



DATA SHEET

MMBD6100W

SURFACE MOUNT SWITCHING DIODES

VOLTAGE 80 Volts **POWER** 200mWatts

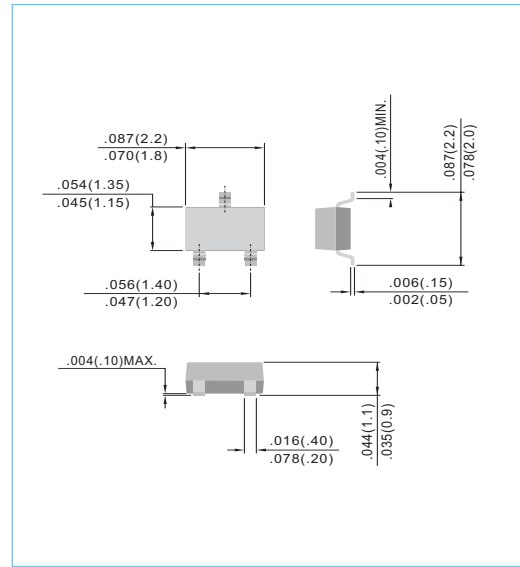
SOT-323 Unit: inch (mm)

FEATURES

- Dual, common cathode configuration
- Very fast reverse recovery ($T_{rr} < 2.0\text{ns}$ typical)
- Low capacitance ($< 2.5\text{pF}$ @ 0V)
- Surface mount package ideally suited for automatic insertion
- Pb free product are available : 99% Sn above can meet RoHS environment substance directive request

MECHANICAL DATA

Case: SOT-323 plastic
 Terminals : Solderable per MIL-STD-750, Method 2026
 Approx weight : 0.008 gram
 Marking : T4



ABSOLUTE RATINGS

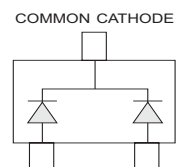
| PARAMETER | SYMBOL | VALUE | UNITS |
|--|-----------|-------|-------|
| Maximum Reverse Voltage | V_R | 80 | V |
| Peak Reverse Voltage | V_{RRM} | 80 | V |
| Continuous Forward Current | I_F | 0.2 | A |
| Non-repetitive Peak Forward Surge Current at $t=1.0 \mu\text{s}$ | I_{FSM} | 2.0 | A |

THERMAL CHARACTERISTICS

| PARAMETER | SYMBOL | VALUE | UNITS |
|--|-----------------|------------|----------------------|
| Power Dissipation ⁽¹⁾ | P_{TOT} | 200 | mW |
| Thermal Resistance, Junction to Ambient ⁽¹⁾ | $R_{\theta JA}$ | 625 | $^{\circ}\text{C/W}$ |
| Junction Temperature | T_J | -55 to 150 | $^{\circ}\text{C}$ |
| Storage Temperature | T_{STG} | -55 to 150 | $^{\circ}\text{C}$ |

NOTE:

1. FR-5 Board=1.0 x 0.75 x 0.062 in.





ELECTRICAL CHARACTERISTICS ($T_J=25^{\circ}\text{C}$, unless otherwise noted)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN. | TYP. | MAX. | UNITS |
|----------------------------------|----------|---|--------------|------|------------|-------|
| Reverse Breakdown Voltage | V_{BR} | $I_R=100\mu\text{A}$ | 80 | - | - | V |
| Reverse Current | I_R | $V_R=50\text{V}$ | - | - | 100 | nA |
| Forward Voltage | V_F | $I_F=1\text{mA}$ $I_F=100\text{mA}$ | 0.55 0.85 | - | 0.7 1.1 | V |
| Total Capacitance | C_T | $V_R=0\text{V}$, $f=1\text{MHz}$ | - | - | 2.5 | pF |
| Reverse Recovery Time (Figure 1) | t_{rr} | $I_F=I_R=10\text{mA}$, $R_L=100\ \Omega$ | - | - | 4.0 | ns |



ELECTRICAL CHARACTERISTIC CURVES (each diode)

