

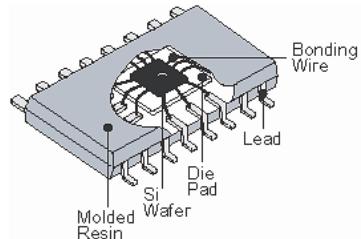
300 Watt Transient Voltage Suppressor

COMCHIP
SMD DIODE SPECIALIST

CT Series -G (RoHS Device)

Features

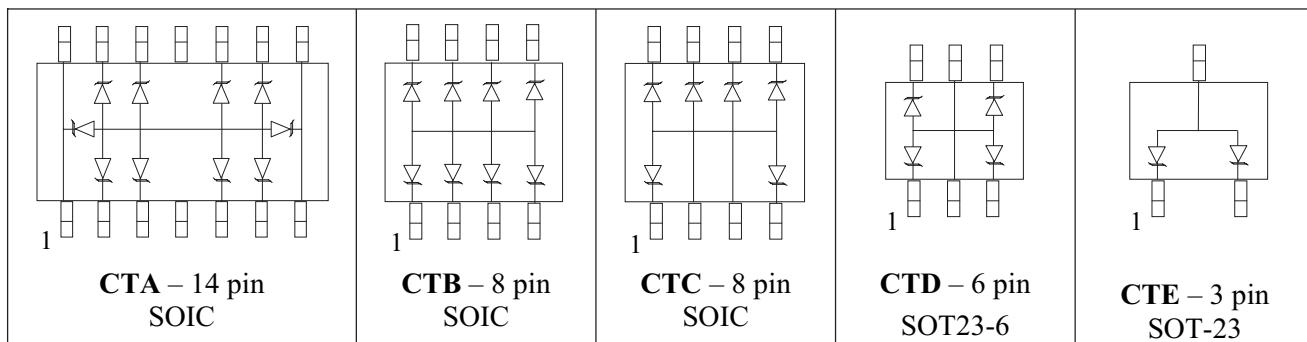
- (16kV) IEC 61000-4-2 rating
- 8/20 us transient rated
- Five working voltages (5, 12, 15, 24, 36)



Applications

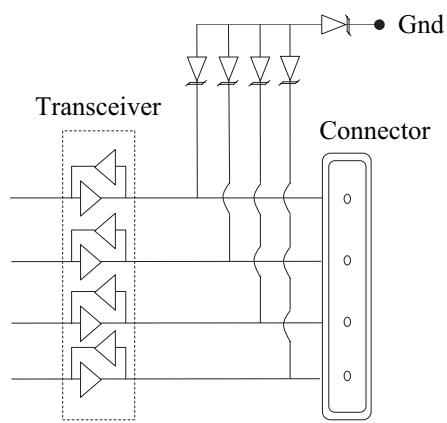
- Transient / ESD Suppression
- LAN/WAN
- Peripherals
- Set-Top Boxes

Circuit Schematic

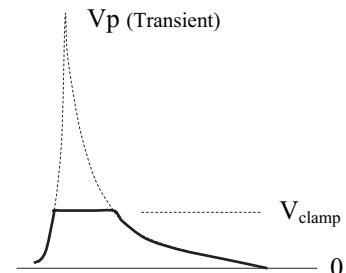
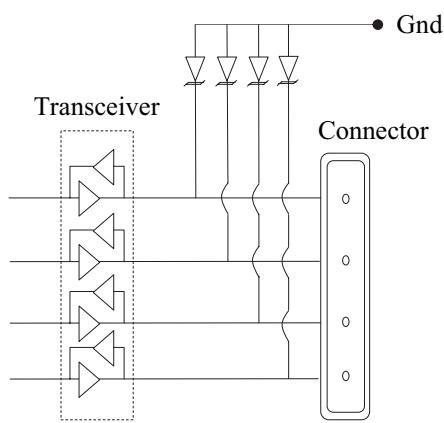


Application Schematic

Bidirectional



Unidirectional



300 Watt Transient Voltage Suppressor

COMCHIP
SMD DIODE SPECIALIST

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Specifications: (Ta = 25°C)

| Rating | Symbol | Value | Units |
|----------------------------|-----------------|---------------|-------|
| Peak Pulse Power (8/20 us) | P _{PK} | 300 | Watts |
| Operating Temp. Range | T _J | -55 to +125 | °C |
| Soldering Temperature | T _L | 260 (10 sec.) | °C |

5V Volt Characteristics (5V0)

| Symbol | Characteristic | Min | Typ | Max | Units | Test Condition |
|-----------------|---------------------------|-----|-----|-----|-------|------------------------|
| V _{BD} | Reverse breakdown voltage | 6.0 | | | V | I _F = 1 ma |
| I _L | Reverse leakage current | | | 10 | uA | @ V _{BD} = 5v |
| C _T | Capacitance | | | 350 | pF | @ 1Mhz |
| V _C | Channel clamp voltage | | | 10 | V | 8 / 20us, 1 Amp |
| I _{PP} | Peak pulse current | | | 17 | Amps | 8 / 20 us |

12 Volt Characteristics (12V)

| Symbol | Characteristic | Min | Typ | Max | Units | Test Condition |
|-----------------|---------------------------|------|-----|-----|-------|-------------------------|
| V _{BD} | Reverse breakdown voltage | 13.3 | | | V | I _F = 1 ma |
| I _L | Reverse leakage current | | | 1 | uA | @ V _{BD} = 12v |
| C _T | Capacitance | | | 120 | pF | @ 1Mhz |
| V _C | Channel clamp voltage | | | 20 | V | 8 / 20us, 1 Amp |
| I _{PP} | Peak pulse current | | | 12 | Amps | 8 / 20 us |

