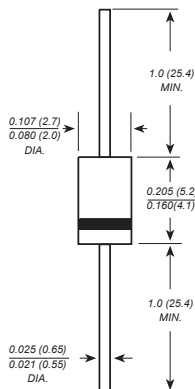


SB120S THRU SB1B0S

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 Volts Forward Current - 1.0 Ampere

A-405



Dimensions in inches and (millimeters)

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC A-401 molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.008 ounce, 0.23 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	SB 120S	SB 130S	SB 140S	SB 150S	SB 160S	SB 170S	SB 180S	SB 190S	SB 1B0S	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	50	60	70	80	90	100	VOLTS
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	49	56	63	70	VOLTS
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	70	80	90	100	VOLTS
Maximum average forward rectified current 0.375”(9.5mm) lead length(see fig.1)	I _(AV)	1.0									Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	40.0									Amps
Maximum instantaneous forward voltage at 1.0A	V _F	0.55			0.70		0.85				Volts
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	0.5									mA
		10.0				5.0					
Typical junction capacitance (NOTE 1)	C _J	110			80				pF		
Typical thermal resistance (NOTE 2)	R _{θJA}	50.0									°C/W
Operating junction temperature range	T _J	-65 to +125					-65 to +150				°C
Storage temperature range	T _{STG}	-65 to +150									°C

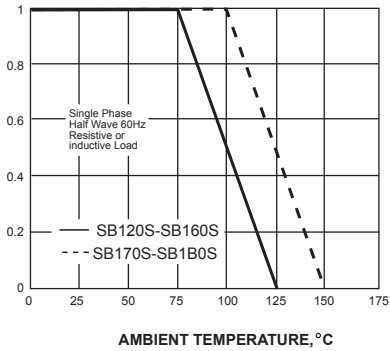
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES SB120S THRU SB1B0S

AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,
AMPERES

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

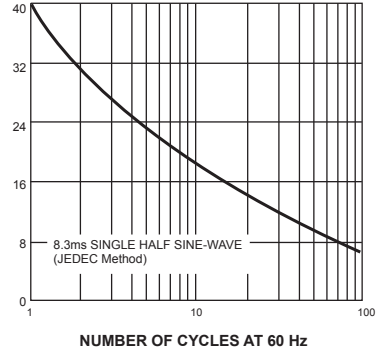
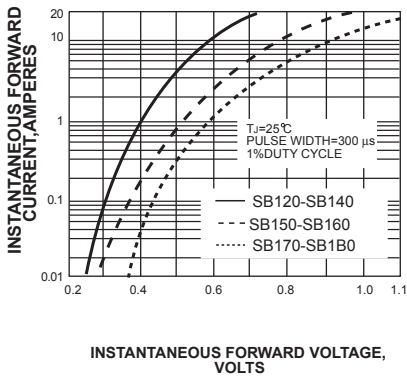


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

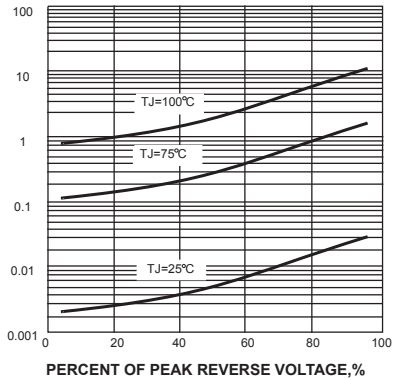
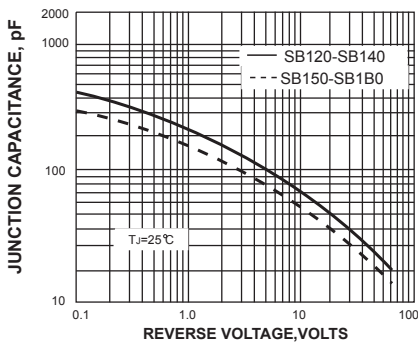


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

