



# MMBD717W SERIES

## SURFACE MOUNT SCHOTTKY DIODES

**VOLTAGE** 20 Volts **CURRENT** 200 mA

**SOT-323** Unit: inch (mm)

### FEATURES

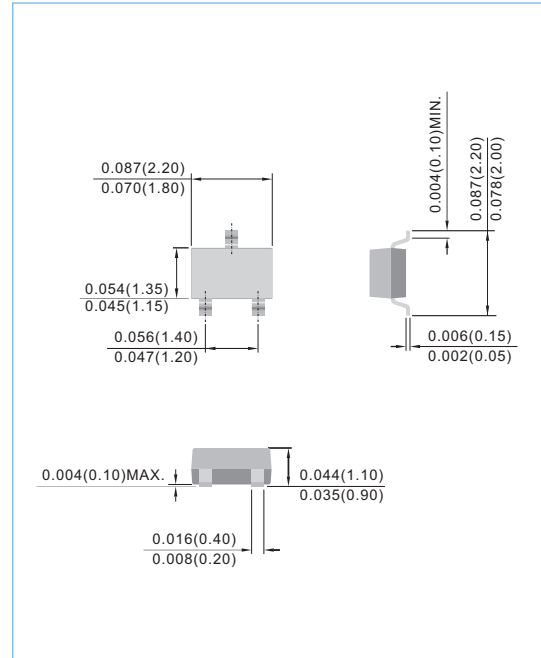
- Very Low  $V_F$ : 0.37V (Typ) at  $I_F = 1\text{mA}$
- Low Capacitance: 2.5 pF (Max) at  $V_R=0\text{V}$
- Extremely Fast Switching Speed
- Lead free in comply with EU RoHS 2002/95/EC directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

Case: SOT-323, Plastic

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

Approx. Weight: 0.005 gram



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

| PARAMETER  | SYMBOL          | MMBD717W   | MMBD717AW    | MMBD717CW      | MMBD717SW | UNITS |
|--|-----------------|------------|--------------|----------------|-----------|-------|
| Marking Code                                     | -               | P70        | P72          | P73            | P74       | -     |
| Maximum Reverse Voltage                          | $V_R$           | 20         |              |                |           | V     |
| Peak Reverse Voltage                             | $V_{RRM}$       | 20         |              |                |           | V     |
| Maximum Forward Current                          | $I_F$           | 0.2        |              |                |           | A     |
| Power Dissipation (Note 1)                       | $P_{TOT}$       | 200        |              |                |           | mW    |
| Thermal Resistance , Junction to Ambient         | $R_{\theta JA}$ | 556        |              |                |           | °C/W  |
| Operating Junction and Storage Temperature Range | $T_J, T_{STG}$  | -55 to 150 |              |                |           | °C    |
| Circuit Figure                                   | -               | SINGLE     | COMMON ANODE | COMMON CATHODE | SERIES    | -     |

