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

| Part number | Output power (W) | Output voltage (V) | Output current (A rms) | Primary inductance
\( \mu \)H\) | Leakage inductance\(^3\) \( \mu \)H | DCR max (mOhms) | Pri/sec isolation (Vdc) |
<table>
<thead>
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<th></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>Primary: 13.5</td>
<td>1500</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Secondary: 0.4</td>
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</tbody>
</table>

1. When ordering, please specify packaging code:

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

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.

**Recommended Land Pattern**

- Dimensions are in inches/mm
- Parts manufactured prior to December 2011 may be marked differently.

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For Texas Instruments UCC3580
Planar Magnetics for Texas Instruments UCC3580

Output Inductor

<table>
<thead>
<tr>
<th>Part number1</th>
<th>Inductance2@ 0 Adc (µH)</th>
<th>I rated Adc</th>
<th>DCR max (mOhms)</th>
<th>Isolation3 (Vdc)</th>
<th>Isat4 (A)</th>
<th>Irms5 (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>B0434-AL_</td>
<td>2.0 ±10%</td>
<td>30</td>
<td>Main: 1.9</td>
<td>1100</td>
<td>38</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aux: 1450.0</td>
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</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:
   - B0434-ALD
   - 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

Recommended Land Pattern

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 part 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

Dimensions are in inches

www.coilcraft.com

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This product may not be used in medical or high risk applications without prior Coilcraft approval.
Specification subject to change without notice.
Please check web site for latest information.