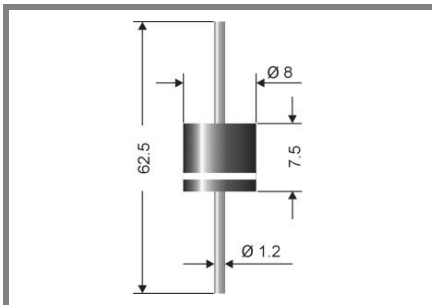


P 1000 A....P 1000 S



Axial lead diode

Standard silicon rectifier diodes

P 1000 A....P 1000 S

Forward Current: 10 A

Reverse Voltage: 50 to 1200 V

Features

- Max. solder temperature: 260°C
- Plastic material has UL classification 94V-0
- Max. junction temperature $T_j \leq 200^\circ\text{C}$ in bypass mode

Mechanical Data

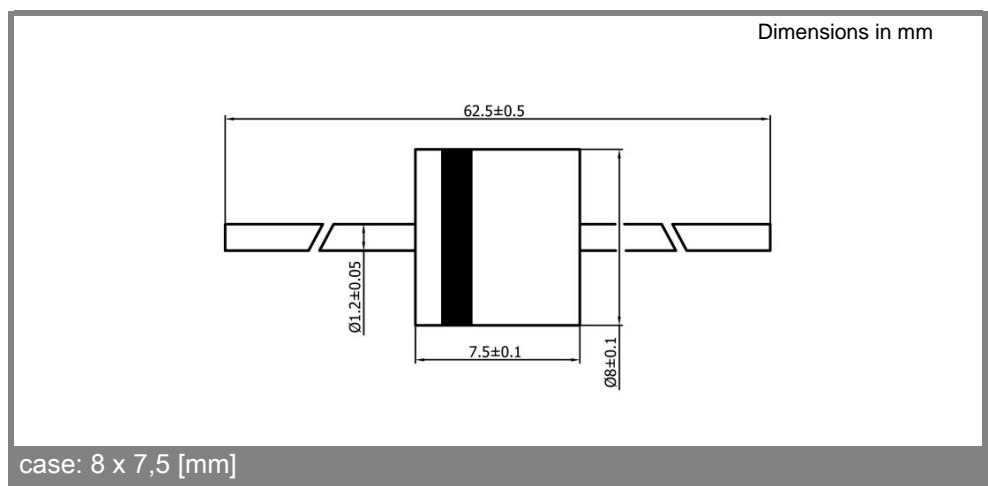
- Plastic case 8 x 7.5 [mm]
- Weight approx.: 1.5 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 500 pieces per ammo or 1000 pieces per reel

- 1) Valid, if leads are kept at T_A at a distance 10 mm from case
- 2) $I_F = 5\text{A}$, $T_j = 25^\circ\text{C}$
- 3) $T_A = 25^\circ\text{C}$
- 4) $R_{thT} \leq 3\text{ K/W}$ if leads are kept at ambient temperature at a distance 0 mm from case
- 5) Max. junction temperature $T_j \leq 185^\circ\text{C}$ in reverse mode $V_R = 50\%V_{RRM}$, $T_j \leq 200^\circ\text{C}$ in bypass mode

| Type | Repetitive peak reverse voltage V_{RRM} V | Surge peak reverse voltage V_{RSM} V | Max. reverse recovery time $I_F = -A$ $I_R = -A$ $I_{RR} = -A$ t_{rr} ns | Max. forward voltage $V_F^{(2)}$ |
|----------|---|--|---|-------------------------------------|
| P 1000 A | 50 | 50 | - | 0,9 |
| P 1000 B | 100 | 100 | - | 0,9 |
| P 1000 D | 200 | 200 | - | 0,9 |
| P 1000 G | 400 | 400 | - | 0,9 |
| P 1000 J | 600 | 600 | - | 0,9 |
| P 1000 K | 800 | 800 | - | 0,9 |
| P 1000 M | 1000 | 1000 | - | 0,9 |
| P 1000 S | 1200 | 1200 | - | 0,9 |

