

## Features

- 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

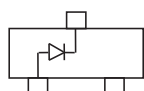
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 625°C/W Junction to Ambient

| MCC Part Number | Device Marking | Repetitive Peak Reverse Voltage $V_{RRM}$ | RMS Reverse Voltage $V_{R(RMS)}$ | DC Blocking Voltage $V_R$ |
|-----------------|----------------|-------------------------------------------|----------------------------------|---------------------------|
| MMBD4148WT      | A2             | 75V                                       | 53V                              | 75V                       |

|                                           |           |       |          |
|-------------------------------------------|-----------|-------|----------|
| Non-Repetitive Peak Reverse Voltage       | $V_{RM}$  | 100V  |          |
| Working Peak Reverse Voltage              | $V_{RWM}$ | 75V   |          |
| Forward DC Current                        | $I_{FM}$  | 300mA |          |
| Average Rectified Output Current          | $I_o$     | 150mA |          |
| Non-Repetitive Peak Forward Surge Current | $I_{FSM}$ | 2.0A  | @t=8.3ms |
| Power Dissipation                         | $P_d$     | 200mW |          |

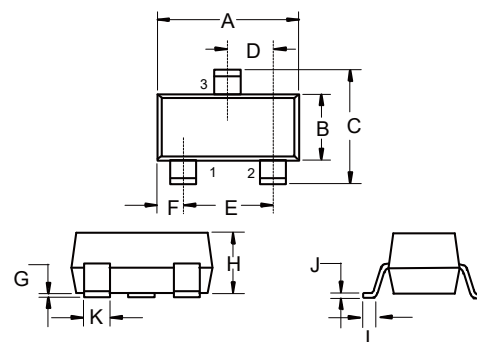
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

## Internal Structure:



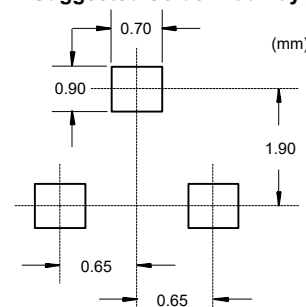
# 200mW Switching Diode

## 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

|                                                         |          |                                      |                                                              |
|---------------------------------------------------------|----------|--------------------------------------|--------------------------------------------------------------|
| Reverse Breakdown Voltage                               | $V_{BR}$ | 75V                                  | $I_R=100.0\mu A$                                             |
| Maximum Forward Voltage                                 | $V_F$    | 0.715V<br>0.855V<br>1.000V<br>1.250V | $I_F=1.0mA$<br>$I_F=10.0mA$<br>$I_F=50.0mA$<br>$I_F=150.0mA$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$    | 1.0 $\mu A$<br>25nA                  | $V_R=75V$<br>$V_R=25V$                                       |
| Diode Capacitance                                       | $C_d$    | 2.0pF                                | $V_R=0.0V, f=1.0MHz$                                         |
| Reverse Recovery Time                                   | $t_{rr}$ | 4.0ns                                | $I_F=10mA, I_R=10mA$<br>$I_{rr}=0.1*I_R$                     |

## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

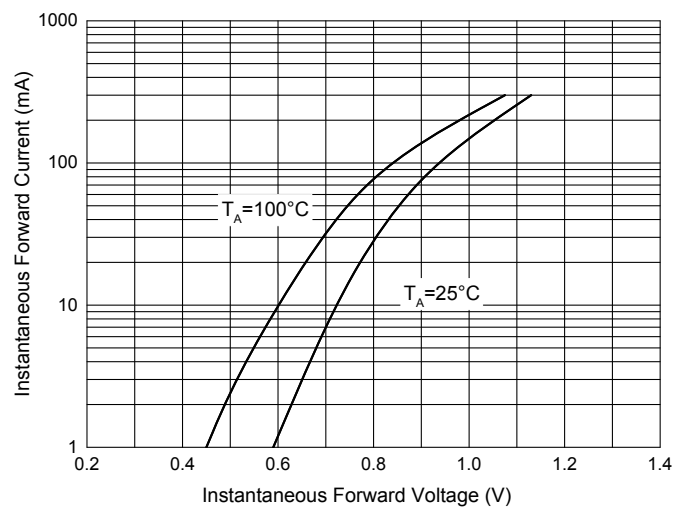


Fig. 2 - Typical Reverse Leakage Characteristics

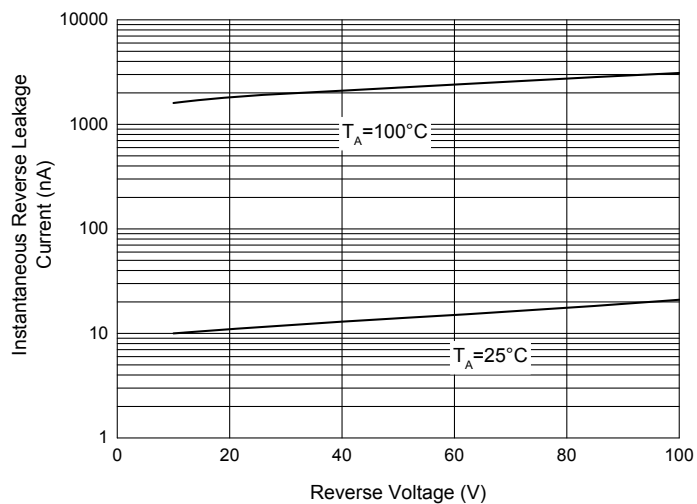
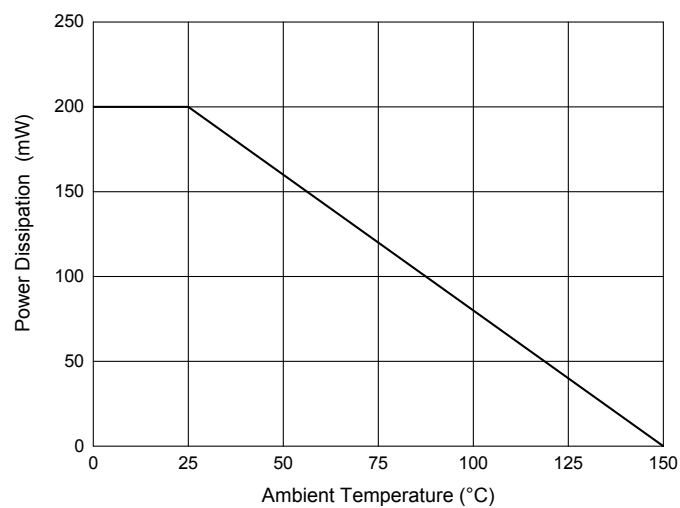


Fig. 3 - Power Derating Curve



## Ordering Information

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

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