

SOD-123

Features:

- Extremely Low V_f
- Low Stored Charge, Majority Carrier Conduction
- Low Power Loss / High Efficient

Applications:

- For Use in Low Voltage, High Frequency Inverters
- Free Wheeling and Polarity Protection Applications

Maximum Ratings:

Ratings at 25°C unless otherwise specified.

Parameter	Symbol	Value	Unit
Non-repetitive peak reverse voltage	V_{RSM}	48	V
Peak repetitive reverse voltage Working peak reverse voltage DC reverse voltage	V_{RRM} V_{RWM} V_R	40	V
RMS reverse voltage	$V_{R(RMS)}$	28	V
Average rectified output current	I_o	1	A
Peak forward surge current at $\approx 8.3ms$	I_{FSM}	25	A
Power dissipation	P_d	250	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	80	°C/W
Storage temperature	T_j, T_{STG}	-65 to +125	°C

Electrical Characteristics:

Ratings at 25°C unless otherwise specified

Parameter	Symbol	Min.	Max.	Unit	Test Condition
Reverse breakdown voltage	$V_{(BR)}$	40	-	V	$I_R=1mA$
Forward voltage	V_F	-	0.6 0.9	V	$I_F=1A$ $I_F=3A$
Reverse voltage leakage current	I_R	-	1	mA	$V_R=40V$
Diode capacitance	C_D	-	120	pF	$V_R=4V, f=1MHz$

Typical Characteristics:

