

# High Frequency Wire Wound Transformers

EP7 Platforms - SMT



- Power Range:** up to 5W
- Height:** 9.27mm Max
- Footprint:** 13.34mm x 10.7mm Max
- Topology:** Forward and Flyback

Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C<sup>3</sup>

Part Number	Parameter	Configuration	Value	Notes
PA1130NL	Pri. Inductance	(3-4)	500µH ± 10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	8µH MAX	
	DCR	(3-4)	1750mΩ MAX	
		(6, 5-8, 7)	15mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
	K1 Factor		9735.2	
PA1131NL	Pri. Inductance	(3-4)	500µH ± 10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	7.5µH MAX	
	DCR	(3-4)	1750mΩ MAX	
		(6, 5-8, 7)	35mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
	K1 Factor		9735.2	
PA1132NL	Pri. Inductance	(3-4)	521µH ± 10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	7.5 µH MAX	
	DCR	(3-4)	1750mΩ MAX	
		(6, 5-8, 7)	100mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
	K1 Factor		9937.1	

# High Frequency Wire Wound Transformers

EP7 Platforms - SMT

Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C <sup>5</sup>				
PA1279NL	Pri. Inductance	(3-4)	310 $\mu$ H $\pm$ 10%	
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	5 $\mu$ H MAX	
	DCR	(3-4)	1600m $\Omega$ MAX	
		(6, 5-8, 7)	45 m $\Omega$ MAX	
		(2-1)	2600 m $\Omega$ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
K1 Factor		6584.5	FLYBACK TRANSFORMER	
PA1280NL	Pri. Inductance	(3-4)	310 $\mu$ H $\pm$ 10%	
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	5 $\mu$ H MAX	
	DCR	(3-4)	1600 m $\Omega$ MAX	
		(6, 5-8, 7)	87 m $\Omega$ MAX	
		(2-1)	2650 m $\Omega$ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
K1 Factor		6584.5	FLYBACK TRANSFORMER	
PA1281NL	Pri. Inductance	(3-4)	310 $\mu$ H $\pm$ 10%	
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	5 $\mu$ H MAX	
	DCR	(3-4)	1600 m $\Omega$ MAX	
		(6, 5-8, 7)	550 m $\Omega$ MAX	
		(2-1)	2600 m $\Omega$ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
K1 Factor		6584.5	FLYBACK TRANSFORMER	
PA1825NL	Pri. Inductance	(8-1)	24.5 $\mu$ H $\pm$ 10%	
	Lk. Inductance	(8-1) with (2, 3, 4, 5, 6, 7) shorted	110 $\mu$ H MAX	
	DCR	(8-1)	50 m $\Omega$ MAX	
		(7-2)	50 m $\Omega$ MAX	
		(6-3)	110 m $\Omega$ MAX	
		(5-4)	160 m $\Omega$ MAX	
	Hi-Pot	Pri-Sec	600 Vdc	
K1 Factor		1635.5	FLYBACK TRANSFORMER	

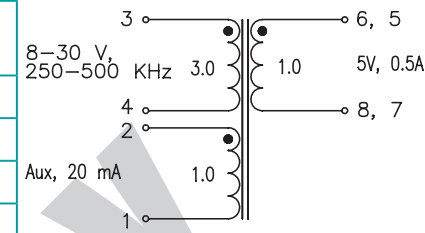
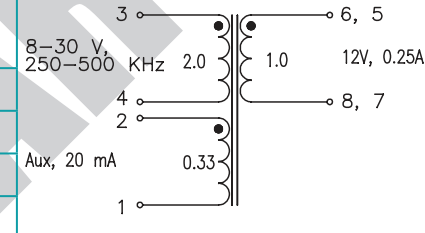
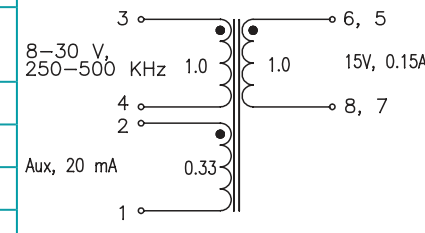
# High Frequency Wire Wound Transformers

