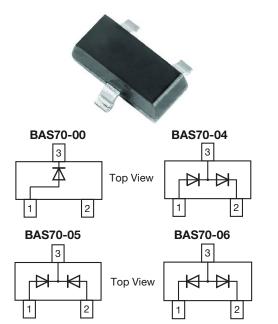
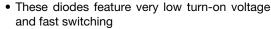


Vishay Semiconductors

# 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 available

RoHS

- 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 <a href="https://www.vishay.com/doc?99912"><u>www.vishay.com/doc?99912</u></a>

### **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

<b>DESIGN SUPPORT TOOLS</b> click logo to get started
---



PARTS TABLE					
PART	ORDERING CODE	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS	
BAS70-00	BAS70-00-E3-08 or BAS70-00-E3-18	Cinalo	70		
	BAS70-00-HE3-08 or BAS70-00-HE3-18	Single	73	Tape and reel	
BAS70-04	BAS70-04-E3-08 or BAS70-04-E3-18	Dual serial	74		
	BAS70-04-HE3-08 or BAS70-04-HE3-18	Duai Seriai	74		
BAS70-05	BAS70-05-E3-08 or BAS70-05-E3-18	Common cathode	75		
	BAS70-05-HE3-08 or BAS70-05-HE3-18	Common camode	75		
BAS70-06	BAS70-06-E3-08 or BAS70-06-E3-18	Common anode	76		
	BAS70-06-HE3-08 or BAS70-06-HE3-18	Common anode	70		

<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)		I <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

(1) 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

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



### www.vishay.com

# Vishay Semiconductors

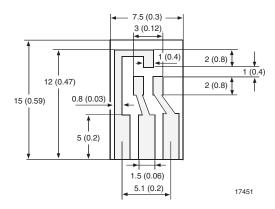
<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reserve beakdown voltage	I <sub>R</sub> = 10 μA (pulsed)	V <sub>(BR)</sub>	70			V
Leakage current	V <sub>R</sub> = 50 V	I <sub>R</sub>		20	100	nA
Forward 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	$V_R = 0 V, f = 1 MHz$	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

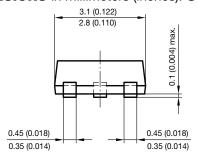
## LAYOUT FOR $R_{thJA}$ TEST

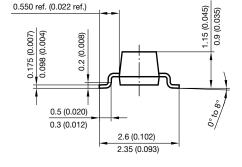
Thickness:

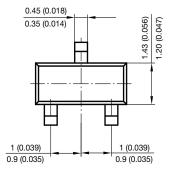
Fiberglass 1.5 mm (0.059") Copper leads 0.3 mm (0.012")

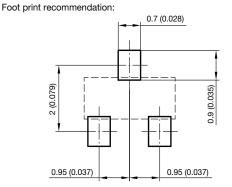


## PACKAGE DIMENSIONS in millimeters (inches): SOT-23









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<sup>&</sup>lt;sup>(1)</sup> Pulse test;  $t_p \le 300 \mu s$ 



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Vishay

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