

## Maximum Ratings (@T<sub>A</sub> = +25°C, unless otherwise specified.)

| Characteristic                            | Symbol              | Value | Unit |
|---|---------------------|-------|------|
| Non-Repetitive Peak Reverse Voltage       | V <sub>RM</sub>     | 100   | V    |
| Peak Repetitive Reverse Voltage           | V <sub>RRM</sub>    | 75    | V    |
| Working Peak Reverse Voltage              | V <sub>RWM</sub>    |       |      |
| DC Blocking Voltage                       | V <sub>R</sub>      |       |      |
| RMS Reverse Voltage                       | V <sub>R(RMS)</sub> | 53    | V    |
| Forward Continuous Current                | I <sub>FM</sub>     | 500   | mA   |
| Average Rectified Output Current          | I <sub>O</sub>      | 250   | mA   |
| Non-Repetitive Peak Forward Surge Current | I <sub>FSM</sub>    | 4     | A    |
|   |                     | 0.5   |      |

## Thermal Characteristics

| Characteristic                                      | Symbol                            | Value       | Unit |
|---|-----------------------------------|-------------|------|
| Power Dissipation (Note 7)                          | P <sub>D</sub>                    | 200         | mW   |
| Thermal Resistance Junction to Ambient Air (Note 7) | R <sub>θJA</sub>                  | 625         | °C/W |
| Operating and Storage Temperature Range             | T <sub>J</sub> , T <sub>STG</sub> | -65 to +150 | °C   |

## Electrical Characteristics (@T<sub>A</sub> = +25°C, unless otherwise specified.)

| Characteristic                     | Symbol             | Min  | Max   | Unit | Test Condition  |
|------------------------------------|--------------------|------|-------|------|---|
| Reverse Breakdown Voltage (Note 6) | V <sub>(BR)R</sub> | 75   | —     | V    | I <sub>R</sub> = 2.5μA  |
| Forward Voltage                    | V <sub>FM</sub>    | 0.62 | 0.72  | V    | I <sub>F</sub> = 5.0mA  |
|                                    |                    | —    | 0.855 |      | I <sub>F</sub> = 10mA   |
|                                    |                    | —    | 1.0   |      | I <sub>F</sub> = 100mA  |
|                                    |                    | —    | 1.25  |      | I <sub>F</sub> = 150mA  |
| Peak Reverse Current (Note 6)      | I <sub>RM</sub>    | —    | 2.5   | μA   | V <sub>R</sub> = 75V  |
|                                    |                    |      | 50    | μA   | V <sub>R</sub> = 75V, T <sub>J</sub> = +150°C   |
|                                    |                    |      | 30    | μA   | V <sub>R</sub> = 25V, T <sub>J</sub> = +150°C   |
|                                    |                    |      | 25    | nA   | V <sub>R</sub> = 20V  |
| Total Capacitance                  | C <sub>T</sub>     | —    | 4.0   | pF   | V <sub>R</sub> = 0, f = 1.0MHz  |
| Reverse Recovery Time              | t <sub>RR</sub>    | —    | 4.0   | ns   | I <sub>F</sub> = I <sub>R</sub> = 10mA,<br>I <sub>RR</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100Ω |

Notes: 6. Short duration pulse test used to minimize self-heating.  
7. Part mounted on FR-4 PC board with minimum recommended pad layouts, which can be found on our website <http://www.diodes.com/datasheets/ap02001.pdf>.

