

## DESCRIPTION

The PTVSHC2EN5VU is a transient voltage suppressor designed to protect power interfaces. It is suitable to replace multiple discrete components in portable electronics.

The PTVSHC2EN5VU is specifically designed to protect power lines.

The PTVSHC2EN5VU is available in DFN 1610-2L package. Standard products are Pb-free and Halogen-free.

## FEATURES

- ✧ Transient protection for high-speed data lines  
IEC 61000-4-2 (ESD) ±30kV (Contact)  
±30kV (Air)
- ✧ Peak power dissipation: 1800W (8/20µs)
- ) ✧ Working voltages : 5V
- ✧ Ultra-small package (1.6mm×1.0mm×0.5mm)
- ✧ Solid-state silicon technology
- ✧ Low clamping voltage

## MACHANICAL DATA

- ✧ DFN1610-2L package
- ✧ Flammability Rating: UL 94V-0
- ✧ Packaging: Tape and Reel
- ✧ High temperature soldering guaranteed:  
260°C/10s
- ✧ Reel size: 7 inch

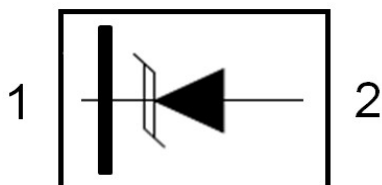
## ORDERING INFORMATION

- ✧ Device: PTVSHC2EN5VU
- ✧ Package: DFN1610-2L
- ✧ Marking:
- ✧ Material: Halogen free
- ✧ Packing: Tape & Reel
- ✧ Quantity per reel: 3,000pcs

## APPLICATIONS

- ✧ Power management
- ✧ Power supply protection

## PIN CONFIGURATION



## PACKAGE OUTLINE



ABSOLUTE MAXIMUM RATING			
Symbol	Parameter	Value	Units
V <sub>ESD</sub>	ESD per IEC 61000-4-2 (Contact)	±30	kV
	ESD per IEC 61000-4-2 (Air)	±30	
P <sub>PP</sub>	Peak Pulse Power (8/20μs)	1800	W
T <sub>J</sub>	Junction Temperature	125	°C
T <sub>STG</sub>	Storage Temperature	-55~150	°C

ELECTRICAL CHARACTERISTICS (T <sub>amb</sub> =25°C)						
Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V <sub>RWM</sub>	Reverse Working Voltage				6.0	V
V <sub>BR</sub>	Reverse Breakdown Voltage	I <sub>T</sub> = 1mA	6.5			V
I <sub>R</sub>	Reverse Leakage Current	V <sub>RWM</sub> = 5V			1.0	uA
V <sub>C</sub>	Clamping Voltage	I <sub>PP</sub> = 10A, t <sub>p</sub> = 8/20μs			8.5	V
		I <sub>PP</sub> = 120A, t <sub>p</sub> = 8/20μs			15	V
C <sub>J</sub>	Junction Capacitance	V <sub>R</sub> = 0V, f = 1MHz		650	700	pF

## ELECTRICAL CHARACTERISTICS CURVE

Fig 1 8/20 $\mu$ s Waveform per IEC61000-4-5

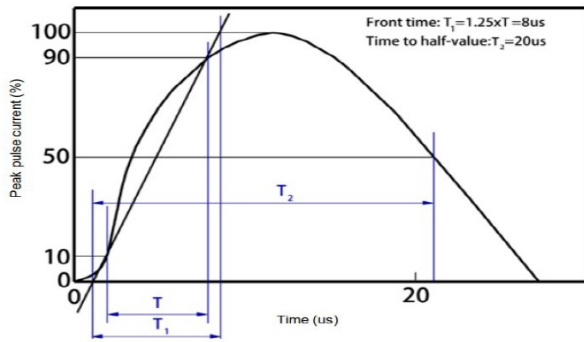


Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2)

