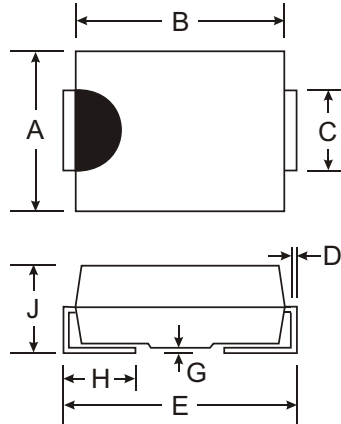


### Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automatic 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

### Mechanical Data

- Case: SMB, Molded Plastic
- Plastic Material: UL Flammability Classification Rating 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solder Plated Terminal - Solderable per MIL-STD-202, Method 208
- Also Available in Lead Free Plating (Matte Tin Finish). Please See Ordering Information, Note 4, on Page 2
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.093 grams (approx.)
- Mounting Position: Any



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<sub>A</sub> = 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 Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	70	80	90	100	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	49	56	63	70	V
Average Rectified Output Current @ T <sub>T</sub> = 125°C	I <sub>O</sub>	2.0				A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	50				A
Forward Voltage @ I <sub>F</sub> = 2.0A @ T <sub>A</sub> = 25° @ T <sub>A</sub> = 100°	V <sub>FM</sub>	0.79 0.69				V
Peak Reverse Current at Rated DC Blocking Voltage @ T <sub>A</sub> = 25°C @ T <sub>A</sub> = 100°C	I <sub>RM</sub>	0.5 15				mA
Typical Total Capacitance (Note 2)	C <sub>T</sub>	75				pF
Typical Thermal Resistance Junction to Terminal (Note 1)	R <sub>θJT</sub>	15				°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150				°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.

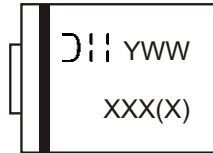
**Ordering Information** (Note 3 & 4)

Device*	Packaging	Shipping
B2x-13	SMB	3000/Tape & Reel

Notes: 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

\* x = Device type, e.g. B270-13 (SMB package).

4. For lead free terminal plating part number, please add "-F" suffix to part number above. Example: B250-13-F.



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

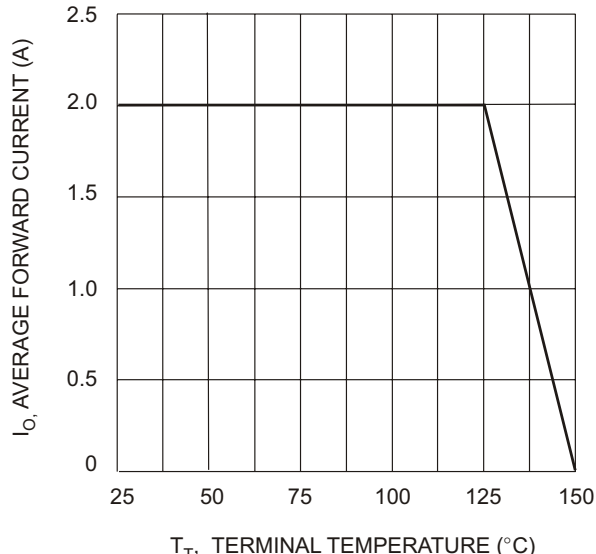


Fig. 1 Forward Current Derating Curve

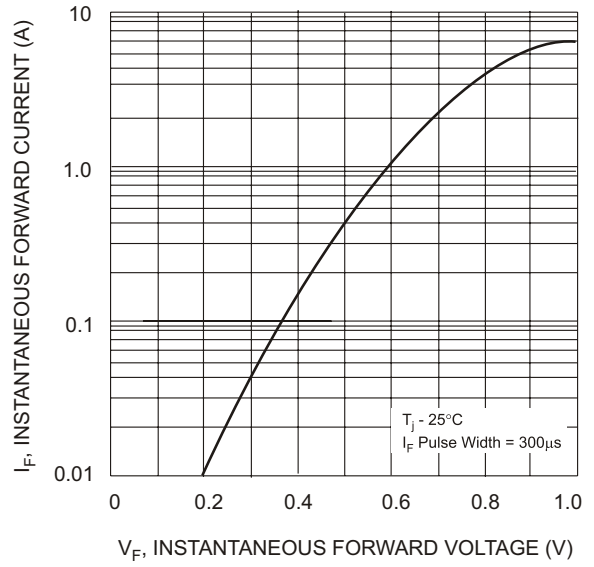


Fig. 2 Typical Forward Characteristics

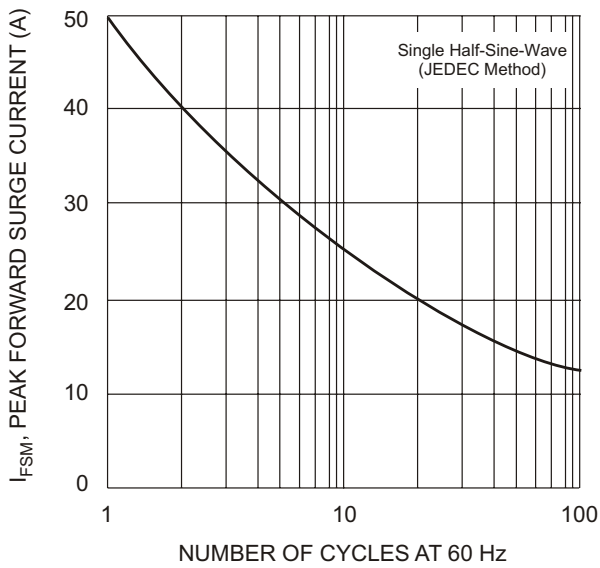


Fig. 3 Max Non-Repetitive Peak Forward Surge Current

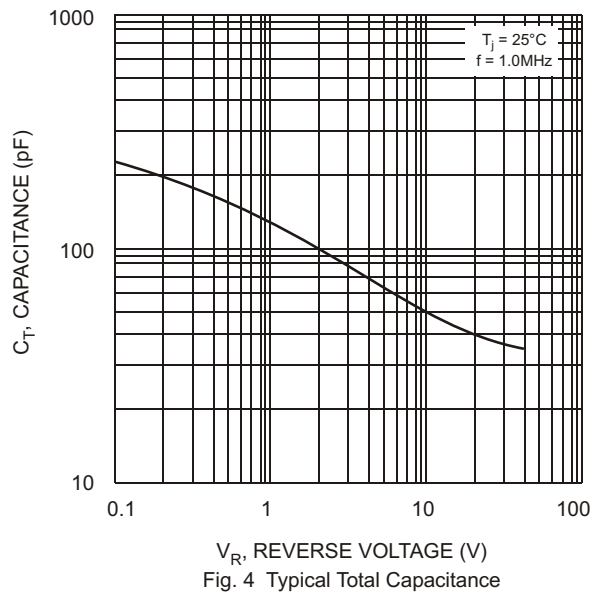


Fig. 4 Typical Total Capacitance



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