

### Features

- Ultra small package: 1.6x1.0x0.5mm
- Protects one data or power line
- Ultra low leakage: nA level
- Low clamping voltage
- 2-pin leadless package
- 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) 80A (5/50ns)
  - IEC61000-4-5 (Lightning) 120A (8/20 $\mu\text{s}$ )
- RoHS Compliant

### Mechanical Characteristics

- Package: DFN1610-2
- Lead Finish: NiPdAu
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020

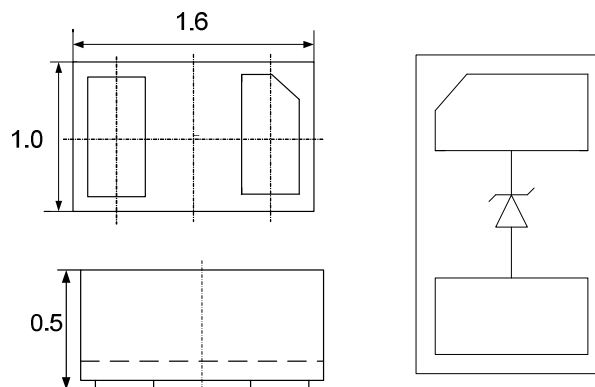
### Applications

- Mobile Phones
- Battery Protection
- Power Line Protection
- Vbat pin for Mobile Devices
- Hand Held Portable Applications

### Ordering Information

Part Number	Qty per Reel	Reel Size
TPESD0571P	3000	7"

### Dimensions and Pin Configuration



## PROTECTION PRODUCTS

### Absolute Maximum Rating

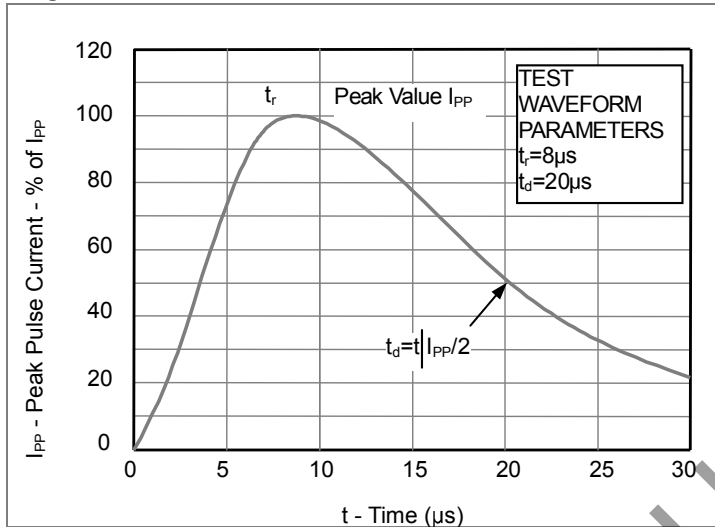
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu$ s)	Ppk	1900	W
Peak Pulse Current (8/20 $\mu$ s)	Ipp	120	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	$\pm 30$ $\pm 30$	kV
Operating Temperature Range	TJ	-55 to +125	$^{\circ}$ C
Storage Temperature Range	Tstg	-55 to +150	$^{\circ}$ C

### Electrical Characteristics

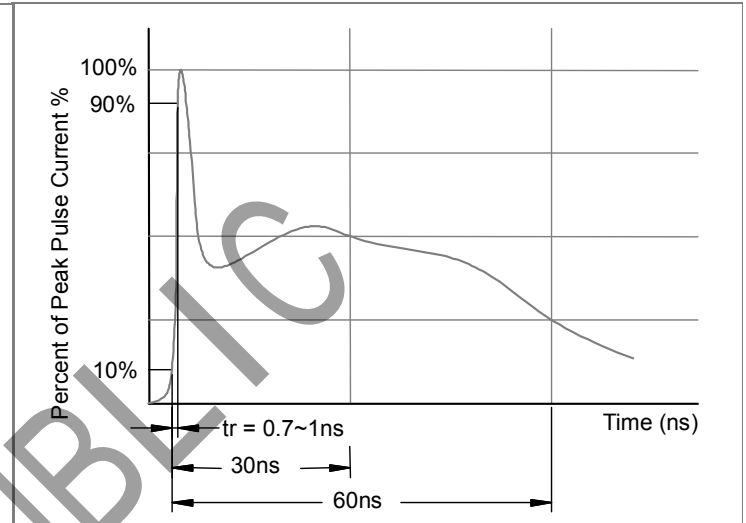
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	
Breakdown Voltage	VBR	6			V	IT = 1mA
Reverse Leakage Current	IR			1.0	$\mu$ A	VRWM = 5V
Forward Voltage	VF		1.0	1.2	V	IF = 10mA
Clamping Voltage	VC			8.5	V	I <sub>PP</sub> = 10A (8 x 20 $\mu$ s pulse)
Clamping Voltage	VC			15	V	I <sub>PP</sub> = 120A (8 x 20 $\mu$ s pulse)
Junction Capacitance	CJ			750	pF	VR = 0V, f = 1MHz

