

# SB120E THRU SB160E

## SCHOTTKY BARRIER RECTIFIER

VOLTAGE: 20 TO 60V      CURRENT: 1.0A

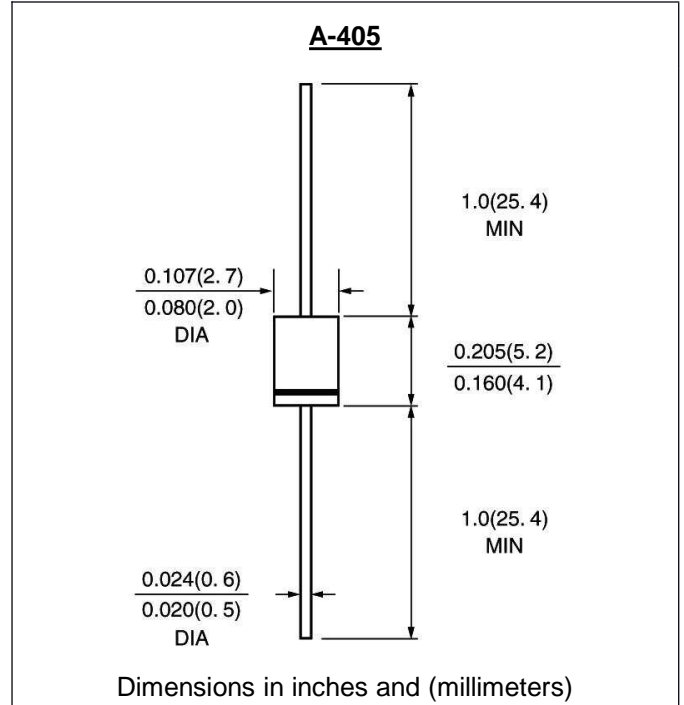


### FEATURE

High current capability, Low forward voltage drop  
 Low power loss, high efficiency  
 High surge capability  
 High temperature soldering guaranteed  
 250°C /10sec/0.375" lead length at 5 lbs tension

### MECHANICAL DATA

Terminal: Plated axial leads solderable per  
 MIL-STD 202E, method 208C  
 Case: Molded with UL-94 Class V-0 recognized Flame  
 Retardant Epoxy  
 Polarity: color band denotes cathode  
 Mounting position: any



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

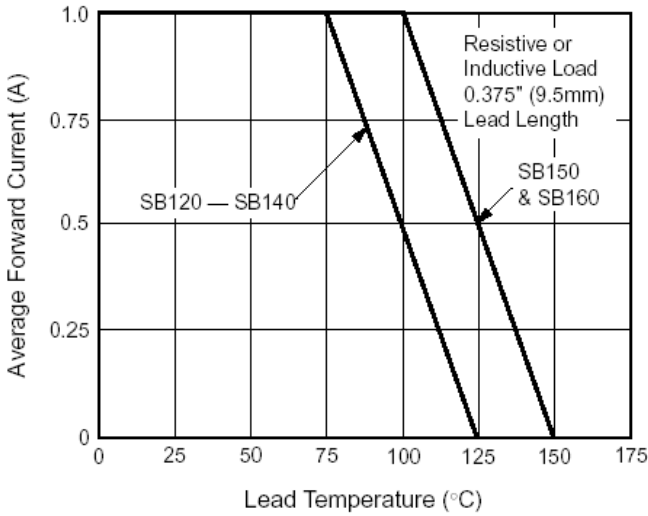
(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

	SYMBOL	SB 120E	SB 130E	SB 140E	SB 150E	SB 160E	units
Maximum Recurrent Peak Reverse Voltage	V <sub>rrm</sub>	20	30	40	50	60	V
Maximum RMS Voltage	V <sub>rms</sub>	14	21	28	35	42	V
Maximum DC blocking Voltage	V <sub>dc</sub>	20	30	40	50	60	V
Maximum Average Forward Rectified Current 3/8" lead length	I <sub>f(av)</sub>	1.0					A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I <sub>fsm</sub>	40.0					A
Maximum Forward Voltage at 1.0A DC	V <sub>f</sub>	0.5		0.7			V
Maximum DC Reverse Current Ta =25°C at rated DC blocking voltage Ta =100°C	I <sub>r</sub>	1.0			10.0		mA mA
Typical Junction Capacitance (Note 1)	C <sub>j</sub>	110.0					pF
Typical Thermal Resistance (Note 2)	R(ja)	50.0					°C /W
Storage and Operating Junction Temperature	T <sub>j</sub>	-65 to +125			-65 to +150		°C
Storage Temperature	T <sub>stg</sub>	-65 to +150					°C

