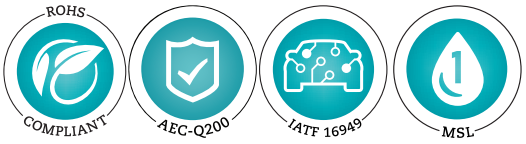
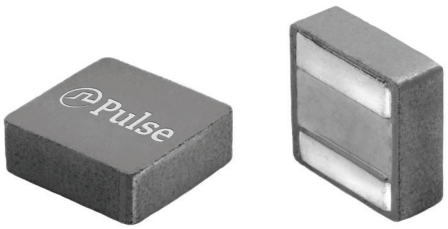
SMT Power Inductors

High Current Composite Inductor - PA2240XXXNLT and PM2240.XXXNLT





- ***Height:*** *7.0mm Max*
- ***Footprint:*** *8.05mm x 7.85mm Max*
- ***Current Rating:*** *up to 15Apk*
- ***Inductance Range****: 3.3uH to 6.8uH*
- *High current, low DCR, and high efficiency*
- *Rated Voltage between Terminals: 60V*
- *Minimized acoustic noise and minimized leakage flux noise*
- *Available in Commercial (PA2240) and Automotive (PM2240) grades*

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

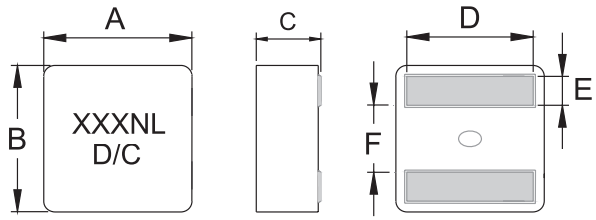
Part Number		▽ Inductance 100KHz, 0.1V	Rated[3] Current	DC Resistance		Saturation Current[2] (25°C)		K Factor for Core Loss	Mechanical D
Commerical	Automotive[6]			TYP.	MAX.	TYP.	MAX.		
(-55°C to 125°C)	(-55°C to 155°C)	uH±20%	A	mΩ	mΩ	A	A		±0.3
PA2240.102NLT	PM2240.102NLT	1.0	25	2.55	2.81	34.8	31.8	82.1	6.70
PA2240.182NLT	PM2240.182NLT	1.8	21	3.10	4.46	25	23	57.4	6.70
PA2240.222NLT	PM2240.222NLT	2.2	17.8	4.05	6.33	19.6	17.6	52.5	6.70
PA2240.332NLT	PM2240.332NLT	3.3	15.1	8.56	9.42	19.4	15.1	40.0	6.7
PA2240.472NLT	PM2240.472NLT	4.7	13.6	12.2	13.5	15.5	14.0	36.3	6.7
PA2240.682NLT	PM2240.682NLT	6.8	9.5	17.8	19.6	12.8	11.0	26.4	6.5
PA2240.103NLT	PM2240.103NLT	10	9.3	17.54	20.17	7.5	6.5	25.1	6.50
PA2240.123NLT	PM2240.123NLT	12	8.2	19.33	22.23	7.4	6.2	22.3	6.50
PA2240.153NLT	PM2240.153NLT	15	7.4	25.67	29.5	7.0	6.0	20.8	6.50

Notes:

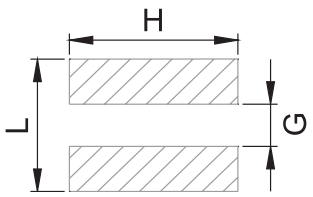
1. Actual temperature of the component during system operation (ambient plus temperature rise) must be within the standard operating range.
2. The saturation current is the current at which the initial inductance drops approximately 30% at the stated ambient temperature. This current is determined by placing the compnent 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 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. The PMxxxx.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.
6. Special Characteristics ▽

