

B270 - B2100

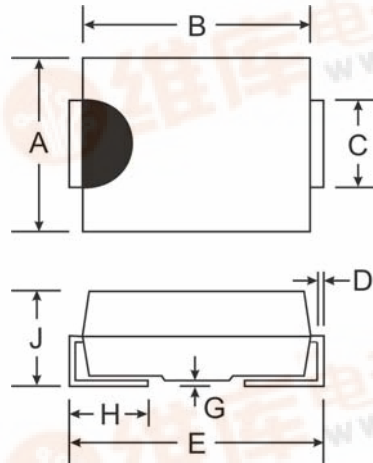
2.0A HIGH VOLTAGE SCHOTTKY BARRIER RECTIFIER

Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- 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 3)**

Mechanical Data

- Case: SMB
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208 ③
- Polarity: Cathode Band or Cathode Notch
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.093 grams (approximate)



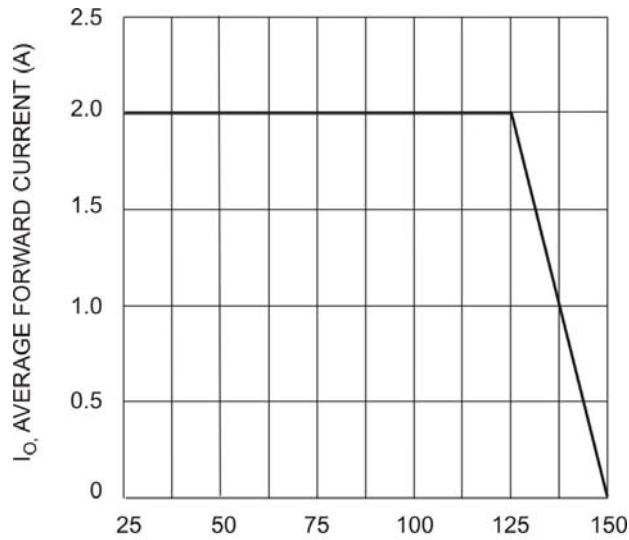
SMB		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.57
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @T_A = 25°C unless otherwise specified

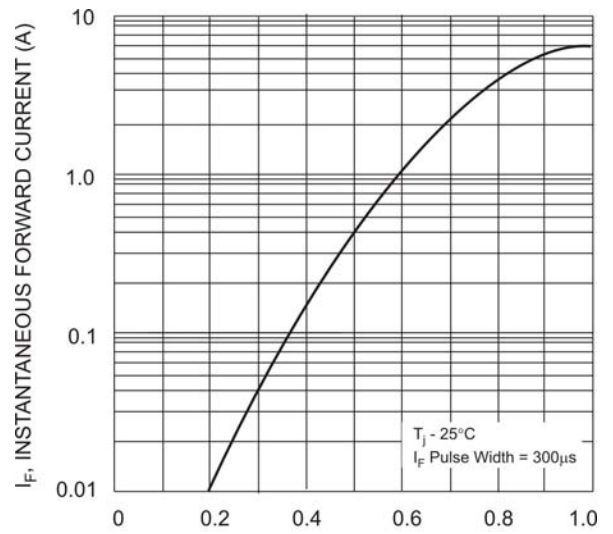
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	B270	B280	B290	B2100	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	70	80	90	100	V
Working Peak Reverse Voltage	V_{RWM}					
DC Blocking Voltage	V_R					
RMS Reverse Voltage	$V_{R(RMS)}$	49	56	63	70	V
Average Rectified Output Current @ $T_T = 125^{\circ}C$	I_O	2.0				A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	50				A
Forward Voltage @ $I_F = 2.0A$ @ $T_A = 25^{\circ}C$	V_{FM}	0.79				V
@ $T_A = 100^{\circ}C$		0.69				
Peak Reverse Current @ $T_A = 25^{\circ}C$	I_{RM}	0.5				mA
at Rated DC Blocking Voltage @ $T_A = 100^{\circ}C$		15				
Typical Total Capacitance (Note 2)	C_T	75				pF
Typical Thermal Resistance Junction to Terminal (Note 1)	$R_{\theta JT}$	15				$^{\circ}C/W$
Operating and Storage Temperature Range	T_i, T_{STG}	-65 to +150				$^{\circ}C$

- Notes: 1. Valid provided that terminals are kept at ambient temperature.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
3. RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, see EU Directive Annex Notes 5 and 7.



