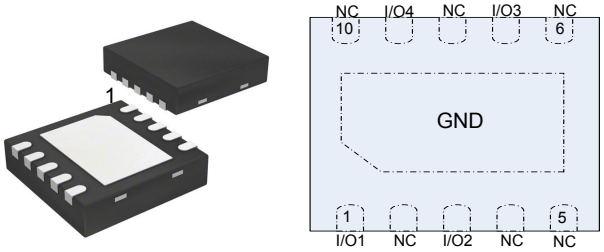
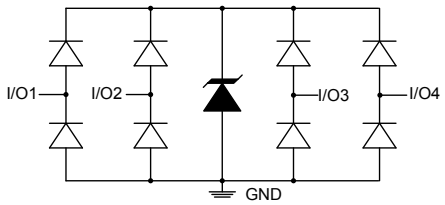
Low Capacitance ESD TVS Array in DFN2626-10L

Features

- 400Watts peak pulse power (tp = 8/20μs)
- DFN2626-10L Package
- Unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance (3pF typical I/O to I/O)
- ESD Protection for high-speed data lines to:
  IEC 61000-4-2 ±15KV contact ±25KV air
  IEC 61000-4-4 (EFT) 40A (5/50ns)
  IEC 61000-4-5 (Lightning) 26A (8/20μs)





Mechanical Data

- **Case:** DFN2626-10L (plastic package).
  Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**
  UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
  260 °C/10 sec. at terminals

Applications

- DVI
- USB 2.0
- Analog Video
- 10/100/1000 Ethernet
- T1/E1 Secondary Protection
- T3/E3 Secondary Protection

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Symbol	Value	Unit
Peak Pulse Power (T_P=8/20μs)	P_{PP}	400	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	15/25	kV
Peak Pulse Current (T_P = 8/20μs)	I_{PP}	26	A
Junction Temperature	T_J	-55 to +125	℃
Storage temperature	T_{STG}	-55 to +150	℃

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	3.5			V
Reverse Leakage Current	I_R	V_R=3.3V			0.5	uA
Clamping Voltage(SURGE)	V_C	I_{PP}=26A, T_P=8/20μs		17		V
Junction Capacitance	C_J	V_R=0V,f=1MHz, I/O to I/O		2.8		pF
	C_J	V_R=0V,f=1MHz, I/O to GND		5.5		pF

Typical Characteristics (T_{amb} = 25 °C unless otherwise specified)

Fig.1 Peak Pulse Power Rating Curve

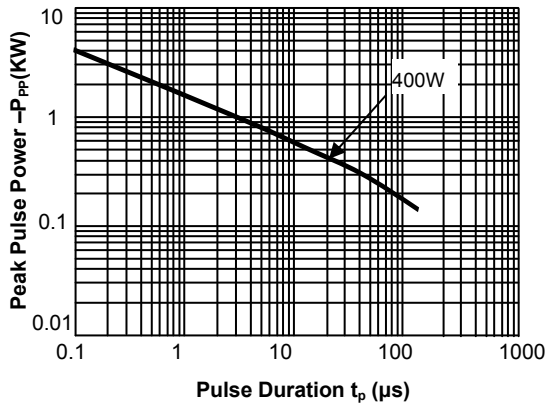


Fig.2 Pulse Derating Curve

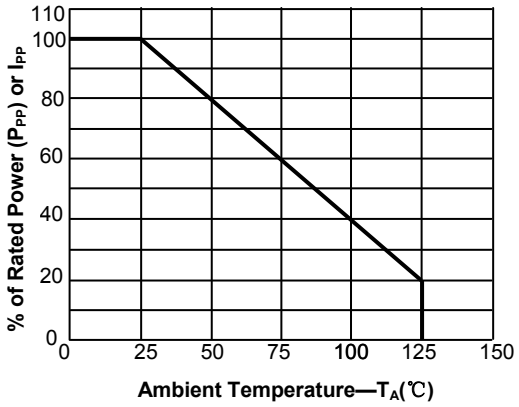


Fig.3 Pulse Waveform-8/20μs

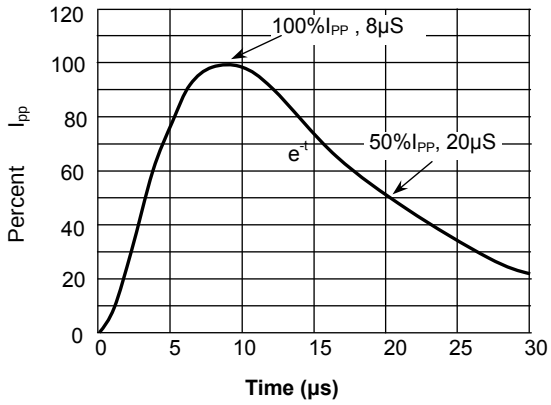


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

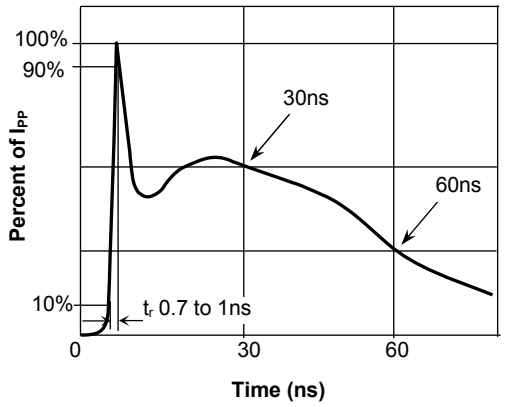


Fig.5 ESD Clamping of I/O to GND (+8kV Contact per IEC 61000-4-2)