Mechanical

PA2240.XXXNLT and PM2240.XXXNLT



FINAL LAYOUT

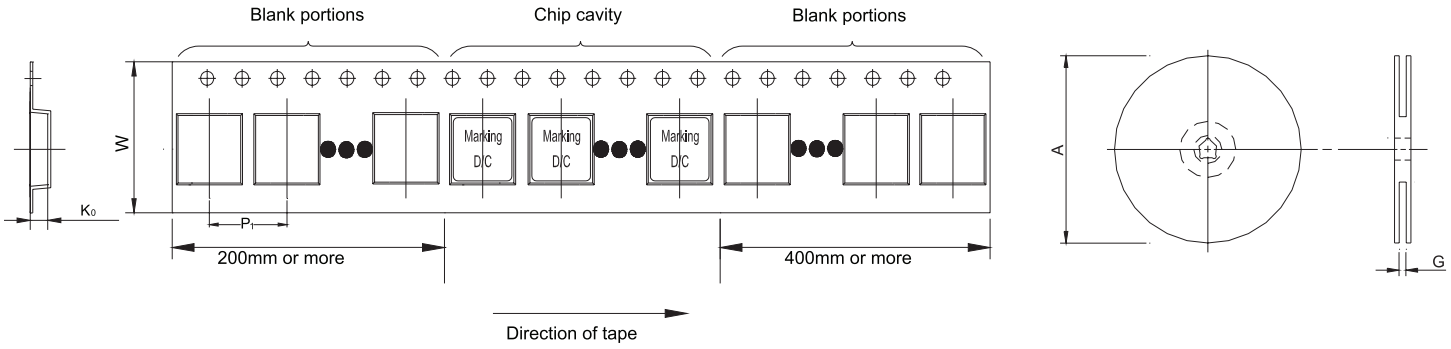


SUGGESTED PAD LAYOUT

Series	A	B	C	D	E	F	L	G	H
PA2240/PM2240	7.8±0.25	7.6±0.25	6.7±0.3	SEE SPEC TABLE	1.75±0.2	3.15±0.25	7.8 (REF)	2.8 (REF)	6.7 (REF)

All Dimensions in mm.

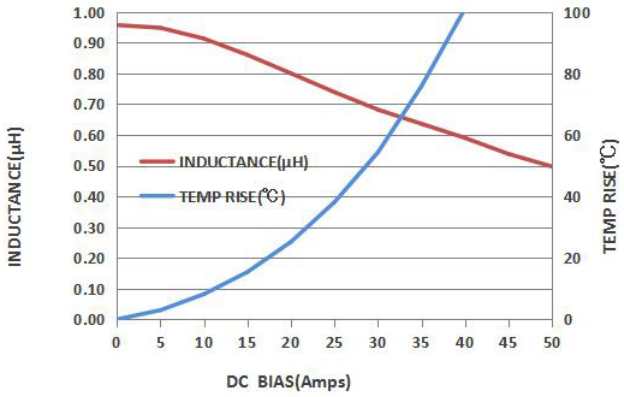
TAPE & REEL INFO



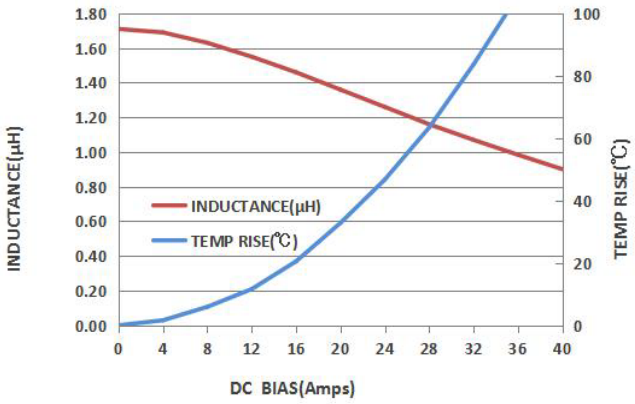
SURFACE MOUNTING TYPE, REEL/TAPE LIST						
	REEL SIZE (mm)		TAPE SIZE (mm)			QTY
	A	G	P_1	W	K_0	PCS/REEL
PA2240/PM2240	Ø330	16.4	12	16	7.3	700

