

1N5819WS

DATASHEET

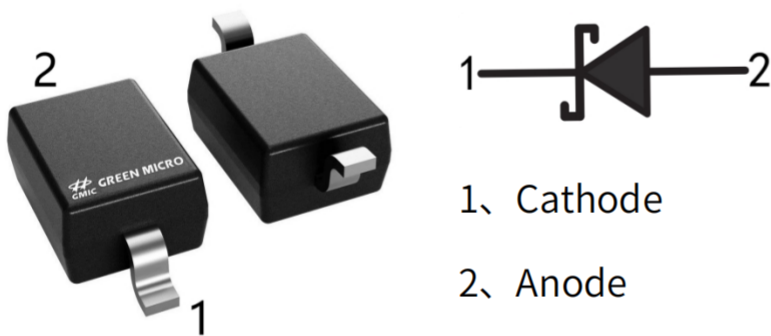
Specification Revision History:

Version	Date	Description
V1.0	2021/06	New
V1.1	2023/08	Modify Ordering Information
V1.2	2024/02	Modify Ordering Information
V1.3	2025/05	Add application precautions and overall typesetting.

FEATURES

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

TOP VIEW AND PINNING



SOD-323

ORDERING INFORMATION

Product Model	Package Type	Packing	Packing Qty
1N5819WS(GMIC)	SOD-323	REEL	3000PCS/REEL
1N5819WS	SOD-323	REEL	3000PCS/REEL

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	1N5819WS	1N5818WS	1N5817WS	Units
Peak Repetitive Reverse Voltage	V_{RRM}	40	30	20	V
RMS reverse voltage	V_{RMS}	28	21	14	V
Working Peak Reverse Voltage	V_{DC}	40	30	20	V
Peak Forward Surge Current , 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	13			A
Maximum Instantaneous Forward Voltage $I_F=20\text{ mA}$ $I_F=200\text{mA}$	V_F	0.37 0.60			V
Power Dissipation	P_D	200			mW
Reverse current 1N5819WS, $V_R=30\text{V}$ 1N5818WS, $V_R=20\text{V}$ 1N5817WS, $V_R=10\text{V}$	I_R	5 – –	– 5 –	– – 5	uA
Thermal Resistance , Junction to Ambient Air	$R_{\theta JA}$	300			°C/W
Reverse voltage $I_R=100\text{uA}$ 1N5819WS 1N5818WS 1N5817WS	$V_{(BR)R}$	40 30 20			V
Reverse recovery time $I_F=I_R=200\text{mA}$, $I_{rr}=0.1I_R$, $R_L=100\Omega$	t_{rr}	10			ns
Forward Continuons Current	I_{FM}	350			mA
Total capacitance $V_R=0\text{V}$, $f=1\text{ MHz}$	C_{tot}	50			pF
Junction temperature	T_j	125			°C
Storage temperature	T_{stg}	-55 ~ +150			°C

