# Shielded Power Inductors – LPS3030

- Small 3.0 x 3.0 mm footprint
- Very low DCR; excellent current handling
- AEC-Q200 Grade 1 qualified (–40°C to +125°C ambient)
- Samples of all values are available in Designer’s Kit C485

### Core material
- Ferrite

### Environmental
- RoHS compliant, halogen free

### Terminations
- RoHS compliant matte tin over nickel over silver.
- Other terminations available at additional cost.

### Weight
- 80 – 90 mg

### Ambient temperature
- –40°C to +125°C with (40°C rise) Irms current.
- Storage temperature: Component: –40°C to +165°C.
- Tape and reel packaging: –40°C to +80°C

### Moisture Sensitivity Level (MSL)
- 1 (unlimited floor life at <30°C / 85% relative humidity)

### 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.

### Part number

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance</th>
<th>DCR max</th>
<th>SRF typ</th>
<th>Isat (A)</th>
<th>Irms (A)</th>
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<tbody>
<tr>
<td>LPS3030-103MR</td>
<td>10</td>
<td>0.150 42.8</td>
<td>0.64 68.70</td>
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1. Please specify termination and packaging codes:
   - LPS3030-824MR

   - Termination: R = RoHS compliant matte tin over nickel over silver.
   - Special order, added cost: Q = RoHS tin-silver-copper (95.5/4/0.5) or P = non-RoHS tin-lead (63/37).
   - Packaging: C = 7” machine-ready reel. EIA-481 embossed plastic tape (600 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).
   - D = 13” machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (2000 parts per full reel).

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4192A impedance analyzer or equivalent. Inductance at 1 MHz is the same for parts with SRF ≥10 MHz.

3. DCR measured on a micro-ohmmeter.

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

5. DC current at 25°C that causes the specified inductance drop from its value without current. Click for temperature derating information.

6. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. Click for temperature derating information.

7. Electrical specifications at 25°C. Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

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Shielded SMT Power Inductors – LPS3030 Series

L vs Frequency

Typical L vs Current

Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.005 in / 0.13 mm. For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part. Dimensions before mounting can be an additional 0.005 inch / 0.13 mm.

Packaging 600/7” reel; 2000/13” reel; Plastic tape: 12 mm wide, 0.30 mm thick, 8 mm pocket spacing, 3.3 mm pocket depth