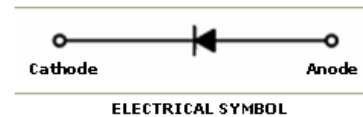


400mW SOD-123 SURFACE MOUNT Small Outline Gull Wing Lead Plastic Package General Purpose Application Fast Switching Diode

Green Product



SOD-123 Gull Wing Lead



Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
P_D	Power Dissipation	400	mW
T_{STG}	Storage Temperature Range	-65 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature	+150	$^\circ\text{C}$
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 ($T_{RR} < 4.0 \text{ nS}$)
- § 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:

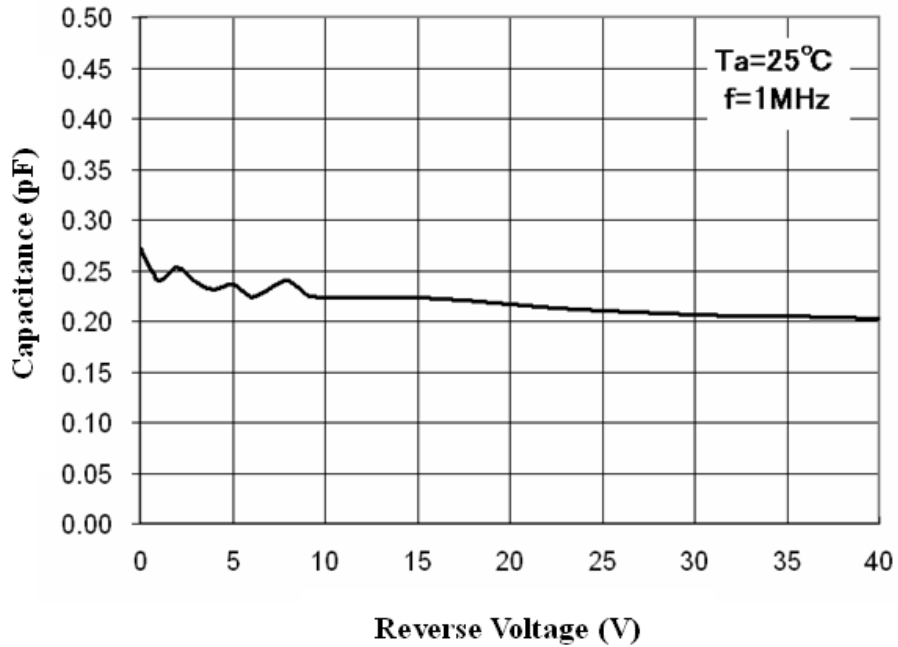
Device Type	Device Marking
KEL1N4148WG	T4
KEL1N4448WG	T5

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

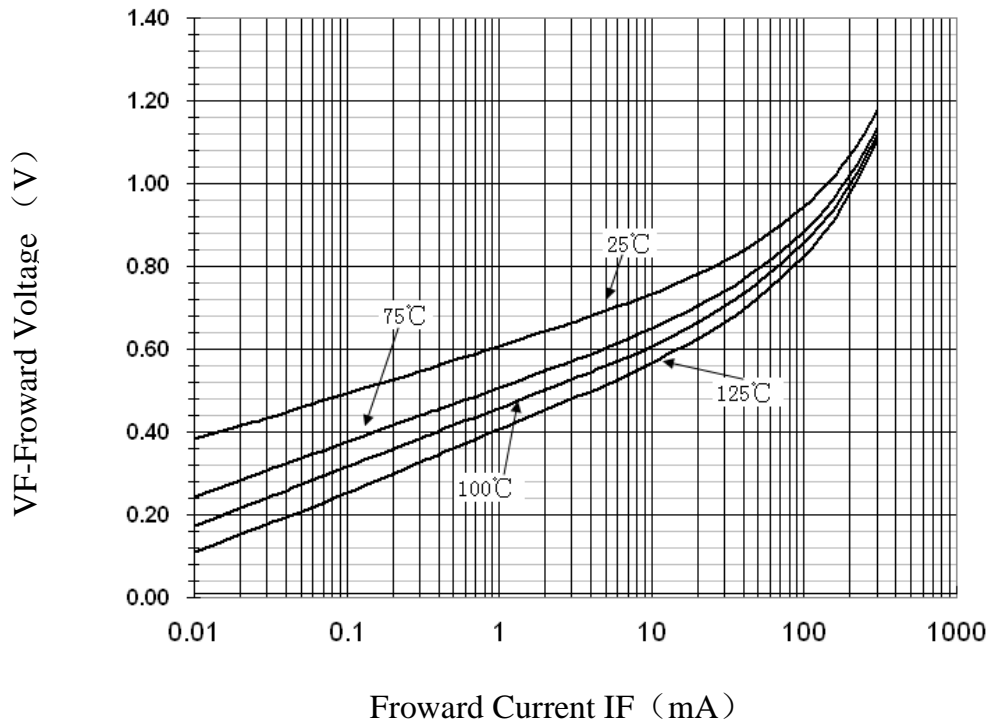
Symbol	Parameter	Test Condition	Limits		Unit
			Min	Max	
B_V	Breakdown Voltage	$I_R = 100\mu\text{A}$	100		Volts
		$I_R = 5\mu\text{A}$	75		
I_R	Reverse Leakage Current	$V_R = 20\text{V}$		25	nA
		$V_R = 75\text{V}$		5	μA
V_F	Forward Voltage	KEL1N4448WG $I_F = 5\text{mA}$	0.62	0.72	Volts
		KEL1N4448WG $I_F = 10\text{mA}$		1.0	
		KEL1N4448WG $I_F = 100\text{mA}$		1.0	
T_{RR}	Reverse Recovery Time	$I_F = 10\text{mA}$ $I_R = 60\text{mA}$ $R_L = 100\Omega$ $I_{RR} = 1\text{mA}$		4	nS
C	Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$		4	pF