TYPICAL CHARACTERISTICS

Fig.1 Power Derating Curve

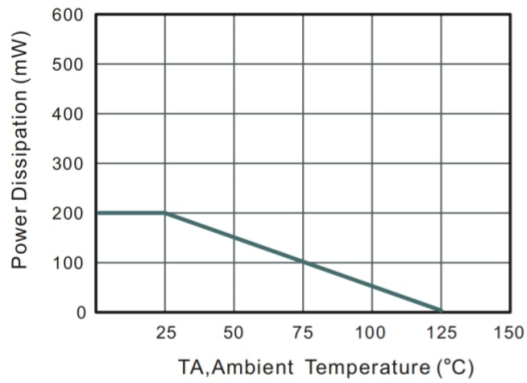


Fig.2 Typical Reverse Characteristics

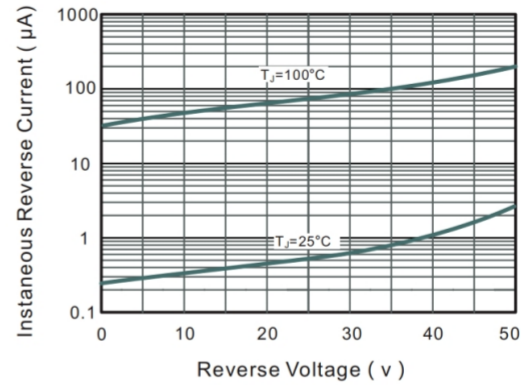


Fig.3 Forward Characteristics

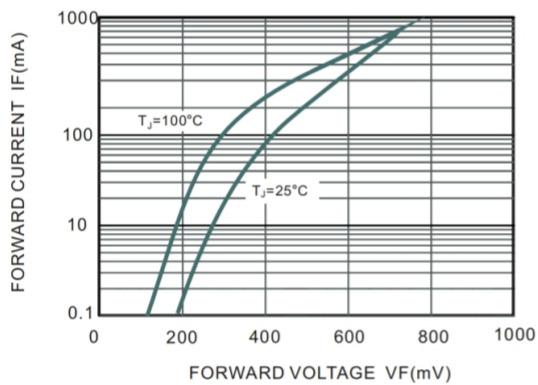


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

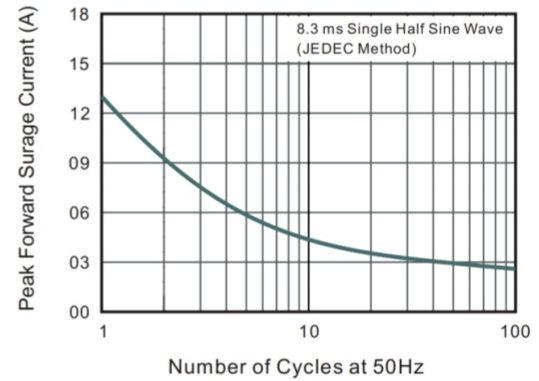


Fig.5 Typical Junction Capacitance

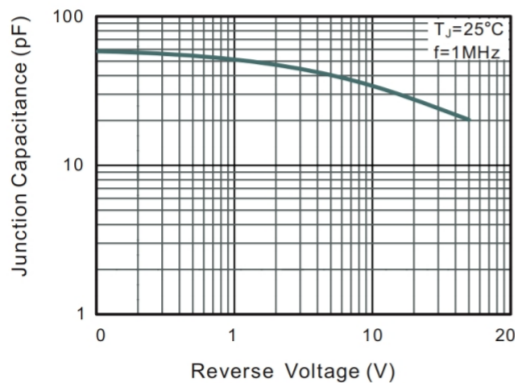
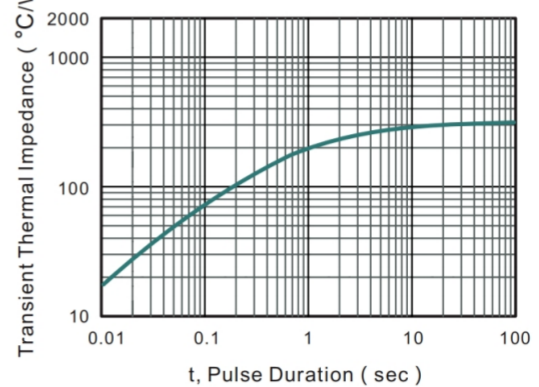
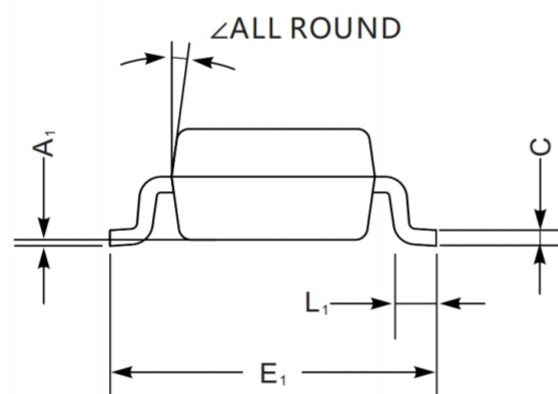
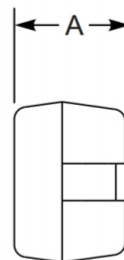
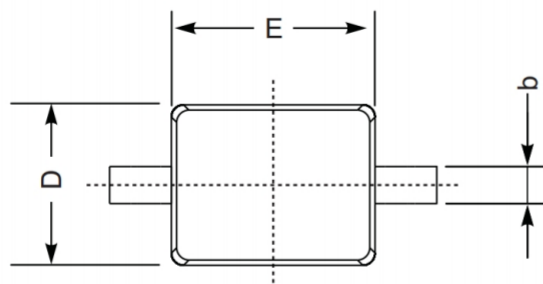


Fig.6 Typical Transient Thermal Impedance



OUTLINE DIMENSIONS

SOD-323



Symbol	Dimensions In Millimeters		Dimensions In Mil	
	Min	Max	Min	Max
A	0.8	1.1	32	43
C	0.08	0.15	3.1	5.9
D	1.2	1.4	47	55
E	1.4	1.8	63	70
E ₁	2.55	2.75	100	108
b	0.25	0.4	9.8	16
L ₁	0.2	0.45	7.9	16
A ₁	—	0.2	—	8
∠	9°			

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