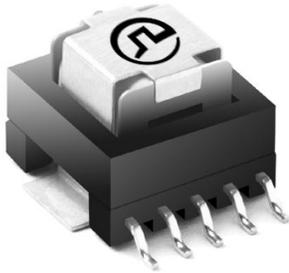


# SMT Current Sense Transformers

PB002XNL Series



- Height:** 10mm Max
- Footprint:** 19.9mm x 15.0mm Max
- Frequency Range:** 50kHz to 500kHz
- Current Rating:** up to 35A

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

Part <sup>5,6</sup> Number	Turns Ratio	Secondary Inductance (mH MIN)	DCR (mΩ MAX)		Hipot (V <sub>RMS</sub> )
			Primary (11-12)	Secondary (2-4)	
PB0025NL	50:1	1.4	0.42	700	500
PB0026NL	100:1	5.6	0.42	1400	500
PB0027NL	200:1	22.4	0.42	2900	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:  

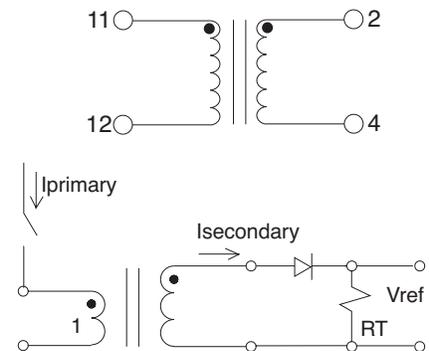
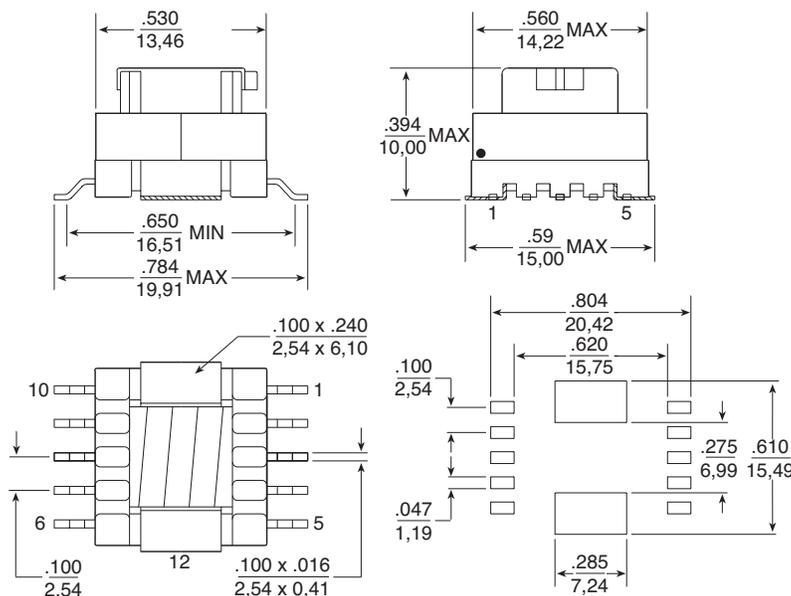
$$R_t (\Omega) = V_{REF} * N / (I_{peak\_primary})$$
  - The peak flux density of the device must remain below 2000 Gauss. To calculate the peak flux density for uni-polar current use following formula:  

$$B_{PK} = 8.0 * V_{REF} * (Duty\_Cycle\_Max) * 10^5 / (N * Freq\_kHz)$$
\* for bi-polar current applications divide B<sub>PK</sub> (as calculated above) by 2.
  - Optional Tape & Packaging can be ordered by adding a "T" suffix to the part number (i.e. PB0025NL becomes PB0025NLT). Pulse complies to the 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

### PBXXXXNL



### APPLICATION CIRCUIT

- Weight** .....4.7 grams
- Tray** .....100/tray
- Tape & Reel** .....300/reel
- Coplanarity** .....0.006 inches

**Dimension:**  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$

# Mouser Electronics

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