



PJE5UFN10A

Ultra Low Capacitance TVS/ESD Protection

V_{RWM}

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
- 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

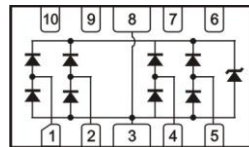
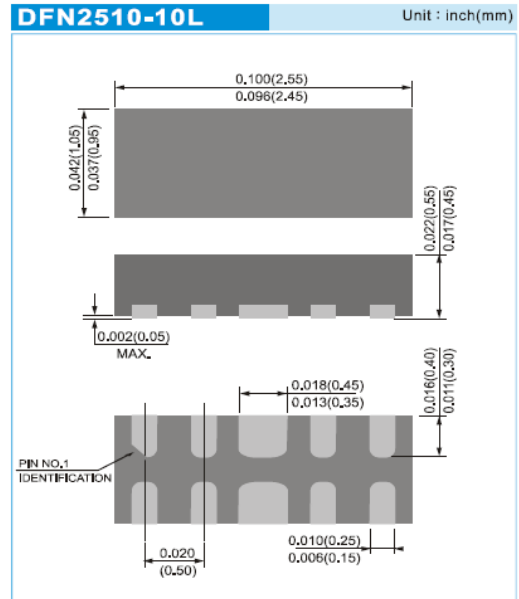


Fig.175(Top View)

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

| PARAMETER | SYMBOL | LIMIT | UNITS |
|--------------------------------------|------------------|-------------|-------|
| ESD IEC61000-4-2(Air) | V _{ESD} | ±15 | kV |
| ESD IEC61000-4-2(Contact) | | ±8 | |
| Operating Junction Temperature Range | T _J | -55 to +150 | °C |
| Storage Temperature Range | T _{STG} | -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 | μA |
| 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 ^(Note 1) | 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 ^(Note 1) | R_{DYN} | $t_P=100\text{ns}$ | - | 0.5 | - | Ω |
| 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

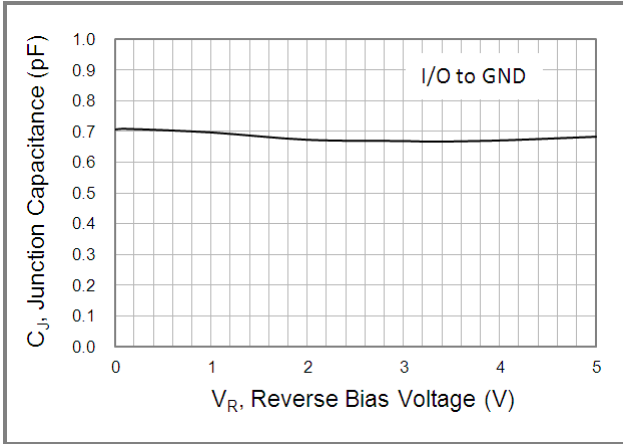


Fig.1 Typical Junction Capacitance

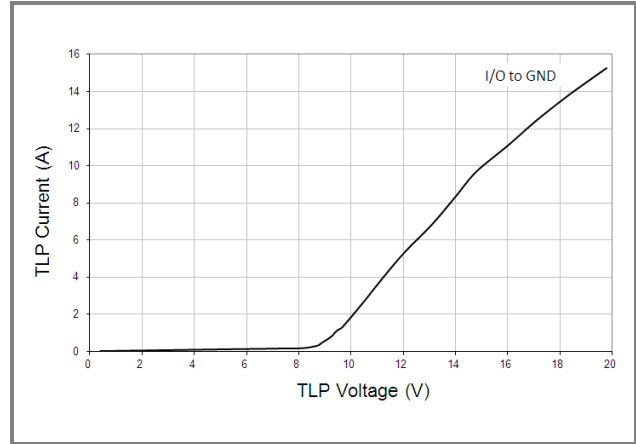


Fig.2 Transmission Line Pulsing (TLP) Measurement

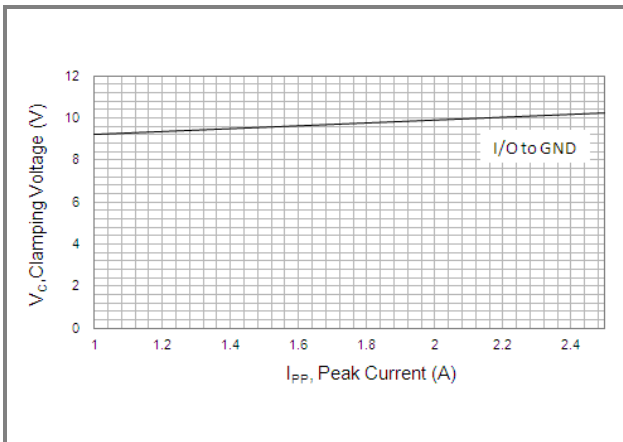


Fig.3 Typical Peak Clamping Voltage(8/20 μ s)

