High Current Composite Inductor - PA5007.XXXNLT and PM2207.XXXNLT

















Height: 3.1mm Max

Footprint: 8.05mm x 7.8mm Max

@ Current Rating: up to 30Apk

Inductance Range: 1.0uH to 8.2uH

Migh current, low DCR, and high efficiency

Rated Voltage between Terminals: 60V

Minimized acoustic noise and minimized leakage flux noise

@ Available in Commercial (PA5007) and Automotive (PM2207) grades

Electrical Specifications @ 25°C, Operating Temperature Range -55°C to +155°C									
Part Number		□ Inductance	Rated ³	DC Resistance		Saturation ²	K Factor	Mechanical	
Commerical	Automotive ⁶	100KHz, 0.1V	Current	TYP.	MAX.	Current (25°C)	for	D	
		uH±20%	A	mΩ	mΩ	A	Core Loss	±0.3	
PA5007.102NLT	PM2207.102NLT	1.0	21.8	4.55	5.0	28.0	67.8	6.6	
PA5007.152NLT	PM2207.152NLT	1.5	15.3	7.5	8.25	23.5	57.7	6.6	
PA5007.222NLT	PM2207.222NLT	2.2	13.0	12.4	13.7	17.0	50.3	6.2	
PA5007.272NLT	PM2207.272NLT	2.7	11.4	14.0	15.4	13.5	44.5	6.2	
PA5007.332NLT	PM2207.332NLT	3.3	10.0	16.3	18.0	13.0	40.0	6.2	
PA5007.472NLT	PM2207.472NLT	4.7	9.0	24.2	26.7	12.2	33.2	6.2	
PA5007.562NLT	PM2207.562NLT	5.6	7.3	30.1	33.2	11.5	28.3	6.2	
PA5007.682NLT	PM2207.682NLT	6.8	6.8	38.6	42.5	11.0	26.4	6.2	
PA5007.822NLT	PM2207.822NLT	8.2	5.9	44.3	48.73	9.0	24.7	6.2	

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 is guaranteed to 2. drop by no more than 40%. The typical inductance at a specified current can be found on the typical performance curves.
- 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.
- The part temperature (ambient+temp rise) should not exceed 155 °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 PM2207.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.
- Special Characteristics

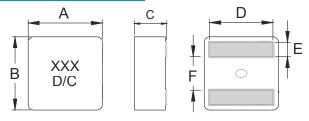
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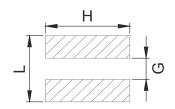
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Mechanical

PA5007.XXXNLT and PM2207.XXXNLT





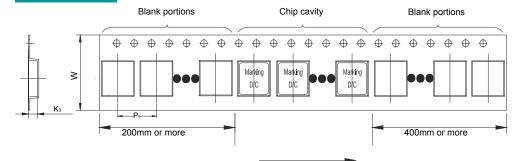
FINAL LAYOUT

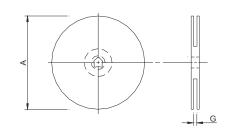
SUGGESTED PAD LAYOUT	
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Series	А	В	C	D	E	F	L	G	Н
PA5007/PM2207	7.8±0.25	7.6±0.2	2.9±0.2	SEE SPEC TABLE	1.75±0.2	3.15±0.25	7.4 (REF)	2.8 (REF)	7.2 (REF)

All Dimensions in mm.

TAPE & REEL INFO



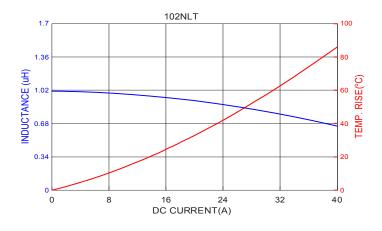


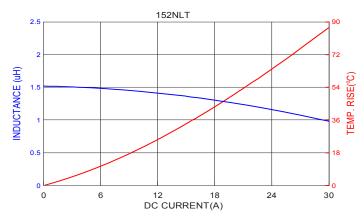
Direction of tape

SURFACE MOUNTING TYPE, REEL/TAPE LIST									
	REEL SIZ	E (mm)	TA	QTY					
	Α	G	P ₁	W	$K_{_{0}}$	PCS/REEL			
PA5007/PM2207	Ø330	16.4	12	16	3.3	1500			

Typical Performance Curves

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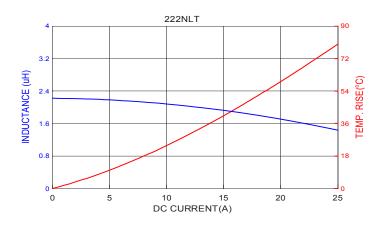


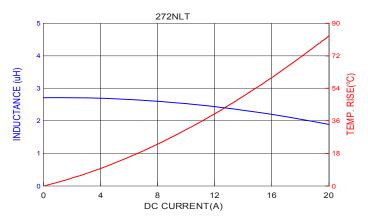


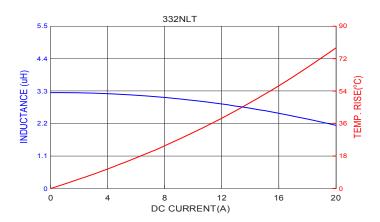
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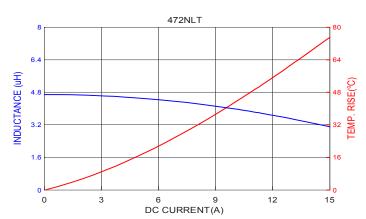
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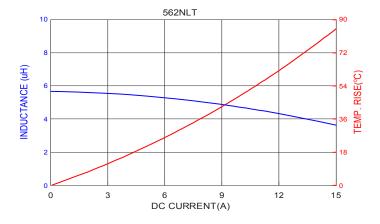




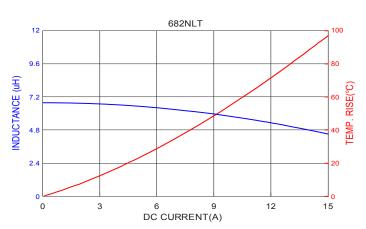






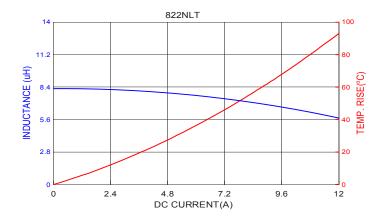


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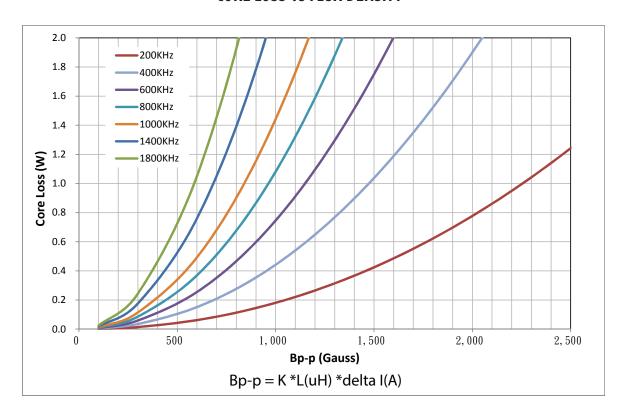


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CORE LOSS vs FLUX DENSITY



For More Information:

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