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)  10.06 per billion hours / 9.940E+07 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.

<table>
<thead>
<tr>
<th>Part number</th>
<th>Turns (N)</th>
<th>Inductance (mH)</th>
<th>DCR max (Ohms)</th>
<th>Frequency range (kHz)</th>
<th>Volt-time product (V*µsec)</th>
<th>Sensed current Iout max (A)</th>
<th>Terminating resistance Rterm (Ohms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CU8965-AL</td>
<td>1:100</td>
<td>1.33</td>
<td>0.0015</td>
<td>16 – 1000</td>
<td>32</td>
<td>20</td>
<td>5.0</td>
</tr>
</tbody>
</table>

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). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).
B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.
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 Vac.
3. Volt-time product is for the secondary, between pin 1 and 2.
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:

   \[ R_{\text{term}} = \frac{V_{\text{out}}}{N_{\text{sec}}/I_{\text{in}}} \]

6. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.
CU8965-AL Current Sense Transformer

Temperature Rise vs Current

![Temperature Rise vs Current Graph]

Dimensions

![Dimensions Diagram]

Dimensions are in **inches**

Recommend Land Pattern

![Recommended Land Pattern]

Dimensions are in **mm**

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Specification subject to change without notice
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