

# PJE5UFN10A-AU

## Ultra Low Capacitance TVS/ESD Protection

**V<sub>RWM</sub>**

**5 V**

### Features

- IEC61000-4-2(ESD): ±15kV Air, ±8kV Contact Compliance
- IEC61000-4-4(EFT): 20A(5/50nS)
- IEC61000-4-5(Lightning): 2.5A(8/20μS)
- Low leakage current, maximum 1μA at rated voltage
- Acquire quality system certificate : TS16949
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2011/65/EU directive.
- Green molding compound as per IEC61249 Std.  
(Halogen Free)

### Mechanical Data

- Case: DFN2510-10L, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00004 ounces, 0.0011 grams
- Marking: JE5U

### Applications

- USB3.0 Data Line Protection
- High Definition Multi-Media Interface Protection
- Monitors and Flat Panel Displays Notebook computers
- Video Line Protection & Base Stations
- 10/100/1000 Ethernet
- HDSL, IDSL Secondary IC Side Protection
- Control Signal Lines Protection

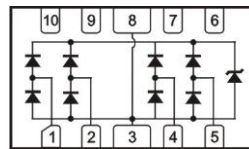
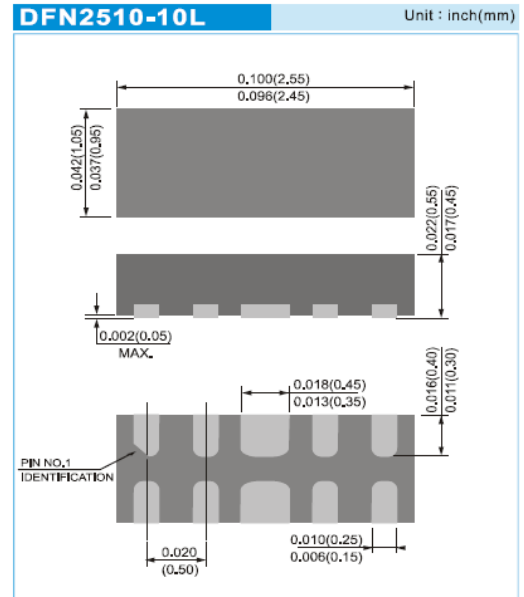


Fig.175(Top View)

### Maximum Ratings (T<sub>A</sub>=25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	V <sub>ESD</sub>	±15	kV
ESD IEC61000-4-2(Contact)		±8	
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

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Electrical Characteristics ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	-	5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR}=1\text{mA}$ , Between any I/O pins to GND	6	-	9	V
Reverse leakage current	$I_R$	$V_R=5\text{V}$ , any I/O pin to GND	-	-	1	$\mu\text{A}$
Clamping Voltage	$V_{CL}$	$I_{PP}=1\text{A}$ , $t_P=8/20\mu\text{s}$ , any I/O pin to GND	-	9.5	12	V
		$I_{PP}=2.5\text{A}$ , $t_P=8/20\mu\text{s}$ , any I/O pin to GND	-	11	13	
Clamping Voltage TLP <sup>(Note 1)</sup>	$V_{CL}$	$I_{PP}=4\text{A}$ , $t_P=100\text{ns}$ , any I/O pin to GND	-	12	-	V
		$I_{PP}=8\text{A}$ , $t_P=100\text{ns}$ , any I/O pin to GND	-	14	-	
Dynamic Resistance <sup>(Note 1)</sup>	$R_{DYN}$	$t_P=100\text{ns}$	-	0.5	-	$\Omega$
Off State Junction Capacitance	$C_J$	0Vdc Bias $f=1\text{MHz}$ , Between any I/O pins to GND	-	0.6	0.8	pF
		0Vdc Bias $f=1\text{MHz}$ , Between any I/O pins	-	0.35	0.4	

NOTES :

1. Testing using Transmission Line Pulse (TLP) conditions:  $Z_0 = 50\Omega$ ,  $t_P = 100\text{ns}$ .

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## TYPICAL CHARACTERISTIC CURVES

