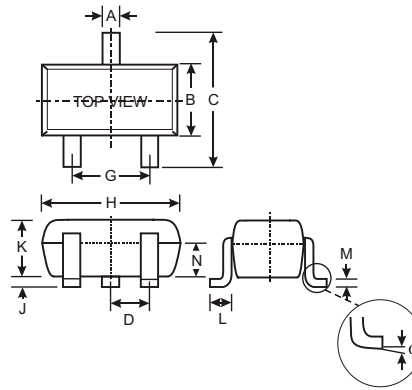


Features

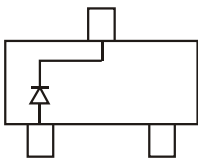
- Ultra-Small Surface Mount Package
- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance

Mechanical Data

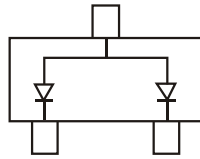
- Case: SOT-523, Molded Plastic
- Case Material - UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Marking: See Diagrams Below & Page 3



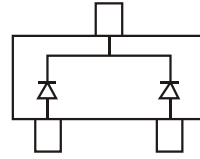
| SOT-523 | | | |
|----------------------|------|------|------|
| Dim | Min | Max | Typ |
| A | 0.15 | 0.30 | 0.22 |
| B | 0.75 | 0.85 | 0.80 |
| C | 1.45 | 1.75 | 1.60 |
| D | — | — | 0.50 |
| G | 0.90 | 1.10 | 1.00 |
| H | 1.50 | 1.70 | 1.60 |
| J | 0.00 | 0.10 | 0.05 |
| K | 0.60 | 0.80 | 0.75 |
| L | 0.10 | 0.30 | 0.22 |
| M | 0.10 | 0.20 | 0.12 |
| N | 0.45 | 0.65 | 0.50 |
| α | 0° | 8° | — |
| All Dimensions in mm | | | |



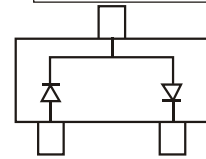
MMBD4448HT Marking: A3



MMBD4448HTA Marking: A6



MMBD4448HTC Marking: A7



MMBD4448HTS Marking: AB

Maximum Ratings @ T_A = 25°C unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|--|--|-------------|------|
| Non-Repetitive Peak Reverse Voltage | V _{RM} | 100 | V |
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 80 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 57 | V |
| Forward Continuous Current (Note 1) | I _{FM} | 500 | mA |
| Average Rectified Output Current (Note 1) | I _O | 250 | mA |
| Non-Repetitive Peak Forward Surge Current @ t = 1.0μs @ t = 1.0s | I _{FSM} | 4.0 2.0 | A |
| Power Dissipation (Note 1) | P _d | 150 | mW |
| Thermal Resistance Junction to Ambient (Note 1) | R _{θJA} | 833 | °C/W |
| Operating and Storage Temperature Range | T _j , T _{STG} | -65 to +150 | °C |

Electrical Characteristics @ T_A = 25°C unless otherwise specified

| Characteristic | Symbol | Min | Max | Unit | Test Condition |
|------------------------------------|--------------------|------|------------------------------|----------------------|--|
| Reverse Breakdown Voltage (Note 2) | V _{(BR)R} | 80 | — | V | I _R = 2.5μA |
| Forward Voltage (Note 2) | V _F | 0.62 | 0.72 0.855 1.0 1.25 | V | I _F = 5.0mA I _F = 10mA I _F = 100mA I _F = 150mA |
| Leakage Current (Note 2) | I _R | — | 100 50 30 25 | nA μA μA nA | V _R = 70V V _R = 75V, T _j = 150°C V _R = 25V, T _j = 150°C V _R = 20V |
| Total Capacitance | C _T | — | 3.5 | pF | V _R = 6V, f = 1.0MHz |
| Reverse Recovery Time | t _{rr} | — | 4.0 | ns | V _R = 6V, I _F = 5mA |

Notes: 1. Device mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.

