

SMT Current Sense Transformer

PH9505.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 +150°C

Part # Part Number	Turns Ratio ±2.0%	Current ² Rating (A)	Secondary Inductance (mH Min)	DCR (mΩ Max)		Hipot (VAC)
				Primary (1*-2)	Secondary (5*-4)	
PH9505.050NLT	1:50	30	1.7	0.5	1500	3000
PH9505.070NLT	1:70	30	3.0	0.5	2100	3000
PH9505.100NLT	1:100	30	7.0	0.5	3100	3000
PH9505.125NLT	1:125	30	11	0.5	4000	3000
PH9505.180NLT	1:180	30	25	0.5	9000	3000

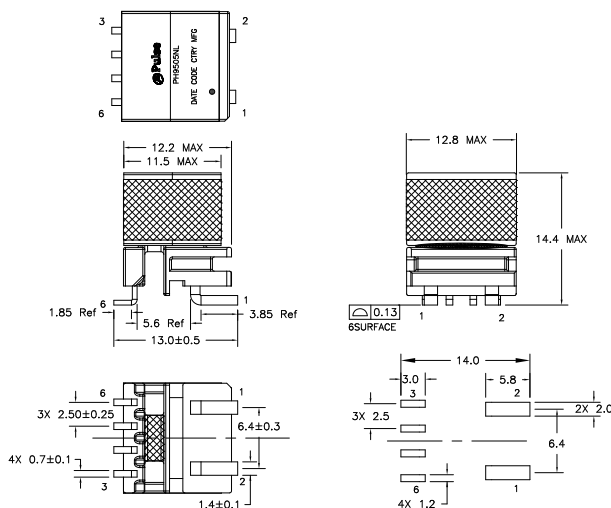
NOTES:

- 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:

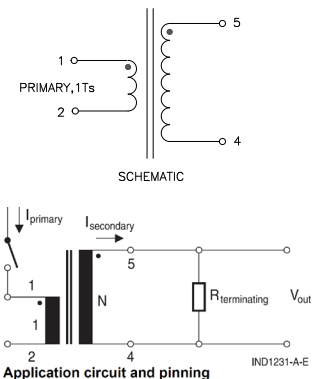
$$R_T (W) = V_{REF} * N / (I_{peak_primary})$$
- The peak flux density of the device must remain below 2200 Gauss. To calculate the peak flux density for uni-polar current use following formula:

$$B_{pk} = 8.85 * V_{REF} * (Duty_Cycle_Max) * 10^5 / (N * Freq_kHz)$$
 *for bi-polar current applications divide B_{pk} (as calculated above) by 2.
- 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.
- Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PH9505.100NLT becomes PH9505.100NLT). Pulse complies to industry standard tape and reel specification EIA481.
- The "NL" suffix indicates an RoHS-compliant part number.

Mechanical



Schematic



Dimensions: Inches
mm

Unless otherwise specified, all tolerances are ± 0.10 / 0.25

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For More Information

Pulse Worldwide Headquarters

15255 Innovation Drive Ste 100
San Diego, CA 92128
U.S.A.

Tel: 858 674 8100
Fax: 858 674 8262

Pulse Europe

Pulse Electronics GmbH
Am Rottland 12
58540 Meinerzhagen
Germany

Tel: 49 2354 777 100
Fax: 49 2354 777 168

Pulse China Headquarters

Pulse Electronics (ShenZhen) CO., LTD
D708, Shenzhen Academy of
Aerospace Technology,
The 10th Keji South Road,
Nanshan District, Shenzhen,
P.R. China 518057

Tel: 86 755 33966678
Fax: 86 755 33966700

Pulse North China

Room 2704/2705
Super Ocean Finance Ctr.
2067 Yan An Road West
Shanghai 200336
China

Tel: 86 21 62787060
Fax: 86 2162786973

Pulse South Asia

3 Fraser Street
0428 DUO Tower
Singapore 189352

Tel: 65 6287 8998
Fax: 65 6280 0080

Pulse North Asia

1F., No.111 Xiyuan Rd
Zhongli City
Taoyuan City 32057
Taiwan (R.O.C)

Tel: 886 3 4356768
Fax: 886 3 4356820

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