

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# SMT POWER INDUCTORS

## Shielded Drum Core - PL91XX Series



-  **Height:** 0.248 inches (6.3mm) Max
-  **Footprint:** 0.413 inches x 0.413 inches (10.5mm x 10.5mm) Max
-  **Inductance Range:** 0.96µH to 879µH
-  **Current Rating:** up to 10.5A

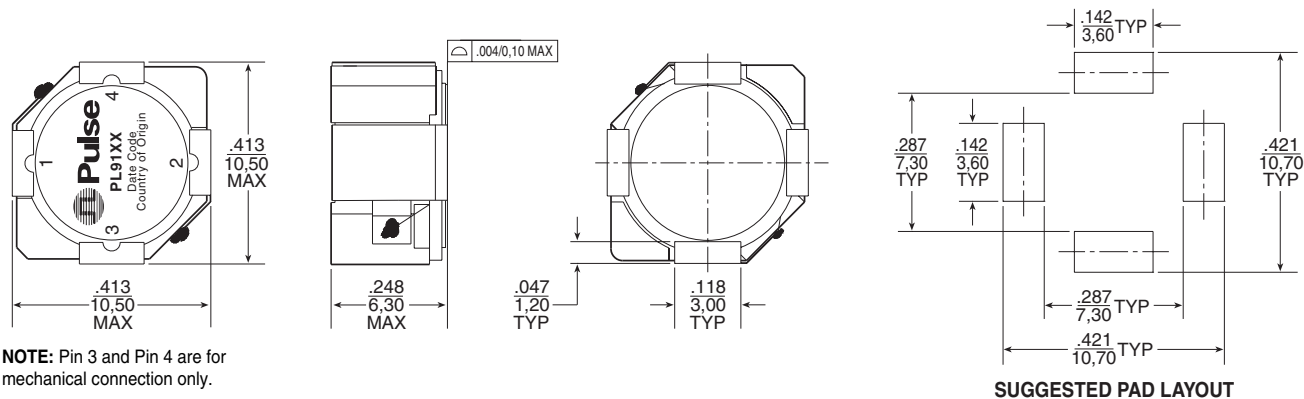
### Electrical Specifications @ 25°C — Operating Temperature -55°C to +130°C

Part Numbers	Inductance @I <sub>rated</sub> (µH TYP)	I <sub>rated</sub> <sup>2</sup> (A)	DCR (mΩ)		Inductance @0A <sub>dc</sub> (µH)	Saturation <sup>3</sup> Current (A) @25°C	Heating <sup>4</sup> Current (A)
			TYP	MAX			
PL9101	0.96	10.5	3.2	4.5	1.0*	12.7	10.5
PL9102	1.52	9.5	3.9	5.5	1.8*	10.1	9.5
PL9103	2.34	7.8	5.5	7.8	2.7*	8.4	7.8
PL9104	3.27	6.7	7.7	11.0	3.9*	7.2	6.7
PL9105	4.39	5.6	11.0	15.6	5.1*	6.3	5.6
PL9106	5.54	5.2	12.6	18.0	6.8*	5.6	5.2
PL9107	6.73	5.0	14.0	20.0	8.2*	5.1	5.0
PL9108	8.19	4.6	16	22	10	4.6	4.8
PL9109	9.9	4.2	20	27	12	4.2	4.3
PL9110	13.4	3.6	22	30	15	3.6	4.0
PL9111	15.4	3.4	31	40	18	3.4	3.4
PL9112	17.6	3.2	35	45	22	3.2	3.2
PL9113	22.5	2.8	47	62	27	2.8	2.8
PL9114	28.5	2.5	53	70	33	2.5	2.6
PL9115	31.4	2.4	55	75	39	2.4	2.5
PL9116	38.4	2.2	76	100	47	2.2	2.2
PL9117	48.3	1.9	87	110	56	1.9	2.1
PL9118	55.9	1.8	95	120	68.0	1.8	2.0
PL9119	67.6	1.7	133	178	82.0	1.7	1.7
PL9120	86.1	1.4	175	230	100.0	1.4	1.5
PL9121	103	1.3	192	253	120.0	1.3	1.4
PL9122	121	1.2	216	280	150.0	1.2	1.3
PL9123	149	1.1	242	310	180.0	1.1	1.2
PL9124	186	1.0	318	400	220.0	1.0	1.05
PL9125	224	0.91	370	460	270	0.91	0.96
PL9126	279	0.82	520	690	330	0.82	0.84
PL9127	335	0.72	571	760	390	0.72	0.80
PL9128	398	0.68	638	850	470	0.68	0.77
PL9129	464	0.63	844	1060	560	0.63	0.66
PL9130	563	0.57	943	1200	680	0.57	0.63
PL9131	681	0.52	1054	1550	820	0.52	0.60
PL9132	879	0.46	1418	1750	1000	0.46	0.50