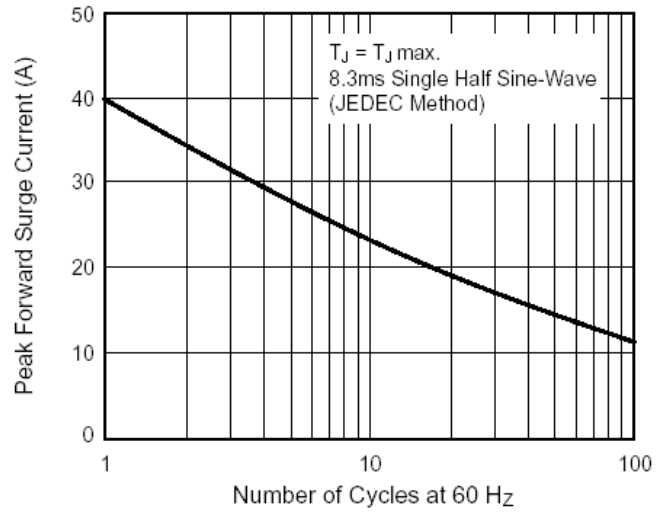
Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
2. Thermal Resistance from Junction to Ambient at 0.5" lead length, vertical P.C. Board Mounted <sup>1</sup>

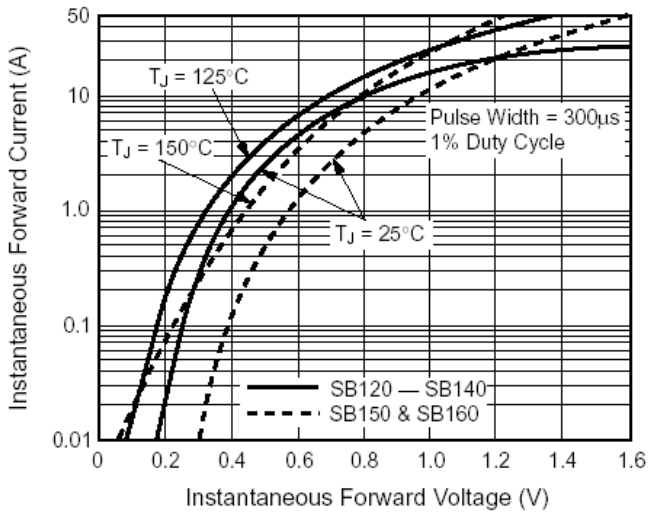
**Fig. 1 - Forward Current Derating Curve**



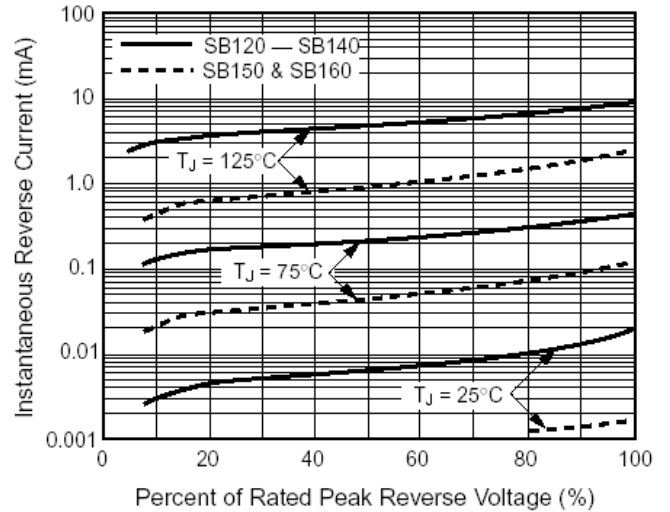
**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current**



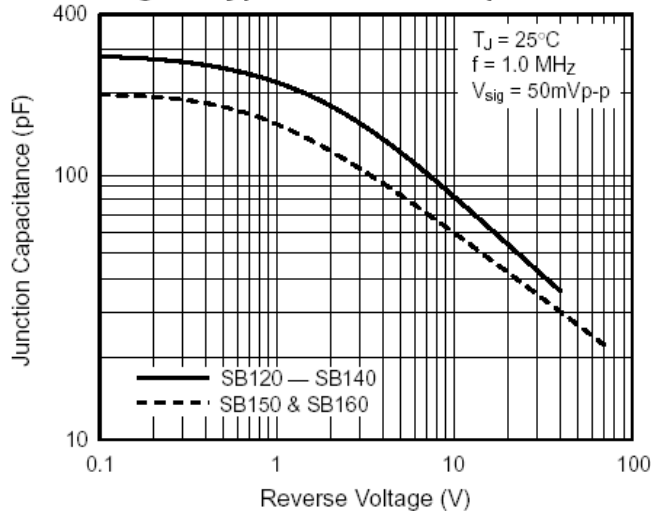
**Fig. 3 - Typical Instantaneous Forward Characteristics**



**Fig. 4 - Typical Reverse Characteristics**



**Fig. 5 - Typical Junction Capacitance**



**Fig. 6 - Typical Transient Thermal Impedance**

