



■ 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)

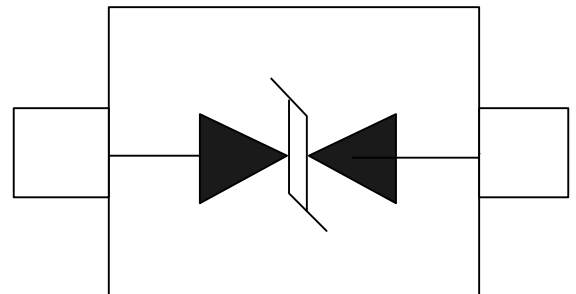
SOD-923



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

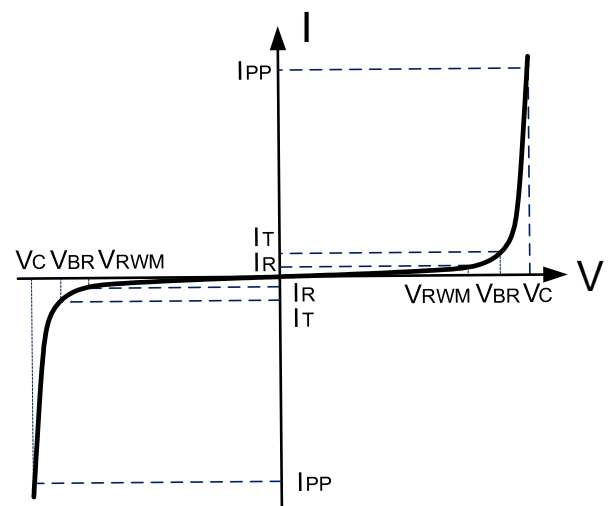
Parameter	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu\text{s}$ )	$P_{PP}$	70	Watts
Peak Pulse Current ( $t_p = 8/20\mu\text{s}$ ) (note1)	$I_{pp}$	8	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	25 25	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	$^\circ\text{C}$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

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

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

■ Electrical Parameters ( $T_A = 25^\circ\text{C}$  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:8/20 $\mu\text{s}$  pulse waveform.

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

Figure 1: Peak Pulse Power vs. Pulse Time

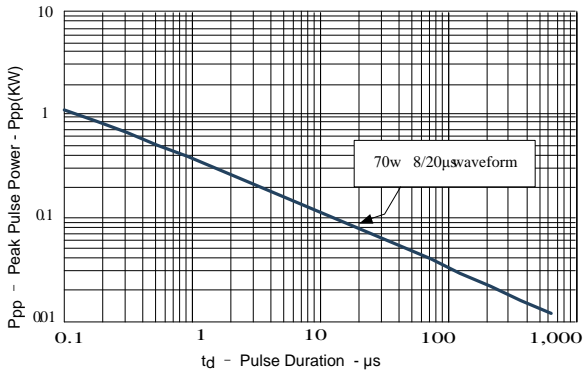


Figure 2: Power Derating Curve

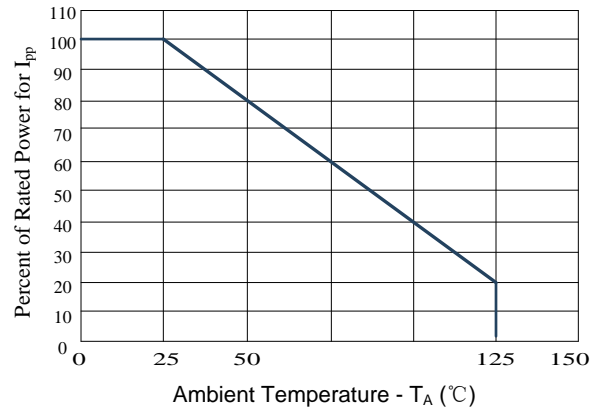


Figure 3: Pulse Waveform

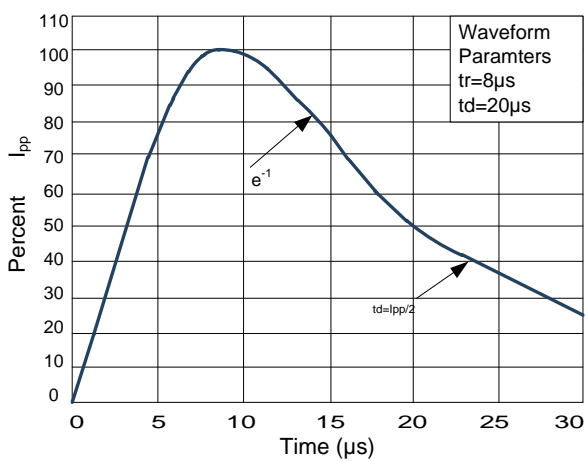
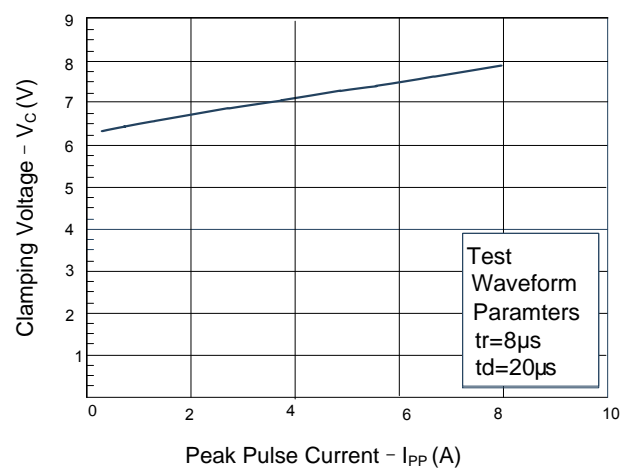
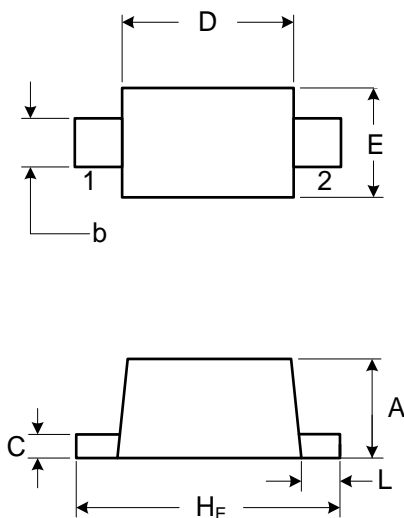


Figure 4: Clamping Voltage vs. I\_pp



■ 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 <sub>E</sub>	0.90	1.10	0.036	0.044
L	0.05	0.15	0.002	0.006

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