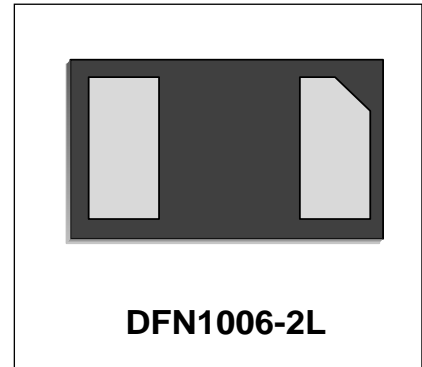


## Transient Voltage Suppressor

### Features

- Protects one I/O or Power Line
- Low Clamping Voltage
- Working Voltage: 5V
- Low Leakage Current



### IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD)  $\pm 30\text{kV}$  (air),  $\pm 30\text{kV}$  (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4A (8/20 $\mu\text{s}$ )

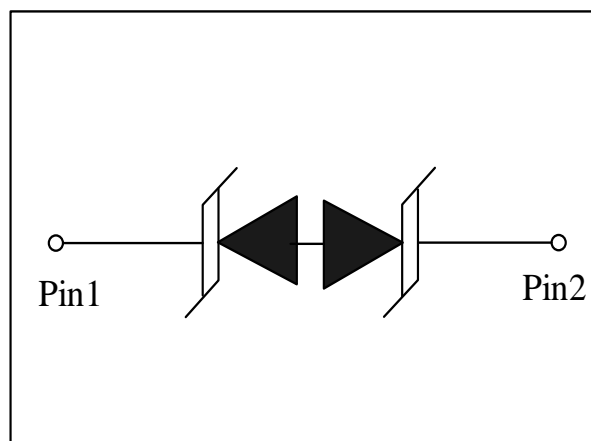
### Mechanical Characteristics

- DFN1006-2L package
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant & HF
- Device meets MSL1 requirement

### Applications

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras
- MP3 Players

### Schematic & PIN Configuration

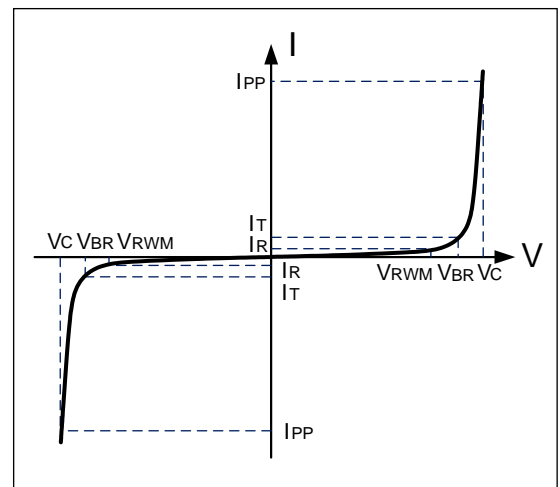


**Absolute Maximum Rating**

| Rating                                   | Symbol           | Value        | Units |
|--|------------------|--------------|-------|
| Peak Pulse Power ( $t_p = 8/20\mu s$ )   | P <sub>PP</sub>  | 60           | Watts |
| Peak Pulse Current ( $t_p = 8/20\mu s$ ) | I <sub>PP</sub>  | 4            | A     |
| Operating Temperature                    | T <sub>J</sub>   | -55 to + 125 | °C    |
| Storage Temperature                      | T <sub>STG</sub> | -55 to +150  | °C    |

**Electrical Parameters**

| Symbol           | Parameter                                  |
|------------------|--|
| I <sub>PP</sub>  | Reverse Peak Pulse Current                 |
| V <sub>C</sub>   | Clamping Voltage @ I <sub>PP</sub>         |
| V <sub>RWM</sub> | Reverse Stand-Off Voltage                  |
| I <sub>R</sub>   | Reverse Leakage Current @ V <sub>RWM</sub> |
| V <sub>BR</sub>  | Breakdown Voltage @ I <sub>T</sub>         |
| I <sub>T</sub>   | Test Current                               |



