

Features

- Bi-directional ESD protection of one line
- 120Watts peak pulse power (tp = 8/20μs)
- Working voltage: 5V
- Junction Capacitance: 15pF(Typ)
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 ±30kV contact ±30kV air
- IEC 61000-4-5 (Lightning) 8A (8/20μs)

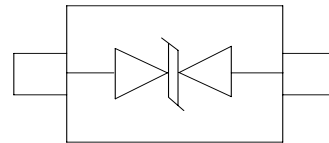
Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Audio Players
- Keypads, Side Keys, LCD Displays


Mechanical Data

- Package:SOD-523
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	Packing	Reel Size
ESD5B5.0ST1G	SOD-523		3000 Tape & Reel	7 inches

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

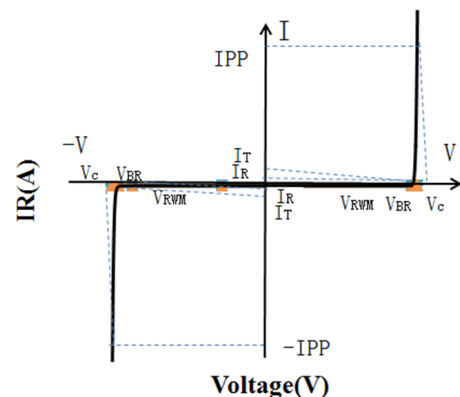
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P_{pk}	120	W
Peak Pulse Current (8/20 μs)	I_{PP}	8	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 30 ± 30	kV
Operating Temperature Range	T_J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	5.5			V
Reverse Leakage Current	I_R	$V_{RWM} = 5\text{V}$			0.5	μA
Holding Voltage	V_C	$I_{PP}=1\text{A}; t_p=8/20\mu\text{s}$			7.5	V
Clamping Voltage	V_C	$I_{PP}=8\text{A}; t_p=8/20\mu\text{s}$			15	V
Junction Capacitance	C_J	$V_R=0\text{V}; f=1\text{MHz}$		15	18	pF

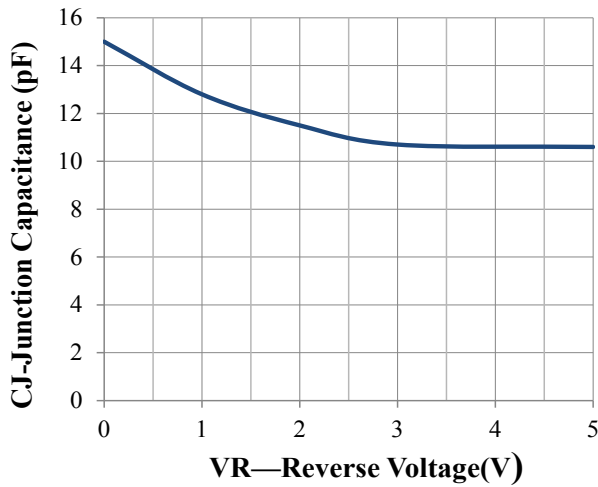
Electrical Parameters ($T_A = 25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_C

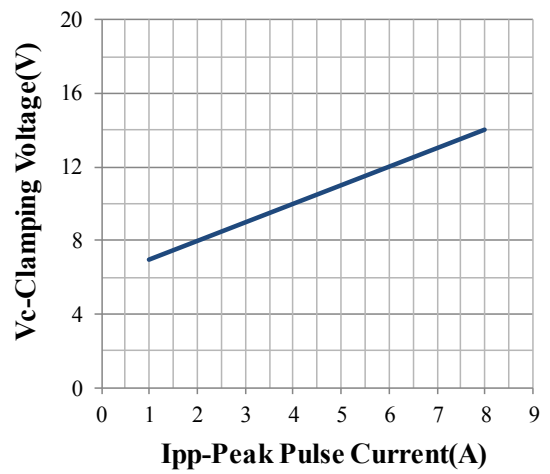




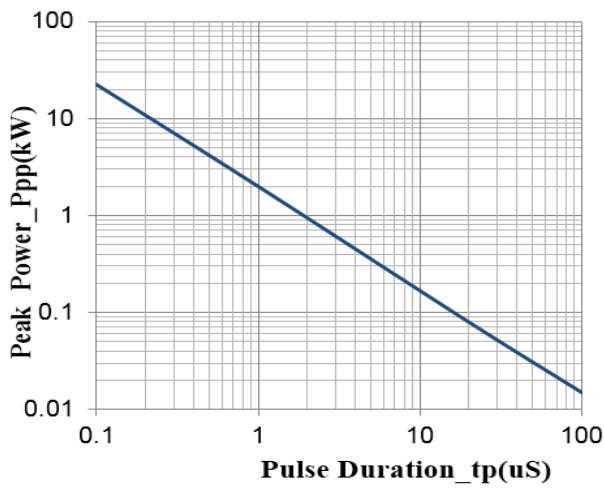
Typical Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise Specified)



