

PS4205-DFA

Low Capacitance ESD Protection

Voltage

5V

Features

- IEC61000-4-2(ESD) : ±15kV Air, ±12kV Contact
- IEC61000-4-4(EFT) : 40A (5/50ns)
- IEC61000-4-5(Lightning) : 5A (8/20uS)
- Low leakage current, maximum of 1uA at rated voltage
- Ultra Low clamping voltage
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

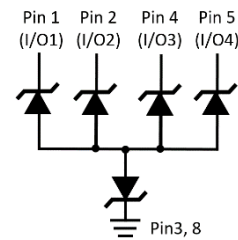
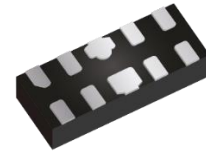
Mechanical Data

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

Applications

- USB 3.0/3.1/3.2/3.3 and 4.0
- Consumer electronics
- Portable devices
- DP 2.0/2.1

DFN2510A-10L



Top view

Part Marking	Parameter
425AYWL	425A = Marking Code YWL = Y - Last digit of calendar year W - Weekly L - The latest two digits of wafer lot#

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 to +125	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

PS4205-DFA

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	-	-	5	V
Reverse Breakdown Voltage	V _{BR}	I _{BR} = 1mA, I/O Pin to GND	6	-	11	V
Reverse Leakage Current	I _R	V _R = ±5V, I/O Pin to GND	-	0.5	1	uA
Surge Clamping Voltage (8/20μs)	V _C	I _{PP} = 5A, I/O Pin to GND	-	2.5	3.5	V
TLP Clamping Voltage (t _{period} =100ns, t _r =1ns)	V _C	I _{TLP} = 16A, I/O Pin to GND	-	4.5	-	V
Junction Capacitance	C _J	V _R = 2.5V, f = 1MHz, I/O Pin to GND	-	0.2	0.25	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.

