

PS4105-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 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

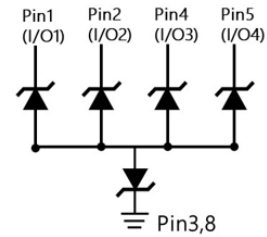
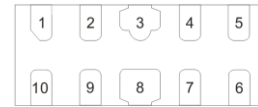
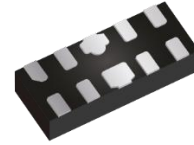
Mechanical Data

- 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
415AYWL	415A = 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 to +125	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

PS4105-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	8	16	-	V
Reverse Leakage Current	I _R	V _R = ±5V, 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	-	5.6	6.6	V
TLP Clamping Voltage (t _{period} =100ns, t _r =1ns)	V _C	I _{TLP} = 16A, I/O Pin to GND	-	8.8	-	V
Junction Capacitance	C _J	V _R = 2.5V, f = 1MHz, I/O Pin to GND	-	0.1	0.15	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.

PS4105-DFA

TYPICAL CHARACTERISTIC CURVES

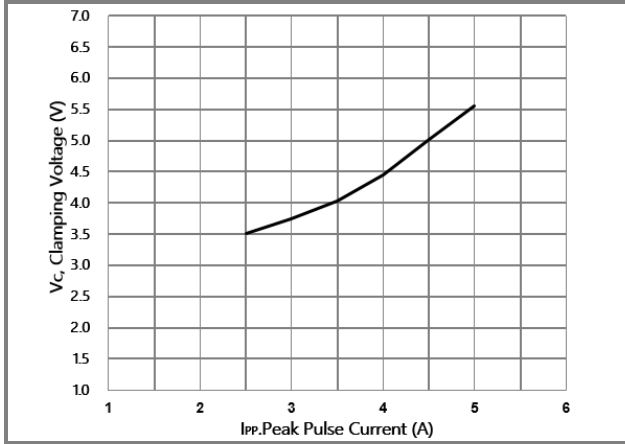


Fig.1 Typical Peak Clamping Voltage

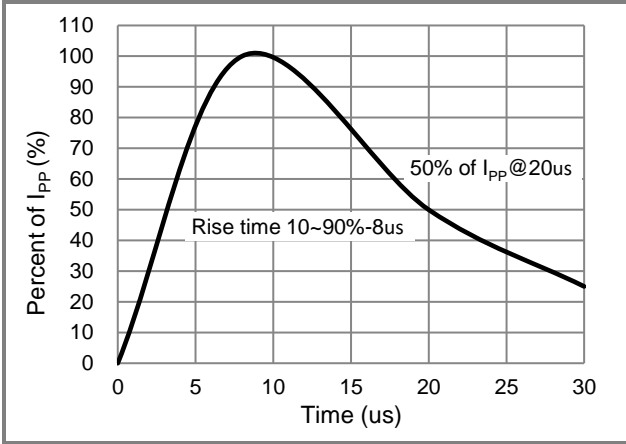


Fig.2 Pulse Waveform

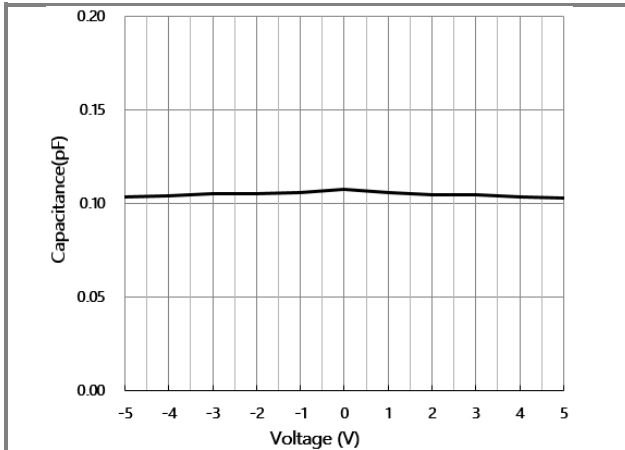


Fig.3 Typical Junction Capacitance

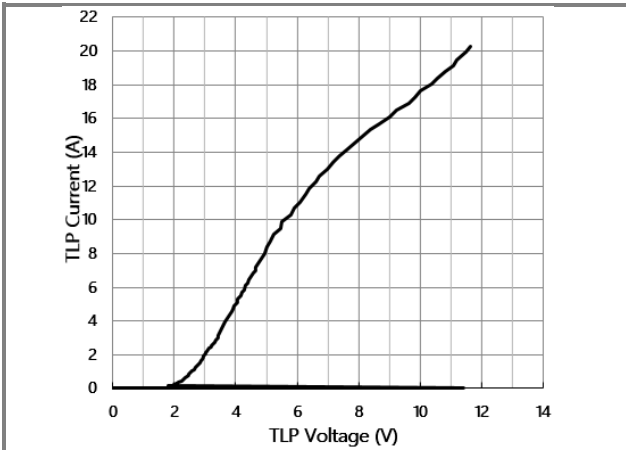


Fig.4 Positive TLP Measurement

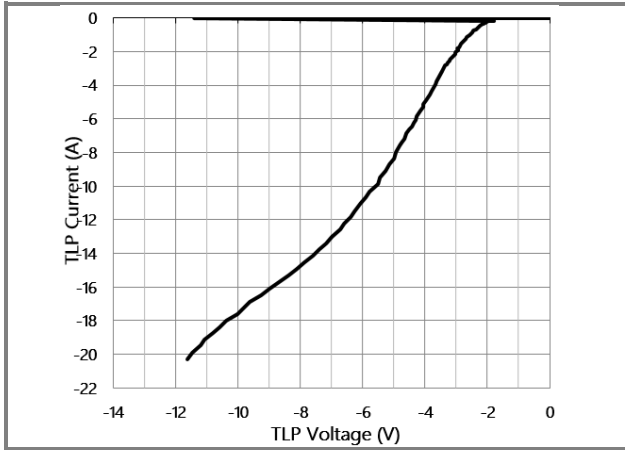


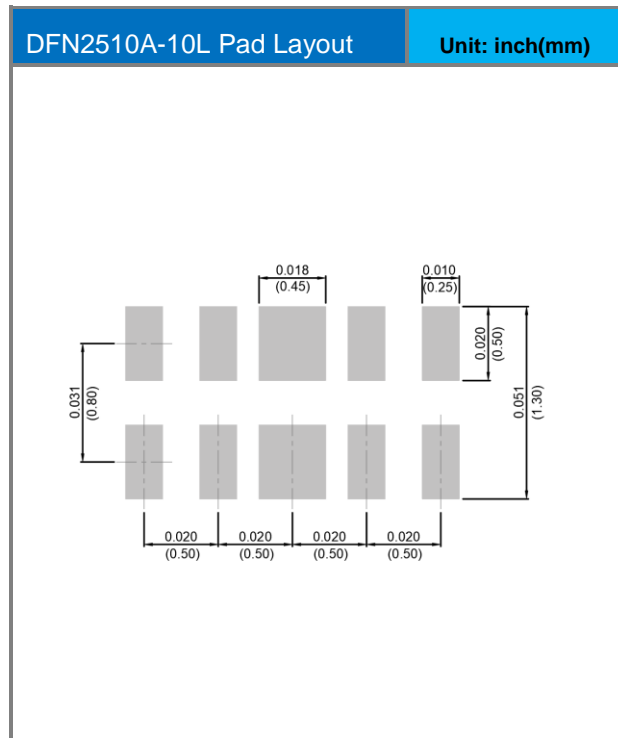
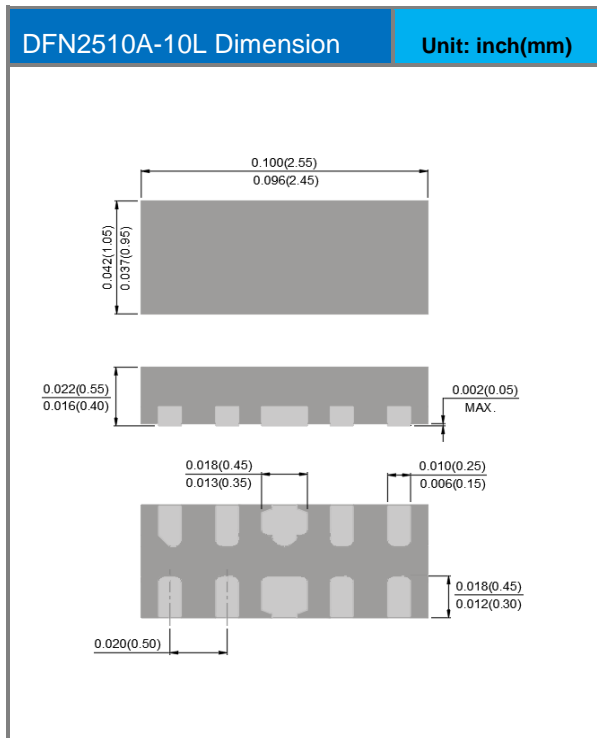
Fig.5 Negative TLP Measurement

PS4105-DFA

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PS4105-DFA	DFN2510A-10L	3K pcs / 7" reel	415A

Packaging Information & Mounting Pad Layout



PS4105-DFA

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.