



5. Pinning information

Table 2. Pinning information

| Pin | Symbol | Description | Simplified outline | Graphic symbol |
|-----|--------|-------------|--|---|
| 1 | K | cathode |  |  |
| 2 | A | anode | | |
| | | | | |

6. Ordering information

Table 3. Ordering information

| Type number | Package Name | Orderable part number | Packing method | Small packing quantity | Package version | Package issue date |
|-------------|--------------|-----------------------|----------------|------------------------|-----------------|--------------------|
| MURS360B | SMB | MURS360BJ | Reel | 3000 | SMB | 20-Feb-2017 |

7. Marking

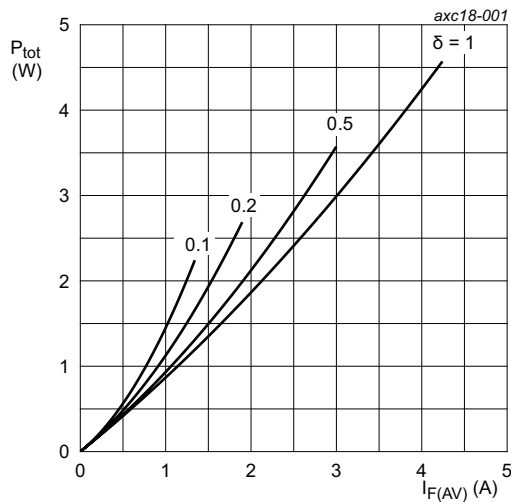
Table 4. Marking codes

| Type number | Marking codes |
|-------------|---------------|
| MURS360B | 360B |

8. Limiting values

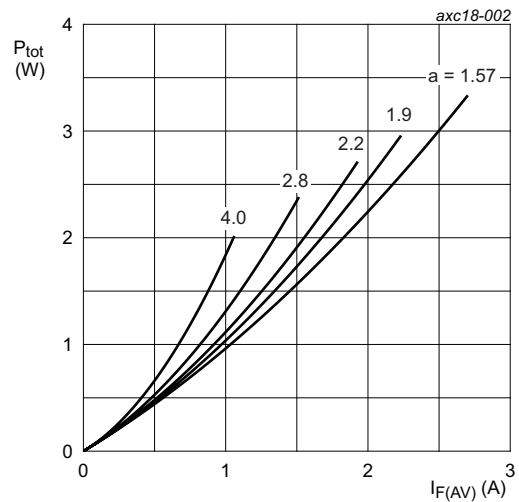
Table 5. Limiting values
In accordance with the Absolute Maximum Rating System (IEC 60134).

| Symbol | Parameter | Conditions | Values | Unit |
|-------------|-------------------------------------|--|------------|--------------------|
| V_{RRM} | repetitive peak reverse voltage | | 600 | V |
| V_{RWM} | crest working reverse voltage | | 600 | V |
| V_R | reverse voltage | DC | 600 | V |
| $I_{F(AV)}$ | average forward current | $\delta = 0.5$; square-wave pulse; $T_{lead} \leq 105\text{ }^{\circ}\text{C}$; Fig. 1 ; Fig. 2 ; Fig. 3 | 3 | A |
| I_{FRM} | repetitive peak forward current | $\delta = 0.5$; $t_p = 25\text{ }\mu\text{s}$; $T_{lead} \leq 105\text{ }^{\circ}\text{C}$; square-wave pulse | 6 | A |
| I_{FSM} | non-repetitive peak forward current | $t_p = 10\text{ ms}$; $T_{j(init)} = 25\text{ }^{\circ}\text{C}$; sine-wave pulse; Fig. 4 | 100 | A |
| | | $t_p = 8.3\text{ ms}$; $T_{j(init)} = 25\text{ }^{\circ}\text{C}$; sine-wave pulse; | 110 | A |
| T_{stg} | storage temperature | | -65 to 175 | $^{\circ}\text{C}$ |
| T_j | junction temperature | | 175 | $^{\circ}\text{C}$ |



$$I_{F(AV)} = I_{F(RMS)} \times \sqrt{\delta}$$
$$V_o = 0.803\text{ V}; R_s = 0.0647\text{ }\Omega$$

