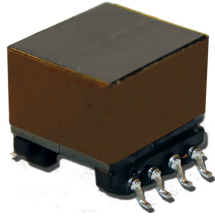


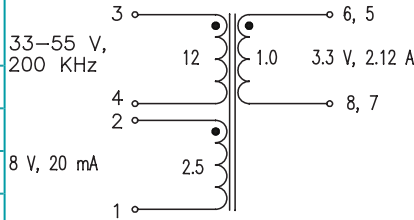
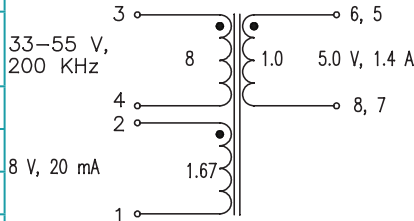
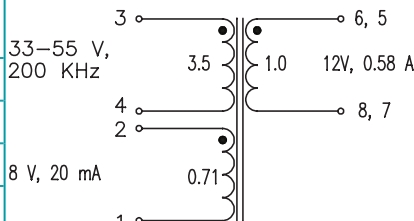
High Frequency Wire Wound Transformers

EP10 Platforms - SMT



-  **Power Range:** up to 30W
-  **Height:** 11.45mm Max
-  **Footprint:** 15.24mm x 13.1mm Max
-  **Topology:** Forward and Flyback

Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C⁵

PA1133NL	Pri. Inductance	(3-4)	253.4μH ± 10%	 33-55 V, 200 KHz 8 V, 20 mA FLYBACK TRANSFORMER
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	7.5μH MAX	
	DCR	(3-4)	420mΩ MAX	
		(6, 5-8, 7)	7.5mΩ MAX	
		(2-1)	115mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
	K1 Factor	4671.8		
PA1134NL	Pri. Inductance	(3-4)	253.4μH ±10%	 33-55 V, 200 KHz 8 V, 20 mA FLYBACK TRANSFORMER
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	7.5μH MAX	
	DCR	(3-4)	420mΩ MAX	
		(6, 5-8, 7)	16mΩ MAX	
		(2-1)	115mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
	K1 Factor	4671.8		
PA1135NL	Pri. Inductance	(3-4)	264.1μH ±10%	 33-55 V, 200 KHz 8 V, 20 mA FLYBACK TRANSFORMER
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	6 μH MAX	
	DCR	(3-4)	800mΩ MAX	
		(6, 5-8, 7)	45mΩ MAX	
		(2-1)	115mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
	K1 Factor	4769.7		

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 Wire Wound Transformers

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Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C

PA1253NL	Pri. Inductance	(3-4)	253.4 μ H $\pm$ 10%	
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	12 μ H MAX	
	DCR	(3-4)	420 m Ω MAX	
		(2-1)	335 m Ω MAX	
		(5-6)	9.5 m Ω MAX	
		(7-8)	7.2 m Ω MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
	KI Factor	4671.8		
				FLYBACK TRANSFORMER
PA1277NL	Pri. Inductance	(3-4)	20.4 μ H $\pm$ 10%	
	Lk. Inductance	(3-4) with (10, 9, 8, 7) shorted	1.5 μ H MAX	
	DCR	(3-4)	80 m Ω MAX	
		(6, 5-8, 7)	7.5 m Ω MAX	
		(2-1)	150 m Ω MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
	KI Factor	1002.9		
				FLYBACK TRANSFORMER
PA1282NL	Pri. Inductance	(3-4)	155 μ H $\pm$ 10%	
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	5 μ H MAX	
	DCR	(3-4)	530 m Ω MAX	
		(6, 5-8, 7)	31 m Ω MAX	
		(2-1)	900 m Ω MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
	KI Factor	3117.5		
				FLYBACK TRANSFORMER
PA1283NL	Pri. Inductance	(3-4)	155 μ H $\pm$ 10%	
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	5 μ H MAX	
	DCR	(3-4)	570 m Ω MAX	
		(6, 5-8, 7)	40 m Ω MAX	
		(2-1)	1000 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	KI Factor	3117.5		
				FLYBACK TRANSFORMER

High Frequency Wire Wound Transformers

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Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C

