LITE-ON SEMICONDUCTOR

1N5819WLC

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

REVERSE VOLTAGE – 40 Volts FORWARD CURRENT – 1.0 Ampere

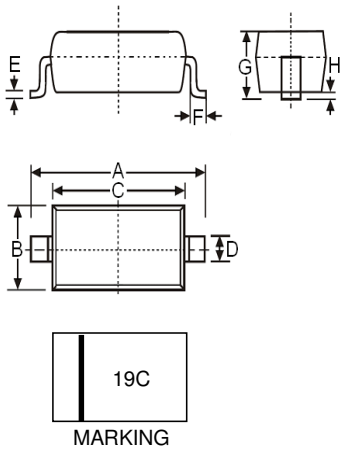
FEATURES

- Low Forward Voltage Drop
- High Surge Capability and High Current Capability
- For Surface Mounted Applications
- High Conductance
- Guard Ring Construction for Transient Protection
- ESD Capability:
  Machine Model, C (> 400 V)
  Human Body Model, 3B (> 8 kV)
- IEC 61000-4-2, level 4 (ESD), >15KV (air)

MECHANICAL DATA

- Case: SOD-123 Plastic
- Case Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Moisture Sensitivity: Level 1 per J-STD-020D
- Lead Pb-Free in RoHS 2002/95/EC Compliant
- Weight: approx. 0.01 grams (approximate)

SOD-123



MARKING

SOD-123		
Dim.	Min.	Max.
A	3.55	3.85
B	1.40	1.70
C	2.55	2.85
D	0.55 Typical	
E	0.11 Typical	
F	0.25	---
G	---	1.35
H	---	0.10
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage Working peak reverse voltage DC blocking voltage	V_{RRM} V_{RWM} V_R	40	V
Forward continuous current (Note 1)	I_F	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load(JEDEC Method)	I_{FSM}	25	A
Power dissipation (Note 1)	P_D	450	mW
Themal Resistance (Note 2)	$R_{\theta JA}$	230	°C/W
Operation and storage temperature range	T_J ,T_{STG}	-65 to +125	℃

ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Minimum Reverse Breakdown Voltage	I_R = 1.0mA	$V_{(BR)R}$	40	V
Maximum Forward Voltage	IF = 0.1A IF = 1.0A IF = 3.0A	V_F	320 450 750	mV
Maximum DC Reverse Current at Rated DC Blocking Voltage	VR = 4.0V, T_J = 25℃ VR = 6.0V, T_J = 25℃	I_R	50 75	uA
	VR = 40V, T_J = 25℃ VR = 40V, T_J = 100℃ VR = 4.0V, T_J = 100℃ VR = 6.0V, T_J = 100℃		1.0 10 2.0 3.0	mA
Typical Junction Capacitance (Note 1)	V_R = 4V DC, f = 1.0MHz	C_J	70	pF

Note :

(1)Unit mounted with 7.0*7.0mm copper pad areas
(2)Thermal Resistance Junction to Ambient,

