

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

SOD-323
MECHANICAL DATA

- ◆ Case: SOD-323
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 5.48mg / 0.00019oz

Marking Code

Marking Code	
1N5819WS	S4
1N5818WS	S5
1N5817WS	S6

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, 8.3ms Single Half Sine-wave Superimposed On Rated Load(JEDEC method)		I _{FSM}	13			A
Maximum Instantaneous Forward Voltage	I _F =20mA	V _F	0.37			V
	I _F =200mA		0.60			
Power Dissipation		P _D	200			mW
Reverse current	1N5819WS, V _R =30V	I _R	5	-	-	uA
	1N5818WS, V _R =20V		-	5	-	
	1N5817WS, V _R =10V		-	-	5	
Thermal Resistance, Junction to Ambient Air		R _{θJA}	300			°C/W
Reverse voltage I _R =100uA	1N5819WS	V _{(BR)R}	40			V
	1N5818WS		30			
	1N5817WS		20			
Reverse recovery time I _F =I _R =200mA, I _{rr} =0.1xI _R , R _L =100Ω		T _{rr}	10			nS
Forward Continuons Current		I _{FM}	350			mA
Total capacitance V _R =0V, f=1MHZ		C _{tot}	50			pF
Junction temperature		T _j	125			°C
Storage temperature		T _{stg}	-55 ~ +150			°C

Fig.1 Power Derating Curve

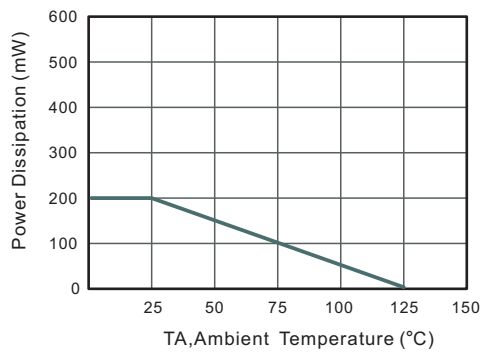


Fig.2 Typical Reverse Characteristics

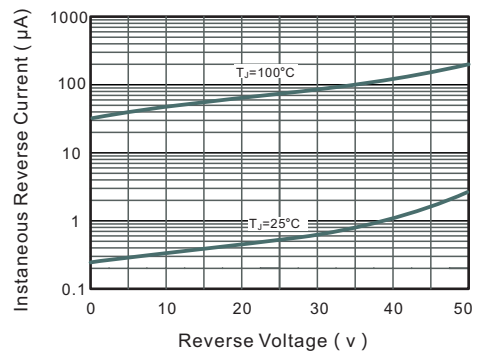


Fig.3 Forward Characteristics

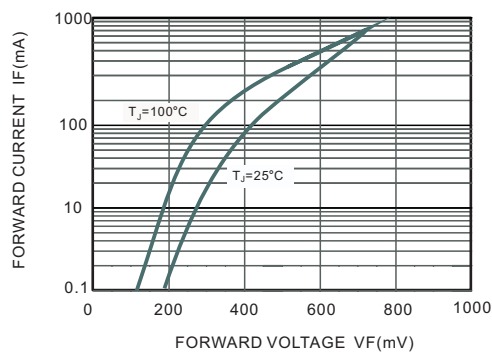


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

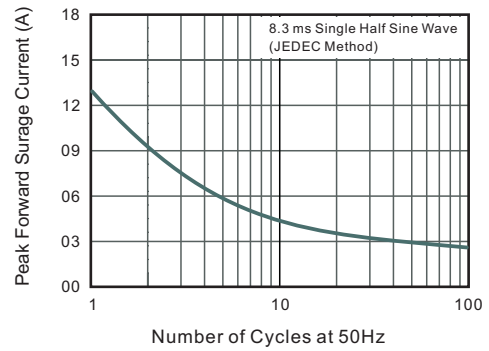


Fig.5 Typical Junction Capacitance

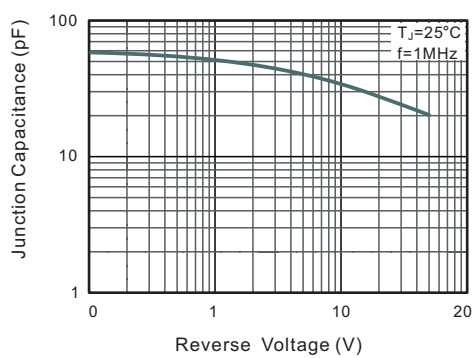
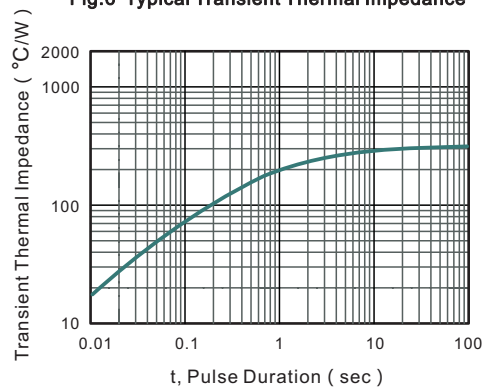
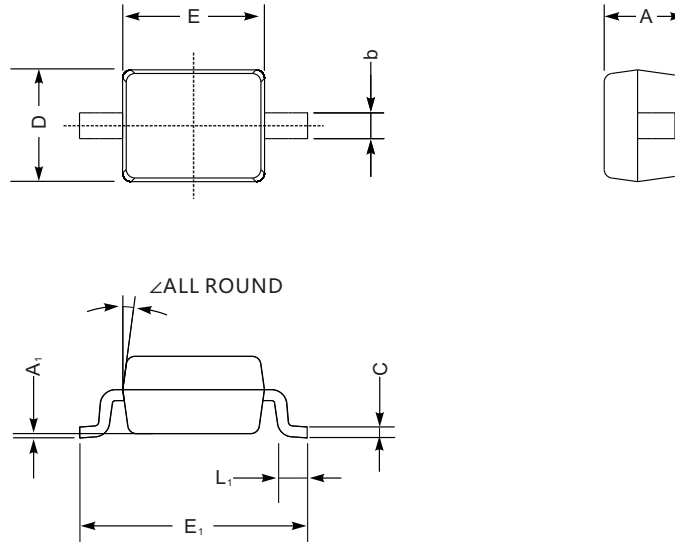


Fig.6 Typical Transient Thermal Impedance

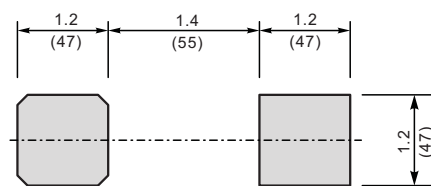


Package Outline
SOD-323

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	E ₁	b	L ₁	A ₁	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	

The recommended mounting pad size

 Unit: $\frac{\text{mm}}{(\text{mil})}$