



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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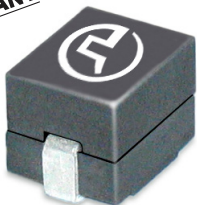
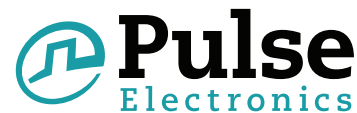
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# SMT Power Inductors

Power Beads - PA2982.XXXHL Series



- ⊕ **Current Rating:** Over 81A<sub>pk</sub>
- ⊕ **Inductance Range:** 100nH to 220nH
- ⊕ **Height:** 5.0 and 5.1 mm Max
- ⊕ **Footprint:** 11.0mm x 8.0mm Max
- ⊕ **Halogen Free**

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

Part Number	Inductance <sup>1</sup> @ 0A <sub>DC</sub> (nH +/- 10%)	Inductance <sup>2</sup> @ I <sub>rated</sub> (nH TYP)	I <sub>rated</sub> <sup>3</sup> (ADC)	DCR <sup>4</sup> (mW nominal)	Saturation Current <sup>5</sup> (A TYP)		Heating Current <sup>6</sup> (A TYP)
					25°C	100°C	
PA2982.101HL	100	95	62	0.35 +/- 8.6%	93	77	62
PA2982.121HL	120	120	59		74	59	
PA2982.151HL	150	140	50		64	50	
PA2982.191HL	190	180	38		48	38	
PA2982.221HL	220	210	33		42	33	

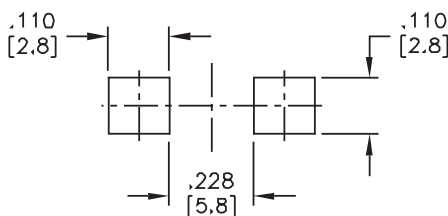
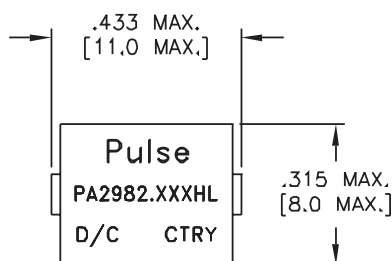
### NOTES:

- 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 rated current as listed is either the saturation current (25°C or 100°C) or the heating current depending on which value is lower.
- The nominal DCR is measured from point Ⓐ to point Ⓒ, as shown below on the mechanical drawing.
- The saturation current is the typical current which causes the inductance to drop by 20% at the stated ambient temperatures (25°C, 100°C and 125°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 when used in a typical application.
- 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 coreloss 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. PA2982.221HL becomes PA2982.221HLT). Pulse complies to industry standard tape and reel specification EIA481. The tape and reel for this product has a width (W=24mm), pitch (Po=12.0mm) and depth (Ko=5.5mm).
- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

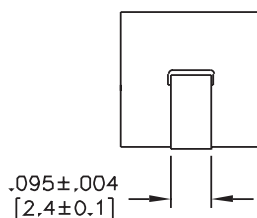
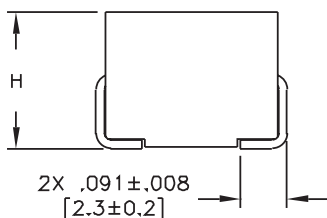
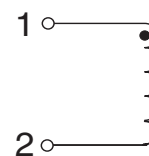
## Mechanical

