SMT Power Inductor

High Current Molded Power Inductor - PA4344.XXXANLT Series

Pulse
a YAGEO company

- ***Height:*** *7.0mm Max*
- ***Footprint:*** *18.3mm x 17.2mm Max*
- ***Current Rating:*** *up to 55.0A*
- ***Inductance Range:*** *0.47uH to 82uH*
- *Shielded construction and compact design*
- *High current, low DCR, and high efficiency*
- *Minimized acoustic noise and minimized leakage flux*

Electrical Specifications @ 25°C - Operating Temperature -55°C to +155°C

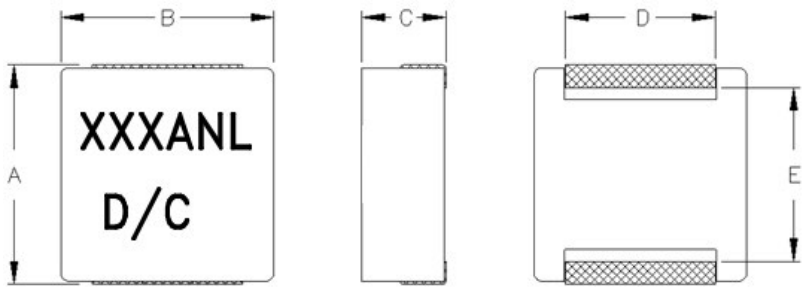
Part Number	Inductance[5,8] 100KHz, 1V	Rated[3] Current	DC Resistance		Saturation[2] Current	SRF	K Factor
			TYP.	MAX.	TYP.	TYP.	
	uH±20%	A	mΩ	mΩ	A	MHz	
PA4344.471ANLT	0.47	55	0.7	0.9	100	56	44.2
PA4344.561ANLT	0.56	50	0.81	0.97	70	47	56.1
PA4344.102ANLT	1	42	1.03	1.2	45	32	48.5
PA4344.152ANLT	1.5	35	1.5	1.8	40	26	31.2
PA4344.182ANLT	1.8	32	1.7	2	34	23	30.9
PA4344.222ANLT	2.2	30	1.8	2.2	32	20	25.5
PA4344.332ANLT	3.3	28	2.7	3.3	29	16	18.1
PA4344.472ANLT	4.7	26	3.7	4.5	26	14	13.4
PA4344.682ANLT	6.8	22	6	7.2	22	11	10.2
PA4344.103ANLT	10	19	9.2	10.6	19	9	7.6
PA4344.153ANLT	15	14	12.8	15.5	14	7	7.4
PA4344.223ANLT	22	11.5	20.5	24	11.5	6	5.6
PA4344.333ANLT	33	10	32	37	10	5	4.4
PA4344.473ANLT	47	8.0	40	47	8.0	4	4.3
PA4344.683ANLT	68	6.5	66	76	7.2	4	
PA4344.823ANLT	82	5.7	69	83	6.5	3	2.6

Notes:

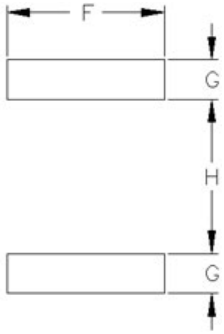
1. Actual temperature of the component during system operation (ambient plus temperature rise) must be within the standard operating range.
2. The saturation current is the current at which the initial inductance drops by approximately 30% at the stated ambient temperature. The maximum allowable drop 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 thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
5. Please note that the inductance tolerance of all parts are ±20%, except those indicated by an * which are +/- 30%.
6. 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.
7. 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.
8. Special Characteristics ▽

Mechanical

PA4344.XXXANLT



Final Layout

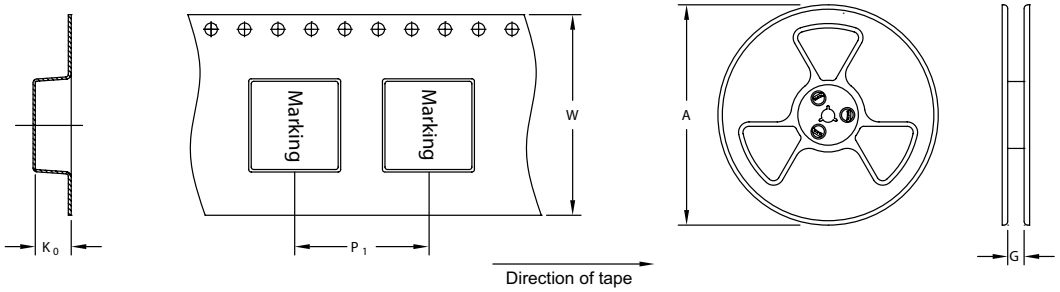


SUGGESTED PAD LAYOUT

Series	A	B	C	D	E	F	G	H
PA4344.XXXANLT	17.8±0.5	16.9±0.3	6.7±0.3	(11.9)	(13.1)	(12.5)	(3.15)	(12.2)

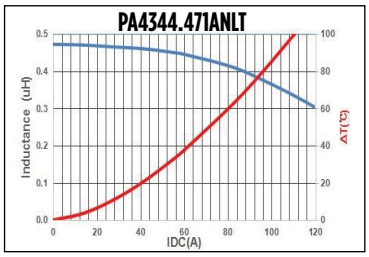
All Dimensions in mm.

