



- ➊ Designed for use with Infineon® DrBlade 2.0
- ➋ Current Rating: Over 94 Apk
- ➌ Inductance Range: 120nH to 180nH
- ➍ Height: 9.2 mm Max
- ➎ Footprint: 11.0mm x 8.2mm Max
- ➏ 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 (mΩ nominal)	Saturation Current ⁵ (A TYP)		Heating Current ⁶ (A TYP)
					25°C	100°C	
PA4085.121HL	120	120	84	0.18 +/- 5%	94	84	70
PA4085.151HL	150	148	65		84	65	
PA4085.181HL	180	163	58		72	58	

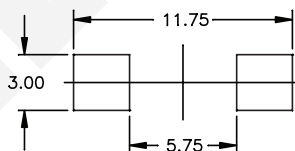
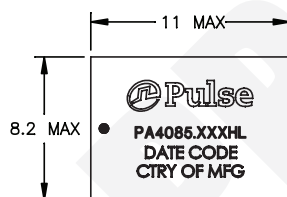
NOTES:

- 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 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. PA4085.XXXHLT). 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=8.2mm).
- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

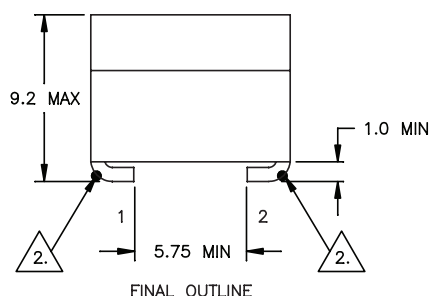
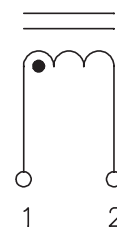
Mechanical