| Absolute Maximum Ratings | | $T_A = 25^\circ\text{C}$, unless otherwise specified | |
|--------------------------|--|---|----------------------|
| Symbol | Conditions | Values | Units |
| I_{FAV} | Max. averaged fwd. current, R-load, $T_A = 50^\circ\text{C}^{(1)}$ | 10 | A |
| I_{FRM} | Repetitive peak forward current $f > 15\text{ Hz}^{(1)}$ | 80 | A |
| I_{FSM} | Peak forward surge current 50 Hz half sinus-wave $^{(3)}$ | 400 | A |
| i^2t | Rating for fusing, $t < 10\text{ ms}^{(3)}$ | 800 | A^2s |
| R_{thA} | Max. thermal resistance junction to ambient $^{(1)}$ | | K/W |
| R_{thL} | Max. thermal resistance junction to terminals $^{(4)}$ | 3 | K/W |
| T_j | Operating junction temperature | -50...+175 ($T_j \leq 200^\circ\text{C}^{(5)}$) | $^\circ\text{C}$ |
| T_s | Storage temperature | -50...+175 | $^\circ\text{C}$ |

| Characteristics | | $T_A = 25^\circ\text{C}$, unless otherwise specified | |
|-----------------|--|---|---------------|
| Symbol | Conditions | Values | Units |
| I_R | Maximum leakage current, $T_j = 25^\circ\text{C}$; $V_R = V_{RRM}$ | <25 | μA |
| | $T_j = ^\circ\text{C}$; $V_R = V_{RRM}$ | | |
| C_j | Typical junction capacitance (at MHz and applied reverse voltage of V) | - | pF |
| Q_{rr} | Reverse recovery charge ($U_R = V$; $I_F = A$; $dI_F/dt = A/\text{ms}$) | - | μC |
| E_{RSM} | Non repetitive peak reverse avalanche energy ($I_R = \text{mA}$; $T_j = ^\circ\text{C}$; inductive load switched off) | - | mJ |



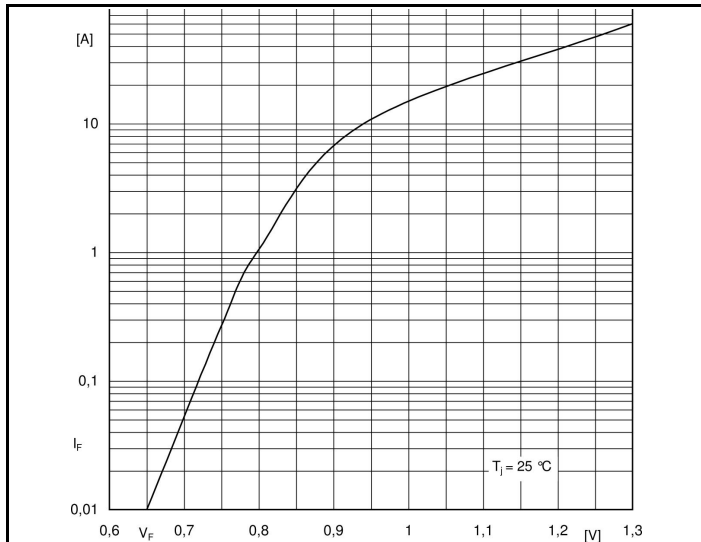


Fig. 1 Forward characteristic (typical values)

