

Current Sense Transformers

High Frequency

:: CST206/306 Description

Designed for switching power supply applications, Triad current sense transformers are used to detect the current passing through a conductor.

These transformers are very reliable and operate effectively over the frequency range of 20 kHz-200 kHz. They are constructed of UL rated 130°C materials. Both models are available with a center tap option.

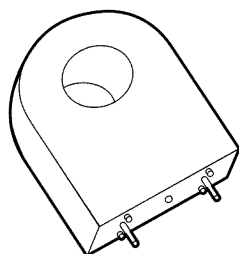


Figure A

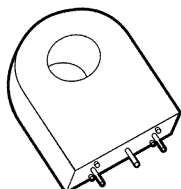


Figure B

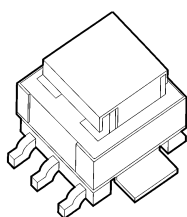
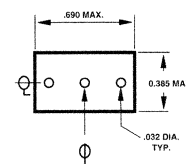
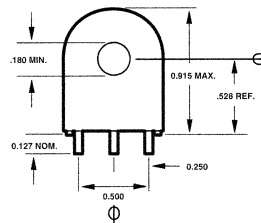
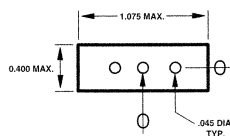
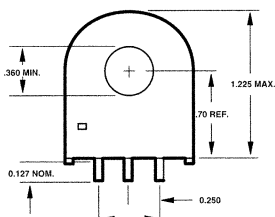
Section/ Figure	Type No.	ET VpSEC REF 20 kHz	Turns Count	Min. Ind. mH	DCR Max. Ohms	Pri. Amps
A	CST206-1A	2000	100	14.0	.580	110.0 RMS
B	CST206-1T	2000	100 CT	14.0	.580	110.0 RMS
A	CST206-2A	4000	200	56.0	3.500	80.0 RMS
B	CST206-2T	4000	200 CT	56.0	3.500	80.0 RMS
A	CST206-3A	6000	300	130.0	12.400	70.0 RMS
B	CST206-3T	6000	300 CT	130.0	12.400	70.0 RMS
B	CST306-1A	500	50	3.5	.340	35.0 RMS
A	CST306-1T	500	50 CT	3.5	.580	35.0 RMS
B	CST306-2A	1000	100	14.0	1.550	25.0 RMS
A	CST306-2T	1000	100 CT	14.0	1.550	25.0 RMS
B	CST306-3A	2000	200	55.0	3.750	25.0 RMS
A	CST306-3T	2000	200 CT	55.0	3.750	25.0 RMS

:: Outline Dimensions

Technical Notes

1. Derate ET product by 32% for 50 kHz, 52% for 100 Hz and 50% for unidirectional operation.
2. Rated primary current renders approximately 40°C temperature rise.

3. CST206 models have maximum recommended terminating resistance of 1 ohm per turn.
4. Primary is inserted through hole in casing.
5. 3 pin or center tapped (CT) models are designed with a T suffix.



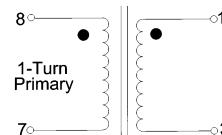
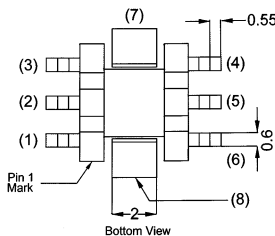
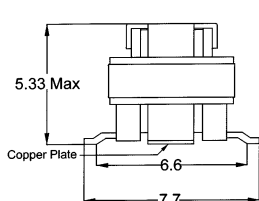
:: CSE5 Description

Designed to monitor current at 250 kHz and above. These transformers have a primary current rating of 10 Amps.

