

## 3.0Amp Schottky Barrier Rectifiers

## SB320~SB3200

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375"(9.5mm) lead length,  
5 lbs. (2.3kg) tension

### Mechanical Data

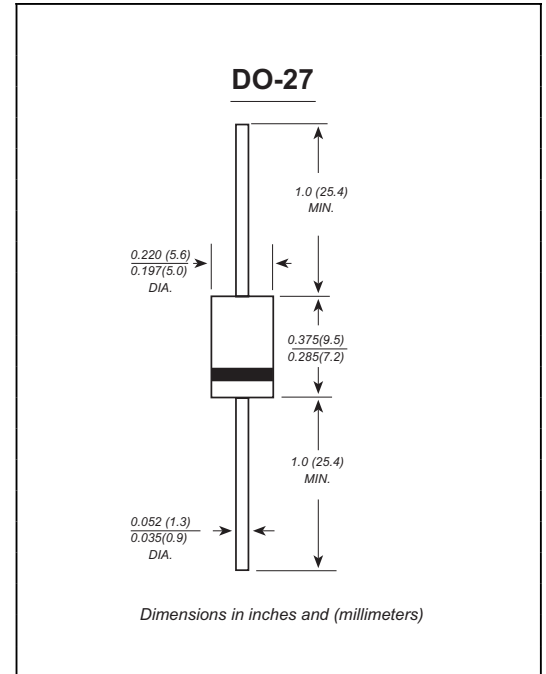
**Case:** JEDEC DO-27 molded plastic body

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.04 ounce, 1.10 grams



### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

|  | SYMBOLS         | SB 320      | SB 330 | SB 340 | SB 350 | SB 360 | SB 370 | SB 380      | SB 390 | SB 3100 | SB 3150 | SB 3200 | UNITS |    |
|--|-----------------|-------------|--------|--------|--------|--------|--------|-------------|--------|---------|---------|---------|-------|----|
| Maximum repetitive peak reverse voltage  | $V_{RRM}$       | 20          | 30     | 40     | 50     | 60     | 70     | 80          | 90     | 100     | 150     | 200     | VOLTS |    |
| Maximum RMS voltage  | $V_{RMS}$       | 14          | 21     | 28     | 35     | 42     | 49     | 56          | 63     | 70      | 105     | 140     | VOLTS |    |
| Maximum DC blocking voltage  | $V_{DC}$        | 20          | 30     | 40     | 50     | 60     | 70     | 80          | 90     | 100     | 150     | 200     | VOLTS |    |
| Maximum average forward rectified current<br>0.375"(9.5mm) lead length(see fig.1)                      | $I_{(AV)}$      | 3.0         |        |        |        |        |        |             |        |         |         |         | Amps  |    |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method) | $I_{FSM}$       | 80.0        |        |        |        |        |        |             |        |         |         |         | Amps  |    |
| Maximum instantaneous forward voltage at 3.0A  | $V_F$           | 0.55        |        | 0.70   |        | 0.85   |        |             | 0.95   |         |         | Volts   |       |    |
| Maximum DC reverse current $T_A=25^\circ C$<br>at rated DC blocking voltage $T_A=100^\circ C$          | $I_R$           | 0.5         |        |        |        |        |        | 0.2         |        |         | mA      |         |       |    |
|  |                 | 20.0        |        |        | 10.0   |        |        | 2.0         |        |         |         |         |       |    |
| Typical junction capacitance (NOTE 1)  | $C_J$           | 250         |        |        | 160    |        |        |             |        |         |         |         |       | pF |
| Typical thermal resistance (NOTE 2)  | $R_{\theta JA}$ | 40.0        |        |        |        |        |        |             |        |         |         |         | °C/W  |    |
| Operating junction temperature range   | $T_J$           | -65 to +125 |        |        |        |        |        | -65 to +150 |        |         |         |         |       | °C |
| Storage temperature range  | $T_{STG}$       | -65 to +150 |        |        |        |        |        |             |        |         |         |         | °C    |    |

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to ambient at 0.375"(9.5mm) lead length, P.C.B. mounted

# Ratings And Characteristic Curves

## SB320 THRU SB3200

FIG. 1- FORWARD CURRENT DERATING CURVE

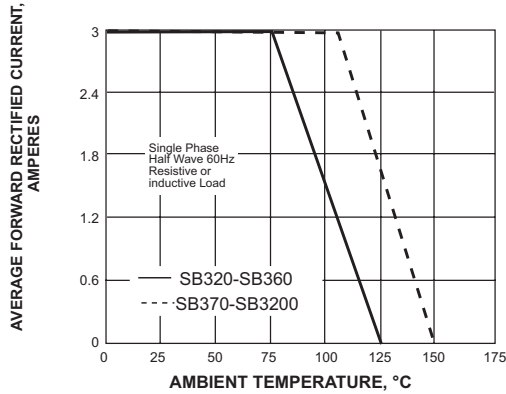


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

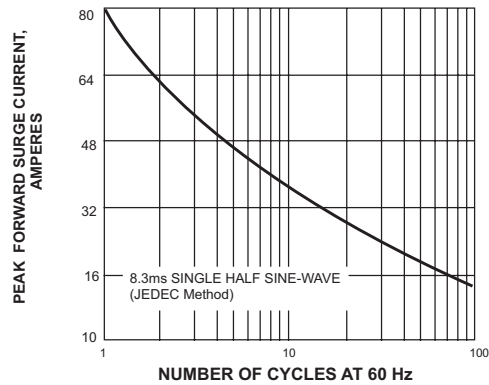


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

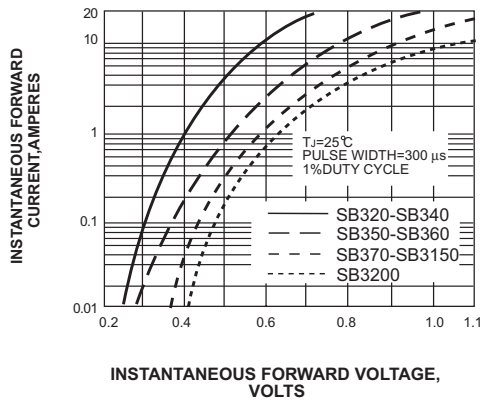


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

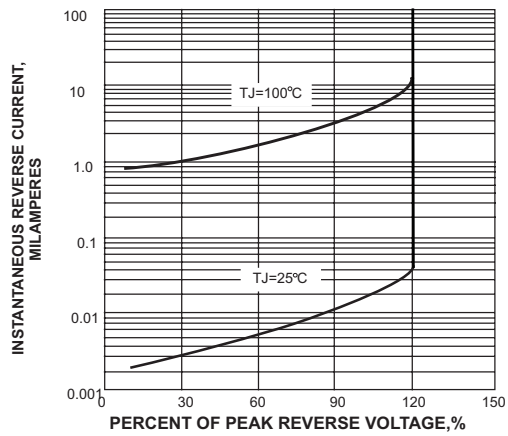


FIG. 5-TYPICAL JUNCTION CAPACITANCE

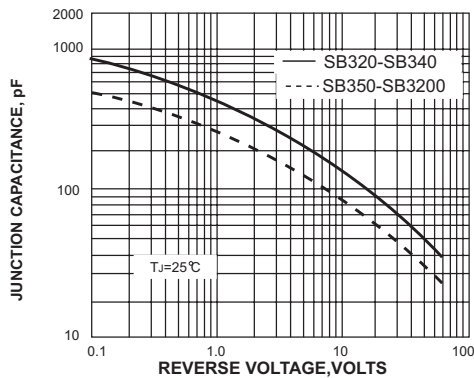


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

