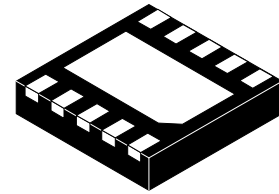
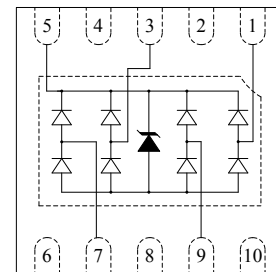


Features

- 450W peak pulse power ($t_p=8/20\mu s$)
- Package optimized for high-speed lines
- Provides protection for two line pairs
- Low capacitance: 3.8pF @ 0V (Typical)
- Low leakage current: 0.1 μA @ V_{RWM} (Typical)
- Low operating and clamping voltage
- Transient protection for high-speed data lines
 - IEC 61000-4-2 (ESD) $\pm 15kV$ (Air)
 - $\pm 8kV$ (Contact)
 - IEC 61000-4-4 (EFT) 40A (5/50 ns)
 - IEC 61000-4-5 (Surge) 25A (8/20 μs)
- Each I/O pin can withstand over 1000 ESD strikes for $\pm 8kV$ contact discharge
- RoHS compliant



Package: DFN2626-10L



(Top View)

Schematic Diagram

Applications

- 10/100/1000M Ethernet Ports
- WAN/LAN Equipment
- Desktops, Servers and Notebooks
- Cellular Phones
- Switching Systems
- Audio/Video Inputs

Absolute Maximum Ratings

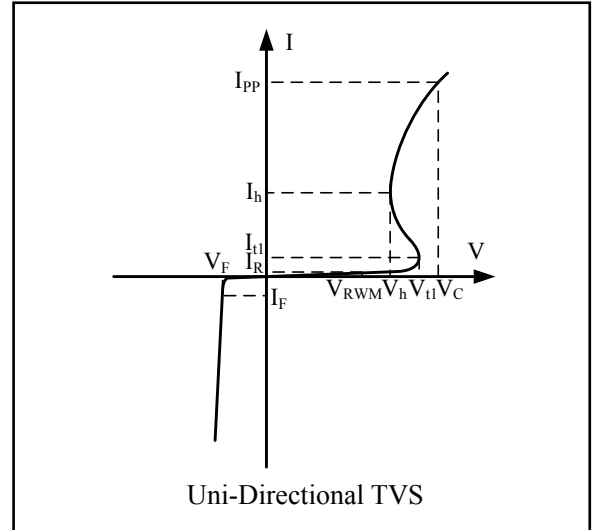
($T_A=25^\circ C$, Unless otherwise specified.)

Symbol	Parameter	Value	Units
I_{PP}	Peak Pulse Current (8/20 μs)	25	A
P_{PK}	Peak Pulse Power (8/20 μs)	450	Watts
V_{ESD}	ESD per IEC 61000-4-2 (Air)	± 25	kV
	ESD per IEC 61000-4-2 (Contact)	± 15	
T_{OPT}	Operating Temperature	-55 to +125	$^\circ C$
T_{STG}	Storage Temperature	-55 to +150	$^\circ C$

Electrical Characteristics

($T_A=25^\circ\text{C}$, Unless otherwise specified.)

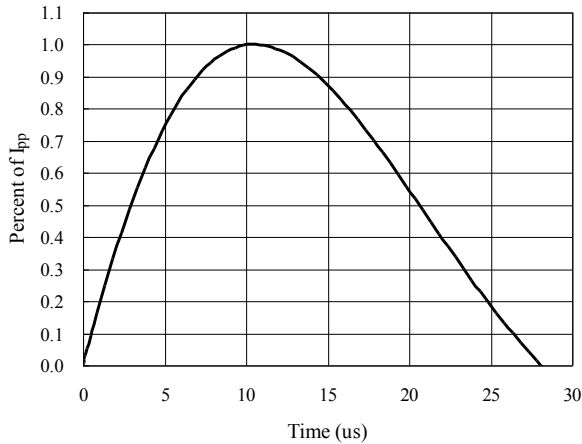
Symbol	Parameter
V_{RWM}	Nominal Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{t1}	Trigger Voltage
I_{t1}	Trigger Current @ V_{t1}
V_h	Holding Voltage
I_h	Holding Current @ V_h
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Maximum Peak Pulse Current
V_F	Forward Voltage @ I_F
C_{ESD}	Parasitic Capacitance



