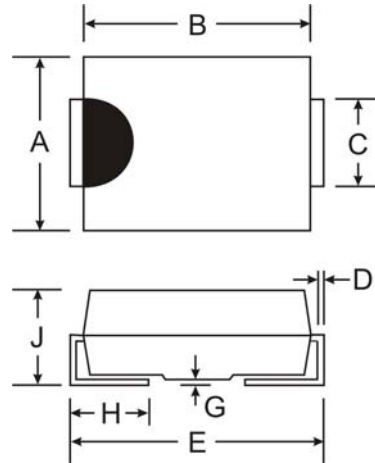


Features

- 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)**



| 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 | | |

Mechanical Data

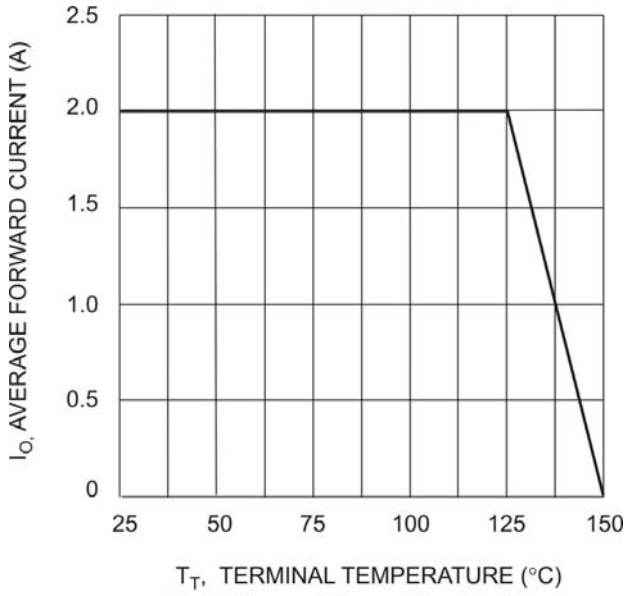
- Case: SMB
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208 (E3)
- Polarity: Cathode Band or Cathode Notch
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.093 grams (approximate)

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

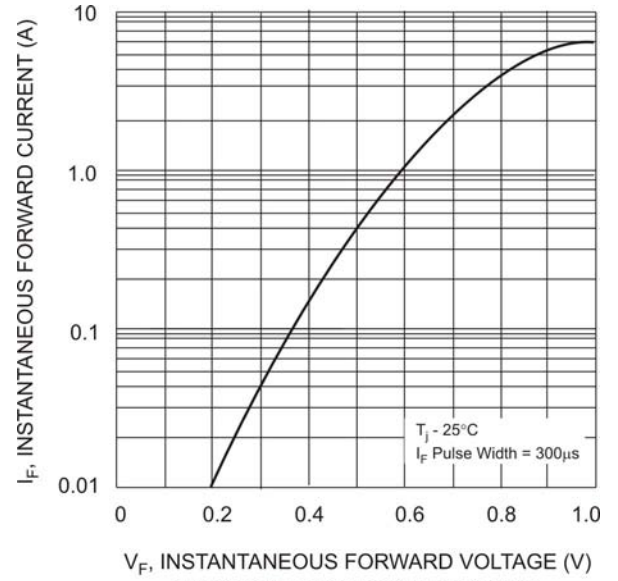
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| 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°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°C | V _{FM} | 0.79 | | | | V |
| @ T _A = 100°C | | 0.69 | | | | |
| Peak Reverse Current at Rated DC Blocking Voltage @ T _A = 25°C | I _{RM} | 0.5 | | | | mA |
| @ T _A = 100°C | | 15 | | | | |
| Typical Total Capacitance (Note 2) | C _T | 75 | | | | pF |
| Typical Thermal Resistance Junction to Terminal (Note 1) | R _{θJT} | 15 | | | | °C/W |
| Operating and Storage Temperature Range | T _i , T _{STG} | -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.
 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 (°C)
Fig. 1 Forward Current Derating Curve



