

# Current Sense Transformers CST4835



- AEC-Q200 Grade 1 qualified (–40°C to +125°C ambient)
- 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 silver over nickel over phos bronze.

**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)**

38 per billion hours / 26,315,789 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 <sup>1</sup>	Turns (N) pri:sec	Inductance <sup>2</sup> min (µH)	DCR max (Ohms)		Frequency range (kHz)	Volt-time product <sup>3</sup> (Vµsec)	Sensed current I <sub>in</sub> <sup>4</sup> max (A)	Terminating resistance R <sub>T</sub> <sup>5</sup> (Ohms)
			pri	sec				
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).

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.

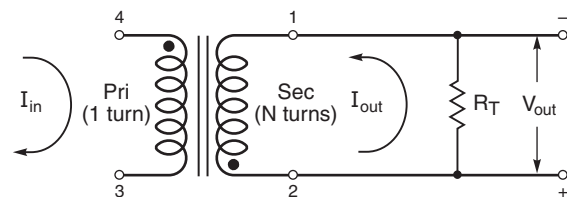
D = 13" machine-ready reel. EIA-481 embossed plastic tape (2200 parts per full reel).

- Inductance measured between secondary pins at 100 kHz, 0.1 Vrms, 0 Adc.
- Maximum volt-time product is for the secondary, based on 2000 Gauss.
- 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).
- Terminating resistance (R<sub>T</sub>) 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.

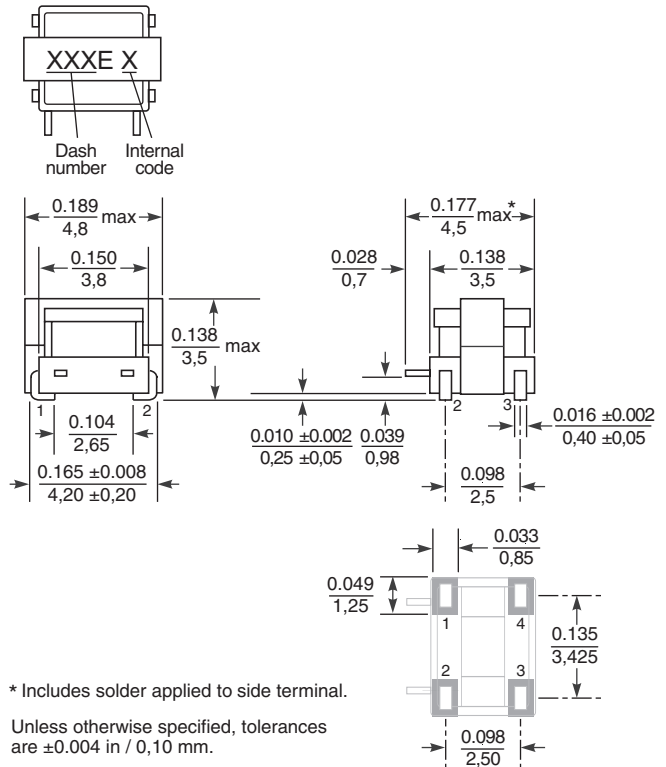
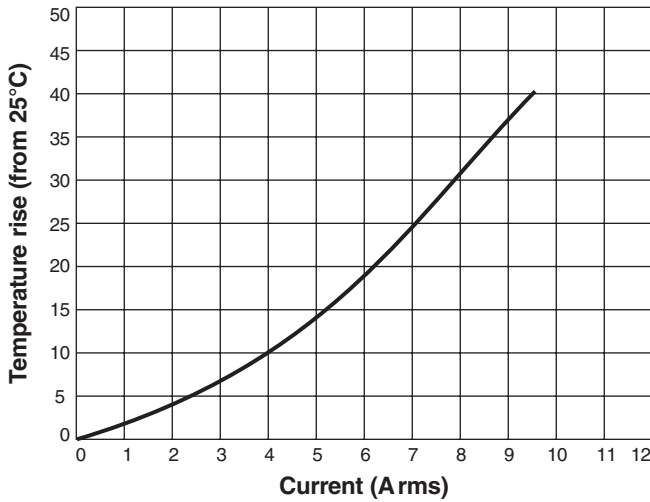
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.





# CST4835 Series SMT Current Sense Transformers

## Temperature Rise vs Current



\* Includes solder applied to side terminal.

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

Dimensions are in  $\frac{\text{inches}}{\text{mm}}$

### Recommended Land Pattern