

## 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:  $\pm 30\text{kV}$   
Contact discharge:  $\pm 25\text{kV}$
  - IEC61000-4-5 (Lightning) : 4.5A(8/20 $\mu\text{s}$ )
  - IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ ROHS Compliant

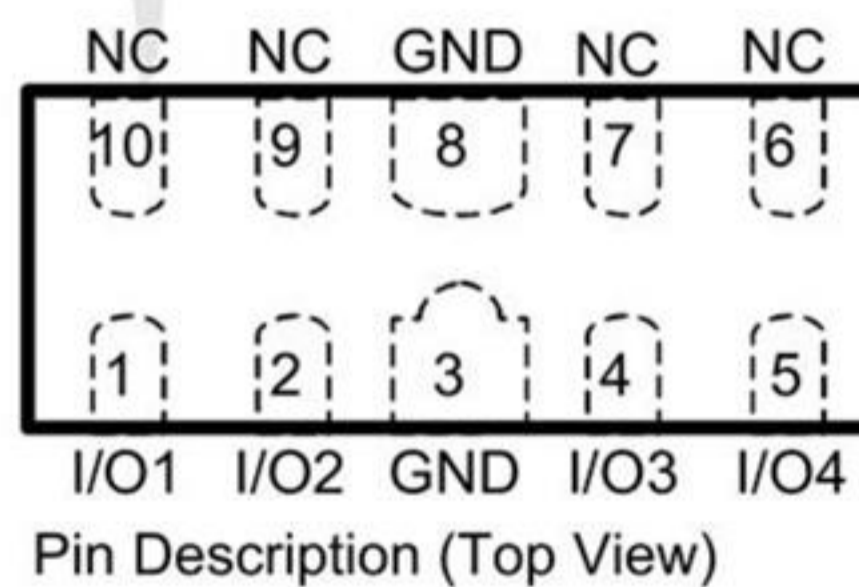
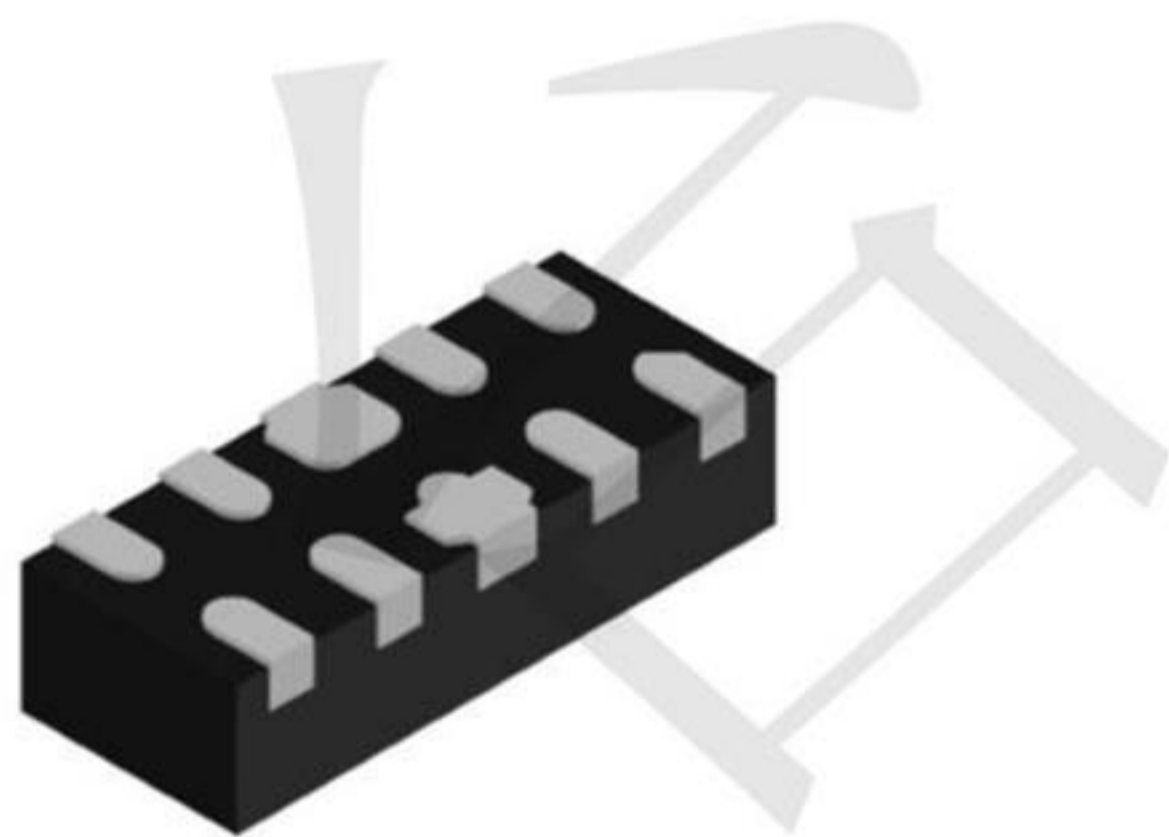
## Mechanical Characteristics

