

## SuperESD – SLVU2.8-4-LF-T7-ES

## 1. Description

The SLVU2.8-4-LF-T7-ES is a low capacitance TVS (Transient Voltage Suppressor) array designed to protect high speed data interfaces. It has been specifically designed to protect sensitive electronic components which are connected to data and transmission lines from over-stress caused by Electrostatic Discharge (ESD), cable discharge events (CDE), lightning and other induced voltage surges.

## 2. Features

- IEC 61000-4-2 Level 4 ESD Protection
  - ±30kV Contact Discharge
  - ±30kV Air Discharge
- 600W Peak pulse Power (8/20us)
- Low clamping voltage
- Working voltage: 2.8V
- Low leakage current
- Low capacitance:  $C_j = 1.2\text{pF typ.}$
- RoHS compliant
- Unidirectional configuration

## 3. Applications

- 10/100/1000 Ethernet
- WAN/LAN Equipment
- Desktops, Servers, and Notebooks
- Analog Inputs
- Base Station
- Switch Systems

## 4. Ordering Information

Part Number	Packag e	Marking	Material	Packin g	Quantit y per reel	Flammabilit y Rating	Reel Size
SLVU2.8-4-LF-T7-E S	SOP-8	SLVU2.8-4/LO T	Haloge n free	Tape & Reel	2,500 PCS	UL 94V-0	13 inche s

Table-1 Ordering information

## 5. Pin Configuration and Functions

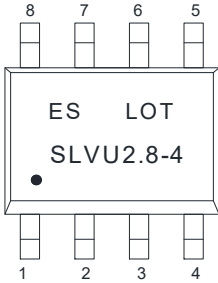
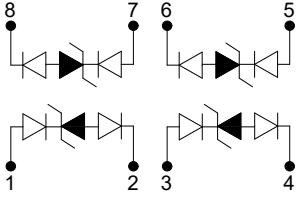
Pin	Name	Description	Outline	Circuit Diagram
1	IO	Connect to IO		
2	GND	Connect to GND		
3	IO	Connect to IO		
4	GND	Connect to GND		
5	IO	Connect to IO		
6	GND	Connect to GND		
7	IO	Connect to IO		
8	GND	Connect to GND		

Table-2 Pin configuration

## 6. Specification

### 6.1. Absolute Maximum rating

Over operating free-air temperature range (unless otherwise noted)

Parameters	Symbol	Min.	Max.	Unit
Peak pulse power (tp=8/20us)@25°C	P <sub>pk</sub>	-	600	W
Peak pulse current (tp=8/20us)@25°C	I <sub>pp</sub>		30	A
ESD (IEC61000-4-2 air discharge) @25°C	V <sub>ESD</sub>	-	±30	kV
ESD (IEC61000-4-2 contact discharge) @25°C	V <sub>ESD</sub>	-	±30	kV
Junction temperature	T <sub>J</sub>	-	150	°C
Operating temperature	T <sub>OP</sub>	-40	125	°C
Storage temperature	T <sub>STG</sub>	-55	150	°C
Lead temperature	T <sub>L</sub>	-	260	°C

