



# MMBD4148TS

## SURFACE MOUNT SWITCHING DIODES

**VOLTAGE** 100 Volt **POWER** 200mWatt

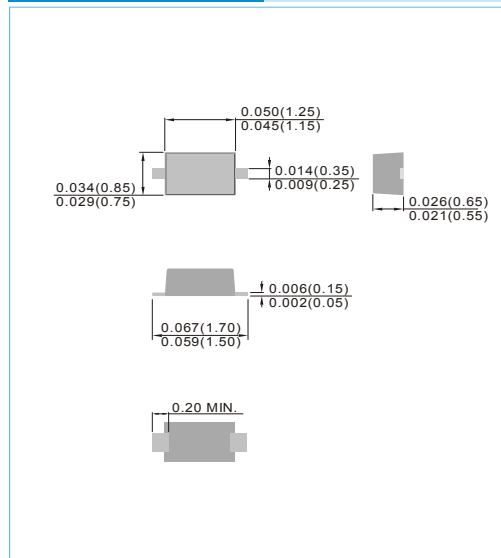
**SOD-523** Unit : inch(mm)

### FEATURES

- Fast switching Speed.
- Electrically Identical to Standard JEDEC
- Surface Mount Package Ideally Suited for Automatic Insertion.
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: SOD-523 plastic case.
- Terminals : Solderable per MIL-STD-750, Method 2026
- Standard packaging: 8mm tape
- Approx. Weight : 0.0001 ounces, 0.0014 grams
- Marking Code: A2



### ABSOLUTE RATINGS (T<sub>A</sub>=25°C, unless otherwise noted)

| PARAMETER  | SYMBOL             | VALUE      | UNITS |
|--|--------------------|------------|-------|
| Reverse Voltage  | V <sub>R</sub>     | 75         | V     |
| Peak Reverse Voltage                                     | V <sub>RRM</sub>   | 100        | V     |
| RMS Voltage  | V <sub>RMS</sub>   | 50         | V     |
| Maximum DC Blocking Voltage                              | V <sub>DC</sub>    | 75         | V     |
| Maximum Average Forward Current at T <sub>A</sub> =25 °C | I <sub>F(AV)</sub> | 150        | mA    |
| Peak Forward Surge Current, 1.0 μs                       | I <sub>FSM</sub>   | 4          | A     |
| Power Dissipation Derate Above 25 °C                     | P <sub>TOT</sub>   | 200        | mW    |
| Junction Temperature                                     | T <sub>J</sub>     | 150        | °C    |
| Storage Temperature Range                                | T <sub>STG</sub>   | -55 to 150 | °C    |

### THERMAL CHARACTERISTICS

| PARAMETER                  | SYMBOL           | VALUE | UNITS  |
|----------------------------|------------------|-------|--------|
| Typical Thermal Resistance | R <sub>θJA</sub> | 635   | °C / W |



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

| PARAMETER                     | SYMBOL   | TEST CONDITIONS  | VALUE                          | UNITS         |
|-------------------------------|----------|--|--------------------------------|---------------|
| Maximum Forward Voltage       | $V_F$    | $I_F=1\text{mA}$<br>$I_F=10\text{mA}$<br>$I_F=50\text{mA}$<br>$I_F=150\text{mA}$ | 0.715<br>0.855<br>1.00<br>1.25 | V             |
| Reverse Leakage Current       | $I_R$    | $V_R=20\text{V}$<br>$V_R=75\text{V}$   | 0.025<br>2.5                   | $\mu\text{A}$ |
| Maximum Total Capacitance     | $C_T$    | $V_R=0\text{V}$ , $f=1\text{MHz}$  | 1.5                            | pF            |
| Maximum Reverse Recovery Time | $t_{rr}$ | $I_F=10\text{mA}$ , $I_R=1\text{mA}$<br>$V_R=6\text{V}$ , $R_L=100\Omega$        | 4                              | ns            |

