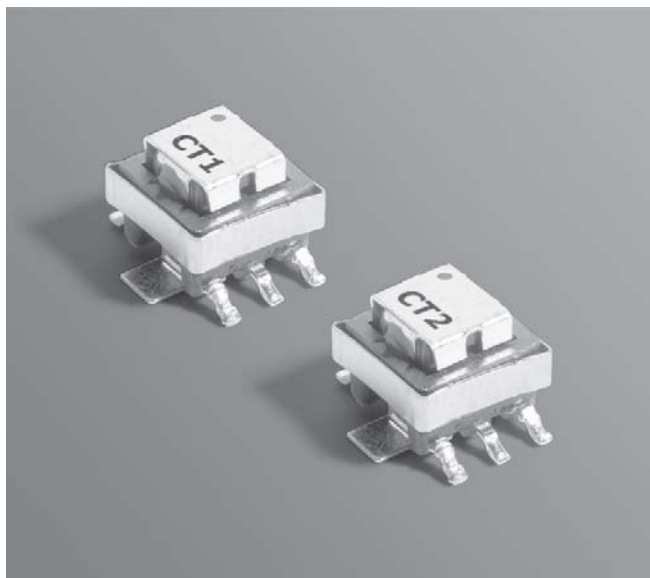




# SMT Current Sensors – CST Series



The CST surface mount current sensing transformers are designed for use from 50 kHz to nearly 1 MHz to sense continuous currents to 10 Amps and greater.

The CST1 and CST2 differ in pinout numbering and layout in order to meet the requirements of different applications.

These transformers feature extremely low primary DC resistance and 500 V isolation between windings. They are available in eight different turns ratios to meet a wide variety of requirements. They are ideal for use in switching power supply applications.

Coilcraft **Designer's Kit C389** contains samples of each of the standard parts shown. To order, contact Coilcraft or visit <http://order.coilcraft.com>.

Part number <sup>1</sup>		Turns (N) pri : sec	Inductance <sup>2</sup> min (µH)	DCR max (Ohms)		Sensed current <sup>3</sup> I <sub>in</sub> (A)	Terminating resistance R <sub>T</sub> <sup>4</sup> (Ohms)	Volt-time product <sup>5</sup> (V-µsec)	Color dot
CST1	CST2			Primary	Secondary				
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-125L C

**Termination:** L = RoHS compliant matte tin over nickel over phos bronze  
Special order:

T = RoHS tin-silver-copper (95.5/4/0.5) or

S = non-RoHS tin-lead (63/37).

**Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape (250 parts per full reel).

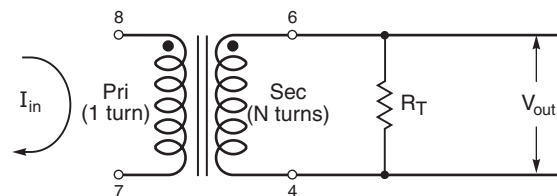
B = Less than full reel. In tape, but not machine ready.  
To have a leader and trailer added (\$25 charge), use code letter C instead.

D = 13" machine-ready reel. EIA-481 embossed plastic tape (1000 parts per full reel).

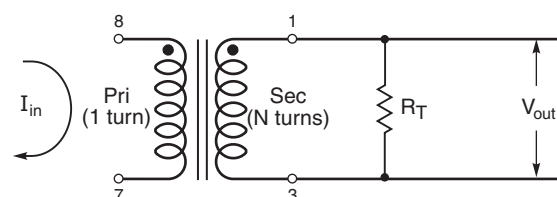
- Inductance measured between secondary pins at 100 kHz, 0.1 Vrms.
- Primary current of 10 A causes approximately 25°C temperature rise above 25°C ambient. Higher current causes a greater temperature rise (see Temperature Rise vs Current curve).
- Terminating resistance (R<sub>T</sub>) value is based 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<sub>T</sub> (Ohms) = V<sub>out</sub> × N<sub>sec</sub> / I<sub>in</sub>.
- Maximum volt-time product for the secondary.
- Storage and operating temperature range -40°C to +125°C.
- Electrical specifications at 25°C.

## Typical Circuits

### CST1



### CST2



**Coilcraft**<sup>®</sup>

Specifications subject to change without notice.  
Please check our website for latest information.

