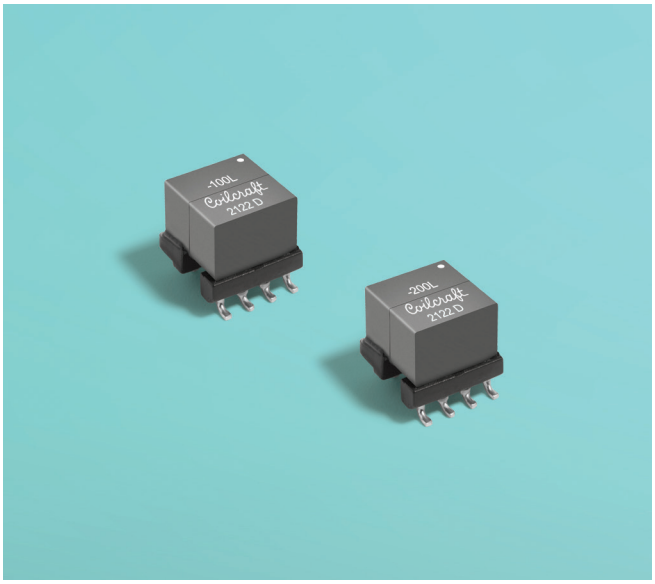
Current Sense Transformers ST614TCB



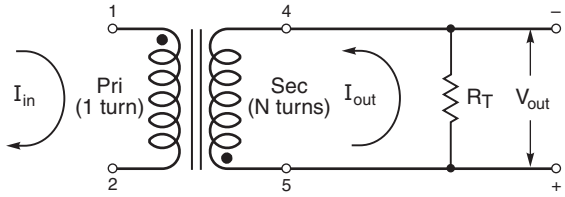
- Designed for use from 1.18 kHz up to 1 MHz and above to sense continuous currents to 28 Amps
- 3000 Vrms, one minute isolation (hipot) between windings
- 3.6 mm creepage and clearances
- UL Class 180 (H) insulating materials

Core material Ferrite
Environmental RoHS compliant
Terminations Tin-silver (96.5/3.5) over tin over nickel over copper
Weight 2.6 g
Ambient temperature –40°C to +125°C
Maximum part temperature +165°C (ambient + temp rise)
Storage temperature Component: –55°C to +165°C.
Tape and reel Packaging: –55°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)
Packaging 350/13″ reel; Plastic tape: 24 mm wide, 0.5 mm thick, 16 mm pocket spacing, 11.6 mm pocket depth
PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

Part number[1]	Turns (N) pri:sec	Inductance[2] min (mH)	DCR max (Ohms) pri	DCR max (Ohms) sec	Frequency range[3] (kHz)	Volt-time product[4] (Vµsec)	Sensed current I_{in}[5] max (A)	Terminating resistance R_T[6] (Ohms)
ST614TCB1050LZ	1 : 50	1.7	0.00153	0.65	33 – >1000	106.0	28	1.8
ST614TCB1070LZ	1 : 70	3	0.00153	1.38	24 – >1000	148.4	28	2.5
ST614TCB1100LZ	1 : 100	7	0.00153	2.79	17 – >1000	212.0	28	3.6
ST614TCB1125LZ	1 : 125	11	0.00153	4.85	13 – >1000	265.0	28	4.5
ST614TCB1200LZ	1 : 200	32	0.00153	10.42	11 – >1000	424.0	28	7.1

1. When ordering, please specify **termination** and **screening** codes:
   ST614TCB1200LZ
   Termination: **L** = Tin-silver (96.5/3.5) over tin over nickel over copper
   S = Tin-lead (63/37) over tin over nickel over copper
   T = Tin-silver-copper (95.5/4/0.5) over tin over nickel over copper
   Screening: **Z** = Unscreened
   H = Coilcraft CP-SA-10001 Group A
   - Screening performed to the document's latest revision.
   - Lot qualification (Group B) available.
   - Custom testing also available.
2. Inductance measured between secondary pins at 100 kHz, 0.1 Vrms, 0 Adc.
3. For specific questions regarding frequency range, please contact us at cst@coilcraft.com.
4. Volt-time product is for the secondary, between pin 4 and 5.
5. Primary current of 28 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).
6. Terminating resistance (R_T) value is based on 1 Volt output with 28 Amps flowing through the primary. Varying terminating resistance increases or decreases output Voltage/Ampere according to the following equation: $R_T = V_{out} \times N_{sec}/I_{in}$.
7 Electrical specifications at 25°C.

