

SMT Power Inductors

Unshielded Drum Core - PF0504NL Series



- Height:** 11.43 Max
- Footprint:** 18.54mm x 15.24mm Max
- Current Rating:** up to 20A
- Inductance Range:** 0.68μH to 150μH
- 260°C reflow peak temperature qualified
- Leaded technology compatible

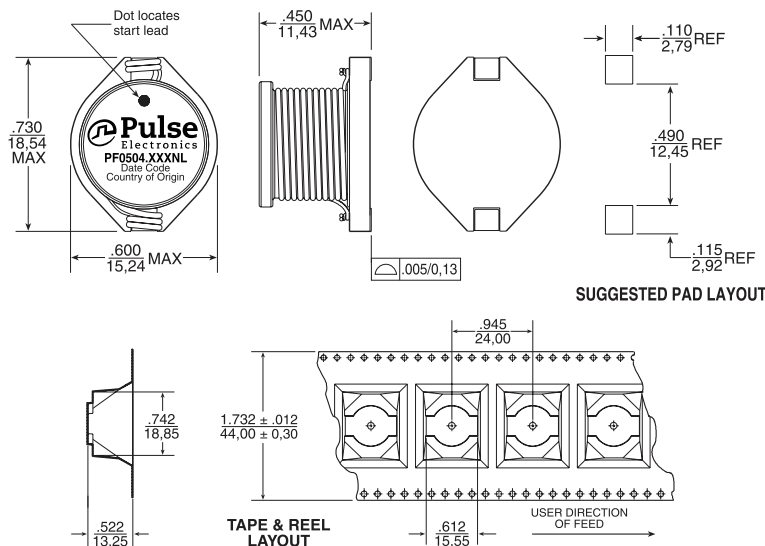
Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C⁶

| Part ⁵ Number | Inductance ¹ @ Irated (μH ± 15%) | Irated ² (A) | DCR (MAX) (mΩ) | Inductance @ 0A _{dc} (μH ± 20%) | Saturation Current ³ Isat (A) | Heating Current ⁴ Ibc (A) |
|--------------------------|---|-------------------------|----------------|--|--|--------------------------------------|
| PF0504.681NL | 0.68 | 20.0 | 2.0 | 0.68 | 64 | 20.0 |
| PF0504.122NL | 1.2 | 17.1 | 2.6 | 1.2 | 48 | 17.7 |
| PF0504.222NL | 2.2 | 14.7 | 3.7 | 2.2 | 35 | 14.7 |
| PF0504.332NL | 3.3 | 13.7 | 4.3 | 3.3 | 29 | 13.7 |
| PF0504.392NL | 3.9 | 11.7 | 6.7 | 3.9 | 26 | 11.7 |
| PF0504.472NL | 4.7 | 10.8 | 6.9 | 4.7 | 24 | 10.8 |
| PF0504.682NL | 6.8 | 9.0 | 9.8 | 6.8 | 20 | 9.0 |
| PF0504.103NL | 10 | 7.1 | 15 | 10 | 16 | 7.1 |
| PF0504.183NL | 18 | 6.0 | 25 | 18 | 13 | 6.0 |
| PF0504.223NL | 22 | 5.4 | 27 | 22 | 11 | 5.4 |
| PF0504.333NL | 33 | 4.4 | 42 | 33 | 9 | 4.4 |
| PF0504.403NL | 40 | 4.0 | 50 | 40 | 8 | 4.0 |
| PF0504.473NL | 47 | 3.5 | 55 | 47 | 7 | 3.5 |
| PF0504.104NL | 100 | 2.3 | 153 | 100 | 5 | 2.3 |
| PF0504.154NL | 150 | 2 | 200 | 150 | 4 | 2 |

Mechanical

Schematic

PF0504.XXXNL



Weight6.0 grams
 Tape & Reel160/reel
 Dimensions: $\frac{\text{Inches}}{\text{mm}}$
 Unless otherwise specified,
 all tolerances are $\pm \frac{.004}{0,10}$

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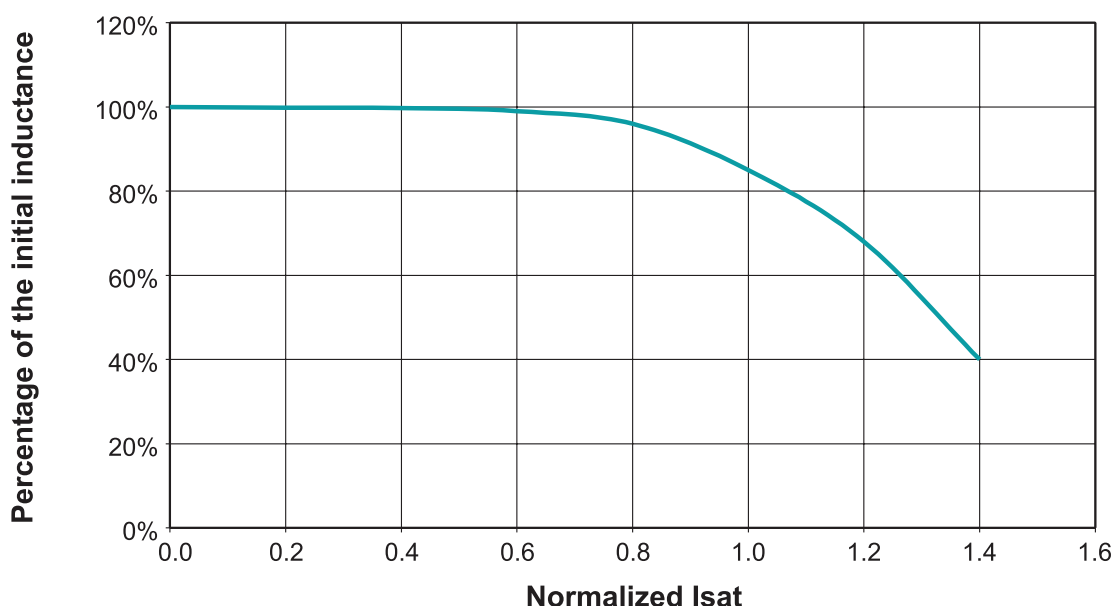
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Notes from Tables:

1. Inductance at I_{rated} is a typical inductance value measured when the inductor is subjected to the rated current.
2. The rated current listed is the lower of the saturation current @ 25°C or the heating current.
3. The saturation current, I_{sat} , is the current at which the component inductance drops by 20% (maximum) at an ambient temperature of 25°C. This current is determined by placing the component in the specified ambient environment and applying a short duration pulse current (to eliminate self-heating effects) to the component.
4. The heating current, I_{bc} , is the DC current required to raise the component temperature by approximately 40°C. The heating current is determined by mounting the component on a typical PCB and applying current for 30 minutes.
5. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PF0504.681NL becomes PF0504.681NLT). Pulse complies to industry standard tape and reel specification EIA481.
6. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

Inductance vs Current Characteristics



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