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

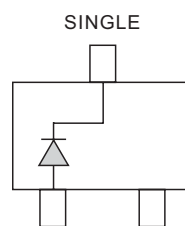


FIG.14

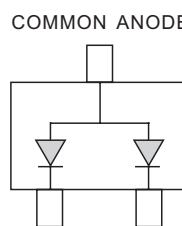


FIG.15

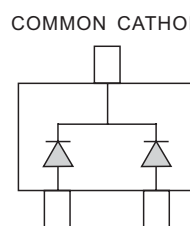


FIG.16

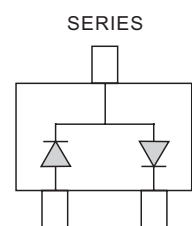


FIG.17

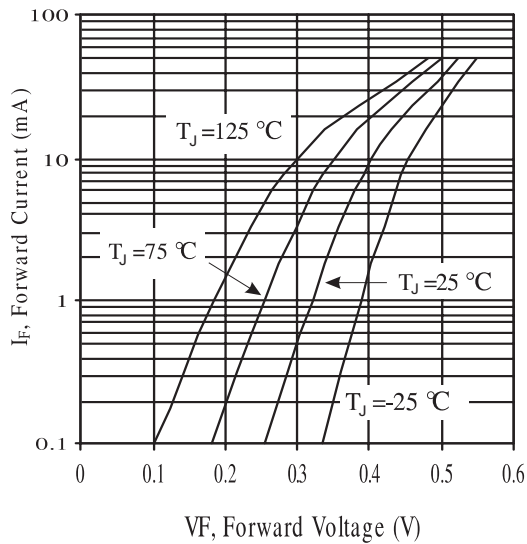


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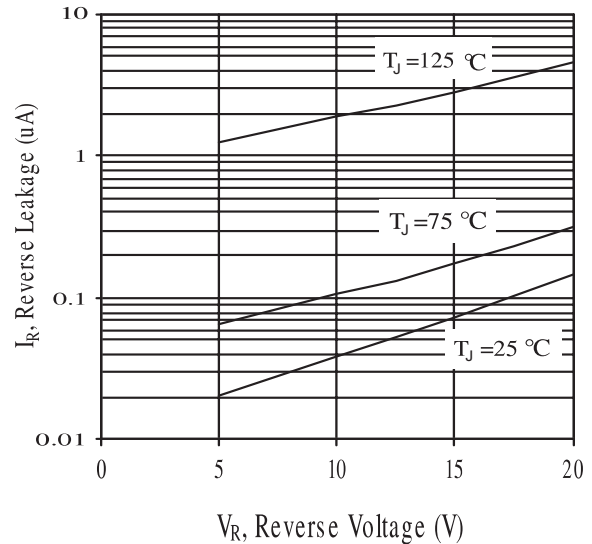
## ELECTRICAL CHARACTERISTICS (each diode) ( $T_J = 25^\circ\text{C}$ unless otherwise noted)

| PARAMETER                 | SYMBOL     | TEST CONDITION                   | MIN. | TYP. | MAX. | UNITS         |
|---------------------------|------------|----------------------------------|------|------|------|---------------|
| Reverse Breakdown Voltage | $V_{(BR)}$ | $I_R=10\ \mu\text{A}$            | 20   | --   | --   | V             |
| Reverse Leakage Current   | $I_R$      | $V_R=10\ \text{V}$               | --   | --   | 1.0  | $\mu\text{A}$ |
| Forward Voltage           | $V_F$      | $I_F=1.0\text{mA}$               | --   | --   | 0.37 | V             |
| Total Capacitance         | $C_T$      | $V_R=0\text{V}, f=1.0\text{MHz}$ | --   | --   | 2.5  | pF            |

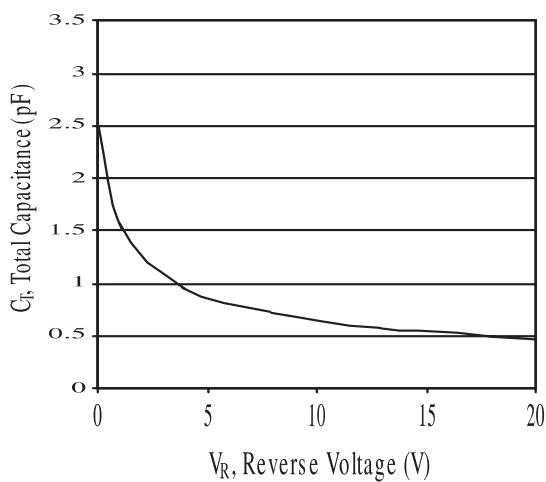
## ELECTRICAL CHARACTERISTICS CURVE



**Figure 1. Typical Forward Voltage**



**Figure 2. Typical Reverse Current**

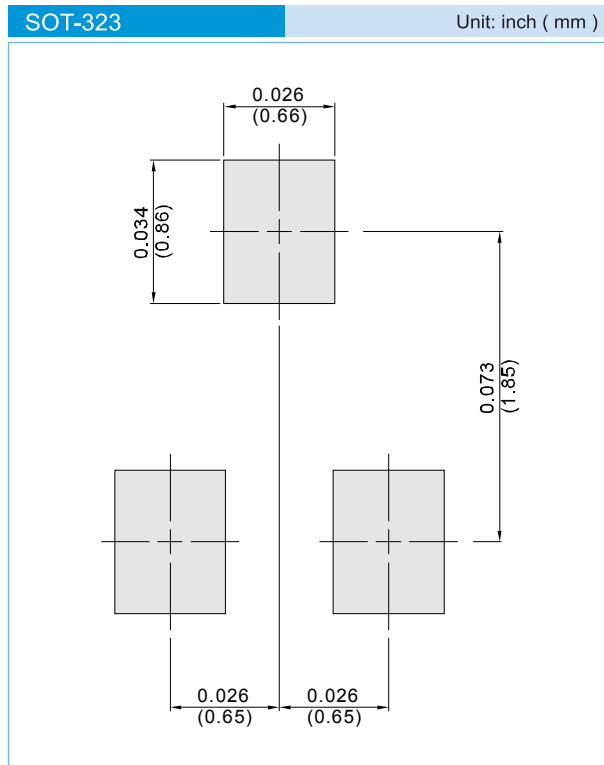


**Figure 3. Typical Total Capacitance**



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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



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## Part No\_packing code\_Version

MMBD717W\_R1\_00001

MMBD717W\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



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



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