LITE-ON SEMICONDUCTORS

1N5819WL

SURFACE MOUNT
SCHOTTKY BARRIER RECTIFIER

REVERSE VOLTAGE – 40 Volts
FORWARD CURRENT – 1.0 Ampere

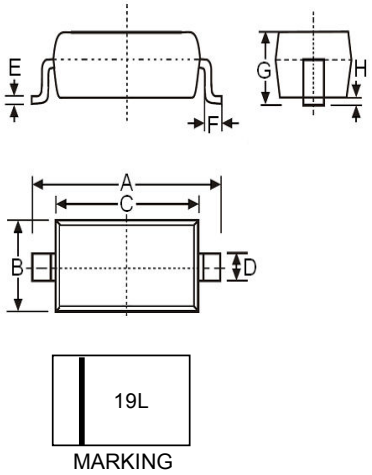
FEATURES

- Low Forward Voltage Drop
- High Surge Capability and High Current Capability
- For Surface Mounted Applications
- High Conductance
- Guard Ring Construction for Transient Protection

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 Thermal Characteristics @ T_A = 25℃ unless otherwise specified

Characteristic	Symbol	Value	Units
Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	V
Forward Continuous Current (Note 1) @ TC=75℃	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
Thermal Resistance (Note 2)	$R_{\Theta JA}$	230	℃/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +125	℃

Electrical Characteristics @ T_A = 25℃ unless otherwise specified

Parameter	Symbol	Value	Unit	Test Condition
Minimum Reverse Breakdown Voltage	$V_{(BR)R}$	40	V	I_R = 1.0mA
Maximum Forward Voltage	V_F	320 450 750	mV	IF = 0.1A IF = 1.0A IF = 3.0A
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	50 75	uA	VR = 4.0V, T_J = 25°C VR = 6.0V, T_J = 25°C
		1.0 10 2.0 3.0	mA	VR = 40V, T_J = 25°C VR = 40V, T_J = 100°C VR = 4.0V, T_J = 100°C VR = 6.0V, T_J = 100°C
Typical Junction Capacitance	C_J	70	pF	V_R = 4V DC, f = 1.0MHz

Note :

