High Current Molded Power Inductor - PA4343.XXXANLT Series













Meight: 6.5mm Max

@ Footprint: 14.0mm x 12.8mm Max

© Current Rating: up to 53A

@ Inductance Range: 0.22uH to 68uH

Shielded construction and compact design

Migh current, low DCR, and high efficiency

Minimized acoustic noise and minimized leakage flux

Electrical Specifications @ 25°C – Operating Temperature –55°C to +155°C									
Part Number	Inductance <sup>5,8</sup> 100KHz, 1V uH±20%	Rated <sup>3</sup> Current	DC Resistance		Saturation <sup>2</sup> Current	SRF			
			TYP.	MAX.	TYP.	TYP.	Mechanical	K Factor	
			mΩ	mΩ	A	MHz			
PA4343.221ANLT	0.22	42	0.4	0.46	105	130	Footprint 1	93.5	
PA4343.331ANLT	0.33	36	0.6	0.70	65	80	Footprint 1	106.1	
PA4343.471ANLT	0.47	35	0.88	1.02	58	70	Footprint 1	60.4	
PA4343.561ANLT	0.56	33.5	1.1	1.3	50	62	Footprint 1	60.4	
PA4343.681ANLT	0.68	33	1.25	1.5	46	58	Footprint 1	75.8	
PA4343.821ANLT	0.82	31	1.3	1.65	39	56	Footprint 1	68.7	
PA4343.102ANLT	1.0	29	1.5	1.8	36	43	Footprint 1	53.5	
PA4343.152ANLT	1.5	25	2.2	2.53	30	33	Footprint 1	38.1	
PA4343.222ANLT	2.2	21	3.7	4.2	24	25	Footprint 2	32.2	
PA4343.242ANLT	2.4	20.5	3.9	4.5	23.5	23	Footprint 2		
PA4343.332ANLT	3.3	19	5.3	6.2	22.5	17	Footprint 2	22.6	
PA4343.472ANLT	4.7	17	6.8	8.0	21	15	Footprint 2	16.5	
PA4343.562ANLT	5.6	15	8.3	9.8	19.5	14	Footprint 2	16.5	
PA4343.682ANLT	6.8	14	9.8	11.3	18	12	Footprint 2	12.0	
PA4343.822ANLT	8.2	12.5	12	13.8	17	10	Footprint 2	11.0	
PA4343.103ANLT	10	11	13	15.8	15	10	Footprint 2	10.1	
PA4343.223ANLT	22	8	31	35	9	6	Footprint 2	8.6	
PA4343.333ANLT	33	6.5	46	55	8	4	Footprint 2	5.1	
PA4343.473ANLT	47	5.7	58	67	6.8	4	Footprint 2	6.2	
PA4343.683ANLT	68	4.8	82	100	5.0	3	Footprint 2	4.7	

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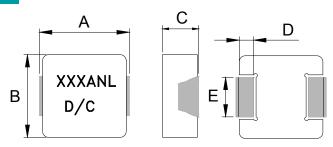
#### Notes:

- 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 by approximately 30% at the stated ambient temperature. The maximum allowable drop at this stated current is 40% of the initial inductance. 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.
- 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 maximum operating temperature under worst case operating conditions. Circuit design, PCB trace size and 8.

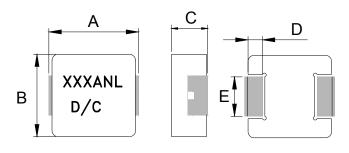
- thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
- Please note that the inductance tolerance of all parts are ±20%, except those indicated by an \* which are +/- 30%.
- Parts shown in bold are standard catalog parts and are available through sample stock and distribution. Parts in lighter font are available but are not necessarily held in sample stock or distribution and lead times may be longer. Please contact Pulse for availablity.
- The PM prefix parts are AEC-Q200 qualified and has full automotive IATF16949
  certification. The mechanical dimensions are 100% tested in production but do not
  necessarily meet a product capability index (Cpk) 1.33 and therefore may not strictly
  conform to PPAP.
  - Special Characteristics

