PLR Series – Planar Transformer

Features
- 25 watt planar DC-DC transformer
- Forward converter topology
- Low leakage inductance
- Low profile component
- Surface mount
- Operating temperature: -40 °C to +125 °C
- RoHS compliant*

Applications
- Industrial power supplies
- LED lighting
- PoE applications
- Battery Management Systems (BMS)
- Switched-Mode Power Supplies (SMPS)

General Specifications
- Operating Temperature: -40 °C to +125 °C
- Storage Temperature: -40 °C to +105 °C
- Output Power: 25 W
- Transformer Input Voltage: 35-57 VDC
- Switching Frequency: 250 kHz
- Moisture Sensitivity Level: 1

Electrical Specifications @ 25 °C

<table>
<thead>
<tr>
<th>Bourns Part Number</th>
<th>Primary Inductance(^1) (6-7) Min. (μH)</th>
<th>Leakage Inductance(^1) (6-7) w/ (1,3,4,5) shorted Max. (μH)</th>
<th>DCR Max. (mΩ) @ 20 kHz, 1 V</th>
<th>Turns Ratio @ 20 kHz, 1 V</th>
<th>Hi-Pot (Pri-Sec) Ref.</th>
<th>Hi-Pot (Coil-Core) Ref.</th>
<th>Main Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLR025-EI22A05S</td>
<td>85</td>
<td>120 (6-7), 450 (4-5), 11.5 (1-3) (NP1:NP2:NP3)</td>
<td>1500 VDC</td>
<td>5 V / 5 A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLR025-EI22A12S</td>
<td>140</td>
<td>140 (6-7), 510 (4-5), 90 (1-3) (NP1:NP2:NP3)</td>
<td>750 VDC</td>
<td>12 V / 2.1 A</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: 1. Measuring conditions 250 kHz, 1 V

How To Order

<table>
<thead>
<tr>
<th>Model</th>
<th>Power Rating</th>
<th>Core and Size</th>
<th>Output Voltage</th>
<th>PCB type</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLR = Planar Transformer</td>
<td>25 W</td>
<td>EI22 = EIW 21.8</td>
<td>5 V</td>
<td>S = SMD</td>
</tr>
</tbody>
</table>

Materials
- PCB: FR4 Tg135C
- Tape: KAPTON #201
- Core: DMR44
- Glue: Silicone

Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov
PLR Series – Planar Transformer

Product Dimensions

<table>
<thead>
<tr>
<th>TOP VIEW</th>
<th>BOTTOM VIEW</th>
<th>SIDE VIEW</th>
<th>FRONT VIEW</th>
<th>DIMENSIONS: MM (INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>34.0 ± 0.3</td>
<td>2.9 ± 0.2</td>
<td>1.27 ± 0.4</td>
<td>1.6 ± 0.16</td>
<td>34.8 ± 0.2 (1.378)</td>
</tr>
<tr>
<td>(1.339 ± .012)</td>
<td>(.079 ± .008)</td>
<td>(.050 ± .016)</td>
<td>(.063 ± .006)</td>
<td></td>
</tr>
<tr>
<td>16.8 (.661) MAX.</td>
<td>4.1 ± 0.2</td>
<td>7.04 ± 0.41</td>
<td>2.5 ± 0.4/.0.2</td>
<td>1.8 ± .071 (7 PLCS.)</td>
</tr>
<tr>
<td>16.0 ± 0.5 (.630 ± .020)</td>
<td>3.2 ± 0.2</td>
<td>(.126 ± .008)</td>
<td>(.098 ± .018~.012)</td>
<td>10.5 ± 0.2 (0.413 ± .008)</td>
</tr>
<tr>
<td>23.0 (.906) MAX.</td>
<td>(.079 ± .008)</td>
<td>(.050 ± .016)</td>
<td></td>
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</tbody>
</table>

Unless otherwise specified, all tolerances are ± 0.25 / (.010)

Lead-Free Soldering Profile

<table>
<thead>
<tr>
<th>Preheating</th>
<th>Soldering</th>
<th>Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temp.</td>
<td>Time</td>
<td>Temp.</td>
</tr>
<tr>
<td>T1</td>
<td>140 °C</td>
<td>T2</td>
</tr>
</tbody>
</table>

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Primary and secondary windings to be connected in parallel on PCB.

Packaging Specifications

300 pcs. per reel, 3 reels per carton
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