

Small Signal Product

**1A, 50V - 1000V 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



**MELF**



MECHANICAL DATA

**Case:** MELF

Molding compound, UL flammability classification rating 94V-0

**Mounting position:** Any

**Polarity:** Indicated by silver cathode band

**Weight:** 0.12 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)									
PARAMETER	SYMBOL	LL4001G	LL4002G	LL4003G	LL4004G	LL4005G	LL4006G	LL4007G	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 V <sub>R</sub> 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 DC.

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### RATINGS AND CHARACTERISTICS CURVES

( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

Fig.1 Forward Current Derating Curve

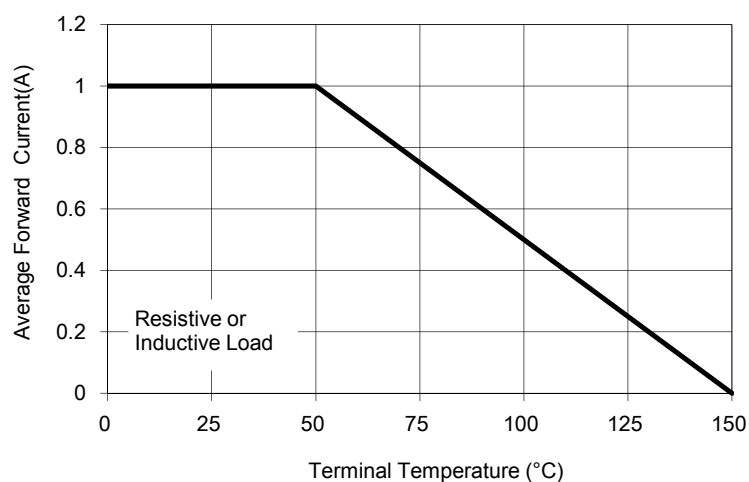


Fig. 2 Maximum Non-Repetitive Peak Forward Surge Current

