Planar Transformer  For National Semiconductor
LM5037 PWM Controller

- Developed for NSC LM5037 Dual-Mode PWM Controller
- Designed as half bridge in forward topology
- Auxiliary winding provides 10 V to the chipset
- Input voltage range: 36 – 78 V

**Core material** Ferrite
**Terminations** RoHS matte tin over nickel over brass. Other terminations available at additional cost.
**Weight** 11.8 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** 200 per 13” reel Plastic tape: 44 mm wide, 0.37 mm thick, 32 mm pocket spacing, 9.35 mm pocket depth
**PCB washing** Only pure water or alcohol recommended

### Specifications

<table>
<thead>
<tr>
<th>Part number</th>
<th>Output power (W)</th>
<th>Output voltage (V)</th>
<th>Output current (Adc)</th>
<th>Primary inductance (µH)</th>
<th>Leakage inductance (µH)</th>
<th>DCR max (mOhms)</th>
<th>Turns ratio</th>
<th>Pri/sec Isolation (Vdc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HA3648-BL__</td>
<td>50</td>
<td>5</td>
<td>10</td>
<td>30.0</td>
<td>0.040</td>
<td>pri: 6.0 sec: 4.0 aux: 160</td>
<td>2:1:1:2 / 1:2</td>
<td>1500</td>
</tr>
</tbody>
</table>

1. When ordering, please specify a packaging code:
   - **HA3648-BL D**
     - Packaging: D = 13” machine ready reel. EIA-481 embossed plastic tape (200 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 250 kHz, 0.1 Vrms, 0 Aadc.
3. Leakage inductance measured between pins 3 and 4 at 250 kHz, 0.1 Vrms, 0 Aadc with pins 6, 8 and 10 shorted.
4. DCR for the secondary is from pin 6 to pin 10.
5. Electrical specifications at 25°C.

### Recommended Land Pattern

- Dot indicates pin 1
- Dimensions are in inches
- Parts manufactured prior to December 2011 may be marked differently.

**Coilcraft**

www.coilcraft.com

US  +1-847-639-6400  sales@coilcraft.com
UK   +44-1236-730595  sales@coilcraft-europe.com
Taiwan +886-2-2264 3646  sales@coilcraft-taiwan.com
China +86-21-6218 8074  sales@coilcraft.com.cn
Singapore  +65-6484 8412  sales@coilcraft.com.sg

© Coilcraft Inc. 2015

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.