

Symbols

| | |
|-----------------|---|
| C_J | Junction Capacitance |
| I_F | DC Forward Current |
| $I_{(AV)}$ | Average Forward Rectifier Current |
| I_{FSM} | Peak Forward Surge Current |
| I_R | Reverse Current |
| I_{RSM} | Maximum Non-Repetitive Peak Current |
| I_O | Mean Forward Current |
| I_T | On-State Test Current |
| I_{PPM} | Maximum peak impulse Current |
| I^2t | Rating for Fusing |
| P_D | Steady State Power Dissipation |
| P_{PK} | Peak Power Dissipation |
| $R_{\Theta JA}$ | Thermal Resistance (Junction to Ambient) |
| $R_{\Theta JC}$ | Thermal Resistance (Junction to Case) |
| $R_{\Theta JL}$ | Thermal Resistance (Junction to Lead) |
| T_a | Ambient Temperature |
| T_c | Case Temperature |
| T_J | Junction Temperature |
| T_L | Lead Temperature |
| T_{tp} | Tie-Point Temperature |
| T_{rr} | Reverse Recovery Time |
| $V_{(BR)}$ | Reverse Breakdown Voltage |
| V_F | Forward Voltage |
| V_R | Reverse Voltage |
| V_{RM} | Maximum Recurrent Peak Reverse Voltage |
| V_{RMS} | RMS Input Voltage |
| V_{RSM} | Maximum Reverse Voltage (Clamping Voltage) at I_{RSM} |
| V_{RRM} | Repetitive Peak Reverse Voltage |
| V_{RWM} | Working Peak Reverse Voltage (Stand-off Voltage) |
| V_Z | Zener Voltage |
| Z_{ZK} | Zener Impedance at I_{ZK} |
| Z_{ZT} | Zener Impedance at I_{ZT} |



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Silicon Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) |

1A1 Series, 1 A, Case Type: R-1



| | | | | | | | | | |
|-----|--|-----|----|------|---|----|-----|-----|-----|
| 1A1 | | 1.0 | 50 | 50 | - | 30 | 1.1 | 1.0 | 5.0 |
| 1A2 | | 1.0 | 50 | 100 | - | 30 | 1.1 | 1.0 | 5.0 |
| 1A3 | | 1.0 | 50 | 200 | - | 30 | 1.1 | 1.0 | 5.0 |
| 1A4 | | 1.0 | 50 | 400 | - | 30 | 1.1 | 1.0 | 5.0 |
| 1A5 | | 1.0 | 50 | 600 | - | 30 | 1.1 | 1.0 | 5.0 |
| 1A6 | | 1.0 | 50 | 800 | - | 30 | 1.1 | 1.0 | 5.0 |
| 1A7 | | 1.0 | 50 | 1000 | - | 30 | 1.1 | 1.0 | 5.0 |

1N4001/SN1A Series, 1 A, Case Type: DO-41/SMA



| | | | | | | | | | |
|--------|------|-----|----|------|----|----|-----|-----|-----|
| 1N4001 | SN1A | 1.0 | 75 | 50 | 10 | 30 | 1.0 | 1.0 | 5.0 |
| 1N4002 | SN1B | 1.0 | 75 | 100 | 10 | 30 | 1.0 | 1.0 | 5.0 |
| 1N4003 | SN1D | 1.0 | 75 | 200 | 10 | 30 | 1.0 | 1.0 | 5.0 |
| 1N4004 | SN1G | 1.0 | 75 | 400 | 10 | 30 | 1.0 | 1.0 | 5.0 |
| 1N4005 | SN1J | 1.0 | 75 | 600 | 10 | 30 | 1.0 | 1.0 | 5.0 |
| 1N4006 | SN1K | 1.0 | 75 | 800 | 10 | 30 | 1.0 | 1.0 | 5.0 |
| 1N4007 | SN1M | 1.0 | 75 | 1000 | 10 | 30 | 1.0 | 1.0 | 5.0 |
| BY133 | SN13 | 1.0 | 75 | 1300 | 10 | 30 | 1.0 | 1.0 | 5.0 |

BYW27/SNWA Series, 1 A, Case Type: DO-41/SMA



| | | | | | | | | | |
|------------|------|-----|----|------|----|----|-----|-----|-----|
| BYW27-50 | SNWA | 1.0 | 70 | 50 | 10 | 50 | 1.0 | 1.0 | 0.2 |
| BYW27-100 | SNWB | 1.0 | 70 | 100 | 10 | 50 | 1.0 | 1.0 | 0.2 |
| BYW27-200 | SNWD | 1.0 | 70 | 200 | 10 | 50 | 1.0 | 1.0 | 0.2 |
| BYW27-400 | SNWG | 1.0 | 70 | 400 | 10 | 50 | 1.0 | 1.0 | 0.2 |
| BYW27-600 | SNWJ | 1.0 | 70 | 600 | 10 | 50 | 1.0 | 1.0 | 0.2 |
| BYW27-800 | SNWK | 1.0 | 70 | 800 | 10 | 50 | 1.0 | 1.0 | 0.2 |
| BYW27-1000 | SNWM | 1.0 | 70 | 1000 | 10 | 50 | 1.0 | 1.0 | 0.2 |

11E1 Series, 1 A, Case Type: DO-41



| | | | | | | | | | |
|------|--|-----|----|-----|---|----|-----|-----|----|
| 11E1 | | 1.0 | 40 | 100 | - | 45 | 1.0 | 1.0 | 50 |
| 11E2 | | 1.0 | 40 | 200 | - | 45 | 1.0 | 1.0 | 50 |
| 11E4 | | 1.0 | 40 | 400 | - | 45 | 1.0 | 1.0 | 10 |
| 11E6 | | 1.0 | 40 | 600 | - | 45 | 1.0 | 1.0 | 10 |

11ES1 Series, 1 A, Case Type: DO-41



| | | | | | | | | | |
|-------|--|-----|----|-----|---|----|-----|-----|----|
| 11ES1 | | 1.0 | 40 | 100 | - | 45 | 1.0 | 1.0 | 50 |
| 11ES2 | | 1.0 | 40 | 200 | - | 45 | 1.0 | 1.0 | 50 |



Silicon Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) |

1SR35-100 Series, 1 A, Case Type: DO-41



| | | | | | | | | | |
|-----------|--|-----|----|-----|---|----|-----|-----|----|
| 1SR35-100 | | 1.0 | 50 | 100 | - | 30 | 1.1 | 1.0 | 10 |
| 1SR35-200 | | 1.0 | 50 | 200 | - | 30 | 1.1 | 1.0 | 10 |
| 1SR35-400 | | 1.0 | 50 | 400 | - | 30 | 1.1 | 1.0 | 10 |

1SR139-100 Series, 1 A, Case Type: DO-41



| | | | | | | | | | |
|------------|--|-----|----|-----|---|----|-----|-----|----|
| 1SR139-100 | | 1.0 | 25 | 100 | - | 40 | 1.1 | 1.0 | 10 |
| 1SR139-200 | | 1.0 | 25 | 200 | - | 40 | 1.1 | 1.0 | 10 |
| 1SR139-400 | | 1.0 | 25 | 400 | - | 40 | 1.1 | 1.0 | 10 |
| 1SR139-600 | | 1.0 | 25 | 600 | - | 40 | 1.1 | 1.0 | 10 |

1SR154-400 Series, 1 A, Case Type: SMA



| | | | | | | | | | |
|--|------------|-----|----|-----|---|----|-----|-----|----|
| | 1SR154-400 | 1.0 | 25 | 400 | - | 30 | 1.1 | 1.0 | 10 |
| | 1SR154-600 | 1.0 | 25 | 600 | - | 30 | 1.1 | 1.0 | 10 |

EM01 Series, 1 A, Case Type: DO-41



| | | | | | | | | | |
|-------|--|-----|----|-----|---|----|------|-----|----|
| EM01 | | 1.0 | 25 | 400 | - | 45 | 0.97 | 1.0 | 10 |
| EM01A | | 1.0 | 25 | 600 | - | 45 | 0.97 | 1.0 | 10 |
| EM01Z | | 1.0 | 25 | 200 | - | 45 | 0.97 | 1.0 | 10 |

EM1 Series, 1 A, Case Type: DO-41



| | | | | | | | | | |
|------|--|-----|----|------|---|----|------|-----|----|
| EM1 | | 1.0 | 25 | 400 | - | 45 | 0.97 | 1.0 | 10 |
| EM1A | | 1.0 | 25 | 600 | - | 45 | 0.97 | 1.0 | 10 |
| EM1B | | 1.0 | 25 | 800 | - | 35 | 0.97 | 1.0 | 20 |
| EM1C | | 1.0 | 25 | 1000 | - | 35 | 0.97 | 1.0 | 20 |

ERA15-01 Series, 1 A, Case Type: DO-41



| | | | | | | | | | |
|----------|--|-----|----|------|---|----|-----|-----|----|
| ERA15-01 | | 1.0 | 40 | 100 | - | 40 | 1.1 | 2.0 | 10 |
| ERA15-02 | | 1.0 | 40 | 200 | - | 40 | 1.1 | 2.0 | 10 |
| ERA15-04 | | 1.0 | 40 | 400 | - | 40 | 1.1 | 2.0 | 10 |
| ERA15-06 | | 1.0 | 40 | 600 | - | 40 | 1.1 | 2.0 | 10 |
| ERA15-08 | | 1.0 | 25 | 800 | - | 40 | 1.1 | 2.0 | 10 |
| ERA15-10 | | 1.0 | 25 | 1000 | - | 40 | 1.1 | 2.0 | 10 |



Silicon Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) |

ERB12-01 Series, 1 A, Case Type: DO-41



| | | | | | | | | | |
|----------|--|-----|----|------|---|----|-----|-----|----|
| ERB12-01 | | 1.0 | 60 | 100 | - | 60 | 1.1 | 2.0 | 10 |
| ERB12-02 | | 1.0 | 60 | 200 | - | 60 | 1.1 | 2.0 | 10 |
| ERB12-04 | | 1.0 | 60 | 400 | - | 60 | 1.1 | 2.0 | 10 |
| ERB12-06 | | 1.0 | 60 | 600 | - | 60 | 1.1 | 2.0 | 10 |
| ERB12-10 | | 1.0 | 25 | 1000 | - | 50 | 1.1 | 2.0 | 10 |

MRA4003 Series, 1 A, Case Type: SMA



| | | | | | | | | | |
|--|---------|-----|-----------------------|------|---|----|------|-----|----|
| | MRA4003 | 1.0 | 150 (T _L) | 300 | - | 30 | 1.18 | 2.0 | 10 |
| | MRA4004 | 1.0 | 150 (T _L) | 400 | - | 30 | 1.18 | 2.0 | 10 |
| | MRA4005 | 1.0 | 150 (T _L) | 600 | - | 30 | 1.18 | 2.0 | 10 |
| | MRA4006 | 1.0 | 150 (T _L) | 800 | - | 30 | 1.18 | 2.0 | 10 |
| | MRA4007 | 1.0 | 150 (T _L) | 1000 | - | 30 | 1.18 | 2.0 | 10 |

S1A Series, 1 A, Case Type: SMA



| | | | | | | | | | |
|--|-----|-----|-----------------------|------|---|----|-----|-----|-----|
| | S1A | 1.0 | 110 (T _L) | 50 | - | 40 | 1.1 | 1.0 | 1.0 |
| | S1B | 1.0 | 110 (T _L) | 100 | - | 40 | 1.1 | 1.0 | 1.0 |
| | S1D | 1.0 | 110 (T _L) | 200 | - | 40 | 1.1 | 1.0 | 1.0 |
| | S1G | 1.0 | 110 (T _L) | 400 | - | 40 | 1.1 | 1.0 | 1.0 |
| | S1J | 1.0 | 110 (T _L) | 600 | - | 40 | 1.1 | 1.0 | 1.0 |
| | S1K | 1.0 | 100 (T _L) | 800 | - | 30 | 1.1 | 1.0 | 5.0 |
| | S1M | 1.0 | 100 (T _L) | 1000 | - | 30 | 1.1 | 1.0 | 5.0 |

S5277 Series, 1.0 A, Case Type: DO-41



| | | | | | | | | | |
|--------|--|-----|----|------|---|----|-----|-----|----|
| S5277B | | 1.0 | 25 | 100 | - | 55 | 1.2 | 1.0 | 10 |
| S5277G | | 1.0 | 25 | 400 | - | 55 | 1.2 | 1.0 | 10 |
| S5277J | | 1.0 | 25 | 600 | - | 33 | 1.2 | 1.0 | 10 |
| S5277N | | 1.0 | 25 | 1000 | - | 33 | 1.2 | 1.0 | 10 |

S5566B Series, 1 A, Case Type: DO-41



| | | | | | | | | | |
|--------|--|-----|----|------|---|----|-----|-----|----|
| S5566B | | 1.0 | 25 | 100 | - | 45 | 1.2 | 1.0 | 10 |
| S5566G | | 1.0 | 25 | 400 | - | 45 | 1.2 | 1.0 | 10 |
| S5566J | | 1.0 | 25 | 600 | - | 30 | 1.2 | 1.0 | 10 |
| S5566N | | 1.0 | 25 | 1000 | - | 30 | 1.2 | 1.0 | 10 |

S5688B Series, 1 A, Case Type: R-1



| | | | | | | | | | |
|--------|--|-----|----|------|---|----|-----|-----|----|
| S5688B | | 1.0 | 30 | 100 | - | 45 | 1.2 | 1.0 | 10 |
| S5688G | | 1.0 | 30 | 400 | - | 45 | 1.2 | 1.0 | 10 |
| S5688J | | 1.0 | 30 | 600 | - | 30 | 1.2 | 1.0 | 10 |
| S5688N | | 1.0 | 30 | 1000 | - | 30 | 1.2 | 1.0 | 10 |



Silicon Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) |

1S1885 Series, 1 A, Case Type: D2



| | | | | | | | | | |
|--------|--|-----|----|-----|---|----|-----|-----|----|
| 1S1885 | | 1.0 | 65 | 100 | - | 60 | 1.2 | 1.5 | 10 |
| 1S1886 | | 1.0 | 65 | 200 | - | 60 | 1.2 | 1.5 | 10 |
| 1S1887 | | 1.0 | 65 | 400 | - | 60 | 1.2 | 1.5 | 10 |
| 1S1888 | | 1.0 | 65 | 600 | - | 60 | 1.2 | 1.5 | 10 |

EM2 Series, 1.2 A, Case Type: DO-41



| | | | | | | | | | |
|------|--|-----|----|-----|---|----|------|-----|----|
| EM2 | | 1.2 | 25 | 400 | - | 80 | 0.92 | 1.2 | 10 |
| EM2A | | 1.2 | 25 | 600 | - | 80 | 0.92 | 1.2 | 10 |
| EM2B | | 1.2 | 25 | 800 | - | 80 | 0.92 | 1.2 | 10 |

ERC04-02 Series, 1.2 A, Case Type: D2A



| | | | | | | | | | |
|----------|--|-----|----|------|---|-----|-----|-----|----|
| ERC04-02 | | 1.2 | 60 | 200 | - | 100 | 1.1 | 4.0 | 10 |
| ERC04-04 | | 1.2 | 60 | 400 | - | 100 | 1.1 | 4.0 | 10 |
| ERC04-06 | | 1.2 | 60 | 600 | - | 100 | 1.1 | 4.0 | 10 |
| ERC04-10 | | 1.2 | 60 | 1000 | - | 100 | 1.1 | 4.0 | 10 |

ERC05-06 Series, 1.2 A, Case Type: D2



| | | | | | | | | | |
|----------|--|-----|----|------|---|-----|------|-----|----|
| ERC05-06 | | 1.2 | 60 | 600 | - | 100 | 1.00 | 4.0 | 10 |
| ERC05-08 | | 1.2 | 60 | 800 | - | 100 | 1.00 | 4.0 | 10 |
| ERC05-10 | | 1.2 | 60 | 1000 | - | 100 | 1.00 | 4.0 | 10 |

ERC25-04 Series, 1.2 A, Case Type: D2



| | | | | | | | | | |
|----------|--|-----|----|-----|---|----|------|-----|----|
| ERC25-04 | | 1.2 | 40 | 400 | - | 50 | 1.10 | 1.2 | 10 |
| ERC25-06 | | 1.2 | 40 | 600 | - | 50 | 1.10 | 1.2 | 10 |

RM11A Series, 1.2 A, Case Type: D2



| | | | | | | | | | |
|-------|--|-----|----|------|----|-----|------|-----|----|
| RM11A | | 1.2 | 70 | 600 | 15 | 100 | 0.92 | 1.5 | 10 |
| RM11B | | 1.2 | 70 | 800 | 15 | 100 | 0.92 | 1.5 | 10 |
| RM11C | | 1.2 | 70 | 1000 | 15 | 100 | 0.92 | 1.5 | 10 |

RM2 Series, 1.2 A, Case Type: D2A



| | | | | | | | | | |
|------|--|-----|----|------|----|-----|------|-----|----|
| RM2Z | | 1.2 | 70 | 200 | 15 | 100 | 0.91 | 1.5 | 10 |
| RM2 | | 1.2 | 70 | 400 | 15 | 100 | 0.91 | 1.5 | 10 |
| RM2A | | 1.2 | 70 | 600 | 15 | 100 | 0.91 | 1.5 | 10 |
| RM2B | | 1.2 | 70 | 800 | 15 | 100 | 0.91 | 1.5 | 10 |
| RM2C | | 1.2 | 70 | 1000 | 15 | 100 | 0.91 | 1.5 | 10 |



Silicon Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) |

RM10 Series, 1.2 - 1.5 A, Case Type: D2



| | | | | | | | | | |
|-------|--|-----|----|-----|----|-----|------|-----|----|
| RM10 | | 1.2 | 70 | 400 | 15 | 150 | 0.91 | 1.5 | 10 |
| RM10A | | 1.2 | 70 | 600 | 15 | 150 | 0.91 | 1.5 | 10 |
| RM10B | | 1.2 | 70 | 800 | 15 | 150 | 0.91 | 1.5 | 10 |
| RM10Z | | 1.5 | 70 | 200 | 15 | 120 | 0.91 | 1.5 | 10 |

1N5391/SNOA Series, 1.5 A, Case Type: DO-41/SMA



| | | | | | | | | | |
|--------|------|-----|----|------|----|----|-----|-----|-----|
| 1N5391 | SNOA | 1.5 | 70 | 50 | 10 | 50 | 1.1 | 1.5 | 5.0 |
| 1N5392 | SNOB | 1.5 | 70 | 100 | 10 | 50 | 1.1 | 1.5 | 5.0 |
| 1N5393 | SNOD | 1.5 | 70 | 200 | 10 | 50 | 1.1 | 1.5 | 5.0 |
| 1N5394 | SNOE | 1.5 | 70 | 300 | 10 | 50 | 1.1 | 1.5 | 5.0 |
| 1N5395 | SNOG | 1.5 | 70 | 400 | 10 | 50 | 1.1 | 1.5 | 5.0 |
| 1N5396 | SNOH | 1.5 | 70 | 500 | 10 | 50 | 1.1 | 1.5 | 5.0 |
| 1N5397 | SNOJ | 1.5 | 70 | 600 | 10 | 50 | 1.1 | 1.5 | 5.0 |
| 1N5398 | SNOK | 1.5 | 70 | 800 | 10 | 50 | 1.1 | 1.5 | 5.0 |
| 1N5399 | SNOM | 1.5 | 70 | 1000 | 10 | 50 | 1.1 | 1.5 | 5.0 |

GP15A Series, 1.5 A, Case Type: D2



| | | | | | | | | | |
|-------|--|-----|----|------|---|----|------|-----|-----|
| GP15A | | 1.5 | 55 | 50 | - | 50 | 1.10 | 1.5 | 5.0 |
| GP15B | | 1.5 | 55 | 100 | - | 50 | 1.10 | 1.5 | 5.0 |
| GP15D | | 1.5 | 55 | 200 | - | 50 | 1.10 | 1.5 | 5.0 |
| GP15G | | 1.5 | 55 | 400 | - | 50 | 1.10 | 1.5 | 5.0 |
| GP15J | | 1.5 | 55 | 600 | - | 50 | 1.10 | 1.5 | 5.0 |
| GP15K | | 1.5 | 55 | 800 | - | 50 | 1.10 | 1.5 | 5.0 |
| GP15M | | 1.5 | 55 | 1000 | - | 50 | 1.10 | 1.5 | 5.0 |

S2A Series, 1.5 A, Case Type: SMB



| | | | | | | | | | |
|--|-----|-----|---------|------|---|----|------|-----|-----|
| | S2A | 1.5 | 75 (TL) | 50 | - | 50 | 1.15 | 1.5 | 1.0 |
| | S2B | 1.5 | 75 (TL) | 100 | - | 50 | 1.15 | 1.5 | 1.0 |
| | S2D | 1.5 | 75 (TL) | 200 | - | 50 | 1.15 | 1.5 | 1.0 |
| | S2G | 1.5 | 75 (TL) | 400 | - | 50 | 1.15 | 1.5 | 1.0 |
| | S2J | 1.5 | 75 (TL) | 600 | - | 50 | 1.15 | 1.5 | 1.0 |
| | S2K | 1.5 | 75 (TL) | 800 | - | 50 | 1.15 | 1.5 | 1.0 |
| | S2M | 1.5 | 75 (TL) | 1000 | - | 50 | 1.15 | 1.5 | 1.0 |

ERD07-13 Series, 1.5 A, Case Type: DO-201AD



| | | | | | | | | | |
|----------|--|-----|---------|------|---|----|-----|-----|----|
| ERD07-13 | | 1.5 | 125(TL) | 1300 | - | 50 | 1.2 | 4.0 | 10 |
| ERD07-15 | | 1.5 | 125(TL) | 1500 | - | 50 | 1.2 | 4.0 | 10 |



Silicon Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) |

RM4 Series, 1.7 A, Case Type: DO-201AD



| | | | | | | | | | |
|------|--|-----|----|-----|---|-----|------|-----|----|
| RM4Y | | 1.7 | 40 | 100 | - | 150 | 0.95 | 3.0 | 10 |
| RM4Z | | 1.7 | 40 | 200 | - | 150 | 0.95 | 3.0 | 10 |
| RM4 | | 1.7 | 40 | 400 | - | 150 | 0.95 | 3.0 | 10 |

DL201 Series, 2 A, Case Type: D2



| | | | | | | | | | |
|-------|--|-----|----|------|---|----|-----|-----|-----|
| DL201 | | 2.0 | 50 | 50 | - | 75 | 1.0 | 2.0 | 5.0 |
| DL202 | | 2.0 | 50 | 100 | - | 75 | 1.0 | 2.0 | 5.0 |
| DL203 | | 2.0 | 50 | 200 | - | 75 | 1.0 | 2.0 | 5.0 |
| DL204 | | 2.0 | 50 | 400 | - | 75 | 1.0 | 2.0 | 5.0 |
| DL205 | | 2.0 | 50 | 600 | - | 75 | 1.0 | 2.0 | 5.0 |
| DL206 | | 2.0 | 50 | 800 | - | 75 | 1.0 | 2.0 | 5.0 |
| DL207 | | 2.0 | 50 | 1000 | - | 75 | 1.0 | 2.0 | 5.0 |

DR200/SN2A Series, 2 A, Case Type: D2/SMB



| | | | | | | | | | |
|-------|------|-----|----|------|----|----|-----|-----|-----|
| DR200 | SN2A | 2.0 | 50 | 50 | 15 | 75 | 1.0 | 2.0 | 5.0 |
| DR201 | SN2B | 2.0 | 50 | 100 | 15 | 75 | 1.0 | 2.0 | 5.0 |
| DR202 | SN2D | 2.0 | 50 | 200 | 15 | 75 | 1.0 | 2.0 | 5.0 |
| DR204 | SN2G | 2.0 | 50 | 400 | 15 | 75 | 1.0 | 2.0 | 5.0 |
| DR206 | SN2J | 2.0 | 50 | 600 | 15 | 75 | 1.0 | 2.0 | 5.0 |
| DR208 | SN2K | 2.0 | 50 | 800 | 15 | 75 | 1.0 | 2.0 | 5.0 |
| DR210 | SN2M | 2.0 | 50 | 1000 | 15 | 75 | 1.0 | 2.0 | 5.0 |

RL251 Series, 2.5 A, Case Type: D2A



| | | | | | | | | | |
|-------|--|-----|----|------|---|-----|-----|-----|---|
| RL251 | | 2.5 | 75 | 50 | - | 150 | 1.1 | 2.5 | 5 |
| RL252 | | 2.5 | 75 | 100 | - | 150 | 1.1 | 2.5 | 5 |
| RL253 | | 2.5 | 75 | 200 | - | 150 | 1.1 | 2.5 | 5 |
| RL254 | | 2.5 | 75 | 400 | - | 150 | 1.1 | 2.5 | 5 |
| RL255 | | 2.5 | 75 | 600 | - | 150 | 1.1 | 2.5 | 5 |
| RL256 | | 2.5 | 75 | 800 | - | 150 | 1.1 | 2.5 | 5 |
| RL257 | | 2.5 | 75 | 1000 | - | 150 | 1.1 | 2.5 | 5 |

RM3 Series, 2.5 A, Case Type: DO-201AD



| | | | | | | | | | |
|------|--|-----|----|-----|---|-----|------|-----|----|
| RM3 | | 2.5 | 50 | 400 | - | 150 | 0.95 | 2.5 | 10 |
| RM3A | | 2.5 | 50 | 600 | - | 150 | 0.95 | 2.5 | 10 |
| RM3B | | 2.5 | 50 | 800 | - | 150 | 0.95 | 2.5 | 10 |



Silicon Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) |

BY251/SN21 Series, 3 A, Case Type: DO-201AD/SMC



| | | | | | | | | | |
|-------|------|-----|----|------|----|-----|-----|-----|----|
| BY251 | SN21 | 3.0 | 50 | 200 | 20 | 100 | 1.1 | 3.0 | 20 |
| BY252 | SN22 | 3.0 | 50 | 400 | 20 | 100 | 1.1 | 3.0 | 20 |
| BY253 | SN23 | 3.0 | 50 | 600 | 20 | 100 | 1.1 | 3.0 | 20 |
| BY254 | SN24 | 3.0 | 50 | 800 | 20 | 100 | 1.1 | 3.0 | 20 |
| BY255 | SN25 | 3.0 | 50 | 1300 | 20 | 100 | 1.1 | 3.0 | 20 |

1N5400 /SN3A Series, 3 A, Case Type: DO-201AD/SMC



| | | | | | | | | | |
|--------|------|-----|----|------|----|-----|-----|-----|-----|
| 1N5400 | SN3A | 3.0 | 75 | 50 | 30 | 200 | 1.0 | 3.0 | 5.0 |
| 1N5401 | SN3B | 3.0 | 75 | 100 | 30 | 200 | 1.0 | 3.0 | 5.0 |
| 1N5402 | SN3D | 3.0 | 75 | 200 | 30 | 200 | 1.0 | 3.0 | 5.0 |
| 1N5404 | SN3G | 3.0 | 75 | 400 | 30 | 200 | 1.0 | 3.0 | 5.0 |
| 1N5406 | SN3J | 3.0 | 75 | 600 | 30 | 200 | 1.0 | 3.0 | 5.0 |
| 1N5407 | SN3K | 3.0 | 75 | 800 | 30 | 200 | 1.0 | 3.0 | 5.0 |
| 1N5408 | SN3M | 3.0 | 75 | 1000 | 30 | 200 | 1.0 | 3.0 | 5.0 |

SN3AS Series, 3.0 A, Case Type: SMB



| | | | | | | | | | |
|--|-------|-----|----|------|---|-----|-----|-----|-----|
| | SN3AS | 3.0 | 75 | 50 | - | 200 | 1.2 | 3.0 | 5.0 |
| | SN3BS | 3.0 | 75 | 100 | - | 200 | 1.2 | 3.0 | 5.0 |
| | SN3DS | 3.0 | 75 | 200 | - | 200 | 1.2 | 3.0 | 5.0 |
| | SN3GS | 3.0 | 75 | 400 | - | 200 | 1.2 | 3.0 | 5.0 |
| | SN3JS | 3.0 | 75 | 600 | - | 200 | 1.2 | 3.0 | 5.0 |
| | SN3KS | 3.0 | 75 | 800 | - | 200 | 1.2 | 3.0 | 5.0 |
| | SN3MS | 3.0 | 75 | 1000 | - | 200 | 1.2 | 3.0 | 5.0 |

BY550/SN5A Series, 5 A, Case Type: DO-201AD/SMC



| | | | | | | | | | |
|------------|------|-----|----|------|----|-----|-----|-----|----|
| BY550-50 | SN5A | 5.0 | 60 | 50 | 40 | 300 | 1.1 | 5.0 | 20 |
| BY550-100 | SN5B | 5.0 | 60 | 100 | 40 | 300 | 1.1 | 5.0 | 20 |
| BY550-200 | SN5D | 5.0 | 60 | 200 | 40 | 300 | 1.1 | 5.0 | 20 |
| BY550-400 | SN5G | 5.0 | 60 | 400 | 40 | 300 | 1.1 | 5.0 | 20 |
| BY550-600 | SN5J | 5.0 | 60 | 600 | 40 | 300 | 1.1 | 5.0 | 20 |
| BY550-800 | SN5K | 5.0 | 60 | 800 | 40 | 300 | 1.1 | 5.0 | 20 |
| BY550-1000 | SN5M | 5.0 | 60 | 1000 | 40 | 300 | 1.1 | 5.0 | 20 |

6A05 Series, 6 A, Case Type: D6



| | | | | | | | | | |
|------|--|-----|----|------|---|-----|------|-----|-----|
| 6A05 | | 6.0 | 60 | 50 | - | 400 | 0.95 | 6.0 | 5.0 |
| 6A1 | | 6.0 | 60 | 100 | - | 400 | 0.95 | 6.0 | 5.0 |
| 6A2 | | 6.0 | 60 | 200 | - | 400 | 0.95 | 6.0 | 5.0 |
| 6A4 | | 6.0 | 60 | 400 | - | 400 | 0.95 | 6.0 | 5.0 |
| 6A6 | | 6.0 | 60 | 600 | - | 400 | 0.95 | 6.0 | 5.0 |
| 6A8 | | 6.0 | 60 | 800 | - | 400 | 0.95 | 6.0 | 5.0 |
| 6A10 | | 6.0 | 60 | 1000 | - | 400 | 1.00 | 6.0 | 5.0 |



Silicon Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) |

P600A Series, 6 A, Case Type: D6



| | | | | | | | | | |
|-------|--|-----|----|------|---|-----|-----|-----|-----|
| P600A | | 6.0 | 60 | 50 | - | 400 | 0.9 | 6.0 | 5.0 |
| P600B | | 6.0 | 60 | 100 | - | 400 | 0.9 | 6.0 | 5.0 |
| P600D | | 6.0 | 60 | 200 | - | 400 | 0.9 | 6.0 | 5.0 |
| P600G | | 6.0 | 60 | 400 | - | 400 | 0.9 | 6.0 | 5.0 |
| P600J | | 6.0 | 60 | 600 | - | 400 | 0.9 | 6.0 | 5.0 |
| P600K | | 6.0 | 60 | 800 | - | 400 | 0.9 | 6.0 | 5.0 |
| P600M | | 6.0 | 60 | 1000 | - | 400 | 1.0 | 6.0 | 5.0 |

P800A Series, 8 A, Case Type: D6



| | | | | | | | | | |
|-------|--|-----|----|-----|---|-----|-----|-----|-----|
| P800A | | 8.0 | 50 | 50 | - | 400 | 1.0 | 8.0 | 5.0 |
| P800B | | 8.0 | 50 | 100 | - | 400 | 1.0 | 8.0 | 5.0 |
| P800D | | 8.0 | 50 | 200 | - | 400 | 1.0 | 8.0 | 5.0 |
| P800G | | 8.0 | 50 | 400 | - | 400 | 1.0 | 8.0 | 5.0 |
| P800J | | 8.0 | 50 | 600 | - | 400 | 1.0 | 8.0 | 5.0 |
| P800K | | 8.0 | 50 | 800 | - | 400 | 1.0 | 8.0 | 5.0 |

NS8AT Series, 8 A, Case Type: TO-220AC



| | | | | | | | | | |
|-------|--|-----|---------|------|---|-----|-----|-----|----|
| NS8AT | | 8.0 | 100(Tc) | 50 | - | 175 | 1.1 | 8.0 | 10 |
| NS8BT | | 8.0 | 100(Tc) | 100 | - | 175 | 1.1 | 8.0 | 10 |
| NS8DT | | 8.0 | 100(Tc) | 200 | - | 175 | 1.1 | 8.0 | 10 |
| NS8GT | | 8.0 | 100(Tc) | 400 | - | 175 | 1.1 | 8.0 | 10 |
| NS8JT | | 8.0 | 100(Tc) | 600 | - | 175 | 1.1 | 8.0 | 10 |
| NS8KT | | 8.0 | 100(Tc) | 800 | - | 175 | 1.1 | 8.0 | 10 |
| NS8MT | | 8.0 | 100(Tc) | 1000 | - | 175 | 1.1 | 8.0 | 10 |

10A01 Series, 10 A, Case Type: D6



| | | | | | | | | | |
|-------|--|----|----|------|---|-----|-----|----|----|
| 10A01 | | 10 | 50 | 50 | - | 600 | 1.3 | 10 | 10 |
| 10A02 | | 10 | 50 | 100 | - | 600 | 1.3 | 10 | 10 |
| 10A03 | | 10 | 50 | 200 | - | 600 | 1.3 | 10 | 10 |
| 10A04 | | 10 | 50 | 400 | - | 600 | 1.3 | 10 | 10 |
| 10A05 | | 10 | 50 | 600 | - | 600 | 1.3 | 10 | 10 |
| 10A06 | | 10 | 50 | 800 | - | 600 | 1.3 | 10 | 10 |
| 10A07 | | 10 | 50 | 1000 | - | 600 | 1.3 | 10 | 10 |



Glass Passivated Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|---------------------------------|--------------------------------------|------|---------------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) |

GL34A Series, 0.5 A, Case Type: Mini MELF (Plastic)



| | | | | | | | | | |
|-------|--|-----|---------------------|-----|---|----|-----|-----|-----|
| GL34A | | 0.5 | 75(T _T) | 50 | - | 10 | 1.2 | 0.5 | 5.0 |
| GL34B | | 0.5 | 75(T _T) | 100 | - | 10 | 1.2 | 0.5 | 5.0 |
| GL34D | | 0.5 | 75(T _T) | 200 | - | 10 | 1.2 | 0.5 | 5.0 |
| GL34G | | 0.5 | 75(T _T) | 400 | - | 10 | 1.2 | 0.5 | 5.0 |
| GL34J | | 0.5 | 75(T _T) | 600 | - | 10 | 1.3 | 0.5 | 5.0 |

1G1 Series, 1 A, Case Type: R-1



| | | | | | | | | | |
|-----|--|-----|----|------|---|----|-----|-----|-----|
| 1G1 | | 1.0 | 50 | 50 | - | 30 | 1.1 | 1.0 | 5.0 |
| 1G2 | | 1.0 | 50 | 100 | - | 30 | 1.1 | 1.0 | 5.0 |
| 1G3 | | 1.0 | 50 | 200 | - | 30 | 1.1 | 1.0 | 5.0 |
| 1G4 | | 1.0 | 50 | 400 | - | 30 | 1.1 | 1.0 | 5.0 |
| 1G5 | | 1.0 | 50 | 600 | - | 30 | 1.1 | 1.0 | 5.0 |
| 1G6 | | 1.0 | 50 | 800 | - | 30 | 1.1 | 1.0 | 5.0 |
| 1G7 | | 1.0 | 50 | 1000 | - | 30 | 1.1 | 1.0 | 5.0 |

AM01A, 1 A, Case Type: M1A



| | | | | | | | | | |
|-------|--|-----|----|-----|---|----|------|-----|----|
| AM01A | | 1.0 | 25 | 600 | - | 35 | 0.98 | 1.0 | 10 |
|-------|--|-----|----|-----|---|----|------|-----|----|

LMN1A Series, 1 A, Case Type: M1A



| | | | | | | | | | |
|-------|--|-----|----|------|---|----|-----|-----|-----|
| LMN1A | | 1.0 | 50 | 50 | - | 30 | 1.0 | 1.0 | 5.0 |
| LMN1B | | 1.0 | 50 | 100 | - | 30 | 1.0 | 1.0 | 5.0 |
| LMN1D | | 1.0 | 50 | 200 | - | 30 | 1.0 | 1.0 | 5.0 |
| LMN1G | | 1.0 | 50 | 400 | - | 30 | 1.0 | 1.0 | 5.0 |
| LMN1J | | 1.0 | 50 | 600 | - | 30 | 1.0 | 1.0 | 5.0 |
| LMN1K | | 1.0 | 50 | 800 | - | 30 | 1.0 | 1.0 | 5.0 |
| LMN1M | | 1.0 | 50 | 1000 | - | 30 | 1.0 | 1.0 | 5.0 |

1N4001G/GN1A Series, 1 A, Case Type: DO-41/SMA



| | | | | | | | | | |
|---------|------|-----|----|------|----|----|-----|-----|-----|
| 1N4001G | GN1A | 1.0 | 75 | 50 | 10 | 30 | 1.0 | 1.0 | 5.0 |
| 1N4002G | GN1B | 1.0 | 75 | 100 | 10 | 30 | 1.0 | 1.0 | 5.0 |
| 1N4003G | GN1D | 1.0 | 75 | 200 | 10 | 30 | 1.0 | 1.0 | 5.0 |
| 1N4004G | GN1G | 1.0 | 75 | 400 | 10 | 30 | 1.0 | 1.0 | 5.0 |
| 1N4005G | GN1J | 1.0 | 75 | 600 | 10 | 30 | 1.0 | 1.0 | 5.0 |
| 1N4006G | GN1K | 1.0 | 75 | 800 | 10 | 30 | 1.0 | 1.0 | 5.0 |
| 1N4007G | GN1M | 1.0 | 75 | 1000 | 10 | 30 | 1.0 | 1.0 | 5.0 |
| BY133G | GN13 | 1.0 | 75 | 1300 | 10 | 30 | 1.0 | 1.0 | 5.0 |



Glass Passivated Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|---------------------------------|--------------------------------------|------|---------------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) |

GF1A Series, 1 A, Case Type: SMA



| | | | | | | | | | |
|--|------|-----|----|------|---|----|-----|-----|-----|
| | GF1A | 1.0 | 75 | 50 | - | 30 | 1.0 | 1.0 | 5.0 |
| | GF1B | 1.0 | 75 | 100 | - | 30 | 1.0 | 1.0 | 5.0 |
| | GF1D | 1.0 | 75 | 200 | - | 30 | 1.0 | 1.0 | 5.0 |
| | GF1G | 1.0 | 75 | 400 | - | 30 | 1.0 | 1.0 | 5.0 |
| | GF1J | 1.0 | 75 | 600 | - | 30 | 1.0 | 1.0 | 5.0 |
| | GF1K | 1.0 | 75 | 800 | - | 30 | 1.0 | 1.0 | 5.0 |
| | GF1M | 1.0 | 75 | 1000 | - | 30 | 1.0 | 1.0 | 5.0 |

DL4001 Series, 1 A, Case Type: MELF (Plastic)



| | | | | | | | | | |
|--|--------|-----|----|------|---|----|-----|-----|-----|
| | DL4001 | 1.0 | 75 | 50 | - | 30 | 1.1 | 1.0 | 5.0 |
| | DL4002 | 1.0 | 75 | 100 | - | 30 | 1.1 | 1.0 | 5.0 |
| | DL4003 | 1.0 | 75 | 200 | - | 30 | 1.1 | 1.0 | 5.0 |
| | DL4004 | 1.0 | 75 | 400 | - | 30 | 1.1 | 1.0 | 5.0 |
| | DL4005 | 1.0 | 75 | 600 | - | 30 | 1.1 | 1.0 | 5.0 |
| | DL4006 | 1.0 | 75 | 800 | - | 30 | 1.1 | 1.0 | 5.0 |
| | DL4007 | 1.0 | 75 | 1000 | - | 30 | 1.1 | 1.0 | 5.0 |

GP10A Series, 1 A, Case Type: DO-41



| | | | | | | | | | |
|-------|--|-----|----|------|---|----|-----|-----|-----|
| GP10A | | 1.0 | 75 | 50 | - | 30 | 1.1 | 1.0 | 5.0 |
| GP10B | | 1.0 | 75 | 100 | - | 30 | 1.1 | 1.0 | 5.0 |
| GP10D | | 1.0 | 75 | 200 | - | 30 | 1.1 | 1.0 | 5.0 |
| GP10G | | 1.0 | 75 | 400 | - | 30 | 1.1 | 1.0 | 5.0 |
| GP10J | | 1.0 | 75 | 600 | - | 30 | 1.1 | 1.0 | 5.0 |
| GP10K | | 1.0 | 75 | 800 | - | 30 | 1.2 | 1.0 | 5.0 |
| GP10M | | 1.0 | 75 | 1000 | - | 30 | 1.2 | 1.0 | 5.0 |
| GP10N | | 1.0 | 75 | 1100 | - | 30 | 1.2 | 1.0 | 5.0 |
| GP10Q | | 1.0 | 75 | 1200 | - | 30 | 1.2 | 1.0 | 5.0 |
| GP10T | | 1.0 | 75 | 1300 | - | 30 | 1.3 | 1.0 | 5.0 |
| GP10V | | 1.0 | 75 | 1400 | - | 30 | 1.3 | 1.0 | 5.0 |
| GP10W | | 1.0 | 75 | 1500 | - | 30 | 1.3 | 1.0 | 5.0 |
| GP10Y | | 1.0 | 75 | 1600 | - | 30 | 1.3 | 1.0 | 5.0 |

GL41Y, 1 A, Case Type: MELF



| | | | | | | | | | |
|--|-------|-----|----|------|---|----|-----|-----|----|
| | GL41Y | 1.0 | 75 | 1600 | - | 30 | 1.2 | 1.0 | 10 |
|--|-------|-----|----|------|---|----|-----|-----|----|



Glass Passivated Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|---------------------------------|--------------------------------------|------|---------------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) |

1N5391G/GNOA Series, 1.5 A, Case Type: DO-41/SMA

| | | | | | | | | | |
|---------|------|-----|----|------|---|----|-----|-----|-----|
| 1N5391G | GNOA | 1.5 | 75 | 50 | - | 50 | 1.1 | 1.5 | 5.0 |
| 1N5392G | GNOB | 1.5 | 75 | 100 | - | 50 | 1.1 | 1.5 | 5.0 |
| 1N5393G | GNOB | 1.5 | 75 | 200 | - | 50 | 1.1 | 1.5 | 5.0 |
| 1N5394G | GNOE | 1.5 | 75 | 300 | - | 50 | 1.1 | 1.5 | 5.0 |
| 1N5395G | GNOG | 1.5 | 75 | 400 | - | 50 | 1.1 | 1.5 | 5.0 |
| 1N5396G | GNOH | 1.5 | 75 | 500 | - | 50 | 1.1 | 1.5 | 5.0 |
| 1N5397G | GNOJ | 1.5 | 75 | 600 | - | 50 | 1.1 | 1.5 | 5.0 |
| 1N5398G | GNOK | 1.5 | 75 | 800 | - | 50 | 1.1 | 1.5 | 5.0 |
| 1N5399G | GNOM | 1.5 | 75 | 1000 | - | 50 | 1.1 | 1.5 | 5.0 |

DR200G/GN2A Series, 2 A, Case Type: D2/SMB

| | | | | | | | | | |
|--------|------|-----|----|------|----|----|-----|-----|-----|
| DR200G | GN2A | 2.0 | 50 | 50 | 15 | 75 | 1.0 | 2.0 | 5.0 |
| DR201G | GN2B | 2.0 | 50 | 100 | 15 | 75 | 1.0 | 2.0 | 5.0 |
| DR202G | GN2D | 2.0 | 50 | 200 | 15 | 75 | 1.0 | 2.0 | 5.0 |
| DR204G | GN2G | 2.0 | 50 | 400 | 15 | 75 | 1.0 | 2.0 | 5.0 |
| DR206G | GN2J | 2.0 | 50 | 600 | 15 | 75 | 1.0 | 2.0 | 5.0 |
| DR208G | GN2K | 2.0 | 50 | 800 | 15 | 75 | 1.0 | 2.0 | 5.0 |
| DR210G | GN2M | 2.0 | 50 | 1000 | 15 | 75 | 1.0 | 2.0 | 5.0 |

GNTA Series, 2.5 A, Case Type: SMB

| | | | | | | | | | |
|--|------|-----|----|------|---|-----|-----|-----|-----|
| | GNTA | 2.5 | 75 | 50 | - | 150 | 1.1 | 2.5 | 5.0 |
| | GNTB | 2.5 | 75 | 100 | - | 150 | 1.1 | 2.5 | 5.0 |
| | GNTD | 2.5 | 75 | 200 | - | 150 | 1.1 | 2.5 | 5.0 |
| | GNTG | 2.5 | 75 | 400 | - | 150 | 1.1 | 2.5 | 5.0 |
| | GNTJ | 2.5 | 75 | 600 | - | 150 | 1.1 | 2.5 | 5.0 |
| | GNTK | 2.5 | 75 | 800 | - | 150 | 1.1 | 2.5 | 5.0 |
| | GNTM | 2.5 | 75 | 1000 | - | 150 | 1.1 | 2.5 | 5.0 |

1N5400G/GN3A Series, 3 A, Case Type: DO-201AD/SMC

| | | | | | | | | | |
|---------|------|-----|----|------|----|-----|-----|-----|-----|
| 1N5400G | GN3A | 3.0 | 75 | 50 | 20 | 150 | 1.0 | 3.0 | 5.0 |
| 1N5401G | GN3B | 3.0 | 75 | 100 | 20 | 150 | 1.0 | 3.0 | 5.0 |
| 1N5402G | GN3D | 3.0 | 75 | 200 | 20 | 150 | 1.0 | 3.0 | 5.0 |
| 1N5404G | GN3G | 3.0 | 75 | 400 | 20 | 150 | 1.0 | 3.0 | 5.0 |
| 1N5406G | GN3J | 3.0 | 75 | 600 | 20 | 150 | 1.0 | 3.0 | 5.0 |
| 1N5407G | GN3K | 3.0 | 75 | 800 | 20 | 150 | 1.1 | 3.0 | 5.0 |
| 1N5408G | GN3M | 3.0 | 75 | 1000 | 20 | 150 | 1.1 | 3.0 | 5.0 |

BY550-1000GS, 6 A, Case Type: DO-201AD

| | | | | | | | | | |
|--------------|--|-----|----|------|---|-----|-----|-----|----|
| BY550-1000GS | | 5.0 | 60 | 1000 | - | 300 | 1.1 | 5.0 | 20 |
|--------------|--|-----|----|------|---|-----|-----|-----|----|



High Speed Switching Diodes

| Type No. | Max. Average Forward Rectified Current | | Max. Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Repetitive Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time ⁽¹⁾ | Max. Power Dissipation |
|----------|--|------|----------------------|--------------------------------------|-------------------------------|--------------------------------------|------------------|---------------------------------|---|------------------------|
| | I _{F(AV)} | @ Ta | V _{RM} | I _{FRM} | I _{FSM} | V _F | @ I _F | I _R | T _{rr} | P _D |
| | (mA) | (°C) | (V) | (mA) | (A) | (V) | (mA) | (μA) | (ns) | (mW) |

1N4148 Series, Case Type: DO-35



| | | | | | | | | | | |
|--------|-----|----|-----|-----|-----|------|-----|--------|---|-----|
| 1N4148 | 150 | 25 | 75 | 450 | 0.5 | 1.0 | 10 | 5.0 | 4 | 500 |
| 1N4149 | 150 | 25 | 100 | - | 0.5 | 1.0 | 10 | 5.0 nA | 4 | 500 |
| 1N4150 | 200 | 25 | 50 | 600 | 0.5 | 1.0 | 200 | 0.1 | 4 | 500 |
| 1N4151 | 200 | 25 | 75 | 450 | 0.5 | 1.0 | 50 | 0.05 | 4 | 500 |
| 1N4152 | 150 | 25 | 30 | 450 | - | 0.88 | 20 | 0.05 | 2 | 500 |
| 1N4153 | 150 | 25 | 50 | 450 | - | 0.88 | 20 | 0.05 | 2 | 500 |
| 1N4154 | 150 | 25 | 25 | 450 | - | 1.0 | 30 | 0.1 | 4 | 500 |

1N4447 Series, Case Type: DO-35



| | | | | | | | | | | |
|--------|-----|----|----|-----|---|-----|-----|------|---|-----|
| 1N4447 | 150 | 25 | 75 | 450 | - | 1.0 | 20 | 5.0 | 4 | 500 |
| 1N4448 | 150 | 25 | 75 | 450 | - | 1.0 | 10 | 5.0 | 4 | 500 |
| 1N4449 | 150 | 25 | 75 | 450 | - | 1.0 | 30 | 5.0 | 4 | 500 |
| 1N4450 | 200 | 25 | 30 | 600 | - | 1.0 | 200 | 0.05 | 4 | 500 |
| 1N4454 | 150 | 25 | 75 | 450 | - | 1.0 | 10 | 5.0 | 4 | 500 |

1N4531 Series, Case Type: DO-34



| | | | | | | | | | | |
|---------|-----|----|----|-----|-----|-----|----|--------|---|-----|
| 1N4531 | 200 | 75 | 75 | - | 0.5 | 1.0 | 10 | 25 nA | 4 | 500 |
| 1N4532 | 200 | 75 | 75 | - | 0.5 | 1.0 | 10 | 100 nA | 2 | 500 |
| 1N4148S | 150 | 25 | 75 | 450 | 0.5 | 1.0 | 10 | 5.0 | 4 | 500 |

1N914 Series, Case Type: DO-35



| | | | | | | | | | | |
|--------|----|----|----|---|-----|------|----|-------|---|-----|
| 1N914 | 75 | 25 | 75 | - | 0.5 | 1.0 | 10 | 25 nA | 4 | 250 |
| 1N914A | 75 | 25 | 75 | - | 0.5 | 1.0 | 20 | 25 nA | 4 | 250 |
| 1N914B | 75 | 25 | 75 | - | 0.5 | 0.72 | 5 | 25 nA | 4 | 250 |

1S1585 Series, Case Type: DO-35



| | | | | | | | | | | |
|---------|-----|----|----|---|-----|-----|-----|-----|---|-----|
| 1S1585 | 150 | 25 | 80 | - | 0.7 | 1.0 | 100 | 0.5 | 2 | 300 |
| 1S1586 | 150 | 25 | 50 | - | 0.7 | 1.0 | 100 | 0.5 | 2 | 300 |
| 1S1587 | 130 | 25 | 50 | - | 0.6 | 1.2 | 100 | 0.5 | 2 | 300 |
| 1S1588 | 120 | 25 | 30 | - | 0.5 | 1.3 | 100 | 0.5 | 4 | 300 |
| 1S2076A | 150 | 25 | 70 | - | 1.0 | 0.8 | 10 | 0.1 | 4 | 250 |

1SS130 Series, Case Type: DO-34



| | | | | | | | | | | |
|--------|-----|----|----|-----|-----|-----|-----|-----|---|-----|
| 1SS130 | 130 | 25 | 75 | 400 | - | 1.0 | 10 | 0.5 | 4 | 300 |
| 1SS131 | 130 | 25 | 80 | 400 | 0.6 | 1.2 | 100 | 0.5 | 4 | 300 |
| 1SS132 | 120 | 25 | 50 | 350 | 0.5 | 1.2 | 100 | 0.5 | 4 | 300 |
| 1SS133 | 110 | 25 | 35 | 300 | 0.6 | 1.2 | 100 | 0.5 | 4 | 300 |

Note : (1) Reverse Recovery test conditions : I_F = 1A, di/dt = 50 A/ms



High Speed Switching Diodes

| Type No. | Max. Average Forward Rectified Current | | Max. Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Repetitive Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time ⁽¹⁾ | Max. Power Dissipation |
|----------|--|------|----------------------|--------------------------------------|-------------------------------|--------------------------------------|------------------|---------------------------------|---|------------------------|
| | I _{F(AV)} | @ Ta | V _{RM} | I _{FRM} | I _{FSM} | V _F | @ I _F | I _R | T _{rr} | P _D |
| | (mA) | (°C) | (V) | (mA) | (A) | (V) | (mA) | (μA) | (ns) | (mW) |

1SS176 Series, Case Type: DO-34



| | | | | | | | | | | |
|---------|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|
| 1SS176 | 100 | 25 | 30 | 300 | 1.0 | 1.2 | 100 | 0.5 | 4.0 | 300 |
| 1SS177 | 100 | 25 | 50 | 300 | 1.0 | 1.2 | 100 | 0.5 | 4.0 | 300 |
| 1SS178 | 100 | 25 | 80 | 300 | 1.0 | 1.2 | 100 | 0.5 | 4.0 | 300 |
| 1SS270A | 150 | 25 | 70 | - | 1.0 | 0.8 | 10 | 1.0 | 3.5 | 250 |
| BAS15 | 100 | 150 | 50 | 225 | 0.5 | 1.1 | 100 | 0.2 | 4.0 | 350 |

BAV10 Series, Case Type: DO-35



| | | | | | | | | | | |
|-------|-----|----|-----|-----|-----|-----|-----|-----|----|-----|
| BAV10 | 300 | 25 | 60 | 600 | 1.0 | 1.0 | 200 | 0.1 | 6 | 350 |
| BAV19 | 200 | 25 | 100 | 625 | 1.0 | 1.0 | 100 | 0.1 | 50 | 500 |
| BAV20 | 200 | 25 | 150 | 625 | 1.0 | 1.0 | 100 | 0.1 | 50 | 500 |
| BAV21 | 200 | 25 | 200 | 625 | 1.0 | 1.0 | 100 | 0.1 | 50 | 500 |

BAW62 Series, Case Type: DO-35



| | | | | | | | | | | |
|-------|-----|----|----|-----|-----|-----|-----|-----|---|-----|
| BAW62 | 250 | 25 | 75 | 450 | 0.5 | 1.0 | 100 | 5.0 | 4 | 350 |
| BAW75 | 150 | 25 | 25 | - | 2.0 | 1.0 | 30 | 0.1 | 4 | 500 |
| BAW76 | 150 | 25 | 50 | - | 2.0 | 1.0 | 100 | 0.1 | 4 | 500 |

BAV100 Series, Case Type: Mini MELF



| | | | | | | | | | | |
|--------|-----|----|-----|-----|-----|-----|-----|-----|----|-----|
| BAV100 | 200 | 25 | 50 | 625 | 1.0 | 1.0 | 100 | 0.1 | 50 | 400 |
| BAV101 | 200 | 25 | 100 | 625 | 1.0 | 1.0 | 100 | 0.1 | 50 | 400 |
| BAV102 | 200 | 25 | 150 | 625 | 1.0 | 1.0 | 100 | 0.1 | 50 | 400 |
| BAV103 | 200 | 25 | 200 | 625 | 1.0 | 1.0 | 100 | 0.1 | 50 | 400 |
| BAV105 | 300 | 25 | 60 | 600 | 0.5 | 1.0 | 200 | 0.1 | 6 | 500 |

BAX14 Series, Case Type: DO-35



| | | | | | | | | | | |
|-------|-----|----|-----|-----|-----|------|-----|-----|----|-----|
| BAX14 | 400 | 25 | 40 | 2A | 9.0 | 1.00 | 300 | 0.1 | 50 | 450 |
| BAX18 | 400 | 25 | 75 | 2A | 9.0 | 1.00 | 300 | 5.0 | 50 | 450 |
| BAY80 | 200 | 25 | 150 | 650 | 1.0 | 1.07 | 150 | 0.1 | 50 | 400 |

LL4148 Series, Case Type: Mini MELF



| | | | | | | | | | | |
|--------|-----|----|----|-----|-----|------|-----|------|---|-----|
| LL4148 | 200 | 25 | 75 | 450 | 0.5 | 1.00 | 10 | 5.00 | 4 | 500 |
| LL4150 | 200 | 25 | 50 | 600 | 0.5 | 1.00 | 200 | 0.10 | 4 | 500 |
| LL4151 | 200 | 25 | 50 | 450 | 0.5 | 1.00 | 50 | 0.05 | 4 | 500 |
| LL4153 | 200 | 25 | 50 | 450 | 0.5 | 0.88 | 50 | 0.05 | 4 | 500 |
| LL4448 | 200 | 25 | 75 | 450 | 0.5 | 1.00 | 100 | 5.00 | 4 | 500 |



High Speed Switching Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Max. Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Repetitive Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time ⁽¹⁾ | Max. Power Dissipation |
|----------|--|------|----------------------|--------------------------------------|-------------------------------|--------------------------------------|------------------|---------------------------------|---|------------------------|
| | I _{F(AV)} | @ Ta | V _{RM} | I _{FRM} | I _{FSM} | V _F | @ I _F | I _R | T _{rr} | P _D |
| | (mA) | (°C) | (V) | (mA) | (A) | (V) | (mA) | (μA) | (ns) | (mW) |

BAV19W - 21W, Case Type: SOD-123



| | | | | | | | | | | |
|--------|-----|----|-----|-----|-----|-----|-----|-----|----|-----|
| BAV19W | 200 | 25 | 120 | 625 | 2.5 | 1.0 | 100 | 0.1 | 50 | 250 |
| BAV20W | 200 | 25 | 200 | 625 | 2.5 | 1.0 | 100 | 0.1 | 50 | 250 |
| BAV21W | 200 | 25 | 250 | 625 | 2.5 | 1.0 | 100 | 0.1 | 50 | 250 |

1N4448W, Case Type: SOD-123



| | | | | | | | | | | |
|---------|-----|----|-----|---|-----|------|-----|-----|-----|-----|
| 1N4448W | 150 | 25 | 100 | - | 4.0 | 1.25 | 150 | 0.1 | 4.0 | 400 |
|---------|-----|----|-----|---|-----|------|-----|-----|-----|-----|

1N914W, Case Type: SOD-123



| | | | | | | | | | | |
|--------|-----|----|-----|---|-----|------|----|-----|-----|-----|
| 1N914W | 200 | 25 | 100 | - | 1.0 | 1.00 | 10 | 5.0 | 4.0 | 400 |
|--------|-----|----|-----|---|-----|------|----|-----|-----|-----|

1N4148W/WS/WT, Case Type: SOD-123, SOD-323, SOD-523



| | | | | | | | | | | |
|----------|-----|----|-----|---|------|-----|----|-----|-----|-----|
| 1N4148W | 150 | 25 | 100 | - | 0.50 | 1.0 | 10 | 5.0 | 4.0 | 400 |
| 1N4148WS | 150 | 25 | 75 | - | 0.35 | 1.0 | 10 | 5.0 | 4.0 | 200 |
| 1N4148WT | 125 | 25 | 100 | - | 2.00 | 1.0 | 50 | 1.0 | 4.0 | 150 |

1SS355 Series, Case Type: SOD-323



| | | | | | | | | | | |
|--------|-----|----|----|---|-----|-----|-----|-----|-----|---|
| 1SS355 | 100 | 25 | 90 | - | 0.5 | 1.2 | 100 | 0.1 | 4.0 | - |
|--------|-----|----|----|---|-----|-----|-----|-----|-----|---|

BAS16WS, Case Type: SOD-323



| | | | | | | | | | | |
|---------|-----|----|----|---|-----|-----|----|-----|-----|-----|
| BAS16WS | 250 | 25 | 75 | - | 0.5 | 1.0 | 50 | 1.0 | 6.0 | 200 |
|---------|-----|----|----|---|-----|-----|----|-----|-----|-----|

BAV19WS Series, Case Type: SOD-323



| | | | | | | | | | | |
|---------|-----|----|-----|-----|-----|-----|-----|-----|----|-----|
| BAV19WS | 200 | 25 | 100 | 625 | 1.0 | 1.0 | 100 | 0.1 | 50 | 200 |
| BAV20WS | 200 | 25 | 150 | 625 | 1.0 | 1.0 | 100 | 0.1 | 50 | 200 |
| BAV21WS | 200 | 25 | 200 | 625 | 1.0 | 1.0 | 100 | 0.1 | 50 | 200 |

BAS216WS - 316WS, BAS321, Case Type: SOD-323



| | | | | | | | | | | |
|----------|-----|----|-----|---|-----|------|-----|-----|-----|-----|
| BAS216WS | 250 | 25 | 85 | - | 4.0 | 1.25 | 150 | 1.0 | 4.0 | 400 |
| BAS316WS | 250 | 90 | 100 | - | 4.0 | 1.25 | 150 | 1.0 | 4.0 | 400 |
| BAS321 | 250 | 25 | 250 | - | 9.0 | 1.25 | 200 | 0.1 | 4.0 | 300 |

1SS352 Series, Case Type: SOD-323



| | | | | | | | | | | |
|--------|-----|----|----|---|-----|------|-----|-----|-----|-----|
| 1SS352 | 100 | 25 | 85 | - | 1.0 | 0.98 | 100 | 0.5 | 4.0 | 200 |
|--------|-----|----|----|---|-----|------|-----|-----|-----|-----|



High Speed Switching Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Max. Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Repetitive Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time ⁽¹⁾ | Max. Power Dissipation |
|----------|--|------|----------------------|--------------------------------------|-------------------------------|--------------------------------------|------------------|---------------------------------|---|------------------------|
| | I _{F(AV)} | @ Ta | V _{RM} | I _{FRM} | I _{FSM} | V _F | @ I _F | I _R | T _{rr} | P _D |
| | (mA) | (°C) | (V) | (mA) | (A) | (V) | (mA) | (μA) | (ns) | (mW) |

RB520S-30, Case Type: SOD-523



| | | | | | | | | | | |
|-----------|-----|----|----|---|-----|-----|-----|-----|-----|---|
| RB520S-30 | 200 | 25 | 30 | - | 1.0 | 0.6 | 200 | 1.0 | 4.0 | - |
|-----------|-----|----|----|---|-----|-----|-----|-----|-----|---|

BAS216WT, Case Type: SOD-523



| | | | | | | | | | | |
|----------|-----|----|----|---|-----|------|-----|-----|-----|-----|
| BAS216WT | 250 | 25 | 85 | - | 4.0 | 1.25 | 150 | 1.0 | 4.0 | 400 |
|----------|-----|----|----|---|-----|------|-----|-----|-----|-----|

1N914WT, Case Type: SOD-523



| | | | | | | | | | | |
|---------|-----|----|-----|---|-----|------|----|-----|-----|-----|
| 1N914WT | 200 | 25 | 100 | - | 0.5 | 1.00 | 10 | 5.0 | 4.0 | 150 |
|---------|-----|----|-----|---|-----|------|----|-----|-----|-----|

BAS521, Case Type: SOD-523



| | | | | | | | | | | |
|--------|-----|----|-----|---|-----|------|-----|-----|----|-----|
| BAS521 | 250 | 90 | 300 | - | 4.5 | 1.10 | 100 | 0.2 | 50 | 500 |
|--------|-----|----|-----|---|-----|------|-----|-----|----|-----|

1SS181- 7 Series, Case Type: SOT-23



| | | | | | | | | | | |
|--------|-----|----|----|---|-----|-----|-----|-----|-----|-----|
| 1SS181 | 100 | 25 | 85 | - | 2.0 | 1.2 | 100 | 0.5 | 4.0 | 150 |
| 1SS184 | 100 | 25 | 85 | - | 2.0 | 1.2 | 100 | 0.5 | 4.0 | 150 |
| 1SS187 | 100 | 25 | 85 | - | 2.0 | 1.2 | 100 | 0.5 | 4.0 | 150 |

1SS226, Case Type: SOT-23



| | | | | | | | | | | |
|--------|-----|----|----|---|-----|-----|-----|-----|-----|-----|
| 1SS226 | 100 | 25 | 85 | - | 2.0 | 1.2 | 100 | 0.5 | 4.0 | 150 |
|--------|-----|----|----|---|-----|-----|-----|-----|-----|-----|

BAS16, Case Type: SOT-23



| | | | | | | | | | | |
|--------|-----|----|----|-----|---|------|-----|-------|-------|-----|
| BAS16 | 215 | 25 | 85 | 500 | 4 | 1.25 | 150 | 1.0 | 4.0 | 250 |
| BAS116 | 215 | 25 | 85 | 500 | 4 | 1.25 | 150 | 5(nA) | 3(μs) | 250 |

BAS19 - 21, Case Type: SOT-23



| | | | | | | | | | | |
|-------|-----|----|-----|---|---|-----|-----|-----|----|-----|
| BAS19 | 200 | 25 | 120 | - | 9 | 1.0 | 100 | 0.1 | 50 | 250 |
| BAS20 | 200 | 25 | 200 | - | 9 | 1.0 | 100 | 0.1 | 50 | 250 |
| BAS21 | 200 | 25 | 250 | - | 9 | 1.0 | 100 | 0.1 | 50 | 250 |



High Speed Switching Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Max. Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Repetitive Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time ⁽¹⁾ | Max. Power Dissipation |
|----------|--|------|----------------------|--------------------------------------|-------------------------------|--------------------------------------|------------------|---------------------------------|---|------------------------|
| | I _{F(AV)} | @ Ta | V _{RM} | I _{FRM} | I _{FSM} | V _F | @ I _F | I _R | T _{rr} | P _D |
| | (mA) | (°C) | (V) | (mA) | (A) | (V) | (mA) | (μA) | (ns) | (mW) |

BAS70 Series, Case Type: SOT-23



| | | | | | | | | | | |
|----------|-----|----|----|---|-----|-----|----|-----|-----|-----|
| BAS70-00 | 200 | 25 | 70 | - | 0.6 | 1.0 | 15 | 0.1 | 5.0 | 200 |
| BAS70-04 | 200 | 25 | 70 | - | 0.6 | 1.0 | 15 | 0.1 | 5.0 | 200 |
| BAS70-05 | 200 | 25 | 70 | - | 0.6 | 1.0 | 15 | 0.1 | 5.0 | 200 |
| BAS70-06 | 200 | 25 | 70 | - | 0.6 | 1.0 | 15 | 0.1 | 5.0 | 200 |

BAV23 Series, Case Type: SOT-23



| | | | | | | | | | | |
|---------|-----|----|-----|-----|-----|-----|-----|-----|----|-----|
| BAV23 | 400 | 25 | 250 | 625 | 9.0 | 1.0 | 100 | 0.1 | 50 | 350 |
| BAV23SE | 400 | 25 | 250 | 625 | 9.0 | 1.0 | 100 | 0.1 | 50 | 350 |
| BAV23CC | 400 | 25 | 250 | 625 | 9.0 | 1.0 | 100 | 0.1 | 50 | 350 |
| BAV23CA | 400 | 25 | 250 | 625 | 9.0 | 1.0 | 100 | 0.1 | 50 | 350 |

BAV70 & BAV99, Case Type: SOT-23



| | | | | | | | | | | |
|-------|-----|----|----|-----|---|-----|----|-----|-----|-----|
| BAV70 | 200 | 25 | 70 | - | 2 | 1.0 | 50 | 5.0 | 6.0 | 350 |
| BAV99 | 125 | 25 | 85 | 450 | 1 | 1.0 | 50 | 1.0 | 4.0 | 250 |

BAW56, Case Type: SOT-23



| | | | | | | | | | | |
|-------|-----|----|----|-----|---|------|-----|-----|-----|-----|
| BAW56 | 125 | 25 | 85 | 450 | 4 | 1.25 | 150 | 1.0 | 4.0 | 250 |
|-------|-----|----|----|-----|---|------|-----|-----|-----|-----|

BAT400D, Case Type: SOT-23



| | | | | | | | | | | |
|---------|-----|----|----|---|-----|------|-----|----|-----|-----|
| BAT400D | 500 | 25 | 40 | - | 3.0 | 0.55 | 500 | 30 | 4.0 | 480 |
|---------|-----|----|----|---|-----|------|-----|----|-----|-----|

MMBD914/MMBD7000, Case Type: SOT-23



| | | | | | | | | | | |
|----------|-----|----|-----|---|-----|-----|-----|-----|-----|-----|
| MMBD914 | 200 | 25 | 100 | - | 0.5 | 1.0 | 10 | 5.0 | 4.0 | 225 |
| MMBD7000 | 200 | 25 | 100 | - | 2.0 | 1.1 | 100 | 3 | 4.0 | 350 |

MMBD4148, Case Type: SOT-23



| | | | | | | | | | | |
|------------|-----|----|-----|-----|-----|-----|----|-----|-----|-----|
| MMBD4148 | 200 | 25 | 100 | 700 | 1.0 | 1.0 | 10 | 5.0 | 4.0 | 350 |
| MMBD4148SE | 200 | 25 | 100 | 700 | 1.0 | 1.0 | 10 | 5.0 | 4.0 | 350 |
| MMBD4148CC | 200 | 25 | 100 | 700 | 1.0 | 1.0 | 10 | 5.0 | 4.0 | 350 |
| MMBD4148CA | 200 | 25 | 100 | 700 | 1.0 | 1.0 | 10 | 5.0 | 4.0 | 350 |



High Voltage Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|---------------------------------|--------------------------------------|------|---------------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) |

HVR125 Series, 0.2 - 0.5 A, Case Type: DO-41



| | | | | | | | | | |
|--------|--|-----|----|------|-----|----|-----|-----|-----|
| HVR125 | | 0.5 | 50 | 2500 | 5.0 | 30 | 3.3 | 1.0 | 5.0 |
| HVR130 | | 0.5 | 50 | 3000 | 5.0 | 30 | 3.3 | 1.0 | 5.0 |
| HVR140 | | 0.3 | 50 | 4000 | 5.0 | 30 | 5.0 | 1.0 | 5.0 |
| HVR150 | | 0.3 | 50 | 5000 | 5.0 | 30 | 5.0 | 1.0 | 5.0 |
| HVR160 | | 0.2 | 50 | 6000 | 5.0 | 30 | 8.0 | 1.0 | 5.0 |
| HVR170 | | 0.2 | 50 | 7000 | 5.0 | 30 | 8.0 | 1.0 | 5.0 |
| HVR180 | | 0.2 | 50 | 8000 | 5.0 | 30 | 8.0 | 1.0 | 5.0 |

GP02-20 Series, 0.25 A, Case Type: DO-41



| | | | | | | | | | |
|---------|--|------|----|------|---|----|-----|-----|-----|
| GP02-20 | | 0.25 | 55 | 2000 | - | 15 | 3.0 | 1.0 | 5.0 |
| GP02-25 | | 0.25 | 55 | 2500 | - | 15 | 3.0 | 1.0 | 5.0 |
| GP02-30 | | 0.25 | 55 | 3000 | - | 15 | 3.0 | 1.0 | 5.0 |
| GP02-35 | | 0.25 | 55 | 3500 | - | 15 | 3.0 | 1.0 | 5.0 |
| GP02-40 | | 0.25 | 55 | 4000 | - | 15 | 3.0 | 1.0 | 5.0 |

HVR230 Series, 0.5 - 1 A, Case Type: D2



| | | | | | | | | | |
|--------|--|-----|----|------|---|----|-----|-----|-----|
| HVR230 | | 1.0 | 50 | 3000 | - | 50 | 3.0 | 1.0 | 5.0 |
| HVR250 | | 0.5 | 50 | 5000 | - | 50 | 5.0 | 1.0 | 5.0 |

HVR112/SN1N Series, 1 A, Case Type: DO-41/SMA



| | | | | | | | | | |
|--------|------|-----|----|------|-----|----|-----|-----|-----|
| HVR112 | SN1N | 1.0 | 75 | 1200 | 5.0 | 30 | 2.2 | 1.0 | 5.0 |
| HVR114 | SN1O | 1.0 | 75 | 1400 | 5.0 | 30 | 2.2 | 1.0 | 5.0 |
| HVR116 | SN1P | 1.0 | 75 | 1600 | 5.0 | 30 | 2.2 | 1.0 | 5.0 |
| HVR118 | SN1Q | 1.0 | 75 | 1800 | 5.0 | 30 | 2.2 | 1.0 | 5.0 |
| HVR120 | SN1R | 1.0 | 75 | 2000 | 5.0 | 30 | 2.2 | 1.0 | 5.0 |
| | S1T | 1.0 | 75 | 3000 | - | 30 | 3.0 | 1.0 | 5.0 |

SHV-01JN - SHV-06HN, 2 - 30 mA, Case Type: M1A & DO-41



| | | | | | | | | | |
|-----------|--|-------|----|------|---|-----|-----|-------|-----|
| SHV-01JN* | | 0.030 | 25 | 500 | - | 3.0 | 1.0 | 0.010 | 10 |
| SHV-02JN | | 0.030 | 25 | 1000 | - | 3.0 | 2.0 | 0.010 | 10 |
| SHV-06JN | | 0.030 | 25 | 3000 | - | 3.0 | 6.0 | 0.010 | 10 |
| SHV-05J | | 0.030 | 25 | 2500 | - | 3.0 | 5.0 | 0.010 | 10 |
| SHV-04 | | 0.002 | 25 | 4000 | - | 0.5 | 20 | 0.010 | 1.0 |
| SHV-06HN | | 0.002 | 25 | 6000 | - | 0.5 | 24 | 0.010 | 1.0 |

* M1A Package

HVR3509/HVR3509H, 0.35A, Case Type: DO-201AD



| | | | | | | | | | |
|----------|--|-------|----|------|---|----|-----|------|-----|
| HVR3509 | | 0.35A | 25 | 9000 | - | 30 | 8.0 | 0.35 | 5.0 |
| HVR3509H | | 0.35A | 25 | 9000 | - | 30 | 10 | 0.35 | 5.0 |



High Voltage Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|---------------------------------|--------------------------------------|------------------|---------------------------------|
| | | I _{F(AV)} | @ Ta | V _{RRM} | I _{FRM} | I _{FSM} | V _F | @ I _F | I _R |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) |

HVR4509 , 0.45A, Case Type: DO-201AD



| | | | | | | | | | |
|---------|--|-------|----|------|---|----|-----|------|-----|
| HVR4509 | | 0.45A | 25 | 9000 | - | 30 | 8.0 | 0.45 | 5.0 |
|---------|--|-------|----|------|---|----|-----|------|-----|

HVR312/SN3N Series, 3 A, Case Type: DO-201AD/SMC



| | | | | | | | | | |
|--------|------|-----|----|------|----|-----|-----|-----|----|
| HVR312 | SN3N | 3.0 | 50 | 1200 | 10 | 100 | 2.2 | 3.0 | 10 |
| HVR314 | SN3O | 3.0 | 50 | 1400 | 10 | 100 | 2.2 | 3.0 | 10 |
| HVR316 | SN3P | 3.0 | 50 | 1600 | 10 | 100 | 2.2 | 3.0 | 10 |
| HVR318 | SN3Q | 3.0 | 50 | 1800 | 10 | 100 | 2.2 | 3.0 | 10 |
| HVR320 | SN3R | 3.0 | 50 | 2000 | 10 | 100 | 2.2 | 3.0 | 10 |

HVR512/SN5N Series, 5 A, Case Type: DO-201AD/SMC



| | | | | | | | | | |
|--------|------|-----|----|------|----|-----|-----|-----|----|
| HVR512 | SN5N | 5.0 | 50 | 1200 | 20 | 200 | 2.2 | 5.0 | 10 |
| HVR514 | SN5O | 5.0 | 50 | 1400 | 20 | 200 | 2.2 | 5.0 | 10 |
| HVR516 | SN5P | 5.0 | 50 | 1600 | 20 | 200 | 2.2 | 5.0 | 10 |
| HVR518 | SN5Q | 5.0 | 50 | 1800 | 20 | 200 | 2.2 | 5.0 | 10 |
| HVR520 | SN5R | 5.0 | 50 | 2000 | 20 | 200 | 2.2 | 5.0 | 10 |

Note: V_{RRM} > 2000 V is available on special request

High Voltage Fast Recovery Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Reverse Recovery Time | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C |
|------------|-----|--|------|--------------------------------------|----------------------------|---------------------------------|--------------------------------------|------------------|---------------------------------|
| | | Current | | Voltage | Time | Current | at Ta=25°C | | at Ta=25°C |
| | | I _{F(AV)} | @ Ta | V _{RRM} | T _{rr} | I _{FSM} | V _F | @ I _F | I _R |
| Axial Lead | SMD | (A) | (°C) | (V) | (ns) | (A) | (V) | (A) | (μA) |

SHV-02 -SHV-03S, 2 mA, Case Type: M1A



| | | | | | | | | | |
|---------|--|-------|----|------|--------------------|-----|----|-------|-----|
| SHV-02 | | 0.002 | 25 | 2000 | 180 ⁽¹⁾ | 0.3 | 16 | 0.010 | 1.0 |
| SHV-03 | | 0.002 | 25 | 3000 | 180 ⁽¹⁾ | 0.5 | 16 | 0.010 | 1.0 |
| SHV-03S | | 0.002 | 25 | 3000 | 180 ⁽¹⁾ | 0.3 | 16 | 0.010 | 1.0 |

SHV- 05EN - SHV- 08EN, 2 mA, Case Type: DO-41



| | | | | | | | | | |
|----------|--|-------|----|------|--------------------|-----|----|-------|-----|
| SHV-05EN | | 0.002 | 25 | 5000 | 150 ⁽¹⁾ | 0.5 | 20 | 0.010 | 1.0 |
| SHV-06EN | | 0.002 | 25 | 6000 | 150 ⁽¹⁾ | 0.5 | 24 | 0.010 | 1.0 |
| SHV-08EN | | 0.002 | 25 | 8000 | 50 ⁽²⁾ | 0.5 | 30 | 0.010 | 1.0 |

Notes:

- (1) Reverse Recovery Test Conditions : I_F = 10 mA, I_{RP} = 10 mA.
- (2) Reverse Recovery Test Conditions : I_F = 0.5A, I_R = 1 A, I_{rr} = 0.25 A



High Voltage Fast Recovery Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time ⁽¹⁾ |
|----------|--|------|--------------------------------------|--------------------------------------|---------------------------------|--------------------------------------|-----|---------------------------------|---|
| | I _{F(AV)} @ T _a | | V _{RRM} | I _{FRM} | I _{FSM} | V _F @ I _F | | I _R | T _{rr} |
| | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

BY8004 Series, Case Type: DO-41



| | | | | | | | | | |
|--------|------|-----|------|-----|---|----|-----|-------|-----|
| BY8004 | 0.02 | 90 | 5000 | 0.5 | - | 20 | 0.1 | 3.0 * | 100 |
| BY8006 | 0.01 | 100 | 8000 | 0.5 | - | 25 | 0.1 | 3.0 * | 100 |

* T_j=120°C

HFR125 Series, 0.25 - 0.30 A, Case Type: DO-41



| | | | | | | | | | |
|--------|------|----|------|---|----|-----|------|-----|-----|
| HFR125 | 0.25 | 50 | 2500 | - | 30 | 5.0 | 0.25 | 1.0 | 250 |
| HFR130 | 0.25 | 50 | 3000 | - | 30 | 7.0 | 0.25 | 1.0 | 200 |
| HFR180 | 0.30 | 50 | 8000 | - | 40 | 9.0 | 0.3 | 5.0 | 200 |

HUF150 , 0.5 A, Case Type: DO-41



| | | | | | | | | | |
|--------|-----|----|------|---|----|------|-----|-----|----|
| HUF150 | 0.5 | 50 | 5000 | - | 20 | 12.0 | 0.5 | 5.0 | 90 |
|--------|-----|----|------|---|----|------|-----|-----|----|

GS1S , 0.2 A, Case Type: SMA



| | | | | | | | | | |
|------|-----|----|------|---|----|-----|-----|-----|----|
| GS1S | 0.2 | 25 | 2500 | - | 30 | 6.0 | 0.2 | 1.0 | 35 |
|------|-----|----|------|---|----|-----|-----|-----|----|

RGP02 Series, 0.5 A, Case Type: DO-41



| | | | | | | | | | |
|-----------|-----|----|------|-----|----|-----|-----|-----|-----|
| RGP02-12E | 0.5 | 55 | 1200 | 5.0 | 20 | 1.8 | 0.1 | 5.0 | 300 |
| RGP02-14E | 0.5 | 55 | 1400 | 5.0 | 20 | 1.8 | 0.1 | 5.0 | 300 |
| RGP02-16E | 0.5 | 55 | 1600 | 5.0 | 20 | 1.8 | 0.1 | 5.0 | 300 |
| RGP02-18E | 0.5 | 55 | 1800 | 5.0 | 20 | 1.8 | 0.1 | 5.0 | 300 |
| RGP02-20E | 0.5 | 55 | 2000 | 5.0 | 20 | 1.8 | 0.1 | 5.0 | 300 |

SR1P Series, 0.5 A, Case Type: SMA



| | | | | | | | | | |
|------|-----|----|------|---|----|-----|-----|-----|-----|
| SR1N | 0.5 | 75 | 1200 | - | 30 | 2.6 | 1.0 | 5.0 | 300 |
| SR1O | 0.5 | 75 | 1400 | - | 30 | 2.6 | 1.0 | 5.0 | 300 |
| SR1P | 0.5 | 75 | 1600 | - | 30 | 2.6 | 1.0 | 5.0 | 300 |
| SR1R | 0.5 | 75 | 2000 | - | 30 | 3.0 | 0.5 | 5.0 | 500 |

GR15 Series, 1 A, Case Type: DO-215AC



| | | | | | | | | | |
|--------|-----|----|------|---|----|-----|-----|-----|-----|
| GR15-G | 0.5 | 55 | 1500 | - | 20 | 2.0 | 0.1 | 5.0 | 300 |
| GR20-G | 0.5 | 55 | 2000 | - | 20 | 2.4 | 0.1 | 5.0 | 500 |

UHVR112, 1.0A Case Type: DO-41



| | | | | | | | | | |
|---------|-----|----|------|---|----|-----|-----|-----|----|
| UHVR112 | 1.0 | 75 | 1200 | - | 30 | 2.2 | 1.0 | 5.0 | 75 |
|---------|-----|----|------|---|----|-----|-----|-----|----|

3TH41 Series, 3 A, Case Type: DO-201AD



| | | | | | | | | | |
|-------|-----|----|------|---|----|-----|-----|----|----------------------|
| 3TH41 | 3.0 | 25 | 1500 | - | 50 | 1.2 | 3.0 | 10 | 1.5μs ⁽²⁾ |
|-------|-----|----|------|---|----|-----|-----|----|----------------------|

FHVR1120, 0.2A Case Type: D2



| | | | | | | | | | |
|----------|-----|----|-------|---|----|----|-----|-----|-----|
| FHVR1120 | 0.2 | 50 | 12000 | - | 20 | 13 | 0.2 | 5.0 | 150 |
|----------|-----|----|-------|---|----|----|-----|-----|-----|

Notes: (1) Reverse Recovery test conditions : I_F = 0.5A, I_R = 1 A, I_{rr} = 0.25 A

(2) Reverse Recovery test conditions : I_F = 100 mA, I_R = 100 mA



Cell Rectifier Diodes

| Type No. | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C |
|----------|--|------|--------------------------------------|--------------------------------------|---------------------------------|--------------------------------------|------------------|---------------------------------|
| | I _{F(AV)} | @ Ta | V _{RRM} | I _{FRM} | I _{FSM} | V _F | @ I _F | I _R |
| | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) |

CN3 Series, 3 A, Case Type: C3A



| | | | | | | | | |
|------|-----|----|------|----|-----|-----|-----|-----|
| CN3A | 3.0 | 75 | 50 | 30 | 200 | 1.1 | 3.0 | 5.0 |
| CN3B | 3.0 | 75 | 100 | 30 | 200 | 1.1 | 3.0 | 5.0 |
| CN3D | 3.0 | 75 | 200 | 30 | 200 | 1.1 | 3.0 | 5.0 |
| CN3G | 3.0 | 75 | 400 | 30 | 200 | 1.1 | 3.0 | 5.0 |
| CN3J | 3.0 | 75 | 600 | 30 | 200 | 1.1 | 3.0 | 5.0 |
| CN3K | 3.0 | 75 | 800 | 30 | 200 | 1.1 | 3.0 | 5.0 |
| CN3M | 3.0 | 75 | 1000 | 30 | 200 | 1.1 | 3.0 | 5.0 |

CN5 Series, 5 A, Case Type: C5A



| | | | | | | | | |
|------|-----|----|------|----|-----|-----|-----|-----|
| CN5A | 5.0 | 75 | 50 | 60 | 250 | 1.1 | 5.0 | 5.0 |
| CN5B | 5.0 | 75 | 100 | 60 | 250 | 1.1 | 5.0 | 5.0 |
| CN5D | 5.0 | 75 | 200 | 60 | 250 | 1.1 | 5.0 | 5.0 |
| CN5G | 5.0 | 75 | 400 | 60 | 250 | 1.1 | 5.0 | 5.0 |
| CN5J | 5.0 | 75 | 600 | 60 | 250 | 1.1 | 5.0 | 5.0 |
| CN5K | 5.0 | 75 | 800 | 60 | 250 | 1.1 | 5.0 | 5.0 |
| CN5M | 5.0 | 75 | 1000 | 60 | 250 | 1.1 | 5.0 | 5.0 |

CN8 Series, 8 A, Case Type: C8A



| | | | | | | | | |
|------|-----|----|------|----|-----|-----|-----|-----|
| CN8A | 8.0 | 75 | 50 | 60 | 300 | 1.1 | 8.0 | 5.0 |
| CN8B | 8.0 | 75 | 100 | 60 | 300 | 1.1 | 8.0 | 5.0 |
| CN8D | 8.0 | 75 | 200 | 60 | 300 | 1.1 | 8.0 | 5.0 |
| CN8G | 8.0 | 75 | 400 | 60 | 300 | 1.1 | 8.0 | 5.0 |
| CN8J | 8.0 | 75 | 600 | 60 | 300 | 1.1 | 8.0 | 5.0 |
| CN8K | 8.0 | 75 | 800 | 60 | 300 | 1.1 | 8.0 | 5.0 |
| CN8M | 8.0 | 75 | 1000 | 60 | 300 | 1.1 | 8.0 | 5.0 |

CN18 Series, 18 A, Case Type: C18A



| | | | | | | | | |
|-------|----|----|------|----|-----|-----|----|-----|
| CN18A | 18 | 75 | 50 | 75 | 400 | 1.1 | 18 | 5.0 |
| CN18B | 18 | 75 | 100 | 75 | 400 | 1.1 | 18 | 5.0 |
| CN18D | 18 | 75 | 200 | 75 | 400 | 1.1 | 18 | 5.0 |
| CN18G | 18 | 75 | 400 | 75 | 400 | 1.1 | 18 | 5.0 |
| CN18J | 18 | 75 | 600 | 75 | 400 | 1.1 | 18 | 5.0 |
| CN18K | 18 | 75 | 800 | 75 | 400 | 1.1 | 18 | 5.0 |
| CN18M | 18 | 75 | 1000 | 75 | 400 | 1.1 | 18 | 5.0 |

CN25 Series, 25 A, Case Type: C18A



| | | | | | | | | |
|-------|----|----|------|----|-----|-----|----|-----|
| CN25A | 25 | 75 | 50 | 75 | 400 | 1.1 | 25 | 5.0 |
| CN25B | 25 | 75 | 100 | 75 | 400 | 1.1 | 25 | 5.0 |
| CN25D | 25 | 75 | 200 | 75 | 400 | 1.1 | 25 | 5.0 |
| CN25G | 25 | 75 | 400 | 75 | 400 | 1.1 | 25 | 5.0 |
| CN25J | 25 | 75 | 600 | 75 | 400 | 1.1 | 25 | 5.0 |
| CN25K | 25 | 75 | 800 | 75 | 400 | 1.1 | 25 | 5.0 |
| CN25M | 25 | 75 | 1000 | 75 | 400 | 1.1 | 25 | 5.0 |



Automotive Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | |
|----------|--|------|--------------------------------------|--------------------------------------|---------------------------------|--------------------------------------|------------------|---------------------------------|--|
| | I _{F(AV)} | @ Ta | V _{RRM} | I _{FRM} | I _{FSM} | V _F | @ I _F | I _R | |
| | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | |

AR2500/MR2500 Series, 25 A, Case Type: BUTTON/MR



| | | | | | | | | | |
|-----------------------|-----------------------|----|-----|------|----|-----|-----|----|-----|
| AR2500 ⁽¹⁾ | MR2500 ⁽¹⁾ | 25 | 150 | 50 | 75 | 400 | 1.0 | 25 | 5.0 |
| AR2501 ⁽¹⁾ | MR2501 ⁽¹⁾ | 25 | 150 | 100 | 75 | 400 | 1.0 | 25 | 5.0 |
| AR2502 ⁽¹⁾ | MR2502 ⁽¹⁾ | 25 | 150 | 200 | 75 | 400 | 1.0 | 25 | 5.0 |
| AR2504 ⁽¹⁾ | MR2504 ⁽¹⁾ | 25 | 150 | 400 | 75 | 400 | 1.0 | 25 | 5.0 |
| AR2506 ⁽¹⁾ | MR2506 ⁽¹⁾ | 25 | 150 | 600 | 75 | 400 | 1.0 | 25 | 5.0 |
| AR2508 ⁽¹⁾ | MR2508 ⁽¹⁾ | 25 | 150 | 800 | 75 | 400 | 1.0 | 25 | 5.0 |
| AR2510 ⁽¹⁾ | MR2510 ⁽¹⁾ | 25 | 150 | 1000 | 75 | 400 | 1.0 | 25 | 5.0 |
| AR2512 ⁽¹⁾ | MR2512 ⁽¹⁾ | 25 | 150 | 1200 | 75 | 400 | 1.0 | 25 | 5.0 |

AR3500/MR3500 Series, 35 A, Case Type: BUTTON/MR



| | | | | | | | | | |
|-----------------------|-----------------------|----|-----|------|----|-----|-----|----|-----|
| AR3500 ⁽¹⁾ | MR3500 ⁽¹⁾ | 35 | 150 | 50 | 75 | 400 | 1.1 | 35 | 5.0 |
| AR3501 ⁽¹⁾ | MR3501 ⁽¹⁾ | 35 | 150 | 100 | 75 | 400 | 1.1 | 35 | 5.0 |
| AR3502 ⁽¹⁾ | MR3502 ⁽¹⁾ | 35 | 150 | 200 | 75 | 400 | 1.1 | 35 | 5.0 |
| AR3504 ⁽¹⁾ | MR3504 ⁽¹⁾ | 35 | 150 | 400 | 75 | 400 | 1.1 | 35 | 5.0 |
| AR3506 ⁽¹⁾ | MR3506 ⁽¹⁾ | 35 | 150 | 600 | 75 | 400 | 1.1 | 35 | 5.0 |
| AR3508 ⁽¹⁾ | MR3508 ⁽¹⁾ | 35 | 150 | 800 | 75 | 400 | 1.1 | 35 | 5.0 |
| AR3510 ⁽¹⁾ | MR3510 ⁽¹⁾ | 35 | 150 | 1000 | 75 | 400 | 1.1 | 35 | 5.0 |
| AR3512 ⁽¹⁾ | MR3512 ⁽¹⁾ | 35 | 150 | 1200 | 75 | 400 | 1.1 | 35 | 5.0 |

AR5000/MR5000 Series, 50 A, Case Type: BUTTON/MR



| | | | | | | | | | |
|-----------------------|-----------------------|----|-----|------|----|-----|-----|----|-----|
| AR5000 ⁽¹⁾ | MR5000 ⁽¹⁾ | 50 | 150 | 50 | 75 | 500 | 1.1 | 50 | 5.0 |
| AR5001 ⁽¹⁾ | MR5001 ⁽¹⁾ | 50 | 150 | 100 | 75 | 500 | 1.1 | 50 | 5.0 |
| AR5002 ⁽¹⁾ | MR5002 ⁽¹⁾ | 50 | 150 | 200 | 75 | 500 | 1.1 | 50 | 5.0 |
| AR5004 ⁽¹⁾ | MR5004 ⁽¹⁾ | 50 | 150 | 400 | 75 | 500 | 1.1 | 50 | 5.0 |
| AR5006 ⁽¹⁾ | MR5006 ⁽¹⁾ | 50 | 150 | 600 | 75 | 500 | 1.1 | 50 | 5.0 |
| AR5008 ⁽¹⁾ | MR5008 ⁽¹⁾ | 50 | 150 | 800 | 75 | 500 | 1.1 | 50 | 5.0 |
| AR5010 ⁽¹⁾ | MR5010 ⁽¹⁾ | 50 | 150 | 1000 | 75 | 500 | 1.1 | 50 | 5.0 |
| AR5012 ⁽¹⁾ | MR5012 ⁽¹⁾ | 50 | 150 | 1200 | 75 | 500 | 1.1 | 50 | 5.0 |

MR750 Series, 22 A, Case Type: D6



| | | | | | | | | | |
|-------|--|----|----------------------|------|---|-----|-----|-----|----|
| MR750 | | 22 | 60 (T _L) | 50 | - | 400 | 0.9 | 6.0 | 25 |
| MR751 | | 22 | 60 (T _L) | 100 | - | 400 | 0.9 | 6.0 | 25 |
| MR752 | | 22 | 60 (T _L) | 200 | - | 400 | 0.9 | 6.0 | 25 |
| MR754 | | 22 | 60 (T _L) | 400 | - | 400 | 0.9 | 6.0 | 25 |
| MR756 | | 22 | 60 (T _L) | 600 | - | 400 | 0.9 | 6.0 | 25 |
| MR758 | | 22 | 60 (T _L) | 800 | - | 400 | 0.9 | 6.0 | 25 |
| MR760 | | 22 | 60 (T _L) | 1000 | - | 400 | 0.9 | 6.0 | 25 |

Note:

(1) Wire leads version available in case type D6 ; Add suffix "L" e.g. AR2500L



Avalanche Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Allowable Avalanche Current (Note 1) | Max. Repetitive Peak Reverse Voltage | Min. Avalanche Breakdown Voltage @ 1 mA | Max. Avalanche Breakdown Voltage @ 1 mA | Max. Peak Forward Surge Current | Max. Reverse Current at Ta=25°C |
|----------|---|--|---|---|---------------------------------------|---------------------------------------|
| | I _{ZSM} | V _{RRM} | V _{BR} (Min) | V _{BR} (Max) | I _{FSM} | I _R |
| | (A) | (V) | (V) | (V) | (A) | (μA) |

R2G Series, 1 A, Case Type: D2



| | | | | | | |
|------|-----|-----|-----|-----|----|-----|
| R2G | 1.0 | 115 | 120 | 145 | - | 10 |
| R2M | 1.0 | 130 | 135 | 180 | 75 | 5.0 |
| R2KN | 1.0 | 140 | 150 | 170 | - | 10 |
| R2KS | 1.0 | 145 | 160 | 180 | - | 10 |
| R2K | 1.0 | 150 | 170 | 200 | - | 10 |

BYD13D Series, 1.4 A, Case Type: DO-41



| | | | | | | |
|--------|-----|------|------|---|----|-----|
| BYD13D | 1.4 | 200 | 225 | - | 20 | 1.0 |
| BYD13G | 1.4 | 400 | 450 | - | 20 | 1.0 |
| BYD13J | 1.4 | 600 | 650 | - | 20 | 1.0 |
| BYD13K | 1.4 | 800 | 900 | - | 20 | 1.0 |
| BYD13M | 1.4 | 1000 | 1100 | - | 20 | 1.0 |

BYD17D Series, 1.5 A, Case Type: MELF(Pastic)



| | | | | | | |
|--------|-----|------|----|------|-----|-----|
| BYD17D | 1.5 | 225 | 20 | 1.05 | 1.0 | 1.0 |
| BYD17G | 1.5 | 450 | 20 | 1.05 | 1.0 | 1.0 |
| BYD17J | 1.5 | 650 | 20 | 1.05 | 1.0 | 1.0 |
| BYD17K | 1.5 | 900 | 20 | 1.05 | 1.0 | 1.0 |
| BYD17M | 1.5 | 1100 | 20 | 1.05 | 1.0 | 1.0 |

BYW54 Series, 2.0 A, Case Type: D2



| | | | | | | |
|-------|-----|------|------|---|----|-----|
| BYW54 | 2.0 | 600 | 650 | - | 50 | 1.0 |
| BYW55 | 2.0 | 800 | 900 | - | 50 | 1.0 |
| BYW56 | 2.0 | 1000 | 1100 | - | 50 | 1.0 |

R2KY Series, 2.0 - 3.0 A, Case Type: D2



| | | | | | | |
|------|-----|-----|-----|------|---|-----|
| R2KY | 2.0 | 120 | 130 | 155 | - | 10 |
| RM25 | 3.0 | 40 | 50 | 61.5 | - | 5.0 |

BYX134PL Series, 0.05 A, Case Type: D2



| | | | | | | |
|----------|------|------|------|------|---|-----|
| BYX134PL | 0.05 | 4000 | 5500 | 7500 | - | 1.0 |
|----------|------|------|------|------|---|-----|

* For case type DO-41 ; Add suffix "G" e.g. BYX134GPL

Note : (1) 100 μs single square pulse



Avalanche Fast Recovery Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Min. Avalanche Breakdown Voltage @ 100 μ A | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|----------|--|-------------------|--------------------------------------|--|---------------------------------|--------------------------------------|------------------|---------------------------------|--------------------------------|
| | I _{F(AV)} | @ T _{tp} | V _{RRM} | V _{BR(Min)} | I _{FSM} | V _F | @ I _F | I _R | T _{rr} ⁽¹⁾ |
| | (A) | (°C) | (V) | (V) | (A) | (V) | (A) | (mA) | (ns) |

BAX12 Series, 0.4 A, Case Type: DO-35



| | | | | | | | | | |
|--------|-----|----|----|-----|----|------|-----|-----|----|
| BAX12 | 0.4 | 25 | 90 | 120 | 15 | 1.25 | 0.4 | 0.1 | 50 |
| BAX12A | 0.4 | 25 | 90 | 120 | 15 | 1.25 | 0.4 | 0.1 | 50 |

BYV26A Series, 1 A, Case Type: DO-41



| | | | | | | | | | |
|--------|-----|----|------|------|----|-----|-----|-----|----|
| BYV26A | 1.0 | 55 | 200 | 300 | 30 | 2.5 | 1.0 | 5.0 | 30 |
| BYV26B | 1.0 | 55 | 400 | 500 | 30 | 2.5 | 1.0 | 5.0 | 30 |
| BYV26C | 1.0 | 55 | 600 | 700 | 30 | 2.5 | 1.0 | 5.0 | 30 |
| BYV26D | 1.0 | 55 | 800 | 900 | 30 | 2.5 | 1.0 | 5.0 | 75 |
| BYV26E | 1.0 | 55 | 1000 | 1100 | 30 | 2.5 | 1.0 | 5.0 | 75 |

BYD33D Series, 1.3 A, Case Type: DO-41



| | | | | | | | | | |
|--------|-----|----|------|------|----|-----|-----|-----|-----|
| BYD33D | 1.3 | 55 | 200 | 300 | 20 | 1.3 | 1.0 | 1.0 | 250 |
| BYD33G | 1.3 | 55 | 400 | 500 | 20 | 1.3 | 1.0 | 1.0 | 250 |
| BYD33J | 1.3 | 55 | 600 | 700 | 20 | 1.3 | 1.0 | 1.0 | 250 |
| BYD33K | 1.3 | 55 | 800 | 900 | 20 | 1.3 | 1.0 | 1.0 | 300 |
| BYD33M | 1.3 | 55 | 1000 | 1100 | 20 | 1.3 | 1.0 | 1.0 | 300 |

BYV36 Series, 1.5 - 1.6 A, Case Type: DO-15



| | | | | | | | | | |
|--------|-----|----|------|------|----|------|-----|-----|-----|
| BYV36A | 1.6 | 60 | 200 | 300 | 30 | 1.35 | 1.0 | 5.0 | 100 |
| BYV36B | 1.6 | 60 | 400 | 500 | 30 | 1.35 | 1.0 | 5.0 | 100 |
| BYV36C | 1.6 | 60 | 600 | 700 | 30 | 1.35 | 1.0 | 5.0 | 100 |
| BYV36D | 1.5 | 60 | 800 | 900 | 30 | 1.45 | 1.0 | 5.0 | 150 |
| BYV36E | 1.5 | 60 | 1000 | 1100 | 30 | 1.45 | 1.0 | 5.0 | 150 |

BYV95 Series, 1.5 A, Case Type: D2



| | | | | | | | | | |
|--------|-----|----|------|------|----|-----|-----|-----|-----|
| BYV95A | 1.5 | 55 | 200 | 300 | 35 | 1.6 | 3.0 | 5.0 | 250 |
| BYV95B | 1.5 | 55 | 400 | 500 | 35 | 1.6 | 3.0 | 5.0 | 250 |
| BYV95C | 1.5 | 55 | 600 | 700 | 35 | 1.6 | 3.0 | 5.0 | 250 |
| BYV96D | 1.5 | 55 | 800 | 900 | 35 | 1.6 | 3.0 | 5.0 | 300 |
| BYV96E | 1.5 | 55 | 1000 | 1100 | 35 | 1.6 | 3.0 | 5.0 | 300 |

BYG10D - M Series, 1.5 A, Case Type: SMA



| | | | | | | | | | |
|--------|-----|----|------|---|----|------|-----|-----|-----------|
| BYG10D | 1.5 | 85 | 200 | - | 30 | 1.15 | 1.5 | 1.0 | 4 μ s |
| BYG10G | 1.5 | 85 | 400 | - | 30 | 1.15 | 1.5 | 1.0 | 4 μ s |
| BYG10J | 1.5 | 85 | 600 | - | 30 | 1.15 | 1.5 | 1.0 | 4 μ s |
| BYG10K | 1.5 | 85 | 800 | - | 30 | 1.15 | 1.5 | 1.0 | 4 μ s |
| BYG10M | 1.5 | 85 | 1000 | - | 30 | 1.15 | 1.5 | 1.0 | 4 μ s |

Note : (1) Reverse Recovery test conditions : I_F = 0.5A, I_R = 1 A, I_{rr} = 0.25 A



Avalanche Fast Recovery Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Min. Avalanche Breakdown Voltage @ 100 μ A | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|----------|--|-------------------|--------------------------------------|--|---------------------------------|--------------------------------------|------------------|---------------------------------|--------------------------------|
| | I _{F(AV)} | @ T _{tp} | V _{RRM} | V _{BR(Min)} | I _{FSM} | V _F | @ I _F | I _R | T _{rr} ⁽¹⁾ |
| | (A) | (°C) | (V) | (V) | (A) | (V) | (A) | (mA) | (ns) |

BYG20D - J Series, 1.5 A, Case Type: SMA



| | | | | | | | | | |
|--------|-----|----|-----|---|----|-----|-----|-----|----|
| BYG20D | 1.5 | 85 | 200 | - | 30 | 1.4 | 1.5 | 1.0 | 75 |
| BYG20G | 1.5 | 85 | 400 | - | 30 | 1.4 | 1.5 | 1.0 | 75 |
| BYG20J | 1.5 | 85 | 600 | - | 30 | 1.4 | 1.5 | 1.0 | 75 |

BYG24D - J Series, 1.5 A, Case Type: SMA



| | | | | | | | | | |
|--------|-----|----|-----|---|----|------|-----|-----|-----|
| BYG24D | 1.5 | 95 | 200 | - | 30 | 1.25 | 1.5 | 1.0 | 140 |
| BYG24G | 1.5 | 95 | 400 | - | 30 | 1.25 | 1.5 | 1.0 | 140 |
| BYG24J | 1.5 | 95 | 600 | - | 30 | 1.25 | 1.5 | 1.0 | 140 |

BYD37D - M Series, 1.5 A, Case Type: MELF(Pastic)



| | | | | | | | | | |
|--------|-----|----------|------|------|----|-----|-----|-----|-----|
| BYD37D | 1.5 | 105(Ttp) | 200 | 300 | 20 | 1.3 | 1.0 | 1.0 | 250 |
| BYD37G | 1.5 | 105(Ttp) | 400 | 500 | 20 | 1.3 | 1.0 | 1.0 | 250 |
| BYD37J | 1.5 | 105(Ttp) | 600 | 700 | 20 | 1.3 | 1.0 | 1.0 | 250 |
| BYD37K | 1.5 | 105(Ttp) | 800 | 900 | 20 | 1.3 | 1.0 | 1.0 | 300 |
| BYD37M | 1.5 | 105(Ttp) | 1000 | 1100 | 20 | 1.3 | 1.0 | 1.0 | 300 |

BYD37DA - MA Series, 1.5 A, Case Type: SMA



| | | | | | | | | | |
|---------|-----|----------|------|------|----|-----|-----|-----|-----|
| BYD37DA | 1.5 | 105(Ttp) | 200 | 300 | 20 | 1.3 | 1.0 | 1.0 | 250 |
| BYD37GA | 1.5 | 105(Ttp) | 400 | 500 | 20 | 1.3 | 1.0 | 1.0 | 250 |
| BYD37JA | 1.5 | 105(Ttp) | 600 | 700 | 20 | 1.3 | 1.0 | 1.0 | 250 |
| BYD37KA | 1.5 | 105(Ttp) | 800 | 900 | 20 | 1.3 | 1.0 | 1.0 | 300 |
| BYD37MA | 1.5 | 105(Ttp) | 1000 | 1100 | 20 | 1.3 | 1.0 | 1.0 | 300 |

BYD57D - V Series, 1.0-1.2 A, Case Type: MELF(Pastic)



| | | | | | | | | | |
|--------|-----|---------|------|------|---|-----|-----|-----|-----|
| BYD57D | 1.0 | 85(Ttp) | 200 | 300 | 5 | 3.6 | 1.0 | 5.0 | 30 |
| BYD57G | 1.0 | 85(Ttp) | 400 | 500 | 5 | 3.6 | 1.0 | 5.0 | 30 |
| BYD57J | 1.0 | 85(Ttp) | 600 | 700 | 5 | 3.6 | 1.0 | 5.0 | 30 |
| BYD57K | 1.0 | 85(Ttp) | 800 | 900 | 5 | 3.6 | 1.0 | 5.0 | 75 |
| BYD57M | 1.0 | 85(Ttp) | 1000 | 1100 | 5 | 3.6 | 1.0 | 5.0 | 75 |
| BYD57U | 1.2 | 85(Ttp) | 1200 | 1300 | 5 | 2.3 | 1.0 | 5.0 | 150 |
| BYD57V | 1.2 | 85(Ttp) | 1400 | 1500 | 5 | 2.3 | 1.0 | 5.0 | 150 |

Note : (1) Reverse Recovery test conditions : I_F = 0.5A, I_R = 1 A, I_{rr} = 0.25 A



Avalanche Fast Recovery Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Min. Avalanche Breakdown Voltage @ 100 μ A | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|----------|--|-------------------|--------------------------------------|--|---------------------------------|--------------------------------------|------------------|---------------------------------|--------------------------------|
| | I _{F(AV)} | @ T _{tp} | V _{RRM} | V _{BR(Min)} | I _{FSM} | V _F | @ I _F | I _R | T _{rr} ⁽¹⁾ |
| | (A) | (°C) | (V) | (V) | (A) | (V) | (A) | (mA) | (ns) |

BYD77A - G Series, 1.85 - 2 A, Case Type: MELF(Pastic)



| | | | | | | | | | |
|--------|------|----------|-----|-----|----|------|-----|-----|----|
| BYD77A | 2.0 | 105(Ttp) | 50 | 55 | 25 | 0.98 | 1.0 | 1.0 | 25 |
| BYD77B | 2.0 | 105(Ttp) | 100 | 110 | 25 | 0.98 | 1.0 | 1.0 | 25 |
| BYD77C | 2.0 | 105(Ttp) | 150 | 165 | 25 | 0.98 | 1.0 | 1.0 | 25 |
| BYD77D | 2.0 | 105(Ttp) | 200 | 220 | 25 | 0.98 | 1.0 | 1.0 | 25 |
| BYD77E | 1.85 | 105(Ttp) | 250 | 275 | 25 | 1.05 | 1.0 | 1.0 | 50 |
| BYD77F | 1.85 | 105(Ttp) | 300 | 330 | 25 | 1.05 | 1.0 | 1.0 | 50 |
| BYD77G | 1.85 | 105(Ttp) | 400 | 440 | 25 | 1.05 | 1.0 | 1.0 | 50 |

BYD77AA - GA Series, 1.85 - 2 A, Case Type: SMA



| | | | | | | | | | |
|---------|------|----------|-----|-----|----|------|-----|-----|----|
| BYD77AA | 2.0 | 105(Ttp) | 50 | 55 | 25 | 0.98 | 1.0 | 1.0 | 25 |
| BYD77BA | 2.0 | 105(Ttp) | 100 | 110 | 25 | 0.98 | 1.0 | 1.0 | 25 |
| BYD77CA | 2.0 | 105(Ttp) | 150 | 165 | 25 | 0.98 | 1.0 | 1.0 | 25 |
| BYD77DA | 2.0 | 105(Ttp) | 200 | 220 | 25 | 0.98 | 1.0 | 1.0 | 25 |
| BYD77EA | 1.85 | 105(Ttp) | 250 | 275 | 25 | 1.05 | 1.0 | 1.0 | 50 |
| BYD77FA | 1.85 | 105(Ttp) | 300 | 330 | 25 | 1.05 | 1.0 | 1.0 | 50 |
| BYD77GA | 1.85 | 105(Ttp) | 400 | 440 | 25 | 1.05 | 1.0 | 1.0 | 50 |

BYV27 Series, 2 A, Case Type: DO-41



| | | | | | | | | | |
|-----------|-----|----|-----|-----|----|------|-----|-----|----|
| BYV27-100 | 2.0 | 85 | 100 | 110 | 50 | 1.07 | 3.0 | 1.0 | 25 |
| BYV27-150 | 2.0 | 85 | 150 | 165 | 50 | 1.07 | 3.0 | 1.0 | 25 |
| BYV27-200 | 2.0 | 85 | 200 | 220 | 50 | 1.07 | 3.0 | 1.0 | 25 |

BYW95 Series, 3.0 A, Case Type: DO-201AD



| | | | | | | | | | |
|--------|-----|----|------|------|----|-----|-----|-----|-----|
| BYW95A | 3.0 | 55 | 200 | 300 | 70 | 1.5 | 5.0 | 5.0 | 250 |
| BYW95B | 3.0 | 55 | 400 | 500 | 70 | 1.5 | 5.0 | 5.0 | 250 |
| BYW95C | 3.0 | 55 | 600 | 700 | 70 | 1.5 | 5.0 | 5.0 | 250 |
| BYW96D | 3.0 | 55 | 800 | 900 | 70 | 1.5 | 5.0 | 5.0 | 300 |
| BYW96E | 3.0 | 55 | 1000 | 1100 | 70 | 1.5 | 5.0 | 5.0 | 300 |

Note :

(1) Reverse Recovery test conditions : I_F = 0.5A, I_R = 1 A, I_{rr} = 0.25 A



Fast Recovery Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Surge Forward Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|----------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Trr |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

1F1 Series, 1 A, Case Type: R-1



| | | | | | | | | | | |
|-----|--|-----|----|------|---|----|-----|-----|-----|--------------------|
| 1F1 | | 1.0 | 50 | 50 | - | 30 | 1.3 | 1.0 | 5.0 | 150 ⁽¹⁾ |
| 1F2 | | 1.0 | 50 | 100 | - | 30 | 1.3 | 1.0 | 5.0 | 150 ⁽¹⁾ |
| 1F3 | | 1.0 | 50 | 200 | - | 30 | 1.3 | 1.0 | 5.0 | 150 ⁽¹⁾ |
| 1F4 | | 1.0 | 50 | 400 | - | 30 | 1.3 | 1.0 | 5.0 | 150 ⁽¹⁾ |
| 1F5 | | 1.0 | 50 | 600 | - | 30 | 1.3 | 1.0 | 5.0 | 250 ⁽¹⁾ |
| 1F6 | | 1.0 | 50 | 800 | - | 30 | 1.3 | 1.0 | 5.0 | 500 ⁽¹⁾ |
| 1F7 | | 1.0 | 50 | 1000 | - | 30 | 1.3 | 1.0 | 5.0 | 500 ⁽¹⁾ |

ERA34-10/EP01C 0.1 - 0.2 A, Case Type: DO-41



| | | | | | | | | | | |
|----------|--|------|----|------|---|-----|-----|-----|-----|--------------------|
| ERA34-10 | | 0.10 | 60 | 1000 | - | 2.0 | 3.0 | 0.1 | 50 | 150 ⁽³⁾ |
| EP01C | | 0.20 | 25 | 1000 | - | 5.0 | 4.0 | 0.2 | 5.0 | 200 ⁽³⁾ |
| AP01C | | 0.20 | 25 | 1000 | - | 5.0 | 4.0 | 0.2 | 100 | 200 ⁽³⁾ |

EU1 Series, 0.2 - 0.25 A, Case Type: DO-41



| | | | | | | | | | | |
|------|--|------|----|------|---|----|-----|------|----|--------------------|
| EU1Z | | 0.25 | 25 | 200 | - | 15 | 2.5 | 0.25 | 10 | 400 ⁽²⁾ |
| EU1 | | 0.25 | 25 | 400 | - | 15 | 2.5 | 0.25 | 10 | 400 ⁽²⁾ |
| EU1A | | 0.25 | 25 | 600 | - | 15 | 2.5 | 0.25 | 10 | 400 ⁽²⁾ |
| EU1C | | 0.20 | 25 | 1000 | - | 15 | 2.5 | 0.20 | 10 | 400 ⁽²⁾ |

RU1 Series, 0.2 - 0.25 A, Case Type: D2



| | | | | | | | | | | |
|------|--|------|----|------|---|----|-----|------|----|--------------------|
| RU1 | | 0.25 | 50 | 400 | - | 15 | 2.5 | 0.25 | 10 | 400 ⁽²⁾ |
| RU1A | | 0.25 | 50 | 600 | - | 15 | 2.5 | 0.25 | 10 | 400 ⁽²⁾ |
| RU1B | | 0.25 | 50 | 800 | - | 15 | 2.5 | 0.25 | 10 | 400 ⁽²⁾ |
| RU1C | | 0.20 | 50 | 1000 | - | 15 | 3.0 | 0.20 | 10 | 400 ⁽²⁾ |

AU01 Series, 0.5 A, Case Type: DO-41



| | | | | | | | | | | |
|-------|--|-----|----|-----|---|----|-----|-----|----|--------------------|
| AU01 | | 0.5 | 25 | 400 | - | 15 | 1.7 | 0.5 | 10 | 400 ⁽²⁾ |
| AU01A | | 0.5 | 25 | 600 | - | 15 | 1.7 | 0.5 | 10 | 400 ⁽²⁾ |
| AU01Z | | 0.5 | 25 | 200 | - | 15 | 1.7 | 0.5 | 10 | 400 ⁽²⁾ |

ERA22-02 Series, 0.5 A, Case Type: DO-41



| | | | | | | | | | | |
|----------|--|-----|----|------|---|----|-----|-----|----|--------------------|
| ERA22-02 | | 0.5 | 40 | 200 | - | 10 | 1.5 | 0.5 | 10 | 400 ⁽³⁾ |
| ERA22-04 | | 0.5 | 40 | 400 | - | 10 | 1.5 | 0.5 | 10 | 400 ⁽³⁾ |
| ERA22-06 | | 0.5 | 40 | 600 | - | 10 | 1.5 | 0.5 | 10 | 400 ⁽³⁾ |
| ERA22-08 | | 0.5 | 40 | 800 | - | 10 | 1.5 | 0.5 | 10 | 400 ⁽³⁾ |
| ERA22-10 | | 0.5 | 40 | 1000 | - | 10 | 1.5 | 0.5 | 10 | 400 ⁽³⁾ |

ERB43-02 Series, 0.5 A, Case Type: DO-41



| | | | | | | | | | | |
|----------|--|-----|----|-----|---|----|-----|-----|----|--------------------|
| ERB43-02 | | 0.5 | 40 | 200 | - | 10 | 1.2 | 0.5 | 10 | 400 ⁽³⁾ |
| ERB43-04 | | 0.5 | 40 | 400 | - | 10 | 1.2 | 0.5 | 10 | 400 ⁽³⁾ |
| ERB43-06 | | 0.5 | 40 | 600 | - | 10 | 1.2 | 0.5 | 10 | 400 ⁽³⁾ |
| ERB43-08 | | 0.5 | 40 | 800 | - | 10 | 1.2 | 0.5 | 10 | 400 ⁽³⁾ |

Notes: (1) Reverse recovery test conditions : $I_F = 0.5$ A, $I_R = 1$ A, with $I_{rr} = 0.25$ A

(2) Reverse recovery test conditions : $I_F = 10$ mA, $I_R = 10$ mA recover to 1 mA

(3) Reverse recovery test conditions : $I_F = 100$ mA, $I_R = 100$ mA



Fast Recovery Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Surge Forward Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|----------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Trr |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

TVR1 Series, 0.5 A, Case Type: DO-41



| | | | | | | | | | | | |
|-------|--|-----|----|-----|---|----|-----|-----|----|-------------------|--------------------|
| TVR1B | | 0.5 | 60 | 100 | - | 10 | 1.2 | 0.5 | 10 | 75 ⁽¹⁾ | 300 ⁽³⁾ |
| TVR1G | | 0.5 | 60 | 400 | - | 10 | 1.2 | 0.5 | 10 | 75 ⁽¹⁾ | 300 ⁽³⁾ |
| TVR1J | | 0.5 | 60 | 600 | - | 10 | 1.2 | 0.5 | 10 | 75 ⁽¹⁾ | 300 ⁽³⁾ |

TVR2 Series, 0.5 A, Case Type: D2



| | | | | | | | | | | | |
|-------|--|-----|----|-----|---|----|-----|-----|----|-------------------|--|
| TVR2B | | 0.5 | 60 | 100 | - | 30 | 1.4 | 1.0 | 10 | 20 ⁽⁴⁾ | |
| TVR2D | | 0.5 | 60 | 200 | - | 30 | 1.4 | 1.0 | 10 | 20 ⁽⁴⁾ | |
| TVR2G | | 0.5 | 60 | 400 | - | 30 | 1.4 | 1.0 | 10 | 20 ⁽⁴⁾ | |
| TVR2J | | 0.5 | 60 | 600 | - | 30 | 1.4 | 1.0 | 10 | 20 ⁽⁴⁾ | |

S5295B Series, 0.5 A, Case Type: DO-41



| | | | | | | | | | | | |
|--------|--|-----|----|-----|---|----|-----|-----|----|----------------------|--|
| S5295B | | 0.5 | 25 | 100 | - | 30 | 1.5 | 1.0 | 10 | 1.5μs ⁽⁴⁾ | |
| S5295G | | 0.5 | 25 | 400 | - | 30 | 1.5 | 1.0 | 10 | 1.5μs ⁽⁴⁾ | |
| S5295J | | 0.5 | 25 | 600 | - | 30 | 1.5 | 1.0 | 10 | 1.5μs ⁽⁴⁾ | |

05NU41 Series, 0.5 A, Case Type: DO-41



| | | | | | | | | | | | |
|--------|--|-----|----|------|---|----|-----|-----|-----|--------------------|--|
| 05NU41 | | 0.5 | 25 | 1000 | - | 10 | 3.0 | 0.5 | 100 | 100 ⁽⁵⁾ | |
| 05NU42 | | 0.5 | 25 | 1000 | - | 10 | 3.0 | 0.5 | 100 | 100 ⁽⁵⁾ | |

RH1 Series, 0.6 A, Case Type: D2



| | | | | | | | | | | | |
|------|--|-----|----|------|---|----|-----|-----|-----|--------------------|--|
| RH1 | | 0.6 | 50 | 400 | - | 35 | 1.3 | 0.6 | 5.0 | 4μs ⁽²⁾ | |
| RH1A | | 0.6 | 50 | 600 | - | 35 | 1.3 | 0.6 | 5.0 | 4μs ⁽²⁾ | |
| RH1B | | 0.6 | 50 | 800 | - | 35 | 1.3 | 0.6 | 5.0 | 4μs ⁽²⁾ | |
| RH1C | | 0.6 | 50 | 1000 | - | 35 | 1.3 | 0.6 | 5.0 | 4μs ⁽²⁾ | |

ES1 Series, 0.5 - 0.7 A, Case Type: DO-41



| | | | | | | | | | | | |
|-------|--|-----|----|------|---|----|-----|-----|----|----------------------|--|
| ES1Z | | 0.7 | 25 | 200 | - | 30 | 2.5 | 0.8 | 10 | 1.5μs ⁽²⁾ | |
| ES1 | | 0.7 | 25 | 400 | - | 30 | 2.5 | 0.8 | 10 | 1.5μs ⁽²⁾ | |
| ES1 A | | 0.7 | 25 | 600 | - | 30 | 2.5 | 0.8 | 10 | 1.5μs ⁽²⁾ | |
| ES1F | | 0.5 | 50 | 1500 | - | 20 | 2.0 | 0.5 | 10 | 1.5μs ⁽²⁾ | |

AU02 Series, 0.8 A, Case Type: DO-41



| | | | | | | | | | | | |
|-------|--|-----|----|-----|---|----|-----|-----|----|--------------------|--|
| AU02 | | 0.8 | 25 | 400 | - | 25 | 1.3 | 0.8 | 10 | 400 ⁽³⁾ | |
| AU02A | | 0.8 | 25 | 600 | - | 25 | 1.3 | 0.8 | 10 | 400 ⁽³⁾ | |
| AU02Z | | 0.8 | 25 | 200 | - | 25 | 1.3 | 0.8 | 10 | 400 ⁽³⁾ | |

Notes :

- (1) Reverse recovery test conditions : $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, with $I_{rr} = 0.25 \text{ A}$
- (2) Reverse recovery test conditions : $I_F = 10 \text{ mA}$, $I_R = 10 \text{ mA}$ recover to 1 mA
- (3) Reverse recovery test conditions : $I_F = 100 \text{ mA}$, $I_R = 100 \text{ mA}$
- (4) Reverse recovery test conditions : $I_F = 20 \text{ mA}$, $I_R = 1 \text{ mA}$
- (5) Reverse recovery test conditions : $I_F = 1 \text{ A}$, $di/dt = -30 \text{ A/ms}$.



Fast Recovery Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | The plastic material samples are 24°C recognition at 25°C. | | | | | | | | |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|---------------------------------|----------------------------|------|
| | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Surge Forward Current | Max. Forward Voltage Drop at Ta=25°C | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time | |
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF @ IF | IR | Trr | |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

ERB38-04 Series, 0.8 A, Case Type: DO-41



| | | | | | | | | | | |
|----------|--|-----|----|-----|---|----|-----|-----|----|-------------------|
| ERB38-04 | | 0.8 | 25 | 400 | - | 20 | 2.5 | 0.8 | 50 | 50 ⁽⁴⁾ |
| ERB38-05 | | 0.8 | 25 | 500 | - | 20 | 2.5 | 0.8 | 50 | 50 ⁽⁴⁾ |
| ERB38-06 | | 0.8 | 25 | 600 | - | 20 | 2.5 | 0.8 | 50 | 50 ⁽⁴⁾ |

1SR153-100 Series, 0.8 A, Case Type: DO-41



| | | | | | | | | | | | |
|------------|--|-----|----|-----|---|----|-----|-----|----|--------------------|--------------------|
| 1SR153-100 | | 0.8 | 55 | 100 | - | 30 | 1.3 | 0.8 | 10 | 400 ⁽³⁾ | 250 ⁽¹⁾ |
| 1SR153-200 | | 0.8 | 55 | 200 | - | 30 | 1.3 | 0.8 | 10 | 400 ⁽³⁾ | 250 ⁽¹⁾ |
| 1SR153-400 | | 0.8 | 55 | 400 | - | 30 | 1.3 | 0.8 | 10 | 400 ⁽³⁾ | 250 ⁽¹⁾ |

1SR124-100 Series, 1 A, Case Type: DO-41



| | | | | | | | | | | | |
|------------|--|-----|----|-----|---|----|-----|-----|----|--------------------|--------------------|
| 1SR124-100 | | 1.0 | 55 | 100 | - | 30 | 1.3 | 1.0 | 10 | 400 ⁽³⁾ | 250 ⁽¹⁾ |
| 1SR124-200 | | 1.0 | 55 | 200 | - | 30 | 1.3 | 1.0 | 10 | 400 ⁽³⁾ | 250 ⁽¹⁾ |
| 1SR124-400 | | 1.0 | 55 | 400 | - | 30 | 1.3 | 1.0 | 10 | 400 ⁽³⁾ | 250 ⁽¹⁾ |

ERB44-02 Series, 1 A, Case Type: DO-41



| | | | | | | | | | | |
|----------|--|-----|----|------|---|----|-----|-----|----|--------------------|
| ERB44-02 | | 1.0 | 40 | 200 | - | 30 | 1.1 | 1.0 | 10 | 400 ⁽²⁾ |
| ERB44-04 | | 1.0 | 40 | 400 | - | 30 | 1.1 | 1.0 | 10 | 400 ⁽²⁾ |
| ERB44-06 | | 1.0 | 40 | 600 | - | 30 | 1.1 | 1.0 | 10 | 400 ⁽²⁾ |
| ERB44-08 | | 1.0 | 40 | 800 | - | 30 | 1.1 | 1.0 | 10 | 400 ⁽²⁾ |
| ERB44-10 | | 1.0 | 40 | 1000 | - | 30 | 1.1 | 1.0 | 10 | 400 ⁽²⁾ |

EU2 Series, 1 - 1.2 A, Case Type: DO-41



| | | | | | | | | | | |
|-------|--|-----|----|-----|---|----|-----|-----|----|--------------------|
| EU2YX | | 1.2 | 25 | 70 | - | 25 | 0.9 | 1.2 | 10 | 200 ⁽³⁾ |
| EU2Z | | 1.0 | 25 | 200 | - | 15 | 1.4 | 1.0 | 10 | 400 ⁽³⁾ |
| EU2 | | 1.0 | 25 | 400 | - | 15 | 1.4 | 1.0 | 10 | 400 ⁽³⁾ |
| EU2A | | 1.0 | 25 | 600 | - | 15 | 1.4 | 1.0 | 10 | 400 ⁽³⁾ |

RGP10A Series, 1 A, Case Type: DO-41



| | | | | | | | | | | |
|--------|--|-----|----|------|---|----|-----|-----|-----|--------------------|
| RGP10A | | 1.0 | 55 | 50 | - | 30 | 1.3 | 1.0 | 5.0 | 150 ⁽¹⁾ |
| RGP10B | | 1.0 | 55 | 100 | - | 30 | 1.3 | 1.0 | 5.0 | 150 ⁽¹⁾ |
| RGP10D | | 1.0 | 55 | 200 | - | 30 | 1.3 | 1.0 | 5.0 | 150 ⁽¹⁾ |
| RGP10G | | 1.0 | 55 | 400 | - | 30 | 1.3 | 1.0 | 5.0 | 150 ⁽¹⁾ |
| RGP10J | | 1.0 | 55 | 600 | - | 30 | 1.3 | 1.0 | 5.0 | 250 ⁽¹⁾ |
| RGP10K | | 1.0 | 55 | 800 | - | 30 | 1.3 | 1.0 | 5.0 | 500 ⁽¹⁾ |
| RGP10M | | 1.0 | 55 | 1000 | - | 30 | 1.3 | 1.0 | 5.0 | 500 ⁽¹⁾ |

10ELS1 Series, 1 A, Case Type: D2



| | | | | | | | | | | |
|--------|--|-----|----|-----|---|----|------|-----|----|--------------------|
| 10ELS1 | | 1.0 | 25 | 100 | - | 30 | 1.10 | 1.0 | 10 | 150 ⁽¹⁾ |
| 10ELS2 | | 1.0 | 25 | 200 | - | 30 | 1.10 | 1.0 | 10 | 150 ⁽¹⁾ |
| 10ELS4 | | 1.0 | 25 | 400 | - | 50 | 1.15 | 1.0 | 10 | 150 ⁽¹⁾ |
| 10ELS6 | | 1.0 | 25 | 600 | - | 50 | 1.15 | 1.0 | 10 | 150 ⁽¹⁾ |

Notes: (1) Reverse recovery test conditions : I_F = 0.5 A, I_R = 1 A, with I_{rr} = 0.25 A

(2) Reverse recovery test conditions : I_F = 100 mA, I_R = 100 mA

(3) Reverse recovery test conditions : I_F = 10 mA, I_R = 10 mA recover to 1 mA

(4) Reverse recovery test conditions : I_F = 100 mA, I_R = 200 mA



Fast Recovery Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Surge Forward Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|----------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Trr |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

BA157/SRA7 Series, 1 A, Case Type: DO-41/SMA

| | | | | | | | | | | | |
|-------|------|-----|----|------|-----|----|-----|-----|-----|--------------------|--------------------|
| BA157 | SRA7 | 1.0 | 45 | 400 | 5.0 | 35 | 1.3 | 1.0 | 5.0 | 300 ⁽²⁾ | 150 ⁽¹⁾ |
| BA158 | SRA8 | 1.0 | 45 | 600 | 5.0 | 35 | 1.3 | 1.0 | 5.0 | 300 ⁽²⁾ | 150 ⁽¹⁾ |
| BA159 | SRA9 | 1.0 | 45 | 1000 | 5.0 | 35 | 1.3 | 1.0 | 5.0 | 500 ⁽²⁾ | 250 ⁽¹⁾ |

FR101/SR1A Series, 1 A, Case Type: DO-41/SMA

| | | | | | | | | | | | |
|-----------|------|-----|----|------|-----|----|-----|-----|-----|--------------------|--|
| FR101 | SR1A | 1.0 | 55 | 50 | 5.0 | 35 | 1.3 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| FR102 | SR1B | 1.0 | 55 | 100 | 5.0 | 35 | 1.3 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| FR103 | SR1D | 1.0 | 55 | 200 | 5.0 | 35 | 1.3 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| FR104 | SR1G | 1.0 | 55 | 400 | 5.0 | 35 | 1.3 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| FR105 | SR1J | 1.0 | 55 | 600 | 5.0 | 35 | 1.3 | 1.0 | 5.0 | 250 ⁽¹⁾ | |
| FR106 | SR1K | 1.0 | 55 | 800 | 5.0 | 35 | 1.3 | 1.0 | 5.0 | 500 ⁽¹⁾ | |
| FR107 | SR1M | 1.0 | 55 | 1000 | 5.0 | 35 | 1.3 | 1.0 | 5.0 | 500 ⁽¹⁾ | |
| FR107-STR | - | 1.0 | 55 | 1000 | 5.0 | 35 | 1.3 | 1.0 | 5.0 | 250 ⁽¹⁾ | |

RS1 Series, 1 A, Case Type: SMA

| | | | | | | | | | | | |
|--|------|-----|----|------|---|----|------|-----|-----|--------------------|--|
| | RS1A | 1.0 | 90 | 50 | - | 30 | 1.30 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| | RS1B | 1.0 | 90 | 100 | - | 30 | 1.30 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| | RS1D | 1.0 | 90 | 200 | - | 30 | 1.30 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| | RS1G | 1.0 | 90 | 400 | - | 30 | 1.30 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| | RS1J | 1.0 | 90 | 600 | - | 30 | 1.30 | 1.0 | 5.0 | 250 ⁽¹⁾ | |
| | RS1K | 1.0 | 90 | 800 | - | 30 | 1.30 | 1.0 | 5.0 | 500 ⁽¹⁾ | |
| | RS1M | 1.0 | 90 | 1000 | - | 30 | 1.30 | 1.0 | 5.0 | 500 ⁽¹⁾ | |

1N4933/SRN3 Series, 1 A, Case Type: DO-41/SMA

| | | | | | | | | | | | |
|--------|------|-----|----|-----|-----|----|-----|-----|-----|--------------------|--|
| 1N4933 | SRN3 | 1.0 | 50 | 50 | 5.0 | 30 | 1.2 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| 1N4934 | SRN4 | 1.0 | 50 | 100 | 5.0 | 30 | 1.2 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| 1N4935 | SRN5 | 1.0 | 50 | 200 | 5.0 | 30 | 1.2 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| 1N4936 | SRN6 | 1.0 | 50 | 400 | 5.0 | 30 | 1.2 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| 1N4937 | SRN7 | 1.0 | 50 | 600 | 5.0 | 30 | 1.2 | 1.0 | 5.0 | 150 ⁽¹⁾ | |

DL4933 Series, 1 A, Case Type: MELF (Plastic)

| | | | | | | | | | | | |
|--|--------|-----|----|-----|---|----|-----|-----|-----|--------------------|--|
| | DL4933 | 1.0 | 55 | 50 | - | 30 | 1.2 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| | DL4934 | 1.0 | 55 | 100 | - | 30 | 1.2 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| | DL4935 | 1.0 | 55 | 200 | - | 30 | 1.2 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| | DL4936 | 1.0 | 55 | 400 | - | 30 | 1.2 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| | DL4937 | 1.0 | 55 | 600 | - | 30 | 1.2 | 1.0 | 5.0 | 150 ⁽¹⁾ | |

RGF1A Series, 1 A, Case Type: SMA

| | | | | | | | | | | | |
|--|-------|-----|-----------------------|------|---|----|-----|-----|-----|--------------------|--|
| | RGF1A | 1.0 | 125 (T _L) | 50 | - | 30 | 1.3 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| | RGF1B | 1.0 | 125 (T _L) | 100 | - | 30 | 1.3 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| | RGF1D | 1.0 | 125 (T _L) | 200 | - | 30 | 1.3 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| | RGF1G | 1.0 | 125 (T _L) | 400 | - | 30 | 1.3 | 1.0 | 5.0 | 150 ⁽¹⁾ | |
| | RGF1J | 1.0 | 125 (T _L) | 600 | - | 30 | 1.3 | 1.0 | 5.0 | 250 ⁽¹⁾ | |
| | RGF1K | 1.0 | 125 (T _L) | 800 | - | 30 | 1.3 | 1.0 | 5.0 | 500 ⁽¹⁾ | |
| | RGF1M | 1.0 | 125 (T _L) | 1000 | - | 30 | 1.3 | 1.0 | 5.0 | 500 ⁽¹⁾ | |

Notes :

- (1) Reverse recovery test conditions : $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, with $I_{rr} = 0.25 \text{ A}$
- (2) Reverse recovery test conditions : $I_F = 10 \text{ mA}$, $I_R = 10 \text{ mA}$ recover to 1 mA

Fast Recovery Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Surge Forward Current | Max. Forward Voltage Drop at Ta=25°C | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|---------------------------------|----------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF @ IF | IR | Trr |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) (A) | (μA) | (ns) |

RU2 Series, 1 - 1.5 A, Case Type: D2

| | | | | | | | | | | |
|-------|--|-----|----|-----|-----|----|------|-----|----|--------------------|
| RU2Z | | 1.0 | 50 | 200 | 5.0 | 20 | 1.50 | 1.0 | 10 | 400 ⁽²⁾ |
| RU2 | | 1.0 | 50 | 600 | 5.0 | 20 | 1.50 | 1.0 | 10 | 400 ⁽²⁾ |
| RU2B | | 1.0 | 50 | 800 | 5.0 | 20 | 1.50 | 1.0 | 10 | 400 ⁽²⁾ |
| RU2M | | 1.1 | 50 | 400 | 5.0 | 20 | 1.20 | 1.1 | 10 | 400 ⁽²⁾ |
| RU2AM | | 1.1 | 50 | 600 | 5.0 | 20 | 1.20 | 1.1 | 10 | 400 ⁽²⁾ |
| RU2YX | | 1.5 | 50 | 100 | 5.0 | 30 | 0.95 | 1.5 | 10 | 200 ⁽²⁾ |
| RU20A | | 1.5 | 25 | 600 | - | 50 | 1.10 | 1.5 | 10 | 400 ⁽³⁾ |

RGL1A Series, 1 A, Case Type: Mini MELF (Plastic)

| | | | | | | | | | | |
|--|-------|-----|----|------|---|----|------|-----|-----|--------------------|
| | RGL1A | 1.0 | 75 | 50 | - | 25 | 1.30 | 1.0 | 5.0 | 150 ⁽¹⁾ |
| | RGL1B | 1.0 | 75 | 100 | - | 25 | 1.30 | 1.0 | 5.0 | 150 ⁽¹⁾ |
| | RGL1D | 1.0 | 75 | 200 | - | 25 | 1.30 | 1.0 | 5.0 | 150 ⁽¹⁾ |
| | RGL1G | 1.0 | 75 | 400 | - | 25 | 1.30 | 1.0 | 5.0 | 150 ⁽¹⁾ |
| | RGL1J | 1.0 | 75 | 600 | - | 25 | 1.30 | 1.0 | 5.0 | 250 ⁽¹⁾ |
| | RGL1K | 1.0 | 75 | 800 | - | 25 | 1.30 | 1.0 | 5.0 | 500 ⁽¹⁾ |
| | RGL1M | 1.0 | 75 | 1000 | - | 25 | 1.30 | 1.0 | 5.0 | 500 ⁽¹⁾ |

15DF4 Series, 1.3 A, Case Type: D2

| | | | | | | | | | | |
|-------|--|-----|----|-----|---|----|-----|-----|----|--------------------|
| 15DF4 | | 1.3 | 40 | 400 | - | 70 | 1.2 | 1.3 | 10 | 150 ⁽¹⁾ |
| 15DF6 | | 1.3 | 40 | 600 | - | 70 | 1.2 | 1.3 | 10 | 150 ⁽¹⁾ |
| 15DF8 | | 1.3 | 40 | 800 | - | 70 | 1.2 | 1.3 | 10 | 150 ⁽¹⁾ |

BYT52A Series, 1.4 A, Case Type: D2

| | | | | | | | | | | |
|--------|--|-----|---------------------|------|---|----|-----|-----|----|--------------------|
| BYT52A | | 1.4 | 25(T _L) | 50 | - | 50 | 1.3 | 1.0 | 10 | 200 ⁽¹⁾ |
| BYT52B | | 1.4 | 25(T _L) | 100 | - | 50 | 1.3 | 1.0 | 10 | 200 ⁽¹⁾ |
| BYT52D | | 1.4 | 25(T _L) | 200 | - | 50 | 1.3 | 1.0 | 10 | 200 ⁽¹⁾ |
| BYT52G | | 1.4 | 25(T _L) | 400 | - | 50 | 1.3 | 1.0 | 10 | 200 ⁽¹⁾ |
| BYT52J | | 1.4 | 25(T _L) | 600 | - | 50 | 1.3 | 1.0 | 10 | 200 ⁽¹⁾ |
| BYT52K | | 1.4 | 25(T _L) | 800 | - | 50 | 1.3 | 1.0 | 10 | 200 ⁽¹⁾ |
| BYT52M | | 1.4 | 25(T _L) | 1000 | - | 50 | 1.3 | 1.0 | 10 | 200 ⁽¹⁾ |

RGP15A Series, 1.5 A, Case Type: D2

| | | | | | | | | | | |
|--------|--|-----|----|------|---|----|-----|-----|-----|--------------------|
| RGP15A | | 1.5 | 55 | 50 | - | 50 | 1.3 | 1.5 | 5.0 | 150 ⁽¹⁾ |
| RGP15B | | 1.5 | 55 | 100 | - | 50 | 1.3 | 1.5 | 5.0 | 150 ⁽¹⁾ |
| RGP15D | | 1.5 | 55 | 200 | - | 50 | 1.3 | 1.5 | 5.0 | 150 ⁽¹⁾ |
| RGP15G | | 1.5 | 55 | 400 | - | 50 | 1.3 | 1.5 | 5.0 | 150 ⁽¹⁾ |
| RGP15J | | 1.5 | 55 | 600 | - | 50 | 1.3 | 1.5 | 5.0 | 250 ⁽¹⁾ |
| RGP15K | | 1.5 | 55 | 800 | - | 50 | 1.3 | 1.5 | 5.0 | 500 ⁽¹⁾ |
| RGP15M | | 1.5 | 55 | 1000 | - | 50 | 1.3 | 1.5 | 5.0 | 500 ⁽¹⁾ |

FR151/SROA Series, 1.5 A, Case Type: DO-41/SMA

| | | | | | | | | | | |
|-----------|------|-----|----|------|-----|----|-----|-----|-----|--------------------|
| FR151 | SROA | 1.5 | 55 | 50 | 5.0 | 60 | 1.3 | 1.5 | 5.0 | 150 ⁽¹⁾ |
| FR152 | SROB | 1.5 | 55 | 100 | 5.0 | 60 | 1.3 | 1.5 | 5.0 | 150 ⁽¹⁾ |
| FR153 | SROD | 1.5 | 55 | 200 | 5.0 | 60 | 1.3 | 1.5 | 5.0 | 150 ⁽¹⁾ |
| FR154 | SROG | 1.5 | 55 | 400 | 5.0 | 60 | 1.3 | 1.5 | 5.0 | 150 ⁽¹⁾ |
| FR155 | SROJ | 1.5 | 55 | 600 | 5.0 | 60 | 1.3 | 1.5 | 5.0 | 250 ⁽¹⁾ |
| FR156 | SROK | 1.5 | 55 | 800 | 5.0 | 60 | 1.3 | 1.5 | 5.0 | 500 ⁽¹⁾ |
| FR157 | SROM | 1.5 | 55 | 1000 | 5.0 | 60 | 1.3 | 1.5 | 5.0 | 500 ⁽¹⁾ |
| FR157-STR | - | 1.5 | 55 | 1000 | 5.0 | 60 | 1.3 | 1.5 | 5.0 | 250 ⁽¹⁾ |

Notes: (1) Reverse recovery test conditions : I_F = 0.5 A, I_R = 1 A, with I_{rr} = 0.25 A

(2) Reverse recovery test conditions : I_F = 10 mA, I_R = 10 mA recover to 1 mA

(3) Reverse recovery test conditions : I_F = 100 mA, I_R = 100 mA

Fast Recovery Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Surge Forward Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------------------|---------------------------------|----------------------------|
| | | I _{F(AV)} | @ Ta | V _{RRM} | I _{FRM} | I _{FSM} | V _F | @ I _F | I _R | T _{rr} |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

1R5J Series, 1.5 A, Case Type: D2



| | | | | | | | | | | |
|---------|--|-----|----|-----|---|----|-----|-----|-----|--------------------|
| 1R5JH45 | | 1.5 | 25 | 600 | - | 50 | 1.2 | 1.5 | 100 | 200 ⁽⁴⁾ |
| 1R5JU41 | | 1.5 | 25 | 600 | - | 40 | 2.0 | 2.0 | 100 | 100 ⁽⁴⁾ |

ERD28-04 Series, 1.5 A, Case Type: D2A



| | | | | | | | | | | |
|----------|--|-----|----|-----|---|----|-----|-----|----|--------------------|
| ERD28-04 | | 1.5 | 25 | 400 | - | 70 | 1.1 | 1.5 | 10 | 400 ⁽³⁾ |
| ERD28-06 | | 1.5 | 25 | 600 | - | 70 | 1.1 | 1.5 | 10 | 400 ⁽³⁾ |
| ERD28-08 | | 1.5 | 25 | 800 | - | 70 | 1.1 | 1.5 | 10 | 400 ⁽³⁾ |

RU3 Series, 1.5 - 2.0 A, Case Type: D2A



| | | | | | | | | | | |
|-------|--|-----|----|------|---|----|------|-----|----|--------------------|
| RU3 | | 1.5 | 50 | 400 | - | 30 | 1.5 | 1.5 | 10 | 400 ⁽²⁾ |
| RU3A | | 1.5 | 50 | 600 | - | 30 | 1.5 | 1.5 | 10 | 400 ⁽²⁾ |
| RU3B | | 1.5 | 50 | 800 | - | 30 | 1.5 | 1.5 | 10 | 400 ⁽²⁾ |
| RU3C | | 1.5 | 50 | 1000 | - | 30 | 2.0 | 1.5 | 10 | 400 ⁽²⁾ |
| RU3M | | 1.5 | 50 | 400 | - | 30 | 1.1 | 1.5 | 10 | 400 ⁽²⁾ |
| RU3AM | | 1.5 | 50 | 600 | - | 30 | 1.1 | 1.5 | 10 | 400 ⁽²⁾ |
| RU3YX | | 2.0 | 25 | 100 | - | 50 | 0.95 | 2.0 | 10 | 200 ⁽²⁾ |

RU4 Series, 1.5 - 2.5 A, Case Type: DO-201AD



| | | | | | | | | | | |
|-------|--|-----|----|------|---|-----|-----|-----|----|--------------------|
| RU4 | | 1.5 | 50 | 400 | - | 50 | 1.5 | 3.0 | 10 | 400 ⁽²⁾ |
| RU4A | | 1.5 | 50 | 600 | - | 50 | 1.5 | 3.0 | 10 | 400 ⁽²⁾ |
| RU4B | | 1.5 | 50 | 800 | - | 50 | 1.6 | 3.0 | 10 | 400 ⁽²⁾ |
| RU4C | | 1.5 | 50 | 1000 | - | 50 | 1.6 | 3.0 | 50 | 400 ⁽²⁾ |
| RU4Y | | 2.0 | 60 | 100 | - | 70 | 1.3 | 3.5 | 10 | 400 ⁽²⁾ |
| RU4Z | | 2.0 | 60 | 200 | - | 70 | 1.3 | 3.5 | 10 | 400 ⁽²⁾ |
| RU4M | | 2.0 | 50 | 400 | - | 50 | 1.3 | 3.5 | 10 | 400 ⁽³⁾ |
| RU4AM | | 2.0 | 50 | 600 | - | 50 | 1.3 | 3.5 | 10 | 400 ⁽³⁾ |
| RU4YX | | 2.2 | 50 | 100 | - | 100 | 1.3 | 3.5 | 10 | 200 ⁽³⁾ |
| RU4DS | | 2.5 | 60 | 1300 | - | 50 | 1.8 | 3.0 | 50 | 400 ⁽³⁾ |

BYW32 Series, 2 A, Case Type: D2



| | | | | | | | | | | |
|-------|--|-----|----|-----|---|----|-----|-----|-----|--------------------|
| BYW32 | | 2.0 | 55 | 200 | - | 40 | 1.2 | 2.0 | 5.0 | 200 ⁽¹⁾ |
| BYW33 | | 2.0 | 55 | 300 | - | 40 | 1.2 | 2.0 | 5.0 | 200 ⁽¹⁾ |
| BYW34 | | 2.0 | 55 | 400 | - | 40 | 1.2 | 2.0 | 5.0 | 200 ⁽¹⁾ |
| BYW35 | | 2.0 | 55 | 500 | - | 40 | 1.2 | 2.0 | 5.0 | 200 ⁽¹⁾ |
| BYW36 | | 2.0 | 55 | 600 | - | 40 | 1.2 | 2.0 | 5.0 | 200 ⁽¹⁾ |

Notes :

- (1) Reverse recovery test conditions : I_F = 0.5 A, I_R = 1 A, with I_{rr} = 0.25 A
- (2) Reverse recovery test conditions : I_F = 10 mA, I_R = 10 mA recover to 1 mA
- (3) Reverse recovery test conditions : I_F = 100 mA, I_R = 100 mA
- (4) Reverse recovery test conditions : I_F = 1 A, di/dt = -30 A/ms



Fast Recovery Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Surge Forward Current | Max. Forward Voltage Drop at Ta=25°C | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|--|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|---------------------------------|----------------------------|
| | IF(AV) @ Ta | VRRM | IFRM | IFSM | VF @ IF | IR | Trr |
| Axial Lead | SMD | (A) (°C) | (V) | (A) | (A) | (V) (A) | (μA) (ns) |

BY296/SR26 Series, 2 A, Case Type: DO-201AD/SMB



| | | | | | | | | | | | |
|-------|------|-----|----|-----|----|----|-----|-----|----|--------------------|--------------------|
| BY296 | SR26 | 2.0 | 50 | 100 | 10 | 70 | 1.3 | 2.0 | 10 | 500 ⁽²⁾ | 250 ⁽¹⁾ |
| BY297 | SR27 | 2.0 | 50 | 200 | 10 | 70 | 1.3 | 2.0 | 10 | 500 ⁽²⁾ | 250 ⁽¹⁾ |
| BY298 | SR28 | 2.0 | 50 | 400 | 10 | 70 | 1.3 | 2.0 | 10 | 500 ⁽²⁾ | 250 ⁽¹⁾ |
| BY299 | SR29 | 2.0 | 50 | 800 | 10 | 70 | 1.3 | 2.0 | 10 | 500 ⁽²⁾ | 250 ⁽¹⁾ |

FR201/SR2A Series, 2 A, Case Type: D2/SMB



| | | | | | | | | | | |
|-----------|------|-----|----|------|----|----|-----|-----|----|--------------------|
| FR201 | SR2A | 2.0 | 75 | 50 | 15 | 75 | 1.3 | 2.0 | 10 | 150 ⁽¹⁾ |
| FR202 | SR2B | 2.0 | 75 | 100 | 15 | 75 | 1.3 | 2.0 | 10 | 150 ⁽¹⁾ |
| FR203 | SR2D | 2.0 | 75 | 200 | 15 | 75 | 1.3 | 2.0 | 10 | 150 ⁽¹⁾ |
| FR204 | SR2G | 2.0 | 75 | 400 | 15 | 75 | 1.3 | 2.0 | 10 | 150 ⁽¹⁾ |
| FR205 | SR2J | 2.0 | 75 | 600 | 15 | 75 | 1.3 | 2.0 | 10 | 250 ⁽¹⁾ |
| FR206 | SR2K | 2.0 | 75 | 800 | 15 | 75 | 1.3 | 2.0 | 10 | 500 ⁽¹⁾ |
| FR207 | SR2M | 2.0 | 75 | 1000 | 15 | 75 | 1.3 | 2.0 | 10 | 500 ⁽¹⁾ |
| FR207-STR | - | 2.0 | 75 | 1000 | 15 | 75 | 1.3 | 2.0 | 10 | 250 ⁽¹⁾ |

RGP20A-J Series, 2 A, Case Type: D2A



| | | | | | | | | | | |
|--------|--|-----|----|-----|---|----|-----|-----|-----|--------------------|
| RGP20A | | 2.0 | 55 | 50 | - | 80 | 1.3 | 2.0 | 5.0 | 150 ⁽¹⁾ |
| RGP20B | | 2.0 | 55 | 100 | - | 80 | 1.3 | 2.0 | 5.0 | 150 ⁽¹⁾ |
| RGP20D | | 2.0 | 55 | 200 | - | 80 | 1.3 | 2.0 | 5.0 | 150 ⁽¹⁾ |
| RGP20G | | 2.0 | 55 | 400 | - | 80 | 1.3 | 2.0 | 5.0 | 150 ⁽¹⁾ |
| RGP20J | | 2.0 | 55 | 600 | - | 80 | 1.3 | 2.0 | 5.0 | 250 ⁽¹⁾ |

FR251/SRTA Series, 2.5 A, Case Type: D2A/SMB



| | | | | | | | | | | |
|-----------|------|-----|----|------|----|-----|-----|-----|----|--------------------|
| FR251 | SRTA | 2.5 | 75 | 50 | 15 | 100 | 1.3 | 2.5 | 10 | 150 ⁽¹⁾ |
| FR252 | SRTB | 2.5 | 75 | 100 | 15 | 100 | 1.3 | 2.5 | 10 | 150 ⁽¹⁾ |
| FR253 | SRTD | 2.5 | 75 | 200 | 15 | 100 | 1.3 | 2.5 | 10 | 150 ⁽¹⁾ |
| FR254 | SRTG | 2.5 | 75 | 400 | 15 | 100 | 1.3 | 2.5 | 10 | 150 ⁽¹⁾ |
| FR255 | SRTJ | 2.5 | 75 | 600 | 15 | 100 | 1.3 | 2.5 | 10 | 250 ⁽¹⁾ |
| FR256 | SRTK | 2.5 | 75 | 800 | 15 | 100 | 1.3 | 2.5 | 10 | 500 ⁽¹⁾ |
| FR257 | SRTM | 2.5 | 75 | 1000 | 15 | 100 | 1.3 | 2.5 | 10 | 500 ⁽¹⁾ |
| FR257-STR | - | 2.5 | 75 | 1000 | 15 | 100 | 1.3 | 2.5 | 10 | 250 ⁽¹⁾ |

BY228/SR36 Series, 3 A, Case Type: DO-201AD/SMC



| | | | | | | | | | | | |
|-------|------|-----|----|-----|----|-----|------|-----|----|--------------------|--------------------|
| BY396 | SR36 | 3.0 | 50 | 100 | 15 | 100 | 1.25 | 3.0 | 10 | 500 ⁽²⁾ | 250 ⁽¹⁾ |
| BY397 | SR37 | 3.0 | 50 | 200 | 15 | 100 | 1.25 | 3.0 | 10 | 500 ⁽²⁾ | 250 ⁽¹⁾ |
| BY398 | SR38 | 3.0 | 50 | 400 | 15 | 100 | 1.25 | 3.0 | 10 | 500 ⁽²⁾ | 250 ⁽¹⁾ |
| BY399 | SR39 | 3.0 | 50 | 800 | 15 | 100 | 1.25 | 3.0 | 10 | 500 ⁽²⁾ | 250 ⁽¹⁾ |