Fig. 1. Forward power dissipation as a function of average forward current; square waveform; maximum values



$$a = \text{form factor} = I_{F(RMS)} / I_{F(AV)}$$
$$V_o = 0.803\text{ V}; R_s = 0.0647\text{ }\Omega$$

Fig. 2. Forward power dissipation as a function of average forward current; sinusoidal waveform; maximum values

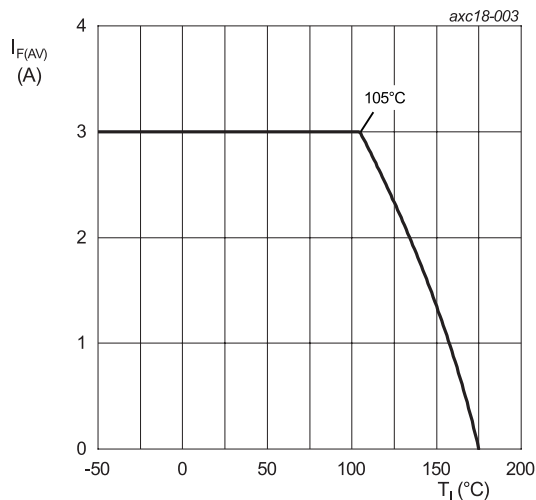


Fig. 3. Forward current as a function of lead temperature; typical values

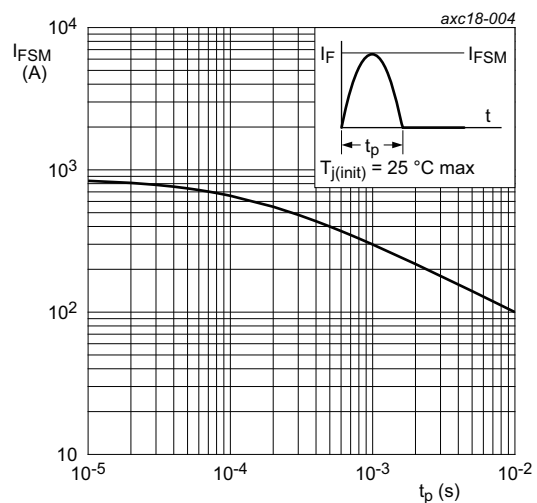


Fig. 4. Non-repetitive peak forward current as a function of pulse width; sinusoidal waveform; maximum values

9. Thermal characteristics

Table 6. Thermal characteristics

| Symbol | Parameter | Conditions | | Min | Typ | Max | Unit |
|------------------|--|--|--|-----|-----|-----|------|
| $R_{th(j-lead)}$ | thermal resistance from junction to lead | mounted on a minimum footprint printed-circuit board (FR4); Fig. 5 | | - | 23 | 25 | K/W |
| $R_{th(j-a)}$ | thermal resistance from junction to ambient free air | mounted on a minimum footprint printed-circuit board (FR4) | | - | 75 | - | K/W |

