

SMT POWER INDUCTORS

Wire Wound - PA2050.XXXNL Series



-  **Height:** 12.2mm Max
-  **Footprint:** 22.2mm x 19.1mm Max
-  **Current Rating:** Over 22Apk
-  **Inductance Range:** 5.8μH to 57μH

Electrical Specifications @ 25°C — Operating Temperature -40°C to +130°C¹

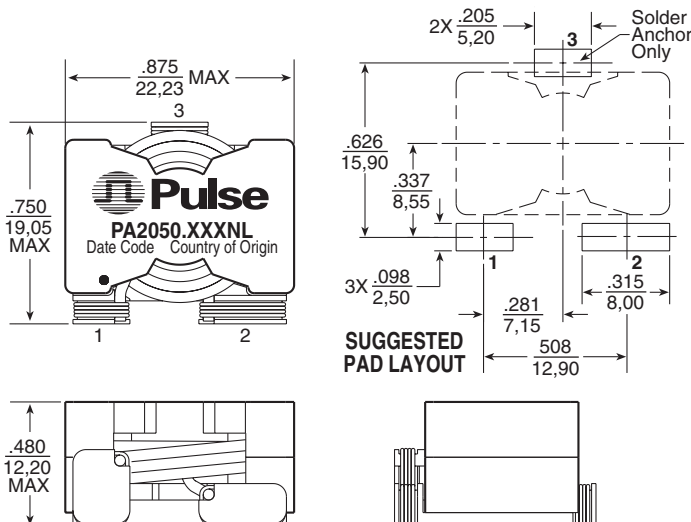
Part ⁶ Number	Inductance @0Adc (μH ±10%)	Inductance @Irated (μH TYP)	Irated ¹ (Adc)	DCR (mΩ ±10%)	Saturation ² Current Isat (A TYP)		Heating ³ Current Ioc (A TYP)	Core Loss Factor K2
					25°C	100°C		
PA2050.582NL	5.8	5.8	14.4	4.4	22	17	14.4	155
PA2050.782NL	7.8	7.8	13.3	5.1	18	16	13.3	181
PA2050.103NL	10.2	10.2	12.5	5.8	16	15	12.5	206
PA2050.163NL	16.0	16.0	9.9	9.1	12	11	9.9	258
PA2050.193NL	19.4	19.4	8.5	12.6	11	10	8.5	284
PA2050.233NL	23.0	23.0	8.0	13.7	9.8	8	8.1	310
PA2050.273NL	27.0	26.2	7.8	14.9	9	8	7.8	335
PA2050.313NL	31.4	30.6	6.7	20.2	8.4	8	6.7	361
PA2050.363NL	36.0	35.2	6.0	21.6	8	6	6.5	387
PA2050.393NL	38.9	37.5	6.0	18.8	6.3	6	6.2	482
PA2050.413NL	41.0	40.0	6.0	23.1	7.3	6	6.2	413
PA2050.583NL	57.8	57.8	5.0	34.5	6.2	5	5.1	490

NOTES:

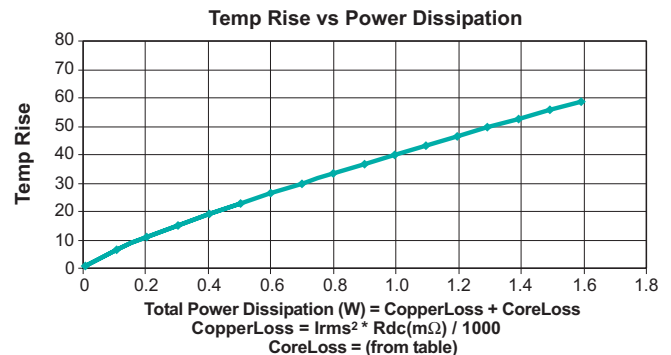
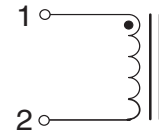
- The rated current as listed is either the saturation current or the heating current depending on which value is lower.
- The saturation current is the typical current which causes the inductance to drop by 20% at the stated ambient temperatures (25°C and 100°C). This current is determined by placing the component in the specified ambient environment and applying a short duration pulse current (to eliminate self-heating effects) to the component.
- The heating current is the DC current which causes the part temperature to increase by approximately 40°C.
- In high volt*time applications, additional heating in the component can occur due to core losses in the inductor which may necessitate derating the current in order to limit the temperature rise of the component. To determine the approximate total losses (or temperature rise) for a given application, the coreloss and temperature rise formula can be used:
 $\Delta B \text{ (Gauss)} = K2 * \Delta I$
 $\text{Core Loss (W)} = 1.5E-13 * (\text{Freq_kHz})^{1.63} * \Delta B^{2.62}$
- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

