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

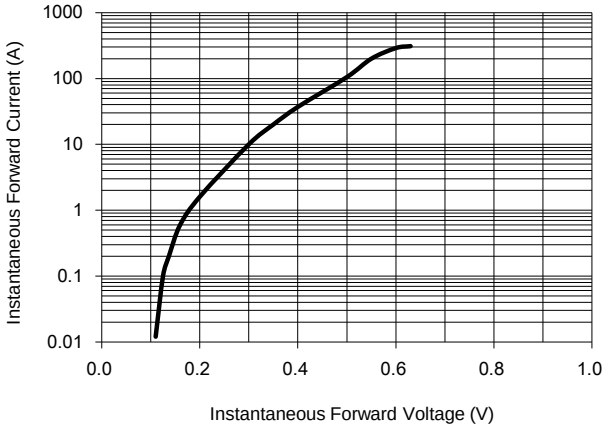


Fig. 2 Forward Current Derating Curve

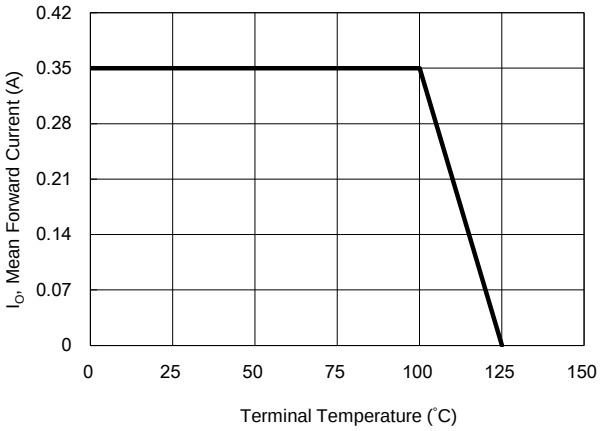


Fig. 3 Admissible Power Dissipation

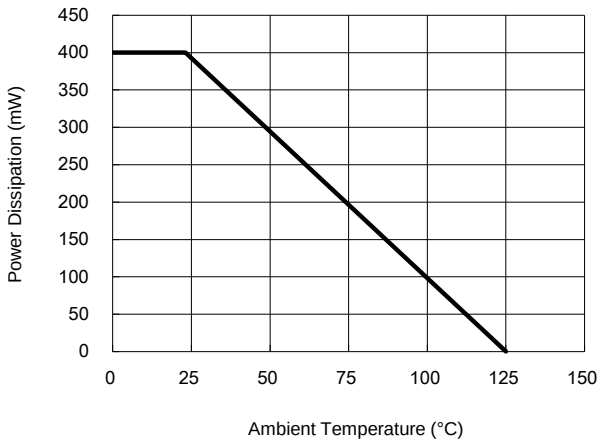
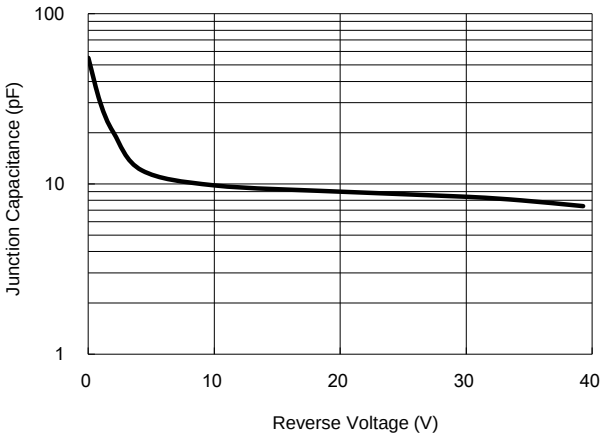


Fig. 4 Typical Junction Capacitance



Small Signal Product

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

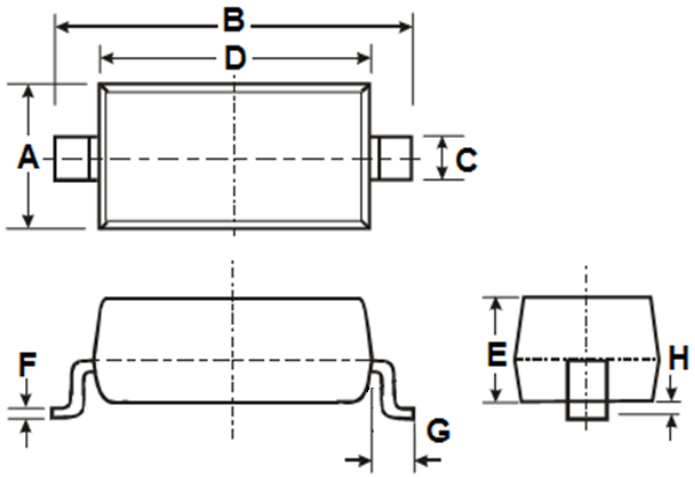
Note 1: "x" is Device Code from "A" - "C".

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

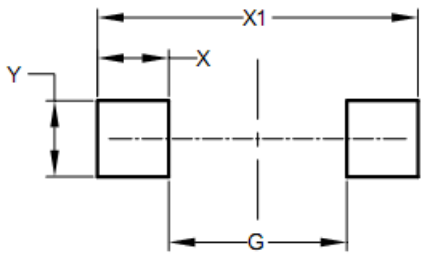
PACKAGE OUTLINE DIMENSIONS

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

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Taiwan Semiconductor:

SD103AW SD103BW SD103CW SD103CW RHG SD103BW RHG SD103AW RHG