Notes :

- (1) Reverse recovery test conditions : $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, with $I_{rr} = 0.25 \text{ A}$
- (2) Reverse recovery test conditions : $I_F = 10 \text{ mA}$, $I_R = 10 \text{ mA}$ recover to 1 mA

Fast Recovery Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Surge Forward Current | Max. Forward Voltage Drop at Ta=25°C | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|--|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|---------------------------------|----------------------------|
| | IF(AV) @ Ta | VRRM | IFRM | IFSM | VF @ IF | IR | Trr |
| Axial Lead | SMD | (A) (°C) | (V) | (A) | (A) | (V) (A) | (μA) (ns) |

BYT56A Series, 3 A, Case Type: DO-201AD



| | | | | | | | | | | |
|--------|--|-----|----|------|---|----|-----|-----|-----|--------------------|
| BYT56A | | 3.0 | 50 | 50 | - | 80 | 1.4 | 3.0 | 5.0 | 100 ⁽¹⁾ |
| BYT56B | | 3.0 | 50 | 100 | - | 80 | 1.4 | 3.0 | 5.0 | 100 ⁽¹⁾ |
| BYT56D | | 3.0 | 50 | 200 | - | 80 | 1.4 | 3.0 | 5.0 | 100 ⁽¹⁾ |
| BYT56G | | 3.0 | 50 | 400 | - | 80 | 1.4 | 3.0 | 5.0 | 100 ⁽¹⁾ |
| BYT56J | | 3.0 | 50 | 600 | - | 80 | 1.4 | 3.0 | 5.0 | 100 ⁽¹⁾ |
| BYT56K | | 3.0 | 50 | 800 | - | 80 | 1.4 | 3.0 | 5.0 | 100 ⁽¹⁾ |
| BYT56M | | 3.0 | 50 | 1000 | - | 80 | 1.4 | 3.0 | 5.0 | 100 ⁽¹⁾ |

FR301/SR3A Series, 3 A, Case Type: DO-201AD/SMC



| | | | | | | | | | | |
|-----------|------|-----|----|------|----|-----|-----|-----|----|--------------------|
| FR301 | SR3A | 3.0 | 55 | 50 | 20 | 200 | 1.3 | 3.0 | 10 | 150 ⁽¹⁾ |
| FR302 | SR3B | 3.0 | 55 | 100 | 20 | 200 | 1.3 | 3.0 | 10 | 150 ⁽¹⁾ |
| FR303 | SR3D | 3.0 | 55 | 200 | 20 | 200 | 1.3 | 3.0 | 10 | 150 ⁽¹⁾ |
| FR304 | SR3G | 3.0 | 55 | 400 | 20 | 200 | 1.3 | 3.0 | 10 | 150 ⁽¹⁾ |
| FR305 | SR3J | 3.0 | 55 | 600 | 20 | 200 | 1.3 | 3.0 | 10 | 250 ⁽¹⁾ |
| FR306 | SR3K | 3.0 | 55 | 800 | 20 | 200 | 1.3 | 3.0 | 10 | 500 ⁽¹⁾ |
| FR307 | SR3M | 3.0 | 55 | 1000 | 20 | 200 | 1.3 | 3.0 | 10 | 500 ⁽¹⁾ |
| FR307-STR | | 3.0 | 55 | 1000 | 20 | 200 | 1.3 | 3.0 | 10 | 250 ⁽¹⁾ |

RS3A Series, 3 A, Case Type: SMC



| | | | | | | | | | | |
|--|------|-----|----|-----|---|-----|-----|-----|----|--------------------|
| | RS3A | 3.0 | 55 | 50 | - | 100 | 1.3 | 3.0 | 10 | 150 ⁽¹⁾ |
| | RS3B | 3.0 | 55 | 100 | - | 100 | 1.3 | 3.0 | 10 | 150 ⁽¹⁾ |
| | RS3D | 3.0 | 55 | 200 | - | 100 | 1.3 | 3.0 | 10 | 150 ⁽¹⁾ |
| | RS3G | 3.0 | 55 | 400 | - | 100 | 1.3 | 3.0 | 10 | 150 ⁽¹⁾ |
| | RS3J | 3.0 | 55 | 600 | - | 100 | 1.3 | 3.0 | 10 | 250 ⁽¹⁾ |
| | RS3K | 3.0 | 55 | 800 | - | 100 | 1.3 | 3.0 | 10 | 500 ⁽¹⁾ |

MR850/SRR0 Series, 3 A, Case Type: DO-201AD/SMC



| | | | | | | | | | | | |
|-------|------|-----|----|-----|----|-----|------|-----|----|--------------------|--------------------|
| MR850 | SRR0 | 3.0 | 90 | 50 | 15 | 100 | 1.25 | 3.0 | 10 | 200 ⁽²⁾ | 150 ⁽¹⁾ |
| MR851 | SRR1 | 3.0 | 90 | 100 | 15 | 100 | 1.25 | 3.0 | 10 | 200 ⁽²⁾ | 150 ⁽¹⁾ |
| MR852 | SRR2 | 3.0 | 90 | 200 | 15 | 100 | 1.25 | 3.0 | 10 | 200 ⁽²⁾ | 150 ⁽¹⁾ |
| MR854 | SRR4 | 3.0 | 90 | 400 | 15 | 100 | 1.25 | 3.0 | 10 | 200 ⁽²⁾ | 150 ⁽¹⁾ |
| MR856 | SRR6 | 3.0 | 90 | 600 | 15 | 100 | 1.25 | 3.0 | 10 | 200 ⁽²⁾ | 150 ⁽¹⁾ |
| MR858 | - | 3.0 | 90 | 800 | 15 | 100 | 1.25 | 3.0 | 10 | 200 ⁽²⁾ | 150 ⁽¹⁾ |

3JH45 Series, 3 A, Case Type: DO-201AD



| | | | | | | | | | | |
|-------|---|-----|----|-----|---|----|------|-----|-----|--------------------|
| 3JH45 | - | 3.0 | 25 | 600 | - | 77 | 1.2 | 3.0 | 100 | 200 ⁽⁴⁾ |
| 30DF6 | - | 3.0 | 40 | 600 | - | 90 | 1.25 | 3.0 | 10 | 200 ⁽³⁾ |

Notes :

- (1) Reverse recovery test conditions : $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, with $I_{rr} = 0.25 \text{ A}$
- (2) Reverse recovery test conditions : $I_F = 1 \text{ A}$, to $V_R = 30 \text{ V}$
- (3) Reverse Recovery test conditions : $I_F = 1 \text{ A}$, to $V_R = 30 \text{ V}$
- (4) Reverse Recovery test conditions : $I_F = 1 \text{ A}$, $di/dt = -30 \text{ A/ms}$

Fast Recovery Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Surge Forward Current | Max. Forward Voltage Drop at Ta=25°C | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|--|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|---------------------------------|----------------------------|
| | IF(AV) @ Ta | VRRM | IFRM | IFSM | VF @ IF | IR | Trr |
| Axial Lead | SMD | (A) (°C) | (V) | (A) | (A) | (V) (A) | (μA) (ns) |

RGP30 Series, 3 A, Case Type: DO-201AD



| | | | | | | | | | | |
|--------|--|-----|----|------|---|-----|------|-----|-----|--------------------|
| RGP30A | | 3.0 | 55 | 50 | - | 125 | 1.30 | 3.0 | 5.0 | 150 ⁽¹⁾ |
| RGP30B | | 3.0 | 55 | 100 | - | 125 | 1.30 | 3.0 | 5.0 | 150 ⁽¹⁾ |
| RGP30D | | 3.0 | 55 | 200 | - | 125 | 1.30 | 3.0 | 5.0 | 150 ⁽¹⁾ |
| RGP30G | | 3.0 | 55 | 400 | - | 125 | 1.30 | 3.0 | 5.0 | 150 ⁽¹⁾ |
| RGP30J | | 3.0 | 55 | 600 | - | 125 | 1.30 | 3.0 | 5.0 | 150 ⁽¹⁾ |
| RGP30K | | 3.0 | 55 | 800 | - | 125 | 1.30 | 3.0 | 5.0 | 250 ⁽¹⁾ |
| RGP30M | | 3.0 | 55 | 1000 | - | 125 | 1.30 | 3.0 | 5.0 | 500 ⁽¹⁾ |

1N5415 Series, 3 A, Case Type: D2A



| | | | | | | | | | | |
|--------|--|-----|----|-----|---|----|-----|-----|-----|--------------------|
| 1N5415 | | 3.0 | 55 | 50 | - | 80 | 1.1 | 3.0 | 1.0 | 150 ⁽¹⁾ |
| 1N5416 | | 3.0 | 55 | 100 | - | 80 | 1.1 | 3.0 | 1.0 | 150 ⁽¹⁾ |
| 1N5417 | | 3.0 | 55 | 200 | - | 80 | 1.1 | 3.0 | 1.0 | 150 ⁽¹⁾ |
| 1N5418 | | 3.0 | 55 | 400 | - | 80 | 1.1 | 3.0 | 1.0 | 150 ⁽¹⁾ |
| 1N5419 | | 3.0 | 55 | 500 | - | 80 | 1.1 | 3.0 | 1.0 | 250 ⁽¹⁾ |
| 1N5420 | | 3.0 | 55 | 600 | - | 80 | 1.1 | 3.0 | 1.0 | 400 ⁽¹⁾ |

FR501 Series, 5 A, Case Type: DO-201AD



| | | | | | | | | | | |
|-------|---|-----|----|------|---|-----|-----|-----|----|--------------------|
| FR501 | - | 5.0 | 75 | 50 | - | 300 | 1.3 | 5.0 | 10 | 150 ⁽¹⁾ |
| FR502 | - | 5.0 | 75 | 100 | - | 300 | 1.3 | 5.0 | 10 | 150 ⁽¹⁾ |
| FR503 | - | 5.0 | 75 | 200 | - | 300 | 1.3 | 5.0 | 10 | 150 ⁽¹⁾ |
| FR504 | - | 5.0 | 75 | 400 | - | 300 | 1.3 | 5.0 | 10 | 150 ⁽¹⁾ |
| FR505 | - | 5.0 | 75 | 600 | - | 300 | 1.3 | 5.0 | 10 | 250 ⁽¹⁾ |
| FR506 | - | 5.0 | 75 | 800 | - | 300 | 1.3 | 5.0 | 10 | 500 ⁽¹⁾ |
| FR507 | - | 5.0 | 75 | 1000 | - | 300 | 1.3 | 5.0 | 10 | 500 ⁽¹⁾ |

FR601 Series, 6 A, Case Type: D6



| | | | | | | | | | | |
|-------|---|-----|----|------|---|-----|-----|-----|----|--------------------|
| FR601 | - | 6.0 | 55 | 50 | - | 200 | 1.3 | 6.0 | 10 | 150 ⁽¹⁾ |
| FR602 | - | 6.0 | 55 | 100 | - | 200 | 1.3 | 6.0 | 10 | 150 ⁽¹⁾ |
| FR603 | - | 6.0 | 55 | 200 | - | 200 | 1.3 | 6.0 | 10 | 150 ⁽¹⁾ |
| FR604 | - | 6.0 | 55 | 400 | - | 200 | 1.3 | 6.0 | 10 | 150 ⁽¹⁾ |
| FR605 | - | 6.0 | 55 | 600 | - | 200 | 1.3 | 6.0 | 10 | 250 ⁽¹⁾ |
| FR606 | - | 6.0 | 55 | 800 | - | 200 | 1.3 | 6.0 | 10 | 500 ⁽¹⁾ |
| FR607 | - | 6.0 | 55 | 1000 | - | 200 | 1.3 | 6.0 | 10 | 500 ⁽¹⁾ |

FR801 Series, 8 A, Case Type: D6



| | | | | | | | | | | |
|-------|---|-----|----------|-----|---|-----|-----|-----|----|--------------------|
| FR801 | - | 8.0 | 100 (Tc) | 50 | - | 150 | 1.3 | 8.0 | 10 | 150 ⁽¹⁾ |
| FR802 | - | 8.0 | 100 (Tc) | 100 | - | 150 | 1.3 | 8.0 | 10 | 150 ⁽¹⁾ |
| FR803 | - | 8.0 | 100 (Tc) | 200 | - | 150 | 1.3 | 8.0 | 10 | 150 ⁽¹⁾ |
| FR804 | - | 8.0 | 100 (Tc) | 400 | - | 150 | 1.3 | 8.0 | 10 | 150 ⁽¹⁾ |
| FR805 | - | 8.0 | 100 (Tc) | 600 | - | 150 | 1.3 | 8.0 | 10 | 250 ⁽¹⁾ |

Note :

(1) Reverse Recovery test conditions : $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, with $I_{rr} = 0.25 \text{ A}$

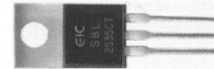


Fast Recovery Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Surge Forward Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|----------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Trr |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

ESAC25 Series, 10 A, Case Type: TO - 220AB



| | | | | | | | | | | |
|------------|---|----|----------|-----|---|----|-----|-----|----|--------------------|
| ESAC25-02C | - | 10 | 106 (Tc) | 200 | - | 70 | 1.3 | 2.5 | 10 | 400 ⁽²⁾ |
| ESAC25-02D | - | 10 | 106 (Tc) | 200 | - | 70 | 1.3 | 2.5 | 10 | 400 ⁽²⁾ |
| ESAC25-02N | - | 10 | 106 (Tc) | 200 | - | 70 | 1.3 | 2.5 | 10 | 400 ⁽²⁾ |
| ESAC25-04C | - | 10 | 106 (Tc) | 400 | - | 70 | 1.3 | 2.5 | 10 | 400 ⁽²⁾ |
| ESAC25-04D | - | 10 | 106 (Tc) | 400 | - | 70 | 1.3 | 2.5 | 10 | 400 ⁽²⁾ |
| ESAC25-04N | - | 10 | 106 (Tc) | 400 | - | 70 | 1.3 | 2.5 | 10 | 400 ⁽²⁾ |

F1200A Series, 12 A, Case Type: D6



| | | | | | | | | | | |
|--------|--|----|----|-----|----|-----|------|-----|----|--------------------|
| F1200A | | 12 | 50 | 50 | 80 | 390 | 0.85 | 5.0 | 25 | 200 ⁽¹⁾ |
| F1200D | | 12 | 50 | 200 | 80 | 390 | 0.85 | 5.0 | 25 | 200 ⁽¹⁾ |

FTB2000AA /FTB2000KG, 20 A, Case Type: D2PAK



| | | | | | | | | | | |
|--|-----------------------------|----|----------|-----|----|-----|------|------|----|--------------------|
| | FTB2000KA/AA ⁽³⁾ | 20 | 100 (Tc) | 50 | 80 | 390 | 0.96 | 20.0 | 25 | 200 ⁽¹⁾ |
| | FTB2000KB/AB ⁽³⁾ | 20 | 100 (Tc) | 100 | 80 | 390 | 0.96 | 20.0 | 25 | 200 ⁽¹⁾ |
| | FTB2000KD/AD ⁽³⁾ | 20 | 100 (Tc) | 200 | 80 | 390 | 0.96 | 20.0 | 25 | 200 ⁽¹⁾ |
| | FTB2000KG/AG ⁽³⁾ | 20 | 100 (Tc) | 400 | 80 | 390 | 0.96 | 20.0 | 25 | 200 ⁽¹⁾ |

Notes :

- (1) Reverse Recovery test conditions : I_F = 0.5 A, I_R = 1 A, with I_{rr} = 0.25 A
- (2) Reverse Recovery test conditions : I_F = 100 mA, I_R = 100 mA
- (3) K (Standard) is p/n FTB2000KA, FTB2000KB, ..., KG, A (Reverse) is p/n FTB2000AA, FTB2000AB, ..., AG



Fast Recovery Glass Passivated Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Surge Forward Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|----------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Trr ⁽¹⁾ |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

LMR1A Series, 1 A, Case Type: M1A



| | | | | | | | | | | |
|-------|--|-----|----|------|---|----|-----|-----|-----|-----|
| LMR1A | | 1.0 | 50 | 50 | - | 30 | 1.0 | 1.0 | 5.0 | 150 |
| LMR1B | | 1.0 | 50 | 100 | - | 30 | 1.0 | 1.0 | 5.0 | 150 |
| LMR1D | | 1.0 | 50 | 200 | - | 30 | 1.0 | 1.0 | 5.0 | 150 |
| LMR1G | | 1.0 | 50 | 400 | - | 30 | 1.0 | 1.0 | 5.0 | 150 |
| LMR1J | | 1.0 | 50 | 600 | - | 30 | 1.0 | 1.0 | 5.0 | 250 |
| LMR1K | | 1.0 | 50 | 800 | - | 30 | 1.0 | 1.0 | 5.0 | 500 |
| LMR1M | | 1.0 | 50 | 1000 | - | 30 | 1.0 | 1.0 | 5.0 | 500 |

FR101G/GR1A Series, 1 A, Case Type: DO-41/SMA



| | | | | | | | | | | |
|------------|------|-----|----|------|-----|----|-----|-----|-----|-----|
| FR101G | GR1A | 1.0 | 55 | 50 | 5.0 | 30 | 1.3 | 1.0 | 5.0 | 150 |
| FR102G | GR1B | 1.0 | 55 | 100 | 5.0 | 30 | 1.3 | 1.0 | 5.0 | 150 |
| FR103G | GR1D | 1.0 | 55 | 200 | 5.0 | 30 | 1.3 | 1.0 | 5.0 | 150 |
| FR104G | GR1G | 1.0 | 55 | 400 | 5.0 | 30 | 1.3 | 1.0 | 5.0 | 150 |
| FR105G | GR1J | 1.0 | 55 | 600 | 5.0 | 30 | 1.3 | 1.0 | 5.0 | 250 |
| FR106G | GR1K | 1.0 | 55 | 800 | 5.0 | 30 | 1.3 | 1.0 | 5.0 | 500 |
| FR107G | GR1M | 1.0 | 55 | 1000 | 5.0 | 30 | 1.3 | 1.0 | 5.0 | 500 |
| FR107G-STR | - | 1.0 | 55 | 1000 | 5.0 | 30 | 1.3 | 1.0 | 5.0 | 250 |

FR151G Series, 1.5 A, Case Type: DO-41



| | | | | | | | | | | |
|------------|--|-----|----|------|---|----|-----|-----|-----|-----|
| FR151G | | 1.5 | 55 | 50 | - | 60 | 1.4 | 1.5 | 5.0 | 150 |
| FR152G | | 1.5 | 55 | 100 | - | 60 | 1.4 | 1.5 | 5.0 | 150 |
| FR153G | | 1.5 | 55 | 200 | - | 60 | 1.4 | 1.5 | 5.0 | 150 |
| FR154G | | 1.5 | 55 | 400 | - | 60 | 1.4 | 1.5 | 5.0 | 150 |
| FR155G | | 1.5 | 55 | 600 | - | 60 | 1.4 | 1.5 | 5.0 | 250 |
| FR156G | | 1.5 | 55 | 800 | - | 60 | 1.4 | 1.5 | 5.0 | 500 |
| FR157G | | 1.5 | 55 | 1000 | - | 60 | 1.4 | 1.5 | 5.0 | 500 |
| FR157G-STR | | 1.5 | 55 | 1000 | - | 60 | 1.4 | 1.5 | 5.0 | 250 |

1N4933G/GRN3 Series, 1 A, Case Type: DO-41/SMA



| | | | | | | | | | | |
|---------|------|-----|----|-----|-----|----|-----|-----|-----|-----|
| 1N4933G | GRN3 | 1.0 | 50 | 50 | 5.0 | 30 | 1.2 | 1.0 | 5.0 | 150 |
| 1N4934G | GRN4 | 1.0 | 50 | 100 | 5.0 | 30 | 1.2 | 1.0 | 5.0 | 150 |
| 1N4935G | GRN5 | 1.0 | 50 | 200 | 5.0 | 30 | 1.2 | 1.0 | 5.0 | 150 |
| 1N4936G | GRN6 | 1.0 | 50 | 400 | 5.0 | 30 | 1.2 | 1.0 | 5.0 | 150 |
| 1N4937G | GRN7 | 1.0 | 50 | 600 | 5.0 | 30 | 1.2 | 1.0 | 5.0 | 150 |

Note :

(1) Reverse Recovery test conditions : $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, $I_{rr} = 0.25 \text{ A}$



Fast Recovery Glass Passivated Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Surge Forward Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|----------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Trr ⁽¹⁾ |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

FR201G/GR2A Series, 2 A, Case Type: D2/SMB



| | | | | | | | | | | |
|------------|------|-----|----|------|----|----|-----|-----|----|-----|
| FR201G | GR2A | 2.0 | 75 | 50 | 10 | 75 | 1.3 | 2.0 | 10 | 150 |
| FR202G | GR2B | 2.0 | 75 | 100 | 10 | 75 | 1.3 | 2.0 | 10 | 150 |
| FR203G | GR2D | 2.0 | 75 | 200 | 10 | 75 | 1.3 | 2.0 | 10 | 150 |
| FR204G | GR2G | 2.0 | 75 | 400 | 10 | 75 | 1.3 | 2.0 | 10 | 150 |
| FR205G | GR2J | 2.0 | 75 | 600 | 10 | 75 | 1.3 | 2.0 | 10 | 250 |
| FR206G | GR2K | 2.0 | 75 | 800 | 10 | 75 | 1.3 | 2.0 | 10 | 500 |
| FR207G | GR2M | 2.0 | 75 | 1000 | 10 | 75 | 1.3 | 2.0 | 10 | 500 |
| FR207G-STR | - | 2.0 | 75 | 1000 | 10 | 75 | 1.3 | 2.0 | 10 | 250 |

FR251G Series, 2.5 A, Case Type: D2A



| | | | | | | | | | | |
|------------|--|-----|----|------|---|----|-----|-----|----|-----|
| FR251G | | 2.5 | 75 | 50 | - | 80 | 1.3 | 2.5 | 10 | 150 |
| FR252G | | 2.5 | 75 | 100 | - | 80 | 1.3 | 2.5 | 10 | 150 |
| FR253G | | 2.5 | 75 | 200 | - | 80 | 1.3 | 2.5 | 10 | 150 |
| FR254G | | 2.5 | 75 | 400 | - | 80 | 1.3 | 2.5 | 10 | 150 |
| FR255G | | 2.5 | 75 | 600 | - | 80 | 1.3 | 2.5 | 10 | 250 |
| FR256G | | 2.5 | 75 | 800 | - | 80 | 1.3 | 2.5 | 10 | 500 |
| FR257G | | 2.5 | 75 | 1000 | - | 80 | 1.3 | 2.5 | 10 | 500 |
| FR257G-STR | | 2.5 | 75 | 1000 | - | 80 | 1.3 | 2.5 | 10 | 250 |

FR301G/GR3A Series, 3 A, Case Type: DO-201AD/SMC



| | | | | | | | | | | |
|------------|------|-----|----|------|----|-----|-----|-----|-----|-----|
| FR301G | GR3A | 3.0 | 55 | 50 | 15 | 100 | 1.3 | 3.0 | 5.0 | 150 |
| FR302G | GR3B | 3.0 | 55 | 100 | 15 | 100 | 1.3 | 3.0 | 5.0 | 150 |
| FR303G | GR3D | 3.0 | 55 | 200 | 15 | 100 | 1.3 | 3.0 | 5.0 | 150 |
| FR304G | GR3G | 3.0 | 55 | 400 | 15 | 100 | 1.3 | 3.0 | 5.0 | 150 |
| FR305G | GR3J | 3.0 | 55 | 600 | 15 | 100 | 1.3 | 3.0 | 5.0 | 250 |
| FR306G | GR3K | 3.0 | 55 | 800 | 15 | 100 | 1.3 | 3.0 | 5.0 | 500 |
| FR307G | GR3M | 3.0 | 55 | 1000 | 15 | 100 | 1.3 | 3.0 | 5.0 | 500 |
| FR307G-STR | - | 3.0 | 55 | 1000 | 15 | 100 | 1.3 | 3.0 | 5.0 | 250 |

SMC1200D/SMC2000D, 12-20 A, Case Type: SMC



| | | | | | | | | | | |
|--|----------|----|----|-----|---|-----|------|-----|----|-----|
| | SMC1200D | 12 | 50 | 200 | - | 390 | 0.85 | 5.0 | 25 | 200 |
| | SMC2000D | 20 | 55 | 200 | - | 390 | 0.84 | 5.0 | 25 | 200 |

Note :

(1) Reverse Recovery test conditions : $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, $I_{rr} = 0.25 \text{ A}$



High Efficient Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|-----|---------------------------------|--------------------------------|
| | | I _{F(AV)} @ Ta | | V _{RRM} | I _{FRM} | I _{FSM} | V _F @ I _F | | I _R | T _{rr} ⁽¹⁾ |
| | | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

1H1G Series, 1 A, Case Type: M1A

| | | | | | | | | | | |
|------|--|-----|----|------|---|----|-----|-----|-----|----|
| 1H1G | | 1.0 | 25 | 50 | - | 25 | 1.2 | 1.0 | 5.0 | 50 |
| 1H2G | | 1.0 | 25 | 100 | - | 25 | 1.2 | 1.0 | 5.0 | 50 |
| 1H3G | | 1.0 | 25 | 200 | - | 25 | 1.2 | 1.0 | 5.0 | 50 |
| 1H4G | | 1.0 | 25 | 300 | - | 25 | 1.2 | 1.0 | 5.0 | 50 |
| 1H5G | | 1.0 | 25 | 400 | - | 25 | 1.2 | 1.0 | 5.0 | 50 |
| 1H6G | | 1.0 | 25 | 600 | - | 25 | 1.8 | 1.0 | 5.0 | 75 |
| 1H7G | | 1.0 | 25 | 800 | - | 25 | 1.8 | 1.0 | 5.0 | 75 |
| 1H8G | | 1.0 | 25 | 1000 | - | 25 | 1.8 | 1.0 | 5.0 | 75 |

RD2A, 1.2 A, Case Type: D2A

| | | | | | | | | | | |
|------|--|-----|----|-----|---|----|------|-----|----|----|
| RD2A | | 1.2 | 25 | 600 | - | 30 | 1.55 | 1.2 | 50 | 50 |
|------|--|-----|----|-----|---|----|------|-----|----|----|

HER101/SE1A Series, 1 A, Case Type: DO-41/SMA

| | | | | | | | | | | |
|--------|------|-----|----|------|-----|----|-----|-----|-----|----|
| HER101 | SE1A | 1.0 | 55 | 50 | 5.0 | 30 | 1.1 | 1.0 | 5.0 | 50 |
| HER102 | SE1B | 1.0 | 55 | 100 | 5.0 | 30 | 1.1 | 1.0 | 5.0 | 50 |
| HER103 | SE1D | 1.0 | 55 | 200 | 5.0 | 30 | 1.1 | 1.0 | 5.0 | 50 |
| HER104 | SE1E | 1.0 | 55 | 300 | 5.0 | 30 | 1.1 | 1.0 | 5.0 | 50 |
| HER105 | SE1G | 1.0 | 55 | 400 | 5.0 | 30 | 1.1 | 1.0 | 5.0 | 50 |
| HER106 | SE1J | 1.0 | 55 | 600 | 5.0 | 30 | 1.7 | 1.0 | 5.0 | 75 |
| HER107 | SE1K | 1.0 | 55 | 800 | 5.0 | 30 | 1.7 | 1.0 | 5.0 | 75 |
| HER108 | SE1M | 1.0 | 55 | 1000 | 5.0 | 30 | 2.2 | 1.0 | 5.0 | 75 |

HER151/SEOA Series, 1.5 A, Case Type: DO-41/SMA

| | | | | | | | | | | |
|--------|------|-----|----|------|-----|----|-----|-----|-----|----|
| HER151 | SEOA | 1.5 | 55 | 50 | 5.0 | 60 | 1.1 | 1.5 | 5.0 | 50 |
| HER152 | SEOB | 1.5 | 55 | 100 | 5.0 | 60 | 1.1 | 1.5 | 5.0 | 50 |
| HER153 | SEOD | 1.5 | 55 | 200 | 5.0 | 60 | 1.1 | 1.5 | 5.0 | 50 |
| HER154 | SEOE | 1.5 | 55 | 300 | 5.0 | 60 | 1.1 | 1.5 | 5.0 | 50 |
| HER155 | SEOG | 1.5 | 55 | 400 | 5.0 | 60 | 1.1 | 1.5 | 5.0 | 50 |
| HER156 | SEOJ | 1.5 | 55 | 600 | 5.0 | 60 | 1.7 | 1.5 | 5.0 | 75 |
| HER157 | SEOK | 1.5 | 55 | 800 | 5.0 | 60 | 1.7 | 1.5 | 5.0 | 75 |
| HER158 | SEOM | 1.5 | 55 | 1000 | 5.0 | 60 | 1.7 | 1.5 | 5.0 | 75 |

HER201/SE2A Series, 2 A, Case Type: D2/SMB

| | | | | | | | | | | |
|--------|------|-----|----|------|----|----|-----|-----|----|----|
| HER201 | SE2A | 2.0 | 55 | 50 | 10 | 75 | 1.1 | 2.0 | 10 | 50 |
| HER202 | SE2B | 2.0 | 55 | 100 | 10 | 75 | 1.1 | 2.0 | 10 | 50 |
| HER203 | SE2D | 2.0 | 55 | 200 | 10 | 75 | 1.1 | 2.0 | 10 | 50 |
| HER204 | SE2E | 2.0 | 55 | 300 | 10 | 75 | 1.1 | 2.0 | 10 | 50 |
| HER205 | SE2G | 2.0 | 55 | 400 | 10 | 75 | 1.1 | 2.0 | 10 | 50 |
| HER206 | SE2J | 2.0 | 55 | 600 | 10 | 75 | 1.7 | 2.0 | 10 | 75 |
| HER207 | SE2K | 2.0 | 55 | 800 | 10 | 75 | 1.7 | 2.0 | 10 | 75 |
| HER208 | SE2M | 2.0 | 55 | 1000 | 10 | 75 | 1.7 | 2.0 | 10 | 75 |

Note : (1) Reverse Recovery test conditions : I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A

High Efficient Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|-----|---------------------------------|--------------------------------|
| | | I _{F(AV)} @ Ta | | V _{RRM} | I _{FRM} | I _{FSM} | V _F @ I _F | | I _R | T _{rr} ⁽¹⁾ |
| | | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

HER251/SETA Series, 2.5 A, Case Type: D2A/SMB



| | | | | | | | | | | |
|--------|------|-----|----|------|----|-----|-----|-----|----|----|
| HER251 | SETA | 2.5 | 55 | 50 | 10 | 100 | 1.1 | 2.5 | 10 | 50 |
| HER252 | SETB | 2.5 | 55 | 100 | 10 | 100 | 1.1 | 2.5 | 10 | 50 |
| HER253 | SETD | 2.5 | 55 | 200 | 10 | 100 | 1.1 | 2.5 | 10 | 50 |
| HER254 | SETE | 2.5 | 55 | 300 | 10 | 100 | 1.1 | 2.5 | 10 | 50 |
| HER255 | SETG | 2.5 | 55 | 400 | 10 | 100 | 1.1 | 2.5 | 10 | 50 |
| HER256 | SETJ | 2.5 | 55 | 600 | 10 | 100 | 1.7 | 2.5 | 10 | 75 |
| HER257 | SETK | 2.5 | 55 | 800 | 10 | 100 | 1.7 | 2.5 | 10 | 75 |
| HER258 | SETM | 2.5 | 55 | 1000 | 10 | 100 | 1.7 | 2.5 | 10 | 75 |

HER301/SE3A Series, 3 A, Case Type: DO-201AD/SMC



| | | | | | | | | | | |
|--------|------|-----|----|------|----|-----|-----|-----|----|----|
| HER301 | SE3A | 3.0 | 55 | 50 | 15 | 150 | 1.1 | 3.0 | 10 | 50 |
| HER302 | SE3B | 3.0 | 55 | 100 | 15 | 150 | 1.1 | 3.0 | 10 | 50 |
| HER303 | SE3D | 3.0 | 55 | 200 | 15 | 150 | 1.1 | 3.0 | 10 | 50 |
| HER304 | SE3E | 3.0 | 55 | 300 | 15 | 150 | 1.1 | 3.0 | 10 | 50 |
| HER305 | SE3G | 3.0 | 55 | 400 | 15 | 150 | 1.1 | 3.0 | 10 | 50 |
| HER306 | SE3J | 3.0 | 55 | 600 | 15 | 150 | 1.7 | 3.0 | 10 | 75 |
| HER307 | SE3K | 3.0 | 55 | 800 | 15 | 150 | 1.7 | 3.0 | 10 | 75 |
| HER308 | SE3M | 3.0 | 55 | 1000 | 15 | 150 | 1.7 | 3.0 | 10 | 75 |

HER501/SE5A Series, 5 A, Case Type: DO-201AD/SMC



| | | | | | | | | | | |
|--------|------|-----|----|------|----|-----|-----|-----|----|----|
| HER501 | SE5A | 5.0 | 55 | 50 | 25 | 200 | 1.1 | 5.0 | 10 | 50 |
| HER502 | SE5B | 5.0 | 55 | 100 | 25 | 200 | 1.1 | 5.0 | 10 | 50 |
| HER503 | SE5D | 5.0 | 55 | 200 | 25 | 200 | 1.1 | 5.0 | 10 | 50 |
| HER504 | SE5E | 5.0 | 55 | 300 | 25 | 200 | 1.1 | 5.0 | 10 | 50 |
| HER505 | SE5G | 5.0 | 55 | 400 | 25 | 200 | 1.1 | 5.0 | 10 | 50 |
| HER506 | SE5J | 5.0 | 55 | 600 | 25 | 200 | 1.7 | 5.0 | 10 | 75 |
| HER507 | SE5K | 5.0 | 55 | 800 | 25 | 200 | 1.7 | 5.0 | 10 | 75 |
| HER508 | SE5M | 5.0 | 55 | 1000 | 25 | 200 | 1.7 | 5.0 | 10 | 75 |

HER601 Series, 6 A, Case Type: D6



| | | | | | | | | | | |
|--------|--|-----|----|------|----|-----|-----|-----|----|----|
| HER601 | | 6.0 | 55 | 50 | 25 | 200 | 1.1 | 6.0 | 10 | 50 |
| HER602 | | 6.0 | 55 | 100 | 25 | 200 | 1.1 | 6.0 | 10 | 50 |
| HER603 | | 6.0 | 55 | 200 | 25 | 200 | 1.1 | 6.0 | 10 | 50 |
| HER604 | | 6.0 | 55 | 300 | 25 | 200 | 1.1 | 6.0 | 10 | 50 |
| HER605 | | 6.0 | 55 | 400 | 25 | 200 | 1.1 | 6.0 | 10 | 50 |
| HER606 | | 6.0 | 55 | 600 | 25 | 200 | 1.7 | 6.0 | 10 | 75 |
| HER607 | | 6.0 | 55 | 800 | 25 | 200 | 1.7 | 6.0 | 10 | 75 |
| HER608 | | 6.0 | 55 | 1000 | 25 | 200 | 1.7 | 6.0 | 10 | 75 |

Note : (1) Reverse Recovery test conditions : I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A

Super Fast Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|----------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Trr |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

AG01 Series, 0.5-1 A, Case Type: DO-41



| | | | | | | | | | | |
|-------|--|-----|----|-----|---|----|-----|-----|-----|--------------------|
| AG01Y | | 1.0 | 25 | 70 | - | 25 | 1.2 | 1.0 | 100 | 100 ⁽²⁾ |
| AG01Z | | 0.7 | 25 | 200 | - | 15 | 1.8 | 0.7 | 100 | 100 ⁽²⁾ |
| AG01 | | 0.7 | 25 | 400 | - | 15 | 1.8 | 0.7 | 100 | 100 ⁽²⁾ |
| AG01A | | 0.5 | 25 | 600 | - | 15 | 1.8 | 0.5 | 100 | 100 ⁽²⁾ |

EG01 Series, 0.5 - 1 A, Case Type: DO-41



| | | | | | | | | | | |
|-------|--|-----|----|------|---|----|-----|-----|-----|--------------------|
| EG01Y | | 1.0 | 50 | 70 | - | 30 | 1.2 | 1.0 | 100 | 100 ⁽²⁾ |
| EG01Z | | 0.7 | 50 | 200 | - | 15 | 1.9 | 0.7 | 50 | 100 ⁽²⁾ |
| EG01 | | 0.7 | 50 | 400 | - | 15 | 2.0 | 0.7 | 50 | 100 ⁽²⁾ |
| EG01A | | 0.5 | 25 | 600 | - | 10 | 2.0 | 0.5 | 100 | 100 ⁽²⁾ |
| EG01C | | 0.5 | 25 | 1000 | - | 10 | 3.3 | 0.5 | 50 | 100 ⁽²⁾ |

EG1 Series, 0.6 - 1 A, Case Type: DO-41



| | | | | | | | | | | |
|------|--|-----|----|-----|---|----|-----|-----|-----|--------------------|
| EG1Y | | 1.1 | 50 | 70 | - | 30 | 1.2 | 1.1 | 100 | 100 ⁽²⁾ |
| EG1Z | | 0.8 | 50 | 200 | - | 15 | 1.7 | 0.8 | 50 | 100 ⁽²⁾ |
| EG1 | | 0.8 | 50 | 400 | - | 15 | 1.8 | 0.8 | 50 | 100 ⁽²⁾ |
| EG1A | | 0.6 | 25 | 600 | - | 10 | 2.0 | 0.6 | 100 | 100 ⁽²⁾ |

ERA32-01 Series, 1 A, Case Type: DO-41



| | | | | | | | | | | |
|----------|--|-----|----|-----|---|----|------|-----|----|--------------------|
| ERA32-01 | | 1.0 | 40 | 100 | - | 40 | 0.92 | 1.0 | 10 | 100 ⁽²⁾ |
| ERA32-02 | | 1.0 | 40 | 200 | - | 40 | 0.92 | 1.0 | 10 | 100 ⁽²⁾ |

11DF1 Series, 1 A, Case Type: DO-41



| | | | | | | | | | | |
|-------|--|-----|----|-----|---|----|------|-----|----|-------------------|
| 11DF1 | | 1.0 | 63 | 100 | - | 30 | 0.98 | 1.0 | 10 | 35 ⁽¹⁾ |
| 11DF2 | | 1.0 | 63 | 200 | - | 30 | 0.98 | 1.0 | 10 | 35 ⁽¹⁾ |
| 11DF3 | | 1.0 | 57 | 300 | - | 30 | 1.25 | 1.0 | 10 | 35 ⁽¹⁾ |
| 11DF4 | | 1.0 | 57 | 400 | - | 30 | 1.25 | 1.0 | 10 | 35 ⁽¹⁾ |

MUR120 Series, 1 A, Case Type: DO-41



| | | | | | | | | | | |
|--------|--|-----|----|-----|---|----|-------|-----|-----|-------------------|
| MUR120 | | 1.0 | 25 | 200 | - | 35 | 0.875 | 1.0 | 2.0 | 25 ⁽¹⁾ |
| MUR140 | | 1.0 | 25 | 400 | - | 35 | 1.25 | 1.0 | 5.0 | 50 ⁽¹⁾ |
| MUR160 | | 1.0 | 25 | 600 | - | 35 | 1.25 | 1.0 | 5.0 | 50 ⁽¹⁾ |

RG10 Series, 1 - 1.5 A, Case Type: D2



| | | | | | | | | | | |
|-------|--|-----|----|-----|-----|----|-----|-----|-----|-------------------|
| RG10Y | | 1.5 | 55 | 70 | 5.0 | 50 | 1.1 | 1.5 | 500 | 35 ⁽¹⁾ |
| RG10 | | 1.2 | 55 | 400 | 5.0 | 50 | 1.8 | 1.5 | 500 | 35 ⁽¹⁾ |
| RG10A | | 1.0 | 55 | 600 | 5.0 | 50 | 2.0 | 1.0 | 500 | 35 ⁽¹⁾ |

Notes: (1) Reverse Recovery test conditions : $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, $I_{rr} = 0.25 \text{ A}$

(2) Reverse Recovery test conditions : $I_F = 100 \text{ mA}$, $I_R = 100 \text{ mA}$



Super Fast Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|----------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Trr |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

UF1001 Series, 1 A, Case Type: DO-41



| | | | | | | | | | | |
|--------|--|-----|----|------|---|----|------|-----|-----|-------------------|
| UF1001 | | 1.0 | 55 | 50 | - | 30 | 1.10 | 1.0 | 5.0 | 50 ⁽¹⁾ |
| UF1002 | | 1.0 | 55 | 100 | - | 30 | 1.10 | 1.0 | 5.0 | 50 ⁽¹⁾ |
| UF1003 | | 1.0 | 55 | 200 | - | 30 | 1.10 | 1.0 | 5.0 | 50 ⁽¹⁾ |
| UF1004 | | 1.0 | 55 | 400 | - | 30 | 1.10 | 1.0 | 5.0 | 50 ⁽¹⁾ |
| UF1005 | | 1.1 | 55 | 600 | - | 30 | 1.70 | 1.0 | 5.0 | 75 ⁽¹⁾ |
| UF1006 | | 1.0 | 55 | 800 | - | 30 | 1.70 | 1.0 | 5.0 | 75 ⁽¹⁾ |
| UF1007 | | 1.0 | 55 | 1000 | - | 30 | 1.70 | 1.0 | 5.0 | 75 ⁽¹⁾ |

UF4001 Series, 1 A, Case Type: DO-41



| | | | | | | | | | | |
|--------|--|-----|----|------|---|----|------|-----|----|-------------------|
| UF4001 | | 1.0 | 55 | 50 | - | 30 | 1.00 | 1.0 | 10 | 50 ⁽¹⁾ |
| UF4002 | | 1.0 | 55 | 100 | - | 30 | 1.00 | 1.0 | 10 | 50 ⁽¹⁾ |
| UF4003 | | 1.0 | 55 | 200 | - | 30 | 1.00 | 1.0 | 10 | 50 ⁽¹⁾ |
| UF4004 | | 1.0 | 55 | 400 | - | 30 | 1.00 | 1.0 | 10 | 50 ⁽¹⁾ |
| UF4005 | | 1.0 | 55 | 600 | - | 30 | 1.70 | 1.0 | 10 | 75 ⁽¹⁾ |
| UF4006 | | 1.0 | 55 | 800 | - | 30 | 1.70 | 1.0 | 10 | 75 ⁽¹⁾ |
| UF4007 | | 1.0 | 55 | 1000 | - | 30 | 1.70 | 1.0 | 10 | 75 ⁽¹⁾ |

SF11/SS1A Series, 1 A, Case Type: DO-41/SMA



| | | | | | | | | | | |
|------|------|-----|----|------|-----|----|------|-----|-----|-------------------|
| SF11 | SS1A | 1.0 | 55 | 50 | 5.0 | 30 | 0.95 | 1.0 | 5.0 | 35 ⁽¹⁾ |
| SF12 | SS1B | 1.0 | 55 | 100 | 5.0 | 30 | 0.95 | 1.0 | 5.0 | 35 ⁽¹⁾ |
| SF13 | SS1C | 1.0 | 55 | 150 | 5.0 | 30 | 0.95 | 1.0 | 5.0 | 35 ⁽¹⁾ |
| SF14 | SS1D | 1.0 | 55 | 200 | 5.0 | 30 | 0.95 | 1.0 | 5.0 | 35 ⁽¹⁾ |
| SF15 | SS1E | 1.0 | 55 | 300 | 5.0 | 30 | 1.70 | 1.0 | 5.0 | 35 ⁽¹⁾ |
| SF16 | SS1G | 1.0 | 55 | 400 | 5.0 | 30 | 1.70 | 1.0 | 5.0 | 35 ⁽¹⁾ |
| SF17 | SS1J | 1.0 | 55 | 600 | 5.0 | 30 | 1.70 | 1.0 | 5.0 | 35 ⁽¹⁾ |
| SF18 | SS1K | 1.0 | 55 | 800 | 5.0 | 30 | 4.00 | 1.0 | 10 | 35 ⁽¹⁾ |
| SF19 | SS1M | 1.0 | 55 | 1000 | 5.0 | 30 | 4.00 | 1.0 | 10 | 35 ⁽¹⁾ |

ES1A Series, 1 A, Case Type: SMA



| | | | | | | | | | | |
|--|------|-----|----------------------|------|---|----|------|-----|-----|-------------------|
| | ES1A | 1.0 | 120(T _L) | 50 | - | 30 | 0.95 | 1.0 | 5.0 | 35 ⁽¹⁾ |
| | ES1B | 1.0 | 120(T _L) | 100 | - | 30 | 0.95 | 1.0 | 5.0 | 35 ⁽¹⁾ |
| | ES1C | 1.0 | 120(T _L) | 150 | - | 30 | 0.95 | 1.0 | 5.0 | 35 ⁽¹⁾ |
| | ES1D | 1.0 | 120(T _L) | 200 | - | 30 | 0.95 | 1.0 | 5.0 | 35 ⁽¹⁾ |
| | ES1E | 1.0 | 120(T _L) | 300 | - | 30 | 1.25 | 1.0 | 5.0 | 35 ⁽¹⁾ |
| | ES1G | 1.0 | 120(T _L) | 400 | - | 30 | 1.25 | 1.0 | 5.0 | 35 ⁽¹⁾ |
| | ES1J | 1.0 | 120(T _L) | 600 | - | 30 | 1.70 | 1.0 | 5.0 | 35 ⁽¹⁾ |
| | ES1K | 1.0 | 55 | 800 | - | 30 | 4.00 | 1.0 | 10 | 35 ⁽¹⁾ |
| | ES1M | 1.0 | 55 | 1000 | - | 30 | 4.00 | 1.0 | 10 | 35 ⁽¹⁾ |

Notes: (1) Reverse Recovery test conditions : I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A

(2) Reverse Recovery test conditions : I_F = 100 mA, I_R = 100 mA



Super Fast Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|----------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Trr |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

RG2 Series, 1 - 1.5 A, Case Type: D2



| | | | | | | | | | | | |
|------|--|-----|----|-----|-----|----|-----|-----|-----|-------------------|--------------------|
| RG2Y | | 1.5 | 60 | 70 | 5.0 | 50 | 1.1 | 1.5 | 500 | 35 ⁽¹⁾ | 100 ⁽²⁾ |
| RG2Z | | 1.2 | 60 | 200 | 5.0 | 50 | 1.5 | 1.5 | 500 | 35 ⁽¹⁾ | 100 ⁽²⁾ |
| RG2 | | 1.2 | 60 | 400 | 5.0 | 50 | 1.8 | 1.5 | 500 | 35 ⁽¹⁾ | 100 ⁽²⁾ |
| RG2A | | 1.0 | 60 | 600 | 5.0 | 50 | 2.0 | 1.0 | 500 | 35 ⁽¹⁾ | 100 ⁽²⁾ |

RG4 Series, 1 - 2.0 A, Case Type: DO-201AD



| | | | | | | | | | | | |
|------|--|-----|----|-----|---|-----|-----|-----|------|-------------------|--------------------|
| RG4Y | | 2.0 | 60 | 70 | - | 100 | 1.3 | 3.5 | 1000 | 35 ⁽¹⁾ | 100 ⁽²⁾ |
| RG4Z | | 1.0 | 60 | 200 | - | 80 | 1.7 | 3.0 | 1000 | 35 ⁽¹⁾ | 100 ⁽²⁾ |
| RG4 | | 1.0 | 60 | 400 | - | 80 | 1.8 | 3.0 | 500 | 35 ⁽¹⁾ | 100 ⁽²⁾ |
| RG4A | | 1.0 | 60 | 600 | - | 50 | 2.0 | 2.0 | 500 | 35 ⁽¹⁾ | 100 ⁽²⁾ |

EL1 Series, 1.5 A, Case Type: DO-41



| | | | | | | | | | | | |
|------|--|-----|----|-----|---|----|------|-----|-----|--------------------|--|
| EL1Z | | 1.5 | 25 | 200 | - | 20 | 0.98 | 1.5 | 100 | 50 ⁽²⁾ | |
| EL1 | | 1.5 | 25 | 400 | - | 20 | 1.30 | 1.5 | 10 | 100 ⁽²⁾ | |

SFO1/SSOA Series, 1.5 A, Case Type: DO-41/SMA



| | | | | | | | | | | | |
|------|------|-----|----|------|-----|----|------|-----|-----|-------------------|--|
| SFO1 | SSOA | 1.5 | 55 | 50 | 5.0 | 60 | 0.95 | 1.5 | 5.0 | 35 ⁽¹⁾ | |
| SFO2 | SSOB | 1.5 | 55 | 100 | 5.0 | 60 | 0.95 | 1.5 | 5.0 | 35 ⁽¹⁾ | |
| SFO3 | SSOC | 1.5 | 55 | 150 | 5.0 | 60 | 0.95 | 1.5 | 5.0 | 35 ⁽¹⁾ | |
| SFO4 | SSOD | 1.5 | 55 | 200 | 5.0 | 60 | 0.95 | 1.5 | 5.0 | 35 ⁽¹⁾ | |
| SFO5 | SSOE | 1.5 | 55 | 300 | 5.0 | 60 | 1.70 | 1.5 | 5.0 | 35 ⁽¹⁾ | |
| SFO6 | SSOG | 1.5 | 55 | 400 | 5.0 | 60 | 1.70 | 1.5 | 5.0 | 35 ⁽¹⁾ | |
| SFO7 | SSOJ | 1.5 | 55 | 600 | 5.0 | 60 | 1.70 | 1.5 | 5.0 | 35 ⁽¹⁾ | |
| SFO8 | SSOK | 1.5 | 55 | 800 | 5.0 | 60 | 4.00 | 1.5 | 20 | 35 ⁽¹⁾ | |
| SFO9 | SSOM | 1.5 | 55 | 1000 | 5.0 | 60 | 4.00 | 1.5 | 20 | 35 ⁽¹⁾ | |

EPG20A Series, 2 A, Case Type: D2



| | | | | | | | | | | | |
|--------|--|-----|----|-----|---|----|------|-----|-----|-------------------|--|
| EGP20A | | 2.0 | 55 | 50 | - | 75 | 0.95 | 2.0 | 5.0 | 50 ⁽¹⁾ | |
| EGP20B | | 2.0 | 55 | 100 | - | 75 | 0.95 | 2.0 | 5.0 | 50 ⁽¹⁾ | |
| EGP20C | | 2.0 | 55 | 150 | - | 75 | 0.95 | 2.0 | 5.0 | 50 ⁽¹⁾ | |
| EGP20D | | 2.0 | 55 | 200 | - | 75 | 0.95 | 2.0 | 5.0 | 50 ⁽¹⁾ | |

UG2A-D Series, 2 A, Case Type: DO-41



| | | | | | | | | | | | |
|------|--|-----|----|-----|---|----|------|-----|-----|-------------------|--|
| UG2A | | 2.0 | 50 | 50 | - | 80 | 0.95 | 2.0 | 5.0 | 15 ⁽¹⁾ | |
| UG2B | | 2.0 | 50 | 100 | - | 80 | 0.95 | 2.0 | 5.0 | 15 ⁽¹⁾ | |
| UG2C | | 2.0 | 50 | 150 | - | 80 | 0.95 | 2.0 | 5.0 | 15 ⁽¹⁾ | |
| UG2D | | 2.0 | 50 | 200 | - | 80 | 0.95 | 2.0 | 5.0 | 15 ⁽¹⁾ | |

Notes: (1) Reverse Recovery test conditions : $I_F = 0.5$ A, $I_R = 1$ A, $t_{rr} = 0.25$ A

(2) Reverse Recovery test conditions : $I_F = 100$ mA, $I_R = 100$ mA



Super Fast Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|----------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Trr |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

SF21/SS2A Series, 2 A, Case Type: D2/SMB



| | | | | | | | | | | |
|------|------|-----|----|------|----|----|------|-----|-----|-------------------|
| SF21 | SS2A | 2.0 | 55 | 50 | 10 | 75 | 0.95 | 2.0 | 5.0 | 35 ⁽¹⁾ |
| SF22 | SS2B | 2.0 | 55 | 100 | 10 | 75 | 0.95 | 2.0 | 5.0 | 35 ⁽¹⁾ |
| SF23 | SS2C | 2.0 | 55 | 150 | 10 | 75 | 0.95 | 2.0 | 5.0 | 35 ⁽¹⁾ |
| SF24 | SS2D | 2.0 | 55 | 200 | 10 | 75 | 0.95 | 2.0 | 5.0 | 35 ⁽¹⁾ |
| SF25 | SS2E | 2.0 | 55 | 300 | 10 | 75 | 1.70 | 2.0 | 5.0 | 35 ⁽¹⁾ |
| SF26 | SS2G | 2.0 | 55 | 400 | 10 | 75 | 1.70 | 2.0 | 5.0 | 35 ⁽¹⁾ |
| SF27 | SS2J | 2.0 | 55 | 600 | 10 | 75 | 1.70 | 2.0 | 5.0 | 35 ⁽¹⁾ |
| SF28 | SS2K | 2.0 | 55 | 800 | 10 | 75 | 4.00 | 2.0 | 20 | 35 ⁽¹⁾ |
| SF29 | SS2M | 2.0 | 55 | 1000 | 10 | 75 | 4.00 | 2.0 | 20 | 35 ⁽¹⁾ |

ES2A Series, 2 A, Case Type: SMB



| | | | | | | | | | | |
|--|------|-----|----------------------|-----|---|----|------|-----|-----|-------------------|
| | ES2A | 2.0 | 110(T _L) | 50 | - | 50 | 0.90 | 2.0 | 5.0 | 20 ⁽¹⁾ |
| | ES2B | 2.0 | 110(T _L) | 100 | - | 50 | 0.90 | 2.0 | 5.0 | 20 ⁽¹⁾ |
| | ES2C | 2.0 | 110(T _L) | 150 | - | 50 | 0.90 | 2.0 | 5.0 | 20 ⁽¹⁾ |
| | ES2D | 2.0 | 110(T _L) | 200 | - | 50 | 0.90 | 2.0 | 5.0 | 20 ⁽¹⁾ |

* For SMA package add suffix "A" e.g. ES2AA, ES2BA...

SFT1/SSTA Series, 2.5 A, Case Type: D2A/SMB



| | | | | | | | | | | |
|------|------|-----|----|------|----|-----|------|-----|-----|-------------------|
| SFT1 | SSTA | 2.5 | 55 | 50 | 10 | 100 | 0.95 | 2.5 | 5.0 | 35 ⁽¹⁾ |
| SFT2 | SSTB | 2.5 | 55 | 100 | 10 | 100 | 0.95 | 2.5 | 5.0 | 35 ⁽¹⁾ |
| SFT3 | SSTC | 2.5 | 55 | 150 | 10 | 100 | 0.95 | 2.5 | 5.0 | 35 ⁽¹⁾ |
| SFT4 | SSTD | 2.5 | 55 | 200 | 10 | 100 | 0.95 | 2.5 | 5.0 | 35 ⁽¹⁾ |
| SFT5 | SSTE | 2.5 | 55 | 300 | 10 | 100 | 1.70 | 2.5 | 5.0 | 35 ⁽¹⁾ |
| SFT6 | SSTG | 2.5 | 55 | 400 | 10 | 100 | 1.70 | 2.5 | 5.0 | 35 ⁽¹⁾ |
| SFT7 | SSTJ | 2.5 | 55 | 600 | 10 | 100 | 1.70 | 2.5 | 5.0 | 35 ⁽¹⁾ |
| SFT8 | SSTK | 2.5 | 55 | 800 | 10 | 100 | 4.00 | 2.5 | 5.0 | 35 ⁽¹⁾ |
| SFT9 | SSTM | 2.5 | 55 | 1000 | 10 | 100 | 4.00 | 2.5 | 5.0 | 35 ⁽¹⁾ |

1N5807/1N5807US Series, 3.0 A, Case Type: D2A/SMB



| | | | | | | | | | | |
|--------|----------|-----|----|-----|---|-----|-------|---|---|-------------------|
| 1N5807 | 1N5807US | 3.0 | 55 | 50 | - | 125 | 0.875 | 4 | 5 | 30 ⁽²⁾ |
| 1N5809 | 1N5809US | 3.0 | 55 | 100 | - | 125 | 0.875 | 4 | 5 | 30 ⁽²⁾ |
| 1N5811 | 1N5811US | 3.0 | 55 | 150 | - | 125 | 0.875 | 4 | 5 | 30 ⁽²⁾ |

UF5404 Series, 3 A, Case Type: DO-201AD



| | | | | | | | | | | |
|--------|--|-----|----|------|---|-----|------|-----|----|-------------------|
| UF5404 | | 3.0 | 55 | 300 | - | 150 | 1.00 | 3.0 | 10 | 50 ⁽¹⁾ |
| UF5405 | | 3.0 | 55 | 400 | - | 150 | 1.00 | 3.0 | 10 | 50 ⁽¹⁾ |
| UF5406 | | 3.0 | 55 | 600 | - | 150 | 1.70 | 3.0 | 10 | 75 ⁽¹⁾ |
| UF5407 | | 3.0 | 55 | 800 | - | 150 | 1.70 | 3.0 | 10 | 75 ⁽¹⁾ |
| UF5408 | | 3.0 | 55 | 1000 | - | 150 | 1.70 | 3.0 | 10 | 75 ⁽¹⁾ |

Notes: (1) Reverse Recovery test conditions : I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A

(2) Reverse Recovery test conditions : I_F = 100 mA, I_R = 100 mA



Super Fast Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|----------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Trr |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

ES3A-M Series, 3 A, Case Type: SMC



| | | | | | | | | | | |
|--|------|-----|----|------|---|-----|------|-----|----|-------------------|
| | ES3A | 3.0 | 55 | 50 | - | 100 | 0.95 | 3.0 | 10 | 35 ⁽¹⁾ |
| | ES3B | 3.0 | 55 | 100 | - | 100 | 0.95 | 3.0 | 10 | 35 ⁽¹⁾ |
| | ES3C | 3.0 | 55 | 150 | - | 100 | 0.95 | 3.0 | 10 | 35 ⁽¹⁾ |
| | ES3D | 3.0 | 55 | 200 | - | 100 | 0.95 | 3.0 | 10 | 35 ⁽¹⁾ |
| | ES3E | 3.0 | 55 | 300 | - | 100 | 1.30 | 3.0 | 10 | 35 ⁽¹⁾ |
| | ES3G | 3.0 | 55 | 400 | - | 100 | 1.30 | 3.0 | 10 | 35 ⁽¹⁾ |
| | ES3J | 3.0 | 55 | 600 | - | 100 | 1.70 | 3.0 | 10 | 35 ⁽¹⁾ |
| | ES3K | 3.0 | 55 | 800 | - | 100 | 1.70 | 3.0 | 10 | 35 ⁽¹⁾ |
| | ES3M | 3.0 | 55 | 1000 | - | 100 | 1.70 | 3.0 | 10 | 35 ⁽¹⁾ |

SF31/SS3A Series, 3 A, Case Type: DO-201AD/SMC



| | | | | | | | | | | |
|------|------|-----|----|------|----|-----|------|-----|----|-------------------|
| SF31 | SS3A | 3.0 | 55 | 50 | 15 | 125 | 0.95 | 3.0 | 10 | 35 ⁽¹⁾ |
| SF32 | SS3B | 3.0 | 55 | 100 | 15 | 125 | 0.95 | 3.0 | 10 | 35 ⁽¹⁾ |
| SF33 | SS3C | 3.0 | 55 | 150 | 15 | 125 | 0.95 | 3.0 | 10 | 35 ⁽¹⁾ |
| SF34 | SS3D | 3.0 | 55 | 200 | 15 | 125 | 0.95 | 3.0 | 10 | 35 ⁽¹⁾ |
| SF35 | SS3E | 3.0 | 55 | 300 | 15 | 125 | 1.70 | 3.0 | 10 | 35 ⁽¹⁾ |
| SF36 | SS3G | 3.0 | 55 | 400 | 15 | 125 | 1.70 | 3.0 | 10 | 35 ⁽¹⁾ |
| SF37 | SS3J | 3.0 | 55 | 600 | 15 | 125 | 1.70 | 3.0 | 10 | 35 ⁽¹⁾ |
| SF38 | SS3K | 3.0 | 55 | 800 | 15 | 125 | 4.00 | 3.0 | 10 | 35 ⁽¹⁾ |
| SF39 | SS3M | 3.0 | 55 | 1000 | 15 | 125 | 4.00 | 3.0 | 10 | 35 ⁽¹⁾ |

SF51/SS5A Series, 5 A, Case Type: DO-201AD/SMC



| | | | | | | | | | | |
|------|------|-----|----|------|----|-----|------|-----|----|-------------------|
| SF51 | SS5A | 5.0 | 55 | 50 | 20 | 135 | 0.95 | 5.0 | 10 | 35 ⁽¹⁾ |
| SF52 | SS5B | 5.0 | 55 | 100 | 20 | 135 | 0.95 | 5.0 | 10 | 35 ⁽¹⁾ |
| SF53 | SS5C | 5.0 | 55 | 150 | 20 | 135 | 0.95 | 5.0 | 10 | 35 ⁽¹⁾ |
| SF54 | SS5D | 5.0 | 55 | 200 | 20 | 135 | 0.95 | 5.0 | 10 | 35 ⁽¹⁾ |
| SF55 | SS5E | 5.0 | 55 | 300 | 20 | 135 | 1.70 | 5.0 | 10 | 35 ⁽¹⁾ |
| SF56 | SS5G | 5.0 | 55 | 400 | 20 | 135 | 1.70 | 5.0 | 10 | 35 ⁽¹⁾ |
| SF57 | SS5J | 5.0 | 55 | 600 | 20 | 135 | 1.70 | 5.0 | 10 | 35 ⁽¹⁾ |
| SF58 | SS5K | 5.0 | 55 | 800 | 20 | 135 | 4.00 | 5.0 | 10 | 35 ⁽¹⁾ |
| SF59 | SS5M | 5.0 | 55 | 1000 | 20 | 135 | 4.00 | 5.0 | 10 | 35 ⁽¹⁾ |

SF61 Series, 6 A, Case Type: D6



| | | | | | | | | | | |
|------|--|-----|----|------|----|-----|------|-----|-----|-------------------|
| SF61 | | 6.0 | 55 | 50 | 25 | 150 | 0.95 | 6.0 | 5.0 | 35 ⁽¹⁾ |
| SF62 | | 6.0 | 55 | 100 | 25 | 150 | 0.95 | 6.0 | 5.0 | 35 ⁽¹⁾ |
| SF63 | | 6.0 | 55 | 150 | 25 | 150 | 0.95 | 6.0 | 5.0 | 35 ⁽¹⁾ |
| SF64 | | 6.0 | 55 | 200 | 25 | 150 | 0.95 | 6.0 | 5.0 | 35 ⁽¹⁾ |
| SF65 | | 6.0 | 55 | 300 | 25 | 150 | 1.70 | 6.0 | 5.0 | 35 ⁽¹⁾ |
| SF66 | | 6.0 | 55 | 400 | 25 | 150 | 1.70 | 6.0 | 5.0 | 35 ⁽¹⁾ |
| SF67 | | 6.0 | 55 | 600 | 25 | 150 | 1.70 | 6.0 | 5.0 | 35 ⁽¹⁾ |
| SF68 | | 6.0 | 55 | 800 | 25 | 150 | 4.00 | 6.0 | 5.0 | 35 ⁽¹⁾ |
| SF69 | | 6.0 | 55 | 1000 | 25 | 150 | 4.00 | 6.0 | 5.0 | 35 ⁽¹⁾ |

Note: (1) Reverse Recovery test conditions : $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, $I_{rr} = 0.25 \text{ A}$



Super Fast Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|----------------------------|
| | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Trr ⁽¹⁾ |
| Axial Lead | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

FES8AT Series, 8 A, Case Type: TO-220AC



| | | | | | | | | | |
|-----------------------|-----|---------|-----|---|-----|------|-----|----|-------------------|
| FES8AT ⁽²⁾ | 8.0 | 100(Tc) | 50 | - | 125 | 0.95 | 8.0 | 10 | 35 ⁽¹⁾ |
| FES8BT ⁽²⁾ | 8.0 | 100(Tc) | 100 | - | 125 | 0.95 | 8.0 | 10 | 35 ⁽¹⁾ |
| FES8CT ⁽²⁾ | 8.0 | 100(Tc) | 150 | - | 125 | 0.95 | 8.0 | 10 | 35 ⁽¹⁾ |
| FES8DT ⁽²⁾ | 8.0 | 100(Tc) | 200 | - | 125 | 0.95 | 8.0 | 10 | 35 ⁽¹⁾ |
| FES8FT ⁽²⁾ | 8.0 | 100(Tc) | 300 | - | 125 | 1.30 | 8.0 | 10 | 50 ⁽¹⁾ |
| FES8GT ⁽²⁾ | 8.0 | 100(Tc) | 400 | - | 125 | 1.30 | 8.0 | 10 | 50 ⁽¹⁾ |
| FES8HT ⁽²⁾ | 8.0 | 100(Tc) | 500 | - | 125 | 1.50 | 8.0 | 10 | 50 ⁽¹⁾ |
| FES8JT ⁽²⁾ | 8.0 | 100(Tc) | 600 | - | 125 | 1.50 | 8.0 | 10 | 50 ⁽¹⁾ |

FES16AT Series, 16 A, Case Type: TO-220AC



| | | | | | | | | | |
|------------------------|----|---------|-----|---|-----|------|----|----|-------------------|
| FES16AT ⁽²⁾ | 16 | 100(Tc) | 50 | - | 250 | 0.95 | 16 | 10 | 35 ⁽¹⁾ |
| FES16BT ⁽²⁾ | 16 | 100(Tc) | 100 | - | 250 | 0.95 | 16 | 10 | 35 ⁽¹⁾ |
| FES16CT ⁽²⁾ | 16 | 100(Tc) | 150 | - | 250 | 0.95 | 16 | 10 | 35 ⁽¹⁾ |
| FES16DT ⁽²⁾ | 16 | 100(Tc) | 200 | - | 250 | 0.95 | 16 | 10 | 35 ⁽¹⁾ |
| FES16FT ⁽²⁾ | 16 | 100(Tc) | 300 | - | 250 | 1.30 | 16 | 10 | 50 ⁽¹⁾ |
| FES16GT ⁽²⁾ | 16 | 100(Tc) | 400 | - | 250 | 1.30 | 16 | 10 | 50 ⁽¹⁾ |
| FES16HT ⁽²⁾ | 16 | 100(Tc) | 500 | - | 250 | 1.50 | 16 | 10 | 50 ⁽¹⁾ |
| FES16JT ⁽²⁾ | 16 | 100(Tc) | 600 | - | 250 | 1.50 | 16 | 10 | 50 ⁽¹⁾ |

FEP16AT Series, 16 A, Case Type: TO-220AB



| | | | | | | | | | |
|---------|----|---------|-----|---|-----|------|----|----|----|
| FEP16AT | 16 | 100(Tc) | 50 | - | 125 | 0.95 | 16 | 10 | 35 |
| FEP16BT | 16 | 100(Tc) | 100 | - | 125 | 0.95 | 16 | 10 | 35 |
| FEP16CT | 16 | 100(Tc) | 150 | - | 125 | 0.95 | 16 | 10 | 35 |
| FEP16DT | 16 | 100(Tc) | 200 | - | 125 | 0.95 | 16 | 10 | 35 |
| FEP16FT | 16 | 100(Tc) | 300 | - | 125 | 1.30 | 16 | 10 | 50 |
| FEP16GT | 16 | 100(Tc) | 400 | - | 125 | 1.30 | 16 | 10 | 50 |
| FEP16HT | 16 | 100(Tc) | 500 | - | 125 | 1.50 | 16 | 10 | 50 |
| FEP16JT | 16 | 100(Tc) | 600 | - | 125 | 1.50 | 16 | 10 | 50 |

FEP30AP Series, 30 A, Case Type: TO-247AD



| | | | | | | | | | |
|---------|----|---------|-----|---|-----|------|----|----|----|
| FEP30AP | 30 | 100(Tc) | 50 | - | 300 | 0.95 | 30 | 10 | 35 |
| FEP30BP | 30 | 100(Tc) | 100 | - | 300 | 0.95 | 30 | 10 | 35 |
| FEP30CP | 30 | 100(Tc) | 150 | - | 300 | 0.95 | 30 | 10 | 35 |
| FEP30DP | 30 | 100(Tc) | 200 | - | 300 | 0.95 | 30 | 10 | 35 |
| FEP30FP | 30 | 100(Tc) | 300 | - | 300 | 1.30 | 30 | 10 | 50 |
| FEP30GP | 30 | 100(Tc) | 400 | - | 300 | 1.30 | 30 | 10 | 50 |
| FEP30HP | 30 | 100(Tc) | 500 | - | 300 | 1.50 | 30 | 10 | 50 |
| FEP30JP | 30 | 100(Tc) | 600 | - | 300 | 1.50 | 30 | 10 | 50 |

MUR1520/S, Case Type: TO-220AC



| | | | | | | | | | |
|----------|----|--------|-----|---|-----|------|----|----|----|
| MUR1520 | 15 | 150 Tc | 200 | - | 200 | 1.05 | 15 | 10 | 35 |
| MUR1520S | 15 | 150 Tc | 200 | - | 200 | 1.05 | 15 | 10 | 35 |

Notes :

- (1) Reverse Recovery test conditions : $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, $I_{rr} = 0.25 \text{ A}$
- (2) For wire leads (case type ITO-220AC) add suffix "F" e.g. FESF8AT, FESF8BT, ..., FESF8JT and FESF16AT, FESF16BT, ..., FESF16JT



Super Fast Glass Passivated Rectifier Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Surge Forward Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Reverse Recovery Time |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|----------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Trr ⁽¹⁾ |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (μA) | (ns) |

LMS1A Series, 1 A, Case Type: M1A



| | | | | | | | | | | |
|-------|--|-----|----|------|---|----|------|-----|-----|----|
| LMS1A | | 1.0 | 50 | 50 | - | 30 | 0.95 | 1.0 | 5.0 | 35 |
| LMS1B | | 1.0 | 50 | 100 | - | 30 | 0.95 | 1.0 | 5.0 | 35 |
| LMS1D | | 1.0 | 50 | 200 | - | 30 | 0.95 | 1.0 | 5.0 | 35 |
| LMS1G | | 1.0 | 50 | 400 | - | 30 | 1.7 | 1.0 | 5.0 | 35 |
| LMS1J | | 1.0 | 50 | 600 | - | 30 | 1.7 | 1.0 | 5.0 | 35 |
| LMS1K | | 1.0 | 50 | 800 | - | 30 | 4.0 | 1.0 | 10 | 35 |
| LMS1M | | 1.0 | 50 | 1000 | - | 30 | 4.0 | 1.0 | 10 | 35 |

SF11G Series, 1 A, Case Type: DO-41



| | | | | | | | | | | |
|-------|--|-----|----|------|---|----|------|-----|-----|----|
| SF11G | | 1.0 | 55 | 50 | - | 30 | 0.95 | 1.0 | 5.0 | 35 |
| SF12G | | 1.0 | 55 | 100 | - | 30 | 0.95 | 1.0 | 5.0 | 35 |
| SF13G | | 1.0 | 55 | 150 | - | 30 | 0.95 | 1.0 | 5.0 | 35 |
| SF14G | | 1.0 | 55 | 200 | - | 30 | 0.95 | 1.0 | 5.0 | 35 |
| SF15G | | 1.0 | 55 | 300 | - | 30 | 1.7 | 1.0 | 5.0 | 35 |
| SF16G | | 1.0 | 55 | 400 | - | 30 | 1.7 | 1.0 | 5.0 | 35 |
| SF17G | | 1.0 | 55 | 600 | - | 30 | 1.7 | 1.0 | 5.0 | 35 |
| SF18G | | 1.0 | 55 | 800 | - | 30 | 4.0 | 1.0 | 10 | 35 |
| SF19G | | 1.0 | 55 | 1000 | - | 30 | 4.0 | 1.0 | 10 | 35 |

S2L20U, 1.5 A, Case Type: D2A



| | | | | | | | | | | |
|--------|--|-----|----|-----|---|----|------|-----|----|----|
| S2L20U | | 1.5 | 25 | 200 | - | 50 | 0.98 | 1.5 | 10 | 35 |
|--------|--|-----|----|-----|---|----|------|-----|----|----|

1N5802/1N5802US Series, 2.5 A, Case Type: DO-41



| | | | | | | | | | | |
|--------|----------|-----|----------------------|-----|---|----|-------|-----|-----|----|
| 1N5802 | 1N5802US | 2.5 | 75 (T _L) | 50 | - | 35 | 0.875 | 1.0 | 1.0 | 25 |
| 1N5803 | 1N5803US | 2.5 | 75 (T _L) | 75 | - | 35 | 0.875 | 1.0 | 1.0 | 25 |
| 1N5804 | 1N5804US | 2.5 | 75 (T _L) | 100 | - | 35 | 0.875 | 1.0 | 1.0 | 25 |
| 1N5805 | 1N5805US | 2.5 | 75 (T _L) | 125 | - | 35 | 0.875 | 1.0 | 1.0 | 25 |
| 1N5806 | 1N5806US | 2.5 | 75 (T _L) | 150 | - | 35 | 0.875 | 1.0 | 1.0 | 25 |

RHRP660F, 6 A, Case Type: ITO-220AC

| | | | | | | | | | | |
|----------|--|-----|----------------------|-----|---|----|-----|-----|----|----|
| RHRP660F | | 6.0 | 100(T _C) | 600 | - | 80 | 2.7 | 6.0 | 10 | 20 |
|----------|--|-----|----------------------|-----|---|----|-----|-----|----|----|

SF61G Series, 6 A, Case Type: D6



| | | | | | | | | | | |
|-------|--|-----|----|------|---|-----|------|-----|-----|----|
| SF61G | | 6.0 | 55 | 50 | - | 150 | 0.95 | 6.0 | 5.0 | 35 |
| SF62G | | 6.0 | 55 | 100 | - | 150 | 0.95 | 6.0 | 5.0 | 35 |
| SF63G | | 6.0 | 55 | 150 | - | 150 | 0.95 | 6.0 | 5.0 | 35 |
| SF64G | | 6.0 | 55 | 200 | - | 150 | 0.95 | 6.0 | 5.0 | 35 |
| SF65G | | 6.0 | 55 | 300 | - | 150 | 1.7 | 6.0 | 5.0 | 35 |
| SF66G | | 6.0 | 55 | 400 | - | 150 | 1.7 | 6.0 | 5.0 | 35 |
| SF67G | | 6.0 | 55 | 600 | - | 150 | 1.7 | 6.0 | 5.0 | 35 |
| SF68G | | 6.0 | 55 | 800 | - | 150 | 4.0 | 6.0 | 10 | 35 |
| SF69G | | 6.0 | 55 | 1000 | - | 150 | 4.0 | 6.0 | 10 | 35 |

SMC1520, 15 A, Case Type: SMC



| | | | | | | | | | | |
|---------|--|----|---------------------|-----|---|-----|------|------|----|----|
| SMC1520 | | 15 | 75(T _C) | 200 | - | 200 | 1.05 | 15.0 | 10 | 35 |
|---------|--|----|---------------------|-----|---|-----|------|------|----|----|

MUR3020WT Series, Case Type: TO-247AD (TO-3P)



| | | | | | | | | | | |
|-----------|--|------|--------------------|-----|---|-----|------|----|----|-------------------|
| MUR3020WT | | 30 A | 150 T _C | 200 | - | 200 | 1.05 | 15 | 10 | 30 ⁽²⁾ |
| MUR3040WT | | 30 A | 150 T _C | 400 | - | 150 | 1.25 | 15 | 10 | 60 ⁽²⁾ |

Notes : (1) Reverse Recovery test conditions : I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A

(2) Reverse Recovery test conditions : I_F = 1A, di/dt = 50 A/ms



Schottky Barrier Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|
| | | IF(AV) | @ TL | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (mA) |

AK03 Series, 0.7 - 1 A, Case Type: DO-41



| | | | | | | | | | |
|------|--|-----|----|----|---|----|------|-----|-----|
| AK03 | | 1.0 | 25 | 30 | - | 25 | 0.55 | 1.0 | 1.0 |
| AK04 | | 1.0 | 25 | 40 | - | 25 | 0.55 | 1.0 | 1.0 |
| AK06 | | 0.7 | 40 | 60 | - | 10 | 0.62 | 0.7 | 1.0 |
| AK09 | | 0.7 | 35 | 90 | - | 10 | 0.81 | 0.7 | 1.0 |

1N5817/SKN7 Series, 1 A, Case Type: DO-41/SMA



| | | | | | | | | | |
|--------|------|-----|----|----|-----|----|------|-----|-----|
| 1N5817 | SKN7 | 1.0 | 90 | 20 | 5.0 | 25 | 0.45 | 1.0 | 1.0 |
| 1N5818 | SKN8 | 1.0 | 90 | 30 | 5.0 | 25 | 0.55 | 1.0 | 1.0 |
| 1N5819 | SKN9 | 1.0 | 90 | 40 | 5.0 | 25 | 0.60 | 1.0 | 1.0 |

LL5817 Series, 1 A, Case Type: MELF(Plastic)



| | | | | | | | | | |
|--|--------|-----|----|----|-----|----|------|-----|-----|
| | LL5817 | 1.0 | 90 | 20 | 5.0 | 25 | 0.45 | 1.0 | 1.0 |
| | LL5818 | 1.0 | 90 | 30 | 5.0 | 25 | 0.55 | 1.0 | 1.0 |
| | LL5819 | 1.0 | 90 | 40 | 5.0 | 25 | 0.60 | 1.0 | 1.0 |

1S20 - 1SB0 Series, 1.0 A, Case Type: M1A



| | | | | | | | | | |
|------|--|-----|-----|-----|---|----|------|-----|-----|
| 1S20 | | 1.0 | 75 | 20 | - | 35 | 0.55 | 1.0 | 1.0 |
| 1S30 | | 1.0 | 75 | 30 | - | 35 | 0.55 | 1.0 | 1.0 |
| 1S40 | | 1.0 | 75 | 40 | - | 35 | 0.55 | 1.0 | 1.0 |
| 1S50 | | 1.0 | 100 | 50 | - | 35 | 0.70 | 1.0 | 1.0 |
| 1S60 | | 1.0 | 100 | 60 | - | 35 | 0.70 | 1.0 | 1.0 |
| 1S80 | | 1.0 | 100 | 80 | - | 35 | 0.85 | 1.0 | 1.0 |
| 1SB0 | | 1.0 | 100 | 100 | - | 35 | 0.85 | 1.0 | 1.0 |

ERA Series, 1 A, Case Type: DO-41



| | | | | | | | | | |
|-----------|--|-----|-----|----|---|----|------|-----|-----|
| ERA81-004 | | 1.0 | 25 | 40 | - | 50 | 0.55 | 1.0 | 2.0 |
| ERA83-004 | | 1.0 | 115 | 40 | - | 50 | 0.55 | 1.0 | 2.0 |
| ERA83-006 | | 1.0 | 111 | 60 | - | 30 | 0.58 | 1.0 | 2.0 |
| ERA84-009 | | 1.0 | 25 | 90 | - | 60 | 0.90 | 1.0 | 1.0 |

SB120/SK12 Series, 1 A, Case Type: DO-41/SMA



| | | | | | | | | | |
|-------|------|-----|-----|-----|-----|----|------|-----|-----|
| SB120 | SK12 | 1.0 | 75 | 20 | 5.0 | 40 | 0.50 | 1.0 | 0.5 |
| SB130 | SK13 | 1.0 | 75 | 30 | 5.0 | 40 | 0.50 | 1.0 | 0.5 |
| SB140 | SK14 | 1.0 | 75 | 40 | 5.0 | 40 | 0.50 | 1.0 | 0.5 |
| SB150 | SK15 | 1.0 | 100 | 50 | 5.0 | 40 | 0.70 | 1.0 | 0.5 |
| SB160 | SK16 | 1.0 | 100 | 60 | 5.0 | 40 | 0.70 | 1.0 | 0.5 |
| SB170 | SK17 | 1.0 | 100 | 70 | 5.0 | 40 | 0.70 | 1.0 | 0.5 |
| SB180 | SK18 | 1.0 | 100 | 80 | 5.0 | 40 | 0.79 | 1.0 | 0.5 |
| SB190 | SK19 | 1.0 | 100 | 90 | 5.0 | 40 | 0.79 | 1.0 | 0.5 |
| SB1B0 | SK1B | 1.0 | 100 | 100 | 5.0 | 40 | 0.79 | 1.0 | 0.5 |



Schottky Barrier Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|
| | | IF(AV) | @ TL | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (mA) |

MBR150 Series, 1 A, Case Type: DO-41



| | | | | | | | | | |
|--------|--|-----|---------|----|---|----|------|-----|-----|
| MBR150 | | 1.0 | 55 (Ta) | 50 | - | 25 | 0.75 | 1.0 | 0.5 |
| MBR160 | | 1.0 | 55 (Ta) | 60 | - | 25 | 0.75 | 1.0 | 0.5 |

EK Series, 1 - 1.5 A, Case Type: DO-41



| | | | | | | | | | |
|------|--|-----|----|----|---|----|------|-----|-----|
| EK03 | | 1.0 | 25 | 30 | - | 25 | 0.55 | 1.0 | 1.0 |
| EK04 | | 1.0 | 25 | 40 | - | 25 | 0.55 | 1.0 | 1.0 |
| EK13 | | 1.5 | 40 | 30 | - | 40 | 0.55 | 2.0 | 5.0 |
| EK14 | | 1.5 | 40 | 40 | - | 40 | 0.55 | 2.0 | 5.0 |
| EK16 | | 1.5 | 40 | 60 | - | 25 | 0.62 | 1.5 | 1.0 |
| EK19 | | 1.5 | 35 | 90 | - | 40 | 0.81 | 1.5 | 2.0 |

11DQ03 Series, 1.1 A, Case Type: DO-41



| | | | | | | | | | |
|--------|--|-----|---------|-----|---|----|------|-----|-----|
| 11DQ03 | | 1.1 | 75 (Tc) | 30 | - | 42 | 0.55 | 1.1 | 6.0 |
| 11DQ04 | | 1.1 | 75 (Tc) | 40 | - | 42 | 0.55 | 1.1 | 6.0 |
| 11DQ05 | | 1.1 | 84 (Tc) | 50 | - | 26 | 0.58 | 1.1 | 11 |
| 11DQ06 | | 1.1 | 84 (Tc) | 60 | - | 26 | 0.58 | 1.1 | 11 |
| 11DQ09 | | 1.1 | 75 (Tc) | 90 | - | 42 | 0.85 | 1.1 | 0.5 |
| 11DQ10 | | 1.1 | 75 (Tc) | 100 | - | 42 | 0.85 | 1.1 | 1.0 |

10MQ Series, 1.5 A, Case Type: SMA



| | | | | | | | | | |
|--|----------|-----|-----|-----|---|----|------|-----|-----|
| | 10MQ040N | 1.5 | 123 | 40 | - | 30 | 0.62 | 1.5 | 0.5 |
| | 10MQ100N | 1.5 | 126 | 100 | - | 30 | 0.85 | 1.5 | 0.1 |

SL12 Series, 1.5 A, Case Type: SMA



| | | | | | | | | | |
|--|------|-----|-----|----|---|----|-------|-----|-----|
| | SL12 | 1.5 | 105 | 20 | - | 50 | 0.445 | 1.0 | 0.2 |
| | SL13 | 1.5 | 105 | 30 | - | 50 | 0.445 | 1.0 | 0.2 |

RK13 Series, 1.5 - 1.7 A, Case Type: D2



| | | | | | | | | | |
|------|--|-----|----|----|----|----|------|-----|-----|
| RK13 | | 1.7 | 75 | 30 | 15 | 50 | 0.55 | 1.7 | 5.1 |
| RK14 | | 1.7 | 75 | 40 | 15 | 50 | 0.55 | 1.7 | 5.1 |
| RK16 | | 1.5 | 75 | 60 | 15 | 50 | 0.62 | 1.5 | 1.0 |
| RK19 | | 1.5 | 75 | 90 | 15 | 50 | 0.81 | 1.5 | 2.0 |

21DQ09 Series, 1.7 A, Case Type: DO-41



| | | | | | | | | | |
|--------|--|-----|----|-----|---|----|------|-----|-----|
| 21DQ09 | | 1.7 | 47 | 90 | - | 70 | 0.85 | 2.0 | 1.0 |
| 21DQ10 | | 1.7 | 43 | 100 | - | 70 | 0.85 | 2.0 | 1.0 |



Schottky Barrier Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|
| | | IF(AV) | @ TL | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (mA) |

SBO20 Series, 1.5 A, Case Type: DO-41



| | | | | | | | | | |
|-------|--|-----|-----|-----|---|----|------|-----|-----|
| SBO20 | | 1.5 | 75 | 20 | - | 50 | 0.50 | 1.5 | 0.5 |
| SBO30 | | 1.5 | 75 | 30 | - | 50 | 0.50 | 1.5 | 0.5 |
| SBO40 | | 1.5 | 75 | 40 | - | 50 | 0.50 | 1.5 | 0.5 |
| SBO50 | | 1.5 | 100 | 50 | - | 50 | 0.70 | 1.5 | 0.5 |
| SBO60 | | 1.5 | 100 | 60 | - | 50 | 0.70 | 1.5 | 0.5 |
| SBO70 | | 1.5 | 100 | 70 | - | 50 | 0.70 | 1.5 | 0.5 |
| SBO80 | | 1.5 | 100 | 80 | - | 50 | 0.79 | 1.5 | 0.5 |
| SBO90 | | 1.5 | 100 | 90 | - | 50 | 0.79 | 1.5 | 0.5 |
| SBOB0 | | 1.5 | 100 | 100 | - | 50 | 0.79 | 1.5 | 0.5 |

ERB81 Series, 2.0 A, Case Type: D2



| | | | | | | | | | |
|-----------|--|-----|---------|----|---|-----|------|-----|-----|
| ERB81-004 | | 2.0 | 25 (Ta) | 40 | - | 100 | 0.55 | 2.0 | 5.0 |
| ERB83-004 | | 2.0 | 25 (Ta) | 40 | - | 100 | 0.55 | 2.0 | 5.0 |
| ERB83-006 | | 2.0 | 104 | 60 | - | 60 | 0.58 | 2.0 | 5.0 |
| ERB84-009 | | 2.0 | 25 (Ta) | 90 | - | 60 | 0.90 | 2.0 | 2.0 |

SB220/SK22 Series, 2.0 A, Case Type: D2/SMB



| | | | | | | | | | |
|-------|------|-----|-----|-----|----|----|------|-----|-----|
| SB220 | SK22 | 2.0 | 75 | 20 | 10 | 60 | 0.50 | 2.0 | 0.5 |
| SB230 | SK23 | 2.0 | 75 | 30 | 10 | 60 | 0.50 | 2.0 | 0.5 |
| SB240 | SK24 | 2.0 | 75 | 40 | 10 | 60 | 0.50 | 2.0 | 0.5 |
| SB250 | SK25 | 2.0 | 100 | 50 | 10 | 60 | 0.74 | 2.0 | 0.5 |
| SB260 | SK26 | 2.0 | 100 | 60 | 10 | 60 | 0.74 | 2.0 | 0.5 |
| SB270 | SK27 | 2.0 | 100 | 70 | 10 | 60 | 0.74 | 2.0 | 0.5 |
| SB280 | SK28 | 2.0 | 100 | 80 | 10 | 60 | 0.79 | 2.0 | 0.5 |
| SB290 | SK29 | 2.0 | 100 | 90 | 10 | 60 | 0.79 | 2.0 | 0.5 |
| SB2B0 | SK2B | 2.0 | 100 | 100 | 10 | 60 | 0.79 | 2.0 | 0.5 |

Also available in Axial DO-41 and SMD SMA Case Types. Use suffix "S" to order (e.g. SB220S, SK22S)

SR220 - SR2100 Series, 2.0 A, Case Type: DO-41



| | | | | | | | | | |
|--------|--|-----|----|-----|---|----|------|-----|-----|
| SR220 | | 2.0 | 40 | 20 | - | 50 | 0.55 | 2.0 | 2.0 |
| SR230 | | 2.0 | 40 | 30 | - | 50 | 0.55 | 2.0 | 2.0 |
| SR240 | | 2.0 | 40 | 40 | - | 50 | 0.55 | 2.0 | 2.0 |
| SR250 | | 2.0 | 60 | 50 | - | 50 | 0.70 | 2.0 | 2.0 |
| SR260 | | 2.0 | 60 | 60 | - | 50 | 0.70 | 2.0 | 2.0 |
| SR290 | | 2.0 | 60 | 90 | - | 50 | 0.85 | 2.0 | 2.0 |
| SR2100 | | 2.0 | 60 | 100 | - | 50 | 0.85 | 2.0 | 2.0 |

RK33 Series, 2.0 - 2.5 A, Case Type: D2A



| | | | | | | | | | |
|------|--|-----|----|----|----|----|------|-----|-----|
| RK33 | | 2.5 | 75 | 30 | 15 | 50 | 0.55 | 2.5 | 5.0 |
| RK34 | | 2.5 | 75 | 40 | 15 | 50 | 0.55 | 2.5 | 5.0 |
| RK36 | | 2.0 | 75 | 60 | 15 | 50 | 0.62 | 2.0 | 2.0 |
| RK39 | | 2.0 | 75 | 90 | 15 | 50 | 0.81 | 2.0 | 3.0 |



Schottky Barrier Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|
| | | IF(AV) | @ TL | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (mA) |

SBT20 Series, 2.5 A, Case Type: D2A



| | | | | | | | | | |
|-------|--|-----|-----|-----|---|----|------|-----|-----|
| SBT20 | | 2.5 | 75 | 20 | - | 50 | 0.50 | 1.5 | 0.5 |
| SBT30 | | 2.5 | 75 | 30 | - | 50 | 0.50 | 1.5 | 0.5 |
| SBT40 | | 2.5 | 75 | 40 | - | 50 | 0.50 | 1.5 | 0.5 |
| SBT50 | | 2.5 | 100 | 50 | - | 50 | 0.74 | 1.5 | 0.5 |
| SBT60 | | 2.5 | 100 | 60 | - | 50 | 0.74 | 1.5 | 0.5 |
| SBT70 | | 2.5 | 100 | 70 | - | 50 | 0.74 | 1.5 | 0.5 |
| SBT80 | | 2.5 | 100 | 80 | - | 50 | 0.79 | 1.5 | 0.5 |
| SBT90 | | 2.5 | 100 | 90 | - | 50 | 0.79 | 1.5 | 0.5 |
| SBTB0 | | 2.5 | 100 | 100 | - | 50 | 0.79 | 1.5 | 0.5 |

ERC Series, 2.6 - 3.0 A, Case Type: DO-201AD



| | | | | | | | | | |
|-----------|--|-----|-----|----|---|-----|------|-----|-----|
| ERC81-004 | | 2.6 | 25 | 40 | - | 120 | 0.55 | 3.0 | 5.0 |
| ERC81-006 | | 3.0 | 104 | 60 | - | 80 | 0.58 | 3.0 | 5.0 |
| ERC84-009 | | 3.0 | 85 | 90 | - | 120 | 0.80 | 3.0 | 0.5 |

RB055L-40 3.0 A, Case Type: SMA



| | | | | | | | | | |
|-----------|--|-----|----|----|---|----|------|-----|-----|
| RB055L-40 | | 3.0 | 25 | 40 | - | 40 | 0.65 | 3.0 | 0.5 |
|-----------|--|-----|----|----|---|----|------|-----|-----|

1N5820/SKN0 Series, 3 A, Case Type: DO-201AD/SMC



| | | | | | | | | | |
|--------|------|-----|----|----|----|----|-------|-----|-----|
| 1N5820 | SKN0 | 3.0 | 95 | 20 | 15 | 80 | 0.475 | 3.0 | 2.0 |
| 1N5821 | SKN1 | 3.0 | 95 | 30 | 15 | 80 | 0.500 | 3.0 | 2.0 |
| 1N5822 | SKN2 | 3.0 | 95 | 40 | 15 | 80 | 0.525 | 3.0 | 2.0 |

Also available in Axial D2A and SMD SMB Case Types. Use suffix "S" to order (e.g. 1N5820S, SKN0S)

SB320/SK32 Series, 3 A, Case Type: DO-201AD/SMC



| | | | | | | | | | |
|-------|------|-----|-----|-----|----|----|------|-----|-----|
| SB320 | SK32 | 3.0 | 75 | 20 | 15 | 80 | 0.50 | 3.0 | 0.5 |
| SB330 | SK33 | 3.0 | 75 | 30 | 15 | 80 | 0.50 | 3.0 | 0.5 |
| SB340 | SK34 | 3.0 | 75 | 40 | 15 | 80 | 0.50 | 3.0 | 0.5 |
| SB350 | SK35 | 3.0 | 100 | 50 | 15 | 80 | 0.74 | 3.0 | 0.5 |
| SB360 | SK36 | 3.0 | 100 | 60 | 15 | 80 | 0.74 | 3.0 | 0.5 |
| SB370 | SK37 | 3.0 | 100 | 70 | 15 | 80 | 0.74 | 3.0 | 0.5 |
| SB380 | SK38 | 3.0 | 100 | 80 | 15 | 80 | 0.79 | 3.0 | 0.5 |
| SB390 | SK39 | 3.0 | 100 | 90 | 15 | 80 | 0.79 | 3.0 | 0.5 |
| SB3B0 | SK3B | 3.0 | 100 | 100 | 15 | 80 | 0.79 | 3.0 | 0.5 |

Also available in Axial D2A and SMD SMB Case Types. Use suffix "S" to order (e.g. SB320S, SK32S), SMA Case Types. Use suffix "A" to order (e.g. SK32A).

MBR320 Series, 3 A, Case Type: DO-201AD



| | | | | | | | | | |
|--------|--|-----|---------|----|---|----|------|-----|-----|
| MBR320 | | 3.0 | 65 (Ta) | 20 | - | 80 | 0.60 | 3.0 | 0.6 |
| MBR330 | | 3.0 | 65 (Ta) | 30 | - | 80 | 0.60 | 3.0 | 0.6 |
| MBR340 | | 3.0 | 65 (Ta) | 40 | - | 80 | 0.60 | 3.0 | 0.6 |
| MBR350 | | 3.0 | 65 (Ta) | 50 | - | 80 | 0.74 | 3.0 | 0.6 |
| MBR360 | | 3.0 | 65 (Ta) | 60 | - | 80 | 0.74 | 3.0 | 0.6 |



Schottky Barrier Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|
| | | IF(AV) | @ TL | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (mA) |

RK43 Series, 3.0 - 3.5 A, Case Type: DO-201AD



| | | | | | | | | | |
|------|--|-----|-----|----|---|----|------|-----|-----|
| RK43 | | 3.0 | 109 | 30 | - | 80 | 0.55 | 3.0 | 5.0 |
| RK44 | | 3.0 | 109 | 40 | - | 80 | 0.55 | 3.0 | 5.0 |
| RK46 | | 3.5 | 109 | 60 | - | 70 | 0.62 | 3.5 | 3.0 |
| RK49 | | 3.5 | 109 | 90 | - | 60 | 0.81 | 3.5 | 5.0 |

31DQ03 Series, 3.3 A, Case Type: DO-201AD



| | | | | | | | | | |
|--------|--|-----|---------|-----|---|-----|------|-----|-----|
| 31DQ03 | | 3.3 | 48 (Tc) | 30 | - | 120 | 0.55 | 3.0 | 3.0 |
| 31DQ04 | | 3.3 | 48 (Tc) | 40 | - | 120 | 0.55 | 3.0 | 3.0 |
| 31DQ09 | | 3.3 | 53 (Tc) | 90 | - | 34 | 0.85 | 3.5 | 1.0 |
| 31DQ10 | | 3.3 | 53 (Tc) | 100 | - | 34 | 0.85 | 3.5 | 1.0 |

SB520/SK52 Series, 5 A, Case Type: DO-201AD/SMC



| | | | | | | | | | |
|-------|------|-----|----|-----|----|-----|------|-----|-----|
| SB520 | SK52 | 5.0 | 60 | 20 | 25 | 150 | 0.55 | 5.0 | 0.5 |
| SB530 | SK53 | 5.0 | 60 | 30 | 25 | 150 | 0.55 | 5.0 | 0.5 |
| SB540 | SK54 | 5.0 | 60 | 40 | 25 | 150 | 0.55 | 5.0 | 0.5 |
| SB550 | SK55 | 5.0 | 80 | 50 | 25 | 150 | 0.67 | 5.0 | 0.5 |
| SB560 | SK56 | 5.0 | 80 | 60 | 25 | 150 | 0.67 | 5.0 | 0.5 |
| SB570 | SK57 | 5.0 | 80 | 70 | 25 | 150 | 0.67 | 5.0 | 0.5 |
| SB580 | SK58 | 5.0 | 80 | 80 | 25 | 150 | 0.79 | 5.0 | 0.5 |
| SB590 | SK59 | 5.0 | 80 | 90 | 25 | 150 | 0.79 | 5.0 | 0.5 |
| SB5B0 | SK5B | 5.0 | 80 | 100 | 25 | 150 | 0.79 | 5.0 | 0.5 |

Also available in Axial D2A and SMD SMB Case Types. Use suffix "S" to order (e.g. SB520S, SK52S)

SR520 Series, 5.0 A, Case Type: DO-201AD



| | | | | | | | | | |
|-------|--|-----|----|----|---|-----|------|-----|----|
| SR520 | | 5.0 | 60 | 20 | - | 150 | 0.57 | 5.0 | 10 |
| SR530 | | 5.0 | 60 | 30 | - | 120 | 0.57 | 5.0 | 10 |
| SR540 | | 5.0 | 60 | 40 | - | 120 | 0.57 | 5.0 | 10 |
| SR550 | | 5.0 | 85 | 50 | - | 120 | 0.70 | 5.0 | 10 |
| SR560 | | 5.0 | 85 | 60 | - | 120 | 0.70 | 5.0 | 10 |

SB5150-SB5200, 5.0 A, Case Type: DO-201AD



| | | | | | | | | | |
|--------|--|-----|--------|-----|---|-----|------|-----|------|
| SB5150 | | 5.0 | 25(Ta) | 150 | - | 100 | 0.85 | 5.0 | 0.01 |
| SB5200 | | 5.0 | 25(Ta) | 200 | - | 100 | 0.87 | 5.0 | 0.01 |

MBR735 Series, 7.5 A, Case Type: TO-220AC



| | | | | | | | | | |
|--------|--|-----|---------|----|---|-----|------|-----|-----|
| MBR735 | | 7.5 | 105(Tc) | 35 | - | 150 | - | - | 0.1 |
| MBR745 | | 7.5 | 105(Tc) | 45 | - | 150 | - | - | 0.1 |
| MBR750 | | 7.5 | 105(Tc) | 50 | - | 150 | 0.75 | 7.5 | 0.5 |
| MBR760 | | 7.5 | 105(Tc) | 60 | - | 150 | 0.75 | 7.5 | 0.5 |

SBL1030 Series, 10 A, Case Type: TO-220AC

| | | | | | | | | | |
|---------|--|----|---------|----|---|-----|-----|----|-----|
| SBL1030 | | 10 | 110(Tc) | 30 | - | 250 | 0.6 | 10 | 1.0 |
| SBL1040 | | 10 | 110(Tc) | 40 | - | 250 | 0.6 | 10 | 1.0 |



Schottky Barrier Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|
| | | IF(AV) | @ TL | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (mA) |

SD1045/SD1645, 10-16 A, Case Type: DO-201AD



| | | | | | | | | | |
|--------|--|----|--------|----|---|-----|------|----|-----|
| SD1045 | | 10 | 100 | 45 | - | 340 | 0.55 | 10 | 0.8 |
| SD1545 | | 15 | 25(Tc) | 45 | - | 300 | 0.54 | 15 | 0.2 |
| SD1645 | | 16 | 25(Tc) | 45 | - | 300 | 0.55 | 16 | 0.2 |

SK1045/SK1545, 10-15 A, Case Type: SMC



| | | | | | | | | | |
|--------|--|----|--------|----|---|-----|------|----|-----|
| SK1045 | | 10 | 100 | 45 | - | 340 | 0.55 | 10 | 0.8 |
| SK1545 | | 15 | 25(Tc) | 45 | - | 300 | 0.54 | 15 | 0.2 |

MBRB1045/MBRB1545, 10-15 A, Case Type: D2PAK



| | | | | | | | | | |
|----------|--|----|---------|----|---|-----|------|----|------|
| MBRB1045 | | 10 | 120(Tc) | 45 | - | 150 | 0.57 | 10 | 0.20 |
| MBRB1545 | | 15 | 120(Tc) | 45 | - | 150 | 0.54 | 15 | 0.25 |

MBR1035 Series, 10 A, Case Type: TO-220AC



| | | | | | | | | | |
|---------|--|----|---------|----|---|-----|------|----|------|
| MBR1035 | | 10 | 125(Tc) | 35 | - | 150 | 0.84 | 10 | 0.10 |
| MBR1045 | | 10 | 125(Tc) | 45 | - | 150 | 0.84 | 10 | 0.10 |
| MBR1050 | | 10 | 125(Tc) | 50 | - | 150 | 0.80 | 10 | 0.15 |
| MBR1060 | | 10 | 125(Tc) | 60 | - | 150 | 0.80 | 10 | 0.15 |

SBL1030CT Series, 10 - 16 A, Case Type: TO-220AB



| | | | | | | | | | |
|-----------|--|----|--------|----|---|-----|------|---|-----|
| SBL1030CT | | 10 | 95(Tc) | 30 | - | 250 | 0.55 | 5 | 0.5 |
| SBL1040CT | | 10 | 95(Tc) | 40 | - | 250 | 0.55 | 5 | 0.5 |
| SBL1630CT | | 16 | 95(Tc) | 30 | - | 250 | 0.55 | 8 | 0.5 |
| SBL1640CT | | 16 | 95(Tc) | 40 | - | 250 | 0.55 | 8 | 0.5 |

MBR1660CT Series, 16 A, Case Type: TO-220AB



| | | | | | | | | | |
|------------|--|----|---------|-----|---|-----|------|-----|------|
| MBR1660CT | | 16 | 115(Tc) | 60 | - | 150 | 0.75 | 8.0 | 1.00 |
| MBR16100CT | | 16 | 133(Tc) | 100 | - | 150 | 0.84 | 16 | 0.10 |

MBR1635 Series, 16 A, Case Type: TO-220AC



| | | | | | | | | | |
|---------|--|----|---------|----|---|-----|------|----|------|
| MBR1635 | | 16 | 125(Tc) | 35 | - | 150 | 0.63 | 16 | 0.20 |
| MBR1645 | | 16 | 125(Tc) | 45 | - | 150 | 0.63 | 16 | 0.20 |
| MBR1650 | | 16 | 125(Tc) | 50 | - | 150 | 0.75 | 16 | 1.00 |
| MBR1660 | | 16 | 125(Tc) | 60 | - | 150 | 0.75 | 16 | 1.00 |

MBRF16H35 Series, 16 A, Case Type: ITO-220AC



| | | | | | | | | | |
|-----------|--|----|---------|----|---|-----|------|----|------|
| MBRF16H35 | | 16 | 130(Tc) | 35 | - | 150 | 0.66 | 16 | 0.10 |
| MBRF16H45 | | 16 | 130(Tc) | 45 | - | 150 | 0.66 | 16 | 0.10 |
| MBRF16H50 | | 16 | 130(Tc) | 50 | - | 150 | 0.73 | 16 | 0.10 |
| MBRF16H60 | | 16 | 130(Tc) | 60 | - | 150 | 0.73 | 16 | 0.10 |

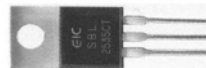


Schottky Barrier Rectifiers

The plastic material carries U/L recognition 94V-0.

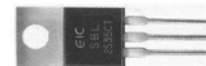
| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|
| | | IF(AV) | @ TL | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (mA) |

MBR2035CT Series, 20 A, Case Type: TO-220AB



| | | | | | | | | | |
|-----------|--|----|---------|----|---|-----|------|----|------|
| MBR2035CT | | 20 | 135(Tc) | 35 | - | 150 | 0.57 | 10 | 0.10 |
| MBR2045CT | | 20 | 135(Tc) | 45 | - | 150 | 0.57 | 10 | 0.10 |
| MBR2050CT | | 20 | 135(Tc) | 50 | - | 150 | 0.8 | 10 | 0.15 |
| MBR2060CT | | 20 | 135(Tc) | 60 | - | 150 | 0.8 | 10 | 0.15 |

MBR2535CT Series, 30 A, Case Type: TO-220AB



| | | | | | | | | | |
|-----------|--|----|---------|----|----|-----|------|----|------|
| MBR2535CT | | 30 | 130(Tc) | 35 | 30 | 150 | 0.82 | 30 | 0.20 |
| MBR2545CT | | 30 | 130(Tc) | 45 | 30 | 150 | 0.82 | 30 | 0.20 |
| MBR2550CT | | 30 | 130(Tc) | 50 | 30 | 150 | 0.75 | 15 | 1.00 |
| MBR2560CT | | 30 | 130(Tc) | 60 | 30 | 150 | 0.75 | 15 | 1.00 |

MBRB3045CT Series, 30 A, Case Type: D²PAK



| | | | | | | | | | |
|--|------------|----|---------|----|---|-----|------|----|-----|
| | MBRB3045CT | 30 | 110(Tc) | 45 | - | 200 | 0.76 | 30 | 1.0 |
|--|------------|----|---------|----|---|-----|------|----|-----|

MBR3045CT Series, 30 A, Case Type: TO-220AB



| | | | | | | | | | |
|-----------|--|----|---------|----|---|-----|------|----|-----|
| MBR3045CT | | 30 | 110(Tc) | 45 | - | 200 | 0.76 | 30 | 1.0 |
|-----------|--|----|---------|----|---|-----|------|----|-----|

SBL2030PT Series, 20 - 40 A, Case Type: TO-247AD



| | | | | | | | | | |
|-----------|--|----|---------|----|---|-----|------|----|-----|
| SBL2030PT | | 20 | 105(Tc) | 30 | - | 250 | 0.55 | 10 | 1.0 |
| SBL2040PT | | 20 | 105(Tc) | 40 | - | 250 | 0.55 | 10 | 1.0 |
| SBL3030PT | | 30 | 100(Tc) | 30 | - | 250 | 0.55 | 15 | 1.0 |
| SBL3040PT | | 30 | 100(Tc) | 40 | - | 250 | 0.55 | 15 | 1.0 |
| SBL4030PT | | 40 | 100(Tc) | 30 | - | 250 | 0.58 | 20 | 10 |
| SBL4040PT | | 40 | 100(Tc) | 40 | - | 250 | 0.58 | 20 | 10 |

MBR3035PT Series, 30 A, Case Type: TO-247AD



| | | | | | | | | | |
|-----------|--|----|---------|----|----|-----|------|----|-----|
| MBR3035PT | | 30 | 105(Tc) | 35 | 30 | 200 | 0.76 | 30 | 1.0 |
| MBR3045PT | | 30 | 105(Tc) | 45 | 30 | 200 | 0.76 | 30 | 1.0 |
| MBR3050PT | | 30 | 125(Tc) | 50 | 30 | 300 | 0.75 | 20 | 5.0 |
| MBR3060PT | | 30 | 125(Tc) | 60 | 30 | 300 | 0.75 | 20 | 5.0 |

MBR4035PT Series, 40 A, Case Type: TO-247AD



| | | | | | | | | | |
|-----------|--|----|---------|----|----|-----|-----|----|----|
| MBR4035PT | | 40 | 120(Tc) | 35 | 40 | 400 | 0.7 | 20 | 10 |
| MBR4045PT | | 40 | 120(Tc) | 45 | 40 | 400 | 0.7 | 20 | 10 |
| MBR4050PT | | 40 | 120(Tc) | 50 | 40 | 400 | 0.8 | 20 | 10 |
| MBR4060PT | | 40 | 120(Tc) | 60 | 40 | 400 | 0.8 | 20 | 10 |



Schottky Barrier Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|
| | | IF(AV) | @ TL | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (mA) |

MBRS1 Series, 1 A, Case Type: SMB



| | | | | | | | | | |
|--|------------|-----|-----|-----|---|----|------|-----|-----|
| | MBRS120T3 | 1.0 | 115 | 20 | - | 40 | 0.60 | 1.0 | 1.0 |
| | MBRS130LT3 | 1.0 | 120 | 30 | - | 40 | 0.40 | 1.0 | 1.0 |
| | MBRS140 | 1.0 | 115 | 40 | - | 40 | 0.60 | 1.0 | 1.0 |
| | MBRS1100 | 1.0 | 120 | 100 | - | 50 | 0.75 | 1.0 | 0.5 |

MBRS240LT3G, 2 A, Case Type: SMB



| | | | | | | | | | |
|--|-------------|-----|---------|----|---|----|------|-----|-----|
| | MBRS240LT3G | 2.0 | 100(Tc) | 40 | - | 25 | 0.43 | 2.0 | 2.0 |
|--|-------------|-----|---------|----|---|----|------|-----|-----|

MBRS3200, 3 A, Case Type: SMB



| | | | | | | | | | |
|--|----------|-----|-----|-----|---|-----|------|-----|-----|
| | MBRS3200 | 3.0 | 120 | 200 | - | 100 | 0.84 | 3.0 | 1.0 |
|--|----------|-----|-----|-----|---|-----|------|-----|-----|

MBRS3 Series, 3 A, Case Type: SMC



| | | | | | | | | | |
|--|-----------|-----|--------|-----|---|-----|------|-----|------|
| | MBRS330T3 | 3.0 | 100 | 30 | - | 80 | 0.50 | 3.0 | 2.00 |
| | MBRS340T3 | 3.0 | 100 | 40 | - | 80 | 0.53 | 3.0 | 2.00 |
| | MBRS360T3 | 3.0 | 137 | 60 | - | 125 | 0.74 | 3.0 | 0.15 |
| | MBRS3100 | 3.0 | 100 | 100 | - | 130 | 0.79 | 3.0 | 0.05 |
| | MBRS3201 | 3.0 | 70(Tc) | 200 | - | 100 | 0.84 | 3.0 | 1.00 |

MBRS4201, 4 A, Case Type: SMC



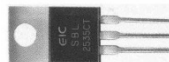
| | | | | | | | | | |
|--|----------|-----|----|-----|---|-----|------|-----|-----|
| | MBRS4201 | 4.0 | 70 | 200 | - | 100 | 0.86 | 4.0 | 1.0 |
|--|----------|-----|----|-----|---|-----|------|-----|-----|

SB5150/SB5200, 5 A, Case Type: DO-201AD



| | | | | | | | | | |
|--|--------|-----|---------|-----|---|-----|------|-----|------|
| | SB5150 | 5.0 | 110(Ta) | 150 | - | 100 | 0.85 | 5.0 | 0.01 |
| | SB5200 | 5.0 | 110(Ta) | 200 | - | 100 | 0.87 | 5.0 | 0.01 |

FST10 Series, 10 A, Case Type: TO-220AB



| | | | | | | | | | |
|----------|--|----|-----|-----|---|-----|------|---|-----|
| FST10120 | | 10 | 162 | 120 | - | 200 | 0.82 | 5 | 0.1 |
| FST10130 | | 10 | 162 | 130 | - | 200 | 0.82 | 5 | 0.1 |
| FST10150 | | 10 | 162 | 150 | - | 200 | 0.82 | 5 | 0.1 |
| FST10180 | | 10 | 137 | 180 | - | 200 | 0.84 | 5 | 0.1 |
| FST10200 | | 10 | 137 | 200 | - | 200 | 0.84 | 5 | 0.1 |

MS10 Series, 10 A, Case Type: TO-220AC



| | | | | | | | | | |
|---------|--|----|-----|-----|---|-----|------|----|-----|
| MS10180 | | 10 | 155 | 180 | - | 225 | 0.88 | 10 | 0.1 |
| MS10200 | | 10 | 155 | 200 | - | 225 | 0.88 | 10 | 0.1 |



Schottky Barrier Rectifiers

The plastic material carries U/L recognition 94V-0.

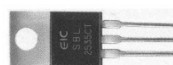
| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|
| | | IF(AV) | @ TL | VRRM | IFRM | IFSM | VF | @ IF | IR |
| Axial Lead | SMD | (A) | (°C) | (V) | (A) | (A) | (V) | (A) | (mA) |

MS16 Series, 16 A, Case Type: TO-220AC



| | | | | | | | | | |
|---------|--|----|-----|-----|---|-----|------|----|-----|
| MS16180 | | 16 | 146 | 180 | - | 250 | 0.88 | 16 | 0.1 |
| MS16200 | | 16 | 146 | 200 | - | 250 | 0.88 | 16 | 0.1 |

FST20 Series, 20 A, Case Type: TO-220AB



| | | | | | | | | | |
|----------|--|----|-----|-----|---|-----|------|----|-----|
| FST20120 | | 20 | 157 | 120 | - | 225 | 0.83 | 10 | 0.1 |
| FST20130 | | 20 | 157 | 130 | - | 225 | 0.83 | 10 | 0.1 |
| FST20150 | | 20 | 157 | 150 | - | 225 | 0.83 | 10 | 0.1 |
| FST20180 | | 20 | 155 | 180 | - | 225 | 0.88 | 10 | 0.1 |
| FST20200 | | 20 | 155 | 200 | - | 225 | 0.88 | 10 | 0.1 |

MBR20200CT, 20 A, Case Type: TO-220AB



| | | | | | | | | | |
|------------|--|----|---------|-----|----|-----|------|----|-----|
| MBR20200CT | | 20 | 125(Tc) | 200 | 20 | 150 | 1.00 | 20 | 1.0 |
|------------|--|----|---------|-----|----|-----|------|----|-----|

* For package ITO-220AB part number MBRF20200CT

MS20 Series, 20 A, Case Type: TO-220AC



| | | | | | | | | | |
|---------|--|----|-----|-----|---|-----|------|----|-----|
| MS20180 | | 20 | 141 | 180 | - | 250 | 0.85 | 20 | 0.1 |
| MS20200 | | 20 | 141 | 200 | - | 250 | 0.85 | 20 | 0.1 |

FST31 Series, 30 A, Case Type: TO-220AB



| | | | | | | | | | |
|----------|--|----|-----|-----|---|-----|------|----|------|
| FST31120 | | 30 | 153 | 120 | - | 250 | 0.85 | 15 | 0.25 |
| FST31130 | | 30 | 153 | 130 | - | 250 | 0.85 | 15 | 0.25 |
| FST31150 | | 30 | 153 | 150 | - | 250 | 0.85 | 15 | 0.25 |
| FST31180 | | 30 | 150 | 180 | - | 250 | 0.83 | 15 | 0.10 |
| FST31200 | | 30 | 150 | 200 | - | 250 | 0.83 | 15 | 0.10 |



Schottky Barrier Rectifiers

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Power Dissipation |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Pd |
| Axial Lead | SMD | (mA) | (°C) | (V) | (mA) | (A) | (V) | (mA) | (μA) | (mW) |

1N5711/LL5711, Case Type: DO-35 / MiniMELF



| | | | | | | | | | | |
|--------|--------|-----|----|----|---|-----|------|-----|-----|-----|
| 1N5711 | LL5711 | 1.0 | 25 | 70 | - | 2.0 | 0.41 | 1.0 | 0.2 | 400 |
| 1N6263 | LL6263 | 1.0 | 25 | 60 | - | 2.0 | 0.41 | 1.0 | 0.2 | 400 |

1SS88 Series, Case Type: DO-35



| | | | | | | | | | | |
|--------|--|----|----|----|---|---|------|-----|-----|-----|
| 1SS88 | | 15 | 25 | 10 | - | - | 0.43 | 1.0 | 0.2 | 150 |
| 1SS106 | | 30 | 25 | 10 | - | - | 4.50 | 1.0 | 70 | - |
| 1SS108 | | 15 | 25 | 30 | - | - | 3.00 | 1.0 | 100 | - |

1SS165 Series, Case Type: DO-34



| | | | | | | | | | | |
|--------|--|----|----|----|---|---|-----|-----|------|-----|
| 1SS165 | | 15 | 25 | 10 | - | - | 0.6 | 10 | 0.2 | 150 |
| 1SS166 | | 15 | 25 | 10 | - | - | 0.6 | 10 | 0.2 | 150 |
| 1SS198 | | 30 | 25 | 10 | - | - | 1.0 | 4.5 | 70 | - |
| 1SS199 | | 15 | 25 | 30 | - | - | 1.0 | 2.0 | 100 | - |
| 1SS286 | | 35 | 25 | 25 | - | - | 0.6 | 10 | 0.01 | 150 |

BAT41 / LL41 Series, Case Type: DO-35 / MiniMELF



| | | | | | | | | | | |
|-------|------|-----|----|-----|-----|------|------|-----|---------|---------|
| BAT41 | LL41 | 100 | 25 | 100 | 350 | 0.75 | 0.45 | 1.0 | 0.1 | 400 |
| BAT42 | LL42 | 200 | 25 | 30 | 500 | 4.00 | 0.40 | 10 | 0.5/1.0 | 200 |
| BAT43 | LL43 | 200 | 25 | 30 | 500 | 4.00 | 0.33 | 2.0 | 0.5/1.0 | 200 |
| BAT46 | LL46 | 150 | 25 | 100 | 350 | 0.75 | 0.45 | 10 | 5.0 | 150/200 |
| BAT48 | LL48 | 350 | 25 | 40 | 1A | 0.75 | 0.40 | 10 | 25 | 330 |

BAT81 Series, Case Type: DO-34



| | | | | | | | | | | |
|-------|--|----|----|----|-----|-----|------|-----|-----|-----|
| BAT81 | | 30 | 25 | 40 | 150 | 0.5 | 0.41 | 1.0 | 0.2 | 200 |
| BAT82 | | 30 | 25 | 50 | 150 | 0.5 | 0.41 | 1.0 | 0.2 | 200 |
| BAT83 | | 30 | 25 | 60 | 150 | 0.5 | 0.41 | 1.0 | 0.2 | 200 |

BAT85/BAS85 Series, Case Type: DO-35 / MiniMELF



| | | | | | | | | | | |
|-------|-------|-----|----|----|-----|-----|------|----|-----|-----|
| BAT85 | BAS85 | 200 | 25 | 30 | - | 0.6 | 0.40 | 10 | 2.0 | 200 |
| BAT86 | BAS86 | 200 | 50 | 50 | 500 | - | 0.45 | 10 | 5.0 | 200 |

HSS100 Series, Case Type: DO-34



| | | | | | | | | | | |
|--------|--|----|----|----|---|---|-----|----|------|-----|
| HSS100 | | 35 | 25 | 60 | - | - | 0.9 | 20 | 0.10 | 150 |
| HSS101 | | 35 | 25 | 30 | - | - | 0.7 | 10 | 0.01 | 150 |
| HSS102 | | 35 | 25 | 70 | - | - | 1.1 | 20 | 0.01 | 150 |



Schottky Barrier Rectifiers

| Type No. | | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Power Dissipation |
|------------|-----|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|------------------------|
| | | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Pd |
| Axial Lead | SMD | (mA) | (°C) | (V) | (mA) | (A) | (V) | (mA) | (μA) | (mW) |

MA700 Series, Case Type: DO-34



| | | | | | | | | | | |
|--------|--|-----|----|----|---|---|-----|-----|------|---|
| MA700 | | 150 | 25 | 15 | - | - | 0.4 | 10 | 0.10 | - |
| MA700A | | 150 | 25 | 30 | - | - | 0.4 | 1.0 | 0.15 | - |

RB441Q-40 & RB721Q-40. Case Type: DO-34



| | | | | | | | | | | |
|-----------|--|----|----|----|---|-------|------|-----|-----|---|
| RB441Q-40 | | 10 | 25 | 40 | - | 1.0 | 0.34 | 10 | 100 | - |
| RB721Q-40 | | 30 | 25 | 40 | - | 200mA | 0.37 | 1.0 | 0.5 | - |

SB0015-03A & SB0030-01A. Case Type: DO-34



| | | | | | | | | | | |
|------------|--|----|----|----|---|---|-----|-----|-----|---|
| SB0015-03A | | 15 | 25 | 30 | - | - | 1.0 | 3.0 | 100 | - |
| SB0030-01A | | 30 | 25 | 10 | - | - | 1.0 | 4.5 | 70 | - |

SD101A/LL101A Series, Case Type: DO-35/MiniMELF



| | | | | | | | | | | |
|--------|--------|----|----|----|---|-----|------|----|-----|-----|
| SD101A | LL101A | 30 | 25 | 60 | - | 2.0 | 1.00 | 15 | 0.2 | 400 |
| SD101B | LL101B | 30 | 25 | 50 | - | 2.0 | 0.95 | 15 | 0.2 | 400 |
| SD101C | LL101C | 30 | 25 | 40 | - | 2.0 | 0.90 | 15 | 0.2 | 400 |

BAS81 - BAS83 , Case Type: MiniMELF



| | | | | | | | | | | |
|-------|--|----|----|----|---|-------|-----|----|-----|---|
| BAS81 | | 30 | 25 | 40 | - | 500mA | 1.0 | 15 | 0.2 | - |
| BAS82 | | 30 | 25 | 50 | - | 500mA | 1.0 | 15 | 0.2 | - |
| BAS83 | | 30 | 25 | 60 | - | 500mA | 1.0 | 15 | 0.2 | - |

SD103A/LL103A Series, Case Type: DO-35/MiniMELF



| | | | | | | | | | | |
|--------|--------|-----|----|----|---|----|------|-----|-----|-----|
| SD103A | LL103A | 200 | 25 | 40 | - | 15 | 0.55 | 200 | 5.0 | 400 |
| SD103B | LL103B | 200 | 25 | 50 | - | 15 | 0.55 | 200 | 5.0 | 400 |
| SD103C | LL103C | 200 | 25 | 60 | - | 15 | 0.55 | 200 | 5.0 | 400 |



Schottky Barrier Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Power Dissipation |
|----------|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|------------------------|
| | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Pd |
| SMD | (mA) | (°C) | (V) | (mA) | (A) | (V) | (mA) | (μA) | (mW) |

BAT42W Series, Case Type: SOD-123



| | | | | | | | | | |
|---------|-----|----|-----|---|------|------|-----|-----|-----|
| BAT42W* | 200 | 25 | 30 | - | 4.0 | 1.00 | 200 | 0.5 | 200 |
| BAT43W* | 200 | 25 | 30 | - | 4.0 | 1.00 | 200 | 0.5 | 200 |
| BAT54W* | 200 | 25 | 30 | - | 1.0 | 0.65 | 100 | 2.0 | 200 |
| BAT46W | 150 | 25 | 100 | - | 0.75 | 1.00 | 250 | 5.0 | 200 |

* Also available in SMD SOD-323 Case Types. Use suffix "S" to order (e.g. BAT42WS, BAT43WS, BAT54WS)

and SOD-523 Case Types. Use suffix "T" to order (e.g. BAT42WT, BAT43WT, BAT54WT)

MBR0520L, MBR0520-04 , Case Type: SOD-123



| | | | | | | | | | |
|----------|-----|---------|----|---|-----|-------|-----|-----|---|
| MBR0520L | 500 | 90 | 20 | - | 5.5 | 0.385 | 500 | 250 | - |
| MBR0520 | 500 | 129(TL) | 20 | - | 6.5 | 0.440 | 500 | 150 | - |
| MBR0530 | 500 | 100 | 30 | - | 5.5 | 0.430 | 500 | 130 | - |
| MBR0540 | 500 | 25 | 40 | - | 5.5 | 0.510 | 500 | 20 | - |

1N5817WB Series, 1 A, Case Type: SOD-123



| | | | | | | | | | |
|----------|------|----|----|---|---|------|-----|-----|-----|
| 1N5817WB | 1(A) | 25 | 20 | - | - | 0.45 | 1.0 | 1.0 | 450 |
| 1N5818WB | 1(A) | 25 | 30 | - | - | 0.55 | 1.0 | 1.0 | 450 |
| 1N5819WB | 1(A) | 25 | 40 | - | - | 0.60 | 1.0 | 1.0 | 450 |

MBR130W, Case Type: SOD-123



| | | | | | | | | | |
|---------|------|--------|----|---|-----|------|-----|-----|---|
| MBR130W | 1(A) | 65(TL) | 30 | - | 5.5 | 0.50 | 0.7 | 200 | - |
|---------|------|--------|----|---|-----|------|-----|-----|---|

SD101AW-CW Series, Case Type: SOD-123



| | | | | | | | | | |
|---------|----|----|----|---|-----|------|----|-----|-----|
| SD101AW | 15 | 25 | 60 | - | 2.0 | 1.00 | 15 | 0.2 | 400 |
| SD101BW | 15 | 25 | 50 | - | 2.0 | 0.95 | 15 | 0.2 | 400 |
| SD101CW | 15 | 25 | 40 | - | 2.0 | 0.90 | 15 | 0.2 | 400 |

SD103AW-CWS Series, Case Type: SOD-123



| | | | | | | | | | |
|---------|-----|----|----|---|-----|------|-----|-----|-----|
| SD103AW | 350 | 25 | 40 | - | 2.0 | 0.60 | 200 | 5.0 | 400 |
| SD103BW | 350 | 25 | 30 | - | 2.0 | 0.60 | 200 | 5.0 | 400 |
| SD103CW | 350 | 25 | 20 | - | 2.0 | 0.60 | 200 | 5.0 | 400 |



Schottky Barrier Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Power Dissipation |
|----------|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|------------------------|
| | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Pd |
| SMD | (mA) | (°C) | (V) | (mA) | (A) | (V) | (mA) | (μA) | (mW) |

SD101AWS Series, Case Type: SOD-323



| | | | | | | | | | |
|----------|----|----|----|---|-----|------|----|-----|-----|
| SD101AWS | 30 | 25 | 60 | - | 2.0 | 1.00 | 15 | 0.2 | 150 |
| SD101BWS | 30 | 25 | 50 | - | 2.0 | 0.95 | 15 | 0.2 | 150 |
| SD101CWS | 30 | 25 | 40 | - | 2.0 | 0.90 | 15 | 0.2 | 150 |

SD103AWS Series, Case Type: SOD-323



| | | | | | | | | | |
|----------|-----|----|----|---|-----|------|-----|-----|-----|
| SD103AWS | 200 | 25 | 40 | - | 2.0 | 0.60 | 200 | 5.0 | 150 |
| SD103BWS | 200 | 25 | 30 | - | 2.0 | 0.60 | 200 | 5.0 | 150 |
| SD103CWS | 200 | 25 | 20 | - | 2.0 | 0.60 | 200 | 5.0 | 150 |

RB751V-40/RB501V-40 , Case Type: SOD-323



| | | | | | | | | | |
|------------|-----|----|----|---|-----|------|-----|-----|---|
| RB751V-40* | 30 | 25 | 40 | - | 0.2 | 0.37 | 1.0 | 0.5 | - |
| RB501V-40 | 100 | 25 | 45 | - | 1.0 | 0.55 | 100 | 30 | - |

* Also available in SMD SOD-523 Case Types. Use suffix "S" to order p/n RB751S-40

1SS367 , Case Type: SOD-323



| | | | | | | | | | |
|--------|-----|----|----|---|-----|-----|-----|----|---|
| 1SS367 | 100 | 25 | 15 | - | 1.0 | 0.3 | 5.0 | 20 | - |
|--------|-----|----|----|---|-----|-----|-----|----|---|

SDB412WS , Case Type: SOD-323



| | | | | | | | | | |
|----------|-----|----|----|---|-----|-----|-----|-----|---|
| SDB412WS | 500 | 25 | 40 | - | 0.5 | 0.5 | 500 | 200 | - |
|----------|-----|----|----|---|-----|-----|-----|-----|---|

RB520S-30/RB521S-30, -40 , Case Type: SOD-523



| | | | | | | | | | |
|-----------|-----|----|----|---|-----|------|-----|-----|---|
| RB520S-30 | 200 | 25 | 30 | - | 1.0 | 0.60 | 200 | 1.0 | - |
| RB521S-30 | 200 | 25 | 30 | - | 1.0 | 0.50 | 200 | 30 | - |
| RB521S-40 | 200 | 25 | 40 | - | 1.0 | 0.50 | 200 | 90 | - |

1SS388, Case Type: SOD-523



| | | | | | | | | | |
|--------|-----|----|----|---|-----|-----|----|-----|-----|
| 1SS388 | 100 | 25 | 45 | - | 1.0 | 0.6 | 50 | 5.0 | 150 |
|--------|-----|----|----|---|-----|-----|----|-----|-----|

RB521G-30, Case Type: SOD-523



| | | | | | | | | | |
|-----------|-----|----|----|---|-----|------|----|------|---|
| RB521G-30 | 100 | 25 | 30 | - | 1.0 | 0.35 | 10 | 10.0 | - |
|-----------|-----|----|----|---|-----|------|----|------|---|



Schottky Barrier Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Max. Repetitive Peak Reverse Voltage | Max. Repetitive Peak Forward Current | Max. Forward Surge Current | Max. Forward Voltage Drop at Ta=25°C | | Max. Reverse Current at Ta=25°C | Max. Power Dissipation |
|----------|--|------|--------------------------------------|--------------------------------------|----------------------------|--------------------------------------|------|---------------------------------|------------------------|
| | IF(AV) | @ Ta | VRRM | IFRM | IFSM | VF | @ IF | IR | Pd |
| SMD | (mA) | (°C) | (V) | (mA) | (A) | (V) | (mA) | (μA) | (mW) |

1SS294, Case Type: SOT-23



| | | | | | | | | | |
|--------|-----|----|----|---|---|-----|----|-----|-----|
| 1SS294 | 300 | 25 | 45 | - | - | 0.6 | 10 | 5.0 | 150 |
|--------|-----|----|----|---|---|-----|----|-----|-----|

BAT400D, Case Type: SOT-23



| | | | | | | | | | |
|---------|-----|----|----|---|---|------|-----|------|-----|
| BAT400D | 500 | 25 | 40 | - | 3 | 0.55 | 500 | 50.0 | 480 |
|---------|-----|----|----|---|---|------|-----|------|-----|

BAT54 Series, Case Type: SOT-23



| | | | | | | | | | |
|--------|-----|----|----|-----|-----|-----|----|-----|-----|
| BAT54 | 200 | 25 | 30 | 0.3 | 0.6 | 0.5 | 30 | 2.0 | 230 |
| BAT54A | 200 | 25 | 30 | 0.3 | 0.6 | 0.5 | 30 | 2.0 | 230 |
| BAT54C | 200 | 25 | 30 | 0.3 | 0.6 | 0.5 | 30 | 2.0 | 230 |
| BAT54S | 200 | 25 | 30 | 0.3 | 0.6 | 0.5 | 30 | 2.0 | 230 |

BAS40 Series, Case Type: SOT-23



| | | | | | | | | | |
|----------|-----|----|----|---|-----|-----|----|-----|---|
| BAS40 | 200 | 25 | 40 | - | 0.6 | 1.0 | 40 | 0.2 | - |
| BAS40-04 | 200 | 25 | 40 | - | 0.6 | 1.0 | 40 | 0.2 | - |
| BAS40-05 | 200 | 25 | 40 | - | 0.6 | 1.0 | 40 | 0.2 | - |
| BAS40-06 | 200 | 25 | 40 | - | 0.6 | 1.0 | 40 | 0.2 | - |

BAS40W Series, Case Type: SOT-23



| | | | | | | | | | |
|-----------|-----|----|----|---|-----|-----|----|-----|-----|
| BAS40W | 200 | 25 | 40 | - | 0.6 | 1.0 | 40 | 0.2 | 200 |
| BAS40-04W | 200 | 25 | 40 | - | 0.6 | 1.0 | 40 | 0.2 | 200 |
| BAS40-05W | 200 | 25 | 40 | - | 0.6 | 1.0 | 40 | 0.2 | 200 |
| BAS40-06W | 200 | 25 | 40 | - | 0.6 | 1.0 | 40 | 0.2 | 200 |

BAS70 Series, Case Type: SOT-23



| | | | | | | | | | |
|----------|-----|----|----|---|-----|-----|----|-----|-----|
| BAS70 | 200 | 25 | 70 | - | 0.6 | 1.0 | 15 | 0.1 | 200 |
| BAS70-04 | 200 | 25 | 70 | - | 0.6 | 1.0 | 15 | 0.1 | 200 |
| BAS70-05 | 200 | 25 | 70 | - | 0.6 | 1.0 | 15 | 0.1 | 200 |
| BAS70-06 | 200 | 25 | 70 | - | 0.6 | 1.0 | 15 | 0.1 | 200 |



Zener Diodes 0.20 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Marking | Zener Voltage (Note 1) | | | Test Current | Zener Impedance | | Test Current | Leakage Current | |
|----------|---------|------------------------|------|------|--------------|---------------------|---------------------|--------------|-----------------|-----|
| | | V_Z @ I_{ZT} (V) | | | I_{ZT} | Z_{ZT} @ I_{ZT} | Z_{ZK} @ I_{ZK} | I_{ZK} | I_R @ V_R | |
| | | Min. | Nom. | Max. | (mA) | (Ω) | (Ω) | (mA) | (μ A) | (V) |

MM5Z2V4 Series, 0.2 W, Case Type : SOD-523



| | | | | | | | | | | |
|---------|----|------|-------|------|---|-----|------|-----|------|------|
| MM5Z2V4 | Z7 | 2.2 | 2.4 | 2.6 | 5 | 100 | 1000 | 1.0 | 50 | 1.0 |
| MM5Z2V7 | A8 | 2.5 | 2.7 | 2.9 | 5 | 100 | 1000 | 1.0 | 20 | 1.0 |
| MM5Z3V0 | B8 | 2.8 | 3.0 | 3.2 | 5 | 100 | 1000 | 1.0 | 10 | 1.0 |
| MM5Z3V3 | C8 | 3.1 | 3.3 | 3.5 | 5 | 95 | 1000 | 1.0 | 5 | 1.0 |
| MM5Z3V6 | D8 | 3.4 | 3.6 | 3.8 | 5 | 90 | 1000 | 1.0 | 5 | 1.0 |
| MM5Z3V9 | E8 | 3.7 | 3.9 | 4.1 | 5 | 90 | 1000 | 1.0 | 3 | 1.0 |
| MM5Z4V3 | F8 | 4.0 | 4.3 | 4.6 | 5 | 90 | 1000 | 1.0 | 3 | 1.0 |
| MM5Z4V7 | G8 | 4.4 | 4.7 | 5.0 | 5 | 80 | 800 | 1.0 | 3 | 2.0 |
| MM5Z5V1 | H8 | 4.8 | 5.1 | 5.4 | 5 | 60 | 500 | 1.0 | 2 | 2.0 |
| MM5Z5V6 | I8 | 5.2 | 5.6 | 6.0 | 5 | 40 | 200 | 1.0 | 1 | 2.0 |
| MM5Z6V2 | J8 | 5.8 | 6.2 | 6.6 | 5 | 10 | 100 | 1.0 | 3 | 4.0 |
| MM5Z6V8 | K8 | 6.4 | 6.8 | 7.2 | 5 | 15 | 160 | 1.0 | 2 | 4.0 |
| MM5Z7V5 | L8 | 7.0 | 7.5 | 7.9 | 5 | 15 | 160 | 1.0 | 1 | 5.0 |
| MM5Z8V2 | M8 | 7.7 | 8.2 | 8.7 | 5 | 15 | 160 | 1.0 | 0.7 | 5.0 |
| MM5Z9V1 | N8 | 8.5 | 9.1 | 9.6 | 5 | 15 | 160 | 1.0 | 0.2 | 7.0 |
| MM5Z10V | O8 | 9.4 | 10 | 10.6 | 5 | 20 | 160 | 1.0 | 0.1 | 8.0 |
| MM5Z11V | P8 | 10.4 | 11 | 11.6 | 5 | 20 | 160 | 1.0 | 0.1 | 8.0 |
| MM5Z12V | Q8 | 11.4 | 12 | 12.7 | 5 | 25 | 80 | 1.0 | 0.1 | 8.0 |
| MM5Z13V | R8 | 12.4 | 13.25 | 14.1 | 5 | 30 | 80 | 1.0 | 0.1 | 8.0 |
| MM5Z15V | S8 | 14.3 | 15 | 15.8 | 5 | 30 | 80 | 1.0 | 0.05 | 10.5 |
| MM5Z16V | T8 | 15.3 | 16.2 | 17.1 | 5 | 40 | 80 | 1.0 | 0.05 | 11.2 |
| MM5Z18V | U8 | 16.8 | 18 | 19.1 | 5 | 45 | 80 | 1.0 | 0.05 | 12.6 |
| MM5Z20V | V8 | 18.8 | 20 | 21.2 | 5 | 55 | 100 | 1.0 | 0.05 | 14.0 |
| MM5Z22V | W8 | 20.8 | 22 | 23.3 | 5 | 55 | 100 | 1.0 | 0.05 | 15.4 |
| MM5Z24V | X8 | 22.8 | 24.2 | 25.6 | 5 | 70 | 120 | 1.0 | 0.05 | 16.8 |
| MM5Z27V | Y8 | 25.1 | 27 | 28.9 | 2 | 80 | 300 | 1.0 | 0.05 | 18.9 |
| MM5Z30V | Z8 | 28 | 30 | 32 | 2 | 80 | 300 | 1.0 | 0.05 | 21.0 |
| MM5Z33V | A9 | 31 | 33 | 35 | 2 | 80 | 300 | 1.0 | 0.05 | 23.2 |
| MM5Z36V | B9 | 34 | 36 | 38 | 2 | 90 | 500 | 1.0 | 0.05 | 25.2 |
| MM5Z39V | C9 | 37 | 39 | 41 | 2 | 130 | 500 | 1.0 | 0.05 | 27.3 |
| MM5Z43V | D9 | 40 | 43 | 46 | 2 | 150 | 500 | 1.0 | 0.05 | 30.1 |
| MM5Z47V | E9 | 44 | 47 | 50 | 2 | 170 | 500 | 1.0 | 0.05 | 32.9 |
| MM5Z51V | F9 | 48 | 51 | 54 | 2 | 180 | 500 | 1.0 | 0.05 | 35.7 |
| MM5Z56V | G9 | 52 | 56 | 60 | 2 | 200 | 500 | 1.0 | 0.05 | 39.2 |
| MM5Z62V | H9 | 58 | 62 | 66 | 2 | 215 | 500 | 1.0 | 0.05 | 43.4 |
| MM5Z68V | I9 | 64 | 68 | 72 | 2 | 240 | 500 | 1.0 | 0.05 | 47.6 |
| MM5Z75V | J9 | 70 | 75 | 79 | 2 | 255 | 500 | 1.0 | 0.05 | 52.5 |

Note :

(1) Zener voltage is measured with a pulse test current I_Z at an ambient temperature of 25 °C.



Zener Diodes 0.20 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Marking | Zener Voltage ⁽¹⁾ | | | Test Current | Zener Impedance | Test Current | Leakage Current | |
|----------|---------|------------------------------|------|------|--------------|---------------------|--------------|-----------------|-------|
| | | V_Z @ I_{ZT} (V) | | | I_{ZT} | Z_{ZT} @ I_{ZT} | I_{ZT} | I_R @ | V_R |
| | | Min. | Nom. | Max. | (mA) | (Ω) | (mA) | (μ A) | (V) |

MM5Z2B4 Series, 0.2 W, Case Type : SOD-523



| | | | | | | | | | |
|---------|----|-------|-----|-------|-----|-----|-----|-----|-----|
| MM5Z2B4 | XY | 2.352 | 2.4 | 2.448 | 5.0 | 100 | 5.0 | 120 | 1.0 |
| MM5Z2B7 | XZ | 2.646 | 2.7 | 2.754 | 5.0 | 110 | 5.0 | 120 | 1.0 |
| MM5Z3B0 | FR | 2.940 | 3.0 | 3.060 | 5.0 | 120 | 5.0 | 50 | 1.0 |
| MM5Z3B3 | FX | 3.234 | 3.3 | 3.366 | 5.0 | 130 | 5.0 | 20 | 1.0 |
| MM5Z3B6 | FY | 3.528 | 3.6 | 3.672 | 5.0 | 130 | 5.0 | 10 | 1.0 |
| MM5Z3B9 | FZ | 3.822 | 3.9 | 3.978 | 5.0 | 130 | 5.0 | 5.0 | 1.0 |
| MM5Z4B3 | HA | 4.214 | 4.3 | 4.386 | 5.0 | 130 | 5.0 | 5.0 | 1.0 |
| MM5Z4B7 | HB | 4.606 | 4.7 | 4.794 | 5.0 | 130 | 5.0 | 2.0 | 1.0 |
| MM5Z5B1 | HC | 4.998 | 5.1 | 5.202 | 5.0 | 130 | 5.0 | 2.0 | 1.5 |
| MM5Z5B6 | HD | 5.488 | 5.6 | 5.712 | 5.0 | 80 | 5.0 | 1.0 | 2.5 |
| MM5Z6B2 | HE | 6.076 | 6.2 | 6.324 | 5.0 | 50 | 5.0 | 1.0 | 3.0 |
| MM5Z6B8 | HF | 6.664 | 6.8 | 6.936 | 5.0 | 30 | 5.0 | 0.5 | 3.5 |
| MM5Z7B5 | HH | 7.350 | 7.5 | 7.650 | 5.0 | 30 | 5.0 | 0.5 | 4.0 |
| MM5Z8B2 | HJ | 8.036 | 8.2 | 8.364 | 5.0 | 30 | 5.0 | 0.5 | 5.0 |
| MM5Z9B1 | HK | 8.918 | 9.1 | 9.282 | 5.0 | 30 | 5.0 | 0.5 | 6.0 |
| MM5ZB10 | HM | 9.80 | 10 | 10.20 | 5.0 | 30 | 5.0 | 0.1 | 7.0 |
| MM5ZB11 | HN | 10.78 | 11 | 11.22 | 5.0 | 30 | 5.0 | 0.1 | 8.0 |
| MM5ZB12 | HP | 11.76 | 12 | 12.24 | 5.0 | 35 | 5.0 | 0.1 | 9.0 |
| MM5ZB13 | HR | 12.74 | 13 | 13.26 | 5.0 | 35 | 5.0 | 0.1 | 10 |
| MM5ZB15 | HX | 14.70 | 15 | 15.30 | 5.0 | 40 | 5.0 | 0.1 | 11 |
| MM5ZB16 | HY | 15.68 | 16 | 16.32 | 5.0 | 40 | 5.0 | 0.1 | 12 |
| MM5ZB18 | HZ | 17.64 | 18 | 18.36 | 5.0 | 45 | 5.0 | 0.1 | 13 |
| MM5ZB20 | JA | 19.60 | 20 | 20.40 | 5.0 | 50 | 5.0 | 0.1 | 15 |
| MM5ZB22 | JB | 21.56 | 22 | 22.44 | 5.0 | 55 | 5.0 | 0.1 | 17 |
| MM5ZB24 | JC | 23.52 | 24 | 24.48 | 5.0 | 60 | 5.0 | 0.1 | 19 |
| MM5ZB27 | JD | 26.46 | 27 | 27.54 | 5.0 | 70 | 2.0 | 0.1 | 21 |
| MM5ZB30 | JE | 29.40 | 30 | 30.60 | 5.0 | 80 | 2.0 | 0.1 | 23 |
| MM5ZB33 | JF | 32.34 | 33 | 33.66 | 5.0 | 80 | 2.0 | 0.1 | 25 |
| MM5ZB36 | JH | 35.28 | 36 | 36.72 | 5.0 | 90 | 2.0 | 0.1 | 27 |
| MM5ZB39 | JJ | 38.22 | 39 | 39.78 | 2.5 | 100 | 2.0 | 2.0 | 30 |
| MM5ZB43 | JK | 42.14 | 43 | 43.86 | 2.5 | 130 | 2.0 | 2.0 | 33 |
| MM5ZB47 | JM | 46.06 | 47 | 47.94 | 2.5 | 150 | 2.0 | 2.0 | 36 |
| MM5ZB51 | YA | 49.98 | 51 | 52.02 | 2.5 | 180 | 2.0 | 1.0 | 39 |
| MM5ZB56 | YB | 54.88 | 56 | 57.12 | 2.5 | 180 | 2.0 | 1.0 | 43 |
| MM5ZB62 | YC | 60.76 | 62 | 63.24 | 2.5 | 200 | 2.0 | 0.2 | 47 |
| MM5ZB68 | YD | 66.64 | 68 | 69.36 | 2.5 | 250 | 2.0 | 0.2 | 52 |
| MM5ZB75 | YE | 73.50 | 75 | 76.50 | 2.5 | 300 | 2.0 | 0.2 | 57 |

Note :

(1) Tested with pulses $t_p = 20$ ms.



