

# 300W Transient Voltage Suppressor

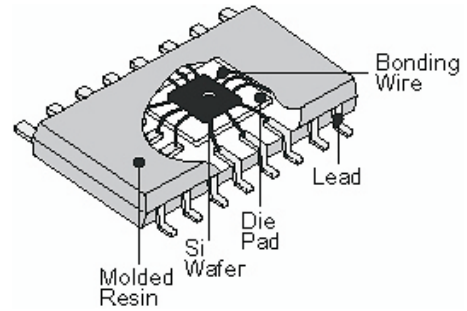
## CT Series -G RoHS Device

### Features

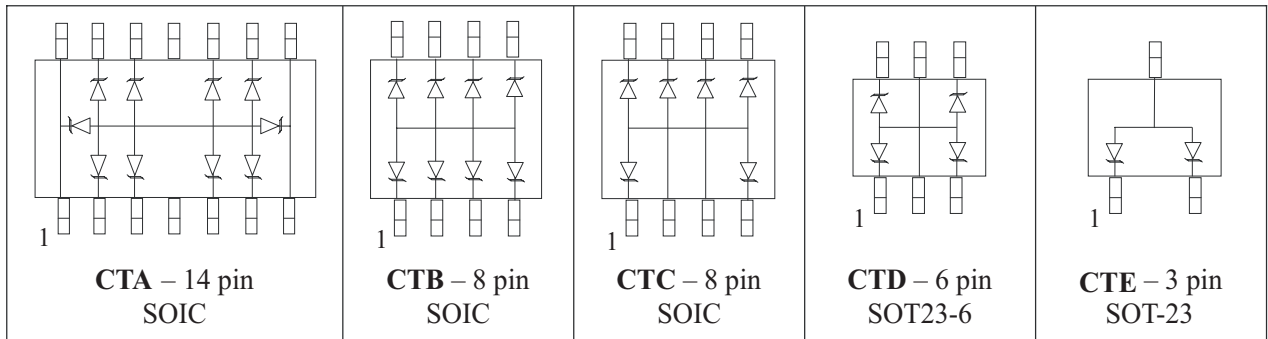
- (16kV) IEC 61000-4-2 rating.
- 8/20  $\mu$ S transient rated.
- Six working voltages (3.3, 5, 12, 24).

### Applications

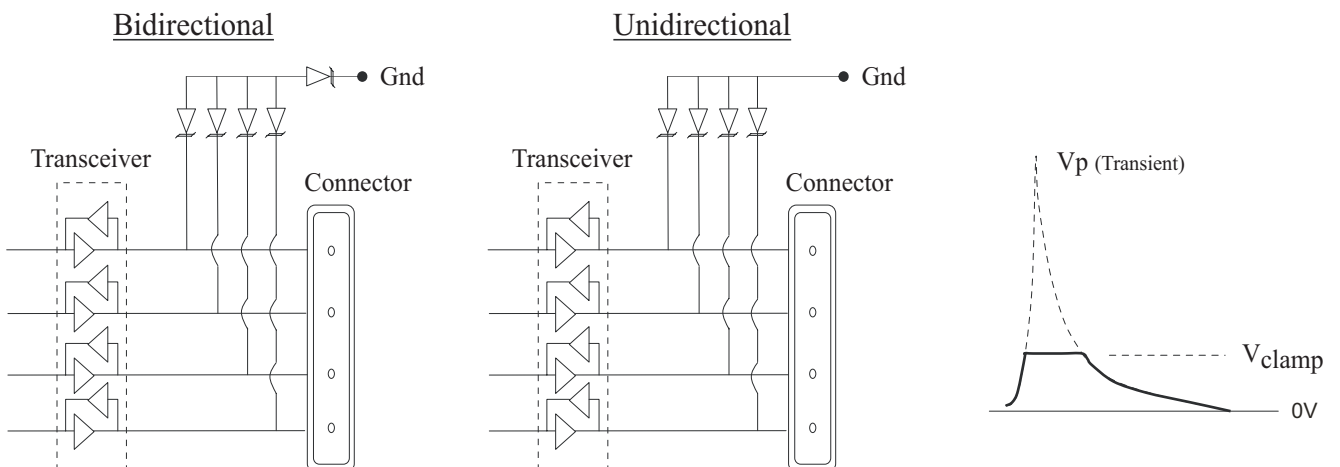
- Transient / ESD suppression.
- LAN/WAN.
- Peripherals.
- Set-Top Boxes.



