

Features

- Low Current Leakage
- Small Outline Surface Mount Package
- 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: 357°C/W Junction to Ambient

| MCC Part Number | Device Marking | Peak Reverse Voltage V_{RM} | Reverse Voltage V_R |
|-----------------|----------------|-------------------------------|-----------------------|
| MMBD914 | 5D | 100V | 75V |

| | | | |
|----------------------------------|-----------|-------|----------------------------------|
| Average Rectified Output Current | I_o | 200mA | Resistive Load $f > 50\text{Hz}$ |
| Peak Forward Surge Current | I_{FSM} | 1.0A | $t=1\text{s, Non-Repetitive}$ |
| Power Dissipation | P_{TOT} | 350mW | |

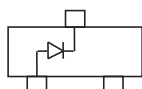
Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---------------------------------------------------------|----------|--------|-------------------------------------------------------|
| Maximum Forward Voltage | V_F | 0.855V | $I_{FM}=10\text{mA}, T_j=25^\circ\text{C}$ (Note2) |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 25nA | $V_R=20\text{V}, T_j=25^\circ\text{C}$ |
| Typical Junction Capacitance | C_J | 2pF | $V_R=0.0\text{V}, f=1.0\text{MHz}$ |
| Reverse Recovery Time | T_{rr} | 4.0ns | $I_F=10\text{mA}, V_R=6\text{V}, R_L=100\Omega$ |

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

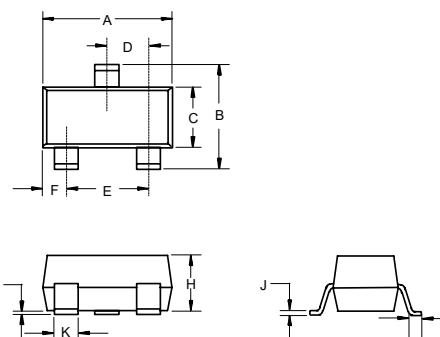
2. Pulse test: Pulse width 300 μsec , Duty cycle 2%

Internal Structure



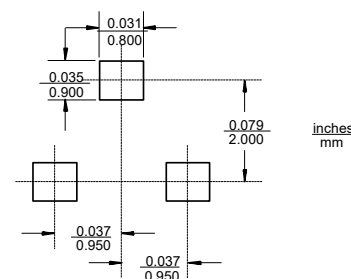
350mW 100 Volt Silicon Epitaxial Diode

SOT-23



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.110 | 0.120 | 2.80 | 3.04 | |
| B | 0.083 | 0.104 | 2.10 | 2.64 | |
| C | 0.047 | 0.055 | 1.20 | 1.40 | |
| D | 0.034 | 0.041 | 0.85 | 1.05 | |
| E | 0.067 | 0.083 | 1.70 | 2.10 | |
| F | 0.018 | 0.024 | 0.45 | 0.60 | |
| G | 0.0004 | 0.006 | 0.01 | 0.15 | |
| H | 0.035 | 0.043 | 0.90 | 1.10 | |
| J | 0.003 | 0.007 | 0.08 | 0.18 | |
| K | 0.014 | 0.020 | 0.35 | 0.51 | |
| L | 0.007 | 0.020 | 0.20 | 0.50 | |

Suggested Solder Pad Layout



Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

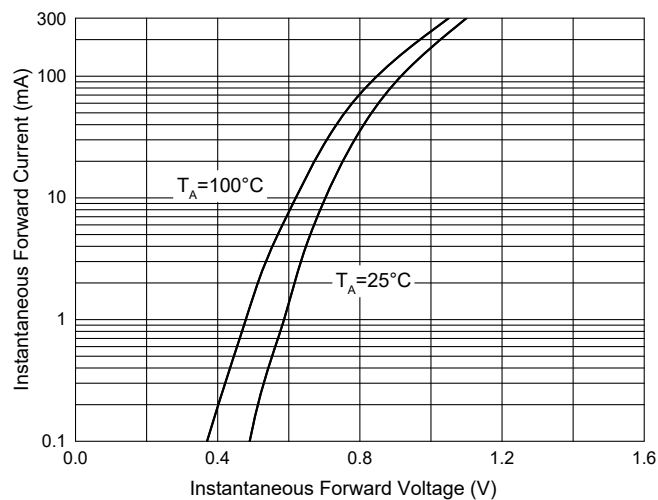


Fig. 2 - Typical Reverse Leakage Characteristics

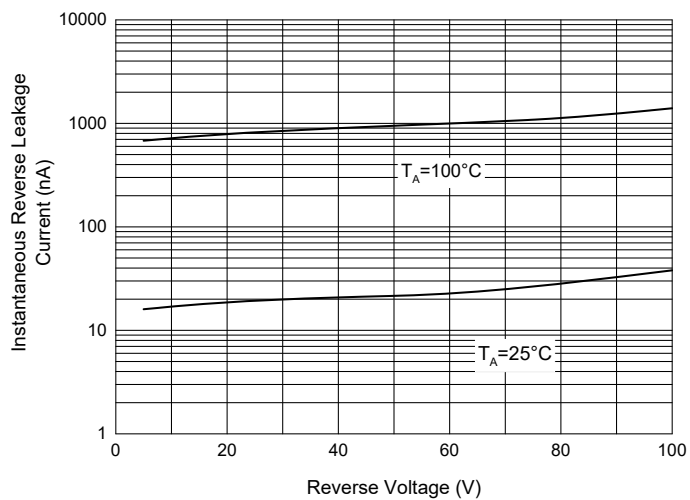
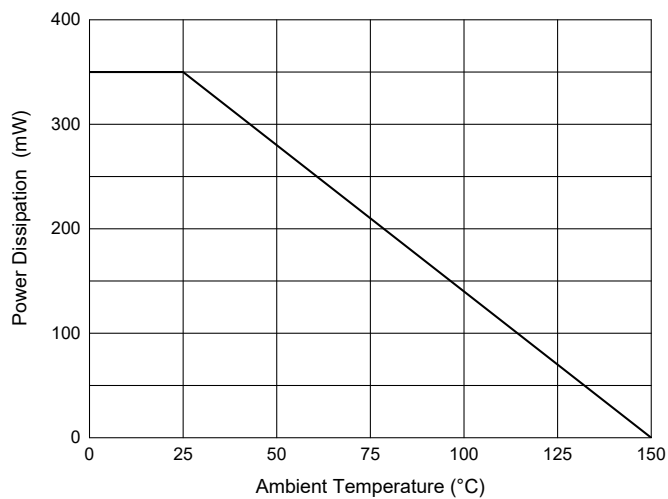


Fig. 3 - Power Derating Curve



Ordering Information

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

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