Typical Performance Curves

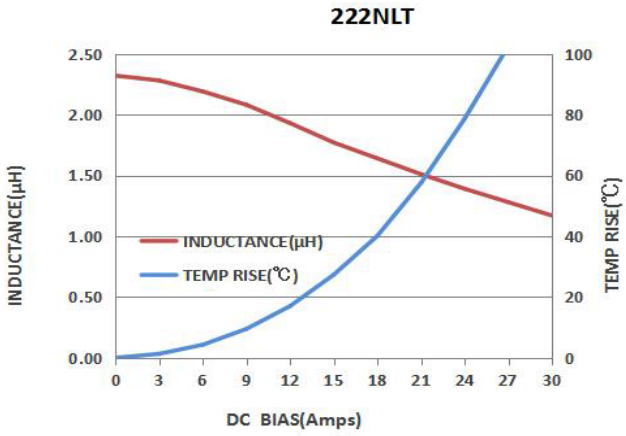
102NLT



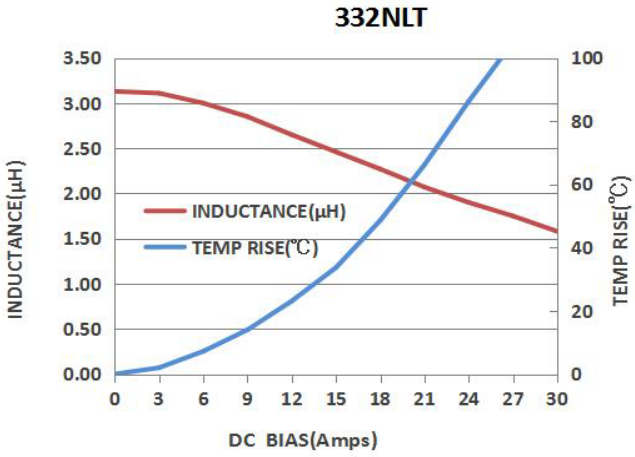
182NLT



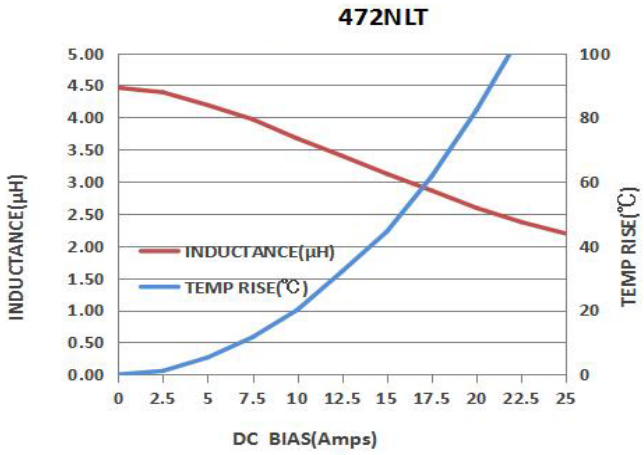
222NLT



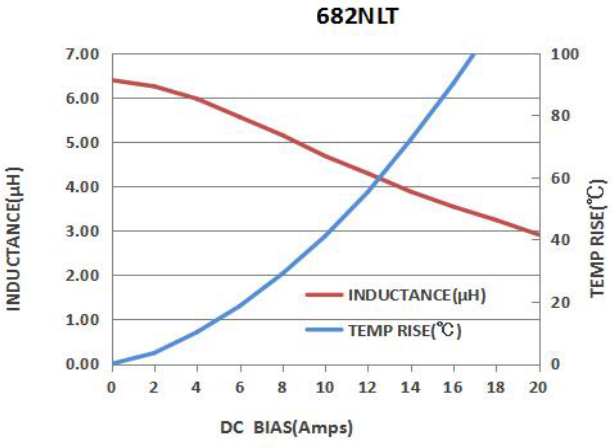
332NLT



472NLT

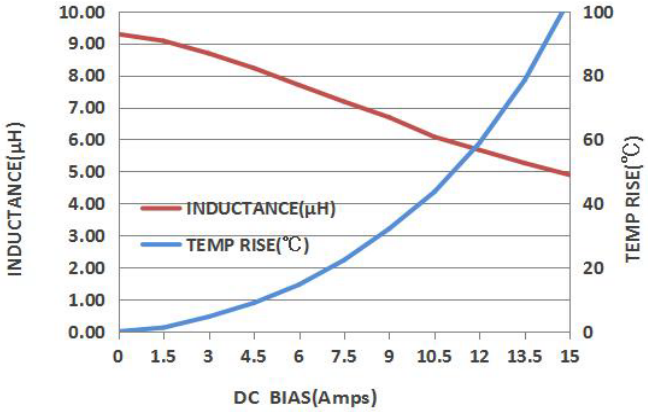


682NLT

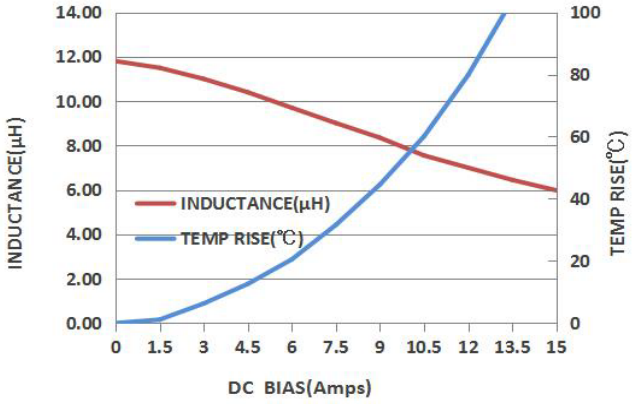


