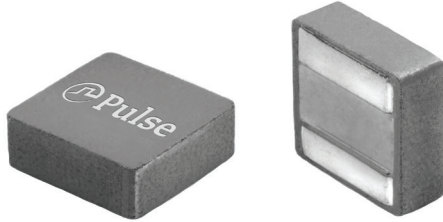


SMT Power Inductors

High Current Composite Inductor - PA5005.XXXNLT and PM2205.XXXNLT



-  **Height:** 5.0mm Max
-  **Footprint:** 6.8mm x 6.6mm Max
-  **Current Rating:** up to 24Apk
-  **Inductance Range:** 0.82uH to 8.2uH
-  High current, low DCR, and high efficiency
-  High reliability
-  Minimized acoustic noise and minimized leakage flux noise
-  Available in Commercial (PA5005) and Automotive (PM2205) grades

Electrical Specifications @ 25°C, Operating Temperature Range per Below⁴

Part Number		Inductance 100KHz, 0.1V	Rated ³ Current	DC Resistance		Saturation ² Current (25°C)	K Factor for Core Loss	Mechanical D
Commerical (-40°C to 125°C)	Automotive ⁶ (-55°C to 155°C)			TYP.	MAX.			
		uH±20%	A	mΩ	mΩ	A		±0.3
PA5005.821NLT	PM2205.821NLT	0.82	21	3.8	4.18	24	132.2	5.3
PA5005.102NLT	PM2205.102NLT	1	20	4.1	4.52	23	132.2	5.3
PA5005.122NLT	PM2205.122NLT	1.2	18	5.3	5.83	22	109.2	5.3
PA5005.152NLT	PM2205.152NLT	1.5	17	5.7	6.3	19.5	93	5.3
PA5005.182NLT	PM2205.182NLT	1.8	16	6.4	7.1	18.5	93	5.3
PA5005.222NLT	PM2205.222NLT	2.2	13	7.7	8.5	16	81	5.2
PA5005.332NLT	PM2205.332NLT	3.3	11	11.2	12.5	12.5	64.4	5.2
PA5005.432NLT	PM2205.432NLT	4.3	9	15.1	16.2	11	53.4	5.2
PA5005.472NLT	PM2205.472NLT	4.7	8.5	16.7	18.4	10.5	49.2	5.2

Notes:

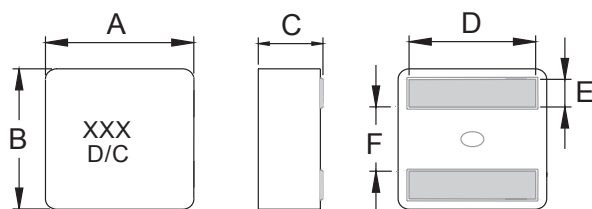
- Actual temperature of the component during system operation (ambient plus temperature rise) must be within the standard operating range.
- The saturation current is the current at which the initial inductance drops approximately 30% at the stated ambient temperature. This current is determined by placing the component in the specified ambient environment and applying a short duration pulse current (to eliminate self-heating effect) to the component.
- The rated current is the DC current required to raise the component temperature by approximately 40 °C. Take note that the components' performance 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.
- 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.
- The PM2205.XXXNLT part numbers are AEC-Q200 and IATF16949 certified. 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.

SMT Power Inductors

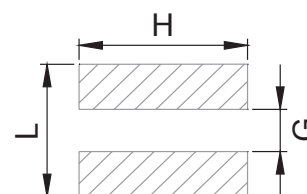
High Current Composite Inductor - PA5005.XXXNLT and PM2205.XXXNLT

