

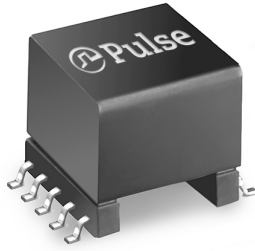


**THE DATASHEET OF
PA2221NLT**



High Frequency Wire Wound Transformers

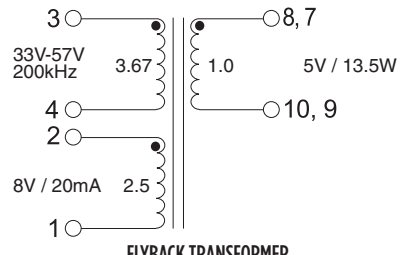
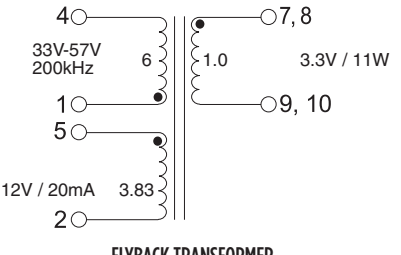
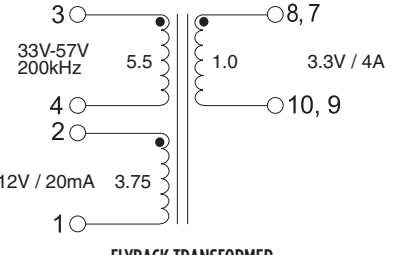
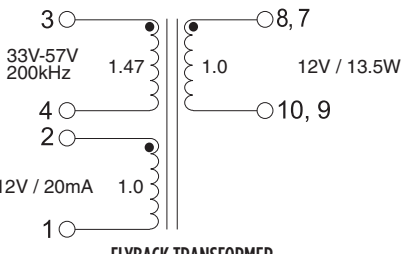
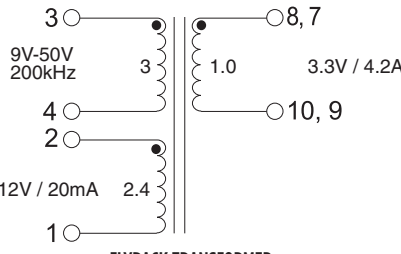
EP13 Platforms - SMT



- Ⓢ **Power Range:** up to 60W
- Ⓢ **Height:** 12.7mm Max
- Ⓢ **Footprint:** 17.7mm x 14.0mm Max
- Ⓢ **Topology:** Forward and Flyback

Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C				
PA1136NL	Pri. Inductance	(3-4)	126.7μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (10, 9, 8, 7) shorted	7.5μH MAX	
	DCR	(3-4)	440mΩ MAX	
		(8, 7-10, 9)	6mΩ MAX	
		(2-1)	88mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
K1 Factor	1353.6			
PA1137NL	Pri. Inductance	(3-4)	126μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (10, 9, 8, 7) shorted	7.5μH MAX	
	DCR	(3-4)	460mΩ MAX	
		(8, 7-10, 9)	12mΩ MAX	
		(2-1)	94mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
K1 Factor	1353.6			
PA1138NL	Pri. Inductance	(3-4)	126.7μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (10, 9, 8, 7) shorted	7.5μH MAX	
	DCR	(3-4)	460mΩ MAX	
		(8, 7-10, 9)	55mΩ MAX	
		(2-1)	94mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
K1 Factor	1353.6			
PA1218NL	Pri. Inductance	(3-4)	480μH ±10%	<p>FLYBACK TRANSFORMER</p> <p>Output power is limited to 6W maximum total</p>
	Lk. Inductance	(3-4) with (10, 8, 7, 6) shorted	10μH MAX	
	DCR	(3-4)	570mΩ MAX	
		(8-10)	15mΩ MAX	
		(6-7)	40mΩ MAX	
		(2-1)	325mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vdc	
K1 Factor	5128.2			

Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C¹

PA1260NL	Pri. Inductance	(3-4)	77.4μH ±10%	 <p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (10, 9, 8, 7) shorted	0.8μH MAX	
	DCR	(3-4)	220mΩ MAX	
		(8, 7-10, 9)	18mΩ MAX	
		(2-1)	250mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
	K1 Factor	1804.2		
PA1267NL	Pri. Inductance	(4-1)	155.5μH ±10%	 <p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(4-1) with (10, 9, 8, 7) shorted	5μH MAX	
	DCR	(4-1)	330mΩ MAX	
		(7, 8-9, 10)	11mΩ MAX	
		(5-2)	650mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
	K1 Factor	2215.1		
PA1269NL	Pri. Inductance	(3-4)	77.4μH ±10%	 <p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (10, 9, 8, 7) shorted	0.8μH MAX	
	DCR	(3-4)	100mΩ MAX	
		(8, 7-10, 9)	6.5mΩ MAX	
		(2-1)	270mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
	K1 Factor	1804.2		
PA1276NL	Pri. Inductance	(3-4)	77.4μH ±10%	 <p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (10, 9, 8, 7) shorted	0.8μH MAX	
	DCR	(3-4)	100mΩ MAX	
		(8, 7-10, 9)	6.5mΩ MAX	
		(2-1)	270mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vdc	
	K1 Factor	1804.2		
PA1309NL	Pri. Inductance	(3-4)	16.4μH ±10%	 <p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (10, 9, 8, 7) shorted	0.7μH MAX	
	DCR	(3-4)	38mΩ MAX	
		(8, 7-10, 9)	10mΩ MAX	
		(2-1)	200mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
	K1 Factor	599.0		

High Frequency Wire Wound Transformers

EP13 Platforms - SMT



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Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C¹

PA1367NL	Pri. Inductance	(3, 4-2, 1)	66.1μH ±10%	<p>FORWARD TRANSFORMER</p>
	Lk. Inductance	(3, 4-2, 1) with (10, 9, 8, 7) shorted	1.0μH MAX	
	DCR	(3, 4-2,1)	82mΩ MAX	
		(7, 9)	12mΩ MAX	
		(8-10)	97mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
	K1 Factor	57.0		
PA1460NL	Pri. Inductance	(3, 4)	40μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3, 4) with (10, 9, 8, 7) shorted	2.5μH MAX	
	DCR	(3, 4)	95mΩ MAX	
		(8, 7-10, 9)	28mΩ MAX	
		(2-1)	66mΩ MAX	
	Hi-Pot	Pri-Sec	1650Vrms	
	K1 Factor	1025.6		
PA1528NL	Pri. Inductance	(3, 4)	28.9μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3, 4) with (10, 9, 8, 7) shorted	1μH MAX	
	DCR	(3, 4)	58mΩ MAX	
		(8, 7-10, 9)	27mΩ MAX	
		(2-1)	55mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
	K1 Factor	871.8		
PA1528ANL	Pri. Inductance	(3, 4)	28.9μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3,4) with (10, 9, 8, 7) shorted	1μH MAX	
	DCR	(3, 4)	58mΩ MAX	
		(8, 7-10, 9)	27mΩ MAX	
		(2-1)	77mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vdc	
	K1 Factor	871.8		

High Frequency Wire Wound Transformers

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

Part Number	Parameter	Value	Value	Diagram
PA1576NL	Pri. Inductance	(3, 4)	230.4μH ±30%	<p>FORWARD TRANSFORMER</p>
	Lk. Inductance	(3, 4) with (10, 9, 8, 7) shorted	1.5μH MAX	
	DCR	(3, 4)	36mΩ MAX	
		(8, 7-10, 9)	3.5mΩ MAX	
		(2-1)	58mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
KI Factor	42.7			
PA1577NL	Pri. Inductance	(3-4)	230.4μH ±60%	<p>FORWARD TRANSFORMER</p>
	Lk. Inductance	(3-4) with (10, 9, 8, 7) shorted	1.5μH MAX	
	DCR	(3, 4)	36mΩ MAX	
		(7-9)=(8-10)	54mΩ MAX	
		(2-1)	55mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
KI Factor	42.7			
PA1769NL	Pri. Inductance	(3, 4)	6.7μH ±7%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3, 4) with (10, 9, 8, 7) shorted	0.65μH MAX	
	DCR	(3, 4)	25mΩ MAX	
		(8, 7-10, 9)	6.5mΩ MAX	
		(2-1)	115mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
KI Factor	381.8			
PA1861NL	Pri. Inductance	(1, 4)	115.5μH ±7%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(1, 4) with (10, 9, 8, 7) shorted	0.65μH MAX	
	DCR	(1, 4)	330mΩ MAX	
		(7, 8-9, 10)	11mΩ MAX	
		(5-2)	460mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
KI Factor	1645.3			
PA2070NL	Pri. Inductance	(5-4)	164μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(5-4) with (10, 9, 8, 7) shorted	3μH MAX	
	DCR	(5-4)	292mΩ MAX	
		(7, 8-9, 10)	8.5mΩ MAX	
		(2-1)	60mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vdc	
KI Factor	2628.2			

