

Transient Voltage Suppressors for ESD Protection

LC3304EP8

Description

The LC3304EP8 is low capacitance TVS arrays designed to protect high speed data interfaces. This series has been specifically designed to protect sensitive components which are connected to high-speed data and transmission lines from over-voltage caused by ESD (electrostatic discharge), CDE (Cable Discharge Events), and EFT (electrical fast transients).

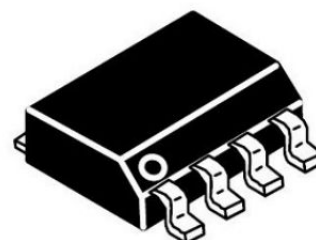
Feature

- ◆ 450 Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
- ◆ Protects two line pairs (four lines)
- ◆ Low capacitance
- ◆ RoHS Compliant
- ◆ IEC61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact) -- A Pair
- ◆ IEC61000-4-4 (EFT) 40A (5/50 μs)
- ◆ IEC61000-4-5 (Lightning) 25A (8/20 μs) -- A Pair

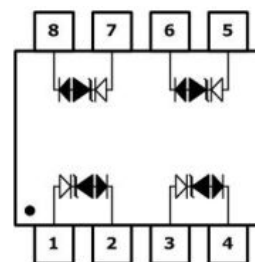
Applications

- ◆ High-Speed Data Lines
- ◆ 10/100/1000 Ethernet
- ◆ WAN/LAN Equipment
- ◆ Test & Measurement Equipment
- ◆ Switching Systems
- ◆ Instrumentation
- ◆ Audio/Video Inputs

SOP-08



Functional Diagram



Mechanical Data

- ◆ JEDEC SOP-08 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 70 Milligrams (Approximate)
- ◆ Quantity Per Reel : 500pcs
- ◆ Reel Size : 7 inch
- ◆ Lead Finish : Lead Free

Mechanical Characteristics

Symbol	Parameter	Value	Units
P _{pp}	Peak Pulse Power ($t_p=8/20\mu s$ waveform)	450	Watts
T _J	Operating Junction Temperature Range	-55 to +150	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C
T _L	Soldering Temperature Range	260	°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}	$I_T=1mA$	3.5	--	--	V
Reverse Leakage Current	I_R	--	--	--	0.1	μA
Positive Clamping Voltage	V_C	$I_{PP}=1A$;	--	--	6.4	V
		$I_{PP}=25A$;	--	--	18	V
Capacitance Between I/O And GND	C_J	$V_R=0V, f=1MHz$;	--	--	2	pF

Characteristic Curves

Fig1. 8/20 μs Pulse Waveform

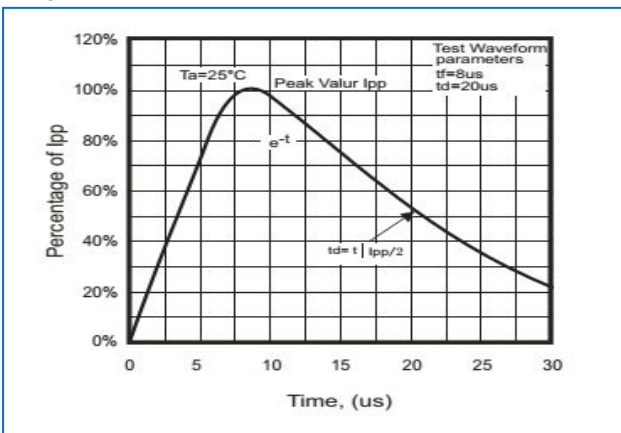


Fig3. Non-Repetitive peak pulse power vs. Pulse Time

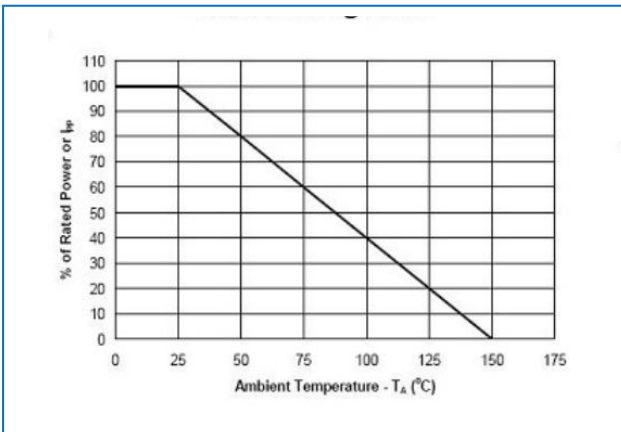


Fig2.ESD Pulse Waveform (according to IEC 61000-4-2)

