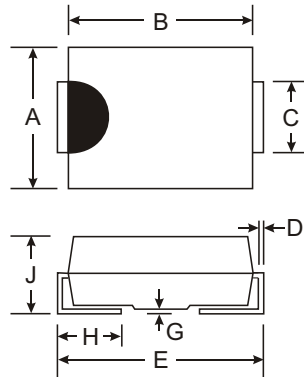


Features

- 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
- Available in Lead Free Version



| Dim | SMA | | SMB | |
|-----|------|------|------|------|
| | Min | Max | Min | Max |
| A | 2.29 | 2.92 | 3.30 | 3.94 |
| B | 4.00 | 4.60 | 4.06 | 4.57 |
| C | 1.27 | 1.63 | 1.96 | 2.21 |
| D | 0.15 | 0.31 | 0.15 | 0.31 |
| E | 4.80 | 5.59 | 5.00 | 5.59 |
| G | 0.10 | 0.20 | 0.10 | 0.20 |
| H | 0.76 | 1.52 | 0.76 | 1.52 |
| J | 2.01 | 2.62 | 2.00 | 2.62 |

All Dimensions in mm

Mechanical Data

- Case: Molded Plastic
- Plastic Material - UL Flammability Classification 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
- Approx. Weight: SMA 0.064 grams
SMB 0.093 grams
- Mounting Position: Any
- Marking: Type Number

No Suffix Designates SMB Package
"A" Suffix Designates SMA Package

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 | B220/A | B230/A | B240/A | B250/A | B260/A | Unit |
|--|-----------------------------------|-------------|--------|--------|--------|--------|------|
| Peak Repetitive Reverse Voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | V |
| Working Peak Reverse Voltage | V _{RWM} | | | | | | |
| DC Blocking Voltage | V _R | | | | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 14 | 21 | 28 | 35 | 42 | V |
| Average Rectified Output Current @ T _T = 100°C | I _O | 2.0 | | | | | A |
| Non-Repetitive Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 50 | | | | | A |
| Forward Voltage @ I _F = 2.0A | V _{FM} | 0.50 | | 0.70 | | | V |
| Peak Reverse Current @ T _A = 25°C at Rated DC Blocking Voltage @ T _A = 100°C | I _{RM} | 0.5 | | | 20 | | mA |
| Typical Junction Capacitance (Note 2) | C _j | 200 | | | | | pF |
| Typical Thermal Resistance, Junction to Terminal | R _{θJT} | 20 | | | | | K/W |
| Typical Thermal Resistance, Junction to Ambient (Note 1) | R _{θJA} | 25 | | | | | K/W |
| Operating and Storage Temperature Range | T _j , T _{STG} | -65 to +150 | | | | | °C |

Notes: 1. Thermal Resistance: Junction to terminal, unit mounted on PC board with 5.0 mm² (0.013 mm thick) copper pad as heat sink.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

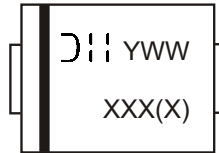
Ordering Information (Note 3 & 4)

| Device* | Packaging | Shipping |
|-------------------|------------|--------------------------------------|
| B2x-13 B2xB-13 | SMA SMB | 5000/Tape & Reel 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. B260A-13 (SMA package); B240-13 (SMB package).

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



XXX = Product type marking code, ex: B220A (SMA package)
 XXXX = Product type marking code, ex: B230 (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

