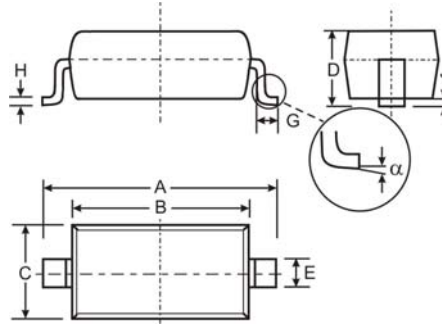


Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Very Low Reverse Capacitance
- **Lead Free/RoHS Compliant (Note 3)**

Mechanical Data

- Case: SOD-123
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Leads: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe)
- Polarity: Cathode Band
- Marking: Date Code & Type Code, See Page 3
- Type Codes: SD101AW S1 or SK
SD101BW S2 or SK
SD101CW S3 or SK
- Ordering Information: See Page 3
- Weight: 0.01 grams (approximate)



SOD-123		
Dim	Min	Max
A	3.55	3.85
B	2.55	2.85
C	1.40	1.70
D	—	1.35
E	0.45	0.65
	0.55 Typical	
G	0.25	—
H	0.11 Typical	
J	—	0.10
α	0°	8°
All Dimensions in mm		

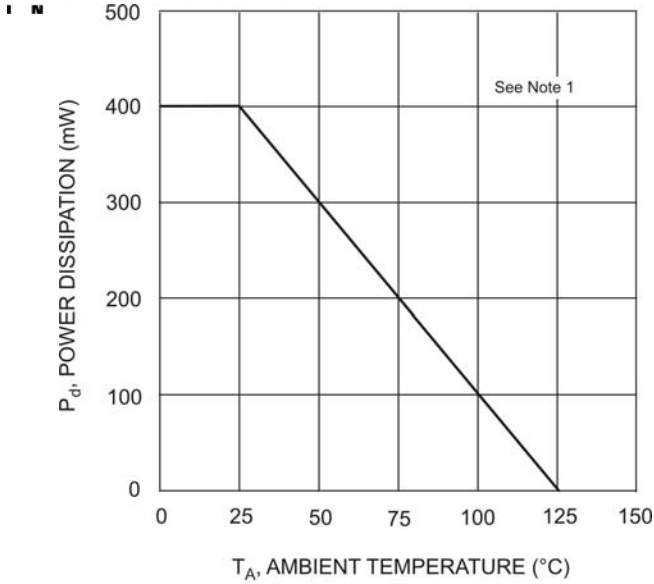
Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	SD101AW	SD101BW	SD101CW	Unit
Peak Repetitive Reverse Voltage	V _{RRM}				
Working Peak Reverse Voltage	V _{RWM}	60	50	40	V
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 ≤ 1.0s @ t = 10μs	I _{FSM}		50		mA
			2.0		A
Power Dissipation (Note 1)	P _d		400		mW
Thermal Resistance, Junction to Ambient Air (Note 1)	R _{θJA}		300		°C/W
Operating and Storage Temperature Range	T _J , T _{STG}		-65 to +125		°C

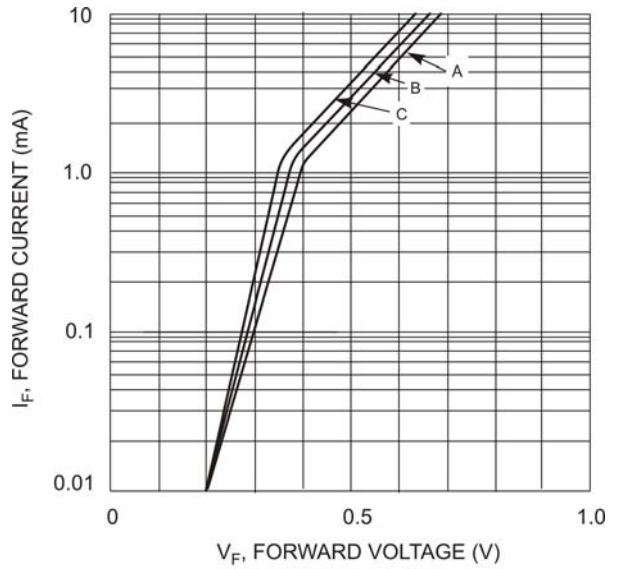
Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	SD101AW	60	—	V	I _R = 10μA
	SD101BW	50			I _R = 10μA
	SD101CW	40			I _R = 10μA
Forward Voltage Drop	SD101AW	—	0.41	V	I _F = 1.0mA
	SD101BW		0.40		I _F = 1.0mA
	SD101CW		0.39		I _F = 1.0mA
	SD101AW		1.00		I _F = 15mA
	SD101BW		0.95		I _F = 15mA
	SD101CW		0.90		I _F = 15mA
Peak Reverse Current (Note 2)	SD101AW	—	200	nA	V _R = 50V
	SD101BW				V _R = 40V
	SD101CW				V _R = 30V
Total Capacitance	SD101AW	—	2.0	pF	V _R = 0V, f = 1.0MHz
	SD101BW		2.1		
	SD101CW		2.2		
Reverse Recovery Time	t _{rr}	—	1.0	ns	I _F = I _R = 5.0mA, I _{rr} = 0.1 x I _R , R _L = 100Ω

