

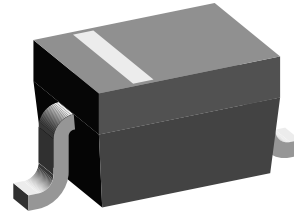
## Small Signal Schottky Diode

### Features

- Schottky diode for high-speed switching
- Circuit protection
- Voltage clamping
- High-level detecting and mixing
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



**RoHS**  
COMPLIANT



20145

### Mechanical Data

**Case:** SOD-323

**Weight:** approx. 4.3 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
BAS170WS-V	BAS170WS-V-GS18 or BAS170WS-V-GS08	73	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		$V_{RRM}$	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		$T_{amb}$	- 65 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

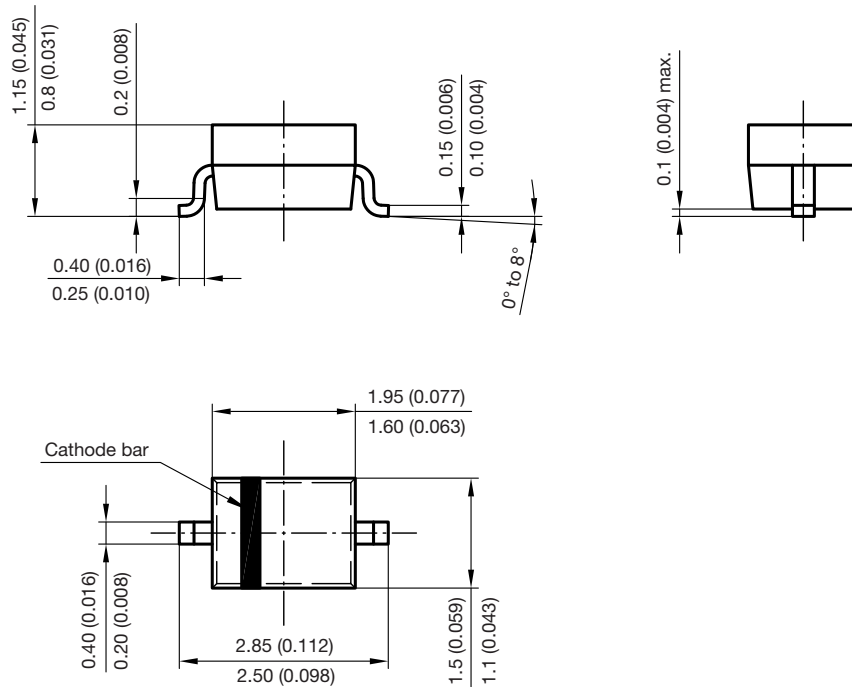
T<sub>amb</sub> = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Reverse breakdown voltage	I <sub>R</sub> = 10 μA (pulsed)	V <sub>(BR)</sub>	70			V
Leakage current	V <sub>R</sub> = 50 V	I <sub>R</sub>			0.1	μA
	V <sub>R</sub> = 70 V	I <sub>R</sub>			10	μA
Forward voltage	I <sub>F</sub> = 1 mA	V <sub>F</sub>		375	410	mV
	I <sub>F</sub> = 10 mA	V <sub>F</sub>		705	750	mV
Forward voltage <sup>1)</sup>	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 <sub>E</sub> = 5 mA, f = 10 kHz	R <sub>F</sub>		34		Ω

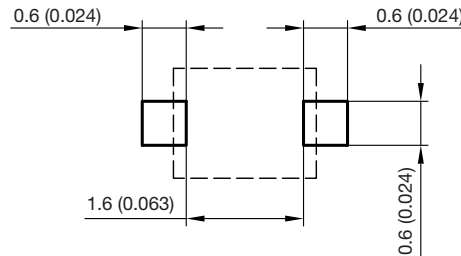
Note:

<sup>1)</sup> Pulse test; t<sub>p</sub> ≤ 300 μs

## Package Dimensions in millimeters (inches): SOD-323

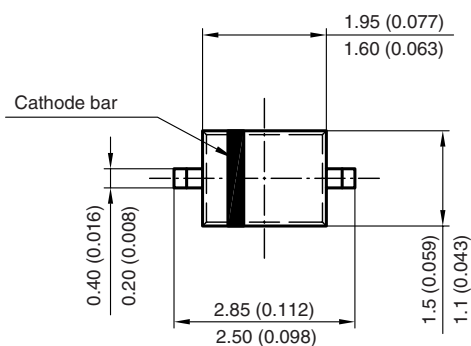
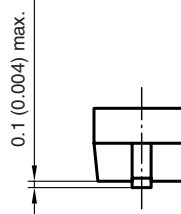
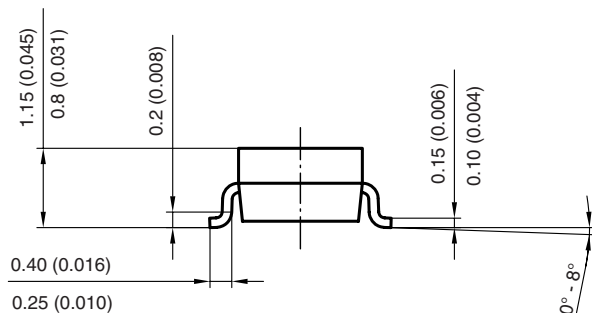


Foot print recommendation:

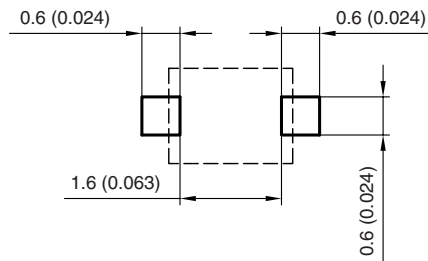


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## PACKAGE DIMENSIONS in millimeters (inches)



Mounting pad layout



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