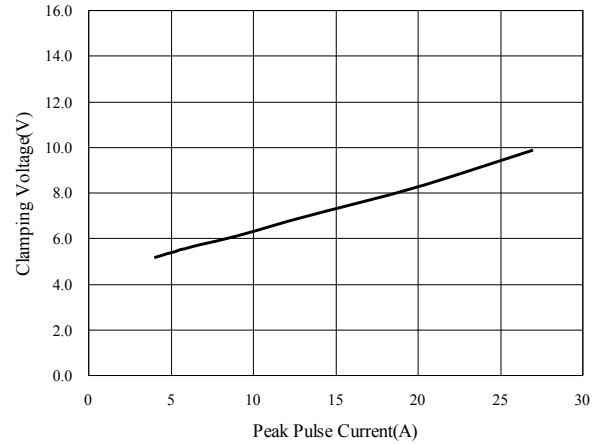
Symbol	Test Condition	Minimum	Typical	Maximum	Units
V_{RWM}	-	-	-	3.3	V
I_R	$V_{RWM} = 3.3\text{V}, T = 25^\circ\text{C}$	-	0.1	1.0	μA
V_{t1}	$I_{t1} = 1\mu\text{A}$	3.5	4.2	5.0	V
V_h	$I_h = 1\text{mA}$	3.3	-	4.5	V
V_C	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$ (Each Line)	-	-	5.5	V
V_C	$I_{PP} = 10\text{A}, t_p = 8/20\mu\text{s}$ (Each Line)	-	-	8.5	V
V_C	$I_{PP} = 25\text{A}, t_p = 8/20\mu\text{s}$ (Each Line)	-	-	16.0	V
C_{ESD}	Between I/O Pins and Ground $V_R = 0\text{V}, f = 1\text{MHz}$	-	3.8	5.0	pF
C_{ESD}	Between I/O Pins $V_R = 0\text{V}, f = 1\text{MHz}$	-	2.0	2.5	pF