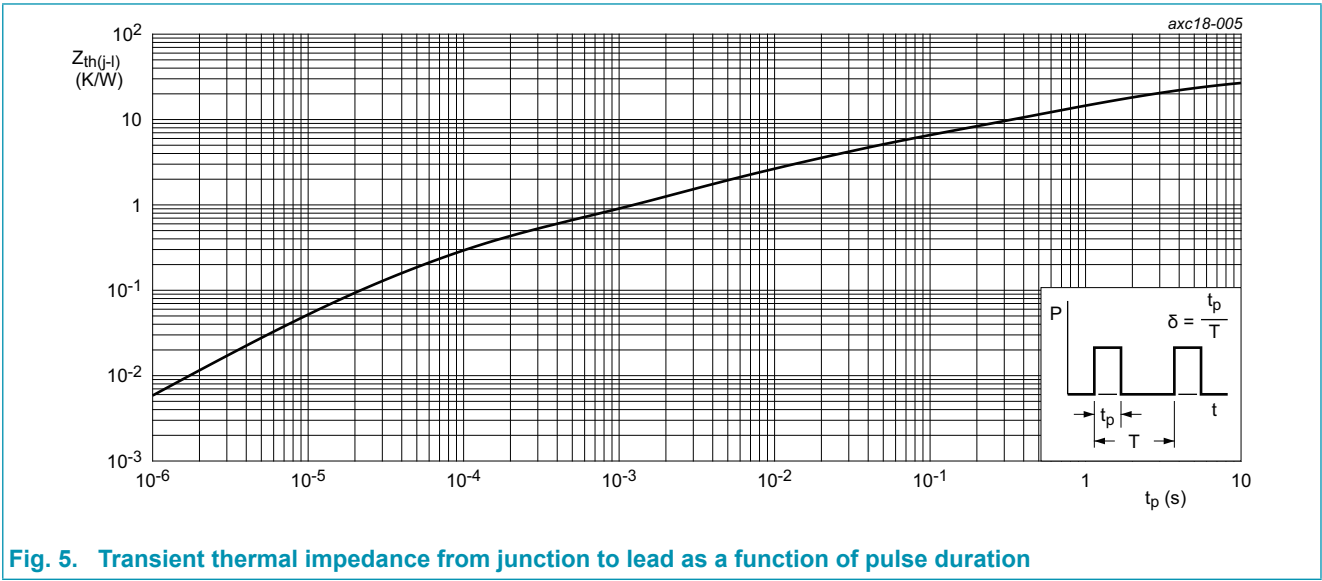
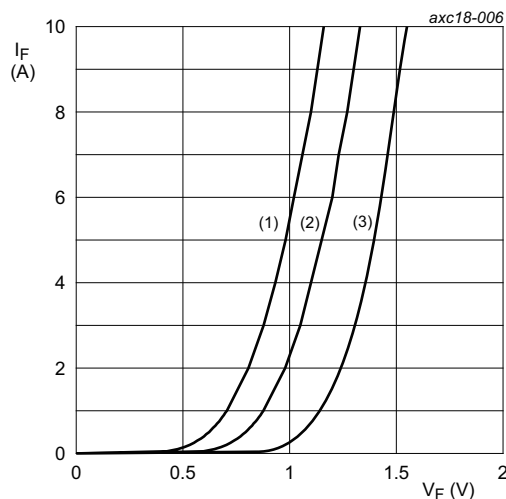


Fig. 5. Transient thermal impedance from junction to lead as a function of pulse duration

10. Characteristics

Table 7. Characteristics

| Symbol | Parameter | Conditions | | Min | Typ | Max | Unit |
|-------------------------|---------------------------------|---|--|------|------|------|------|
| Static characteristics | | | | | | | |
| V _F | forward current | I _F = 3 A; T _j = 25 °C; Fig. 6 | | - | - | 1.3 | V |
| | | I _F = 3 A; T _j = 150 °C; Fig. 6 | | - | 0.88 | 1.05 | V |
| I _R | reverse current | V _R = 600 V; T _j = 25 °C | | - | - | 3 | μA |
| | | V _R = 600 V; T _j = 150 °C | | - | - | 1 | mA |
| Dynamic characteristics | | | | | | | |
| Q _r | reverse charge | I _F = 3 A; V _R = 400 V; dI _F /dt = 200 A/μs; T _j = 25 °C; Fig. 7 | | - | 122 | - | nC |
| | | I _F = 3 A; V _R = 400 V; dI _F /dt = 200 A/μs; T _j = 125 °C; Fig. 7 | | - | 199 | - | nC |
| t _{rr} | reverse recovery time | I _F = 1 A; V _R = 30 V; dI _F /dt = 50 A/μs; T _j = 25 °C; Fig. 7 | | - | 50 | - | ns |
| | | I _F = 0.5 A; I _R = 1 A; I _{R(meas)} = 0.25 A; T _j = 25 °C; Step recovery | | - | - | 50 | ns |
| | | I _F = 3 A; V _R = 400 V; dI _F /dt = 200 A/μs; T _j = 25 °C; Fig. 7 | | - | 52 | - | ns |
| | | I _F = 3 A; V _R = 400 V; dI _F /dt = 200 A/μs; T _j = 125 °C; Fig. 7 | | - | 65 | - | ns |
| I _{RM} | peak reverse recovery current | I _F = 3 A; V _R = 400 V; dI _F /dt = 200 A/μs; T _j = 25 °C; Fig. 7 | | - | 4.7 | - | A |
| | | I _F = 3 A; V _R = 400 V; dI _F /dt = 200 A/μs; T _j = 125 °C; Fig. 7 | | - | 6.1 | - | A |
| E _{as} | non-repetitive avalanche energy | I _R = 1.2 A; T _{j(init)} = 25 °C; L = 15 mH | | 10.8 | - | - | mJ |



