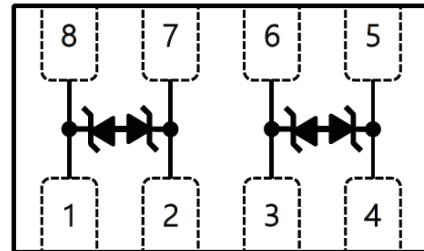


Ultra Low Capacitance TVS Array

Features

- IEC 61000-4-2 (ESD) $\pm 18\text{kV}$ (air), $\pm 18\text{kV}$ (contact)
- IEC 61000-4-5 (Lightning) 8A (8/20 μs)
- IEC 61000-4-4 (EFT) 30A (5/50ns)
- Ultra-low Capacitance (IO to I/O) : 0.38pF typ.
- Protects two line pairs
- Ultra-low leakage : nA level
- Operating voltage : 2.5V
- Ultra-low clamping voltage

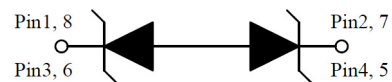
Pin Configuration



Applications

- High-speed differential data lines
- 5G/10G Ethernet
- RJ-45 Connectors
- LAN/WAN Device
- Ethernet interface

Circuit Diagram



Mechanical Characteristics

- Package: DFN2010-8L (2.0 \times 1.0 \times 0.36mm)
- Moisture Sensitivity: Level 1 per J-STD-020
- RoHS Compliant

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PK}	50	W
Peak Pulse Current ($t_p = 8/20\mu\text{s}$)	I_{PP}	8	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 18	KV
ESD per IEC 61000-4-2 (Contact)		± 18	KV
Operating Junction Temperature Range	T_J	-40 to +85	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +125	$^\circ\text{C}$
Lead Soldering Temperature	T_{SOL}	260 (10 sec.)	$^\circ\text{C}$

Electrical Characteristics (T _A = 25°C Unless otherwise noted)						
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V _{RWM}				2.5	V
Breakdown Voltage	V _{BR}	I _{BR} = 1mA	5			V
Reverse Leakage Current	I _R	V _{RWM} = 2.5V			1	μA
Clamping Voltage	V _C	I _{PP} = 1A (tp =8/20μs)	2.5	3.1		V
Clamping Voltage	V _C	I _{PP} = 2A (tp =8/20μs)	2.7	3.2		V
Clamping Voltage	V _C	I _{PP} = 5A (tp =8/20μs)	4.0	4.6		V
Clamping Voltage	V _C	I _{PP} = 8A (tp =8/20μs)	5.0	5.6		V
TLP Clamping Voltage (tperiod = 100ns,tr = 1ns)	V _C	I _{TLP} = 16A, I/O Pin to I/O Pin		8.2		V
TLP Dynamic Resistance (tperiod = 100ns,tr = 1ns)	R _{DYN}	I/O Pin to I/O Pin		0.35		Ω
Junction capacitance	C _J	V _R = 0V, f = 1MHz		0.38	0.75	pF

Typical Operating Characteristics ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

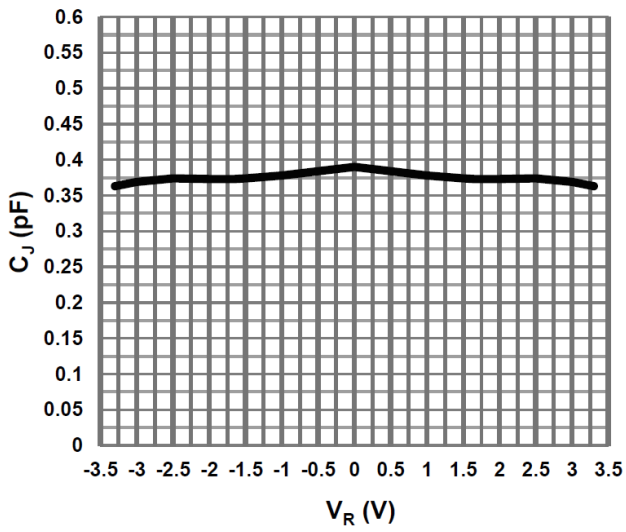


Fig 1. Junction Capacitance vs. Reverse Voltage

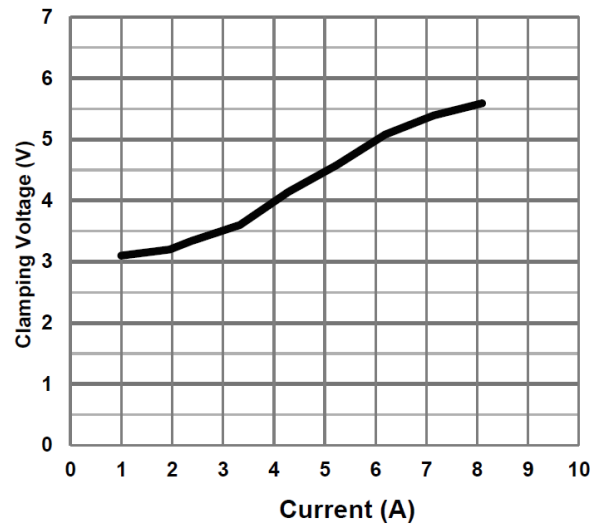


Fig 2. Clamping Voltage vs. Peak Pulse Current

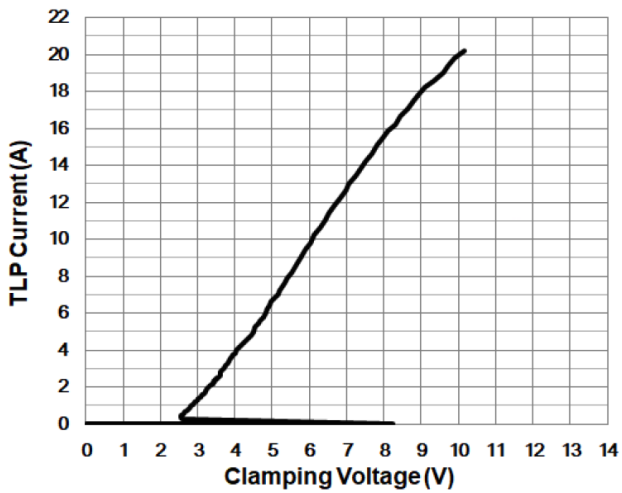


Fig 3. TLP Waveform ($t_{period} = 100\text{ns}$, $t_r = 1\text{ns}$)

Package Mechanical Data

Symbol	Dimensions in millimeters			
	Min.	Typ.	Max.	
A	0.32	--	0.40	
A1	0.00	--	0.05	
A3	0.20 REF			
b	0.20	0.25	0.30	
D	1.90	2.00	2.10	
E	0.90	1.00	1.10	
e	0.50 BSC			
L	0.30	0.35	0.40	

Suggested Land Layout

Symbol	Dimensions in millimeters	
C	0.5	
X	0.3	
X1	1.8	
Y	0.6	
Y1	1.4	

Ordering information

Part Number	Package	Marking code	Base qty	Reel Size	Delivery mode
			(pcs)	(inch)	
STKD8E62BSL	DFN2010-8L	E62	3,000	7	Tape and reel