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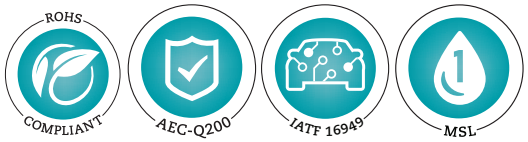
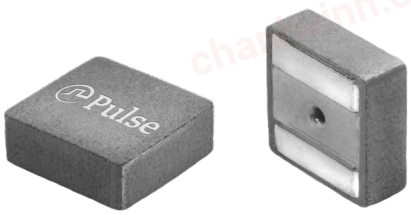
SMT Power Inductors

Molded powder - PA2241.XXXNLT and PM2241.XXXNLT series

Pulse
a YAGEO company





- ***Height:*** *8.0mm Max*
- ***Footprint:*** *9.2mm x 8.8mm Max*
- ***Current Rating:*** *up to 24 Apk*
- ***Inductance Range****: 1.8 uH to 10 uH*
- ***Rated Voltage between Terminals:*** 50V
- *High current, low DCR, and high efficiency*
- *Minimized acoustic noise and minimized leakage flux noise*
- *Available in Commercial (PA2241) and Automotive (PM2241) grades*

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

Part Number		▽ Inductance[6] 100KHz, 0.1V	Rated[3] Current	DC Resistance MAX.	Saturation[2] Current	Mechanical D	K Factor for Core Loss
Commerical	Automotive[4,5]						
(-55°C to 125°C)	(-55°C to 155°C)	uH±20%	A	mΩ	A	mm±0.3	
PA2241.182NLT	PM2241.182NLT	1.80	24.0	4.0	24.0	7.2	48.5
PA2241.222NLT	PM2241.222NLT	2.20	21.5	4.3	22.0	7.2	43.3
PA2241.332NLT	PM2241.332NLT	3.30	18.0	7.3	20.0	6.9	33.6
PA2241.472NLT	PM2241.472NLT	4.70	14.6	9.8	17.0	6.9	27.9
PA2241.682NLT	PM2241.682NLT	6.80	11.3	14.3	12.5	6.9	23.8
PA2241.103NLT	PM2241.103NLT	10.0	8.7	22.9	10.0	6.9	22.2

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 is guaranteed to drop by no more than 40%. The typical inductance at a specified current can be found on the typical performance curves.
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. PM2241.XXXNL 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.
6. Special Characteristics ▽ for PM2241.XXXNLT.

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Mechanical

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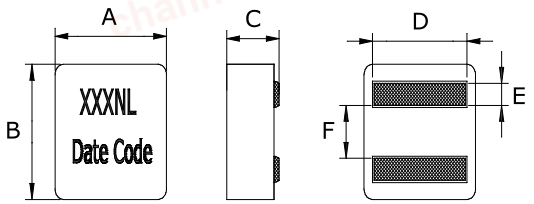
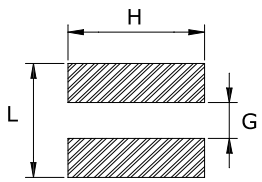


FINAL LAYOUT

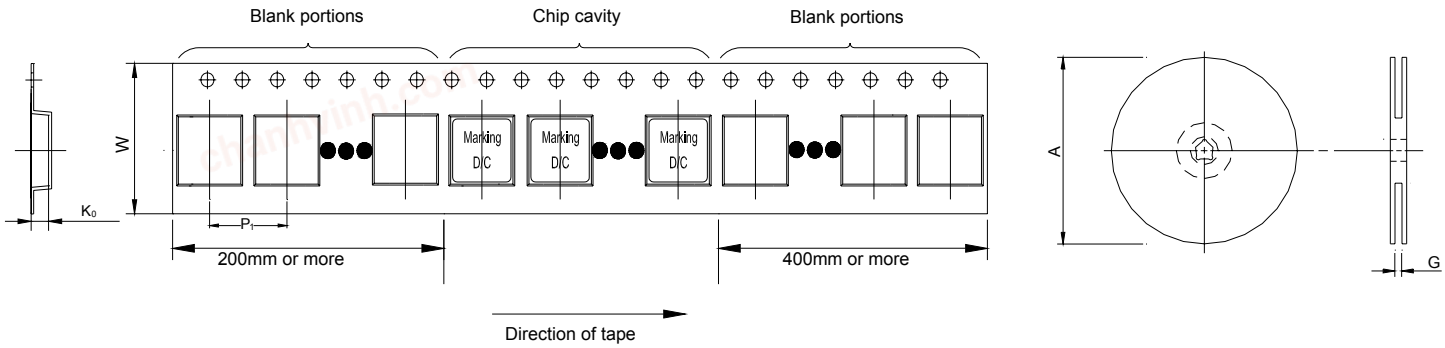


SUGGESTED PAD LAYOUT

Series	A	B	C	D	E	F	L	G	H
PA/PM2241.XXXNLT	8.9±0.3	8.5±0.3	7.7±0.3	SEE SPEC TABLE	1.8±0.2	3.5±0.5	8.0(REF)	2.7 (REF)	7.8 (REF)

