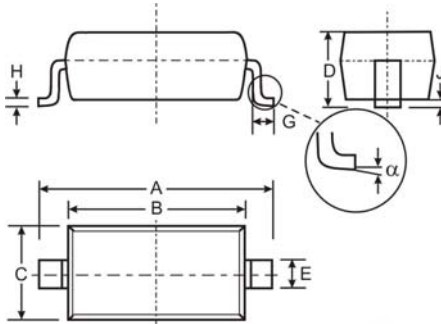


**Features**

- 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<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	SD101AW	SD101BW	SD101CW	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	60	50	40	V
Working Peak Reverse Voltage	V <sub>RWM</sub>	—	—	—	—
DC Blocking Voltage	V <sub>R</sub>	—	—	—	—
RMS Reverse Voltage	V <sub>R(RMS)</sub>	42	35	28	V
Forward Continuous Current (Note 1)	I <sub>FM</sub>	—	15	—	mA
Non-Repetitive Peak Forward Surge Current	I <sub>FSM</sub>	—	50	—	mA
			@ t = 10μs	2.0	—
Power Dissipation (Note 1)	P <sub>d</sub>	—	400	—	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	R <sub>θJA</sub>	—	300	—	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +125			°C

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

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V <sub>(BR)R</sub>	60	—	V	I <sub>R</sub> = 10μA
		50	—		I <sub>R</sub> = 10μA
		40	—		I <sub>R</sub> = 10μA
Forward Voltage Drop	V <sub>FM</sub>	—	0.41	V	I <sub>F</sub> = 1.0mA
		—	0.40		I <sub>F</sub> = 1.0mA
		—	0.39		I <sub>F</sub> = 1.0mA
		—	1.00		I <sub>F</sub> = 15mA
		—	0.95		I <sub>F</sub> = 15mA
		—	0.90		I <sub>F</sub> = 15mA
Peak Reverse Current (Note 2)	I <sub>RM</sub>	—	200	nA	V <sub>R</sub> = 50V
		—	—		V <sub>R</sub> = 40V
		—	—		V <sub>R</sub> = 30V
Total Capacitance	C <sub>T</sub>	—	2.0	pF	V <sub>R</sub> = 0V, f = 1.0MHz
		—	2.1		
		—	2.2		
Reverse Recovery Time	t <sub>rr</sub>	—	1.0	ns	I <sub>F</sub> = I <sub>R</sub> = 5.0mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 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.

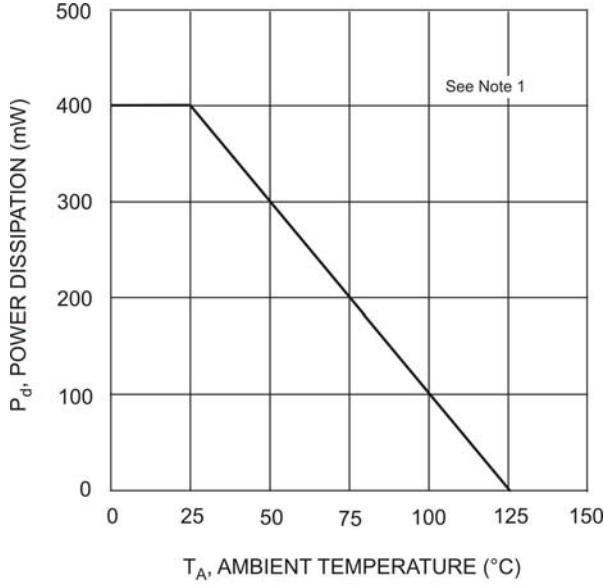


Fig. 1 Power Derating Curve

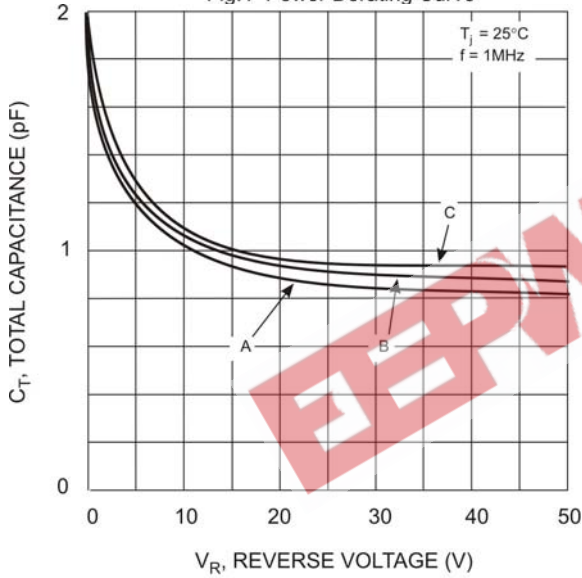


Fig. 3 Typical Total Capacitance vs Reverse Voltage

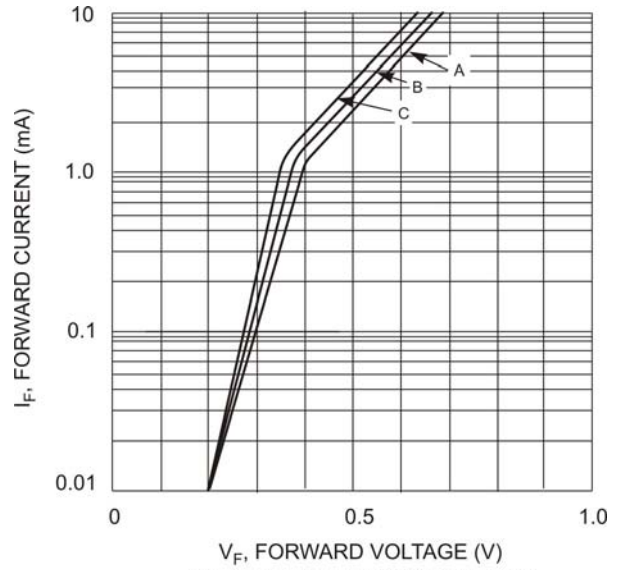


Fig. 2 Typical Forward Characteristic

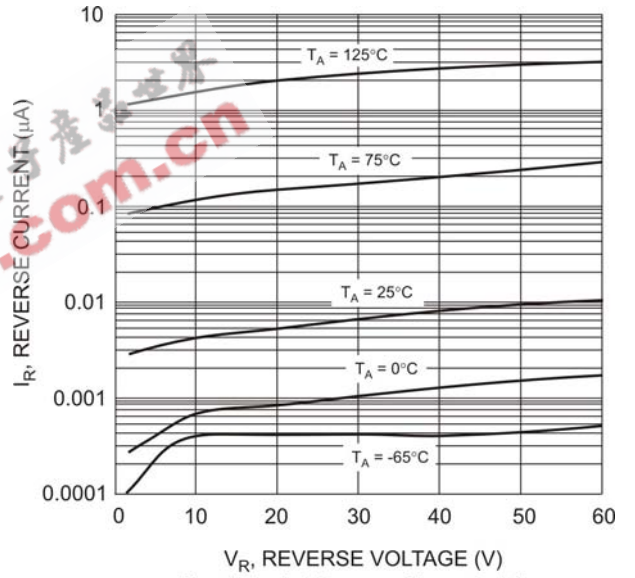


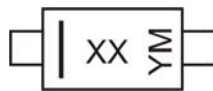
Fig. 4 Typical Reverse Characteristics

## 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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