Table-3 Absolute Maximum rating

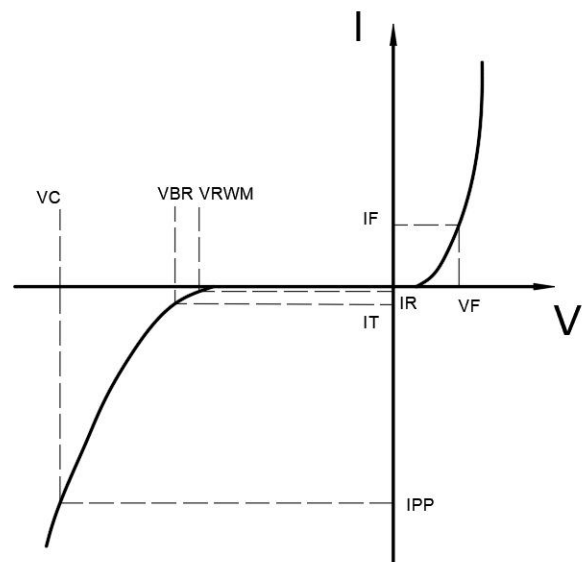
## 6.2. Electrical Characteristics

At TA = 25°C unless otherwise noted

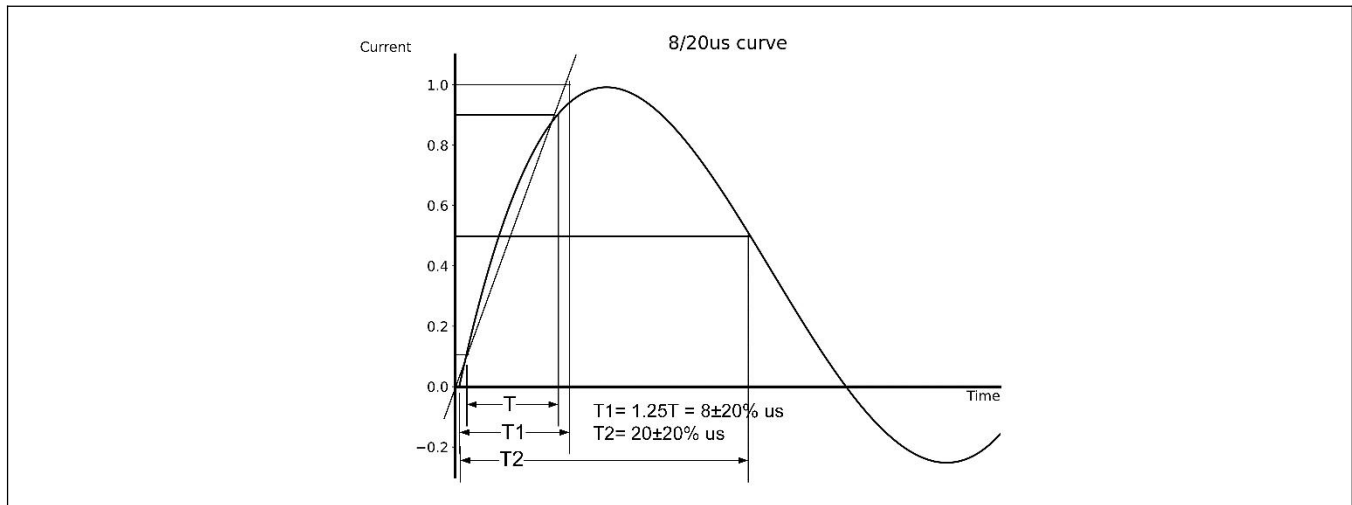
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	$V_{RWM}$				2.8	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	3.0			V
Reverse Leakage Current	$I_R$	$V_{RWM}=2.8V$			1.0	$\mu A$
Clamping Voltage	$V_C$	$I_{PP}=1A$ ; $t_p=8/20\mu s$		5.5	7.0	V
Clamping Voltage	$V_C$	$I_{PP}=30A$ ; $t_p=8/20\mu s$		16.0	22	V
Junction Capacitance	$C_J$	$V_R=0V$ ; $f=1MHz$		1.2	1.5	pF