$T_A = 25^\circ C$ unless otherwise specified

Fig. 1 - Forward Current Derating Curve

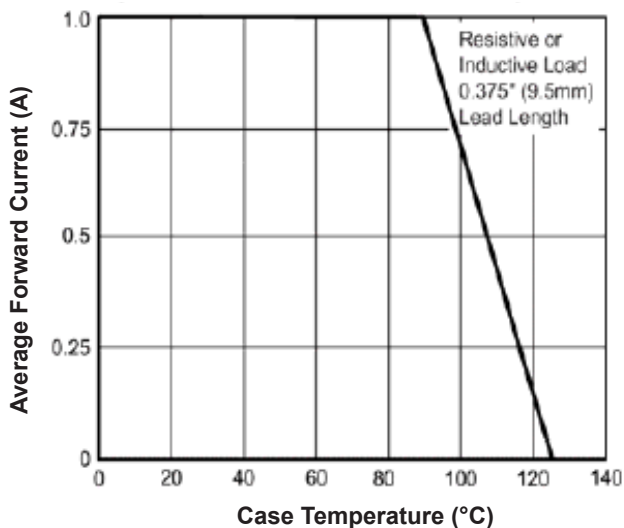


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

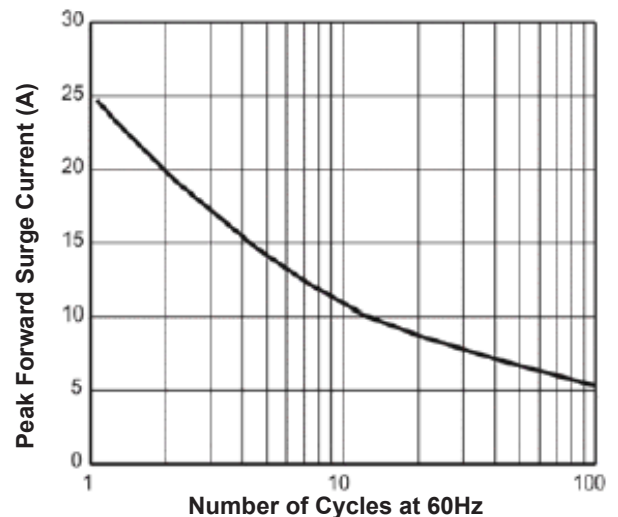


Fig. 3 - Typical Instantaneous Forward Characteristics

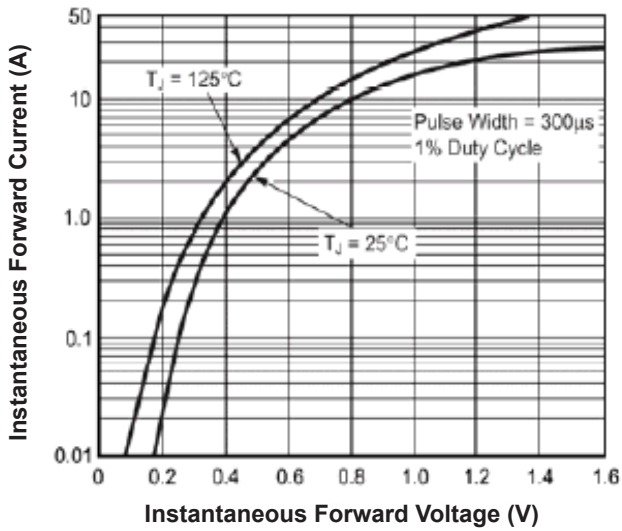


Fig. 4 - Typical Reverse Characteristics

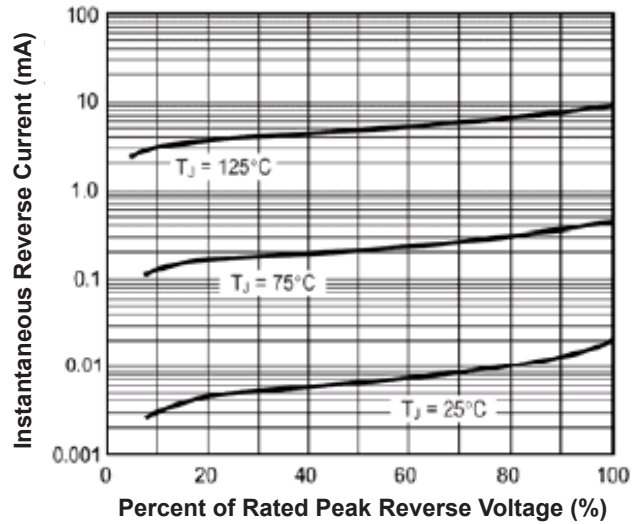


Fig. 5 - Typical Junction Capacitance

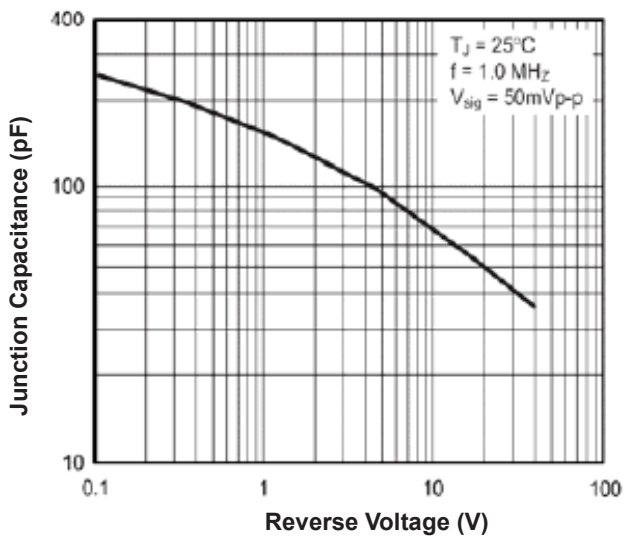
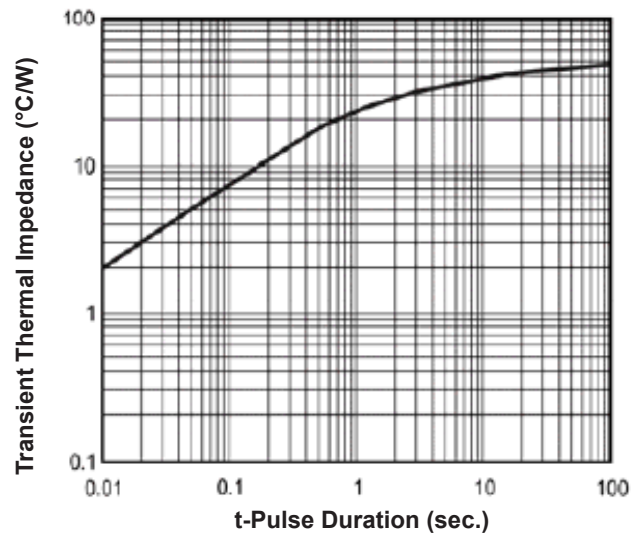
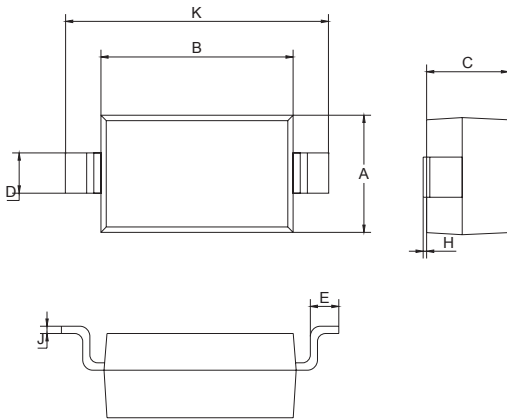


Fig. 6 - Typical Transient Thermal Impedance



Package Outline:

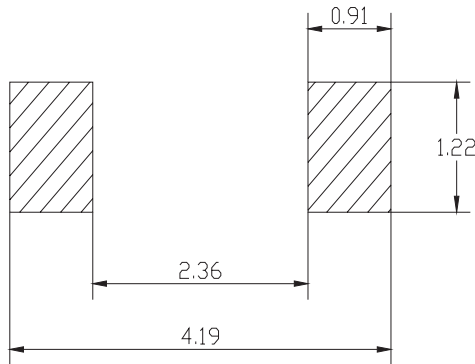
Plastic surface mounted package



SOD-123		
Dim.	Min.	Max.
A	1.4	1.8
B	2.55	2.85
C	1.15 Typ.	
D	0.5	0.6
E	0.3	0.4
H	0.02	0.1
J	0.1 Typ.	
K	3.55	3.85

Dimensions : Millimetres

Soldering Footprint:



Dimensions : Millimetres

Package Information:

Device	Package	Shipping
1N5819HW-7-F	SOD-123	3,000 / Tape & Reel

Part Number Table

Description	Part Number
Schottky Barrier Diode	1N5819HW-7-F

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