

Features

- Ultra low capacitance: 0.3pF typical (IO to IO)
- Ultra low leakage: nA level
- Low operating voltage: 5.5V
- Complies with following standards:
- – IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 20\text{kV}$
Contact discharge: $\pm 15\text{kV}$
- – IEC 61000-4-5 (Lightning) 3.5A (8/20 μs)
- RoHS Compliant
- Lead Finish: NiPdAu

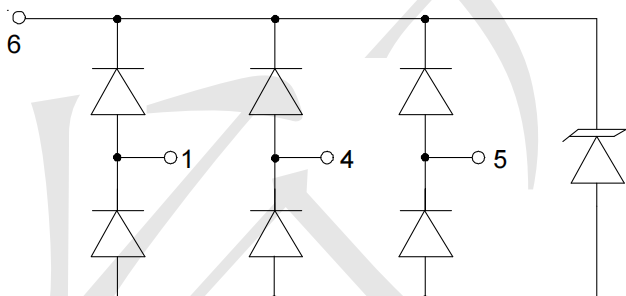
Mechanical Characteristics

- Package: DFN1210-6
- 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

- USB
- MMC Port
- Serial ATA
- Video Port

Dimensions and Pin Configuration



GND (Pin 1)				VBus (Pin 6)
NC (Pin 2)				I/O 2 (Pin 5)
NC (Pin 3)				I/O 1 (Pin 4)

Marking: 0502N

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	70	W
Peak Pulse Current (8/20μs)	Ipp	3.5	A
ESD per IEC 61000-4-2 (Air)	VESD	±20	kV
ESD per IEC 61000-4-2 (Contact)		±15	
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			5.5	V	
Breakdown Voltage	VBR	6			V	IT = 1mA
Reverse Leakage Current	IR			0.1	μA	VRWM = 5.5V
Clamping Voltage	VC			9	V	I _{PP} = 1A (8 x 20μs pulse)
Clamping Voltage	VC			15	V	I _{PP} = 3.5A (8 x 20Us pulse)
Junction Capacitance	CJ		0.5	0.6	pF	Vr=0V ,f= 1MHZ IO to GND
			0.3		pF	Vr=0V ,f= 1MHZ IO to IO

