



A1N4148WGH

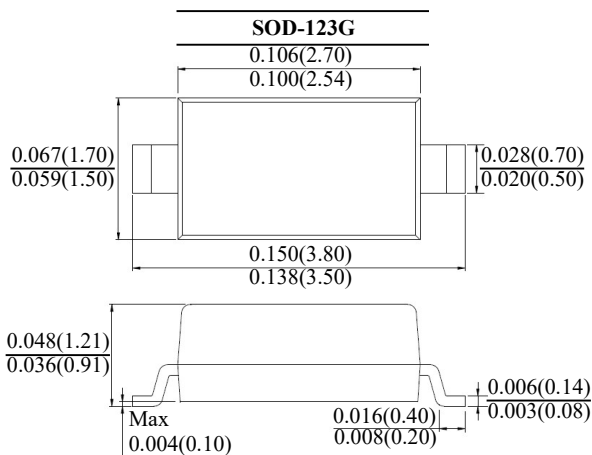
SWITCHING DIODE

FEATURES

- Fast Switching Diode
- AEC-Q101 Qualified
- Suffix "H" indicates Halogen-free parts, ex. A1N4148WGH

MECHANICAL DATA

Case : SOD-123G
 Epoxy : UL 94V-O rate flame retardant
 Polarity : Indicated by cathode band
 Mounting position : Any



Dimensions in inch and (millimeter)

Maximum Ratings@ $T_A=25\text{ }^\circ\text{C}$

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	100	V
Reverse Voltage	V_R	75	V
Average Rectified Forward Current	$I_{F(AV)}$	150	mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	at t=1s	0.5
		at t=1ms	1.0
		at t=1 μ s	4.0
Power Dissipation	P_D	400	mW
Thermal Resistance from Junction to Ambient (Note 1)	$R_{\theta JA}$	312	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^\circ\text{C}$

Note :

1. Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



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Electrical Characteristics@ $T_A=25\text{ }^\circ\text{C}$

Parameter	Conditions	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage	$I_R=1\mu\text{A}$	$V_{(BR)R}$	75	-	V
Forward Voltage	$I_F=1\text{mA}$	V_F	-	0.715	V
	$I_F=10\text{mA}$		-	0.855	
	$I_F=50\text{mA}$		-	1.000	
	$I_F=150\text{mA}$		-	1.250	
Reverse Leakage Current	$V_R=20\text{V}$	I_R	-	25	nA
	$V_R=75\text{V}$		-	1	μA
	$V_R=25\text{V}, T_J=150^\circ\text{C}$		-	30	
	$V_R=75\text{V}, T_J=150^\circ\text{C}$		-	50	
Total Capacitance	$V_R=0\text{V}, f=1\text{MHz}$	C_T	-	2	pF
Reverse Recovery Time	$I_F=10\text{mA}, I_{tr}=0.1\times I_R, V_R=6\text{V}, R_L=100\Omega$	t_{tr}	-	4	ns



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RATINGS AND CHARACTERISTIC CURVES