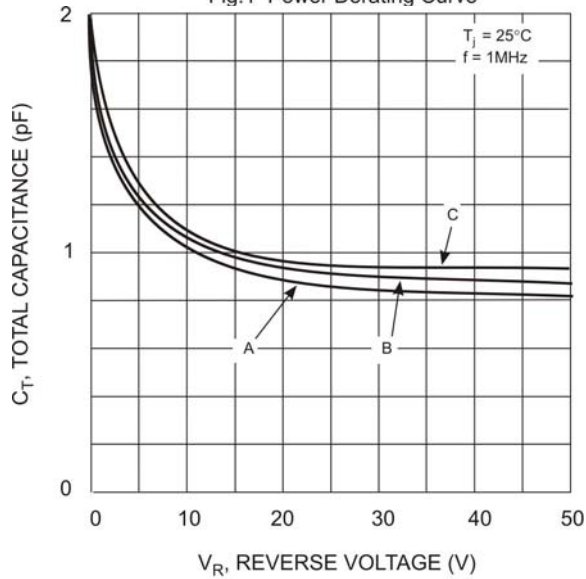
- Notes:
1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 2. Short duration pulse test used to minimize self-heating effect.
 3. No purposefully added lead.



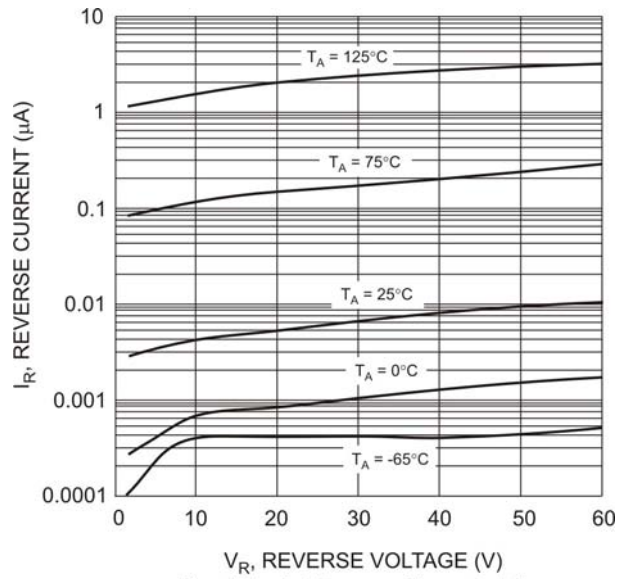
T_A , AMBIENT TEMPERATURE (°C)
Fig. 1 Power Derating Curve



V_F , FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristic



V_R , REVERSE VOLTAGE (V)
Fig. 3 Typical Total Capacitance vs Reverse Voltage



V_R , REVERSE VOLTAGE (V)
Fig. 4 Typical Reverse Characteristics

Ordering Information (Note 4)

Device	Packaging	Shipping
SD101xW-7-F	SOD-123	3000/Tape and Reel
SD101xW-13-F	SOD-123	10,000/Tape and 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

YM = Date Code Marking

Y = Year (ex: T = 2006)

M = Month (ex: 9 = September)

Date Code Key

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Code	J	K	L	M	N	P	R	S	T	U	V	W	X	Y	Z

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

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