

Features

- ◆ Ultra low capacitance: 0.35pF typical
- ◆ Operating voltage: 5V
- ◆ Low clamping voltage
- ◆ Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 30\text{kV}$
Contact discharge: $\pm 25\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 4A (8/20 μs)
- ◆ RoHS Compliant

Mechanical Characteristics

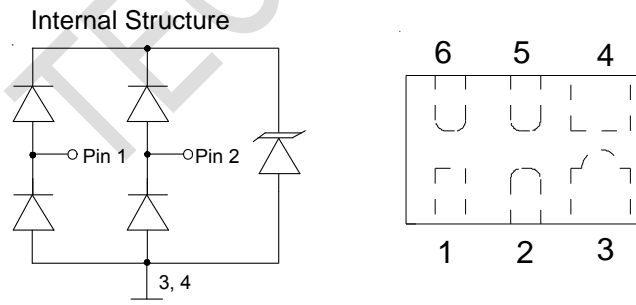
- ◆ Package: DFN1610-6
- ◆ Ultra Low Leakage: nA Level
- ◆ Case Material: “Green” Molding Compound.
- ◆ UL Flammability Classification Rating 94V-0
- ◆ Moisture Sensitivity: Level 3 per J STD-020



Ordering Information

Part Number	Qty per Reel	Reel Size
TPZ8802DFN6	3000	7"

Dimensions and Pin Configuration



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

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppk	100	W
Peak Pulse Current (8/20 μs)	I _{PP}	4	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	± 30 ± 20	kV
Operating Temperature Range	T _J	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T _{stg}	-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
DP, DM, USB ID TVS						
Reverse Working Voltage	V _{RWM}			5.0	V	
Breakdown Voltage	V _{BR}	6.0			V	I _T = 1mA
Reverse Leakage Current	I _R			0.3	μA	V _{RWM} = 5.0V
Clamping Voltage	V _C			15	V	I _{PP} = 1A (8 x 20 μs pulse), any I/O pin to ground
Clamping Voltage	V _C			25	V	I _{PP} = 4A (8 x 20 μs pulse), any I/O pin to ground
Junction Capacitance	C _J		0.3		pF	V _R = 0V, f = 1MHz, any I/O pin I/O

