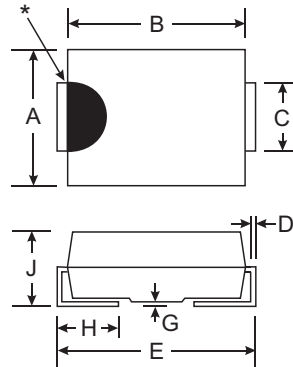


Features

Guard Ring Die Construction for Transient Protection
 Ideally Suited for Automatic Assembly
 Low Power Loss, High Efficiency
 Surge Overload Rating to 100A Peak
 For Use in Low Voltage, High Frequency Inverters, Free
 Wheeling, and Polarity Protection Application
Lead Free Finish/RoHS Compliant (Note 4)

Mechanical Data

Case: SMA
 Case Material: Molded Plastic. UL Flammability
 Classification 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
 Marking Information: See Page 3
 Ordering Information: See Page 3
 Approximate Weight: SMA 0.064 grams



| Dim | SMA | |
|----------------------|------|------|
| | Min | Max |
| A | 2.29 | 2.92 |
| B | 4.00 | 4.60 |
| C | 1.27 | 1.63 |
| D | 0.15 | 0.31 |
| E | 4.80 | 5.59 |
| G | 0.10 | 0.20 |
| H | 0.76 | 1.52 |
| J | 2.01 | 2.30 |
| All Dimensions in mm | | |

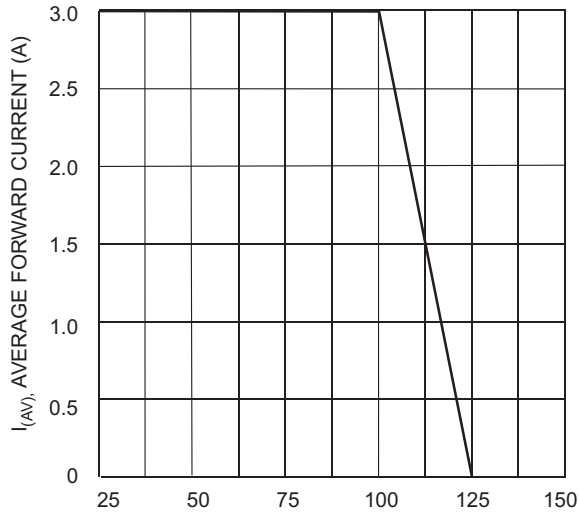
*: Note: Device may have a semicircular indentation/
 notch on one side of the device (as shown).

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

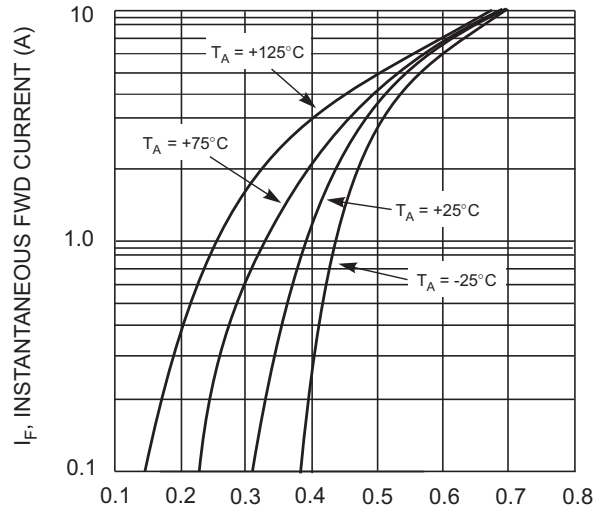
Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

