

Transient Voltage Suppressors for ESD Protection

ESD3.3V92D-C

Description

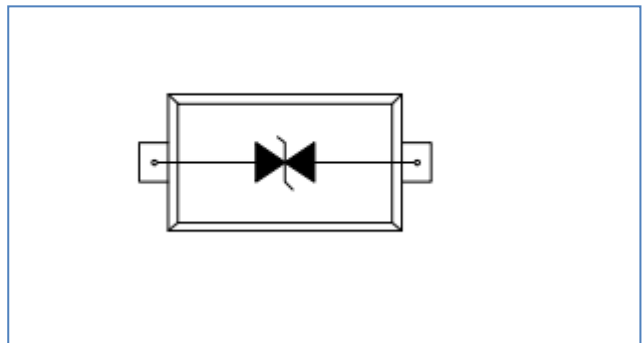
The ESDXXV92D-C Series is designed to protect voltage sensitive Components from ESD and transient voltage events. Excellent Clamping capability, low leakage, and fast response time, Make these part ideal for ESD protection on designs where Board space is at a premium.



Feature

- ◆ 150 and 170 Watts Peak Pulse Power per Line (tp=8/20μs)
- ◆ Small body outline dimensions
- ◆ Low body height
- ◆ Low Leakage current
- ◆ Response Time is Typically <1 ns
- ◆ IEC61000-4-2(ESD): ±30kV (air) ±30kV(contact)

Functional Diagram



Applications

- ◆ Cell Phone Handsets and Accessories
- ◆ Microprocessor based equipment
- ◆ Personal Digital Assistants (PDA's)
- ◆ Notebooks, Desktops, and Servers
- ◆ Portable Instrumentation
- ◆ Peripherals
- ◆ USB Interface

Mechanical Data

- ◆ SOD-923 Package (1.0 x 0.6 mm)
- ◆ Molding Compound Flammability Rating : UL 94V-O
- ◆ Low Body Height: 0.43 mm Max
- ◆ Lead Finish : Lead Free

Mechanical Characteristics

Symbol	Parameter	Value	Units
Ppp	Peak Pulse Power (tp=8/20μs waveform)	150	Watts
TL	Lead Soldering Temperature	260 (10 sec.)	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C
T _J	Operating Junction Temperature Range	-55 to +150	°C

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Electrical Characteristics(@25°C Unless Otherwise Specified)

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Working Voltage	V_{RWM}	--	--	--	3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$;	5.0	--	--	V
Reverse Leakage Current	I_R	$V_{RWM} = 3.3V, T=25^{\circ}C$;	--	--	1.0	μA
Positive Clamping Voltage	V_C	$I_{PP} = 9.8A, T_P = 8/20\mu s$;	--	--	14.1	V
Junction capacitance	C_J	$V_R = 0V, f = 1MHz$;	--	25	--	pF

Characteristics Curves

Fig1: 8/20 μs Pulse Waveform

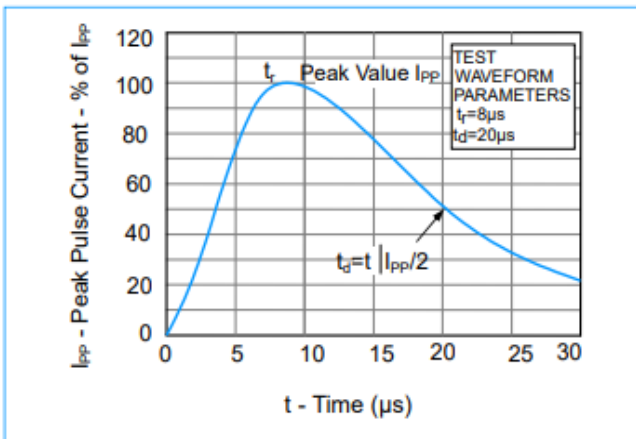


Fig2. Power Rating Derating Curve

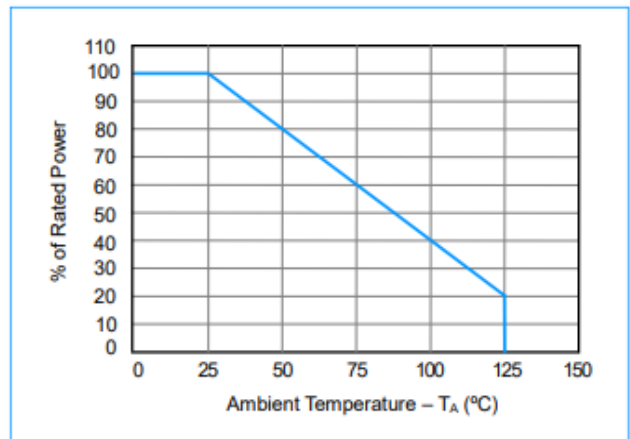
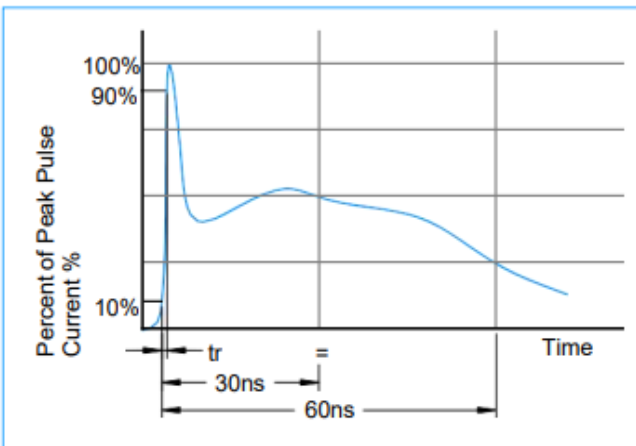


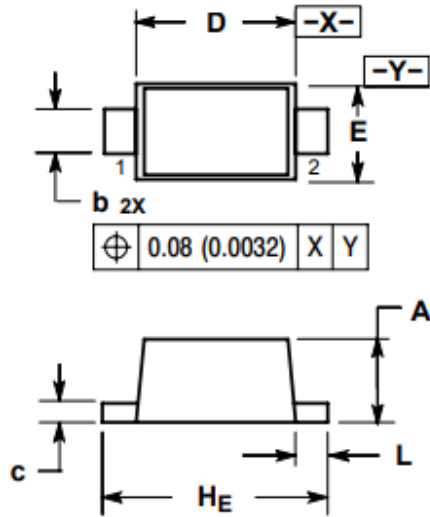
Fig3. ESD Pulse Waveform (according to IEC61000-4-2)



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SOD-923 Package Outline & Dimensions

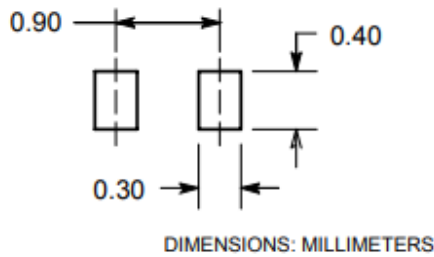


NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.34	0.37	0.40	0.013	0.015	0.016
b	0.15	0.20	0.25	0.006	0.008	0.010
c	0.07	0.12	0.17	0.003	0.005	0.007
D	0.75	0.80	0.85	0.030	0.031	0.033
E	0.55	0.60	0.65	0.022	0.024	0.026
HE	0.95	1.00	1.05	0.037	0.039	0.041
L	0.05	0.10	0.15	0.002	0.004	0.006

SOLDERING FOOTPRINT*



Ordering Information

Device	Marking	Package	Quantity	Reel Size
ESD3.3V92D-C	B	SOD-923	8,000pcs/Reel	7 inch