Zener Diodes 0.25 W

| Type No. | Suffix ⁽¹⁾ | Zener Voltage | | Test Current | Maximum Dynamic Resistance | | Maximum Reverse Current | | Typical Temperature Coefficient * | |
|----------|-----------------------|--------------------|------|-----------------|----------------------------|------------------|-------------------------|------------------|-----------------------------------|----------------|
| | | V _Z (V) | | I _{ZT} | r _d | @ I _Z | I _R | @ V _R | γ _Z (mV/ °C) | I _Z |
| | | min. | max. | (mA) | (Ω) | (mA) | (μA) | (V) | | (mA) |

HZK-LL Series, 0.25 W, Case Type : MiniMELF



| | | | | | | | | | | |
|--------|---|-----|-----|-----|-----|-----|-----|-----|-----|----|
| HZK2LL | A | 1.6 | 2.0 | 0.5 | 350 | 0.5 | 0.5 | 0.5 | 1.2 | 50 |
| | B | 1.9 | 2.3 | | | | | | | |
| | C | 2.2 | 2.6 | | | | | | | |
| HZK3LL | A | 2.5 | 2.9 | 0.5 | 360 | 0.5 | 0.5 | 1.0 | 1.2 | 50 |
| | B | 2.8 | 3.2 | | | | | | | |
| | C | 3.1 | 3.5 | | | | | | | |
| HZK4LL | A | 3.4 | 3.8 | 0.5 | 370 | 0.5 | 0.5 | 2.0 | 1.5 | 50 |
| | B | 3.7 | 4.1 | | | | | | | |
| | C | 4.0 | 4.4 | | | | | | | |
| HZK5LL | A | 4.3 | 4.7 | 0.5 | 380 | 0.5 | 0.5 | 3.0 | 1.5 | 50 |
| | B | 4.6 | 5.0 | | | | | | | |
| | C | 4.9 | 5.3 | | | | | | | |

* $\Delta V_{Z1} = V_Z (I_Z = 0.5 \text{ mA}) - V_{Z1} (I_Z = 0.05 \text{ mA})$

$\Delta V_{Z2} = V_{Z1} (I_Z = 0.05 \text{ mA}) - V_{Z2} (I_Z = 0.001 \text{ mA})$

Note:

(1) When placing an order for an HZK-LL type, enter "A", "B" or "C" suffix e.g. HZK2ALL, HZK2BLL ... HZK5CLL



Zener Diodes 0.25 W

| Type No. | Grade | Zener Voltage V _Z @ I _{ZT} | | | | | | Test Current | Maximum Dynamic Resistance | | Maximum Reverse Current | | | |
|----------|-------|---|------|-----------|------|-----------|------|-----------------|-------------------------------|---|-------------------------------|----------------|---|----------------|
| | | Suffix -1 | | Suffix -2 | | Suffix -3 | | | | | | | | |
| | | min. | max. | min. | max. | min. | max. | I _{ZT} | rd | @ | I _Z | I _R | @ | V _R |
| | | (V) | (V) | (V) | (V) | (V) | (V) | (mA) | (W) | | (mA) | (μA) | | (V) |

HZS Series, 0.25 W, Case Type : DO-34



| | | | | | | | | | | | | |
|-------|---|------|------|------|------|------|------|---|-----|---|----|------|
| HZS2 | A | 1.6 | 1.8 | 1.7 | 1.9 | 1.8 | 2.0 | 5 | 100 | 5 | 25 | 0.5 |
| | B | 1.9 | 2.1 | 2.0 | 2.2 | 2.1 | 2.3 | 5 | 100 | 5 | 2 | 0.5 |
| | C | 2.2 | 2.4 | 2.3 | 2.5 | 2.4 | 2.6 | 5 | 100 | 5 | 1 | 0.5 |
| HZS3 | A | 2.5 | 2.7 | 2.6 | 2.8 | 2.7 | 2.9 | 5 | 100 | 5 | 1 | 0.5 |
| | B | 2.8 | 3.0 | 2.9 | 3.1 | 3.0 | 3.2 | 5 | 100 | 5 | 1 | 0.5 |
| | C | 3.1 | 3.3 | 3.2 | 3.4 | 3.3 | 3.5 | 5 | 100 | 5 | 1 | 0.5 |
| HZS4 | A | 3.4 | 3.6 | 3.5 | 3.7 | 3.6 | 3.8 | 5 | 100 | 5 | 5 | 1.00 |
| | B | 3.7 | 3.9 | 3.8 | 4.0 | 3.9 | 4.1 | 5 | 100 | 5 | 5 | 1.00 |
| | C | 4.0 | 4.2 | 4.1 | 4.3 | 4.2 | 4.4 | 5 | 100 | 5 | 5 | 1.00 |
| HZS5 | A | 4.3 | 4.5 | 4.4 | 4.6 | 4.5 | 4.7 | 5 | 100 | 5 | 5 | 1.5 |
| | B | 4.6 | 4.8 | 4.7 | 4.9 | 4.8 | 5.0 | 5 | 100 | 5 | 5 | 1.5 |
| | C | 4.9 | 5.1 | 5.0 | 5.2 | 5.1 | 5.3 | 5 | 100 | 5 | 5 | 1.5 |
| HZS6 | A | 5.2 | 5.5 | 5.3 | 5.6 | 5.4 | 5.7 | 5 | 35 | 5 | 5 | 2.0 |
| | B | 5.5 | 5.8 | 5.6 | 5.9 | 5.7 | 6.0 | 5 | 35 | 5 | 5 | 2.0 |
| | C | 5.8 | 6.1 | 6.0 | 6.3 | 6.1 | 6.4 | 5 | 35 | 5 | 5 | 2.0 |
| HZS7 | A | 6.3 | 6.6 | 6.4 | 6.7 | 6.6 | 6.9 | 5 | 15 | 5 | 1 | 3.5 |
| | B | 6.7 | 7.0 | 6.9 | 7.2 | 7.0 | 7.3 | 5 | 15 | 5 | 1 | 3.5 |
| | C | 7.2 | 7.6 | 7.3 | 7.7 | 7.5 | 7.9 | 5 | 15 | 5 | 1 | 3.5 |
| HZS9 | A | 7.7 | 8.1 | 7.9 | 8.3 | 8.1 | 8.5 | 5 | 20 | 5 | 1 | 5.0 |
| | B | 8.3 | 8.7 | 8.5 | 8.9 | 8.7 | 9.1 | 5 | 20 | 5 | 1 | 5.0 |
| | C | 8.9 | 9.3 | 9.1 | 9.5 | 9.3 | 9.7 | 5 | 20 | 5 | 1 | 5.0 |
| HZS11 | A | 9.5 | 9.9 | 9.7 | 10.1 | 9.9 | 10.3 | 5 | 25 | 5 | 1 | 7.5 |
| | B | 10.2 | 10.6 | 10.4 | 10.8 | 10.7 | 11.1 | 5 | 25 | 5 | 1 | 7.5 |
| | C | 10.9 | 11.3 | 11.1 | 11.6 | 11.4 | 11.9 | 5 | 25 | 5 | 1 | 7.5 |
| HZS12 | A | 11.6 | 12.1 | 11.9 | 12.4 | 12.2 | 12.7 | 5 | 35 | 5 | 1 | 9.5 |
| | B | 12.4 | 12.9 | 12.6 | 13.1 | 12.9 | 13.4 | 5 | 35 | 5 | 1 | 9.5 |
| | C | 13.2 | 13.7 | 13.5 | 14.0 | 13.8 | 14.3 | 5 | 35 | 5 | 1 | 9.5 |
| HZS15 | | 14.1 | 14.7 | 14.5 | 15.1 | 14.9 | 15.5 | 5 | 40 | 5 | 1 | 11 |
| HZS16 | | 15.3 | 15.9 | 15.7 | 16.5 | 16.3 | 17.1 | 5 | 45 | 5 | 1 | 12 |
| HZS18 | | 16.9 | 17.7 | 17.5 | 18.3 | 18.1 | 19.0 | 5 | 55 | 5 | 1 | 13 |
| HZS20 | | 18.8 | 19.7 | 19.5 | 20.4 | 20.2 | 21.1 | 2 | 60 | 2 | 1 | 15 |
| HZS22 | | 20.9 | 21.9 | 21.6 | 22.6 | 22.3 | 23.3 | 2 | 65 | 2 | 1 | 17 |
| HZS24 | | 22.9 | 24.0 | 23.6 | 24.7 | 24.3 | 25.5 | 2 | 70 | 2 | 1 | 19 |
| HZS27 | | 25.2 | 26.6 | 26.2 | 27.6 | 27.2 | 28.6 | 2 | 80 | 2 | 1 | 21 |
| HZS30 | | 28.2 | 29.6 | 29.2 | 30.6 | 30.2 | 31.6 | 2 | 100 | 2 | 1 | 23 |
| HZS33 | | 31.2 | 32.6 | 32.2 | 33.6 | 33.2 | 34.6 | 2 | 120 | 2 | 1 | 25 |
| HZS36 | | 34.2 | 35.7 | 35.3 | 36.8 | 36.4 | 38.0 | 2 | 140 | 2 | 1 | 27 |

Note :

The lower voltage types (HZS2 - HZS12) are available in 3 grades, "A" to "C", each with suffix "-1", "-2" or "-3"

For example the type with $V_Z = 8.5 - 8.9V$ is HZS9B-2

The higher voltage types are only available with suffix "-1", "-2" or "-3" (no grade) e.g. HZS30-3



Zener Diodes 0.25 W

| Type No. | Suffix ⁽¹⁾ | Zener Voltage | | Test Current | Maximum Dynamic Resistance | | | Maximum Reverse Current | | Typical Temperature Coefficient * | |
|----------|-----------------------|--------------------|------|-----------------|----------------------------|---|----------------|-------------------------|---|-----------------------------------|-------------------------|
| | | V _Z (V) | | I _{ZT} | r _d | @ | I _Z | I _R | @ | V _R | γ _Z (mV/ °C) |
| | | min. | max. | (mA) | (Ω) | | (mA) | (μA) | | (V) | I _Z (mA) |

HZS-LL Series, 0.25 W, Case Type : DO-34



| | | | | | | | | | | |
|--------|---|-----|-----|-----|-----|-----|-----|-----|-----|----|
| HZS2LL | A | 1.6 | 2.0 | 0.5 | 100 | 0.5 | 350 | 0.5 | 1.2 | 50 |
| | B | 1.9 | 2.3 | | | | | | | |
| | C | 2.2 | 2.6 | | | | | | | |
| HZS3LL | A | 2.5 | 2.9 | 0.5 | 100 | 1.0 | 360 | 0.5 | 1.2 | 50 |
| | B | 2.8 | 3.2 | | | | | | | |
| | C | 3.1 | 3.5 | | | | | | | |
| HZS4LL | A | 3.4 | 3.8 | 0.5 | 100 | 2.0 | 370 | 0.5 | 1.5 | 50 |
| | B | 3.7 | 4.1 | | | | | | | |
| | C | 4.0 | 4.4 | | | | | | | |
| HZS5LL | A | 4.3 | 4.7 | 0.5 | 100 | 3.0 | 380 | 0.5 | 1.5 | 50 |
| | B | 4.6 | 5.0 | | | | | | | |
| | C | 4.9 | 5.3 | | | | | | | |

* $\Delta V_{Z1} = V_Z (I_Z = 0.5 \text{ mA}) - V_{Z1} (I_Z = 0.05 \text{ mA})$

$\Delta V_{Z1} = V_{Z1} (I_Z = 0.5 \text{ mA}) - V_{Z2} (I_Z = 0.05 \text{ mA})$

Note:

(1) When placing an order for HZS-LL type, enter suffix "A", "B" or "C" e.g. HZS2ALL, HZS2BLL HZS5CLL



Zener Diodes 0.30 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Marking | Zener Voltage ⁽¹⁾ | | | Test Current | Zener Impedance ⁽²⁾ | Test Current | Leakage Current | | Temp. coefficient of Zener Voltage | |
|----------|---------|------------------------------|-------------------|------|-----------------|---------------------------------|----------------|-----------------|------------------|------------------------------------|------|
| | | V _Z | @ I _{ZT} | (V) | I _{ZT} | Z _Z @ I _Z | I _Z | I _R | @ V _R | TKvz (%/K) | |
| | | Min. | Nom. | Max. | (mA) | (Ω) | (mA) | (μA) | (V) | Min. | Max. |

MM3Z2V0 Series, 0.3 W, Case Type : SOD-323



| | | | | | | | | | | | |
|---------|----|------|-----|------|-----|-----|-----|-----|-----|-------|-------|
| MM3Z2V0 | B0 | 1.80 | 2.0 | 2.15 | 5.0 | 100 | 5.0 | 120 | 0.5 | -0.09 | -0.06 |
| MM3Z2V2 | C0 | 2.08 | 2.2 | 2.33 | 5.0 | 100 | 5.0 | 120 | 0.7 | -0.09 | -0.06 |
| MM3Z2V4 | 1C | 2.28 | 2.4 | 2.56 | 5.0 | 100 | 5.0 | 120 | 1.0 | -0.09 | -0.06 |
| MM3Z2V7 | 1D | 2.5 | 2.7 | 2.9 | 5.0 | 110 | 5.0 | 120 | 1.0 | -0.09 | -0.06 |
| MM3Z3V0 | 1E | 2.8 | 3.0 | 3.2 | 5.0 | 120 | 5.0 | 50 | 1.0 | -0.08 | -0.05 |
| MM3Z3V3 | 1F | 3.1 | 3.3 | 3.5 | 5.0 | 130 | 5.0 | 20 | 1.0 | -0.08 | -0.05 |
| MM3Z3V6 | 1H | 3.4 | 3.6 | 3.8 | 5.0 | 130 | 5.0 | 10 | 1.0 | -0.08 | -0.05 |
| MM3Z3V9 | 1J | 3.7 | 3.9 | 4.1 | 5.0 | 130 | 5.0 | 5.0 | 1.0 | -0.08 | -0.05 |
| MM3Z4V3 | 1K | 4.0 | 4.3 | 4.6 | 5.0 | 130 | 5.0 | 5.0 | 1.0 | -0.06 | -0.03 |
| MM3Z4V7 | 1M | 4.4 | 4.7 | 5.0 | 5.0 | 130 | 5.0 | 2.0 | 1.0 | -0.05 | +0.02 |
| MM3Z5V1 | 1N | 4.8 | 5.1 | 5.4 | 5.0 | 130 | 5.0 | 2.0 | 1.5 | -0.02 | +0.02 |
| MM3Z5V6 | 1P | 5.2 | 5.6 | 6.0 | 5.0 | 80 | 5.0 | 1.0 | 2.5 | -0.05 | +0.05 |
| MM3Z6V2 | 1R | 5.8 | 6.2 | 6.6 | 5.0 | 50 | 5.0 | 1.0 | 3.0 | 0.03 | 0.06 |
| MM3Z6V8 | 1X | 6.4 | 6.8 | 7.2 | 5.0 | 30 | 5.0 | 0.5 | 3.5 | 0.03 | 0.07 |
| MM3Z7V5 | 1Y | 7.0 | 7.5 | 7.9 | 5.0 | 30 | 5.0 | 0.5 | 4.0 | 0.03 | 0.07 |
| MM3Z8V2 | 1Z | 7.7 | 8.2 | 8.7 | 5.0 | 30 | 5.0 | 0.5 | 5.0 | 0.03 | 0.08 |
| MM3Z9V1 | 2A | 8.5 | 9.1 | 9.6 | 5.0 | 30 | 5.0 | 0.5 | 6.0 | 0.03 | 0.09 |
| MM3Z10 | 2B | 9.4 | 10 | 10.6 | 5.0 | 30 | 5.0 | 0.1 | 7.0 | 0.03 | 0.10 |
| MM3Z11 | 2C | 10.4 | 11 | 11.6 | 5.0 | 30 | 5.0 | 0.1 | 8.0 | 0.03 | 0.11 |
| MM3Z12 | 2D | 11.4 | 12 | 12.7 | 5.0 | 35 | 5.0 | 0.1 | 9.0 | 0.03 | 0.11 |
| MM3Z13 | 2E | 12.4 | 13 | 14.1 | 5.0 | 35 | 5.0 | 0.1 | 10 | 0.03 | 0.11 |
| MM3Z15 | 2F | 13.8 | 15 | 15.8 | 5.0 | 40 | 5.0 | 0.1 | 11 | 0.03 | 0.11 |
| MM3Z16 | 2H | 15.3 | 16 | 17.1 | 5.0 | 40 | 5.0 | 0.1 | 12 | 0.03 | 0.11 |
| MM3Z18 | 2J | 16.8 | 18 | 19.1 | 5.0 | 45 | 5.0 | 0.1 | 13 | 0.03 | 0.11 |
| MM3Z20 | 2K | 18.8 | 20 | 21.2 | 5.0 | 50 | 5.0 | 0.1 | 15 | 0.03 | 0.11 |
| MM3Z22 | 2M | 20.8 | 22 | 23.3 | 5.0 | 55 | 5.0 | 0.1 | 17 | 0.04 | 0.12 |
| MM3Z24 | 2N | 22.8 | 24 | 25.6 | 5.0 | 60 | 2.0 | 0.1 | 19 | 0.04 | 0.12 |
| MM3Z27 | 2P | 25.1 | 27 | 28.9 | 5.0 | 70 | 2.0 | 0.1 | 21 | 0.04 | 0.12 |
| MM3Z30 | 2R | 28 | 30 | 32 | 5.0 | 80 | 2.0 | 0.1 | 23 | 0.04 | 0.12 |
| MM3Z33 | 2X | 31 | 33 | 35 | 5.0 | 80 | 2.0 | 0.1 | 25 | 0.04 | 0.12 |
| MM3Z36 | 2Y | 34 | 36 | 38 | 5.0 | 90 | 2.0 | 0.1 | 27 | 0.04 | 0.12 |
| MM3Z39 | 2Z | 37 | 39 | 41 | 2.5 | 100 | 2.0 | 2.0 | 30 | 0.04 | 0.12 |
| MM3Z43 | 3A | 40 | 43 | 46 | 2.5 | 130 | 2.0 | 2.0 | 33 | 0.04 | 0.12 |
| MM3Z47 | 3B | 44 | 47 | 50 | 2.5 | 150 | 2.0 | 2.0 | 36 | 0.04 | 0.12 |
| MM3Z51 | 3C | 48 | 51 | 54 | 2.5 | 180 | 2.0 | 1.0 | 39 | 0.04 | 0.12 |
| MM3Z56 | 3D | 52 | 56 | 60 | 2.5 | 180 | 2.0 | 1.0 | 43 | 0.04 | 0.12 |
| MM3Z62 | 3E | 58 | 62 | 66 | 2.5 | 200 | 2.0 | 0.2 | 47 | 0.04 | 0.12 |
| MM3Z68 | 3F | 64 | 68 | 72 | 2.5 | 250 | 2.0 | 0.2 | 52 | 0.04 | 0.12 |
| MM3Z75 | 3H | 70 | 75 | 79 | 2.5 | 300 | 2.0 | 0.2 | 57 | 0.04 | 0.12 |
| MM3Z82 | 3J | 77 | 82 | 87 | 2.5 | 300 | 2.0 | 0.2 | 63 | 0.05 | 0.12 |
| MM3Z91 | 3K | 85 | 91 | 96 | 1.0 | 700 | 1.0 | 0.2 | 69 | 0.05 | 0.12 |
| MM3Z100 | 3M | 94 | 100 | 106 | 1.0 | 700 | 1.0 | 0.2 | 76 | 0.05 | 0.12 |
| MM3Z110 | 3N | 104 | 110 | 116 | 1.0 | 800 | 1.0 | 0.2 | 84 | 0.05 | 0.12 |
| MM3Z120 | 3P | 114 | 120 | 127 | 1.0 | 900 | 1.0 | 0.2 | 91 | 0.05 | 0.12 |

Note :

(1) V_Z is tested with pulses (20 ms).



Zener Diodes 0.30 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Marking | Zener Voltage ⁽¹⁾ | | | Test Current | Dynamic Impedance ⁽²⁾ | Test Current | Reverse Leakage Current | | Temp. coefficient of Zener Voltage | |
|----------|---------|------------------------------|-------------------|------|-----------------|----------------------------------|----------------|-------------------------|------------------|------------------------------------|------|
| | | V _Z | @ I _{ZT} | (V) | I _{ZT} | Z _Z @ I _Z | I _Z | I _R | @ V _R | TK _{VZ} (%/K) | |
| | | Min. | Nom. | Max. | (mA) | (Ω) | (mA) | (μA) | (V) | Min. | Max. |

MM3Z2V2B Series, 0.3 W, Case Type : SOD-323



| | | | | | | | | | | | |
|----------|----|-------|-----|-------|---|-----|---|-----|-----|-------|-------|
| MM3Z2V2B | MF | 2.08 | 2.2 | 2.33 | 5 | 100 | 5 | 120 | 0.7 | -0.09 | -0.06 |
| MM3Z2V4B | 7C | 2.30 | 2.4 | 2.65 | 5 | 100 | 5 | 120 | 1.0 | -0.09 | -0.06 |
| MM3Z2V7B | 7D | 2.65 | 2.7 | 2.95 | 5 | 110 | 5 | 120 | 1.0 | -0.09 | -0.06 |
| MM3Z3V0B | 7E | 2.95 | 3.0 | 3.25 | 5 | 120 | 5 | 50 | 1.0 | -0.08 | -0.05 |
| MM3Z3V3B | 7F | 3.25 | 3.3 | 3.55 | 5 | 120 | 5 | 20 | 1.0 | -0.08 | -0.05 |
| MM3Z3V6B | 7H | 3.60 | 3.6 | 3.845 | 5 | 100 | 5 | 10 | 1.0 | -0.08 | -0.05 |
| MM3Z3V9B | 7J | 3.89 | 3.9 | 4.16 | 5 | 100 | 5 | 5 | 1.0 | -0.08 | -0.05 |
| MM3Z4V3B | 7K | 4.17 | 4.3 | 4.43 | 5 | 100 | 5 | 5 | 1.0 | -0.06 | -0.03 |
| MM3Z4V7B | 7M | 4.55 | 4.7 | 4.75 | 5 | 100 | 5 | 2 | 1.0 | -0.05 | +0.02 |
| MM3Z5V1B | 7N | 4.98 | 5.1 | 5.20 | 5 | 80 | 5 | 2 | 1.5 | -0.02 | +0.02 |
| MM3Z5V6B | 7P | 5.49 | 5.6 | 5.73 | 5 | 60 | 5 | 1 | 2.5 | -0.05 | +0.05 |
| MM3Z6V2B | 7R | 6.06 | 6.2 | 6.33 | 5 | 60 | 5 | 1 | 3.0 | 0.03 | 0.06 |
| MM3Z6V8B | 7X | 6.65 | 6.8 | 6.93 | 5 | 40 | 5 | 0.5 | 3.5 | 0.03 | 0.07 |
| MM3Z7V5B | 7Y | 7.28 | 7.5 | 7.60 | 5 | 30 | 5 | 0.5 | 4.0 | 0.03 | 0.07 |
| MM3Z8V2B | 7Z | 8.02 | 8.2 | 8.36 | 5 | 30 | 5 | 0.5 | 5.0 | 0.03 | 0.08 |
| MM3Z9V1B | 8A | 8.85 | 9.1 | 9.23 | 5 | 30 | 5 | 0.5 | 6.0 | 0.03 | 0.09 |
| MM3Z10B | 8B | 9.77 | 10 | 10.21 | 5 | 30 | 5 | 0.1 | 7.0 | 0.03 | 0.10 |
| MM3Z11B | 8C | 10.76 | 11 | 11.22 | 5 | 30 | 5 | 0.1 | 8.0 | 0.03 | 0.11 |
| MM3Z12B | 8D | 11.74 | 12 | 12.24 | 5 | 30 | 5 | 0.1 | 9.0 | 0.03 | 0.11 |
| MM3Z13B | 8E | 12.91 | 13 | 13.49 | 5 | 37 | 5 | 0.1 | 10 | 0.03 | 0.11 |
| MM3Z15B | 8F | 14.34 | 15 | 14.98 | 5 | 42 | 5 | 0.1 | 11 | 0.03 | 0.11 |
| MM3Z16B | 8H | 15.85 | 16 | 16.51 | 5 | 50 | 5 | 0.1 | 12 | 0.03 | 0.11 |
| MM3Z18B | 8J | 17.56 | 18 | 18.35 | 5 | 65 | 5 | 0.1 | 13 | 0.03 | 0.11 |
| MM3Z20B | 8K | 19.52 | 20 | 20.39 | 5 | 85 | 5 | 0.1 | 15 | 0.03 | 0.11 |
| MM3Z22B | 8M | 21.54 | 22 | 22.47 | 5 | 100 | 5 | 0.1 | 17 | 0.04 | 0.12 |
| MM3Z24B | 8N | 23.72 | 24 | 24.78 | 5 | 120 | 5 | 0.1 | 19 | 0.04 | 0.12 |
| MM3Z27B | 8P | 26.19 | 27 | 27.53 | 5 | 150 | 2 | 0.1 | 21 | 0.04 | 0.12 |
| MM3Z30B | 8R | 29.19 | 30 | 30.69 | 5 | 200 | 2 | 0.1 | 23 | 0.04 | 0.12 |
| MM3Z33B | 8X | 32.15 | 33 | 33.79 | 5 | 250 | 2 | 0.1 | 25 | 0.04 | 0.12 |
| MM3Z36B | 8Y | 35.07 | 36 | 36.87 | 5 | 300 | 2 | 0.1 | 27 | 0.04 | 0.12 |
| MM3Z39B | 8Z | 37.00 | 39 | 41.00 | 5 | 100 | 2 | 2.0 | 30 | 0.04 | 0.12 |

Notes :

(1) V_Z is tested with pulses (20 ms).

(2) Z_Z is measured at I_Z by given a very small A.C. current signal.



Zener Diodes 0.30 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Marking | V _{Z1} @ I _{ZT1} = 5 mA (Note 1) | | | Z _{T1} @ I _{ZT1} = 5 mA (Ω) | V _{Z2} @ I _{ZT2} = 1 mA (Note 1) | | Z _{T2} @ I _{ZT2} = 1 mA (Ω) | V _{Z3} @ I _{ZT3} = 20 mA (Note 1) | | Z _{T3} @ I _{ZT3} = 20 mA (Ω) | Max. Reverse Leakage Current I _R @ V _R (μA) (V) | | Θ _{VZ} (mV/k) @ I _{ZT1} = 5 mA Min Max | | C (pF) @ V _R = 0 f = 1 MHz |
|----------|---------|--|--|--|--|--|--|--|---|--|---|---|--|---|--|---|
| | | (V) Min Nom Max | | | | (V) Min Max | | | (V) Min Max | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

BZX84Cxx Series, 0.30 W, Case Type : SOT-23



| | | | | | | | | | | | | | | | | |
|-----------|---------|--|-----|------|--|---|------|---|---|------|---|---|------|--|------|---|
| BZX84C2V4 | C8 | 2.2 | 2.4 | 2.6 | 100 | 1.7 | 2.1 | 600 | 2.6 | 3.2 | 50 | 50 | 1.0 | -3.5 | 0 | 450 |
| BZX84C2V7 | D8 | 2.5 | 2.7 | 2.9 | 100 | 1.9 | 2.4 | 600 | 3.0 | 3.6 | 50 | 20 | 1.0 | -3.5 | 0 | 450 |
| BZX84C3V0 | E8 | 2.8 | 3.0 | 3.2 | 95 | 2.1 | 2.7 | 600 | 3.3 | 3.9 | 50 | 10 | 1.0 | -3.5 | 0 | 450 |
| BZX84C3V3 | F8 | 3.1 | 3.3 | 3.5 | 95 | 2.3 | 2.9 | 600 | 3.6 | 4.2 | 40 | 5 | 1.0 | -3.5 | 0 | 450 |
| BZX84C3V6 | H8 | 3.4 | 3.6 | 3.8 | 90 | 2.7 | 3.3 | 600 | 3.9 | 4.5 | 40 | 5 | 1.0 | -3.5 | 0 | 450 |
| BZX84C3V9 | J8 | 3.7 | 3.9 | 4.1 | 90 | 2.9 | 3.5 | 600 | 4.1 | 4.7 | 30 | 3 | 1.0 | -3.5 | -2.5 | 450 |
| BZX84C4V3 | K8 | 4.0 | 4.3 | 4.6 | 90 | 3.3 | 4.0 | 600 | 4.4 | 5.1 | 30 | 3 | 1.0 | -3.5 | 0 | 450 |
| BZX84C4V7 | M8 | 4.4 | 4.7 | 5.0 | 80 | 3.7 | 4.7 | 500 | 4.5 | 5.4 | 15 | 3 | 2.0 | -3.5 | 0.2 | 260 |
| BZX84C5V1 | N8 | 4.8 | 5.1 | 5.4 | 60 | 4.2 | 5.3 | 480 | 5.0 | 5.9 | 15 | 2 | 2.0 | -2.7 | 1.2 | 225 |
| BZX84C5V6 | P8 | 5.2 | 5.6 | 6.0 | 40 | 4.8 | 6.0 | 400 | 5.2 | 6.3 | 10 | 1 | 2.0 | -2.0 | 2.5 | 200 |
| BZX84C6V2 | R8 | 5.8 | 6.2 | 6.6 | 10 | 5.6 | 6.6 | 150 | 5.8 | 6.8 | 6 | 3 | 4.0 | 0.4 | 3.7 | 185 |
| BZX84C6V8 | X8 | 6.4 | 6.8 | 7.2 | 15 | 6.3 | 7.2 | 80 | 6.4 | 7.4 | 6 | 2 | 4.0 | 1.2 | 4.5 | 155 |
| BZX84C7V5 | Y8 | 7.0 | 7.5 | 7.9 | 15 | 6.9 | 7.9 | 80 | 7.0 | 8.0 | 6 | 1 | 5.0 | 2.5 | 5.3 | 140 |
| BZX84C8V2 | Z8 | 7.7 | 8.2 | 8.7 | 15 | 7.6 | 8.7 | 80 | 7.7 | 8.8 | 6 | 0.7 | 5.0 | 3.2 | 6.2 | 135 |
| BZX84C9V1 | A9 | 8.5 | 9.1 | 9.6 | 15 | 8.4 | 9.6 | 100 | 8.5 | 9.7 | 8 | 0.5 | 6.0 | 3.8 | 7.0 | 130 |
| BZX84C10 | B9 | 9.4 | 10 | 10.6 | 20 | 9.3 | 10.6 | 150 | 9.4 | 10.7 | 10 | 0.2 | 7.0 | 4.5 | 8.0 | 130 |
| BZX84C11 | C9 | 10.4 | 11 | 11.6 | 20 | 10.2 | 11.6 | 150 | 10.4 | 11.8 | 10 | 0.1 | 8.0 | 5.4 | 9.0 | 130 |
| BZX84C12 | D9 | 11.4 | 12 | 12.7 | 25 | 11.2 | 12.7 | 150 | 11.4 | 12.9 | 10 | 0.1 | 8.0 | 6.0 | 10.0 | 130 |
| BZX84C13 | E9 | 12.4 | 13 | 14.1 | 30 | 12.3 | 14.0 | 170 | 12.5 | 14.2 | 15 | 0.1 | 8.0 | 7.0 | 11.0 | 120 |
| BZX84C15 | F9 | 13.8 | 15 | 15.6 | 30 | 13.7 | 15.5 | 200 | 13.9 | 15.7 | 20 | 0.05 | 10.5 | 9.2 | 13.0 | 110 |
| BZX84C16 | H9 | 15.3 | 16 | 17.1 | 40 | 15.2 | 17.0 | 200 | 15.4 | 17.2 | 20 | 0.05 | 11.2 | 10.4 | 14.0 | 105 |
| BZX84C18 | J9 | 16.8 | 18 | 19.1 | 45 | 16.7 | 19.0 | 225 | 16.9 | 19.2 | 20 | 0.05 | 12.6 | 12.4 | 16.0 | 100 |
| BZX84C20 | K9 | 18.8 | 20 | 21.2 | 55 | 18.7 | 21.1 | 225 | 18.9 | 21.4 | 20 | 0.05 | 14.0 | 14.4 | 18.0 | 85 |
| BZX84C22 | M9 | 20.8 | 22 | 23.3 | 55 | 20.7 | 23.2 | 250 | 20.9 | 23.4 | 25 | 0.05 | 15.4 | 16.4 | 20.0 | 85 |
| BZX84C24 | N9 | 22.8 | 24 | 25.6 | 70 | 22.7 | 25.5 | 250 | 22.9 | 25.7 | 25 | 0.05 | 16.8 | 18.4 | 22.0 | 80 |
| TYPE NO. | Marking | V _{Z1} Below @ I _{ZT1} = 2 mA (Note 1) | | | Z _{ZT1} Below @ I _{ZT1} = 2 mA (Ω) | V _{Z2} Below @ I _{ZT2} = 0.1mA (Note 1) | | Z _{ZT2} Below @ I _{ZT4} = 0.5mA (Ω) | V _{Z3} Below @ I _{ZT1} = 10 mA (Note 1) | | Z _{ZT3} Below @ I _{ZT3} = 10 mA (Ω) | Max. Reverse Leakage Current I _R @ V _R | | Θ _{VZ} (mV/k) Below @ I _{ZT1} = 2 mA | | C (pF) @ V _R = 0 f = 1 MHz |
| | | (V) | | | | (V) | | | (V) | | | | | | | |
| | | Min | Nom | Max | | Min | Max | | Min | Max | | (μA) | (V) | Min | Max | |
| | | | | | | | | | | | | | | | | |
| BZX84C27 | P9 | 25.1 | 27 | 28.9 | 80 | 25 | 28.9 | 300 | 25.2 | 29.3 | 45 | 0.05 | 18.9 | 21.4 | 25.3 | 70 |
| BZX84C30 | R9 | 28 | 30 | 32 | 80 | 27.8 | 32 | 300 | 28.1 | 32.4 | 50 | 0.05 | 21.0 | 24.4 | 29.4 | 70 |
| BZX84C33 | X9 | 31 | 33 | 35 | 80 | 30.8 | 35 | 325 | 31.1 | 35.4 | 55 | 0.05 | 23.1 | 27.4 | 33.4 | 70 |
| BZX84C36 | Y9 | 34 | 36 | 38 | 90 | 33.8 | 38 | 350 | 34.1 | 38.4 | 60 | 0.05 | 25.2 | 30.4 | 37.4 | 70 |
| BZX84C39 | Z9 | 37 | 39 | 41 | 130 | 36.7 | 41 | 35 | 37.1 | 41.5 | 70 | 0.05 | 27.3 | 33.4 | 41.2 | 45 |
| BZX84C43 | A0 | 40 | 43 | 46 | 150 | 39.7 | 46 | 375 | 40.1 | 46.5 | 80 | 0.05 | 30.1 | 37.6 | 46.6 | 40 |
| BZX84C47 | B0 | 44 | 47 | 50 | 170 | 43.7 | 50 | 375 | 44.1 | 50.5 | 90 | 0.05 | 32.9 | 42.0 | 51.8 | 40 |
| BZX84C51 | C0 | 48 | 51 | 54 | 180 | 47.6 | 54 | 400 | 48.1 | 54.6 | 100 | 0.05 | 35.7 | 46.6 | 57.2 | 40 |
| BZX84C56 | D0 | 52 | 56 | 60 | 200 | 51.5 | 60 | 425 | 52.1 | 60.8 | 110 | 0.05 | 39.2 | 52.2 | 63.8 | 40 |
| BZX84C62 | E0 | 58 | 62 | 66 | 215 | 57.4 | 66 | 450 | 58.2 | 67.0 | 120 | 0.05 | 43.4 | 58.8 | 71.6 | 35 |
| BZX84C68 | F0 | 64 | 68 | 72 | 240 | 63.4 | 72 | 475 | 64.2 | 73.2 | 130 | 0.05 | 47.6 | 65.6 | 79.8 | 35 |
| BZX84C75 | H0 | 70 | 75 | 79 | 255 | 69.4 | 79 | 500 | 70.3 | 80.2 | 140 | 0.05 | 52.5 | 73.4 | 88.6 | 35 |

Note: (1) Zener voltage is measured with pulse test current I_Z at an ambient temperature of 25 °C



Zener Diodes 0.35 W

The plastic material carries U/L recognition 94V-0.

| TYPE NO. | Marking | V_{Z1} @ $I_{ZT1} = 5 \text{ mA}$ (Note 1) | | | Z_{ZT1} @ $I_{ZT1} = 5 \text{ mA}$ | V_{Z2} @ $I_{ZT2} = 1 \text{ mA}$ (Note 1) | | Z_{ZT2} @ $I_{ZT2} = 1 \text{ mA}^{(2)}$ | V_{Z3} @ $I_{ZT3} = 20 \text{ mA}$ (Note 1) | | Z_{ZT3} @ $I_{ZT3} = 20 \text{ mA}$ | Max. Reverse Leakage Current I_R @ V_R | | Θ_{VZ} (mV/k) @ $I_{ZT1} = 5 \text{ mA}$ | | C (pF) @ $V_R = 0$ $f = 1 \text{ MHz}$ |
|----------|---------|--|-----|-----|---|--|-----|---|---|-----|--|---|-----|---|-----|--|
| | | (V) | | | (Ω) | (V) | | (Ω) | (V) | | (Ω) | (μA) | (V) | | | |
| | | Min | Nom | Max | | Min | Max | | Min | Max | | | | Min | Max | |

BZX84Bxx Series, 0.35 W, Case Type : SOT-23



| BZX84B2V4 | CR | 2.35 | 2.4 | 2.45 | 100 | 1.7 | 2.1 | 600 | 2.6 | 3.2 | 50 | 50 | 1.0 | -3.5 | 0 | 450 |
|-----------|---------|--|-----|------|--|--|------|--|---|------|---|---|------|---|------|--|
| BZX84B2V7 | CX | 2.64 | 2.7 | 2.76 | 100 | 1.9 | 2.4 | 600 | 3.0 | 3.6 | 50 | 20 | 1.0 | -3.5 | 0 | 450 |
| BZX84B3V0 | CY | 2.94 | 3.0 | 3.06 | 95 | 2.1 | 2.7 | 600 | 3.3 | 3.9 | 50 | 10 | 1.0 | -3.5 | 0 | 450 |
| BZX84B3V3 | CZ | 3.23 | 3.3 | 3.37 | 95 | 2.3 | 2.9 | 600 | 3.6 | 4.2 | 40 | 5 | 1.0 | -3.5 | 0 | 450 |
| BZX84B3V6 | DA | 3.52 | 3.6 | 3.68 | 90 | 2.7 | 3.3 | 600 | 3.9 | 4.5 | 40 | 5 | 1.0 | -3.5 | 0 | 450 |
| BZX84B3V9 | DB | 3.82 | 3.9 | 3.98 | 90 | 2.9 | 3.5 | 600 | 4.1 | 4.7 | 30 | 3 | 1.0 | -3.5 | -2.5 | 450 |
| BZX84B4V3 | DC | 4.21 | 4.3 | 4.39 | 90 | 3.3 | 4.0 | 600 | 4.4 | 5.1 | 30 | 3 | 1.0 | -3.5 | 0 | 450 |
| BZX84B4V7 | DD | 4.60 | 4.7 | 4.8 | 80 | 3.7 | 4.7 | 500 | 4.5 | 5.4 | 15 | 3 | 2.0 | -3.5 | 0.2 | 260 |
| BZX84B5V1 | DE | 4.99 | 5.1 | 5.2 | 60 | 4.2 | 5.3 | 480 | 5.0 | 5.9 | 15 | 2 | 2.0 | -2.7 | 1.2 | 225 |
| BZX84B5V6 | DF | 5.49 | 5.6 | 5.71 | 40 | 4.8 | 6.0 | 400 | 5.2 | 6.3 | 10 | 1 | 2.0 | -2.0 | 2.5 | 200 |
| BZX84B6V2 | DH | 6.07 | 6.2 | 6.32 | 10 | 5.6 | 6.6 | 150 | 5.8 | 6.8 | 6 | 3 | 4.0 | 0.4 | 3.7 | 185 |
| BZX84B6V8 | DJ | 6.66 | 6.8 | 6.94 | 15 | 6.3 | 7.2 | 80 | 6.4 | 7.4 | 6 | 2 | 4.0 | 1.2 | 4.5 | 155 |
| BZX84B7V5 | DK | 7.35 | 7.5 | 7.65 | 15 | 6.9 | 7.9 | 80 | 7.0 | 8.0 | 6 | 1 | 5.0 | 2.5 | 5.3 | 140 |
| BZX84B8V2 | DM | 8.04 | 8.2 | 8.36 | 15 | 7.6 | 8.7 | 80 | 7.7 | 8.8 | 6 | 0.7 | 5.0 | 3.2 | 6.2 | 135 |
| BZX84B9V1 | DN | 8.92 | 9.1 | 9.28 | 15 | 8.4 | 9.6 | 100 | 8.5 | 9.7 | 8 | 0.5 | 6.0 | 3.8 | 7.0 | 130 |
| BZX84B10 | DP | 9.80 | 10 | 10.2 | 20 | 9.3 | 10.6 | 150 | 9.4 | 10.7 | 10 | 0.2 | 7.0 | 4.5 | 8.0 | 130 |
| BZX84B11 | DR | 10.8 | 11 | 11.2 | 20 | 10.2 | 11.6 | 150 | 10.4 | 11.8 | 10 | 0.1 | 8.0 | 5.4 | 9.0 | 130 |
| BZX84B12 | DX | 11.8 | 12 | 12.2 | 25 | 11.2 | 12.7 | 150 | 11.4 | 12.9 | 10 | 0.1 | 8.0 | 6.0 | 10.0 | 130 |
| BZX84B13 | DY | 12.7 | 13 | 13.3 | 30 | 12.3 | 14.0 | 170 | 12.5 | 14.2 | 15 | 0.1 | 8.0 | 7.0 | 11.0 | 120 |
| BZX84B15 | DZ | 14.7 | 15 | 15.3 | 30 | 13.7 | 15.5 | 200 | 13.9 | 15.7 | 20 | 0.05 | 10.5 | 9.2 | 13.0 | 110 |
| BZX84B16 | EA | 15.7 | 16 | 16.3 | 40 | 15.2 | 17.0 | 200 | 15.4 | 17.2 | 20 | 0.05 | 11.2 | 10.4 | 14.0 | 105 |
| BZX84B18 | EB | 17.6 | 18 | 18.4 | 45 | 16.7 | 19.0 | 225 | 16.9 | 19.2 | 20 | 0.05 | 12.6 | 12.4 | 16.0 | 100 |
| BZX84B20 | EC | 19.6 | 20 | 20.4 | 55 | 18.7 | 21.1 | 225 | 18.9 | 21.4 | 20 | 0.05 | 14.0 | 14.4 | 18.0 | 85 |
| BZX84B22 | ED | 21.6 | 22 | 22.5 | 55 | 20.7 | 23.2 | 250 | 20.9 | 23.4 | 25 | 0.05 | 15.4 | 16.4 | 20.0 | 85 |
| BZX84B24 | EE | 23.5 | 24 | 24.5 | 70 | 22.7 | 25.5 | 250 | 22.9 | 25.7 | 25 | 0.05 | 16.8 | 18.4 | 22.0 | 80 |
| TYPE NO. | Marking | V_{Z1} Below @ $I_{ZT1} = 2 \text{ mA}$ (Note 1) | | | Z_{ZT1} Below @ $I_{ZT1} = 2 \text{ mA}$ | V_{Z2} Below @ $I_{ZT2} = 0.1 \text{ mA}$ (Note 1) | | Z_{ZT2} Below @ $I_{ZT4} = 0.5 \text{ mA}$ | V_{Z3} Below @ $I_{ZT3} = 10 \text{ mA}$ (Note 1) | | Z_{ZT3} Below @ $I_{ZT3} = 10 \text{ mA}$ | Max. Reverse Leakage Current I_R @ V_R | | Θ_{VZ} (mV/k) Below @ $I_{ZT1} = 2 \text{ mA}$ | | C (pF) @ $V_R = 0$ $f = 1 \text{ MHz}$ |
| | | (V) | | | (Ω) | (V) | | (Ω) | (V) | | (Ω) | (μA) | (V) | | | |
| | | Min | Nom | Max | | Min | Max | | Min | Max | | | | Min | Max | |
| BZX84B27 | EF | 26.4 | 27 | 27.6 | 80 | 25 | 28.9 | 300 | 25.2 | 29.3 | 45 | 0.05 | 18.9 | 21.4 | 25.3 | 70 |
| BZX84B30 | EH | 29.4 | 30 | 30.6 | 80 | 27.8 | 32 | 300 | 28.1 | 32.4 | 50 | 0.05 | 21.0 | 24.4 | 29.4 | 70 |
| BZX84B33 | EJ | 32.3 | 33 | 33.7 | 80 | 30.8 | 35 | 325 | 31.1 | 35.4 | 55 | 0.05 | 23.1 | 27.4 | 33.4 | 70 |
| BZX84B36 | EK | 35.2 | 36 | 36.8 | 90 | 33.8 | 38 | 350 | 34.1 | 38.4 | 60 | 0.05 | 25.2 | 30.4 | 37.4 | 70 |
| BZX84B39 | EM | 38.2 | 39 | 39.8 | 130 | 36.7 | 41 | 35 | 37.1 | 41.5 | 70 | 0.05 | 27.3 | 33.4 | 41.2 | 45 |
| BZX84B43 | EN | 42.1 | 43 | 43.9 | 150 | 39.7 | 46 | 375 | 40.1 | 46.5 | 80 | 0.05 | 30.1 | 37.6 | 46.6 | 40 |
| BZX84B47 | EP | 46.0 | 47 | 48 | 170 | 43.7 | 50 | 375 | 44.1 | 50.5 | 90 | 0.05 | 32.9 | 42.0 | 51.8 | 40 |

Notes :

(1) Tested with pulses $t_p = 20 \text{ ms}$.

(1) The Zener impedance, Z_{ZT2} for the 27 through 75 volt types is tested at 0.5 mA rather than the test current of 0.1mA used for V_{Z2}



Zener Diodes 0.35 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Marking Code | Zener Voltage ⁽¹⁾ | | Test Current | Max. Dynamic Resistance | | Test Current | Maximum Reverse Voltage | | Maximum Zener Current |
|----------|--------------|------------------------------|------|--------------|-------------------------|-------------------|--------------|-------------------------|-----|-----------------------|
| | | $V_Z @ I_{ZT}$ (V) | | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | I_{ZK} | I_R at V_R | | I_{ZM} |
| | | Min. | Max. | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | (mA) |

BZX84CxxCA Series, 0.35 W, Case Type : SOT-23



| | | | | | | | | | | |
|-------------|----|------|------|-----|-----|-----|-----|------|-----|-----|
| BZX84C3V0CA | MR | 2.8 | 3.2 | 5.0 | 100 | 600 | 1.0 | 4.0 | 1.0 | 109 |
| BZX84C3V3CA | MX | 3.1 | 3.5 | 5.0 | 95 | 600 | 1.0 | 2.0 | 1.0 | 100 |
| BZX84C3V6CA | MY | 3.4 | 3.8 | 5.0 | 95 | 600 | 1.0 | 2.0 | 1.0 | 92 |
| BZX84C3V9CA | MZ | 3.7 | 4.1 | 5.0 | 90 | 600 | 1.0 | 2.0 | 1.0 | 85 |
| BZX84C4V3CA | NA | 4.0 | 4.6 | 5.0 | 90 | 600 | 1.0 | 1.0 | 1.0 | 76 |
| BZX84C4V7CA | NB | 4.4 | 5.0 | 5.0 | 80 | 500 | 1.0 | 3.0 | 2.0 | 70 |
| BZX84C5V1CA | NC | 4.8 | 5.4 | 5.0 | 60 | 480 | 1.0 | 2.0 | 2.0 | 65 |
| BZX84C5V6CA | ND | 5.2 | 6.0 | 5.0 | 40 | 400 | 1.0 | 1.0 | 2.0 | 58 |
| BZX84C6V2CA | NE | 5.8 | 6.6 | 5.0 | 10 | 150 | 1.0 | 3.0 | 4.0 | 53 |
| BZX84C6V8CA | NF | 6.4 | 7.2 | 5.0 | 10 | 80 | 1.0 | 2.0 | 4.0 | 49 |
| BZX84C7V5CA | NH | 7.0 | 7.9 | 5.0 | 10 | 80 | 1.0 | 1.0 | 5.0 | 44 |
| BZX84C8V2CA | NJ | 7.7 | 8.7 | 5.0 | 10 | 80 | 1.0 | 0.7 | 5.0 | 40 |
| BZX84C9V1CA | NK | 8.5 | 9.6 | 5.0 | 15 | 100 | 1.0 | 0.5 | 6.0 | 36 |
| BZX84C10CA | NM | 9.4 | 10.6 | 5.0 | 20 | 150 | 1.0 | 0.2 | 7.0 | 33 |
| BZX84C11CA | NN | 10.4 | 11.6 | 5.0 | 20 | 150 | 1.0 | 0.1 | 8.0 | 30 |
| BZX84C12CA | NP | 11.4 | 12.7 | 5.0 | 25 | 150 | 1.0 | 0.1 | 8.0 | 28 |
| BZX84C13CA | NX | 12.4 | 14.1 | 5.0 | 30 | 170 | 1.0 | 0.1 | 8.0 | 25 |
| BZX84C15CA | NY | 13.8 | 15.6 | 5.0 | 30 | 200 | 1.0 | 0.05 | 10 | 22 |
| BZX84C16CA | NZ | 15.3 | 17.1 | 5.0 | 40 | 200 | 1.0 | 0.05 | 11 | 20 |
| BZX84C18CA | PA | 16.8 | 19.1 | 5.0 | 50 | 225 | 1.0 | 0.05 | 13 | 18 |
| BZX84C20CA | PB | 18.8 | 21.2 | 5.0 | 50 | 225 | 1.0 | 0.05 | 14 | 17 |
| BZX84C22CA | PC | 20.8 | 23.3 | 5.0 | 55 | 250 | 1.0 | 0.05 | 15 | 15 |
| BZX84C24CA | PD | 22.8 | 25.6 | 5.0 | 80 | 250 | 1.0 | 0.05 | 17 | 14 |
| BZX84C27CA | PE | 25.1 | 28.9 | 2.0 | 80 | 300 | 0.5 | 0.05 | 19 | 12 |
| BZX84C30CA | PF | 28 | 32 | 2.0 | 80 | 300 | 0.5 | 0.05 | 21 | 11 |
| BZX84C33CA | PH | 31 | 35 | 2.0 | 80 | 325 | 0.5 | 0.05 | 23 | 10 |
| BZX84C36CA | PJ | 34 | 38 | 2.0 | 90 | 350 | 0.5 | 0.05 | 25 | 9 |
| BZX84C39CA | PM | 37 | 41 | 2.0 | 90 | 350 | 0.5 | 0.05 | 27 | 9 |
| BZX84C43CA | PN | 40 | 46 | 2.0 | 100 | 375 | 0.5 | 0.05 | 30 | 8 |
| BZX84C47CA | PP | 44 | 50 | 2.0 | 100 | 375 | 0.5 | 0.05 | 33 | 7 |

Note : (1) Tested with pulses $t_p = 20$ ms.



Zener Diodes 0.35 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Marking Code | Zener Voltage ⁽¹⁾ | | | Test Current | Max. Dynamic Resistance | Maximum Reverse Voltage | |
|----------|--------------|------------------------------|------|------|--------------|-------------------------|-------------------------|-----|
| | | $V_Z @ I_{ZT}$ (V) | | | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | I_R at V_R | |
| | | Min. | Nom. | Max. | (mA) | (Ω) | (μA) | (V) |

BZX84CxxCC Series, 0.35 W, Case Type : SOT-23



| | | | | | | | | |
|-------------|----|------|-----|------|-----|-----|------|------|
| BZX84C2V4CC | JH | 2.2 | 2.4 | 2.6 | 5.0 | 100 | 50 | 1.0 |
| BZX84C2V7CC | JJ | 2.5 | 2.7 | 2.9 | 5.0 | 100 | 20 | 1.0 |
| BZX84C3V0CC | JK | 2.8 | 3.0 | 3.2 | 5.0 | 95 | 10 | 1.0 |
| BZX84C3V3CC | JM | 3.1 | 3.3 | 3.5 | 5.0 | 95 | 5.0 | 1.0 |
| BZX84C3V6CC | JN | 3.4 | 3.6 | 3.8 | 5.0 | 90 | 5.0 | 1.0 |
| BZX84C3V9CC | JP | 3.7 | 3.9 | 4.1 | 5.0 | 90 | 3.0 | 1.0 |
| BZX84C4V3CC | JR | 4.0 | 4.3 | 4.6 | 5.0 | 90 | 3.0 | 1.0 |
| BZX84C4V7CC | JX | 4.4 | 4.7 | 5.0 | 5.0 | 80 | 3.0 | 2.0 |
| BZX84C5V1CC | JY | 4.8 | 5.1 | 5.4 | 5.0 | 60 | 2.0 | 2.0 |
| BZX84C5V6CC | JZ | 5.2 | 5.6 | 6.0 | 5.0 | 40 | 1.0 | 2.0 |
| BZX84C6V2CC | KA | 5.8 | 6.2 | 6.6 | 5.0 | 10 | 3.0 | 4.0 |
| BZX84C6V8CC | KB | 6.4 | 6.8 | 7.2 | 5.0 | 15 | 2.0 | 4.0 |
| BZX84C7V5CC | KC | 7.0 | 7.5 | 7.9 | 5.0 | 15 | 1.0 | 5.0 |
| BZX84C8V2CC | KD | 7.7 | 8.2 | 8.7 | 5.0 | 15 | 0.7 | 5.0 |
| BZX84C9V1CC | KE | 8.5 | 9.1 | 9.6 | 5.0 | 15 | 0.5 | 6.0 |
| BZX84C10CC | KF | 9.4 | 10 | 10.6 | 5.0 | 20 | 0.2 | 7.0 |
| BZX84C11CC | KH | 10.4 | 11 | 11.6 | 5.0 | 20 | 0.1 | 8.0 |
| BZX84C12CC | KJ | 11.4 | 12 | 12.7 | 5.0 | 25 | 0.1 | 8.0 |
| BZX84C13CC | KK | 12.4 | 13 | 14.1 | 5.0 | 30 | 0.1 | 8.0 |
| BZX84C15CC | KM | 13.8 | 15 | 15.6 | 5.0 | 30 | 0.05 | 10.5 |
| BZX84C16CC | KN | 15.3 | 16 | 17.1 | 5.0 | 40 | 0.05 | 11.2 |
| BZX84C18CC | KP | 16.8 | 18 | 19.1 | 5.0 | 45 | 0.05 | 12.6 |
| BZX84C20CC | KR | 18.8 | 20 | 21.2 | 5.0 | 55 | 0.05 | 14.0 |
| BZX84C22CC | KX | 20.8 | 22 | 23.3 | 5.0 | 55 | 0.05 | 15.4 |
| BZX84C24CC | KY | 22.8 | 24 | 25.6 | 5.0 | 70 | 0.05 | 16.8 |
| BZX84C27CC | KZ | 25.1 | 27 | 28.9 | 2.0 | 80 | 0.05 | 18.9 |
| BZX84C30CC | MA | 28 | 30 | 32 | 2.0 | 80 | 0.05 | 21.0 |
| BZX84C33CC | MB | 31 | 33 | 35 | 2.0 | 80 | 0.05 | 23.1 |
| BZX84C36CC | MC | 34 | 36 | 38 | 2.0 | 90 | 0.05 | 25.2 |
| BZX84C39CC | MD | 37 | 39 | 41 | 2.0 | 130 | 0.05 | 27.3 |
| BZX84C43CC | ME | 40 | 43 | 46 | 2.0 | 150 | 0.05 | 30.1 |
| BZX84C47CC | MF | 44 | 47 | 50 | 2.0 | 170 | 0.05 | 32.9 |
| BZX84C51CC | MH | 48 | 51 | 54 | 2.0 | 180 | 0.05 | 35.7 |
| BZX84C56CC | MJ | 52 | 56 | 60 | 2.0 | 200 | 0.05 | 39.2 |
| BZX84C62CC | MK | 58 | 62 | 66 | 2.0 | 215 | 0.05 | 43.4 |
| BZX84C68CC | MM | 64 | 68 | 72 | 2.0 | 240 | 0.05 | 47.6 |
| BZX84C75CC | MN | 70 | 75 | 79 | 2.0 | 255 | 0.05 | 52.5 |

Note : (1) Tested with pulses $t_p = 20$ ms.



Zener Diodes 0.35 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Marking | Zener Voltage ⁽¹⁾ | | | Test Current | Maximum Zener Impedance | | Test Current | Maximum Reverse Leakage Current | |
|----------|---------|------------------------------|-------------------|------|-----------------|-----------------------------------|-----------------------------------|-----------------|---------------------------------|-----|
| | | V _Z | @ I _{ZT} | (V) | I _{ZT} | Z _{ZT} @ I _{ZT} | Z _{ZK} @ I _{ZK} | I _{ZK} | I _R @ V _R | |
| | | Min. | Nom. | Max. | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) |

MMBZ5221B Series, 0.35 W, Case Type : SOT-23



| | | | | | | | | | | |
|-----------|----|-------|-----|-------|-----|-----|------|------|-----|-----|
| MMBZ5221B | Y0 | 2.28 | 2.4 | 2.52 | 20 | 30 | 1200 | 0.25 | 100 | 1.0 |
| MMBZ5223B | Z0 | 2.57 | 2.7 | 2.84 | 20 | 30 | 1300 | 0.25 | 75 | 1.0 |
| MMBZ5225B | AA | 2.85 | 3.0 | 3.15 | 20 | 29 | 1600 | 0.25 | 50 | 1.0 |
| MMBZ5226B | AB | 3.14 | 3.3 | 3.47 | 20 | 28 | 1600 | 0.25 | 25 | 1.0 |
| MMBZ5227B | AC | 3.42 | 3.6 | 3.78 | 20 | 24 | 1700 | 0.25 | 15 | 1.0 |
| MMBZ5228B | AD | 3.71 | 3.9 | 4.10 | 20 | 23 | 1900 | 0.25 | 10 | 1.0 |
| MMBZ5229B | AE | 4.09 | 4.3 | 4.52 | 20 | 22 | 2000 | 0.25 | 5 | 1.0 |
| MMBZ5230B | AF | 4.47 | 4.7 | 4.94 | 20 | 19 | 1900 | 0.25 | 5 | 2.0 |
| MMBZ5231B | AH | 4.85 | 5.1 | 5.36 | 20 | 17 | 1600 | 0.25 | 5 | 2.0 |
| MMBZ5232B | AJ | 5.32 | 5.6 | 5.88 | 20 | 11 | 1600 | 0.25 | 5 | 3.0 |
| MMBZ5233B | AK | 5.70 | 6.0 | 6.30 | 20 | 7 | 1600 | 0.25 | 5 | 3.5 |
| MMBZ5234B | AM | 5.89 | 6.2 | 6.51 | 20 | 7 | 1000 | 0.25 | 5 | 4.0 |
| MMBZ5235B | AN | 6.46 | 6.8 | 7.14 | 20 | 5 | 750 | 0.25 | 3 | 5.0 |
| MMBZ5236B | AP | 7.13 | 7.5 | 7.88 | 20 | 6 | 500 | 0.25 | 3 | 6.0 |
| MMBZ5237B | AR | 7.79 | 8.2 | 8.61 | 20 | 8 | 500 | 0.25 | 3 | 6.5 |
| MMBZ5238B | AX | 8.27 | 8.7 | 9.14 | 20 | 8 | 600 | 0.25 | 3 | 6.5 |
| MMBZ5239B | AY | 8.65 | 9.1 | 9.56 | 20 | 10 | 600 | 0.25 | 3 | 7.0 |
| MMBZ5240B | AZ | 9.50 | 10 | 10.50 | 20 | 17 | 600 | 0.25 | 3 | 8.0 |
| MMBZ5241B | BA | 10.45 | 11 | 11.50 | 20 | 22 | 600 | 0.25 | 2 | 8.4 |
| MMBZ5242B | BB | 11.40 | 12 | 12.60 | 20 | 30 | 600 | 0.25 | 1 | 9.1 |
| MMBZ5243B | BC | 12.35 | 13 | 13.65 | 9.5 | 13 | 600 | 0.25 | 0.5 | 9.9 |
| MMBZ5245B | BE | 14.25 | 15 | 15.75 | 8.5 | 16 | 600 | 0.25 | 0.1 | 11 |
| MMBZ5246B | BF | 15.20 | 16 | 16.80 | 7.8 | 17 | 600 | 0.25 | 0.1 | 12 |
| MMBZ5247B | BH | 16.15 | 17 | 17.85 | 7.4 | 19 | 600 | 0.25 | 0.1 | 13 |
| MMBZ5248B | BJ | 17.10 | 18 | 18.90 | 7.0 | 21 | 600 | 0.25 | 0.1 | 14 |
| MMBZ5249B | BK | 18.05 | 19 | 19.95 | 6.6 | 23 | 600 | 0.25 | 0.1 | 14 |
| MMBZ5250B | BM | 19.00 | 20 | 21.00 | 6.2 | 25 | 600 | 0.25 | 0.1 | 15 |
| MMBZ5251B | BN | 20.90 | 22 | 23.10 | 5.6 | 29 | 600 | 0.25 | 0.1 | 17 |
| MMBZ5252B | BP | 22.80 | 24 | 25.20 | 5.2 | 33 | 600 | 0.25 | 0.1 | 18 |
| MMBZ5253B | BR | 23.75 | 25 | 26.25 | 5.0 | 35 | 600 | 0.25 | 0.1 | 19 |
| MMBZ5254B | BX | 25.65 | 27 | 28.35 | 4.6 | 41 | 600 | 0.25 | 0.1 | 21 |
| MMBZ5255B | BY | 26.60 | 28 | 29.40 | 4.5 | 44 | 600 | 0.25 | 0.1 | 21 |
| MMBZ5256B | BZ | 28.50 | 30 | 31.50 | 4.2 | 49 | 600 | 0.25 | 0.1 | 23 |
| MMBZ5257B | CA | 31.35 | 33 | 34.65 | 3.8 | 58 | 700 | 0.25 | 0.1 | 25 |
| MMBZ5258B | CB | 34.20 | 36 | 37.80 | 3.4 | 70 | 700 | 0.25 | 0.1 | 27 |
| MMBZ5259B | CC | 37.05 | 39 | 40.95 | 3.2 | 80 | 800 | 0.25 | 0.1 | 30 |
| MMBZ5260B | CD | 40.85 | 43 | 45.15 | 3.0 | 93 | 900 | 0.25 | 0.1 | 33 |
| MMBZ5261B | CE | 44.65 | 47 | 49.35 | 2.7 | 105 | 1000 | 0.25 | 0.1 | 36 |

Note :

(1) Tested with pulses tp = 20 ms



Zener Diodes 0.40 W

| Type No. | Grade | Zener Voltage V _Z @ I _{ZT} | | | | | | Test Current | Maximum Dynamic Resistance | | Maximum Reverse Current | | | | |
|----------|-------|---|------|-----------|------|-----------|------|-----------------|-------------------------------|--|-------------------------------|--|-----------------|---------------------|---------------------------------|
| | | Suffix -1 | | Suffix -2 | | Suffix -3 | | | | | | | | | |
| | | min. | max. | min. | max. | min. | max. | | | | | | I _{ZT} | rd @ I _Z | I _R @ V _R |
| | | (V) | (V) | (V) | (V) | (V) | (V) | | | | | | (mA) | (Ω) (mA) | (μA) (V) |

HZ6L Series, 0.4 W, Case Type : DO-35



| | | | | | | | | | | | | |
|-------|---|------|------|------|------|------|------|-----|-----|-----|---|------|
| HZ6L | A | 5.2 | 5.5 | 5.3 | 5.6 | 5.4 | 5.7 | 0.5 | 150 | 0.5 | 1 | 2.0 |
| | B | 5.5 | 5.8 | 5.6 | 5.9 | 5.7 | 6.0 | 0.5 | 80 | 0.5 | 1 | 2.0 |
| | C | 5.8 | 6.1 | 6.0 | 6.3 | 6.1 | 6.4 | 0.5 | 60 | 0.5 | 1 | 2.0 |
| HZ7L | A | 6.3 | 6.6 | 6.4 | 6.7 | 6.6 | 6.9 | 0.5 | 60 | 0.5 | 1 | 3.5 |
| | B | 6.7 | 7.0 | 6.9 | 7.2 | 7.0 | 7.3 | 0.5 | 60 | 0.5 | 1 | 3.5 |
| | C | 7.2 | 7.6 | 7.3 | 7.7 | 7.5 | 7.9 | 0.5 | 60 | 0.5 | 1 | 3.5 |
| HZ9L | A | 7.7 | 8.1 | 7.9 | 8.3 | 8.1 | 8.5 | 0.5 | 60 | 0.5 | 1 | 6.0 |
| | B | 8.3 | 8.7 | 8.5 | 8.9 | 8.7 | 9.1 | 0.5 | 60 | 0.5 | 1 | 6.0 |
| | C | 8.9 | 9.3 | 9.1 | 9.5 | 9.3 | 9.7 | 0.5 | 60 | 0.5 | 1 | 6.0 |
| HZ11L | A | 9.5 | 9.9 | 9.7 | 10.1 | 9.9 | 10.3 | 0.5 | 80 | 0.5 | 1 | 8.0 |
| | B | 10.2 | 10.6 | 10.4 | 10.8 | 10.7 | 11.1 | 0.5 | 80 | 0.5 | 1 | 8.0 |
| | C | 10.9 | 11.3 | 11.1 | 11.6 | 11.4 | 11.9 | 0.5 | 80 | 0.5 | 1 | 8.0 |
| HZ12L | A | 11.6 | 12.1 | 11.9 | 12.4 | 12.2 | 12.7 | 0.5 | 80 | 0.5 | 1 | 10.5 |
| | B | 12.4 | 12.9 | 12.6 | 13.1 | 12.9 | 13.4 | 0.5 | 80 | 0.5 | 1 | 10.5 |
| | C | 13.2 | 13.7 | 13.5 | 14.0 | 13.8 | 14.3 | 0.5 | 80 | 0.5 | 1 | 10.5 |
| HZ15L | | 14.1 | 14.7 | 14.5 | 15.1 | 14.9 | 15.5 | 0.5 | 80 | 0.5 | 1 | 13.0 |
| HZ16L | | 15.3 | 15.9 | 15.7 | 16.5 | 16.3 | 17.1 | 0.5 | 80 | 0.5 | 1 | 14.0 |
| HZ18L | | 16.9 | 17.7 | 17.5 | 18.3 | 18.1 | 19.0 | 0.5 | 80 | 0.5 | 1 | 15.0 |
| HZ20L | | 18.8 | 19.7 | 19.5 | 20.4 | 20.2 | 21.1 | 0.5 | 100 | 0.5 | 1 | 18.0 |
| HZ22L | | 20.9 | 21.9 | 21.6 | 22.6 | 22.3 | 23.3 | 0.5 | 100 | 0.5 | 1 | 20.0 |
| HZ24L | | 22.9 | 24.0 | 23.6 | 24.7 | 24.3 | 25.5 | 0.5 | 120 | 0.5 | 1 | 22.0 |
| HZ27L | | 25.2 | 26.6 | 26.2 | 27.6 | 27.2 | 28.6 | 0.5 | 150 | 0.5 | 1 | 24.0 |
| HZ30L | | 28.2 | 29.6 | 29.2 | 30.6 | 30.2 | 31.6 | 0.5 | 200 | 0.5 | 1 | 27.0 |
| HZ33L | | 31.2 | 32.6 | 32.2 | 33.6 | 33.2 | 34.6 | 0.5 | 250 | 0.5 | 1 | 30.0 |
| HZ36L | | 34.2 | 35.7 | 35.3 | 36.8 | 36.4 | 38.0 | 0.5 | 300 | 0.5 | 1 | 33.0 |

Note :

The lower voltage types (HZ6L - HZ12L) are available in 3 grades, "A" to "C", each with suffix "-1", "-2" or "-3"

For example the type with $V_Z = 8.5 - 8.9V$ is HZ9B2L

The higher voltage types are only available with suffix "-1", "-2" or "-3" (no grade) e.g. HZ30-3L



Zener Diodes 0.40 W

| Type No. | Suffix ⁽¹⁾ | Zener Voltage | | Test Current | Maximum Dynamic Resistance | | Maximum Reverse Current | | Typical Temperature Coefficient * | |
|----------|-----------------------|--------------------|------|-----------------|----------------------------|------------------|-------------------------|------------------|-----------------------------------|----------------|
| | | V _Z (V) | | I _{ZT} | r _d | @ I _Z | I _R | @ V _R | γ _Z (mV/ °C) | I _Z |
| | | min. | max. | (mA) | (Ω) | (mA) | (μA) | (V) | | (mA) |

HZK-L Series, 0.4 W, Case Type : Mini MELF



| | | | | | | | | | | | |
|--------|----|------|------|-----|-----|-----|---|------|-----|-----|-----|
| HZK6L | A1 | 5.2 | 5.5 | 0.5 | 150 | 0.5 | 1 | 2.0 | 1.0 | 0.5 | |
| | A2 | 5.3 | 5.6 | | 80 | | | | | | |
| | A3 | 5.4 | 5.7 | | | | | | | | |
| | B1 | 5.5 | 5.8 | | | | | | | | |
| | B2 | 5.6 | 5.9 | | | | | | | | |
| | B3 | 5.7 | 6.0 | | | | | | | | |
| | C1 | 5.8 | 6.1 | | | | | | | | |
| | C2 | 6.0 | 6.3 | | | | | | | | |
| | C3 | 6.1 | 6.4 | | | | | | | | 60 |
| HZK7L | A1 | 6.3 | 6.6 | 0.5 | 60 | 0.5 | 1 | 3.5 | 2.0 | 0.5 | |
| | A2 | 6.4 | 6.7 | | | | | | | | |
| | A3 | 6.6 | 6.9 | | | | | | | | |
| | B1 | 6.7 | 7.0 | | | | | | | | |
| | B2 | 6.9 | 7.2 | | | | | | | | |
| | B3 | 7.0 | 7.3 | | | | | | | | |
| | C1 | 7.2 | 7.6 | | | | | | | | |
| | C2 | 7.3 | 7.7 | | | | | | | | |
| | C3 | 7.5 | 7.9 | | | | | | | | 0.5 |
| HZK9L | A1 | 7.7 | 8.1 | | | | | | | | |
| | A2 | 7.9 | 8.3 | | | | | | | | |
| | A3 | 8.1 | 8.5 | | | | | | | | |
| | B1 | 8.3 | 8.7 | | | | | | | | |
| | B2 | 8.5 | 8.9 | | | | | | | | |
| | B3 | 8.7 | 9.1 | | | | | | | | |
| | C1 | 8.9 | 9.3 | | | | | | | | |
| | C2 | 9.1 | 9.5 | | | | | | | | |
| | C3 | 9.3 | 9.7 | 0.5 | 80 | 0.5 | 1 | 8.0 | 5.0 | 0.5 | |
| HZK11L | A1 | 9.5 | 9.9 | | | | | | | | |
| | A2 | 9.7 | 10.1 | | | | | | | | |
| | A3 | 9.9 | 10.3 | | | | | | | | |
| | B1 | 10.2 | 10.6 | | | | | | | | |
| | B2 | 10.4 | 10.8 | | | | | | | | |
| | B3 | 10.7 | 11.1 | | | | | | | | |
| | C1 | 10.9 | 11.3 | | | | | | | | |
| | C2 | 11.1 | 11.6 | | | | | | | | |
| | C3 | 11.4 | 11.9 | 0.5 | 80 | 0.5 | 1 | 10.5 | 7.0 | 0.5 | |
| HZK12L | A1 | 11.6 | 12.1 | | | | | | | | |
| | A2 | 11.9 | 12.4 | | | | | | | | |
| | A3 | 12.2 | 12.7 | | | | | | | | |
| | B1 | 12.4 | 12.9 | | | | | | | | |
| | B2 | 12.6 | 13.1 | | | | | | | | |
| | B3 | 12.9 | 13.4 | | | | | | | | |
| | C1 | 13.2 | 13.7 | | | | | | | | |
| | C2 | 13.5 | 14.0 | | | | | | | | |
| | C3 | 13.8 | 14.3 | | | | | | | | |

Note : (1) When placing an order for HZK-L type, enter suffix as follows: HZK6A1L, HZK6A2L.....HZK36-3L



Zener Diodes 0.40 W

| Type No. | Suffix ⁽¹⁾ | Zener Voltage | | Test Current | Maximum Dynamic Resistance | | Maximum Reverse Current | | Typical Temperature Coefficient * | |
|----------|-----------------------|--------------------|------|-----------------|----------------------------|------------------|-------------------------|------------------|-----------------------------------|----------------|
| | | V _Z (V) | | I _{ZT} | r _d | @ I _Z | I _R | @ V _R | γ _Z (mV/ °C) | I _Z |
| | | min. | max. | (mA) | (Ω) | (mA) | (μA) | (V) | | (mA) |

HZK-L Series, 0.4 W, Case Type : Mini MELF



| | | | | | | | | | | |
|--------|---|------|------|-----|-----|-----|---|------|------|-----|
| HZK15L | 1 | 14.1 | 14.7 | 0.5 | 80 | 0.5 | 1 | 13.0 | 9.0 | 0.5 |
| | 2 | 14.5 | 15.1 | | | | | | | |
| | 3 | 14.9 | 15.5 | | | | | | | |
| HZK16L | 1 | 15.3 | 15.9 | 0.5 | 80 | 0.5 | 1 | 14.0 | 10.0 | 0.5 |
| | 2 | 15.7 | 16.5 | | | | | | | |
| | 3 | 16.3 | 17.1 | | | | | | | |
| HZK18L | 1 | 16.9 | 17.7 | 0.5 | 80 | 0.5 | 1 | 15.0 | 12.0 | 0.5 |
| | 2 | 17.5 | 18.3 | | | | | | | |
| | 3 | 18.1 | 19.0 | | | | | | | |
| HZK20L | 1 | 18.8 | 19.7 | 0.5 | 100 | 0.5 | 1 | 18.0 | 14.0 | 0.5 |
| | 2 | 19.5 | 20.4 | | | | | | | |
| | 3 | 20.2 | 21.1 | | | | | | | |
| HZK22L | 1 | 20.9 | 21.9 | 0.5 | 100 | 0.5 | 1 | 20.0 | 16.0 | 0.5 |
| | 2 | 21.6 | 22.6 | | | | | | | |
| | 3 | 22.3 | 23.3 | | | | | | | |
| HZK24L | 1 | 22.9 | 24.0 | 0.5 | 120 | 0.5 | 1 | 22.0 | 18.0 | 0.5 |
| | 2 | 23.6 | 24.7 | | | | | | | |
| | 3 | 24.3 | 25.5 | | | | | | | |
| HZK27L | 1 | 25.2 | 26.6 | 0.5 | 150 | 0.5 | 1 | 24.0 | 20.0 | 0.5 |
| | 2 | 26.2 | 27.6 | | | | | | | |
| | 3 | 27.2 | 28.6 | | | | | | | |
| HZK30L | 1 | 28.2 | 29.6 | 0.5 | 200 | 0.5 | 1 | 27.0 | 23.0 | 0.5 |
| | 2 | 29.2 | 30.6 | | | | | | | |
| | 3 | 30.2 | 31.6 | | | | | | | |
| HZK33L | 1 | 31.2 | 32.6 | 0.5 | 250 | 0.5 | 1 | 30.0 | 26.0 | 0.5 |
| | 2 | 32.2 | 33.6 | | | | | | | |
| | 3 | 33.2 | 34.6 | | | | | | | |
| HZK36L | 1 | 34.2 | 35.7 | 0.5 | 300 | 0.5 | 1 | 33.0 | 30.0 | 0.5 |
| | 2 | 35.3 | 36.8 | | | | | | | |
| | 3 | 36.4 | 38.0 | | | | | | | |

Note:

(1) When placing an order for HZK-L type, enter suffix as follows: HZK6A1L, HZK6A2L....HZK36-3L



Zener Diodes 0.40 W

| Type No. | Suffix ⁽¹⁾ | Zener Voltage | | Test Current | Maximum Dynamic Resistance | | Maximum Reverse Current | | Typical Temperature Coefficient * | |
|----------|-----------------------|--------------------|------|-----------------|----------------------------|------------------|-------------------------|------------------|-----------------------------------|----------------|
| | | V _Z (V) | | I _{ZT} | r _d | @ I _Z | I _R | @ V _R | γ _Z (mV/ °C) | I _Z |
| | | min. | max. | (mA) | (Ω) | (mA) | (μA) | (V) | | (mA) |

HZS-L Series, 0.4 W, Case Type : DO-34



| | | | | | | | | | | |
|--------|----|------|------|-----|-----|-----|---|------|------|-----|
| HZS6L | A1 | 5.2 | 5.5 | 0.5 | 150 | 0.5 | 1 | 2.0 | 2.0 | 0.5 |
| | A2 | 5.3 | 5.6 | | | | | | | |
| | A3 | 5.4 | 5.7 | | | | | | | |
| | B1 | 5.5 | 5.8 | | | | | | | |
| | B2 | 5.6 | 5.9 | | | | | | | |
| | B3 | 5.7 | 6.0 | | | | | | | |
| | C1 | 5.8 | 6.1 | | | | | | | |
| | C2 | 6.0 | 6.3 | | | | | | | |
| | C3 | 6.1 | 6.4 | | | | | | | |
| HZS7L | A1 | 6.3 | 6.6 | 0.5 | 60 | 0.5 | 1 | 3.5 | 3.0 | 0.5 |
| | A2 | 6.4 | 6.7 | | | | | | | |
| | A3 | 6.6 | 6.9 | | | | | | | |
| | B1 | 6.7 | 7.0 | | | | | | | |
| | B2 | 6.9 | 7.2 | | | | | | | |
| | B3 | 7.0 | 7.3 | | | | | | | |
| | C1 | 7.2 | 7.6 | | | | | | | |
| | C2 | 7.3 | 7.7 | | | | | | | |
| | C3 | 7.5 | 7.9 | | | | | | | |
| HZS9L | A1 | 7.7 | 8.1 | 0.5 | 60 | 0.5 | 1 | 6.0 | 7.0 | 0.5 |
| | A2 | 7.9 | 8.3 | | | | | | | |
| | A3 | 8.1 | 8.5 | | | | | | | |
| | B1 | 8.3 | 8.7 | | | | | | | |
| | B2 | 8.5 | 8.9 | | | | | | | |
| | B3 | 8.7 | 9.1 | | | | | | | |
| | C1 | 8.9 | 9.3 | | | | | | | |
| | C2 | 9.1 | 9.5 | | | | | | | |
| HZS11L | A1 | 9.5 | 9.9 | 0.5 | 80 | 0.5 | 1 | 8.0 | 1.0 | 2.0 |
| | A2 | 9.7 | 10.1 | | | | | | | |
| | A3 | 9.9 | 10.3 | | | | | | | |
| | B1 | 10.2 | 10.6 | | | | | | | |
| | B2 | 10.4 | 10.8 | | | | | | | |
| | B3 | 10.7 | 11.1 | | | | | | | |
| | C1 | 10.9 | 11.3 | | | | | | | |
| | C2 | 11.1 | 11.6 | | | | | | | |
| | C3 | 11.4 | 11.9 | | | | | | | |
| HZS12L | A1 | 11.6 | 12.1 | 0.5 | 80 | 0.5 | 1 | 10.5 | 10.0 | 0.5 |
| | A2 | 11.9 | 12.4 | | | | | | | |
| | A3 | 12.2 | 12.7 | | | | | | | |
| | B1 | 12.4 | 12.9 | | | | | | | |
| | B2 | 12.6 | 13.1 | | | | | | | |
| | B3 | 12.9 | 13.4 | | | | | | | |
| | C1 | 13.2 | 13.7 | | | | | | | |
| | C2 | 13.5 | 14.0 | | | | | | | |
| | C3 | 13.8 | 14.3 | | | | | | | |

Note: (1) When placing an order for HZS-L type, enter suffix as follows: HZS6A1, HZS6A2L HZS36-3L



Zener Diodes 0.40 W

| Type No. | Suffix ⁽¹⁾ | Zener Voltage | | Test Current | Maximum Dynamic Resistance | | Maximum Reverse Current | | Typical Temperature Coefficient * | |
|----------|-----------------------|--------------------|------|-----------------|----------------------------|------------------|-------------------------|------------------|-----------------------------------|----------------|
| | | V _Z (V) | | I _{ZT} | r _d | @ I _Z | I _R | @ V _R | γ _Z (mV/ °C) | I _Z |
| | | min. | max. | (mA) | (Ω) | (mA) | (μA) | (V) | | (mA) |

HZS-L Series, 0.4 W, Case Type : DO-34



| | | | | | | | | | | |
|--------|---|------|------|-----|-----|-----|---|------|------|-----|
| HZS15L | 1 | 14.1 | 14.7 | 0.5 | 80 | 0.5 | 1 | 13.0 | 12.0 | 0.5 |
| | 2 | 14.5 | 15.1 | | | | | | | |
| | 3 | 14.9 | 15.5 | | | | | | | |
| HZS16L | 1 | 15.3 | 15.9 | 0.5 | 80 | 0.5 | 1 | 14.0 | 13.0 | 0.5 |
| | 2 | 15.7 | 16.5 | | | | | | | |
| | 3 | 16.3 | 17.1 | | | | | | | |
| HZS18L | 1 | 16.9 | 17.7 | 0.5 | 80 | 0.5 | 1 | 15.0 | 16.0 | 0.5 |
| | 2 | 17.5 | 18.3 | | | | | | | |
| | 3 | 18.1 | 19.0 | | | | | | | |
| HZS20L | 1 | 18.8 | 19.7 | 0.5 | 100 | 0.5 | 1 | 18.0 | 18.0 | 0.5 |
| | 2 | 19.5 | 20.4 | | | | | | | |
| | 3 | 20.2 | 21.1 | | | | | | | |
| HZS22L | 1 | 20.9 | 21.9 | 0.5 | 100 | 0.5 | 1 | 20.0 | 20.0 | 0.5 |
| | 2 | 21.6 | 22.6 | | | | | | | |
| | 3 | 22.3 | 23.3 | | | | | | | |
| HZS24L | 1 | 22.9 | 24.0 | 0.5 | 120 | 0.5 | 1 | 22.0 | 23.0 | 0.5 |
| | 2 | 23.6 | 24.7 | | | | | | | |
| | 3 | 24.3 | 25.5 | | | | | | | |
| HZS27L | 1 | 25.2 | 26.6 | 0.5 | 150 | 0.5 | 1 | 24.0 | 26.0 | 0.5 |
| | 2 | 26.2 | 27.6 | | | | | | | |
| | 3 | 27.2 | 28.6 | | | | | | | |
| HZS30L | 1 | 28.2 | 29.6 | 0.5 | 200 | 0.5 | 1 | 27.0 | 29.0 | 0.5 |
| | 2 | 29.2 | 30.6 | | | | | | | |
| | 3 | 30.2 | 31.6 | | | | | | | |
| HZS33L | 1 | 31.2 | 32.6 | 0.5 | 250 | 0.5 | 1 | 30.0 | 32.0 | 0.5 |
| | 2 | 32.2 | 33.6 | | | | | | | |
| | 3 | 33.2 | 34.6 | | | | | | | |
| HZS36L | 1 | 34.2 | 35.7 | 0.5 | 300 | 0.5 | 1 | 33.0 | 36.0 | 0.5 |
| | 2 | 35.3 | 36.8 | | | | | | | |
| | 3 | 36.4 | 38.0 | | | | | | | |

Note:

(1) When placing an order for HZS-L type, enter suffix as follows: HZS6A1, HZS6A2LHZS36-3L



Zener Diodes 0.40 W

| Type | Suffix ⁽³⁾ | Zener Voltage ⁽¹⁾ | | Test Current | Maximum Zener ⁽²⁾ Impedance | | | Maximum Reverse Current | |
|------|-----------------------|------------------------------|------|--------------|---|---------------------|----------|-------------------------|----------|
| | | V_Z (V) at I_{ZT} | | I_{ZT} | Z_{ZT} @ I_{ZT} | Z_{ZK} @ I_{ZK} | I_{ZK} | I_R | at V_R |
| | | min. | max. | (mA) | (Ω) | (Ω) | (mA) | (μ A) | (V) |

RD2.0ES Series, 0.4 W, Case Type : DO-34



| | | | | | | | | | |
|---------|-----|------|------|---|-----|------|-----|-----|-----|
| RD2.0ES | AB | 1.88 | 2.20 | 5 | 100 | 1000 | 0.5 | 120 | 0.5 |
| | AB1 | 1.88 | 2.10 | | | | | | |
| | AB2 | 2.02 | 2.20 | | | | | | |
| RD2.2ES | AB | 2.12 | 2.41 | 5 | 100 | 1000 | 0.5 | 120 | 0.7 |
| | AB1 | 2.12 | 2.30 | | | | | | |
| | AB2 | 2.22 | 2.41 | | | | | | |
| RD2.4ES | AB | 2.33 | 2.63 | 5 | 100 | 1000 | 0.5 | 120 | 1.0 |
| | AB1 | 2.33 | 2.52 | | | | | | |
| | AB2 | 2.43 | 2.63 | | | | | | |
| RD2.7ES | AB | 2.54 | 2.91 | 5 | 110 | 1000 | 0.5 | 100 | 1.0 |
| | AB1 | 2.54 | 2.75 | | | | | | |
| | AB2 | 2.69 | 2.91 | | | | | | |
| RD3.0ES | AB | 2.85 | 3.22 | 5 | 120 | 1000 | 0.5 | 50 | 1.0 |
| | AB1 | 2.85 | 3.07 | | | | | | |
| | AB2 | 3.01 | 3.22 | | | | | | |
| RD3.3ES | AB | 3.16 | 3.53 | 5 | 120 | 1000 | 0.5 | 20 | 1.0 |
| | AB1 | 3.16 | 3.38 | | | | | | |
| | AB2 | 3.32 | 3.53 | | | | | | |
| RD3.6ES | AB | 3.47 | 3.83 | 5 | 120 | 1100 | 0.5 | 10 | 1.0 |
| | AB1 | 3.47 | 3.68 | | | | | | |
| | AB2 | 3.62 | 3.83 | | | | | | |
| RD3.9ES | AB | 3.77 | 4.14 | 5 | 120 | 1200 | 0.5 | 5 | 1.0 |
| | AB1 | 3.77 | 3.98 | | | | | | |
| | AB2 | 3.92 | 4.14 | | | | | | |
| RD4.3ES | AB | 4.05 | 4.53 | 5 | 120 | 1200 | 0.5 | 5 | 1.0 |
| | AB1 | 4.05 | 4.26 | | | | | | |
| | AB2 | 4.20 | 4.40 | | | | | | |
| | AB3 | 4.34 | 4.53 | | | | | | |
| RD4.7ES | AB | 4.47 | 4.91 | 5 | 100 | 1200 | 0.5 | 5 | 1.0 |
| | AB1 | 4.47 | 4.65 | | | | | | |
| | AB2 | 4.59 | 4.77 | | | | | | |
| | AB3 | 4.71 | 4.91 | | | | | | |
| RD5.1ES | AB | 4.85 | 5.35 | 5 | 70 | 1200 | 0.5 | 5 | 1.5 |
| | AB1 | 4.85 | 5.03 | | | | | | |
| | AB2 | 4.97 | 5.18 | | | | | | |
| | AB3 | 5.12 | 5.35 | | | | | | |
| RD5.6ES | AB | 5.29 | 5.88 | 5 | 40 | 900 | 0.5 | 5 | 2.5 |
| | AB1 | 5.29 | 5.52 | | | | | | |
| | AB2 | 5.46 | 5.70 | | | | | | |
| | AB3 | 5.64 | 5.88 | | | | | | |
| RD6.2ES | AB | 5.81 | 6.40 | 5 | 30 | 500 | 0.5 | 5 | 3.0 |
| | AB1 | 5.81 | 6.06 | | | | | | |
| | AB2 | 5.99 | 6.24 | | | | | | |
| | AB3 | 6.16 | 6.40 | | | | | | |



Zener Diodes 0.40 W

| Type | Suffix ⁽³⁾ | Zener Voltage ⁽¹⁾ | | Test Current | Maximum Zener ⁽²⁾ Impedance | | | Maximum Reverse Current | |
|------|-----------------------|------------------------------|------|--------------|---|---------------------|----------|-------------------------|----------|
| | | V_Z (V) at I_{ZT} | | I_{ZT} | Z_{ZT} @ I_{ZT} | Z_{ZK} @ I_{ZK} | I_{ZK} | I_R | at V_R |
| | | min. | max. | (mA) | (Ω) | (Ω) | (mA) | (μ A) | (V) |

RD2.0ES Series, 0.4 W, Case Type : DO-34



| | | | | | | | | | |
|---------|-----|-------|-------|---|----|-----|-----|-----|-----|
| RD6.8ES | AB | 6.32 | 6.97 | 5 | 25 | 150 | 0.5 | 2 | 3.5 |
| | AB1 | 6.32 | 6.59 | | | | | | |
| | AB2 | 6.52 | 6.79 | | | | | | |
| | AB3 | 6.70 | 6.97 | | | | | | |
| RD7.5ES | AB | 6.88 | 7.64 | 5 | 25 | 120 | 0.5 | 0.5 | 4.0 |
| | AB1 | 6.88 | 7.19 | | | | | | |
| | AB2 | 7.11 | 7.41 | | | | | | |
| | AB3 | 7.33 | 7.64 | | | | | | |
| RD8.2ES | AB | 7.56 | 8.41 | 5 | 20 | 120 | 0.5 | 0.5 | 5.0 |
| | AB1 | 7.56 | 7.90 | | | | | | |
| | AB2 | 7.82 | 8.15 | | | | | | |
| | AB3 | 8.07 | 8.41 | | | | | | |
| RD9.1ES | AB | 8.33 | 9.29 | 5 | 20 | 120 | 0.5 | 0.5 | 6.0 |
| | AB1 | 8.33 | 8.70 | | | | | | |
| | AB2 | 8.61 | 8.99 | | | | | | |
| | AB3 | 8.89 | 9.29 | | | | | | |
| RD10ES | AB | 9.19 | 10.30 | 5 | 20 | 120 | 0.5 | 0.2 | 7.0 |
| | AB1 | 9.19 | 9.59 | | | | | | |
| | AB2 | 9.48 | 9.90 | | | | | | |
| | AB3 | 9.82 | 10.30 | | | | | | |
| RD11ES | AB | 10.18 | 11.26 | 5 | 20 | 120 | 0.5 | 0.2 | 8.0 |
| | AB1 | 10.18 | 10.63 | | | | | | |
| | AB2 | 10.50 | 10.95 | | | | | | |
| | AB3 | 10.82 | 11.26 | | | | | | |
| RD12ES | AB | 11.13 | 12.30 | 5 | 25 | 110 | 0.5 | 0.2 | 9.0 |
| | AB1 | 11.13 | 11.63 | | | | | | |
| | AB2 | 11.50 | 11.92 | | | | | | |
| | AB3 | 11.80 | 12.30 | | | | | | |
| RD13ES | AB | 12.18 | 13.62 | 5 | 25 | 110 | 0.5 | 0.2 | 10 |
| | AB1 | 12.18 | 12.71 | | | | | | |
| | AB2 | 12.59 | 13.16 | | | | | | |
| | AB3 | 13.03 | 13.62 | | | | | | |
| RD15ES | AB | 13.48 | 15.02 | 5 | 25 | 110 | 0.5 | 0.2 | 11 |
| | AB1 | 13.48 | 14.09 | | | | | | |
| | AB2 | 13.95 | 14.56 | | | | | | |
| | AB3 | 14.42 | 15.02 | | | | | | |
| RD16ES | AB | 14.87 | 16.50 | 5 | 25 | 150 | 0.5 | 0.2 | 12 |
| | AB1 | 14.87 | 15.50 | | | | | | |
| | AB2 | 15.33 | 15.96 | | | | | | |
| | AB3 | 15.79 | 16.50 | | | | | | |
| RD18ES | AB | 16.34 | 18.30 | 5 | 30 | 150 | 0.5 | 0.2 | 13 |
| | AB1 | 16.34 | 17.06 | | | | | | |
| | AB2 | 16.90 | 17.67 | | | | | | |
| | AB3 | 17.51 | 18.30 | | | | | | |

Zener Diodes 0.40 W

| Type | Suffix ⁽³⁾ | Zener Voltage ⁽¹⁾ | | Test Current | Maximum Zener ⁽²⁾ Impedance | | | Maximum Reverse Current | |
|------|-----------------------|------------------------------|------|--------------|---|---------------------|----------|-------------------------|----------|
| | | V_Z (V) at I_{ZT} | | I_{ZT} | Z_{ZT} @ I_{ZT} | Z_{ZK} @ I_{ZK} | I_{ZK} | I_R | at V_R |
| | | min. | max. | (mA) | (Ω) | (Ω) | (mA) | (μ A) | (V) |

RD2.0ES Series, 0.4 W, Case Type : DO-34



| | | | | | | | | | |
|--------|-----|-------|-------|---|----|-----|-----|-----|----|
| RD20ES | AB | 18.14 | 20.45 | 5 | 30 | 200 | 0.5 | 0.2 | 15 |
| | AB1 | 18.14 | 18.96 | | | | | | |
| | AB2 | 18.80 | 19.68 | | | | | | |
| | AB3 | 19.52 | 20.45 | | | | | | |
| RD22ES | AB | 20.23 | 22.61 | 5 | 30 | 200 | 0.5 | 0.2 | 17 |
| | AB1 | 20.23 | 21.08 | | | | | | |
| | AB2 | 20.76 | 21.65 | | | | | | |
| | AB3 | 21.22 | 22.09 | | | | | | |
| | AB4 | 21.68 | 22.61 | | | | | | |
| RD24ES | AB | 22.26 | 24.81 | 5 | 30 | 200 | 0.5 | 0.2 | 19 |
| | AB1 | 22.26 | 23.12 | | | | | | |
| | AB2 | 22.75 | 23.73 | | | | | | |
| | AB3 | 23.29 | 24.27 | | | | | | |
| | AB4 | 23.81 | 24.81 | | | | | | |
| RD27ES | AB | 24.26 | 27.64 | 5 | 45 | 250 | 0.5 | 0.2 | 21 |
| | AB1 | 24.26 | 25.52 | | | | | | |
| | AB2 | 24.97 | 26.26 | | | | | | |
| | AB3 | 25.63 | 26.95 | | | | | | |
| | AB4 | 26.29 | 27.64 | | | | | | |
| RD30ES | AB | 26.99 | 30.51 | 5 | 55 | 250 | 0.5 | 0.2 | 23 |
| | AB1 | 26.99 | 28.39 | | | | | | |
| | AB2 | 27.70 | 29.13 | | | | | | |
| | AB3 | 28.36 | 29.82 | | | | | | |
| | AB4 | 29.02 | 30.51 | | | | | | |
| RD33ES | AB | 29.68 | 33.11 | 5 | 65 | 250 | 0.5 | 0.2 | 25 |
| | AB1 | 29.68 | 31.22 | | | | | | |
| | AB2 | 30.32 | 31.88 | | | | | | |
| | AB3 | 30.90 | 32.50 | | | | | | |
| | AB4 | 31.49 | 33.11 | | | | | | |
| RD36ES | AB | 32.14 | 35.77 | 5 | 75 | 250 | 0.5 | 0.2 | 27 |
| | AB1 | 32.14 | 33.79 | | | | | | |
| | AB2 | 32.79 | 34.49 | | | | | | |
| | AB3 | 33.40 | 35.13 | | | | | | |
| | AB4 | 34.01 | 35.77 | | | | | | |
| RD39ES | AB | 34.68 | 38.52 | 5 | 85 | 250 | 0.5 | 0.2 | 30 |
| | AB1 | 34.68 | 36.47 | | | | | | |
| | AB2 | 35.36 | 37.19 | | | | | | |
| | AB3 | 36.00 | 37.85 | | | | | | |
| | AB4 | 36.63 | 38.52 | | | | | | |

Notes :

- (1) Tested with pulse (40 ms)
- (2) Z_Z and Z_{ZK} are measured at I_Z by applying a very small AC current signal
- (3) When placing an order for an RD2.0ES type, please add suffix e.g. RD2.0ESAB, RD2.0ESAB1... RD39ESAB4



Zener Diodes 0.40 W

| Type No. | Suffix ⁽³⁾ | Zener Voltage ⁽¹⁾ | | | Dynamic Impedance | | Knee Dynamic Impedance | | Reverse Current | |
|----------|-----------------------|------------------------------|------|-----------|-------------------|-----------|------------------------|-----------|-----------------|----------|
| | | $V_Z(V)$ | | | $Z_Z(\Omega)$ | | $Z_{ZK}(\Omega)$ | | $I_R(\mu A)$ | |
| | | Min. | Max. | $I_Z(mA)$ | Max. | $I_Z(mA)$ | Max. | $I_Z(mA)$ | Max. | $V_R(V)$ |

RD4.7JS Series, 0.4 W, Case Type : DO-34



| | | | | | | | | | | |
|---------|-----|-------|-------|---|-----|---|-----|-----|-----|-----|
| RD4.7JS | AB | 4.42 | 4.90 | 5 | 100 | 5 | 800 | 0.5 | 2.0 | 1.0 |
| | AB1 | 4.42 | 4.61 | | | | | | | |
| | AB2 | 4.55 | 4.75 | | | | | | | |
| | AB3 | 4.69 | 4.90 | | | | | | | |
| RD5.1JS | AB | 4.84 | 5.37 | 5 | 80 | 5 | 500 | 0.5 | 2.0 | 1.5 |
| | AB1 | 4.84 | 5.04 | | | | | | | |
| | AB2 | 4.98 | 5.20 | | | | | | | |
| | AB3 | 5.14 | 5.37 | | | | | | | |
| RD5.6JS | AB | 5.31 | 5.92 | 5 | 60 | 5 | 200 | 0.5 | 1.0 | 2.5 |
| | AB1 | 5.31 | 5.55 | | | | | | | |
| | AB2 | 5.49 | 5.73 | | | | | | | |
| | AB3 | 5.67 | 5.92 | | | | | | | |
| RD6.2JS | AB | 5.86 | 6.53 | 5 | 60 | 5 | 100 | 0.5 | 1.0 | 3.0 |
| | AB1 | 5.86 | 6.12 | | | | | | | |
| | AB2 | 6.06 | 6.33 | | | | | | | |
| | AB3 | 6.26 | 6.53 | | | | | | | |
| RD6.8JS | AB | 6.47 | 7.14 | 5 | 40 | 5 | 60 | 0.5 | 0.5 | 3.5 |
| | AB1 | 6.47 | 6.73 | | | | | | | |
| | AB2 | 6.65 | 6.93 | | | | | | | |
| | AB3 | 6.86 | 7.14 | | | | | | | |
| RD7.5JS | AB | 7.06 | 7.84 | 5 | 30 | 5 | 60 | 0.5 | 0.5 | 4.0 |
| | AB1 | 7.06 | 7.36 | | | | | | | |
| | AB2 | 7.28 | 7.60 | | | | | | | |
| | AB3 | 7.52 | 7.84 | | | | | | | |
| RD8.2JS | AB | 7.76 | 8.64 | 5 | 30 | 5 | 60 | 0.5 | 0.5 | 5.0 |
| | AB1 | 7.76 | 8.10 | | | | | | | |
| | AB2 | 8.02 | 8.36 | | | | | | | |
| | AB3 | 8.28 | 8.64 | | | | | | | |
| RD9.1JS | AB | 8.56 | 9.55 | 5 | 30 | 5 | 60 | 0.5 | 0.5 | 6.0 |
| | AB1 | 8.56 | 8.93 | | | | | | | |
| | AB2 | 8.85 | 9.23 | | | | | | | |
| | AB3 | 9.15 | 9.55 | | | | | | | |
| RD10JS | AB | 9.45 | 10.55 | 5 | 30 | 5 | 60 | 0.5 | 0.1 | 7.0 |
| | AB1 | 9.45 | 9.87 | | | | | | | |
| | AB2 | 9.77 | 10.21 | | | | | | | |
| | AB3 | 10.11 | 10.55 | | | | | | | |
| RD11JS | AB | 10.44 | 11.56 | 5 | 30 | 5 | 60 | 0.5 | 0.1 | 8.0 |
| | AB1 | 10.44 | 10.88 | | | | | | | |
| | AB2 | 10.76 | 11.22 | | | | | | | |
| | AB3 | 11.10 | 11.56 | | | | | | | |
| RD12JS | AB | 11.42 | 12.60 | 5 | 30 | 5 | 80 | 0.5 | 0.1 | 9.0 |
| | AB1 | 11.42 | 11.90 | | | | | | | |
| | AB2 | 11.74 | 12.24 | | | | | | | |
| | AB3 | 12.08 | 12.60 | | | | | | | |
| RD13JS | AB | 12.47 | 13.69 | 5 | 37 | 5 | 80 | 0.5 | 0.1 | 10 |
| | AB1 | 12.47 | 13.03 | | | | | | | |
| | AB2 | 12.91 | 13.49 | | | | | | | |
| | AB3 | 13.37 | 13.96 | | | | | | | |

Zener Diodes 0.40 W

| Type No. | Suffix ⁽³⁾ | Zener Voltage ⁽¹⁾ | | | Dynamic Impedance | | Knee Dynamic Impedance | | Reverse Current | |
|----------|-----------------------|------------------------------|------|------------|--------------------|------------|------------------------|------------|------------------|-----------|
| | | V_Z (V) | | | Z_Z (Ω) | | Z_{ZK} (Ω) | | I_R (μ A) | |
| | | Min. | Max. | I_Z (mA) | Max. | I_Z (mA) | Max. | I_Z (mA) | Max. | V_R (V) |

RD4.7JS Series, 0.4 W, Case Type : DO-34



| | | | | | | | | | | |
|--------|-----|-------|-------|---|-----|---|-----|-----|-----|----|
| RD15JS | AB | 13.84 | 15.52 | 5 | 42 | 5 | 80 | 0.5 | 0.1 | 11 |
| | AB1 | 13.84 | 14.46 | | | | | | | |
| | AB2 | 14.34 | 14.98 | | | | | | | |
| | AB3 | 14.85 | 15.52 | | | | | | | |
| RD16JS | AB | 15.37 | 17.09 | 5 | 50 | 5 | 80 | 0.5 | 0.1 | 12 |
| | AB1 | 15.37 | 16.01 | | | | | | | |
| | AB2 | 15.85 | 16.51 | | | | | | | |
| | AB3 | 16.35 | 17.09 | | | | | | | |
| RD18JS | AB | 16.94 | 19.03 | 5 | 65 | 5 | 80 | 0.5 | 0.1 | 13 |
| | AB1 | 16.94 | 17.70 | | | | | | | |
| | AB2 | 17.56 | 18.53 | | | | | | | |
| | AB3 | 18.21 | 19.03 | | | | | | | |
| RD20JS | AB | 18.86 | 21.08 | 5 | 85 | 5 | 100 | 0.5 | 0.1 | 15 |
| | AB1 | 18.86 | 19.70 | | | | | | | |
| | AB2 | 19.52 | 20.39 | | | | | | | |
| | AB3 | 20.21 | 21.08 | | | | | | | |
| RD22JS | AB | 20.88 | 23.17 | 5 | 100 | 5 | 100 | 0.5 | 0.1 | 17 |
| | AB1 | 20.88 | 21.77 | | | | | | | |
| | AB2 | 21.54 | 22.47 | | | | | | | |
| | AB3 | 22.23 | 23.17 | | | | | | | |
| RD24JS | AB | 22.93 | 25.57 | 5 | 120 | 5 | 120 | 0.5 | 0.1 | 19 |
| | AB1 | 22.93 | 23.96 | | | | | | | |
| | AB2 | 23.72 | 24.78 | | | | | | | |
| | AB3 | 24.54 | 25.57 | | | | | | | |
| RD27JS | AB | 25.20 | 28.61 | 5 | 150 | 5 | 150 | 0.5 | 0.1 | 21 |
| | AB1 | 25.20 | 26.50 | | | | | | | |
| | AB2 | 26.19 | 27.53 | | | | | | | |
| | AB3 | 27.21 | 28.61 | | | | | | | |
| RD30JS | AB | 28.22 | 31.74 | 5 | 200 | 5 | 200 | 0.5 | 0.1 | 23 |
| | AB1 | 28.22 | 29.66 | | | | | | | |
| | AB2 | 29.19 | 30.69 | | | | | | | |
| | AB3 | 30.20 | 31.74 | | | | | | | |
| RD33JS | AB | 32.18 | 34.83 | 5 | 250 | 5 | 250 | 0.5 | 0.1 | 25 |
| | AB1 | 32.18 | 32.78 | | | | | | | |
| | AB2 | 32.15 | 33.79 | | | | | | | |
| | AB3 | 33.13 | 34.83 | | | | | | | |
| RD36JS | AB | 34.12 | 37.91 | 5 | 300 | 5 | 300 | 0.5 | 0.1 | 27 |
| | AB1 | 34.12 | 35.86 | | | | | | | |
| | AB2 | 35.07 | 36.87 | | | | | | | |
| | AB3 | 36.07 | 37.91 | | | | | | | |
| RD39JS | AB | 37.04 | 40.99 | 5 | 360 | 5 | 360 | 0.5 | 0.1 | 30 |
| | AB1 | 37.04 | 38.94 | | | | | | | |
| | AB2 | 38.00 | 39.94 | | | | | | | |
| | AB3 | 38.99 | 40.99 | | | | | | | |

Notes:

- (1) Tested with pulse (40 ms).
- (2) Z_Z and Z_{ZK} are measured at I_Z by applying a very small AC current signal.
- (3) When placing an order for an RD4.7JS type, please add suffix e.g. RD4.7JSAB, RD4.7JSAB1... RD39JSAB3

Zener Diodes 0.50 W

| Type No. | | Nominal Zener Voltage | Test Current | Maximum Zener Impedance ⁽¹⁾ | | Maximum Reverse Leakage Current | | Typical Temperature Coefficient | Maximum Regulator Current ⁽²⁾ |
|------------|-----|----------------------------------|-----------------|--|---|---------------------------------|-----|---------------------------------|--|
| | | V _Z @ I _{ZT} | I _{ZT} | Z _{ZT} @ I _{ZT} | Z _{ZK} at I _{ZK} = 0.25mA | I _R @ V _R | | α _{VZ} (%/ °C) | I _{ZM} |
| Axial Lead | SMD | (V) | (mA) | (Ω) | (Ω) | (μA) | (V) | | (mA) |

1N5221/ZMM5221 Series, Case Type: DO-35/Mini MELF



| | | | | | | | | | |
|--------|---------|-----|-----|-----|------|-----|-----|---------|------|
| 1N5221 | ZMM5221 | 2.4 | 20 | 30 | 1200 | 100 | 1.0 | -0.085 | 190 |
| 1N5222 | ZMM5222 | 2.5 | 20 | 30 | 1250 | 100 | 1.0 | -0.085 | 182 |
| 1N5223 | ZMM5223 | 2.7 | 20 | 30 | 1300 | 75 | 1.0 | -0.080 | 168 |
| 1N5224 | ZMM5224 | 2.8 | 20 | 30 | 1400 | 75 | 1.0 | -0.080 | 162 |
| 1N5225 | ZMM5225 | 3.0 | 20 | 29 | 1600 | 50 | 1.0 | -0.075 | 152 |
| 1N5226 | ZMM5226 | 3.3 | 20 | 28 | 1600 | 25 | 1.0 | -0.070 | 138 |
| 1N5227 | ZMM5227 | 3.6 | 20 | 24 | 1700 | 15 | 1.0 | -0.065 | 126 |
| 1N5228 | ZMM5228 | 3.9 | 20 | 23 | 1900 | 10 | 1.0 | -0.060 | 115 |
| 1N5229 | ZMM5229 | 4.3 | 20 | 22 | 2000 | 5.0 | 1.0 | -0.055 | 106 |
| 1N5230 | ZMM5230 | 4.7 | 20 | 19 | 1900 | 5.0 | 2.0 | ± 0.030 | 97 |
| 1N5231 | ZMM5231 | 5.1 | 20 | 17 | 1600 | 5.0 | 2.0 | ± 0.030 | 89 |
| 1N5232 | ZMM5232 | 5.6 | 20 | 11 | 1600 | 5.0 | 3.0 | +0.038 | 81 |
| 1N5233 | ZMM5233 | 6.0 | 20 | 7 | 1600 | 5.0 | 3.5 | +0.038 | 76 |
| 1N5234 | ZMM5234 | 6.2 | 20 | 7 | 1000 | 5.0 | 4.0 | +0.045 | 73 |
| 1N5235 | ZMM5235 | 6.8 | 20 | 5 | 750 | 3.0 | 5.0 | +0.050 | 67 |
| 1N5236 | ZMM5236 | 7.5 | 20 | 6 | 500 | 3.0 | 6.0 | +0.058 | 61 |
| 1N5237 | ZMM5237 | 8.2 | 20 | 8 | 500 | 3.0 | 6.5 | +0.062 | 55 |
| 1N5238 | ZMM5238 | 8.7 | 20 | 8 | 600 | 3.0 | 6.5 | +0.065 | 52 |
| 1N5239 | ZMM5239 | 9.1 | 20 | 10 | 600 | 3.0 | 7.0 | +0.068 | 50 |
| 1N5240 | ZMM5240 | 10 | 20 | 17 | 600 | 3.0 | 8.0 | +0.075 | 45 |
| 1N5241 | ZMM5241 | 11 | 20 | 22 | 600 | 2.0 | 8.4 | +0.076 | 41 |
| 1N5242 | ZMM5242 | 12 | 20 | 30 | 600 | 1.0 | 9.1 | +0.077 | 38 |
| 1N5243 | ZMM5243 | 13 | 9.5 | 13 | 600 | 0.5 | 9.9 | +0.079 | 35 |
| 1N5244 | ZMM5244 | 14 | 9.0 | 15 | 600 | 0.1 | 10 | +0.082 | 32 |
| 1N5245 | ZMM5245 | 15 | 8.5 | 16 | 600 | 0.1 | 11 | +0.082 | 30 |
| 1N5246 | ZMM5246 | 16 | 7.8 | 17 | 600 | 0.1 | 12 | +0.083 | 28 |
| 1N5247 | ZMM5247 | 17 | 7.4 | 19 | 600 | 0.1 | 13 | +0.084 | 27 |
| 1N5248 | ZMM5248 | 18 | 7.0 | 21 | 600 | 0.1 | 14 | +0.085 | 25 |
| 1N5249 | ZMM5249 | 19 | 6.6 | 23 | 600 | 0.1 | 14 | +0.086 | 24 |
| 1N5250 | ZMM5250 | 20 | 6.2 | 25 | 600 | 0.1 | 15 | +0.086 | 23 |
| 1N5251 | ZMM5251 | 22 | 5.6 | 29 | 600 | 0.1 | 17 | +0.087 | 21 |
| 1N5252 | ZMM5252 | 24 | 5.2 | 33 | 600 | 0.1 | 18 | +0.088 | 19.1 |
| 1N5253 | ZMM5253 | 25 | 5.0 | 35 | 600 | 0.1 | 19 | +0.089 | 18.2 |
| 1N5254 | ZMM5254 | 27 | 4.6 | 41 | 600 | 0.1 | 21 | +0.090 | 16.8 |
| 1N5255 | ZMM5255 | 28 | 4.5 | 44 | 600 | 0.1 | 21 | +0.091 | 16.2 |
| 1N5256 | ZMM5256 | 30 | 4.2 | 49 | 600 | 0.1 | 23 | +0.091 | 15.1 |
| 1N5257 | ZMM5257 | 33 | 3.8 | 58 | 700 | 0.1 | 25 | +0.092 | 13.8 |
| 1N5258 | ZMM5258 | 36 | 3.4 | 70 | 700 | 0.1 | 27 | +0.093 | 12.6 |
| 1N5259 | ZMM5259 | 39 | 3.2 | 80 | 800 | 0.1 | 30 | +0.094 | 11.6 |
| 1N5260 | ZMM5260 | 43 | 3.0 | 93 | 900 | 0.1 | 33 | +0.095 | 10.6 |
| 1N5261 | ZMM5261 | 47 | 2.7 | 105 | 1000 | 0.1 | 36 | +0.095 | 9.7 |
| 1N5262 | ZMM5262 | 51 | 2.5 | 125 | 1100 | 0.1 | 39 | +0.096 | 8.9 |
| 1N5263 | ZMM5263 | 56 | 2.2 | 150 | 1300 | 0.1 | 43 | +0.096 | - |
| 1N5264 | ZMM5264 | 60 | 2.1 | 170 | 1400 | 0.1 | 46 | +0.097 | - |
| 1N5265 | ZMM5265 | 62 | 2.0 | 185 | 1400 | 0.1 | 47 | +0.098 | - |
| 1N5266 | ZMM5266 | 68 | 1.8 | 230 | 1600 | 0.1 | 52 | +0.097 | - |
| 1N5267 | ZMM5267 | 75 | 1.7 | 270 | 1700 | 0.1 | 56 | +0.098 | - |

Notes :

- (1) The Zener impedance is derived from the 1 KHz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}. Zener impedance is measured at two points to ensure a sharp knee on the breakdown curve and to eliminate unstable units
- (2) V_F = 1.1 Vmax. @ I_F = 200 mA
- (3) Standard Zener voltage tolerance is ± 10%. Add suffix "B" for ± 5% tolerance, Add suffix "C" for ± 2% tolerance .



Zener Diodes 0.50 W

| Type No. | Zener Voltage $V_Z @ I_{ZT}$ | | | | Maximum DC Zener Current | Voltage Regulation | Maximum Reverse Leakage Current | |
|----------|---------------------------------|----------------------------|-------------|------------------------|-----------------------------|---------------------------|------------------------------------|-----------------|
| | Min. (V) | Nom. ⁽¹⁾ (V) | Max. (V) | I_{ZT} (μ A) | $I_{ZM}^{(2)}$ (mA) | $\Delta V_Z^{(4)}$ (V) | $I_R^{(3)}$ (μ A) | at V_R (V) |
| SMD | | | | | | | | |

TZS4678 Series, Case Type: Mini MELF



| | | | | | | | | |
|---------|-------|-----|-------|----|------|------|------|------|
| TZS4678 | 1.710 | 1.8 | 1.89 | 50 | 120 | 0.70 | 7.5 | 1.0 |
| TZS4679 | 1.900 | 2.0 | 2.10 | 50 | 110 | 0.70 | 5.0 | 1.0 |
| TZS4680 | 2.090 | 2.2 | 2.310 | 50 | 100 | 0.75 | 4.0 | 1.0 |
| TZS4681 | 2.280 | 2.4 | 2.520 | 50 | 95.0 | 0.80 | 2.0 | 1.0 |
| TZS4682 | 2.565 | 2.7 | 2.835 | 50 | 90.0 | 0.85 | 1.0 | 1.0 |
| TZS4683 | 2.850 | 3.0 | 3.150 | 50 | 85.0 | 0.90 | 0.8 | 1.0 |
| TZS4684 | 3.135 | 3.3 | 3.465 | 50 | 80.0 | 0.95 | 7.5 | 1.5 |
| TZS4685 | 3.420 | 3.6 | 3.780 | 50 | 75.0 | 0.95 | 7.5 | 2.0 |
| TZS4686 | 3.705 | 3.9 | 4.095 | 50 | 70.0 | 0.97 | 5.0 | 2.0 |
| TZS4687 | 4.085 | 4.3 | 4.515 | 50 | 65.0 | 0.99 | 4.0 | 2.0 |
| TZS4688 | 4.465 | 4.7 | 4.935 | 50 | 60.0 | 0.99 | 10 | 3.0 |
| TZS4689 | 4.845 | 5.1 | 5.355 | 50 | 55.0 | 0.97 | 10 | 3.0 |
| TZS4690 | 5.320 | 5.6 | 5.880 | 50 | 50.0 | 0.96 | 10 | 4.0 |
| TZS4691 | 5.890 | 6.2 | 6.510 | 50 | 45.0 | 0.95 | 10 | 5.0 |
| TZS4692 | 6.460 | 6.8 | 7.140 | 50 | 35.0 | 0.90 | 10 | 5.10 |
| TZS4693 | 7.125 | 7.5 | 7.875 | 50 | 31.8 | 0.75 | 10 | 5.70 |
| TZS4694 | 7.790 | 8.2 | 8.610 | 50 | 29.0 | 0.50 | 1.0 | 6.20 |
| TZS4695 | 8.265 | 8.7 | 9.135 | 50 | 27.4 | 0.10 | 1.0 | 6.60 |
| TZS4696 | 8.645 | 9.1 | 9.555 | 50 | 26.2 | 0.08 | 1.0 | 6.90 |
| TZS4697 | 9.500 | 10 | 10.50 | 50 | 24.8 | 0.10 | 1.0 | 7.60 |
| TZS4698 | 10.45 | 11 | 11.55 | 50 | 21.6 | 0.11 | 0.05 | 8.40 |
| TZS4699 | 11.40 | 12 | 12.60 | 50 | 20.4 | 0.12 | 0.05 | 9.10 |
| TZS4700 | 12.35 | 13 | 13.65 | 50 | 19.0 | 0.13 | 0.05 | 9.80 |
| TZS4701 | 13.30 | 14 | 14.70 | 50 | 17.5 | 0.14 | 0.05 | 10.6 |
| TZS4702 | 14.25 | 15 | 15.75 | 50 | 16.3 | 0.15 | 0.05 | 11.4 |
| TZS4703 | 15.20 | 16 | 16.80 | 50 | 15.4 | 0.16 | 0.05 | 12.1 |
| TZS4704 | 16.15 | 17 | 17.85 | 50 | 14.5 | 0.17 | 0.05 | 12.9 |
| TZS4705 | 17.10 | 18 | 18.90 | 50 | 13.2 | 0.18 | 0.05 | 13.6 |
| TZS4706 | 18.05 | 19 | 19.95 | 50 | 12.5 | 0.19 | 0.05 | 14.4 |
| TZS4707 | 19.00 | 20 | 21.00 | 50 | 11.9 | 0.20 | 0.01 | 15.2 |
| TZS4708 | 20.90 | 22 | 23.10 | 50 | 10.8 | 0.22 | 0.01 | 16.7 |
| TZS4709 | 22.80 | 24 | 25.20 | 50 | 9.90 | 0.24 | 0.01 | 18.2 |
| TZS4710 | 23.75 | 25 | 26.25 | 50 | 9.50 | 0.25 | 0.01 | 19.0 |
| TZS4711 | 25.65 | 27 | 28.35 | 50 | 8.80 | 0.27 | 0.01 | 20.4 |
| TZS4712 | 26.60 | 28 | 29.40 | 50 | 8.50 | 0.28 | 0.01 | 21.2 |
| TZS4713 | 28.50 | 30 | 31.50 | 50 | 7.90 | 0.30 | 0.01 | 22.8 |
| TZS4714 | 31.35 | 33 | 34.65 | 50 | 7.20 | 0.33 | 0.01 | 25.0 |
| TZS4715 | 34.20 | 36 | 37.80 | 50 | 6.60 | 0.36 | 0.01 | 27.3 |
| TZS4716 | 37.05 | 39 | 40.95 | 50 | 6.10 | 0.39 | 0.01 | 29.6 |
| TZS4717 | 40.85 | 43 | 45.15 | 50 | 5.50 | 0.43 | 0.01 | 32.6 |

Notes :

- (1) The type number shown have a standard tolerance of $\pm 5\%$ on the nominal zener voltage.
- (2) Maximum zener current ratings are based on maximum zener voltage of the individual unit.
- (3) Reverse leakage current are guaranteed and measured at V_R as shown on the table.
- (4) Voltage change is equal to the difference between V_Z at 100 μ A and V_Z at 10 μ A.



Zener Diodes 0.50 W

| Type No. | Nominal Zener Voltage ⁽³⁾ | Test Current | Maximum Zener Impedance | Maximum Reverse Leakage Current $I_R @ V_R=1V$ | | Maximum DC Zener Current ⁽²⁾ |
|----------|---|-----------------|-------------------------------|--|--------------------|--|
| | $V_Z @ I_{ZT}$ | I_{ZT} | $Z_{ZT} @ I_{ZT}^{(1)}$ | $T_a=25^{\circ}C$ | $T_a=150^{\circ}C$ | I_{ZM} |
| | (V) | (mA) | (Ω) | (μA) | (μA) | (mA) |

1N746A Series, 0.5 W, Case Type : DO-35



| | | | | | | |
|--------|-----|----|----|-----|----|-----|
| 1N746A | 3.3 | 20 | 28 | 10 | 30 | 110 |
| 1N747A | 3.6 | 20 | 24 | 10 | 30 | 100 |
| 1N748A | 3.9 | 20 | 23 | 10 | 30 | 95 |
| 1N749A | 4.3 | 20 | 22 | 2 | 30 | 85 |
| 1N750A | 4.7 | 20 | 19 | 2 | 30 | 75 |
| 1N751A | 5.1 | 20 | 17 | 1 | 20 | 70 |
| 1N752A | 5.6 | 20 | 11 | 1 | 20 | 65 |
| 1N753A | 6.2 | 20 | 7 | 0.1 | 20 | 60 |
| 1N754A | 6.8 | 20 | 5 | 0.1 | 20 | 55 |
| 1N755A | 7.5 | 20 | 6 | 0.1 | 20 | 50 |
| 1N756A | 8.2 | 20 | 8 | 0.1 | 20 | 45 |
| 1N757A | 9.1 | 20 | 10 | 0.1 | 20 | 40 |
| 1N758A | 10 | 20 | 17 | 0.1 | 20 | 35 |
| 1N759A | 12 | 20 | 30 | 0.1 | 20 | 30 |

Notes :

- (1) The Zener impedance is derived from the 1 KHz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (I_{ZT}) is superimposed on I_{ZT} . Zener impedance is measured at two points to ensure a sharp knee on the breakdown curve and to eliminate unstable units
- (2) Valid provided that leads are at a distance of 3/8" from case and kept at ambient temperature.
- (3) Measured with device junction in thermal equilibrium
- (4) Standard zener voltage tolerance is $\pm 5\%$ for suffix "A" . Other tolerances are available upon request
- (5) $V_F = 1.5 V_{max}$. @ $I_F = 200 mA$



Zener Diodes 0.50 W

| Type No. | Zener Voltage $V_Z @ I_{ZT}^{(3)}$ | | Maximum Zener Impedance ⁽¹⁾ | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current |
|----------|---------------------------------------|----------|---|-------------------|----------|------------------------------------|-----|-----------------------------|
| | Nominal | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | I_{ZK} | $I_R @ V_R$ | | $I_{ZM}^{(2)}$ |
| | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | (mA) |

1N957B Series, 0.5 W, Case Type : DO-35



| | | | | | | | | |
|--------|-----|------|------|------|------|-----|------|-----|
| 1N957B | 6.8 | 18.5 | 4.5 | 700 | 1.00 | 150 | 5.2 | 58 |
| 1N958B | 7.5 | 16.5 | 5.5 | 700 | 0.50 | 75 | 5.7 | 53 |
| 1N959B | 8.2 | 15.0 | 6.5 | 700 | 0.50 | 50 | 6.2 | 47 |
| 1N960B | 9.1 | 14.0 | 7.5 | 700 | 0.50 | 25 | 6.9 | 43 |
| 1N961B | 10 | 12.5 | 8.5 | 700 | 0.25 | 10 | 7.6 | 40 |
| 1N962B | 11 | 11.5 | 9.5 | 700 | 0.25 | 5 | 8.4 | 36 |
| 1N963B | 12 | 10.5 | 11.5 | 700 | 0.25 | 5 | 9.1 | 32 |
| 1N964B | 13 | 9.5 | 13 | 700 | 0.25 | 5 | 9.9 | 29 |
| 1N965B | 15 | 8.5 | 16 | 700 | 0.25 | 5 | 11.4 | 27 |
| 1N966B | 16 | 7.8 | 17 | 700 | 0.25 | 5 | 12.2 | 24 |
| 1N967B | 18 | 7.0 | 21 | 750 | 0.25 | 5 | 13.7 | 21 |
| 1N968B | 20 | 6.2 | 25 | 750 | 0.25 | 5 | 15.2 | 20 |
| 1N969B | 22 | 5.6 | 29 | 750 | 0.25 | 5 | 16.7 | 18 |
| 1N970B | 24 | 5.2 | 33 | 750 | 0.25 | 5 | 18.2 | 16 |
| 1N971B | 27 | 4.6 | 41 | 750 | 0.25 | 5 | 20.6 | 14 |
| 1N972B | 30 | 4.2 | 49 | 1000 | 0.25 | 5 | 22.8 | 13 |
| 1N973B | 33 | 3.8 | 58 | 1000 | 0.25 | 5 | 25.1 | 12 |
| 1N974B | 36 | 3.4 | 70 | 1000 | 0.25 | 5 | 27.4 | 11 |
| 1N975B | 39 | 3.2 | 80 | 1000 | 0.25 | 5 | 29.7 | 10 |
| 1N976B | 43 | 3.0 | 93 | 1500 | 0.25 | 5 | 32.7 | 9.2 |
| 1N977B | 47 | 2.7 | 105 | 1500 | 0.25 | 5 | 35.8 | 8.5 |
| 1N978B | 51 | 2.5 | 125 | 1500 | 0.25 | 5 | 38.8 | 7.8 |
| 1N979B | 56 | 2.2 | 150 | 2000 | 0.25 | 5 | 42.6 | 6.9 |
| 1N980B | 62 | 2.0 | 185 | 2000 | 0.25 | 5 | 47.1 | 6.3 |
| 1N981B | 68 | 1.8 | 230 | 2000 | 0.25 | 5 | 51.7 | 5.7 |
| 1N982B | 75 | 1.7 | 270 | 2000 | 0.25 | 5 | 56.0 | 5.2 |
| 1N983B | 82 | 1.5 | 330 | 3000 | 0.25 | 5 | 62.2 | 4.7 |
| 1N984B | 91 | 1.4 | 440 | 3000 | 0.25 | 5 | 69.2 | 4.3 |

Notes :

- (1) The Zener Impedance is derived from the 1 KHz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (I_{ZT}) is superimposed on I_{ZT} . Zener Impedance is measured at two points to ensure a sharp knee on the breakdown curve and to eliminate unstable units.
- (2) Valid provided that leads are at a distance of 3/8" from case and kept at 25°C ambient temperature.
- (3) Measured with device junction in thermal equilibrium.
- (4) Standard zener voltage tolerance is $\pm 5\%$ for suffix "B". Other tolerances are available upon request.
- (5) $V_F = 1.5 V_{max}$. @ $I_F = 200 \text{ mA}$



Zener Diodes 0.50 W

| Type No. | Zener Voltage $V_Z @ I_{ZT}$ | | | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current, I_R | | | Temp. coefficient of Zener Voltage at $I_Z = 5\text{mA}$ $\alpha_{VZ}(\% / ^\circ\text{C})$ | Admissible Zener Current ⁽²⁾ $I_{ZM}(\text{mA})$ |
|----------|---------------------------------|------------|------------|------------------|-----------------------------------|-----------------------------------|------------------|---|--|-----------------|--|--|
| | Nom ⁽¹⁾ (V) | Min (V) | Max (V) | I_{ZT} (mA) | $Z_{ZT} @ I_{ZT}$ (Ω) | $Z_{ZK} @ I_{ZK}$ (Ω) | I_{ZK} (mA) | $T_a=25^\circ\text{C}$ (μA) | $T_a=150^\circ\text{C}$ (μA) | At V_R (V) | | |

BZX55 Series, 0.5 W, Case Type : DO-35



| | | | | | | | | | | | | |
|-----------|-----|------|------|-----|-----|------|-----|-----|-----|-----|-------------------------|-----|
| BZX55C2V0 | 2.0 | 1.90 | 2.10 | 5.0 | 85 | 600 | 1.0 | 100 | 200 | 1.0 | -0.09...-0.06 | 175 |
| BZX55C2V2 | 2.2 | 2.09 | 2.31 | 5.0 | 85 | 600 | 1.0 | 50 | 100 | 1.0 | -0.09...-0.06 | 160 |
| BZX55C2V4 | 2.4 | 2.28 | 2.56 | 5.0 | 85 | 600 | 1.0 | 50 | 100 | 1.0 | -0.09...-0.06 | 145 |
| BZX55C2V7 | 2.7 | 2.5 | 2.9 | 5.0 | 85 | 600 | 1.0 | 10 | 50 | 1.0 | -0.09...-0.06 | 135 |
| BZX55C3V0 | 3.0 | 2.8 | 3.2 | 5.0 | 85 | 600 | 1.0 | 4.0 | 40 | 1.0 | -0.08...-0.05 | 125 |
| BZX55C3V3 | 3.3 | 3.1 | 3.5 | 5.0 | 85 | 600 | 1.0 | 2.0 | 40 | 1.0 | -0.08...-0.05 | 115 |
| BZX55C3V6 | 3.6 | 3.4 | 3.8 | 5.0 | 85 | 600 | 1.0 | 2.0 | 40 | 1.0 | -0.08...-0.05 | 105 |
| BZX55C3V9 | 3.9 | 3.7 | 4.1 | 5.0 | 85 | 600 | 1.0 | 2.0 | 40 | 1.0 | -0.08...-0.05 | 95 |
| BZX55C4V3 | 4.3 | 4.0 | 4.6 | 5.0 | 75 | 600 | 1.0 | 1.0 | 20 | 1.0 | -0.06...-0.03 | 90 |
| BZX55C4V7 | 4.7 | 4.4 | 5.0 | 5.0 | 60 | 600 | 1.0 | 0.5 | 10 | 1.0 | -0.05...+0.02 | 85 |
| BZX55C5V1 | 5.1 | 4.8 | 5.4 | 5.0 | 35 | 550 | 1.0 | 0.1 | 2 | 1.0 | -0.02...+0.02 | 80 |
| BZX55C5V6 | 5.6 | 5.2 | 6.0 | 5.0 | 25 | 450 | 1.0 | 0.1 | 2 | 1.0 | -0.05...+0.05 | 70 |
| BZX55C6V2 | 6.2 | 5.8 | 6.6 | 5.0 | 10 | 200 | 1.0 | 0.1 | 2 | 2.0 | 0.03...0.06 | 64 |
| BZX55C6V8 | 6.8 | 6.4 | 7.2 | 5.0 | 8 | 150 | 1.0 | 0.1 | 2 | 3.0 | 0.03...0.07 | 58 |
| BZX55C7V5 | 7.5 | 7.0 | 7.9 | 5.0 | 7 | 50 | 1.0 | 0.1 | 2 | 5.0 | 0.03...0.07 | 53 |
| BZX55C8V2 | 8.2 | 7.7 | 8.7 | 5.0 | 7 | 50 | 1.0 | 0.1 | 2 | 6.2 | 0.03...0.08 | 47 |
| BZX55C9V1 | 9.1 | 8.5 | 9.6 | 5.0 | 10 | 50 | 1.0 | 0.1 | 2 | 6.8 | 0.03...0.09 | 43 |
| BZX55C10 | 10 | 9.4 | 10.6 | 5.0 | 15 | 70 | 1.0 | 0.1 | 2 | 7.5 | 0.03...0.10 | 40 |
| BZX55C11 | 11 | 10.4 | 11.6 | 5.0 | 20 | 70 | 1.0 | 0.1 | 2 | 8.2 | 0.03...0.11 | 36 |
| BZX55C12 | 12 | 11.4 | 12.7 | 5.0 | 20 | 90 | 1.0 | 0.1 | 2 | 9.1 | 0.03...0.11 | 32 |
| BZX55C13 | 13 | 12.4 | 14.1 | 5.0 | 26 | 110 | 1.0 | 0.1 | 2 | 10 | 0.03...0.11 | 29 |
| BZX55C15 | 15 | 13.8 | 15.6 | 5.0 | 30 | 110 | 1.0 | 0.1 | 2 | 11 | 0.03...0.11 | 28 |
| BZX55C16 | 16 | 15.3 | 17.1 | 5.0 | 40 | 170 | 1.0 | 0.1 | 2 | 12 | 0.03...0.11 | 27 |
| BZX55C18 | 18 | 16.8 | 19.1 | 5.0 | 50 | 170 | 1.0 | 0.1 | 2 | 13 | 0.03...0.11 | 24 |
| BZX55C20 | 20 | 18.8 | 21.2 | 5.0 | 55 | 220 | 1.0 | 0.1 | 2 | 15 | 0.03...0.11 | 21 |
| BZX55C22 | 22 | 20.8 | 23.3 | 5.0 | 55 | 220 | 1.0 | 0.1 | 2 | 16 | 0.04...0.12 | 20 |
| BZX55C24 | 24 | 22.8 | 25.6 | 5.0 | 80 | 220 | 1.0 | 0.1 | 2 | 18 | 0.04...0.12 | 18 |
| BZX55C27 | 27 | 25.1 | 28.9 | 5.0 | 80 | 220 | 1.0 | 0.1 | 2 | 20 | 0.04...0.12 | 16 |
| BZX55C30 | 30 | 28 | 32 | 5.0 | 80 | 220 | 1.0 | 0.1 | 2 | 22 | 0.04...0.12 | 14 |
| BZX55C33 | 33 | 31 | 35 | 5.0 | 80 | 220 | 1.0 | 0.1 | 2 | 24 | 0.04...0.12 | 13 |
| BZX55C36 | 36 | 34 | 38 | 5.0 | 80 | 220 | 1.0 | 0.1 | 2 | 27 | 0.04...0.12 | 12 |
| BZX55C39 | 39 | 37 | 41 | 2.5 | 90 | 500 | 0.5 | 0.1 | 5 | 30 | 0.04...0.12 | 11 |
| BZX55C43 | 43 | 40 | 46 | 2.5 | 90 | 500 | 0.5 | 0.1 | 5 | 33 | 0.04...0.12 | 10 |
| BZX55C47 | 47 | 44 | 50 | 2.5 | 110 | 600 | 0.5 | 0.1 | 5 | 36 | 0.04...0.12 | 9.2 |
| BZX55C51 | 51 | 48 | 54 | 2.5 | 125 | 700 | 0.5 | 0.1 | 10 | 39 | 0.04...0.12 | 8.5 |
| BZX55C56 | 56 | 52 | 60 | 2.5 | 135 | 700 | 0.5 | 0.1 | 10 | 43 | typ. 0.1 ⁽⁴⁾ | 7.8 |
| BZX55C62 | 62 | 58 | 66 | 2.5 | 150 | 1000 | 0.5 | 0.1 | 10 | 47 | typ. 0.1 ⁽⁴⁾ | 7.0 |
| BZX55C68 | 68 | 64 | 72 | 2.5 | 200 | 1000 | 0.5 | 0.1 | 10 | 51 | typ. 0.1 ⁽⁴⁾ | 6.4 |
| BZX55C75 | 75 | 70 | 79 | 2.5 | 250 | 1000 | 0.5 | 0.1 | 10 | 56 | typ. 0.1 ⁽⁴⁾ | 5.9 |
| BZX55C82 | 82 | 77 | 87 | 2.5 | 300 | 1500 | 0.5 | 0.1 | 10 | 62 | typ. 0.1 ⁽⁴⁾ | 5.3 |
| BZX55C91 | 91 | 85 | 96 | 1.0 | 450 | 2000 | 0.1 | 0.1 | 10 | 68 | typ. 0.1 ⁽⁴⁾ | 4.8 |
| BZX55C100 | 100 | 94 | 106 | 1.0 | 450 | 5000 | 0.1 | 0.1 | 10 | 75 | typ. 0.1 ⁽⁴⁾ | 4.4 |

Notes:

- (1) Tested with pulse $t_p = 20\text{ ms}$
- (2) Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case
- (3) For $\pm 2\%$ tolerance replace the sixth letter of the type from "C" to "B" e.g. BZX55B15
- (4) At $I_Z = 2.5\text{ mA}$
- (5) $V_F = 1\text{ Vmax. @ } I_F = 100\text{ mA}$



Zener Diodes 0.50 W

| Type No. | Zener Voltage $V_Z @ I_{ZT}$ | | Maximum Zener Impedance, $f = 1\text{ kHz}$ | | | Maximum Reverse Leakage Current | | Temp. coefficient of Zener Voltage at I_{ZT} |
|----------|---------------------------------|----------|--|-------------------|----------|------------------------------------|----------|--|
| | Nom ⁽¹⁾ | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | I_{ZK} | I_R | at V_R | |
| | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | $\alpha_{VZ} (\% / ^\circ\text{C})$ |

BZV55 Series, 0.5 W, Case Type : Mini MELF



| | | | | | | | | |
|-----------|-----|-----|-----|-----|-----|------|-----|---------------|
| BZV55C2V4 | 2.4 | 5.0 | 100 | 600 | 1.0 | 50 | 1.0 | -0.08...-0.06 |
| BZV55C2V7 | 2.7 | 5.0 | 100 | 600 | 1.0 | 20 | 1.0 | -0.08...-0.06 |
| BZV55C3V0 | 3.0 | 5.0 | 95 | 600 | 1.0 | 10 | 1.0 | -0.08...-0.05 |
| BZV55C3V3 | 3.3 | 5.0 | 95 | 600 | 1.0 | 5.0 | 1.0 | -0.08...-0.05 |
| BZV55C3V6 | 3.6 | 5.0 | 90 | 600 | 1.0 | 5.0 | 1.0 | -0.08...-0.04 |
| BZV55C3V9 | 3.9 | 5.0 | 90 | 600 | 1.0 | 3.0 | 1.0 | -0.07...-0.03 |
| BZV55C4V3 | 4.3 | 5.0 | 90 | 600 | 1.0 | 3.0 | 1.0 | -0.04...-0.01 |
| BZV55C4V7 | 4.7 | 5.0 | 80 | 500 | 1.0 | 3.0 | 2.0 | -0.03...+0.01 |
| BZV55C5V1 | 5.1 | 5.0 | 60 | 480 | 1.0 | 2.0 | 2.0 | -0.02...+0.05 |
| BZV55C5V6 | 5.6 | 5.0 | 40 | 400 | 1.0 | 1.0 | 2.0 | -0.01...+0.06 |
| BZV55C6V2 | 6.2 | 5.0 | 10 | 150 | 1.0 | 3.0 | 4.0 | 0.00...0.07 |
| BZV55C6V8 | 6.8 | 5.0 | 15 | 80 | 1.0 | 2.0 | 4.0 | 0.01...0.08 |
| BZV55C7V5 | 7.5 | 5.0 | 15 | 80 | 1.0 | 1.0 | 5.0 | 0.01...0.09 |
| BZV55C8V2 | 8.2 | 5.0 | 15 | 80 | 1.0 | 0.7 | 5.0 | 0.01...0.09 |
| BZV55C9V1 | 9.1 | 5.0 | 15 | 100 | 1.0 | 0.5 | 6.0 | 0.02...0.10 |
| BZV55C10 | 10 | 5.0 | 20 | 150 | 1.0 | 0.2 | 7.0 | 0.03...0.11 |
| BZV55C11 | 11 | 5.0 | 20 | 150 | 1.0 | 0.1 | 8.0 | 0.03...0.11 |
| BZV55C12 | 12 | 5.0 | 25 | 150 | 1.0 | 0.1 | 8.0 | 0.03...0.11 |
| BZV55C13 | 13 | 5.0 | 30 | 170 | 1.0 | 0.1 | 8.0 | 0.03...0.11 |
| BZV55C15 | 15 | 5.0 | 30 | 200 | 1.0 | 0.05 | 10 | 0.03...0.11 |
| BZV55C16 | 16 | 5.0 | 40 | 200 | 1.0 | 0.05 | 11 | 0.03...0.11 |
| BZV55C18 | 18 | 5.0 | 45 | 225 | 1.0 | 0.05 | 13 | 0.03...0.11 |
| BZV55C20 | 20 | 5.0 | 55 | 225 | 1.0 | 0.05 | 14 | 0.03...0.11 |
| BZV55C22 | 22 | 5.0 | 55 | 250 | 1.0 | 0.05 | 15 | 0.03...0.11 |
| BZV55C24 | 24 | 5.0 | 70 | 250 | 1.0 | 0.05 | 17 | 0.04...0.12 |
| BZV55C27 | 27 | 2.0 | 80 | 300 | 0.5 | 0.05 | 19 | 0.04...0.12 |
| BZV55C30 | 30 | 2.0 | 80 | 300 | 0.5 | 0.05 | 21 | 0.04...0.12 |
| BZV55C33 | 33 | 2.0 | 80 | 325 | 0.5 | 0.05 | 23 | 0.04...0.12 |
| BZV55C36 | 36 | 2.0 | 90 | 350 | 0.5 | 0.05 | 25 | 0.04...0.12 |
| BZV55C39 | 39 | 2.0 | 130 | 350 | 0.5 | 0.05 | 27 | 0.04...0.12 |
| BZV55C43 | 43 | 2.0 | 150 | 375 | 0.5 | 0.05 | 30 | 0.04...0.12 |
| BZV55C47 | 47 | 2.0 | 170 | 375 | 0.5 | 0.05 | 33 | 0.04...0.12 |
| BZV55C51 | 51 | 2.0 | 180 | 400 | 0.5 | 0.05 | 36 | 0.04...0.12 |
| BZV55C56 | 56 | 2.0 | 200 | 425 | 0.5 | 0.05 | 39 | 0.1 (typ.) |
| BZV55C62 | 62 | 2.0 | 215 | 450 | 0.5 | 0.05 | 43 | 0.1 (typ.) |
| BZV55C68 | 68 | 2.0 | 240 | 475 | 0.5 | 0.05 | 48 | 0.1 (typ.) |
| BZV55C75 | 75 | 2.0 | 255 | 500 | 0.5 | 0.05 | 53 | 0.1 (typ.) |

Notes.

- (1) Tested with pulse $t_p = 5\text{ ms}$
- (2) The type numbers listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$
For $\pm 2\%$ tolerance replace the sixth letter of the type from "C" to "B" e.g. BZV55B15
- (3) $V_F = 0.9 V_{max}$. @ $I_F = 10\text{ mA}$



Zener Diodes 0.50 W

| Type No. | Zener Voltage $V_Z @ I_{ZT}$ | | Maximum Zener Impedance, $f = 1\text{ kHz}$ | | | Maximum Reverse Leakage Current | | Temp. coefficient of Zener Voltage at I_{ZT} | Admissible Zener Current ⁽²⁾ | Maximum Capacitance $V_R=0, f=1\text{ MHz}$ |
|----------|---------------------------------|----------|--|-------------------|----------|------------------------------------|----------|--|--|---|
| | Nom ⁽¹⁾ | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | I_{ZK} | I_R | at V_R | | | |
| | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | $\alpha_{mVZ} (\% / ^\circ\text{C})$ | (mA) | (pF) |

BZX79 Series, 0.5 W, Case Type : DO-35



| | | | | | | | | | | |
|-----------|-----|-----|-----|-----|-----|------|-----|---------------|-----|-----|
| BZX79C2V4 | 2.4 | 5.0 | 100 | 600 | 1.0 | 50 | 1.0 | -0.08...-0.06 | 167 | 450 |
| BZX79C2V7 | 2.7 | 5.0 | 100 | 600 | 1.0 | 20 | 1.0 | -0.08...-0.06 | 135 | 450 |
| BZX79C3V0 | 3.0 | 5.0 | 95 | 600 | 1.0 | 10 | 1.0 | -0.08...-0.05 | 125 | 450 |
| BZX79C3V3 | 3.3 | 5.0 | 95 | 600 | 1.0 | 5.0 | 1.0 | -0.08...-0.05 | 115 | 450 |
| BZX79C3V6 | 3.6 | 5.0 | 90 | 600 | 1.0 | 5.0 | 1.0 | -0.08...-0.04 | 105 | 450 |
| BZX79C3V9 | 3.9 | 5.0 | 90 | 600 | 1.0 | 3.0 | 1.0 | -0.07...-0.03 | 95 | 450 |
| BZX79C4V3 | 4.3 | 5.0 | 90 | 600 | 1.0 | 3.0 | 1.0 | -0.04...-0.01 | 90 | 450 |
| BZX79C4V7 | 4.7 | 5.0 | 80 | 500 | 1.0 | 3.0 | 1.0 | -0.03...+0.01 | 85 | 300 |
| BZX79C5V1 | 5.1 | 5.0 | 60 | 480 | 1.0 | 2.0 | 1.0 | -0.02...+0.05 | 80 | 300 |
| BZX79C5V6 | 5.6 | 5.0 | 40 | 400 | 1.0 | 1.0 | 1.0 | -0.01...+0.06 | 70 | 300 |
| BZX79C6V2 | 6.2 | 5.0 | 10 | 150 | 1.0 | 3.0 | 2.0 | 0.00...0.07 | 64 | 200 |
| BZX79C6V8 | 6.8 | 5.0 | 15 | 80 | 1.0 | 2.0 | 3.0 | 0.01...0.08 | 58 | 200 |
| BZX79C7V5 | 7.5 | 5.0 | 15 | 80 | 1.0 | 1.0 | 5.0 | 0.01...0.09 | 53 | 150 |
| BZX79C8V2 | 8.2 | 5.0 | 15 | 80 | 1.0 | 0.7 | 6.0 | 0.01...0.09 | 47 | 150 |
| BZX79C9V1 | 9.1 | 5.0 | 15 | 100 | 1.0 | 0.5 | 7.0 | 0.02...0.10 | 43 | 150 |
| BZX79C10 | 10 | 5.0 | 20 | 150 | 1.0 | 0.2 | 7.5 | 0.03...0.11 | 40 | 90 |
| BZX79C11 | 11 | 5.0 | 20 | 150 | 1.0 | 0.1 | 8.5 | 0.03...0.11 | 36 | 85 |
| BZX79C12 | 12 | 5.0 | 25 | 150 | 1.0 | 0.1 | 9.0 | 0.03...0.11 | 32 | 85 |
| BZX79C13 | 13 | 5.0 | 30 | 170 | 1.0 | 0.1 | 10 | 0.03...0.11 | 29 | 80 |
| BZX79C15 | 15 | 5.0 | 30 | 200 | 1.0 | 0.05 | 11 | 0.03...0.11 | 27 | 75 |
| BZX79C16 | 16 | 5.0 | 40 | 200 | 1.0 | 0.05 | 12 | 0.03...0.11 | 24 | 75 |
| BZX79C18 | 18 | 5.0 | 45 | 225 | 1.0 | 0.05 | 14 | 0.03...0.11 | 21 | 70 |
| BZX79C20 | 20 | 5.0 | 55 | 225 | 1.0 | 0.05 | 15 | 0.03...0.11 | 20 | 60 |
| BZX79C22 | 22 | 5.0 | 55 | 250 | 1.0 | 0.05 | 17 | 0.03...0.11 | 18 | 60 |
| BZX79C24 | 24 | 5.0 | 70 | 250 | 1.0 | 0.05 | 18 | 0.04...0.12 | 16 | 55 |
| BZX79C27 | 27 | 2.0 | 80 | 300 | 0.5 | 0.05 | 20 | 0.04...0.12 | 14 | 50 |
| BZX79C30 | 30 | 2.0 | 80 | 300 | 0.5 | 0.05 | 22 | 0.04...0.12 | 13 | 50 |
| BZX79C33 | 33 | 2.0 | 80 | 325 | 0.5 | 0.05 | 24 | 0.04...0.12 | 12 | 45 |
| BZX79C36 | 36 | 2.0 | 90 | 350 | 0.5 | 0.05 | 27 | 0.04...0.12 | 11 | 45 |
| BZX79C39 | 39 | 2.0 | 130 | 350 | 0.5 | 0.05 | 28 | 0.04...0.12 | 10 | 45 |
| BZX79C43 | 43 | 2.0 | 150 | 375 | 0.5 | 0.05 | 32 | 0.04...0.12 | 9.2 | 40 |
| BZX79C47 | 47 | 2.0 | 170 | 375 | 0.5 | 0.05 | 35 | 0.04...0.12 | 8.5 | 40 |
| BZX79C51 | 51 | 2.0 | 180 | 400 | 0.5 | 0.05 | 38 | 0.04...0.12 | 7.8 | 40 |
| BZX79C56 | 56 | 2.0 | 200 | 425 | 0.5 | 0.05 | 39 | 0.1(typ.) | 7.1 | 40 |
| BZX79C62 | 62 | 2.0 | 215 | 450 | 0.5 | 0.05 | 43 | 0.1(typ.) | 6.4 | 35 |
| BZX79C68 | 68 | 2.0 | 240 | 475 | 0.5 | 0.05 | 48 | 0.1(typ.) | 5.8 | 35 |
| BZX79C75 | 75 | 2.0 | 255 | 500 | 0.5 | 0.05 | 53 | 0.1(typ.) | 5.3 | 35 |

Notes:

- (1) Tested with pulse $t_p = 5\text{ ms}$
- (2) Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case
- (3) The type numbers listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$
For $\pm 2\%$ tolerance replace the sixth letter of the type from "C" to "B" e.g. BZX79B13
- (4) $V_F = 0.9\text{ Vmax.} @ I_F = 10\text{ mA}$



Zener Diodes 0.50 W

| Type No. | Suffix ⁽²⁾ | Zener Voltage | | Test Current | Maximum Zener Impedance , f = 1kHz | | | Maximum Reverse Current | |
|----------|-----------------------|--|------|-----------------|------------------------------------|-----------------------------------|-----------------|-------------------------|-------------------|
| | | V _Z (V) at I _{ZT} ⁽¹⁾ | | I _{ZT} | Z _{ZT} @ I _{ZT} | Z _{ZK} @ I _{ZK} | I _{ZK} | I _R | at V _R |
| | | min. | max. | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) |

GLZ Series, 0.5 W, Case Type : Mini MELF



| | | | | | | | | | |
|--------|---|-------|--------|----|----|------|-----|-----|-----|
| GLZ3.3 | A | 3.160 | 3.380 | 20 | 70 | 1000 | 1 | 20 | 1 |
| | B | 3.320 | 3.530 | | | | | | |
| GLZ3.6 | A | 3.455 | 3.695 | 20 | 60 | 1000 | 1 | 10 | 1 |
| | B | 3.600 | 3.845 | | | | | | |
| GLZ3.9 | A | 3.74 | 4.01 | 20 | 50 | 1000 | 1 | 5 | 1 |
| | B | 3.89 | 4.16 | | | | | | |
| GLZ4.3 | A | 4.04 | 4.29 | 20 | 40 | 1000 | 1 | 5 | 1 |
| | B | 4.17 | 4.43 | | | | | | |
| | C | 4.30 | 4.57 | | | | | | |
| GLZ4.7 | A | 4.44 | 4.68 | 20 | 25 | 900 | 1 | 5 | 1 |
| | B | 4.55 | 4.80 | | | | | | |
| | C | 4.68 | 4.93 | | | | | | |
| GLZ5.1 | A | 4.81 | 5.07 | 20 | 20 | 800 | 1 | 5 | 1.5 |
| | B | 4.94 | 5.20 | | | | | | |
| | C | 5.09 | 5.37 | | | | | | |
| GLZ5.6 | A | 5.28 | 5.55 | 20 | 13 | 500 | 1 | 5 | 2.5 |
| | B | 5.45 | 5.73 | | | | | | |
| | C | 5.61 | 5.91 | | | | | | |
| GLZ6.2 | A | 5.78 | 6.09 | 20 | 10 | 300 | 1 | 5 | 3 |
| | B | 5.96 | 6.27 | | | | | | |
| | C | 6.12 | 6.44 | | | | | | |
| GLZ6.8 | A | 6.29 | 6.63 | 20 | 8 | 150 | 0.5 | 2 | 3.5 |
| | B | 6.49 | 6.83 | | | | | | |
| | C | 6.66 | 7.01 | | | | | | |
| GLZ7.5 | A | 6.85 | 7.22 | 20 | 8 | 120 | 0.5 | 0.5 | 4 |
| | B | 7.07 | 7.45 | | | | | | |
| | C | 6.29 | 7.67 | | | | | | |
| GLZ8.2 | A | 7.53 | 7.92 | 20 | 8 | 120 | 0.5 | 0.5 | 5 |
| | B | 7.78 | 8.19 | | | | | | |
| | C | 8.03 | 8.45 | | | | | | |
| GLZ9.1 | A | 8.29 | 8.73 | 20 | 8 | 120 | 0.5 | 0.5 | 6 |
| | B | 8.57 | 9.01 | | | | | | |
| | C | 8.83 | 9.30 | | | | | | |
| GLZ10 | A | 9.12 | 9.59 | 20 | 8 | 120 | 0.5 | 0.2 | 7 |
| | B | 9.41 | 9.90 | | | | | | |
| | C | 9.70 | 10.20 | | | | | | |
| | D | 9.94 | 10.44 | | | | | | |
| GLZ11 | A | 10.18 | 10.71 | 20 | 10 | 120 | 0.5 | 0.2 | 8 |
| | B | 10.50 | 115.00 | | | | | | |
| | C | 10.82 | 11.38 | | | | | | |
| GLZ12 | A | 11.13 | 11.71 | 20 | 12 | 110 | 0.5 | 0.2 | 9 |
| | B | 11.44 | 12.03 | | | | | | |
| | C | 11.74 | 12.35 | | | | | | |
| GLZ13 | A | 12.11 | 12.75 | 10 | 14 | 110 | 0.5 | 0.2 | 10 |
| | B | 12.55 | 13.21 | | | | | | |
| | C | 12.99 | 13.66 | | | | | | |



Zener Diodes 0.50 W

| Type No. | Suffix ⁽²⁾ | Zener Voltage | | Test Current | Maximum Zener Impedance , f = 1kHz | | | Maximum Reverse Current | |
|----------|-----------------------|--|------|-----------------|------------------------------------|-----------------------------------|-----------------|-------------------------|-------------------|
| | | V _Z (V) at I _{ZT} ⁽¹⁾ | | I _{ZT} | Z _{ZT} @ I _{ZT} | Z _{ZK} @ I _{ZK} | I _{ZK} | I _R | at V _R |
| | | min. | max. | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) |

GLZ Series, 0.5 W, Case Type : Mini MELF



| | | | | | | | | | |
|-------|---|-------|-------|----|----|-----|-----|-----|----|
| GLZ15 | A | 13.45 | 14.13 | 10 | 16 | 110 | 0.5 | 0.2 | 11 |
| | B | 13.89 | 14.62 | | | | | | |
| | C | 14.35 | 15.09 | | | | | | |
| GLZ16 | A | 14.80 | 15.57 | 10 | 18 | 150 | 0.5 | 0.2 | 12 |
| | B | 15.25 | 16.04 | | | | | | |
| | C | 15.69 | 16.51 | | | | | | |
| GLZ18 | A | 16.22 | 17.06 | 10 | 23 | 150 | 0.5 | 0.2 | 13 |
| | B | 16.82 | 17.70 | | | | | | |
| | C | 17.42 | 18.33 | | | | | | |
| GLZ20 | A | 18.02 | 18.96 | 10 | 28 | 200 | 0.5 | 0.2 | 15 |
| | B | 18.63 | 19.59 | | | | | | |
| | C | 19.23 | 20.22 | | | | | | |
| | D | 19.72 | 20.72 | | | | | | |
| GLZ22 | A | 20.15 | 21.20 | 5 | 30 | 200 | 0.5 | 0.2 | 17 |
| | B | 20.64 | 21.71 | | | | | | |
| | C | 21.08 | 22.17 | | | | | | |
| | D | 21.52 | 22.63 | | | | | | |
| GLZ24 | A | 22.05 | 23.18 | 5 | 35 | 200 | 0.5 | 0.2 | 19 |
| | B | 22.61 | 23.77 | | | | | | |
| | C | 23.12 | 24.31 | | | | | | |
| | D | 23.63 | 24.85 | | | | | | |
| GLZ27 | A | 24.26 | 25.52 | 5 | 45 | 200 | 0.5 | 0.2 | 21 |
| | B | 24.97 | 26.26 | | | | | | |
| | C | 25.63 | 26.95 | | | | | | |
| | D | 26.29 | 27.54 | | | | | | |
| GLZ30 | A | 26.99 | 28.39 | 5 | 55 | 250 | 0.5 | 0.2 | 23 |
| | B | 27.70 | 29.13 | | | | | | |
| | C | 28.36 | 29.82 | | | | | | |
| | D | 29.20 | 30.51 | | | | | | |
| GLZ33 | A | 29.68 | 31.22 | 5 | 65 | 250 | 0.5 | 0.2 | 25 |
| | B | 30.32 | 31.88 | | | | | | |
| | C | 30.90 | 32.50 | | | | | | |
| | D | 31.49 | 33.11 | | | | | | |
| GLZ36 | A | 31.14 | 33.79 | 5 | 75 | 250 | 0.5 | 0.2 | 27 |
| | B | 32.76 | 34.49 | | | | | | |
| | C | 33.40 | 35.13 | | | | | | |
| | D | 34.01 | 35.77 | | | | | | |
| GLZ39 | A | 34.68 | 36.47 | 5 | 85 | 250 | 0.5 | 0.2 | 30 |
| | B | 35.36 | 37.19 | | | | | | |
| | C | 36.00 | 37.85 | | | | | | |
| | D | 36.63 | 38.52 | | | | | | |

Notes:

- (1) The Zener voltage is measured 40ms after power is supplied
- (2) When ordering use suffix "A", "B", "C" or "D" to specify zener voltage e.g. GLZ3.3A....GLZ39D



Zener Diodes 0.50 W

| Type No. | Grade | Zener Voltage V _Z @ I _{ZT} | | | | | | Test Current | Maximum Dynamic Resistance | | Maximum Reverse Current | | | | |
|----------|-------|---|------|-----------|------|-----------|------|-----------------|-------------------------------|--|-------------------------------|--|-----------------|---------------------|---------------------------------|
| | | Suffix -1 | | Suffix -2 | | Suffix -3 | | | | | | | | | |
| | | min. | max. | min. | max. | min. | max. | | | | | | I _{ZT} | rd @ I _Z | I _R @ V _R |
| | | (V) | (V) | (V) | (V) | (V) | (V) | | | | | | (mA) | (Ω) (mA) | (μA) (V) |

HZ Series, 0.5 W, Case Type : DO-35



| | | | | | | | | | | | | |
|------|---|------|------|------|------|------|------|---|-----|---|----|-----|
| HZ2 | A | 1.6 | 1.8 | 1.7 | 1.9 | 1.8 | 2.0 | 5 | 100 | 5 | 25 | 0.5 |
| | B | 1.9 | 2.1 | 2.0 | 2.2 | 2.1 | 2.3 | 5 | 100 | 5 | 2 | 0.5 |
| | C | 2.2 | 2.4 | 2.3 | 2.5 | 2.4 | 2.6 | 5 | 100 | 5 | 1 | 0.5 |
| HZ3 | A | 2.5 | 2.7 | 2.6 | 2.8 | 2.7 | 2.9 | 5 | 100 | 5 | 1 | 0.5 |
| | B | 2.8 | 3.0 | 2.9 | 3.1 | 3.0 | 3.2 | 5 | 100 | 5 | 1 | 0.5 |
| | C | 3.1 | 3.3 | 3.2 | 3.4 | 3.3 | 3.5 | 5 | 100 | 5 | 1 | 0.5 |
| HZ4 | A | 3.4 | 3.6 | 3.5 | 3.7 | 3.6 | 3.8 | 5 | 100 | 5 | 5 | 1.0 |
| | B | 3.7 | 3.9 | 3.8 | 4.0 | 3.9 | 4.1 | 5 | 100 | 5 | 5 | 1.0 |
| | C | 4.0 | 4.2 | 4.1 | 4.3 | 4.2 | 4.4 | 5 | 100 | 5 | 5 | 1.0 |
| HZ5 | A | 4.3 | 4.5 | 4.4 | 4.6 | 4.5 | 4.7 | 5 | 100 | 5 | 5 | 1.5 |
| | B | 4.6 | 4.8 | 4.7 | 4.9 | 4.8 | 5.0 | 5 | 100 | 5 | 5 | 1.5 |
| | C | 4.9 | 5.1 | 5.0 | 5.2 | 5.1 | 5.3 | 5 | 100 | 5 | 5 | 1.5 |
| HZ6 | A | 5.2 | 5.5 | 5.3 | 5.6 | 5.4 | 5.7 | 5 | 35 | 5 | 5 | 2.0 |
| | B | 5.5 | 5.8 | 5.6 | 5.9 | 5.7 | 6.0 | 5 | 35 | 5 | 5 | 2.0 |
| | C | 5.8 | 6.1 | 6.0 | 6.3 | 6.1 | 6.4 | 5 | 35 | 5 | 5 | 2.0 |
| HZ7 | A | 6.3 | 6.6 | 6.4 | 6.7 | 6.6 | 6.9 | 5 | 15 | 5 | 1 | 3.5 |
| | B | 6.7 | 7.0 | 6.9 | 7.2 | 7.0 | 7.3 | 5 | 15 | 5 | 1 | 3.5 |
| | C | 7.2 | 7.6 | 7.3 | 7.7 | 7.5 | 7.9 | 5 | 15 | 5 | 1 | 3.5 |
| HZ9 | A | 7.7 | 8.1 | 7.9 | 8.3 | 8.1 | 8.5 | 5 | 20 | 5 | 1 | 5.0 |
| | B | 8.3 | 8.7 | 8.5 | 8.9 | 8.7 | 9.1 | 5 | 20 | 5 | 1 | 5.0 |
| | C | 8.9 | 9.3 | 9.1 | 9.5 | 9.3 | 9.7 | 5 | 20 | 5 | 1 | 5.0 |
| HZ11 | A | 9.5 | 9.9 | 9.7 | 10.1 | 9.9 | 10.3 | 5 | 25 | 5 | 1 | 7.5 |
| | B | 10.2 | 10.6 | 10.4 | 10.8 | 10.7 | 11.1 | 5 | 25 | 5 | 1 | 7.5 |
| | C | 10.9 | 11.3 | 11.1 | 11.6 | 11.4 | 11.9 | 5 | 25 | 5 | 1 | 7.5 |
| HZ12 | A | 11.6 | 12.1 | 11.9 | 12.4 | 12.2 | 12.7 | 5 | 35 | 5 | 1 | 9.5 |
| | B | 12.4 | 12.9 | 12.6 | 13.1 | 12.9 | 13.4 | 5 | 35 | 5 | 1 | 9.5 |
| | C | 13.2 | 13.7 | 13.5 | 14.0 | 13.8 | 14.3 | 5 | 35 | 5 | 1 | 9.5 |
| HZ15 | | 14.1 | 14.7 | 14.5 | 15.1 | 14.9 | 15.5 | 5 | 40 | 5 | 1 | 11 |
| HZ16 | | 15.3 | 15.9 | 15.7 | 16.5 | 16.3 | 17.1 | 5 | 45 | 5 | 1 | 12 |
| HZ18 | | 16.9 | 17.7 | 17.5 | 18.3 | 18.1 | 19.0 | 5 | 55 | 5 | 1 | 13 |
| HZ20 | | 18.8 | 19.7 | 19.5 | 20.4 | 20.2 | 21.1 | 2 | 60 | 2 | 1 | 15 |
| HZ22 | | 20.9 | 21.9 | 21.6 | 22.6 | 22.3 | 23.3 | 2 | 65 | 2 | 1 | 17 |
| HZ24 | | 22.9 | 24.0 | 23.6 | 24.7 | 24.3 | 25.5 | 2 | 70 | 2 | 1 | 19 |
| HZ27 | | 25.2 | 26.6 | 26.2 | 27.6 | 27.2 | 28.6 | 2 | 80 | 2 | 1 | 21 |
| HZ30 | | 28.2 | 29.6 | 29.2 | 30.6 | 30.2 | 31.6 | 2 | 100 | 2 | 1 | 23 |
| HZ33 | | 31.2 | 32.6 | 32.2 | 33.6 | 33.2 | 34.6 | 2 | 120 | 2 | 1 | 25 |
| HZ36 | | 34.2 | 35.7 | 35.3 | 36.8 | 36.4 | 38.0 | 2 | 140 | 2 | 1 | 27 |

Note : The lower voltage types (HZ2 - HZ12) are available in 3 grades, "A" to "C", each with suffix "-1", "-2" or "-3"

For example the type with $V_Z = 8.5 - 8.9V$ is HZ9B-2

The higher voltage types are only available with suffix "-1", "-2" or "-3" (no grade) e.g. HZ36-3



Zener Diodes 0.50 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Marking | Zener Voltage ⁽²⁾ | | | Test Current | Dynamic Impedance ⁽³⁾ | | Max. Reverse Leakage Current | | Temp. Coefficient of Zener Voltage | |
|----------|---------|--------------------------------------|------|------|-----------------|-----------------------------------|------|---------------------------------|------------------------|------------------------------------|------|
| | | V _Z @ I _{ZT} (V) | | | I _{ZT} | Z _{ZT} @ I _{ZT} | | I _R @ V _R | TK _{VZ} (%/K) | | |
| | | Min. | Nom. | Max. | (mA) | (Ω) | (mA) | (μA) | (V) | Min. | Max. |

MM1Z2V4 Series, 0.5 W, Case Type : SOD-123



| | | | | | | | | | | | |
|---------|----|------|-----|------|-----|-----|---|-----|-----|-------|-------|
| MM1Z2V4 | 4C | 2.28 | 2.4 | 2.56 | 5.0 | 100 | 5 | 120 | 1.0 | -0.09 | -0.06 |
| MM1Z2V7 | 4D | 2.5 | 2.7 | 2.9 | 5.0 | 110 | 5 | 120 | 1.0 | -0.09 | -0.06 |
| MM1Z3V0 | 4E | 2.8 | 3.0 | 3.2 | 5.0 | 120 | 5 | 50 | 1.0 | -0.08 | -0.05 |
| MM1Z3V3 | 4F | 3.1 | 3.3 | 3.5 | 5.0 | 130 | 5 | 20 | 1.0 | -0.08 | -0.05 |
| MM1Z3V6 | 4H | 3.4 | 3.6 | 3.8 | 5.0 | 130 | 5 | 10 | 1.0 | -0.08 | -0.05 |
| MM1Z3V9 | 4J | 3.7 | 3.9 | 4.1 | 5.0 | 130 | 5 | 5.0 | 1.0 | -0.08 | -0.05 |
| MM1Z4V3 | 4K | 4.0 | 4.3 | 4.6 | 5.0 | 130 | 5 | 5.0 | 1.0 | -0.06 | -0.03 |
| MM1Z4V7 | 4M | 4.4 | 4.7 | 5.0 | 5.0 | 130 | 5 | 2.0 | 1.0 | -0.05 | +0.02 |
| MM1Z5V1 | 4N | 4.8 | 5.1 | 5.4 | 5.0 | 130 | 5 | 2.0 | 1.5 | -0.02 | +0.02 |
| MM1Z5V6 | 4P | 5.2 | 5.6 | 6.0 | 5.0 | 80 | 5 | 1.0 | 2.5 | -0.05 | +0.05 |
| MM1Z6V2 | 4R | 5.8 | 6.2 | 6.6 | 5.0 | 50 | 5 | 1.0 | 3.0 | 0.03 | 0.06 |
| MM1Z6V8 | 4X | 6.4 | 6.8 | 7.2 | 5.0 | 30 | 5 | 0.5 | 3.5 | 0.03 | 0.07 |
| MM1Z7V5 | 4Y | 7.0 | 7.5 | 7.9 | 5.0 | 30 | 5 | 0.5 | 4.0 | 0.03 | 0.07 |
| MM1Z8V2 | 4Z | 7.7 | 8.2 | 8.7 | 5.0 | 30 | 5 | 0.5 | 5.0 | 0.03 | 0.08 |
| MM1Z9V1 | 5A | 8.5 | 9.1 | 9.6 | 5.0 | 30 | 5 | 0.5 | 6.0 | 0.03 | 0.09 |
| MM1Z10 | 5B | 9.4 | 10 | 10.6 | 5.0 | 30 | 5 | 0.1 | 7.0 | 0.03 | 0.1 |
| MM1Z11 | 5C | 10.4 | 11 | 11.6 | 5.0 | 30 | 5 | 0.1 | 8.0 | 0.03 | 0.11 |
| MM1Z12 | 5D | 11.4 | 12 | 12.7 | 5.0 | 35 | 5 | 0.1 | 9.0 | 0.03 | 0.11 |
| MM1Z13 | 5E | 12.4 | 13 | 14.1 | 5.0 | 35 | 5 | 0.1 | 10 | 0.03 | 0.11 |
| MM1Z15 | 5F | 13.8 | 15 | 15.6 | 5.0 | 40 | 5 | 0.1 | 11 | 0.03 | 0.11 |
| MM1Z16 | 5H | 15.3 | 16 | 17.1 | 5.0 | 40 | 5 | 0.1 | 12 | 0.03 | 0.11 |
| MM1Z18 | 5J | 16.8 | 18 | 19.1 | 5.0 | 45 | 5 | 0.1 | 13 | 0.03 | 0.11 |
| MM1Z20 | 5K | 18.8 | 20 | 21.2 | 5.0 | 50 | 5 | 0.1 | 15 | 0.03 | 0.11 |
| MM1Z22 | 5M | 20.8 | 22 | 23.3 | 5.0 | 55 | 5 | 0.1 | 17 | 0.04 | 0.12 |
| MM1Z24 | 5N | 22.8 | 24 | 25.6 | 5.0 | 60 | 5 | 0.1 | 19 | 0.04 | 0.12 |
| MM1Z27 | 5P | 25.1 | 27 | 28.9 | 5.0 | 70 | 2 | 0.1 | 21 | 0.04 | 0.12 |
| MM1Z30 | 5R | 28.0 | 30 | 32.0 | 5.0 | 80 | 2 | 0.1 | 23 | 0.04 | 0.12 |
| MM1Z33 | 5X | 31.0 | 33 | 35.0 | 5.0 | 80 | 2 | 0.1 | 25 | 0.04 | 0.12 |
| MM1Z36 | 5Y | 34.0 | 36 | 38.0 | 5.0 | 90 | 2 | 0.1 | 27 | 0.04 | 0.12 |
| MM1Z39 | 5Z | 37.0 | 39 | 41.0 | 2.5 | 100 | 2 | 2.0 | 30 | 0.04 | 0.12 |
| MM1Z43 | 6A | 40.0 | 43 | 46.0 | 2.5 | 130 | 2 | 2.0 | 33 | 0.04 | 0.12 |
| MM1Z47 | 6B | 44.0 | 47 | 50.0 | 2.5 | 150 | 2 | 2.0 | 36 | 0.04 | 0.12 |
| MM1Z51 | 6C | 48.0 | 51 | 54.0 | 2.5 | 180 | 2 | 1.0 | 39 | 0.04 | 0.12 |
| MM1Z56 | 6D | 52.0 | 56 | 60.0 | 2.5 | 180 | 2 | 1.0 | 43 | 0.04 | 0.12 |
| MM1Z62 | 6E | 58.0 | 62 | 66.0 | 2.5 | 200 | 2 | 0.2 | 47 | 0.04 | 0.12 |
| MM1Z68 | 6F | 64.0 | 68 | 72.0 | 2.5 | 250 | 2 | 0.2 | 52 | 0.04 | 0.12 |
| MM1Z75 | 6H | 70.0 | 75 | 79.0 | 2.5 | 300 | 2 | 0.2 | 57 | 0.04 | 0.12 |

Notes :

- (1) The type number shown have a standard tolerance of $\pm 5\%$ on the nominal Zener Voltage.
- (2) V_Z is tested with pulses (20ms).
- (3) V_Z is measured at I_Z by given a very small A.C. current signal.



