



**THE DATASHEET OF  
CTES0312V-G**



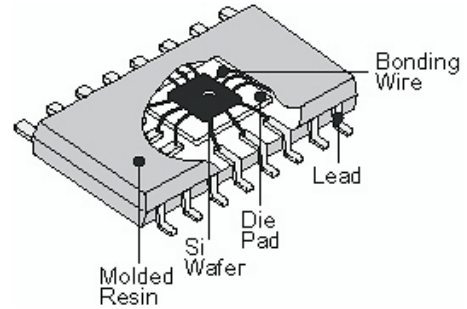
## CT Series -G RoHS Device

### Features

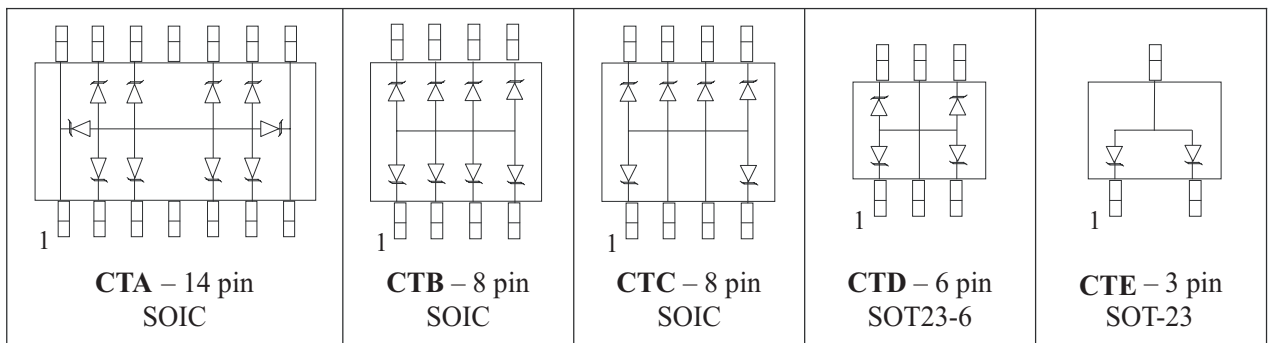
- (16kV) IEC 61000-4-2 rating.
- 8/20  $\mu$ S transient rated.
- Six working voltages (3.3, 5, 12, 24).

### Applications

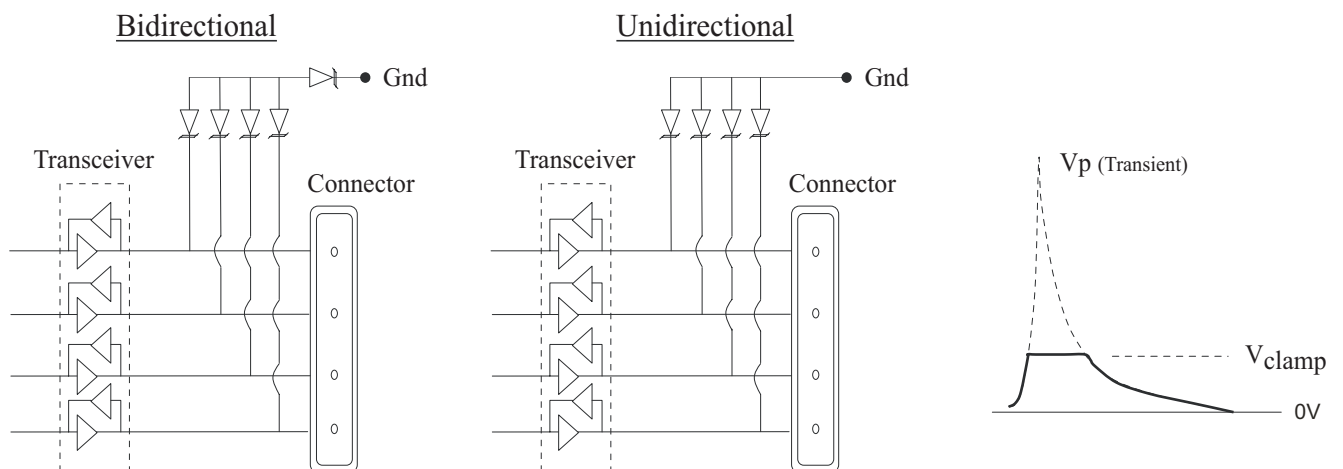
- Transient / ESD suppression.
- LAN/WAN.
- Peripherals.
- Set-Top Boxes.