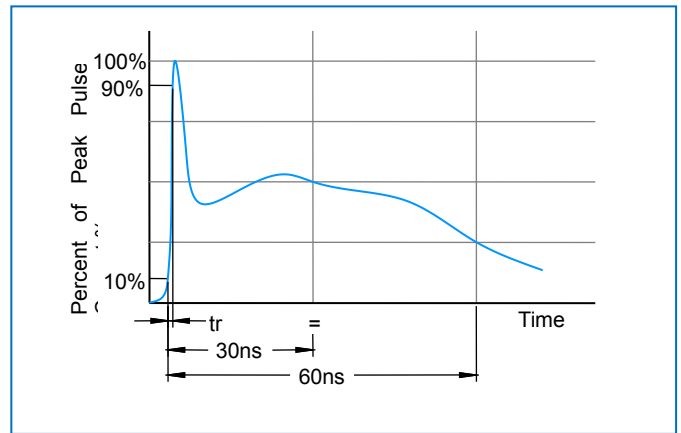
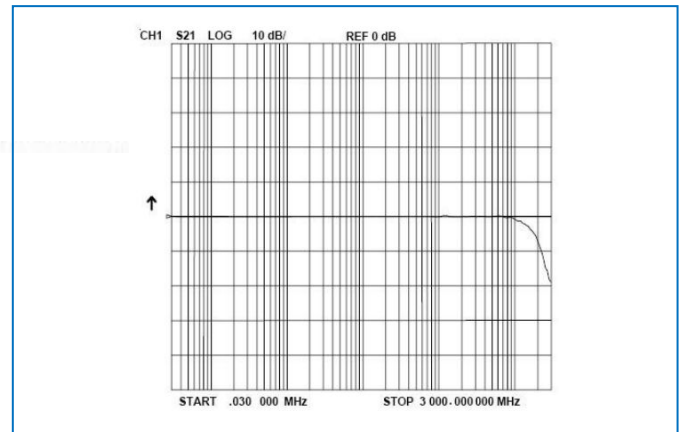


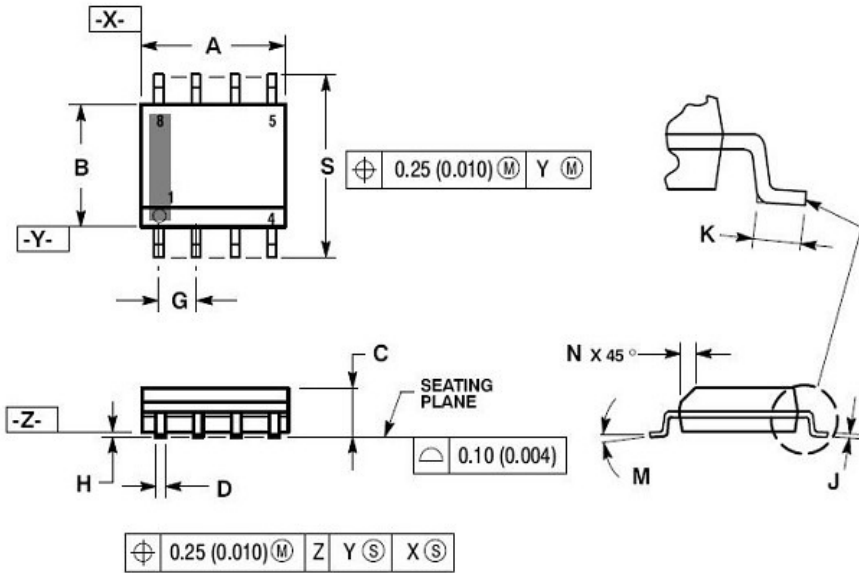
Fig4. Insertion loss S21



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SOP-08 Package Outline & Dimensions



*** SOLDERING FOOTPRINT**

