

### Features

- Ultra Low Capacitance 0.5pF typical
- Low operating Voltage: 5.0 V
- Low clamping voltage
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5(Lightning)5A(5/50ns)

### Ordering Information

Part Number	Qty per Reel	Reel Size
TPRCLAMP0542T	3000	7"

### Mechanical Characteristics

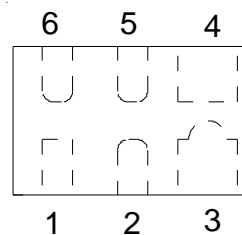
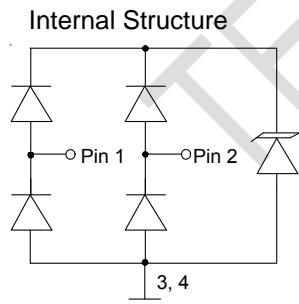
- JEDEC DFN1610-6 package
- Molding compound flammability rating: UL 94V-0



### Applications

- USB 2.0
- HDMI 1.3
- SATA and eSATA
- DVI
- IEEE 1394
- PCI Express
- Portable Electronics
- Notebooks

### Dimensions and Pin Configuration



Pin	Identification
1 - 2	Input Lines
5 - 6	Output Lines (No Internal Connection)
3 - 4	Ground

### PROTECTION PRODUCTS

[WWW.SOT23.COM.TW](http://WWW.SOT23.COM.TW)

#### Absolute Maximum Ratings ( $T_A=25^{\circ}\text{C}$ unless otherwise specified)

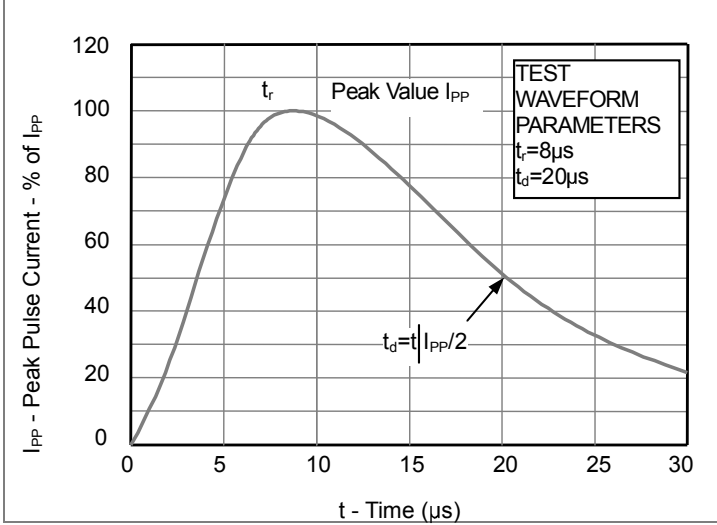
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu\text{s}$ )	Ppk	150	W
Peak Pulse Current (8/20 $\mu\text{s}$ )	I <sub>PP</sub>	5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V <sub>ESD</sub>	$\pm 25$ $\pm 20$	kV
Operating Temperature Range	T <sub>J</sub>	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	$^{\circ}\text{C}$

#### Electrical Characteristics ( $T_A=25^{\circ}\text{C}$ unless otherwise specified)

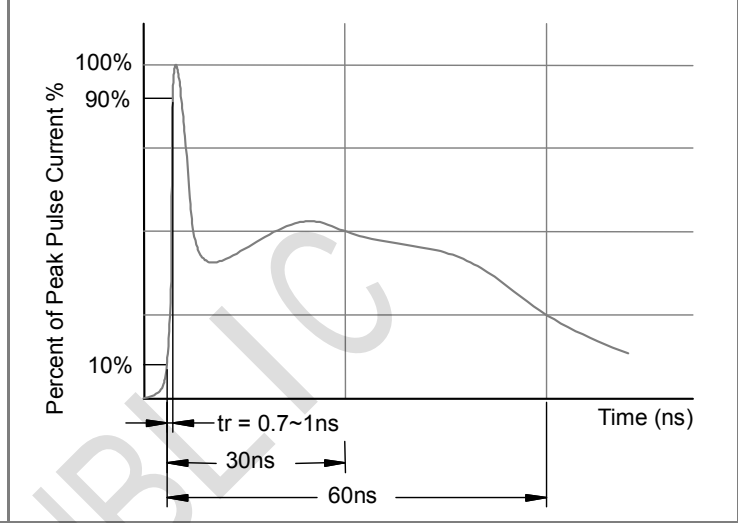
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
<b>DP, DM, USB ID TVS</b>						
Reverse Working Voltage	V <sub>RWM</sub>			5.0	V	
Breakdown Voltage	V <sub>BR</sub>	6.0			V	I <sub>T</sub> = 1mA
Reverse Leakage Current	I <sub>R</sub>			0.5	$\mu\text{A}$	V <sub>RWM</sub> = 5.0V
Clamping Voltage	V <sub>C</sub>			15	V	I <sub>PP</sub> = 1A (8 x 20 $\mu\text{s}$ pulse), any I/O pin to ground
Clamping Voltage	V <sub>C</sub>			25	V	I <sub>PP</sub> = 5A (8 x 20 $\mu\text{s}$ pulse), any I/O pin to ground
Junction Capacitance	C <sub>J</sub>		0.5	1.0	pF	V <sub>R</sub> = 0V, f = 1MHz, any I/O pin to ground

**PROTECTION PRODUCTS**  
Typical characteristics

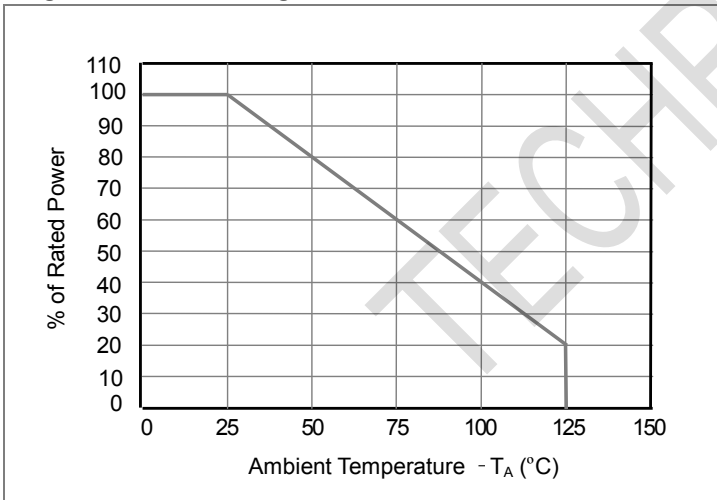
**Fig1. 8/20 $\mu$ s Pulse Waveform**



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



**Fig3. Power Derating Curve**



**Outline Drawing - DFN1610-6**