High Frequency Wire Wound Transformers

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Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C ¹				
PA2086NL	Pri. Inductance	(2-3)	164μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(2-3) with (10, 9, 8, 7) shorted	3μH MAX	
	DCR	(2-3)	292mΩ MAX	
		(5-4)	64mΩ MAX	
		(9-10)	17mΩ MAX	
		(7-8)	100mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
KI Factor	2628.2			
PA2114NL	Pri. Inductance	(2-3)	164μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(2-3) with (10, 9, 8, 7) shorted	3μH MAX	
	DCR	(2-3)	300mΩ MAX	
		(5-4)	64mΩ MAX	
		(9-1)	30mΩ MAX	
		(7-8)	165mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
KI Factor	2628.2			
PA2194NL	Pri. Inductance	(1-2)	617.4μH ±28%	<p>FORWARD TRANSFORMER</p>
	Lk. Inductance	(1-2) with (10, 9, 7, 6, 5, 4) shorted	2μH MAX	
	DCR	(1-2)	80mΩ MAX	
		(9, 10-6, 7)	30mΩ MAX	
		(4-5)	4mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
KI Factor	24.4			
PA2204NL	Pri. Inductance	(2, 3-4, 5)	5μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(2, 3-4, 5) with (10, 9, 8, 7) shorted	0.25μH MAX	
	DCR	(2, 3-4, 5)	20mΩ MAX	
		(8, 7-10, 9)	10.3mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
KI Factor	2628.2			
PA2221NL	Pri. Inductance	(5-4)	152μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(5-4) with (10, 9, 8, 7) shorted	4μH MAX	
	DCR	(5-4)	280mΩ MAX	
		(7, 8-9, 10)	5.2mΩ MAX	
		(2-1)	67mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vdc	
KI Factor	2435.9			

¹ Please note this part has an alternate pin-out. Please see note 5 and refer to alternate mechanical drawing.

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

Model	Parameter	Configuration	Value	Transformer Diagram
PA2271NL	Pri. Inductance	(3-4)	10μH ±10%	
	Lk. Inductance	(3-4) with (10, 9, 8, 7) shorted	1μH MAX	
	DCR	(3-4)	23mΩ MAX	
		(8, 7-10, 9)	6.7mΩ MAX	
		(2-1)	54mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vdc	
KI Factor	512.8			
PA2328NL	Pri. Inductance	(1-2)	100μH ±10%	
	Lk. Inductance	(1-2) with (10, 9, 6, 5, 4) shorted	0.875μH MAX	
	DCR	(1-2)	210mΩ MAX	
		(6, 7-9, 10)	9mΩ MAX	
		(4-5)	580mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
KI Factor	18.3			
PA2367NL	Pri. Inductance	(2-1)	85μH ±10%	
	Lk. Inductance	(2-1) with (10, 9, 7, 6, 5, 4) shorted	0.75μH MAX	
	DCR	(2-1)	325mΩ MAX	
		(9, 10-6, 7)	25.5mΩ MAX	
		(4-5)	815mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
KI Factor	1614.4			
PA2369NL	Pri. Inductance	(5-3)	37μH ±10%	
	Lk. Inductance	(5-3) with (6, 7, 9, 10) shorted	0.75μH MAX	
	DCR	(5-3)	89mΩ MAX	
		(6, 7-9, 10)	6.2mΩ MAX	
		(2-1)	84mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
KI Factor	948.7			
PA2417NL	Pri. Inductance	(1-2)	530μH ±28%	
	Lk. Inductance	(1-2) with (10, 9, 7, 6, 5, 4) shorted	0.5μH MAX	
	DCR	(1-2)	75mΩ MAX	
		(6, 7-9, 10)	6.5mΩ MAX	
		(4-5)	886mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vdc	
KI Factor	25.6			

High Frequency Wire Wound Transformers

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Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C¹

