



Features

- u Low capacitance: 0.35 pF typical (I/O to I/O)
- u Low operating voltage: 5V
- u RoHS Compliant
- u IEC61000-4-2 (ESD) $\pm 25\text{kV}$ (air), $\pm 20\text{kV}$ (contact)
- u IEC61000-4-4 (EFT) 40A (5/50ns)
- u IEC61000-4-5 (Lightning) 4.3A(8/20 μs)

Mechanical Characteristics

- u Package: DFN2510-10 (2.5 $\times$ 1.0 $\times$ 0.5mm)
- u Ultra low leakage: nA level
- u Case Material: "Green" Molding Compound.
- u UL Flammability Classification Rating 94V-0
- u Moisture Sensitivity: Level 3 per J-STD-020
- u Terminal Connections: See Diagram Below

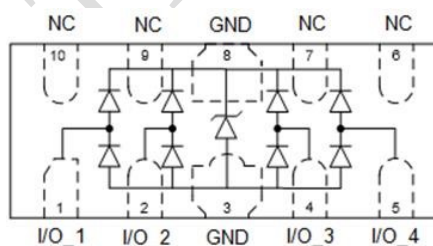
Applications

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

Ordering Information

Part Number	Qty per Reel	Reel Size
TPD4S010DQAR-TP	3000	7"

Dimensions and Pin Configuration





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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	I _{pp}	4.3	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 25	kV
ESD per IEC 61000-4-2 (Contact)		± 15	
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	V	Any I/O pin to ground
Breakdown Voltage	V _{BR}	6.8		9.5	V	I _T = 1mA, any I/O pin to ground
Reverse Leakage Current	I _R			0.08	μA	V _{RWM} = 5V, any I/O pin to ground
Clamping Voltage	V _C			15	V	I _{PP} = 4.3A (8 x 20μs pulse), any I/O pin to ground
Junction Capacitance	C _J		0.35		pF	V _R = 0V, f = 1MHz, between I/O pins
Junction Capacitance	C _J		0.6	0.8	pF	V _R = 0V, f = 1MHz, any I/O pin to ground



Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

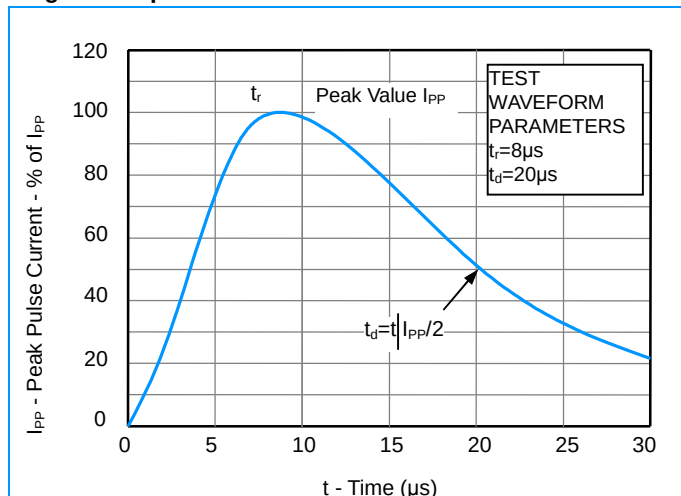


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

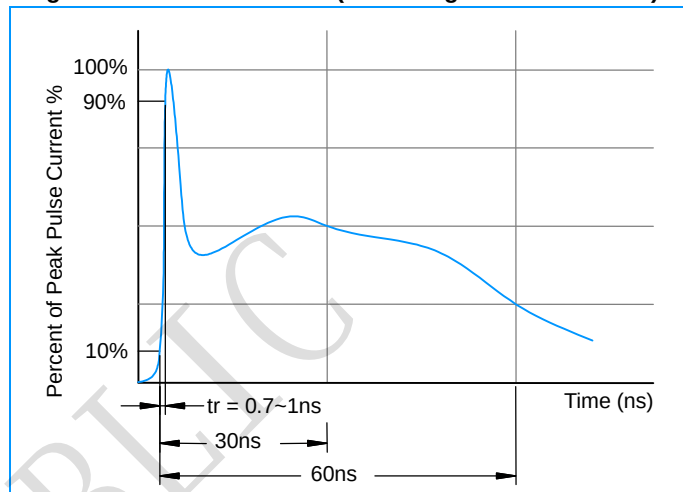
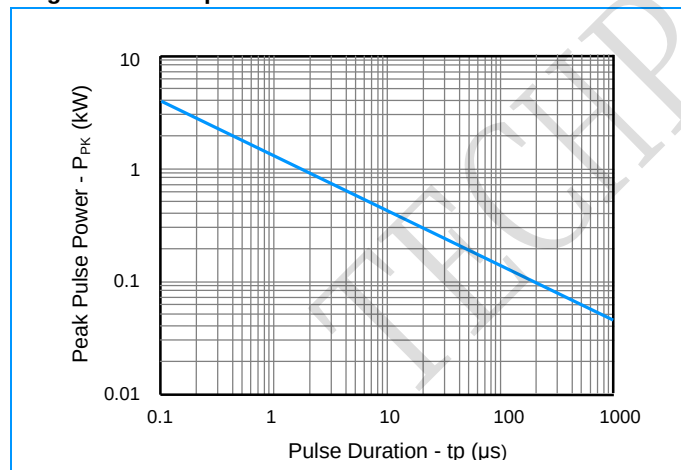


