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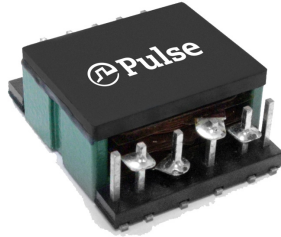
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# HIGH FREQUENCY FLAT COIL PLANAR TRANSFORMERS

PH08XXCNL Series (up to 160W)



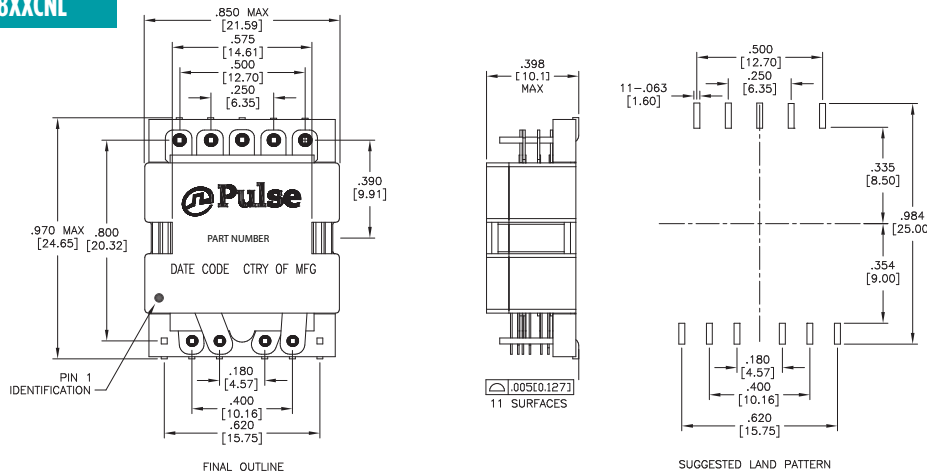
- Power Rating:** up to 160 W
- Height:** 9.1mm to 9.6mm Max
- Footprint:** 24.7mm x 21.6mm Max
- Frequency Range:** 200kHz to 700kHz
- Isolation (Primary to Secondary):** 1500 V<sub>DC</sub>
- Patented:** US Pat 9378885

## Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C

Part <sup>3</sup> Number	Turns			Schematic	Primary <sup>1</sup> Inductance (μ MIN)	Leakage <sup>2</sup> Inductance (μ MAX)	DCR (mΩ MAX)			Maximum Height (mm)
	Primary A	Primary B	Secondary				Primary A	Primary B	Secondary	
PH0801CNL	4T	4T	4T (1T:1T:1T:1T)	A1	153	0.45	8.5	8.5	7	9.1
PH0802CNL	4T	5T			194	0.45	8.5	12.5		
PH0803CNL	5T	5T			240	0.55	12.5	12.5		
PH0804CNL	5T	6T			290	0.60	12.5	14.2		
PH0805CNL	6T	6T			345	0.65	14.2	14.2		
PH0806CNL	4T	4T	1T & 1T	A2	153	0.45	8.5	8.5	1.0 & 1.0	9.1
PH0807CNL	4T	5T			194	0.55	8.5	12.5		
PH0808CNL	5T	5T			240	0.55	12.5	12.5		
PH0809CNL	5T	6T			290	0.90	12.5	14.2		
PH0810NL	6T	6T			345	1.00	14.2	14.2		
PH0811CNL	4T	4T	2T & 1T	A3	153	0.45	8.5	8.5	1.75 & 1.75	9.1
PH0812CNL	4T	5T			194	0.45	8.5	12.5		
PH0813CNL	5T	5T			240	0.55	12.5	12.5		
PH0814CNL	5T	6T			290	0.65	12.5	14.2		
PH0815CNL	6T	6T			345	0.85	14.2	14.2		

## Mechanicals

### PH08XXCNL



Weight .....11.8 grams  
 Tape & Reel .....180/reel  
 Tray .....40/tray  
 Dimensions:  $\frac{\text{Inches}}{\text{mm}}$   
 Unless otherwise specified,  
 all tolerances are  $\pm \frac{.010}{0.25}$

USA 858 674 8100

Germany 49 2354 777 100

Singapore 65 6287 8998

Shanghai 86 21 62787060

China 86 755 33966678

Taiwan 886 3 4356768

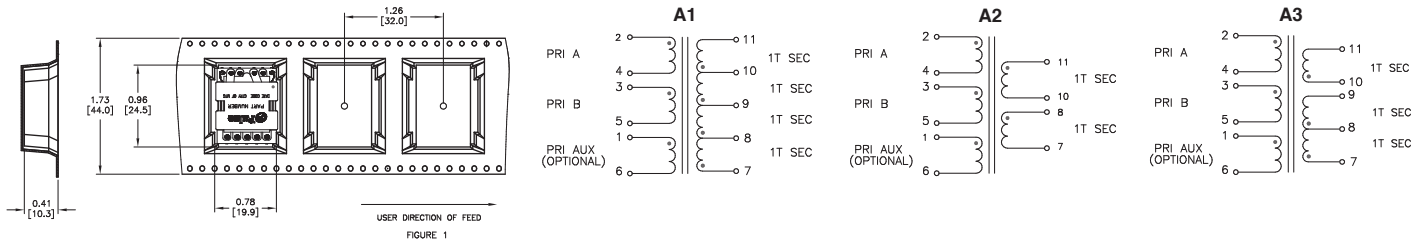
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## Schematics

