

SB12 THRU SB16

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE:20 TO 60V

CURRENT: 1.0A



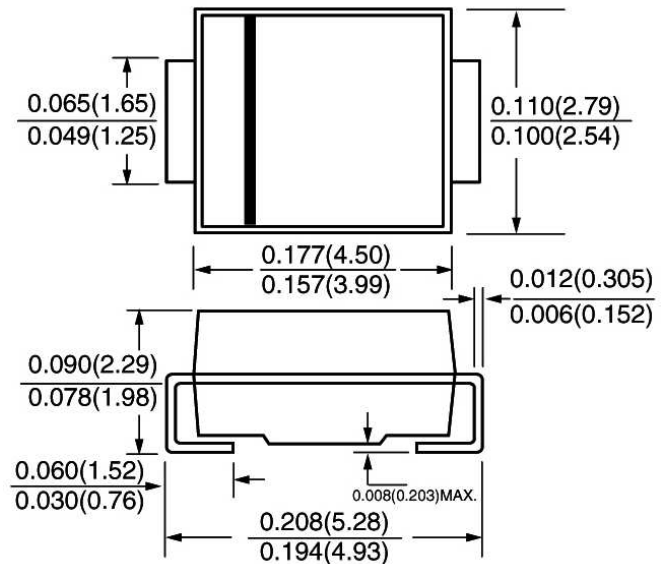
FEATURE

Plastic package has Underwriters Laboratory Flammability Classification 94V-0
 For surface mounted applications
 Low profile package
 Built-in strain relief
 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
 Guardring for overvoltage protection
 High temperature soldering guaranteed:
 250°C /10 seconds at terminals

MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic body
 Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
 Polarity: Color band denotes cathode end
 Weight: 0.002 ounce, 0.064 gram

SMA/DO--214AC



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated, for capacitive load, derate current by 20%)

	SYMBOL	SB 12	SB 13	SB 14	SB 15	SB 16	units
Maximum Recurrent Peak Reverse Voltage	V _{rrm}	20	30	40	50	60	V
Maximum RMS Voltage	V _{rms}	14	21	28	35	42	V
Maximum DC blocking Voltage	V _{dc}	20	30	40	50	60	V
Maximum Average Forward Rectified Current 3/8"lead length at T _L =110°C	I _{f(av)}	1.0					A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I _{fsm}	40.0					A
Maximum Forward Voltage at rated Forward current (Note 1)	V _f	0.50			0.75		V
Maximum DC Reverse Current Ta =25°C at rated DC blocking voltage Ta =100°C	I _r	0.5			10.0		mA
					5.0		
Typical Thermal Resistance (Note 2)	R(ja)	88.0					°C /W
Operating junction temperature range	T _J	-55 to +125			-55 to +150		°C
Storage Temperature range	T _{stg}	-55 to +150					°C

NOTE:

- (1) Pulse test: 300µs pulse width, 1% duty cycle
- (2) P.C.B. mounted with 0.2 x 0.2inches (5.0 x5.0mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES SB12 THRU SB16

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FIG. 1 - FORWARD CURRENT DERATING CURVE

