Features

- Bi-directional ESD protection of one lines
- 40Watts peak pulse power (tp = 8/20μs)
- Working voltage: 3.3V
- Junction Capacitance: 0.22pF(Typ)
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 ±15kV contact ±20kV air
- IEC 61000-4-5 (Lightning) 6A (8/20μs)

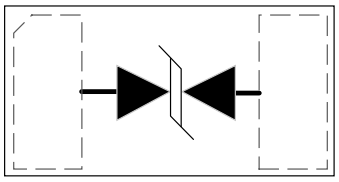
Applications

- USB3.0 and USB3.1
- Ultra-high-speed data lines
- Very sensitive interface lines
- Notebooks, Desktops, and Servers
- Portable Instrumentation

Mechanical Data

- Package:DFN0603
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	Packing	Reel Size
PESD3V3Y1BSFYL-CN	DFN0603	C9	10000 Tape & Reel	7 inches

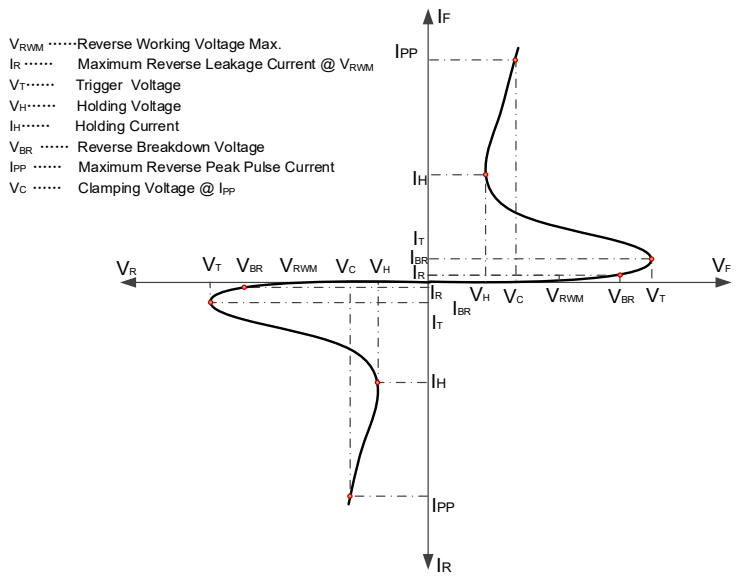
Absolute Maximum Rating(TA = 25°C unless otherwise noted)

Rating	Symbol	Value	Units
Peak Pulse Power (t_p =8/20μs)	P_{PP}	40	Watts
Peak Pulse Current (t_p =8/20μs) (note1)	I_{pp}	6	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	20 15	kV
Lead Soldering Temperature	T_L	260(10seconds)	℃
Junction Temperature	T_J	-55 to + 125	℃
Storage Temperature	T_{stg}	-55 to + 125	℃

Electrical Characteristics(T_A = 25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				3.3	V
Holding Voltage	V_H		2.0		3.3	V
Reverse Leakage Current	I_R	V_{RWM}=3.3V,T=25℃		5	200	nA
Clamping Voltage	V_C	I_{PP}=16A,t_p=100ns		6.0	6.8	V
Clamping Voltage	V_{CL}	I_{PP}=6A,t_p=8/20μs			5.8	V
dynamic resistance	R_{dyn}	T_{amb}=25℃, I_R=10A		0.3	0.4	Ω
Junction Capacitance	C_j	V_R = 0V, f = 1MHz		0.22	0.32	pF

