

PS4103-DFA

Low Capacitance ESD Protection

Voltage

3.3V

Features

- IEC61000-4-2(ESD) : ±15kV Air, ±12kV Contact
- IEC61000-4-4(EFT) : 30A (5/50ns)
- IEC61000-4-5(Lightning) : 5A (8/20uS)
- Low leakage current, maximum of 0.5uA at rated voltage
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- Pb-Free/Halogen Free/BFR Free and RoHS Compliant

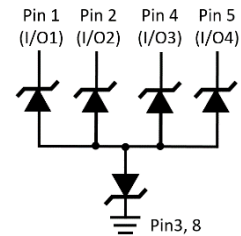
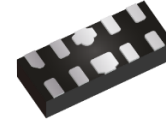
Mechanical Data

- Case : DFN2510A-10L Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.003 grams

Applications

- USB 3.X/4.0
- Consumer electronics
- Portable devices
- DP 2.0/2.1

DFN2510A-10L



Top view

Part Marking	Parameter
413AYWL	413A = Marking Code YWL = Y - Last digit of calendar year W - Weekly L - Tracking Code

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNITS
ESD IEC61000-4-2(Air)	V _{ESD}	±15	kV
ESD IEC61000-4-2(Contact)		±12	
Operating Junction Temperature Range	T _J	-55~125	°C
Storage Temperature Range	T _{STG}	-55~150	°C

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Electrical Characteristics (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage ^(Note 1)	V _{RWM}	I/O Pin to GND	-	-	3.3	V
Reverse Breakdown Voltage	V _{BR}	I _{BR} = 1mA, I/O Pin to GND	7	15	-	V
Reverse Leakage Current	I _R	V _R = ±3.3V, I/O Pin to GND	-	0.4	0.5	uA
Surge Clamping Voltage (8/20us)	V _C	I _{PP} = 5A, I/O Pin to GND	-	5.5	6.5	V
TLP Clamping Voltage (t _{period} =100ns, t _r =1ns)	V _C	I _{TLP} = 16A, I/O Pin to GND	-	8.6	-	V
Junction Capacitance	C _J	V _R = 1.65V, f = 1MHz, I/O Pin to GND	-	0.09	0.12	pF

NOTES:

1. A transient suppressor is selected according to the working peak reverse voltage(V_{RWM}), which should be equal to or greater than the DC or continuous peak operation voltage level.
2. Testing using Transmission Line Pulse (TLP) conditions: Z₀ = 50Ω, t_p = 100 ns.
3. This parameter is guaranteed by design.

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TYPICAL CHARACTERISTIC CURVES

