

# SMT Current Sense Transformers

PA1005.XXXNL Series



- Height: 5.5mm Max**
- Footprint: 8.4mm x 7.2mm Max**
- Current Rating: up to 20A**
- Frequency Range: 50kHz to 1MHz**
- Low Primary DCR version of P820X**

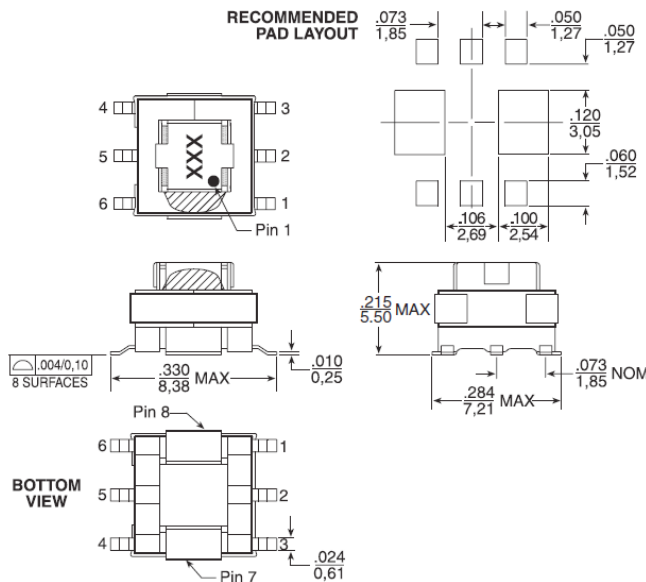
## Electrical Specifications @ 25°C — Operating Temperature -40°C to +130°C

Part Number <sup>5,6</sup>	Turns Ratio	Current Rating <sup>2</sup> (A)	Secondary Inductance (mH MIN)	DCR (mΩ MAX)		Hipot (V <sub>RMS</sub> )
				Primary (8-7)	Secondary (1-3)	
PA1005.020NL	1:20	20	0.08	0.75	550	1000
PA1005.030NL	1:30	20	0.18	0.75	870	1000
PA1005.040NL	1:40	20	0.32	0.75	1140	1000
PA1005.050NL	1:50	20	0.50	0.75	1500	1000
PA1005.060NL	1:60	20	0.72	0.75	2250	1000
PA1005.070NL	1:70	20	0.98	0.75	4750	1000
PA1005.100NL	1:100	20	2.00	0.75	5500	1000
PA1005.125NL	1:125	20	3.00	0.75	6500	500

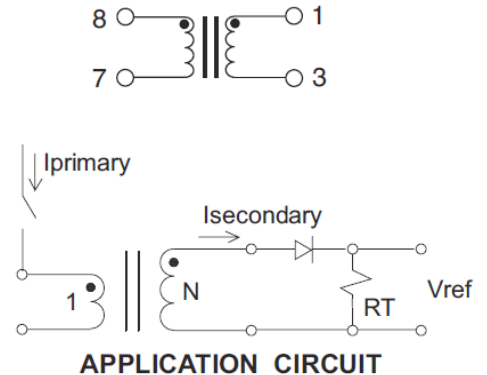
### NOTES:

- 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 (Rt) use the following formula:  
 $R_t (\Omega) = V_{REF} * N / (I_{peak\_primary})$
- 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:  
 $B_{pk} = 37.59 * V_{REF} * (Duty\_Cycle\_Max) * 10^5 / (N * Freq\_kHz)$   
 \* for bi-polar current applications divide Bpk (as calculated above) by 2.
- Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PA1005.020NL becomes PA1005.020NLT). Pulse complies to industry standard tape and reel specification EIA481.
- The "NL" suffix indicates an RoHS-compliant part number. Non-NL suffixed parts are not necessarily RoHS compliant, but are electrically and mechanically equivalent to NL versions. If a part number does not have the "NL" suffix, but an RoHS compliant version is required, please contact Pulse for availability.

## Mechanical



## Schematic



Weight . . . . . 0.34 grams  
 Tray . . . . . 120/tray  
 Tape & Reel . . . . . 900/reel  
 Coplanarity . . . . . 0.004 inches

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$   
 Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$