High Frequency Planar Transformers

Spyglass Series (up to 140W)

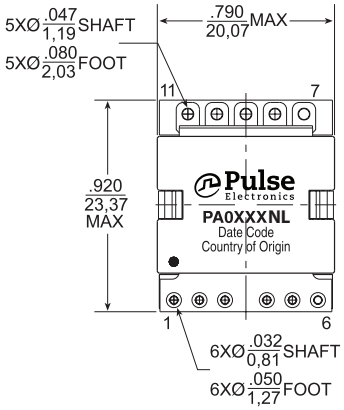
- ***Power Rating:*** *up to 140W*
- ***Height:*** *8.6mm MAX and 9.7mm MAX*
- ***Footprint:*** *23.4mm x 20.1mm MAX*
- ***Frequency Range:*** *235kHz to 700kHz*

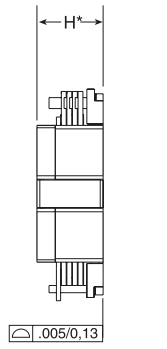
Electrical Specifications @ 25°C – Operating Temperature -40°C to +125°C

Part[4,5] Number	Power[1] Rating	Turns Ratio (Pri:Sec)	Primary[2] Secondary Isolation	Primary Inductance (µH MIN)	Leakage Inductance* (µH MAX)	DCR (mΩ MAX)			Maximum Height (mm)
						Primary	Primary Aux.	Secondary	
PA0168NL	100W 48v to 3.3v/30A	12:2	1500 Vdc Basic	320	0.75	45	N/A	1.30	8.6
PA0369NL	100W 48v to 3.3v/30A	6:1	1500 Vdc Basic	65	0.25	15	N/A	0.40	8.6
PA0423NL	140W 48v to 12v/11.7A	8:4 (w/4T Pri. Aux.)	1500 Vdc Basic	140	0.30	35	500	7.00	8.6
PA0463NL	50W 48v to 3.3v/15A	10:2 (w/9T Pri. Aux.)	1500 Vdc Basic	200	1.00	40	4885	2.50	8.6
PA0491NL	100W 48v to 5v/20A	8:2	1500 Vdc Basic	140	0.25	35	N/A	1.30	8.6
PA0634NL	100W 48v to 5v/20A	8:2 (w/5T Pri. Aux.)	1500 Vdc Basic	140	0.38	35	460	1.30	8.6
PA0693NL	100W 48v to 5v/25A	12:3 (w/4T Pri. Aux.)	1500 Vdc Basic	346	0.55	50	300	3.50	9.7

Mechanicals

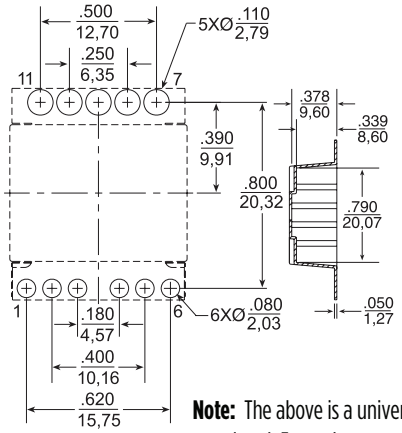
PA0XXXNL

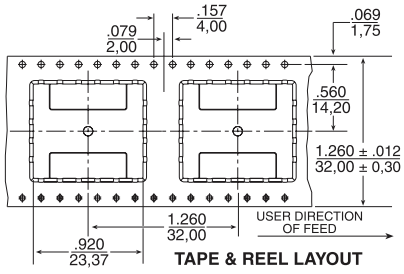




*H - Maximum Height (see table above)

SUGGESTED PAD LAYOUT





TAPE & REEL LAYOUT

Weight 0.8grams
Tape & Reel 400/reel
Tray 40/tray

Note: The above is a universal footprint for a component that has all 11 pins populated. For a given part number, it is only necessary to provide pads for the terminations shown in the schematic below.

