

# 300 Watt Transient Voltage Suppressor

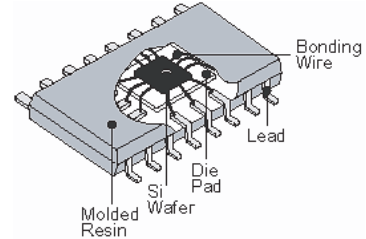
**COMCHIP**  
SMD DIODE SPECIALIST



## CT Series -G (RoHS Device)

### Features

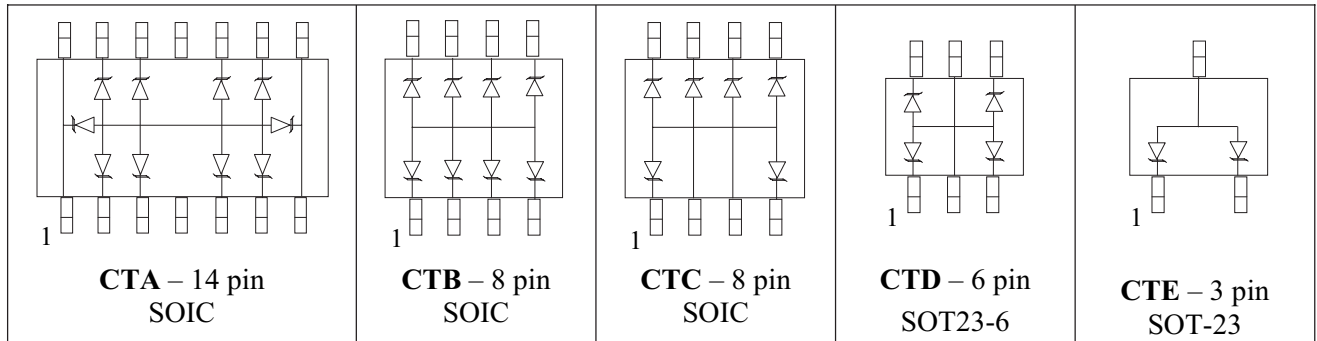
- (16kV) IEC 61000-4-2 rating
- 8/20 us transient rated
- Five working voltages (5, 12, 15, 24, 36)



