PFC Boost Inductor

For ON Semiconductor

NCP1606 PFC Controller

- Designed to operate in 100 Watt applications.
- Referenced as LBOOST in application note AND8282/D.
- Auxiliary winding provides zero current detection (ZCD) information and can also supply power to the NCP1606.
- 1000 Vrms winding to winding and winding to core isolation

Core material Ferrite
Terminations RoHS compliant tin-silver over tin over copper over copper-steel
Weight 27.2 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 36 parts per tray
PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance ±15% (µH)</th>
<th>Inductance at lpk min (µH)</th>
<th>lpk (A)</th>
<th>DCR max (Ohms)2</th>
<th>Leakage inductance max (µH)</th>
<th>Turns ratio</th>
<th>Irms4</th>
</tr>
</thead>
<tbody>
<tr>
<td>FA2890-AL</td>
<td>400.0</td>
<td>340.0</td>
<td>3.7</td>
<td>0.27</td>
<td>0.345</td>
<td>50.0</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 4 and 8 shorted.
4. Current that causes a 40°C temperature rise from 25°C ambient.
5. Electrical specifications at 25°C.

Irms Derating

% of rated Irms vs Ambient temperature (°C)

Irms Derating

Recommended Board Layout

For ON Semiconductor

NCP1606 PFC Controller

- Designed to operate in 100 Watt applications.
- Referenced as LBOOST in application note AND8282/D.
- Auxiliary winding provides zero current detection (ZCD) information and can also supply power to the NCP1606.
- 1000 Vrms winding to winding and winding to core isolation

Core material Ferrite
Terminations RoHS compliant tin-silver over tin over copper over copper-steel
Weight 27.2 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 36 parts per tray
PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance ±15% (µH)</th>
<th>Inductance at lpk min (µH)</th>
<th>lpk (A)</th>
<th>DCR max (Ohms)2</th>
<th>Leakage inductance max (µH)</th>
<th>Turns ratio</th>
<th>Irms4</th>
</tr>
</thead>
<tbody>
<tr>
<td>FA2890-AL</td>
<td>400.0</td>
<td>340.0</td>
<td>3.7</td>
<td>0.27</td>
<td>0.345</td>
<td>50.0</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 4 and 8 shorted.
4. Current that causes a 40°C temperature rise from 25°C ambient.
5. Electrical specifications at 25°C.

Irms Derating

% of rated Irms vs Ambient temperature (°C)

Irms Derating

Recommended Board Layout

For ON Semiconductor

NCP1606 PFC Controller

- Designed to operate in 100 Watt applications.
- Referenced as LBOOST in application note AND8282/D.
- Auxiliary winding provides zero current detection (ZCD) information and can also supply power to the NCP1606.
- 1000 Vrms winding to winding and winding to core isolation

Core material Ferrite
Terminations RoHS compliant tin-silver over tin over copper over copper-steel
Weight 27.2 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 36 parts per tray
PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.