Technical Data
Data Sheet Draft, Rev. -

RoHS

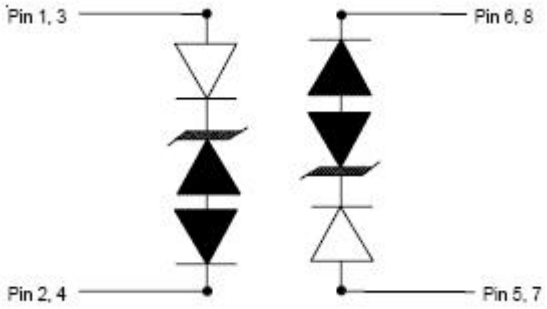
SLVU2.8-4 Low Voltage TVS Diode Array

SO-8

Description

The SLVU2.8-4 TVS diode is a low capacitance TVS(Transient Voltage Suppressor) device designed to protect low voltage components such as Ethernet transceivers, laser diodes, ASICs, and high-speed RAM from transients caused by electrostatic discharge(ESD), cable discharge events(CDE), lightning and other induced voltage surges.
The SLVU2.8-4 is in an SO-8 package and can be used to protect two high-speed line pair. The "flow-thru"design minimizes trace inductance and reduces voltage overshoot associated with ESD events. The low clamping voltage of the SLVU2.8-4 minimizes the stress on the protected IC.

Circuit Diagram



Mechanical Characteristics

- SO-8 package
- Marking: Part number, date code
- Packaging: Tape and Reel
- Molding compound flammability rating: UL 94V-0

Features

- 600 Watts peak pulse power(tp=8/20us)
- Transient protection for high speed data lines
  IEC 61000-4-2(ESD)±15KV(air),±8KV(contact)
  IEC 61000-4-4(EFT) 40A (5/50ns)
  IEC 61000-4-5(Lightning) 30A (8/20us)
- Low capacitance
- Low leakage current
- Low operating and clamping voltages
- Protects two line pairs(four lines)

Applications

- 10/100 Ethernet
- WAN/LAN Equipment
- Switching Systems
- Desktops,Servers and Notebooks
- Instrumentation
- Analog Inputs
- Base Stations

Ordering Information:

Device	Package	Shipping
SLVU2.8-4	SO-8(Pb-Free)	3000pcs/ reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Technical Data
Data Sheet Draft, Rev. -

RoHS

Maximum Ratings

Characteristics	Symbol	Max.	Units
Peak Pulse Power (tp=8/20us)	P_{PK}	600	Watts
Peak Pulse Current (tp=8/20us)	I_{PP}	30	A
ESD per IEC61000-4-2 (air) ESD per IEC61000-4-2 (contact)	V_{ESD}	25 15	KV
Lead Soldering Temperature	T_L	260(10 seconds)	℃
Operating Temperature	T_J	-55 to +125	℃
Storage Temperature	T_{STG}	-55 to +150	℃

Electrical Characteristics

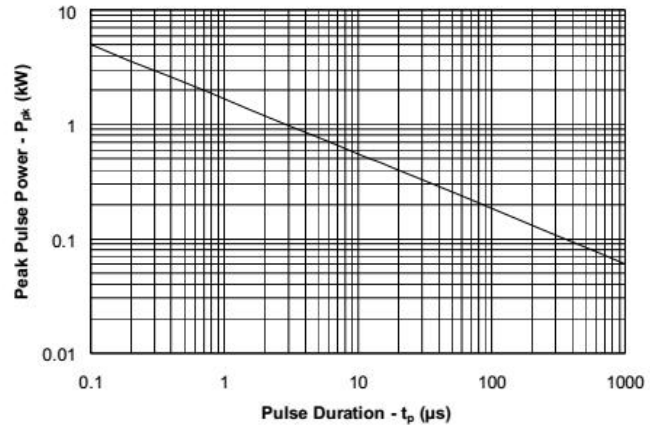
Characteristics	Symbol	Condition	Min.	Typ.	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}				2.8	V
Punch-Through Voltage	V_{PT}	I_{PT}=2uA	3.0			V
Snap-Back Voltage	V_{SB}	I_{SB}=50mA	2.8			V
Reverse Leakage Current	I_R	V_{RWM}=2.8V,T=25℃ (Each Line)		0.01	1	uA
Clamping Voltage	V_C	I_{PP}=5A, tp=8/20us (Each Line)			8.5	V
Clamping Voltage	V_C	I_{PP}=10A, tp=8/20us (Each Line)			12	V
Clamping Voltage	V_C	I_{PP}=30A, tp=8/20us (Each Line)			20	V
Junction Capacitance	Cj	V_R=0V, f=1MHz (Each Line)		5		pF

