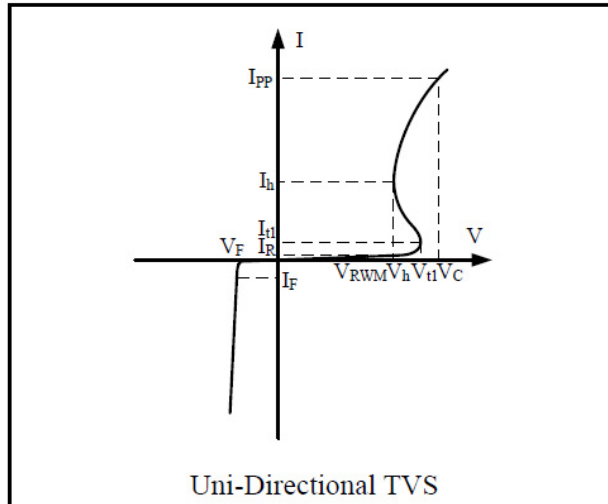




**Electrical Parameter** (T=25°C)

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
$C_{ESD}$	Parasitic Capacitance



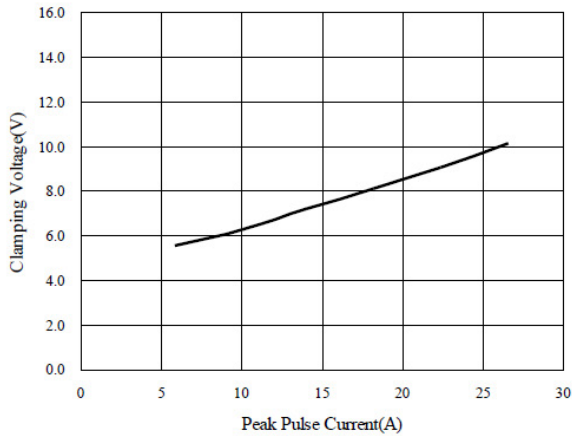
**Electrical Characteristics** ( $T_A=25^\circ\text{C}$  unless otherwise specified)

Symbol	Test Condition	Minimum	Typical	Maximum	Units
$V_{RWM}$	-	-	-	2.5	V
$I_R$	$V_{RWM} = 2.5\text{V}$	-	5	500	nA
$I_R$	$V_{RWM} = 2.5\text{V}, T_a=100^\circ\text{C}$	-	20	-	nA
$V_{t1}$	$I_{t1} = 1\mu\text{A}$	3.0	3.7	4.5	V
$V_h$	$I_h = 1\text{mA}$	3.0	-	4.0	V
$V_C$	Any I/O to Ground $I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$	-	-	4.5	V
$V_C$	Any I/O to Ground $I_{PP} = 10\text{A}, t_p = 8/20\mu\text{s}$	-	-	7.5	V
$V_C$	Any I/O to Ground $I_{PP} = 25\text{A}, t_p = 8/20\mu\text{s}$	-	-	12.0	V
$V_C$	Line-to-Line / Line-to-GND, two I/O Pins connected together on each line $I_{PP} = 40\text{A}, t_p = 8/20\mu\text{s}$	-	-	20.0	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 $V_R = 0\text{V}, f = 1\text{MHz}$	-	1.7	2.5	pF

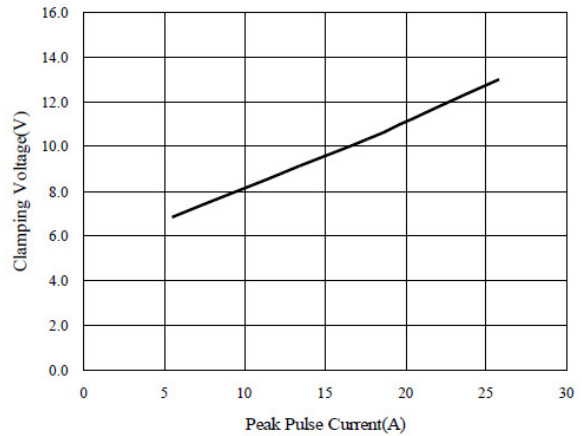


### Typical Characteristic Curve

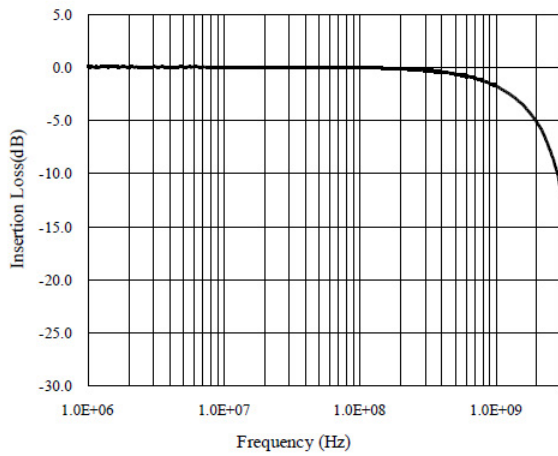
**Clamping Voltage  $V_C$  vs. Current  $I_{PP}$**   
Any I/O to GND



