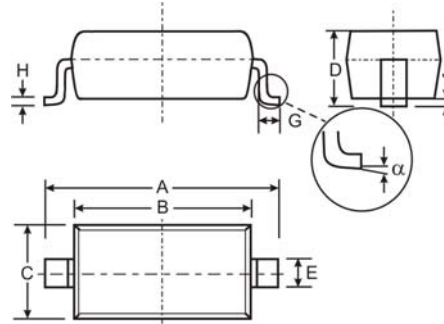


### Features

- 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 and Type Code, See Page 3
- Type Codes: SD103AW S4  
SD103BW S5 or S4  
SD103CW S6 or S5 or S4
- 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		

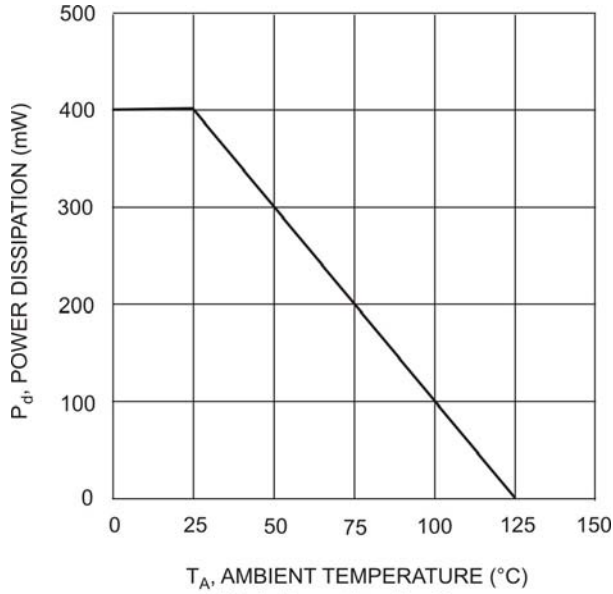
### Maximum Ratings @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	SD103AW	SD103BW	SD103CW	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>				
Working Peak Reverse Voltage	V <sub>RWM</sub>	40	30	20	V
DC Blocking Voltage	V <sub>R</sub>				
RMS Reverse Voltage	V <sub>R(RMS)</sub>	28	21	14	V
Forward Continuous Current (Note 1)	I <sub>FM</sub>		350		mA
Non-Repetitive Peak Forward Surge Current @ t ≤ 1.0s	I <sub>FSM</sub>		1.5		A
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

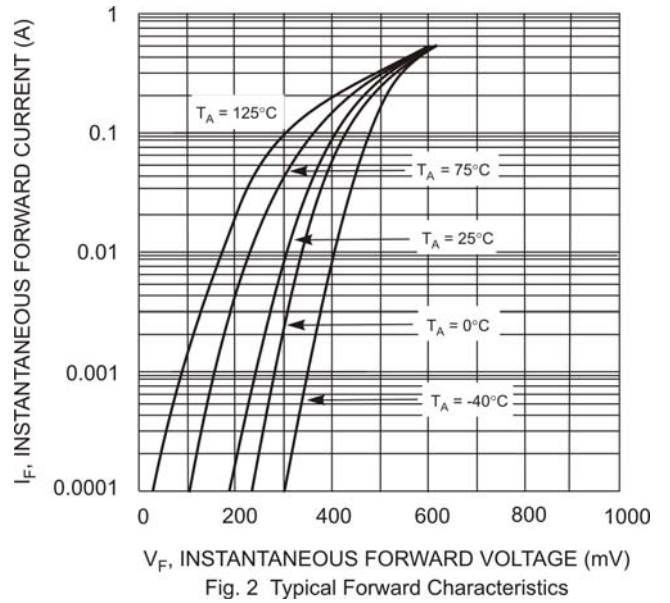
### Electrical Characteristics @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	SD103AW	40	—	—	V	I <sub>R</sub> = 100μA
	SD103BW	30	—	—		
	SD103CW	20	—	—		
Forward Voltage Drop	V <sub>FM</sub>	—	—	0.37 0.60	V	I <sub>F</sub> = 20mA I <sub>F</sub> = 200mA
Peak Reverse Current (Note 2)	SD103AW	—	—	5.0	μA	V <sub>R</sub> = 30V V <sub>R</sub> = 20V V <sub>R</sub> = 10V
	SD103BW	—	—			
	SD103CW	—	—			
Total Capacitance	C <sub>T</sub>	—	28	—	pF	V <sub>R</sub> = 0V, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>	—	10	—	ns	I <sub>F</sub> = I <sub>R</sub> = 200mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100Ω

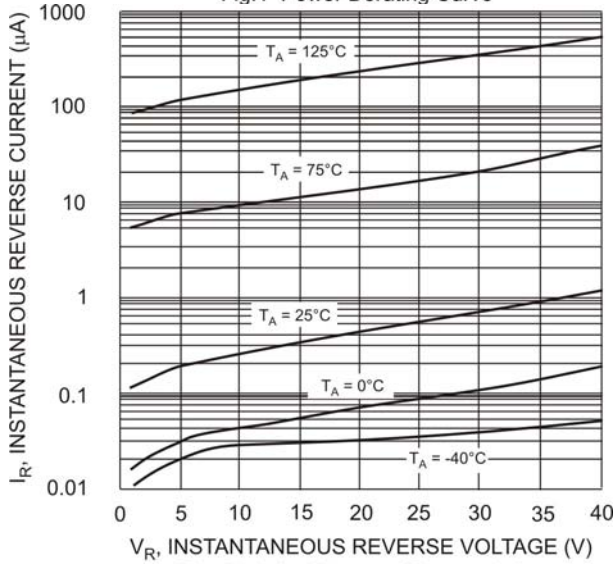
- Notes:
1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
  2. Short duration test pulse used to minimize self-heating effect.
  3. No purposefully added lead.



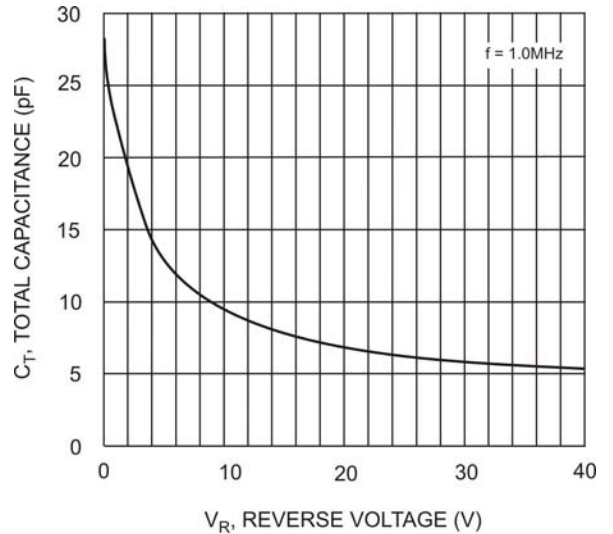
$T_A$ , AMBIENT TEMPERATURE (°C)  
Fig. 1 Power Derating Curve



$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (mV)  
Fig. 2 Typical Forward Characteristics



$V_R$ , INSTANTANEOUS REVERSE VOLTAGE (V)  
Fig. 3 Typical Reverse Characteristics



$V_R$ , REVERSE VOLTAGE (V)  
Fig. 4 Typ. Total Capacitance vs. Reverse Voltage

## Ordering Information (Note 4)

Device	Packaging	Shipping
SD103AW-7-F	SOD-123	3000/Tape and Reel
SD103BW-7-F	SOD-123	3000/Tape and Reel
SD103CW-7-F	SOD-123	3000/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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