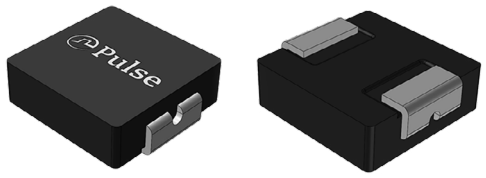
SMT Power Inductor

High Current Molded Power Inductor - PA5401 & PM5401 Series

Pulse
a YAGEO company



- **Height:** *2mm Max*
- **Footprint:** *3.7mm x 3.4mm Max*
- **Current Rating:** *up to 10.5A*
- **Inductance Range:** *0.1uH to 10.0uH*
- *High current, low DCR, and high efficiency*
- *Shielded construction and compact design*
- *Minimized acoustic noise and minimized leakage flux noise*
- *200 Vdc Isolation Between Terminal and Core*
- *Available in Commercial (PA) and Automotive (PM) grades*

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

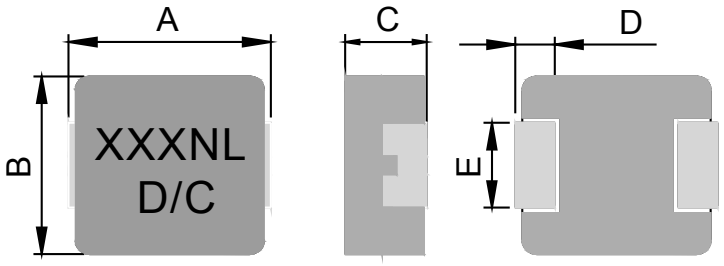
Commercial[6,7]	Automotive[6,7]	Inductance[5] (100KHz, 1.0V)	Rated[5] Current	DC Resistance		Saturation[2] Current
			TYP.	TYP.	MAX.	TYP.
		uH±20%	A	mΩ	mΩ	A
PA5401.101NLT	PM5401.101NLT	0.10*	10.5	6.6	9	14
PA5401.221NLT	PM5401.221NLT	0.22*	9	11	14	11.2
PA5401.331NLT	PM5401.331NLT	0.33	8	17	21	10
PA5401.471NLT	PM5401.471NLT	0.47	7	19.7	23	9
PA5401.601NLT	PM5401.601NLT	0.6	6	24	28	7.5
PA5401.681NLT	PM5401.681NLT	0.68	5.5	25.5	29	7
PA5401.821NLT	PM5401.821NLT	0.82	4.8	27	32	6
PA5401.102NLT	PM5401.102NLT	1.0	4	32	38	5
PA5401.122NLT	PM5401.122NLT	1.2	3.9	39	47	4.5
PA5401.152NLT	PM5401.152NLT	1.5	3.8	42	50	4
PA5401.222NLT	PM5401.222NLT	2.2	3.5	65	75	3.7
PA5401.332NLT	PM5401.332NLT	3.3	3	125	145	3.5
PA5401.472NLT	PM5401.472NLT	4.7	2.6	172	200	3
PA5401.562NLT	PM5401.562NLT	5.6	2.2	205	238	2.6
PA5401.682NLT	PM5401.682NLT	6.8	1.9	260	300	2.2
PA5401.822NLT	PM5401.822NLT	8.2	1.6	340	390	1.9
PA5401.103NLT	PM5401.103NLT	10	1.4	366	422	1.6

Notes:

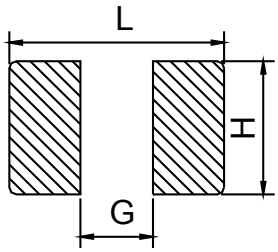
1. Actual temperature of the component during system operation (ambient plus temperature rise) must be within the standard operating range.
2. The saturation current is the current at which the initial inductance drops approximately 30% at the stated ambient temperature. This current is determined by 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 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

