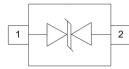


Features

- 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)

Applications

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



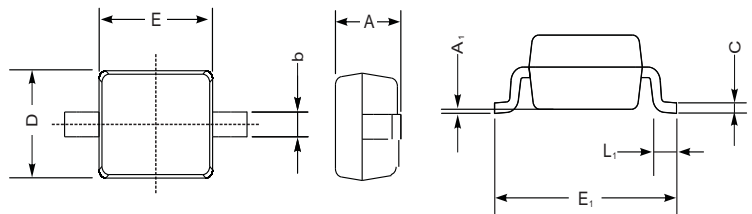
Mechanical Characteristics

- 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

Ordering information

Device	Package	Making
SD05C	SOD-323	05B

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	—

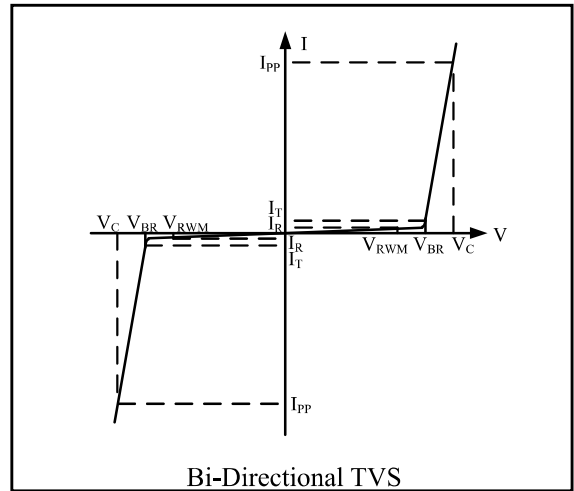
Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

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

SD05C

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}	$I_T = 1\text{mA}(\text{Pin1-Pin2})$	6.0	7.0	8.0	V
Reverse Leakage Current	I_R	$V_{RWM} = 5.0\text{V}(\text{Pin2-Pin1})$			0.1	μA
Clamping Voltage	V_C	$I_{PP} = 10\text{A} (8 \times 20\mu\text{s pulse})$ (Pin1-Pin2)		7.0		V
Clamping Voltage	V_C	$I_{PP} = 20\text{A} (8 \times 20\mu\text{s pulse})$ (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 (SD05C)

Fig1. 8/20 μ s Pulse Waveform

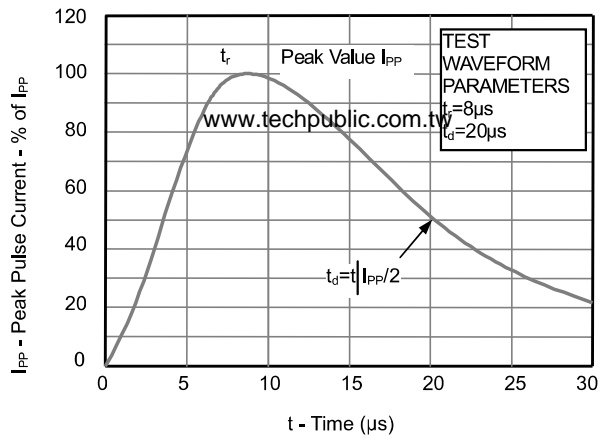


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

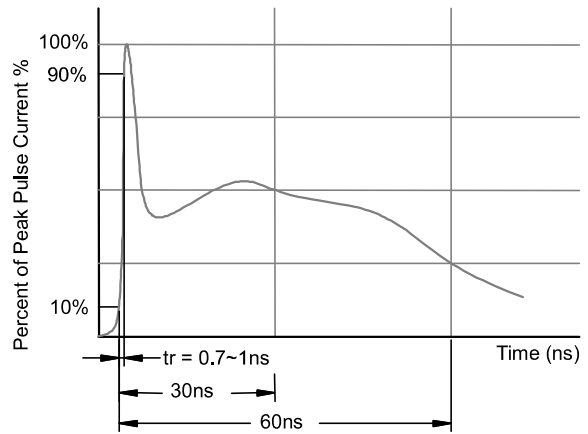


Fig3. Power Derating Curve