$V_o = 0.803\text{ V}$; $R_s = 0.0647\text{ }\Omega$

- (1) $T_j = 150\text{ °C}$; typical values
- (2) $T_j = 150\text{ °C}$; maximum values
- (3) $T_j = 25\text{ °C}$; maximum values

Fig. 6. Forward current as a function of forward voltage

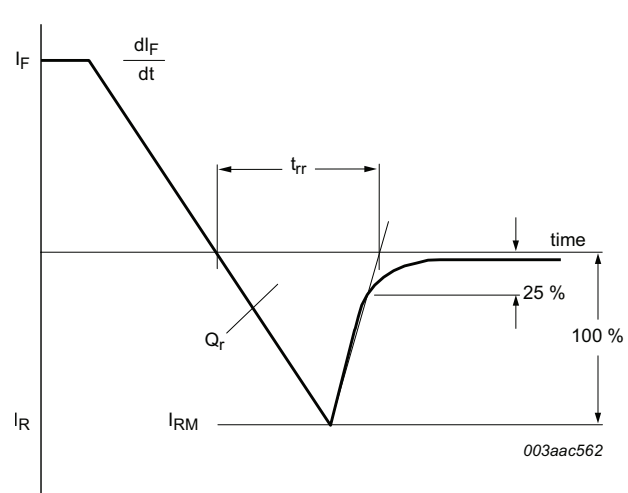
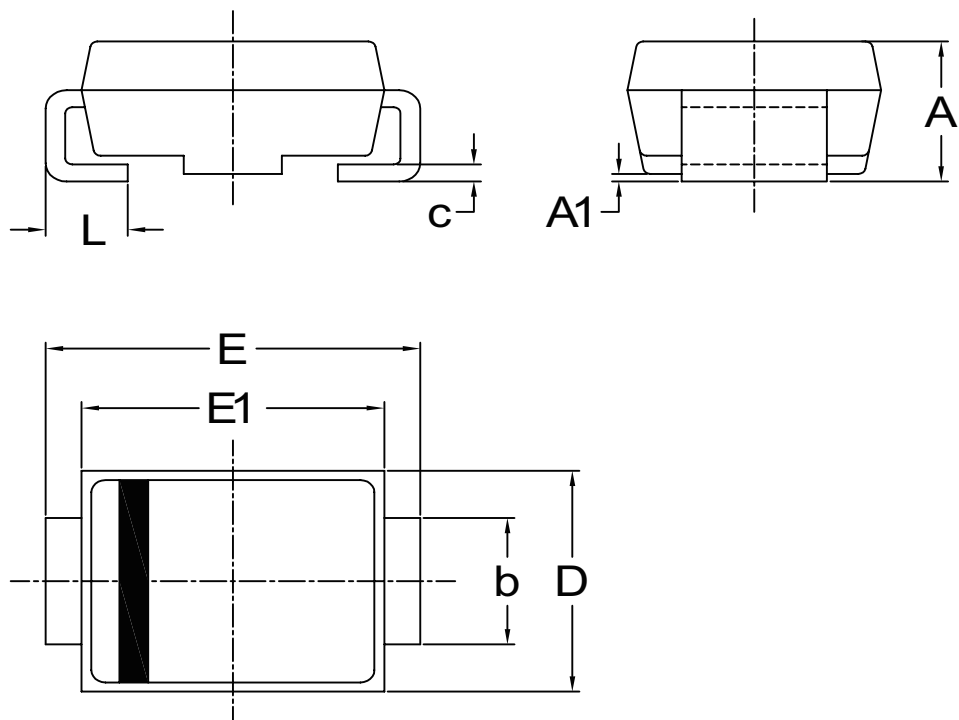


Fig. 7. Reverse recovery definitions; ramp recovery

11. Package outline



| UNIT | A | A1 | b | c | D | E | E1 | L |
|------|-----|------|------|------|------|------|------|------|
| mm | Max | 0.20 | 2.21 | 0.31 | 3.95 | 5.60 | 4.60 | 1.60 |
| | Min | 0.05 | 1.96 | 0.15 | 3.30 | 5.20 | 4.05 | 0.75 |

Remark: Dimensions D and E1 do not include mold flash.

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|--------------------------------|--------------------|---|
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