

Features

- High Speed Switching Diode
- For General Purpose Switching Applications
- Surface Mount Package
- 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: -55°C to +125°C
- Storage Temperature Range: -55°C to +125°C
- Thermal Resistance: 667°C/W Junction to Ambient

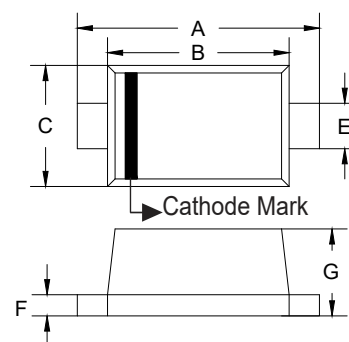
| MCC Part Number | Device Marking |
|-----------------|----------------|
| 1SS387 | G |

| Parameter | Symbol | Value |
|--|-------------|-------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 85V |
| Reverse Voltage | V_R | 80V |
| Average Forward Current | $I_{F(AV)}$ | 100mA |
| Peak Forward Surge Current ($t=10ms$) | I_{FSM} | 1A |
| Power Dissipation | P_D | 150mW |

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

150mW Switching Diode

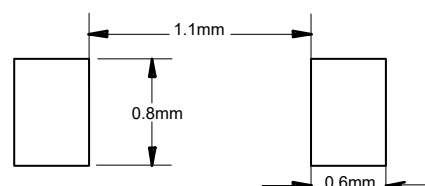
SOD-523



DIMENSIONS

| 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 | |
| E | 0.010 | 0.014 | 0.25 | 0.35 | |
| F | 0.003 | 0.008 | 0.08 | 0.20 | |
| G | 0.020 | 0.026 | 0.50 | 0.65 | |

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Units |
|-----------------------|----------|--|------|------|------|---------------|
| Forward Voltage | V_F | $I_F=1\text{mA}$ | | 0.62 | | V |
| | | $I_F=10\text{mA}$ | | 0.75 | | V |
| | | $I_F=100\text{mA}$ | | | 1.2 | V |
| Reverse Current | I_R | $V_R=30\text{V}$ | | | 0.1 | μA |
| | | $V_R=80\text{V}$ | | | 0.5 | μA |
| Junction Capacitance | C_J | $V_R = 0\text{V}, f = 1\text{MHz}$ | | | 3 | pF |
| Reverse Recovery Time | t_{rr} | $I_F=I_R=10\text{mA},$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$ | | | 4 | ns |

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

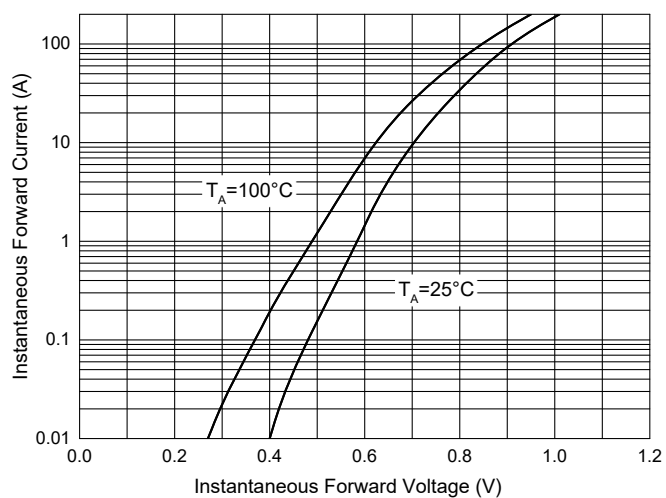


Fig. 2 - Typical Reverse Leakage Characteristics

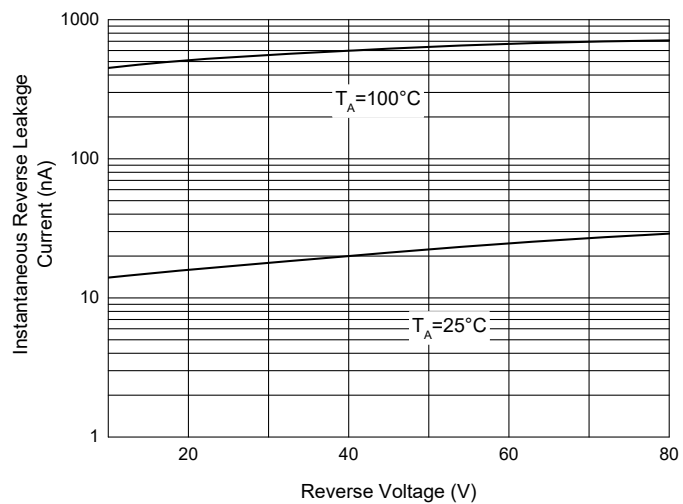
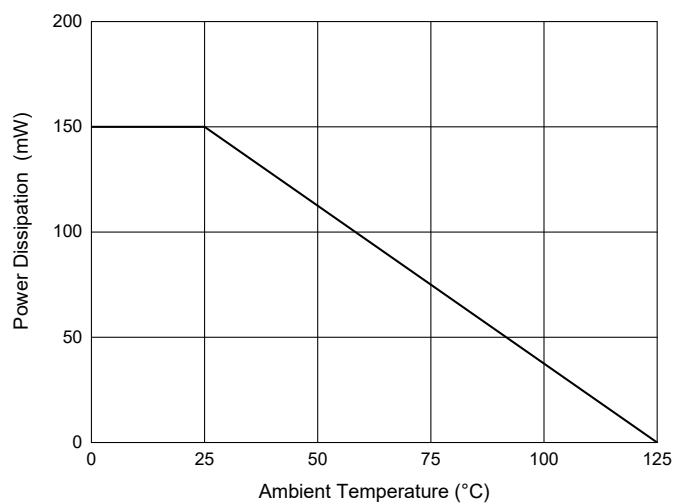


Fig. 3 - Power Derating Curve



Ordering Information

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

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