Military/Aerospace Grade





Height: 7.4mm Max

- Footprint: 19.8mm x 19.6mm Max

Current Rating: up to 73A

Φ Inductance Range: .405μH to 6.2μH

		Electrical Specifications @ 25°C — Operating Temperature -40°C to +130°C ⁸						
Part Number ^{5,7}	Inductance @ Irated (µH ±15%)	Irated ¹ (Apc)	$DCR(m\Omega)$		Inductance @ 0 Apc	Saturation Current ²		Heating ³ Current
			TYP	MAX	(μH ±15%)	25°C	100°C	(A)
-Turn (Low - Loss) Series								
PL10100	0.45	73	.38	.48	0.45	95	80	73
PL10101	0.63	54	.38	.48	0.65	63	53	73
PL10102	0.85	39	.38	.48	0.91	46	37	73
PL10103	1.05	30	.38	.48	1.10	35	30	73
PL10104	1.25	25	.38	.48	1.30	29	26	73
PL10105	1.45	21	.38	.48	1.50	24	22	73
-Turn Series								
PL10106	0.45	52	.78	.98	0.45	95	80	52
PL10107	0.63	52	.78	.98	0.65	63	53	52
PL10108	0.85	39	.78	.98	0.91	46	37	52
PL10109	1.05	30	.78	.98	1.10	35	30	52
PL10110	1.25	25	.78	.98	1.30	29	26	52
PL10111	1.45	21	.78	.98	1.50	24	22	52
-Turn Series								
PL10112	0.95	42	1.15	1.43	1.0	68	54	42
PL10113	1.40	36	1.15	1.43	1.5	43	35	42
PL10114	1.90	25	1.15	1.43	2.0	29	25	42
PL10115	2.40	20	1.15	1.43	2.5	23	21	42
PL10116	2.80	15	1.15	1.43	3.0	18	16	42
PL10117	3.40	12	1.15	1.43	3.5	15	13	42
-Turn Series								
PL10118	1.60	37	1.44	1.80	1.60	55	43	37
PL10119	2.40	30	1.44	1.80	2.42	35	27	37
PL10120	3.30	17	1.44	1.80	3.60	20	18	37
PL10121	4.00	14	1.44	1.80	4.40	16	15	37
PL10122	4.90	11	1.44	1.80	5.34	13	12	37
PL10123	5.80	9	1.44	1.80	6.20	11	10	37

NOTES:

- which value is lower.
- 2. The saturation current is the current which causes the inductance to drop by 15% 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)
- 3. The heating current is the DC current which causes the temperature of the part to increase by approximately 45°C. This current is determined by mounting the component on a PCB with .25" wide, 2 oz. equivalent copper traces, and applying the current to the device for 30 minutes with no forced air cooling.
- 1. The rated current as listed is either 85% of the saturation current or the heating current, depending on 4. 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. In order to determine the approximate total losses (or temperature rise) for a given application, the total copper and core losses should be taken into account. For approximate value of core losses, in a given application, use the core loss graph on page 24.
 - 5. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PL10118 becomes PL10118T). Pulse complies to industry standard tape and reel specification EIA481.
 - 6. Meets solderability test per IPC/EIA J-STD-002B using flux type ORLO.
 - 7. The temperature of the component (ambient plus temperature rise) must be within the stated opeating temperature range.

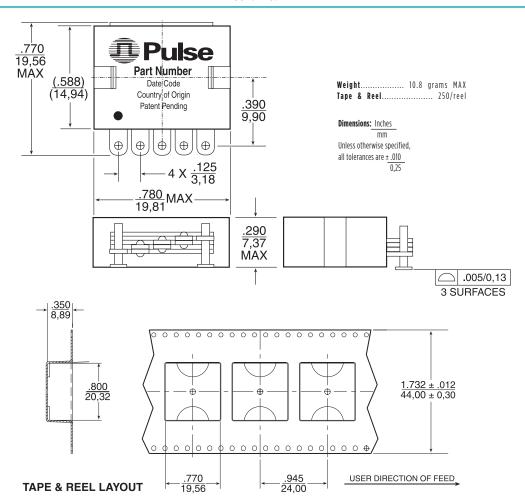
pulseelectronics.com M194.B (1/13)

