Isolation Power Transformers

EE5 Platform SMD



- *Push Pull Converter Transformer*
- *Operational Insulation*
- *1.5KVrms isolation (380Vrms continuous)*
- *Compact and cost effective industrial design*
- *Output: 1.0W max*

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

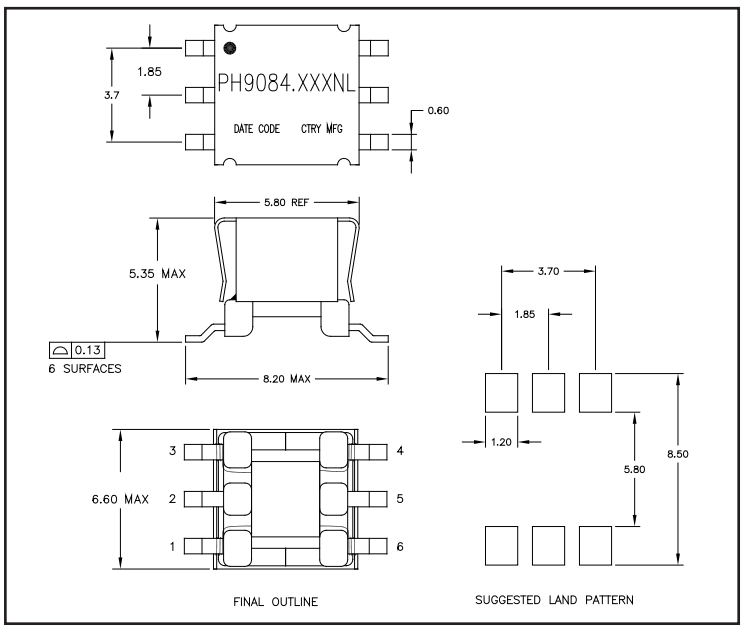
Part Number	Inductance (1-3) (µH ±35%)	Leakage Inductance (1-3) with (4-6) shorted (µH MAX)	Capacitance (1, 2, 3) to (4, 5, 6) (pF MAX)	DCR (1-3) (Ω MAX)	DCR (4-6) (Ω MAX)	MAX (1-3)[1] (V-µsec Max)	Turns Ratio (1:3) (6:4)	Isolated Voltage (Vrms)
PH9084.011NL	456	3.0	15	2.0	2.0	37	1CT : 1CT	1500
PH9084.034NL	256	3.0	15	1.6	2.0	28	3CT : 4CT	
PH9084.043NL	456	3.0	15	2.0	2.0	37	4CT : 3CT	
PH9084.021NL	456	3.0	15	2.0	1.2	37	2CT : 1CT	

Notes:

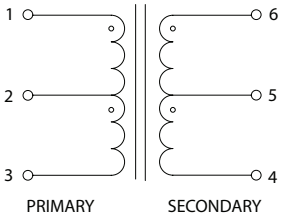
1. The ET Max is calculated to limit the core loss and temperature rise at 200KHz based on a bipolar flux swing of 180mT Peak.
2. For Push-Pull topology, where the voltage is applied across half the primary winding turns, the ET needs to be derated by 50% for the same flux swing.
3. The applied ET may need to be further derated for higher frequencies based on the temperature rise which results from the core and copper losses
   A. To calculate total copper loss (W), use the following formula:
   Copper Loss (W) = Irms_Primary^2 * DCR_Primary + Irms_Secondary^2*DCR_Secondary
   B. To calculate total core loss (W), use the following formula:
   Core Loss (W) = 1.2E-12 * (Frequency in kHz)$^{1.9}$ * (180 * [ET/ET Max])$^{2.7}$
   Where ET is the applied Volt Second, ET Max is the rated Volt Second for 180mT flux swing
   C. To calculate temperature rise, use the following formula:
   Temperature Rise (°C) = 302 * (Core Loss(W) + Copper Loss (W))
4. Optional Tape & Reel packing can be ordered by adding a "**T**" suffix to the part number (i.e. PH9084.011NL becomes PH9084.011NL**T**). Pulse complies to industry standard tape and reel specification EIA481.
5. The "NL" suffix indicates an RoHS-compliant part number.

Mechanical

PH9084.XXXNL



Schematic



Weight 0.37grams
Tape & Reel 900/reel
Tray 120/tray

Dimensions: mm

Unless otherwise specified, all tolerances are ±0.25

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