Mechanical

PA5005.XXXNLT and PM2205.XXXNLT



FINAL LAYOUT

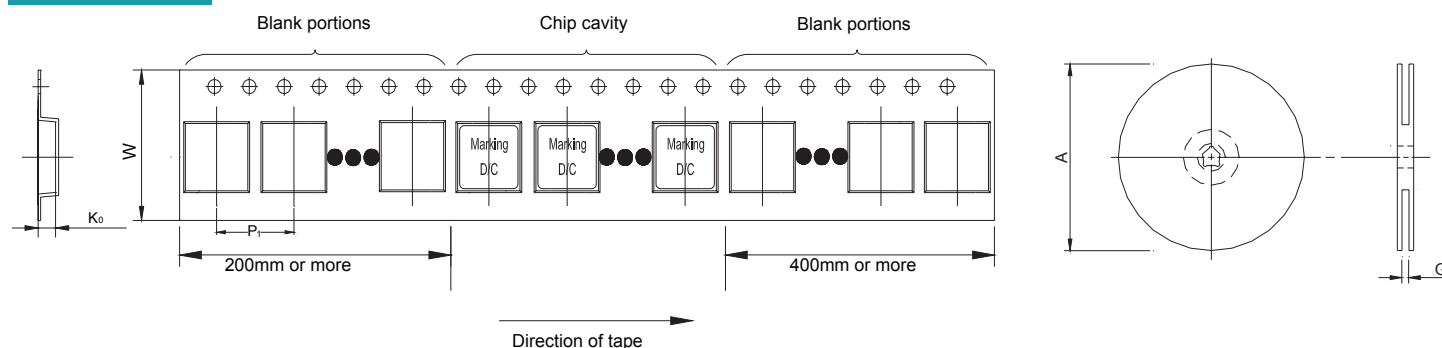


SUGGESTED PAD LAYOUT

Series	A	B	C	D	E	F	L	G	H
PA5005/PM2205	6.6±0.2	6.4±0.2	4.8±0.2	SEE SPEC TABLE	1.4±0.2	2.6±0.25	5.6 (REF)	2.5 (REF)	5.6 (REF)

All Dimensions in mm.

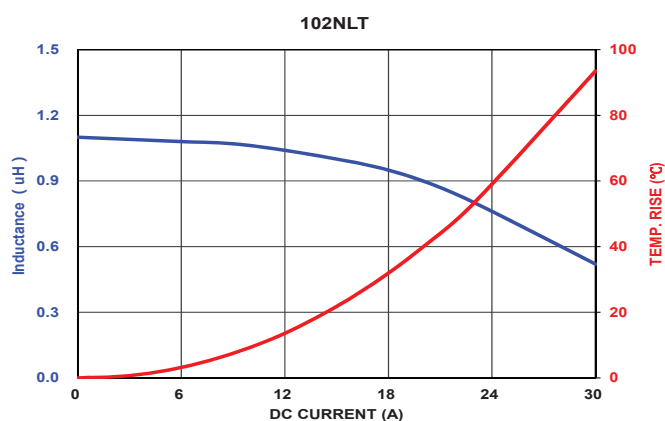
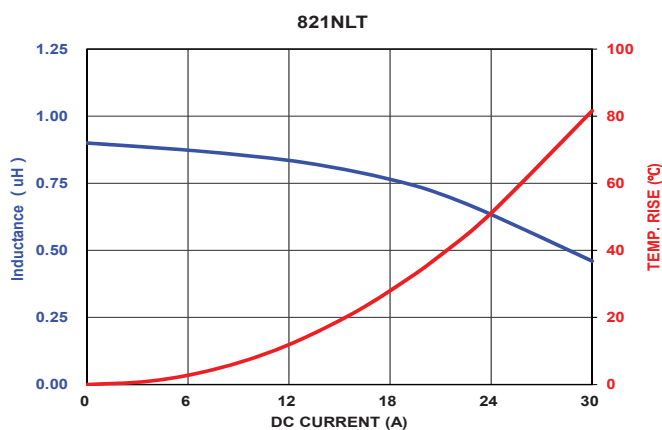
TAPE & REEL INFO



