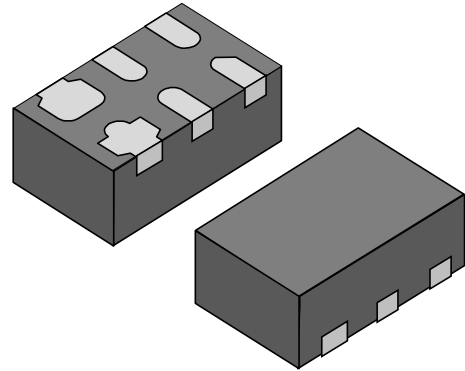


»Features

- ◆ 80Watts peak pulse power (tp = 8/20µs)
- ◆ Uni-directional configurations
- ◆ Solid-state silicon-avalanche technology
- ◆ Capacitance: 0.25pF typical
- ◆ Low clamping voltage
- ◆ Low leakage current
- ◆ Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±25KV
    - Contact discharge: ±20KV
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 4A (8/20us)



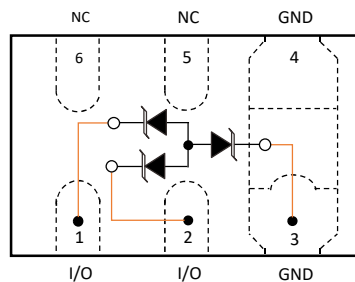
»Applications

- ◆ USB 2.0 and USB 3.0 Ports
- ◆ USB OTG
- ◆ Digital video interface(DVI)
- ◆ Monitor and Flat Panel Displays
- ◆ PCI Express and Serial SATA Ports
- ◆ Gigabit Ethernet

»Mechanical Data

- ◆ Package: DFN1610P6
- ◆ UL Flammability Classification Rating 94V-0
- ◆ Packaging: Tape and Reel
- ◆ RoHS/WEEE Compliant

»Schematic & PIN Configuration



**DFN1610P6**

## »Absolute Maximum Ratings

Parameter	Symbol	Value	Units
Reverse Working Voltage	$V_{RWM}$	5	V
Peak Pulse Power (tp=8/20μs)	$P_{PP}$	80	W
Peak Pulse Current (tp=8/20μs)	$I_{PP}$	4	A
ESD per IEC 61000-4-2 (Air)	$V_{ESD-Air}$	25	KV
ESD per IEC 61000-4-2 (Contact)	$V_{ESD-Contact}$	20	KV
Lead Soldering Temperature (10s)	$T_L$	260	°C
Operating Temperature Range	$T_J$	-55 to 125	°C
Storage Temperature Range	$T_{STG}$	-55 to 150	°C

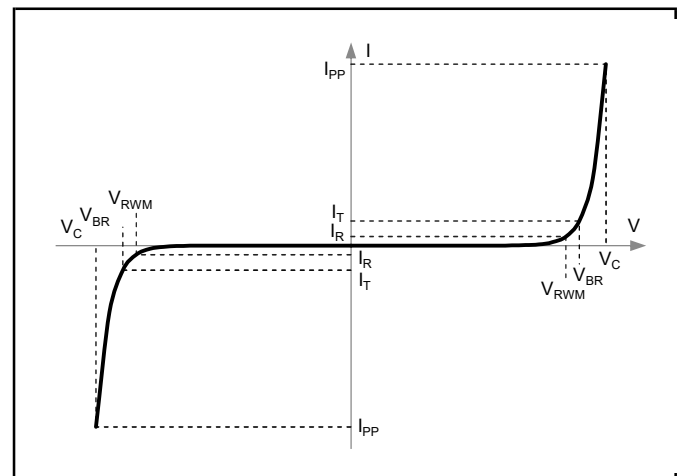
## »Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	6.5			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V$			0.1	uA
Clamping Voltage	$V_C$	$I_{PP} = 1A, tp=8/20\mu s$		10		V
Clamping Voltage	$V_C$	$I_{PP} = 4A, tp=8/20\mu s$			20	V
Junction Capacitance	$C_J$	$V_{DC} = 0V, f=1MHz$		0.25	0.4	pF

Notes: The default test is I/O pin to ground.

## »Electrical Parameters

Symbol	Definition
$I_{PP}$	Peak Pulse Current
$V_C$	Clamping Voltage
$V_{RWM}$	Reverse Working Voltage
$I_R$	Reverse Leakage Current
$V_{BR}$	Breakdown Voltage
$I_T$	Test Current



