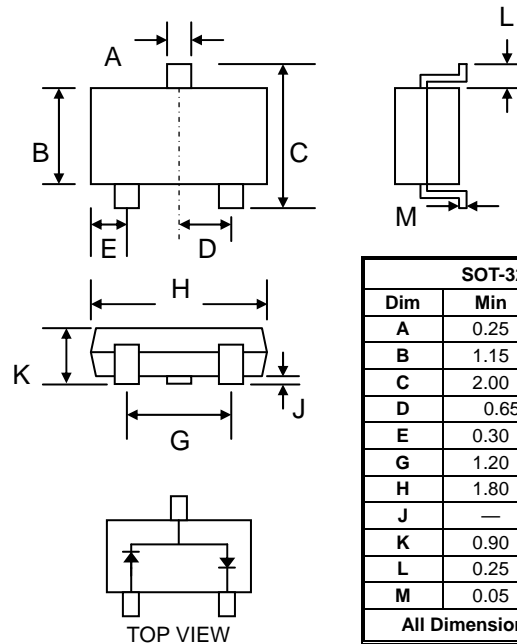


### Features

- **Very Low Capacitance**
- Low Forward Voltage
- PN Junction Guard Ring for Transient and ESD Protection
- For General Purpose Switching Applications
- Plastic Material – UL Recognition Flammability Classification 94V-0

### Mechanical Data

- Case: SOT-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.006 grams (approx.)
- Mounting Position: Any
- Marking: M5
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**



| SOT-323              |              |      |
|----------------------|--------------|------|
| Dim                  | Min          | Max  |
| A                    | 0.25         | 0.40 |
| B                    | 1.15         | 1.35 |
| C                    | 2.00         | 2.40 |
| D                    | 0.65 Nominal |      |
| E                    | 0.30         | 0.40 |
| G                    | 1.20         | 1.40 |
| H                    | 1.80         | 2.20 |
| J                    | —            | 0.10 |
| K                    | 0.90         | 1.10 |
| L                    | 0.25         | —    |
| M                    | 0.05         | 0.15 |
| All Dimensions in mm |              |      |

### Maximum Ratings @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

| Characteristic   | Symbol                          | Value       | Unit               |
|--|---------------------------------|-------------|--------------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 7.0         | V                  |
| Operating and Storage Temperature Range  | $T_J, T_{STG}$                  | -55 to +150 | $^{\circ}\text{C}$ |

### Thermal Characteristics

| Characteristic                                   | Symbol   | Value | Unit                 |
|--|----------|-------|----------------------|
| Power Dissipation (Note 1)                       | $P_D$    | 200   | mW                   |
| Thermal Resistance, Junction to Ambient (Note 1) | $R_{JA}$ | 625   | $^{\circ}\text{C/W}$ |

Note: 1. Mounted on FR-4 PC board with minimum recommended pad layout.

## Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

| Characteristic   | Symbol     | Min. | Typ. | Max.       | Unit          |
|--|------------|------|------|------------|---------------|
| Reverse Breakdown Voltage @ $I_R = 10\mu\text{A}$                      | $V_{(BR)}$ | 7.0  |      |            | V             |
| Forward Voltage Drop @ $I_F = 10\text{mA}$                             | $V_F$      |      |      | 0.6        | V             |
| Reverse Leakage Current @ $V_R = 3.0\text{V}$<br>@ $V_R = 7.0\text{V}$ | $I_R$      |      |      | 0.25<br>10 | $\mu\text{A}$ |
| Diode Capacitance ( $V_R = 0\text{V}$ , $f = 1.0\text{MHz}$ )          | $C_D$      |      |      | 1.0        | pF            |

