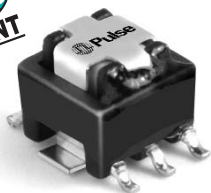


# SMT CURRENT SENSE TRANSFORMERS

## P822X Series



- Height:** 5.1mm Max
- Footprint:** 8.4mm x 7.2mm Max
- Current Rating:** up to 10A
- Frequency Range:** 50kHz to 1MHz
- Reverse Polarity version of P820X**

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

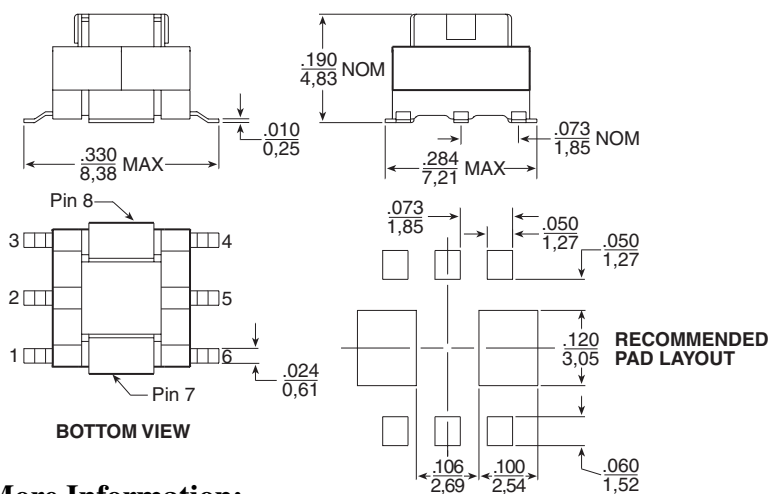
| Part Number | Turns Ratio | Current Rating <sup>2</sup> (A) | Secondary Inductance (mH MIN) | DCR (mΩ MAX)  |                 | Hipot (VRMS) |
|-------------|-------------|---------------------------------|-------------------------------|---------------|-----------------|--------------|
|             |             |                                 |                               | Primary (8-7) | Secondary (6-4) |              |
| P8222       | 1:20        | 10                              | 0.08                          | 6             | 550             | 500          |
| P8223       | 1:30        | 10                              | 0.18                          | 6             | 870             | 500          |
| P8224       | 1:40        | 10                              | 0.32                          | 6             | 1140            | 500          |
| P8225       | 1:50        | 10                              | 0.50                          | 6             | 1500            | 500          |
| P8226       | 1:60        | 10                              | 0.72                          | 6             | 1750            | 500          |
| P8227NL     | 1:70        | 10                              | 0.98                          | 6             | 4750            | 500          |
| P8228NL     | 1:100       | 10                              | 2.00                          | 6             | 5500            | 500          |
| P8229       | 1:125       | 10                              | 3.00                          | 6             | 6500            | 500          |

#### NOTES:

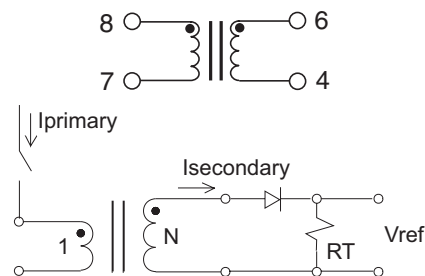
- The temperature of the component (ambient temperature plus temperature rise) must be within the specified operating temperature range.
- The maximum current rating is based upon temperature rise of the component and represents the DC current which will cause a typical temperature rise of 40°C with no airflow when both one turn windings connected in parallel.
- To calculate the value of the terminating resistor (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.
- Add "T" suffix to the part number for Tape & Reel packaging, (i.e. P8222T).
- 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



#### APPLICATION CIRCUIT

Weight . . . . . 0.34 grams  
 Tray . . . . . 120/tray  
 Tape & Reel . . . . . 900/reel  
 Coplanarity . . . . . 0.006 inches

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$   
 Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$

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