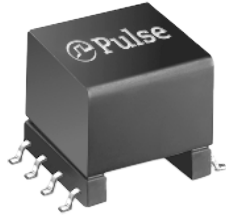


HIGH FREQUENCY WIRE-WOUND TRANSFORMER

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°C

PA1133NL	Pri. Inductance	(3-4)	253.4μH ± 10%	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%	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%	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		

HIGH FREQUENCY WIRE-WOUND TRANSFORMER

EP10 Platforms - SMT

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

PA1253NL	Pri. Inductance	(3-4)	253.4 μ H $\pm$ 10%	FLYBACK TRANSFORMER
	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		
PA1277NL	Pri. Inductance	(3-4)	20.4 μ H $\pm$ 10%	FLYBACK TRANSFORMER
	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		
PA1282NL	Pri. Inductance	(3-4)	155 μ H $\pm$ 10%	FLYBACK TRANSFORMER
	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		
PA1283NL	Pri. Inductance	(3-4)	155 μ H $\pm$ 10%	FLYBACK TRANSFORMER
	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		

HIGH FREQUENCY WIRE-WOUND TRANSFORMER

EP10 Platforms - SMT

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 m Ω MAX	
		(6, 5-8, 7)	370 m Ω MAX	
		(2-1)	920 m Ω 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 m Ω MAX	
		(5-8)	30 m Ω MAX	
		(2-1)	105 m Ω 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 m Ω MAX	
		(6, 5-8, 7)	12 m Ω MAX	
		(2-1)	115 m Ω 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 m Ω MAX	
		(6, 5-8, 7)	11 m Ω MAX	
		(2-1)	115 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vdc	
	K1 Factor	1115.0		

HIGH FREQUENCY WIRE-WOUND TRANSFORMER

EP10 Platforms - SMT

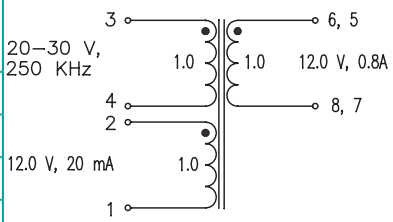
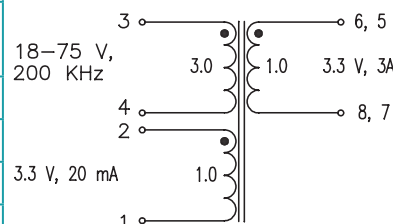
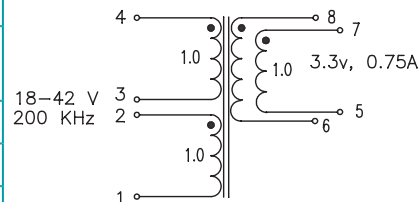
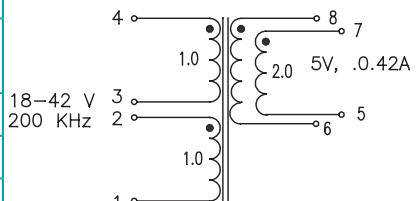
Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C

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 TRANSFORMER

EP10 Platforms - SMT

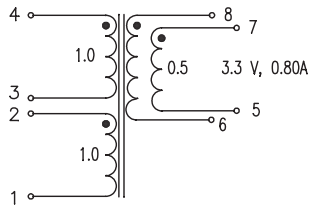
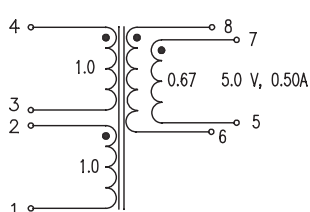
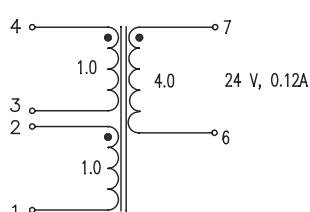
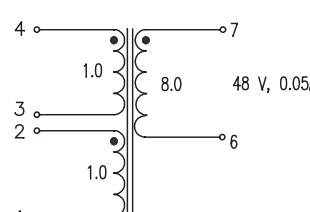
Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C

PA2456NL	Pri. Inductance	(3-4)	24 μ H $\pm$ 10%	 FLYBACK TRANSFORMER
	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	
	KI Factor	1179.9		
PA2627NL	Pri. Inductance	(3-4)	50.5 μ H $\pm$ 10%	 FLYBACK TRANSFORMER
	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	
	KI Factor	1241.4		
PA3948.001NL	Pri. Inductance	(4-1) with 3,2 shorted	40 μ H $\pm$ 10%	 FLYBACK TRANSFORMER
		(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	
	KI Factor	1241.4		
PA3948.002NL	Pri. Inductance	(4-1) with 3,2 shorted	40 μ H $\pm$ 10%	 FLYBACK TRANSFORMER
		(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	
	KI Factor	983.3		

HIGH FREQUENCY WIRE-WOUND TRANSFORMER

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%	 8-36 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	
		(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%	 8-36 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	
		(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%	 8-36 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	1.6 μ H MAX	
		(4-1)	220 m Ω MAX	
	DCR	(7-6)	1275 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	983.3		FLYBACK TRANSFORMER
PA3918.006NL	Pri. Inductance	(4-1) with 3, 2 shorted	40 μ H $\pm$ 10%	 8-36 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	1.65 μ H MAX	
		(4-1)	220 m Ω MAX	
	DCR	(7-6)	3350 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	983.3		FLYBACK TRANSFORMER