- ◆ 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

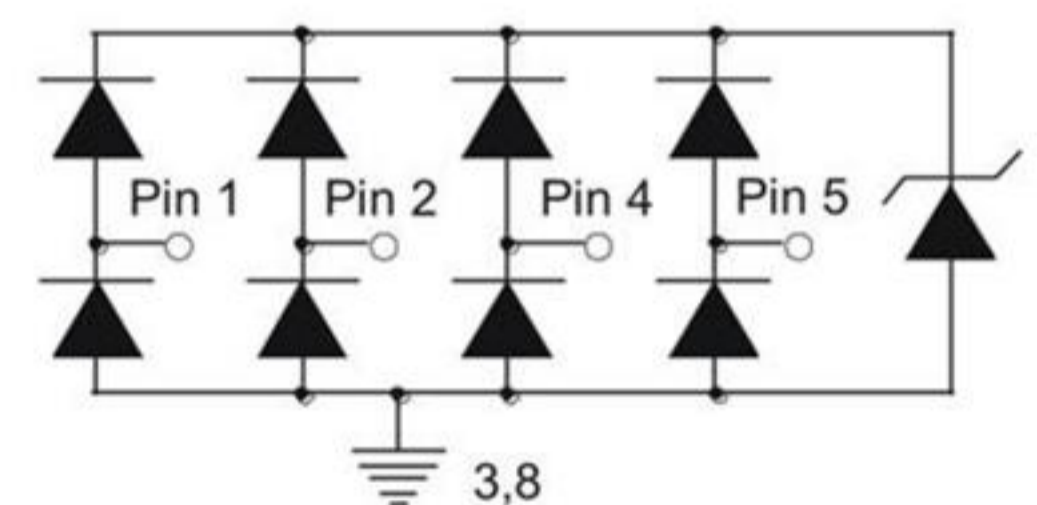
## Applications

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

## Dimensions and Pin Configuration

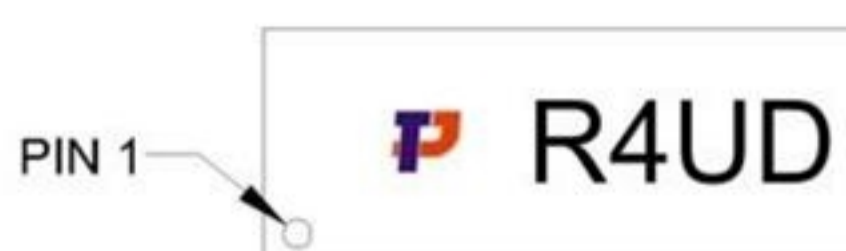


Pin #	Description
1, 2, 4, 5	I/O
6, 7, 9, 10	No Connection
3, 8	GND



Device Schematic

## Marking:



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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	70	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	± 30 ± 25	kV
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	6.8	7.5	9.2	V	IT = 1mA, any I/O pin to ground
Reverse Leakage Current	IR		0.01	0.05	μA	VRWM = 5V, any I/O pin to ground
Clamping Voltage	VC			10	V	I <sub>PP</sub> = 1 A (8 x 20μs pulse), any I/O pin to ground
Clamping Voltage	VC			13	V	I <sub>PP</sub> = 4.5A (8 x 20μs pulse), any I/O pin to ground
Junction Capacitance	CJ		0.3		pF	VR = 0V, f = 1MHz, between I/O pins
Junction Capacitance	CJ		0.6	0.8	pF	VR = 0V, f = 1MHz, any I/O pin to ground

