



## MMDL914

### High Speed Switching Diode

### Features

- Fast Switching Speed
- Low Current Leakage
- Compression Bond Construction
- Surface Mount Application
- Device Marking: MMDL914 = 5D
- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/Rohs Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

### Maximum Ratings

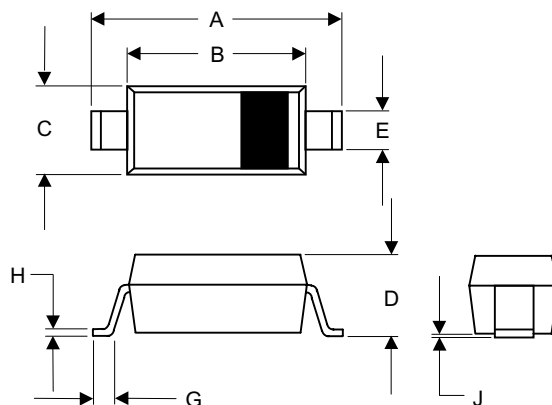
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 635°C/W Junction To Ambient

### Electrical Characteristics @ 25°C Unless Otherwise Specified

|                                                         |            |                     |                                                      |
|---------------------------------------------------------|------------|---------------------|------------------------------------------------------|
| Reverse Voltage                                         | $V_R$      | 100V                |                                                      |
| Minimum Breakdown Voltage                               | $V_{(BR)}$ | 100V                | $I_R = 100\mu A$                                     |
| Forward Current                                         | $I_F$      | 200mA               |                                                      |
| Total Device Dissipation FR-5 Board Derate above 25°C   | $P_D$      | 200mW<br>1.57mW/°C  |                                                      |
| Junction Temperature                                    | $T_J$      | 150°C               |                                                      |
| Peak Forward Surge Current                              | $I_{FSM}$  | 500mA               | 8.3ms, half sine                                     |
| Maximum Instantaneous Forward Voltage                   | $V_F$      | 1.0V                | $I_{FM} = 10mA$ ;<br>$T_J = 25^\circ C^*$            |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$      | 25nA<br>0.5 $\mu A$ | $V_R = 20V$ ;<br>$V_R = 75V$ ;<br>$T_J = 25^\circ C$ |
| Maximum Junction Capacitance                            | $C_J$      | 4pF                 | Measured at<br>1.0MHz, $V_R = 0V$                    |
| Maximum Reverse Recovery Time                           | $T_{rr}$   | 4nS                 | $I_F = 10mA$ ;<br>$V_R = 6V$ ;<br>$R_L = 100\Omega$  |

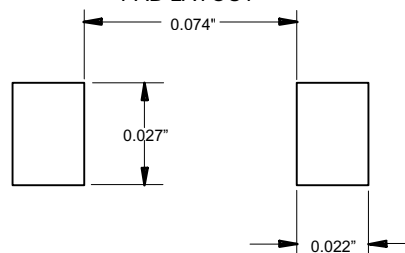
\*Pulse test: Pulse width 300  $\mu sec$ , Duty cycle 2%

### SOD323



| DIM | INCHES |      | MM    |      | NOTE |
|-----|--------|------|-------|------|------|
|     | MIN    | MAX  | MIN   | MAX  |      |
| A   | .090   | .107 | 2.30  | 2.70 |      |
| B   | .063   | .071 | 1.60  | 1.80 |      |
| C   | .045   | .053 | 1.15  | 1.35 |      |
| D   | .031   | .045 | 0.80  | 1.15 |      |
| E   | .010   | .016 | 0.25  | 0.40 |      |
| G   | .004   | .018 | 0.10  | 0.45 |      |
| H   | .004   | .010 | 0.10  | 0.25 |      |
| J   | -----  | .006 | ----- | 0.15 |      |

