

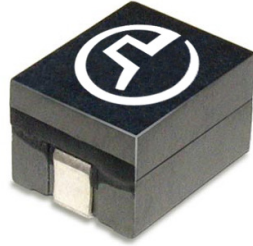


**THE DATASHEET OF
PA1320.221NL**



SMT Power Inductors

Power Beads - PA1320NL and PA1320ANL Series



- Current Rating:** Over 75Apk
- Inductance Range:** 120nH to 310nH
- Height:** 6.5mm Max
- Footprint:** 10.4mm x 8.0mm Max

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

Part Number	Inductance @ 0A _{DC} (nH ±20%)	Inductance @ I _{rated} (nH TYP)	I _{rated} ¹ (A _{DC})	DCR ² (mΩ)	Saturation Current ³ (A TYP)		Heating ⁴ Current (A TYP)
					25°C	100°C	
PA1320.121NL	120	120	40	0.48 ±8% (NL) 0.47 ±5% (ANL)	90	73	40
PA1320.141NL	140	140	40		76	64	
PA1320.171NL	180	174	40		54.5	52	
PA1320.221NL	200	185	40		55	45	
PA1320.301NL	310	250	30		34	29.5	

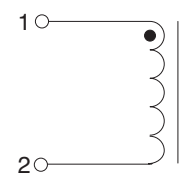
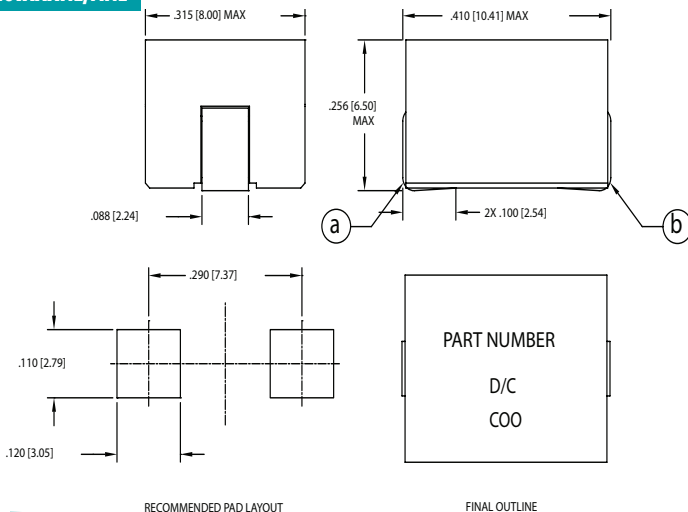
Notes:

- The rated current as listed is either the saturation current or the heating current depending on which value is lower.
- The nominal DCR tolerance is by design. The nominal DCR is measured from point (a) to point (b), as shown below on the mechanical drawing. The standard part PA1320.XXXNL has a DCR tolerance of +/-8%. A tighter DCR tolerance (+/-5%) part is available by changing the NL suffix to ANL (i.e. PA1320.121NL becomes PA1320.121ANL).
- The saturation current is the typical current which causes the inductance to drop by 20% at the stated ambient temperatures (25°C and 100°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.
- The heating current is the DC current which causes the part temperature to increase by approximately 40C. This current is determined by soldering the component on a typical application PCB, and then applying the current to the device for 30 minutes with 25LFM of forced air cooling.
- In high volt*time applications, additional heating in the component can occur due to core losses in the inductor which may necessitate derating the current in order to limit the temperature rise of the component. To determine the approximate total losses (or temperature rise) for a given application, the coreloss and temperature rise curves can be used.
- Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PA1320.121NL becomes PA1320.121NLT). Pulse complies to industry standard tape and reel specification EIA481.
- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

