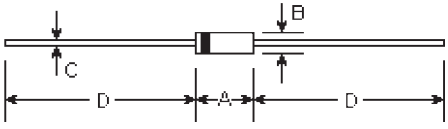
SB120S THRU SB1B0S

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

Features

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

A-405



Mechanical Data

- **Case:** Molded plastic, A-405
- **Terminals:** Axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** Color band denotes cathode
- **Mounting Position:** Any
- **Weight:** 0.008 ounce, 0.22 gram

DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.165	0.205	4.2	5.2	
B	0.079	0.106	2.0	2.7	ϕ
C	0.020	0.024	0.5	0.6	ϕ
D	1.000	-	25.40	-	

Maximum Ratings and Electrical Characteristics

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

	Symbols	SB 120S	SB 130S	SB 140S	SB 150S	SB 160S	SB 180S	SB 1B0S	Units
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	Volts
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at T_L=90℃	$I_{(AV)}$	1.0							Amp
Peak forward surge current, I_{FM} (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℃	$I_{R(AV)}$	30.0							mA
Maximum DC reverse current at rated DC blocking voltage T_A=25℃ / T_A=100℃	I_R	1.0 10.0							mA
Typical junction capacitance (Note 1)	C_J	110.0							ρ F
Typical thermal resistance (Note 2)	$R_{\Theta JA}$	80.0							℃/W
Operating and storage temperature range	T_J, T_{STG}	-50 to +125							℃

Notes:

(1) Measured at 1.0MHz and applied reverse voltage of 4.0 VDC

(2) Thermal resistance junction to ambient

RATINGS AND CHARACTERISTIC CURVES

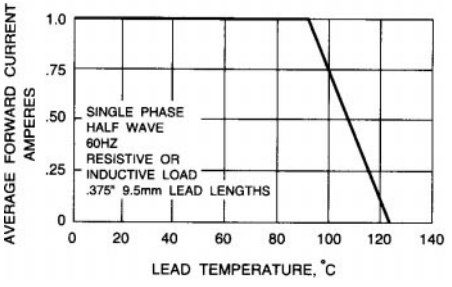


Fig. 1 – FORWARD CURRENT DERATING CURVE

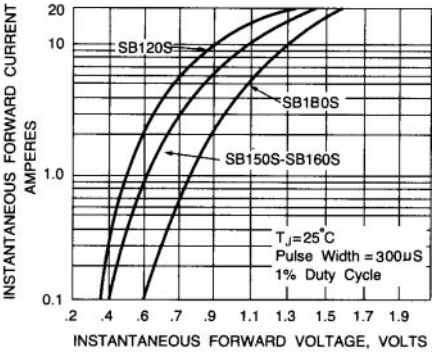


Fig. 2 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

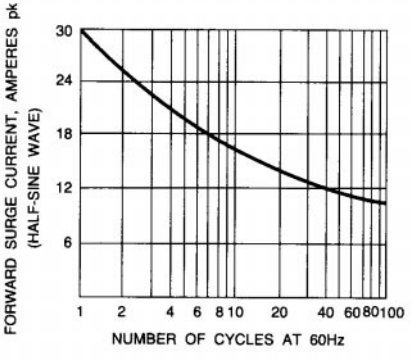


Fig. 3 – MAXIMUM NON-REPETITIVE SURGE CURRENT

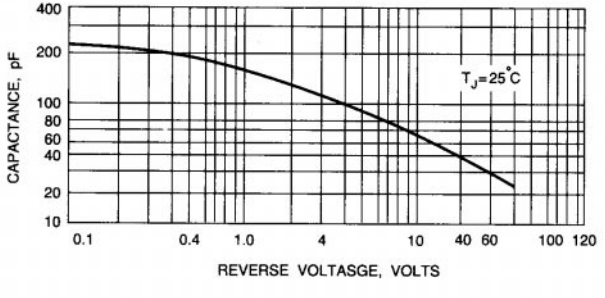


Fig. 4 – TYPICAL JUNCTION CAPACITANCE