Zener Diodes 0.50 W

The plastic material carries U/L recognition 94V-0.

| TYPE NO. | Marking | Zener Voltage ⁽¹⁾ | | | Test Current | Dynamic Impedance ⁽²⁾ | | Max. Reverse Leakage Current | | Temp. Coefficient of Zener Voltage | |
|----------|---------|--------------------------------------|------|------|-----------------|-----------------------------------|------|---------------------------------|-----|------------------------------------|------|
| | | V _Z @ I _{ZT} (V) | | | I _{ZT} | Z _{ZT} @ I _{ZT} | | I _R @ V _R | | TK _{VZ} (%/K) | |
| | | Min. | Nom. | Max. | (mA) | (Ω) | (mA) | (μA) | (V) | Min. | Max. |

MM1Z2V7B Series, 0.5 W, Case Type : SOD-123



| | | | | | | | | | | | |
|----------|----|-------|-----|-------|---|-----|---|-----|-----|-------|-------|
| MM1Z2V7B | 9D | 2.65 | 2.7 | 2.95 | 5 | 110 | 5 | 120 | 1.0 | -0.09 | -0.06 |
| MM1Z3V0B | 9E | 2.95 | 3.0 | 3.25 | 5 | 120 | 5 | 50 | 1.0 | -0.08 | -0.05 |
| MM1Z3V3B | 9F | 3.25 | 3.3 | 3.55 | 5 | 130 | 5 | 20 | 1.0 | -0.08 | -0.05 |
| MM1Z3V6B | 9H | 3.60 | 3.6 | 3.845 | 5 | 130 | 5 | 10 | 1.0 | -0.08 | -0.05 |
| MM1Z3V9B | 9J | 3.89 | 3.9 | 4.16 | 5 | 130 | 5 | 5.0 | 1.0 | -0.08 | -0.05 |
| MM1Z4V3B | 9K | 4.17 | 4.3 | 4.43 | 5 | 130 | 5 | 5.0 | 1.0 | -0.06 | -0.03 |
| MM1Z4V7B | 9M | 4.55 | 4.7 | 4.80 | 5 | 130 | 5 | 2.0 | 1.0 | -0.05 | +0.02 |
| MM1Z5V1B | 9N | 4.95 | 5.1 | 5.20 | 5 | 130 | 5 | 2.0 | 1.5 | -0.02 | +0.02 |
| MM1Z5V6B | 9P | 5.45 | 5.6 | 5.73 | 5 | 80 | 5 | 1.0 | 2.5 | -0.05 | +0.05 |
| MM1Z6V2B | 9R | 6.00 | 6.2 | 6.33 | 5 | 50 | 5 | 1.0 | 3.0 | 0.03 | 0.06 |
| MM1Z6V8B | 9X | 6.65 | 6.8 | 7.00 | 5 | 30 | 5 | 0.5 | 3.5 | 0.03 | 0.07 |
| MM1Z7V5B | 9Y | 7.28 | 7.5 | 7.70 | 5 | 30 | 5 | 0.5 | 4.0 | 0.03 | 0.07 |
| MM1Z8V2B | 9Z | 8.02 | 8.2 | 8.45 | 5 | 30 | 5 | 0.5 | 5.0 | 0.03 | 0.08 |
| MM1Z9V1B | 0A | 8.80 | 9.1 | 9.30 | 5 | 30 | 5 | 0.5 | 6.0 | 0.03 | 0.09 |
| MM1Z10B | 0B | 9.75 | 10 | 10.30 | 5 | 30 | 5 | 0.1 | 7.0 | 0.03 | 0.10 |
| MM1Z11B | 0C | 10.70 | 11 | 11.28 | 5 | 30 | 5 | 0.1 | 8.0 | 0.03 | 0.11 |
| MM1Z12B | 0D | 11.70 | 12 | 12.30 | 5 | 35 | 5 | 0.1 | 9.0 | 0.03 | 0.11 |
| MM1Z13B | 0E | 12.43 | 13 | 14.00 | 5 | 35 | 5 | 0.1 | 10 | 0.03 | 0.11 |
| MM1Z15B | 0F | 13.80 | 15 | 15.56 | 5 | 40 | 5 | 0.1 | 11 | 0.03 | 0.11 |
| MM1Z16B | 0H | 15.31 | 16 | 17.14 | 5 | 40 | 5 | 0.1 | 12 | 0.03 | 0.11 |
| MM1Z18B | 0J | 16.89 | 18 | 19.08 | 5 | 45 | 5 | 0.1 | 13 | 0.03 | 0.11 |
| MM1Z20B | 0K | 18.80 | 20 | 21.14 | 5 | 50 | 5 | 0.1 | 15 | 0.03 | 0.11 |
| MM1Z22B | 0M | 20.81 | 22 | 23.25 | 5 | 55 | 5 | 0.1 | 17 | 0.04 | 0.12 |
| MM1Z24B | 0N | 22.86 | 24 | 25.66 | 5 | 60 | 5 | 0.1 | 19 | 0.04 | 0.12 |
| MM1Z27B | 0P | 25.10 | 27 | 28.90 | 5 | 70 | 2 | 0.1 | 21 | 0.04 | 0.12 |
| MM1Z30B | 0R | 28.00 | 30 | 32.00 | 5 | 80 | 2 | 0.1 | 23 | 0.04 | 0.12 |
| MM1Z33B | 0X | 31.00 | 33 | 35.00 | 5 | 80 | 2 | 0.1 | 25 | 0.04 | 0.12 |
| MM1Z36B | 0Y | 34.00 | 36 | 38.00 | 5 | 90 | 2 | 0.1 | 27 | 0.04 | 0.12 |
| MM1Z39B | 0Z | 37.00 | 39 | 41.00 | 5 | 100 | 2 | 2.0 | 30 | 0.04 | 0.12 |
| MM1Z36B | 0Y | 34.00 | 36 | 38.00 | 5 | 90 | 2 | 0.1 | 27 | 0.04 | 0.12 |
| MM1Z39B | 0Z | 37.00 | 39 | 41.00 | 5 | 100 | 2 | 2.0 | 30 | 0.04 | 0.12 |

Notes :

(1) V_Z is tested with pulses (20ms).

(2) V_Z is measured at I_Z by given a very small A.C. current signal.



Zener Diodes 0.50 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Marking | Zener Voltage ^(1,2) | | | Test Current | Maximum Reverse Leakage Current | |
|----------|---------|--------------------------------------|------|------|-----------------|---------------------------------|-----|
| | | V _Z @ I _{ZT} (V) | | | I _{ZT} | I _R @ V _R | |
| | | Min. | Nom. | Max. | (μA) | (μA) | (V) |

MM1Z4689 Series, 0.5 W, Case Type : SOD-123



| | | | | | | | |
|----------|----|-------|-----|-------|----|------|------|
| MM1Z4689 | BX | 4.85 | 5.1 | 5.36 | 50 | 10 | 3.0 |
| MM1Z4690 | BY | 5.32 | 5.6 | 5.88 | 50 | 10 | 4.0 |
| MM1Z4691 | BZ | 5.89 | 6.2 | 6.51 | 50 | 10 | 5.0 |
| MM1Z4692 | CA | 6.46 | 6.8 | 7.14 | 50 | 10 | 5.1 |
| MM1Z4693 | CB | 7.13 | 7.5 | 7.88 | 50 | 10 | 5.7 |
| MM1Z4694 | CC | 7.79 | 8.2 | 8.61 | 50 | 1.0 | 6.2 |
| MM1Z4696 | CE | 8.65 | 9.1 | 9.56 | 50 | 1.0 | 6.9 |
| MM1Z4697 | CF | 9.50 | 10 | 10.50 | 50 | 1.0 | 7.6 |
| MM1Z4698 | CH | 10.45 | 11 | 11.50 | 50 | 0.05 | 8.4 |
| MM1Z4699 | CJ | 11.40 | 12 | 12.60 | 50 | 0.05 | 9.1 |
| MM1Z4700 | CK | 12.35 | 13 | 13.65 | 50 | 0.05 | 9.8 |
| MM1Z4702 | CN | 14.25 | 15 | 15.75 | 50 | 0.05 | 11.4 |
| MM1Z4703 | CP | 15.20 | 16 | 16.80 | 50 | 0.05 | 12.1 |
| MM1Z4705 | CX | 17.10 | 18 | 18.90 | 50 | 0.05 | 13.6 |
| MM1Z4707 | CZ | 19.00 | 20 | 21.00 | 50 | 0.01 | 15.2 |
| MM1Z4708 | DA | 20.90 | 22 | 23.10 | 50 | 0.01 | 16.7 |
| MM1Z4709 | DB | 22.80 | 24 | 25.20 | 50 | 0.01 | 18.2 |
| MM1Z4711 | DD | 25.65 | 27 | 28.35 | 50 | 0.01 | 20.4 |
| MM1Z4713 | DF | 28.50 | 30 | 31.50 | 50 | 0.01 | 22.8 |
| MM1Z4714 | DH | 31.35 | 33 | 34.65 | 50 | 0.01 | 25.0 |
| MM1Z4715 | DJ | 34.20 | 36 | 37.80 | 50 | 0.01 | 27.3 |
| MM1Z4716 | DK | 37.05 | 39 | 40.95 | 50 | 0.01 | 29.6 |
| MM1Z4717 | DM | 40.85 | 43 | 45.15 | 50 | 0.01 | 32.6 |

Notes :

(1) Tested with pulses $t_p = 20$ ms



Zener Diodes 0.50 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Marking | Zener Voltage | | | Test Current | Maximum Zener Impedance | | Test Current | Maximum Reverse Leakage Current | |
|----------|---------|--------------------------------------|------|------|-----------------|-----------------------------------|-----------------------------------|-----------------|---------------------------------|-----|
| | | V _Z @ I _{ZT} (V) | | | I _{ZT} | Z _{ZT} @ I _{ZT} | Z _{ZK} @ I _{ZK} | I _{ZK} | I _R @ V _R | |
| | | Min. | Nom. | Max. | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) |

MM1Z5221B Series, 0.5 W, Case Type : SOD-123



| | | | | | | | | | | |
|-----------|----|-------|-----|-------|-----|-----|------|------|-----|-----|
| MM1Z5221B | A4 | 2.28 | 2.4 | 2.52 | 20 | 30 | 1200 | 0.25 | 100 | 1.0 |
| MM1Z5223B | B4 | 2.57 | 2.7 | 2.84 | 20 | 30 | 1300 | 0.25 | 75 | 1.0 |
| MM1Z5225B | C4 | 2.85 | 3.0 | 3.15 | 20 | 29 | 1600 | 0.25 | 50 | 1.0 |
| MM1Z5226B | D4 | 3.14 | 3.3 | 3.47 | 20 | 28 | 1600 | 0.25 | 25 | 1.0 |
| MM1Z5227B | E4 | 3.42 | 3.6 | 3.78 | 20 | 24 | 1700 | 0.25 | 15 | 1.0 |
| MM1Z5228B | F4 | 3.71 | 3.9 | 4.10 | 20 | 23 | 1900 | 0.25 | 10 | 1.0 |
| MM1Z5229B | H4 | 4.09 | 4.3 | 4.52 | 20 | 22 | 2000 | 0.25 | 5 | 1.0 |
| MM1Z5230B | J4 | 4.47 | 4.7 | 4.94 | 20 | 19 | 1900 | 0.25 | 5 | 2.0 |
| MM1Z5231B | K4 | 4.85 | 5.1 | 5.36 | 20 | 17 | 1600 | 0.25 | 5 | 2.0 |
| MM1Z5232B | M4 | 5.32 | 5.6 | 5.88 | 20 | 11 | 1600 | 0.25 | 5 | 3.0 |
| MM1Z5234B | N4 | 5.89 | 6.2 | 6.51 | 20 | 7 | 1000 | 0.25 | 5 | 4.0 |
| MM1Z5235B | P4 | 6.46 | 6.8 | 7.14 | 20 | 5 | 750 | 0.25 | 3 | 5.0 |
| MM1Z5236B | R4 | 7.13 | 7.5 | 7.88 | 20 | 6 | 500 | 0.25 | 3 | 6.0 |
| MM1Z5237B | X4 | 7.79 | 8.2 | 8.61 | 20 | 8 | 500 | 0.25 | 3 | 6.5 |
| MM1Z5239B | Y4 | 8.65 | 9.1 | 9.56 | 20 | 10 | 600 | 0.25 | 3 | 7.0 |
| MM1Z5240B | Z4 | 9.50 | 10 | 10.50 | 20 | 17 | 600 | 0.25 | 3 | 8.0 |
| MM1Z5241B | A5 | 10.45 | 11 | 11.50 | 20 | 22 | 600 | 0.25 | 2 | 8.4 |
| MM1Z5242B | B5 | 11.40 | 12 | 12.60 | 20 | 30 | 600 | 0.25 | 1 | 9.1 |
| MM1Z5243B | C5 | 12.35 | 13 | 13.65 | 9.5 | 13 | 600 | 0.25 | 0.5 | 9.9 |
| MM1Z5245B | D5 | 14.25 | 15 | 15.75 | 8.5 | 16 | 600 | 0.25 | 0.1 | 11 |
| MM1Z5246B | E5 | 15.20 | 16 | 16.80 | 7.8 | 17 | 600 | 0.25 | 0.1 | 12 |
| MM1Z5248B | F5 | 17.10 | 18 | 18.90 | 7.0 | 21 | 600 | 0.25 | 0.1 | 14 |
| MM1Z5249B | K9 | 18.05 | 19 | 19.95 | 6.6 | 23 | 600 | 0.25 | 0.1 | 14 |
| MM1Z5250B | H5 | 19.00 | 20 | 21.00 | 6.2 | 25 | 600 | 0.25 | 0.1 | 15 |
| MM1Z5251B | J5 | 20.90 | 22 | 23.10 | 5.6 | 29 | 600 | 0.25 | 0.1 | 17 |
| MM1Z5252B | K5 | 22.80 | 24 | 25.20 | 5.2 | 33 | 600 | 0.25 | 0.1 | 18 |
| MM1Z5253B | M9 | 23.75 | 25 | 26.25 | 5.0 | 35 | 600 | 0.25 | 0.1 | 19 |
| MM1Z5254B | M5 | 25.65 | 27 | 28.35 | 4.6 | 41 | 600 | 0.25 | 0.1 | 21 |
| MM1Z5256B | N5 | 28.50 | 30 | 31.50 | 4.2 | 49 | 600 | 0.25 | 0.1 | 23 |
| MM1Z5257B | P5 | 31.35 | 33 | 34.65 | 3.8 | 58 | 700 | 0.25 | 0.1 | 25 |
| MM1Z5258B | R5 | 34.20 | 36 | 37.80 | 3.4 | 70 | 700 | 0.25 | 0.1 | 27 |
| MM1Z5259B | X5 | 37.05 | 39 | 40.95 | 3.2 | 80 | 800 | 0.25 | 0.1 | 30 |
| MM1Z5260B | Y5 | 40.85 | 43 | 45.15 | 3.0 | 93 | 900 | 0.25 | 0.1 | 33 |
| MM1Z5261B | Z5 | 44.65 | 47 | 49.35 | 2.7 | 105 | 1000 | 0.25 | 0.1 | 36 |
| MM1Z5262B | A6 | 48.45 | 51 | 53.55 | 2.5 | 125 | 1100 | 0.25 | 0.1 | 39 |
| MM1Z5263B | B6 | 53.20 | 56 | 58.80 | 2.2 | 150 | 1300 | 0.25 | 0.1 | 43 |
| MM1Z5265B | C6 | 58.90 | 62 | 65.10 | 2.0 | 185 | 1400 | 0.25 | 0.1 | 47 |
| MM1Z5266B | D6 | 64.60 | 68 | 71.40 | 1.8 | 230 | 1600 | 0.25 | 0.1 | 52 |
| MM1Z5267B | E6 | 71.25 | 75 | 78.75 | 1.7 | 270 | 1700 | 0.25 | 0.1 | 56 |

Notes: (1) V_Z is tested with pulses (20 ms)

(2) Nominal Zener voltage is measured with the device junction in thermal equilibrium at $T_L = 30^\circ C \pm 1^\circ C$

(3) Z_{ZT} and Z_{ZK} are measured by device drop across the device by the AC current applied.

The specified limits are for $I_{Z(AC)} = 0.1 I_{Z(DC)}$ with the AC frequency 1 KHz



Zener Diodes 0.50 W

| Type No. | | Zener Voltage $V_Z @ I_{ZT}^{(1)}$ | | | | | | | | | | | | Test Current | Maximum Zener Impedance | | | Maximum Reverse Current | |
|------------|-----|---------------------------------------|------|------|-------------------------|------|------|-------------------------|------|------|----------|------|------|-----------------|----------------------------|-------------------|-------------------|-------------------------------|-------------|
| | | Suffix A ⁽²⁾ | | | Suffix B ⁽²⁾ | | | Suffix C ⁽²⁾ | | | Suffix D | | | | | | | | |
| | | Min. | Nom. | Max. | Min. | Nom. | Max. | Min. | Nom. | Max. | Min. | Nom. | Max. | | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{Zk} @ I_{Zk}$ | I_{Zk} | $I_R @ V_R$ |
| Axial Lead | SMD | (V) | (V) | (V) | (V) | (V) | (V) | (V) | (V) | (V) | (V) | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | |

MTZJ / MMZJ Series, Case Type : DO-34 / Mini MELF



| | | | | | | | | | | | | | | | | | | | |
|---------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|-----|------|-----|-----|-----|
| MTZJ2.0 | MMZJ2.0 | 1.89 | 2.00 | 2.11 | 2.02 | 2.11 | 2.20 | - | - | - | - | - | - | 5 | 100 | 1000 | 0.5 | 120 | 0.5 |
| MTZJ2.2 | MMZJ2.2 | 2.11 | 2.20 | 2.29 | 2.22 | 2.32 | 2.42 | - | - | - | - | - | - | 5 | 100 | 1000 | 0.5 | 120 | 0.7 |
| MTZJ2.4 | MMZJ2.4 | 2.34 | 2.44 | 2.54 | 2.43 | 2.53 | 2.63 | - | - | - | - | - | - | 5 | 100 | 1000 | 0.5 | 120 | 1.0 |
| MTZJ2.7 | MMZJ2.7 | 2.54 | 2.65 | 2.76 | 2.69 | 2.8 | 2.91 | - | - | - | - | - | - | 5 | 100 | 1000 | 0.5 | 100 | 1.0 |
| MTZJ3.0 | MMZJ3.0 | 2.85 | 2.96 | 3.07 | 3.01 | 3.12 | 3.23 | - | - | - | - | - | - | 5 | 120 | 1000 | 0.5 | 50 | 1.0 |
| MTZJ3.3 | MMZJ3.3 | 3.16 | 3.27 | 3.38 | 3.32 | 3.43 | 3.54 | - | - | - | - | - | - | 5 | 120 | 1000 | 0.5 | 20 | 1.0 |
| MTZJ3.6 | MMZJ3.6 | 3.45 | 3.58 | 3.70 | 3.60 | 3.72 | 3.845 | - | - | - | - | - | - | 5 | 100 | 1000 | 1.0 | 10 | 1.0 |
| MTZJ3.9 | MMZJ3.9 | 3.74 | 3.88 | 4.01 | 3.89 | 4.03 | 4.16 | - | - | - | - | - | - | 5 | 100 | 1000 | 1.0 | 5 | 1.0 |
| MTZJ4.3 | MMZJ4.3 | 4.04 | 4.17 | 4.29 | 4.17 | 4.30 | 4.43 | - | - | - | - | - | - | 5 | 100 | 1000 | 1.0 | 5 | 1.0 |
| MTZJ4.7 | MMZJ4.7 | 4.44 | 4.56 | 4.67 | 4.55 | 4.68 | 4.80 | - | - | - | - | - | - | 5 | 80 | 900 | 0.5 | 5 | 1.0 |
| MTZJ5.1 | MMZJ5.1 | 4.81 | 4.94 | 5.06 | 4.94 | 5.07 | 5.20 | 5.08 | 5.23 | 5.37 | - | - | - | 5 | 70 | 1200 | 1.0 | 5 | 1.5 |
| MTZJ5.6 | MMZJ5.6 | 5.11 | 5.42 | 5.55 | 5.45 | 5.59 | 5.72 | 5.61 | 5.76 | 5.90 | - | - | - | 5 | 40 | 900 | 1.0 | 5 | 2.5 |
| MTZJ6.2 | MMZJ6.2 | 5.78 | 5.94 | 6.09 | 5.96 | 6.12 | 6.27 | 6.12 | 6.28 | 6.43 | - | - | - | 5 | 30 | 500 | 1.0 | 5 | 3.0 |
| MTZJ6.8 | MMZJ6.8 | 6.33 | 6.46 | 6.62 | 6.49 | 6.66 | 6.82 | 6.66 | 6.84 | 7.01 | - | - | - | 5 | 20 | 150 | 0.5 | 2 | 3.5 |
| MTZJ7.5 | MMZJ7.5 | 6.85 | 7.04 | 7.22 | 7.07 | 7.26 | 7.44 | 7.29 | 7.48 | 7.66 | - | - | - | 5 | 20 | 120 | 0.5 | 0.5 | 4.0 |
| MTZJ8.2 | MMZJ8.2 | 7.53 | 7.73 | 7.92 | 7.79 | 8.00 | 8.20 | 8.03 | 8.24 | 8.44 | - | - | - | 5 | 20 | 120 | 0.5 | 0.5 | 5.0 |
| MTZJ9.1 | MMZJ9.1 | 8.28 | 8.51 | 8.73 | 8.57 | 8.79 | 9.00 | 8.83 | 9.07 | 9.30 | - | - | - | 5 | 20 | 120 | 0.5 | 0.5 | 6.0 |
| MTZJ10 | MMZJ10 | 9.13 | 9.36 | 9.59 | 9.41 | 9.66 | 9.90 | 9.70 | 9.95 | 10.19 | 9.94 | 10.20 | 10.45 | 5 | 20 | 120 | 0.5 | 0.2 | 7.0 |
| MTZJ11 | MMZJ11 | 10.14 | 10.40 | 10.66 | 10.53 | 10.80 | 11.07 | 10.82 | 11.10 | 11.37 | - | - | - | 5 | 20 | 120 | 0.5 | 0.2 | 8.0 |
| MTZJ12 | MMZJ12 | 11.11 | 11.40 | 11.68 | 11.40 | 11.70 | 11.99 | 11.70 | 12.00 | 12.30 | - | - | - | 5 | 25 | 110 | 0.5 | 0.2 | 9.0 |
| MTZJ13 | MMZJ13 | 12.07 | 12.40 | 12.72 | 12.56 | 12.90 | 13.23 | 12.96 | 13.30 | 13.63 | - | - | - | 5 | 25 | 110 | 0.5 | 0.2 | 10 |
| MTZJ15 | MMZJ15 | 13.45 | 13.80 | 14.14 | 13.92 | 14.30 | 14.67 | 14.33 | 14.70 | 15.06 | - | - | - | 5 | 25 | 110 | 0.5 | 0.2 | 11 |
| MTZJ16 | MMZJ16 | 14.82 | 15.20 | 15.58 | 15.21 | 15.60 | 15.99 | 15.69 | 16.10 | 16.50 | - | - | - | 5 | 25 | 150 | 0.5 | 0.2 | 12 |
| MTZJ18 | MMZJ18 | 16.19 | 16.60 | 17.02 | 16.87 | 17.30 | 17.73 | 17.39 | 17.80 | 18.21 | - | - | - | 5 | 30 | 150 | 0.5 | 0.2 | 13 |
| MTZJ20 | MMZJ20 | 18.04 | 18.50 | 18.96 | 18.62 | 19.10 | 19.58 | 19.21 | 19.70 | 20.19 | 19.70 | 20.20 | 20.71 | 5 | 30 | 200 | 0.5 | 0.2 | 15 |
| MTZJ22 | MMZJ22 | 20.18 | 20.70 | 21.22 | 20.67 | 21.20 | 21.73 | 21.06 | 21.60 | 22.14 | 21.55 | 22.10 | 22.65 | 5 | 30 | 200 | 0.5 | 0.2 | 17 |
| MTZJ24 | MMZJ24 | 22.04 | 22.60 | 23.17 | 22.62 | 23.20 | 23.78 | 23.11 | 23.70 | 24.29 | 23.60 | 24.20 | 24.81 | 5 | 35 | 200 | 0.5 | 0.2 | 19 |
| MTZJ27 | MMZJ27 | 24.28 | 24.90 | 25.52 | 24.96 | 25.60 | 26.24 | 26.33 | 27.00 | 27.68 | 26.54 | 27.00 | 27.46 | 5 | 45 | 250 | 0.5 | 0.2 | 21 |
| MTZJ30 | MMZJ30 | 27.01 | 27.70 | 28.39 | 27.69 | 28.40 | 29.11 | 28.37 | 29.10 | 29.83 | 29.06 | 29.80 | 30.55 | 5 | 55 | 250 | 0.5 | 0.2 | 23 |
| MTZJ33 | MMZJ33 | 29.64 | 30.40 | 31.16 | 30.32 | 31.10 | 31.88 | 30.91 | 31.70 | 32.49 | 31.49 | 32.30 | 33.11 | 5 | 65 | 250 | 0.5 | 0.2 | 25 |
| MTZJ36 | MMZJ36 | 32.18 | 33.00 | 33.83 | 32.76 | 33.60 | 34.44 | 33.44 | 34.30 | 35.16 | 34.03 | 34.90 | 35.77 | 5 | 75 | 250 | 0.5 | 0.2 | 27 |
| MTZJ39 | MMZJ39 | 34.71 | 35.60 | 36.49 | 35.47 | 36.30 | 37.13 | 35.98 | 36.90 | 37.82 | 36.66 | 37.60 | 38.54 | 5 | 85 | 250 | 0.5 | 0.2 | 30 |

Note :

- (1) The Zener voltage is measured 40ms after power is supplied
- (2) When placing an order for an MTZJ or MMZJ type, please add suffix e.g. MTZJ2.0A, MTZJ2.0B.....MMZJ39C



Zener Diodes 0.50 W

The plastic material carries U/L recognition 94V-0.

| Type Number | Zener Voltage $V_Z @ I_{ZT}$ | | | | Maximum Zener Impedance | | | Max. Reverse Leakage Current | | Temp. coefficient of Zener Voltage TK_{VZ} | Admissible Zener Current I_{ZM} (mA) |
|----------------|---------------------------------|-----|-----|----------|----------------------------|-------------------|----------|---------------------------------|----------|--|---|
| | Nom. | Min | Max | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | I_{ZK} | I_R | at V_R | | |
| | (V) | (V) | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | (% / K) | |

MZ55C Series, 0.5 W, Case Type : M1A



| | | | | | | | | | | | |
|----------|-----|------|------|-----|------|-------|-----|-----|------|---------------|-----|
| MZ55C3V0 | 3.0 | 2.8 | 3.2 | 5.0 | 85 | 600 | 1.0 | 4.0 | 1.0 | -0.08...-0.05 | 125 |
| MZ55C3V3 | 3.3 | 3.1 | 3.5 | 5.0 | 85 | 600 | 1.0 | 2.0 | 1.0 | -0.08...-0.05 | 115 |
| MZ55C3V6 | 3.6 | 3.4 | 3.8 | 5.0 | 85 | 600 | 1.0 | 2.0 | 1.0 | -0.08...-0.05 | 105 |
| MZ55C3V9 | 3.9 | 3.7 | 4.1 | 5.0 | 85 | 600 | 1.0 | 2.0 | 1.0 | -0.08...-0.05 | 95 |
| MZ55C4V3 | 4.3 | 4.0 | 4.6 | 5.0 | 75 | 600 | 1.0 | 1.0 | 1.0 | -0.06...-0.03 | 90 |
| MZ55C4V7 | 4.7 | 4.4 | 5.0 | 5.0 | 60 | 600 | 1.0 | 1.0 | 1.0 | -0.05...+0.02 | 85 |
| MZ55C5V1 | 5.1 | 4.8 | 5.4 | 5.0 | 35 | 550 | 1.0 | 1.0 | 1.0 | -0.02...+0.02 | 80 |
| MZ55C5V6 | 5.6 | 5.2 | 6.0 | 5.0 | 25 | 450 | 1.0 | 1.0 | 1.0 | -0.05...+0.05 | 70 |
| MZ55C6V2 | 6.2 | 5.8 | 6.6 | 5.0 | 10 | 200 | 1.0 | 1.0 | 2.0 | 0.03...0.06 | 64 |
| MZ55C6V8 | 6.8 | 6.4 | 7.2 | 5.0 | 8 | 150 | 1.0 | 1.0 | 3.0 | 0.03...0.07 | 58 |
| MZ55C7V5 | 7.5 | 7.0 | 7.9 | 5.0 | 7 | 50 | 1.0 | 1.0 | 5.0 | 0.03...0.07 | 53 |
| MZ55C8V2 | 8.2 | 7.7 | 8.7 | 5.0 | 7 | 50 | 1.0 | 1.0 | 6.2 | 0.03...0.08 | 47 |
| MZ55C9V1 | 9.1 | 8.5 | 9.6 | 5.0 | 10 | 50 | 1.0 | 1.0 | 6.8 | 0.03...0.09 | 43 |
| MZ55C10 | 10 | 9.4 | 10.6 | 5.0 | 15 | 70 | 1.0 | 1.0 | 7.5 | 0.03...0.10 | 40 |
| MZ55C11 | 11 | 10.4 | 11.6 | 5.0 | 20 | 70 | 1.0 | 1.0 | 8.2 | 0.03...0.11 | 36 |
| MZ55C12 | 12 | 11.4 | 12.7 | 5.0 | 20 | 90 | 1.0 | 1.0 | 9.1 | 0.03...0.11 | 32 |
| MZ55C13 | 13 | 12.4 | 14.1 | 5.0 | 26 | 110 | 1.0 | 1.0 | 10.0 | 0.03...0.11 | 29 |
| MZ55C14 | 14 | 13.1 | 15.0 | 5.0 | 28 | 110 | 1.0 | 1.0 | 10.5 | 0.03...0.11 | 28 |
| MZ55C15 | 15 | 13.8 | 15.6 | 5.0 | 30 | 110 | 1.0 | 1.0 | 11 | 0.03...0.11 | 27 |
| MZ55C16 | 16 | 15.3 | 17.1 | 5.0 | 40 | 170 | 1.0 | 1.0 | 12 | 0.03...0.11 | 24 |
| MZ55C18 | 18 | 16.8 | 19.1 | 5.0 | 50 | 170 | 1.0 | 1.0 | 13 | 0.03...0.11 | 21 |
| MZ55C20 | 20 | 18.8 | 21.2 | 5.0 | 55 | 220 | 1.0 | 1.0 | 15 | 0.03...0.11 | 20 |
| MZ55C22 | 22 | 20.8 | 23.3 | 5.0 | 55 | 220 | 1.0 | 1.0 | 16 | 0.04...0.12 | 18 |
| MZ55C24 | 24 | 22.8 | 25.6 | 5.0 | 80 | 220 | 1.0 | 1.0 | 18 | 0.04...0.12 | 16 |
| MZ55C27 | 27 | 25.1 | 28.9 | 5.0 | 80 | 220 | 1.0 | 1.0 | 20 | 0.04...0.12 | 14 |
| MZ55C30 | 30 | 28 | 32 | 5.0 | 80 | 220 | 1.0 | 1.0 | 22 | 0.04...0.12 | 13 |
| MZ55C33 | 33 | 31 | 35 | 5.0 | 80 | 220 | 1.0 | 1.0 | 24 | 0.04...0.12 | 12 |
| MZ55C36 | 36 | 34 | 38 | 5.0 | 80 | 220 | 1.0 | 1.0 | 27 | 0.04...0.12 | 11 |
| MZ55C39 | 39 | 37 | 41 | 2.5 | 90 | 500 | 0.5 | 1.0 | 30 | 0.04...0.12 | 10 |
| MZ55C43 | 43 | 40 | 46 | 2.5 | 90 | 500 | 0.5 | 1.0 | 33 | 0.04...0.12 | 9.2 |
| MZ55C47 | 47 | 44 | 50 | 2.5 | 110 | 600 | 0.5 | 1.0 | 36 | 0.04...0.12 | 8.5 |
| MZ55C51 | 51 | 48 | 54 | 2.5 | 125 | 700 | 0.5 | 1.0 | 39 | 0.04...0.12 | 7.8 |
| MZ55C56 | 56 | 52 | 60 | 2.5 | 135 | 700 | 0.5 | 1.0 | 43 | 0.04...0.12 | 7.0 |
| MZ55C62 | 62 | 58 | 66 | 2.5 | 150 | 1000 | 0.5 | 1.0 | 47 | 0.04...0.12 | 6.4 |
| MZ55C68 | 68 | 64 | 72 | 2.5 | 200 | 1000 | 0.5 | 1.0 | 51 | 0.04...0.12 | 5.9 |
| MZ55C75 | 75 | 70 | 79 | 2.5 | 250 | 1000 | 0.5 | 1.0 | 56 | 0.04...0.12 | 5.3 |
| MZ55C82 | 82 | 77 | 87 | 2.5 | 300 | 1500 | 0.5 | 1.0 | 62 | 0.05...0.12 | 4.8 |
| MZ55C91 | 91 | 85 | 96 | 1.0 | 450 | 2000 | 0.5 | 1.0 | 68 | 0.05...0.12 | 4.4 |
| MZ55C100 | 100 | 94 | 106 | 1.0 | 450 | 5000 | 0.5 | 1.0 | 75 | 0.05...0.12 | 4.0 |
| MZ55C110 | 110 | 104 | 116 | 1.0 | 600 | 5000 | 0.5 | 1.0 | 82 | 0.05...0.12 | 3.6 |
| MZ55C120 | 120 | 114 | 127 | 1.0 | 800 | 5500 | 0.5 | 1.0 | 91 | 0.05...0.12 | 3.3 |
| MZ55C130 | 130 | 124 | 141 | 1.0 | 950 | 6000 | 0.5 | 1.0 | 100 | 0.05...0.12 | 3.1 |
| MZ55C150 | 150 | 138 | 156 | 1.0 | 1250 | 6500 | 0.5 | 1.0 | 110 | 0.05...0.12 | 3.7 |
| MZ55C160 | 160 | 153 | 171 | 1.0 | 1400 | 7000 | 0.5 | 1.0 | 120 | 0.05...0.12 | 2.5 |
| MZ55C180 | 180 | 168 | 191 | 1.0 | 1700 | 8500 | 0.5 | 1.0 | 130 | 0.05...0.12 | 2.2 |
| MZ55C190 | 190 | 180 | 199 | 1.0 | 1850 | 9500 | 0.5 | 1.0 | 140 | 0.05...0.12 | 2.1 |
| MZ55C200 | 200 | 188 | 212 | 1.0 | 2000 | 10000 | 0.5 | 1.0 | 150 | 0.05...0.12 | 2.0 |

Note :

- (1) The type number listed have a standard tolerance on the nominal zener voltage of $\pm 5.0\%$.
For $\pm 2\%$ tolerance altered the fifth letter of type from "C" to be "B"



Zener Diodes 0.50 W

| Type No. | Suffix ⁽²⁾ | Zener Voltage ⁽¹⁾ | | | Dynamic Impedance | | Knee Dynamic Impedance | | Reverse Current | | Zener Voltage Temperature | |
|----------|-----------------------|------------------------------|------|------------|-------------------|------------|------------------------|------------|-----------------|-----------|---------------------------|------------|
| | | V_Z (V) | | | $Z_Z(\Omega)$ | | $Z_{ZK}(\Omega)$ | | $I_R(\mu A)$ | | $\gamma_Z(mV/^{\circ}C)$ | |
| | | Min. | Max. | I_Z (mA) | Max. | I_Z (mA) | Max. | I_Z (mA) | Max. | V_R (V) | Max. | I_Z (mA) |

RD2.0E Series, 0.5 W, Case Type : DO-35



| | | | | | | | | | | | | |
|--------|----|------|------|----|-----|----|------|-----|-----|-----|------|----|
| RD2.0E | B | 1.88 | 2.20 | 20 | 140 | 20 | 2000 | 1.0 | 120 | 0.5 | -1.0 | 20 |
| | B1 | 1.88 | 2.10 | | | | | | | | | |
| | B2 | 2.02 | 2.20 | | | | | | | | | |
| RD2.2E | B | 2.12 | 2.41 | 20 | 120 | 20 | 2000 | 1.0 | 120 | 0.7 | -1.5 | 20 |
| | B1 | 2.12 | 2.3 | | | | | | | | | |
| | B2 | 2.22 | 2.41 | | | | | | | | | |
| RD2.4E | B | 2.33 | 2.63 | 20 | 100 | 20 | 2000 | 1.0 | 120 | 1.0 | -1.5 | 20 |
| | B1 | 2.33 | 2.52 | | | | | | | | | |
| | B2 | 2.43 | 2.63 | | | | | | | | | |
| RD2.7E | B | 2.54 | 2.91 | 20 | 100 | 20 | 1000 | 1.0 | 100 | 1.0 | -1.5 | 20 |
| | B1 | 2.54 | 2.75 | | | | | | | | | |
| | B2 | 2.69 | 2.91 | | | | | | | | | |
| RD3.0E | B | 2.85 | 3.22 | 20 | 80 | 20 | 1000 | 1.0 | 50 | 1.0 | -2.0 | 20 |
| | B1 | 2.85 | 3.07 | | | | | | | | | |
| | B2 | 3.01 | 3.22 | | | | | | | | | |
| RD3.3E | B | 3.16 | 3.53 | 20 | 70 | 20 | 1000 | 1.0 | 20 | 1.0 | -2.0 | 20 |
| | B1 | 3.16 | 3.38 | | | | | | | | | |
| | B2 | 3.32 | 3.53 | | | | | | | | | |
| RD3.6E | B | 3.47 | 3.83 | 20 | 60 | 20 | 1000 | 1.0 | 10 | 1.0 | -2.0 | 20 |
| | B1 | 3.47 | 3.68 | | | | | | | | | |
| | B2 | 3.62 | 3.83 | | | | | | | | | |
| RD3.9E | B | 3.77 | 4.14 | 20 | 50 | 20 | 1000 | 1.0 | 5.0 | 1.0 | -2.0 | 20 |
| | B1 | 3.77 | 3.98 | | | | | | | | | |
| | B2 | 3.92 | 4.14 | | | | | | | | | |
| RD4.3E | B | 4.05 | 4.53 | 20 | 40 | 20 | 1000 | 1.0 | 5.0 | 1.0 | -1.5 | 20 |
| | B1 | 4.05 | 4.26 | | | | | | | | | |
| | B2 | 4.20 | 4.40 | | | | | | | | | |
| | B3 | 4.34 | 4.53 | | | | | | | | | |
| RD4.7E | B | 4.47 | 4.91 | 20 | 25 | 20 | 900 | 1.0 | 5.0 | 1.0 | -1.5 | 20 |
| | B1 | 4.47 | 4.65 | | | | | | | | | |
| | B2 | 4.59 | 4.77 | | | | | | | | | |
| | B3 | 4.71 | 4.91 | | | | | | | | | |
| RD5.1E | B | 4.85 | 5.35 | 20 | 20 | 20 | 800 | 1.0 | 5.0 | 1.5 | 0.5 | 20 |
| | B1 | 4.85 | 5.03 | | | | | | | | | |
| | B2 | 4.97 | 5.18 | | | | | | | | | |
| | B3 | 5.12 | 5.35 | | | | | | | | | |
| RD5.6E | B | 5.29 | 5.88 | 20 | 13 | 20 | 500 | 1.0 | 5.0 | 2.5 | 1.5 | 20 |
| | B1 | 5.29 | 5.52 | | | | | | | | | |
| | B2 | 5.46 | 5.70 | | | | | | | | | |
| | B3 | 5.64 | 5.88 | | | | | | | | | |
| RD6.2E | B | 5.81 | 6.40 | 20 | 10 | 20 | 300 | 1.0 | 5.0 | 3.0 | 2.0 | 20 |
| | B1 | 5.81 | 6.06 | | | | | | | | | |
| | B2 | 5.99 | 6.24 | | | | | | | | | |
| | B3 | 6.16 | 6.40 | | | | | | | | | |



Zener Diodes 0.50 W

| Type No. | Suffix ⁽²⁾ | Zener Voltage ⁽¹⁾ | | | Dynamic Impedance | | Knee Dynamic Impedance | | Reverse Current | | Zener Voltage Temperature | |
|----------|-----------------------|------------------------------|------|------------|-------------------|------------|------------------------|------------|-----------------|-----------|---------------------------|------------|
| | | V_Z (V) | | | $Z_Z(\Omega)$ | | $Z_{ZK}(\Omega)$ | | $I_R(\mu A)$ | | $\gamma_Z(mV/^\circ C)$ | |
| | | Min. | Max. | I_Z (mA) | Max. | I_Z (mA) | Max. | I_Z (mA) | Max. | V_R (V) | Max. | I_Z (mA) |

RD2.0E Series, 0.5 W, Case Type : DO-35



| | | | | | | | | | | | | |
|--------|----|-------|-------|----|----|----|-----|-----|-----|-----|-----|----|
| RD6.8E | B | 6.32 | 6.97 | 20 | 8 | 20 | 150 | 0.5 | 2.0 | 3.5 | 2.5 | 20 |
| | B1 | 6.32 | 6.59 | | | | | | | | | |
| | B2 | 6.52 | 6.79 | | | | | | | | | |
| | B3 | 6.70 | 6.97 | | | | | | | | | |
| RD7.5E | B | 6.88 | 7.64 | 20 | 8 | 20 | 120 | 0.5 | 0.5 | 4.0 | 3.0 | 20 |
| | B1 | 6.88 | 7.19 | | | | | | | | | |
| | B2 | 7.11 | 7.41 | | | | | | | | | |
| | B3 | 7.33 | 7.64 | | | | | | | | | |
| RD8.2E | B | 7.56 | 8.41 | 20 | 8 | 20 | 120 | 0.5 | 0.5 | 5.0 | 4.0 | 20 |
| | B1 | 7.56 | 7.90 | | | | | | | | | |
| | B2 | 7.82 | 8.15 | | | | | | | | | |
| | B3 | 8.07 | 8.41 | | | | | | | | | |
| RD9.1E | B | 8.33 | 9.29 | 20 | 8 | 20 | 120 | 0.5 | 0.5 | 6.0 | 4.5 | 20 |
| | B1 | 8.33 | 8.70 | | | | | | | | | |
| | B2 | 8.61 | 8.99 | | | | | | | | | |
| | B3 | 8.89 | 9.29 | | | | | | | | | |
| RD10E | B | 9.19 | 10.30 | 20 | 8 | 20 | 120 | 0.5 | 0.2 | 7.0 | 5.5 | 20 |
| | B1 | 9.19 | 9.59 | | | | | | | | | |
| | B2 | 9.48 | 9.90 | | | | | | | | | |
| | B3 | 9.82 | 10.30 | | | | | | | | | |
| RD11E | B | 10.18 | 11.26 | 10 | 10 | 10 | 120 | 0.5 | 0.2 | 8.0 | 6.5 | 10 |
| | B1 | 10.18 | 10.63 | | | | | | | | | |
| | B2 | 10.50 | 10.95 | | | | | | | | | |
| | B3 | 10.82 | 11.26 | | | | | | | | | |
| RD12E | B | 11.13 | 12.30 | 10 | 12 | 10 | 110 | 0.5 | 0.2 | 9.0 | 7.5 | 10 |
| | B1 | 11.13 | 11.63 | | | | | | | | | |
| | B2 | 11.50 | 11.92 | | | | | | | | | |
| | B3 | 11.80 | 12.30 | | | | | | | | | |
| RD13E | B | 12.18 | 13.62 | 10 | 14 | 10 | 110 | 0.5 | 0.2 | 10 | 8.5 | 10 |
| | B1 | 12.18 | 12.71 | | | | | | | | | |
| | B2 | 12.59 | 13.16 | | | | | | | | | |
| | B3 | 13.03 | 13.62 | | | | | | | | | |
| RD15E | B | 13.48 | 15.02 | 10 | 16 | 10 | 110 | 0.5 | 0.2 | 11 | 10 | 10 |
| | B1 | 13.48 | 14.09 | | | | | | | | | |
| | B2 | 13.95 | 14.56 | | | | | | | | | |
| | B3 | 14.40 | 15.02 | | | | | | | | | |
| RD16E | B | 14.87 | 16.50 | 10 | 18 | 10 | 150 | 0.5 | 0.2 | 12 | 11 | 10 |
| | B1 | 14.87 | 15.50 | | | | | | | | | |
| | B2 | 13.55 | 15.93 | | | | | | | | | |
| | B3 | 15.79 | 16.50 | | | | | | | | | |
| RD18E | B | 16.34 | 18.30 | 10 | 23 | 10 | 150 | 0.5 | 0.2 | 13 | 13 | 10 |
| | B1 | 16.34 | 17.06 | | | | | | | | | |
| | B2 | 16.90 | 17.67 | | | | | | | | | |
| | B3 | 17.51 | 18.30 | | | | | | | | | |



Zener Diodes 0.50 W

| Type No. | Suffix ⁽²⁾ | Zener Voltage ⁽¹⁾ | | | Dynamic Impedance | | Knee Dynamic Impedance | | Reverse Current | | Zener Voltage Temperature | |
|----------|-----------------------|------------------------------|------|------------|-------------------|------------|------------------------|------------|-----------------|-----------|---------------------------|------------|
| | | V_Z (V) | | | $Z_Z(\Omega)$ | | $Z_{ZK}(\Omega)$ | | $I_R(\mu A)$ | | $\gamma_Z(mV/^\circ C)$ | |
| | | Min. | Max. | I_Z (mA) | Max. | I_Z (mA) | Max. | I_Z (mA) | Max. | V_R (V) | Max. | I_Z (mA) |

RD2.0E Series, 0.5 W, Case Type : DO-35



| | | | | | | | | | | | | |
|-------|----|-------|-------|----|----|----|-----|-----|-----|----|----|-----|
| RD20E | B | 18.11 | 20.72 | 10 | 28 | 10 | 200 | 0.5 | 0.2 | 15 | 15 | 10 |
| | B1 | 18.11 | 18.92 | | | | | | | | | |
| | B2 | 18.73 | 19.57 | | | | | | | | | |
| | B3 | 19.38 | 20.22 | | | | | | | | | |
| | B4 | 19.88 | 20.72 | | | | | | | | | |
| RD22E | B | 20.23 | 22.61 | 5 | 30 | 5 | 200 | 0.5 | 0.2 | 17 | 17 | 5.0 |
| | B1 | 20.23 | 21.08 | | | | | | | | | |
| | B2 | 20.76 | 21.65 | | | | | | | | | |
| | B3 | 21.22 | 22.09 | | | | | | | | | |
| | B4 | 21.68 | 22.61 | | | | | | | | | |
| RD24E | B | 22.26 | 24.81 | 5 | 35 | 5 | 200 | 0.5 | 0.2 | 19 | 19 | 5.0 |
| | B1 | 22.26 | 23.12 | | | | | | | | | |
| | B2 | 22.75 | 23.75 | | | | | | | | | |
| | B3 | 23.29 | 24.27 | | | | | | | | | |
| | B4 | 23.81 | 24.81 | | | | | | | | | |
| RD27E | B | 24.26 | 27.64 | 5 | 45 | 5 | 250 | 0.5 | 0.2 | 21 | 21 | 5.0 |
| | B1 | 24.26 | 25.52 | | | | | | | | | |
| | B2 | 24.97 | 26.26 | | | | | | | | | |
| | B3 | 25.63 | 26.95 | | | | | | | | | |
| | B4 | 26.29 | 27.64 | | | | | | | | | |
| RD30E | B | 26.99 | 30.51 | 5 | 55 | 5 | 250 | 0.5 | 0.2 | 23 | 24 | 5.0 |
| | B1 | 26.99 | 28.39 | | | | | | | | | |
| | B2 | 27.70 | 29.13 | | | | | | | | | |
| | B3 | 28.36 | 29.82 | | | | | | | | | |
| | B4 | 29.02 | 30.51 | | | | | | | | | |
| RD33E | B | 29.63 | 33.11 | 5 | 65 | 5 | 250 | 0.5 | 0.2 | 25 | 26 | 5.0 |
| | B1 | 29.68 | 31.22 | | | | | | | | | |
| | B2 | 30.32 | 31.88 | | | | | | | | | |
| | B3 | 30.90 | 32.50 | | | | | | | | | |
| | B4 | 31.49 | 33.11 | | | | | | | | | |
| RD36E | B | 32.14 | 35.77 | 5 | 75 | 5 | 250 | 0.5 | 0.2 | 27 | 29 | 5.0 |
| | B1 | 32.14 | 33.79 | | | | | | | | | |
| | B2 | 32.79 | 34.49 | | | | | | | | | |
| | B3 | 33.40 | 35.13 | | | | | | | | | |
| | B4 | 34.01 | 35.77 | | | | | | | | | |
| RD39E | B | 34.68 | 40.80 | 5 | 85 | 5 | 250 | 0.5 | 0.2 | 30 | 32 | 5.0 |
| | B1 | 34.68 | 36.47 | | | | | | | | | |
| | B2 | 35.36 | 37.19 | | | | | | | | | |
| | B3 | 36.00 | 37.85 | | | | | | | | | |
| | B4 | 36.63 | 38.52 | | | | | | | | | |

Notes:

- (1) The zener voltage (V_Z) is tested for 40 ms after power is supplied
- (2) When placing an order for an RD2.0E type, please add suffix e.g. RD2.0EB, RD2.0EB1 RD39EB4
The B grade is a wide specification, covering full voltage range for suffix "B1" to "B4"



Zener Diodes 0.50 W

| Type No. | Zener Voltage $V_Z @ I_{ZT}^{(1)}$ | | Test Current | Maximum Zener Impedance | | | Maximum Reverse Current At V_R | |
|----------|---------------------------------------|------|-----------------|----------------------------|-------------------|----------|-------------------------------------|-------|
| | Min. | Max. | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | I_{ZK} | I_R | V_R |
| | (V) | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) |

RLZ Series, Case Type : MiniMELF



| | | | | | | | | |
|---------|-------|-------|----|----|------|-----|-----|-----|
| RLZ3.6B | 3.60 | 3.85 | 20 | 60 | 1000 | 1.0 | 10 | 1.0 |
| RLZ3.9B | 3.89 | 4.16 | 20 | 50 | 1000 | 1.0 | 5 | 1.0 |
| RLZ4.3B | 4.17 | 4.43 | 20 | 40 | 1000 | 1.0 | 5 | 1.0 |
| RLZ4.7B | 4.55 | 4.80 | 20 | 25 | 900 | 1.0 | 5 | 1.0 |
| RLZ5.1B | 4.94 | 5.20 | 20 | 20 | 800 | 1.0 | 5 | 1.5 |
| RLZ5.6B | 5.45 | 5.73 | 20 | 13 | 500 | 1.0 | 5 | 2.5 |
| RLZ6.2B | 5.96 | 6.27 | 20 | 10 | 300 | 1.0 | 5 | 3.0 |
| RLZ6.8B | 6.49 | 6.83 | 20 | 8 | 150 | 0.5 | 2 | 3.5 |
| RLZ7.5B | 7.07 | 7.45 | 20 | 8 | 120 | 0.5 | 0.5 | 4.0 |
| RLZ8.2B | 7.78 | 8.19 | 20 | 8 | 120 | 0.5 | 0.5 | 5.0 |
| RLZ9.1B | 8.57 | 9.01 | 20 | 8 | 120 | 0.5 | 0.5 | 6.0 |
| RLZ10B | 9.41 | 9.90 | 20 | 8 | 120 | 0.5 | 0.2 | 7.0 |
| RLZ11B | 10.50 | 11.05 | 10 | 10 | 120 | 0.5 | 0.2 | 8.0 |
| RLZ12B | 11.44 | 12.03 | 10 | 12 | 110 | 0.5 | 0.2 | 9.0 |
| RLZ13B | 12.55 | 13.21 | 10 | 14 | 110 | 0.5 | 0.2 | 10 |
| RLZ15B | 13.89 | 14.62 | 10 | 16 | 110 | 0.5 | 0.2 | 11 |
| RLZ16B | 15.25 | 16.04 | 10 | 18 | 150 | 0.5 | 0.2 | 12 |
| RLZ18B | 16.82 | 17.70 | 10 | 23 | 150 | 0.5 | 0.2 | 13 |
| RLZ20B | 18.63 | 19.59 | 10 | 28 | 200 | 0.5 | 0.2 | 15 |
| RLZ22B | 20.64 | 21.71 | 5 | 30 | 200 | 0.5 | 0.2 | 17 |
| RLZ24B | 22.61 | 23.77 | 5 | 35 | 200 | 0.5 | 0.2 | 19 |
| RLZ27B | 24.97 | 26.26 | 5 | 45 | 250 | 0.5 | 0.2 | 21 |
| RLZ30B | 27.70 | 29.13 | 5 | 55 | 250 | 0.5 | 0.2 | 23 |
| RLZ33B | 30.32 | 31.88 | 5 | 65 | 250 | 0.5 | 0.2 | 25 |
| RLZ36B | 32.79 | 34.49 | 5 | 75 | 250 | 0.5 | 0.2 | 27 |
| RLZ39B | 35.36 | 37.19 | 5 | 85 | 250 | 0.5 | 0.2 | 30 |

Note :

(1) The Zener voltage is measured 40ms after power is supplied



Zener Diodes 0.50 W

| Type | Zener Voltage $V_Z @ I_{ZT}$ | | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | | Temp. coefficient of Zener Voltage |
|------|---------------------------------|----------|--------------------|----------------------------|-------------------|----------|------------------------------------|-------------|----------|---------------------------------------|
| | Nom | I_{ZT} | V_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | I_{ZK} | I_R | $I_R^{(2)}$ | at V_R | $\alpha_{VZ} (\% / K)$ |
| | (V) | (mA) | (V) ⁽¹⁾ | (Ω) | (Ω) | (mA) | (μA) | (μA) | (V) | |

TZMC Series, 0.5 W, Case Type : Mini MELF



| | | | | | | | | | | |
|---------|-----|-----|--------------|-------|--------|-----|-------|-------|-----|---------------|
| TZMC2V4 | 2.4 | 5 | 2.28 to 2.56 | < 85 | < 600 | 1.0 | < 50 | < 100 | 1.0 | -0.09...-0.06 |
| TZMC2V7 | 2.7 | 5 | 2.5 to 2.9 | < 85 | < 600 | 1.0 | < 10 | < 50 | 1.0 | -0.09...-0.06 |
| TZMC3V0 | 3.0 | 5 | 2.8 to 3.2 | < 90 | < 600 | 1.0 | < 4 | < 40 | 1.0 | -0.08...-0.05 |
| TZMC3V3 | 3.3 | 5 | 3.1 to 3.5 | < 90 | < 600 | 1.0 | < 2 | < 40 | 1.0 | -0.08...-0.05 |
| TZMC3V6 | 3.6 | 5 | 3.4 to 3.8 | < 90 | < 600 | 1.0 | < 2 | < 40 | 1.0 | -0.08...-0.05 |
| TZMC3V9 | 3.9 | 5 | 3.7 to 4.1 | < 90 | < 600 | 1.0 | < 2 | < 40 | 1.0 | -0.08...-0.05 |
| TZMC4V3 | 4.3 | 5 | 4.0 to 4.6 | < 90 | < 600 | 1.0 | < 1 | < 20 | 1.0 | -0.06...-0.03 |
| TZMC4V7 | 4.7 | 5 | 4.4 to 5.0 | < 80 | < 600 | 1.0 | < 0.5 | < 10 | 1.0 | -0.05...-0.02 |
| TZMC5V1 | 5.1 | 5 | 4.8 to 5.4 | < 60 | < 550 | 1.0 | < 0.1 | < 2 | 1.0 | -0.02...+0.02 |
| TZMC5V6 | 5.6 | 5 | 5.2 to 6.0 | < 40 | < 450 | 1.0 | < 0.1 | < 2 | 1.0 | -0.05...+0.05 |
| TZMC6V2 | 6.2 | 5 | 5.8 to 6.6 | < 10 | < 200 | 1.0 | < 0.1 | < 2 | 2.0 | -0.03...+0.06 |
| TZMC6V8 | 6.8 | 5 | 6.4 to 7.2 | < 8 | < 150 | 1.0 | < 0.1 | < 2 | 3.0 | 0.03...0.07 |
| TZMC7V5 | 7.5 | 5 | 7.0 to 7.9 | < 7 | < 50 | 1.0 | < 0.1 | < 2 | 5.0 | 0.03...0.07 |
| TZMC8V2 | 8.2 | 5 | 7.7 to 8.7 | < 7 | < 50 | 1.0 | < 0.1 | < 2 | 6.2 | 0.03...0.08 |
| TZMC9V1 | 9.1 | 5 | 8.5 to 9.6 | < 10 | < 50 | 1.0 | < 0.1 | < 2 | 6.8 | 0.03...0.09 |
| TZMC10 | 10 | 5 | 9.4 to 10.6 | < 15 | < 70 | 1.0 | < 0.1 | < 2 | 7.5 | 0.03...0.10 |
| TZMC11 | 11 | 5 | 10.4 to 11.6 | < 20 | < 70 | 1.0 | < 0.1 | < 2 | 8.2 | 0.03...0.11 |
| TZMC12 | 12 | 5 | 11.4 to 12.7 | < 20 | < 90 | 1.0 | < 0.1 | < 2 | 9.1 | 0.03...0.11 |
| TZMC13 | 13 | 5 | 12.4 to 14.1 | < 26 | < 110 | 1.0 | < 0.1 | < 2 | 10 | 0.03...0.11 |
| TZMC15 | 15 | 5 | 13.8 to 15.6 | < 30 | < 110 | 1.0 | < 0.1 | < 2 | 11 | 0.03...0.11 |
| TZMC16 | 16 | 5 | 15.3 to 17.1 | < 40 | < 170 | 1.0 | < 0.1 | < 2 | 12 | 0.03...0.11 |
| TZMC18 | 18 | 5 | 16.8 to 19.1 | < 50 | < 170 | 1.0 | < 0.1 | < 2 | 13 | 0.03...0.11 |
| TZMC20 | 20 | 5 | 18.8 to 21.2 | < 55 | < 220 | 1.0 | < 0.1 | < 2 | 15 | 0.03...0.11 |
| TZMC22 | 22 | 5 | 20.8 to 23.3 | < 55 | < 220 | 1.0 | < 0.1 | < 2 | 16 | 0.04...0.12 |
| TZMC24 | 24 | 5 | 22.8 to 25.6 | < 80 | < 220 | 1.0 | < 0.1 | < 2 | 18 | 0.04...0.12 |
| TZMC27 | 27 | 5 | 25.1 to 28.9 | < 80 | < 220 | 1.0 | < 0.1 | < 2 | 20 | 0.04...0.12 |
| TZMC30 | 30 | 5 | 28 to 32 | < 80 | < 220 | 1.0 | < 0.1 | < 2 | 22 | 0.04...0.12 |
| TZMC33 | 33 | 5 | 31 to 35 | < 80 | < 220 | 1.0 | < 0.1 | < 2 | 24 | 0.04...0.12 |
| TZMC36 | 36 | 5 | 34 to 38 | < 80 | < 220 | 1.0 | < 0.1 | < 2 | 27 | 0.04...0.12 |
| TZMC39 | 39 | 2.5 | 37 to 41 | < 90 | < 500 | 1.0 | < 0.1 | < 5 | 30 | 0.04...0.12 |
| TZMC43 | 43 | 2.5 | 40 to 46 | < 90 | < 600 | 0.5 | < 0.1 | < 5 | 33 | 0.04...0.12 |
| TZMC47 | 47 | 2.5 | 44 to 50 | < 110 | < 700 | 0.5 | < 0.1 | < 5 | 36 | 0.04...0.12 |
| TZMC51 | 51 | 2.5 | 48 to 54 | < 125 | < 700 | 0.5 | < 0.1 | < 10 | 39 | 0.04...0.12 |
| TZMC56 | 56 | 2.5 | 52 to 60 | < 135 | < 1000 | 0.5 | < 0.1 | < 10 | 43 | 0.04...0.12 |
| TZMC62 | 62 | 2.5 | 58 to 66 | < 150 | < 1000 | 0.5 | < 0.1 | < 10 | 47 | 0.04...0.12 |
| TZMC68 | 68 | 2.5 | 64 to 72 | < 200 | < 1000 | 0.5 | < 0.1 | < 10 | 51 | 0.04...0.12 |
| TZMC75 | 75 | 2.5 | 70 to 79 | < 250 | < 1500 | 0.5 | < 0.1 | < 10 | 56 | 0.04...0.12 |

Notes :

(1) Tighter tolerances are available on request:

TZMA... $\pm 1\%$ of V_{Znom}

TZMB... $\pm 2\%$ of V_{Znom}

TZMF... $\pm 3\%$ of V_{Znom}

(2) At $T_j = 150^\circ C$

Zener Diodes 0.50 W

| Type No. | Zener Voltage $V_Z @ I_{ZT}$ | | Dynamic Resistance | | Maximum Reverse Leakage Current | | Temp. coefficient of Zener Voltage At I_{ZT} | | Admissible Zener Current ⁽²⁾ |
|----------|---------------------------------|----------|---|---|------------------------------------|----------|---|------|--|
| | Nom ⁽¹⁾ | I_{ZT} | at $I_Z = 5\text{mA}$ $f = 1\text{ kHz}$ | at $I_Z = 1\text{mA}$ $f = 1\text{ kHz}$ | I_R | at V_R | $\alpha_{VZ}(10^{-4} / ^\circ\text{C})$ | | |
| | (V) | (mA) | $r_{Zj} (\Omega)$ | $r_{Zj} (\Omega)$ | (μA) | (V) | min. | max. | (mA) |

ZMM Series, 0.5 W, Case Type : Mini MELF



| | | | | | | | | | |
|--------|-----|-----|----------------------|-----------------------|-----|------|-------------|------|-----|
| ZMM2.4 | 2.4 | 5 | < 100 | < 600 | 50 | 0.8 | -10 | -5 | 175 |
| ZMM2.7 | 2.7 | 5 | 75 (< 83) | < 500 | 20 | 0.8 | -9 | -4 | 160 |
| ZMM3.0 | 3.0 | 5 | 80 (< 95) | < 500 | 10 | 0.8 | -9 | -3 | 140 |
| ZMM3.3 | 3.3 | 5 | 80 (< 95) | < 500 | 6.0 | 0.8 | -8 | -3 | 130 |
| ZMM3.6 | 3.6 | 5 | 80 (< 95) | < 500 | 6.0 | 0.8 | -8 | -3 | 120 |
| ZMM3.9 | 3.9 | 5 | 80 (< 95) | < 500 | 1.6 | 0.8 | -7 | -3 | 110 |
| ZMM4.3 | 4.3 | 5 | 80 (< 95) | < 500 | 1.0 | 0.8 | -6 | -1 | 100 |
| ZMM4.7 | 4.7 | 5 | 70 (< 78) | < 500 | 0.1 | 0.8 | -5 | +2 | 90 |
| ZMM5.1 | 5.1 | 5 | 30 (< 60) | < 480 | 0.1 | 0.8 | -3 | +4 | 80 |
| ZMM5.6 | 5.6 | 5 | 10 (< 40) | < 400 | 0.1 | 1 | -2 | +6 | 70 |
| ZMM6.2 | 6.2 | 5 | 4.8 (< 10) | < 200 | 0.1 | 2 | -1 | +7 | 64 |
| ZMM6.8 | 6.8 | 5 | 4.5 (< 8) | < 150 | 0.1 | 3 | +2 | +7 | 58 |
| ZMM7.5 | 7.5 | 5 | 4 (< 7) | < 50 | 0.1 | 5 | +3 | +7 | 53 |
| ZMM8.2 | 8.2 | 5 | 4.5 (< 7) | < 50 | 0.1 | 6 | +4 | +7 | 47 |
| ZMM9.1 | 9.1 | 5 | 4.8 (< 10) | < 50 | 0.1 | 7 | +5 | +8 | 43 |
| ZMM10 | 10 | 5 | 5.2 (< 15) | < 70 | 0.1 | 7.5 | +5 | +8 | 40 |
| ZMM11 | 11 | 5 | 6 (< 20) | < 70 | 0.1 | 8.5 | +5 | +9 | 36 |
| ZMM12 | 12 | 5 | 7 (< 20) | < 90 | 0.1 | 9 | +6 | +9 | 32 |
| ZMM13 | 13 | 5 | 9 (< 25) | < 110 | 0.1 | 10 | +7 | +9 | 29 |
| ZMM15 | 15 | 5 | 11 (< 30) | < 110 | 0.1 | 11 | +7 | +9 | 27 |
| ZMM16 | 16 | 5 | 13 (< 40) | < 170 | 0.1 | 12 | +8 | +9.5 | 24 |
| ZMM18 | 18 | 5 | 18 (< 50) | < 170 | 0.1 | 14 | +8 | +9.5 | 21 |
| ZMM20 | 20 | 5 | 20 (< 50) | < 220 | 0.1 | 15 | +8 | +10 | 20 |
| ZMM22 | 22 | 5 | 25 (< 55) | < 220 | 0.1 | 17 | +8 | +10 | 18 |
| ZMM24 | 24 | 5 | 28 (< 80) | < 220 | 0.1 | 18 | +8 | +10 | 16 |
| ZMM27 | 27 | 5 | 30 (< 80) | < 250 | 0.1 | 20 | +8 | +10 | 14 |
| ZMM30 | 30 | 5 | 35 (< 80) | < 250 | 0.1 | 22.5 | +8 | +10 | 13 |
| ZMM33 | 33 | 5 | 40 (< 80) | < 250 | 0.1 | 25 | +8 | +10 | 12 |
| ZMM36 | 36 | 5 | 40 (< 90) | < 250 | 0.1 | 27 | +8 | +10 | 11 |
| ZMM39 | 39 | 5 | 50 (< 90) | < 300 | 0.1 | 29 | +10 | +12 | 10 |
| ZMM43 | 43 | 5 | 60 (< 100) | < 700 | 0.1 | 32 | +10 | +12 | 9.2 |
| ZMM47 | 47 | 5 | 70 (< 100) | < 750 | 0.1 | 35 | +10 | +12 | 8.5 |
| ZMM51 | 51 | 5 | 70 (< 100) | < 750 | 0.1 | 38 | +10 | +12 | 7.8 |
| ZMM56 | 56 | 2.5 | < 135 ⁽³⁾ | < 1000 ⁽⁴⁾ | 0.1 | 42 | +10 (typ.) | | 7.1 |
| ZMM62 | 62 | 2.5 | < 150 ⁽³⁾ | < 1000 ⁽⁴⁾ | 0.1 | 47 | + 10 (typ.) | | 6.4 |
| ZMM68 | 68 | 2.5 | < 200 ⁽³⁾ | < 1000 ⁽⁴⁾ | 0.1 | 51 | + 10 (typ.) | | 5.8 |
| ZMM75 | 75 | 2.5 | < 250 ⁽³⁾ | < 1500 ⁽⁴⁾ | 0.1 | 55 | + 10 (typ.) | | 5.3 |

Notes:

- (1) Tested with pulse $t_p = 5\text{ ms}$
- (2) Valid provided that leads are kept at ambient temperature
- (3) At $I_Z = 2.5\text{mA}$
- (4) At $I_Z = 0.5\text{mA}$
- (5) Standard zener voltage tolerance is $\pm 5\%$. Other tolerances are available upon request
- (6) $V_F = 1.25\text{ Vmax. @ } I_F = 200\text{ mA}$



Zener Diodes 0.50 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Nominal Zener Voltage | Test Current | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current | Maximum Surge Current |
|----------|-----------------------|--------------|-------------------------|-------------------|----------|---------------------------------|-----|--------------------------|-----------------------|
| | $V_Z @ I_{ZT}$ | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | I_{ZK} | $I_R @ V_R$ | | I_{ZM} | $I_{RM}^{(2)}$ |
| | (V) | (mA) | | (Ω) | (mA) | (μA) | (V) | (mA) | (mApk) |

Z043 Series, 0.5 W, Case Type : DO-41



| | | | | | | | | | |
|-------|-----|------|------|------|------|-----|-----|------|------|
| Z043 | 43 | 2.75 | 70 | 1500 | 0.25 | 5.0 | 32 | 11.0 | 52 |
| Z047 | 47 | 2.40 | 80 | 1500 | 0.25 | 5.0 | 35 | 9.6 | 47 |
| Z051 | 51 | 2.23 | 95 | 1500 | 0.25 | 5.0 | 38 | 8.9 | 44 |
| Z056 | 56 | 2.00 | 110 | 2000 | 0.25 | 5.0 | 42 | 8.0 | 40 |
| Z062 | 62 | 1.83 | 125 | 2000 | 0.25 | 5.0 | 47 | 7.3 | 36 |
| Z068 | 68 | 1.65 | 150 | 2000 | 0.25 | 5.0 | 52 | 6.6 | 33 |
| Z075 | 75 | 1.50 | 175 | 2000 | 0.25 | 5.0 | 57 | 6.0 | 30 |
| Z082 | 82 | 1.37 | 200 | 3000 | 0.25 | 5.0 | 62 | 5.5 | 27 |
| Z091 | 91 | 1.25 | 250 | 3000 | 0.25 | 5.0 | 73 | 5.0 | 24 |
| Z0100 | 100 | 1.12 | 350 | 3000 | 0.25 | 5.0 | 76 | 4.5 | 22 |
| Z0110 | 110 | 1.00 | 450 | 4000 | 0.25 | 5.0 | 83 | 4.1 | 20 |
| Z0120 | 120 | 0.95 | 550 | 4500 | 0.25 | 5.0 | 91 | 3.8 | 18 |
| Z0130 | 130 | 0.88 | 700 | 5000 | 0.25 | 5.0 | 98 | 3.5 | 17 |
| Z0150 | 150 | 0.75 | 1000 | 6000 | 0.25 | 5.0 | 114 | 3.0 | 15 |
| Z0160 | 160 | 0.70 | 1100 | 6500 | 0.25 | 5.0 | 121 | 2.8 | 14 |
| Z0180 | 180 | 0.62 | 1400 | 7000 | 0.25 | 5.0 | 136 | 2.5 | 12.5 |
| Z0190 | 190 | 0.57 | 1400 | 7500 | 0.25 | 5.0 | 144 | 2.3 | 11.8 |
| Z0200 | 200 | 0.55 | 1700 | 8000 | 0.25 | 5.0 | 152 | 2.2 | 11.2 |

Notes :

- The type numbers listed have a standard tolerance on the nominal zener voltage of $\pm 10\%$
Add suffix "A" for $\pm 5\%$ tolerance, add suffix "B" for $\pm 2\%$ tolerance
- Surge current is a non-repetitive 8.3ms square pulse width wave or equivalent sine-wave superimposed on I_{ZT} as per JEDEC method



Zener Diodes 0.50 W

| Type No. | Zener Voltage | | Dynamic Resistance | | Reverse Voltage | Temp. coefficient of Zener Voltage At I _{ZT} | | Admissible Zener Current ⁽²⁾ |
|----------|----------------------------------|-----------------|------------------------|------------------------|----------------------------|---|------|---|
| | V _Z @ I _{ZT} | | at I _Z =5mA | at I _Z =1mA | | | | |
| | Nom ⁽¹⁾ | I _{ZT} | f = 1 kHz | f = 1 kHz | at I _R = 100 nA | α _{vz} (10 ⁻⁴ / °C) | | |
| | (V) | (mA) | r _{zj} (Ω) | r _{zj} (Ω) | V _R (V) | min. | max. | |

ZPD Series, 0.5 W, Case Type : DO-35



| | | | | | | | | |
|--------|-----|-----|---------------------|-----------------------|--------|------------|------|-----|
| ZPD2.7 | 2.7 | 5 | 6.5 (<8) | < 500 | - | -9 | -4 | 160 |
| ZPD3.0 | 3.0 | 5 | 75 (<83) | < 500 | - | -9 | -3 | 140 |
| ZPD3.3 | 3.3 | 5 | 80 (<95) | < 500 | - | -8 | -3 | 130 |
| ZPD3.6 | 3.6 | 5 | 80 (<95) | < 500 | - | -8 | -3 | 120 |
| ZPD3.9 | 3.9 | 5 | 80 (<95) | < 500 | - | -7 | -3 | 110 |
| ZPD4.3 | 4.3 | 5 | 80 (<95) | < 500 | - | -6 | -1 | 100 |
| ZPD4.7 | 4.7 | 5 | 70 (<78) | < 500 | - | -5 | +2 | 90 |
| ZPD5.1 | 5.1 | 5 | 30 (<60) | < 480 | > 0.8 | -3 | +4 | 80 |
| ZPD5.6 | 5.6 | 5 | 10 (<40) | < 400 | > 1 | -2 | +6 | 70 |
| ZPD6.2 | 6.2 | 5 | 4.8 (<10) | < 200 | > 2 | -1 | +7 | 64 |
| ZPD6.8 | 6.8 | 5 | 4.5 (<8) | < 150 | > 3 | +2 | +7 | 58 |
| ZPD7.5 | 7.5 | 5 | 4.0 (<7) | < 50 | > 5 | +3 | +7 | 53 |
| ZPD8.2 | 8.2 | 5 | 4.5 (<7) | < 50 | > 6 | +4 | +7 | 47 |
| ZPD9.1 | 9.1 | 5 | 4.8 (<10) | < 50 | > 7 | +5 | +8 | 43 |
| ZPD10 | 10 | 5 | 5.2 (<15) | < 70 | > 7.5 | +5 | +8 | 40 |
| ZPD11 | 11 | 5 | 6 (<20) | < 70 | > 8.5 | +5 | +9 | 36 |
| ZPD12 | 12 | 5 | 7 (<20) | < 90 | > 9 | +6 | +9 | 32 |
| ZPD13 | 13 | 5 | 9 (<25) | < 110 | > 10 | +7 | +9 | 29 |
| ZPD15 | 15 | 5 | 11 (<30) | < 110 | > 11 | +7 | +9 | 27 |
| ZPD16 | 16 | 5 | 13 (<40) | < 170 | > 12 | +8 | +9.5 | 24 |
| ZPD18 | 18 | 5 | 18 (<50) | < 170 | > 14 | +8 | +9.5 | 21 |
| ZPD20 | 20 | 5 | 20 (<50) | < 220 | > 15 | +8 | +10 | 20 |
| ZPD22 | 22 | 5 | 25 (<55) | < 220 | > 17 | +8 | +10 | 18 |
| ZPD24 | 24 | 5 | 28 (<80) | < 220 | > 18 | +8 | +10 | 16 |
| ZPD27 | 27 | 5 | 30 (<80) | < 250 | > 20 | +8 | +10 | 14 |
| ZPD30 | 30 | 5 | 35 (<80) | < 250 | > 22.5 | +8 | +10 | 13 |
| ZPD33 | 33 | 5 | 40 (<80) | < 250 | > 25 | +8 | +10 | 12 |
| ZPD36 | 36 | 5 | 40 (<90) | < 250 | > 27 | +8 | +10 | 11 |
| ZPD39 | 39 | 5 | 50 (<90) | < 300 | > 29 | +10 | +12 | 10 |
| ZPD43 | 43 | 5 | 60 (<100) | < 700 | > 32 | +10 | +12 | 9.2 |
| ZPD47 | 47 | 5 | 70 (<100) | < 750 | > 35 | +10 | +12 | 8.5 |
| ZPD51 | 51 | 5 | 70 (<100) | < 750 | > 38 | +10 | +12 | 7.8 |
| ZPD56 | 56 | 2.5 | <135 ⁽³⁾ | < 1000 ⁽⁴⁾ | > 42 | +10 (typ.) | | 7.1 |
| ZPD62 | 62 | 2.5 | <150 ⁽³⁾ | < 1000 ⁽⁴⁾ | > 47 | +10 (typ.) | | 6.4 |
| ZPD68 | 68 | 2.5 | <200 ⁽³⁾ | < 1000 ⁽⁴⁾ | > 51 | +10 (typ.) | | 5.8 |
| ZPD75 | 75 | 2.5 | <250 ⁽³⁾ | <1500 ⁽⁴⁾ | > 55 | +10 (typ.) | | 5.3 |

Notes :

- (1) Tested with pulse $t_p = 5$ ms
- (2) Valid provided that leads are at distance of 4 mm from case and kept at ambient temperature
- (3) At $I_Z = 2.5$ mA
- (4) At $I_Z = 0.5$ mA
- (5) The type numbers listed have a standard tolerance on the nominal zener voltage of $\pm 5.0\%$



Zener Diodes 1.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current |
|------------|-----|-----------------------|------|-------------------------|-----------|------|---------------------------------|-----|--------------------------|
| | | Vz@IzT (2) | IzT | ZzT @ IzT | Zzk @ Izk | Izk | Ir @ VR | | IzM |
| Axial Lead | SMD | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | (mA) |

1N4728/SZ10 Series, 1 W, Case Type : DO-41/SMA

| | | | | | | | | | |
|--------|--------|-----|------|------|------|------|-----|-------|-----|
| 1N4728 | SZ103D | 3.3 | 76.0 | 10 | 400 | 1.0 | 100 | 1.0 | 276 |
| 1N4729 | SZ103G | 3.6 | 69.0 | 10 | 400 | 1.0 | 100 | 1.0 | 252 |
| 1N4730 | SZ103J | 3.9 | 64.0 | 9.0 | 400 | 1.0 | 50 | 1.0 | 234 |
| 1N4731 | SZ104D | 4.3 | 58.0 | 9.0 | 400 | 1.0 | 10 | 1.0 | 217 |
| 1N4732 | SZ104H | 4.7 | 53.0 | 8.0 | 500 | 1.0 | 10 | 1.0 | 193 |
| 1N4733 | SZ105B | 5.1 | 49.0 | 7.0 | 550 | 1.0 | 10 | 1.0 | 178 |
| 1N4734 | SZ105G | 5.6 | 45.0 | 5.0 | 600 | 1.0 | 10 | 2.0 | 162 |
| 1N4735 | SZ106C | 6.2 | 41.0 | 2.0 | 700 | 1.0 | 10 | 3.0 | 146 |
| 1N4736 | SZ106I | 6.8 | 37.0 | 3.5 | 700 | 1.0 | 10 | 4.0 | 133 |
| 1N4737 | SZ107F | 7.5 | 34.0 | 4.0 | 700 | 0.5 | 10 | 5.0 | 121 |
| 1N4738 | SZ108C | 8.2 | 31.0 | 4.5 | 700 | 0.5 | 10 | 6.0 | 110 |
| 1N4739 | SZ109B | 9.1 | 28.0 | 5.0 | 700 | 0.5 | 10 | 7.0 | 100 |
| 1N4740 | SZ1010 | 10 | 25.0 | 7.0 | 700 | 0.25 | 10 | 7.6 | 91 |
| 1N4741 | SZ1011 | 11 | 23.0 | 8.0 | 700 | 0.25 | 5.0 | 8.4 | 83 |
| 1N4742 | SZ1012 | 12 | 21.0 | 9.0 | 700 | 0.25 | 5.0 | 9.1 | 76 |
| 1N4743 | SZ1013 | 13 | 19.0 | 10 | 700 | 0.25 | 5.0 | 9.9 | 69 |
| 1N4744 | SZ1015 | 15 | 17.0 | 14 | 700 | 0.25 | 5.0 | 11.4 | 61 |
| 1N4745 | SZ1016 | 16 | 15.5 | 16 | 700 | 0.25 | 5.0 | 12.2 | 57 |
| 1N4746 | SZ1018 | 18 | 14.0 | 20 | 750 | 0.25 | 5.0 | 13.7 | 50 |
| 1N4747 | SZ1020 | 20 | 12.5 | 22 | 750 | 0.25 | 5.0 | 15.2 | 45 |
| 1N4748 | SZ1022 | 22 | 11.5 | 23 | 750 | 0.25 | 5.0 | 16.7 | 41 |
| 1N4749 | SZ1024 | 24 | 10.5 | 25 | 750 | 0.25 | 5.0 | 18.2 | 38 |
| 1N4750 | SZ1027 | 27 | 9.5 | 35 | 750 | 0.25 | 5.0 | 20.6 | 34 |
| 1N4751 | SZ1030 | 30 | 8.5 | 40 | 1000 | 0.25 | 5.0 | 22.8 | 30 |
| 1N4752 | SZ1033 | 33 | 7.5 | 45 | 1000 | 0.25 | 5.0 | 25.1 | 27 |
| 1N4753 | SZ1036 | 36 | 7.0 | 50 | 1000 | 0.25 | 5.0 | 27.4 | 25 |
| 1N4754 | SZ1039 | 39 | 6.5 | 60 | 1000 | 0.25 | 5.0 | 29.7 | 23 |
| 1N4755 | SZ1043 | 43 | 6.0 | 70 | 1500 | 0.25 | 5.0 | 32.7 | 22 |
| 1N4756 | SZ1047 | 47 | 5.5 | 80 | 1500 | 0.25 | 5.0 | 35.8 | 19 |
| 1N4757 | SZ1051 | 51 | 5.0 | 95 | 1500 | 0.25 | 5.0 | 38.8 | 18 |
| 1N4758 | SZ1056 | 56 | 4.5 | 110 | 2000 | 0.25 | 5.0 | 42.6 | 16 |
| 1N4759 | SZ1062 | 62 | 4.0 | 125 | 2000 | 0.25 | 5.0 | 47.1 | 14 |
| 1N4760 | SZ1068 | 68 | 3.7 | 150 | 2000 | 0.25 | 5.0 | 51.7 | 13 |
| 1N4761 | SZ1075 | 75 | 3.3 | 175 | 2000 | 0.25 | 5.0 | 56.0 | 12 |
| 1N4762 | SZ1082 | 82 | 3.0 | 200 | 3000 | 0.25 | 5.0 | 62.2 | 11 |
| 1N4763 | SZ1091 | 91 | 2.8 | 250 | 3000 | 0.25 | 5.0 | 69.2 | 10 |
| 1N4764 | SZ10B0 | 100 | 2.5 | 350 | 3000 | 0.25 | 5.0 | 76.0 | 9.0 |
| Z1110 | SZ10B1 | 110 | 2.3 | 450 | 4000 | 0.25 | 5.0 | 83.6 | 8.6 |
| Z1120 | SZ10B2 | 120 | 2.0 | 550 | 4500 | 0.25 | 5.0 | 91.2 | 7.8 |
| Z1130 | SZ10B3 | 130 | 1.9 | 700 | 5000 | 0.25 | 5.0 | 98.8 | 7.0 |
| Z1150 | SZ10B5 | 150 | 1.7 | 1000 | 6000 | 0.25 | 5.0 | 114.0 | 6.4 |
| Z1160 | SZ10B6 | 160 | 1.6 | 1100 | 6500 | 0.25 | 5.0 | 121.6 | 5.8 |
| Z1180 | SZ10B8 | 180 | 1.4 | 1200 | 7000 | 0.25 | 5.0 | 136.8 | 5.2 |
| Z1200 | SZ10D0 | 200 | 1.2 | 1900 | 9990 | 0.25 | 5.0 | 152.0 | 4.7 |
| Z1220 | SZ10D2 | 220 | 1.0 | 1600 | 8000 | 0.25 | 5.0 | 167.2 | 4.0 |
| Z1240 | SZ10D4 | 240 | 0.93 | 1800 | 8500 | 0.25 | 5.0 | 182.4 | 3.8 |
| Z1250 | SZ10D5 | 250 | 0.9 | 2000 | 9000 | 0.25 | 5.0 | 190 | 3.6 |
| Z1270 | SZ10D7 | 270 | 0.82 | 2100 | 9000 | 0.25 | 5.0 | 205 | 3.3 |
| Z1300 | SZ10E0 | 300 | 0.75 | 2300 | 9500 | 0.25 | 5.0 | 228 | 3.0 |

Notes :

- (1) For Vz ≤ 200 V; VF = 1.2 Vmax. @ IF = 200 mA and for Vz > 200 V; VF = 2 Vmax. @ IF = 200 mA.
- (2) The type numbers listed have a standard tolerance on the nominal zener voltage of ± 10%. A standard tolerance of ± 5% is also available by adding suffix "A" to the standard type for Axial Lead or by replacing the fourth digit of standard type from "0" to "5" for SMD.
- (3) "SZ" for SMD parts will be omitted on marking of the diode
- (4) Use suffix "C" for tolerance ± 2% (Axial Lead)



Zener Diodes 1.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. ⁽²⁾ | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | |
|-------------------------|-----------------------|----------|-------------------------|-------------------|----------|---------------------------------|-----|
| | $V_Z @ I_{ZT}^{(1)}$ | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | I_{ZK} | $I_R @ V_R$ | |
| Axial Lead | (V) | (mA) | (Ω) | (Ω) | (mA) | (μ A) | (V) |

Z1T-100B Series, 1 W, Case Type : DO-41



| | | | | | | | |
|----------|-----|------|------|------|-----|-----|-----|
| Z1T-100B | 100 | 0.95 | 750 | 5000 | 0.1 | 0.1 | 86 |
| Z1T-110B | 110 | 0.95 | 750 | 5000 | 0.1 | 0.1 | 94 |
| Z1T-115B | 115 | 0.95 | 750 | 5000 | 0.1 | 0.1 | 98 |
| Z1T-120B | 120 | 0.95 | 850 | 5000 | 0.1 | 0.1 | 103 |
| Z1T-130B | 130 | 0.95 | 1000 | 5000 | 0.1 | 0.1 | 111 |
| Z1T-140B | 140 | 0.90 | 1200 | 5000 | 0.1 | 0.1 | 120 |
| Z1T-150B | 150 | 0.85 | 1300 | 5000 | 0.1 | 0.1 | 128 |
| Z1T-160B | 160 | 0.80 | 1500 | 5000 | 0.1 | 0.1 | 137 |
| Z1T-170B | 170 | 0.74 | 2200 | 5000 | 0.1 | 0.1 | 145 |
| Z1T-180B | 180 | 0.68 | 2200 | 5000 | 0.1 | 0.1 | 154 |
| Z1T-190B | 190 | 0.66 | 2500 | 5000 | 0.1 | 0.1 | 162 |
| Z1T-200B | 200 | 0.65 | 2500 | 8000 | 0.1 | 0.1 | 171 |
| Z1T-210B | 210 | 0.62 | 5000 | 9000 | 0.1 | 0.1 | 180 |
| Z1T-220B | 220 | 0.59 | 5000 | 9000 | 0.1 | 0.1 | 188 |
| Z1T-230B | 230 | 0.57 | 5000 | 9000 | 0.1 | 0.1 | 197 |
| Z1T-240B | 240 | 0.54 | 5000 | 9000 | 0.1 | 0.1 | 205 |
| Z1T-250B | 250 | 0.52 | 5000 | 9000 | 0.1 | 0.1 | 214 |
| Z1T-260B | 260 | 0.50 | 5000 | 9000 | 0.1 | 0.1 | 222 |
| Z1T-270B | 270 | 0.48 | 5000 | 9000 | 0.1 | 0.1 | 231 |
| Z1T-280B | 280 | 0.46 | 5000 | 9000 | 0.1 | 0.1 | 239 |
| Z1T-290B | 290 | 0.45 | 5000 | 9000 | 0.1 | 0.1 | 248 |
| Z1T-300B | 300 | 0.43 | 5000 | 9000 | 0.1 | 0.1 | 257 |
| Z1T-310B | 310 | 0.42 | 5000 | 9500 | 0.1 | 0.1 | 265 |
| Z1T-320B | 320 | 0.41 | 5000 | 9500 | 0.1 | 0.1 | 274 |
| Z1T-330B | 330 | 0.39 | 5000 | 9500 | 0.1 | 0.1 | 282 |

Notes :

(1) $V_F = 1.2 V_{max.} @ I_F = 200 \text{ mA}$

(2) Suffix " B " indicates $\pm 5.0\%$ tolerance, " A " indicates $\pm 10\%$ tolerance.



Zener Diodes 1.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current | Maximum Surge Current |
|------------|------------------------|----------|-------------------------|---------------------|----------|---------------------------------|-----|--------------------------|-----------------------|
| | $V_Z^{(1)}$ @ I_{ZT} | I_{ZT} | Z_{ZT} @ I_{ZT} | Z_{ZK} @ I_{ZK} | I_{ZK} | I_R @ V_R | | I_{ZM} | I_{RM} |
| Axial Lead | (V) | (mA) | (Ω) | (Ω) | (mA) | (μ A) | (V) | (mA) | (mApk) |

MZ4728 Series, 1.0 W, Case Type : M1A



| | | | | | | | | | |
|--------|-----|------|------|------|------|-----|-------|-----|------|
| MZ4728 | 3.3 | 76.0 | 10 | 400 | 1.0 | 100 | 1.0 | 276 | 1380 |
| MZ4729 | 3.6 | 69.0 | 10 | 400 | 1.0 | 100 | 1.0 | 252 | 1260 |
| MZ4730 | 3.9 | 64.0 | 9.0 | 400 | 1.0 | 50 | 1.0 | 234 | 1190 |
| MZ4731 | 4.3 | 58.0 | 9.0 | 400 | 1.0 | 10 | 1.0 | 217 | 1070 |
| MZ4732 | 4.7 | 53.0 | 8.0 | 500 | 1.0 | 10 | 1.0 | 193 | 970 |
| MZ4733 | 5.1 | 49.0 | 7.0 | 550 | 1.0 | 10 | 1.0 | 178 | 890 |
| MZ4734 | 5.6 | 45.0 | 5.0 | 600 | 1.0 | 10 | 2.0 | 162 | 810 |
| MZ4735 | 6.2 | 41.0 | 2.0 | 700 | 1.0 | 10 | 3.0 | 146 | 730 |
| MZ4736 | 6.8 | 37.0 | 3.5 | 700 | 1.0 | 10 | 4.0 | 133 | 660 |
| MZ4737 | 7.5 | 34.0 | 4.0 | 700 | 0.5 | 10 | 5.0 | 121 | 605 |
| MZ4738 | 8.2 | 31.0 | 4.5 | 700 | 0.5 | 10 | 6.0 | 110 | 550 |
| MZ4739 | 9.1 | 28.0 | 5.0 | 700 | 0.5 | 10 | 7.0 | 100 | 500 |
| MZ4740 | 10 | 25.0 | 7.0 | 700 | 0.25 | 10 | 7.6 | 91 | 454 |
| MZ4741 | 11 | 23.0 | 8.0 | 700 | 0.25 | 5.0 | 8.4 | 83 | 414 |
| MZ4742 | 12 | 21.0 | 9.0 | 700 | 0.25 | 5.0 | 9.1 | 76 | 380 |
| MZ4743 | 13 | 19.0 | 10 | 700 | 0.25 | 5.0 | 9.9 | 69 | 344 |
| MZ4744 | 15 | 17.0 | 14 | 700 | 0.25 | 5.0 | 11.4 | 61 | 305 |
| MZ4745 | 16 | 15.5 | 16 | 700 | 0.25 | 5.0 | 12.2 | 57 | 285 |
| MZ4746 | 18 | 14.0 | 20 | 750 | 0.25 | 5.0 | 13.7 | 50 | 250 |
| MZ4747 | 20 | 12.5 | 22 | 750 | 0.25 | 5.0 | 15.2 | 45 | 225 |
| MZ4748 | 22 | 11.5 | 23 | 750 | 0.25 | 5.0 | 16.7 | 41 | 205 |
| MZ4749 | 24 | 10.5 | 25 | 750 | 0.25 | 5.0 | 18.2 | 38 | 190 |
| MZ4750 | 27 | 9.5 | 35 | 750 | 0.25 | 5.0 | 20.6 | 34 | 170 |
| MZ4751 | 30 | 8.5 | 40 | 1000 | 0.25 | 5.0 | 22.8 | 30 | 150 |
| MZ4752 | 33 | 7.5 | 45 | 1000 | 0.25 | 5.0 | 25.1 | 27 | 135 |
| MZ4753 | 36 | 7.0 | 50 | 1000 | 0.25 | 5.0 | 27.4 | 25 | 125 |
| MZ4754 | 39 | 6.5 | 60 | 1000 | 0.25 | 5.0 | 29.7 | 23 | 115 |
| MZ4755 | 43 | 6.0 | 70 | 1500 | 0.25 | 5.0 | 32.7 | 22 | 110 |
| MZ4756 | 47 | 5.5 | 80 | 1500 | 0.25 | 5.0 | 35.8 | 19 | 95 |
| MZ4757 | 51 | 5.0 | 95 | 1500 | 0.25 | 5.0 | 38.8 | 18 | 90 |
| MZ4758 | 56 | 4.5 | 110 | 2000 | 0.25 | 5.0 | 42.6 | 16 | 80 |
| MZ4759 | 62 | 4.0 | 125 | 2000 | 0.25 | 5.0 | 47.1 | 14 | 70 |
| MZ4760 | 68 | 3.7 | 150 | 2000 | 0.25 | 5.0 | 51.7 | 13 | 65 |
| MZ4761 | 75 | 3.3 | 175 | 2000 | 0.25 | 5.0 | 56.0 | 12 | 60 |
| MZ4762 | 82 | 3.0 | 200 | 3000 | 0.25 | 5.0 | 62.2 | 11 | 55 |
| MZ4763 | 91 | 2.8 | 250 | 3000 | 0.25 | 5.0 | 69.2 | 10 | 50 |
| MZ4764 | 100 | 2.5 | 350 | 3000 | 0.25 | 5.0 | 76.0 | 9.0 | 45 |
| MZ1110 | 110 | 2.3 | 450 | 4000 | 0.25 | 5.0 | 83.6 | 8.6 | 40 |
| MZ1120 | 120 | 2.0 | 550 | 4500 | 0.25 | 5.0 | 91.2 | 7.8 | 37 |
| MZ1130 | 130 | 1.9 | 700 | 5000 | 0.25 | 5.0 | 98.8 | 7.0 | 34 |
| MZ1150 | 150 | 1.7 | 1000 | 6000 | 0.25 | 5.0 | 114.0 | 6.4 | 30 |
| MZ1160 | 160 | 1.6 | 1100 | 6500 | 0.25 | 5.0 | 121.6 | 5.8 | 28 |
| MZ1180 | 180 | 1.4 | 1200 | 7000 | 0.25 | 5.0 | 136.8 | 5.2 | 25 |
| MZ1200 | 200 | 1.2 | 1900 | 9990 | 0.25 | 5.0 | 152.0 | 4.7 | 22 |

Note : (1) The type number listed have a standard tolerance on the nominal zener voltage of $\pm 10\%$.

Suffix "A" indicates $\pm 5\%$ tolerance, suffix "C" indicates $\pm 2\%$ tolerance

Zener Diodes 1.0 W

| Type No. | | Nominal Zener Voltage ⁽³⁾ | | Maximum Zener Impedance ⁽¹⁾ | | | Maximum Reverse Leakage Current | | Maximum Regulator Current | Maximum Surge Current |
|------------|-----|--------------------------------------|-----------------|--|-----------------------------------|-----------------|---------------------------------|-----|--------------------------------|-----------------------|
| | | V _Z @ I _{ZT} | I _{ZT} | Z _{VT} @ I _{ZT} | Z _{ZK} @ I _{ZK} | I _{ZK} | I _R @ V _R | | I _{ZM} ⁽²⁾ | I _{RM} |
| Axial Lead | SMD | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | (mA) | (mA) |

1N4728AG/ZM4728A Series, Case Type : DO-41G / MELF



| | | | | | | | | | | |
|----------|---------|-----|------|-----|------|------|-----|------|-----|------|
| 1N4728AG | ZM4728A | 3.3 | 76.0 | 10 | 400 | 1.0 | 100 | 1.0 | 276 | 1380 |
| 1N4729AG | ZM4729A | 3.6 | 69.0 | 10 | 400 | 1.0 | 100 | 1.0 | 252 | 1260 |
| 1N4730AG | ZM4730A | 3.9 | 64.0 | 9.0 | 400 | 1.0 | 50 | 1.0 | 234 | 1190 |
| 1N4731AG | ZM4731A | 4.3 | 58.0 | 9.0 | 400 | 1.0 | 10 | 1.0 | 217 | 1070 |
| 1N4732AG | ZM4732A | 4.7 | 53.0 | 8.0 | 500 | 1.0 | 10 | 1.0 | 193 | 970 |
| 1N4733AG | ZM4733A | 5.1 | 49.0 | 7.0 | 550 | 1.0 | 10 | 1.0 | 178 | 890 |
| 1N4734AG | ZM4734A | 5.6 | 45.0 | 5.0 | 600 | 1.0 | 10 | 2.0 | 162 | 810 |
| 1N4735AG | ZM4735A | 6.2 | 41 | 2.0 | 700 | 1.0 | 10 | 3.0 | 146 | 730 |
| 1N4736AG | ZM4736A | 6.8 | 37.0 | 3.5 | 700 | 1.0 | 10 | 4.0 | 133 | 660 |
| 1N4737AG | ZM4737A | 7.5 | 34.0 | 4.0 | 700 | 0.5 | 10 | 5.0 | 121 | 605 |
| 1N4738AG | ZM4738A | 8.2 | 31 | 4.5 | 700 | 0.5 | 10 | 6.0 | 110 | 550 |
| 1N4739AG | ZM4739A | 9.1 | 28.0 | 5.0 | 700 | 0.5 | 10 | 7.0 | 100 | 500 |
| 1N4740AG | ZM4740A | 10 | 25.0 | 7.0 | 700 | 0.25 | 10 | 7.6 | 91 | 454 |
| 1N4741AG | ZM4741A | 11 | 23.0 | 8.0 | 700 | 0.25 | 5.0 | 8.4 | 83 | 414 |
| 1N4742AG | ZM4742A | 12 | 21 | 9.0 | 700 | 0.25 | 5.0 | 9.1 | 76 | 380 |
| 1N4743AG | ZM4743A | 13 | 19.0 | 10 | 700 | 0.25 | 5.0 | 9.9 | 69 | 344 |
| 1N4744AG | ZM4744A | 15 | 17.0 | 14 | 700 | 0.25 | 5.0 | 11.4 | 61 | 305 |
| 1N4745AG | ZM4745A | 16 | 15.5 | 16 | 700 | 0.25 | 5.0 | 12.2 | 57 | 285 |
| 1N4746AG | ZM4746A | 18 | 14.0 | 20 | 750 | 0.25 | 5.0 | 13.7 | 50 | 250 |
| 1N4747AG | ZM4747A | 20 | 12.5 | 22 | 750 | 0.25 | 5.0 | 15.2 | 45 | 225 |
| 1N4748AG | ZM4748A | 22 | 11.5 | 23 | 750 | 0.25 | 5.0 | 16.7 | 41 | 205 |
| 1N4749AG | ZM4749A | 24 | 10.5 | 25 | 750 | 0.25 | 5.0 | 18.2 | 38 | 190 |
| 1N4750AG | ZM4750A | 27 | 9.5 | 35 | 750 | 0.25 | 5.0 | 20.6 | 34 | 170 |
| 1N4751AG | ZM4751A | 30 | 8.5 | 40 | 1000 | 0.25 | 5.0 | 22.8 | 30 | 150 |
| 1N4752AG | ZM4752A | 33 | 7.5 | 45 | 1000 | 0.25 | 5.0 | 25.1 | 27 | 135 |
| 1N4753AG | ZM4753A | 36 | 7.0 | 50 | 1000 | 0.25 | 5.0 | 27.4 | 25 | 125 |
| 1N4754AG | ZM4754A | 39 | 6.5 | 60 | 1000 | 0.25 | 5.0 | 29.7 | 23 | 115 |
| 1N4755AG | ZM4755A | 43 | 6.0 | 70 | 1500 | 0.25 | 5.0 | 32.7 | 22 | 110 |
| 1N4756AG | ZM4756A | 47 | 5.5 | 80 | 1500 | 0.25 | 5.0 | 35.8 | 19 | 95 |
| 1N4757AG | ZM4757A | 51 | 5.0 | 95 | 1500 | 0.25 | 5.0 | 38.8 | 18 | 90 |
| 1N4758AG | ZM4758A | 56 | 4.5 | 110 | 2000 | 0.25 | 5.0 | 42.6 | 16 | 80 |
| 1N4759AG | ZM4759A | 62 | 4.0 | 125 | 2000 | 0.25 | 5.0 | 47.1 | 14 | 70 |
| 1N4760AG | ZM4760A | 68 | 3.7 | 150 | 2000 | 0.25 | 5.0 | 51.7 | 13 | 65 |
| 1N4761AG | ZM4761A | 75 | 3.3 | 175 | 2000 | 0.25 | 5.0 | 56.0 | 12 | 60 |
| 1N4762AG | ZM4762A | 82 | 3.0 | 200 | 3000 | 0.25 | 5.0 | 62.2 | 11 | 55 |
| 1N4763AG | ZM4763A | 91 | 2.8 | 250 | 3000 | 0.25 | 5.0 | 69.2 | 10 | 50 |
| 1N4764AG | ZM4764A | 100 | 2.5 | 350 | 3000 | 0.25 | 5.0 | 76.0 | 9.0 | 45 |

Notes:

- (1) The Zener impedance is derived from the 1kHz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}. Zener impedance is measured at two points to ensure a sharp knee on the breakdown curve and to eliminate unstable units
- (2) Valid provided that electrodes are at a distance of 10mm from case and kept at ambient temperature
- (3) Measured under thermal equilibrium and DC test conditions
- (4) Standard Zener voltage tolerance is ± 5% tolerance. Other Zener voltages and tolerances are available upon request.
- (5) V_F = 1.2 Vmax. @ I_F = 200 mA



Zener Diodes 1.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Nominal Zener Voltage | Test Current | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current | Maximum Surge Current |
|----------|-----------------------|--------------|-------------------------|-------------------|----------|---------------------------------|-----|--------------------------|-----------------------|
| | $V_Z @ I_{ZT}$ | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | I_{ZK} | $I_R @ V_R$ | | I_{ZM} | $I_{RM}^{(2)}$ |
| | (V) | (mA) | | (Ω) | (mA) | (μA) | (V) | (mA) | (mApk) |

1SMA4728A Series, 1 W, Case Type : SMA



| | | | | | | | | | |
|-----------|-----|------|-----|------|------|-----|------|-----|------|
| 1SMA4728A | 3.3 | 76.0 | 10 | 400 | 1.0 | 100 | 1.0 | 276 | 1380 |
| 1SMA4729A | 3.6 | 69.0 | 10 | 400 | 1.0 | 100 | 1.0 | 252 | 1260 |
| 1SMA4730A | 3.9 | 58.0 | 9.0 | 400 | 1.0 | 50 | 1.0 | 234 | 1190 |
| 1SMA4731A | 4.3 | 58.0 | 9.0 | 400 | 1.0 | 10 | 1.0 | 217 | 1070 |
| 1SMA4732A | 4.7 | 53.0 | 8.0 | 500 | 1.0 | 10 | 1.0 | 193 | 970 |
| 1SMA4733A | 5.1 | 49.0 | 7.0 | 550 | 1.0 | 10 | 1.0 | 178 | 890 |
| 1SMA4734A | 5.6 | 45.0 | 5.0 | 600 | 1.0 | 10 | 2.0 | 162 | 810 |
| 1SMA4735A | 6.2 | 41.0 | 2.0 | 700 | 1.0 | 10 | 3.0 | 146 | 730 |
| 1SMA4736A | 6.8 | 37.0 | 3.5 | 700 | 1.0 | 10 | 4.0 | 133 | 660 |
| 1SMA4737A | 7.5 | 34.0 | 4.0 | 700 | 0.5 | 10 | 5.0 | 121 | 605 |
| 1SMA4738A | 8.2 | 31.0 | 4.5 | 700 | 0.5 | 10 | 6.0 | 110 | 550 |
| 1SMA4739A | 9.1 | 28.0 | 5.0 | 700 | 0.5 | 10 | 7.0 | 100 | 500 |
| 1SMA4740A | 10 | 25.0 | 7.0 | 700 | 0.25 | 10 | 7.6 | 91 | 454 |
| 1SMA4741A | 11 | 23.0 | 8.0 | 700 | 0.25 | 5.0 | 8.4 | 83 | 414 |
| 1SMA4742A | 12 | 21.0 | 9.0 | 700 | 0.25 | 5.0 | 9.1 | 76 | 380 |
| 1SMA4743A | 13 | 19.0 | 10 | 700 | 0.25 | 5.0 | 9.9 | 69 | 344 |
| 1SMA4744A | 15 | 17.0 | 14 | 700 | 0.25 | 5.0 | 11.4 | 61 | 305 |
| 1SMA4745A | 16 | 15.5 | 16 | 700 | 0.25 | 5.0 | 12.2 | 57 | 285 |
| 1SMA4746A | 18 | 14.0 | 20 | 750 | 0.25 | 5.0 | 13.7 | 50 | 250 |
| 1SMA4747A | 20 | 12.5 | 22 | 750 | 0.25 | 5.0 | 15.2 | 45 | 225 |
| 1SMA4748A | 22 | 11.5 | 23 | 750 | 0.25 | 5.0 | 16.7 | 41 | 205 |
| 1SMA4749A | 24 | 10.5 | 25 | 750 | 0.25 | 5.0 | 18.2 | 38 | 190 |
| 1SMA4750A | 27 | 9.5 | 35 | 750 | 0.25 | 5.0 | 20.6 | 34 | 170 |
| 1SMA4751A | 30 | 8.5 | 40 | 1000 | 0.25 | 5.0 | 22.8 | 30 | 150 |
| 1SMA4752A | 33 | 7.5 | 45 | 1000 | 0.25 | 5.0 | 25.1 | 27 | 135 |
| 1SMA4753A | 36 | 7.0 | 50 | 1000 | 0.25 | 5.0 | 27.4 | 25 | 125 |
| 1SMA4754A | 39 | 6.5 | 60 | 1000 | 0.25 | 5.0 | 29.7 | 23 | 115 |
| 1SMA4755A | 43 | 6.0 | 70 | 1500 | 0.25 | 5.0 | 32.7 | 22 | 110 |
| 1SMA4756A | 47 | 5.5 | 80 | 1500 | 0.25 | 5.0 | 35.8 | 19 | 95 |
| 1SMA4757A | 51 | 5.0 | 95 | 1500 | 0.25 | 5.0 | 38.8 | 18 | 90 |
| 1SMA4758A | 56 | 4.5 | 110 | 2000 | 0.25 | 5.0 | 42.6 | 16 | 80 |
| 1SMA4759A | 62 | 4.0 | 125 | 2000 | 0.25 | 5.0 | 47.1 | 14 | 70 |
| 1SMA4760A | 68 | 3.7 | 150 | 2000 | 0.25 | 5.0 | 51.7 | 13 | 65 |
| 1SMA4761A | 75 | 3.3 | 175 | 2000 | 0.25 | 5.0 | 56.0 | 12 | 60 |
| 1SMA4762A | 82 | 3.0 | 200 | 3000 | 0.25 | 5.0 | 62.2 | 11 | 55 |
| 1SMA4763A | 91 | 2.8 | 250 | 3000 | 0.25 | 5.0 | 69.2 | 10 | 50 |
| 1SMA4764A | 100 | 2.5 | 350 | 3000 | 0.25 | 5.0 | 76.0 | 9.0 | 45 |

Notes :

- (1) The type numbers listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$.
- (2) Surge current is a non-repetitive 8.3ms square pulse width wave or equivalent sine-wave superimposed on I_{ZT} as per JEDEC method



Zener Diodes 1.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Zener Voltage | | | Test Current | Maximum Zener Impedance | | Maximum Reverse Current | | Typical Temperature Coefficient | |
|----------|-----------------|------|------|--------------|-------------------------|---------|-------------------------|---------|---------------------------------|-------|
| | $V_Z (V)^{(1)}$ | | | I_{ZT} | Z_Z | @ I_Z | I_R | @ V_R | γ_Z | I_Z |
| | Min. | Typ. | Max. | (mA) | (Ω) | (mA) | (μA) | (V) | (mV/°C) | (mA) |

PTZ3.6B Series, 1 W, Case Type : SMA



| | | | | | | | | | | |
|---------|------|-------|------|----|----|----|----|------|------|----|
| PTZ3.6B | 3.6 | 3.813 | 4.00 | 40 | 15 | 40 | 60 | 1.0 | -2.8 | 40 |
| PTZ3.9B | 3.9 | 4.136 | 4.40 | 40 | 15 | 40 | 40 | 1.0 | -2.4 | 40 |
| PTZ4.3B | 4.3 | 4.572 | 4.80 | 40 | 15 | 40 | 20 | 1.0 | -2.1 | 40 |
| PTZ4.7B | 4.7 | 4.924 | 5.20 | 40 | 10 | 40 | 20 | 1.0 | -1.7 | 40 |
| PTZ5.1B | 5.1 | 5.368 | 5.70 | 40 | 8 | 40 | 20 | 1.5 | -0.6 | 40 |
| PTZ5.6B | 5.6 | 5.856 | 6.30 | 40 | 8 | 40 | 20 | 2.5 | 1.4 | 40 |
| PTZ6.2B | 6.2 | 6.509 | 7.00 | 40 | 6 | 40 | 20 | 3.0 | 2.5 | 40 |
| PTZ6.8B | 6.8 | 7.280 | 7.70 | 40 | 6 | 40 | 20 | 3.5 | 3.2 | 40 |
| PTZ7.5B | 7.5 | 7.889 | 8.40 | 40 | 4 | 40 | 20 | 4.0 | 4.2 | 40 |
| PTZ8.2B | 8.2 | 8.655 | 9.30 | 40 | 4 | 40 | 20 | 5.0 | 5.0 | 40 |
| PTZ9.1B | 9.1 | 9.747 | 10.2 | 40 | 6 | 40 | 20 | 6.0 | 5.9 | 40 |
| PTZ10B | 10 | 10.31 | 11.2 | 40 | 6 | 40 | 10 | 7.0 | 6.9 | 40 |
| PTZ11B | 11 | 11.51 | 12.3 | 20 | 8 | 20 | 10 | 8.0 | 7.9 | 20 |
| PTZ12B | 12 | 12.50 | 13.5 | 20 | 8 | 20 | 10 | 9.0 | 8.7 | 20 |
| PTZ13B | 13.3 | 13.82 | 15.0 | 20 | 10 | 20 | 10 | 10.0 | 10.1 | 20 |
| PTZ15B | 14.7 | 15.35 | 16.5 | 20 | 10 | 20 | 10 | 11.0 | 11.8 | 20 |
| PTZ16B | 16.2 | 16.86 | 18.3 | 20 | 12 | 20 | 10 | 12.0 | 13.3 | 20 |
| PTZ18B | 18 | 19.00 | 20.3 | 20 | 12 | 20 | 10 | 13.0 | 15.0 | 20 |
| PTZ20B | 20 | 20.82 | 22.4 | 20 | 14 | 20 | 10 | 15.0 | 17.4 | 20 |
| PTZ22B | 22 | 23.85 | 24.5 | 10 | 14 | 10 | 10 | 17.0 | 19.4 | 10 |
| PTZ24B | 24 | 25.31 | 27.6 | 10 | 16 | 10 | 10 | 19.0 | 21.6 | 10 |
| PTZ27B | 27 | 28.70 | 30.8 | 10 | 16 | 10 | 10 | 21.0 | 24.6 | 10 |
| PTZ30B | 30 | 31.57 | 34.0 | 10 | 18 | 10 | 10 | 23.0 | 27.5 | 10 |
| PTZ33B | 33 | 34.95 | 37.0 | 10 | 18 | 10 | 10 | 25.0 | 30.8 | 10 |
| PTZ36B | 36 | 39.24 | 40.0 | 10 | 20 | 10 | 10 | 27.0 | 37.0 | 10 |

Note :

(1) The Zener Voltage V_Z is measured 40 ms after power is supplied



Zener Diodes 1.0 W

| Type No. | Suffix ⁽³⁾ | Zener Voltage $V_Z^{(1)}$ | | | Dynamic Impedance $Z_Z^{(2)}$ | | Reverse Current I_R | |
|----------|-----------------------|------------------------------|------|-------|----------------------------------|-------|--------------------------|-------|
| | | Min. | Max. | I_Z | Max. | I_Z | Max. | V_R |
| | | V | V | mA | Ω | mA | (μ A) | (V) |

RD2.0F Series, 1 W, Case Type : DO-41 Glass



| | | | | | | | | |
|--------|----|------|------|----|----|----|-----|-----|
| RD2.0F | B | 1.88 | 2.25 | 40 | 25 | 40 | 200 | 0.5 |
| | B1 | 1.88 | 2.12 | | | | | |
| | B2 | 2.01 | 2.25 | | | | | |
| RD2.2F | B | 2.11 | 2.45 | 40 | 20 | 40 | 200 | 0.7 |
| | B1 | 2.11 | 2.34 | | | | | |
| | B2 | 2.21 | 2.45 | | | | | |
| RD2.4F | B | 2.31 | 2.65 | 40 | 15 | 40 | 200 | 1.0 |
| | B1 | 2.31 | 2.55 | | | | | |
| | B2 | 2.41 | 2.65 | | | | | |
| RD2.7F | B | 2.52 | 2.93 | 40 | 15 | 40 | 150 | 1.0 |
| | B1 | 2.52 | 2.78 | | | | | |
| | B2 | 2.68 | 2.93 | | | | | |
| RD3.0F | B | 2.83 | 3.22 | 40 | 15 | 40 | 100 | 1.0 |
| | B1 | 2.83 | 3.07 | | | | | |
| | B2 | 2.97 | 3.22 | | | | | |
| RD3.3F | B | 3.13 | 3.51 | 40 | 15 | 40 | 80 | 1.0 |
| | B1 | 3.13 | 3.37 | | | | | |
| | B2 | 3.27 | 3.51 | | | | | |
| RD3.6F | B | 3.43 | 3.83 | 40 | 15 | 40 | 60 | 1.0 |
| | B1 | 3.43 | 3.68 | | | | | |
| | B2 | 3.58 | 3.83 | | | | | |
| RD3.9F | B | 3.73 | 4.15 | 40 | 15 | 40 | 40 | 1.0 |
| | B1 | 3.73 | 4.00 | | | | | |
| | B2 | 3.88 | 4.15 | | | | | |
| RD4.3F | B | 4.03 | 4.55 | 40 | 15 | 40 | 20 | 1.0 |
| | B1 | 4.03 | 4.28 | | | | | |
| | B2 | 4.15 | 4.41 | | | | | |
| | B3 | 4.28 | 4.55 | | | | | |
| RD4.7F | B | 4.41 | 4.91 | 40 | 10 | 40 | 20 | 1.0 |
| | B1 | 4.41 | 4.65 | | | | | |
| | B2 | 4.53 | 4.78 | | | | | |
| | B3 | 4.66 | 4.91 | | | | | |
| RD5.1F | B | 4.79 | 5.38 | 40 | 8 | 40 | 20 | 1.0 |
| | B1 | 4.79 | 5.05 | | | | | |
| | B2 | 4.95 | 5.22 | | | | | |
| | B3 | 5.10 | 5.38 | | | | | |
| RD5.6F | B | 5.28 | 5.95 | 40 | 8 | 40 | 20 | 1.5 |
| | B1 | 5.28 | 5.56 | | | | | |
| | B2 | 5.46 | 5.75 | | | | | |
| | B3 | 5.65 | 5.95 | | | | | |
| RD6.2F | B | 5.76 | 6.52 | 40 | 6 | 40 | 20 | 3.0 |
| | B1 | 5.76 | 6.14 | | | | | |
| | B2 | 5.98 | 6.33 | | | | | |
| | B3 | 6.17 | 6.52 | | | | | |



Zener Diodes 1.0 W

| Type No. | Suffix ⁽³⁾ | Zener Voltage $V_Z^{(1)}$ | | | Dynamic Impedance $Z_Z^{(2)}$ | | Reverse Current I_R | |
|----------|-----------------------|------------------------------|------|-------|----------------------------------|-------|--------------------------|-------|
| | | Min. | Max. | I_Z | Max. | I_Z | Max. | V_R |
| | | V | V | mA | Ω | mA | (μ A) | (V) |

RD2.0F Series, 1 W, Case Type : DO-41 Glass



| | | | | | | | | |
|--------|----|-------|-------|----|----|----|----|-----|
| RD6.8F | B | 6.35 | 7.10 | 40 | 6 | 40 | 20 | 3.5 |
| | B1 | 6.35 | 6.71 | | | | | |
| | B2 | 6.55 | 6.90 | | | | | |
| | B3 | 6.74 | 7.10 | | | | | |
| RD7.5F | B | 6.93 | 7.80 | 40 | 4 | 40 | 20 | 4.0 |
| | B1 | 6.93 | 7.33 | | | | | |
| | B2 | 7.17 | 7.55 | | | | | |
| | B3 | 7.39 | 7.80 | | | | | |
| RD8.2F | B | 7.58 | 8.54 | 40 | 4 | 40 | 20 | 5.0 |
| | B1 | 7.58 | 8.03 | | | | | |
| | B2 | 7.87 | 8.28 | | | | | |
| | B3 | 8.12 | 8.54 | | | | | |
| RD9.1F | B | 8.34 | 9.38 | 40 | 6 | 40 | 20 | 6.0 |
| | B1 | 8.34 | 8.80 | | | | | |
| | B2 | 8.64 | 9.08 | | | | | |
| | B3 | 8.91 | 9.38 | | | | | |
| RD10F | B | 9.16 | 10.40 | 40 | 6 | 40 | 10 | 7.0 |
| | B1 | 9.16 | 9.67 | | | | | |
| | B2 | 9.50 | 9.99 | | | | | |
| | B3 | 9.83 | 10.40 | | | | | |
| RD11F | B | 10.22 | 11.43 | 20 | 8 | 20 | 10 | 8.0 |
| | B1 | 10.22 | 10.75 | | | | | |
| | B2 | 10.54 | 11.19 | | | | | |
| | B3 | 10.87 | 11.43 | | | | | |
| RD12F | B | 11.19 | 12.41 | 20 | 8 | 20 | 10 | 8.0 |
| | B1 | 11.19 | 11.77 | | | | | |
| | B2 | 11.50 | 12.09 | | | | | |
| | B3 | 11.80 | 12.41 | | | | | |
| RD13F | B | 12.19 | 13.83 | 20 | 10 | 20 | 10 | 10 |
| | B1 | 12.19 | 12.85 | | | | | |
| | B2 | 12.63 | 13.30 | | | | | |
| | B3 | 13.11 | 13.83 | | | | | |
| RD15F | B | 13.55 | 15.26 | 20 | 10 | 20 | 10 | 11 |
| | B1 | 13.55 | 14.28 | | | | | |
| | B2 | 14.05 | 14.77 | | | | | |
| | B3 | 14.52 | 15.26 | | | | | |
| RD16F | B | 14.98 | 16.71 | 20 | 12 | 20 | 10 | 12 |
| | B1 | 14.98 | 15.75 | | | | | |
| | B2 | 15.44 | 16.23 | | | | | |
| | B3 | 15.89 | 16.71 | | | | | |
| RD18F | B | 16.37 | 18.55 | 20 | 12 | 20 | 10 | 13 |
| | B1 | 16.37 | 17.27 | | | | | |
| | B2 | 17.03 | 17.91 | | | | | |
| | B3 | 17.64 | 18.55 | | | | | |



Zener Diodes 1.0 W

| Type No. | Suffix ⁽³⁾ | Zener Voltage $V_Z^{(1)}$ | | | Dynamic Impedance $Z_Z^{(2)}$ | | Reverse Current I_R | |
|----------|-----------------------|------------------------------|------|-------|----------------------------------|-------|--------------------------|-------|
| | | Min. | Max. | I_Z | Max. | I_Z | Max. | V_R |
| | | V | V | mA | Ω | mA | (μ A) | (V) |

RD2.0F Series, 1 W, Case Type : DO-41 Glass



| | | | | | | | | |
|-------|----|-------|-------|----|----|----|----|----|
| RD20F | B | 18.26 | 20.84 | 20 | 14 | 20 | 10 | 15 |
| | B1 | 18.26 | 19.21 | | | | | |
| | B2 | 18.93 | 19.91 | | | | | |
| | B3 | 19.59 | 20.84 | | | | | |
| RD22F | B | 20.45 | 22.86 | 10 | 14 | 10 | 10 | 17 |
| | B1 | 20.45 | 21.51 | | | | | |
| | B2 | 21.10 | 22.18 | | | | | |
| | B3 | 21.75 | 22.86 | | | | | |
| RD24F | B | 22.44 | 25.14 | 10 | 16 | 10 | 10 | 19 |
| | B1 | 22.44 | 23.59 | | | | | |
| | B2 | 23.17 | 24.36 | | | | | |
| | B3 | 23.90 | 25.14 | | | | | |
| RD27F | B | 24.63 | 28.43 | 10 | 16 | 10 | 10 | 21 |
| | B1 | 24.63 | 26.10 | | | | | |
| | B2 | 25.70 | 27.12 | | | | | |
| | B3 | 26.72 | 28.43 | | | | | |
| RD30F | B | 27.43 | 31.26 | 10 | 18 | 10 | 10 | 23 |
| | B1 | 27.43 | 29.09 | | | | | |
| | B2 | 28.64 | 30.10 | | | | | |
| | B3 | 29.57 | 31.26 | | | | | |
| RD33F | B | 30.35 | 34.15 | 10 | 18 | 10 | 10 | 25 |
| | B1 | 30.35 | 31.97 | | | | | |
| | B2 | 31.49 | 33.06 | | | | | |
| | B3 | 32.39 | 34.15 | | | | | |
| RD36F | B | 33.24 | 37.01 | 10 | 20 | 10 | 10 | 27 |
| | B1 | 33.24 | 34.94 | | | | | |
| | B2 | 34.26 | 36.01 | | | | | |
| | B3 | 35.19 | 37.01 | | | | | |
| RD39F | B | 36.11 | 40.80 | 10 | 20 | 10 | 10 | 30 |
| | B1 | 36.11 | 38.00 | | | | | |
| | B2 | 37.14 | 39.04 | | | | | |
| | B3 | 38.13 | 40.80 | | | | | |
| RD43F | B | 40.00 | 45.00 | 10 | 50 | 10 | 5 | 33 |
| RD47F | B | 44.00 | 49.00 | 10 | 50 | 10 | 5 | 36 |
| RD51F | B | 48.00 | 54.00 | 10 | 50 | 10 | 5 | 39 |
| RD56F | B | 53.00 | 60.00 | 10 | 50 | 10 | 5 | 43 |
| RD62F | B | 58.00 | 66.00 | 10 | 50 | 10 | 5 | 47 |
| RD68F | B | 64.00 | 72.00 | 10 | 70 | 10 | 5 | 52 |
| RD75F | B | 70.00 | 79.00 | 10 | 90 | 10 | 5 | 57 |
| RD82F | B | 77.00 | 87.00 | 10 | 90 | 10 | 5 | 63 |

Notes:

- (1) Test with pulse (40 ms)
- (2) Z_Z is measured at I_Z given an very small AC Current Signal
- (3) When placing an order for an RD2.0F type, please add suffix e.g. RD2.0FB, RD2.0FB1 RD82FB4
The B grade is a wide specification, covering full voltage range for suffix "B1" to "B3"



Zener Diodes 1.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Zener Voltage ⁽²⁾ | | | | Maximum Zener | | | Maximum Reverse | | Maximum |
|----------|----------------------------------|-----|-----|-----------------|-----------------------------------|-----------------------------------|-----------------|---------------------------------|------------------|------------------------|
| | V _Z @ I _{ZT} | | | | Impedance | | | Leakage Current, I _R | | DC Zener |
| | Nom | Min | Max | I _{ZT} | Z _{ZT} @ I _{ZT} | Z _{Zk} @ I _{ZK} | I _{ZK} | I _R | @ V _R | Current ⁽¹⁾ |
| | (V) | (V) | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | I _{ZM} (mA) |

SMAZ5V1 Series, 1 W, Case Type : SMA



| | | | | | | | | | | |
|---------|------|-------|-------|-----|-----|-----|-----|-----|------|-----|
| SMAZ5V1 | 5.1 | 4.84 | 5.40 | 100 | 5.0 | 500 | 1.0 | 2.5 | 1.0 | 196 |
| SMAZ5V6 | 5.6 | 5.32 | 5.88 | 100 | 2.0 | 250 | 2.0 | 5.0 | 2.0 | 179 |
| SMAZ6V2 | 6.2 | 5.89 | 6.51 | 100 | 2.0 | 200 | 2.0 | 5.0 | 3.0 | 161 |
| SMAZ6V8 | 6.8 | 6.46 | 7.14 | 100 | 2.0 | 200 | 1.0 | 5.0 | 4.0 | 147 |
| SMAZ7V5 | 7.5 | 7.13 | 7.88 | 100 | 2.0 | 450 | 1.0 | 5.0 | 5.0 | 133 |
| SMAZ8V2 | 8.2 | 7.79 | 8.61 | 100 | 2.0 | 200 | 1.0 | 5.0 | 6.0 | 122 |
| SMAZ9V1 | 9.1 | 8.65 | 9.56 | 50 | 4.0 | 200 | 1.0 | 5.0 | 7.0 | 110 |
| SMAZ10 | 10.0 | 9.50 | 10.50 | 50 | 4.0 | 200 | 1.0 | 1.0 | 7.6 | 100 |
| SMAZ12 | 12.0 | 11.40 | 12.60 | 50 | 7.0 | 150 | 1.0 | 1.0 | 9.1 | 83 |
| SMAZ15 | 15.0 | 14.25 | 15.75 | 50 | 10 | 150 | 1.0 | 1.0 | 11.4 | 67 |
| SMAZ16 | 16.0 | 15.20 | 16.80 | 25 | 15 | 150 | 1.0 | 0.5 | 12.2 | 63 |
| SMAZ18 | 18.0 | 17.10 | 18.90 | 25 | 15 | 150 | 1.0 | 0.5 | 13.7 | 56 |
| SMAZ20 | 20.0 | 19.00 | 21.00 | 25 | 15 | 180 | 1.0 | 0.5 | 15.2 | 50 |
| SMAZ22 | 22.0 | 20.90 | 23.10 | 25 | 15 | 180 | 1.0 | 0.5 | 16.7 | 45 |
| SMAZ24 | 24.0 | 22.80 | 25.20 | 25 | 15 | 180 | 1.0 | 0.5 | 18.2 | 42 |
| SMAZ27 | 27.0 | 25.65 | 28.35 | 25 | 15 | 200 | 1.0 | 0.5 | 20.5 | 37 |
| SMAZ30 | 30.0 | 28.50 | 31.50 | 25 | 15 | 250 | 1.0 | 0.5 | 22.8 | 33 |
| SMAZ33 | 33.0 | 31.35 | 34.65 | 25 | 15 | 300 | 1.0 | 0.5 | 25.1 | 30 |
| SMAZ36 | 36.0 | 34.20 | 37.80 | 10 | 40 | 350 | 1.0 | 0.5 | 27.4 | 28 |
| SMAZ39 | 39.0 | 37.05 | 40.95 | 10 | 40 | 450 | 1.0 | 0.5 | 29.6 | 26 |

Notes :

- (1) PCB mounted on 1" x 0.85" x 0.062" copper area pads
- (2) Short duration test pulse used to minimize self-heating effect
- (3) "SMA" will be omitted in marking on the diode.



Zener Diodes 1.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current | Maximum Surge Current |
|----------|------------------------|----------|-------------------------|---------------------|----------|---------------------------------|-----|--------------------------|-----------------------|
| | $V_Z^{(1)}$ @ I_{ZT} | I_{ZT} | Z_{ZT} @ I_{ZT} | Z_{ZK} @ I_{ZK} | I_{ZK} | I_R @ V_R | | I_{ZM} | $I_{RM}^{(2)}$ |
| | (V) | (mA) | (Ω) | (Ω) | (mA) | (μ A) | (V) | (mA) | (mA _{pk}) |

SML4728 Series, 1 W, Case Type : SMA



| | | | | | | | | | |
|---------|-----|------|-----|------|------|-----|------|-----|------|
| SML4728 | 3.3 | 76.0 | 10 | 400 | 1.0 | 100 | 1.0 | 276 | 1380 |
| SML4729 | 3.6 | 69.0 | 10 | 400 | 1.0 | 100 | 1.0 | 252 | 1260 |
| SML4730 | 3.9 | 64.0 | 9.0 | 400 | 1.0 | 50 | 1.0 | 234 | 1190 |
| SML4731 | 4.3 | 58.0 | 9.0 | 400 | 1.0 | 10 | 1.0 | 217 | 1070 |
| SML4732 | 4.7 | 53.0 | 8.0 | 500 | 1.0 | 10 | 1.0 | 193 | 970 |
| SML4733 | 5.1 | 49.0 | 7.0 | 550 | 1.0 | 10 | 1.0 | 178 | 890 |
| SML4734 | 5.6 | 45.0 | 5.0 | 600 | 1.0 | 10 | 2.0 | 162 | 810 |
| SML4735 | 6.2 | 41.0 | 2.0 | 700 | 1.0 | 10 | 3.0 | 146 | 730 |
| SML4736 | 6.8 | 37.0 | 3.5 | 700 | 1.0 | 10 | 4.0 | 133 | 660 |
| SML4737 | 7.5 | 34.0 | 4.0 | 700 | 0.5 | 10 | 5.0 | 121 | 605 |
| SML4738 | 8.2 | 31.0 | 4.5 | 700 | 0.5 | 10 | 6.0 | 110 | 550 |
| SML4739 | 9.1 | 28.0 | 5.0 | 700 | 0.5 | 10 | 7.0 | 100 | 500 |
| SML4740 | 10 | 25.0 | 7.0 | 700 | 0.25 | 10 | 7.6 | 91 | 454 |
| SML4741 | 11 | 23.0 | 8.0 | 700 | 0.25 | 5.0 | 8.4 | 83 | 414 |
| SML4742 | 12 | 21.0 | 9.0 | 700 | 0.25 | 5.0 | 9.1 | 76 | 380 |
| SML4743 | 13 | 19.0 | 10 | 700 | 0.25 | 5.0 | 9.9 | 69 | 344 |
| SML4744 | 15 | 17.0 | 14 | 700 | 0.25 | 5.0 | 11.4 | 61 | 305 |
| SML4745 | 16 | 15.5 | 16 | 700 | 0.25 | 5.0 | 12.2 | 57 | 285 |
| SML4746 | 18 | 14.0 | 20 | 750 | 0.25 | 5.0 | 13.7 | 50 | 250 |
| SML4747 | 20 | 12.5 | 22 | 750 | 0.25 | 5.0 | 15.2 | 45 | 225 |
| SML4748 | 22 | 11.5 | 23 | 750 | 0.25 | 5.0 | 16.7 | 41 | 205 |
| SML4749 | 24 | 10.5 | 25 | 750 | 0.25 | 5.0 | 18.2 | 38 | 190 |
| SML4750 | 27 | 9.5 | 35 | 750 | 0.25 | 5.0 | 20.6 | 34 | 170 |
| SML4751 | 30 | 8.5 | 40 | 1000 | 0.25 | 5.0 | 22.8 | 30 | 150 |
| SML4752 | 33 | 7.5 | 45 | 1000 | 0.25 | 5.0 | 25.1 | 27 | 135 |
| SML4753 | 36 | 7.0 | 50 | 1000 | 0.25 | 5.0 | 27.4 | 25 | 125 |
| SML4754 | 39 | 6.5 | 60 | 1000 | 0.25 | 5.0 | 29.7 | 23 | 115 |
| SML4755 | 43 | 6.0 | 70 | 1500 | 0.25 | 5.0 | 32.7 | 22 | 110 |
| SML4756 | 47 | 5.5 | 80 | 1500 | 0.25 | 5.0 | 35.8 | 19 | 95 |
| SML4757 | 51 | 5.0 | 95 | 1500 | 0.25 | 5.0 | 38.8 | 18 | 90 |
| SML4758 | 56 | 4.5 | 110 | 2000 | 0.25 | 5.0 | 42.6 | 16 | 80 |
| SML4759 | 62 | 4.0 | 125 | 2000 | 0.25 | 5.0 | 47.1 | 14 | 70 |
| SML4760 | 68 | 3.7 | 150 | 2000 | 0.25 | 5.0 | 51.7 | 13 | 65 |
| SML4761 | 75 | 3.3 | 175 | 2000 | 0.25 | 5.0 | 56.0 | 12 | 60 |
| SML4762 | 82 | 3.0 | 200 | 3000 | 0.25 | 5.0 | 62.2 | 11 | 55 |
| SML4763 | 91 | 2.8 | 250 | 3000 | 0.25 | 5.0 | 69.2 | 10 | 50 |
| SML4764 | 100 | 2.5 | 350 | 3000 | 0.25 | 5.0 | 76.0 | 9.0 | 45 |

Notes :

- (1) Standard voltage tolerance is 10%, add suffix "A" for $\pm 5\%$ tolerance
- (2) Surge current is a non-repetitive 8.3ms square pulse width wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC method
- (3) " SML " will be omitted on marking of the diode



Zener Diodes 1.0 W

| Type No. | Zener Voltage ⁽¹⁾ | | Test Current | Dynamic Resistance at I _{ZT} f = 1kHz | Reverse Voltage at I _R = 0.5 μA | Admissible Zener current ⁽²⁾ | Temp. Coeff. of Zener Voltage at I _{ZT} | |
|----------|----------------------------------|-----|-----------------|---|---|---|--|------|
| | V _Z @ I _{ZT} | | | | | | α _{VZ} (10 ⁻⁴ /°C) | |
| | Min | Max | I _{ZT} | rzj | V _R | I _Z | | |
| | (V) | (V) | (mA) | (Ω) | (V) | (mA) | Min. | Max. |

ZMU Series, 1 W, Case Type : MELF



| | | | | | | | | |
|--------|-----|-----|---|------------|------|---|---|----|
| ZMU100 | 88 | 110 | 5 | 140 (<300) | >75 | 7 | 9 | 13 |
| ZMU120 | 107 | 134 | 5 | 170 (<330) | >90 | 6 | 9 | 13 |
| ZMU150 | 130 | 165 | 5 | 200 (<360) | >112 | 5 | 9 | 13 |
| ZMU180 | 160 | 200 | 5 | 220 (<380) | >134 | 4 | 9 | 13 |

ZMY Series, 1 W, Case Type : MELF



| | | | | | | | | |
|--------|------|------|-----|-----------|-------|-----|----|----|
| ZMY3.9 | 3.7 | 4.1 | 100 | 4(<7) | - | 203 | -7 | 2 |
| ZMY4.3 | 4.0 | 4.6 | 100 | 4(<7) | - | 182 | -7 | 3 |
| ZMY4.7 | 4.4 | 5.0 | 100 | 4(<7) | - | 165 | -7 | 4 |
| ZMY5.1 | 4.8 | 5.4 | 100 | 2(<5) | >0.7 | 150 | -6 | 5 |
| ZMY5.6 | 5.2 | 6.0 | 100 | 1(<2) | >1.5 | 135 | -3 | 5 |
| ZMY6.2 | 5.8 | 6.6 | 100 | 1(<2) | >2.0 | 128 | -1 | 6 |
| ZMY6.8 | 6.4 | 7.2 | 100 | 1(<2) | >3.0 | 110 | 0 | 7 |
| ZMY7.5 | 7.0 | 7.9 | 100 | 1(<2) | >5.0 | 100 | 0 | 7 |
| ZMY8.2 | 7.7 | 8.7 | 100 | 1(<2) | >6.0 | 89 | 3 | 8 |
| ZMY9.1 | 8.5 | 9.6 | 50 | 2(<4) | >7.0 | 82 | 3 | 8 |
| ZMY10 | 9.4 | 10.6 | 50 | 2(<4) | >7.5 | 74 | 5 | 9 |
| ZMY11 | 10.4 | 11.6 | 50 | 3(<7) | >8.5 | 66 | 5 | 10 |
| ZMY12 | 11.4 | 12.7 | 50 | 3(<7) | >9.0 | 60 | 5 | 10 |
| ZMY13 | 12.4 | 14.1 | 50 | 4(<9) | >10 | 55 | 5 | 10 |
| ZMY15 | 13.8 | 15.8 | 50 | 4(<9) | >11 | 49 | 5 | 10 |
| ZMY16 | 15.3 | 17.1 | 25 | 5(<10) | >12 | 44 | 7 | 11 |
| ZMY18 | 16.8 | 19.1 | 25 | 5(<11) | >14 | 40 | 7 | 11 |
| ZMY20 | 18.8 | 21.2 | 25 | 6(<12) | >15 | 36 | 7 | 11 |
| ZMY22 | 20.8 | 23.3 | 25 | 7(<13) | >17 | 34 | 7 | 11 |
| ZMY24 | 22.8 | 25.6 | 25 | 8(<14) | >18 | 29 | 7 | 12 |
| ZMY27 | 25.1 | 28.9 | 25 | 9(<15) | >20 | 27 | 7 | 12 |
| ZMY30 | 28 | 32 | 25 | 10(<20) | >22.5 | 25 | 7 | 12 |
| ZMY33 | 31 | 35 | 25 | 11(<20) | >25 | 22 | 7 | 12 |
| ZMY36 | 34 | 38 | 10 | 25(<60) | >27 | 20 | 7 | 12 |
| ZMY39 | 37 | 41 | 10 | 30(<60) | >29 | 18 | 8 | 12 |
| ZMY43 | 40 | 46 | 10 | 35(<80) | >32 | 17 | 8 | 13 |
| ZMY47 | 44 | 50 | 10 | 40(<80) | >35 | 15 | 8 | 13 |
| ZMY51 | 48 | 54 | 10 | 45(<100) | >38 | 14 | 8 | 13 |
| ZMY56 | 52 | 60 | 10 | 50(<100) | >42 | 13 | 8 | 13 |
| ZMY62 | 58 | 66 | 10 | 60(<130) | >47 | 11 | 8 | 13 |
| ZMY68 | 64 | 72 | 10 | 65(<130) | >51 | 10 | 8 | 13 |
| ZMY75 | 70 | 79 | 10 | 70(<160) | >56 | 9.0 | 8 | 13 |
| ZMY82 | 77 | 88 | 10 | 80(<160) | >61 | 8.0 | 8 | 13 |
| ZMY91 | 85 | 96 | 5 | 120(<250) | >68 | 7.5 | 9 | 13 |
| ZMY100 | 94 | 106 | 5 | 130(<250) | >75 | 7.0 | 9 | 13 |

Notes:

- (1) Tested with pulse $t_p = 5\text{ms}$
- (2) Valid provided that electrodes are kept at ambient temperature
- (3) For ZMY Series standard zener voltage tolerance is $\pm 5\%$. Add suffix "C" for $\pm 2\%$ tolerance.



