SMT Power Inductors

High Current Composite Inductor - PA2240XXXNLT and PM2240.XXXNLT





















Pootprint: 8.05mm x 7.85mm Max

Current Rating: up to 15.1Arms

Inductance Range: 3.3uH to 6.8uH

High current, low DCR, and high efficiency

High reliability

Minimized acoustic noise and minimized leakage flux noise

Available in Commercial (PA2240) and Automotive

(PM2240) grades

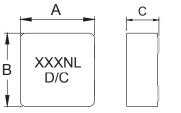
Electrical Specifications @ 25°C, Operating Temperature Range per Below ^{4,5}								
Part Number		□Inductance	Rated ³	DC Resistance		Saturation Current ² (25°C)	K Factor	Mechanical
Commerical	Automotive ⁶	100KHz, 0.1V Current		TYP.	MAX.	TYP.	for Core Loss	D
(-55°C to 125°C)	(-55°C to 155°C)	uH±20%	A	mΩ	$m\Omega$	Α	COIC LOSS	±0.3
PA2240.332NLT	PM2240.332NLT	3.3	15.1	8.56	9.42	15.1	-	6.7
PA2240.472NLT	PM2240.472NLT	4.7	13.6	12.2	13.5	14.0	-	6.7
PA2240.682NLT	PM2240.682NLT	6.8	9.5	17.8	19.6	11.0	-	6.5

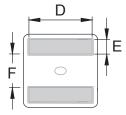
Notes:

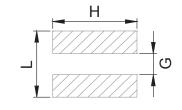
- Actual temperature of the component during system operation (ambient plus temperature rise) must be within the standard operating range.
- The saturation current is the current at which the initial inductance drops by approximately 30% at the stated ambient temperature. The maximum allowable drop at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

PA2240.XXXNLT and PM2240.XXXNLT







FINAL LAYOUT

SUGGESTED PAD LAYOUT

Series	А	В	C	D	E	F	L	G	Н
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.

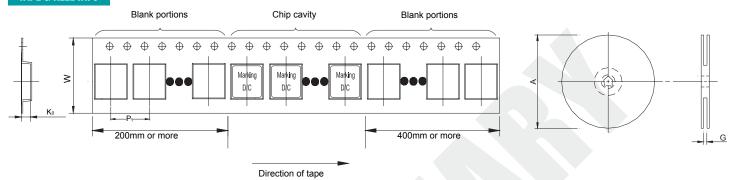


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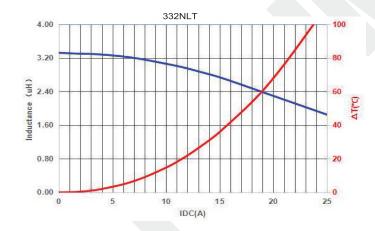


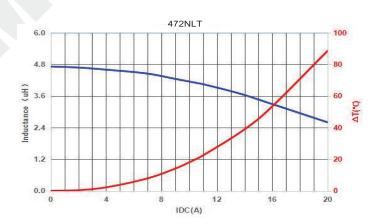
TAPE & REEL INFO

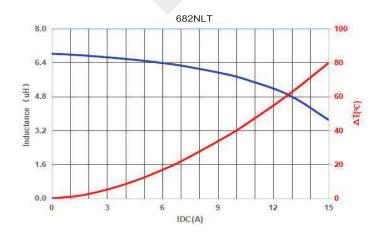


SURFACE MOUNTING TYPE, REEL/TAPE LIST							
	REEL SIZ	E (mm)	TAPE SIZE (mm)			QTY	
	Α	G	P ₁	W	K ₀	PCS/REEL	
PA2240/PM2240	Ø330	16.4	12	16	7.3	700	

Typical Performance Curves

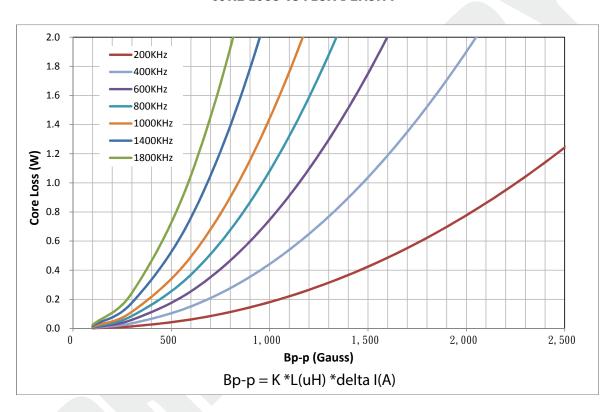








CORE LOSS vs FLUX DENSITY



Pulse Worldwide	Pulse Europe	Pulse China Headquarters	Pulse North China	Pulse South Asia	Pulse North Asia
Headquarters	Pulse Electronics GmbH	Pulse Electronics (ShenZhen) CO., LTD	Room 2704/2705	3 Fraser Street	1F., No.111 Xiyuan Rd
15255 Innovation Drive Ste 100	Am Rottland 12	D708, Shenzhen Academy of	Super Ocean Finance Ctr.	0428 DUO Tower	Zhongli City
San Diego, CA 92128	58540 Meinerzhagen	Aerospace Technology,	2067 Yan An Road West	Singapore 189352	Taoyuan City 32057
U.S.A.	Germany	The 10th Keji South Road,	Shanghai 200336		Taiwan (R.O.C)
		Nanshan District, Shenzhen,	China		
		P.R. China 518057			

Tel: 858 674 8100 Tel: 49 2354 777 100 Tel: 86 755 33966678 Tel: 86 21 62787060 Tel: 65 6287 8998 Tel: 886 3 4356768 Fax: 858 674 8262 Fax: 86 2162786973 Fax: 49 2354 777 168 Fax: 86 755 33966700 Fax: 65 6280 0080 Fax: 886 3 4356820

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