

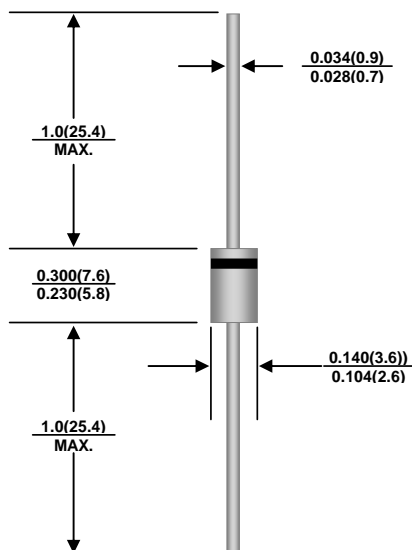


SB220 THRU SB2200

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 200 Volts Forward Current - 2.0 Ampere

DO-15



Dimensions in inches and (millimeters)

FEATURES

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

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%.

| PARAMETER | SYMBOLS | SB 220 | SB 230 | SB 240 | SB 250 | SB 260 | SB 270 | SB 280 | SB 290 | SB2100 | SB2150 | SB2200 | 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 _R | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 150 | 200 | Volts |
| Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1) | I _{F(AV)} | 2.0 | | | | | | | | | | | Amp |
| Peak forward surge current at 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 60.0 | | | | | | | | | | | Amps |
| Maximum Forward Voltage at IF=2.0A | V _F | 0.50 | | 0.70 | | 0.85 | | 0.92 | | | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage | I _R | 0.5 | | | | | | | | | | | mA |
| | | 10.0 | | | | | 5.0 | | | | | | |
| Typical Junction Capacitance (NOTE 1) | C _J | 220 | | 150 | | | | | | | | | pF |
| Typical Thermal Resistance (NOTE 2) | R _{θJA} | 50 | | | | | | | | | | | ℃/W |
| Operating Junction Temperature Range | T _J | -65 to +125 | | | | | -65 to +150 | | | | | | ℃ |
| Storage Temperature Range | T _{STG} | -65 ~ +150 | | | | | | | | | | | ℃ |

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Mounted with minimum recommended padsize , PCBoard FR4.
3. $T_J=25^\circ C$ unless otherwise specified.



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RATINGS AND CHARACTERISTIC CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

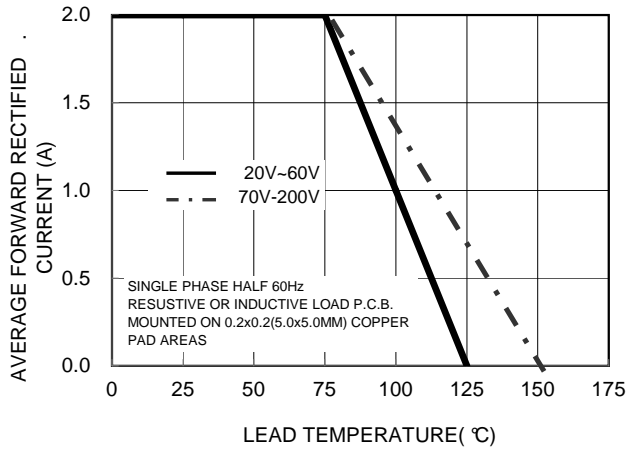


FIG. 2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT

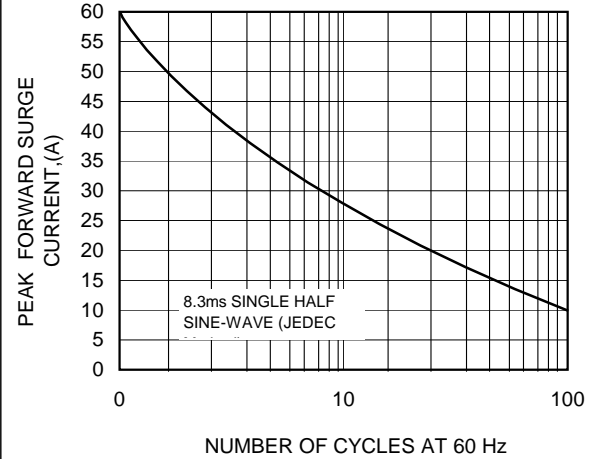


FIG. 3-TYPICAL INSTANTANEOUS FORWARD
CHARACTERISTICS

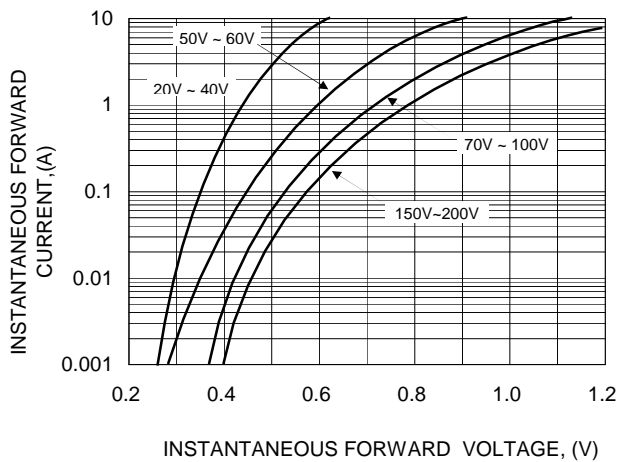


FIG. 4-TYPICAL INSTANTANEOUS REVERSE
CHARACTERISTICS

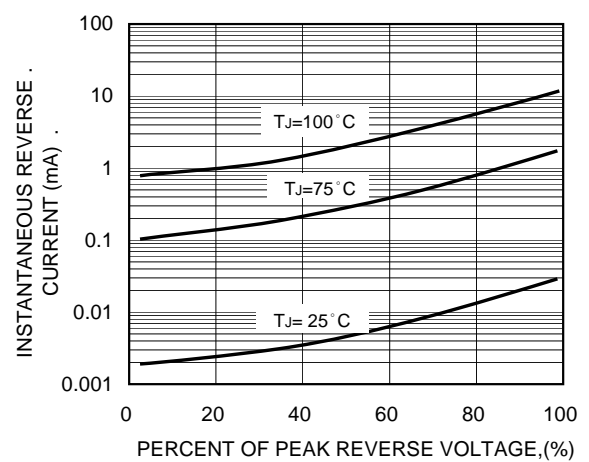


FIG. 5-TYPICAL JUNCTION CAPACITANCE

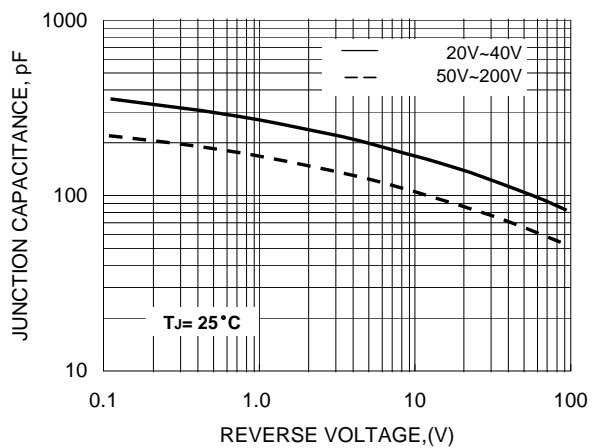


FIG. 6-TYPICAL TRANSIENT THERMAL
IMPEDANCE

