## 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)

### 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

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### Table: 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) min</th>
<th>Leakage inductance max (µH)</th>
<th>DCR max (mOhms) pri</th>
<th>Turns ratio: sec1 : sec2 : aux</th>
<th>Pri/sec isolation (Vdc)</th>
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<tbody>
<tr>
<td>HA3648-BL__</td>
<td>50</td>
<td>5</td>
<td>10</td>
<td>30.0</td>
<td>0.040</td>
<td>6.0</td>
<td>2 : 1 : 1 : 2</td>
<td>1500</td>
</tr>
</tbody>
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1. When ordering, please specify a **packaging** code:

   HA3648-BLD

   **Packaging:**
   - **D** = 13” machine ready reel. EIA-481 embossed plastic tape (200 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 250 kHz, 0.1 Vrms, 0 Adc.

3. Leakage inductance measured between pins 3 and 4 at 250 kHz, 0.1 Vrms, 0 Adc 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.

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### Diagram: Recommended Land Pattern

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