

Axial lead diode

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 $V_F^{(2)}$
SB 820	20	20	-	0,49
SB 830	30	30	-	0,49
SB 840	40	40	-	0,49
SB 845	45	45	-	0,49

Schottky barrier rectifiers diodes

SB 820 ... SB 845

Forward Current: 8 A

Reverse Voltage: 20 to 45 V

Features

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

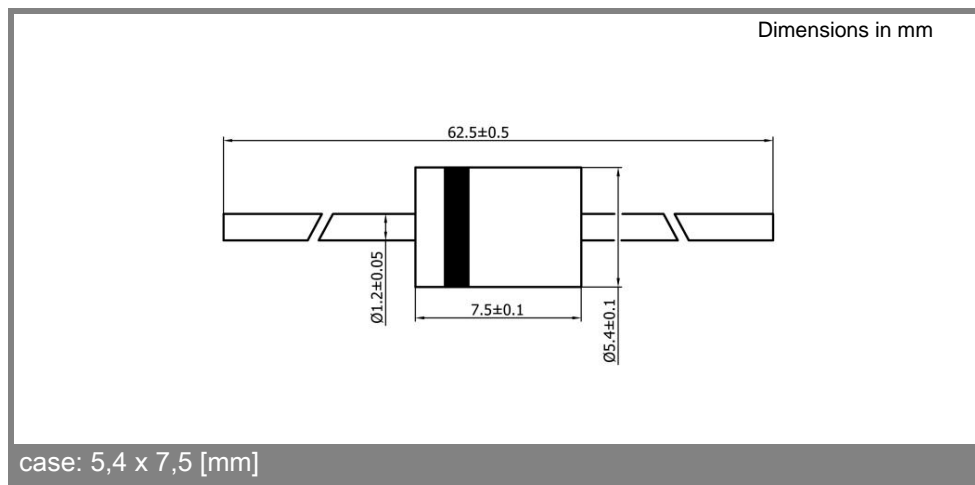
Mechanical Data

- Plastic case: 5,4 x 7,5 [mm]
- Weight approx.: 1,4 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 10 mm from case
- 2) $I_F = 5 A$, $T_j = 25^\circ C$
- 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 $T_j \leq 175^\circ C$ in reverse mode $V_R = 50\% V_{RRM}$, $T_j \leq 200^\circ C$ in bypass mode

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⁾	8	A
I_{FRM}	Repetitive peak forward current $f > 15 Hz$ ¹⁾	30	A
I_{FSM}	Peak forward surge current 50 Hz half sinus-wave ³⁾	200	A
i^2t	Rating for fusing, $t < 10 ms$ ³⁾	200	A ² s
R_{thA}	Max. thermal resistance junction to ambient ¹⁾		K/W
R_{thL}	Max. thermal resistance junction to terminals ⁴⁾	5	K/W
T_j	Operating junction temperature	- 50 ... + 150 ($T_j \leq 200^\circ C$ ⁵⁾)	°C
T_s	Storage temperature	- 50 ... + 175	°C

Characteristics		$T_A = 25^\circ C$, unless otherwise specified	
Symbol	Conditions	Values	Units
I_R	Maximum leakage current, $T_j = 25^\circ C$; $V_R = V_{RRM}$	<400	µA
	$T_j = 100^\circ C$; $V_R = V_{RRM}$	<18	mA
C_j	Typical junction capacitance (at MHz and applied reverse voltage of V)	-	pF
Q_{rr}	Reverse recovery charge ($U_R = V$; $I_F = A$; $di_F/dt = A/ms$)	-	µC
E_{RSM}	Non repetitive peak reverse avalanche energy ($I_R = mA$; $T_j = ^\circ C$; inductive load switched off)	-	mJ



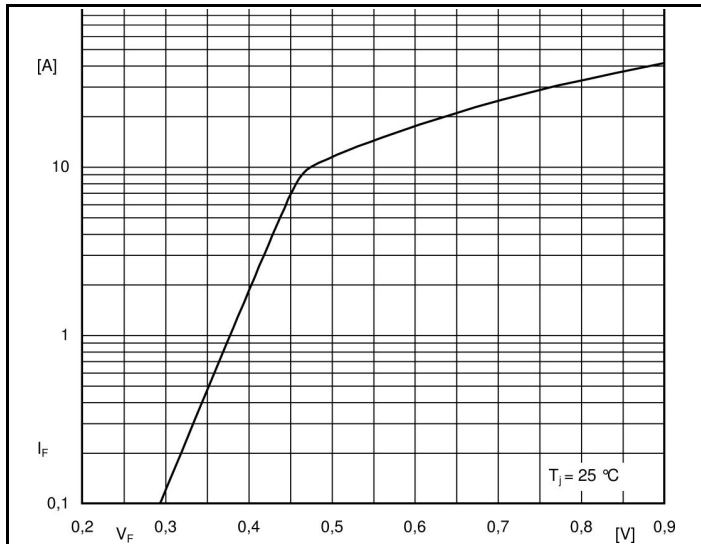


Fig. 1 Forward characteristics (typical values)

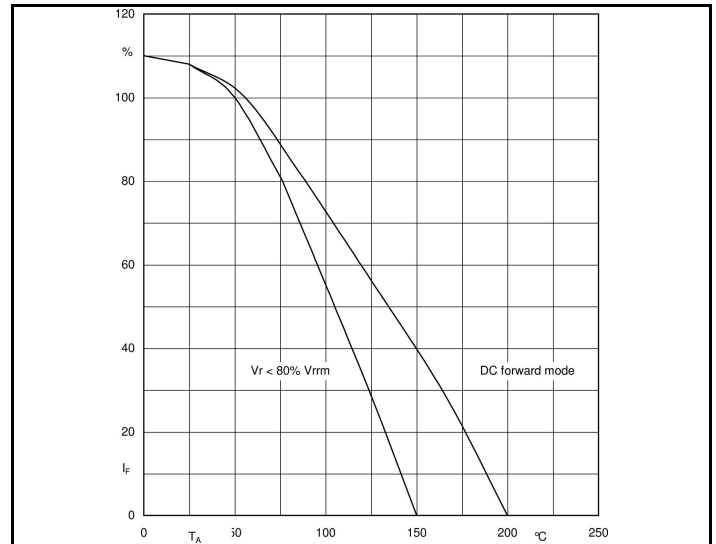


Fig. 2 Rated forward current vs. ambient temperature ¹⁾

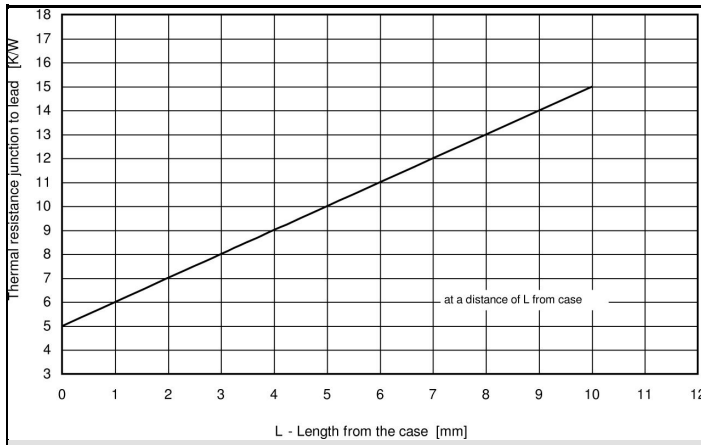


Fig. 3 Thermal resistance versus distance from case