



## 2-Line Ultra Low Capacitance TVS Diode Array

### Features

- Ultra low leakage: nA level
- Operating voltage: 5V
- Ultra low capacitance:0.6pF typical
- Low clamping voltage
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±5kV
    - Contact discharge: ±20kV
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 5A (8/20µs)
- RoHS Compliant

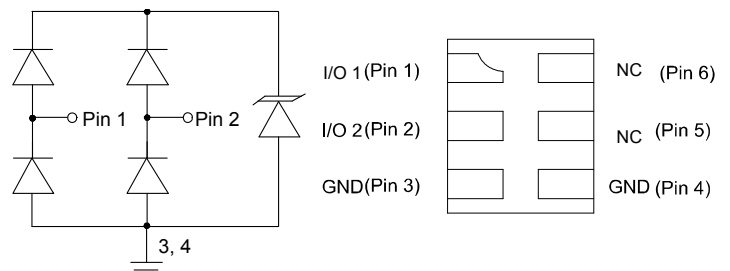
### Dimensions DFN1610-6



### Applications

- USB 3.0 line
- HDMI1.4 Set-top box and digital TV
- 10/100/1000 Ethernet
- Notebook Computers
- SATA Ports
- MDDI Ports

### Pin Configuration



### Mechanical Characteristics

- Package: DFN1610-6
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel:3,000pcs
- Reel Size:7inch

### Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20µs)	Ppp	125	W
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	±25	Kv
ESD per IEC 61000-4-2 (Contact)		±20	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STJ</sub>	-55 to +150	°C

## Electrical Characteristics (TA=25°C unless otherwise specified)

Part Number	Device Marking	V <sub>RWM</sub> (V)	V <sub>BR</sub> (V)	I <sub>T</sub> (mA)	V <sub>C</sub> @1A	V <sub>C</sub>		I <sub>R</sub> μA (Max)	C (Pf) (Typ.)
						(Max)	(@A)		
ULC0542T	0522P	5	6	1	15	25	5	0.5	0.6

