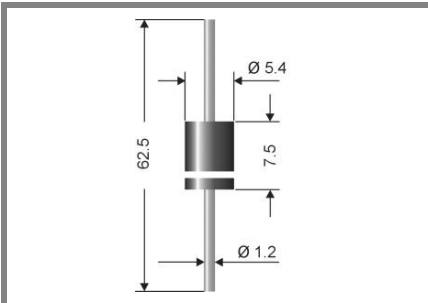


# SB 1520S ... SB 15100S



## Axial lead diode

## Schottky barrier rectifiers diodes

### SB 1520S ... SB 15100S

**Forward Current: 15 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.: 1,4 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 1250 pieces per ammo

1) Valid, if leads are kept at ambient temperature at a distance of 6 mm from case

2)  $I_F = 5 \text{ A}$ ,  $T_J = 25 \text{ °C}$

3)  $T_A = 25 \text{ °C}$

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

5) Max. junction temperature  $T_J \leq 200 \text{ °C}$  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 $V_F^{2)}$
SB 1520S	20	20	-	0,44
SB 1530S	30	30	-	0,44
SB 1540S	40	40	-	0,44
SB 1545S	45	45	-	0,47
SB 1550S	50	50	-	0,6
SB 1560S	60	60	-	0,6
SB 1590S	90	90	-	0,74
SB 15100S	100	100	-	0,74

Absolute Maximum Ratings $T_A = 25 \text{ °C}$ , unless otherwise specified			
Symbol	Conditions	Values	Units
$I_{FAV}$	Max. averaged fwd. current, R-load, $T_A = 50 \text{ °C}^1)$	15	A
$I_{FRM}$	Repetitive peak forward current $f > 15 \text{ Hz}^1)$	60	A
$I_{FSM}$	Peak forward surge current 50 Hz half sinus-wave $^3)$	320	A
$i^2t$	Rating for fusing, $t < 10 \text{ ms}^3)$	510	A <sup>2</sup> 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 ( $T_J \leq 200 \text{ °C}$ in bypass mode $^5)$ )	°C
$T_s$	Storage temperature	- 50 ... + 175	°C

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

