

2.0Amp Schottky Barrier Rectifiers

SB220~SB2200

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

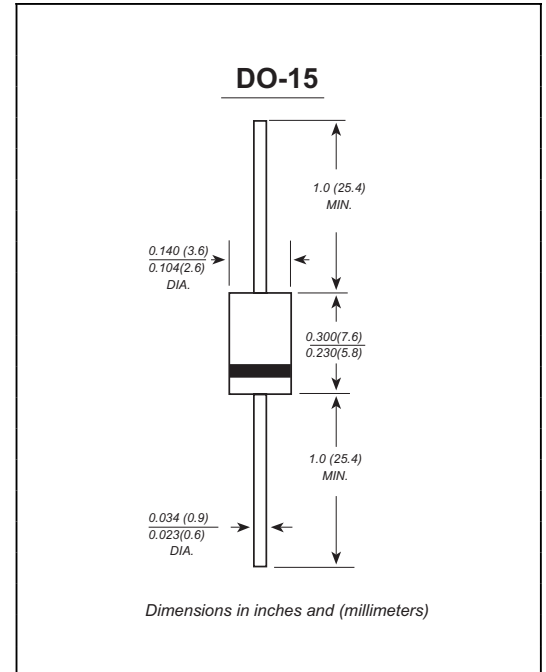
Case: JEDEC DO-15 molded plastic body

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

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.014 ounce, 0.40 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 220 | SB 230 | SB 240 | SB 250 | SB 260 | SB 270 | SB 280 | SB 290 | SB 2100 | SB 2150 | SB 2200 | 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 | 100 | 200 | VOLTS | |
| Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1) | $I_{(AV)}$ | 2.0 | | | | | | | | | | | Amp | |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 60.0 | | | | | | | | | | | Amps | |
| Maximum instantaneous forward voltage at 2.0A | V_F | 0.55 | | 0.70 | | 0.85 | | | 0.95 | | | Volts | | |
| Maximum DC reverse current at rated DC blocking voltage $T_A=25^{\circ}C$ $T_A=100^{\circ}C$ | I_R | 0.5 | | | | | 10.0 | | | 5.0 | | 0.2 2.0 | mA | |
| Typical junction capacitance (NOTE 1) | C_J | 220 | | | 80 | | | | | | | | | pF |
| Typical thermal resistance (NOTE 2) | $R_{\theta JA}$ | 50.0 | | | | | | | | | | | $^{\circ}C/W$ | |
| Operating junction temperature range | T_J | -65 to +125 | | | | | -65 to +150 | | | | | | | $^{\circ}C$ |
| Storage temperature range | T_{STG} | -65 to +150 | | | | | | | | | | | $^{\circ}C$ | |

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

SB220 THRU SB2200

FIG. 1- FORWARD CURRENT DERATING CURVE

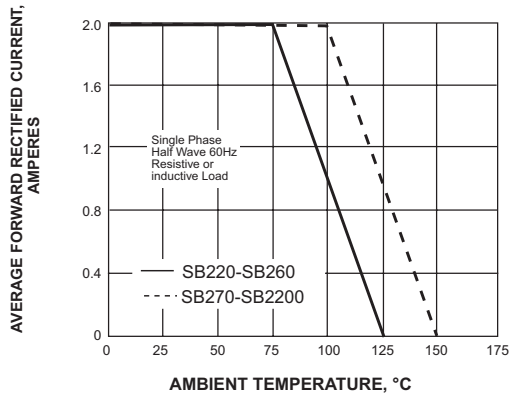


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

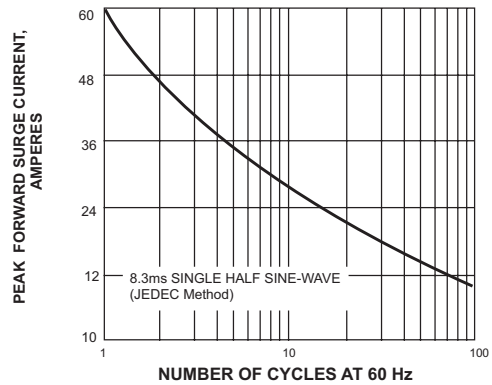


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

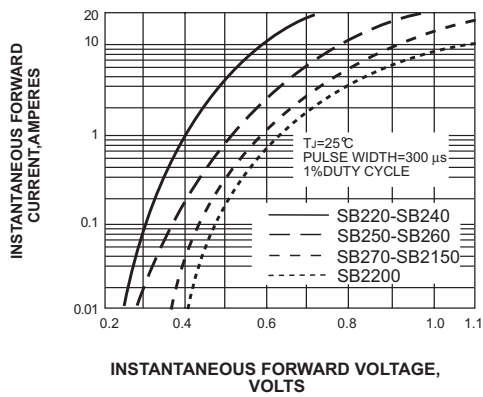


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

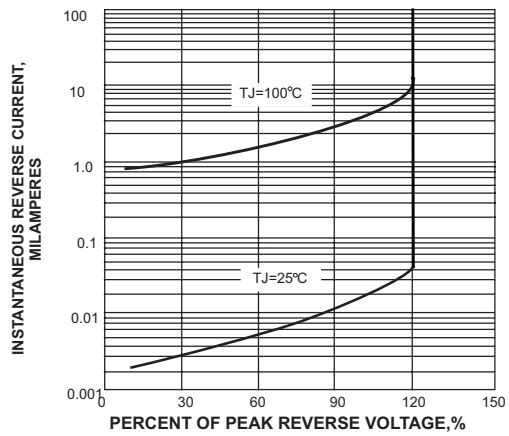


FIG. 5-TYPICAL JUNCTION CAPACITANCE

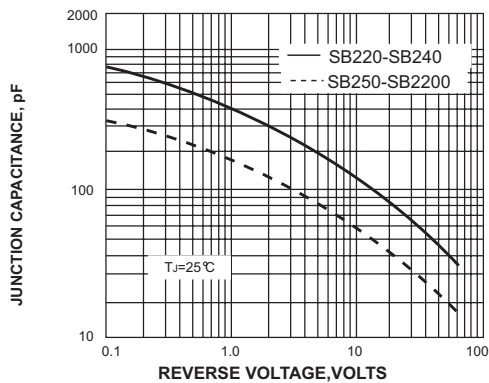


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

