

Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- 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

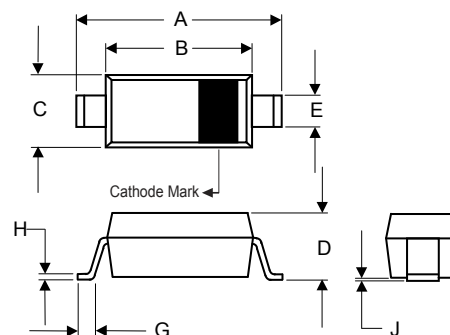
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 625°C/W Junction to Ambient

| MCC Part Number | Device Marking |
|-----------------|----------------|
| 1N4148WX | T4 |

| Parameter | Symbol | Value |
|-------------------------------------------|--------------|-------|
| DC Reverse Voltage | V_R | 100V |
| Working Peak Reverse Voltage | V_{RWM} | 100V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 71V |
| Forward Continuous Current | I_{FM} | 300mA |
| Average Rectified Output Current | I_O | 150mA |
| Peak Forward Surge Current ($t=1\mu s$) | I_{FSM} | 2A |
| ($t=1s$) | | 1A |
| Power Dissipation | P_D | 200mW |

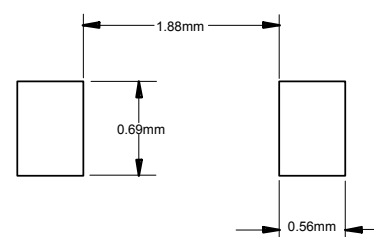
200mW High Speed Switching Diode

SOD-323



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.090 | 0.113 | 2.30 | 2.88 | |
| B | 0.063 | 0.071 | 1.60 | 1.80 | |
| C | 0.045 | 0.053 | 1.15 | 1.35 | |
| D | 0.031 | 0.049 | 0.80 | 1.24 | |
| 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 | $I_F=1\text{mA}$ | | | 0.715 | V |
| | | $I_F=10\text{mA}$ | | | 0.855 | V |
| | | $I_F=50\text{mA}$ | | | 1 | V |
| | | $I_F=150\text{mA}$ | | | 1.25 | V |
| Reverse Current | I_R | $V_R=20\text{V}, T_J=25^\circ\text{C}$ | | | 25 | nA |
| | | $V_R=75\text{V}, T_J=25^\circ\text{C}$ | | | 1 | μA |
| | | $V_R=75\text{V}, T_J=150^\circ\text{C}$ | | | 50 | μA |
| Junction Capacitance | C_J | $V_R = 0\text{V}, f = 1\text{MHz}$ | | | 2 | pF |
| Reverse Recovery Time | t_{rr} | $I_F=I_R=10\text{mA},$ $I_{rr}=0.1*I_R, R_L=100\Omega$ | | | 4 | ns |

* Pulse Test: Pulse Width 300 μsec , Duty Cycle 2%

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

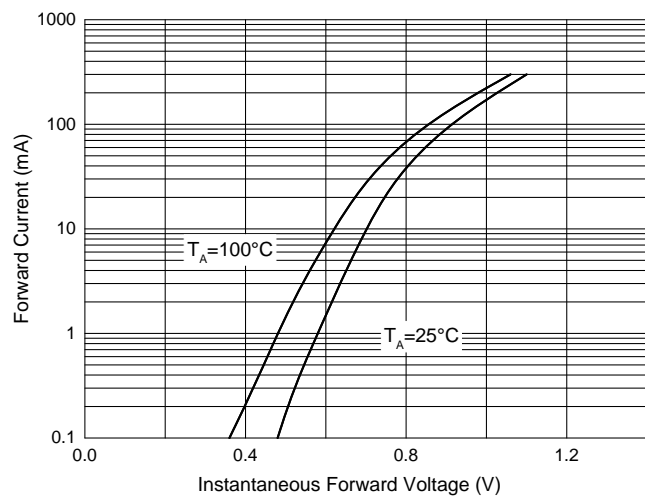


Fig. 2 - Typical Reverse Leakage Characteristics

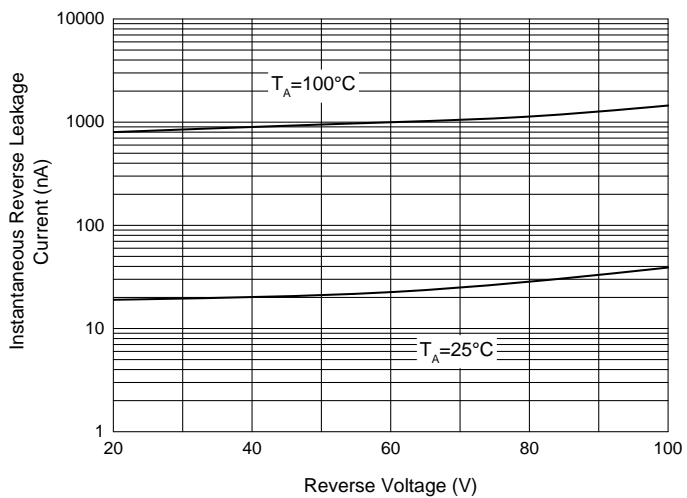
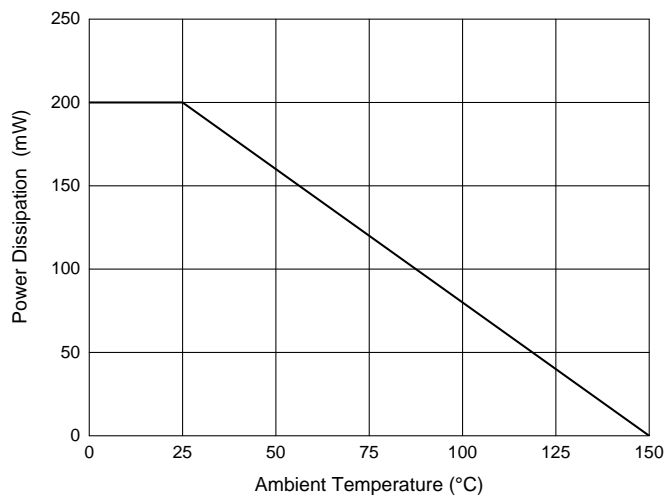


Fig. 3 - Power Derating Curve



Ordering Information

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

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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