1A, 50 - 1000V Surface Mount Rectifier

FEATURES

- Plastic package has carries underwriters
- Ideal for automated placement
- Surge overload rating to 30A peak
- Reliable low cost construction utilizing molded
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- Inverters and Converters
- Free Wheeling diodes

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	1	A
V_{RRM}	50 - 1000	V
I_{FSM}	30	A
$T_{J\ MAX}$	150	°C
Package	MELF	

Pb-Free RoHS COMPLIANT HALOGEN FREE

MECHANICAL DATA

- Case: MELF
- Molding compound meets UL 94V-0 flammability rating
- Meet JESD 201 class 1A whisker test
- Polarity: Indicated by cathode band
- Weight: 120.00mg (approximately)

MELF

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	LL4001G	LL4002G	LL4003G	LL4004G	LL4005G	LL4006G	LL4007G	UNIT
Repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Forward current	I_F	1							A
Surge peak forward current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30							A
Junction temperature	T_J	-65 to +150							°C
Storage temperature	T_{STG}	-65 to +150							°C

THERMAL PERFORMANCE			
PARAMETER	**SYMBOL**	**TYP**	**UNIT**
Junction-to-case thermal resistance	$R_{\Theta JC}$	50	°C/W

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)					
PARAMETER	**CONDITIONS**	**SYMBOL**	**TYP**	**MAX**	**UNIT**
Forward voltage (1)	I_F = 1.0A	V_F	-	1.1	V
Reverse current @ rated V_R (2)	T_J = 25°C	I_R	-	5	μA
	T_J = 125°C		-	100	μA
Junction capacitance	1 MHz, V_R=4.0V	C_J	15	-	pF

Notes:

1. Pulse test with PW=0.3 ms
2. Pulse test with PW=30 ms

ORDERING INFORMATION		
ORDERING CODE(1)	**PACKAGE**	**PACKING**
LL400xG L0G	MELF	5,000/13” reel

Notes:

(1) “x” defines voltage from 50V(LL4001G) – 1000V(LL4007G)