Typical Performance Characteristics

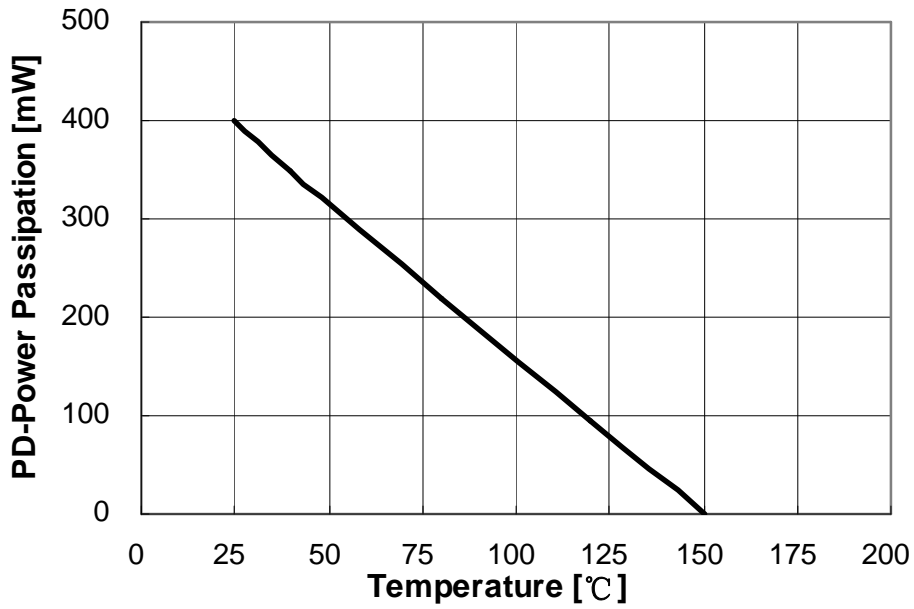
Total Capacitance



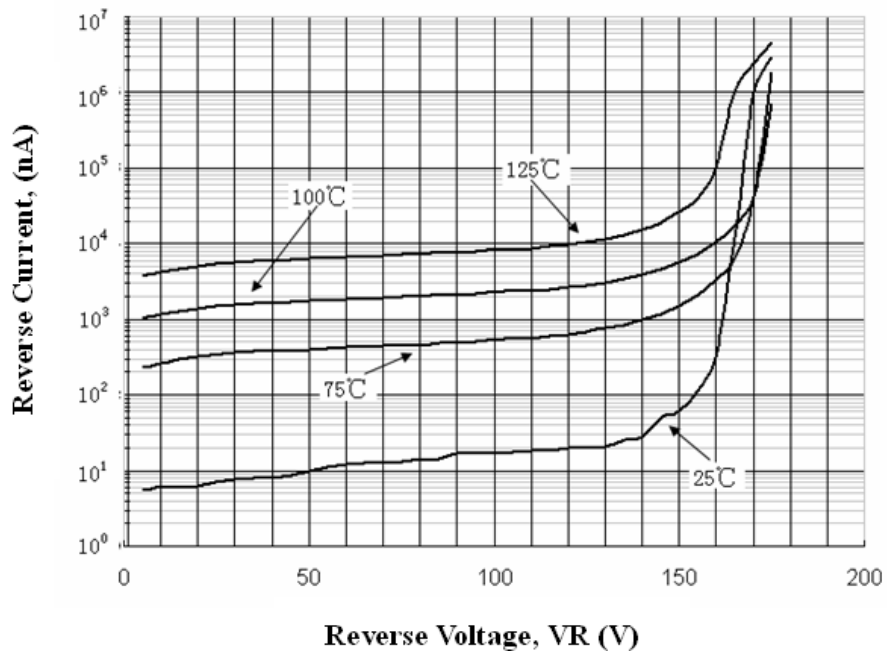
Forward Voltage vs Ambient Temperature



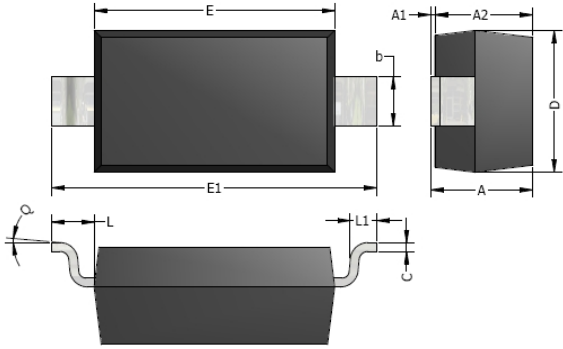
Power Derating Curve



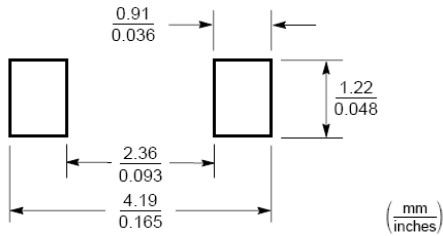
Reverse Current vs Reverse Voltage



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 which 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 damages resulting from such improper use of sale.

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