Planar Transformer For NSC LM5033 PWM Controller for IBC Applications

The B0853-A was designed specifically for the National Semiconductor LM5033 high voltage PWM controller. This planar transformer can be used in push-pull, half-bridge and full-bridge topologies.

It is ideal for use in high-current power supply applications such as open loop intermediate bus converters (IBC) and closed loop voltage mode converters. It offers high efficiency in a low-profile package and features a split secondary, a separate auxiliary winding and 1500 Vdc primary to secondary isolation.

Coilcraft’s Planar Prototyping Kit C356 was used to design this transformer. No tooling or additional parts were required. To order the kit, contact Coilcraft or purchase on-line at http://order.coilcraft.com.

Free evaluation samples of B0853-AL are available by contacting Coilcraft or by visiting www.coilcraft.com.

### Part number1  Output power (W)  Input voltage range (V)  Output voltage nom (V)  Output current (A peak)  Primary inductance min (µH)  Leakage inductance max (µH)  DCR max (mOhms)  Turns ratio¹ Pri: sec: aux

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<tbody>
<tr>
<td>B0853-AL</td>
<td>200</td>
<td>40 – 60</td>
<td>10</td>
<td>20</td>
<td>46.8</td>
<td>0.10</td>
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<td>5:4:4</td>
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1. When ordering, please specify packaging code:

**D** = 13" machine ready reel. EIA-481 embossed plastic tape (200 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 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 100 kHz, 0.1 Vrms, 0 Adc with pins 6 and 10 shorted.

4. Turns ratio is with the secondary windings connected in series.

5. Storage and ambient operating temperature range: –40°C to +85°C.

6. Electrical specifications at 25°C.

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**Recommended Land Pattern**

- Dot indicates pin 1
- Weight: 11.6 g
- Termination: Matte tin over nickel over brass
- Tape and reel: 200/13” reel 44 mm tape width

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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.