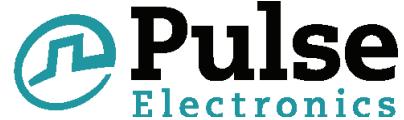


# SMT Power Inductors

Round Wire Coils - PG0702NL



- Height:** 8.0mm Max
- Footprint:** 10.8mm x 9.2mm Max
- Saturation Current:** up to 42.5A
- No thermal aging**

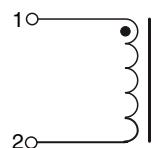
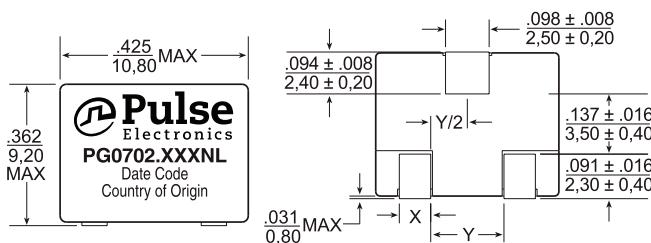
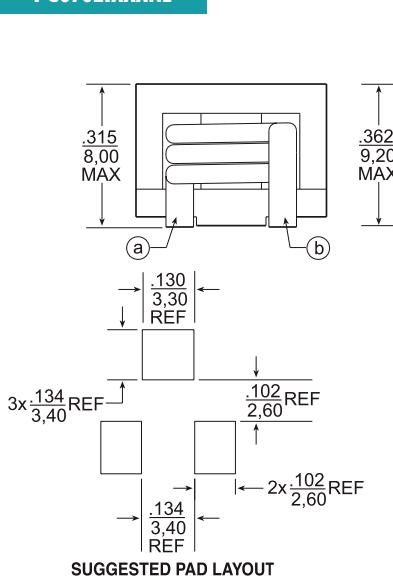
Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C<sup>1</sup>

Part Number	Inductance <sup>2</sup> @ Irated ( $\mu$ H TYP)	Irated <sup>3</sup> (A) Factor	DCR <sup>4</sup> (m $\Omega$ ) ( $\pm 6\%$ )	Inductance @ 0A <sub>dc</sub> ( $\mu$ H $\pm 20\%$ )	Saturation Current Isat (A TYP)		Heating <sup>6</sup> Current I <sub>dc</sub> (A TYP)	Core Loss <sup>7</sup> Factor K2
					25°C	100°C		
PG0702.301NL	0.24	42.5	0.68	0.30	42.5	33.5	47.0	30.8
PG0702.401NL	0.38	38.0	0.91	0.40	43.0	34.0	38.0	27.4
PG0702.451NL	0.41	38.0	0.91	0.45	41.0	31.7	38.0	30.8
PG0702.601NL	0.48	32.0	0.91	0.60	32.0	25.5	38.0	41.1
PG0702.102NL	0.80	26.0	1.76	1.00	26.0	20.3	26.1	51.4
PG0702.222NL	1.76	15.9	3.30	2.20	15.9	12.7	16.4	90.5
PG0702.302NL	2.90	12.4	5.90	3.00	16.0	12.5	12.4	102.8
PG0702.472NL	3.76	8.4	5.30	4.70	8.4	6.7	13.2	161.0
PG0702.682NL	5.44	8.5	7.70	6.80	8.5	6.8	9.6	155.4

## Mechanical

## Schematic

### PG0702.XXXNL



Part Number	X (mm)	Y (mm)
PG0702.301NL	1.80 $\pm$ 0.2	4.5 $\pm$ 0.4
PG0702.401NL	1.80 $\pm$ 0.2	4.5 $\pm$ 0.4
PG0702.451NL	1.80 $\pm$ 0.2	4.5 $\pm$ 0.4
PG0702.601NL	1.80 $\pm$ 0.2	4.5 $\pm$ 0.4
PG0702.102NL	1.80 $\pm$ 0.2	4.5 $\pm$ 0.4
PG0702.222NL	1.6 $\pm$ 0.2	4.8 $\pm$ 0.4
PG0702.302NL	1.6 $\pm$ 0.2	4.8 $\pm$ 0.4
PG0702.472NL	1.6 $\pm$ 0.2	4.8 $\pm$ 0.4
PG0702.682NL	1.6 $\pm$ 0.2	4.8 $\pm$ 0.4

