SMT Current Sense Transformers

PB002XNL Series





💶 Height: 10mm Max

Footprint: 19.9mm x 15.0mm MaxFrequency Range: 50kHz to 500kHz

Current Rating: up to 35A

Electrical Specifications @ 25°C – Operating Temperature –40°C to +130°C					
		Secondary	$\textbf{DCR} (\text{m}\Omega \text{MAX})$		Hipot
Part ^{5,6} Number	Turns Ratio	Inductance (mH MIN)	Primary (11-12)	Secondary (2-4)	(V _{RMS})
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 Bpk (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.
- 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

Schematic





