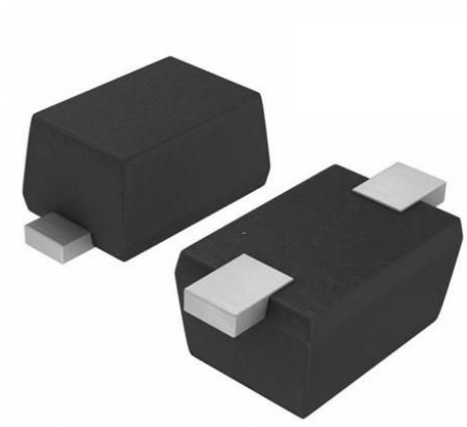
ESD9B5.0ST5G

Transient Voltage Suppression Diode

Features

- Bi-directional ESD protection of one lines
- 70Watts peak pulse power (tp = 8/20μs)
- Working voltage: 5V
- Low clamping voltage
- Low leakage current
- Solid-state silicon-avalanche technology
- IEC 61000-4-2 ±25kV contact ±25kV air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 8A (8/20μs)

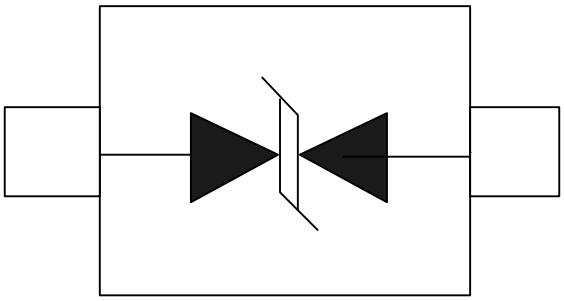
SOD-923



Applications

- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Pagers Peripherals

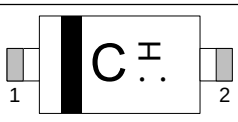
Schematic & PIN Configuration



Mechanical Data

- Package:SOD-923
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Ordering Information

Part Number	Package	Marking	Packing	Reel Size
ESD9B5.0ST5G	SOD-923		8000 Tape & Reel	7 inches

■ Absolute Maximum Rating(T_A = 25°C unless otherwise noted)

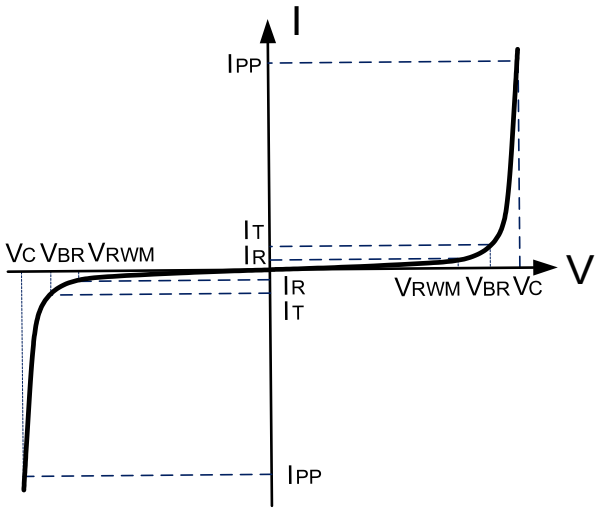
Parameter	Symbol	Value	Units
Peak Pulse Power (t_p =8/20μs)	P_{PP}	70	Watts
Peak Pulse Current (t_p =8/20μs) (note1)	I_{pp}	8	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	25 25	kV
Lead Soldering Temperature	T_L	260(10seconds)	℃
Junction Temperature	T_J	-55 to + 150	℃
Storage Temperature	T_{stg}	-55 to + 150	℃

■ Electrical Characteristics(T_A = 25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	6.0			V
Reverse Leakage Current	I_R	V_{RWM}=5V,T=25℃			0.5	uA
Clamping Voltage	V_C	I_{PP}=8A,t_p=8/20μs		8		V
Junction Capacitance	C_j	V_R = 0V, f = 1MHz		15	20	pF

■ Electrical Parameters (T_A = 25°C unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



Note:8/20μs pulse waveform.

