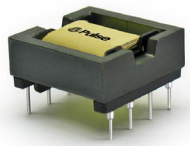
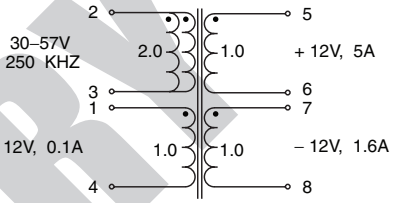
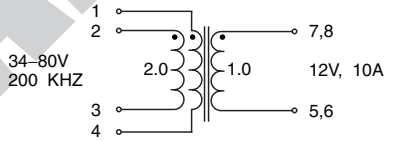
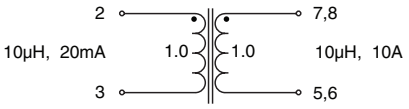
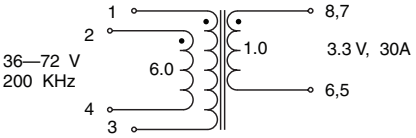
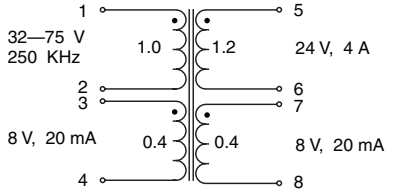
HIGH FREQUENCY WIRE WOUND TRANSFORMERS

EFD20 Platforms - THT



- **Power Range:** Up to120W
- **Height:** 13.0mm Max
- **Footprint:** 22.4mm x 21.0mm Max
- **Topology:** Forward and Flyback

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

PA1040NL	Pri. Inductance	(2-3)	222µH ±30%	
	Lk. Inductance	(2-3) with (5,6,7,8) shorted	2µH MAX	
	DCR	(2-3)	45mΩ MAX	
		(5-6)	15mΩ MAX	
		(7-8)	24mΩ MAX	
		(1-4)	80mΩ MAX	
	Hi-Pot	Pri-Sec	1500 Vdc	
	K1 Factor	23		
PA1425NL	Pri. Inductance	(1,2-3,4)	110µH ±30%	
	Lk. Inductance	(1,2-3,4) with (5,6,7,8) shorted	2µH MAX	
	DCR	(2-3)	82mΩ MAX	
		(1-4)	102mΩ MAX	
		(7,8-5,6)	7.5mΩ MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	23		
PA1426NL	Pri. Inductance	(7,8-5,6)	10.6µH ±7%	
	Lk. Inductance	(7,8-5,6) with (2-3) shorted	1.5µH MAX	
	DCR	(7,8-5,6)	13mΩ MAX	
		(2-3)	480mΩ MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	263		
PA1522NL	Pri. Inductance	(1,2-3,4)	160.2µH ±33%	
	Lk. Inductance	(1,2-3,4) with (5,6,7,8) shorted	1.5µH MAX	
	DCR	(1-3)	60mΩ MAX	
		(2-4)	72mΩ MAX	
		(8,7-6,5)	2.5mΩ MAX	
		Pri-Sec	1800 Vdc	
		26.9		
PA2583NL	Pri. Inductance	(1-2)	40µH ±10%	
	Lk. Inductance	(1-2) with (5,6,7,8) shorted	0.33µH MAX	
	DCR	(1-2)	18mΩ MAX	
		(3-4)	61mΩ MAX	
		(5-6)	24mΩ MAX	
		(7-8)	62mΩ MAX	
	Hi-Pot	Pri-Sec	1500 Vrms	
	K1 Factor	32.3		

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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:

   CoreLoss (W) = 1.32E-13 * $(Freq\_kHz)^{1.63}$ * $(\Delta B\_Gauss)^{2.63}$

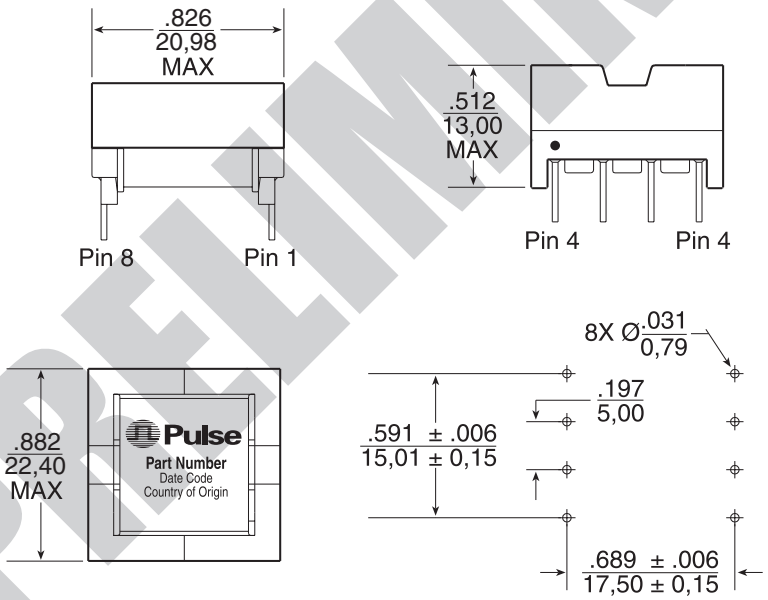
   where ΔB can be calculated as:

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

   For Forward Topology: ΔB = K1_Factor * Volt-µsec
5. 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

8-PIN THT



SUGGESTED PAD LAYOUT

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