Small Signal Schottky Diode

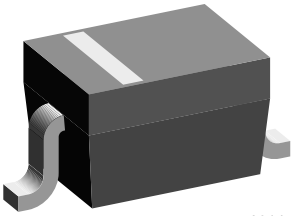
Features

- 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

Pb-free

e3

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 °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 s	I_{FSM}	600	mA
Power dissipation[1)]		P_{tot}	200	mW

Note:

[1)] Valid provided that electrodes are kept at ambient temperature.

Thermal Characteristics

T_{amb} = 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		T_j	125	°C
Operating temperature range		T_{amb}	- 65 to + 125	°C
Storage temperature range		T_{stg}	- 65 to + 150	°C

Note:

[1)] Valid provided that electrodes are kept at ambient temperature

Electrical Characteristics

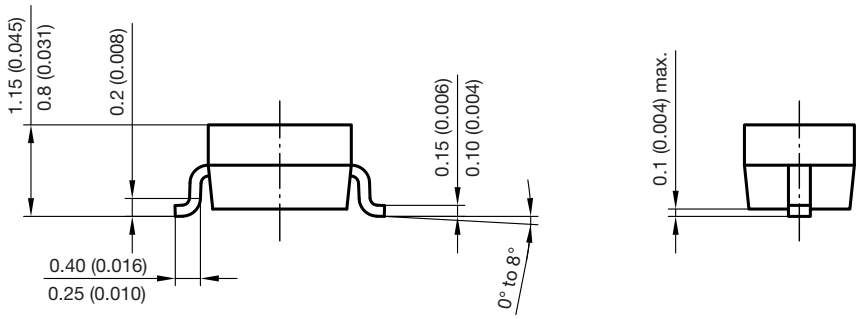
T_{amb} = 25 °C, unless otherwise specified

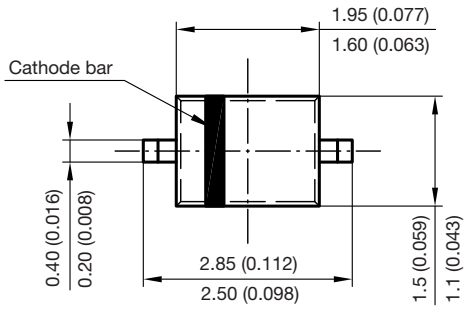
Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Reverse breakdown voltage	I_R = 10 µA (pulsed)	$V_{(BR)}$	70			V
Leakage current	V_R = 50 V	I_R			0.1	µA
	V_R = 70 V	I_R			10	µA
Forward voltage	I_F = 1 mA	V_F		375	410	mV
	I_F = 10 mA	V_F		705	750	mV
Forward voltage[1)]	I_F = 15 mA	V_F		880	1000	mV
Diode capacitance	V_R = 0 V, f = 1 MHz	C_D		1.5	2	pF
Differential forward resistance	I_E = 5 mA, f = 10 kHz	R_F		34		Ω

Note:

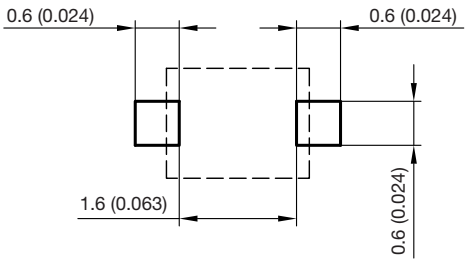
[1)] Pulse test; $t_p \leq 300$ µs

Package Dimensions in millimeters (inches): SOD-323



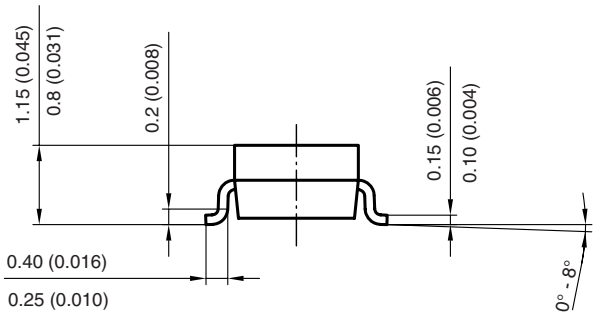


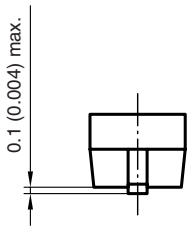
Foot print recommendation:

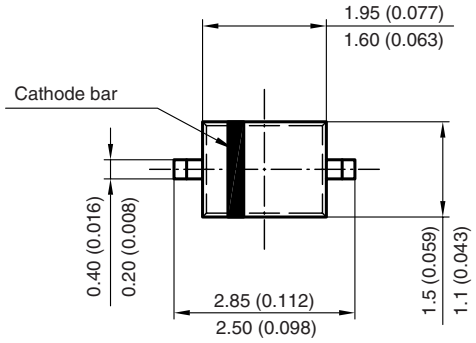


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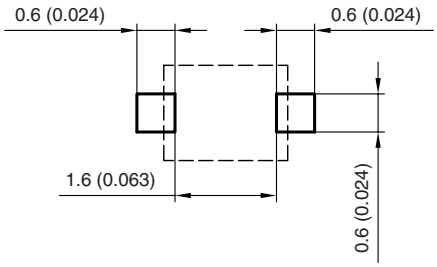
PACKAGE DIMENSIONS in millimeters (inches)







Mounting pad layout



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