SMT Power Inductors - LPO3010

- Miniature power inductors – 3 × 3 mm, only 1.0 mm tall
- Low DCR, excellent current handling

**Designers Kit C388** contains 3 of each part

**Core material** Ferrite

**Terminations** RoHS compliant silver-palladium-platinum-glass frit. Other terminations available at additional cost.

**Weight** 20 – 22 mg

**Ambient temperature** –40°C to +85°C with Irms current.

**Maximum part temperature** +125°C (ambient + temp rise)

**Storage temperature** Component: –40°C to +125°C

**Tape and reel packaging:** –40°C to +85°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** 1000/7” reel; 3500/13” reel Plastic tape: 12 mm wide, 0.23 mm thick, 8 mm pocket spacing, 1.14 mm pocket depth

**Recommended pick and place nozzle** OD: 3 mm; ID: ≤1.5 mm

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf

1. When ordering, please specify **termination** and **packaging** codes:

   **LPO3010-473ML**

   **Termination:** L = RoHS compliant silver-palladium-platinum-glass frit
   **Special order:** T = RoHS tin-silver-copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).

   **Packaging:** C = 7” machine-ready reel. EIA-481 embossed plastic tape (1000 parts per full reel).
   B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter C instead.
   D = 13” machine-ready reel. EIA-481 embossed plastic tape (3500 parts per full reel).

2. Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4192A.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using an Agilent/HP 8753ES or equivalent.

5. DC current at which the inductance drops 10% (typ) from its value without current.

6. Current that causes a 40°C temperature rise from 25°C ambient.

7. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

### Table: SMT Power Inductors - LPO3010

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance</th>
<th>DCR</th>
<th>SRF</th>
<th>Isat</th>
<th>Irms</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPO3010-102NL</td>
<td>1.0 ±30%</td>
<td>0.140</td>
<td>200</td>
<td>1.7</td>
<td>1.4</td>
</tr>
<tr>
<td>LPO3010-122NL</td>
<td>1.2 ±30%</td>
<td>0.160</td>
<td>190</td>
<td>1.6</td>
<td>1.4</td>
</tr>
<tr>
<td>LPO3010-152NL</td>
<td>1.5 ±30%</td>
<td>0.200</td>
<td>150</td>
<td>1.3</td>
<td>1.0</td>
</tr>
<tr>
<td>LPO3010-222NL</td>
<td>2.2 ±30%</td>
<td>0.265</td>
<td>140</td>
<td>1.2</td>
<td>0.90</td>
</tr>
<tr>
<td>LPO3010-322NL</td>
<td>3.3 ±30%</td>
<td>0.335</td>
<td>100</td>
<td>0.96</td>
<td>0.60</td>
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<tr>
<td>LPO3010-472NL</td>
<td>4.7 ±30%</td>
<td>0.570</td>
<td>80</td>
<td>0.76</td>
<td>0.50</td>
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<tr>
<td>LPO3010-682NL</td>
<td>6.8 ±30%</td>
<td>0.650</td>
<td>68</td>
<td>0.68</td>
<td>0.47</td>
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<tr>
<td>LPO3010-822NL</td>
<td>8.2 ±30%</td>
<td>1.00</td>
<td>60</td>
<td>0.64</td>
<td>0.45</td>
</tr>
<tr>
<td>LPO3010-103ML</td>
<td>10 ±20%</td>
<td>1.15</td>
<td>50</td>
<td>0.50</td>
<td>0.45</td>
</tr>
<tr>
<td>LPO3010-153ML</td>
<td>15 ±20%</td>
<td>1.57</td>
<td>35</td>
<td>0.42</td>
<td>0.40</td>
</tr>
<tr>
<td>LPO3010-223ML</td>
<td>22 ±20%</td>
<td>2.20</td>
<td>30</td>
<td>0.37</td>
<td>0.35</td>
</tr>
<tr>
<td>LPO3010-333ML</td>
<td>33 ±20%</td>
<td>2.80</td>
<td>14</td>
<td>0.31</td>
<td>0.29</td>
</tr>
<tr>
<td>LPO3010-473ML</td>
<td>47 ±20%</td>
<td>4.60</td>
<td>12</td>
<td>0.30</td>
<td>0.28</td>
</tr>
</tbody>
</table>

**SPICE models** on our web site
SMT Power Inductors - LPO3010 Series

Typical L vs Frequency

Typical L vs Current

Typical ESR vs Frequency

Recommended Land Pattern

Dimensions are in inches / mm

RoHS COMPLIANT