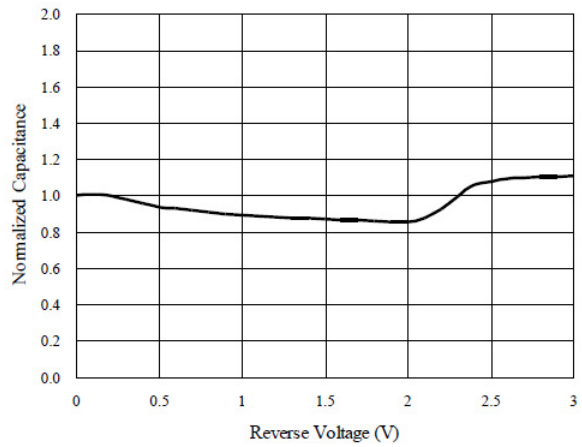
**Clamping Voltage  $V_C$  vs. Current  $I_{PP}$**   
Line-to-Line, Two I/O Pins Connected Together



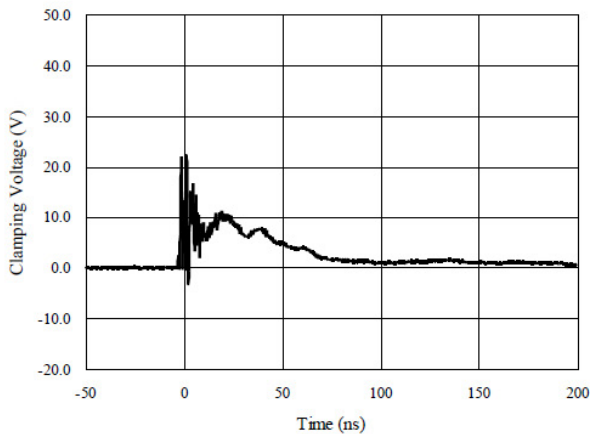
### Insertion Loss S21



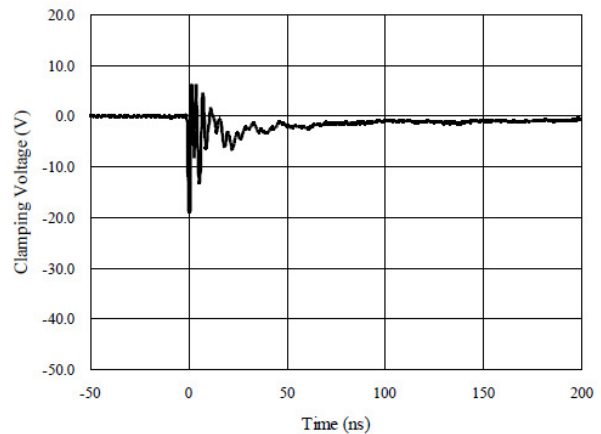
### Normalized Capacitance vs. Voltage



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



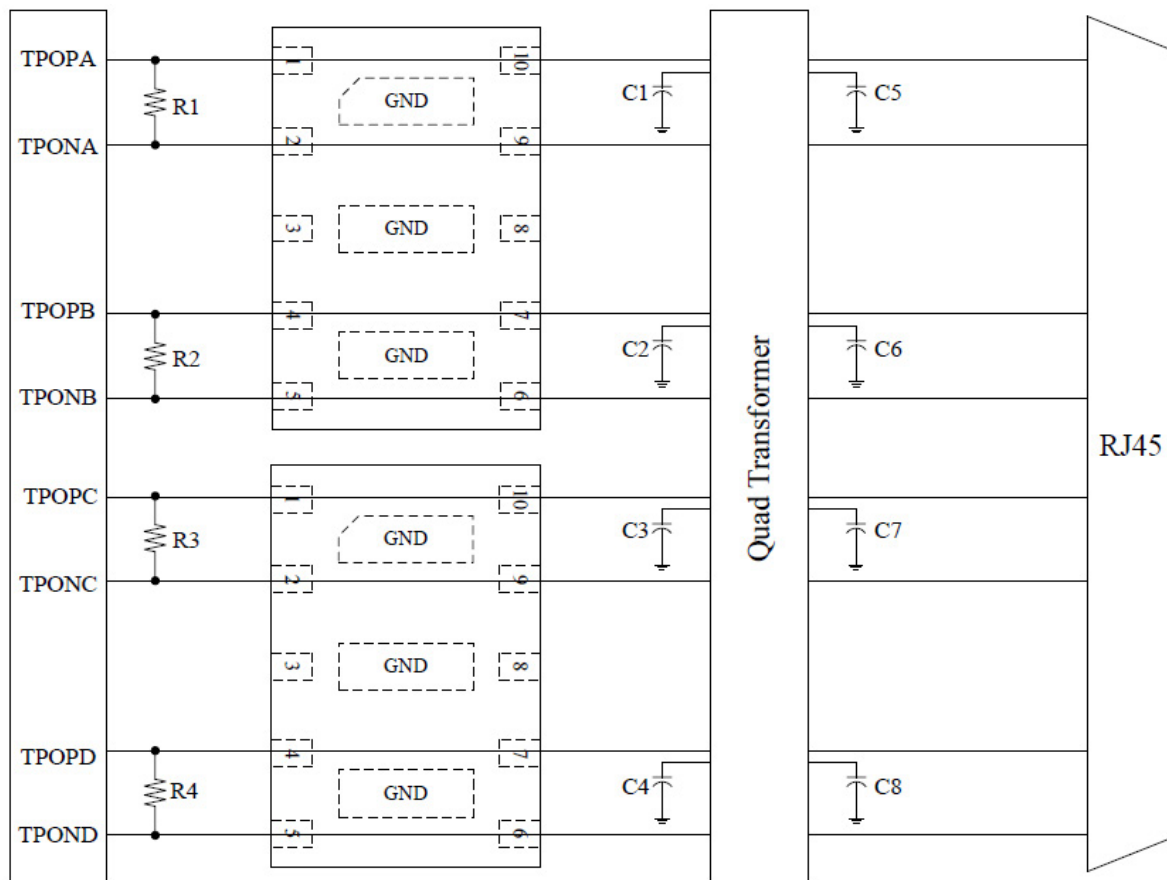
**ESD Clamping of I/O to GND**  
**(-8kV Contact per IEC 61000-4-2)**



