Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

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 1)**
- **"Green" Device (Note 2)**

Mechanical Data

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

Top View

Ordering Information (Note 3)

Part Number	Case	Packaging
SD101AWS-7-F	SOD323	3000/Tape & Reel
SD101BWS-7-F	SOD323	3000/Tape & Reel
SD101CWS-7-F	SOD323	3000/Tape & Reel

Notes: 1. No purposefully added lead.
2. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/
3. For packaging details, go to our website at http://www.diodes.com.

Marking Information

xx = Product Type Marking Code
S1 or SK = SD101AWS
S2 or SK = SD101BWS
S3 or SC or SK = SD101CWS

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 4)	I_{FM}	15			mA
Non-Repetitive Peak Forward Surge Current @ t ≤ 1.0s @ t = 10μs	I_{FSM}	50 2.0			mA

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 4)	P_D	200	mW
Thermal Resistance, Junction to Ambient Air (Note 4)	$R_{\theta JA}$	625	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +125	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic		Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Breakdown Voltage (Note 5)	SD101AWS	$V_{(BR)R}$	60	—	—	V	I_R = 10μA
	SD101BWS		50	—	—		I_R = 10μA
	SD101CWS		40	—	—		I_R = 10μA
Forward Voltage Drop	SD101AWS	V_{FM}	—	—	0.41	V	I_F = 1.0mA
	SD101BWS		—	—	0.40		I_F = 1.0mA
	SD101CWS		—	—	0.39		I_F = 1.0mA
	SD101AWS		—	—	1.00		I_F = 15mA
	SD101BWS		—	—	0.95		I_F = 15mA
	SD101CWS		—	—	0.90		I_F = 15mA
Peak Reverse Current (Note 5)	SD101AWS	I_{RM}	—	—	200	nA	V_R = 50V
	SD101BWS		—	—	200		V_R = 40V
	SD101CWS		—	—	200		V_R = 30V
Total Capacitance	SD101AWS	C_T	—	—	2.0	pF	V_R = 0V, f = 1.0MHz
	SD101BWS		—	—	2.1		V_R = 0V, f = 1.0MHz
	SD101CWS		—	—	2.2		V_R = 0V, f = 1.0MHz
Reverse Recovery Time		t_{rr}	—	—	1.0	ns	I_F = I_R = 5.0mA, I_{rr} = 0.1 x I_R, R_L = 100Ω

