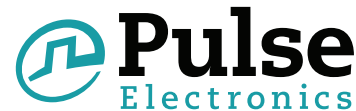


SMT Power Inductors

Power Beads - PA2982.XXXHL Series



- Current Rating:** Over 81A_{pk}
- 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°C⁷

Part Number	Inductance ¹ @ 0A _{dc} (nH +/- 10%)	Inductance ² @ I _{rated} (nH TYP)	I _{rated} ³ (ADC)	DCR ⁴ (mW nominal)	Saturation Current ⁵ (A TYP)		Heating Current ⁶ (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	

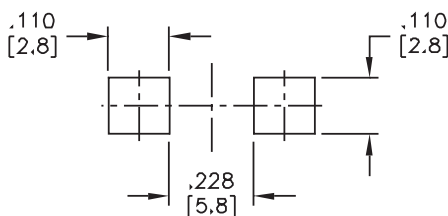
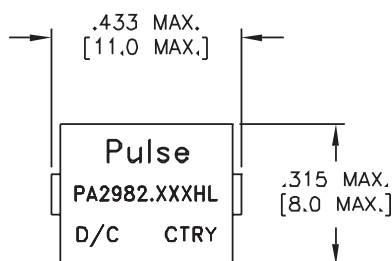
NOTES:

- Inductance measured at 100kHz, 100mVrms.
- Inductance at I_{rated} 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.

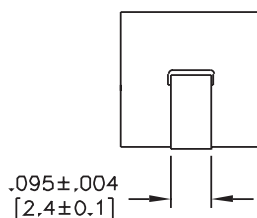
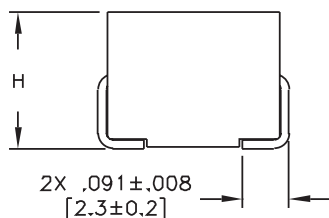
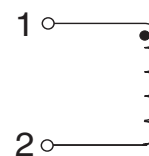
Mechanical

