



## 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](http://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

**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)

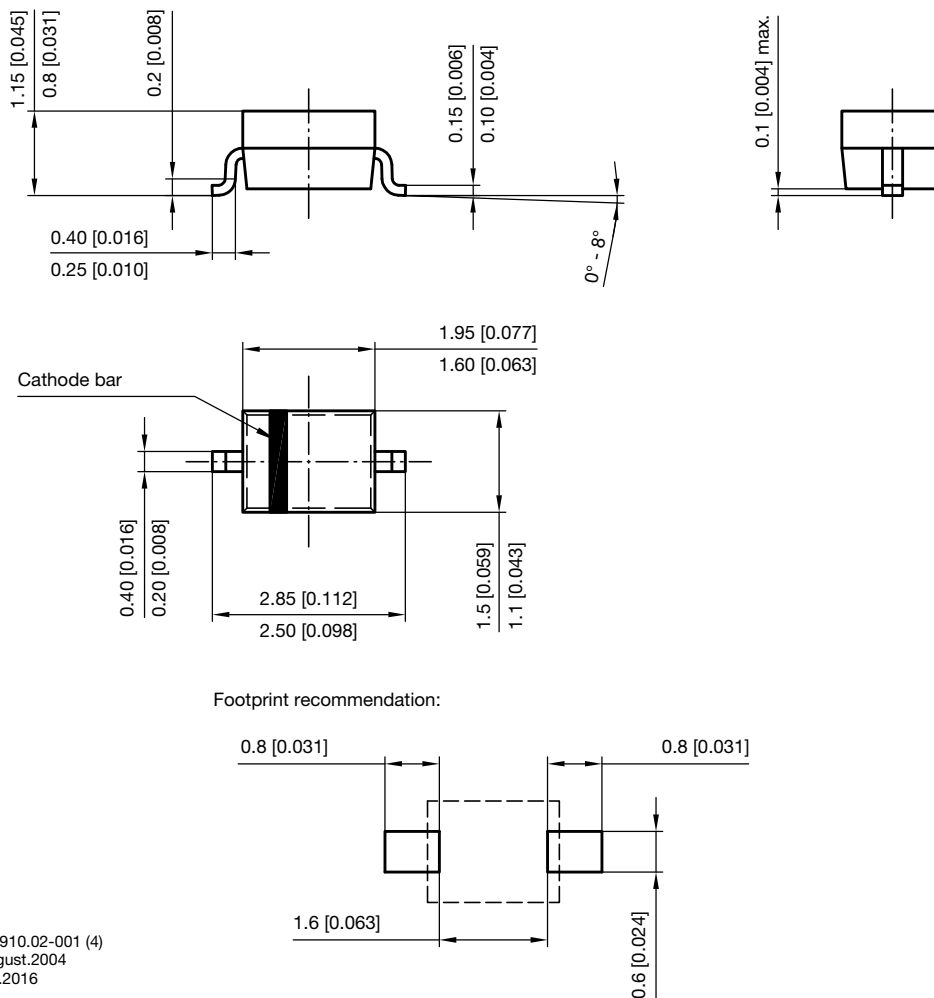
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 10\text{ }\mu\text{A}$ (pulsed)	$V_{(BR)}$	70			V
Leakage current	$V_R = 50\text{ V}$	$I_R$			0.1	$\mu\text{A}$
	$V_R = 70\text{ V}$	$I_R$			10	$\mu\text{A}$
Forward voltage	$I_F = 1\text{ mA}$	$V_F$		375	410	mV
	$I_F = 10\text{ mA}$	$V_F$		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**



Document no.: S8-V-3910.02-001 (4)  
Created - Date: 24.August.2004  
Rev. 6 - Date: 23.Sept.2016  
17443



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