



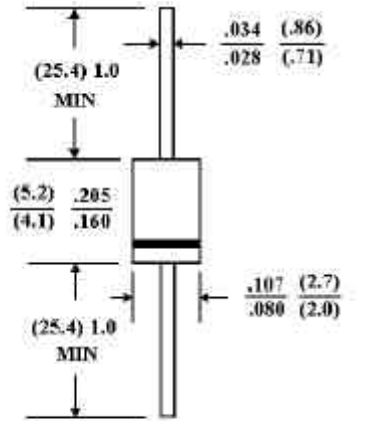
# SB120 THRU SB1100

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

DO-41

## FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound
- 1 ampere operation at  $T_A=75^\circ\text{C}$  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, DO-41
- Terminals: Axial leads, solderable per MIL-STD-202, Method 208
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.012 ounce, 0.34 gram

## 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.

|  | SB120       | SB130 | SB140 | SB150 | SB160 | SB180 | SB1100 | 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 $T_A=75^\circ\text{C}$                                | 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 $T_A=75^\circ\text{C}$                                      | 30          |       |       |       |       |       |        | mA                        |
| Maximum Reverse Current $T_A=25^\circ\text{C}$ at Rated Reverse Voltage $T_A=100^\circ\text{C}$                      | 0.5<br>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:

- Measured at 1 MHz and applied reverse voltage of 4.0 VDC
- Thermal Resistance Junction to Ambient

RATING AND CHARACTERISTIC CURVES  
 SB120 THRU SB1100

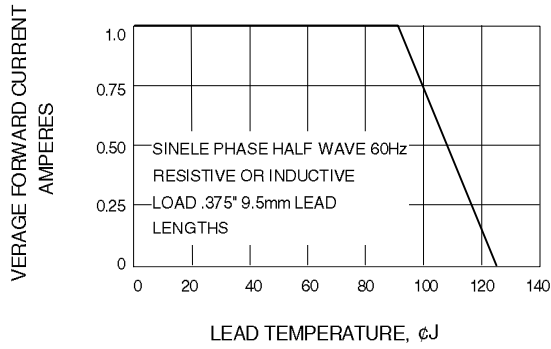


Fig. 1-FORWARD CURRENT DERATING CURVEE

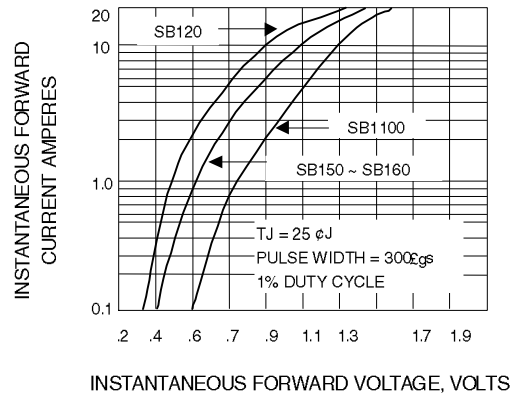


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

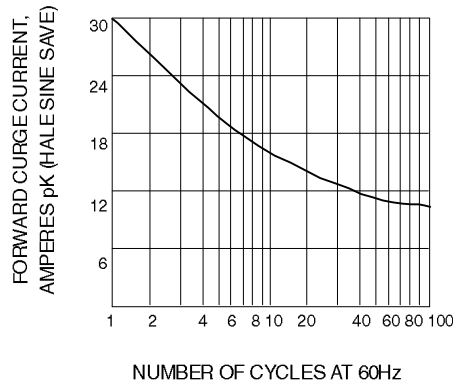


Fig. 3-MAXIMUM NON-REPETITIVE SURGE CURRENT

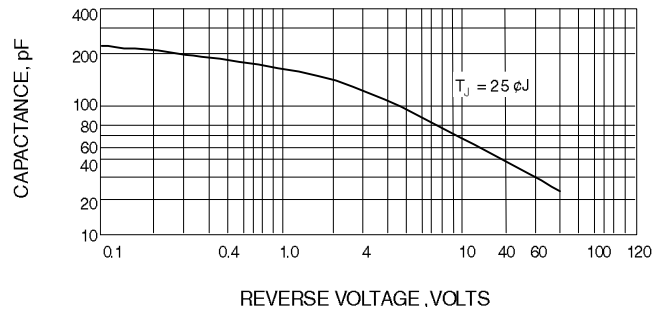


Fig. 4-TYPICAL JUNCTION CAPACITANCE