2. Short duration test pulse used to minimize self-heating effect.

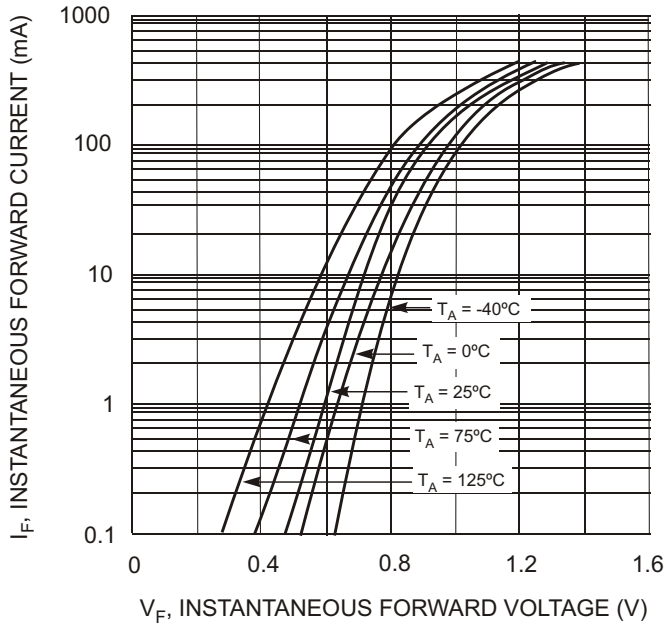


Fig. 1 Typical Forward Characteristics

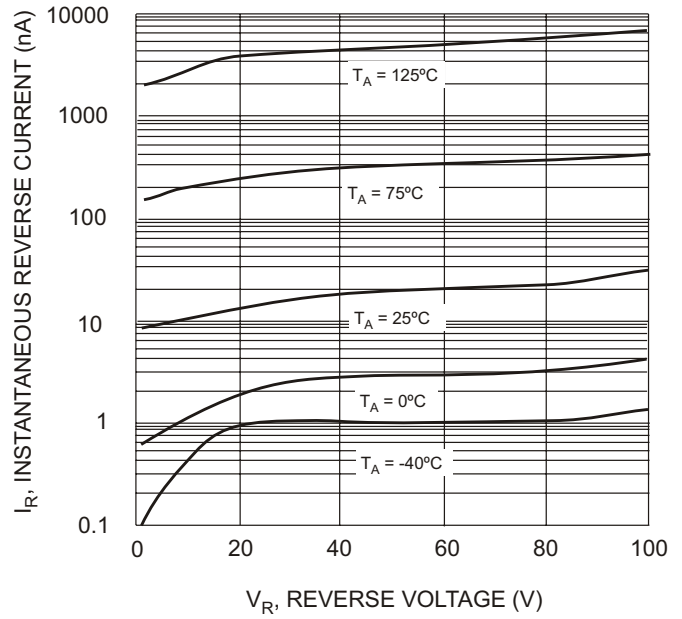


Fig. 2 Typical Reverse Characteristics

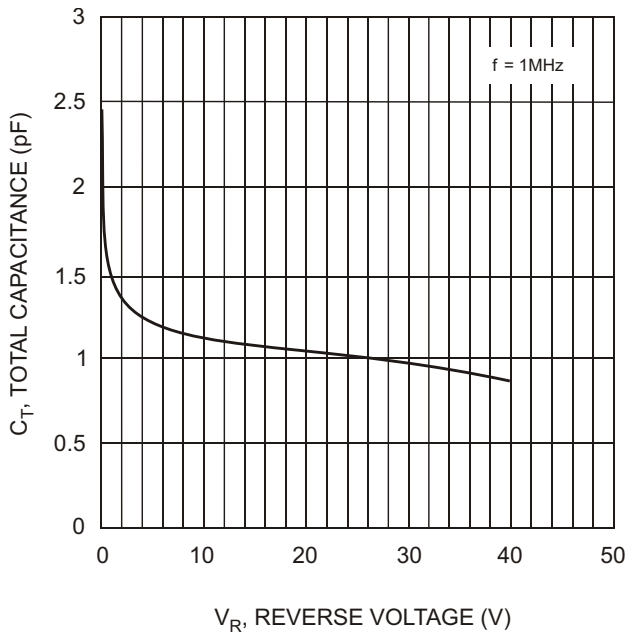


Fig. 3 Typical Capacitance vs. Reverse Voltage

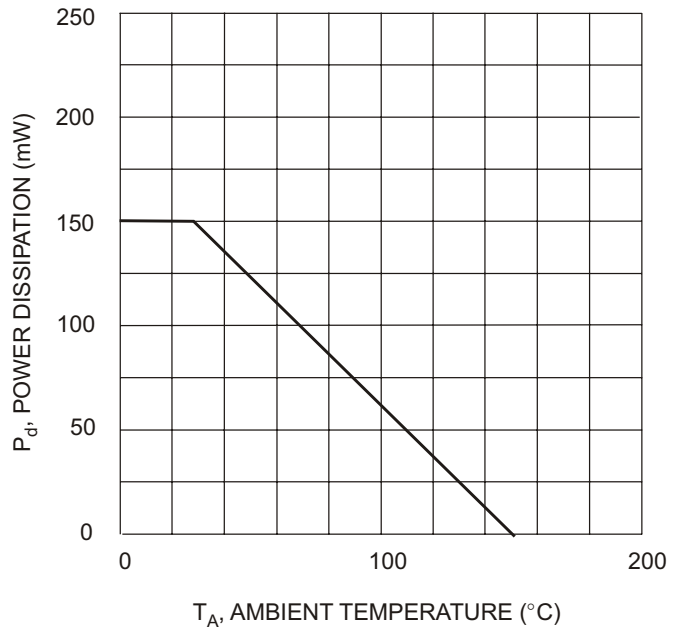
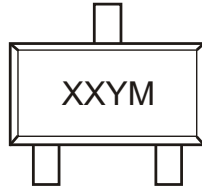


Fig. 4 Power Derating Curve, Total Package

Ordering Information (Note 3)

| Device | Packaging | Shipping |
|---------------|-----------|------------------|
| MMBD4448HT-7 | SOT-523 | 3000/Tape & Reel |
| MMBD4448HTA-7 | SOT-523 | 3000/Tape & Reel |
| MMBD4448HTC-7 | SOT-523 | 3000/Tape & Reel |
| MMBD4448HTS-7 | SOT-523 | 3000/Tape & Reel |

Marking Information



XX = Product Type Marking Code (See Page 1 Diagrams)
 YM = Date Code Marking
 Y = Year (ex: N = 2002)
 M = Month (ex: 9 = September)

Date Code Key

| Year | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|------|------|------|------|------|------|------|------|------|------|
| Code | M | N | P | R | S | T | U | V | W |

| 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 |

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