SURFACE MOUNTING TYPE, REEL/TAPE LIST

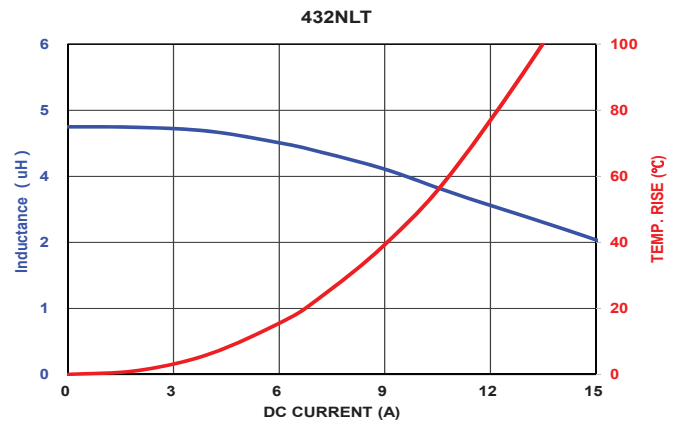
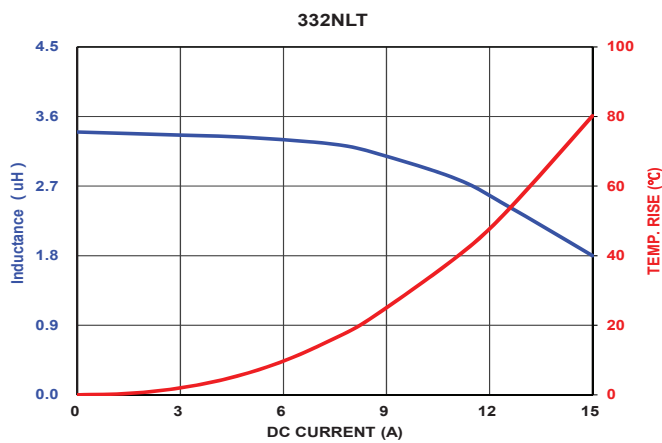
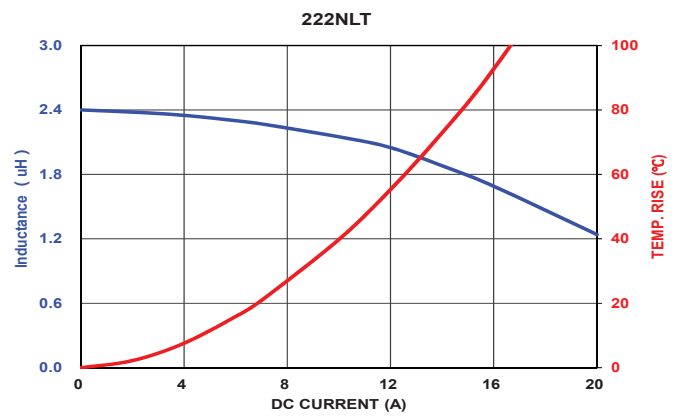
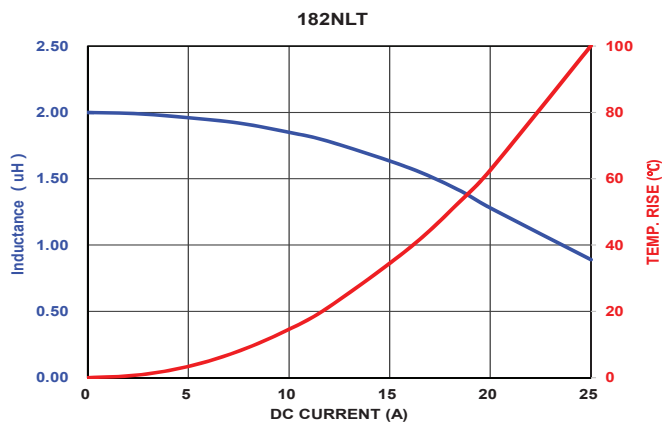
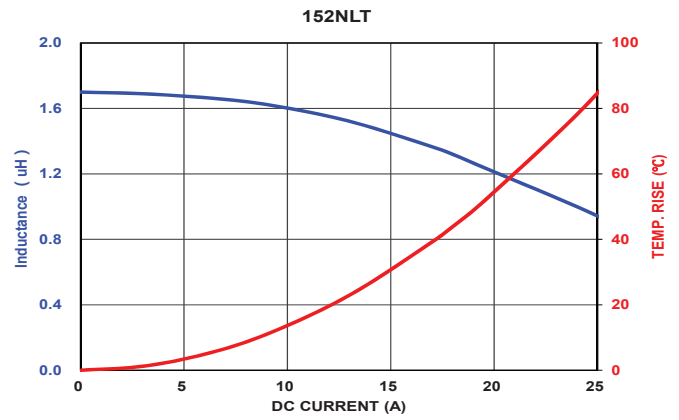
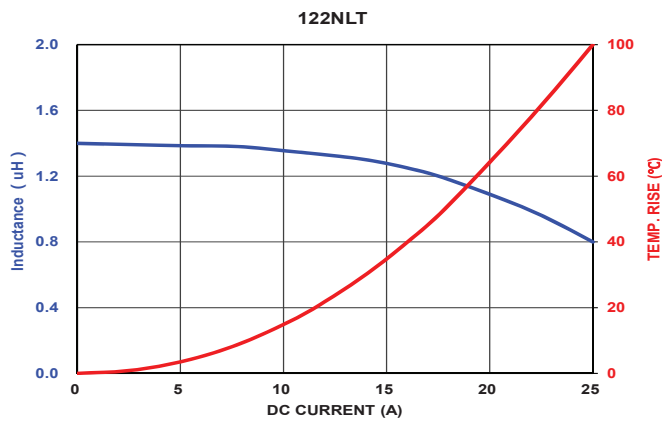
	REEL SIZE (mm)		TAPE SIZE (mm)			QTY
	A	G	P ₁	W	K ₀	PCS/REEL
PA5005/PM2205	Ø330	16.4	12	16	5.3	800

