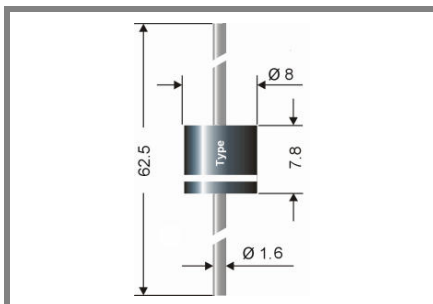


# P2500ATL ... P2500MTL



## 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

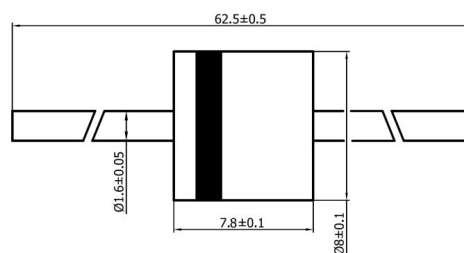
Symbol	Conditions	Values	Units
$I_{FAV}$	Max. averaged fwd. current, R-load, $T_A = 50 \text{ °C}$ <sup>1)</sup>	25	A
$I_{FRM}$	Repetitive peak forward current $f > 15 \text{ Hz}$ <sup>1)</sup>	90	A
$I_{FSM}$	Peak forward surge current 50 Hz half sinus-wave <sup>3)</sup>	650	A
$i^2t$	Rating for fusing,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

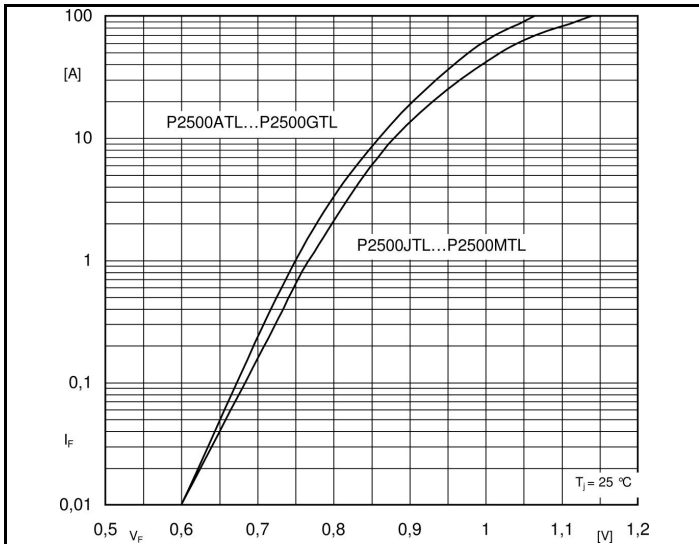


Fig. 1, Forward characteristics (typical values)

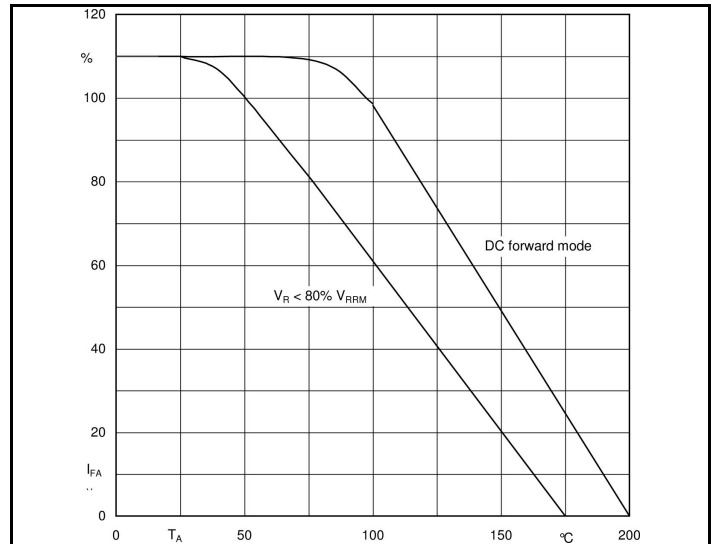


Fig. 2, Rated forward current vs. ambient temperature <sup>1)</sup>

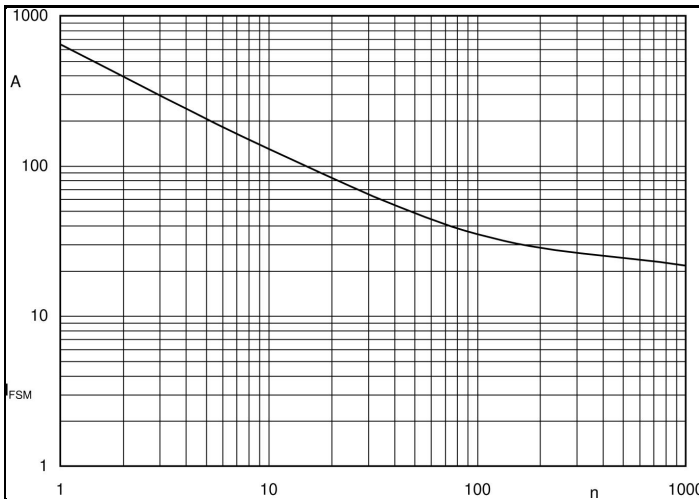


Fig. 3,  $I_{FSM}$  current versus number of cycles at 50 Hz

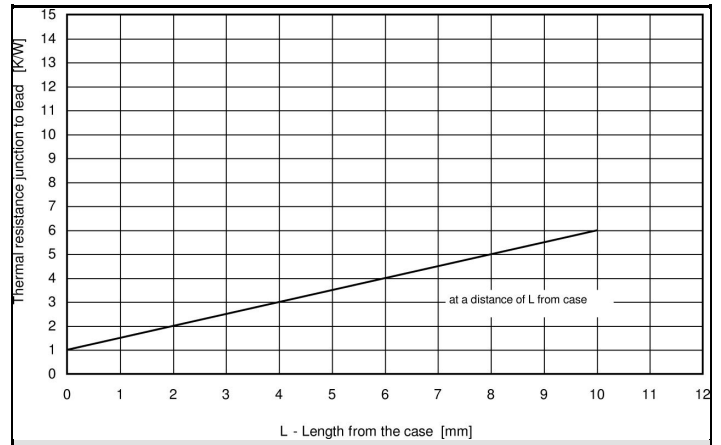


Fig. 4, Thermal resistance versus distance from case