Table-4 Electrical Characteristics

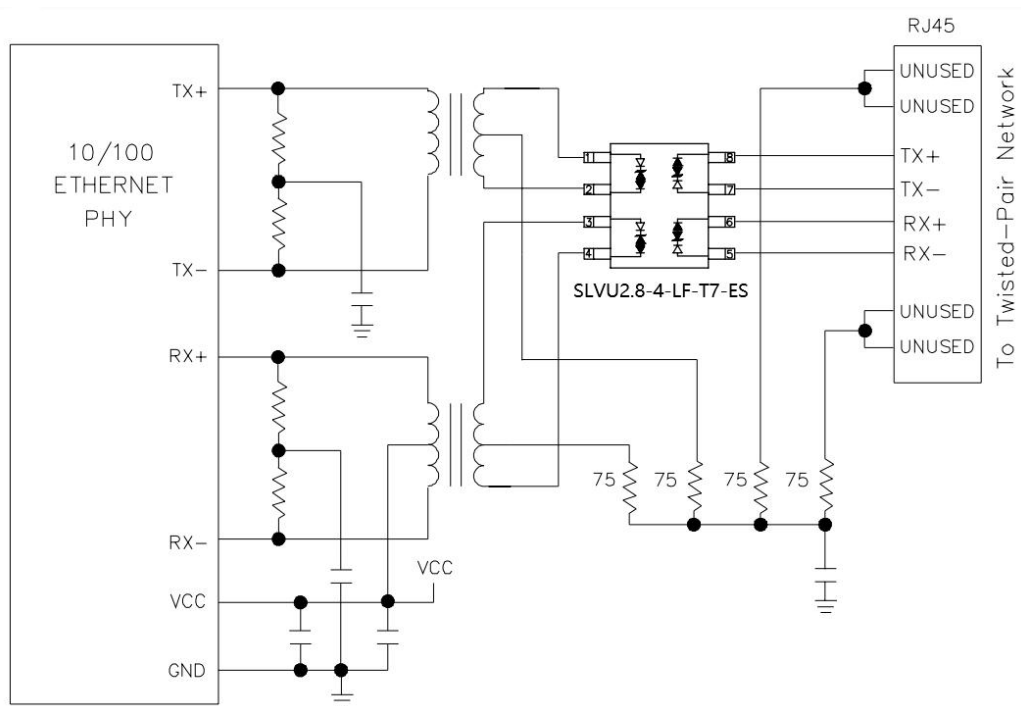
Symbol	Parameters
$V_{RWM}$	Peak Reverse Working Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$