## Characteristic Curves

Fig1. 8/20μs Pulse Waveform

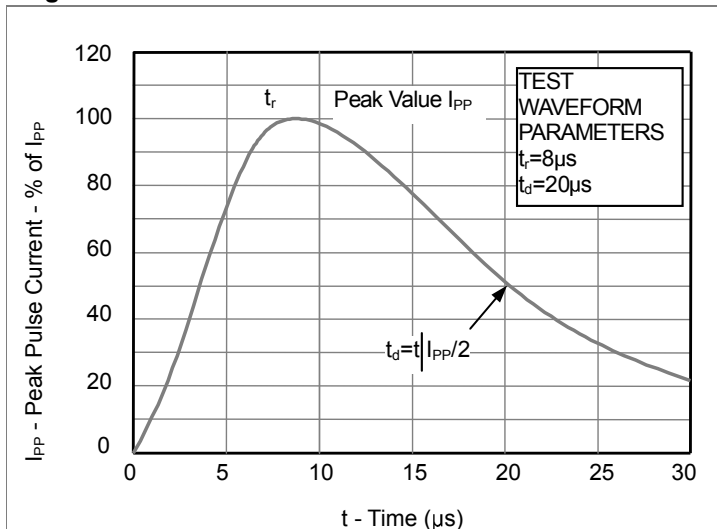


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

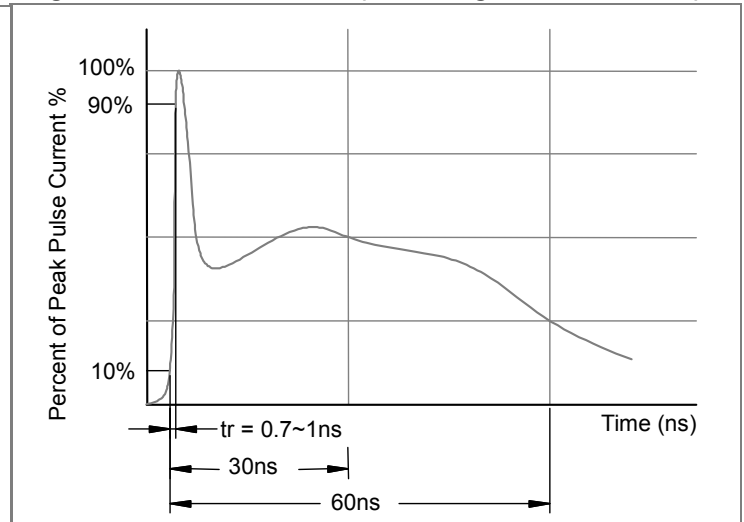
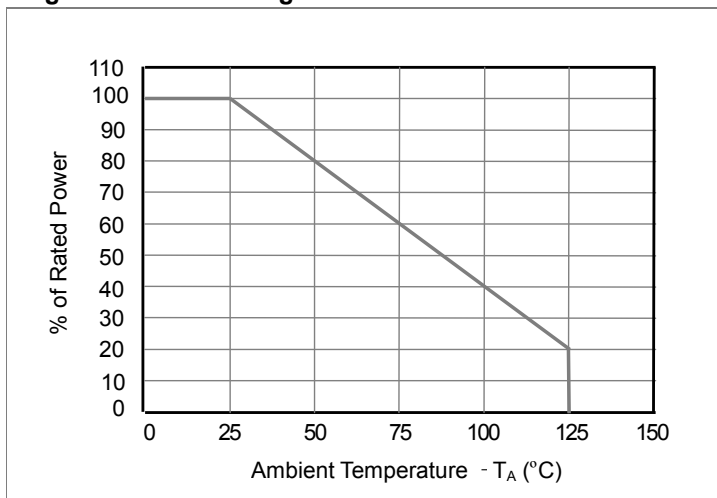
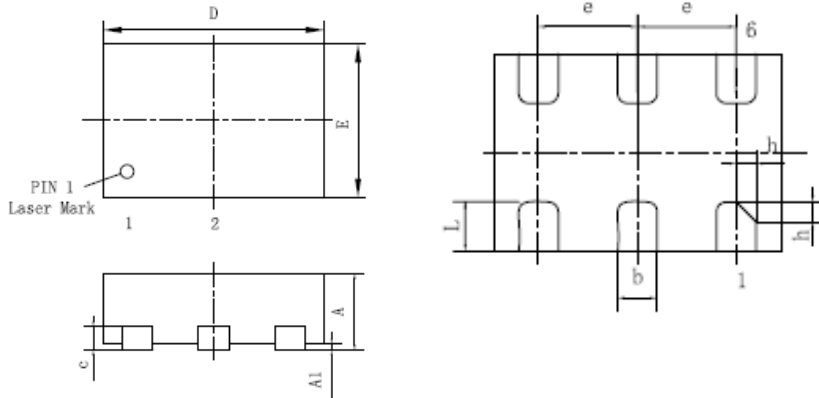


Fig3. Power Derating Curve

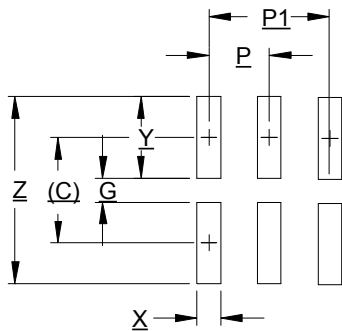


## DFN1610-6 Package Outline Drawing



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.70	0.75	0.80
A1	—	0.02	0.05
b	0.17	0.20	0.25
c	0.15	0.20	0.25
D	1.55	1.60	1.65
E	0.90	1.00	1.10
e	0.50BSC		
L	0.20	0.25	0.30
h	0.08	0.10	0.12

## Suggested Land Pattern



DIM	DIMENSIONS	
	INCHES	MILLIMETERS
C	(.034)	(0.87)
G	.007	0.19
P	.020	0.50
P1	.039	1.00
X	.008	0.20
Y	.027	0.68
Z	.061	1.55

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