Military/Aerospace Grade

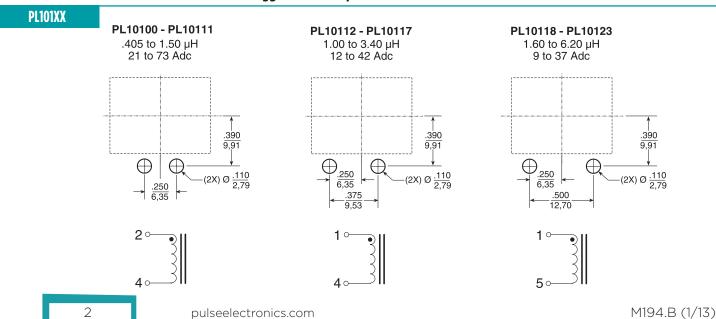


Mechanical

PL101XX



Suggested Pad Layouts and Schematics

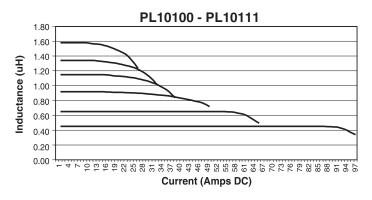


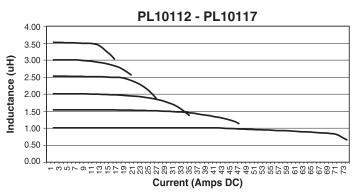
Military/Aerospace Grade

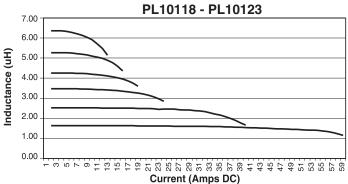


Inductance vs. Current Characteristics (25°C)

PL101XX

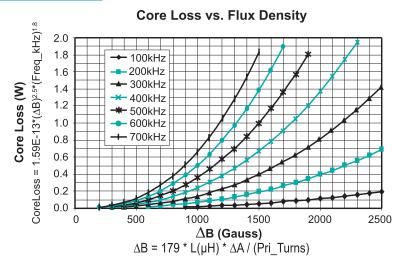




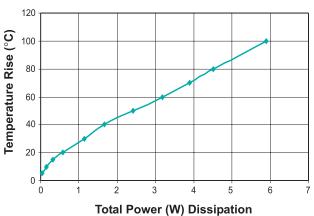


Measurements Charts

PL101XX



Temperature Rise vs. Power (W) Dissipation



Total Power Dissipation = Copper Loss (W) + Core Loss (W)

Copper Loss (W) = Current (rms) 2 * DCR (m Ω) / 1000 Core Loss (W) = per table

3 pulseelectronics.com M194.B (1/13)

Military/Aerospace Grade



For More Information

Pulse North America Pulse Europe Pulse China Headquarters Pulse North China Pulse South Asia Pulse North Asia B402, Shenzhen Academy of Headquarters Zeppelinstrasse 15 Room 2704/2705 135 Joo Seng Road 3F No. 198, Zhongyuan Road Two Pearl Buck Court 71083 Herrenberg Aerospace Technology Bldg. Super Ocean Finance Ctr. #03-02 Zhongli City Bristol, PA 19007 Germany 10th Kejinan Road 2067 Yan An Road West PM Industrial Bldg. Taoyuan County (32068) U.S.A. Singapore 368363 High-Tech Zone Shanghai 200336 Taiwan Nanshan District China Shenzen, PR China 518057 Tel: 215 781 6400 Tel: 49 7032 7806 0 Tel: 86 755 33966678 Tel: 86 21 62787060 Tel: 65 6287 8998 Tel: 886 3 4356768 Fax: 215 781 6403 Fax: 49 7032 7806 12 Fax: 86 755 33966700 Fax: 86 2162786973 Fax: 65 6287 8998 Fax: 886 3 4356823

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, 2013. Pulse Electronics, Inc. All rights reserved.

4 pulseelectronics.com M194.B (1/13)