Isolation Power Transformers

Toroid Platform SMD





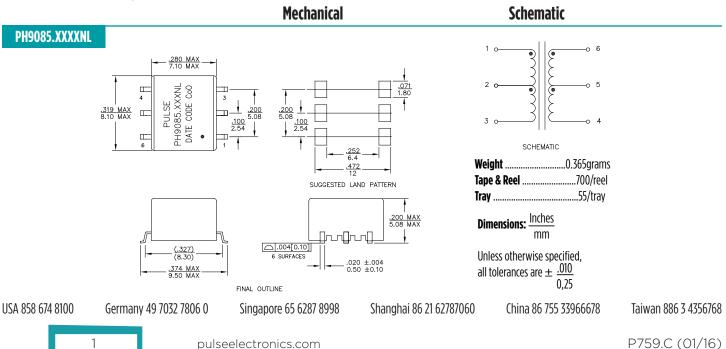
- Push Pull Converter Transformer
- Compatible with MAXIM[™] MAX253 to power RS-485/RS232 transceiver and other communication interfaces
- 2.5KVrms isolation
 - Compact and cost effective industrial design

Electrical Specifications @ 25°C – Operating Temperature –40°C to +125°C								
Part ^{2, 3, 4} Number	Inductance (1-3) (μH ±35%)	Leakage Inductance (1-3) with (4-6) shorted (µH MAX)	Capacitance (1, 2, 3) to (4, 5, 6) (pF MAX)	DCR (1-3) (Ω MAX)	dcr (4-6) (Ω Max)	МАХ (1-3)¹ (V-µsec Max)	Turns Ratio (1:3) (6:4)	Isolated Voltage (Vrms)
PH9085.011NL	1020	0.8	30	0.60	0.65	22	1CT : 1CT	
PH9085.012NL	1020	0.6	40	0.85	1.60	22	1CT : 2CT	
PH9085.021NL	1160	1.6	20	0.60	0.35	23.6	2CT : 1CT	
PH9085.034NL	1020	0.6	40	0.60	0.75	22	3CT : 4CT	2500
PH9085.035NL	1020	0.6	40	0.80	1.20	22	3CT : 5CT	
PH9085.038NL	1020	0.7	40	0.85	2.00	22	3CT : 8CT	
PH9085.043NL	1160	0.8	30	0.60	0.50	23.6	4CT : 3CT	
PH9085.083NL	1160	2.0	15	0.60	0.30	23.6	8CT : 3CT	
PH9085.089NL	1160	0.6	40	0.60	0.70	23.6	8CT :9CT	

Notes:

 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. For Push-Pull topology, where the voltage is applied across half the primary winding turns, the maximum volts-use needs to be derated by 50%. 2. Optional Tape & Reel packing can be ordered by adding a **"T"** suffix to the part number (i.e. PH9085.012NL becomes PH9085.012NLT). Pulse complies to industry standard tape and reel specification EIA481.

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



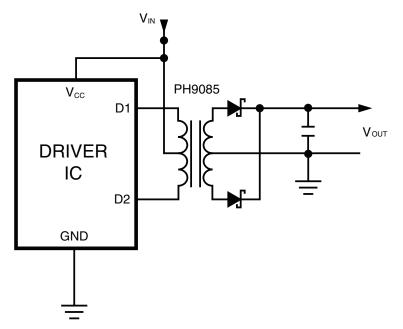
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Application

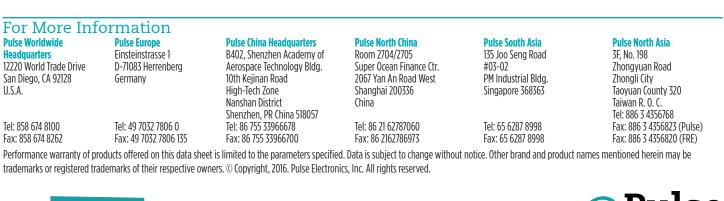
PH9085NL is a series of high isolation power supply transformer drivers. Intended to operate in a fixed duty cycle Push Pull topology, it is a part of a low cost solution for delivering lower power (up to 2W) from a low voltage source. A typical implementation would be an isolated RS-485/RS-232 power supply driver circuit, the design is compatible with the MAXIM[™] 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.

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P759.C (01/16)

