

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

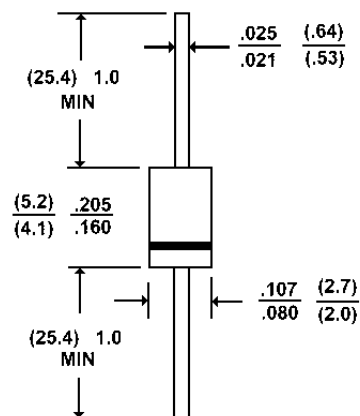
Terminals: Axial leads, solderable per MIL-STD-202, Method 208

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 $25\text{ }^{\circ}\text{C}$ 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 θ_{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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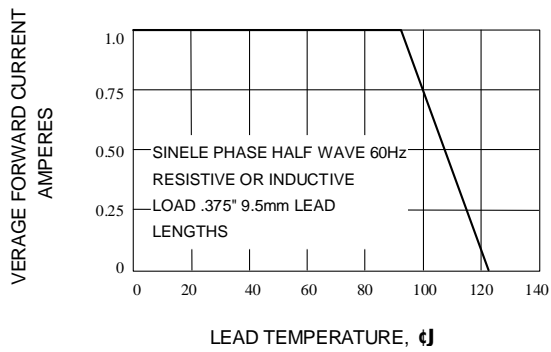


Fig. 1-FORWARD CURRENT DERATING CURVEE

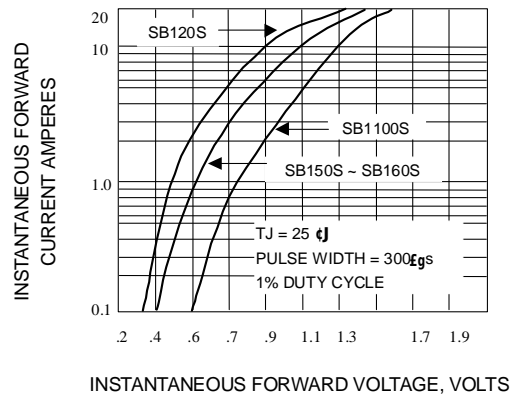


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

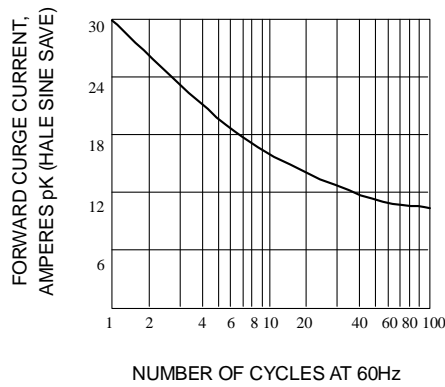


Fig. 3-MAXIMUM NON-REPETITIVE SURGE CURRENT

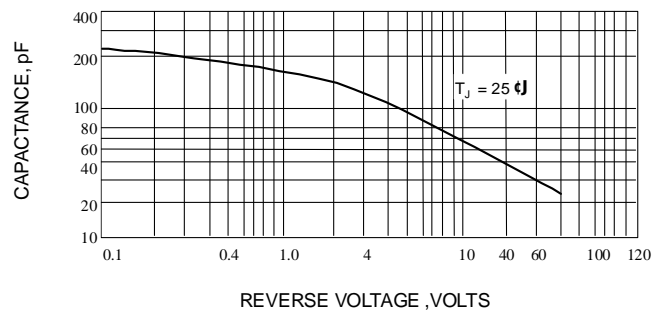


Fig. 4-TYPICAL JUNCTION CAPACITANCE