

# SB510

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE: 100V

CURRENT: 5.0A



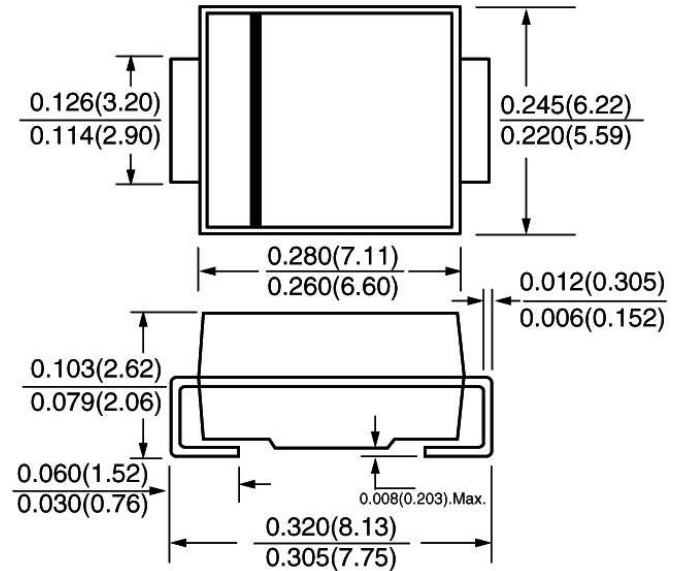
### FEATURE

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  
Guard ring for over voltage protection  
High temperature soldering guaranteed: 250°C /10 seconds at terminals

### MECHANICAL DATA

Case: JEDEC DO-214AB molded plastic body  
Terminals: Solder plated, solder able per MIL-STD-750, Method 2026  
Polarity: Color band denotes cathode end

### SMC/DO--214AB



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	SB510	units
Maximum Recurrent Peak Reverse Voltage	V <sub>rrm</sub>	100	V
Maximum RMS Voltage	V <sub>rms</sub>	70	V
Maximum DC blocking Voltage	V <sub>dc</sub>	100	V
Maximum Average Forward Rectified Current	I <sub>f(av)</sub>	5.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I <sub>fsm</sub>	100.0	A
Maximum Forward Voltage at rated Forward current (Note 1)	V <sub>f</sub>	0.85	V
Maximum DC Reverse Current at rated DC blocking voltage Ta =25°C Ta =100°C	I <sub>r</sub>	0.6 20.0	mA
Typical Thermal Resistance (Note 2)	R <sub>th(ja)</sub>	50.0	°C/W
Storage and Operating Temperature Range	T <sub>stg</sub> , T <sub>j</sub>	-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 x 5.0mm) copper pad areas

