

Features

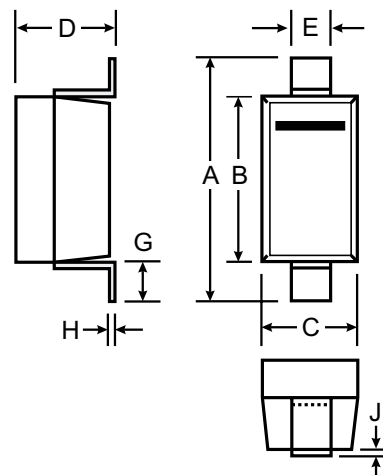
- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: SOD-123, Plastic
- Polarity: Cathode Band
- Leads: Solderable per MIL-STD-202, Method 208
- Marking: Date Code and Type Code

Type Code: SL

- Weight: 0.01 grams (approx.)



SOD-123		
Dim	Min	Max
A	3.55	3.85
B	2.55	2.85
C	1.40	1.70
D	—	1.35
E	0.55 Typical	
G	0.25	—
H	0.15 Typical	
J	—	0.10
All Dimensions in mm		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	1N5819HW	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage @ I _R = 1.0mA DC Blocking Voltage	V _{RRM} V _{RWM} V _R	40	V
RMS Reverse Voltage	V _{R(RMS)}	28	V
Average Rectified Output Current @ T _L = 90°C	I _O	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 2)	P _d	450	mW
Typical Thermal Resistance Junction to Ambient (Note 2)	R _{θJA}	222	°C/W
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +125	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage (Note 1)	V _{FM}	—	—	0.320	V	I _F = 0.1A I _F = 1.0A I _F = 3.0A
		—	—	0.450		
		—	—	0.750		
Reverse Leakage Current (Note 1)	I _{RM}	—	—	1.0	mA	V _R = 40V, T _A = 25°C V _R = 40V, T _A = 100°C V _R = 4V, T _A = 25°C V _R = 4V, T _A = 100°C V _R = 6V, T _A = 25°C V _R = 6V, T _A = 100°C
		—	—	10		
		—	10	50		
		—	1	2		
		—	15	75		
—	1.5	3	3	3		
Typical Junction Capacitance	C _j	—	110	—	pF	V _R = 4V, f = 1.0MHz

Notes: 1. Pulse Test: Pulse width = 300μs, Duty Cycle ≤ 2%.