T_T , TERMINAL TEMPERATURE ($^{\circ}\text{C}$)
Fig. 1 Forward Current Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics

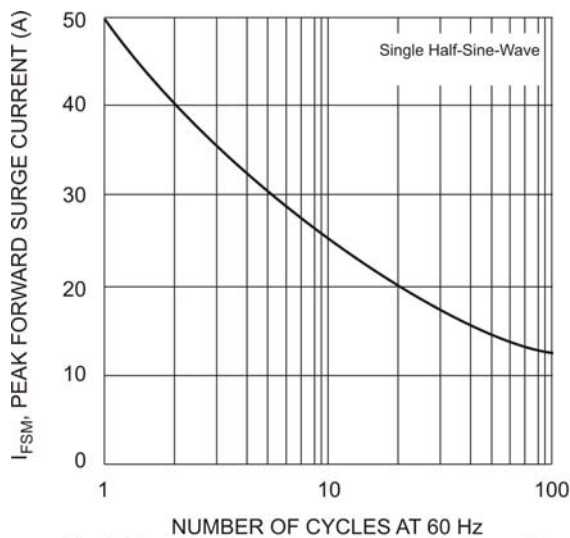
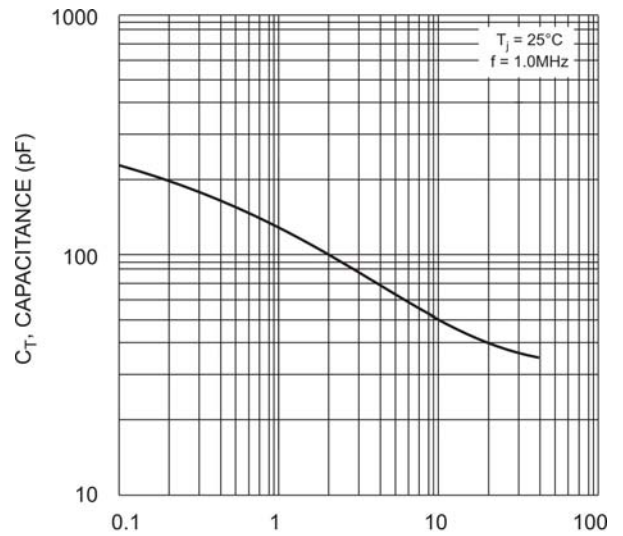


Fig. 3 Max Non-Repetitive Peak Forward Surge Current



V_R , REVERSE VOLTAGE (V)
Fig. 4 Typical Total Capacitance

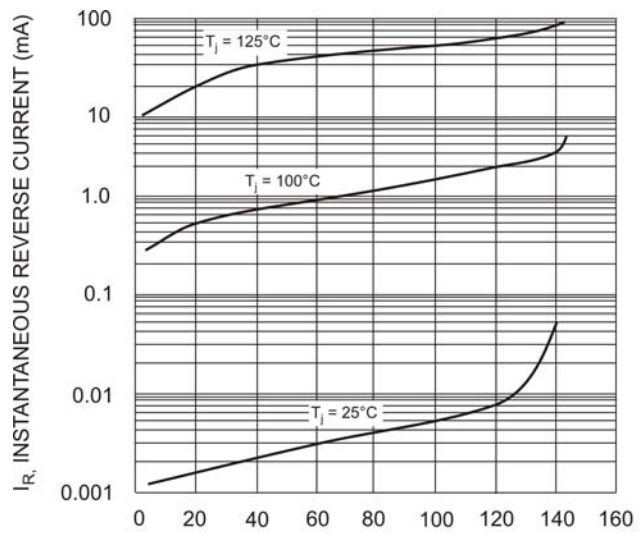


Fig. 5 Typical Reverse Characteristics



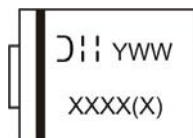
Ordering Information (Note 4)

Device*	Packaging	Shipping
B2xxx-13-F	SMB	3000/Tape & Reel

* x = Device type, e.g. B270-13-F

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



XXXX = Product type marking code, ex: B290 (SMB package)

D|| = Manufacturers' code marking

YWW = Date code marking

Y = Last digit of year ex: 2 for 2002

WW = Week code 01 to 52

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