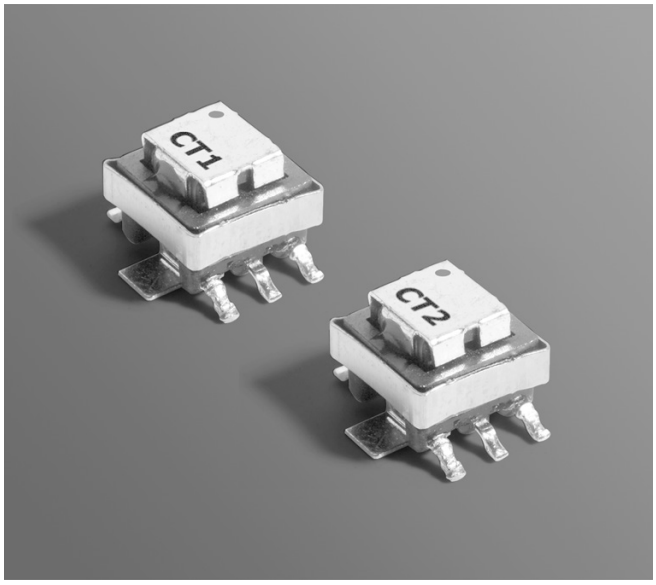
SMT Current Sensors – CST Series



- For use from 50 kHz to nearly 1 MHz
- Two different pinouts to meet the requirements of different applications.
- Low primary DC resistance; 500 V isolation between windings.

Designer's Kit C389 contains 2 each of each part
Core material Ferrite
Terminations See Note 1.
Weight 0.4 g
Ambient temperature –40°C to +125°C
Storage temperature Component: –40°C to +125°C. Tape and reel packaging: –40°C to +80°C
Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)
Failures in Time (FIT) / Mean Time Between Failures (MTBF) 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332
Packaging 250/7″reel;1000/13″ reel; Plastic tape: 16 mm wide, 0.35 mm thick, 12 mm pocket spacing, 5.6 mm pocket depth
PCB washing Only pure water or alcohol recommended

Part number[1]		Turns (N)	Inductance[2]	DCR max (Ohms)		Sensed current[3]	Terminating resistance R_T[4]	Volt-time product[5]	Color
CST1	CST2	pri:sec	min (µH)	Primary	Secondary	I_{in} (A)	(Ohms)	(V-µsec)	dot
CST1-020L_	CST2-020L_	1:20	81	0.0007	0.400	10	2.0	16	Red
CST1-030L_	CST2-030L_	1:30	180	0.0007	0.870	10	3.0	24	Orange
CST1-040L_	CST2-040L_	1:40	320	0.0007	1.14	10	4.0	32	Yellow
CST1-050L_	CST2-050L_	1:50	500	0.0007	1.50	10	5.0	41	Green
CST1-060L_	CST2-060L_	1:60	730	0.0007	1.98	10	6.0	49	Blue
CST1-070L_	CST2-070L_	1:70	980	0.0007	4.75	10	7.0	57	Violet
CST1-100L_	CST2-100L_	1:100	2000	0.0007	5.50	10	10.0	81	Gray
CST1-125L_	CST2-125L_	1:125	3000	0.0007	6.50	10	12.5	101	Black

1. When ordering, please specify **termination** and **packaging** codes:

CSTX-125LC

Termination: **L** = RoHS compliant tin-silver over tin over nickel over phos bronze (pins 1 – 6); RoHS compliant tin-silver over tin over nickel over copper (pins 7 – 8)
Special order: **S** = non-RoHS tin-lead (63/37) over tin over nickel over phos bronze (pins 1 – 6); nonRoHS tin-lead over gold over nickel over copper (pins 7 – 8).

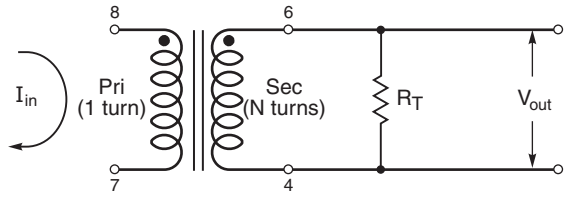
Packaging: **C** = 7″ machine-ready reel. EIA-481 embossed plastic tape (250 parts per full reel).
B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter C instead.
D = 13″ machine-ready reel. EIA-481 embossed plastic tape (1000 parts per full reel).

2. Inductance measured between secondary pins at 100 kHz, 0.1 Vrms.
3. Primary current of 10 A causes approximately 25°C temperature rise from 25°C ambient. Higher current causes a greater temperature rise (see Temperature Rise vs Current curve).
4. Terminating resistance (R_T) value is based on 1 Volt output with 10 Amps flowing through the primary. Varying terminating resistance increases or decreases output Voltage/Ampere according to the following equation: R_T (Ohms) = $V_{out} \times N_{sec}/I_{in}$.
5. Maximum volt-time product for the secondary.
6. Electrical specifications at 25°C.

