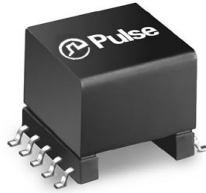


High Frequency Wire Wound Transformers

EP13Plus Platforms - SMT PA3855/56.XXXNLT



- Ⓢ 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

Part Number	Electrical Specifications @25°C – Operating Temperature -40°C to 130°C ¹			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				

High Frequency Wire Wound Transformers

EP13Plus Platforms - SMT PA3855/56.XXXNL



Part Number	Electrical Specifications @25°C – Operating Temperature -40°C to 130°C ¹			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				
PA3855.008NL	Pri. Inductance	(6-9)	2.5uH +/- 10%	<p>Flyback Transformer</p>	
	Lk. Inductance	(6-9) w/ (1,2,3,5) shorted	0.2uH Max		
	DCR	(1-2)	80		mΩ Max
		(3-5)	100		
		(6,7-9,10)	9		
	Hi-Pot	Pri-Sec	2250		Vdc
K1 Factor	208.3				
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				
PA3856.002N	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				

High Frequency Wire Wound Transformers

EP13Plus Platforms - SMT PA3855/56.XXXNL



Part Number	Electrical Specifications @25°C – Operating Temperature -40°C to 130°C ¹			Schematic	
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				
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				
PA3856.007NL	Pri. Inductance	(1-2)	200uH +/- 25%	<p>Forward Transformer</p>	
	Lk. Inductance	(1-2) w/ (7,8,9,10) shorted	0.36uH Max		
	DCR	(1-2)	60		mΩ Max
		(3-4)	75		
		(8-7)	90		
		(10-9)	90		
	Hi-Pot	Pri-Sec	2250		Vdc
K1 Factor	33.3				

High Frequency Wire Wound Transformers

EP13Plus Platforms - SMT PA3855/56.XXXNLT



Notes:

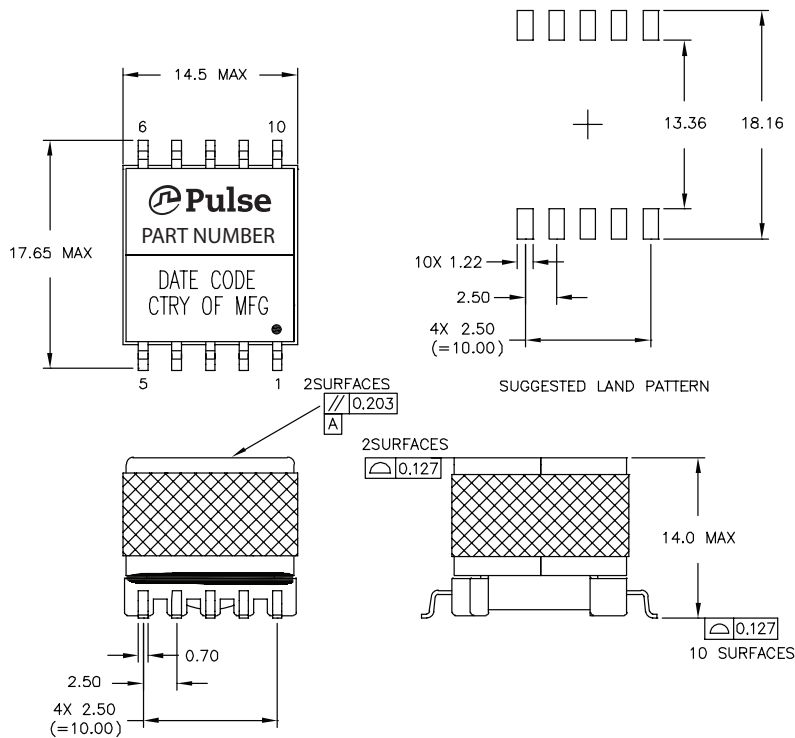
1. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
2. For flyback topology applications, it is necessary to ensure that the transformer will not saturate in the application. The peak flux density (Bpk) should remain below 2700Gauss. To calculate the peak flux density use the following formula:

$$B_{pk} \text{ (Gauss)} = K1_Factor * I_{pk}(A)$$
3. In high volt- μ sec applications, it is important to calculate the core loss of the transformer. Approximate transformer core loss can be calculated as:

$$CoreLoss \text{ (W)} = 3.84E-14 * (Freq_kHz)^{1.65} * (\Delta B_Gauss)^{2.65}$$
 where ΔB can be calculated as:
 For Flyback Topology: $\Delta B = K1_Factor * \Delta I(A)$
 For Forward Topology: $\Delta B = K1_Factor * Volt\text{-}\mu\text{sec}$
4. 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.
5. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PA2160.001NL becomes PA2160.001NLT). Pulse complies with industry standard tape and reel specification EIA481.

Mechanical

PM2160.XXXNL

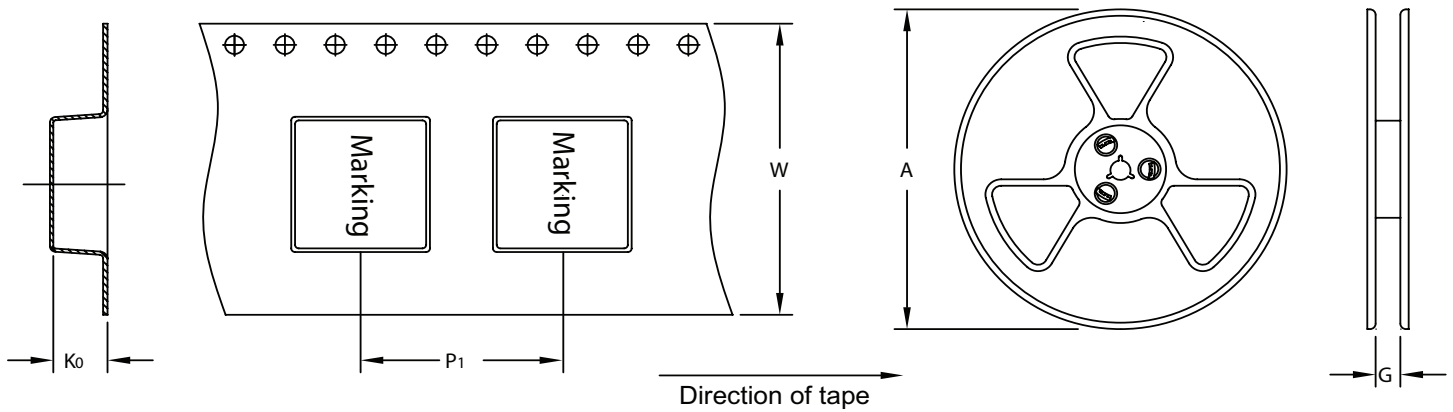


High Frequency Wire Wound Transformers

EP13Plus Platforms - SMT PA3855/56.XXXNLT



TAPE & REEL INFO



SURFACE MOUNTING TYPE, REEL/TAPE LIST						
PART NUMBER	REEL SIZE (mm)		TAPE SIZE (mm)			QTY
	A	G	P ₁	W	K ₀	PCS/REEL
PA3855/56.XXXNLT	Ø330	32.4	24	32	13.2	130

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 Rd
Zhongli City
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, 2020. Pulse Electronics, Inc. All rights reserved.