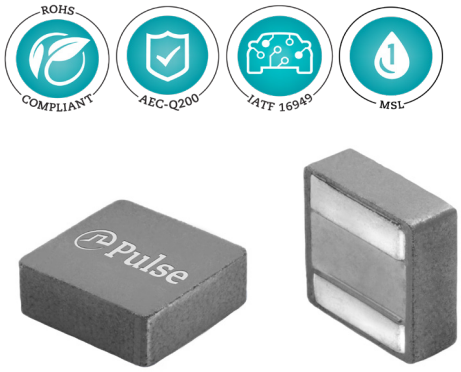
SMT Power Inductors

High Current Composite Inductor - PA2247XXXNLT and PM2247.XXXNLT



- ***Height:*** *10.0mm Max*
- ***Footprint:*** *17.8mm x 16.8mm Max*
- ***Current Rating:*** *up to 30Arms*
- ***Inductance Range****: 4.7uH to 33.0uH*
- *High current, low DCR, and high efficiency*
- *High reliability*
- *Minimized acoustic noise and minimized leakage flux noise*
- *Available in Commercial (PA2247) and Automotive (PM2247) grades*

Electrical Specifications @ 25°C, Operating Temperature Range per Below[4,5]

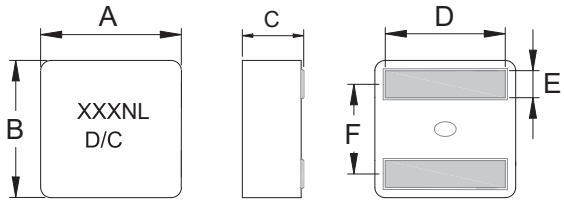
Part Number		▽ Inductance 100KHz, 0.1V	Rated[3] Current	DC Resistance		Saturation Current[2] (25°C)	K Factor for Core Loss
Commerical	Automotive[6]			TYP.	MAX.	TYP.	
(-55°C to 125°C)	(-55°C to 155°C)	uH±20%	A	mΩ	mΩ	A	
PA2247.472NLT	PM2247.472NLT	4.7	30	3.4	3.8	39	10.9
PA2247.562NLT	PM2247.562NLT	5.6	28	3.82	4.2	34	9.6
PA2247.682NLT	PM2247.682NLT	6.8	26	4.18	4.6	31	9.6
PA2247.822NLT	PM2247.822NLT	8.2	25	6.0	7.2	28	8.6
PA2247.103NLT	PM2247.103NLT	10.0	24	7.1	8.6	26	7.2
PA2247.153NLT	PM2247.153NLT	15.0	18	9.2	11.5	20	6.1
PA2247.223NLT	PM2247.223NLT	22.0	16	13.2	15.8	18	5.0
PA2247.333NLT	PM2247.333NLT	33.0	13	18.7	20.0	16.7	3.9

Notes:

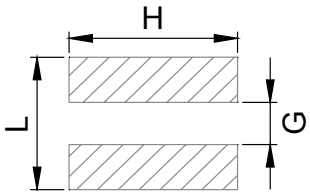
1. Actual temperature of the component during system operation (ambient plus temperature rise) must be within the standard operating range.
2. The saturation current is the current at which the initial inductance drops by approximately 30% at the stated ambient temperature. The maximum allowable drop at this stated current is 40% of the initial inductance. 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.
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

