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













Footprint: 16.8mm x 15.8mm MaxCurrent Rating: up to 40Arms

Inductance Range: 2.0uH to 22uH

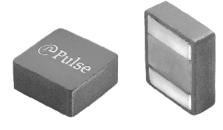
@ High current, low DCR, and high efficiency

High reliability

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	Rated <sup>3</sup>	DC Resistance		Saturation <sup>2</sup>	K Factor			
Commerical	Automotive <sup>6</sup>	100KHz, 0.1V	Current	TYP.	MAX.	Current (25°C)	for Core Loss			
		uH±20%	A	mΩ	mΩ	Α				
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:

- 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 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.
- 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 ♥.

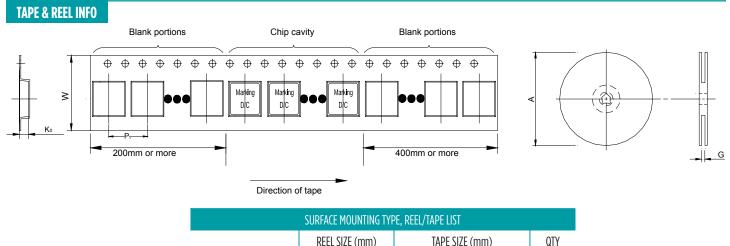
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### **Mechanical**

#### PA5433.XXXNLT and PM5433.XXXNLT D XXXNL В Ė D/C FINAL LAYOUT SUGGESTED PAD LAYOUT Series 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.

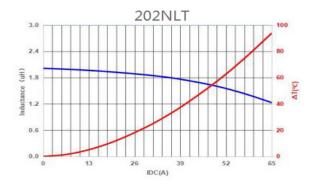


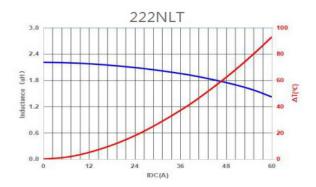
SURFACE MOUNTING TYPE, REEL/TAPE LIST											
	REEL SIZE (mm)		TAPE SIZE (mm)			QTY					
	Α	G	P <sub>1</sub>	W	$K_{_{0}}$	PCS/REEL					
PA5433/PM5433	Ø330	32.4	24	32	8.5	200					

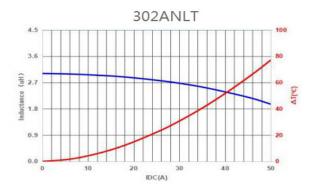
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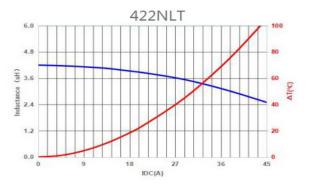


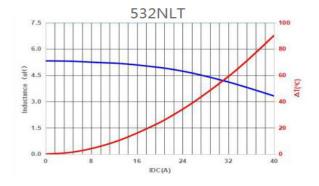
### **Typical Performance Curves**



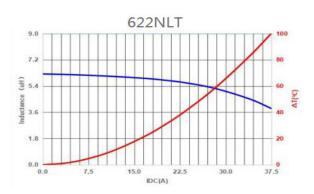






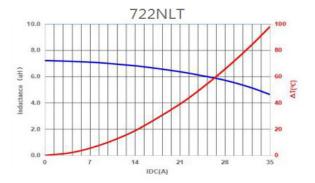


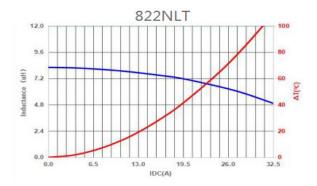
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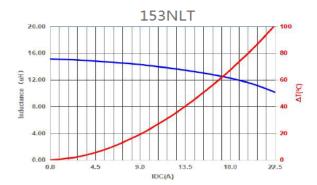


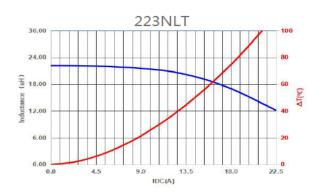
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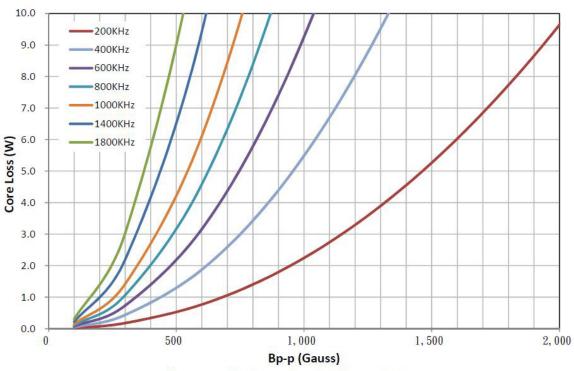






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# **CORE LOSS vs FLUX DENSITY**



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

#### For More Information:

Americas - prodinfo\_power@pulseelectronics.com | Europe - power-apps-europe@pulseelectronics.com | Asia - power-apps-asia@pulseelectronics.com

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