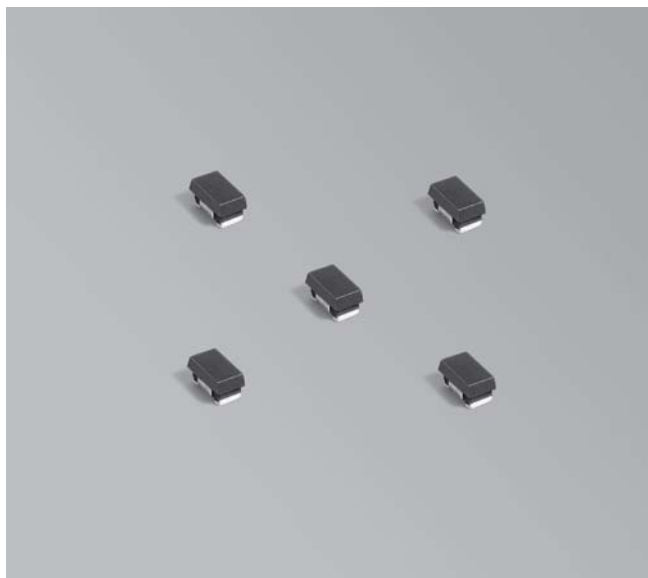


**NEW!**

# Shielded Power Inductors – PFL1610



- Low cost, low profile 0603 size power inductor
- Only 1 mm high, and requires less than 2 mm<sup>2</sup> of board space
- Provides the current handling of much larger inductors; up to 2350 mA.

**Designer's Kit C433** contains 20 each of all values

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

**Weight** 5.4 – 5.7 mg

**Ambient temperature** –40°C to +85°C with I<sub>rms</sub> current, +85°C to +125°C with derated current

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

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** 2000 per 7" reel Paper tape: 8 mm wide, 1.68 mm thick, 2 mm pocket spacing

**PCB washing** Only pure water or alcohol recommended

| Part number <sup>1</sup> | Inductance <sup>2</sup><br>±20% (µH) | DCR (mOhms) <sup>3</sup> |     | SRF typ <sup>4</sup><br>(MHz) | Isat (mA) <sup>5</sup> |          |          | I <sub>rms</sub> (mA) <sup>6</sup> |           |
|--------------------------|--------------------------------------|--------------------------|-----|-------------------------------|------------------------|----------|----------|------------------------------------|-----------|
|                          |                                      | typ                      | max |                               | 10% drop               | 20% drop | 30% drop | 20°C rise                          | 40°C rise |
| PFL1610-331ME_           | 0.33                                 | 85                       | 98  | 644                           | 1140                   | 1860     | 2350     | 1100                               | 1500      |
| PFL1610-471ME_           | 0.47                                 | 183                      | 205 | 540                           | 1000                   | 1700     | 1820     | 770                                | 1000      |
| PFL1610-681ME_           | 0.68                                 | 203                      | 223 | 423                           | 800                    | 1500     | 1630     | 720                                | 970       |
| PFL1610-102ME_           | 1.0                                  | 331                      | 365 | 351                           | 650                    | 1000     | 1260     | 570                                | 750       |

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

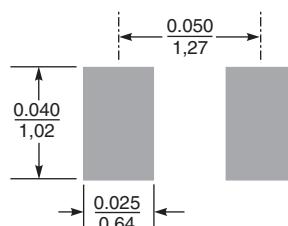
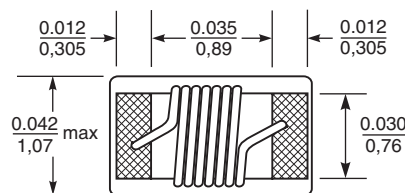
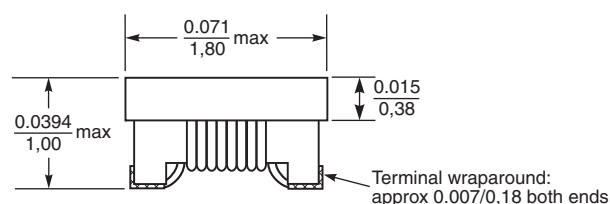
**PFL1610-102MEW**

**Packaging:** **W** = 7" machine-ready reel. EIA-481 punched paper tape (2000 parts per full reel).

**U** = Less than full reel. In tape, but not machine ready.  
To have a leader and trailer added (\$25 charge), use code letter W instead.

