



MMBD7000-AU

SURFACE MOUNT SWITCHING DIODE

VOLTAGE 100 Volts **POWER** 225 mWatts

SOT-23 Unit : inch(mm)

FEATURES

- Very fast reverse recovery ($T_{rr} < 2$ ns typical)
- Isolated, series-connected diode pair
- Surface mount package ideally suited for automatic insertion
- Acquire quality system certificate : TS16949
- AEC-Q101 qualified
- Lead free in comply with EU RoHS 2011/65/EU directives
- Green molding compound as per IEC61249 Std. . (Halogen Free)

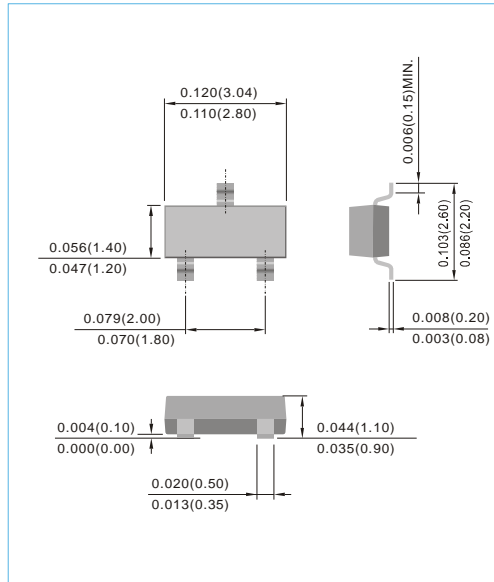
MECHANICAL DATA

Case: SOT-23, Plastic

Terminals: Solderable per MIL-STD-750, Method 2026

Approx. Weight: 0.0003 ounces, 0.0084 grams

Marking: T3



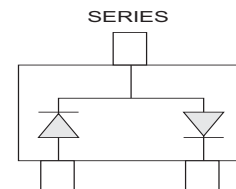
ABSOLUTE RATINGS

| Parameter | Symbol | Value | Units |
|---|-----------|-------|-------|
| Maximum Reverse Voltage | V_R | 100 | V |
| Peak Reverse Voltage | V_{RRM} | 100 | V |
| Continuous Forward Current | I_F | 0.2 | A |
| Non-repetitive Peak Forward Surge Current at $t=1\mu s$ | I_{FSM} | 4 | A |

THERMAL CHARACTERISTICS

| Parameter | Symbol | Value | Units |
|--|-----------------|------------|---------------|
| Power Dissipation (Note 1) | P_{TOT} | 225 | mW |
| Thermal Resistance, Junction to Ambient (Note 1) | $R_{\theta JA}$ | 556 | $^{\circ}C/W$ |
| Junction Temperature | T_J | -55 to 150 | $^{\circ}C$ |
| Storage Temperature | T_{STG} | -55 to 150 | $^{\circ}C$ |

Note 1. FR-4 Board = 70 x 60 x 1mm.

