

# B120B-B160B

Schottky Barrier Rectifiers

**REVERSE VOLTAGE: 20 --- 60 V**

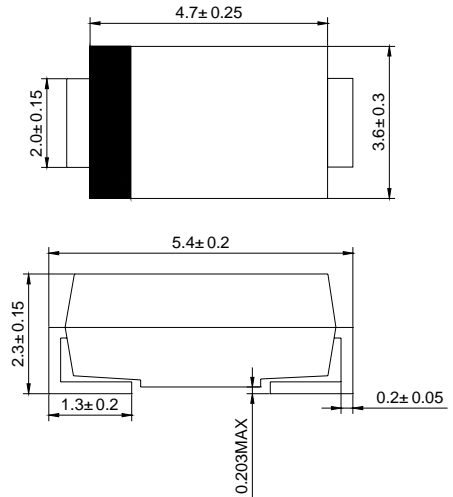
**CURRENT: 1.0 A**



## SMB

## Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal silicon junction, majority carrier conduction
- High surge capability
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling and polarity protection applications
- Guardring for overvoltage protection
- High temperature soldering guaranteed: 250°C/10 seconds at terminals



Dimensions in millimeters

## Mechanical Data

- Case: JEDEC SMB, molded plastic over passivated chip
- Polarity: Color band denotes cathode end
- Weight: 0.003 ounces, 0.093 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

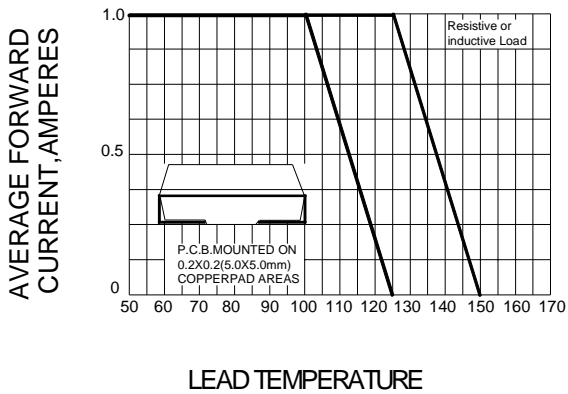
Ratings at 25°C ambient temperature unless otherwise specified

		B120B	B130B	B140B	B150B	B160B	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	20	30	40	50	60	V
Maximum RMS voltage	$V_{RWS}$	14	21	28	35	42	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	V
Maximum average forward rectified current at $T_c$ (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 (NOTE.1)	$V_F$	0.5			0.7		V
Maximum DC reverse current (NOTE.1) @ $T_A = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_A = 100^\circ\text{C}$	$I_R$	0.5 10.0					mA
Typical thermal resistance (NOTE. 2)	$R_{JA}$	88.0					$^\circ\text{C/W}$
	$R_{JL}$	20.0					
Storage temperature range Operating junction and storage temperature range	$T_j$	- 55 --- +125					$^\circ\text{C}$
Storage temperature range	$T_{STG}$	- 55 --- +150					$^\circ\text{C}$

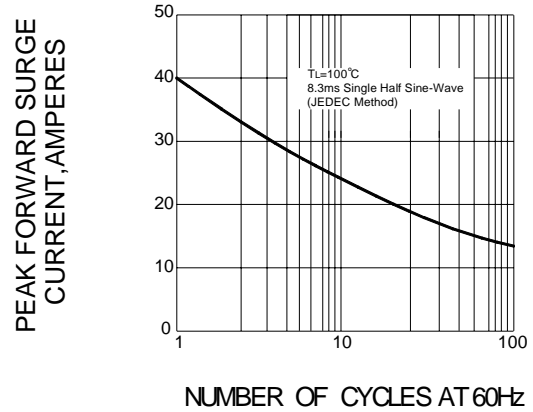
NOTE: 1. Pulse test: 300  $\mu\text{s}$  pulse width, 1% duty cycle  
2. P.C.B. mounted with 0.2" x 0.2" (5.0 x 5.0 mm<sup>2</sup>) copper pad areas

## Ratings AND Characteristic Curves

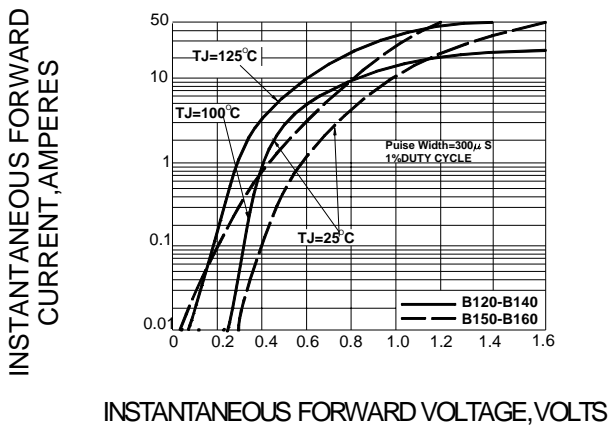
**FIG.1 – FORWARD DERATING CURVE**



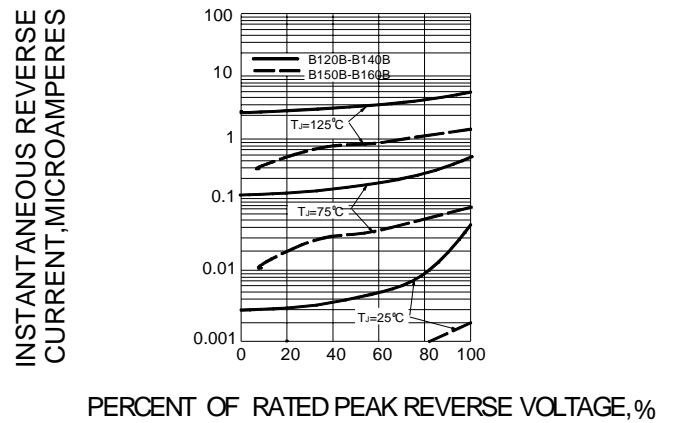
**FIG.2– PEAK FORWARD SURGE CURRENT**



**FIG.3 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**



**FIG.5–TYPICAL JUNCTION CAPACITANCE**