REV. 1, Mar.-2016, KSYR82

MECHANICAL INFORMATION
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FIG.1- FORWARD CURRENT DERATING CURVE

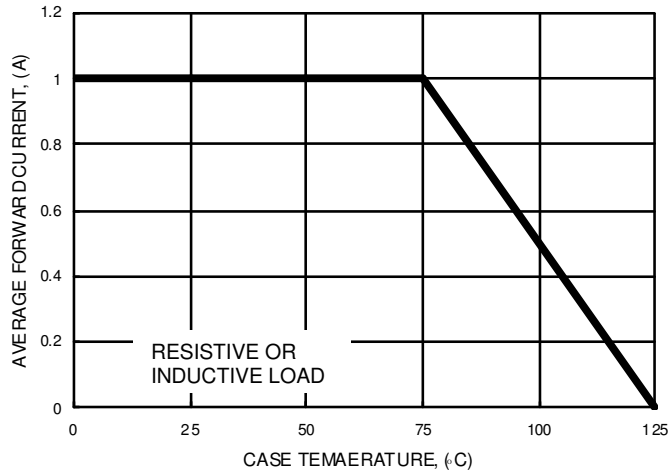


FIG.2- TYPICAL JUNCTION CAPACITANCE

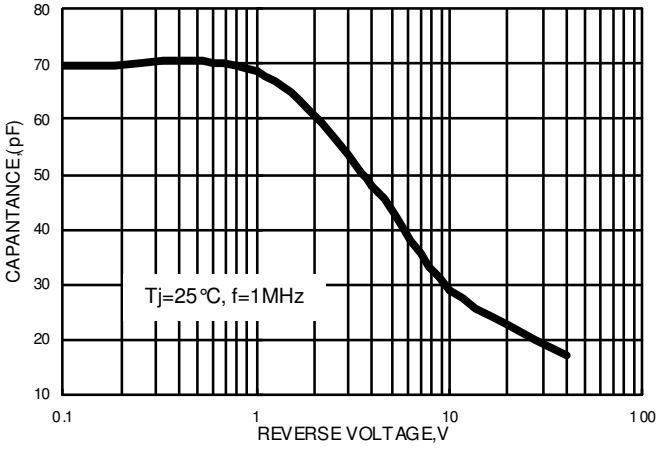


FIG.3- TYPICAL FORWORD CHARACTERISTICS

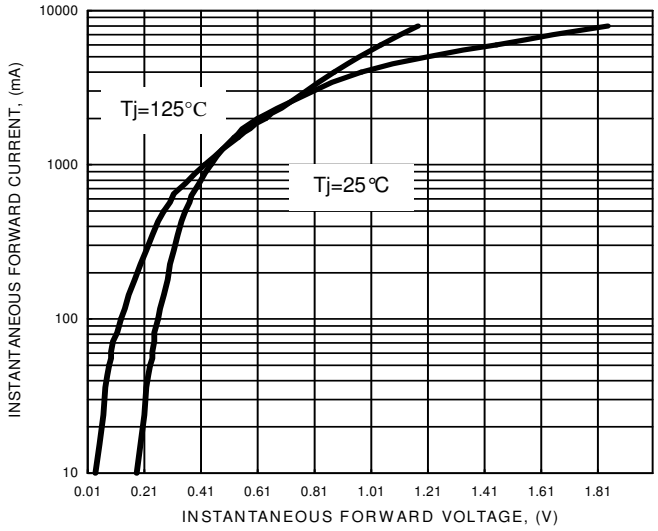


FIG.4- TYPICAL REVERSE CHARACTERISTICS

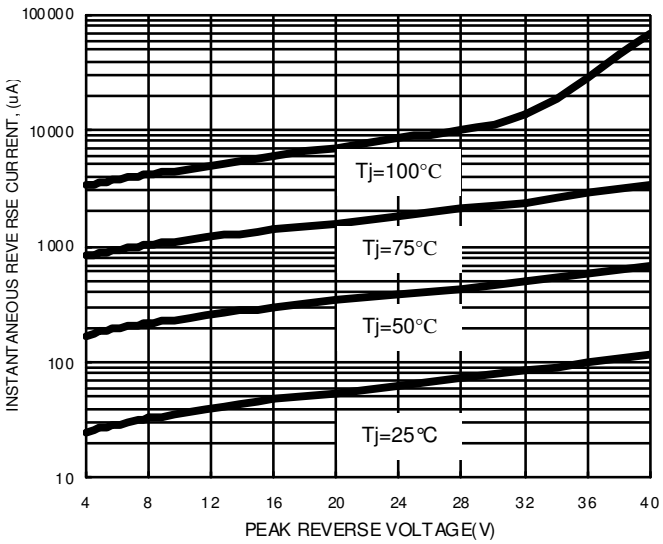


FIG.5- MAXIMUM NON-REPETITIVE SURGE CURRENT

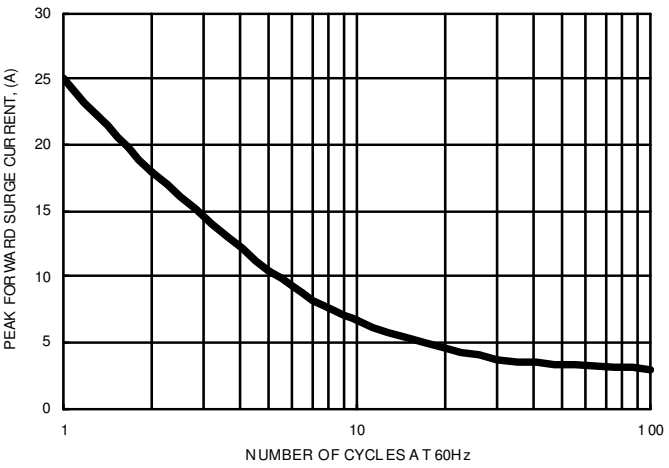
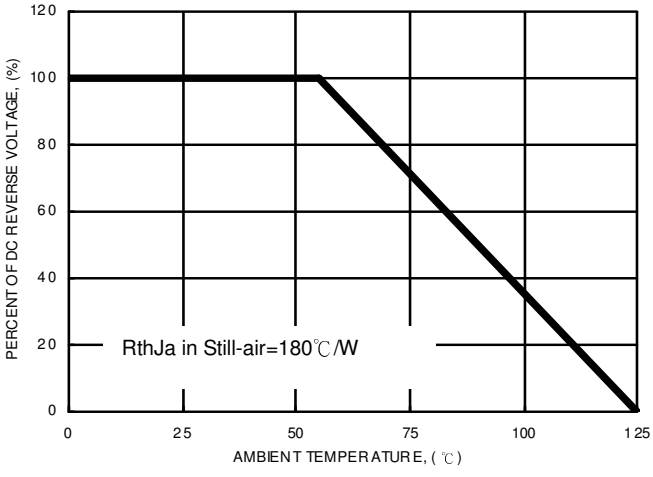


FIG.6- DC REVERSE VOLTAGE DERATING CURVE



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