1A, 20 - 40V Schottky Barrier Surface Mount Rectifier

FEATURES

- Plastic package has carries underwriters
- Ideal for automated placement
- Surge overload rating to 25A peak
- Reliable low cost construction utilizing molded
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- Inverters
- Converters
- Adapters

MECHANICAL DATA

- Case: MELF
- Meet JESD 201 class 1A whisker test
- Polarity: Indicated by cathode band
- Weight: 120.00mg (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	1	A
V_{RRM}	20 - 40	V
I_{FSM}	25	A
$T_{J\ MAX}$	125	°C
Package	MELF	
Configuration	Single die	

Pb-Free RoHS COMPLIANT HALOGEN FREE

MELF

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)					
PARAMETER	**SYMBOL**	**LL5817**	**LL5818**	**LL5819**	**UNIT**
Repetitive peak reverse voltage	V_{RRM}	20	30	40	V
Reverse voltage, total rms value	$V_{R(RMS)}$	14	21	28	V
DC blocking voltage	V_{DC}	20	30	40	V
Forward current	I_F	1			A
Surge peak forward current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	25			A
Junction temperature	T_J	-65 to +125			°C
Storage temperature	T_{STG}	-65 to +125			°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction-to-Ambient thermal resistance	$R_{\Theta JA}$	80	°C/W

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage[1]	LL5817	I_F = 1A	V_F	-	0.450	V
		I_F = 3A		-	0.750	V
	LL5818	I_F = 1A		-	0.550	V
		I_F = 3A		-	0.875	V
	LL5819	I_F = 1A		-	0.600	V
		I_F = 3A		-	0.900	V
Reverse current @ rated V_R[2]		T_J = 25°C	I_R	-	0.5	mA
		T_J = 100°C		-	5	mA
Junction capacitance		1MHz, V_R = 4.0V	C_J	110	-	pF

Notes:

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

ORDERING INFORMATION

ORDERING CODE[1]	PACKAGE	PACKING
LL581x L0G	MELF	5,000/13” reel

Notes:

1. “x” defines voltage from 20V(LL5817) to 40V(LL5819)