EP7 Platforms - SMT

Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C <sup>5</sup>				
PA2571NL	Pri. Inductance	(1-4)	100µH ±25%	<p>FORWARD TRANSFORMER</p>
	DCR	(1-4)	85 mΩ MAX	
		(5-7)	8760 mΩ MAX	
		(7-8)	2200 mΩ MAX	
	Hi-Pot	Pri-Sec	500 Vrms	
KI Factor	93.5			
PA2617NL	Pri. Inductance	(3-4)	22.5 µH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (5,7) shorted	0.6 µH MAX	
	DCR	(3-4)	100 mΩ MAX	
		(5-7)	200 mΩ MAX	
		(2-1)	110 mΩ MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
KI Factor	1401.9			
PA2626NL	Pri. Inductance	(3-4)	30 µH ±5%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	0.7 µH MAX	
	DCR	(3-4)	250 mΩ MAX	
		(6, 5-8, 7)	72 mΩ MAX	
		(2-1)	170 mΩ MAX	
	Hi-Pot	Pri-Sec	500 Vrms	
KI Factor	1168.2			
PA3018NL	Pri. Inductance	(3-4)	48.6µH ±5%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	0.9 µH MAX	
	DCR	(3-4)	250 mΩ MAX	
		(6, 5-8, 7)	35 mΩ MAX	
		(2-1)	130 mΩ MAX	
	Hi-Pot	Pri-Sec	500 Vdc	
KI Factor	1892.5			

# High Frequency Wire Wound Transformers

EP7 Platforms - SMT

Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C <sup>2</sup>				
<b>PA3019NL</b>	Pri. Inductance	(3-4)	47.2 $\mu$ H $\pm$ 5%	 <p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (1, 2, 8, 7, 6, 5) shorted	0.7 $\mu$ H MAX	
	DCR	(3-4)	250 m $\Omega$ MAX	
		(6, 5-8, 7)	72 m $\Omega$ MAX	
		(2-1)	170 m $\Omega$ MAX	
	Hi-Pot	Pri-Sec	500 Vrms	
K1 Factor	1838.0			
<b>PA3020NL</b>	Pri. Inductance	(3-4)	56.7 $\mu$ H $\pm$ 5%	 <p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	0.98 $\mu$ H MAX	
	DCR	(3-4)	400 m $\Omega$ MAX	
		(6, 5-8, 7)	200 m $\Omega$ MAX	
		(2-1)	110 m $\Omega$ MAX	
	Hi-Pot	Pri-Sec	500 Vrms	
K1 Factor	1766.4			
<b>PA3021NL</b>	Pri. Inductance	(3-4)	48.8 $\mu$ H $\pm$ 5%	 <p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	0.4 $\mu$ H MAX	
	DCR	(3-4)	100m $\Omega$ MAX	
		(6, 5-8, 7)	200 m $\Omega$ MAX	
		(2-1)	110 m $\Omega$ MAX	
	Hi-Pot	Pri-Sec	500 Vrms	
K1 Factor	3040.5			

# High Frequency Wire Wound Transformers

EP7 Platforms - SMT

**Notes:**

1. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
2. The above transformers and inductors have been tested and approved by Pulse's power IC partners and are sited in the appropriate datasheet or evaluation board documentation at these companies. To determine which IC and IC partners are matched with the above Pulse part numbers please consult the IC Cross Reference on the Pulse website.
3. 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 2700Gauss. To calculate the peak density, use the following formula:  
 $B_{pk} \text{ (Gauss)} = K1\_Factor * I_{pk} \text{ (A)}$
4. In high volt-sec applications, it is important to calculate the core loss of the transformer. Approximate transformer core loss can be calculated as:

$$\text{CoreLoss (W)} = 2.5E-14 * (\text{Freq\_kHz})^{1.63} * (\Delta B\_Gauss)^{2.63}$$

where  $\Delta B$  can be calculated as:

For Flyback Topology:  $\Delta B = K1\_Factor * (A)$

For Forward Topology:  $\Delta B = K1\_Factor * \text{Volt-}\mu\text{sec}$

5. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PA1130NL becomes PA1130NLT). 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) an depth (Ko=9.8mm).

## Mechanical

PAXXXNL

