

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 ($T_A=25^\circ C$ 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)	$R_{\theta JA}$	357	$^\circ C/W$
Junction and storage temperature range	T_J, T_{STG}	-65 to + 150	$^\circ C$

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
		$V_R=25V, T_j=150^\circ C$	-	30	μA
		$V_R=75V, T_j=150^\circ C$	-	50	μA
Junction capacitance	C_J	-	2.0	pF	
Reverse recovery time	t_{rr}	-	4.0	ns	

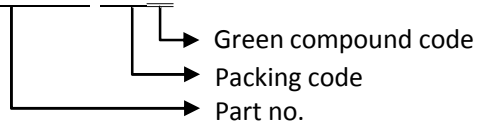
Notes : 1. Valid provided that terminals are kept at ambient temperature

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

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ORDER INFORMATION (EXAMPLE)

1N4148W-G RBG



RATINGS AND CHARACTERISTICS CURVES

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

Fig.1 Typical Forward Characteristics

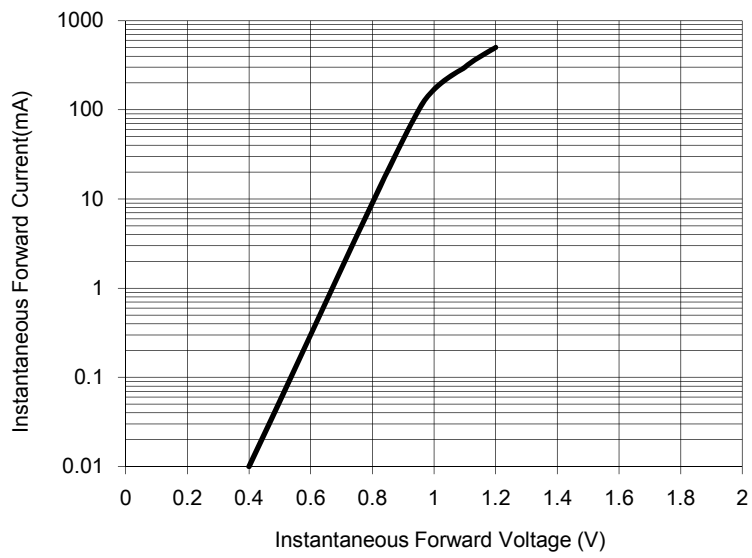
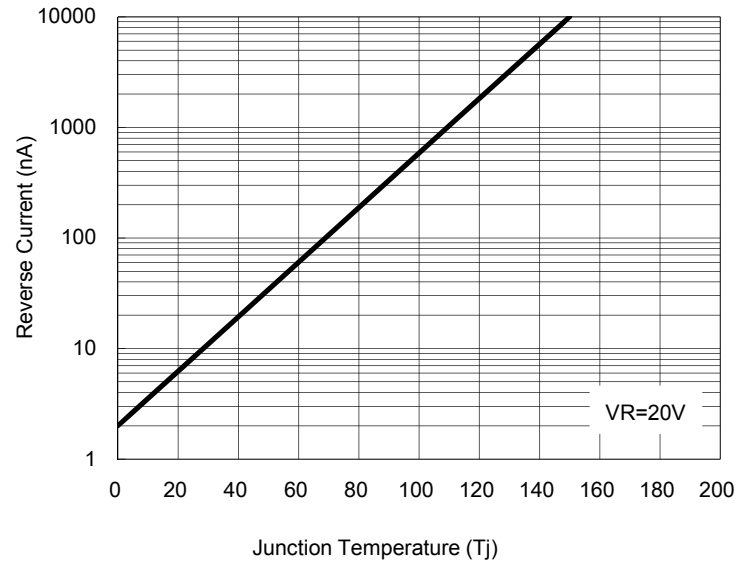


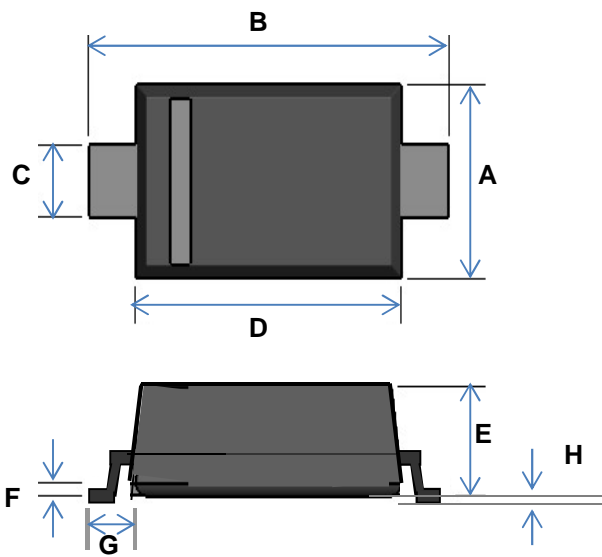
Fig. 2 Reverse Current vs Junction Temperature



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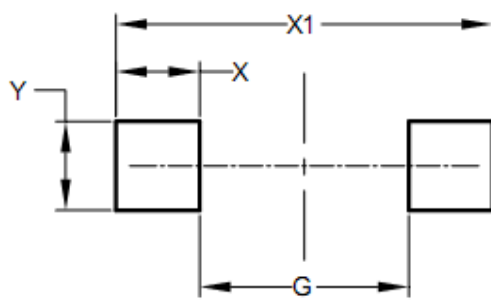
DIMENSIONS

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

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