Flyback Transformers

For Linear Technology LT3750/LT3751
Capacitor Charger Controllers

These surface mount flyback transformers were developed for use with Linear Technology LT3750 Capacitor Charger Controller. DA2033-AL and DA2034-AL are also specified for the LT3751 Controller. They have a smaller footprint than other transformers designed for this application.

These low-profile transformers feature 1500 Vrms, one minute winding to winding isolation and 750 Vrms winding to core isolation. They are designed to operate with an input range of 3 – 24 V and to charge a capacitor to 300 V.

They are shown on the Linear Technology LT3750 application note for use in a 300 V, 3 A charging circuit (DA2032); a 300 V, 6 A charging circuit (DA2033); and a 300 V, 9 A charging circuit (DA2034).

Coilcraft can also custom engineer a transformer to meet your specific requirements. For free evaluation samples, contact Coilcraft or visit www.coilcraft.com.

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance at 0A²</th>
<th>Inductance at Ipk³</th>
<th>DCR max (Ohms)</th>
<th>Leakage inductance max (µH)</th>
<th>Ipk³ (A)</th>
<th>Interwinding capacitance max (pF)</th>
<th>Turns ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA2032-AL_</td>
<td>10.0</td>
<td>9.0</td>
<td>0.013</td>
<td>1.60</td>
<td>3.0</td>
<td>67</td>
<td>1 : 10</td>
</tr>
<tr>
<td>DA2033-AL_</td>
<td>10.0</td>
<td>9.0</td>
<td>0.015</td>
<td>1.10</td>
<td>5.0</td>
<td>76</td>
<td>1 : 10</td>
</tr>
<tr>
<td>DA2034-AL_</td>
<td>10.0</td>
<td>9.0</td>
<td>0.018</td>
<td>1.75</td>
<td>10.0</td>
<td>128</td>
<td>1 : 10</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:

   Packaging: D = 13” machine-ready reel. EIA-481 embossed plastic tape (DA2032-AL & DA2033-AL: 200 parts per full reel; DA2034-AL: 175 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 is for the primary, measured at 100 kHz, 0.1 Vrms, 0 Adc.
3. Peak primary current drawn at minimum input voltage.
4. DCR is with the primary windings connected in parallel.
5. Leakage inductance is with the primary windings connected in parallel and with the secondary winding shorted.
6. Capacitance measured at 100 kHz, 0.1 Vrms from pin 3 to pin 1 with all other pins shorted.
7. Electrical specifications at 25°C.

Core material  Ferrite
Terminations  RoHS compliant tin-silver over tin over nickel over phosph bronze. Other terminations available at additional cost.
Weight  DA2032: 5.9 g; DA2033: 8.2 g; DA2034: 14.1 g
Ambient temperature  –40°C to +125°C
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) 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332
Packaging  DA2032-AL  200 per 13” reel. Plastic tape: 44 mm wide, 0.4 mm thick, 28 mm pocket spacing, 9.6 mm pocket depth
DA2033-AL  200 per 13” reel. Plastic tape: 44 mm wide, 0.4 mm thick, 24 mm pocket spacing, 10.56 mm pocket depth
DA2034-AL  175 per 13” reel. Plastic tape: 44 mm wide, 0.4 mm thick, 32 mm pocket spacing, 11.9 mm pocket depth
PCB washing  Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.
Flyback Transformers for Linear LT3750

DA2032-AL

Dot indicates pin 1

DA2033-AL

Dot indicates pin 1

DA2034-AL

Dot indicates pin 1

Recommended Land Pattern

Recommended Land Pattern

Recommended Land Pattern

Internal code
Parts manufactured prior to September 2011 may be marked differently.

Dimensions are in inches

Dimensions are in mm

RoHS COMPLIANT

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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.

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Document 510-2 Revised 02/09/11

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