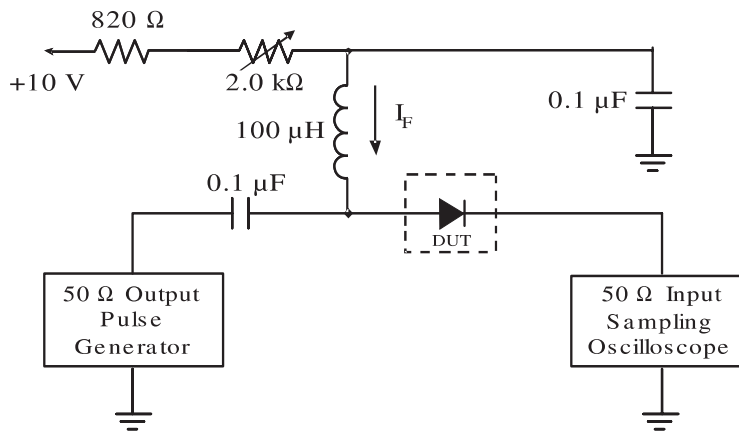




MMBD7000-AU

ELECTRICAL CHARACTERISTICS

| Parameter | Symbol | Test Condition | Min. | Typ. | Max. | Units |
|---|----------|---|------|------|--------------------|---------|
| Reverse Breakdown Voltage | V_{BR} | $I_R=100\mu A$ | 100 | -- | -- | V |
| Reverse Current | I_R | $V_R=50V$ $V_R=100V$ $V_R=50V, T_J=125^\circ C$ | -- | -- | 1 3 100 | μA |
| Forward Voltage | V_F | $I_F=1mA$ $I_F=10mA$ $I_F=100mA$ | -- | -- | 0.7 0.82 1.1 | V |
| Total Capacitance | C_J | $V_R=0V, f=1MHz$ | -- | -- | 2 | pF |
| Reverse Recovery Time (See Figure 1) | T_{RR} | $I_F=10mA, I_R=10mA$ $R_L=100\Omega$ | -- | -- | 4 | ns |



- Notes: 1. A 2.0k Ω variable resistor adjusted for a forward current (I_F) to 10mA
2. Input pulse is adjusted to $I_{R(peak)}$ is equal to 10mA