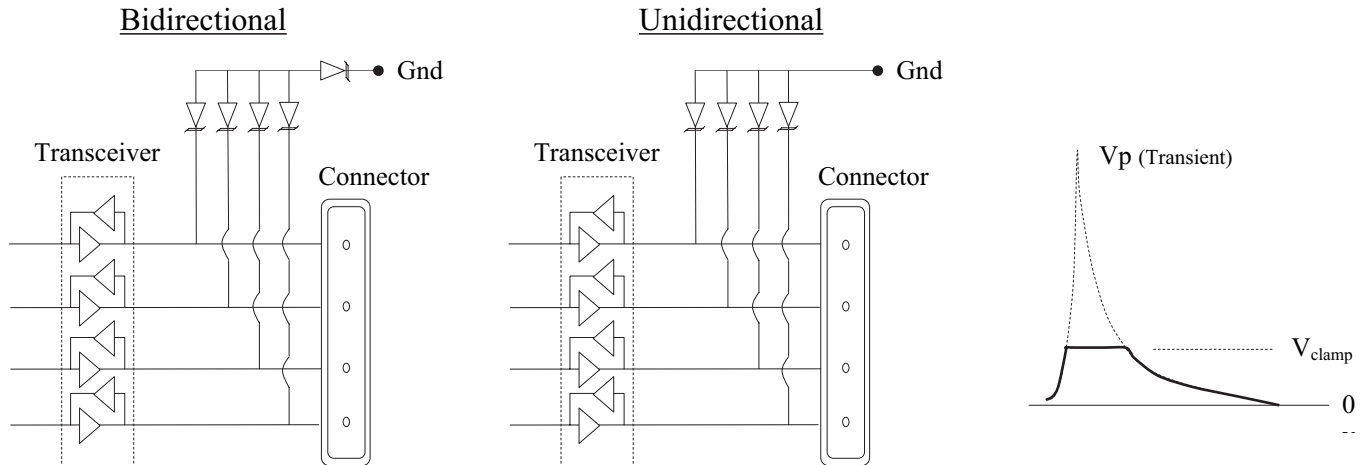
### Applications

- Transient / ESD Suppression
- LAN/WAN
- Peripherals
- Set-Top Boxes

### Circuit Schematic



### Application Schematic



# 300 Watt Transient Voltage Suppressor



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

**Specifications:** ( Ta = 25°C )

Rating	Symbol	Value	Units
Peak Pulse Power (8/20 us)	P <sub>PK</sub>	300	Watts
Operating Temp. Range	T <sub>J</sub>	-55 to +125	°C
Soldering Temperature	T <sub>L</sub>	260 (10 sec.)	°C

### 5V Volt Characteristics (5V0)

Symbol	Characteristic	Min	Typ	Max	Units	Test Condition
V <sub>BD</sub>	Reverse breakdown voltage	6.0			V	I <sub>F</sub> = 1 ma
I <sub>L</sub>	Reverse leakage current			10	uA	@ V <sub>BD</sub> = 5v
C <sub>T</sub>	Capacitance			350	pF	@ 1Mhz
V <sub>C</sub>	Channel clamp voltage			10	V	8 / 20us, 1 Amp
I <sub>PP</sub>	Peak pulse current			17	Amps	8 / 20 us

### 12 Volt Characteristics (12V)

Symbol	Characteristic	Min	Typ	Max	Units	Test Condition
V <sub>BD</sub>	Reverse breakdown voltage	13.3			V	I <sub>F</sub> = 1 ma
I <sub>L</sub>	Reverse leakage current			1	uA	@ V <sub>BD</sub> = 12v
C <sub>T</sub>	Capacitance			120	pF	@ 1Mhz
V <sub>C</sub>	Channel clamp voltage			20	V	8 / 20us, 1 Amp
I <sub>PP</sub>	Peak pulse current			12	Amps	8 / 20 us

### 15 Volt Characteristics (15V)

Symbol	Characteristic	Min	Typ	Max	Units	Test Condition
V <sub>BD</sub>	Reverse breakdown voltage	16.7			V	I <sub>F</sub> = 1 ma
I <sub>L</sub>	Reverse leakage current			1	uA	@ V <sub>BD</sub> = 15v
C <sub>T</sub>	Capacitance			75	pF	@ 1Mhz
V <sub>C</sub>	Channel clamp voltage			24	V	8 / 20us, 1 Amp
I <sub>PP</sub>	Peak pulse current			10	Amps	8 / 20 us

### 24 Volt Characteristics (24V)

Symbol	Characteristic	Min	Typ	Max	Units	Test Condition
V <sub>BD</sub>	Reverse breakdown voltage	26.7			V	I <sub>F</sub> = 1 ma
I <sub>L</sub>	Reverse leakage current			1	uA	@ V <sub>BD</sub> = 24v
C <sub>T</sub>	Capacitance			50	pF	@ 1Mhz
V <sub>C</sub>	Channel clamp voltage			43	V	8 / 20us, 1 Amp
I <sub>PP</sub>	Peak pulse current			5	Amps	8 / 20 us

### 36 Volt Characteristics (24V)

Symbol	Characteristic	Min	Typ	Max	Units	Test Condition
V <sub>BD</sub>	Reverse breakdown voltage	37			V	I <sub>F</sub> = 1 ma
I <sub>L</sub>	Reverse leakage current			1	uA	@ V <sub>BD</sub> = 36v
C <sub>T</sub>	Capacitance			40	pF	@ 1Mhz
V <sub>C</sub>	Channel clamp voltage			40	V	8 / 20us, 1 Amp
I <sub>PP</sub>	Peak pulse current			3	Amps	8 / 20 us

