



SD101AW - SD101CW

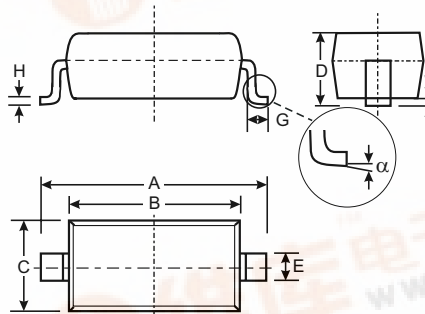
SCHOTTKY BARRIER SWITCHING DIODE

Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Very Low Reverse Capacitance

Mechanical Data

- Case: SOD-123, 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
- Marking: Date Code & Type Code, See Page 2
- Type Codes: SD101AW S1 or SK
SD101BW S2 or SK
SD101CW S3 or SK
- Weight: 0.01 grams (approx.)
- Ordering Information: See Page 2



SOD-123		
Dim	Min	Max
A	3.55	3.85
B	2.55	2.85
C	1.40	1.70
D	—	1.35
E	0.55 Typical	
G	0.25	—
H	0.11 Typical	
J	—	0.10
α	0°	8°
All Dimensions in mm		

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	SD101AW	SD101BW	SD101CW	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	60	50	40	V
Working Peak Reverse Voltage	V_{RWM}				
DC Blocking Voltage	V_R				
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 @ $t \leq 1.0\text{s}$ @ $t = 10\mu\text{s}$	I_{FSM}	50 2.0			mA A
Power Dissipation (Note 1)	P_d	400			mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	300			$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +125			$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

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

Notes: 1. Part mounted on FR-4 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.

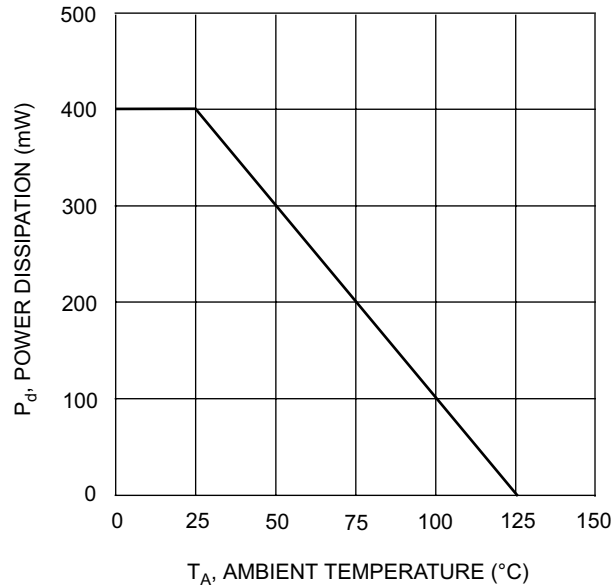


Fig. 1 Power Derating Curve

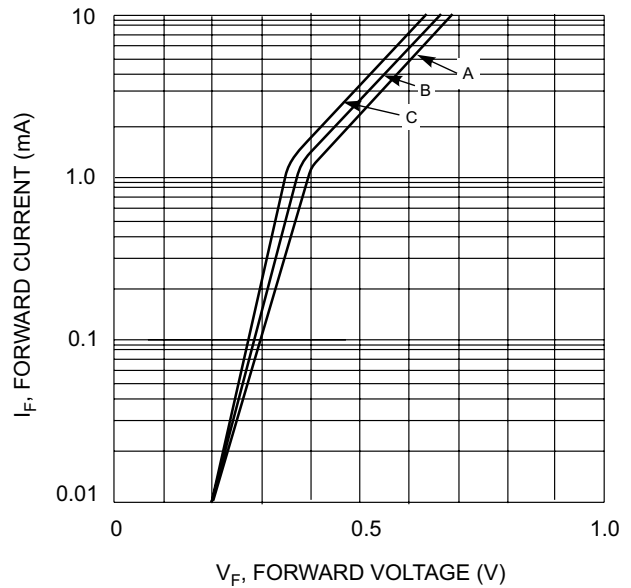


Fig. 2 Typical Forward Characteristic

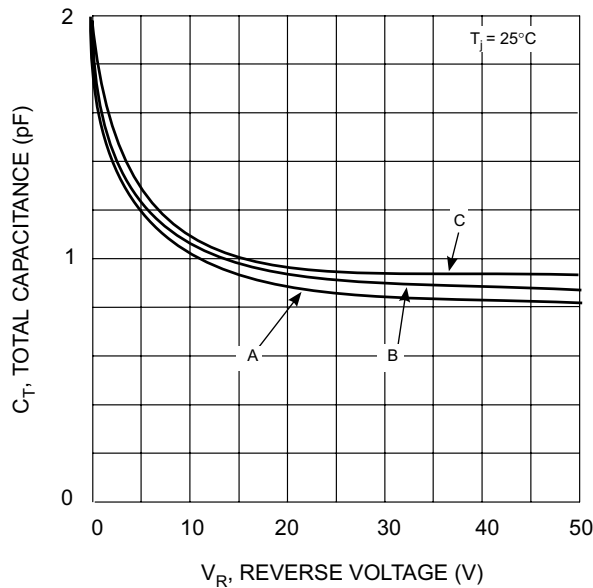


Fig. 3 Typ. Total Capacitance vs Reverse Voltage

Ordering Information (Note 3)

Device	Packaging	Shipping
SD101AW-7	SOD-123	3000/Tape and Reel
SD101BW-7	SOD-123	3000/Tape and Reel
SD101CW-7	SOD-123	3000/Tape and Reel

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

Marking Information



XX = Product Type Marking Code
 YM = Date Code Marking
 Y = Year (ex: N = 2002)
 M = Month (ex: 9 = September)

Date Code Key

Year	1998	1999	2000	2001	2002	2003	2004	2005
Code	J	K	L	M	N	P	R	S

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D