



SOD-123

**Schottky Barrier Diode****FEATURES**

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

MECHANICAL DATA

- Case: SOD-123
- 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.



1.Cathode 2. Anode

Parameter	Symbols	SD103AW	SD103BW	SD103CW	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 I _F =200mA	V _F	0.37 0.60			V
Power Dissipation	P _D	400			mW
Reverse current V _R =30V V _R =20V V _R =10V	I _R	5 — —	— 5 —	— — 5	uA
Thermal Resistance, Junction to Ambient Air	R _{θJA}	300			°C/W
Reverse voltage I _R =100uA	V _(BR)	SD103AW SD103BW SD103CW	40 30 20		V
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}	28			pF
Junction temperature	T _j	125			°C
Storage temperature	T _{stg}	-55 ~ +150			°C

Fig.1 Power Derating Curve

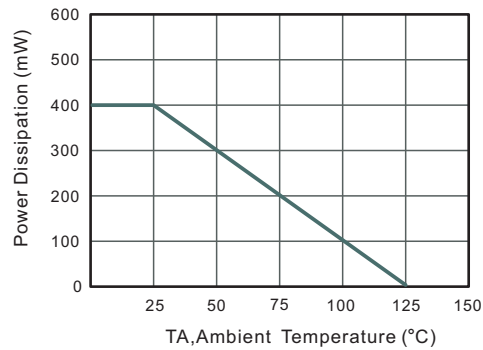


Fig.2 Typical Reverse Characteristics

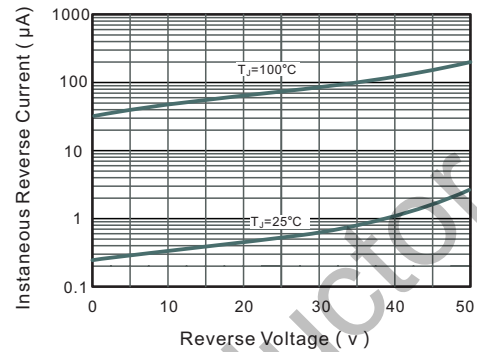


Fig.3 Forward Characteristics

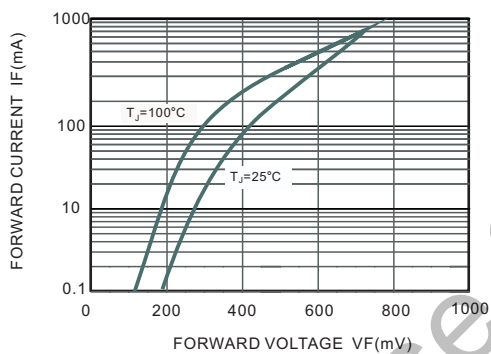


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

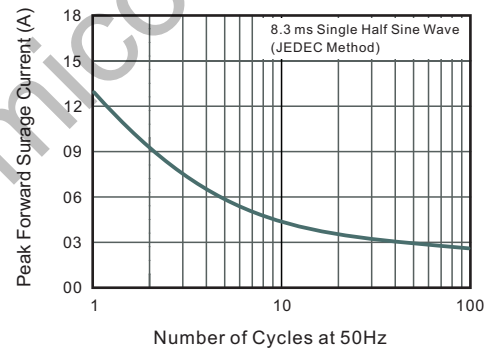


Fig.5 Typical Junction Capacitance

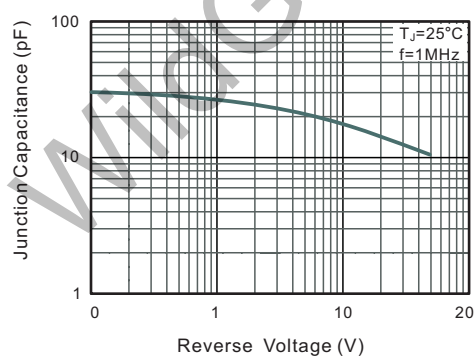
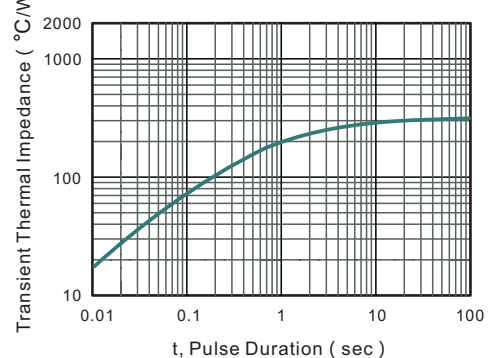


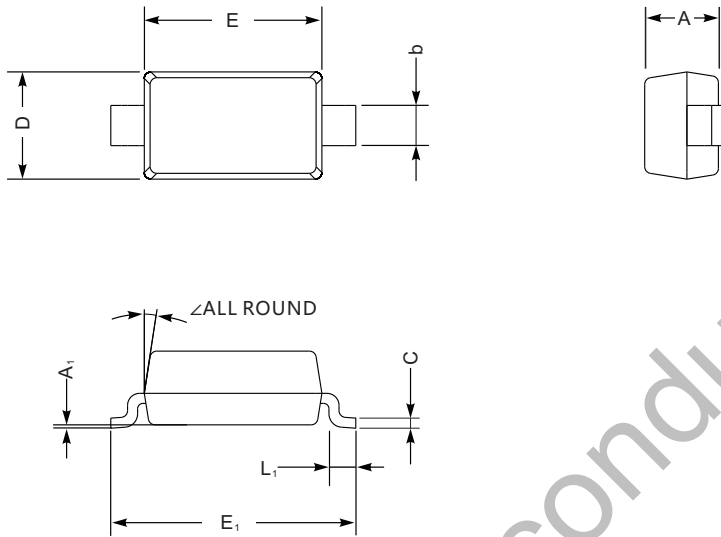
Fig.6 Typical Transient Thermal Impedance



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

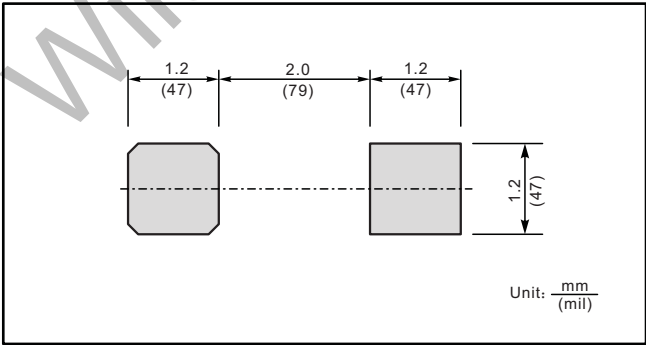
SOD-123



SOD-123 mechanical data

UNIT		A	C	D	E	E ₁	L ₁	b	A ₁	∠
mm	max	1.3	0.22	1.8	2.8	3.9	0.45	0.7	0.2	9°
	min	0.9	0.09	1.5	2.5	3.6	0.25	0.5	—	
mil	max	51	8.7	71	110	154	18	28	8	
	min	35	3.5	59	98	142	10	20	—	

The recommended mounting pad size



Marking

Type number	Marking code
SD103AW	S4
SD103BW	S5
SD103CW	S6