



Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- **High Conductance**
- Totally Lead-Free Finish & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)
- Qualified to AEC-Q101 Standards for High Reliability
- PPAP capable (Note 4)

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Mechanical Data

- Case: SOD323
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Lead Free Plating (Matte Tin Finish Annealed over Alloy 42 Leadframe). Solderable per MIL-STD-202, Method 208 @3
- Polarity: Cathode Band
- Weight: 0.004 grams (Approximate)





Ordering Information (Note 5)

Part Number	Compliance	Case	Packaging
B0530WS-7-F	AEC-Q101	SOD323	3,000/Tape & Reel
B0530WS-13-F	AEC-Q101	SOD323	10,000/Tape & Reel
B0530WSQ-13-F	Automotive	SOD323	10,000/Tape & Reel

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

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

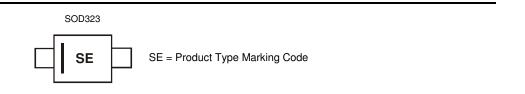
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

4. Automotive products are AEC-Q101 qualified and are PPAP capable. Automotive, AEC-Q101 and standard products are electrically and thermally

the same, except where specified. For more information, please refer to http://www.diodes.com/quality/product_compliance_definitions/. 5. For packaging details, go to our website at http"//www.diodes.com/products/packages.html.

Marking Information

Notes:





Maximum Ratings (@ $T_A = +25 \,^{\circ}C$, 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 _{RRM} V _{RWM} V _R	30	V
RMS Reverse Voltage	V _{R(RMS)}	21	V
Average Rectified Output Current (See Figure 1)	lo	0.5	А
Peak Repetitive Forward Current tp = 8.3ms, Half Sine-Wave	I _{FRM}	3.5	А
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	2	А

Thermal Characteristics

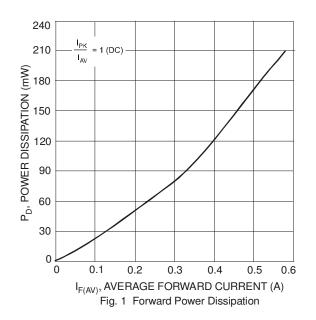
Characteristic	Symbol	Value	Unit
Power Dissipation (Note 6)	PD	235	mW
Typical Thermal Resistance Junction to Ambient (Note 6)	R _{0JA}	426	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-40 to +125	°C

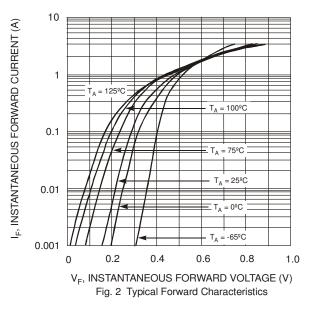
Electrical Characteristics (@T_A = +25 °C, unless otherwise specified.)

Characteristic	Symbol	Min	Тур	Мах	Unit	Test Conditions
Reverse Breakdown Voltage (Note 7)	V _{(BR)R}	30	—	—	V	I _R = 500μA
Forward Voltage Drop	V _F		0.40	0.36 0.45	V	I _F = 0.1A I _F = 0.5A
Leakage Current (Note 7)	I _R			80 100 500	μΑ	$V_R = 15V$ $V_R = 20V$ $V_R = 30V$
Total Capacitance	CT	_	58		pF	$f = 1MHz, V_R = 0V DC$

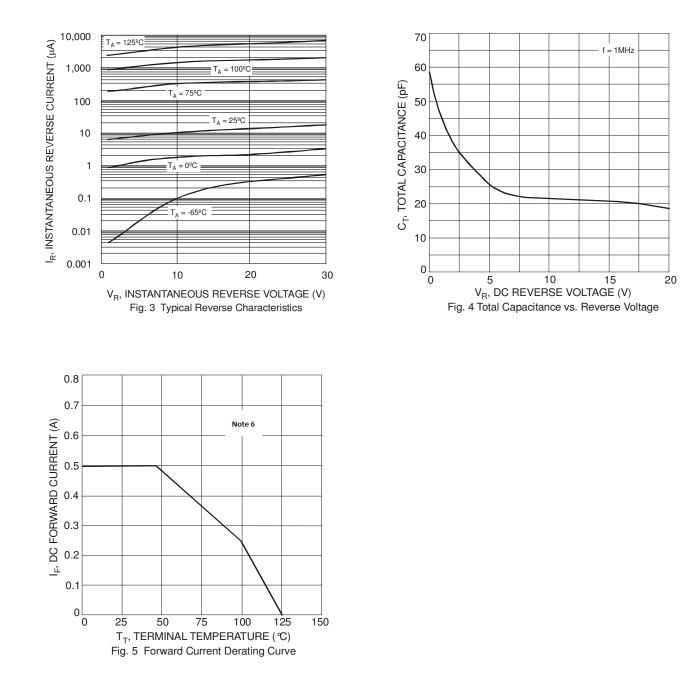
Notes:

6. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf. 7. Short duration pulse test used to minimize self-heating effect.





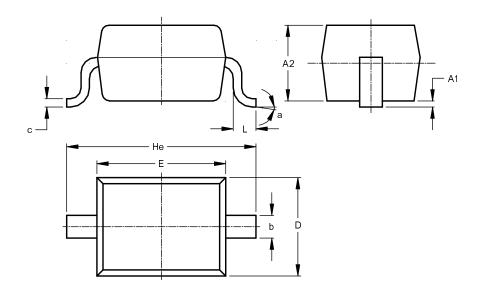






Package Outline Dimensions

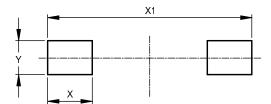
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for the latest version.



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	8º				
All [All Dimensions in mm				

Suggested Pad Layout

Please see AP02001 at http://www.diodes.com/datasheets/ap02001.pdf for the latest version.



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



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