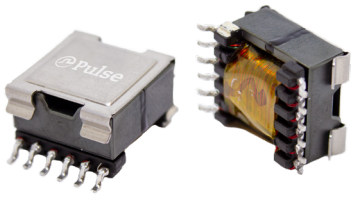
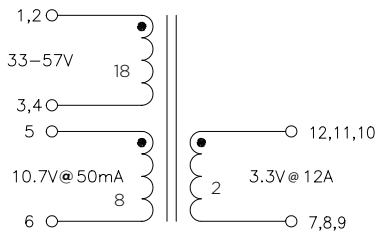
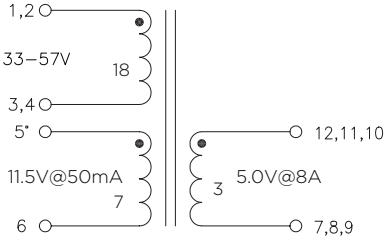
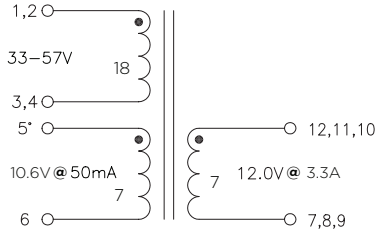
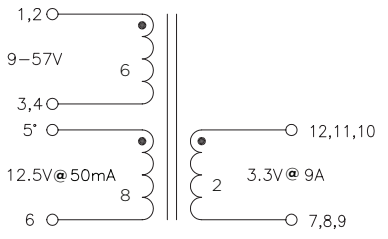
High Frequency Wire Wound Transformers

EFD15+ Flyback Transformer Platform – PAT6261.XXXNL Series

Pulse
a YAGEO company



- ***Height:*** *10.5mm Max*
- ***Footprint:*** *16.5mm x 22.23mm*
- ***Topology:*** *Flyback transformer*
- ***Functional Insulation***
- ***Isolation voltage:*** *1500Vrms (hi-pot)*
- ***Operating Frequency:*** *250kHz*

Pulse PN	Electrical Specifications @25°C – Operating Temperature -40°C to 125°C[1]			Schematic
PAT6261.001NL	Pri. Inductance	(1, 2 - 3, 4)	24 µH ± 10%	
	Lk. Inductance	(1, 2 - 3, 4) with (12, 11, 10 - 7, 8, 9) shorted	1.5 µH max	
	DCR	(1, 2 - 3, 4)	80 mΩ max	
		(5 -6)	420 mΩ max	
		(12, 11, 10 - 7, 8, 9)	5.3 mΩ max	
	Hi-Pot	Pri - Sec	1500 Vrms	
	K1 Factor	614		
PAT6261.002NL	Pri. Inductance	(1, 2 - 3, 4)	24 µH ± 10%	
	Lk. Inductance	(1, 2 - 3, 4) with (12, 11, 10 - 7, 8, 9) shorted	1.3 µH max	
	DCR	(1, 2 - 3, 4)	80 mΩ max	
		(5 -6)	370 mΩ max	
		(12, 11, 10 - 7, 8, 9)	6.3 mΩ max	
	Hi-Pot	Pri - Sec	1500 Vrms	
	K1 Factor	614		
PAT6261.003NL	Pri. Inductance	(1, 2 - 3, 4)	24 µH ± 10%	
	Lk. Inductance	(1, 2 - 3, 4) with (12, 11, 10 - 7, 8, 9) shorted	1 µH max	
	DCR	(1, 2 - 3, 4)	80 mΩ max	
		(5 -6)	370 mΩ max	
		(12, 11, 10 - 7, 8, 9)	30 mΩ max	
	Hi-Pot	Pri - Sec	1500 Vrms	
	K1 Factor	614		
PAT6261.004NL	Pri. Inductance	(1, 2 - 3, 4)	3 µH ± 10%	
	Lk. Inductance	(1, 2 - 3, 4) with (12, 11, 10 - 7, 8, 9) shorted	0.2 µH max	
	DCR	(1, 2 - 3, 4)	15 mΩ max	
		(5 -6)	420 mΩ max	
		(12, 11, 10 - 7, 8, 9)	5 mΩ max	
	Hi-Pot	Pri - Sec	1500 Vrms	
	K1 Factor	230		

