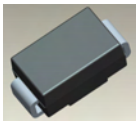
1.0A HIGH VOLTAGE SCHOTTKY BARRIER RECTIFIER

Features

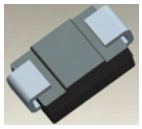
- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automated Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 50A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- High Temperature Soldering: 260°C/10 Second at Terminal
- **Lead Free Finish, RoHS Compliant (Note 1)**
- **Green Molding Compound (No Halogen and Antimony) (Note 2)**

Mechanical Data

- Case: SMB
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208 e3
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.093 grams (approximate)



Top View



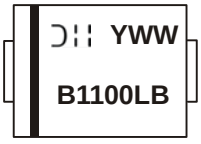
Bottom View

Ordering Information (Note 3)

Part Number	Case	Packaging
B1100LB-13-F	SMB	3000/Tape & Reel

Notes:
1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes.
2. Product manufactured with Data Code 0924 (week 24, 2009) and newer are built with Green Molding Compound.
3. For packaging details, go to our website at http://www.diodes.com.

Marking Information



B1100LB = Product type marking code
= Manufacturers' code marking
YWW = Date code marking
Y = Last digit of year (ex: 02 for 2002)
WW = Week code (01 to 53)

Note: Device has a cathode band and may also have a cathode notch.

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Maximum Ratings @T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitance load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage @ I_R = 0.5mA	V_{RRM} V_{RWM} V_R	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Average Rectified Output Current @ T_T = 120°C @ T_T = 100°C	I_O	1.0 2.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load	I_{FSM}	50	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Terminal (Note 4)	$R_{\theta JT}$	22	°C/W
Operating and Storage Temperature Range (Note 5)	T_J, T_{STG}	-65 to +175	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V_F	-	-	0.75	V	I_F = 1.0A, T_A = 25°C
Leakage Current (Note 6)	I_R	- -	- -	0.5 5.0	mA	V_R = 100V, T_A = 25°C V_R = 100V, T_A = 100°C
Total Capacitance	C_T	-	-	100	pF	V_R = 4V, f = 1MHz

Notes: 4. Valid provided that terminals are kept at ambient temperature.
5. The heat generated must be less than the thermal conductivity from Junction-to-Ambient: $dP_D/dT_J < 1/R_{\theta JA}$.
6. Short duration pulse test used to minimize self-heating effect.