**PROTECTION PRODUCTS**  
 Typical characteristics

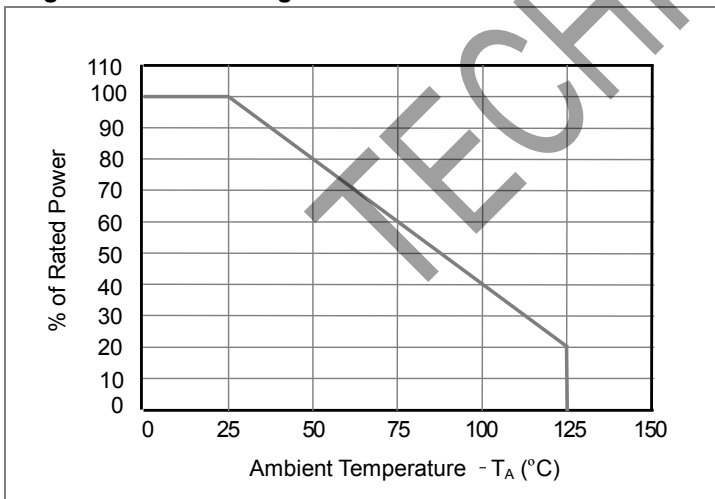
**Fig1. 8/20 $\mu$ s Pulse Waveform**



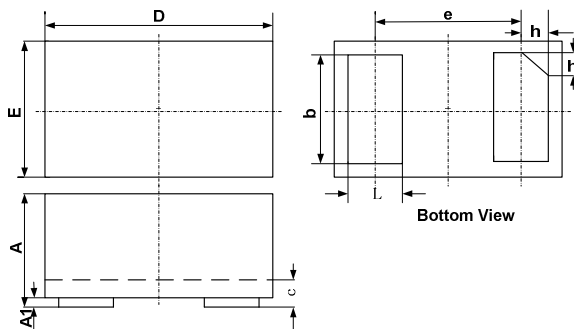
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**

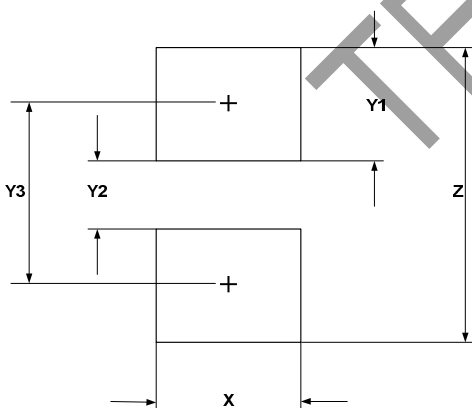


## Outline Drawing -DFN1610-2



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.018	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.75	0.80	0.85	0.030	0.032	0.034
c	0.10	0.15	0.20	0.004	0.006	0.008
D	1.55	1.60	1.65	0.062	0.064	0.066
e	1.10 BSC			0.044 BSC		
E	0.95	1.00	1.05	0.038	0.040	0.042
L	0.35	0.40	0.45	0.014	0.016	0.018
h	0.15	0.20	0.25	0.006	0.008	0.010

## Land Pattern - DFN1610-2



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	1.00	0.040
Y1	0.62	0.025
Y2	0.60	0.024
Y3	1.22	0.049
Z	1.85	0.074