- Inductance tested at 7.9 MHz, 0.1 V<sub>rms</sub> using a Coilcraft SMD-F test fixture with an Agilent/HP 4286 impedance analyzer and Coilcraft-provided correlation pieces.
- DCR measured using a micro-ohmmeter.
- SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.
- DC current at which the inductance drops the specified amount from its value without current.
- Current that causes the specified temperature rise from 25°C ambient.
- Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



**Recommended  
Land Pattern**

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

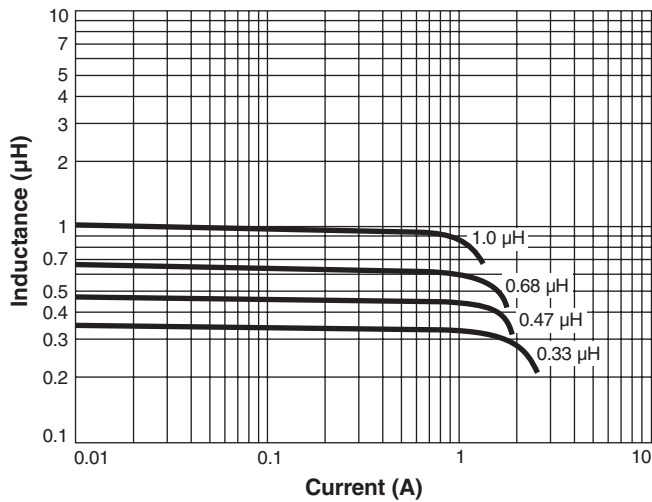
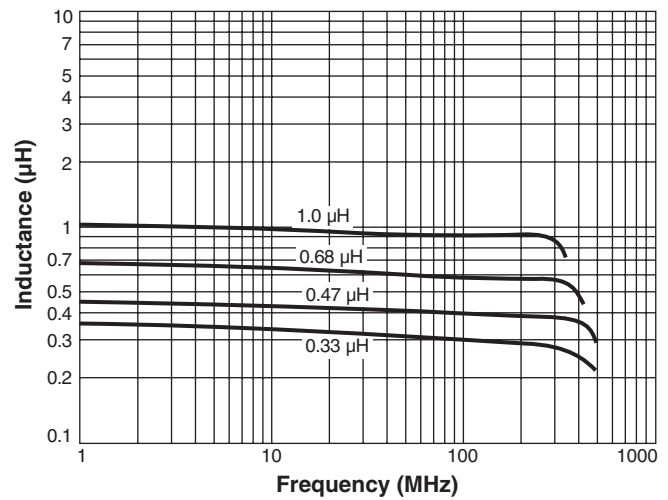
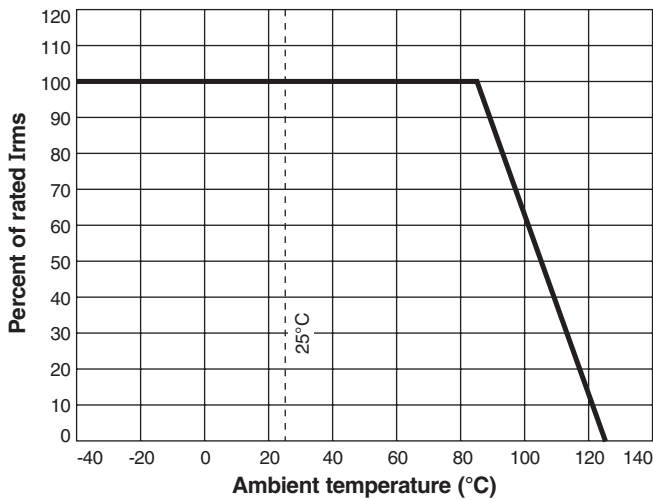
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Specifications subject to change without notice.  
Please check our website for latest information.

Document 753-1 Revised 12/14/09

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**NEW!****PFL1610 Series****L vs Current****L vs Frequency****Irms Derating**

**Coilcraft**®

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