





-  **Current Rating:** up to 28Apk
-  **Inductance Range:** 0.46uH to 10.5uH
-  **Height:** 6.4mm Max
-  **Footprint:** 7.6mm x 7.4mm Max

Electrical Specifications @ 25°C — Operating Temperature -40°C to +130°C¹

Part Number	Inductance @I _{rated} ² (μH TYP)	I _{rated} ³ (A)	Controlled Electrical Specs		Saturation Current Isat ⁵ (A TYP)		Heating Current ⁶ I _{dc} (A TYP)	Core Loss ⁷ Factor (K2)
			DCR ⁴ (mΩ) ±8%	Inductance @ 0Adc (μH ± 20%)	25°C	100°C		
PG0871.461NL	0.42	24.0	1.5	0.46	28.0	25.0	24.0	14.196
PG0871.681NL	0.64	19.0	2.3	0.68	24.5	20.0	19.0	10.647
PG0871.821NL	0.71	19.0	2.3	0.82	21.0	18.0	19.0	10.647
PG0871.102NL	0.80	17.5	2.3	1.00	17.5	15.5	19.0	10.647
PG0871.152NL	1.20	13.5	4.4	1.5	14	12.5	13.5	8.517
PG0871.222NL	2.00	9.5	7.6	2.20	12.0	10.5	9.5	7.098
PG0871.332NL	3.00	7.1	13.5	3.30	10.5	9.5	7.1	5.324
PG0871.472NL	4.50	6.7	17.0	4.70	9.3	8.0	6.7	4.259
PG0871.682NL	6.40	5.8	20.0	6.80	7.8	6.5	5.8	3.549
PG0871.922NL	8.80	4.9	30.0	9.20	6.7	5.5	4.9	3.042
PG0871.103NL	9.50	4.7	31.5	10.50	6.3	5.3	4.7	2.839

NOTES:

- Actual temperature of the component during system operation (ambient plus temperature rise) must be within the standard operating range.
- Inductance at I_{rated} is a typical inductance value for the component taken at rated current.
- The rated current as listed is either the saturation current (@ 25°C) or the heating current depending on which value is lower.
- The DCR of the part is measured at an ambient temperature of 20°C±3°C from point a and b as shown below on the mechanical drawing.
- The saturation current, Isat, is the current at which the component inductance drop by 20% (typical) 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 effect) to the component.
- The heating current, I_{dc}, 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. The temperature is measured by placing the thermocouple on top of the unit under test. Take note that the components' performance varies depending on the system condition. IT is suggested that the component be tested at the system level, to verify the temperature rise of the component during system operation.
- Core loss approximation is based on published core data:

$$\text{Core Loss} = K1 * (f)^{1.324} * (\Delta B)^{2.422} \text{ in mW}$$

$$K1 = 71.56 \text{ E-4}$$

$$\Delta B = K2 * V_{\text{usec}} \text{ in mT}$$

$$f = \text{switching frequency in MHz}$$

$$K1 \text{ \& } K2 = \text{core loss factors}$$

$$V = \text{Voltage across the component in V}$$

$$V_{\text{usec}} = V * D / f$$

$$D = \text{Duty cycle}$$
- Unless otherwise specified, all testing is made at 100kHz, 0.1Vac
- Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PG0871.222NL becomes PG0871.222NLT). Pulse complies to industry standard tape and reel specification EIA481. The tape and reel for this product has a width (W=16.0mm), pitch (Po=12.0mm) and depth (Ko=6.8 mm).

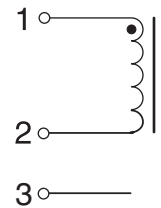
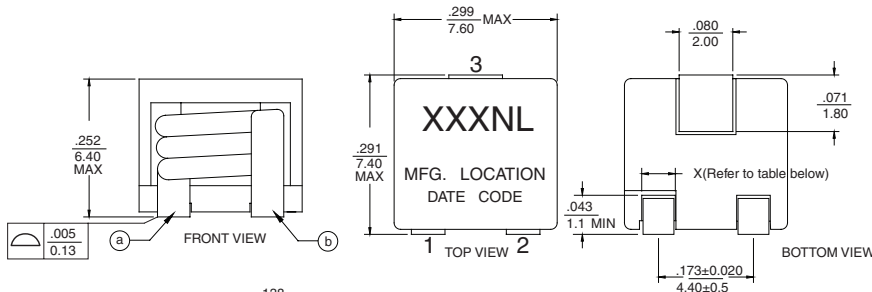
SMT Power Inductors

Round Wires - PG0871NL series



Mechanicals

Schematics



* Pin 3 is for mechanical support only and has no internal electrical connection.

