



## Features

- Protects one data or power line
- Low operating voltage: 15V
- Ultra low clamping voltage
- Complies with following standards:
  - IEC 61000-4-2 (ESD)immunity test  
Air discharge:  $\pm 30\text{kV}$   
Contact discharge:  $\pm 30\text{kV}$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 125 A (8/20 $\mu\text{s}$ )
- RoHS Compliant

## Mechanical Characteristics

- Package: DFN2X2-3
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020

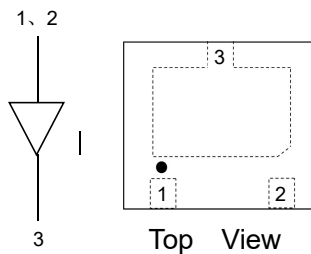
## Applications

- Fast-charge battery chargers
- Power management system
- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals

## Ordering Information

Part Number	Qty per Reel	Reel Size
TPTVS15VU-DFN3	3000	7"

## Dimensions and Pin Configuration





**Absolute Maximum Ratings** (T<sub>amb</sub>=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P <sub>PK</sub>	4000	W
Peak Pulse Current (8/20μs)	I <sub>PP</sub>	125	A
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	T <sub>OP</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

**Electrical Characteristics** (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Peak Reverse Working Voltage	V <sub>RWM</sub>				15	V
Breakdown Voltage	V <sub>BR</sub>	I <sub>t</sub> =1mA	16	17.5	19	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> = 15V			1	μA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =30A t <sub>p</sub> = 8/20μs		22	26	V
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =125A t <sub>p</sub> = 8/20μs		29	38	V
Peak Pulse Power ( t <sub>p</sub> = 8/20μS )	P <sub>pp</sub>		4000			W
Junction Capacitance	C <sub>j</sub>	V <sub>R</sub> =0V f = 1MHz		800	1200	pF



**Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)**

Fig1. 8/20 $\mu\text{s}$  Pulse Waveform

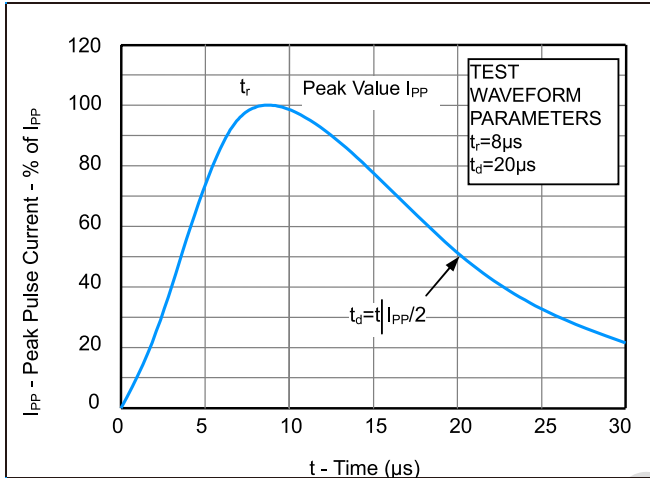


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

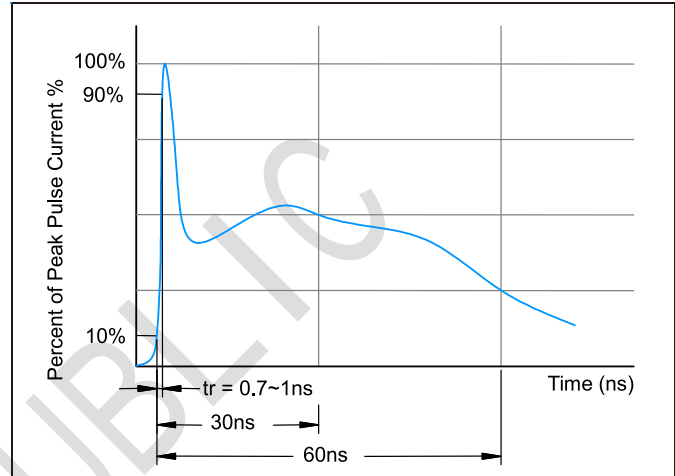


Fig3. Power Derating Curve

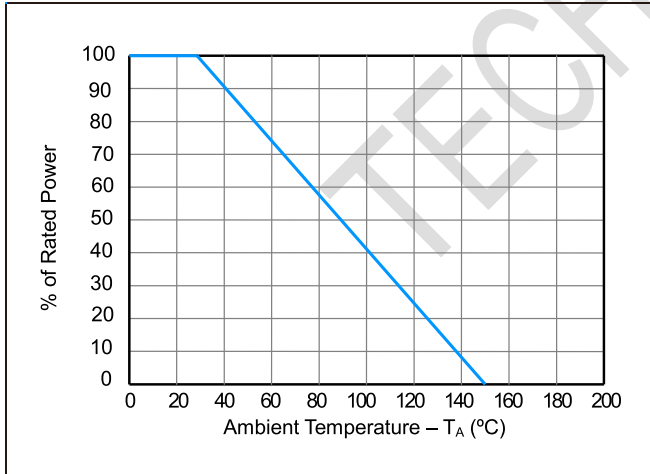
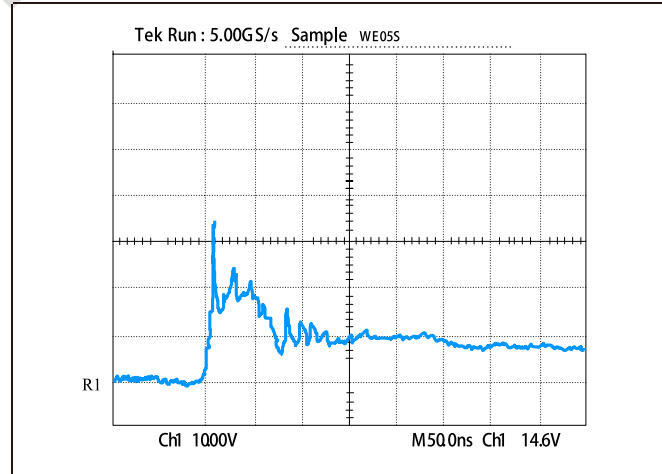
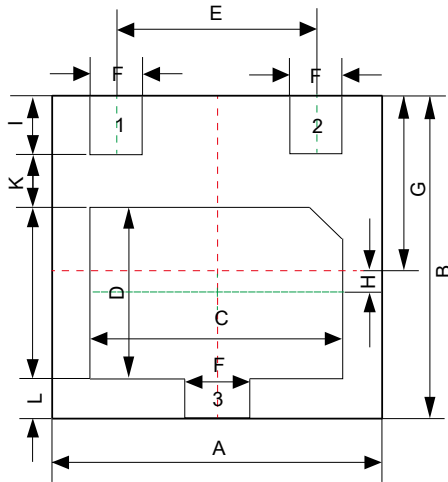


Figure 4: ESD Clamping (8kV Contact per IEC 61000-4-2)

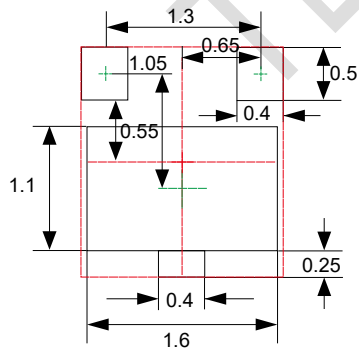




**DFN2X2-3 Package Outline Drawing**



Bottom View



Recommended Soldering Pad

Dim	Millimeters	
	MIN	MAX
A	1.90	2.10
B	1.90	2.10
C	1.40	1.60
D	0.90	1.10
E	1.30BSC	
F	0.25	0.35
G	0.95	1.05
H	0.20	0.30
I	0.35	0.45
J		0.65
K	0.30	0.35
L	0.15	0.20

Unit:mm