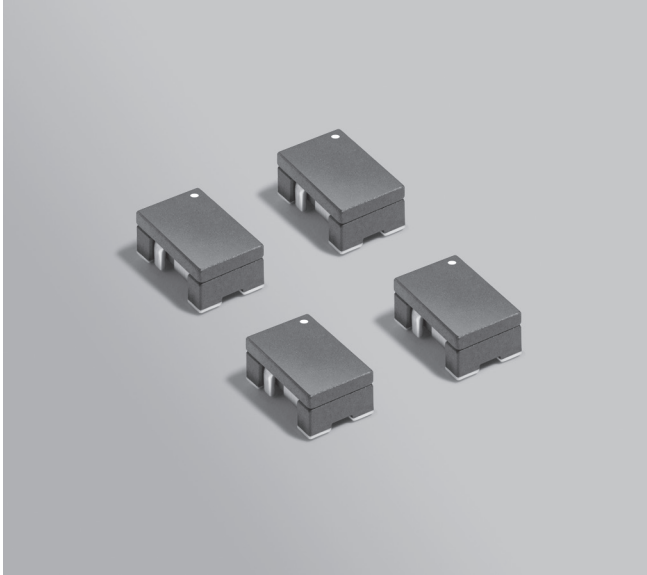


**NEW!**

# Current Sense Transformers CSX7030



- Miniature, low-profile chip-style current sense transformer – only 3.3 mm tall
- Designed and fabricated for systems mounted in harsh automotive conditions
- Extremely low DC resistance
- 1000 Vrms, one minute isolation (hipot) between primary and secondary
- AEC-Q200 qualified

**Core material** Ferrite

**Environment** RoHS compliant, halogen free

**Terminations** RoHS compliant tin over nickel over silver glass frit.

**Weight** 385 – 435 mg

**Ambient temperature** –40°C to +125°C

**Maximum part temperature** +140°C (ambient + temp rise)

**Storage temperature** Component: –40°C to +140°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)

**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	L <sup>2</sup> min (mH)	DCR max		Frequency range (kHz)	Isolation <sup>3</sup> (Vrms)	Volt-time product <sup>4</sup> (Vµsec)	Sensed current I <sub>in</sub> <sup>5</sup> (A)	Terminating resistance R <sub>T</sub> <sup>6</sup> (Ohms)
			pri (mOhms)	sec (Ohms)					
CSX7030-050RC	1:50	0.40	0.52	1.87	25 – >1000	1000	34.5	20	2.5
CSX7030-100RC	1:100	1.7	0.52	3.84	12 – >1000	1000	69.0	20	5.0
CSX7030-150RC	1:150	3.7	0.52	14.76	8 – >1000	1000	103.5	20	7.5
CSX7030-175RC	1:175	5.1	0.52	17.76	7 – >1000	1000	120.75	20	8.75
CSX7030-200RC	1:200	6.6	0.52	34.08	5 – >1000	1000	138	20	10.0

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

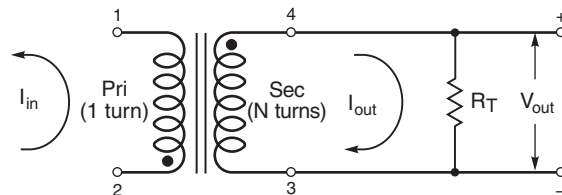
**CSX7030-200RC**

**Packaging:** **C** = 7" machine-ready reel. EIA-481 punched paper tape (500 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

**D** = 13" machine-ready reel. EIA-481 embossed plastic tape (2200 parts per full reel). Factory order only, not stocked.

- Inductance is measured at 100 kHz, 0.1 Vrms, 0 ADC.
  - 1000 Vrms, one minute isolation (hipot) between primary and secondary.
  - Volt-time product is for the secondary, between pin 3 and 4.
  - Primary current of 20 A causes less than 40°C temperature rise from 25°C ambient. Higher current causes a greater temperature rise.
  - Terminating resistance (R<sub>T</sub>) value is based on 1 Volt output with 20 Amps flowing through the primary. Varying terminating resistance increases or decreases output Voltage/Ampere according to the following equation:  
R<sub>T</sub> = V<sub>out</sub> × N<sub>sec</sub>/I<sub>in</sub>.
  - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

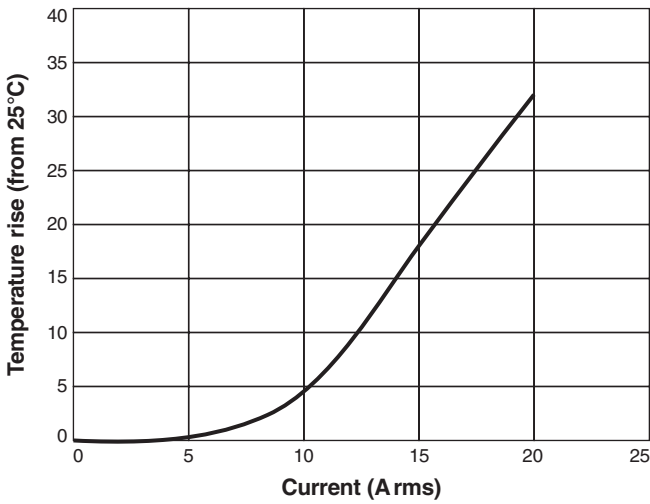
## Typical Circuit



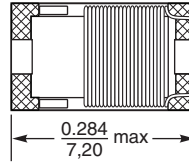
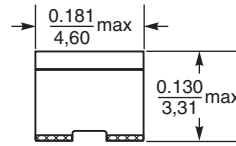


# CSX7030 SMT Current Sense Transformers

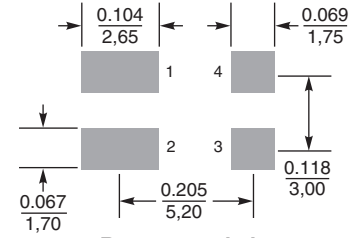
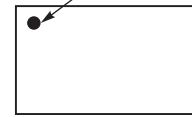
## Temperature Rise vs Current



## Dimensions



Dot indicates Pin 1



**Recommended Land Pattern**

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

**Packaging** 500/7" reel 2200/13" reel Plastic tape: 16 mm wide, 0.4 mm thick, 8 mm pocket spacing, 3.5 mm pocket depth