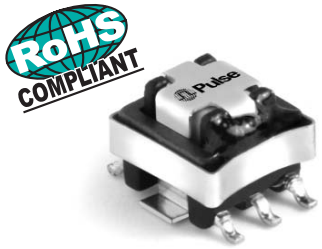
SMT CURRENT SENSE TRANSFORMERS

P820X Series



- **Height:** 5.1mm Max*
- **Footprint:** 8.4mm x 7.2mm Max
- **Current Rating:** up to 10A
- **Frequency Range:** 50kHz to 1MHz
- **Lower Primary DCR version available:** PA1005.XXX series

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

Part [6,7] Number	Turns Ratio	Current [2] Rating (A)	Secondary Inductance (mH MIN)	DCR (mΩ MAX)		Hipot (V_{RMS})
				Primary (8-7)	Secondary (1-3)	
P8202	1:20	10	0.08	6	550	500
P8203	1:30	10	0.18	6	870	500
P8204	1:40	10	0.32	6	1140	500
P8205	1:50	10	0.50	6	1500	500
P8206	1:60	10	0.72	6	2250	500
P8207	1:70	10	0.98	6	4750	500
P8208	1:100	10	2.00	6	5500	500
P8209 [7]	1:125	10	3.00	6	6500	500

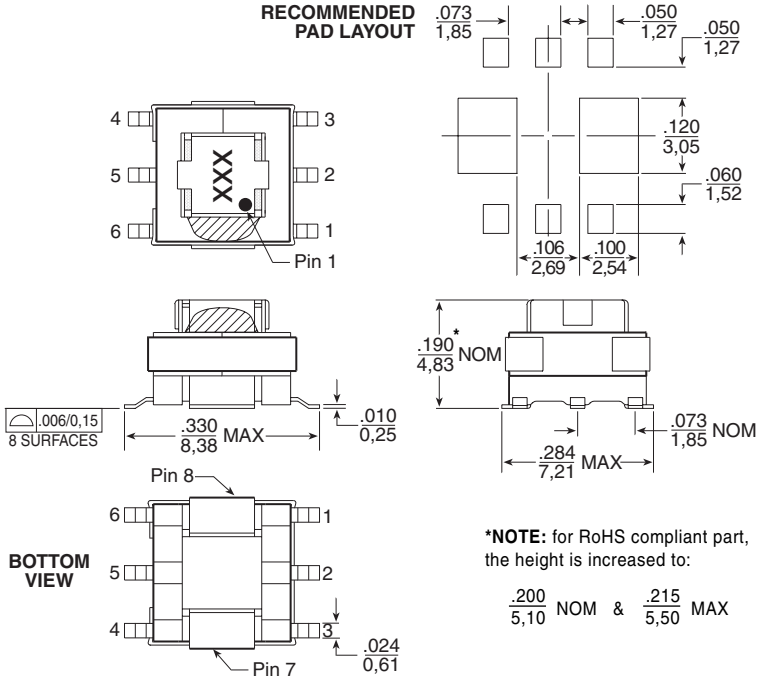
NOTES:

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) = Vref * 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} = 37.59 * V_{REF} * (Duty_Cycle_Max) * 10^5 / (N * Freq_kHz)

   * for bi-polar current applications divide B_{PK} (as calculated above) by 2.
5. Part numbers **P8222** to **P8229** are reverse polarity versions of **P820X**.
6. Optional Tape & Reel packaging can be ordered by adding a "**T**" suffix to the part number (i.e. P8202 becomes P8202**T**). Pulse complies to industry standard tape and reel specification EIA481.
7. To order RoHS compliant part, add the suffix "**NL**" to the part number (i.e. P8202 becomes P8202**NL** and P8202T becomes P8202**NL**T). Please note that the P8209 part is not available in an RoHS compliant version.

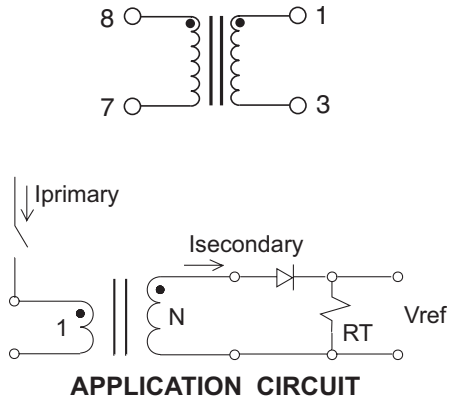
Mechanical



***NOTE:** for RoHS compliant part, the height is increased to:

.200 5,10 NOM & .215 5,50 MAX

Schematic



APPLICATION CIRCUIT

Weight . . . . . .0.34 grams
Tray 120/tray
Tape & Reel 900/reel
Coplanarity . . . . . .0.004 inches

Dimensions: Inches / mm

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