Zener Diodes 1.3 W

The plastic material carries U/L recognition 94V-0.

| Type No. | | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current |
|------------|-----|----------------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------|---------------------------------|-----|--------------------------|
| | | V _Z @ I _{ZT} | I _{ZT} | Z _{zt} @ I _{ZT} | Z _{zk} @ I _{ZK} | I _{ZK} | I _R @ V _R | | I _{ZM} |
| Axial Lead | SMD | (V) | (mA) | (W) | (W) | (mA) | (mA) | (V) | (mA) |

BZX85/SZ25 Series, 1.3 W, Case Type : DO-41/SMA

| | | | | | | | | | |
|-----------|--------|-----|-----|------|------|------|-----|-----|-----|
| BZX85C2V4 | SZ252D | 2.4 | 80 | 20 | 400 | 1.0 | 150 | 1.0 | 410 |
| BZX85C2V7 | SZ252H | 2.7 | 80 | 20 | 400 | 1.0 | 150 | 1.0 | 370 |
| BZX85C3V0 | SZ253A | 3.0 | 80 | 20 | 400 | 1.0 | 100 | 1.0 | 340 |
| BZX85C3V3 | SZ253D | 3.3 | 80 | 20 | 400 | 1.0 | 40 | 1.0 | 320 |
| BZX85C3V6 | SZ253G | 3.6 | 70 | 20 | 500 | 1.0 | 20 | 1.0 | 290 |
| BZX85C3V9 | SZ253J | 3.9 | 60 | 15 | 500 | 1.0 | 10 | 1.0 | 280 |
| BZX85C4V3 | SZ254D | 4.3 | 50 | 13 | 500 | 1.0 | 3.0 | 1.0 | 250 |
| BZX85C4V7 | SZ254H | 4.7 | 45 | 13 | 500 | 1.0 | 3.0 | 1.0 | 215 |
| BZX85C5V1 | SZ255B | 5.1 | 45 | 10 | 500 | 1.0 | 1.0 | 1.5 | 200 |
| BZX85C5V6 | SZ255G | 5.6 | 45 | 7.0 | 400 | 1.0 | 1.0 | 2.0 | 190 |
| BZX85C6V2 | SZ256C | 6.2 | 35 | 4.0 | 300 | 1.0 | 1.0 | 3.0 | 170 |
| BZX85C6V8 | SZ256I | 6.8 | 35 | 3.5 | 300 | 1.0 | 50 | 4.0 | 155 |
| BZX85C7V5 | SZ257F | 7.5 | 35 | 3.0 | 200 | 0.5 | 50 | 4.5 | 140 |
| BZX85C8V2 | SZ258C | 8.2 | 25 | 5.0 | 200 | 0.5 | 50 | 6.2 | 130 |
| BZX85C9V1 | SZ259B | 9.1 | 25 | 5.0 | 200 | 0.5 | 50 | 6.8 | 120 |
| BZX85C10 | SZ2510 | 10 | 25 | 7.0 | 200 | 0.5 | 0.5 | 7.5 | 105 |
| BZX85C11 | SZ2511 | 11 | 20 | 8.0 | 300 | 0.5 | 0.5 | 8.2 | 97 |
| BZX85C12 | SZ2512 | 12 | 20 | 9.0 | 350 | 0.5 | 0.5 | 9.1 | 88 |
| BZX85C13 | SZ2513 | 13 | 20 | 10 | 400 | 0.5 | 0.5 | 10 | 79 |
| BZX85C15 | SZ2515 | 15 | 15 | 15 | 500 | 0.5 | 0.5 | 11 | 71 |
| BZX85C16 | SZ2516 | 16 | 15 | 15 | 500 | 0.5 | 0.5 | 12 | 66 |
| BZX85C18 | SZ2518 | 18 | 15 | 20 | 500 | 0.5 | 0.5 | 13 | 62 |
| BZX85C20 | SZ2520 | 20 | 10 | 24 | 600 | 0.5 | 0.5 | 15 | 56 |
| BZX85C22 | SZ2522 | 22 | 10 | 25 | 600 | 0.5 | 0.5 | 16 | 52 |
| BZX85C24 | SZ2524 | 24 | 10 | 25 | 600 | 0.5 | 0.5 | 18 | 47 |
| BZX85C27 | SZ2527 | 27 | 8.0 | 30 | 750 | 0.25 | 0.5 | 20 | 41 |
| BZX85C30 | SZ2530 | 30 | 8.0 | 30 | 1000 | 0.25 | 0.5 | 22 | 36 |
| BZX85C33 | SZ2533 | 33 | 8.0 | 35 | 1000 | 0.25 | 0.5 | 24 | 33 |
| BZX85C36 | SZ2536 | 36 | 8.0 | 40 | 1000 | 0.25 | 0.5 | 27 | 30 |
| BZX85C39 | SZ2539 | 39 | 6.0 | 50 | 1000 | 0.25 | 0.5 | 30 | 28 |
| BZX85C43 | SZ2543 | 43 | 6.0 | 50 | 1000 | 0.25 | 0.5 | 33 | 26 |
| BZX85C47 | SZ2547 | 47 | 4.0 | 90 | 1500 | 0.25 | 0.5 | 36 | 23 |
| BZX85C51 | SZ2551 | 51 | 4.0 | 115 | 1500 | 0.25 | 0.5 | 39 | 21 |
| BZX85C56 | SZ2556 | 56 | 4.0 | 120 | 2000 | 0.25 | 0.5 | 43 | 19 |
| BZX85C62 | SZ2562 | 62 | 4.0 | 125 | 2000 | 0.25 | 0.5 | 47 | 16 |
| BZX85C68 | SZ2568 | 68 | 4.0 | 130 | 2000 | 0.25 | 0.5 | 51 | 15 |
| BZX85C75 | SZ2575 | 75 | 4.0 | 135 | 2000 | 0.25 | 0.5 | 56 | 14 |
| BZX85C82 | SZ2582 | 82 | 2.7 | 200 | 3000 | 0.25 | 0.5 | 62 | 12 |
| BZX85C91 | SZ2591 | 91 | 2.7 | 250 | 3000 | 0.25 | 0.5 | 68 | 10 |
| BZX85C100 | SZ25B0 | 100 | 2.7 | 350 | 3000 | 0.25 | 0.5 | 75 | 9.4 |
| BZX85C110 | SZ25B1 | 110 | 2.7 | 450 | 4000 | 0.25 | 0.5 | 82 | 8.6 |
| BZX85C120 | SZ25B2 | 120 | 2.0 | 550 | 4500 | 0.25 | 0.5 | 91 | 7.8 |
| BZX85C130 | SZ25B3 | 130 | 2.0 | 700 | 5000 | 0.25 | 0.5 | 100 | 7.0 |
| BZX85C150 | SZ25B5 | 150 | 2.0 | 1000 | 6000 | 0.25 | 0.5 | 110 | 6.4 |
| BZX85C160 | SZ25B6 | 160 | 1.5 | 1100 | 6500 | 0.25 | 0.5 | 120 | 5.8 |
| BZX85C180 | SZ25B8 | 180 | 1.5 | 1200 | 7000 | 0.25 | 0.5 | 130 | 5.2 |
| BZX85C200 | SZ25D0 | 200 | 1.5 | 1500 | 8000 | 0.25 | 0.5 | 150 | 4.7 |

Notes:

- (1) V_F = 1.2 V_{max}. @ I_F = 200 mA.
- (2) The type numbers listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$. Add suffix "B" for $\pm 2\%$ tolerance for axial lead.
- (3) "BZX" for Axial Lead / "SZ" for SMD will be omitted on marking of the diode.



Zener Diodes 1.3 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current |
|------------|-----------------------|----------|-------------------------|-------------------|----------|---------------------------------|-----|--------------------------|
| | $V_Z @ I_{ZT}$ | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | I_{ZK} | $I_R @ V_R$ | | I_{ZM} |
| Axial Lead | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | (mA) |

MZ85C Series, 1.3 W, Case Type : M1A



| | | | | | | | | |
|----------|-----|-----|------|------|------|-----|-----|-----|
| MZ85C3V0 | 3.0 | 80 | 20 | 400 | 1.0 | 100 | 1.0 | 340 |
| MZ85C3V3 | 3.3 | 80 | 20 | 400 | 1.0 | 40 | 1.0 | 320 |
| MZ85C3V6 | 3.6 | 70 | 20 | 500 | 1.0 | 20 | 1.0 | 290 |
| MZ85C3V9 | 3.9 | 60 | 15 | 500 | 1.0 | 10 | 1.0 | 280 |
| MZ85C4V3 | 4.3 | 50 | 13 | 500 | 1.0 | 3.0 | 1.0 | 250 |
| MZ85C4V7 | 4.7 | 45 | 13 | 500 | 1.0 | 3.0 | 1.0 | 215 |
| MZ85C5V1 | 5.1 | 45 | 10 | 500 | 1.0 | 1.0 | 1.5 | 200 |
| MZ85C5V6 | 5.6 | 45 | 7.0 | 400 | 1.0 | 1.0 | 2.0 | 190 |
| MZ85C6V2 | 6.2 | 35 | 4.0 | 300 | 1.0 | 1.0 | 3.0 | 170 |
| MZ85C6V8 | 6.8 | 35 | 3.5 | 300 | 1.0 | 50 | 4.0 | 155 |
| MZ85C7V5 | 7.5 | 35 | 3.0 | 200 | 0.5 | 50 | 4.5 | 140 |
| MZ85C8V2 | 8.2 | 25 | 5.0 | 200 | 0.5 | 50 | 6.2 | 130 |
| MZ85C9V1 | 9.1 | 25 | 5.0 | 200 | 0.5 | 50 | 6.8 | 120 |
| MZ85C10 | 10 | 25 | 7.0 | 200 | 0.5 | 50 | 7.5 | 105 |
| MZ85C11 | 11 | 20 | 8.0 | 300 | 0.5 | 50 | 8.2 | 97 |
| MZ85C12 | 12 | 20 | 9.0 | 350 | 0.5 | 0.5 | 9.1 | 88 |
| MZ85C13 | 13 | 20 | 10 | 400 | 0.5 | 0.5 | 10 | 79 |
| MZ85C15 | 15 | 15 | 15 | 500 | 0.5 | 0.5 | 11 | 71 |
| MZ85C16 | 16 | 15 | 15 | 500 | 0.5 | 0.5 | 12 | 66 |
| MZ85C18 | 18 | 15 | 20 | 500 | 0.5 | 0.5 | 13 | 62 |
| MZ85C19 | 19 | 15 | 20 | 550 | 0.5 | 0.5 | 14 | 58 |
| MZ85C20 | 20 | 10 | 24 | 600 | 0.5 | 0.5 | 15 | 56 |
| MZ85C22 | 22 | 10 | 25 | 600 | 0.5 | 0.5 | 16 | 52 |
| MZ85C24 | 24 | 10 | 25 | 600 | 0.5 | 0.5 | 18 | 47 |
| MZ85C27 | 27 | 8.0 | 30 | 750 | 0.25 | 0.5 | 20 | 41 |
| MZ85C30 | 30 | 8.0 | 30 | 1000 | 0.25 | 0.5 | 22 | 36 |
| MZ85C33 | 33 | 8.0 | 35 | 1000 | 0.25 | 0.5 | 24 | 33 |
| MZ85C36 | 36 | 8.0 | 40 | 1000 | 0.25 | 0.5 | 27 | 30 |
| MZ85C39 | 39 | 6.0 | 50 | 1000 | 0.25 | 0.5 | 30 | 28 |
| MZ85C43 | 43 | 6.0 | 50 | 1000 | 0.25 | 0.5 | 33 | 26 |
| MZ85C47 | 47 | 4.0 | 90 | 1500 | 0.25 | 0.5 | 36 | 23 |
| MZ85C51 | 51 | 4.0 | 115 | 1500 | 0.25 | 0.5 | 39 | 21 |
| MZ85C56 | 56 | 4.0 | 120 | 2000 | 0.25 | 0.5 | 43 | 19 |
| MZ85C62 | 62 | 4.0 | 125 | 2000 | 0.25 | 0.5 | 47 | 16 |
| MZ85C68 | 68 | 4.0 | 130 | 2000 | 0.25 | 0.5 | 51 | 15 |
| MZ85C75 | 75 | 4.0 | 135 | 2000 | 0.25 | 0.5 | 56 | 14 |
| MZ85C82 | 82 | 2.7 | 200 | 3000 | 0.25 | 0.5 | 62 | 12 |
| MZ85C91 | 91 | 2.7 | 250 | 3000 | 0.25 | 0.5 | 68 | 10 |
| MZ85C100 | 100 | 2.7 | 350 | 3000 | 0.25 | 0.5 | 75 | 9.4 |
| MZ85C110 | 110 | 2.7 | 450 | 4000 | 0.25 | 0.5 | 82 | 8.6 |
| MZ85C120 | 120 | 2.0 | 550 | 4500 | 0.25 | 0.5 | 91 | 7.8 |
| MZ85C130 | 130 | 2.0 | 700 | 5000 | 0.25 | 0.5 | 100 | 7.0 |
| MZ85C150 | 150 | 2.0 | 1000 | 6000 | 0.25 | 0.5 | 110 | 6.4 |
| MZ85C160 | 160 | 1.5 | 1100 | 6500 | 0.25 | 0.5 | 120 | 5.8 |
| MZ85C180 | 180 | 1.5 | 1200 | 7000 | 0.25 | 0.5 | 130 | 5.2 |
| MZ85C200 | 200 | 1.5 | 1900 | 9990 | 0.25 | 0.5 | 150 | 4.7 |

Note :

(1) The type number listed have a standard tolerance on the nominal zener voltage of $\pm 5.0\%$.



Zener Diodes 1.3 W

| Type No. | Zener Voltage ⁽¹⁾ V _Z @ I _{ZT} | | Test Current | Dynamic Resistance at I _{ZT} , f = 1kHz | Reverse Voltage at I _R = 0.5mA | Admissible Zener Current | Temp. coefficient of Zener Voltage | |
|----------|--|------|-----------------|--|--|-------------------------------|---|------|
| | Min. | Max. | I _{ZT} | | V _R | I _Z ⁽²⁾ | $\alpha_{VZ}(10^{-4} / ^\circ\text{C})$ | |
| | (V) | (V) | (mA) | r _{Zj} (Ω) | (V) | (mA) | min. | max. |

ZPY Series, 1.3 W, Case Type : DO-41 Glass



| | | | | | | | | |
|--------|------|------|-----|-------------|--------|-----|----|-----|
| ZPY3.9 | 3.7 | 4.1 | 100 | 4 (< 7) | - | 290 | -7 | +2 |
| ZPY4.3 | 4.0 | 4.6 | 100 | 4 (< 7) | - | 280 | -7 | +3 |
| ZPY4.7 | 4.4 | 5.0 | 100 | 2 (< 5) | - | 250 | -7 | +4 |
| ZPY5.1 | 4.8 | 6.4 | 100 | 1 (< 2) | > 0.7 | 215 | -6 | +5 |
| ZPY5.6 | 5.2 | 6.0 | 100 | 1 (< 2) | > 1.5 | 200 | -3 | +5 |
| ZPY6.2 | 5.8 | 6.6 | 100 | 1 (< 2) | > 2.0 | 190 | -1 | +6 |
| ZPY6.8 | 6.4 | 7.2 | 100 | 1 (< 2) | > 3.0 | 170 | 0 | +7 |
| ZPY7.5 | 7.0 | 7.9 | 100 | 1 (< 2) | > 5.0 | 155 | 0 | +7 |
| ZPY8.2 | 7.7 | 8.7 | 100 | 1 (< 2) | > 6.0 | 140 | +3 | +8 |
| ZPY9.1 | 8.5 | 9.6 | 50 | 2 (< 4) | > 7.0 | 130 | +3 | +8 |
| ZPY10 | 9.41 | 10.6 | 50 | 2 (< 4) | > 7.5 | 120 | +5 | +9 |
| ZPY11 | 10.4 | 11.6 | 50 | 3 (< 7) | > 8.5 | 105 | +5 | +10 |
| ZPY12 | 11.4 | 12.7 | 50 | 3 (< 7) | > 9.0 | 97 | +5 | +10 |
| ZPY13 | 12.4 | 14.1 | 50 | 4 (< 9) | > 10 | 88 | +5 | +10 |
| ZPY15 | 13.8 | 15.8 | 50 | 4 (< 9) | > 11 | 79 | +5 | +10 |
| ZPY16 | 15.3 | 17.1 | 25 | 5 (< 10) | > 12 | 71 | +7 | +11 |
| ZPY18 | 16.8 | 19.1 | 25 | 5 (< 11) | > 14 | 66 | +7 | +11 |
| ZPY20 | 18.8 | 21.2 | 25 | 6 (< 12) | > 15 | 62 | +7 | +11 |
| ZPY22 | 20.8 | 23.3 | 25 | 7 (< 13) | > 17 | | +7 | +11 |
| ZPY24 | 22.8 | 25.6 | 25 | 8 (< 14) | > 18 | 56 | +7 | +12 |
| ZPY27 | 25.1 | 28.9 | 25 | 9 (< 15) | > 20 | 52 | +7 | +12 |
| ZPY30 | 28 | 32 | 25 | 10 (< 20) | > 22.5 | 47 | +7 | +12 |
| ZPY33 | 31 | 35 | 25 | 11 (< 20) | > 25 | 41 | +7 | +12 |
| ZPY36 | 34 | 38 | 10 | 25 (< 60) | > 27 | 36 | +7 | +12 |
| ZPY39 | 37 | 41 | 10 | 30 (< 60) | > 29 | 33 | +8 | +12 |
| ZPY43 | 40 | 46 | 10 | 35 (< 80) | > 32 | 30 | +8 | +13 |
| ZPY47 | 44 | 50 | 10 | 40 (< 80) | > 35 | 28 | +8 | +13 |
| ZPY51 | 48 | 64 | 10 | 45 (< 100) | > 38 | 26 | +8 | +13 |
| ZPY56 | 52 | 60 | 10 | 50 (< 100) | > 42 | 23 | +8 | +13 |
| ZPY62 | 58 | 66 | 10 | 60 (< 130) | > 47 | 21 | +8 | +13 |
| ZPY68 | 64 | 72 | 10 | 65 (< 130) | > 51 | 19 | +8 | +13 |
| ZPY75 | 70 | 79 | 10 | 70 (< 160) | > 56 | 16 | +8 | +13 |
| ZPY82 | 77 | 88 | 10 | 80 (< 160) | > 61 | 15 | +8 | +13 |
| ZPY91 | 85 | 96 | 5 | 120 (< 250) | > 68 | 14 | +9 | +13 |
| ZPY100 | 94 | 106 | 5 | 130 (< 250) | > 75 | 12 | +9 | +13 |

Notes:

(1) Tested with pulse tp = 5 ms

(2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.

For devices in glass DO-41 case with higher Zener voltage but same power dissipation see types ZPU100 ... ZPU180



Zener Diodes 1.5 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current |
|----------|----------------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------|---------------------------------|-----|--------------------------|
| | V _Z @ I _{ZT} | I _{ZT} | Z _{ZT} @ I _{ZT} | Z _{ZK} @ I _{ZK} | I _{ZK} | I _R @ V _R | | I _{ZM} |
| | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | (mA) |

MZ5913A Series, 1.5 W, Case Type : M1A



| | | | | | | | | |
|---------|-----|-------|------|------|------|-----|-------|-----|
| MZ5913A | 3.3 | 113.6 | 10.0 | 500 | 1.0 | 100 | 1.0 | 454 |
| MZ5914A | 3.6 | 104.2 | 9.0 | 500 | 1.0 | 75 | 1.0 | 416 |
| MZ5915A | 3.9 | 96.1 | 7.5 | 500 | 1.0 | 25 | 1.0 | 384 |
| MZ5916A | 4.3 | 87.2 | 6.0 | 500 | 1.0 | 5.0 | 1.0 | 348 |
| MZ5917A | 4.7 | 79.8 | 5.0 | 500 | 1.0 | 5.0 | 1.5 | 319 |
| MZ5918A | 5.1 | 73.5 | 4.0 | 350 | 1.0 | 5.0 | 2.0 | 294 |
| MZ5919A | 5.6 | 66.9 | 2.0 | 250 | 1.0 | 5.0 | 3.0 | 267 |
| MZ5920A | 6.2 | 60.5 | 2.0 | 200 | 1.0 | 5.0 | 4.0 | 241 |
| MZ5921A | 6.8 | 55.1 | 2.5 | 200 | 1.0 | 5.0 | 5.2 | 220 |
| MZ5922A | 7.5 | 50.0 | 3.0 | 400 | 0.5 | 5.0 | 6.0 | 200 |
| MZ5923A | 8.2 | 45.7 | 3.5 | 400 | 0.5 | 5.0 | 6.5 | 182 |
| MZ5924A | 9.1 | 41.2 | 4.0 | 500 | 0.5 | 5.0 | 7.0 | 164 |
| MZ5925A | 10 | 37.5 | 4.5 | 500 | 0.25 | 5.0 | 8.0 | 150 |
| MZ5926A | 11 | 34.1 | 5.5 | 550 | 0.25 | 1.0 | 8.4 | 136 |
| MZ5927A | 12 | 31.2 | 6.5 | 550 | 0.25 | 1.0 | 9.1 | 125 |
| MZ5928A | 13 | 28.8 | 7.0 | 550 | 0.25 | 1.0 | 9.9 | 115 |
| MZ5929A | 15 | 25.0 | 9.0 | 600 | 0.25 | 1.0 | 11.4 | 100 |
| MZ5930A | 16 | 23.4 | 10 | 600 | 0.25 | 1.0 | 12.2 | 93 |
| MZ5931A | 18 | 20.8 | 12 | 650 | 0.25 | 1.0 | 13.7 | 83 |
| MZ5932A | 20 | 18.7 | 14 | 650 | 0.25 | 1.0 | 15.2 | 75 |
| MZ5933A | 22 | 17.0 | 17.5 | 650 | 0.25 | 1.0 | 16.7 | 68 |
| MZ5934A | 24 | 15.6 | 19 | 700 | 0.25 | 1.0 | 18.2 | 62 |
| MZ5935A | 27 | 13.9 | 23 | 700 | 0.25 | 1.0 | 20.6 | 55 |
| MZ5936A | 30 | 12.5 | 26 | 750 | 0.25 | 1.0 | 22.8 | 50 |
| MZ5937A | 33 | 11.4 | 33 | 800 | 0.25 | 1.0 | 25.1 | 45 |
| MZ5938A | 36 | 10.4 | 38 | 850 | 0.25 | 1.0 | 27.4 | 41 |
| MZ5939A | 39 | 9.6 | 45 | 900 | 0.25 | 1.0 | 29.7 | 38 |
| MZ5940A | 43 | 8.7 | 53 | 950 | 0.25 | 1.0 | 32.7 | 34 |
| MZ5941A | 47 | 8.0 | 67 | 1000 | 0.25 | 1.0 | 35.8 | 31 |
| MZ5942A | 51 | 7.3 | 70 | 1100 | 0.25 | 1.0 | 38.8 | 29 |
| MZ5943A | 56 | 6.7 | 86 | 1300 | 0.25 | 1.0 | 42.6 | 26 |
| MZ5944A | 62 | 6.0 | 100 | 1500 | 0.25 | 1.0 | 47.1 | 24 |
| MZ5945A | 68 | 5.5 | 120 | 1700 | 0.25 | 1.0 | 51.7 | 22 |
| MZ5946A | 75 | 5.0 | 140 | 2000 | 0.25 | 1.0 | 56.0 | 20 |
| MZ5947A | 82 | 4.6 | 160 | 2500 | 0.25 | 1.0 | 62.2 | 18 |
| MZ5948A | 91 | 4.1 | 200 | 3000 | 0.25 | 1.0 | 69.2 | 16 |
| MZ5949A | 100 | 3.7 | 250 | 3100 | 0.25 | 1.0 | 76.0 | 15 |
| MZ5950A | 110 | 3.4 | 300 | 4000 | 0.25 | 1.0 | 83.6 | 13 |
| MZ5951A | 120 | 3.1 | 380 | 4500 | 0.25 | 1.0 | 91.2 | 12 |
| MZ5952A | 130 | 2.9 | 450 | 5000 | 0.25 | 1.0 | 98.8 | 11 |
| MZ5953A | 150 | 2.5 | 600 | 6000 | 0.25 | 1.0 | 114.0 | 10 |
| MZ5954A | 160 | 2.3 | 700 | 6500 | 0.25 | 1.0 | 121.6 | 9.0 |
| MZ5955A | 180 | 2.1 | 900 | 7000 | 0.25 | 1.0 | 136.8 | 8.0 |
| MZ5956A | 200 | 1.9 | 1200 | 8000 | 0.25 | 1.0 | 152.0 | 7.0 |

Note : (1) Suffix "A" is for $\pm 10\%$ tolerance. Use suffix "B" for $\pm 5\%$ tolerance (Axial lead)



Zener Diodes 1.5 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Nominal Zener Voltage | Test Current | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current |
|----------|-----------------------|--------------|-------------------------|-------------------|----------|---------------------------------|-----|--------------------------|
| | $V_Z @ I_{ZT}$ | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | I_{ZK} | $I_R @ V_R$ | | I_{ZM} |
| | (V) | (mA) | | (Ω) | (mA) | (μ A) | (V) | (mA) |

1SMA5913A Series, 1.5 W, Case Type : SMA



| | | | | | | | | |
|-----------|-----|-------|------|------|------|-----|-------|-----|
| 1SMA5913A | 3.3 | 113.6 | 10 | 500 | 1.0 | 100 | 1.0 | 454 |
| 1SMA5914A | 3.6 | 104.2 | 9.0 | 500 | 1.0 | 75 | 1.0 | 416 |
| 1SMA5915A | 3.9 | 96.1 | 7.5 | 500 | 1.0 | 25 | 1.0 | 384 |
| 1SMA5916A | 4.3 | 87.2 | 6.0 | 500 | 1.0 | 5.0 | 1.0 | 348 |
| 1SMA5917A | 4.7 | 79.8 | 5.0 | 500 | 1.0 | 5.0 | 1.5 | 319 |
| 1SMA5918A | 5.1 | 73.5 | 4.0 | 500 | 1.0 | 5.0 | 2.0 | 294 |
| 1SMA5919A | 5.6 | 66.9 | 2.0 | 500 | 1.0 | 5.0 | 3.0 | 267 |
| 1SMA5920A | 6.2 | 60.5 | 2.0 | 200 | 1.0 | 5.0 | 4.0 | 241 |
| 1SMA5921A | 6.8 | 55.1 | 2.5 | 200 | 1.0 | 5.0 | 5.2 | 220 |
| 1SMA5922A | 7.5 | 50.0 | 3.0 | 400 | 0.5 | 5.0 | 6.0 | 200 |
| 1SMA5923A | 8.2 | 45.7 | 3.5 | 400 | 0.5 | 5.0 | 6.5 | 182 |
| 1SMA5924A | 9.1 | 41.2 | 4.0 | 500 | 0.5 | 5.0 | 7.0 | 164 |
| 1SMA5925A | 10 | 37.5 | 4.5 | 500 | 0.25 | 5.0 | 8.0 | 150 |
| 1SMA5926A | 11 | 34.1 | 5.5 | 550 | 0.25 | 1.0 | 8.4 | 136 |
| 1SMA5927A | 12 | 31.2 | 6.5 | 550 | 0.25 | 1.0 | 9.1 | 125 |
| 1SMA5928A | 13 | 28.8 | 7.0 | 550 | 0.25 | 1.0 | 9.9 | 115 |
| 1SMA5929A | 15 | 25.0 | 9.0 | 600 | 0.25 | 1.0 | 11.4 | 100 |
| 1SMA5930A | 16 | 23.4 | 10 | 600 | 0.25 | 1.0 | 12.2 | 93 |
| 1SMA5931A | 18 | 20.8 | 12 | 650 | 0.25 | 1.0 | 13.7 | 83 |
| 1SMA5932A | 20 | 18.7 | 14 | 650 | 0.25 | 1.0 | 15.2 | 75 |
| 1SMA5933A | 22 | 17.0 | 17.5 | 650 | 0.25 | 1.0 | 16.7 | 68 |
| 1SMA5934A | 24 | 15.6 | 19 | 700 | 0.25 | 1.0 | 18.2 | 62 |
| 1SMA5935A | 27 | 13.9 | 23 | 700 | 0.25 | 1.0 | 20.6 | 55 |
| 1SMA5936A | 30 | 12.5 | 26 | 750 | 0.25 | 1.0 | 22.8 | 50 |
| 1SMA5937A | 33 | 11.4 | 33 | 800 | 0.25 | 1.0 | 25.1 | 45 |
| 1SMA5938A | 36 | 10.4 | 38 | 850 | 0.25 | 1.0 | 27.4 | 41 |
| 1SMA5939A | 39 | 9.6 | 45 | 900 | 0.25 | 1.0 | 29.7 | 38 |
| 1SMA5940A | 43 | 8.7 | 53 | 950 | 0.25 | 1.0 | 32.7 | 34 |
| 1SMA5941A | 47 | 8.0 | 67 | 1000 | 0.25 | 1.0 | 35.8 | 31 |
| 1SMA5942A | 51 | 7.3 | 70 | 1100 | 0.25 | 1.0 | 38.8 | 29 |
| 1SMA5943A | 56 | 6.7 | 86 | 1300 | 0.25 | 1.0 | 42.6 | 26 |
| 1SMA5944A | 62 | 6.0 | 100 | 1500 | 0.25 | 1.0 | 47.1 | 24 |
| 1SMA5945A | 68 | 5.5 | 120 | 1700 | 0.25 | 1.0 | 51.7 | 22 |
| 1SMA5946A | 75 | 5.0 | 140 | 2000 | 0.25 | 1.0 | 56.0 | 20 |
| 1SMA5947A | 82 | 4.6 | 160 | 2500 | 0.25 | 1.0 | 62.2 | 18 |
| 1SMA5948A | 91 | 4.1 | 200 | 3000 | 0.25 | 1.0 | 69.2 | 16 |
| 1SMA5949A | 100 | 3.7 | 250 | 3100 | 0.25 | 1.0 | 76.0 | 15 |
| 1SMA5950A | 110 | 3.4 | 300 | 4000 | 0.25 | 1.0 | 83.6 | 13 |
| 1SMA5951A | 120 | 3.1 | 380 | 4500 | 0.25 | 1.0 | 91.2 | 12 |
| 1SMA5952A | 130 | 2.9 | 450 | 5000 | 0.25 | 1.0 | 98.8 | 11 |
| 1SMA5953A | 150 | 2.5 | 600 | 6000 | 0.25 | 1.0 | 114.0 | 10 |
| 1SMA5954A | 160 | 2.3 | 700 | 6500 | 0.25 | 1.0 | 121.6 | 9.0 |
| 1SMA5955A | 180 | 2.1 | 900 | 7000 | 0.25 | 1.0 | 136.8 | 8.0 |
| 1SMA5956A | 200 | 1.9 | 1200 | 8000 | 0.25 | 1.0 | 152.0 | 7.0 |
| 1SMA5957A | 240 | 1.5 | 1600 | 9000 | 0.25 | 1.0 | 182.4 | 6.0 |

Notes: (1) Suffix "A" indicates $\pm 10\%$ tolerance, change to suffix "B" for $\pm 5\%$ tolerance.

(2) "1SMA5" will be omitted in marking on the diode.



Zener Diodes 2.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current |
|------------|-----|----------------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------|---------------------------------|-----|--------------------------|
| | | V _Z @ I _{ZT} | I _{ZT} | Z _{ZT} @ I _{ZT} | Z _{ZK} @ I _{ZK} | I _{ZK} | I _R @ V _R | | I _{ZM} |
| Axial Lead | SMD | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | (mA) |

2EZ / SZ45 Series, 2.0 W, Case Type : DO-41/SMA

| | | | | | | | | | |
|----------|--------|-----|------|------|------|------|-----|-------|-----|
| 2EZ2.7D5 | SZ452H | 2.7 | 80 | 10 | 400 | 1.0 | 100 | 1.0 | 660 |
| 2EZ3.0D5 | SZ453A | 3.0 | 160 | 8.0 | 400 | 1.0 | 100 | 1.0 | 600 |
| 2EZ3.3D5 | SZ453D | 3.3 | 145 | 8.0 | 400 | 1.0 | 80 | 1.0 | 545 |
| 2EZ3.6D5 | SZ453G | 3.6 | 139 | 5.0 | 400 | 1.0 | 80 | 1.0 | 504 |
| 2EZ3.9D5 | SZ453J | 3.9 | 128 | 5.0 | 400 | 1.0 | 30 | 1.0 | 468 |
| 2EZ4.3D5 | SZ454D | 4.3 | 116 | 4.5 | 400 | 1.0 | 20 | 1.0 | 434 |
| 2EZ4.7D5 | SZ454H | 4.7 | 106 | 4.5 | 550 | 1.0 | 5.0 | 1.0 | 386 |
| 2EZ5.1D5 | SZ455B | 5.1 | 98.0 | 3.5 | 600 | 1.0 | 5.0 | 1.0 | 356 |
| 2EZ5.6D5 | SZ455G | 5.6 | 89.5 | 2.5 | 500 | 1.0 | 5.0 | 2.0 | 324 |
| 2EZ6.2D5 | SZ456C | 6.2 | 80.5 | 1.5 | 700 | 1.0 | 5.0 | 3.0 | 292 |
| 2EZ6.8D5 | SZ456I | 6.8 | 73.5 | 2.0 | 700 | 1.0 | 5.0 | 4.0 | 266 |
| 2EZ7.5D5 | SZ457F | 7.5 | 66.5 | 2.0 | 700 | 0.5 | 5.0 | 5.0 | 242 |
| 2EZ8.2D5 | SZ458C | 8.2 | 61.0 | 2.3 | 700 | 0.5 | 5.0 | 6.0 | 220 |
| 2EZ9.1D5 | SZ459B | 9.1 | 55.0 | 2.5 | 700 | 0.5 | 3.0 | 7.0 | 200 |
| 2EZ10D5 | SZ4510 | 10 | 50.0 | 3.5 | 700 | 0.25 | 3.0 | 7.6 | 182 |
| 2EZ11D5 | SZ4511 | 11 | 45.5 | 4.0 | 700 | 0.25 | 1.0 | 8.4 | 166 |
| 2EZ12D5 | SZ4512 | 12 | 41.5 | 4.5 | 700 | 0.25 | 1.0 | 9.1 | 152 |
| 2EZ13D5 | SZ4513 | 13 | 38.5 | 5.0 | 700 | 0.25 | 0.5 | 9.9 | 138 |
| 2EZ14D5 | SZ4514 | 14 | 35.7 | 5.5 | 700 | 0.25 | 0.5 | 10.6 | 130 |
| 2EZ15D5 | SZ4515 | 15 | 33.4 | 7.0 | 700 | 0.25 | 0.5 | 11.4 | 122 |
| 2EZ16D5 | SZ4516 | 16 | 31.2 | 8.0 | 700 | 0.25 | 0.5 | 12.2 | 114 |
| 2EZ17D5 | SZ4517 | 17 | 29.4 | 9.0 | 750 | 0.25 | 0.5 | 13.0 | 107 |
| 2EZ18D5 | SZ4518 | 18 | 27.8 | 10 | 750 | 0.25 | 0.5 | 13.7 | 100 |
| 2EZ19D5 | SZ4519 | 19 | 26.3 | 11 | 750 | 0.25 | 0.5 | 14.4 | 95 |
| 2EZ20D5 | SZ4520 | 20 | 25.0 | 11 | 750 | 0.25 | 0.5 | 15.2 | 90 |
| 2EZ22D5 | SZ4522 | 22 | 22.8 | 12 | 750 | 0.25 | 0.5 | 16.7 | 82 |
| 2EZ24D5 | SZ4524 | 24 | 20.8 | 13 | 750 | 0.25 | 0.5 | 18.2 | 76 |
| 2EZ27D5 | SZ4527 | 27 | 18.5 | 18 | 750 | 0.25 | 0.5 | 20.6 | 68 |
| 2EZ30D5 | SZ4530 | 30 | 16.6 | 20 | 1000 | 0.25 | 0.5 | 22.5 | 60 |
| 2EZ33D5 | SZ4533 | 33 | 15.1 | 23 | 1000 | 0.25 | 0.5 | 25.1 | 55 |
| 2EZ36D5 | SZ4536 | 36 | 13.9 | 25 | 1000 | 0.25 | 0.5 | 27.4 | 50 |
| 2EZ39D5 | SZ4539 | 39 | 12.8 | 30 | 1000 | 0.25 | 0.5 | 29.7 | 47 |
| 2EZ43D5 | SZ4543 | 43 | 11.6 | 35 | 1500 | 0.25 | 0.5 | 32.7 | 43 |
| 2EZ47D5 | SZ4547 | 47 | 10.6 | 40 | 1500 | 0.25 | 0.5 | 35.8 | 39 |
| 2EZ51D5 | SZ4551 | 51 | 9.8 | 48 | 1500 | 0.25 | 0.5 | 38.8 | 36 |
| 2EZ56D5 | SZ4556 | 56 | 9.0 | 55 | 2000 | 0.25 | 0.5 | 42.6 | 32 |
| 2EZ62D5 | SZ4562 | 62 | 8.1 | 60 | 2000 | 0.25 | 0.5 | 47.1 | 29 |
| 2EZ68D5 | SZ4568 | 68 | 7.4 | 75 | 2000 | 0.25 | 0.5 | 51.7 | 27 |
| 2EZ75D5 | SZ4575 | 75 | 6.7 | 90 | 2000 | 0.25 | 0.5 | 56.0 | 24 |
| 2EZ82D5 | SZ4582 | 82 | 6.1 | 100 | 3000 | 0.25 | 0.5 | 62.2 | 22 |
| 2EZ91D5 | SZ4591 | 91 | 5.5 | 125 | 3000 | 0.25 | 0.5 | 69.2 | 20 |
| 2EZ100D5 | SZ45B0 | 100 | 5.0 | 175 | 3000 | 0.25 | 0.5 | 76.0 | 18 |
| 2EZ110D5 | SZ45B1 | 110 | 4.5 | 250 | 4000 | 0.25 | 0.5 | 83.6 | 17 |
| 2EZ120D5 | SZ45B2 | 120 | 4.2 | 325 | 4500 | 0.25 | 0.5 | 91.2 | 15 |
| 2EZ130D5 | SZ45B3 | 130 | 3.8 | 400 | 5000 | 0.25 | 0.5 | 98.8 | 14 |
| 2EZ140D5 | SZ45B4 | 140 | 3.6 | 500 | 5500 | 0.25 | 0.5 | 106.4 | 13 |
| 2EZ150D5 | SZ45B5 | 150 | 3.3 | 575 | 6000 | 0.25 | 0.5 | 114.0 | 12 |
| 2EZ160D5 | SZ45B6 | 160 | 3.1 | 650 | 6500 | 0.25 | 0.5 | 121.6 | 11 |
| 2EZ170D5 | SZ45B7 | 170 | 2.9 | 675 | 7000 | 0.25 | 0.5 | 130.4 | 11 |
| 2EZ180D5 | SZ45B8 | 180 | 2.8 | 725 | 7000 | 0.25 | 0.5 | 136.8 | 10 |
| 2EZ190D5 | SZ45B9 | 190 | 2.6 | 825 | 8000 | 0.25 | 0.5 | 144.8 | 10 |
| 2EZ200D5 | SZ45D0 | 200 | 2.5 | 900 | 8000 | 0.25 | 0.5 | 152.0 | 9.0 |
| 2EZ220D5 | SZ45D2 | 220 | 2.0 | 2000 | 8500 | 0.25 | 0.5 | 167 | 8.0 |
| 2EZ270D5 | SZ45D7 | 270 | 1.6 | 2200 | 8500 | 0.25 | 0.5 | 205 | 6.7 |
| 2EZ300D5 | SZ45E0 | 300 | 1.5 | 2200 | 9000 | 0.25 | 0.5 | 228 | 5.9 |
| 2EZ330D5 | SZ45E3 | 330 | 1.4 | 2300 | 9000 | 0.25 | 0.5 | 250 | 5.4 |

Notes :

- (1) For V_Z ≤ 200 V; V_F = 1.2 V_{max}. @ I_F = 200 mA and for V_Z > 200 V; V_F = 2 V_{max}. @ I_F = 200 mA.
- (2) Suffix "5" indicates ± 5% tolerance, suffix "10" indicates ± 10% tolerance (Axial lead) / replace the fourth digit of type from "0" for ± 10% tolerance to "5" for ± 5% tolerance (SMD)
- (3) "EZ" for Axial Lead / "SZ" for SMD will be omitted on marking of the diode



Zener Diodes 2.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Zener Voltage ⁽²⁾ at I _{ZT} | | Test Current | Dynamic resistance at I _{ZT} | Temp. coeff. of Zener Voltage at I _{ZT} | Maximum Reverse at I _R = 1 μA | Admissible Zener Current ⁽¹⁾ at Ta = 25 °C |
|----------|--|------|----------------------|---|--|--|---|
| | V _Z (V) | | | | | | |
| | min. | max. | I _{ZT} (mA) | max. rzj (Ω) | α _{VZ} (10 ⁻⁴ /K) | V _R (V) | I _Z (mA) |

ZY3.6 Series, 2 W, Case Type : DO-41



| | | | | | | | |
|-------|------|------|-----|-----|------------|--------|-----|
| ZY3.6 | 3.4 | 3.8 | 100 | 7 | -7...+2 | - | 440 |
| ZY3.9 | 3.7 | 4.1 | 100 | 7 | -7...+2 | - | 410 |
| ZY4.3 | 4.0 | 4.6 | 100 | 7 | -7...+3 | - | 360 |
| ZY4.7 | 4.4 | 5.0 | 100 | 7 | -7...+4 | - | 330 |
| ZY5.1 | 4.8 | 5.4 | 100 | 5 | -6...+5 | - | 300 |
| ZY5.6 | 5.2 | 6.0 | 100 | 2 | -3...+5 | >1.5 | 275 |
| ZY6.2 | 5.8 | 6.6 | 100 | 2 | -1...+6 | >1.5 | 245 |
| ZY6.8 | 6.4 | 7.2 | 100 | 1 | 0...+7 | >2.0 | 220 |
| ZY7.5 | 7.0 | 7.9 | 100 | 1 | 0...+7 | >2.0 | 200 |
| ZY8.2 | 7.7 | 8.7 | 100 | 1 | +3...+8 | >3.5 | 180 |
| ZY9.1 | 8.5 | 9.6 | 50 | 4 | +3...+8 | >7.4 | 165 |
| ZY10 | 9.4 | 10.6 | 50 | 4 | +5...+9 | >8.2 | 145 |
| ZY11 | 10.4 | 11.6 | 50 | 7 | +5...+10 | >9.2 | 135 |
| ZY12 | 11.4 | 12.7 | 50 | 7 | +5...+10 | >10 | 120 |
| ZY13 | 12.4 | 14.1 | 50 | 10 | +5...+10 | >10.7 | 110 |
| ZY15 | 13.8 | 15.8 | 50 | 10 | +5...+10 | >12 | 98 |
| ZY16 | 15.3 | 17.1 | 25 | 15 | +6...+11 | >13.3 | 90 |
| ZY18 | 16.8 | 19.1 | 25 | 15 | +6...+11 | >14.7 | 80 |
| ZY20 | 18.8 | 21.2 | 25 | 15 | +6...+11 | >16.5 | 72 |
| ZY22 | 20.8 | 23.3 | 25 | 15 | +6...+11 | >18.3 | 66 |
| ZY24 | 22.8 | 25.6 | 25 | 15 | +6...+11 | >20.1 | 60 |
| ZY27 | 25.1 | 28.9 | 25 | 15 | +6...+11 | >22.5 | 53 |
| ZY30 | 28 | 32 | 25 | 15 | +6...+11 | >25.1 | 48 |
| ZY33 | 31 | 35 | 25 | 15 | +6...+11 | >27.8 | 44 |
| ZY36 | 34 | 38 | 10 | 40 | +6...+11 | >30.2 | 40 |
| ZY39 | 37 | 41 | 10 | 40 | +6...+11 | >32.9 | 37 |
| ZY43 | 40 | 46 | 10 | 45 | +7...+12 | >35.6 | 33 |
| ZY47 | 44 | 50 | 10 | 45 | +7...+12 | >39.2 | 30 |
| ZY51 | 48 | 54 | 10 | 60 | +7...+12 | >42.8 | 27 |
| ZY56 | 52 | 60 | 10 | 60 | +7...+12 | >47.3 | 25 |
| ZY62 | 58 | 66 | 10 | 80 | +8...+13 | >51.7 | 21 |
| ZY68 | 64 | 72 | 10 | 80 | +8...+13 | >57.1 | 20 |
| ZY75 | 70 | 79 | 10 | 100 | +8...+13 | >63.2 | 18 |
| ZY82 | 77 | 88 | 10 | 100 | +8...+13 | >68.6 | 16 |
| ZY91 | 85 | 96 | 5 | 200 | +9...+13 | >75.7 | 15 |
| ZY100 | 94 | 106 | 5 | 200 | +9...+13 | >83.7 | 13 |
| ZY110 | 104 | 116 | 5 | 250 | +9...+13 | >92.6 | 12 |
| ZY120 | 114 | 127 | 5 | 250 | +9...+13 | >101.6 | 11 |
| ZY130 | 124 | 141 | 5 | 300 | +9...+13 | >110.5 | 10 |
| ZY150 | 138 | 156 | 5 | 300 | +9...+13 | >123 | 9 |
| ZY160 | 153 | 171 | 5 | 350 | +9...+13 | >136 | 8.5 |
| ZY180 | 168 | 191 | 5 | 350 | +9...+13 | >149 | 8 |
| ZY200 | 168 | 212 | 5 | 350 | +9 ... +13 | >167 | 7.5 |

Notes :

(1) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case

(2) Tested with pulse $t_p = 5$ ms



Zener Diodes 3.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current |
|------------|-----|----------------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------|---------------------------------|-----|--------------------------|
| | | V _Z @ I _{ZT} | I _{ZT} | Z _{ZT} @ I _{ZT} | Z _{ZK} @ I _{ZK} | I _{ZK} | I _R @ V _R | | I _{ZM} |
| Axial Lead | SMD | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | (mA) |

1N5913A/SZ303D Series, 3.0/1.5 W, Case Type : DO-41/SMA

| | | | | | | | | | |
|---------|--------|-----|-------|------|------|------|-----|-------|-----|
| 1N5913A | SZ303D | 3.3 | 113.6 | 10.0 | 500 | 1.0 | 100 | 1.0 | 454 |
| 1N5914A | SZ303G | 3.6 | 104.2 | 9.0 | 500 | 1.0 | 75 | 1.0 | 416 |
| 1N5915A | SZ303J | 3.9 | 96.1 | 7.5 | 500 | 1.0 | 25 | 1.0 | 384 |
| 1N5916A | SZ304D | 4.3 | 87.2 | 6.0 | 500 | 1.0 | 5.0 | 1.0 | 348 |
| 1N5917A | SZ304H | 4.7 | 79.8 | 5.0 | 500 | 1.0 | 5.0 | 1.5 | 319 |
| 1N5918A | SZ305B | 5.1 | 73.5 | 4.0 | 350 | 1.0 | 5.0 | 2.0 | 294 |
| 1N5919A | SZ305G | 5.6 | 66.9 | 2.0 | 250 | 1.0 | 5.0 | 3.0 | 267 |
| 1N5920A | SZ306C | 6.2 | 60.5 | 2.0 | 200 | 1.0 | 5.0 | 4.0 | 241 |
| 1N5921A | SZ306I | 6.8 | 55.1 | 2.5 | 200 | 1.0 | 5.0 | 5.2 | 220 |
| 1N5922A | SZ307F | 7.5 | 50.0 | 3.0 | 400 | 0.5 | 5.0 | 6.0 | 200 |
| 1N5923A | SZ308C | 8.2 | 45.7 | 3.5 | 400 | 0.5 | 5.0 | 6.5 | 182 |
| 1N5924A | SZ309B | 9.1 | 41.2 | 4.0 | 500 | 0.5 | 5.0 | 7.0 | 164 |
| 1N5925A | SZ3010 | 10 | 37.5 | 4.5 | 500 | 0.25 | 5.0 | 8.0 | 150 |
| 1N5926A | SZ3011 | 11 | 34.1 | 5.5 | 550 | 0.25 | 1.0 | 8.4 | 136 |
| 1N5927A | SZ3012 | 12 | 31.2 | 6.5 | 550 | 0.25 | 1.0 | 9.1 | 125 |
| 1N5928A | SZ3013 | 13 | 28.8 | 7.0 | 550 | 0.25 | 1.0 | 9.9 | 115 |
| 1N5929A | SZ3015 | 15 | 25.0 | 9.0 | 600 | 0.25 | 1.0 | 11.4 | 100 |
| 1N5930A | SZ3016 | 16 | 23.4 | 10 | 600 | 0.25 | 1.0 | 12.2 | 93 |
| 1N5931A | SZ3018 | 18 | 20.8 | 12 | 650 | 0.25 | 1.0 | 13.7 | 83 |
| 1N5932A | SZ3020 | 20 | 18.7 | 14 | 650 | 0.25 | 1.0 | 15.2 | 75 |
| 1N5933A | SZ3022 | 22 | 17.0 | 17.5 | 650 | 0.25 | 1.0 | 16.7 | 68 |
| 1N5934A | SZ3024 | 24 | 15.6 | 19 | 700 | 0.25 | 1.0 | 18.2 | 62 |
| 1N5935A | SZ3027 | 27 | 13.9 | 23 | 700 | 0.25 | 1.0 | 20.6 | 55 |
| 1N5936A | SZ3030 | 30 | 12.5 | 26 | 750 | 0.25 | 1.0 | 22.8 | 50 |
| 1N5937A | SZ3033 | 33 | 11.4 | 33 | 800 | 0.25 | 1.0 | 25.1 | 45 |
| 1N5938A | SZ3036 | 36 | 10.4 | 38 | 850 | 0.25 | 1.0 | 27.4 | 41 |
| 1N5939A | SZ3039 | 39 | 9.6 | 45 | 900 | 0.25 | 1.0 | 29.7 | 38 |
| 1N5940A | SZ3043 | 43 | 8.7 | 53 | 950 | 0.25 | 1.0 | 32.7 | 34 |
| 1N5941A | SZ3047 | 47 | 8.0 | 67 | 1000 | 0.25 | 1.0 | 35.8 | 31 |
| 1N5942A | SZ3051 | 51 | 7.3 | 70 | 1100 | 0.25 | 1.0 | 38.8 | 29 |
| 1N5943A | SZ3056 | 56 | 6.7 | 86 | 1300 | 0.25 | 1.0 | 42.6 | 26 |
| 1N5944A | SZ3062 | 62 | 6.0 | 100 | 1500 | 0.25 | 1.0 | 47.1 | 24 |
| 1N5945A | SZ3068 | 68 | 5.5 | 120 | 1700 | 0.25 | 1.0 | 51.7 | 22 |
| 1N5946A | SZ3075 | 75 | 5.0 | 140 | 2000 | 0.25 | 1.0 | 56.0 | 20 |
| 1N5947A | SZ3082 | 82 | 4.6 | 160 | 2500 | 0.25 | 1.0 | 62.2 | 18 |
| 1N5948A | SZ3091 | 91 | 4.1 | 200 | 3000 | 0.25 | 1.0 | 69.2 | 16 |
| 1N5949A | SZ30B0 | 100 | 3.7 | 250 | 3100 | 0.25 | 1.0 | 76.0 | 15 |
| 1N5950A | SZ30B1 | 110 | 3.4 | 300 | 4000 | 0.25 | 1.0 | 83.6 | 13 |
| 1N5951A | SZ30B2 | 120 | 3.1 | 380 | 4500 | 0.25 | 1.0 | 91.2 | 12 |
| 1N5952A | SZ30B3 | 130 | 2.9 | 450 | 5000 | 0.25 | 1.0 | 98.8 | 11 |
| 1N5953A | SZ30B5 | 150 | 2.5 | 600 | 6000 | 0.25 | 1.0 | 114.0 | 10 |
| 1N5954A | SZ30B6 | 160 | 2.3 | 700 | 6500 | 0.25 | 1.0 | 121.6 | 9.0 |
| 1N5955A | SZ30B8 | 180 | 2.1 | 900 | 7000 | 0.25 | 1.0 | 136.8 | 8.0 |
| 1N5956A | SZ30D0 | 200 | 1.9 | 1200 | 8000 | 0.25 | 1.0 | 152.0 | 7.0 |

Notes :

- (1) V_F = 1.5 Vmax. @ I_F = 200mA
- (2) Suffix "A" is for ± 10% tolerance. Use suffix "B" for ± 5% tolerance (Axial lead) / replace the fourth digit of type from "0" for ± 10% tolerance to "5" for ± 5% tolerance (SMD)
- (3) "SZ" for SMD will be omitted on marking of the diode.



Zener Diodes 3.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current |
|------------|----------------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------|---------------------------------|-----|--------------------------|
| | V _Z @ I _{ZT} | I _{ZT} | Z _{KT} @ I _{ZT} | Z _{ZK} @ I _{ZK} | I _{ZK} | I _R @ V _R | | I _{ZM} |
| Axial Lead | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | (mA) |

1SMB5913A Series, 3.0W, Case Type : SMB



| | | | | | | | | |
|-----------|-----|-------|------|------|------|-----|-------|-----|
| 1SMB5913A | 3.3 | 113.6 | 10.0 | 500 | 1.0 | 100 | 1.0 | 454 |
| 1SMB5914A | 3.6 | 104.2 | 9.0 | 500 | 1.0 | 75 | 1.0 | 416 |
| 1SMB5915A | 3.9 | 96.1 | 7.5 | 500 | 1.0 | 25 | 1.0 | 384 |
| 1SMB5916A | 4.3 | 87.2 | 6.0 | 500 | 1.0 | 5.0 | 1.0 | 348 |
| 1SMB5917A | 4.7 | 79.8 | 5.0 | 500 | 1.0 | 5.0 | 1.5 | 319 |
| 1SMB5918A | 5.1 | 73.5 | 4.0 | 350 | 1.0 | 5.0 | 2.0 | 294 |
| 1SMB5919A | 5.6 | 66.9 | 2.0 | 250 | 1.0 | 5.0 | 3.0 | 267 |
| 1SMB5920A | 6.2 | 60.5 | 2.0 | 200 | 1.0 | 5.0 | 4.0 | 241 |
| 1SMB5921A | 6.8 | 55.1 | 2.5 | 200 | 1.0 | 5.0 | 5.2 | 220 |
| 1SMB5922A | 7.5 | 50.0 | 3.0 | 400 | 0.5 | 5.0 | 6.0 | 200 |
| 1SMB5923A | 8.2 | 45.7 | 3.5 | 400 | 0.5 | 5.0 | 6.5 | 182 |
| 1SMB5924A | 9.1 | 41.2 | 4.0 | 500 | 0.5 | 5.0 | 7.0 | 164 |
| 1SMB5925A | 10 | 37.5 | 4.5 | 500 | 0.25 | 5.0 | 8.0 | 150 |
| 1SMB5926A | 11 | 34.1 | 5.5 | 550 | 0.25 | 1.0 | 8.4 | 136 |
| 1SMB5927A | 12 | 31.2 | 6.5 | 550 | 0.25 | 1.0 | 9.1 | 125 |
| 1SMB5928A | 13 | 28.8 | 7.0 | 550 | 0.25 | 1.0 | 9.9 | 115 |
| 1SMB5929A | 15 | 25.0 | 9.0 | 600 | 0.25 | 1.0 | 11.4 | 100 |
| 1SMB5930A | 16 | 23.4 | 10 | 600 | 0.25 | 1.0 | 12.2 | 93 |
| 1SMB5931A | 18 | 20.8 | 12 | 650 | 0.25 | 1.0 | 13.7 | 83 |
| 1SMB5932A | 20 | 18.7 | 14 | 650 | 0.25 | 1.0 | 15.2 | 75 |
| 1SMB5933A | 22 | 17.0 | 17.5 | 650 | 0.25 | 1.0 | 16.7 | 68 |
| 1SMB5934A | 24 | 15.6 | 19 | 700 | 0.25 | 1.0 | 18.2 | 62 |
| 1SMB5935A | 27 | 13.9 | 23 | 700 | 0.25 | 1.0 | 20.6 | 55 |
| 1SMB5936A | 30 | 12.5 | 26 | 750 | 0.25 | 1.0 | 22.8 | 50 |
| 1SMB5937A | 33 | 11.4 | 33 | 800 | 0.25 | 1.0 | 25.1 | 45 |
| 1SMB5938A | 36 | 10.4 | 38 | 850 | 0.25 | 1.0 | 27.4 | 41 |
| 1SMB5939A | 39 | 9.6 | 45 | 900 | 0.25 | 1.0 | 29.7 | 38 |
| 1SMB5940A | 43 | 8.7 | 53 | 950 | 0.25 | 1.0 | 32.7 | 34 |
| 1SMB5941A | 47 | 8.0 | 67 | 1000 | 0.25 | 1.0 | 35.8 | 31 |
| 1SMB5942A | 51 | 7.3 | 70 | 1100 | 0.25 | 1.0 | 38.8 | 29 |
| 1SMB5943A | 56 | 6.7 | 86 | 1300 | 0.25 | 1.0 | 42.6 | 26 |
| 1SMB5944A | 62 | 6.0 | 100 | 1500 | 0.25 | 1.0 | 47.1 | 24 |
| 1SMB5945A | 68 | 5.5 | 120 | 1700 | 0.25 | 1.0 | 51.7 | 22 |
| 1SMB5946A | 75 | 5.0 | 140 | 2000 | 0.25 | 1.0 | 56.0 | 20 |
| 1SMB5947A | 82 | 4.6 | 160 | 2500 | 0.25 | 1.0 | 62.2 | 18 |
| 1SMB5948A | 91 | 4.1 | 200 | 3000 | 0.25 | 1.0 | 69.2 | 16 |
| 1SMB5949A | 100 | 3.7 | 250 | 3100 | 0.25 | 1.0 | 76.0 | 15 |
| 1SMB5950A | 110 | 3.4 | 300 | 4000 | 0.25 | 1.0 | 83.6 | 13 |
| 1SMB5951A | 120 | 3.1 | 380 | 4500 | 0.25 | 1.0 | 91.2 | 12 |
| 1SMB5952A | 130 | 2.9 | 450 | 5000 | 0.25 | 1.0 | 98.8 | 11 |
| 1SMB5953A | 150 | 2.5 | 600 | 6000 | 0.25 | 1.0 | 114.0 | 10 |
| 1SMB5954A | 160 | 2.3 | 700 | 6500 | 0.25 | 1.0 | 121.6 | 9.0 |
| 1SMB5955A | 180 | 2.1 | 900 | 7000 | 0.25 | 1.0 | 136.8 | 8.0 |
| 1SMB5956A | 200 | 1.9 | 1200 | 8000 | 0.25 | 1.0 | 152.0 | 7.0 |

Notes :

- (1) V_F = 1.5 Vmax. @ I_F = 200mA
- (2) Suffix "A" is for ± 10% tolerance. Use suffix "B" for ± 5% tolerance.
- (3) "SMB59" for SMD will be omitted on marking of the diode.



Zener Diodes 3.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current |
|------------|-----|----------------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------|---------------------------------|-----|--------------------------|
| | | V _Z @ I _{ZT} | I _{ZT} | Z _{ZT} @ I _{ZT} | Z _{ZK} @ I _{ZK} | I _{ZK} | I _R @ V _R | | I _{ZM} |
| Axial Lead | SMD | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | (mA) |

3EZ / SZ55 Series, 3.0 W, Case Type : DO-41/SMA

| | | | | | | | | | |
|----------|--------|-----|-----|-----|------|------|-----|-------|-----|
| 3EZ3.9D5 | SZ553J | 3.9 | 192 | 4.5 | 400 | 1.0 | 80 | 1.0 | 630 |
| 3EZ4.3D5 | SZ554D | 4.3 | 174 | 4.5 | 400 | 1.0 | 30 | 1.0 | 590 |
| 3EZ4.7D5 | SZ554H | 4.7 | 160 | 4.0 | 500 | 1.0 | 20 | 1.0 | 550 |
| 3EZ5.1D5 | SZ555B | 5.1 | 147 | 3.5 | 550 | 1.0 | 5.0 | 1.0 | 520 |
| 3EZ5.6D5 | SZ555G | 5.6 | 134 | 2.5 | 600 | 1.0 | 5.0 | 2.0 | 480 |
| 3EZ6.2D5 | SZ556C | 6.2 | 121 | 1.5 | 700 | 1.0 | 5.0 | 3.0 | 435 |
| 3EZ6.8D5 | SZ556I | 6.8 | 110 | 2.0 | 700 | 1.0 | 5.0 | 4.0 | 393 |
| 3EZ7.5D5 | SZ557F | 7.5 | 100 | 2.0 | 700 | 0.5 | 5.0 | 5.0 | 360 |
| 3EZ8.2D5 | SZ558C | 8.2 | 91 | 2.3 | 700 | 0.5 | 5.0 | 6.0 | 330 |
| 3EZ9.1D5 | SZ559B | 9.1 | 82 | 2.5 | 700 | 0.5 | 5.0 | 7.0 | 297 |
| 3EZ10D5 | SZ5510 | 10 | 75 | 3.5 | 700 | 0.25 | 3.0 | 7.6 | 270 |
| 3EZ11D5 | SZ5511 | 11 | 68 | 4.0 | 700 | 0.25 | 3.0 | 8.4 | 225 |
| 3EZ12D5 | SZ5512 | 12 | 63 | 4.5 | 700 | 0.25 | 1.0 | 9.1 | 246 |
| 3EZ13D5 | SZ5513 | 13 | 58 | 4.5 | 700 | 0.25 | 0.5 | 9.9 | 208 |
| 3EZ14D5 | SZ5514 | 14 | 53 | 5.0 | 700 | 0.25 | 0.5 | 10.6 | 193 |
| 3EZ15D5 | SZ5515 | 15 | 50 | 5.5 | 700 | 0.25 | 0.5 | 11.4 | 180 |
| 3EZ16D5 | SZ5516 | 16 | 47 | 5.5 | 700 | 0.25 | 0.5 | 12.2 | 169 |
| 3EZ17D5 | SZ5517 | 17 | 44 | 6.0 | 750 | 0.25 | 0.5 | 13.0 | 159 |
| 3EZ18D5 | SZ5518 | 18 | 42 | 6.0 | 750 | 0.25 | 0.5 | 13.7 | 150 |
| 3EZ19D5 | SZ5519 | 19 | 40 | 7.0 | 750 | 0.25 | 0.5 | 14.4 | 142 |
| 3EZ20D5 | SZ5520 | 20 | 37 | 7.0 | 750 | 0.25 | 0.5 | 15.2 | 135 |
| 3EZ22D5 | SZ5522 | 22 | 34 | 8.0 | 750 | 0.25 | 0.5 | 16.7 | 123 |
| 3EZ24D5 | SZ5524 | 24 | 31 | 9.0 | 750 | 0.25 | 0.5 | 18.2 | 112 |
| 3EZ27D5 | SZ5527 | 27 | 28 | 10 | 750 | 0.25 | 0.5 | 20.6 | 100 |
| 3EZ28D5 | SZ5528 | 28 | 27 | 12 | 750 | 0.25 | 0.5 | 21.0 | 96 |
| 3EZ30D5 | SZ5530 | 30 | 25 | 16 | 1000 | 0.25 | 0.5 | 22.5 | 90 |
| 3EZ33D5 | SZ5533 | 33 | 23 | 20 | 1000 | 0.25 | 0.5 | 25.1 | 82 |
| 3EZ36D5 | SZ5536 | 36 | 21 | 22 | 1000 | 0.25 | 0.5 | 27.4 | 75 |
| 3EZ39D5 | SZ5539 | 39 | 19 | 28 | 1000 | 0.25 | 0.5 | 29.7 | 69 |
| 3EZ43D5 | SZ5543 | 43 | 17 | 33 | 1500 | 0.25 | 0.5 | 32.7 | 63 |
| 3EZ47D5 | SZ5547 | 47 | 16 | 38 | 1500 | 0.25 | 0.5 | 35.6 | 57 |
| 3EZ51D5 | SZ5551 | 51 | 15 | 45 | 1500 | 0.25 | 0.5 | 38.8 | 53 |
| 3EZ56D5 | SZ5556 | 56 | 13 | 50 | 2000 | 0.25 | 0.5 | 42.6 | 48 |
| 3EZ62D5 | SZ5562 | 62 | 12 | 55 | 2000 | 0.25 | 0.5 | 47.1 | 44 |
| 3EZ68D5 | SZ5568 | 68 | 11 | 70 | 2000 | 0.25 | 0.5 | 51.7 | 40 |
| 3EZ75D5 | SZ5575 | 75 | 10 | 85 | 2000 | 0.25 | 0.5 | 56.0 | 36 |
| 3EZ82D5 | SZ5582 | 82 | 9.1 | 95 | 3000 | 0.25 | 0.5 | 62.2 | 33 |
| 3EZ91D5 | SZ5591 | 91 | 8.2 | 115 | 3000 | 0.25 | 0.5 | 69.2 | 30 |
| 3EZ100D5 | SZ55B0 | 100 | 7.5 | 160 | 3000 | 0.25 | 0.5 | 76.0 | 27 |
| 3EZ110D5 | SZ55B1 | 110 | 6.8 | 225 | 4000 | 0.25 | 0.5 | 83.6 | 25 |
| 3EZ120D5 | SZ55B2 | 120 | 6.3 | 300 | 4500 | 0.25 | 0.5 | 91.2 | 22 |
| 3EZ130D5 | SZ55B3 | 130 | 5.8 | 375 | 5000 | 0.25 | 0.5 | 98.8 | 21 |
| 3EZ140D5 | SZ55B4 | 140 | 5.3 | 475 | 5000 | 0.25 | 0.5 | 106.4 | 19 |
| 3EZ150D5 | SZ55B5 | 150 | 5.0 | 550 | 6000 | 0.25 | 0.5 | 114.0 | 18 |
| 3EZ160D5 | SZ55B6 | 160 | 4.7 | 625 | 6500 | 0.25 | 0.5 | 121.6 | 17 |
| 3EZ170D5 | SZ55B7 | 170 | 4.4 | 650 | 7000 | 0.25 | 0.5 | 130.4 | 16 |
| 3EZ180D5 | SZ55B8 | 180 | 4.2 | 700 | 7000 | 0.25 | 0.5 | 136.8 | 15 |
| 3EZ190D5 | SZ55B9 | 190 | 4.0 | 800 | 8000 | 0.25 | 0.5 | 144.8 | 14 |
| 3EZ200D5 | SZ55D0 | 200 | 3.7 | 875 | 8000 | 0.25 | 0.5 | 152.0 | 13 |

Notes :

- (1) V_F = 1.5 Vmax. @ I_F = 200mA.
- (2) Suffix "5" indicates ± 5% tolerance, suffix "10" indicates ± 10% tolerance (Axial lead) / replace the fourth digit of type from "0" for ± 10% tolerance to "5" for ± 5% tolerance (SMD)
- (3) " 3EZ " for Axial Lead / "SZ " for SMD will be omitted on marking of the diode



Zener Diodes 3.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Working Voltage | | | Test Current | Differential Resistance | | Temperature Coefficient | | Maximum Reverse Leakage Current | |
|----------|-----------------|------|------|--------------|------------------------------------|------|------------------------------|------|---------------------------------|-----|
| | $V_Z @ I_Z$ | | | I_Z | $r_{diff}(\Omega) \text{ at } I_Z$ | | $S_Z (\%/K) \text{ at } I_Z$ | | $I_R @ V_R$ | |
| | Min. | Nom. | Max. | (mA) | Typ. | Max. | Min. | Max. | (μA) | (V) |

BZG03-C Series, 3 W, Case Type : SMA



| | | | | | | | | | | |
|------------|------|-----|------|-----|-----|------|------|------|-----|-----|
| BZG03-C10 | 9.4 | 10 | 10.6 | 50 | 2 | 4 | 0.05 | 0.09 | 7.0 | 7.5 |
| BZG03-C11 | 10.4 | 11 | 11.6 | 50 | 4 | 7 | 0.05 | 0.10 | 4.0 | 8.2 |
| BZG03-C12 | 11.4 | 12 | 12.7 | 50 | 4 | 7 | 0.05 | 0.10 | 3.0 | 9.1 |
| BZG03-C13 | 12.4 | 13 | 14.1 | 50 | 5 | 10 | 0.05 | 0.10 | 2.0 | 10 |
| BZG03-C15 | 13.8 | 15 | 15.6 | 50 | 5 | 10 | 0.05 | 0.10 | 1.0 | 11 |
| BZG03-C16 | 15.3 | 16 | 17.1 | 25 | 6 | 15 | 0.05 | 0.11 | 1.0 | 12 |
| BZG03-C18 | 16.8 | 18 | 19.1 | 25 | 6 | 15 | 0.06 | 0.11 | 1.0 | 13 |
| BZG03-C20 | 18.8 | 20 | 21.2 | 25 | 6 | 15 | 0.06 | 0.11 | 1.0 | 15 |
| BZG03-C22 | 20.8 | 22 | 23.3 | 25 | 6 | 15 | 0.06 | 0.11 | 1.0 | 16 |
| BZG03-C24 | 22.8 | 24 | 25.6 | 25 | 7 | 15 | 0.06 | 0.11 | 1.0 | 18 |
| BZG03-C27 | 25.1 | 27 | 28.9 | 25 | 7 | 15 | 0.06 | 0.11 | 1.0 | 20 |
| BZG03-C30 | 28 | 30 | 32 | 25 | 8 | 15 | 0.06 | 0.11 | 1.0 | 22 |
| BZG03-C33 | 31 | 33 | 35 | 25 | 8 | 15 | 0.06 | 0.11 | 1.0 | 24 |
| BZG03-C36 | 34 | 36 | 38 | 10 | 21 | 40 | 0.06 | 0.11 | 1.0 | 27 |
| BZG03-C39 | 37 | 39 | 41 | 10 | 21 | 40 | 0.06 | 0.11 | 1.0 | 30 |
| BZG03-C43 | 40 | 43 | 46 | 10 | 24 | 45 | 0.07 | 0.12 | 1.0 | 33 |
| BZG03-C47 | 44 | 47 | 50 | 10 | 24 | 45 | 0.07 | 0.12 | 1.0 | 36 |
| BZG03-C51 | 48 | 51 | 54 | 10 | 25 | 60 | 0.07 | 0.12 | 1.0 | 39 |
| BZG03-C56 | 52 | 56 | 60 | 10 | 25 | 60 | 0.07 | 0.12 | 1.0 | 43 |
| BZG03-C62 | 58 | 62 | 66 | 10 | 25 | 80 | 0.08 | 0.13 | 1.0 | 47 |
| BZG03-C68 | 64 | 68 | 72 | 10 | 25 | 80 | 0.08 | 0.13 | 1.0 | 51 |
| BZG03-C75 | 70 | 75 | 79 | 10 | 30 | 100 | 0.08 | 0.13 | 1.0 | 56 |
| BZG03-C82 | 77 | 82 | 87 | 10 | 30 | 100 | 0.08 | 0.13 | 1.0 | 62 |
| BZG03-C91 | 85 | 91 | 96 | 5.0 | 60 | 200 | 0.09 | 0.13 | 1.0 | 68 |
| BZG03-C100 | 94 | 100 | 106 | 5.0 | 60 | 200 | 0.09 | 0.13 | 1.0 | 75 |
| BZG03-C110 | 104 | 110 | 116 | 5.0 | 80 | 250 | 0.09 | 0.13 | 1.0 | 82 |
| BZG03-C120 | 114 | 120 | 127 | 5.0 | 80 | 250 | 0.09 | 0.13 | 1.0 | 91 |
| BZG03-C130 | 124 | 130 | 141 | 5.0 | 110 | 300 | 0.09 | 0.13 | 1.0 | 100 |
| BZG03-C150 | 138 | 150 | 156 | 5.0 | 130 | 300 | 0.09 | 0.13 | 1.0 | 110 |
| BZG03-C160 | 153 | 160 | 171 | 5.0 | 150 | 350 | 0.09 | 0.13 | 1.0 | 120 |
| BZG03-C180 | 168 | 180 | 191 | 5.0 | 180 | 400 | 0.09 | 0.13 | 1.0 | 130 |
| BZG03-C200 | 188 | 200 | 212 | 5.0 | 200 | 500 | 0.09 | 0.13 | 1.0 | 150 |
| BZG03-C220 | 208 | 220 | 233 | 2.0 | 350 | 750 | 0.09 | 0.13 | 1.0 | 160 |
| BZG03-C240 | 228 | 240 | 256 | 2.0 | 400 | 850 | 0.09 | 0.13 | 1.0 | 180 |
| BZG03-C270 | 251 | 270 | 289 | 2.0 | 450 | 1000 | 0.09 | 0.13 | 1.0 | 200 |

Note : (1) "BZG03-" will be omitted in marking on the diode, e.g. p/n BZG03-C10 marking "C10".



Zener Diodes 3.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Standoff Voltage | | Min. Breakdown Voltage | | T _{KVZ} @ I _R | | Max. Clamping Voltage | | Typical Junction Capacitance |
|----------|------------------|---------------------|------------------------------------|----|-----------------------------------|-----|--------------------------------------|-------------------|----------------------------------|
| | V _R | I _{R(max)} | V _(BR) @ I _R | | (% / K) | | V _{CL(R)} @ I _{PP} | @ I _{ZT} | @ V _R = 0 V, f = 1MHz |
| | V | (μ A) | V | mA | typ | Max | V ⁽¹⁾ | A ⁽¹⁾ | C _J (pF) |

BZG04- Series, 3 W, Case Type : SMA



| | | | | | | | | | |
|-----------|-----|----|------|----|------|------|-------|------|------|
| BZG04-8V2 | 8.2 | 20 | 9.4 | 50 | 0.05 | 0.09 | 14.8 | 20.3 | 1200 |
| BZG04-9V1 | 9.1 | 5 | 10.4 | 50 | 0.05 | 0.10 | 15.7 | 19.1 | 1100 |
| BZG04-10 | 10 | 5 | 11.4 | 50 | 0.05 | 0.10 | 17.0 | 17.7 | 1000 |
| BZG04-11 | 11 | 5 | 12.4 | 50 | 0.05 | 0.10 | 18.9 | 15.9 | 850 |
| BZG04-12 | 12 | 5 | 13.8 | 50 | 0.05 | 0.11 | 20.9 | 14.4 | 815 |
| BZG04-13 | 13 | 5 | 15.3 | 25 | 0.06 | 0.11 | 22.9 | 13.1 | 785 |
| BZG04-15 | 15 | 5 | 16.8 | 25 | 0.06 | 0.11 | 25.6 | 11.7 | 710 |
| BZG04-16 | 16 | 5 | 18.8 | 25 | 0.06 | 0.11 | 28.4 | 10.6 | 655 |
| BZG04-18 | 18 | 5 | 20.8 | 25 | 0.06 | 0.11 | 31.0 | 9.7 | 610 |
| BZG04-20 | 20 | 5 | 22.8 | 25 | 0.06 | 0.11 | 33.8 | 8.9 | 570 |
| BZG04-22 | 22 | 5 | 25.1 | 25 | 0.06 | 0.11 | 38.1 | 7.9 | 545 |
| BZG04-24 | 24 | 5 | 28 | 25 | 0.06 | 0.11 | 42.2 | 7.1 | 505 |
| BZG04-27 | 27 | 5 | 31 | 25 | 0.06 | 0.11 | 46.2 | 6.5 | 475 |
| BZG04-30 | 30 | 5 | 34 | 10 | 0.06 | 0.11 | 50.1 | 6.0 | 450 |
| BZG04-33 | 33 | 5 | 37 | 10 | 0.06 | 0.11 | 54.1 | 5.5 | 420 |
| BZG04-36 | 36 | 5 | 40 | 10 | 0.07 | 0.12 | 60.7 | 4.9 | 390 |
| BZG04-39 | 39 | 5 | 44 | 10 | 0.07 | 0.12 | 65.5 | 4.6 | 370 |
| BZG04-43 | 43 | 5 | 48 | 10 | 0.07 | 0.12 | 70.8 | 4.2 | 350 |
| BZG04-47 | 47 | 5 | 52 | 10 | 0.07 | 0.12 | 78.6 | 3.8 | 330 |
| BZG04-51 | 51 | 5 | 58 | 10 | 0.08 | 0.13 | 86.5 | 3.5 | 310 |
| BZG04-56 | 56 | 5 | 64 | 10 | 0.08 | 0.13 | 94.4 | 3.2 | 291 |
| BZG04-62 | 62 | 5 | 70 | 10 | 0.08 | 0.13 | 103.5 | 2.9 | 280 |
| BZG04-68 | 68 | 5 | 77 | 10 | 0.08 | 0.13 | 114 | 2.6 | 275 |
| BZG04-75 | 75 | 5 | 85 | 5 | 0.09 | 0.13 | 126 | 2.4 | 260 |
| BZG04-82 | 82 | 5 | 94 | 5 | 0.09 | 0.13 | 139 | 2.2 | 250 |
| BZG04-91 | 91 | 5 | 104 | 5 | 0.09 | 0.13 | 152 | 2.0 | 243 |
| BZG04-100 | 100 | 5 | 114 | 5 | 0.09 | 0.13 | 167 | 1.8 | 170 |
| BZG04-110 | 110 | 5 | 124 | 5 | 0.09 | 0.13 | 185 | 1.6 | 153 |
| BZG04-120 | 120 | 5 | 138 | 5 | 0.09 | 0.13 | 204 | 1.5 | 150 |
| BZG04-130 | 130 | 5 | 153 | 5 | 0.09 | 0.13 | 224 | 1.3 | 145 |
| BZG04-150 | 150 | 5 | 168 | 5 | 0.09 | 0.13 | 249 | 1.2 | 140 |
| BZG04-160 | 160 | 5 | 188 | 5 | 0.09 | 0.13 | 276 | 1.1 | 135 |
| BZG04-180 | 180 | 5 | 208 | 2 | 0.09 | 0.13 | 305 | 1.0 | 131 |
| BZG04-200 | 200 | 5 | 228 | 2 | 0.09 | 0.13 | 336 | 0.9 | 122 |
| BZG04-220 | 220 | 5 | 251 | 2 | 0.09 | 0.13 | 380 | 0.8 | 120 |

Note : (1) "BZG0 - " will be omitted in marking on the diode, e.g. p/n BZG04-8V2 marking "48V2".



Zener Diodes 3.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Zener Voltage | | | Test Current | Maximum Dynamic Resistance | | Test Current | Temp. coefficient of Zener Voltage | | Maximum Reverse Leakage Current | |
|----------|----------------------------------|-----|-----|-----------------|----------------------------|--------------------|-----------------|------------------------------------|-----|---------------------------------|------------------|
| | V _Z @ I _{ZT} | | | | r _{zjT} @ | r _{zjK} @ | | @I _{ZT} | | | |
| | Min | typ | Max | I _{ZT} | I _{ZK} | I _{ZK} | I _{ZK} | (% / K) | | I _R | @ V _R |
| | (V) | (V) | (V) | (mA) | (Ω) | (Ω) | (mA) | Min | Max | (μA) | (V) |

BZG05C Series, 3 W, Case Type : SMA



| | | | | | | | | | | | |
|-----------|------|-----|------|-----|-----|------|------|-------|-------|-----|-----|
| BZG05C3V3 | 3.1 | 3.3 | 3.5 | 80 | 20 | 400 | 1.0 | -0.08 | 0.05 | 40 | 1.0 |
| BZG05C3V6 | 3.4 | 3.6 | 3.8 | 60 | 20 | 500 | 1.0 | -0.08 | -0.05 | 20 | 1.0 |
| BZG05C3V9 | 3.7 | 3.9 | 4.1 | 60 | 15 | 500 | 1.0 | -0.07 | -0.02 | 10 | 1.0 |
| BZG05C4V3 | 4.0 | 4.3 | 4.6 | 50 | 13 | 500 | 1.0 | -0.07 | -0.01 | 3.0 | 1.0 |
| BZG05C4V7 | 4.4 | 4.7 | 5.0 | 45 | 13 | 600 | 1.0 | -0.03 | 0.040 | 3.0 | 1.0 |
| BZG05C5V1 | 4.8 | 5.1 | 5.4 | 45 | 10 | 500 | 1.0 | -0.01 | 0.040 | 1.0 | 1.5 |
| BZG05C5V6 | 5.2 | 5.6 | 6.0 | 45 | 7.0 | 400 | 1.0 | 0.00 | 0.045 | 1.0 | 2.0 |
| BZG05C6V2 | 5.8 | 6.2 | 6.6 | 35 | 4.0 | 300 | 1.0 | 0.010 | 0.055 | 1.0 | 3.0 |
| BZG05C6V8 | 6.4 | 6.8 | 7.2 | 35 | 3.5 | 300 | 1.0 | 0.015 | 0.060 | 1.0 | 4.0 |
| BZG05C7V5 | 7.0 | 7.5 | 7.9 | 35 | 3.0 | 200 | 0.5 | 0.020 | 0.065 | 1.0 | 4.5 |
| BZG05C8V2 | 7.7 | 8.2 | 8.7 | 25 | 5.0 | 200 | 0.5 | 0.030 | 0.070 | 1.0 | 6.2 |
| BZG05C9V1 | 8.5 | 9.1 | 9.6 | 25 | 5.0 | 200 | 0.5 | 0.035 | 0.075 | 1.0 | 6.8 |
| BZG05C10 | 9.4 | 10 | 10.6 | 25 | 7.0 | 200 | 0.5 | 0.040 | 0.080 | 0.5 | 7.0 |
| BZG05C11 | 10.4 | 11 | 11.6 | 20 | 8.0 | 300 | 0.5 | 0.045 | 0.080 | 0.5 | 8.2 |
| BZG05C12 | 11.4 | 12 | 12.7 | 20 | 9.0 | 350 | 0.5 | 0.045 | 0.085 | 0.5 | 9.1 |
| BZG05C13 | 12.4 | 13 | 14.1 | 20 | 10 | 400 | 0.5 | 0.050 | 0.085 | 0.5 | 10 |
| BZG05C15 | 13.8 | 15 | 15.6 | 15 | 15 | 500 | 0.5 | 0.055 | 0.090 | 0.5 | 11 |
| BZG05C16 | 15.3 | 16 | 17.1 | 15 | 15 | 500 | 0.5 | 0.055 | 0.090 | 0.5 | 12 |
| BZG05C18 | 16.8 | 18 | 19.1 | 15 | 20 | 500 | 0.5 | 0.060 | 0.090 | 0.5 | 13 |
| BZG05C20 | 18.8 | 20 | 21.2 | 10 | 24 | 600 | 0.5 | 0.060 | 0.090 | 0.5 | 15 |
| BZG05C22 | 20.8 | 22 | 23.3 | 10 | 25 | 600 | 0.5 | 0.060 | 0.095 | 0.5 | 16 |
| BZG05C24 | 22.8 | 24 | 25.6 | 10 | 25 | 600 | 0.5 | 0.060 | 0.095 | 0.5 | 18 |
| BZG05C27 | 25.1 | 27 | 28.9 | 8 | 30 | 750 | 0.25 | 0.060 | 0.095 | 0.5 | 20 |
| BZG05C30 | 28 | 30 | 32 | 8 | 30 | 1000 | 0.25 | 0.060 | 0.095 | 0.5 | 22 |
| BZG05C33 | 31 | 33 | 35 | 8 | 35 | 1000 | 0.25 | 0.060 | 0.095 | 0.5 | 24 |
| BZG05C36 | 34 | 36 | 38 | 8 | 40 | 1000 | 0.25 | 0.060 | 0.095 | 0.5 | 27 |
| BZG05C39 | 37 | 39 | 41 | 6 | 50 | 1000 | 0.25 | 0.060 | 0.095 | 0.5 | 30 |
| BZG05C43 | 40 | 43 | 46 | 6 | 50 | 1000 | 0.25 | 0.060 | 0.095 | 0.5 | 33 |
| BZG05C47 | 44 | 47 | 50 | 4 | 90 | 1500 | 0.25 | 0.060 | 0.095 | 0.5 | 36 |
| BZG05C51 | 48 | 51 | 54 | 4 | 115 | 1500 | 0.25 | 0.060 | 0.095 | 0.5 | 39 |
| BZG05C56 | 52 | 56 | 60 | 4 | 120 | 2000 | 0.25 | 0.060 | 0.095 | 0.5 | 43 |
| BZG05C62 | 58 | 62 | 66 | 4 | 125 | 2000 | 0.25 | 0.060 | 0.095 | 0.5 | 47 |
| BZG05C68 | 64 | 68 | 72 | 4 | 130 | 2000 | 0.25 | 0.060 | 0.095 | 0.5 | 51 |
| BZG05C75 | 70 | 75 | 79 | 4 | 135 | 2000 | 0.25 | 0.060 | 0.095 | 0.5 | 56 |
| BZG05C82 | 77 | 82 | 87 | 2.7 | 200 | 3000 | 0.25 | 0.060 | 0.095 | 0.5 | 62 |
| BZG05C91 | 85 | 91 | 96 | 2.7 | 250 | 3000 | 0.25 | 0.060 | 0.095 | 0.5 | 68 |
| BZG05C100 | 95 | 100 | 106 | 2.7 | 350 | 3000 | 0.25 | 0.060 | 0.095 | 0.5 | 75 |

Note : (1) "BZG0 C " will be omitted in marking on the diode, e.g. p/n BZG05C3V3 marking "53V3".



Zener Diodes 5.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | | Maximum DC. Zener Current |
|------------|-----|----------------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------|-------------------------------------|------------|------------|---------------------------|
| | | V _Z @ I _{ZT} | I _{ZT} | Z _{KT} @ I _{ZT} | Z _{KK} @ I _{ZK} | I _{ZK} | I _R @ V _R (V) | | | I _{ZM} |
| Axial Lead | SMD | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | Suffix "A" | Suffix "B" | (mA) |

1N5333A/SZ60 Series, 5 W, Case Type : DO-15/SMB

| | | | | | | | | | | |
|---------|--------|-----|-----|-----|------|-----|-----|------|------|------|
| 1N5338A | SZ605B | 5.1 | 240 | 1.5 | 400 | 1.0 | 1.0 | 1.0 | 1.0 | 930 |
| 1N5339A | SZ605G | 5.6 | 220 | 1.0 | 400 | 1.0 | 1.0 | 2.0 | 2.0 | 856 |
| 1N5340A | SZ606A | 6.0 | 200 | 1.0 | 300 | 1.0 | 1.0 | 3.0 | 3.0 | 790 |
| 1N5341A | SZ606C | 6.2 | 200 | 1.0 | 200 | 1.0 | 1.0 | 3.0 | 3.0 | 765 |
| 1N5342A | SZ606I | 6.8 | 175 | 1.0 | 200 | 1.0 | 10 | 4.9 | 5.2 | 700 |
| 1N5343A | SZ607F | 7.5 | 175 | 1.5 | 200 | 1.0 | 10 | 5.4 | 5.7 | 630 |
| 1N5344A | SZ608C | 8.2 | 150 | 1.5 | 200 | 1.0 | 10 | 5.9 | 6.2 | 580 |
| 1N5345A | SZ608H | 8.7 | 150 | 2.0 | 200 | 1.0 | 10 | 6.25 | 6.6 | 545 |
| 1N5346A | SZ609B | 9.1 | 150 | 2.0 | 150 | 1.0 | 7.5 | 6.6 | 6.9 | 520 |
| 1N5347A | SZ6010 | 10 | 125 | 2.0 | 125 | 1.0 | 5.0 | 7.2 | 7.6 | 475 |
| 1N5348A | SZ6011 | 11 | 125 | 2.5 | 125 | 1.0 | 5.0 | 8.0 | 8.4 | 430 |
| 1N5349A | SZ6012 | 12 | 100 | 2.5 | 125 | 1.0 | 2.0 | 8.6 | 9.1 | 395 |
| 1N5350A | SZ6013 | 13 | 100 | 2.5 | 100 | 1.0 | 1.0 | 9.4 | 9.9 | 365 |
| 1N5351A | SZ6014 | 14 | 100 | 2.5 | 75 | 1.0 | 1.0 | 10.1 | 10.6 | 340 |
| 1N5352A | SZ6015 | 15 | 75 | 2.5 | 75 | 1.0 | 1.0 | 10.8 | 11.5 | 315 |
| 1N5353A | SZ6016 | 16 | 75 | 2.5 | 75 | 1.0 | 1.0 | 11.5 | 12.2 | 295 |
| 1N5354A | SZ6017 | 17 | 70 | 2.5 | 75 | 1.0 | 0.5 | 12.2 | 12.9 | 280 |
| 1N5355A | SZ6018 | 18 | 65 | 2.5 | 75 | 1.0 | 0.5 | 13.0 | 13.7 | 265 |
| 1N5356A | SZ6019 | 19 | 65 | 8.0 | 75 | 1.0 | 0.5 | 13.7 | 14.4 | 250 |
| 1N5357A | SZ6020 | 20 | 65 | 3.0 | 75 | 1.0 | 0.5 | 14.4 | 15.2 | 237 |
| 1N5358A | SZ6022 | 22 | 50 | 3.5 | 75 | 1.0 | 0.5 | 15.8 | 16.7 | 216 |
| 1N5359A | SZ6024 | 24 | 50 | 3.5 | 100 | 1.0 | 0.5 | 17.3 | 18.2 | 198 |
| 1N5360A | SZ6025 | 25 | 50 | 4.0 | 110 | 1.0 | 0.5 | 18.0 | 19.0 | 190 |
| 1N5361A | SZ6027 | 27 | 50 | 5.0 | 120 | 1.0 | 0.5 | 19.4 | 20.6 | 176 |
| 1N5362A | SZ6028 | 28 | 50 | 6.0 | 130 | 1.0 | 0.5 | 20.1 | 21.2 | 170 |
| 1N5363A | SZ6030 | 30 | 40 | 8.0 | 140 | 1.0 | 0.5 | 21.6 | 22.8 | 158 |
| 1N5364A | SZ6033 | 33 | 40 | 10 | 150 | 1.0 | 0.5 | 23.8 | 25.1 | 144 |
| 1N5365A | SZ6036 | 36 | 30 | 11 | 160 | 1.0 | 0.5 | 25.9 | 27.4 | 132 |
| 1N5366A | SZ6039 | 39 | 30 | 14 | 170 | 1.0 | 0.5 | 28.1 | 29.7 | 122 |
| 1N5367A | SZ6043 | 43 | 30 | 20 | 190 | 1.0 | 0.5 | 31.0 | 32.7 | 110 |
| 1N5368A | SZ6047 | 47 | 25 | 25 | 210 | 1.0 | 0.5 | 33.8 | 35.8 | 100 |
| 1N5369A | SZ6051 | 51 | 25 | 27 | 230 | 1.0 | 0.5 | 36.7 | 38.8 | 93.0 |
| 1N5370A | SZ6056 | 56 | 20 | 35 | 280 | 1.0 | 0.5 | 40.3 | 42.6 | 86.0 |
| 1N5371A | SZ6060 | 60 | 20 | 40 | 350 | 1.0 | 0.5 | 43.0 | 45.5 | 79.0 |
| 1N5372A | SZ6062 | 62 | 20 | 42 | 400 | 1.0 | 0.5 | 44.6 | 47.1 | 76.0 |
| 1N5373A | SZ6068 | 68 | 20 | 44 | 500 | 1.0 | 0.5 | 49.0 | 51.7 | 70.0 |
| 1N5374A | SZ6075 | 75 | 20 | 45 | 620 | 1.0 | 0.5 | 54.0 | 56.0 | 63.0 |
| 1N5375A | SZ6082 | 82 | 15 | 65 | 720 | 1.0 | 0.5 | 59.0 | 62.2 | 58.0 |
| 1N5376A | SZ6087 | 87 | 15 | 75 | 760 | 1.0 | 0.5 | 63.0 | 66.0 | 54.5 |
| 1N5377A | SZ6091 | 91 | 15 | 75 | 760 | 1.0 | 0.5 | 65.5 | 69.2 | 52.5 |
| 1N5378A | SZ60B0 | 100 | 12 | 90 | 800 | 1.0 | 0.5 | 72.0 | 76.0 | 47.5 |
| 1N5379A | SZ60B1 | 110 | 12 | 125 | 1000 | 1.0 | 0.5 | 79.2 | 83.6 | 43.0 |
| 1N5380A | SZ60B2 | 120 | 10 | 170 | 1150 | 1.0 | 0.5 | 86.4 | 91.2 | 39.5 |
| 1N5381A | SZ60B3 | 130 | 10 | 190 | 1250 | 1.0 | 0.5 | 93.2 | 98.8 | 36.6 |
| 1N5382A | SZ60B4 | 140 | 8.0 | 230 | 1500 | 1.0 | 0.5 | 101 | 106 | 34.0 |
| 1N5383A | SZ60B5 | 150 | 8.0 | 330 | 1500 | 1.0 | 0.5 | 108 | 114 | 31.6 |
| 1N5384A | SZ60B6 | 160 | 8.0 | 350 | 1650 | 1.0 | 0.5 | 115 | 122 | 29.4 |
| 1N5385A | SZ60B7 | 170 | 8.0 | 380 | 1750 | 1.0 | 0.5 | 122 | 129 | 28.0 |
| 1N5386A | SZ60B8 | 180 | 5.0 | 430 | 1750 | 1.0 | 0.5 | 130 | 137 | 26.4 |
| 1N5387A | SZ60B9 | 190 | 5.0 | 450 | 1850 | 1.0 | 0.5 | 137 | 144 | 25.0 |
| 1N5388A | SZ60D0 | 200 | 5.0 | 480 | 1850 | 1.0 | 0.5 | 144 | 152 | 23.6 |

Notes :

- (1) V_F = 1.2 Vmax. @ I_F = 1 A(3.3V to 200V)
- (2) V_F = 2.0 Vmax. @ I_F = 1 A(220V to 240V)
- (3) Use suffix "A" for ± 10% tolerance and suffix "B" for ± 5% tolerance (Axial lead) / replace the fourth digit of type from "0" for ± 10% tolerance to "5" for ± 5% tolerance (SMD).
- (4) "SZ" for SMD will be omitted on marking of the diode



Zener Diodes 5.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC. Zener Current |
|----------|----------------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------|---------------------------------|-----|---------------------------|
| | V _Z @ I _{ZT} | I _{ZT} | Z _{ZT} @ I _{ZT} | Z _{ZK} @ I _{ZK} | I _{ZK} | I _R @ V _R | | I _{ZM} |
| | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | (mA) |

1N4954 Series, 5 W, Case Type : DO-15



| | | | | | | | | |
|--------|-----|-----|-----|------|-----|------|-------|------|
| 1N4954 | 6.8 | 175 | 1.0 | 1000 | 1.0 | 150 | 5.2 | 29.3 |
| 1N4955 | 7.5 | 175 | 1.5 | 800 | 1.0 | 100 | 5.7 | 26.4 |
| 1N4956 | 8.2 | 150 | 1.5 | 600 | 1.0 | 50 | 6.2 | 24.0 |
| 1N4957 | 9.1 | 150 | 2.0 | 400 | 1.0 | 25 | 6.9 | 22.0 |
| 1N4958 | 10 | 125 | 2.0 | 125 | 1.0 | 25.0 | 7.6 | 20.0 |
| 1N4959 | 11 | 125 | 2.5 | 130 | 1.0 | 10.0 | 8.4 | 19.0 |
| 1N4960 | 12 | 100 | 2.5 | 140 | 1.0 | 10.0 | 9.1 | 18.0 |
| 1N4961 | 13 | 100 | 3.0 | 145 | 1.0 | 10.0 | 9.9 | 16.0 |
| 1N4962 | 15 | 75 | 3.5 | 150 | 1.0 | 5.0 | 11.4 | 12.0 |
| 1N4963 | 16 | 75 | 3.5 | 155 | 1.0 | 5.0 | 12.2 | 10.0 |
| 1N4964 | 18 | 65 | 4.0 | 160 | 1.0 | 5.0 | 13.7 | 9.0 |
| 1N4965 | 20 | 65 | 4.5 | 165 | 1.0 | 2.0 | 15.2 | 8.0 |
| 1N4966 | 22 | 50 | 5.0 | 170 | 1.0 | 2.0 | 16.7 | 7.0 |
| 1N4967 | 24 | 50 | 5.0 | 175 | 1.0 | 2.0 | 18.2 | 6.5 |
| 1N4968 | 27 | 50 | 6.0 | 180 | 1.0 | 2.0 | 20.6 | 6.0 |
| 1N4969 | 30 | 40 | 8.0 | 190 | 1.0 | 2.0 | 22.8 | 5.5 |
| 1N4970 | 33 | 40 | 10 | 200 | 1.0 | 2.0 | 25.1 | 5.0 |
| 1N4971 | 36 | 30 | 11 | 220 | 1.0 | 2.0 | 27.4 | 4.5 |
| 1N4972 | 39 | 30 | 14 | 230 | 1.0 | 2.0 | 29.7 | 4.0 |
| 1N4973 | 43 | 30 | 20 | 240 | 1.0 | 2.0 | 32.7 | 3.5 |
| 1N4974 | 47 | 25 | 25 | 250 | 1.0 | 2.0 | 35.8 | 3.2 |
| 1N4975 | 51 | 25 | 27 | 270 | 1.0 | 2.0 | 38.8 | 3.0 |
| 1N4976 | 56 | 20 | 35 | 320 | 1.0 | 2.0 | 42.6 | 2.8 |
| 1N4977 | 62 | 20 | 42 | 400 | 1.0 | 2.0 | 47.1 | 2.5 |
| 1N4978 | 68 | 20 | 50 | 500 | 1.0 | 2.0 | 51.7 | 2.2 |
| 1N4979 | 75 | 20 | 55 | 620 | 1.0 | 2.0 | 56.0 | 2.0 |
| 1N4980 | 82 | 15 | 80 | 720 | 1.0 | 2.0 | 62.2 | 1.8 |
| 1N4981 | 91 | 15 | 90 | 760 | 1.0 | 2.0 | 69.2 | 1.6 |
| 1N4982 | 100 | 12 | 110 | 800 | 1.0 | 2.0 | 76.0 | 1.4 |
| 1N4983 | 110 | 12 | 125 | 1000 | 1.0 | 2.0 | 83.6 | 1.2 |
| 1N4984 | 120 | 10 | 170 | 1150 | 1.0 | 2.0 | 91.2 | 1.00 |
| 1N4985 | 130 | 10 | 190 | 1250 | 1.0 | 2.0 | 98.8 | 0.80 |
| 1N4986 | 150 | 8 | 330 | 1500 | 1.0 | 2.0 | 114 | 0.75 |
| 1N4987 | 160 | 8 | 350 | 1650 | 1.0 | 2.0 | 121.6 | 0.70 |
| 1N4988 | 180 | 5 | 450 | 1750 | 1.0 | 2.0 | 136.8 | 0.60 |
| 1N4989 | 200 | 5 | 500 | 1850 | 1.0 | 2.0 | 152 | 0.50 |

Notes :

- (1) Maximum voltage change ΔV_Z between 10% of I_{ZM} and 50% of I_{ZM}
- (2) Standard voltage tolerance is $\pm 5\%$



Zener Diodes 5.0 W

The plastic material carries U/L recognition 94V-0.

| Type No. | Nominal Zener Voltage | Test Current | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | | Maximum DC Zener Current |
|----------|-----------------------|--------------|-------------------------|-------------------|----------|---------------------------------|------------|------------|--------------------------|
| | $V_Z @ I_{ZT}$ | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | I_{ZK} | $I_R @ V_R (V)$ | | | I_{ZM} |
| | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | Suffix "A" | Suffix "B" | (mA) |

SMBJ5333A Series, 5 W, Case Type : SMB



| | | | | | | | | | |
|-----------|-----|-----|-----|------|-----|-----|------|------|------|
| SMBJ5338A | 5.1 | 240 | 1.5 | 400 | 1.0 | 1.0 | 1.0 | 1.0 | 930 |
| SMBJ5339A | 5.6 | 220 | 1.0 | 400 | 1.0 | 1.0 | 2.0 | 2.0 | 856 |
| SMBJ5340A | 6.0 | 200 | 1.0 | 300 | 1.0 | 1.0 | 3.0 | 3.0 | 790 |
| SMBJ5341A | 6.2 | 200 | 1.0 | 200 | 1.0 | 1.0 | 3.0 | 3.0 | 765 |
| SMBJ5342A | 6.8 | 175 | 1.0 | 200 | 1.0 | 10 | 4.9 | 5.2 | 700 |
| SMBJ5343A | 7.5 | 175 | 1.0 | 200 | 1.0 | 10 | 5.4 | 5.7 | 630 |
| SMBJ5344A | 8.2 | 150 | 1.0 | 200 | 1.0 | 10 | 5.9 | 6.2 | 580 |
| SMBJ5345A | 8.7 | 150 | 1.0 | 200 | 1.0 | 10 | 6.25 | 6.6 | 545 |
| SMBJ5346A | 9.1 | 150 | 2.0 | 150 | 1.0 | 7.5 | 6.6 | 6.9 | 520 |
| SMBJ5347A | 10 | 125 | 2.0 | 125 | 1.0 | 5.0 | 7.2 | 7.6 | 475 |
| SMBJ5348A | 11 | 125 | 2.0 | 125 | 1.0 | 5.0 | 8.0 | 8.4 | 430 |
| SMBJ5349A | 12 | 100 | 2.5 | 125 | 1.0 | 2.0 | 8.6 | 9.1 | 395 |
| SMBJ5350A | 13 | 100 | 2.5 | 100 | 1.0 | 1.0 | 9.4 | 9.9 | 365 |
| SMBJ5351A | 14 | 100 | 2.5 | 75 | 1.0 | 1.0 | 10.1 | 10.6 | 340 |
| SMBJ5352A | 15 | 75 | 2.5 | 75 | 1.0 | 1.0 | 10.8 | 11.5 | 315 |
| SMBJ5353A | 16 | 75 | 2.5 | 75 | 1.0 | 1.0 | 11.5 | 12.2 | 295 |
| SMBJ5354A | 17 | 70 | 2.5 | 75 | 1.0 | 0.5 | 12.2 | 12.9 | 280 |
| SMBJ5355A | 18 | 65 | 2.5 | 75 | 1.0 | 0.5 | 13.0 | 13.7 | 265 |
| SMBJ5356A | 19 | 65 | 3.0 | 75 | 1.0 | 0.5 | 13.7 | 14.4 | 250 |
| SMBJ5357A | 20 | 65 | 3.0 | 75 | 1.0 | 0.5 | 14.4 | 15.2 | 237 |
| SMBJ5358A | 22 | 50 | 3.5 | 75 | 1.0 | 0.5 | 15.8 | 16.7 | 216 |
| SMBJ5359A | 24 | 50 | 3.5 | 100 | 1.0 | 0.5 | 17.3 | 18.2 | 198 |
| SMBJ5360A | 25 | 50 | 4.0 | 110 | 1.0 | 0.5 | 18.0 | 19.0 | 190 |
| SMBJ5361A | 27 | 50 | 5.0 | 120 | 1.0 | 0.5 | 19.4 | 20.6 | 176 |
| SMBJ5362A | 28 | 50 | 6.0 | 130 | 1.0 | 0.5 | 20.1 | 21.2 | 170 |
| SMBJ5363A | 30 | 40 | 8.0 | 140 | 1.0 | 0.5 | 21.6 | 22.8 | 158 |
| SMBJ5364A | 33 | 40 | 10 | 150 | 1.0 | 0.5 | 23.8 | 25.1 | 144 |
| SMBJ5365A | 36 | 30 | 11 | 160 | 1.0 | 0.5 | 25.9 | 27.4 | 132 |
| SMBJ5366A | 39 | 30 | 14 | 170 | 1.0 | 0.5 | 28.1 | 29.7 | 122 |
| SMBJ5367A | 43 | 30 | 20 | 190 | 1.0 | 0.5 | 31.0 | 32.7 | 110 |
| SMBJ5368A | 47 | 25 | 25 | 210 | 1.0 | 0.5 | 33.8 | 35.8 | 100 |
| SMBJ5369A | 51 | 25 | 27 | 230 | 1.0 | 0.5 | 36.7 | 38.8 | 93.0 |
| SMBJ5370A | 56 | 20 | 35 | 280 | 1.0 | 0.5 | 40.3 | 42.6 | 86.0 |
| SMBJ5371A | 60 | 20 | 40 | 350 | 1.0 | 0.5 | 43.0 | 45.5 | 79.0 |
| SMBJ5372A | 62 | 20 | 42 | 400 | 1.0 | 0.5 | 44.6 | 47.1 | 76.0 |
| SMBJ5373A | 68 | 20 | 44 | 500 | 1.0 | 0.5 | 49.0 | 51.7 | 70.0 |
| SMBJ5374A | 75 | 20 | 45 | 620 | 1.0 | 0.5 | 54.0 | 56.0 | 63.0 |
| SMBJ5375A | 82 | 15 | 65 | 720 | 1.0 | 0.5 | 59.0 | 62.2 | 58.0 |
| SMBJ5376A | 87 | 15 | 75 | 760 | 1.0 | 0.5 | 63.0 | 66.0 | 54.5 |
| SMBJ5377A | 91 | 15 | 75 | 760 | 1.0 | 0.5 | 65.5 | 69.2 | 52.5 |
| SMBJ5378A | 100 | 12 | 90 | 800 | 1.0 | 0.5 | 72.0 | 76.0 | 47.5 |
| SMBJ5379A | 110 | 12 | 125 | 1000 | 1.0 | 0.5 | 79.2 | 83.6 | 43.0 |
| SMBJ5380A | 120 | 10 | 170 | 1150 | 1.0 | 0.5 | 86.4 | 91.2 | 39.5 |
| SMBJ5381A | 130 | 10 | 190 | 1250 | 1.0 | 0.5 | 93.2 | 98.8 | 36.6 |
| SMBJ5382A | 140 | 8.0 | 230 | 1500 | 1.0 | 0.5 | 101 | 106 | 34.0 |
| SMBJ5383A | 150 | 8.0 | 330 | 1500 | 1.0 | 0.5 | 108 | 114 | 31.6 |
| SMBJ5384A | 160 | 8.0 | 350 | 1650 | 1.0 | 0.5 | 115 | 122 | 29.4 |
| SMBJ5385A | 170 | 8.0 | 380 | 1750 | 1.0 | 0.5 | 122 | 129 | 28.0 |
| SMBJ5386A | 180 | 5.0 | 430 | 1750 | 1.0 | 0.5 | 130 | 137 | 26.4 |
| SMBJ5387A | 190 | 5.0 | 450 | 1850 | 1.0 | 0.5 | 137 | 144 | 25.0 |
| SMBJ5388A | 200 | 5.0 | 480 | 1850 | 1.0 | 0.5 | 144 | 152 | 23.6 |

Note : Suffix "A" indicates $\pm 10\%$ tolerance, change to suffix "B" for $\pm 5\%$ tolerance. "SMBJ53" will be omitted on marking of the diode.



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ I_T | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ V_{WM} | Maximum Peak Pulse Surge Current | Maximum Clamping Voltage @ I_{PPM} |
|----------------|---------------------------|------|------------------------------|------------------------------------|----------------------------------|--------------------------------------|
| | V_{BR} (V) | | I_T | V_{WM} | I_R | V_C |
| Unidirectional | Min. | Max. | (mA) | (V) | (μ A) | (A) |

TGL34 Series, 150W, Case Type: Mini MELF (Plastic)



| | | | | | | | |
|------------|------|------|-----|------|------|------|------|
| TGL34-6.8 | 6.12 | 7.48 | 10 | 5.5 | 1000 | 10.8 | 13.9 |
| TGL34-6.8A | 6.45 | 7.14 | 10 | 5.8 | 1000 | 10.5 | 14.3 |
| TGL34-7.5 | 6.75 | 8.25 | 10 | 6.0 | 500 | 11.7 | 12.8 |
| TGL34-7.5A | 7.13 | 7.88 | 10 | 6.4 | 500 | 11.3 | 13.3 |
| TGL34-8.2 | 7.38 | 9.02 | 10 | 6.6 | 200 | 12.5 | 12.0 |
| TGL34-8.2A | 7.79 | 8.61 | 10 | 7.0 | 200 | 12.1 | 12.4 |
| TGL34-9.1 | 8.19 | 10.0 | 1.0 | 7.3 | 50 | 13.8 | 10.9 |
| TGL34-9.1A | 8.65 | 9.55 | 1.0 | 7.7 | 50 | 13.4 | 11.2 |
| TGL34-10 | 9.0 | 11.0 | 1.0 | 8.1 | 10 | 15.0 | 10.0 |
| TGL34-10A | 9.5 | 10.5 | 1.0 | 8.5 | 10 | 14.5 | 10.3 |
| TGL34-11 | 9.9 | 12.1 | 1.0 | 8.9 | 5 | 16.2 | 9.3 |
| TGL34-11A | 10.5 | 11.6 | 1.0 | 9.4 | 5 | 15.6 | 9.6 |
| TGL34-12 | 10.8 | 13.2 | 1.0 | 9.7 | 5 | 17.3 | 8.7 |
| TGL34-12A | 11.4 | 12.6 | 1.0 | 10.2 | 5 | 16.7 | 9.0 |
| TGL34-13 | 11.7 | 14.3 | 1.0 | 10.5 | 5 | 19.0 | 7.9 |
| TGL34-13A | 12.4 | 13.7 | 1.0 | 11.1 | 5 | 18.2 | 8.2 |
| TGL34-15 | 13.5 | 16.5 | 1.0 | 12.1 | 5 | 22.0 | 6.8 |
| TGL34-15A | 14.3 | 15.8 | 1.0 | 12.8 | 5 | 21.2 | 7.1 |
| TGL34-16 | 14.4 | 17.6 | 1.0 | 12.9 | 5 | 23.5 | 6.4 |
| TGL34-16A | 15.2 | 16.8 | 1.0 | 13.6 | 5 | 22.5 | 6.7 |
| TGL34-18 | 16.2 | 19.8 | 1.0 | 14.5 | 5 | 26.5 | 5.7 |
| TGL34-18A | 17.1 | 18.9 | 1.0 | 15.3 | 5 | 25.2 | 6.0 |
| TGL34-20 | 18.0 | 22.0 | 1.0 | 16.2 | 5 | 29.1 | 5.2 |
| TGL34-20A | 19.0 | 21.0 | 1.0 | 17.1 | 5 | 27.7 | 5.4 |
| TGL34-22 | 19.8 | 24.2 | 1.0 | 17.8 | 5 | 31.9 | 4.7 |
| TGL34-22A | 20.9 | 23.1 | 1.0 | 18.8 | 5 | 30.6 | 4.9 |
| TGL34-24 | 21.6 | 26.4 | 1.0 | 19.4 | 5 | 34.7 | 4.3 |
| TGL34-24A | 22.8 | 25.2 | 1.0 | 20.5 | 5 | 33.2 | 4.5 |
| TGL34-27 | 24.3 | 29.7 | 1.0 | 21.8 | 5 | 39.1 | 3.8 |
| TGL34-27A | 25.7 | 28.4 | 1.0 | 23.1 | 5 | 37.5 | 4.0 |
| TGL34-30 | 27.0 | 30.0 | 1.0 | 24.3 | 5 | 43.5 | 3.4 |
| TGL34-30A | 28.5 | 31.5 | 1.0 | 25.6 | 5 | 41.4 | 3.6 |
| TGL34-33 | 29.7 | 36.3 | 1.0 | 26.8 | 5 | 47.7 | 3.1 |
| TGL34-33A | 31.4 | 34.7 | 1.0 | 28.2 | 5 | 45.7 | 3.3 |
| TGL34-36 | 32.4 | 39.6 | 1.0 | 29.1 | 5 | 52.0 | 2.9 |
| TGL34-36A | 34.2 | 37.8 | 1.0 | 30.8 | 5 | 49.9 | 3.0 |
| TGL34-39 | 35.1 | 42.9 | 1.0 | 31.6 | 5 | 56.4 | 2.7 |
| TGL34-39A | 37.1 | 41.0 | 1.0 | 33.3 | 5 | 53.9 | 2.8 |

Note : (1) For bidirectional use suffix "C" or "CA"



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ I_T | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ V_{WM} | Maximum Peak Pulse Surge Current | Maximum Clamping Voltage @ I_{PPM} |
|----------------|---------------------------|------|------------------------------|------------------------------------|----------------------------------|--------------------------------------|
| | V_{BR} (V) | | V_{WM} | I_R | I_{PPM} | V_C |
| Unidirectional | Min. | Max. | (mA) | (V) | (μ A) | (A) |

TGL34 Series, 150W, Case Type: Mini MELF (Plastic)



| | | | | | | | |
|------------|------|------|-----|------|---|------|-----|
| TGL34-43 | 38.7 | 47.3 | 1.0 | 34.8 | 5 | 61.9 | 2.4 |
| TGL34-43A | 40.9 | 45.2 | 1.0 | 36.8 | 5 | 59.3 | 2.5 |
| TGL34-47 | 42.3 | 51.7 | 1.0 | 38.1 | 5 | 67.8 | 2.2 |
| TGL34-47A | 44.7 | 49.4 | 1.0 | 40.2 | 5 | 64.8 | 2.3 |
| TGL34-51 | 45.9 | 56.1 | 1.0 | 41.3 | 5 | 73.5 | 2.0 |
| TGL34-51A | 48.5 | 53.6 | 1.0 | 43.6 | 5 | 70.1 | 2.1 |
| TGL34-56 | 50.4 | 61.6 | 1.0 | 45.4 | 5 | 81 | 1.9 |
| TGL34-564A | 53.2 | 58.8 | 1.0 | 47.8 | 5 | 77 | 1.9 |
| TGL34-62 | 55.8 | 68.8 | 1.0 | 50.2 | 5 | 89 | 1.7 |
| TGL34-62A | 58.9 | 65.1 | 1.0 | 53.0 | 5 | 85 | 1.8 |
| TGL34-68 | 61.2 | 74.8 | 1.0 | 55.1 | 5 | 98 | 1.5 |
| TGL34-68A | 64.6 | 71.4 | 1.0 | 58.1 | 5 | 92 | 1.6 |
| TGL34-75 | 67.5 | 82.5 | 1.0 | 60.7 | 5 | 108 | 1.4 |
| TGL34-75A | 71.3 | 78.8 | 1.0 | 64.1 | 5 | 103 | 1.5 |
| TGL34-82 | 73.8 | 90.2 | 1.0 | 66.4 | 5 | 118 | 1.3 |
| TGL34-82A | 77.9 | 86.1 | 1.0 | 70.1 | 5 | 113 | 1.3 |
| TGL34-91 | 81.9 | 100 | 1.0 | 73.7 | 5 | 131 | 1.1 |
| TGL34-91A | 86.5 | 95.5 | 1.0 | 77.8 | 5 | 125 | 1.2 |
| TGL34-100 | 90 | 110 | 1.0 | 81.0 | 5 | 144 | 1.0 |
| TGL34-100A | 95 | 105 | 1.0 | 85.5 | 5 | 137 | 1.1 |
| TGL34-110 | 99 | 121 | 1.0 | 89.2 | 5 | 158 | 0.9 |
| TGL34-110A | 105 | 116 | 1.0 | 94.0 | 5 | 152 | 1.0 |
| TGL34-120 | 108 | 132 | 1.0 | 97.2 | 5 | 173 | 0.9 |
| TGL34-120A | 114 | 126 | 1.0 | 102 | 5 | 165 | 0.9 |
| TGL34-130 | 117 | 143 | 1.0 | 105 | 5 | 187 | 0.8 |
| TGL34-130A | 124 | 137 | 1.0 | 111 | 5 | 179 | 0.8 |
| TGL34-150 | 135 | 165 | 1.0 | 121 | 5 | 215 | 0.7 |
| TGL34-150A | 143 | 158 | 1.0 | 128 | 5 | 207 | 0.7 |
| TGL34-160 | 144 | 176 | 1.0 | 130 | 5 | 230 | 0.7 |
| TGL34-160A | 152 | 168 | 1.0 | 136 | 5 | 219 | 0.7 |
| TGL34-170 | 153 | 187 | 1.0 | 138 | 5 | 244 | 0.6 |
| TGL34-170A | 162 | 179 | 1.0 | 145 | 5 | 234 | 0.6 |
| TGL34-180 | 162 | 198 | 1.0 | 146 | 5 | 258 | 0.6 |
| TGL34-180A | 171 | 189 | 1.0 | 154 | 5 | 246 | 0.6 |
| TGL34-200 | 180 | 220 | 1.0 | 162 | 5 | 287 | 0.5 |
| TGL34-200A | 190 | 210 | 1.0 | 171 | 5 | 274 | 0.5 |

Note : (1) For bidirectional use suffix "C" or "CA"



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Working Peak Reverse Voltage ⁽¹⁾ | Breakdown Voltage @ I_T | | | Test Current | Max. Reverse Leakage Current | Max. Clamping Voltage at I_{PP} | Max. Reverse Peak Pulse Current ⁽³⁾ |
|----------|---|---------------------------|-----|------|--------------|------------------------------|-----------------------------------|--|
| | V_{RWM} | V_{BR} @ I_T | | | I_T | I_R @ V_{RWM} | V_C | I_{PP} |
| | (V) | Min | Nom | Max. | (mA) | (μ A) | (V) | (mA) |

SMF5.0A Series, 200W, Case Type: SOD-123FL



| | | | | | | | | |
|---------|-----|------|--------|------|-----|-----|------|------|
| SMF5.0A | 5.0 | 6.40 | 6.70 | 7.00 | 10 | 400 | 9.2 | 21.7 |
| SMF6.0A | 6.0 | 6.67 | 7.02 | 7.37 | 10 | 400 | 10.3 | 19.4 |
| SMF6.5A | 6.5 | 7.22 | 7.60 | 7.98 | 10 | 250 | 11.2 | 17.9 |
| SMF7.0A | 7.0 | 7.78 | 8.20 | 8.60 | 10 | 100 | 12.0 | 16.7 |
| SMF7.5A | 7.5 | 8.33 | 8.77 | 9.21 | 1.0 | 50 | 12.9 | 15.5 |
| SMF8.0A | 8.0 | 8.89 | 9.36 | 9.83 | 1.0 | 25 | 13.6 | 14.7 |
| SMF8.5A | 8.5 | 9.44 | 9.92 | 10.4 | 1.0 | 10 | 14.4 | 13.9 |
| SMF9.0A | 9.0 | 10.0 | 10.55 | 11.1 | 1.0 | 5.0 | 15.4 | 13.0 |
| SMF10A | 10 | 11.1 | 11.70 | 12.3 | 1.0 | 2.5 | 17.0 | 11.8 |
| SMF11A | 11 | 12.2 | 12.85 | 13.5 | 1.0 | 2.5 | 18.2 | 11.0 |
| SMF12A | 12 | 13.3 | 14.00 | 14.7 | 1.0 | 2.5 | 19.9 | 10.1 |
| SMF13A | 13 | 14.4 | 15.15 | 15.9 | 1.0 | 1.0 | 21.5 | 9.3 |
| SMF14A | 14 | 15.6 | 16.40 | 17.2 | 1.0 | 1.0 | 23.2 | 8.6 |
| SMF15A | 15 | 16.7 | 17.60 | 18.5 | 1.0 | 1.0 | 24.4 | 8.2 |
| SMF16A | 16 | 17.8 | 18.75 | 19.7 | 1.0 | 1.0 | 26.0 | 7.7 |
| SMF17A | 17 | 18.9 | 19.90 | 20.9 | 1.0 | 1.0 | 27.6 | 7.2 |
| SMF18A | 18 | 20.0 | 21.00 | 22.1 | 1.0 | 1.0 | 29.2 | 6.8 |
| SMF20A | 20 | 22.2 | 23.35 | 24.5 | 1.0 | 1.0 | 32.4 | 6.2 |
| SMF22A | 22 | 24.4 | 25.60 | 26.9 | 1.0 | 1.0 | 35.5 | 5.6 |
| SMF24A | 24 | 26.7 | 28.10 | 29.5 | 1.0 | 1.0 | 38.9 | 5.1 |
| SMF26A | 26 | 28.9 | 30.40 | 31.9 | 1.0 | 1.0 | 42.1 | 4.8 |
| SMF28A | 28 | 31.1 | 32.80 | 34.4 | 1.0 | 1.0 | 45.4 | 4.4 |
| SMF30A | 30 | 33.3 | 35.10 | 36.8 | 1.0 | 1.0 | 48.4 | 4.1 |
| SMF33A | 33 | 36.7 | 38.70 | 40.6 | 1.0 | 1.0 | 53.3 | 3.8 |
| SMF36A | 36 | 40.0 | 42.10 | 44.2 | 1.0 | 1.0 | 58.1 | 3.4 |
| SMF40A | 40 | 44.4 | 46.80 | 49.1 | 1.0 | 1.0 | 64.5 | 3.1 |
| SMF43A | 43 | 47.8 | 50.30 | 52.8 | 1.0 | 1.0 | 69.4 | 2.9 |
| SMF45A | 45 | 50.0 | 52.65 | 55.3 | 1.0 | 1.0 | 72.7 | 2.8 |
| SMF48A | 48 | 53.3 | 56.10 | 58.9 | 1.0 | 1.0 | 77.4 | 2.6 |
| SMF51A | 51 | 56.7 | 59.70 | 62.7 | 1.0 | 1.0 | 82.4 | 2.4 |
| SMF54A | 54 | 60.0 | 63.15 | 66.3 | 1.0 | 1.0 | 87.1 | 2.3 |
| SMF58A | 58 | 64.4 | 67.80 | 71.2 | 1.0 | 1.0 | 93.6 | 2.1 |
| SMF60A | 60 | 66.7 | 70.20 | 73.7 | 1.0 | 1.0 | 96.8 | 1.8 |
| SMF64A | 64 | 71.1 | 74.85 | 78.6 | 1.0 | 1.0 | 103 | 1.7 |
| SMF70A | 70 | 77.8 | 81.90 | 86.0 | 1.0 | 1.0 | 113 | 1.5 |
| SMF75A | 75 | 83.3 | 87.70 | 92.1 | 1.0 | 1.0 | 121 | 1.4 |
| SMF78A | 78 | 86.7 | 91.25 | 95.8 | 1.0 | 1.0 | 126 | 1.4 |
| SMF85A | 85 | 94.4 | 99.20 | 104 | 1.0 | 1.0 | 137 | 1.3 |
| SMF90A | 90 | 100 | 105.50 | 111 | 1.0 | 1.0 | 146 | 1.2 |
| SMF100A | 100 | 111 | 117.00 | 123 | 1.0 | 1.0 | 162 | 1.1 |
| SMF110A | 110 | 122 | 128.50 | 135 | 1.0 | 1.0 | 177 | 1.0 |
| SMF120A | 120 | 133 | 140.00 | 147 | 1.0 | 1.0 | 193 | 0.9 |
| SMF130A | 130 | 144 | 151.50 | 159 | 1.0 | 1.0 | 209 | 0.8 |
| SMF150A | 150 | 167 | 176.00 | 185 | 1.0 | 1.0 | 243 | 0.7 |
| SMF160A | 160 | 178 | 187.50 | 197 | 1.0 | 1.0 | 259 | 0.7 |
| SMF170A | 170 | 189 | 199.00 | 209 | 1.0 | 1.0 | 275 | 0.6 |

Note : (1) A transient suppressor is normally selected according to the Working Peak Reverse Voltage (V_{RWM}) which should be equal to or greater than the DC or continuous peak operating voltage level.



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Breakdown Voltage @ It (Note 1) | | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ VRWM | Maximum Reverse Current | Maximum Clamping Voltage @ IRSM | Maximum Temperature Coefficient of VBR |
|----------------|-----|------------------------------------|------|------|------------------------------|--------------------------------|-------------------------|---------------------------------|--|
| Unidirectional | | VBR (V) | | It | VRWM | IR | IRSM | VRSM | |
| Axial Lead | SMD | Min. | Max. | (mA) | (V) | (μA) | (A) | (V) | (% / °C) |

BZW04 / STUB Series, 400W, Case Type: DO-41/SMA

| | | | | | | | | | |
|-----------|---------|------|------|-----|------|------|------|------|-------|
| BZW04P5V8 | STUB06I | 6.45 | 7.48 | 10 | 5.80 | 1000 | 38.0 | 10.5 | 0.057 |
| BZW04-5V8 | STUB56I | 6.45 | 7.14 | 10 | 5.80 | 1000 | 38.0 | 10.5 | 0.057 |
| BZW04P6V4 | STUB07F | 7.13 | 8.25 | 10 | 6.40 | 500 | 35.4 | 11.3 | 0.061 |
| BZW04-6V4 | STUB57F | 7.13 | 7.88 | 10 | 6.40 | 500 | 35.4 | 11.3 | 0.061 |
| BZW04P7V0 | STUB08C | 7.79 | 9.02 | 10 | 7.02 | 200 | 33.0 | 12.1 | 0.065 |
| BZW04-7V0 | STUB58C | 7.79 | 8.61 | 10 | 7.02 | 200 | 33.0 | 12.1 | 0.065 |
| BZW04P7V8 | STUB09B | 8.65 | 10.0 | 1.0 | 7.78 | 50 | 30.0 | 13.4 | 0.068 |
| BZW04-7V8 | STUB59B | 8.65 | 9.55 | 1.0 | 7.78 | 50 | 30.0 | 13.4 | 0.068 |
| BZW04P8V5 | STUB010 | 9.50 | 11.0 | 1.0 | 8.55 | 10 | 27.6 | 14.5 | 0.073 |
| BZW04-8V5 | STUB510 | 9.50 | 10.5 | 1.0 | 8.55 | 10 | 27.6 | 14.5 | 0.073 |
| BZW04P9V4 | STUB011 | 10.5 | 12.1 | 1.0 | 9.40 | 5.0 | 25.7 | 15.6 | 0.075 |
| BZW04-9V4 | STUB511 | 10.5 | 11.6 | 1.0 | 9.40 | 5.0 | 25.7 | 15.6 | 0.075 |
| BZW04P10 | STUB012 | 11.4 | 13.2 | 1.0 | 10.2 | 5.0 | 24.0 | 16.7 | 0.078 |
| BZW04-10 | STUB512 | 11.4 | 12.6 | 1.0 | 10.2 | 5.0 | 24.0 | 16.7 | 0.078 |
| BZW04P11 | STUB013 | 12.4 | 14.3 | 1.0 | 11.1 | 5.0 | 22.0 | 18.2 | 0.081 |
| BZW04-11 | STUB513 | 12.4 | 13.7 | 1.0 | 11.1 | 5.0 | 22.0 | 18.2 | 0.081 |
| BZW04P13 | STUB015 | 14.3 | 16.5 | 1.0 | 12.8 | 5.0 | 19.0 | 21.2 | 0.084 |
| BZW04-13 | STUB515 | 14.3 | 15.8 | 1.0 | 12.8 | 5.0 | 19.0 | 21.2 | 0.084 |
| BZW04P14 | STUB016 | 15.2 | 17.6 | 1.0 | 13.6 | 5.0 | 17.8 | 22.5 | 0.086 |
| BZW04-14 | STUB516 | 15.2 | 16.8 | 1.0 | 13.6 | 5.0 | 17.8 | 22.5 | 0.086 |
| BZW04P15 | STUB018 | 17.1 | 19.8 | 1.0 | 15.3 | 5.0 | 16.0 | 25.2 | 0.088 |
| BZW04-15 | STUB518 | 17.1 | 18.9 | 1.0 | 15.3 | 5.0 | 16.0 | 25.2 | 0.088 |
| BZW04P17 | STUB020 | 19.0 | 22.0 | 1.0 | 17.1 | 5.0 | 14.5 | 27.7 | 0.090 |
| BZW04-17 | STUB520 | 19.0 | 21.0 | 1.0 | 17.1 | 5.0 | 14.5 | 27.7 | 0.090 |
| BZW04P19 | STUB022 | 20.9 | 24.2 | 1.0 | 18.8 | 5.0 | 13.0 | 30.6 | 0.092 |
| BZW04-19 | STUB522 | 20.9 | 23.1 | 1.0 | 18.8 | 5.0 | 13.0 | 30.6 | 0.092 |
| BZW04P20 | STUB024 | 22.8 | 26.4 | 1.0 | 20.5 | 5.0 | 12.0 | 33.2 | 0.094 |
| BZW04-20 | STUB524 | 22.8 | 25.2 | 1.0 | 20.5 | 5.0 | 12.0 | 33.2 | 0.094 |
| BZW04P23 | STUB027 | 25.7 | 29.7 | 1.0 | 23.1 | 5.0 | 10.7 | 37.5 | 0.096 |
| BZW04-23 | STUB527 | 25.7 | 28.4 | 1.0 | 23.1 | 5.0 | 10.7 | 37.5 | 0.096 |
| BZW04P26 | STUB030 | 28.5 | 33.0 | 1.0 | 25.6 | 5.0 | 9.6 | 41.5 | 0.097 |
| BZW04-26 | STUB530 | 28.5 | 31.5 | 1.0 | 25.6 | 5.0 | 9.6 | 41.5 | 0.097 |
| BZW04P28 | STUB033 | 31.4 | 36.3 | 1.0 | 28.2 | 5.0 | 8.8 | 45.7 | 0.098 |
| BZW04-28 | STUB533 | 31.4 | 34.7 | 1.0 | 28.2 | 5.0 | 8.8 | 45.7 | 0.098 |
| BZW04P31 | STUB036 | 34.2 | 39.6 | 1.0 | 30.8 | 5.0 | 8.0 | 49.9 | 0.099 |
| BZW04-31 | STUB536 | 34.2 | 37.8 | 1.0 | 30.8 | 5.0 | 8.0 | 49.9 | 0.099 |
| BZW04P33 | STUB039 | 37.1 | 42.9 | 1.0 | 33.3 | 5.0 | 7.4 | 53.9 | 0.100 |
| BZW04-33 | STUB539 | 37.1 | 41.0 | 1.0 | 33.3 | 5.0 | 7.4 | 53.9 | 0.100 |
| BZW04P37 | STUB043 | 40.9 | 47.3 | 1.0 | 36.8 | 5.0 | 6.7 | 59.3 | 0.101 |
| BZW04-37 | STUB543 | 40.9 | 45.2 | 1.0 | 36.8 | 5.0 | 6.7 | 59.3 | 0.101 |
| BZW04P40 | STUB047 | 44.7 | 51.7 | 1.0 | 40.2 | 5.0 | 6.2 | 64.8 | 0.101 |
| BZW04-40 | STUB547 | 44.7 | 49.4 | 1.0 | 40.2 | 5.0 | 6.2 | 64.8 | 0.101 |
| BZW04P44 | STUB051 | 48.5 | 56.1 | 1.0 | 43.6 | 5.0 | 5.7 | 70.1 | 0.102 |
| BZW04-44 | STUB551 | 48.5 | 53.6 | 1.0 | 43.6 | 5.0 | 5.7 | 70.1 | 0.102 |
| BZW04P48 | STUB056 | 53.2 | 61.6 | 1.0 | 47.8 | 5.0 | 5.2 | 77.0 | 0.103 |
| BZW04-48 | STUB556 | 53.2 | 58.8 | 1.0 | 47.8 | 5.0 | 5.2 | 77.0 | 0.103 |
| BZW04P53 | STUB062 | 58.9 | 68.2 | 1.0 | 53.0 | 5.0 | 4.7 | 85.0 | 0.104 |
| BZW04-53 | STUB562 | 58.9 | 65.1 | 1.0 | 53.0 | 5.0 | 4.7 | 85.0 | 0.104 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Breakdown Voltage @ It (Note 1) | | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ VRWM | Maximum Reverse Current | Maximum Clamping Voltage @ IRSM | Maximum Temperature Coefficient of VBR |
|----------------|-----|------------------------------------|------|------|------------------------------|--------------------------------|-------------------------|---------------------------------|--|
| Unidirectional | | VBR (V) | | It | VRWM | IR | IRSM | VRSM | |
| Axial Lead | SMD | Min. | Max. | (mA) | (V) | (μA) | (A) | (V) | (% / °C) |

BZW04 / STUB Series, 400W, Case Type: DO-41/SMA

| | | | | | | | | | |
|-----------|---------|------|------|-----|------|-----|-----|------|-------|
| BZW04P58 | STUB068 | 64.6 | 74.8 | 1.0 | 58.1 | 5.0 | 4.3 | 92.0 | 0.104 |
| BZW04-58 | STUB568 | 64.6 | 71.4 | 1.0 | 58.1 | 5.0 | 4.3 | 92.0 | 0.104 |
| BZW04P64 | STUB075 | 71.3 | 82.5 | 1.0 | 64.1 | 5.0 | 3.9 | 103 | 0.105 |
| BZW04-64 | STUB575 | 71.3 | 78.8 | 1.0 | 64.1 | 5.0 | 3.9 | 103 | 0.105 |
| BZW04P70 | STUB082 | 77.9 | 90.2 | 1.0 | 70.1 | 5.0 | 3.5 | 113 | 0.105 |
| BZW04-70 | STUB582 | 77.9 | 86.1 | 1.0 | 70.1 | 5.0 | 3.5 | 113 | 0.105 |
| BZW04P78 | STUB091 | 86.5 | 100 | 1.0 | 77.8 | 5.0 | 3.2 | 125 | 0.106 |
| BZW04-78 | STUB591 | 86.5 | 95.5 | 1.0 | 77.8 | 5.0 | 3.2 | 125 | 0.106 |
| BZW04P85 | STUB0B0 | 95.0 | 110 | 1.0 | 85.5 | 5.0 | 2.9 | 137 | 0.106 |
| BZW04-85 | STUB5B0 | 95.0 | 105 | 1.0 | 85.5 | 5.0 | 2.9 | 137 | 0.106 |
| BZW04P94 | STUB0B1 | 105 | 121 | 1.0 | 94.0 | 5.0 | 2.6 | 152 | 0.107 |
| BZW04-94 | STUB5B1 | 105 | 116 | 1.0 | 94.0 | 5.0 | 2.6 | 152 | 0.107 |
| BZW04P102 | STUB0B2 | 114 | 132 | 1.0 | 102 | 5.0 | 2.4 | 165 | 0.107 |
| BZW04-102 | STUB5B2 | 114 | 126 | 1.0 | 102 | 5.0 | 2.4 | 165 | 0.107 |
| BZW04P111 | STUB0B3 | 124 | 143 | 1.0 | 111 | 5.0 | 2.2 | 179 | 0.107 |
| BZW04-111 | STUB5B3 | 124 | 137 | 1.0 | 111 | 5.0 | 2.2 | 179 | 0.107 |
| BZW04P128 | STUB0B5 | 143 | 165 | 1.0 | 128 | 5.0 | 2.0 | 207 | 0.108 |
| BZW04-128 | STUB5B5 | 143 | 158 | 1.0 | 128 | 5.0 | 2.0 | 207 | 0.108 |
| BZW04P136 | STUB0B6 | 152 | 176 | 1.0 | 136 | 5.0 | 1.8 | 219 | 0.108 |
| BZW04-136 | STUB5B6 | 152 | 168 | 1.0 | 136 | 5.0 | 1.8 | 219 | 0.108 |
| BZW04P145 | STUB0B7 | 161 | 187 | 1.0 | 145 | 5.0 | 1.7 | 234 | 0.108 |
| BZW04-145 | STUB5B7 | 161 | 179 | 1.0 | 145 | 5.0 | 1.7 | 234 | 0.108 |
| BZW04P154 | STUB0B8 | 171 | 198 | 1.0 | 154 | 5.0 | 1.6 | 246 | 0.108 |
| BZW04-154 | STUB5B8 | 171 | 189 | 1.0 | 154 | 5.0 | 1.6 | 246 | 0.108 |
| BZW04P171 | STUB0D0 | 190 | 220 | 1.0 | 171 | 5.0 | 1.5 | 274 | 0.108 |
| BZW04-171 | STUB5D0 | 190 | 210 | 1.0 | 171 | 5.0 | 1.5 | 274 | 0.108 |
| BZW04P188 | STUB0D2 | 209 | 242 | 1.0 | 188 | 5.0 | 1.4 | 301 | 0.108 |
| BZW04-188 | STUB5D2 | 209 | 231 | 1.0 | 188 | 5.0 | 1.4 | 301 | 0.108 |
| BZW04P213 | STUB0D5 | 237 | 275 | 1.0 | 213 | 5.0 | 1.3 | 344 | 0.110 |
| BZW04-213 | STUB5D5 | 237 | 263 | 1.0 | 213 | 5.0 | 1.3 | 344 | 0.110 |
| BZW04P239 | STUB0D8 | 266 | 308 | 1.0 | 239 | 5.0 | 1.3 | 384 | 0.110 |
| BZW04-239 | STUB5D8 | 266 | 294 | 1.0 | 239 | 5.0 | 1.3 | 384 | 0.110 |
| BZW04P256 | STUB0E0 | 285 | 330 | 1.0 | 256 | 5.0 | 1.2 | 414 | 0.110 |
| BZW04-256 | STUB5E0 | 285 | 315 | 1.0 | 256 | 5.0 | 1.2 | 414 | 0.110 |
| BZW04P273 | STUB0E2 | 304 | 352 | 1.0 | 273 | 5.0 | 1.2 | 438 | 0.110 |
| BZW04-273 | STUB5E2 | 304 | 336 | 1.0 | 273 | 5.0 | 1.2 | 438 | 0.110 |
| BZW04P299 | STUB0E5 | 332 | 385 | 1.0 | 299 | 5.0 | 0.9 | 482 | 0.110 |
| BZW04-299 | STUB5E5 | 332 | 368 | 1.0 | 299 | 5.0 | 0.9 | 482 | 0.110 |
| BZW04P342 | STUB0G0 | 380 | 440 | 1.0 | 342 | 5.0 | 0.9 | 548 | 0.110 |
| BZW04-342 | STUB5G0 | 380 | 420 | 1.0 | 342 | 5.0 | 0.9 | 548 | 0.110 |
| BZW04P376 | STUB0G4 | 418 | 484 | 1.0 | 376 | 5.0 | 0.8 | 603 | 0.110 |
| BZW04-376 | STUB5G4 | 418 | 462 | 1.0 | 376 | 5.0 | 0.8 | 603 | 0.110 |

Notes:

- (1) VBR measured after It applied for 300 μs, It = square wave pulse or equivalent
- (2) VF = 3.5 Vmax., IF = 25 A (6.8 V to 110 V)
VF = 5.0 Vmax., IF = 25 A (120 V to 400 V) per 1/2 square or equivalent sine wave
PW = 8.3 ms, duty cycle = 4 pulses per minute maximum
- (3) For bidirectional use "B" suffix (Axial Lead) / replace the third digit of type from "U" to "B" (SMD)
- (4) "ZW04" for Axial lead / "STU" or "STB" for SMD will be omitted on marking of the diode
- (5) For bidirectional types having VR of 10 V and under, the IR limit is doubled



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Breakdown Voltage @ It (Note 1) | | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ VRWM | Maximum Reverse Current | Maximum Clamping Voltage @ IRSM | Maximum Temperature Coefficient of VBR |
|----------------|-----|--------------------------------------|------|------|------------------------------|--------------------------------|-------------------------|---------------------------------|--|
| Unidirectional | | VBR (V) | | It | VRWM | IR | IRSM | VRSM | of VBR |
| Axial Lead | SMD | Min. | Max. | (mA) | (V) | (μ A) | (A) | (V) | (% / °C) |

P4KE / STUP Series, 400W, Case Type: DO-41/SMA



| | | | | | | | | | |
|----------|---------|------|------|-----|------|------|------|------|-------|
| P4KE6.8 | STUP06I | 6.12 | 7.48 | 10 | 5.50 | 1000 | 38.0 | 10.8 | 0.057 |
| P4KE6.8A | STUP56I | 6.45 | 7.14 | 10 | 5.80 | 1000 | 40.0 | 10.5 | 0.057 |
| P4KE7.5 | STUP07F | 6.75 | 8.25 | 10 | 6.05 | 500 | 36.0 | 11.7 | 0.061 |
| P4KE7.5A | STUP57F | 7.13 | 7.88 | 10 | 6.40 | 500 | 37.0 | 11.3 | 0.061 |
| P4KE8.2 | STUP08C | 7.38 | 9.02 | 10 | 6.63 | 200 | 33.0 | 12.5 | 0.065 |
| P4KE8.2A | STUP58C | 7.79 | 8.61 | 10 | 7.02 | 200 | 35.0 | 12.1 | 0.065 |
| P4KE9.1 | STUP09B | 8.19 | 10.0 | 1.0 | 7.37 | 50 | 30.0 | 13.8 | 0.068 |
| P4KE9.1A | STUP59B | 8.65 | 9.55 | 1.0 | 7.78 | 50 | 31.0 | 13.4 | 0.068 |
| P4KE10 | STUP010 | 9.00 | 11.0 | 1.0 | 8.10 | 10 | 28.0 | 15.0 | 0.073 |
| P4KE10A | STUP510 | 9.50 | 10.5 | 1.0 | 8.55 | 10 | 29.0 | 14.5 | 0.073 |
| P4KE11 | STUP011 | 9.90 | 12.1 | 1.0 | 8.92 | 5.0 | 26.0 | 16.2 | 0.075 |
| P4KE11A | STUP511 | 10.5 | 11.6 | 1.0 | 9.40 | 5.0 | 27.0 | 15.6 | 0.075 |
| P4KE12 | STUP012 | 10.8 | 13.2 | 1.0 | 9.72 | 5.0 | 24.0 | 17.3 | 0.078 |
| P4KE12A | STUP512 | 11.4 | 12.6 | 1.0 | 10.2 | 5.0 | 25.0 | 16.7 | 0.078 |
| P4KE13 | STUP013 | 11.7 | 14.3 | 1.0 | 10.5 | 5.0 | 22.0 | 19.0 | 0.081 |
| P4KE13A | STUP513 | 12.4 | 13.7 | 1.0 | 11.1 | 5.0 | 23.0 | 18.2 | 0.081 |
| P4KE15 | STUP015 | 13.5 | 16.5 | 1.0 | 12.1 | 5.0 | 19.0 | 22.0 | 0.084 |
| P4KE15A | STUP515 | 14.3 | 15.8 | 1.0 | 12.8 | 5.0 | 20.0 | 21.2 | 0.084 |
| P4KE16 | STUP016 | 14.4 | 17.6 | 1.0 | 12.9 | 5.0 | 18.0 | 23.5 | 0.086 |
| P4KE16A | STUP516 | 15.2 | 16.8 | 1.0 | 13.6 | 5.0 | 19.0 | 22.5 | 0.086 |
| P4KE17 | STUP017 | 15.3 | 18.7 | 1.0 | 13.7 | 5.0 | 17.0 | 25.0 | 0.087 |
| P4KE17A | STUP517 | 16.2 | 17.9 | 1.0 | 14.5 | 5.0 | 18.0 | 24.0 | 0.087 |
| P4KE18 | STUP018 | 16.2 | 19.8 | 1.0 | 14.5 | 5.0 | 16.0 | 26.5 | 0.088 |
| P4KE18A | STUP518 | 17.1 | 18.9 | 1.0 | 15.3 | 5.0 | 17.0 | 25.5 | 0.088 |
| P4KE20 | STUP020 | 18.0 | 22.0 | 1.0 | 16.2 | 5.0 | 14.0 | 29.1 | 0.090 |
| P4KE20A | STUP520 | 19.0 | 21.0 | 1.0 | 17.1 | 5.0 | 15.0 | 27.7 | 0.090 |
| P4KE22 | STUP022 | 19.8 | 24.2 | 1.0 | 17.8 | 5.0 | 13.0 | 31.9 | 0.092 |
| P4KE22A | STUP522 | 20.9 | 23.1 | 1.0 | 18.8 | 5.0 | 14.0 | 30.6 | 0.092 |
| P4KE24 | STUP024 | 21.6 | 26.4 | 1.0 | 19.4 | 5.0 | 12.0 | 34.7 | 0.094 |
| P4KE24A | STUP524 | 22.8 | 25.2 | 1.0 | 20.5 | 5.0 | 13.0 | 33.2 | 0.094 |
| P4KE27 | STUP027 | 24.3 | 29.7 | 1.0 | 21.8 | 5.0 | 11.0 | 39.1 | 0.096 |
| P4KE27A | STUP527 | 25.7 | 28.4 | 1.0 | 23.1 | 5.0 | 11.2 | 37.5 | 0.096 |
| P4KE30 | STUP030 | 27.0 | 33.0 | 1.0 | 24.3 | 5.0 | 10.0 | 43.5 | 0.097 |
| P4KE30A | STUP530 | 28.5 | 31.5 | 1.0 | 25.6 | 5.0 | 10.0 | 41.4 | 0.097 |
| P4KE33 | STUP033 | 29.7 | 36.3 | 1.0 | 26.8 | 5.0 | 9.0 | 47.7 | 0.098 |
| P4KE33A | STUP533 | 31.4 | 34.7 | 1.0 | 28.2 | 5.0 | 9.0 | 45.7 | 0.098 |
| P4KE36 | STUP036 | 32.4 | 39.6 | 1.0 | 29.1 | 5.0 | 8.0 | 52.0 | 0.099 |
| P4KE36A | STUP536 | 34.2 | 37.8 | 1.0 | 30.8 | 5.0 | 8.4 | 49.9 | 0.099 |
| P4KE39 | STUP039 | 35.1 | 42.9 | 1.0 | 31.6 | 5.0 | 7.4 | 56.4 | 0.100 |
| P4KE39A | STUP539 | 37.1 | 41.0 | 1.0 | 33.3 | 5.0 | 7.8 | 53.9 | 0.100 |
| P4KE43 | STUP043 | 38.7 | 47.3 | 1.0 | 34.8 | 5.0 | 6.8 | 61.9 | 0.101 |
| P4KE43A | STUP543 | 40.9 | 45.2 | 1.0 | 36.8 | 5.0 | 7.1 | 59.3 | 0.101 |
| P4KE47 | STUP047 | 42.3 | 51.7 | 1.0 | 38.1 | 5.0 | 6.2 | 67.8 | 0.101 |
| P4KE47A | STUP547 | 44.7 | 49.4 | 1.0 | 40.2 | 5.0 | 6.5 | 64.8 | 0.101 |
| P4KE51 | STUP051 | 45.9 | 56.1 | 1.0 | 41.3 | 5.0 | 5.7 | 73.5 | 0.102 |
| P4KE51A | STUP551 | 48.5 | 53.6 | 1.0 | 43.6 | 5.0 | 6.0 | 70.1 | 0.102 |
| P4KE56 | STUP056 | 50.4 | 61.6 | 1.0 | 45.4 | 5.0 | 5.2 | 80.5 | 0.103 |
| P4KE56A | STUP556 | 53.2 | 58.8 | 1.0 | 47.8 | 5.0 | 5.5 | 77.0 | 0.103 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Breakdown Voltage @ It (Note 1) | | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ VRWM | Maximum Reverse Current | Maximum Clamping Voltage @ IRSM | Maximum Temperature Coefficient of VBR |
|----------------|-----|--------------------------------------|------|------|------------------------------|--------------------------------|-------------------------|---------------------------------|--|
| Unidirectional | | VBR (V) | | It | VRWM | IR | IRSM | VRSM | |
| Axial Lead | SMD | Min. | Max. | (mA) | (V) | (μA) | (A) | (V) | (% / °C) |

P4KE / STUP Series, 400W, Case Type: DO-41/SMA



| | | | | | | | | | |
|----------|---------|------|------|-----|------|-----|------|------|-------|
| P4KE62 | STUP062 | 55.8 | 68.2 | 1.0 | 50.2 | 5.0 | 4.7 | 89.0 | 0.104 |
| P4KE62A | STUP562 | 58.9 | 65.1 | 1.0 | 53.0 | 5.0 | 5.0 | 85.0 | 0.104 |
| P4KE68 | STUP068 | 61.2 | 74.8 | 1.0 | 55.1 | 5.0 | 4.3 | 98.0 | 0.104 |
| P4KE68A | STUP568 | 64.6 | 71.4 | 1.0 | 58.1 | 5.0 | 4.6 | 92.0 | 0.104 |
| P4KE75 | STUP075 | 67.5 | 82.5 | 1.0 | 60.7 | 5.0 | 3.9 | 108 | 0.105 |
| P4KE75A | STUP575 | 71.3 | 78.8 | 1.0 | 64.1 | 5.0 | 4.1 | 103 | 0.105 |
| P4KE82 | STUP082 | 73.8 | 90.2 | 1.0 | 66.4 | 5.0 | 3.6 | 118 | 0.105 |
| P4KE82A | STUP582 | 77.9 | 86.1 | 1.0 | 70.1 | 5.0 | 3.7 | 113 | 0.105 |
| P4KE91 | STUP091 | 81.9 | 100 | 1.0 | 73.7 | 5.0 | 3.2 | 131 | 0.106 |
| P4KE91A | STUP591 | 86.5 | 95.5 | 1.0 | 77.8 | 5.0 | 3.4 | 125 | 0.106 |
| P4KE100 | STUP0B0 | 90.0 | 110 | 1.0 | 81 | 5.0 | 2.9 | 144 | 0.106 |
| P4KE100A | STUP5B0 | 95.0 | 105 | 1.0 | 85.5 | 5.0 | 3.1 | 137 | 0.106 |
| P4KE110 | STUP0B1 | 99.0 | 121 | 1.0 | 89.2 | 5.0 | 2.7 | 158 | 0.107 |
| P4KE110A | STUP5B1 | 105 | 116 | 1.0 | 94.0 | 5.0 | 2.8 | 152 | 0.107 |
| P4KE120 | STUP0B2 | 108 | 132 | 1.0 | 97.2 | 5.0 | 2.4 | 173 | 0.107 |
| P4KE120A | STUP5B2 | 114 | 126 | 1.0 | 102 | 5.0 | 2.5 | 165 | 0.107 |
| P4KE130 | STUP0B3 | 117 | 143 | 1.0 | 105 | 5.0 | 2.2 | 187 | 0.107 |
| P4KE130A | STUP5B3 | 124 | 137 | 1.0 | 111 | 5.0 | 2.3 | 179 | 0.107 |
| P4KE150 | STUP0B5 | 135 | 165 | 1.0 | 121 | 5.0 | 2.0 | 215 | 0.108 |
| P4KE150A | STUP5B5 | 143 | 158 | 1.0 | 128 | 5.0 | 2.0 | 207 | 0.108 |
| P4KE160 | STUP0B6 | 144 | 176 | 1.0 | 130 | 5.0 | 1.8 | 230 | 0.108 |
| P4KE160A | STUP5B6 | 152 | 168 | 1.0 | 136 | 5.0 | 1.9 | 219 | 0.108 |
| P4KE170 | STUP0B7 | 153 | 187 | 1.0 | 138 | 5.0 | 1.7 | 244 | 0.108 |
| P4KE170A | STUP5B7 | 162 | 179 | 1.0 | 145 | 5.0 | 1.8 | 234 | 0.108 |
| P4KE180 | STUP0B8 | 162 | 198 | 1.0 | 146 | 5.0 | 1.6 | 258 | 0.108 |
| P4KE180A | STUP5B8 | 171 | 189 | 1.0 | 154 | 5.0 | 1.7 | 246 | 0.108 |
| P4KE200 | STUP0D0 | 180 | 220 | 1.0 | 162 | 5.0 | 1.5 | 287 | 0.108 |
| P4KE200A | STUP5D0 | 190 | 210 | 1.0 | 171 | 5.0 | 1.53 | 274 | 0.108 |
| P4KE220 | STUP0D2 | 198 | 242 | 1.0 | 175 | 5.0 | 1.16 | 344 | 0.108 |
| P4KE220A | STUP5D2 | 209 | 231 | 1.0 | 185 | 5.0 | 1.22 | 328 | 0.108 |
| P4KE250 | STUP0D5 | 225 | 275 | 1.0 | 202 | 5.0 | 1.11 | 360 | 0.110 |
| P4KE250A | STUP5D5 | 237 | 263 | 1.0 | 214 | 5.0 | 1.16 | 344 | 0.110 |
| P4KE300 | STUP0E0 | 270 | 330 | 1.0 | 243 | 5.0 | 0.93 | 430 | 0.110 |
| P4KE300A | STUP5E0 | 285 | 315 | 1.0 | 256 | 5.0 | 0.97 | 414 | 0.110 |
| P4KE350 | STUP0E5 | 315 | 385 | 1.0 | 284 | 5.0 | 0.79 | 504 | 0.110 |
| P4KE350A | STUP5E5 | 332 | 368 | 1.0 | 300 | 5.0 | 0.83 | 482 | 0.110 |
| P4KE400 | STUP0G0 | 360 | 440 | 1.0 | 324 | 5.0 | 0.70 | 574 | 0.110 |
| P4KE400A | STUP5G0 | 380 | 420 | 1.0 | 342 | 5.0 | 0.73 | 548 | 0.110 |
| P4KE440 | STUP0G4 | 396 | 484 | 1.0 | 356 | 5.0 | 0.95 | 631 | 0.110 |
| P4KE440A | STUP5G4 | 418 | 462 | 1.0 | 376 | 5.0 | 1.00 | 602 | 0.110 |

Notes:

- (1) V_{BR} measured after I_t applied for 300 μ s, I_t = square wave pulse or equivalent
- (2) $V_F = 3.5 V_{max.}$, $I_F = 25 A$ (6.8 V to 91 V)
 $V_F = 5.0 V_{max.}$, $I_F = 25 A$ (100 V to 400 V) per 1/2 square or equivalent sine wave
PW = 8.3 ms, duty cycle = 4 pulses per minute maximum
- (3) For bidirectional use "C" or "CA" suffix (Axial Lead) / replace the third letter of type from "U" to "B" (SMD)
- (4) "4KE" for Axial lead / "STU" or "STB" for SMD will be omitted on marking of the diode
- (5) For bidirectional types having V_R of 10 V and under, the I_R limit is doubled



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ It (Note 1) | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ VRWM | Maximum Reverse Current | Maximum Clamping Voltage @ IRSM | Maximum Temperature Coefficient of VBR | |
|----------------|---|------|------------------------------------|--------------------------------------|-------------------------------|---------------------------------------|---|----------|
| | VBR (V) | It | VRWM | IR | IRSM | VRSM | | |
| Unidirectional | Min. | Max. | (mA) | (V) | (μA) | (A) | (V) | (% / °C) |

