

# Shielded Power Inductors – PFL1005



- Smallest power inductor – only 0.71 mm high, 1.14 x 0.635 mm footprint
- Handles current up to 2800 mAmps
- AEC-Q200 Grade 1 (–40°C to +125°C ambient)

**Core material** Composite

**Core and winding loss** See [www.coilcraft.com/coreloss](http://www.coilcraft.com/coreloss)

**Weight** 1.3 – 1.8 mg

**Environmental** RoHS compliant, halogen free

**Terminations** RoHS compliant matte tin over nickel over silver-palladium-glass frit.

**Ambient temperature** –40°C to +125°C.

**Maximum part temperature** +140°C (ambient + temp rise). [Derating.](#)

**Storage temperature** Component: –40°C to +140°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

**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><br>±20% (nH) | DCR (Ohms) <sup>3</sup> |       | SRF typ <sup>4</sup><br>(MHz) | Isat (mA) <sup>5</sup> |          |          | Irms (mA) <sup>6</sup> |           |
|--------------------------|--------------------------------------|-------------------------|-------|-------------------------------|------------------------|----------|----------|------------------------|-----------|
|                          |                                      | typ                     | max   |                               | 10% drop               | 20% drop | 30% drop | 20°C rise              | 40°C rise |
| PFL1005-18NMRW           | 18                                   | 0.032                   | 0.042 | 3400                          | 2000                   | 2500     | 2600     | 1400                   | 2000      |
| PFL1005-36NMRW           | 36                                   | 0.034                   | 0.043 | 2500                          | 1500                   | 2400     | 2800     | 1400                   | 2000      |
| PFL1005-60NMRW           | 60                                   | 0.042                   | 0.050 | 2100                          | 1300                   | 1900     | 2100     | 1200                   | 1600      |
| PFL1005-101MRW           | 100                                  | 0.059                   | 0.075 | 2200                          | 1000                   | 1500     | 1900     | 1100                   | 1500      |
| PFL1005-181MRW           | 180                                  | 0.19                    | 0.21  | 1250                          | 700                    | 880      | 1100     | 900                    | 1200      |
| PFL1005-271MRW           | 270                                  | 0.22                    | 0.24  | 920                           | 450                    | 650      | 740      | 700                    | 910       |
| PFL1005-391MRW           | 390                                  | 0.45                    | 0.51  | 770                           | 380                    | 510      | 550      | 450                    | 570       |
| PFL1005-561MRW           | 560                                  | 0.48                    | 0.54  | 620                           | 300                    | 440      | 490      | 410                    | 530       |
| PFL1005-721MRW           | 720                                  | 0.62                    | 0.68  | 560                           | 280                    | 400      | 450      | 370                    | 470       |
| PFL1005-102MRW           | 1000                                 | 0.97                    | 1.08  | 460                           | 270                    | 350      | 380      | 310                    | 400       |

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

↓  
**PFL1005-102MRW**

**Packaging:** **W** = 7" machine-ready reel. EIA-481 punched paper tape (2000 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

**U** = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from U to W.

2. Inductance tested at 7.9 MHz, 0.1 Vrms using a Coilcraft SMD-F test fixture and Coilcraft-provided correlation pieces with an Agilent/HP 4286 impedance analyzer.

3. DCR measured on 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.

**COILCRAFT** ACCURATE  
**PRECISION** REPEATABLE  
MEASUREMENTS  
SEE WEB SITE **TEST FIXTURES**



[www.coilcraft.com](http://www.coilcraft.com)

**US** +1-847-639-6400 [sales@coilcraft.com](mailto:sales@coilcraft.com)

**UK** +44-1236-730595 [sales@coilcraft-europe.com](mailto:sales@coilcraft-europe.com)

**Taiwan** +886-2-2264 3646 [sales@coilcraft.com.tw](mailto:sales@coilcraft.com.tw)

**China** +86-21-6218 8074 [sales@coilcraft.com.cn](mailto:sales@coilcraft.com.cn)

**Singapore** + 65-6484 8412 [sales@coilcraft.com.sg](mailto:sales@coilcraft.com.sg)

Document 739-1 Revised 07/26/19

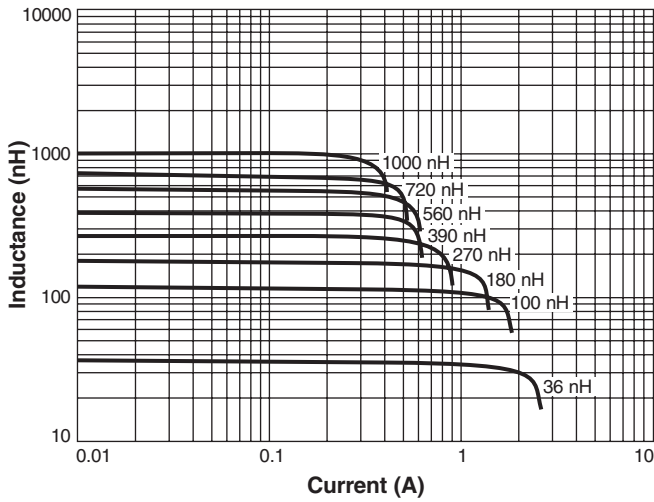
© Coilcraft Inc. 2021

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.

