1N5819W

DATASHEET

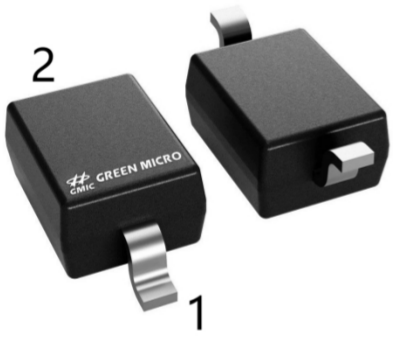
Specification Revision History:

Version	Date	Description
V1.0	2021/06	New
V1.1	2023/05	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



1、Cathode

2、Anode

SOD-123

ORDERING INFORMATION

Product Model	Package Type	Packing	Packing Qty
1N5819W(GMIC)	SOD-123	REEL	3000PCS/REEL
1N5819W	SOD-123	REEL	3000PCS/REEL

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	1N5819W	1N5818W	1N5817W	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,8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	13			A
Maximum Instantaneous Forward Voltage I_F =20 mA	V_F	0.37			V
Maximum Instantaneous Forward Voltage I_F =200mA		0.60			
Power Dissipation	P_D	400			mW
Reverse current V_R =30V	I_R	5	–	–	uA
Reverse current V_R =20V		–	5	–	
Reverse current V_R = 10V		–	–	5	
Thermal Resistance , Junction to Ambient Air	$R_{\theta JA}$	300			°C/W
Reverse voltage I_R= 100uA 1N5819W	$V_{(BR)}$	40			V
Reverse voltage I_R= 100uA 1N5818W		30			
Reverse voltage I_R= 100uA 1N5817W		20			
Reverse recovery time $I_F = I_R$ =200mA , I_{rr}=0. 1xIR , R_L = 100Ω	trr	10			ns
Forward Continuons Current	I_{FM}	350			mA
Total capacitance V_R =0V.f= 1 MHZ	C_{tot}	28			pF
Junction temperature	T_j	125			°C
Storage temperature	T_{stg}	-55 ~ +150			°C

