



# Small Signal Switching Diode, High Voltage



### FEATURES

- Silicon epitaxial planar diode
- Fast switching 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](http://www.vishay.com/doc?99912)



RoHS COMPLIANT

### MECHANICAL DATA

Case: SOD-123

Weight: approx. 10.3 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
GSD2004W-V	GSD2004W-V-GS18 or GSD2004W-V-GS08	B6	Single diode	Tape and reel

ABSOLUTE MAXIMUM RATINGS (T <sub>amb</sub> = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Continuous reverse voltage		V <sub>R</sub>	240	V
Repetitive peak reverse voltage		V <sub>RRM</sub>	300	V
Forward current (continuous)		I <sub>F</sub>	225	mA
Repetitive peak forward current		I <sub>FRM</sub>	625	mA
Non-repetitive peak forward current	t <sub>p</sub> = 1 μs	I <sub>FSM</sub>	4	A
	t <sub>p</sub> = 1 s	I <sub>FSM</sub>	1	A
Power dissipation <sup>(1)</sup>		P <sub>tot</sub>	350	mW

THERMAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Typical thermal resistance junction to ambient air <sup>(1)</sup>		R <sub>thJA</sub>	357	K/W
Junction temperature		T <sub>j</sub>	150	°C
Storage temperature range		T <sub>s</sub>	- 65 to + 150	°C

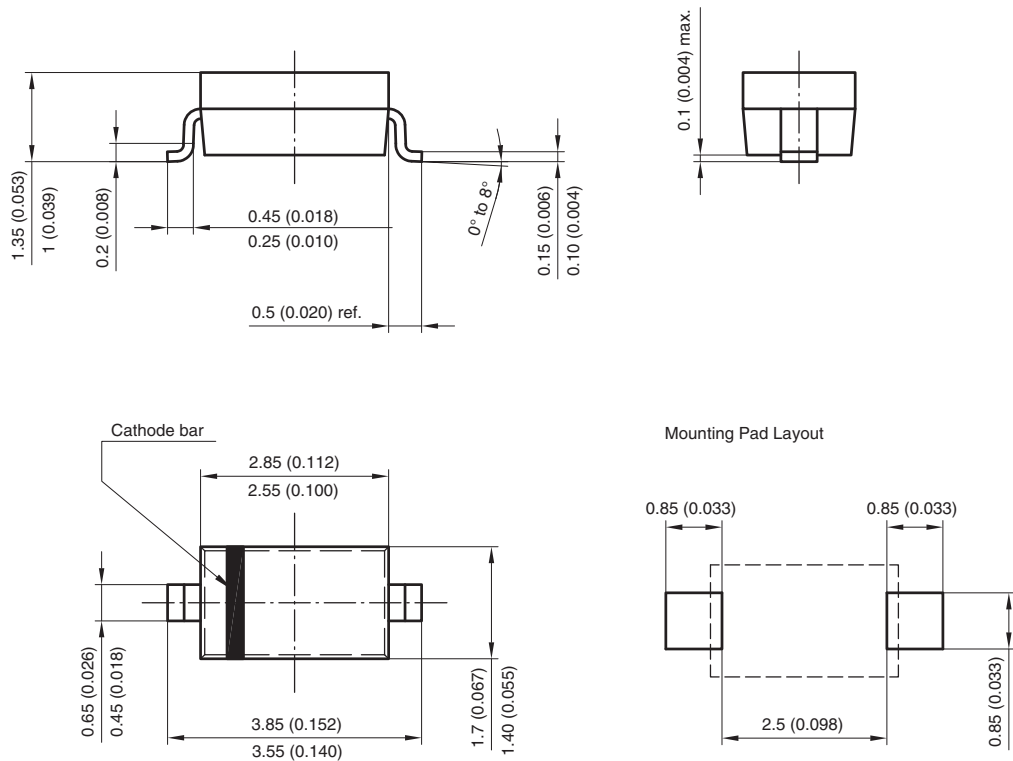
#### Note

<sup>(1)</sup> Valid provided that electrodes are kept at ambient temperature.



ELECTRICAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	I <sub>R</sub> = 100 μA	V <sub>(BR)</sub>	300			V
Leakage current	V <sub>R</sub> = 240 V	I <sub>R</sub>			100	nA
	V <sub>R</sub> = 240 V, T <sub>j</sub> = 150 °C	I <sub>R</sub>			100	μA
Forward voltage	I <sub>F</sub> = 20 mA	V <sub>F</sub>		0.83	0.87	V
	I <sub>F</sub> = 100 mA	V <sub>F</sub>			1	V
Diode capacitance	V <sub>F</sub> = V <sub>R</sub> = 0, f = 1 MHz	C <sub>D</sub>			5	pF
Reverse recovery time	I <sub>F</sub> = I <sub>R</sub> = 30 mA, I <sub>R</sub> = 3 mA, R <sub>L</sub> = 100 Ω	t <sub>rr</sub>			50	ns

**PACKAGE DIMENSIONS** in millimeters (inches): **SOD-123**



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