

300 Watt Transient Voltage Suppressor

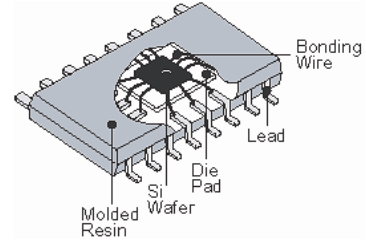
COMCHIP
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CT Series -G (RoHS Device)

Features

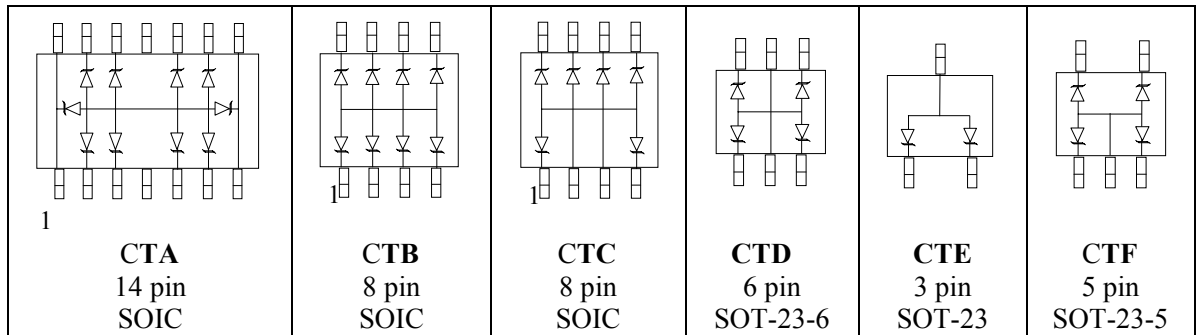
- (16kV) IEC 61000-4-2 rating
- 8/20 us transient rated
- Six working voltages (3.3, 5, 12, 15, 24, 36)



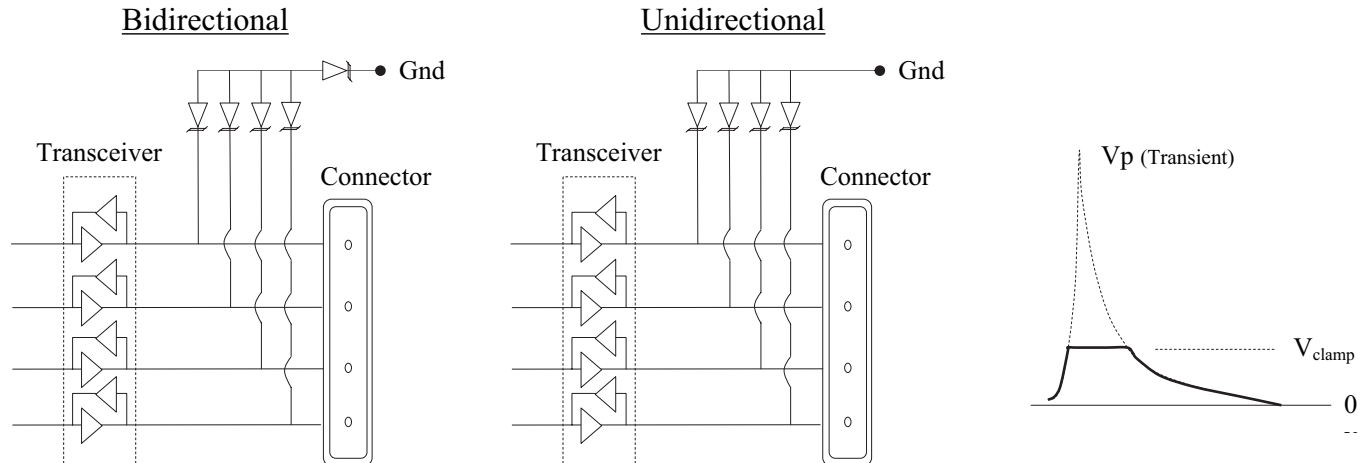
Applications

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

Circuit Schematic



Application Schematic



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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

3.3V Volt Characteristics (3V3)

