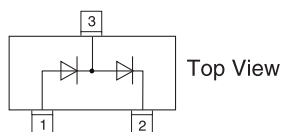
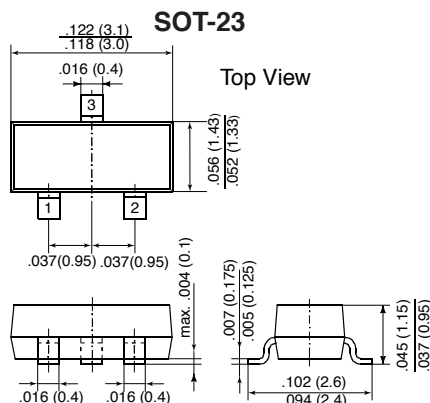


MMBD7000

DUAL SMALL SIGNAL SWITCHING DIODE



Dimensions in inches and (millimeters)

FEATURES

- ◆ Silicon Epitaxial Planar Diode
- ◆ Fast switching dual diode, especially suited for automatic insertion.



MECHANICAL DATA

Case: SOT-23 (TO-236AB) Plastic Package

Weight: approx. 0.008 g

Marking Code: M5C

MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified (per diode)

| | SYMBOL | VALUE | UNIT |
|--|-----------------|--|-------------|
| Reverse Voltage | V_R | 100 | Volts |
| Forward Current (continuous) | I_F | 200 | mA |
| Non-Repetitive Peak Forward Current at $t = 1s$ | I_{FSM} | 500 | mA |
| Power Dissipation on FR-5 Board $T_A = 25^\circ C$ Derate above 25°C | P_{tot} | 225 1.8 | mW mW/°C |
| Total Device Dissipation on Alumina Substrate, $T_A = 25^\circ C$ Derate above 25°C | P_{tot} | 300 2.4 | mW mW/°C |
| Thermal Resistance Junction to Ambient Air | $R_{\theta JA}$ | 417 ⁽¹⁾ 556 ⁽²⁾ | °C/W |
| Maximum Junction Temperature | T_j | 150 | °C |
| Storage Temperature Range | T_s | -55 to +150 | °C |

NOTES

(1) On Alumina Substrate

(2) On FR-5 Board

MMBD7000

ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified (per diode).

| | SYMBOL | MIN. | MAX. | UNIT |
|---|-----------|------|------|---------------|
| Reverse Breakdown Voltage at $I_R=100\mu\text{A}$ | V_{BR} | 100 | - | Volts |
| Leakage Current at $V_R = 50\text{ V}$ | I_R | - | 1.0 | μA |
| at $V_R = 100\text{ V}$ | I_R | - | 3.0 | μA |
| at $V_R = 50\text{ V}, T_j = 125^\circ\text{C}$ | I_R | - | 100 | μA |
| Forward Voltage at $I_F = 1\text{ mA}$ | V_F | 0.55 | 0.70 | Volts |
| at $I_F = 10\text{ mA}$ | V_F | 0.67 | 0.82 | Volts |
| at $I_F = 100\text{ mA}$ | V_F | 0.75 | 1.10 | Volts |
| Capacitance at $V_R = 0; f = 1\text{ MHz}$ | C_{tot} | - | 1.5 | pF |
| Reverse Recovery Time from $I_F = 10\text{ mA}$ to $I_R = 10\text{ mA}$ measured at $I_{rr} = 1\text{ mA}, R_L = 100\ \Omega$ | t_{rr} | - | 4.0 | ns |