

# High Frequency Wire Wound Transformers

ER7.5 Platforms - SMT - PA4470.XXXNL



- Power Range:** Up to 1.8 W
- Height:** 6.0 mm Max
- Footprint:** 9.5 mm x 8.0 mm Max
- Topology:** Flyback

Pulse PN	Electrical Specifications @25°C - Operating Temperature -40°C to 130°C <sup>1</sup>				Schematic		
PA4470.001NL	Pri. Inductance	(4-3)	216	uH +/- 25%			
	Lk. Inductance	(4-3)	3.5	uH Max			
	DCR	w/ (5,6,7,8) shorted	(4-3)	2.6	Ohms Max		33-57v 200kHz  10v/50mA
			(2-1)	2.72			
			(5-6)	0.11			
			(7-8)	0.12			
Hi-Pot	Pri-Sec	1650	Vdc				
K1 Factor	7187						
PA4470.002NL	Pri. Inductance	(4-3)	216	uH +/- 25%			
	Lk. Inductance	(4-3)	3.5	uH Max			
	DCR	w/ (5,6,7,8) shorted	(4-3)	2.6	Ohms Max		33-57v 200kHz  10v/50mA
			(2-1)	1.8			
			(5-6)	0.32			
			(7-8)	0.32			
Hi-Pot	Pri-Sec	1650	Vdc				
K1 Factor	7187						
PA4470.003NL	Pri. Inductance	(4-3)	216	uH +/- 25%			
	Lk. Inductance	(4-3)	3.5	uH Max			
	DCR	w/ (5,6,7,8) shorted	(4-3)	2.6	Ohms Max		33-57v 200kHz  10v/50mA
			(2-1)	2.72			
			(5-6)	1.2			
			(7-8)	1.2			
Hi-Pot	Pri-Sec	1650	Vdc				
K1 Factor	7187						
PA4470.004NL	Pri. Inductance	(4-3)	21.8	uH +/- 25%			
	Lk. Inductance	(4-3)	0.5	uH Max			
	DCR	w/ (5,6,7,8) shorted	(4-3)	0.3	Ohms Max		10-14v 200kHz  10v/50mA
			(2-1)	1.6			
			(5-6)	0.11			
			(7-8)	0.12			
Hi-Pot	Pri-Sec	1650	Vdc				
K1 Factor	2357						

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Pulse PN	Electrical Specifications @25° C - Operating Temperature -40° C to 130° C 1				Schematic	
PA4470.005NL	Pri. Inductance	(4-3)	21.8	uH +/- 25%		
	Lk. Inductance	(4-3) w/ (5,6,7,8) shorted	0.5	uH Max		
	DCR	(4-3)	0.3	Ohms Max	5v/0.9W	
		(2-1)	1.6			
		(5-6)	0.15			
		(7-8)	0.16			
Hi-Pot	Pri-Sec	1650	Vdc			
K1 Factor	2357					
PA4470.006NL	Pri. Inductance	(4-3)	21.8	uH +/- 25%		
	Lk. Inductance	(4-3) w/ (5,6,7,8) shorted	0.5	uH Max		
	DCR	(4-3)	0.3	Ohms Max	12v/0.9W	
		(2-1)	1.6			
		(5-6)	1.15			
		(7-8)	1.2			
Hi-Pot	Pri-Sec	1650	Vdc			
K1 Factor	2357					

## Notes:

- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
- For flyback topology applications, it is necessary to ensure that the transformer will not saturate in the application. The peak flux density (Bpk) should remain below 2600Gauss. To calculate the peak flux density use the following formula:  

$$B_{pk} \text{ (Gauss)} = K1\_Factor * I_{pk} \text{ (A)}$$
- In high volt- $\mu$ sec applications, it is important to calculate the core loss of the transformer. Approximate transformer core loss can be calculated as:  