PA5401/PM5401



FINAL LAYOUT

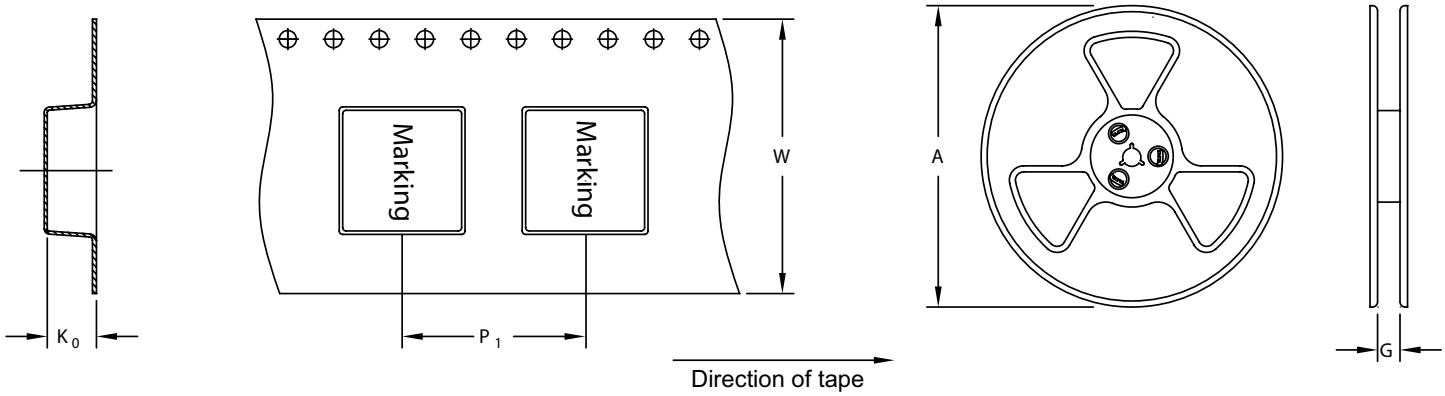


SUGGESTED PAD LAYOUT

Series	A	B	C	D	E	L	G	H
PA5401/PM5401	3.5+/-0.2	3.2+/-0.2	1.8+/-0.2	0.7+/-0.2	1.2+/-0.2	4.1	1.9	1.45

All Dimensions in mm.

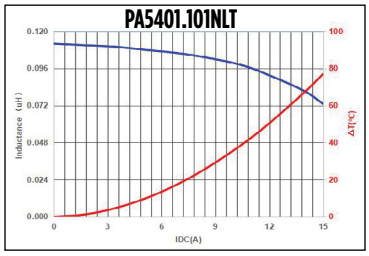
TAPE & REEL INFO

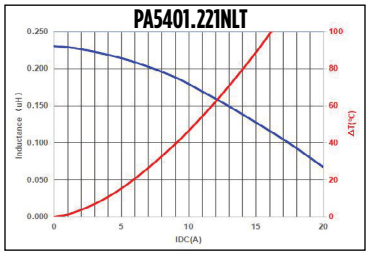


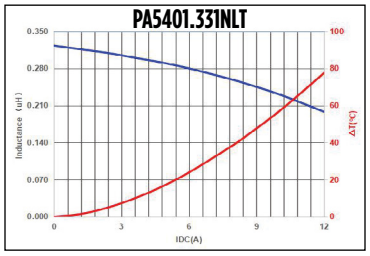
SURFACE MOUNTING TYPE, REEL/TAPE LIST						
	REEL SIZE (mm)		TAPE SIZE (mm)			QTY
	A	G	P_1	W	K_0	PCS/REEL
PA5401/PM5401	Ø330	12.4	8	12	2.3	3000

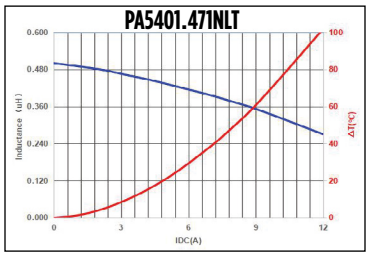
Typical Performace Curves

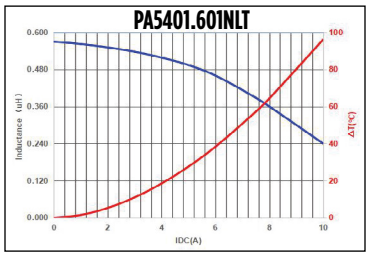
PA5401/PM5401

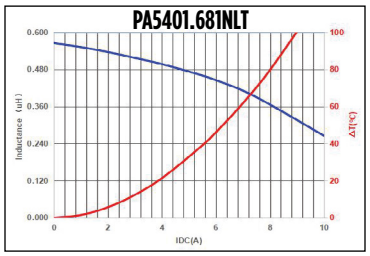












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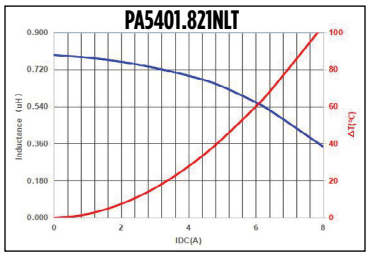