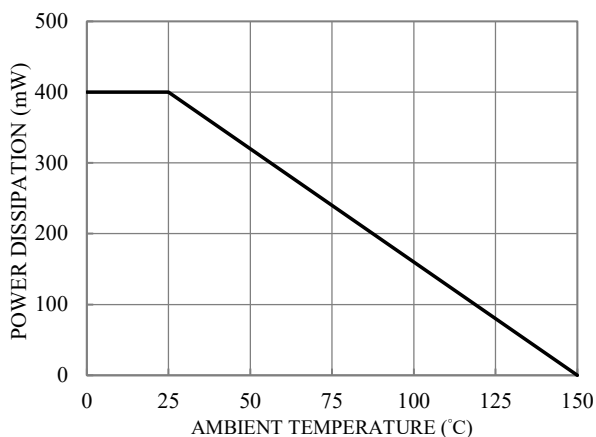


Fig.1-POWER DERATING CURVE

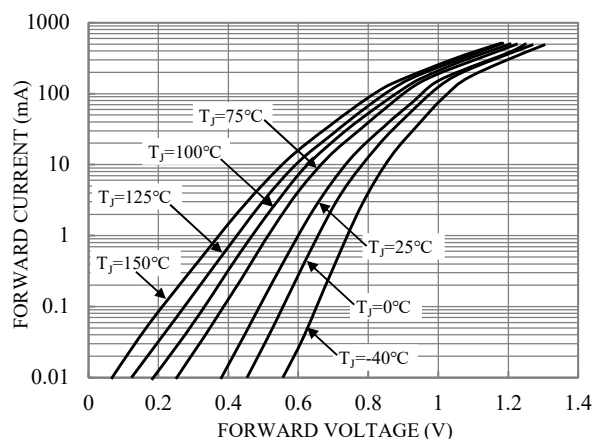


Fig.2-TYPICAL FORWARD CHARACTERISTICS

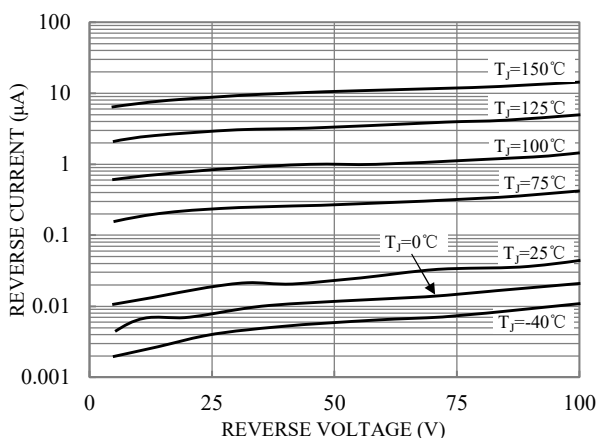


Fig.3-TYPICAL REVERSE CHARACTERISTICS

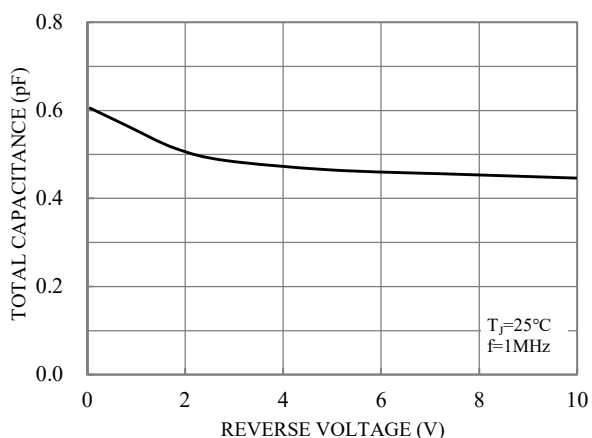


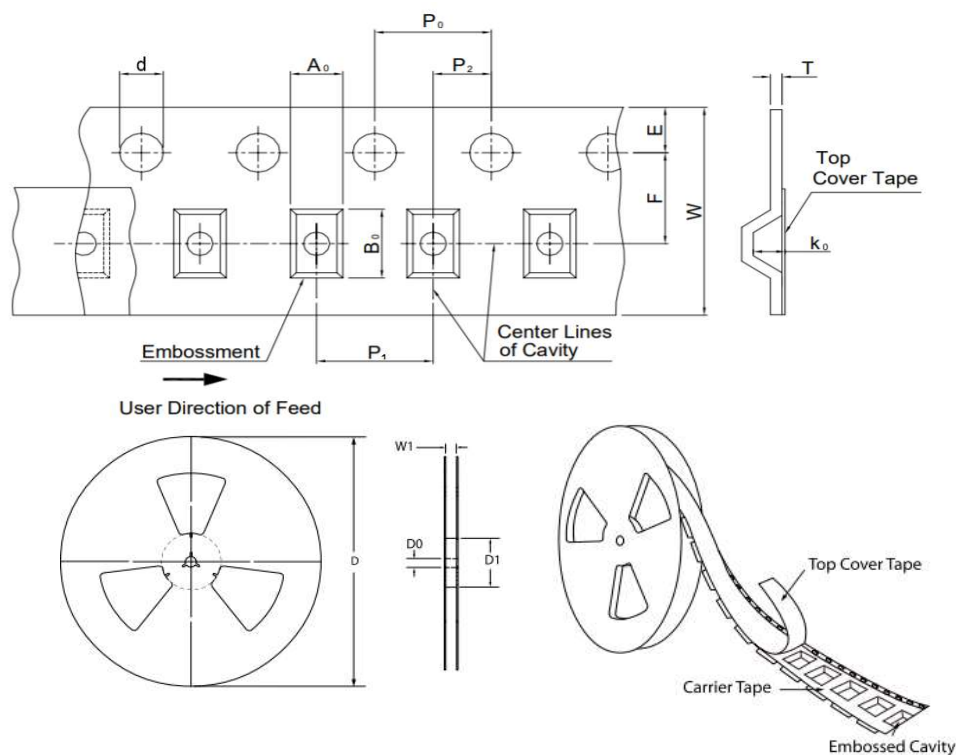
Fig.4-TOTAL CAPACITANCE VS REVERSE VOLTAGE



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TAPE & REEL SPECIFICATION



Item	Symbol	SOD-123G
Carrier width	A_0	1.85 ± 0.10
Carrier length	B_0	3.95 ± 0.10
Carrier depth	K_0	1.36 ± 0.10
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D_0	13.00 ± 0.50
Reel inner diameter	D_1	MIN. 50.00
Sprocket hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocket hole pitch	P_0	4.00 ± 0.10
Punch hole pitch	P_1	4.00 ± 0.10
Embossment center	P_2	2.00 ± 0.10
Overall tape thickness	T	MAX. 0.60
Tape width	W	MAX. 8.30
Reel width	W_1	MAX. 14.90

ORDER INFORMATION

Package	Reel Size	Quantity
SOD-123G	7"	3,000

MARKING CODE

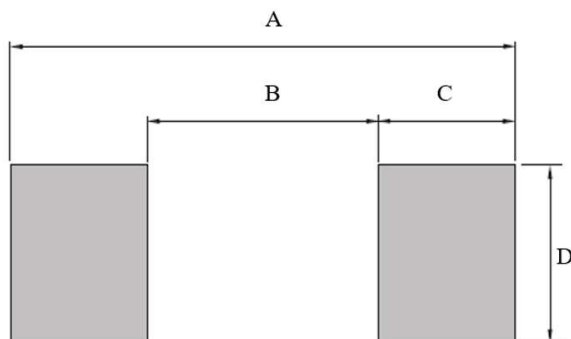
Part Number	Marking Code
A1N4148WGH	W1



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SWITCHING DIODE

SUGGESTED SOLDER PAD LAYOUT



Unit :mm

PACKAGE	A	B	C	D
SOD-123G	3.90	2.20	0.85	1.20