SMT Power Inductor

High Current Molded Power Inductor - PA4343.XXXNLT & PM4343.XXXNLT Series

Pulse a YAGEO company

- ***Height:*** *6.5mm Max*
- ***Footprint:*** *14.0mm x 12.8mm Max*
- ***Current Rating:*** *up to 55.0A*
- ***Inductance Range:*** *0.15uH to 47.0uH*
- *Shielded construction and compact design*
- *High current, low DCR, and high efficiency*
- *Minimized acoustic noise and minimized leakage flux*
- *200Vdc Isolation between terminal and core*

Electrical Specifications @ 25°C - Operating Temperature -55°C to +125°C

Commercial[6,7]	Automotive[6,7]	Inductance[5] 100KHz, 1V	Rated[3] Current	DC Resistance		Saturation[2] Current	K Factor for CoreLoss
				TYP.	MAX.		
		uH±20%	A	mΩ	mΩ	A	
PA4343.151NLT	PM4343.151NLT	0.15*	55	0.49	0.6	118	–
PA4343.221NLT	PM4343.221NLT	0.22	53	0.47	0.6	112	71.3
PA4343.301NLT	PM4343.301NLT	0.3	48	0.6	0.72	72	–
PA4343.331NLT	PM4343.331NLT	0.33	46	0.65	0.8	68	96.2
PA4343.361NLT	PM4343.361NLT	0.36	45	0.7	0.9	66	–
PA4343.401NLT	PM4343.401NLT	0.4	44	0.7	1	64	–
PA4343.451NLT	PM4343.451NLT	0.45	42	0.9	1.2	63	–
PA4343.471NLT	PM4343.471NLT	0.47	41	0.9	1.2	63	60.4
PA4343.501NLT	PM4343.501NLT	0.5	40	0.92	1.25	60	–
PA4343.561NLT	PM4343.561NLT	0.56	37	1.05	1.2	58	84.0
PA4343.681NLT	PM4343.681NLT	0.68	35	1.25	1.5	55	75.8
PA4343.821NLT	PM4343.821NLT	0.82	33	1.5	1.9	50	58.9
PA4343.102NLT	PM4343.102NLT	1	30	1.7	2.3	48	53.5
PA4343.142NLT	PM4343.142NLT	1.4	27	2.1	2.6	46	–
PA4343.152NLT	PM4343.152NLT	1.5	27	2.5	3	45	38.1
PA4343.182NLT	PM4343.182NLT	1.8	27	3.6	4	40	37.7
PA4343.222NLT	PM4343.222NLT	2.2	22	3.8	4.2	37	33.5
PA4343.272NLT	PM4343.272NLT	2.7	20	4.3	5.5	32	28.3
PA4343.332NLT	PM4343.332NLT	3.3	18	5.7	6.8	30	18.7
PA4343.472NLT	PM4343.472NLT	4.7	13.5	7	8.4	28	16.5
PA4343.562NLT	PM4343.562NLT	5.6	12.5	8.5	10	23	13.9
PA4343.682NLT	PM4343.682NLT	6.8	11.5	9.5	11.5	18	12.9
PA4343.822NLT	PM4343.822NLT	8.2	10.5	12	15.5	15.5	10.3

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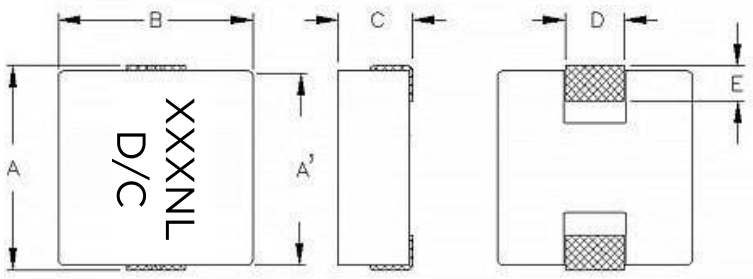
Electrical Specifications @ 25°C – Operating Temperature -55°C to +125°C							
Commercial[6,7]	Automotive[6,7]	▽ Inductance[5] 100KHz, 1V	Rated[3] Current	DC Resistance		Saturation[2] Current	K Factor for CoreLoss
				TYP.	MAX.		
		uH±20%	A	mΩ	mΩ	A	
PA4343.103NLT	PM4343.103NLT	10	10	13.2	16.5	15.5	9.6
PA4343.133NLT	PM4343.133NLT	13	9	21	24	13	7.3
PA4343.153NLT	PM4343.153NLT	15	9	23.2	28	12.5	11.0
PA4343.223NLT	PM4343.223NLT	22	9	32.5	37	12	7.5
PA4343.333NLT	PM4343.333NLT	33	8	48	58	11	6.2
PA4343.473NLT	PM4343.473NLT	47	6.5	76	90	9.5	4.2