TGL41 Series, 400W, Case Type: MELF(Plastic)



| | | | | | | | | |
|------------|------|------|-----|------|------|------|------|-------|
| TGL41-6.8 | 6.12 | 7.48 | 10 | 5.50 | 1000 | 37.0 | 10.8 | 0.060 |
| TGL41-6.8A | 6.45 | 7.14 | 10 | 5.80 | 1000 | 38.1 | 10.5 | 0.060 |
| TGL41-7.5 | 6.75 | 8.25 | 10 | 6.05 | 500 | 34.2 | 11.7 | 0.064 |
| TGL41-7.5A | 7.13 | 7.88 | 10 | 6.40 | 500 | 35.4 | 11.3 | 0.064 |
| TGL41-8.2 | 7.38 | 9.02 | 10 | 6.63 | 200 | 32.0 | 12.5 | 0.068 |
| TGL41-8.2A | 7.79 | 8.61 | 10 | 7.02 | 200 | 33.1 | 12.1 | 0.068 |
| TGL41-9.1 | 8.19 | 10.0 | 1.0 | 7.37 | 50 | 29.0 | 13.8 | 0.071 |
| TGL41-9.1A | 8.65 | 9.55 | 1.0 | 7.78 | 50 | 29.9 | 13.4 | 0.071 |
| TGL41-10 | 9.0 | 11.0 | 1.0 | 8.10 | 10 | 26.7 | 15.0 | 0.076 |
| TGL41-10A | 9.5 | 10.5 | 1.0 | 8.55 | 10 | 27.6 | 14.0 | 0.076 |
| TGL41-11 | 9.9 | 12.1 | 1.0 | 8.92 | 5 | 24.7 | 16.2 | 0.078 |
| TGL41-11A | 10.5 | 11.6 | 1.0 | 9.40 | 5 | 25.6 | 15.6 | 0.078 |
| TGL41-12 | 10.8 | 13.2 | 1.0 | 9.72 | 5 | 23.1 | 17.3 | 0.081 |
| TGL41-12A | 11.4 | 12.6 | 1.0 | 10.2 | 5 | 24.0 | 16.7 | 0.081 |
| TGL41-13 | 11.7 | 14.3 | 1.0 | 10.5 | 5 | 21.1 | 19.0 | 0.084 |
| TGL41-13A | 12.4 | 13.7 | 1.0 | 11.1 | 5 | 22.0 | 18.2 | 0.084 |
| TGL41-15 | 13.5 | 16.5 | 1.0 | 12.1 | 5 | 18.2 | 22.0 | 0.087 |
| TGL41-15A | 14.3 | 15.8 | 1.0 | 12.8 | 5 | 18.9 | 21.2 | 0.087 |
| TGL41-16 | 14.4 | 17.6 | 1.0 | 12.9 | 5 | 17.0 | 23.5 | 0.089 |
| TGL41-16A | 15.2 | 16.8 | 1.0 | 13.6 | 5 | 17.8 | 22.5 | 0.089 |
| TGL41-18 | 16.2 | 19.8 | 1.0 | 14.5 | 5 | 15.1 | 26.5 | 0.091 |
| TGL41-18A | 17.1 | 18.9 | 1.0 | 15.3 | 5 | 15.9 | 25.2 | 0.091 |
| TGL41-20 | 18.0 | 22.0 | 1.0 | 16.2 | 5 | 13.7 | 29.1 | 0.093 |
| TGL41-20A | 19.0 | 21.0 | 1.0 | 17.1 | 5 | 14.4 | 27.7 | 0.093 |
| TGL41-22 | 19.8 | 24.2 | 1.0 | 17.8 | 5 | 12.5 | 31.9 | 0.095 |
| TGL41-22A | 20.9 | 23.1 | 1.0 | 18.8 | 5 | 13.1 | 30.6 | 0.095 |
| TGL41-24 | 21.6 | 26.4 | 1.0 | 19.4 | 5 | 11.5 | 34.7 | 0.097 |
| TGL41-24A | 22.8 | 25.2 | 1.0 | 20.5 | 5 | 12.0 | 33.2 | 0.097 |
| TGL41-27 | 24.3 | 29.7 | 1.0 | 21.8 | 5 | 10.2 | 39.1 | 0.099 |
| TGL41-27A | 25.7 | 28.4 | 1.0 | 23.1 | 5 | 10.7 | 37.5 | 0.099 |
| TGL41-30 | 27.0 | 30.0 | 1.0 | 24.3 | 5 | 9.2 | 43.5 | 0.100 |
| TGL41-30A | 28.5 | 31.5 | 1.0 | 25.6 | 5 | 9.7 | 41.4 | 0.100 |
| TGL41-33 | 29.7 | 36.3 | 1.0 | 26.8 | 5 | 8.4 | 47.7 | 0.101 |
| TGL41-33A | 31.4 | 34.7 | 1.0 | 28.2 | 5 | 8.8 | 45.7 | 0.101 |
| TGL41-36 | 32.4 | 39.6 | 1.0 | 29.1 | 5 | 7.7 | 52.0 | 0.102 |
| TGL41-36A | 34.2 | 37.8 | 1.0 | 30.8 | 5 | 8.0 | 49.9 | 0.102 |
| TGL41-39 | 35.1 | 42.9 | 1.0 | 31.6 | 5 | 7.1 | 56.4 | 0.103 |
| TGL41-39A | 37.1 | 41.0 | 1.0 | 33.3 | 5 | 7.4 | 53.9 | 0.103 |
| TGL41-43 | 38.7 | 47.3 | 1.0 | 34.8 | 5 | 6.5 | 61.9 | 0.104 |
| TGL41-43A | 40.9 | 45.2 | 1.0 | 36.8 | 5 | 6.7 | 59.3 | 0.104 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ It (Note 1) | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ VRWM | Maximum Reverse Current | Maximum Clamping Voltage @ IRSM | Maximum Temperature Coefficient of VBR | |
|----------------|---|------|------------------------------------|--------------------------------------|-------------------------------|---------------------------------------|---|----------|
| | VBR (V) | | It | VRWM | IR | IRSM | VRSM | |
| Unidirectional | Min. | Max. | (mA) | (V) | (μA) | (A) | (V) | (% / °C) |

TGL41 Series, 400W, Case Type: MELF(Plastic)



| | | | | | | | | |
|------------|------|------|-----|------|---|------|------|-------|
| TGL41-47 | 42.3 | 51.7 | 1.0 | 38.1 | 5 | 5.9 | 67.8 | 0.104 |
| TGL41-47A | 44.7 | 49.4 | 1.0 | 40.2 | 5 | 6.2 | 64.8 | 0.104 |
| TGL41-51 | 45.9 | 56.1 | 1.0 | 41.3 | 5 | 5.4 | 73.5 | 0.105 |
| TGL41-51A | 48.5 | 53.6 | 1.0 | 43.6 | 5 | 5.7 | 70.1 | 0.105 |
| TGL41-56 | 50.4 | 61.6 | 1.0 | 45.4 | 5 | 5.0 | 80.5 | 0.106 |
| TGL41-564A | 53.2 | 58.8 | 1.0 | 47.8 | 5 | 5.2 | 77.0 | 0.106 |
| TGL41-62 | 55.8 | 68.8 | 1.0 | 50.2 | 5 | 4.5 | 89.0 | 0.107 |
| TGL41-62A | 58.9 | 65.1 | 1.0 | 53.0 | 5 | 4.7 | 85.0 | 0.107 |
| TGL41-68 | 61.2 | 74.8 | 1.0 | 55.1 | 5 | 4.1 | 98.0 | 0.107 |
| TGL41-68A | 64.6 | 71.4 | 1.0 | 58.1 | 5 | 4.3 | 92.0 | 0.107 |
| TGL41-75 | 67.5 | 82.5 | 1.0 | 60.7 | 5 | 3.7 | 108 | 0.108 |
| TGL41-75A | 71.3 | 78.8 | 1.0 | 64.1 | 5 | 3.9 | 103 | 0.108 |
| TGL41-82 | 73.8 | 90.2 | 1.0 | 66.4 | 5 | 3.4 | 118 | 0.108 |
| TGL41-82A | 77.9 | 86.1 | 1.0 | 70.1 | 5 | 3.5 | 113 | 0.108 |
| TGL41-91 | 81.9 | 100 | 1.0 | 73.7 | 5 | 3.1 | 131 | 0.109 |
| TGL41-91A | 86.5 | 95.5 | 1.0 | 77.8 | 5 | 3.2 | 125 | 0.109 |
| TGL41-100 | 90 | 110 | 1.0 | 81.0 | 5 | 1.39 | 144 | 0.109 |
| TGL41-100A | 95 | 105 | 1.0 | 85.5 | 5 | 1.46 | 137 | 0.109 |
| TGL41-110 | 99 | 121 | 1.0 | 89.2 | 5 | 1.27 | 158 | 0.110 |
| TGL41-110A | 105 | 116 | 1.0 | 94.0 | 5 | 1.32 | 152 | 0.110 |
| TGL41-120 | 108 | 132 | 1.0 | 97.2 | 5 | 1.16 | 173 | 0.110 |
| TGL41-120A | 114 | 126 | 1.0 | 102 | 5 | 1.21 | 165 | 0.110 |
| TGL41-130 | 117 | 143 | 1.0 | 105 | 5 | 1.07 | 187 | 0.110 |
| TGL41-130A | 124 | 137 | 1.0 | 111 | 5 | 1.12 | 179 | 0.110 |
| TGL41-150 | 135 | 165 | 1.0 | 121 | 5 | 0.93 | 215 | 0.111 |
| TGL41-150A | 143 | 158 | 1.0 | 128 | 5 | 0.97 | 207 | 0.111 |
| TGL41-160 | 144 | 176 | 1.0 | 130 | 5 | 0.87 | 230 | 0.111 |
| TGL41-160A | 152 | 168 | 1.0 | 136 | 5 | 0.91 | 219 | 0.111 |
| TGL41-170 | 153 | 187 | 1.0 | 138 | 5 | 0.82 | 244 | 0.111 |
| TGL41-170A | 162 | 179 | 1.0 | 145 | 5 | 0.85 | 234 | 0.111 |
| TGL41-180 | 162 | 198 | 1.0 | 146 | 5 | 0.78 | 258 | 0.111 |
| TGL41-180A | 171 | 189 | 1.0 | 154 | 5 | 0.81 | 246 | 0.111 |
| TGL41-200 | 180 | 220 | 1.0 | 162 | 5 | 0.70 | 287 | 0.111 |
| TGL41-200A | 190 | 210 | 1.0 | 171 | 5 | 0.73 | 274 | 0.111 |

Note :

- (1) Pulse test: $t_p \leq 50$ ms
- (2) For bidirectional use "C" or "CA" suffix



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ $I_t^{(1)}$ | | Working Peak Reverse Voltage | Max. Reverse Leakage @ V_{RWM} | Maximum Peak Pulse Surge Current | Maximum Clamping Voltage @ I_{PPM} |
|----------------|---------------------------------|-------|------------------------------|----------------------------------|----------------------------------|--------------------------------------|
| | V_{BR} (V) | I_t | V_{RWM} | $I_R^{(3)}$ | I_{PPM} | V_C |
| Unidirectional | Min. | Max. | (mA) | (V) | (μA) | (A) |
| | | | | | | (V) |

SMAJ Series, 400W, Case Type: SMA



| | | | | | | | |
|-------------------------|------|------|-----|-----|-----|------|------|
| SMAJ5.0 | 6.40 | 7.82 | 10 | 5.0 | 800 | 41.7 | 9.6 |
| SMAJ5.0A ⁽⁴⁾ | 6.40 | 7.07 | 10 | 5.0 | 800 | 43.5 | 9.2 |
| SMAJ6.0 | 6.67 | 8.15 | 10 | 6.0 | 800 | 35.1 | 11.4 |
| SMAJ6.0A | 6.67 | 7.37 | 10 | 6.0 | 800 | 38.8 | 10.3 |
| SMAJ6.5 | 7.22 | 8.82 | 10 | 6.5 | 500 | 32.5 | 12.3 |
| SMAJ6.5A | 7.22 | 7.98 | 10 | 6.5 | 500 | 35.7 | 11.2 |
| SMAJ7.0 | 7.78 | 9.51 | 10 | 7.0 | 200 | 30.1 | 13.3 |
| SMAJ7.0A | 7.78 | 8.6 | 10 | 7.0 | 200 | 33.3 | 12.0 |
| SMAJ7.5 | 8.33 | 10.2 | 1.0 | 7.5 | 100 | 28.0 | 14.3 |
| SMAJ7.5A | 8.33 | 9.21 | 1.0 | 7.5 | 100 | 31.0 | 12.9 |
| SMAJ8.0 | 8.89 | 10.9 | 1.0 | 8.0 | 50 | 26.7 | 15.0 |
| SMAJ8.0A | 8.89 | 9.83 | 1.0 | 8.0 | 50 | 29.4 | 13.6 |
| SMAJ8.5 | 9.44 | 11.5 | 1.0 | 8.5 | 10 | 25.2 | 15.9 |
| SMAJ8.5A | 9.44 | 10.4 | 1.0 | 8.5 | 10 | 27.8 | 14.4 |
| SMAJ9.0 | 10.0 | 12.2 | 1.0 | 9.0 | 5.0 | 23.7 | 16.9 |
| SMAJ9.0A | 10.0 | 11.1 | 1.0 | 9.0 | 5.0 | 26.0 | 15.4 |
| SMAJ10 | 11.1 | 13.6 | 1.0 | 10 | 1.0 | 21.2 | 18.8 |
| SMAJ10A | 11.1 | 12.3 | 1.0 | 10 | 1.0 | 23.5 | 17.0 |
| SMAJ11 | 12.2 | 14.9 | 1.0 | 11 | 1.0 | 19.9 | 20.1 |
| SMAJ11A | 12.2 | 13.5 | 1.0 | 11 | 1.0 | 22.0 | 18.2 |
| SMAJ12 | 13.3 | 16.3 | 1.0 | 12 | 1.0 | 18.2 | 22.0 |
| SMAJ12A | 13.3 | 14.7 | 1.0 | 12 | 1.0 | 20.1 | 19.9 |
| SMAJ13 | 14.4 | 17.6 | 1.0 | 13 | 1.0 | 16.8 | 23.8 |
| SMAJ13A | 14.4 | 15.9 | 1.0 | 13 | 1.0 | 18.6 | 21.5 |
| SMAJ14 | 15.6 | 19.1 | 1.0 | 14 | 1.0 | 15.5 | 25.8 |
| SMAJ14A | 15.6 | 17.2 | 1.0 | 14 | 1.0 | 17.2 | 23.2 |
| SMAJ15 | 16.7 | 20.4 | 1.0 | 15 | 1.0 | 14.8 | 26.9 |
| SMAJ15A | 16.7 | 18.5 | 1.0 | 15 | 1.0 | 16.4 | 24.4 |
| SMAJ16 | 17.8 | 21.8 | 1.0 | 16 | 1.0 | 13.9 | 28.8 |
| SMAJ16A | 17.8 | 19.7 | 1.0 | 16 | 1.0 | 15.4 | 26.0 |
| SMAJ17 | 18.9 | 23.1 | 1.0 | 17 | 1.0 | 13.1 | 30.5 |
| SMAJ17A | 18.9 | 20.9 | 1.0 | 17 | 1.0 | 14.5 | 27.6 |
| SMAJ18 | 20.0 | 24.4 | 1.0 | 18 | 1.0 | 12.4 | 32.2 |
| SMAJ18A | 20.0 | 22.1 | 1.0 | 18 | 1.0 | 13.7 | 29.2 |
| SMAJ20 | 22.2 | 27.1 | 1.0 | 20 | 1.0 | 11.2 | 35.8 |
| SMAJ20A | 22.2 | 24.5 | 1.0 | 20 | 1.0 | 12.3 | 32.4 |
| SMAJ22 | 24.4 | 29.8 | 1.0 | 22 | 1.0 | 10.2 | 39.4 |
| SMAJ22A | 24.4 | 26.9 | 1.0 | 22 | 1.0 | 11.3 | 35.5 |
| SMAJ24 | 26.7 | 32.6 | 1.0 | 24 | 1.0 | 9.3 | 43.0 |
| SMAJ24A | 26.7 | 29.5 | 1.0 | 24 | 1.0 | 10.3 | 38.9 |
| SMAJ26 | 28.9 | 35.3 | 1.0 | 26 | 1.0 | 8.6 | 46.6 |
| SMAJ26A | 28.9 | 31.9 | 1.0 | 26 | 1.0 | 9.5 | 42.1 |
| SMAJ28 | 31.1 | 38.0 | 1.0 | 28 | 1.0 | 8.0 | 50.0 |
| SMAJ28A | 31.1 | 34.4 | 1.0 | 28 | 1.0 | 8.8 | 45.4 |
| SMAJ30 | 33.3 | 40.7 | 1.0 | 30 | 1.0 | 7.5 | 53.5 |
| SMAJ30A | 33.3 | 36.8 | 1.0 | 30 | 1.0 | 8.3 | 48.4 |
| SMAJ33 | 36.7 | 44.9 | 1.0 | 33 | 1.0 | 6.8 | 59.0 |
| SMAJ33A | 36.7 | 40.6 | 1.0 | 33 | 1.0 | 7.5 | 53.3 |
| SMAJ36 | 40.0 | 48.9 | 1.0 | 36 | 1.0 | 6.2 | 64.3 |
| SMAJ36A | 40.0 | 44.2 | 1.0 | 36 | 1.0 | 6.9 | 58.1 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ $I_t^{(1)}$ | | Working Peak Reverse Voltage | Max. Reverse Leakage @ V_{RWM} | Maximum Peak Pulse Surge Current | Maximum Clamping Voltage @ I_{PPM} |
|----------------|---------------------------------|-------|------------------------------|----------------------------------|----------------------------------|--------------------------------------|
| | V_{BR} (V) | I_t | V_{RWM} | $I_R^{(3)}$ | I_{PPM} | V_C |
| Unidirectional | Min. | Max. | (mA) | (V) | (μA) | (V) |

SMAJ Series, 400W, Case Type: SMA



| | | | | | | | |
|----------|------|------|-----|-----|-----|------|------|
| SMAJ40 | 44.4 | 54.3 | 1.0 | 40 | 1.0 | 5.6 | 71.4 |
| SMAJ40A | 44.4 | 49.1 | 1.0 | 40 | 1.0 | 6.2 | 64.5 |
| SMAJ43 | 47.8 | 58.4 | 1.0 | 43 | 1.0 | 5.2 | 76.7 |
| SMAJ43A | 47.8 | 52.8 | 1.0 | 43 | 1.0 | 5.7 | 69.4 |
| SMAJ45 | 50.0 | 61.1 | 1.0 | 45 | 1.0 | 5.0 | 80.3 |
| SMAJ45A | 50.0 | 55.3 | 1.0 | 45 | 1.0 | 5.5 | 72.7 |
| SMAJ48 | 53.3 | 65.1 | 1.0 | 48 | 1.0 | 4.7 | 85.5 |
| SMAJ48A | 53.3 | 58.9 | 1.0 | 48 | 1.0 | 5.2 | 77.4 |
| SMAJ51 | 56.7 | 69.3 | 1.0 | 51 | 1.0 | 4.4 | 91.1 |
| SMAJ51A | 56.7 | 62.7 | 1.0 | 51 | 1.0 | 4.9 | 82.4 |
| SMAJ54 | 60.0 | 73.3 | 1.0 | 54 | 1.0 | 4.2 | 96.3 |
| SMAJ54A | 60.0 | 66.3 | 1.0 | 54 | 1.0 | 4.6 | 87.1 |
| SMAJ58 | 64.4 | 78.7 | 1.0 | 58 | 1.0 | 3.9 | 103 |
| SMAJ58A | 64.4 | 71.2 | 1.0 | 58 | 1.0 | 4.3 | 93.6 |
| SMAJ60 | 66.7 | 81.5 | 1.0 | 60 | 1.0 | 3.7 | 107 |
| SMAJ60A | 66.7 | 73.7 | 1.0 | 60 | 1.0 | 4.1 | 96.8 |
| SMAJ64 | 71.1 | 86.4 | 1.0 | 64 | 1.0 | 3.5 | 114 |
| SMAJ64A | 71.1 | 78.6 | 1.0 | 64 | 1.0 | 3.9 | 103 |
| SMAJ70 | 77.8 | 95.1 | 1.0 | 70 | 1.0 | 3.2 | 125 |
| SMAJ70A | 77.8 | 86 | 1.0 | 70 | 1.0 | 3.5 | 113 |
| SMAJ75 | 83.3 | 102 | 1.0 | 75 | 1.0 | 3.0 | 134 |
| SMAJ75A | 83.3 | 92.1 | 1.0 | 75 | 1.0 | 3.3 | 121 |
| SMAJ78 | 86.7 | 106 | 1.0 | 78 | 1.0 | 2.9 | 139 |
| SMAJ78A | 86.7 | 95.8 | 1.0 | 78 | 1.0 | 3.2 | 126 |
| SMAJ85 | 94.4 | 115 | 1.0 | 85 | 1.0 | 2.0 | 151 |
| SMAJ85A | 94.4 | 104 | 1.0 | 85 | 1.0 | 2.2 | 137 |
| SMAJ90 | 100 | 122 | 1.0 | 90 | 1.0 | 1.9 | 160 |
| SMAJ90A | 100 | 111 | 1.0 | 90 | 1.0 | 2.1 | 146 |
| SMAJ100 | 111 | 136 | 1.0 | 100 | 1.0 | 1.7 | 179 |
| SMAJ100A | 111 | 123 | 1.0 | 100 | 1.0 | 1.9 | 162 |
| SMAJ110 | 122 | 149 | 1.0 | 110 | 1.0 | 1.5 | 196 |
| SMAJ110A | 122 | 135 | 1.0 | 110 | 1.0 | 1.7 | 177 |
| SMAJ120 | 133 | 163 | 1.0 | 120 | 1.0 | 1.4 | 214 |
| SMAJ120A | 133 | 147 | 1.0 | 120 | 1.0 | 1.6 | 193 |
| SMAJ130 | 144 | 176 | 1.0 | 130 | 1.0 | 1.3 | 231 |
| SMAJ130A | 144 | 159 | 1.0 | 130 | 1.0 | 1.4 | 209 |
| SMAJ150 | 167 | 204 | 1.0 | 150 | 1.0 | 1.1 | 268 |
| SMAJ150A | 167 | 185 | 1.0 | 150 | 1.0 | 1.2 | 243 |
| SMAJ160 | 178 | 218 | 1.0 | 160 | 1.0 | 1.0 | 287 |
| SMAJ160A | 178 | 197 | 1.0 | 160 | 1.0 | 1.2 | 259 |
| SMAJ170 | 189 | 231 | 1.0 | 170 | 1.0 | 0.99 | 304 |
| SMAJ170A | 189 | 209 | 1.0 | 170 | 1.0 | 1.09 | 275 |
| SMAJ188 | 209 | 255 | 1.0 | 188 | 1.0 | 0.90 | 344 |
| SMAJ188A | 209 | 231 | 1.0 | 188 | 1.0 | 0.91 | 328 |

Notes :

- (1) Pulse test : $t_p \leq 50ms$
- (2) For bidirectional use "C" or "CA" suffix
- (3) For bi-directional types having V_R of 10 V and less , the I_R limit is doubled
- (4) For the bidirectional SMAJ5.0CA, the maximum V_{BR} is 7.25V
- (5) "SMAJ" will be omitted on marking of the diode



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Breakdown Voltage @ It (Note 1) | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ VRWM | Maximum Reverse Current | Maximum Clamping Voltage @ IRSM | Maximum Voltage Temperature Variation of VBR |
|----------------|-----|--------------------------------------|------|------------------------------|--------------------------------|-------------------------|---------------------------------|--|
| Unidirectional | | VBR (V) | | VRWM | IR | IRSM | VRSM | |
| Axial Lead | SMD | Min. | Max. | (mA) | (V) | (μA) | (A) | (V) |

SA / STUS Series, 500W, Case Type: DO-41/SMA

| | | | | | | | | | |
|--------|---------|------|------|-----|------|-----|------|------|------|
| SA5.0 | STUS06H | 6.40 | 7.3 | 10 | 5.0 | 600 | 52.0 | 9.6 | 5.0 |
| SA5.0A | STUS56H | 6.40 | 7.0 | 10 | 5.0 | 600 | 54.3 | 9.2 | 5.0 |
| SA6.0 | STUS07A | 6.67 | 8.15 | 10 | 6.0 | 600 | 43.9 | 11.4 | 5.0 |
| SA6.0A | STUS57A | 6.67 | 7.37 | 10 | 6.0 | 600 | 48.5 | 10.3 | 5.0 |
| SA6.5 | STUS07G | 7.22 | 8.82 | 10 | 6.5 | 400 | 40.7 | 12.3 | 5.0 |
| SA6.5A | STUS57G | 7.22 | 7.98 | 10 | 6.5 | 400 | 44.7 | 11.2 | 5.0 |
| SA7.0 | STUS08C | 7.78 | 9.51 | 10 | 7.0 | 150 | 37.8 | 13.3 | 6.0 |
| SA7.0A | STUS58C | 7.78 | 8.60 | 10 | 7.0 | 150 | 41.7 | 12.0 | 6.0 |
| SA7.5 | STUS08I | 8.33 | 10.2 | 1.0 | 7.5 | 50 | 35.0 | 14.3 | 7.0 |
| SA7.5A | STUS58I | 8.33 | 9.21 | 1.0 | 7.5 | 50 | 38.8 | 12.9 | 7.0 |
| SA8.0 | STUS09B | 8.89 | 10.9 | 1.0 | 8.0 | 25 | 33.3 | 15.0 | 7.0 |
| SA8.0A | STUS59B | 8.89 | 9.83 | 1.0 | 8.0 | 25 | 36.7 | 13.6 | 7.0 |
| SA8.5 | STUS010 | 9.44 | 11.5 | 1.0 | 8.5 | 5.0 | 31.4 | 15.9 | 8.0 |
| SA8.5A | STUS510 | 9.44 | 10.4 | 1.0 | 8.5 | 5.0 | 34.7 | 14.4 | 8.0 |
| SA9.0 | STUS011 | 10.0 | 12.2 | 1.0 | 9.0 | 1.0 | 29.5 | 16.9 | 9.0 |
| SA9.0A | STUS511 | 10.0 | 11.1 | 1.0 | 9.0 | 1.0 | 32.5 | 15.4 | 9.0 |
| SA10 | STUS012 | 11.1 | 13.6 | 1.0 | 10.0 | 1.0 | 26.6 | 18.8 | 10.0 |
| SA10A | STUS512 | 11.1 | 12.3 | 1.0 | 10.0 | 1.0 | 29.4 | 17.0 | 10.0 |
| SA11 | STUS013 | 12.2 | 14.9 | 1.0 | 11.0 | 1.0 | 24.9 | 20.1 | 11.0 |
| SA11A | STUS513 | 12.2 | 13.5 | 1.0 | 11.0 | 1.0 | 27.4 | 18.2 | 11.0 |
| SA12 | STUS014 | 13.3 | 16.3 | 1.0 | 12.0 | 1.0 | 22.7 | 22.0 | 12.0 |
| SA12A | STUS514 | 13.3 | 14.7 | 1.0 | 12.0 | 1.0 | 25.1 | 19.9 | 12.0 |
| SA13 | STUS015 | 14.4 | 17.6 | 1.0 | 13.0 | 1.0 | 21 | 23.8 | 13.0 |
| SA13A | STUS515 | 14.4 | 15.9 | 1.0 | 13.0 | 1.0 | 23.2 | 21.5 | 13.0 |
| SA14 | STUS016 | 15.6 | 19.1 | 1.0 | 14.0 | 1.0 | 19.4 | 25.8 | 14.0 |
| SA14A | STUS516 | 15.6 | 17.2 | 1.0 | 14.0 | 1.0 | 21.5 | 23.2 | 14.0 |
| SA15 | STUS018 | 16.7 | 20.4 | 1.0 | 15.0 | 1.0 | 18.8 | 26.9 | 16.0 |
| SA15A | STUS518 | 16.7 | 18.5 | 1.0 | 15.0 | 1.0 | 20.6 | 24.4 | 16.0 |
| SA16 | STUS019 | 17.8 | 21.8 | 1.0 | 16.0 | 1.0 | 17.6 | 28.8 | 19.0 |
| SA16A | STUS519 | 17.8 | 19.7 | 1.0 | 16.0 | 1.0 | 19.2 | 26.0 | 17.0 |
| SA17 | STUS020 | 18.9 | 23.1 | 1.0 | 17.0 | 1.0 | 16.4 | 30.5 | 20.0 |
| SA17A | STUS520 | 18.9 | 20.9 | 1.0 | 17.0 | 1.0 | 18.1 | 27.6 | 19.0 |
| SA18 | STUS021 | 20.0 | 24.4 | 1.0 | 18.0 | 1.0 | 15.5 | 32.2 | 21.0 |
| SA18A | STUS521 | 20.0 | 22.1 | 1.0 | 18.0 | 1.0 | 17.2 | 29.2 | 20.0 |
| SA20 | STUS023 | 22.2 | 27.1 | 1.0 | 20.0 | 1.0 | 13.9 | 35.8 | 25.0 |
| SA20A | STUS523 | 22.2 | 24.5 | 1.0 | 20.0 | 1.0 | 15.4 | 32.4 | 23.0 |
| SA22 | STUS026 | 24.4 | 29.8 | 1.0 | 22.0 | 1.0 | 12.7 | 39.4 | 28.0 |
| SA22A | STUS526 | 24.4 | 26.9 | 1.0 | 22.0 | 1.0 | 14.1 | 35.5 | 25.0 |
| SA24 | STUS028 | 26.7 | 32.6 | 1.0 | 24.0 | 1.0 | 11.6 | 43.0 | 31.0 |
| SA24A | STUS528 | 26.7 | 29.5 | 1.0 | 24.0 | 1.0 | 12.8 | 38.9 | 28.0 |
| SA26 | STUS030 | 28.9 | 35.3 | 1.0 | 26.0 | 1.0 | 10.7 | 46.6 | 31.0 |
| SA26A | STUS530 | 28.9 | 31.9 | 1.0 | 26.0 | 1.0 | 11.9 | 42.1 | 30.0 |
| SA28 | STUS033 | 31.1 | 38.0 | 1.0 | 28.0 | 1.0 | 9.9 | 50.0 | 35.0 |
| SA28A | STUS533 | 31.1 | 34.4 | 1.0 | 28.0 | 1.0 | 11 | 45.4 | 31.0 |
| SA30 | STUS035 | 33.3 | 40.7 | 1.0 | 30.0 | 1.0 | 9.3 | 53.5 | 39.0 |
| SA30A | STUS535 | 33.3 | 36.8 | 1.0 | 30.0 | 1.0 | 10.3 | 48.4 | 36.0 |
| SA33 | STUS039 | 36.7 | 44.9 | 1.0 | 33.0 | 1.0 | 8.5 | 59.0 | 42.0 |
| SA33A | STUS539 | 36.7 | 40.6 | 1.0 | 33.0 | 1.0 | 9.4 | 53.3 | 39.0 |
| SA36 | STUS042 | 40.0 | 48.9 | 1.0 | 36.0 | 1.0 | 7.8 | 64.3 | 46.0 |
| SA36A | STUS542 | 40.0 | 44.2 | 1.0 | 36.0 | 1.0 | 8.6 | 58.1 | 41.0 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Breakdown Voltage @ It (Note 1) | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ VRWM | Maximum Reverse Current | Maximum Clamping Voltage @ IRSM | Maximum Voltage Temperature Variation of VBR |
|----------------|-----|--------------------------------------|------|------------------------------|--------------------------------|-------------------------|---------------------------------|--|
| Unidirectional | | VBR (V) | | VRWM | IR | IRSM | VRSM | |
| Axial Lead | SMD | Min. | Max. | (mA) | (V) | (μA) | (A) | (V) |

SA / STUS Series, 500W, Case Type: DO-41/SMA

| | | | | | | | | | |
|--------|---------|------|------|-----|------|-----|-----|------|------|
| SA40 | STUS047 | 44.4 | 54.3 | 1.0 | 40.0 | 1.0 | 7.0 | 71.4 | 51.0 |
| SA40A | STUS547 | 44.4 | 49.1 | 1.0 | 40.0 | 1.0 | 7.8 | 64.5 | 46.0 |
| SA43 | STUS050 | 47.8 | 58.4 | 1.0 | 43.0 | 1.0 | 6.5 | 76.7 | 55.0 |
| SA43A | STUS550 | 47.8 | 52.8 | 1.0 | 43.0 | 1.0 | 7.2 | 69.4 | 50.0 |
| SA45 | STUS053 | 50.0 | 61.1 | 1.0 | 45.0 | 1.0 | 6.2 | 80.3 | 58.0 |
| SA45A | STUS553 | 50.0 | 55.3 | 1.0 | 45.0 | 1.0 | 6.9 | 72.7 | 52.0 |
| SA48 | STUS056 | 53.3 | 65.1 | 1.0 | 48.0 | 1.0 | 5.8 | 85.5 | 63.0 |
| SA48A | STUS556 | 53.3 | 58.9 | 1.0 | 48.0 | 1.0 | 6.5 | 77.4 | 56.0 |
| SA51 | STUS060 | 56.7 | 69.3 | 1.0 | 51.0 | 1.0 | 5.5 | 91.1 | 66.0 |
| SA51A | STUS560 | 56.7 | 62.7 | 1.0 | 51.0 | 1.0 | 6.1 | 82.4 | 61.0 |
| SA54 | STUS063 | 60.0 | 73.3 | 1.0 | 54.0 | 1.0 | 5.2 | 96.3 | 71.0 |
| SA54A | STUS563 | 60.0 | 66.3 | 1.0 | 54.0 | 1.0 | 5.7 | 87.1 | 65.0 |
| SA58 | STUS068 | 64.4 | 78.7 | 1.0 | 58.0 | 1.0 | 4.9 | 103 | 78.0 |
| SA58A | STUS568 | 64.4 | 71.2 | 1.0 | 58.0 | 1.0 | 5.3 | 93.6 | 70.0 |
| SA60 | STUS071 | 66.7 | 81.5 | 1.0 | 60.0 | 1.0 | 4.7 | 107 | 80.0 |
| SA60A | STUS571 | 66.7 | 73.7 | 1.0 | 60.0 | 1.0 | 5.2 | 96.8 | 71.0 |
| SA64 | STUS075 | 71.1 | 86.9 | 1.0 | 64.0 | 1.0 | 4.4 | 114 | 86.0 |
| SA64A | STUS575 | 71.1 | 78.6 | 1.0 | 64.0 | 1.0 | 4.9 | 103 | 76.0 |
| SA70 | STUS082 | 77.8 | 95.1 | 1.0 | 70.0 | 1.0 | 4.0 | 125 | 94.0 |
| SA70A | STUS582 | 77.8 | 86.0 | 1.0 | 70.0 | 1.0 | 4.4 | 113 | 85.0 |
| SA75 | STUS088 | 83.3 | 102 | 1.0 | 75.0 | 1.0 | 3.7 | 134 | 101 |
| SA75A | STUS588 | 83.3 | 92.1 | 1.0 | 75.0 | 1.0 | 4.1 | 121 | 91.0 |
| SA78 | STUS091 | 86.7 | 106 | 1.0 | 78.0 | 1.0 | 3.6 | 139 | 105 |
| SA78A | STUS591 | 86.7 | 95.8 | 1.0 | 78.0 | 1.0 | 4.0 | 126 | 95.0 |
| SA85 | STUS099 | 94.4 | 115 | 1.0 | 85.0 | 1.0 | 3.3 | 151 | 114 |
| SA85A | STUS599 | 94.4 | 104 | 1.0 | 85.0 | 1.0 | 3.6 | 137 | 103 |
| SA90 | STUS0B1 | 100 | 122 | 1.0 | 90.0 | 1.0 | 3.1 | 160 | 121 |
| SA90A | STUS5B1 | 100 | 111 | 1.0 | 90.0 | 1.0 | 3.4 | 146 | 110 |
| SA100 | STUS0B2 | 111 | 136 | 1.0 | 100 | 1.0 | 2.8 | 179 | 135 |
| SA100A | STUS5B2 | 111 | 123 | 1.0 | 100 | 1.0 | 3.1 | 162 | 123 |
| SA110 | STUS0B3 | 122 | 149 | 1.0 | 110 | 1.0 | 2.6 | 196 | 148 |
| SA110A | STUS5B3 | 122 | 135 | 1.0 | 110 | 1.0 | 2.8 | 177 | 133 |
| SA120 | STUS0B4 | 133 | 163 | 1.0 | 120 | 1.0 | 2.3 | 214 | 162 |
| SA120A | STUS5B4 | 133 | 147 | 1.0 | 120 | 1.0 | 2.0 | 193 | 146 |
| SA130 | STUS0B5 | 144 | 176 | 1.0 | 130 | 1.0 | 2.2 | 231 | 175 |
| SA130A | STUS5B5 | 144 | 159 | 1.0 | 130 | 1.0 | 2.4 | 209 | 158 |
| SA150 | STUS0B8 | 167 | 204 | 1.0 | 150 | 1.0 | 1.9 | 268 | 203 |
| SA150A | STUS5B8 | 167 | 185 | 1.0 | 150 | 1.0 | 2.1 | 243 | 184 |
| SA160 | STUS0B9 | 178 | 218 | 1.0 | 160 | 1.0 | 1.7 | 287 | 217 |
| SA160A | STUS5B9 | 178 | 197 | 1.0 | 160 | 1.0 | 1.9 | 259 | 196 |
| SA170 | STUS0D0 | 189 | 231 | 1.0 | 170 | 1.0 | 1.6 | 304 | 230 |
| SA170A | STUS5D0 | 189 | 209 | 1.0 | 170 | 1.0 | 1.8 | 275 | 208 |

Notes:

- (1) VBR measured after It applied for 300 μs., It = square wave pulse or equivalent
- (2) VF = 3.5 Vmax., IF = 35 A (6.8 V to 91 V)
VF = 5.0 Vmax., IF = 35 A (150 V to 200 V) per 1/2 square or equivalent sine wave
PW = 8.3 ms, duty cycle = 4 pulses per minute maximum
- (3) For bidirectional use suffix "C" or "CA" (Axial Lead) / replace the third digit of type from "U" to "B" (SMD)
- (4) "STU" or "STB" will be omitted on marking of the diode.
- (5) For bidirectional types having VR of 10 V and under, the IR limit is doubled



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ It (Note 1) | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ VRWM | Maximum Peak pulse Current | Maximum Clamping Voltage @ IRSM |
|----------------|---|------|------------------------------------|--------------------------------------|----------------------------------|---------------------------------------|
| | VBR (V) | It | VRWM | IR | I _{PP} | VRSM |
| Unidirectional | Min. | Max. | (mA) | (V) | (μA) | (A) |

BZW06 Series, 600W, Case Type: DO-15



| | | | | | | | |
|-----------|------|------|-----|------|------|------|------|
| BZW06P5V8 | 6.45 | 7.48 | 10 | 5.80 | 1000 | 57 | 10.5 |
| BZW06-5V8 | 6.45 | 7.14 | 10 | 5.80 | 1000 | 57 | 10.5 |
| BZW06P6V4 | 7.13 | 7.25 | 10 | 6.40 | 500 | 53 | 11.3 |
| BZW06-6V4 | 7.13 | 7.88 | 10 | 6.40 | 500 | 53 | 11.3 |
| BZW06P7V0 | 7.79 | 9.02 | 10 | 7.02 | 200 | 50 | 12.1 |
| BZW06-7V0 | 7.79 | 8.61 | 10 | 7.02 | 200 | 50 | 12.1 |
| BZW06P7V8 | 8.65 | 10.0 | 1.0 | 7.78 | 50 | 45 | 13.4 |
| BZW06-7V8 | 8.65 | 9.55 | 1.0 | 7.78 | 50 | 45 | 13.4 |
| BZW06P8V5 | 9.50 | 11.0 | 1.0 | 8.55 | 10 | 41 | 14.5 |
| BZW06-8V5 | 9.50 | 10.5 | 1.0 | 8.55 | 10 | 41 | 14.5 |
| BZW06P9V4 | 10.5 | 12.1 | 1.0 | 9.40 | 5.0 | 38 | 15.6 |
| BZW06-9V4 | 10.5 | 11.6 | 1.0 | 9.40 | 5.0 | 38 | 15.6 |
| BZW06P10 | 11.4 | 13.2 | 1.0 | 10.2 | 5.0 | 36 | 16.7 |
| BZW06-10 | 11.4 | 12.6 | 1.0 | 10.2 | 5.0 | 36 | 16.7 |
| BZW06P11 | 12.4 | 14.3 | 1.0 | 11.1 | 5.0 | 33 | 18.2 |
| BZW06-11 | 12.4 | 13.7 | 1.0 | 11.1 | 5.0 | 33 | 18.2 |
| BZW06P13 | 14.3 | 16.5 | 1.0 | 12.8 | 5.0 | 28 | 21.2 |
| BZW06-13 | 14.3 | 15.8 | 1.0 | 12.8 | 5.0 | 28 | 21.2 |
| BZW06P14 | 15.2 | 17.6 | 1.0 | 13.6 | 5.0 | 27 | 22.5 |
| BZW06-14 | 15.2 | 16.8 | 1.0 | 13.6 | 5.0 | 27 | 22.5 |
| BZW06P15 | 17.1 | 19.8 | 1.0 | 15.3 | 1.0 | 24 | 25.2 |
| BZW06-15 | 17.1 | 18.9 | 1.0 | 15.3 | 1.0 | 24 | 25.2 |
| BZW06P17 | 19.0 | 22.0 | 1.0 | 17.1 | 1.0 | 22 | 27.2 |
| BZW06-17 | 19.0 | 21.0 | 1.0 | 17.1 | 1.0 | 22 | 27.2 |
| BZW06P19 | 20.9 | 24.2 | 1.0 | 18.8 | 1.0 | 20 | 30.6 |
| BZW06-19 | 20.9 | 23.1 | 1.0 | 18.8 | 1.0 | 20 | 30.6 |
| BZW06P20 | 22.8 | 26.4 | 1.0 | 20.5 | 1.0 | 18 | 33.2 |
| BZW06-20 | 22.8 | 25.2 | 1.0 | 20.5 | 1.0 | 18 | 33.2 |
| BZW06P23 | 25.7 | 29.7 | 1.0 | 23.1 | 1.0 | 16 | 37.5 |
| BZW06-23 | 25.7 | 28.4 | 1.0 | 23.1 | 1.0 | 16 | 37.5 |
| BZW06P26 | 28.5 | 33.0 | 1.0 | 25.6 | 1.0 | 14.5 | 41.5 |
| BZW06-26 | 28.5 | 31.5 | 1.0 | 25.6 | 1.0 | 14.5 | 41.5 |
| BZW06P28 | 31.4 | 36.3 | 1.0 | 28.2 | 1.0 | 13.1 | 45.7 |
| BZW06-28 | 31.4 | 34.7 | 1.0 | 28.2 | 1.0 | 13.1 | 45.7 |
| BZW06P31 | 34.2 | 39.6 | 1.0 | 30.8 | 1.0 | 12.0 | 49.9 |
| BZW06-31 | 34.2 | 37.8 | 1.0 | 30.8 | 1.0 | 12.0 | 49.9 |
| BZW06P33 | 37.1 | 42.9 | 1.0 | 33.3 | 1.0 | 11.1 | 53.9 |
| BZW06-33 | 37.1 | 41.0 | 1.0 | 33.3 | 1.0 | 11.1 | 53.9 |
| BZW06P37 | 40.9 | 47.3 | 1.0 | 36.8 | 1.0 | 10.1 | 59.3 |
| BZW06-37 | 40.9 | 45.2 | 1.0 | 36.8 | 1.0 | 10.1 | 59.3 |
| BZW06P40 | 44.7 | 51.7 | 1.0 | 40.2 | 1.0 | 9.3 | 64.8 |
| BZW06-40 | 44.7 | 49.4 | 1.0 | 40.2 | 1.0 | 9.3 | 64.8 |
| BZW06P44 | 48.5 | 56.1 | 1.0 | 43.6 | 1.0 | 8.6 | 70.1 |
| BZW06-44 | 48.5 | 53.6 | 1.0 | 43.6 | 1.0 | 8.6 | 70.1 |
| BZW06P48 | 53.2 | 61.6 | 1.0 | 47.8 | 1.0 | 7.8 | 77 |
| BZW06-48 | 53.2 | 58.8 | 1.0 | 47.8 | 1.0 | 7.8 | 77 |
| BZW06P53 | 58.9 | 68.2 | 1.0 | 53 | 1.0 | 7.1 | 85 |
| BZW06-53 | 58.9 | 65.1 | 1.0 | 53 | 1.0 | 7.1 | 85 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ It (Note 1) | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ VRWM | Maximum Peak pulse Current | Maximum Clamping Voltage @ IRSM |
|----------------|---|------|------------------------------------|--------------------------------------|----------------------------------|---------------------------------------|
| | VBR (V) | It | VRWM | IR | I _{PP} | VRSM |
| Unidirectional | Min. | Max. | (mA) | (V) | (μA) | (A) |
| | | | | | | (V) |

BZW06 Series, 600W, Case Type: DO-15



| | | | | | | | |
|-----------|------|------|-----|------|-----|-----|-----|
| BZW06P58 | 64.6 | 74.8 | 1.0 | 58.1 | 1.0 | 6.5 | 92 |
| BZW06-58 | 64.6 | 71.4 | 1.0 | 58.1 | 1.0 | 6.5 | 92 |
| BZW06P64 | 71.3 | 82.5 | 1.0 | 64.1 | 1.0 | 5.8 | 103 |
| BZW06-64 | 71.3 | 78.8 | 1.0 | 64.1 | 1.0 | 5.8 | 103 |
| BZW06P70 | 77.9 | 90.2 | 1.0 | 70.1 | 1.0 | 5.3 | 113 |
| BZW06-70 | 77.9 | 86.1 | 1.0 | 70.1 | 1.0 | 5.3 | 113 |
| BZW06P78 | 86.5 | 100 | 1.0 | 77.8 | 1.0 | 4.8 | 125 |
| BZW06-78 | 86.5 | 95.5 | 1.0 | 77.8 | 1.0 | 4.8 | 125 |
| BZW06P85 | 95 | 110 | 1.0 | 85.8 | 1.0 | 4.4 | 137 |
| BZW06-85 | 95 | 105 | 1.0 | 85.8 | 1.0 | 4.4 | 137 |
| BZW06P94 | 105 | 121 | 1.0 | 94 | 1.0 | 3.9 | 152 |
| BZW06-94 | 105 | 116 | 1.0 | 94 | 1.0 | 3.9 | 152 |
| BZW06P102 | 114 | 132 | 1.0 | 102 | 1.0 | 3.6 | 165 |
| BZW06-102 | 114 | 126 | 1.0 | 102 | 1.0 | 3.6 | 165 |
| BZW06P111 | 124 | 143 | 1.0 | 111 | 1.0 | 3.4 | 179 |
| BZW06-111 | 124 | 137 | 1.0 | 111 | 1.0 | 3.4 | 179 |
| BZW06P128 | 143 | 165 | 1.0 | 128 | 1.0 | 2.9 | 207 |
| BZW06-128 | 143 | 158 | 1.0 | 128 | 1.0 | 2.9 | 207 |
| BZW06P136 | 152 | 176 | 1.0 | 136 | 1.0 | 2.7 | 219 |
| BZW06-136 | 152 | 168 | 1.0 | 136 | 1.0 | 2.7 | 219 |
| BZW06P145 | 161 | 187 | 1.0 | 145 | 1.0 | 2.6 | 234 |
| BZW06-145 | 161 | 179 | 1.0 | 145 | 1.0 | 2.6 | 234 |
| BZW06P154 | 171 | 198 | 1.0 | 154 | 1.0 | 2.4 | 246 |
| BZW06-154 | 171 | 189 | 1.0 | 154 | 1.0 | 2.4 | 246 |
| BZW06P171 | 190 | 220 | 1.0 | 171 | 1.0 | 2.2 | 274 |
| BZW06-171 | 190 | 210 | 1.0 | 171 | 1.0 | 2.2 | 274 |
| BZW06P188 | 209 | 242 | 1.0 | 188 | 1.0 | 2.0 | 301 |
| BZW06-188 | 209 | 231 | 1.0 | 188 | 1.0 | 2.0 | 301 |
| BZW06P213 | 237 | 275 | 1.0 | 213 | 1.0 | 1.8 | 344 |
| BZW06-213 | 237 | 263 | 1.0 | 213 | 1.0 | 1.8 | 344 |
| BZW06P239 | 266 | 308 | 1.0 | 239 | 1.0 | 1.7 | 384 |
| BZW06-239 | 266 | 294 | 1.0 | 239 | 1.0 | 1.7 | 384 |
| BZW06P256 | 285 | 330 | 1.0 | 256 | 1.0 | 1.6 | 414 |
| BZW06-256 | 285 | 315 | 1.0 | 256 | 1.0 | 1.6 | 414 |
| BZW06P273 | 304 | 352 | 1.0 | 273 | 1.0 | 1.6 | 436 |
| BZW06-273 | 304 | 336 | 1.0 | 273 | 1.0 | 1.6 | 436 |
| BZW06P299 | 332 | 285 | 1.0 | 299 | 1.0 | 1.6 | 482 |
| BZW06-299 | 332 | 368 | 1.0 | 299 | 1.0 | 1.6 | 482 |
| BZW06P342 | 380 | 440 | 1.0 | 342 | 1.0 | 1.3 | 548 |
| BZW06-342 | 380 | 420 | 1.0 | 342 | 1.0 | 1.3 | 548 |
| BZW06P376 | 418 | 484 | 1.0 | 376 | 1.0 | 1.3 | 603 |
| BZW06-376 | 418 | 462 | 1.0 | 376 | 1.0 | 1.3 | 603 |

Notes:

- (1) Pulse test : $t_p < 50$ ms
- (2) For Bidirectional use suffix "B" (Axial Lead)
- (3) For bidirectional types having V_R of 10 V and under, the I_R limit is doubled
- (4) "ZW06" will be omitted on marking of the diode.
- (5) For case type D2 (Axial Lead) , we can support until the end of 2008.



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Breakdown Voltage @ I_t (Note 1) | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ V_{RWM} | Maximum Reverse Current | Maximum Clamping Voltage @ I_{RSM} | Maximum Temperature Coefficient of V_{BR} |
|----------------|-----|---|-------|------------------------------|-------------------------------------|-------------------------|--------------------------------------|---|
| Unidirectional | | V_{BR} (V) | I_t | V_{RWM} | I_R | I_{RSM} | V_{RSM} | |
| Axial Lead | SMD | Min. | Max. | (mA) | (V) | (μ A) | (A) | (V) |
| | | | | | | | | (% / °C) |

P6KE/STU6 Series, 600W, Case Type: DO-15/SMB



| | | | | | | | | | |
|----------|---------|------|------|-----|------|------|------|------|-------|
| P6KE6.8 | STU606I | 6.12 | 7.48 | 10 | 5.50 | 1000 | 55.5 | 10.8 | 0.057 |
| P6KE6.8A | STU656I | 6.45 | 7.14 | 10 | 5.80 | 1000 | 57.0 | 10.5 | 0.057 |
| P6KE7.5 | STU607F | 6.75 | 8.25 | 10 | 6.05 | 500 | 51.0 | 11.7 | 0.061 |
| P6KE7.5A | STU657F | 7.13 | 7.88 | 10 | 6.40 | 500 | 53.0 | 11.3 | 0.061 |
| P6KE8.2 | STU608C | 7.38 | 9.02 | 10 | 6.63 | 200 | 48.0 | 12.5 | 0.065 |
| P6KE8.2A | STU658C | 7.79 | 8.61 | 10 | 7.02 | 200 | 50.0 | 12.1 | 0.065 |
| P6KE9.1 | STU609B | 8.19 | 10.0 | 1.0 | 7.37 | 50 | 44.0 | 13.8 | 0.068 |
| P6KE9.1A | STU659B | 8.65 | 9.55 | 1.0 | 7.78 | 50 | 45.0 | 13.4 | 0.068 |
| P6KE10 | STU6010 | 9.00 | 11.0 | 1.0 | 8.10 | 10 | 40.0 | 15.0 | 0.073 |
| P6KE10A | STU6510 | 9.50 | 10.5 | 1.0 | 8.55 | 10 | 41.0 | 14.5 | 0.073 |
| P6KE11 | STU6011 | 9.90 | 12.1 | 1.0 | 8.92 | 5.0 | 37.0 | 16.2 | 0.075 |
| P6KE11A | STU6511 | 10.5 | 11.6 | 1.0 | 9.40 | 5.0 | 38.0 | 15.6 | 0.075 |
| P6KE12 | STU6012 | 10.8 | 13.2 | 1.0 | 9.72 | 5.0 | 35.0 | 17.3 | 0.078 |
| P6KE12A | STU6512 | 11.4 | 12.6 | 1.0 | 10.2 | 5.0 | 36.0 | 16.7 | 0.078 |
| P6KE13 | STU6013 | 11.7 | 14.3 | 1.0 | 10.5 | 5.0 | 32.0 | 19.0 | 0.081 |
| P6KE13A | STU6513 | 12.4 | 13.7 | 1.0 | 11.1 | 5.0 | 33.0 | 18.2 | 0.081 |
| P6KE15 | STU6015 | 13.5 | 16.3 | 1.0 | 12.1 | 5.0 | 27.0 | 22.0 | 0.084 |
| P6KE15A | STU6515 | 14.3 | 15.8 | 1.0 | 12.8 | 5.0 | 28.0 | 21.2 | 0.084 |
| P6KE16 | STU6016 | 14.4 | 17.6 | 1.0 | 12.9 | 5.0 | 26.0 | 23.5 | 0.086 |
| P6KE16A | STU6516 | 15.2 | 16.8 | 1.0 | 13.6 | 5.0 | 27.0 | 22.5 | 0.086 |
| P6KE18 | STU6018 | 16.2 | 19.8 | 1.0 | 14.5 | 5.0 | 23.0 | 26.5 | 0.088 |
| P6KE18A | STU6518 | 17.1 | 18.9 | 1.0 | 15.3 | 5.0 | 24.0 | 25.2 | 0.088 |
| P6KE20 | STU6020 | 18.0 | 22.0 | 1.0 | 16.2 | 5.0 | 21.0 | 29.1 | 0.090 |
| P6KE20A | STU6520 | 19.0 | 21.0 | 1.0 | 17.1 | 5.0 | 22.0 | 27.7 | 0.090 |
| P6KE22 | STU6022 | 19.8 | 24.2 | 1.0 | 17.8 | 5.0 | 19.0 | 31.9 | 0.092 |
| P6KE22A | STU6522 | 20.9 | 23.1 | 1.0 | 18.8 | 5.0 | 20.0 | 30.6 | 0.092 |
| P6KE24 | STU6024 | 21.6 | 26.4 | 1.0 | 19.4 | 5.0 | 17.0 | 34.7 | 0.094 |
| P6KE24A | STU6524 | 22.8 | 25.2 | 1.0 | 20.5 | 5.0 | 18.0 | 33.2 | 0.094 |
| P6KE27 | STU6027 | 24.3 | 29.7 | 1.0 | 21.8 | 5.0 | 15.0 | 39.1 | 0.096 |
| P6KE27A | STU6527 | 25.7 | 28.4 | 1.0 | 23.1 | 5.0 | 16.0 | 37.5 | 0.096 |
| P6KE30 | STU6030 | 27.0 | 33.0 | 1.0 | 24.3 | 5.0 | 14.0 | 43.5 | 0.097 |
| P6KE30A | STU6530 | 28.5 | 31.5 | 1.0 | 25.6 | 5.0 | 14.4 | 41.4 | 0.097 |
| P6KE33 | STU6033 | 29.7 | 36.3 | 1.0 | 26.8 | 5.0 | 12.6 | 47.7 | 0.098 |
| P6KE33A | STU6533 | 31.4 | 34.7 | 1.0 | 28.2 | 5.0 | 13.2 | 45.7 | 0.098 |
| P6KE36 | STU6036 | 32.4 | 39.6 | 1.0 | 29.1 | 5.0 | 11.6 | 52.0 | 0.099 |
| P6KE36A | STU6536 | 34.2 | 37.8 | 1.0 | 30.8 | 5.0 | 12.0 | 49.9 | 0.099 |
| P6KE39 | STU6039 | 35.1 | 42.9 | 1.0 | 31.6 | 5.0 | 10.6 | 56.4 | 0.100 |
| P6KE39A | STU6539 | 37.1 | 41.0 | 1.0 | 33.3 | 5.0 | 11.2 | 53.9 | 0.100 |
| P6KE43 | STU6043 | 38.7 | 47.3 | 1.0 | 34.8 | 5.0 | 9.6 | 61.9 | 0.101 |
| P6KE43A | STU6543 | 40.9 | 45.2 | 1.0 | 36.8 | 5.0 | 10.1 | 59.3 | 0.101 |
| P6KE47 | STU6047 | 42.3 | 51.7 | 1.0 | 38.1 | 5.0 | 8.9 | 67.8 | 0.101 |
| P6KE47A | STU6547 | 44.7 | 49.4 | 1.0 | 40.2 | 5.0 | 9.3 | 64.8 | 0.101 |
| P6KE51 | STU6051 | 45.9 | 56.1 | 1.0 | 41.3 | 5.0 | 8.2 | 73.5 | 0.102 |
| P6KE51A | STU6551 | 48.5 | 53.6 | 1.0 | 43.6 | 5.0 | 8.6 | 70.1 | 0.102 |
| P6KE56 | STU6056 | 50.4 | 61.6 | 1.0 | 45.4 | 5.0 | 7.4 | 80.5 | 0.103 |
| P6KE56A | STU6556 | 53.2 | 58.8 | 1.0 | 47.8 | 5.0 | 7.8 | 77.0 | 0.103 |
| P6KE62 | STU6062 | 55.8 | 68.2 | 1.0 | 50.2 | 5.0 | 6.8 | 89.0 | 0.104 |
| P6KE62A | STU6562 | 58.9 | 65.1 | 1.0 | 53.0 | 5.0 | 7.1 | 85.0 | 0.104 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Breakdown Voltage @ I_t (Note 1) | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ V_{RWM} | Maximum Reverse Current | Maximum Clamping Voltage @ I_{RSM} | Maximum Temperature Coefficient of V_{BR} |
|----------------|-----|------------------------------------|-------|------------------------------|-------------------------------------|-------------------------|--------------------------------------|---|
| Unidirectional | | V_{BR} (V) | I_t | V_{RWM} | I_R | I_{RSM} | V_{RSM} | |
| Axial Lead | SMD | Min. | Max. | (mA) | (V) | (μ A) | (A) | (V) |
| | | | | | | | | (% / °C) |

P6KE/STU6 Series, 600W, Case Type: DO-15/SMB



| | | | | | | | | | |
|----------|---------|------|------|-----|------|-----|------|------|-------|
| P6KE68 | STU6068 | 61.2 | 74.8 | 1.0 | 55.1 | 5.0 | 6.1 | 98.0 | 0.104 |
| P6KE68A | STU6568 | 64.6 | 71.4 | 1.0 | 58.1 | 5.0 | 6.5 | 92.0 | 0.104 |
| P6KE75 | STU6075 | 67.5 | 82.5 | 1.0 | 60.7 | 5.0 | 5.5 | 108 | 0.105 |
| P6KE75A | STU6575 | 71.3 | 78.8 | 1.0 | 64.1 | 5.0 | 5.8 | 103 | 0.105 |
| P6KE82 | STU6082 | 73.8 | 90.2 | 1.0 | 66.4 | 5.0 | 5.1 | 118 | 0.105 |
| P6KE82A | STU6582 | 77.9 | 86.1 | 1.0 | 70.1 | 5.0 | 5.3 | 113 | 0.105 |
| P6KE91 | STU6091 | 81.9 | 100 | 1.0 | 73.7 | 5.0 | 4.5 | 131 | 0.106 |
| P6KE91A | STU6591 | 86.5 | 95.5 | 1.0 | 77.8 | 5.0 | 4.8 | 125 | 0.106 |
| P6KE100 | STU60B0 | 90.0 | 110 | 1.0 | 81 | 5.0 | 4.2 | 144 | 0.106 |
| P6KE100A | STU65B0 | 95.0 | 105 | 1.0 | 85.5 | 5.0 | 4.4 | 137 | 0.106 |
| P6KE110 | STU60B1 | 99.0 | 121 | 1.0 | 89.2 | 5.0 | 3.8 | 158 | 0.107 |
| P6KE110A | STU65B1 | 105 | 116 | 1.0 | 94.0 | 5.0 | 4.0 | 152 | 0.107 |
| P6KE120 | STU60B2 | 108 | 132 | 1.0 | 97.2 | 5.0 | 3.5 | 173 | 0.107 |
| P6KE120A | STU65B2 | 114 | 126 | 1.0 | 102 | 5.0 | 3.6 | 165 | 0.107 |
| P6KE130 | STU60B3 | 117 | 143 | 1.0 | 106 | 5.0 | 3.2 | 187 | 0.107 |
| P6KE130A | STU65B3 | 124 | 137 | 1.0 | 111 | 5.0 | 3.3 | 179 | 0.107 |
| P6KE150 | STU60B5 | 135 | 165 | 1.0 | 121 | 5.0 | 2.8 | 215 | 0.108 |
| P6KE150A | STU65B5 | 143 | 158 | 1.0 | 128 | 5.0 | 2.9 | 207 | 0.108 |
| P6KE160 | STU60B6 | 144 | 176 | 1.0 | 130 | 5.0 | 2.6 | 230 | 0.108 |
| P6KE160A | STU65B6 | 152 | 168 | 1.0 | 136 | 5.0 | 2.7 | 219 | 0.108 |
| P6KE170 | STU60B7 | 153 | 187 | 1.0 | 138 | 5.0 | 2.5 | 244 | 0.108 |
| P6KE170A | STU65B7 | 162 | 179 | 1.0 | 145 | 5.0 | 2.6 | 234 | 0.108 |
| P6KE180 | STU60B8 | 162 | 198 | 1.0 | 146 | 5.0 | 2.3 | 258 | 0.108 |
| P6KE180A | STU65B8 | 171 | 189 | 1.0 | 154 | 5.0 | 2.4 | 246 | 0.108 |
| P6KE200 | STU60D0 | 180 | 220 | 1.0 | 162 | 5.0 | 2.1 | 287 | 0.108 |
| P6KE200A | STU65D0 | 190 | 210 | 1.0 | 171 | 5.0 | 2.2 | 274 | 0.108 |
| P6KE220 | STU60D2 | 198 | 242 | 1.0 | 175 | 5.0 | 1.75 | 344 | 0.108 |
| P6KE220A | STU65D2 | 209 | 231 | 1.0 | 185 | 5.0 | 1.83 | 328 | 0.108 |
| P6KE250 | STU60D5 | 225 | 275 | 1.0 | 202 | 5.0 | 1.67 | 360 | 0.110 |
| P6KE250A | STU65D5 | 237 | 263 | 1.0 | 214 | 5.0 | 1.75 | 344 | 0.110 |
| P6KE300 | STU60E0 | 270 | 330 | 1.0 | 243 | 5.0 | 1.40 | 430 | 0.110 |
| P6KE300A | STU65E0 | 285 | 315 | 1.0 | 256 | 5.0 | 1.45 | 414 | 0.110 |
| P6KE320 | STU60E2 | 288 | 352 | 1.0 | 259 | 5.0 | 1.31 | 460 | 0.110 |
| P6KE320A | STU65E2 | 303 | 337 | 1.0 | 272 | 5.0 | 1.35 | 445 | 0.110 |
| P6KE350 | STU60E5 | 315 | 385 | 1.0 | 284 | 5.0 | 1.20 | 504 | 0.110 |
| P6KE350A | STU65E5 | 332 | 368 | 1.0 | 300 | 5.0 | 1.25 | 482 | 0.110 |
| P6KE400 | STU60G0 | 360 | 440 | 1.0 | 324 | 5.0 | 1.05 | 574 | 0.110 |
| P6KE400A | STU65G0 | 380 | 420 | 1.0 | 342 | 5.0 | 1.10 | 548 | 0.110 |
| P6KE440 | STU60G4 | 396 | 484 | 1.0 | 356 | 5.0 | 0.95 | 631 | 0.110 |
| P6KE440A | STU65G4 | 418 | 462 | 1.0 | 376 | 5.0 | 1.00 | 602 | 0.110 |

Notes:

- (1) V_{BR} measured after I_t applied for 300 μ s., I_t = square wave pulse or equivalent
- (2) $V_F = 3.5 V_{max.}$, $I_F = 50 A$ (6.8 V to 91 V)
 $V_F = 5.0 V_{max.}$, $I_F = 50 A$ (100 V to 440 V) per 1/2 square or equivalent sine wave
 $PW = 8.3 ms$, duty cycle = 4 pulses per minute maximum
- (3) For bidirectional use suffix "C" or "CA" (Axial Lead) / replace the third digit of type from "U" to "B" (SMD)
- (4) "6KE" for Axial lead / "STU" or "STB" for SMD will be omitted on marking of the diode
- (5) For bidirectional types having V_R of 10 V and under, the I_R limit is doubled
- (6) For case type D2A (Axial Lead), we can support until the end of 2008.



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ It (Note 1) | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ V _{RWM} | Maximum Reverse Current | Maximum Clamping Voltage @ I _{RSM} | Maximum Temperature Coefficient of V _{BR} |
|----------------|--------------------------------------|------|------------------------------------|--|-------------------------------|---|---|
| | V _{BR} (V) | It | V _{RWM} | I _R | I _{RSM} | V _{RSM} | |
| Unidirectional | Min. | Max. | (mA) | (V) | (mA) | (A) | (V) |
| | | | | | | | (% / °C) |

P6SMB Series, 600W, Case Type: SMB



| | | | | | | | | |
|-----------|------|------|-----|------|------|------|------|-------|
| P6SMB6.8A | 6.45 | 7.14 | 10 | 5.80 | 1000 | 57.0 | 10.5 | 0.057 |
| P6SMB7.5A | 7.13 | 7.88 | 10 | 6.40 | 500 | 53.0 | 11.3 | 0.061 |
| P6SMB8.2A | 7.79 | 8.61 | 10 | 7.02 | 200 | 50.0 | 12.1 | 0.065 |
| P6SMB9.1A | 8.65 | 9.55 | 1.0 | 7.78 | 50 | 45.0 | 13.4 | 0.068 |
| P6SMB10A | 9.50 | 10.5 | 1.0 | 8.55 | 10 | 41.0 | 14.5 | 0.073 |
| P6SMB11A | 10.5 | 11.6 | 1.0 | 9.40 | 5.0 | 38.0 | 15.6 | 0.075 |
| P6SMB12A | 11.4 | 12.6 | 1.0 | 10.2 | 5.0 | 36.0 | 16.7 | 0.078 |
| P6SMB13A | 12.4 | 13.7 | 1.0 | 11.1 | 5.0 | 33.0 | 18.2 | 0.081 |
| P6SMB15A | 14.3 | 15.8 | 1.0 | 12.8 | 5.0 | 28.0 | 21.2 | 0.084 |
| P6SMB16A | 15.2 | 16.8 | 1.0 | 13.6 | 5.0 | 27.0 | 22.5 | 0.086 |
| P6SMB18A | 17.1 | 18.9 | 1.0 | 15.3 | 5.0 | 24.0 | 25.2 | 0.088 |
| P6SMB20A | 19.0 | 21.0 | 1.0 | 17.1 | 5.0 | 22.0 | 27.7 | 0.090 |
| P6SMB22A | 20.9 | 23.1 | 1.0 | 18.8 | 5.0 | 20.0 | 30.6 | 0.092 |
| P6SMB24A | 22.8 | 25.2 | 1.0 | 20.5 | 5.0 | 18.0 | 33.2 | 0.094 |
| P6SMB27A | 25.7 | 28.4 | 1.0 | 23.1 | 5.0 | 16.0 | 37.5 | 0.096 |
| P6SMB30A | 28.5 | 31.5 | 1.0 | 25.6 | 5.0 | 14.4 | 41.4 | 0.097 |
| P6SMB33A | 31.4 | 34.7 | 1.0 | 28.2 | 5.0 | 13.2 | 45.7 | 0.098 |
| P6SMB36A | 34.2 | 37.8 | 1.0 | 30.8 | 5.0 | 12.0 | 49.9 | 0.099 |
| P6SMB39A | 37.1 | 41.0 | 1.0 | 33.3 | 5.0 | 11.2 | 53.9 | 0.100 |
| P6SMB43A | 40.9 | 45.2 | 1.0 | 36.8 | 5.0 | 10.1 | 59.3 | 0.101 |
| P6SMB47A | 44.7 | 49.4 | 1.0 | 40.2 | 5.0 | 9.3 | 64.8 | 0.101 |
| P6SMB51A | 48.5 | 53.6 | 1.0 | 43.6 | 5.0 | 8.6 | 70.1 | 0.102 |
| P6SMB56A | 53.2 | 58.8 | 1.0 | 47.8 | 5.0 | 7.8 | 77.0 | 0.103 |
| P6SMB62A | 58.9 | 65.1 | 1.0 | 53.0 | 5.0 | 7.1 | 85.0 | 0.104 |
| P6SMB68A | 64.6 | 71.4 | 1.0 | 58.1 | 5.0 | 6.5 | 92.0 | 0.104 |
| P6SMB75A | 71.3 | 78.8 | 1.0 | 64.1 | 5.0 | 5.8 | 103 | 0.105 |
| P6SMB82A | 77.9 | 86.1 | 1.0 | 70.1 | 5.0 | 5.3 | 113 | 0.105 |
| P6SMB91A | 86.5 | 95.5 | 1.0 | 77.8 | 5.0 | 4.8 | 125 | 0.106 |
| P6SMB100A | 95.0 | 105 | 1.0 | 85.5 | 5.0 | 4.4 | 137 | 0.106 |
| P6SMB110A | 105 | 116 | 1.0 | 94.0 | 5.0 | 4.0 | 152 | 0.107 |
| P6SMB120A | 114 | 126 | 1.0 | 102 | 5.0 | 3.6 | 165 | 0.107 |
| P6SMB130A | 124 | 137 | 1.0 | 111 | 5.0 | 3.3 | 179 | 0.107 |
| P6SMB150A | 143 | 158 | 1.0 | 128 | 5.0 | 2.9 | 207 | 0.108 |
| P6SMB160A | 152 | 168 | 1.0 | 136 | 5.0 | 2.7 | 219 | 0.108 |
| P6SMB170A | 162 | 179 | 1.0 | 145 | 5.0 | 2.6 | 234 | 0.108 |
| P6SMB180A | 171 | 189 | 1.0 | 154 | 5.0 | 2.4 | 246 | 0.108 |
| P6SMB200A | 190 | 210 | 1.0 | 171 | 5.0 | 2.2 | 274 | 0.108 |
| P6SMB220A | 209 | 231 | 1.0 | 185 | 5.0 | 1.83 | 328 | 0.108 |
| P6SMB250A | 237 | 263 | 1.0 | 214 | 5.0 | 1.75 | 344 | 0.110 |
| P6SMB300A | 285 | 315 | 1.0 | 256 | 5.0 | 1.45 | 414 | 0.110 |
| P6SMB350A | 332 | 368 | 1.0 | 300 | 5.0 | 1.25 | 482 | 0.110 |
| P6SMB400A | 380 | 420 | 1.0 | 342 | 5.0 | 1.10 | 548 | 0.110 |
| P6SMB440A | 418 | 462 | 1.0 | 376 | 5.0 | 1.00 | 602 | 0.110 |
| P6SMB480A | 456 | 504 | 1.0 | 408 | 5.0 | 0.91 | 658 | 0.110 |
| P6SMB510A | 485 | 535 | 1.0 | 434 | 5.0 | 0.86 | 698 | 0.110 |
| P6SMB540A | 513 | 567 | 1.0 | 459 | 5.0 | 0.81 | 740 | 0.110 |

Notes:

- (1) V_{BR} measured after I_t applied for 300 μs ., I_t = square wave pulse or equivalent
- (2) $V_F = 3.5 V_{max}$., $I_F = 50 A$ (6.8 V to 91 V)
 $V_F = 5.0 V_{max}$., $I_F = 50 A$ (100 V to 540 V) per 1/2 square or equivalent sine wave
PW = 8.3 ms, duty cycle = 4 pulses per minute maximum
- (3) For bidirectional use suffix "CA" .Bidirectional types having V_R of 10 V and under, the I_R limit is doubled
- (4) "P6SMB" will be omitted in marking on the diode



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ $I_T^{(1)}$ | | | Reverse Stand-off Voltage | Maximum Reverse Leakage @ V_{WM} | Maximum Peak Pulse Surge Current | Maximum Clamping Voltage @ I_{PPM} |
|----------------|---------------------------------|------|-------|---------------------------|------------------------------------|----------------------------------|--------------------------------------|
| | V_{BR} (V) | | I_T | | | | |
| Unidirectional | Min. | Max. | (mA) | (V) | (μA) | (A) | (V) |

SMBJ Series, 600W, Case Type: SMB



| | | | | | | | |
|----------|------|------|-----|-----|-----|------|------|
| SMBJ5.0 | 6.40 | 7.82 | 10 | 5.0 | 800 | 62.5 | 9.6 |
| SMBJ5.0A | 6.40 | 7.07 | 10 | 5.0 | 800 | 65.2 | 9.2 |
| SMBJ6.0 | 6.67 | 8.15 | 10 | 6.0 | 800 | 52.6 | 11.4 |
| SMBJ6.0A | 6.67 | 7.37 | 10 | 6.0 | 800 | 58.3 | 10.3 |
| SMBJ6.5 | 7.22 | 8.82 | 10 | 6.5 | 500 | 48.7 | 12.3 |
| SMBJ6.5A | 7.22 | 7.98 | 10 | 6.5 | 500 | 53.6 | 11.2 |
| SMBJ7.0 | 7.78 | 9.51 | 10 | 7.0 | 200 | 45.1 | 13.3 |
| SMBJ7.0A | 7.78 | 8.6 | 10 | 7.0 | 200 | 50.0 | 12.0 |
| SMBJ7.5 | 8.33 | 10.2 | 1.0 | 7.5 | 100 | 42.0 | 14.3 |
| SMBJ7.5A | 8.33 | 9.21 | 1.0 | 7.5 | 100 | 46.5 | 12.9 |
| SMBJ8.0 | 8.89 | 10.9 | 1.0 | 8.0 | 50 | 40.0 | 15.0 |
| SMBJ8.0A | 8.89 | 9.83 | 1.0 | 8.0 | 50 | 44.1 | 13.6 |
| SMBJ8.5 | 9.44 | 11.5 | 1.0 | 8.5 | 20 | 37.7 | 15.9 |
| SMBJ8.5A | 9.44 | 10.4 | 1.0 | 8.5 | 20 | 41.7 | 14.4 |
| SMBJ9.0 | 10.0 | 12.2 | 1.0 | 9.0 | 10 | 35.5 | 16.9 |
| SMBJ9.0A | 10.0 | 11.1 | 1.0 | 9.0 | 10 | 39.0 | 15.4 |
| SMBJ10 | 11.1 | 13.6 | 1.0 | 10 | 5.0 | 31.9 | 18.8 |
| SMBJ10A | 11.1 | 12.3 | 1.0 | 10 | 5.0 | 35.3 | 17.0 |
| SMBJ11 | 12.2 | 14.9 | 1.0 | 11 | 5.0 | 29.9 | 20.1 |
| SMBJ11A | 12.2 | 13.5 | 1.0 | 11 | 5.0 | 33.0 | 18.2 |
| SMBJ12 | 13.3 | 16.3 | 1.0 | 12 | 5.0 | 27.3 | 22.0 |
| SMBJ12A | 13.3 | 14.7 | 1.0 | 12 | 5.0 | 30.2 | 19.9 |
| SMBJ13 | 14.4 | 17.6 | 1.0 | 13 | 5.0 | 25.2 | 23.8 |
| SMBJ13A | 14.4 | 15.9 | 1.0 | 13 | 5.0 | 27.9 | 21.5 |
| SMBJ14 | 15.6 | 19.1 | 1.0 | 14 | 5.0 | 23.3 | 25.8 |
| SMBJ14A | 15.6 | 17.2 | 1.0 | 14 | 5.0 | 25.8 | 23.2 |
| SMBJ15 | 16.7 | 20.4 | 1.0 | 15 | 5.0 | 22.3 | 26.9 |
| SMBJ15A | 16.7 | 18.5 | 1.0 | 15 | 5.0 | 24.0 | 24.4 |
| SMBJ16 | 17.8 | 21.8 | 1.0 | 16 | 5.0 | 20.8 | 28.8 |
| SMBJ16A | 17.8 | 19.7 | 1.0 | 16 | 5.0 | 23.1 | 26.0 |
| SMBJ17 | 18.9 | 23.1 | 1.0 | 17 | 5.0 | 19.7 | 30.5 |
| SMBJ17A | 18.9 | 20.9 | 1.0 | 17 | 5.0 | 21.7 | 27.6 |
| SMBJ18 | 20.0 | 24.4 | 1.0 | 18 | 5.0 | 18.6 | 32.2 |
| SMBJ18A | 20.0 | 22.1 | 1.0 | 18 | 5.0 | 20.5 | 29.2 |
| SMBJ20 | 22.2 | 27.1 | 1.0 | 20 | 5.0 | 16.7 | 35.8 |
| SMBJ20A | 22.2 | 24.5 | 1.0 | 20 | 5.0 | 18.5 | 32.4 |
| SMBJ22 | 24.4 | 29.8 | 1.0 | 22 | 5.0 | 15.2 | 39.4 |
| SMBJ22A | 24.4 | 26.9 | 1.0 | 22 | 5.0 | 16.9 | 35.5 |
| SMBJ24 | 26.7 | 32.6 | 1.0 | 24 | 5.0 | 14.0 | 43.0 |
| SMBJ24A | 26.7 | 29.5 | 1.0 | 24 | 5.0 | 15.4 | 38.9 |
| SMBJ26 | 28.9 | 35.3 | 1.0 | 26 | 5.0 | 12.4 | 46.6 |
| SMBJ26A | 28.9 | 31.9 | 1.0 | 26 | 5.0 | 14.2 | 42.1 |
| SMBJ28 | 31.1 | 38 | 1.0 | 28 | 5.0 | 12.0 | 50.0 |
| SMBJ28A | 31.1 | 34.4 | 1.0 | 28 | 5.0 | 13.2 | 45.4 |
| SMBJ30 | 33.3 | 40.7 | 1.0 | 30 | 5.0 | 11.2 | 53.5 |
| SMBJ30A | 33.3 | 36.8 | 1.0 | 30 | 5.0 | 12.4 | 48.4 |
| SMBJ33 | 36.7 | 44.9 | 1.0 | 33 | 5.0 | 10.2 | 59.0 |
| SMBJ33A | 36.7 | 40.6 | 1.0 | 33 | 5.0 | 11.3 | 53.3 |
| SMBJ36 | 40.0 | 48.9 | 1.0 | 36 | 5.0 | 9.3 | 64.3 |
| SMBJ36A | 40.0 | 44.2 | 1.0 | 36 | 5.0 | 10.3 | 58.1 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ $I_T^{(1)}$ | | | Reverse Stand-off Voltage | Maximum Reverse Leakage @ V_{WM} | Maximum Peak Pulse Surge Current | Maximum Clamping Voltage @ I_{PPM} |
|----------------|---------------------------------|------|-------|---------------------------|------------------------------------|----------------------------------|--------------------------------------|
| | V_{BR} (V) | | I_T | | | | |
| Unidirectional | Min. | Max. | (mA) | (V) | (μA) | (A) | (V) |

SMBJ Series, 600W, Case Type: SMB



| | | | | | | | |
|----------|------|------|-----|-----|-----|-----|------|
| SMBJ40 | 44.4 | 54.3 | 1.0 | 40 | 5.0 | 8.4 | 71.4 |
| SMBJ40A | 44.4 | 49.1 | 1.0 | 40 | 5.0 | 9.3 | 64.5 |
| SMBJ43 | 47.8 | 58.4 | 1.0 | 43 | 5.0 | 7.8 | 76.7 |
| SMBJ43A | 47.8 | 52.8 | 1.0 | 43 | 5.0 | 8.6 | 69.4 |
| SMBJ45 | 50.0 | 61.1 | 1.0 | 45 | 5.0 | 7.5 | 80.3 |
| SMBJ45A | 50.0 | 55.3 | 1.0 | 45 | 5.0 | 8.3 | 72.7 |
| SMBJ48 | 53.3 | 65.1 | 1.0 | 48 | 5.0 | 7.0 | 85.5 |
| SMBJ48A | 53.3 | 58.9 | 1.0 | 48 | 5.0 | 7.7 | 77.4 |
| SMBJ51 | 56.7 | 69.3 | 1.0 | 51 | 5.0 | 6.6 | 91.1 |
| SMBJ51A | 56.7 | 62.7 | 1.0 | 51 | 5.0 | 7.3 | 82.4 |
| SMBJ54 | 60.0 | 73.3 | 1.0 | 54 | 5.0 | 6.2 | 96.3 |
| SMBJ54A | 60.0 | 66.3 | 1.0 | 54 | 5.0 | 6.9 | 87.1 |
| SMBJ58 | 64.4 | 78.7 | 1.0 | 58 | 5.0 | 5.8 | 103 |
| SMBJ58A | 64.4 | 71.2 | 1.0 | 58 | 5.0 | 6.4 | 93.6 |
| SMBJ60 | 66.7 | 81.5 | 1.0 | 60 | 5.0 | 5.6 | 107 |
| SMBJ60A | 66.7 | 73.7 | 1.0 | 60 | 5.0 | 6.2 | 96.8 |
| SMBJ64 | 71.1 | 86.9 | 1.0 | 64 | 5.0 | 5.3 | 114 |
| SMBJ64A | 71.1 | 78.6 | 1.0 | 64 | 5.0 | 5.8 | 103 |
| SMBJ70 | 77.8 | 95.1 | 1.0 | 70 | 5.0 | 4.8 | 125 |
| SMBJ70A | 77.8 | 86.0 | 1.0 | 70 | 5.0 | 5.3 | 113 |
| SMBJ75 | 83.3 | 102 | 1.0 | 75 | 5.0 | 4.5 | 134 |
| SMBJ75A | 83.3 | 92.1 | 1.0 | 75 | 5.0 | 4.9 | 121 |
| SMBJ78 | 86.7 | 106 | 1.0 | 78 | 5.0 | 4.3 | 139 |
| SMBJ78A | 86.7 | 95.8 | 1.0 | 78 | 5.0 | 4.7 | 126 |
| SMBJ85 | 94.4 | 115 | 1.0 | 85 | 5.0 | 3.9 | 151 |
| SMBJ85A | 94.4 | 104 | 1.0 | 85 | 5.0 | 4.4 | 137 |
| SMBJ90 | 100 | 122 | 1.0 | 90 | 5.0 | 3.8 | 160 |
| SMBJ90A | 100 | 111 | 1.0 | 90 | 5.0 | 4.1 | 146 |
| SMBJ100 | 111 | 136 | 1.0 | 100 | 5.0 | 3.4 | 179 |
| SMBJ100A | 111 | 123 | 1.0 | 100 | 5.0 | 3.7 | 162 |
| SMBJ110 | 122 | 149 | 1.0 | 110 | 5.0 | 3.0 | 196 |
| SMBJ110A | 122 | 135 | 1.0 | 110 | 5.0 | 3.4 | 177 |
| SMBJ120 | 133 | 163 | 1.0 | 120 | 5.0 | 2.8 | 214 |
| SMBJ120A | 133 | 147 | 1.0 | 120 | 5.0 | 3.1 | 193 |
| SMBJ130 | 144 | 176 | 1.0 | 130 | 5.0 | 2.6 | 231 |
| SMBJ130A | 144 | 159 | 1.0 | 130 | 5.0 | 2.9 | 209 |
| SMBJ150 | 167 | 204 | 1.0 | 150 | 5.0 | 2.2 | 268 |
| SMBJ150A | 167 | 185 | 1.0 | 150 | 5.0 | 2.5 | 243 |
| SMBJ160 | 178 | 218 | 1.0 | 160 | 5.0 | 2.1 | 287 |
| SMBJ160A | 178 | 197 | 1.0 | 160 | 5.0 | 2.3 | 259 |
| SMBJ170 | 189 | 231 | 1.0 | 170 | 5.0 | 2.0 | 304 |
| SMBJ170A | 189 | 209 | 1.0 | 170 | 5.0 | 2.2 | 275 |
| SMBJ188 | 209 | 255 | 1.0 | 188 | 5.0 | 1.7 | 344 |
| SMBJ188A | 209 | 231 | 1.0 | 188 | 5.0 | 2.0 | 328 |

- Notes: (1) Pulse test : $t_p \leq 50ms$
(2) For bidirectional use suffix "C" or "CA"
(3) For bidirectional types with V_{WM} of 10 Volts and less, the I_R limit is doubled
(4) For the bidirectional SMBJ5.0CA, the maximum V_{BR} is 7.25V
(5) "SMBJ" will be omitted on marking of the diode



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ I_t (Note 1) | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ V_{RWM} | Maximum Reverse Current | Maximum Clamping Voltage @ I_{RSM} | Maximum Temperature Coefficient of V_{BR} |
|----------------|---|-------|------------------------------------|---|-------------------------------|--|--|
| | V_{BR} (V) | I_t | V_{RWM} | I_R | I_{RSM} | V_{RSM} | (% / °C) |
| Bi-directional | Min. | (mA) | (V) | (μ A) | (A) | (V) | (% / °C) |

EPS5 Series, 1000W, Case Type: M1A



| | | | | | | | |
|-------|------|-----|----|----|------|------|-------|
| EPS5 | 6.0 | 1.0 | 5 | 50 | 10.0 | 9.5 | 0.030 |
| EPS8 | 9.0 | 1.0 | 8 | 2 | 10.0 | 13.7 | 0.040 |
| EPS12 | 13.8 | 1.0 | 12 | 1 | 10.0 | 21.6 | 0.050 |
| EPS15 | 16.7 | 1.0 | 15 | 1 | 10.0 | 26.0 | 0.055 |
| EPS17 | 19.0 | 1.0 | 17 | 1 | 10.0 | 29.2 | 0.060 |
| EPS24 | 28.4 | 1.0 | 24 | 1 | 10.0 | 43.2 | 0.070 |
| EPS28 | 31.0 | 1.0 | 28 | 1 | 10.0 | 47.8 | 0.075 |
| EPS33 | 36.8 | 1.0 | 33 | 1 | 10.0 | 56.7 | 0.080 |
| EPS48 | 54.0 | 1.0 | 48 | 1 | 10.0 | 84.3 | 0.090 |

Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ I_t (Note 1) | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ V_{RWM} | Maximum Reverse Current | Maximum Clamping Voltage @ I_{RSM} | Maximum Temperature Coefficient of V_{BR} |
|----------------|---|-------|------------------------------------|---|-------------------------------|--|--|
| | V_{BR} (V) | I_t | V_{RWM} | I_R | I_{RSM} | V_{RSM} | (% / °C) |
| Unidirectional | Min. | (mA) | (V) | (μ A) | (A) | (V) | (% / °C) |

1N5610 - 1N5613, 1500W, Case Type: DO-201



| | | | | | | | |
|--------|------|-----|------|---|-----|------|-------|
| 1N5610 | 33.0 | 1.0 | 30.5 | 5 | 32 | 47.6 | 0.093 |
| 1N5611 | 43.7 | 1.0 | 40.3 | 5 | 24 | 63.5 | 0.094 |
| 1N5612 | 54.0 | 1.0 | 49.0 | 5 | 19 | 78.5 | 0.096 |
| 1N5613 | 191 | 1.0 | 175 | 5 | 5.7 | 265 | 0.100 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Breakdown Voltage @ I_t (Note 1) | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ V_{RWM} | Maximum Reverse Current | Maximum Clamping Voltage @ I_{RSM} | Maximum Temperature Coefficient of V_{BR} |
|----------------|-----|---|-------|------------------------------|-------------------------------------|-------------------------|--------------------------------------|---|
| Unidirectional | | V_{BR} (V) | I_t | V_{RWM} | I_R | I_{RSM} | V_{RSM} | |
| Axial Lead | SMD | Min. | Max. | (mA) | (V) | (μA) | (A) | (V) |
| | | | | | | | | (% / °C) |

1N6267/STUN Series, 1,500 W, Case Type: DO-201/SMC



| | | | | | | | | | |
|---------|---------|------|------|-----|------|------|------|------|-------|
| 1N6267 | STUN06I | 6.12 | 7.48 | 10 | 5.50 | 1000 | 139 | 10.8 | 0.057 |
| 1N6267A | STUN56I | 6.45 | 7.14 | 10 | 5.80 | 1000 | 143 | 10.5 | 0.057 |
| 1N6268 | STUN07F | 6.75 | 8.25 | 10 | 6.05 | 500 | 128 | 11.7 | 0.061 |
| 1N6268A | STUN57F | 7.13 | 7.88 | 10 | 6.40 | 500 | 132 | 11.3 | 0.061 |
| 1N6269 | STUN08C | 7.38 | 9.02 | 10 | 6.63 | 200 | 120 | 12.5 | 0.065 |
| 1N6269A | STUN58C | 7.79 | 8.61 | 10 | 7.02 | 200 | 124 | 12.1 | 0.065 |
| 1N6270 | STUN09B | 8.19 | 10.0 | 1.0 | 7.37 | 50 | 109 | 13.8 | 0.068 |
| 1N6270A | STUN59B | 8.65 | 9.55 | 1.0 | 7.78 | 50 | 112 | 13.4 | 0.068 |
| 1N6271 | STUN010 | 9.00 | 11.0 | 1.0 | 8.10 | 10 | 100 | 15.0 | 0.073 |
| 1N6271A | STUN510 | 9.50 | 10.5 | 1.0 | 8.55 | 10 | 103 | 14.5 | 0.073 |
| 1N6272 | STUN011 | 9.90 | 12.1 | 1.0 | 8.92 | 5.0 | 93.0 | 16.2 | 0.075 |
| 1N6272A | STUN511 | 10.5 | 11.6 | 1.0 | 9.40 | 5.0 | 96.0 | 15.6 | 0.075 |
| 1N6273 | STUN012 | 10.8 | 13.2 | 1.0 | 9.72 | 5.0 | 87.0 | 17.3 | 0.078 |
| 1N6273A | STUN512 | 11.4 | 12.6 | 1.0 | 10.2 | 5.0 | 90.0 | 16.7 | 0.078 |
| 1N6274 | STUN013 | 11.7 | 14.3 | 1.0 | 10.5 | 5.0 | 79.0 | 19.0 | 0.081 |
| 1N6274A | STUN513 | 12.4 | 13.7 | 1.0 | 11.1 | 5.0 | 82.0 | 18.2 | 0.081 |
| 1N6275 | STUN015 | 13.5 | 16.3 | 1.0 | 12.1 | 5.0 | 68.0 | 22.0 | 0.084 |
| 1N6275A | STUN515 | 14.3 | 15.8 | 1.0 | 12.8 | 5.0 | 71.0 | 21.2 | 0.084 |
| 1N6276 | STUN016 | 14.4 | 17.6 | 1.0 | 12.9 | 5.0 | 64.0 | 23.5 | 0.086 |
| 1N6276A | STUN516 | 15.2 | 16.8 | 1.0 | 13.6 | 5.0 | 67.0 | 22.5 | 0.086 |
| 1N6277 | STUN018 | 16.2 | 19.8 | 1.0 | 14.5 | 5.0 | 56.5 | 26.5 | 0.088 |
| 1N6277A | STUN518 | 17.1 | 18.9 | 1.0 | 15.3 | 5.0 | 59.5 | 25.2 | 0.088 |
| 1N6278 | STUN020 | 18.0 | 22.0 | 1.0 | 16.2 | 5.0 | 51.5 | 29.1 | 0.090 |
| 1N6278A | STUN520 | 19.0 | 21.0 | 1.0 | 17.1 | 5.0 | 54.0 | 27.7 | 0.090 |
| 1N6279 | STUN022 | 19.8 | 24.2 | 1.0 | 17.8 | 5.0 | 47.0 | 31.9 | 0.092 |
| 1N6279A | STUN522 | 20.9 | 23.1 | 1.0 | 18.8 | 5.0 | 49.0 | 30.6 | 0.092 |
| 1N6280 | STUN024 | 21.6 | 26.4 | 1.0 | 19.4 | 5.0 | 43.0 | 34.7 | 0.094 |
| 1N6280A | STUN524 | 22.8 | 25.2 | 1.0 | 20.5 | 5.0 | 45.0 | 33.2 | 0.094 |
| 1N6281 | STUN027 | 24.3 | 29.7 | 1.0 | 21.8 | 5.0 | 38.5 | 39.1 | 0.096 |
| 1N6281A | STUN527 | 25.7 | 28.4 | 1.0 | 23.1 | 5.0 | 40.0 | 37.5 | 0.096 |
| 1N6282 | STUN030 | 27.0 | 33.0 | 1.0 | 24.3 | 5.0 | 34.5 | 43.5 | 0.097 |
| 1N6282A | STUN530 | 28.5 | 31.5 | 1.0 | 25.6 | 5.0 | 36.0 | 41.4 | 0.097 |
| 1N6283 | STUN033 | 29.7 | 36.3 | 1.0 | 26.8 | 5.0 | 31.5 | 47.7 | 0.098 |
| 1N6283A | STUN533 | 31.4 | 34.7 | 1.0 | 28.2 | 5.0 | 33.0 | 45.7 | 0.098 |
| 1N6284 | STUN036 | 32.4 | 39.6 | 1.0 | 29.1 | 5.0 | 29.0 | 52.0 | 0.099 |
| 1N6284A | STUN536 | 34.2 | 37.8 | 1.0 | 30.8 | 5.0 | 30.0 | 49.9 | 0.099 |
| 1N6285 | STUN039 | 35.1 | 42.9 | 1.0 | 31.6 | 5.0 | 26.5 | 56.4 | 0.100 |
| 1N6285A | STUN539 | 37.1 | 41.0 | 1.0 | 33.3 | 5.0 | 28.0 | 53.9 | 0.100 |
| 1N6286 | STUN043 | 38.7 | 47.3 | 1.0 | 34.8 | 5.0 | 24.0 | 61.9 | 0.101 |
| 1N6286A | STUN543 | 40.9 | 45.2 | 1.0 | 36.8 | 5.0 | 25.3 | 59.3 | 0.101 |
| 1N6287 | STUN047 | 42.3 | 51.7 | 1.0 | 38.1 | 5.0 | 22.2 | 67.8 | 0.101 |
| 1N6287A | STUN547 | 44.7 | 49.4 | 1.0 | 40.2 | 5.0 | 23.2 | 64.8 | 0.101 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Breakdown Voltage @ I_t (Note 1) | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ V_{RWM} | Maximum Reverse Current | Maximum Clamping Voltage @ I_{RSM} | Maximum Temperature Coefficient of V_{BR} |
|----------------|-----|--------------------------------------|-------|------------------------------|-------------------------------------|-------------------------|--------------------------------------|---|
| Unidirectional | | V_{BR} (V) | I_t | V_{RWM} | I_R | I_{RSM} | V_{RSM} | |
| Axial Lead | SMD | Min. | Max. | (mA) | (V) | (μ A) | (A) | (V) |

1N6267/STUN Series, 1,500 W, Case Type: DO-201/SMC



| | | | | | | | | | |
|---------|---------|------|------|-----|------|-----|------|------|-------|
| 1N6288 | STUN051 | 45.9 | 56.1 | 1.0 | 41.3 | 5.0 | 20.4 | 73.5 | 0.102 |
| 1N6288A | STUN551 | 48.5 | 53.6 | 1.0 | 43.6 | 5.0 | 21.4 | 70.1 | 0.102 |
| 1N6289 | STUN056 | 50.4 | 61.6 | 1.0 | 45.4 | 5.0 | 18.6 | 80.5 | 0.103 |
| 1N6289A | STUN556 | 53.2 | 58.8 | 1.0 | 47.8 | 5.0 | 19.5 | 77.0 | 0.103 |
| 1N6290 | STUN062 | 55.8 | 68.2 | 1.0 | 50.2 | 5.0 | 16.9 | 89.0 | 0.104 |
| 1N6290A | STUN562 | 58.9 | 65.1 | 1.0 | 53.0 | 5.0 | 17.7 | 85.0 | 0.104 |
| 1N6291 | STUN068 | 61.2 | 74.8 | 1.0 | 55.1 | 5.0 | 15.3 | 98.0 | 0.104 |
| 1N6291A | STUN568 | 64.6 | 71.4 | 1.0 | 58.1 | 5.0 | 16.3 | 92.0 | 0.104 |
| 1N6292 | STUN075 | 67.5 | 82.5 | 1.0 | 60.7 | 5.0 | 13.9 | 108 | 0.105 |
| 1N6292A | STUN575 | 71.3 | 78.8 | 1.0 | 64.1 | 5.0 | 14.6 | 103 | 0.105 |
| 1N6293 | STUN082 | 73.8 | 90.2 | 1.0 | 66.4 | 5.0 | 12.7 | 118 | 0.105 |
| 1N6293A | STUN582 | 77.9 | 86.1 | 1.0 | 70.1 | 5.0 | 13.3 | 113 | 0.105 |
| 1N6294 | STUN091 | 81.9 | 100 | 1.0 | 73.7 | 5.0 | 11.4 | 131 | 0.106 |
| 1N6294A | STUN591 | 86.5 | 95.5 | 1.0 | 77.8 | 5.0 | 12.0 | 125 | 0.106 |
| 1N6295 | STUN0B0 | 90.0 | 110 | 1.0 | 81.0 | 5.0 | 10.4 | 144 | 0.106 |
| 1N6295A | STUN5B0 | 95.0 | 105 | 1.0 | 85.5 | 5.0 | 11.0 | 137 | 0.106 |
| 1N6296 | STUN0B1 | 99.0 | 121 | 1.0 | 89.2 | 5.0 | 9.5 | 158 | 0.107 |
| 1N6296A | STUN5B1 | 105 | 116 | 1.0 | 94.0 | 5.0 | 9.9 | 152 | 0.107 |
| 1N6297 | STUN0B2 | 108 | 132 | 1.0 | 97.2 | 5.0 | 8.7 | 173 | 0.107 |
| 1N6297A | STUN5B2 | 114 | 126 | 1.0 | 102 | 5.0 | 9.1 | 165 | 0.107 |
| 1N6298 | STUN0B3 | 117 | 143 | 1.0 | 105 | 5.0 | 8.0 | 187 | 0.107 |
| 1N6298A | STUN5B3 | 124 | 137 | 1.0 | 111 | 5.0 | 8.4 | 179 | 0.107 |
| 1N6299 | STUN0B5 | 135 | 165 | 1.0 | 121 | 5.0 | 7.0 | 215 | 0.108 |
| 1N6299A | STUN5B5 | 143 | 158 | 1.0 | 128 | 5.0 | 7.2 | 207 | 0.108 |
| 1N6300 | STUN0B6 | 144 | 176 | 1.0 | 130 | 5.0 | 6.5 | 230 | 0.108 |
| 1N6300A | STUN5B6 | 152 | 168 | 1.0 | 136 | 5.0 | 6.8 | 219 | 0.108 |
| 1N6301 | STUN0B7 | 153 | 187 | 1.0 | 138 | 5.0 | 6.2 | 244 | 0.108 |
| 1N6301A | STUN5B7 | 162 | 179 | 1.0 | 145 | 5.0 | 6.4 | 234 | 0.108 |
| 1N6302 | STUN0B8 | 162 | 198 | 1.0 | 146 | 5.0 | 5.8 | 258 | 0.108 |
| 1N6302A | STUN5B8 | 171 | 189 | 1.0 | 154 | 5.0 | 6.1 | 246 | 0.108 |
| 1N6303 | STUN0D0 | 180 | 220 | 1.0 | 162 | 5.0 | 5.2 | 287 | 0.108 |
| 1N6303A | STUN5D0 | 190 | 210 | 1.0 | 171 | 5.0 | 5.5 | 274 | 0.108 |

Notes:

- (1) V_{BR} measured after I_t applied for 300 μ s., I_t = square wave pulse or equivalent
- (2) $V_F = 3.5 V_{max.}$, $I_F = 100$ A (6.8 V to 91 V)
 $V_F = 5.0 V_{max.}$, $I_F = 100$ A (100 V to 200 V) per 1/2 square or equivalent sine wave
 $PW = 8.3$ ms, duty cycle = 4 pulses per minute maximum
- (3) For bidirectional use suffix "C" or "CA" (Axial Lead) / replace the third letter of type from "U" to "B" (SMD)
- (4) "STU" or "STB" will be omitted on marking of the diode.
- (5) Add suffix "L" (Axial Lead) for case type DO-201AD
- (6) For bidirectional types have V_R of 10 V and under, the I_R limit is doubled.



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Breakdown Voltage @ I_t (Note 1) | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ V_{RWM} | Maximum Reverse Current | Maximum Clamping Voltage @ I_{RSM} | Maximum Temperature Coefficient of V_{BR} |
|----------------|-----|---|-------|------------------------------|-------------------------------------|-------------------------|--------------------------------------|---|
| Unidirectional | | V_{BR} (V) | I_t | V_{RWM} | I_R | I_{RSM} | V_{RSM} | |
| Axial Lead | SMD | Min. | Max. | (mA) | (V) | (μ A) | (A) | (V) |
| | | | | | | | | (% / °C) |

1.5KE/STUK Series, 1,500 W, Case Type: DO-201/SMC



| | | | | | | | | | |
|-----------|---------|------|------|-----|------|------|------|------|-------|
| 1.5KE6.8 | STUK06I | 6.12 | 7.48 | 10 | 5.50 | 1000 | 139 | 10.8 | 0.057 |
| 1.5KE6.8A | STUK56I | 6.45 | 7.14 | 10 | 5.80 | 1000 | 143 | 10.5 | 0.057 |
| 1.5KE7.5 | STUK07F | 6.75 | 8.25 | 10 | 6.05 | 500 | 128 | 11.7 | 0.061 |
| 1.5KE7.5A | STUK57F | 7.13 | 7.88 | 10 | 6.40 | 500 | 132 | 11.3 | 0.061 |
| 1.5KE8.2 | STUK08C | 7.38 | 9.02 | 10 | 6.63 | 200 | 120 | 12.5 | 0.065 |
| 1.5KE8.2A | STUK58C | 7.79 | 8.61 | 10 | 7.02 | 200 | 124 | 12.1 | 0.065 |
| 1.5KE9.1 | STUK09B | 8.19 | 10.0 | 1.0 | 7.37 | 50 | 109 | 13.8 | 0.068 |
| 1.5KE9.1A | STUK59B | 8.65 | 9.55 | 1.0 | 7.78 | 50 | 112 | 13.4 | 0.068 |
| 1.5KE10 | STUK010 | 9.00 | 11.0 | 1.0 | 8.10 | 10 | 100 | 15.0 | 0.073 |
| 1.5KE10A | STUK510 | 9.50 | 10.5 | 1.0 | 8.55 | 10 | 103 | 14.5 | 0.073 |
| 1.5KE11 | STUK011 | 9.90 | 12.1 | 1.0 | 8.92 | 5.0 | 93.0 | 16.2 | 0.075 |
| 1.5KE11A | STUK511 | 10.5 | 11.6 | 1.0 | 9.40 | 5.0 | 96.0 | 15.6 | 0.075 |
| 1.5KE12 | STUK012 | 10.8 | 13.2 | 1.0 | 9.72 | 5.0 | 87.0 | 17.3 | 0.078 |
| 1.5KE12A | STUK512 | 11.4 | 12.6 | 1.0 | 10.2 | 5.0 | 90.0 | 16.7 | 0.078 |
| 1.5KE13 | STUK013 | 11.7 | 14.3 | 1.0 | 10.5 | 5.0 | 79.0 | 19.0 | 0.081 |
| 1.5KE13A | STUK513 | 12.4 | 13.7 | 1.0 | 11.1 | 5.0 | 82.0 | 18.2 | 0.081 |
| 1.5KE15 | STUK015 | 13.5 | 16.5 | 1.0 | 12.1 | 5.0 | 68.0 | 22.0 | 0.084 |
| 1.5KE15A | STUK515 | 14.3 | 15.8 | 1.0 | 12.8 | 5.0 | 71.0 | 21.2 | 0.084 |
| 1.5KE16 | STUK016 | 14.4 | 17.6 | 1.0 | 12.9 | 5.0 | 64.0 | 23.5 | 0.086 |
| 1.5KE16A | STUK516 | 15.2 | 16.8 | 1.0 | 13.6 | 5.0 | 67.0 | 22.5 | 0.086 |
| 1.5KE18 | STUK018 | 16.2 | 19.8 | 1.0 | 14.5 | 5.0 | 56.5 | 26.5 | 0.088 |
| 1.5KE18A | STUK518 | 17.1 | 18.9 | 1.0 | 15.3 | 5.0 | 59.5 | 25.2 | 0.088 |
| 1.5KE20 | STUK020 | 18.0 | 22.0 | 1.0 | 16.2 | 5.0 | 51.5 | 29.1 | 0.090 |
| 1.5KE20A | STUK520 | 19.0 | 21.0 | 1.0 | 17.1 | 5.0 | 54.0 | 27.7 | 0.090 |
| 1.5KE22 | STUK022 | 19.8 | 24.2 | 1.0 | 17.8 | 5.0 | 47.0 | 31.9 | 0.092 |
| 1.5KE22A | STUK522 | 20.9 | 23.1 | 1.0 | 18.8 | 5.0 | 49.0 | 30.6 | 0.092 |
| 1.5KE24 | STUK024 | 21.6 | 26.4 | 1.0 | 19.4 | 5.0 | 43.0 | 34.7 | 0.094 |
| 1.5KE24A | STUK524 | 22.8 | 25.2 | 1.0 | 20.5 | 5.0 | 45.0 | 33.2 | 0.094 |
| 1.5KE27 | STUK027 | 24.3 | 29.7 | 1.0 | 21.8 | 5.0 | 38.5 | 39.1 | 0.096 |
| 1.5KE27A | STUK527 | 25.7 | 28.4 | 1.0 | 23.1 | 5.0 | 40.0 | 37.5 | 0.096 |
| 1.5KE30 | STUK030 | 27.0 | 33.0 | 1.0 | 24.3 | 5.0 | 34.5 | 43.5 | 0.097 |
| 1.5KE30A | STUK530 | 28.5 | 31.5 | 1.0 | 25.6 | 5.0 | 36.0 | 41.4 | 0.097 |
| 1.5KE33 | STUK033 | 29.7 | 36.3 | 1.0 | 26.8 | 5.0 | 31.5 | 47.7 | 0.098 |
| 1.5KE33A | STUK533 | 31.4 | 34.7 | 1.0 | 28.2 | 5.0 | 33.0 | 45.7 | 0.098 |
| 1.5KE36 | STUK036 | 32.4 | 39.6 | 1.0 | 29.1 | 5.0 | 29.0 | 52.0 | 0.099 |
| 1.5KE36A | STUK536 | 34.2 | 37.8 | 1.0 | 30.8 | 5.0 | 30.0 | 49.9 | 0.099 |
| 1.5KE39 | STUK039 | 35.1 | 42.9 | 1.0 | 31.6 | 5.0 | 26.5 | 56.4 | 0.100 |
| 1.5KE39A | STUK539 | 37.1 | 41.0 | 1.0 | 33.3 | 5.0 | 28.0 | 53.9 | 0.100 |
| 1.5KE43 | STUK043 | 38.7 | 47.3 | 1.0 | 34.8 | 5.0 | 24.0 | 61.9 | 0.101 |
| 1.5KE43A | STUK543 | 40.9 | 45.2 | 1.0 | 36.8 | 5.0 | 25.3 | 59.3 | 0.101 |
| 1.5KE47 | STUK047 | 42.3 | 51.7 | 1.0 | 38.1 | 5.0 | 22.2 | 67.8 | 0.101 |
| 1.5KE47A | STUK547 | 44.7 | 49.4 | 1.0 | 40.2 | 5.0 | 23.2 | 64.8 | 0.101 |
| 1.5KE51 | STUK051 | 45.9 | 56.1 | 1.0 | 41.3 | 5.0 | 20.4 | 73.5 | 0.102 |
| 1.5KE51A | STUK551 | 48.5 | 53.6 | 1.0 | 43.6 | 5.0 | 21.4 | 70.1 | 0.102 |
| 1.5KE56 | STUK056 | 50.4 | 61.6 | 1.0 | 45.4 | 5.0 | 18.6 | 80.5 | 0.103 |
| 1.5KE56A | STUK556 | 53.2 | 58.8 | 1.0 | 47.8 | 5.0 | 19.5 | 77.0 | 0.103 |
| 1.5KE62 | STUK062 | 55.8 | 68.2 | 1.0 | 50.2 | 5.0 | 16.9 | 89.0 | 0.104 |
| 1.5KE62A | STUK562 | 58.9 | 65.1 | 1.0 | 53.0 | 5.0 | 17.7 | 85.0 | 0.104 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Breakdown Voltage @ I_t (Note 1) | | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ V_{RWM} | Maximum Reverse Current | Maximum Clamping Voltage @ I_{RSM} | Maximum Temperature Coefficient of V_{BR} |
|----------------|-----|---|------|-------|------------------------------|-------------------------------------|-------------------------|--------------------------------------|---|
| Unidirectional | | V_{BR} (V) | | I_t | V_{RWM} | I_R | I_{RSM} | V_{RSM} | |
| Axial Lead | SMD | Min. | Max. | (mA) | (V) | (μ A) | (A) | (V) | (% / °C) |

1.5KE/STUK Series, 1,500 W, Case Type: DO-201/SMC



| | | | | | | | | | |
|-----------|---------|------|------|-----|------|-----|------|------|-------|
| 1.5KE68 | STUK068 | 61.2 | 74.8 | 1.0 | 55.1 | 5.0 | 15.3 | 98.0 | 0.104 |
| 1.5KE68A | STUK568 | 64.6 | 71.4 | 1.0 | 58.1 | 5.0 | 16.3 | 92.0 | 0.104 |
| 1.5KE75 | STUK075 | 67.5 | 82.5 | 1.0 | 60.7 | 5.0 | 13.9 | 108 | 0.105 |
| 1.5KE75A | STUK575 | 71.3 | 78.8 | 1.0 | 64.1 | 5.0 | 14.6 | 103 | 0.105 |
| 1.5KE82 | STUK082 | 73.8 | 90.2 | 1.0 | 66.4 | 5.0 | 12.7 | 118 | 0.105 |
| 1.5KE82A | STUK582 | 77.9 | 86.1 | 1.0 | 70.1 | 5.0 | 13.3 | 113 | 0.105 |
| 1.5KE91 | STUK091 | 81.9 | 100 | 1.0 | 73.7 | 5.0 | 11.4 | 131 | 0.106 |
| 1.5KE91A | STUK591 | 86.5 | 95.5 | 1.0 | 77.8 | 5.0 | 12.0 | 125 | 0.106 |
| 1.5KE100 | STUK0B0 | 90.0 | 110 | 1.0 | 81.0 | 5.0 | 10.4 | 144 | 0.106 |
| 1.5KE100A | STUK5B0 | 95.0 | 105 | 1.0 | 85.5 | 5.0 | 11.0 | 137 | 0.106 |
| 1.5KE110 | STUK0B1 | 99.0 | 121 | 1.0 | 89.2 | 5.0 | 9.5 | 158 | 0.107 |
| 1.5KE110A | STUK5B1 | 105 | 116 | 1.0 | 94.0 | 5.0 | 9.9 | 152 | 0.107 |
| 1.5KE120 | STUK0B2 | 108 | 132 | 1.0 | 97.2 | 5.0 | 8.7 | 173 | 0.107 |
| 1.5KE120A | STUK5B2 | 114 | 126 | 1.0 | 102 | 5.0 | 9.1 | 165 | 0.107 |
| 1.5KE130 | STUK0B3 | 117 | 143 | 1.0 | 105 | 5.0 | 8.0 | 187 | 0.107 |
| 1.5KE130A | STUK5B3 | 124 | 137 | 1.0 | 111 | 5.0 | 8.4 | 179 | 0.107 |
| 1.5KE150 | STUK0B5 | 135 | 165 | 1.0 | 121 | 5.0 | 7.0 | 215 | 0.108 |
| 1.5KE150A | STUK5B5 | 143 | 158 | 1.0 | 128 | 5.0 | 7.2 | 207 | 0.108 |
| 1.5KE160 | STUK0B6 | 144 | 176 | 1.0 | 130 | 5.0 | 6.5 | 230 | 0.108 |
| 1.5KE160A | STUK5B6 | 152 | 168 | 1.0 | 136 | 5.0 | 6.8 | 219 | 0.108 |
| 1.5KE170 | STUK0B7 | 153 | 187 | 1.0 | 138 | 5.0 | 6.2 | 244 | 0.108 |
| 1.5KE170A | STUK5B7 | 162 | 179 | 1.0 | 145 | 5.0 | 6.4 | 234 | 0.108 |
| 1.5KE180 | STUK0B8 | 162 | 198 | 1.0 | 146 | 5.0 | 5.8 | 258 | 0.108 |
| 1.5KE180A | STUK5B8 | 171 | 189 | 1.0 | 154 | 5.0 | 6.1 | 246 | 0.108 |
| 1.5KE200 | STUK0D0 | 180 | 220 | 1.0 | 162 | 5.0 | 5.2 | 287 | 0.108 |
| 1.5KE200A | STUK5D0 | 190 | 210 | 1.0 | 171 | 5.0 | 5.5 | 274 | 0.108 |
| 1.5KE220 | STUK0D2 | 198 | 242 | 1.0 | 175 | 5.0 | 4.3 | 344 | 0.108 |
| 1.5KE220A | STUK5D2 | 209 | 231 | 1.0 | 185 | 5.0 | 4.6 | 328 | 0.108 |
| 1.5KE250 | STUK0D5 | 225 | 275 | 1.0 | 202 | 5.0 | 4.2 | 360 | 0.110 |
| 1.5KE250A | STUK5D5 | 237 | 263 | 1.0 | 214 | 5.0 | 4.4 | 344 | 0.110 |
| 1.5KE300 | STUK0E0 | 270 | 330 | 1.0 | 243 | 5.0 | 3.5 | 430 | 0.110 |
| 1.5KE300A | STUK5E0 | 285 | 315 | 1.0 | 256 | 5.0 | 3.6 | 414 | 0.110 |
| 1.5KE350 | STUK0E5 | 315 | 385 | 1.0 | 284 | 5.0 | 3.0 | 504 | 0.110 |
| 1.5KE350A | STUK5E5 | 332 | 368 | 1.0 | 300 | 5.0 | 3.1 | 482 | 0.110 |
| 1.5KE400 | STUK0G0 | 360 | 440 | 1.0 | 324 | 5.0 | 2.6 | 574 | 0.110 |
| 1.5KE400A | STUK5G0 | 380 | 420 | 1.0 | 342 | 5.0 | 2.7 | 548 | 0.110 |
| 1.5KE440 | STUK0G4 | 396 | 484 | 1.0 | 356 | 5.0 | 2.4 | 631 | 0.110 |
| 1.5KE440A | STUK5G4 | 418 | 462 | 1.0 | 376 | 5.0 | 2.5 | 602 | 0.110 |

Notes:

- (1) V_{BR} measured after I_t applied for 300 μ s., I_t = square wave pulse or equivalent
- (2) $V_F = 3.5 V_{max}$, $I_F = 100$ A (6.8 V to 91 V)
 $V_F = 5.0 V_{max}$, $I_F = 100$ A (100 V to 440 V) per 1/2 square or equivalent sine wave
 $PW = 8.3$ ms, duty cycle = 4 pulses per minute maximum
- (3) For bidirectional use suffix "C" or "CA" (Axial Lead) / replace the third letter of type from "U" to "B" (SMD)
- (4) "1.5" for axial lead / "STU" or "STB" for SMD will be omitted on marking of the diode.
- (5) Use suffix "L" (Axial Lead) for case type DO-201AD
- (6) For bidirectional types have V_R of 10 V and under, the I_R limit is doubled



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ $I_T^{(1)}$ | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ V_{WM} | Maximum Peak Pulse Surge Current | Maximum Clamping Voltage @ I_{PPM} |
|----------------|---------------------------------|-------|------------------------------|------------------------------------|----------------------------------|--------------------------------------|
| | V_{BR} (V) | I_T | V_{WM} | $I_R^{(3)}$ | I_{PPM} | V_C |
| Unidirectional | Min. | Max. | (mA) | (V) | (μ A) | (A) |

SMCJ Series, 1,500W, Case Type: SMC



| | | | | | | | |
|----------|------|------|-----|-----|------|-------|------|
| SMCJ5.0 | 6.40 | 7.82 | 10 | 5.0 | 1000 | 156.3 | 9.6 |
| SMCJ5.0A | 6.40 | 7.07 | 10 | 5.0 | 1000 | 163.0 | 9.2 |
| SMCJ6.0 | 6.67 | 8.15 | 10 | 6.0 | 1000 | 131.6 | 11.4 |
| SMCJ6.0A | 6.67 | 7.37 | 10 | 6.0 | 1000 | 145.6 | 10.3 |
| SMCJ6.5 | 7.22 | 8.82 | 10 | 6.5 | 500 | 122.0 | 12.3 |
| SMCJ6.5A | 7.22 | 7.98 | 10 | 6.5 | 500 | 133.9 | 11.2 |
| SMCJ7.0 | 7.78 | 9.51 | 10 | 7.0 | 200 | 112.8 | 13.3 |
| SMCJ7.0A | 7.78 | 8.6 | 10 | 7.0 | 200 | 125.0 | 12.0 |
| SMCJ7.5 | 8.33 | 10.2 | 1.0 | 7.5 | 100 | 104.9 | 14.3 |
| SMCJ7.5A | 8.33 | 9.21 | 1.0 | 7.5 | 100 | 116.3 | 12.9 |
| SMCJ8.0 | 8.89 | 10.9 | 1.0 | 8.0 | 50 | 100.0 | 15.0 |
| SMCJ8.0A | 8.89 | 9.83 | 1.0 | 8.0 | 50 | 110.3 | 13.6 |
| SMCJ8.5 | 9.44 | 11.5 | 1.0 | 8.5 | 20 | 94.3 | 15.9 |
| SMCJ8.5A | 9.44 | 10.4 | 1.0 | 8.5 | 20 | 104.2 | 14.4 |
| SMCJ9.0 | 10.0 | 12.2 | 1.0 | 9.0 | 10 | 88.8 | 16.9 |
| SMCJ9.0A | 10.0 | 11.1 | 1.0 | 9.0 | 10 | 97.4 | 15.4 |
| SMCJ10 | 11.1 | 13.6 | 1.0 | 10 | 5.0 | 79.8 | 18.8 |
| SMCJ10A | 11.1 | 12.3 | 1.0 | 10 | 5.0 | 88.2 | 17.0 |
| SMCJ11 | 12.2 | 14.9 | 1.0 | 11 | 5.0 | 74.6 | 20.1 |
| SMCJ11A | 12.2 | 13.5 | 1.0 | 11 | 5.0 | 82.4 | 18.2 |
| SMCJ12 | 13.3 | 16.3 | 1.0 | 12 | 5.0 | 68.2 | 22.0 |
| SMCJ12A | 13.3 | 14.7 | 1.0 | 12 | 5.0 | 75.4 | 19.9 |
| SMCJ13 | 14.4 | 17.6 | 1.0 | 13 | 1.0 | 63.0 | 23.8 |
| SMCJ13A | 14.4 | 15.9 | 1.0 | 13 | 1.0 | 69.8 | 21.5 |
| SMCJ14 | 15.6 | 19.1 | 1.0 | 14 | 1.0 | 58.1 | 25.8 |
| SMCJ14A | 15.6 | 17.2 | 1.0 | 14 | 1.0 | 64.7 | 23.2 |
| SMCJ15 | 16.7 | 20.4 | 1.0 | 15 | 1.0 | 55.8 | 26.9 |
| SMCJ15A | 16.7 | 18.5 | 1.0 | 15 | 1.0 | 61.5 | 24.4 |
| SMCJ16 | 17.8 | 21.8 | 1.0 | 16 | 1.0 | 52.1 | 28.8 |
| SMCJ16A | 17.8 | 19.7 | 1.0 | 16 | 1.0 | 57.7 | 26.0 |
| SMCJ17 | 18.9 | 23.1 | 1.0 | 17 | 1.0 | 49.2 | 30.5 |
| SMCJ17A | 18.9 | 20.9 | 1.0 | 17 | 1.0 | 54.3 | 27.6 |
| SMCJ18 | 20.0 | 24.4 | 1.0 | 18 | 1.0 | 46.6 | 32.2 |
| SMCJ18A | 20.0 | 22.1 | 1.0 | 18 | 1.0 | 51.4 | 29.2 |
| SMCJ20 | 22.2 | 27.1 | 1.0 | 20 | 1.0 | 41.9 | 35.8 |
| SMCJ20A | 22.2 | 24.5 | 1.0 | 20 | 1.0 | 46.3 | 32.4 |
| SMCJ22 | 24.4 | 29.8 | 1.0 | 22 | 1.0 | 38.1 | 39.4 |
| SMCJ22A | 24.4 | 26.9 | 1.0 | 22 | 1.0 | 42.3 | 35.5 |
| SMCJ24 | 26.7 | 32.6 | 1.0 | 24 | 1.0 | 34.9 | 43.0 |
| SMCJ24A | 26.7 | 29.5 | 1.0 | 24 | 1.0 | 38.6 | 38.9 |
| SMCJ26 | 28.9 | 35.3 | 1.0 | 26 | 1.0 | 32.2 | 46.6 |
| SMCJ26A | 28.9 | 31.9 | 1.0 | 26 | 1.0 | 35.6 | 42.1 |
| SMCJ28 | 31.1 | 38.0 | 1.0 | 28 | 1.0 | 30.0 | 50.0 |
| SMCJ28A | 31.1 | 34.4 | 1.0 | 28 | 1.0 | 33.0 | 45.4 |
| SMCJ30 | 33.3 | 40.7 | 1.0 | 30 | 1.0 | 28.0 | 53.5 |
| SMCJ30A | 33.3 | 36.8 | 1.0 | 30 | 1.0 | 31.0 | 48.4 |
| SMCJ33 | 36.7 | 44.9 | 1.0 | 33 | 1.0 | 25.4 | 59.0 |
| SMCJ33A | 36.7 | 40.6 | 1.0 | 33 | 1.0 | 28.1 | 53.3 |
| SMCJ36 | 40.0 | 48.9 | 1.0 | 36 | 1.0 | 23.3 | 64.3 |
| SMCJ36A | 40.0 | 44.2 | 1.0 | 36 | 1.0 | 25.8 | 58.1 |
| SMCJ40 | 44.4 | 54.3 | 1.0 | 40 | 1.0 | 21.0 | 71.4 |
| SMCJ40A | 44.4 | 49.1 | 1.0 | 40 | 1.0 | 23.3 | 64.5 |
| SMCJ43 | 47.8 | 58.4 | 1.0 | 43 | 1.0 | 19.6 | 76.7 |
| SMCJ43A | 47.8 | 52.8 | 1.0 | 43 | 1.0 | 21.6 | 69.4 |
| SMCJ45 | 50.0 | 61.1 | 1.0 | 45 | 1.0 | 18.7 | 80.3 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ $I_T^{(1)}$ | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ V_{WM} | Maximum Peak Pulse Surge Current | Maximum Clamping Voltage @ I_{PPM} |
|----------------|---------------------------------|-------|------------------------------|------------------------------------|----------------------------------|--------------------------------------|
| | V_{BR} (V) | I_T | V_{WM} | $I_R^{(3)}$ | I_{PPM} | V_C |
| Unidirectional | Min. | Max. | (mA) | (V) | (μ A) | (A) |

SMCJ Series, 1,500W, Case Type: SMC



| | | | | | | | |
|----------|------|------|-----|-----|-----|------|------|
| SMCJ45A | 50.0 | 55.3 | 1.0 | 45 | 1.0 | 20.6 | 72.7 |
| SMCJ48 | 53.3 | 65.1 | 1.0 | 48 | 1.0 | 17.5 | 85.5 |
| SMCJ48A | 53.3 | 58.9 | 1.0 | 48 | 1.0 | 19.4 | 77.4 |
| SMCJ51 | 56.7 | 69.3 | 1.0 | 51 | 1.0 | 16.5 | 91.1 |
| SMCJ51A | 56.7 | 62.7 | 1.0 | 51 | 1.0 | 18.2 | 82.4 |
| SMCJ54 | 60.0 | 73.3 | 1.0 | 54 | 1.0 | 15.6 | 96.3 |
| SMCJ54A | 60.0 | 66.3 | 1.0 | 54 | 1.0 | 17.2 | 87.1 |
| SMCJ58 | 64.4 | 78.7 | 1.0 | 58 | 1.0 | 14.6 | 103 |
| SMCJ58A | 64.4 | 71.2 | 1.0 | 58 | 1.0 | 16.0 | 93.6 |
| SMCJ60 | 66.7 | 81.5 | 1.0 | 60 | 1.0 | 14.0 | 107 |
| SMCJ60A | 66.7 | 73.7 | 1.0 | 60 | 1.0 | 15.5 | 96 |
| SMCJ64 | 71.1 | 86.4 | 1.0 | 64 | 1.0 | 13.2 | 114 |
| SMCJ64A | 71.1 | 78.6 | 1.0 | 64 | 1.0 | 14.6 | 103 |
| SMCJ70 | 77.8 | 95.1 | 1.0 | 70 | 1.0 | 12.0 | 125 |
| SMCJ70A | 77.8 | 86 | 1.0 | 70 | 1.0 | 13.3 | 113 |
| SMCJ75 | 83.3 | 102 | 1.0 | 75 | 1.0 | 11.2 | 134 |
| SMCJ75A | 83.3 | 92.1 | 1.0 | 75 | 1.0 | 12.4 | 121 |
| SMCJ78 | 86.7 | 106 | 1.0 | 78 | 1.0 | 10.8 | 139 |
| SMCJ78A | 86.7 | 95.8 | 1.0 | 78 | 1.0 | 11.9 | 126 |
| SMCJ85 | 94.4 | 115 | 1.0 | 85 | 1.0 | 9.9 | 151 |
| SMCJ85A | 94.4 | 104 | 1.0 | 85 | 1.0 | 10.9 | 137 |
| SMCJ90 | 100 | 122 | 1.0 | 90 | 1.0 | 9.4 | 160 |
| SMCJ90A | 100 | 111 | 1.0 | 90 | 1.0 | 10.3 | 146 |
| SMCJ100 | 111 | 136 | 1.0 | 100 | 1.0 | 8.4 | 179 |
| SMCJ100A | 111 | 123 | 1.0 | 100 | 1.0 | 9.3 | 162 |
| SMCJ110 | 122 | 149 | 1.0 | 110 | 1.0 | 7.7 | 196 |
| SMCJ110A | 122 | 135 | 1.0 | 110 | 1.0 | 8.5 | 177 |
| SMCJ120 | 133 | 163 | 1.0 | 120 | 1.0 | 7.0 | 214 |
| SMCJ120A | 133 | 147 | 1.0 | 120 | 1.0 | 7.8 | 193 |
| SMCJ130 | 144 | 176 | 1.0 | 130 | 1.0 | 6.5 | 231 |
| SMCJ130A | 144 | 159 | 1.0 | 130 | 1.0 | 7.2 | 209 |
| SMCJ150 | 167 | 204 | 1.0 | 150 | 1.0 | 5.6 | 268 |
| SMCJ150A | 167 | 185 | 1.0 | 150 | 1.0 | 6.2 | 243 |
| SMCJ160 | 178 | 218 | 1.0 | 160 | 1.0 | 5.2 | 287 |
| SMCJ160A | 178 | 197 | 1.0 | 160 | 1.0 | 5.8 | 259 |
| SMCJ170 | 189 | 231 | 1.0 | 170 | 1.0 | 4.90 | 304 |
| SMCJ170A | 189 | 209 | 1.0 | 170 | 1.0 | 5.50 | 275 |
| SMCJ188 | 209 | 255 | 1.0 | 188 | 1.0 | 4.40 | 344 |
| SMCJ188A | 209 | 231 | 1.0 | 188 | 1.0 | 4.60 | 328 |
| SMCJ200A | 224 | 247 | 1.0 | 200 | 1.0 | 4.6 | 324 |
| SMCJ220A | 246 | 272 | 1.0 | 220 | 1.0 | 4.2 | 356 |
| SMCJ250A | 279 | 309 | 1.0 | 250 | 1.0 | 3.7 | 405 |
| SMCJ300A | 335 | 371 | 1.0 | 300 | 1.0 | 3.1 | 486 |
| SMCJ350A | 391 | 432 | 1.0 | 350 | 1.0 | 2.6 | 567 |
| SMCJ400A | 447 | 494 | 1.0 | 400 | 1.0 | 2.3 | 648 |
| SMCJ440A | 492 | 543 | 1.0 | 440 | 1.0 | 2.1 | 713 |

Notes :

- (1) Pulse test : $t_p \leq 50ms$
- (2) For bidirectional use suffix "C" or "CA"
- (3) For bidirectional types have V_{WM} of 10 V and less , the I_R limit is doubled
- (4) For the bidirectional SMCJ5.0CA, the maximum V_{BR} is 7.25V
- (5) "SMCJ" will be omitted on marking of the diode
- (6) For part without A , the V_{BR} is $\pm 10\%$ and V_C is $\pm 5\%$ higher than with A parts.



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ I_T | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ V_{WM} | Maximum Peak Pulse Surge Current | Maximum Clamping Voltage @ I_{PPM} |
|----------------|---------------------------|-------|------------------------------|------------------------------------|----------------------------------|--------------------------------------|
| | V_{BR} (V) | I_T | V_{WM} | I_R | I_{PPM} | V_C |
| Unidirectional | Min. | Max. | (mA) | (V) | (μ A) | (A) |
| | | | (V) | | | (V) |

3.0SMCJ Series, 3,000W, Case Type: SMC



| | | | | | | | |
|------------|------|------|-----|----|------|-------|------|
| 3.0SMCJ11 | 12.2 | 15.4 | 1.0 | 11 | 1000 | 149.2 | 20.1 |
| 3.0SMCJ11A | 12.2 | 14.0 | 1.0 | 11 | 1000 | 184.8 | 18.2 |
| 3.0SMCJ12 | 13.3 | 16.9 | 1.0 | 12 | 1000 | 136.4 | 22.0 |
| 3.0SMCJ12A | 13.3 | 15.3 | 1.0 | 12 | 1000 | 150.6 | 19.9 |
| 3.0SMCJ13 | 14.4 | 18.2 | 1.0 | 13 | 500 | 126.0 | 23.8 |
| 3.0SMCJ13A | 14.4 | 16.5 | 1.0 | 13 | 500 | 139.4 | 21.5 |
| 3.0SMCJ14 | 15.6 | 19.8 | 1.0 | 14 | 200 | 116.2 | 25.8 |
| 3.0SMCJ14A | 15.6 | 17.9 | 1.0 | 14 | 200 | 129.4 | 23.2 |
| 3.0SMCJ15 | 16.7 | 21.1 | 1.0 | 15 | 100 | 111.6 | 26.9 |
| 3.0SMCJ15A | 16.7 | 19.2 | 1.0 | 15 | 100 | 123.0 | 24.4 |
| 3.0SMCJ16 | 17.8 | 22.6 | 1.0 | 16 | 50 | 104.2 | 28.8 |
| 3.0SMCJ16A | 17.8 | 20.5 | 1.0 | 16 | 50 | 115.4 | 26.0 |
| 3.0SMCJ17 | 18.9 | 23.9 | 1.0 | 17 | 20 | 98.4 | 30.5 |
| 3.0SMCJ17A | 18.9 | 21.7 | 1.0 | 17 | 20 | 106.6 | 27.6 |
| 3.0SMCJ18 | 20.0 | 25.3 | 1.0 | 18 | 10 | 93.2 | 32.2 |
| 3.0SMCJ18A | 20.0 | 23.3 | 1.0 | 18 | 10 | 102.8 | 29.2 |
| 3.0SMCJ20 | 22.2 | 28.1 | 1.0 | 20 | 10 | 83.8 | 35.8 |
| 3.0SMCJ20A | 22.2 | 25.5 | 1.0 | 20 | 10 | 92.6 | 32.4 |
| 3.0SMCJ22 | 24.4 | 30.9 | 1.0 | 22 | 5 | 76.2 | 39.4 |
| 3.0SMCJ22A | 24.4 | 28.0 | 1.0 | 22 | 5 | 84.4 | 35.5 |
| 3.0SMCJ24 | 26.7 | 33.8 | 1.0 | 24 | 5 | 69.8 | 43.0 |
| 3.0SMCJ24A | 26.7 | 30.7 | 1.0 | 24 | 5 | 77.2 | 38.9 |
| 3.0SMCJ26 | 28.9 | 36.6 | 1.0 | 26 | 5 | 64.4 | 46.6 |
| 3.0SMCJ26A | 28.9 | 33.2 | 1.0 | 26 | 5 | 71.2 | 42.1 |
| 3.0SMCJ28 | 31.1 | 39.4 | 1.0 | 28 | 5 | 60.0 | 50.0 |
| 3.0SMCJ28A | 31.1 | 35.8 | 1.0 | 28 | 5 | 66.0 | 45.4 |
| 3.0SMCJ30 | 33.3 | 42.2 | 1.0 | 30 | 5 | 56.0 | 53.5 |
| 3.0SMCJ30A | 33.3 | 38.3 | 1.0 | 30 | 5 | 62.0 | 48.4 |
| 3.0SMCJ33 | 36.7 | 46.5 | 1.0 | 33 | 5 | 50.4 | 59.0 |
| 3.0SMCJ33A | 36.7 | 42.2 | 1.0 | 33 | 5 | 56.2 | 53.3 |
| 3.0SMCJ36 | 40.0 | 50.7 | 1.0 | 36 | 5 | 46.6 | 64.3 |
| 3.0SMCJ36A | 40.0 | 46.0 | 1.0 | 36 | 5 | 51.6 | 58.1 |
| 3.0SMCJ40 | 44.4 | 56.3 | 1.0 | 40 | 5 | 42.0 | 71.4 |
| 3.0SMCJ40A | 44.4 | 51.1 | 1.0 | 40 | 5 | 46.4 | 64.5 |
| 3.0SMCJ43 | 47.8 | 60.5 | 1.0 | 43 | 5 | 39.2 | 76.7 |
| 3.0SMCJ43A | 47.8 | 54.9 | 1.0 | 43 | 5 | 43.2 | 69.4 |
| 3.0SMCJ45 | 50.0 | 63.3 | 1.0 | 45 | 5 | 37.4 | 80.3 |
| 3.0SMCJ45A | 50.0 | 57.5 | 1.0 | 45 | 5 | 41.2 | 72.7 |
| 3.0SMCJ48 | 53.3 | 67.5 | 1.0 | 48 | 5 | 35.0 | 85.5 |
| 3.0SMCJ48A | 53.3 | 61.3 | 1.0 | 48 | 5 | 38.8 | 77.4 |
| 3.0SMCJ51 | 56.7 | 71.8 | 1.0 | 51 | 5 | 37.0 | 91.1 |
| 3.0SMCJ51A | 56.7 | 65.2 | 1.0 | 51 | 5 | 36.4 | 82.4 |
| 3.0SMCJ54 | 60.0 | 76.0 | 1.0 | 54 | 5 | 31.2 | 96.3 |
| 3.0SMCJ54A | 60.0 | 69.0 | 1.0 | 54 | 5 | 34.4 | 87.1 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ I_T | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ V_{WM} | Maximum Peak Pulse Surge Current | Maximum Clamping Voltage @ I_{PPM} |
|----------------|---------------------------|-------|------------------------------|------------------------------------|----------------------------------|--------------------------------------|
| | V_{BR} (V) | I_T | V_{WM} | I_R | I_{PPM} | V_C |
| Unidirectional | Min. | Max. | (mA) | (V) | (μ A) | (A) |

3.0SMCJ Series, 3,000W, Case Type: SMC



| | | | | | | | |
|-------------|------|-------|-----|-----|---|------|------|
| 3.0SMCJ58 | 64.4 | 81.6 | 1.0 | 58 | 5 | 39.2 | 103 |
| 3.0SMCJ58A | 64.4 | 74.1 | 1.0 | 58 | 5 | 32.0 | 93.6 |
| 3.0SMCJ60 | 66.7 | 84.5 | 1.0 | 60 | 5 | 28.0 | 107 |
| 3.0SMCJ60A | 66.7 | 76.7 | 1.0 | 60 | 5 | 31.0 | 96 |
| 3.0SMCJ64 | 71.1 | 90.1 | 1.0 | 64 | 5 | 26.4 | 114 |
| 3.0SMCJ64A | 71.1 | 81.8 | 1.0 | 64 | 5 | 29.2 | 103 |
| 3.0SMCJ70 | 77.8 | 98.6 | 1.0 | 70 | 5 | 24.0 | 125 |
| 3.0SMCJ70A | 77.8 | 89.5 | 1.0 | 70 | 5 | 26.6 | 113 |
| 3.0SMCJ75 | 83.3 | 105.7 | 1.0 | 75 | 5 | 22.4 | 134 |
| 3.0SMCJ75A | 83.3 | 95.8 | 1.0 | 75 | 5 | 24.8 | 121 |
| 3.0SMCJ78 | 86.7 | 109.8 | 1.0 | 78 | 5 | 21.6 | 139 |
| 3.0SMCJ78A | 86.7 | 99.7 | 1.0 | 78 | 5 | 22.8 | 126 |
| 3.0SMCJ85 | 94.4 | 119.2 | 1.0 | 85 | 5 | 19.8 | 151 |
| 3.0SMCJ85A | 94.4 | 108.2 | 1.0 | 85 | 5 | 20.8 | 137 |
| 3.0SMCJ90 | 100 | 126.5 | 1.0 | 90 | 5 | 18.8 | 160 |
| 3.0SMCJ90A | 100 | 115.5 | 1.0 | 90 | 5 | 20.6 | 146 |
| 3.0SMCJ100 | 111 | 141.0 | 1.0 | 100 | 5 | 16.6 | 179 |
| 3.0SMCJ100A | 111 | 128.0 | 1.0 | 100 | 5 | 18.6 | 162 |
| 3.0SMCJ110 | 122 | 154.5 | 1.0 | 110 | 5 | 15.4 | 196 |
| 3.0SMCJ110A | 122 | 140.5 | 1.0 | 110 | 5 | 16.8 | 177 |
| 3.0SMCJ120 | 133 | 169.0 | 1.0 | 120 | 5 | 14.0 | 214 |
| 3.0SMCJ120A | 133 | 153.0 | 1.0 | 120 | 5 | 15.6 | 193 |
| 3.0SMCJ130 | 144 | 182.5 | 1.0 | 130 | 5 | 13.0 | 231 |
| 3.0SMCJ130A | 144 | 165.5 | 1.0 | 130 | 5 | 14.4 | 209 |
| 3.0SMCJ150 | 167 | 211.5 | 1.0 | 150 | 5 | 11.2 | 268 |
| 3.0SMCJ150A | 167 | 192.5 | 1.0 | 150 | 5 | 12.4 | 243 |
| 3.0SMCJ160 | 178 | 226.0 | 1.0 | 160 | 5 | 10.4 | 287 |
| 3.0SMCJ160A | 178 | 205.0 | 1.0 | 160 | 5 | 11.6 | 259 |
| 3.0SMCJ170 | 189 | 239.5 | 1.0 | 170 | 5 | 9.8 | 304 |
| 3.0SMCJ170A | 189 | 217.5 | 1.0 | 170 | 5 | 11.0 | 275 |
| 3.0SMCJ180 | 198 | 253.8 | 1.0 | 180 | 5 | 9.3 | 322 |
| 3.0SMCJ180A | 198 | 230.4 | 1.0 | 180 | 5 | 10.3 | 292 |
| 3.0SMCJ190 | 209 | 267.9 | 1.0 | 190 | 5 | 8.8 | 340 |
| 3.0SMCJ190A | 209 | 243.2 | 1.0 | 190 | 5 | 9.7 | 308 |
| 3.0SMCJ200 | 220 | 282.0 | 1.0 | 200 | 5 | 8.4 | 358 |
| 3.0SMCJ200A | 220 | 256.0 | 1.0 | 200 | 5 | 9.3 | 324 |
| 3.0SMCJ210 | 231 | 296.1 | 1.0 | 210 | 5 | 7.8 | 376 |
| 3.0SMCJ210A | 231 | 268.8 | 1.0 | 210 | 5 | 8.8 | 340 |
| 3.0SMCJ220 | 242 | 310.2 | 1.0 | 220 | 5 | 7.6 | 394 |
| 3.0SMCJ220A | 242 | 281.6 | 1.0 | 220 | 5 | 8.4 | 356 |

Notes:

- (1) For bidirectional use suffix "C" or "CA"
- (2) "SMCJ" will be omitted on marking of the diode.