Technical Data
Data Sheet Draft, Rev. -

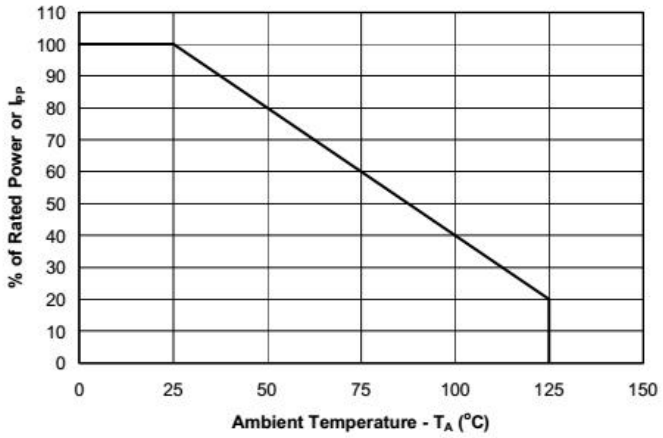
RoHS

Ratings and Characteristics Curves

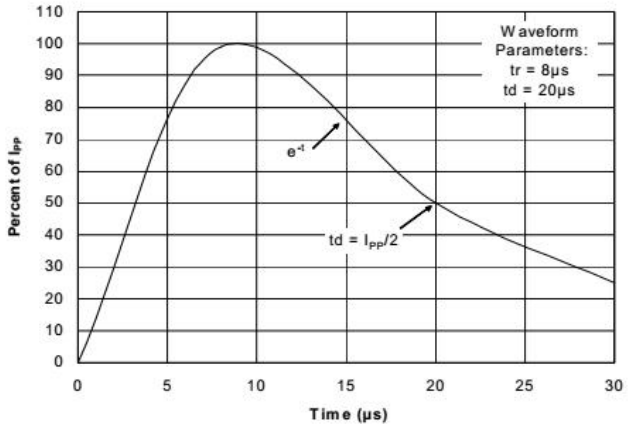
Non-Repetitive Peak Pulse Power vs. Pulse Time