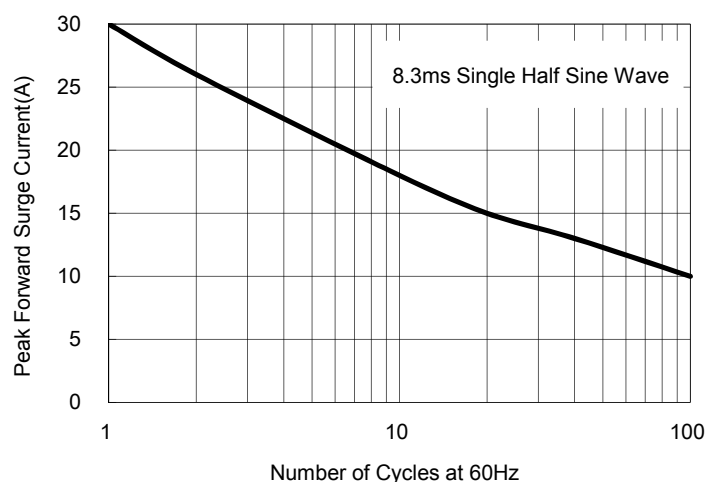


Fig. 3 Instantaneous Forward Characteristics

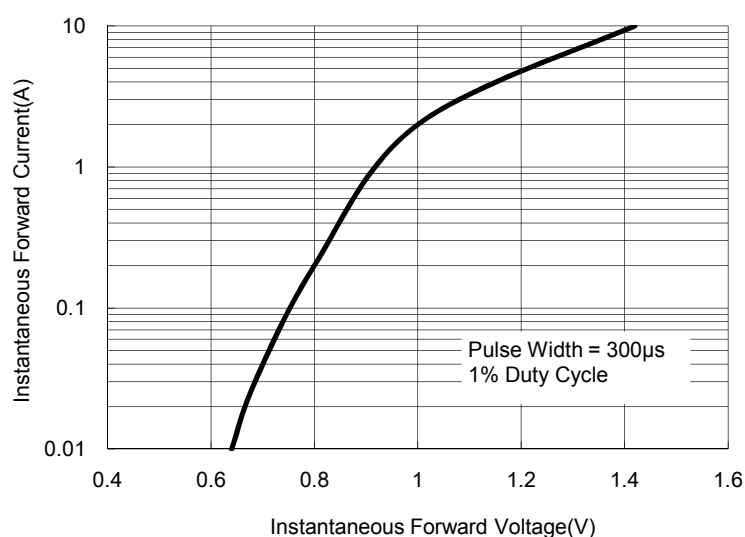


Fig. 4 Typical Reverse Characteristics

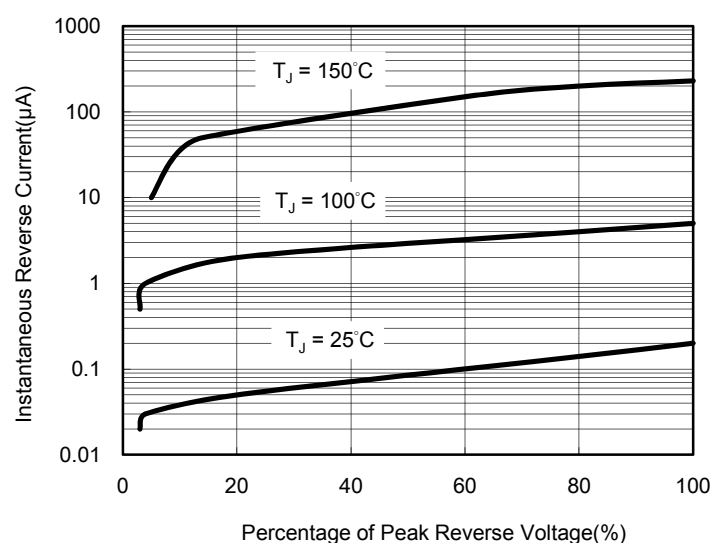


Fig. 5 Typical Junction Capacitance

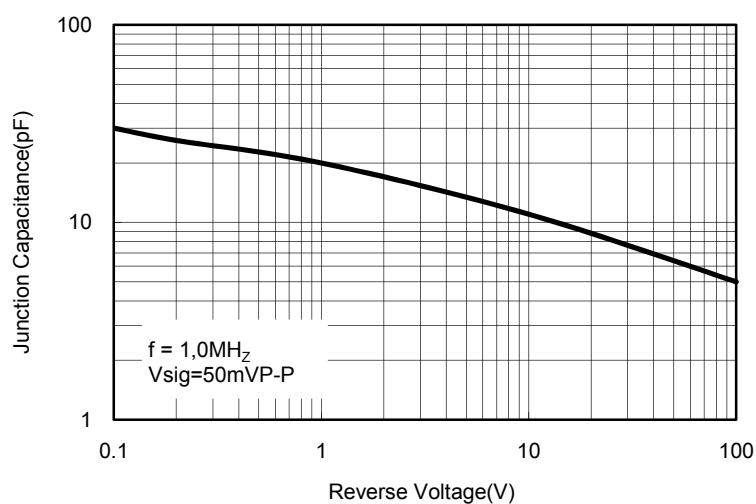
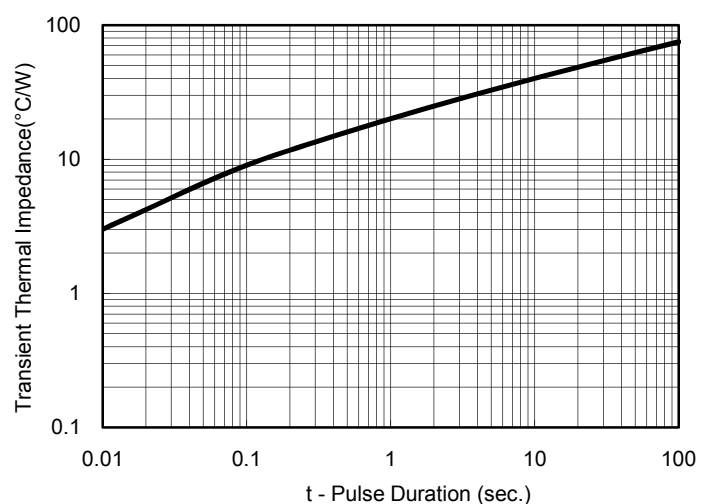


Fig. 6 Typical Transient Thermal Impedance



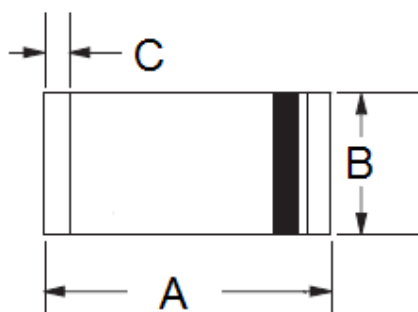
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ORDERING INFORMATION			
PART NO.	PACKING CODE	PACKAGE	PACKING
LL400xG (Note 1)	L0	MELF	5K / 13" Reel

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

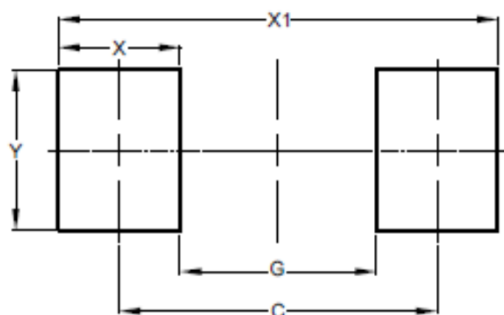
EXAMPLE			
PREFERRED P/N	PART NO.	PACKING CODE	DESCRIPTION
LL4007G L0	LL4007G	L0	

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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