

### Surface Mount Schottky Barrier Rectifiers

**(Pb)** Lead(Pb)-Free

#### Feature:

- \*For Surface Mount Application
- \*Metal-Semiconductor Junction With Guardring
- \*Epitaxial Construction
- \*Very Low Forward Voltage Drop
- \*High Current Capability
- \*Plastic Meterial Has UL Flammability Classification 94V-0
- \*For Use In Low , And Polarity Protection Applications

#### Mechanical Data

- \*Case : Molded Plastic
- \*Polarity :Indicated by cathode band
- \*Weight : 0.003 Ounce ,0.093 grams

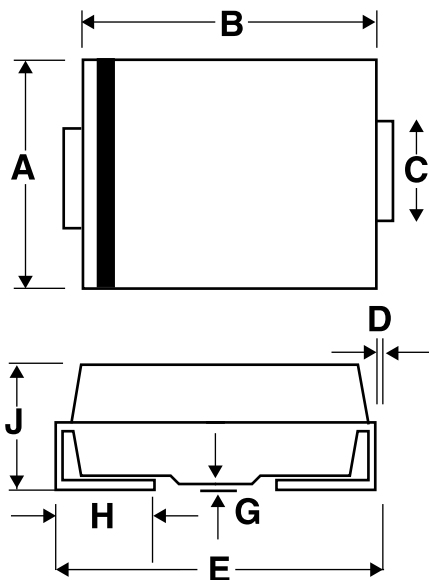
**REVERSE VOLTAGE**  
**20 TO 60 VOLTS**  
**FORWARD CURRENT**  
**1.0 AMPERE**



**SMB(DO-214AA)**

### SMB Outline Dimension

Unit:mm



| SMB      |      |      |
|----------|------|------|
| Dim      | Min  | Max  |
| <b>A</b> | 3.30 | 3.94 |
| <b>B</b> | 4.06 | 4.80 |
| <b>C</b> | 1.96 | 2.21 |
| <b>D</b> | 0.15 | 0.31 |
| <b>E</b> | 5.00 | 5.59 |
| <b>G</b> | 0.10 | 0.20 |
| <b>H</b> | 0.76 | 1.52 |
| <b>J</b> | 2.00 | 2.62 |

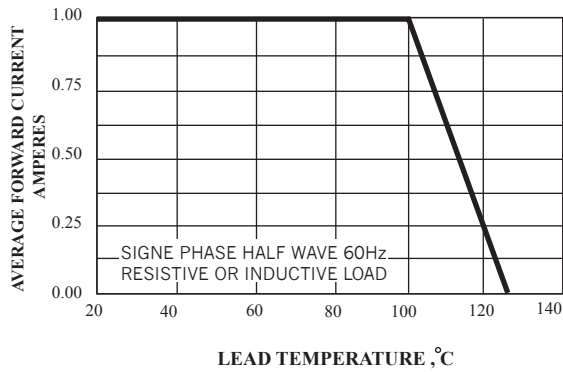
**Maximum Ratings and Electrical Characteristics**

Rating 25 °C Ambient Temperature Unless Otherwise Specified.  
 Single Phase Half Wave, 60Hz , Resistive or Inductive Load.  
 For Capacitive Load, Derate Current by 20%.

