

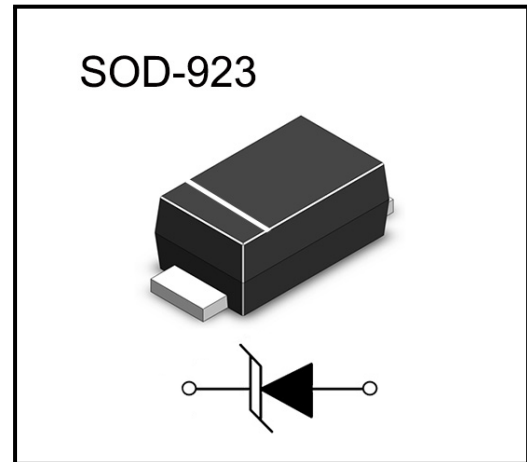
ESD9X3.3ST5G-N

ESD Protection Diode

Features

- 120Watts peak pulse power ($t_p = 8/20\mu s$)
- Unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping Voltage
- Low leakage current
- IEC 61000-4-2 $\pm 30kV$ contact ; $\pm 30kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 11A (8/20 μs)

Package



Applications

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

Mechanical Characteristics

- SOD-923 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
ESD9X3.3ST5G-N	SOD-923	8k	Tape and reel

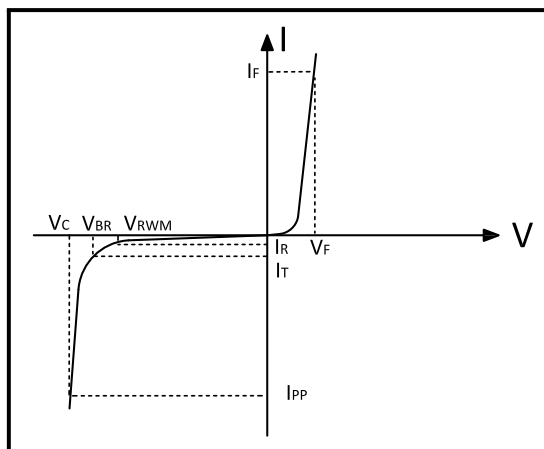


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ESD Protection Diode

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}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



Note: 8/20us pulse Waveform.

Absolute Maximum Rating

Rating	Symler	Value	Units
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PP}	120	Watts
Peak Pulse Current ($t_p = 8/20\mu\text{s}$)	I_{PP}	11	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	30	KV
ESD per IEC 61000-4-2 (Contact)		30	
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

Parameter	Symler	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}	—	—	—	3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	4.5	—	6.5	V
Reverse Leakage Current	I_R	$V_{RWM} = 3.3\text{V}, T = 25^\circ\text{C}$	—	—	0.1	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu\text{s}$	—	—	11	A
Clamping Voltage	V_C	$I_{PP} = 11\text{A}, t_p = 8/20\mu\text{s}$	—	9.0	11	V
Junction Capacitance	C_j	$V_R = 0\text{V}, f = 1\text{MHz}$	—	65	80	pF



Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

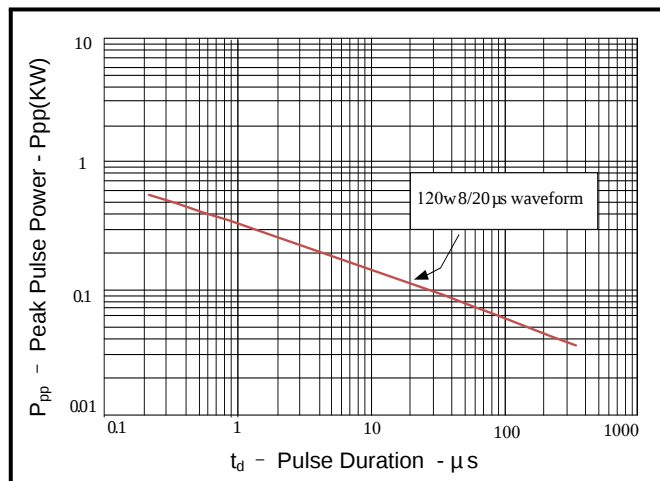


Figure 2: Power Derating Curve

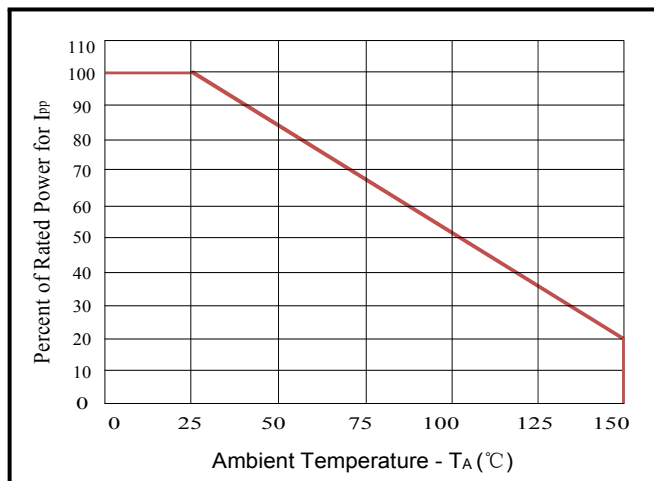


Figure 3: Pulse Waveform

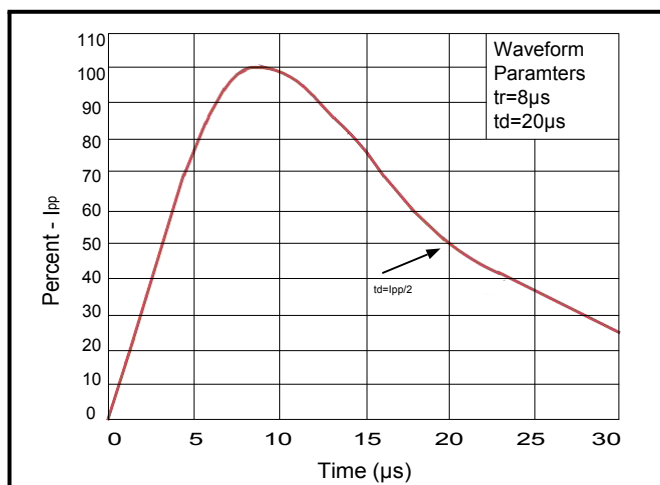
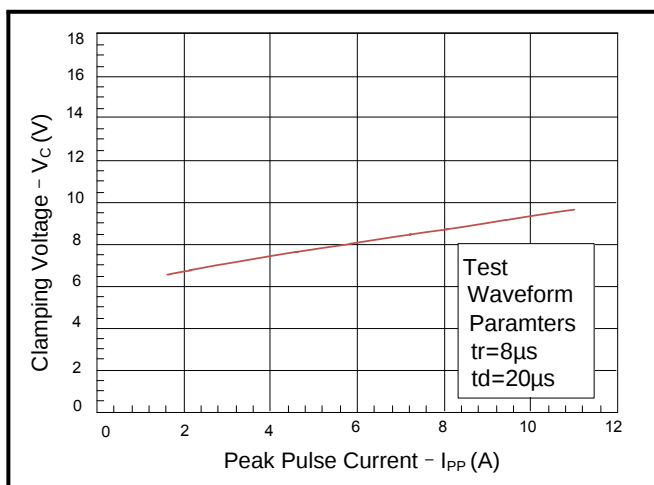


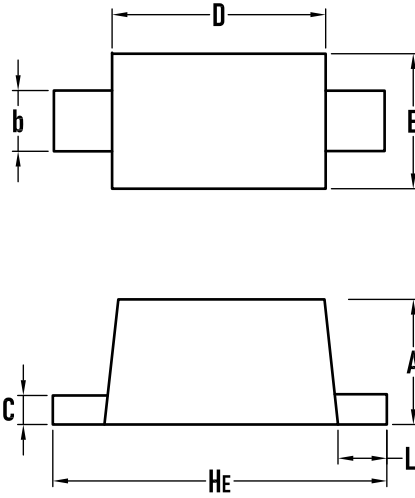
Figure 4: Clamping Voltage vs. I_{PP}



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ESD Protection Diode

Outline Drawing - SOD-923



SYMBOL	MILLIMETER		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	0.39	0.45	0.015	0.018
b	0.15	0.30	0.006	0.012
C	0.06	0.20	0.002	0.008
D	0.70	0.90	0.028	0.035
E	0.55	0.65	0.026	0.028
HE	0.90	1.10	0.035	0.043
L	0.05	0.15	0.002	0.006

