






SMT CURRENT SENSE TRANSFORMERS

PA1005.XXXNL Series



-  **Height:** 5.1mm 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 ^{5,6} Number	Turns Ratio	Current ² Rating (A)	Secondary Inductance (mH MIN)	DCR (mΩ MAX)		Hipot (V _{RMS})
				Primary (8-7)	Secondary (1-3)	
PA1005.020NL	1:20	20	0.08	0.75	550	500
PA1005.030NL	1:30	20	0.18	0.75	870	500
PA1005.040NL	1:40	20	0.32	0.75	1140	500
PA1005.050NL	1:50	20	0.50	0.75	1500	500
PA1005.060NL	1:60	20	0.72	0.75	2250	500
PA1005.070NL	1:70	20	0.98	0.75	4750	500
PA1005.100NL	1:100	20	2.00	0.75	5500	500
PA1005.125	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 (R_t) 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:

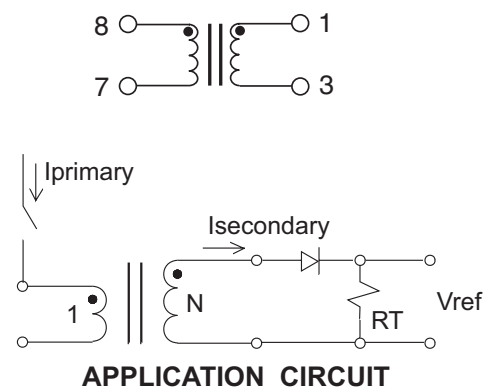
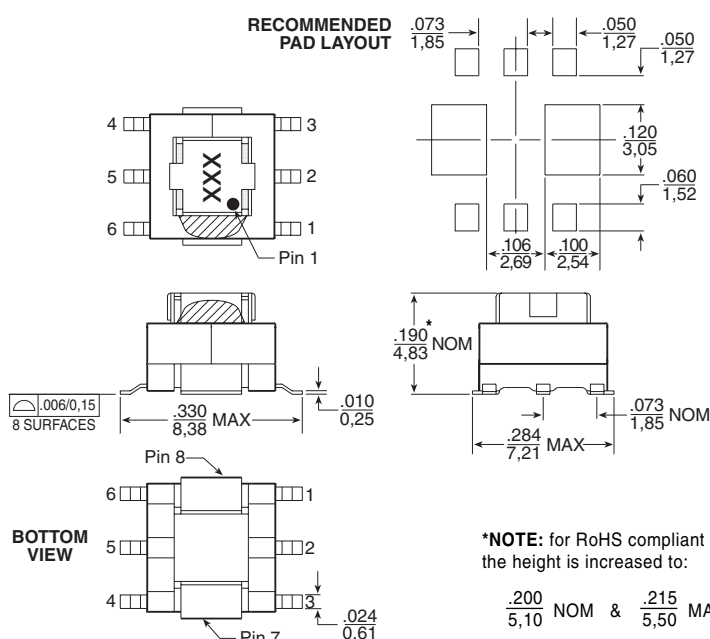
$$B_{pk} = 37.59 * V_{REF} * (Duty_Cycle_Max) * 10^5 / (N * Freq_kHz)$$

* for bi-polar current applications divide B_{pk} (as calculated above) by 2.

- Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PA1005.020 becomes PA1005.020T). 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 $\pm \frac{.010}{0.25}$