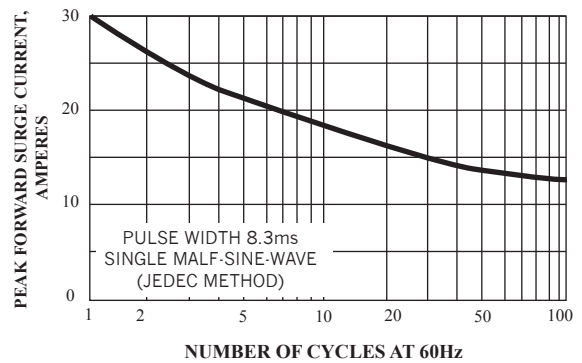
| <b>Characteristics</b>   | <b>Symbol</b>    | <b>B120B</b> | <b>B130B</b> | <b>B140B</b> | <b>B150B</b> | <b>B160B</b> | <b>Unit</b> |
|--|------------------|--------------|--------------|--------------|--------------|--------------|-------------|
| Maximum Recurrent Peak Reverse Voltage   | VRRM             | 20           | 30           | 40           | 50           | 60           | V           |
| Maximum RMS Voltage  | VRMS             | 14           | 21           | 28           | 35           | 42           | V           |
| Maximum DC Blocking Voltage  | VDC              | 20           | 30           | 40           | 50           | 60           | V           |
| Maximum Average Forward Rectified Current @TC=100°C  | IF(AV)           | 1.0          |              |              |              |              | A           |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) | IFSM             | 30           |              |              |              |              | A           |
| Maximum Instantaneous At 1.0A DC   | VF               | 0.5          |              | 0.7          |              | V            |             |
| Maximum DC Reverse Current @Tj=25°C<br>At Rated DC Blocking Voltage @Tj=100°C                      | IR               | 0.5<br>10    |              |              |              |              | mA          |
| Typical Junction Capacitance (Note 1)  | CJ               | 110          |              |              |              |              | PF          |
| Typical Thermal Resistance (Note 2)  | R <sub>θJL</sub> | 20           |              |              |              |              | °C/W        |
| Operating Temperature Range  | TJ               | -55 to+125   |              |              |              |              | °C          |
| Storage Temperature Range  | TSTG             | -55 to+150   |              |              |              |              | °C          |

NOTES:1.Measured at 1.0MHz applied reverse voltage of 4.0V DC.  
 2.Thermal Resistance Junction to case.

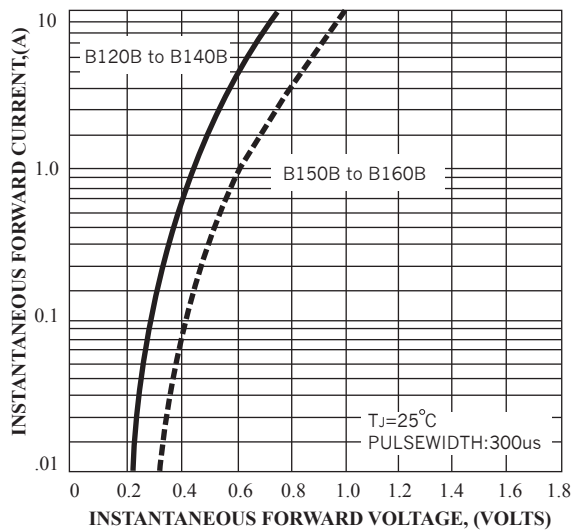
**FIG.1 FORWARD CURRENT DERATING CURVE**



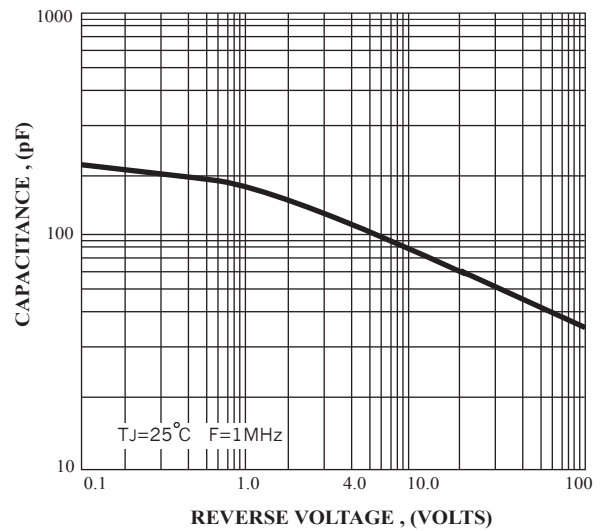
**FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT**



**FIG.3 TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 TYPICAL JUNCTION CAPACITANCE**



**FIG.5 TYPICAL REVERSE CHARACTERISTICS**