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

RATING AND CHARACTERISTIC CURVES
1N5819WL

FIG.1- FORWARD CURRENT DERATING CURVE

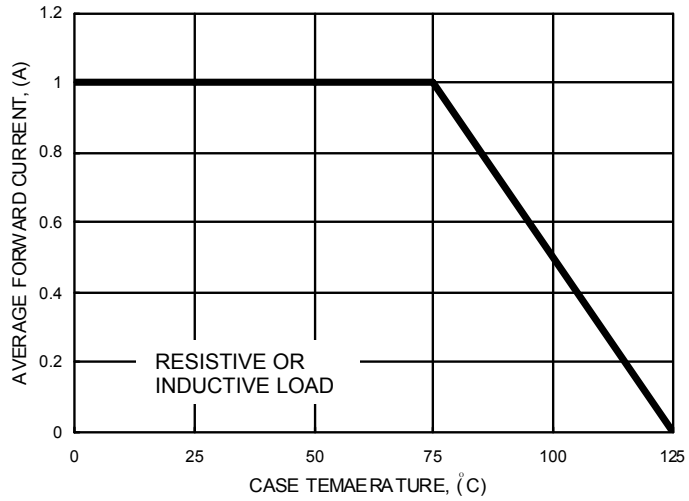


FIG.2- TYPICAL JUNCTION CAPACITANCE

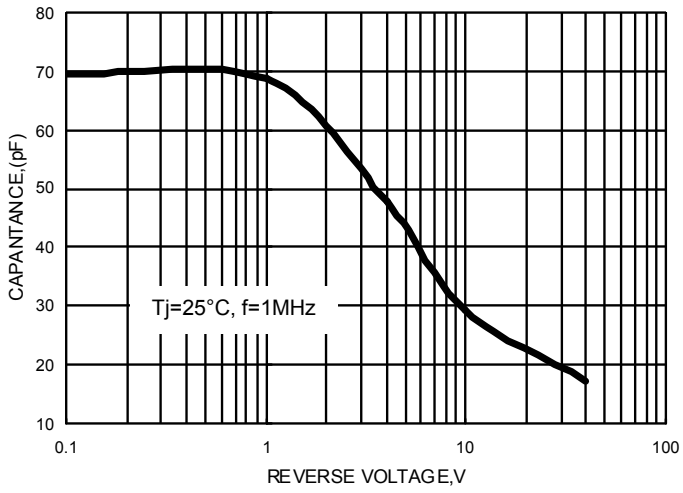


FIG.3- TYPICAL FORWORD CHARACTERISTICS

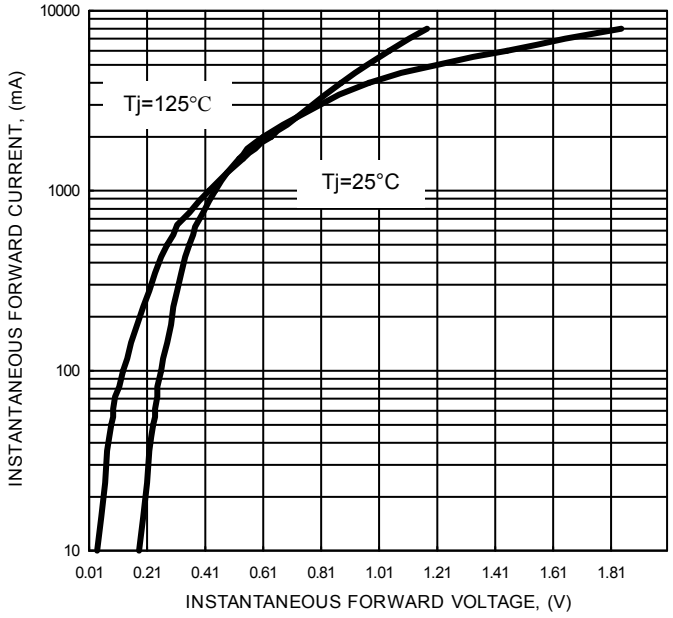


FIG.4- TYPICAL REVERSE CHARACTERISTICS

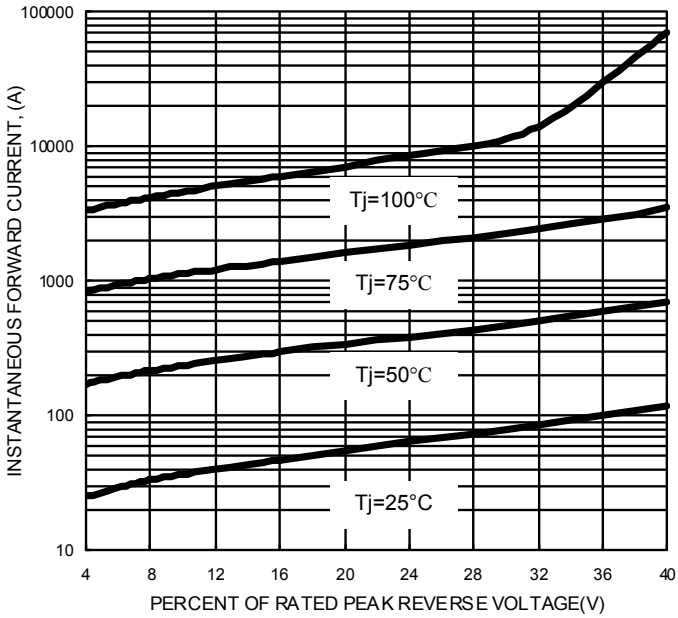


FIG.5- MAXIMUM NON-REPETITIVE SURGE CURRENT

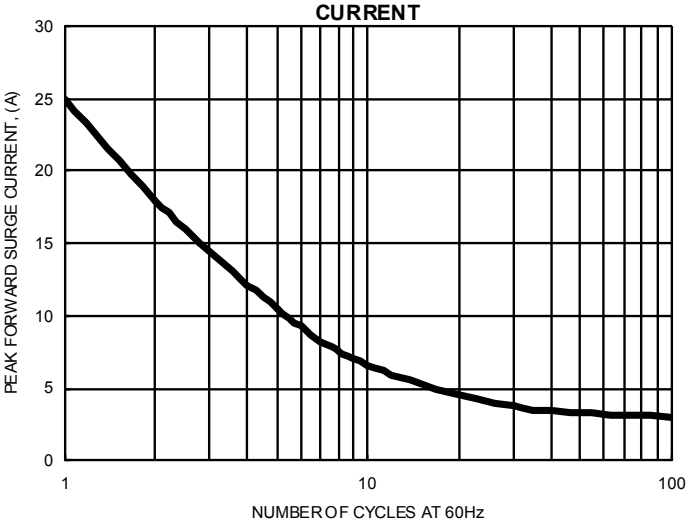
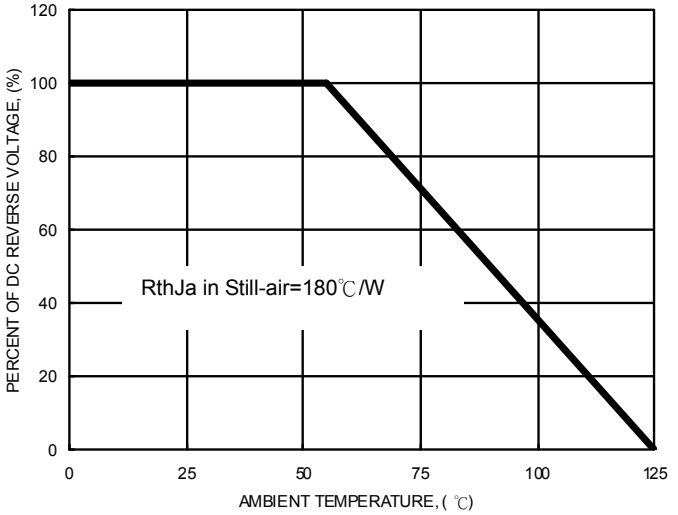


FIG.6- DC REVERSE VOLTAGE DERATING CURVE



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