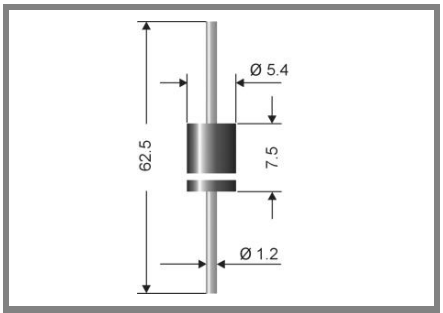
SB 1220 ... SB 12100



Axial lead diode

Schottky barrier rectifiers diodes

SB 1220 ... SB 12100

Forward Current: 12 A

Reverse Voltage: 20 to 100 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) Vailid, if leads are kept at T_A at a distance of 10 mm from case
2) I_F = 5 A, V_F<0,49 V @I_F=12 A, T_j = 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 1220	20	20	-	0,45
SB 1230	30	30	-	0,45
SB 1240	40	40	-	0,45
SB 1245	45	45	-	0,48
SB 1250	50	50	-	0,61
SB 1260	60	60	-	0,61
SB 1290	90	90	-	0,75
SB 12100	100	100	-	0,75

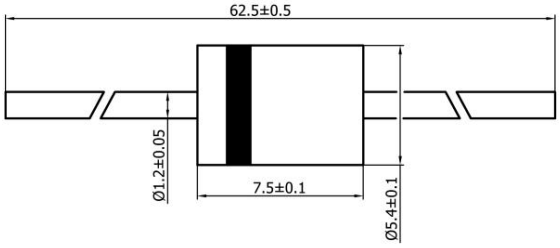
Absolute Maximum Ratings T_A = 25 °C, unless otherwise specified

Symbol	Conditions	Values	Units
I_{FAV}	Max. averaged fwd. current, R-load, T_A = 50 °C 1)	12	A
I_{FRM}	Repetitive peak forward current f > 15 Hz 1)	55	A
I_{FSM}	Peak forward surge current 50 Hz half sinus-wave 3)	280	A
i²t	Rating for fusing, t < 10 ms 3)	390	A²s
R_{thA}	Max. thermal resistance junction to ambient 1)		K/W
R_{thL}	Max. thermal resistance junction to terminals 4)	4	K/W
T_j	Operating junction temperature	-50 ... +150 ($T_j \leq$ 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}	<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)	-	µC
E_{RSM}	Non repetitive peak reverse avalanche energy (I_R = mA; T_j = °C; inductive load switched off)	-	mJ

Dimensions in mm



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

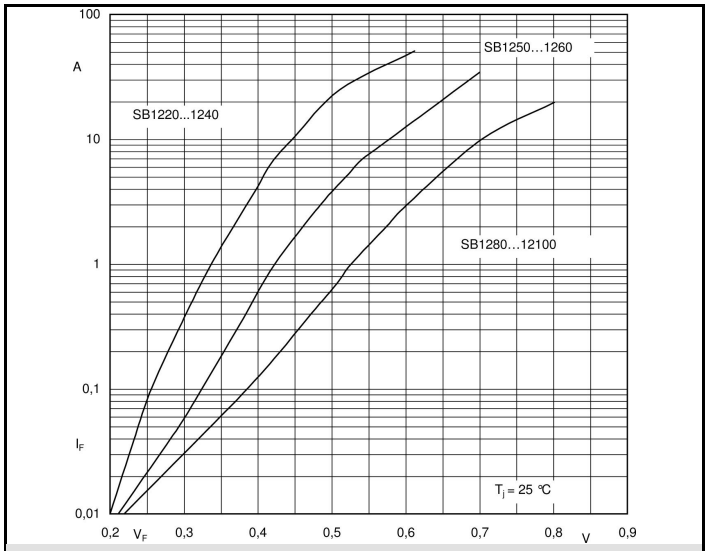


Fig. 1, Forward characteristics (typical values)

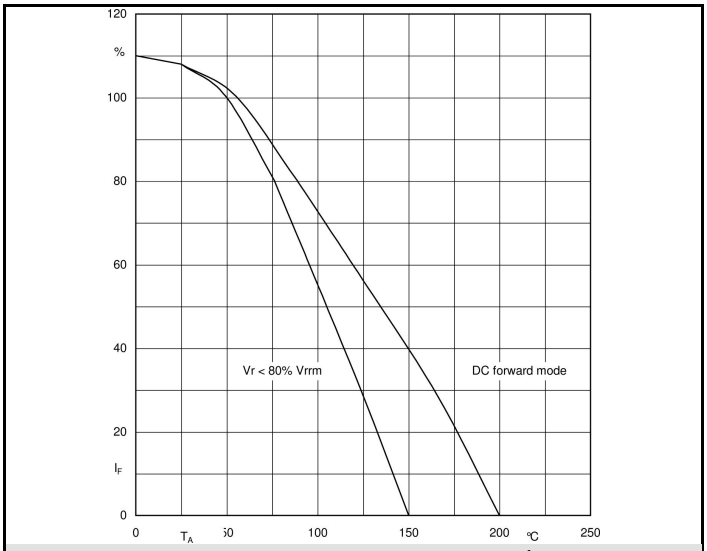


Fig. 2, Rated forward current vs. ambient temperature [1])

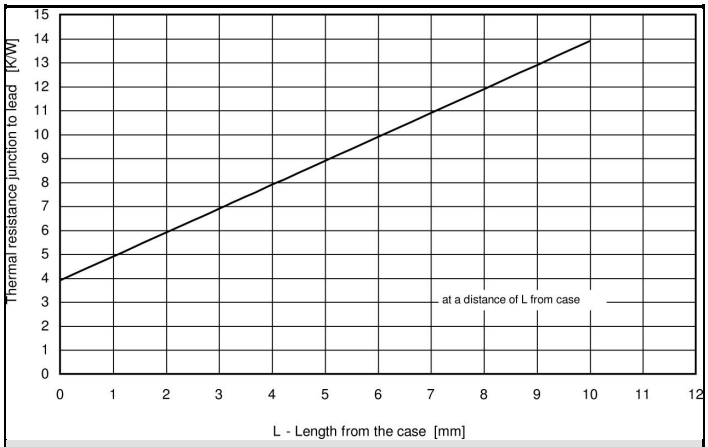


Fig. 3, Thermal resistance versus distance from case - typical values