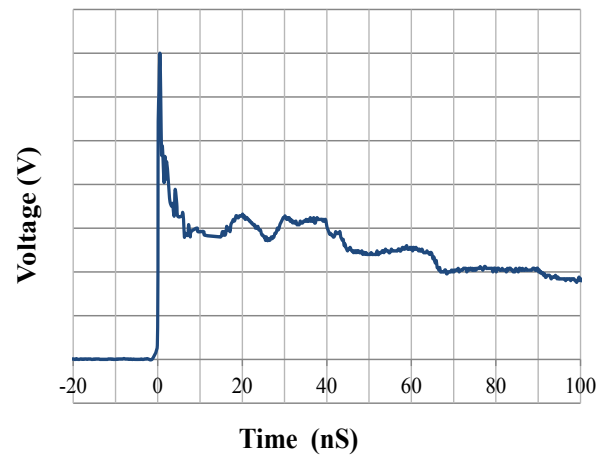
Junction Capacitance vs. Reverse Voltage



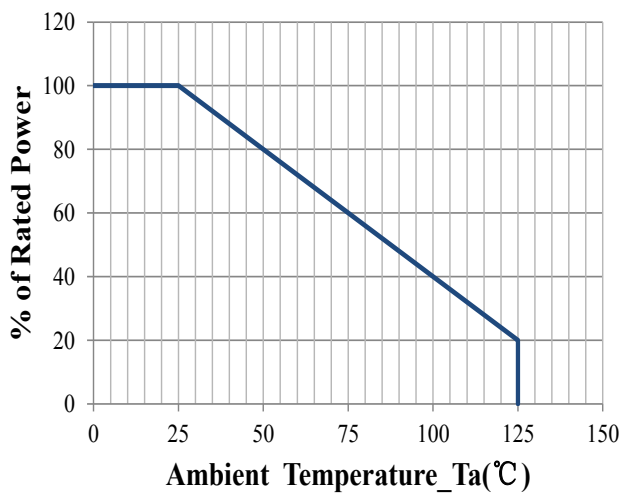
Clamping Voltage vs. Peak Pulse Current



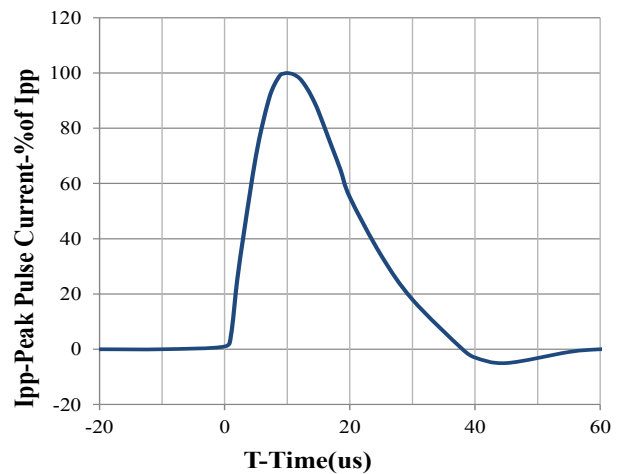
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform



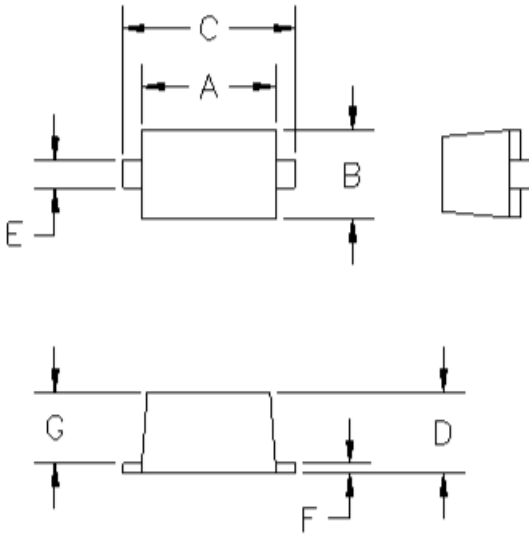
Power Derating Curve



8 X 20us Pulse Waveform



Outline Drawing – SOD-523



DIMENSIONS					
DIM ^N	INCHES		MM		NOTE
	. MIN	MAX	MIN	MAX	
A	.043	.051	1.10	1.30	—
B	.028	.035	0.70	0.90	—
C	.059	.067	1.50	1.70	—
D	.020	.028	0.50	0.70	—
E	.010	.014	0.25	0.35	—
F	.004	.008	0.10	0.20	—
G	.020	.028	0.50	0.70	—

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