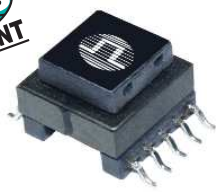
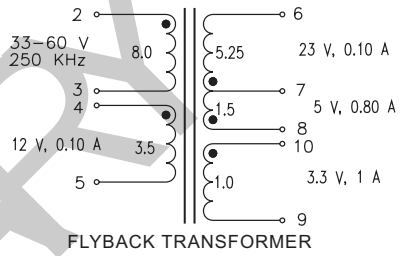
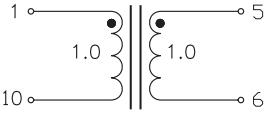
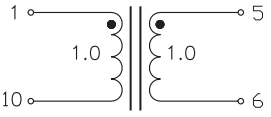
HIGH FREQUENCY WIRE WOUND TRANSFORMERS

EF12.6 Platforms - SMT



- **Power Range:** Up to 13W
- **Height:** 10.2mm Max
- **Footprint:** 19.9mm x 14.2mm Max
- **Topology:** Forward and Flyback

Electrical Specifications @ 25°C — Operating Temperature -40°C to 130°C [5]

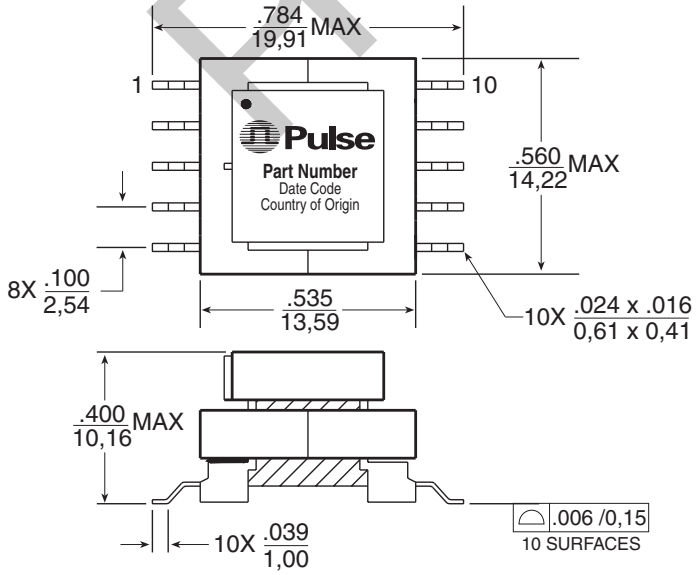
PA1853NL	Pri. Inductance	(2-3)	117.8µH ±10%	
	Lk. Inductance	(2-3) with (6,7,8,9,10) shorted	1.5µH MAX	
	DCR	(2-3)	330mΩ MAX	
		(4-5)	240mΩ MAX	
		(8-7)	35mΩ MAX	
		(7-6)	472mΩ MAX	
		(10-9)	17mΩ MAX	
	Hi-Pot	Pri-Sec	500Vrms	
	K1 Factor	2968.8		
PA2100NL	Pri. Inductance	(1-10)	338µH ±15%	
	Lk. Inductance	(1-10) with (5-6) shorted	1.7mH MAX	
	DCR	(2-3)	76mΩ MAX	
		(4-5)	92mΩ MAX	
	Hi-Pot	Pri-Sec	1000Vrms	
	K1 Factor	1.24		
PA2101NL	Pri. Inductance	(1-10)	338µH ±15%	
	Lk. Inductance	(1-10) with (5-6) shorted	480µH MAX	
	DCR	(2-3)	82mΩ MAX	
		(4-5)	82mΩ MAX	
	Hi-Pot	Pri-Sec	1000Vrms	
	K1 Factor	1.24		

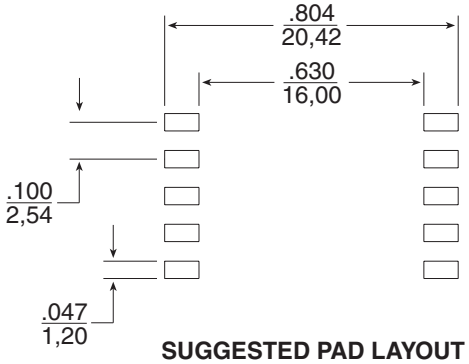
FLYBACK TRANSFORMER

ISOLATION TRANSFORMER

ISOLATION TRANSFORMER

Mechanical





SUGGESTED PAD LAYOUT

HIGH FREQUENCY WIRE WOUND TRANSFORMERS
EF12.6 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:

   Bpk (Gauss) = K1_Factor * Ipk(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:

   Power Loss (W) = $3.33E\text{-}14 * (Freq\_kHz)^{1.63} * (\Delta B\_Gauss)^{2.63}$

   where ΔB can be calculated as:

   For Flyback Topology: $\Delta B = K1\_Factor * \Delta(A)$

   For Forward Topology: $\Delta B = K1\_Factor * Volt\text{-}\mu sec$

5. Optional Tape & Reel packaging can be ordered by adding a "**T**" suffix to the part number (i.e. PA1853NL becomes PA1853NL**T**). 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=10.16mm).
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.

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