## Characteristic Curves

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

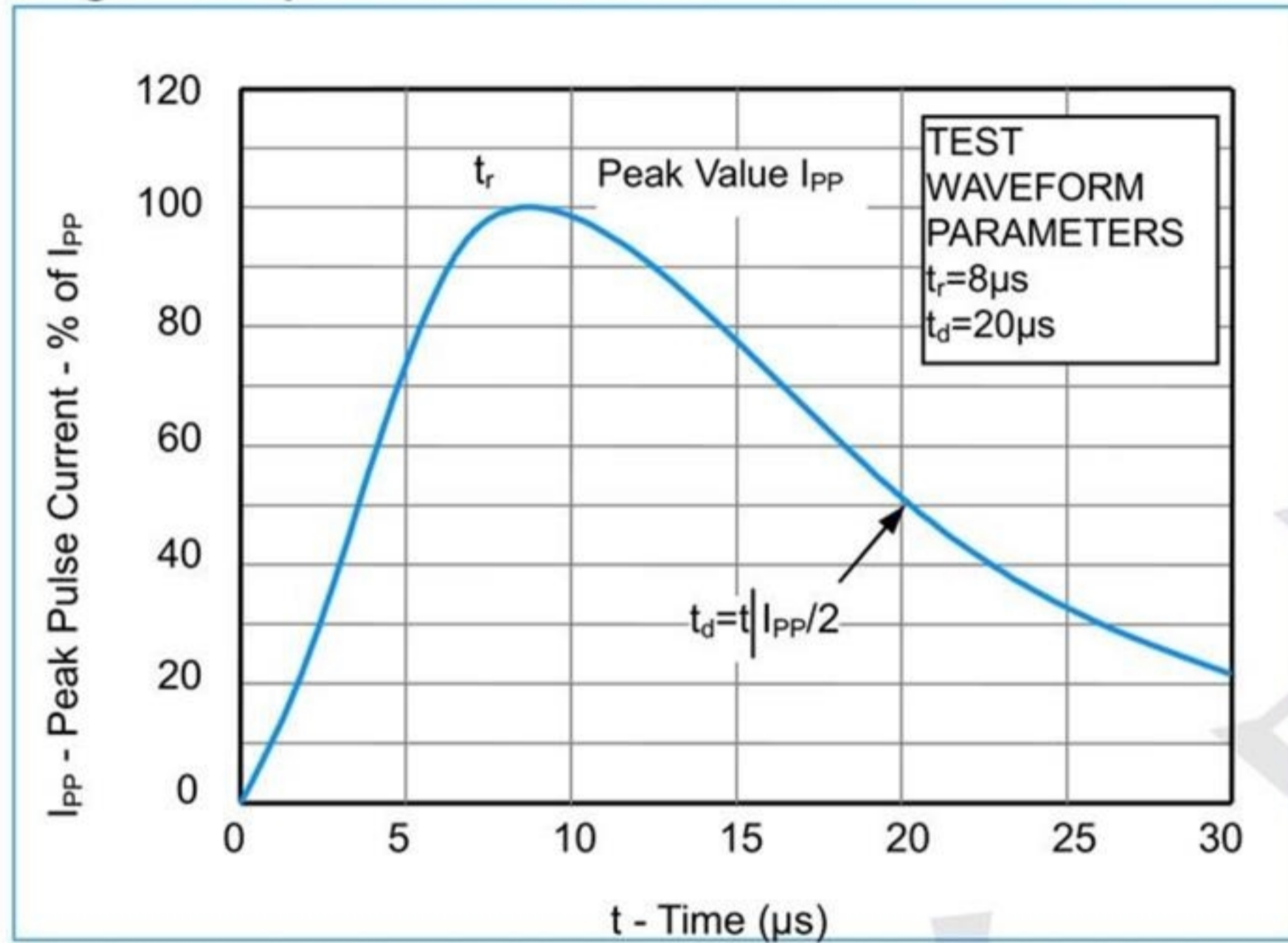


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

