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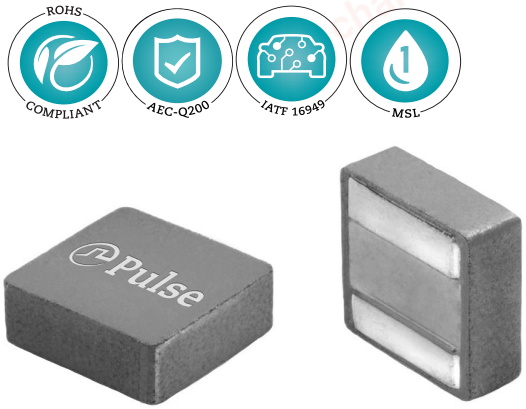
SMT Power Inductor
High Current Composite Inductor - PA/PM5430 and PA/PM5431.XXXNLT



- ***Height:*** *4.1mm Max*
- ***Footprint:*** *4.35mm x 4.35mm Max*
- ***Current Rating:*** *up to 6.6Apk*
- ***Inductance Range****: 3.3uH to 15uH*
- ***Rated Voltage between Terminals:*** *50V*
- *High current, low DCR, and high efficiency*
- *Minimized acoustic noise and minimized leakage flux noise*
- *Available in Commercial (PA543X) and Automotive (PM543X) grades(PM5430) grades*

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

Part Number		▽Inductance 100KHz, 0.1V	Rated[3] Current	DC Resistance	Isat[2]	SRF	K Factor for Core Loss
Commerical	Automotive[6]	uH±20%	A	mΩ MAX.	A MAX	MHz	
PA5430.332NLT	PM5430.332NLT	3.3	6.6	28.6	5.5	32	133
PA5430.472NLT	PM5430.472NLT	4.7	5.1	44.1	4.5	23	101
PA5430.682NLT	PM5430.682NLT	6.8	3.9	74.1	3.6	22	90
PA5431.822NLT	PM5431.822NLT	8.2	3.4	66.9	3.4	20	74
PA5431.103NLT	PM5431.103NLT	10	3.1	92.4	2.5	18	71
PA5431.153NLT	PM5431.153NLT	15	2.8	120	2.3	14	51

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 is guaranteed to drop by no more than 40%.
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 155°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. 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.
6. The PM543X.XXXNLT series are AEC-Q200 certified and IATF 16949 compliance, but the resistance to solvents test is waived. The inductance and mechanical dimensions will do 100% test in mass production due to the Cpk <1.33.
7. Special Characteristics ▽ for PM543X.XXXNLT.

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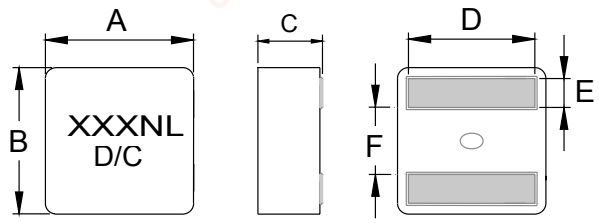
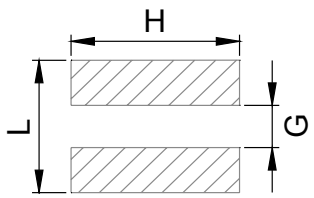
Mechanical