PA2431NL	Pri. Inductance	(1-2)	429.3μH ±28%	<p>FORWARD TRANSFORMER</p>
	Lk. Inductance	(1-2) with (10, 9, 7, 6, 5, 4) shorted	0.5μH MAX	
	DCR	(1-2)	68mΩ MAX	
	DCR	(6, 7-9, 10)	6.75mΩ MAX	
	DCR	(4-5)	970mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vdc	
	KI Factor	28.5		
PA2437NL	Pri. Inductance	(1-4) with (3-2) shorted	80μH ±10%	<p>FORWARD TRANSFORMER</p>
	Lk. Inductance	(1-4) with (3-2) and (9-10) shorted	2μH MAX	
	DCR	(1-3)	47mΩ MAX	
		(2-4)	58mΩ MAX	
		(6-7)	155mΩ MAX	
		(9-10)	12mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
KI Factor	1709.4			
PA2466NL	Pri. Inductance	(5-3)	37μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(5-3) with (6, 7, 9, 10) shorted	0.75μH MAX	
	DCR	(5-3)	89mΩ MAX	
		(6, 7-9, 10)	4.6mΩ MAX	
		(2-1)	96mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
KI Factor	948.7			
PA2467NL	Pri. Inductance	(5-3)	37μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(5-3) with (6, 7, 9, 10) shorted	0.75μH MAX	
	DCR	(5-3)	89mΩ MAX	
		(6, 7-9, 10)	4.6mΩ MAX	
		(2-1)	96mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
KI Factor	948.7			
PA2641NL	Pri. Inductance	(3-4)	40μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(3-4) with (6,7,9,10) shorted	1.5μH MAX	
	DCR	(3,4)	100mΩ MAX	
		(6-7)	105mΩ MAX	
		(9-10)	170mΩ MAX	
		(2-1)	460mΩ MAX	
	Hi-Pot	(1,2) to 3,4,6,7,9,10	1500Vrms	
KI Factor	976.8			

High Frequency Wire Wound Transformers

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

Part Number	Parameter	Winding Configuration	Value	Diagram
PA2649NL	Pri. Inductance	(1-2)	100.5μH ±10%	
	Lk. Inductance	(1-2) with (4, 5, 6, 7, 8, 9, 10) shorted	0.88μH MAX	
	DCR	(1-2)	110mΩ MAX	
		(6, 7-9, 10)	40mΩ MAX	
		(4-5)	561mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vdc	
KI Factor	22.3			
PA2669NL	Pri. Inductance	(1,2)	17.3μH ±10%	
	Lk. Inductance	(1,2) with (6,7-9,10) shorted	0.28μH MAX	
	DCR	(1-2)	42mΩ MAX	
		(5-4)	99mΩ MAX	
		(6,7-9,10)	12.6mΩ MAX	
	Hi-Pot	(1,2) to (6,7,9,10)	1500Vrms	
(1,2) to (4,5)		600Vrms		
KI Factor	739.3	Windings to core	600Vrms	
PA2725NL	Pri. Inductance	(5-4)	139.5μH ±10%	<p>* Please note this part has an alternate pin-out. Please see note 5 and refer to alternate mechanical drawing.</p>
	Lk. Inductance	(5-4) with (7,8,9,10) shorted	1.1μH MAX	
	DCR	(5,4)	265mΩ MAX	
		(7-9)	23mΩ MAX	
		(8-10)	40mΩ MAX	
	Hi-Pot	(2-1)	110mΩ MAX	
(1,2,3,4) to (7,8,9,10)		1500Vrms		
KI Factor	2384.6			
PA2945NL	Pri. Inductance	(1-2)	100μH ±10%	
	Lk. Inductance	(1-2) with (4, 5, 6, 7, 8, 9, 10) shorted	0.3μH MAX	
	DCR	(1-2)	27.5mΩ MAX	
		(6, 7-9, 10)	52mΩ MAX	
		(4-5)	295mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
KI Factor	42.7			
PA3150NL	Pri. Inductance	(1-3)	100.5μH ±10%	
	Lk. Inductance	(1-3) with (4,5,6,7,9,10) shorted	0.5μH MAX	
	DCR	(1-3)	74.5mΩ MAX	
		(4-5)	550mΩ MAX	
		(6,9)	15.5mΩ MAX	
		(7,10)	16.5mΩ MAX	
Hi-Pot	(1,3,4,5) to (7, 6,9,10)	1500Vrms		
KI Factor	28.5			

Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C¹

PA3171NL	Pri. Inductance	(1-3)	100µH ±10%	<p> PRI 1 33-57 VDC 275kHz 4 6 3 1 5.3 V, 2 A 4 7 12 V, 20 mA 2.6 8 5 9 1 10.6 V, 20 mA </p> <p>* Please note this part has an alternate pin-out. Please see note 5 and refer to alternate mechanical drawing.</p>
	Lk. Inductance	(1-3) with (6, 7, 8, 9) shorted	1µH MAX	
	DCR	(1-3)	190mΩ MAX	
		(6-7)	28mΩ MAX	
		(8-9)	500mΩ MAX	
	Hi-Pot	(1,2,3,4) TO (6,7,8,9)	500Vrms	
KI Factor	1831.5			
FLYBACK TRANSFORMER				
PA3242NL	Pri. Inductance	(1-10)	220µH ±10%	<p> 10 5 9.9V@70mA 33-57V 1.0 6 2 100kHz 6.0 4 6.6V@3mA 1 1.0 7 1.0 2,3 3.3V@900mA 1.0 8,9 0V </p>
	Lk. Inductance	(1-10) with (2, 3, 4, 5, 6, 7, 8, 9) shorted	1.6µH MAX	
	DCR	(1-10)	230mΩ MAX	
		(2-9)=(3-8)	17.5mΩ MAX	
		(4-7)	50mΩ MAX	
		(5-6)	50mΩ MAX	
Hi-Pot	Pri-Sec	1000Vdc		
KI Factor	3760.7			
FLYBACK TRANSFORMER				
PA3274NL	Pri. Inductance	(1-2)	100µH ±10%	<p> PRI 1 33-57 VDC 250 kHz 100 uH 2 5.8 6 SEC 5 V 3.5 A 4 2.2 7 SEC 5 V 3.5 A AUX 12 V 10 mA 5 10 </p>
	Lk. Inductance	(1-2) with (4,5,6,7,9,10) shorted	0.5µH MAX	
	DCR	(1-2)	77.75mΩ MAX	
		(6-9)	11.9mΩ MAX	
		(7-10)	12.95mΩ MAX	
		(4-5)	256mΩ MAX	
Hi-Pot	(1,2,4,5) to (6,7,9,10)	1500Vrms		
KI Factor	17.7			
FORWARD TRANSFORMER				
PA3342NL	Pri. Inductance	(2-3)	90µH ±10%	<p> 2 9 33-57V 8.0 1.0 5V, 10mA 400kHz 3 10 10V, 0.02A 5 7 2.0 2.5 12V, 2A 4 8 </p>
	Lk. Inductance	(2-3) with (10, 9, 8, 7) shorted	2µH MAX	
	DCR	(2-3)	300mΩ MAX	
		(5-4)	120mΩ MAX	
		(9-10)	40mΩ MAX	
		(7-8)	27mΩ MAX	
Hi-Pot	Pri-Sec	1500Vdc		
KI Factor	1442.3			
FLYBACK TRANSFORMER				
PA3371NL	Pri. Inductance	(4-5)	31µH ±10%	<p> 9-57V 4 4.0 6 7 100kHz 5 1.0 5.0V, 3.0A 3 8 9 10V, 0.02A 2.0 1.2 6V, 0.02A 2 1 (on 6-9, short 7-8) </p>
	Lk. Inductance	(4-5) with (1, 2, 3, 6, 7, 8, 9, 10) shorted	0.5µH MAX	
	DCR	(4-5)	100mΩ MAX	
		(6-8)=(7-9)	13mΩ MAX	
		(1-10)	83.5mΩ MAX	
		(3-2)	155mΩ MAX	
Hi-Pot	Pri-Sec	1500Vrms		
KI Factor	794.9			
FORWARD TRANSFORMER				

