Switch Mode Transformers

EP7 Platform SMD

Pulse Electronics



- *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*
- *UL class F insulation System compliant*

Electrical Specifications @ 25°C – Operating Temperature -40°C to +125°C[4]

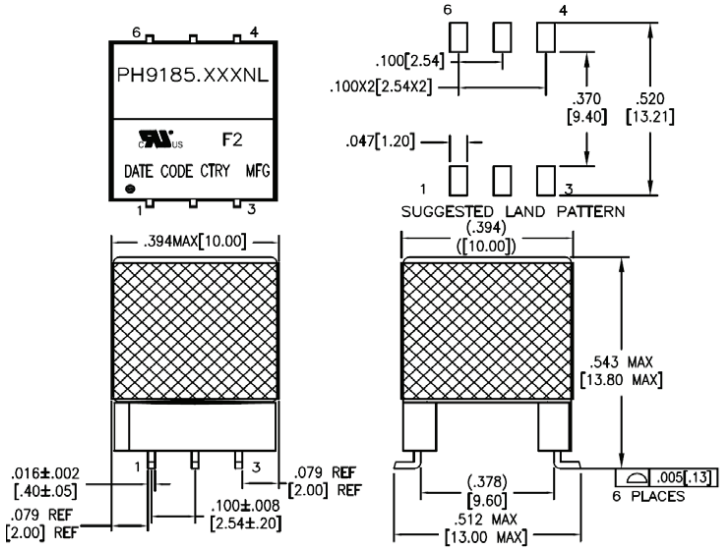
Part[2,3] Number	Inductance (1-3) (µH ±45%)	DCR (1-3) (Ω MAX)	MAX (1-3)[1] (V-µsec)	Turns Ratio	Isolated Voltage (Vrms)
PH9185.011NL	750.0	0.50	66.0	1:1	4000.0
PH9185.012NL	450.0	0.40	52.0	1:2	
PH9185.013NL	200.0	0.35	36.0	1:3	
PH9185.021NL	880.0	0.56	74.0	2:1	
PH9185.034NL	750.0	0.50	66.0	3:4	
PH9185.038NL	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	

Notes:

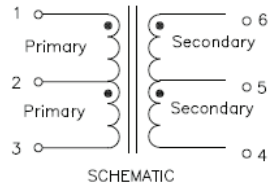
1. The maximum volt-usec rating limits the peak flux density to 3600 gauss when used in bi-polar drive application with 200KHz. For unipolar drive applications or a bi-polar drive with 350kHz, a maximum volt-usec could be 60% of the listed value.
2. Optional Tape & Reel packing can be ordered by adding a "**T**" suffix to the part number (i.e. PH9185.012NL becomes PH9185.012NL**T**). Pulse complies to industry standard tape 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.

Mechanical

PH9185.XXXXNL



Schematic



Weight 2.6grams
Tape & Reel 150/reel
Tray 80/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

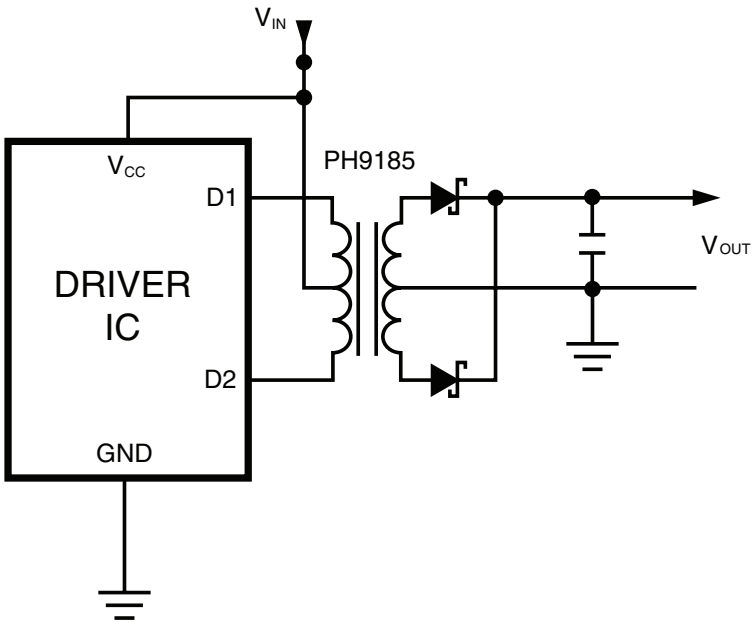
Switching Mode Transformers

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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™ 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.

MAXIM is a registered trademark of Maxim Integrated Products.

For More Information

Pulse Worldwide Headquarters
12220 World Trade Drive
San Diego, CA
92128
U.S.A.

Tel: 858 674 8100
Fax: 858 674 8262

Pulse Europe
Einsteinstrasse 1
D-71083 Herrenberg
Germany

Tel: 49 7032 78060
Fax: 49 7032 7806 135

Pulse China Headquarters
B402, Shenzhen Academy of Aerospace Technology Bldg.
10th Kejinan Road
High-Tech Zone
Nanshan District
Shenzen, PR China
518057
Tel: 86 755 33966678
Fax: 86 755 33966700

Pulse North China
Room 2704/2705
Super Ocean Finance Ctr.
2067 Yan An Road West
Shanghai 200336
China

Tel: 86 21 62787060
Fax: 86 2162786973

Pulse South Asia
135 Joo Seng Road
#03-02
PM Industrial Bldg.
Singapore 368363

Tel: 65 6287 8998
Fax: 65 6287 8998

Pulse North Asia
3F, No. 198
Zhongyuan Road
Zhongli City
Taoyuan County 320
Taiwan R. O. C.
Tel: 886 3 4356768
Fax: 886 3 4356823 (Pulse)
Fax: 886 3 4356820 (FRE)

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