SB020 THRU SB040

SCHOTTKY BARRIER RECTIFIER

VOLTAGE: 20 TO 40V CURRENT: 0.6A

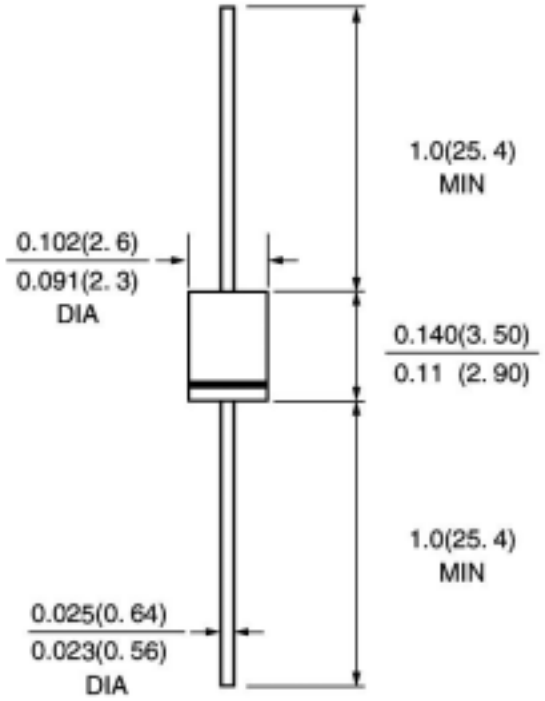
FEATURE

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

R-1



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)

	SYMBOL	SB020	SB030	SB040	units
Maximum Recurrent Peak Reverse Voltage	Vrrm	20	30	40	V
Maximum RMS Voltage	Vrms	14	21	28	V
Maximum DC blocking Voltage	Vdc	20	30	40	V
Maximum Average Forward Rectified Current 0.375" lead length TL=60°C	If(av)	0.6			A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	Ifsm	20.0			A
Maximum Forward Voltage at 0.6A DC(Note 1)	Vf	0.55			V
Maximum DC Reverse Current Ta =25°C at rated DC blocking voltage Ta =100°C	Ir	0.5 10.0			mA mA
Typical Thermal Resistance (Note 2)	R(ja)	80.0			°C /W
Storage and Operating Junction Temperature	Tj	-50 to +125		-50 to +150	°C

Note:

1. Pulse test :300uS pulse width ,1% duty cycle.
2. Thermal Resistance from Junction to Ambient at 0.5" lead length, vertical P.C. Board Mounted [1]

[2]

