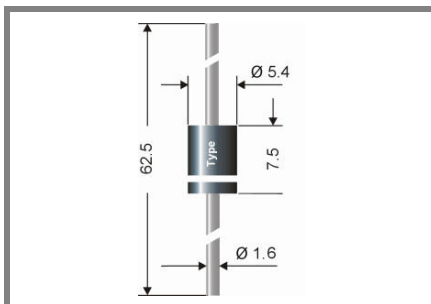


# SB1220TL...SB12100TL



## Axial lead diode

## Schottky barrier rectifiers diodes

### SB1220TL...SB12100TL

**Forward Current: 12 A**

**Reverse Voltage: 20 to 100 V**

Preliminary Data

### Features

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

### Mechanical Data

- Plastic case: 5,4 x 7,5 [mm]
- Weight approx.: 1,8 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 1250 pieces per ammo or per reel

1) Valid, if leads are kept at  $T_A$  at a distance of 0 mm from case

2)  $I_F = 5 \text{ A}$ ,  $V_F < 490 \text{ mV}$  @  $I_F = 12 \text{ A}$ ,  $T_j = 25^\circ\text{C}$

3)  $T_A = 25^\circ\text{C}$

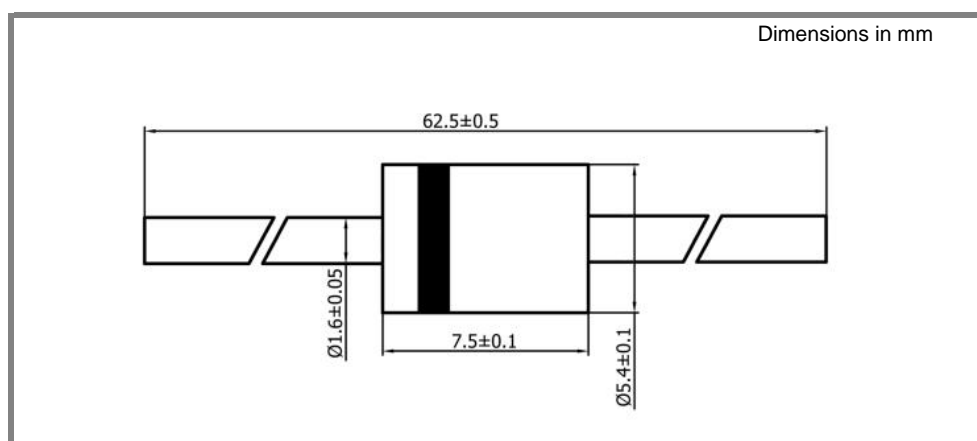
4) Thermal resistance from junction to lead/terminal at a distance 0 mm from case

5) Max. junction temperature  $T_j \leq 200^\circ\text{C}$  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 $V_F^{2)}$
SB1220TL	20	20	-	0,45
SB1230TL	30	30	-	0,45
SB1240TL	40	40	-	0,45
SB1245TL	45	45	-	0,45
SB1250TL	50	50	-	0,61
SB1260TL	60	60	-	0,61
SB1290TL	90	90	-	0,75
SB12100TL	100	100	-	0,75

Absolute Maximum Ratings		$T_A = 25^\circ\text{C}$ , unless otherwise specified	
Symbol	Conditions	Values	Units
$I_{FAV}$	Max. averaged fwd. current, R-load, $T_A = 75^\circ\text{C}$ <sup>1)</sup>	12	A
$I_{FRM}$	Repetitive peak forward current $f > 15 \text{ Hz}$ <sup>1)</sup>	55	A
$I_{FSM}$	Peak forward surge current 50 Hz half sinus-wave <sup>3)</sup>	300	A
$i^2t$	Rating for fusing, $t < 10 \text{ ms}$ <sup>3)</sup>	450	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>	2	K/W
$T_j$	Operating junction temperature	-50...+150 ( $T_j \leq 200^\circ\text{C}$ in bypass mode <sup>5)</sup> )	°C
$T_s$	Storage temperature	-50... +175	°C

