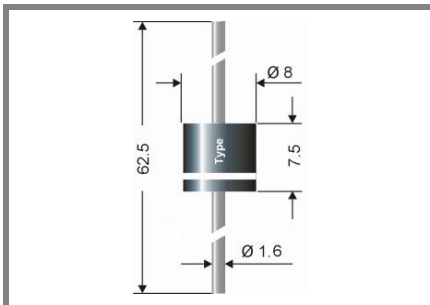


# P 1500 ATL ... P1500 STL



## Axial lead diode

## Standard silicon rectifier diodes

### P 1500 ATL ... P1500 STL

**Forward Current: 15 A**

**Reverse Voltage: 50 to 1200 V**

Preliminary Data

### Features

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

### Mechanical Data

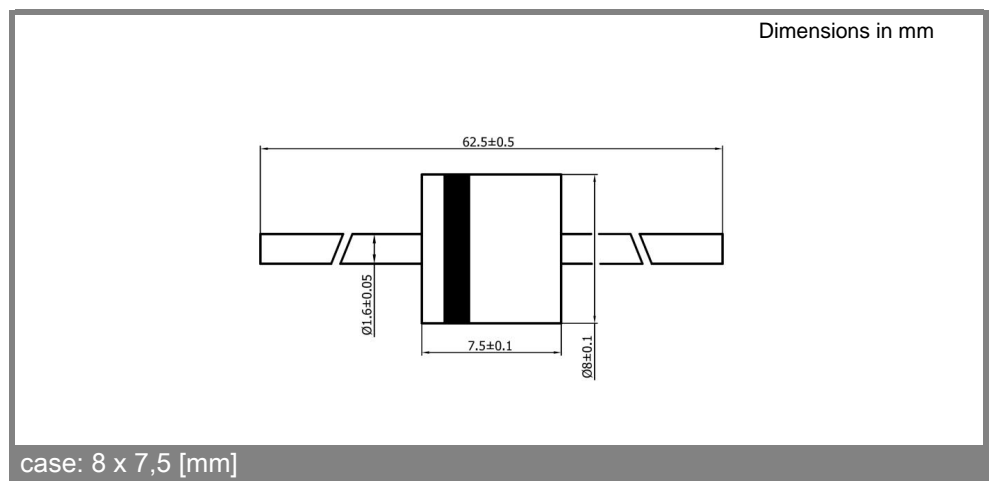
- Plastic case: 8 x 7,5 [mm]
- Weight approx.: 2 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 500 pieces per ammo or 1000 pieces per reel

- 1) Valid, if leads are kept at  $T_A$  at a distance of 10 mm from case
- 2)  $I_F = 5 A$ ,  $T_j = 25 ^\circ C$ ,  $V_F@15A$  for types: P1500A-G < 910mV, P1500J-S < 970mV
- 3)  $T_A = 25 ^\circ C$
- 4) Thermal resistance from junction to lead/terminal at a distance 0 mm from case
- 5) Max. junction temperature  $T_j \leq 200 ^\circ C$  in bypass mode / DC forward 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 $V_F^{2)}$
P1500A TL	50	50	-	0,84
P1500B TL	100	100	-	0,84
P1500D TL	200	200	-	0,84
P1500G TL	400	400	-	0,84
P1500J TL	600	600	-	0,88
P1500K TL	800	800	-	0,88
P1500M TL	1000	1000	-	0,88
P1500S TL	1200	1200	-	0,88

Absolute Maximum Ratings		$T_A = 25 ^\circ C$ , unless otherwise specified	
Symbol	Conditions	Values	Units
$I_{FAV}$	Max. averaged fwd. current, R-load, $T_A = 50 ^\circ C$ 1)	15	A
$I_{FRM}$	Repetitive peak forward current $f > 15 Hz$ 1)	85	A
$I_{FSM}$	Peak forward surge current 50 Hz half sinus-wave 3)	600	A
$i^2t$	Rating for fusing, $t < 10 ms$ 3)	1800	A <sup>2</sup> s
$R_{thA}$	Max. thermal resistance junction to ambient 1)		K/W
$R_{thL}$	Max. thermal resistance junction to terminals 4)	1,8	K/W
$T_j$	Operating junction temperature	- 50 ... + 175 ( $T_j \leq 200 ^\circ C$ in bypass mode 5) )	$^\circ C$
$T_s$	Storage temperature	- 50 ... + 175	$^\circ C$