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

Fig1. 8/20 μs Pulse Waveform

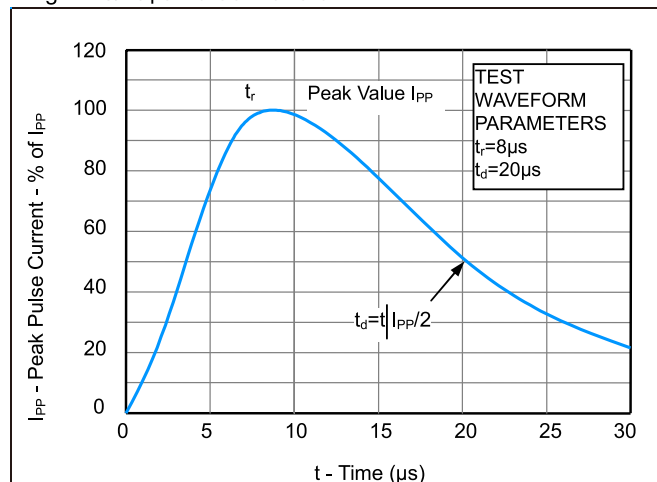


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

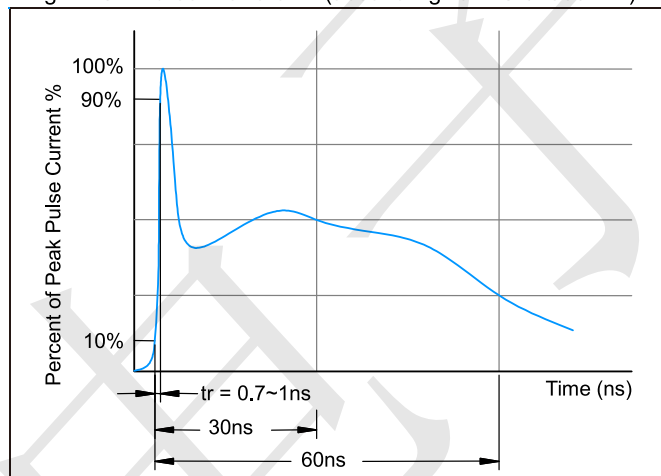
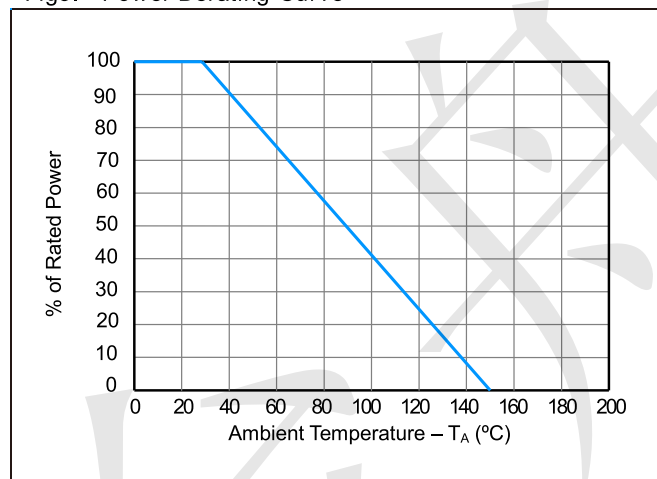
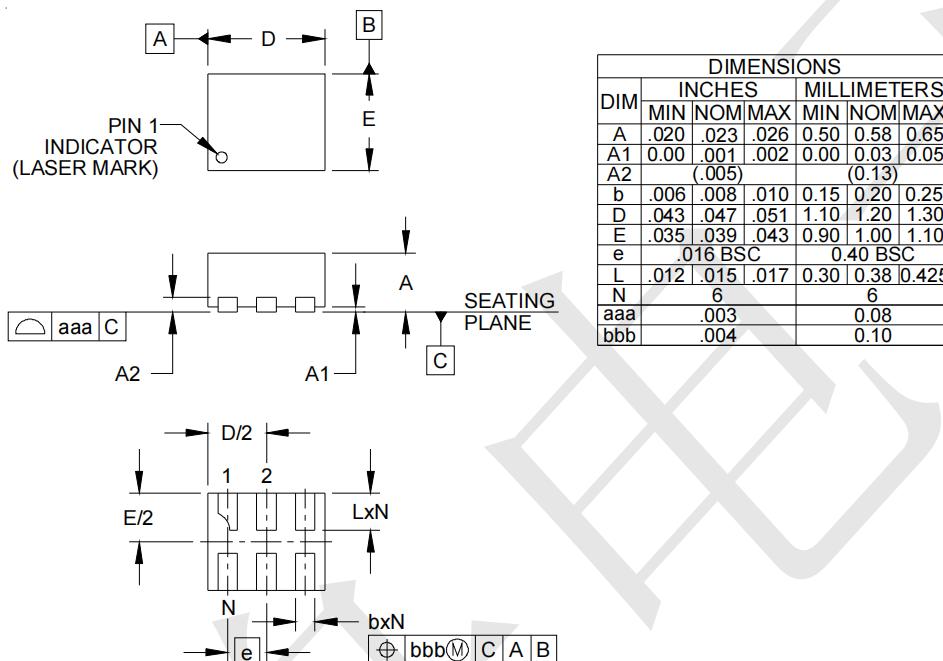


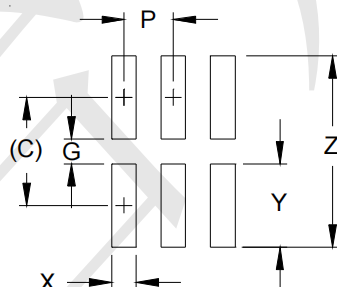
Fig3. Power Derating Curve



Outline Drawing - DFN1210-6



Land Pattern - DFN1210-6



DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.034)	(0.875)
G	.008	0.20
P	.016	0.40
X	.008	0.20
Y	.027	0.675
Z	.061	1.55