Current Sense Transformers CST4835

- AEC-Q200 Grade 1 (–40°C to +125°C)
- Miniature SMT design, only 4.5 × 4.8 mm footprint
- 500 Vrms, one minute isolation (hipot) between windings
- Designed for use up to 1 MHz to sense continuous currents to 7 Amps

Core material Ferrite
Environmental RoHS compliant, halogen free
Terminations RoHS compliant tin-silver over tin over nickel over copper (pins 2 – 1); RoHS compliant tin over nickel over copper (pins 4 – 3)
Weight 115 – 122 mg
Ambient temperature –40°C to +125°C
Maximum part temperature +165°C (ambient + temp rise)
Storage temperature Component: –40°C to +165°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) 10.06 per billion hours / 9.940E+07 hours, calculated per Telcordia SR-332
Packaging 500/7″ reel; 2200/13″ reel; Plastic tape: 12 mm wide, 0.35 mm thick, 8 mm pocket spacing, 3.6 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 (µH)	DCR max (Ohms) pri	DCR max (Ohms) sec	Frequency range (kHz)	Volt-time product[3] (Vµsec)	Sensed current I_{in}[4] max (A)	Terminating resistance R_T[5] (Ohms)
CST4835-020E_	1:20	33	0.003	0.35	83 – 1000	6.0	7	2.9
CST4835-030E_	1:30	74	0.003	0.90	56 – 1000	9.0	7	4.3
CST4835-040E_	1:40	132	0.003	1.60	42 – 1000	12.0	7	5.7
CST4835-050E_	1:50	205	0.003	2.50	33 – 1000	15.0	7	7.1
CST4835-060E_	1:60	295	0.003	3.60	28 – 1000	18.0	7	8.6
CST4835-070E_	1:70	400	0.003	4.60	24 – 1000	21.0	7	10.0
CST4835-100E_	1:100	820	0.003	9.50	17 – 1000	30.0	7	14.3
CST4835-125E_	1:125	1280	0.003	13.0	13 – 1000	37.5	7	17.9
CST4835-150E_	1:150	1800	0.003	21.0	11 – 1000	45.0	7	21.4

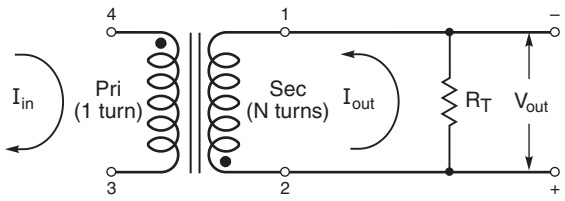
1. When ordering, please specify **packaging** code:

CST4835-150EC

Packaging: **C** = 7″ machine-ready reel. EIA-481 embossed plastic tape (500 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).
B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.
D = 13″ machine-ready reel. EIA-481 embossed plastic tape (2200 parts per full reel).

2. Inductance measured between secondary pins at 100 kHz, 0.1 Vrms, 0 Adc.
3. Volt-time product is for the secondary, between pin 1 and 2.
4. Primary current of 7 A causes less than 25°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 7 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.



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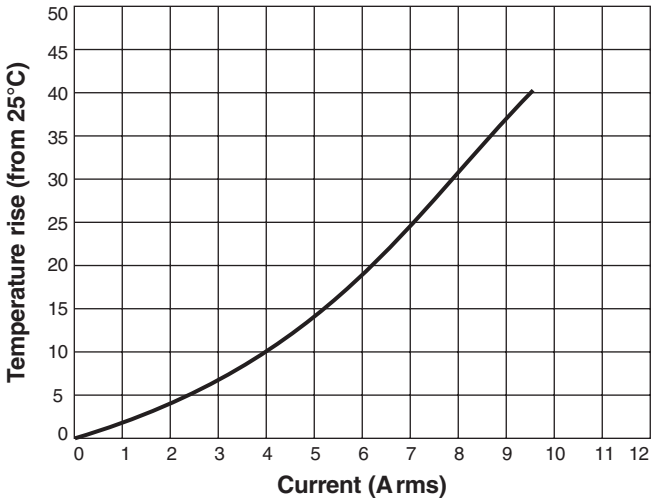
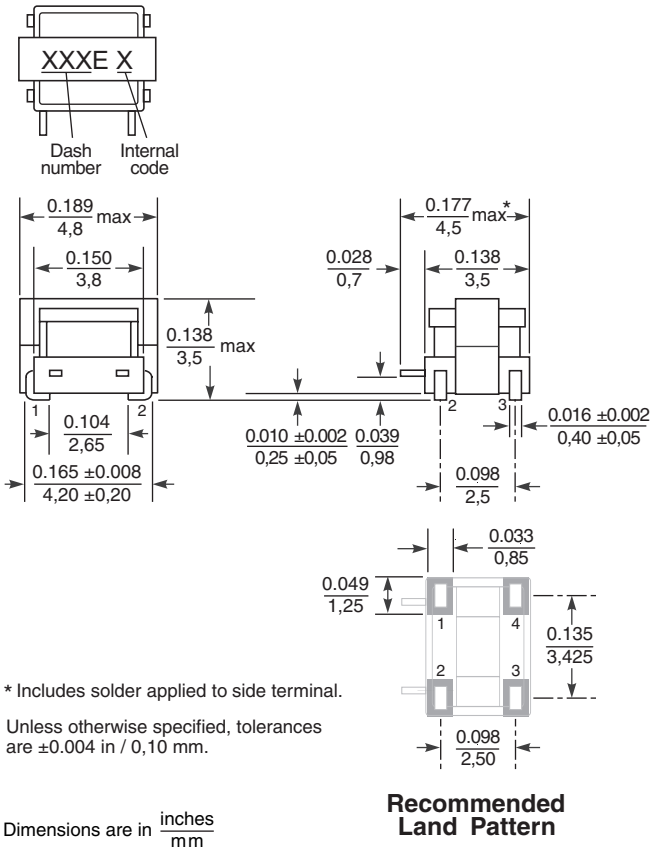
CST4835 Series SMT Current Sense Transformers

Temperature Rise vs Current





Recommended Land Pattern

* Includes solder applied to side terminal.

Unless otherwise specified, tolerances are ±0.004 in / 0,10 mm.

Dimensions are in inches / mm

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