

SMT Current Sense Transformer

PH9505.XXXNL and PMS9505.XXXNL EP10 SMD Platform



- Insulation: Reinforced, 6.5mm creepage
- Isolation: 3000Vrms
- Height: 14.4mm Max
- Footprint: 13.6mm x 12.8mm Max
- Current Rating: up to 30A
- Operating Frequency: Greater than 20kHz

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

Commercial ^{5,6}	Automotive	Turns Ratio ±2.0%	Current ² Rating (A)	Secondary Inductance (mH Min)	DCR (mΩ Max)		Hipot (V _{AC})
					Primary (1*-2)	Secondary (5*-4)	
PH9505.050NLT	PMS9505.050NLT	1:50	30	1.7	0.5	1500	3000
PH9505.070NLT	PMS9505.070NLT	1:70	30	3.0	0.5	2100	3000
PH9505.100NLT	PMS9505.100NLT	1:100	30	7.0	0.5	3100	3000
PH9505.125NLT	PMS9505.125NLT	1:125	30	11	0.5	4000	3000
PH9505.180NLT	PMS9505.180NLT	1:180	30	25	0.5	9000	3000

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.
- To calculate value of terminating resistor (R_t) use the following formula:

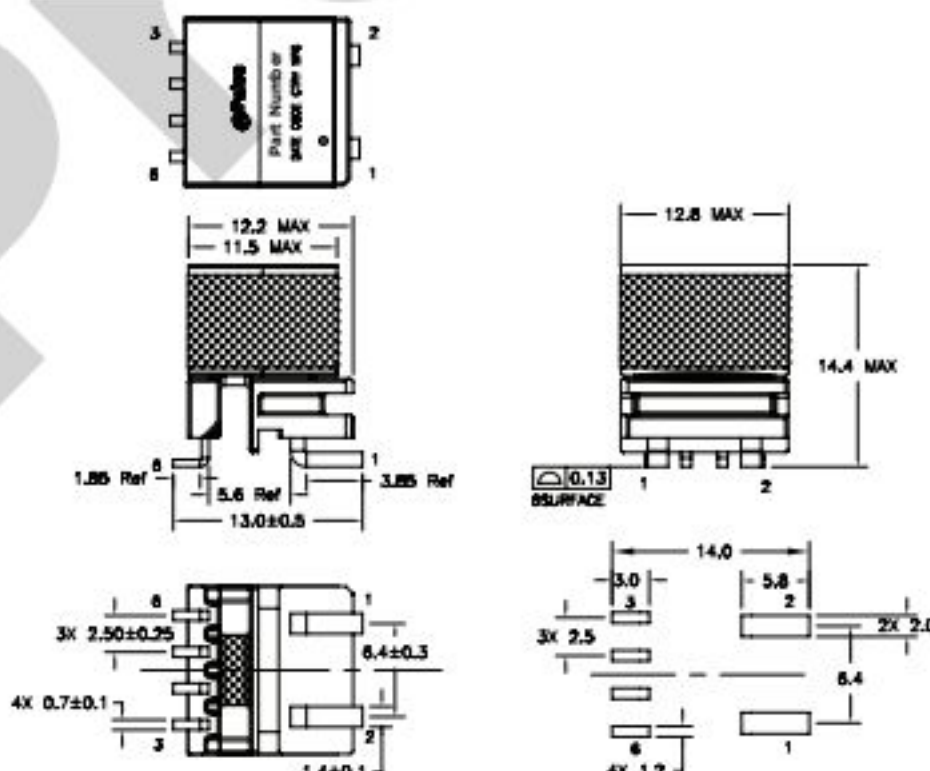
$$R_t (W) = V_{REF} \cdot N / (I_{peak_primary})$$
- The peak flux density of the device must remain below 2200 Gauss. To calculate the peak flux density for uni-polar current use following formula:

$$B_{pk} = 8.85 \cdot V_{REF} \cdot (Duty_Cycle_Max) \cdot 10^5 / (N \cdot Freq_kHz)$$

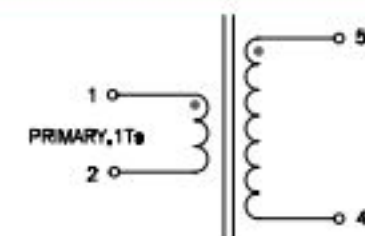
* for bi-polar current applications divide B_{pk} (as calculated above) by 2.
- This design complies with basic insulation according to EC60664-1/IEC60590-1/IEC61558-1/-2-16 for a working voltage up to 500Vrms and with reinforced insulation according to IEC60664/IEC60950-1 for working voltage up to 300Vrms
- Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PH9505.100NL becomes PH9505.100NLT). Pulse complies to industry standard tape and reel specification EIA481.
- The "NL" suffix indicates an RoHS-compliant part number.

Mechanical

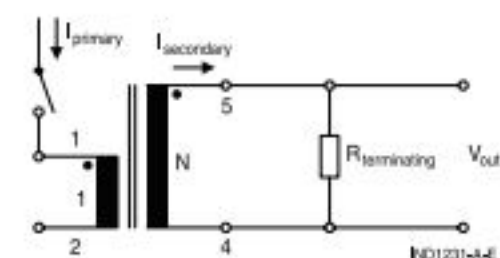
PH9505NLT/PMS9505NLT



Schematic



SCHEMATIC



Application circuit and pinning

Weight 4.3 grams
Tape & Reel 150/reel

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

Unless otherwise specified, all tolerances are $\pm \frac{.010}{0.25}$

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Preliminary

For More Information:

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