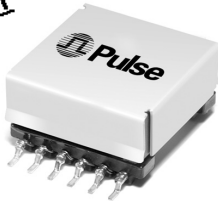






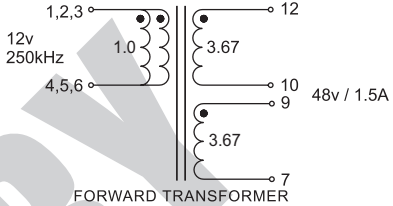
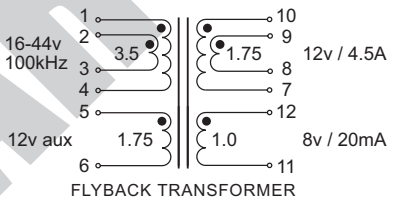

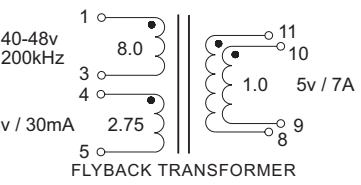
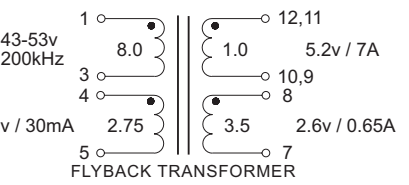
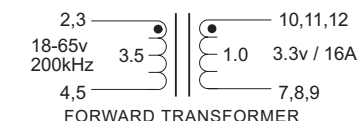
HIGH FREQUENCY WIRE WOUND TRANSFORMERS

EFD25 Platforms - SMT



-  **Power Range:** Up to 105W
-  **Height:** 13.7mm Max
-  **Footprint:** 32.0mm x 26.4mm Max
-  **Topology:** Forward and Flyback

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

PA0700NL	Pri. Inductance	(1,2,3-4,5,6)	21.4μH ±40%	 <p>FORWARD TRANSFORMER</p>
	Lk. Inductance	(1,2,3-4,5,6) with (7,9,10,12) shorted	0.5μH MAX	
	DCR	(1,2,3-4,5,6)	4mΩ MAX	
		(12-10)	45mΩ MAX	
		(9-7)	40mΩ MAX	
	Hi-Pot	Pri-Sec	2250Vdc	
K1 Factor	57.5			
PA1188	Pri. Inductance	(1,2-3,4)	26.5μH ±15%	 <p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(1,2-3,4) with (7,8,9,10) shorted	0.36μH MAX	
	DCR	(1-4)=(2-3)	50mΩ MAX	
		(5-6)	30mΩ MAX	
		(10-7)=(9-8)	20mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vdc	
K1 Factor	326.4			
PA1434NL	Pri. Inductance	(2,3-4,5)	30.9μH ±10%	 <p>FORWARD TRANSFORMER</p>
	Lk. Inductance	(2,3-4,5) with (11,10,9,8) shorted	0.5μH MAX	
	DCR	(2,3-4,5)	36mΩ MAX	
		(11,10,9,8)	19mΩ MAX	
	Hi-Pot	Pri-Sec	1800Vrms	
K1 Factor	354.6			
PA1468NL	Pri. Inductance	(1-3)	199.7μH ±12%	 <p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(1-3) with (11,10,9,8) shorted	3.4μH MAX	
	DCR	(1-3)	142mΩ MAX	
		(11-8)	73mΩ MAX	
		(11,10,9,8)	7.5mΩ MAX	
	Hi-Pot	Pri-Sec	1800Vrms	
K1 Factor	1075.7			
PA1543NL	Pri. Inductance	(1-3)	300μH ±10%	 <p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(1-3) with (11,10,9,8) shorted	5μH MAX	
	DCR	(1-3)	120mΩ MAX	
		(4-5)	70mΩ MAX	
		(12,11-10,9)	7.5mΩ MAX	
	Hi-Pot	Pri-Sec	1800Vrms	
K1 Factor	1616.4			
PA1785NL	Pri. Inductance	(2,3-4,5)	98μH ±30%	 <p>FORWARD TRANSFORMER</p>
	Lk. Inductance	(2,3-4,5) with (7,8,9,10,11,12) shorted	1μH MAX	
	DCR	(2-4)	15.5mΩ MAX	
		(3-5)	22mΩ MAX	
		(12,11,10-9,8,7)	2.5mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
K1 Factor	24.6			

