

Features

- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- Fast Switching Speed
- 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

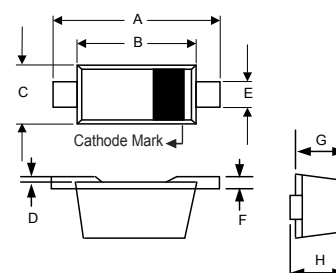
- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance: 625°C/W Junction to Ambient

| MCC Part Number | Device Marking |
|--------------------|----------------|
| 1N4148X | 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=1μs) | I_{FSM} | 2A |
| (t=1s) | | 1A |
| Power Dissipation | P_D | 200mW |

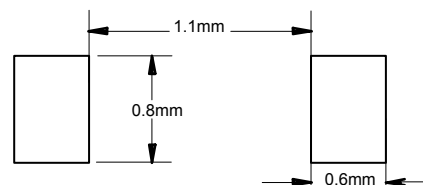
200mW Switching Diodes

SOD-523



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.059 | 0.067 | 1.50 | 1.70 | |
| B | 0.043 | 0.051 | 1.10 | 1.30 | |
| C | 0.030 | 0.033 | 0.75 | 0.85 | |
| D | 0.001 | 0.003 | 0.01 | 0.07 | |
| E | 0.010 | 0.014 | 0.25 | 0.35 | |
| F | 0.003 | 0.006 | 0.08 | 0.15 | |
| G | 0.020 | 0.028 | 0.50 | 0.70 | |
| H | 0.020 | 0.031 | 0.51 | 0.77 | |

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} | $I_F=I_R=10\text{mA},$ $I_{rr}=0.1 \cdot I_R, R_L=100\Omega$ | | | 4 | ns |

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

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

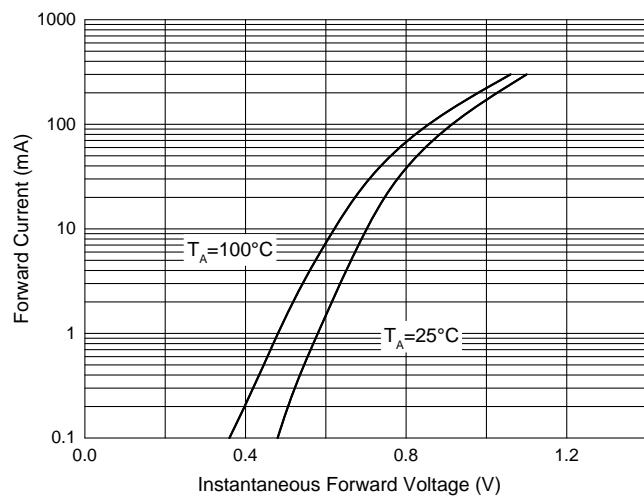


Fig. 2 - Typical Reverse Leakage Characteristics

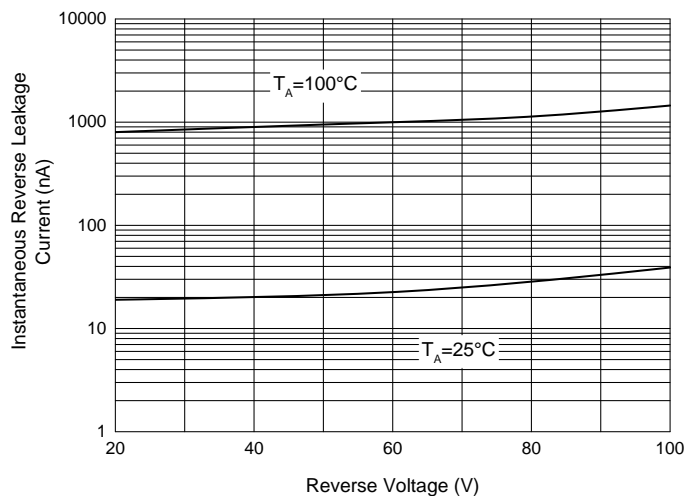
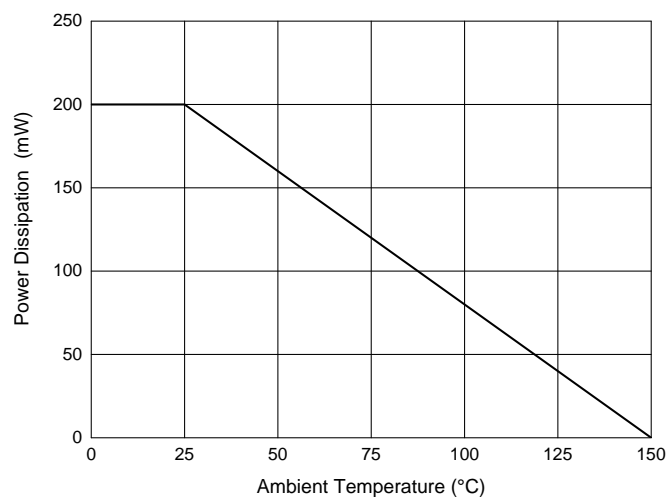


Fig. 3 - Power Derating Curve



Ordering Information

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 8Kpcs/Reel |

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

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