High Frequency Wire Wound Transformers

EP13 Platforms - SMT

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

Part Number	Parameter	Winding Configuration	Value	Diagram
PA3519NL	Pri. Inductance	(1-3)	73.5μH ±10%	
		(1-3)	57.5μH min @1.7ADC	
	Lk. Inductance	(1-3) with (4,5,6,7,8,9) shorted	0.6μH MAX	
	DCR	(1-3)	113mΩ MAX	
		(6-7)	15mΩ MAX	
		(8-9)	31mΩ MAX	
		(5-4)	180mΩ MAX	
	Hi-Pot	(1,3,4,5) to (6,7,8,9)	1500Vrms	
KI Factor		1570.5		
PA3642NL	Pri. Inductance	(1-3)	37.9μH ±10%	
		(1-3)	30μH Min @ 2.5ADC	
	Lk. Inductance	(1-3) with (4,5,6,7,8,9) shorted	0.4 μH MAX	
	DCR	(1-3)	101mΩ MAX	
		(6-7)	14mΩ MAX	
		(8-9)	26mΩ MAX	
		(5-4)	92mΩ MAX	
	Hi-Pot	(1,3,4,5) to (6,7,8,9)	1500Vrms	
KI Factor		1079.8		
PA3715NL	Pri. Inductance	(5-3)	37μH ±10%	
		(5-3)	29μH Min @ 2.8ADC	
	Lk. Inductance	(5-3) with (1,2,6,7,9,10) shorted	0.75μH MAX	
	DCR	(5,3)	89mΩ MAX	
		(5-3)	84mΩ MAX	
		(2-1)	3.87mΩ MAX	
	Hi-Pot	(1,2,3,5) to (6,7,9,10)	1500Vrms	
KI Factor		948.7		
PA4065NL	Pri. Inductance	(1-2)	100.5μH ±10%	
	Lk. Inductance	(1-2) with (4, 5, 6, 7, 8, 9, 10) shorted	0.88μH MAX	
	DCR	(1-2)	75mΩ MAX	
		(6, 7-9, 10)	40mΩ MAX	
		(4-5)	410mΩ MAX	
	Hi-Pot	Pri-Sec	1500Vrms	
	KI Factor		27.0	

High Frequency Wire Wound Transformers

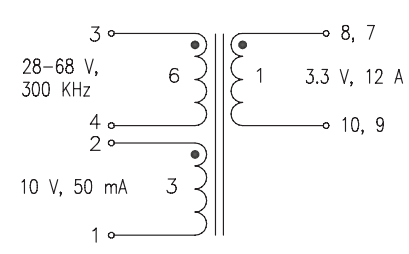
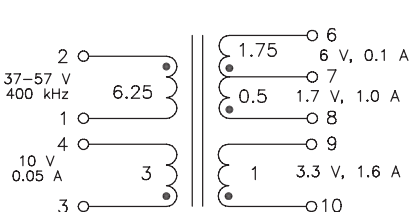
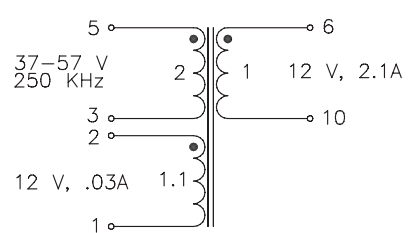
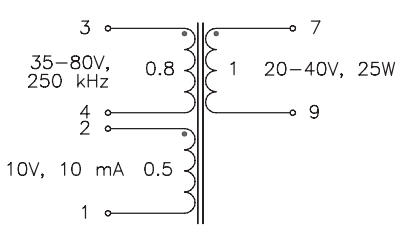
EP13 Platforms - SMT



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

Model	Parameter	Winding Configuration	Value	Notes
PA4836NL	Pri. Inductance	(2-3)	75µH ±10%	
		(2-3)	52.5µH Min @ 2.3 ADC	
	Lk. Inductance	(2-3) with (7,8,9,10) shorted	2µH MAX	
	DCR	(2-3)	300mΩ MAX	
		(5-4)	120mΩ MAX	
		(9-10)	68mΩ MAX	
		(7-8)	352mΩ MAX	
	Hi-Pot	(2,3,4,5) to (7,8,9,10)	1650Vrms	
KI Factor		1201.9		
<p>FLYBACK TRANSFORMER</p>				
PG0738NL	Pri. Inductance	(4-3)	162µH ±10%	
	Lk. Inductance	(4-3) with (7,8,9,10) shorted	2.2 µH MAX	
	DCR	(4-3)	600mΩ MAX	
		(1-2)	240mΩ MAX	
		(9-10)	14mΩ MAX	
		(7-8)	240mΩ MAX	
Hi-Pot	(1,2,3,4) to (7,8,9,10)	1500Vrms		
KI Factor		2076.9		
<p>FLYBACK TRANSFORMER</p>				
PG1318NL	Pri. Inductance	(1-2)	100.5µH ±10%	
	Lk. Inductance	(1-2) with (4,5,6,7,9,10) shorted	0.875µH MAX	
	DCR	(1-2)	110mΩ MAX	
		(6,7-9,10)	40mΩ MAX	
		(4-5)	680mΩ MAX	
	Hi-Pot	(1,2,4,5) to (6,7,9,10)	1500Vrms	
	KI Factor		22.3	
<p>FORWARD TRANSFORMER</p>				
PG1387NL	Pri. Inductance	(2-1)	123µH ±12%	
	Lk. Inductance	(2-1) with (3,4,6,7,8,9,10) shorted	2µH MAX	
	Lk. Inductance	(2-1) with (7,8) shorted	5µH MAX	
	Lk. Inductance	(2-1) with (7,8,9,10) shorted	2.1µH MAX	
	DCR	(2-1)	428mΩ MAX	
		(4-3)	590mΩ MAX	
		(6-7)	280mΩ MAX	
		(7-8)	35mΩ MAX	
		(9-10)	25mΩ MAX	
Hi-Pot	(1,2,3,4) to (6,7,8,9,10)	1500Vrms		
KI Factor		3504.3		
<p>FLYBACK TRANSFORMER</p>				

