

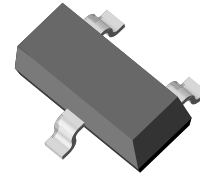
Small Signal Schottky Diodes, Single & Dual

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

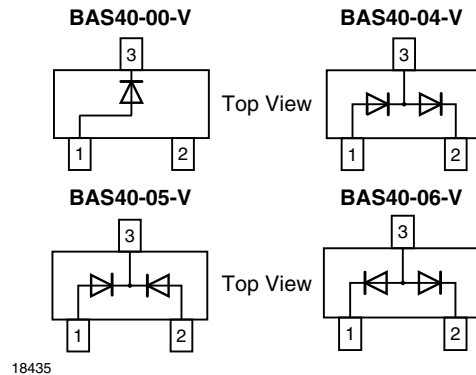
Case: SOT-23

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 ¹⁾	mA
Surge forward current	$t_p < 1\text{ s}$	I_{FSM}	600 ¹⁾	mA
Power dissipation ¹⁾		P_{tot}	200 ¹⁾	mW

¹⁾ 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 ¹⁾	K/W
Junction temperature		T_j	125	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	- 65 to + 150	$^{\circ}\text{C}$

¹⁾ Device on fiberglass substrate, see layout on next page.

Electrical Characteristics

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

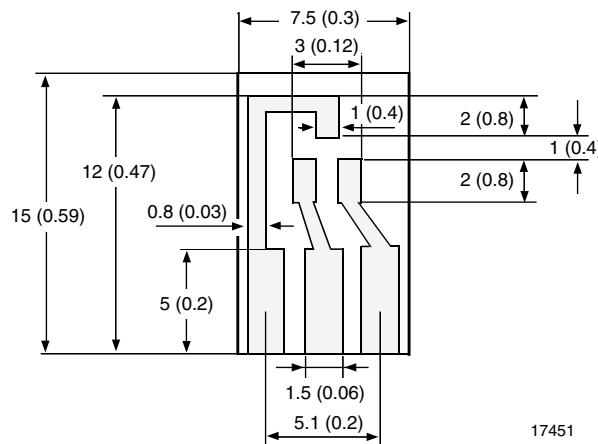
Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Reverse breakdown voltage	$I_R = 10\text{ }\mu\text{A}$ (pulsed)	$V_{(BR)}$	40			V
Leakage current	Pulse test $V_R = 30\text{ V}$, $t_p < 300\text{ }\mu\text{s}$	I_R		20	100	nA
Forward voltage	Pulse test $t_p < 300\text{ }\mu\text{s}$, $I_F = 1\text{ mA}$	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

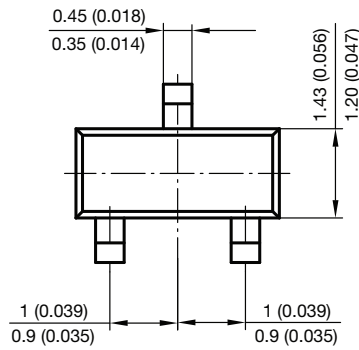
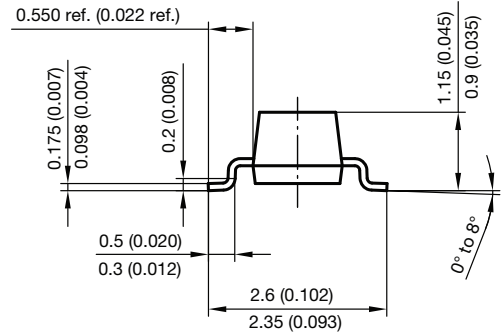
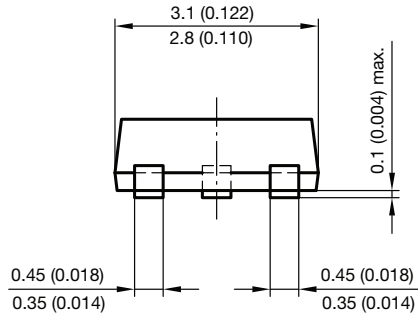
Thickness:

Fiberglass 1.5 mm (0.059 in.)

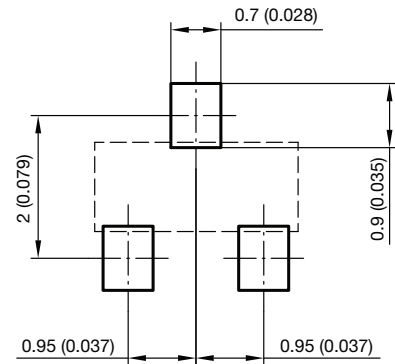
Copper leads 0.3 mm (0.012 in.)



Package Dimensions in millimeters (inches): SOT-23



Foot print recommendation:



Document no.: 6.541-5014.01-4

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17418



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