

Schottky Barrier Rectifier

1A High Voltage



RoHS
Compliant



Features:

- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automated Assembly
- Low Power Loss, High Efficiency
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- High Temperature Soldering: 260°C/10 Second at Terminal

Mechanical Data:

Case	: SMB
Case Material	: Molded Plastic
Moisture Sensitivity	: Level 1 per J-STD-020
Terminals	: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208
Polarity	: Cathode Band or Cathode Notch
Weight	: SMB 0.093g (approximate)

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	V _{RRM}	100	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
RMS Reverse Voltage	V _{R(RMS)}	70	
Average Rectified Output Current @ T _T = 125°C	I _O	1	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	30	
Repetitive Peak Reverse Current	I _{RRM}	1	

Thermal Characteristics:

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Terminal (Note 1)	R _{θJT}	25	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Electrical Characteristics: @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V _F	-	-	0.79 0.69	V	I _F = 1A, T _A = 25°C I _F = 1A, T _A = 100°C
Leakage Current (Note 2)	I _R	-	-	0.5 5	mA	@ Rated V _R , T _A = 25°C @ Rated V _R , T _A = 100°C
Total Capacitance	C _T	-	-	80	pF	V _R = 4V, f = 1MHz

- Notes: 1. Valid provided that terminals are kept at ambient temperature.
2. Short duration pulse test used to minimize self-heating effect.

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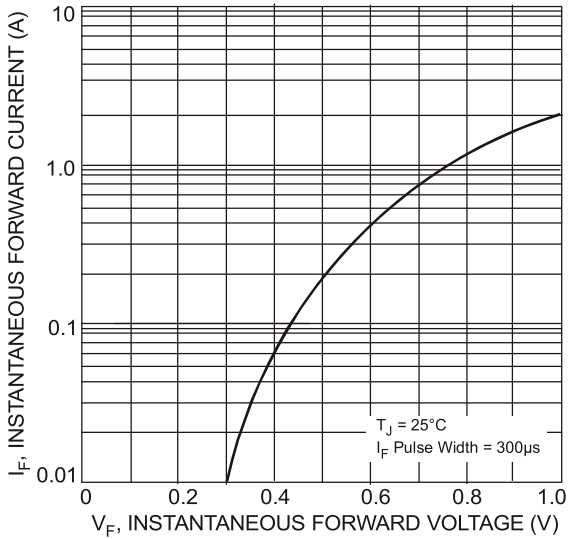


Fig. 1 Typical Forward Characteristics

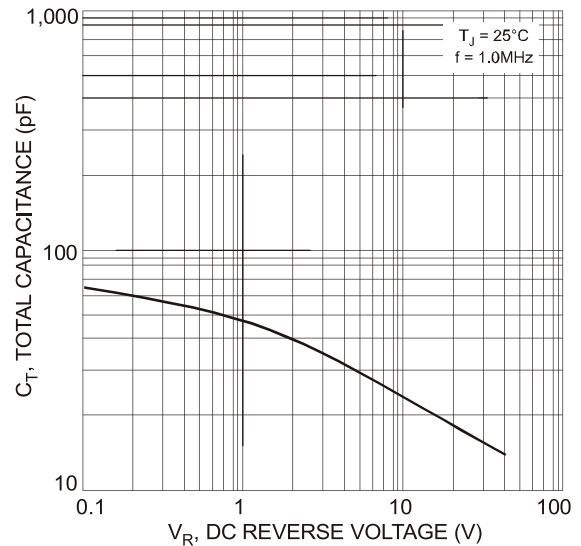


Fig. 2 Total Capacitance vs. Reverse Voltage

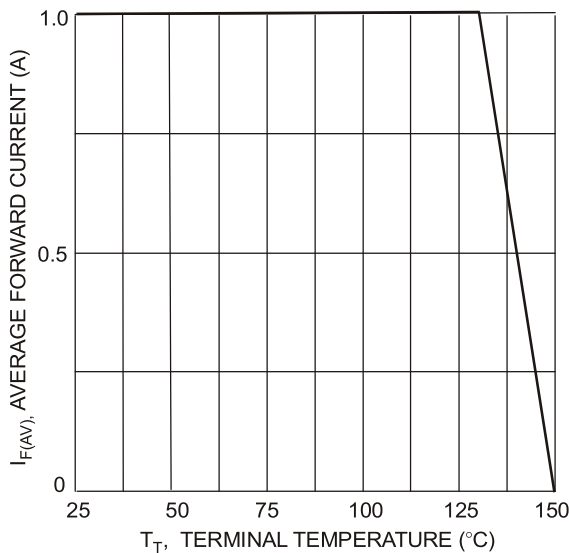


Fig. 3 Forward Current Derating Curve

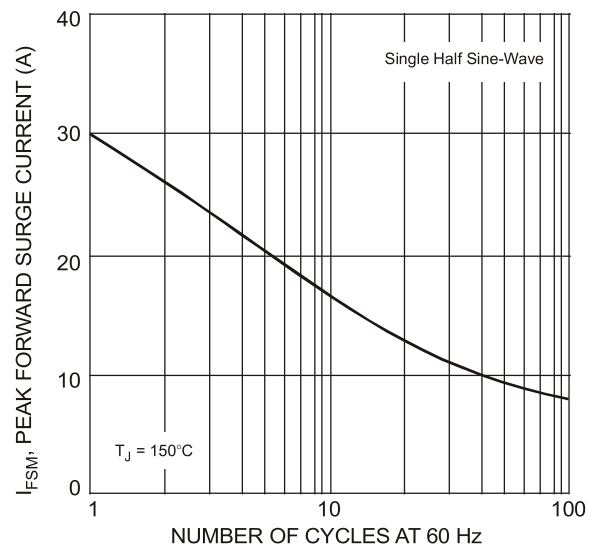


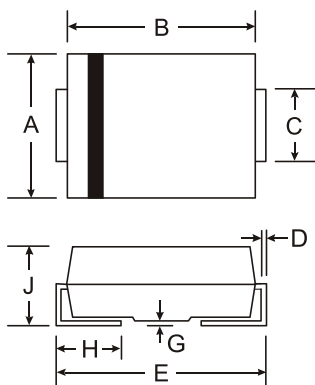
Fig. 4 Max Non-Repetitive Peak Forward Surge Current



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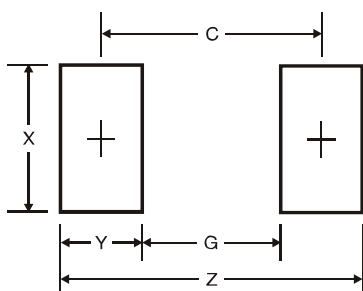
Package Outline Dimensions:



Dimensions	Min	Max
A	3.3	3.94
B	4.06	4.57
C	1.96	2.21
D	0.15	0.31
E	5	5.59
G	0.5	2
H	0.76	1.52
J	2	2.5

Dimensions : Millimetres

Suggested Pad Layout:



Dimensions	Value
Z	6.7
G	1.8
X	2.3
Y	2.5
C	4.3

Dimensions : Millimetres

Part Number Table

Description	Part Number
Rectifier, Schottky, 1A, 100V	B1100-13-F

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