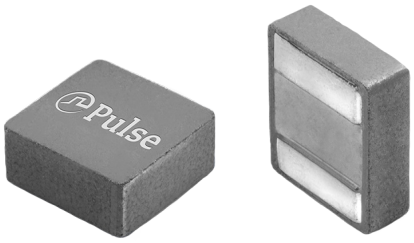
SMT Power Inductors

High Current Composite Inductor - PA5433.XXXNLT and PM5433.XXXNLT

Pulse
a YAGEO company



- ***Height:*** *8.0mm Max*
- ***Footprint:*** *16.8mm x 15.8mm Max*
- ***Current Rating:*** *up to 40Arms*
- ***Inductance Range****: 2.0uH to 22uH*
- *High current, low DCR, and high efficiency*
- *Rated Voltage between Terminals: 100V*
- *Minimized acoustic noise and minimized leakage flux noise*
- *Available in Commercial (PA5433) and Automotive (PM5433) grades*

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

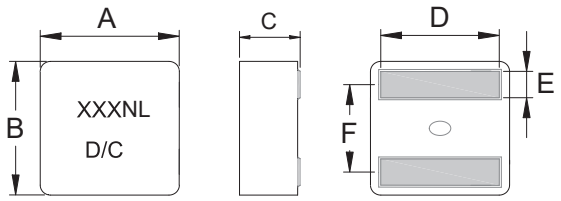
Part Number		▽Inductance 100KHz, 0.1V	Rated[3] Current	DC Resistance		Saturation[2] Current (25°C)	K Factor for Core Loss
Commerical	Automotive[6]			TYP.	MAX.		
		uH±20%	A	mΩ	mΩ	A	
PA5433.202NLT	PM5433.202NLT	2.00	40.0	1.92	2.21	52.0	17.7
PA5433.222NLT	PM5433.222NLT	2.20	37.0	2.15	2.48	49.0	17.7
PA5433.302NLT	PM5433.302NLT	3.00	34.5	2.50	3.00	41.0	14.6
PA5433.422NLT	PM5433.422NLT	4.20	27.0	3.90	4.68	33.0	12.5
PA5433.532NLT	PM5433.532NLT	5.30	26.0	4.45	5.34	31.0	10.9
PA5433.622NLT	PM5433.622NLT	6.20	23.0	5.40	6.50	31.0	9.6
PA5433.722NLT	PM5433.722NLT	7.20	21.0	6.00	7.20	29.0	8.6
PA5433.822NLT	PM5433.822NLT	8.20	19.0	6.60	7.92	25.0	8.6
PA5433.103NLT	PM5433.103NLT	10.0	16.0	8.00	9.60	21.0	7.8
PA5433.153NLT	PM5433.153NLT	15.0	13.0	12.50	15.00	18.0	6.1
PA5433.223NLT	PM5433.223NLT	22.0	12.0	19.30	23.20	16.0	4.7

Notes:

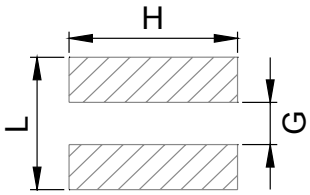
1. Actual temperature of the component during system operation (ambient plus temperature rise) must be within the standard operating range.
2. The saturation current is the current at which the initial inductance is guaranteed to drop by no more than 40%. The typical inductance at a specified current 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 the upper operating temperature range 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. The PMxxxx.XXXNLT part numbers are AEC-Q200 and IATF16949 certified. The inductance and 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.
6. Special Characteristics▽.