Fig1. 8/20 μ s Pulse Waveform

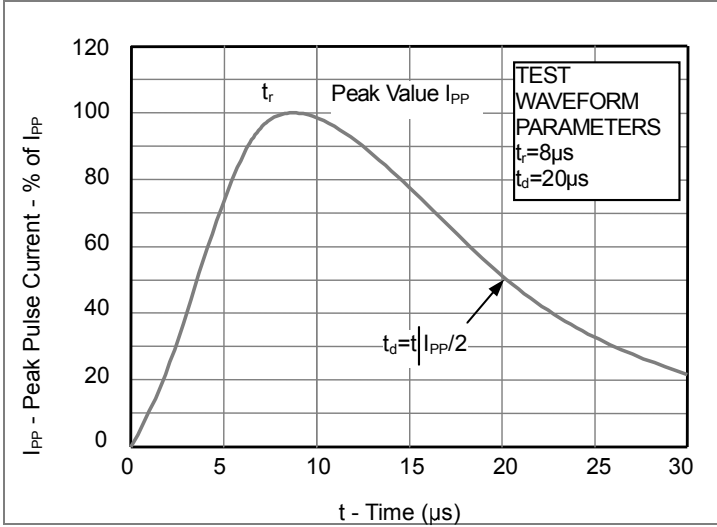


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

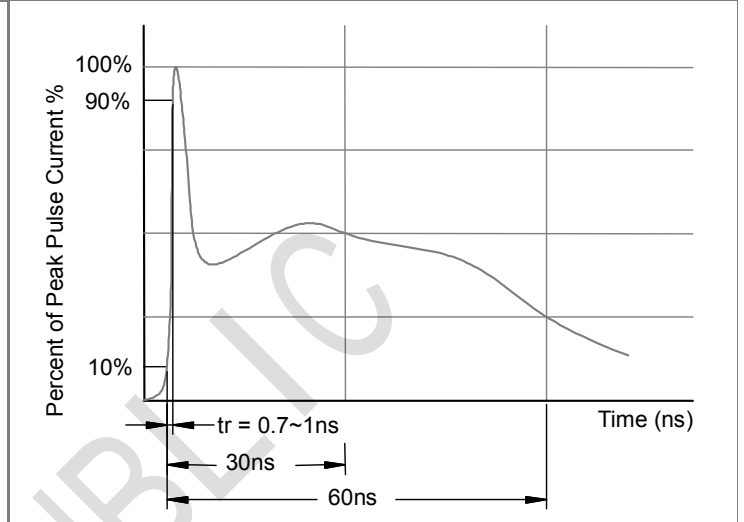
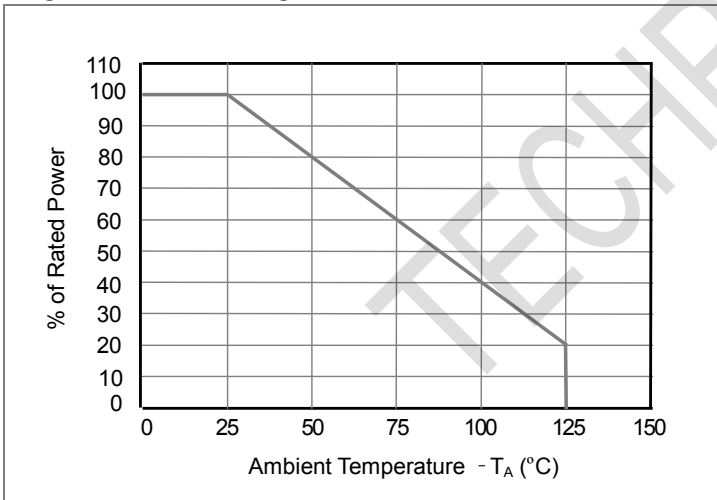
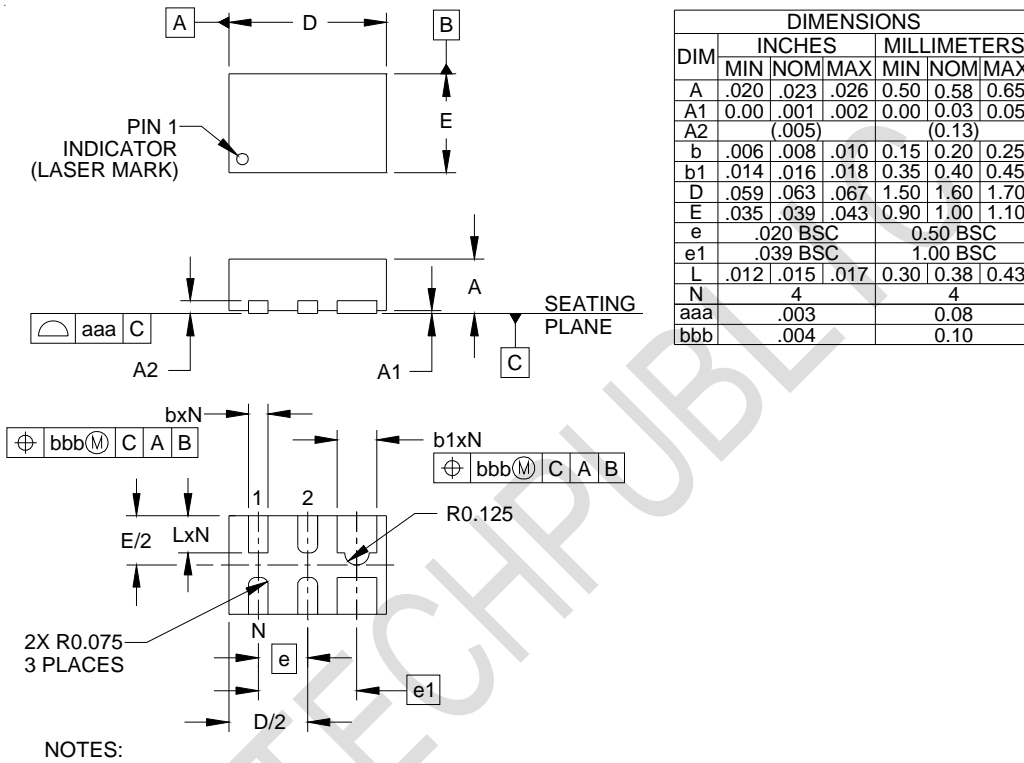


Fig3. Power Derating Curve



Outline Drawing - DFN1610-6



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