



### Features

- Very Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)
- Qualified to AEC-Q101 Standards for High Reliability
- An Automotive-Compliant Part is Available Under Separate Data Sheet (<u>BAT760Q</u>)

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

## **Mechanical Data**

- Case: SOD323
- Case Material Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: Cathode Band
- Terminals: Finish Matte Tin Annealed Over Alloy 42 Leadframe. Solderable per MIL-STD-202, Method 208 3
- Weight: 0.004 grams (Approximate)



Top View

### Ordering Information (Note 4)

Case	Packaging
SOD323	3,000/Tape & Reel
	Case

Notes: 1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.

2. See http://www.diodes.com/quality/lead\_free.html for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.

3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

4. For packaging details, go to our website at https://www.diodes.com/design/support/packaging/diodes-packaging/.

## **Marking Information**





### Maximum Ratings (@T<sub>A</sub> = +25°C unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	30	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	21	V
Average Rectified Output Current	lo	1	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	5.5	A

# **Thermal Characteristics**

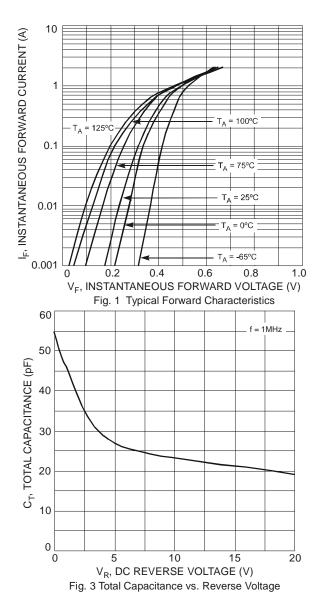
Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	PD	235	mW
Typical Thermal Resistance Junction to Ambient (Note 5)	R <sub>0JA</sub>	426	°C/W
Operating and Storage Temperature Range	T <sub>J,</sub> T <sub>STG</sub>	-65 to +150	°C

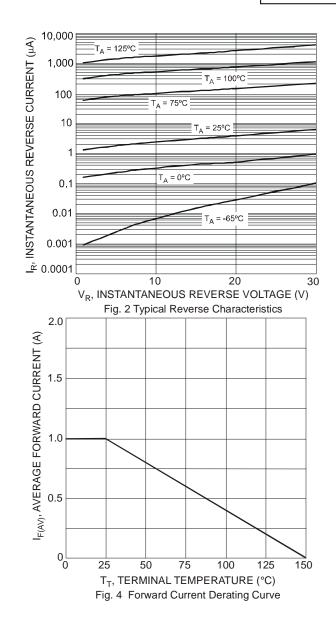
## Electrical Characteristics (@T<sub>A</sub> = +25°C unless otherwise specified.)

Characteristic	Symbol	Min	Тур	Max	Unit	Test Conditions
Reverse Breakdown Voltage (Note 6)	V <sub>(BR)R</sub>	30	_	_	V	I <sub>R</sub> = 500μA
		_	245	270		$I_F = 10 \text{mA}$
Forward Voltage Drop	VF		320	350	mV	$I_{F} = 100 mA$
			495	550		I <sub>F</sub> = 1A
			3.0	10		$V_R = 5V$
Leakage Current (Note 6)	I <sub>R</sub>		3.5	20	μA	$V_R = 8V$
			5.0	50		V <sub>R</sub> = 15V
Total Capacitance	CT	_	25		pF	$f = 1MHz, V_R = 5VDC$

Notes: 5. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at http://www.diodes.com/package-outlines.html. 6. Short duration pulse test used to minimize self-heating effect.



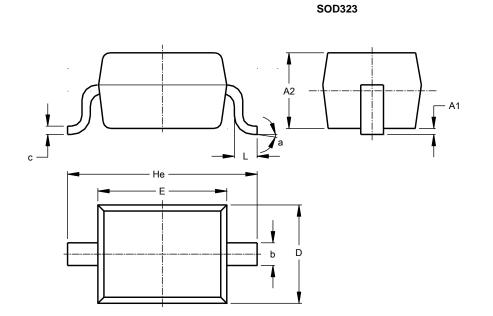






# Package Outline Dimensions

Please see http://www.diodes.com/package-outlines.html for the latest version.

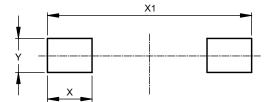


SOD323					
Dim	Min	Max	Тур		
A1		0.10	0.05		
A2	1.00	1.10	1.05		
b	0.25	0.35	0.30		
С	0.10	0.15	0.11		
D	1.20	1.40	1.30		
E	1.60	1.80	1.70		
He	2.30	2.70	2.50		
L	0.20	0.40	0.30		
а	0°	8º			
All Dimensions in mm					

# **Suggested Pad Layout**

Please see http://www.diodes.com/package-outlines.html for the latest version.





Dimensions	Value (in mm)
Х	0.590
X1	2.700
Y	0.450



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