# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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High Current Molded Power Inductor - PA5002.XXXNLT Series





- 🥟 Height: 2.1mm Max
- *P* **Footprint:** 5.7mm x 5.5mm Max
- Current Rating: up to 30Apk
- *P* Inductance Range: 0.15uH to 1.5uH
- 🕐 High current, low DCR, and high efficiency
- 🕐 High reliability
- *P* Minimized acoustic noise and minimized leakage flux noise

Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C								
Part Number	Inductance 100KHz, 0.1V uH±20%	Rated Current A	Resi	Saturation Current				
			TYP.	MAX.	(25C)			
			mΩ	mΩ	A			
PA5002.151NLT	0.15	18.80	4.00	4.60	30.00			
PA5002.161NLT	0.16	18.80	4.00	4.60	30.00			
PA5002.331NLT	0.33	14.40	6.10	7.00	26.00			
PA5002.471NLT	0.47	14.10	7.00	8.05	22.00			
PA5002.561NLT	0.56	13.90	8.70	9.54	19.00			
PA5002.681NLT	0.68	13.40	8.90	10.20	16.00			
PA5002.801NLT	0.80	13.00	10.30	11.80	15.50			
PA5002.821NLT	0.82	12.00	11.00	12.70	15.00			
PA5002.102NLT	1.00	10.50	12.00	13.80	14.50			
PA5002.122NLT	1.20	9.40	14.20	16.30	14.00			
PA5002.152NLT	1.50	8.80	16.20	18.70	13.30			

#### Notes:

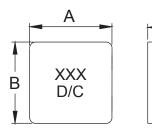
- 1. Actual temperature of the component during system operation (ambient plus temperature rise) must be within the standard operating range.
- 2. The saturation current is the current at which the initial inductance drops approximately 30% at the stated ambient temperature. This current is determined by placing the compnent in the specified ambient environment and applying a short duration pulse current (to eliminate self-heating effect) to the component.
- 3. The rated current is the DC current required to raise the component temperature by approximately 40°C. Take note that the components' performanc 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.
- 4. The part temperature (ambient+temp rise) should not exceed 125°C under worst case operating conditions. Circuit design, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

1

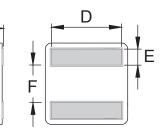
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#### Mechanical

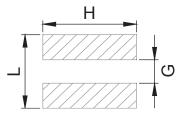


PA5002.XXXNLT



FINAL LAYOUT

С

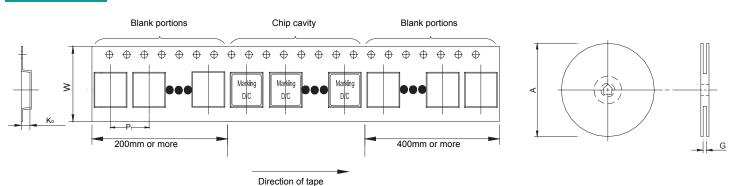


SUGGESTED PAD LAYOUT

Series	A	В	C	D	E	F	L	G	H
PA5002.XXXNLT	5.5±0.2	5.3±0.2	1.9±0.2	4.3±0.3	1.1±0.2	2.3±0.25	4.5 (REF)	2.0 (REF)	4.7 (REF)

All Dimensions in mm.

**TAPE & REEL INFO** 



SURFACE MOUNTING TYPE, REEL/TAPE LIST							
	REEL SIZE (mm)			TAPE SIZE (mm)			
	А	G	P <sub>1</sub>	W	K <sub>0</sub>	PCS/REEL	
PA5002.XXXNLT	<b>Ø</b> 330	12.4	8	12	2.3	3000	