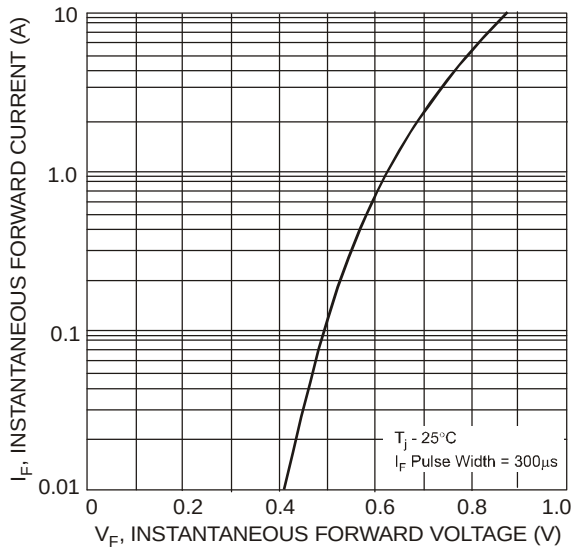

Fig. 1 Typical Forward Characteristics

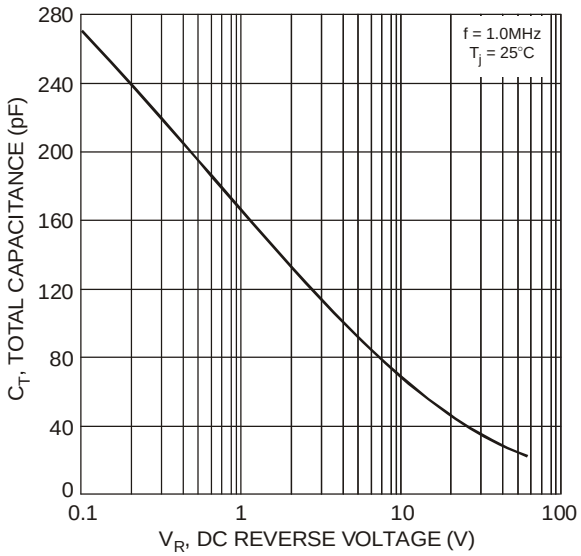

Fig. 2 Total Capacitance vs. Reverse Voltage

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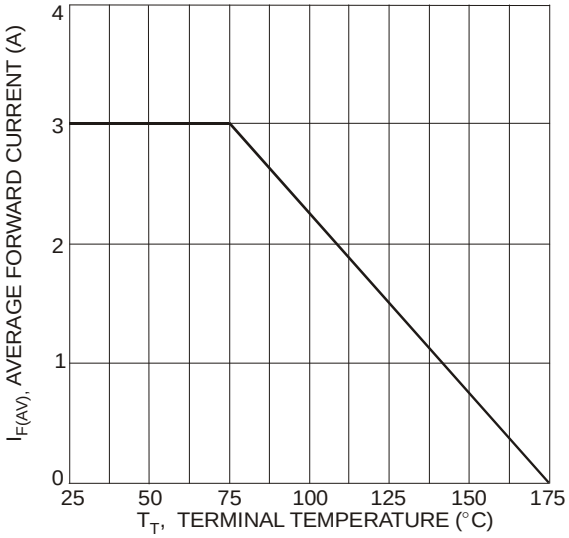


Fig. 3 Forward Current Derating Curve

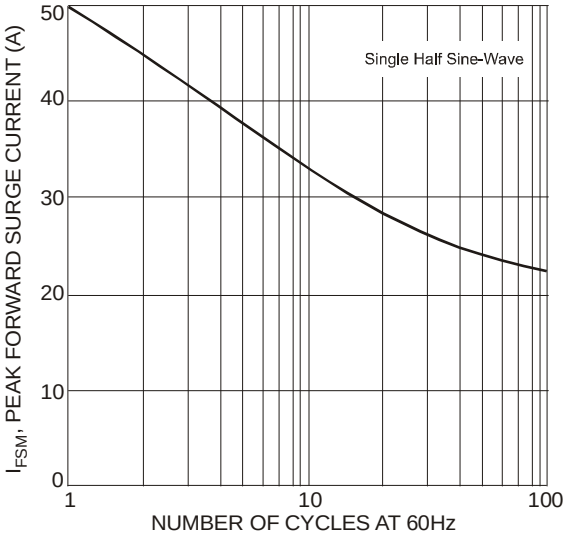
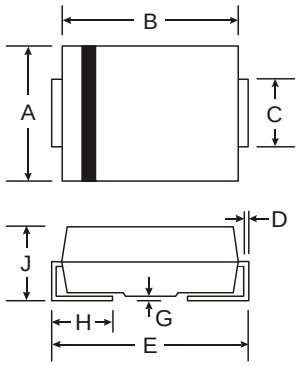


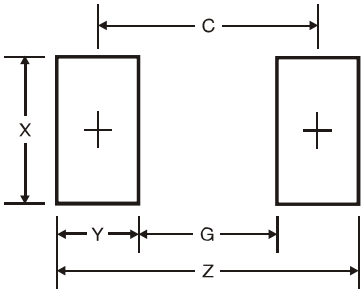
Fig. 4 Max Non-Repetitive Peak Forward Surge Current

Package Outline Dimensions



SMB		
Dim	**Min**	**Max**
A	3.30	3.94
B	4.06	4.57
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.05	0.20
H	0.76	1.52
J	2.00	2.50
All Dimensions in mm		

Suggested Pad Layout



Dimensions	Value (in mm)
Z	6.8
G	1.8
X	2.3
Y	2.5
C	4.3

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