Schottky Barrier Diode

FEATURES

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

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

Top View

Simplified outline SOD-323 and symbol

MECHANICAL DATA

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

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbols	SD103AWS	SD103BWS	SD103CWS	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
Maximum Instantaneous Forward Voltage I_F=200mA	V_F	0.60			V
Power Dissipation	P_D	200			mW
Reverse current SD103AWS,V_R=30V	I_R	5	–	–	uA
Reverse current SD103BWS,V_R=20V	I_R	–	5	–	uA
Reverse current SD103CWS,V_R=10V	I_R	–	–	5	uA
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	300			°C/W
Reverse voltage I_R=100uA SD103AW	$V_{(BR)R}$	40			V
Reverse voltage I_R=100uA SD103BW	$V_{(BR)R}$	30			V
Reverse voltage I_R=100uA SD103CW	$V_{(BR)R}$	20			V
Reverse recovery time I_F=I_R=200mA,Irr=0.1xI_R,R_L=100Ω	trr	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			℃
Storage temperature	T_{stg}	-55 ~ +150			℃

Fig.1 Power Derating Curve

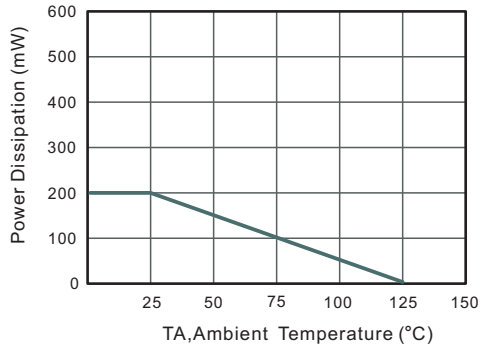


Fig.2 Typical Reverse Characteristics

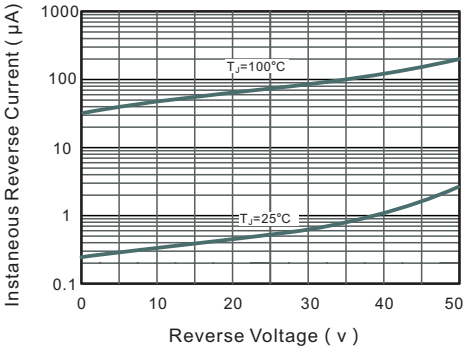


Fig.3 Forward Characteristics

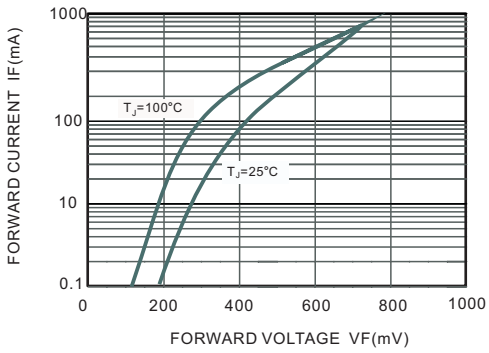


Fig.4 Maximum Non-Repetitive Peak Forward Surage Current

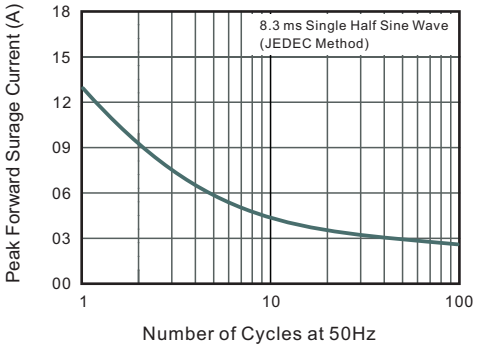


Fig.5 Typical Junction Capacitance

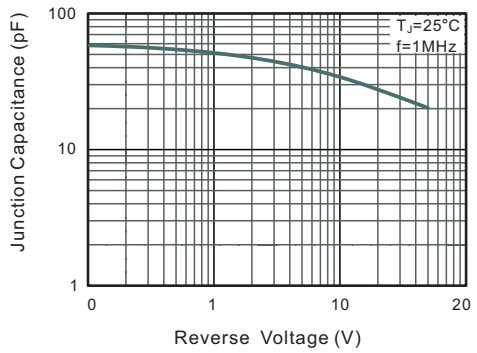
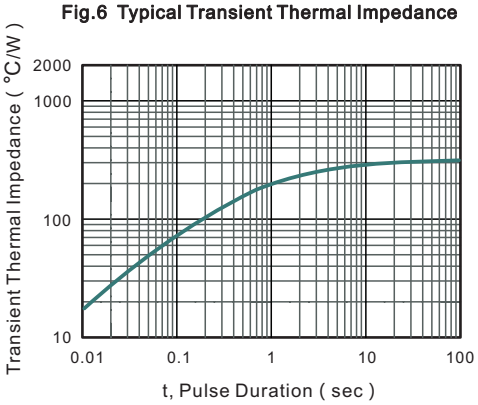


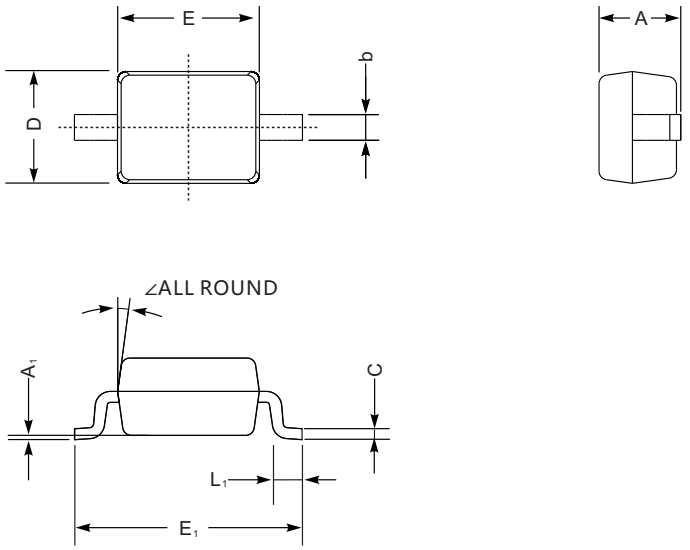
Fig.6 Typical Transient Thermal Impedance



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

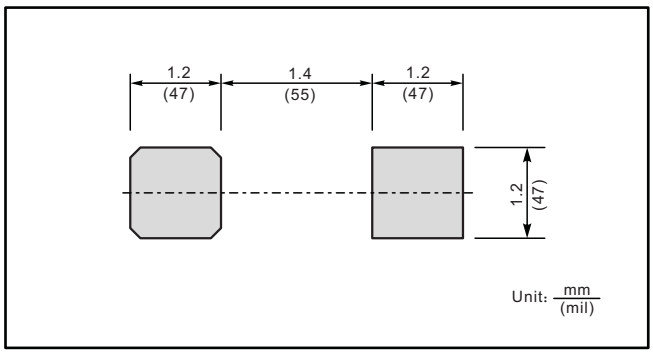
SOD-323



SOD-323 mechanical data

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



Marking

Type number	Marking code
SD103AWS	S4
SD103BWS	S5
SD103CWS	S6