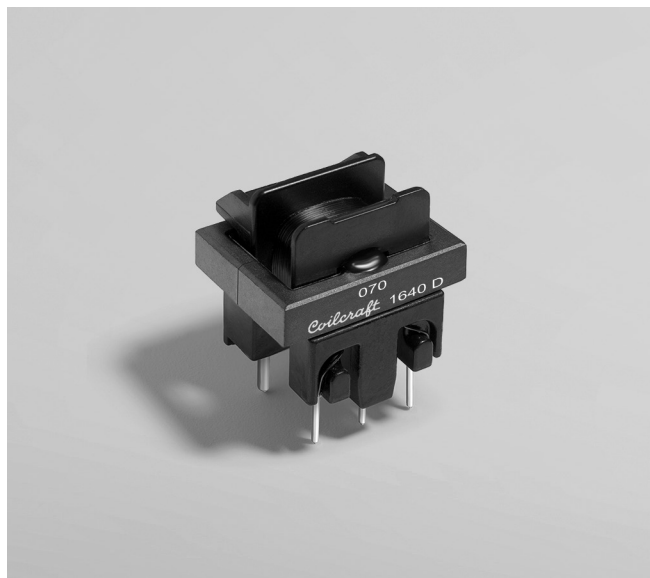


Current Sense Transformers CST2020



- AEC-Q200 Grade 1 (–40°C to +125°C)
- Sensed current up to 40 A
- Frequency range 400 Hz – to 1 MHz and above
- Very low primary DC resistance
- Meets Reinforced Insulation per UL 60950-1
- 4000 Vrms, one minute isolation (hipot) between windings

Core material Ferrite

Terminations Tin-silver-copper over tin over copper over steel (pins 1 – 3); Tin-silver-copper over tin over nickel over copper (pins 4 – 5)

Weight 7 – 8.5 g

Ambient temperature –40°C to +125°C

Maximum part temperature +165°C (ambient + temp rise)

Storage temperature Component: –40°C to +165°C.

Tray packaging: –40°C to +80°C

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Packaging 100 per tray

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

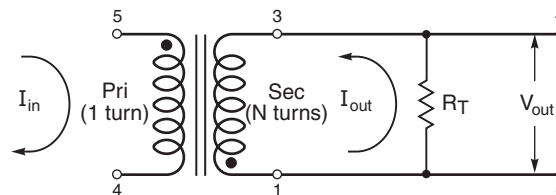
Part number	Turns (N) pri:sec	Inductance ¹ min (mH)	DCR max (Ohms)		Frequency range ² (kHz)	Volt-time product ³ (Vμsec)	Sensed current I_{in} ⁴ max (A)	Terminating resistance R_T ⁵ (Ohms)
			pri	sec				
CST2020-070L	1:70	3.46	0.00084	0.83	1.8 – >1000	277	40	1.75
CST2020-100L	1:100	7.07	0.00084	1.23	1.3 – >1000	395	40	2.5
CST2020-200L	1:200	28.28	0.00084	3.95	0.60 – >1000	791	40	5.0
CST2020-300L	1:300	63.63	0.00084	7.84	0.40 – >1000	1186	40	7.5

1. Inductance measured between secondary pins at 10 kHz, 0.1 Vrms, 0 Adc.
2. For specific questions regarding frequency range, please contact us at cst@coilcraft.com.
3. Volt-time product is for the secondary, between pin 3 and 1.
4. Primary current of 40 A causes less than 40°C temperature rise from 25°C ambient. Higher current causes a greater temperature rise (see Temperature Rise vs Current curve).
5. Terminating resistance (R_T) value is based on 1 Volt output with 40 Amps flowing through the primary. Varying terminating resistance increases or decreases output Voltage/Ampere according to the following equation:

$$R_T = V_{out} \times N_{sec} / I_{in}$$
6. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Typical Circuit



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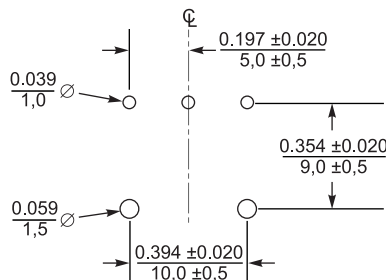
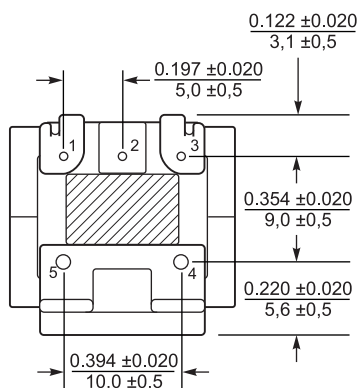
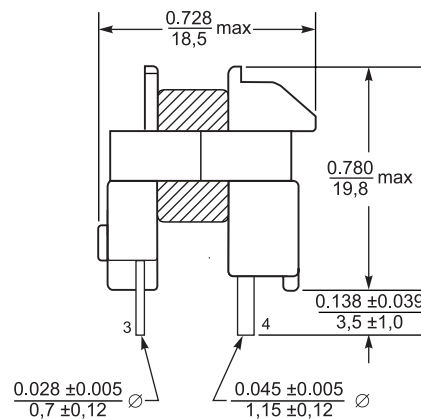
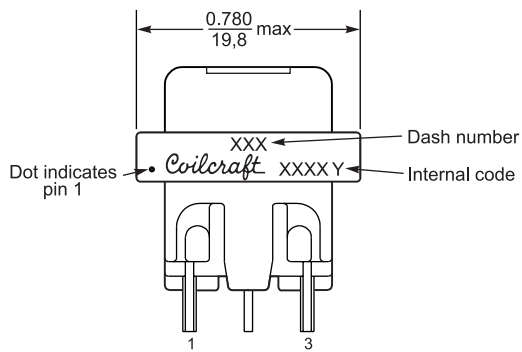
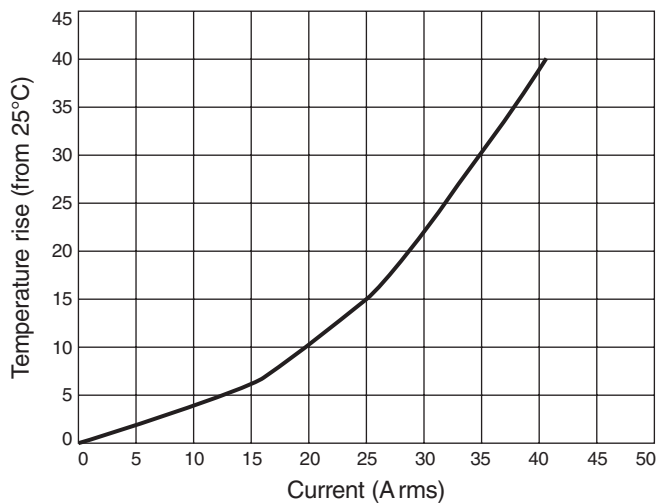
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CST2020 Current Sense Transformers

Temperature Rise vs Current



Recommended PC Board Layout

Dimensions are in $\frac{\text{inches}}{\text{mm}}$



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