Schematics

PA2982.XXXHL



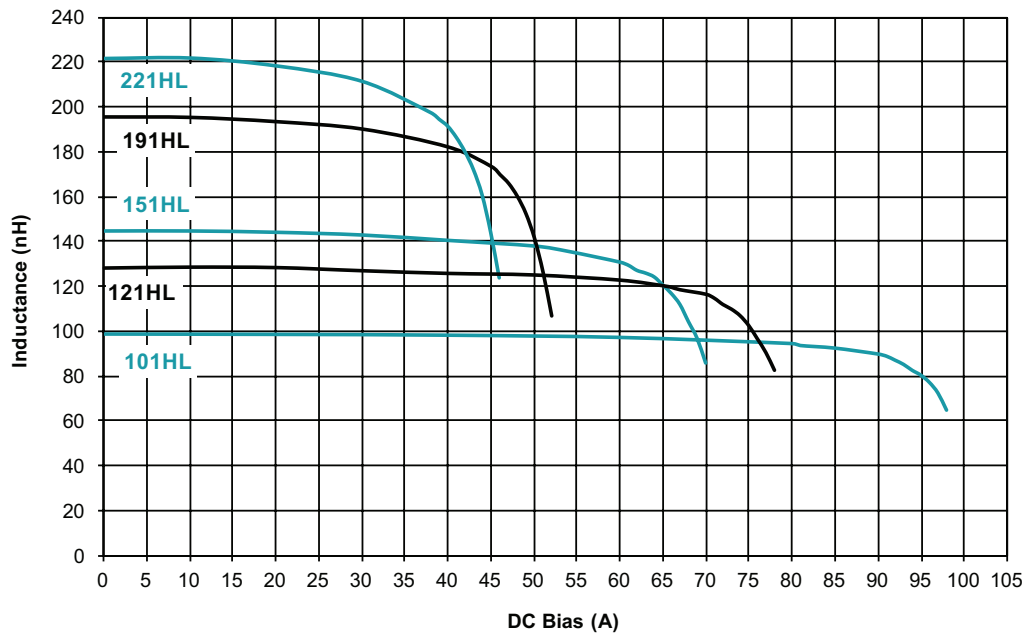
SUGGESTED PAD LAYOUT



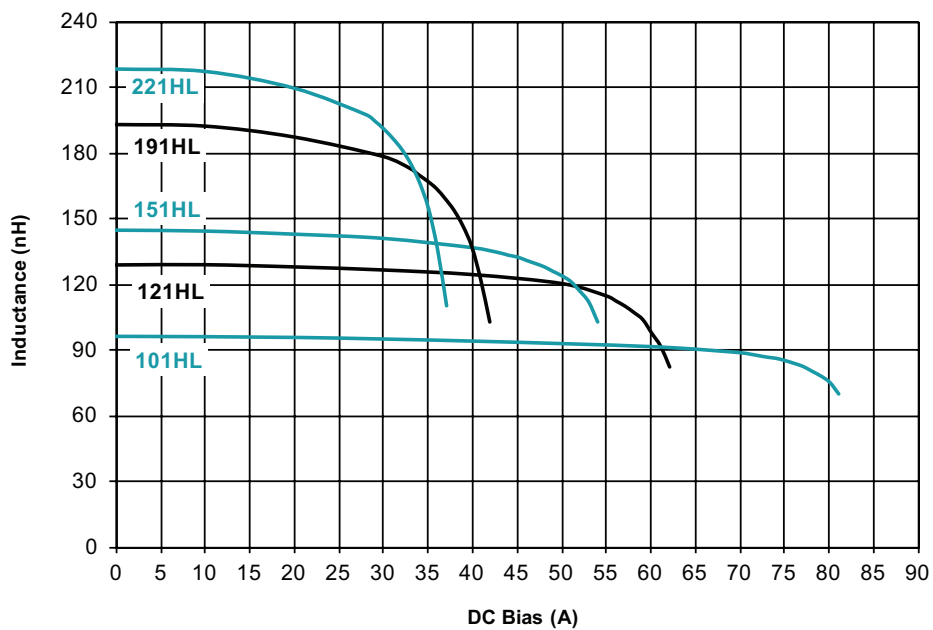
Weight 2.4 grams
Tape & Reel 560/reel

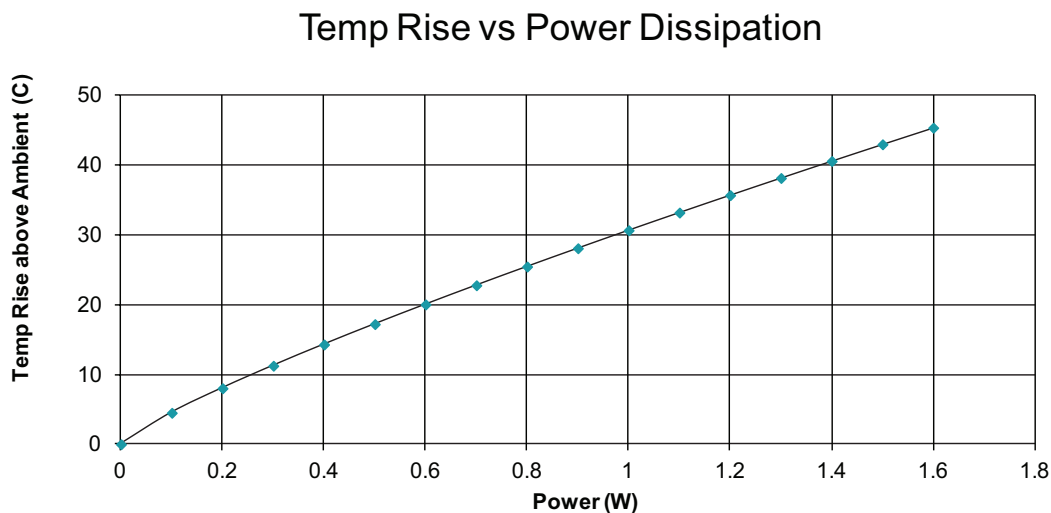
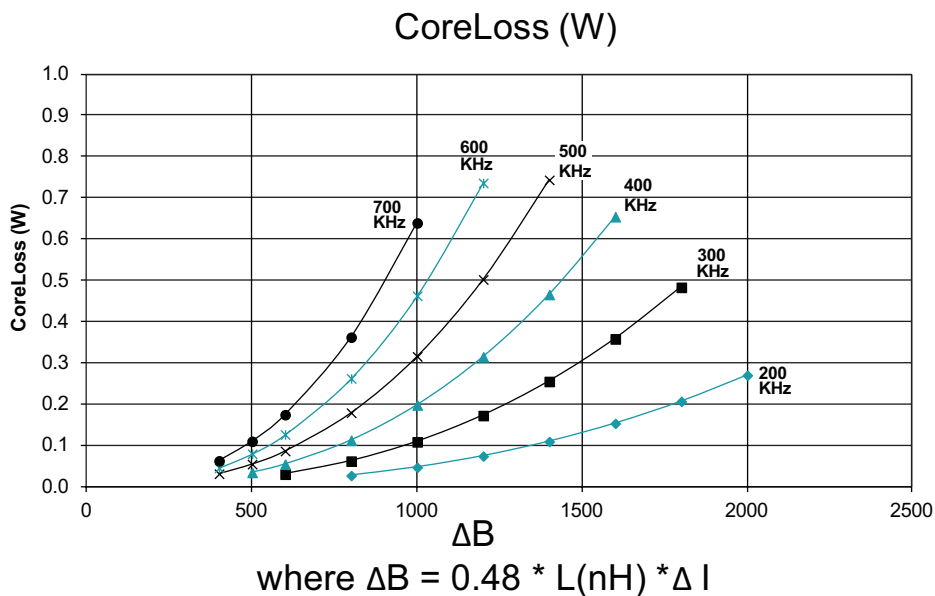
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0.25}$

Typical Inductance vs DC bias @25°C



Typical Inductance vs DC bias @100°C





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

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