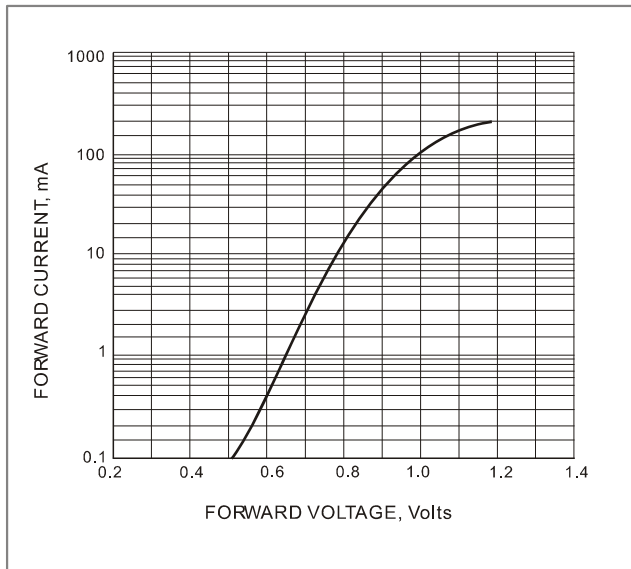


FIG. 1 TYPICAL FORWARD CHARACTERISTIC

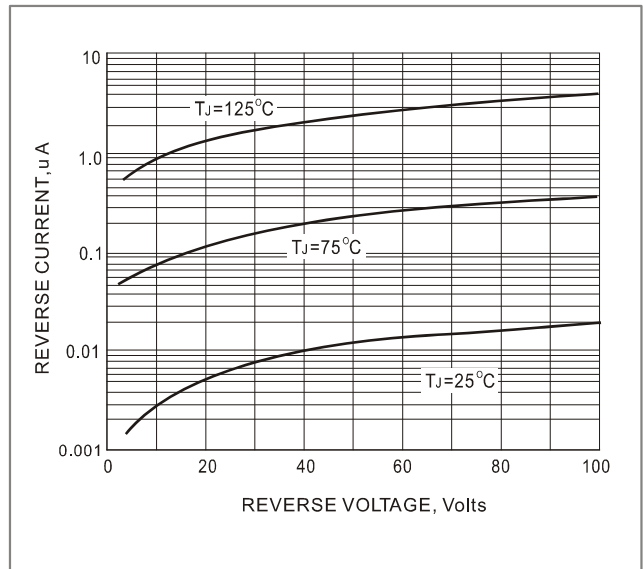


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

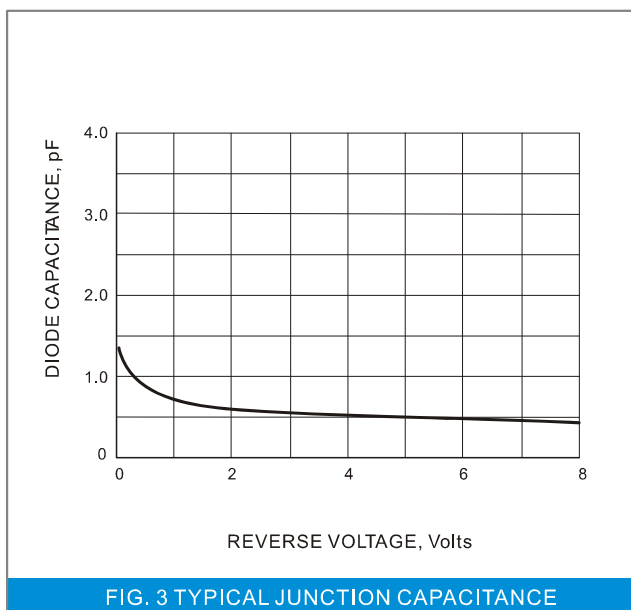


FIG. 3 TYPICAL JUNCTION CAPACITANCE

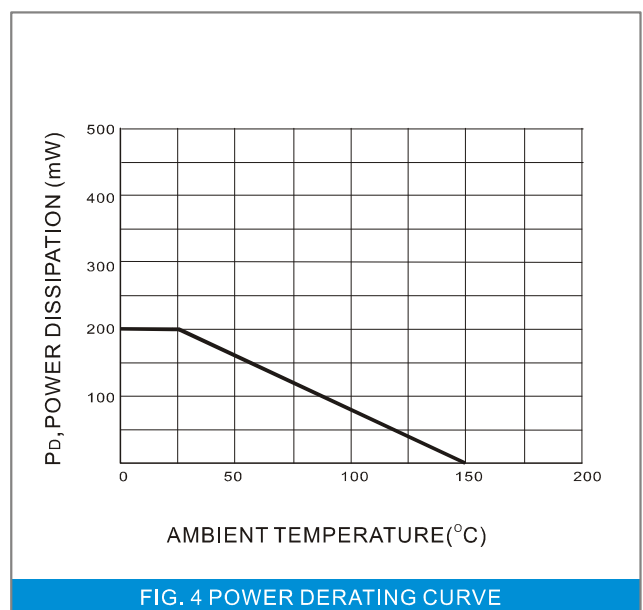
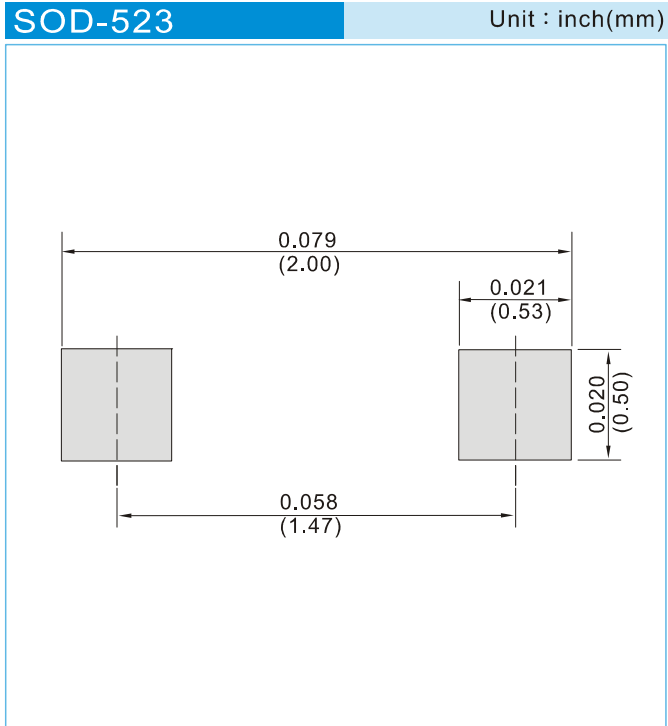


FIG. 4 POWER DERATING CURVE



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### MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information
  - T/R - 12K per 13" plastic Reel
  - T/R - 5K per 7" plastic Reel



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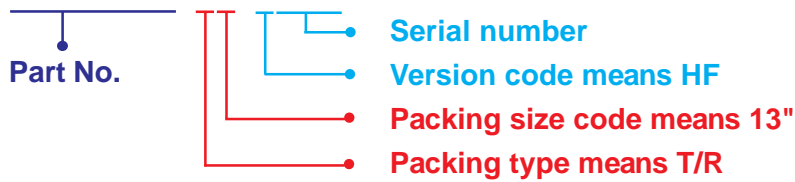
## Part No\_packing code\_Version

MMBD4148TS\_R1\_00001

MMBD4148TS\_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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