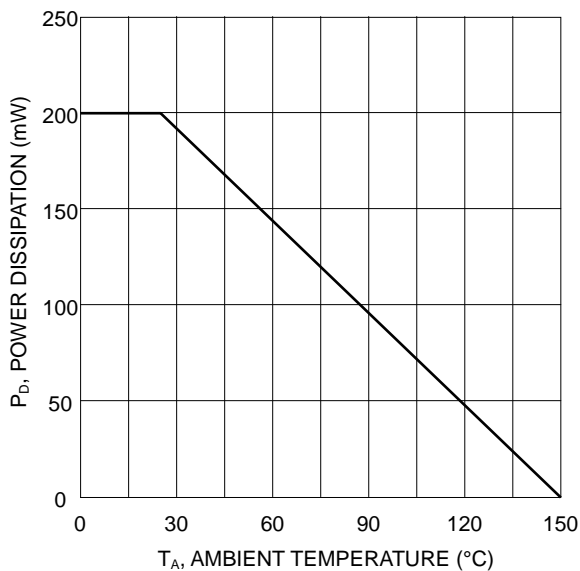


Fig. 1 Power Derating Curve

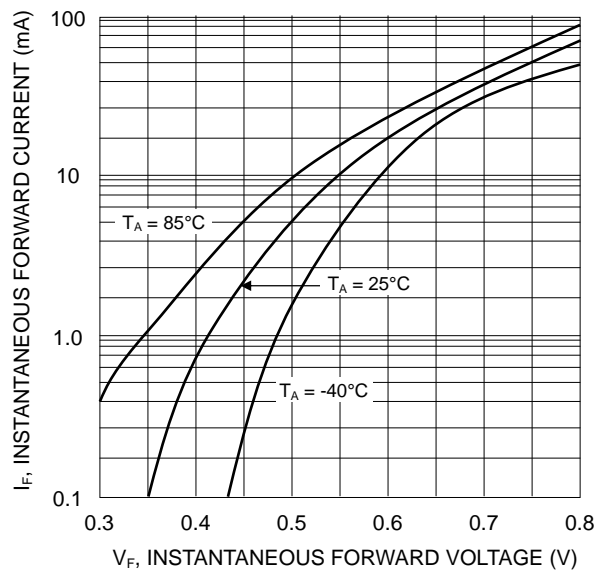


Fig. 2 Typical Forward Characteristics

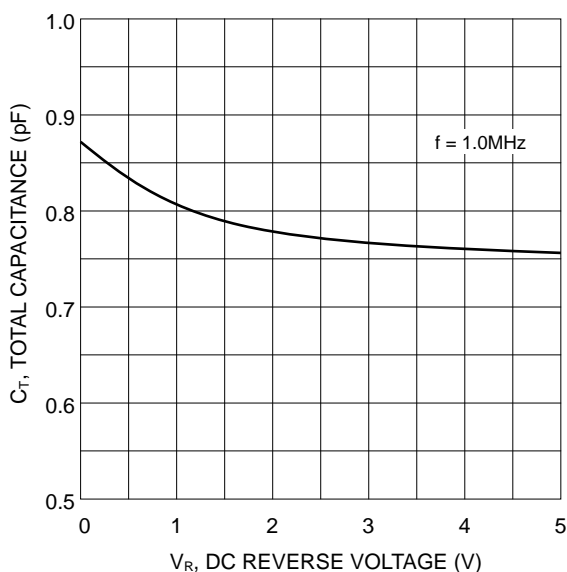


Fig. 3 Total Capacitance vs. Reverse Voltage

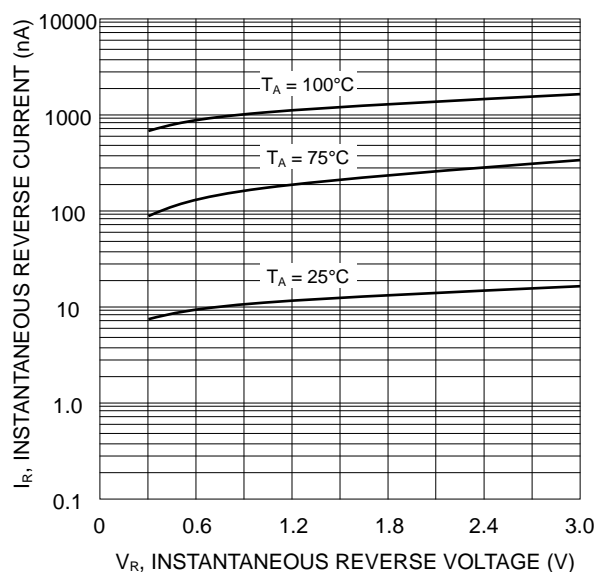
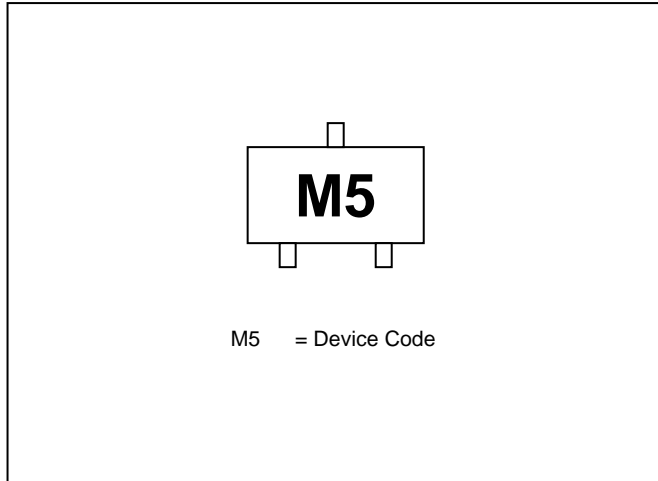
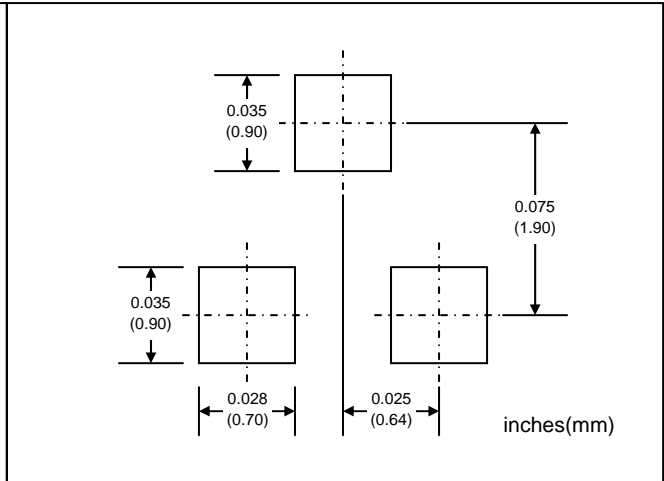