PA5430/PM5430.XXXNLT and PA5431.XXXNLT



FINAL LAYOUT

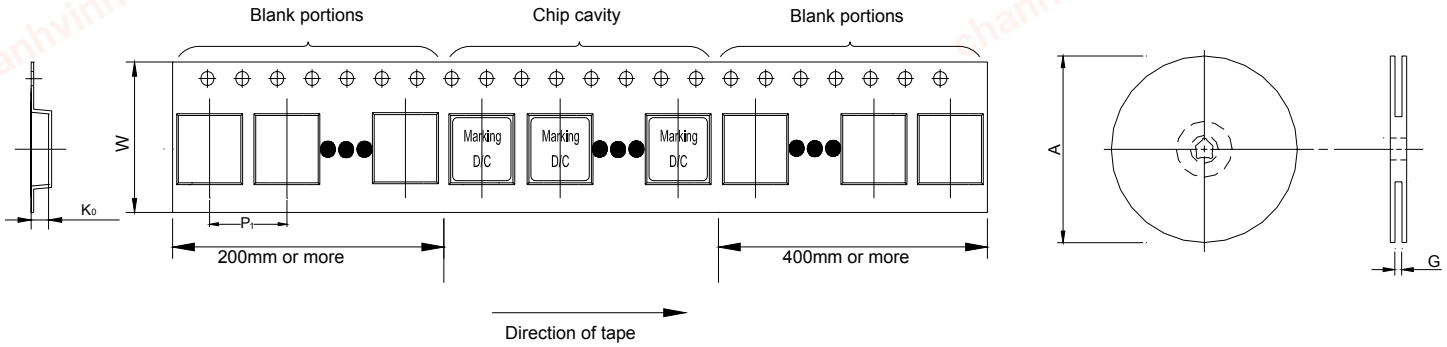


SUGGESTED PAD LAYOUT

Series	A	B	C	D	E	F	L	G	H
PA5430/PM5430	4.1±0.25	4.1±0.25	2.8±0.3	3.4±0.3	0.88±0.3	1.6±0.3	3.4 (REF)	1.4 (REF)	3.8 (REF)
PA5431/PM5431	4.1±0.25	4.1±0.25	3.8±0.3	3.4±0.3	0.88±0.3	1.6±0.3	3.4 (REF)	1.4 (REF)	3.8 (REF)

All Dimensions in mm.

TAPE & REEL INFO



SURFACE MOUNTING TYPE, REEL/TAPE LIST						
Series	REEL SIZE (mm)		TAPE SIZE (mm)			QTY
	A	G	P_1	W	K_0	PCS/REEL
PA5430/PM5430	Ø330	12.4	8	12	3.3	2000
PA5431/PM5431	Ø330	12.4	8	12	4.5	1800

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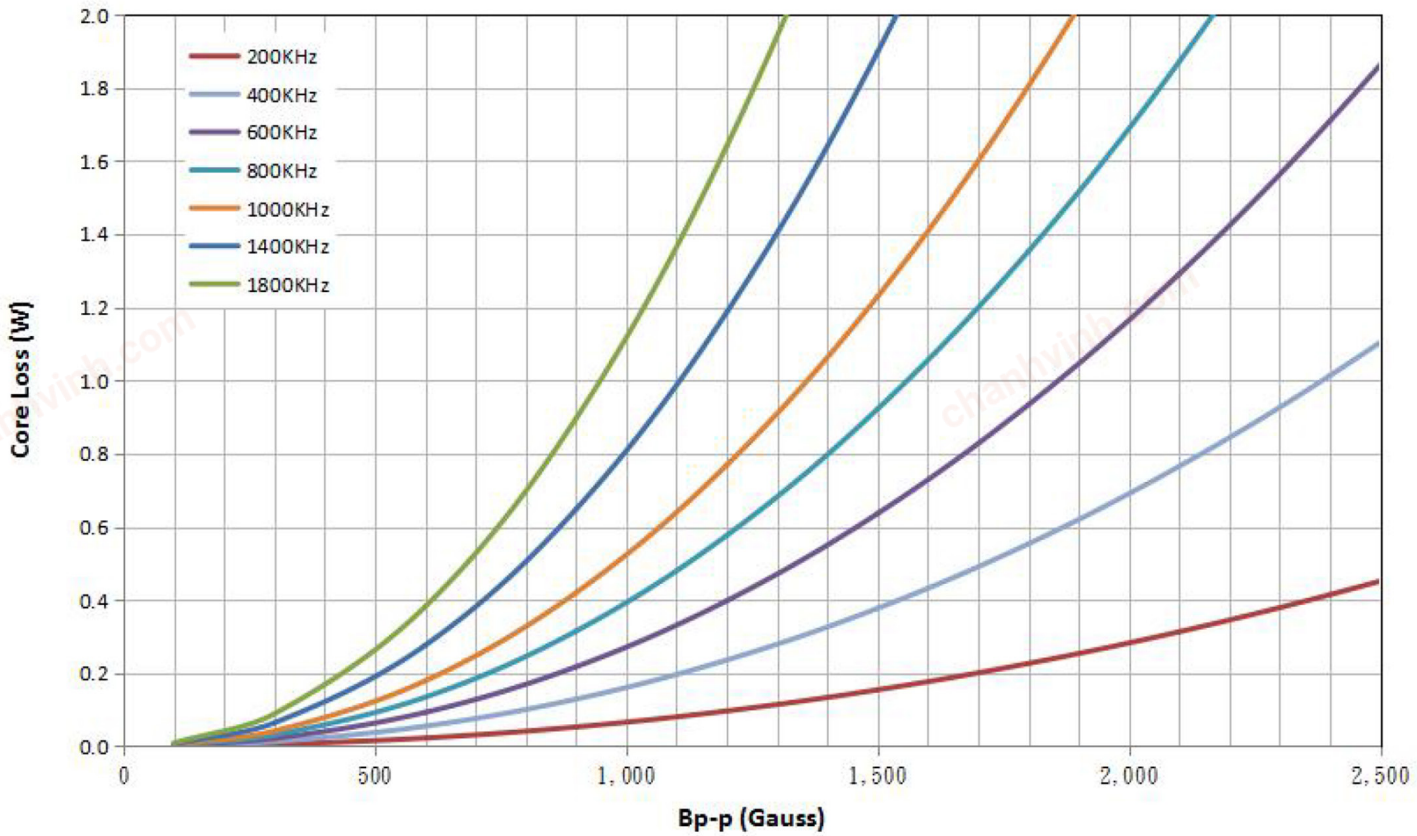
CORE LOSS vs FLUX DENSITY

