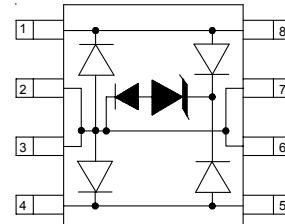
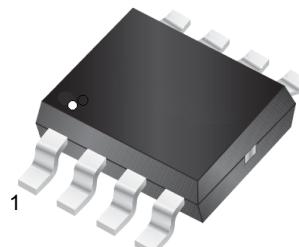


Low Capacitance ESD TVS Array in SOP8

Features

- 1800Watts peak pulse power ($t_p = 8/20\mu s$)
- SOP8 Package
- Protects two lines in common and differential mode
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance
- Transient protection for high-speed data lines to
Bellcore 1089 (Intra-Building) 100A (2/10μs)
ITU K.20 I_{PP}=40A (5/310μs)
IEC 61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
IEC 61000-4-4 (EFT) 40A (5/50ns)
IEC 61000-4-5 (Lightning) 100A (8/20μs)



Mechanical Data

- **Case:** SOP8 (plastic package).
Lead free; RoHS compliant; Halogen free
- **Molding Compound Flammability Rating:**
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
260 °C/10 sec. at terminals

Applications

- Low Voltage Interfaces
- T3/E3
- 10/100 Ethernet
- Set-Top Box
- ISDN Interfaces

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

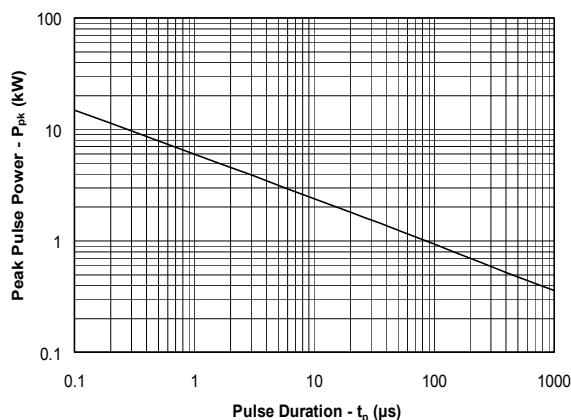
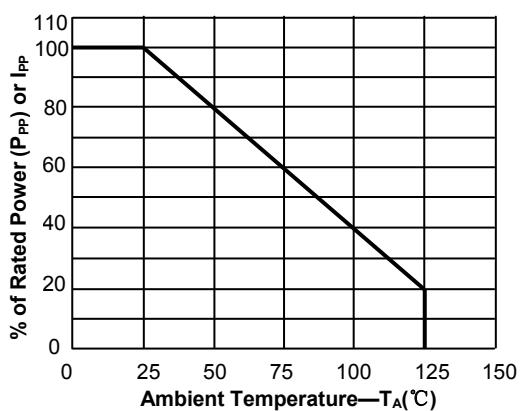
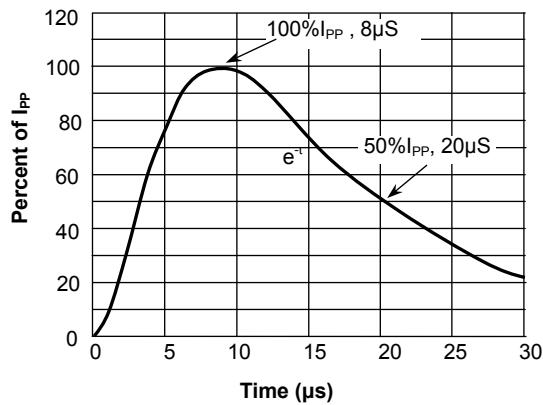
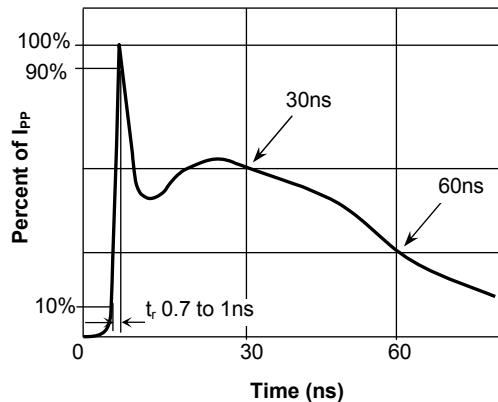
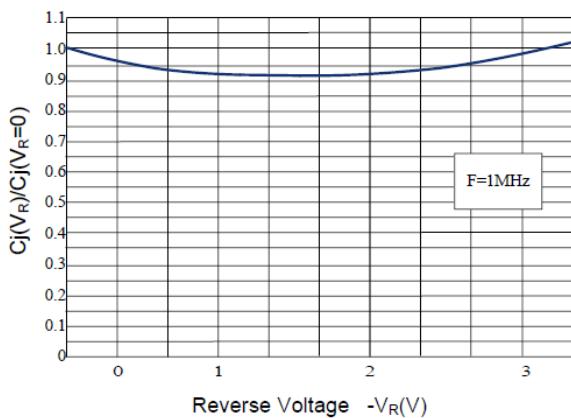
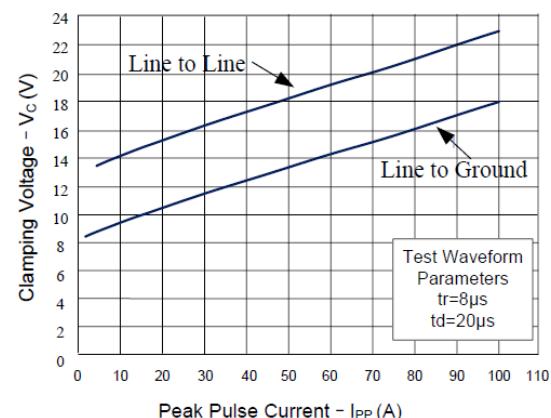
Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_p=8/20\mu s$)	P _{PP}	1800	W
ESD contact/air discharge (IEC-61000-4-2)	V _{ESD}	30/30	kV
Peak Pulse Current ($T_p = 8/20\mu s$)	I _{PP}	100	A
Junction Temperature	T _J	-55 to +125	°C
Storage temperature	T _{STG}	-55 to +150	°C

