

SCHOTTKY BARRIER DIODE

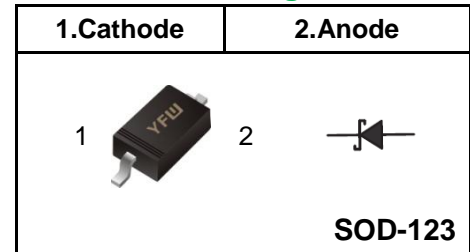
FEATURES

- ◆ Low Forward Voltage Drop
- ◆ Guard Ring Construction for Transient Protection
- ◆ Negligible Reverse Recovery Time
- ◆ Low Capacitance
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ◆ Case: SOD-123
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 16mg / 0.00056oz

Pinning



Marking Code

1N5819W	S4
1N5818W	S5
1N5817W	S6

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	V_F	$I_F=20mA$	0.37		V
		$I_F=200mA$	0.60		
Power Dissipation	P_D	400			mW
Reverse current	I_R	1N5819W, $V_R=30V$	5	-	uA
		1N5818W, $V_R=20V$	-	5	
		1N5817W, $V_R=10V$	-	-	
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	300			°C/W
Reverse voltage $I_R=100uA$	$V_{(BR)R}$	1N5819W	40		V
		1N5818W	30		
		1N5817W	20		
Reverse recovery time $I_F=I_R=200mA, I_{rr}=0.1 \times I_R, R_L=100\Omega$	T_{rr}	10			nS
Forward Continuous Current	I_{FM}	350			mA
Total capacitance $V_R=0V, f=1MHz$	C_{tot}	28			pF
Junction temperature	T_j	125			°C
Storage temperature	T_{stg}	-55 ~ +150			°C

Fig.1 Power Derating Curve

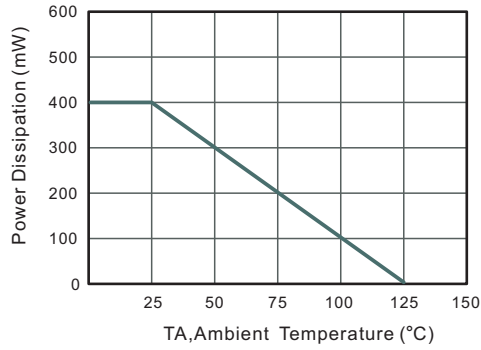


Fig.2 Typical Reverse Characteristics

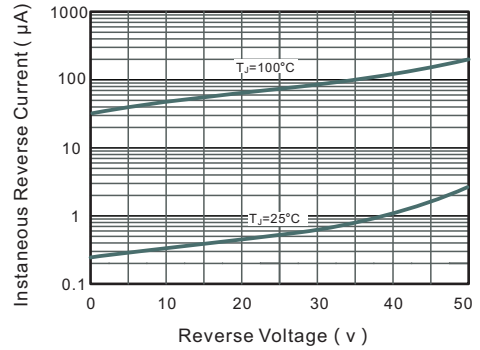


Fig.3 Forward Characteristics

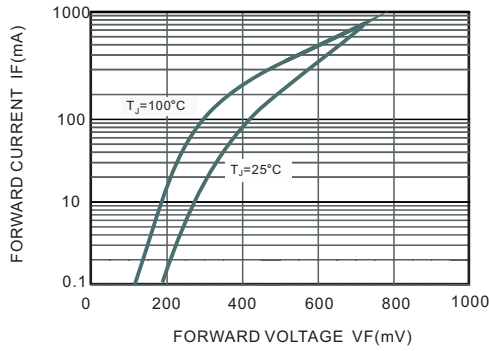


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

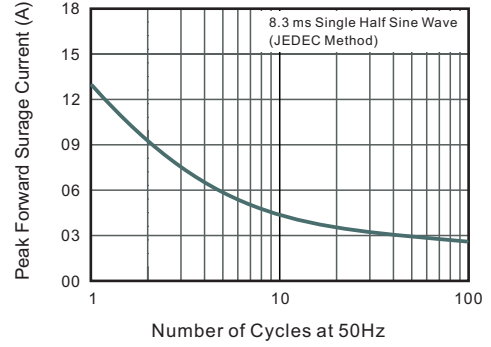


Fig.5 Typical Junction Capacitance

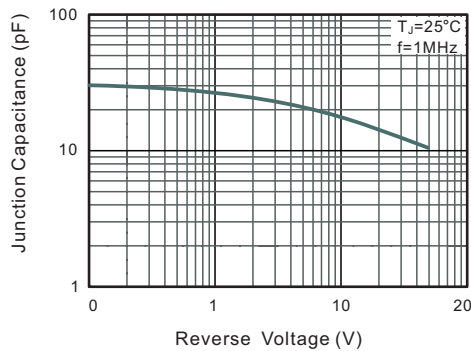
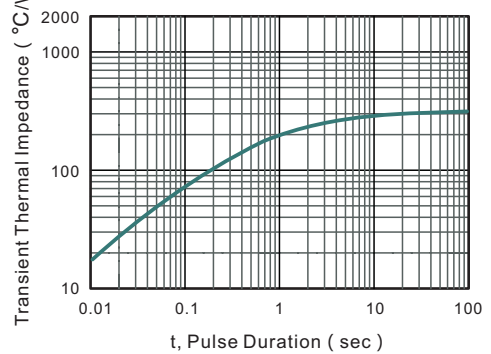


Fig.6 Typical Transient Thermal Impedance



Ordering information

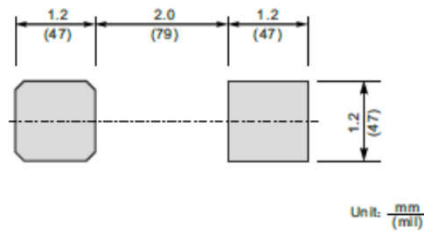
Package	Packing Description	Packing Quantity
SOD-123	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

Package Dimensions

SOD-123

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.3	35	51
C	0.09	0.22	3.5	8.7
D	1.5	1.8	59	71
E	2.5	2.8	98	110
E1	3.6	3.9	142	154
b	0.5	0.7	20	28
L1	0.25	0.45	10	18
A1	-	0.2	-	8
∠	9°			

The recommended mounting pad size



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