**Shielded Power Inductors – PFL4514**

- Low cost, low profile miniature power inductor
- Only 1.4 mm high; requires a mere 16 mm² of board space
- Provides current handling of much larger inductors; up to 4.2 A.

**Core material** Composite

**Core and winding loss** See www.coilcraft.com/coreloss

**Environmental** RoHS compliant, halogen free

**Terminations** RoHS compliant matte tin over nickel over silver-platinum-glass frit. Other terminations available at additional cost.

**Weight** 73.5 mg

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

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

**Storage temperature** Component: –40°C to +125°C. Tape and reel packaging: –40°C to +80°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**

- **Part number**
- **Inductance** ±20% (µH) typ   max
- **DCR** (mOhms) typ   max
- **SRF** typ
- **I<sub>sat</sub>** (A)<sup>c</sup>
- **I<sub>rms</sub>** (A)<sup>6</sup>

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance ±20% (µH)</th>
<th>DCR (mOhms)&lt;sup&gt;c&lt;/sup&gt;</th>
<th>SRF typ</th>
<th>I&lt;sub&gt;sat&lt;/sub&gt; (A)&lt;sup&gt;c&lt;/sup&gt;</th>
<th>I&lt;sub&gt;rms&lt;/sub&gt; (A)&lt;sup&gt;6&lt;/sup&gt;</th>
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</table>

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

PFL4514-223M**E**

**Termination:** E = RoHS compliant matte tin over nickel over silver.

- Special order, added cost:
  - **Q** = RoHS tin-silver-copper (95.5/4/0.5) or 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. Factory order only, not stocked (5000 parts per full reel).

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Vdc.

3. DCR measured using a micro-ohmmeter.

4. SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.

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.
PFL4514 Series

L vs Current

L vs Frequency

Terminal wraparound: approx 0.01/0.254 both ends

Dimensions are in inches

Recommended Land Pattern

RoHS Compliant
Halogen Free

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.