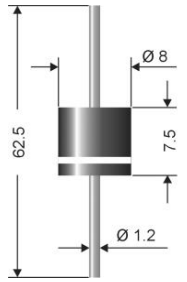
SB 1820 ... SB 1840



Axial lead diode

Schottky barrier rectifiers diodes

SB 1820 ... SB 1840

Forward Current: 18 A

Reverse Voltage: 20 to 40 V

Features

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

Mechanical Data

- Plastic case: 8 x 7,5 [mm]
- Weight approx.: 1,5 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 500 pieces per ammo or 1000 pieces per reel

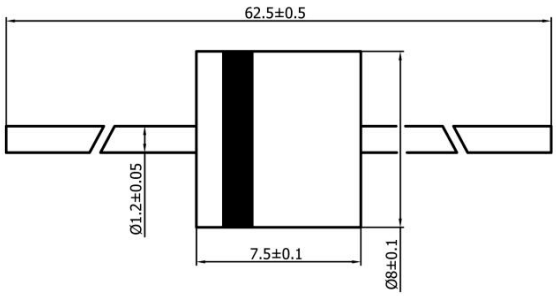
1) Valid, if leads are kept at T_A at a distance of 10 mm from case
2) I_F = 5 A, Tj = 25 °C
3) T_A = 25 °C
4) Thermal resistance from junction to lead/terminal at a distance 0 mm from case
5) Max. junction temperature Tj ≤ 200 °C in bypass mode / DC forward mode

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)
SB 1820	20	20	-	0,39
SB 1830	30	30	-	0,39
SB 1840	40	40	-	0,39

Absolute Maximum Ratings	T_A = 25 °C, unless otherwise specified		
Symbol	**Conditions**	**Values**	**Units**
I_{FAV}	Max. averaged fwd. current, R-load, T_A = 50 °C 1)	18	A
I_{FRM}	Repetitive peak forward current f > 15 Hz 1)	70	A
I_{FSM}	Peak forward surge current Hz half sinus-wave 3)	450	A
i²t	Rating for fusing, t < 10 ms 3)	1020	A²s
R_{thA}	Max. thermal resistance junction to ambient 1)		K/W
R_{thL}	Max. thermal resistance junction to terminals 4)	3	K/W
T_j	Operating junction temperature	- 50 ... + 150 (Tj ≤ 200 °C in bypass mode 5))	°C
T_s	Storage temperature	- 50 ... + 175	°C

Characteristics	T_A = 25 °C, unless otherwise specified		
Symbol	**Conditions**	**Values**	**Units**
I_R	Maximum leakage current, T_j = 25 °C; V_R = V_{RRM}	<500	µA
	T_j = 100 °C; V_R = V_{RRM}	30 (typ.)	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 = °C; inductive load switched off)	-	mJ

Dimensions in mm



case: 8 x 7,5 [mm]

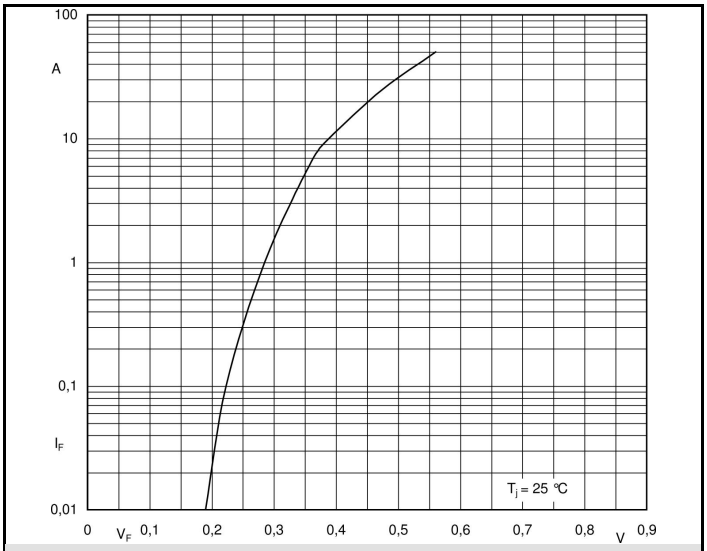


Fig. 1, Forward characteristics (typical values)

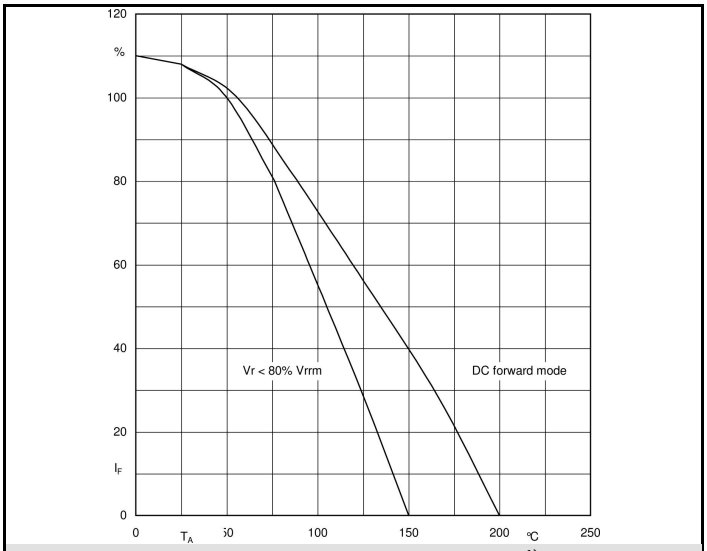


Fig. 2, Rated forward current vs. ambient temperature [1)]

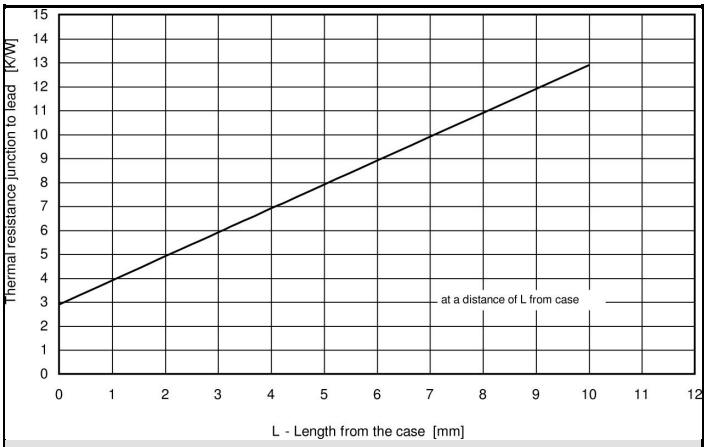


Fig. 3, Thermal resistance versus distance from case

