

Small Signal Product

High Speed SMD Switching Diode

FEATURES

- Fast switching device ($t_{tr} < 4.0ns$)
- Surface mount device type
- Moisture sensitivity level 1
- Matte Tin (Sn) lead finish with Nickel (Ni) underplate
- Pb free and RoHS compliant
- Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code


SOD-123

MECHANICAL DATA

- Case: Bend lead SOD-123 small outline plastic package
- Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed : 260°C/10s
- Polarity: Indicated by cathode band
- Weight: 10 ± 0.5 mg
- Marking Code: T4



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power dissipation	P _D	350	mW
DC blocking voltage	V _R	100	V
Repetitive peak reverse voltage	V _{RRM}	100	V
Work peak reverse voltage	V _{RWM}	100	V
RMS reverse voltage	V _{R(RMS)}	70	V
Repetitive peak forward current	I _{FRM}	300	mA
Mean forward current	I _O	150	mA
Non-repetitive peak forward surge current @ t=1 ms	I _{FSM}	2.0	A
@ t=10 ms		1.0	
Thermal resistance (Junction to Ambient) (Note 1)	R _{θJA}	357	°C/W
Junction and storage temperature range	T _J , T _{STG}	-65 to + 150	°C

PARAMETER	SYMBOL	MIN	MAX	UNIT	
Forward voltage	V _F	I _F =1.0mA	-	0.715	V
		I _F =10mA	-	0.855	
		I _F =50mA	-	1.0	
		I _F =150mA	-	1.25	
Reverse leakage current	I _R	V _R =20V	-	25	nA
		V _R =75V	-	2.5	μA
		V _R =25V, T _j =150°C	-	30	μA
		V _R =75V, T _j =150°C	-	50	μA
Junction capacitance	C _J	-	2.0	pF	
Reverse recovery time	t _{tr}	-	4.0	ns	

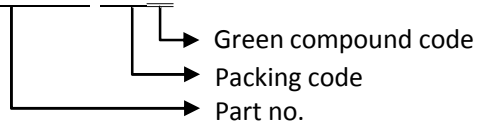
Notes : 1. Valid provided that terminals are kept at ambient temperature

 Notes : 2. Reverse Recovery Test Conditions : I_F=10mA, I_R=10mA, R_L=100Ω, I_{RR}=1mA

Small Signal Product

ORDER INFORMATION (EXAMPLE)

1N4148W-G RBG



RATINGS AND CHARACTERISTICS CURVES

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

Fig.1 Typical Forward Characteristics

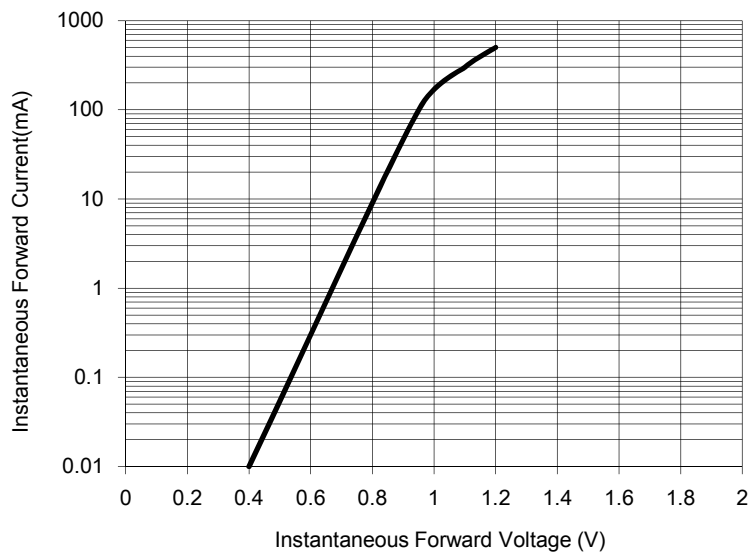
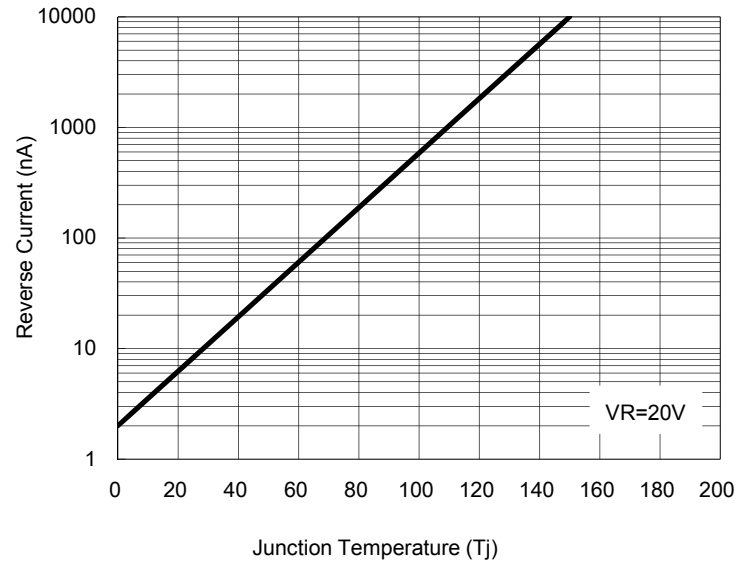


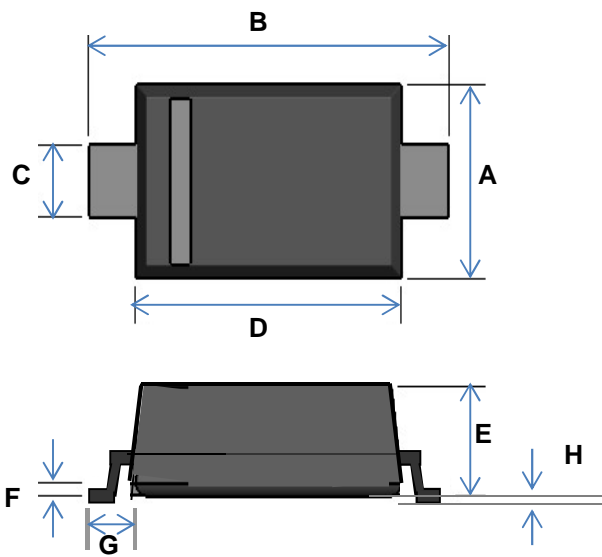
Fig. 2 Reverse Current vs Junction Temperature



Small Signal Product

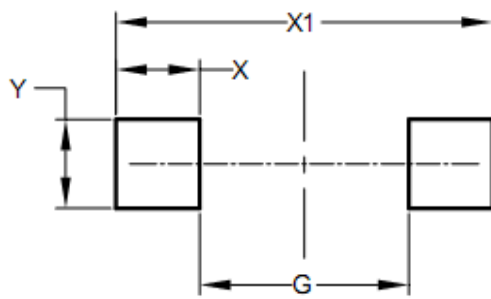
DIMENSIONS

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

SUGGESTED 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

Small Signal Product

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.