Magnetics for National Semiconductor LM5030

New RoHS part numbers are shown. Lead was removed from internal parts. The next to the last character is an L to indicate RoHS compliance. (View old data sheet.)

- Specially developed for use with the National Semiconductor LM5030 100V Push-Pull Current Mode PWM Controllers
- Low profile, high efficiency planar transformer: 33, 35 and 60 Watt versions
- Output choke inductor with auxiliary winding: 33, 35 and 60 Watt versions
- Magnetically shielded input choke
- RoHS-compliant. 260°C compatible.
  Planar transformers - Tin over nickel over brass terminations
  MSS6132 - Gold over nickel over phos bronze terminations
  Output choke inductors - Tin-silver over tin over nickel over phos bronze terminations

![Photo](Photo) ![Pricing](Pricing) ![Materials declaration](Materials declaration) ![PDF data sheets](PDF data sheets)

### SPECIFICATIONS

![L versus Frequency](L versus Frequency) ![L versus Current](L versus Current) ![Schematics](Schematics) ![Dimensions](Dimensions) ![Tape and reel specifications](Tape and reel specifications)

<table>
<thead>
<tr>
<th>Part number</th>
<th>Output power (W)</th>
<th>Input voltage range (V)</th>
<th>Output voltage (V)</th>
<th>Output current (A rms)</th>
<th>Primary inductance (mH)</th>
<th>Leakage inductance max (μH)</th>
<th>DCR max (Ohms)</th>
<th>Turns ratio</th>
<th>Tape and reel specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>A9784-BL</td>
<td>33</td>
<td>36 – 75</td>
<td>3.3</td>
<td>10.0</td>
<td>1.30</td>
<td>3.50</td>
<td>0.850</td>
<td>0.016</td>
<td>6 : 1</td>
</tr>
<tr>
<td>A0152-AL</td>
<td>35</td>
<td>36 – 75</td>
<td>5.0</td>
<td>7.0</td>
<td>1.30</td>
<td>2.50</td>
<td>0.850</td>
<td>0.018</td>
<td>4 : 1</td>
</tr>
<tr>
<td>B0310-AL</td>
<td>60</td>
<td>36 – 75</td>
<td>12</td>
<td>5.0</td>
<td>1.30</td>
<td>2.50</td>
<td>0.850</td>
<td>0.060</td>
<td>2 : 1</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code: e.g. B0310-ALD
   Packaging:  
   - **D** = 13” machine-ready reel
   - EIA RS-481 clear plastic tape (250 parts per full reel).
   - **B** = Less than full reel
   In tape, not machine ready. To have a leader and trailer added ($25 charge), use code letter D instead.

2. 15°C temperature rise typical at output current.

3. Inductance measured between pins 1 and 3 at 250 kHz, 0.1 Vrms, 0 Adc.

[View old data sheet](http://www.coilcraft.com/lm5030.cfm)
Magnetics for National Semiconductor LM5030

4 Primary/secondary isolation 1500 Vrms.
5 Operating temperature range: -40°C to +85°C.
6 Electrical specifications at 25°C.

### Input Choke Inductor

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance ±20% (μH)</th>
<th>DCR max (Ohms)</th>
<th>SRF typ (MHz)</th>
<th>Isat (A)</th>
<th>Irms (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSS6132-103ML</td>
<td>10</td>
<td>0.085</td>
<td>39</td>
<td>1.3</td>
<td>1.9</td>
</tr>
</tbody>
</table>

1 When ordering, please specify packaging code: e.g. MSS6132-103ML

**Packaging:**

- **C** = 7” machine-ready reel
  - EIA RS-481 clear plastic tape (350 parts per full reel).
- **B** = Less than full reel
  - In tape, not machine ready. To have a leader and trailer added ($25 charge), use code letter C instead.
- **D** = 13” reel, machine-ready
  - EIA RS-481 clear plastic tape. Factory order only, not stocked (1200 parts per full reel).

2 Inductance measured at 100 kHz, 0.1 Vrms.
3 SRF measured using Agilent/HP 8753D network analyzer and Coilcraft SMD-D test fixture. [Details](#)
4 Isat: DC current at which the inductance drops 10% (typ) from its value without current. [Details](#)
5 Irms: Average current for specified temperature rise from 25°C ambient. [Details](#)
6 Operating temperature range -40°C to +85°C. [Details](#)
7 Electrical specifications at 25°C.

See [Qualification Standards](#) for environmental and test data.

### Output Choke Inductor

<table>
<thead>
<tr>
<th>Part number</th>
<th>Power (W)</th>
<th>L±10% at 0 Adc (μH)</th>
<th>Inductance ±10% (μH)</th>
<th>DCR max (Ohms)</th>
<th>Interwinding isolation (V)</th>
<th>Turns ratio main : aux</th>
<th>Isat (A)</th>
<th>Irms (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A9785-BL</td>
<td>33</td>
<td>7.0</td>
<td>6.71 at 12.0 Adc</td>
<td>0.0066</td>
<td>1.95</td>
<td>1500</td>
<td>1 : 3.2</td>
<td>15.0</td>
</tr>
<tr>
<td>A0153-AL</td>
<td>35</td>
<td>7.0</td>
<td>6.20 at 10.0 Adc</td>
<td>0.0066</td>
<td>1.32</td>
<td>1500</td>
<td>1 : 22</td>
<td>15.5</td>
</tr>
<tr>
<td>B0414-AL</td>
<td>60</td>
<td>13.8</td>
<td>13.8 at 5.0 Adc</td>
<td>0.0098</td>
<td>0.68</td>
<td>1500</td>
<td>1 : 1.09</td>
<td>8.0</td>
</tr>
</tbody>
</table>

1 When ordering, please specify packaging code: e.g. B0414-AL

**Packaging:**

- **D** = 13” machine-ready reel
  - EIA RS-481 clear plastic tape (200 parts per full reel).
- **B** = Less than full reel
  - In tape, not machine ready. To have a leader and trailer added ($25 charge), use code letter D instead.

2 Inductance measured at 10.0 kHz, 0.1 Vrms.
3 Isolation measured from pin 5 to pins 1, 2, 3, 4.
4 Isat: DC current at which inductance drops 12% (typ) from its value without current. [Details](#)
5 Irms: Average current for a 40°C temperature rise above 25°C ambient. [Temperature rise curves](#), [Details](#)
6 Operating temperature range -40°C to +85°C, [Details](#)
7 Electrical specifications at 25°C.

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