SMT Power Inductors

Power Beads - PA2891.XXXHL Series

- **Current Rating:** *Over 72 Apk*
- **Inductance Range:** *210nH to 440nH*
- **Height:** *8.0 mm Max*
- **Footprint:** *13.7mm x 12.95mm Max*
- *Halogen Free*

Electrical Specifications @ 25°C — Operating Temperature - 40°C to +130°C [7]

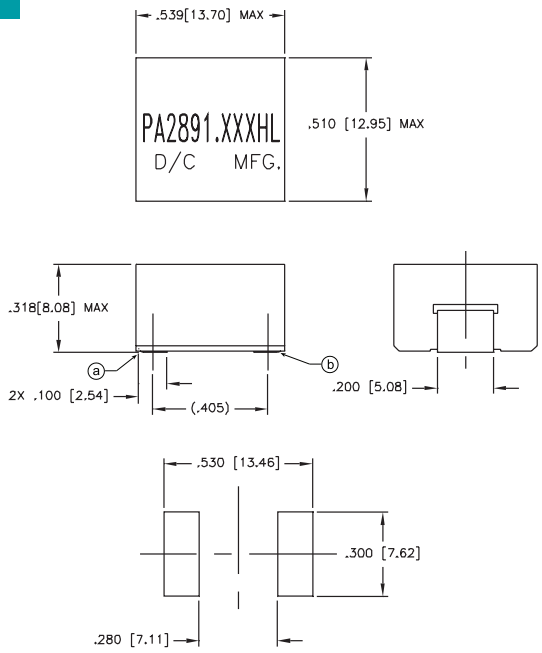
Part Number	Inductance[1] @ 0ADC (nH +/- 10%)	Inductance[2] @Irated (nH TYP)	Irated[3] (ADC)	DCR[4] (mΩ nominal)	Saturation Current[5] (A TYP)		Heating Current[6] (A TYP)
					25°C	100°C	
PA2891.211HL	210	210	71	0.22 +/- 10%	85	71	72
PA2891.261HL	260	260	56		67	56	
PA2891.321HL	320	315	45		56	45	
PA2891.441HL	440	440	30		38	30	

NOTES:

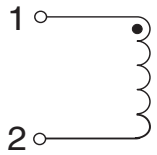
1. Inductance measured at 100kHz, 100mVrms.
2. Inductance at Irated is the value of the inductance at 25°C at the listed rated current.
3. The rated current as listed is either the saturation current (25°C or 100°C) or the heating current depending on which value is lower.
4. The nominal DCR is measured from point ⓐ to point ⓑ, as shown below on the mechanical drawing.
5. 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.
6. The heating current is the DC current which causes the part temperature to increase by approximately 40°C when used in a typical application.
7. In high volt*time applications, additional heating in the component can occur due to core losses in the inductor which may neccessitate 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.
8. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PA2891.211HL becomes PA2891.211HLT).
   Pulse complies to industry standard tape and reel specification EIA481. The tape and reel for this product has a width (W=24mm), pitch (Po=16.0mm) and depth (Ko=9.8mm).
9. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