Fig. 1 – Forward Current Derating Curve

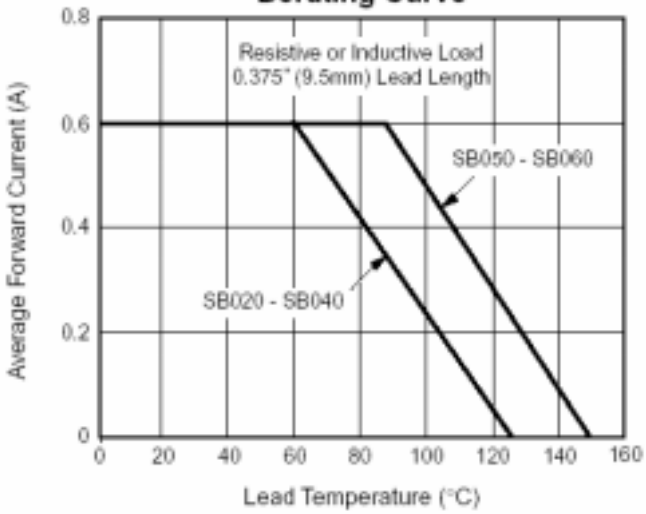


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

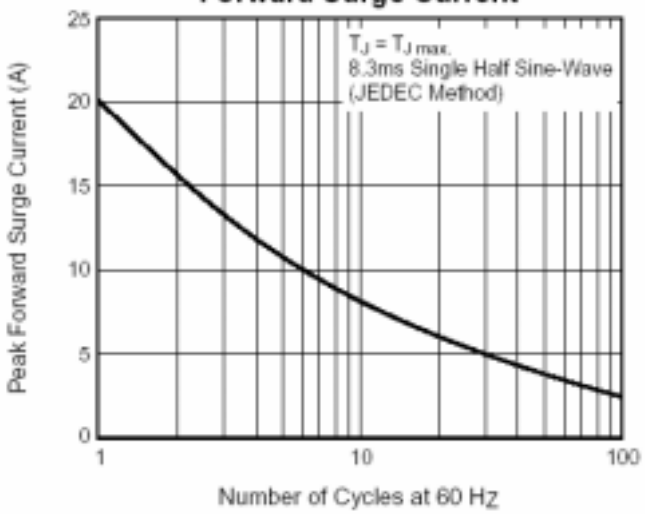


Fig. 3 – Typical Instantaneous Forward Characteristics

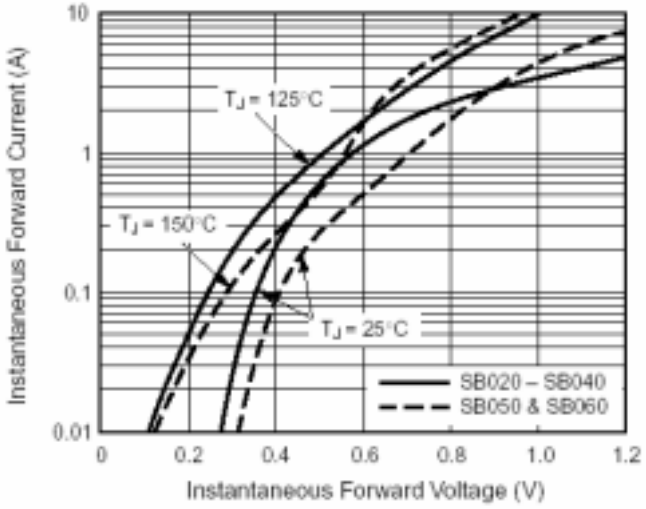


Fig. 4 – Typical Reverse Leakage Characteristics

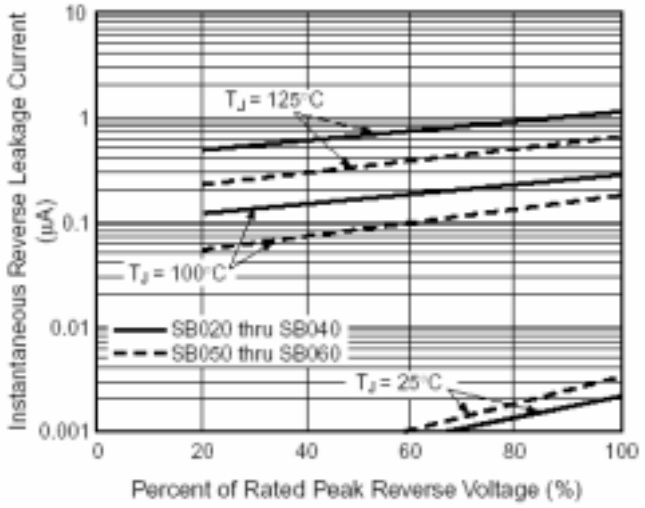


Fig. 5 – Typical Junction Capacitance

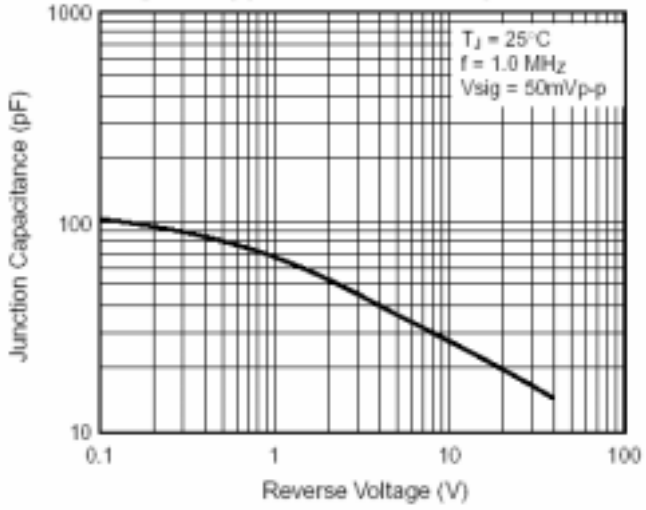
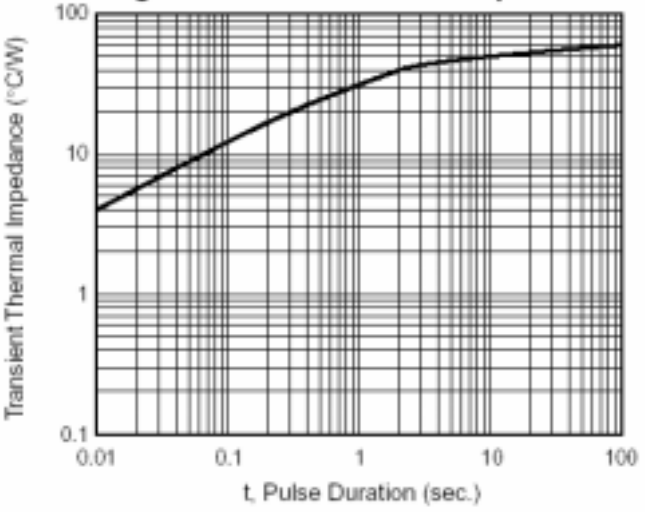


Fig. 6 – Transient Thermal Impedance



[2] Rev.A6, 26-Apr-05