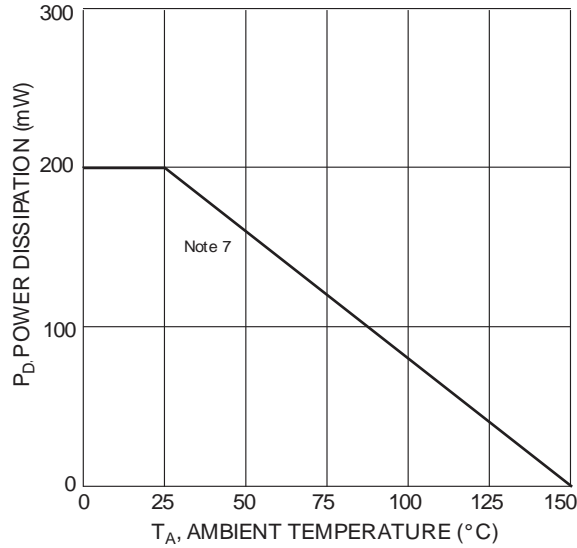


Figure 1 Forward Current Derating Curve

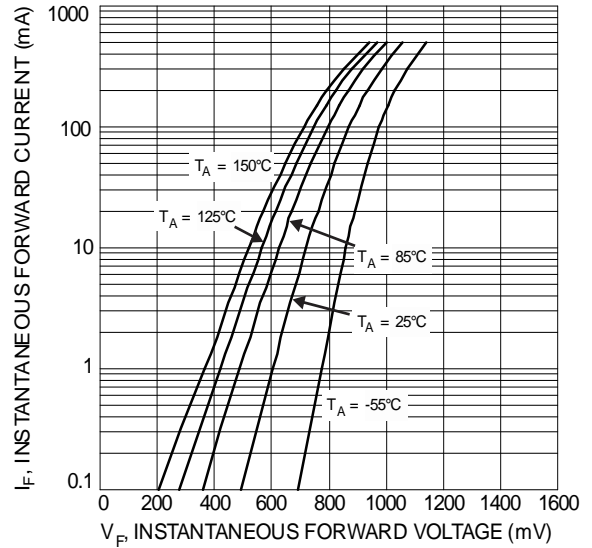


Figure 2 Typical Forward Characteristics

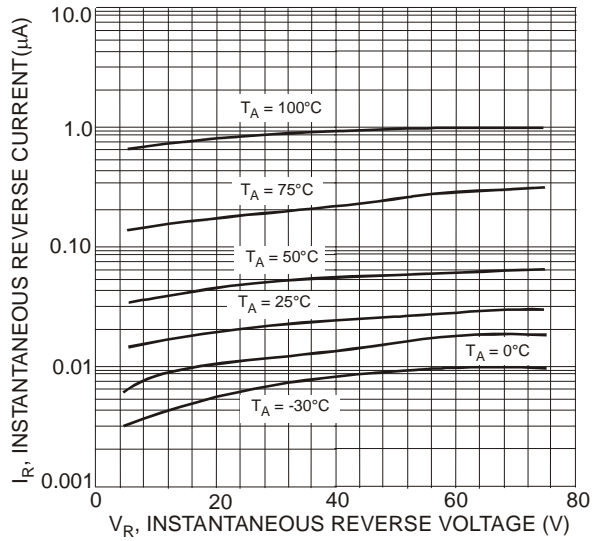


Figure 3 Typical Reverse Characteristics

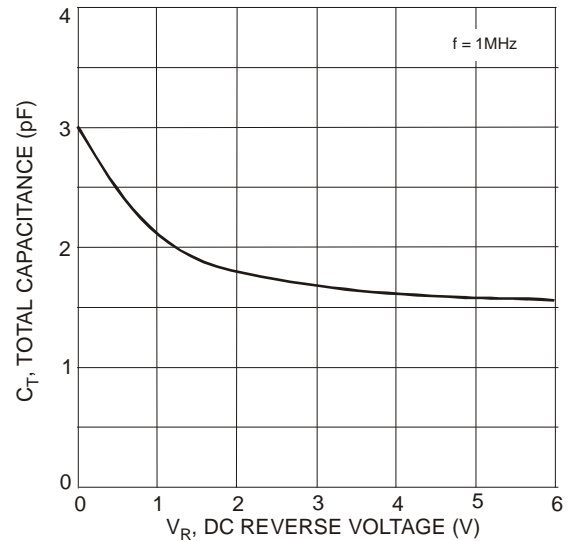


Figure 4 Total Capacitance vs. Reverse Voltage

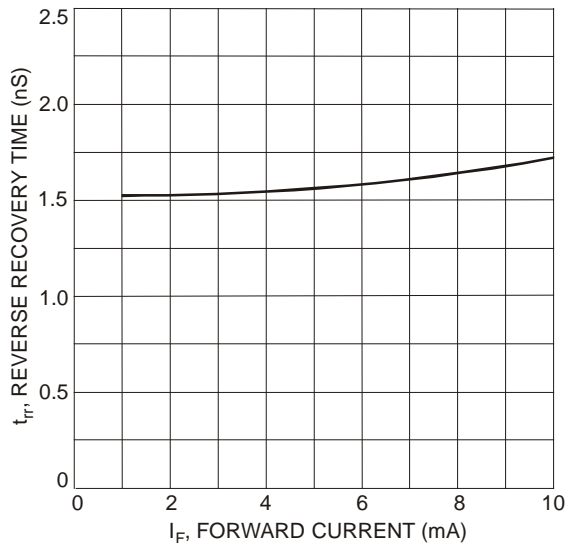
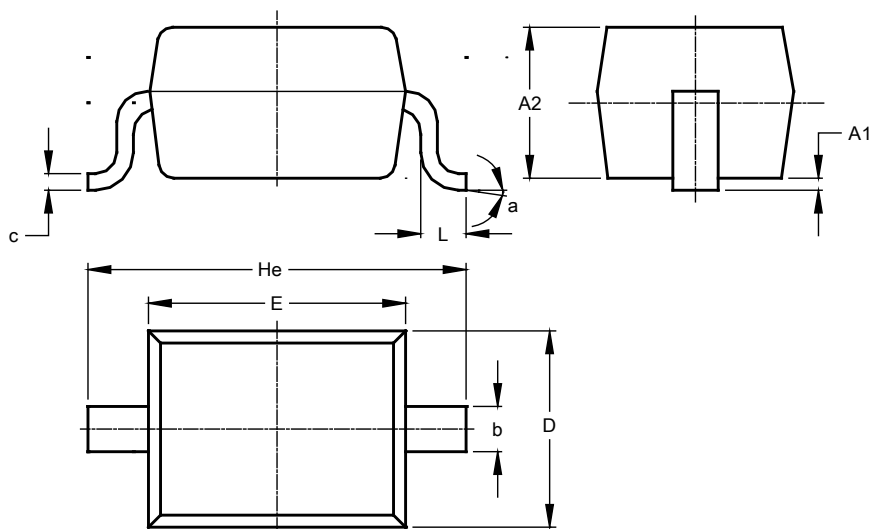


Figure 5 Reverse Recovery Time vs. Forward Current

## Package Outline Dimensions

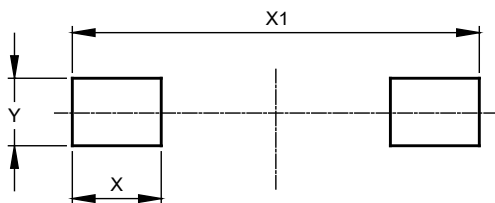
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



| SOD323               |      |      |      |
|----------------------|------|------|------|
| Dim                  | Min  | Max  | Typ  |
| A1                   | --   | 0.10 | 0.05 |
| A2                   | 1.00 | 1.10 | 1.05 |
| b                    | 0.25 | 0.35 | 0.30 |
| c                    | 0.10 | 0.15 | 0.11 |
| D                    | 1.20 | 1.40 | 1.30 |
| E                    | 1.60 | 1.80 | 1.70 |
| He                   | 2.30 | 2.70 | 2.50 |
| L                    | 0.20 | 0.40 | 0.30 |
| a                    | 0°   | 8°   | --   |
| All Dimensions in mm |      |      |      |

## Suggested Pad Layout

Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for the latest version.



| Dimensions | Value (in mm) |
|------------|---------------|
| X          | 0.590         |
| X1         | 2.700         |
| Y          | 0.450         |

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