



# MMBV3700

## SURFACE MOUNT PIN DIODE

**VOLTAGE** 200 Volts    **POWER** 200 mW

**SOT-23**    Unit: inch (mm)

### FEATURES

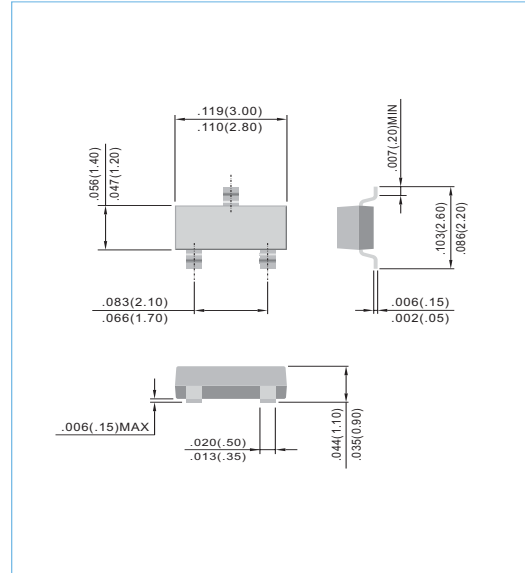
- High reverse breakdown voltage (200V min)
- Very low series resistance at 100MHz (0.7Ω typical @  $I_F=10\text{mA}$ )
- Long minority carrier lifetime ( $T_{rr}=300\text{ns}$  typical)
- Low capacitance (0.5 pF typical @  $V_R=20\text{V}$ )
- Surface mount package ideally suited for automatic insertion
- Pb free product are available : 99% Sn above can meet RoHS environment substance directive request

### MECHANICAL DATA

Case: SOT-23, Plastic

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

Approx. Weight: 0.008 gram



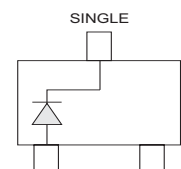
### ABSOLUTE RATINGS

| PARAMETER                  | SYMBOL | VALUE | UNIT |
|----------------------------|--------|-------|------|
| Maximum Reverse Voltage    | $V_R$  | 200   | V    |
| Continuous Forward Current | $I_F$  | 0.2   | A    |

### THERMAL CHARACTERISTICS

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

Note 1. FR-5 Board=1.0x0.75x0.062 in.





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

| PARAMETER                 | SYMBOL     | TEST CONDITION                     | MIN. | TYP. | MAX. | UNIT     |
|---------------------------|------------|------------------------------------|------|------|------|----------|
| Reverse Breakdown Voltage | $V_{(BR)}$ | $I_R=10\mu\text{A}$                | 200  | -    | -    | V        |
| Reverse Current           | $I_R$      | $V_R=150\text{V}$                  | -    | -    | 100  | nA       |
| Series Resistance         | $R_S$      | $I_F=10\text{mA}, f=100\text{MHz}$ | -    | 0.7  | 1.0  | $\Omega$ |
| Total Capacitance         | $C_T$      | $V_R=20\text{V}, f=1\text{MHz}$    | -    | 0.7  | 1.0  | pF       |
| Reverse Recovery Time     | $t_{rr}$   | $I_F=I_R=10\text{mA}$              | -    | 300  | -    | ns       |