**Electrical Characteristics(T=25°C unless otherwise noted)**

| WE1169KF                          |                  |   |         |         |         |       |
|-----------------------------------|------------------|---|---------|---------|---------|-------|
| Parameter                         | Symbol           | Conditions  | Minimum | Typical | Maximum | Units |
| Reverse Stand-Off Voltage         | V <sub>RWM</sub> |   |         |         | 5       | V     |
| Reverse Breakdown Voltage         | V <sub>BR</sub>  | I <sub>T</sub> =1mA                                 | 6       |         |         | V     |
| Reverse Leakage Current           | I <sub>R</sub>   | V <sub>RWM</sub> =5V, T=25°C                        |         |         | 200     | nA    |
| Clamping Voltage                  | V <sub>C</sub>   | I <sub>PP</sub> =1A, t <sub>p</sub> =8/20μs         |         |         | 9.5     | V     |
| Clamping Voltage                  | V <sub>C</sub>   | I <sub>PP</sub> =4A, t <sub>p</sub> =8/20μs         |         |         | 15      | V     |
| ESD Clamping Voltage <sup>1</sup> | V <sub>C</sub>   | I <sub>PP</sub> = 4A<br>t <sub>p</sub> = 0.2/100ns  |         | 9.5     |         | V     |
| ESD Clamping Voltage <sup>1</sup> | V <sub>C</sub>   | I <sub>PP</sub> = 16A<br>t <sub>p</sub> = 0.2/100ns |         | 14.5    |         | V     |
| Dynamic Resistance <sup>1,2</sup> | R <sub>DYN</sub> | TLP=0.2/100ns                                       |         | 0.4     |         | Ω     |
| Junction Capacitance              | C <sub>j</sub>   | V <sub>R</sub> =0V, f =1MHz                         |         |         | 30      | pF    |

**Note:** 1、 TLP Setting : t<sub>p</sub>=100ns, t<sub>r</sub>=0.2ns, I<sub>TLP</sub> and V<sub>TLP</sub> sample window:t<sub>1</sub>=70ns to t<sub>2</sub>=90ns.

2、 Dynamic resistance calculated from I<sub>PP</sub>=4A to I<sub>PP</sub>=16A using “Best Fit”

