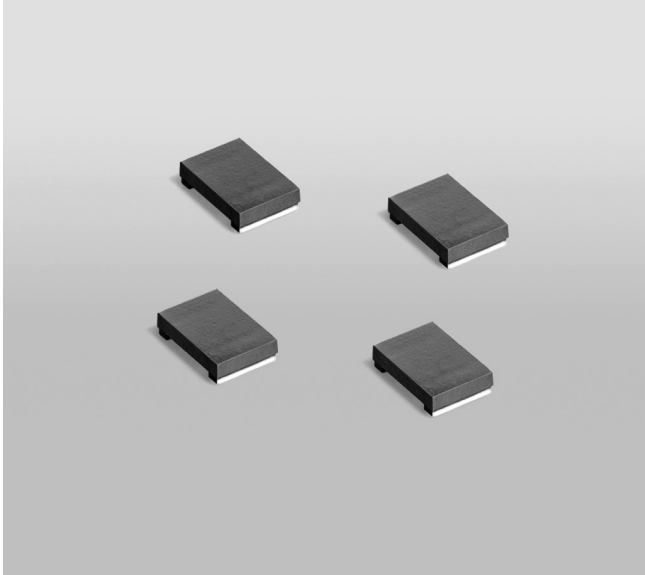


# Shielded Power Inductors – PFL4514



- Low cost, low profile miniature power inductor
- Only 1.4 mm high; requires a mere 16 mm<sup>2</sup> 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](http://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** 1000/7" reel; 5000/13" reel. Plastic tape: 12 mm wide, 0.21 mm thick, 8 mm pocket spacing, 1.65 mm pocket depth

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR (mOhms) <sup>3</sup>		SRF typ <sup>4</sup> (MHz)	Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>	
		typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
PFL4514-102ME_	1.0	80	96	300	2.8	3.8	4.2	1.5	2.0
PFL4514-222ME_	2.2	115	135	240	1.8	2.6	3.0	1.2	1.5
PFL4514-472ME_	4.7	220	260	180	1.4	1.9	2.1	0.89	1.2
PFL4514-682ME_	6.8	400	480	170	1.1	1.5	1.7	0.86	1.2
PFL4514-103ME_	10	680	800	140	0.97	1.2	1.4	0.49	0.67
PFL4514-153ME_	15	1140	1350	110	0.77	0.99	1.1	0.44	0.58
PFL4514-223ME_	22	2330	2750	75	0.59	0.74	0.79	0.31	0.41

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

**PFL4514-223MEC**

**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 **P** = 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. Factory order only, not stocked (5000 parts per full reel).

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

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.



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Document 849-1 Revised 09/13/15

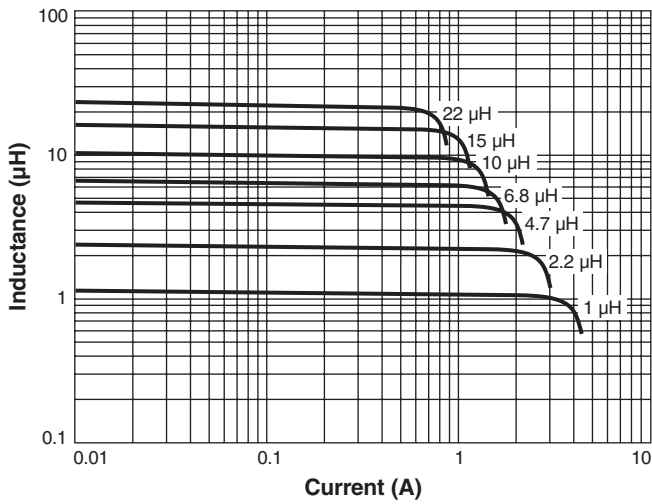
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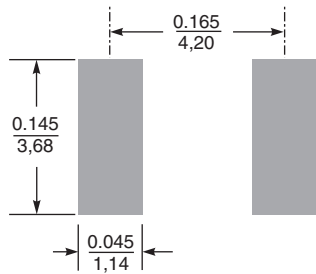
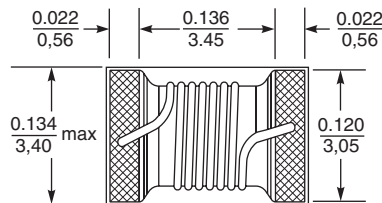
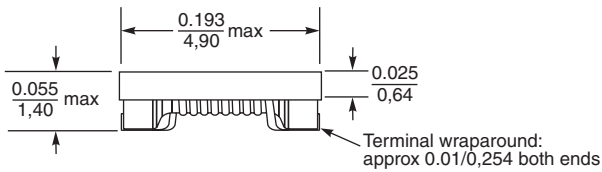
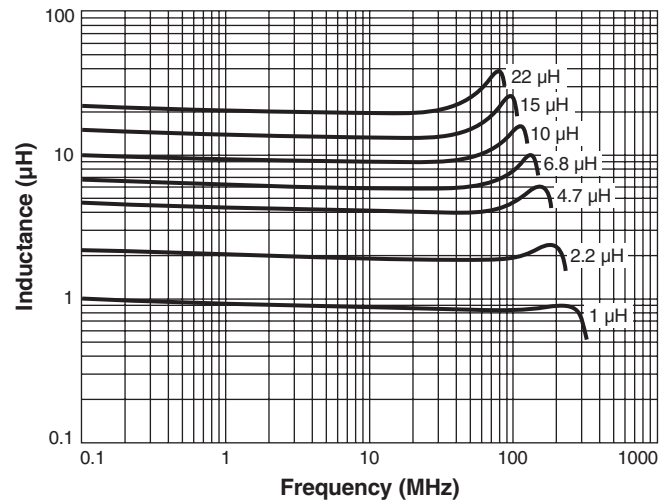


# PFL4514 Series

## L vs Current



## L vs Frequency



**Recommended Land Pattern**

Dimensions are in  $\frac{\text{inches}}{\text{mm}}$



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Document 849-2 Revised 09/13/15

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