

High Isolation Power Transformers

Toroid Platform SMD



- Push Pull Converter Transformer
- 4KVrms Isolation
- Compact and cost effective industrial design
- Sidecar Package
- Patented:** US Pat 9,646,755

Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C

Part Number	Inductance (1-3) ($\mu\text{H} \pm 35\%$)	Leakage Inductance (1-3) with (4-6) shorted ($\mu\text{H} \text{ MAX}$)	Capacitance (1, 2, 3) to (4, 5, 6) (pF MAX)	DCR (1-3) ($\Omega \text{ MAX}$)	DCR (4-6) ($\Omega \text{ MAX}$)	MAX (1-3) ¹ (V- $\mu\text{sec} \text{ Max}$)	Turns Ratio (1:3) (6:4)	Isolated Voltage (Vrms)
PH9384.011NL	538	0.8	20	0.30	0.40	24	1CT : 1CT	4000
PH9384.012NL	538	0.6	30	0.33	0.65	24	1CT : 2CT	
PH9384.021NL	538	1.6	15	0.30	0.25	24	2CT : 1CT	
PH9384.034NL	680	0.6	30	0.35	0.52	27	3CT : 4CT	
PH9384.035NL	680	0.7	30	0.35	0.65	27	3CT : 5CT	
PH9384.043NL	538	0.8	20	0.30	0.30	24	4CT : 3CT	
PH9384.083NL	538	2.0	15	0.30	0.22	24	8CT : 3CT	
PH9384.089NL	538	0.6	30	0.30	0.42	24	8CT : 9CT	

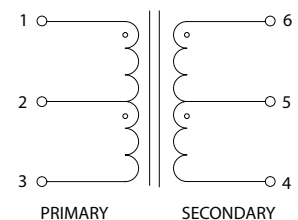
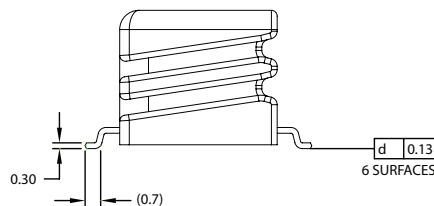
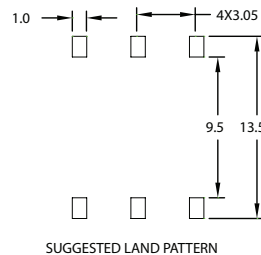
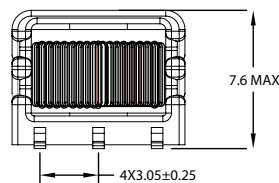
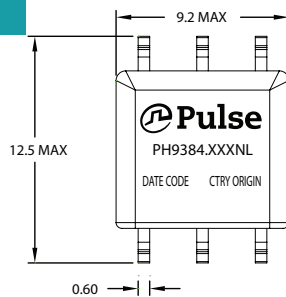
Notes:

- 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-usec needs to be derated by 50%.
- Optional Tape & Reel packing can be ordered by adding a "T" suffix to the part number (i.e. PH9384.012NL becomes PH9384.012NLT). Pulse complies to industry standard tape and reel specification EIA481.
- The "NL" suffix indicates an RoHS-compliant part number.

Mechanical

Schematic

PH9384.XXXNL



Weight0.85grams
Tape & Reel400/reel
Tray55/tray

Dimensions: $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

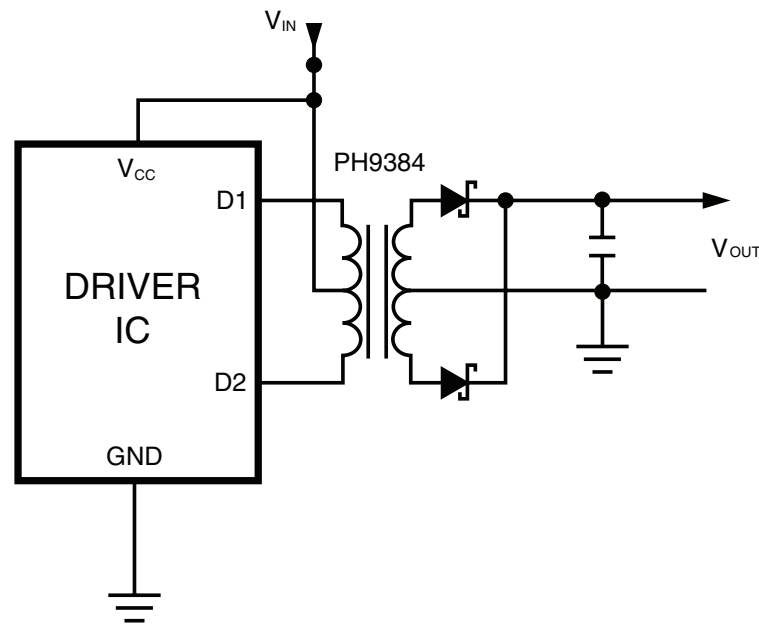
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Application

PH9384NL 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™ 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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