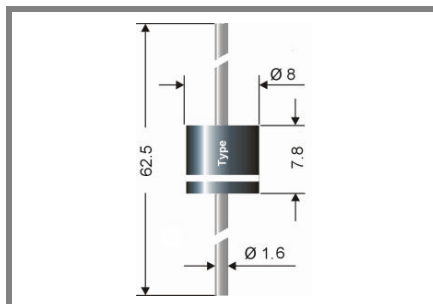


P2500ATL ... P2500MTL



Axial lead diode

Standard silicon rectifier diodes

P2500ATL ... P2500MTL

Forward Current: 25 A

Reverse Voltage: 50 to 1000 V

Preliminary Data

Features

- Max. solder temperature: 260°C
- Plastic material has UL classification 94V-0

Mechanical Data

- Plastic case: 8 x 7,8 [mm]
- Weight approx.: 3,0 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 ambient temperature T_A at a distance 0 mm from case

2) $I_F = 5 \text{ A}$, $T_j = 25 \text{ °C}$

3) $T_A = 25 \text{ °C}$

4) Thermal resistance from junction to lead/terminal at a distance 0 mm from case

5) Max. junction temperature $T_j \leq 185 \text{ °C}$ in reverse mode $V_R = 50\% V_{RRM}$, $T_j \leq 200 \text{ °C}$ 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 $V_F^{(2)}$
P2500 ATL	50	50	-	0,85
P2500 BTL	100	100	-	0,85
P2500 DTL	200	200	-	0,85
P2500 GTL	400	400	-	0,85
P2500 JTL	600	600	-	0,87
P2500 KTL	800	800	-	0,87
P2500 MTL	1000	1000	-	0,87

Absolute Maximum Ratings

$T_A = 25 \text{ °C}$, unless otherwise specified

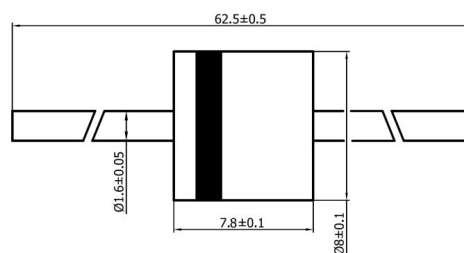
Symbol	Conditions	Values	Units
I_{FAV}	Max. averaged fwd. current, R-load, $T_A = 50 \text{ °C}^{(1)}$	25	A
I_{FRM}	Repetitive peak forward current $f > 15 \text{ Hz}^{(1)}$	90	A
I_{FSM}	Peak forward surge current 50 Hz half sinus-wave $^{(3)}$	650	A
i^2t	Rating for fusing, $t < 10 \text{ ms}^{(3)}$	2100	A ² s
R_{thA}	Max. thermal resistance junction to ambient $^{(1)}$		K/W
R_{thL}	Max. thermal resistance junction to terminals $^{(4)}$	0,7	K/W
T_j	Operating junction temperature	- 50 ... + 175 ($T_j \leq 200 \text{ °C}$ $^{(5)}$)	°C
T_s	Storage temperature	- 50 ... + 200	°C

Characteristics

$T_A = 25 \text{ °C}$, unless otherwise specified

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

Dimensions in mm



case: 8 x 7,8 [mm]

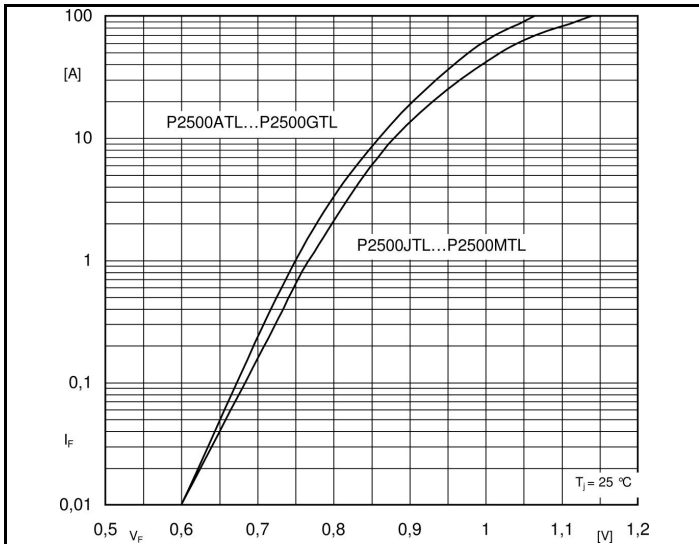


Fig. 1, Forward characteristics (typical values)