PA2247.XXXNLT and PM2247.XXXNLT



FINAL LAYOUT

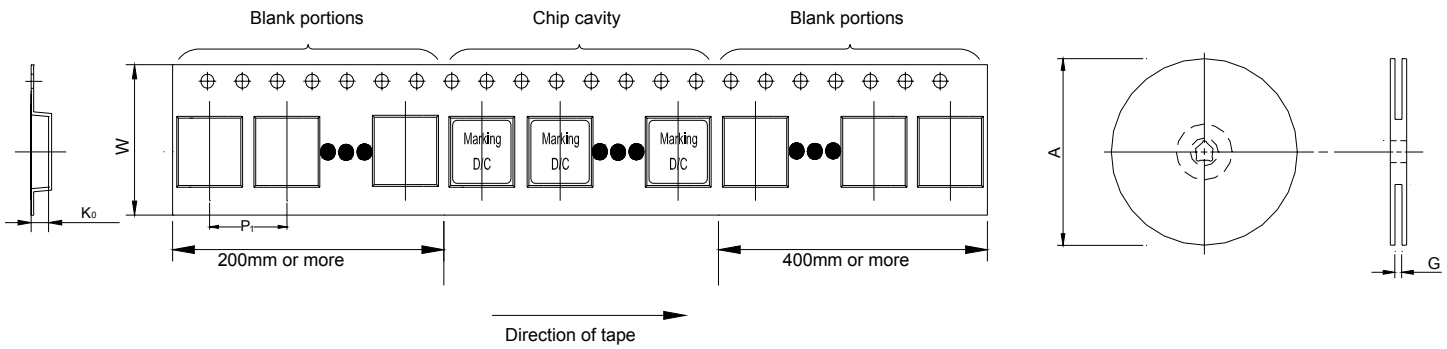


SUGGESTED PAD LAYOUT

Series	A	B	C	D	E	F	L	G	H
PA2247/PM2247 .472/.562/.682/.822NLT	16.5±0.3	15.5±0.3	9.7±0.3	13.2±0.5	3.2±0.2	10.4±0.3	15.0(REF)	6.0 (REF)	15.0(REF
PA2247/PM2247 .103/.153/.223/.333NLT	17.5±0.3	16.5±0.3							

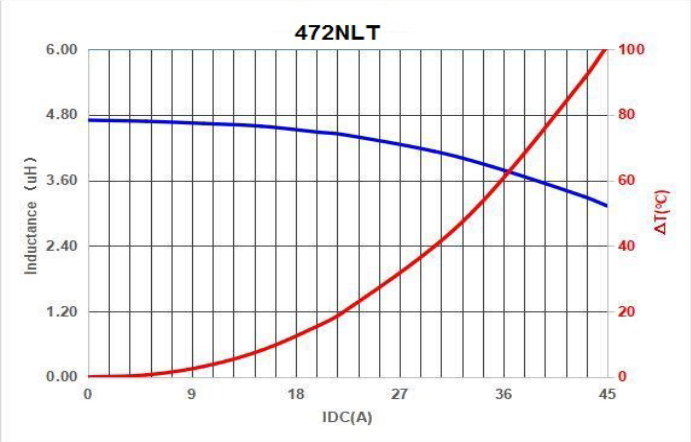
All Dimensions in mm.

