

UNDER DEVELOPMENT

**PHENITEC**  
**SEMICONDUCTOR**

**6ULC4P6V0**

**Ultra-Low Capacitance TVS**

### Features

- Ultra Low Capacitance 0.3pF(Bi-Direction Use)
- High ESD Protection Level IEC61000-4-2,Level 4(ESD) +/-15kV(Contact Air)
- Stand-off Voltage:5V
- For Bi-Directional TVS Use

### Applications

- High speed antenna applications

| Item             | Characteristics |
|------------------|-----------------|
| Wafer size       | 6inch           |
| Chip size        | 360 * 280 um    |
| Top metalization | Al-Si           |

### Maximum Ratings (Ta=25degC)(\*1)

| Symbol           | Parameter   | Value      | Units |
|------------------|---|------------|-------|
| T <sub>stg</sub> | Storage temperature Range   | -55 to+150 | Deg C |
| T <sub>j</sub>   | Maximum junction temperature  | -55 to+125 | Deg C |
| I <sub>pp</sub>  | Peak pulse current(t=8/20usec)  | 2          | A     |
| V <sub>pp</sub>  | Electrostatic discharge<br>IEC61000-4-2 Air Discharge<br>IEC61000-4-2 Contact Discharge | ±15        | kV    |

(\*1) All Rating values for reference on a SOT-23 package configuration (front: Au wire 35um, back: Au eutectic), mounted on PCB of 1.5cm by 2.5cm.

**Electrical Characteristics (Ta=25degC)**

## ■ Uni-Direction Use(\*1)

| Parameter                 | Symbol           | Min. | Typ. | Max. | Unit | Condition                       |
|---------------------------|------------------|------|------|------|------|---------------------------------|
| Reverse stand-off voltage | V <sub>RWM</sub> | -    | -    | 5.0  | V    |                                 |
| Leakage current           | I <sub>R</sub>   | -    | -    | 500  | nA   | V <sub>RWM</sub> = 5.0V         |
| Breakdown voltage         | V <sub>BR</sub>  | 6.0  | -    | 9.0  | V    | I <sub>R</sub> = 1mA            |
| Clamping voltage          | V <sub>c</sub>   |      | 10.2 | 12.0 | V    | I <sub>pp</sub> =1A , tp=8/20us |
| Capacitance               | C                | -    | 0.5  | 0.8  | pF   | V <sub>R</sub> = 0V, f = 1MHz   |

## ■ Bi-Direction Use(\*1)

| Parameter                 | Symbol           | Min. | Typ. | Max. | Unit | Condition                       |
|---------------------------|------------------|------|------|------|------|---------------------------------|
| Reverse stand-off voltage | V <sub>RWM</sub> | -    | -    | 5.0  | V    |                                 |
| Leakage current           | I <sub>R</sub>   | -    | 0.9  | -    | nA   | V <sub>RWM</sub> = 5.0V         |
| Breakdown voltage         | V <sub>BR</sub>  | -    | 8.6  | -    | V    | I <sub>R</sub> = 1mA            |
| Clamping voltage          | V <sub>c</sub>   |      | 12.3 |      | V    | I <sub>pp</sub> =1A , tp=8/20us |
| Capacitance               | C                | -    | 0.3  | 0.5  | pF   | V <sub>R</sub> = 0V, f = 1MHz   |

\*1 All values for reference on a SOT-23 package configuration  
(front: Au wire 35um, back: Au eutectic)

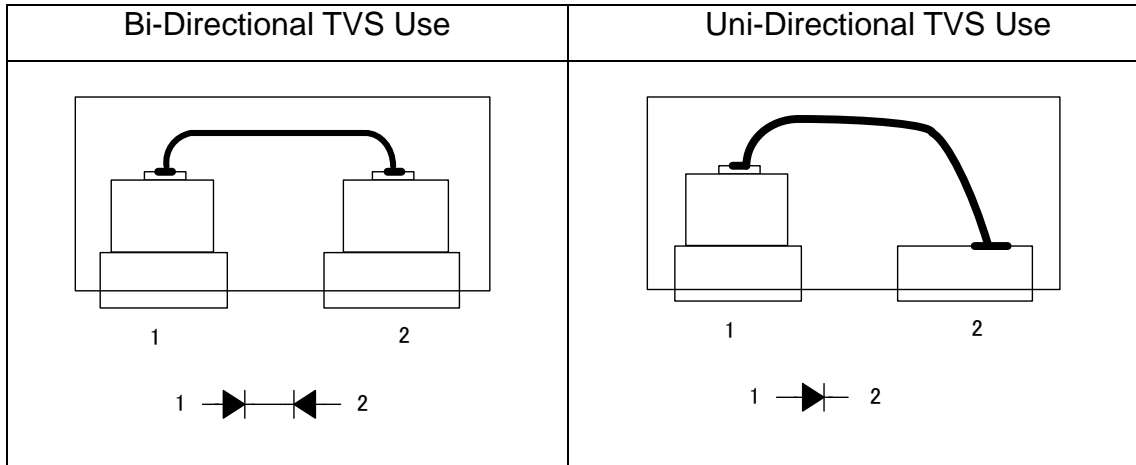
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**Note**

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1. Assembly

Example: DFN1006



Example: SOT-23