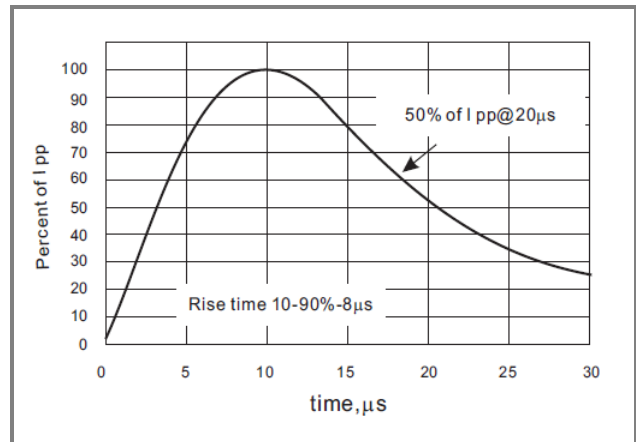


Fig.4 8/20 μ s Pulse Waveform



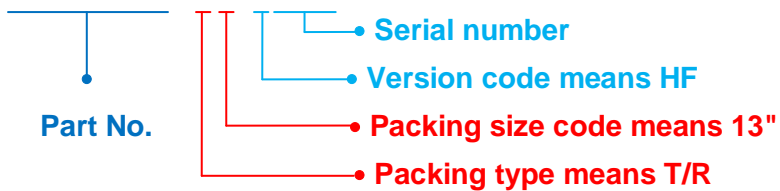
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PART NO PACKING CODE VERSION

| Part No Packing Code | Package Type | Packing Type | Marking | Version |
|----------------------|--------------|--------------------|---------|--------------|
| PJE5UFN10A_R1_00001 | DFN2510-10L | 5K pcs / 7" reel | JE5U | Halogen free |
| PJE5UFN10A_R2_00001 | DFN2510-10L | 12K pcs / 13" reel | JE5U | Halogen free |

For example :

RB500V-40_R2_00001



| Packing Code XX | | | | Version Code XXXXX | | |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type | 1 st Code | Packing size code | 2 nd Code | HF or RoHS | 1 st Code | 2 nd ~5 th Code |
| Tape and Ammunition Box (T/B) | A | N/A | 0 | HF | 0 | serial number |
| Tape and Reel (T/R) | R | 7" | 1 | RoHS | 1 | serial number |
| Bulk Packing (B/P) | B | 13" | 2 | | | |
| Tube Packing (T/P) | T | 26mm | X | | | |
| Tape and Reel (Right Oriented) (TRR) | S | 52mm | Y | | | |
| Tape and Reel (Left Oriented) (TRL) | L | PANASERT T/B CATHODE UP (PBCU) | U | | | |
| FORMING | F | PANASERT T/B CATHODE DOWN (PBCD) | D | | | |

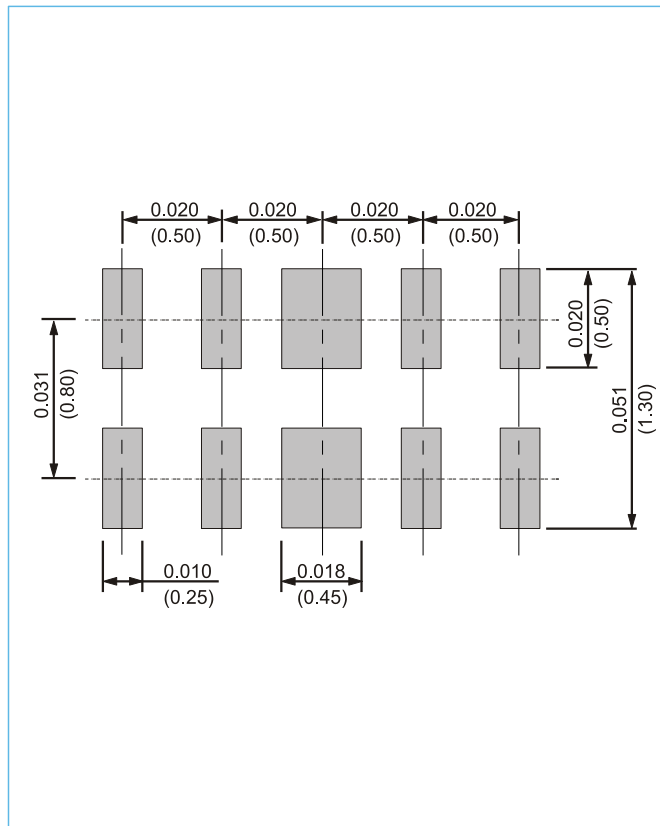


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MOUNTING PAD LAYOUT

DFN2510-10L

Unit : inch(mm)





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