

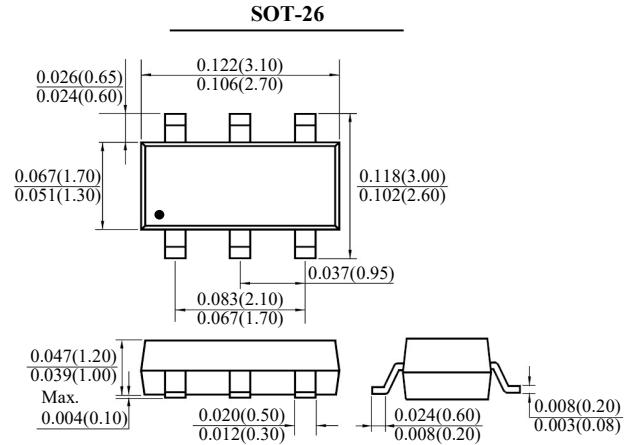
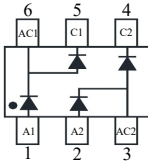


MMBD3003BRDH

SWITCHING DIODES

FEATURES

- Fast Switching Speed
- High Conductance
- High Reverse Breakdown Voltage Rating
- Suffix "H" indicates Halogen-free parts, ex. MMBD3003BRDH



Dimensions in inch and (millimeter)

Maximum Ratings@ $T_A = 25^\circ\text{C}$

| Parameter | Symbol | Value | Unit |
|--|-----------------|---------------------|---------------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 300 | V |
| Working Peak Reverse Voltage | V_{RWM} | 300 | V |
| DC Blocking Voltage | V_R | 300 | V |
| Forward Continuous Current | I_F | 225 | mA |
| Repetitive Peak Forward Current | I_{FRM} | 625 | mA |
| Non-Repetitive Peak Forward Surge Current | I_{FSM} | at $t=1\text{s}$ | 1 |
| | | at $t=1\mu\text{s}$ | 4 |
| Total Power Dissipation (Note 1) | P_{tot} | 350 | mW |
| Thermal Resistance from Junction to Ambient (Note 1) | $R_{\theta JA}$ | 357 | $^\circ\text{C}/\text{W}$ |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | $^\circ\text{C}$ |

Note:

1. Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.

Electrical Characteristics@ $T_A = 25^\circ\text{C}$

| Parameter | Conditions | Symbol | Min. | Max. | Unit |
|---------------------------|---|-------------|------|------|---------------|
| Reverse Breakdown Voltage | $I_R=100\mu\text{A}$ | $V_{(BR)R}$ | 300 | - | V |
| Forward Voltage | $I_F=20\text{mA}$ | V_F | - | 0.87 | V |
| | $I_F=100\text{mA}$ | | - | 1.00 | |
| | $I_F=200\text{mA}$ | | - | 1.25 | |
| Reverse Current | $V_R=240\text{V}$ | I_R | - | 0.1 | μA |
| | $V_R=240\text{V}, T_J=150^\circ\text{C}$ | | - | 100 | |
| Total Capacitance | $V_R=0\text{V}, f=1\text{MHz}$ | C_T | - | 5 | pF |
| Reverse Recovery Time | $I_F=I_R=30\text{mA}, I_{tr}=0.1 \times I_R, R_L=100\Omega$ | t_{rr} | - | 50 | ns |



