WEITRON

B120N/B140N
B160N

Surface Mount Schottky Barrier Diodes

Lead(Pb)-Free

REVERSE VOLTAGE
20-60Volts
FORWARD CURRENT
1.0 Ampere

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

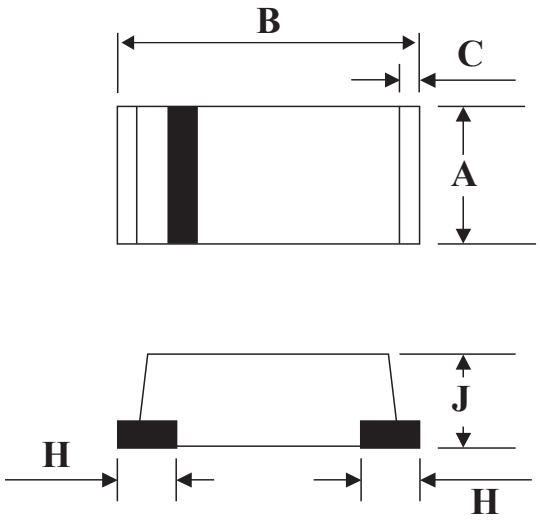
SOD-323F

Mechanical Data

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

SOD-323F Outline Dimension

unit:mm



SOD-323F		
Dim	**Min**	**Max**
A	1.05	1.45
B	2.30	2.70
C	-	0.30(TYP)
H	-	0.40(TYP)
J	0.80	1.20

Maximum Ratings and Electrical Characteristics

Rating 25℃ 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	V_{RRM}	20	40	60	V
Maximum RMS Voltage	V_{RMS}	14	28	42	V
Maximum DC Blocking Voltage	V_{DC}	20	40	60	V
Maximum Average Forward (FIG1)	$I_{F(AV)}$	1.0			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30			A
Maximum Instantaneous @ T_A=25 ℃	V_F	0.55		0.70	V
Maximum DC Reverse Current @T_A=25℃ At Rated DC Blocking Voltage @T_A=125℃	I_R	0.5 10			mA
Typical Junction Capacitance (1)	C_J	120(TYP)			pF
Typical Thermal Resistance (2)	$R_{\theta JC}$	90(TYP)			℃/W
Operating Temperature Range	T_J	-55 to+125			℃
Storage Temperature Range	T_{STG}	-55 to+150			℃

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

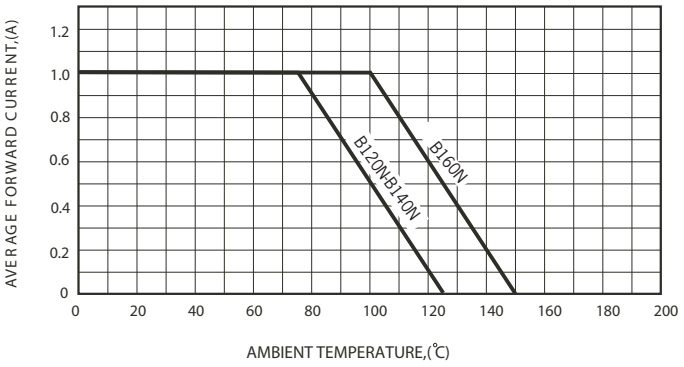


FIG.1 Typical Forward Current Derating Curve

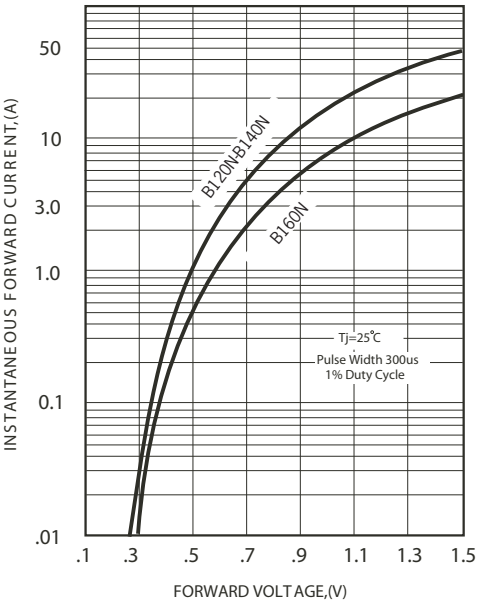


FIG.2 Typical Forward Characteristics

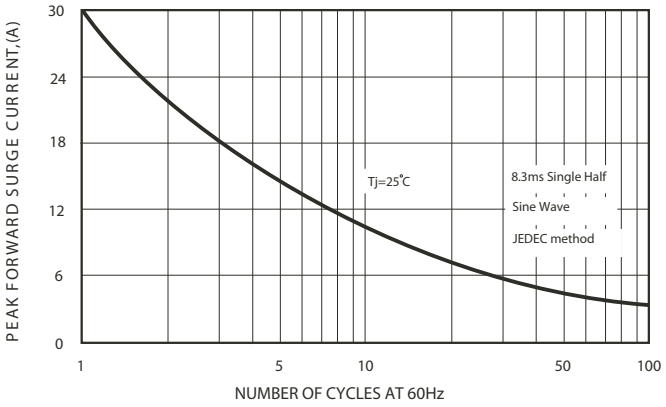


FIG.3 Maximum Non-Repetitive Forward Surge Current

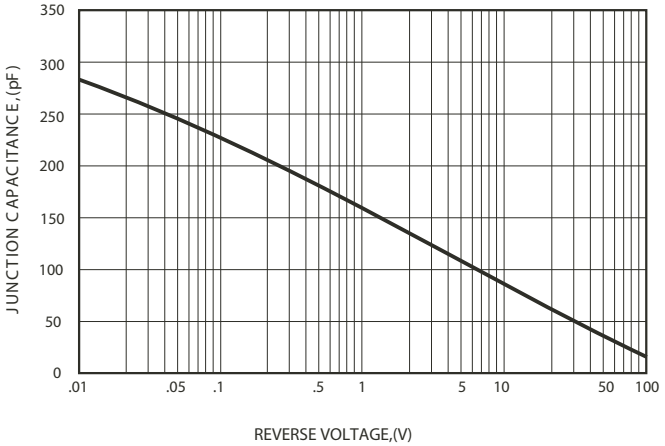


FIG.4 Typical Junction Capacitance

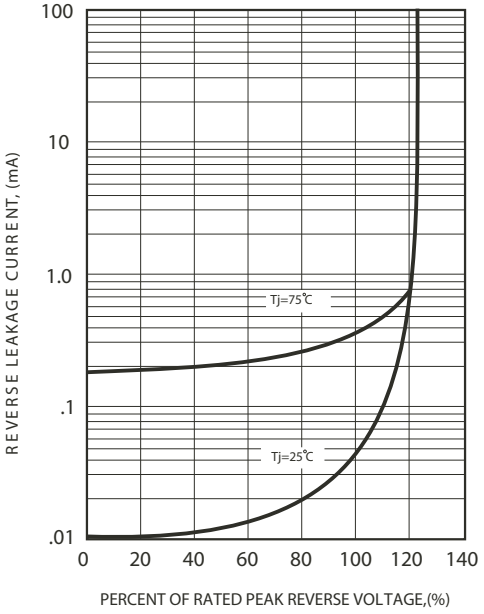


FIG.5 Typcial Reverse Characteristics