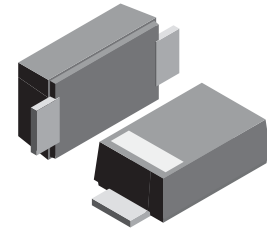


VOLTAGE RANGE: 40V
CURRENT: 1.0 A

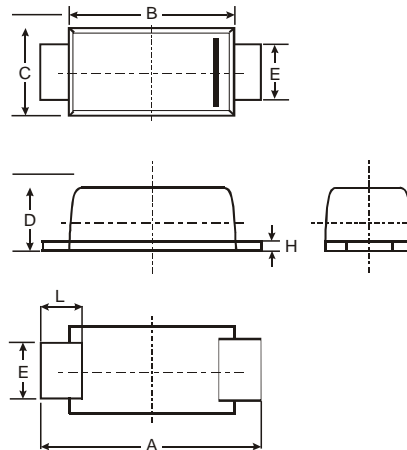
Features

- 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



Mechanical Data

- Case: SOD-123FL plastic body over passivated junction
- Terminals : Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight:0.0007 ounce, 0.02 grams



SOD-123FL			
Dim	Min	Max	Typ
A	3.50	3.80	3.65
B	2.60	2.90	2.75
C	1.70	1.90	1.80
D	0.09	1.10	1.00
E	0.08	1.10	0.095
H	0.12	0.20	0.16
L	0.07	0.09	0.08
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
Reverse Breakdown Voltage (Note 1)	V _{(BR)R}	40	—	—	V	I _R = 1.0mA
Forward Voltage (Note 1)	V _F	—	—	0.320 0.450 0.750	V	I _F = 0.1A I _F = 1.0A I _F = 3.0A
Reverse Leakage Current (Note 1)	I _R	—	—	1.0 10 50 2 15 75 1.5	mA mA μA mA μA μA 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
Total Capacitance	C _T	—	110	—	pF	V _R = 4V, f = 1.0MHz

Notes: 1. Short duration pulse test used to minimize self-heating effect.
 2. Device mounted on FR-4 PC Board, 2"x2", 2 oz. Copper, single sided, Cathode pad dimensions 0.75"x1.0", Anode pad dimensions 0.25"x1.0".

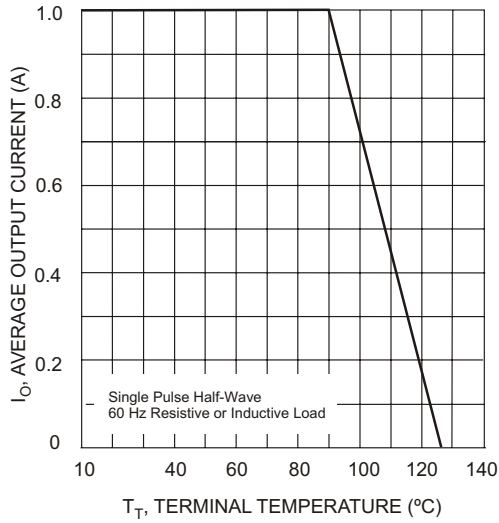


Fig. 1 Forward Current Derating Curve

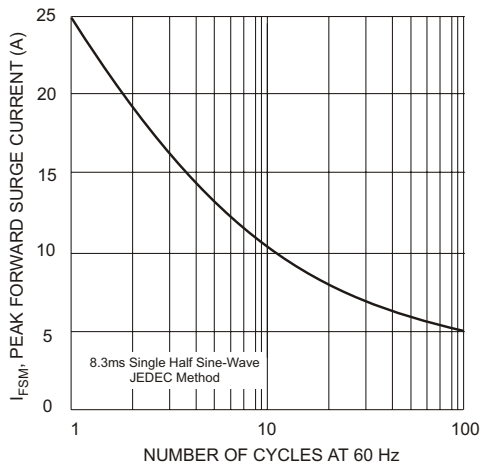


Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

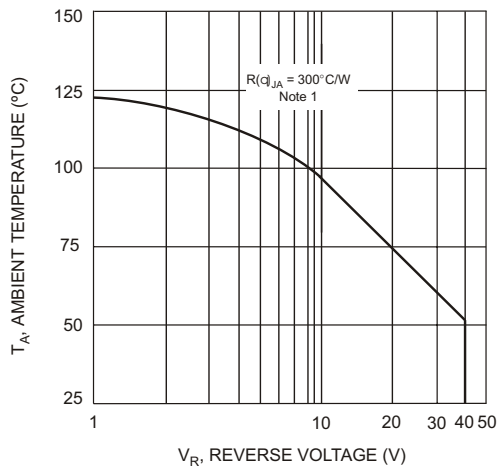


Fig. 5 Typical Safe Operating Area

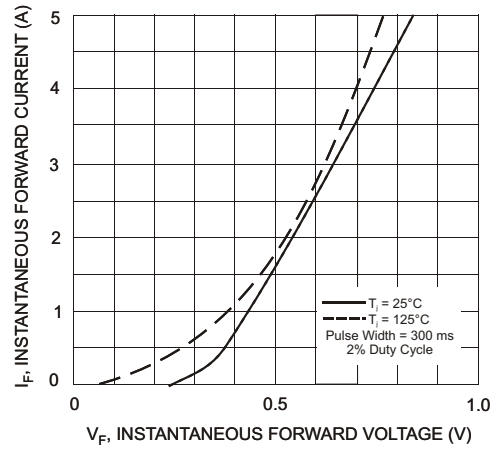


Fig. 2 Typical Forward Characteristics

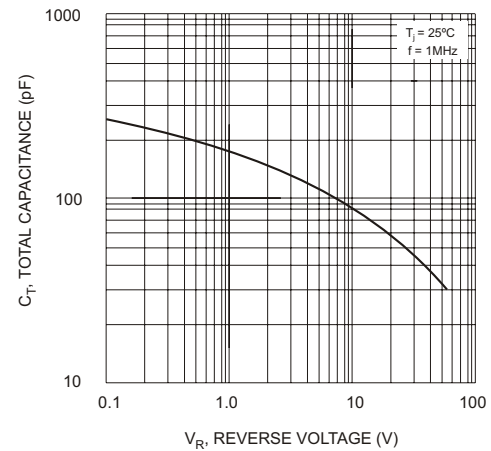


Fig. 4 Typical Total Capacitance

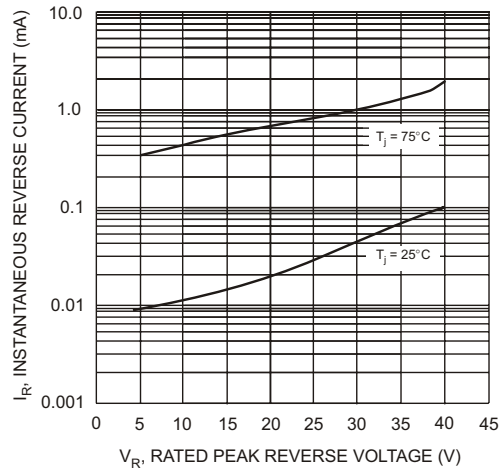


Fig. 6 Typical Reverse Characteristics