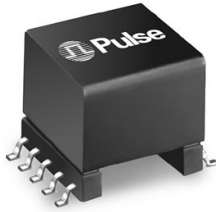


# High Frequency Wire Wound Transformers

EP13Plus Platforms - SMT



- Industry standard footprint, 30% more power handling
- Power Range:** Up to 70W
- Height:** 14.0mm Max
- Footprint:** 17.7mm x 14.5mm Max
- Topology:** Forward and Flyback

Pulse PN	Electrical Specifications @25C – Operating Temperature -40C to 130C <sup>1</sup>			Schematic	
PA3855.001NL	Pri. Inductance	(1-3)	54uH +/- 10%	<p>Flyback Transformer</p>	
	Lk. Inductance	(1-3) w/ (10,9,6,7,4,5) shorted	0.67uH Max		
	DCR	(1-3)	62		mΩ Max
		(9-6)	6.5		
		(10-7)	6.5		
		(4-5)	120		
Hi-Pot	Pri-Sec	2250 Vdc			
K1 Factor	1125.0				
PA3855.002NL	Pri. Inductance	(1-3)	48uH +/- 10%	<p>Flyback Transformer</p>	
	Lk. Inductance	(1-3) w/ (10,9,6,7,4,5) shorted	0.67uH Max		
	DCR	(1-3)	62		mΩ Max
		(9-6)	10		
		(10-7)	10		
		(4-5)	120		
Hi-Pot	Pri-Sec	2250 Vdc			
K1 Factor	1000.0				
PA3855.003NL	Pri. Inductance	(1-3)	41uH +/- 10%	<p>Flyback Transformer</p>	
	Lk. Inductance	(1-3) w/ (10,9,6,7,4,5) shorted	0.67uH Max		
	DCR	(1-3)	62		mΩ Max
		(9-6)	20		
		(10-7)	23		
		(4-5)	120		
Hi-Pot	Pri-Sec	2250 Vdc			
K1 Factor	854.2				
PA3855.004NL	Pri. Inductance	(1-3)	21uH +/- 10%	<p>Flyback Transformer</p>	
	Lk. Inductance	(1-3) w/ (10,9,6,7,4,5) shorted	0.3uH Max		
	DCR	(1-3)	31		mΩ Max
		(9-6)	10		
		(10-7)	10		
		(4-5)	180		
Hi-Pot	Pri-Sec	2250 Vdc			
K1 Factor	538.5				

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Pulse PN	Electrical Specifications @25C – Operating Temperature -40C to 130C <sup>1</sup>			Schematic	
PA3855.005NL	Pri. Inductance	(1-3)	21uH +/- 10%	<p>Flyback Transformer</p>	
	Lk. Inductance	(1-3) w/ (10,9,6,7,4,5) shorted	0.3uH Max		
	DCR	(1-3)	31		mΩ Max
		(9-6)	14		
		(10-7)	14		
		(4-5)	180		
Hi-Pot	Pri-Sec	2250	Vdc		
K1 Factor	583.3				
PA3855.006NL	Pri. Inductance	(1-3)	21uH +/- 10%	<p>Flyback Transformer</p>	
	Lk. Inductance	(1-3) w/ (10,9,6,7,4,5) shorted	0.3uH Max		
	DCR	(1-3)	31		mΩ Max
		(9-6)	58		
		(10-7)	58		
		(4-5)	180		
Hi-Pot	Pri-Sec	2250	Vdc		
K1 Factor	583.3				
PA3856.001NL	Pri. Inductance	(1-3)	100 uH +/- 15%	<p>Forward Transformer</p>	
	Lk. Inductance	(1-3) w/ (10,9,6,7,4,5) shorted	0.4uH Max		
	DCR	(1-3)	29.4		mΩ Max
		(9-6)	6.5		
		(10-7)	6.5		
		(4-5)	120		
Hi-Pot	Pri-Sec	2250	Vdc		
K1 Factor	27.8				
PA3856.002NL	Pri. Inductance	(1-3)	100uH +/- 15%	<p>Forward Transformer</p>	
	Lk. Inductance	(1-3) w/ (10,9,6,7,4,5) shorted	0.4uH Max		
	DCR	(1-3)	29.4		mΩ Max
		(9-6)	10		
		(10-7)	10		
		(4-5)	120		
Hi-Pot	Pri-Sec	2250	Vdc		
K1 Factor	27.8				
PA3856.003NL	Pri. Inductance	(1-3)	100uH +/- 15%	<p>Forward Transformer</p>	
	Lk. Inductance	(1-3) w/ (10,9,6,7,4,5) shorted	0.4uH Max		
	DCR	(1-3)	29.4		mΩ Max
		(9-6)	31.6		
		(10-7)	36		
		(4-5)	120		
Hi-Pot	Pri-Sec	2250	Vdc		
K1 Factor	27.8				