Weight 1.1 grams

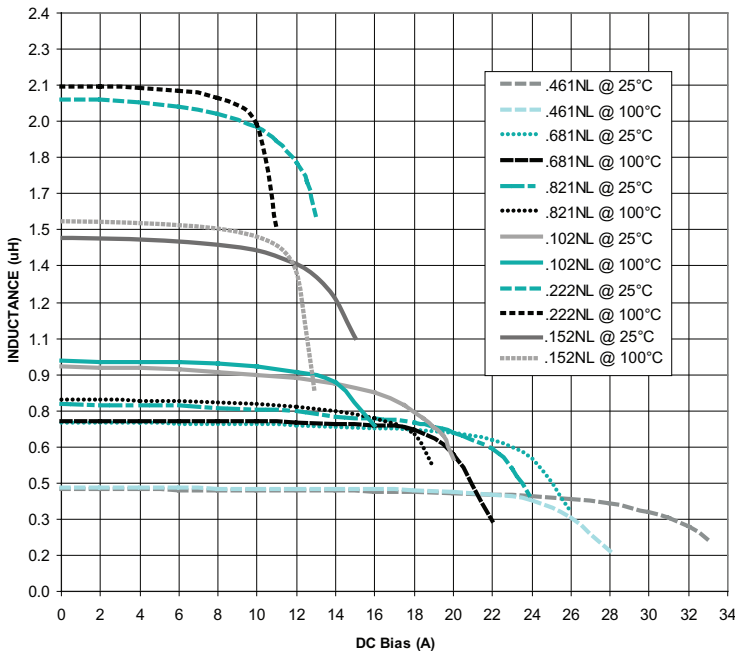
Tape & Reel 700/reel

Dimensions: Inches
mm

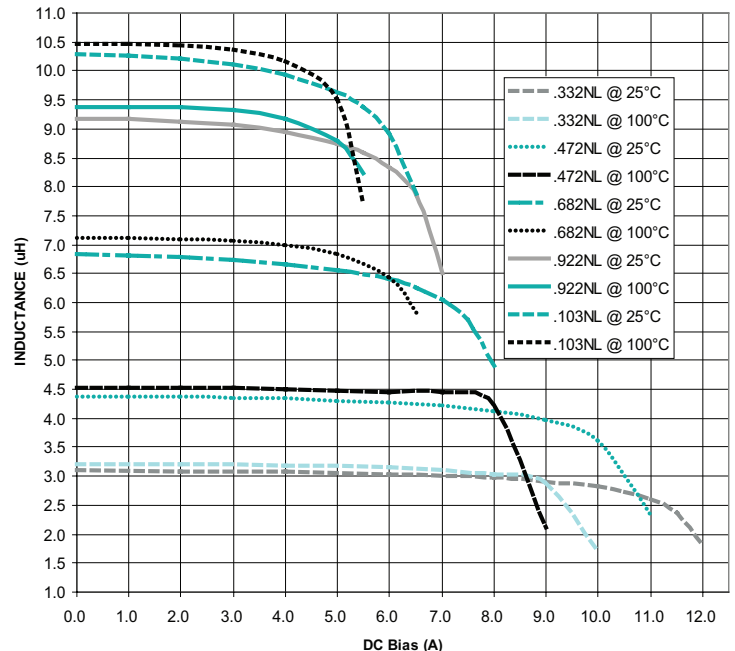
Unless otherwise specified,
all tolerances are ± .010
0.25

PART NUMBER	X
PG0871.461NL	1.2±0.2mm
PG0871.681NL	1.2±0.2mm
PG0871.821NL	1.2±0.2mm
PG0871.102NL	1.2±0.2mm
PG0871.222NL	0.9±0.2mm
PG0871.332NL	0.8±0.2mm
PG0871.472NL	0.8±0.2mm
PG0871.682NL	0.8±0.2mm
PG0871.922NL	0.6±0.2mm
PG0871.103NL	0.6±0.2mm

Typical Inductance vs DC Bias @25°C and 100°C



Typical Inductance vs DC Bias @25°C and 100°C



For More Information

Pulse Worldwide Headquarters
12220 World Trade Drive
San Diego, CA 92128
U.S.A.

Pulse Europe
Einsteinstrasse 1
D-71083 Herrenberg
Germany

Pulse China Headquarters
B402, Shenzhen Academy of
Aerospace Technology Bldg.
10th Kejinan Road
High-Tech Zone
Nanshan District
Shenzhen, PR China 518057
Tel: 86 755 33966678
Fax: 86 755 33966700

Pulse North China
Room 2704/2705
Super Ocean Finance Ctr.
2067 Yan An Road West
Shanghai 200336
China

Tel: 86 21 62787060
Fax: 86 2162786973

Pulse South Asia
135 Joo Seng Road
#03-02
PM Industrial Bldg.
Singapore 368363

Tel: 65 6287 8998
Fax: 65 6287 8998

Pulse North Asia
3F, No. 198
Zhongyuan Road
Zhongli City
Taoyuan County 320
Taiwan R. O. C.
Tel: 886 3 4356768
Fax: 886 3 4356823 (Pulse)
Fax: 886 3 4356820 (FRE)

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners. © Copyright, 2015. Pulse Electronics, Inc. All rights reserved.