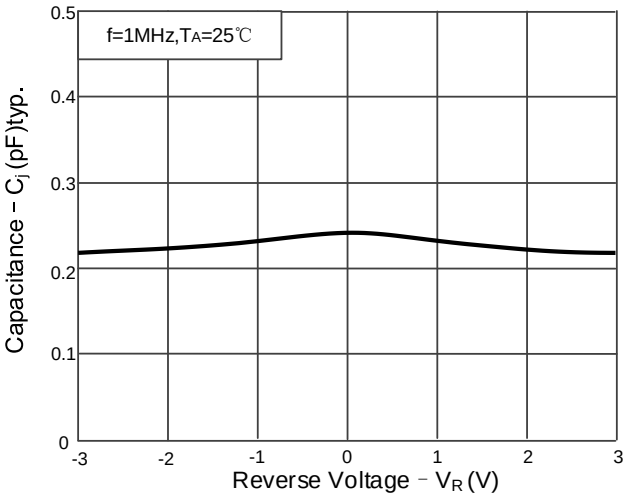
Electrical Parameters (T_A = 25°C unless otherwise noted)



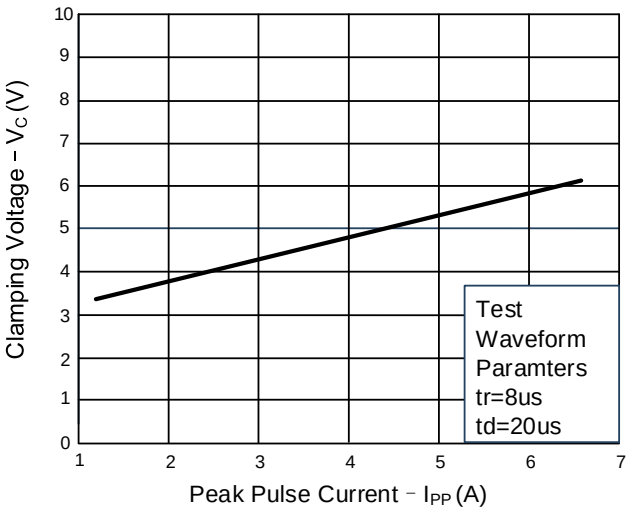
Note1：8/20μs pulse waveform.

Typical Characteristic(T_A = 25°C unless otherwise noted)

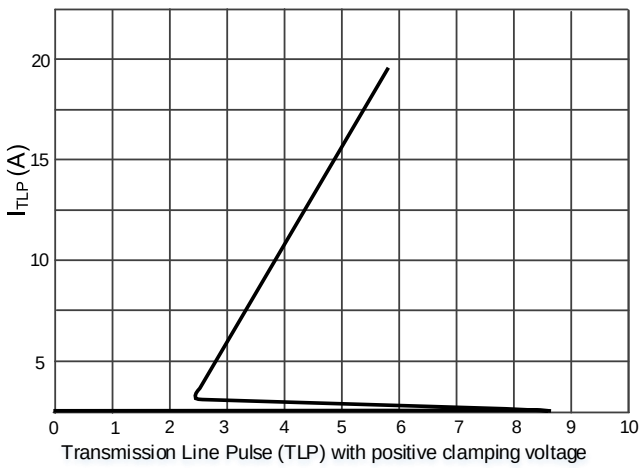
Capacitance vs. Reverse Voltage



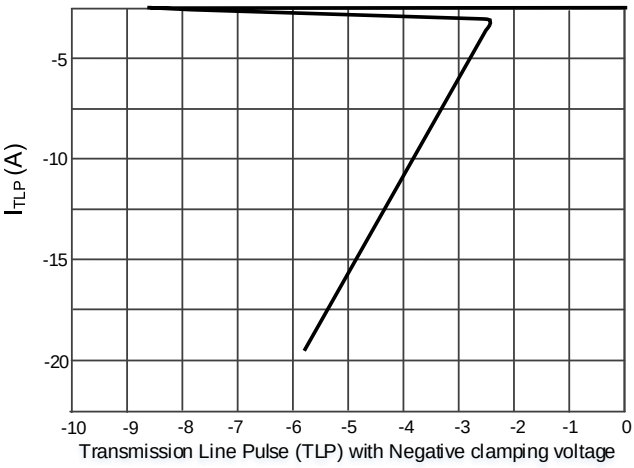
Reverse Clamping Voltage vs. Peak Pulse Current



