



# SB120 THRU SB1200

## SCHOTTKY BARRIER RECTIFIER

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

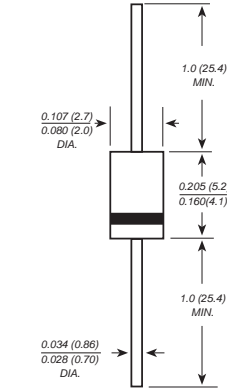
### FEATURES

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 DO-41 molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750,  
 Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.012 ounce, 0.33 grams

### DO-41



Dimensions in inches and (millimeters)

### 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 120	SB 130	SB 140	SB 150	SB 160	SB 170	SB 180	SB 190	SB 1100	SB 1150	SB 1200	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 at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	$I_R$	0.5					0.2			mA				
		10.0			5.0			2.0						
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.

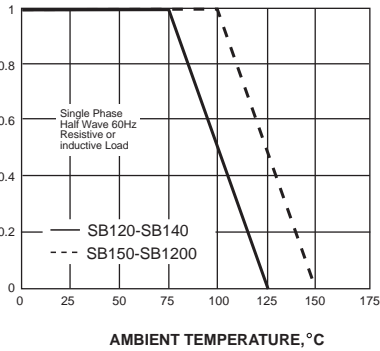
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted



# RATINGS AND CHARACTERISTIC CURVES SB120 THRU SB1200

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

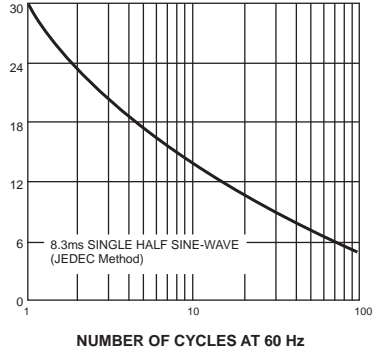


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

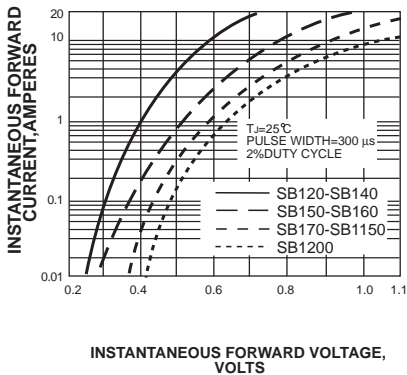


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

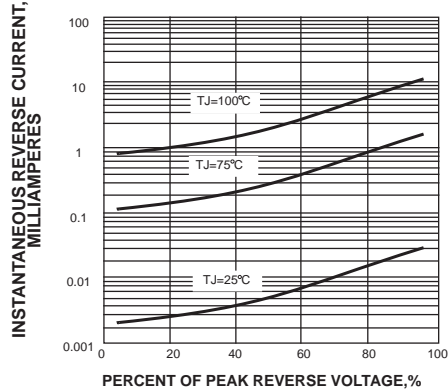


FIG. 5-TYPICAL JUNCTION CAPACITANCE

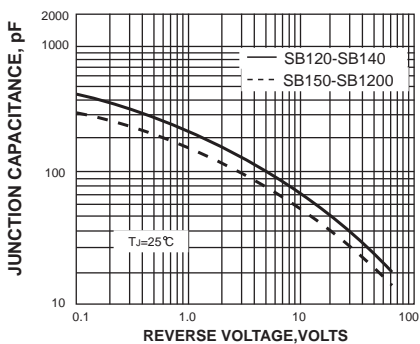


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