## Schematics

### PA2982.XXXHL



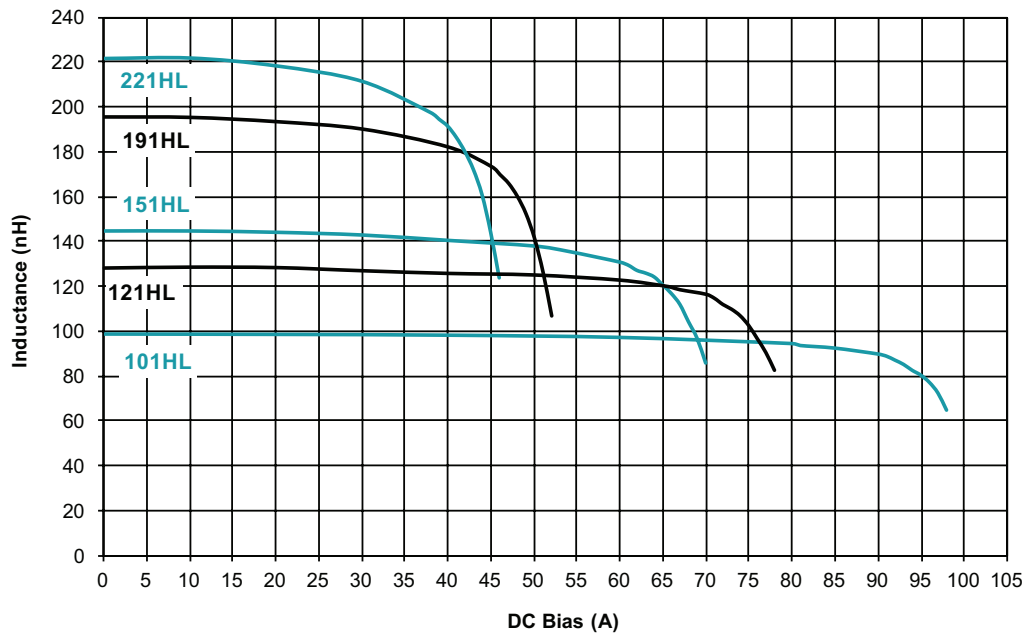
SUGGESTED PAD LAYOUT



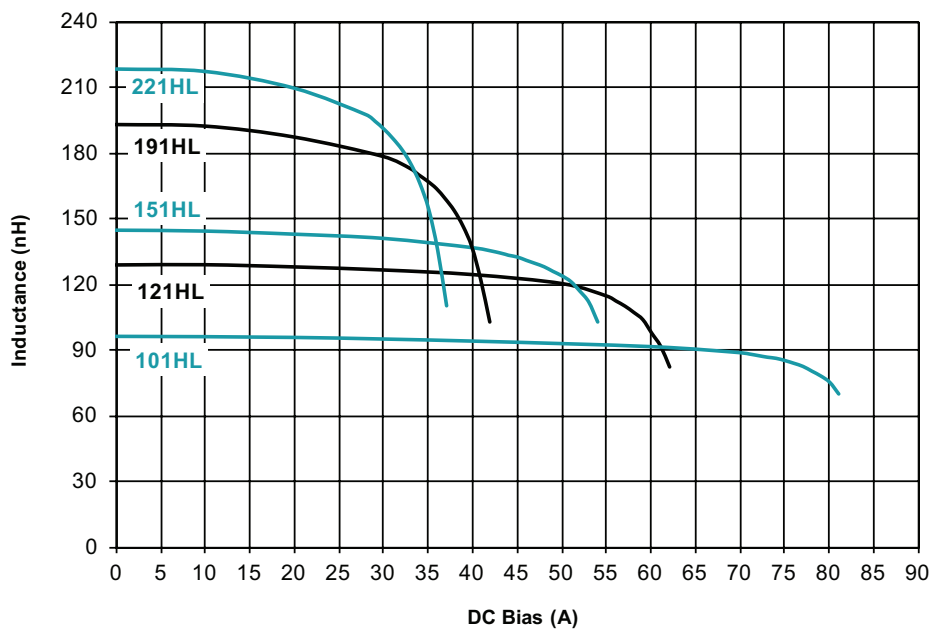
Weight . . . . . 2.4 grams  
Tape & Reel . . . . . 560/reel