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

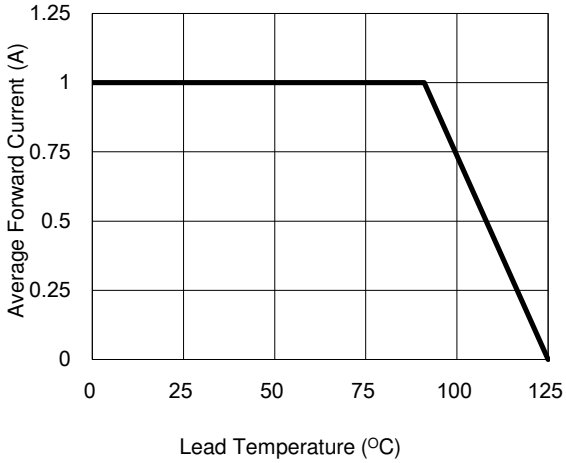


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

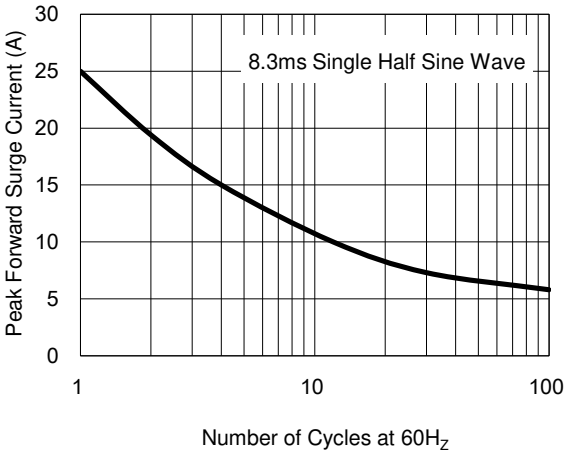


Fig.3 Typical Forward Characteristics

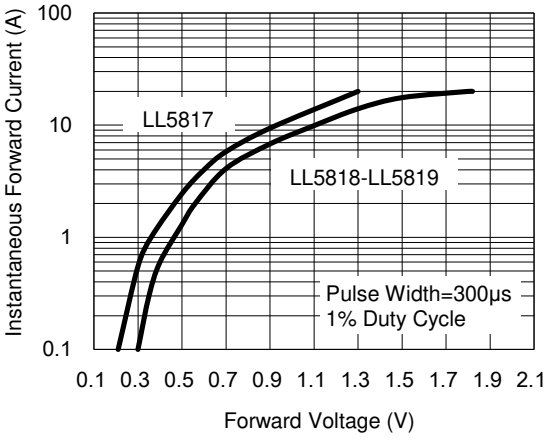


Fig.4 Typical Reverse Characteristics

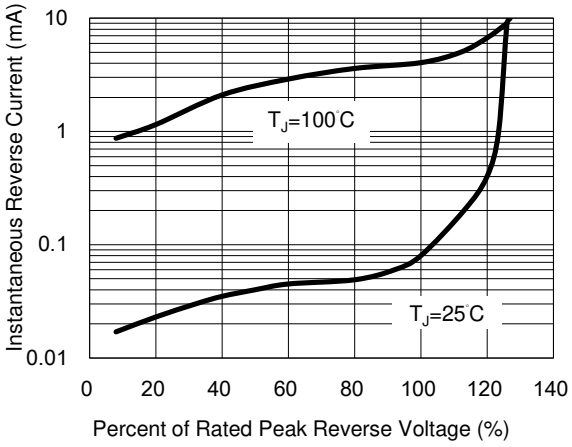


Fig.5 Typical Junction Capacitance

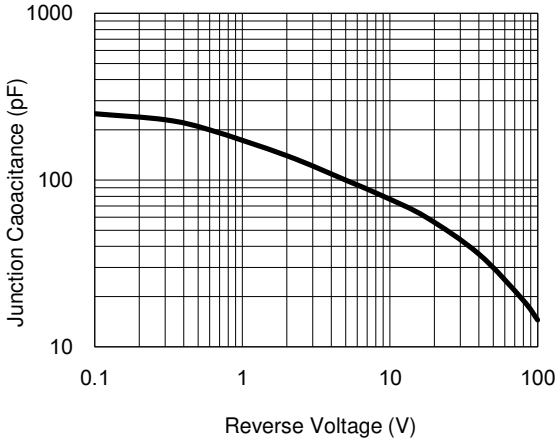
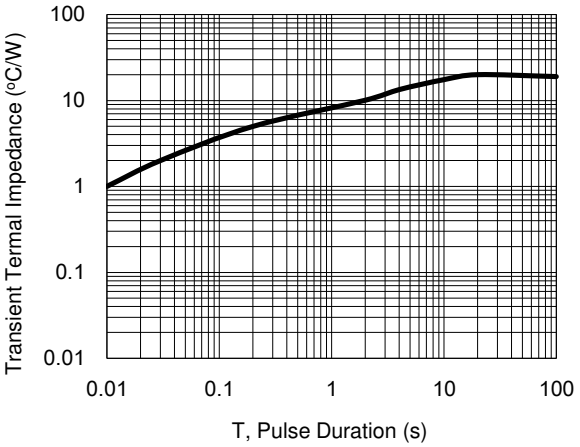
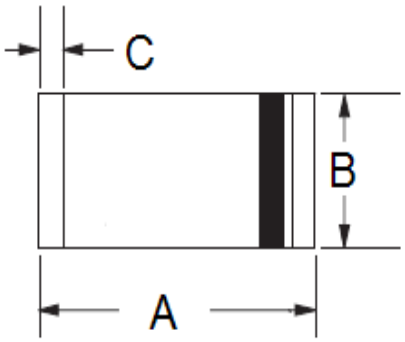


Fig.6 Typical Transient Thermal Impedance



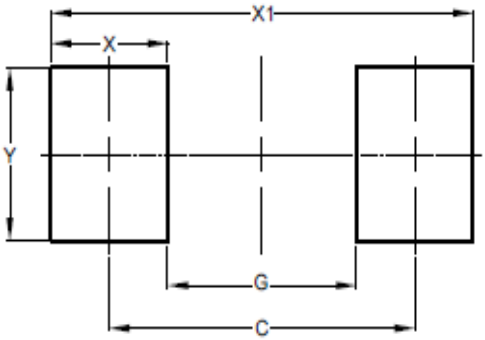
PACKAGE OUTLINE DIMENSIONS

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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