



# PJE28VM2FN2

## ESD Protection

$V_{RWM}$

**28 V**

## Features

- ESD protection of one line
- IEC61000-4-2(ESD):  $\pm 20$ kV Air,  $\pm 15$ kV Contact Compliance
- IEC61000-4-4(EFT): 40A(5/50nS)
- IEC61000-4-5(Lightning): 3A(8/20 $\mu$ S)
- Low leakage current, maximum of 0.5 $\mu$ A at rated voltage
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive).
- Green molding compound as per IEC61249 Std..(Halogen Free)

## Mechanical Data

- Case: DFN 2L, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00004 ounces, 0.0011 grams
- Marking: 9V

## Applications

- LED Backlight
- Mobile Phones and accessories
- Desktops, Servers and Notebook
- Hand held portable
- Computer Interfaces Protection
- Serial and Parallel Ports Protection
- Control Signal Lines Protection

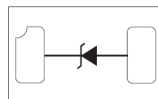
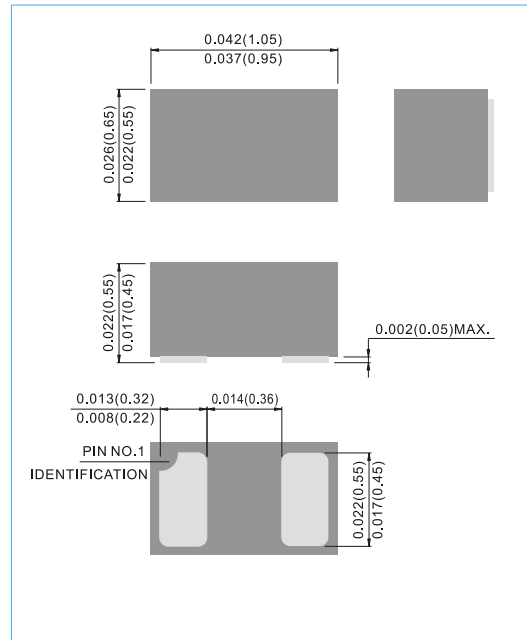


Fig.30(Top View)

## DFN 2L

Unit : inch(mm)



## Maximum Ratings ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| PARAMETER   | SYMBOL    | LIMIT       | UNITS              |
|---|-----------|-------------|--------------------|
| Peak Pulse Power Dissipation( $t_p=8/20\mu\text{s}$ ) | $P_{PP}$  | 165         | W                  |
| ESD IEC61000-4-2(Air)                                 | $V_{ESD}$ | $\pm 20$    | kV                 |
| ESD IEC61000-4-2(Contact)                             |           | $\pm 15$    |                    |
| Operating Junction Temperature Range                  | $T_J$     | -55 to +125 | $^{\circ}\text{C}$ |
| Storage Temperature Range                             | $T_{STG}$ | -55 to +150 | $^{\circ}\text{C}$ |



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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 <sup>(NOTE1)</sup> | $V_{RWM}$ | -                                       | -    | -    | 28   | V             |
| Reverse Breakdown Voltage                    | $V_{BR}$  | $I_{BR}=1\text{mA}$                     | 29   | -    | 35   | V             |
| Reverse leakage current                      | $I_R$     | $V_R=28\text{V}$                        | -    | -    | 0.5  | $\mu\text{A}$ |
| Clamping Voltage                             | $V_{CL}$  | $I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$ | -    | 38   | 45   | V             |
|  |           | $I_{PP}=3\text{A}, t_p=8/20\mu\text{s}$ | -    | 48   | 55   |               |
| Dynamic Resistance <sup>(NOTE2)</sup>        | $R_D$     | $t_p=8/20\mu\text{s}$                   | -    | 5    | -    | $\Omega$      |
| Off State Junction Capacitance               | $C_J$     | 0Vdc Bias $f=1\text{MHz}$               | -    | -    | 25   | pF            |

**NOTE :**

- 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.Dynamic resistance calculated from  $I_{PP}=1\text{A}$  to  $I_{PP}=3\text{A}$ .



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## TYPICAL CHARACTERISTIC CURVES

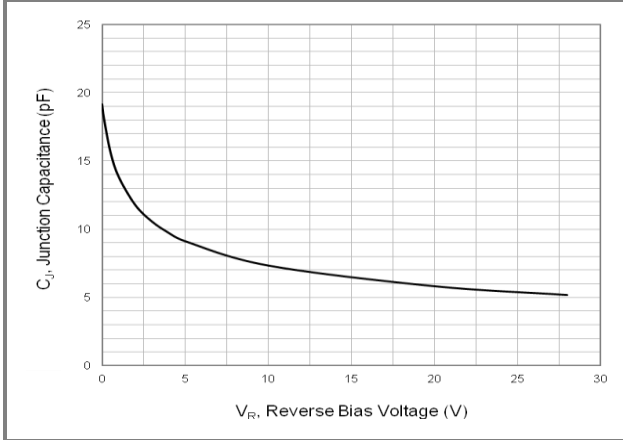


Fig.1 Typical Junction Capacitance

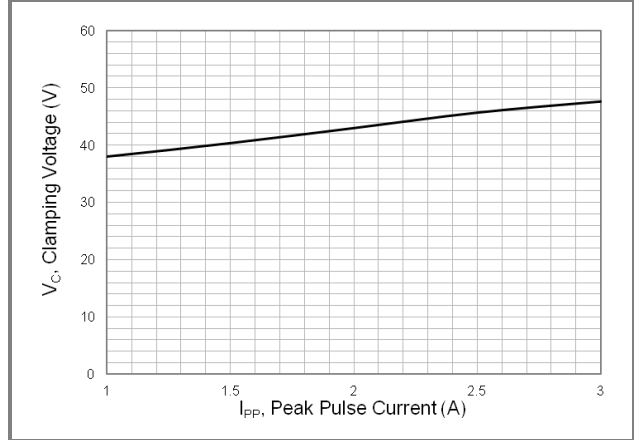


Fig.2 Typical Peak Clamping Voltage(8/20 $\mu$ s)