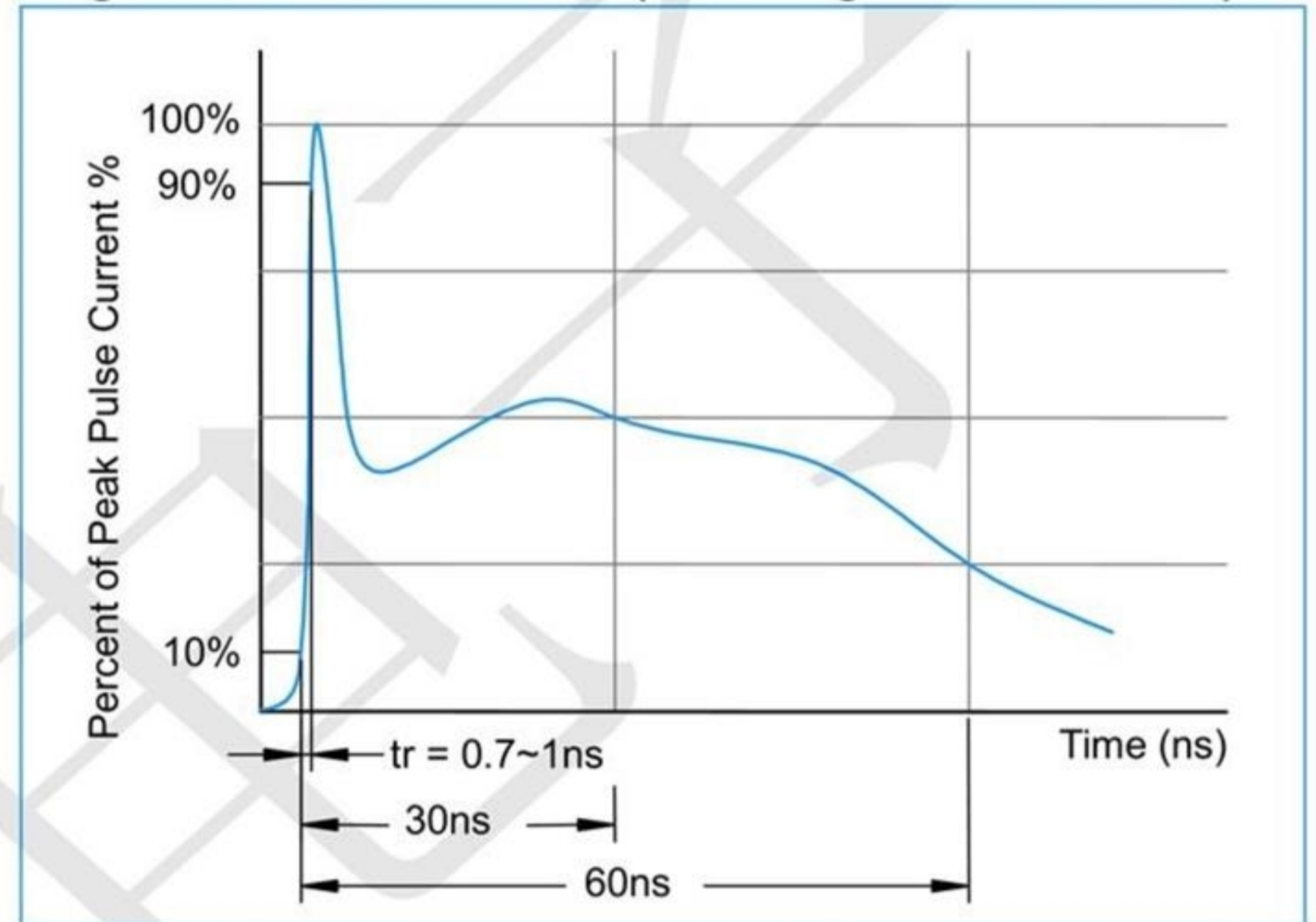
