

## 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	



MELF



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

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT	
Forward voltage <sup>(1)</sup>	LL5817	$V_F$	-	0.450	V	
				$I_F = 1\text{A}$	0.750	V
	LL5818			$I_F = 3\text{A}$	0.550	V
				$I_F = 1\text{A}$	0.875	V
	LL5819			$I_F = 3\text{A}$	0.600	V
				$I_F = 1\text{A}$	0.900	V
Reverse current @ rated $V_R$ <sup>(2)</sup>	$T_J = 25^\circ\text{C}$	$I_R$	-	0.5	mA	
	$T_J = 100^\circ\text{C}$			5	mA	
Junction capacitance	1MHz, $V_R = 4.0\text{V}$	$C_J$	110	-	pF	

**Notes:**

1. Pulse test with  $PW = 0.3\text{ms}$
2. Pulse test with  $PW = 30\text{ms}$

**ORDERING INFORMATION**

ORDERING CODE <sup>(1)</sup>	PACKAGE	PACKING
LL581x L0G	MELF	5,000/13" reel

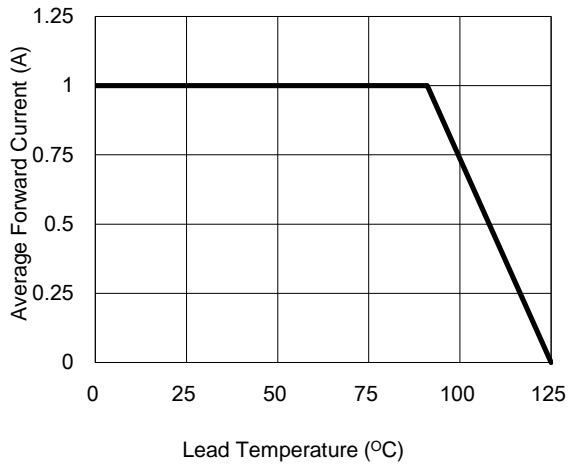
**Notes:**

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

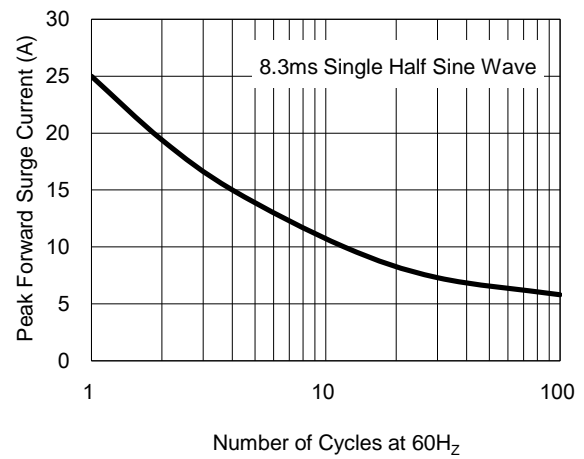
**CHARACTERISTICS CURVES**

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

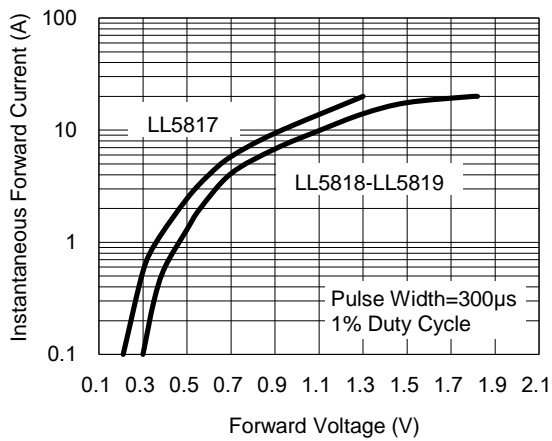
**Fig.1 Forward Current Derating Curve**



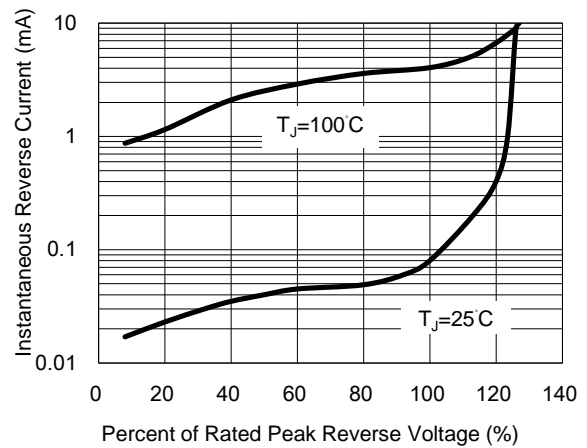
**Fig.2 Maximum Non-Repetitive Peak Forward Surge Current**



