



## Axial lead diode

## Schottky barrier rectifiers diodes

### SB 520...SB 5100

**Forward Current: 5 A**

**Reverse Voltage: 20 to 100 V**

### Features

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

### Mechanical Data

- Plastic case DO-201
- Weight approx.: 1 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 1700 pieces per ammo

1) Valid, if leads are kept at ambient temperature at a distance of 10 mm from case

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

3)  $T_A = 25 \text{ °C}$

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 520	20	20	-	0,55
SB 530	30	30	-	0,55
SB 540	40	40	-	0,55
SB 550	50	50	-	0,67
SB 560	60	60	-	0,67
SB 590	90	90	-	0,79
SB 5100	100	100	-	0,79

### Absolute Maximum Ratings

$T_c = 25 \text{ °C}$ , unless otherwise specified

Symbol	Conditions	Values	Units
$I_{FAV}$	Max. averaged fwd. current, R-load, $T_A = 50 \text{ °C}^1)$	5	A
$I_{FRM}$	Repetitive peak forward current $f > 15 \text{ Hz}^1)$	20	A
$I_{FSM}$	Peak forward surge current 50 Hz half sinus-wave $^3)$	150	A
$i^2t$	Rating for fusing, $t < 10 \text{ ms}^3)$	310	A <sup>2</sup> s
$R_{thA}$	Max. thermal resistance junction to ambient $^1)$	25	K/W
$R_{thT}$	Max. thermal resistance junction to terminals $^1)$	8	K/W
$T_j$	Operating junction temperature	-50...+150	°C
$T_s$	Storage temperature	-50...+175	°C

### Characteristics

$T_c = 25 \text{ °C}$ , unless otherwise specified

Symbol	Conditions	Values	Units
$I_R$	Maximum leakage current, $T_j = 25 \text{ °C}$ ; $V_R = V_{RRM}$	SB520...560 $I_R < 0,50$	mA
	$T_j = \text{°C}$ ; $V_R = V_{RRM}$	SB590...5100 $I_R < 0,60$	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



