

## SB220 THRU SB2100

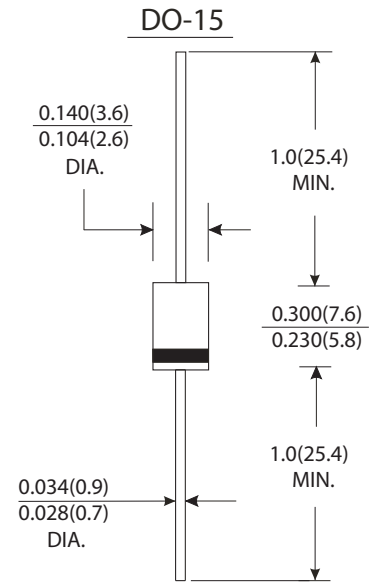
CURRENT 2.0Amperes  
VOLTAGE 20 to 100 Volts

### Features

- Plastic Package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, Low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed : 250°C/10 seconds at terminals, 0.375" (9.5mm) lead length, 5lbs. (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, 0.39 gram



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified, single phase, half wave, resistive or inductive load. For capacitive load, derate by 20%)

	Symbols	SB220	SB230	SB240	SB250	SB260	SB280	SB2100	Units
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	Volts
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length at T <sub>L</sub> =75°C	I <sub>(AV)</sub>	2.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	50.0							Amps
Maximum instantaneous forward voltage at 1.0A (Note 1)	V <sub>F</sub>	0.55			0.70		0.85		Volts
Maximum instantaneous reverse current at rated DC blocking voltage (Note1)	T <sub>A</sub> =25°C	1.0							mA
	T <sub>A</sub> =100°C	10							
Typical junction capacitance (Note 3)	C <sub>J</sub>	170							pF
Typical thermal resistance (Note 2)	R <sub>θ JA</sub>	35.0							°C/W
Operating junction temperature range	T <sub>J</sub>	-65 to +125							°C
Storage temperature range	T <sub>STG</sub>	-65 to +150							°C

#### Notes:

- (1) Pulse test: 300 μs pulse width, 1% duty cycle
- (2) Thermal resistance from junction to lead, and/or to ambient P.C.B. mounted with 0.375"(9.5mm) lead length with 1.5X1.5"(38X38mm) copper pads
- (3) Measured 1.0MHz and reverse voltage of 4.0 volts



# RATINGS AND CHARACTERISTIC CURVES SB220 THRU SB2100

FIG.1-FORWARD CURRENT DERATING CURVE

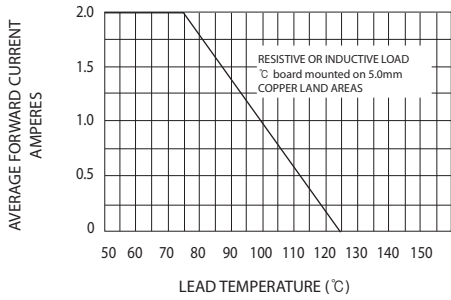


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

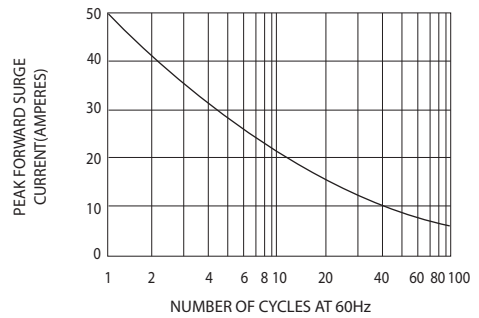


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

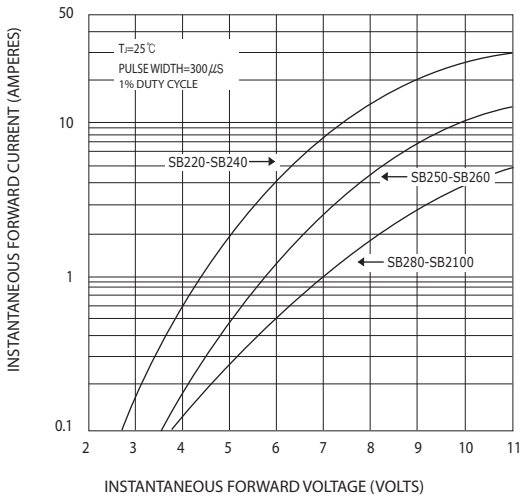


FIG.4-TYPICAL REVERSE CHARACTERISTICS

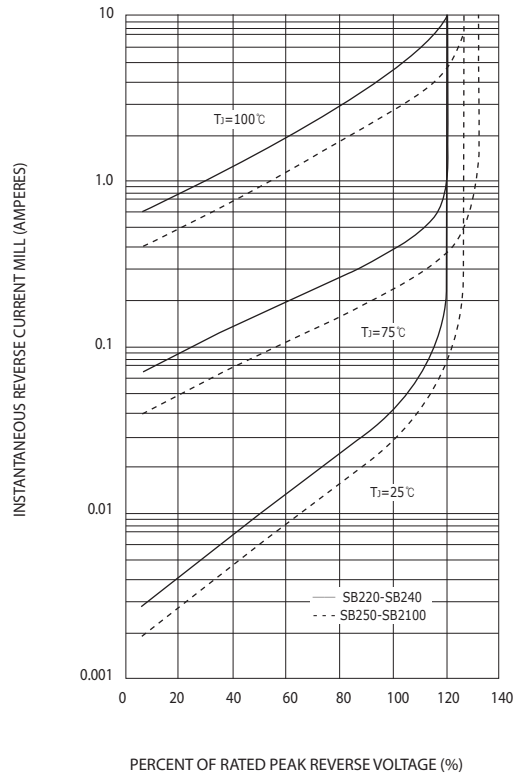


FIG.5-TYPICAL JUNCTION CAPACITANCE

