

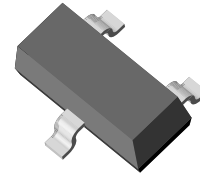
## Small Signal Schottky Diodes, Single & Dual

### 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



**RoHS**  
COMPLIANT



### Mechanical Data

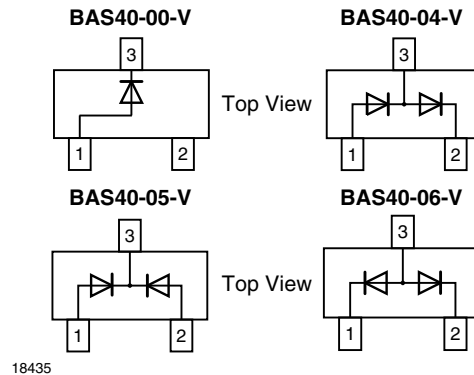
**Case:** SOT-23

**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



### Parts Table

Part	Ordering code	Type Marking	Remarks
BAS40-00-V	BAS40-00-V-GS18 or BAS40-00-V-GS08	43	Tape and Reel
BAS40-04-V	BAS40-04-V-GS18 or BAS40-04-V-GS08	44	Tape and Reel
BAS40-05-V	BAS40-05-V-GS18 or BAS40-05-V-GS08	45	Tape and Reel
BAS40-06-V	BAS40-06-V-GS18 or BAS40-06-V-GS08	46	Tape and Reel

### Absolute Maximum Ratings

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Repetitive peak reverse voltage		$V_{RRM} = V_{RWM} = V_R$	40	V
Forward continuous current		$I_F$	200 <sup>1)</sup>	mA
Surge forward current	$t_p < 1\text{ s}$	$I_{FSM}$	600 <sup>1)</sup>	mA
Power dissipation <sup>1)</sup>		$P_{tot}$	200 <sup>1)</sup>	mW

<sup>1)</sup> Device on fiberglass substrate, see layout on next page.

# BAS40-00-V to BAS40-06-V



Vishay Semiconductors

## Thermal Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air		$R_{thJA}$	500 <sup>1)</sup>	K/W
Junction temperature		$T_j$	125	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	- 65 to + 150	$^{\circ}\text{C}$

<sup>1)</sup> Device on fiberglass substrate, see layout on next page.

## Electrical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

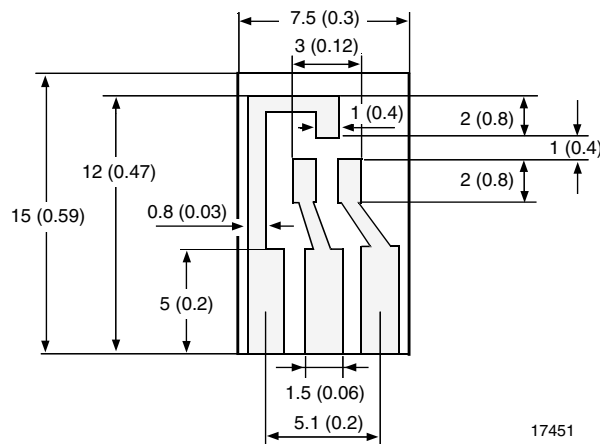
Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Reverse breakdown voltage	$I_R = 10\text{ }\mu\text{A}$ (pulsed)	$V_{(BR)}$	40			V
Leakage current	Pulse test $V_R = 30\text{ V}$ , $t_p < 300\text{ }\mu\text{s}$	$I_R$		20	100	nA
Forward voltage	Pulse test $t_p < 300\text{ }\mu\text{s}$ , $I_F = 1\text{ mA}$	$V_F$			380	mV
	Pulse test $t_p < 300\text{ }\mu\text{s}$ , $I_F = 40\text{ mA}$	$V_F$			1000	mV
Diode capacitance	$V_R = 0\text{ V}$ , $f = 1\text{ MHz}$	$C_D$		4	5	pF
Reverse recovery time	$I_F = I_R = 10\text{ mA}$ , $i_R = 1\text{ mA}$ , $R_L = 100\text{ }\Omega$	$t_{rr}$			5	ns

## Layout for $R_{thJA}$ test

Thickness:

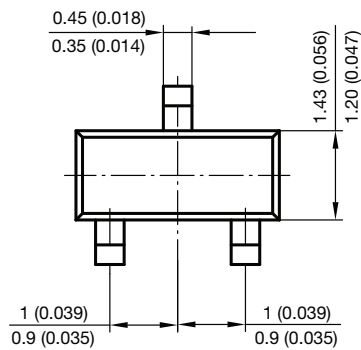
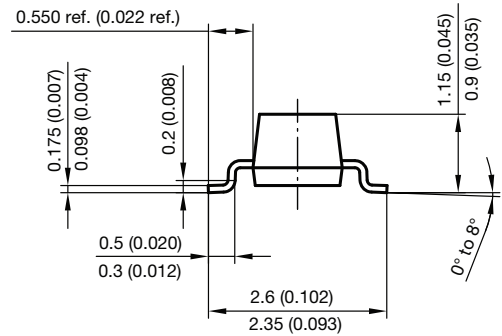
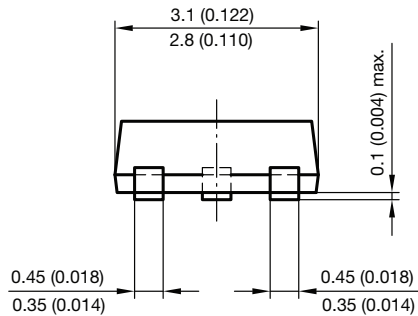
Fiberglass 1.5 mm (0.059 in.)

Copper leads 0.3 mm (0.012 in.)

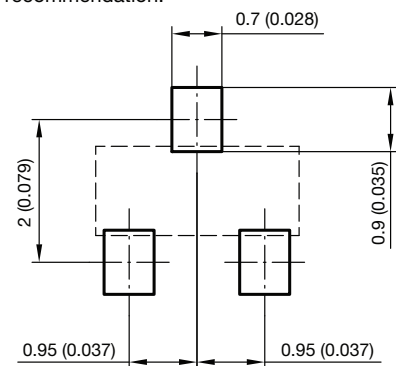


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## Package Dimensions in millimeters (inches): SOT-23



Foot print recommendation:



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Rev. 8 - Date: 23.Sept.2009

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