»Typical Characteristics

Fig.1 - Peak Pulse Power Rating

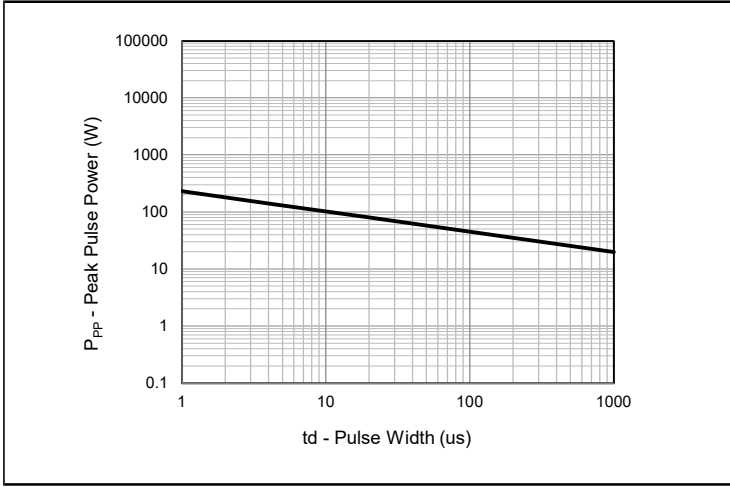


Fig.2 - Pulse Derating Curve

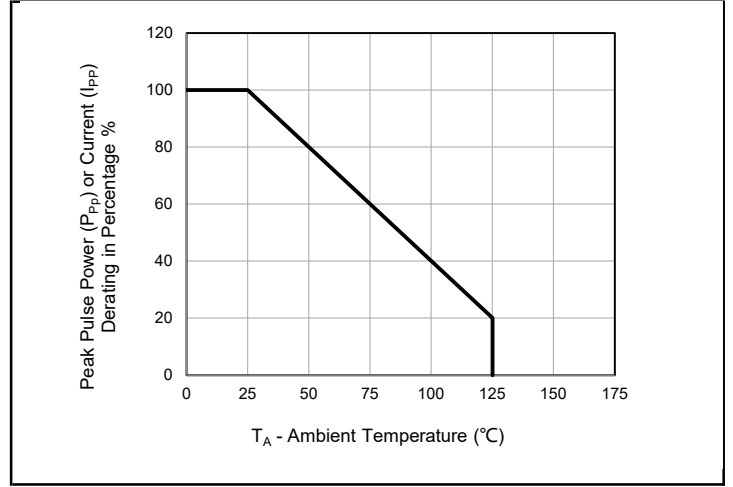


Fig.3 - 8/20us Pulse Waveform

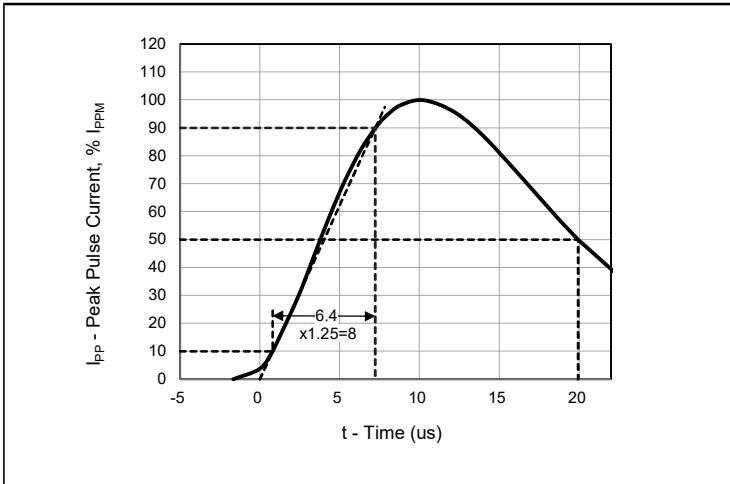


Fig.4 - Typical Clamping Voltage

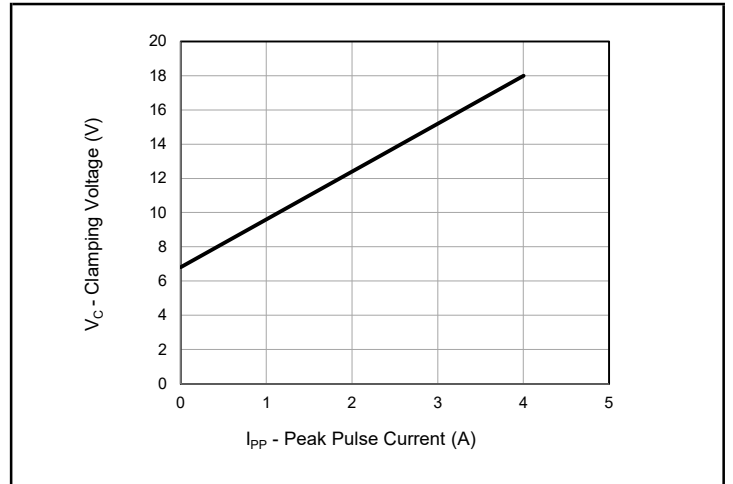


Fig.5 - ESD Pulse Waveform (IEC61000-4-2)

