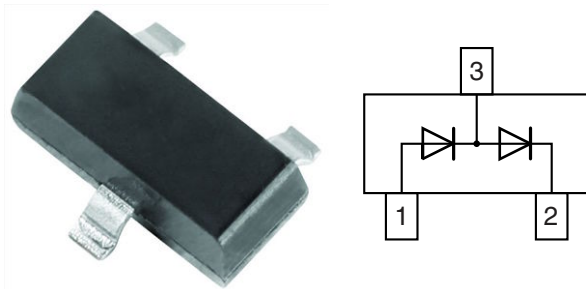


Small Signal Switching Diode, Dual



FEATURES

- Silicon epitaxial planar diode
- Fast switching dual diode, especially suited for automatic insertion
- AEC-Q101 qualified
- Base P/N-E3 - RoHS-compliant, commercial grade
- Base P/N-HE3 - RoHS-compliant, AEC-Q101 qualified
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

MECHANICAL DATA

Case: SOT-23

Weight: approx. 8.8 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	MMBD7000-E3-08 or MMBD7000-E3-18	Dual diodes serial	M5C	Tape and reel
	MMBD7000-HE3-08 or MMBD7000-HE3-18			

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

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		$R_{thJA}^{(1)}$	417	K/W
		$R_{thJA}^{(2)}$	556	K/W
Maximum junction temperature		T_j	150	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	- 55 to + 150	$^{\circ}\text{C}$
Operating temperature range		T_{op}	- 55 to + 150	$^{\circ}\text{C}$

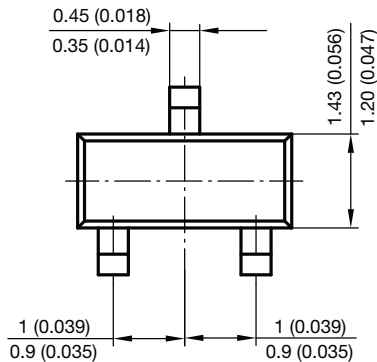
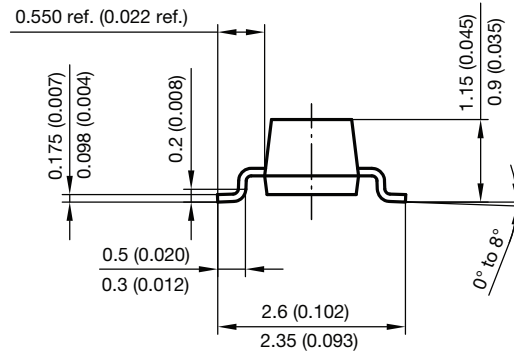
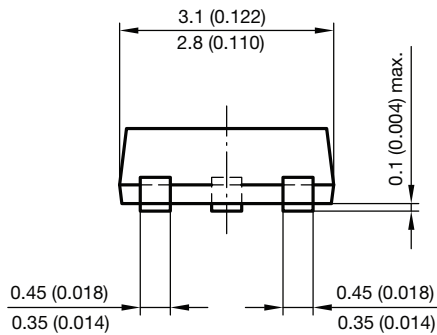
Notes

(1) Device on alumina substrate

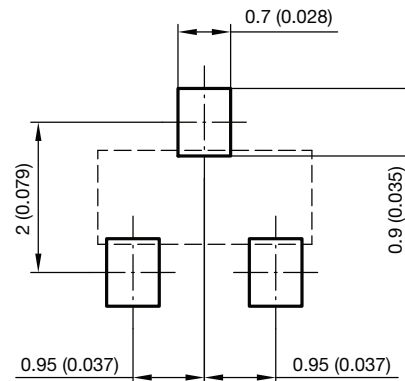
(2) On FR-5 board

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 100\text{ }\mu\text{A}$	$V_{(BR)}$				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
Diode capacitance	$V_R = 0, f = 1\text{ MHz}$	C_D			1.5	pF
Reverse recovery time	$I_F = I_R = 10\text{ mA}, I_R = 1\text{ mA}, R_L = 100\text{ }\Omega$	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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