■ Typical Characteristics(T_A = 25°C unless otherwise noted)

Figure 1: Peak Pulse Power vs. Pulse Time

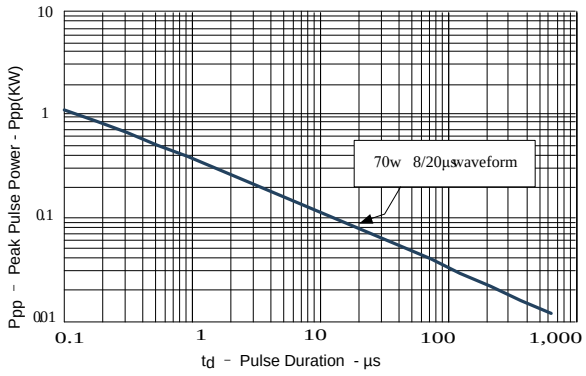


Figure 2: Power Derating Curve

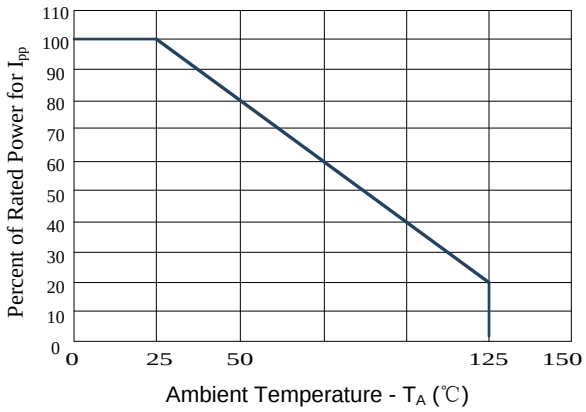


Figure3: Pulse Waveform

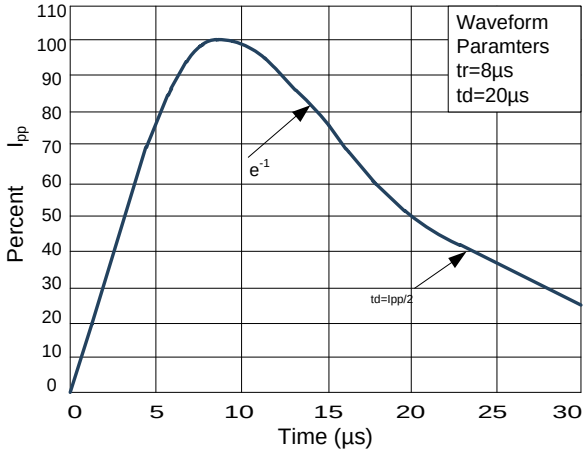
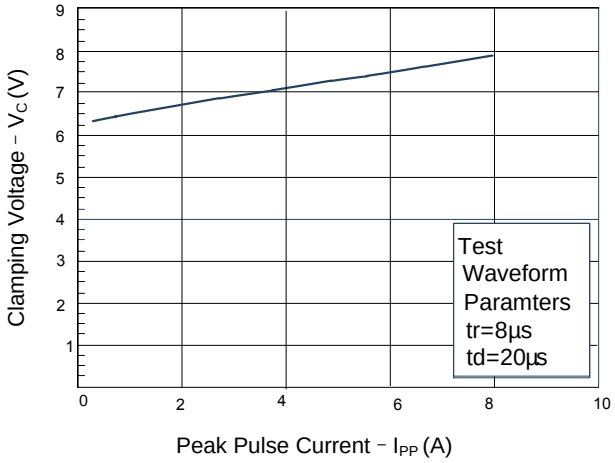
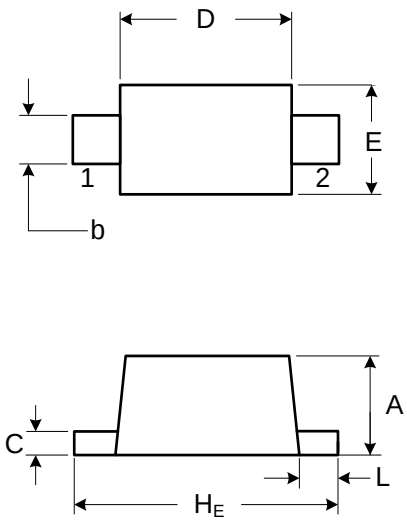


Figure 4: Clamping Voltage vs.Ipp



■ Outline Drawing – SOD-923



DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.35	0.43	0.014	0.0172
b	0.15	0.25	0.006	0.010
C	0.07	0.17	0.0028	0.0068
D	0.75	0.85	0.030	0.034
E	0.55	0.65	0.022	0.026
H_E	0.90	1.10	0.036	0.044
L	0.05	0.15	0.002	0.006