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ It (Note 1) | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ VRWM | Maximum Reverse Current | Maximum Clamping Voltage @ IRSM | Maximum Temperature Coefficient of VBR |
|----------------|--------------------------------------|------|------------------------------------|--------------------------------------|-------------------------------|---------------------------------------|---|
| | VBR (V) | | It | VRWM | IR | IRSM | VRSM |
| Unidirectional | Min. | Max. | (mA) | (V) | (μA) | (A) | (V) |
| | | | | | | | (% / °C) |

3KE Series, 3,000 W, Case Type: DO-201



| | | | | | | | | |
|--------|------|------|-----|------|------|------|------|-------|
| 3KE13 | 11.7 | 14.3 | 10 | 10.5 | 1000 | 158 | 19.0 | 0.081 |
| 3KE13A | 12.4 | 13.7 | 10 | 11.1 | 1000 | 164 | 18.2 | 0.081 |
| 3KE15 | 13.5 | 16.5 | 10 | 12.1 | 500 | 136 | 22.0 | 0.084 |
| 3KE15A | 14.3 | 15.8 | 10 | 12.8 | 500 | 142 | 21.2 | 0.084 |
| 3KE16 | 14.4 | 17.6 | 10 | 12.9 | 200 | 128 | 23.5 | 0.086 |
| 3KE16A | 15.2 | 16.8 | 10 | 13.6 | 200 | 134 | 22.5 | 0.086 |
| 3KE18 | 16.2 | 19.8 | 1.0 | 14.5 | 50 | 113 | 26.5 | 0.088 |
| 3KE18A | 17.1 | 18.9 | 1.0 | 15.3 | 50 | 119 | 25.2 | 0.088 |
| 3KE20 | 18.0 | 22.0 | 1.0 | 16.2 | 10 | 103 | 29.1 | 0.090 |
| 3KE20A | 19.0 | 21.0 | 1.0 | 17.1 | 10 | 108 | 27.7 | 0.090 |
| 3KE22 | 19.8 | 24.2 | 1.0 | 17.8 | 5.0 | 94 | 31.9 | 0.092 |
| 3KE22A | 20.9 | 23.1 | 1.0 | 18.8 | 5.0 | 98 | 30.6 | 0.092 |
| 3KE24 | 21.6 | 26.4 | 1.0 | 19.4 | 5.0 | 86 | 34.7 | 0.094 |
| 3KE24A | 22.8 | 25.2 | 1.0 | 20.5 | 5.0 | 90 | 33.2 | 0.094 |
| 3KE27 | 24.3 | 29.7 | 1.0 | 21.8 | 5.0 | 77 | 39.1 | 0.096 |
| 3KE27A | 25.7 | 28.4 | 1.0 | 23.1 | 5.0 | 80 | 37.5 | 0.096 |
| 3KE30 | 27.0 | 33.0 | 1.0 | 24.3 | 5.0 | 69 | 43.5 | 0.097 |
| 3KE30A | 28.5 | 31.5 | 1.0 | 25.6 | 5.0 | 72 | 41.4 | 0.097 |
| 3KE33 | 29.7 | 36.3 | 1.0 | 26.8 | 5.0 | 63 | 47.7 | 0.098 |
| 3KE33A | 31.4 | 34.7 | 1.0 | 28.2 | 5.0 | 66 | 45.7 | 0.098 |
| 3KE36 | 32.4 | 39.6 | 1.0 | 29.1 | 5.0 | 58 | 52.0 | 0.099 |
| 3KE36A | 34.2 | 37.8 | 1.0 | 30.8 | 5.0 | 60 | 49.9 | 0.099 |
| 3KE39 | 35.1 | 42.9 | 1.0 | 31.6 | 5.0 | 53 | 56.4 | 0.100 |
| 3KE39A | 37.1 | 41.0 | 1.0 | 33.3 | 5.0 | 56 | 53.9 | 0.100 |
| 3KE43 | 38.7 | 47.3 | 1.0 | 34.8 | 5.0 | 48 | 61.9 | 0.101 |
| 3KE43A | 40.9 | 45.2 | 1.0 | 36.8 | 5.0 | 51 | 59.3 | 0.101 |
| 3KE47 | 42.3 | 51.7 | 1.0 | 38.1 | 5.0 | 44 | 67.8 | 0.101 |
| 3KE47A | 44.7 | 49.4 | 1.0 | 40.2 | 5.0 | 46 | 64.8 | 0.101 |
| 3KE51 | 45.9 | 56.1 | 1.0 | 41.3 | 5.0 | 41 | 73.5 | 0.102 |
| 3KE51A | 48.5 | 53.6 | 1.0 | 43.6 | 5.0 | 43 | 70.1 | 0.102 |
| 3KE56 | 50.4 | 61.6 | 1.0 | 45.4 | 5.0 | 37 | 80.5 | 0.103 |
| 3KE56A | 53.2 | 58.8 | 1.0 | 47.8 | 5.0 | 39 | 77.0 | 0.103 |
| 3KE62 | 55.8 | 68.2 | 1.0 | 50.2 | 5.0 | 34 | 89.0 | 0.104 |
| 3KE62A | 58.9 | 65.1 | 1.0 | 53.0 | 5.0 | 35.4 | 85.0 | 0.104 |
| 3KE68 | 61.2 | 74.8 | 1.0 | 55.1 | 5.0 | 30.6 | 98.0 | 0.104 |
| 3KE68A | 64.6 | 71.4 | 1.0 | 58.1 | 5.0 | 32.6 | 92.0 | 0.104 |
| 3KE75 | 67.5 | 82.5 | 1.0 | 60.7 | 5.0 | 27.8 | 108 | 0.105 |
| 3KE75A | 71.3 | 78.8 | 1.0 | 64.1 | 5.0 | 29.2 | 103 | 0.105 |
| 3KE82 | 73.8 | 90.2 | 1.0 | 66.4 | 5.0 | 25.4 | 118 | 0.105 |
| 3KE82A | 77.9 | 86.1 | 1.0 | 70.1 | 5.0 | 26.6 | 113 | 0.105 |
| 3KE91 | 81.9 | 100 | 1.0 | 73.7 | 5.0 | 22.8 | 131 | 0.106 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ It (Note 1) | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ VRWM | Maximum Reverse Current | Maximum Clamping Voltage @ IRSM | Maximum Temperature Coefficient of VBR |
|----------------|--------------------------------------|------|------------------------------------|--------------------------------------|-------------------------------|---------------------------------------|---|
| | VBR (V) | It | VRWM | IR | IRSM | VRSM | |
| Unidirectional | Min. | Max. | (mA) | (V) | (μA) | (A) | (V) |
| | | | | | | | (% / °C) |

3KE Series, 3,000 W, Case Type: DO-201



| | | | | | | | | |
|---------|------|------|-----|------|-----|------|-----|-------|
| 3KE91A | 86.5 | 95.5 | 1.0 | 77.8 | 5.0 | 24.0 | 125 | 0.106 |
| 3KE100 | 90.0 | 110 | 1.0 | 81.0 | 5.0 | 20.8 | 144 | 0.106 |
| 3KE100A | 95.0 | 105 | 1.0 | 85.5 | 5.0 | 22.0 | 137 | 0.106 |
| 3KE110 | 99.0 | 121 | 1.0 | 89.2 | 5.0 | 19.0 | 158 | 0.107 |
| 3KE110A | 105 | 116 | 1.0 | 94.0 | 5.0 | 19.8 | 152 | 0.107 |
| 3KE120 | 108 | 132 | 1.0 | 97.2 | 5.0 | 17.4 | 173 | 0.107 |
| 3KE120A | 114 | 126 | 1.0 | 102 | 5.0 | 18.2 | 165 | 0.107 |
| 3KE130 | 117 | 143 | 1.0 | 105 | 5.0 | 16.0 | 187 | 0.107 |
| 3KE130A | 124 | 137 | 1.0 | 111 | 5.0 | 16.8 | 179 | 0.107 |
| 3KE150 | 135 | 165 | 1.0 | 121 | 5.0 | 14.0 | 215 | 0.108 |
| 3KE150A | 143 | 158 | 1.0 | 128 | 5.0 | 14.4 | 207 | 0.108 |
| 3KE160 | 144 | 176 | 1.0 | 130 | 5.0 | 13.0 | 230 | 0.108 |
| 3KE160A | 152 | 168 | 1.0 | 136 | 5.0 | 13.6 | 219 | 0.108 |
| 3KE170 | 153 | 187 | 1.0 | 138 | 5.0 | 12.4 | 244 | 0.108 |
| 3KE170A | 162 | 179 | 1.0 | 145 | 5.0 | 12.8 | 234 | 0.108 |
| 3KE180 | 162 | 198 | 1.0 | 146 | 5.0 | 11.6 | 258 | 0.108 |
| 3KE180A | 171 | 189 | 1.0 | 154 | 5.0 | 12.2 | 246 | 0.108 |
| 3KE200 | 180 | 220 | 1.0 | 162 | 5.0 | 10.4 | 287 | 0.108 |
| 3KE200A | 190 | 210 | 1.0 | 171 | 5.0 | 11.0 | 274 | 0.108 |
| 3KE220 | 198 | 242 | 1.0 | 175 | 5.0 | 8.6 | 344 | 0.108 |
| 3KE220A | 209 | 231 | 1.0 | 185 | 5.0 | 9.2 | 328 | 0.108 |
| 3KE250 | 225 | 275 | 1.0 | 202 | 5.0 | 10 | 360 | 0.110 |
| 3KE250A | 237 | 263 | 1.0 | 214 | 5.0 | 10 | 344 | 0.110 |
| 3KE300 | 270 | 330 | 1.0 | 243 | 5.0 | 10 | 430 | 0.110 |
| 3KE300A | 285 | 315 | 1.0 | 256 | 5.0 | 10 | 414 | 0.110 |
| 3KE350 | 315 | 385 | 1.0 | 284 | 5.0 | 8.0 | 504 | 0.110 |
| 3KE350A | 332 | 368 | 1.0 | 300 | 5.0 | 8.0 | 482 | 0.110 |
| 3KE400 | 360 | 440 | 1.0 | 324 | 5.0 | 8.0 | 574 | 0.110 |
| 3KE400A | 380 | 420 | 1.0 | 342 | 5.0 | 8.0 | 548 | 0.110 |
| 3KE440 | 396 | 484 | 1.0 | 356 | 5.0 | 4.8 | 631 | 0.110 |
| 3KE440A | 418 | 462 | 1.0 | 376 | 5.0 | 5.0 | 602 | 0.110 |

Notes:

- (1) V_{BR} measured after I_t applied for 300 μ s., I_t = square wave pulse or equivalent
- (2) $V_F = 5.0$ Vmax., $I_F = 100$ A per 1/2 square or equivalent sine wave
PW = 8.3 ms, duty cycle = 4 pulses per minute maximum
- (3) For bidirectional use suffix "C" or "CA"
- (4) For bidirectional types having V_R of 20 V and under, the I_R limit is doubled



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ I_T (Note 1) | | I_T | Reverse Stand off Voltage V_{RM} | Maximum Reverse Leakage @ V_{RM} I_R | Maximum Peak Pulse Current (Note2) I_{PPM} | Maximum Clamping Voltage @ I_{PPM} V_C | Maximum Temperature Coefficient of V_{BR} (%/°C) |
|----------------|---|------|-------|---|---|---|---|--|
| | Min. | Max. | | | | | | |
| Unidirectional | | | (mA) | (V) | (μ A) | (A) | (V) | |

5KP Series, 5,000W, Case Type: D6



| | | | | | | | | |
|---------|------|------|-----|-----|------|-----|------|-------|
| 5KP5.0 | 6.40 | 7.30 | 50 | 5.0 | 5000 | 520 | 9.60 | 0.057 |
| 5KP5.0A | 6.40 | 7.00 | 50 | 5.0 | 5000 | 543 | 9.20 | 0.057 |
| 5KP6.0 | 6.67 | 8.15 | 50 | 6.0 | 5000 | 439 | 11.4 | 0.061 |
| 5KP6.0A | 6.67 | 7.37 | 50 | 6.0 | 5000 | 485 | 10.3 | 0.061 |
| 5KP6.5 | 7.22 | 8.82 | 50 | 6.5 | 2000 | 407 | 12.3 | 0.065 |
| 5KP6.5A | 7.22 | 7.98 | 50 | 6.5 | 2000 | 447 | 11.2 | 0.065 |
| 5KP7.0 | 7.78 | 9.51 | 5.0 | 7.0 | 1000 | 378 | 13.3 | 0.068 |
| 5KP7.0A | 7.78 | 8.60 | 5.0 | 7.0 | 1000 | 417 | 12.0 | 0.068 |
| 5KP7.5 | 8.33 | 10.2 | 5.0 | 7.5 | 250 | 350 | 14.3 | 0.073 |
| 5KP7.5A | 8.33 | 9.21 | 5.0 | 7.5 | 250 | 388 | 12.9 | 0.073 |
| 5KP8.0 | 8.89 | 10.9 | 5.0 | 8.0 | 150 | 333 | 15.0 | 0.075 |
| 5KP8.0A | 8.89 | 9.83 | 5.0 | 8.0 | 150 | 367 | 13.6 | 0.075 |
| 5KP8.5 | 9.44 | 11.5 | 5.0 | 8.5 | 50 | 314 | 15.9 | 0.078 |
| 5KP8.5A | 9.44 | 10.4 | 5.0 | 8.5 | 50 | 347 | 14.4 | 0.078 |
| 5KP9.0 | 10.0 | 12.2 | 5.0 | 9.0 | 20 | 295 | 16.9 | 0.081 |
| 5KP9.0A | 10.0 | 11.1 | 5.0 | 9.0 | 20 | 325 | 15.4 | 0.081 |
| 5KP10 | 11.1 | 13.6 | 5.0 | 10 | 15 | 266 | 18.8 | 0.084 |
| 5KP10A | 11.1 | 12.3 | 5.0 | 10 | 15 | 294 | 17.0 | 0.084 |
| 5KP11 | 12.2 | 14.9 | 5.0 | 11 | 10 | 249 | 20.1 | 0.086 |
| 5KP11A | 12.2 | 13.5 | 5.0 | 11 | 10 | 274 | 18.2 | 0.086 |
| 5KP12 | 13.3 | 16.3 | 5.0 | 12 | 10 | 227 | 22.0 | 0.088 |
| 5KP12A | 13.3 | 14.7 | 5.0 | 12 | 10 | 251 | 19.9 | 0.088 |
| 5KP13 | 14.4 | 17.6 | 5.0 | 13 | 10 | 210 | 23.8 | 0.090 |
| 5KP13A | 14.4 | 15.9 | 5.0 | 13 | 10 | 232 | 21.5 | 0.090 |
| 5KP14 | 15.6 | 19.1 | 5.0 | 14 | 10 | 194 | 25.8 | 0.092 |
| 5KP14A | 15.6 | 17.2 | 5.0 | 14 | 10 | 215 | 23.2 | 0.092 |
| 5KP15 | 16.7 | 20.4 | 5.0 | 15 | 10 | 188 | 26.9 | 0.094 |
| 5KP15A | 16.7 | 18.5 | 5.0 | 15 | 10 | 206 | 24.4 | 0.094 |
| 5KP16 | 17.8 | 21.8 | 5.0 | 16 | 10 | 176 | 28.8 | 0.096 |
| 5KP16A | 17.8 | 19.7 | 5.0 | 16 | 10 | 192 | 26.0 | 0.096 |
| 5KP17 | 18.9 | 23.1 | 5.0 | 17 | 10 | 164 | 30.5 | 0.097 |
| 5KP17A | 18.9 | 20.9 | 5.0 | 17 | 10 | 181 | 27.6 | 0.097 |
| 5KP18 | 20.0 | 24.4 | 5.0 | 18 | 10 | 155 | 32.2 | 0.098 |
| 5KP18A | 20.0 | 22.1 | 5.0 | 18 | 10 | 172 | 29.2 | 0.098 |
| 5KP20 | 22.2 | 27.1 | 5.0 | 20 | 10 | 139 | 35.8 | 0.099 |
| 5KP20A | 22.2 | 24.5 | 5.0 | 20 | 10 | 154 | 32.4 | 0.099 |
| 5KP22 | 24.4 | 29.8 | 5.0 | 22 | 10 | 127 | 39.4 | 0.100 |
| 5KP22A | 24.4 | 26.9 | 5.0 | 22 | 10 | 141 | 35.5 | 0.100 |
| 5KP24 | 26.7 | 32.6 | 5.0 | 24 | 10 | 116 | 43.0 | 0.101 |
| 5KP24A | 26.7 | 29.5 | 5.0 | 24 | 10 | 128 | 38.9 | 0.101 |
| 5KP26 | 28.9 | 35.3 | 5.0 | 26 | 10 | 107 | 46.6 | 0.101 |
| 5KP26A | 28.9 | 31.9 | 5.0 | 26 | 10 | 119 | 42.1 | 0.101 |
| 5KP28 | 31.1 | 38.0 | 5.0 | 28 | 10 | 99 | 50.1 | 0.102 |
| 5KP28A | 31.1 | 34.4 | 5.0 | 28 | 10 | 110 | 45.4 | 0.102 |
| 5KP30 | 33.3 | 40.7 | 5.0 | 30 | 10 | 93 | 53.5 | 0.103 |
| 5KP30A | 33.3 | 36.8 | 5.0 | 30 | 10 | 103 | 48.4 | 0.103 |
| 5KP33 | 36.7 | 44.9 | 5.0 | 33 | 10 | 85 | 59.0 | 0.104 |
| 5KP33A | 36.7 | 40.6 | 5.0 | 33 | 10 | 94 | 53.3 | 0.104 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ I_T (Note 1) | | I_T | Reverse Stand off Voltage V_{RM} | Maximum Reverse Leakage @ V_{RM} I_R | Maximum Peak Pulse Current (Note2) I_{PPM} | Maximum Clamping Voltage @ I_{PPM} V_C | Maximum Temperature Coefficient of V_{BR} (%/°C) |
|----------------|---|------|-------|---|---|---|---|--|
| | Min. | Max. | | | | | | |
| Unidirectional | | | (mA) | (V) | (μ A) | (A) | (V) | |

5KP Series, 5,000W, Case Type: D6



| | | | | | | | | |
|---------|------|------|-----|-----|----|----|------|-------|
| 5KP36 | 40.0 | 48.9 | 5.0 | 36 | 10 | 78 | 64.3 | 0.104 |
| 5KP36A | 40.0 | 44.2 | 5.0 | 36 | 10 | 86 | 58.1 | 0.104 |
| 5KP40 | 44.4 | 54.3 | 5.0 | 40 | 10 | 70 | 71.4 | 0.105 |
| 5KP40A | 44.4 | 49.1 | 5.0 | 40 | 10 | 78 | 64.5 | 0.105 |
| 5KP43 | 47.8 | 58.4 | 5.0 | 43 | 10 | 65 | 76.7 | 0.105 |
| 5KP43A | 47.8 | 52.8 | 5.0 | 43 | 10 | 72 | 69.4 | 0.105 |
| 5KP45 | 50.0 | 61.1 | 5.0 | 45 | 10 | 62 | 80.3 | 0.106 |
| 5KP45A | 50.0 | 55.3 | 5.0 | 45 | 10 | 69 | 72.7 | 0.106 |
| 5KP48 | 53.3 | 65.2 | 5.0 | 48 | 10 | 58 | 85.5 | 0.106 |
| 5KP48A | 53.3 | 58.9 | 5.0 | 48 | 10 | 65 | 77.4 | 0.106 |
| 5KP51 | 56.7 | 69.3 | 5.0 | 51 | 10 | 55 | 91.1 | 0.107 |
| 5KP51A | 56.7 | 62.7 | 5.0 | 51 | 10 | 61 | 82.4 | 0.107 |
| 5KP54 | 60.0 | 73.3 | 5.0 | 54 | 10 | 52 | 96.3 | 0.107 |
| 5KP54A | 60.0 | 66.3 | 5.0 | 54 | 10 | 57 | 87.1 | 0.107 |
| 5KP56 | 62.2 | 76.1 | 5.0 | 56 | 10 | 50 | 100 | 0.107 |
| 5KP56A | 62.2 | 68.8 | 5.0 | 56 | 10 | 55 | 91 | 0.107 |
| 5KP58 | 64.4 | 78.7 | 5.0 | 58 | 10 | 49 | 103 | 0.107 |
| 5KP58A | 64.4 | 71.2 | 5.0 | 58 | 10 | 53 | 94 | 0.107 |
| 5KP60 | 66.7 | 81.5 | 5.0 | 60 | 10 | 47 | 107 | 0.108 |
| 5KP60A | 66.7 | 73.7 | 5.0 | 60 | 10 | 52 | 97 | 0.108 |
| 5KP64 | 71.1 | 96.9 | 5.0 | 64 | 10 | 44 | 114 | 0.108 |
| 5KP64A | 71.1 | 78.6 | 5.0 | 64 | 10 | 49 | 103 | 0.108 |
| 5KP70 | 77.6 | 95.1 | 5.0 | 70 | 10 | 40 | 125 | 0.108 |
| 5KP70A | 77.6 | 86.0 | 5.0 | 70 | 10 | 44 | 113 | 0.108 |
| 5KP75 | 83.3 | 102 | 5.0 | 75 | 10 | 37 | 134 | 0.108 |
| 5KP75A | 83.3 | 92.1 | 5.0 | 75 | 10 | 41 | 121 | 0.108 |
| 5KP78 | 86.7 | 106 | 5.0 | 78 | 10 | 36 | 139 | 0.108 |
| 5KP78A | 86.7 | 95.8 | 5.0 | 78 | 10 | 40 | 126 | 0.108 |
| 5KP85 | 94.4 | 115 | 5.0 | 85 | 10 | 33 | 151 | 0.108 |
| 5KP85A | 94.4 | 104 | 5.0 | 85 | 10 | 36 | 137 | 0.110 |
| 5KP90 | 100 | 122 | 5.0 | 90 | 10 | 31 | 160 | 0.110 |
| 5KP90A | 100 | 111 | 5.0 | 90 | 10 | 34 | 146 | 0.110 |
| 5KP100 | 111 | 136 | 5.0 | 100 | 10 | 28 | 179 | 0.110 |
| 5KP100A | 111 | 123 | 5.0 | 100 | 10 | 31 | 162 | 0.110 |
| 5KP110 | 122 | 149 | 5.0 | 110 | 10 | 26 | 196 | 0.112 |
| 5KP110A | 122 | 135 | 5.0 | 110 | 10 | 28 | 177 | 0.112 |
| 5KP120 | 133 | 163 | 5.0 | 120 | 10 | 24 | 211 | 0.112 |
| 5KP120A | 133 | 147 | 5.0 | 120 | 10 | 26 | 192 | 0.112 |
| 5KP150 | 167 | 204 | 5.0 | 150 | 10 | 19 | 263 | 0.112 |
| 5KP150A | 167 | 184 | 5.0 | 150 | 10 | 21 | 238 | 0.112 |
| 5KP160 | 178 | 217 | 5.0 | 160 | 10 | 18 | 281 | 0.114 |
| 5KP160A | 178 | 196 | 5.0 | 160 | 10 | 19 | 263 | 0.114 |
| 5KP180 | 200 | 244 | 5.0 | 180 | 10 | 16 | 316 | 0.114 |
| 5KP180A | 200 | 221 | 5.0 | 180 | 10 | 17 | 290 | 0.114 |

- Notes:** (1) V_{BR} measured after I_T applied for 300 μ s., I_T = square wave pulse or equivalent
(2) For bidirectional use suffix "C" or "CA"
(3) V_F = 3.5 V max. for devices of V_R < 100 V, and V_F = 5 V max. for devices of V_R > 100 V
(4) For bidirectional devices having V_R of 10 V and under, the I_R limit is doubled



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ I _R (Note 1) | | Stand - off Reverse Voltage | Maximum Reverse Leakage @ V _{RM} | Maximum Reverse Current | Maximum Clamping Voltage @ I _{RSM} | Maximum Temperature Coefficient | |
|----------------|---|----------------|-----------------------------------|---|-------------------------------|---|---------------------------------------|-------------------------|
| | V _{BR} (V) | I _R | V _{RM} | I _R | I _{RSM} | V _{RSM} | αT (Note 2) | |
| Unidirectional | Min. | Max. | (mA) | (V) | (μA) | (A) | (V) | (10 ⁻⁴ / °C) |

BZW50 Series, 5,000W, Case Type: D6



| | | | | | | | | |
|------------------|------|------|-----|-----|-----|------|------|------|
| BZW50-10 | 11.1 | 13.6 | 1.0 | 10 | 5.0 | 266 | 18.8 | 7.8 |
| BZW50-12 | 13.3 | 16.3 | 1.0 | 12 | 5.0 | 227 | 22.0 | 8.4 |
| BZW50-15 | 16.6 | 20.4 | 1.0 | 15 | 5.0 | 186 | 26.9 | 8.8 |
| BZW50-18 | 20.0 | 24.4 | 1.0 | 18 | 5.0 | 155 | 32.2 | 9.2 |
| BZW50-22 | 24.4 | 29.8 | 1.0 | 22 | 5.0 | 127 | 39.4 | 9.6 |
| BZW50-27 | 30.0 | 36.6 | 1.0 | 27 | 5.0 | 103 | 48.3 | 9.8 |
| BZW50-33 | 36.6 | 44.7 | 1.0 | 33 | 5.0 | 85 | 59.0 | 10 |
| BZW50-39 | 43.3 | 53.0 | 1.0 | 39 | 5.0 | 72 | 69.4 | 10.1 |
| BZW50-47 | 52.0 | 63.6 | 1.0 | 47 | 5.0 | 60.1 | 83.2 | 10.3 |
| BZW50-56 | 62.2 | 76.0 | 1.0 | 56 | 5.0 | 50 | 99.6 | 10.4 |
| BZW50-68 | 75.6 | 92.4 | 1.0 | 68 | 5.0 | 41 | 121 | 10.5 |
| BZW50-82 | 91.0 | 111 | 1.0 | 82 | 5.0 | 34 | 145 | 10.6 |
| BZW50-100 | 111 | 136 | 1.0 | 100 | 5.0 | 28 | 179 | 10.7 |
| BZW50-120 | 133 | 163 | 1.0 | 120 | 5.0 | 23 | 215 | 10.8 |
| BZW50-150 | 166 | 204 | 1.0 | 150 | 5.0 | 19 | 269 | 10.8 |
| BZW50-180 | 200 | 244 | 1.0 | 180 | 5.0 | 16 | 322 | 10.8 |

Notes:

- (1) Pulse test : $t_p < 50$ ms
- (2) $\Delta V_{BR} = \alpha T \cdot V_{BR}$ (25 °C)
- (3) For bidirectional use suffix "B" (Axial Lead)



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ I_T (Note 1) | | Reverse Stand off Voltage | Maximum Reverse Leakage @ V_{RM} | Maximum Peak Pulse Current (Note2) | Maximum Clamping Voltage @ I_{PPM} | Maximum Temperature Coefficient of V_{BR} (%/°C) |
|----------------|---|-------|---------------------------------|--|--|--|--|
| | V_{BR} (V) | I_T | V_{RM} | I_R | I_{PPM} | V_C | |
| Unidirectional | Min. | Max. | (mA) | (V) | (μ A) | (A) | (V) |

S5KP Series, 5,000W, Case Type: D²PAK



| | | | | | | | | |
|----------|------|------|-----|-----|------|-----|------|-------|
| S5KP5.0 | 6.40 | 7.30 | 50 | 5.0 | 5000 | 520 | 9.60 | 0.057 |
| S5KP5.0A | 6.40 | 7.00 | 50 | 5.0 | 5000 | 543 | 9.20 | 0.057 |
| S5KP6.0 | 6.67 | 8.15 | 50 | 6.0 | 5000 | 439 | 11.4 | 0.061 |
| S5KP6.0A | 6.67 | 7.37 | 50 | 6.0 | 5000 | 485 | 10.3 | 0.061 |
| S5KP6.5 | 7.22 | 8.82 | 50 | 6.5 | 2000 | 407 | 12.3 | 0.065 |
| S5KP6.5A | 7.22 | 7.98 | 50 | 6.5 | 2000 | 447 | 11.2 | 0.065 |
| S5KP7.0 | 7.78 | 9.51 | 5.0 | 7.0 | 1000 | 378 | 13.3 | 0.068 |
| S5KP7.0A | 7.78 | 8.60 | 5.0 | 7.0 | 1000 | 417 | 12.0 | 0.068 |
| S5KP7.5 | 8.33 | 10.2 | 5.0 | 7.5 | 250 | 350 | 14.3 | 0.073 |
| S5KP7.5A | 8.33 | 9.21 | 5.0 | 7.5 | 250 | 388 | 12.9 | 0.073 |
| S5KP8.0 | 8.89 | 10.9 | 5.0 | 8.0 | 150 | 333 | 15.0 | 0.075 |
| S5KP8.0A | 8.89 | 9.83 | 5.0 | 8.0 | 150 | 367 | 13.6 | 0.075 |
| S5KP8.5 | 9.44 | 11.5 | 5.0 | 8.5 | 50 | 314 | 15.9 | 0.078 |
| S5KP8.5A | 9.44 | 10.4 | 5.0 | 8.5 | 50 | 347 | 14.4 | 0.078 |
| S5KP9.0 | 10.0 | 12.2 | 5.0 | 9.0 | 20 | 295 | 16.9 | 0.081 |
| S5KP9.0A | 10.0 | 11.1 | 5.0 | 9.0 | 20 | 325 | 15.4 | 0.081 |
| S5KP10 | 11.1 | 13.6 | 5.0 | 10 | 15 | 266 | 18.8 | 0.084 |
| S5KP10A | 11.1 | 12.3 | 5.0 | 10 | 15 | 294 | 17.0 | 0.084 |
| S5KP11 | 12.2 | 14.9 | 5.0 | 11 | 10 | 249 | 20.1 | 0.086 |
| S5KP11A | 12.2 | 13.5 | 5.0 | 11 | 10 | 274 | 18.2 | 0.086 |
| S5KP12 | 13.3 | 16.3 | 5.0 | 12 | 10 | 227 | 22.0 | 0.088 |
| S5KP12A | 13.3 | 14.7 | 5.0 | 12 | 10 | 251 | 19.9 | 0.088 |
| S5KP13 | 14.4 | 17.6 | 5.0 | 13 | 10 | 210 | 23.8 | 0.090 |
| S5KP13A | 14.4 | 15.9 | 5.0 | 13 | 10 | 232 | 21.5 | 0.090 |
| S5KP14 | 15.6 | 19.1 | 5.0 | 14 | 10 | 194 | 25.8 | 0.092 |
| S5KP14A | 15.6 | 17.2 | 5.0 | 14 | 10 | 215 | 23.2 | 0.092 |
| S5KP15 | 16.7 | 20.4 | 5.0 | 15 | 10 | 188 | 26.9 | 0.094 |
| S5KP15A | 16.7 | 18.5 | 5.0 | 15 | 10 | 206 | 24.4 | 0.094 |
| S5KP16 | 17.8 | 21.8 | 5.0 | 16 | 10 | 176 | 28.8 | 0.096 |
| S5KP16A | 17.8 | 19.7 | 5.0 | 16 | 10 | 192 | 26.0 | 0.096 |
| S5KP17 | 18.9 | 23.1 | 5.0 | 17 | 10 | 164 | 30.5 | 0.097 |
| S5KP17A | 18.9 | 20.9 | 5.0 | 17 | 10 | 181 | 27.6 | 0.097 |
| S5KP18 | 20.0 | 24.4 | 5.0 | 18 | 10 | 155 | 32.2 | 0.098 |
| S5KP18A | 20.0 | 22.1 | 5.0 | 18 | 10 | 172 | 29.2 | 0.098 |
| S5KP20 | 22.2 | 27.1 | 5.0 | 20 | 10 | 139 | 35.8 | 0.099 |
| S5KP20A | 22.2 | 24.5 | 5.0 | 20 | 10 | 154 | 32.4 | 0.099 |
| S5KP22 | 24.4 | 29.8 | 5.0 | 22 | 10 | 127 | 39.4 | 0.100 |
| S5KP22A | 24.4 | 26.9 | 5.0 | 22 | 10 | 141 | 35.5 | 0.100 |
| S5KP24 | 26.7 | 32.6 | 5.0 | 24 | 10 | 116 | 43.0 | 0.101 |
| S5KP24A | 26.7 | 29.5 | 5.0 | 24 | 10 | 128 | 38.9 | 0.101 |
| S5KP26 | 28.9 | 35.3 | 5.0 | 26 | 10 | 107 | 46.6 | 0.101 |
| S5KP26A | 28.9 | 31.9 | 5.0 | 26 | 10 | 119 | 42.1 | 0.101 |
| S5KP28 | 31.1 | 38.0 | 5.0 | 28 | 10 | 99 | 50.1 | 0.102 |
| S5KP28A | 31.1 | 34.4 | 5.0 | 28 | 10 | 110 | 45.4 | 0.102 |
| S5KP30 | 33.3 | 40.7 | 5.0 | 30 | 10 | 93 | 53.5 | 0.103 |
| S5KP30A | 33.3 | 36.8 | 5.0 | 30 | 10 | 103 | 48.4 | 0.103 |
| S5KP33 | 36.7 | 44.9 | 5.0 | 33 | 10 | 85 | 59.0 | 0.104 |
| S5KP33A | 36.7 | 40.6 | 5.0 | 33 | 10 | 94 | 53.3 | 0.104 |
| S5KP36 | 40.0 | 48.9 | 5.0 | 36 | 10 | 78 | 64.3 | 0.104 |
| S5KP36A | 40.0 | 44.2 | 5.0 | 36 | 10 | 86 | 58.1 | 0.104 |
| S5KP40 | 44.4 | 54.3 | 5.0 | 40 | 10 | 70 | 71.4 | 0.105 |
| S5KP40A | 44.4 | 49.1 | 5.0 | 40 | 10 | 78 | 64.5 | 0.105 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ I_T (Note 1) | | Reverse Stand off Voltage | Maximum Reverse Leakage @ V_{RM} | Maximum Peak Pulse Current (Note2) | Maximum Clamping Voltage @ I_{PPM} | Maximum Temperature Coefficient of V_{BR} (%/°C) |
|----------------|---|-------|---------------------------------|--|--|--|--|
| | V_{BR} (V) | I_T | V_{RM} | I_R | I_{PPM} | V_C | |
| Unidirectional | Min. | Max. | (mA) | (V) | (μ A) | (A) | (V) |

S5KP Series, 5,000W, Case Type: D²PAK



| | | | | | | | | |
|----------|------|------|-----|-----|----|----|------|-------|
| S5KP43 | 47.8 | 58.4 | 5.0 | 43 | 10 | 65 | 76.7 | 0.105 |
| S5KP43A | 47.8 | 52.8 | 5.0 | 43 | 10 | 72 | 69.4 | 0.105 |
| S5KP45 | 50.0 | 61.1 | 5.0 | 45 | 10 | 62 | 80.3 | 0.106 |
| S5KP45A | 50.0 | 55.3 | 5.0 | 45 | 10 | 69 | 72.7 | 0.106 |
| S5KP48 | 53.3 | 65.2 | 5.0 | 48 | 10 | 58 | 85.5 | 0.106 |
| S5KP48A | 53.3 | 58.9 | 5.0 | 48 | 10 | 65 | 77.4 | 0.106 |
| S5KP51 | 56.7 | 69.3 | 5.0 | 51 | 10 | 55 | 91.1 | 0.107 |
| S5KP51A | 56.7 | 62.7 | 5.0 | 51 | 10 | 61 | 82.4 | 0.107 |
| S5KP54 | 60.0 | 73.3 | 5.0 | 54 | 10 | 52 | 96.3 | 0.107 |
| S5KP54A | 60.0 | 66.3 | 5.0 | 54 | 10 | 57 | 87.1 | 0.107 |
| S5KP56 | 62.2 | 76.1 | 5.0 | 56 | 10 | 50 | 100 | 0.107 |
| S5KP56A | 62.2 | 68.8 | 5.0 | 56 | 10 | 55 | 91 | 0.107 |
| S5KP58 | 64.4 | 78.7 | 5.0 | 58 | 10 | 49 | 103 | 0.107 |
| S5KP58A | 64.4 | 71.2 | 5.0 | 58 | 10 | 53 | 94 | 0.107 |
| S5KP60 | 66.7 | 81.5 | 5.0 | 60 | 10 | 47 | 107 | 0.108 |
| S5KP60A | 66.7 | 73.7 | 5.0 | 60 | 10 | 52 | 97 | 0.108 |
| S5KP64 | 71.1 | 96.9 | 5.0 | 64 | 10 | 44 | 114 | 0.108 |
| S5KP64A | 71.1 | 78.6 | 5.0 | 64 | 10 | 49 | 103 | 0.108 |
| S5KP70 | 77.6 | 95.1 | 5.0 | 70 | 10 | 40 | 125 | 0.108 |
| S5KP70A | 77.6 | 86.0 | 5.0 | 70 | 10 | 44 | 113 | 0.108 |
| S5KP75 | 83.3 | 102 | 5.0 | 75 | 10 | 37 | 134 | 0.108 |
| S5KP75A | 83.3 | 92.1 | 5.0 | 75 | 10 | 41 | 121 | 0.108 |
| S5KP78 | 86.7 | 106 | 5.0 | 78 | 10 | 36 | 139 | 0.108 |
| S5KP78A | 86.7 | 95.8 | 5.0 | 78 | 10 | 40 | 126 | 0.108 |
| S5KP85 | 94.4 | 115 | 5.0 | 85 | 10 | 33 | 151 | 0.108 |
| S5KP85A | 94.4 | 104 | 5.0 | 85 | 10 | 36 | 137 | 0.110 |
| S5KP90 | 100 | 122 | 5.0 | 90 | 10 | 31 | 160 | 0.110 |
| S5KP90A | 100 | 111 | 5.0 | 90 | 10 | 34 | 146 | 0.110 |
| S5KP100 | 111 | 136 | 5.0 | 100 | 10 | 28 | 179 | 0.110 |
| S5KP100A | 111 | 123 | 5.0 | 100 | 10 | 31 | 162 | 0.110 |
| S5KP110 | 122 | 149 | 5.0 | 110 | 10 | 26 | 196 | 0.112 |
| S5KP110A | 122 | 135 | 5.0 | 110 | 10 | 28 | 177 | 0.112 |
| S5KP120 | 133 | 163 | 5.0 | 120 | 10 | 24 | 211 | 0.112 |
| S5KP120A | 133 | 147 | 5.0 | 120 | 10 | 26 | 192 | 0.112 |
| S5KP150 | 167 | 204 | 5.0 | 150 | 10 | 19 | 263 | 0.112 |
| S5KP150A | 167 | 184 | 5.0 | 150 | 10 | 21 | 238 | 0.112 |
| S5KP160 | 178 | 217 | 5.0 | 160 | 10 | 18 | 281 | 0.114 |
| S5KP160A | 178 | 196 | 5.0 | 160 | 10 | 19 | 263 | 0.114 |
| S5KP170 | 189 | 231 | 5.0 | 170 | 10 | 17 | 298 | 0.114 |
| S5KP170A | 189 | 209 | 5.0 | 170 | 10 | 18 | 278 | 0.114 |
| S5KP180 | 200 | 244 | 5.0 | 180 | 10 | 16 | 316 | 0.114 |
| S5KP180A | 200 | 221 | 5.0 | 180 | 10 | 17 | 290 | 0.114 |

Notes:

- (1) V_{BR} measured after I_T applied for 300 μ s., I_T = square wave pulse or equivalent
- (2) For bidirectional use suffix "C" or "CA"
- (3) V_F = 3.5 V max. for devices of V_R < 100 V, and V_F = 5 V max. for devices of V_R > 100 V
- (4) For bidirectional devices having V_R of 10 V and under, the I_R limit is doubled
- (5) "S KP " will be omitted on marking of the diode

Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ I_T | | | Reverse Stand off Voltage | Maximum Reverse Leakage @ V_{RWM} | Maximum Reverse Leakage @ V_{RM} | Maximum Peak Pulse Current at 10/1000ms | Maximum Clamping Voltage @ I_{PPM} |
|----------------|---------------------------|------|-------|---------------------------|-------------------------------------|------------------------------------|---|--------------------------------------|
| | V_{BR} (V) | | I_T | V_{RWM} | I_R | $I_R (T_C=175^\circ C)$ | I_{PPM} | V_C |
| Unidirectional | Min. | Max. | (mA) | (V) | (mA) | (mA) | (A) | (V) |

SM8S Series, 6,600W, Case Type: D²PAK



| | | | | | | | | |
|---------|------|------|-----|----|----|-----|-----|------|
| SM8S10 | 11.1 | 13.6 | 5.0 | 10 | 15 | 250 | 351 | 18.8 |
| SM8S10A | 11.1 | 12.3 | 5.0 | 10 | 15 | 250 | 388 | 17.0 |
| SM8S11 | 12.2 | 14.9 | 5.0 | 11 | 10 | 150 | 328 | 20.1 |
| SM8S11A | 12.2 | 13.5 | 5.0 | 11 | 10 | 150 | 363 | 18.2 |
| SM8S12 | 13.3 | 16.3 | 5.0 | 12 | 10 | 150 | 300 | 22.0 |
| SM8S12A | 13.3 | 14.7 | 5.0 | 12 | 10 | 150 | 332 | 19.9 |
| SM8S13 | 14.4 | 17.6 | 5.0 | 13 | 10 | 150 | 277 | 23.8 |
| SM8S13A | 14.4 | 15.9 | 5.0 | 13 | 10 | 150 | 307 | 21.5 |
| SM8S14 | 15.6 | 19.1 | 5.0 | 14 | 10 | 150 | 256 | 25.8 |
| SM8S14A | 15.6 | 17.2 | 5.0 | 14 | 10 | 150 | 284 | 23.2 |
| SM8S15 | 16.7 | 20.4 | 5.0 | 15 | 10 | 150 | 245 | 26.9 |
| SM8S15A | 16.7 | 18.5 | 5.0 | 15 | 10 | 150 | 270 | 24.4 |
| SM8S16 | 17.8 | 21.8 | 5.0 | 16 | 10 | 150 | 229 | 28.8 |
| SM8S16A | 17.8 | 19.7 | 5.0 | 16 | 10 | 150 | 254 | 26.0 |
| SM8S17 | 18.9 | 23.1 | 5.0 | 17 | 10 | 150 | 216 | 30.5 |
| SM8S17A | 18.9 | 20.9 | 5.0 | 17 | 10 | 150 | 239 | 27.6 |
| SM8S18 | 20.0 | 24.4 | 5.0 | 18 | 10 | 150 | 205 | 32.2 |
| SM8S18A | 20.0 | 22.1 | 5.0 | 18 | 10 | 150 | 226 | 29.2 |
| SM8S20 | 22.2 | 27.1 | 5.0 | 20 | 10 | 150 | 184 | 35.8 |
| SM8S20A | 22.2 | 24.5 | 5.0 | 20 | 10 | 150 | 204 | 32.4 |
| SM8S22 | 24.4 | 29.8 | 5.0 | 22 | 10 | 150 | 168 | 39.4 |
| SM8S22A | 24.4 | 26.9 | 5.0 | 22 | 10 | 150 | 168 | 35.5 |
| SM8S24 | 26.7 | 32.6 | 5.0 | 24 | 10 | 150 | 153 | 43.0 |
| SM8S24A | 26.7 | 29.5 | 5.0 | 24 | 10 | 150 | 170 | 38.9 |
| SM8S26 | 28.9 | 35.3 | 5.0 | 26 | 10 | 150 | 142 | 46.6 |
| SM8S26A | 28.9 | 31.9 | 5.0 | 26 | 10 | 150 | 157 | 42.1 |
| SM8S28 | 31.1 | 38.0 | 5.0 | 28 | 10 | 150 | 132 | 50.1 |
| SM8S28A | 31.1 | 34.4 | 5.0 | 28 | 10 | 150 | 145 | 45.4 |
| SM8S30 | 33.3 | 40.7 | 5.0 | 30 | 10 | 150 | 123 | 53.5 |
| SM8S30A | 33.3 | 36.8 | 5.0 | 30 | 10 | 150 | 136 | 48.4 |
| SM8S33 | 36.7 | 44.9 | 5.0 | 33 | 10 | 150 | 112 | 59.0 |
| SM8S33A | 36.7 | 40.6 | 5.0 | 33 | 10 | 150 | 124 | 53.3 |
| SM8S36 | 40.0 | 48.9 | 5.0 | 36 | 10 | 150 | 103 | 64.3 |
| SM8S36A | 40.0 | 44.2 | 5.0 | 36 | 10 | 150 | 114 | 58.1 |
| SM8S40 | 44.4 | 54.3 | 5.0 | 40 | 10 | 150 | 92 | 71.4 |
| SM8S40A | 44.4 | 49.1 | 5.0 | 40 | 10 | 150 | 102 | 64.5 |
| SM8S43 | 47.8 | 58.4 | 5.0 | 43 | 10 | 150 | 86 | 76.7 |
| SM8S43A | 47.8 | 52.8 | 5.0 | 43 | 10 | 150 | 95 | 69.4 |

Notes:

- (1) For all types maximum $V_F = 1.8V$ at $I_F = 100A$ measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum
- (2) "SM S " will be omitted on marking of the diode.
- (3) For bidirectional use suffix "C" or "CA"



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| TYPE | Breakdown Voltage @ I_T (Note 1) | | Reverse Stand off Voltage | Maximum Reverse Leakage @ V_{RM} | Maximum Peak Pulse Current (Note2) | Maximum Clamping Voltage @ I_{PPM} | Maximum Temperature Coefficient of V_{BR} (%/°C) |
|------|---|------|---------------------------------|--|--|--|--|
| | V_{BR} (V) | | V_{RM} | I_R | I_{PPM} | V_C | |
| | Min. | Max. | (mA) | (V) | (μ A) | (A) | |

10KP Series, 10,000 W, Case Type: D6



| | | | | | | | | |
|---------|------|------|---|----|-------|-----|------|-------|
| 10KP11 | 12.2 | 14.9 | 5 | 11 | 10000 | 498 | 20.1 | 0.086 |
| 10KP11A | 12.2 | 13.5 | 5 | 11 | 10000 | 549 | 18.2 | 0.086 |
| 10KP12 | 13.3 | 16.3 | 5 | 12 | 10000 | 455 | 22.0 | 0.088 |
| 10KP12A | 13.3 | 14.7 | 5 | 12 | 10000 | 503 | 19.9 | 0.088 |
| 10KP13 | 14.4 | 17.6 | 5 | 13 | 4000 | 420 | 23.8 | 0.090 |
| 10KP13A | 14.4 | 15.9 | 5 | 13 | 4000 | 465 | 21.5 | 0.090 |
| 10KP14 | 15.6 | 19.1 | 5 | 14 | 2000 | 388 | 25.8 | 0.092 |
| 10KP14A | 15.6 | 17.2 | 5 | 14 | 2000 | 431 | 23.2 | 0.092 |
| 10KP15 | 16.7 | 20.4 | 5 | 15 | 500 | 372 | 26.9 | 0.094 |
| 10KP15A | 16.7 | 18.5 | 5 | 15 | 500 | 410 | 24.4 | 0.094 |
| 10KP16 | 17.8 | 21.8 | 5 | 16 | 300 | 347 | 28.8 | 0.096 |
| 10KP16A | 17.8 | 19.7 | 5 | 16 | 300 | 385 | 26.0 | 0.096 |
| 10KP17 | 18.9 | 23.1 | 5 | 17 | 100 | 328 | 30.5 | 0.097 |
| 10KP17A | 18.9 | 20.9 | 5 | 17 | 100 | 362 | 27.6 | 0.097 |
| 10KP18 | 20.0 | 24.4 | 5 | 18 | 40 | 311 | 32.2 | 0.098 |
| 10KP18A | 20.0 | 22.1 | 5 | 18 | 40 | 342 | 29.2 | 0.098 |
| 10KP20 | 22.2 | 27.1 | 5 | 20 | 30 | 279 | 35.8 | 0.099 |
| 10KP20A | 22.2 | 24.5 | 5 | 20 | 30 | 309 | 32.4 | 0.099 |
| 10KP22 | 24.4 | 29.8 | 5 | 22 | 20 | 254 | 39.4 | 0.100 |
| 10KP22A | 24.4 | 26.9 | 5 | 22 | 20 | 282 | 35.5 | 0.100 |
| 10KP24 | 26.7 | 32.6 | 5 | 24 | 20 | 233 | 43.0 | 0.101 |
| 10KP24A | 26.7 | 29.5 | 5 | 24 | 20 | 257 | 38.9 | 0.101 |
| 10KP26 | 28.9 | 35.3 | 5 | 26 | 20 | 215 | 46.6 | 0.101 |
| 10KP26A | 28.9 | 31.9 | 5 | 26 | 20 | 238 | 42.1 | 0.101 |
| 10KP28 | 31.1 | 38.0 | 5 | 28 | 20 | 200 | 50.1 | 0.102 |
| 10KP28A | 31.1 | 34.4 | 5 | 28 | 20 | 220 | 45.4 | 0.102 |
| 10KP30 | 33.3 | 40.7 | 5 | 30 | 20 | 187 | 53.5 | 0.103 |
| 10KP30A | 33.3 | 36.8 | 5 | 30 | 20 | 207 | 48.4 | 0.103 |
| 10KP33 | 36.7 | 44.9 | 5 | 33 | 20 | 169 | 59.0 | 0.104 |
| 10KP33A | 36.7 | 40.6 | 5 | 33 | 20 | 188 | 53.3 | 0.104 |
| 10KP36 | 40.0 | 48.9 | 5 | 36 | 20 | 156 | 64.3 | 0.104 |
| 10KP36A | 40.0 | 44.2 | 5 | 36 | 20 | 172 | 58.1 | 0.104 |
| 10KP40 | 44.4 | 54.3 | 5 | 40 | 20 | 140 | 71.4 | 0.105 |
| 10KP40A | 44.4 | 49.1 | 5 | 40 | 20 | 155 | 64.5 | 0.105 |
| 10KP43 | 47.8 | 58.4 | 5 | 43 | 20 | 130 | 76.7 | 0.105 |
| 10KP43A | 47.8 | 52.8 | 5 | 43 | 20 | 144 | 69.4 | 0.105 |
| 10KP45 | 50.0 | 61.1 | 5 | 45 | 20 | 125 | 80.3 | 0.106 |
| 10KP45A | 50.0 | 55.3 | 5 | 45 | 20 | 138 | 72.7 | 0.106 |
| 10KP48 | 53.3 | 65.2 | 5 | 48 | 20 | 117 | 85.5 | 0.106 |
| 10KP48A | 53.3 | 58.9 | 5 | 48 | 20 | 129 | 77.4 | 0.106 |
| 10KP51 | 56.7 | 69.3 | 5 | 51 | 20 | 110 | 91.1 | 0.107 |
| 10KP51A | 56.7 | 62.7 | 5 | 51 | 20 | 121 | 82.4 | 0.107 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| TYPE | Breakdown Voltage @ I_T (Note 1) | | Reverse Stand off Voltage | Maximum Reverse Leakage @ V_{RM} | Maximum Peak Pulse Current (Note2) | Maximum Clamping Voltage @ I_{PPM} | Maximum Temperature Coefficient of V_{BR} (%/°C) |
|------|---|------|---------------------------------|--|--|--|--|
| | V_{BR} (V) | | V_{RM} | I_R | I_{PPM} | V_C | |
| | Min. | Max. | (mA) | (V) | (μ A) | (A) | |

10KP Series, 10,000 W, Case Type: D6



| | | | | | | | | |
|----------|------|------|---|-----|----|-----|------|-------|
| 10KP54 | 60.0 | 73.3 | 5 | 54 | 20 | 104 | 96.3 | 0.107 |
| 10KP54A | 60.0 | 66.3 | 5 | 54 | 20 | 115 | 87.1 | 0.107 |
| 10KP56 | 62.2 | 76.1 | 5 | 56 | 20 | 100 | 100 | 0.107 |
| 10KP56A | 62.2 | 68.8 | 5 | 56 | 20 | 110 | 91 | 0.107 |
| 10KP58 | 64.4 | 78.7 | 5 | 58 | 20 | 97 | 103 | 0.107 |
| 10KP58A | 64.4 | 71.2 | 5 | 58 | 20 | 106 | 94 | 0.107 |
| 10KP60 | 66.7 | 81.5 | 5 | 60 | 20 | 93 | 107 | 0.108 |
| 10KP60A | 66.7 | 73.7 | 5 | 60 | 20 | 103 | 97 | 0.108 |
| 10KP64 | 71.1 | 96.9 | 5 | 64 | 20 | 88 | 114 | 0.108 |
| 10KP64A | 71.1 | 78.6 | 5 | 64 | 20 | 97 | 103 | 0.108 |
| 10KP70 | 77.6 | 95.1 | 5 | 70 | 20 | 80 | 125 | 0.108 |
| 10KP70A | 77.6 | 86.0 | 5 | 70 | 20 | 88 | 113 | 0.108 |
| 10KP75 | 83.3 | 102 | 5 | 75 | 20 | 75 | 134 | 0.108 |
| 10KP75A | 83.3 | 92.1 | 5 | 75 | 20 | 83 | 121 | 0.108 |
| 10KP78 | 86.7 | 106 | 5 | 78 | 20 | 72 | 139 | 0.108 |
| 10KP78A | 86.7 | 95.8 | 5 | 78 | 20 | 79 | 126 | 0.108 |
| 10KP85 | 94.4 | 115 | 5 | 85 | 20 | 66 | 151 | 0.108 |
| 10KP85A | 94.4 | 104 | 5 | 85 | 20 | 73 | 137 | 0.110 |
| 10KP90 | 100 | 122 | 5 | 90 | 20 | 63 | 160 | 0.110 |
| 10KP90A | 100 | 111 | 5 | 90 | 20 | 68 | 146 | 0.110 |
| 10KP100 | 111 | 136 | 5 | 100 | 20 | 56 | 179 | 0.110 |
| 10KP100A | 111 | 123 | 5 | 100 | 20 | 62 | 162 | 0.110 |
| 10KP110 | 122 | 149 | 5 | 110 | 20 | 51 | 196 | 0.112 |
| 10KP110A | 122 | 135 | 5 | 110 | 20 | 56 | 177 | 0.112 |
| 10KP120 | 133 | 163 | 5 | 120 | 20 | 47 | 211 | 0.112 |
| 10KP120A | 133 | 147 | 5 | 120 | 20 | 52 | 192 | 0.112 |
| 10KP150 | 167 | 204 | 5 | 150 | 20 | 38 | 263 | 0.112 |
| 10KP150A | 167 | 184 | 5 | 150 | 20 | 42 | 238 | 0.112 |
| 10KP160 | 178 | 217 | 5 | 160 | 20 | 36 | 281 | 0.114 |
| 10KP160A | 178 | 196 | 5 | 160 | 20 | 38 | 263 | 0.114 |
| 10KP170 | 189 | 231 | 5 | 170 | 20 | 34 | 298 | 0.114 |
| 10KP170A | 189 | 209 | 5 | 170 | 20 | 36 | 274 | 0.114 |
| 10KP180 | 200 | 244 | 5 | 180 | 20 | 32 | 316 | 0.114 |
| 10KP180A | 200 | 221 | 5 | 180 | 20 | 34 | 290 | 0.114 |

Notes:

- (1) V_{BR} measured after I_T applied for 300 μ s., I_T = square wave pulse or equivalent.
- (2) V_F = 3.5 Volts max. for devices of V_R < 100 V, and V_F = 5 Volts max. for devices of V_R > 100 V.
- (3) For Bi-directional devices having V_R of 20 Volts and under the I_R limit is doubled.



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Reverse Stand Off Voltage | Breakdown Voltage @ I_T | | Maximum Reverse Leakage @ V_R | Maximum Clamping Voltage @ I_{PP} | Maximum Peak Pulse Current | Max. Voltage Temperature Variation of V_{BR} |
|------------------|-----------------|---------------------------|---------------------------|-------|---------------------------------|-------------------------------------|----------------------------|--|
| (Unidirectional) | (Bidirectional) | V_R | V_{BR} (V) | I_T | I_R | V_C | I_{PP} | |
| | | (V) | Min. | (mA) | (μA) | (V) | (A) | (mV/°C) |

15KP Series, 15,000 W, Case Type: D6



| | | | | | | | | |
|---------|----------|----|------|-----|-------|------|-----|-----|
| 15KP17 | 15KP17C | 17 | 18.9 | 50 | 5,000 | 32.2 | 464 | 19 |
| 15KP17A | 15KP17CA | 17 | 18.9 | 50 | 5,000 | 29.3 | 512 | 17 |
| 15KP18 | 15KP18C | 18 | 20.0 | 50 | 5,000 | 34.2 | 439 | 20 |
| 15KP18A | 15KP18CA | 18 | 20.0 | 50 | 5,000 | 30.9 | 485 | 18 |
| 15KP20 | 15KP20C | 20 | 22.2 | 20 | 1,500 | 37.9 | 396 | 24 |
| 15KP20A | 15KP20CA | 20 | 22.2 | 20 | 1,500 | 34.3 | 437 | 21 |
| 15KP22 | 15KP22C | 22 | 24.4 | 10 | 500 | 41.1 | 365 | 27 |
| 15KP22A | 15KP22CA | 22 | 24.4 | 10 | 500 | 37.1 | 404 | 24 |
| 15KP24 | 15KP24C | 24 | 26.7 | 5.0 | 150 | 45.0 | 333 | 30 |
| 15KP24A | 15KP24CA | 24 | 26.7 | 5.0 | 150 | 40.7 | 369 | 27 |
| 15KP26 | 15KP26C | 26 | 28.9 | 5.0 | 50 | 48.7 | 308 | 32 |
| 15KP26A | 15KP26CA | 26 | 28.9 | 5.0 | 50 | 44.0 | 341 | 29 |
| 15KP28 | 15KP28C | 28 | 31.1 | 5.0 | 25 | 52.4 | 286 | 35 |
| 15KP28A | 15KP28CA | 28 | 31.1 | 5.0 | 25 | 47.5 | 316 | 31 |
| 15KP30 | 15KP30C | 30 | 33.3 | 5.0 | 15 | 56.2 | 267 | 37 |
| 15KP30A | 15KP30CA | 30 | 33.3 | 5.0 | 15 | 50.7 | 296 | 33 |
| 15KP33 | 15KP33C | 33 | 36.7 | 5.0 | 10 | 60.6 | 248 | 42 |
| 15KP33A | 15KP33CA | 33 | 36.7 | 5.0 | 10 | 54.8 | 274 | 38 |
| 15KP36 | 15KP36C | 36 | 40.0 | 5.0 | 10 | 66.0 | 227 | 46 |
| 15KP36A | 15KP36CA | 36 | 40.0 | 5.0 | 10 | 59.7 | 251 | 41 |
| 15KP40 | 15KP40C | 40 | 44.4 | 5.0 | 10 | 72.8 | 206 | 51 |
| 15KP40A | 15KP40CA | 40 | 44.4 | 5.0 | 10 | 65.8 | 228 | 46 |
| 15KP43 | 15KP43C | 43 | 47.8 | 5.0 | 10 | 77.1 | 195 | 55 |
| 15KP43A | 15KP43CA | 43 | 47.8 | 5.0 | 10 | 69.7 | 215 | 50 |
| 15KP45 | 15KP45C | 45 | 50.0 | 5.0 | 10 | 80.7 | 186 | 57 |
| 15KP45A | 15KP45CA | 45 | 50.0 | 5.0 | 10 | 73.0 | 205 | 52 |
| 15KP48 | 15KP48C | 48 | 53.3 | 5.0 | 10 | 85.9 | 175 | 62 |
| 15KP48A | 15KP48CA | 48 | 53.3 | 5.0 | 10 | 77.7 | 193 | 56 |
| 15KP51 | 15KP51C | 51 | 56.7 | 5.0 | 10 | 91.5 | 164 | 66 |
| 15KP51A | 15KP51CA | 51 | 56.7 | 5.0 | 10 | 82.5 | 181 | 60 |
| 15KP54 | 15KP54C | 54 | 60.0 | 5.0 | 10 | 96.8 | 155 | 70 |
| 15KP54A | 15KP54CA | 54 | 60.0 | 5.0 | 10 | 87.5 | 171 | 63 |
| 15KP58 | 15KP58C | 58 | 64.4 | 5.0 | 10 | 104 | 144 | 76 |
| 15KP58A | 15KP58CA | 58 | 64.4 | 5.0 | 10 | 94 | 160 | 68 |
| 15KP60 | 15KP60C | 60 | 66.7 | 5.0 | 10 | 107 | 140 | 78 |
| 15KP60A | 15KP60CA | 60 | 66.7 | 5.0 | 10 | 97.3 | 154 | 70 |
| 15KP64 | 15KP64C | 64 | 71.1 | 5.0 | 10 | 115 | 130 | 84 |
| 15KP64A | 15KP64CA | 64 | 71.1 | 5.0 | 10 | 104 | 144 | 76 |
| 15KP70 | 15KP70C | 70 | 77.8 | 5.0 | 10 | 126 | 119 | 92 |
| 15KP70A | 15KP70CA | 70 | 77.8 | 5.0 | 10 | 114 | 132 | 83 |
| 15KP75 | 15KP75C | 75 | 83.3 | 5.0 | 10 | 135 | 111 | 100 |
| 15KP75A | 15KP75CA | 75 | 83.3 | 5.0 | 10 | 122 | 123 | 89 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Reverse Stand Off Voltage | Breakdown Voltage @ I_T | | Maximum Reverse Leakage @ V_R | Maximum Clamping Voltage @ I_{PP} | Maximum Peak Pulse Current | Max. Voltage Temperature Variation |
|------------------|-----------------|---------------------------|---------------------------|-------|---------------------------------|-------------------------------------|----------------------------|------------------------------------|
| (Unidirectional) | (Bidirectional) | V_R | V_{BR} (V) | I_T | I_R | V_C | I_{PP} | of V_{BR} |
| | | (V) | Min. | (mA) | (μA) | (V) | (A) | (mV/°C) |

15KP Series, 15,000 W, Case Type: D6



| | | | | | | | | |
|----------|-----------|-----|------|-----|----|-----|-----|-----|
| 15KP78 | 15KP78C | 78 | 86.7 | 5.0 | 10 | 140 | 107 | 104 |
| 15KP78A | 15KP78CA | 78 | 86.7 | 5.0 | 10 | 126 | 119 | 93 |
| 15KP85 | 15KP85C | 85 | 94.4 | 5.0 | 10 | 152 | 99 | 113 |
| 15KP85A | 15KP85CA | 85 | 94.4 | 5.0 | 10 | 137 | 109 | 102 |
| 15KP90 | 15KP90C | 90 | 100 | 5.0 | 10 | 160 | 94 | 120 |
| 15KP90A | 15KP90CA | 90 | 100 | 5.0 | 10 | 146 | 103 | 110 |
| 15KP100 | 15KP100C | 100 | 111 | 5.0 | 10 | 179 | 84 | 134 |
| 15KP100A | 15KP100CA | 100 | 111 | 5.0 | 10 | 162 | 93 | 123 |
| 15KP110 | 15KP110C | 110 | 122 | 5.0 | 10 | 196 | 77 | 147 |
| 15KP110A | 15KP110CA | 110 | 122 | 5.0 | 10 | 178 | 84 | 133 |
| 15KP120 | 15KP120C | 120 | 133 | 5.0 | 10 | 214 | 70 | 161 |
| 15KP120A | 15KP120CA | 120 | 133 | 5.0 | 10 | 193 | 78 | 146 |
| 15KP130 | 15KP130C | 130 | 144 | 5.0 | 10 | 231 | 65 | 174 |
| 15KP130A | 15KP130CA | 130 | 144 | 5.0 | 10 | 209 | 72 | 158 |
| 15KP150 | 15KP150C | 150 | 167 | 5.0 | 10 | 268 | 56 | 202 |
| 15KP150A | 15KP150CA | 150 | 167 | 5.0 | 10 | 243 | 62 | 184 |
| 15KP160 | 15KP160C | 160 | 178 | 5.0 | 10 | 287 | 52 | 216 |
| 15KP160A | 15KP160CA | 160 | 178 | 5.0 | 10 | 259 | 58 | 196 |
| 15KP170 | 15KP170C | 170 | 189 | 5.0 | 10 | 304 | 49 | 229 |
| 15KP170A | 15KP170CA | 170 | 189 | 5.0 | 10 | 275 | 55 | 208 |
| 15KP180 | 15KP180C | 180 | 200 | 5.0 | 10 | 321 | 47 | 242 |
| 15KP180A | 15KP180CA | 180 | 200 | 5.0 | 10 | 287 | 52 | 220 |
| 15KP200 | 15KP200C | 200 | 222 | 5.0 | 10 | 356 | 42 | 296 |
| 15KP200A | 15KP200CA | 200 | 222 | 5.0 | 10 | 325 | 46 | 274 |
| 15KP220 | 15KP220C | 220 | 245 | 5.0 | 10 | 393 | 38 | 297 |
| 15KP220A | 15KP220CA | 220 | 245 | 5.0 | 10 | 347 | 43 | 273 |
| 15KP240 | 15KP240C | 240 | 267 | 5.0 | 10 | 428 | 35 | 324 |
| 15KP240A | 15KP240CA | 240 | 267 | 5.0 | 10 | 387 | 39 | 300 |

Note:

Suffix "A" denotes 5% tolerance device , no suffix denotes a 10% tolerance device



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Part Number (Uni-directional) | Part Number (Bi-directional) | Reverse Stand Off Voltage | Breakdown Voltage @ I_T | | | Maximum Reverse Leakage @ V_R | Maximum Clamping Voltage @ I_{PP} | Maximum Peak Pulse Current | Max. Voltage Temperature Variation |
|----------------------------------|---------------------------------|---------------------------|---------------------------|------|-------|---------------------------------|-------------------------------------|----------------------------|------------------------------------|
| | | V_{WM} | V_{BR} (V) | | I_T | I_R | V_C | I_{PP} | of V_{BR} |
| | | (V) | Min. | Max. | (mA) | (μ A) | (V) | (A) | (mV/°C) |

R15KP Series, 15,000 W, Case Type: 5R



| | | | | | | | | | |
|----------|-----------|----|------|------|-----|-------|------|-----|-----|
| R15KP17 | R15KP17C | 17 | 18.9 | 23.1 | 50 | 5,000 | 32.2 | 464 | 19 |
| R15KP17A | R15KP17CA | 17 | 18.9 | 20.9 | 50 | 5,000 | 29.3 | 512 | 17 |
| R15KP18 | R15KP18C | 18 | 20.0 | 24.4 | 50 | 5,000 | 34.2 | 439 | 20 |
| R15KP18A | R15KP18CA | 18 | 20.0 | 22.1 | 50 | 5,000 | 30.9 | 485 | 18 |
| R15KP20 | R15KP20C | 20 | 22.2 | 27.1 | 20 | 1,500 | 37.9 | 396 | 24 |
| R15KP20A | R15KP20CA | 20 | 22.2 | 24.5 | 20 | 1,500 | 34.3 | 437 | 21 |
| R15KP22 | R15KP22C | 22 | 24.4 | 29.8 | 10 | 500 | 41.1 | 365 | 27 |
| R15KP22A | R15KP22CA | 22 | 24.4 | 26.9 | 10 | 500 | 37.1 | 404 | 24 |
| R15KP24 | R15KP24C | 24 | 26.7 | 32.6 | 5.0 | 150 | 45.0 | 333 | 30 |
| R15KP24A | R15KP24CA | 24 | 26.7 | 29.5 | 5.0 | 150 | 40.7 | 369 | 27 |
| R15KP26 | R15KP26C | 26 | 28.9 | 35.3 | 5.0 | 50 | 48.7 | 308 | 32 |
| R15KP26A | R15KP26CA | 26 | 28.9 | 31.9 | 5.0 | 50 | 44.0 | 341 | 29 |
| R15KP28 | R15KP28C | 28 | 31.1 | 38.0 | 5.0 | 25 | 52.4 | 286 | 35 |
| R15KP28A | R15KP28CA | 28 | 31.1 | 34.4 | 5.0 | 25 | 47.5 | 316 | 31 |
| R15KP30 | R15KP30C | 30 | 33.3 | 40.7 | 5.0 | 15 | 56.2 | 267 | 37 |
| R15KP30A | R15KP30CA | 30 | 33.3 | 36.8 | 5.0 | 15 | 50.7 | 296 | 33 |
| R15KP33 | R15KP33C | 33 | 36.7 | 44.9 | 5.0 | 10 | 60.6 | 248 | 42 |
| R15KP33A | R15KP33CA | 33 | 36.7 | 40.6 | 5.0 | 10 | 54.8 | 274 | 38 |
| R15KP36 | R15KP36C | 36 | 40.0 | 48.9 | 5.0 | 10 | 66.0 | 227 | 46 |
| R15KP36A | R15KP36CA | 36 | 40.0 | 44.2 | 5.0 | 10 | 59.7 | 251 | 41 |
| R15KP40 | R15KP40C | 40 | 44.4 | 54.3 | 5.0 | 10 | 72.8 | 206 | 51 |
| R15KP40A | R15KP40CA | 40 | 44.4 | 49.1 | 5.0 | 10 | 65.8 | 228 | 46 |
| R15KP43 | R15KP43C | 43 | 47.8 | 58.4 | 5.0 | 10 | 77.1 | 195 | 55 |
| R15KP43A | R15KP43CA | 43 | 47.8 | 52.8 | 5.0 | 10 | 69.7 | 215 | 50 |
| R15KP45 | R15KP45C | 45 | 50.0 | 61.1 | 5.0 | 10 | 80.7 | 186 | 57 |
| R15KP45A | R15KP45CA | 45 | 50.0 | 55.3 | 5.0 | 10 | 73.0 | 205 | 52 |
| R15KP48 | R15KP48C | 48 | 53.3 | 65.1 | 5.0 | 10 | 85.9 | 175 | 62 |
| R15KP48A | R15KP48CA | 48 | 53.3 | 58.9 | 5.0 | 10 | 77.7 | 193 | 56 |
| R15KP51 | R15KP51C | 51 | 56.7 | 69.3 | 5.0 | 10 | 91.5 | 164 | 66 |
| R15KP51A | R15KP51CA | 51 | 56.7 | 62.7 | 5.0 | 10 | 82.5 | 181 | 60 |
| R15KP54 | R15KP54C | 54 | 60.0 | 73.3 | 5.0 | 10 | 96.8 | 155 | 70 |
| R15KP54A | R15KP54CA | 54 | 60.0 | 66.3 | 5.0 | 10 | 87.5 | 171 | 63 |
| R15KP58 | R15KP58C | 58 | 64.4 | 78.7 | 5.0 | 10 | 104 | 144 | 76 |
| R15KP58A | R15KP58CA | 58 | 64.4 | 71.2 | 5.0 | 10 | 94 | 160 | 68 |
| R15KP60 | R15KP60C | 60 | 66.7 | 81.5 | 5.0 | 10 | 107 | 140 | 78 |
| R15KP60A | R15KP60CA | 60 | 66.7 | 73.7 | 5.0 | 10 | 97.3 | 154 | 70 |
| R15KP64 | R15KP64C | 64 | 71.1 | 86.9 | 5.0 | 10 | 115 | 130 | 84 |
| R15KP64A | R15KP64CA | 64 | 71.1 | 78.6 | 5.0 | 10 | 104 | 144 | 76 |
| R15KP70 | R15KP70C | 70 | 77.8 | 95.1 | 5.0 | 10 | 126 | 119 | 92 |
| R15KP70A | R15KP70CA | 70 | 77.8 | 86.0 | 5.0 | 10 | 114 | 132 | 83 |
| R15KP75 | R15KP75C | 75 | 83.3 | 102 | 5.0 | 10 | 135 | 111 | 100 |
| R15KP75A | R15KP75CA | 75 | 83.3 | 92.1 | 5.0 | 10 | 122 | 123 | 89 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Part Number (Uni-directional) | Part Number (Bi-directional) | Reverse Stand Off Voltage | Breakdown Voltage @ I_T | | | Maximum Reverse Leakage @ V_R | Maximum Clamping Voltage @ I_{PP} | Maximum Peak Pulse Current | Max. Voltage Temperature Variation |
|----------------------------------|---------------------------------|---------------------------|---------------------------|------|-------|---------------------------------|-------------------------------------|----------------------------|------------------------------------|
| | | V_{WM} | V_{BR} (V) | | I_T | I_R | V_C | I_{PP} | of V_{BR} |
| | | (V) | Min. | Max. | (mA) | (μ A) | (V) | (A) | (mV/°C) |

R15KP Series, 15,000 W, Case Type: 5R



| | | | | | | | | | |
|-----------|------------|-----|------|------|-----|----|-----|-----|-----|
| R15KP78 | R15KP78C | 78 | 86.7 | 106 | 5.0 | 10 | 140 | 107 | 104 |
| R15KP78A | R15KP78CA | 78 | 86.7 | 95.8 | 5.0 | 10 | 126 | 119 | 93 |
| R15KP85 | R15KP85C | 85 | 94.4 | 115 | 5.0 | 10 | 152 | 99 | 113 |
| R15KP85A | R15KP85CA | 85 | 94.4 | 104 | 5.0 | 10 | 137 | 109 | 102 |
| R15KP90 | R15KP90C | 90 | 100 | 122 | 5.0 | 10 | 160 | 94 | 120 |
| R15KP90A | R15KP90CA | 90 | 100 | 111 | 5.0 | 10 | 146 | 103 | 110 |
| R15KP100 | R15KP100C | 100 | 111 | 136 | 5.0 | 10 | 179 | 84 | 134 |
| R15KP100A | R15KP100CA | 100 | 111 | 123 | 5.0 | 10 | 162 | 93 | 123 |
| R15KP110 | R15KP110C | 110 | 122 | 149 | 5.0 | 10 | 196 | 77 | 147 |
| R15KP110A | R15KP110CA | 110 | 122 | 135 | 5.0 | 10 | 178 | 84 | 133 |
| R15KP120 | R15KP120C | 120 | 133 | 163 | 5.0 | 10 | 214 | 70 | 161 |
| R15KP120A | R15KP120CA | 120 | 133 | 147 | 5.0 | 10 | 193 | 78 | 146 |
| R15KP130 | R15KP130C | 130 | 144 | 176 | 5.0 | 10 | 231 | 65 | 174 |
| R15KP130A | R15KP130CA | 130 | 144 | 159 | 5.0 | 10 | 209 | 72 | 158 |
| R15KP150 | R15KP150C | 150 | 167 | 204 | 5.0 | 10 | 268 | 56 | 202 |
| R15KP150A | R15KP150CA | 150 | 167 | 185 | 5.0 | 10 | 243 | 62 | 184 |
| R15KP160 | R15KP160C | 160 | 178 | 218 | 5.0 | 10 | 287 | 52 | 216 |
| R15KP160A | R15KP160CA | 160 | 178 | 197 | 5.0 | 10 | 259 | 58 | 196 |
| R15KP170 | R15KP170C | 170 | 189 | 231 | 5.0 | 10 | 304 | 49 | 229 |
| R15KP170A | R15KP170CA | 170 | 189 | 209 | 5.0 | 10 | 275 | 55 | 208 |
| R15KP180 | R15KP180C | 180 | 200 | 244 | 5.0 | 10 | 321 | 47 | 242 |
| R15KP180A | R15KP180CA | 180 | 200 | 221 | 5.0 | 10 | 287 | 52 | 220 |
| R15KP200 | R15KP200C | 200 | 222 | 271 | 5.0 | 10 | 356 | 42 | 296 |
| R15KP200A | R15KP200CA | 200 | 222 | 245 | 5.0 | 10 | 325 | 46 | 274 |
| R15KP220 | R15KP220C | 220 | 245 | 299 | 5.0 | 10 | 393 | 38 | 297 |
| R15KP220A | R15KP220CA | 220 | 245 | 271 | 5.0 | 10 | 347 | 43 | 273 |
| R15KP240 | R15KP240C | 240 | 267 | 326 | 5.0 | 10 | 428 | 35 | 324 |
| R15KP240A | R15KP240CA | 240 | 267 | 295 | 5.0 | 10 | 387 | 39 | 300 |

Note:

Suffix "A" denotes 5% tolerance device , no suffix denotes a 10% tolerance device



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Reverse Stand Off Voltage | Breakdown Voltage @ $I_{(BR)}$ | | | Maximum Reverse Leakage @ V_{WM} | Maximum Clamping Voltage @ I_{PP} | Maximum Peak Pulse Current | Max. Voltage Temperature Variation |
|------------------|-----------------|---------------------------|--------------------------------|--------------------|----------------------|------------------------------------|-------------------------------------|----------------------------|------------------------------------|
| (Unidirectional) | (Bidirectional) | V_{WM} (V) | V_{BR} (V) | $I_{(BR)}$ (mA) | I_R (μA) | V_C (V) | I_{PP} (A) | | of V_{BR} (mV/°C) |
| | | | Min. | Max. | | | | | |

30KP Series, 30,000 W, Case Type: D6



| | | | | | | | | | |
|---------|----------|----|------|------|----|-------|------|-----|-----|
| 30KP22 | 30KP22C | 22 | 24.4 | 29.8 | 50 | 10000 | 41.1 | 730 | 27 |
| 30KP22A | 30KP22CA | 22 | 24.4 | 26.9 | 50 | 10000 | 37.1 | 808 | 24 |
| 30KP24 | 30KP24C | 24 | 26.7 | 32.6 | 50 | 10000 | 45.0 | 666 | 30 |
| 30KP24A | 30KP24CA | 24 | 26.7 | 29.5 | 50 | 10000 | 40.7 | 738 | 27 |
| 30KP26 | 30KP26C | 26 | 28.9 | 35.3 | 50 | 10000 | 48.7 | 616 | 32 |
| 30KP26A | 30KP26CA | 26 | 28.9 | 31.9 | 50 | 10000 | 44.0 | 682 | 29 |
| 30KP28 | 30KP28C | 28 | 31.1 | 38.0 | 50 | 8000 | 52.4 | 572 | 35 |
| 30KP28A | 30KP28CA | 28 | 31.1 | 34.4 | 50 | 8000 | 47.5 | 632 | 31 |
| 30KP30 | 30KP30C | 30 | 33.3 | 40.7 | 50 | 8000 | 56.2 | 534 | 37 |
| 30KP30A | 30KP30CA | 30 | 33.3 | 36.9 | 50 | 8000 | 50.7 | 592 | 33 |
| 30KP33 | 30KP33C | 33 | 36.7 | 44.9 | 50 | 5000 | 64.6 | 496 | 42 |
| 30KP33A | 30KP33CA | 33 | 36.7 | 40.6 | 50 | 5000 | 58.6 | 548 | 38 |
| 30KP36 | 30KP36C | 36 | 40.0 | 48.9 | 50 | 5000 | 68.2 | 454 | 46 |
| 30KP36A | 30KP36CA | 36 | 40.0 | 44.2 | 50 | 5000 | 61.8 | 502 | 41 |
| 30KP40 | 30KP40C | 40 | 44.4 | 54.3 | 20 | 1500 | 75.8 | 412 | 51 |
| 30KP40A | 30KP40CA | 40 | 44.4 | 49.1 | 20 | 1500 | 68.6 | 456 | 46 |
| 30KP43 | 30KP43C | 43 | 47.8 | 58.4 | 10 | 500 | 79.0 | 380 | 55 |
| 30KP43A | 30KP43CA | 43 | 47.8 | 52.8 | 10 | 500 | 71.0 | 430 | 50 |
| 30KP45 | 30KP45C | 45 | 50.0 | 61.1 | 5 | 150 | 80.7 | 372 | 57 |
| 30KP45A | 30KP45CA | 45 | 50.0 | 55.3 | 5 | 150 | 73.0 | 410 | 52 |
| 30KP48 | 30KP48C | 48 | 53.3 | 65.1 | 5 | 150 | 85.9 | 350 | 62 |
| 30KP48A | 30KP48CA | 48 | 53.3 | 58.9 | 5 | 150 | 77.7 | 386 | 56 |
| 30KP51 | 30KP51C | 51 | 56.7 | 69.3 | 5 | 50 | 91.5 | 328 | 66 |
| 30KP51A | 30KP51CA | 51 | 56.7 | 62.7 | 5 | 50 | 82.8 | 362 | 60 |
| 30KP54 | 30KP54C | 54 | 60.0 | 73.3 | 5 | 25 | 96.8 | 310 | 70 |
| 30KP54A | 30KP54CA | 54 | 60.0 | 66.3 | 5 | 25 | 87.5 | 342 | 63 |
| 30KP58 | 30KP58C | 58 | 64.4 | 78.7 | 5 | 15 | 104 | 288 | 76 |
| 30KP58A | 30KP58CA | 58 | 64.4 | 71.2 | 5 | 15 | 94 | 320 | 68 |
| 30KP60 | 30KP60C | 60 | 66.7 | 81.5 | 5 | 15 | 107 | 280 | 78 |
| 30KP60A | 30KP60CA | 60 | 66.7 | 73.7 | 5 | 15 | 97.3 | 304 | 71 |
| 30KP64 | 30KP64C | 64 | 71.1 | 86.9 | 5 | 10 | 115 | 260 | 84 |
| 30KP64A | 30KP64CA | 64 | 71.1 | 78.6 | 5 | 10 | 104 | 288 | 76 |
| 30KP70 | 30KP70C | 70 | 77.8 | 95.1 | 5 | 10 | 126 | 238 | 92 |
| 30KP70A | 30KP70CA | 70 | 77.8 | 86.0 | 5 | 10 | 114 | 264 | 83 |
| 30KP75 | 30KP75C | 75 | 83.3 | 102 | 5 | 10 | 135 | 222 | 100 |
| 30KP75A | 30KP75CA | 75 | 83.3 | 92.1 | 5 | 10 | 122 | 246 | 89 |
| 30KP78 | 30KP78C | 78 | 86.7 | 106 | 5 | 10 | 140 | 214 | 104 |
| 30KP78A | 30KP78CA | 78 | 86.7 | 95.8 | 5 | 10 | 126 | 238 | 93 |
| 30KP85 | 30KP85C | 85 | 94.4 | 115 | 5 | 10 | 152 | 198 | 113 |
| 30KP85A | 30KP85CA | 85 | 94.4 | 104 | 5 | 10 | 137 | 218 | 102 |
| 30KP90 | 30KP90C | 90 | 100 | 122 | 5 | 10 | 160 | 188 | 120 |
| 30KP90A | 30KP90CA | 90 | 100 | 111 | 5 | 10 | 146 | 206 | 109 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Reverse Stand Off Voltage | Breakdown Voltage @ $I_{(BR)}$ | | | Maximum Reverse Leakage @ V_{WM} | Maximum Clamping Voltage @ I_{PP} | Maximum Peak Pulse Current | Max. Voltage Temperature Variation |
|------------------|-----------------|---------------------------|--------------------------------|------|--------------------|------------------------------------|-------------------------------------|----------------------------|------------------------------------|
| (Unidirectional) | (Bidirectional) | V_{WM} (V) | V_{BR} (V) Min. | Max. | $I_{(BR)}$ (mA) | I_R (μA) | V_C (V) | I_{PP} (A) | of V_{BR} (mV/°C) |

30KP Series, 30,000 W, Case Type: D6



| | | | | | | | | | |
|----------|-----------|-----|-----|-----|---|----|-----|-----|-----|
| 30KP100 | 30KP100C | 100 | 111 | 136 | 5 | 10 | 179 | 168 | 134 |
| 30KP100A | 30KP100CA | 100 | 111 | 123 | 5 | 10 | 162 | 186 | 121 |
| 30KP110 | 30KP110C | 110 | 122 | 149 | 5 | 10 | 196 | 154 | 147 |
| 30KP110A | 30KP110CA | 110 | 122 | 135 | 5 | 10 | 178 | 168 | 133 |
| 30KP120 | 30KP120C | 120 | 133 | 163 | 5 | 10 | 214 | 140 | 161 |
| 30KP120A | 30KP120CA | 120 | 133 | 147 | 5 | 10 | 193 | 156 | 145 |
| 30KP130 | 30KP130C | 130 | 144 | 176 | 5 | 10 | 231 | 130 | 174 |
| 30KP130A | 30KP130CA | 130 | 144 | 159 | 5 | 10 | 209 | 142 | 157 |
| 30KP150 | 30KP150C | 150 | 167 | 204 | 5 | 10 | 268 | 112 | 202 |
| 30KP150A | 30KP150CA | 150 | 167 | 185 | 5 | 10 | 243 | 124 | 183 |
| 30KP160 | 30KP160C | 160 | 178 | 218 | 5 | 10 | 287 | 104 | 216 |
| 30KP160A | 30KP160CA | 160 | 178 | 197 | 5 | 10 | 259 | 116 | 195 |
| 30KP170 | 30KP170C | 170 | 189 | 231 | 5 | 10 | 304 | 98 | 229 |
| 30KP170A | 30KP170CA | 170 | 189 | 209 | 5 | 10 | 275 | 110 | 207 |
| 30KP180 | 30KP180C | 180 | 200 | 244 | 5 | 10 | 321 | 94 | 242 |
| 30KP180A | 30KP180CA | 180 | 200 | 221 | 5 | 10 | 291 | 104 | 219 |
| 30KP200 | 30KP200C | 200 | 222 | 271 | 5 | 10 | 356 | 84 | 269 |
| 30KP200A | 30KP200CA | 200 | 222 | 245 | 5 | 10 | 322 | 94 | 243 |
| 30KP220 | 30KP220C | 220 | 245 | 299 | 5 | 10 | 393 | 76 | 297 |
| 30KP220A | 30KP220CA | 220 | 245 | 271 | 5 | 10 | 356 | 84 | 269 |
| 30KP250A | 30KP250CA | 250 | 278 | 308 | 5 | 10 | 403 | 74 | 306 |
| 30KP260A | 30KP260CA | 260 | 289 | 320 | 5 | 10 | 419 | 71 | 318 |
| 30KP280A | 30KP280CA | 280 | 311 | 345 | 5 | 10 | 451 | 66 | 344 |
| 30KP300A | 30KP300CA | 300 | 333 | 369 | 5 | 10 | 483 | 62 | 368 |
| 30KP350A | 30KP350CA | 350 | 389 | 431 | 5 | 10 | 564 | 53 | 430 |
| 30KP400A | 30KP400CA | 400 | 444 | 492 | 5 | 10 | 644 | 46 | 490 |

Note:

Suffix "A" denotes 5% tolerance device , no suffix denotes a 10% tolerance device



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Reverse Stand Off Voltage | Breakdown Voltage @ $I_{(BR)}$ | | | Maximum Reverse Leakage @ V_{WM} | Maximum Clamping Voltage @ I_{PP} | Maximum Peak Pulse Current |
|------------------|-----------------|---------------------------|--------------------------------|------|------------|------------------------------------|-------------------------------------|----------------------------|
| (Unidirectional) | (Bidirectional) | V_{WM} | V_{BR} (V) | | $I_{(BR)}$ | I_R | V_C | I_{PP} |
| | | (V) | Min. | Max. | (mA) | (μA) | (V) | (A) |

50KP Series, 50,000 W, Case Type: D6



| | | | | | | | | |
|----------|-----------|-----|------|------|----|-------|------|-----|
| 50KP36 | 50KP36C | 36 | 40.0 | 48.9 | 50 | 10000 | 68.2 | 733 |
| 50KP36A | 50KP36CA | 36 | 40.0 | 44.2 | 50 | 10000 | 61.8 | 809 |
| 50KP40 | 50KP40C | 40 | 44.4 | 54.3 | 20 | 10000 | 75.8 | 659 |
| 50KP40A | 50KP40CA | 40 | 44.4 | 49.1 | 20 | 10000 | 68.6 | 728 |
| 50KP43 | 50KP43C | 43 | 47.8 | 58.4 | 10 | 10000 | 79.0 | 632 |
| 50KP43A | 50KP43CA | 43 | 47.8 | 52.8 | 10 | 10000 | 71.0 | 704 |
| 50KP45 | 50KP45C | 45 | 50.0 | 61.1 | 5 | 8000 | 80.7 | 619 |
| 50KP45A | 50KP45CA | 45 | 50.0 | 55.3 | 5 | 8000 | 73.0 | 684 |
| 50KP48 | 50KP48C | 48 | 53.3 | 65.1 | 5 | 8000 | 85.9 | 582 |
| 50KP48A | 50KP48CA | 48 | 53.3 | 58.9 | 5 | 8000 | 77.7 | 643 |
| 50KP51 | 50KP51C | 51 | 56.7 | 69.3 | 5 | 5000 | 91.5 | 546 |
| 50KP51A | 50KP51CA | 51 | 56.7 | 62.7 | 5 | 5000 | 82.8 | 603 |
| 50KP54 | 50KP54C | 54 | 60.0 | 73.3 | 5 | 5000 | 96.8 | 516 |
| 50KP54A | 50KP54CA | 54 | 60.0 | 66.3 | 5 | 5000 | 87.5 | 571 |
| 50KP58 | 50KP58C | 58 | 64.4 | 78.7 | 5 | 1500 | 104 | 480 |
| 50KP58A | 50KP58CA | 58 | 64.4 | 71.2 | 5 | 1500 | 94 | 531 |
| 50KP60 | 50KP60C | 60 | 66.7 | 81.5 | 5 | 500 | 107 | 467 |
| 50KP60A | 50KP60CA | 60 | 66.7 | 73.7 | 5 | 500 | 97.3 | 513 |
| 50KP64 | 50KP64C | 64 | 71.1 | 86.9 | 5 | 150 | 115 | 434 |
| 50KP64A | 50KP64CA | 64 | 71.1 | 78.6 | 5 | 150 | 104 | 480 |
| 50KP70 | 50KP70C | 70 | 77.8 | 95.1 | 5 | 150 | 126 | 396 |
| 50KP70A | 50KP70CA | 70 | 77.8 | 86.0 | 5 | 150 | 114 | 438 |
| 50KP75 | 50KP75C | 75 | 83.3 | 102 | 5 | 50 | 135 | 370 |
| 50KP75A | 50KP75CA | 75 | 83.3 | 92.1 | 5 | 50 | 122 | 409 |
| 50KP78 | 50KP78C | 78 | 86.7 | 106 | 5 | 25 | 140 | 357 |
| 50KP78A | 50KP78CA | 78 | 86.7 | 95.8 | 5 | 25 | 126 | 396 |
| 50KP85 | 50KP85C | 85 | 94.4 | 115 | 5 | 15 | 152 | 328 |
| 50KP85A | 50KP85CA | 85 | 94.4 | 104 | 5 | 15 | 137 | 364 |
| 50KP90 | 50KP90C | 90 | 100 | 122 | 5 | 15 | 160 | 312 |
| 50KP90A | 50KP90CA | 90 | 100 | 111 | 5 | 15 | 146 | 342 |
| 50KP100 | 50KP100C | 100 | 111 | 136 | 5 | 10 | 179 | 279 |
| 50KP100A | 50KP100CA | 100 | 111 | 123 | 5 | 10 | 162 | 308 |



Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | | Reverse Stand Off Voltage | Breakdown Voltage @ $I_{(BR)}$ | | | Maximum Reverse Leakage @ V_{WM} | Maximum Clamping Voltage @ I_{PP} | Maximum Peak Pulse Current |
|------------------|-----------------|---------------------------|--------------------------------|------|------------|------------------------------------|-------------------------------------|----------------------------|
| (Unidirectional) | (Bidirectional) | V_{WM} | V_{BR} (V) | | $I_{(BR)}$ | I_R | V_C | I_{PP} |
| | | (V) | Min. | Max. | (mA) | (μA) | (V) | (A) |

50KP Series, 50,000 W, Case Type: D6



| | | | | | | | | |
|----------|-----------|-----|-----|-----|---|----|-----|-----|
| 50KP110 | 50KP110C | 110 | 122 | 149 | 5 | 10 | 196 | 255 |
| 50KP110A | 50KP110CA | 110 | 122 | 135 | 5 | 10 | 178 | 280 |
| 50KP120 | 50KP120C | 120 | 133 | 163 | 5 | 10 | 214 | 233 |
| 50KP120A | 50KP120CA | 120 | 133 | 147 | 5 | 10 | 193 | 259 |
| 50KP130 | 50KP130C | 130 | 144 | 176 | 5 | 10 | 231 | 216 |
| 50KP130A | 50KP130CA | 130 | 144 | 159 | 5 | 10 | 209 | 239 |
| 50KP150 | 50KP150C | 150 | 167 | 204 | 5 | 10 | 268 | 186 |
| 50KP150A | 50KP150CA | 150 | 167 | 185 | 5 | 10 | 243 | 205 |
| 50KP160 | 50KP160C | 160 | 178 | 218 | 5 | 10 | 287 | 174 |
| 50KP160A | 50KP160CA | 160 | 178 | 197 | 5 | 10 | 259 | 193 |
| 50KP170 | 50KP170C | 170 | 189 | 231 | 5 | 10 | 304 | 164 |
| 50KP170A | 50KP170CA | 170 | 189 | 209 | 5 | 10 | 275 | 181 |
| 50KP180 | 50KP180C | 180 | 200 | 244 | 5 | 10 | 321 | 155 |
| 50KP180A | 50KP180CA | 180 | 200 | 221 | 5 | 10 | 291 | 171 |
| 50KP200 | 50KP200C | 200 | 222 | 271 | 5 | 10 | 356 | 140 |
| 50KP200A | 50KP200CA | 200 | 222 | 245 | 5 | 10 | 322 | 155 |
| 50KP220 | 50KP220C | 220 | 245 | 299 | 5 | 10 | 393 | 127 |
| 50KP220A | 50KP220CA | 220 | 245 | 271 | 5 | 10 | 356 | 140 |
| 50KP250A | 50KP250CA | 250 | 278 | 308 | 5 | 10 | 403 | 124 |
| 50KP260A | 50KP260CA | 260 | 289 | 320 | 5 | 10 | 419 | 119 |
| 50KP280A | 50KP280CA | 280 | 311 | 345 | 5 | 10 | 451 | 110 |
| 50KP300A | 50KP300CA | 300 | 333 | 369 | 5 | 10 | 483 | 103 |
| 50KP350A | 50KP350CA | 350 | 389 | 431 | 5 | 10 | 564 | 88 |
| 50KP400A | 50KP400CA | 400 | 444 | 492 | 5 | 10 | 644 | 77 |

Note: (1) For bidirectional type having V_{WM} of 60 volts and less, the I_P limit is double.



Low Capacitance Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-O.

| Type No. | Breakdown Voltage @ I_t | | Reverse Stand-off Voltage | Max. Reverse Leakage @ V_{RWM} | Max. Clamping Voltage @ $I_{RSM} = 5A$ | Max. Reverse Current | Max. Junction Capacitance @ 0 Volt | Working Inverse Blocking Voltage | Max. Inverse Blocking Current @ V_{WIB} | Peak Inverse Blocking Voltage |
|----------|------------------------------|-------|---------------------------------|---|---|----------------------------|---|---|--|--|
| | V_{BR} (V) | I_t | V_{RWM} | I_R | V_{RSM} | I_{RSM} | | V_{WIB} | I_{IB} | V_{PIB} |
| | Min. | (mA) | (V) | (μA) | (V) | (A) | pF | (V) | mA | (V) |

SAC Series, 500 W, Case Type: DO-41



| | | | | | | | | | | |
|--------|------|-----|-----|-----|------|------|----|-----|-----|-----|
| SAC5.0 | 7.6 | 1.0 | 5.0 | 300 | 10.0 | 44 | 50 | 75 | 1.0 | 100 |
| SAC6.0 | 7.9 | 1.0 | 6.0 | 300 | 11.2 | 41 | 50 | 75 | 1.0 | 100 |
| SAC7.0 | 8.3 | 1.0 | 7.0 | 300 | 12.6 | 38 | 50 | 75 | 1.0 | 100 |
| SAC8.0 | 8.9 | 1.0 | 8.0 | 100 | 13.4 | 36 | 50 | 75 | 1.0 | 100 |
| SAC8.5 | 9.4 | 1.0 | 8.5 | 50 | 14.0 | 34 | 50 | 75 | 1.0 | 100 |
| SAC10 | 11.1 | 1.0 | 10 | 5.0 | 16.3 | 29 | 50 | 75 | 1.0 | 100 |
| SAC12 | 13.3 | 1.0 | 12 | 5.0 | 19.0 | 25 | 50 | 75 | 1.0 | 100 |
| SAC15 | 16.7 | 1.0 | 15 | 5.0 | 23.6 | 20 | 50 | 75 | 1.0 | 100 |
| SAC18 | 20.0 | 1.0 | 18 | 5.0 | 28.8 | 15 | 50 | 75 | 1.0 | 100 |
| SAC22 | 24.4 | 1.0 | 22 | 5.0 | 35.4 | 14 | 50 | 75 | 1.0 | 100 |
| SAC26 | 28.9 | 1.0 | 26 | 5.0 | 42.3 | 11.1 | 50 | 75 | 1.0 | 100 |
| SAC30 | 33.3 | 1.0 | 30 | 5.0 | 48.6 | 10 | 50 | 75 | 1.0 | 100 |
| SAC36 | 40.0 | 1.0 | 36 | 5.0 | 60.0 | 8.6 | 50 | 75 | 1.0 | 100 |
| SAC45 | 50.0 | 1.0 | 45 | 5.0 | 77.0 | 6.8 | 50 | 150 | 1.0 | 200 |
| SAC50 | 55.5 | 1.0 | 50 | 5.0 | 88.0 | 5.8 | 50 | 150 | 1.0 | 200 |



Low Capacitance Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage ⁽¹⁾ @ I_T | | Reverse Stand-off Voltage | Maximum Reverse Leakage @ V_{RWM} | Maximum Peak Pulse Surge Current | Maximum Clamping Voltage @ I_{PPM} | Maximum Junction Capacitance @ 0 Volt |
|----------|--|------|---------------------------|-------------------------------------|----------------------------------|--------------------------------------|---------------------------------------|
| | V_{BR} (V) | | V_{RWM} | I_R | I_{PPM} | V_C | |
| | Min. | Max. | (mA) | (V) | (μ A) | (A) | pF |

SMBJ-LC Series, 600 W, Case Type: SMB



| | | | | | | | | |
|-------------|-------|-------|-----|-----|-----|------|------|----|
| SMBJ-LC5.0 | 7.20 | 8.62 | 10 | 5.0 | 800 | 62.5 | 9.6 | 80 |
| SMBJ-LC5.0A | 7.20 | 7.87 | 10 | 5.0 | 800 | 65.2 | 9.2 | 80 |
| SMBJ-LC6.0 | 7.47 | 8.95 | 10 | 6.0 | 800 | 52.6 | 11.4 | 80 |
| SMBJ-LC6.0A | 7.47 | 8.17 | 10 | 6.0 | 800 | 58.3 | 10.3 | 80 |
| SMBJ-LC6.5 | 8.02 | 9.62 | 10 | 6.5 | 500 | 48.7 | 12.3 | 80 |
| SMBJ-LC6.5A | 8.02 | 8.78 | 10 | 6.5 | 500 | 53.6 | 11.2 | 80 |
| SMBJ-LC7.0 | 8.58 | 10.31 | 10 | 7.0 | 200 | 45.1 | 13.3 | 80 |
| SMBJ-LC7.0A | 8.58 | 9.40 | 10 | 7.0 | 200 | 50.0 | 12.0 | 80 |
| SMBJ-LC7.5 | 9.13 | 11.00 | 1.0 | 7.5 | 100 | 42.0 | 14.3 | 80 |
| SMBJ-LC7.5A | 9.13 | 10.01 | 1.0 | 7.5 | 100 | 46.5 | 12.9 | 80 |
| SMBJ-LC8.0 | 9.69 | 11.70 | 1.0 | 8.0 | 50 | 40.0 | 15.0 | 80 |
| SMBJ-LC8.0A | 9.69 | 10.63 | 1.0 | 8.0 | 50 | 44.1 | 13.6 | 80 |
| SMBJ-LC8.5 | 10.24 | 12.3 | 1.0 | 8.5 | 10 | 37.7 | 15.9 | 80 |
| SMBJ-LC8.5A | 10.24 | 11.2 | 1.0 | 8.5 | 10 | 41.7 | 14.4 | 80 |
| SMBJ-LC9.0 | 10.8 | 13.0 | 1.0 | 9.0 | 5.0 | 35.5 | 16.9 | 80 |
| SMBJ-LC9.0A | 10.8 | 11.9 | 1.0 | 9.0 | 5.0 | 39.0 | 15.4 | 80 |
| SMBJ-LC10 | 11.9 | 14.4 | 1.0 | 10 | 1.0 | 31.9 | 18.8 | 80 |
| SMBJ-LC10A | 11.9 | 13.1 | 1.0 | 10 | 1.0 | 35.3 | 17.0 | 80 |
| SMBJ-LC11 | 13.0 | 15.7 | 1.0 | 11 | 1.0 | 29.9 | 20.1 | 80 |
| SMBJ-LC11A | 13.0 | 14.3 | 1.0 | 11 | 1.0 | 33.0 | 18.2 | 80 |
| SMBJ-LC12 | 14.1 | 17.1 | 1.0 | 12 | 1.0 | 27.3 | 22.0 | 80 |
| SMBJ-LC12A | 14.1 | 15.5 | 1.0 | 12 | 1.0 | 30.2 | 19.9 | 80 |
| SMBJ-LC13 | 15.2 | 18.4 | 1.0 | 13 | 1.0 | 25.2 | 23.8 | 80 |
| SMBJ-LC13A | 15.2 | 16.7 | 1.0 | 13 | 1.0 | 27.9 | 21.5 | 80 |
| SMBJ-LC14 | 16.4 | 19.9 | 1.0 | 14 | 1.0 | 23.3 | 25.8 | 80 |
| SMBJ-LC14A | 16.4 | 18.0 | 1.0 | 14 | 1.0 | 25.8 | 23.2 | 80 |
| SMBJ-LC15 | 17.5 | 21.2 | 1.0 | 15 | 1.0 | 22.3 | 26.9 | 80 |
| SMBJ-LC15A | 17.5 | 19.3 | 1.0 | 15 | 1.0 | 24.0 | 24.4 | 80 |
| SMBJ-LC16 | 18.6 | 22.6 | 1.0 | 16 | 1.0 | 20.8 | 28.8 | 80 |
| SMBJ-LC16A | 18.6 | 20.5 | 1.0 | 16 | 1.0 | 23.1 | 26.0 | 80 |
| SMBJ-LC17 | 19.7 | 23.9 | 1.0 | 17 | 1.0 | 19.7 | 30.5 | 80 |
| SMBJ-LC17A | 19.7 | 21.7 | 1.0 | 17 | 1.0 | 21.7 | 27.6 | 80 |
| SMBJ-LC18 | 20.8 | 25.2 | 1.0 | 18 | 1.0 | 18.6 | 32.2 | 80 |
| SMBJ-LC18A | 20.8 | 22.9 | 1.0 | 18 | 1.0 | 20.5 | 29.2 | 80 |
| SMBJ-LC20 | 23.0 | 27.9 | 1.0 | 20 | 1.0 | 16.7 | 35.8 | 80 |
| SMBJ-LC20A | 23.0 | 25.3 | 1.0 | 20 | 1.0 | 18.5 | 32.4 | 80 |
| SMBJ-LC22 | 25.2 | 30.6 | 1.0 | 22 | 1.0 | 15.2 | 39.4 | 80 |
| SMBJ-LC22A | 25.2 | 27.7 | 1.0 | 22 | 1.0 | 16.9 | 35.5 | 80 |
| SMBJ-LC24 | 27.5 | 33.4 | 1.0 | 24 | 1.0 | 14.0 | 43.0 | 80 |
| SMBJ-LC24A | 27.5 | 30.3 | 1.0 | 24 | 1.0 | 15.4 | 38.9 | 80 |
| SMBJ-LC26 | 29.7 | 36.1 | 1.0 | 26 | 1.0 | 12.4 | 46.6 | 80 |
| SMBJ-LC26A | 29.7 | 32.7 | 1.0 | 26 | 1.0 | 14.2 | 42.1 | 80 |
| SMBJ-LC28 | 31.9 | 38.8 | 1.0 | 28 | 1.0 | 12.0 | 50.0 | 80 |
| SMBJ-LC28A | 31.9 | 35.2 | 1.0 | 28 | 1.0 | 13.2 | 45.4 | 80 |
| SMBJ-LC30 | 34.1 | 41.5 | 1.0 | 30 | 1.0 | 11.2 | 53.5 | 80 |
| SMBJ-LC30A | 34.1 | 37.6 | 1.0 | 30 | 1.0 | 12.4 | 48.4 | 80 |
| SMBJ-LC33 | 37.5 | 45.7 | 1.0 | 33 | 1.0 | 10.2 | 59.0 | 80 |
| SMBJ-LC33A | 37.5 | 41.4 | 1.0 | 33 | 1.0 | 11.3 | 53.3 | 80 |

Low Capacitance Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage ⁽¹⁾ @ I _T | | Reverse Stand-off Voltage | Maximum Reverse Leakage @ V _{RWM} | Maximum Peak Pulse Surge Current | Maximum Clamping Voltage @ I _{PPM} | Maximum Junction Capacitance @ 0 Volt |
|----------|---|------|---------------------------|--|----------------------------------|---|---------------------------------------|
| | V _{BR} (V) | | V _{RWM} | I _R | I _{PPM} | V _C | @ 0 Volt |
| | Min. | Max. | (mA) | (V) | (μA) | (A) | pF |

SMBJ-LC Series, 600 W, Case Type: SMB



| | | | | | | | | |
|-------------|-------|-------|-----|-----|-----|------|------|----|
| SMBJ-LC36 | 40.8 | 49.7 | 1.0 | 36 | 1.0 | 9.3 | 64.3 | 80 |
| SMBJ-LC36A | 40.8 | 45.0 | 1.0 | 36 | 1.0 | 10.3 | 58.1 | 80 |
| SMBJ-LC40 | 45.2 | 55.1 | 1.0 | 40 | 1.0 | 8.4 | 71.4 | 80 |
| SMBJ-LC40A | 45.2 | 49.9 | 1.0 | 40 | 1.0 | 9.3 | 64.5 | 80 |
| SMBJ-LC43 | 48.6 | 59.2 | 1.0 | 43 | 1.0 | 7.8 | 76.7 | 80 |
| SMBJ-LC43A | 48.6 | 53.6 | 1.0 | 43 | 1.0 | 8.6 | 69.4 | 80 |
| SMBJ-LC45 | 50.8 | 61.9 | 1.0 | 45 | 1.0 | 7.5 | 80.3 | 80 |
| SMBJ-LC45A | 50.8 | 56.1 | 1.0 | 45 | 1.0 | 8.3 | 72.7 | 80 |
| SMBJ-LC48 | 54.1 | 65.9 | 1.0 | 48 | 1.0 | 7.0 | 85.5 | 80 |
| SMBJ-LC48A | 54.1 | 59.7 | 1.0 | 48 | 1.0 | 7.7 | 77.4 | 80 |
| SMBJ-LC51 | 57.5 | 70.1 | 1.0 | 51 | 1.0 | 6.6 | 91.1 | 80 |
| SMBJ-LC51A | 57.5 | 63.5 | 1.0 | 51 | 1.0 | 7.3 | 82.4 | 80 |
| SMBJ-LC54 | 60.8 | 74.1 | 1.0 | 54 | 1.0 | 6.2 | 96.3 | 80 |
| SMBJ-LC54A | 60.8 | 67.1 | 1.0 | 54 | 1.0 | 6.9 | 87.1 | 80 |
| SMBJ-LC58 | 65.2 | 79.5 | 1.0 | 58 | 1.0 | 5.8 | 103 | 80 |
| SMBJ-LC58A | 65.2 | 72.0 | 1.0 | 58 | 1.0 | 6.4 | 93.6 | 80 |
| SMBJ-LC60 | 67.5 | 82.3 | 1.0 | 60 | 1.0 | 5.6 | 107 | 80 |
| SMBJ-LC60A | 67.5 | 74.5 | 1.0 | 60 | 1.0 | 6.2 | 96.8 | 80 |
| SMBJ-LC64 | 71.9 | 87.7 | 1.0 | 64 | 1.0 | 5.3 | 114 | 80 |
| SMBJ-LC64A | 71.9 | 79.4 | 1.0 | 64 | 1.0 | 5.8 | 103 | 80 |
| SMBJ-LC70 | 78.6 | 95.9 | 1.0 | 70 | 1.0 | 4.8 | 125 | 80 |
| SMBJ-LC70A | 78.6 | 86.8 | 1.0 | 70 | 1.0 | 5.3 | 113 | 80 |
| SMBJ-LC75 | 84.1 | 102.8 | 1.0 | 75 | 1.0 | 4.5 | 134 | 80 |
| SMBJ-LC75A | 84.1 | 92.9 | 1.0 | 75 | 1.0 | 4.9 | 121 | 80 |
| SMBJ-LC78 | 87.5 | 106.8 | 1.0 | 78 | 1.0 | 4.3 | 139 | 80 |
| SMBJ-LC78A | 87.5 | 96.6 | 1.0 | 78 | 1.0 | 4.7 | 126 | 80 |
| SMBJ-LC85 | 95.2 | 115.8 | 1.0 | 85 | 1.0 | 3.9 | 151 | 80 |
| SMBJ-LC85A | 95.2 | 104.8 | 1.0 | 85 | 1.0 | 4.4 | 137 | 80 |
| SMBJ-LC90 | 100.8 | 122.8 | 1.0 | 90 | 1.0 | 3.8 | 160 | 80 |
| SMBJ-LC90A | 100.8 | 111.8 | 1.0 | 90 | 1.0 | 4.1 | 146 | 80 |
| SMBJ-LC100 | 111.8 | 136.8 | 1.0 | 100 | 1.0 | 3.4 | 179 | 80 |
| SMBJ-LC100A | 111.8 | 123.8 | 1.0 | 100 | 1.0 | 3.7 | 162 | 80 |
| SMBJ-LC110 | 122.8 | 149.8 | 1.0 | 110 | 1.0 | 3.0 | 196 | 80 |
| SMBJ-LC110A | 122.8 | 135.8 | 1.0 | 110 | 1.0 | 3.4 | 177 | 80 |
| SMBJ-LC120 | 133.8 | 163.8 | 1.0 | 120 | 1.0 | 2.8 | 214 | 80 |
| SMBJ-LC120A | 133.8 | 147.8 | 1.0 | 120 | 1.0 | 3.1 | 193 | 80 |
| SMBJ-LC130 | 144.8 | 176.8 | 1.0 | 130 | 1.0 | 2.6 | 231 | 80 |
| SMBJ-LC130A | 144.8 | 159.8 | 1.0 | 130 | 1.0 | 2.9 | 209 | 80 |
| SMBJ-LC150 | 167.8 | 204.8 | 1.0 | 150 | 1.0 | 2.2 | 268 | 80 |
| SMBJ-LC150A | 167.8 | 185.8 | 1.0 | 150 | 1.0 | 2.5 | 243 | 80 |
| SMBJ-LC160 | 178.8 | 218.8 | 1.0 | 160 | 1.0 | 2.1 | 287 | 80 |
| SMBJ-LC160A | 178.8 | 197.8 | 1.0 | 160 | 1.0 | 2.3 | 259 | 80 |
| SMBJ-LC170 | 189.8 | 231.8 | 1.0 | 170 | 1.0 | 2.0 | 304 | 80 |
| SMBJ-LC170A | 189.8 | 209.8 | 1.0 | 170 | 1.0 | 2.2 | 275 | 80 |
| SMBJ-LC188 | 209.8 | 255.8 | 1.0 | 188 | 1.0 | 1.7 | 344 | 80 |
| SMBJ-LC188A | 209.8 | 231.8 | 1.0 | 188 | 1.0 | 2.0 | 328 | 80 |

Notes: (1) Pulse test : $t_p \leq 50\text{ms}$.

(2) "SMBJ-L" will be omitted in marking on the diode.



Low Capacitance Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-O.

| Type No. | Breakdown Voltage @ It | | Reverse Stand-off Voltage | Max. Reverse Leakage @ VRWM | Max. Clamping Voltage @ IRSM | Max. Reverse Current | Max. Junction Capacitance @ 0 Volt | Working Inverse Blocking Voltage | Max. Inverse Blocking Current @ VWIB | Peak Inverse Blocking Voltage |
|----------|---------------------------|------|---------------------------------|--------------------------------------|---------------------------------------|----------------------------|---|---|---|--|
| | VBR (V) | | VRWM | IR | VRSM | IRSM | pF | VWIB | IIB | VPIB |
| | Min. | Max. | (mA) | (V) | (μA) | (V) | | | | |

LCE Series, 1500 W, Case Type: DO-201



| | | | | | | | | | | | |
|---------|-------|-------|-----|-----|------|------|-----|-----|----|-----|-----|
| LCE6.5 | 8.02 | 9.62 | 10 | 6.5 | 1000 | 14.3 | 100 | 100 | 75 | 1.0 | 100 |
| LCE6.5A | 8.02 | 8.78 | 10 | 6.5 | 1000 | 13.2 | 100 | 100 | 75 | 1.0 | 100 |
| LCE7.0 | 8.58 | 10.31 | 10 | 7.0 | 500 | 15.3 | 100 | 100 | 75 | 1.0 | 100 |
| LCE7.0A | 8.58 | 9.40 | 10 | 7.0 | 500 | 14.0 | 100 | 100 | 75 | 1.0 | 100 |
| LCE7.5 | 9.13 | 11.00 | 10 | 7.5 | 250 | 16.3 | 100 | 100 | 75 | 1.0 | 100 |
| LCE7.5A | 9.13 | 10.01 | 10 | 7.5 | 250 | 14.9 | 100 | 100 | 75 | 1.0 | 100 |
| LCE8.0 | 9.69 | 11.70 | 10 | 8.0 | 100 | 17.0 | 100 | 100 | 75 | 1.0 | 100 |
| LCE8.0A | 9.69 | 10.63 | 10 | 8.0 | 100 | 15.6 | 100 | 100 | 75 | 1.0 | 100 |
| LCE8.5 | 10.24 | 12.3 | 1.0 | 8.5 | 50 | 17.9 | 94 | 100 | 75 | 1.0 | 100 |
| LCE8.5A | 10.24 | 11.2 | 1.0 | 8.5 | 50 | 16.4 | 100 | 100 | 75 | 1.0 | 100 |
| LCE9.0 | 10.8 | 13.0 | 1.0 | 9.0 | 10.0 | 18.9 | 89 | 100 | 75 | 1.0 | 100 |
| LCE9.0A | 10.8 | 11.9 | 1.0 | 9.0 | 10.0 | 17.4 | 97 | 100 | 75 | 1.0 | 100 |
| LCE10 | 11.9 | 14.4 | 1.0 | 10 | 5.0 | 20.8 | 80 | 100 | 75 | 1.0 | 100 |
| LCE10A | 11.9 | 13.1 | 1.0 | 10 | 5.0 | 19.0 | 88 | 100 | 75 | 1.0 | 100 |
| LCE11 | 13.0 | 15.7 | 1.0 | 11 | 5.0 | 22.1 | 74 | 100 | 75 | 1.0 | 100 |
| LCE11A | 13.0 | 14.3 | 1.0 | 11 | 5.0 | 20.2 | 82 | 100 | 75 | 1.0 | 100 |
| LCE12 | 14.1 | 17.1 | 1.0 | 12 | 5.0 | 24.0 | 68 | 100 | 75 | 1.0 | 100 |
| LCE12A | 14.1 | 15.5 | 1.0 | 12 | 5.0 | 21.9 | 75 | 100 | 75 | 1.0 | 100 |
| LCE13 | 15.2 | 18.4 | 1.0 | 13 | 5.0 | 25.8 | 63 | 100 | 75 | 1.0 | 100 |
| LCE13A | 15.2 | 16.7 | 1.0 | 13 | 5.0 | 23.5 | 70 | 100 | 75 | 1.0 | 100 |
| LCE14 | 16.4 | 19.9 | 1.0 | 14 | 5.0 | 27.8 | 58 | 100 | 75 | 1.0 | 100 |
| LCE14A | 16.4 | 18.0 | 1.0 | 14 | 5.0 | 25.2 | 65 | 100 | 75 | 1.0 | 100 |
| LCE15 | 17.5 | 21.2 | 1.0 | 15 | 5.0 | 28.9 | 56 | 100 | 75 | 1.0 | 100 |
| LCE15A | 17.5 | 19.3 | 1.0 | 15 | 5.0 | 26.4 | 61 | 100 | 75 | 1.0 | 100 |
| LCE16 | 18.6 | 22.6 | 1.0 | 16 | 5.0 | 30.8 | 52 | 100 | 75 | 1.0 | 100 |
| LCE16A | 18.6 | 20.5 | 1.0 | 16 | 5.0 | 28.0 | 57 | 100 | 75 | 1.0 | 100 |
| LCE17 | 19.7 | 23.9 | 1.0 | 17 | 5.0 | 32.5 | 49 | 100 | 75 | 1.0 | 100 |
| LCE17A | 19.7 | 21.7 | 1.0 | 17 | 5.0 | 29.6 | 54 | 100 | 75 | 1.0 | 100 |
| LCE18 | 20.8 | 25.2 | 1.0 | 18 | 5.0 | 34.2 | 46 | 100 | 75 | 1.0 | 100 |
| LCE18A | 20.8 | 22.9 | 1.0 | 18 | 5.0 | 31.2 | 51 | 100 | 75 | 1.0 | 100 |
| LCE20 | 23.0 | 27.9 | 1.0 | 20 | 5.0 | 37.8 | 42 | 100 | 75 | 1.0 | 100 |
| LCE20A | 23.0 | 25.3 | 1.0 | 20 | 5.0 | 34.4 | 46 | 100 | 75 | 1.0 | 100 |
| LCE22 | 25.2 | 30.6 | 1.0 | 22 | 5.0 | 41.4 | 38 | 100 | 75 | 1.0 | 100 |
| LCE22A | 25.2 | 27.7 | 1.0 | 22 | 5.0 | 37.5 | 42 | 100 | 75 | 1.0 | 100 |
| LCE24 | 27.5 | 33.4 | 1.0 | 24 | 5.0 | 45.0 | 35 | 100 | 75 | 1.0 | 100 |
| LCE24A | 27.5 | 30.3 | 1.0 | 24 | 5.0 | 40.9 | 39 | 100 | 75 | 1.0 | 100 |
| LCE26 | 29.7 | 36.1 | 1.0 | 26 | 5.0 | 48.6 | 32 | 100 | 75 | 1.0 | 100 |
| LCE26A | 29.7 | 32.7 | 1.0 | 26 | 5.0 | 44.1 | 36 | 100 | 75 | 1.0 | 100 |
| LCE28 | 31.9 | 38.8 | 1.0 | 28 | 5.0 | 52.1 | 30 | 100 | 75 | 1.0 | 100 |
| LCE28A | 31.9 | 35.2 | 1.0 | 28 | 5.0 | 47.5 | 33 | 100 | 75 | 1.0 | 100 |



Low Capacitance Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-O.

| Type No. | Breakdown Voltage @ It | | Reverse Stand-off Voltage | Max. Reverse Leakage @ VRWM | Max. Clamping Voltage @ IRSM | Max. Reverse Current | Max. Junction Capacitance @ 0 Volt | Working Inverse Blocking Voltage | Max. Inverse Blocking Current @ VWIB | Peak Inverse Blocking Voltage |
|----------|---------------------------|------|---------------------------------|--------------------------------------|---------------------------------------|----------------------------|---|---|---|--|
| | VBR (V) | It | VRWM | IR | VRSM | IRSM | pF | VWIB | IIB | VPIB |
| | Min. | Max. | (mA) | (V) | (μA) | (V) | | (V) | mA | (V) |

LCE Series, 1500 W, Case Type: DO-201



| | | | | | | | | | | | |
|--------|-------|-------|-----|----|-----|-------|------|-----|-----|-----|-----|
| LCE30 | 34.1 | 41.5 | 1.0 | 30 | 5.0 | 55.5 | 28 | 100 | 75 | 1.0 | 100 |
| LCE30A | 34.1 | 37.6 | 1.0 | 30 | 5.0 | 50.4 | 31 | 100 | 75 | 1.0 | 100 |
| LCE33 | 37.5 | 45.7 | 1.0 | 33 | 5.0 | 61.0 | 25.4 | 100 | 75 | 1.0 | 100 |
| LCE33A | 37.5 | 41.4 | 1.0 | 33 | 5.0 | 55.3 | 28.1 | 100 | 75 | 1.0 | 100 |
| LCE36 | 40.8 | 49.7 | 1.0 | 36 | 5.0 | 66.3 | 23.3 | 100 | 75 | 1.0 | 100 |
| LCE36A | 40.8 | 45.0 | 1.0 | 36 | 5.0 | 60.1 | 25.8 | 100 | 75 | 1.0 | 100 |
| LCE40 | 45.2 | 55.1 | 1.0 | 40 | 5.0 | 73.4 | 21 | 100 | 75 | 1.0 | 100 |
| LCE40A | 45.2 | 49.9 | 1.0 | 40 | 5.0 | 66.5 | 23.3 | 100 | 75 | 1.0 | 100 |
| LCE43 | 48.6 | 59.2 | 1.0 | 43 | 5.0 | 78.7 | 19.5 | 100 | 150 | 1.0 | 200 |
| LCE43A | 48.6 | 53.6 | 1.0 | 43 | 5.0 | 71.4 | 21.6 | 100 | 150 | 1.0 | 200 |
| LCE45 | 50.8 | 61.9 | 1.0 | 45 | 5.0 | 82.3 | 18.7 | 100 | 150 | 1.0 | 200 |
| LCE45A | 50.8 | 56.1 | 1.0 | 45 | 5.0 | 74.7 | 20.6 | 100 | 150 | 1.0 | 200 |
| LCE48 | 54.1 | 65.9 | 1.0 | 48 | 5.0 | 87.5 | 17.5 | 100 | 150 | 1.0 | 200 |
| LCE48A | 54.1 | 59.7 | 1.0 | 48 | 5.0 | 79.4 | 19.4 | 100 | 150 | 1.0 | 200 |
| LCE51 | 57.5 | 70.1 | 1.0 | 51 | 5.0 | 93.1 | 16.5 | 100 | 150 | 1.0 | 200 |
| LCE51A | 57.5 | 63.5 | 1.0 | 51 | 5.0 | 84.4 | 18.2 | 100 | 150 | 1.0 | 200 |
| LCE54 | 60.8 | 74.1 | 1.0 | 54 | 5.0 | 98.3 | 15.6 | 100 | 150 | 1.0 | 200 |
| LCE54A | 60.8 | 67.1 | 1.0 | 54 | 5.0 | 89.1 | 17.2 | 100 | 150 | 1.0 | 200 |
| LCE58 | 65.2 | 79.5 | 1.0 | 58 | 5.0 | 105.0 | 14.6 | 100 | 150 | 1.0 | 200 |
| LCE58A | 65.2 | 72.0 | 1.0 | 58 | 5.0 | 95.6 | 16 | 100 | 150 | 1.0 | 200 |
| LCE60 | 67.5 | 82.3 | 1.0 | 60 | 5.0 | 109.0 | 14 | 90 | 150 | 1.0 | 200 |
| LCE60A | 67.5 | 74.5 | 1.0 | 60 | 5.0 | 98.8 | 15.5 | 90 | 150 | 1.0 | 200 |
| LCE64 | 71.9 | 87.7 | 1.0 | 64 | 5.0 | 116.0 | 13.2 | 90 | 150 | 1.0 | 200 |
| LCE64A | 71.9 | 79.4 | 1.0 | 64 | 5.0 | 105.0 | 14.6 | 90 | 150 | 1.0 | 200 |
| LCE70 | 78.6 | 95.9 | 1.0 | 70 | 5.0 | 127.0 | 12.0 | 90 | 150 | 1.0 | 200 |
| LCE70A | 78.6 | 86.8 | 1.0 | 70 | 5.0 | 115.0 | 13.3 | 90 | 150 | 1.0 | 200 |
| LCE75 | 84.1 | 102.8 | 1.0 | 75 | 5.0 | 136.0 | 11.2 | 90 | 150 | 1.0 | 200 |
| LCE75A | 84.1 | 92.9 | 1.0 | 75 | 5.0 | 123.0 | 12.4 | 90 | 150 | 1.0 | 200 |
| LCE80 | 95.2 | 115.8 | 1.0 | 80 | 5.0 | 144.0 | 10.6 | 90 | 150 | 1.0 | 200 |
| LCE80A | 95.2 | 104.8 | 1.0 | 80 | 5.0 | 131.0 | 11.6 | 90 | 150 | 1.0 | 200 |
| LCE90 | 100.8 | 122.8 | 1.0 | 90 | 5.0 | 162.0 | 9.4 | 90 | 300 | 1.0 | 200 |
| LCE90A | 100.8 | 111.8 | 1.0 | 90 | 5.0 | 148.0 | 10.3 | 90 | 300 | 1.0 | 200 |



Low Capacitance Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-O.

| Type Number | Reverse Stand-off Voltage | Breakdown Voltage @ I_{BR} | | | Maximum Reverse Leakage @ V_{WM} | Maximum Clamping Voltage @ I_{PP} | Maximum Peak Pulse Current @ 10/1000 | Maximum Junction Capacitance @ 0 Volt | Working Inverse Blocking Voltage | Inverse Blocking Leakage Current | Peak Inverse Blocking Voltage |
|-------------|---------------------------|------------------------------|------|----------|------------------------------------|-------------------------------------|--------------------------------------|---------------------------------------|----------------------------------|----------------------------------|-------------------------------|
| | V_{WM} | V_{BR} (V) | | I_{BR} | I_D | V_C | I_{PP} | pF | V_{WIB} (V) | I_{IB} mA | V_{PIB} (V) |
| | (V) | Min. | Max. | (mA) | (μ A) | (V) | (A) | | | | |

SMCJLCE Series, 1500 W, Case Type: SMC



| | | | | | | | | | | | |
|-------------|-----|------|------|-----|------|------|------|-----|----|-----|-----|
| SMCJLCE6.5 | 6.5 | 7.22 | 8.82 | 10 | 1000 | 12.3 | 100 | 75 | 75 | 1.0 | 100 |
| SMCJLCE6.5A | 6.5 | 7.22 | 7.98 | 10 | 1000 | 11.2 | 100 | 75 | 75 | 1.0 | 100 |
| SMCJLCE7.0 | 7.0 | 7.78 | 9.51 | 10 | 500 | 13.3 | 100 | 75 | 75 | 1.0 | 100 |
| SMCJLCE7.0A | 7.0 | 7.78 | 8.60 | 10 | 500 | 12.0 | 100 | 75 | 75 | 1.0 | 100 |
| SMCJLCE7.5 | 7.5 | 8.33 | 10.2 | 10 | 250 | 14.3 | 100 | 100 | 75 | 1.0 | 100 |
| SMCJLCE7.5A | 7.5 | 8.33 | 9.21 | 10 | 250 | 12.9 | 100 | 100 | 75 | 1.0 | 100 |
| SMCJLCE8.0 | 8.0 | 8.89 | 10.9 | 10 | 100 | 15.0 | 100 | 100 | 75 | 1.0 | 100 |
| SMCJLCE8.0A | 8.0 | 8.89 | 9.83 | 1.0 | 100 | 13.6 | 100 | 100 | 75 | 1.0 | 100 |
| SMCJLCE8.5 | 8.5 | 9.44 | 11.5 | 1.0 | 50 | 15.9 | 94 | 100 | 75 | 1.0 | 100 |
| SMCJLCE8.5A | 8.5 | 9.44 | 10.4 | 1.0 | 50 | 14.4 | 100 | 100 | 75 | 1.0 | 100 |
| SMCJLCE9.0 | 9.0 | 10.0 | 12.2 | 1.0 | 10 | 16.9 | 89 | 100 | 75 | 1.0 | 100 |
| SMCJLCE9.0A | 9.0 | 10.0 | 11.1 | 1.0 | 10 | 15.4 | 97 | 100 | 75 | 1.0 | 100 |
| SMCJLCE10 | 10 | 11.1 | 13.6 | 1.0 | 5.0 | 18.8 | 80 | 100 | 75 | 1.0 | 100 |
| SMCJLCE10A | 10 | 11.1 | 12.3 | 1.0 | 5.0 | 17.0 | 88 | 100 | 75 | 1.0 | 100 |
| SMCJLCE11 | 11 | 12.2 | 14.9 | 1.0 | 5.0 | 20.1 | 74 | 100 | 75 | 1.0 | 100 |
| SMCJLCE11A | 11 | 12.2 | 13.5 | 1.0 | 5.0 | 18.2 | 82 | 100 | 75 | 1.0 | 100 |
| SMCJLCE12 | 12 | 13.3 | 16.3 | 1.0 | 5.0 | 22.0 | 68 | 100 | 75 | 1.0 | 100 |
| SMCJLCE12A | 12 | 13.3 | 14.7 | 1.0 | 5.0 | 19.9 | 75 | 100 | 75 | 1.0 | 100 |
| SMCJLCE13 | 13 | 14.4 | 17.6 | 1.0 | 5.0 | 23.8 | 63 | 100 | 75 | 1.0 | 100 |
| SMCJLCE13A | 13 | 14.4 | 15.9 | 1.0 | 5.0 | 21.5 | 70 | 100 | 75 | 1.0 | 100 |
| SMCJLCE14 | 14 | 15.6 | 19.1 | 1.0 | 5.0 | 25.8 | 58 | 100 | 75 | 1.0 | 100 |
| SMCJLCE14A | 14 | 15.6 | 17.2 | 1.0 | 5.0 | 23.2 | 65 | 100 | 75 | 1.0 | 100 |
| SMCJLCE15 | 15 | 16.7 | 20.4 | 1.0 | 5.0 | 26.9 | 56 | 100 | 75 | 1.0 | 100 |
| SMCJLCE15A | 15 | 16.7 | 18.5 | 1.0 | 5.0 | 24.4 | 61 | 100 | 75 | 1.0 | 100 |
| SMCJLCE16 | 16 | 17.8 | 21.8 | 1.0 | 5.0 | 28.8 | 52 | 100 | 75 | 1.0 | 100 |
| SMCJLCE16A | 16 | 17.8 | 19.7 | 1.0 | 5.0 | 26.0 | 57 | 100 | 75 | 1.0 | 100 |
| SMCJLCE17 | 17 | 18.9 | 23.1 | 1.0 | 5.0 | 30.5 | 49 | 100 | 75 | 1.0 | 100 |
| SMCJLCE17A | 17 | 18.9 | 20.9 | 1.0 | 5.0 | 27.6 | 54 | 100 | 75 | 1.0 | 100 |
| SMCJLCE18 | 18 | 20.0 | 24.4 | 1.0 | 5.0 | 32.2 | 46 | 100 | 75 | 1.0 | 100 |
| SMCJLCE18A | 18 | 20.0 | 22.1 | 1.0 | 5.0 | 29.2 | 51 | 100 | 75 | 1.0 | 100 |
| SMCJLCE20 | 20 | 22.2 | 27.1 | 1.0 | 5.0 | 35.8 | 42 | 100 | 75 | 1.0 | 100 |
| SMCJLCE20A | 20 | 22.2 | 24.5 | 1.0 | 5.0 | 32.4 | 46 | 100 | 75 | 1.0 | 100 |
| SMCJLCE22 | 22 | 24.4 | 29.8 | 1.0 | 5.0 | 39.4 | 38 | 100 | 75 | 1.0 | 100 |
| SMCJLCE22A | 22 | 24.4 | 26.9 | 1.0 | 5.0 | 35.5 | 42 | 100 | 75 | 1.0 | 100 |
| SMCJLCE24 | 24 | 26.7 | 32.6 | 1.0 | 5.0 | 43.0 | 35 | 100 | 75 | 1.0 | 100 |
| SMCJLCE24A | 24 | 26.7 | 29.5 | 1.0 | 5.0 | 38.9 | 39 | 100 | 75 | 1.0 | 100 |
| SMCJLCE26 | 26 | 28.9 | 35.3 | 1.0 | 5.0 | 46.6 | 32 | 100 | 75 | 1.0 | 100 |
| SMCJLCE26A | 26 | 28.9 | 31.9 | 1.0 | 5.0 | 42.1 | 36 | 100 | 75 | 1.0 | 100 |
| SMCJLCE28 | 28 | 31.1 | 38.0 | 1.0 | 5.0 | 50.1 | 30 | 100 | 75 | 1.0 | 100 |
| SMCJLCE28A | 28 | 31.1 | 34.4 | 1.0 | 5.0 | 45.5 | 33 | 100 | 75 | 1.0 | 100 |
| SMCJLCE30 | 30 | 33.3 | 40.7 | 1.0 | 5.0 | 53.5 | 28 | 100 | 75 | 1.0 | 100 |
| SMCJLCE30A | 30 | 33.3 | 36.8 | 1.0 | 5.0 | 48.4 | 31 | 100 | 75 | 1.0 | 100 |
| SMCJLCE33 | 33 | 36.7 | 44.9 | 1.0 | 5.0 | 59.0 | 25.4 | 100 | 75 | 1.0 | 100 |
| SMCJLCE33A | 33 | 36.7 | 40.6 | 1.0 | 5.0 | 53.3 | 28.1 | 100 | 75 | 1.0 | 100 |



Low Capacitance Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-O.

| Type Number | Reverse Stand-off Voltage | Breakdown Voltage @ $I_{(BR)}$ | | | Maximum Reverse Leakage @ V_{WM} | Maximum Clamping Voltage @ I_{PP} | Maximum Peak Pulse Current @ 10/1000 | Maximum Junction Capacitance @ 0 Volt | Working Inverse Blocking Voltage | Inverse Blocking Leakage Current | Peak Inverse Blocking Voltage |
|-------------|---------------------------|--------------------------------|------|------------|------------------------------------|-------------------------------------|--------------------------------------|---------------------------------------|----------------------------------|----------------------------------|-------------------------------|
| | V_{WM} | V_{BR} (V) | | $I_{(BR)}$ | I_D | V_C | I_{PP} | pF | V_{WIB} | I_{IB} | V_{PIB} |
| | (V) | Min. | Max. | (mA) | (μ A) | (V) | (A) | | (V) | mA | (V) |

SMCJLCE Series, 1500 W, Case Type: SMC



| | | | | | | | | | | | |
|-------------|-----|------|------|-----|-----|------|------|-----|-----|-----|-----|
| SMCJLCE36 | 36 | 40.0 | 48.9 | 1.0 | 5.0 | 64.3 | 23.3 | 100 | 75 | 1.0 | 100 |
| SMCJLCE36A | 36 | 40.0 | 44.2 | 1.0 | 5.0 | 58.1 | 25.8 | 100 | 75 | 1.0 | 100 |
| SMCJLCE40 | 40 | 44.4 | 54.3 | 1.0 | 5.0 | 71.4 | 21.0 | 100 | 75 | 1.0 | 100 |
| SMCJLCE40A | 40 | 44.4 | 49.1 | 1.0 | 5.0 | 64.5 | 23.3 | 100 | 75 | 1.0 | 100 |
| SMCJLCE43 | 43 | 47.8 | 58.4 | 1.0 | 5.0 | 76.7 | 19.5 | 100 | 150 | 1.0 | 200 |
| SMCJLCE43A | 43 | 47.8 | 52.8 | 1.0 | 5.0 | 69.4 | 21.6 | 100 | 150 | 1.0 | 200 |
| SMCJLCE45 | 45 | 50.0 | 61.1 | 1.0 | 5.0 | 80.3 | 18.7 | 100 | 150 | 1.0 | 200 |
| SMCJLCE45A | 45 | 50.0 | 55.3 | 1.0 | 5.0 | 72.7 | 20.6 | 100 | 150 | 1.0 | 200 |
| SMCJLCE48 | 48 | 53.3 | 65.1 | 1.0 | 5.0 | 85.5 | 17.5 | 100 | 150 | 1.0 | 200 |
| SMCJLCE48A | 48 | 53.3 | 58.9 | 1.0 | 5.0 | 77.4 | 19.4 | 100 | 150 | 1.0 | 200 |
| SMCJLCE51 | 51 | 56.7 | 69.3 | 1.0 | 5.0 | 91.1 | 16.5 | 100 | 150 | 1.0 | 200 |
| SMCJLCE51A | 51 | 56.7 | 62.7 | 1.0 | 5.0 | 82.4 | 18.2 | 100 | 150 | 1.0 | 200 |
| SMCJLCE54 | 54 | 60.0 | 73.3 | 1.0 | 5.0 | 96.3 | 15.6 | 100 | 150 | 1.0 | 200 |
| SMCJLCE54A | 54 | 60.0 | 66.3 | 1.0 | 5.0 | 87.1 | 17.2 | 100 | 150 | 1.0 | 200 |
| SMCJLCE58 | 58 | 64.4 | 78.7 | 1.0 | 5.0 | 103 | 14.6 | 100 | 150 | 1.0 | 200 |
| SMCJLCE58A | 58 | 64.4 | 71.2 | 1.0 | 5.0 | 93.6 | 16.0 | 100 | 150 | 1.0 | 200 |
| SMCJLCE60 | 60 | 66.7 | 81.5 | 1.0 | 5.0 | 107 | 14.0 | 90 | 150 | 1.0 | 200 |
| SMCJLCE60A | 60 | 66.7 | 73.7 | 1.0 | 5.0 | 96.8 | 15.5 | 90 | 150 | 1.0 | 200 |
| SMCJLCE64 | 64 | 71.1 | 86.9 | 1.0 | 5.0 | 114 | 13.2 | 90 | 150 | 1.0 | 200 |
| SMCJLCE64A | 64 | 71.1 | 78.6 | 1.0 | 5.0 | 103 | 14.6 | 90 | 150 | 1.0 | 200 |
| SMCJLCE70 | 70 | 77.8 | 95.1 | 1.0 | 5.0 | 125 | 12.0 | 90 | 150 | 1.0 | 200 |
| SMCJLCE70A | 70 | 77.8 | 86.0 | 1.0 | 5.0 | 113 | 13.3 | 90 | 150 | 1.0 | 200 |
| SMCJLCE75 | 75 | 83.3 | 102 | 1.0 | 5.0 | 134 | 11.2 | 90 | 150 | 1.0 | 200 |
| SMCJLCE75A | 75 | 83.3 | 92.1 | 1.0 | 5.0 | 121 | 12.4 | 90 | 150 | 1.0 | 200 |
| SMCJLCE80 | 80 | 88.7 | 108 | 1.0 | 5.0 | 142 | 10.6 | 90 | 150 | 1.0 | 200 |
| SMCJLCE80A | 80 | 88.7 | 98.0 | 1.0 | 5.0 | 129 | 11.6 | 90 | 150 | 1.0 | 200 |
| SMCJLCE90 | 90 | 100 | 122 | 1.0 | 5.0 | 160 | 9.4 | 90 | 300 | 1.0 | 200 |
| SMCJLCE90A | 90 | 100 | 111 | 1.0 | 5.0 | 146 | 10.3 | 90 | 300 | 1.0 | 200 |
| SMCJLCE100 | 100 | 111 | 136 | 1.0 | 5.0 | 179 | 8.4 | 90 | 300 | 1.0 | 200 |
| SMCJLCE100A | 100 | 111 | 123 | 1.0 | 5.0 | 162 | 9.3 | 90 | 300 | 1.0 | 200 |
| SMCJLCE110 | 110 | 122 | 149 | 1.0 | 5.0 | 196 | 7.7 | 90 | 300 | 1.0 | 400 |
| SMCJLCE110A | 110 | 122 | 135 | 1.0 | 5.0 | 178 | 8.4 | 90 | 300 | 1.0 | 400 |
| SMCJLCE120 | 120 | 133 | 163 | 1.0 | 5.0 | 214 | 7.0 | 90 | 300 | 1.0 | 400 |
| SMCJLCE120A | 120 | 133 | 147 | 1.0 | 5.0 | 193 | 7.8 | 90 | 300 | 1.0 | 400 |
| SMCJLCE130 | 130 | 144 | 176 | 1.0 | 5.0 | 231 | 6.5 | 90 | 300 | 1.0 | 400 |
| SMCJLCE130A | 130 | 144 | 159 | 1.0 | 5.0 | 209 | 7.2 | 90 | 300 | 1.0 | 400 |
| SMCJLCE150 | 150 | 167 | 204 | 1.0 | 5.0 | 268 | 5.6 | 90 | 300 | 1.0 | 400 |
| SMCJLCE150A | 150 | 167 | 185 | 1.0 | 5.0 | 243 | 6.2 | 90 | 300 | 1.0 | 400 |
| SMCJLCE160 | 160 | 178 | 218 | 1.0 | 5.0 | 287 | 5.2 | 90 | 300 | 1.0 | 400 |
| SMCJLCE160A | 160 | 178 | 197 | 1.0 | 5.0 | 259 | 5.8 | 90 | 300 | 1.0 | 400 |
| SMCJLCE170 | 170 | 189 | 231 | 1.0 | 5.0 | 304 | 4.9 | 90 | 300 | 1.0 | 400 |
| SMCJLCE170A | 170 | 189 | 209 | 1.0 | 5.0 | 275 | 5.4 | 90 | 300 | 1.0 | 400 |



Low Capacitance Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ I_{BR} | | Reverse Stand-off Voltage | Maximum Clamping Voltage @ I_{PP} | Peak Pulse Current | Maximum Standby Current @ V_{WM} | Maximum Junction Capacitance @ 0 Volt |
|----------|---------------------------------|----------|---------------------------------|---|-----------------------|--|--|
| | V_{BR} (V) | I_{BR} | V_{WM} | V_C | I_{PP} | I_D | @ 0 Volt |
| | Min. | Max. | (mA) | (V) | (A) | (μA) | pF |

SMLJ-LCxx Series, 3000 W, Case Type: SMC



| | | | | | | | | |
|-------------|-------|-------|-----|-----|------|-------|------|-----|
| SMLJ-LC5.0 | 7.40 | 8.30 | 10 | 5.0 | 9.6 | 312.5 | 1000 | 100 |
| SMLJ-LC5.0A | 7.40 | 8.00 | 10 | 5.0 | 9.2 | 326.0 | 1000 | 100 |
| SMLJ-LC6.0 | 7.67 | 9.15 | 10 | 6.0 | 11.4 | 263.2 | 1000 | 100 |
| SMLJ-LC6.0A | 7.67 | 8.37 | 10 | 6.0 | 10.3 | 291.3 | 1000 | 100 |
| SMLJ-LC6.5 | 8.22 | 9.82 | 10 | 6.5 | 12.3 | 243.9 | 500 | 100 |
| SMLJ-LC6.5A | 8.22 | 8.98 | 10 | 6.5 | 11.2 | 267.9 | 500 | 100 |
| SMLJ-LC7.0 | 8.78 | 10.51 | 10 | 7.0 | 13.3 | 225.6 | 200 | 100 |
| SMLJ-LC7.0A | 8.78 | 9.60 | 10 | 7.0 | 12.0 | 250.0 | 200 | 100 |
| SMLJ-LC7.5 | 9.33 | 11.2 | 1.0 | 7.5 | 14.3 | 209.8 | 100 | 100 |
| SMLJ-LC7.5A | 9.33 | 10.21 | 1.0 | 7.5 | 12.9 | 232.6 | 100 | 100 |
| SMLJ-LC8.0 | 9.89 | 11.9 | 1.0 | 8.0 | 15.0 | 200.0 | 50 | 100 |
| SMLJ-LC8.0A | 9.89 | 10.83 | 1.0 | 8.0 | 13.6 | 220.6 | 50 | 100 |
| SMLJ-LC8.5 | 10.44 | 12.5 | 1.0 | 8.5 | 15.9 | 188.6 | 25 | 100 |
| SMLJ-LC8.5A | 10.44 | 11.4 | 1.0 | 8.5 | 14.4 | 208.4 | 25 | 100 |
| SMLJ-LC9.0 | 11.0 | 13.2 | 1.0 | 9.0 | 16.9 | 177.4 | 10 | 100 |
| SMLJ-LC9.0A | 11.0 | 12.1 | 1.0 | 9.0 | 15.4 | 194.8 | 10 | 100 |
| SMLJ-LC10 | 12.1 | 14.6 | 1.0 | 10 | 18.8 | 159.6 | 5 | 100 |
| SMLJ-LC10A | 12.1 | 13.3 | 1.0 | 10 | 17.0 | 176.4 | 5 | 100 |
| SMLJ-LC11 | 13.2 | 15.9 | 1.0 | 11 | 20.1 | 149.2 | 5 | 100 |
| SMLJ-LC11A | 13.2 | 14.5 | 1.0 | 11 | 18.2 | 164.8 | 5 | 100 |
| SMLJ-LC12 | 14.3 | 17.3 | 1.0 | 12 | 22.0 | 136.4 | 5 | 100 |
| SMLJ-LC12A | 14.3 | 15.7 | 1.0 | 12 | 19.9 | 150.6 | 5 | 100 |
| SMLJ-LC13 | 15.4 | 18.6 | 1.0 | 13 | 23.8 | 126.0 | 5 | 100 |
| SMLJ-LC13A | 15.4 | 16.9 | 1.0 | 13 | 21.5 | 139.4 | 5 | 100 |
| SMLJ-LC14 | 16.6 | 20.1 | 1.0 | 14 | 25.8 | 116.2 | 2 | 100 |
| SMLJ-LC14A | 16.6 | 18.2 | 1.0 | 14 | 23.2 | 129.4 | 2 | 100 |
| SMLJ-LC15 | 17.7 | 21.4 | 1.0 | 15 | 26.9 | 111.6 | 2 | 100 |
| SMLJ-LC15A | 17.7 | 19.5 | 1.0 | 15 | 24.4 | 123.0 | 2 | 100 |
| SMLJ-LC16 | 18.8 | 22.8 | 1.0 | 16 | 28.8 | 104.2 | 2 | 100 |
| SMLJ-LC16A | 18.8 | 20.7 | 1.0 | 16 | 26.0 | 115.4 | 2 | 100 |
| SMLJ-LC17 | 19.9 | 24.1 | 1.0 | 17 | 30.5 | 98.4 | 2 | 100 |
| SMLJ-LC17A | 19.9 | 21.9 | 1.0 | 17 | 27.6 | 106.6 | 2 | 100 |
| SMLJ-LC18 | 21.0 | 25.4 | 1.0 | 18 | 32.2 | 93.2 | 2 | 100 |
| SMLJ-LC18A | 21.0 | 23.1 | 1.0 | 18 | 29.2 | 102.8 | 2 | 100 |
| SMLJ-LC20 | 23.2 | 28.1 | 1.0 | 20 | 35.8 | 83.8 | 2 | 100 |
| SMLJ-LC20A | 23.2 | 25.5 | 1.0 | 20 | 32.4 | 92.6 | 2 | 100 |
| SMLJ-LC22 | 25.4 | 30.8 | 1.0 | 22 | 39.4 | 76.2 | 2 | 100 |
| SMLJ-LC22A | 25.4 | 27.9 | 1.0 | 22 | 35.5 | 84.4 | 2 | 100 |
| SMLJ-LC24 | 27.7 | 33.6 | 1.0 | 24 | 43.0 | 69.8 | 2 | 100 |
| SMLJ-LC24A | 27.7 | 30.5 | 1.0 | 24 | 38.9 | 77.2 | 2 | 100 |
| SMLJ-LC26 | 29.9 | 36.3 | 1.0 | 26 | 46.6 | 64.4 | 2 | 100 |
| SMLJ-LC26A | 29.9 | 32.9 | 1.0 | 26 | 42.1 | 71.2 | 2 | 100 |
| SMLJ-LC28 | 32.1 | 39.0 | 1.0 | 28 | 50.0 | 60.0 | 2 | 100 |
| SMLJ-LC28A | 32.1 | 35.4 | 1.0 | 28 | 45.4 | 66.0 | 2 | 100 |
| SMLJ-LC30 | 34.3 | 41.7 | 1.0 | 30 | 53.5 | 56.0 | 2 | 100 |
| SMLJ-LC30A | 34.3 | 37.8 | 1.0 | 30 | 48.4 | 62.0 | 2 | 100 |
| SMLJ-LC33 | 37.7 | 45.9 | 1.0 | 33 | 59.0 | 50.4 | 2 | 100 |
| SMLJ-LC33A | 37.7 | 41.6 | 1.0 | 33 | 53.3 | 56.2 | 2 | 100 |



Low Capacitance Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ $I_{(BR)}$ | | Reverse Stand-off Voltage | Maximum Clamping Voltage @ I_{PP} | Peak Pulse Current | Maximum Standby Current @ V_{WM} | Maximum Junction Capacitance @ 0 Volt |
|----------|-----------------------------------|------------|---------------------------------|---|-----------------------|--|--|
| | V_{BR} (V) | $I_{(BR)}$ | V_{WM} | V_C | I_{PP} | I_D | @ 0 Volt |
| | Min. | Max. | (mA) | (V) | (A) | (μA) | pF |

SMLJ-LCxx Series, 3000 W, Case Type: SMC



| | | | | | | | | |
|-------------|------|-------|-----|-----|------|------|---|-----|
| SMLJ-LC36 | 41.0 | 49.9 | 1.0 | 36 | 64.3 | 46.6 | 2 | 100 |
| SMLJ-LC36A | 41.0 | 45.2 | 1.0 | 36 | 58.1 | 51.6 | 2 | 100 |
| SMLJ-LC40 | 45.4 | 55.3 | 1.0 | 40 | 71.4 | 42.0 | 2 | 100 |
| SMLJ-LC40A | 45.4 | 50.1 | 1.0 | 40 | 64.5 | 46.4 | 2 | 100 |
| SMLJ-LC43 | 48.8 | 59.4 | 1.0 | 43 | 76.7 | 39.2 | 2 | 100 |
| SMLJ-LC43A | 48.8 | 53.8 | 1.0 | 43 | 69.4 | 43.2 | 2 | 100 |
| SMLJ-LC45 | 51.0 | 62.1 | 1.0 | 45 | 80.3 | 37.4 | 2 | 100 |
| SMLJ-LC45A | 51.0 | 56.3 | 1.0 | 45 | 72.7 | 41.2 | 2 | 100 |
| SMLJ-LC48 | 54.3 | 66.1 | 1.0 | 48 | 85.5 | 35.0 | 2 | 100 |
| SMLJ-LC48A | 54.3 | 59.9 | 1.0 | 48 | 77.4 | 38.8 | 2 | 100 |
| SMLJ-LC51 | 57.7 | 70.3 | 1.0 | 51 | 91.1 | 37.0 | 2 | 100 |
| SMLJ-LC51A | 57.7 | 63.7 | 1.0 | 51 | 82.4 | 36.4 | 2 | 100 |
| SMLJ-LC54 | 61.0 | 74.3 | 1.0 | 54 | 96.3 | 31.2 | 2 | 100 |
| SMLJ-LC54A | 61.0 | 67.3 | 1.0 | 54 | 87.1 | 34.4 | 2 | 100 |
| SMLJ-LC58 | 65.4 | 79.7 | 1.0 | 58 | 103 | 39.2 | 2 | 100 |
| SMLJ-LC58A | 65.4 | 72.2 | 1.0 | 58 | 93.6 | 32.0 | 2 | 100 |
| SMLJ-LC60 | 67.7 | 82.5 | 1.0 | 60 | 107 | 28.0 | 2 | 90 |
| SMLJ-LC60A | 67.7 | 74.7 | 1.0 | 60 | 96.8 | 31.0 | 2 | 90 |
| SMLJ-LC64 | 72.1 | 87.9 | 1.0 | 64 | 114 | 26.4 | 2 | 90 |
| SMLJ-LC64A | 72.1 | 79.6 | 1.0 | 64 | 103 | 29.2 | 2 | 90 |
| SMLJ-LC70 | 78.8 | 96.1 | 1.0 | 70 | 125 | 24.0 | 2 | 90 |
| SMLJ-LC70A | 78.8 | 87.0 | 1.0 | 70 | 113 | 26.6 | 2 | 90 |
| SMLJ-LC75 | 84.3 | 103.0 | 1.0 | 75 | 134 | 22.4 | 2 | 90 |
| SMLJ-LC75A | 84.3 | 93.1 | 1.0 | 75 | 121 | 24.8 | 2 | 90 |
| SMLJ-LC78 | 87.7 | 107.0 | 1.0 | 78 | 139 | 21.6 | 2 | 90 |
| SMLJ-LC78A | 87.7 | 96.8 | 1.0 | 78 | 126 | 22.8 | 2 | 90 |
| SMLJ-LC85 | 95.4 | 116 | 1.0 | 85 | 151 | 19.8 | 2 | 90 |
| SMLJ-LC85A | 95.4 | 105 | 1.0 | 85 | 137 | 20.8 | 2 | 90 |
| SMLJ-LC90 | 101 | 123 | 1.0 | 90 | 160 | 18.8 | 2 | 90 |
| SMLJ-LC90A | 101 | 112 | 1.0 | 90 | 146 | 20.6 | 2 | 90 |
| SMLJ-LC100 | 112 | 137 | 1.0 | 100 | 179 | 16.8 | 2 | 90 |
| SMLJ-LC100A | 112 | 124 | 1.0 | 100 | 162 | 18.6 | 2 | 90 |
| SMLJ-LC110 | 123 | 150 | 1.0 | 110 | 196 | 15.4 | 2 | 90 |
| SMLJ-LC110A | 123 | 136 | 1.0 | 110 | 177 | 16.8 | 2 | 90 |
| SMLJ-LC120 | 134 | 164 | 1.0 | 120 | 214 | 14.0 | 2 | 90 |
| SMLJ-LC120A | 134 | 148 | 1.0 | 120 | 193 | 15.6 | 2 | 90 |
| SMLJ-LC130 | 145 | 177 | 1.0 | 130 | 231 | 13.0 | 2 | 90 |
| SMLJ-LC130A | 145 | 160 | 1.0 | 130 | 209 | 14.4 | 2 | 90 |
| SMLJ-LC150 | 168 | 205 | 1.0 | 150 | 268 | 11.2 | 2 | 90 |
| SMLJ-LC150A | 168 | 186 | 1.0 | 150 | 243 | 12.4 | 2 | 90 |
| SMLJ-LC160 | 179 | 219 | 1.0 | 160 | 287 | 10.4 | 2 | 90 |
| SMLJ-LC160A | 179 | 198 | 1.0 | 160 | 259 | 11.6 | 2 | 90 |
| SMLJ-LC170 | 190 | 232 | 1.0 | 170 | 304 | 9.8 | 2 | 90 |
| SMLJ-LC170A | 190 | 210 | 1.0 | 170 | 275 | 11.0 | 2 | 90 |

Notes: (1) Pulse test : $t_p \leq 50ms$.

(2) "SMLJ-L" will be omitted in marking on the diode.