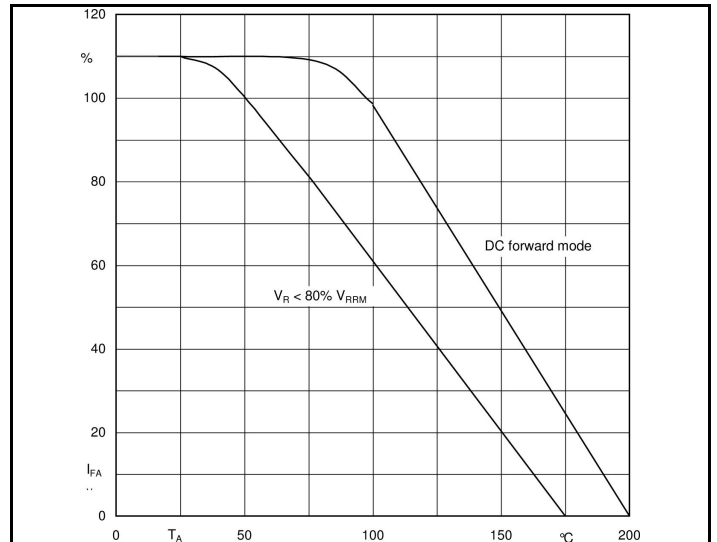


Fig. 2 Rated forward current vs. ambient temperature ¹⁾

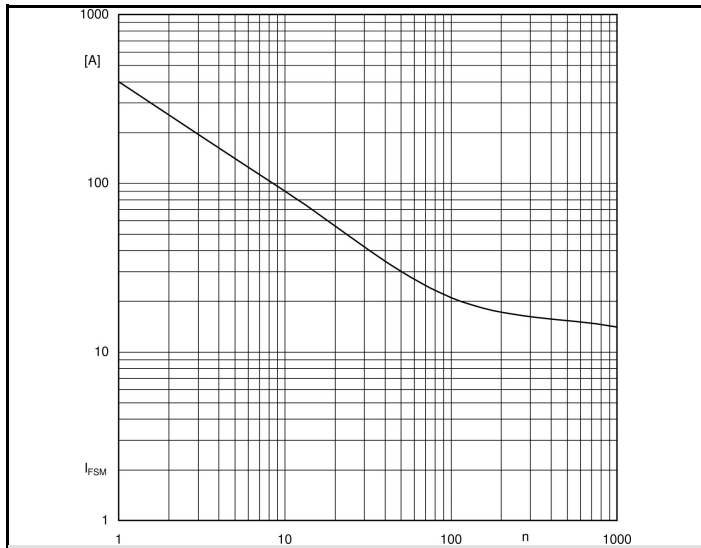


Fig. 3 I_{FSM} current versus number of cycles at 50 Hz

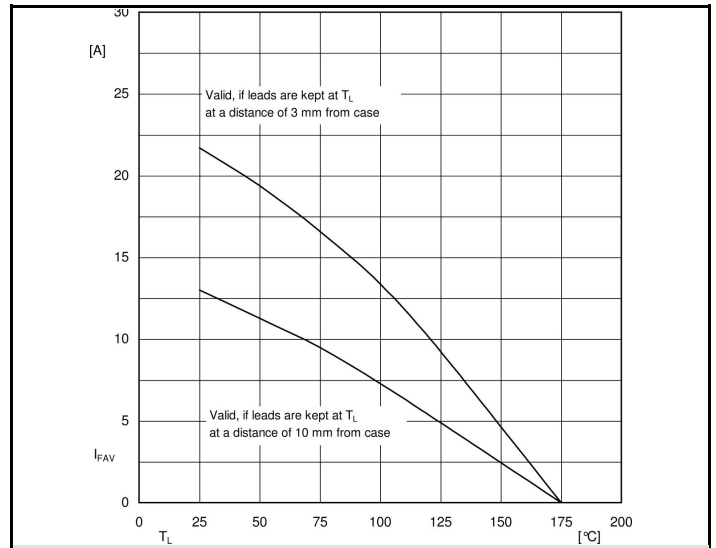


Fig. 4 Maximum Average Forward Current

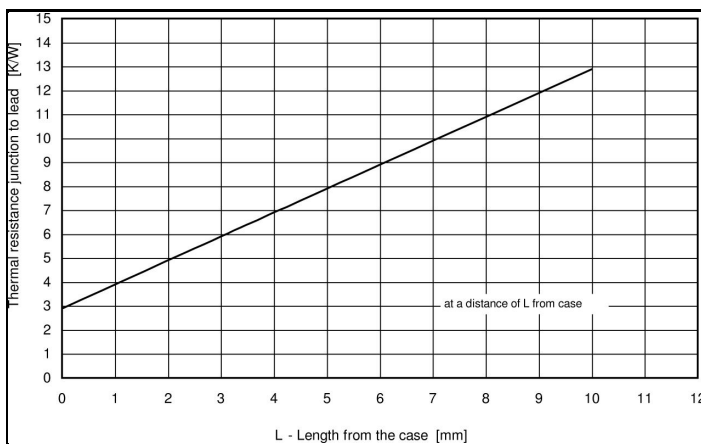


Fig. 5 Thermal resistance versus dimension from case