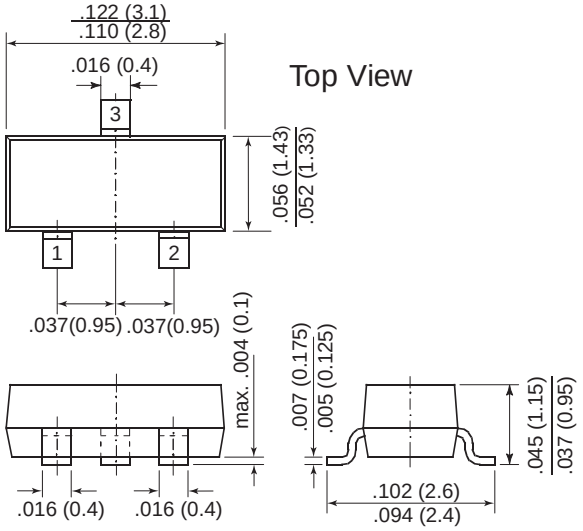
MMBD7000

New Product

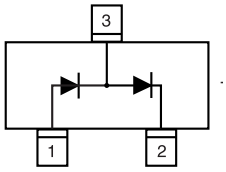
Vishay Semiconductors
formerly General Semiconductor

Dual Small-Signal Switching Diode

TO-236AB (SOT-23)



Dimensions in inches and (millimeters)



Top View

Features

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

Mechanical Data

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

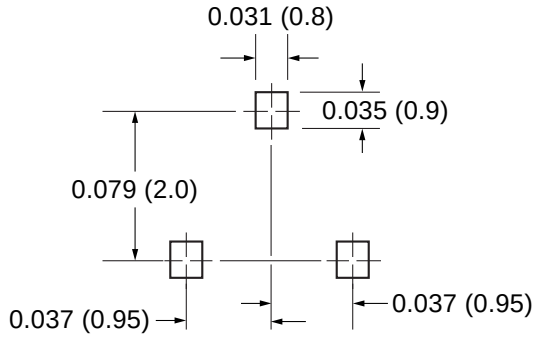
Weight: approx. 0.008g

Marking Code: M5C

Packaging Codes/Options:

E8/10K per 13" reel (8mm tape), 30K/box
E9/3K per 7" reel (8mm tape), 30K/box

Mounting Pad Layout



Maximum Ratings and Thermal Characteristics

T_A = 25°C unless otherwise noted

Parameter		Symbol	Value	Unit
Reverse Voltage		V_R	100	V
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°C Derate above 25°C	P_{tot}	225 1.8	mW mW/°C
Total Device Dissipation	on Alumina Substrate, T_A = 25°C Derate above 25°C	P_{tot}	300 2.4	mW mW/°C
Typical 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

Note:
(1) Device on Alumina Substrate
(2) On FR-5 Board

Electrical Characteristics

T_J = 25°C unless otherwise noted

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	V_{BR}	I_R = 100μA	100	—	—	V
Leakage Current	I_R	V_R = 50V V_R = 100V V_R = 50V, T_j = 125°C	— — —	— — —	1.0 3.0 100	μA
Forward Voltage	V_F	I_F = 1mA I_F = 10mA I_F = 100mA	0.55 0.67 0.75	— — —	0.70 0.82 1.10	V
Capacitance	C_{tot}	V_R = 0, f = 1MHz	—	—	1.5	pF
Reverse Recovery Time	t_{rr}	I_F = 10mA to I_R = 10mA I_{rr} = 1mA, R_L = 100Ω	—	—	4.0	ns

(1)Device on fiberglass substrate, see layout