

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)	MAX (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	2500
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	
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:

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. For Push-Pull topology, where the voltage is applied across half the primary winding turns, the maximum volts-usec needs to be derated by 50%.

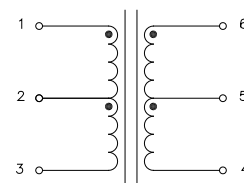
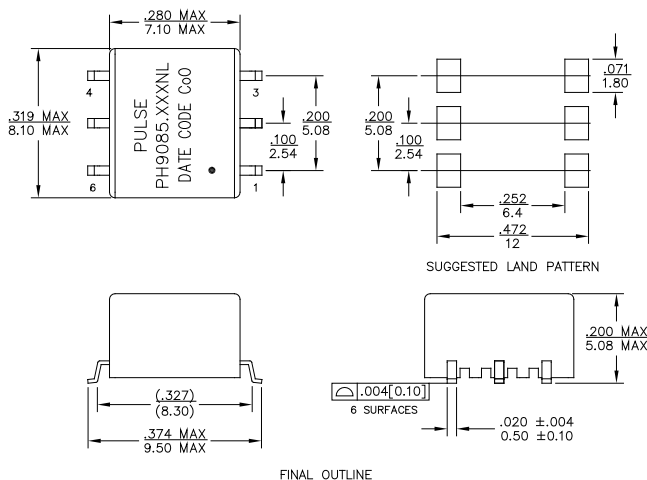
2. Optional Tape & Reel packing can be ordered by adding a "T" suffix to the part number (i.e. PH9085.012NL becomes PH9085.012NLT). Pulse complies to industry standard tape and reel specification EIA481.

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

Mechanical

Schematic

PH9085.XXXNL



SCHEMATIC

Weight0.365grams
 Tape & Reel700/reel
 Tray55/tray

Dimensions: Inches
 mm

Unless otherwise specified,
 all tolerances are ± .010
 0,25

USA 858 674 8100

Germany 49 7032 7806 0

Singapore 65 6287 8998

Shanghai 86 21 62787060

China 86 755 33966678

Taiwan 886 3 4356768

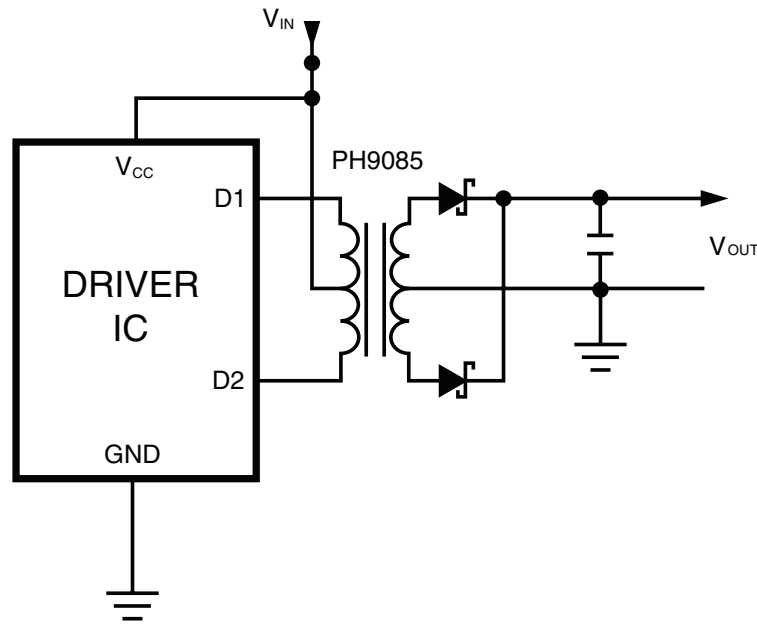
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Application

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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