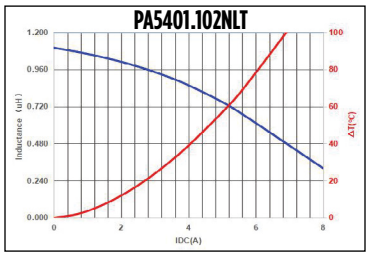

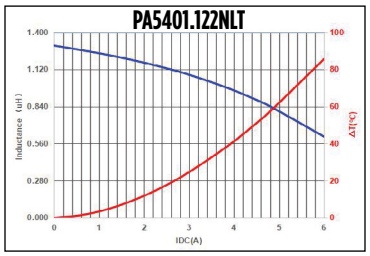

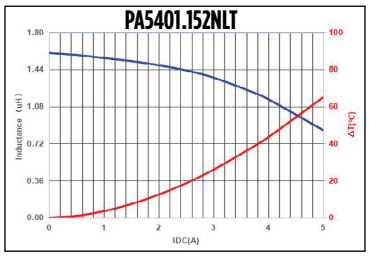

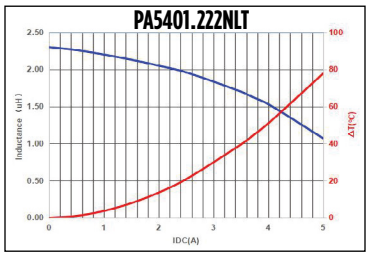

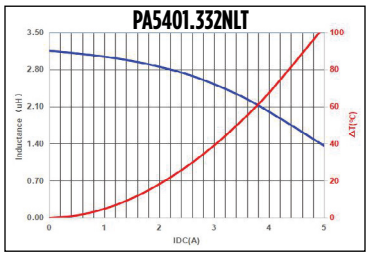

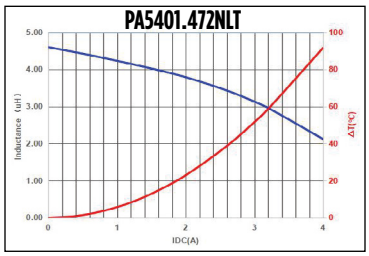

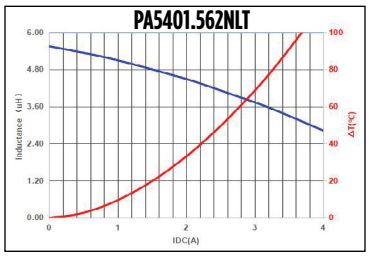

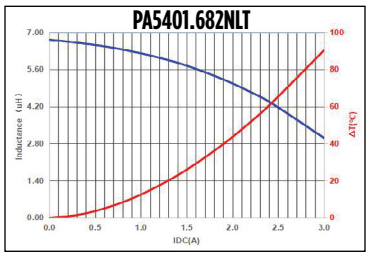

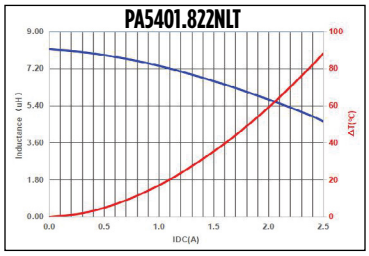

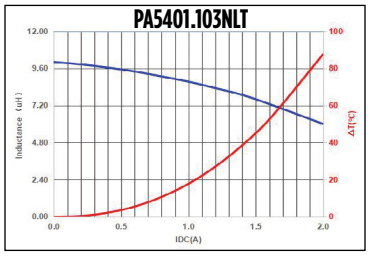

For More Information:

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