Mechanical

Schematic

PA1320.XXXNL/ANL



Weight2.05 grams
Tape & Reel750/reel

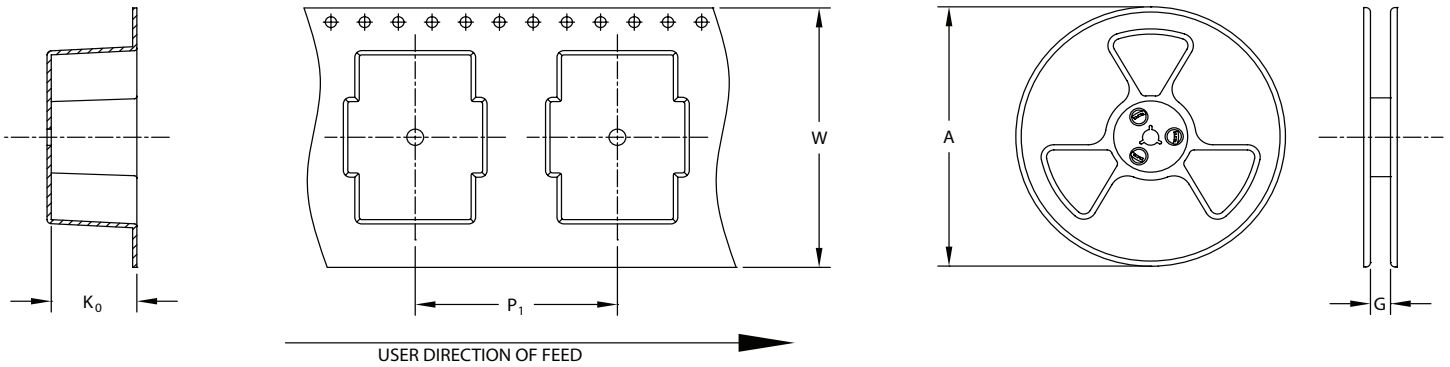
Dimensions: $\frac{\text{Inches}}{\text{mm}}$

