

Small Signal Product

Features

- ◇ Surge overload ratings to 25 amperes peak
- ◇ Ideal for printed circuit board
- ◇ Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- ◇ High temperature soldering :
260°C/10 seconds at terminals
- ◇ Mounting position : Any
- ◇ Weight : 0.12 grams

MELF



Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	LL5817	LL5818	LL5819	Units
Maximum recurrent peak reverse voltage	V_{RRM}	20	30	40	V
Maximum RMS voltage	V_{RMS}	14	21	28	V
Maximum DC blocking voltage	V_{DC}	20	30	40	V
Maximum average forward rectified current @ $T_L = 90^\circ\text{C}$	$I_{F(AV)}$	1.0			A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	25			A
Maximum instantaneous forward voltage (Note1) @ 1.0 A	V_F	0.450	0.550	0.600	V
Maximum instantaneous forward voltage (Note1) @ 3.0 A	V_F	0.750	0.875	0.900	V
Maximum DC reverse current @ $T_A = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_A = 100^\circ\text{C}$	I_R	0.5			mA
		5			mA
Typical junction capacitance (Note2)	C_j	110			pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	80			$^\circ\text{C/W}$
Operating and storage temperature range	T_J, T_{STG}	-65 to +125 / -65 to +150			$^\circ\text{C}$

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

2. Measured at 1 MHz and applied reverse voltage of 4.0 volts D.C

3. Thermal resistance junction to ambient

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RATINGS AND CHARACTERISTIC CURVES (LL5817 thru LL5819)