PA1284NL	Pri. Inductance	(3-4)	155 $\mu\text{H} \pm 10\%$	33-57 V, 200 KHz 12 V, 20 mA FLYBACK TRANSFORMER
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	5 μH MAX	
	DCR	(3-4)	540 $\text{m}\Omega$ MAX	
		(6, 5-8, 7)	370 $\text{m}\Omega$ MAX	
		(2-1)	920 $\text{m}\Omega$ MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	3117.5		
PA1370NL	Pri. Inductance	(3-4)	20.4 $\mu\text{H} \pm 10\%$	33-57 V, 200 KHz 10 V, 20 mA FLYBACK TRANSFORMER
	Lk. Inductance	(3-4) with (8, 5) shorted	1.5 μH MAX	
	DCR	(3-4)	80 $\text{m}\Omega$ MAX	
		(5-8)	30 $\text{m}\Omega$ MAX	
		(2-1)	105 $\text{m}\Omega$ MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	1002.9		
PA1721NL	Pri. Inductance	(3-4)	185 $\mu\text{H} \pm 10\%$	33-55 V, 200 KHz 8 V, 20 mA FORWARD TRANSFORMER
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	10 μH MAX	
	DCR	(3-4)	420 $\text{m}\Omega$ MAX	
		(6, 5-8, 7)	12 $\text{m}\Omega$ MAX	
		(2-1)	115 $\text{m}\Omega$ MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	3410.8		
PA2362NL	Pri. Inductance	(3-4)	25.2 $\mu\text{H} \pm 10\%$	20-30 V, 250 KHz 5 V, 20 mA FLYBACK TRANSFORMER
	Lk. Inductance	(3-4) with (1, 2, 8, 7, 6, 5) shorted	0.55 μH MAX	
	DCR	(3-4)	135 $\text{m}\Omega$ MAX	
		(6, 5-8, 7)	11 $\text{m}\Omega$ MAX	
		(2-1)	115 $\text{m}\Omega$ MAX	
	Hi-Pot	Pri-Sec	1500 Vdc	
	K1 Factor	1115.0		

High Frequency Wire Wound Transformers

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Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C⁵

PA2363NL	Pri. Inductance	(3-4)	25.2 μ H $\pm$ 10%	10–20 V, 250 KHz 5 V, 20 mA FLYBACK TRANSFORMER
	Lk. Inductance	(3-4) with (1, 2, 8, 7, 6, 5) shorted	0.85 μ H MAX	
	DCR	(3-4)	135 m Ω MAX	
		(6, 5-8, 7)	9 m Ω MAX	
		(2-1)	180 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	1115.0		
PA2364NL	Pri. Inductance	(3-4)	25.2 μ H $\pm$ 10%	10–20 V, 250 KHz 3.3 V, 20 mA FLYBACK TRANSFORMER
	Lk. Inductance	(3-4) with (1, 2, 8, 7, 6, 5) shorted	1 μ H MAX	
	DCR	(3-4)	145 m Ω MAX	
		(6, 5-8, 7)	7.5 m Ω MAX	
		(2-1)	110 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	1059.4		
PA2454NL	Pri. Inductance	(3-4)	24 μ H $\pm$ 10%	20–30 V, 250 KHz 5.0 V, 20 mA FLYBACK TRANSFORMER
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	0.75 μ H MAX	
	DCR	(3-4)	82 m Ω MAX	
		(6, 5-8, 7)	13 m Ω MAX	
		(2-1)	80 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	1179.9		
PA2455NL	Pri. Inductance	(3-4)	24 μ H $\pm$ 10%	20–30 V, 250 KHz 12.0 V, 20 mA FLYBACK TRANSFORMER
	Lk. Inductance	(1-4) with (8, 7, 6, 5) shorted	0.6 μ H MAX	
	DCR	(3-4)	90 m Ω MAX	
		(6, 5-8, 7)	23 m Ω MAX	
		(2-1)	130 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vdc	
	K1 Factor	1179.9		

High Frequency Wire Wound Transformers

EP10 Platforms - SMT



Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C

PA2456NL	Pri. Inductance	(3-4)	24 μ H $\pm$ 10%	20-30 V, 250 KHz 12.0 V, 20 mA
	Lk. Inductance	(3,4) with (8, 7, 6, 5) shorted	0.6 μ H MAX	
	DCR	(3-4)	86 m Ω MAX	
		(6, 5-8, 7)	86 m Ω MAX	
		(2-1)	470 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	1179.9		
FLYBACK TRANSFORMER				
PA2627NL	Pri. Inductance	(3-4)	50.5 μ H $\pm$ 10%	18-75 V, 200 KHz 3.3 V, 20 mA
	Lk. Inductance	(3-4) with (8, 7, 6, 5) shorted	1.4 μ H MAX	
	DCR	(3-4)	420 m Ω MAX	
		(6, 5-8, 7)	47 m Ω MAX	
		(2-1)	174 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	1241.4		
FLYBACK TRANSFORMER				
PA3948.001NL	Pri. Inductance	(4-1) with 3,2 shorted	40 μ H $\pm$ 10%	18-42 V 200 KHz
		(4-1) with 3,2 shorted	32 μ H Min at 1.88A	
	Lk. Inductance	(4-1) with (5, 6, 7, 8) shorted	1.45 μ H MAX	
	DCR	(3-4)	410 m Ω MAX	
		(6, 5-8, 7))	140 m Ω MAX	
		(2-1)	140 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vdc	
	K1 Factor	1241.4		
FLYBACK TRANSFORMER				
PA3948.002NL	Pri. Inductance	(4-1) with 3,2 shorted	40 μ H $\pm$ 10%	18-42 V 200 KHz
		(4-1) with 3,2 shorted	32 μ H Min at 1.88A	
	Lk. Inductance	(4-1) with (5, 6, 7, 8) shorted	1.45 μ H MAX	
	DCR	(4-1)	405 m Ω MAX	
		(8-6)	470 m Ω MAX	
		(7-5)	470 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vdc	
	K1 Factor	983.3		
FLYBACK TRANSFORMER				

