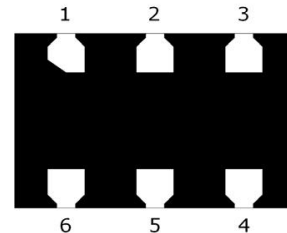


Transient Voltage Suppressors for ESD Protection

LC3314P6

Description

The LC3314P6 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).



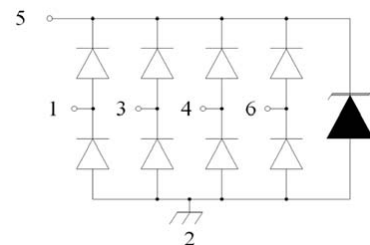
Feature

- ◆ 495 Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
- ◆ Protects Four lines
- ◆ Low clamping voltage
- ◆ Working voltages : 5.0V
- ◆ Low leakage current
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ IEC61000-4-5 (LIGHTING) 33A (8/20 μs)
- ◆ IEC61000-4-2(ESD): $\pm 25kV$ (air discharge)
 $\pm 15kV$ (contact discharge);

Applications

- ◆ 10/100/1000 Ethernet Interface
- ◆ Microprocessor based equipment
- ◆ Personal Digital Assistants (PDA 's)
- ◆ Notebooks, Desktops, and Servers
- ◆ ISDN S/T Interface
- ◆ WAN/LAN Equipment
- ◆ USB Interface

Functional Diagram



Mechanical Data

- ◆ DFN3020P6 Package
- ◆ Molding Compound Flammability Rating : UL 94V-O
- ◆ Weight 12.0 Milligrams (Approximate)
- ◆ Lead Finish : Lead Free

Mechanical Characteristics

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power ($t_p=8/20\mu s$ waveform)	495	Watts
T_L	Lead Soldering Temperature	260 (10 sec.)	$^{\circ}C$
T_{STG}	Storage Temperature Range	-55 to +150	$^{\circ}C$
T_J	Operating Junction Temperature Range	-40 to +125	$^{\circ}C$

Transient Voltage Suppressors for ESD Protection

LC3314P6

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}	$I_T=1mA$;	4.0	--	--	V
Reverse Leakage Current	I_R	$V_{RWM}=3.3V$, $T=25^{\circ}C$;	--	--	0.1	μA
Positive Clamping Voltage	V_C	$I_{PP}=1.0A$, $T_P=8/20\mu s$;	--	--	6.0	V
		$I_{PP}=30.0A$, $T_P=8/20\mu s$;	--	--	16.5	V
Junction capacitance	C_J	$V_R=0V$, $f=1MHz$;	--	5.0	--	pF

Characteristic Curves

Fig1. 8/20 μs Pulse Waveform

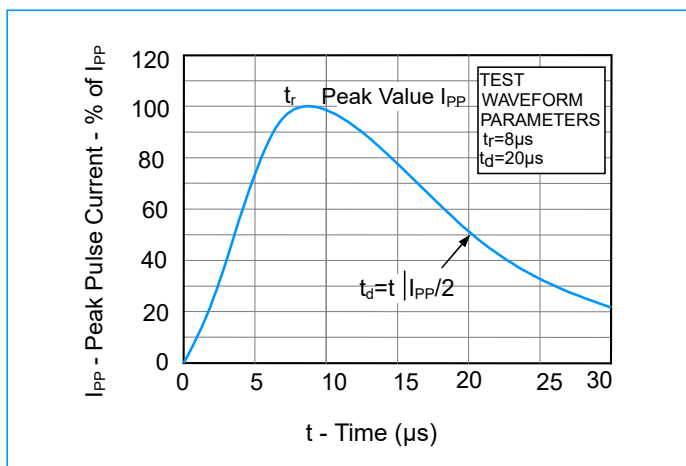


Fig2. Power Rating Derating Curve

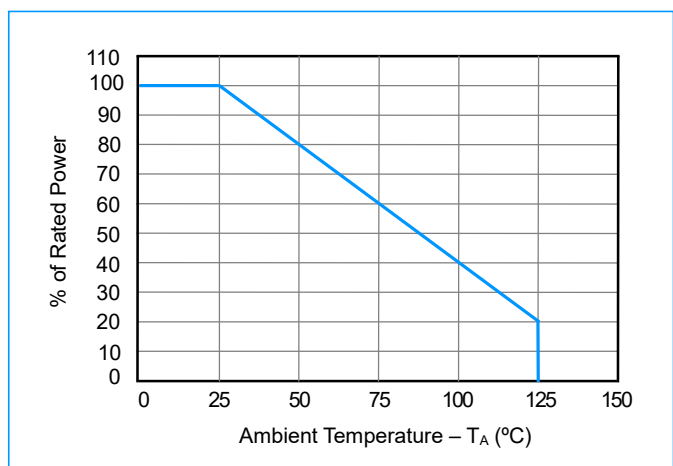


Fig3. Clamping Voltage vs. Peak pulse Current ($t_P=8/20\mu s$)

