



# SD101AWS - SD101CWS

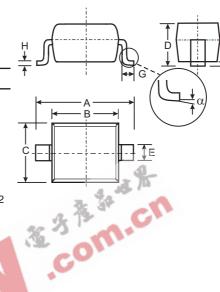
# SURFACE MOUNT SCHOTTKY BARRIER DIODE

### Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Low Capacitance
- Ultra-small Surface Mount Package
- Lead Free/RoHS Compliant Version (Note 2)

## **Mechanical Data**

- Case: SOD-323
- Case material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Polarity: Cathode Band
- Leads: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Marking: See Page 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 (approximate)



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 @ TA = 25°C unless otherwise specified

Characteristic		Symbol	SD101AWS	SD101BWS	SD101CWS	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	60	50	40	V
RMS Reverse Voltage		V <sub>R(RMS)</sub>	42	35	28	V
Forward Continuous Current (Note 1)		I <sub>FM</sub>		15	•	mA
	t ≤ 1.0s t = 10μs	I <sub>FSM</sub>		50 2.0		mA A
Power Dissipation (Note 1)		PD		200		mW
Thermal Resistance, Junction to Ambient Air (Note	e 1)	$R_{\theta JA}$		625		°C/W
Operating and Storage Temperature Range		Tj, T <sub>STG</sub>		-65 to +125		°C

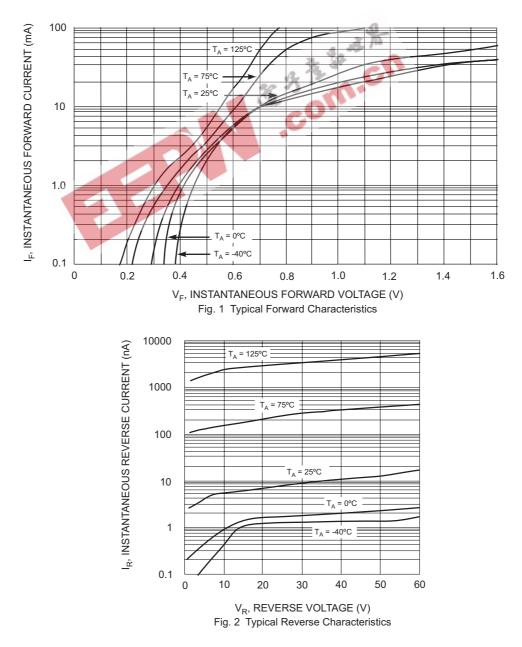
Note: 1. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf. 2. No purposefully added lead.

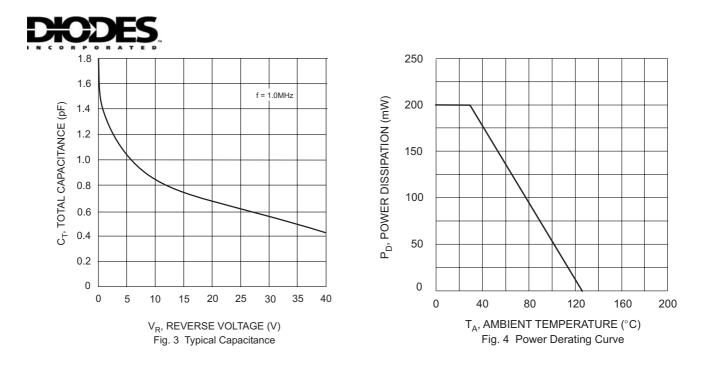


## **Electrical Characteristics** @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic		Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 3)	SD101AWS SD101BWS SD101CWS	V <sub>(BR)R</sub>	60 50 40		v	$ \begin{array}{l} I_{R}=10\mu A\\ I_{R}=10\mu A\\ I_{R}=10\mu A \end{array} \end{array} $
Forward Voltage Drop	SD101AWS SD101BWS SD101CWS SD101CWS SD101AWS SD101BWS SD101CWS	V <sub>FM</sub>		0.41 0.40 0.39 1.00 0.95 0.90	v	
Peak Reverse Current (Note 3)	SD101AWS SD101BWS SD101CWS	I <sub>RM</sub>		200	nA	$V_{R} = 50V$ $V_{R} = 40V$ $V_{R} = 30V$
Total Capacitance	SD101AWS SD101BWS SD101CWS	CT		2.0 2.1 2.2	pF	V <sub>R</sub> = 0V, f = 1.0MHz
Reverse Recovery Time		t <sub>rr</sub>	_	1.0	ns	$I_F = I_R = 5.0 \text{mA},$ $I_{rr} = 0.1 \text{ x } I_R, R_L = 100 \Omega$

Notes: 3. Short duration test pulse used to minimize self-heating effect.

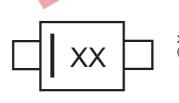




Ordering Information (Note 4)				
Device	Packaging	Shipping		
SD101AWS-7-F	SOD-323	3000/Tape & Reel		
SD101BWS-7-F	SOD-323	3000/Tape & Reel		
SD101CWS-7-F	SOD-323	3000/Tape & Reel		

Notes: 4. For Packaging Details, go to our website at: http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



XX = Product Type Marking Code (See Page 1)

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