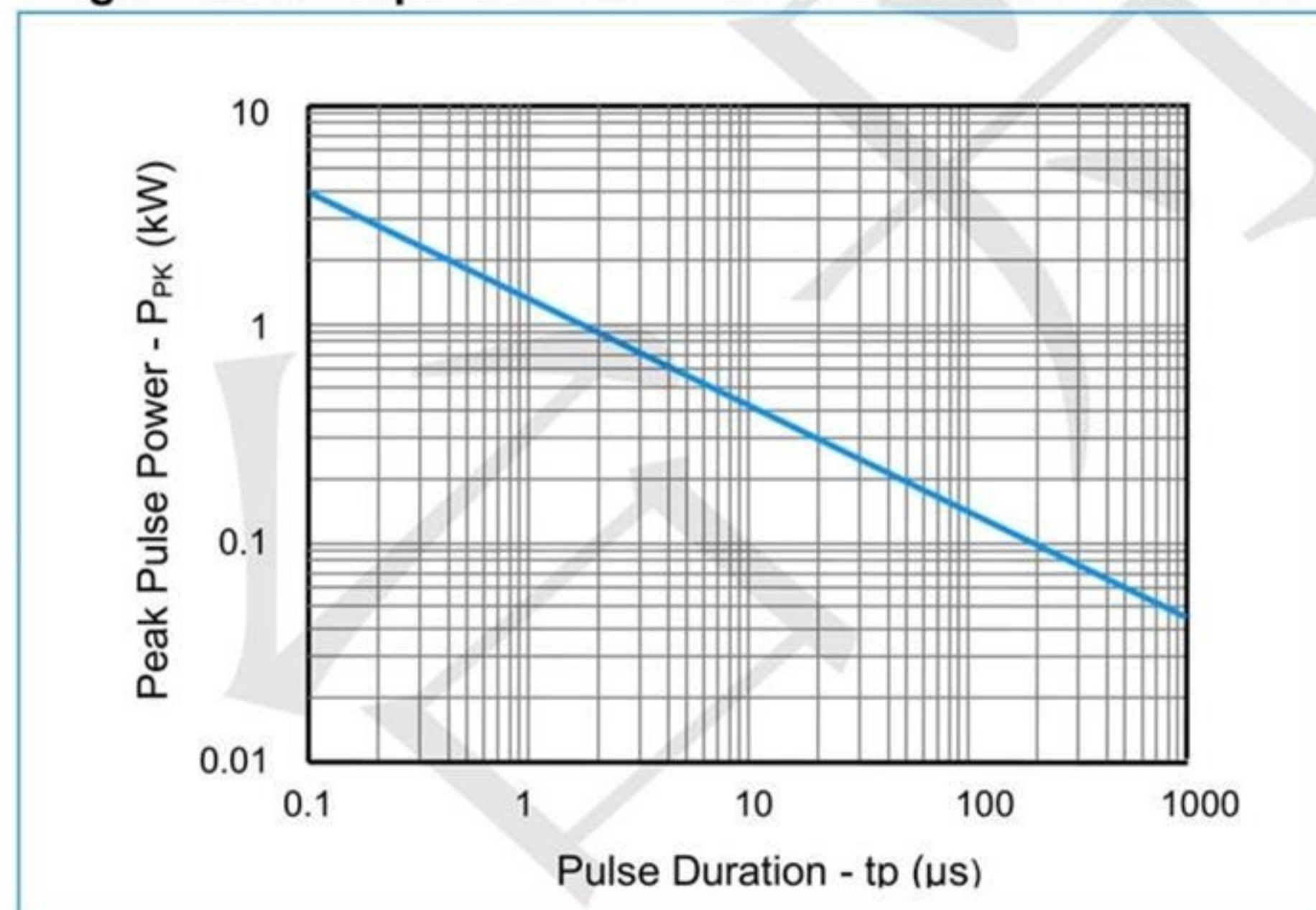
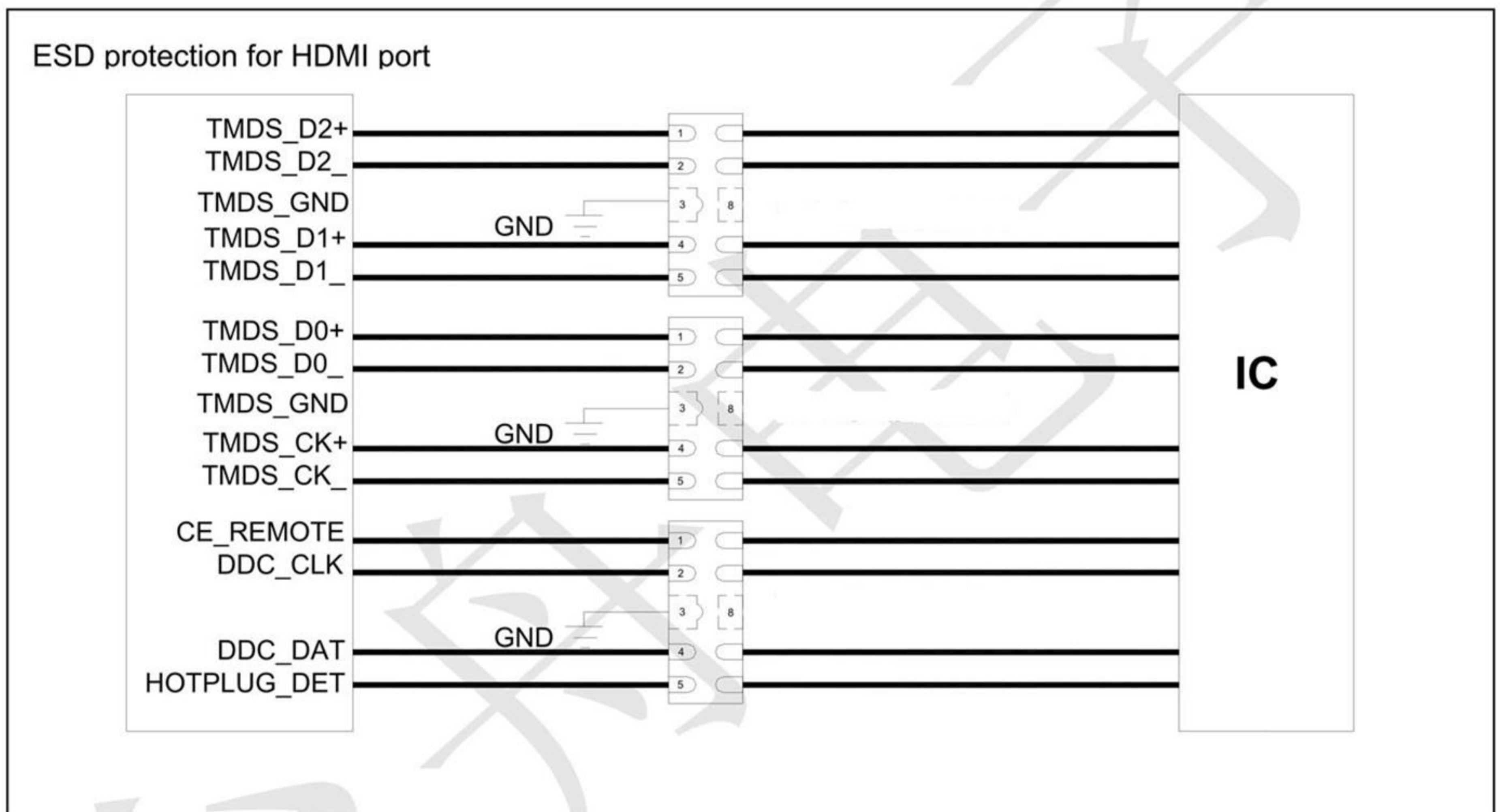


