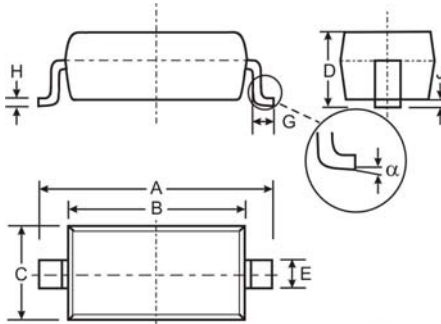


**Features**

- 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
$\alpha$	0°	8°
All Dimensions in mm		

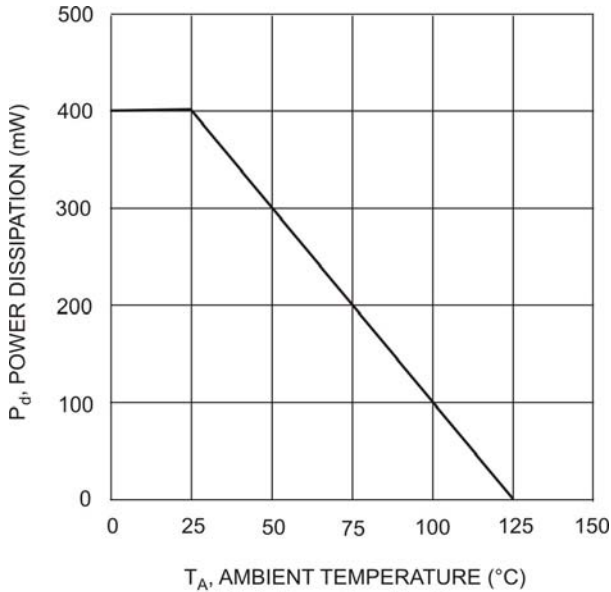
**Maximum Ratings** @ $T_A = 25^\circ\text{C}$  unless otherwise specified

Characteristic	Symbol	SD103AW	SD103BW	SD103CW	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	40	30	20	V
Working Peak Reverse Voltage	$V_{RWM}$	40	30	20	V
DC Blocking Voltage	$V_R$	28	21	14	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	21	14	V
Forward Continuous Current (Note 1)	$I_{FM}$	350			mA
Non-Repetitive Peak Forward Surge Current @ $t \leq 1.0\text{s}$	$I_{FSM}$	1.5			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			$^\circ\text{C}$

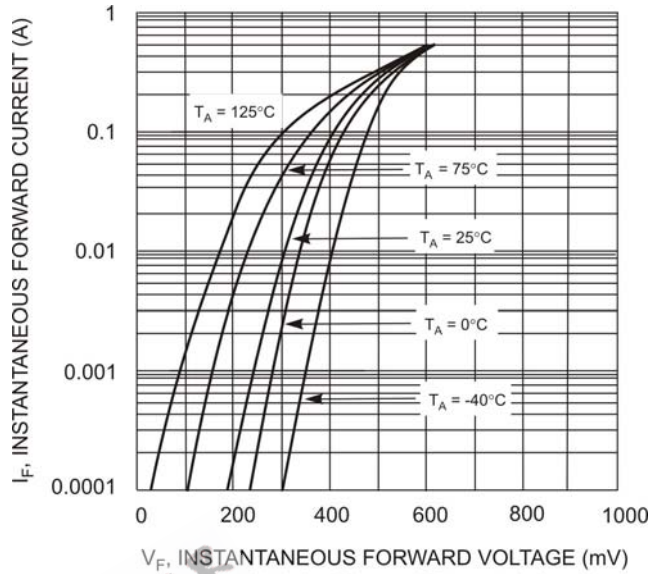
**Electrical Characteristics** @ $T_A = 25^\circ\text{C}$  unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	SD103AW	40	—	—	V	$I_R = 100\mu\text{A}$
	SD103BW	30	—	—	V	
	SD103CW	20	—	—	V	
Forward Voltage Drop	$V_{FM}$	—	—	0.37 0.60	V	$I_F = 20\text{mA}$ $I_F = 200\text{mA}$
Peak Reverse Current (Note 2)	$I_{RM}$	—	—	5.0	$\mu\text{A}$	$V_R = 30\text{V}$ $V_R = 20\text{V}$ $V_R = 10\text{V}$
Total Capacitance	$C_T$	—	28	—	pF	$V_R = 0\text{V}, f = 1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$	—	10	—	ns	$I_F = I_R = 200\text{mA}$ , $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$

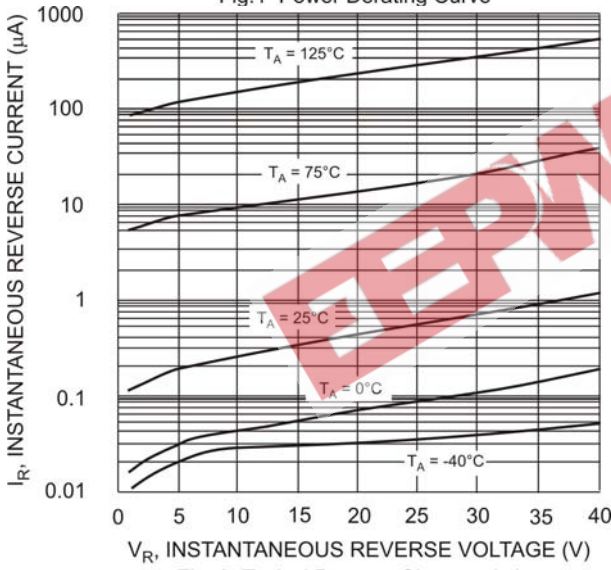
- Notes:
1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
  2. Short duration test pulse used to minimize self-heating effect.
  3. No purposefully added lead.



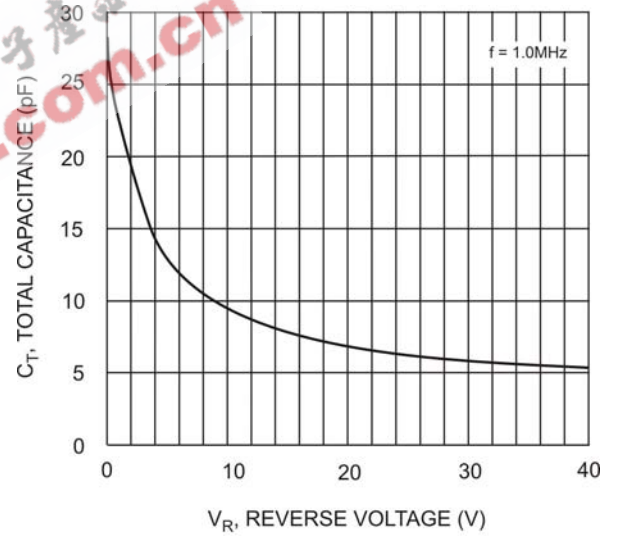
$T_A$ , AMBIENT TEMPERATURE (°C)  
Fig. 1 Power Derating Curve



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



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



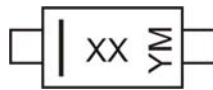
$C_T$ , TOTAL CAPACITANCE (pF)  
Fig. 4 Typ. Total Capacitance vs. Reverse Voltage

## 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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