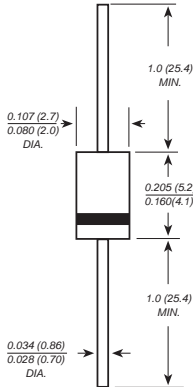


SB120 THRU SB1200

SCHOTTKY BARRIER RECTIFIER

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

DO-41



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:
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

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 180	SB 190	SB 1B0	SB 1150	SB 1200	UNITS	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	90	100	150	200	V	
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	63	70	105	140	V	
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	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}	40.0										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					10.0		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

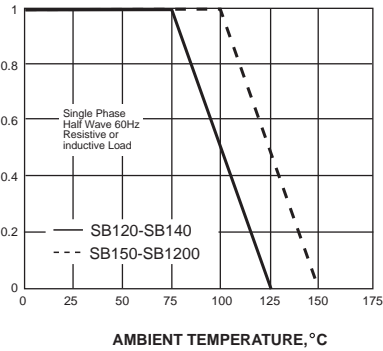
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

RATINGS AND CHARACTERISTIC CURVES 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

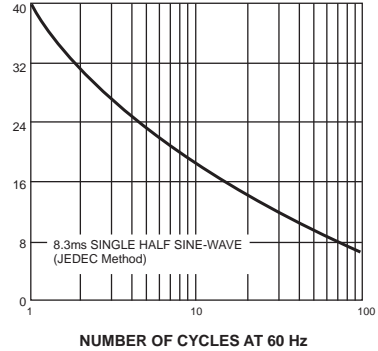
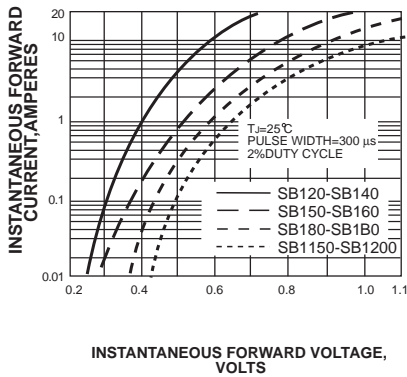


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

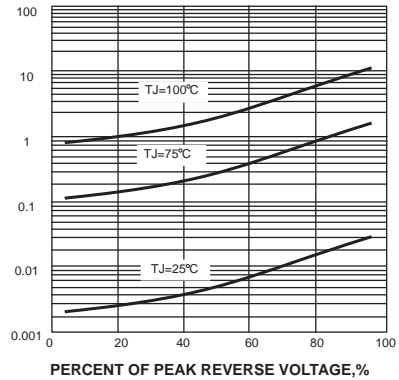
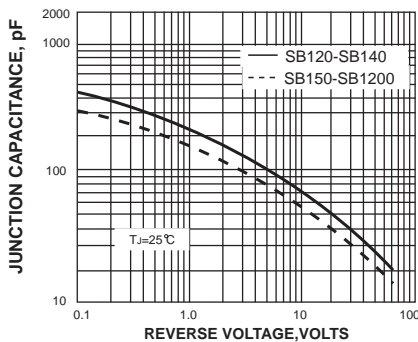


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

