

## Features

- ◆ Ultra low capacitance: 0.3pF typical (I/O to I/O)
- ◆ Ultra low leakage: nA level
- ◆ Low operating voltage: 5V
- ◆ Low clamping voltage
- ◆ Up to 4 data lines and one power line protects
- ◆ Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge:  $\pm 25\text{kV}$   
Contact discharge:  $\pm 20\text{kV}$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) : 4 A(8/20 $\mu\text{s}$ )
- ◆ ROHS Compliant

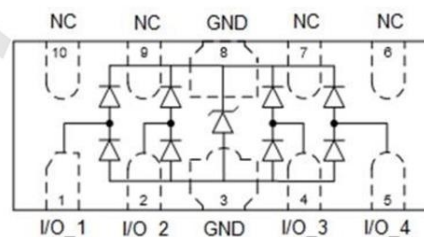
## Mechanical Characteristics

- ◆ Package: DFN2510-10 (2.5 $\times$ 1.0 $\times$ 0.5mm)
- ◆ 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 :3000pcs/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



**Marking: 0524P**

**Absolute Maximum Ratings** (Tamb=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    | Any I/O pin to ground                            |
| Breakdown Voltage       | VBR    | 7   | 8   | 9.5 | V    | IT = 1mA, any I/O pin to ground                  |
| Reverse Leakage Current | IR     |     |     | 0.1 | μA   | VRWM = 5V, any I/O pin to ground                 |
| Clamping Voltage        | VC     |     |     | 9   | V    | IPP = 1A (8 x 20μs pulse), any I/O pin to ground |
| Clamping Voltage        | VC     |     |     | 16  | V    | IPP = 4A (8 x 20μs pulse), any I/O pin to ground |
| Junction Capacitance    | CJ     |     | 0.3 | 0.4 | pF   | VR = 0V, f = 1MHz, between I/O pins              |
| Junction Capacitance    | CJ     |     |     | 0.8 | pF   | VR = 0V, f = 1MHz, any I/O pin to ground         |