Weight (TYP) ..... 2.6grams  
Tray ..... 500/tray  
Dimensions: Inches  
mm

Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0,25}$

USA 858 674 8100

Germany 49 7032 7806 0

Singapore 65 6287 8998

Shanghai 86 21 62787060

China 86 755 33966678

Taiwan 886 3 4356768

# SMT Power Inductors

Round Wire Coils - PG0702NL

## Notes:

1. Actual temperature of the component (ambient plus temperature rise) must be within the standard operating temperature range.
2. Inductance at Irated is a typical inductance value for the component taken at rated current.
3. The rated current listed is the lower of the saturation current (@ 25°C) or the heating current depending on which value is lower.
4. The DCR of the part is measured at an ambient temperature of 20C 3C from point a and b as shown above on the mechanical drawing.
5. The saturation current, Isat, is the current at which the component inductance drops 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 effects) to the component.
6. The heating current, Ibc, 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 component's 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.

7. Core Loss approximation is based on published core data:

$$\text{Core Loss} = K1 * (f)^{1/2} * (K2\Delta I)^{2.7}$$

Where: Core Loss = in Watts

$$K1 = 2.20E-11$$

f = switching frequency in kHz

K1 & K2 = core loss factors

ΔI = delta I across the component in Ampere

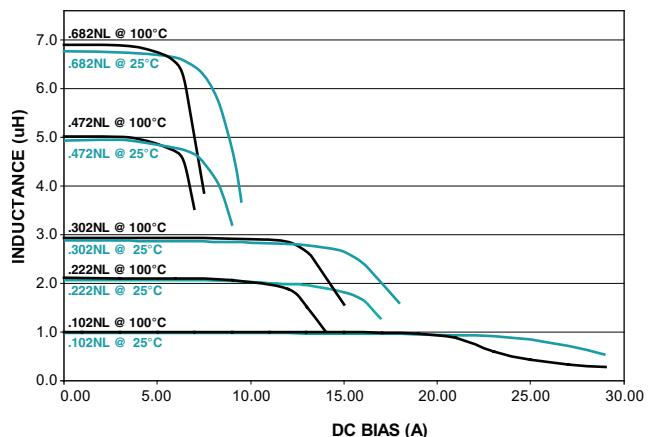
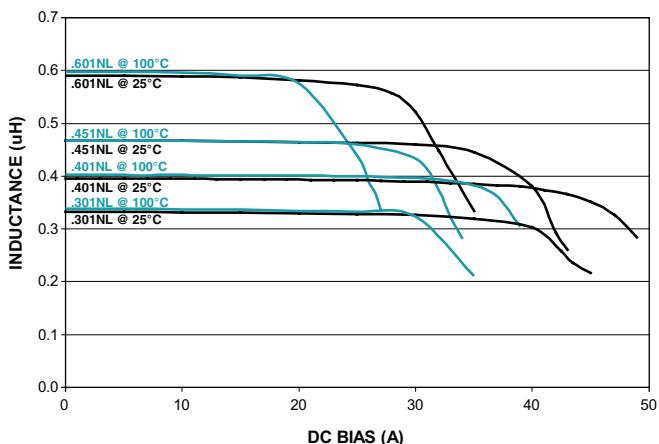
K2\*ΔI = one half of the peak to peak flux density

across the component in Gauss

8. Unless otherwise specified, all testing is made at 100kHz, 0.1V<sub>AC</sub>.

9. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PG0702.40NL becomes PG0702.40NLT). Pulse complies to industry standard tape and reel specification EIA481. The tape and reel for this product has a width (W=24.0mm), pitch (Po=16mm) and depth (Ko=8.9mm).

## Typical Inductance vs Current Characteristics @ 25°C and 100°C



## For More Information

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

Tel: 858 674 8100  
Fax: 858 674 8262

**Pulse Europe**  
Einsteinstrasse 1  
D-71083 Herrenberg  
Germany

Tel: 49 7032 78060  
Fax: 49 7032 7806 135

**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.

ООО "ЛайфЭлектроникс"

"LifeElectronics" LLC

ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибуторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибуторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помочь разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)  
Email: [org@lifeelectronics.ru](mailto:org@lifeelectronics.ru)