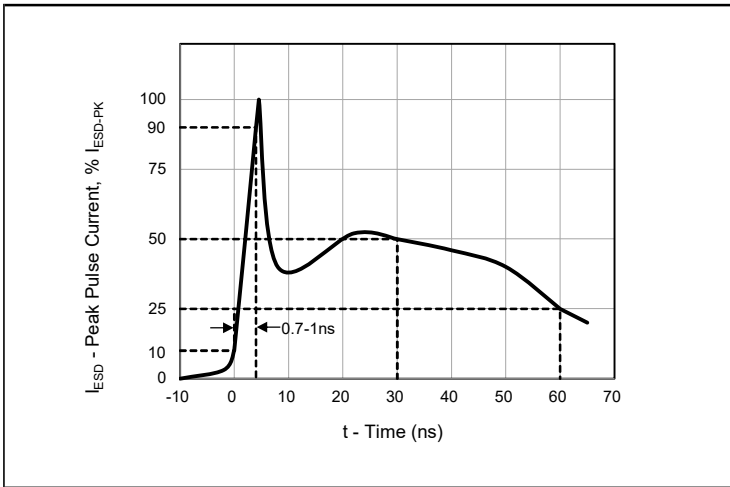
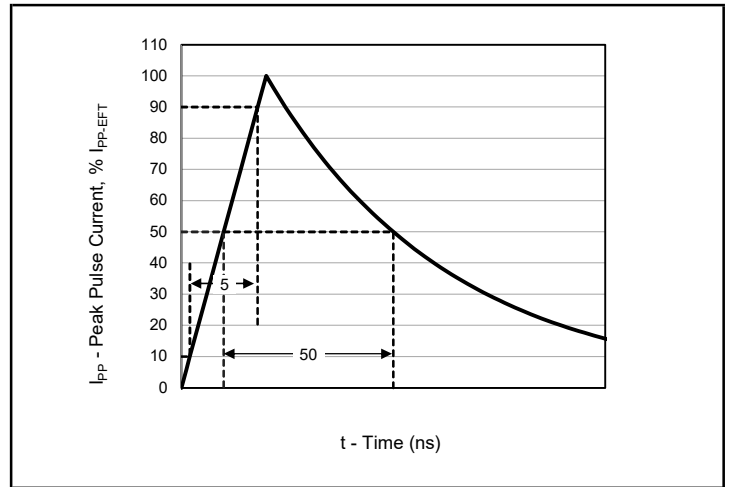
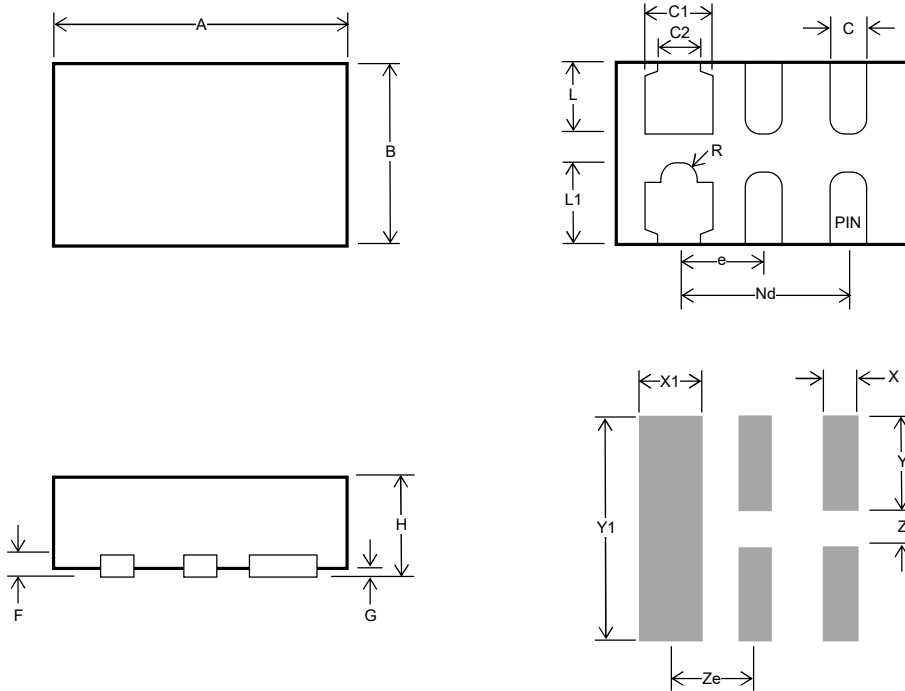


Fig.6 - 5/50ns EFT Waveform (IEC61000-4-4)

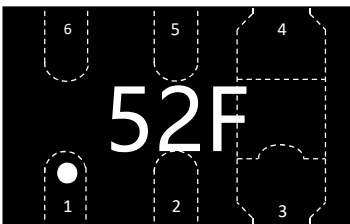


»Outline Drawing



DFN1610P6			
SYMBOL	Millimeters		
	MIN	NOM	MAX
A	1.55	1.6	1.65
B	0.95	1	1.05
C	0.15	0.2	0.25
F	0.12	0.15	0.2
G	0	0.02	0.05
H	0.45	0.5	0.55
L	0.33	0.38	0.43
e		0.5	
C1	0.35	0.4	0.45
C2	0.2	0.25	0.3
L1	0.44	0.49	0.54
Nd		1	
X		0.3	
Y		0.5	
Z		0.1	
Ze		0.5	

»Marking



»Ordering Information

Order Code	Package	Base Quantity	Delivery Mode
BDFN1510C052R	DFN1610P6	5000 PCS/Reel	Tape and Reel

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