Planar Magnetics

This planar transformer and planar inductor pair is designed specifically for the Texas Instruments UCC3580 family of PWM controllers.

The B0392-AL transformer is engineered for use in single switch, forward topologies operating at 300 kHz. It is ideal for use in high-current telecom power supply applications that require high efficiency in a low-profile package.

The main winding of the B0434-AL inductor serves as an output choke, while the auxiliary winding controls input current to the PWM.

Request free evaluation samples by contacting Coilcraft or visiting www.coilcraft.com.

Transformer

<table>
<thead>
<tr>
<th>Part number1</th>
<th>Output power (W)</th>
<th>Output voltage (V)</th>
<th>Output current (A rms)</th>
<th>Primary inductance2 min (µH)</th>
<th>Leakage inductance3 max (µH)</th>
<th>DCR max (mOhms)</th>
<th>Pri/sec isolation (Vdc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>B0392-AL_</td>
<td>100</td>
<td>3.3</td>
<td>30.0</td>
<td>65.0</td>
<td>0.22</td>
<td></td>
<td>13.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Primary: 13.5</td>
<td></td>
<td></td>
<td>1500</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:

   **Packaging:**
   - **D** = 13” machine ready reel. EIA-481 embossed plastic tape (200 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 D instead.

2. Inductance measured on an Agilent/HP 4284 between pins 1 and 2 at 250 kHz, 0.1 Vrms, 0 Adc.
3. Leakage inductance measured between pins 1 and 2 at 100 kHz, 0.1 Vrms, 0 Adc with secondary pins shorted.
4. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

Parts manufactured prior to December 2011 may be marked differently.

Recommended Land Pattern

Dimensions are in inches/mm
Planar Magnetics for Texas Instruments UCC3580

Output Inductor

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance $^2$ @ 0 Adc (µH)</th>
<th>I rated Adc</th>
<th>DCR max (mOhms)</th>
<th>Isolation $^3$ (Vdc)</th>
<th>Isat $^4$ (A)</th>
<th>Irms $^5$ (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>B0434-AL_</td>
<td>2.0 $\pm$ 10%</td>
<td>30</td>
<td>Main: 1.9</td>
<td>1100</td>
<td>38</td>
<td>36</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:

Packaging:
- D = 13” machine ready reel, EIA-481 embossed plastic tape (200 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 D instead.

2. Inductance measured on an Agilent/HP 4284 between pins 3 and 4 at 10 kHz, 0.1 Vrms.
3. Isolation measured from pin 1 to pin 3.
4. DC current at which inductance drops 10% (typ) from its value without current.
5. Current that causes a 40°C rise from 25°C ambient.
6. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

Typical L vs Frequency

Typical L vs Current

Core material: Ferrite
Terminations: RoHS Matte-tin over nickel over brass
Weight: 11.1 – 11.5 g
Ambient temperature: –40°C to +85°C
Storage temperature: Component: –40°C to +85°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): 38 per billion hours
Mean Time Between Failures (MTBF): 26,315,789 hours, calculated per Telcordia SR-332
Packaging: 200 per 13” reel. Plastic tape: 44 mm wide, 0.37 mm thick, 32 mm pocket spacing, 9.4 mm pocket depth
PCB washing: Only pure water or alcohol recommended

Parts manufactured prior to December 2011 may be marked differently.

Dimensions are in inches (±0.006/0.15) or mm (±0.015).

Recommended Land Pattern

RoHS Compliant

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Document 357-2 Revised 07/24/12
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