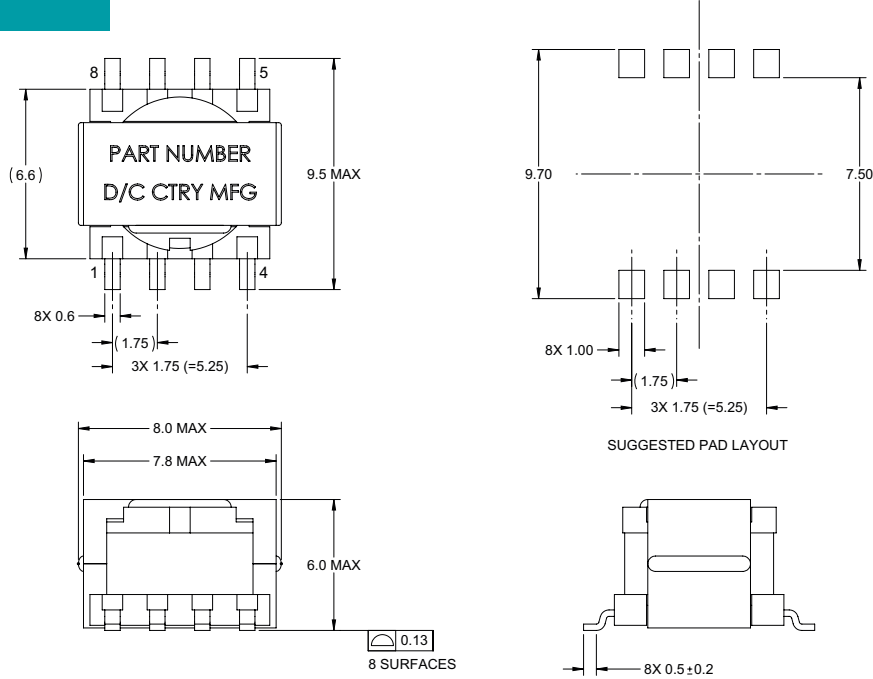
$$CoreLoss \text{ (W)} = 3.84E-14 * (Freq\_kHz)^{1.63} * (\Delta B\_Gauss)^{2.63}$$
 where  $\Delta B$  can be calculated as:  
 For Flyback Topology:  $\Delta B = K1\_Factor * \Delta I \text{ (A)}$
- Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PA4470.001NL becomes PA4470.001NLT). Pulse complies with industry standard tape and reel specification EIA481. The tape and reel for this product has a width (W=24mm), pitch (Po=16mm) and depth (Ko=5.8mm).

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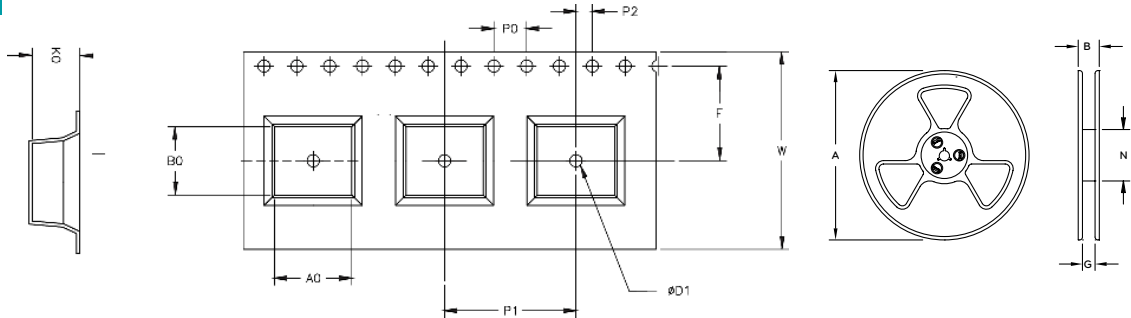
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## Mechanical

PA4470.XXXNL



## TAPE & REEL INFO



## SURFACE MOUNTING TYPE, REEL/TAPE LIST

	REEL SIZE (mm)						TAPE SIZE (mm)									QTY
	A	A <sup>0</sup>	B	B <sup>0</sup>	G	N	E	F	P <sub>1</sub>	P <sub>0</sub>	P	W	T	K	K <sup>0</sup>	
PA4470.XXXNLT	Ø330	9.4	N/A	8.3	12	100	N/A	11.5	N/A	4	N/A	24	N/A	5.8	3.3	700

### Notes:

1. Inductance is measure, where applicable, with both primary windings connected in series (2 to 5, with 3 and 4 shorted).
2. Leakage inductance is measured with both primary windings connected in series (where applicable) with all other windings shorted.