Notes:

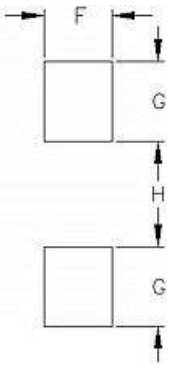
1. Actual temperature of the component during system operation (ambient plus temperature rise) must be within the standard operating range.
2. The saturation current is the current at which the initial inductance drops approximately 30% at the stated ambient temperature. This current is determined by 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.
5. Please note that the inductance tolerance of all parts are +/-20% except those indicated with a * 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 part numbers have full automotive IATF16949 certification. The PM part number 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

PA4343/PM4343



Final Layout

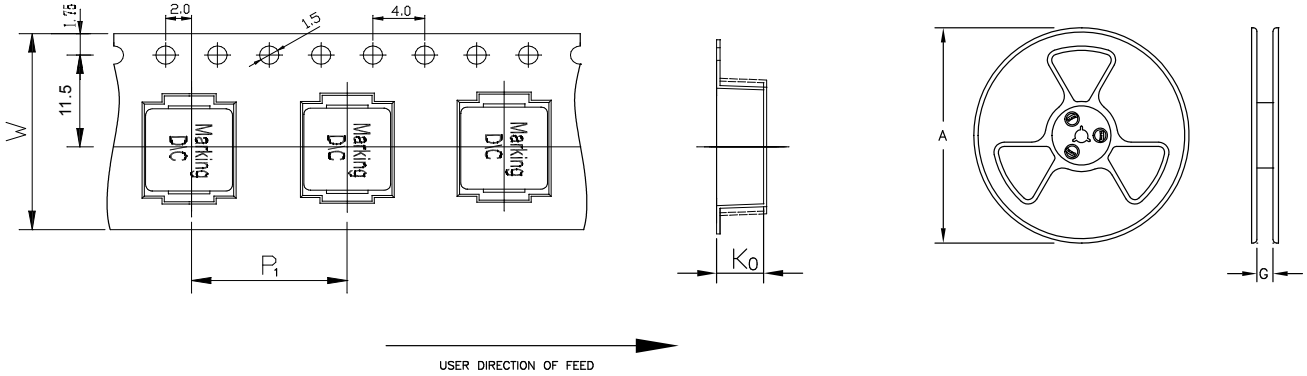


SUGGESTED PAD LAYOUT

Series	A	A'	B	C	D	E	F	G	H
PA4343/PM4343	13.5 +/- 0.5	(12.5)	12.5 +/- 0.3	6.2 +/- 0.3	4.7+/-0.3	2.3+/-0.3	(5.0)	(3.1)	(8.0)

All Dimensions in mm.

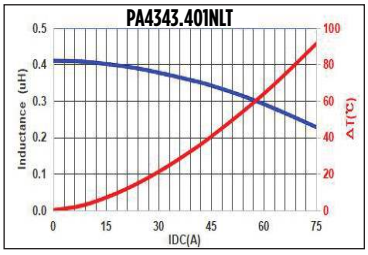
TAPE & REEL INFO



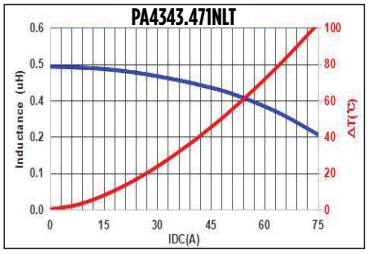
SURFACE MOUNTING TYPE, REEL/TAPE LIST						
	REEL SIZE (mm)		TAPE SIZE (mm)			QTY
	A	G	P_1	W	K_0	PCS/REEL
PA4343/PM4343	Ø330	24	16	24	7.0	500

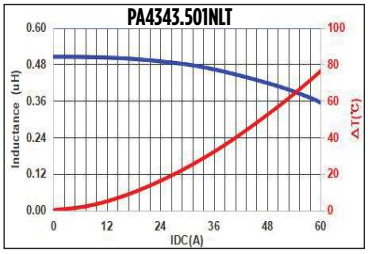
Typical Performance Curves

PA4343.XXXNLT and PM4343.XXXNLT

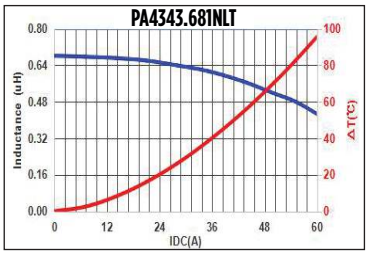


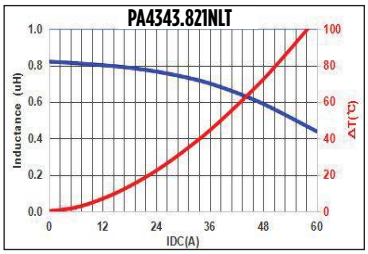

PA4343.451NLT
Inductance (uH)
ΔT(℃)
IDC(A)


