

SMT Current Sense Transformer

P820X Series



- Height:** 5.5mm Max
- Footprint:** 8.4mm x 7.2mm Max
- Current Rating:** up to 10A
- Frequency Range:** 20kHz to 1MHz
- Lower Primary DCR version available:** PA1005.XXX series

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

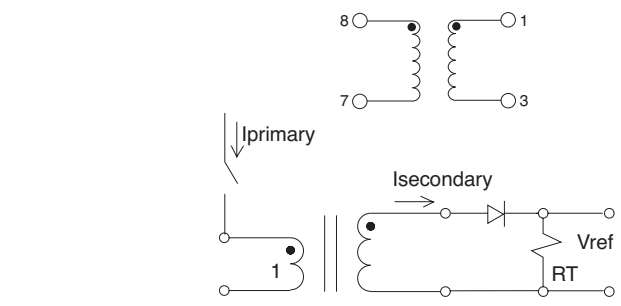
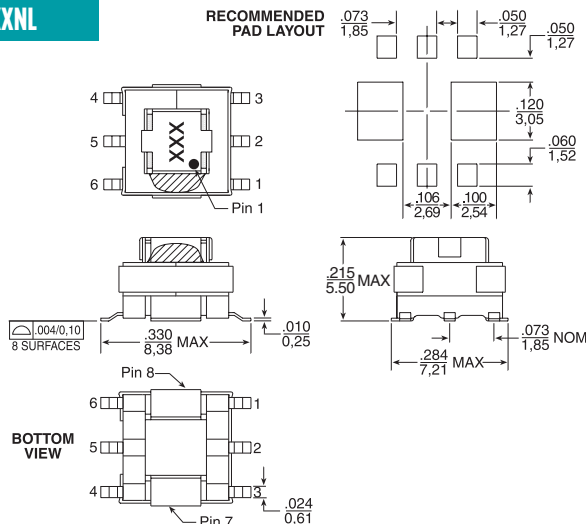
| Part Number ^{6,7} | Turns Ratio | Current ² Rating (A) | Secondary Inductance (mH MIN) | DCR (mΩ MAX) | | Hipot (V _{RMS}) |
|----------------------------|-------------|---------------------------------|-------------------------------|---------------|-----------------|---------------------------|
| | | | | 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 | 4700 | 500 |
| P8208NL | 1:100 | 10 | 2.00 | 6 | 5500 | 500 |
| P8209NL | 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 40C with no airflow.
 - To calculate the value of the 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 B_{PK} (as calculated above) by 2.
 - Part number **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. P8202NL becomes P8202NLT). 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

PXXXXNL



Weight0.34 grams
Tray120/tray
Tape & Reel900/reel
Coplanarity0.004 inches

Dimension: $\frac{\text{Inches}}{\text{mm}}$ Unless otherwise specified, all tolerances are $\pm \frac{.010}{.025}$

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For More Information

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