

## 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 |                                  |

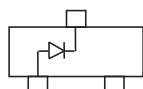
## Electrical Characteristics @ 25°C Unless Otherwise Specified

|   |          |        |   |
|---|----------|--------|---|
| 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.

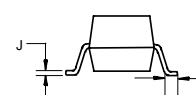
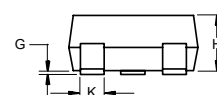
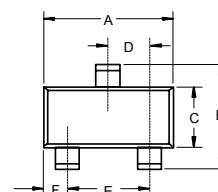
2. Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

## Internal Structure



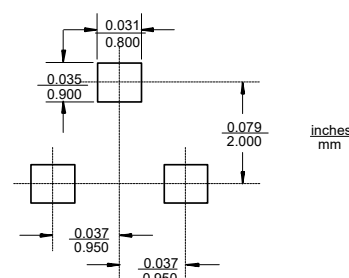
# 350mW 100 Volt Silicon Epitaxial Diode

## SOT-23



| DIM | INCHES |       | MM   |      | NOTE |
|-----|--------|-------|------|------|------|
|     | 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

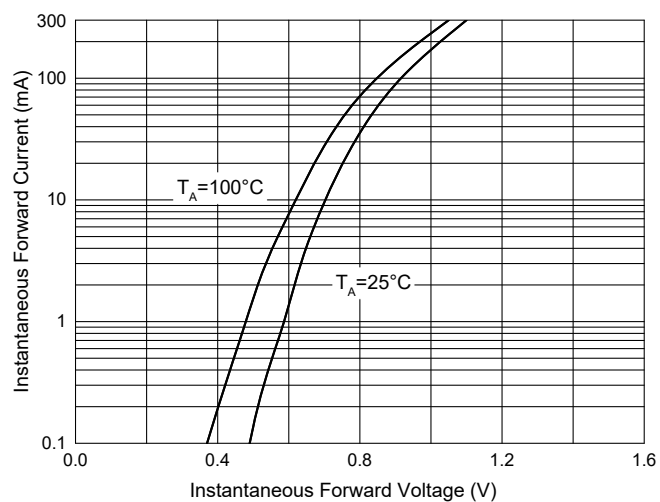


Fig. 2 - Typical Reverse Leakage Characteristics

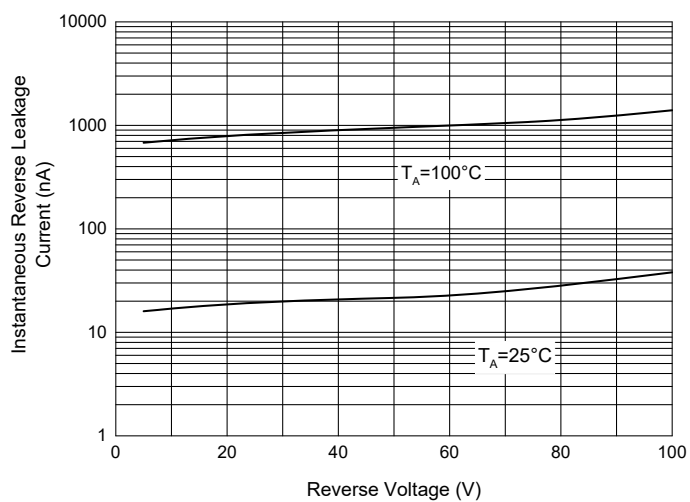
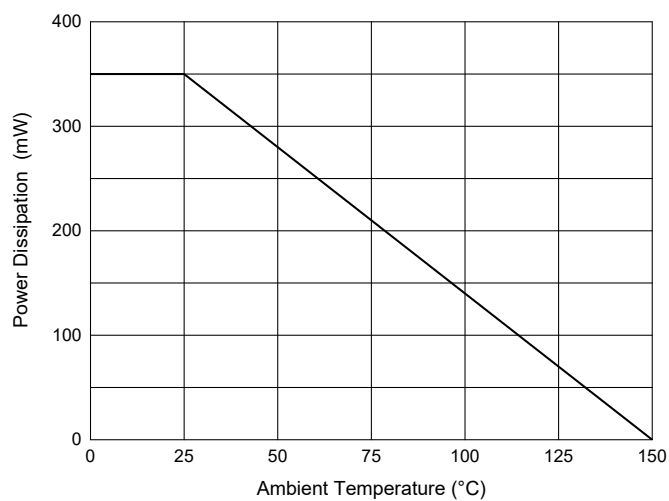


Fig. 3 - Power Derating Curve



## Ordering Information

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

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