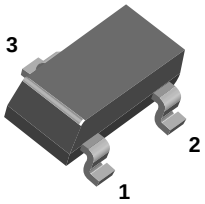
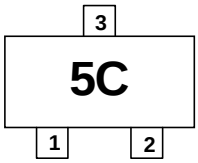
FAIRCHILD
SEMICONDUCTOR®

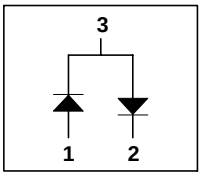
# MMBD7000




SOT-23




**Connection Diagram**




## Small signal Diode

### Absolute Maximum Ratings*

$T_A$ = 25°C unless otherwise noted

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $V_{RRM}$ | Maximum Repetitive Reverse Voltage | 100 | V |
| $I_{F(AV)}$ | Average Rectified Forward Current | 200 | mA |
| $I_{FSM}$ | Non-repetitive Peak Forward Surge Current<br>Pulse Width = 1.0 second<br>Pulse Width = 1.0 microsecond | <br>1.0<br>2.0 | <br>A<br>A |
| $T_{stg}$ | Storage Temperature Range | -55 to +150 | °C |
| $T_J$ | Operating Junction Temperature | 150 | °C |

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

**NOTES**:

**1)** These ratings are based on a maximum junction temperature of 150 degrees C.

**2)** These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

### Thermal Characteristics

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $P_D$ | Power Dissipation | 350 | mW |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 357 | °C/W |

### Electrical Characteristics

$T_A$ = 25°C unless otherwise noted

| Symbol | Parameter | Test Conditions | Min | Max | Units |
|---|---|---|---|---|---|
| $V_R$ | Breakdown Voltage | $I_R$ = 100 µA | 100 | | V |
| $V_F$ | Forward Voltage | $I_F$ = 1.0 mA<br>$I_F$ = 10 mA<br>$I_F$ = 100 mA | 550<br>670<br>0.75 | 700<br>820<br>1.1 | mV<br>mV<br>V |
| $I_R$ | Reverse Current | $V_R$ = 100 V<br>$V_R$ = 50 V<br>$V_R$ = 50 V, $T_A$ = 125°C | | 500<br>300<br>100 | nA<br>nA<br>µA |
| $C_T$ | Total Capacitance | $V_R$ = 0, f = 1.0 MHz | | 1.5 | pF |
| $t_{rr}$ | Reverse Recovery Time | $I_F$ = $I_R$ = 10 mA, $I_{RR}$ = 1.0 mA, $R_L$ = 100 Ω | | 4.0 | ns |

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|---|---|---|
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