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

Model	Parameter	Configuration	Value	Diagram
PG1576NL	Pri. Inductance	(3-4)	230.4μH ±10%	
	Lk. Inductance	(3-4) with (10,9,8,7) shorted	1.5 μH MAX	
	DCR	(3-4)	36mΩ MAX	
		(7,8-9,10)	3.5mΩ MAX	
		(2,1)	58mΩ MAX	
	Hi-Pot	(1,2,3,4) to (7,8,9,10)	1500Vrms	
		(1,2) to (3,4)	500Vrms	
windings to core		600Vrms		
K1 Factor		42.7	FORWARD TRANSFORMER	
PG1593NL	Pri. Inductance	(2-1)	144μH ±10%	
	Lk. Inductance	(2-1) with (3,4,6,7,8,9,10) shorted	0.9μH MAX	
		(3-4) with (1,2,6,7,8,9,10) shorted	0.3μH MAX	
		(6-7) with (1,2,3,4,6,7,9,10) shorted	0.2μH MAX	
		(7-8) with (1,2,3,4,6,7,9,10) shorted	0.1μH MAX	
		(9-10) with (1,2,3,4,6,7,9,10) shorted	0.1μH MAX	
	DCR	(2-1)	1202mΩ MAX	
Hi-Pot	(1,3-6,7,9,10)	1500Vrms		
K1 Factor		2953.8	FLYBACK TRANSFORMER	
PH2467NL	Pri. Inductance	(5-3)	37μH ±10%	
	Lk. Inductance	(5-3) with (6,10) shorted	0.65μH MAX	
	DCR	(5-3)	89mΩ MAX	
		(2-1)	96mΩ MAX	
		(6-10)	28mΩ MAX	
	Hi-Pot	(5,3,2,1) to (6,10)	1650Vrms	
K1 Factor		948.7	FLYBACK TRANSFORMER	
PH9006NL	Pri. Inductance	(3-4)	19μH ±15%	
	Lk. Inductance	(3-4) with (1,2,7,9) shorted	0.42 μH MAX	
	DCR	(3-4)	36mΩ MAX	
		(7,9)	3.5mΩ MAX	
		(2-1)	58mΩ MAX	
	Hi-Pot	(1,2,3,4) to (7,8,9,10)	1500Vrms	
K1 Factor		609.0	FLYBACK TRANSFORMER	

High Frequency Wire Wound Transformers

EP13 Platforms - SMT



Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C ¹				
PH9058NL	Pri. Inductance	(5-4)	152μH ±10%	<p>FLYBACK TRANSFORMER</p>
	Lk. Inductance	(5-4) with (1,2,7,8,9,10) shorted	4μH MAX	
	DCR	(5-4)	280mΩ MAX	
		(7,8-9,10)	50mΩ MAX	
		(2-1)	67mΩ MAX	
	Hi-Pot	(1,2,4,5) to (7,8,9,10)	1650Vrms	
	KI Factor	2435.9		
PH9098NL	Pri. Inductance	(1-2)	100.5μH ±15%	<p>FORWARD TRANSFORMER</p>
	Lk. Inductance	(1-2) with (4,5,6,7,9,10) shorted	1.5μH MAX	
	DCR	(1-2)	115mΩ MAX	
		(4-5)	980mΩ MAX	
		(6,10)	60mΩ MAX	
		(7,9)	480 mΩ MAX	
	Hi-Pot	Pri-Sec	1650Vrms	
KI Factor	22.3			