High Frequency Wire Wound Transformers

EP10 Platforms - SMT



Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C⁵

PA3948.003NL	Pri. Inductance	(4-1) with 3, 2 shorted	40 μ H $\pm$ 10%	
		(4-1) with 3, 2 shorted	32 μ H Min at 1.88A	
	Lk. Inductance	(4-1) with (5, 6, 7, 8) shorted	1.45 μ H MAX	
		(4-1)	405 m Ω MAX	
	DCR	(8-6)	470 m Ω MAX	
		(7-5)	470 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	983.3		FLYBACK TRANSFORMER
PA3948.004NL	Pri. Inductance	(4-1) with 3, 2 shorted	40 μ H $\pm$ 10%	
		(4-1) with 3, 2 shorted	32 μ H Min at 1.88A	
	Lk. Inductance	(4-1) with (5, 6, 7, 8) shorted	1.45 μ H MAX	
		(4-1)	220 m Ω MAX	
	DCR	(8-6)	58 m Ω MAX	
		(7-5)	58 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	983.3		FLYBACK TRANSFORMER
PA3948.005NL	Pri. Inductance	(4-1) with 3, 2 shorted	40 μ H $\pm$ 10%	
		(4-1) with 3, 2 shorted	32 μ H Min at 1.88A	
	Lk. Inductance	(4-1) with (5, 6, 7, 8) shorted	1.6 μ H MAX	
		(4-1)	220 m Ω MAX	
	DCR	(7-6)	1275 m Ω MAX	
		(4-1)	1275 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	983.3		FLYBACK TRANSFORMER
PA3948.006NL	Pri. Inductance	(4-1) with 3, 2 shorted	40 μ H $\pm$ 10%	
		(4-1) with 3, 2 shorted	32 μ H Min at 1.88A	
	Lk. Inductance	(4-1) with (5, 6, 7, 8) shorted	1.65 μ H MAX	
		(4-1)	220 m Ω MAX	
	DCR	(7-6)	3350 m Ω MAX	
		(4-1)	3350 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	983.3		FLYBACK TRANSFORMER

High Frequency Wire Wound Transformers

EP10 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 ΔB can be calculated as:

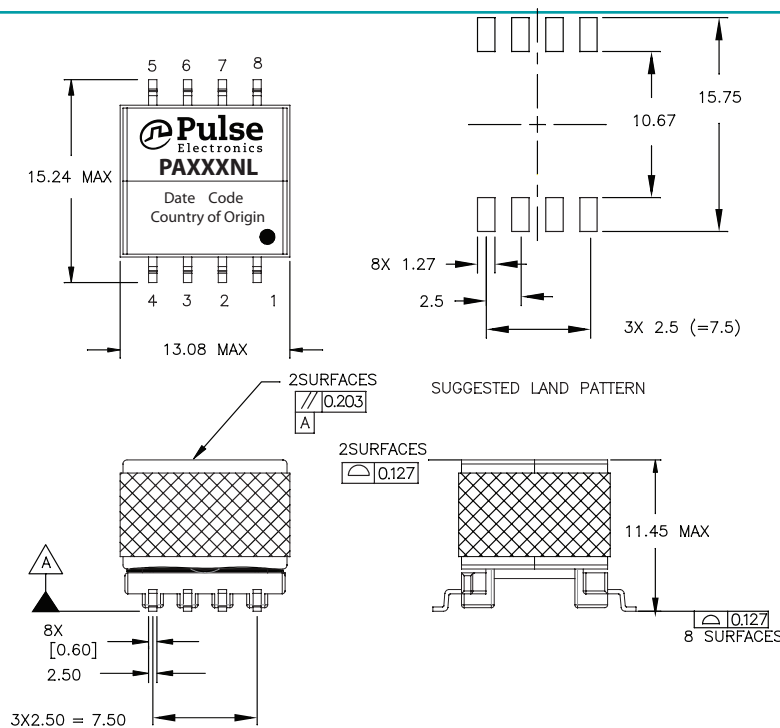
For Flyback Topology: $\Delta B = K1_Factor * (A)$

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. PA1133NL becomes PA1133NLT). Pulse complies with industry standard tape and reel specification EIA481. The tape and reel for this product has a width (W=32mm), pitch (Po=24mm) an depth (Ko=11.6mm).

Mechanical

PAXXXNL



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