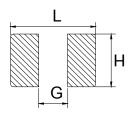
#### **Mechanical**

#### PA4343.XXXANLT



#### Footprint 1





Footprint 2

Final Layout

SUGGESTED PAD LAYOUT

Series	Mechanical	A	В	C	D	E	L	G	Н
PA4343.XXXANLT	Footprint 1	13.5±0.5	12.6±0.2	6.2±0.3	2.3±0.3	4.0±0.3	14.5	8.0	5.0
PA4343.XXXANLT	Footprint 2	13.5±0.5	12.6±0.2	6.2±0.3	2.3±0.3	4.7±0.3	14.5	8.0	5.0

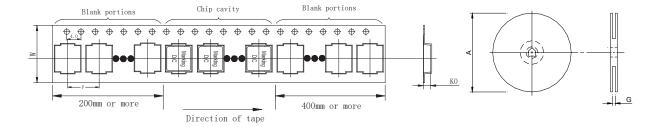
All Dimensions in mm.

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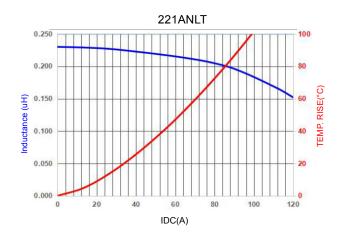


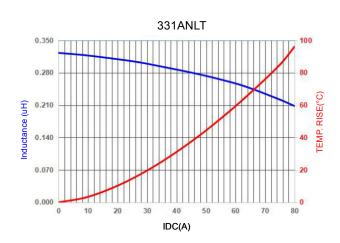
#### **TAPE & REEL INFO**

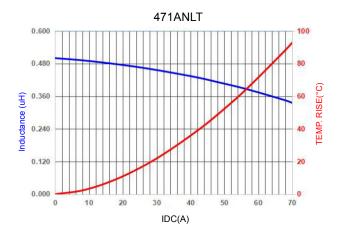


SURFACE MOUNTING TYPE, REEL/TAPE LIST									
	REEL SIZ	'E (mm)	TA	QTY					
	Α	G	P <sub>1</sub>	W	$K_{0}$	PCS/REEL			
PA4343.XXXANLT	Ø330	24.4	16	24	7.0	500			

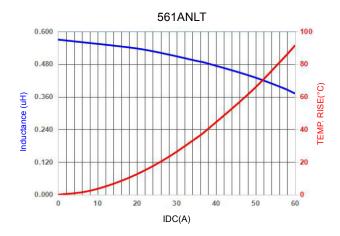
#### **Typical Performance Curves**





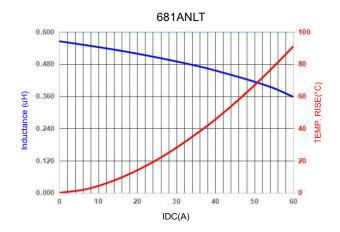


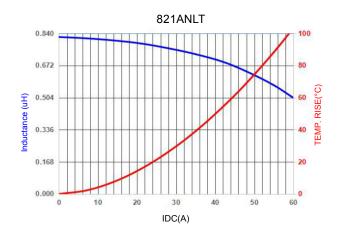
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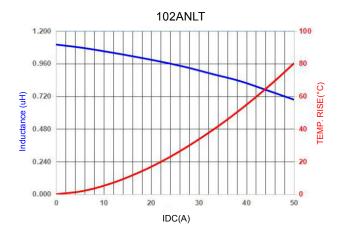


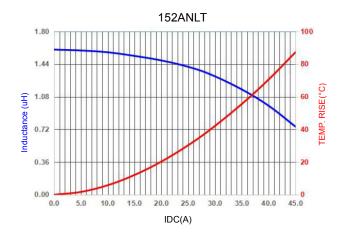
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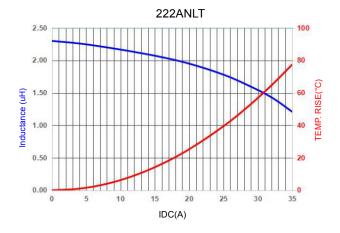




