

## Small Signal Product

## Low VF SMD Schottky Barrier Diode

**FEATURES**

- Low power loss, high current capability, low VF
- Surface device type mounting
- Moisture sensitivity level 1
- Matte Tin(Sn) lead finish with Nickel(Ni) underplate
- Packing code with suffix "G" means green compound (halogen-free)


**SOD-123**

**MECHANICAL DATA**

- Case: SOD-123 small outline plastic package
- Molding compound, UL flammability classification rating 94V-0
- Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guar
- High temperature soldering guaranteed : 260°C/10s
- Polarity: Indicated by cathode band
- Weight: 0.01 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)					
PARAMETER	SYMBOL	SD103AW	SD103BW	SD103CW	UNIT
Power Dissipation	P <sub>D</sub>	400			mW
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	40	30	20	V
Reverse Voltage	V <sub>R</sub>	28	21	14	V
Mean Forward Current @ T <sub>L</sub> = 100°C	I <sub>O</sub>	350			mA
Repetitive Peak Forward Surge Current @ t ≤ 1.0 s	I <sub>FRM</sub>	1.5			A
Thermal Resistance ( Junction to Ambient )	R <sub>θJA</sub>	300			°C/W
Junction Temperature	T <sub>J</sub>	125			°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +125			°C

PARAMETER	SYMBOL	MIN	TYP	MAX	Units
Reverse Breakdown Voltage	SD103AW I <sub>R</sub> = 10 μA	40			V
	SD103BW I <sub>R</sub> = 10 μA	30	-	-	
	SD103CW I <sub>R</sub> = 10 μA	20			
Forward Voltage	I <sub>F</sub> = 20 mA			0.37	V
	I <sub>F</sub> = 200 mA			0.60	
Reverse Leakage Current	SD103AW V <sub>R</sub> = 30 V			5	μA
	SD103BW V <sub>R</sub> = 20 V				
	SD103CW V <sub>R</sub> = 10 V				
Junction Capacitance	V <sub>R</sub> = 0 , f = 1.0 MHz		50		pF

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RATINGS AND CHARACTERISTICS CURVES

( $T_A=25^\circ\text{C}$  unless otherwise noted)

