Small Signal Product

High Speed SMD Switching Diode

FEATURES

- Fast switching device (t_{rr}<4.0ns)
- Surface mount device type
- Moisture sensitivity level 1
- Matte Tin (Sn) lead finish with Nickel (Ni) underplate
- 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: Bend lead SOD-123 small outline plastic package
- Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guaran
- 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 @ t=10 ms	I_{FSM}	2.0 1.0	A
Thermal resistance (Junction to Ambient) (Note 1)	$R_{\theta JA}$	357	°C/W
Junction and storage temperature range	T_J , T_{STG}	-65 to +150	°C

PARAMETER		**SYMBOL**	**MIN**	**MAX**	**UNIT**
Forward voltage	I_F=1.0mA	V_F	-	0.715	V
	I_F=10mA		-	0.855	
	I_F=50mA		-	1.000	
	I_F=150mA		-	1.250	
Reverse leakage current	V_R=20V	I_R	-	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	V_R=0, f=1.0MHz	C_J	-	2.0	pF
Reverse recovery time	(Note 2)	t_{rr}	-	4.0	ns

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

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

ORDERING INFORMATION				
PART NO.	**PACKING CODE**	**PACKING CODE SUFFIX**	**PACKAGE**	**PACKING**
1N4148W-G	RH	G	SOD-123	3K / 7" Reel

Note: Whole series with green compound

EXAMPLE				
EXAMPLE PART NO.	**PART NO.**	**PACKING CODE**	**PACKING CODE SUFFIX**	**DESCRIPTION**
1N4148W-G RHG	1N4148W-G	RH	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

Fig.1 Typical Forward Characteristics

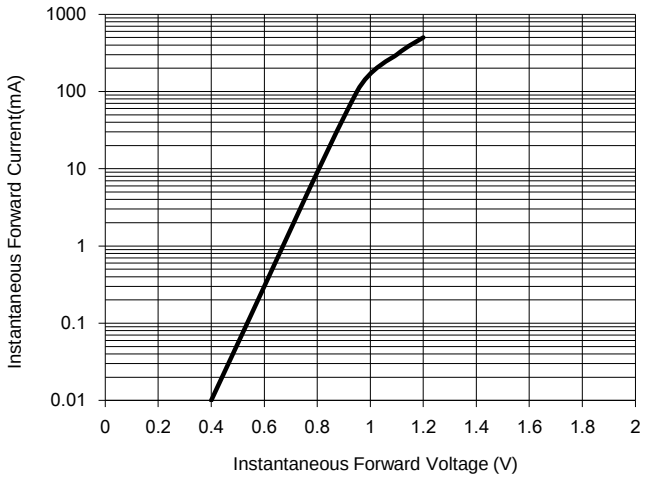
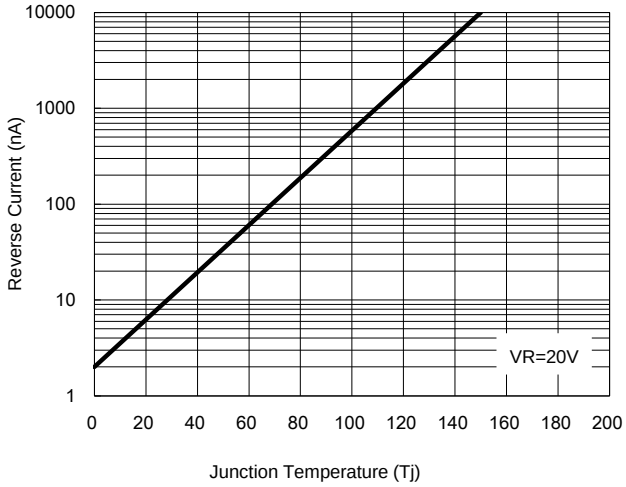


Fig. 2 Reverse Current vs Junction Temperature



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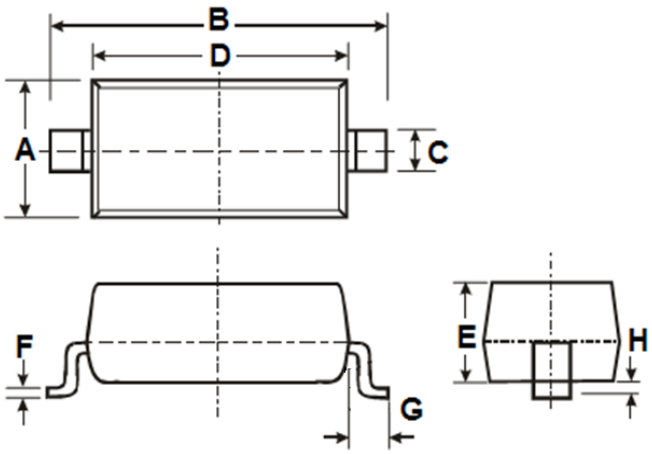
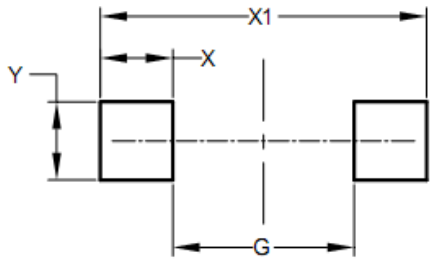
DIMENSIONS

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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Version: D1601

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1N4148W-G RHG