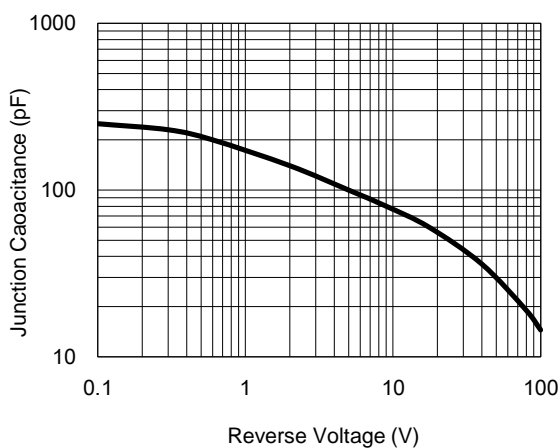
**Fig.3 Typical Forward Characteristics**



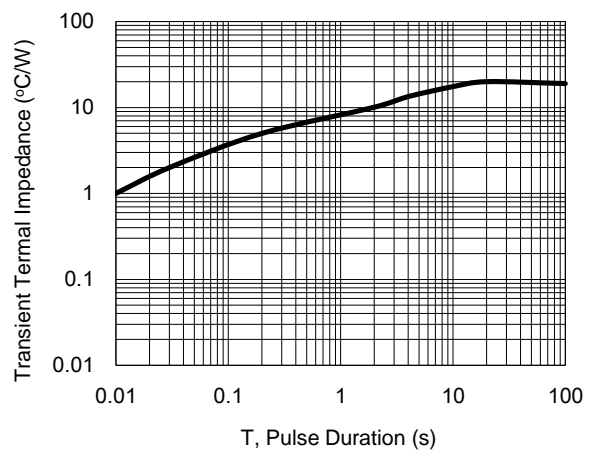
**Fig.4 Typical Reverse Characteristics**



**Fig.5 Typical Junction Capacitance**

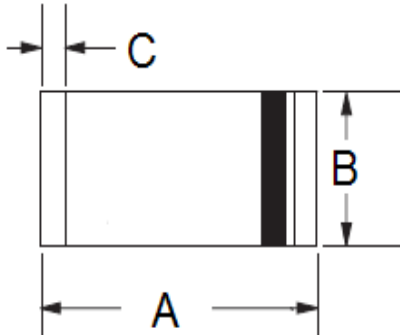


**Fig.6 Typical Transient Thermal Impedance**



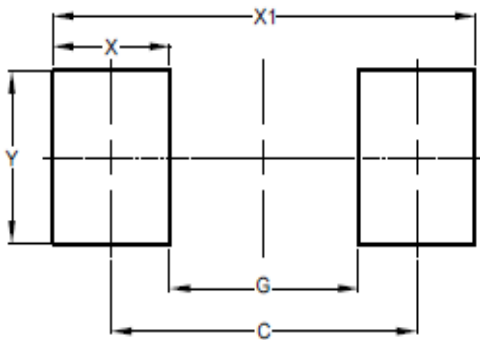
**PACKAGE OUTLINE DIMENSIONS**

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

## Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Purchasers are solely responsible for the choice, selection, and use of TSC products and TSC assumes no liability for application assistance or the design of Purchasers' products.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Schottky Diodes & Rectifiers](#) category:*

*Click to view products by [Taiwan Semiconductor](#) manufacturer:*

Other Similar products are found below :

[MA4E2039](#) [D1FH3-5063](#) [MBR0530L-TP](#) [MBR10100CT-BP](#) [MBR1545CT](#) [MMBD301M3T5G](#) [RB160M-50TR](#) [RB551V-30](#)  
[BAS16E6433HTMA1](#) [BAT 54-02LRH E6327](#) [NSR05F40QNXT5G](#) [NTE555](#) [JANS1N6640](#) [SB07-03C-TB-H](#) [SB1003M3-TL-W](#) [SK310-T](#)  
[SK32A-LTP](#) [SK33A-TP](#) [SK34B-TP](#) [SS3003CH-TL-E](#) [GA01SHT18](#) [CRS10I30A\(TE85L,QM](#) [MA4E2501L-1290](#) [MBRB30H30CT-1G](#)  
[SB007-03C-TB-E](#) [SK32A-TP](#) [SK33B-TP](#) [SK35A-TP](#) [SK38B-TP](#) [NRVBM120LT1G](#) [NTE505](#) [NTSB30U100CT-1G](#) [SS15E-TP](#) [VS-](#)  
[6CWQ10FNHM3](#) [ACDBA1100LR-HF](#) [ACDBA1200-HF](#) [ACDBA140-HF](#) [ACDBA2100-HF](#) [ACDBA3100-HF](#) [CDBQC0530L-HF](#)  
[CDBQC0240LR-HF](#) [ACDBA340-HF](#) [ACDBA260LR-HF](#) [ACDBA1100-HF](#) [SK310B-TP](#) [MA4E2502L-1246](#) [MA4E2502H-1246](#)  
[NRVBM120ET1G](#) [NSR01L30MXT5G](#) [NTE573](#)