Mechanical

PA2981.XXXHL



Schematics

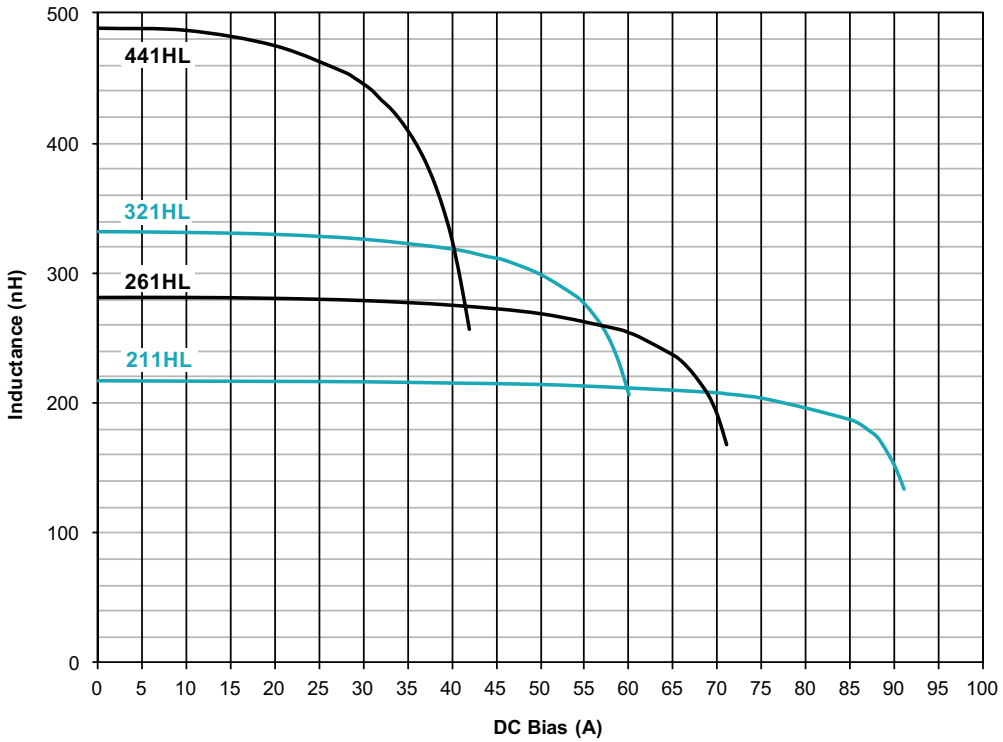


Weight . . . . . 5.7 grams
Tape & Reel 400/reel

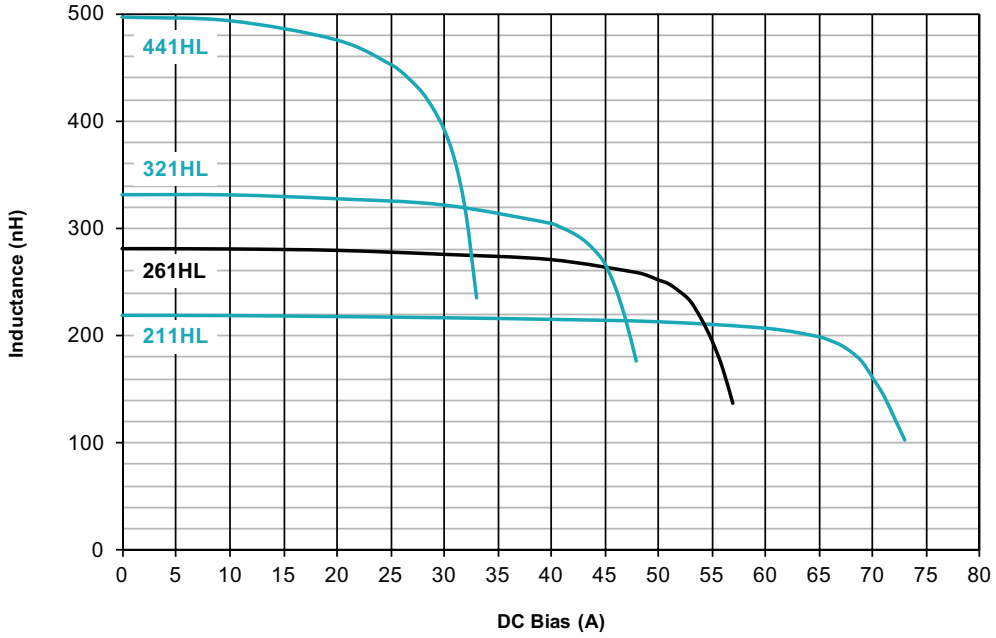
Dimensions: Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

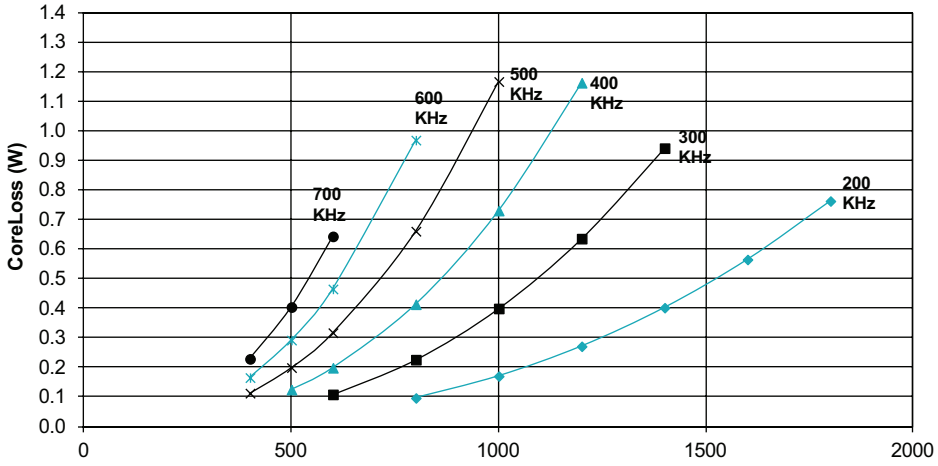
Typical Inductance vs DC bias @25°C



Typical Inductance vs DC bias @100ºC



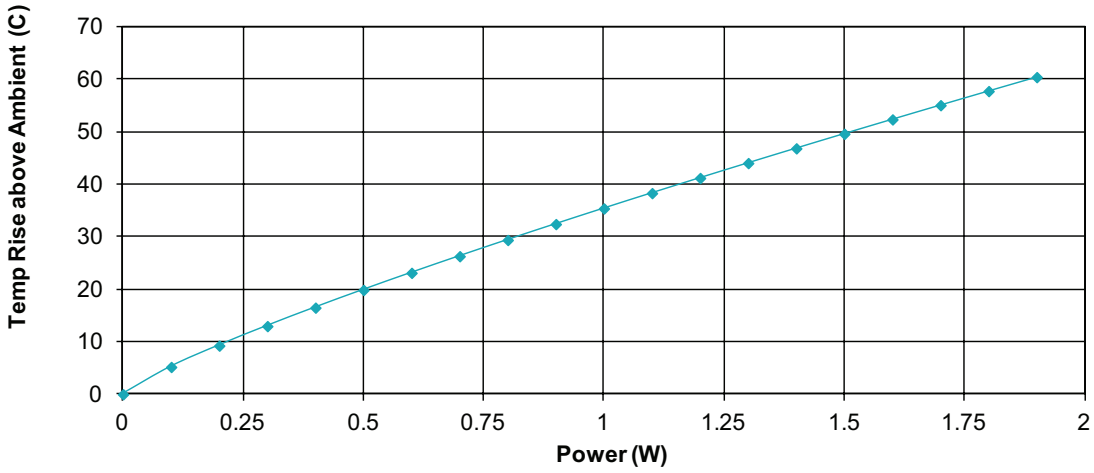
PA2891.XXXHL CoreLoss (W)



$$\Delta B$$

where $\Delta B = 0.23 * L(nH) * \Delta I$

PA2891.XXXHL Temp Rise vs Power Dissipation



Total Power Dissipation (W) = CopperLoss + CoreLoss
CopperLoss = Irms^2 * Rdc(mOhms) / 1000
CoreLoss = (from table)

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Pulse:

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