PH08XXCNL

### Tape & Reel Layout for PH08XXCNL

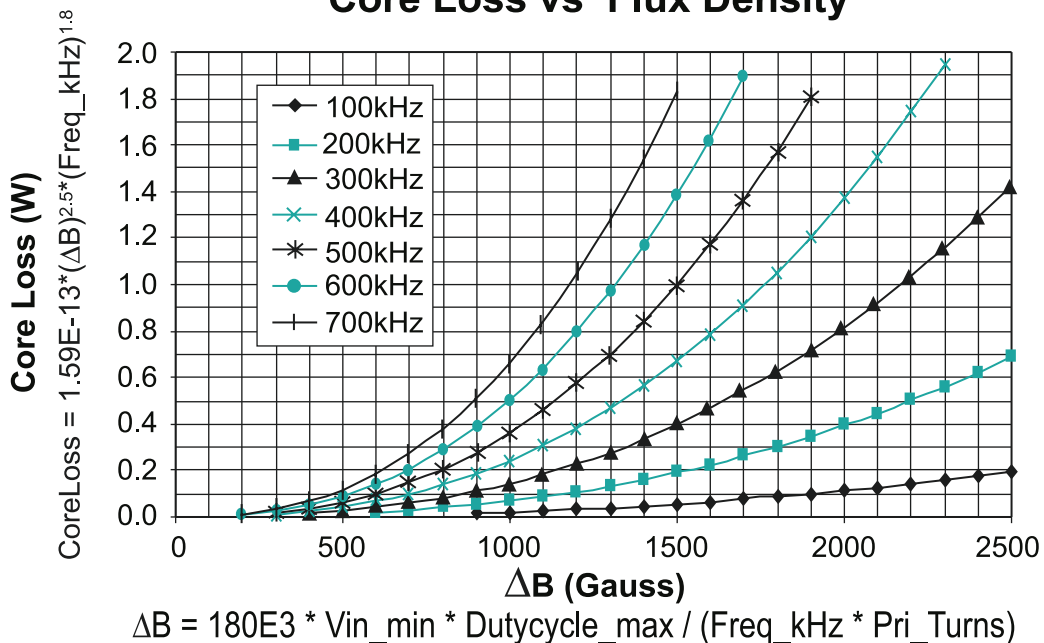


### Notes:

1. Inductance is measured with both primary windings connected in services (2 to 5, with 3 and 4 shorted).
2. Leakage inductance is measured on winding (2-5) with (3-4) and (7, 8, 9, 10, 11) shorted.
3. The "NL" suffix indicates an RoHS-compliant part number.
4. It is possible to add a primary side aux. winding to any of the above configurations as shown in the schematics. Transformers with primary side aux. winding are non-standard and can be made available upon request. The primary aux. winding can be between 2 and 16 turns. To add a primary aux. winding to a given base, use the

- extension .xxx. For example, to add a 4T aux. winding to the base part number PH0801CNL, use the part number PH0801.004NL. The height increases by 0.5mm for .xxx part. For example, **PH0801CNL** is 8.6mm MAX, **PH0801.004CNL** is 9.1mm MAX.
5. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the complete number (i.e. **PH0801.009CNL** becomes **PH0801.009CNLT**).
6. To determine if the transformer is suitable for your application, it is necessary to ensure that the temperature rise of the component (ambient plus temperature rise) not exceed its operating temperature. To determine the approximate temperature rise of the transformer, refer to the graphs below.

## Core Loss vs Flux Density

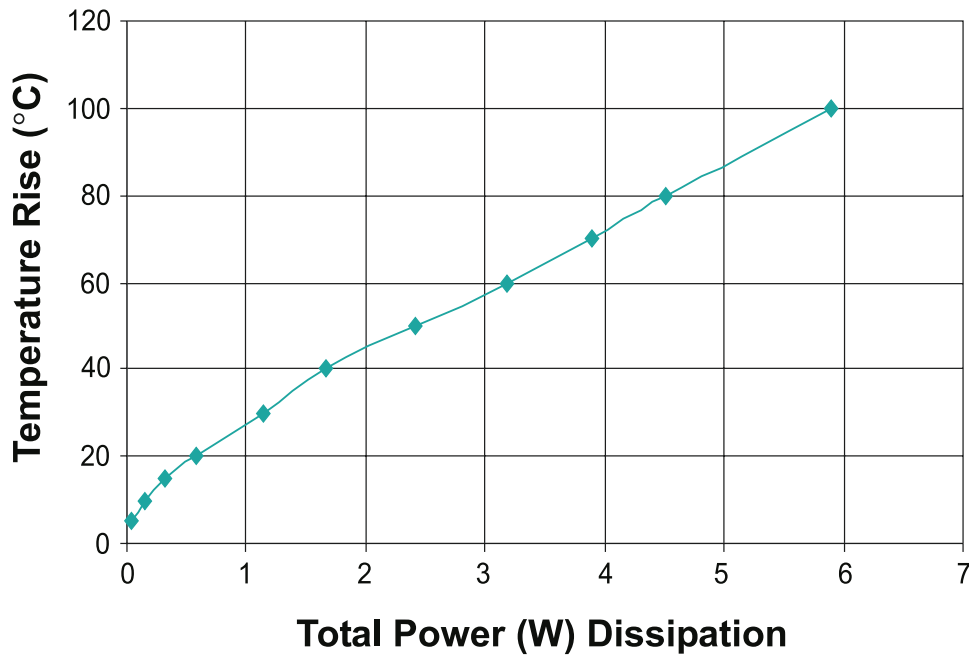




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## Temperature Rise vs. Power (W) Dissipation



## For More Information

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