

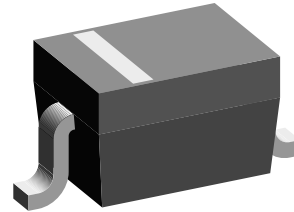
## Small Signal Schottky Diode

### 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

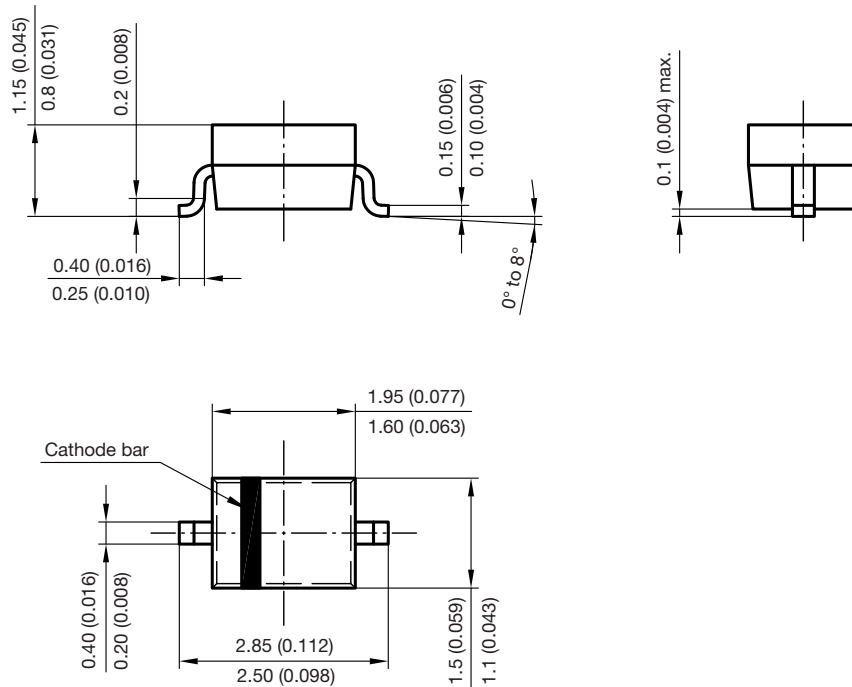
$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

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	$I_E = 5\text{ mA}$ , $f = 10\text{ kHz}$	$R_F$		34		$\Omega$

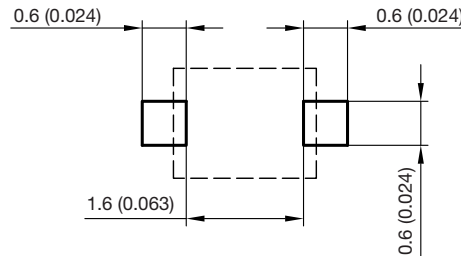
Note:

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

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

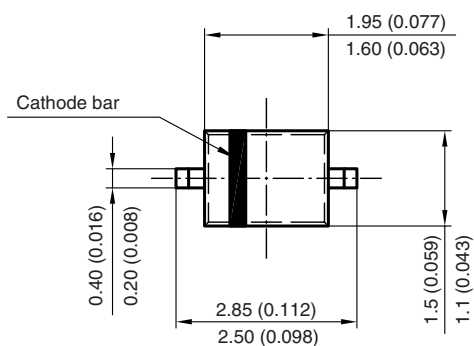
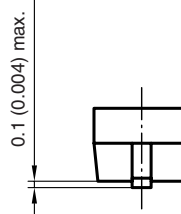
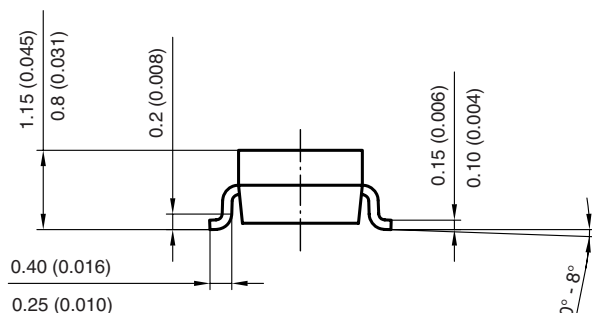


Foot print recommendation:

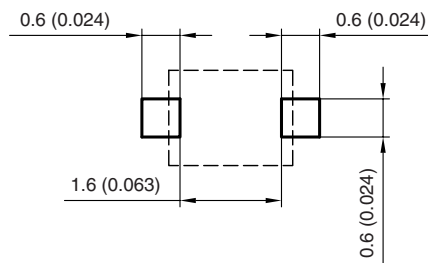


Document no.:S8-V-3910.02-001 (4)  
 Created - Date: 24.August.2004  
 Rev. 5 - Date: 23.Sept.2009  
 17443

### PACKAGE DIMENSIONS in millimeters (inches)



Mounting pad layout



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17443



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