

Features

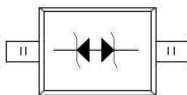
300W peak pulse power (8/20 μ s)
Protects one data or power line
Ultra low leakage: nA level
Operating voltage: 5V
Ultra low clamping voltage
Complies with following standards:
IEC 61000-4-2 (ESD) immunity test
Air discharge: ± 30 kV
Contact discharge: ± 30 kV
IEC61000-4-4 (Lightning) 20A (8/20ns)

Mechanical Characteristics

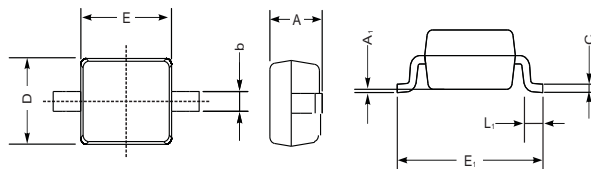
Package: SOD-323
Lead Finish: Matte Tin
Case Material: "Green" Molding Compound.
UL Flammability Classification Rating 94V-0
Moisture Sensitivity: Level 3 per J-STD-020
Terminal Connections: See Diagram Below

Applications

Cellular Handsets and Accessories
Personal Digital Assistants
Notebooks and Handhelds
Portable Instrumentation
Peripherals
Pagers Peripherals
Desktop and Servers



SOD323



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
	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	—

Ordering information

Order code	Package	Making
PESD5V0S1BA	SOD-323	E6

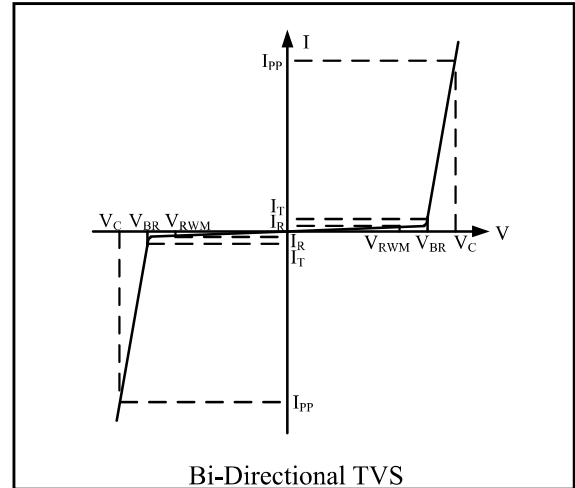
Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μ s)	P _{pk}	300	W
Peak Pulse Current (8/20 μ s)	I _{PP}	20	A
ESD per IEC 61000-4-2 (Air)	VESD	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

PESD5V0S1BA

Electrical Characteristics (TA=25°C unless otherwise specified)

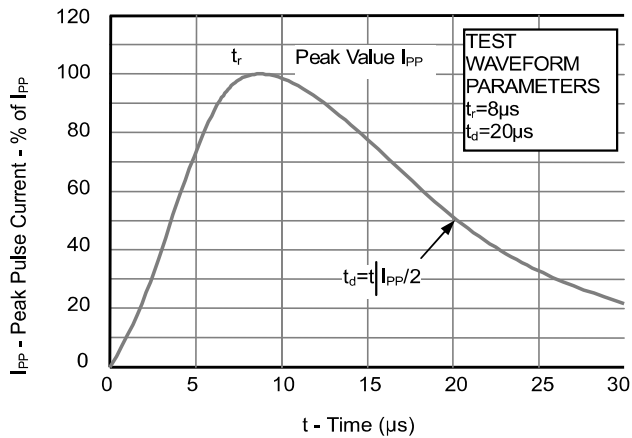
Symbol	Parameter
V_{RWM}	Nominal Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Reverse Breakdown Voltage @ I_T
I_T	Test Current for Reverse Breakdown
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Maximum Peak Pulse Current
C_{ESD}	Parasitic Capacitance
V_R	Reverse Voltage
f	Small Signal Frequency



Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA(Pin1-Pin2)}$	6.0	7.0	8.0	V
Reverse Leakage Current	I_R	$V_{RWM} = 5.0\text{V(Pin2-Pin1)}$			0.1	μA
Clamping Voltage	V_C	$I_{PP} = 10\text{A (8 x 20}\mu\text{s pulse)}$ (Pin1-Pin2)		7.0		V
Clamping Voltage	V_C	$I_{PP} = 20\text{A (8 x 20}\mu\text{s pulse)}$ (Pin1-Pin2)		9.0		V
Junction Capacitance	C_J	$V_R = 0\text{V, } f = 1\text{MHz}$ (Pin1-Pin2)		35		pF

RATING AND CHARACTERISTIC CURVES (PESD5V0S1BA)

Fig1. 8/20 μ s Pulse Waveform



ig2. ESD Pulse Waveform (according to IEC 61000-4-2)

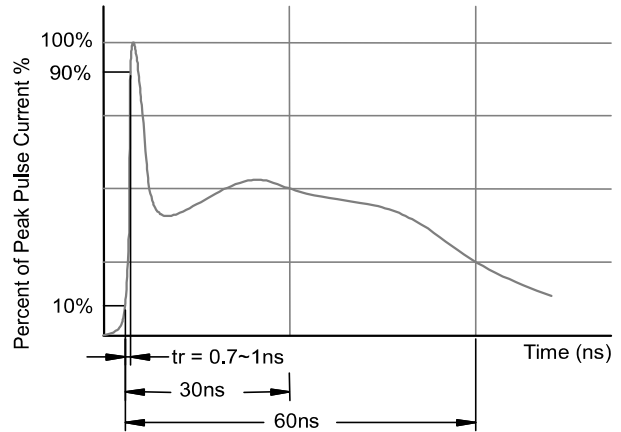


Fig3. Power Derating Curve

