

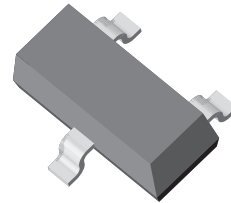
Small Signal Switching Diode, Dual

Features

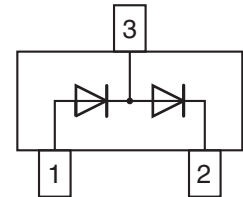
- Silicon Epitaxial Planar Diode
- Fast switching dual diode, especially suited for automatic insertion
- AEC-Q101 qualified
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC



RoHS
COMPLIANT
GREEN
(5-2008)**



18109



Mechanical Data

Case: SOT-23

Weight: approx. 8.1 mg

Packaging Codes/Options:

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

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

Parts Table

Part	Ordering code	Type Marking	Remarks
MMBD7000-V-G	MMBD7000-V-G-18 or MMBD7000-V-G-08	M5G	Tape and Reel

Absolute Maximum Ratings

$T_{amb} = 25\text{ }^{\circ}\text{C}$, 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	$t = 1\text{ s}$	I_{FSM}	500	mA
Power dissipation on FR-5 board		P_{tot}	225	mW
	Derate above $25\text{ }^{\circ}\text{C}$	P_{tot}	1.8	mW/K
Total device dissipation on Alumina substrate		P_{tot}	300	mW
	Derate above $25\text{ }^{\circ}\text{C}$	P_{tot}	2.4	mW/K

** Please see document "Vishay Material Category Policy": www.vishay.com/doc?99902

Thermal Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Typical thermal resistance, junction to ambient air		R_{thJA}	417 ¹⁾	K/W
		R_{thJA}	556 ²⁾	K/W
Maximum junction temperature		T_j	150	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	- 55 to + 150	$^{\circ}\text{C}$

1) Device on alumina substrate

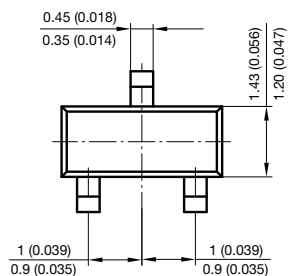
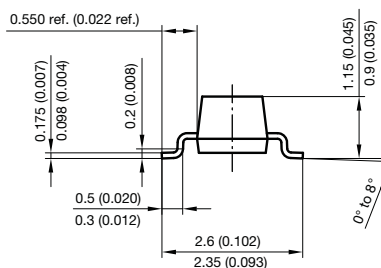
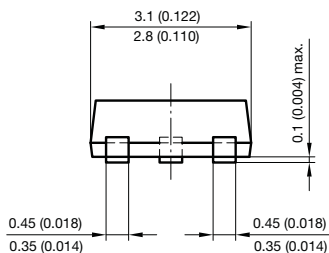
2) On FR-5 board

Electrical Characteristics

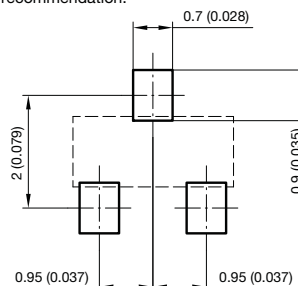
$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

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			1	μA
	$V_R = 100\text{ V}$	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
Diode capacitance	$V_R = 0, f = 1\text{ MHz}$	C_D			1.5	pF
Reverse recovery time	$I_F = 10\text{ mA}$ to $I_R = 10\text{ mA}$, $I_{rr} = 1\text{ mA}, R_L = 100\text{ }\Omega$	t_{rr}			4	ns

Package Dimensions in millimeters (inches): SOT-23



Foot print recommendation:



Document no.: 6.541-5014.01-4

Rev. 8 - Date: 23.Sept.2009

17418



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