TAK CHEONG®

SEMICONDUCTOR

400mW SOD-123 SURFACE MOUNT

Small Outline Gull Wing Lead Plastic Package
General Purpose Application
Fast Switching Diode

Green Product

SOD-123 Gull Wing Lead

ELECTRICAL SYMBOL

Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
P_D	Power Dissipation	400	mW
T_{STG}	Storage Temperature Range	-65 to +150	°C
T_J	Operating Junction Temperature	+150	°C
V_{RSM}	Non-Repetitive Peak Reverse Voltage	100	V
V_{RRM}	Repetitive Peak Reverse Voltage	75	V
I_{FRM}	Repetitive Peak Forward Current	300	mA
I_O	Continuous Forward Current	150	mA
I_{FSM}	Peak Forward Surge Current (Pulse Width=1us)	2	A

These ratings are limiting values above which the serviceability of the diode may be impaired.

Specification Features:

- Fast Switching Device (T_{RR} <4.0 nS)
- General Purpose Diodes
- Gull Wing Lead SOD-123 Small Outline Plastic Package
- Surface Device Type Mounting
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode
- Weight: approx. 0.01g

DEVICE MARKING CODE:

Device Type	Device Marking
1N4148WG	T4
1N4448WG	T5

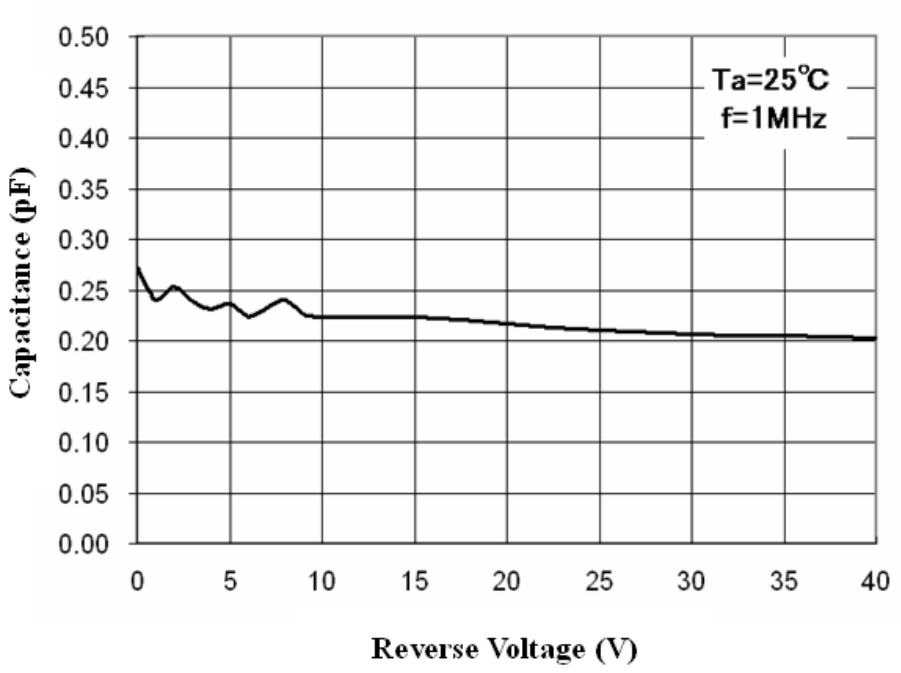
Electrical Characteristics

T_A = 25°C unless otherwise noted

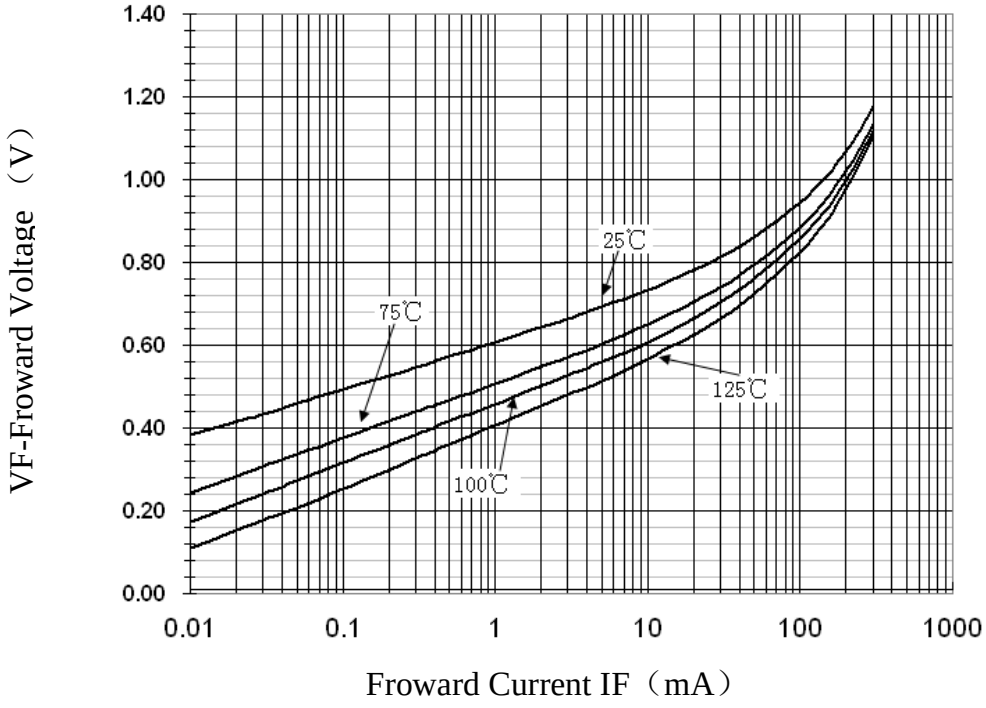
Symbol	Parameter		Test Condition	Limits Min	Limits Max	Unit
B_V	Breakdown Voltage		I_R=100μA	100		Volts
			I_R=5μA	75		
I_R	Reverse Leakage Current		V_R=20V		25	nA
			V_R=75V		5	μA
V_F	Forward Voltage	1N4448WG	I_F=5mA	0.62	0.72	Volts
		1N4148WG	I_F=10mA		1.0	
		1N4448WG	I_F=100mA		1.0	
T_{RR}	Reverse Recovery Time		I_F=10mA, I_R=60mA, R_L=100Ω, I_{RR}=1mA		4	nS
C	Capacitance		V_R=0V, f=1M_{HZ}		4	pF

