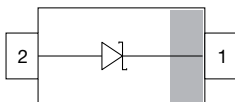


## Small Signal Schottky Diode



### FEATURES

- Schottky diode for high-speed switching
- Circuit protection
- Voltage clamping
- High-level detecting and mixing
- AEC-Q101 qualified available
- Base P/N-G3 - RoHS compliant, commercial grade
- Base P/N-HG3\_A - RoHS-compliant, AEC-Q101 qualified (part number available on request)
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

AUTOMOTIVE  
GRADE  
Available



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

### LINKS TO ADDITIONAL RESOURCES



### MECHANICAL DATA

**Case:** SOD-323

**Weight:** approx. 4 mg

**Packaging codes/options:**

18/10K per 13" reel (8 mm tape), 10K/box

08/3K per 7" reel (8 mm tape), 15K/box

### PARTS TABLE

PART	ORDERING CODE	AEC-Q101 QUALIFIED	TYPE MARKING	CIRCUIT CONFIGURATION	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY
BAS170WS	BAS170WS-G3-08	no	7D	Single	3 000 (8 mm tape on 7" reel)	15 000
	BAS170WS-HG3_A-08	yes				
	BAS170WS-G3-18	no			10 000 (8 mm tape on 13" reel)	10 000
	BAS170WS-HG3_A-18	yes				

### PACKAGE

PACKAGE NAME	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
SOD-323	4 mg	UL 94 V-0	MSL 1 (according J-STD-020)	Peak temperature max. 260 °C

### ABSOLUTE MAXIMUM RATINGS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		V <sub>RRM</sub>	70	V
Forward continuous current		I <sub>F</sub>	70	mA
Surge forward current	t <sub>p</sub> < 1 s	I <sub>FSM</sub>	600	mA
Power dissipation <sup>(1)</sup>		P <sub>tot</sub>	150	mW

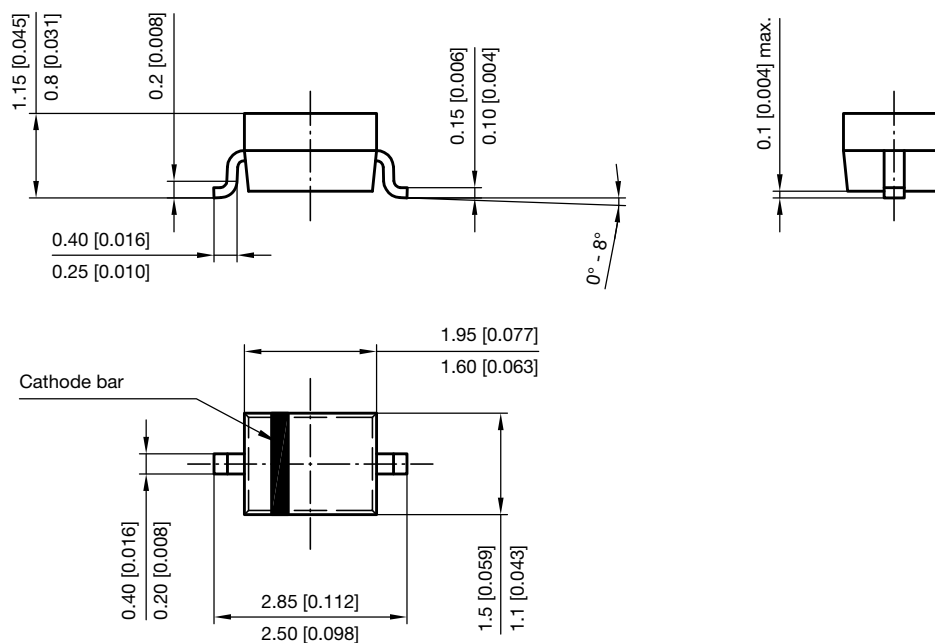
#### Note

<sup>(1)</sup> Infinite heatsink

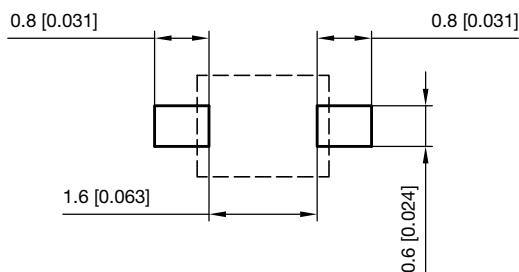
### THERMAL CHARACTERISTICS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air	infinite heatsink	R <sub>thJA</sub>	650	K/W
Junction temperature		T <sub>j</sub>	125	°C
Operating temperature range		T <sub>op</sub>	-55 to +125	°C
Storage temperature range		T <sub>stg</sub>	-65 to +150	°C

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , 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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