

# 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



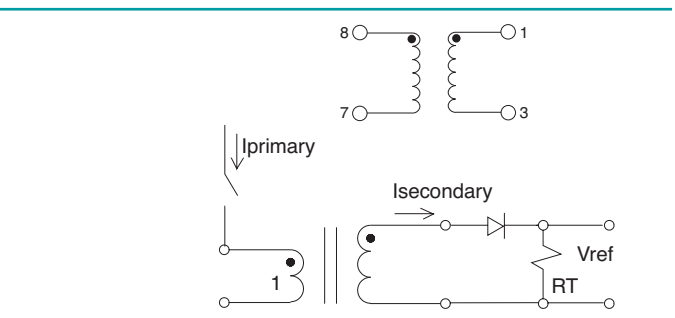
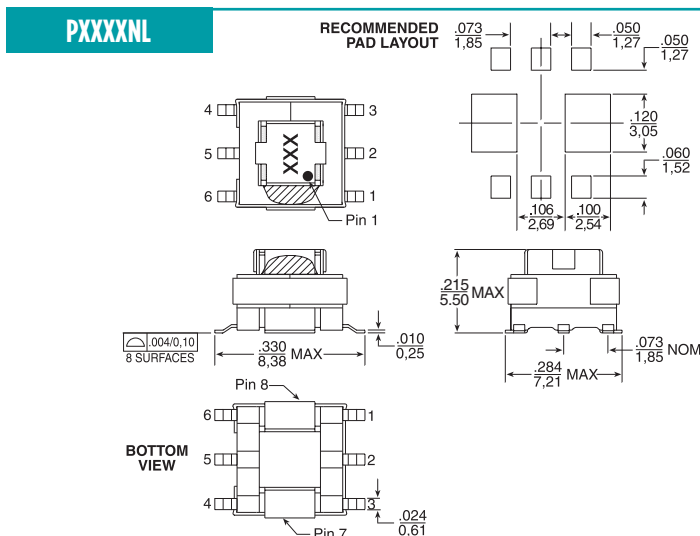
## Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C

Part Number <sup>6,7</sup>	Turns Ratio	Current <sup>2</sup> Rating (A)	Secondary Inductance (mH MIN)	DCR (mΩ MAX)		Hipot (V <sub>RMS</sub> )
				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	6000	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<sub>PK</sub> (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



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

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

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## For More Information:

**Americas** - [prodinfo\\_power@pulseelectronics.com](mailto:prodinfo_power@pulseelectronics.com) | **Europe** - [power-apps-europe@pulseelectronics.com](mailto:power-apps-europe@pulseelectronics.com) | **Asia** - [power-apps-asia@pulseelectronics.com](mailto:power-apps-asia@pulseelectronics.com)

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