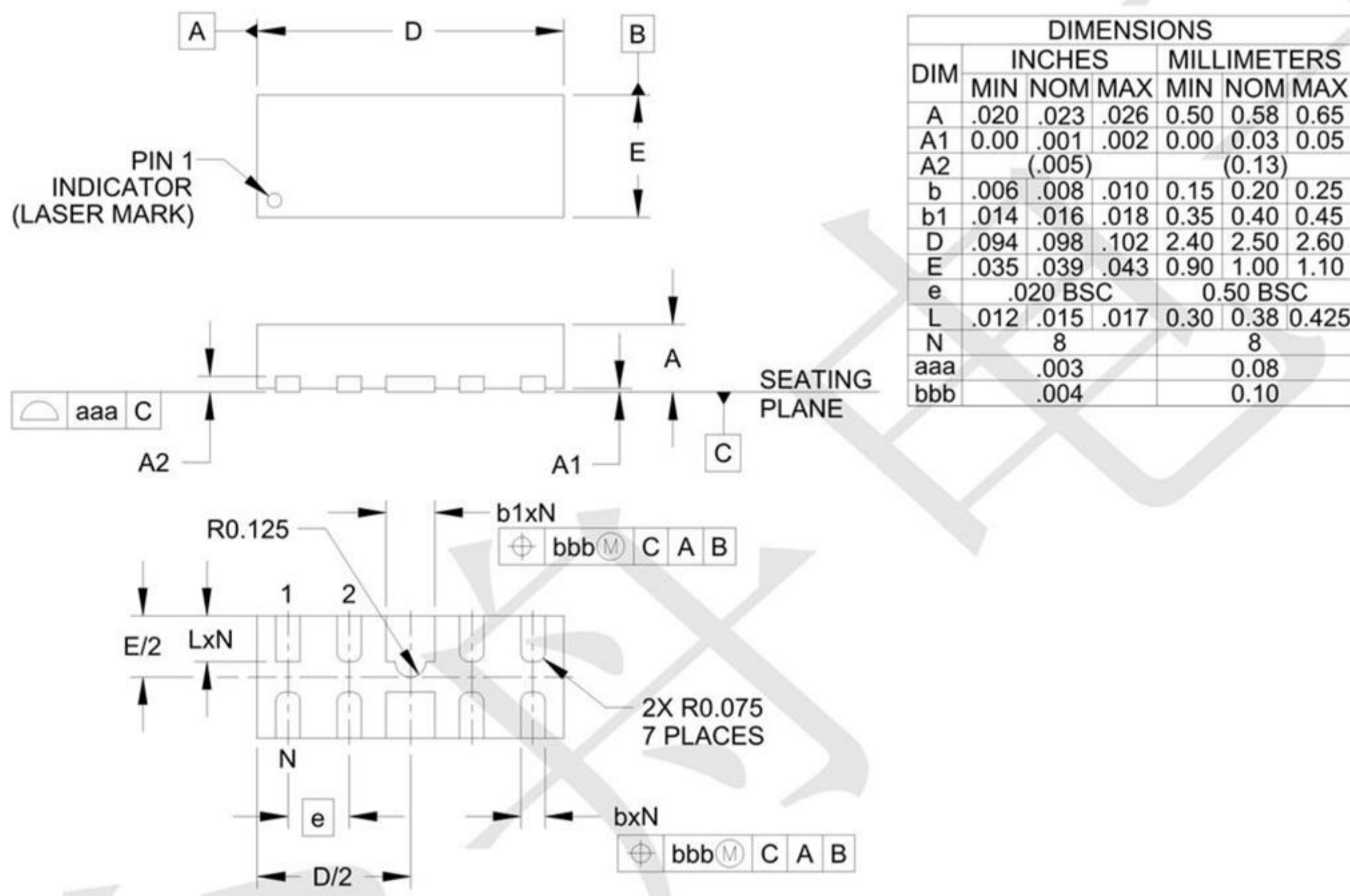
Fig3. Non - Repetitive Peak Pulse Power vs. Pulse Time



**Application Information**



**Outline Drawing - DFN2510-10**



**Land Pattern - DFN2510-10**