### Circuit Schematic



### Application Schematic



# 300W Transient Voltage Suppressor

## Maximum Ratings and Electrical Characteristics

Specifications: (Ta=25°C)

| Rating                    | Symbol          | Value          | Units |
|---------------------------|-----------------|----------------|-------|
| Peak pulse power (8/20μS) | P <sub>PK</sub> | 300            | Watts |
| Operating Temp. range     | T <sub>J</sub>  | -55 to +125 °C | °C    |
| Soldering temperature     | T <sub>L</sub>  | 260 (10sec)    | °C    |

### 3.3V Volt Characteristics (3V3)

| Symbol          | Characteristics           | Min | Max | Units | Test Conditions        |
|-----------------|---------------------------|-----|-----|-------|------------------------|
| V <sub>BD</sub> | Reverse breakdown voltage | 4.0 |     | V     | I <sub>F</sub> =1mA    |
| I <sub>L</sub>  | Reverse leakage current   |     | 50  | μA    | @V <sub>BD</sub> =3.3V |
| C <sub>T</sub>  | Capacitance               |     | 350 | pF    | @1MHz                  |
| V <sub>C</sub>  | Channel clamp voltage     |     | 8   | V     | 8/20μS, 1A             |
| I <sub>PP</sub> | Peak pulse current        |     | 17  | A     | 8/20μS                 |

### 5V Volt Characteristics (5V0)

| Symbol          | Characteristics           | Min | Max | Units | Test Conditions      |
|-----------------|---------------------------|-----|-----|-------|----------------------|
| V <sub>BD</sub> | Reverse breakdown voltage | 6.0 |     | V     | I <sub>F</sub> =1mA  |
| I <sub>L</sub>  | Reverse leakage current   |     | 10  | μA    | @V <sub>BD</sub> =5V |
| C <sub>T</sub>  | Capacitance               |     | 350 | pF    | @1MHz                |
| V <sub>C</sub>  | Channel clamp voltage     |     | 10  | V     | 8/20μS, 1A           |
| I <sub>PP</sub> | Peak pulse current        |     | 17  | A     | 8/20 μ S             |

### 12V Volt Characteristics (12V)

| Symbol          | Characteristics           | Min  | Max | Units | Test Conditions       |
|-----------------|---------------------------|------|-----|-------|-----------------------|
| V <sub>BD</sub> | Reverse breakdown voltage | 13.3 |     | V     | I <sub>F</sub> =1mA   |
| I <sub>L</sub>  | Reverse leakage current   |      | 1   | μA    | @V <sub>BD</sub> =12V |
| C <sub>T</sub>  | Capacitance               |      | 120 | pF    | @1MHz                 |
| V <sub>C</sub>  | Channel clamp voltage     |      | 20  | V     | 8/20μS, 1A            |
| I <sub>PP</sub> | Peak pulse current        |      | 12  | A     | 8/20 μ S              |

### 24V Volt Characteristics (24V)

| Symbol          | Characteristics           | Min  | Max | Units | Test Conditions       |
|-----------------|---------------------------|------|-----|-------|-----------------------|
| V <sub>BD</sub> | Reverse breakdown voltage | 26.7 |     | V     | I <sub>F</sub> =1mA   |
| I <sub>L</sub>  | Reverse leakage current   |      | 1   | μA    | @V <sub>BD</sub> =24V |
| C <sub>T</sub>  | Capacitance               |      | 50  | pF    | @1MHz                 |
| V <sub>C</sub>  | Channel clamp voltage     |      | 43  | V     | 8/20μS, 1A            |
| I <sub>PP</sub> | Peak pulse current        |      | 5   | A     | 8/20 μ S              |

