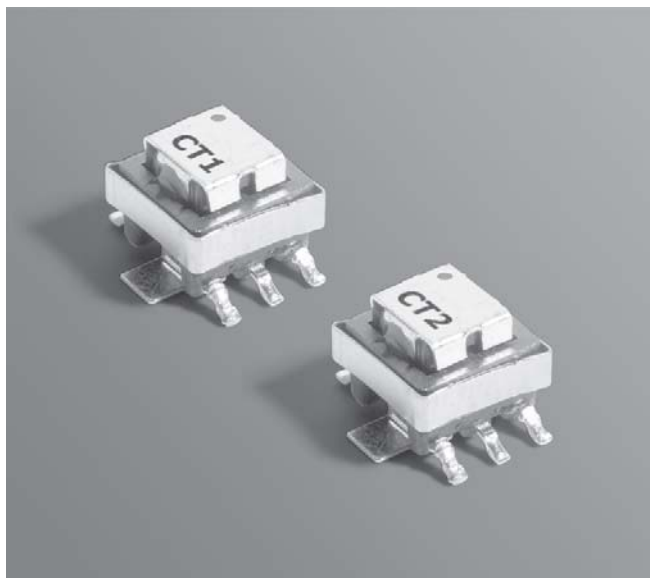




SMT Current Sensors – CST Series



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 ¹ | | Turns (N) pri : sec | Inductance ² min (µH) | DCR max (Ohms) | | Sensed current ³ I _{in} (A) | Terminating resistance R _T ⁴ (Ohms) | Volt-time product ⁵ (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).

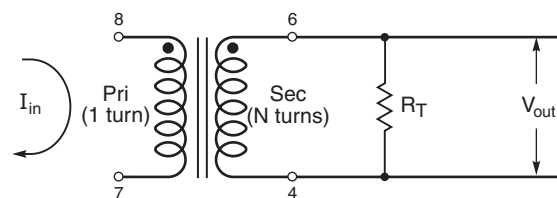
B = Less than full reel. In tape, but not machine ready.
To have a leader and trailer added (\$25 charge), use
code letter C instead.

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

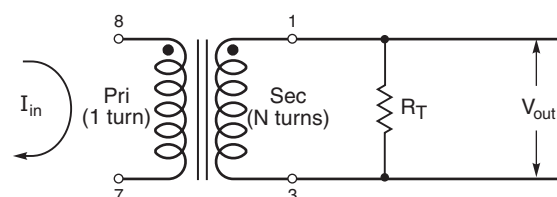
- Inductance measured between secondary pins at 100 kHz, 0.1 Vrms.
- Primary current of 10 A causes approximately 25°C temperature rise above 25°C ambient. Higher current causes a greater temperature rise (see Temperature Rise vs Current curve).
- Terminating resistance (R_T) value is based on 1 Volt 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} × N_{sec} / I_{in}.
- 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®

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

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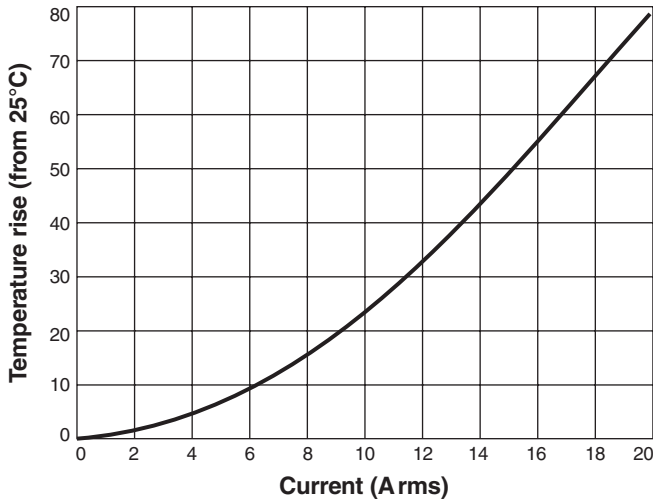
1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