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

SMT Power Inductors

Power Beads - PA1320NL and PA1320ANL Series

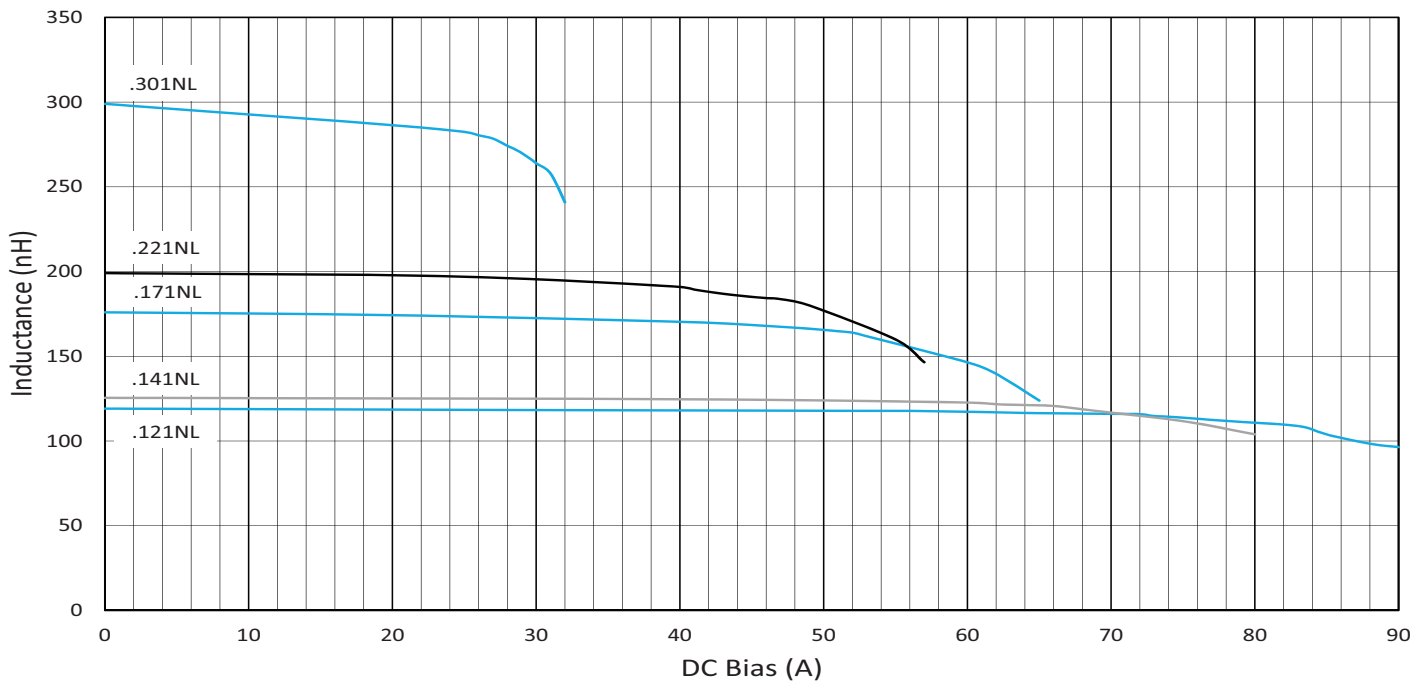
TAPE & REEL INFO



SURFACE MOUNTING TYPE, REEL/TAPE LIST

PART NUMBER	REEL SIZE (mm)		TAPE SIZE (mm)			QTY
	A	G	P ₁	W	K ₀	PCS/REEL
PA1320.XXXNL/PA1320.XXXANLT	Ø330	24.4	12	24	6.5	750

Typical Inductance vs DC Bias @ 25°C

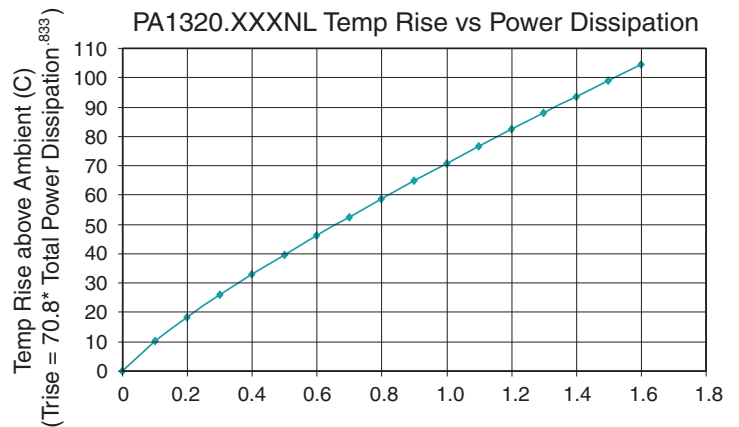
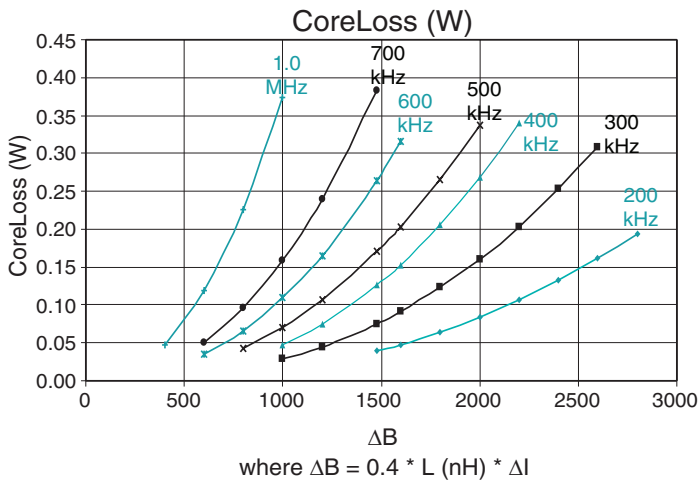
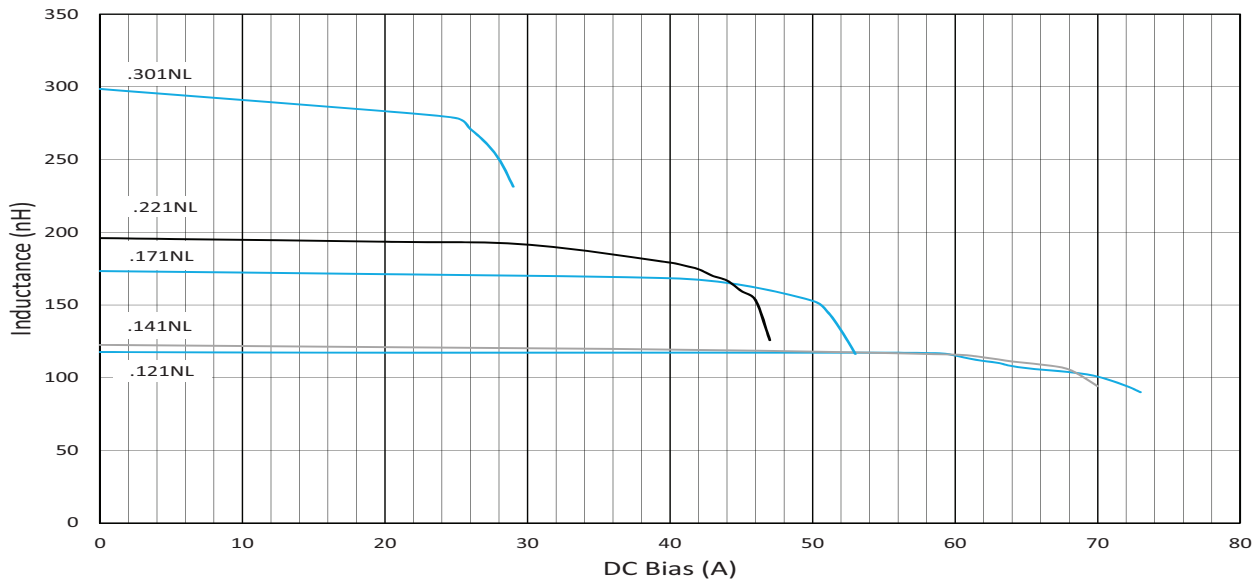