Mechanical

PA5433.XXXNLT and PM5433.XXXNLT



FINAL LAYOUT

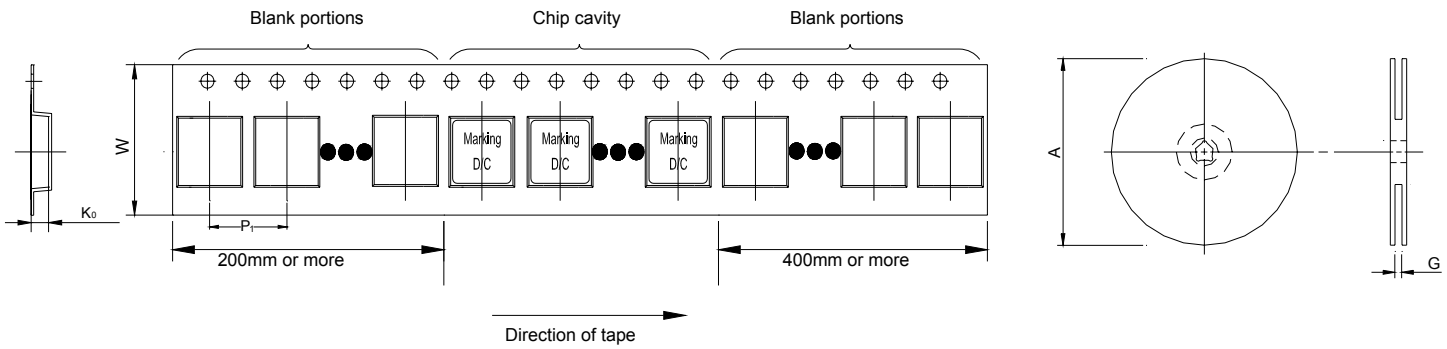


SUGGESTED PAD LAYOUT

Series	A	B	C	D	E	F	L	G	H
PA5433/PM5433	16.5±0.3	15.5±0.3	7.7±0.3	13.2±0.5	3.2±0.2	10.4±0.3	15.0 (REF)	6.0(REF)	15.0(REF)

All Dimensions in mm.

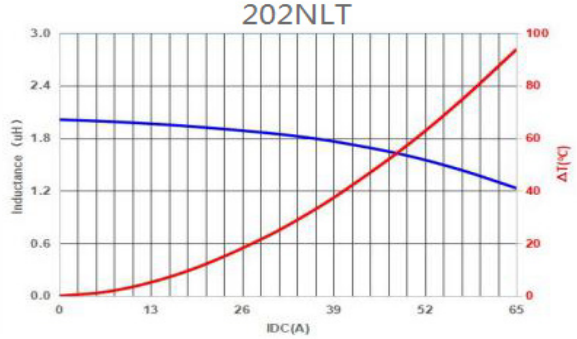
TAPE & REEL INFO



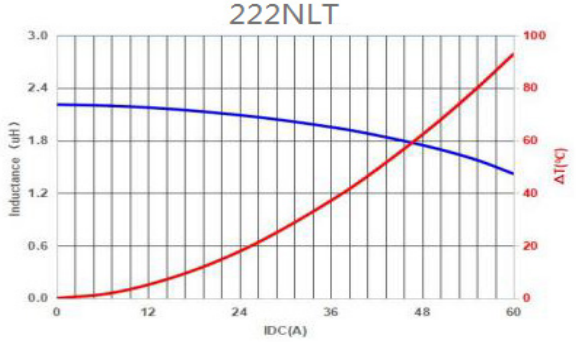
SURFACE MOUNTING TYPE, REEL/TAPE LIST						
	REEL SIZE (mm)		TAPE SIZE (mm)			QTY
	A	G	P_1	W	K_0	PCS/REEL
PA5433/PM5433	Ø330	32.4	24	32	8.5	200