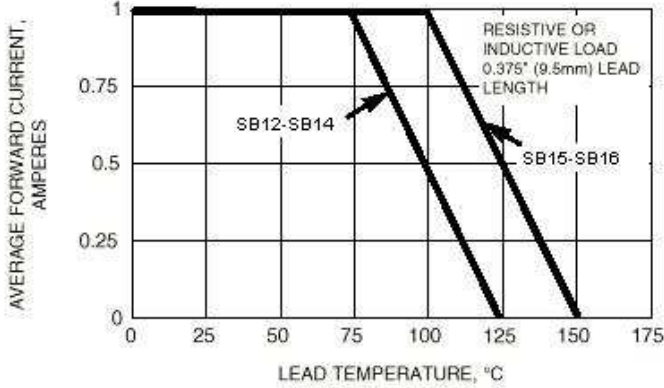


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

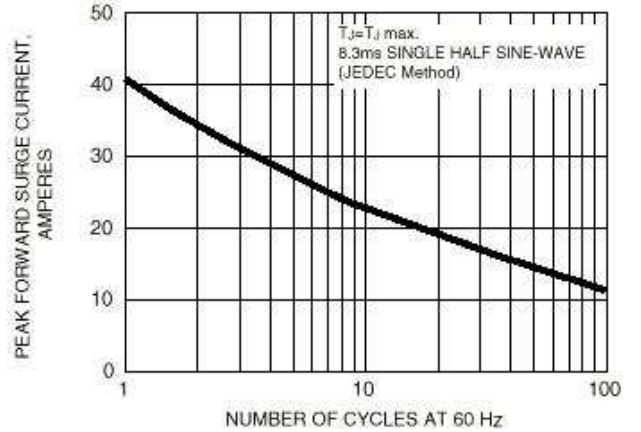


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

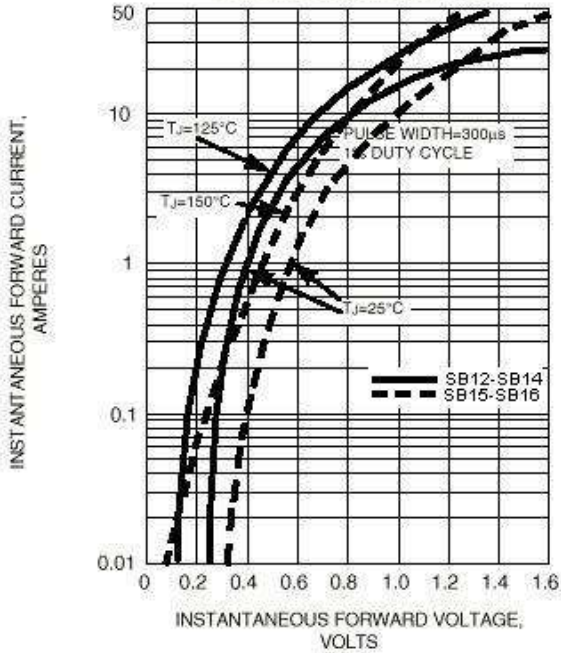


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

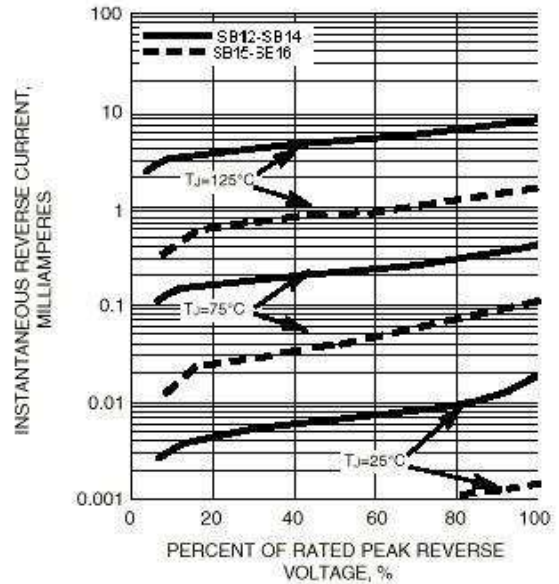


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

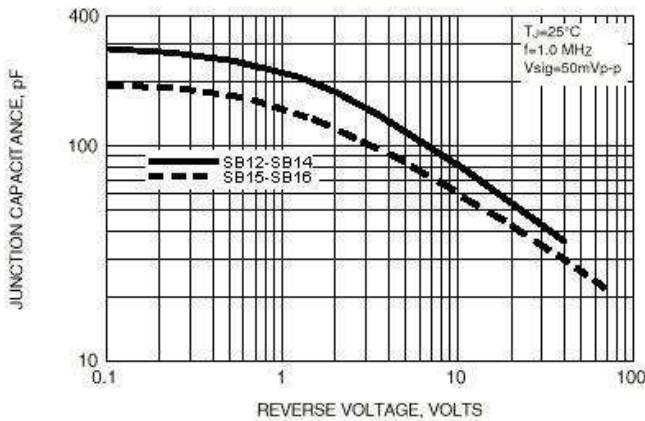


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