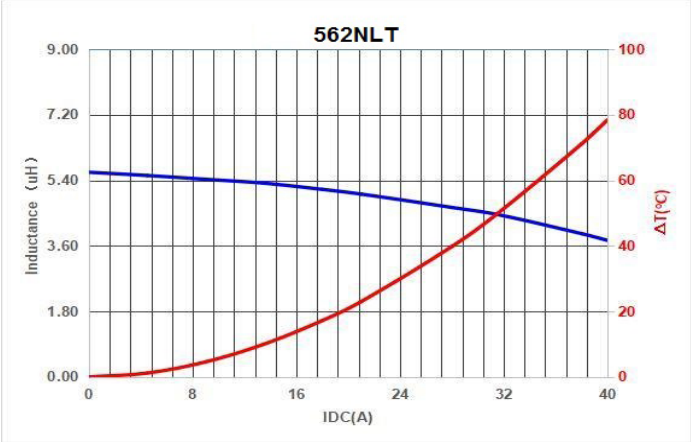
TAPE & REEL INFO

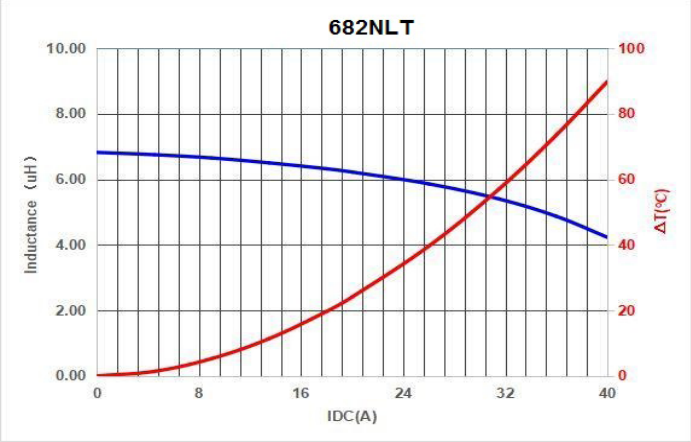


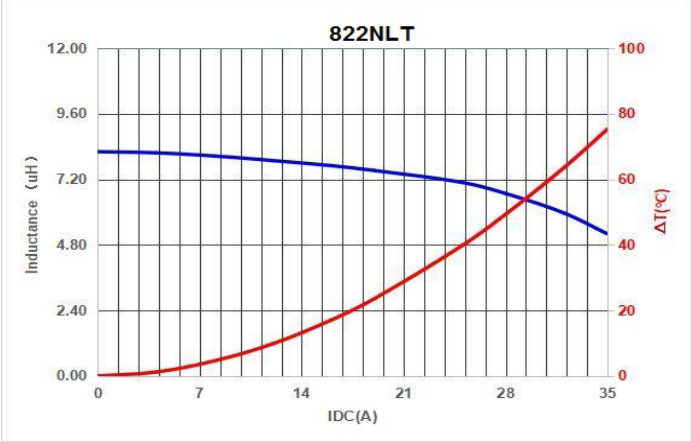
SURFACE MOUNTING TYPE, REEL/TAPE LIST						
	REEL SIZE (mm)		TAPE SIZE (mm)			QTY
	A	G	P_1	W	K_0	PCS/REEL
PA2247/PM2247	Ø330	32.4	24	32	10.5	150

