



MMBD914

SURFACE MOUNT SWITCHING DIODE

VOLTAGE 100 Volt **POWER** 225 mWatt

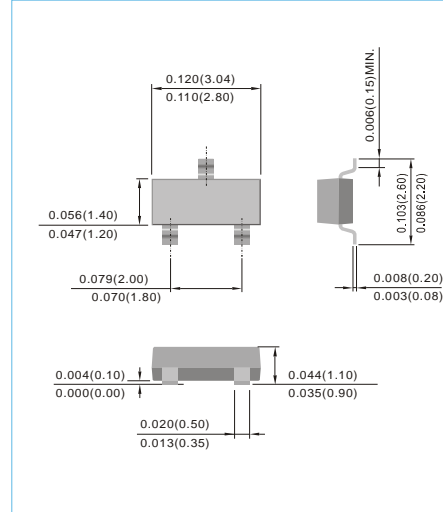
SOT-23 Unit : inch(mm)

FEATURES

- Very fast reverse recovery ($T_{rr} < 2\text{ns}$ typical)
- Low capacitance (4pF @ 0V typical)
- Surface mount package ideally suited for automatic insertion
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: SOT-23 plastic case.
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0003 ounces, 0.0084 grams
- Marking : T1



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 $t = 1\mu\text{s}$ | 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 | $^{\circ}\text{C}/\text{W}$ |
| Operating Junction And Storage Temperature Range | T_J, T_{STG} | -55 to 150 | $^{\circ}\text{C}$ |

NOTE :

1. FR-5 Board = 1X0.75X0.062 in.

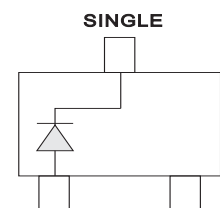


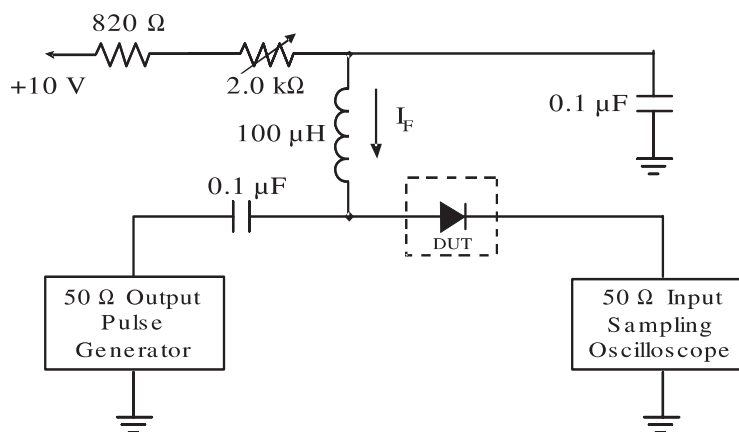
Fig. 14



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

| Parameter | Symbol | Test Condition | Min. | Typ. | Max. | Units |
|----------------------------------|------------|---|------|------|------------|---------------|
| Reverse Breakdown Voltage | $V_{(BR)}$ | $I_R=100\mu\text{A}$ | 100 | - | - | V |
| Reverse Current | I_R | $V_R=20\text{V}$ $V_R=75\text{V}$ | - | - | 0.025 5 | μA |
| Forward Voltage | V_F | $I_F=10\text{mA}$ | - | - | 1 | V |
| Total Capacitance | C_J | $f=1.0\text{MHz}$, $V_R=0\text{V}$ | - | - | 4 | pF |
| Reverse Recovery Time (Figure 1) | T_{RR} | $I_F=I_R=10\text{mA}$, $R_L=100\Omega$ | - | - | 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 $I_{R(\text{peak})}$ is equal to 10mA

Figure 1. REVERSE RECOVERY TIME EQUIVALENT TEST CIRCUIT



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ELECTRICAL CHARACTERISTICS CURVE

