Planar Magnetics For Texas Instruments UCC3580

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>Primary: 13.5</td>
<td>1500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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</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). 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.
Planar Magnetics for Texas Instruments UCC3580

Output Inductor

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance @ 0 Adc (µH)</th>
<th>I rated Adc</th>
<th>DCR max (mOhms)</th>
<th>Isolation (Vdc)</th>
<th>Isat (A)</th>
<th>Irms (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>
<td></td>
<td></td>
<td></td>
</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). 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 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

- **Inductance vs Frequency**:
  - Frequency (MHz)
  - Inductance (µH)

- **Typical L vs Current**
  - Current (A)
  - Inductance (µH)

### Core material
- Ferrite

### Terminations
- RoHS Tin silver 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)

### Packaging
- 200 per 13" reel

### PCB washing
- Only pure water or alcohol recommended

### Dimensions
- Parts manufactured prior to December 2011 may be marked differently.

- **Recommended Land Pattern**: 
  - Main
  - Aux
  - PCB

### Dimensions are in millimeters (mm)

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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.