Typical Performance Curves

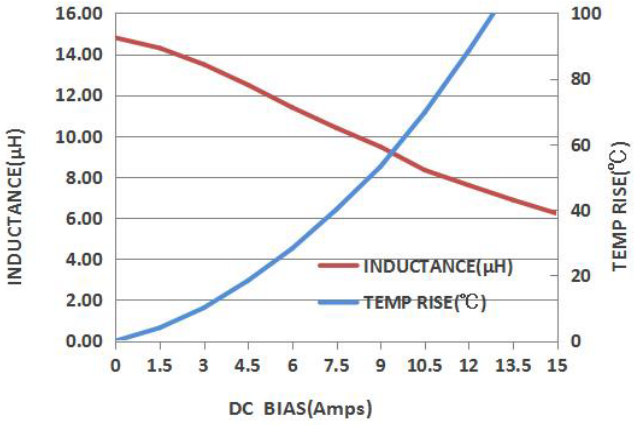
.103NLT



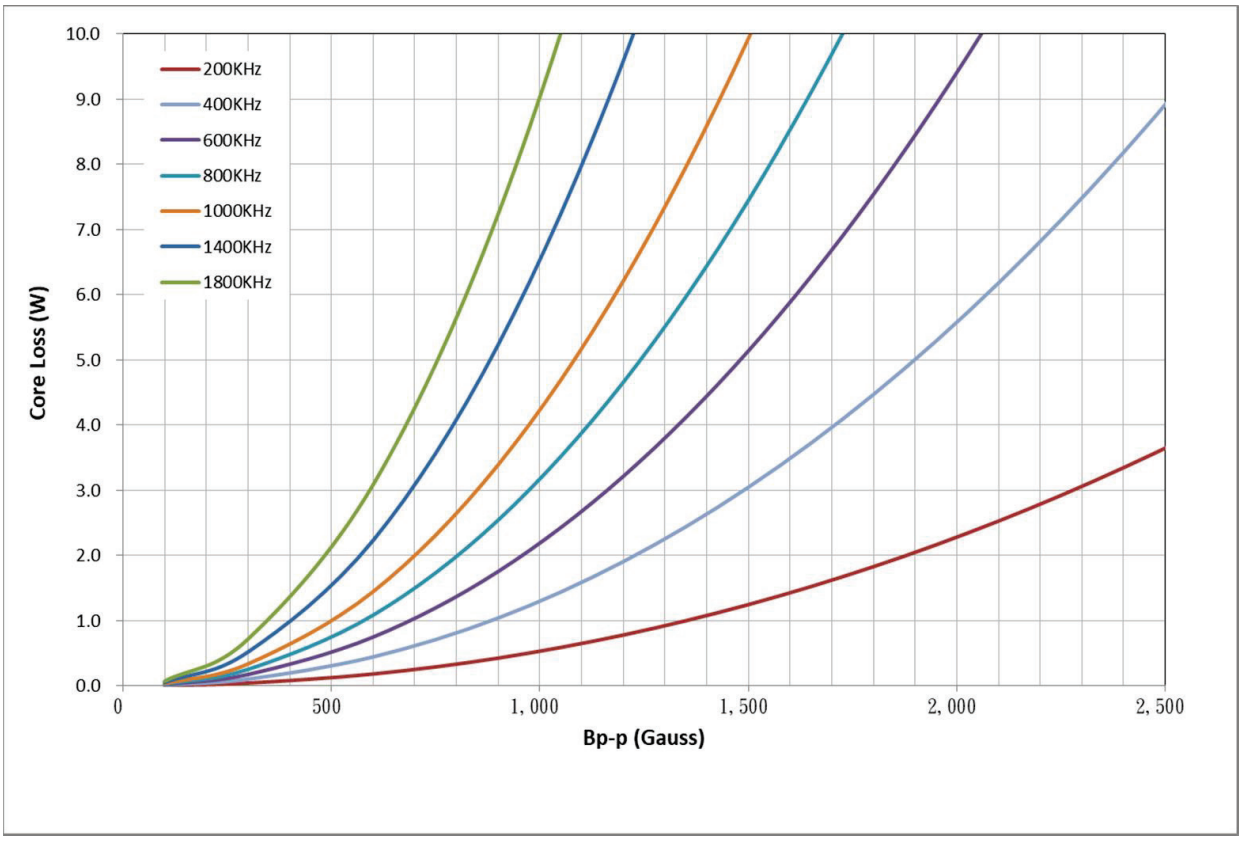
123NLT



153NLT



CORE LOSS vs FLUX DENSITY



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

For More Information:
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