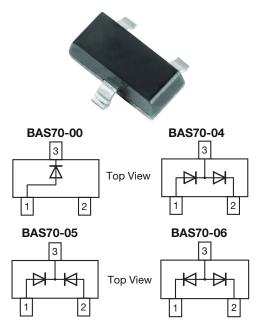
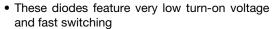


Vishay Semiconductors

# Small Signal Schottky Diodes, Single and Dual



#### **FEATURES**





• These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges



AEC-Q101 qualified

- Base P/N-E3 RoHS-compliant, commercial grade
- Base P/N-HE3 RoHS-compliant, AEC-Q101 qualified
- · Material categorization: For definitions of compliance please see www.vishav.com/doc?99912

#### **MECHANICAL DATA**

Case: SOT-23

Weight: approx. 8.8 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	INTERNAL CONSTRUCTION	TYPE MARKING	REMARKS	
BAS70-00	BAS70-00-E3-08 or BAS70-00-E3-18	Single diode	73		
	BAS70-00-HE3-08 or BAS70-00-HE3-18	Sirigle diode	73	Tape and reel	
BAS70-04	BAS70-04-E3-08 or BAS70-04-E3-18	Dual diodes serial	74		
	BAS70-04-HE3-08 or BAS70-04-HE3-18	Duai diodes seriai	74		
BAS70-05	BAS70-05-E3-08 or BAS70-05-E3-18	Dual diodes common cathode	75		
	BAS70-05-HE3-08 or BAS70-05-HE3-18	Duai diodes confinion cathode	75	l	
BAS70-06	BAS70-06-E3-08 or BAS70-06-E3-18	Dual diodes common anode	76		
	BAS70-06-HE3-08 or BAS70-06-HE3-18	Duai diodes common anode	76		

<b>ABSOLUTE MAXIMUM RATINGS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Repetitive peak reverse voltage		$V_{RRM} = V_{RRM} = V_{R}$	70	V	
Forward continuous current (1)		l <sub>F</sub>	200	mA	
Surge forward current (1)	t <sub>p</sub> < 1 s	I <sub>FSM</sub>	600	mA	
Power dissipation (1)		P <sub>tot</sub>	200	mW	

### Note

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

THERMAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Thermal resistance junction to ambient air (1)		R <sub>thJA</sub>	500	K/W	
Junction temperature		Tj	125	°C	
Storage temperature range		T <sub>stg</sub>	- 65 to + 150	°C	
Operating temperature range		T <sub>op</sub>	- 55 to + 125	°C	

#### Note

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



#### www.vishay.com

## Vishay Semiconductors

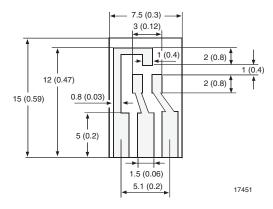
<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reserve beakdown voltage	I <sub>R</sub> = 10 μA (pulsed)	V <sub>(BR)</sub>	70			V
Leakage current	V <sub>R</sub> = 50 V	I <sub>R</sub>		20	100	nA
Forward voltage	I <sub>F</sub> = 1.0 mA	V <sub>F</sub>			410	mV
Forward voltage (1)	I <sub>F</sub> = 15 mA	V <sub>F</sub>			1000	mV
Diode capacitance	V <sub>R</sub> = 0 V, f = 1 MHz	C <sub>D</sub>		1.5	2	pF
Reserve recovery time	$I_F = I_R = 10 \text{ mA}, i_R = 1 \text{ mA},$ $R_L = 100 \Omega$	t <sub>rr</sub>			5	ns

#### Note

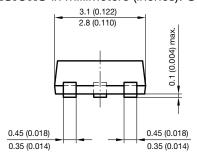
### LAYOUT FOR $R_{thJA}$ TEST

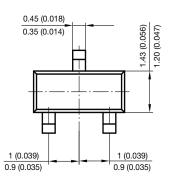
Thickness:

Fiberglass 1.5 mm (0.059") Copper leads 0.3 mm (0.012")

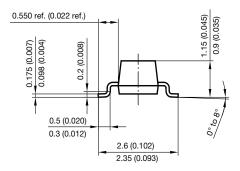


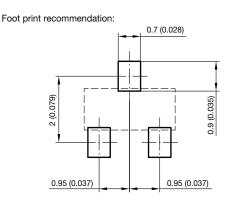
### PACKAGE DIMENSIONS in millimeters (inches): SOT-23





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 $<sup>^{(1)}~</sup>$  Pulse test;  $t_p \leq 300~\mu s$ 



## **Legal Disclaimer Notice**

Vishay

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Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

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