



**THE DATASHEET OF
MMBD4448HT-TP**



Features

- Fast Switching Speed
- High Conductance, Power Dissipation
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

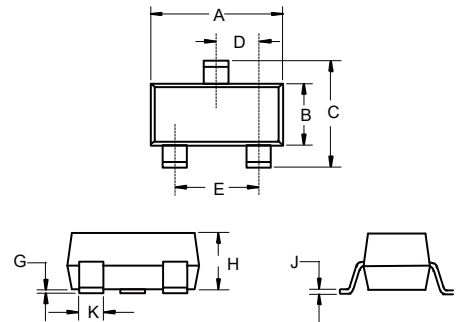
- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance: 833°C/W Junction to Ambient

| MCC Part Number | Device Marking | Repetitive Peak Reverse Voltage V_{RRM} | RMS Reverse Voltage $V_{R(RMS)}$ | DC Blocking Voltage V_R |
|-----------------|----------------|---|----------------------------------|---------------------------|
| MMBD4448HT | A3 | 80V | 57V | 80V |
| MMBD4448HTA | A6 | 80V | 57V | 80V |
| MMBD4448HTC | A7 | 80V | 57V | 80V |
| MMBD4448HTS | AB | 80V | 57V | 80V |

| | | | |
|-------------------------------------|-----------|----------------------|---------------------------|
| Non-Repetitive Peak Reverse Voltage | V_{RM} | 100V | |
| Working Peak Reverse Voltage | V_{RWM} | 80V | |
| Forward Continuous Current | I_{FM} | 500mA | |
| Average Rectified Output Current | I_o | 250mA | |
| Peak Forward Surge Current | I_{FSM} | 4.0A 2.0A 1.0A | @1.0µs @8.3ms @1.0s |
| Power Dissipation | P_D | 150mW | |

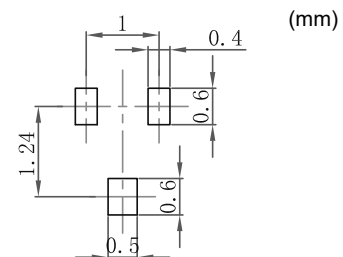
**150mW
Switching Diodes**

SOT-523



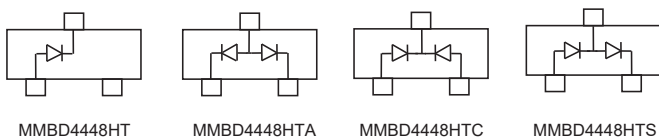
| DIM | DIMENSIONS | | | | NOTE |
|-----|---------------|-------|--------------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.059 | 0.067 | 1.50 | 1.70 | |
| B | 0.030 | 0.033 | 0.75 | 0.85 | |
| C | 0.057 | 0.069 | 1.45 | 1.75 | |
| D | 0.020 Nominal | | 0.50 Nominal | | |
| E | 0.035 | 0.043 | 0.90 | 1.10 | |
| G | 0.000 | 0.004 | 0.00 | 0.10 | |
| H | 0.024 | 0.031 | 0.60 | 0.80 | |
| J | 0.004 | 0.008 | 0.10 | 0.20 | |
| K | 0.006 | 0.014 | 0.15 | 0.35 | |

Suggested Solder Pad Layout



Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|-------------------------------|----------|--------------------------------------|--|
| Minimum Breakdown Voltage | V_{BR} | 80V | $I_R=2.5\mu A$ |
| Maximum Forward Voltage | V_F | 0.720V 0.855V 1.000V 1.250V | $I_F=5.0mA$ $I_F=10.0mA$ $I_F=50.0mA$ $I_F=150.0mA$ |
| Minimum Forward Voltage | V_F | 0.620V | $I_F=5.0mA$ |
| Maximum Peak Reverse voltage | I_R | 0.1 μA 25nA | $V_R=70V$ $V_R=20V$ |
| Maximum Total Capacitance | C_T | 3.5pF | $V_R=6.0V, f=1.0MHz$ |
| Maximum Reverse Recovery Time | t_{rr} | 4.0ns | $I_F=5mA, V_R=6V$ |

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

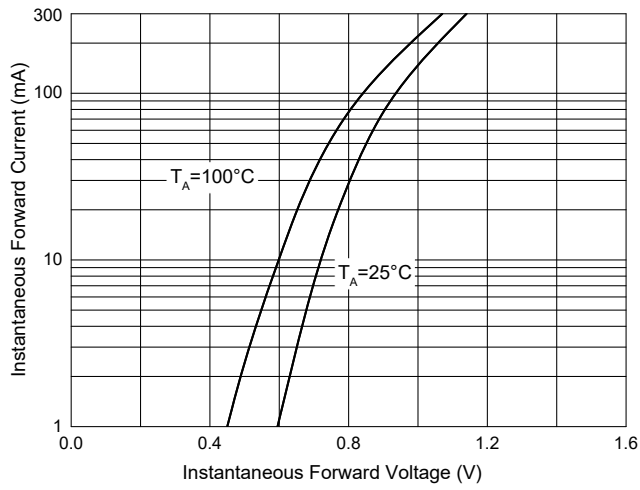


Fig. 2 - Typical Reverse Leakage Characteristics

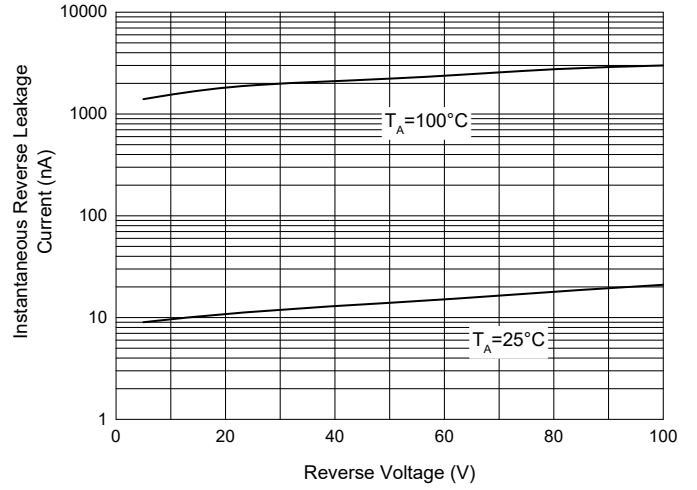
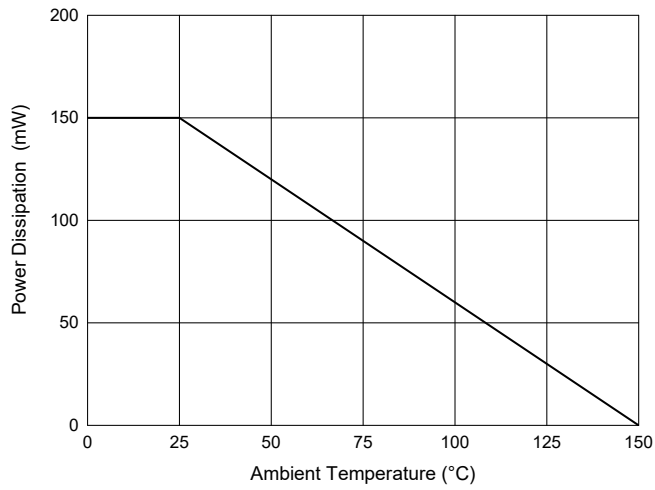


Fig. 3 - Power Derating Curve



Ordering Information

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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