MMBD3003BRDH

SWITCHING DIODES

RATINGS AND CHARACTERISTIC CURVES

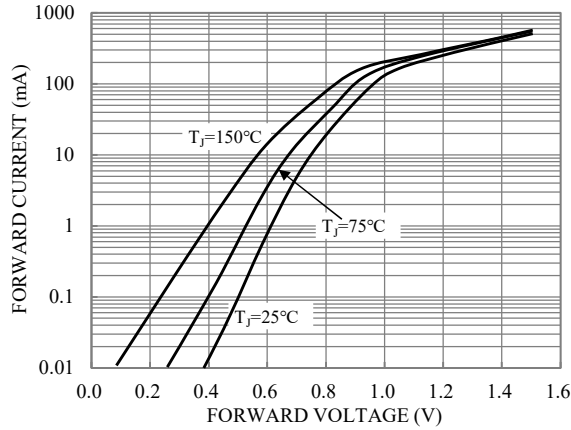


Fig.1-TYPICAL FORWARD CHARACTERISTICS

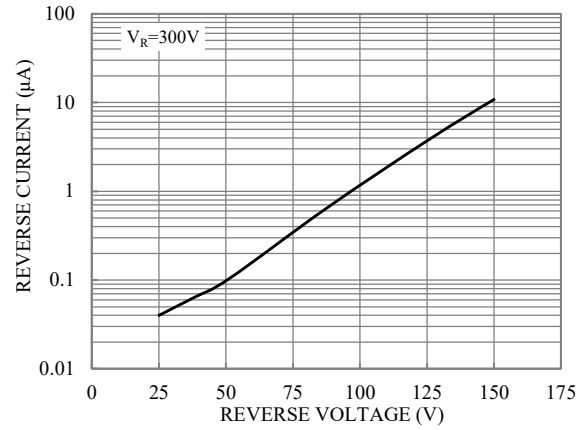


Fig.2-TYPICAL REVERSE CHARACTERISTICS

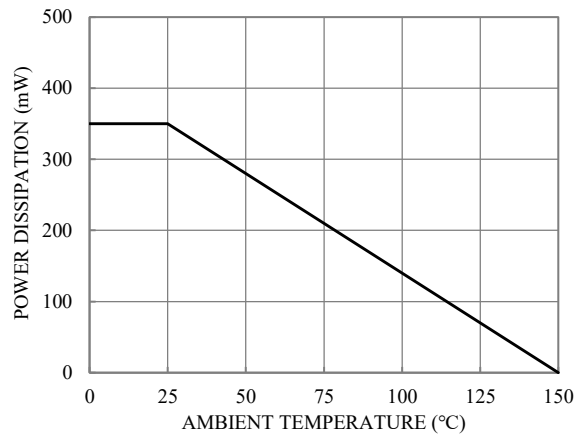


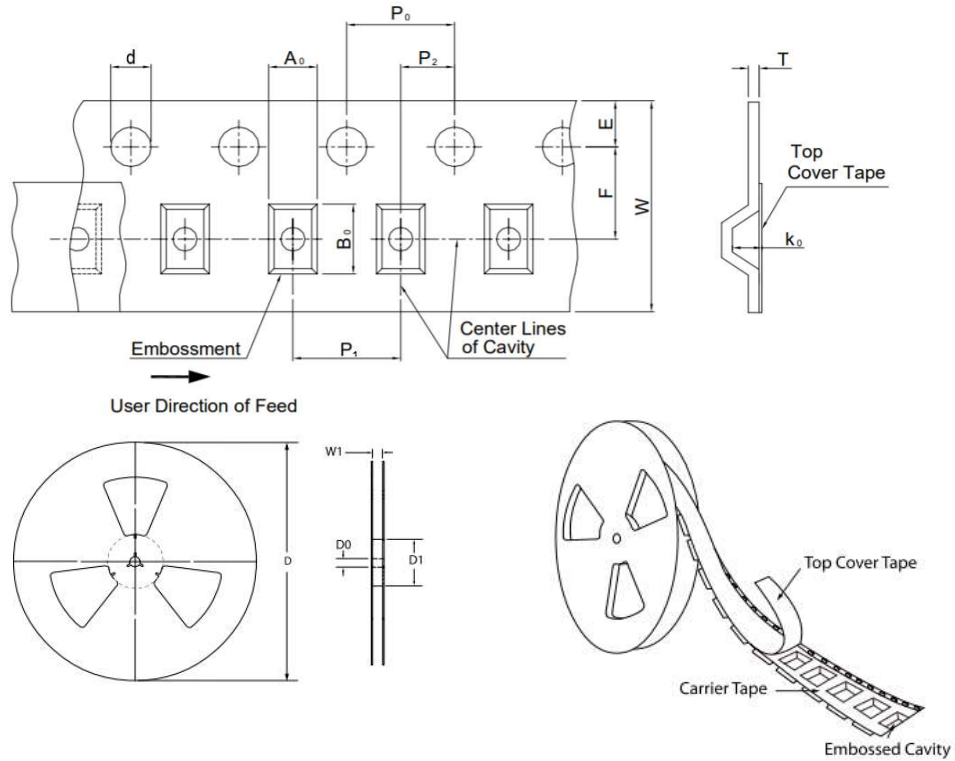
Fig.3-POWER DERATING CURVE



MMBD3003BRDH

SWITCHING DIODES

TAPE & REEL SPECIFICATION



| Item | Symbol | SOT-26 |
|------------------------|----------------|---------------|
| Carrier width | A ₀ | 3.30 ± 0.10 |
| Carrier length | B ₀ | 3.20 ± 0.10 |
| Carrier depth | K ₀ | 1.50 ± 0.10 |
| Sprocket hole | d | 1.50 ± 0.10 |
| Reel outside diameter | D | 178.00 ± 2.00 |
| Feed hole width | D ₀ | 13.00 ± 0.50 |
| Reel inner diameter | D ₁ | MIN. 50.00 |