Fig. 1 Typical Forward Characteristics

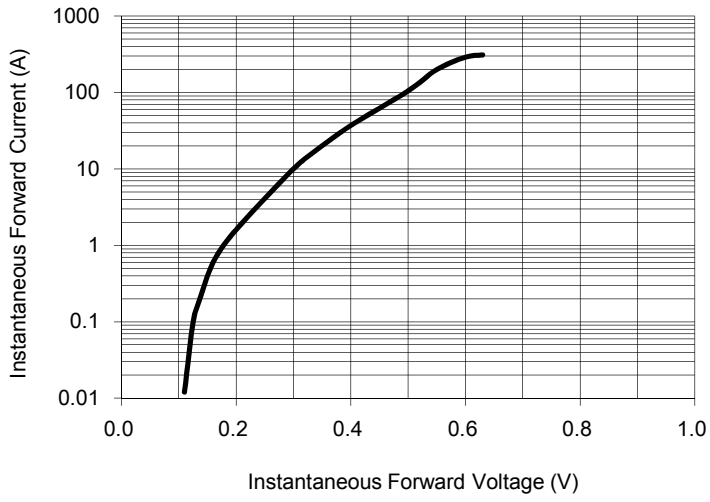


Fig. 2 Forward Current Derating Curve

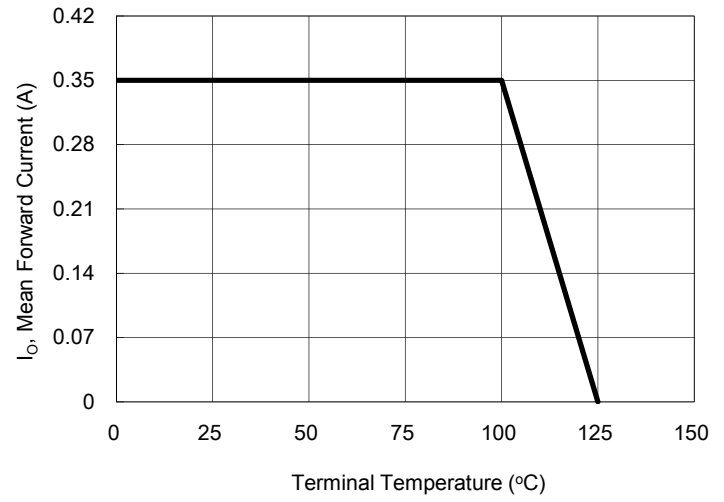


Fig. 3 Admissible Power Dissipation Curve

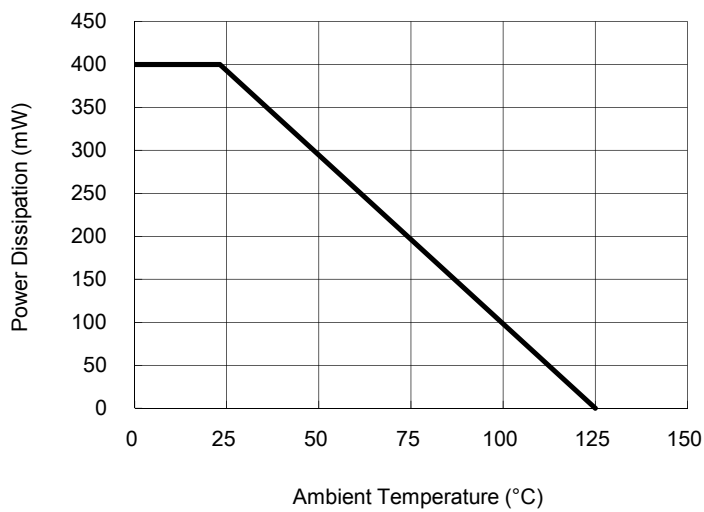
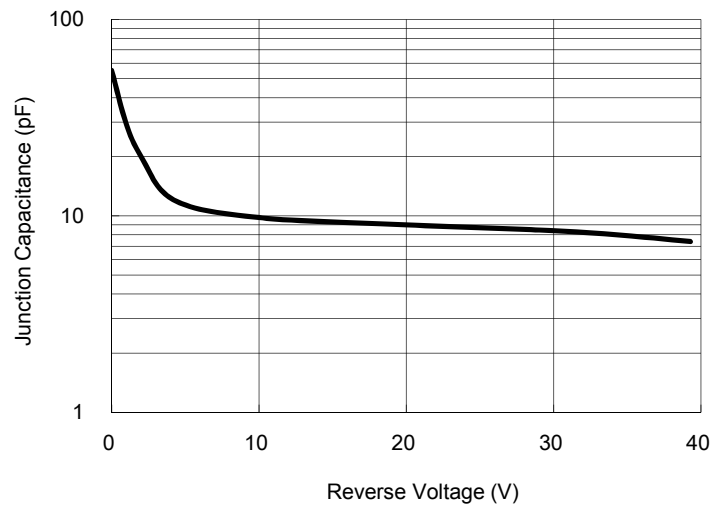


Fig. 4 Typical Junction Capacitance



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ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX (Note 2)	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
SD103xW (Note 1)	-xx	RH	G	SOD-123	3,000 / 7" Reel
		RF			

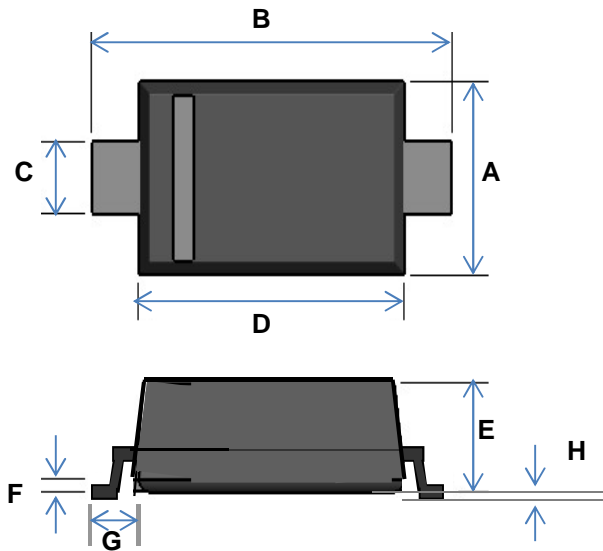
Note 1: "x" is Device Code from "A" thru "C".

Note 2: Part No. Suffix „-xx “ would be used for special requirement

EXAMPLE					
PREFERRED PART NO.	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
SD103AW RH	SD103AW		RH		Multiple manufacture source
SD103AW RHG	SD103AW		RH	G	Multiple manufacture source Green compound
SD103AW-D0 RFG	SD103AW	-D0	RF	G	Define manufacture source Green compound

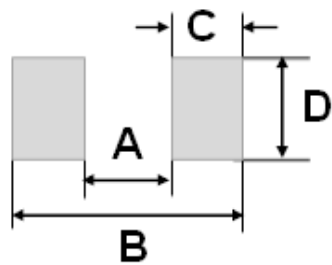
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PACKAGE OUTLINE DIMENSIONS  
**SOD-123**



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.40	1.80	0.055	0.071
B	3.55	3.85	0.140	0.152
C	0.45	0.70	0.018	0.028
D	2.55	2.85	0.100	0.112
E	0.95	1.35	0.037	0.053
F	0.05	0.15	0.002	0.006
G	0.50 REF		0.02 REF	
H	-	0.10	-	0.004

SUGGEST PAD LAYOUT



DIM.	Unit (mm)		Unit (inch)	
	Typ.		Typ.	
A	2.36		0.093	
B	4.19		0.165	
C	0.91		0.036	
D	1.22		0.048	

MARKING

Part No.	Marking
SD103AW	S4
SD103BW	S5
SD103CW	S6

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