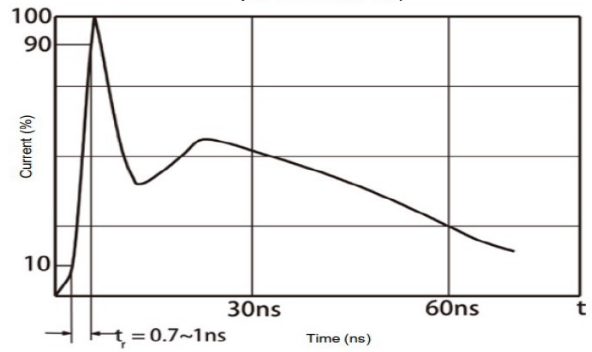


Fig 3 Voltage vs Capacitance

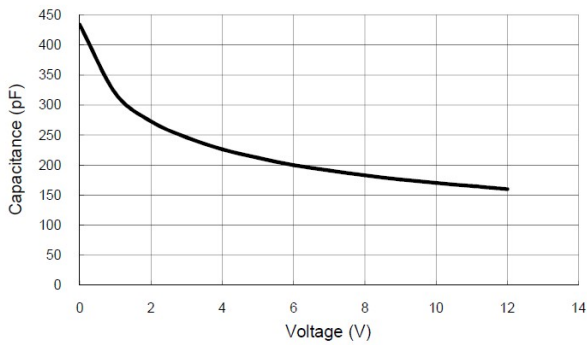
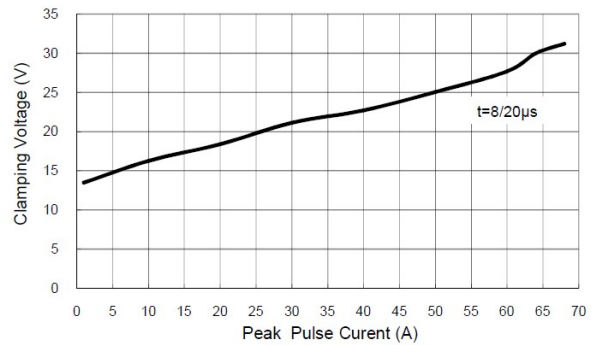
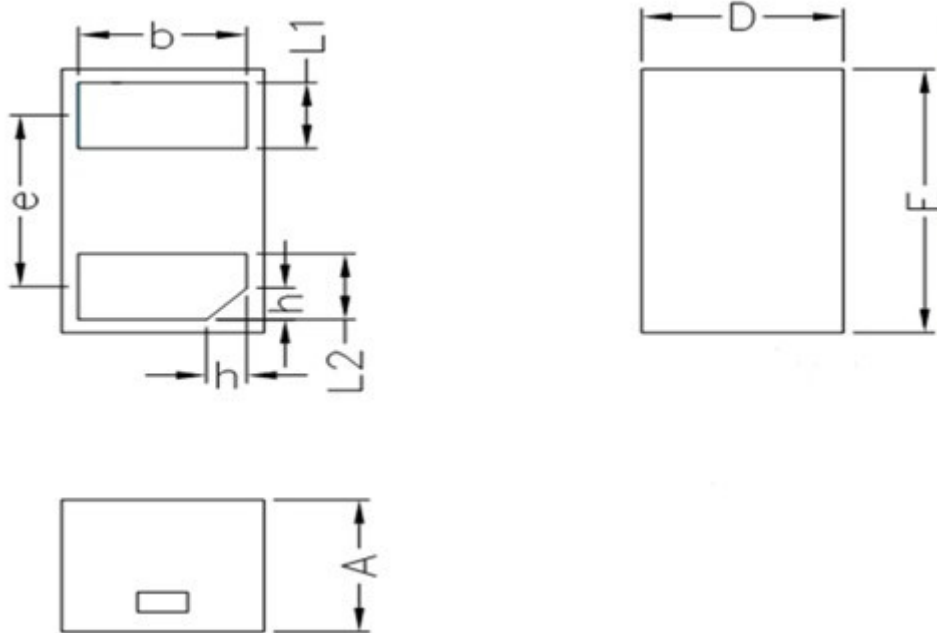


Fig 4 Clamping Voltage vs Peak Pulse Current



DFN1610-2L PACKAGE OUTLINE DIMENSIONS



COMMON DIMENSION(mm)			
REF	Min	Nom	Max
D	0.95	1.00	1.05
E	1.55	1.60	1.65
L1	0.35	0.40	0.45
L2	0.35	0.40	0.45
b	0.75	0.80	0.85
e	1.09BSC		
A	0.45	0.50	0.55
h	0.15	0.20	0.25

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