Fig. 4 Typical Reverse Characteristics

## MARKING INFORMATION

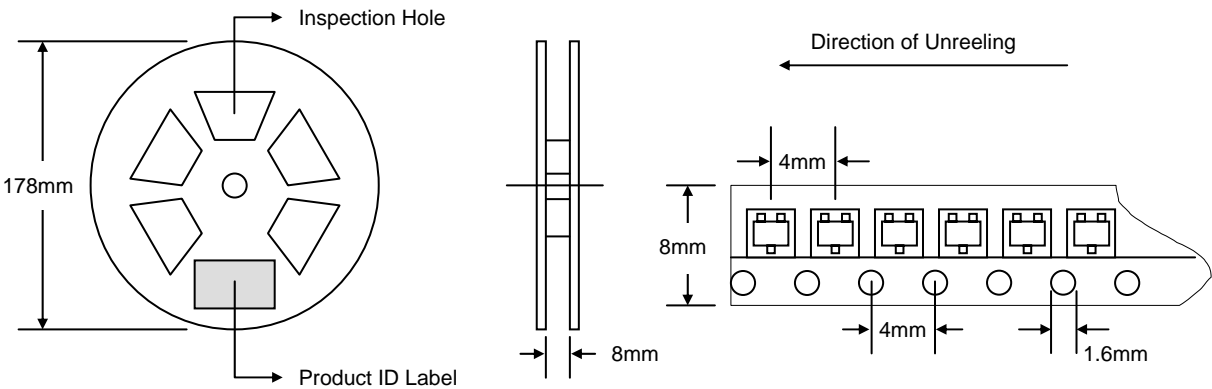


## RECOMMENDED FOOTPRINT



## PACKAGING INFORMATION

### TAPE & REEL




| Reel Diameter (mm) | Quantity (PCS) | Inner Box Size L x W x H (mm) | Quantity (PCS) | Carton Size L x W x H (mm) | Quantity (PCS) | Approx. Gross Weight (KG) |
|--------------------|----------------|-------------------------------|----------------|----------------------------|----------------|---------------------------|
| 178                | 3,000          | 187 x 187 x 65                | 15,000         | 390 x 240 x 420            | 150,000        | 10.0                      |

**Note:** 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.  
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

## ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|--------------|-------------------|
| MMBD352W-T1 | SOT-323      | 3000/Tape & Reel  |

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, MMBD352W-T1-LF.**

WON-TOP ELECTRONICS and  are registered trademarks of Won-Top Electronics Co., Ltd (WTE). WTE has checked all information carefully and believes it to be correct and accurate. However, WTE cannot assume any responsibility for inaccuracies. Furthermore, this information does not give the purchaser of semiconductor devices any license under patent rights to manufacturer. WTE reserves the right to change any or all information herein without further notice.

**WARNING:** DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

**Won-Top Electronics Co., Ltd.**

No. 44 Yu Kang North 3rd Road,

Chine Chen Dist., Kaohsiung 806, Taiwan

**Phone:** 886-7-822-5408 or 886-7-822-5410

**Fax:** 886-7-822-5417

**Email:** sales@wontop.com

**Internet:** <http://www.wontop.com>

*We power your everyday.*