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SMT Current Sense Transformer

PH9505.XXXNL and PMS9505.XXXNL EP10 SMD Platform

Pulse a YAGEO company



- **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

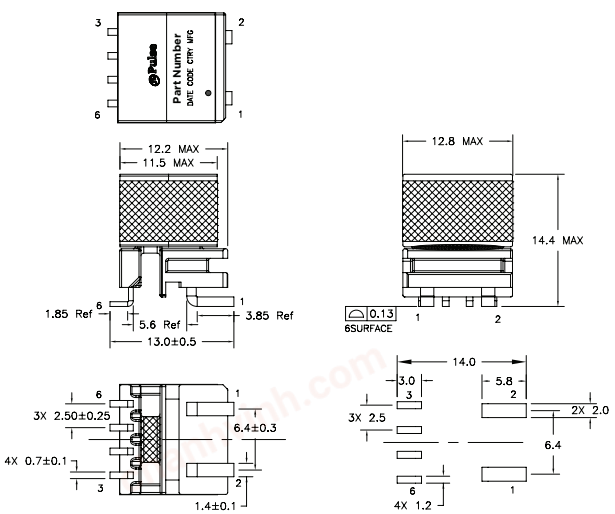
Commercial [5,6]	Automotive	Turns Ratio ±2.0%	Current[2] Rating (A)	Secondary Inductance (mH Min)	DCR (mΩ Max)		Hipot (V_{AC})
					Primary (1*-2)	Secondary (5*-4)	
PH9505.050NLT	PMS9505.050NLT	1:50	30	1.7	0.5	1500	3000
PH9505.070NLT	PMS9505.070NLT	1:70	30	3.0	0.5	2100	3000
PH9505.100NLT	PMS9505.100NLT	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:

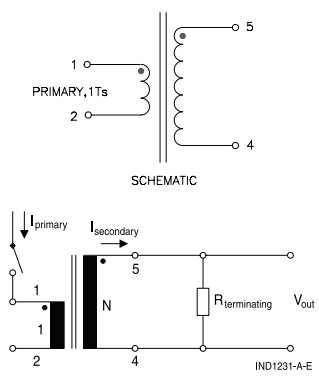
1. The temperature of component (ambient temperature plus temper-ature rise) must be within the specified operating temperature range.
2. The maximum current rating is based upon temperature rise of the component and represents the DC current which will cause a typical temperature rise of 40°C .
3. To calculate value of terminating resistor (Rt) use the following formula:
   Rt (W) = V_{REF} * N / (Ipeak_primary)
4. 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:
   Bpk = 8.85* V_{REF} * (Duty_Cycle_Max) * 10^5 / (N * Freq_kHz)
   * for bi-polar current applications divide Bpk (as calculated above) by 2.
5. This design complies with basic insulation according to EC60664/ 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
   Application condition: OVC II, Pollution degree 2, Material Group 3, Altitude up to 2km.
   The actual creepage distance > 6.5mm and the clearance distance >4.5mm between primary and secondary windings. This creepage distance is reduced when the transformer is mounted on the proposed pad layout. Refer to the PCB material group and pollution degree to determine if this reduces the working voltage capability.
6. 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.
7. The "**NL**" suffix indicates an RoHS-compliant part number.

Mechanical

PH9505NLT/PMS9505NLT



Schematic



Application circuit and pinning

Weight . . . . . 4.3 grams
Tape & Reel 150/reel

Dimensions: Inches / mm
Unless otherwise specified, all tolerances are ± .010 / 0,25

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For More Information:
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