Typical Characteristics

Figure 1: Peak Pulse Power Vs Pulse Time

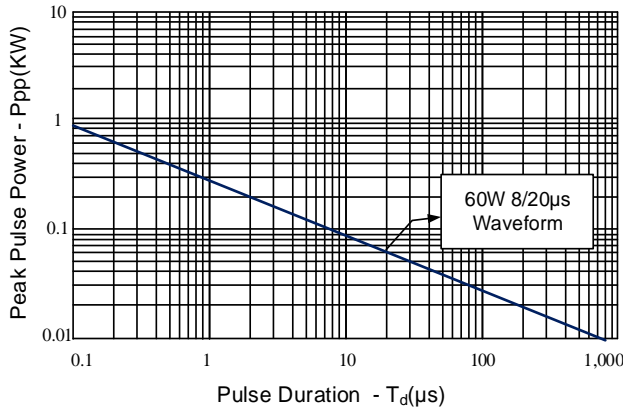


Figure 2: Power Derating Curve

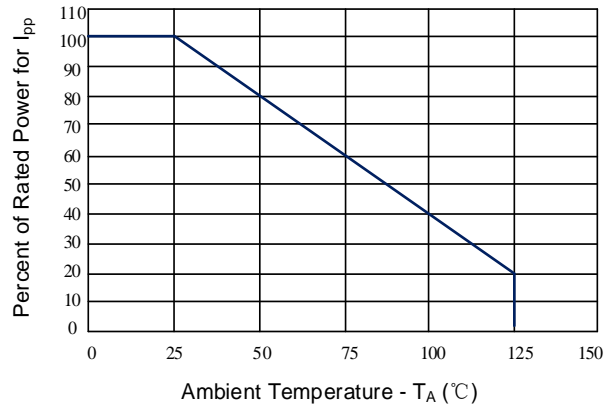


Figure 3: Clamping Voltage vs. Peak Pulse Current

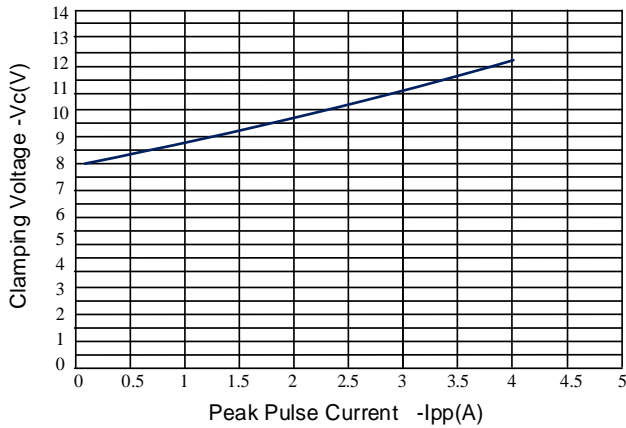


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

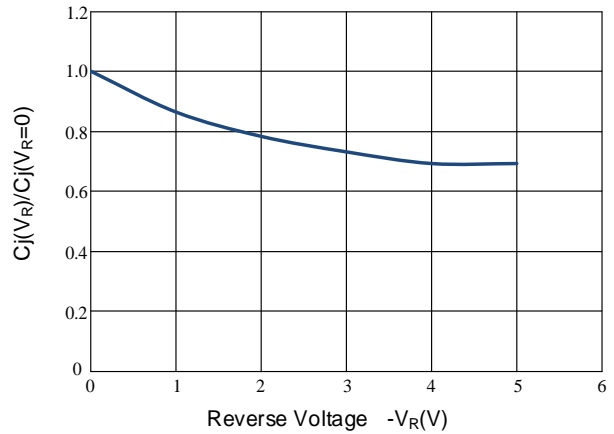


Figure 5: TLP Positive I-V Curve

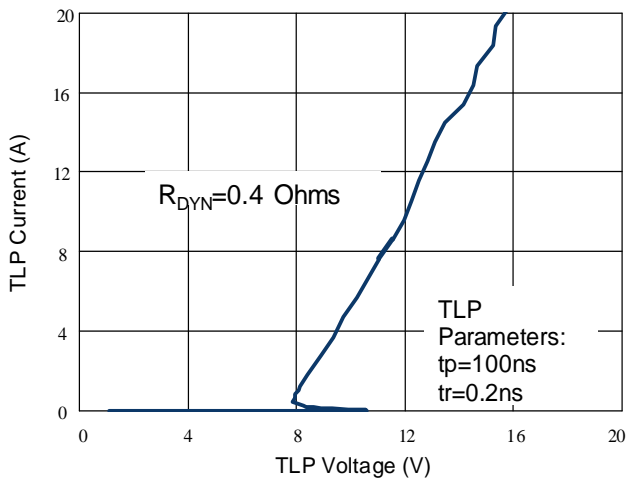
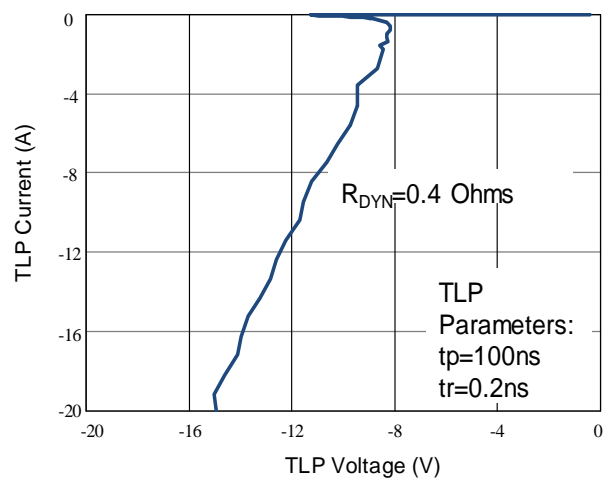
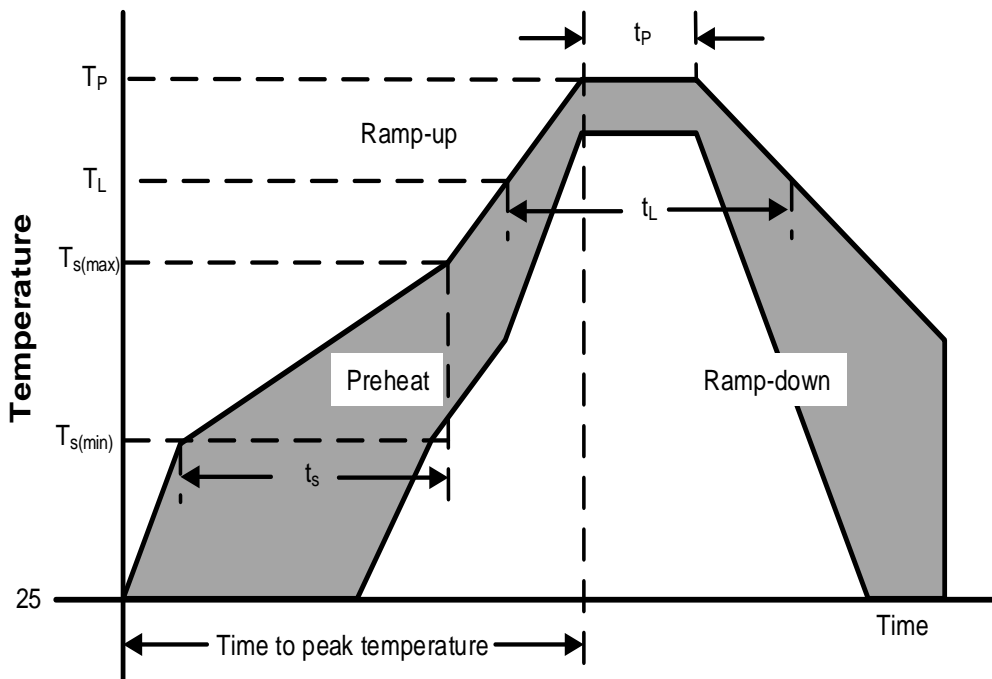


Figure 6: TLP Negative I-V Curve



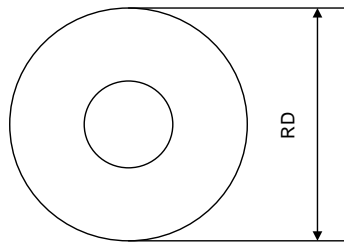
Soldering Parameters

| Reflow Condition                                       |                                  | Pb – Free assembly |
|--|----------------------------------|--------------------|
| Pre Heat   | Temperature Min ( $T_{s(min)}$ ) | 150°C              |
|  | Temperature Max ( $T_{s(max)}$ ) | 200°C              |
|  | Time (min to max) ( $t_s$ )      | 60 – 190 secs      |
| Average ramp up rate (Liquidus Temp) ( $T_L$ ) to peak |                                  | 5°C/second max     |
| $T_{s(max)}$ to $T_L$ —Ramp-up Rate                    |                                  | 5°C/second max     |
| Reflow   | Temperature ( $T_L$ ) (Liquidus) | 217°C              |
|  | Temperature ( $t_L$ )            | 60 – 150 seconds   |
| Peak Temperature ( $T_P$ )                             |                                  | 260+0/-5 °C        |
| Time within actual peak Temperature ( $t_p$ )          |                                  | 20 – 40 seconds    |
| Ramp-down Rate   |                                  | 5°C/second max     |
| Time 25°C to peak Temperature ( $T_P$ )                |                                  | 8 minutes Max.     |
| Do not exceed  |                                  | 280°C              |

