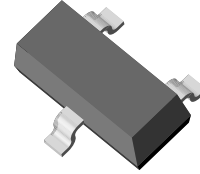**VISHAY.**

Small Signal Schottky Diodes, Single & Dual

Features

- These diodes feature very low turn-on voltage and fast switching
- These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

Pb-free

e3

RoHS COMPLIANT
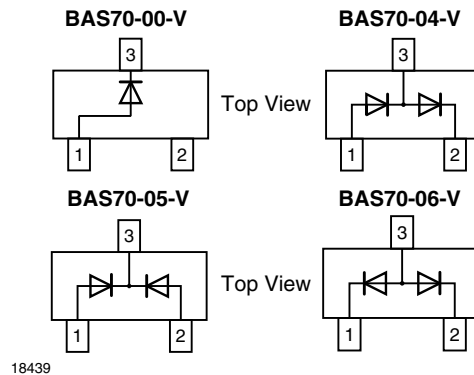
Mechanical Data

Case: SOT-23

Weight: approx. 8.8 mg

Packaging Codes/Options:

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

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

BAS70-00-V · BAS70-04-V · BAS70-05-V · BAS70-06-V · Top View · 18439

Parts Table

Part	Ordering code	Type Marking	Remarks
BAS70-00-V	BAS70-00-V-GS18 or BAS70-00-V-GS08	73	Tape and Reel
BAS70-04-V	BAS70-04-V-GS18 or BAS70-04-V-GS08	74	Tape and Reel
BAS70-05-V	BAS70-05-V-GS18 or BAS70-05-V-GS08	75	Tape and Reel
BAS70-06-V	BAS70-06-V-GS18 or BAS70-06-V-GS08	76	Tape and Reel

Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Repetitive peak reverse voltage		$V_{RRM} = V_{RWM} = V_R$	70	V
Forward continuous current		I_F	200[1]	mA
Surge forward current	$t_p < 1$ s	I_{FSM}	600[1]	mA
Power dissipation[1]		P_{tot}	200[1]	mW

[1] Device on fiberglass substrate, see layout on next page

Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air		R_{thJA}	500[1]	K/W
Junction temperature		T_j	125	°C
Storage temperature range		T_{stg}	- 65 to + 150	°C

[1] Device on fiberglass substrate, see layout on next page

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Rev. 1.8, 05-Aug-10

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www.vishay.com

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BAS70-00-V to BAS70-06-V

Vishay Semiconductors

Electrical Characteristics

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

Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Reverse breakdown voltage	I_R = 10 µA (pulsed)	$V_{(BR)}$	70			V
Leakage current	V_R = 50 V	I_R		20	100	nA
Forward voltage	I_F = 1.0 mA	V_F			410	mV
Forward voltage[1]	I_F = 15 mA,	V_F			1000	mV
Diode capacitance	V_R = 0 V, f = 1 MHz	C_D		1.5	2	pF
Reverse recovery time	I_F = I_R = 10 mA, i_R = 1 mA, R_L = 100 Ω	t_{rr}			5	ns

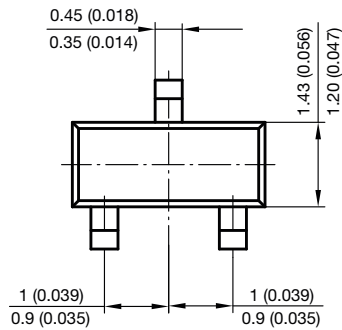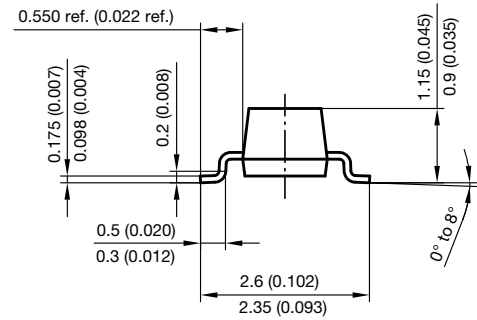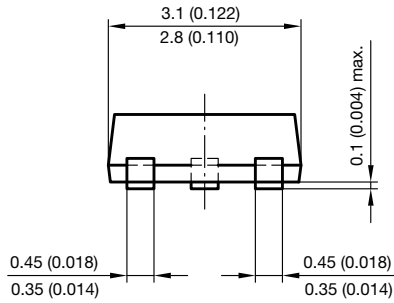[1] Pulse test; $t_p \leq$ 300 µs

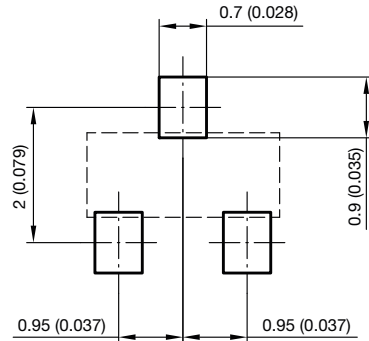## Layout for R_{thJA} test

Thickness:
Fiberglass 1.5 mm (0.059 in.)
Copper leads 0.3 mm (0.012 in.)
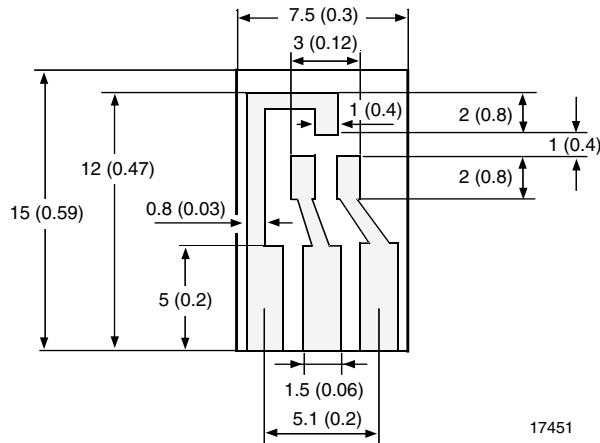
Package Dimensions in millimeters (inches): SOT-23

3.1 (0.122)
2.8 (0.110)
0.1 (0.004) max.
0.45 (0.018)
0.35 (0.014)
0.45 (0.018)
0.35 (0.014)

0.550 ref. (0.022 ref.)
1.15 (0.045)
0.9 (0.035)
0.175 (0.007)
0.098 (0.004)
0.2 (0.008)
0.5 (0.020)
0.3 (0.012)
2.6 (0.102)
2.35 (0.093)
0° to 8°

0.45 (0.018)
0.35 (0.014)
1.43 (0.056)
1.20 (0.047)
1 (0.039)
0.9 (0.035)
1 (0.039)
0.9 (0.035)

Foot print recommendation:

0.7 (0.028)
2 (0.079)
0.9 (0.035)
0.95 (0.037)
0.95 (0.037)

Document no.: 6.541-5014.01-4
Rev. 8 - Date: 23.Sept.2009
17418

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Rev. 1.8, 05-Aug-10

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