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



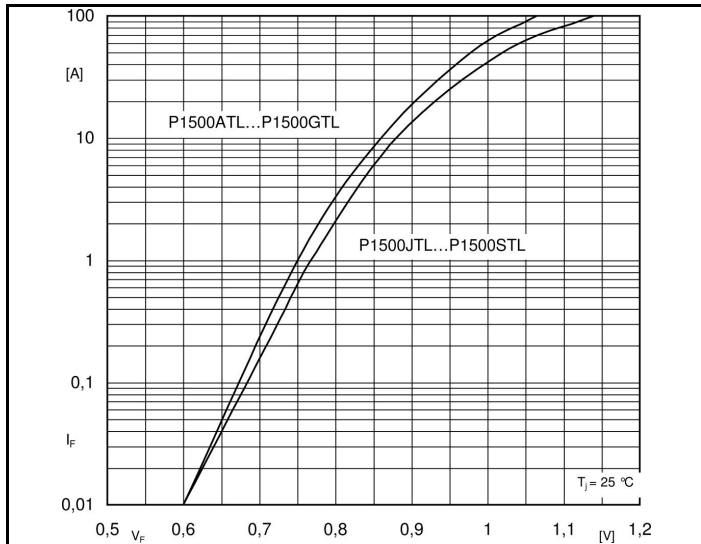


Fig. 1, Forward characteristics (typical values)

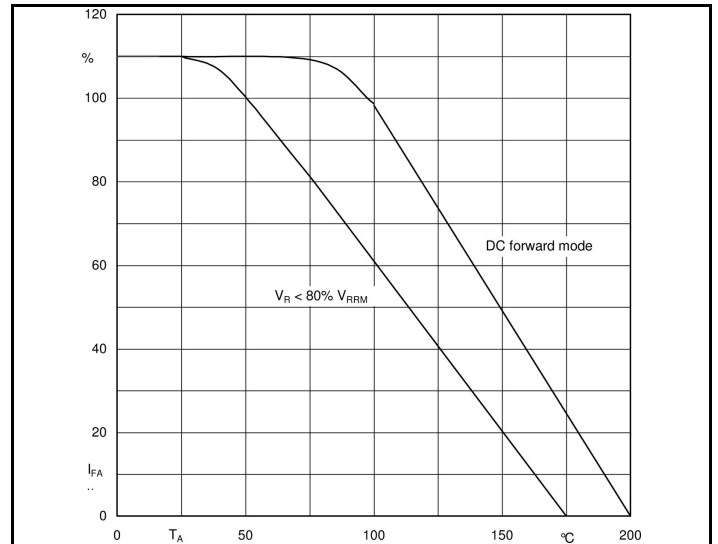


Fig. 2, Rated forward current vs. ambient temperature <sup>1)</sup>

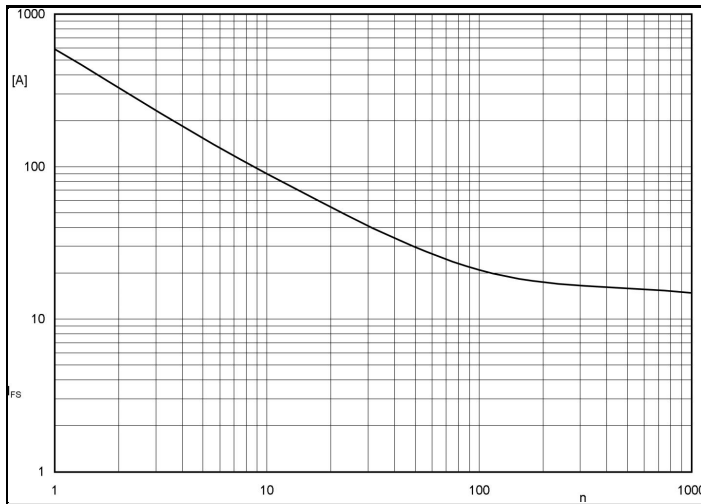


Fig. 3,  $I_{FSM}$  current versus number of cycles at 50 Hz

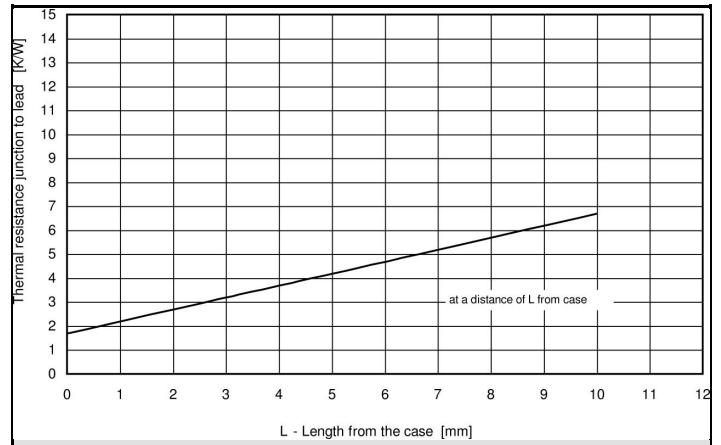


Fig. 4, Thermal resistance versus distance from case