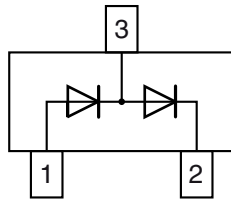




Small Signal Switching Diode, Dual



FEATURES

- Silicon epitaxial planar diode
- Fast switching dual diode, especially suited for automatic insertion
- AEC-Q101 qualified
- Base P/N-G3 - green, commercial grade
- Material categorization:
For definitions of compliance please see www.vishay.com/doc?99912



MECHANICAL DATA

Case: SOT-23

Weight: approx. 8.1 mg

Packaging codes/options:

18/10K per 13" reel (8 mm tape), 10K/box

08/3K per 7" reel (8 mm tape), 15K/box

| PARTS TABLE | | | | |
|-------------|----------------------------------|-----------------------|--------------|---------------|
| PART | ORDERING CODE | INTERNAL CONSTRUCTION | TYPE MARKING | REMARKS |
| MMBD7000-G | MMBD7000-G3-08 or MMBD7000-G3-18 | Dual diodes serial | M5G | Tape and reel |

| ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified) | | | | |
|---|--------------------|------------------|-------|------|
| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
| Reverse voltage | | V _R | 100 | V |
| Forward current (continuous) | | I _F | 200 | mA |
| Non-repetitive peak forward current | t = 1 s | I _{FSM} | 500 | mA |
| Power dissipation on FR-5 board | | P _{tot} | 225 | mW |
| | Derate above 25 °C | P _{tot} | 1.8 | mW/K |
| Total device dissipation on alumina substrate | | P _{tot} | 300 | mW |
| | Derate above 25 °C | P _{tot} | 2.4 | mW/K |

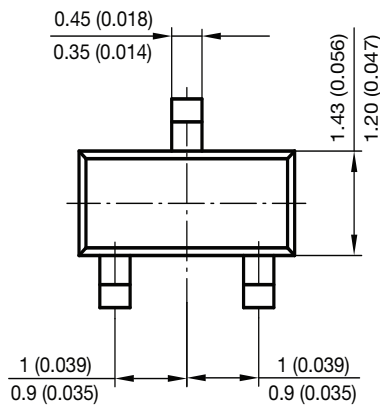
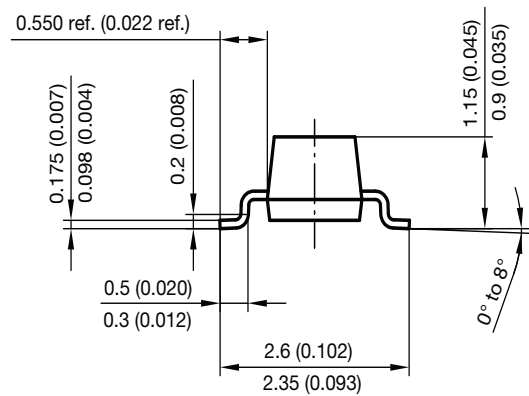
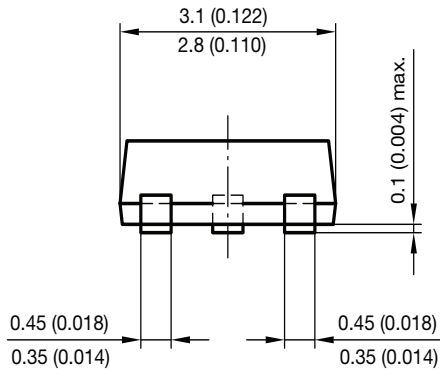
| THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified) | | | | |
|--|----------------|----------------------------------|---------------|------|
| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
| Typical thermal resistance, junction to ambient air | | R _{thJA} ⁽¹⁾ | 417 | K/W |
| | | R _{thJA} ⁽²⁾ | 556 | K/W |
| Maximum junction temperature | | T _j | 150 | °C |
| Storage temperature range | | T _{stg} | - 55 to + 150 | °C |
| Operating temperature range | | T _{op} | - 55 to + 150 | °C |

Notes

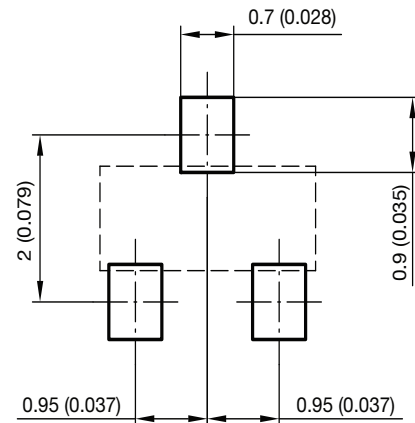
(1) Device on alumina substrate

(2) On FR-5 board

| ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified) | | | | | | |
|--|--|------------|------|------|------|---------------|
| PARAMETER | TEST CONDITION | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Reverse breakdown voltage | $I_R = 100\text{ }\mu\text{A}$ | $V_{(BR)}$ | 100 | | | V |
| Leakage current | $V_R = 50\text{ V}$ | I_R | | | 1000 | nA |
| | $V_R = 100\text{ V}$ | I_R | | | 3 | μA |
| | $V_R = 50\text{ V}, T_j = 125\text{ }^{\circ}\text{C}$ | I_R | | | 100 | μA |
| Forward voltage | $I_F = 1\text{ mA}$ | V_F | 0.55 | | 0.70 | V |
| | $I_F = 10\text{ mA}$ | V_F | 0.67 | | 0.82 | V |
| | $I_F = 100\text{ mA}$ | V_F | 0.75 | | 1.10 | V |
| Reverse recovery time | $I_F = I_R = 10\text{ mA}, i_R = 1\text{ mA}, R_L = 100\text{ }\Omega$ | t_{rr} | | | 4 | ns |
| Diode capacitance | $V_R = 0\text{ V}, f = 1\text{ MHz}$ | C_D | | | 1.5 | pF |

PACKAGE DIMENSIONS in millimeters (inches): **SOT-23**


Foot print recommendation:



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 Rev. 8 - Date: 23.Sept.2009
 17418



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