#### SUGGESTED SOLDER PAD LAYOUT



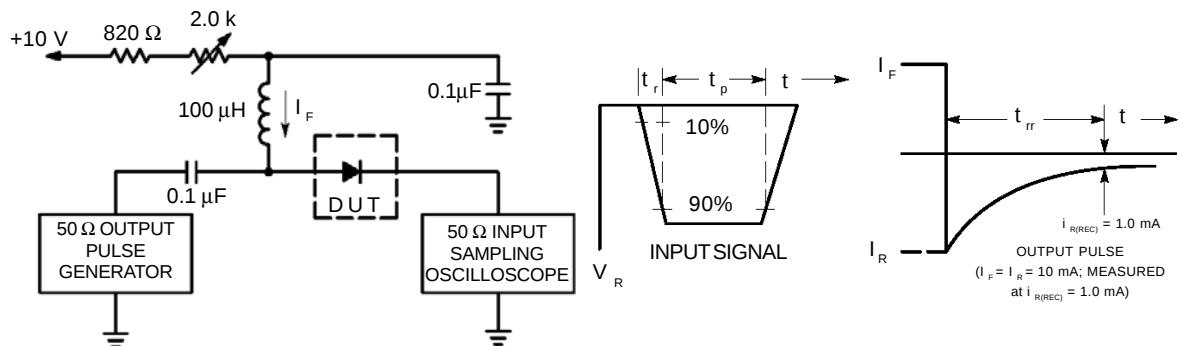


Figure 1. Recovery Time Equivalent Test Circuit

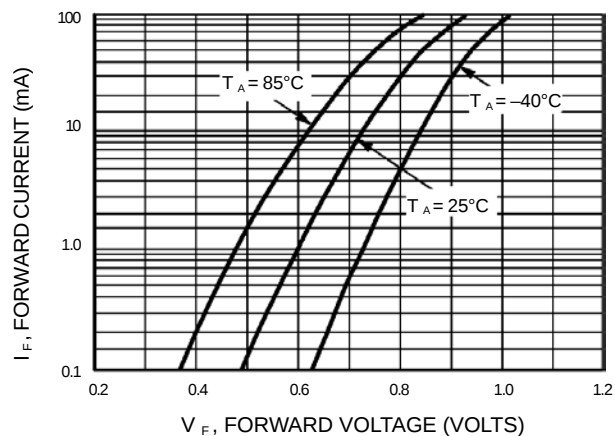


Figure 2. Forward Voltage

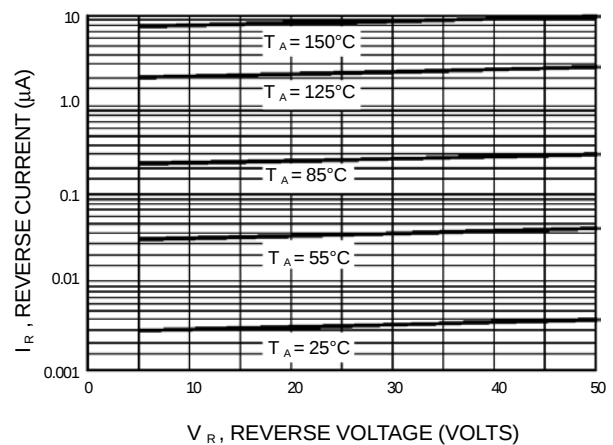


Figure 3. Leakage Current

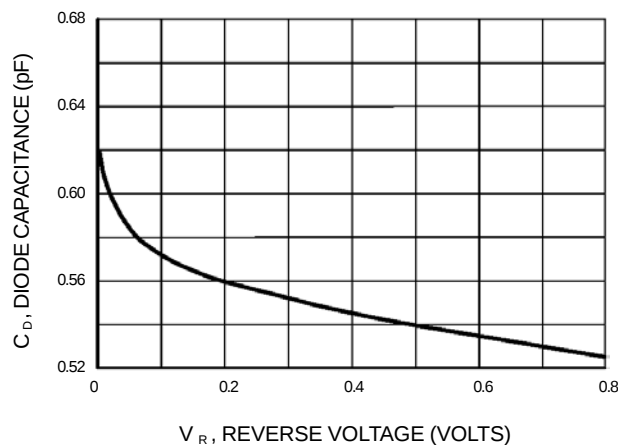


Figure 4. Capacitance

## 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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