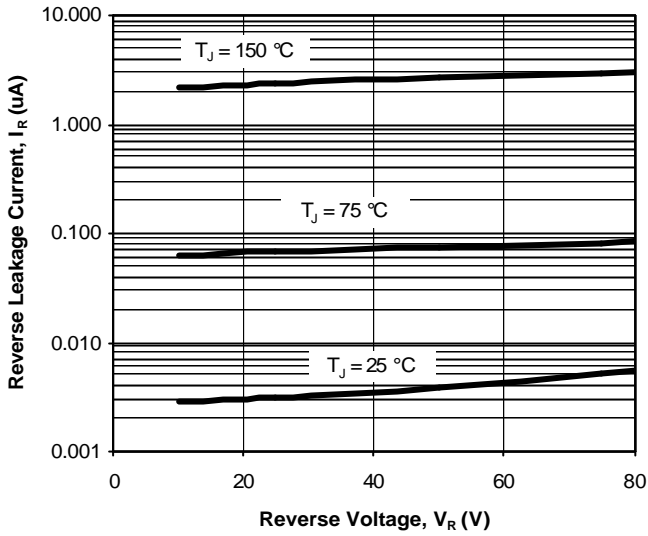


Fig. 2. Reverse Current vs. Reverse Voltage

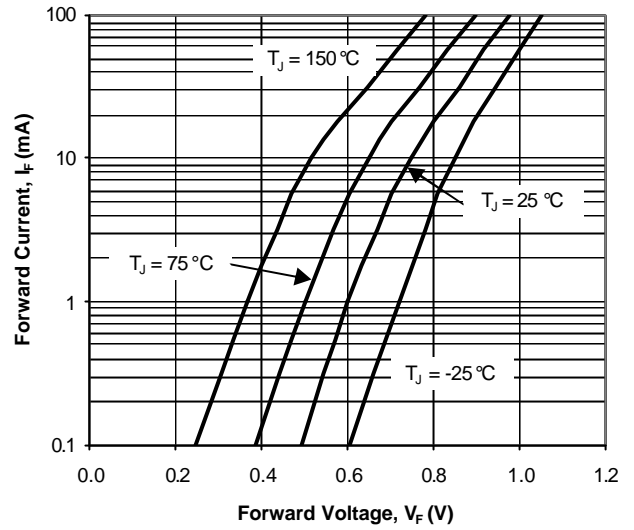


Fig. 3. Forward Current vs. Forward Voltage

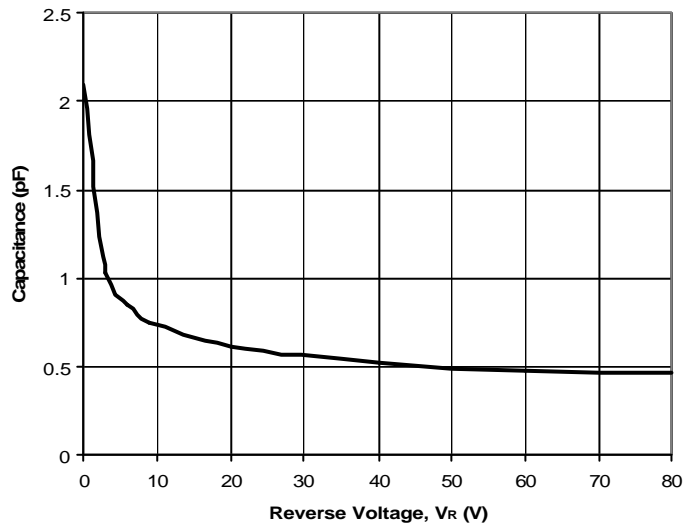
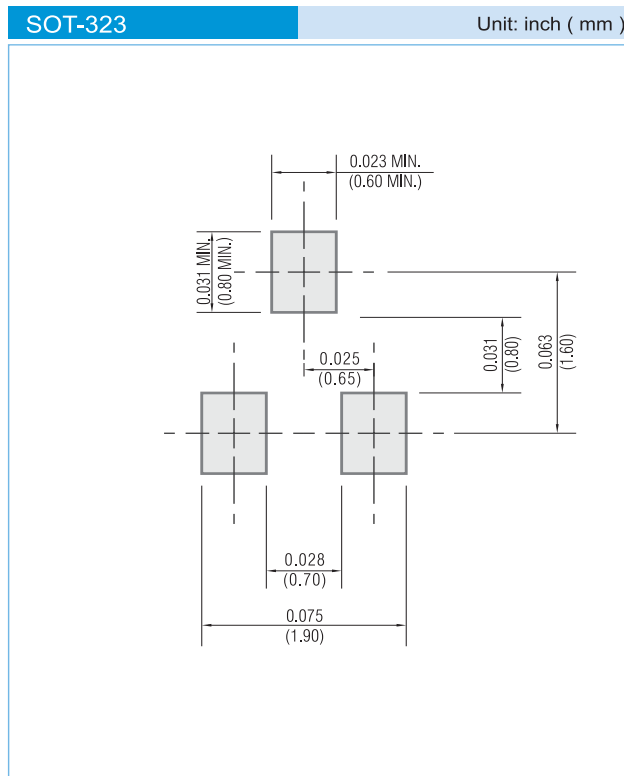


Fig. 4. Capacitance vs. Reverse Voltage



MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
 - T/R - 10K per 13" plastic Reel
 - T/R - 3K per 7" plastic Reel

LEGAL STATEMENT

IMPORTANT NOTICE

This information is intended to unambiguously characterize the product in order to facilitate the customer's evaluation of the device in the application. The information will help the customer's technical experts determine that the device is compatible and interchangeable with similar devices made by other vendors. The information in this data sheet is believed to be reliable and accurate. The specifications and information herein are subject to change without notice. New products and improvements in products and product characterization are constantly in process. Therefore, the factory should be consulted for the most recent information and for any special characteristics not described or specified.

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