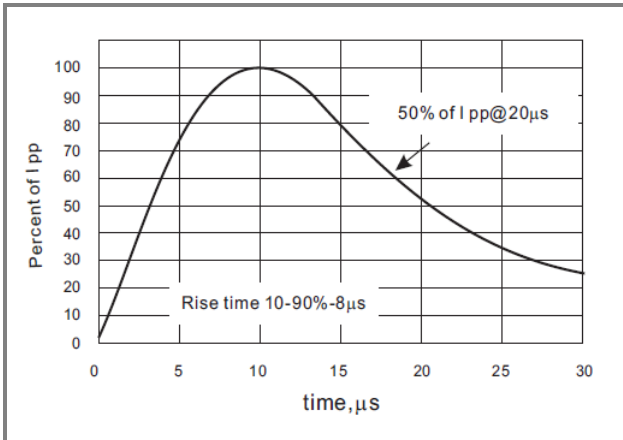


Fig.3 8/20 $\mu$ s Pulse Waveform

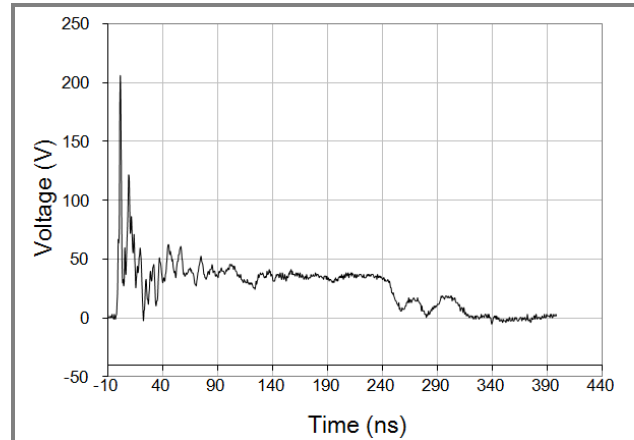
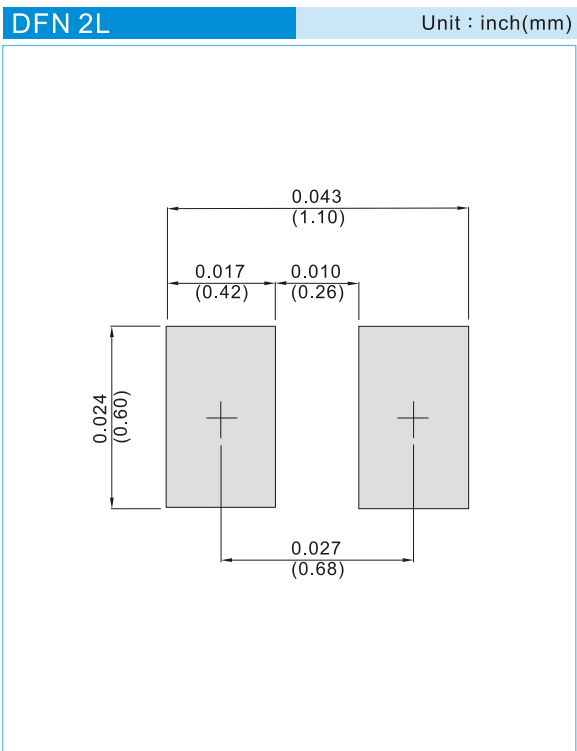


Fig.4 ESD Clamping (+8kV Contact per IEC61000-4-2)



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information  
T/R – 8K per 7" plastic Reel



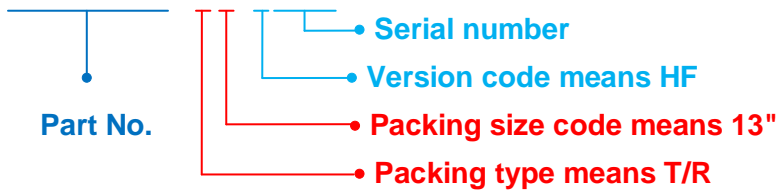
# PJE28VM2FN2

Part No\_packing code\_Version

PJE28VM2FN2\_R1\_00001

For example :

RB500V-40\_R2\_00001



| Packing Code <b>XX</b>               |                      |                                  |                      | Version Code <b>XXXXX</b> |                      |                                       |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type                         | 1 <sup>st</sup> Code | Packing size code                | 2 <sup>nd</sup> Code | HF or RoHS                | 1 <sup>st</sup> Code | 2 <sup>nd</sup> ~5 <sup>th</sup> 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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