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
PA/PM2241.XXXNLT	Ø330	24.4	12	24	8.5	450

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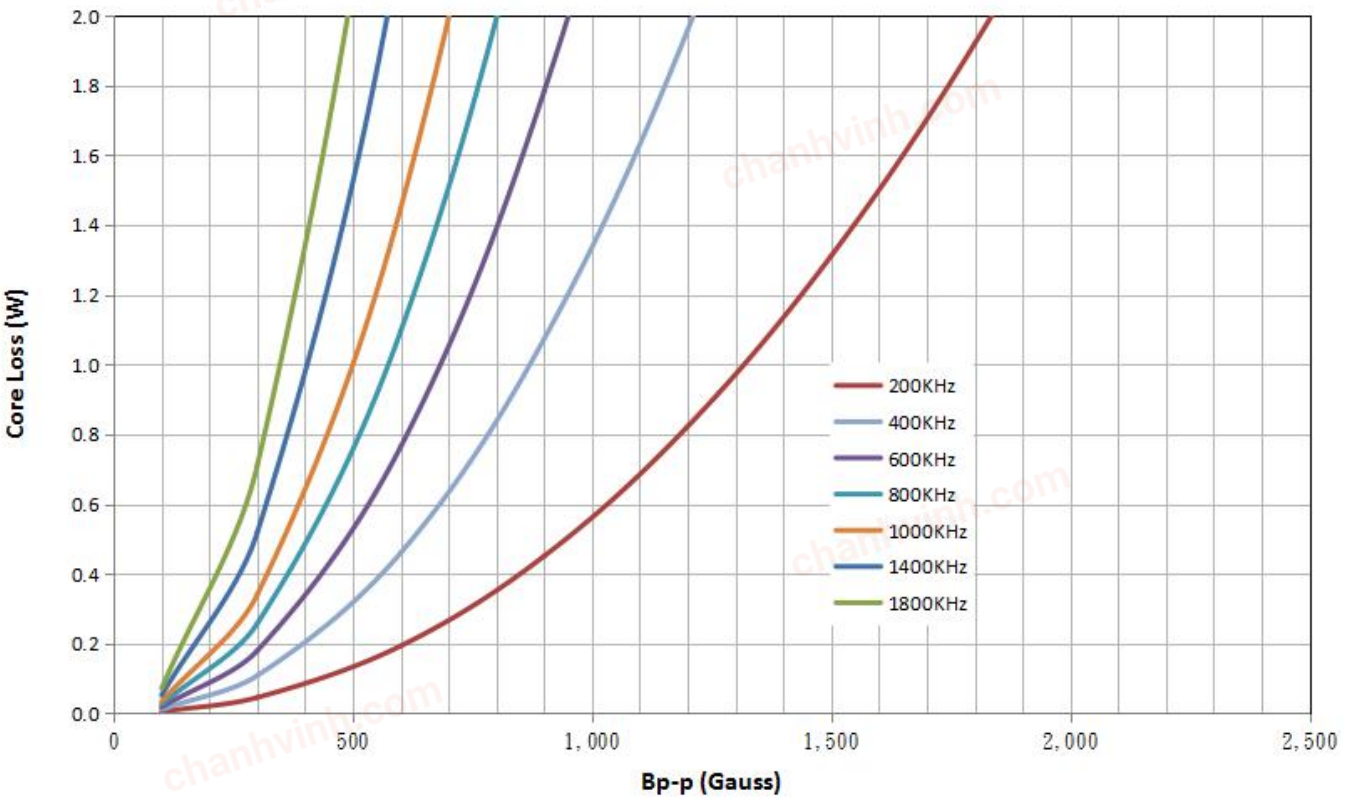
CORE LOSS vs FLUX DENSITY

PA/PM2241.XXXNLT



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

Americas - prodinfo_power_americas@yageo.com | **Europe -** prodinfo_power_emea@yageo.com | **Asia -** prodinfo_power_asia@yageo.com

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