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



Coilcraft CPS
CRITICAL PRODUCTS & SERVICES

1102 Silver Lake Road
Cary, IL 60013
Phone 800-981-0363

Fax 847-639-1508
Email cps@coilcraft.com
www.coilcraft-cps.com

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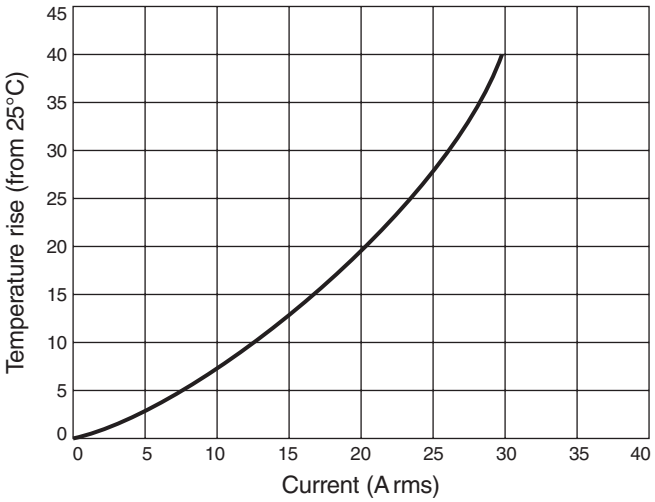
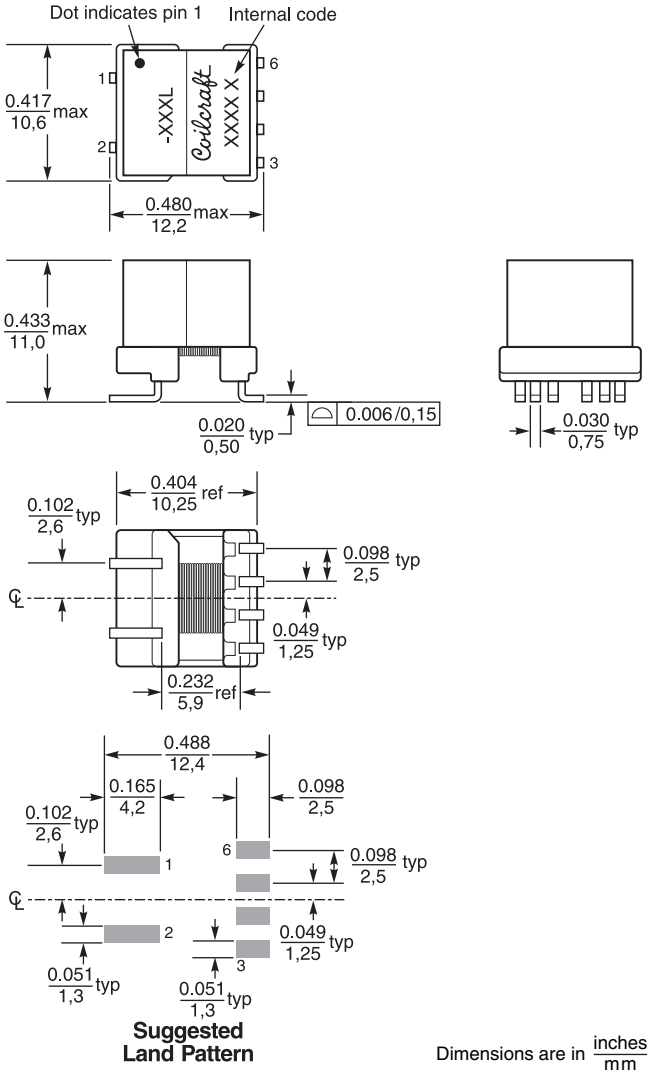
ST614TCB Series SMT Current Sense Transformers

Temperature Rise vs Current





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1102 Silver Lake Road
Cary, IL 60013
Phone 800-981-0363
Fax 847-639-1508
Email cps@coilcraft.com
www.coilcraft-cps.com

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