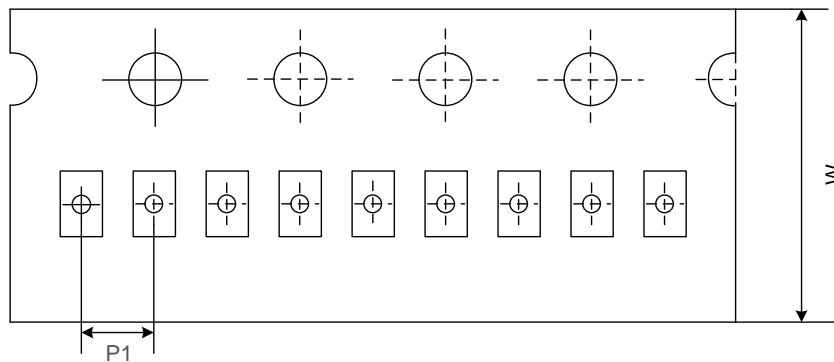


**Tape And Reel Information**

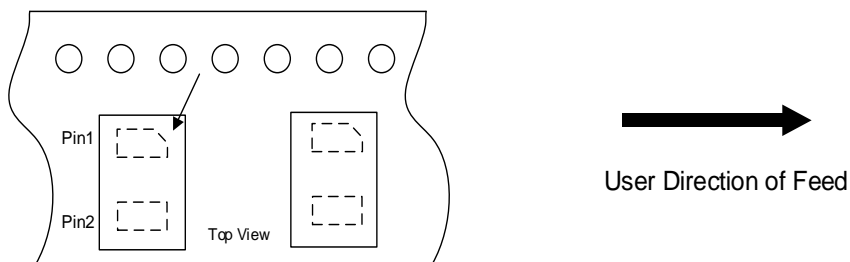
**Reel Dimensions**



**Tape Dimensions**



**Quadrant Assignments For PIN1 Orientation In Tape**



|    |   |        |
|----|---|--------|
| RD | Reel Dimensions                         | 7 inch |
| W  | Overall width of the carrier tape       | 8 mm   |
| P1 | Pitch between successive cavity centers | 2mm    |

Outline Drawing –DFN1006-2L

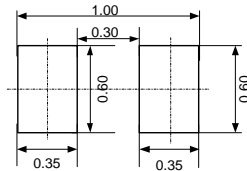
### PACKAGE OUTLINE

BOTTOM VIEW

DFN1006-2L

| SYMBOL | MILLIMETERS |      |
|--------|-------------|------|
|        | MIN         | MAX  |
| A      | 0.32        | 0.55 |
| b      | 0.45        | 0.55 |
| D      | 0.95        | 1.05 |
| e      | 0.65BSC     |      |
| E      | 0.55        | 0.65 |
| L      | 0.2         | 0.38 |
| L1     | 0           | 0.1  |

Land Pattern



Marking Codes

|              |  |
|--------------|--|
| Part Number  | WE1169KF   |
| Marking Code | <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <span style="margin-right: 10px;">1</span> <span style="font-size: 2em; font-weight: bold; letter-spacing: 0.5em;">P B</span> <span style="margin-left: 10px;">2</span> </div> |

Package Information

Qty: 10k/Reel

CONTACT INFORMATION

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 WAYON website: <http://www.way-on.com>  
 For additional information, please contact your local Sales Representative.

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Specifications are subject to change without notice.  
 The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
 Users should verify actual device performance in their specific applications.

单击下面可查看定价，库存，交付和生命周期等信息

[>>WAY-ON\(维安\)](#)