## Switch Mode Transformers

EP7 Platform SMD





- Push Pull Converter Transformer
- Reinforced insulation for isolated power supply driver
- Compatible with MAXIM™ MAX253 to power RS-485/RS232 transceiver
- 8mm creepage, 4000V Hi-pot
- UL and TUV certification A
- UL class F insulation System compliant

	Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C <sup>4</sup>								
Part <sup>2,3</sup> Number	<b>Inductance</b> (1-3) (μΗ ±45%)	<b>DCR (1-3)</b> (Ω MAX)	<b>MAX (1-3)</b> 1 (V-µsec)	Turns Ratio	<b>Isolated Voltage</b> (Vrms)				
PH9185.011NL	750.0	0.50	66.0	1:1	4000.0				
PH9185.012NL	450.0	0.40	52.0	1:2					
PH9185.013NL	200.0	0.35	36.0	1:3					
PH9185.021NL	880.0	0.56	74.0	2:1					
PH9185.034NL	750.0	0.50	66.0	3:4					
PH9185.038NL	310.0	0.35	44.0	3:8					
PH9185.043NL	1260.0	0.70	89.0	4:3					
PH9185.083NL	560.0	0.45	59.0	8:3	1				

#### Notes:

1. The maximum volt-usec rating limits the peak flux density to 3600 gauss when used in bi-polar drive application with 200KHz. For unipolar drive applications or a bi-polar drive with 350kHz, a maximum volt-usec could be 60% of the listed value.

and reel specification EIA481.

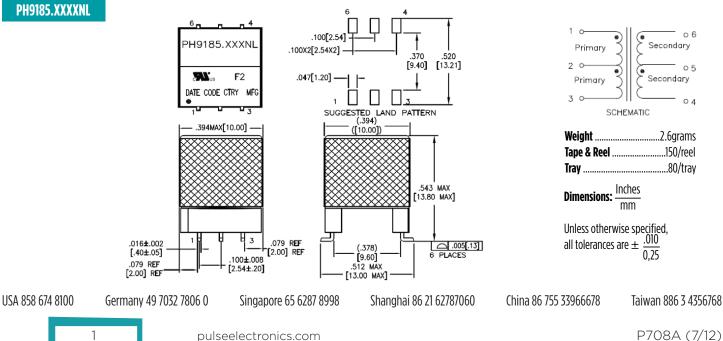
3. The "NL" suffix indicates an RoHS-compliant part number.

4. The temperature of the component (ambient plus the temperature rise) must be within the stated operating temperature range.

**Schematic** 

2. Optional Tape & Reel packing can be ordered by adding a "T" suffix to the part number (i.e. PH9185.012NL becomes PH9185.012NLT). Pulse complies to industry standard tape

#### **Mechanical**



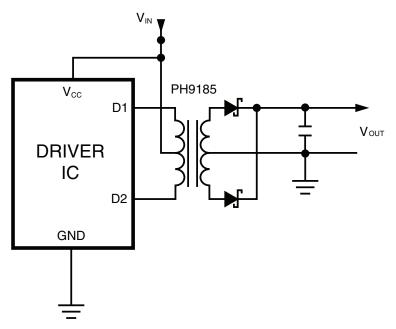
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### Application

PH9185NL is a series of high isolation power supply transformer drivers. Intended to operate in a fixed duty cycle Push Pull topology, it is a part of a low cost solution for delivering lower power (up to 3W) from a low voltage source. A typical implementation would be an isolated RS-485/RS-232 power supply driver circuit, the design is compatible with the MAXIM<sup>™</sup> MAX253 IC.

A schematic diagram for the Push Pull converter topology is given below.



For a fixed 50% duty cycle mode of operation, the output voltage is simply determined by the input voltage and turns ratio. So, with the available turns ratios, a variety of output voltages can be selected.

This transformer design has been certified by UL to comply with U L60050-1 2ND edition, and CAN/CSA C22.2 NO. 60950-1-07 2ND edition; and by TUV to comply with EN61558-1 and EN61558-2-16 with reinforced insulation for a working voltage up to 400V 8mm creepage and 4000Vrms isolation voltage is guaranteed to meet this requirement. The design also complies with the Pulse's class F insulation system.

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For More Information									
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