# High Frequency Wire Wound Transformers

EP13Plus Platforms - SMT



Pulse PN	Electrical Specifications @25C – Operating Temperature -40C to 130C <sup>1</sup>			Schematic	
PA3856.004NL	Pri. Inductance	(1-3)	128uH +/- 25%	<p>Forward Transformer</p>	
	Lk. Inductance	(1-3) w/ (10,9,6,7,4,5) shorted	0.15uH Max		
	DCR	(1-3)	17.6		mΩ Max
		(9-6)	14.4		
		(10-7)	17		
		(4-5)	410		
	Hi-Pot	Pri-Sec	2250		Vdc
K1 Factor	41.7				
PA3856.005NL	Pri. Inductance	(1-3)	128uH +/- 15%	<p>Forward Transformer</p>	
	Lk. Inductance	(1-3) w/ (10,9,6,7,4,5) shorted	0.15uH Max		
	DCR	(1-3)	17.6		mΩ Max
		(9-6)	31.6		
		(10-7)	36		
		(4-5)	410		
	Hi-Pot	Pri-Sec	2250		Vdc
K1 Factor	41.7				
PA3856.006NL	Pri. Inductance	(1-3)	128uH +/- 15%	<p>Forward Transformer</p>	
	Lk. Inductance	(1-3) w/ (10,9,6,7,4,5) shorted	0.15uH Max		
	DCR	(1-3)	17.6		mΩ Max
		(9-6)	105.6		
		(10-7)	122		
		(4-5)	426		
	Hi-Pot	Pri-Sec	2250		Vdc
K1 Factor	41.7				

- Notes:**
- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
  - 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:  
 $Bpk \text{ (Gauss)} = K1\_Factor * Ipk(A)$
  - In high volt-μsec applications, it is important to calculate the core loss of the transformer. Approximate transformer core loss can be calculated as:  
 $CoreLoss \text{ (W)} = 3.84E-14 * (Freq\_kHz)1.63 * (DB\_Gauss)2.63$   
 where DB can be calculated as:  
 For Flyback Topology:  $DB = K1\_Factor * D(A)$   
 For Forward Topology:  $DB = K1\_Factor * Volt\text{-}\mu\text{sec}$
  - 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 clockwise to pin 10 on the upper right corner.
  - Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PA3855.001NL becomes PA3855.001NLT). 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) and depth (Ko=13.2mm).

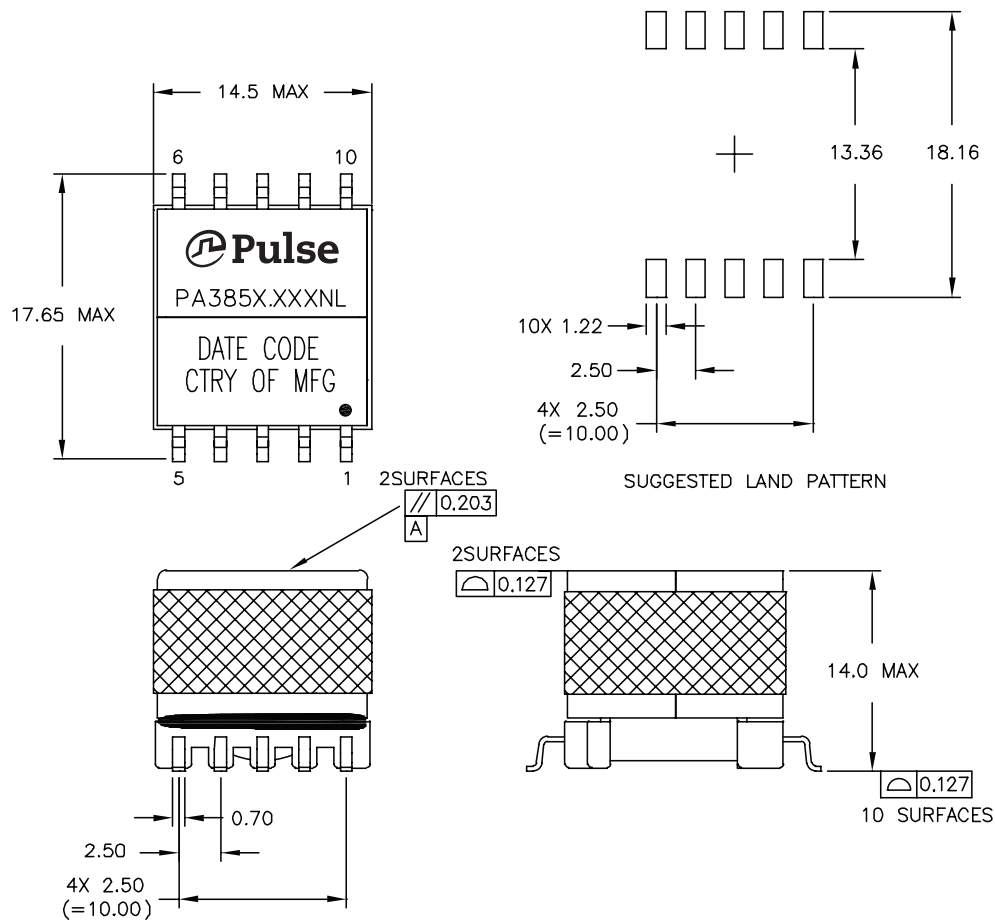
# High Frequency Wire Wound Transformers

EP13Plus Platforms - SMT



## Mechanical

### PA3855.XXNL/ PA3856.XXNL



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