# Planar Transformer for TI LM5122 Synchronous Flyback Controller

- Designed for Texas Instruments LM5122 Synchronous Flyback Controller with Multiple Phase Capability
- 96% efficiency
- 9.0 – 60 V input; up to 12 V, 5 A output
- 1500 Vrms, one minute isolation (hipot) from primary to secondary; 500 Vrms windings to core

**Core material** Ferrite  
**Terminations** Matte tin over nickel over brass.  
**Weight** 24 g  
**Ambient temperature** −40°C to +125°C  
**Storage temperature** Component: −40°C to +125°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)  
**Failures in Time (FIT) / Mean Time Between Failures (MTBF)** 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332  
**Packaging** 25 parts per tray  
**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

## Electrical Specifications

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance at 0 A$^1$ ±10% (µH)</th>
<th>Inductance at Ip$^2$ min (µH)</th>
<th>DCR max$^3$ (mOhms)</th>
<th>Leakage inductance$^4$ max (µH)</th>
<th>Ip$^2$ (Adc)</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA6605-AL</td>
<td>10</td>
<td>9.0</td>
<td>4.7</td>
<td>0.13</td>
<td>12.5</td>
<td>12 V, 5 A</td>
</tr>
</tbody>
</table>

1. Inductance is for the primary and is measured at 250 kHz, 0.1 Vrms.  
2. Ip is the current drawn at minimum input voltage  
3. DCR is for each winding  
4. Leakage inductance is for the primary, measured at 250 kHz, 0.1 Vrms with secondary winding shorted.  
5. Electrical specifications at 25°C.  
Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

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**Recommended Land Pattern**  
Dimensions are in inches and mm.