Typical Performance Curves



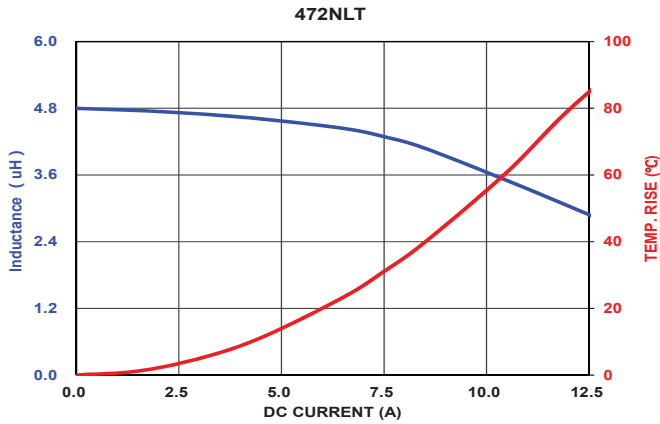
SMT Power Inductors

High Current Composite Inductor - PA5005.XXXNLT and PM2205.XXXNLT

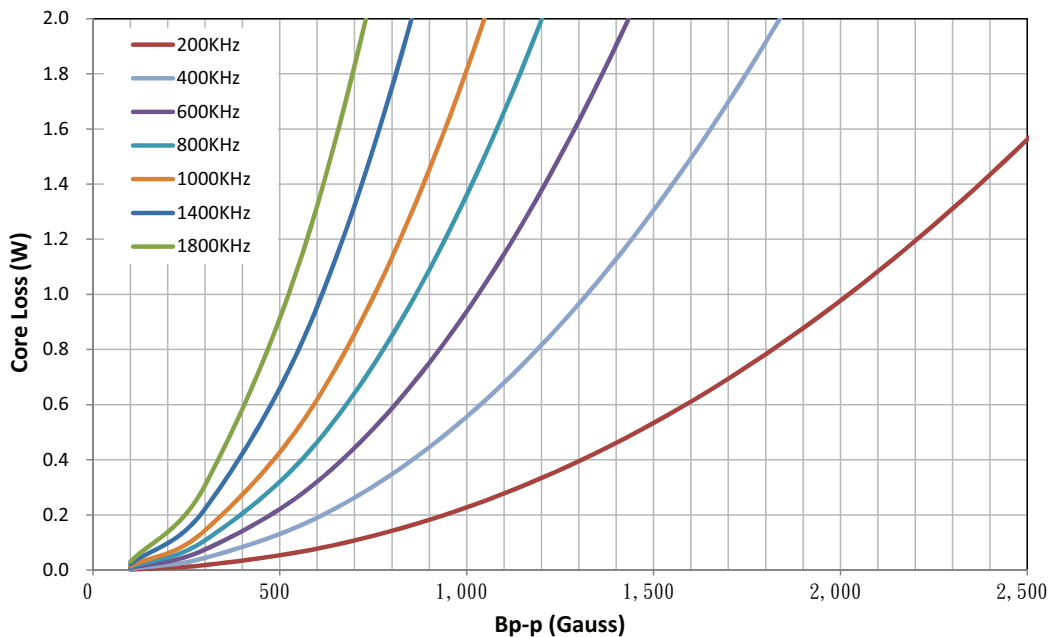


SMT Power Inductors

High Current Composite Inductor - PA5005.XXXNLT and PM2205.XXXNLT



CORE LOSS vs FLUX DENSITY



$$Bp-p = K * L(uH) * \Delta I(A)$$

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