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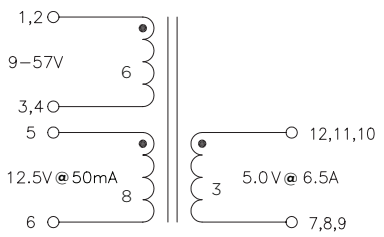
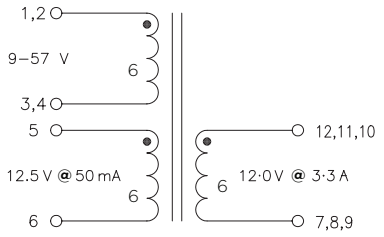
Pulse PN	Electrical Specifications @25°C – Operating Temperature -40°C to 125°C[1]			Schematic
PAT6261.005NL	Pri. Inductance	(1, 2 - 3, 4)	3 µH ± 10%	
	Lk. Inductance	(1, 2 - 3, 4) with (12, 11, 10 - 7, 8, 9) shorted	0.2 µH max	
	DCR	(1, 2 - 3, 4)	12.5 mΩ max	
		(5 -6)	450 mΩ max	
		(12, 11, 10 - 7, 8, 9)	5.5 mΩ max	
	Hi-Pot	Pri - Sec	1500 Vrms	
	K1 Factor	230		
PAT6261.006NL	Pri. Inductance	(1, 2 - 3, 4)	3 µH ± 10%	
	Lk. Inductance	(1, 2 - 3, 4) with (12, 11, 10 - 7, 8, 9) shorted	0.2 µH max	
	DCR	(1, 2 - 3, 4)	15 mΩ max	
		(5 -6)	375 mΩ max	
		(12, 11, 10 - 7, 8, 9)	25 mΩ max	
	Hi-Pot	Pri - Sec	1500 Vrms	
	K1 Factor	230		

Notes:

1. Storage Temperature: -40°C to 125°C
2. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
3. Pri/Lk. Inductance value is measured at 100Khz/0.1Vrms.
4. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. (PAT6261.XXXNL becomes PAT6261.XXXNLT). Pulse complies with industry standard tape and reel specification EIA481.
5. 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 (Gauss) = K1_Factor * Ipk(A)

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

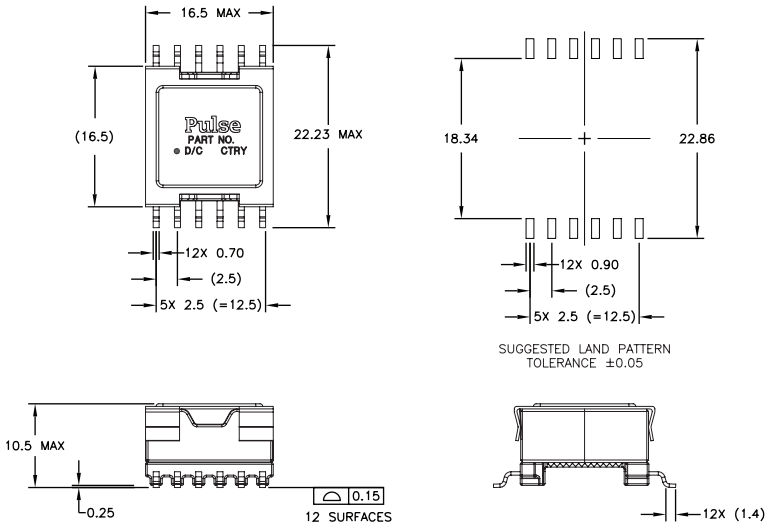
   CoreLoss (W) = $4.6E\text{-}14 * (Freq\_kHz)^{1.63} * (\Delta B\_Gauss)^{2.63}$

   where ΔB can be calculated as:

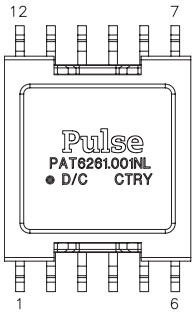
   For Flyback Topology: ΔB = K1_Factor * Δ(A)

PAT6261.XXXNL

Mechanical



Final Outline



For More Information:

Americas - prodinfo_power_americas@yageo.com | **Europe -** prodinfo_power_emea@yageo.com | **Asia -** prodinfo_power_asia@yageo.com