SB170 - SB1100

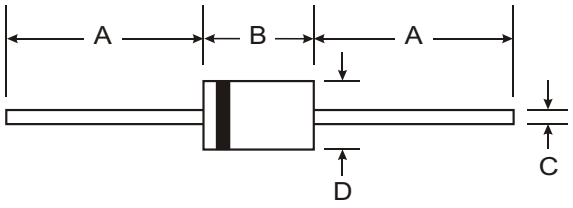
1.0A HIGH VOLTAGE SCHOTTKY BARRIER RECTIFIER

SPICE MODELS: SB170 SB180 SB190 SB1100

NEW PRODUCT

Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 25A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- High Temperature Soldering: 260°C/10 Second at Terminal
- Plastic Material: UL Flammability Classification Rating 94V-0



Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads - Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.3 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

DO-41		
Dim	**Min**	**Max**
A	25.4	—
B	4.1	5.2
C	0.71	0.86
D	2.0	2.7
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	SB170	SB180	SB190	SB1100	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	70	80	90	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	49	56	63	70	V
Average Rectified Output Current @ T_T = 85°C	I_O	1.0				A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	25				A
Forward Voltage @ I_F = 1.0A @ T_A = 25°C	V_{FM}	0.80				V
Peak Reverse Current @ T_A = 25°C at Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	0.5 10				mA
Typical Junction Capacitance (Note 2)	C_j	80				pF
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	15				K/W
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	50				K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +125				°C

Notes: 1. Valid provided that leads are kept at ambient temperature at a distance of 9.5mm from the case.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

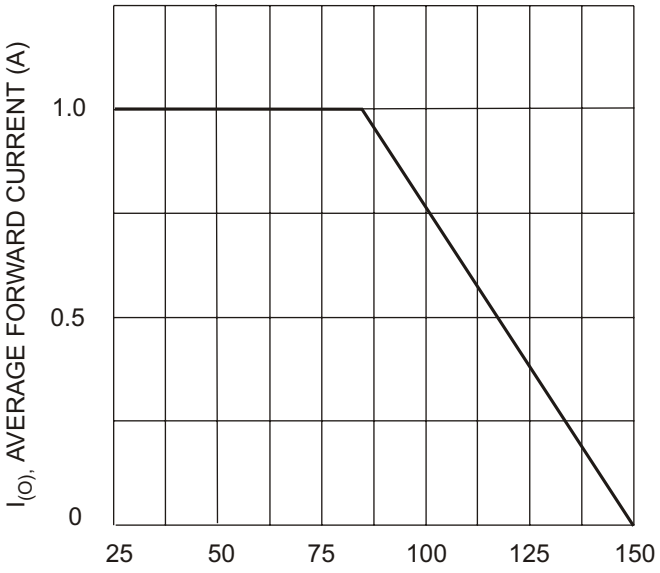


Fig. 1 Forward Current Derating Curve

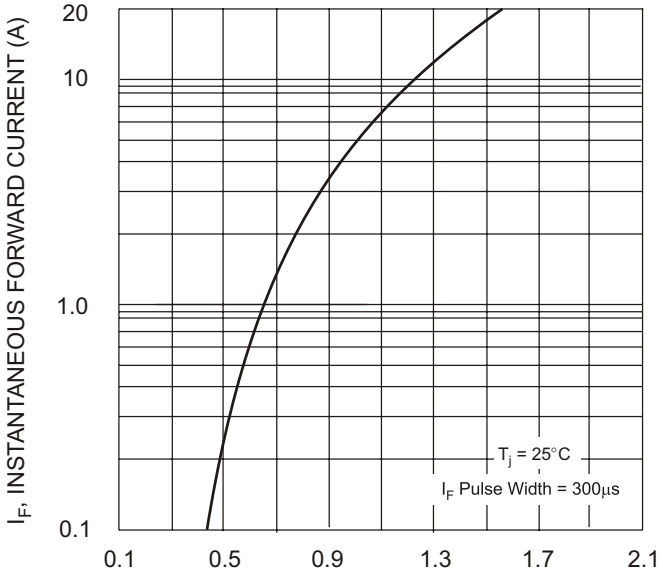


Fig. 2 Typical Forward Characteristics

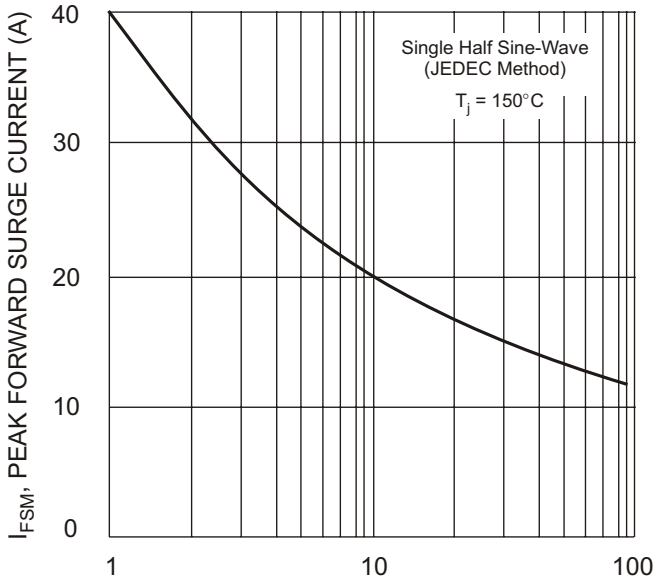


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

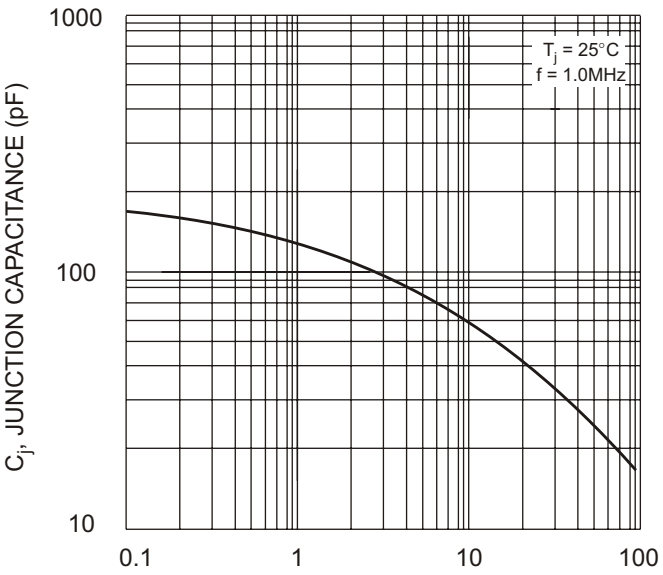


Fig. 4 Typical Junction Capacitance