TAIWAN SEMICONDUCTOR

RoHS COMPLIANCE

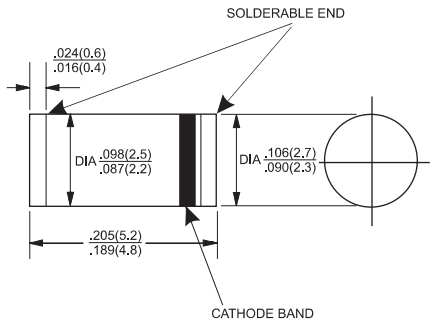
LL4001G - LL4007G

1.0AMP Surface Mount
Glass Passivated Silicon Rectifiers

MELF

Features

- ✧ Plastic package has carries underwriters Laboratory flammability classification 94V-0
- ✧ Surge overload rating to 30 Ampers peak
- ✧ Ideal for printed circuit board.
- ✧ Reliable low cost construction utilizing molded plastic technique results in in-expensive product.
- ✧ High temperature soldering guaranteed: 260°C / 10 seconds at terminals.



Mechanical Data

- ✧ Solderability per MIL-STD-750, method 208 at terminals.
- ✧ Mounting position: Any
- ✧ Weight: 0.12 gram

Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number	Symbol	LL 4001G	LL 4002G	LL 4003G	LL 4004G	LL 4005G	LL 4006G	LL 4007G	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @T_A = 75°C	$I_{(AV)}$	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage @1.0A	V_F	1.1							V
Maximum DC Reverse Current @ T_A=25°C at Rated DC Blocking Voltage @ T_A=125°C	I_R	5 100							uA uA
Typical Junction Capacitance (Note 1)	Cj	15							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	50							°C/W
Operating and Storage Temperature Range	T_J,T_{STG}	- 65 to + 150							°C

Notes: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.
2. Thermal Resistance from Junction to case. Mount on 0.2" x 0.2" Cu-pad on P.C.B.

RATINGS AND CHARACTERISTIC CURVES (LL4001G THRU LL4007G)

FIG.1- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

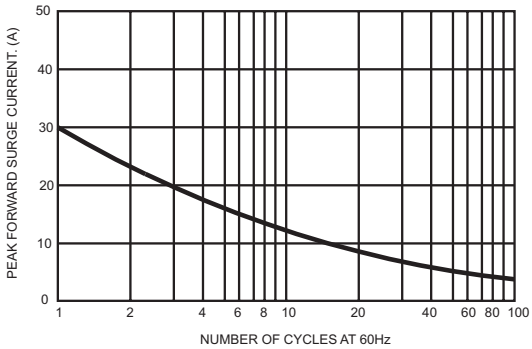


FIG.2- TYPICAL FORWARD CHARACTERISTICS

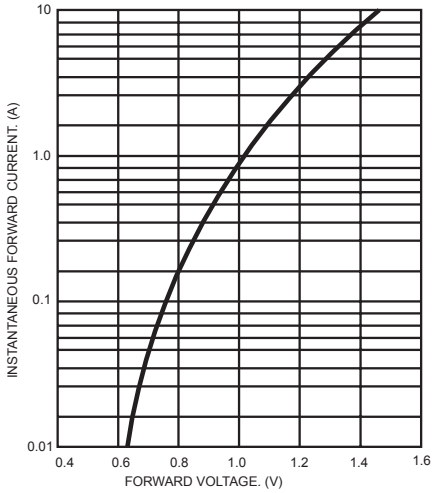


FIG.3- MAXIMUM FORWARD CURRENT DERATING CURVE

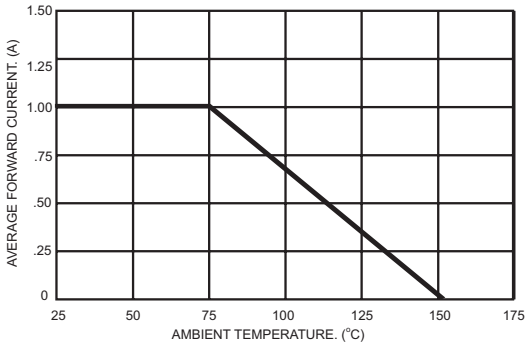


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

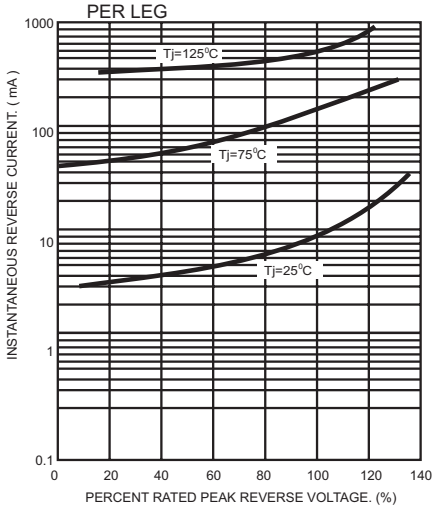


FIG.5- TYPICAL JUNCTION CAPACITANCE