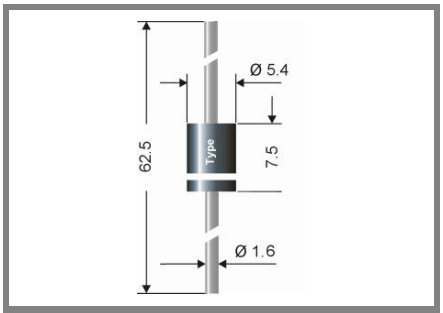
SB 1020TL...SB 1045TL



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 1020TL	20	20	-	0,47
SB 1030TL	30	30	-	0,47
SB 1040TL	40	40	-	0,47
SB 1045TL	45	45	-	0,47

Schottky barrier rectifiers diodes

SB 1020TL...SB 1045TL

Forward Current: 8 A

Reverse Voltage: 20 to 45 V

Preliminary Data

Features

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

Mechanical Data

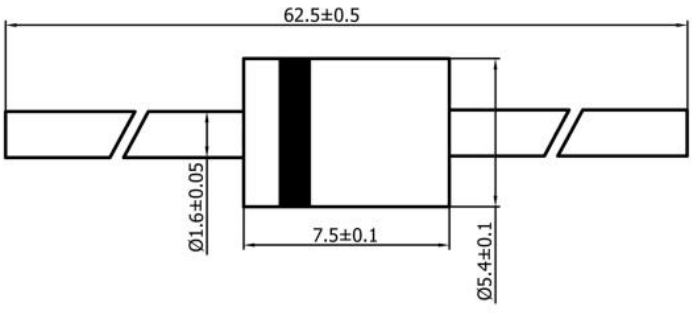
- Plastic case: 5,4 x 7,5 [mm]
- Weight approx.: 1,7 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 1250 pieces per ammo or per reel

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 °C
3) T_A = 25 °C
4) Thermal resistance from junction to lead/terminal at a distance 0 mm from case
5) Max. junction temperatue Tj ≤ 175°C in reverse mode $V_R \leq 50\% V_{RRM}$, Tj ≤ 200°C in bypass mode

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]	10	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]	225	A
i²t	Rating for fusing, t < ms [3]	250	A²s
R_{thA}	Max. thermal resistance junction to ambient [1]		K/W
R_{thL}	Max. thermal resistance junction to terminals [4]	2,7	K/W
T_j	Operating junction temperature	- 50 ... + 150 (Tj ≤ 200 °C [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; $V_R = V_{RRM}$	<400	µA
	T_j = 100 °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 = °C; inductive load switched off)	-	mJ

Dimensions in mm



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

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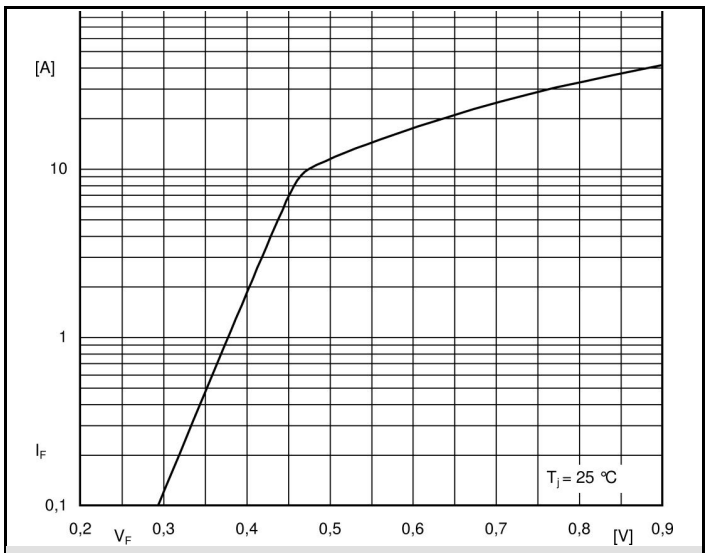


Fig. 1 Forward characteristics (typical values)

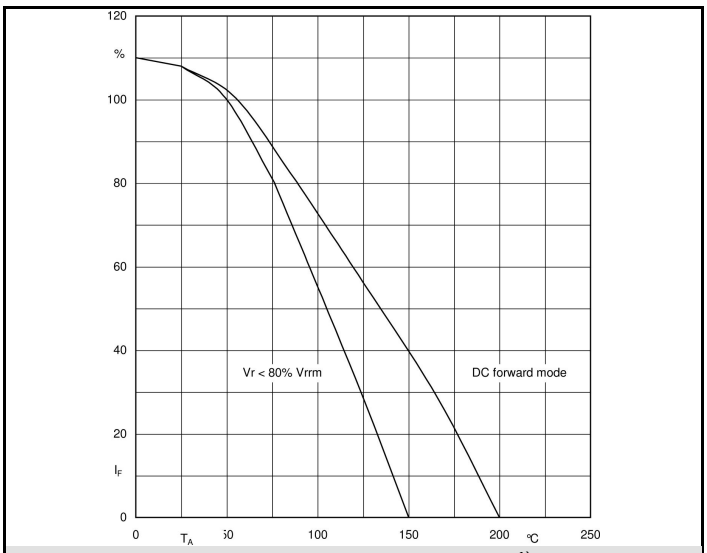


Fig. 2 Rated forward current vs. ambient temperature [1)]

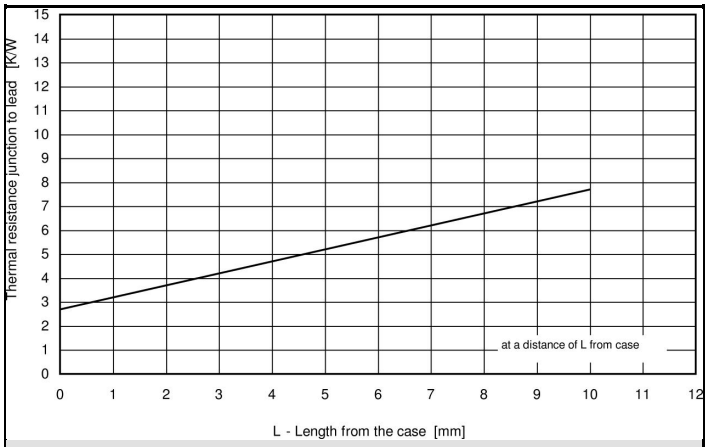


Fig. 3 Thermal resistance versus distance from case

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