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

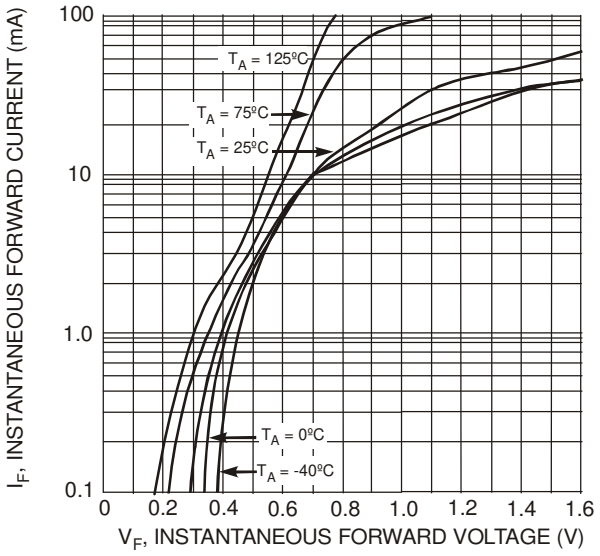


Fig. 1 Typical Forward Characteristics

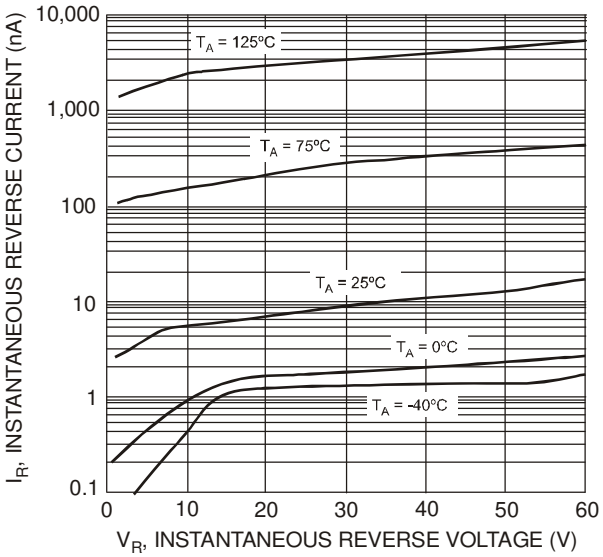


Fig. 2 Typical Reverse Characteristics

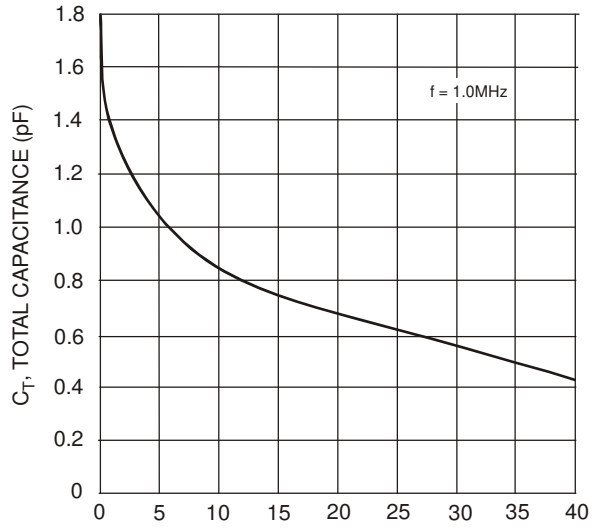


Fig. 3 Total Capacitance vs. Reverse Voltage

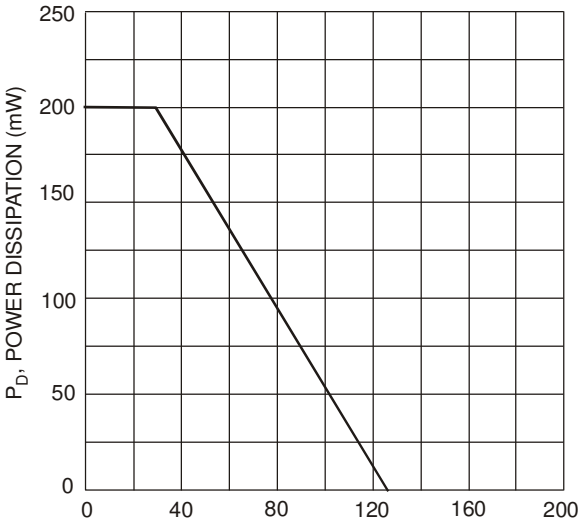
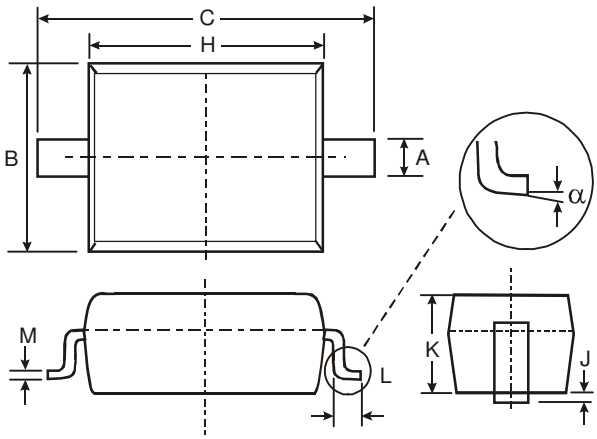


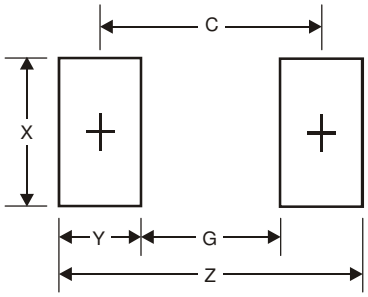
Fig. 4 Power Derating Curve

Package Outline Dimensions



SOD323		
Dim	**Min**	**Max**
A	0.25	0.35
B	1.20	1.40
C	2.30	2.70
H	1.60	1.80
J	0.00	0.10
K	1.0	1.1
L	0.20	0.40
M	0.10	0.15
α	0°	8°
All Dimensions in mm		

Suggested Pad Layout



Dimensions	Value (in mm)
Z	3.75
G	1.05
X	0.65
Y	1.35
C	2.40