

# SB120S THRU SB1100S

## 1 AMPERE SCHOTTKY BARRIER RECTIFIERS VOLTAGE - 20 to 100 Volts CURRENT - 1.0 Ampere

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound
- 1 ampere operation at  $T_A=75\text{ }^\circ\text{C}$  with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications

### MECHANICAL DATA

Case: Molded plastic, A-405

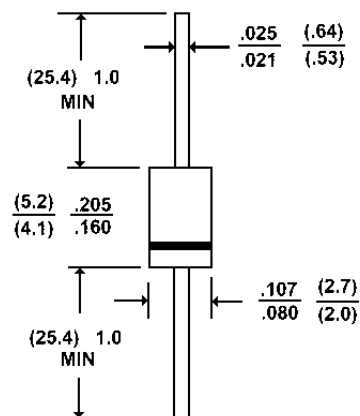
Terminals: Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Color band denotes cathode

Mounting Position: Any

Weight: 0.008 ounce, 0.22 gram

### A-405



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25  $^\circ\text{C}$  ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

	SB120S	SB130S	SB140S	SB150S	SB168S	SB180S	SB1100S	UNITS
Maximum Recurrent Peak Reverse Voltage	20	30	40	50	60	80	100	V
Maximum RMS Voltage	14	21	26	35	42	56	80	V
Maximum DC Blocking Voltage	20	30	40	50	60	80	100	V
Maximum Forward Voltage at 1.0A	0.50		0.70		0.85			V
Maximum Average Forward Rectified Current .375" Lead Length at $T_A=75\text{ }^\circ\text{C}$	1.0							A
Peak Forward Surge Current $I_{FM}$ (surge) 8.3msec. single half sine-wave superimposed on rated load (JEDEC method)	30							A
Maximum Full Load Reverse Current, Full Cycle Average at $T_A=75\text{ }^\circ\text{C}$	30							mA
Maximum Reverse Current $T_A=25\text{ }^\circ\text{C}$ at Rated Reverse Voltage $T_A=100\text{ }^\circ\text{C}$	0.5 10.0							mA
Typical Junction capacitance (Note 1)	110							pF
Typical Thermal Resistance $\theta_{KJA}$ (Note 2)	80							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	-50 TO +125							$^\circ\text{C}$

### NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC

2. Thermal Resistance Junction to Ambient

\* JECED Registered Value

# RATING AND CHARACTERISTIC CURVES

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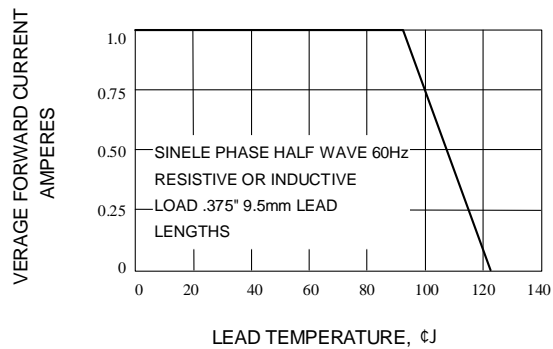


Fig. 1- FORWARD CURRENT DERATING CURVEE

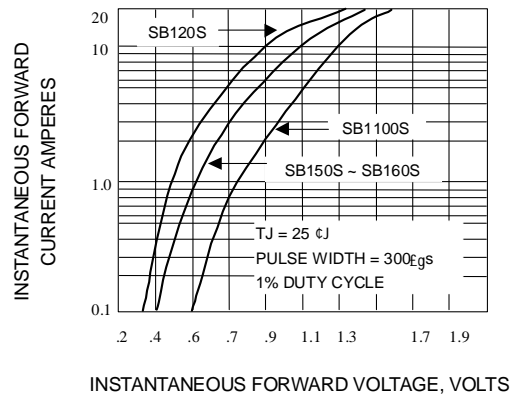


Fig. 2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

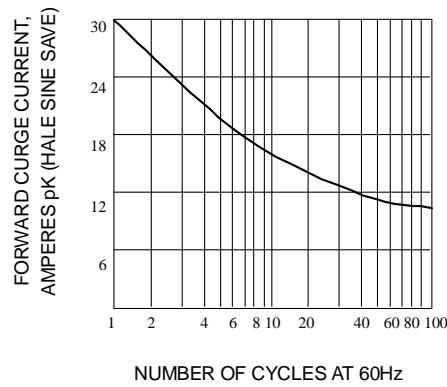


Fig. 3- MAXIMUM NON-REPETITIVE SURGE CURRENT

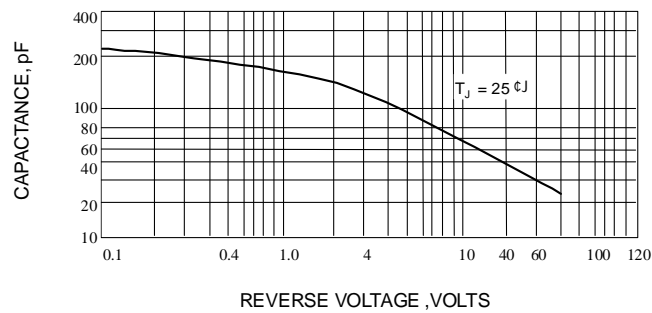


Fig. 4- TYPICAL JUNCTION CAPACITANCE