

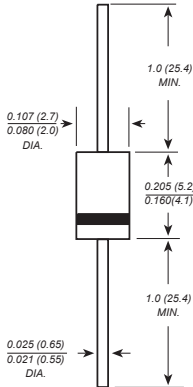


SB120S THRU SB1B0S

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%.

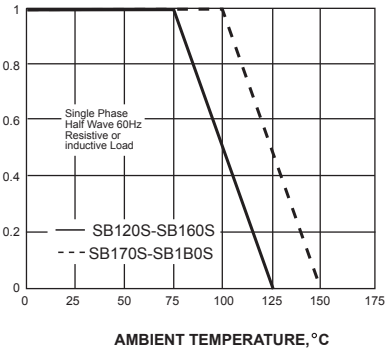
	SYMBOLS	SB 120S	SB 130S	SB 140S	SB 150S	SB 160S	SB 170S	SB 180S	SB 190S	SB 1B0S	UNITS	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	70	80	90	100	VOLTS	
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	49	56	63	70	VOLTS	
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	70	80	90	100	VOLTS	
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 at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R	10.0			5.0			mA				
Typical junction capacitance (NOTE 1)	C_J	110			80			pF				
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50.0									$^\circ\text{C}/\text{W}$	
Operating junction temperature range	T_J	-65 to +125					-65 to +150					$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 to +150									$^\circ\text{C}$	

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

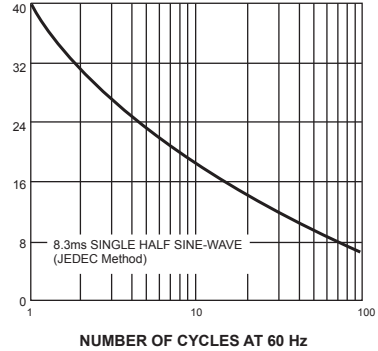
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



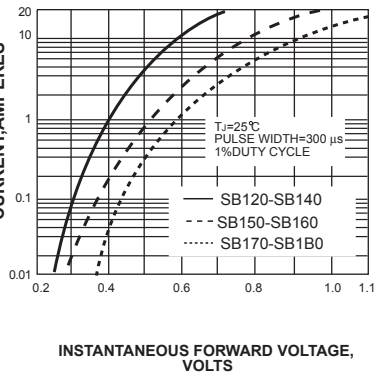
PEAK FORWARD SURGE CURRENT,
AMPERES

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



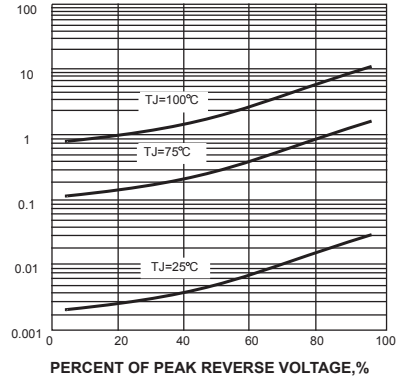
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



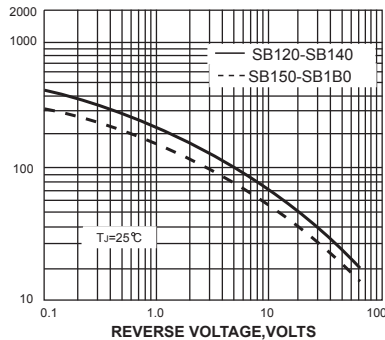
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