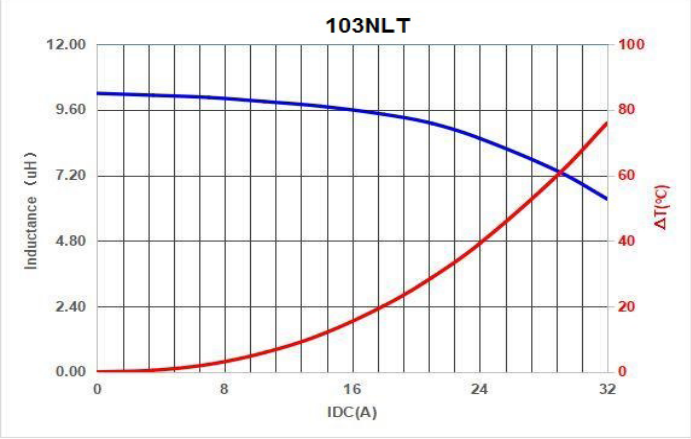
Typical Performance Curves

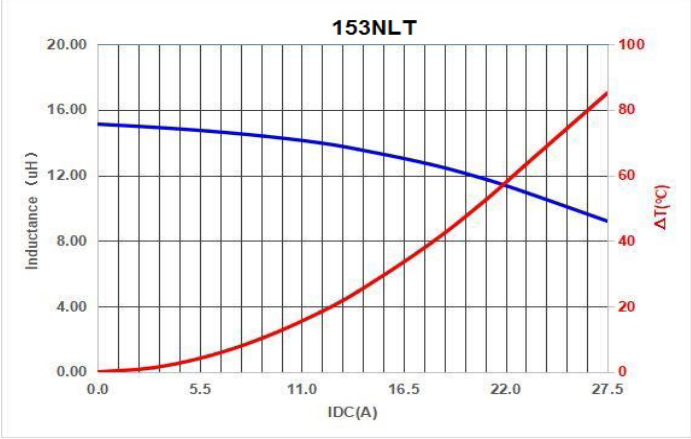


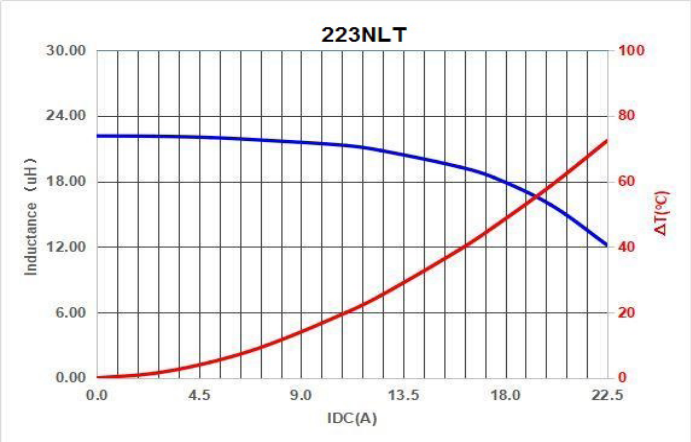


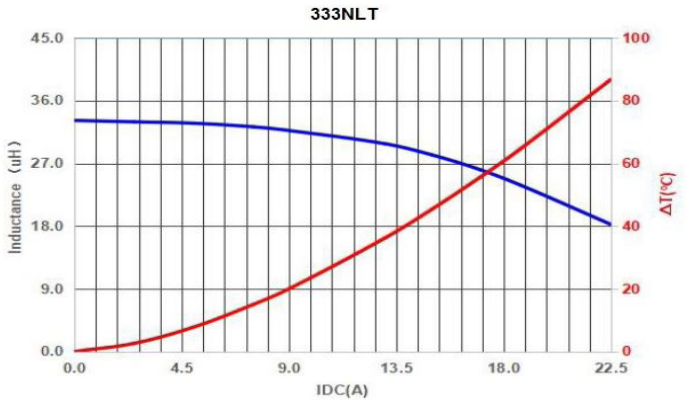




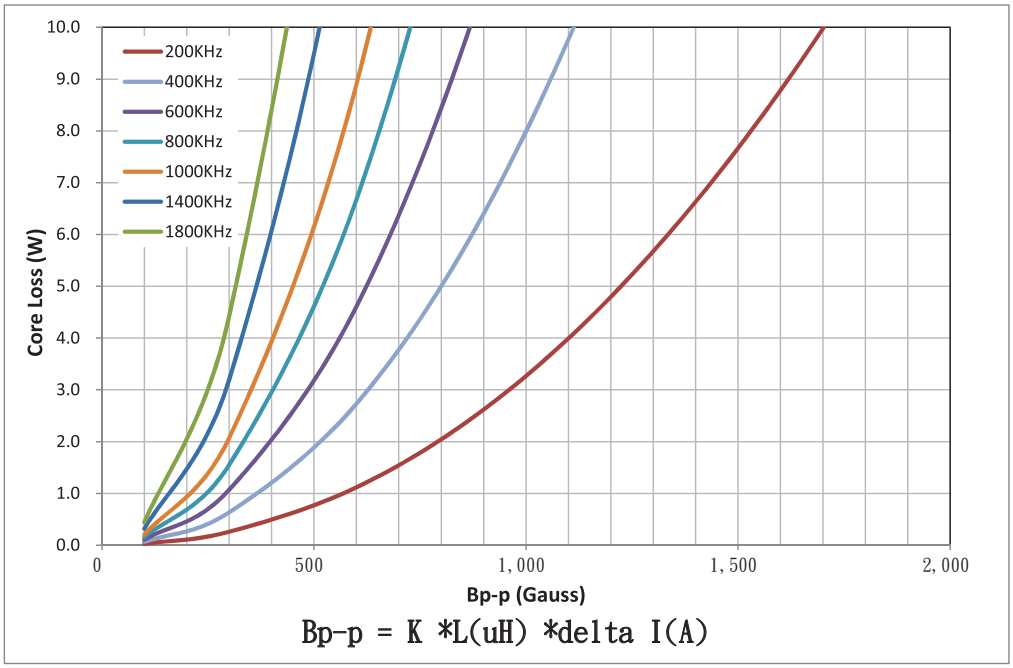








CORE LOSS vs FLUX DENSITY



For More Information

Pulse Worldwide Headquarters
15255 Innovation Drive Ste 100
San Diego, CA 92128
U.S.A.

Tel: 858 674 8100
Fax: 858 674 8262

Pulse Europe
Pulse Electronics GmbH
Am Rottland 12
58540 Meinerzhagen
Germany

Tel: 49 2354 777 100
Fax: 49 2354 777 168

Pulse China Headquarters
Pulse Electronics (ShenZhen) CO., LTD
D708, Shenzhen Academy of
Aerospace Technology,
The 10th Keji South Road,
Nanshan District, Shenzhen,
P.R. China 518057

Tel: 86 755 33966678
Fax: 86 755 33966700

Pulse North China
Room 2704/2705
Super Ocean Finance Ctr.
2067 Yan An Road West
Shanghai 200336
China

Tel: 86 21 62787060
Fax: 86 2162786973

Pulse South Asia
3 Fraser Street 0428
DUO Tower
Singapore 189352

Tel: 65 6287 8998
Fax: 65 6280 0080

Pulse North Asia
1F., No.111 Xiyuan Road
Zhongli District
Taoyuan City 32057
Taiwan (R.O.C)

Tel: 886 3 4356768
Fax: 886 3 4356820