### Circuit Schematic



### Application Schematic



## 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)

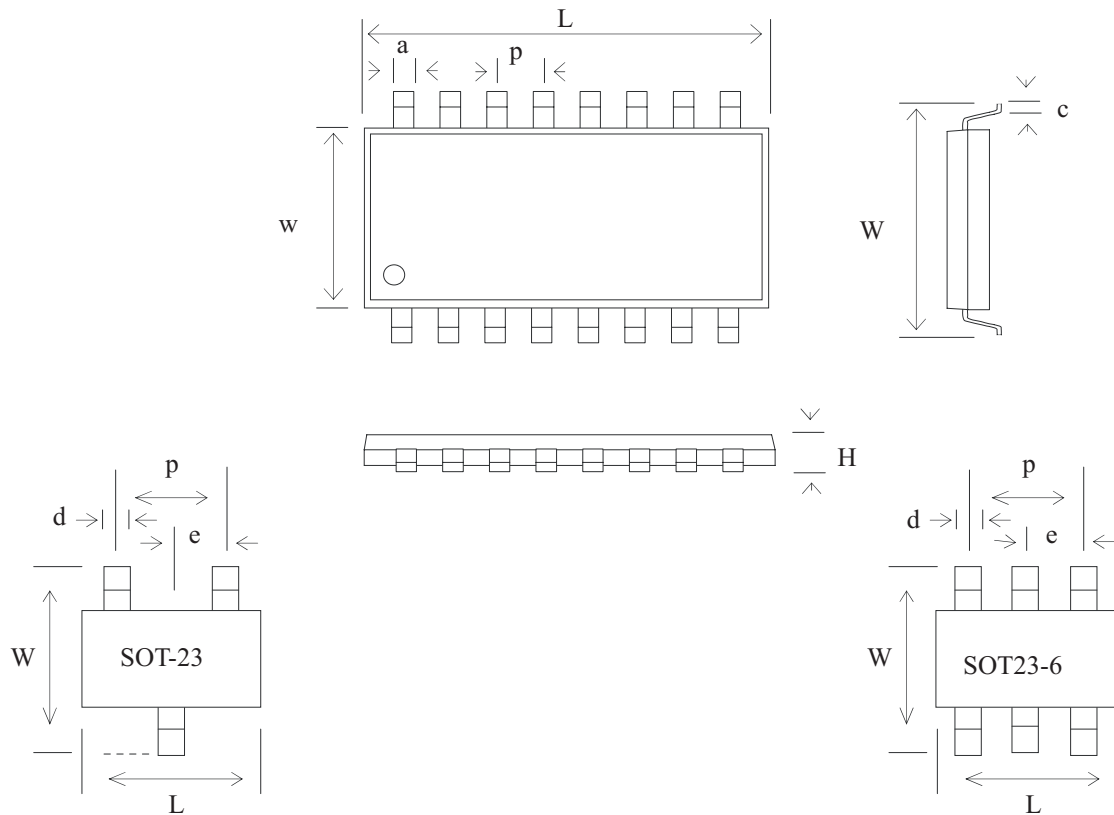
Symbol	Characteristics	Min	Max	Units	Test Conditions
V <sub>BD</sub>	Reverse breakdown voltage	26.7		V	I <sub>F</sub> =1mA
I <sub>L</sub>	Reverse leakage current		1	µA	@V <sub>BD</sub> =24V
C <sub>T</sub>	Capacitance		50	pF	@1MHz
V <sub>C</sub>	Channel clamp voltage		43	V	8/20µS, 1A
I <sub>PP</sub>	Peak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

## 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

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