

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 (MSL): 1
- Matte Tin (Sn) lead finish with Nickel (Ni) under plate
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21


**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)

<b>MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS</b> ( $T_A=25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	SD103AW	SD103BW	SD103CW	UNIT
Power Dissipation	$P_D$	400			mW
Repetitive Peak Reverse Voltage	$V_{RRM}$	40	30	20	V
Reverse Voltage	$V_R$	28	21	14	V
Mean Forward Current @ $T_L = 100^\circ\text{C}$	$I_O$	350			mA
Repetitive Peak Forward Surge Current @ $t \leq 1.0 \text{ s}$	$I_{FRM}$	1.5			A
Thermal Resistance ( Junction to Ambient )	$R_{\theta JA}$	300			$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	125			$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +125			$^\circ\text{C}$

PARAMETER	SYMBOL	MIN	TYP	MAX	Units
Reverse Breakdown Voltage	SD103AW $I_R = 10 \mu\text{A}$	40			V
	SD103BW $I_R = 10 \mu\text{A}$	30	-	-	
	SD103CW $I_R = 10 \mu\text{A}$	20			
Forward Voltage	$I_F = 20 \text{ mA}$			0.37	V
	$I_F = 200 \text{ mA}$			0.60	
Reverse Leakage Current	SD103AW $V_R = 30 \text{ V}$				$\mu\text{A}$
	SD103BW $V_R = 20 \text{ V}$			5	
	SD103CW $V_R = 10 \text{ V}$				
Junction Capacitance	$V_R = 0, f = 1.0 \text{ MHz}$		50		pF

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**RATINGS AND CHARACTERISTICS CURVES**

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

Fig. 1 Typical Forward Characteristics

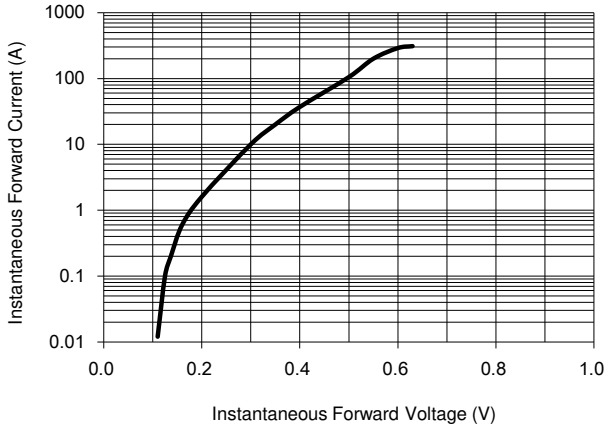


Fig. 2 Forward Current Derating Curve

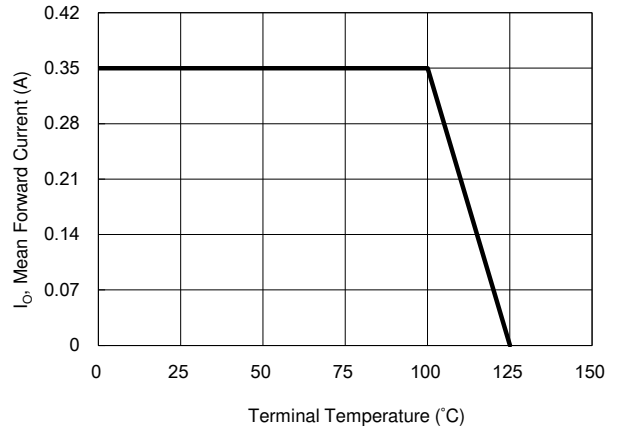


Fig. 3 Admissible Power Dissipation

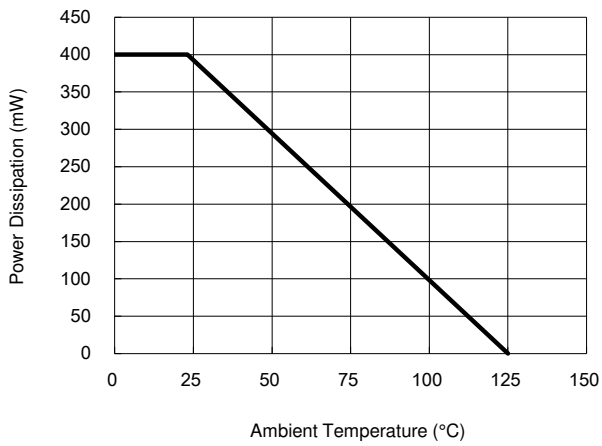
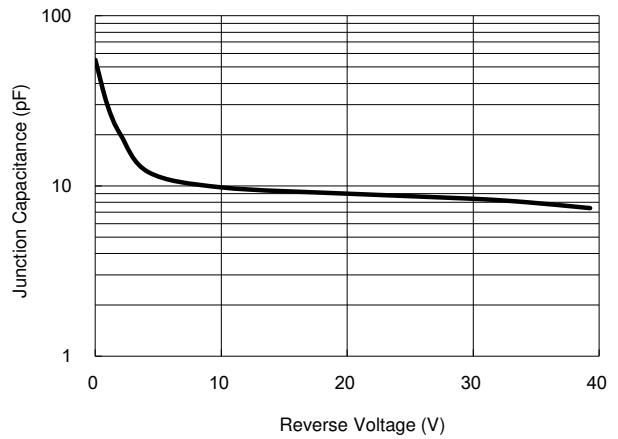


Fig. 4 Typical Junction Capacitance



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

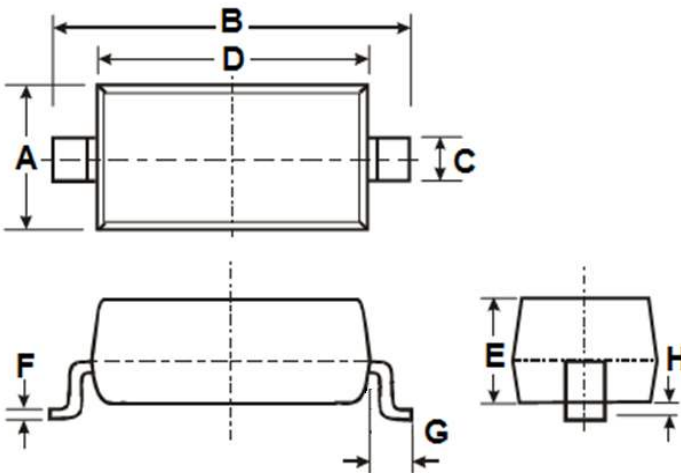
Note 1: "x" is Device Code from "A" - "C".

Note 2: Whole series with green compound

EXAMPLE				
EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
SD103AW RHG	SD103AW	RH	G	Green compound

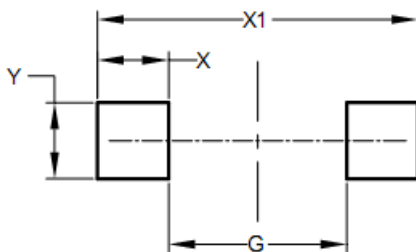
**PACKAGE OUTLINE DIMENSIONS**

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)	
	Min	Min	Min	Min
G	2.25		0.089	
X	0.90		0.035	
X1	4.05		0.159	
Y	0.95		0.037	

**MARKING**

Part No.	Marking
SD103AW	S4
SD103BW	S5
SD103CW	S6

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