

## Small Signal Schottky Diode



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



### MECHANICAL DATA

**Case:** SOD-323

**Weight:** approx. 4.3 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
- 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.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT

### PARTS TABLE

PART	ORDERING CODE	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS
BAS170WS	BAS170WS-E3-08 or BAS170WS-E3-18	Single	73	Tape and reel
	BAS170WS-HE3-08 or BAS170WS-HE3-18			

### ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		$V_{RRM}$	70	V
Forward continuous current		$I_F$	70	mA
Surge forward current	$t_p < 1\text{ s}$	$I_{FSM}$	600	mA
Power dissipation <sup>(1)</sup>		$P_{tot}$	200	mW

#### Note

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

### THERMAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air <sup>(1)</sup>		$R_{thJA}$	650	K/W
Junction temperature		$T_j$	125	$^{\circ}\text{C}$
Operating temperature range		$T_{op}$	-55 to +125	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	-65 to +150	$^{\circ}\text{C}$

#### Note

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

### ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)

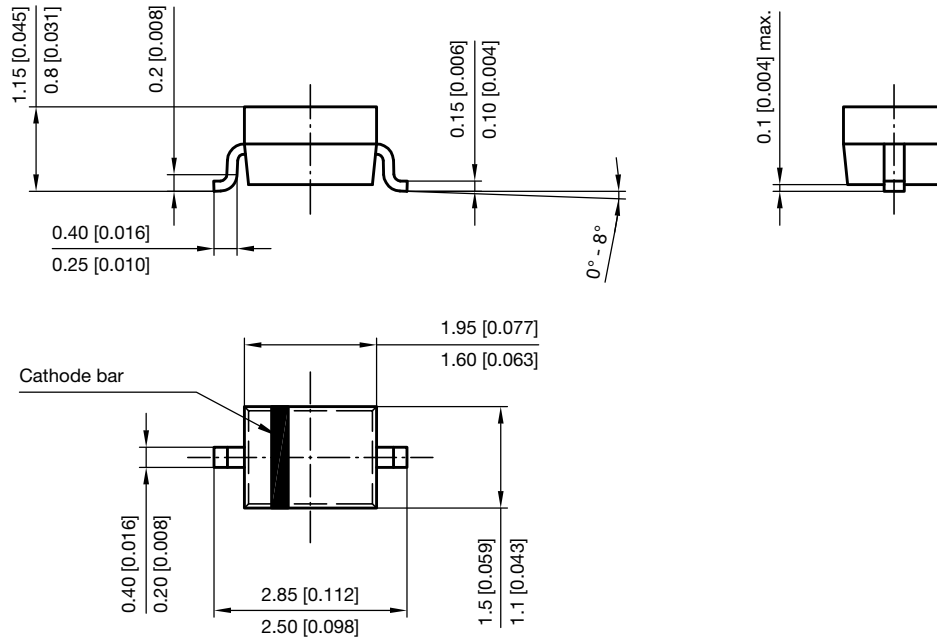
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 10\text{ }\mu\text{A}$ (pulsed)	$V_{(BR)}$	70			V
Leakage current	$V_R = 50\text{ V}$	$I_R$			0.1	$\mu\text{A}$
	$V_R = 70\text{ V}$	$I_R$			10	$\mu\text{A}$
Forward voltage	$I_F = 1\text{ mA}$	$V_F$		375	410	mV
	$I_F = 10\text{ mA}$	$V_F$		705	750	mV
Forward voltage <sup>(1)</sup>	$I_F = 15\text{ mA}$	$V_F$		880	1000	mV
Diode capacitance	$V_R = 0\text{ V}$ , $f = 1\text{ MHz}$	$C_D$		1.5	2	pF
Differential forward resistance	$I_F = 5\text{ mA}$ , $f = 10\text{ kHz}$	$r_f$		34		$\Omega$

#### Note

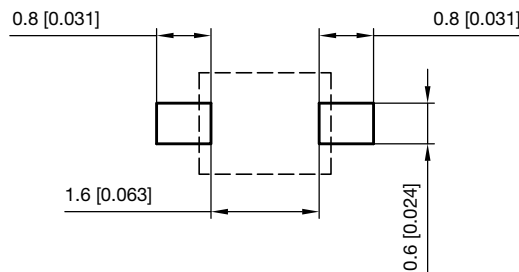
<sup>(1)</sup> Pulse test;  $t_p \leq 300\text{ }\mu\text{s}$



PACKAGE DIMENSIONS in millimeters (inches): SOD-323



Footprint recommendation:



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 17443



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