

# SMT Power Inductor

Power Beads - PA2607.XXXNL/PA2607.XXXAHL 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><br>@ 0ADC<br>(nH +/- 15%) | Inductance<br>@I <sub>rated</sub> <sup>2</sup><br>(nH TYP) | I <sub>rated</sub> <sup>2</sup><br>(ADC) | DCR <sup>3</sup><br>(mΩ nominal)             | Saturation Current <sup>4</sup><br>(A TYP) |       | Heating<br>Current <sup>6</sup><br>(A TYP) | Height<br>mm*<br>(inches) |
|--------------|---------------------------------------------------|------------------------------------------------------------|------------------------------------------|----------------------------------------------|--------------------------------------------|-------|--------------------------------------------|---------------------------|
|              |                                                   |                                                            |                                          |                                              | 25°C                                       | 100°C |                                            |                           |
| PA2607.121NL | 115                                               | 115                                                        | 41                                       | 0.29 +/- 7% (.XXNL)<br>0.29 +/- 5% (.XXXAHL) | 94                                         | 80    | 41                                         | 7.4*<br>(.291)            |
| PA2607.151NL | 150                                               | 150                                                        | 41                                       |                                              | 72                                         | 61    |                                            |                           |
| PA2607.181NL | 175                                               | 175                                                        | 41                                       |                                              | 62                                         | 53    |                                            |                           |
| PA2607.211NL | 215                                               | 195                                                        | 41                                       |                                              | 48                                         | 41    |                                            |                           |
| PA2607.231NL | 230                                               | 208                                                        | 37                                       |                                              | 43                                         | 37    |                                            | 7.3*<br>(.287)            |
| PA2607.271NL | 270                                               | 241                                                        | 34                                       |                                              | 37                                         | 34    |                                            |                           |
| PA2607.301NL | 300                                               | 260                                                        | 28                                       |                                              | 32                                         | 28    |                                            |                           |

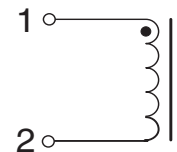
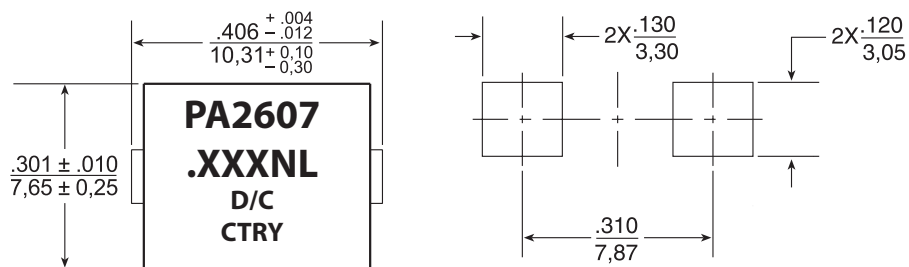
## NOTES:

- Inductance measured at 100kHz, 100mVrms.
- Inductance at I<sub>rated</sub> is the value of the inductance at 25°C at the listed rated current.
- The nominal DCR is measured from point Ⓐ to point Ⓑ, 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.

## Mechanical

## Schematic

### PA2607.XXXNL/PA2607.XXXHNL



\*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.