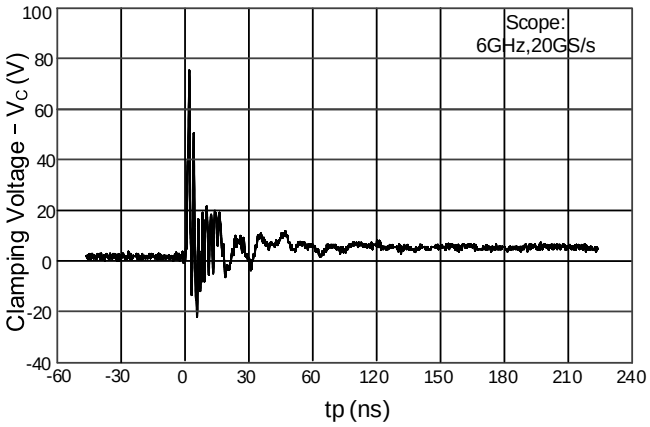
Positive Clamping voltage (TLP)



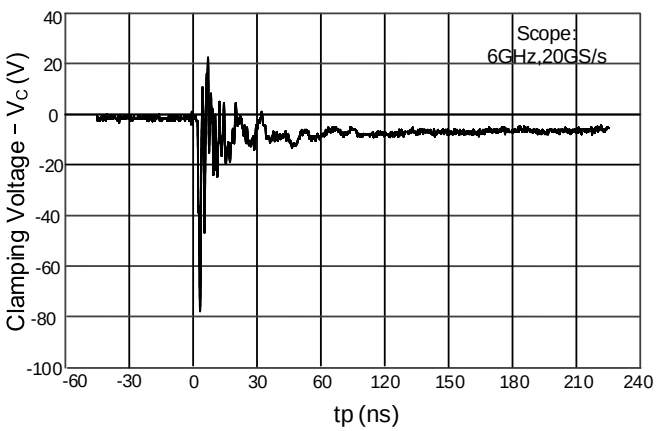
Positive Clamping voltage (TLP)



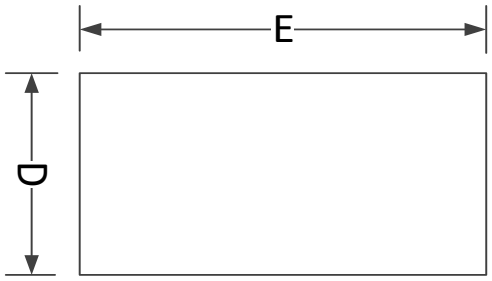
IEC61000-4-2 : 8 kV positive pulse(pin 1 to pin 2)



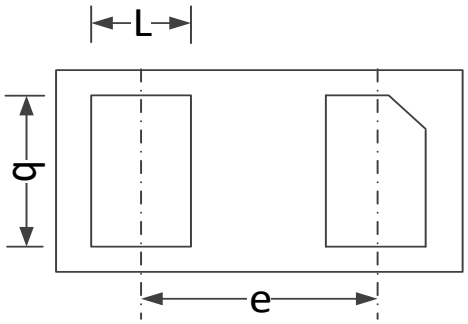
IEC61000-4-2 : 8 kV positive pulse(pin 2 to pin 1)



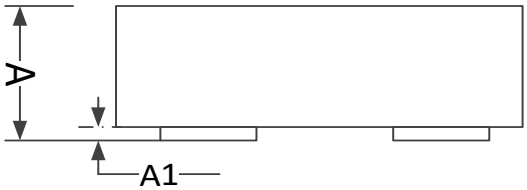
Outline Drawing – DFN0603



TOP VIEW



BOTTOM VIEW



SIDE VIEW

COMMON DIMENSION (MM)			
PKG	DFN0603		
REF.	MIN.	NOM.	MAX.
A	0.28	0.30	0.34
A1	0.00	0.02	0.05
b	0.21	0.23	0.265
L	0.14		0.24
e	0.35BSC		
D	0.25	0.30	0.35
E	0.55	0.60	0.65

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