Typical Characteristic Curves

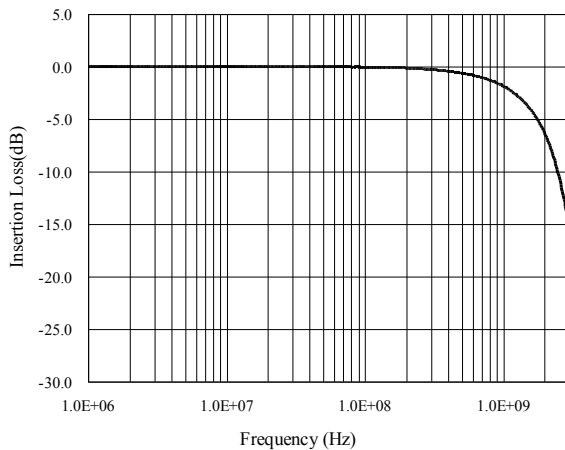
8/20 μ s Pulse Waveform



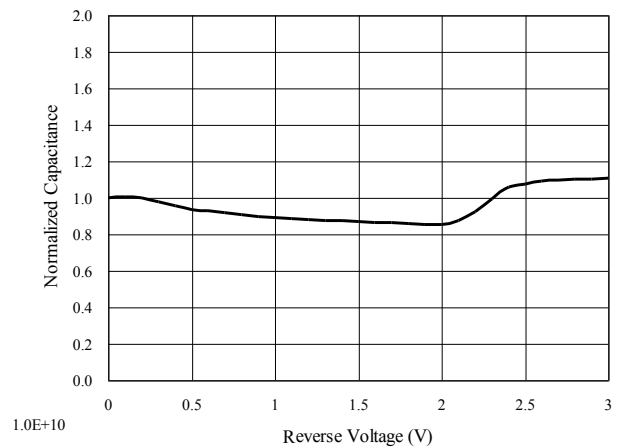
Clamping Voltage V_C vs. Current I_{PP}



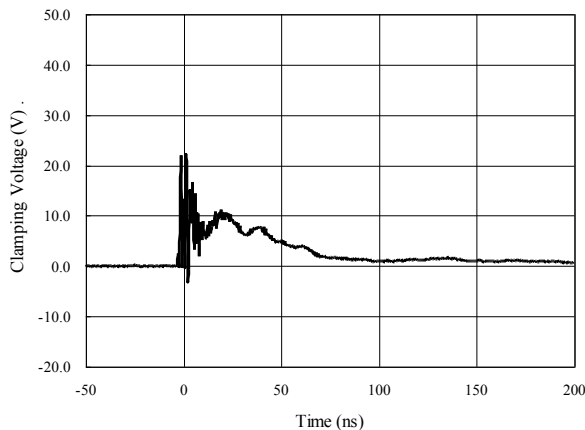
Insertion Loss S21



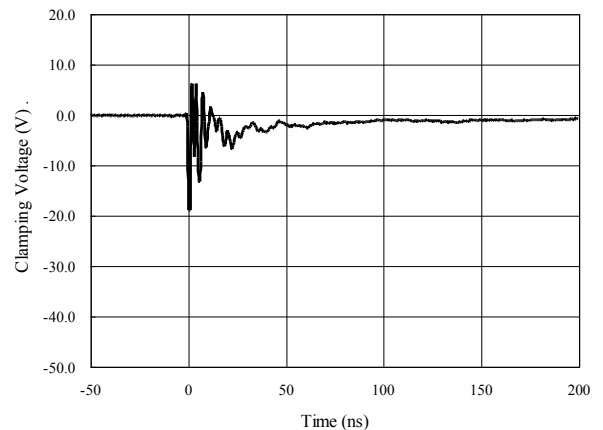
Normalized Capacitance vs. Voltage



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



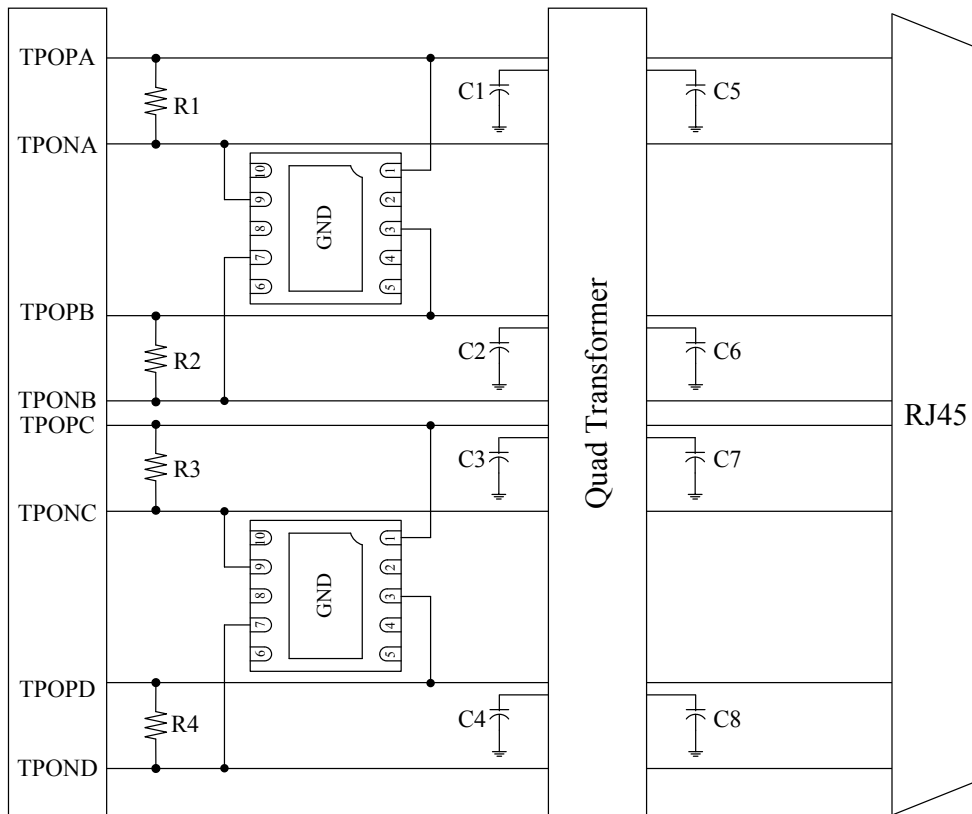
**ESD Clamping of I/O to GND
(-8kV Contact per IEC 61000-4-2)**



