Small Signal Switching Diode, Dual

Features

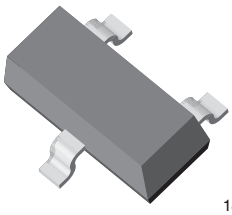
- Silicon Epitaxial Planar Diode
- Fast switching dual diode, especially suited for automatic insertion
- AEC-Q101 qualified
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC

Pb-free

e3

RoHS COMPLIANT

GREEN (5-2008)**



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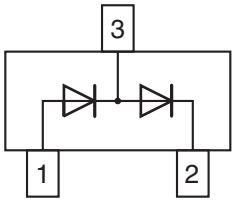


Mechanical Data

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 °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

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

For technical questions within your region, please contact one of the following:
DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com

Thermal Characteristics

T_{amb} = 25 °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	°C
Storage temperature range		T_{stg}	- 55 to + 150	°C

[1] Device on alumina substrate

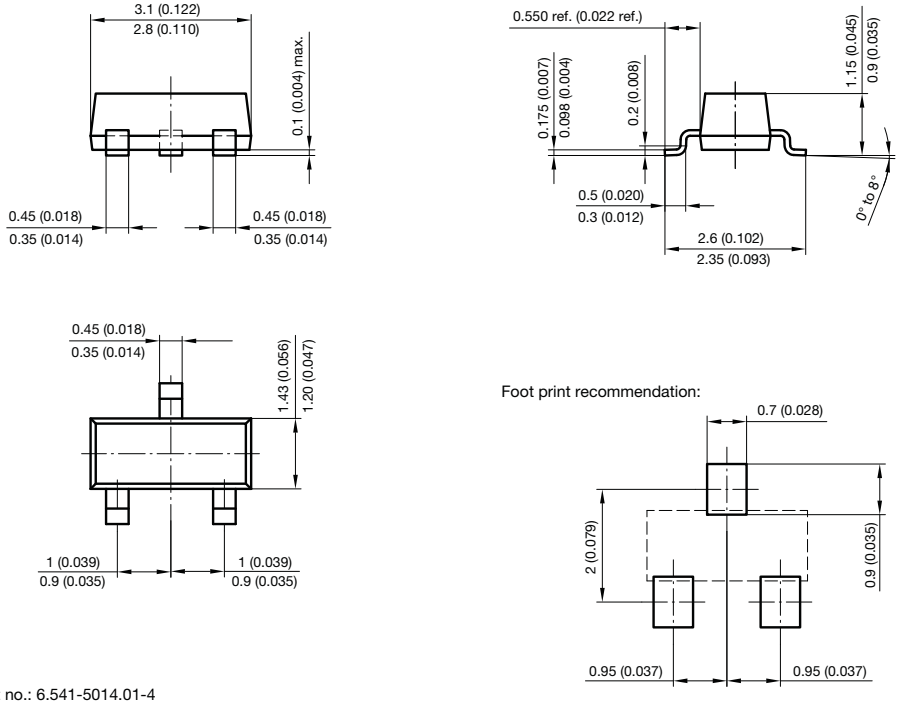
[2] On FR-5 board

Electrical Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	I_R = 100 µA	$V_{(BR)}$	100			V
Leakage current	V_R = 50 V	I_R			1	µA
	V_R = 100 V	I_R			3	µA
	V_R = 50 V, T_j = 125 ° C	I_R			100	µA
Forward voltage	I_F = 1 mA	V_F	0.55		0.70	V
	I_F = 10 mA	V_F	0.67		0.82	V
	I_F = 100 mA	V_F	0.75		1.10	V
Diode capacitance	V_R = 0, f = 1 MHz	C_D			1.5	pF
Reverse recovery time	I_F = 10 mA to I_R = 10 mA, I_{rr} = 1 mA, R_L = 100 Ω	I_{rr}			4	ns

Package Dimensions in millimeters (inches): SOT-23



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