PA4343.471NLT
Inductance (uH)
ΔT(℃)
IDC(A)

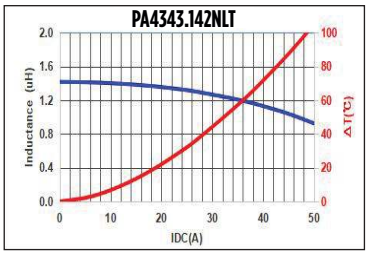

PA4343.501NLT
Inductance (uH)
ΔT(℃)
IDC(A)

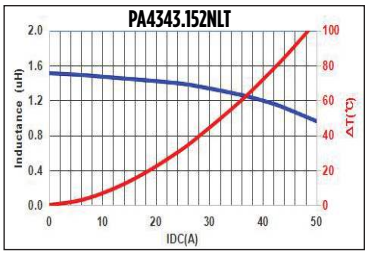

PA4343.561NLT
Inductance (uH)
ΔT(℃)
IDC(A)

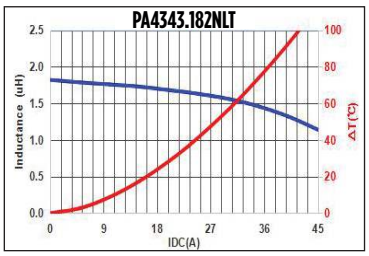

PA4343.681NLT
Inductance (uH)
ΔT(℃)
IDC(A)


PA4343.821NLT
Inductance (uH)
ΔT(℃)
IDC(A)

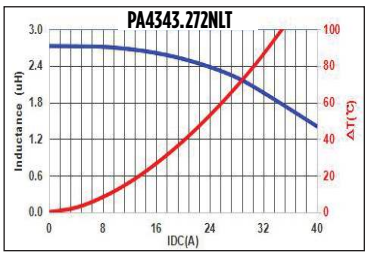

PA4343.102NLT
Inductance (uH)
ΔT(℃)
IDC(A)


PA4343.142NLT
Inductance (uH)
ΔT(℃)
IDC(A)

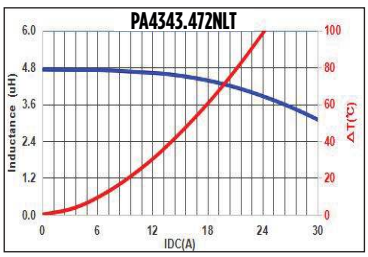

PA4343.152NLT
Inductance (uH)
ΔT(℃)
IDC(A)


PA4343.182NLT
Inductance (uH)
ΔT(℃)
IDC(A)

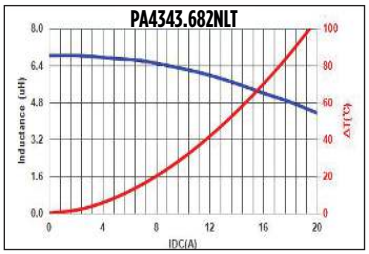

PA4343.222NLT
Inductance (uH)
ΔT(℃)
IDC(A)

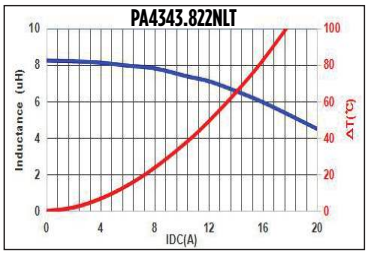

PA4343.272NLT
Inductance (uH)
ΔT(℃)
IDC(A)

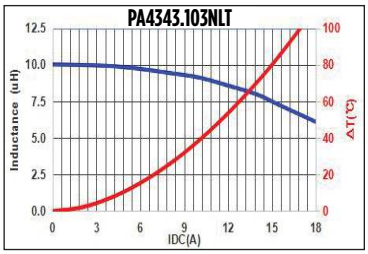

PA4343.332NLT
Inductance (uH)
ΔT(℃)
IDC(A)

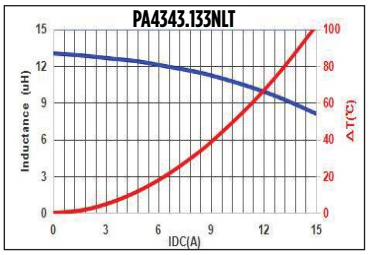

PA4343.472NLT
Inductance (uH)
ΔT(℃)
IDC(A)


