

SMT Current Sense Transformer

PA1005.XXXQNL Series



- AEC-Q200 Qualified**
- Height: 5.5mm Max**
- Footprint: 8.4mm x 7.2mm Max**
- Current Rating: up to 20A**
- Frequency Range: 50kHz to 1MHz**

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

Part ^{5,6} Number	Turns Ratio	Current ² Rating (A)	Secondary Inductance (mH MIN)	DCR (mΩ Max)		Hipot (V _{RMS})
				Primary (8-7)	Secondary (1-3)	
PA1005.020QNL	1:20	20	0.08	0.75	550	900
PA1005.030QNL	1:30	20	0.18	0.75	870	900
PA1005.040QNL	1:40	20	0.32	0.75	1140	900
PA1005.050QNL	1:50	20	0.50	0.75	1500	900
PA1005.060QNL	1:60	20	0.72	0.75	2250	900
PA1005.070QNL	1:70	20	0.98	0.75	4750	900
PA1005.100QNL	1:100	20	2.00	0.75	5500	900
PA1005.125QNL	1:125	20	3.00	0.75	6500	900
PA1005.150QNL	1:150	20	4.32	0.75	9000	900

NOTES:

- The temperature of 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 value of terminating resistor (R_t) use the following formula:
$$R_t (W) = V_{REF} * N / (I_{peak_primary})$$
- 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:
$$B_{pk} = 37.59 * V_{REF} * (Duty_Cycle_Max) * 10^5 / (N * Freq_kHz)$$

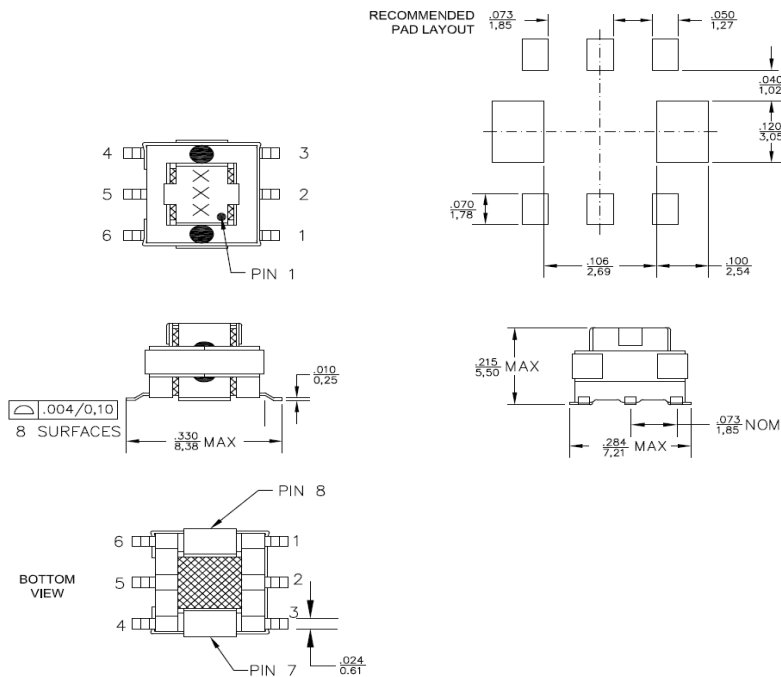
* for bi-polar current applications divide B_{pk} (as calculated above) by 2.
- Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PA1005.020QNL becomes PA1005.020QNLT). Pulse complies to industry standard tape and reel specification EIA481.
- The "NL" suffix indicates an RoHS-compliant part number.

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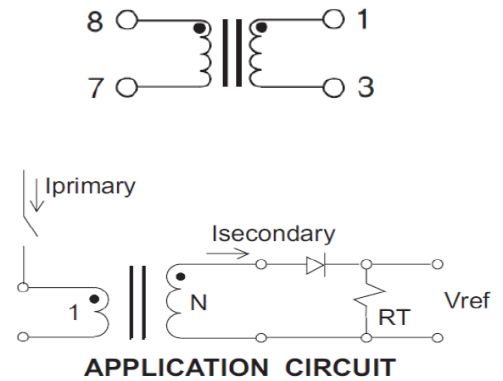
PA1005.XXXQNL Series



Mechanical



Schematic



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

Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified, all tolerances are $\pm \frac{.010}{0.25}$

For More Information

Pulse Worldwide Headquarters

12220 World Trade Drive
San Diego, CA 92128
U.S.A.

Tel: 858 674 8100
Fax: 858 674 8262

Pulse Europe

Pulse Electronics GmbH
Am Rottland 12
58540 Meinerzhagen
Germany

Tel: 49 2354 777 100
Fax: 49 2354 777 168

Pulse China Headquarters

B402, Shenzhen Academy of
Aerospace Technology Bldg.
10th Kejinan Road
High-Tech Zone
Nanshan District
Shenzhen, PR China 518057

Tel: 86 755 33966678
Fax: 86 755 33966700

Pulse North China

Room 2704/2705
Super Ocean Finance Ctr.
2067 Yan An Road West
Shanghai 200336
China

Tel: 86 21 62787060
Fax: 86 2162786973

Pulse South Asia

135 Joo Seng Road
#03-02
PM Industrial Bldg.
Singapore 368363

Tel: 65 6287 8998
Fax: 65 6287 8998

Pulse North Asia

3F, No. 198
Zhongyuan Road
Zhongli City
Taoyuan County 320
Taiwan R. O. C.

Tel: 886 3 4356768
Fax: 886 3 4356823 (Pulse)
Fax: 886 3 4356820 (FRE)

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