



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

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

Symbol	Conditions	Values	Units
I_{FAV}	Max. averaged fwd. current, R-load, $T_A = 50\text{ °C}$ ¹⁾	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 ² s
R_{thA}	Max. thermal resistance junction to ambient ¹⁾	25	K/W
R_{thL}	Max. thermal resistance junction to terminals ⁴⁾	8	K/W
T_J	Operating junction temperature	-50...+150	°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, $T_j = 25\text{ °C}$; $V_R = V_{RRM}$	SB520-560 <0,50	mA
	$T_j = \text{°C}$; $V_R = V_{RRM}$	SB590-5100 <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