### CHARACTERISTIC CURVES

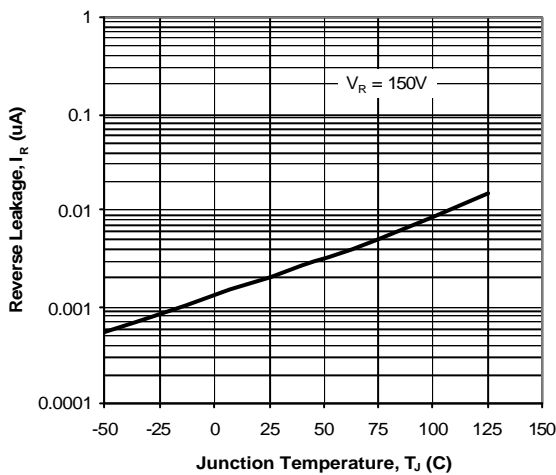


Figure 1. Leakage Current

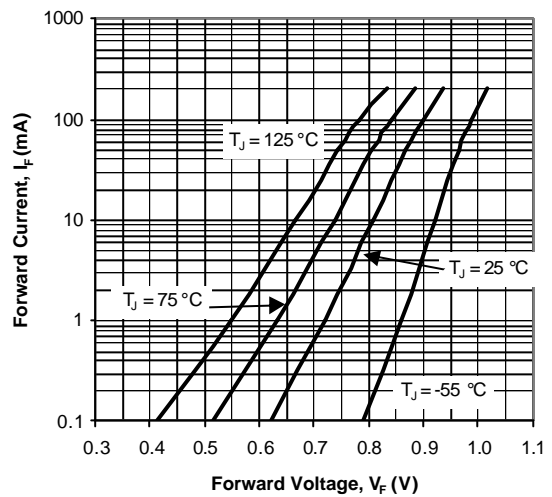


Figure 2. Forward Voltage

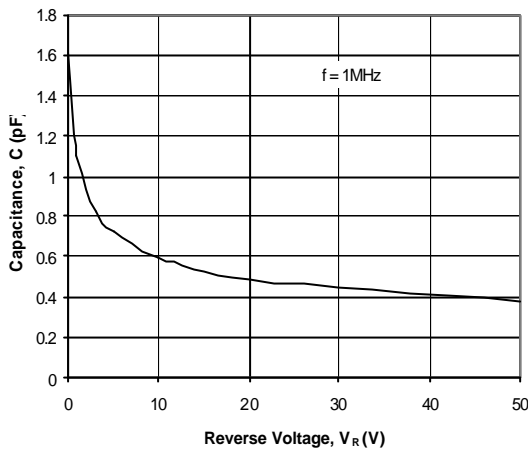


Figure 3. Capacitance

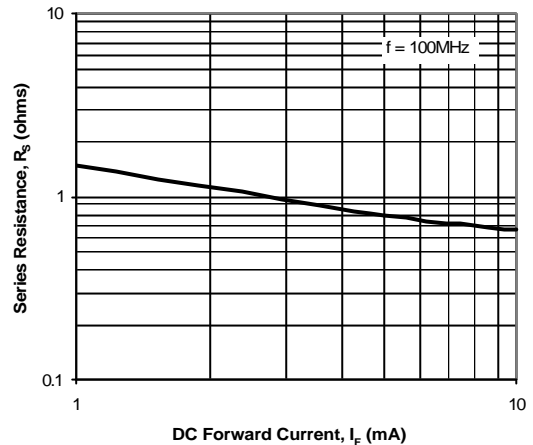
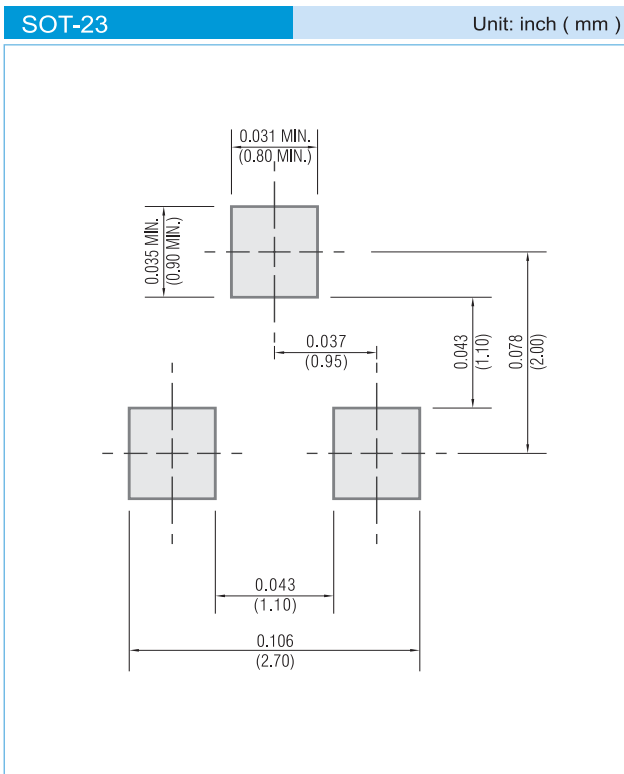


Figure 4. Series Resistance



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## MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information

T/R - 12K per 13" plastic Reel

T/R - 3K per 7" plastic Reel

### LEGAL STATEMENT

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