

FEATURES:

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal silicon junction, majority carrier conduction
- 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
- Guard ring for overvoltage protection
- High temperature soldering guaranteed:
250° C/10 seconds at terminals

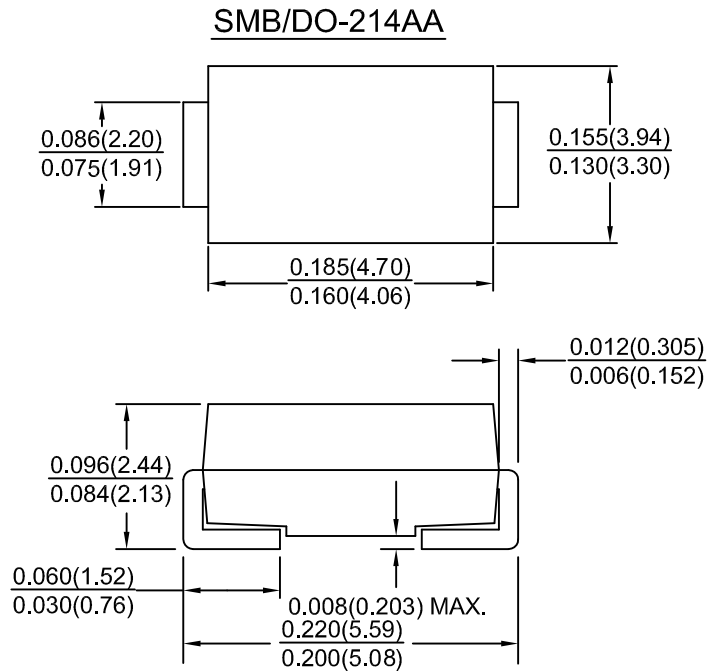
MECHANICAL DATA

Case : JEDEC DO-214AA molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750
Method 2026

Polarity : Color band on body denotes cathode end

Weight : 0.003 ounce, 0.093 grams



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temp. unless otherwise specified.

Single phase, half sine wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20 %.

Characteristic	Symbol	SB 12	SB 13	SB 14	SB 15	SB 16	SB 18	SB 19	SB 1A0	Units
	Marking	S12	S13	S14	S15	S16	S18	S19	S1A0	
Maximum recurrent peak reverse voltage	VRRM	20	30	40	50	60	80	90	100	Volts
Maximum RMS voltage	VRMS	14	21	28	35	42	56	64	70	Volts
Maximum DC blocking voltage	VDC	20	30	40	50	60	80	90	100	Volts
Maximum average forward rectified current at TL(SEE FIG.1)	I(AV)	1.0								Amps
Peak forward surge current 8.3mm single half sine-wave superimposed on rated load(JEDEC Method)	IFSM	30								Amps
Maximum instantaneous forward voltage at 1.0 A(NOTE 1)	VF	0.5	0.55		0.70		0.85			Volts
Maximum instantaneous reverse current at rated DC blocking voltage (NOTE 1) Ta=25℃ Ta=100℃	IR	0.5 20.0								mA
Typical thermal resistance(NOTE 2)	Rth-JA Rth-JL	88.0 28.0								℃/W
Operating junction temperature range	TJ	-65 to +150								℃
Storage temperature range	Tstg	-65 to +150								℃

NOTES:

(1) Pulse test: 300 μs pulse width, 1% duty cycle

(2) P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES SB12 THRU SB1A0

FIG.1 - FORWARD CURRENT DERATING CURVE

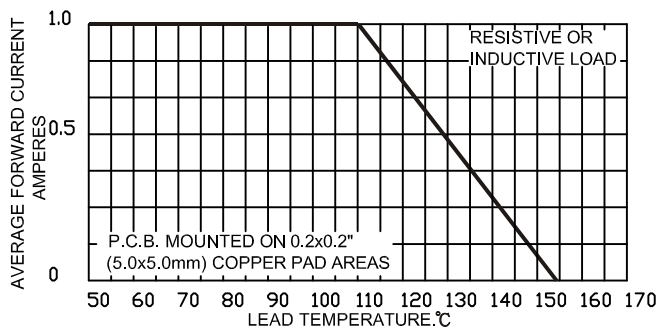


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

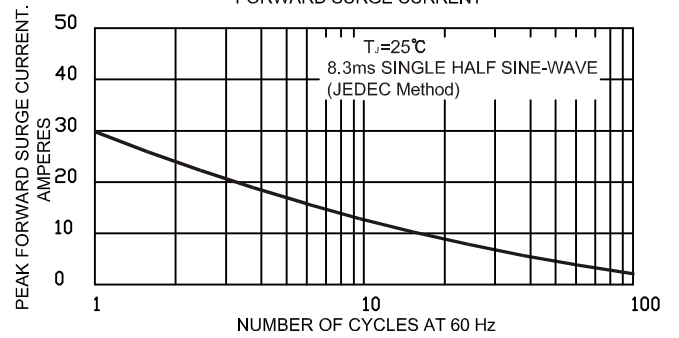


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

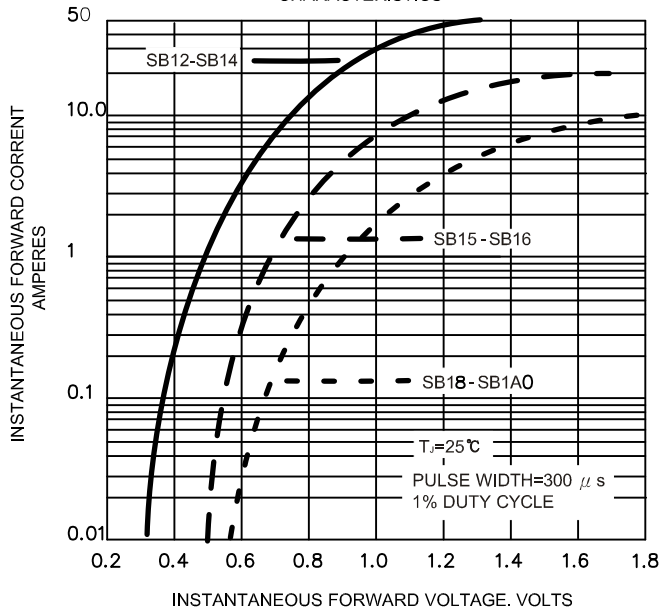


FIG.4-TYPICAL REVERSE CHARACTERISTICS

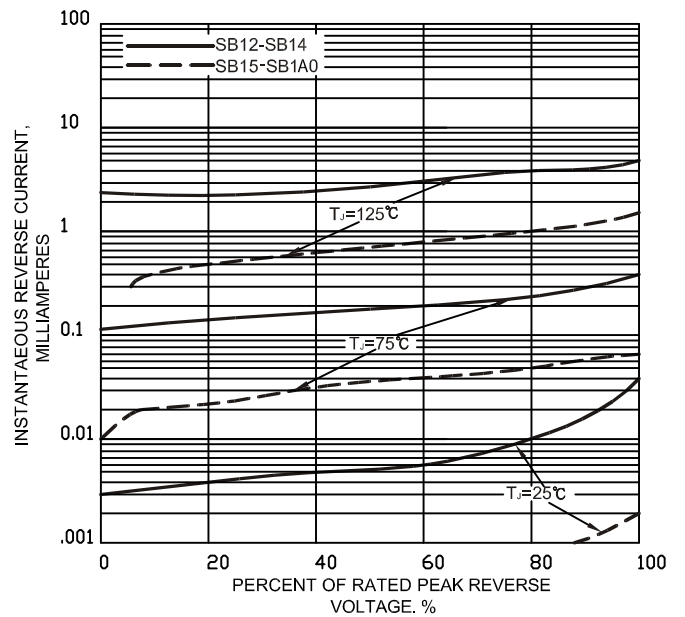


FIG.5-TYPICAL JUNCTION CAPACITANCE