TYPICAL CHARACTERISTICS

Fig.1 Forward Current Derating Curve

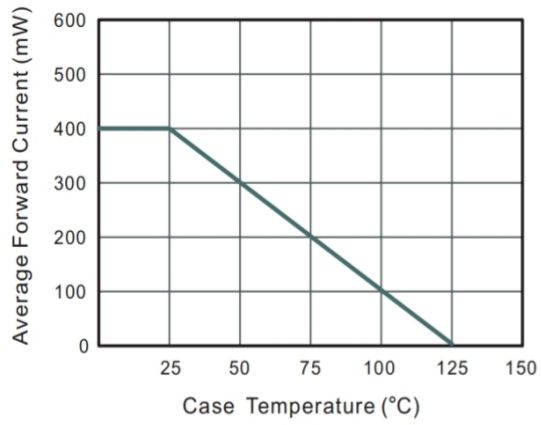


Fig.2 Typical Reverse Characteristics

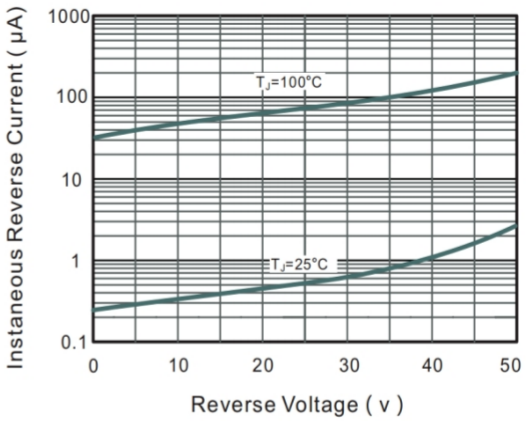


Fig.3 Forward Characteristics

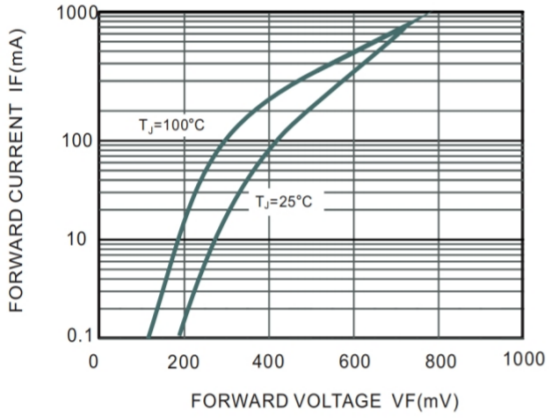


Fig.4 Maximum Non-Repetitive Peak Forward Surage Current

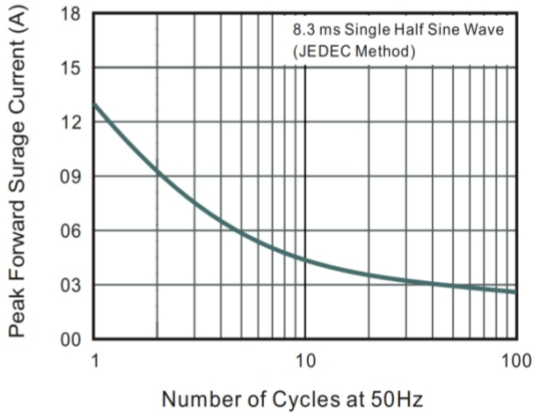


Fig.5 Typical Junction Capacitance

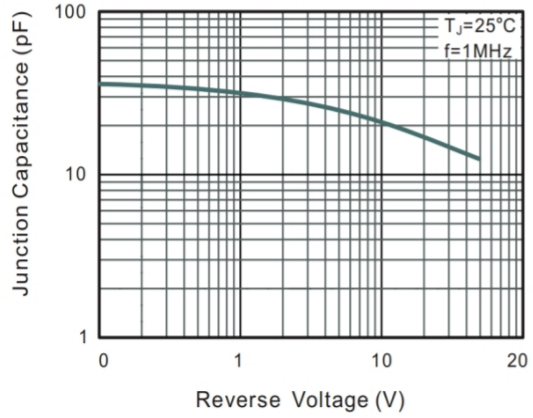
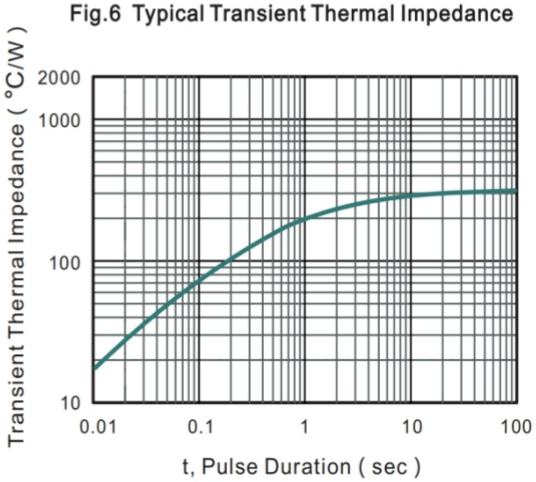
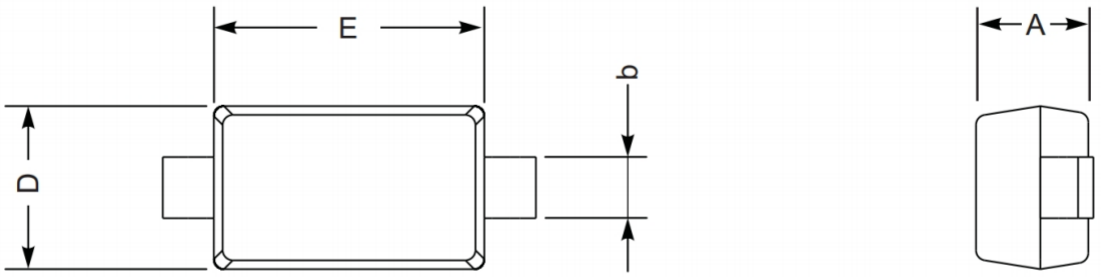


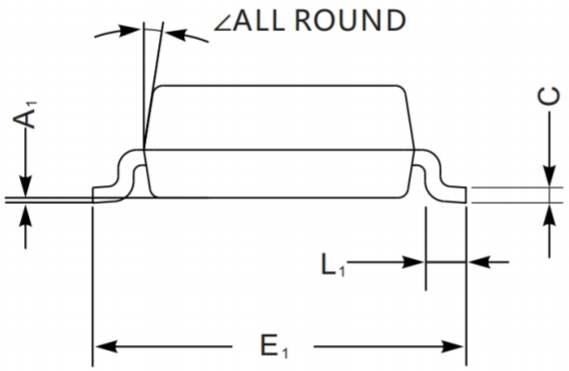
Fig.6 Typical Transient Thermal Impedance



Outline Dimensions

SOD-123





Symbol	Dimensions In Millimeters		Dimensions In Mil	
	Min	Max	Min	Max
A	0.90	1.30	35	51
C	0.09	0.22	3.5	8.7
D	1.50	1.80	59	71
E	2.50	2.80	98	110
E_1	3.60	3.90	142	154
L_1	0.25	0.45	10	18
b	0.50	0.70	20	28
A_1	—	0.20	—	8
∠	9°			

Important Notice

- Green Micro chip reserves the right to change products and documents without notice. Customers should obtain and verify the completeness of the latest technical information before placing orders. Meanwhile, Green Micro chip shall not assume any responsibility or obligation for non-officially revised documents.

- Any parameters in the entire product specification are for reference only, and actual application testing shall prevail. When customers use the products for system design, they must comply with safety regulations and independently assume the following responsibilities: selecting suitable Green Micro chip products according to application requirements; completing design verification and full-link testing of the application; and ensuring that the application complies with safety regulations or other requirements of the target market. Customers shall bear all personal or property losses caused by design defects or illegal operations, which shall have no relation to Green Micro chip.

- Green Micro chip products are prohibited from being used in scenarios such as life support, military equipment, and key aerospace applications. All accidents and legal liabilities arising from out-of-scope use shall be borne by the user, and Green Micro chip shall not be held responsible.

- All technical resources of Green Micro chip (including data sheets and reference designs) are provided "as is", without guarantee of no defects or universality, and without any express or implied warranties. The documents are only authorized for product development and research described in this document. Unauthorized use of intellectual property, public reproduction, and reverse engineering are strictly prohibited. All claims and losses caused by illegal use shall be borne by the user, and Green Micro chip shall not be liable.