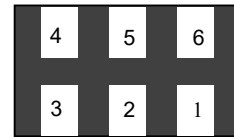


### Features

- 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: ±25kV
    - Contact discharge: ±15kV
  - IEC61000-4-5 (Lightning) 5A (8/20µs)
- RoHS Compliant
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

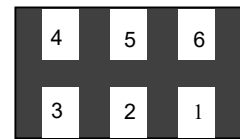
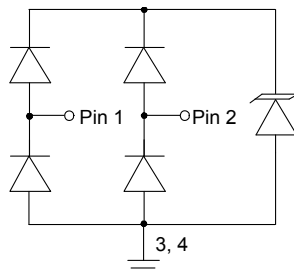
### Dimensions DFN1610



### 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



Pin	Identificaion
1,2	Input line
5,6	Output Lines (No Internal Connection)
3,4	Ground

### Mechanical Characteristics

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

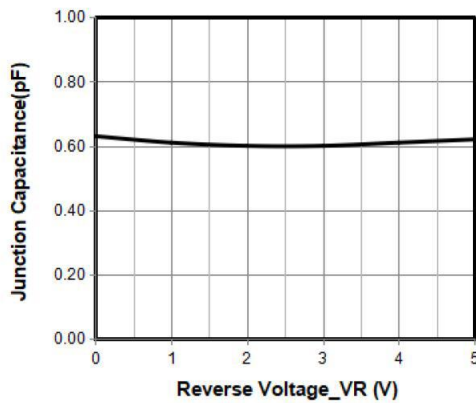
### Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20µs)	Ppp	65	W
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	± 25	Kv
ESD per IEC 61000-4-2 (Contact)		±15	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STJ</sub>	-55 to +150	°C

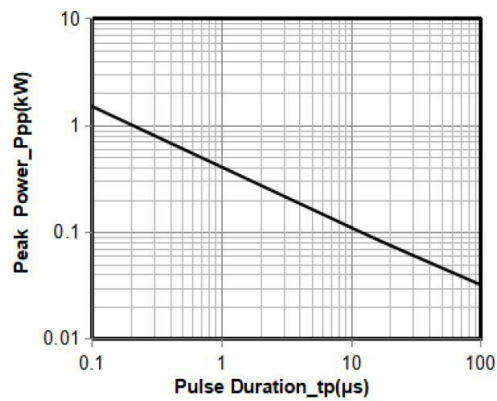
### Electrical Characteristics (TA=25°C unless otherwise specified)

Part Number	Device Marking	V <sub>RWM</sub> (V)	V <sub>BR</sub> (V)	I <sub>T</sub> (mA)	V <sub>c</sub>		I <sub>R</sub> (μA) (Max)	C (Pf) (Typ.)
					(Max)	(@A)		
AESD0542T-Q1	0522P	5	5.6	1	15	5	0.5	0.6

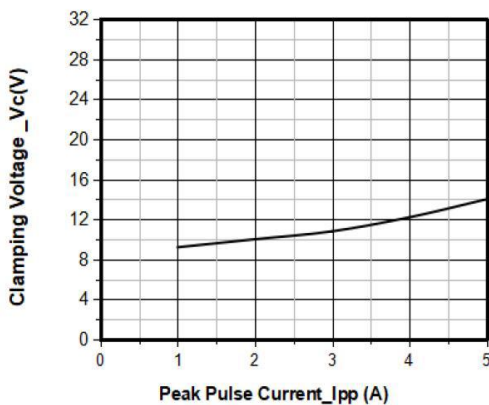
### Characteristic Curves



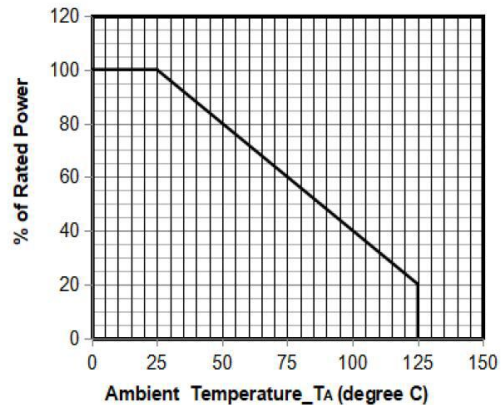
Junction Capacitance vs. Reverse Voltage



Peak Pulse Power vs. Pulse Time

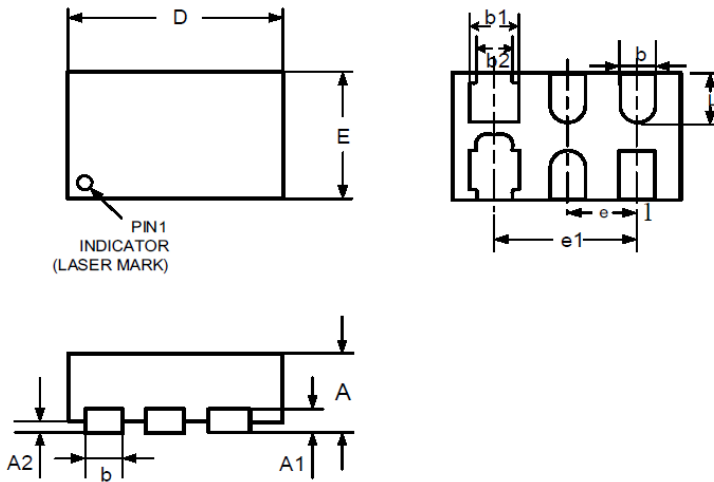


Clamping Voltage vs. Peak Pulse Current



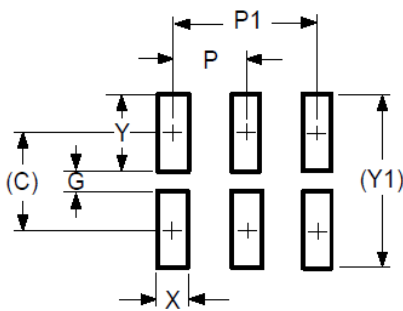
Power Derating Curve

### DFN1610 Package Outline Drawing



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
D	1.55	1.65	0.061	0.065
E	0.95	1.05	0.037	0.041
L	0.33	0.43	0.013	0.017
b	0.15	0.25	0.006	0.010
b1	0.35	0.45	0.014	0.018
b2	0.25	0.35	0.010	0.014
e	0.50BSC		0.020BSC	
e1	1.00BSC		0.039BSC	
A	0.45	0.55	0.018	0.022
A1	0.15REF		0.006REF	
A2	0.00	0.05	0.000	0.002

### Suggested Land Pattern



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
C	0.60		0.024	
G	0.10		0.004	
P	0.50		0.020	
P1	1.0		0.039	
X	0.30		0.012	
Y	0.50		0.020	
Y1	1.10		0.043	