Fig.1 Maximum Forward Current Derating Curve

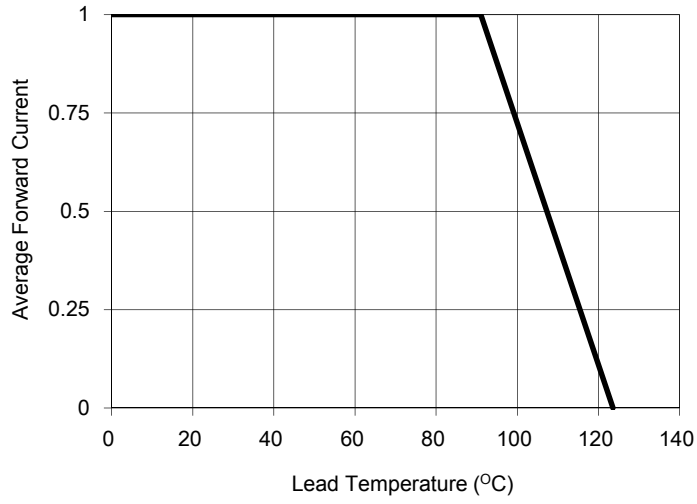


Fig.2 Maximum Non-Repetitive Forward Surge Current

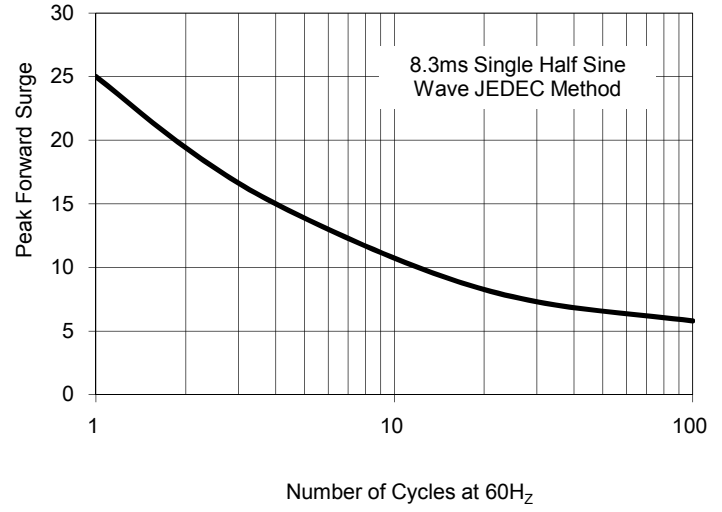


Fig.3 Typical Forward Characteristics

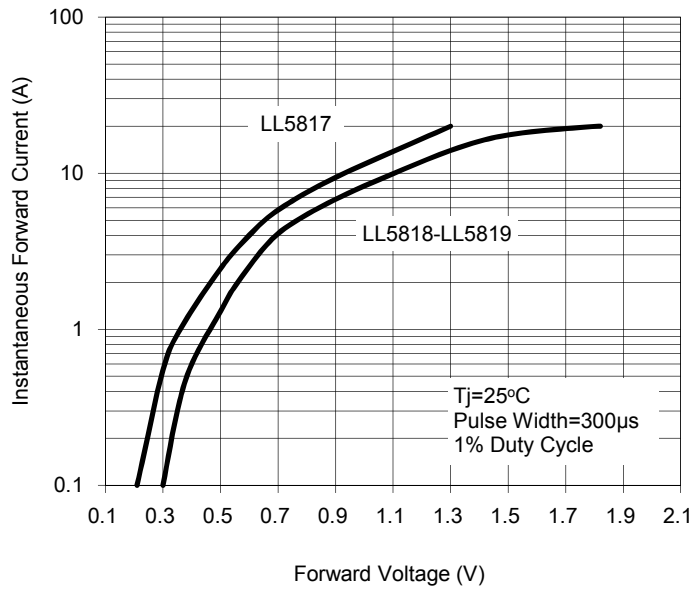


Fig.4 Typical Reverse Characteristics

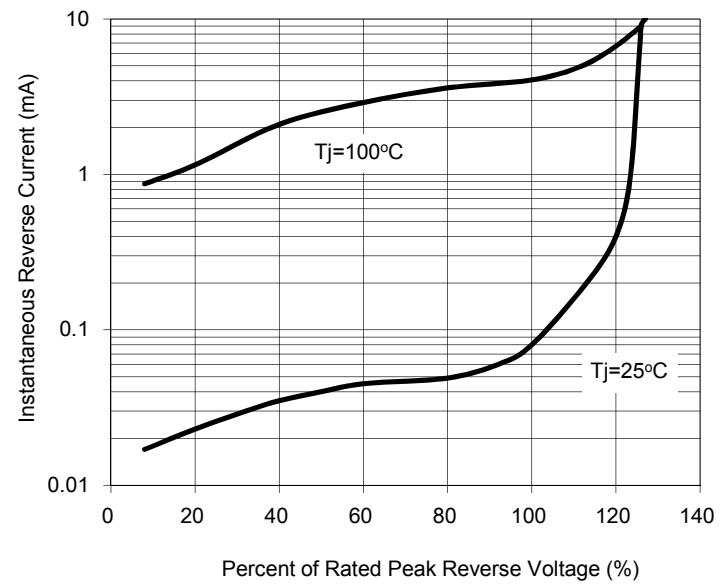


Fig.5 Typical Junction Capacitance

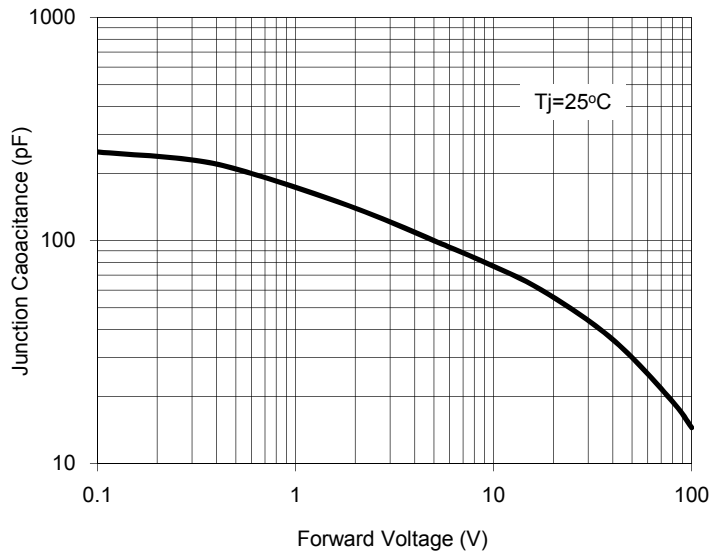
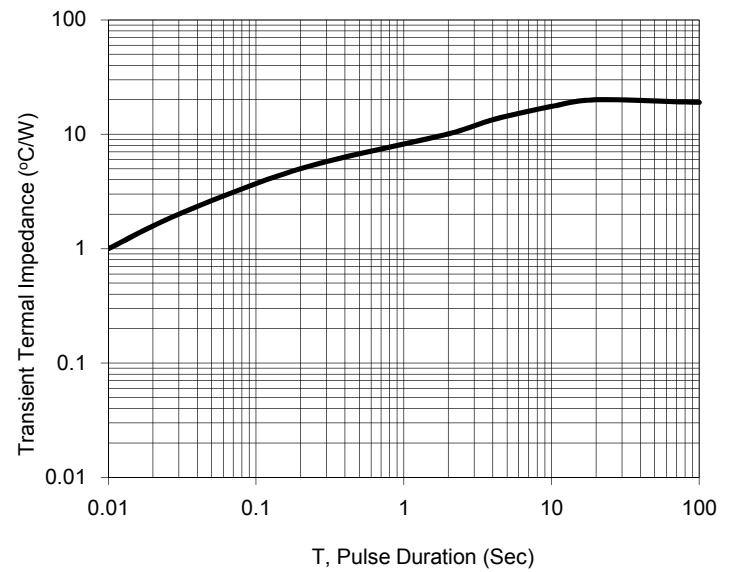


Fig.6 Typical Transient Thermal Characteristics



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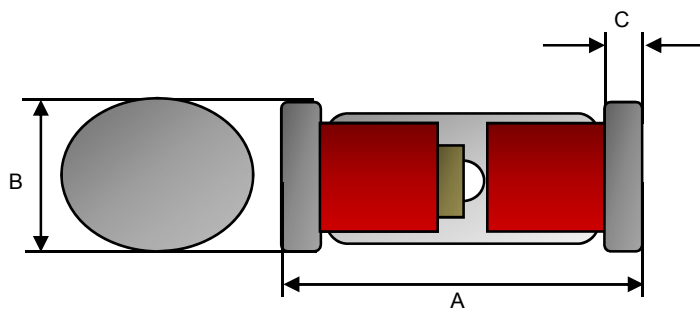
Ordering information (Example)

Part No.	Package	Packing	Packing code	Packing code (Green)	Manufacture code
LL58xx (Note 1)	MELF (Glass Seal)	5K / 13" Reel	L0	L0G	(Note 2)
	MELF (Plastic)	5K / 13" Reel	L0	--	
LL5817	MELF (Glass Seal)	5K / 13" Reel	L0	L0G	
LL5817	MELF (Glass Seal)	5K / 13" Reel	L0	L0G	J0

Note 1 : "xx" is Device Code from "17" thru "19".

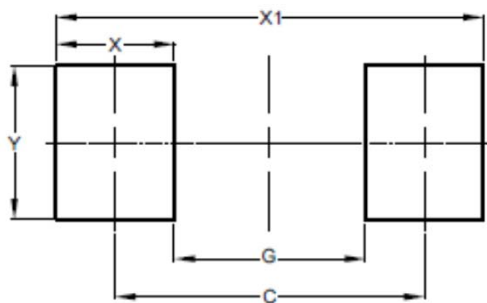
Note 2 : Manufacture special control, if empty means no special control requirement.

Dimensions



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