Medium Power Planar Transformer 2 kW to 5 kW

**FEATURES**
- For high power density DC/DC converter application
- Very low profile and weight
- High efficiency: > 99 %
- Recommended frequency range (50 kHz; 400 kHz)
- Operating temperature range: -55 °C; 120 °C with heat sink dissipation
- Easy-assembly system for cold plates
- Threaded output terminals
- Material temperature grade: 180 °C
- Excellent repeatability

**STANDARD ELECTRICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>INDUCTANCE μH</th>
<th>POWER RANGE W</th>
<th>FREQUENCY kHz</th>
<th>POWER SUPPLY TOPOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLA</td>
<td>49 to 1500</td>
<td>2000 to 5000</td>
<td>50 to 300</td>
<td>Full-bridge; push-pull; half-bridge; forward</td>
</tr>
</tbody>
</table>

**RECOMMENDATIONS FOR MOUNTING**
Announced performances are achieved using a liquid cooling system. The internal temperature must be maintain below 160 °C. The user shall correctly size its own heatsink according to real working conditions of his device.

**EXAMPLE OF TRANSFORMER APPLICATION: 2 kW DC/DC CONVERTER**

<table>
<thead>
<tr>
<th>POWER SUPPLY</th>
<th>TOPOLOGY</th>
<th>FREQUENCY</th>
<th>POWER</th>
<th>INPUT VOLTAGE</th>
<th>OUTPUT VOLTAGE</th>
<th>OUTPUT CURRENT</th>
<th>DUTY CYCLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full bridge with current doubler</td>
<td>100 kHz</td>
<td>2 kW</td>
<td>50 V&lt;sub&gt;DC&lt;/sub&gt;, 110 V&lt;sub&gt;DC&lt;/sub&gt;</td>
<td>30 V</td>
<td>67 A</td>
<td>0.98</td>
<td></td>
</tr>
</tbody>
</table>

**STANDARD ELECTRICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>INDUCTANCE (10 kHz; 0.1 V)</th>
<th>LEAKAGE INDUCTANCE (10 kHz; 0.1 V)</th>
<th>TURN RATIO</th>
<th>POWER LOSSES</th>
<th>EFFICIENCY</th>
<th>HIPOT: PRIMARY / SECONDARY + CORE 1500 V&lt;sub&gt;AC&lt;/sub&gt;</th>
<th>HIPOT: SECONDARY / CORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>91.8 μH ± 25 %</td>
<td>&lt; 100 nH</td>
<td>3:2</td>
<td>&lt; 17 W</td>
<td>&gt; 99 %</td>
<td>&lt; 150 μA</td>
<td>&lt; 150 μA</td>
</tr>
</tbody>
</table>

**ELECTRICAL SCHEMES**

**DIMENSIONS** in millimeters (± 0.5)

Note
- Weight = 170 g
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