

# 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

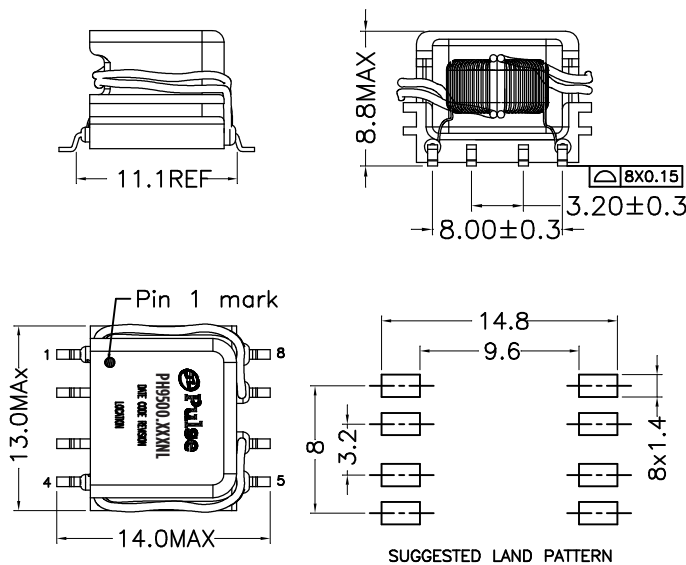
## Electrical Specifications @ 25°C — Operating Temperature -40°C to +125°C

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

### NOTES:

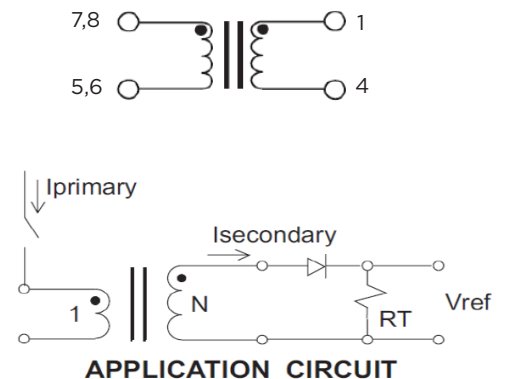
- The temperature of component (ambient temperature plus temperature rise) must be within the specified operating temperature range.
- The maximum current rating is based upon temperature rise of the component and represents the DC current which will cause a typical temperature rise of 40°C with no airflow 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  $\pm .010$

0,25

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## For More Information

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