



SB120S THRU SB1200S

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 200 Volts Forward Current - 1.0 Ampere

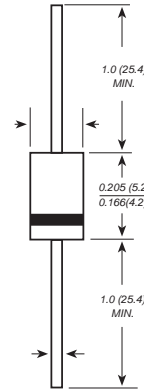
FEATURES

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:
 260°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

A-405



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 1100S	SB 1150S	SB 1200S	UNITS	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	70	80	90	100	150	200	V	
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	49	56	63	70	105	140	V	
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	70	80	90	100	150	200	V	
Maximum average forward rectified current 0.375" (9.5mm) lead length (see fig.1)	$I_{(AV)}$	1.0											A	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0											A	
Maximum instantaneous forward voltage at 1.0A	V_F	0.55		0.70			0.85			0.95		V		
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	0.5						5.0			2.0		mA	
Typical junction capacitance (NOTE 1)	C_J	110			80									pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50.0											°C/W	
Operating junction temperature range	T_J	-55 to +125			-55 to +150									°C
Storage temperature range	T_{STG}	-55 to +150											°C	

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

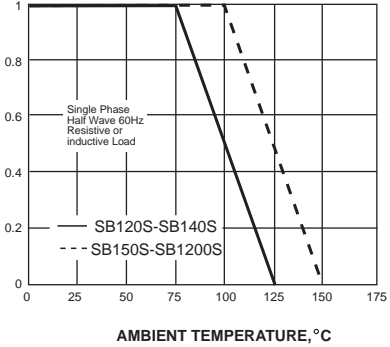
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted



RATINGS AND CHARACTERISTIC CURVES SB120S THRU SB1200S

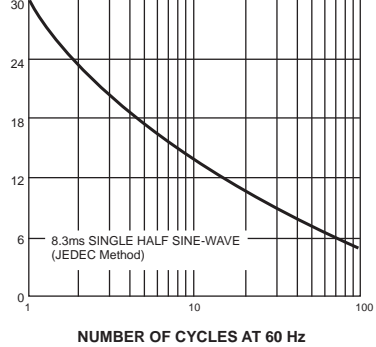
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



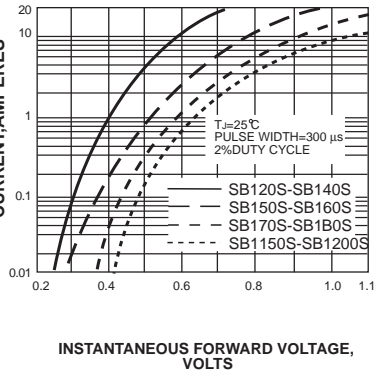
PEAK FORWARD SURGE CURRENT, AMPERES

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



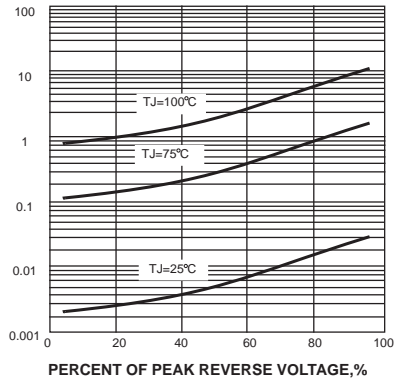
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



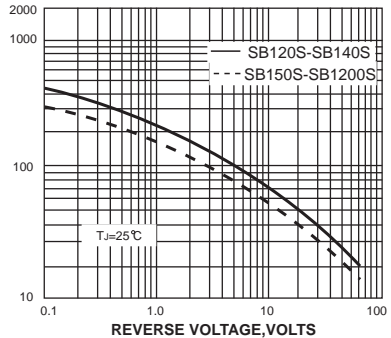
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