| Characteristic | Symbol | B320A | B330A | B340A | B350A | B360A | Unit |
|--------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------|-------|-------|-------|-------|----------------------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 20 | 30 | 40 | 50 | 60 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 14 | 21 | 28 | 35 | 42 | V |
| Average Rectified Output Current @ $T_T = 100^{\circ}\text{C}$ | I_O | 3.0 | | | | | A |
| Non-Repetitive Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 100 | | | | | A |
| Forward Voltage (Note 3) @ $I_F = 3.0\text{A}$ | V_{FM} | 0.50 | | | 0.70 | | V |
| Peak Reverse Current @ $T_A = 25^{\circ}\text{C}$ at Rated DC Blocking Voltage (Note 3) @ $T_A = 100^{\circ}\text{C}$ | I_{RM} | 0.5 20 | | | | | mA |
| Typical Capacitance (Note 2) | C_T | 200 | | | | | pF |
| Typical Thermal Resistance, Junction to Terminal | R_{JT} | 25 | | | | | $^{\circ}\text{C/W}$ |
| Typical Thermal Resistance, Junction to Ambient (Note 1) | R_{JA} | 100 | | | | | $^{\circ}\text{C/W}$ |
| Operating Temperature Range | T_j | -55 to +125 | | | | | $^{\circ}\text{C}$ |
| Storage Temperature Range | T_{STG} | -55 to +150 | | | | | $^{\circ}\text{C}$ |

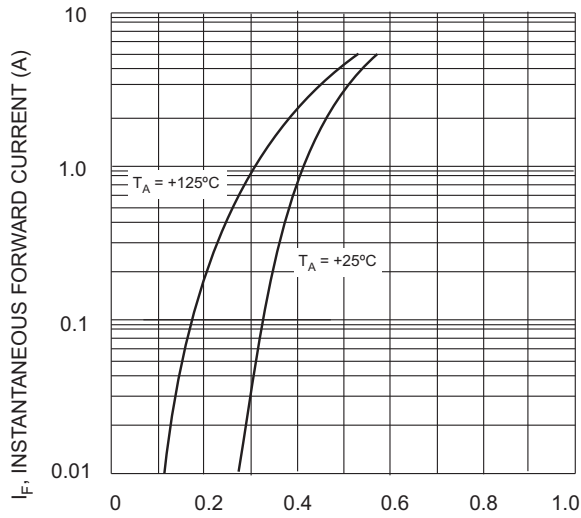
- Notes:
1. Thermal Resistance: Junction to terminal, unit mounted on glass epoxy substrate with 2x3mm copper pad.
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
 3. Short duration test pulse used to minimize self-heating effect.
 4. RoHS revision 13.2.2003. High Temperature Solder Exemption Applied, see *EU Directive Annex Note 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 - B320A thru B340A



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 3 Typ. Forward Characteristics - B350A thru B360A