Symbol	Characteristic	Min	Max	Units	Test Condition
V _{BD}	Reverse breakdown voltage	4.0		V	I _F = 1 ma
I _L	Reverse leakage current		50	uA	@ V _{BD} = 3.3v
C _T	Capacitance		350	pF	@ 1Mhz
V _C	Channel clamp voltage		8	V	8 / 20us, 1 Amp
I _{PP}	Peak pulse current		17	Amps	8 / 20 us

5V Volt Characteristics (5V0)

Symbol	Characteristic	Min	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	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	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	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 (36V)

Symbol	Characteristic	Min	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

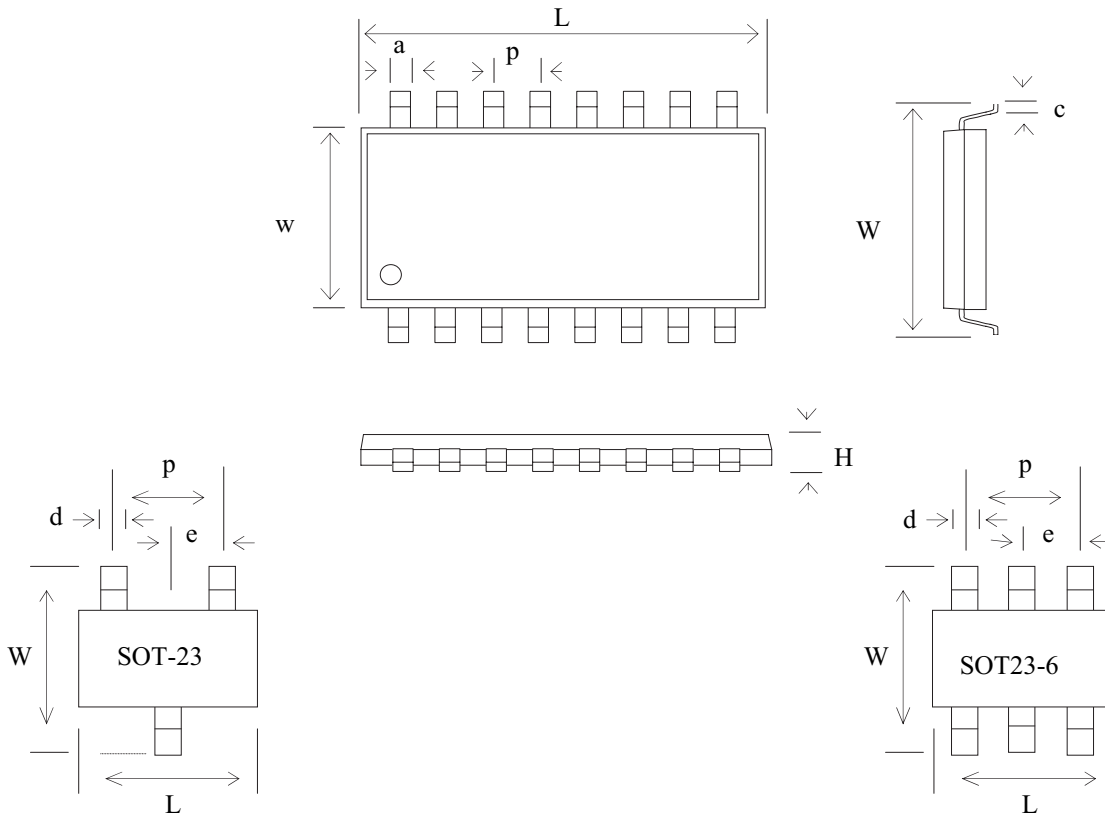
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Ordering Information:

CTA	N14	24V	-G
Type	Package Code	Voltage	RoHS compliant
CTA	From table below	3V3, 5V0, 12V	
CTB		15V, 24V, 36V	
CTC			
CTD			
CTE			
CTF			

Package Information:

Dimensions in (mm)



Package Code	Package Power	Number of Pins	L ± 0.2	W ± 0.2	w ± 0.2	p ± 0.2	± 0.1	A ± 0.1	± 0.1	-
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
S05 / S06	0.225 w	6	2.92	2.80	1.20	1.91	0.95	0.53	0.43	0.95