NOTES:

- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
- 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.
- 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
 $B_{pk} \text{ (Gauss)} = K1_Factor * I_{pk} \text{ (A)}$
- In high volt-sec applications, it is important to calculate the core loss of the transformer.
Approximate transformer core loss can be calculated as:
 $CoreLoss \text{ (W)} = 2.5E-14 * (Freq_kHz)^{1.65} * (\Delta B_Gauss)^{2.63}$
where ΔB can be calculated as:

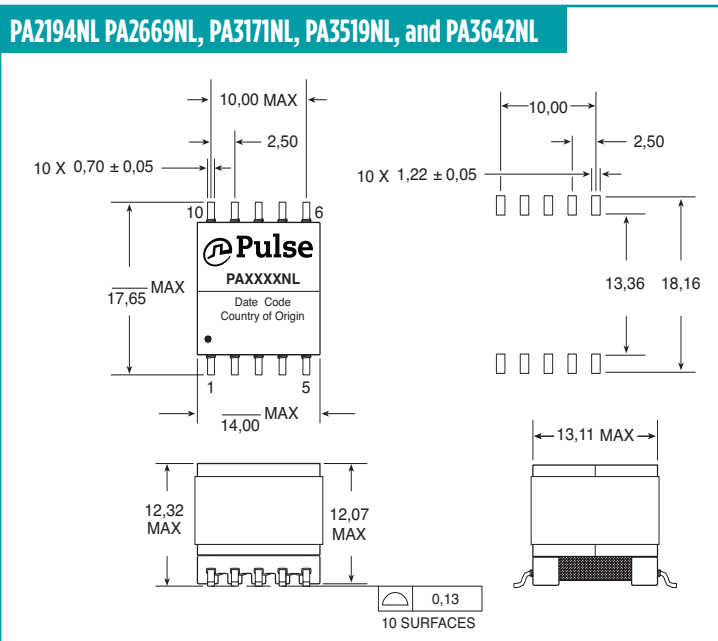
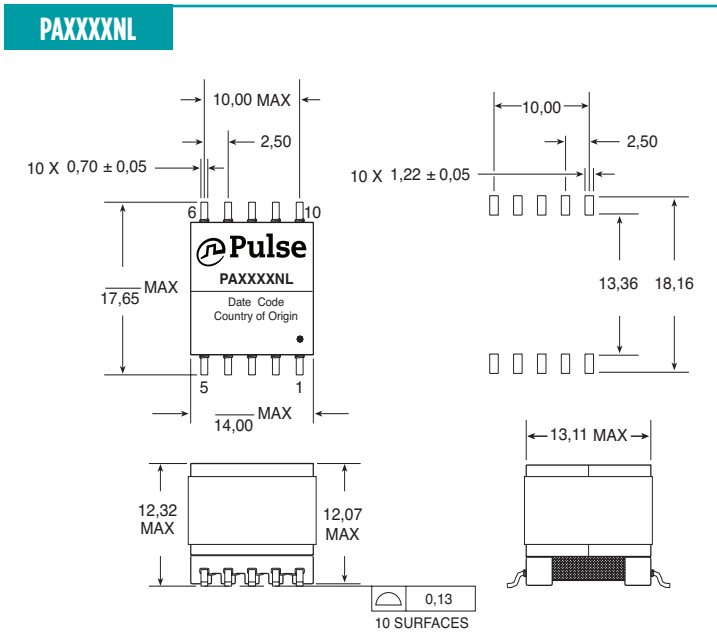
For Flyback Topology: $\Delta B = K1_Factor * \Delta I(A)$

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

- The standard pin-numbering for this package is indicated in the below mechanical drawing showing pin 1 on the lower right corner and the numbers proceeding clock wise to pin 10 on the upper right corner. However, for those parts that are indicated as having an alternate pinout, pin 1 is in the lower left corner and the numbers proceed counter-clockwise to pin 10 in the upper left corner. Refer to the alternate mechanical drawing for further details.
- 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).
- 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

Alternate Mechanical



For More Information:

Americas - prodinfo_power_americas@pulseelectronics.com | Europe - prodinfo_power_emea@pulseelectronics.com | Asia - prodinfo_power_asia@pulseelectronics.com

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