

# Vishay Semiconductors

# **Small Signal Schottky Diode**



### **DESIGN SUPPORT TOOLS** click logo to get started



#### **MECHANICAL DATA**

Case: SOD-323

Weight: approx. 4.0 mg
Packaging codes/options:

18/10K per 13" reel (8 mm tape), 10K/box 08/3K per 7" reel (8 mm tape), 15K/box

#### **FEATURES**

- Schottky diode for high-speed switching
- · Circuit protection
- Voltage clamping
- · High-level detecting and mixing
- AEC-Q101 qualified available (part number on request)
- Base P/N-G3 green, commercial grade
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912





ROHS COMPLIANT HALOGEN FREE

GREEN (5-2008)

PARTS TABLE					
PART	ORDERING CODE	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS	
BAS170WS-G	BAS170WS-G3-08 or BAS170WS-G3-18	Single	7G	Tape and reel	

<b>ABSOLUTE MAXIMUM RATINGS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Repetitive peak reverse voltage		$V_{RRM}$	70	V	
Forward continuous current		I <sub>F</sub>	70	mA	
Surge forward current	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> Valid provided that electrodes are kept at ambient temperature

THERMAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Thermal resistance junction to ambient air (1)		$R_{thJA}$	650	K/W	
Junction temperature		Tj	125	°C	
Operating temperature range		T <sub>op</sub>	-55 to +125	°C	
Storage temperature range		T <sub>stg</sub>	-65 to +150	°C	

#### Note

<sup>(1)</sup> Valid provided that electrodes are kept at ambient temperature

<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	I <sub>R</sub> = 10 μA (pulsed)	V <sub>(BR)</sub>	70			V
Lookaga ayuwant	V <sub>R</sub> = 50 V	l <sub>R</sub>			0.1	μA
Leakage current	V <sub>R</sub> = 70 V	I <sub>R</sub>			10	μΑ
Converse voltage	I <sub>F</sub> = 1 mA	V <sub>F</sub>		375	410	mV
Forward voltage	I <sub>F</sub> = 10 mA	V <sub>F</sub>		705	750	mV
Forward voltage (1)	I <sub>F</sub> = 15 mA	V <sub>F</sub>		880	1000	mV
Diode capacitance	V <sub>R</sub> = 0 V, f = 1 MHz	C <sub>D</sub>		1.5	2	pF
Differential forward resistance	$I_F = 5 \text{ mA}, f = 10 \text{ kHz}$	r <sub>f</sub>		34		Ω

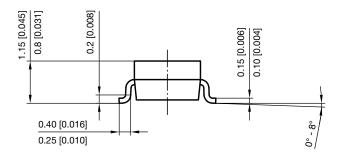
#### Note

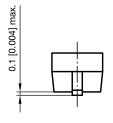
<sup>(1)</sup> Pulse test;  $t_p \le 300 \mu s$ 

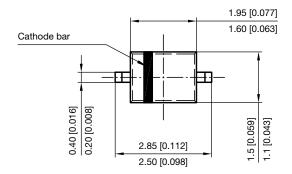


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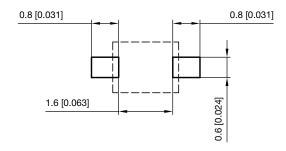
### PACKAGE DIMENSIONS in millimeters (inches): SOD-323







#### Footprint recommendation:



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