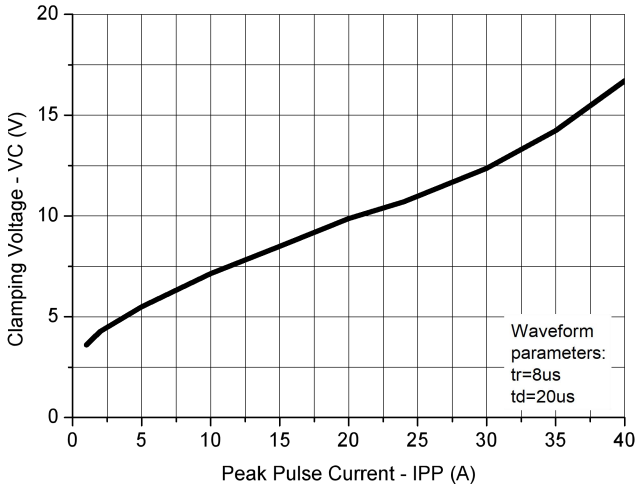
Power Derating Curve



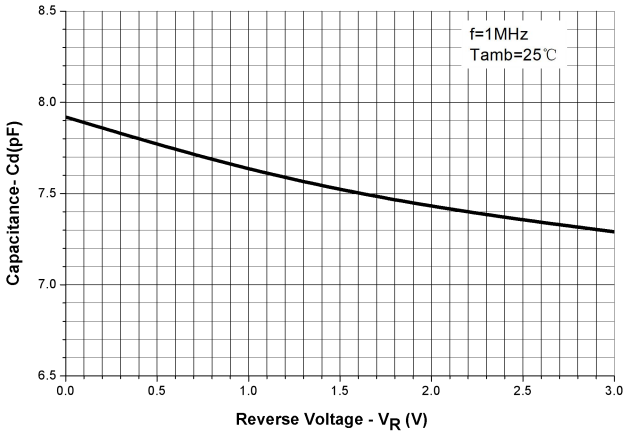
Pulse Waveform



Clamping Voltage vs. Peak Pulse Current



Capacitance vs. Reverse Voltage



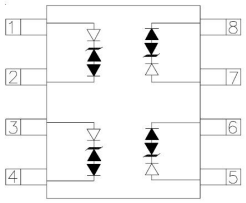
SLVU2.8-4

Technical Data
Data Sheet Draft, Rev. -

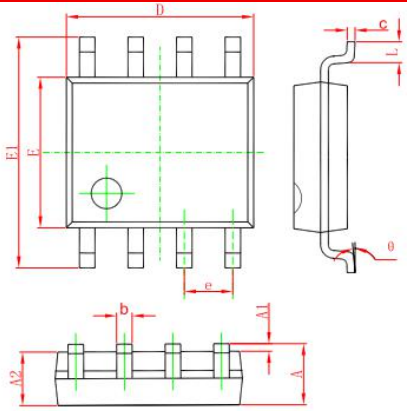
RoHS

Circuit Diagram

The SLVU2.8-4 is designed to protect four data lines of sensitive components from damage and latch-up which may result from transients.Data line I/Os are connected at pin 1 and 2, 3 and 4, 5and 6, 7 and 8.
The SLVU2.8-4 is also designed to protect two high-speed line pair. The line pairs enter at pins 1 and 2, pin 3 and 4, and exit at pin 8 and 7, pin 6 and 5.

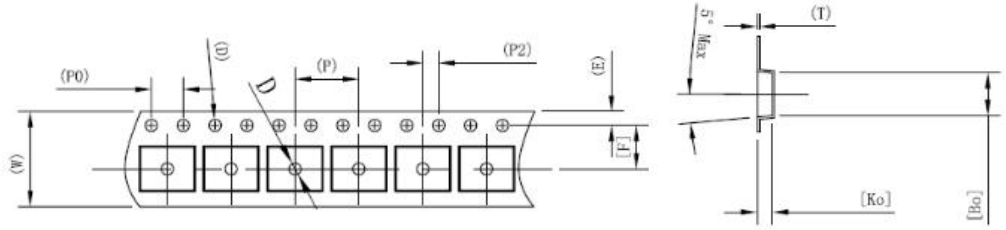


Mechanical Dimensions



字符	Dimension In Millimeters	
	Min	Max
A	1.500	1.700
A1	0.040	0.120
A2	1.350	1.550
b	0.300	0.500
c	0.190	0.250
D	4.800	5.000
E	3.840	4.040
E1	5.900	6.100
e	1.27(BSC)	
L	0.520	0.720
θ	0°	8°

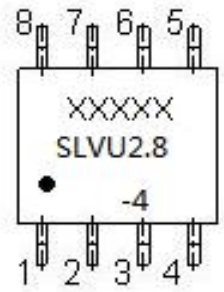
Carrier Tape Specification



ITEM	W	Ao	A1	Bo	B1	Ko	K1	E	F	P	PO	P2	Do	D1	T
DIM	12.0	6.55	0.00	5.40	0.00	1.90	0.00	1.75	5.50	8.0	4.0	2.0	1.50	1.50	0.25
TOLE	+0.30 −0.30	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	+0.10 −0.00	+0.10 −0.00	±0.05

unit:mm

Marking Diagram



Where XXXXX is YYWWL

SLVU2.8-4 = Part Number
YY = Year
WW = Week
L = Lot Number

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Data Sheet Draft, Rev. -

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