Document 385-1 Revised 06/11/09

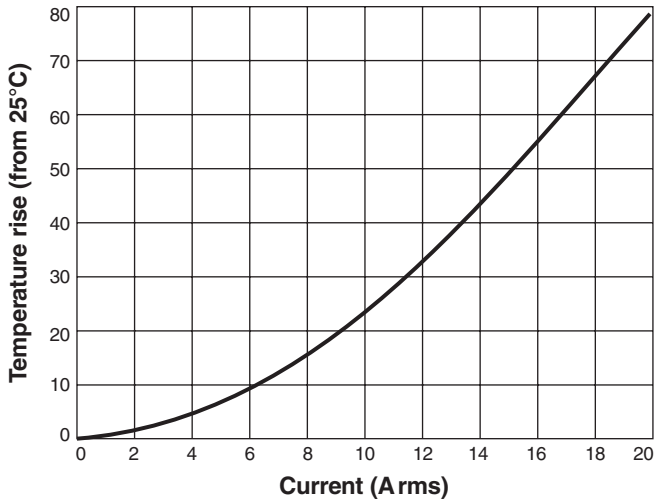
1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Web <http://www.coilcraft.com>

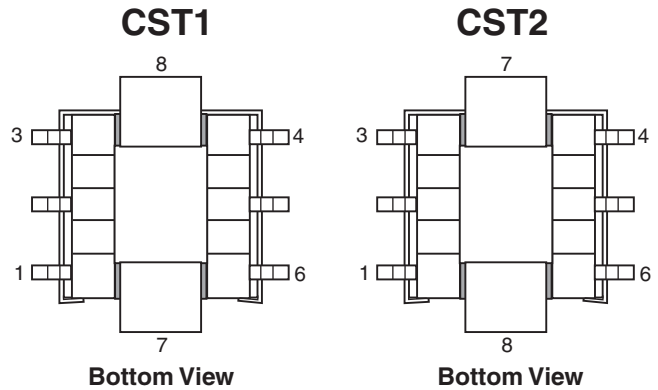


# CST Series Current Sensors

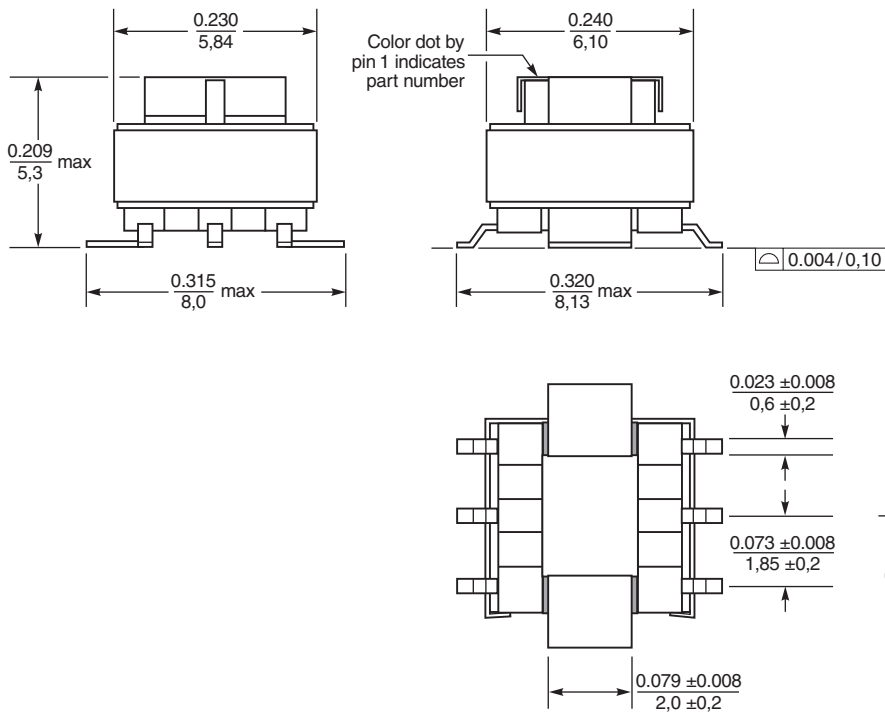
## Temperature Rise vs Current



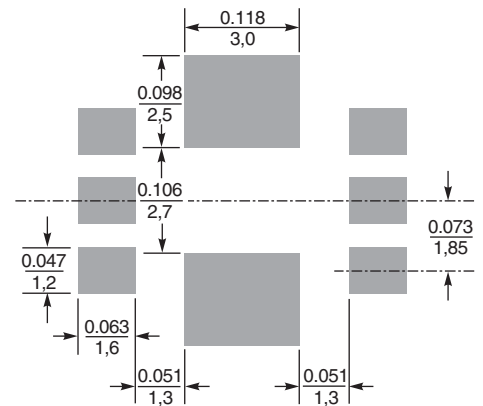
## Pinouts



## Dimensions



## Recommended Land Pattern



**Weight:** 11.0 – 11.9 g  
**Tape and reel:** 250/7" reel; 1000/13" reel 16 mm tape width  
 For packaging data see Tape and Reel Specifications section.



Specifications subject to change without notice.  
 Please check our website for latest information.

Document 385-2 Revised 06/11/09

1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

E-mail info@coilcraft.com Web http://www.coilcraft.com