

### Features

- Fast Switching Speed
- High Conductance
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- 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: 625°C/W Junction to Ambient

| MCC Part Number | Device Marking |
|-----------------|----------------|
| 1N4448WX        | T5             |

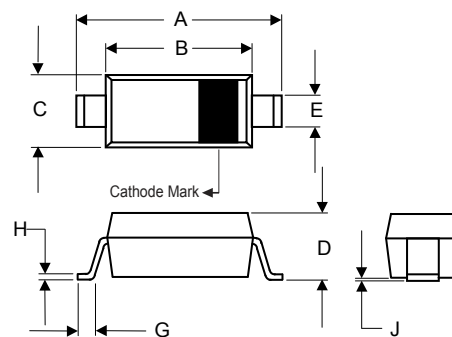
| Parameter                           | Symbol       | Value |
|-------------------------------------|--------------|-------|
| Non-Repetitive Peak Reverse Voltage | $V_{RM}$     | 100V  |
| DC Reverse Voltage                  | $V_R$        | 100V  |
| Peak Repetitive Reverse Voltage     | $V_{RRM}$    | 100V  |
| Working Inverse Voltage             | $V_{RWM}$    | 100V  |
| RMS Reverse Voltage                 | $V_{R(RMS)}$ | 71V   |
| Forward Continuous Current (Note 2) | $I_{FM}$     | 500mA |
| Average Forward Current             | $I_{F(AV)}$  | 250mA |
| Peak Forward Surge Current (t=1s)   | $I_{FSM}$    | 2A    |
| (t=1µs)                             |              | 4A    |
| 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.

Note: 2. Valid Provided that Terminals are Kept at Ambient Temperature

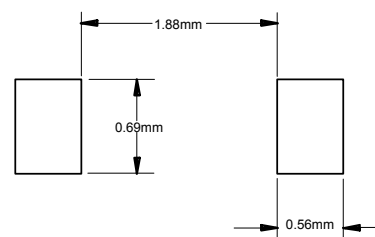
## 200mW High Speed Switching Diode

### SOD-323



| DIM | INCHES |       | MM    |      | NOTE |
|-----|--------|-------|-------|------|------|
|     | MIN    | MAX   | MIN   | MAX  |      |
| A   | 0.090  | 0.107 | 2.30  | 2.70 |      |
| B   | 0.063  | 0.071 | 1.60  | 1.80 |      |
| C   | 0.045  | 0.053 | 1.15  | 1.35 |      |
| D   | 0.031  | 0.045 | 0.80  | 1.15 |      |
| E   | 0.010  | 0.016 | 0.25  | 0.40 |      |
| G   | 0.004  | 0.018 | 0.10  | 0.45 |      |
| H   | 0.004  | 0.010 | 0.10  | 0.25 |      |
| J   | -----  | 0.006 | ----- | 0.15 |      |

### Suggested Solder Pad Layout



## Electrical Characteristics @ 25°C (Unless Otherwise Specified)

| Parameter             | Symbol   | Conditions   | Min. | Typ. | Max.  | Units         |
|-----------------------|----------|--|------|------|-------|---------------|
| Forward Voltage       | $V_F$    | $I_F=5\text{mA}$   |      |      | 0.72  | V             |
|                       |          | $I_F=10\text{mA}$  |      |      | 0.855 | V             |
|                       |          | $I_F=100\text{mA}$   |      |      | 1     | V             |
|                       |          | $I_F=150\text{mA}$   |      |      | 1.25  | V             |
| Reverse Current       | $I_R$    | $V_R=20\text{V}$   |      |      | 25    | nA            |
|                       |          | $V_R=75\text{V}$   |      |      | 1     | $\mu\text{A}$ |
|                       |          | $V_R=25\text{V}, T_J=150^\circ\text{C}$                          |      |      | 30    | $\mu\text{A}$ |
|                       |          | $V_R=75\text{V}, T_J=150^\circ\text{C}$                          |      |      | 50    | $\mu\text{A}$ |
| Junction Capacitance  | $C_J$    | $V_R = 0\text{V}, f = 1\text{MHz}$                               |      |      | 4     | pF            |
| Reverse Recovery Time | $t_{rr}$ | $I_F=I_R=10\text{mA},$<br>$I_{rr}=0.1 \times I_R, R_L=100\Omega$ |      |      | 4     | ns            |

