

Small Signal Product

## Surface Mount Glass Passivated Silicon Rectifiers

### FEATURES

- Plastic package has carries underwriters
- Ideal for automated placement
- Surge overload rating to 30 Amperes peak
- Reliable low cost construction utilizing molded plastic technique results in in-expensive product
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



MELF



### MECHANICAL DATA

**Case:** MELF

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - green compound (halogen-free)

**Mounting position:** Any

**Weight:** 0.12 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)									
PARAMETER	SYMBOL	LL40 01G	LL40 02G	LL40 03G	LL40 04G	LL40 05G	LL40 06G	LL40 07G	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	1							A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	30							A
Maximum instantaneous forward voltage (Note 1) @ 1 A	V <sub>F</sub>	1.1							V
Maximum reverse current @ rated VR T <sub>J</sub> =25 °C T <sub>J</sub> =125 °C	I <sub>R</sub>	5 100							μA
Typical junction capacitance (Note 2)	C <sub>j</sub>	15							pF
Typical thermal resistance	R <sub>θJC</sub>	50							°C/W
Operating junction temperature range	T <sub>J</sub>	- 65 to +150							°C
Storage temperature range	T <sub>STG</sub>	- 65 to +150							°C

Note 1: Pulse test with PW=300μs, 1% duty cycle

Note 2: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

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RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