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

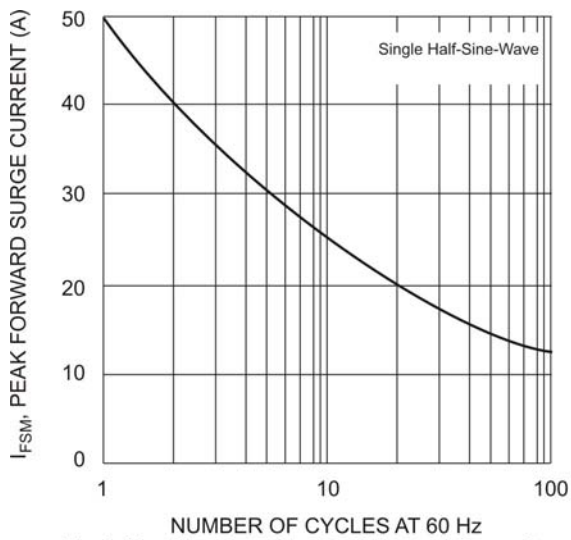
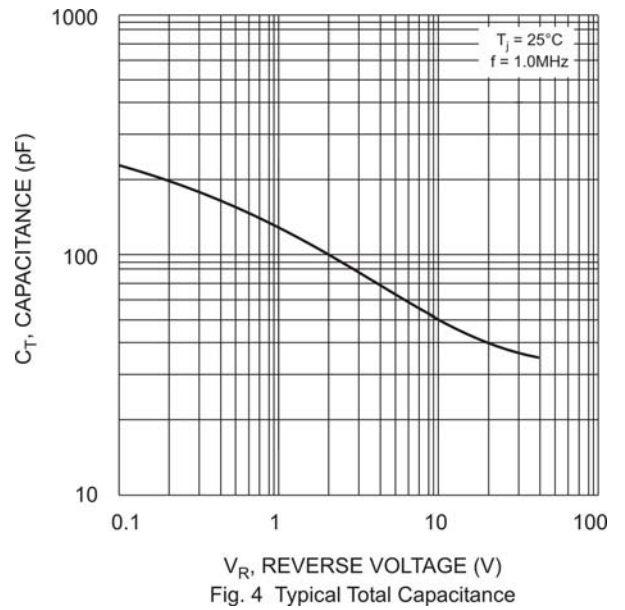


Fig. 3 Max Non-Repetitive Peak Forward Surge Current



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

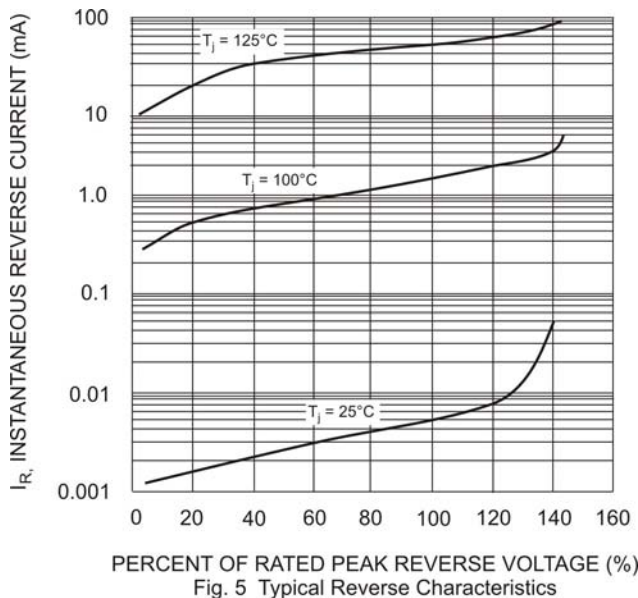


Fig. 5 Typical Reverse Characteristics



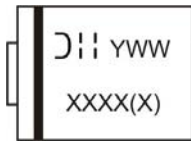
Ordering Information (Note 4)

| 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)
DII = 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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