

# SMT Current Sense Transformers

PM820X Series



- Height: 5.5mm 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 +125°C

Part Number	Turns Ratio	Current <sup>2</sup> Rating (A)	Secondary Inductance (mH MIN)	DCR (mΩMAX)		Highpot (VRMS)
				Primary (8-7)	Secondary (1-3)	
PM8208NL	1:100	10	2.00	6	5500	500

### Notes:

- The temperature of the 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 the value of the terminating resistor (Rt) use the following formula:  

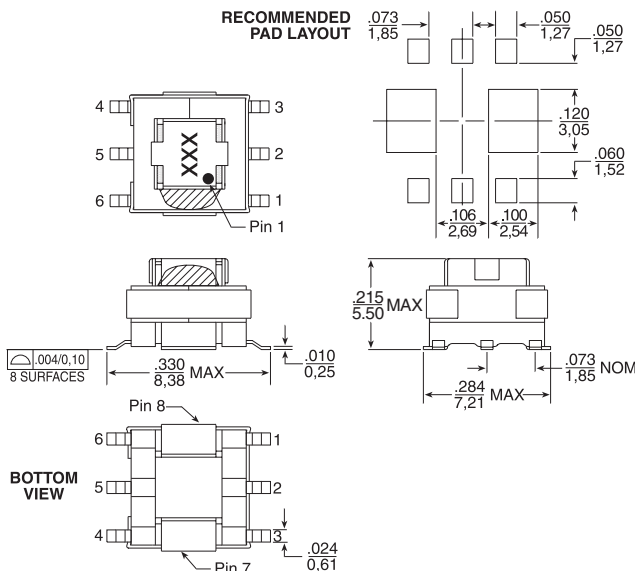
$$R_t (W) = V_{ref} * N / (I_{peak\_primary})$$
- The peak flux density of the device must remain below 2000 Gauss. To calculate the peak flux density for uni-polar current use following formula: 1. The maximum volt-usec rating limits the peak flux density to 3600 gauss when used in bi-polar drive application with 200KHz. For unipolar drive applications or a bi-polar drive with 350kHz, a maximum volt-usec could be 60% of the listed value. For Push-Pull topology, where the voltage is applied across half the primary winding turns, the maximum volts-use needs to be derated by 50%.

$$B_{pk} = 37.59 * V_{ref} * (Duty\_Cycle\_Max) * 105 / (N * Freq\_kHz)$$

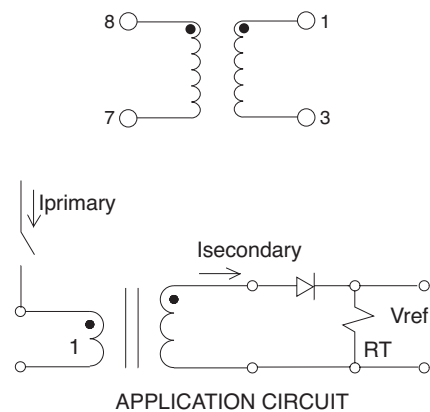
\* for bi-polar current applications divide Bpk (as calculated above) by 2.

- Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. P8202NL becomes P8202NLT). Pulse complies to industry standard tape and reel specification EIA481.
- 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



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

---

## For More Information

### Pulse Worldwide Headquarters

15255 Innovation Drive Ste 100  
 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

Pulse Electronics (ShenZhen) CO., LTD  
 D708, Shenzhen Academy of  
 Aerospace Technology,  
 The 10th Keji South Road,  
 Nanshan District, Shenzhen, P.R.  
 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 6280 0080

### Pulse North Asia

1F, No.111  
 Xiyuan Road  
 Zhongli District  
 Taoyuan City 32057  
 Taiwan (R.O.C)

Tel: 886 3 4356768  
 Fax: 886 3 4356820

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners. © Copyright, 2019. Pulse Electronics, Inc. All rights reserved.