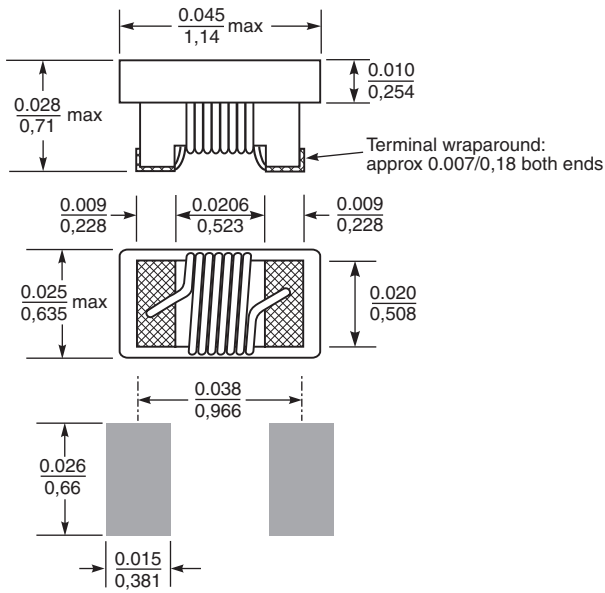
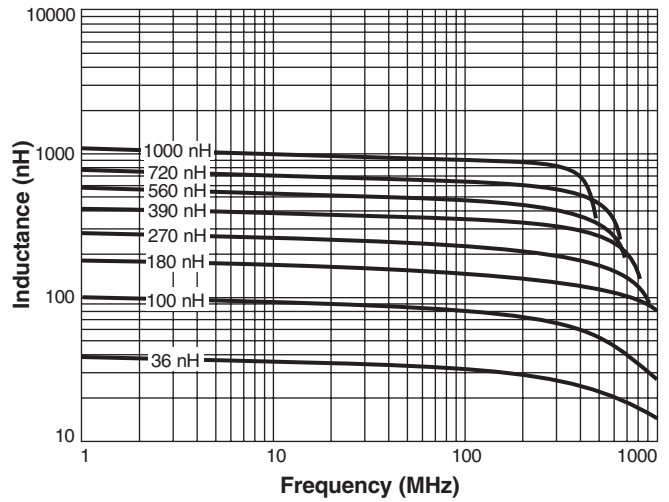


# PFL1005 Series (0402)

## Typical L vs Current



## Typical L vs Frequency



### Recommended Land Pattern

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

**Packaging** 2000 per 7" reel Paper tape: 8 mm wide, 0.68 mm thick, 2 mm pocket spacing



**US** +1-847-639-6400 sales@coilcraft.com  
**UK** +44-1236-730595 sales@coilcraft-europe.com  
**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw  
**China** +86-21-6218 8074 sales@coilcraft.com.cn  
**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

Document 739-2 Revised 07/26/19

© Coilcraft Inc. 2021

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.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Fixed Inductors](#) category:*

*Click to view products by [Coilcraft](#) manufacturer:*

Other Similar products are found below :

[CR43NP-680KC](#) [CR54NP-820KC](#) [CR54NP-8R5MC](#) [CTX32CT-100](#) [70F224AI](#) [MGDQ4-00004-P](#) [MHL1ECTTP18NJ](#) [MHL1JCTTD12NJ](#)  
[PE-51506NL](#) [PE-53601NL](#) [PE-53602NL](#) [PE-53630NL](#) [PE-53824SNLT](#) [PE-92100NL](#) [PG0434.801NLT](#) [PG0936.113NLT](#) [9310-16](#) [PM06-2N7](#) [PM06-39NJ](#) [A01TK](#) [1206CS-471XJ](#) [HC2-2R2TR](#) [HC2LP-R47-R](#) [HC3-2R2-R](#) [1206CS-151XG](#) [RCH664NP-140L](#) [RCH664NP-4R7M](#)  
[RCH8011NP-221L](#) [RCP1317NP-332L](#) [RCP1317NP-391L](#) [RCR1010NP-470M](#) [RCR110DNP-331L](#) [DH2280-4R7M](#) [DS1608C-106](#) [ASPI-4020HI-R10M-T](#) [B10TJ](#) [B82477P4333M](#) [B82498B3101J000](#) [B82498B3680J000](#) [ELJ-RE27NJF2](#) [1812CS-153XJ](#) [1812CS-183XJ](#) [1812CS-223XJ](#) [1812LS-104XJ](#) [1812LS-105XJ](#) [1812LS-124XJ](#) [1812LS-154XJ](#) [1812LS-223XJ](#) [1812LS-224XJ](#) [1812LS-563XJ](#)