

# SMT Power Inductor

Power Beads - PA2607.XXXNL/PA2607.XXXAHL and PM2220.XXXNL Series



- Current Rating:** Over 90 Apk
- Inductance Range:** 115nH to 300nH
- Height:** 7.5mm and 7.6mm Max
- Footprint:** 10.4mm x 7.9mm Max

Electrical Specifications @ 25°C — Operating Temperature -40°C to +130°C<sup>7</sup>

Part Number		Inductance <sup>1</sup> @ OADC (nH +/- 15%)	Inductance @Irated (nH TYP)	Irated <sup>2</sup> (ADC)	DCR <sup>3</sup> (mΩ nominal)	Saturation Current <sup>4</sup> (A TYP)		Heating Current <sup>6</sup> (A TYP)	Height mm* (inches)
Commerical	Automotive <sup>9</sup>					25°C	100°C		
PA2607.121NL	PM2220.121NL	115	115	41	0.29 +/- 7% (.XXNL) 0.29 +/- 5% (.XXXAHL)	94	80	41	7.4* (.291)
PA2607.151NL	PM2220.151NL	150	150	41		72	61		
PA2607.181NL	PM2220.181NL	175	175	41		62	53		
PA2607.211NL	PM2220.211NL	215	195	41		48	41		
PA2607.231NL	PM2220.231NL	230	208	37		43	37	7.3* (.287)	
PA2607.271NL	PM2220.271NL	270	241	31		37	34		
PA2607.301NL	PM2220.301NL	300	260	27		32	28		

## NOTES:

- Inductance measured at 100kHz, 100mVrms @25°C.
- The rated current as listed is either the saturation current or the heating current depending on which value is lower
- The nominal DCR is measured from point a to point b, as shown below on the mechanical drawing. The standard part (PA2607.XXXNL) has a DCR tolerance of +/-7%. A tighter DCR tolerance of +/-5% is available by changing the NL suffix to AHL (i.e. PA2607.211NL becomes PA2607.211AHL).
- The saturation current is the typical current which causes the inductance to drop by 20% at the stated ambient temperatures (25°C and 100°C). This current is determined by placing the component in the specified ambient environment and applying a short duration pulse current (to eliminate self-heating effects) to the component.
- The heating current is the DC current which causes the part temperature to increase by approximately 40°C.
- In high volt\*time applications, additional heating in the component can occur due to core losses in the inductor which may necessitate derating the current in order to limit the temperature rise of the component. To determine the approximate total losses (or temperature rise) for a given application, the core loss and temperature rise curves can be used.
- Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PA2607.211NL becomes PA2607.211NLT). Pulse complies to industry standard tape and reel specification EIA481.
- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
- The PM2220.XXXNL 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.

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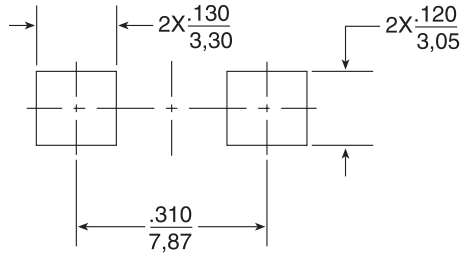
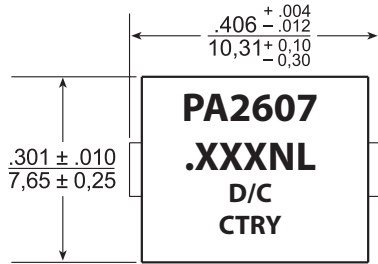
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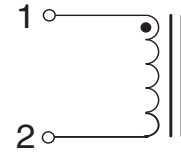
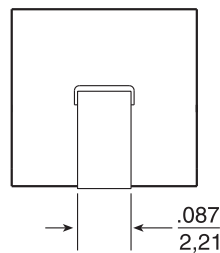
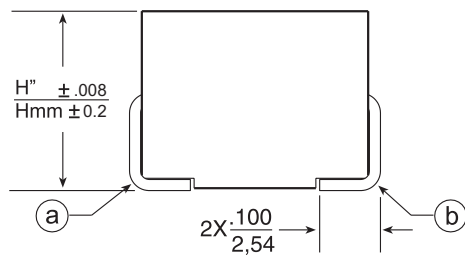
## Mechanical

## Schematic

### PA2607.XXXNL/PA2607.XXXHNL/PM2220.XXXNL



SUGGESTED PAD LAYOUT



\*Please note that marking shown is for the PA2607.XXXNL parts. Marking for AHL parts is the same except PA2607.XXXNL is replaced by PA2607.XXXAHL.