### Ordering Information:

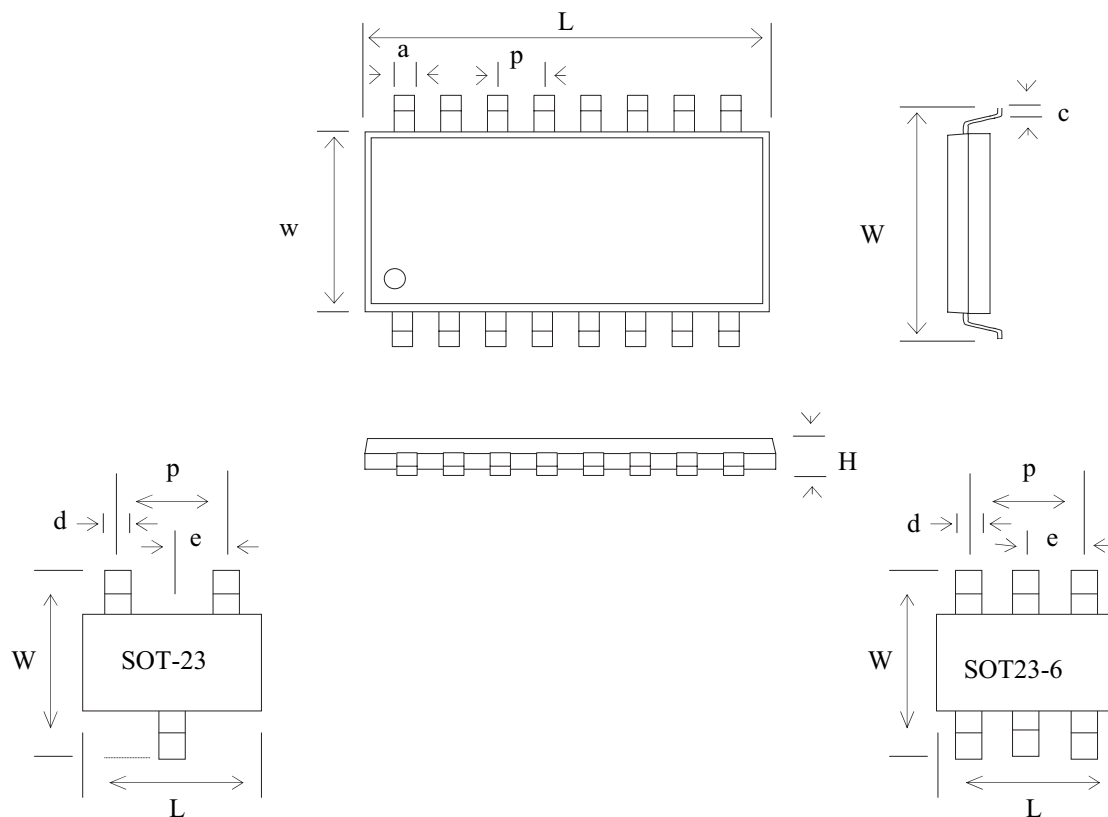
CTA	N14	24V	-G
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Type	Package Code	Voltage	RoHS compliant
CTA	From table below	5V0, 12V	
CTB		15V, 24V, 36V	
CTC			
CTD			
CTE			

# 300 Watt Transient Voltage Suppressor

**Package Information:**

Dimensions in ( mm )



Package Code	Package Power	Number of Pins	$L \pm 0.2$	$W \pm 0.2$	$w \pm 0.2$	$p \pm 0.2$	$e \pm 0.1$	$A \pm 0.1$	$d \pm 0.1$	$H \pm 0.2$
N08	0.4 w	08	4.83	5.99	3.81	1.60	1.27	0.41	0.66	0.95
N14	0.6 w	14	8.66	5.99	3.81	1.60	1.27	0.41	0.66	0.95
S03	0.225 w	3	2.92	2.30	0.95	1.91	0.95	0.53	0.43	0.95
S06	0.225 w	6	2.92	2.80	1.20	1.91	0.95	0.53	0.43	0.95