| Sprocket hole position | E | 1.75 ± 0.10 |
| Punch hole position | F | 3.50 ± 0.10 |
| Sprocket hole pitch | P ₀ | 4.00 ± 0.10 |
| Punch hole pitch | P ₁ | 2.00 ± 0.10 |
| Embossment center | P ₂ | 2.00 ± 0.10 |
| Overall tape thickness | T | MAX. 0.25 |
| Tape width | W | 8.00 ± 0.30 |
| Reel width | W ₁ | 8.40 ± 1.50 |

ORDER INFORMATION

| Package | Reel Size | Quantity |
|---------|-----------|----------|
| SOT-26 | 7" | 3,000 |

MARKING CODE

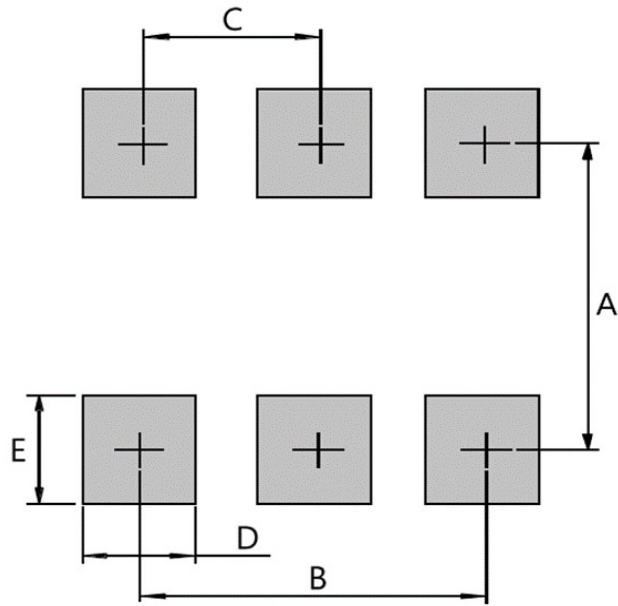
| Part Number | Marking Code |
|--------------|--------------|
| MMBD3003BRDH | TH |



MMBD3003BRDH

SWITCHING DIODES

SUGGESTED SOLDER PAD LAYOUT



Unit : mm

| PACKAGE | A | B | C | D | E |
|---------|------|------|------|------|------|
| SOT-26 | 2.40 | 1.90 | 0.95 | 0.70 | 1.00 |