CHARACTERISTICS CURVES (T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

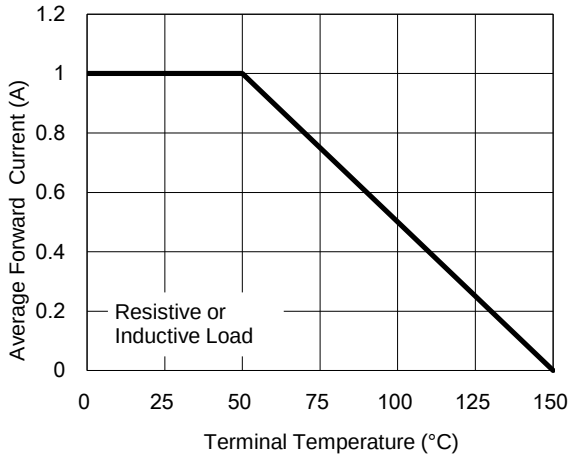


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

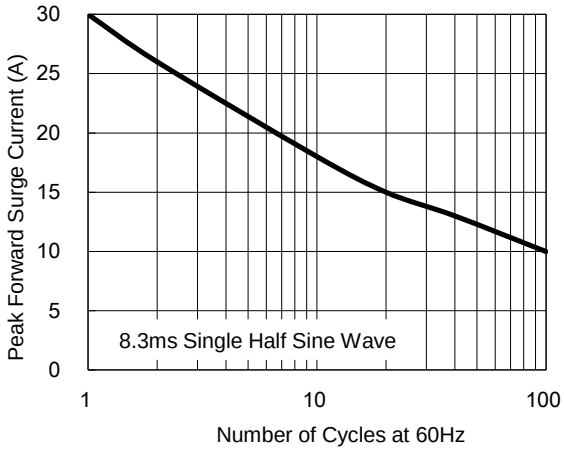


Fig.3 Typical Forward Characteristics

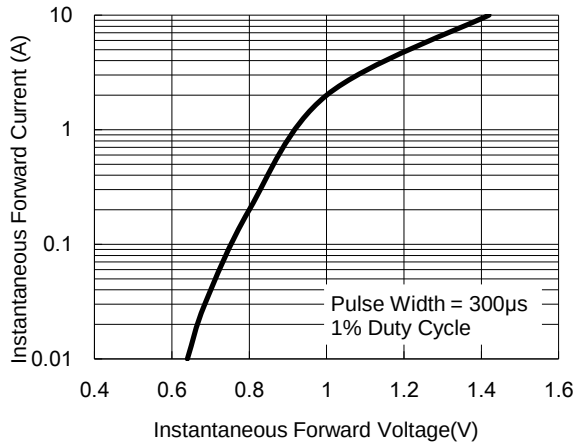


Fig.4 Typical Reverse Characteristics

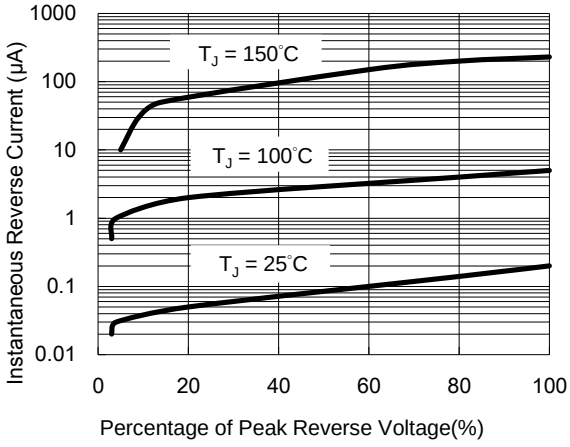


Fig.5 Typical Junction Capacitance

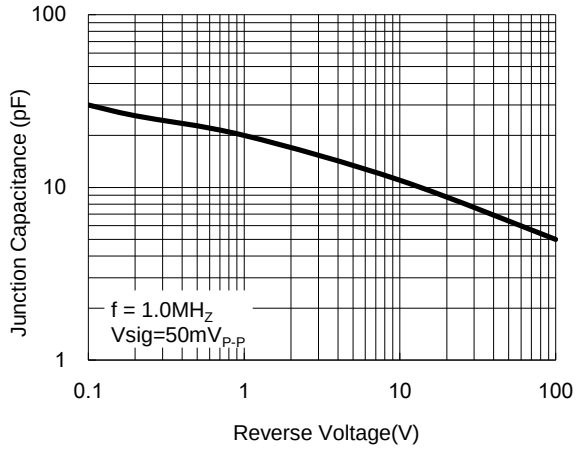
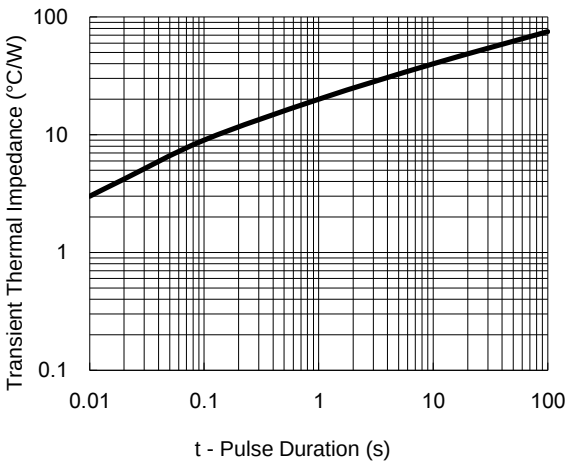
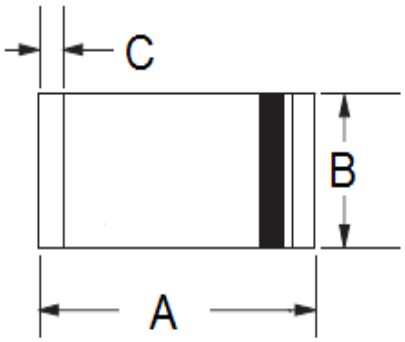


Fig.6 Typical Transient Thermal Impedance



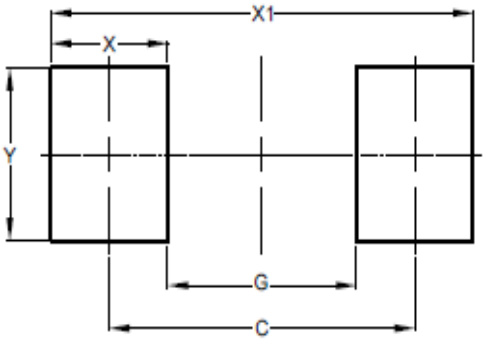
PACKAGE OUTLINE DIMENSIONS

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

SUGGESTED 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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