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 refloows 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](mailto:Doc787_PCB_Washing.pdf).

<table>
<thead>
<tr>
<th>Part number</th>
<th>Turns (N) pri: sec</th>
<th>Inductance (µH) pri</th>
<th>DCR max (Ohms) pri</th>
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<th>Volt-time product (Vµsec)</th>
<th>Sensed current Iout max (A)</th>
<th>Terminating resistance Rterm (Ohms)</th>
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<tr>
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<td>16 – 1000</td>
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<td>20</td>
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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).  

2. Inductance measured between secondary pins at 100 kHz, 0.1 Vrms, 0 Adc.  
4. 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).  
5. Terminating resistance (Rterm) 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:  
   \[ R_{term} = \frac{V_{out}}{N_{sec}} \]  
   \[ \frac{I_{in}}{N_{pri}} \]  

**Typical Circuit**

![Typical Circuit Diagram](Doc787_PCB_Washing.pdf)

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**Typical Circuit**

![Typical Circuit Diagram](Doc787_PCB_Washing.pdf)
CU8965-AL Current Sense Transformer

Temperature Rise vs Current

![Temperature Rise vs Current Graph](image)

Dimensions

![Dimensions Diagram](image)

Dimensions are in inches/mm

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**Recommended Land Pattern**

![Recommended Land Pattern](image)