Typical Performance Curves

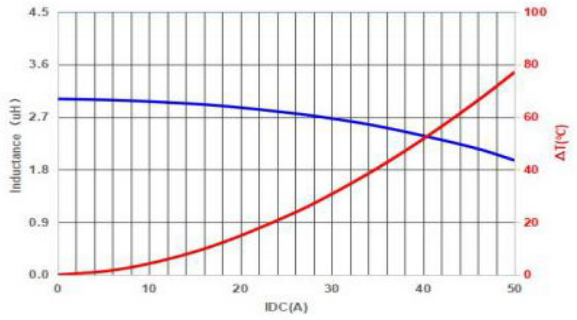
202NLT



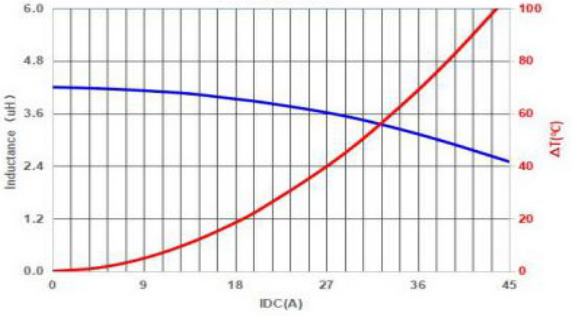
222NLT



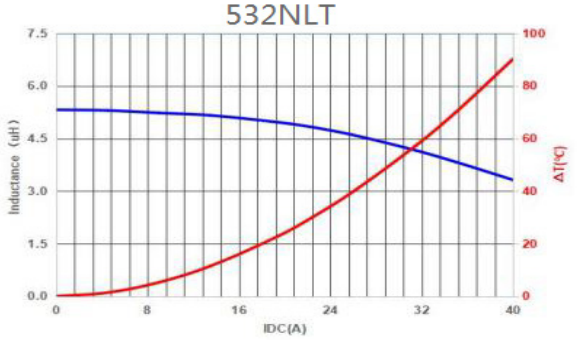
302ANLT



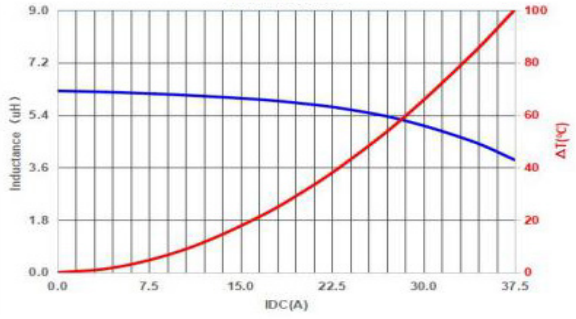
422NLT



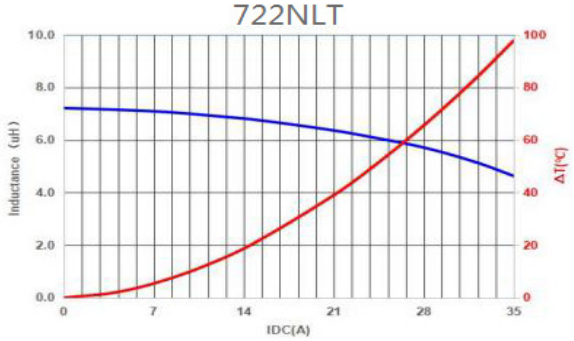
532NLT



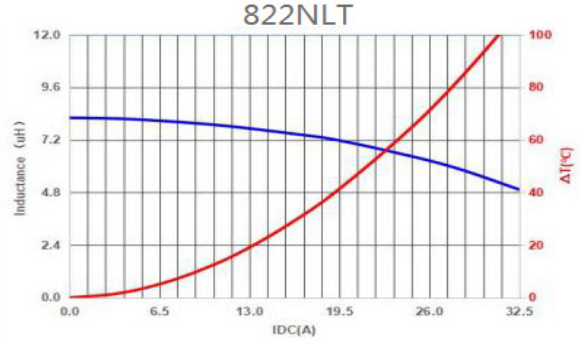