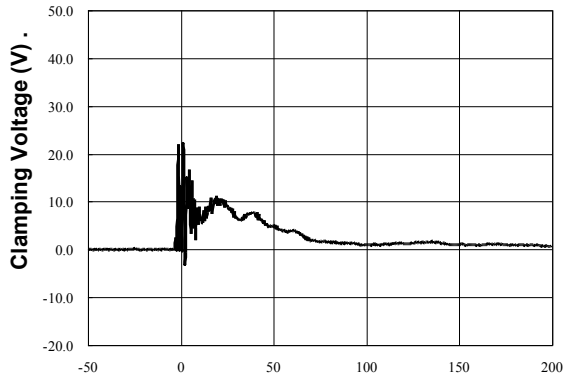
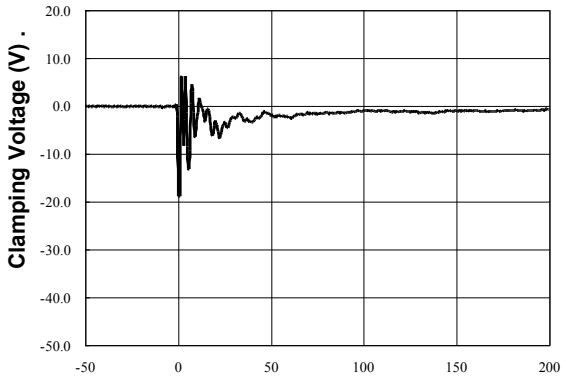
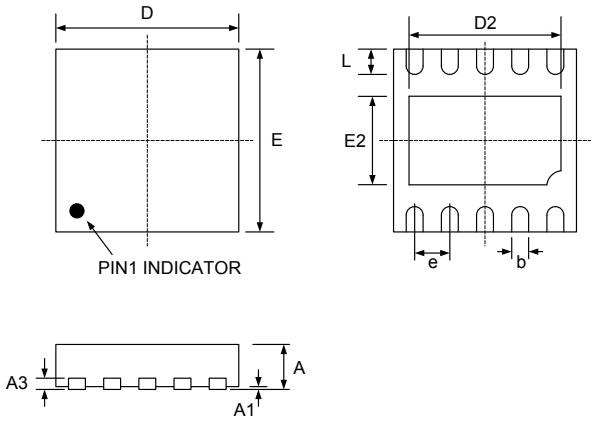


Fig.6 ESD Clamping of I/O to GND (-8kV Contact per IEC 61000-4-2)

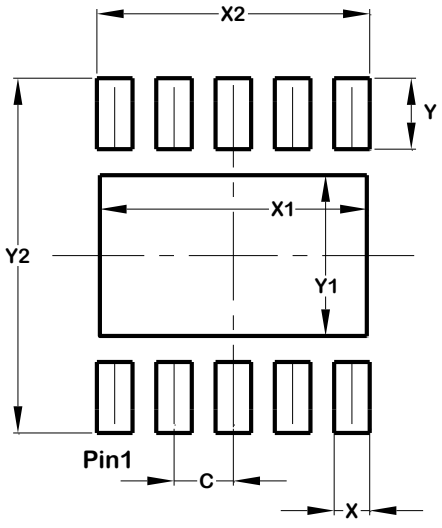


Package Dimensions



Symbol	Dimensions (mm)			Dimensions (Inches)		
	Minimum	Typical	Maximum	Minimum	Typical	Maximum
A	0.500	0.550	0.600	0.020	0.022	0.024
A1	0.000	—	0.050	0.000	—	0.002
A3	0.15 REF			0.006 REF		
b	0.200	0.250	0.300	0.008	0.010	0.012
D	2.550	2.600	2.650	0.100	0.102	0.104
D2	2.000	2.150	2.250	0.079	0.085	0.089
e	0.500 BSC			0.020 BSC		
E	2.550	2.600	2.650	0.100	0.102	0.104
E2	1.110	1.260	1.360	0.044	0.050	0.054
L	0.250	0.350	0.450	0.010	0.014	0.018

Pad Dimensions



Dimensions	Value (in mm)
C	0.500
X	0.300
X1	2.250
X2	2.300
Y	0.600
Y1	1.360
Y2	3.000

Ordering information

Order code	Marking	Package	Packaging option	Base quantity	Packaging specification
TESD2626LC3V3U	M34	DFN2626-10L	Tape and reel	3000pcs / reel	EIA STD RS-481