CORE LOSS vs FLUX DENSITY

PA/PM5430.XXXNLT



Bp-pK*L(uH)*Delta I(A)

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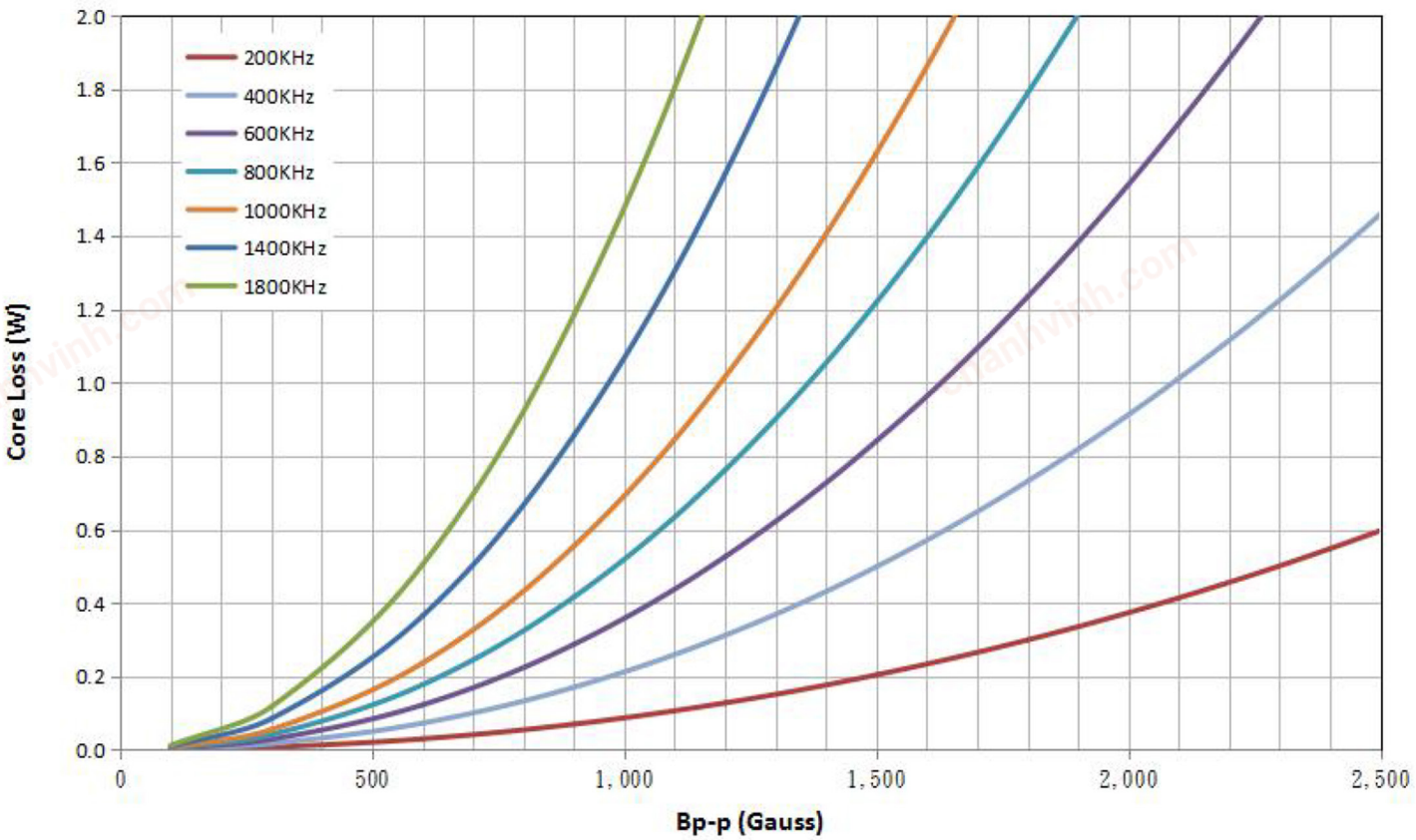
CORE LOSS vs FLUX DENSITY

PA/PM5430.XXXNLT



Bp-pK*L(uH)*Delta I(A)