

## Low VF Surface Mount Schottky Barrier Rectifiers

**(P/b)** Lead(Pb)-Free

### Features:

- \*Low Surface Mounted Applications
- \*Metal-Semiconductor Junction with Guardring
- \*Epitaxial Construction
- \*Very Low Forward Voltage Drop
- \*High Current Capability
- \*Plastic Material Has UL Flammability Classification 94V-0
- \*For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications

### Mechanical Data

- \*Case : Molded Plastic
- \*Polarity : Indicated By Cathode Band
- \*Weight : 0.003 ounces, 0.093 grams

**REVERSE VOLTAGE**  
40Volts

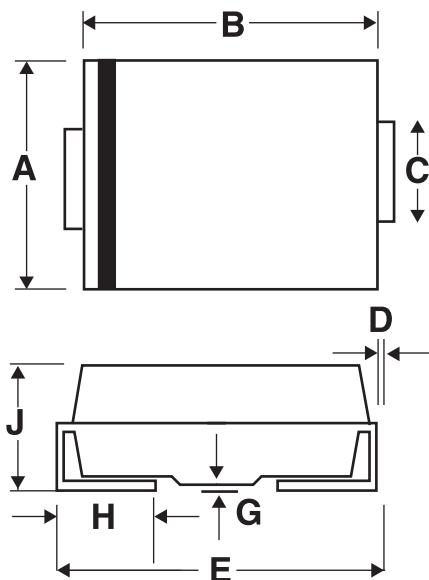
**FORWARD CURRENT**  
1.0Ampere



**SMB(DO-214AA)**

## SMB Outline Dimensions

Unit:mm



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

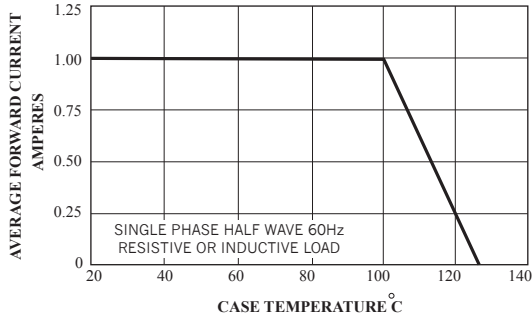
## Maximum Ratings and Electrical Characteristics

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

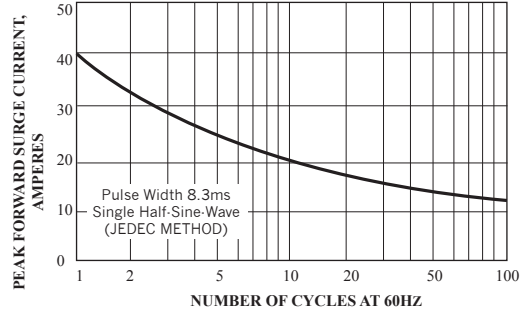
Characteristics	Symbol	B140LB	Unit
Maximum Recurrent Peak Reverse Voltage	VRRM	40	V
Maximum RMS Voltage	VRMS	28	V
Maximum DC Blocking Voltage	VDC	40	V
Maximum Average Forward Rectified Current @TC=100°C	I <sub>F(AV)</sub>	1.0	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	40	A
Maximum Instantaneous Forward Voltage @T <sub>j</sub> =25°C @IF=1.0A @T <sub>j</sub> =100°C	V <sub>F</sub>	0.38 0.35	V
Maximum DC Reverse Current @T <sub>j</sub> =25°C At Rated DC Blocking Voltage @T <sub>j</sub> =100°C	I <sub>R</sub>	1.0 25	mA
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	100	P <sub>F</sub>
Typical Thermal Resistance (Note 2)	RA <sub>JC</sub>	35	°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to+125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to+150	°C

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

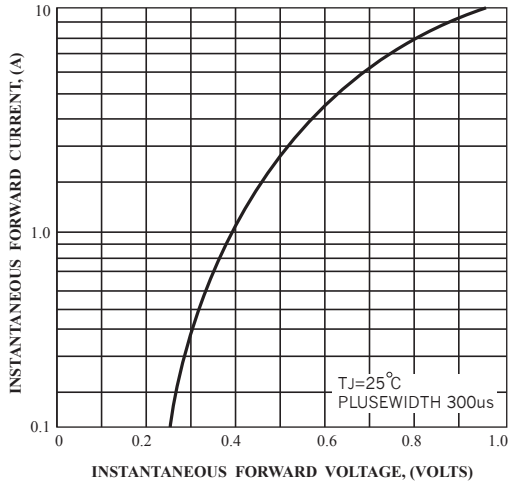
**FIG1.-FORWARD CURRENT DERATION CURVE**



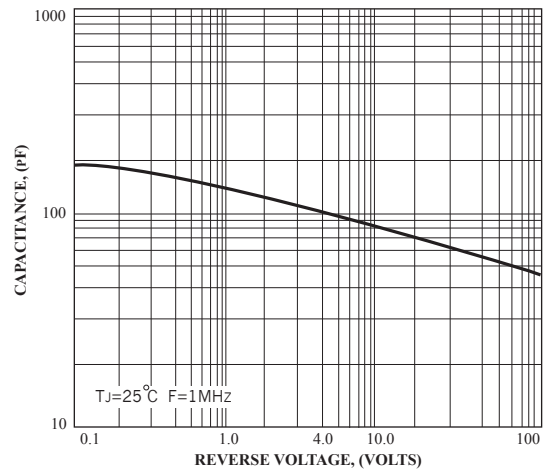
**FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT**



**FIG.3-TYPICAL FORWARD CHARACTERISTICS**



**FIG4.-TYPICAL JUNCTION CAPACITANCE**



**FIG5.-TYPICAL REVERSE CHARACTERISTICS**

