



Features

- Bi-directional ESD protection of four lines
- 250Watts peak pulse power (tp = 8/20μs)
- Working voltage: 5V
- Junction Capacitance: 30pF(Typ)
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 ±30kV contact ±30kV air
- IEC 61000-4-5 (Lightning) 16A (8/20μs)

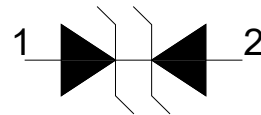
Applications

- Control & monitoring systems
- Portable electronics
- Servers, notebooks, and desktop PCs
- Set-top box
- Communication systems

Mechanical Data

- Package:SOD-323
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	Packing	Reel Size
PESD5V0S1BA	SOD-323		3000 Tape & Reel	7 inches

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

Parameters	Symbol	Min	Max	Unit
Peak pulse power ($t_p=8/20\mu\text{s}$)@ 25°C	Ppk	-	250	W
Peak pulse current ($t_p=8/20\mu\text{s}$)@ 25°C	IPP		16	A
ESD (IEC61000-4-2 air discharge) @ 25°C	VESD	-	± 30	kV
ESD (IEC61000-4-2 contact discharge) @ 25°C	VESD	-	± 30	kV
Junction temperature	TJ	-	125	$^{\circ}\text{C}$
Operating temperature	TOP	-40	85	$^{\circ}\text{C}$
Storage temperature	TSTG	-55	150	$^{\circ}\text{C}$
Lead temperature	TL	-	260	$^{\circ}\text{C}$

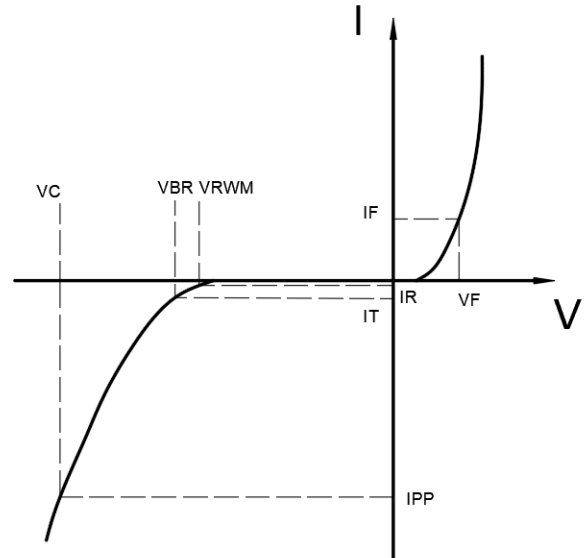
Electrical Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-off Voltage	VRWM				5	V
Reverse Breakdown Voltage	VBR	$I_T=1\text{mA}$	6			V
Reverse Leakage Current	IR	VRWM=5V			1	μA
Clamping Voltage	VC	IPP=1A; $t_p=8/20\mu\text{s}$		10		V
Clamping Voltage	VC	IPP=16A; $t_p=8/20\mu\text{s}$		18		V
Junction Capacitance	CJ	I/O to GND; VR=0V; f=1MHz		30	45	pF

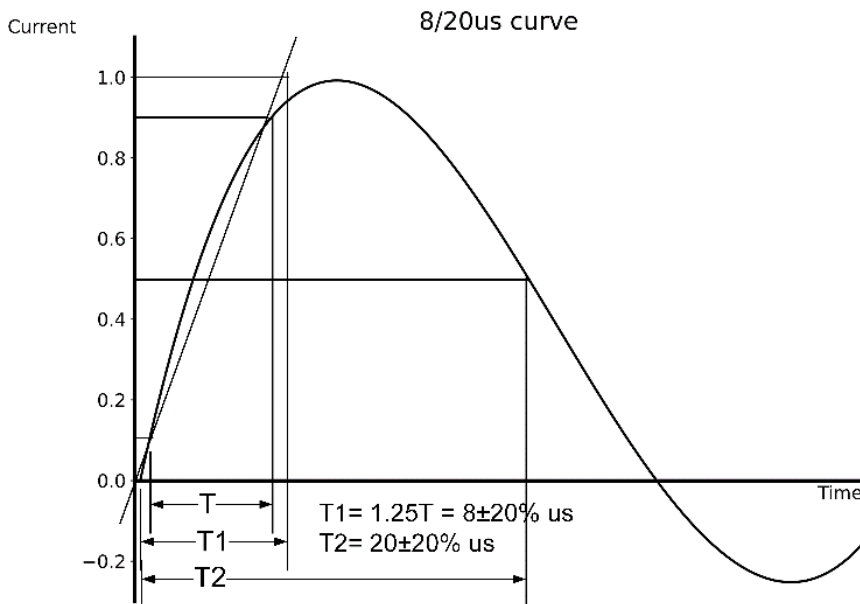


Electrical Parameters($T_A=25^\circ\text{C}$ unless otherwise Specified)