## Characteristic Curves

Fig1. 8/20 $\mu$ s Pulse Waveform

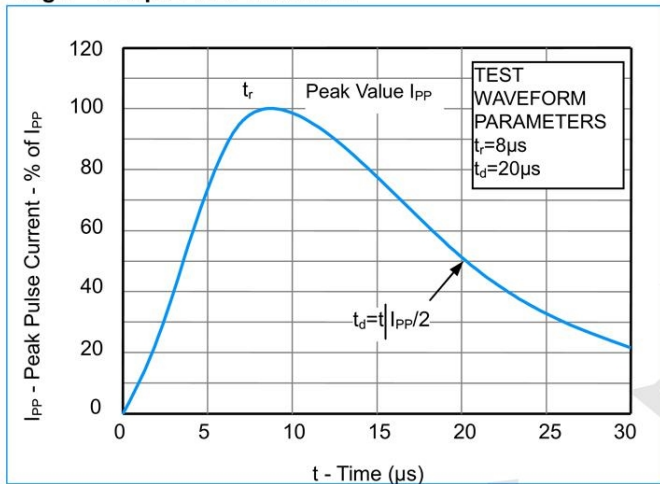


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

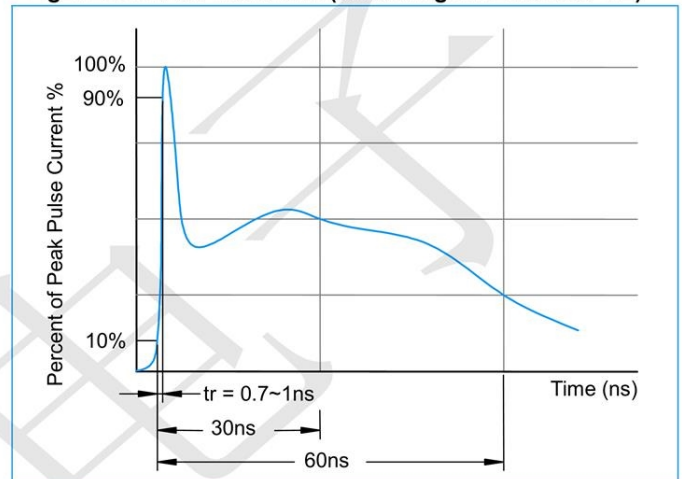
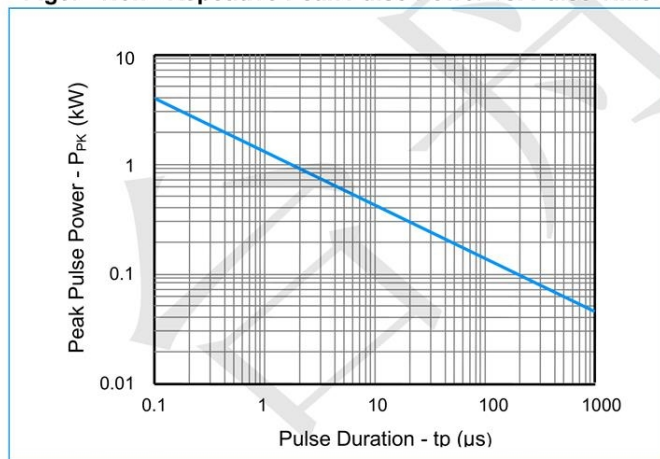
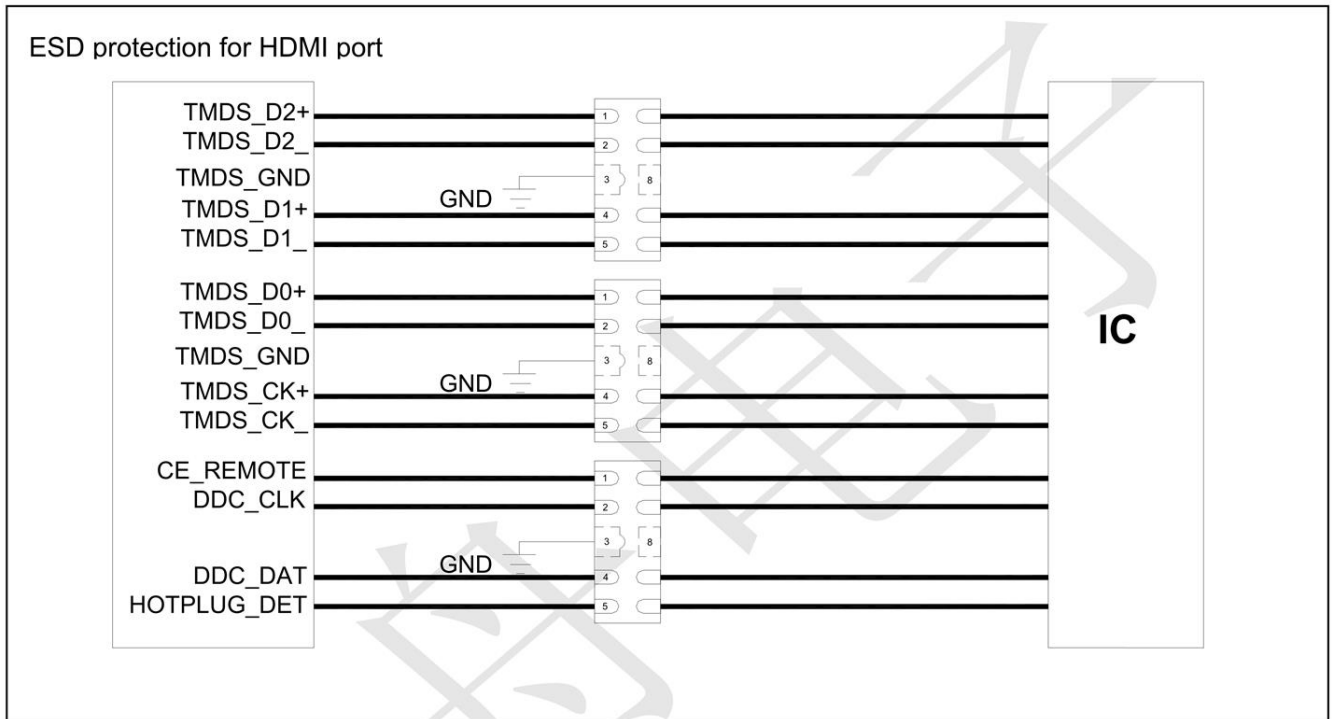