SMT Power Inductors

Power Beads - PA1320NL and PA1320ANL Series



Typical Inductance vs DC Bias @ 100°C



Total Power Dissipation (W) = CopperLoss + CoreLoss
 CopperLoss = $I_{rms}^2 * R_{dc} \text{ (m}\Omega) / 1000$
 CoreLoss = (from table)

For More Information

Pulse Worldwide Headquarters

15255 Innovation Drive Ste 100
 San Diego, CA 92128
 U.S.A.

Pulse Europe

Pulse Electronics GmbH
 Am Rottland 12
 58540 Meinerzhagen
 Germany

Pulse China Headquarters

Pulse Electronics (ShenZhen) CO., LTD
 D708, Shenzhen Academy of
 Aerospace Technology,
 The 10th Keji South Road,
 Nanshan District, Shenzhen,
 P.R. China 518057

Pulse North China

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

Pulse South Asia

3 Fraser Street 0428
 DUO Tower
 Singapore 189352

Pulse North Asia

1F., No.111 Xiyuan Road
 Zhongli District
 Taoyuan City 32057
 Taiwan (R.O.C)

Tel: 858 674 8100
 Fax: 858 674 8262

Tel: 49 2354 777 100
 Fax: 49 2354 777 168

Tel: 86 755 33966678
 Fax: 86 755 33966700

Tel: 86 21 62787060
 Fax: 86 2162786973

Tel: 65 6287 8998
 Fax: 65 6280 0080

Tel: 886 3 4356768
 Fax: 886 3 4356820

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, 2019. Pulse Electronics, Inc. All rights reserved.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

 [View PA1320.221NL on WIN SOURCE](#)

 [Pulse Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management