

# Current Sense Transformer CU8965-AL



- Developed for Analog Devices ADP1051 Eighth Brick Power Module
- Sensed current up to 20 A; Frequency range: 16 kHz – 1 MHz
- Very low primary DC resistance
- 1500 Vdc, one second isolation between windings.

**Core material** Ferrite

**Terminations** RoHS compliant tin-silver over tin over nickel over phos bronze

**Weight** 0.16 g

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

**Maximum part temperature** +165°C (ambient + temp rise)

**Storage temperature** Component: –40°C to +125°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** 600/7" reel; 2500/13" reel Plastic tape: 16 mm wide, 0.35 mm thick, 8 mm pocket spacing, 3.0 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 (mH)	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				
CU8965-AL_	1:100	1.33	0.0015	10.68	16 – 1000	32	20	5.0

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

**CU8965-ALC**

**Packaging:** **C** = 7" machine-ready reel. EIA-481 embossed plastic tape (600 parts per full reel).

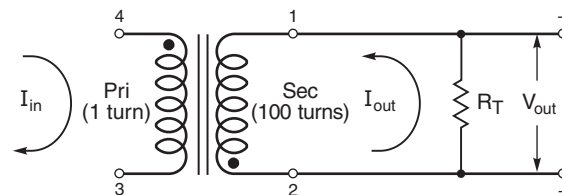
**B** = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter C instead.

**D** = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (2500 parts per full reel).

- Inductance measured between secondary pins at 100 kHz, 0.1 V<sub>rms</sub>, 0 Adc.
  - Maximum volt-time product is for the secondary, based on 2000 Gauss.
  - Primary current of 20 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 20 Amps flowing through the primary. Varying terminating resistance increases or decreases output Voltage/Ampere according to the following equation:  

$$R_T = V_{out} \times N_{sec} / I_{in}$$
  - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

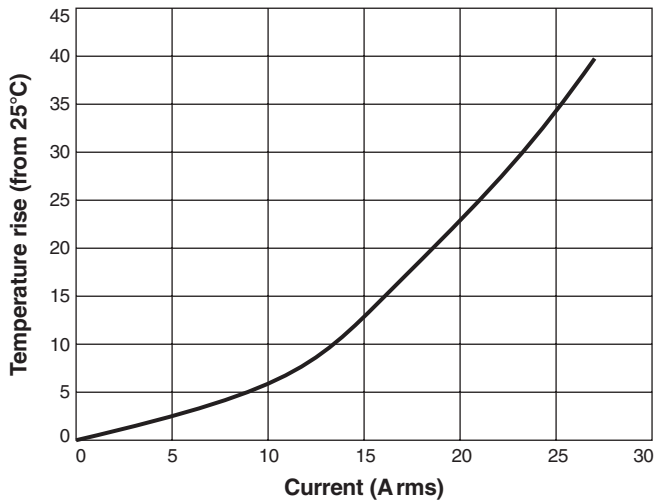
## Typical Circuit



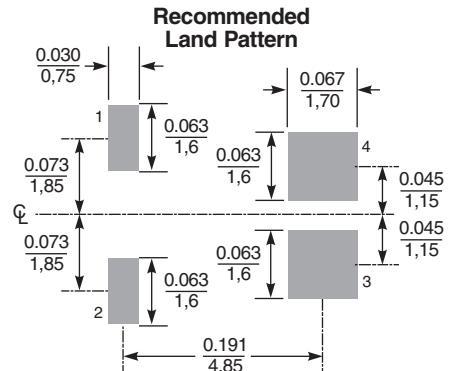
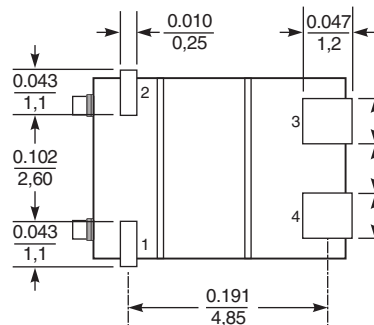
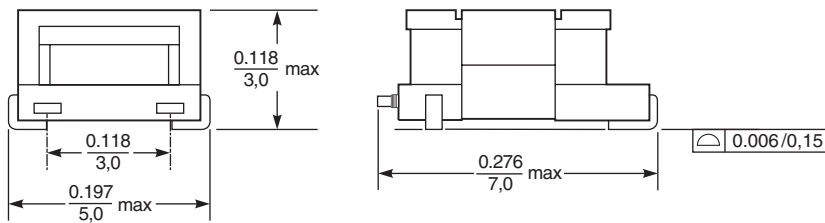


# CU8965-AL Current Sense Transformer

## Temperature Rise vs Current



## Dimensions



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



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Document 1165-2 Revised 08/29/16

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