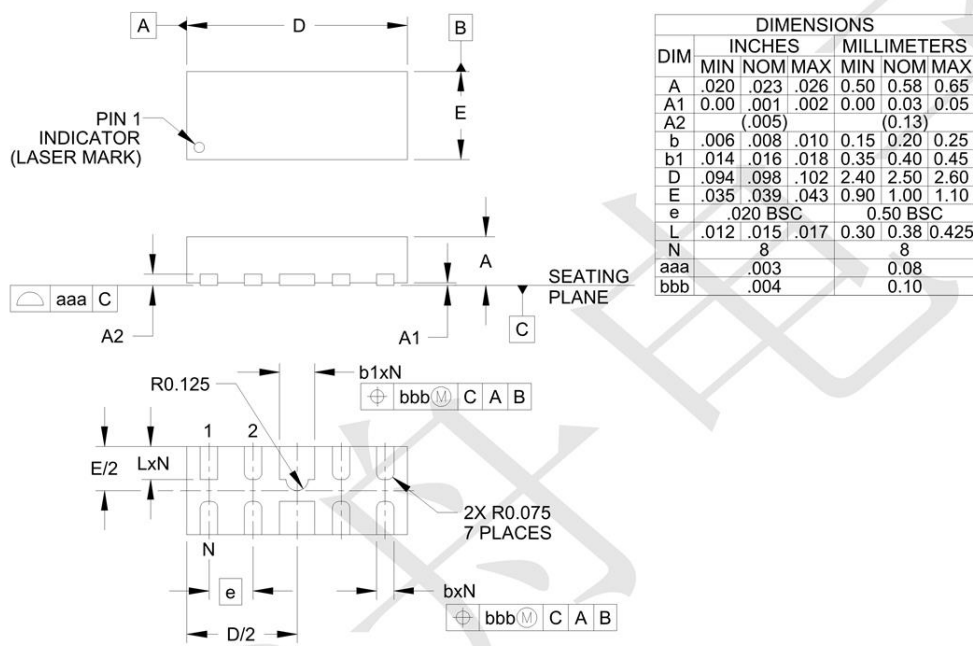
Fig3. Non - Repetitive Peak Pulse Power vs. Pulse Time



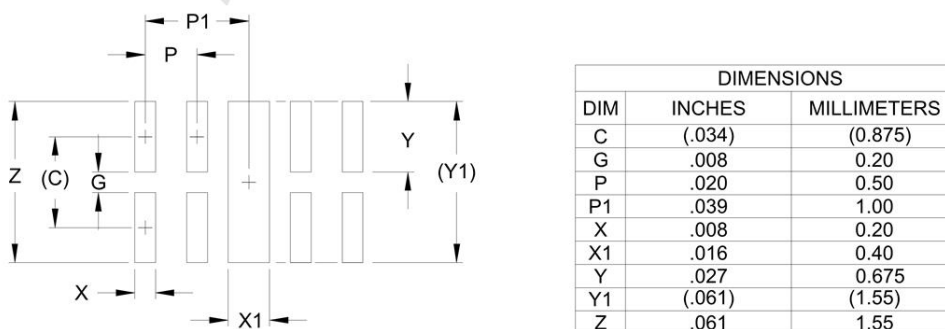
**Application Information**



## Outline Drawing - DFN2510-10



## Land Pattern - DFN2510-10



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