Dimensions: Inches / mm Unless otherwise specified, all tolerances are ± .010/0,25

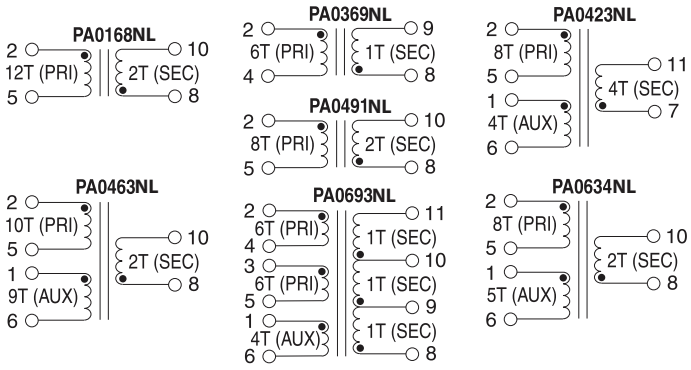
USA 858 674 8100 Germany 49 7032 7806 0 Singapore 65 6287 8998 Shanghai 86 21 62787060 China 86 755 33966678 Taiwan 886 3 4356768

High Frequency Planar Transformers

Spyglass Series (up to 140W)

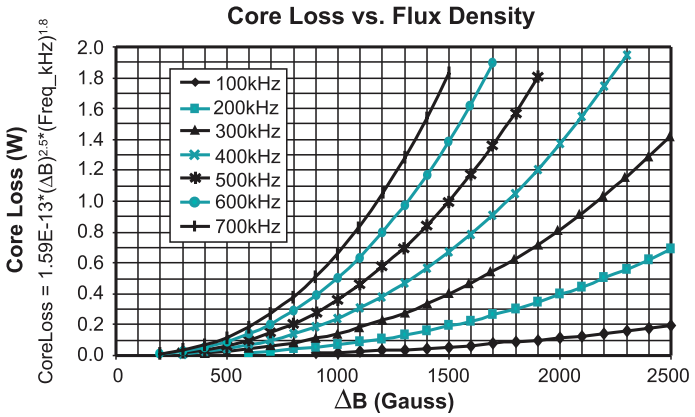
Schematics

PA0XXX

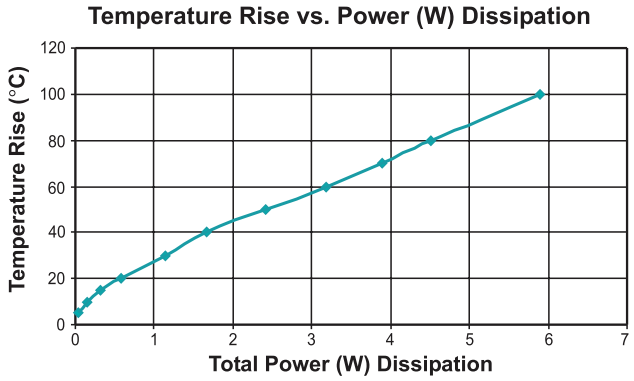


Notes from Tables:

1. The above transformers have been tested and approved by Pulse's IC partners and are cited in the appropriate datasheet or evaluation board documentation at these companies. To determine which IC and IC companies are matched with the above transformers, please refer to the IC cross reference on the Pulse web page. See the Spyglass transformer matrix on the next page for other winding configurations that can be made available.
2. The listed transformers are designed to meet basic insulation (1.4mm creepage and clearance with 1500Vdc isolation). Lower cost transformers with operational insulation (1500Vdc isolation with no creepage and clearance spacings) are available. Please contact Pulse Power Applications Engineering for details.
3. To determine if the transformer is suitable for your application, it is necessary to ensure that the te mperature rise of the component (ambient plus temperature rise) does not exceed its operating temperature. To determine the approximate temperature rise of the transformer, refer to the graphs below.
4. Add suffix "**T**" to the part number for Tape & Reel package (i.e. PA0168**T**).



ΔB = 179211.46 * Vin_min * Dutycycle_max / (Freq_kHz * Pri_Turns)



Total Power Dissipation (W) = .001 *(DCRprimary * Irms_primary^2 + DCRsecondary * Irms_secondary^2) +Core Loss (W)

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