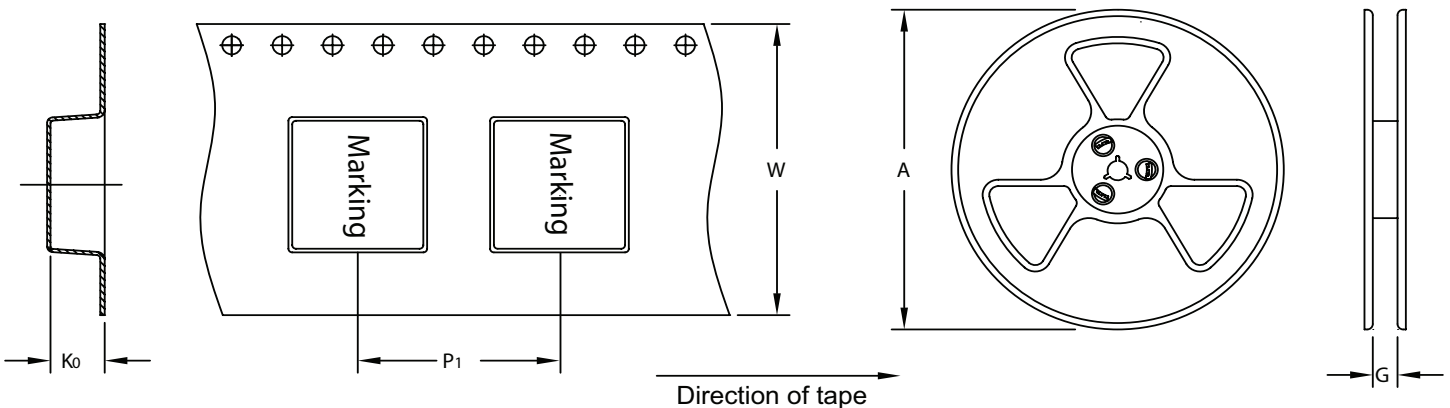
Weight .....2.4grams

Tape & Reel .....400/reel

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$

## TAPE & REEL INFO

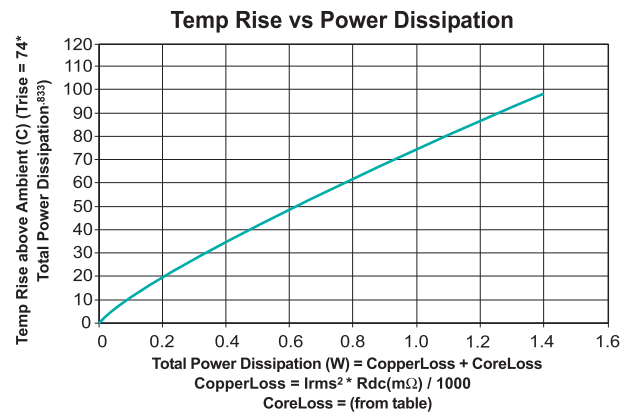
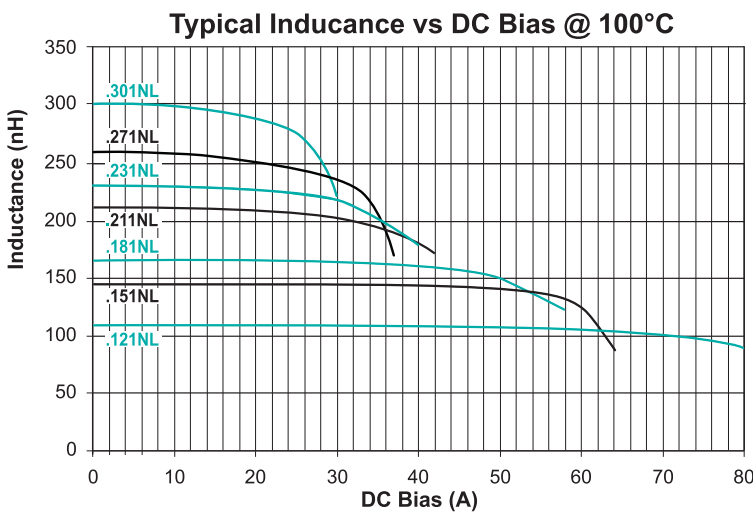
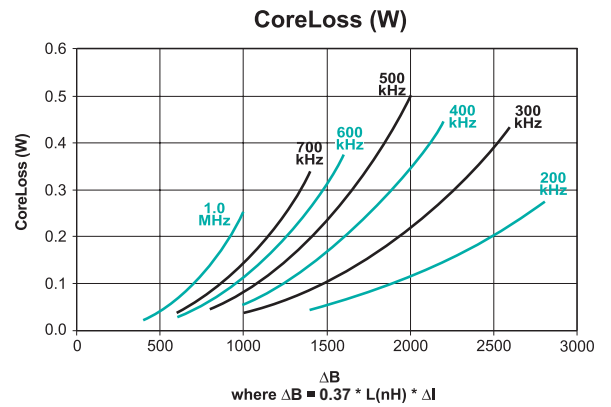
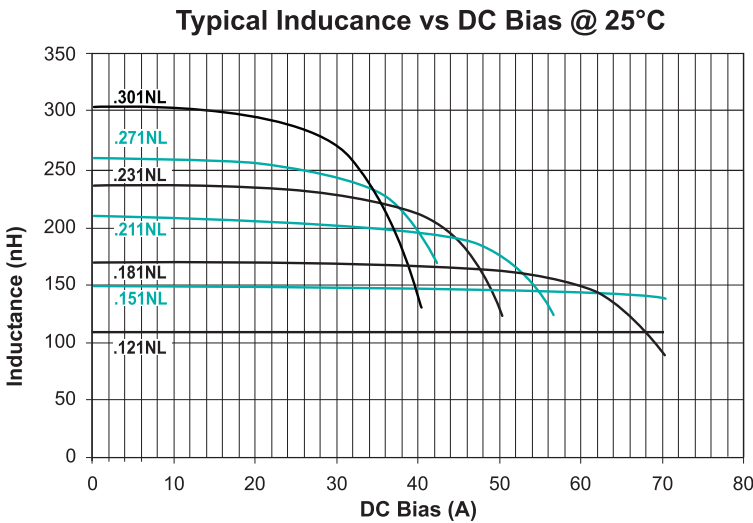


### SURFACE MOUNTING TYPE, REEL/TAPE LIST

PART NUMBER	REEL SIZE (mm)		TAPE SIZE (mm)			QTY
	A	G	P <sub>1</sub>	W	K <sub>0</sub>	PCS/REEL
PA2607.XXXNL/PA2607.XXXHNL/PM2220.XXXNL	Ø330	24.4	16.0	24.0	8.1	400

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