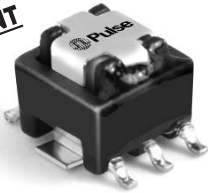


SMT CURRENT SENSE TRANSFORMERS

P820X Series



-  **Height:** 5.1mm Max*
-  **Footprint:** 8.4mm x 7.2mm Max
-  **Current Rating:** up to 10A
-  **Frequency Range:** 50kHz to 1MHz
-  **Lower Primary DCR version available:** PA1005.XXX series

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

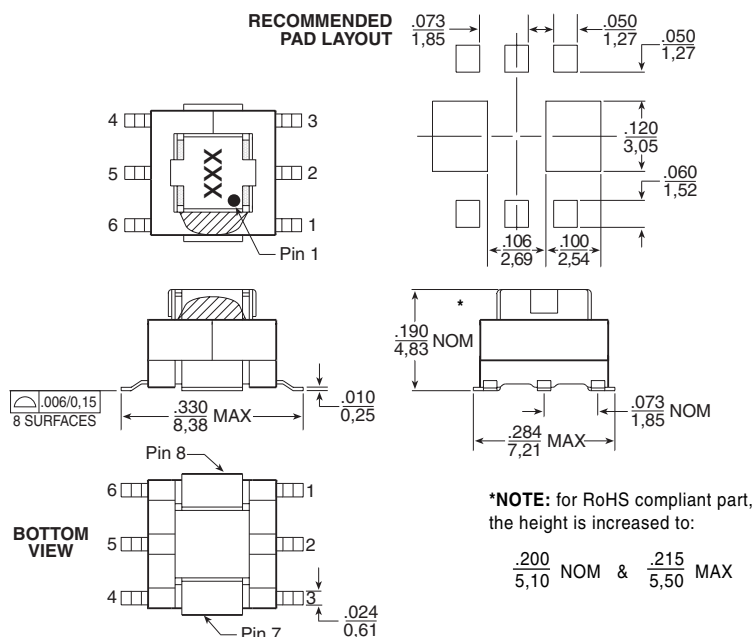
| Part ^{6,7} Number | Turns Ratio | Current Rating (A) | Secondary Inductance (mH MIN) | DCR (mΩ MAX) | | Hipot (V _{RMS}) |
|-------------------------------|----------------|--------------------------|-------------------------------------|------------------|--------------------|------------------------------|
| | | | | Primary (8-7) | Secondary (1-3) | |
| P8202NL | 1:20 | 10 | 0.08 | 6 | 550 | 500 |
| P8203NL | 1:30 | 10 | 0.18 | 6 | 870 | 500 |
| P8204NL | 1:40 | 10 | 0.32 | 6 | 1140 | 500 |
| P8205NL | 1:50 | 10 | 0.50 | 6 | 1500 | 500 |
| P8206NL | 1:60 | 10 | 0.72 | 6 | 2250 | 500 |
| P8207NL | 1:70 | 10 | 0.98 | 6 | 4750 | 500 |
| P8208NL | 1:100 | 10 | 2.00 | 6 | 5500 | 500 |
| P8209 ⁷ | 1:125 | 10 | 3.00 | 6 | 6500 | 500 |

NOTES:

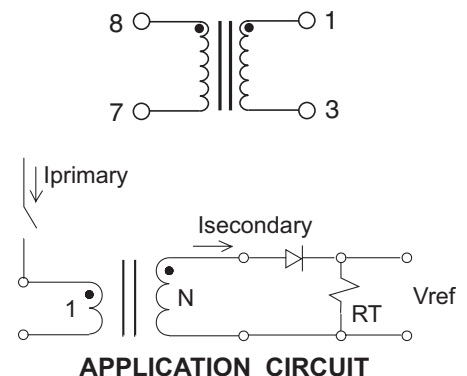
- The temperature of the component (ambient temperature plus temperature rise) must be within the specified operating temperature range.
- The maximum current rating is based upon temperature rise of the component and represents the DC current which will cause a typical temperature rise of 40°C with no airflow when both one turn windings connected in parallel.
- To calculate the value of the 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.
- Part numbers **P8222** to **P8229** are reverse polarity versions of **P820X**.
- Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. P8202 becomes P8202T). 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
 Tray120/tray
 Tape & Reel900/reel
 Coplanarity 0.004 inches

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