Ultra Low Capacitance Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-O.

| Type No. | Breakdown Voltage @ It | | Reverse Stand-off Voltage | Max. Reverse Leakage @ VRWM | Max. Clamping Voltage @ IRSM | Max. Reverse Current | Max. Junction Capacitance @ 0 Volt | Working Inverse Blocking Voltage | Max. Inverse Blocking Current @ VWIB | Peak Inverse Blocking Voltage |
|----------|------------------------|------|---------------------------|-----------------------------|------------------------------|----------------------|------------------------------------|----------------------------------|--------------------------------------|-------------------------------|
| | VBR (V) | It | VRWM | IR | VRSM | IRSM | pF | VWIB | IIB | VPIB |
| | Min. | Max. | (mA) | (V) | (μA) | (V) | | (V) | mA | (V) |

ULCE Series, 1500 W, Case Type: DO-201



| | | | | | | | | | | | |
|----------|-------|-------|-----|-----|------|------|-----|----|----|-----|-----|
| ULCE6.5 | 8.82 | 10.42 | 10 | 6.5 | 1000 | 16.3 | 100 | 35 | 75 | 1.0 | 100 |
| ULCE6.5A | 8.82 | 9.58 | 10 | 6.5 | 1000 | 15.2 | 100 | 35 | 75 | 1.0 | 100 |
| ULCE7.0 | 9.38 | 11.11 | 10 | 7.0 | 500 | 17.3 | 100 | 35 | 75 | 1.0 | 100 |
| ULCE7.0A | 9.38 | 10.20 | 10 | 7.0 | 500 | 16.0 | 100 | 35 | 75 | 1.0 | 100 |
| ULCE7.5 | 9.93 | 11.80 | 10 | 7.5 | 250 | 18.3 | 100 | 35 | 75 | 1.0 | 100 |
| ULCE7.5A | 9.93 | 10.81 | 10 | 7.5 | 250 | 16.9 | 100 | 35 | 75 | 1.0 | 100 |
| ULCE8.0 | 10.49 | 12.50 | 10 | 8.0 | 100 | 19.0 | 100 | 35 | 75 | 1.0 | 100 |
| ULCE8.0A | 10.49 | 11.43 | 10 | 8.0 | 100 | 17.6 | 100 | 35 | 75 | 1.0 | 100 |
| ULCE8.5 | 11.04 | 13.1 | 1.0 | 8.5 | 50 | 19.9 | 94 | 35 | 75 | 1.0 | 100 |
| ULCE8.5A | 11.04 | 12.0 | 1.0 | 8.5 | 50 | 18.4 | 100 | 35 | 75 | 1.0 | 100 |
| ULCE9.0 | 11.6 | 13.8 | 1.0 | 9.0 | 10.0 | 20.9 | 89 | 35 | 75 | 1.0 | 100 |
| ULCE9.0A | 11.6 | 12.7 | 1.0 | 9.0 | 10.0 | 19.4 | 97 | 35 | 75 | 1.0 | 100 |
| ULCE10 | 12.7 | 15.2 | 1.0 | 10 | 5.0 | 22.8 | 80 | 35 | 75 | 1.0 | 100 |
| ULCE10A | 12.7 | 13.9 | 1.0 | 10 | 5.0 | 21.0 | 88 | 35 | 75 | 1.0 | 100 |
| ULCE11 | 13.8 | 16.5 | 1.0 | 11 | 5.0 | 24.1 | 74 | 35 | 75 | 1.0 | 100 |
| ULCE11A | 13.8 | 15.1 | 1.0 | 11 | 5.0 | 22.2 | 82 | 35 | 75 | 1.0 | 100 |
| ULCE12 | 14.9 | 17.9 | 1.0 | 12 | 5.0 | 26.0 | 68 | 35 | 75 | 1.0 | 100 |
| ULCE12A | 14.9 | 16.3 | 1.0 | 12 | 5.0 | 23.9 | 75 | 35 | 75 | 1.0 | 100 |
| ULCE13 | 16.0 | 19.2 | 1.0 | 13 | 5.0 | 27.8 | 63 | 35 | 75 | 1.0 | 100 |
| ULCE13A | 16.0 | 17.5 | 1.0 | 13 | 5.0 | 25.5 | 70 | 35 | 75 | 1.0 | 100 |
| ULCE14 | 17.2 | 20.7 | 1.0 | 14 | 5.0 | 29.8 | 58 | 35 | 75 | 1.0 | 100 |
| ULCE14A | 17.2 | 18.8 | 1.0 | 14 | 5.0 | 27.2 | 65 | 35 | 75 | 1.0 | 100 |
| ULCE15 | 18.3 | 22.0 | 1.0 | 15 | 5.0 | 30.9 | 56 | 35 | 75 | 1.0 | 100 |
| ULCE15A | 18.3 | 20.1 | 1.0 | 15 | 5.0 | 28.4 | 61 | 35 | 75 | 1.0 | 100 |
| ULCE16 | 19.4 | 23.4 | 1.0 | 16 | 5.0 | 32.8 | 52 | 35 | 75 | 1.0 | 100 |
| ULCE16A | 19.4 | 21.3 | 1.0 | 16 | 5.0 | 30.0 | 57 | 35 | 75 | 1.0 | 100 |
| ULCE17 | 20.5 | 24.7 | 1.0 | 17 | 5.0 | 34.5 | 49 | 35 | 75 | 1.0 | 100 |
| ULCE17A | 20.5 | 22.5 | 1.0 | 17 | 5.0 | 31.6 | 54 | 35 | 75 | 1.0 | 100 |
| ULCE18 | 21.6 | 26.0 | 1.0 | 18 | 5.0 | 36.2 | 46 | 35 | 75 | 1.0 | 100 |
| ULCE18A | 21.6 | 23.7 | 1.0 | 18 | 5.0 | 33.2 | 51 | 35 | 75 | 1.0 | 100 |
| ULCE20 | 23.8 | 28.7 | 1.0 | 20 | 5.0 | 39.8 | 42 | 35 | 75 | 1.0 | 100 |
| ULCE20A | 23.8 | 26.1 | 1.0 | 20 | 5.0 | 36.4 | 46 | 35 | 75 | 1.0 | 100 |
| ULCE22 | 26.0 | 31.4 | 1.0 | 22 | 5.0 | 43.4 | 38 | 35 | 75 | 1.0 | 100 |
| ULCE22A | 26.0 | 28.5 | 1.0 | 22 | 5.0 | 39.5 | 42 | 35 | 75 | 1.0 | 100 |
| ULCE24 | 28.3 | 34.2 | 1.0 | 24 | 5.0 | 47.0 | 35 | 35 | 75 | 1.0 | 100 |
| ULCE24A | 28.3 | 31.1 | 1.0 | 24 | 5.0 | 42.9 | 39 | 35 | 75 | 1.0 | 100 |
| ULCE26 | 30.5 | 36.9 | 1.0 | 26 | 5.0 | 50.6 | 32 | 35 | 75 | 1.0 | 100 |
| ULCE26A | 30.5 | 33.5 | 1.0 | 26 | 5.0 | 46.1 | 36 | 35 | 75 | 1.0 | 100 |



Ultra Low Capacitance Transient Voltage Suppressor Diodes

The plastic material carries U/L recognition 94V-O.

| Type No. | Breakdown Voltage @ I_t | | Reverse Stand-off Voltage | Max. Reverse Leakage @ V_{RWM} | Max. Clamping Voltage @ I_{RSM} | Max. Reverse Current | Max. Junction Capacitance @ 0 Volt | Working Inverse Blocking Voltage | Max. Inverse Blocking Current @ V_{WIB} | Peak Inverse Blocking Voltage |
|----------|------------------------------|-------|---------------------------------|---|--|----------------------------|---|---|--|--|
| | V_{BR} (V) | I_t | V_{RWM} | I_R | V_{RSM} | I_{RSM} | pF | V_{WIB} | I_{IB} | V_{PIB} |
| | Min. | Max. | (mA) | (V) | (μ A) | (V) | | (V) | mA | (V) |

ULCE Series, 1500 W, Case Type: DO-201



| | | | | | | | | | | | |
|---------|-------|-------|-----|----|-----|-------|------|----|-----|-----|-----|
| ULCE28 | 32.7 | 39.6 | 1.0 | 28 | 5.0 | 54.1 | 30 | 35 | 75 | 1.0 | 100 |
| ULCE28A | 32.7 | 36.0 | 1.0 | 28 | 5.0 | 49.5 | 33 | 35 | 75 | 1.0 | 100 |
| ULCE30 | 34.9 | 42.3 | 1.0 | 30 | 5.0 | 57.5 | 28 | 35 | 75 | 1.0 | 100 |
| ULCE30A | 34.9 | 38.4 | 1.0 | 30 | 5.0 | 52.4 | 31 | 35 | 75 | 1.0 | 100 |
| ULCE33 | 38.3 | 46.5 | 1.0 | 33 | 5.0 | 63.0 | 25.4 | 35 | 75 | 1.0 | 100 |
| ULCE33A | 38.3 | 42.2 | 1.0 | 33 | 5.0 | 57.3 | 28.1 | 35 | 75 | 1.0 | 100 |
| ULCE36 | 41.6 | 50.5 | 1.0 | 36 | 5.0 | 68.3 | 23.3 | 35 | 75 | 1.0 | 100 |
| ULCE36A | 41.6 | 45.8 | 1.0 | 36 | 5.0 | 62.1 | 25.8 | 35 | 75 | 1.0 | 100 |
| ULCE40 | 46.0 | 55.9 | 1.0 | 40 | 5.0 | 75.4 | 21 | 35 | 75 | 1.0 | 100 |
| ULCE40A | 46.0 | 50.7 | 1.0 | 40 | 5.0 | 68.5 | 23.3 | 35 | 75 | 1.0 | 100 |
| ULCE43 | 49.4 | 60.0 | 1.0 | 43 | 5.0 | 80.7 | 19.5 | 35 | 150 | 1.0 | 200 |
| ULCE43A | 49.4 | 54.4 | 1.0 | 43 | 5.0 | 73.4 | 21.6 | 35 | 150 | 1.0 | 200 |
| ULCE45 | 51.6 | 62.7 | 1.0 | 45 | 5.0 | 84.3 | 18.7 | 35 | 150 | 1.0 | 200 |
| ULCE45A | 51.6 | 56.9 | 1.0 | 45 | 5.0 | 76.7 | 20.6 | 35 | 150 | 1.0 | 200 |
| ULCE48 | 54.9 | 66.7 | 1.0 | 48 | 5.0 | 89.5 | 17.5 | 35 | 150 | 1.0 | 200 |
| ULCE48A | 54.9 | 60.5 | 1.0 | 48 | 5.0 | 81.4 | 19.4 | 35 | 150 | 1.0 | 200 |
| ULCE51 | 58.3 | 70.9 | 1.0 | 51 | 5.0 | 95.1 | 16.5 | 35 | 150 | 1.0 | 200 |
| ULCE51A | 58.3 | 64.3 | 1.0 | 51 | 5.0 | 86.4 | 18.2 | 35 | 150 | 1.0 | 200 |
| ULCE54 | 61.6 | 74.9 | 1.0 | 54 | 5.0 | 100.3 | 15.6 | 35 | 150 | 1.0 | 200 |
| ULCE54A | 61.6 | 67.9 | 1.0 | 54 | 5.0 | 91.1 | 17.2 | 35 | 150 | 1.0 | 200 |
| ULCE58 | 66.0 | 80.3 | 1.0 | 58 | 5.0 | 107.0 | 14.6 | 35 | 150 | 1.0 | 200 |
| ULCE58A | 66.0 | 72.8 | 1.0 | 58 | 5.0 | 97.6 | 16 | 35 | 150 | 1.0 | 200 |
| ULCE60 | 68.3 | 83.1 | 1.0 | 60 | 5.0 | 111.0 | 14 | 35 | 150 | 1.0 | 200 |
| ULCE60A | 68.3 | 75.3 | 1.0 | 60 | 5.0 | 100.8 | 15.5 | 35 | 150 | 1.0 | 200 |
| ULCE64 | 72.7 | 88.5 | 1.0 | 64 | 5.0 | 118.0 | 13.2 | 35 | 150 | 1.0 | 200 |
| ULCE64A | 72.7 | 80.2 | 1.0 | 64 | 5.0 | 107.0 | 14.6 | 35 | 150 | 1.0 | 200 |
| ULCE70 | 79.4 | 96.7 | 1.0 | 70 | 5.0 | 129.0 | 12.0 | 35 | 150 | 1.0 | 200 |
| ULCE70A | 79.4 | 87.6 | 1.0 | 70 | 5.0 | 117.0 | 13.3 | 35 | 150 | 1.0 | 200 |
| ULCE75 | 84.9 | 103.6 | 1.0 | 75 | 5.0 | 138.0 | 11.2 | 35 | 150 | 1.0 | 200 |
| ULCE75A | 84.9 | 93.7 | 1.0 | 75 | 5.0 | 125.0 | 12.4 | 35 | 150 | 1.0 | 200 |
| ULCE80 | 90.3 | 109.6 | 1.0 | 80 | 5.0 | 146.0 | 10.6 | 35 | 150 | 1.0 | 200 |
| ULCE80A | 90.3 | 99.6 | 1.0 | 80 | 5.0 | 133.0 | 11.6 | 35 | 150 | 1.0 | 200 |
| ULCE90 | 101.6 | 123.6 | 1.0 | 90 | 5.0 | 164.0 | 9.4 | 35 | 300 | 1.0 | 200 |
| ULCE90A | 101.6 | 112.6 | 1.0 | 90 | 5.0 | 150.0 | 10.3 | 35 | 300 | 1.0 | 200 |



Automotive Transient Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ I_R (Note 1) at $T_c = 25^\circ\text{C}$ | | Working Peak Reverse Voltage | Maximum Average Forward Rectified Current | Maximum Reverse Current | Maximum Reverse Leakage @ V_{RWM} | Typical Temperature Coefficient of V_{BR} |
|----------|--|------|------------------------------------|---|-------------------------------|---|--|
| | V_{BR} (V) | | V_{RWM} | $I_{F(AV)}$ @ T_c | I_{RSM} | I_R | of V_{BR} (% / $^\circ\text{C}$) |
| | Min. | Max. | (mA) | (V) | (A) | ($^\circ\text{C}$) | |

MR2535 Series, Case Type: MR



| | | | | | | | | | |
|--------|----|----|-----|----|----|-----|------|------|-------|
| MR2535 | 24 | 32 | 100 | 20 | 35 | 150 | 110 | 200 | 0.096 |
| MR2540 | 24 | 32 | 100 | 20 | 50 | 150 | 150 | 200 | 0.096 |
| MR3230 | 38 | 42 | 100 | 30 | 32 | 150 | 77.0 | 1000 | - |

MR2535L Series, Case Type: D6



| | | | | | | | | | |
|---------|----|----|-----|----|----|-----|-----|-----|-------|
| MR2535L | 24 | 32 | 100 | 20 | 35 | 150 | 110 | 200 | 0.096 |
| MR2540L | 24 | 32 | 100 | 20 | 50 | 150 | 150 | 200 | 0.096 |

* For wire leads use suffix "AL" for Case Type : MR-L

Note :

(1) Pulse set : Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$



Automotive Transient Suppressor Diodes

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage @ It (Note 1) | | | Working Peak Reverse Voltage | Maximum Reverse Leakage @ V_{RWM} | Maximum Reverse Leakage @ V_{RWM} , Tj=150°C | Maximum Peak Pulse Surge Current | Maximum Clamping Voltage @ I_{PPM} |
|----------|------------------------------------|------|------|------------------------------------|--|--|---|---|
| | V_{BR} (V) | | It | V_{RWM} | I_R | I_D | $I_{PPM}(2)$ | V_{RSM} |
| | Min. | Max. | (mA) | (V) | (μA) | (μA) | (A) | (V) |

TPSMC6.8 Series, 1500 W, Case Type: SMC



| | | | | | | | | |
|-----------|------|------|-----|------|------|-------|------|------|
| TPSMC6.8 | 6.12 | 7.48 | 10 | 5.50 | 1000 | 10000 | 139 | 10.8 |
| TPSMC6.8A | 6.45 | 7.14 | 10 | 5.80 | 1000 | 10000 | 143 | 10.5 |
| TPSMC7.5 | 6.75 | 8.25 | 10 | 6.05 | 500 | 5000 | 128 | 11.7 |
| TPSMC7.5A | 7.13 | 7.88 | 10 | 6.40 | 500 | 2000 | 132 | 11.3 |
| TPSMC8.2 | 7.38 | 9.02 | 10 | 6.63 | 200 | 2000 | 120 | 12.5 |
| TPSMC8.2A | 7.79 | 8.61 | 10 | 7.02 | 200 | 500 | 124 | 12.1 |
| TPSMC9.1 | 8.19 | 10.0 | 1.0 | 7.37 | 50 | 500 | 109 | 13.8 |
| TPSMC9.1A | 8.65 | 9.55 | 1.0 | 7.78 | 50 | 200 | 112 | 13.4 |
| TPSMC10 | 9.00 | 11.0 | 1.0 | 8.10 | 20 | 200 | 100 | 15.0 |
| TPSMC10A | 9.50 | 10.5 | 1.0 | 8.55 | 20 | 50 | 103 | 14.5 |
| TPSMC11 | 9.90 | 12.1 | 1.0 | 8.92 | 5.0 | 50 | 92.6 | 16.2 |
| TPSMC11A | 10.5 | 11.6 | 1.0 | 9.40 | 5.0 | 10 | 96.2 | 15.6 |
| TPSMC12 | 10.8 | 13.2 | 1.0 | 9.72 | 2.0 | 10 | 86.7 | 17.3 |
| TPSMC12A | 11.4 | 12.6 | 1.0 | 10.2 | 2.0 | 10 | 89.8 | 16.7 |
| TPSMC13 | 11.7 | 14.3 | 1.0 | 10.5 | 2.0 | 10 | 78.9 | 19.0 |
| TPSMC13A | 12.4 | 13.7 | 1.0 | 11.1 | 2.0 | 10 | 82.4 | 18.2 |
| TPSMC15 | 13.5 | 16.5 | 1.0 | 12.1 | 1.0 | 10 | 68.2 | 22.0 |
| TPSMC15A | 14.3 | 15.8 | 1.0 | 12.8 | 1.0 | 10 | 70.8 | 21.2 |
| TPSMC16 | 14.4 | 17.6 | 1.0 | 12.9 | 1.0 | 10 | 63.8 | 23.5 |
| TPSMC16A | 15.2 | 16.8 | 1.0 | 13.6 | 1.0 | 10 | 66.7 | 22.5 |
| TPSMC18 | 16.2 | 19.8 | 1.0 | 14.5 | 1.0 | 10 | 56.6 | 26.5 |
| TPSMC18A | 17.1 | 18.9 | 1.0 | 15.3 | 1.0 | 10 | 59.5 | 25.2 |
| TPSMC20 | 18.0 | 22.0 | 1.0 | 16.2 | 1.0 | 10 | 51.5 | 29.1 |
| TPSMC20A | 19.0 | 21.0 | 1.0 | 17.1 | 1.0 | 10 | 54.2 | 27.7 |
| TPSMC22 | 19.8 | 24.2 | 1.0 | 17.8 | 1.0 | 10 | 47.0 | 31.9 |
| TPSMC22A | 20.9 | 23.1 | 1.0 | 18.8 | 1.0 | 10 | 49.0 | 30.6 |
| TPSMC24 | 21.6 | 26.4 | 1.0 | 19.4 | 1.0 | 10 | 43.2 | 34.7 |
| TPSMC24A | 22.8 | 25.2 | 1.0 | 20.5 | 1.0 | 10 | 45.2 | 33.2 |
| TPSMC27 | 24.3 | 29.7 | 1.0 | 21.8 | 1.0 | 10 | 38.4 | 39.1 |
| TPSMC27A | 25.7 | 28.4 | 1.0 | 23.1 | 1.0 | 10 | 40.0 | 37.5 |
| TPSMC30 | 27.0 | 33.0 | 1.0 | 24.3 | 1.0 | 10 | 34.5 | 43.5 |
| TPSMC30A | 28.5 | 31.5 | 1.0 | 25.6 | 1.0 | 10 | 36.2 | 41.4 |
| TPSMC33 | 29.7 | 36.3 | 1.0 | 26.8 | 1.0 | 10 | 31.4 | 47.7 |
| TPSMC33A | 31.4 | 34.7 | 1.0 | 28.2 | 1.0 | 10 | 32.8 | 45.7 |
| TPSMC36 | 32.4 | 39.6 | 1.0 | 29.1 | 1.0 | 10 | 28.8 | 52.0 |
| TPSMC36A | 34.2 | 37.8 | 1.0 | 30.8 | 1.0 | 10 | 30.1 | 49.9 |
| TPSMC39 | 35.1 | 42.9 | 1.0 | 31.6 | 1.0 | 10 | 26.6 | 56.4 |
| TPSMC39A | 37.1 | 41.0 | 1.0 | 33.3 | 1.0 | 10 | 27.8 | 53.9 |
| TPSMC43 | 38.7 | 47.3 | 1.0 | 34.8 | 1.0 | 10 | 24.2 | 61.9 |
| TPSMC43A | 40.9 | 45.2 | 1.0 | 36.8 | 1.0 | 10 | 25.3 | 59.3 |

Notes :

- (1) V_{BR} measured after I_t applied for 300 μs ., I_t = square wave pulse or equivalent
- (2) "PSMC" will be omitted on marking of the diode



Silicon Bridge Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Input Voltage Recommended | Max. Repetitive Peak Reverse Voltage | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|----------|--|------|---------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | IF(AV) | @ Tc | | | | VF | @ IF | |
| | (A) | (°C) | | | | (V) | (V) | |

KBP200 Series, 2 A, Case Type: KBP



| | | | | | | | | |
|--------|-----|----|-----|------|----|-----|-----|----|
| KBP200 | 2.0 | 50 | 20 | 50 | 60 | 1.0 | 1.0 | 10 |
| KBP201 | 2.0 | 50 | 40 | 100 | 60 | 1.0 | 1.0 | 10 |
| KBP202 | 2.0 | 50 | 80 | 200 | 60 | 1.0 | 1.0 | 10 |
| KBP204 | 2.0 | 50 | 125 | 400 | 60 | 1.0 | 1.0 | 10 |
| KBP206 | 2.0 | 50 | 250 | 600 | 60 | 1.0 | 1.0 | 10 |
| KBP208 | 2.0 | 50 | 380 | 800 | 60 | 1.0 | 1.0 | 10 |
| KBP210 | 2.0 | 50 | 440 | 1000 | 60 | 1.0 | 1.0 | 10 |

KBL400 Series, 4 A, Case Type: KBL



| | | | | | | | | |
|--------|-----|----|-----|------|-----|-----|-----|----|
| KBL400 | 4.0 | 50 | 20 | 50 | 200 | 1.1 | 4.0 | 10 |
| KBL401 | 4.0 | 50 | 40 | 100 | 200 | 1.1 | 4.0 | 10 |
| KBL402 | 4.0 | 50 | 80 | 200 | 200 | 1.1 | 4.0 | 10 |
| KBL404 | 4.0 | 50 | 125 | 400 | 200 | 1.1 | 4.0 | 10 |
| KBL406 | 4.0 | 50 | 250 | 600 | 200 | 1.1 | 4.0 | 10 |
| KBL408 | 4.0 | 50 | 380 | 800 | 200 | 1.1 | 4.0 | 10 |
| KBL410 | 4.0 | 50 | 440 | 1000 | 200 | 1.1 | 4.0 | 10 |

KBU4A-M Series, 4 A, Case Type: KBU



| | | | | | | | | |
|-------|-----|----|---|------|-----|-----|-----|-----|
| KBU4A | 4.0 | 30 | - | 50 | 200 | 1.0 | 4.0 | 5.0 |
| KBU4B | 4.0 | 30 | - | 100 | 200 | 1.0 | 4.0 | 5.0 |
| KBU4D | 4.0 | 30 | - | 200 | 200 | 1.0 | 4.0 | 5.0 |
| KBU4G | 4.0 | 30 | - | 400 | 200 | 1.0 | 4.0 | 5.0 |
| KBU4J | 4.0 | 30 | - | 600 | 200 | 1.0 | 4.0 | 5.0 |
| KBU4K | 4.0 | 30 | - | 800 | 200 | 1.0 | 4.0 | 5.0 |
| KBU4M | 4.0 | 30 | - | 1000 | 200 | 1.0 | 4.0 | 5.0 |

KBU6A-M Series, 6 A, Case Type: KBU



| | | | | | | | | |
|-------|-----|-----|---|------|-----|-----|-----|-----|
| KBU6A | 6.0 | 100 | - | 50 | 250 | 1.0 | 6.0 | 5.0 |
| KBU6B | 6.0 | 100 | - | 100 | 250 | 1.0 | 6.0 | 5.0 |
| KBU6D | 6.0 | 100 | - | 200 | 250 | 1.0 | 6.0 | 5.0 |
| KBU6G | 6.0 | 100 | - | 400 | 250 | 1.0 | 6.0 | 5.0 |
| KBU6J | 6.0 | 100 | - | 600 | 250 | 1.0 | 6.0 | 5.0 |
| KBU6K | 6.0 | 100 | - | 800 | 250 | 1.0 | 6.0 | 5.0 |
| KBU6M | 6.0 | 100 | - | 1000 | 250 | 1.0 | 6.0 | 5.0 |



Silicon Bridge Rectifiers

The plastic material carries U/L recognition 94V-0.

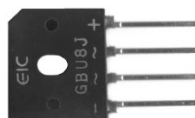
| Type No. | Max. Average Forward Rectified Current | | | Input Voltage Recommended | Max. Repetitive Peak Reverse Voltage | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | | Max. Reverse Current at Ta = 25°C |
|----------|--|---|------|---------------------------|--------------------------------------|---------------------------------|--|---|-----|-----------------------------------|
| | IF(AV) | @ | Tc | | | | VF | @ | IF | |
| | (A) | | (°C) | | | | (V) | | (A) | |
| | | | | (V) | (V) | (A) | (V) | | (A) | (μA) |

KBU8A-M Series, 8 A, Case Type: KBU



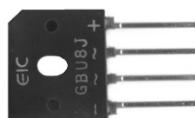
| | | | | | | | | |
|-------|-----|----|---|------|-----|-----|-----|----|
| KBU8A | 8.0 | 65 | - | 50 | 250 | 1.0 | 8.0 | 10 |
| KBU8B | 8.0 | 65 | - | 100 | 250 | 1.0 | 8.0 | 10 |
| KBU8D | 8.0 | 65 | - | 200 | 250 | 1.0 | 8.0 | 10 |
| KBU8G | 8.0 | 65 | - | 400 | 250 | 1.0 | 8.0 | 10 |
| KBU8J | 8.0 | 65 | - | 600 | 250 | 1.0 | 8.0 | 10 |
| KBU8K | 8.0 | 65 | - | 800 | 250 | 1.0 | 8.0 | 10 |
| KBU8M | 8.0 | 65 | - | 1000 | 250 | 1.0 | 8.0 | 10 |

GBU4A-M Series, 4 A, Case Type: GBU



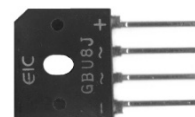
| | | | | | | | | |
|-------|-----|-----|---|------|----|-----|-----|-----|
| GBU4A | 4.0 | 100 | - | 50 | 80 | 1.0 | 4.0 | 5.0 |
| GBU4B | 4.0 | 100 | - | 100 | 80 | 1.0 | 4.0 | 5.0 |
| GBU4D | 4.0 | 100 | - | 200 | 80 | 1.0 | 4.0 | 5.0 |
| GBU4G | 4.0 | 100 | - | 400 | 80 | 1.0 | 4.0 | 5.0 |
| GBU4J | 4.0 | 100 | - | 600 | 80 | 1.0 | 4.0 | 5.0 |
| GBU4K | 4.0 | 100 | - | 800 | 80 | 1.0 | 4.0 | 5.0 |
| GBU4M | 4.0 | 100 | - | 1000 | 80 | 1.0 | 4.0 | 5.0 |

GBU6A-M Series, 6 A, Case Type: GBU



| | | | | | | | | |
|-------|-----|----|---|------|-----|-----|-----|-----|
| GBU6A | 6.0 | 90 | - | 50 | 175 | 1.0 | 6.0 | 5.0 |
| GBU6B | 6.0 | 90 | - | 100 | 175 | 1.0 | 6.0 | 5.0 |
| GBU6D | 6.0 | 90 | - | 200 | 175 | 1.0 | 6.0 | 5.0 |
| GBU6G | 6.0 | 90 | - | 400 | 175 | 1.0 | 6.0 | 5.0 |
| GBU6J | 6.0 | 90 | - | 600 | 175 | 1.0 | 6.0 | 5.0 |
| GBU6K | 6.0 | 90 | - | 800 | 175 | 1.0 | 6.0 | 5.0 |
| GBU6M | 6.0 | 90 | - | 1000 | 175 | 1.0 | 6.0 | 5.0 |

GBU8A-M Series, 8 A, Case Type: GBU



| | | | | | | | | |
|-------|-----|-----|---|------|-----|-----|-----|-----|
| GBU8A | 8.0 | 100 | - | 50 | 200 | 1.0 | 8.0 | 5.0 |
| GBU8B | 8.0 | 100 | - | 100 | 200 | 1.0 | 8.0 | 5.0 |
| GBU8D | 8.0 | 100 | - | 200 | 200 | 1.0 | 8.0 | 5.0 |
| GBU8G | 8.0 | 100 | - | 400 | 200 | 1.0 | 8.0 | 5.0 |
| GBU8J | 8.0 | 100 | - | 600 | 200 | 1.0 | 8.0 | 5.0 |
| GBU8K | 8.0 | 100 | - | 800 | 200 | 1.0 | 8.0 | 5.0 |
| GBU8M | 8.0 | 100 | - | 1000 | 200 | 1.0 | 8.0 | 5.0 |



Silicon Bridge Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Input Voltage Recommended | Max. Repetitive Peak Reverse Voltage | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|----------|-----|--|------|---------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | | IF(AV) | @ Tc | | VRRM | IFSM | VF | @ IF | IR |
| DIP | SIP | (A) | (°C) | (V) | (V) | (A) | (V) | (A) | (μA) |

RBV400 Series, 4 A, Case Type: RBV4

| | | | | | | | | | |
|--|--------|-----|----|---|------|----|------|-----|----|
| | RBV401 | 4.0 | 50 | - | 100 | 80 | 1.05 | 2.0 | 10 |
| | RBV402 | 4.0 | 50 | - | 200 | 80 | 1.05 | 2.0 | 10 |
| | RBV404 | 4.0 | 50 | - | 400 | 80 | 1.10 | 2.0 | 10 |
| | RBV406 | 4.0 | 50 | - | 600 | 80 | 1.10 | 2.0 | 10 |
| | RBV408 | 4.0 | 50 | - | 800 | 80 | 1.10 | 2.0 | 10 |
| | RBV410 | 4.0 | 50 | - | 1000 | 80 | 1.10 | 2.0 | 10 |

D3SB10 Series, 4 A, Case Type: RBV4

| | | | | | | | | | |
|--|--------|-----|-----|---|-----|-----|------|-----|----|
| | D3SB10 | 4.0 | 25 | - | 100 | 120 | 1.05 | 2.0 | 10 |
| | D3SB20 | 4.0 | 25 | - | 200 | 120 | 1.05 | 2.0 | 10 |
| | D3SB40 | 4.0 | 25 | - | 400 | 120 | 1.10 | 2.0 | 10 |
| | D3SB60 | 4.0 | 25 | - | 600 | 120 | 1.10 | 2.0 | 10 |
| | D3SB80 | 4.0 | 25 | - | 800 | 120 | 1.10 | 2.0 | 10 |
| | D4SB80 | 4.0 | 108 | - | 800 | 150 | 0.95 | 2.0 | 10 |

D3SBA10 Series, 4 A, Case Type: RBV4

| | | | | | | | | | |
|--|----------|-----|----|---|------|----|------|-----|----|
| | D3SBA10 | 4.0 | 25 | - | 100 | 80 | 1.05 | 2.0 | 10 |
| | D3SBA20 | 4.0 | 25 | - | 200 | 80 | 1.05 | 2.0 | 10 |
| | D3SBA40 | 4.0 | 25 | - | 400 | 80 | 1.05 | 2.0 | 10 |
| | D3SBA60 | 4.0 | 25 | - | 600 | 80 | 1.05 | 2.0 | 10 |
| | D3SBA80 | 4.0 | 25 | - | 800 | 80 | 1.05 | 2.0 | 10 |
| | D3SBA100 | 4.0 | 25 | - | 1000 | 80 | 1.05 | 2.0 | 10 |

D5SBA10 Series, 6 A, Case Type: RBV25

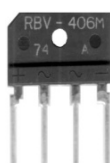
| | | | | | | | | | |
|--|---------|-----|----|---|-----|-----|------|-----|----|
| | D5SBA10 | 6.0 | 25 | - | 100 | 120 | 1.05 | 3.0 | 10 |
| | D5SBA20 | 6.0 | 25 | - | 200 | 120 | 1.05 | 3.0 | 10 |
| | D5SBA40 | 6.0 | 25 | - | 400 | 120 | 1.10 | 3.0 | 10 |
| | D5SBA60 | 6.0 | 25 | - | 600 | 120 | 1.10 | 3.0 | 10 |

BR600/RBV600 Series, 6 A, Case Type: BR6/RBV25

| | | | | | | | | | |
|-------|--------|-----|----|-----|------|-----|-----|-----|----|
| BR600 | RBV600 | 6.0 | 50 | 20 | 50 | 200 | 1.0 | 3.0 | 10 |
| BR601 | RBV601 | 6.0 | 50 | 40 | 100 | 200 | 1.0 | 3.0 | 10 |
| BR602 | RBV602 | 6.0 | 50 | 80 | 200 | 200 | 1.0 | 3.0 | 10 |
| BR604 | RBV604 | 6.0 | 50 | 125 | 400 | 200 | 1.0 | 3.0 | 10 |
| BR606 | RBV606 | 6.0 | 50 | 250 | 600 | 200 | 1.0 | 3.0 | 10 |
| BR608 | RBV608 | 6.0 | 50 | 380 | 800 | 200 | 1.0 | 3.0 | 10 |
| BR610 | RBV610 | 6.0 | 50 | 440 | 1000 | 200 | 1.0 | 3.0 | 10 |



BR6



RBV4



RBV25



Silicon Bridge Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Input Voltage Recommended | Max. Repetitive Peak Reverse Voltage | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|----------|-----|--|------|---------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | | IF(AV) | @ Tc | | VRRM | IFSM | VF | @ IF | IR |
| DIP | SIP | (A) | (°C) | (V) | (V) | (A) | (V) | (A) | (μA) |

RBV600D Series, 6 A, Case Type: RBV25

| | | | | | | | | | |
|--|---------|-----|----|-----|------|-----|-----|-----|----|
| | RBV600D | 6.0 | 50 | 20 | 50 | 300 | 1.0 | 6.0 | 10 |
| | RBV601D | 6.0 | 50 | 40 | 100 | 300 | 1.0 | 6.0 | 10 |
| | RBV602D | 6.0 | 50 | 80 | 200 | 300 | 1.0 | 6.0 | 10 |
| | RBV604D | 6.0 | 50 | 125 | 400 | 300 | 1.0 | 6.0 | 10 |
| | RBV606D | 6.0 | 50 | 250 | 600 | 300 | 1.0 | 6.0 | 10 |
| | RBV608D | 6.0 | 50 | 380 | 800 | 300 | 1.0 | 6.0 | 10 |
| | RBV610D | 6.0 | 50 | 440 | 1000 | 300 | 1.0 | 6.0 | 10 |

BR800/RBV800 Series, 8 A, Case Type: BR10/RBV25

| | | | | | | | | | |
|-------|--------|-----|----|-----|------|-----|-----|-----|----|
| BR800 | RBV800 | 8.0 | 50 | 20 | 50 | 300 | 1.0 | 4.0 | 10 |
| BR801 | RBV801 | 8.0 | 50 | 40 | 100 | 300 | 1.0 | 4.0 | 10 |
| BR802 | RBV802 | 8.0 | 50 | 80 | 200 | 300 | 1.0 | 4.0 | 10 |
| BR804 | RBV804 | 8.0 | 50 | 125 | 400 | 300 | 1.0 | 4.0 | 10 |
| BR806 | RBV806 | 8.0 | 50 | 250 | 600 | 300 | 1.0 | 4.0 | 10 |
| BR808 | RBV808 | 8.0 | 50 | 380 | 800 | 300 | 1.0 | 4.0 | 10 |
| BR810 | RBV810 | 8.0 | 50 | 440 | 1000 | 300 | 1.0 | 4.0 | 10 |

RBV800D Series, 8 A, Case Type: RBV25

| | | | | | | | | | |
|--|---------|-----|----|-----|------|-----|-----|-----|----|
| | RBV800D | 8.0 | 50 | 20 | 50 | 300 | 1.0 | 8.0 | 10 |
| | RBV801D | 8.0 | 50 | 40 | 100 | 300 | 1.0 | 8.0 | 10 |
| | RBV802D | 8.0 | 50 | 80 | 200 | 300 | 1.0 | 8.0 | 10 |
| | RBV804D | 8.0 | 50 | 125 | 400 | 300 | 1.0 | 8.0 | 10 |
| | RBV806D | 8.0 | 50 | 250 | 600 | 300 | 1.0 | 8.0 | 10 |
| | RBV808D | 8.0 | 50 | 380 | 800 | 300 | 1.0 | 8.0 | 10 |
| | RBV810D | 8.0 | 50 | 440 | 1000 | 300 | 1.0 | 8.0 | 10 |

BR1000/RBV1000 Series, 10 A, Case Type: BR10/RBV25

| | | | | | | | | | |
|--------|---------|----|----|-----|------|-----|-----|-----|----|
| BR1000 | RBV1000 | 10 | 55 | 20 | 50 | 300 | 1.0 | 5.0 | 10 |
| BR1001 | RBV1001 | 10 | 55 | 40 | 100 | 300 | 1.0 | 5.0 | 10 |
| BR1002 | RBV1002 | 10 | 55 | 80 | 200 | 300 | 1.0 | 5.0 | 10 |
| BR1004 | RBV1004 | 10 | 55 | 125 | 400 | 300 | 1.0 | 5.0 | 10 |
| BR1006 | RBV1006 | 10 | 55 | 250 | 600 | 300 | 1.0 | 5.0 | 10 |
| BR1008 | RBV1008 | 10 | 55 | 380 | 800 | 300 | 1.0 | 5.0 | 10 |
| BR1010 | RBV1010 | 10 | 55 | 440 | 1000 | 300 | 1.0 | 5.0 | 10 |



BR6



RBV25



Silicon Bridge Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Input Voltage Recommended | Max. Repetitive Peak Reverse Voltage | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|----------|-----|--|------|---------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | | IF(AV) | @ Tc | | VRRM | IFSM | VF | @ IF | IR |
| DIP | SIP | (A) | (°C) | (V) | (V) | (A) | (V) | (A) | (μA) |

RBV1000D Series, 10 A, Case Type: RBV25

| | | | | | | | | | |
|--|----------|----|----|-----|------|-----|-----|----|----|
| | RBV1000D | 10 | 55 | 20 | 50 | 300 | 1.1 | 10 | 10 |
| | RBV1001D | 10 | 55 | 40 | 100 | 300 | 1.1 | 10 | 10 |
| | RBV1002D | 10 | 55 | 80 | 200 | 300 | 1.1 | 10 | 10 |
| | RBV1004D | 10 | 55 | 125 | 400 | 300 | 1.1 | 10 | 10 |
| | RBV1006D | 10 | 55 | 250 | 600 | 300 | 1.1 | 10 | 10 |
| | RBV1008D | 10 | 55 | 380 | 800 | 300 | 1.1 | 10 | 10 |
| | RBV1010D | 10 | 55 | 440 | 1000 | 300 | 1.1 | 10 | 10 |

KBPC1000 Series, 10 A, Case Type: BR50M

| | | | | | | | | | |
|----------|--|----|----|---|------|-----|-----|-----|----|
| KBPC1000 | | 10 | 55 | - | 50 | 200 | 1.2 | 5.0 | 10 |
| KBPC1001 | | 10 | 55 | - | 100 | 200 | 1.2 | 5.0 | 10 |
| KBPC1002 | | 10 | 55 | - | 200 | 200 | 1.2 | 5.0 | 10 |
| KBPC1004 | | 10 | 55 | - | 400 | 200 | 1.2 | 5.0 | 10 |
| KBPC1006 | | 10 | 55 | - | 600 | 200 | 1.2 | 5.0 | 10 |
| KBPC1008 | | 10 | 55 | - | 800 | 200 | 1.2 | 5.0 | 10 |
| KBPC1010 | | 10 | 55 | - | 1000 | 200 | 1.2 | 5.0 | 10 |

BR1500/RBV1500 Series, 15 A, Case Type: BR50/RBV25

| | | | | | | | | | |
|--------|---------|----|----|-----|------|-----|-----|-----|----|
| BR1500 | RBV1500 | 15 | 55 | 20 | 50 | 300 | 1.1 | 7.5 | 10 |
| BR1501 | RBV1501 | 15 | 55 | 40 | 100 | 300 | 1.1 | 7.5 | 10 |
| BR1502 | RBV1502 | 15 | 55 | 80 | 200 | 300 | 1.1 | 7.5 | 10 |
| BR1504 | RBV1504 | 15 | 55 | 125 | 400 | 300 | 1.1 | 7.5 | 10 |
| BR1506 | RBV1506 | 15 | 55 | 250 | 600 | 300 | 1.1 | 7.5 | 10 |
| BR1508 | RBV1508 | 15 | 55 | 380 | 800 | 300 | 1.1 | 7.5 | 10 |
| BR1510 | RBV1510 | 15 | 55 | 440 | 1000 | 300 | 1.1 | 7.5 | 10 |

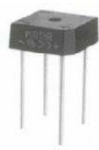
* For wire leads use suffix "W" for Case Type : BR50W

RBV1500D Series, 15 A, Case Type: RBV25

| | | | | | | | | | |
|--|----------|----|----|-----|------|-----|-----|----|----|
| | RBV1500D | 15 | 55 | 20 | 50 | 300 | 1.1 | 15 | 10 |
| | RBV1501D | 15 | 55 | 40 | 100 | 300 | 1.1 | 15 | 10 |
| | RBV1502D | 15 | 55 | 80 | 200 | 300 | 1.1 | 15 | 10 |
| | RBV1504D | 15 | 55 | 125 | 400 | 300 | 1.1 | 15 | 10 |
| | RBV1506D | 15 | 55 | 250 | 600 | 300 | 1.1 | 15 | 10 |
| | RBV1508D | 15 | 55 | 380 | 800 | 300 | 1.1 | 15 | 10 |
| | RBV1510D | 15 | 55 | 440 | 1000 | 300 | 1.1 | 15 | 10 |



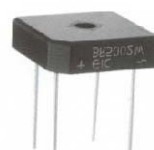
RBV25



BR10



BR50



BR50W



BR50M



Silicon Bridge Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Input Voltage Recommended | Max. Repetitive Peak Reverse Voltage | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|----------|-----|--|------|---------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | | IF(AV) | @ Tc | | | | VF | @ IF | |
| DIP | SIP | (A) | (°C) | (V) | VRRM (V) | IFSM (A) | (V) | (A) | IR (μA) |

KBPC1500 Series, 15 A, Case Type: BR50M

| | | | | | | | | | |
|----------|--|----|----|---|------|-----|-----|-----|----|
| KBPC1500 | | 15 | 55 | - | 50 | 300 | 1.2 | 7.5 | 10 |
| KBPC1501 | | 15 | 55 | - | 100 | 300 | 1.2 | 7.5 | 10 |
| KBPC1502 | | 15 | 55 | - | 200 | 300 | 1.2 | 7.5 | 10 |
| KBPC1504 | | 15 | 55 | - | 400 | 300 | 1.2 | 7.5 | 10 |
| KBPC1506 | | 15 | 55 | - | 600 | 300 | 1.2 | 7.5 | 10 |
| KBPC1508 | | 15 | 55 | - | 800 | 300 | 1.2 | 7.5 | 10 |
| KBPC1510 | | 15 | 55 | - | 1000 | 300 | 1.2 | 7.5 | 10 |

S15VB20 Series, 15 A, Case Type: BR50

| | | | | | | | | | |
|---------|--|----|----|---|-----|-----|------|-----|----|
| S15VB20 | | 15 | 83 | - | 200 | 200 | 1.05 | 7.5 | 10 |
| S15VB60 | | 15 | 83 | - | 600 | 200 | 1.05 | 7.5 | 10 |

D20XB20 Series, 20 A, Case Type: RBV25

| | | | | | | | | | |
|--|----------|----|----|---|------|-----|-----|----|----|
| | D20XB20 | 20 | 87 | - | 200 | 240 | 1.1 | 10 | 10 |
| | D20XB60 | 20 | 87 | - | 600 | 240 | 1.1 | 10 | 10 |
| | D20XB80 | 20 | 87 | - | 800 | 240 | 1.1 | 10 | 10 |
| | D20XB100 | 20 | 87 | - | 1000 | 240 | 1.1 | 10 | 10 |

BR2500/RBV2500 Series, 25 A, Case Type: BR50/RBV25

| | | | | | | | | | |
|--------|---------|----|----|-----|------|-----|-----|------|----|
| BR2500 | RBV2500 | 25 | 55 | 20 | 50 | 300 | 1.1 | 12.5 | 10 |
| BR2501 | RBV2501 | 25 | 55 | 40 | 100 | 300 | 1.1 | 12.5 | 10 |
| BR2502 | RBV2502 | 25 | 55 | 80 | 200 | 300 | 1.1 | 12.5 | 10 |
| BR2504 | RBV2504 | 25 | 55 | 125 | 400 | 300 | 1.1 | 12.5 | 10 |
| BR2506 | RBV2506 | 25 | 55 | 250 | 600 | 300 | 1.1 | 12.5 | 10 |
| BR2508 | RBV2508 | 25 | 55 | 380 | 800 | 300 | 1.1 | 12.5 | 10 |
| BR2510 | RBV2510 | 25 | 55 | 440 | 1000 | 300 | 1.1 | 12.5 | 10 |

* For wire leads use suffix "W" for Case Type : BR50W

D25XB20 Series, 25 A, Case Type: RBV25

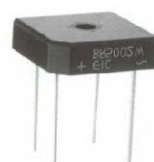
| | | | | | | | | | |
|--|---------|----|----|---|-----|-----|------|------|----|
| | D25XB20 | 25 | 98 | - | 200 | 350 | 1.05 | 12.5 | 10 |
| | D25XB60 | 25 | 98 | - | 600 | 350 | 1.05 | 12.5 | 10 |



RBV25



BR50



BR50W



BR50M



Silicon Bridge Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Input Voltage Recommended | Max. Repetitive Peak Reverse Voltage | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|----------|-----|--|------|---------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | | IF(AV) | @ Tc | | | | VF | @ IF | |
| DIP | SIP | (A) | (°C) | (V) | VRRM (V) | IFSM (A) | (V) | (A) | IR (μA) |

GBJ2500 Series, 25 A, Case Type: RBV25

| | | | | | | | | | |
|--|---------|----|-----|---|------|-----|-----|------|----|
| | GBJ2500 | 25 | 100 | - | 50 | 300 | 1.1 | 12.5 | 10 |
| | GBJ2501 | 25 | 100 | - | 100 | 300 | 1.1 | 12.5 | 10 |
| | GBJ2502 | 25 | 100 | - | 200 | 300 | 1.1 | 12.5 | 10 |
| | GBJ2504 | 25 | 100 | - | 400 | 300 | 1.1 | 12.5 | 10 |
| | GBJ2506 | 25 | 100 | - | 600 | 300 | 1.1 | 12.5 | 10 |
| | GBJ2508 | 25 | 100 | - | 800 | 300 | 1.1 | 12.5 | 10 |
| | GBJ2510 | 25 | 100 | - | 1000 | 300 | 1.1 | 12.5 | 10 |

S25VB20 Series, 25 A, Case Type: BR50

| | | | | | | | | | |
|---------|--|----|----|---|-----|-----|------|------|----|
| S25VB20 | | 25 | 85 | - | 200 | 400 | 1.05 | 12.5 | 10 |
| S25VB60 | | 25 | 85 | - | 600 | 400 | 1.05 | 12.5 | 10 |

RBV2500 Series, 25 A, Case Type: RBV25

| | | | | | | | | | |
|--|----------|----|----|-----|------|-----|-----|----|----|
| | RBV2500D | 25 | 55 | 20 | 50 | 400 | 1.1 | 25 | 10 |
| | RBV2501D | 25 | 55 | 40 | 100 | 400 | 1.1 | 25 | 10 |
| | RBV2502D | 25 | 55 | 80 | 200 | 400 | 1.1 | 25 | 10 |
| | RBV2504D | 25 | 55 | 125 | 400 | 400 | 1.1 | 25 | 10 |
| | RBV2506D | 25 | 55 | 250 | 600 | 400 | 1.1 | 25 | 10 |
| | RBV2508D | 25 | 55 | 380 | 800 | 400 | 1.1 | 25 | 10 |
| | RBV2510D | 25 | 55 | 440 | 1000 | 400 | 1.1 | 25 | 10 |

KBPC2500 Series, 25 A, Case Type: BR50M

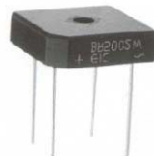
| | | | | | | | | | |
|----------|--|----|----|---|------|-----|-----|------|----|
| KBPC2500 | | 25 | 55 | - | 50 | 300 | 1.1 | 12.5 | 10 |
| KBPC2501 | | 25 | 55 | - | 100 | 300 | 1.1 | 12.5 | 10 |
| KBPC2502 | | 25 | 55 | - | 200 | 300 | 1.1 | 12.5 | 10 |
| KBPC2504 | | 25 | 55 | - | 400 | 300 | 1.1 | 12.5 | 10 |
| KBPC2506 | | 25 | 55 | - | 600 | 300 | 1.1 | 12.5 | 10 |
| KBPC2508 | | 25 | 55 | - | 800 | 300 | 1.1 | 12.5 | 10 |
| KBPC2510 | | 25 | 55 | - | 1000 | 300 | 1.1 | 12.5 | 10 |



RBV25



BR50



BR50W



BR50M



Silicon Bridge Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | | Max. Average Forward Rectified Current | | Input Voltage Recommended | Max. Repetitive Peak Reverse Voltage | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|----------|-----|--|------|---------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | | IF(AV) | @ Tc | | VRRM | IFSM | VF | @ IF | IR |
| DIP | SIP | (A) | (°C) | (V) | (V) | (A) | (V) | (A) | (μA) |

KBPC3500 Series, 35 A, Case Type: BR50M

| | | | | | | | | | |
|----------|--|----|----|---|------|-----|-----|------|----|
| KBPC3500 | | 35 | 55 | - | 50 | 400 | 1.1 | 17.5 | 10 |
| KBPC3501 | | 35 | 55 | - | 100 | 400 | 1.1 | 17.5 | 10 |
| KBPC3502 | | 35 | 55 | - | 200 | 400 | 1.1 | 17.5 | 10 |
| KBPC3504 | | 35 | 55 | - | 400 | 400 | 1.1 | 17.5 | 10 |
| KBPC3506 | | 35 | 55 | - | 600 | 400 | 1.1 | 17.5 | 10 |
| KBPC3508 | | 35 | 55 | - | 800 | 400 | 1.1 | 17.5 | 10 |
| KBPC3510 | | 35 | 55 | - | 1000 | 400 | 1.1 | 17.5 | 10 |

BR3500/RBV3500 Series, 35 A, Case Type: BR50/RBV25

| | | | | | | | | | |
|--------|---------|----|----|-----|------|-----|-----|------|----|
| BR3500 | RBV3500 | 35 | 55 | 20 | 50 | 400 | 1.1 | 17.5 | 10 |
| BR3501 | RBV3501 | 35 | 55 | 40 | 100 | 400 | 1.1 | 17.5 | 10 |
| BR3502 | RBV3502 | 35 | 55 | 80 | 200 | 400 | 1.1 | 17.5 | 10 |
| BR3504 | RBV3504 | 35 | 55 | 125 | 400 | 400 | 1.1 | 17.5 | 10 |
| BR3506 | RBV3506 | 35 | 55 | 250 | 600 | 400 | 1.1 | 17.5 | 10 |
| BR3508 | RBV3508 | 35 | 55 | 380 | 800 | 400 | 1.1 | 17.5 | 10 |
| BR3510 | RBV3510 | 35 | 55 | 440 | 1000 | 400 | 1.1 | 17.5 | 10 |

* For wire leads use suffix "W" for Case Type : BR50W

BR5000/RBV5000 Series, 50 A, Case Type: BR50/RBV25

| | | | | | | | | | |
|--------|---------|----|----|-----|------|-----|-----|----|----|
| BR5000 | RBV5000 | 50 | 55 | 20 | 50 | 400 | 1.1 | 25 | 10 |
| BR5001 | RBV5001 | 50 | 55 | 40 | 100 | 400 | 1.1 | 25 | 10 |
| BR5002 | RBV5002 | 50 | 55 | 80 | 200 | 400 | 1.1 | 25 | 10 |
| BR5004 | RBV5004 | 50 | 55 | 125 | 400 | 400 | 1.1 | 25 | 10 |
| BR5006 | RBV5006 | 50 | 55 | 250 | 600 | 400 | 1.1 | 25 | 10 |
| BR5008 | RBV5008 | 50 | 55 | 380 | 800 | 400 | 1.1 | 25 | 10 |
| BR5010 | RBV5010 | 50 | 55 | 440 | 1000 | 400 | 1.1 | 25 | 10 |

* For wire leads use suffix "W" for Case Type : BR50W

KBPC5000 Series, 50 A, Case Type: BR50M

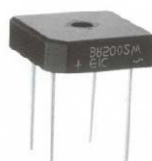
| | | | | | | | | | |
|----------|--|----|----|---|------|-----|-----|----|----|
| KBPC5000 | | 50 | 55 | - | 50 | 400 | 1.1 | 25 | 10 |
| KBPC5001 | | 50 | 55 | - | 100 | 400 | 1.1 | 25 | 10 |
| KBPC5002 | | 50 | 55 | - | 200 | 400 | 1.1 | 25 | 10 |
| KBPC5004 | | 50 | 55 | - | 400 | 400 | 1.1 | 25 | 10 |
| KBPC5006 | | 50 | 55 | - | 600 | 400 | 1.1 | 25 | 10 |
| KBPC5008 | | 50 | 55 | - | 800 | 400 | 1.1 | 25 | 10 |
| KBPC5010 | | 50 | 55 | - | 1000 | 400 | 1.1 | 25 | 10 |



RBV25



BR50



BR50W



BR50M

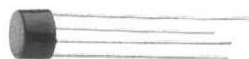


Glass Passivated Bridge Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Input Voltage Recommended | Max. Repetitive Peak Reverse Voltage | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|----------|--|------------------|---------------------------|--------------------------------------|---------------------------------|--|------------------|-----------------------------------|
| | I _{F(AV)} | @ T _c | | | | V _F | @ I _F | |
| | (A) | (°C) | | | | (V) | (A) | |

W005G Series, 1.5 A, Case Type: WOB



| | | | | | | | | |
|-------|-----|----|---|------|----|-----|-----|---|
| W005G | 1.5 | 25 | - | 50 | 50 | 1.0 | 1.0 | 5 |
| W01G | 1.5 | 25 | - | 100 | 50 | 1.0 | 1.0 | 5 |
| W02G | 1.5 | 25 | - | 200 | 50 | 1.0 | 1.0 | 5 |
| W04G | 1.5 | 25 | - | 400 | 50 | 1.0 | 1.0 | 5 |
| W06G | 1.5 | 25 | - | 600 | 50 | 1.0 | 1.0 | 5 |
| W08G | 1.5 | 25 | - | 800 | 50 | 1.0 | 1.0 | 5 |
| W10G | 1.5 | 25 | - | 1000 | 50 | 1.0 | 1.0 | 5 |

KBL400G Series, 4 A, Case Type: KBL



| | | | | | | | | |
|---------|-----|---------|---|------|-----|-----|-----|----|
| KBL400G | 4.0 | 50 (Ta) | - | 50 | 150 | 1.1 | 4.0 | 10 |
| KBL401G | 4.0 | 50 (Ta) | - | 100 | 150 | 1.1 | 4.0 | 10 |
| KBL402G | 4.0 | 50 (Ta) | - | 200 | 150 | 1.1 | 4.0 | 10 |
| KBL404G | 4.0 | 50 (Ta) | - | 400 | 150 | 1.1 | 4.0 | 10 |
| KBL406G | 4.0 | 50 (Ta) | - | 600 | 150 | 1.1 | 4.0 | 10 |
| KBL408G | 4.0 | 50 (Ta) | - | 800 | 150 | 1.1 | 4.0 | 10 |
| KBL410G | 4.0 | 50 (Ta) | - | 1000 | 150 | 1.1 | 4.0 | 10 |

GBPC6005 Series, 6 A, Case Type: BR6

| | | | | | | | | |
|----------|-----|----|---|------|-----|-----|-----|-----|
| GBPC6005 | 6.0 | 50 | - | 50 | 175 | 1.0 | 3.0 | 5.0 |
| GBPC601 | 6.0 | 50 | - | 100 | 175 | 1.0 | 3.0 | 5.0 |
| GBPC602 | 6.0 | 50 | - | 200 | 175 | 1.0 | 3.0 | 5.0 |
| GBPC604 | 6.0 | 50 | - | 400 | 175 | 1.0 | 3.0 | 5.0 |
| GBPC606 | 6.0 | 50 | - | 600 | 175 | 1.0 | 3.0 | 5.0 |
| GBPC608 | 6.0 | 50 | - | 800 | 175 | 1.0 | 3.0 | 5.0 |
| GBPC610 | 6.0 | 50 | - | 1000 | 175 | 1.0 | 3.0 | 5.0 |

GBPC15005 Series, 15 A, Case Type: BR50

| | | | | | | | | |
|-----------|----|----|---|------|-----|-----|-----|-----|
| GBPC15005 | 15 | 50 | - | 50 | 300 | 1.1 | 7.5 | 5.0 |
| GBPC1501 | 15 | 50 | - | 100 | 300 | 1.1 | 7.5 | 5.0 |
| GBPC1502 | 15 | 50 | - | 200 | 300 | 1.1 | 7.5 | 5.0 |
| GBPC1504 | 15 | 50 | - | 400 | 300 | 1.1 | 7.5 | 5.0 |
| GBPC1506 | 15 | 50 | - | 600 | 300 | 1.1 | 7.5 | 5.0 |
| GBPC1508 | 15 | 50 | - | 800 | 300 | 1.1 | 7.5 | 5.0 |
| GBPC1510 | 15 | 50 | - | 1000 | 300 | 1.1 | 7.5 | 5.0 |



BR6



BR50



Glass Passivated Bridge Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | | Input Voltage Recommended | Max. Repetitive Peak Reverse Voltage | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | | Max. Reverse Current at Ta = 25°C |
|----------|--|---|------|---------------------------|--------------------------------------|---------------------------------|--|---|-----|-----------------------------------|
| | IF(AV) | @ | Tc | | | | VF | @ | IF | |
| | (A) | | (°C) | | | | (V) | | (A) | |
| | | | | (V) | (V) | (A) | (V) | | (A) | (μA) |

GBPC25005 Series, 25 A, Case Type: BR50

| | | | | | | | | |
|-----------|----|----|---|------|-----|-----|------|-----|
| GBPC25005 | 25 | 50 | - | 50 | 300 | 1.1 | 12.5 | 5.0 |
| GBPC2501 | 25 | 50 | - | 100 | 300 | 1.1 | 12.5 | 5.0 |
| GBPC2502 | 25 | 50 | - | 200 | 300 | 1.1 | 12.5 | 5.0 |
| GBPC2504 | 25 | 50 | - | 400 | 300 | 1.1 | 12.5 | 5.0 |
| GBPC2506 | 25 | 50 | - | 600 | 300 | 1.1 | 12.5 | 5.0 |
| GBPC2508 | 25 | 50 | - | 800 | 300 | 1.1 | 12.5 | 5.0 |
| GBPC2510 | 25 | 50 | - | 1000 | 300 | 1.1 | 12.5 | 5.0 |

GBPC25005W Series, 25 A, Case Type: BR50W

| | | | | | | | | |
|------------|----|----|---|------|-----|-----|------|-----|
| GBPC25005W | 25 | 50 | - | 50 | 300 | 1.1 | 12.5 | 5.0 |
| GBPC2501W | 25 | 50 | - | 100 | 300 | 1.1 | 12.5 | 5.0 |
| GBPC2502W | 25 | 50 | - | 200 | 300 | 1.1 | 12.5 | 5.0 |
| GBPC2504W | 25 | 50 | - | 400 | 300 | 1.1 | 12.5 | 5.0 |
| GBPC2506W | 25 | 50 | - | 600 | 300 | 1.1 | 12.5 | 5.0 |
| GBPC2508W | 25 | 50 | - | 800 | 300 | 1.1 | 12.5 | 5.0 |
| GBPC2510W | 25 | 50 | - | 1000 | 300 | 1.1 | 12.5 | 5.0 |

GBPC35005 Series, 35 A, Case Type: BR50

| | | | | | | | | |
|-----------|----|----|---|------|-----|-----|------|-----|
| GBPC35005 | 35 | 50 | - | 50 | 400 | 1.1 | 17.5 | 5.0 |
| GBPC3501 | 35 | 50 | - | 100 | 400 | 1.1 | 17.5 | 5.0 |
| GBPC3502 | 35 | 50 | - | 200 | 400 | 1.1 | 17.5 | 5.0 |
| GBPC3504 | 35 | 50 | - | 400 | 400 | 1.1 | 17.5 | 5.0 |
| GBPC3506 | 35 | 50 | - | 600 | 400 | 1.1 | 17.5 | 5.0 |
| GBPC3508 | 35 | 50 | - | 800 | 400 | 1.1 | 17.5 | 5.0 |
| GBPC3510 | 35 | 50 | - | 1000 | 400 | 1.1 | 17.5 | 5.0 |



BR50



BR50W



Mini Bridge Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Input Voltage Recommended | Max. Repetitive Peak Reverse Voltage | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|----------|--|------|---------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | IF(AV) | @ Tc | | | | VF | @ IF | |
| | (A) | (°C) | (V) | VRRM (V) | IFSM (A) | (V) | (A) | IR (μA) |

MB1S Series, 0.5 A, Case Type: MBS



| | | | | | | | | |
|-------|-----|----|---|------|----|-----|-----|-----|
| MB1S | 0.5 | 30 | - | 100 | 35 | 1.0 | 0.4 | 5.0 |
| MB2S | 0.5 | 30 | - | 200 | 35 | 1.0 | 0.4 | 5.0 |
| MB4S | 0.5 | 30 | - | 400 | 35 | 1.0 | 0.4 | 5.0 |
| MB6S | 0.5 | 30 | - | 600 | 35 | 1.0 | 0.4 | 5.0 |
| MB8S | 0.5 | 30 | - | 800 | 35 | 1.0 | 0.4 | 5.0 |
| MB10S | 0.5 | 30 | - | 1000 | 35 | 1.0 | 0.4 | 5.0 |

MB1M Series, 0.5 A, Case Type: MBM



| | | | | | | | | |
|-------|-----|----|---|------|----|-----|-----|-----|
| MB1M | 0.5 | 30 | - | 100 | 35 | 1.0 | 0.4 | 5.0 |
| MB2M | 0.5 | 30 | - | 200 | 35 | 1.0 | 0.4 | 5.0 |
| MB4M | 0.5 | 30 | - | 400 | 35 | 1.0 | 0.4 | 5.0 |
| MB6M | 0.5 | 30 | - | 600 | 35 | 1.0 | 0.4 | 5.0 |
| MB8M | 0.5 | 30 | - | 800 | 35 | 1.0 | 0.4 | 5.0 |
| MB10M | 0.5 | 30 | - | 1000 | 35 | 1.0 | 0.4 | 5.0 |

S1ZB20 Series, 0.8 A, Case Type: MBS



| | | | | | | | | |
|--------|-----|----|---|-----|----|------|-----|----|
| S1ZB20 | 0.8 | 30 | - | 200 | 30 | 1.05 | 0.4 | 10 |
| S1ZB60 | 0.8 | 30 | - | 600 | 30 | 1.05 | 0.4 | 10 |
| S1ZB80 | 0.8 | 30 | - | 800 | 30 | 1.05 | 0.4 | 10 |

DB101 Series, 1 A, Case Type: DFM



| | | | | | | | | |
|-------|-----|----|---|------|----|-----|-----|-----|
| DB101 | 1.0 | 40 | - | 50 | 40 | 1.1 | 1.0 | 5.0 |
| DB102 | 1.0 | 40 | - | 100 | 40 | 1.1 | 1.0 | 5.0 |
| DB103 | 1.0 | 40 | - | 200 | 40 | 1.1 | 1.0 | 5.0 |
| DB104 | 1.0 | 40 | - | 400 | 40 | 1.1 | 1.0 | 5.0 |
| DB105 | 1.0 | 40 | - | 600 | 40 | 1.1 | 1.0 | 5.0 |
| DB106 | 1.0 | 40 | - | 800 | 40 | 1.1 | 1.0 | 5.0 |
| DB107 | 1.0 | 40 | - | 1000 | 40 | 1.1 | 1.0 | 5.0 |

DF005S Series, 1 A, Case Type: DFS



| | | | | | | | | |
|--------|-----|----|---|------|----|-----|-----|----|
| DF005S | 1.0 | 40 | - | 50 | 30 | 1.1 | 1.0 | 10 |
| DF01S | 1.0 | 40 | - | 100 | 30 | 1.1 | 1.0 | 10 |
| DF02S | 1.0 | 40 | - | 200 | 30 | 1.1 | 1.0 | 10 |
| DF04S | 1.0 | 40 | - | 400 | 30 | 1.1 | 1.0 | 10 |
| DF06S | 1.0 | 40 | - | 600 | 30 | 1.1 | 1.0 | 10 |
| DF08S | 1.0 | 40 | - | 800 | 30 | 1.1 | 1.0 | 10 |
| DF10S | 1.0 | 40 | - | 1000 | 30 | 1.1 | 1.0 | 10 |



Mini Bridge Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Input Voltage Recommended | Max. Repetitive Peak Reverse Voltage | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C |
|----------|--|------|---------------------------|--------------------------------------|---------------------------------|--|------|-----------------------------------|
| | IF(AV) | @ Tc | | | | VF | @ IF | |
| | (A) | (°C) | (V) | (V) | (A) | (V) | (A) | (μA) |

DF005M Series, 1 A, Case Type: DFM



| | | | | | | | | |
|--------|-----|----|---|------|----|-----|-----|-----|
| DF005M | 1.0 | 40 | - | 50 | 30 | 1.1 | 1.0 | 5.0 |
| DF01M | 1.0 | 40 | - | 100 | 30 | 1.1 | 1.0 | 5.0 |
| DF02M | 1.0 | 40 | - | 200 | 30 | 1.1 | 1.0 | 5.0 |
| DF04M | 1.0 | 40 | - | 400 | 30 | 1.1 | 1.0 | 5.0 |
| DF06M | 1.0 | 40 | - | 600 | 30 | 1.1 | 1.0 | 5.0 |
| DF08M | 1.0 | 40 | - | 800 | 30 | 1.1 | 1.0 | 5.0 |
| DF10M | 1.0 | 40 | - | 1000 | 30 | 1.1 | 1.0 | 5.0 |

DF15005S Series, 1.5 A, Case Type: DFS



| | | | | | | | | |
|----------|-----|----|---|------|----|-----|-----|----|
| DF15005S | 1.5 | 40 | - | 50 | 50 | 1.1 | 1.5 | 10 |
| DF1501S | 1.5 | 40 | - | 100 | 50 | 1.1 | 1.5 | 10 |
| DF1502S | 1.5 | 40 | - | 200 | 50 | 1.1 | 1.5 | 10 |
| DF1504S | 1.5 | 40 | - | 400 | 50 | 1.1 | 1.5 | 10 |
| DF1506S | 1.5 | 40 | - | 600 | 50 | 1.1 | 1.5 | 10 |
| DF1508S | 1.5 | 40 | - | 800 | 50 | 1.1 | 1.5 | 10 |
| DF1510S | 1.5 | 40 | - | 1000 | 50 | 1.1 | 1.5 | 10 |

DF15005M Series, 1.5 A, Case Type: DFM



| | | | | | | | | |
|----------|-----|---------|---|------|----|-----|-----|-----|
| DF15005M | 1.5 | 40 (Ta) | - | 50 | 50 | 1.1 | 1.5 | 5.0 |
| DF1501M | 1.5 | 40 (Ta) | - | 100 | 50 | 1.1 | 1.5 | 5.0 |
| DF1502M | 1.5 | 40 (Ta) | - | 200 | 50 | 1.1 | 1.5 | 5.0 |
| DF1504M | 1.5 | 40 (Ta) | - | 400 | 50 | 1.1 | 1.5 | 5.0 |
| DF1506M | 1.5 | 40 (Ta) | - | 600 | 50 | 1.1 | 1.5 | 5.0 |
| DF1508M | 1.5 | 40 (Ta) | - | 800 | 50 | 1.1 | 1.5 | 5.0 |
| DF1510M | 1.5 | 40 (Ta) | - | 1000 | 50 | 1.1 | 1.5 | 5.0 |



Avalanche Bridge Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Input Voltage Recommended | Max. Recurrent Peak Reverse Voltage | Avalanche Breakdown Voltage at 100 mA | | Max. Forward Peak Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C | |
|----------|--|------|---------------------------|-------------------------------------|---------------------------------------|------|---------------------------------|--|---------|-----------------------------------|----|
| | IF(AV) @ Tc | | | | Min. | Max. | | IFSM | VF @ IF | | IR |
| | (A) | (°C) | | | | | | | | | |

AKBL400 Series, 4 A, Case Type: KBL



| | | | | | | | | | | |
|---------|-----|----|-----|------|------|------|-----|-----|-----|----|
| AKBL400 | 4.0 | 50 | 20 | 50 | 100 | 550 | 200 | 1.1 | 4.0 | 10 |
| AKBL401 | 4.0 | 50 | 40 | 100 | 150 | 600 | 200 | 1.1 | 4.0 | 10 |
| AKBL402 | 4.0 | 50 | 80 | 200 | 250 | 700 | 200 | 1.1 | 4.0 | 10 |
| AKBL404 | 4.0 | 50 | 125 | 400 | 450 | 900 | 200 | 1.1 | 4.0 | 10 |
| AKBL406 | 4.0 | 50 | 250 | 600 | 700 | 1150 | 200 | 1.1 | 4.0 | 10 |
| AKBL408 | 4.0 | 50 | 380 | 800 | 900 | 1350 | 200 | 1.1 | 4.0 | 10 |
| AKBL410 | 4.0 | 50 | 440 | 1000 | 1100 | 1550 | 200 | 1.1 | 4.0 | 10 |

ABR600 Series, 6 A, Case Type: BR6



| | | | | | | | | | | |
|--------|-----|----|-----|------|------|------|-----|-----|-----|----|
| ABR600 | 6.0 | 50 | 20 | 50 | 100 | 550 | 200 | 1.0 | 3.0 | 10 |
| ABR601 | 6.0 | 50 | 40 | 100 | 150 | 600 | 200 | 1.0 | 3.0 | 10 |
| ABR602 | 6.0 | 50 | 80 | 200 | 250 | 700 | 200 | 1.0 | 3.0 | 10 |
| ABR604 | 6.0 | 50 | 125 | 400 | 450 | 900 | 200 | 1.0 | 3.0 | 10 |
| ABR606 | 6.0 | 50 | 250 | 600 | 700 | 1150 | 200 | 1.0 | 3.0 | 10 |
| ABR608 | 6.0 | 50 | 380 | 800 | 900 | 1350 | 200 | 1.0 | 3.0 | 10 |
| ABR610 | 6.0 | 50 | 440 | 1000 | 1100 | 1550 | 200 | 1.0 | 3.0 | 10 |

ABR800 Series, 8 A, Case Type: BR10



| | | | | | | | | | | |
|--------|-----|----|-----|------|------|------|-----|-----|-----|----|
| ABR800 | 8.0 | 50 | 20 | 50 | 100 | 550 | 300 | 1.0 | 4.0 | 10 |
| ABR801 | 8.0 | 50 | 40 | 100 | 150 | 600 | 300 | 1.0 | 4.0 | 10 |
| ABR802 | 8.0 | 50 | 80 | 200 | 250 | 700 | 300 | 1.0 | 4.0 | 10 |
| ABR804 | 8.0 | 50 | 125 | 400 | 450 | 900 | 300 | 1.0 | 4.0 | 10 |
| ABR806 | 8.0 | 50 | 250 | 600 | 700 | 1150 | 300 | 1.0 | 4.0 | 10 |
| ABR808 | 8.0 | 50 | 380 | 800 | 900 | 1350 | 300 | 1.0 | 4.0 | 10 |
| ABR810 | 8.0 | 50 | 440 | 1000 | 1100 | 1550 | 300 | 1.0 | 4.0 | 10 |

ABR1000 Series, 10 A, Case Type: BR10



| | | | | | | | | | | |
|---------|----|----|-----|------|------|------|-----|-----|-----|----|
| ABR1000 | 10 | 50 | 20 | 50 | 100 | 550 | 300 | 1.0 | 5.0 | 10 |
| ABR1001 | 10 | 50 | 40 | 100 | 150 | 600 | 300 | 1.0 | 5.0 | 10 |
| ABR1002 | 10 | 50 | 80 | 200 | 250 | 700 | 300 | 1.0 | 5.0 | 10 |
| ABR1004 | 10 | 50 | 125 | 400 | 450 | 900 | 300 | 1.0 | 5.0 | 10 |
| ABR1006 | 10 | 50 | 250 | 600 | 700 | 1150 | 300 | 1.0 | 5.0 | 10 |
| ABR1008 | 10 | 50 | 380 | 800 | 900 | 1350 | 300 | 1.0 | 5.0 | 10 |
| ABR1010 | 10 | 50 | 440 | 1000 | 1100 | 1550 | 300 | 1.0 | 5.0 | 10 |



Avalanche Bridge Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | Max. Average Forward Rectified Current | | Input Voltage Recommended | Max. Recurrent Peak Reverse Voltage | Avalanche Breakdown Voltage at 100 mA | | Max. Forward Peak Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C | |
|----------|--|------|---------------------------|-------------------------------------|---------------------------------------|------|---------------------------------|--|---------|-----------------------------------|----|
| | IF(AV) @ Tc | | | | Min. | Max. | | IFSM | VF @ IF | | IR |
| | (A) | (°C) | | | | | | | | | |

ABR1500 Series, 15 A, Case Type: BR50

| | | | | | | | | | | |
|---------|----|----|-----|------|------|------|-----|-----|-----|----|
| ABR1500 | 15 | 55 | 20 | 50 | 100 | 550 | 300 | 1.1 | 7.5 | 10 |
| ABR1501 | 15 | 55 | 40 | 100 | 150 | 600 | 300 | 1.1 | 7.5 | 10 |
| ABR1502 | 15 | 55 | 80 | 200 | 250 | 700 | 300 | 1.1 | 7.5 | 10 |
| ABR1504 | 15 | 55 | 125 | 400 | 450 | 900 | 300 | 1.1 | 7.5 | 10 |
| ABR1506 | 15 | 55 | 250 | 600 | 700 | 1150 | 300 | 1.1 | 7.5 | 10 |
| ABR1508 | 15 | 55 | 380 | 800 | 900 | 1350 | 300 | 1.1 | 7.5 | 10 |
| ABR1510 | 15 | 55 | 440 | 1000 | 1100 | 1550 | 300 | 1.1 | 7.5 | 10 |

* For wire leads use suffix "W" for Case Type : BR50W

ABR2500 Series, 25 A, Case Type: BR50

| | | | | | | | | | | |
|---------|----|----|-----|------|------|------|-----|-----|------|----|
| ABR2500 | 25 | 55 | 20 | 50 | 100 | 550 | 300 | 1.1 | 12.5 | 10 |
| ABR2501 | 25 | 55 | 40 | 100 | 150 | 600 | 300 | 1.1 | 12.5 | 10 |
| ABR2502 | 25 | 55 | 80 | 200 | 250 | 700 | 300 | 1.1 | 12.5 | 10 |
| ABR2504 | 25 | 55 | 125 | 400 | 450 | 900 | 300 | 1.1 | 12.5 | 10 |
| ABR2506 | 25 | 55 | 250 | 600 | 700 | 1150 | 300 | 1.1 | 12.5 | 10 |
| ABR2508 | 25 | 55 | 380 | 800 | 900 | 1350 | 300 | 1.1 | 12.5 | 10 |
| ABR2510 | 25 | 55 | 440 | 1000 | 1100 | 1550 | 300 | 1.1 | 12.5 | 10 |

* For wire leads use suffix "W" for Case Type : BR50W

ABR3500 Series, 35 A, Case Type: BR50

| | | | | | | | | | | |
|---------|----|----|-----|------|------|------|-----|-----|------|----|
| ABR3500 | 35 | 55 | 20 | 50 | 100 | 550 | 300 | 1.1 | 17.5 | 10 |
| ABR3501 | 35 | 55 | 40 | 100 | 150 | 600 | 300 | 1.1 | 17.5 | 10 |
| ABR3502 | 35 | 55 | 80 | 200 | 250 | 700 | 300 | 1.1 | 17.5 | 10 |
| ABR3504 | 35 | 55 | 125 | 400 | 450 | 900 | 300 | 1.1 | 17.5 | 10 |
| ABR3506 | 35 | 55 | 250 | 600 | 700 | 1150 | 300 | 1.1 | 17.5 | 10 |
| ABR3508 | 35 | 55 | 380 | 800 | 900 | 1350 | 300 | 1.1 | 17.5 | 10 |
| ABR3510 | 35 | 55 | 440 | 1000 | 1100 | 1550 | 300 | 1.1 | 17.5 | 10 |

* For wire leads use suffix "W" for Case Type : BR50W

ABR5000 Series, 50 A, Case Type: BR50

| | | | | | | | | | | |
|---------|----|----|-----|------|------|------|-----|-----|----|----|
| ABR5000 | 50 | 55 | 20 | 50 | 100 | 550 | 400 | 1.1 | 25 | 10 |
| ABR5001 | 50 | 55 | 40 | 100 | 150 | 600 | 400 | 1.1 | 25 | 10 |
| ABR5002 | 50 | 55 | 80 | 200 | 250 | 700 | 400 | 1.1 | 25 | 10 |
| ABR5004 | 50 | 55 | 125 | 400 | 450 | 900 | 400 | 1.1 | 25 | 10 |
| ABR5006 | 50 | 55 | 250 | 600 | 700 | 1150 | 400 | 1.1 | 25 | 10 |
| ABR5008 | 50 | 55 | 380 | 800 | 900 | 1350 | 400 | 1.1 | 25 | 10 |
| ABR5010 | 50 | 55 | 440 | 1000 | 1100 | 1550 | 400 | 1.1 | 25 | 10 |

* For wire leads use suffix "W" for Case Type : BR50W



BR50



BR50W



Fast Recovery Bridge Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | Maximum Average Forward Rectified Current | | Input Voltage Recommended | Max. Repetitive Peak Forward Voltage | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C | Max. Reverse Recovery Time ⁽¹⁾ |
|----------|---|------------------|---------------------------|--------------------------------------|---------------------------------|--|------------------|-----------------------------------|---|
| | I _F (AV) | @ T _c | | | | V _F | @ I _F | | |
| | (A) | (°C) | | | | (V) | (A) | | |
| | | | (V) | V _{RRM} (V) | I _{FSM} (A) | | | I _R (μA) | T _{rr} (ns) |

FKBL400 Series, 4 A, Case Type: KBL



| | | | | | | | | | |
|---------|-----|----|-----|------|-----|-----|-----|----|-----|
| FKBL400 | 4.0 | 50 | 20 | 50 | 150 | 1.4 | 4.0 | 10 | 150 |
| FKBL401 | 4.0 | 50 | 40 | 100 | 150 | 1.4 | 4.0 | 10 | 150 |
| FKBL402 | 4.0 | 50 | 80 | 200 | 150 | 1.4 | 4.0 | 10 | 150 |
| FKBL404 | 4.0 | 50 | 125 | 400 | 150 | 1.4 | 4.0 | 10 | 150 |
| FKBL406 | 4.0 | 50 | 250 | 600 | 150 | 1.4 | 4.0 | 10 | 250 |
| FKBL408 | 4.0 | 50 | 380 | 800 | 150 | 1.4 | 4.0 | 10 | 500 |
| FKBL410 | 4.0 | 50 | 440 | 1000 | 150 | 1.4 | 4.0 | 10 | 500 |

FBR600 Series, 6 A, Case Type: BR6



| | | | | | | | | | |
|--------|-----|----|-----|------|-----|-----|-----|----|-----|
| FBR600 | 6.0 | 50 | 20 | 50 | 150 | 1.3 | 3.0 | 10 | 150 |
| FBR601 | 6.0 | 50 | 40 | 100 | 150 | 1.3 | 3.0 | 10 | 150 |
| FBR602 | 6.0 | 50 | 80 | 200 | 150 | 1.3 | 3.0 | 10 | 150 |
| FBR604 | 6.0 | 50 | 125 | 400 | 150 | 1.3 | 3.0 | 10 | 150 |
| FBR606 | 6.0 | 50 | 250 | 600 | 150 | 1.3 | 3.0 | 10 | 250 |
| FBR608 | 6.0 | 50 | 380 | 800 | 150 | 1.3 | 3.0 | 10 | 500 |
| FBR610 | 6.0 | 50 | 440 | 1000 | 150 | 1.3 | 3.0 | 10 | 500 |

FKBP800 Series, 8 A, Case Type: BR10



| | | | | | | | | | |
|--------|-----|----|-----|------|-----|-----|-----|----|-----|
| FBR800 | 8.0 | 50 | 20 | 50 | 200 | 1.3 | 4.0 | 10 | 150 |
| FBR801 | 8.0 | 50 | 40 | 100 | 200 | 1.3 | 4.0 | 10 | 150 |
| FBR802 | 8.0 | 50 | 80 | 200 | 200 | 1.3 | 4.0 | 10 | 150 |
| FBR804 | 8.0 | 50 | 125 | 400 | 200 | 1.3 | 4.0 | 10 | 150 |
| FBR806 | 8.0 | 50 | 250 | 600 | 200 | 1.3 | 4.0 | 10 | 250 |
| FBR808 | 8.0 | 50 | 380 | 800 | 200 | 1.3 | 4.0 | 10 | 500 |
| FBR810 | 8.0 | 50 | 440 | 1000 | 200 | 1.3 | 4.0 | 10 | 500 |

FBR1000 Series, 10 A, Case Type: BR10



| | | | | | | | | | |
|---------|----|----|-----|------|-----|-----|-----|----|-----|
| FBR1000 | 10 | 55 | 20 | 50 | 250 | 1.3 | 5.0 | 10 | 150 |
| FBR1001 | 10 | 55 | 40 | 100 | 250 | 1.3 | 5.0 | 10 | 150 |
| FBR1002 | 10 | 55 | 80 | 200 | 250 | 1.3 | 5.0 | 10 | 150 |
| FBR1004 | 10 | 55 | 125 | 400 | 250 | 1.3 | 5.0 | 10 | 150 |
| FBR1006 | 10 | 55 | 250 | 600 | 250 | 1.3 | 5.0 | 10 | 250 |
| FBR1008 | 10 | 55 | 380 | 800 | 250 | 1.3 | 5.0 | 10 | 500 |
| FBR1010 | 10 | 55 | 440 | 1000 | 250 | 1.3 | 5.0 | 10 | 500 |

Note : (1) Reverse Recovery test conditions : I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A



Fast Recovery Bridge Rectifiers

The plastic material carries U/L recognition 94V-0.

| Type No. | Maximum Average Forward Rectified Current | | Input Voltage Recommended | Max. Repetitive Peak Forward Voltage | Max. Peak Forward Surge Current | Max. Forward Voltage Drop at Ta = 25°C | | Max. Reverse Current at Ta = 25°C | Max. Reverse Recovery Time ⁽¹⁾ |
|----------|---|------------------|---------------------------|--------------------------------------|---------------------------------|--|------------------|-----------------------------------|---|
| | I _F (AV) | @ T _c | | | | V _F | @ I _F | | |
| | (A) | (°C) | | | | (V) | (A) | | |
| | | | (V) | V _{RRM} (V) | I _{FSM} (A) | | | I _R (μA) | T _{rr} (ns) |

FBR1500 Series, 15 A, Case Type: BR50

| | | | | | | | | | |
|---------|----|----|-----|------|-----|-----|-----|----|-----|
| FBR1500 | 15 | 55 | 20 | 50 | 300 | 1.3 | 7.5 | 10 | 150 |
| FBR1501 | 15 | 55 | 40 | 100 | 300 | 1.3 | 7.5 | 10 | 150 |
| FBR1502 | 15 | 55 | 80 | 200 | 300 | 1.3 | 7.5 | 10 | 150 |
| FBR1504 | 15 | 55 | 125 | 400 | 300 | 1.3 | 7.5 | 10 | 150 |
| FBR1506 | 15 | 55 | 250 | 600 | 300 | 1.3 | 7.5 | 10 | 250 |
| FBR1508 | 15 | 55 | 380 | 800 | 300 | 1.3 | 7.5 | 10 | 500 |
| FBR1510 | 15 | 55 | 440 | 1000 | 300 | 1.3 | 7.5 | 10 | 500 |

* For wire leads use suffix "W" for Case Type : BR50W

FBR2500 Series, 25 A, Case Type: BR50

| | | | | | | | | | |
|---------|----|----|-----|------|-----|-----|------|----|-----|
| FBR2500 | 25 | 55 | 20 | 50 | 300 | 1.3 | 12.5 | 10 | 150 |
| FBR2501 | 25 | 55 | 40 | 100 | 300 | 1.3 | 12.5 | 10 | 150 |
| FBR2502 | 25 | 55 | 80 | 200 | 300 | 1.3 | 12.5 | 10 | 150 |
| FBR2504 | 25 | 55 | 125 | 400 | 300 | 1.3 | 12.5 | 10 | 150 |
| FBR2506 | 25 | 55 | 250 | 600 | 300 | 1.3 | 12.5 | 10 | 250 |
| FBR2508 | 25 | 55 | 380 | 800 | 300 | 1.3 | 12.5 | 10 | 500 |
| FBR2510 | 25 | 55 | 440 | 1000 | 300 | 1.3 | 12.5 | 10 | 500 |

* For wire leads use suffix "W" for Case Type : BR50W

FBR3500 Series, 35 A, Case Type: BR50

| | | | | | | | | | |
|---------|----|----|-----|------|-----|-----|------|----|-----|
| FBR3500 | 35 | 55 | 20 | 50 | 400 | 1.3 | 17.5 | 10 | 150 |
| FBR3501 | 35 | 55 | 40 | 100 | 400 | 1.3 | 17.5 | 10 | 150 |
| FBR3502 | 35 | 55 | 80 | 200 | 400 | 1.3 | 17.5 | 10 | 150 |
| FBR3504 | 35 | 55 | 125 | 400 | 400 | 1.3 | 17.5 | 10 | 150 |
| FBR3506 | 35 | 55 | 250 | 600 | 400 | 1.3 | 17.5 | 10 | 250 |
| FBR3508 | 35 | 55 | 380 | 800 | 400 | 1.3 | 17.5 | 10 | 500 |
| FBR3510 | 35 | 55 | 440 | 1000 | 400 | 1.3 | 17.5 | 10 | 500 |

* For wire leads use suffix "W" for Case Type : BR50W

FBR5000 Series, 50 A, Case Type: BR50

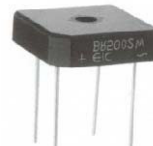
| | | | | | | | | | |
|---------|----|----|-----|------|-----|-----|----|----|-----|
| FBR5000 | 50 | 55 | 20 | 50 | 400 | 1.3 | 25 | 10 | 150 |
| FBR5001 | 50 | 55 | 40 | 100 | 400 | 1.3 | 25 | 10 | 150 |
| FBR5002 | 50 | 55 | 80 | 200 | 400 | 1.3 | 25 | 10 | 150 |
| FBR5004 | 50 | 55 | 125 | 400 | 400 | 1.3 | 25 | 10 | 150 |
| FBR5006 | 50 | 55 | 250 | 600 | 400 | 1.3 | 25 | 10 | 250 |
| FBR5008 | 50 | 55 | 380 | 800 | 400 | 1.3 | 25 | 10 | 500 |
| FBR5010 | 50 | 55 | 440 | 1000 | 400 | 1.3 | 25 | 10 | 500 |

* For wire leads use suffix "W" for Case Type : BR50W

Note : (1) Reverse Recovery test conditions : I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A



BR50



BR50W



Bi - Directional trigger - DIACS

The plastic material carries U/L recognition 94V-0.

| Type No. | Breakdown Voltage | | | Breakover Voltage Symmetry | Dynamic Breakback Voltage | Breakover Current | Peak Pulse Current for 10 μ s 120 PPS Ta < 40 °C |
|----------|---|---------|---------|---|---------------------------|---|---|
| | V _{(BR)1} and V _{(BR)2} | | | [V _{(BR)1}] - [V _{(BR)2}] | $\Delta V \pm$ | I _{(BR)1} and I _{(BR)2} | I _{TRM} |
| | V(Min.) | V(Typ.) | V(Max.) | V(Max) | V(Min.) | μ A(Max.) | A(Max.) |

D32P Series, Case Type: DO-41



| | | | | | | | |
|------|----|----|----|-----|------|-----|-----|
| D32P | 27 | 32 | 37 | 3.0 | 5.0 | 100 | 2.0 |
| D35P | 30 | 35 | 40 | 3.0 | 5.0 | 100 | 2.0 |
| D40P | 35 | 40 | 45 | 3.0 | 5.0 | 100 | 2.0 |
| D50P | 42 | 50 | 58 | 4.0 | 8.0 | 100 | 1.6 |
| D60P | 56 | 60 | 70 | 4.0 | 10.0 | 100 | 1.6 |

DB3 & DB4, Case Type: DO-35



| | | | | | | | |
|-----|----|----|----|-----|-----|-----|-----|
| DB3 | 28 | 32 | 36 | 3.8 | 5.0 | 200 | 2.0 |
| DB4 | 35 | 40 | 45 | 3.8 | 5.0 | 200 | 2.0 |

Thyristor - SIDAC

The plastic material carries U/L recognition 94V-0.

| Type No. | Repetitive Peak Off-State Voltage | Breakover Voltage (60 Hz Sine Wave) | | On-State RMS Current Conduction Angle of 360° | Peak Surge (Non-Repetitive) On-State Current One-cycle@ 60 Hz | Repetitive Peak Off-State Current @ 60Hz, V=V _{DRM} | Dynamic Holding Current R=0.1 K Ω ,60Hz | Breakover Current 60 Hz Sine Wave |
|----------|-----------------------------------|--------------------------------------|------------------------|---|---|--|--|-----------------------------------|
| | V _{DRM} | V _{BO} (Min.) | V _{BO} (Max.) | I _T (RMS) | I _{ISM} | I _{DRM} | I _{HO} | I _{BO} |
| | (V) | (V) | (V) | (A) | (A) | (μ A) | (mA) | (μ A) |

ET013 Series, Case Type: DO-41



| | | | | | | | | |
|-------|-----------|-----|-----|-----|----|----|-----|-----|
| ET013 | ± 90 | 120 | 138 | 0.6 | 20 | 10 | 100 | 200 |
| ET015 | ± 115 | 142 | 157 | 0.6 | 20 | 10 | 100 | 200 |
| ET020 | ± 170 | 190 | 200 | 0.6 | 20 | 10 | 100 | 200 |

G105 Series, Case Type: DO-41



| | | | | | | | | |
|-------|-----------|-----|-----|-----|----|----|-----|-----|
| G105* | ± 90 | 95 | 113 | 1.0 | 20 | 10 | 100 | 200 |
| G120* | ± 90 | 110 | 125 | 1.0 | 20 | 10 | 100 | 200 |
| G130 | ± 90 | 120 | 135 | 1.0 | 20 | 10 | 100 | 200 |
| G220* | ± 180 | 205 | 230 | 1.0 | 20 | 10 | 100 | 200 |
| G240* | ± 180 | 220 | 250 | 1.0 | 20 | 10 | 100 | 200 |
| G260 | ± 180 | 240 | 270 | 1.0 | 20 | 10 | 100 | 200 |
| G270* | ± 180 | 250 | 280 | 1.0 | 20 | 10 | 100 | 200 |

* Also available in Axial D2A Case Types. Use suffix "C" to order(e.g. G105C, G120C,...).



Packaging Information

| Case Type | Packaging | Quantity per Box. (Pcs.) | Package size [mm. (inches)] | Quantity per carton (Pcs.) | Net weight per carton (Kgs.) | Gross weight per carton (Kgs.) | Carton size [mm. (inches)] |
|------------------|---------------------|---------------------------------------|----------------------------------|---|--|--|------------------------------------|
| R-1 | BAG(200 Pcs) | 6,000 | 72x255x135 (2.83x10.04x5.32) | 30,000 | 7.42 | 8.35 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE & AMMO (26 mm) | 3,000 | 45x255x78 (1.77x10.04x3.07) | 39,000 | 5.30 | 7.30 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE & AMMO(52 mm) | 5,000 | 72x255x135 (2.83x10.04x5.32) | 25,000 | 5.00 | 6.20 | 260x370x150 (10.24x14.57x5.90) |
| M1A | BAG(300 Pcs) | 7,500 | 72x255x135 (2.83x10.04x5.32) | 37,500 | 7.75 | 8.16 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE&AMMO (26 mm) | 4,000 | 45x255x78 (1.77x10.04x3.07) | 52,000 | 10.24 | 12.80 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE&AMMO (52 mm) | 5,000 | 72x255x135 (2.83x10.04x5.32) | 25,000 | 5.55 | 6.00 | 260x370x150 (10.24x14.57x5.90) |
| DO-34 (Glass) | BULK | 2,000 | 205x90x21 (8.07x3.54x0.82) | 100,000 | 9.30 | 11.75 | 215x450x240 (8.46x17.71x9.45) |
| | TAPE & REEL | 10,000 | φ 330x81 (φ 12.992x3.189) | 40,000 | 3.72 | 6.45 | 340x340x330 (13.39x13.39x12.99) |
| | TAPE & AMMO (26 mm) | 5,000 | 45x255x78 (1.77x10.04x3.07) | 65,000 | 5.30 | 6.30 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE & AMMO (52 mm) | 10,000 | 72x255x135 (2.83x10.04x5.32) | 50,000 | 4.65 | 6.05 | 260x370x150 (10.24x14.57x5.90) |
| | BAG(500Pcs) & BULK | 5,000 | 115x155x45 (4.53x6.10x1.78) | 100,000 | 9.30 | 11.00 | 250x325x240 (9.84x12.80x9.45) |
| DO-35 (Glass) | BULK | 2,000 | 205x90x21 (8.07x3.54x0.82) | 100,000 | 12.70 | 15.10 | 215x450x240 (8.46x17.71x9.45) |
| | TAPE & REEL | 10,000 | φ 330x81 (φ 12.992x3.189) | 40,000 | 5.08 | 7.80 | 340x340x325 (13.39x13.39x12.79) |
| | TAPE & AMMO (26 mm) | 5,000 | 45x255x78 (1.77x10.04x3.07) | 65,000 | 6.20 | 8.00 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE & AMMO (52 mm) | 10,000 | 72x255x135 (2.83x10.04x5.32) | 50,000 | 6.35 | 7.75 | 260x370x150 (10.24x14.57x5.90) |
| | BAG(500Pcs) & BULK | 5,000 | 92x170x50 (3.62x6.69x1.97) | 100,000 | 12.70 | 14.60 | 185x395x285 (7.28x15.55x11.22) |
| DO-41 (Glass) | TAPE & REEL | 5,000 | φ 330x81 (φ 12.992x3.189) | 20,000 | 5.10 | 7.30 | 340x340x325 (13.39x13.39x12.79) |
| | TAPE & AMMO (26 mm) | 2,500 | 45x255x78 (1.77x10.04x3.07) | 32,500 | 6.40 | 8.00 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE & AMMO (52 mm) | 5,000 | 72x255x135 (2.83x10.04x5.32) | 25,000 | 6.38 | 7.45 | 260x370x150 (10.24x14.57x5.90) |
| | BAG(250Pcs) & BULK | 2,500 | 92x170x50 (4.62x6.69x1.97) | 50,000 | 12.75 | 14.65 | 250x325x240 (9.84x12.80x9.45) |



Packaging Information

| Case Type | Packaging | Quantity per Box. (Pcs.) | Package size [mm. (inches)] | Quantity per carton (Pcs.) | Net weight per carton (Kgs.) | Gross weight per carton (Kgs.) | Carton size [mm. (inches)] |
|-----------|---------------------|---------------------------------------|----------------------------------|---|--|--|------------------------------------|
| DO-41 | BAG(200Pcs) | 5,000 | 72x255x135 (2.83x10.04x5.32) | 25,000 | 8.38 | 9.30 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE & REEL | 5,000 | φ 330x81 (φ 12.992x3.189) | 20,000 | 6.70 | 9.20 | 340x340x325 (13.39x13.39x12.78) |
| | TAPE & AMMO (26 mm) | 2,000 | 45x255x78 (1.77x10.04x3.07) | 26,000 | 5.90 | 7.00 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE & AMMO (52 mm) | 4,000 | 72x255x135 (2.83x10.04x5.32) | 20,000 | 6.70 | 7.70 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE & AMMO 120 | 3,000 | 72x255x120 (2.83x10.04x4.72) | 15,000 | 5.03 | 6.00 | 260x370x140 (10.24x14.57x5.51) |
| DO-15 | BAG(100Pcs) | 3,000 | 72x255x135 (2.83x10.04x5.32) | 15,000 | 6.00 | 6.90 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE & REEL | 3,000 | φ 330x81 (φ 12.992x3.189) | 12,000 | 4.86 | 6.97 | 340x340x325 (13.39x13.39x12.80) |
| | TAPE & AMMO | 3,000 | 72x255x135 (2.83x10.04x5.32) | 15,000 | 6.00 | 7.00 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE & AMMO 120 | 2,500 | 72x255x120 (2.83x10.04x4.72) | 12,500 | 5.00 | 6.00 | 260x370x140 (10.24x14.57x5.51) |
| D2 | BAG(100Pcs) | 2,500 | 72x255x135 (2.83x10.04x5.32) | 12,500 | 5.88 | 6.85 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE & REEL | 3,000 | φ 330x81 (φ 12.992x3.189) | 12,000 | 5.64 | 7.75 | 340x340x325 (13.39x13.39x12.80) |
| | TAPE & AMMO | 2,000 | 72x255x135 (2.83x10.04x5.32) | 10,000 | 4.70 | 5.65 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE & AMMO 120 | 1,500 | 72x255x120 (2.83x10.04x4.72) | 7,500 | 3.53 | 4.40 | 260x370x140 (10.24x14.57x5.51) |
| | TAPE & AMMO (26mm) | 1,000 | 45x255x78 (1.77x10.04x3.07) | 13,000 | 4.72 | 5.95 | 260x370x150 (10.24x14.57x5.90) |
| D2A | BAG (100Pcs) | 2,500 | 72x255x135 (2.83x10.04x5.32) | 12,500 | 7.98 | 8.95 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE & REEL | 3,000 | φ 330x81 (φ 12.992x3.189) | 12,000 | 7.66 | 9.75 | 340x340x325 (13.39x13.39x12.80) |
| | TAPE & AMMO(52 mm) | 2,000 | 72x255x135 (2.83x10.04x5.32) | 10,000 | 6.38 | 7.30 | 260x370x150 (10.24x14.57x5.90) |
| DO-201 | BAG (50Pcs) | 1,500 | 72x255x135 (2.83x10.04x5.32) | 7,500 | 6.98 | 8.00 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE & REEL | 1,250 | φ 330x81 (φ 12.992x3.189) | 5,000 | 4.65 | 6.70 | 340x340x325 (13.39x13.39x12.80) |
| | TAPE & AMMO | 1,000 | 72x255x135 (2.83x10.04x5.32) | 5,000 | 4.65 | 5.60 | 260x370x150 (10.24x14.57x5.90) |



Packaging Information

| Case Type | Packaging | Quantity per Box. (Pcs.) | Package size [mm. (inches)] | Quantity per carton (Pcs.) | Net weight per carton (Kgs.) | Gross weight per carton (Kgs.) | Carton size [mm. (inches)] |
|---------------|-------------|---------------------------------------|----------------------------------|---|--|--|------------------------------------|
| DO-201AD | BAG(50Pcs) | 1,500 | 72x255x135 (2.83x10.04x5.32) | 7,500 | 8.61 | 9.60 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE & REEL | 1,250 | φ 330x81 (φ 12.992x3.189) | 5,000 | 5.74 | 7.80 | 340x340x325 (13.39x13.39x12.80) |
| | TAPE & AMMO | 1,000 | 72x255x135 (2.83x10.04x5.32) | 5,000 | 5.74 | 6.70 | 260x370x150 (10.24x14.57x5.90) |
| D6 | BAG(20Pcs) | 600 | 72x255x135 (2.83x10.04x5.32) | 3,000 | 6.70 | 7.11 | 260x370x150 (10.24x14.57x5.90) |
| | TAPE & REEL | 800 | φ 330x81 (φ 12.992x3.189) | 3,200 | 6.56 | 8.45 | 340x340x325 (13.39x13.39x12.80) |
| MiniMELF | REEL | 3,000 | φ 178x14.4 (φ 7.008x0.567) | 120,000 | 3.72 | 6.90 | 215x405x265 (8.46x15.95x10.43) |
| | REEL | 10,000 | φ 330x14.4 (φ 12.992x0.567) | 50,000 | 1.55 | 3.67 | 340x340x100 (13.39x13.39x3.94) |
| MELF | REEL | 5,000 | φ 330x14.4 (φ 12.992x0.567) | 25,000 | 3.35 | 5.39 | 340x340x100 (13.39x13.39x3.94) |
| SMA(DO-214AC) | REEL | 5,000 | φ 330x18.4 (φ 12.992x0.724) | 25,000 | 1.68 | 3.71 | 340x340x100 (13.39x13.39x3.94) |
| SMB(DO-214AA) | REEL | 3,000 | φ 330x18.4 (φ 12.992x0.724) | 15,000 | 1.76 | 3.94 | 340x340x100 (13.39x13.39x3.94) |
| SMC(DO-214AB) | REEL | 2,500 | φ 330x22.4 (φ 12.992x0.882) | 10,000 | 2.51 | 4.34 | 340x340x100 (13.39x13.39x3.94) |
| DO-215AC | REEL | 3,000 | φ 330x18.4 (φ 12.992x0.724) | 15,000 | 1.28 | 3.56 | 340x340x100 (13.39x13.39x3.94) |
| DFS | REEL | 1,500 | φ 330x22.4 (φ 12.992x0.882) | 7,500 | 2.85 | 4.45 | 340x340x100 (13.39x13.39x3.94) |
| MBS | REEL | 3,000 | φ 330x22.4 (φ 12.992x0.882) | 15,000 | 1.92 | 3.00 | 340x340x100 (13.39x13.39x3.94) |



Packaging Information

| Case Type | Quantity per box (Pcs.) | Box size [mm. (inches)] | Quantity per carton (Pcs.) | Net weight per carton (Kgs.) | Gross weight per carton (Kgs.) | Carton size [mm. (inches)] |
|-----------------|----------------------------------|---|-------------------------------------|---------------------------------------|---|-----------------------------------|
| DFM | 50 | 440 Length (17.4 Length) | Plastic Tubes | | | |
| MBM | 100 | 70x250x135 (2.75x9.84x5.31) | Plastic Tubes | | | |
| WOB | 500 | 200x200x47 (7.87x7.87x1.85) | 5,000 | 6.26 | 8.00 | 215x405x265 (8.46x15.95x10.43) |
| KBP | 100 | 90x170x52 (3.54x6.69x1.97) | 2,000 | 6.52 | 8.80 | 185x395x285 (7.28x15.55x11.22) |
| KBU | 100 | 90x170x52 (3.54x6.69x1.97) | 2,000 | 16.00 | 18.28 | 185x395x285 (7.28x15.55x11.22) |
| KBL | 100 | 90x170x52 (3.54x6.69x1.97) | 2,000 | 10.58 | 12.86 | 185x395x285 (7.28x15.55x11.22) |
| GBU | 160 | 115x115x45 (4.53x6.10x1.77) | 3,200 | 11.51 | 13.30 | 250x325x240 (4.53x6.10x1.77) |
| BR6 | 200 | 160x210x38 (6.30x8.27x1.50) | 2,000 | 6.52 | 7.95 | 215x345x225 (8.46x13.58x8.86) |
| BR10 | 200 | 200x200x47 (7.87x7.87x1.85) | 2,000 | 11.45 | 13.20 | 215x405x265 (8.46x15.95x10.43) |
| BR50 | 50 | 155x165x30 (6.10x6.50x1.18) | 1,000 | 16.55 | 18.65 | 180x330x345 (7.09x12.99x13.58) |
| BR50W | 40 | 155x165x30 (6.10x6.50x1.18) | 800 | 12.52 | 14.60 | 180x330x345 (7.09x12.99x13.58) |
| BR50M | 50 | 155x165x30 (6.10x6.50x1.18) | 900 | 27.60 | 29.30 | 180x330x345 (7.09x12.99x13.58) |
| RBV4 | 120 | 115x155x45 (4.53x6.10x1.77) | 2,400 | 10.27 | 12.10 | 250x325x240 (9.84x12.80x9.45) |
| RBV25 (6A) | 100 | 115x155x45 (4.53x6.10x1.77) | 2,000 | 15.60 | 17.40 | 250x325x240 (9.84x12.80x9.45) |
| RBV25 (8A-10A) | 100 | 115x155x45 (4.53x6.10x1.77) | 2,000 | 15.94 | 17.75 | 250x325x240 (9.84x12.80x9.45) |
| RBV25 (15A) | 100 | 115x155x45 (4.53x6.10x1.77) | 2,000 | 16.22 | 18.05 | 250x325x240 (9.84x12.80x9.45) |
| RBV25 (25A-50A) | 100 | 115x155x45 (4.53x6.10x1.77) | 2,000 | 16.31 | 18.15 | 250x325x240 (9.84x12.80x9.45) |
| CELL 3A | 10,000 | Bottle ϕ 70x120 (ϕ 2.76x4.72) | 100,000 | 9.20 | 10.00 | 260x370x150 (10.24x14.57x5.90) |
| CELL 5A | 10,000 | Bottle ϕ 70x120 (ϕ 2.76x4.72) | 100,000 | 15.40 | 16.20 | 260x370x150 (10.24x14.57x5.90) |
| CELL 8A | 5,000 | Bottle ϕ 70x120 (ϕ 2.76x4.72) | 50,000 | 9.75 | 10.55 | 260x370x150 (10.24x14.57x5.90) |
| CELL 18A | 5,000 | Bottle ϕ 70x120 (ϕ 2.76x4.72) | 50,000 | 12.15 | 12.95 | 260x370x150 (10.24x14.57x5.90) |
| CELL 25A | 5,000 | Bottle ϕ 70x120 (ϕ 2.76x4.72) | 50,000 | 12.55 | 13.35 | 260x370x150 (10.24x14.57x5.90) |



Packaging Information

| Case Type | Quantity per box (Pcs.) | Box size [mm. (inches)] | Quantity per carton (Pcs.) | Net weight per carton (Kgs.) | Gross weight per carton (Kgs.) | Carton size [mm. (inches)] |
|---------------|----------------------------------|------------------------------------|-------------------------------------|---------------------------------------|---|------------------------------------|
| 5R | 400 | 115x115x45 (4.53x6.10x1.77) | 8,000 | 9.28 | 10.90 | 250x325x240 (9.84x12.80x9.45) |
| BUTTON CASE | 2,000 | 72x255x120 (2.83x10.04x4.72) | 10,000 | 18.18 | 19.00 | 260x370x140 (10.24x14.57x5.51) |
| MR | 2,000 | 72x255x120 (2.83x10.04x4.72) | 10,000 | 16.01 | 16.80 | 260x370x140 (10.24x14.57x5.51) |
| AR-L | 200 | 305x84x41 (12.0x3.30x1.61) | 6,000 | 16.39 | 19.04 | 310x420x255 (12.20x16.54x10.04) |
| MR-L | 200 | 305x84x41 (12.0x3.30x1.61) | 6,000 | 15.31 | 17.83 | 310x420x255 (12.20x16.54x10.04) |
| D2PAK | 50 | Tube 32x520x6 (1.23x20.52x0.24) | 1,000 | 1.44 | 2.30 | 140x540x85 (5.51x21.26x3.35) |
| TO-220AB, AC | 50 | Tube 32x520x6 (1.23x20.52x0.24) | 1,000 | 1.95 | 2.81 | 140x540x85 (5.51x21.26x3.35) |
| | 500 | 160x210x38 (6.50x8.27x1.50) | 5,000 | 9.39 | 10.80 | 250x325x240 (9.84x12.80x9.45) |
| ITO-220AB, AC | 50 | Tube 32x520x6 (1.23x20.52x0.24) | 1,000 | 1.75 | 2.60 | 140x540x85 (5.51x21.26x3.35) |
| | 500 | 160x210x38 (6.50x8.27x1.50) | 5,000 | 8.75 | 10.15 | 250x325x240 (9.84x12.80x9.45) |
| TO-247AD | 120 | 90x170x52 (3.54x6.69x1.97) | 2,400 | 15.08 | 17.35 | 185x395x285 (7.28x15.55x11.22) |

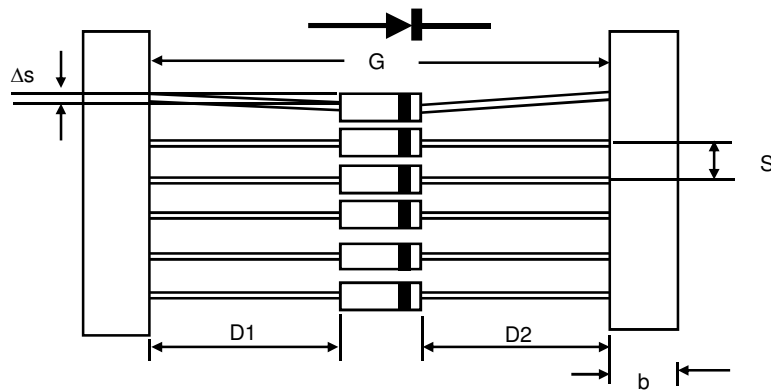
NEW PACKAGING (SURFACE MOUNT DIODES)

| Package | Tape Width | Package size | | Reel Size | | Quantity per box (Pcs.) |
|-----------|------------|--------------|---------------|-----------|--------|----------------------------|
| | (mm) | (mm) | (inch) | (mm) | (inch) | |
| SOT-23 | 8 | 4.0 ± 0.1 | 0.157 ± 0.004 | 178 | 7 | 3,000 |
| SOD-123FL | 8 | 4.0 ± 0.1 | 0.157 ± 0.004 | 178 | 7 | 2,500 |
| SOD-123 | 8 | 4.0 ± 0.1 | 0.157 ± 0.004 | 178 | 7 | 3,000 |
| SOD-323 | 8 | 4.0 ± 0.1 | 0.157 ± 0.004 | 178 | 7 | 3,000 |
| SOD-523 | 8 | 4.0 ± 0.1 | 0.157 ± 0.004 | 178 | 7 | 4,000 |

Packaging Information

TYPE DIMENSIONS (AXIAL LEAD DIODES)

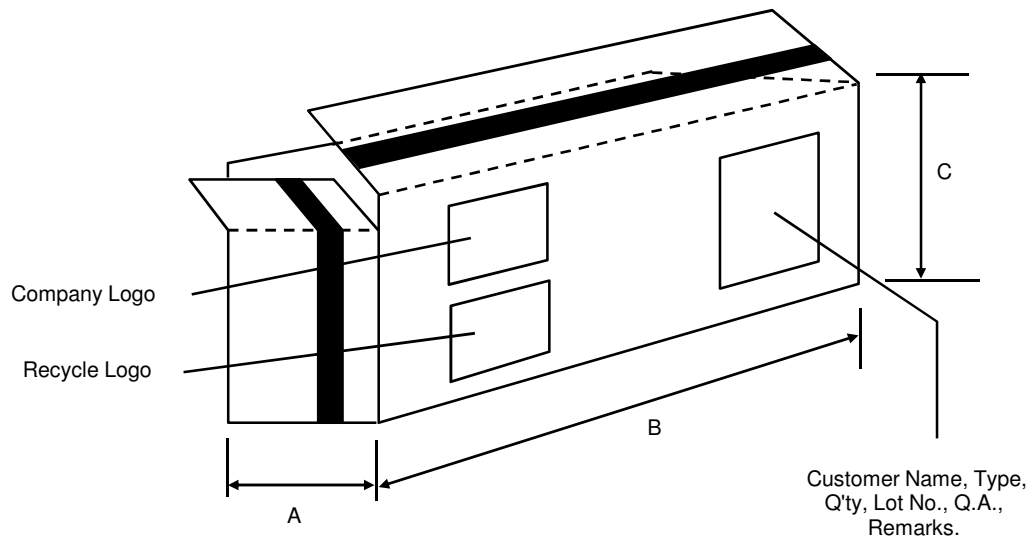
| CASE TYPE (Outline) | Type Dimensions | | | |
|--|-----------------------------------|------------|----------------------------------|-----------------------------------|
| | S | Δs | b | G |
| DO-34, DO-35, DO-41 (Glass), DO-41, DO-15 R-1, M1A, D2, D2A | 5 ± 0.5 (0.196 \pm 0.0196) | 1.2(0.047) | 6 ± 1.05 (0.236 \pm 0.039) | 52 ± 1.50 (2.047 \pm 0.059) |
| DO-34, DO-35, DO-41 (Glass), DO-41, DO-15 R-1, M1A, D2, D2A | 5 ± 0.5 (0.196 \pm 0.0196) | 1.2(0.047) | 6 ± 1.05 (0.236 \pm 0.039) | 26 ± 1.0 (1.023 \pm 0.039) |
| DO-201, DO-201AD, D6 | 10 ± 0.5 (0.393 \pm 0.0196) | 1.2(0.047) | 6 ± 1.05 (0.236 \pm 0.039) | 52 ± 1.50 (2.047 \pm 0.059) |





Packaging Information

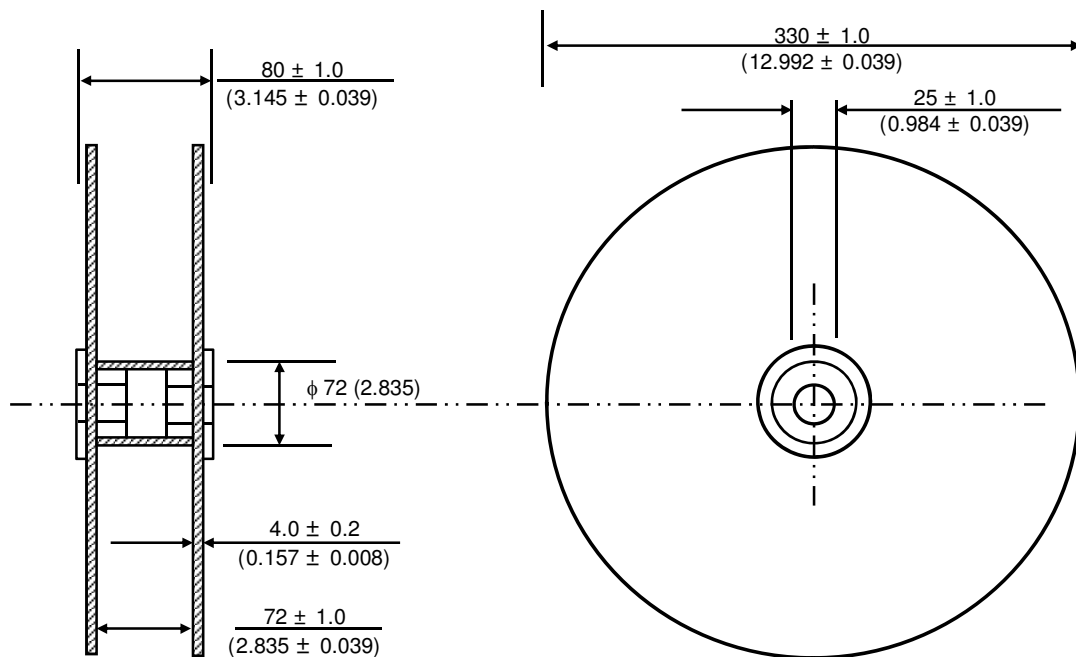
AMMOPACK PACKAGING (AXIAL LEAD DIODES)



| Packaging | Type Dimensions [mm. (inches)] | | |
|-----------------|------------------------------------|--------------------------------------|-------------------------------------|
| | Dimension "A" | Dimension "B" | Dimension "C" |
| 26mm Horizontal | 45 ± 2.0 (1.771 ± 0.079) | 255 ± 2.0 (10.039 ± 0.079) | 78 ± 2.0 (3.070 ± 0.079) |
| 52mm Horizontal | 72 ± 2.0 (2.834 ± 0.079) | 255 ± 2.0 (10.039 ± 0.079) | 135 ± 2.0 (5.314 ± 0.079) |

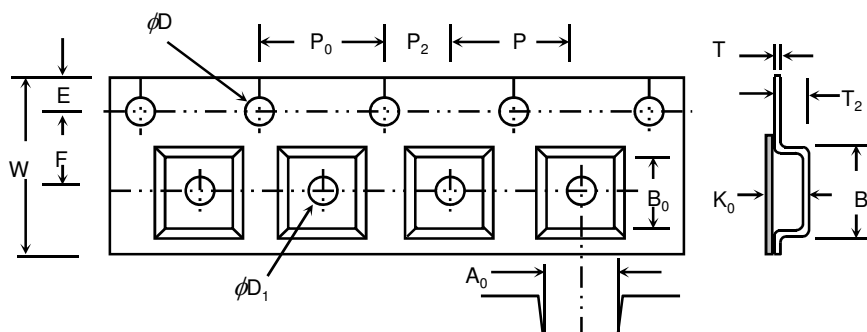
REEL PACKAGING (AXIAL LEAD DIODES)

DIMENSIONS IN mm. (inches)



Packaging Information

SURFACE MOUNT TAPE AND REEL PACKAGING



DIMENSIONS IN mm. (inches)

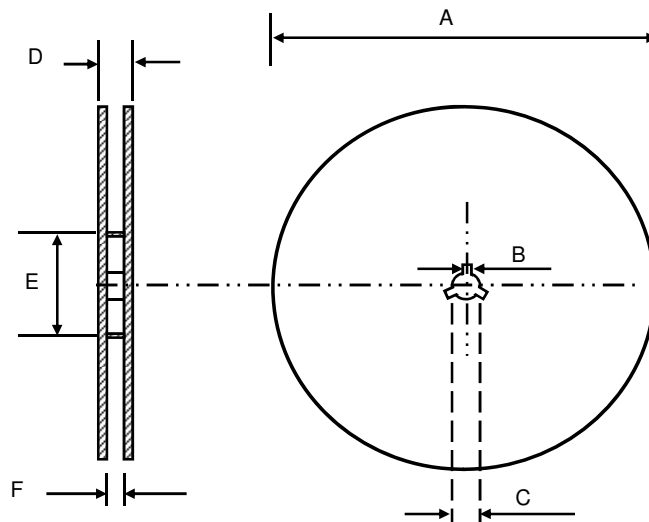
| | Tape Size | D | E | P_0 | T Max. | A_0, B_0, K_0 | P_2 |
|---|--------------|--|--|---------------------------------------|--|--|--|
| | 8, 12, 16mm. | 1.50 ± 0.10 (0.059 \pm 0.004) | 1.75 ± 0.1 (0.069 \pm 0.004) | 4.00 ± 0.1 (0.157 \pm 0.004) | 0.600 (0.024) | See Note 1 | 2.00 ± 0.05 (0.079 \pm 0.002) |
| Case Type | Tape Size | W | P | B_1 Max. | F | T_2 Max. | D_1 |
| MiniMELF, SOD-123FL, SOD-123, SOD-323, SOD-523, SOT-23 | 8mm. | 8.00 ± 0.3 (0.314 \pm 0.012) | 4.00 ± 0.1 (0.157 \pm 0.004) | 4.2(0.165) | 3.50 ± 0.05 (0.137 \pm 0.002) | 2.4(0.094) | 1.00 ± 0.10 (0.039 \pm 0.004) |
| MELF | 12mm. | 12.00 ± 0.3 (0.472 \pm 0.012) | 4.00 ± 0.1 (0.157 \pm 0.004) | 8.2(0.323) | 5.50 ± 0.05 (0.217 \pm 0.002) | 4.5(0.177) | 1.50 ± 0.25 (0.059 \pm 0.001) |
| SMA | 12mm. | 12.00 ± 0.3 (0.472 \pm 0.012) | 4.00 ± 0.1 (0.157 \pm 0.004) | | 5.50 ± 0.05 (0.217 \pm 0.002) | 2.54 ± 0.10 (0.100 \pm 0.004) | 1.50 ± 0.25 (0.059 \pm 0.001) |
| SMB | 12mm. | 12.00 ± 0.3 (0.472 \pm 0.012) | 8.00 ± 0.1 (0.315 \pm 0.004) | | 5.50 ± 0.05 (0.217 \pm 0.002) | 2.67 ± 0.10 (0.105 \pm 0.004) | 1.50 ± 0.25 (0.059 \pm 0.001) |
| SMC | 16mm. | 16.00 ± 0.3 (0.629 \pm 0.012) | 8.00 ± 0.1 (0.315 \pm 0.004) | 12.1(0.476) | 7.50 ± 0.1 (0.295 \pm 0.004) | 2.54 ± 0.10 (0.100 \pm 0.004) | 1.50 ± 0.25 (0.059 \pm 0.001) |
| MBS | 16mm. | 16.00 ± 0.3 (0.629 \pm 0.012) | 8.00 ± 0.1 (0.315 \pm 0.004) | | 7.50 ± 0.1 (0.295 \pm 0.004) | 2.54 ± 0.10 (0.100 \pm 0.004) | 1.50 ± 0.25 (0.059 \pm 0.001) |
| DFS | 16mm. | 16.00 ± 0.3 (0.629 \pm 0.012) | 12.00 ± 0.1 (0.473 \pm 0.004) | | 7.50 ± 0.1 (0.295 \pm 0.004) | 3.8 ± 0.10 (0.150 \pm 0.004) | 1.50 ± 0.25 (0.059 \pm 0.001) |

Note:

1. A_0 , B_0 , and K_0 are determined by the maximum dimensions of the component size. The clearance between the component and the cavity must be within 0.05 mm (0.002") min. to 0.5 mm (0.02") max. for 8mm tape and 12mm tape and 0.15mm(0.006") min. to 0.90 mm (0.035") max. for 16 mm. tape.

Packaging Information

REEL PACKAGING (SURFACE MOUNT DIODES)



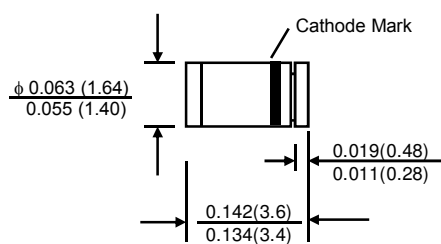
DIMENSIONS IN mm. (inches)

| Tape Size | A max. | B max. | C | D max. | E min. | F max. |
|-----------|---|----------------|--|-----------------|---------------|-----------------|
| 8 mm | 178 ± 2.0 (7.0 ± 0.079) 330 ± 2.0 (13 ± 0.079) | 2.5 (0.098) | 13.0 ± 2.0 (0.51 ± 0.079) | 14.4 (0.567) | 100 (3.94) | 9.9 (0.389) |
| 12 mm | 330 ± 2.0 (13 ± 0.079) | 2.5 (0.098) | 13.0 ± 2.0 (0.51 ± 0.079) | 18.4 (0.724) | 100 (3.94) | 14.4 (0.567) |
| 16 mm | 330 ± 2.0 (13 ± 0.079) | 2.5 (0.098) | 13.0 ± 2.0 (0.51 ± 0.079) | 22.4 (0.802) | 100 (3.94) | 18.4 (0.724) |

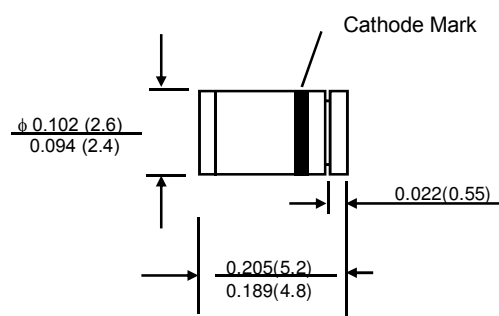
Package Outline

Dimension in inches and (millimeters)

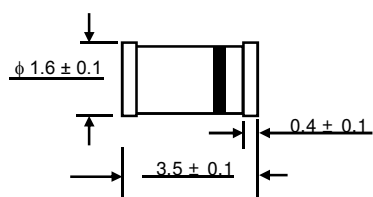
Mini MELF(LL-34)



MELF(LL-41)

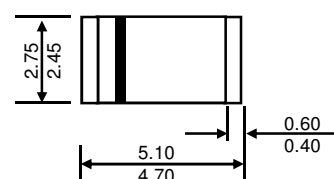


Mini MELF (Plastic)



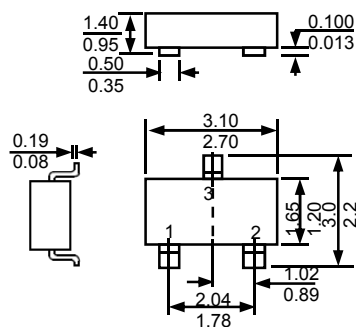
Dimensions in millimeters

MELF (Plastic)



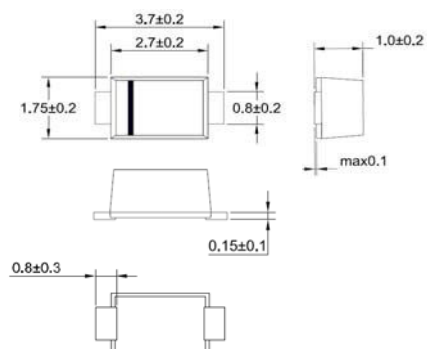
Dimensions in millimeters

SOT-23



Dimensions in millimeters

SOD-123FL

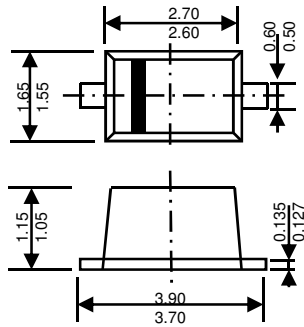


Dimensions in millimeters

Package Outline

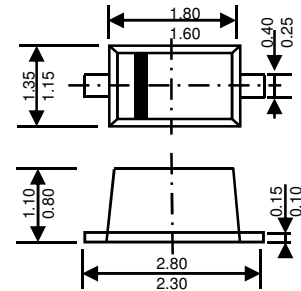
Dimension in inches and (millimeters)

SOD-123



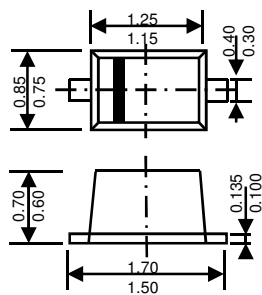
Dimensions in millimeters

SOD-323



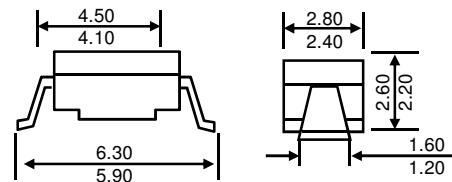
Dimensions in millimeters

SOD-523



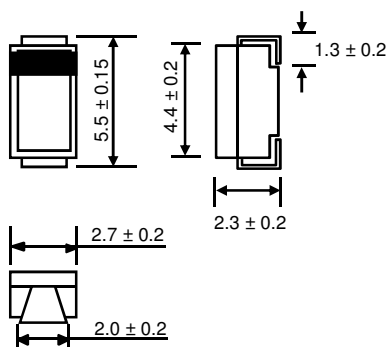
Dimensions in millimeters

DO-215AC



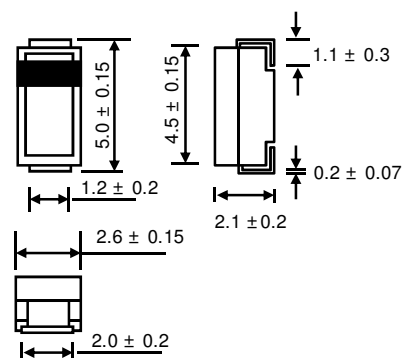
Dimensions in millimeters

SMA



Dimensions in millimeters

SMA(DO-214AC)

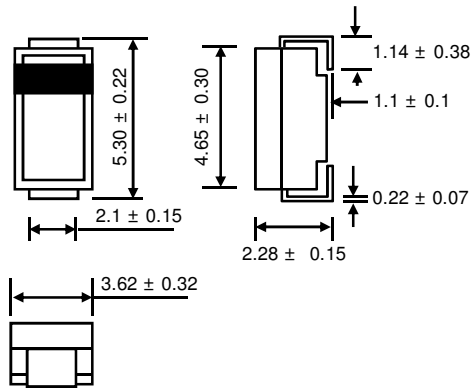


Dimensions in millimeters

Package Outline

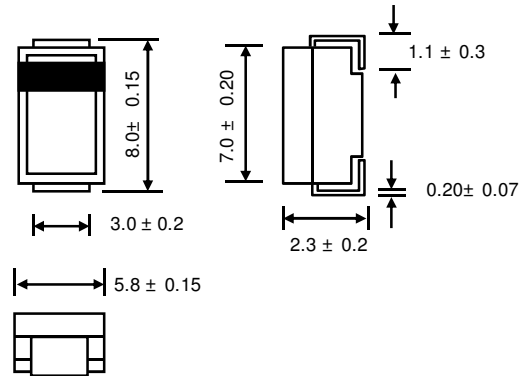
Dimension in inches and (millimeters)

SMB(DO-214AA)



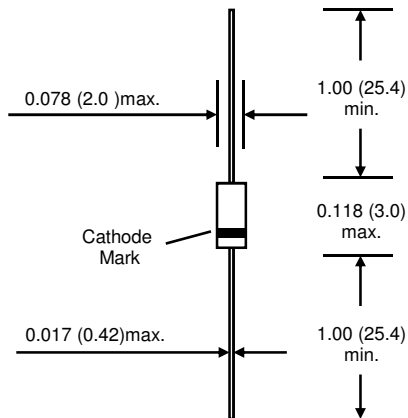
Dimensions in millimeters

SMC(DO-214AB)

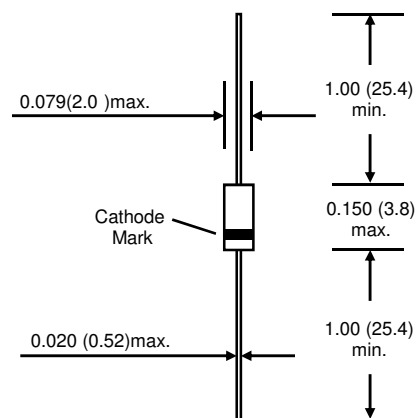


Dimensions in millimeters

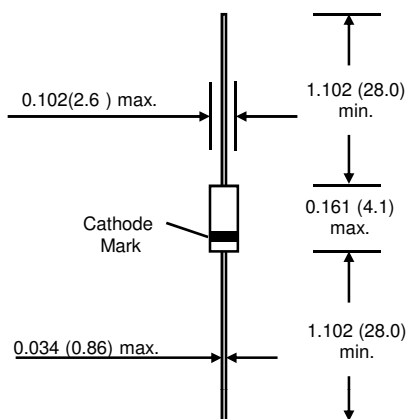
DO-34



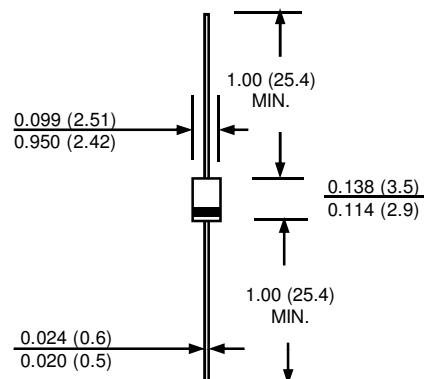
DO-35



DO-41(Glass)



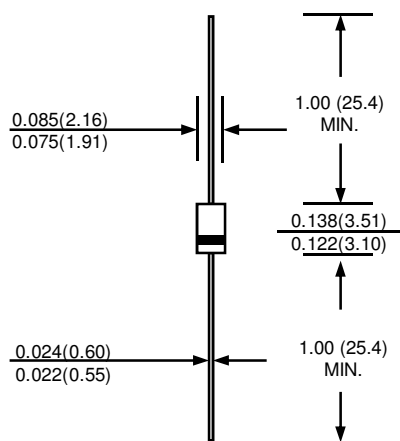
R-1



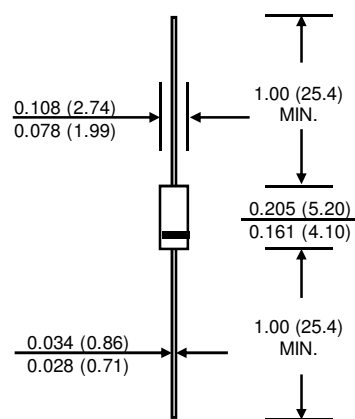
Package Outline

Dimension in inches and (millimeters)

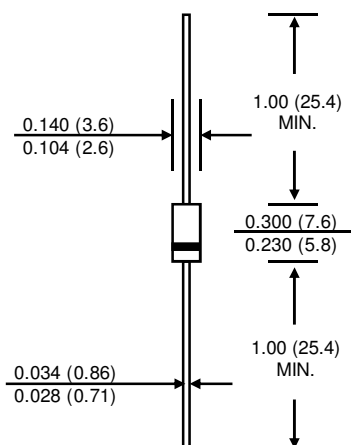
M1A



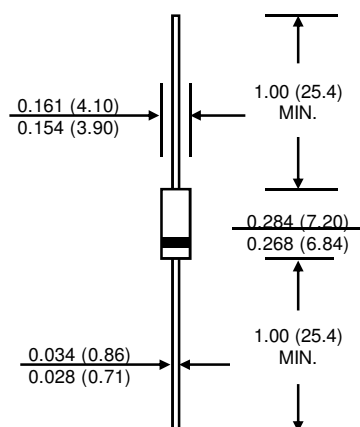
DO-41



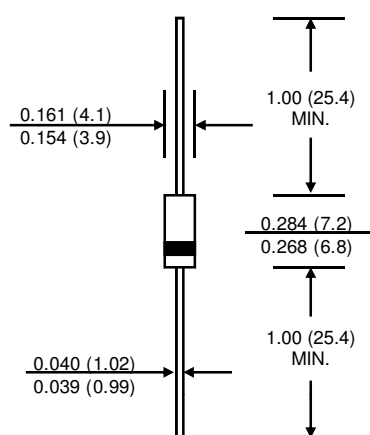
DO-15



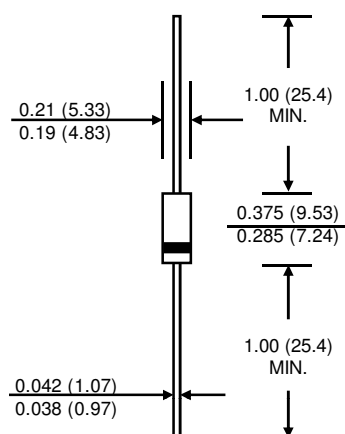
D2



D2A



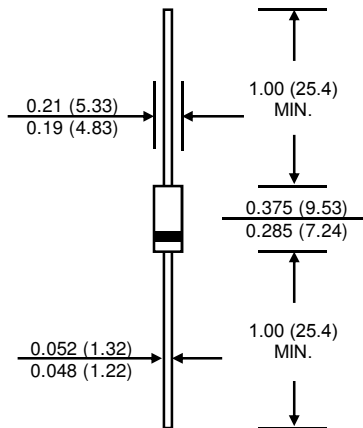
DO-201



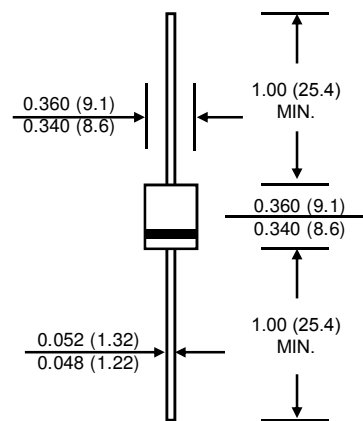
Package Outline

Dimension in inches and (millimeters)

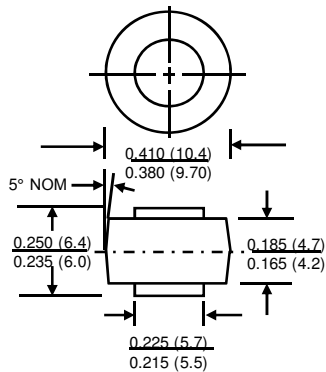
DO-201AD



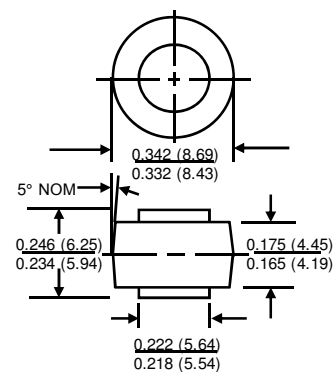
D6



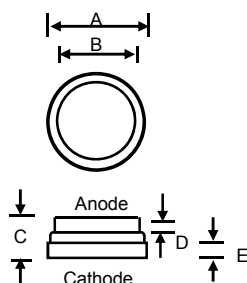
BUTTON CASE (AR)



MR

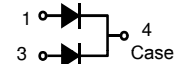
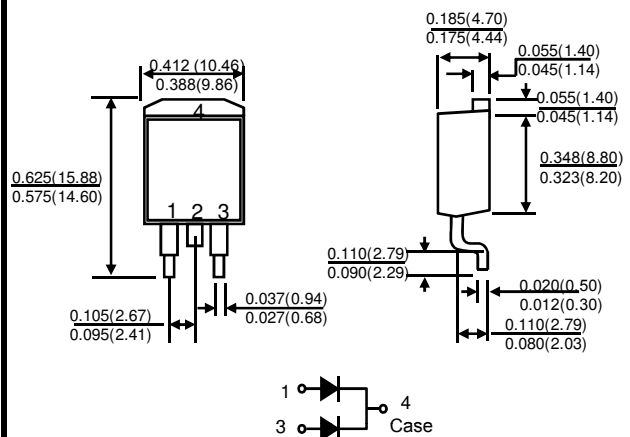


CELL



| DIM. | MILLIMETER | | | | |
|------|------------|------|------|------|------|
| | 3A | 5A | 8A | 18A | 25A |
| A | 3.94 | 4.82 | 5.47 | 6.20 | 6.20 |
| B | 3.18 | 3.94 | 4.82 | 5.47 | 5.47 |
| C | 1.30 | 1.40 | 1.27 | 1.30 | 1.30 |
| D | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 |
| E | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |

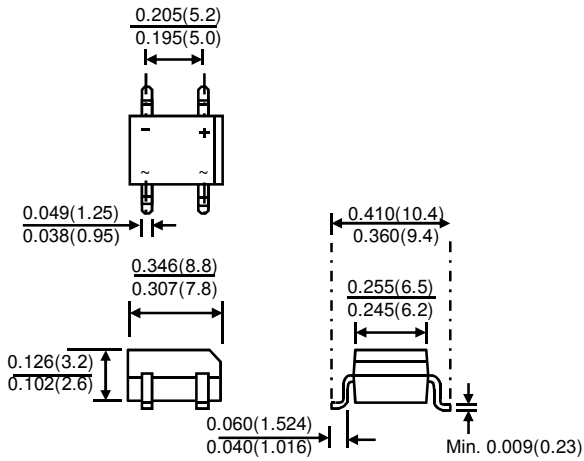
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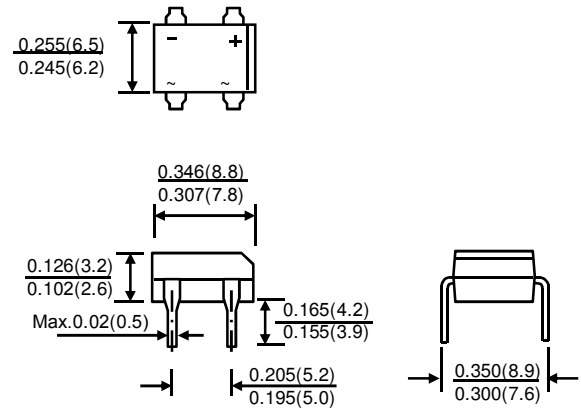
Package Outline

Dimension in inches and (millimeters)

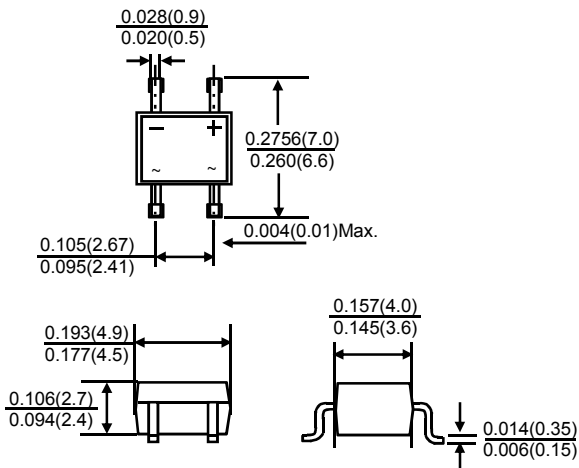
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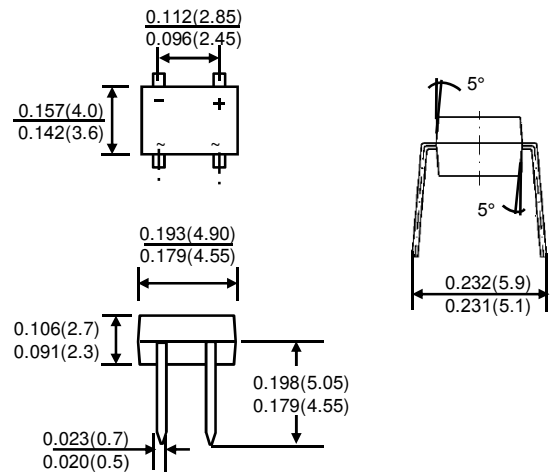
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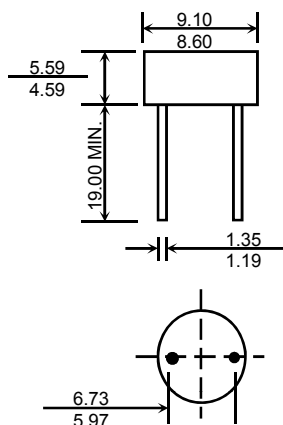
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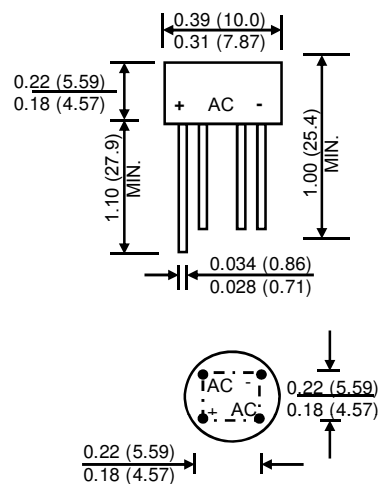
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5R



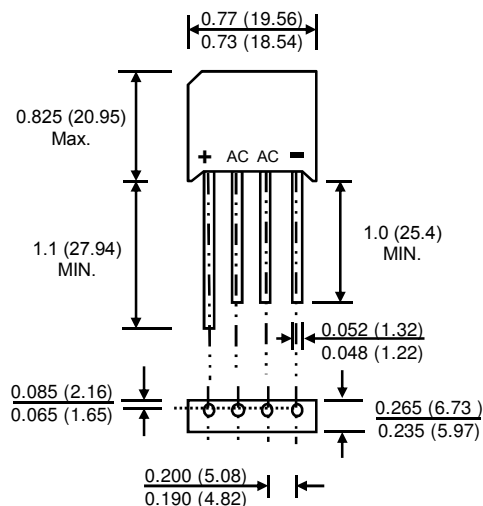
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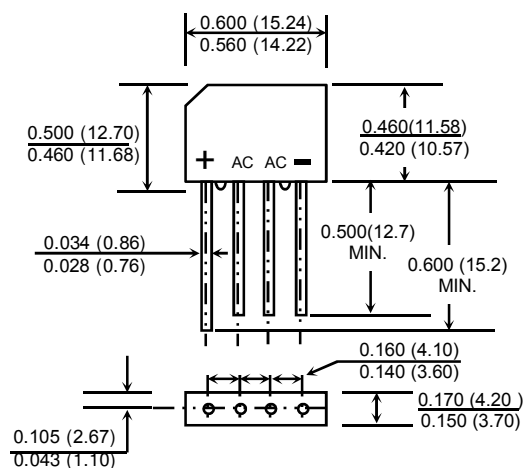
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Dimension in inches and (millimeters)

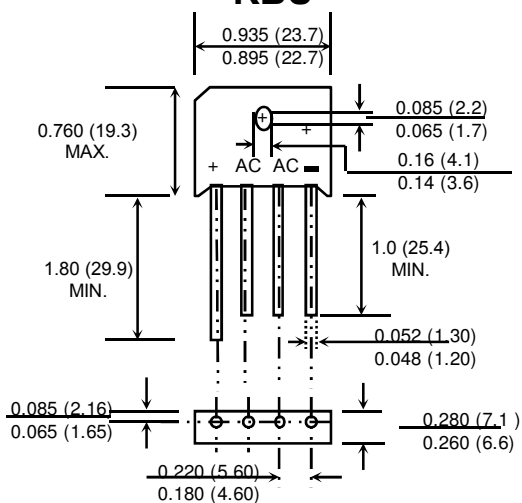
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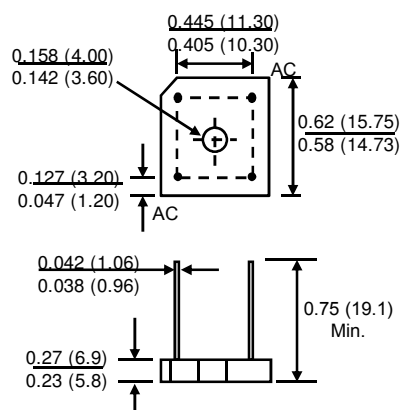
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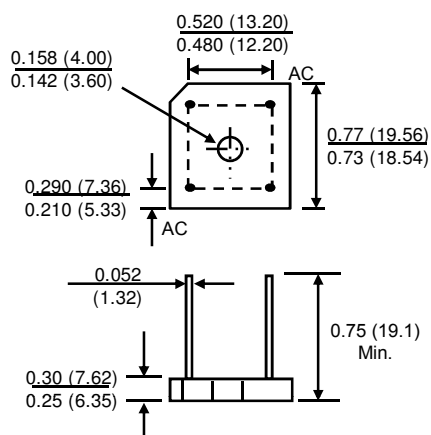
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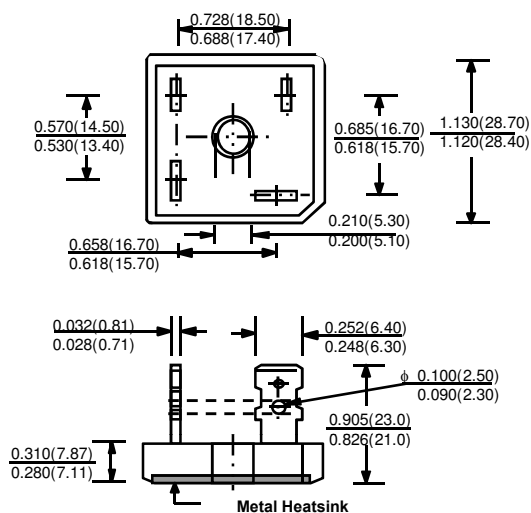
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BR10



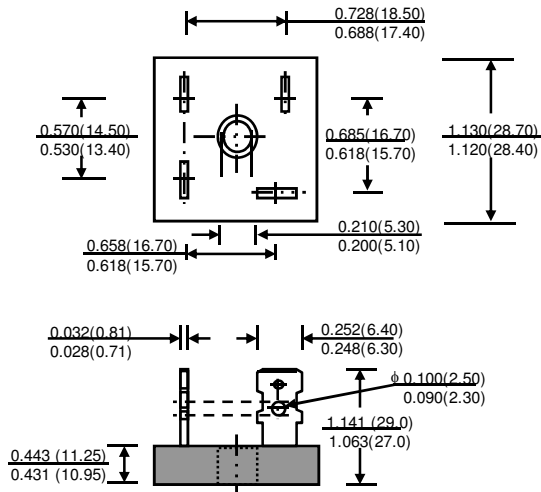
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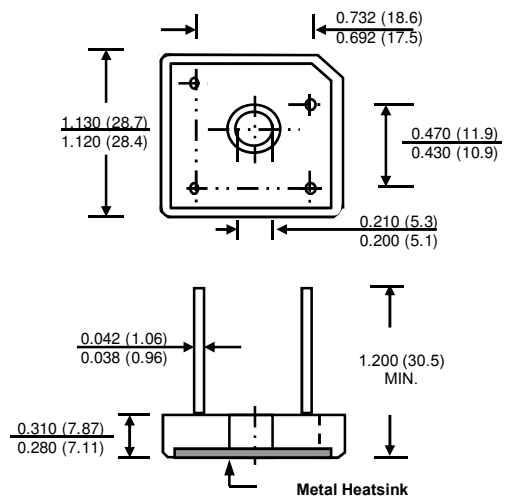
Package Outline

Dimension in inches and (millimeters)

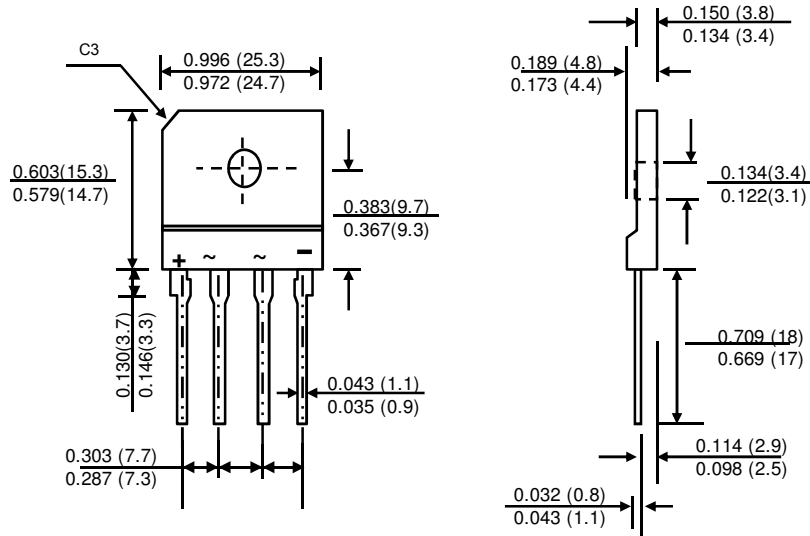
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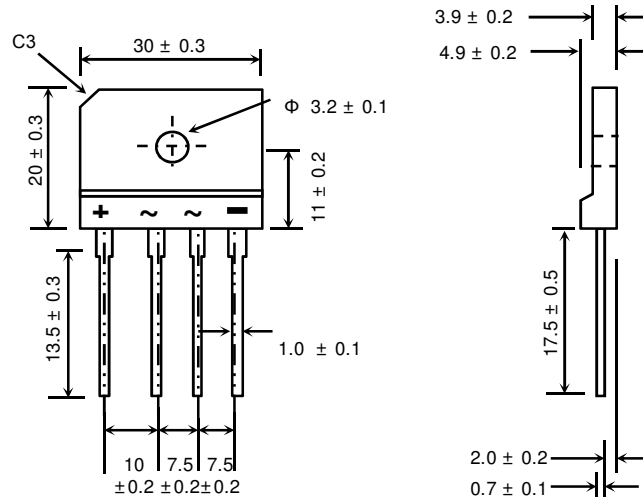
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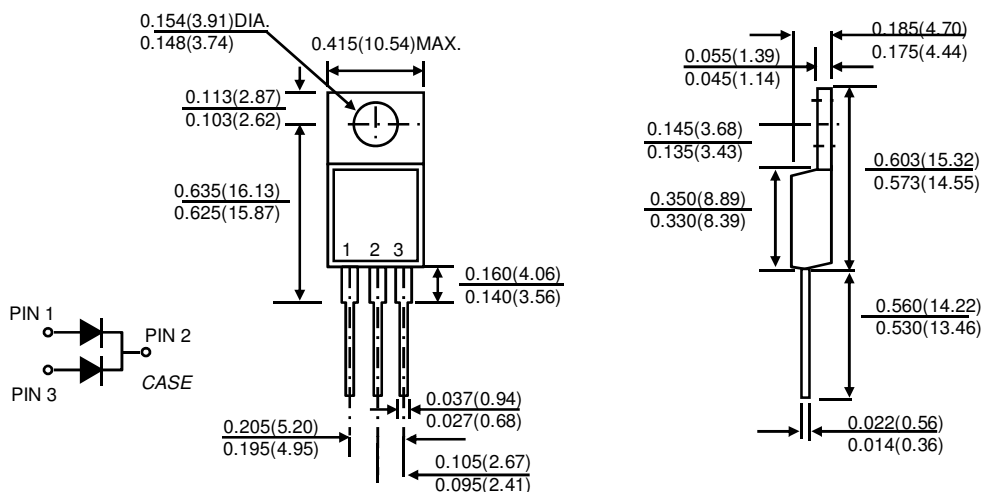
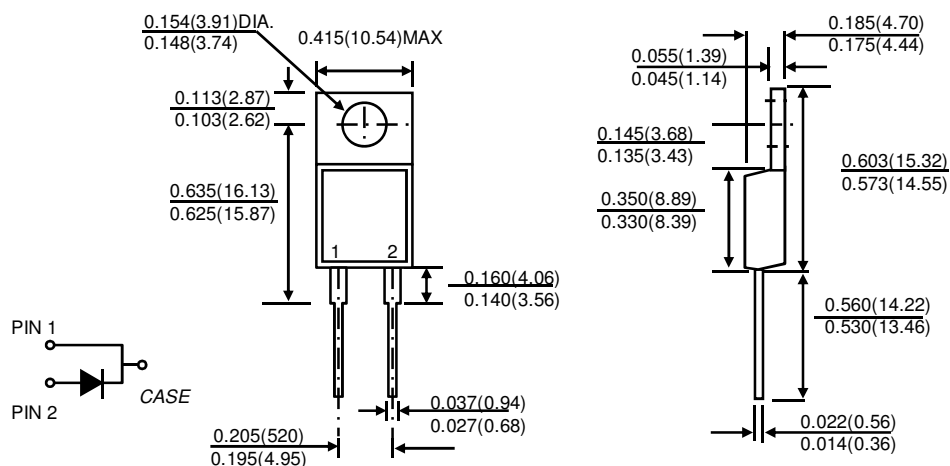
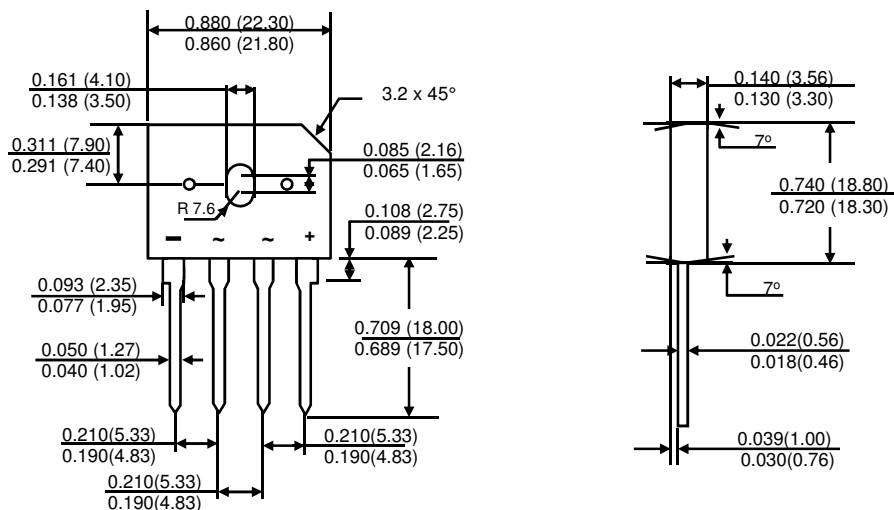


RBV4



RBV25

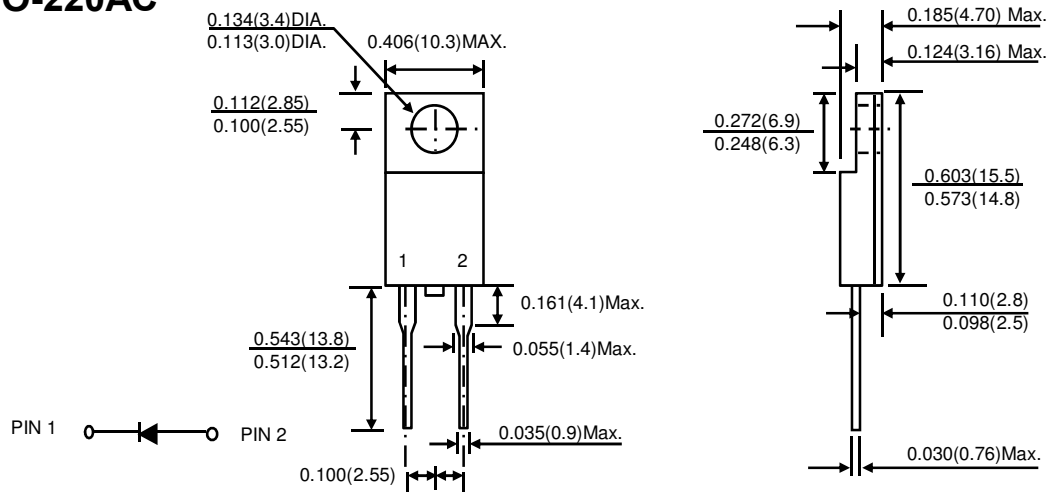




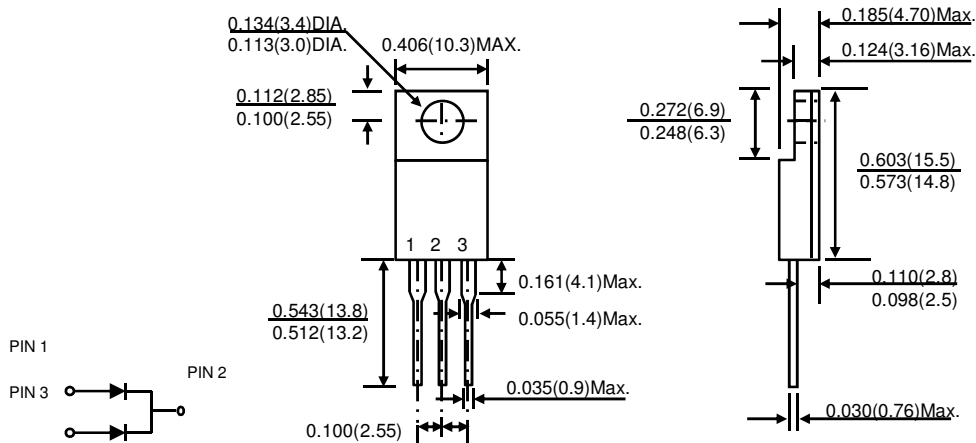
Package Outline

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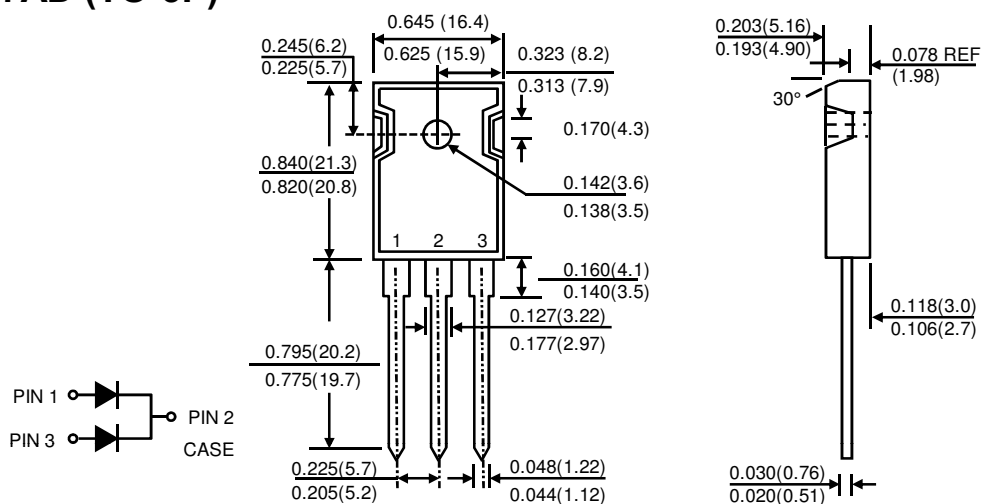
ITO-220AC



ITO-220AB



TO-247AD (TO-3P)





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REVISION HISTORY

Document revision history

| Date | Rivision | Detail |
|-------------|----------|-----------------------|
| 15-Jan-2006 | 10 | Create Catalogue 2006 |
| 10-Feb-2008 | 11 | Create Catalogue 2008 |
| 7-Jan-2010 | 12 | Create Catalogue 2010 |
| 14-Jan-2011 | 13 | Create Catalogue 2011 |