Mechanical

Schematic



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

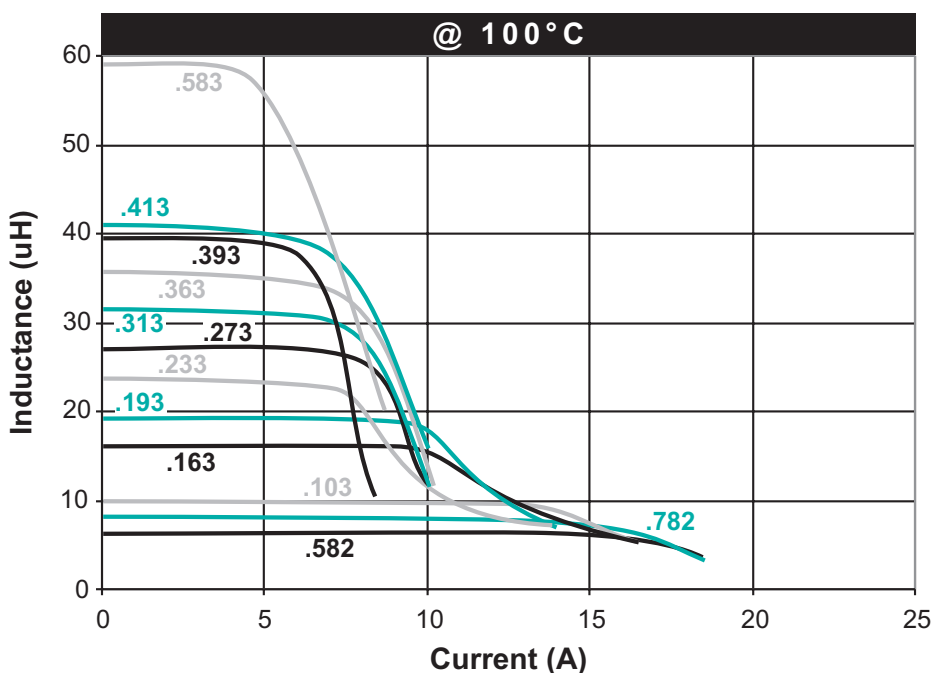
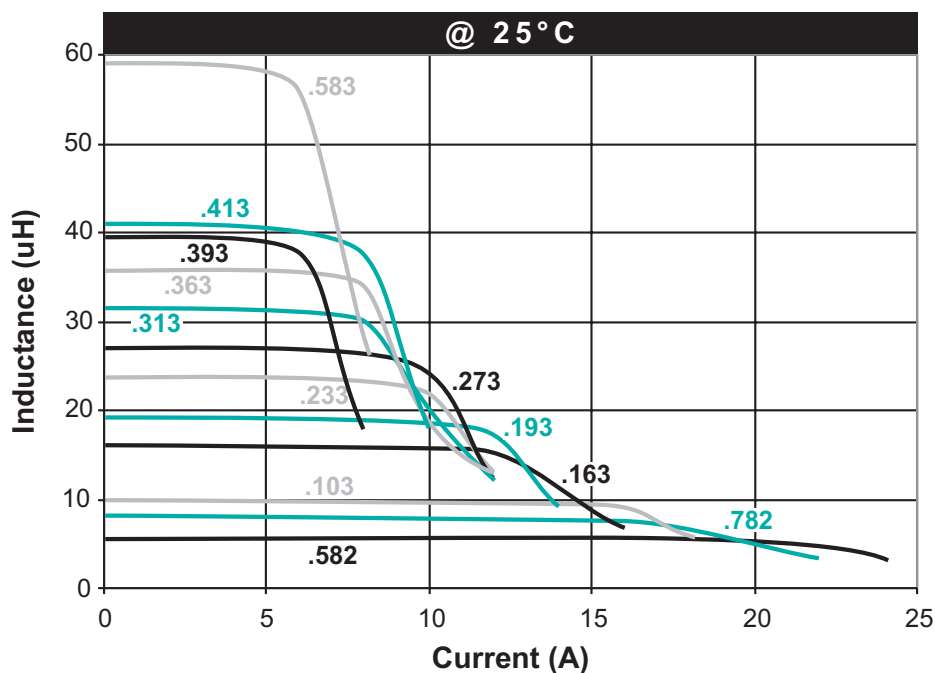


SMT POWER INDUCTORS

Wire Wound - PA2050.XXXNL Series



Inductance vs Current Characteristics



For More Information:

Pulse Worldwide Headquarters

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

www.pulseeng.com

Tel: 858 674 8100

Fax: 858 674 8262

Pulse Europe

Einsteinstrasse 1
D-71083 Herrenberg
Germany

Tel: 49 7032 7806 0

Fax: 49 7032 7806 12

Pulse China Headquarters

B402, Shenzhen
Tech-Innovation International
Tenth Kejian Rd.
High-Tech Industrial Park
Nanshan District, Shenzhen
China

Tel: 86 755 33966678

Fax: 86 755 33966700

Pulse North China

Room 1503
XinYin Building
No. 888 YiShan Rd.
Shanghai 200233
China

Tel: 86 21 54643211/2

Fax: 86 21 54643210

Pulse South Asia

150 Kampong Ampat
#07-01/02
KA Centre
Singapore 368324

Tel: 65 6287 8998

Fax: 65 6280 0080

Pulse North Asia

No. 26
Kao Ching Rd.
Yang Mei Chen
Tao Yuan Hsien
Taiwan, R. O. C.

Tel: 886 3 4641811

Fax: 886 3 4641911

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, 2010. Pulse Engineering, Inc. All rights reserved.

www.pulseeng.com

P661.B (1/10)

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Pulse:

[PA2050.582NL](#) [PA2050.163NL](#) [PA2050.193NL](#) [PA2050.583NL](#) [PA2050.273NL](#) [PA2050.313NL](#) [PA2050.233NL](#)
[PA2050.413NL](#) [PA2050.103NL](#) [PA2050.363NL](#) [PA2050.782NL](#) [PA2050.393NL](#)