

FEATURES

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Low Capacitance

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
 Marking Code: S4
 Simplified outline SOD-123 and symbol

MECHANICAL DATA

- Case: SOD-523
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 16mg/0.00056oz

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbols	1N5819WT
Peak Repetitive Reverse Voltage	V_{RRM}	40V
RMS reverse voltage	V_{RMS}	28V
Working Peak Reverse Voltage	V_{DC}	40V
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	13A
Maximum Instantaneous Forward Voltage $I_F=20mA$ $I_F=200mA$	V_F	0.37 V 0.60
Power Dissipation	P_D	400 mW
Reverse current $V_R=30V$ $V_R=20V$ $V_R=10V$	I_R	5 - uA -
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	300°C/W
Reverse voltage $I_R=100\mu A$ 1N5819W	$V_{(BR)}$	40V
Reverse recovery time $I_F=I_R=200mA, I_{rr}=0.1 \times I_R, R_L=100\Omega$	t_{rr}	10ns
Forward Continuous Current	I_{FM}	350mA
Total capacitance $V_R=0V, f=1MHz$	C_{tot}	28pF
Junction temperature	T_j	125°C
Storage temperature	T_{stg}	-55 ~ +150°C

Fig.1 Power Derating Curve

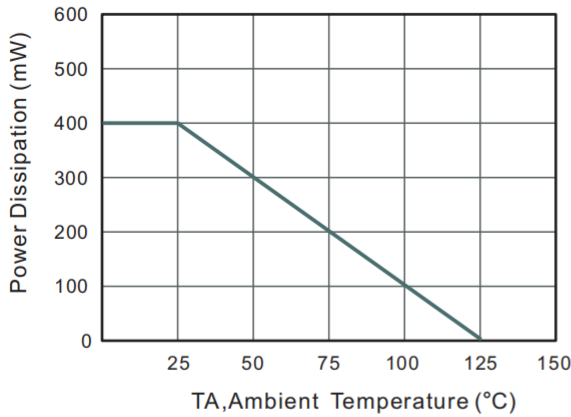


Fig.2 Typical Reverse Characteristics

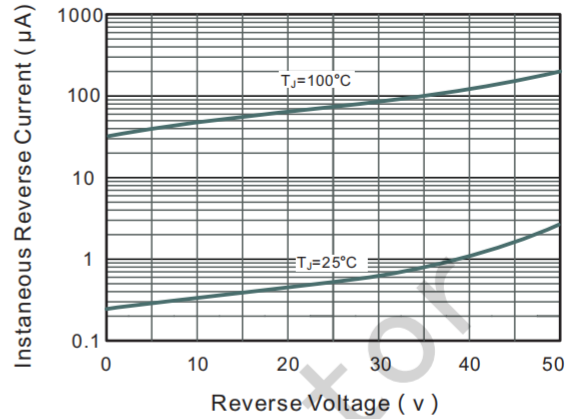


Fig.3 Forward Characteristics

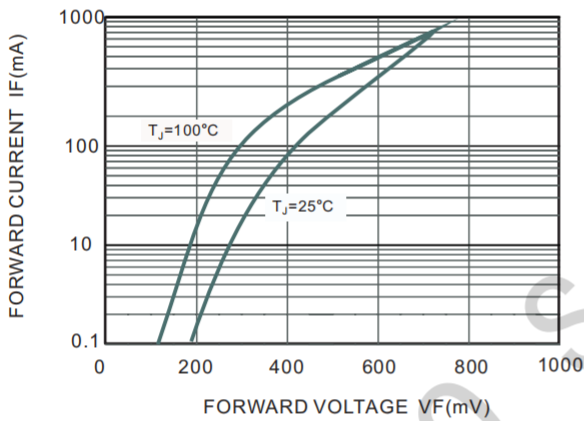


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

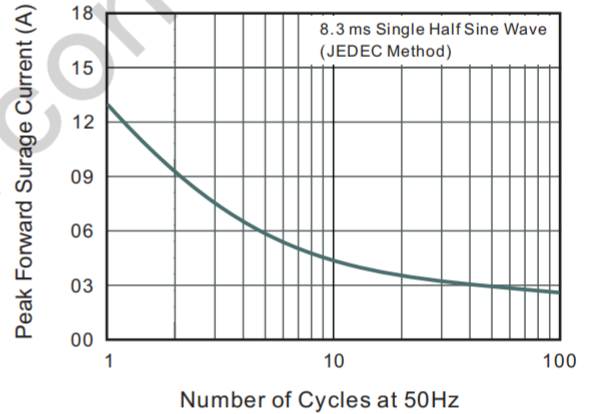


Fig.5 Typical Junction Capacitance

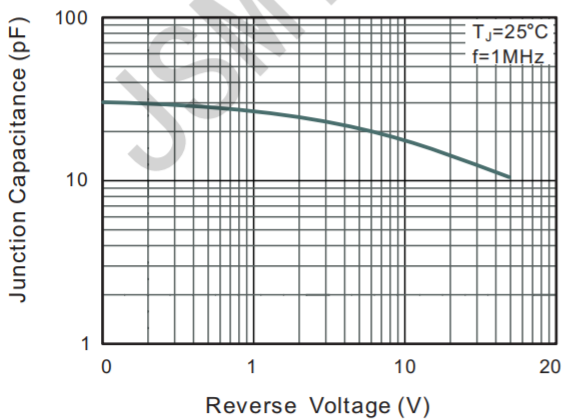
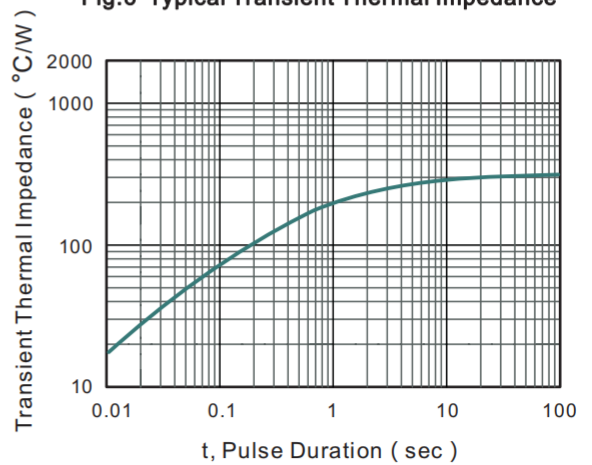
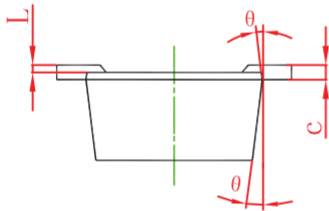
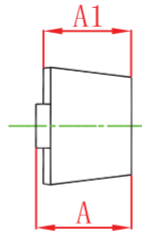
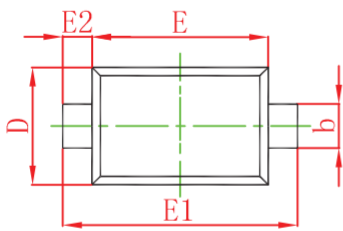


Fig.6 Typical Transient Thermal Impedance



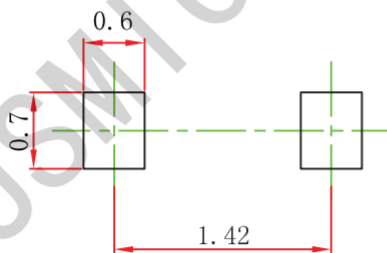
Package Information

SOD-523



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

SOD-523 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.