2. Valid provided that leads are kept at ambient temperature at a distance of 9.5mm from the case.

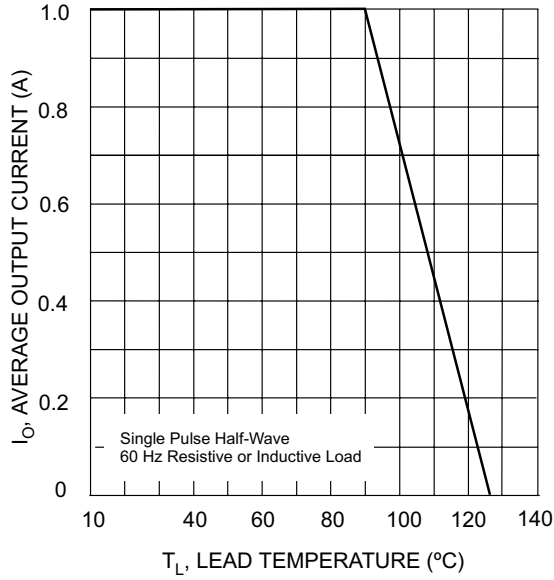


Fig. 1 Forward Current Derating Curve

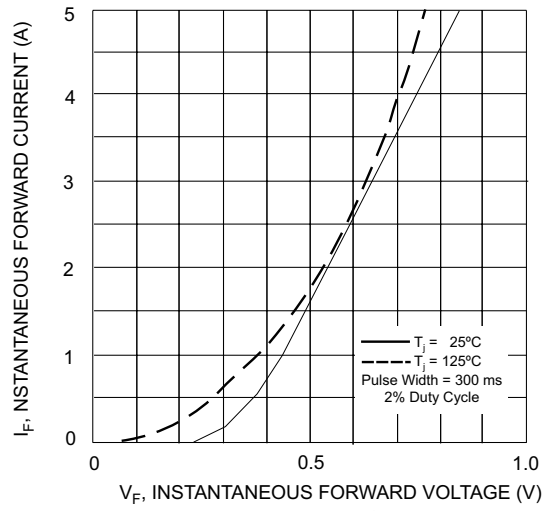


Fig. 2 Typical Forward Characteristics

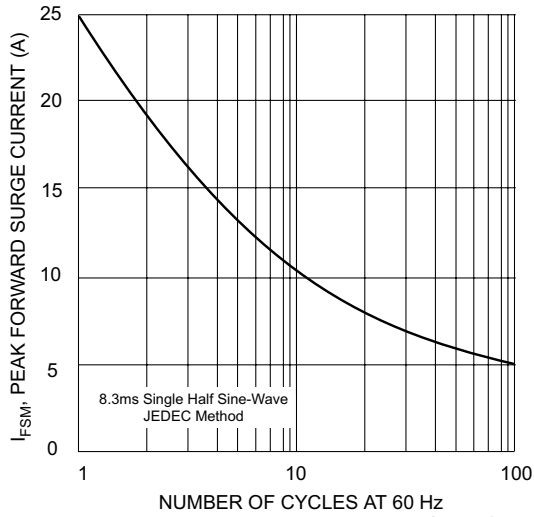


Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

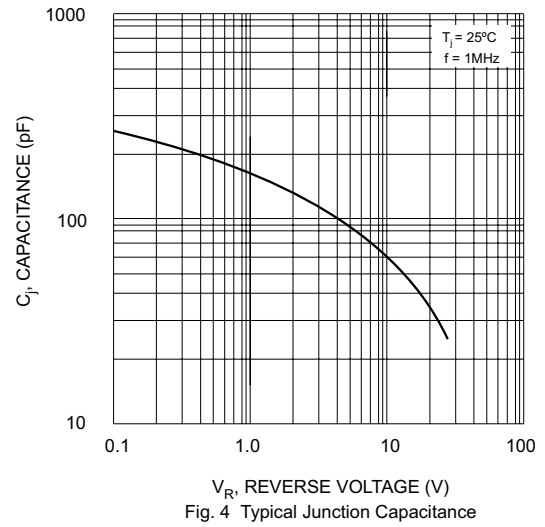


Fig. 4 Typical Junction Capacitance

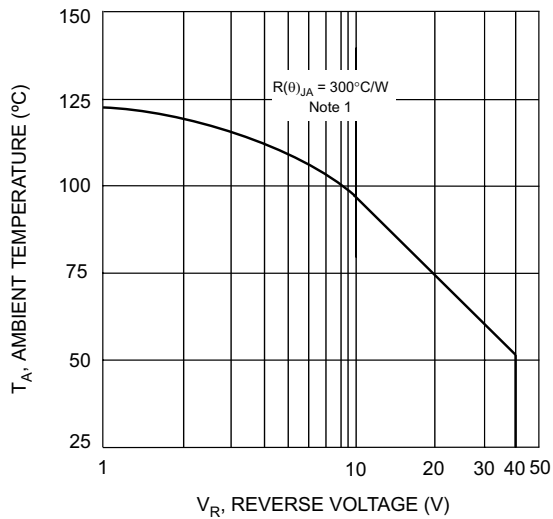


Fig. 5 Typical Safe Operating Area

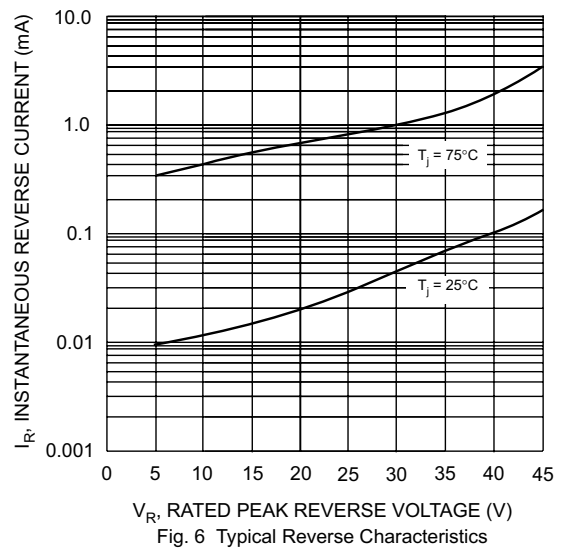


Fig. 6 Typical Reverse Characteristics