HIGH FREQUENCY WIRE WOUND TRANSFORMERS

EFD25 Platforms - SMT

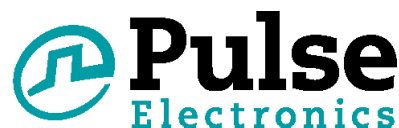


Electrical Specifications @ 25°C — Operating Temperature -40°C to 130°C⁵

PA1799NL	Pri. Inductance	(1,2-11,12)	3.61μH ±12%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(1,2-11,12) with (4,5,6,7,8,9) shorted	0.1μH MAX	
	DCR	(2-11)	5mΩ MAX	
		(1-12)	6mΩ MAX	
		(4,5,6-7,8,9)	9.3mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vdc	
K1 Factor	207.5			
PA1849NL	Pri. Inductance	(1,2-3,4)	30.8μH ±7%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(1,2-3,4) with (8,9,10,11) shorted	0.75μH MAX	
	DCR	(1,2-3,4)	36mΩ MAX	
		(10,11-8,9)	20mΩ MAX	
		(5-6)	130mΩ MAX	
	Hi-Pot	Pri-Sec	1800Vrms	
K1 Factor	354.0			
PA1927NL	Pri. Inductance	(2-11)	23.7μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(2-11) with (6,7) shorted	0.5μH MAX	
	DCR	(2-11)	14mΩ MAX	
		(6-7)	14mΩ MAX	
		(3-1)	110mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vdc	
K1 Factor	454.0			
PA2226NL	Pri. Inductance	(1,2-3,4)	25μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(1,2-3,4) with (5,6,7,8,9,10,11,12) shorted	0.5μH MAX	
	DCR	(1,2-3,4)	16mΩ MAX	
		(5-6)	60mΩ MAX	
		(10,11,12-7,8,9)	2.5mΩ MAX	
	Hi-Pot	Pri-Sec	2250Vdc	
K1 Factor	431.0			
PA2247NL	Pri. Inductance	(2,3-4,5)	40.5μH ±30%	<p>FORWARD TRANSFORMER</p>
	Lk. Inductance	(2,3-4,5) with (7,8,9,10,11,12) shorted	3.5μH MAX	
	DCR	(2-4)	22mΩ MAX	
		(3-5)	22mΩ MAX	
		(9-10)	4mΩ MAX	
		(8-11)	4mΩ MAX	
		(12-7)	170mΩ MAX	
	Hi-Pot	Pri-Sec	2000Vrms	
K1 Factor	28.7			
PA2459NL	Pri. Inductance	(1,2-3,4)	57.8μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(1,2-3,4) with (5,6,7,8,11,12) shorted	0.46μH MAX	
	DCR	(1,2-3,4)	53mΩ MAX	
		(5-6)	94mΩ MAX	
		(7,8-11,12)	33mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
K1 Factor	524.5			

HIGH FREQUENCY WIRE WOUND TRANSFORMERS

EFD25 Platforms - SMT



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

Model	Parameter	Primary Connections	Value	Diagram	
PA2464NL	Pri. Inductance	(1,2-3,4)	40.5µH ±10%	<p>FLYBACK TRANSFORMER</p>	
	Lk. Inductance	(1,2-3,4) with (5,6,7,8,9,10,11,12) shorted	n/a µH MAX		
	DCR		(1,2-3,4)		48mΩ MAX
			(5-6)		167mΩ MAX
			(8-7)		17mΩ MAX
			(12-11)		18mΩ MAX
			(10-9)		102mΩ MAX
	Hi-Pot	Pri-Sec	1500Vrms		
K1 Factor		436.4			
PA2532NL	Pri. Inductance	(1,2-3,4)	12.2µH ±10%	<p>FLYBACK TRANSFORMER</p>	
	Lk. Inductance	(1,2-3,4) with (5,6,7,8,9,10,11,12) shorted	0.196 µH MAX		
	DCR		(1,2-3,4)		18mΩ MAX
			(5-6)		72mΩ MAX
			(8-7)		9.3mΩ MAX
			(12-11)		9.3mΩ MAX
			(10-9)		35mΩ MAX
	Hi-Pot	Pri-Sec	1500Vrms		
K1 Factor		131.5			
PA2548NL	Pri. Inductance	(1,2-3,4)	11.2µH ±10%	<p>FLYBACK TRANSFORMER</p>	
	Lk. Inductance	(1,2-3,4) with (5,6,7,8,9,10,11,12) shorted	n/a µH MAX		
	DCR		(1,2-3,4)		18mΩ MAX
			(5-6)		73mΩ MAX
			(8-7)		20mΩ MAX
			(12-11)		21mΩ MAX
	Hi-Pot	Pri-Sec	2250Vrms		
	K1 Factor		241.4		

