**Flyback Transformer**

For Texas Instruments
LM5000 DC/DC Regulator

This surface mount flyback transformer is designed for use with Texas Instruments LM5000 DC/DC regulator. The core completely encloses the windings to minimize EMI interference. The transformer features very low DCR, 500 Vrms isolation and a leakage inductance rating of just 1.0 µH. Coilcraft can also custom engineer a transformer to meet your specific requirements.

For free evaluation samples, contact Coilcraft or order them on-line at [www.coilcraft.com](http://www.coilcraft.com).

### Specifications

<table>
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<tr>
<th>Part number</th>
<th>Inductance</th>
<th>DCR max</th>
<th>Leakage Inductance</th>
<th>Turns ratio in:out:aux</th>
<th>Isolation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A0009-AL_</td>
<td>±20% (µH)</td>
<td>0.150 (1 – 4)</td>
<td>1.0</td>
<td>1 : 0.33 : 1</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>±20% (µH)</td>
<td>0.150 (2 – 3)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>±20% (µH)</td>
<td>0.012 (5.6 – 7.8)</td>
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</tbody>
</table>

#### Inductance

Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc.

#### DCR max

DCR max in (Ohms) for specified voltages.

#### Leakage Inductance

Leakage inductance measured at 100 kHz, 0.1 Vrms from pins 1 to 4 with all other pins shorted.

#### Turns ratio

Ratio of input to output voltage for specified voltages.

#### Isolation

Isolation measured from pin 1 to pins 5 and 6; from 2 to 5 and 6; and from pins 1, 2, 5 and 6 to the core for one minute.

#### Additional Notes

1. When ordering, please specify a packaging code:

   - **A0009-ALD**
     - **Packaging:** D = 13” machine ready reel. EIA-481 embossed plastic tape (150 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 at 100 kHz, 0.1 Vrms, 0 Adc.

3. Leakage inductance measured at 100 kHz, 0.1 Vrms from pins 1 to 4 with all other pins shorted.

4. Isolation measured from pin 1 to pins 5 and 6; from 2 to 5 and 6; and from pins 1, 2, 5 and 6 to the core for one minute.

5. Electrical specifications at 25°C.

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

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**Core Material**
- **Ferrite**

**Terminations**
- RoHS tin-silver over tin over nickel over phos bronze.
- Other terminations available at additional cost.

**Weight**
- 7.86 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) / Mean Time Between Failures (MTBF)**
- 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**Packaging**
- 150 per 13” reel Plastic tape: 44 mm wide, 0.5 mm thick, 28 mm pocket spacing, 13.8 mm pocket depth

**PCB Washing**
- Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](http://www.coilcraft.com).
A0009-AL Flyback Transformer

Parts manufactured prior to February 2017 were marked with a label and did not have a dot indicating pin 1.

Recommended Land Pattern

Dimensions are in inches and millimeters.

Output 3.3 V @ 3 A

Input

Auxiliary

Pin 1 indicator

Internal code