



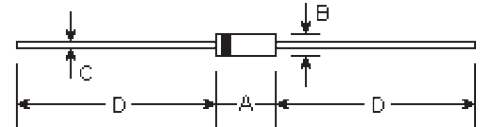
SB120 THRU SB1B0

SCHOTTKY BARRIER RECTIFIER
Reverse Voltage - 20 to 100 Volts
Forward Current - 1.0 Ampere

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
Flame retardant epoxy molding compound
- 1.0 ampere operation at $T_L=90^{\circ}\text{C}$ with no thermal runaway
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications

DO-41



Mechanical Data

- **Case:** Molded plastic, DO-41
- **Terminals:** Axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** Color band denotes cathode
- **Mounting Position:** Any
- **Weight:** 0.012 ounce, 0.33 gram

DIM	DIMENSIONS				Note
	inches		mm		
	Min.	Max.	Min.	Max.	
A	0.165	0.205	4.2	5.2	
B	0.079	0.106	2.0	2.7	ϕ
C	0.028	0.034	0.71	0.86	ϕ
D	1.000	-	25.40	-	

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.
 Single phase, half wave, 60Hz, resistive or inductive load.

	Symbols	SB120	SB130	SB140	SB150	SB160	SB170	SB180	SB190	SB1B0	Units
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	70	80	90	100	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	49	56	63	70	Volts
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	70	80	90	100	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_L=90^{\circ}\text{C}$	$I_{(AV)}$	1.0									Amp
Peak forward surge current, I_{FSM} (surge): 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	I_{FSM}	30.0									Amps
Maximum forward voltage at 1.0A	V_F	0.55		0.70			0.85			Volts	
Maximum full load reverse current, full cycle average at $T_A=75^{\circ}\text{C}$	$I_{R(AV)}$	30.0									mA
Maximum DC reverse current at rated DC blocking voltage $T_A=25^{\circ}\text{C}$ $T_A=100^{\circ}\text{C}$	I_R	1.0				10.0					mA
Typical junction capacitance (Note 1)	C_J	110.0									pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	80.0									$^{\circ}\text{C/W}$
Operating and storage temperature range	T_J, T_{STG}	-50 to +125									$^{\circ}\text{C}$

Notes:

- (1) Measured at 1.0MHz and applied reverse voltage of 4.0 VDC
- (2) Thermal resistance junction to ambient

RATINGS AND CHARACTERISTIC CURVES

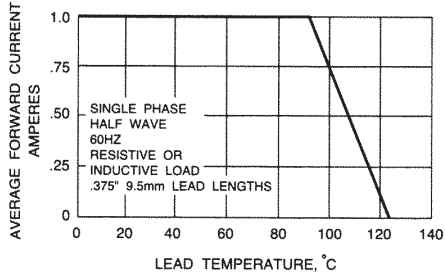


Fig. 1 - FORWARD CURRENT DERATING CURVE

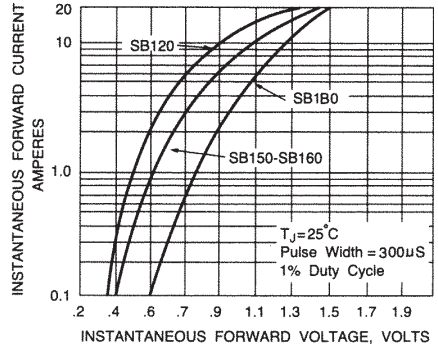


Fig. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

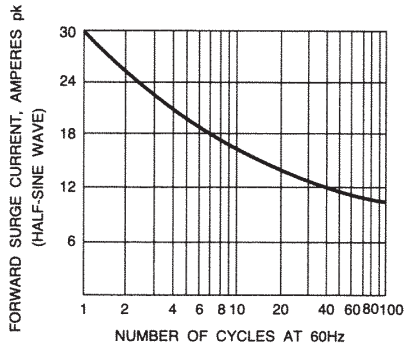


Fig. 3 - MAXIMUM NON-REPETITIVE SURGE CURRENT

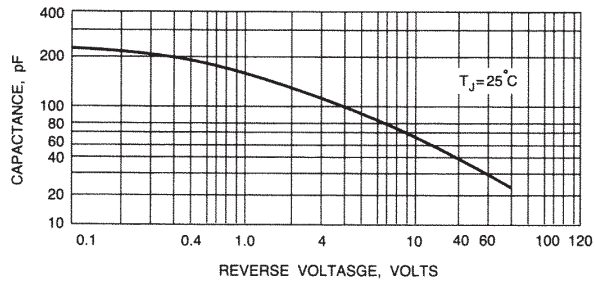


Fig. 4 - TYPICAL JUNCTION CAPACITANCE