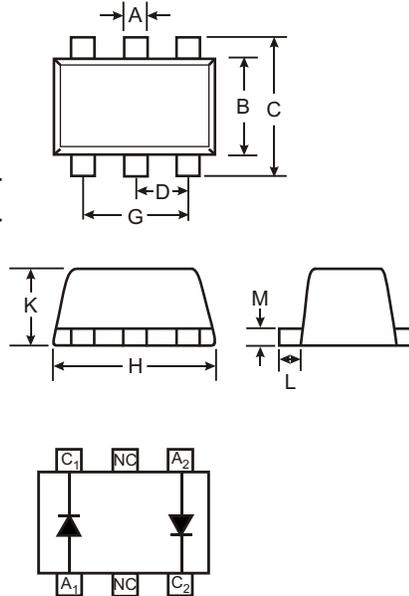


Features

- Surface Mount Package Ideally Suited for Automatic Insertion
- Very Low Leakage Current
- Lead Free By Design/RoHS Compliant (Note 1)

Mechanical Data

- Case: SOT-563, Molded Plastic
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Connections: See Diagram
- Terminals: Finish Matte Tin annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Marking & Type Code Information: See Last Page
- Ordering Information: See Last Page
- Weight: 0.003 grams (approximate)



| SOT-563 | | | |
|----------------------|------|------|------|
| Dim | Min | Max | Typ |
| A | 0.15 | 0.30 | 0.25 |
| B | 1.10 | 1.25 | 1.20 |
| C | 1.55 | 1.70 | 1.60 |
| D | 0.50 | | |
| G | 0.90 | 1.10 | 1.00 |
| H | 1.50 | 1.70 | 1.60 |
| K | 0.56 | 0.60 | 0.60 |
| L | 0.10 | 0.30 | 0.20 |
| M | 0.10 | 0.18 | 0.11 |
| All Dimensions in mm | | | |

Maximum Ratings @ T_A = 25 C unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|--|--|-------------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 85 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 60 | V |
| Forward Continuous Current (Note 2) | I _{FM} | 215 | mA |
| Repetitive Peak Forward Current | I _{FRM} | 500 | mA |
| Non-Repetitive Peak Forward Surge Current | I _{FSM} | 4.0 | A |
| @ t = 1.0 s | | 1.0 | |
| @ t = 1.0ms @ t = 1.0s | | 0.5 | |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +150 | C |

Thermal Characteristics @ T_A = 25 C unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|---|-----------------|-------|------|
| Power Dissipation (Note 2) | P _d | 150 | mW |
| Thermal Resistance Junction to Ambient Air (Note 2) | R _{JA} | 833 | C/W |

Electrical Characteristics @ T_A = 25 C unless otherwise specified

| Characteristic | Symbol | Min | Typ | Max | Unit | Test Condition |
|------------------------------------|--------------------|-----|-----|----------------------------|----------|--|
| Reverse Breakdown Voltage (Note 3) | V _{(BR)R} | 85 | | | V | I _R = 100 A |
| Forward Voltage | V _{FM} | | | 0.90 1.0 1.1 1.25 | V | I _F = 1.0mA I _F = 10mA I _F = 50mA I _F = 150mA |
| Leakage Current (Note 3) | I _{RM} | | | 5.0 80 | nA nA | V _R = 75V V _R = 75V, T _J = 150 C |
| Total Capacitance | C _T | | 2 | | pF | V _R = 0, f = 1.0MHz |
| Reverse Recovery Time | t _{rr} | | | 3.0 | s | I _F = I _R = 10mA, t _{rr} = 0.1 x I _R , R _L = 100 |

- Note:
- No purposefully added lead.
 - Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 - Short duration test pulse used to minimize self-heating effect.

