KEL®

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
KEL1N4148WG	T4
KEL1N4448WG	T5

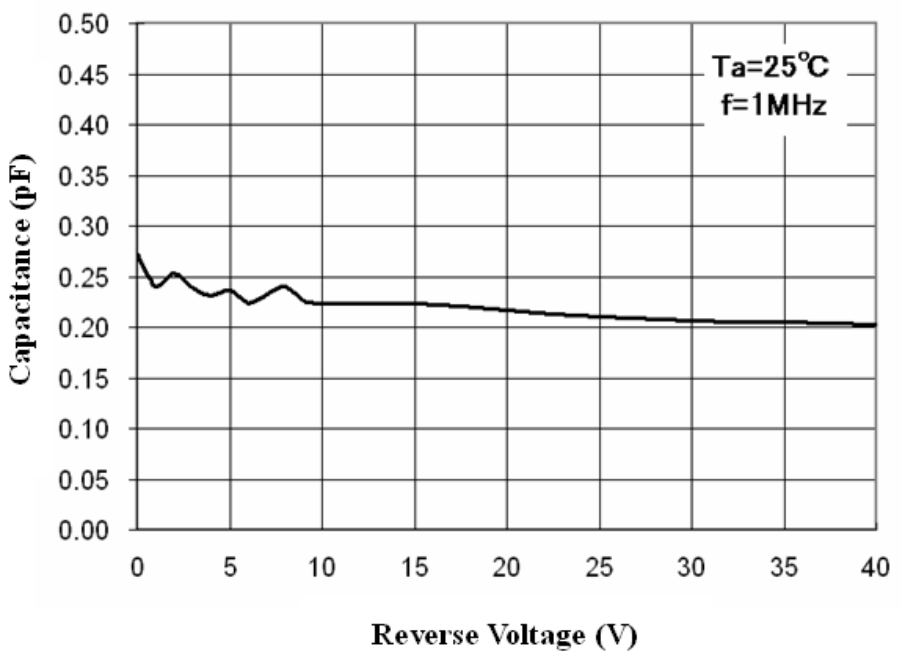
Electrical Characteristics

T_A = 25°C unless otherwise noted

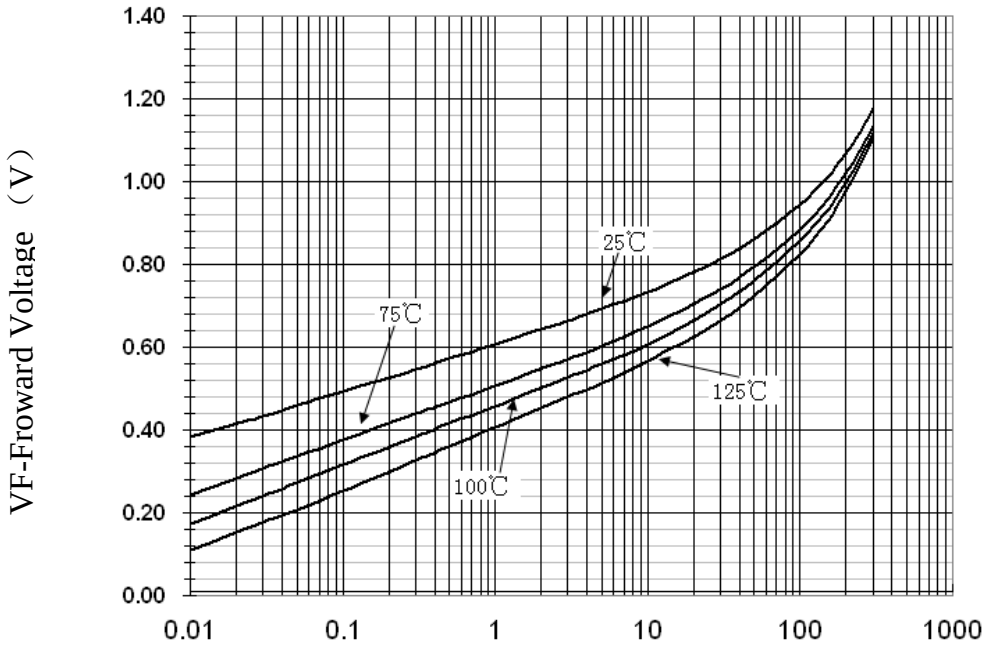
Symbol	Parameter		Test Condition	Limits		Unit
				Min	Max	
B_V	Breakdown Voltage		I_R=100μA	100		Volts
			I_R=5μA	75		
I_R	Reverse Leakage Current		V_R=20V		25	nA
			V_R=75V		5	μA
V_F	Forward Voltage	KEL1N4448WG	I_F=5mA	0.62	0.72	
		KEL1N4448WG	I_F=10mA		1.0	Volts
		KEL1N4448WG	I_F=100mA		1.0	
T_{RR}	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

