

## Features

- Ultra small package: 1.6x1.0x0.5mm
- Ultra low capacitance: 0.3 pF typical (io to io)
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- - IEC 61000-4-2 (ESD) immunity test  
Air discharge:  $\pm 25\text{kV}$   
Contact discharge:  $\pm 20\text{kV}$   
– IEC61000-4-5 (Lightning) 4A (8/20  $\mu\text{s}$ )
- These are Pb-Free Devices

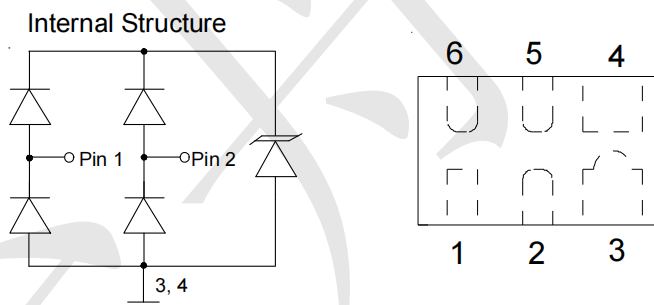
## Mechanical Characteristics

- Package: DFN1610-6
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Shipping Qty :3000pcs/7Inch Tape & Reel

## Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals

## Dimensions and Pin Configuration



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

Marking: 0522P

**Absolute Maximum Ratings** (T<sub>amb</sub>=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	80	W
Peak Pulse Current (8/20μs)	Ipp	4	A
ESD per IEC 61000-4-2 (Air)	VESD	±25	kV
ESD per IEC 61000-4-2 (Contact)		±20	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	
Breakdown Voltage	VBR	6.5	7.5	9	V	IT = 1mA
Reverse Leakage Current	IR			0.07	uA	VRWM = 5V
Clamping Voltage	VC			9	V	Ipp=1A(8x 20us pulse)
Clamping Voltage	VC			13	V	Ipp=4A(8x 20us pulse)
Junction Capacitance	CJ		0.5	0.8	pF	VR = 0V, f = 1MHz, any I/O pin to ground
Junction Capacitance			0.3		pF	VR = 0V, f = 1MHz, between I/O pins

**Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)**

Fig1. 8/20 $\mu\text{s}$  Pulse Waveform

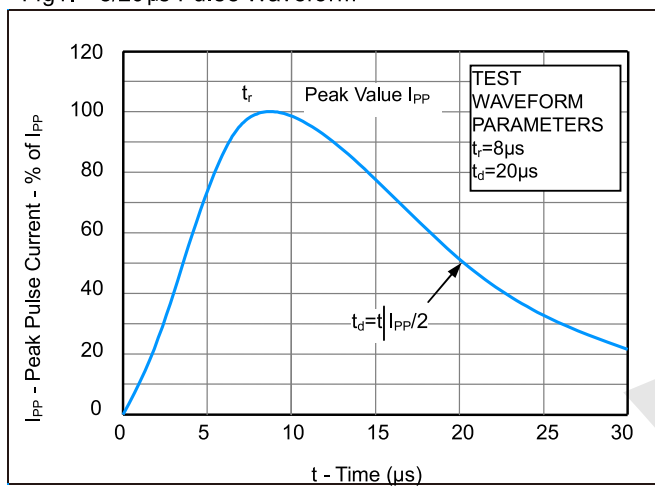


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

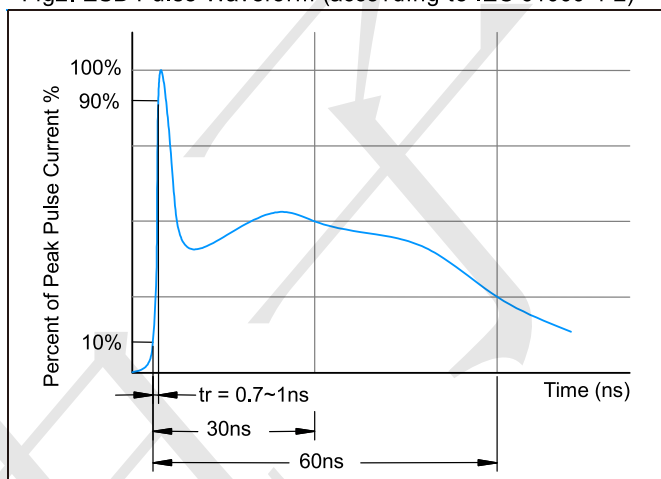
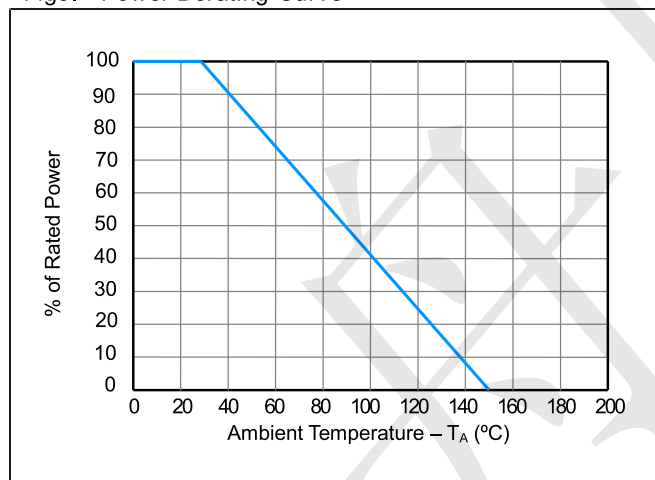
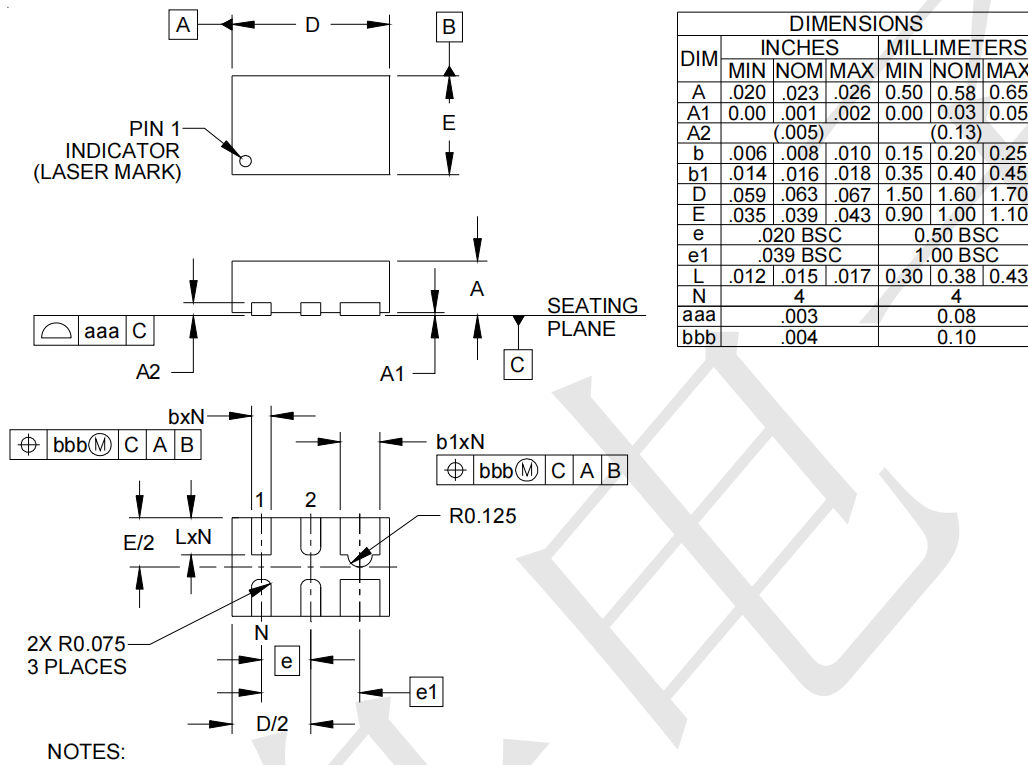


Fig3. Power Derating Curve



**Outline Drawing - DFN1610-6**



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