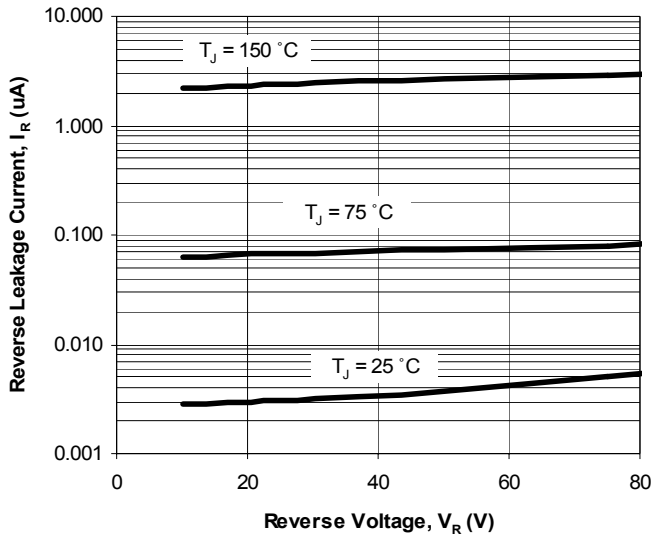


Fig. 2. Reverse Current vs. Reverse Voltage

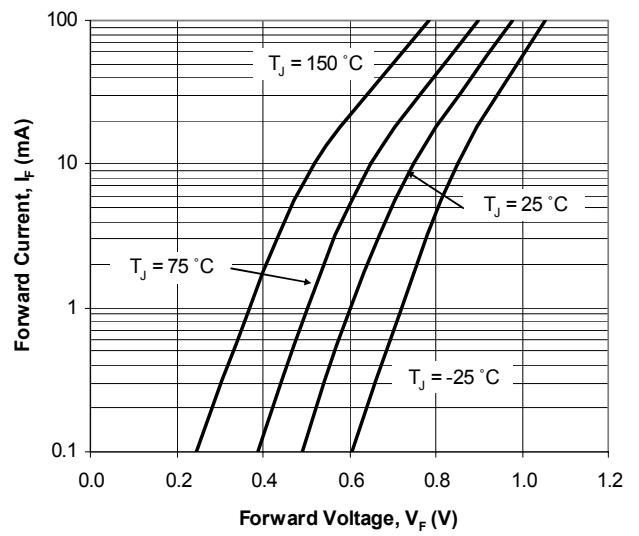


Fig. 3. Forward Current vs. Forward Voltage

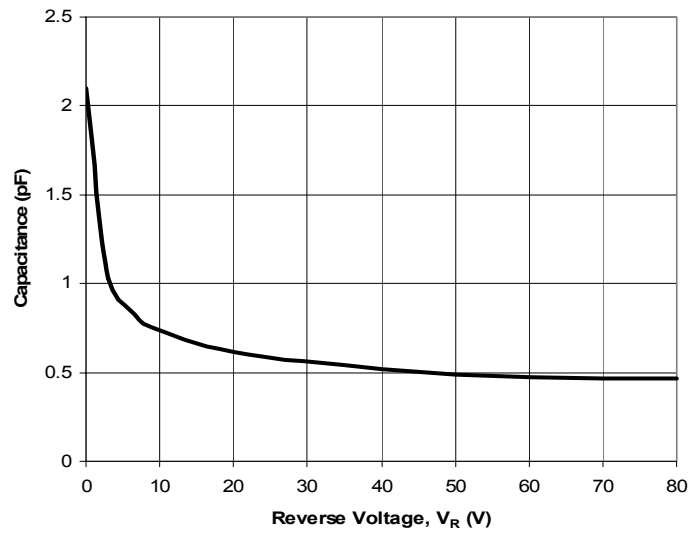


Fig. 4. Capacitance vs. Reverse Voltage

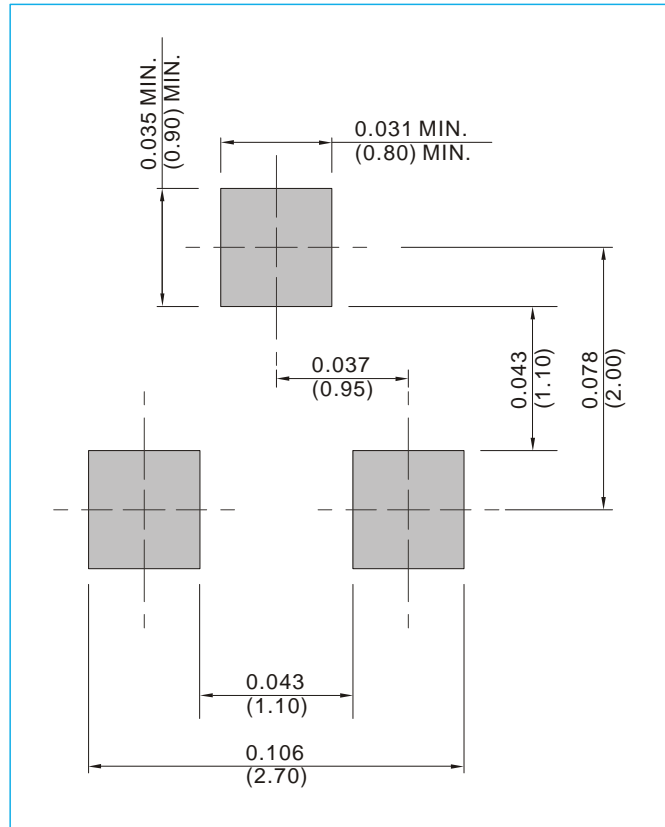


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MOUNTING PAD LAYOUT

SOT-23

Unit : inch(mm)



ORDER INFORMATION

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



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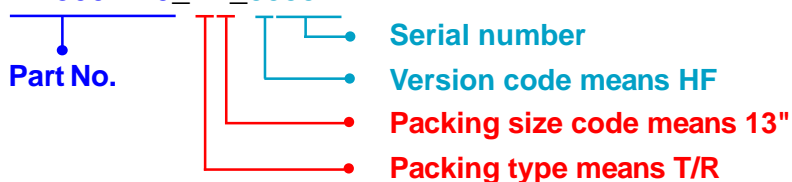
Part No_packing code_Version

MMBD914_R1_00001

MMBD914_R2_00001

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 | | | |



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