

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

1.Cathode	2.Anode
SOD-123	

Marking Code

SD103AW	S4
SD103BW	S5
SD103CW	S6

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

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

Fig.1 Power Derating Curve

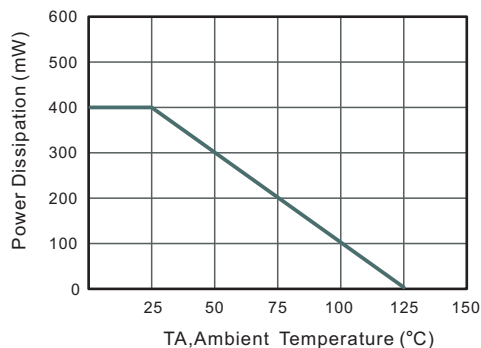


Fig.2 Typical Reverse Characteristics

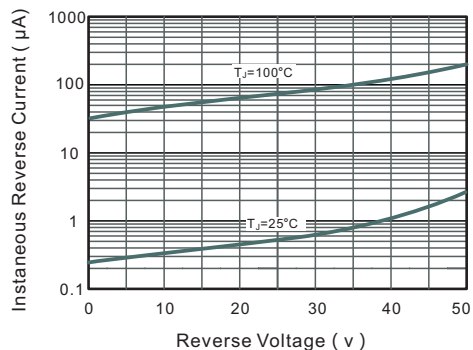


Fig.3 Forward Characteristics

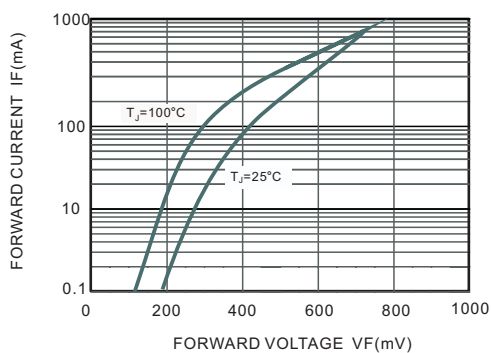


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

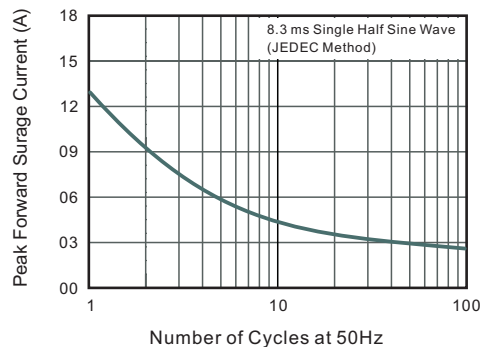


Fig.5 Typical Junction Capacitance

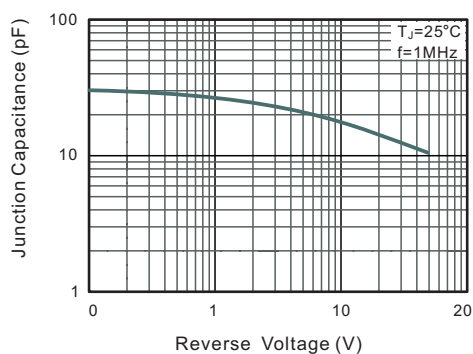
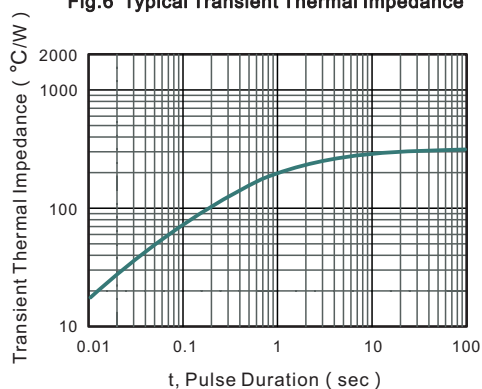


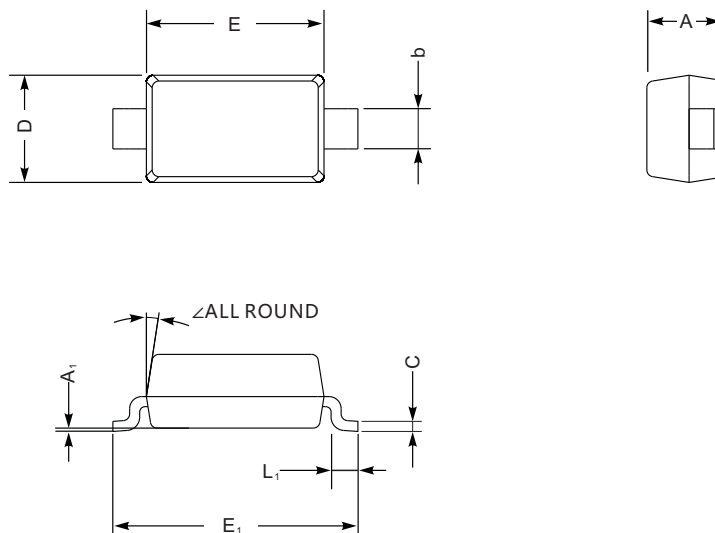
Fig.6 Typical Transient Thermal Impedance



Package Outline

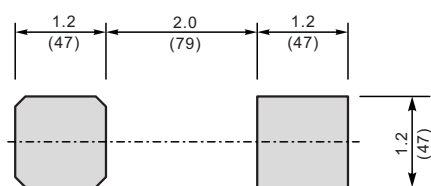
SOD-123

Plastic surface mounted package; 2 leads



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



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

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOD-123	Tape/Reel, 7" reel	3000	EIA-481-1