Part No.	Turns N1:N2 @ 10kHz	Secondary Inductance µH Min.	Secondary DCR mΩ Max
CSE5-100201	1:20	80	550
CSE5-100301	1:30	180	870
CSE5-100401	1:40	320	1140
CSE5-100501	1:50	500	1500
CSE5-100601	1:60	720	1750
CSE5-100701	1:70	980	4750
CSE5-101001	1:100	2000	5500
CSE5-101251	1:125	3000	8500

:: Outline Dimensions

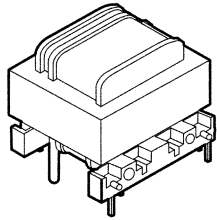
Technical Notes {mm}



Current Sense Transformers

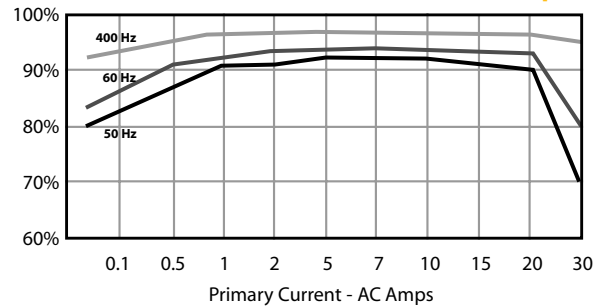
Class B
UL File: E205349 

Low Frequency



:: CSE187L Description
Designed to monitor current in low frequency applications. This Triad part may be used to monitor current from .1 to 30 amperes at frequencies from 50 Hz to 400 Hz.

CSE187L Performance Graph



:: Outline Dimensions

0.710 Max.
0.86 Max.
>025 Sq. (4 Plcs)
.080 Dia. Typical (2 Plcs)

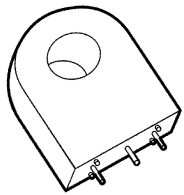
0.60, 0.37, 0.86 Max., 0.11, 2A, 1A, 1, 4, 5, 8

Amps In, Volts Out, 2A, 1A, 8, 5

0.37, 0.60, 0.12, 0.40, 5, 8

Technical Notes

- Turns ratio: Primary to sense 1:500
- Suggested burden resistor: 60 ohms.
- Typical output: 110 mV/Amp.
- Primary DCR: 250 μ Ohms maximum.
- Sense DCR: 21 ohms maximum.
- Constructed with UL recognized materials (Class B, 130°C).
- Hi-pot: 2,500 volts wdg-wdg.
- Potted version available with a dielectric strength of 4,000 volts wdg-wdg.



:: CST Series Description
Triad current sense transformers are used to detect the current passing through a conductor. These transformers are very reliable and operate effectively between 50-60 Hz. They are constructed of UL rated 130°C materials.

:: Specifications

Part No.	Ip Amps	Turns Ratio	Terminating Resistor		DCR (Ohms) Nominal	Volts/Amp @ rated Ip for various loads				Net Weight (grams) REF	Case Dimensions – mm					
			Ohms	Watt		100	500	2K	5K		A	B	C	D	E	F
CST-1005	5	1000:1	100	0.0025	40.00	0.0958	0.4490	1.3694	1.8402	20.0	23.50	24.80	12.00	15.00	7.50	8.50
CST-1010	10	1000:1	100	0.0100	40.00	0.0969	0.4565	0.9686	1.1912	20.0	23.50	24.80	12.00	15.00	7.50	8.50
CST-1015	15	1000:1	100	0.0230	40.00	0.0971	0.4429	0.7508	0.9439	20.0	23.50	24.80	12.00	15.00	7.50	8.50
CST-1020	20	1000:1	100	0.0400	40.00	0.0977	0.3943	0.6174	0.7662	20.0	23.50	24.80	12.00	12.00	7.50	8.50
CST-1025	25	1000:1	100	0.0630	46.00	0.0976	0.4364	0.7496	0.9664	30.0	30.20	30.20	14.30	20.32	10.16	11.40
CST-1030	30	1000:1	100	0.0900	46.00	0.0977	0.4160	0.6710	0.8750	30.0	30.20	30.20	14.30	20.32	10.16	11.40

Ip: Primary Current

:: Outline Dimensions

Technical Notes

- Pin length: 5 \pm 1mm
- Pin diameter: 0.8 \pm 0.1mm
- Pin 3 normally for mechanical support only

L1, L2, Io, 1-Turn Primary, Is, 100 Ohms, RL, Vout, 1, 2