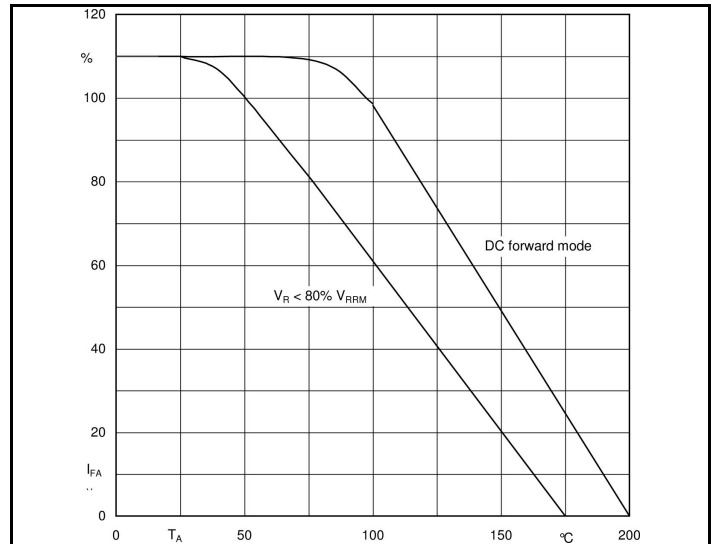


Fig. 2, Rated forward current vs. ambient temperature ¹⁾

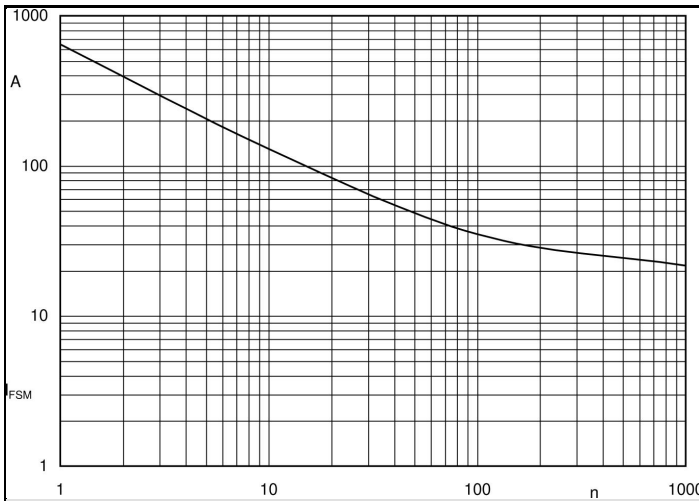


Fig. 3, I_{FSM} current versus number of cycles at 50 Hz

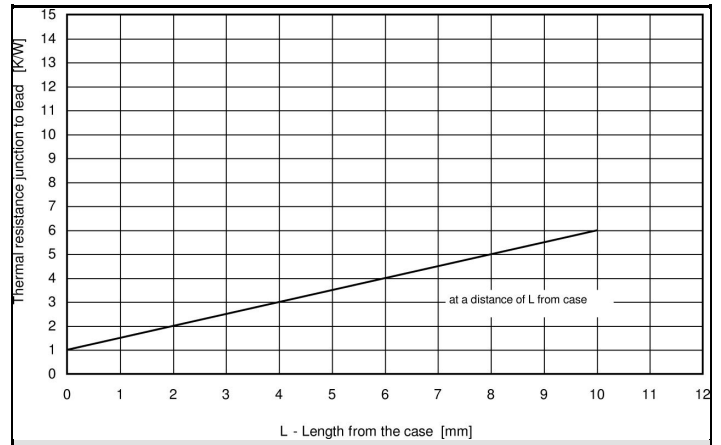


Fig. 4, Thermal resistance versus distance from case