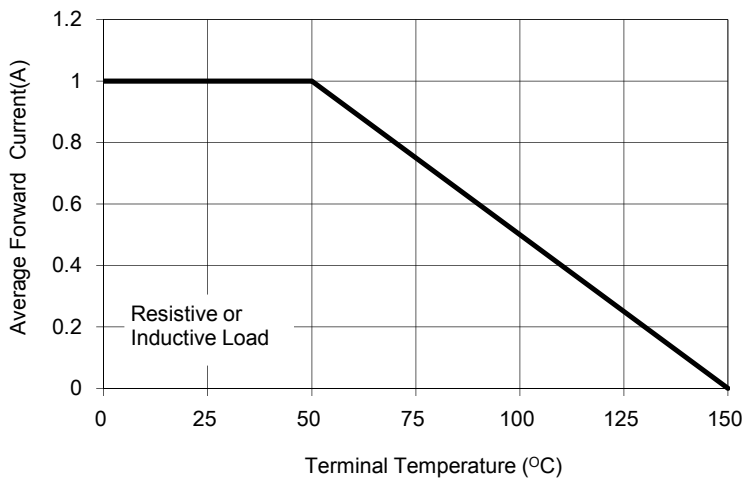


Fig. 2 Maximum Non-Repetitive Peak Forward Surge Current

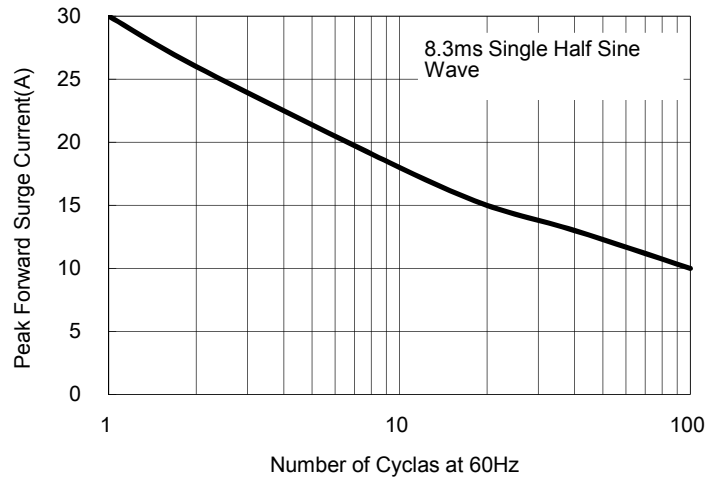


Fig. 3 Instantaneous Forward Characteristics

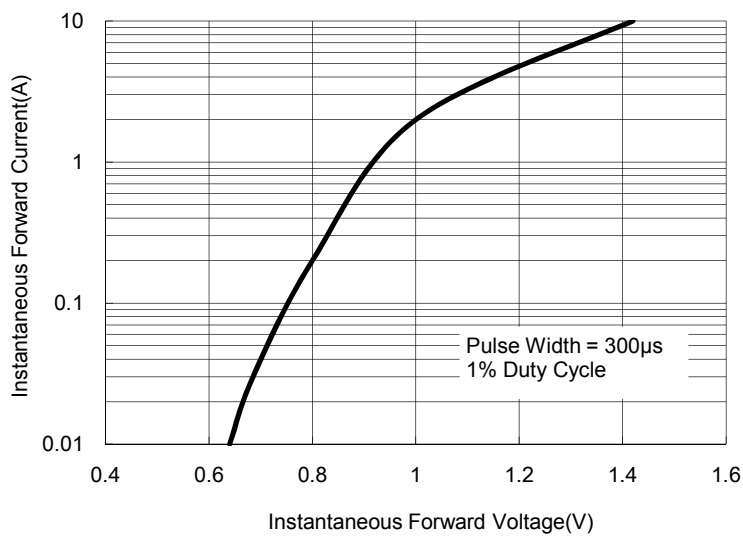


Fig. 4 Typical Reverse Characteristics

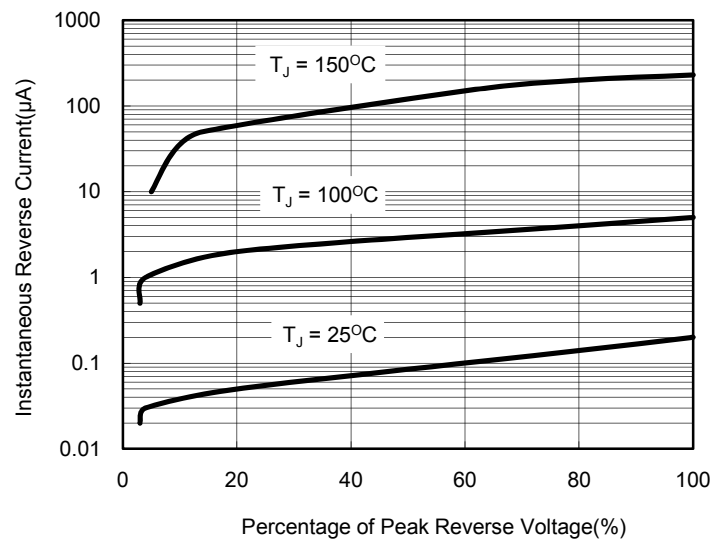


Fig. 5 Typical Junction Capacitance

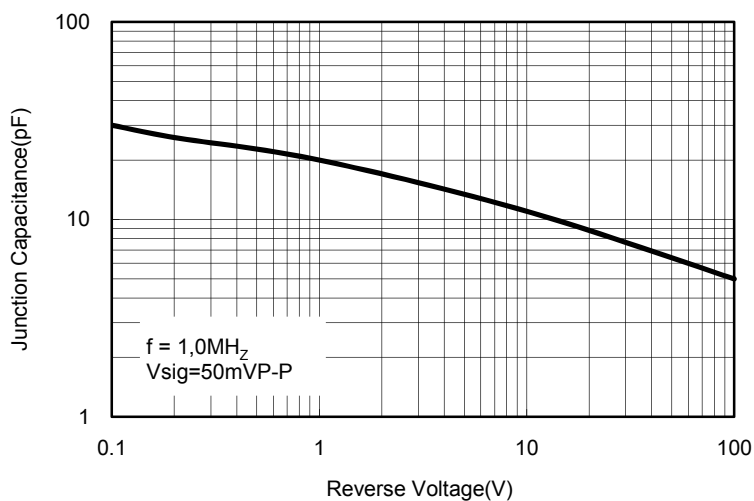
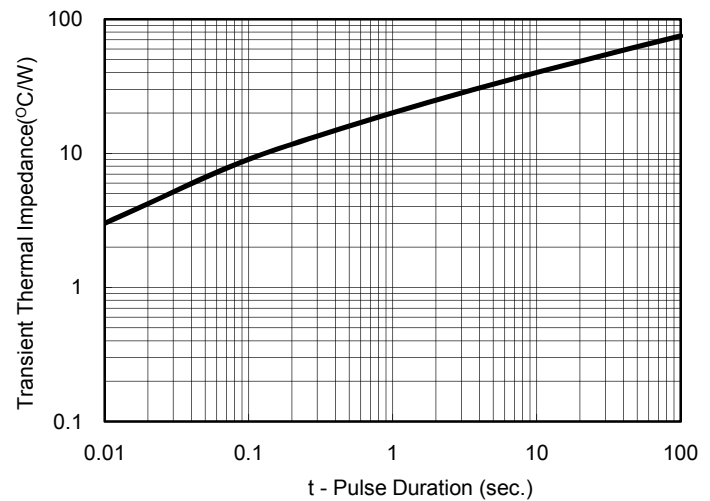


Fig. 6 Typical Transient Thermal Impedance



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ORDERING INFORMATION					
PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
LL400xG (Note 1)	(Note 2)	L0	G	MELF	5K / 13" Reel

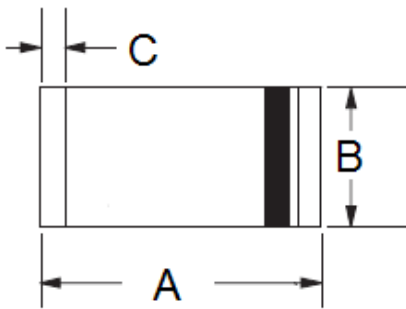
Note 1: "x" defines voltage from 50V (LL4001G) to 1000V (LL4007G)

Note 2: Indicator of manufacturing site for manufacture special control, if empty means no special control requirement

EXAMPLE					
PREFERRED P/N	PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
LL4007G L0	LL4007G		L0		
LL4007G-J0 L0G	LL4007G	J0	L0	G	Green compound

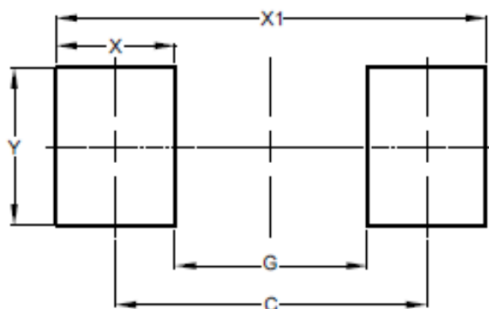
PACKAGE OUTLINE DIMENSIONS

**MELF**



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	4.80	5.50	0.189	0.217
B	2.25	2.67	0.089	0.105
C	0.30	0.60	0.012	0.024

SUGGEST PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
C	4.80	0.189
G	3.30	0.130
X	1.50	0.059
X1	6.30	0.248
Y	2.70	0.106

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