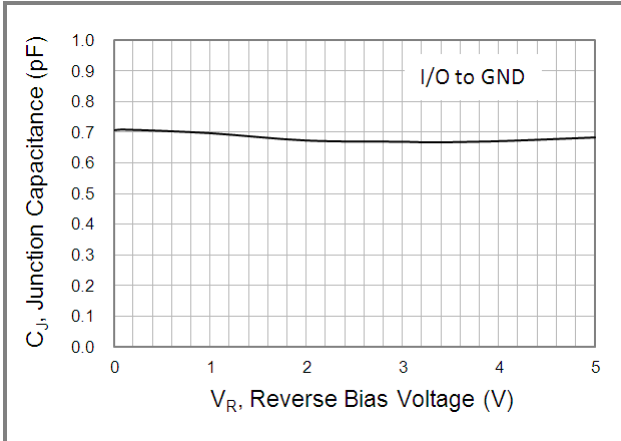


Fig.1 Typical Junction Capacitance

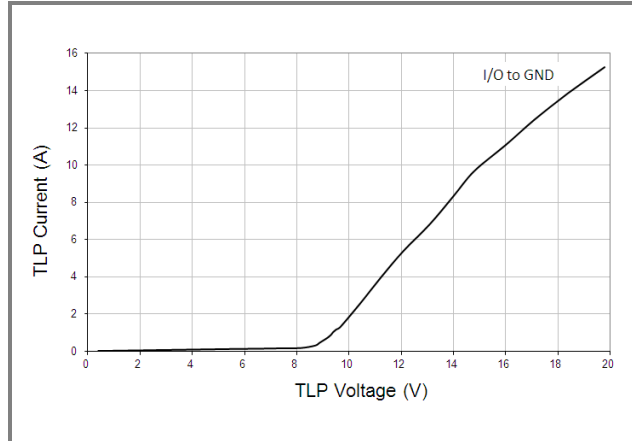


Fig.2 Transmission Line Pulsing (TLP) Measurement

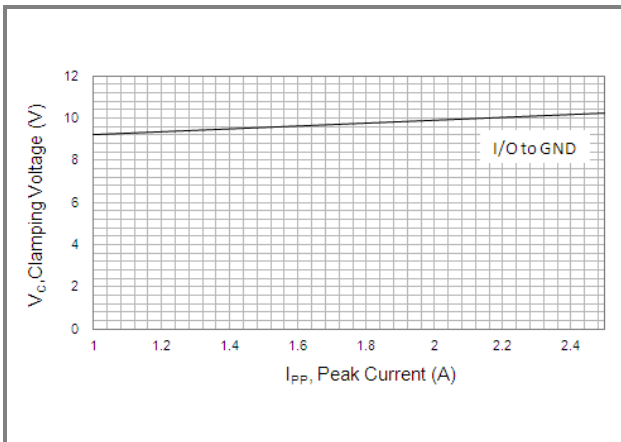


Fig.3 Typical Peak Clamping Voltage(8/20µs)

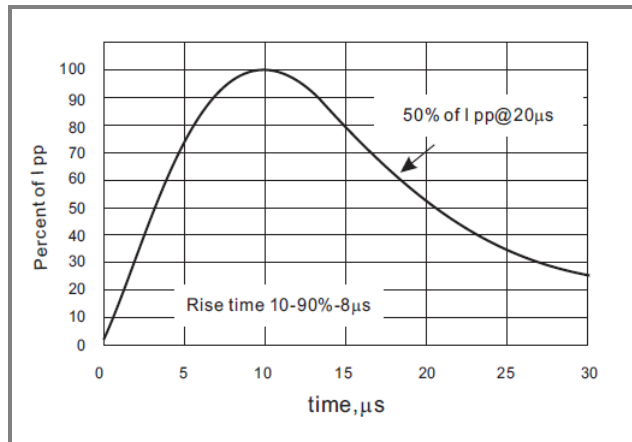


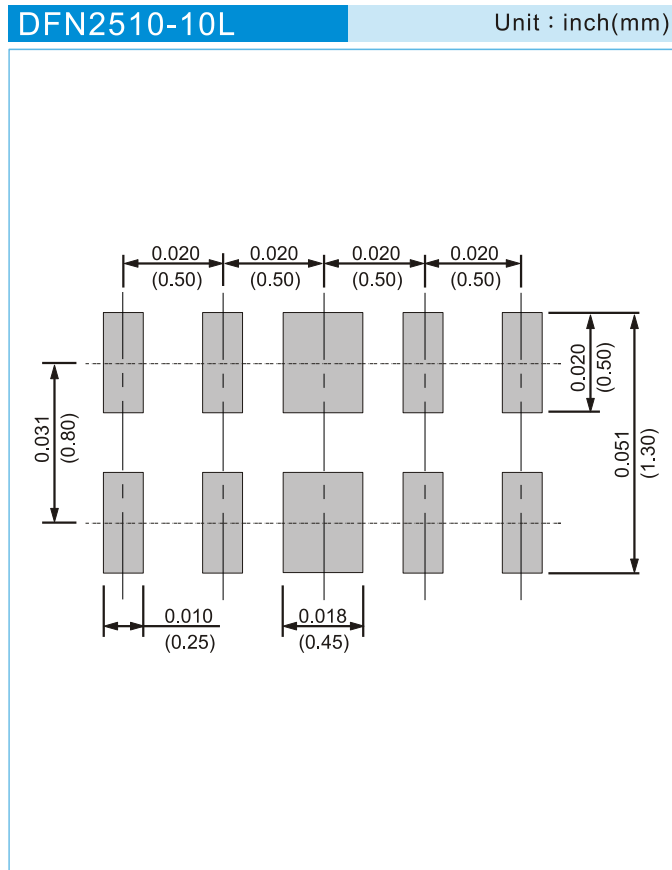
Fig.4 8/20µs Pulse Waveform

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## Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PJE5UFN10A-AU	DFN2510-10L	5K pcs / 7" reel	JE5U
PJE5UFN10A-AU	DFN2510-10L	12K pcs / 13" reel	JE5U

## Mounting Pad Layout



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