Application Information

Electronic equipment is susceptible to damage caused by a variety of sources, including Electrostatic Discharge (ESD), Electrical Fast Transients (EFT) and Lightning strikes. The SPESLC3V3D2626-10U was designed to protect the sensitive equipment from damage which may be induced by such transient events. This product can be configured in different connections to meet the requirement of common-mode and differential-mode as follows:

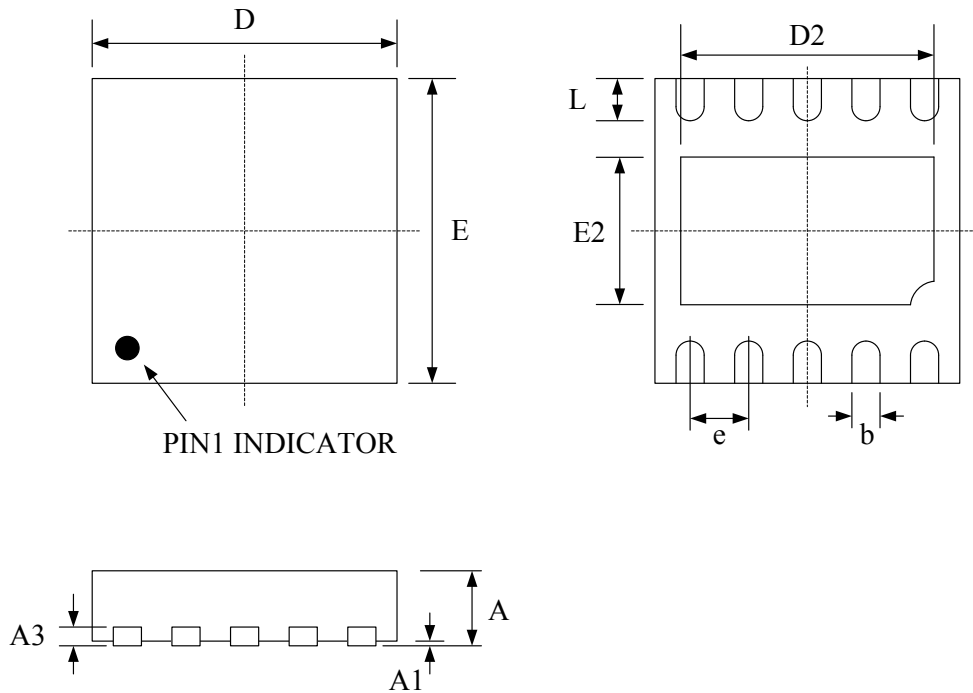
Gigabit Ethernet Protection



Schematic Diagram for Gigabit Ethernet ESD/Surge Protection using SPESLC3V3D2626-10U

NOTE:
DO NOT connect pin5 of SPESLC3V3D2626-10U to a DC supply.

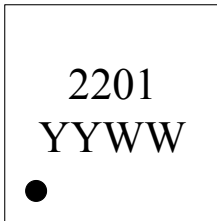
Product Dimensions



Package Dimensions (Controlling dimensions are in millimeters)

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

Marking



Note:

- (1) “2201” is the part number, fixed.
- (2) “YYWW” is date code. “YY” is year (2015 is “15”) while “WW” is assembly week in a year.

Order Information

Device	Package	Carrier	Quantity	HSF Status
SPESLC3V3D2626-10U	DFN2626	Tape & Reel	3000pcs / Reel	RoHS compliant