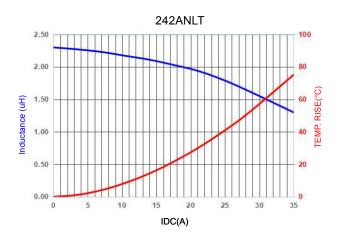






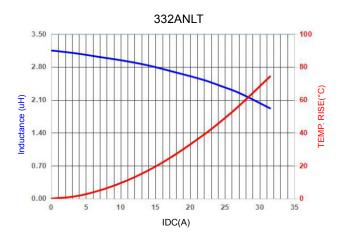


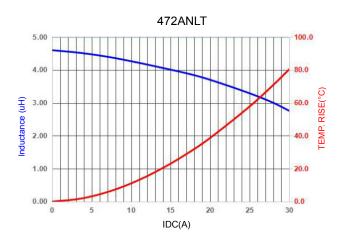
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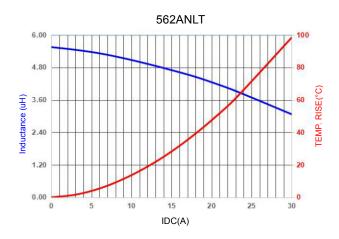


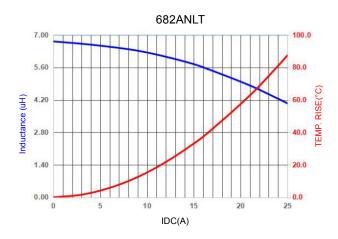
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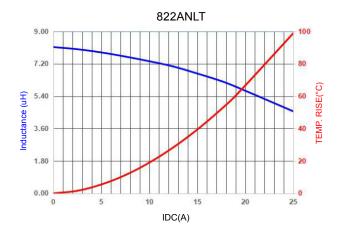




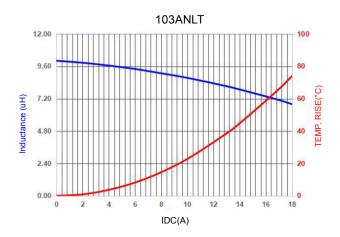






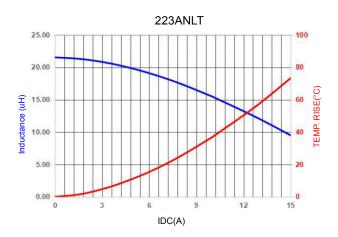


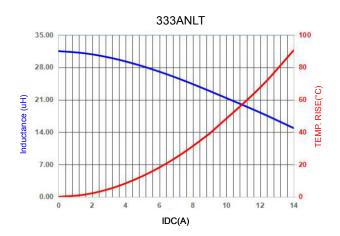
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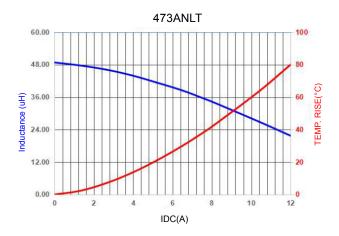


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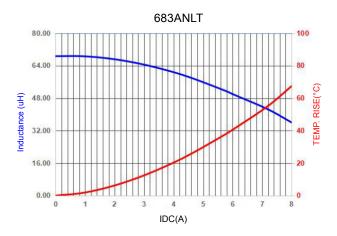






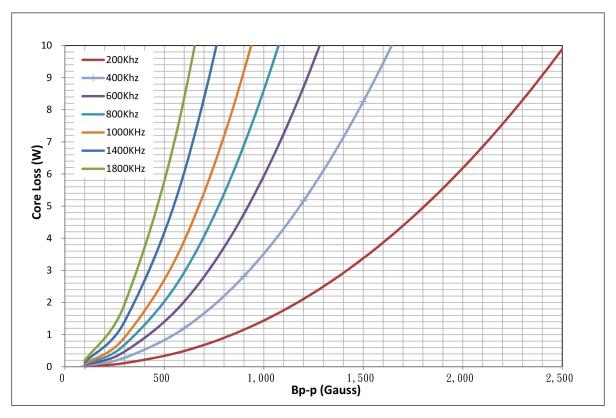


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#### **Core Loss**



Bp-p = K \*L(uH) \*delta I(A)

#### **For More Information:**

Americas - prodinfo\_power\_americas@yageo.com | Europe - prodinfo\_power\_emea@yageo.com | Asia - prodinfo\_power\_asia@yageo.com

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