## 7. Typical Characteristic



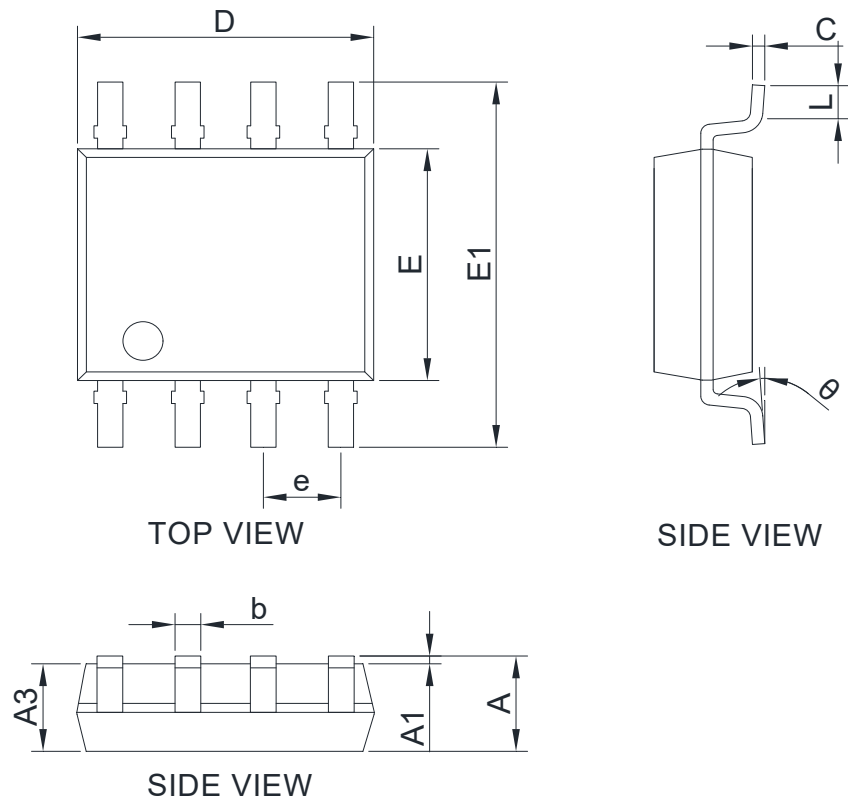
## 8. Typical Application



Typical Interface Application

## 9. Dimension (SOP8)

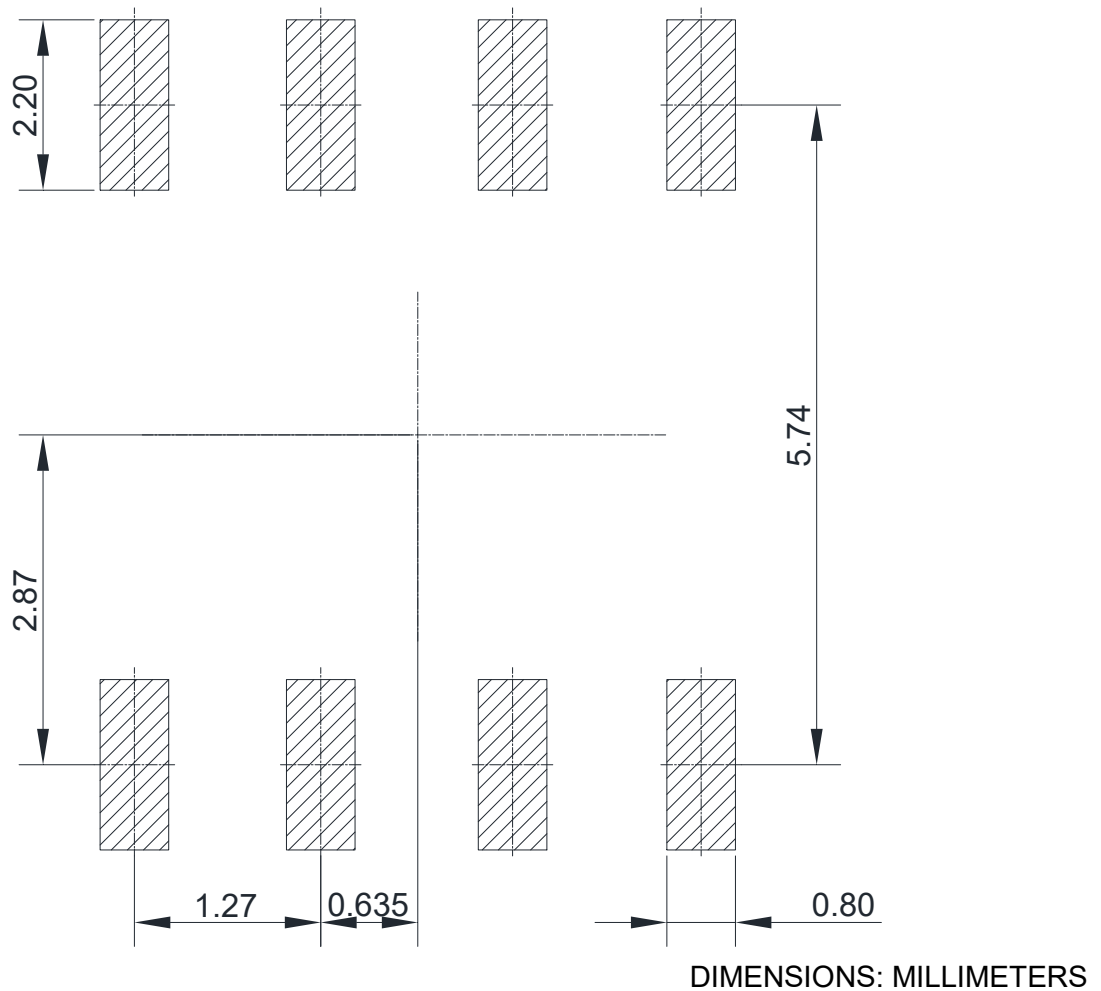
## POD(J)



COMMON DIMENSIONS: UNITS OF MEASURE=MILLIMETER

Symbol	Dimensions			Symbol	Dimensions		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A	1.350	1.550	1.750	e	1.270BSC		
A1	0.100	0.180	0.250	b	0.330	0.420	0.510
A3	1.300	1.400	1.500	L	0.400	0.600	0.800
D	4.800	5.000	5.200	C	0.170	0.210	0.250
E	3.900	4.000	4.100	$\theta$	0°	--	8°
E1	5.800	6.000	6.200				

## 10. Recommended Soldering Footprint



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