

Ultra low capacitance ESD Protection for Ethernet ports

Features

- 70 watts Peak Pulse Power(8/20 μ s)
- Protects two or four I/O lines
- Low capacitance : 0.3pF typical (I/O to I/O)
- Low operating voltage : 5.5V
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
Air discharge: \pm 20kV
Contact discharge: \pm 15kV
 - IEC 61000-4-5 Surge 5 A (8/20us)
 - IEC61000-4-4 (EFT) 40A (5/50ns)
- ROHS Compliant

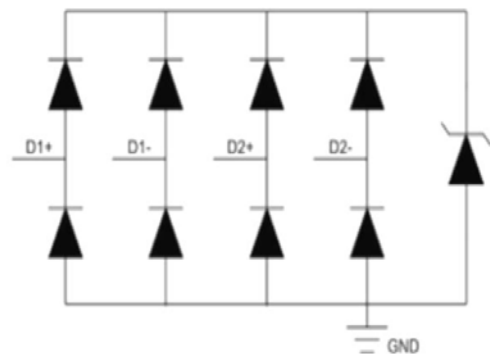
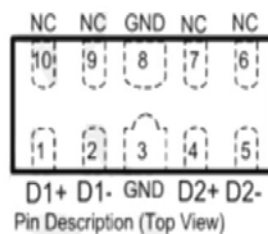
Mechanical Characteristics

- Package: uSON-10
- Ultra low leakage : nA level
- Case Material : "Green Molding Compound
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity : Level 3 Per J-STD-020
- Terminal Connections : See Diagram Below
- Shipping Qty : 3,000pcs/7inch Tape & Reel

Applications

- High Definition Multimedia Interface(HDMI)
- Digital Visual Interface(DVI)
- Unified Display Interface(UDI)
- MDDI Ports
- PCI Express
- Serial ATA

Dimensions and Pin Configuration





FPD4E05U06DQAR

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20µs)	Ppk	70	W
ESD per IEC61000-4-2 (Air) ESD per IEC61000-4-2 (Contact)	V _{ESD}	±20 ±15	kV
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			5.5	V	
Breakdown Voltage	V _{BR}	6.4	7.5	9.2	V	I _T =1mA
Leakage Current	I _{Leak}		0.01	0.05	µA	V _{IO} =9V
Clamping Voltage	V _C			10	V	I _{PP} =1A, T _p =8/20µs
Clamping Voltage	V _C			13	V	I _{PP} =5A, T _p =8/20µs
Junction Capacitance	C _J		0.6	0.8	pF	V _R =0V, f=1MHz,

Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

Fig1. 8/20μs Pulse Waveform

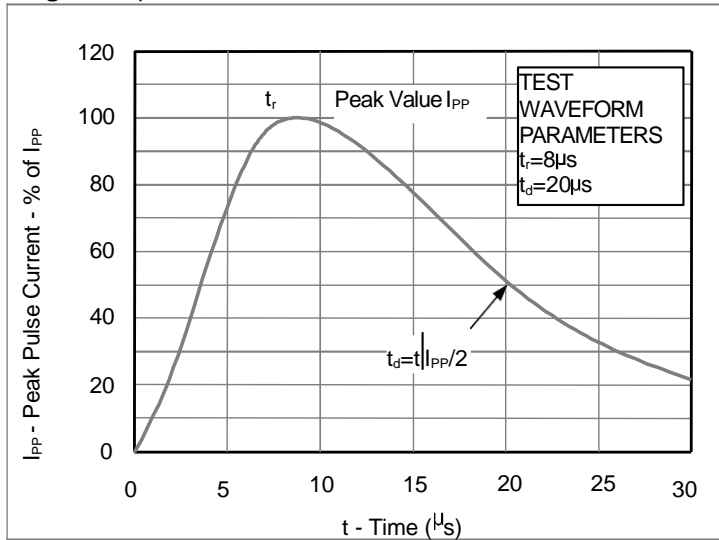


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

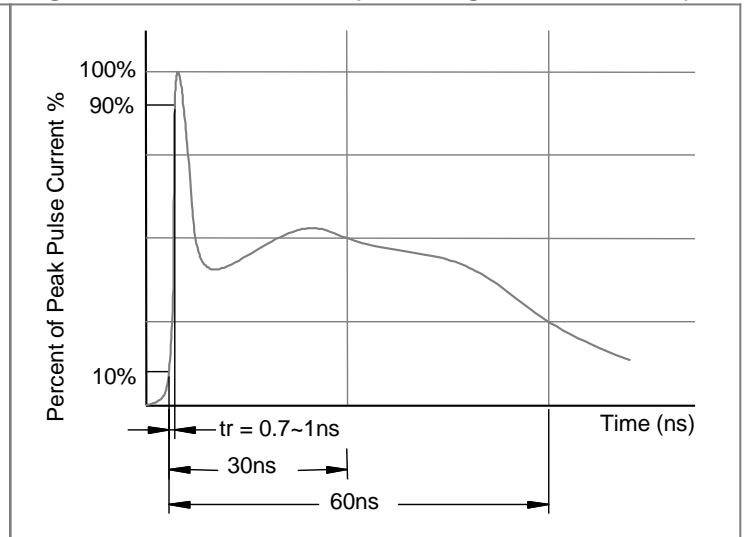
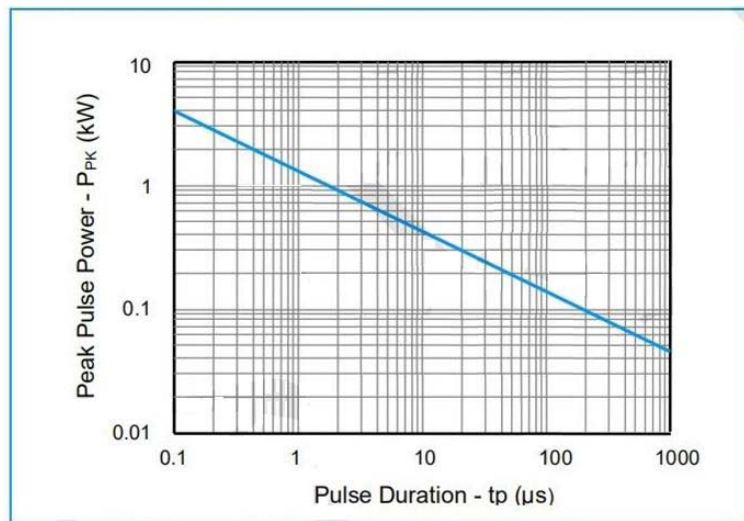
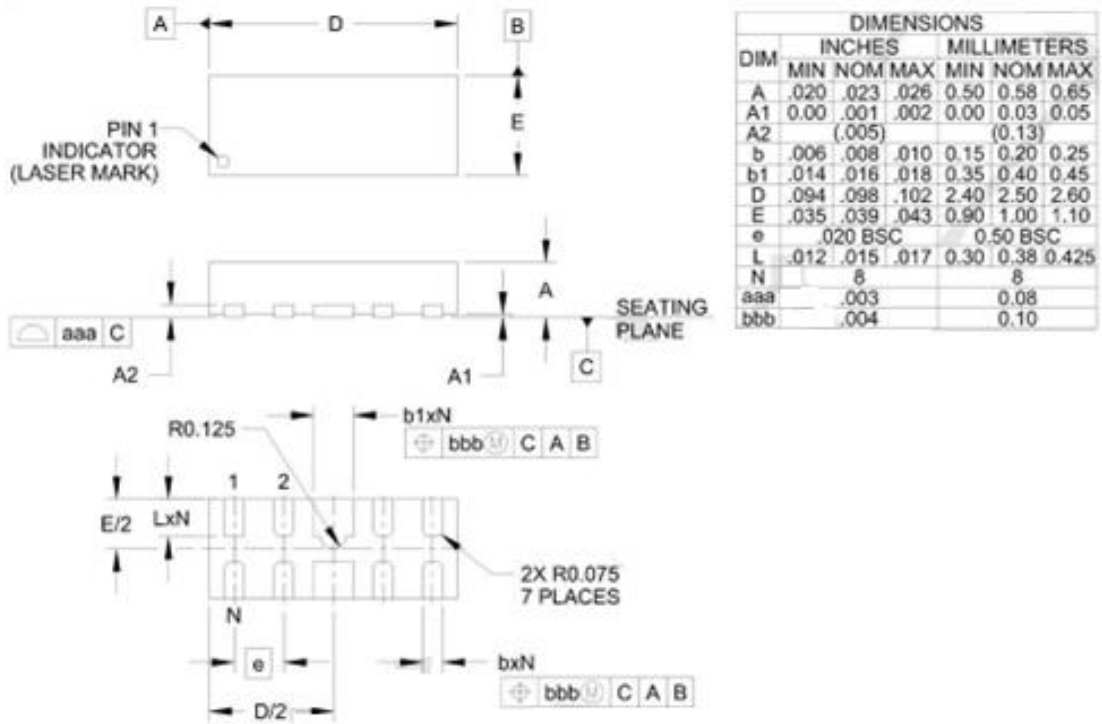


Fig3. Non- Repetitive Peak Pulse Power vs Pulse Time



Outline Drawing - uSON-10



Land Pattern - uSON-10