## RATINGS AND CHARACTERISTIC CURVES SB510

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

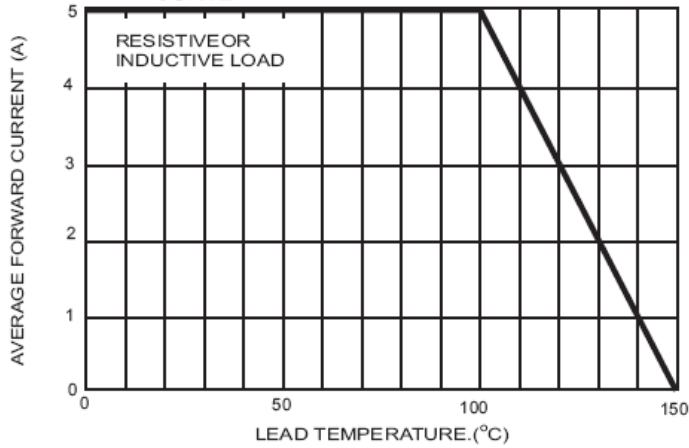


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

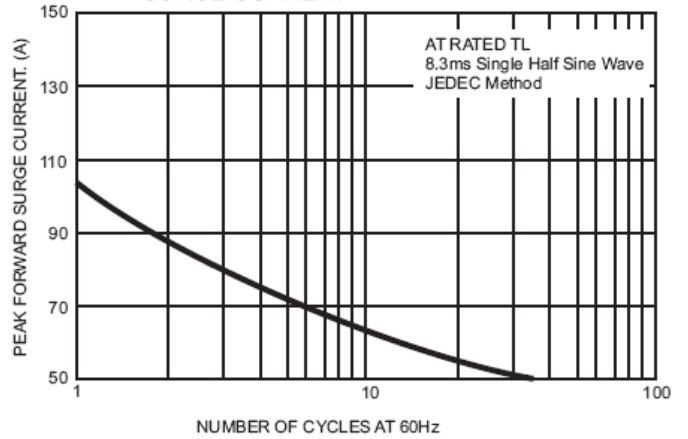


FIG.3-TYPICAL FORWARD CHARACTERISTICS

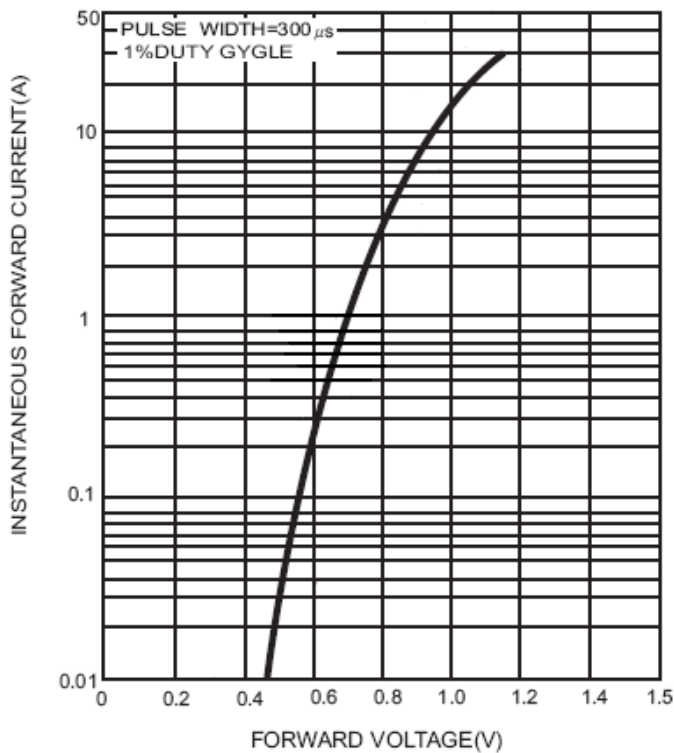


FIG.4- TYPICAL REVERSE CHARACTERISTICS

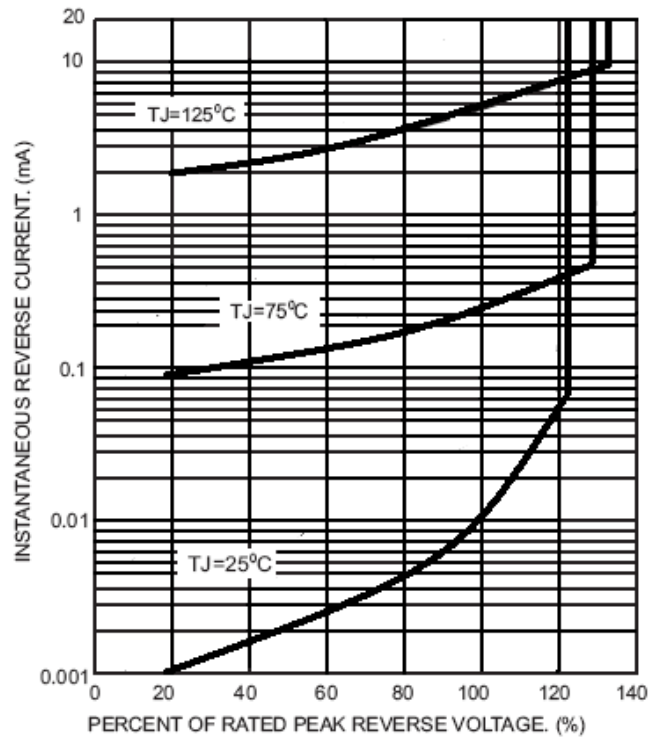


FIG.5-TYPICAL JUNCTION CAPACITANCE

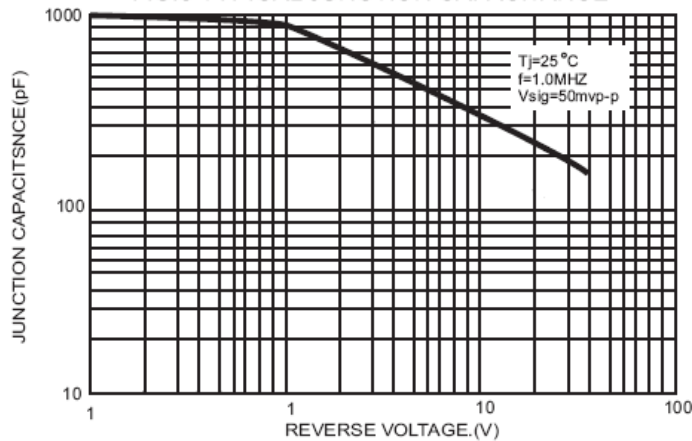


FIG.6- TYPICAL TRANSIENT THERMAL IMPDANCE

