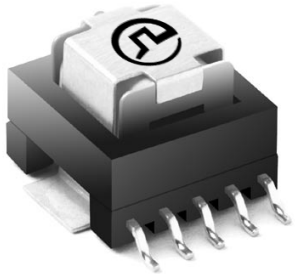
SMT Current Sense Transformers

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

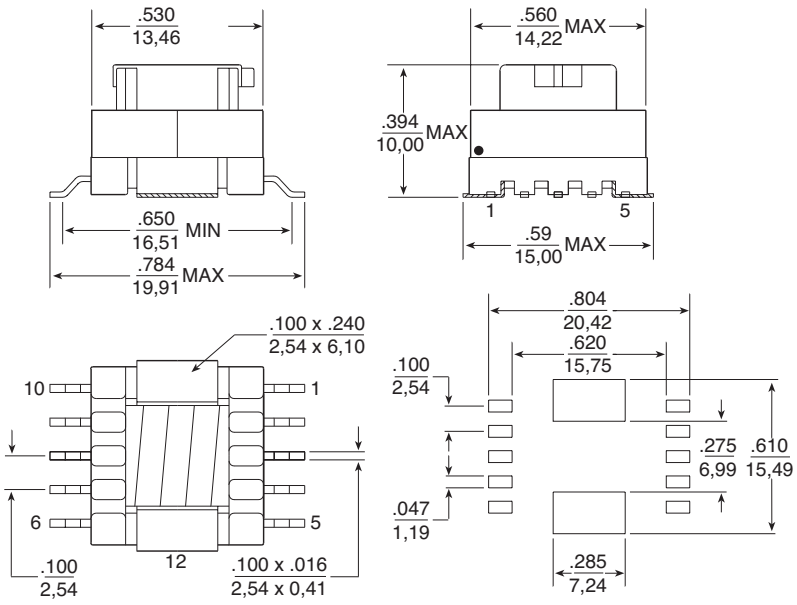
Part [5,6] Number	Turns Ratio	Secondary Inductance (mH MIN)	DCR (mΩ MAX)		Hipot (V_{RMS})
			Primary (11-12)	Secondary (2-4)	
PB0025NL	50:1	1.4	0.42	700	500
PB0026NL	100:1	5.6	0.42	1400	500
PB0027NL	200:1	22.4	0.42	2900	500

Notes:

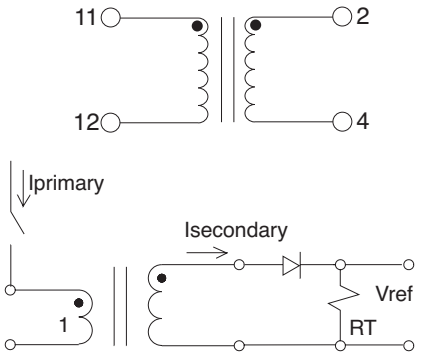
1. The temperature of the component (ambient temperature plus temperature rise) must be within the specified operating temperature range.
2. The maximum current rating is based upon temperature rise of the component and represents the DC current which will cause a typical temperature rise of 40°C with no airflow when both one turn windings connected in parallel.
3. To calculate the value of the terminating resistor (Rt) use the following formula:
   Rt (Ω) = V_{REF} * N / (Ipeak_primary)
4. 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_{PK} (as calculated above) by 2.
5. Optional Tape & Packaging can be ordered by adding a "**T**" suffix to the part number (i.e. PB0025NL becomes PB0025NL**T**). Pulse complies to the industry standard tape and reel specification EIA481.
6. 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

PBXXXXNL



Schematic



APPLICATION CIRCUIT

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

Dimension: Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

Pulse Electronics