

# SMT Current Sense Transformer

PH9500.XXXNL



- Insulation:** Basic, 8.2mm creepage
- Height:** 8.8mm Max
- Footprint:** 13mm x 14mm Max
- Current Rating:** up to 10A
- Patented:** US Patent 9,646,755

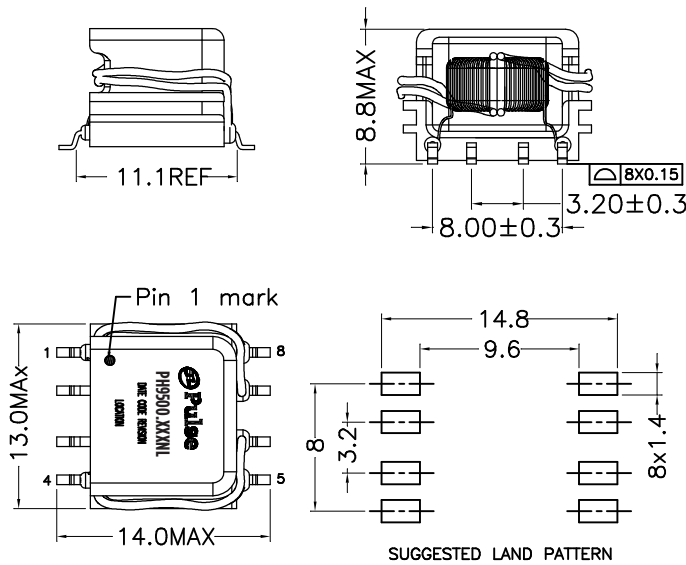
## Electrical Specifications @ 25°C — Operating Temperature -40°C to +125°C

Part <sup>5,6</sup> Number	Turns Ratio	Current <sup>2</sup> Rating (A)	Secondary Inductance (mH MIN)	DCR (mΩ Max)		Hipot (V <sub>DC</sub> )
				Primary (7,8-5,6)	Secondary (1-4)	
PH9500.065NL	1:65	10	2.0	3	1620	4400
PH9500.100NL	1:100	10	10.0	3	2100	4400

**NOTES:**

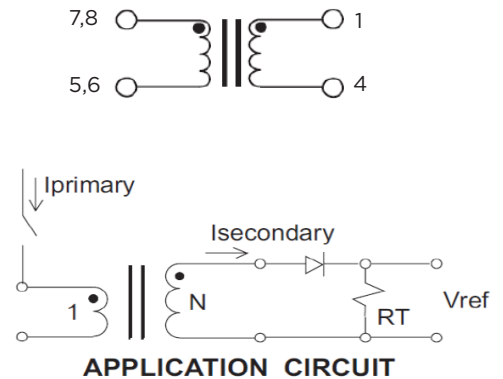
- The temperature of component (ambient temperature plus temperature rise) must be within the specified operating temperature range.
- The maximum current rating is based upon temperature rise of the component and represents the DC current which will cause a typical temperature rise of 40°C with no airflow when both one turn windings connected in parallel.
- To calculate value of terminating resistor (R<sub>t</sub>) use the following formula:  
 $R_t (W) = V_{REF} * N / (I_{peak\_primary})$
- The peak flux density of the device must remain below 2000 Gauss. To calculate the peak flux density for uni-polar current use following formula:  
 $B_{pk} = 23.81 * V_{REF} * (Duty\_Cycle\_Max) * 10^5 / (N * Freq\_kHz)$   
 \* for bi-polar current applications divide B<sub>pk</sub> (as calculated above) by 2.
- Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PH9500.065NL becomes PH9500.065NLT). Pulse complies to industry standard tape and reel specification EIA481.
- The "NL" suffix indicates an RoHS-compliant part number.

### Mechanical



FINAL OUTLINE

### Schematic



Weight ..... 0.34 grams  
 Tray ..... 45/tray  
 Tape & Reel ..... 220/reel

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$   
 Unless otherwise specified, all tolerances are  $\pm .010$

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## For More Information

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