Symbol	Parameters
VRWM	Peak Reverse Working Voltage
IR	Reverse Leakage Current @ VRWM
VBR	Breakdown Voltage @ IT
IT	Test Current
IPP	Maximum Reverse Peak Pulse Current
VC	Clamping Voltage @ IPP
IF	Forward Current
VF	Forward Voltage @ IF

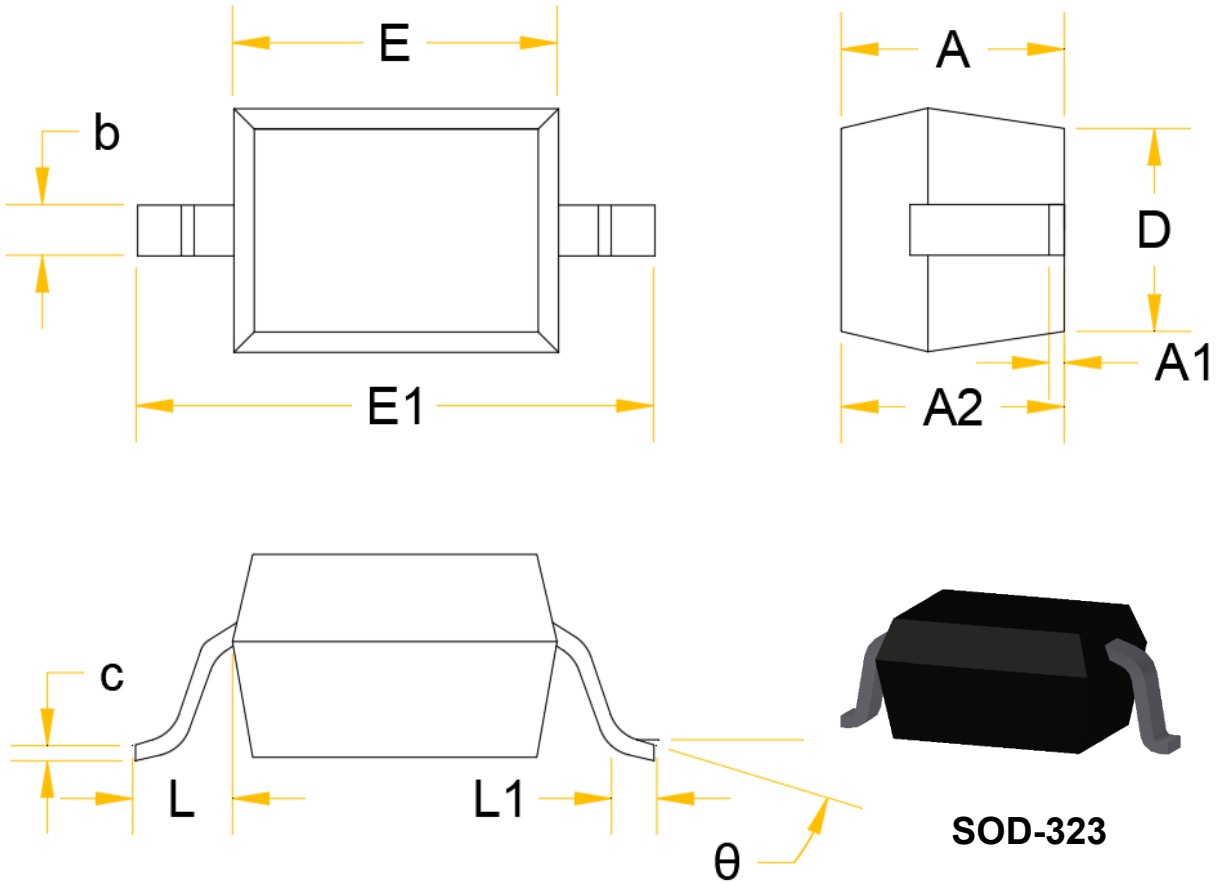


Typical Characteristics($T_A=25^\circ\text{C}$ unless otherwise Specified)





Outline Drawing – SOD-323



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
C	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475REF		0.019REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°