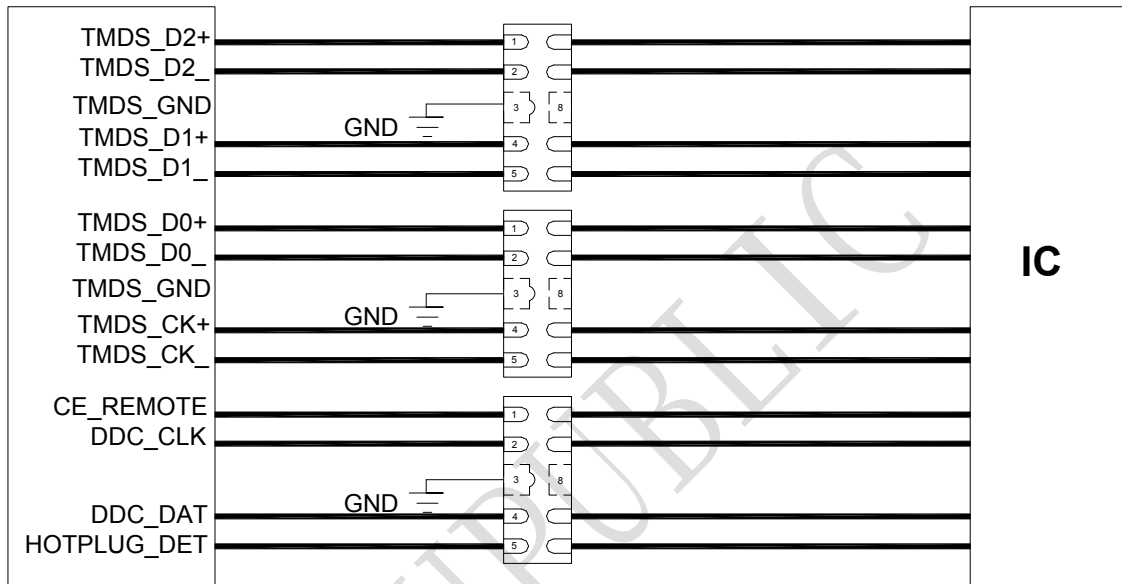
Fig3. Non - Repetitive Peak Pulse Power vs. Pulse Time





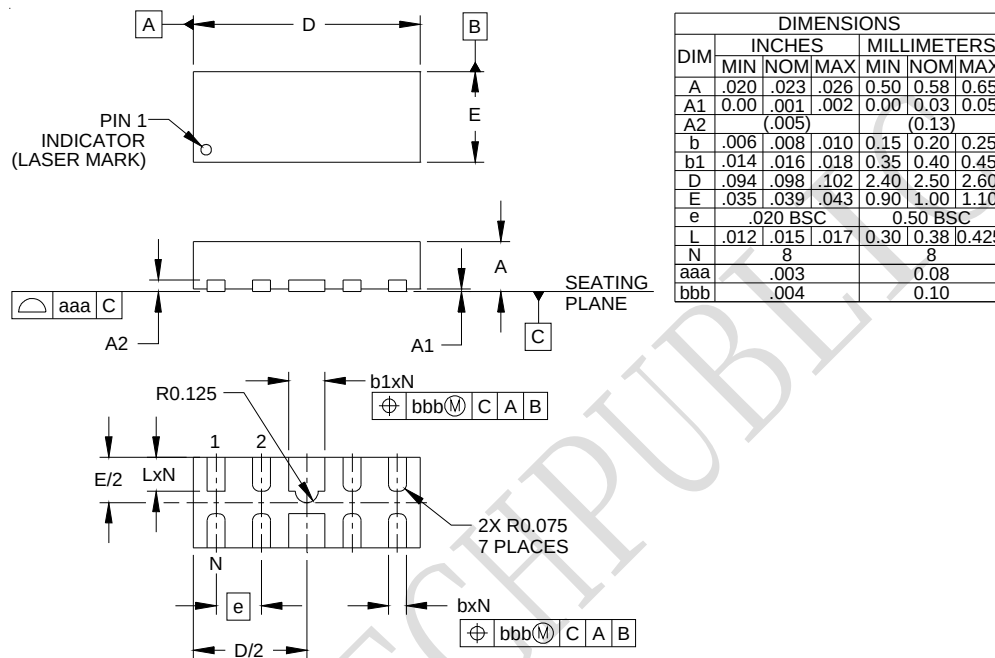
Application Information

ESD protection for HDMI port

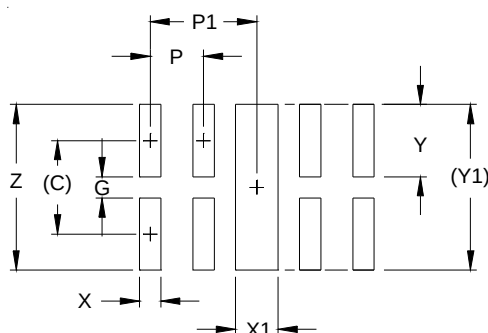




Outline Drawing - DFN2510-10



Land Pattern - DFN2510-10



DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.034)	(0.875)
G	.008	0.20
P	.020	0.50
P1	.039	1.00
X	.008	0.20
X1	.016	0.40
Y	.027	0.675
Y1	(.061)	(1.55)
Z	.061	1.55