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

Pb-Free

RoHS COMPLIANT

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_A=25°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°C	I_O	350			mA
Repetitive Peak Forward Surge Current @ t ≦ 1.0 s	I_{FRM}	1.5			A
Thermal Resistance (Junction to Ambient)	$R_{\theta JA}$	300			°C/W
Junction Temperature	T_J	125			°C
Storage Temperature Range	T_{STG}	-65 to +125			°C

PARAMETER		SYMBOL	MIN	TYP	MAX	Units
Reverse Breakdown Voltage	SD103AW I_R = 10 μA	$V_{(BR)}$	40	-	-	V
	SD103BW I_R = 10 μA		30			
	SD103CW I_R = 10 μA		20			
Forward Voltage	I_F = 20 mA	V_F	-	-	0.37	V
	I_F = 200 mA				0.60	
Reverse Leakage Current	SD103AW V_R = 30 V	I_R	-	-	5	μA
	SD103BW V_R = 20 V					
	SD103CW V_R = 10 V					
Junction Capacitance	V_R = 0 , f = 1.0 MHz	C_J	50			pF

RATINGS AND CHARACTERISTICS CURVES

(T_A=25℃ unless otherwise noted)

Fig. 1 Typical Forward Characteristics

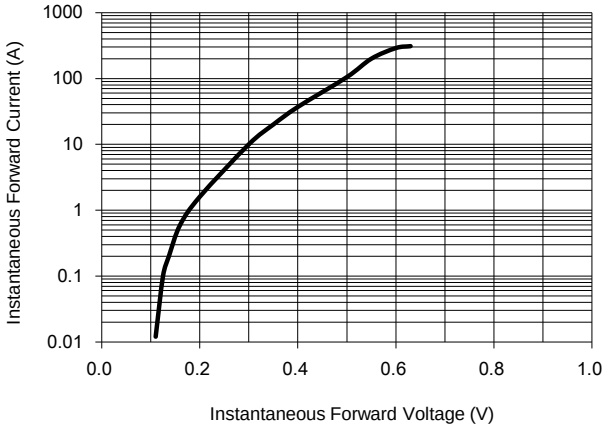


Fig. 2 Forward Current Derating Curve

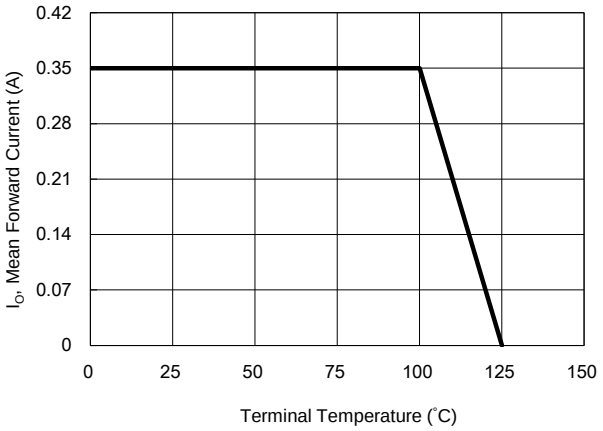


Fig. 3 Admissible Power Dissipation

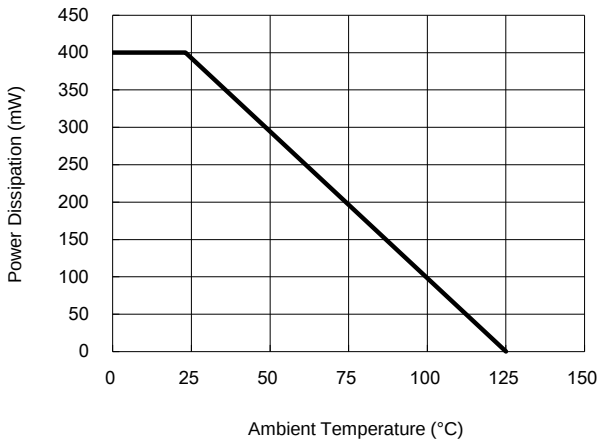
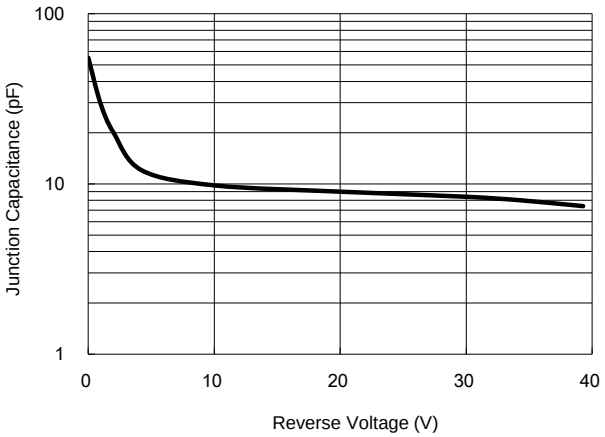


Fig. 4 Typical Junction Capacitance



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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

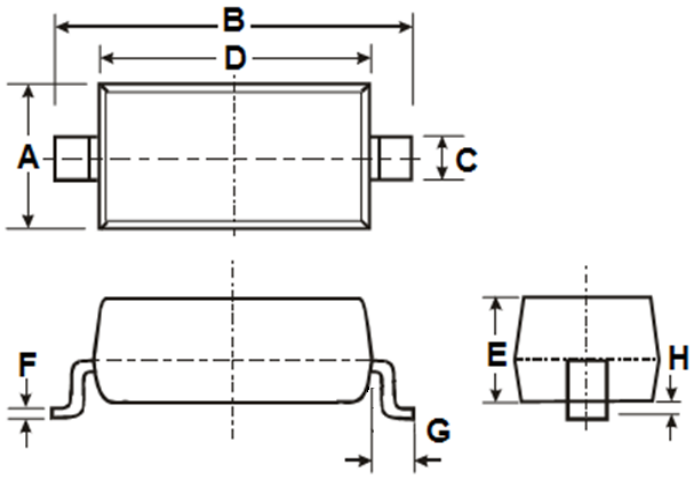
Note 1: "x" is Device Code from "A" - "C".

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

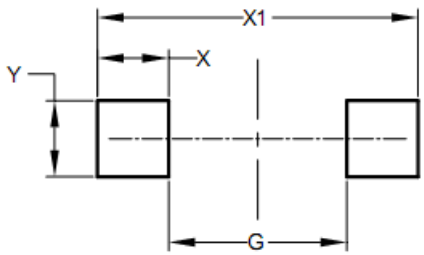
PACKAGE OUTLINE DIMENSIONS

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**
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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