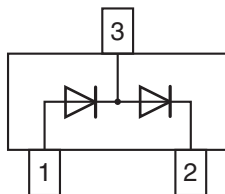


Dual In-Series Small Signal High Voltage Switching Diode



FEATURES

- Silicon epitaxial planar diode
- Fast switching dual in-series diode, especially suited for applications requiring high voltage capability
- 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:

GS18/10K per 13" reel (8 mm tape), 10K/box

GS08/3K per 7" reel (8 mm tape), 15K/box

PARTS TABLE

PART	ORDERING CODE	TYPE MARKING	INTERNAL CONSTRUCTION	REMARKS
GSD2004S-V	GSD2004S-V-GS18 or GSD2004S-V-GS08	DB6	Dual diodes serial	Tape and reel

ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Continuous reverse voltage		V _R	240	V
Peak repetitive reverse voltage		V _{RRM}	300	V
Forward current (continuous)		I _F	225	mA
Peak repetitive forward current		I _{FRM}	625	mA
Non-repetitive peak forward current	t _p = 1 μs	I _{FSM}	4.0	A
	t _p = 1 s	I _{FSM}	1.0	A
Power dissipation ⁽¹⁾		P _{tot}	350	mW

THERMAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Typical thermal resistance junction to ambient air ⁽¹⁾		R _{thJA}	357	°C/W
Junction temperature		T _j	150	°C
Storage temperature range		T _{stg}	- 65 to + 150	°C

Note

⁽¹⁾ Device on fiberglass substrate



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}	300			V
Leakage current	$V_R = 240\text{ V}$	I_R			100	nA
	$V_R = 240\text{ V}$, $T_j = 150\text{ }^{\circ}\text{C}$	I_R			100	μA
Forward voltage	$I_F = 20\text{ mA}$	V_F		0.83	0.87	V
	$I_F = 100\text{ mA}$	V_F			1.00	V
Diode capacitance	$V_F = V_R = 0$, $f = 1\text{ MHz}$	C_D			5.0	pF
Reverse recovery time	$I_F = I_R = 30\text{ mA}$, $i_R = 3.0\text{ mA}$, $R_L = 100\text{ }\Omega$	t_{rr}			50	ns

Note

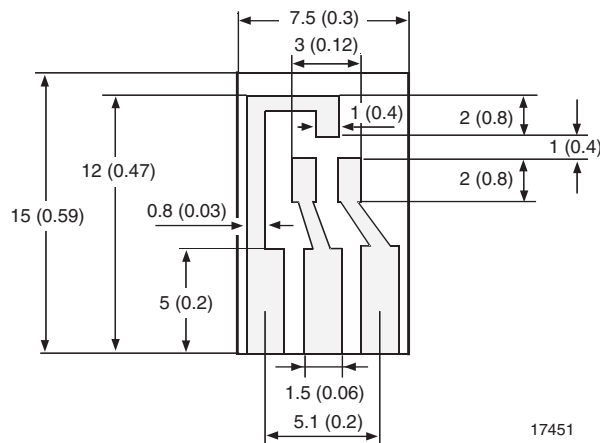
(1) Device on fiberglass substrate

LAYOUT FOR R_{thJA} TEST

Thickness:

Fiberglass 1.5 mm (0.059 inches)

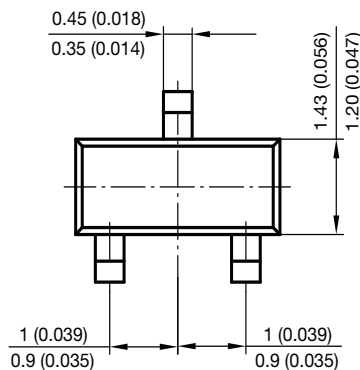
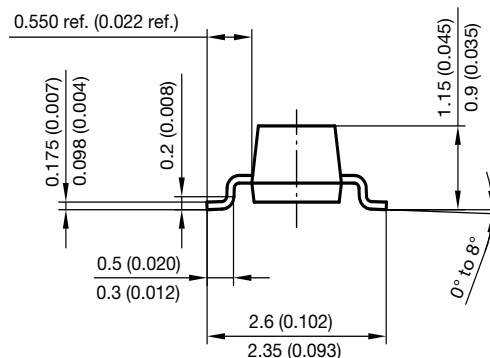
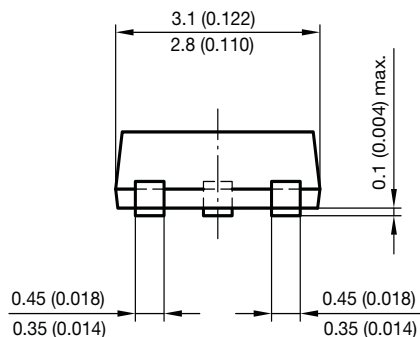
Copper leads 0.3 mm (0.012 inches)



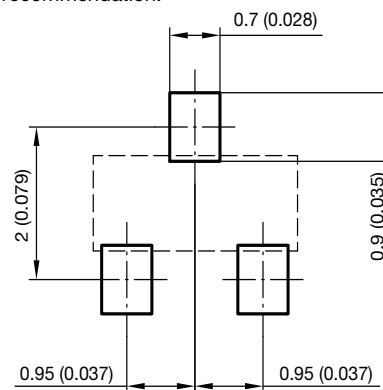
17451



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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