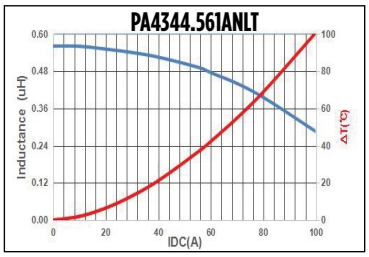
TAPE & REEL INFO

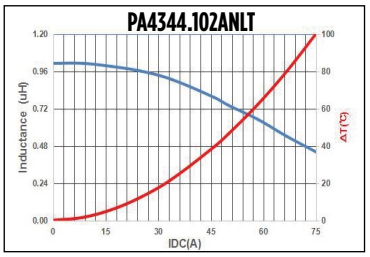


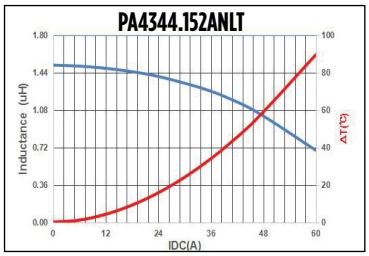
SURFACE MOUNTING TYPE, REEL/TAPE LIST						
	REEL SIZE (mm)		TAPE SIZE (mm)			QTY
	A	G	P_1	W	K_0	PCS/REEL
PA4344.XXXANLT	Ø330	32.4	24	32	7.5	200

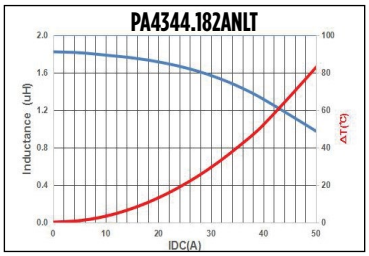
Typical Performance Curves

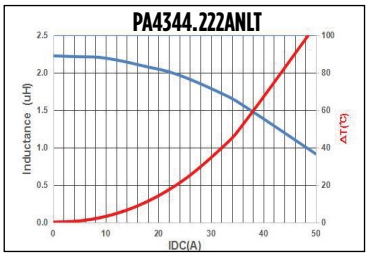


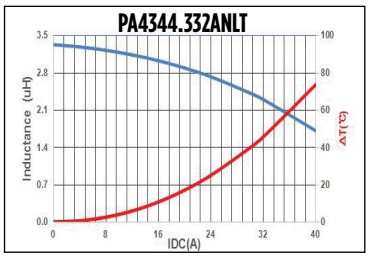


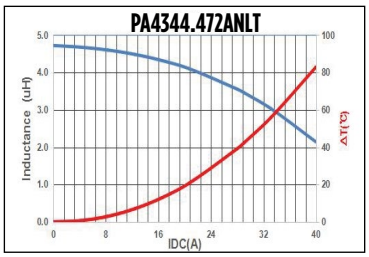


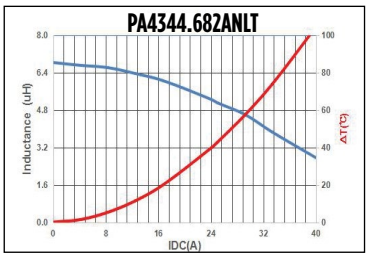




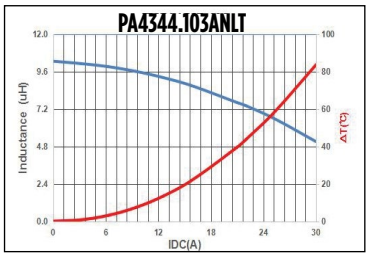








PA4344.103ANLT



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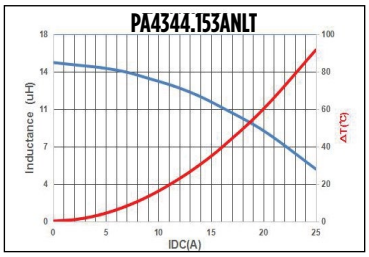

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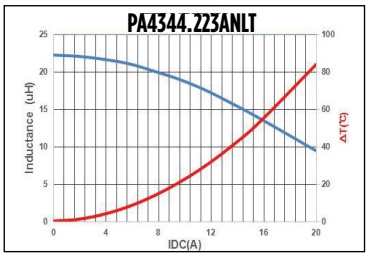

