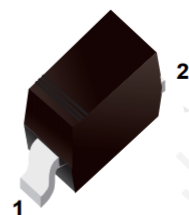


Features

- Very Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance


SOD-323

 1.Cathode
 2.Anode

Top View

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Single phase, half wave, 60Hz, resistive or inductive load. For capacitance load, derate current by 20%.

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	21	
Average Rectified Output Current	I_O	1	A
Forward Current $t = 8.3$ ms Half Sinewave	I_{FSM}	5.5	
Power Dissipation	P_D	235	mW
Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	426	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature range	T_{stg}	-55 to 150	

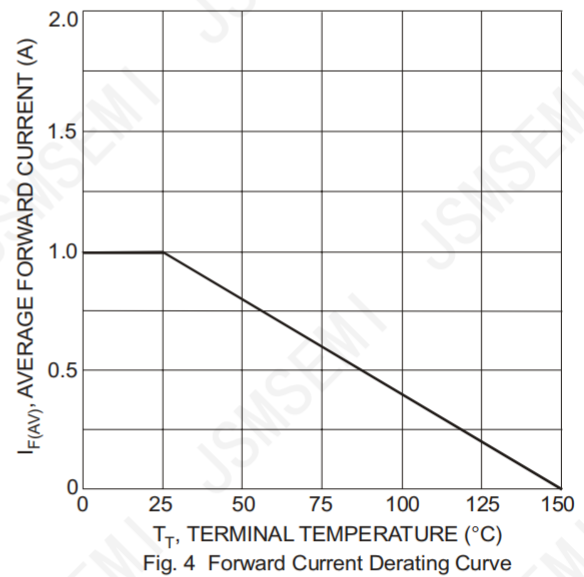
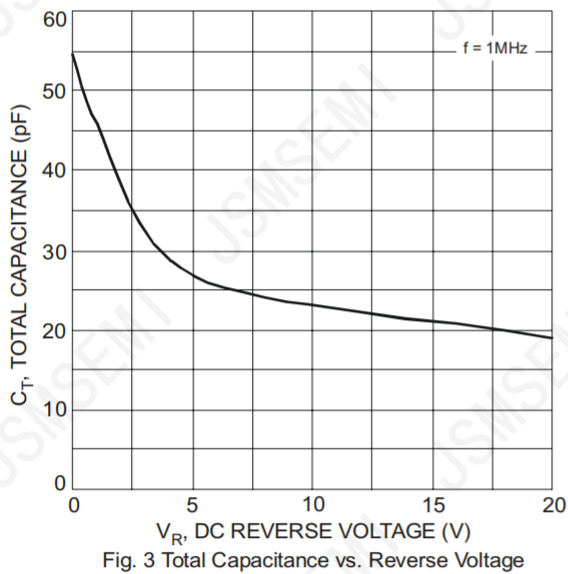
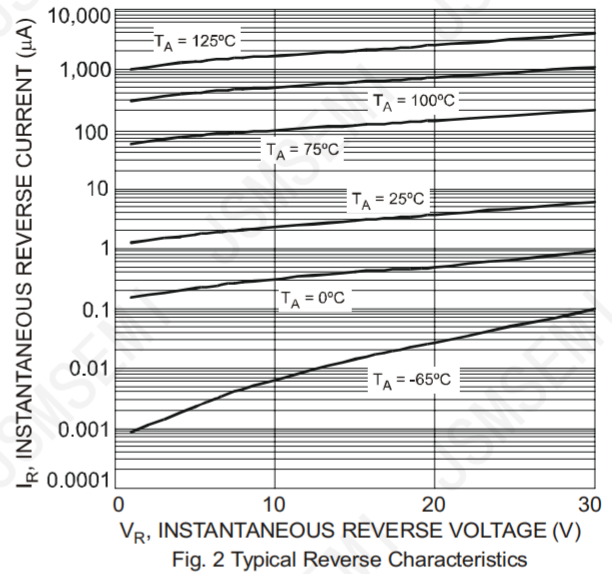
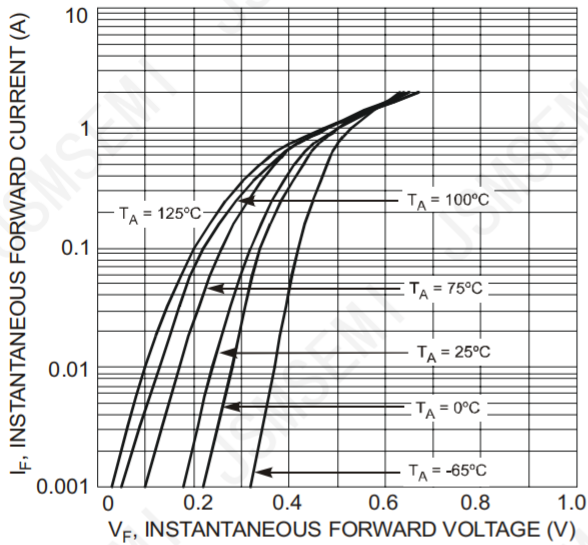
Note 1: Part mounted on FR-4 PC board with recommended pad layout