PS4205-DFA

TYPICAL CHARACTERISTIC CURVES



Fig.1 Typical Peak Clamping Voltage

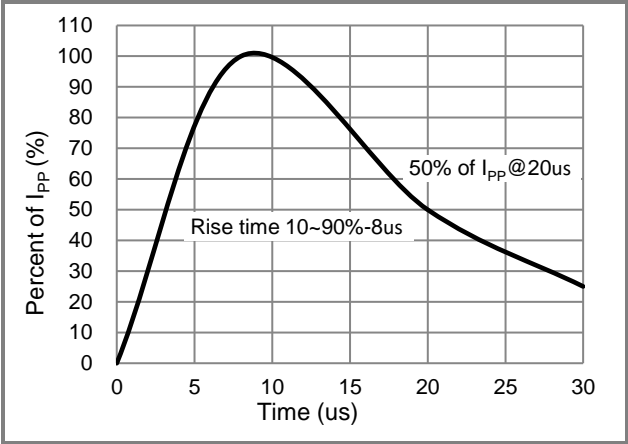


Fig.2 Pulse Waveform

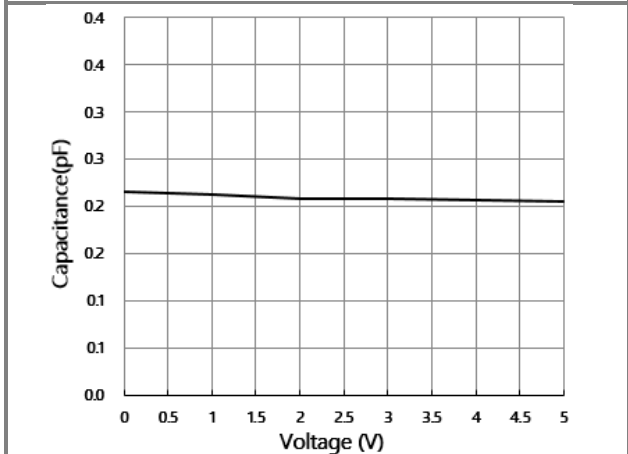


Fig.3 Typical Junction Capacitance

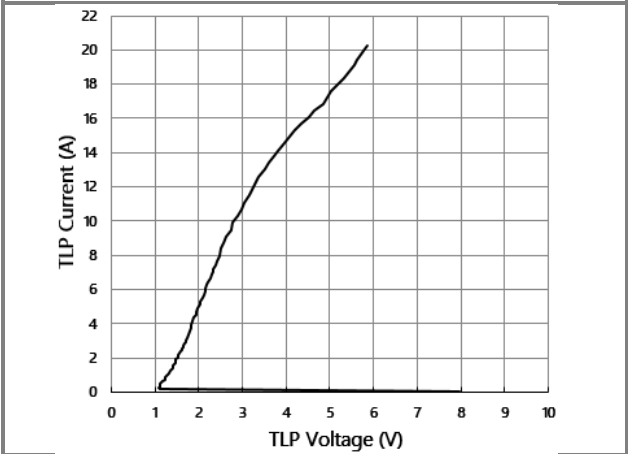


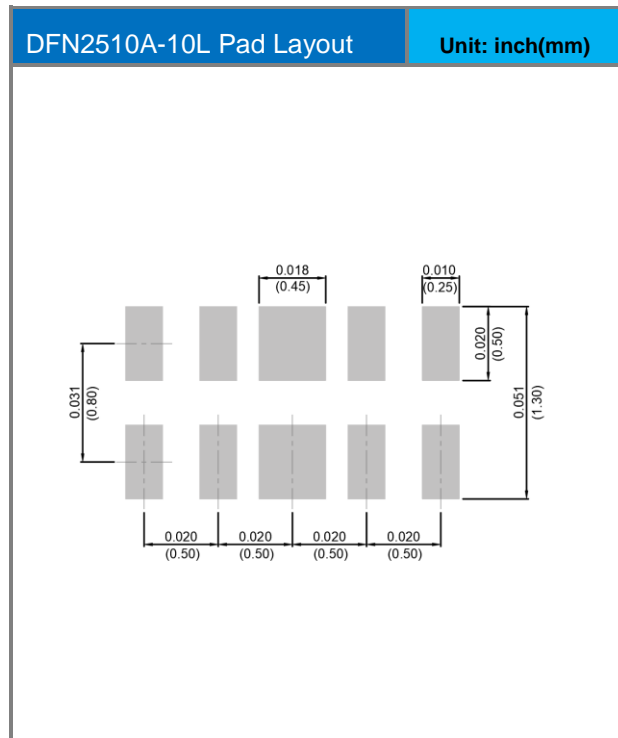
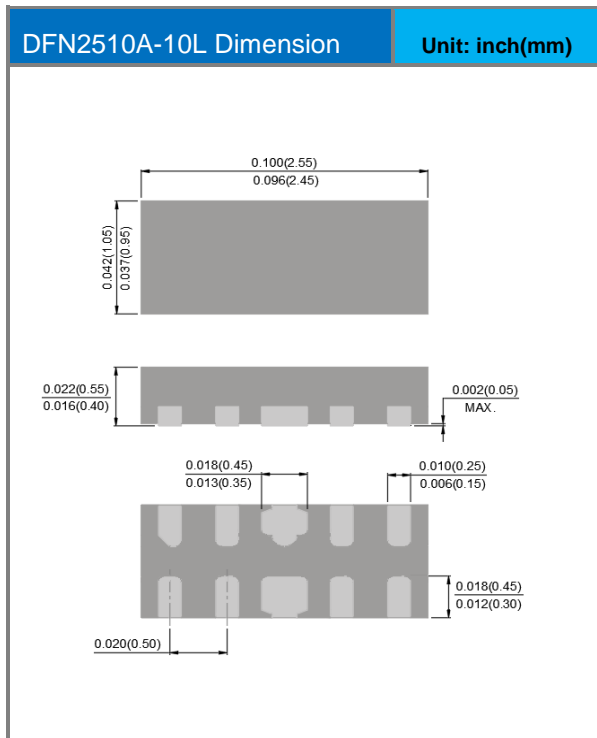
Fig.4 TLP Measurement

PS4205-DFA

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PS4205-DFA	DFN2510A-10L	3K pcs / 7" reel	425A

Packaging Information & Mounting Pad Layout



PS4205-DFA

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