15 Volt Characteristics (15V)

| Symbol | Characteristic | Min | Typ | Max | Units | Test Condition |
|-----------------|---------------------------|------|-----|-----|-------|-------------------------|
| V _{BD} | Reverse breakdown voltage | 16.7 | | | V | I _F = 1 ma |
| I _L | Reverse leakage current | | | 1 | uA | @ V _{BD} = 15v |
| C _T | Capacitance | | | 75 | pF | @ 1Mhz |
| V _C | Channel clamp voltage | | | 24 | V | 8 / 20us, 1 Amp |
| I _{PP} | Peak pulse current | | | 10 | Amps | 8 / 20 us |

24 Volt Characteristics (24V)

| Symbol | Characteristic | Min | Typ | Max | Units | Test Condition |
|-----------------|---------------------------|------|-----|-----|-------|-------------------------|
| V _{BD} | Reverse breakdown voltage | 26.7 | | | V | I _F = 1 ma |
| I _L | Reverse leakage current | | | 1 | uA | @ V _{BD} = 24v |
| C _T | Capacitance | | | 50 | pF | @ 1Mhz |
| V _C | Channel clamp voltage | | | 43 | V | 8 / 20us, 1 Amp |
| I _{PP} | Peak pulse current | | | 5 | Amps | 8 / 20 us |

36 Volt Characteristics (24V)

| Symbol | Characteristic | Min | Typ | Max | Units | Test Condition |
|-----------------|---------------------------|-----|-----|-----|-------|-------------------------|
| V _{BD} | Reverse breakdown voltage | 37 | | | V | I _F = 1 ma |
| I _L | Reverse leakage current | | | 1 | uA | @ V _{BD} = 36v |
| C _T | Capacitance | | | 40 | pF | @ 1Mhz |
| V _C | Channel clamp voltage | | | 40 | V | 8 / 20us, 1 Amp |
| I _{PP} | Peak pulse current | | | 3 | Amps | 8 / 20 us |

Ordering Information:

CTA

N14

24V

-G

Type Package Code

CTA From table below

Voltage

5V0, 12V

RoHS compliant

CTB

15V, 24V, 36V

CTC

CTD

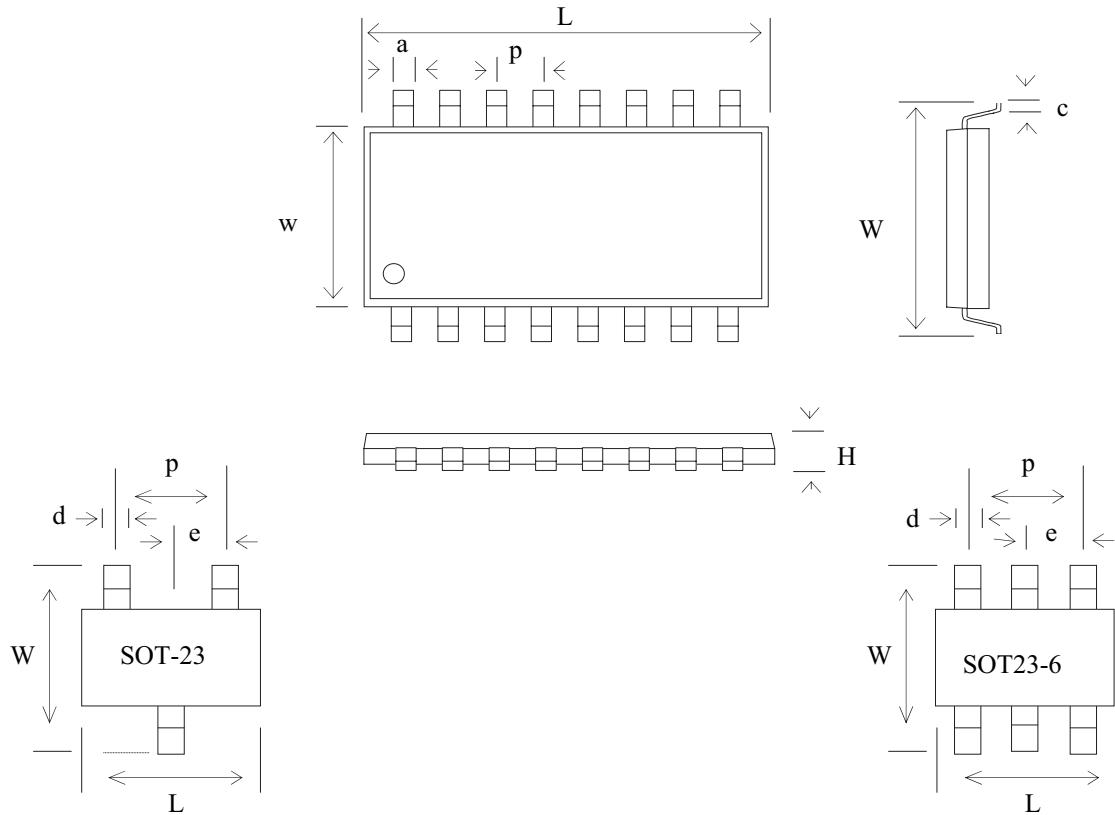
CTE

300 Watt Transient Voltage Suppressor

COMCHIP
SMD DIODE SPECIALIST

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 |