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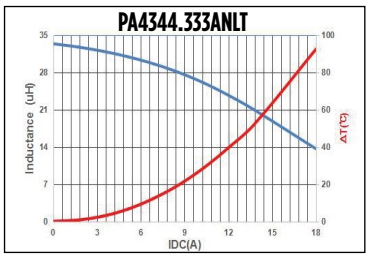

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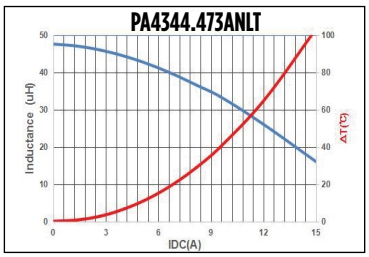

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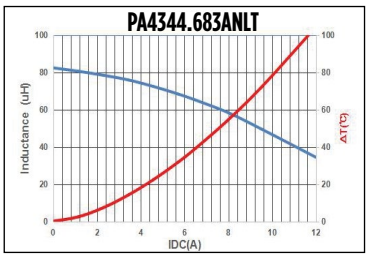

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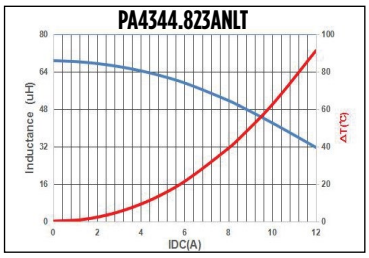
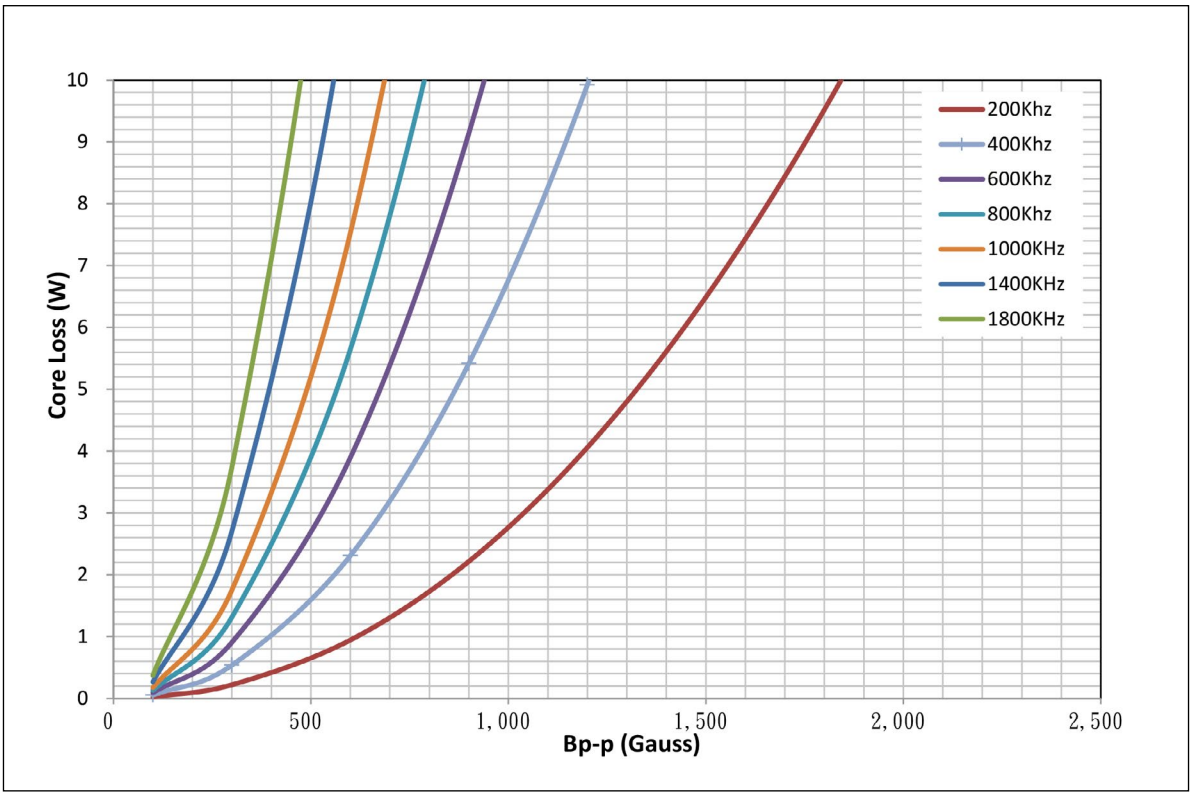


Core Loss



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

For More Information:

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