

SMT Current Sense Transformers

PL1170



- Ⓢ Maximum Reflow Temperature: 235°C
- Ⓢ Storage Temperature: -55°C to +135°C
- Ⓢ Moisture Sensitivity Level (MSL): 3
- Ⓢ Height: 7.1mm Max
- Ⓢ Footprint: 14.6mm x 12.6mm Max
- Ⓢ Current Rating: up to 15 A
- Ⓢ Can be made available in a RoHS configuration by a special request (Sn100 lead finish)
- Ⓢ Frequency Range: 50kHz to 500kHz

Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C

Part Number	Turns Ratio	Current Rating (A)	Secondary Inductance (mH MIN)	DCR (mΩ MAX)		Hipot (Vrms)
				Primary (1, 3-2, 4)	Secondary (5-6)	
PL1170	1:1:100	15	14.8	1.5	930	500

Notes:

- The temperature of the component (ambient temperature plus the 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 air flow when both single turn windings connected in parallel.
- To calculate the value of the terminating resistor (Rt), use the following formula:
- The peak flux density of the device must remain below 2000 Gauss. To calculate the peak flux density for a uni-polar current use the formula below:

$$B_{pk} = 14.29 * V_{ref} * (Duty_Cycle_Max) * 10^5 (N * Freq_kHz)$$

* for bi-polar current applications divide Bpk as calculated above by 2.

- Optional Tape & Reel can be ordered by adding a "T" suffix to the part number (i.e. PL1170 becomes PL1170T).

$$R_t \Omega = V_{REF} * N / (I_{peak_primary})$$

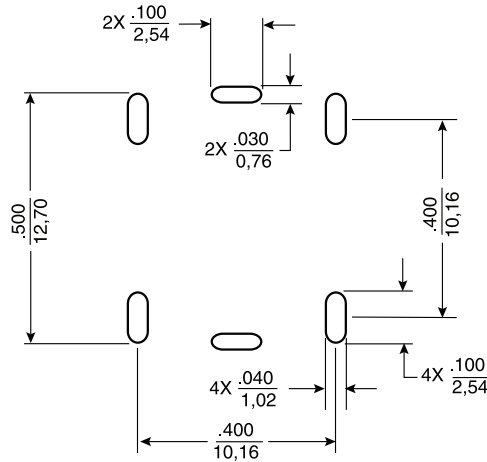
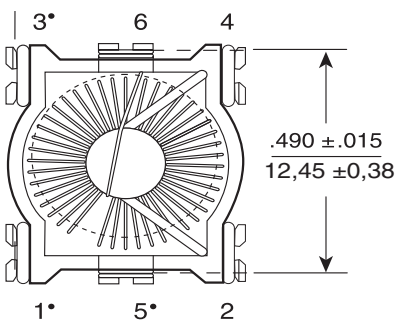
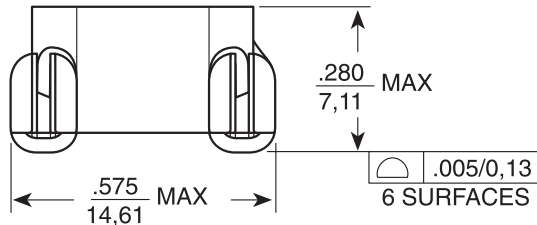
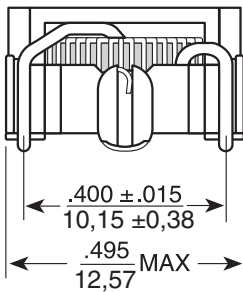
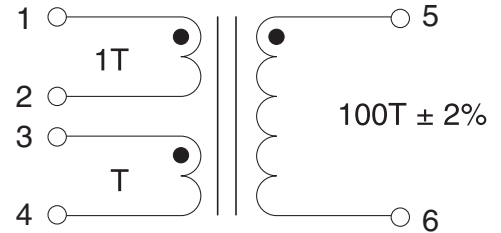
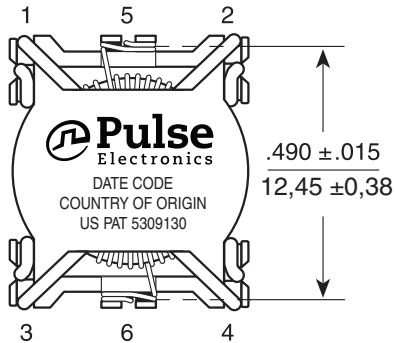
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PL1170

Mechanical

Schematic

PL1170



SUGGESTED PAD LAYOUT

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