

Features

- Low Current Leakage
- Small Outline Surface Mount Package
- Designed For Applications Requiring High Voltage Capability
- 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)

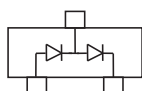
Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C

| MCC Part Number | Device Marking | Peak Reverse Voltage V_{RM} | DC Blocking Voltage V_R |
|---------------------------------|----------------|-------------------------------|---------------------------|
| MMBD2004SWT | B6D | 300V | 240V |
| Continuous Forward Current | I_F | 225mA | |
| Forward Surge Current | I_{FSM} | 4.0A 1.0A | @t=1us @t=1s |
| Repetitive Peak Forward Current | I_{FRM} | 625mA | |
| Power Dissipation | P_D | 250mW | |

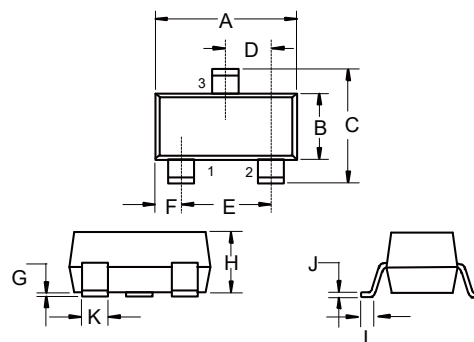
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



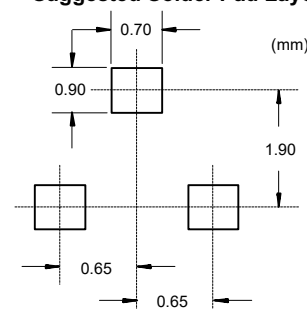
250mW 300Volt Dual Series Switching Diode

SOT-323



| DIMENSIONS | | | | | |
|------------|--------|-------|------|------|------|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | 0.071 | 0.087 | 1.80 | 2.20 | |
| B | 0.045 | 0.053 | 1.15 | 1.35 | |
| C | 0.083 | 0.096 | 2.10 | 2.45 | |
| D | 0.026 | | 0.65 | | TYP. |
| E | 0.047 | 0.055 | 1.20 | 1.40 | |
| F | 0.012 | 0.016 | 0.30 | 0.40 | |
| G | 0.000 | 0.004 | 0.00 | 0.10 | |
| H | 0.035 | 0.044 | 0.90 | 1.10 | |
| J | 0.002 | 0.010 | 0.05 | 0.25 | |
| K | 0.006 | 0.016 | 0.15 | 0.40 | |
| L | 0.010 | 0.018 | 0.26 | 0.46 | |

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|----------|-------------|---|
| Minimum Breakdown Voltage | V_{BR} | 240V | $I_R=100.0\mu A$ |
| Maximum Instantaneous Forward Voltage | V_F | 1.000V | $I_F=100.0mA$ |
| Maximum Reverse voltage leakage current | I_R | 0.1 μA | $V_R=240V$ |
| Maximum Diode Capacitance | C_D | 5.0pF | $V_R=0.0V, f=1.0MHz$ |
| Maximum Reverse Recovery Time | t_{rr} | 50.0ns | $I_F=30mA, I_R=30mA$ $R_L=100\Omega$ |

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

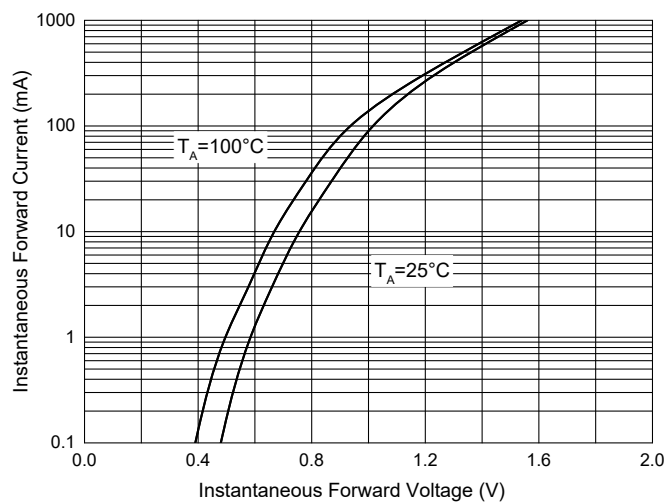


Fig. 2 - Typical Reverse Leakage Characteristics

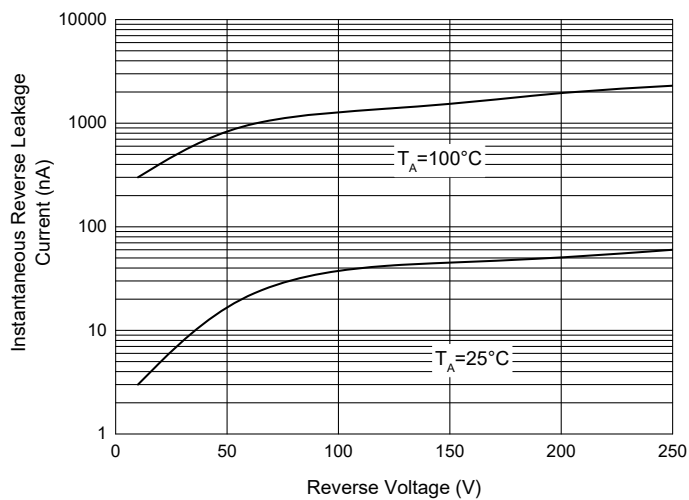
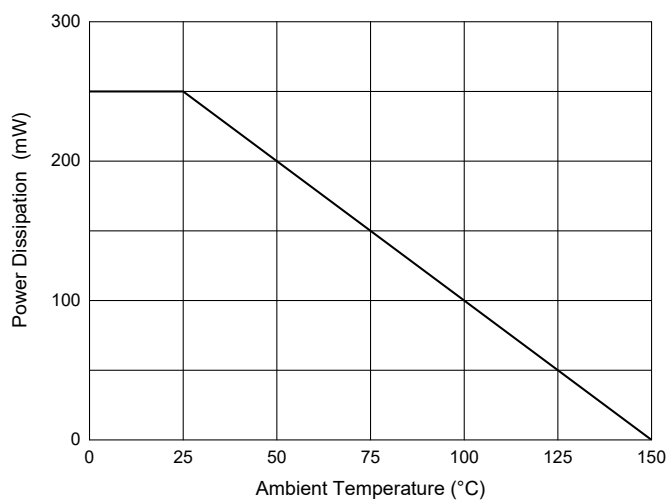


Fig. 3 - Power Derating Curve



Ordering Information

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

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