PRELIMINARY

HIGH FREQUENCY WIRE WOUND TRANSFORMERS

EFD25 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 flux density use the following formula:

$$B_{pk} \text{ (Gauss)} = K1_Factor * I_{pk}(A)$$

4. In high volt-μsec applications, it is important to calculate the core loss of the transformer. Approximate transformer core loss can be calculated as:

$$CoreLoss \text{ (W)} = 2.98E-13 * (Freq_kHz)^{1.63} * (\Delta B_Gauss)^{2.63}$$

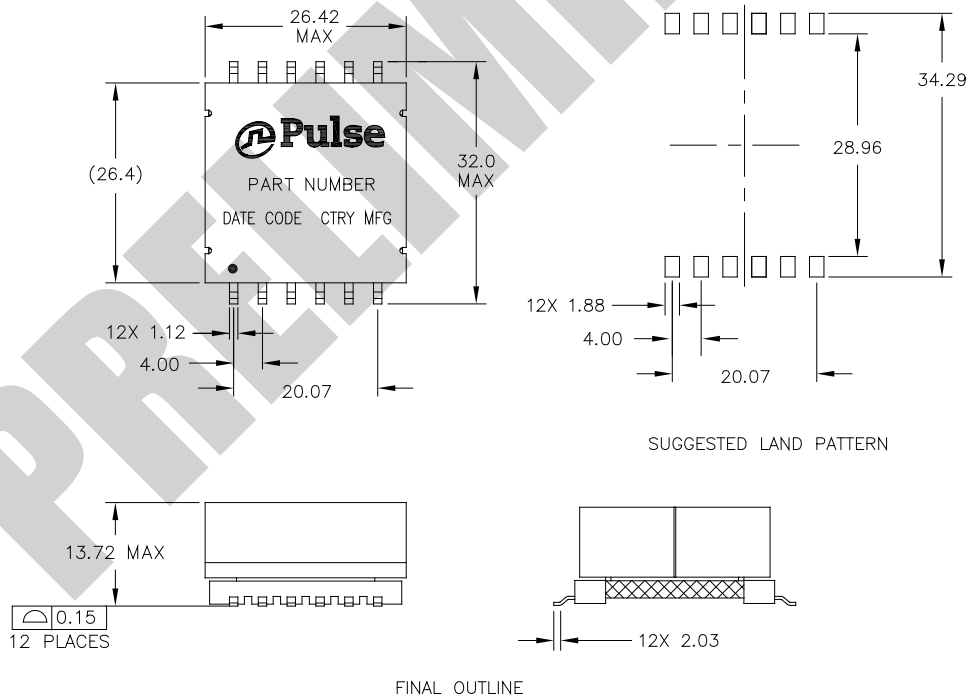
where ΔB can be calculated as:

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

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

5. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PA0700NL becomes PA0700NLT). Pulse complies with industry standard tape and reel specification EIA481.
6. The "NL" suffix indicates an RoHS-compliant part number. Non-NL suffixed parts are not necessarily RoHS compliant, but are electrically and mechanically equivalent to NL versions. If a part number does not have the "NL" suffix, but an RoHS compliant version is required, please contact Pulse for availability.

Mechanical



FINAL OUTLINE

DIMENSION: MM

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE ± 0.25 MM

For More Information

Pulse Worldwide Headquarters

12220 World Trade Drive
San Diego, CA 92128
U.S.A.

Pulse Europe

Einsteinstrasse 1
D-71083 Herrenberg
Germany

Pulse China Headquarters

B402, Shenzhen Academy of
Aerospace Technology Bldg.
10th Kejinan Road
High-Tech Zone
Nanshan District
Shenzhen, PR China 518057
Tel: 86 755 33966678
Fax: 86 755 33966700

Pulse North China

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

Tel: 86 21 62787060
Fax: 86 2162786973

Pulse South Asia

135 Joo Seng Road
#03-02
PM Industrial Bldg.
Singapore 368363

Tel: 65 6287 8998
Fax: 65 6287 8998

Pulse North Asia

3F, No. 198
Zhongyuan Road
Zhongli City
Taoyuan County 320
Taiwan R. O. C.
Tel: 886 3 4356768
Fax: 886 3 4356823 (Pulse)
Fax: 886 3 4356820 (FRE)

Tel: 858 674 8100
Fax: 858 674 8262

Tel: 49 7032 7806 0
Fax: 49 7032 7806 135

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, 2016. Pulse Electronics, Inc. All rights reserved.