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

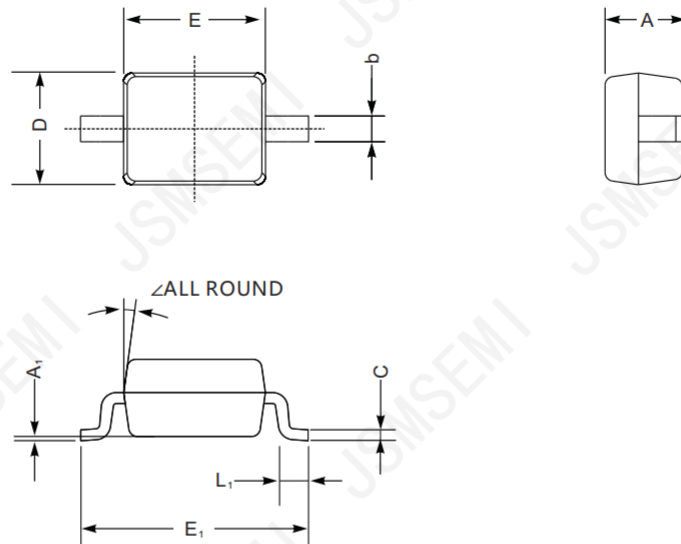
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage (Note 2)	V_R	$I_R = 500 \mu\text{A}$	30			V
Forward voltage	V_{F1}	$I_F = 10 \text{ mA}$			0.27	
	V_{F2}	$I_F = 100 \text{ mA}$			0.35	
	V_{F3}	$I_F = 1 \text{ A}$			0.55	
Leakage current (Note 2)	I_{R1}	$V_R = 5 \text{ V}$			10	μA
	I_{R2}	$V_R = 8 \text{ V}$			20	
	I_{R3}	$V_R = 15 \text{ V}$			50	
Total Capacitance	C_T	$V_R = 5 \text{ V}, f = 1 \text{ MHz}$		25		pF

Note 2: Short duration pulse test used to minimize self-heating effect.

Typical Characteristics



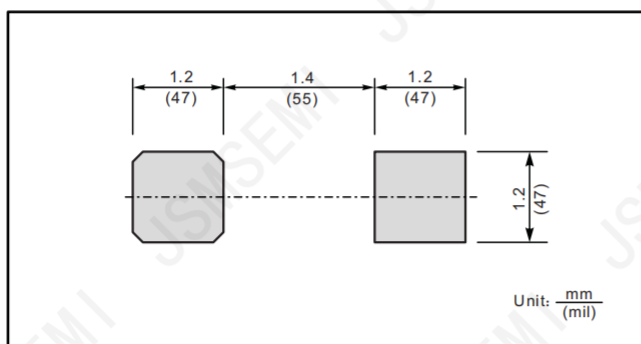
■ SOD-323



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



Revision History

Rev.	Change	Date
V1.0	Initial version	2/23/2024

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