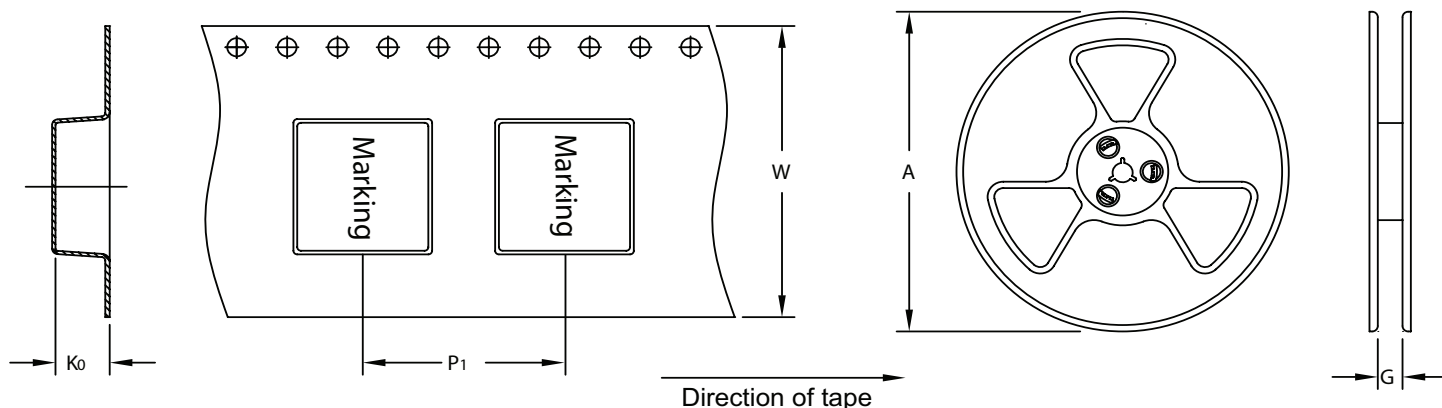
**Weight** .....2.4grams

**Tape & Reel** .....400/reel

**Dimensions:** Inches  
mm

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

## TAPE & REEL INFO



### SURFACE MOUNTING TYPE, REEL/TAPE LIST

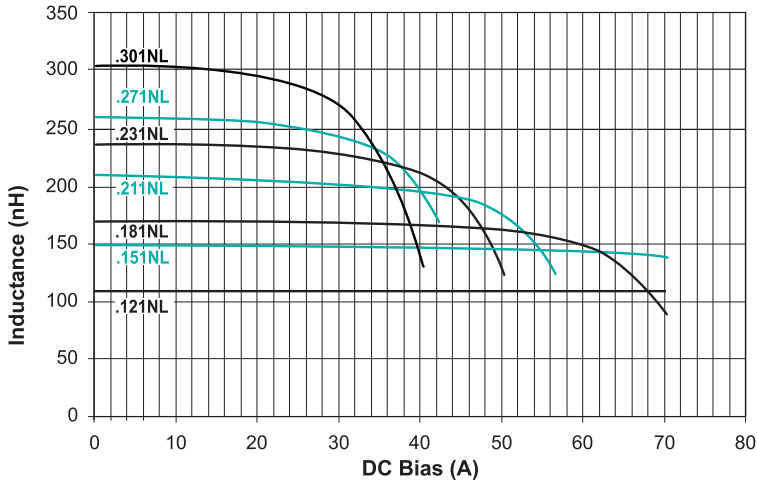
| PART NUMBER                | REEL SIZE (mm) |      | TAPE SIZE (mm) |      |     | QTY      |
|----------------------------|----------------|------|----------------|------|-----|----------|
|                            | A              | G    | P1             | W    | K0  | PCS/REEL |
| PA2607.XXXNL/PA2607.XXXHNL | Ø330           | 24.4 | 16.0           | 24.0 | 8.1 | 400      |

# SMT Power Inductor

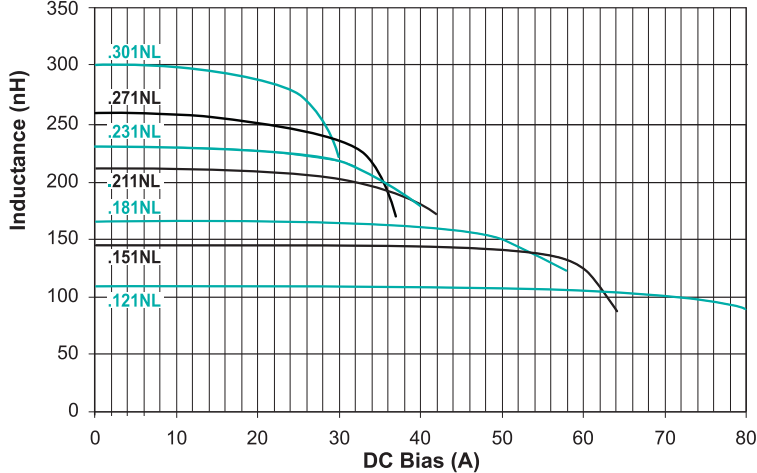
Power Beads - PA2607.XXXNL/PA2607.XXXAHL Series



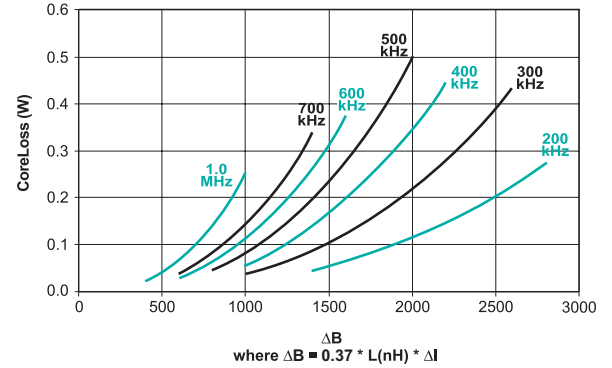
Typical Inducance vs DC Bias @ 25°C



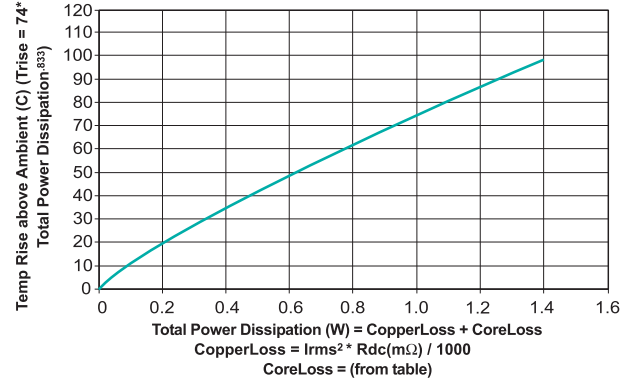
Typical Inducance vs DC Bias @ 100°C



CoreLoss (W)



Temp Rise vs Power Dissipation



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