Characteristics		$T_A = 25^\circ\text{C}$ , unless otherwise specified	
Symbol	Conditions	Values	Units
$I_R$	Maximum leakage current, $T_j = 25^\circ\text{C}$ ; $V_R = V_{RRM}$	<500	$\mu\text{A}$
	$T_j = 100^\circ\text{C}$ ; $V_R = V_{RRM}$	<20	mA
$C_j$	Typical junction capacitance (at MHz and applied reverse voltage of V)	-	pF
$Q_{rr}$	Reverse recovery charge ( $U_R = V$ ; $I_F = A$ ; $dI_F/dt = A/ms$ )	-	$\mu\text{C}$
$E_{RSM}$	Non repetitive peak reverse avalanche energy ( $I_R = \text{mA}$ ; $T_j = ^\circ\text{C}$ ; inductive load switched off)	-	mJ



case: 5,4 x 7,5[mm]

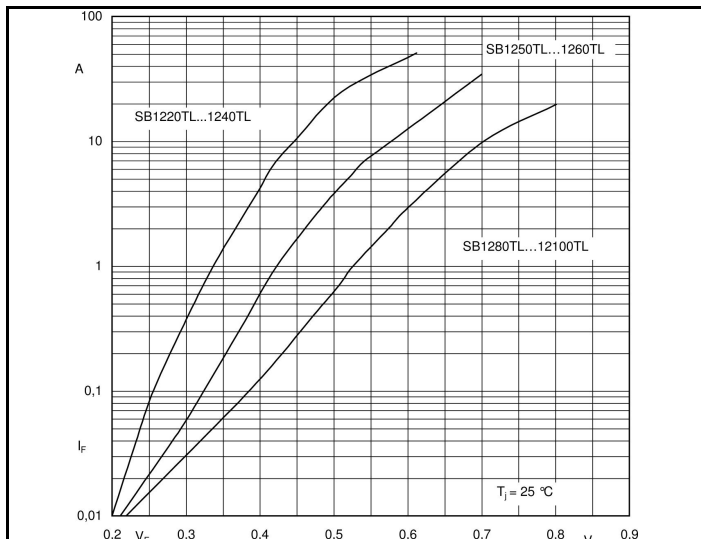


Fig. 1, Forward characteristic (typical values)

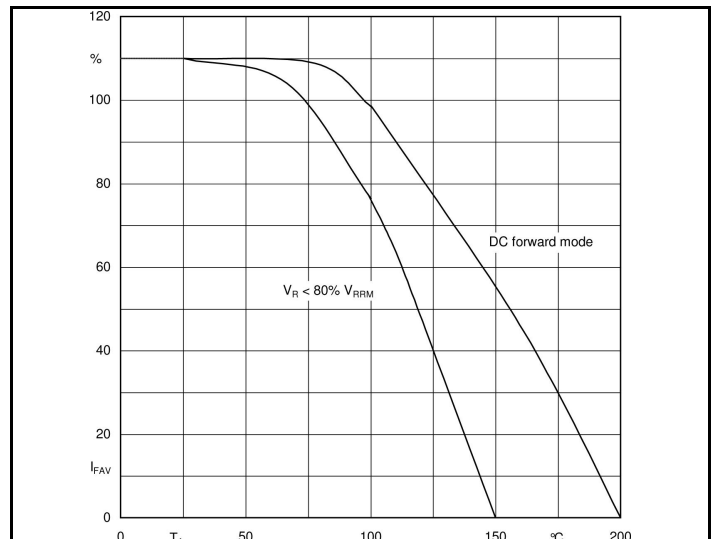


Fig. 2, Rated forward current vs. ambient temperature <sup>1)</sup>

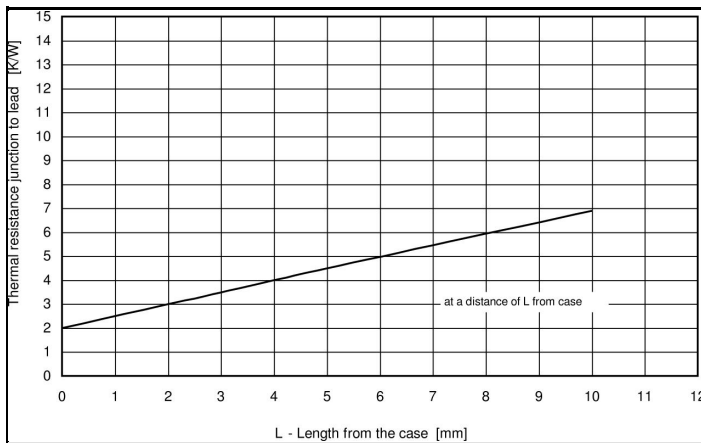


Fig. 3, Thermal resistance versus distance from case