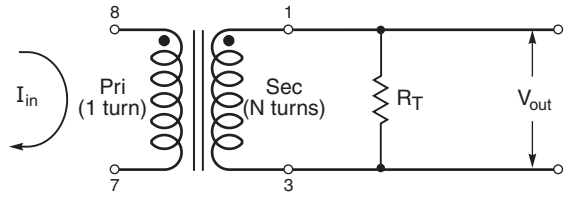
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Typical Circuits

CST1



CST2



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www.coilcraft.com

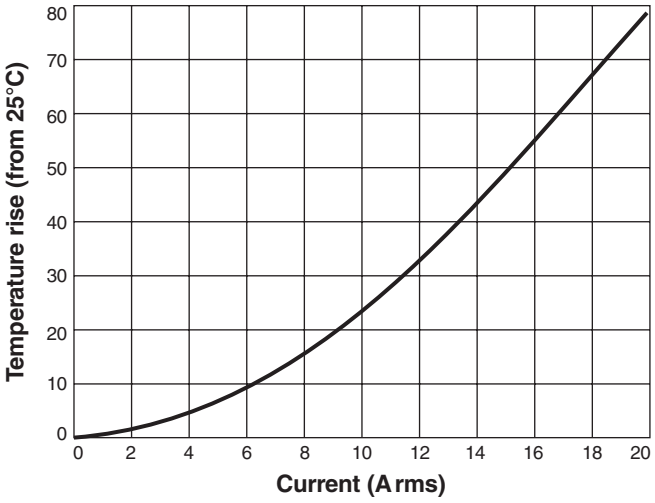
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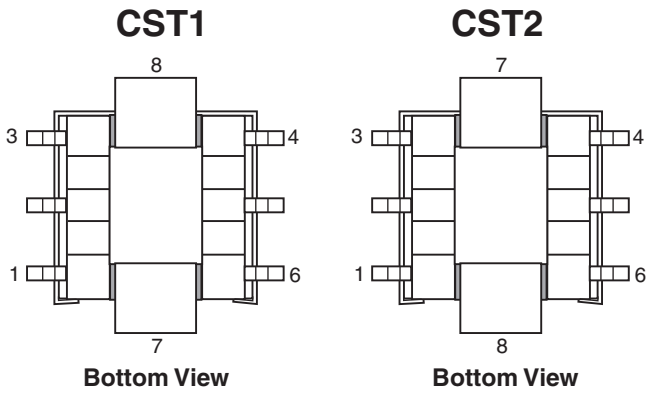
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CST Series Current Sensors

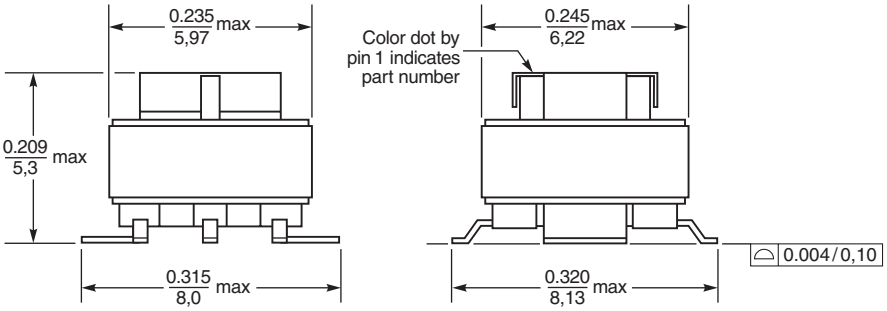
Temperature Rise vs Current

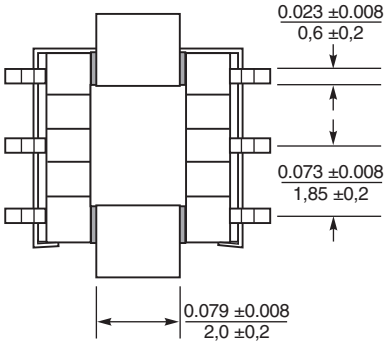


Pinouts

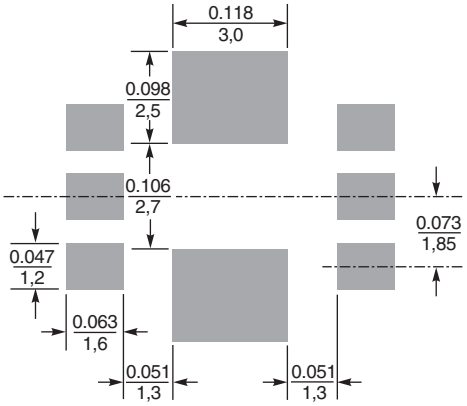


Dimensions





Recommended Land Pattern



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