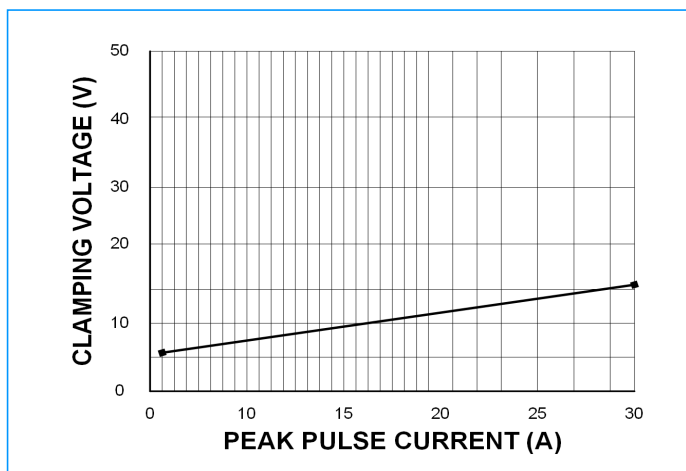
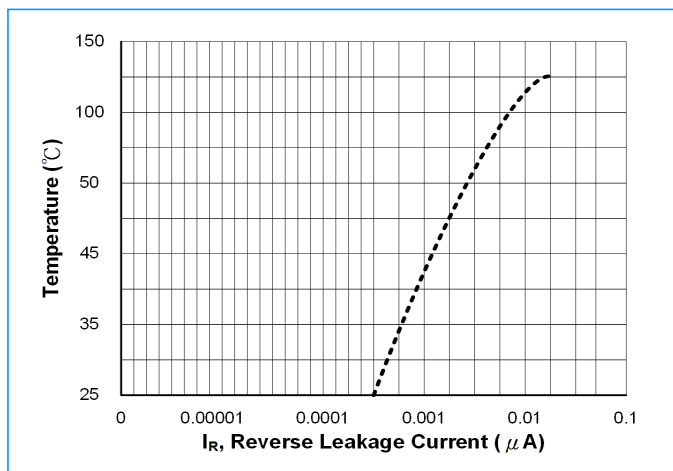


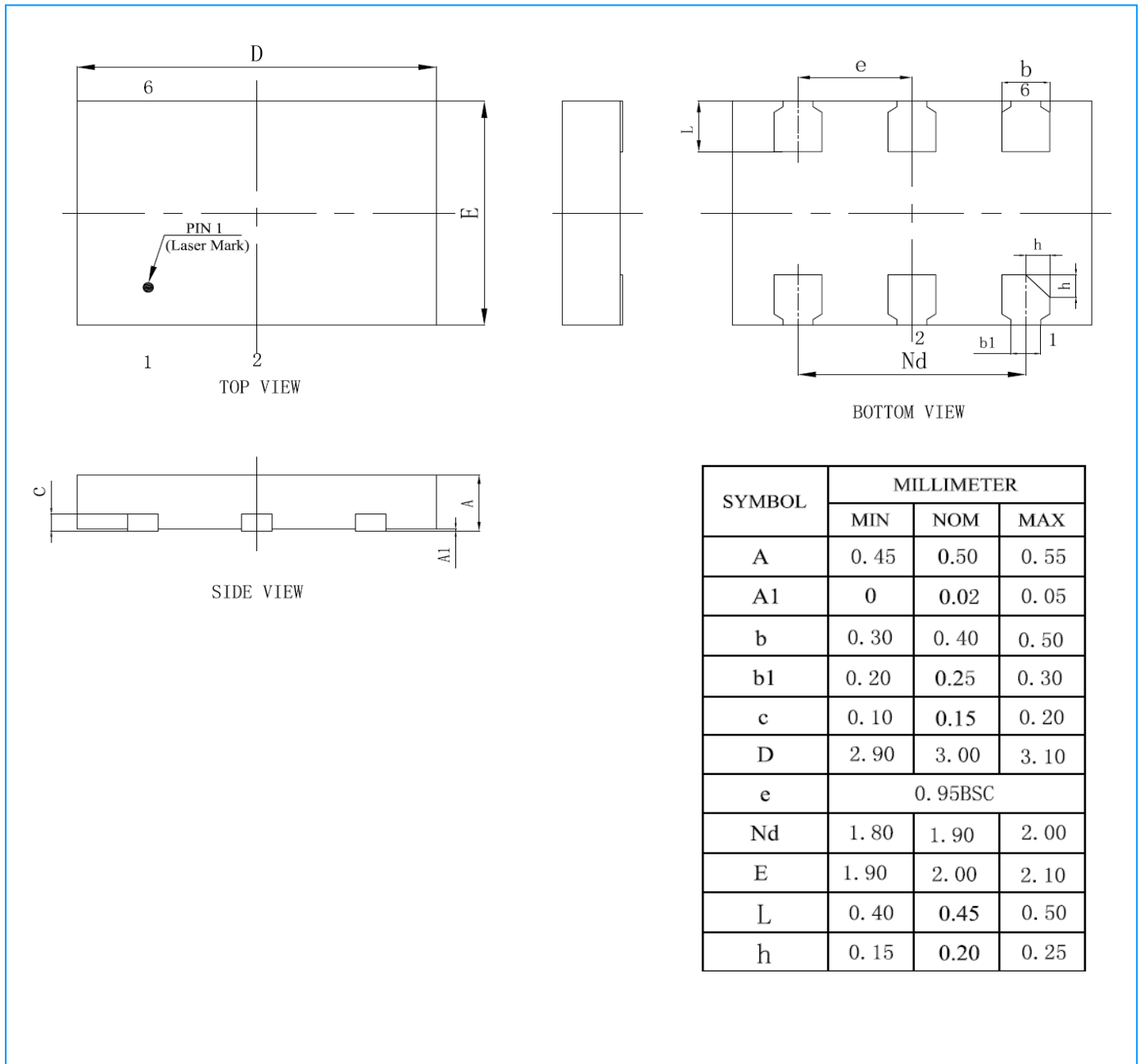
Fig4. Typic Reverse Leakage vs. Temperature



Transient Voltage Suppressors for ESD Protection

LC3314P6

DFN3020P6 Package Outline & Dimensions



Ordering Information

Device	Marking	Package	Quantity	Reel Size
LC3314P6	LC3314P6	DFN3020P6	3,000pcs/Reel	7 inch