

## Surface Mount Schottky Barrier Diodes

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

### Features:

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

### Mechanical Data

- \* Case : Molded Plastic, SOD-323F(0805)
- \* Terminals : Solder Plated, Solderable per ML-STD-750 Method 2026
- \* Polarity : Indicated By Cathode Band
- \* Shipped in 8mm Tape, 3000 Pcs per 7 Inch Reel
- \* Weight: 0.0085 grams

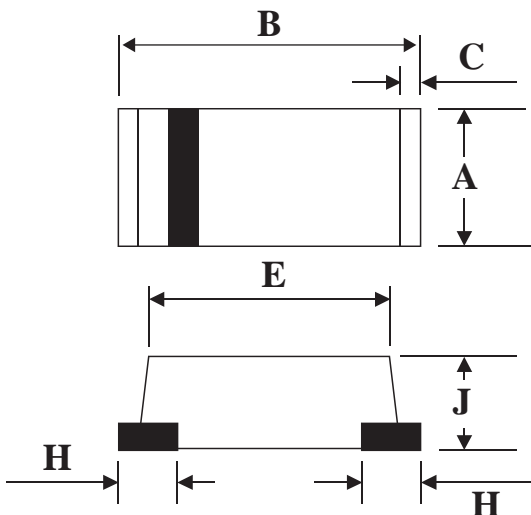
**REVERSE VOLTAGE  
20-60Volts  
FORWARD CURRENT  
1.0 Ampere**



**SOD-323F  
(0805)**

## SOD-323F Outline Dimension

unit:mm



SOD-323F		
Dim	Min	Max
<b>A</b>	1.15	1.35
<b>B</b>	2.30	2.70
<b>C</b>	-	0.30(TYP)
<b>E</b>	1.80	2.20
<b>H</b>	-	0.90(TYP)
<b>J</b>	0.90	1.10

## 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%.

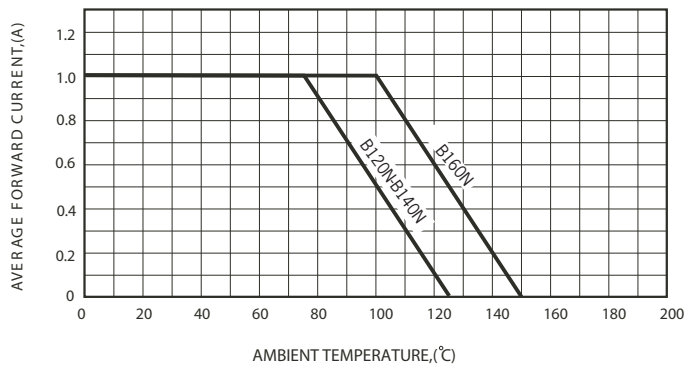
Characteristics	Symbol	B120N	B140N	B160N	Unit
Maximum Recurrent Peak Reverse Voltage	VRRM	20	40	60	V
Maximum RMS Voltage	VRMS	14	28	42	V
Maximum DC Blocking Voltage	VDC	20	40	60	V
Maximum Average Forward (FIG1)	I <sub>F(AV)</sub>	1.0			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	30			A
Maximum Instantaneous @ TA=25 °C	VF	0.55		0.70	V
Maximum DC Reverse Current @TA=25 °C At Rated DC Blocking Voltage @TA=125 °C	I <sub>R</sub>	0.5 10			mA
Typical Junction Capacitance (1)	C <sub>J</sub>	120(TYP)			pF
Typical Thermal Resistance (2)	R <sub>θJC</sub>	90(TYP)			°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:

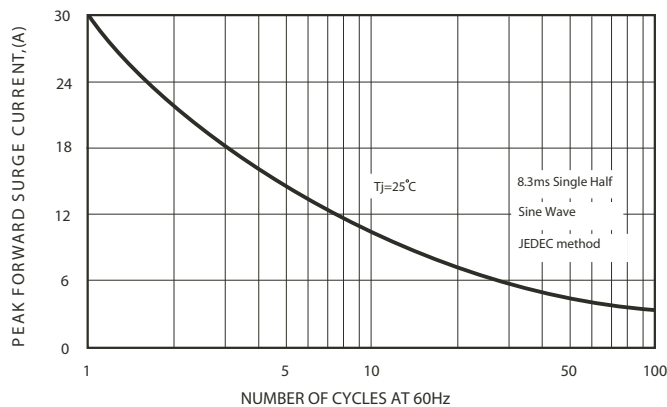
1. Measured at 1.0MHz applied reverse voltage of 4.0V DC.
2. Thermal Resistance Junction to case.

## Device Marking

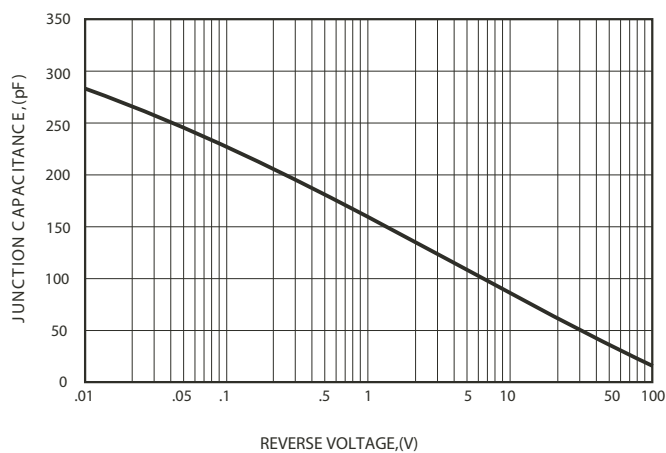
B120N=12 B140N=14 B160N=16



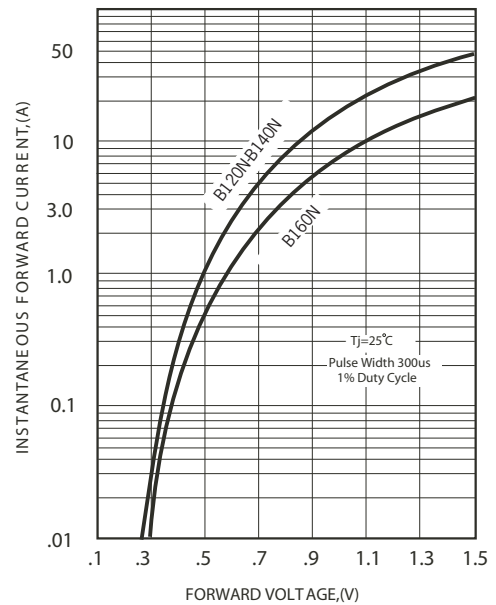
**FIG.1 Typical Forward Current Derating Curve**



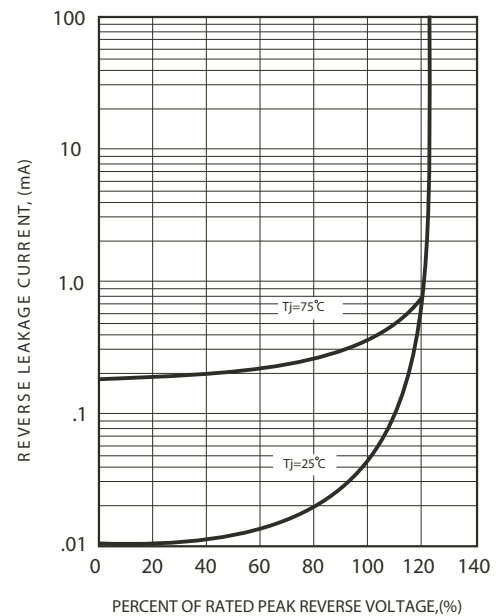
**FIG.3 Maximum Non-Repetitive Forward Surge Current**



**FIG.4 Typical Junction Capacitance**



**FIG.2 Typical Forward Characteristics**



**FIG.5 Typical Reverse Characteristics**