Electrical Characteristics

(T_A = 25 °C unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V _{RWM}				3.3	V
Reverse Breakdown Voltage	V _{BR}	I _T =1mA	3.7			V
Reverse Leakage Current	I _R	V _R =3.3V			0.5	μA
Clamping Voltage (IO to GND)	V _C	I _{PP} =100A, T _p =8/20μS		16	20	V
Clamping Voltage (IO to IO)	V _C	I _{PP} =100A, T _p =8/20μS		20	23	V
Junction Capacitance	C _J	V _R =0V, f=1MHz, I/O to I/O		5.0	8.0	pF
	C _J	V _R =0V, f=1MHz, I/O to GND		10	15	pF

Typical Characteristics ($T_{amb} = 25^{\circ}\text{C}$ unless otherwise specified)

Fig.1 Peak Pulse Power Rating Curve

Fig.2 Pulse Derating Curve

Fig.3 Pulse Waveform-8/20μs

Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

Fig.5 Capacitance vs. Reverse Voltage

Fig.6 Clamping Voltage vs. Peak Pulse Current


Package Dimensions

SYMBOL	DIMENSIONS			
	INCHES	MILIMETER	MIN	MAX
A	0.053	0.069	1.35	1.75
a ₁	0.004	0.010	0.10	0.25
a ₂	0.049	0.065	1.25	1.65
D	0.189	0.197	4.80	5.00
F	0.150	0.157	3.80	4.00
E	0.236BSC		6.00BSC	
b	0.012	0.020	0.31	0.51
e	0.050BSC		1.27BSC	
h	0.010	0.020	0.25	0.50
c	0.007	0.010	0.17	0.25
L	0.016	0.041	0.40	1.04
θ	0°	8°	0°	8°

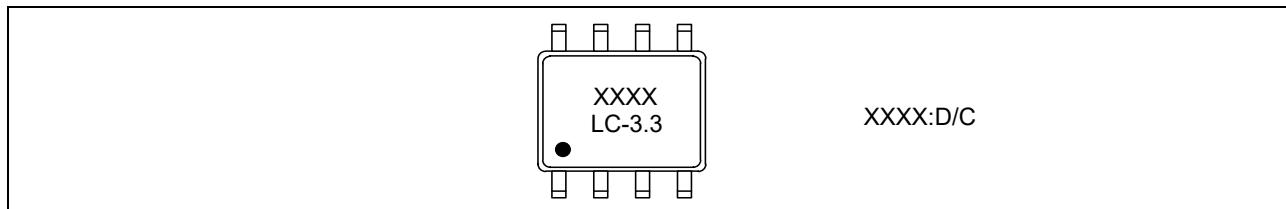
Pad Dimensions

DIM	DIMENSIONS	
	INCHES	MILLIMETERS
C	(.205)	(5.20)
G	.118	3.00
P	.050	1.27
X	.024	0.60
Y	.087	2.20
Z	.291	7.40

NOTES:

1. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY. CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.
2. REFERENCE IPC-SM-782A, RLP NO. 300A.

Marking



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
TESP8LC3V3U	SOP8	Tape and reel	2500pcs / reel	EIA STD RS-481