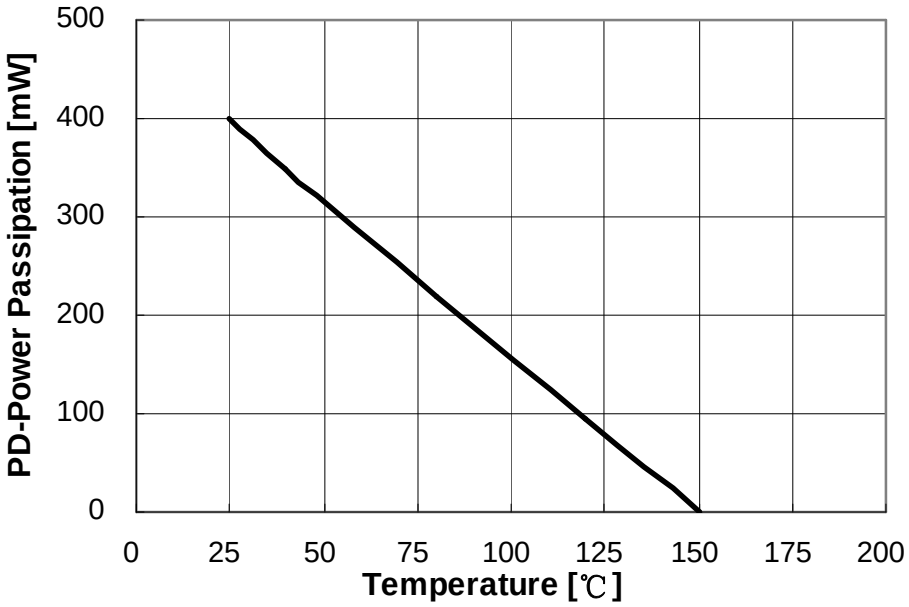
Total Capacitance



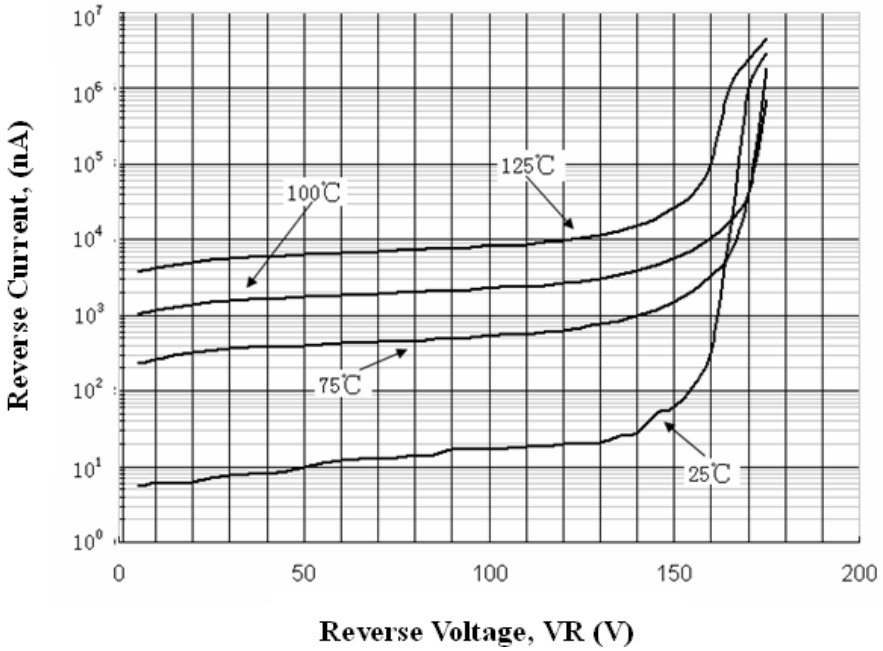
Forward Voltage vs Ambient Temperature



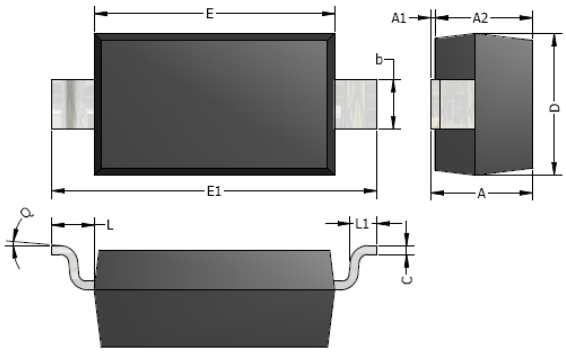
Power Derating Curve



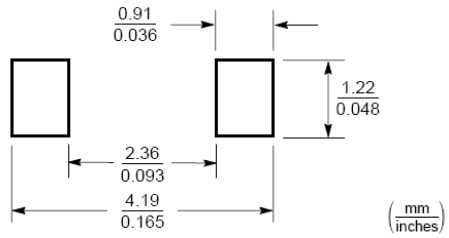
Reverse Current vs Reverse Voltage



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

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