HIGH FREQUENCY WIRE-WOUND TRANSFORMER

EP10 Platforms - SMT

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

PB2115NL	Pri. Inductance	(4-6)	25.2 μ H $\pm$ 10%	FLYBACK TRANSFORMER
	Lk. Inductance	(4-6) with (1,2,3,4,7,8) shorted	1.45 μ H MAX	
	DCR	(4-6)	250 m Ω MAX	
		(7, 8-2,1)	3.3 m Ω MAX	
		(7-5)	20 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	1115.0		
PG0686NL	Pri. Inductance	(3-2)	40 μ H $\pm$ 7%	FLYBACK TRANSFORMER
	Lk. Inductance	(3-2) with (5, 6, 7, 8) shorted	0.05 μ H MAX	
	DCR	(3-2)	98 m Ω MAX	
		(5-7)	50 m Ω MAX	
		(6-8)	65 m Ω MAX	
	Hi-Pot	Pri-Sec	1650 Vrms	
	K1 Factor	1769.9		
PG0721NL	Pri. Inductance	(4-6)	75 μ H $\pm$ 15%	FLYBACK TRANSFORMER
	Lk. Inductance	(4-6) with (1,2,3,5,7,8) shorted	1 μ H MAX	
	DCR	(4-6)	110 m Ω MAX	
		(7,8-2,1)	35 m Ω MAX	
		(5-3)	85 m Ω MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	4424.8		
PG0855NL	Pri. Inductance	(2-4)	33.1 μ H $\pm$ 15%	FLYBACK TRANSFORMER
	DCR	(2-4)	140 m Ω MAX	
		(8-6)	115 m Ω MAX	
		(7-5)	40 m Ω MAX	
	Hi-Pot	Pri-Sec	1000 Vrms	
	K1 Factor	1126.6		

HIGH FREQUENCY WIRE-WOUND TRANSFORMER

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:

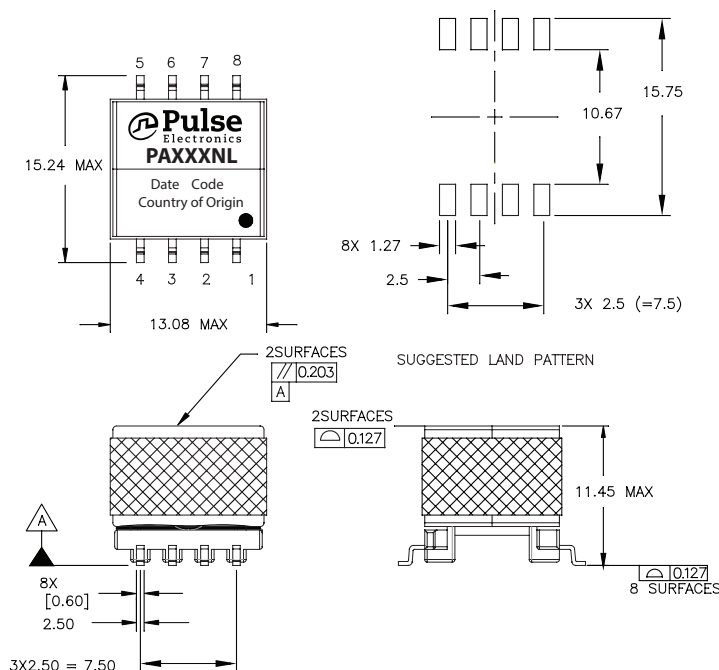
For Flyback Topology: $\Delta B = K1_Factor * (A)$

For Forward Topology: $\Delta B = K1_Factor * \text{Volt-}\mu\text{sec}$

6. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PA1136NL becomes PA1136NLT). 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=13.2mm).

Mechanical

PAXXXXNL



For More Information

Pulse Worldwide Headquarters

15255 Innovation Drive Ste 100
San Diego, CA 92128
U.S.A.

Pulse Europe

Pulse Electronics GmbH
Am Rottland 12
58540 Meinerzhagen
Germany

Pulse China Headquarters

Pulse Electronics (ShenZhen) CO., LTD
D708, Shenzhen Academy of
Aerospace Technology,
The 10th Keji South Road,
Nanshan District, Shenzhen, P.R.
China 518057

Pulse North China

Room 2704/2705
Super Ocean Finance Ctr.
2067 Yan An Road West
Shanghai 200336
China

Pulse South Asia

3 Fraser Street
0428 DUO Tower
Singapore 189352

Pulse North Asia

1F, No.111
Xiyuan Road
Zhongli District
Taoyuan City 32057
Taiwan (R.O.C)

Tel: 858 674 8100
Fax: 858 674 8262

Tel: 49 2354 777 100
Fax: 49 2354 777 168

Tel: 86 755 33966678
Fax: 86 755 33966700

Tel: 86 21 62787060
Fax: 86 2162786973

Tel: 65 6287 8998
Fax: 65 6280 0080

Tel: 886 3 4356768
Fax: 886 3 4356820

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners. © Copyright, 2018, Pulse Electronics, Inc. All rights reserved.