Typical Performance Characteristics

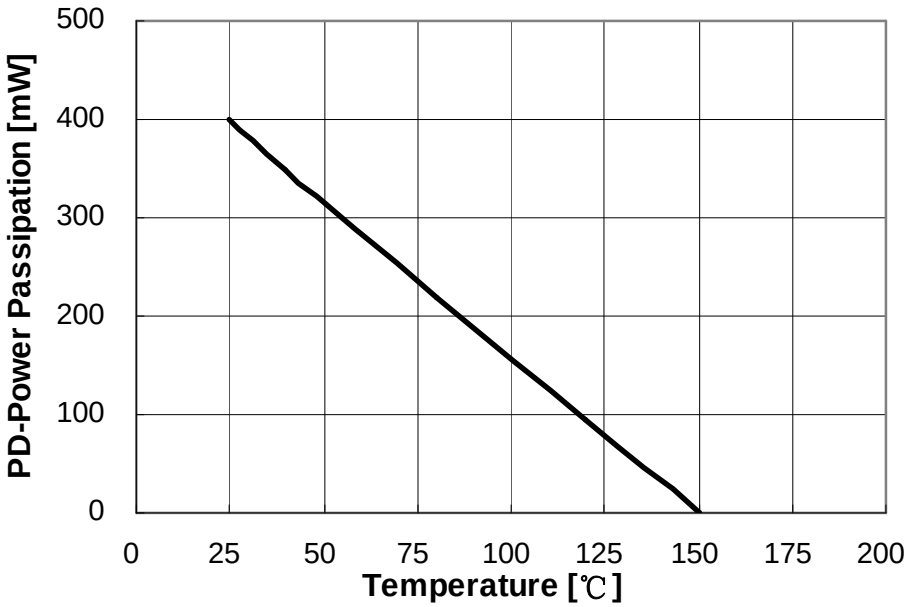
Total Capacitance



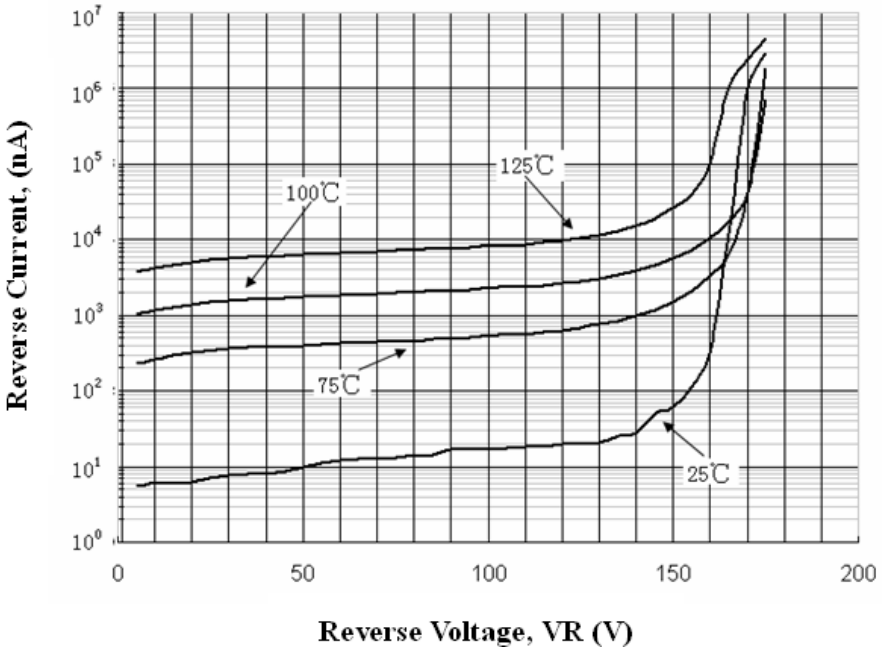
Forward Voltage vs Ambient Temperature



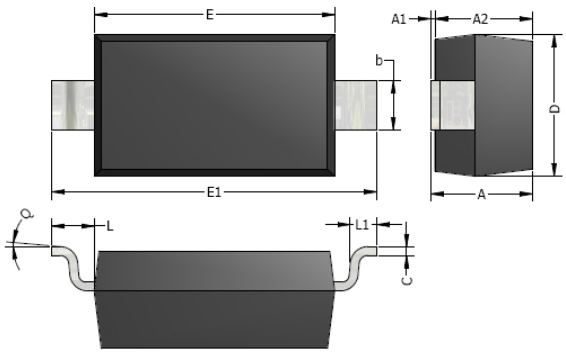
Power Derating Curve



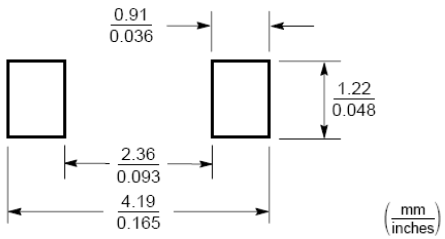
Reverse Current vs Reverse Voltage



SOD123 Gull Wing Lead Package Outline



Typical Soldering Pattern:



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.05	1.25	0.041	0.049
A1	0.00	0.10	0.000	0.004
A2	1.05	1.15	0.041	0.045
b	0.50	0.70	0.020	0.028
c	0.08	0.15	0.003	0.006
D	1.50	1.70	0.059	0.067
E	2.60	2.80	0.102	0.110
E1	3.55	3.85	0.140	0.152
L	0.50 REF.		0.020 REF.	
L1	0.25	0.45	0.010	0.018
θ	0°	8°	0°	8°

Note:
Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

NOTICE

The information presented in this document is for reference only. Tak Cheong reserves the right to make changes without notice for the specification of the products displayed herein.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Tak Cheong Semiconductor Co., Ltd., or anyone on its behalf, assumes no responsibility or liability for any damagers resulting from such improper use of sale.

This publication supersedes & replaces all information reviously supplied. For additional information, please visit our website http://www.takcheong.com, or consult your nearest Tak Cheong's sales office for further assistance.