\* Pulse Test: Pulse Width 300  $\mu\text{sec}$ , Duty Cycle 2%

## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

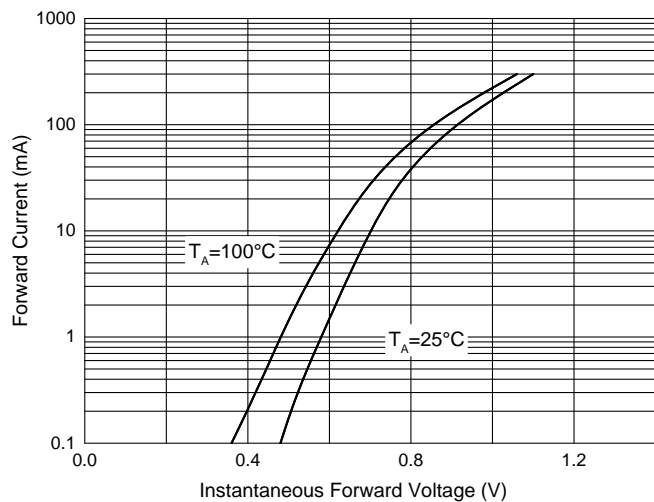


Fig. 2 - Typical Reverse Leakage Characteristics

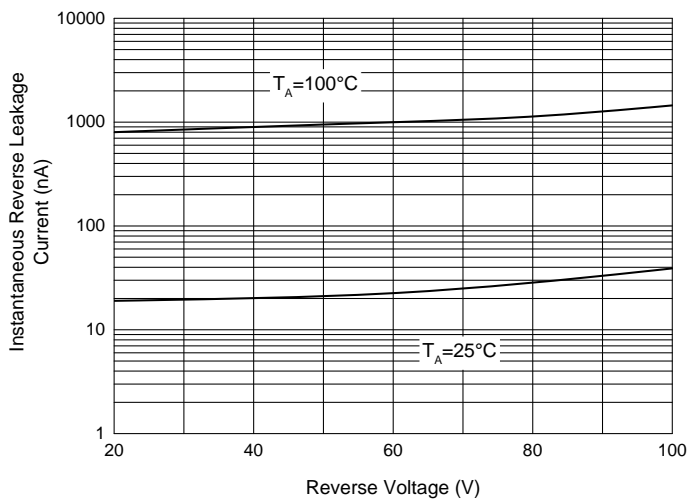
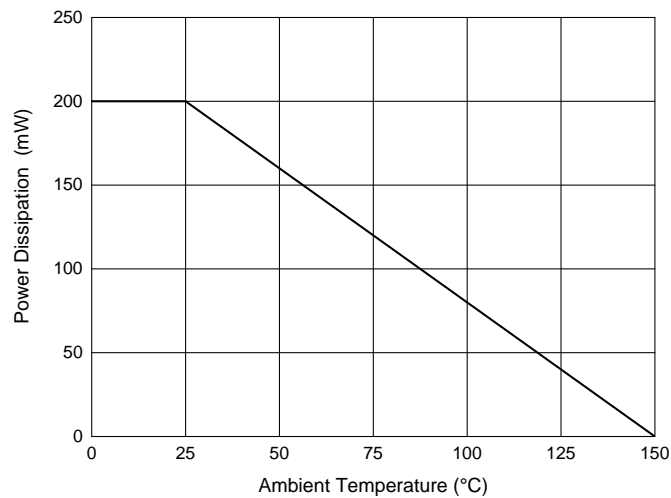


Fig. 3 - Power Derating Curve



## Ordering Information

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

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