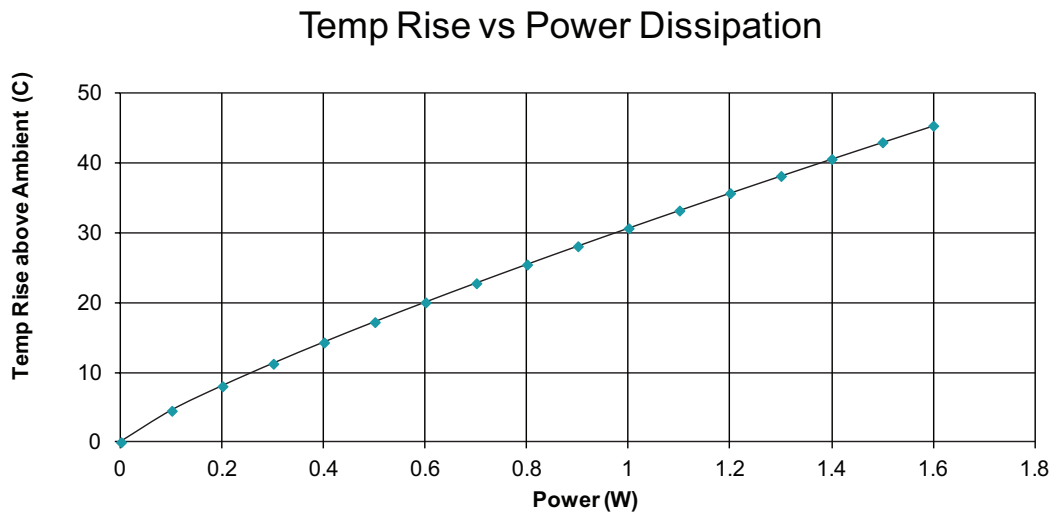
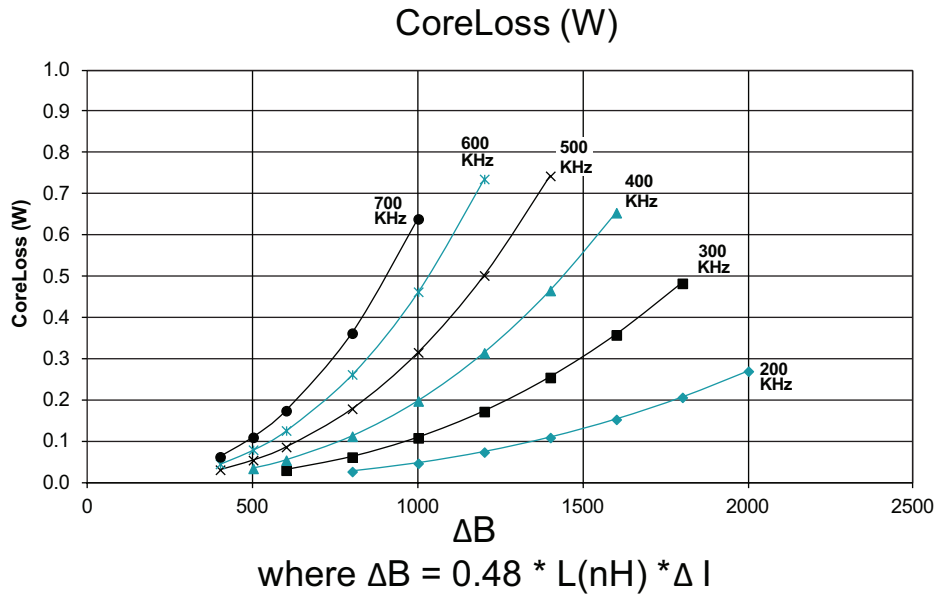
Dimensions:  $\frac{\text{Inches}}{\text{mm}}$   
Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0.25}$

Typical Inductance vs DC bias @25°C



Typical Inductance vs DC bias @100°C





**Total Power Dissipation (W) = CopperLoss + CoreLoss**  
**CopperLoss =  $I_{rms}^2 * R_{dc}(\text{mOhms}) / 1000$**   
**CoreLoss = (from table)**

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