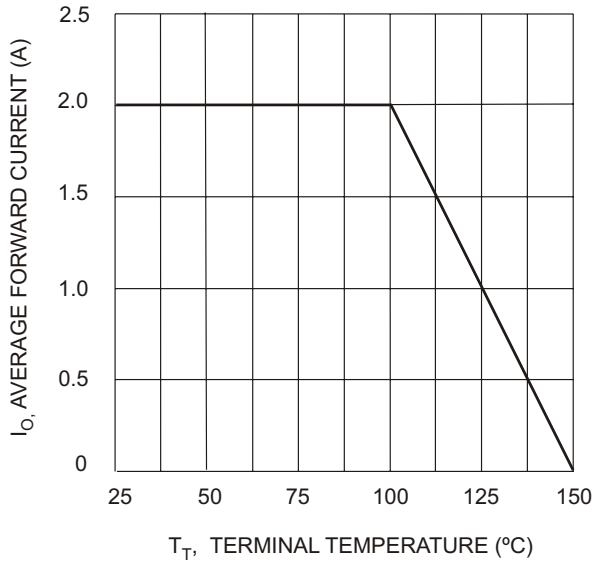


Fig. 1 Forward Current Derating Curve

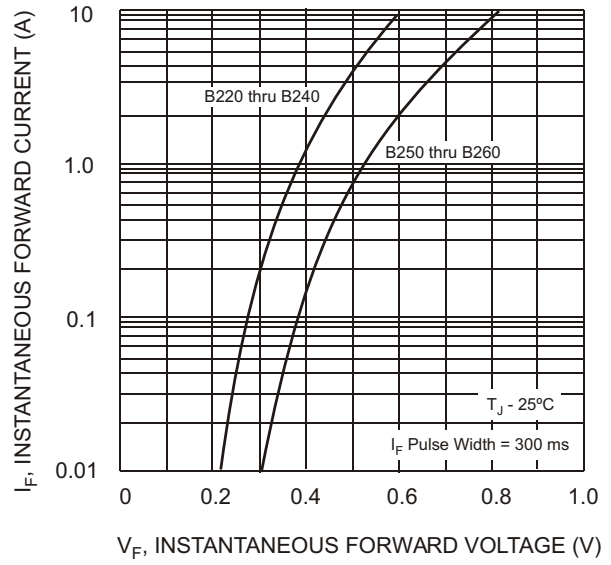


Fig. 2 Typical Forward Characteristics

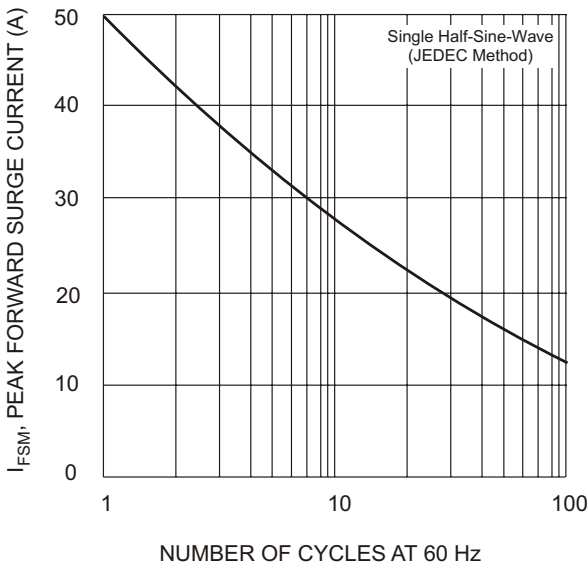


Fig. 3 Max Non-Repetitive Peak Forward Surge Current

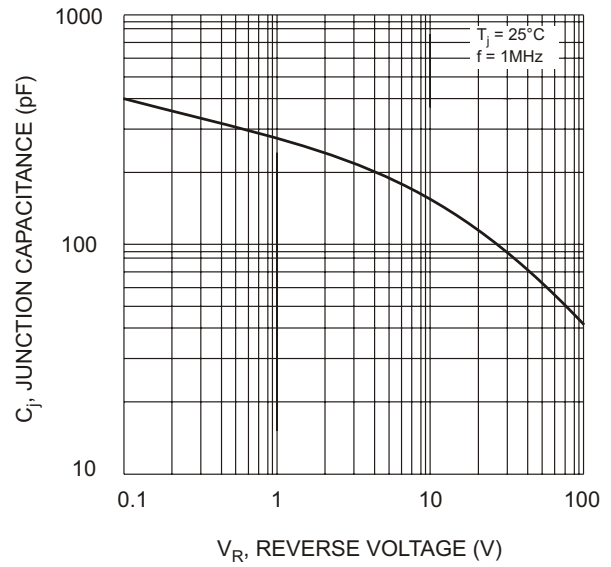


Fig. 4 Typical Junction Capacitance

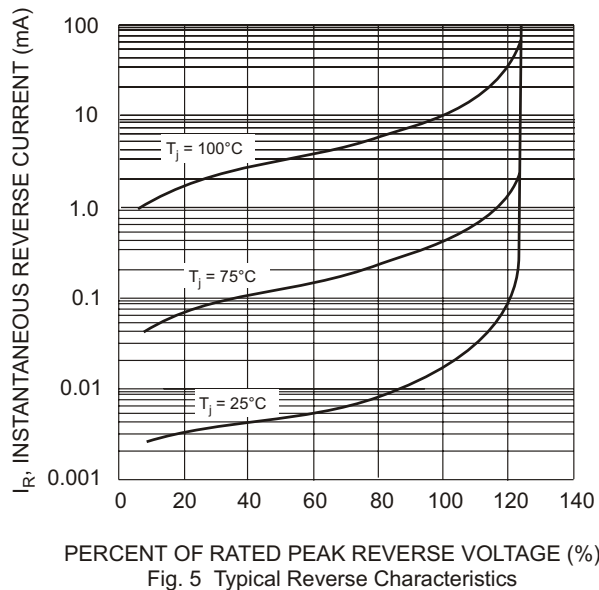


Fig. 5 Typical Reverse Characteristics