Figure 1. REVERSE RECOVERY TIME EQUIVALENT TEST CIRCUIT



MMBD7000-AU

ELECTRICAL CHARACTERISTICS CURVE

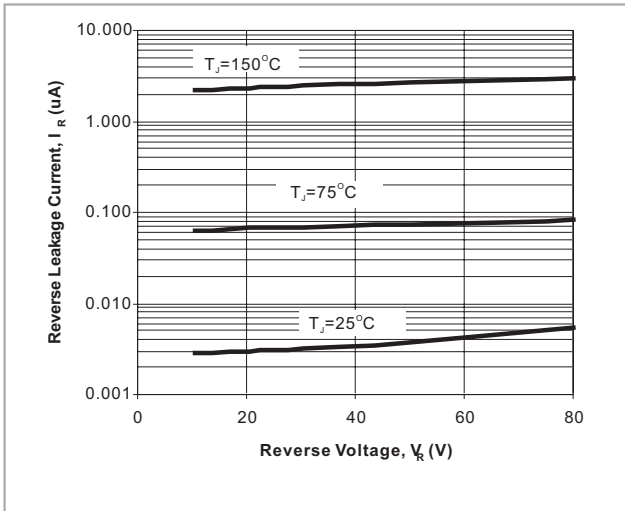


Fig. 2. Reverse Current vs. Reverse Voltage

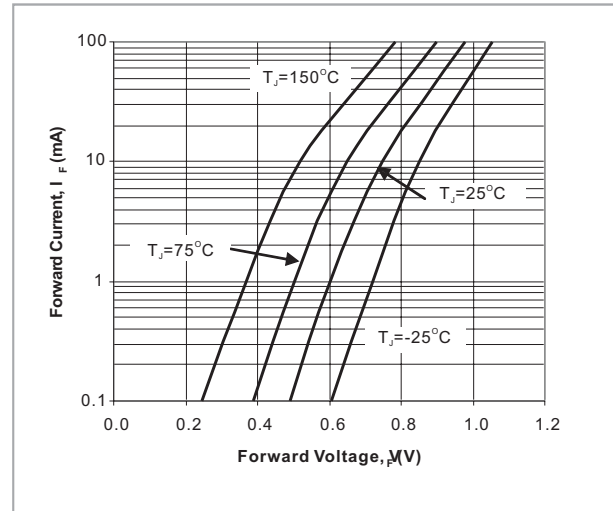


Fig. 3. Forward Current vs. Forward

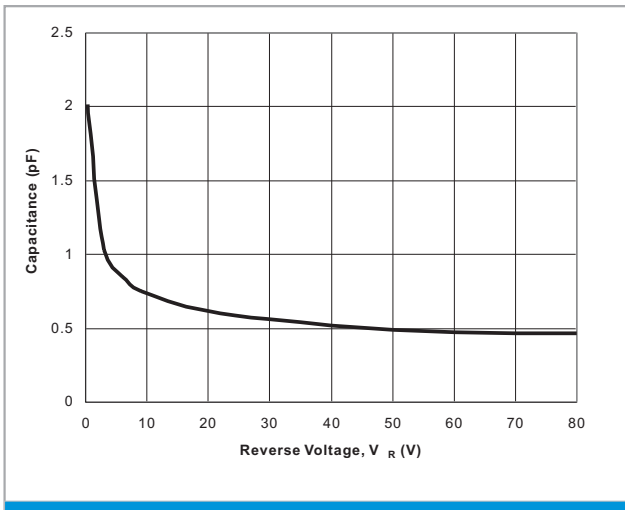


Fig. 4. Capacitance vs. Reverse Voltage

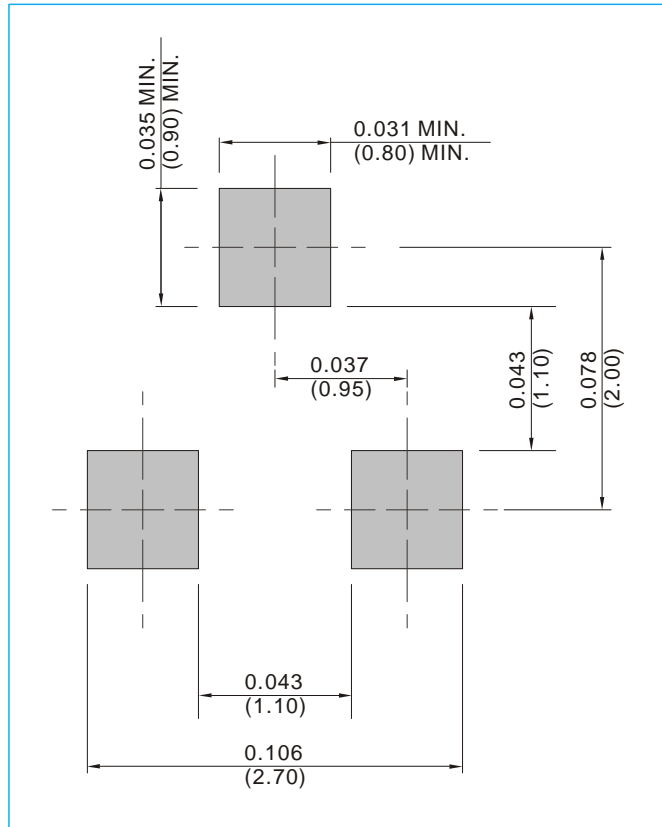


MMBD7000-AU

MOUNTING PAD LAYOUT

SOT-23

Unit : inch(mm)



ORDER INFORMATION

- Packing information
 - T/R - 12K per 13" plastic Reel
 - T/R - 3K per 7" plastic Reel



MMBD7000-AU

Part No_packing code_Version

MMBD7000-AU_R1_000A1

MMBD7000-AU_R2_000A1

For example :

RB500V-40_R2_00001



| Packing Code XX | | | | Version Code XXXXX | | |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type | 1 st Code | Packing size code | 2 nd Code | HF or RoHS | 1 st Code | 2 nd ~5 th Code |
| Tape and Ammunition Box (T/B) | A | N/A | 0 | HF | 0 | serial number |
| Tape and Reel (T/R) | R | 7" | 1 | RoHS | 1 | serial number |
| Bulk Packing (B/P) | B | 13" | 2 | | | |
| Tube Packing (T/P) | T | 26mm | X | | | |
| Tape and Reel (Right Oriented) (TRR) | S | 52mm | Y | | | |
| Tape and Reel (Left Oriented) (TRL) | L | PANASERT T/B CATHODE UP (PBCU) | U | | | |
| FORMING | F | PANASERT T/B CATHODE DOWN (PBCD) | D | | | |



MMBD7000-AU

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.