

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 ¹ | Turns (N) pri:sec | Inductance ² min (mH) | DCR max (Ohms) | | Frequency range (kHz) | Volt-time product ³ (Vµsec) | Sensed current I _{in} ⁴ max (A) | Terminating resistance R _T ⁵ (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

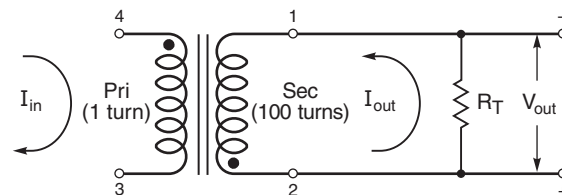
Packaging: **C** = 7" machine-ready reel. EIA-481 embossed plastic tape (600 parts per full reel).

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_{rms}, 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_T) 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.

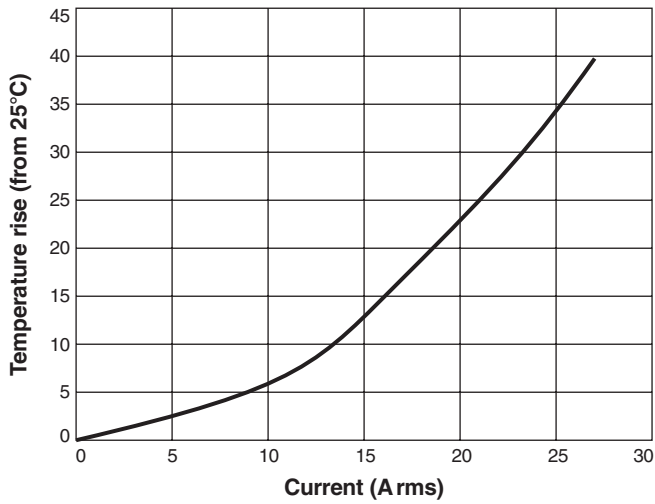
Typical Circuit



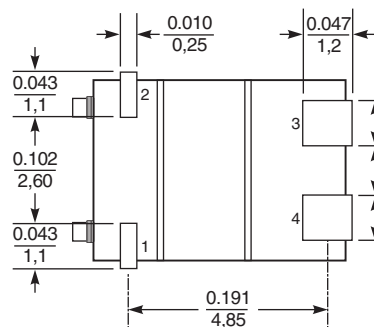
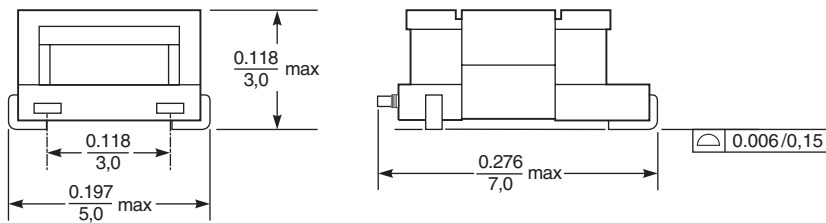


CU8965-AL Current Sense Transformer

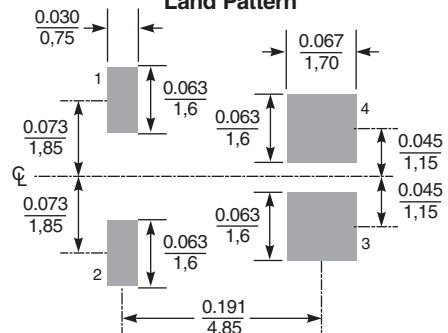
Temperature Rise vs Current



Dimensions



Recommended Land Pattern



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



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