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

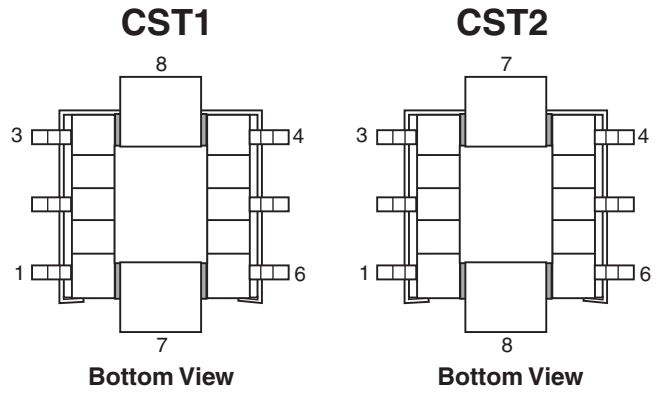


CST Series Current Sensors

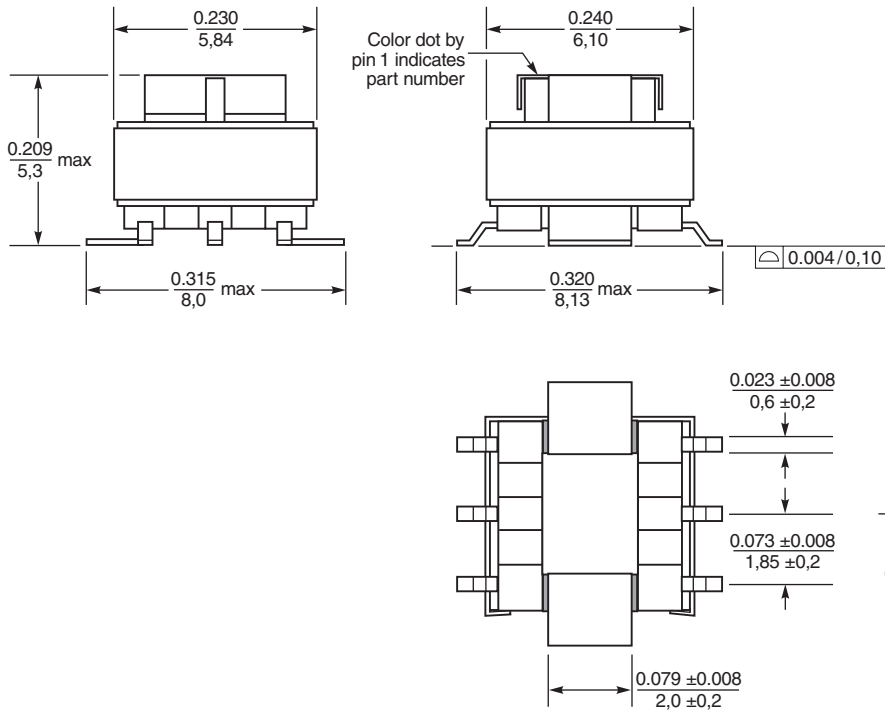
Temperature Rise vs Current



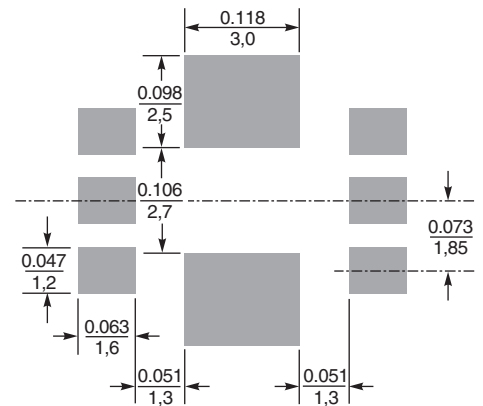
Pinouts



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.



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 Please check our website for latest information.

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