**PFC Boost Inductor**

For ON Semiconductor
NCP1607 and NCP1608
PFC Controllers

- Designed to operate in 100 Watt applications.
- Referenced as L_{boost} in application notes AND8353/D and AND8396/D.
- Auxiliary winding provides zero current detection (ZCD) information and can also supply power to the chipset.
- 1000 Vrms winding to winding isolation

**Core material** Ferrite

**Terminations** RoHS compliant tin-silver over tin over copper over copper-steel

**Weight** 45.6 g

**Ambient temperature** −40°C to +85°C with Irms current, +85°C to +125°C with derated current

**Storage temperature** Component: −40°C to +85°C. Tray packaging: −40°C to +80°C

**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** 120 parts per tray

**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

---

**Table 1: Specifications**

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance ±10% (µH)</th>
<th>Inductance at Ipk (µH)</th>
<th>Ipk (A)</th>
<th>DCR max (Ohms)</th>
<th>Leakage inductance max (µH)</th>
<th>Turns ratio</th>
<th>Irms (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>JA4224-AL</td>
<td>400</td>
<td>380</td>
<td>4.0</td>
<td>0.29</td>
<td>0.38</td>
<td>115</td>
<td>10 : 1</td>
</tr>
</tbody>
</table>

1. Inductance measured at 100 kHz, 0.1 V, 0 Adc using an Agilent/ HP 4284A impedance analyzer or equivalent.
2. DCR measured on Cambridge Technology micro-ohmmeter.
3. Leakage inductance is for the primary and measured with pins 6 and 12 shorted.
4. Current that causes a 40°C temperature rise from 25°C ambient.
5. Electrical specifications at 25°C.

**Irms Derating**

![Irms Derating Graph](image)

---

**Core details**

- Dimensions: 1.44 mm × 3.60 mm
- Dot indicates pin 1
- Dimensions are in millimeters

---

**Applications**

- Designed to operate in 100 Watt applications.
- Referenced as L_{boost} in application notes AND8353/D and AND8396/D.
- Auxiliary winding provides zero current detection (ZCD) information and can also supply power to the chipset.
- 1000 Vrms winding to winding isolation

---

**For more information, visit www.coilcraft.com**