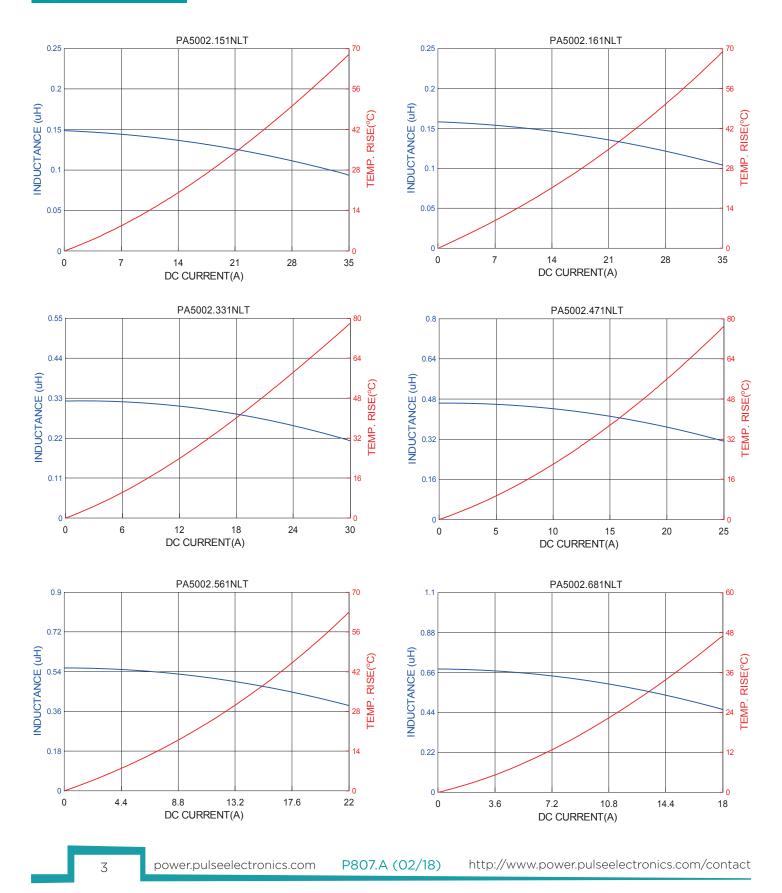
2

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#### **Typical Performance Curves**



1.3

1.04

0.78

0.52

0.26

0

1.7

1.36

1.02

0.68

0.34

0

0

INDUCTANCE (uH)

0

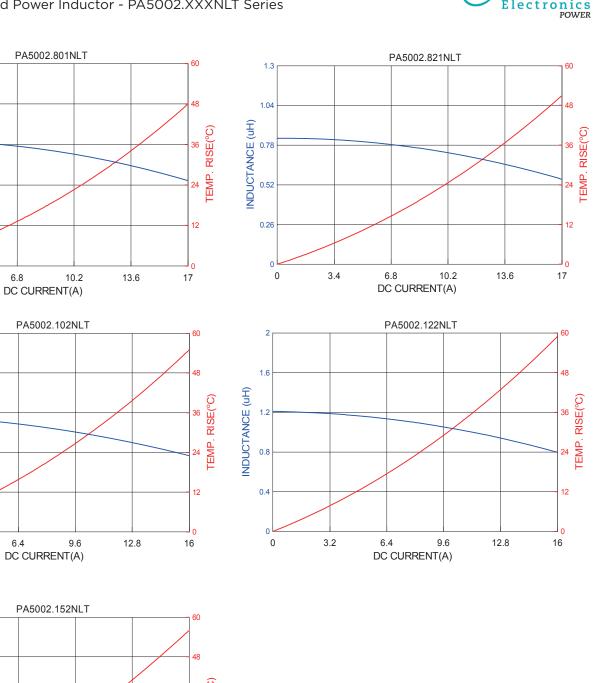
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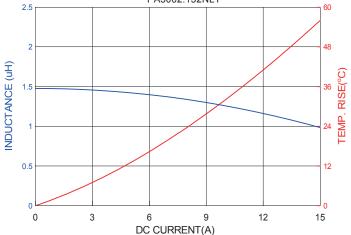
3.2

6.8

INDUCTANCE (uH)

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power.pulseelectronics.com

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