Schematic

PA4085.XXXHL



SUGGESTED PAD LAYOUT

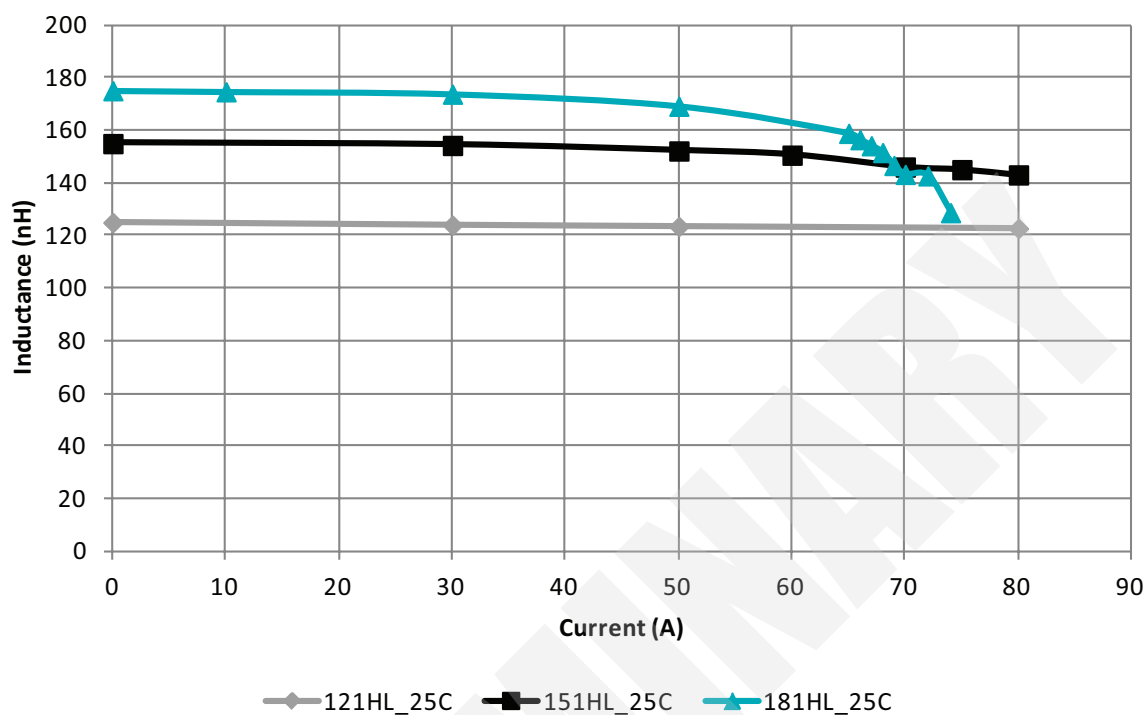


FINAL OUTLINE

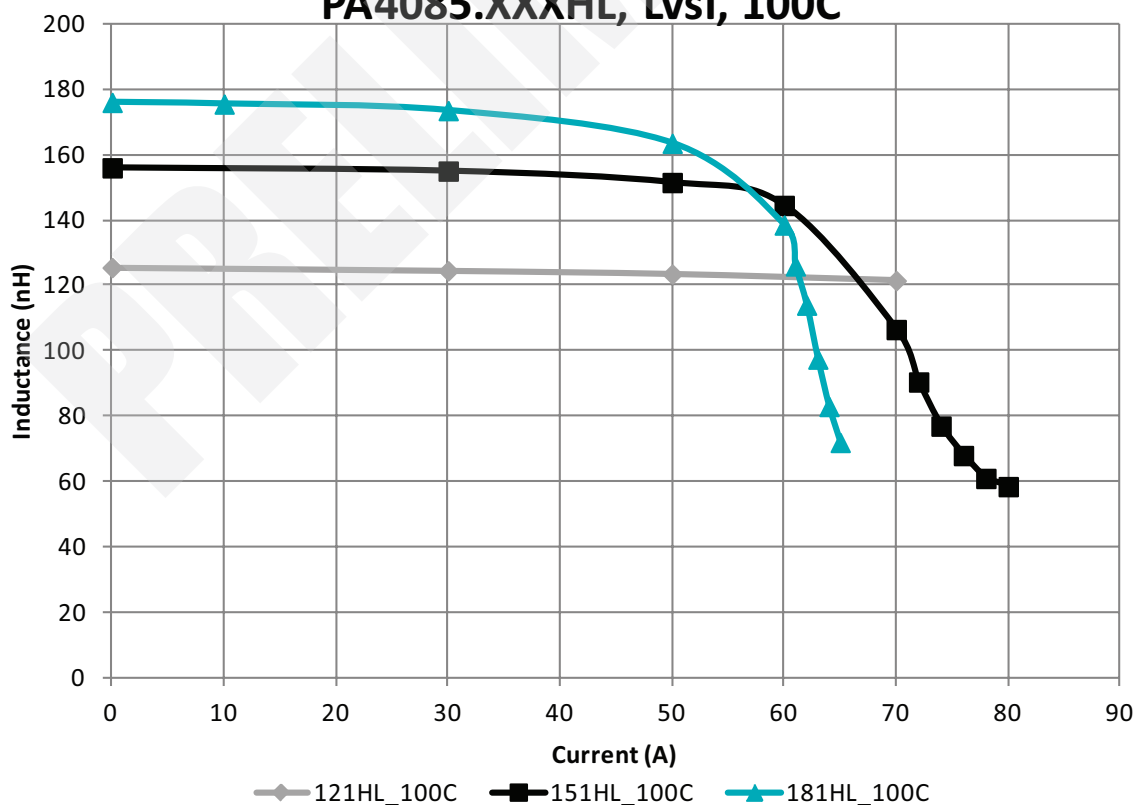
Weight 2.75 grams
Tape & Reel 450/reel

Dimensions: mm
Unless otherwise specified,
all tolerances are ± 0.25

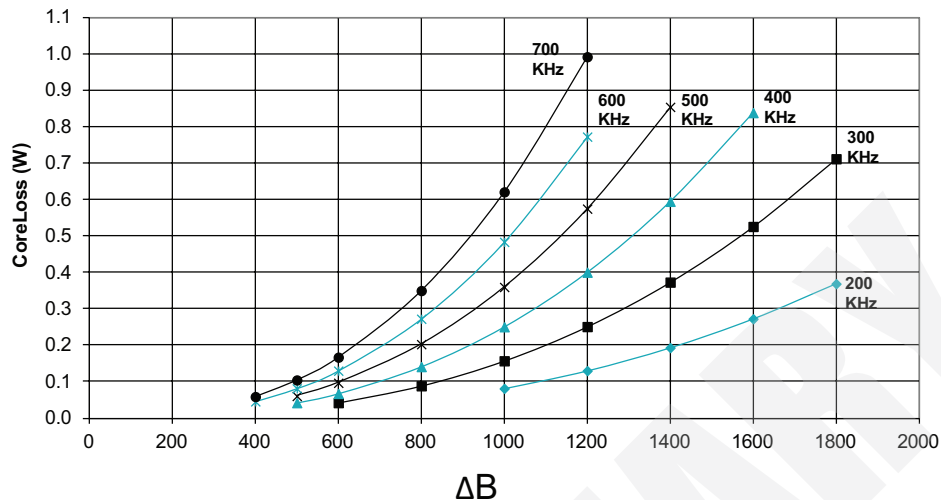
PA4085.XXXHL, LvsI, 25C



PA4085.XXXHL, LvsI, 100C

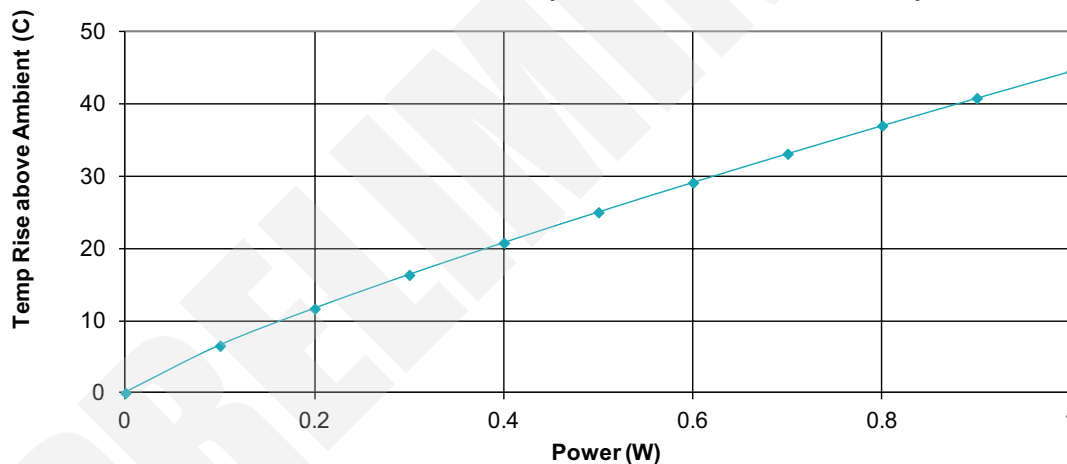


PA4085.XXXHL CoreLoss (W)



where $\Delta B = 0.36 * L(\text{nH}) * \Delta I$

PA4085.XXXHL Temp Rise vs Power Dissipation



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

For More Information

Pulse Worldwide Headquarters
 12220 World Trade Drive
 San Diego, CA 92128
 U.S.A.

Tel: 858 674 8100
 Fax: 858 674 8262

Pulse Europe
 Zeppelinstrasse 15
 71083 Herrenberg
 Germany

Tel: 49 7032 7806 0
 Fax: 49 7032 7806 12

Pulse China Headquarters
 B402, Shenzhen Academy of
 Aerospace Technology Bldg.
 10th Kejinan Road
 High-Tech Zone
 Nanshan District
 Shenzhen, PR China 518057
 Tel: 86 755 33966678
 Fax: 86 755 33966700

Pulse North China
 Room 2704/2705
 Super Ocean Finance Ctr.
 2067 Yan An Road West
 Shanghai 200336
 China

Tel: 86 21 62787060
 Fax: 86 2162786973

Pulse South Asia
 135 Joo Seng Road
 #03-02
 PM Industrial Bldg.
 Singapore 368363

Tel: 65 6287 8998
 Fax: 65 6287 8998

Pulse North Asia
 3F, No. 198
 Zhongyuan Road
 Zhongli City
 Taoyuan County 320
 Taiwan R. O. C.
 Tel: 886 3 4356768
 Fax: 886 3 4356823 (Pulse)
 Fax: 886 3 4356820 (FRE)

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners. © Copyright, 2015. Pulse Electronics, Inc. All rights reserved.