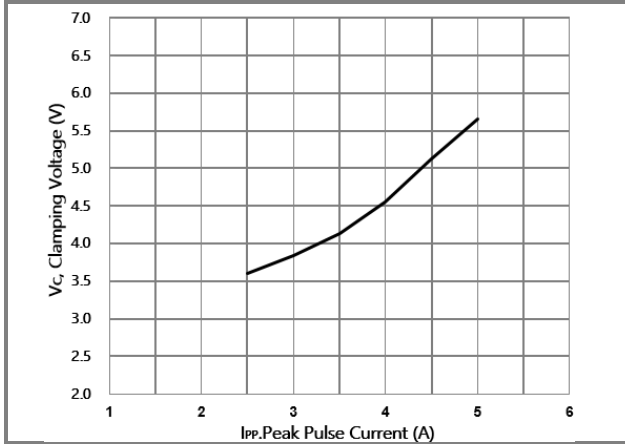


Fig.1 Typical Peak Clamping Voltage

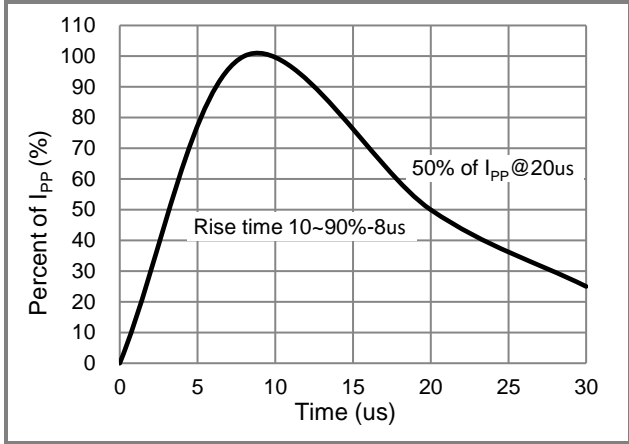


Fig.2 Pulse Waveform

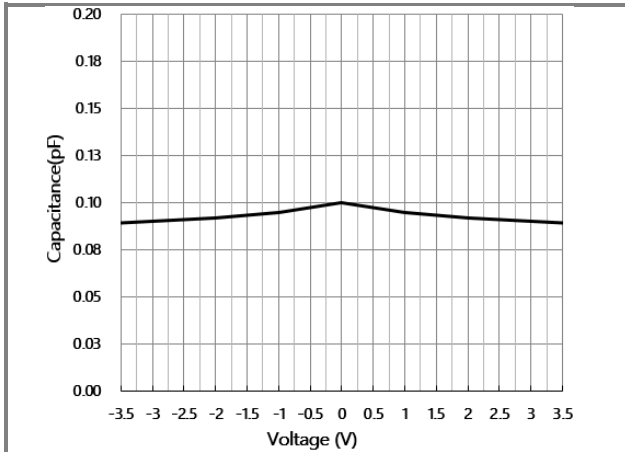


Fig.3 Typical Junction Capacitance

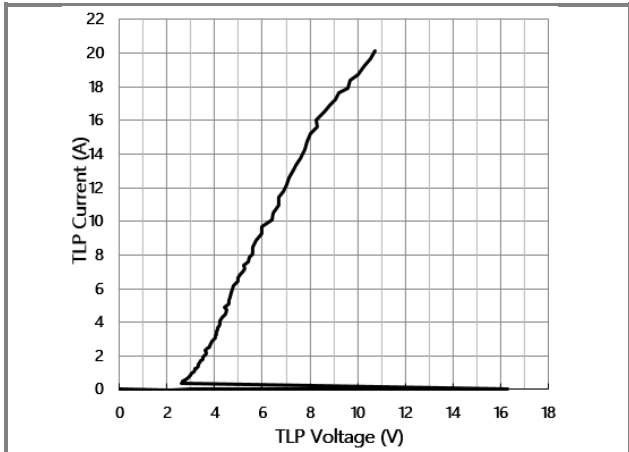


Fig.4 Positive TLP Measurement

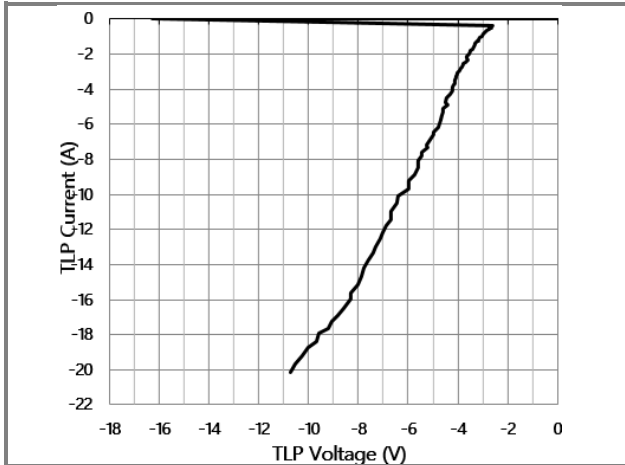


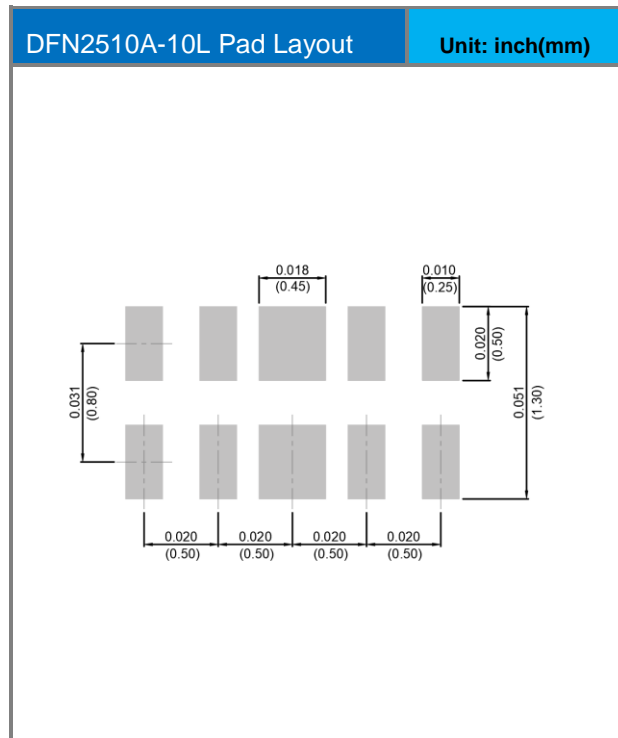
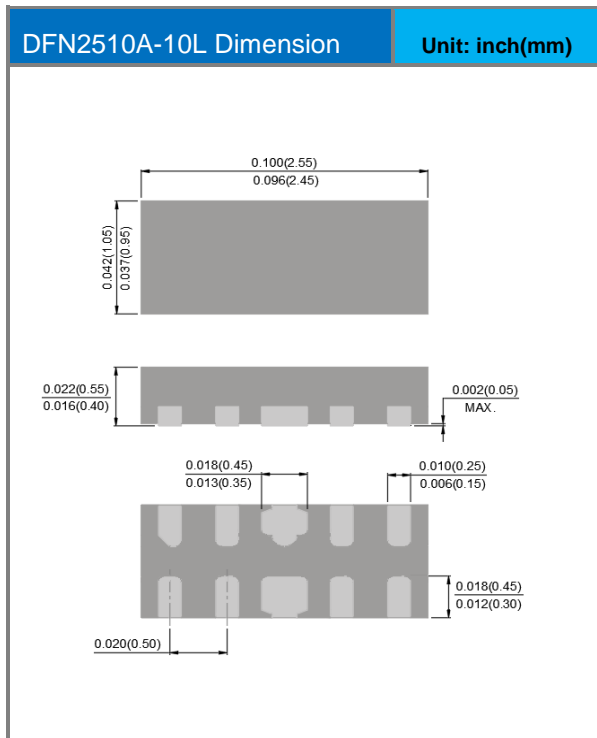
Fig.5 Negative TLP Measurement

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PS4103-DFA	DFN2510A-10L	3K pcs / 7" reel	413A

Packaging Information & Mounting Pad Layout



PS4103-DFA

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