

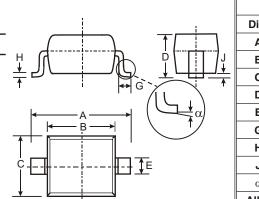
# SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### Features

- Very Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- **High Conductance**

### **Mechanical Data**

- Case: SOD-323, Plastic •
- Case material UL Flammability Rating . Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A •
- Polarity: Cathode Band •
- Leads: Solderable per MIL-STD-202, •
- Method 208
- Also Available in Lead Free Plating (Matte Tin Finish). Please see Ordering Information, Note 4, on Page 1
- Marking: SD, See Page 2
- Weight: 0.004 grams (approx.)



SOD-323					
Dim	Min	Max			
Α	2.30	2.70			
В	1.60	1.80			
С	1.20	1.40			
D	1.05 Typical				
E	0.25	0.35			
G	0.20	0.40			
н	0.10	0.15			
J	0.05 Typical				
α	0°	8°			
All Dimensions in mm					

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

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

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>	20	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	V
Average Rectified Output Current	lo	0.5	А
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	2	А
Power Dissipation (Note 1)	PD	235	mW
Typical Thermal Resistance Junction to Ambient (Note 1)	R <sub>0JA</sub>	426	°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-55 to +125	°C

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

Characteristic	Symbol	Value	Unit	Test Conditions
Minimum Reverse Breakdown Voltage (Note 2)	V <sub>(BR)R</sub>	20	V	$I_{\rm R} = 0.5 {\rm mA}$
Maximum Forward Voltage Drop	VF	0.310 0.430	V	I <sub>F</sub> = 0.1A I <sub>F</sub> = 0.5A
Maximum Leakage Current (Note 2)	I <sub>R</sub>	100 250	μA	$V_R = 10V$ $V_R = 20V$
Typical Total Capacitance	CT	170	pF	$f = 1MHz, V_R = 0VDC$

## Ordering Information (Note 3)

Device	Packaging	Shipping
B0520WS-7	SOD-323	3000/Tape and Reel

Note: 1. 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.

2. Short duration test pulse used to minimize self-heating effect.

For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.
For Lead Free terminal plating part number, please add "-F" suffix to part number above.

Example: B0520WS-7-F.



