

SD101AWS - SD101CWS

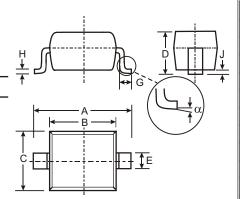
SURFACE MOUNT SCHOTTKY BARRIER DIODE

Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Low Capacitance
- Ultra-small Surface Mount Package

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 3
- Marking: See Sheet 3
- SD101AWS Marking Code: S1 or SK
- SD101BWS Marking Code: S2 or SK
- SD101CWS Marking Code: S3 or SC or SK
- 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_A = 25°C unless otherwise specified

Characteristic	Symbol	SD101AWS	SD101BWS	SD101CWS	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	60	50	40	V
RMS Reverse Voltage	V _{R(RMS)}	42	35	28	V
Forward Continuous Current (Note 1)	I _{FM}		15		mA
Non-Repetitive Peak Forward Surge Current $@t \le 1$ $@t = 1$	IECM	50 2.0			mA A
Power Dissipation (Note 1)	P _D		200		mW
Thermal Resistance, Junction to Ambient Air (Note 1)		625			°C/W
Operating and Storage Temperature Range		-65 to +125			°C

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.



Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	·	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	SD101AWS SD101BWS SD101CWS	V _{(BR)R}	60 50 40	_	V	$I_R = 10\mu A$ $I_R = 10\mu A$ $I_R = 10\mu A$
Forward Voltage Drop	SD101AWS SD101BWS SD101CWS SD101AWS SD101BWS SD101CWS	V _{FM}	_	0.41 0.40 0.39 1.00 0.95 0.90	V	IF = 1.0mA IF = 1.0mA IF = 1.0mA IF = 15mA IF = 15mA IF = 15mA
Peak Reverse Current (Note 2)	SD101AWS SD101BWS SD101CWS	I _{RM}	_	200	nA	V _R = 50V V _R = 40V V _R = 30V
Total Capacitance	SD101AWS SD101BWS SD101CWS	Ст	_	2.0 2.1 2.2	pF	V _R = 0V, f = 1.0MHz
Reverse Recovery Time		t _{rr}	_	1.0	ns	$I_F = I_R = 5.0 \text{mA},$ $I_{rr} = 0.1 \text{ x } I_R, R_L = 100 \Omega$

Notes:

- 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.

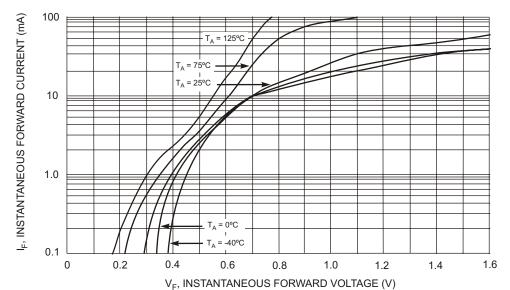


Fig. 1 Typical Forward Characteristics

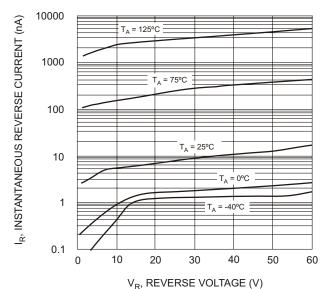
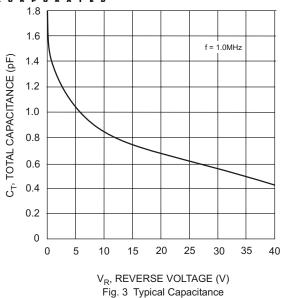
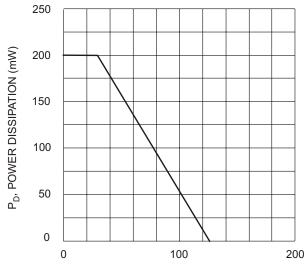


Fig. 2 Typical Reverse Characteristics







T_A, AMBIENT TEMPERATURE (°C) Fig. 4 Power Derating Curve, Total Package

Ordering Information (Note 3)

Device	Packaging	Shipping
SD101AWS-7	SOD-323	3000/Tape & Reel
SD101BWS-7	SOD-323	3000/Tape & Reel
SD101CWS-7	SOD-323	3000/Tape & Reel

Notes: 3. For Packaging Details, go to our website at: http://www.diodes.com/datasheets/ap02007.pdf.

4. For Lead Free version (with Lead Free terminal finish) part number, please add "-F" suffix to part number above. Example: SD101BWS-7-F.

Marking Information



XX = Product Type Marking Code (See Page 1)

DS30078 Rev. 5 - 2 3 of 3 SD101AWS - SD101CWS