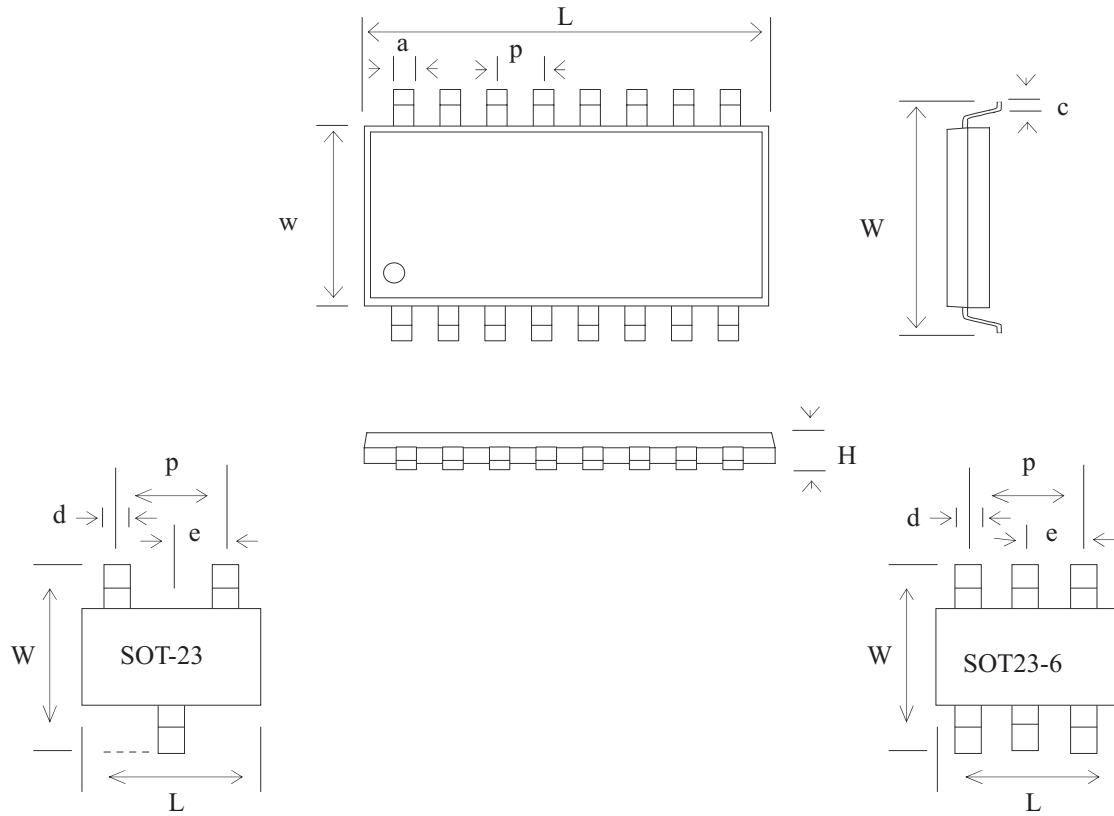
### Ordering Information:

|             |                     |                |                       |
|-------------|---------------------|----------------|-----------------------|
| <b>CTA</b>  | <b>N14</b>          | <b>24V</b>     | <b>-G</b>             |
| <b>Type</b> | <b>Package Code</b> | <b>Voltage</b> | <b>RoHS compliant</b> |
| CTA         | From table below    | 3V3            |                       |
| CTB         |                     | 5V0            |                       |
| CTC         |                     | 12V            |                       |
| CTD         |                     | 24V            |                       |
| CTE         |                     |                |                       |

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## Package Information:

Dimensions in ( mm )



| Package Code | Package Power | Number of Pins | L ± 0.2 | W ± 0.2 | w ± 0.2 | p ± 0.2 | e ± 0.1 | A ± 0.1 | d ± 0.1 | H ± 0.2 |
|--------------|---------------|----------------|---------|---------|---------|---------|---------|---------|---------|---------|
| N08          | 0.4W          | 8              | 4.83    | 5.99    | 3.81    | 1.60    | 1.27    | 0.41    | 0.66    | 0.95    |
| N14          | 0.6W          | 14             | 8.66    | 5.99    | 3.81    | 1.60    | 1.27    | 0.41    | 0.66    | 0.95    |
| S03          | 0.225W        | 3              | 2.92    | 2.30    | 0.95    | 1.91    | 0.95    | 0.53    | 0.43    | 0.95    |
| S06          | 0.225W        | 6              | 2.92    | 2.80    | 1.20    | 1.91    | 0.95    | 0.53    | 0.43    | 0.95    |