### 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 SPESLC2V5D3020-10U 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:

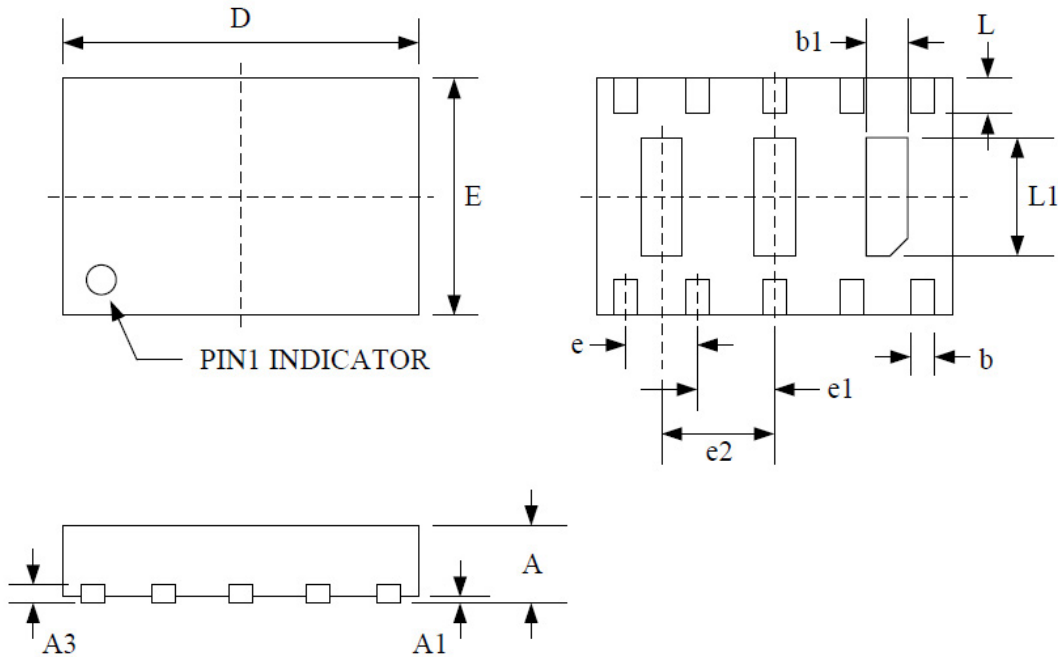
### Gigabit Ethernet Protection



NOTE: Please connect pin3, Pin8 and all GND Tabs of SPESLC2V5D3020-10U to the ground plane of the systems.



**Package Outline Dimensions**



Symbol	Dimensions (mm)			Dimensions (Inches)		
	Minimum	Typical	Maximum	Minimum	Typical	Maximum
A	0.500	0.600	0.650	0.020	0.024	0.026
A1	0.000	0.030	0.050	0.000	0.001	0.002
A3	0.15 REF			0.006 REF		
b	0.150	0.200	0.250	0.006	0.008	0.010
b1	0.250	0.350	0.450	0.010	0.014	0.018
D	2.900	3.000	3.100	0.114	0.118	0.122
E	1.900	2.000	2.100	0.075	0.079	0.083
e	0.600 BSC			0.024 BSC		
e1	0.650 BSC			0.026 BSC		
e2	0.950 BSC			0.037		
L	0.250	0.300	0.350	0.010	0.012	0.014
L1	0.950	1.000	1.050	0.037	0.039	0.041