622NLT



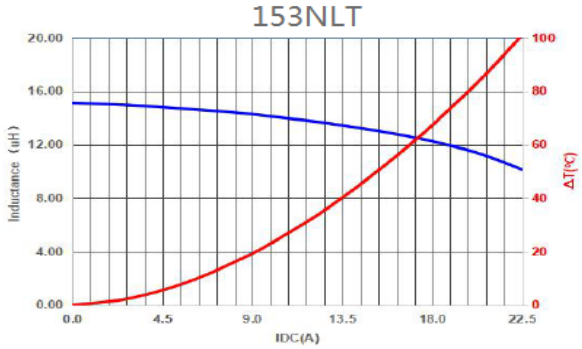
722NLT



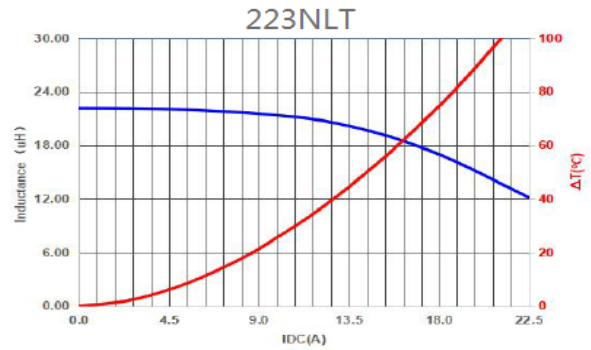
822NLT



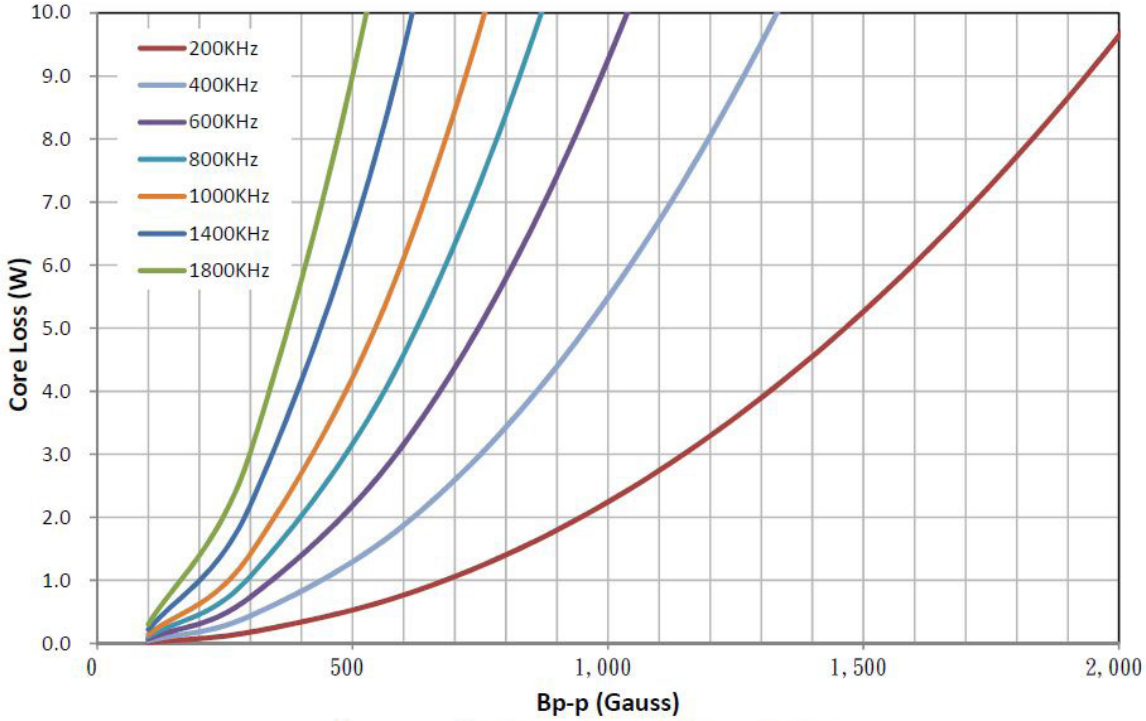
153NLT



223NLT



CORE LOSS vs FLUX DENSITY



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

For More Information:

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