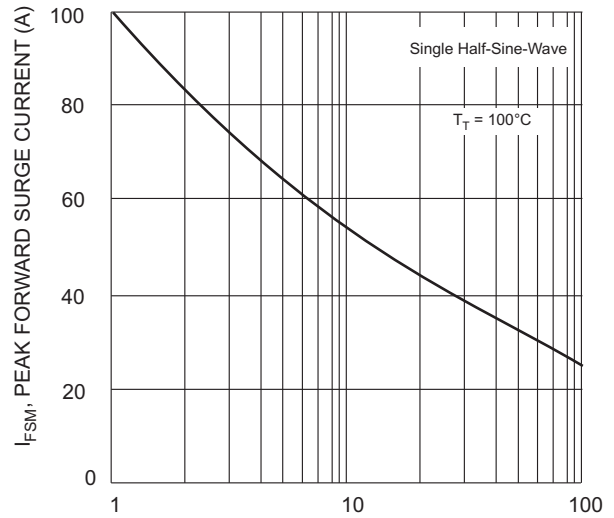
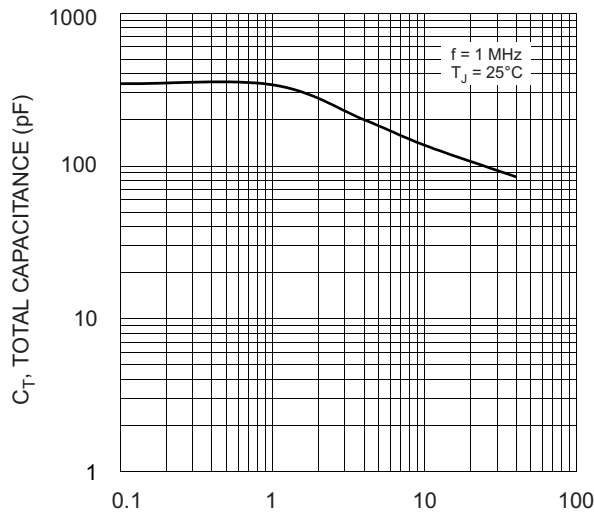
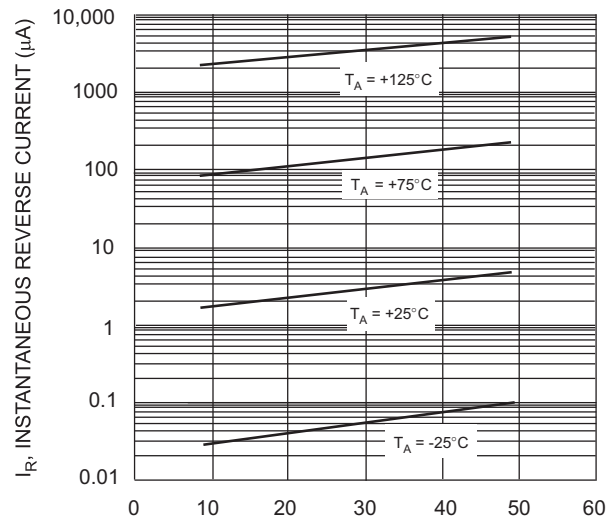


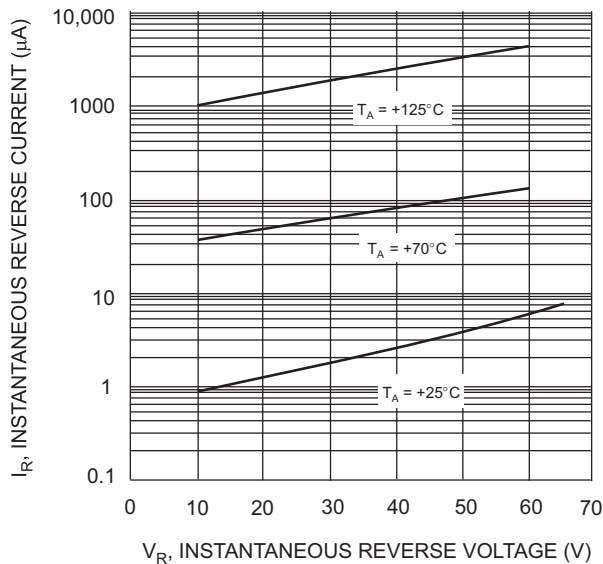
Fig. 4 Max Non-Repetitive Peak Fwd Surge Current



V_R , DC REVERSE VOLTAGE (V)
Fig. 5 Typical Capacitance



V_R , INSTANTANEOUS REVERSE VOLTAGE (V)
Fig. 6 Typical Reverse Characteristics, B320A thru B340A



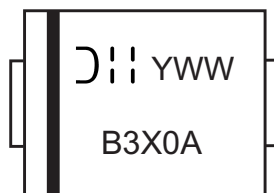
Ordering Information (Note 5)

| Device* | Packaging | Shipping |
|------------|-----------|------------------|
| B3XXA-13-F | SMA | 5000/Tape & Reel |

Notes: 5. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

* xx = Device type, e.g. B320A-13-F (SMA package).

Marking Information



B3X0A = Product type marking code, ex: B320A
 ⌐⌐⌐ = Manufacturers' code marking
 YWW = Date code marking
 Y = Last digit of year ex: 2 for 2002
 WW = Week code 01 to 52

Note: Device has a cathode band (as shown above) and may also have a cathode notch (as shown on Page 1).

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