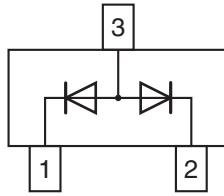


# Dual Common Anode Small Signal High Voltage Switching Diode



## FEATURES

- Silicon epitaxial planar diode
- Fast switching dual common anode diode, especially suited for applications requiring high voltage capability
- AEC-Q101 qualified available (part number on request)
- Base P/N-G3 - green, commercial grade
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**DESIGN SUPPORT TOOLS** click logo to get started



## MECHANICAL DATA

**Case:** SOT-23

**Weight:** approx. 8.1 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	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS
GSD2004A-G	GSD2004A-G3-08 or GSD2004A-G3-18	Common anode	DBH	Tape and reel

## ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , 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	$t_p = 1\text{ }\mu\text{s}$	$I_{FSM}$	4	A
	$t_p = 1\text{ s}$		1	A
Power dissipation <sup>(1)</sup>		$P_{tot}$	350	mW

## THERMAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)

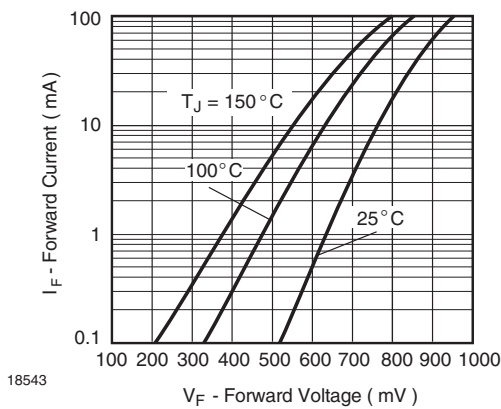
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Typical thermal resistance junction to ambient air <sup>(1)</sup>		$R_{thJA}$	357	$^{\circ}\text{C}/\text{W}$
Junction temperature		$T_j$	150	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	-65 to +150	$^{\circ}\text{C}$
Operating temperature range		$T_{op}$	-55 to +150	$^{\circ}\text{C}$

### Note

<sup>(1)</sup> Device on fiberglass substrate

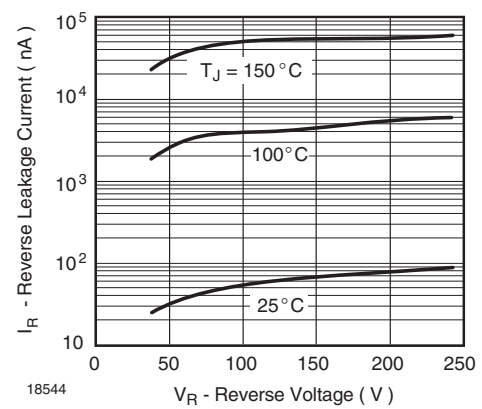
ELECTRICAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	I <sub>R</sub> = 100 μA	V <sub>BR</sub>	300			V
Leakage current	V <sub>R</sub> = 240 V	I <sub>R</sub>			100	nA
	V <sub>R</sub> = 240 V, 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

**TYPICAL CHARACTERISTICS** (T<sub>amb</sub> = 25 °C, unless otherwise specified)



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Fig. 1 - Typical Instantaneous Forward Characteristics



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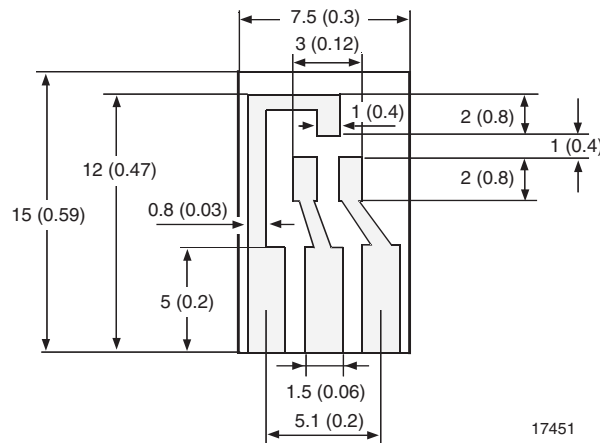
Fig. 2 - Typical Reverse Characteristics

**LAYOUT FOR R<sub>thJA</sub> TEST**

Thickness:

Fiberglass 1.5 mm (0.059 in.)

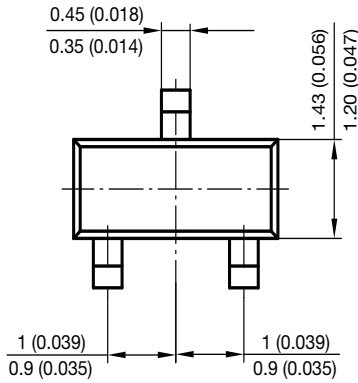
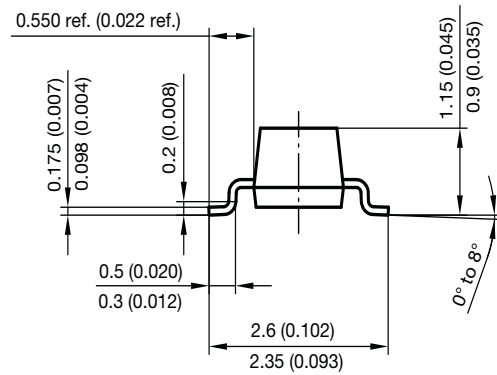
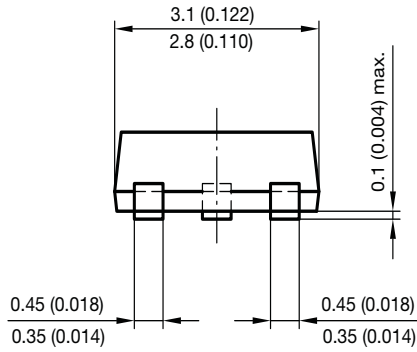
Copper leads 0.3 mm (0.012 in.)



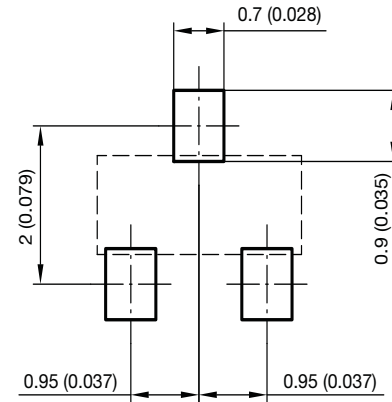
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**PACKAGE DIMENSIONS** in millimeters (inches): **SOT-23**



Foot print recommendation:



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Rev. 8 - Date: 23.Sept.2009  
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