PA4343.562NLT
Inductance (uH)
ΔT(℃)
IDC(A)

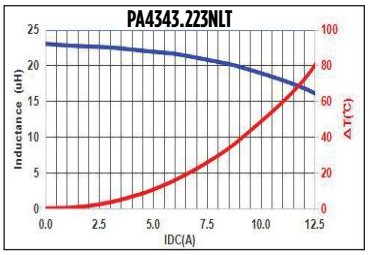

PA4343.682NLT
Inductance (uH)
ΔT(℃)
IDC(A)

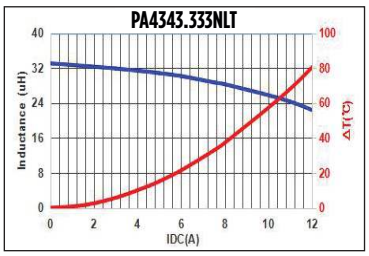

PA4343.822NLT
Inductance (uH)
ΔT(℃)
IDC(A)


PA4343.103NLT
Inductance (uH)
ΔT(℃)
IDC(A)


PA4343.133NLT
Inductance (uH)
ΔT(℃)
IDC(A)

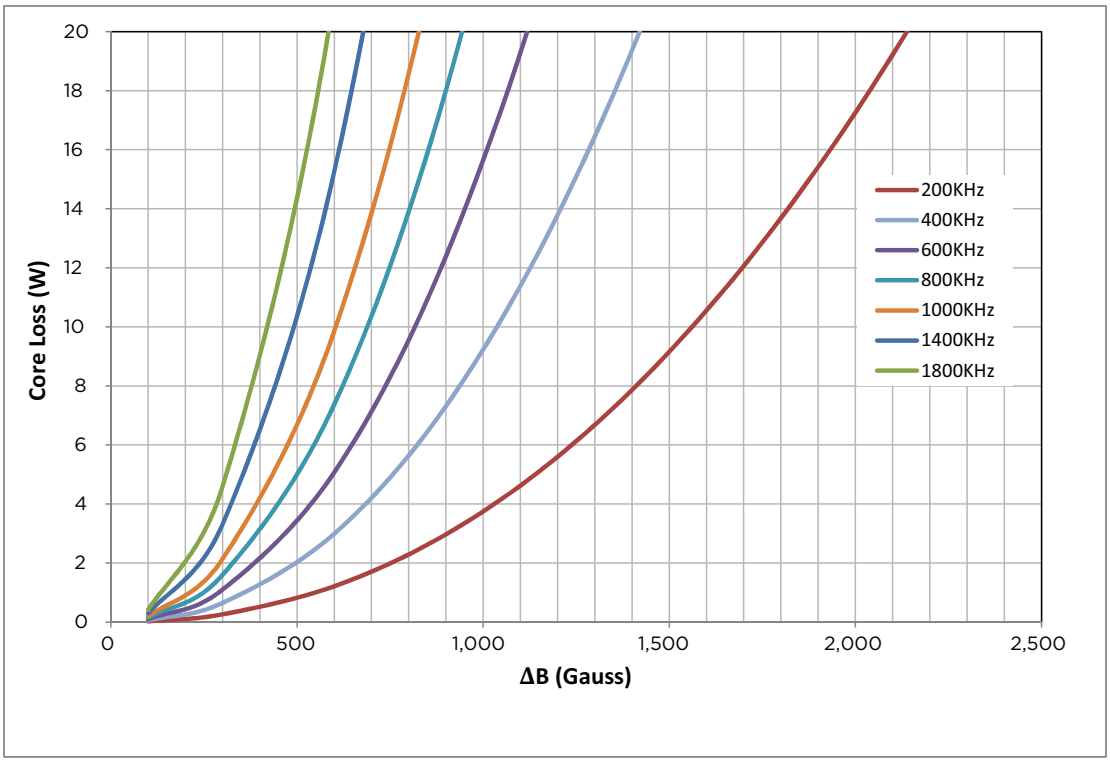

PA4343.153NLT
Inductance (uH)
ΔT(℃)
IDC(A)


PA4343.223NLT
Inductance (uH)
ΔT(℃)
IDC(A)


PA4343.333NLT
Inductance (uH)
ΔT(℃)
IDC(A)


PA4343.473NLT
Inductance (uH)
ΔT(℃)
IDC(A)

CoreLoss versus Flux Density



$$\Delta B\ (Gauss) = K * L(uH) * \Delta I(A)$$

For More Information:

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