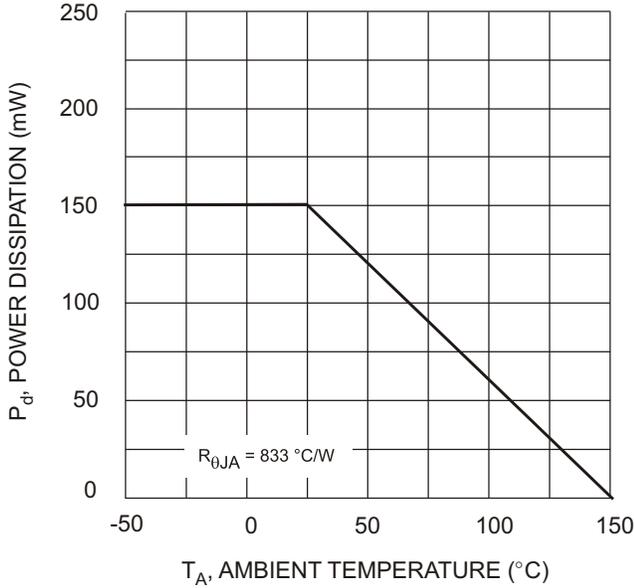


Fig. 1, Derating Curve - Total

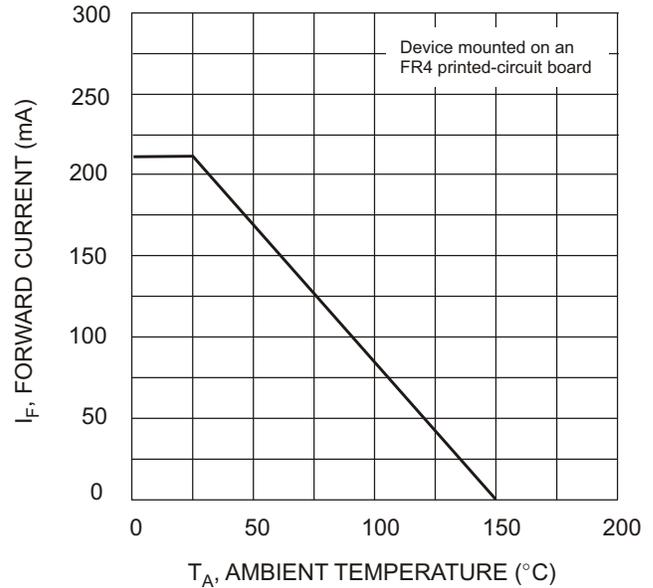


Fig. 2 Current Derating Curve

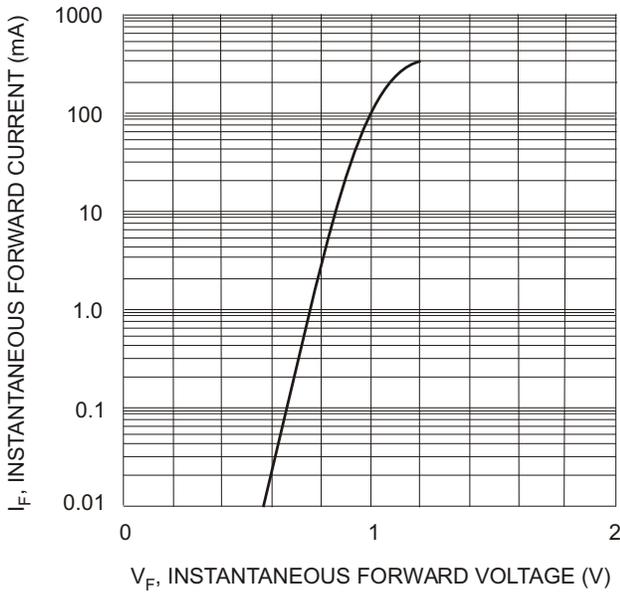


Fig. 3 Typical Forward Characteristics

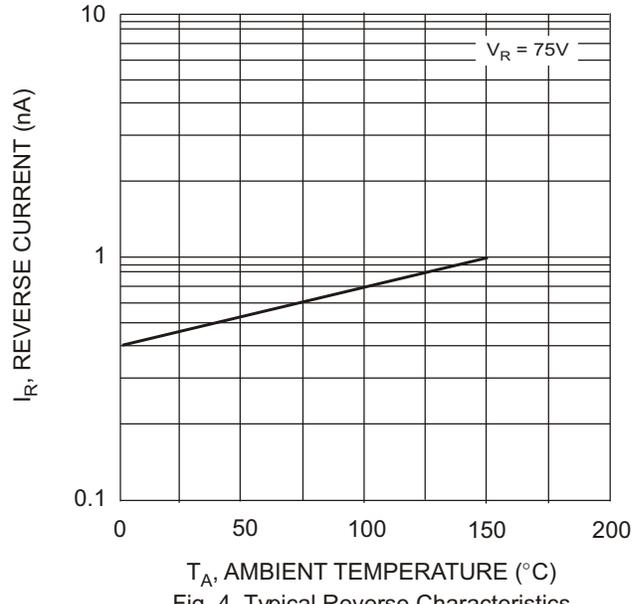


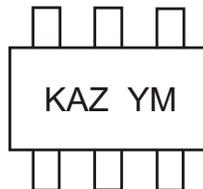
Fig. 4 Typical Reverse Characteristics

Ordering Information (Note 4)

| Device | Packaging | Shipping |
|-----------|-----------|------------------|
| BAS116V-7 | SOT-563 | 3000/Tape & Reel |

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

Marking Information



KAZ = Product Type Marking Code (See Page 1 Diagrams)
 YM = Date Code Marking
 Y = Year (ex: R = 2004)
 M = Month (ex: 9 = September)

Date Code Key

| Year | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | | |
|-------|-----|------|-------|------|------|------|------|------|------|------|-----|-----|
| Code | | R | S | T | U | V | W | X | Y | Z | | |
| Month | Jan | Feb | March | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | O | N | D |

IMPORTANT NOTICE

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.