\*Inductance at 0A<sub>dc</sub> tolerance on indicated part numbers is ±30%; tolerance is ±20% on all other parts. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PL9101 becomes PL9101T).

**NOTES FROM TABLE:** (See back page)

## Mechanical



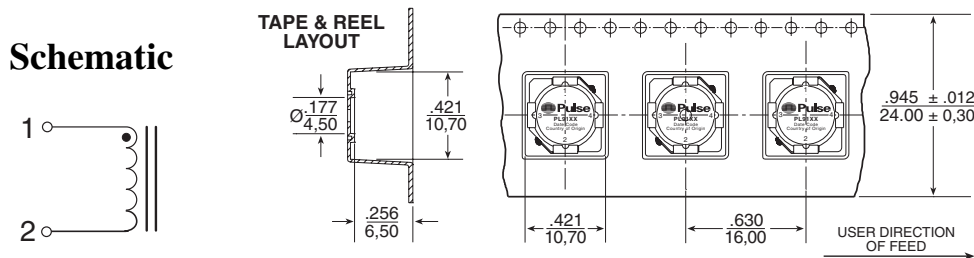
# SMT POWER INDUCTORS

## Shielded Drum Core - PL91XX Series



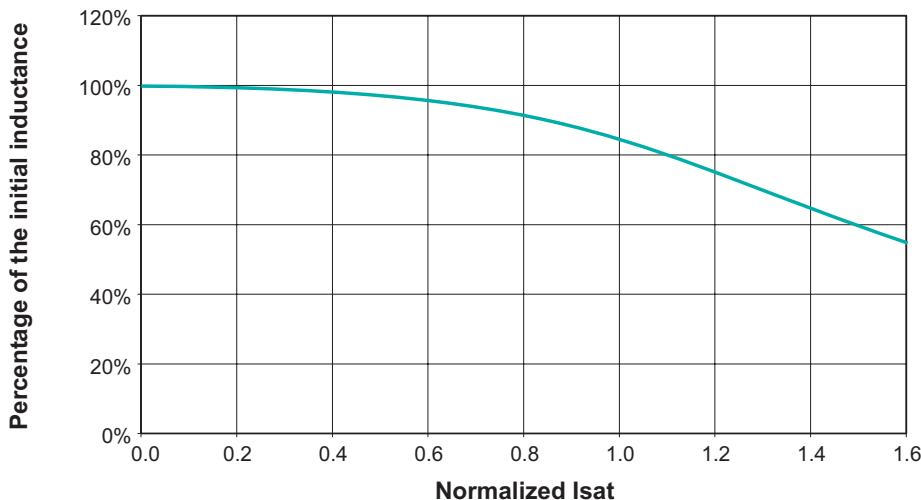
### Notes from Tables

1. Temperature of the component (ambient plus temperature rise) must be within specified operating temperature range.
2. The rated current as listed is either the saturation current or the heating current depending on which value is lower.
3. The saturation current is the current which causes the inductance to drop to 75% of its initial inductance at zero bias. This current is determined by placing the component at room ambient (25°C), and applying a short duration pulse current (to eliminate self-heating effects) to the component.
4. The heating current is the DC current, which causes the temperature of the part to increase by approximately 40°C. This current is determined by extending the terminals of the component with 30mm length 28 gauge buss wires and applying the current to the device for 30 minutes. The temperature is measured by placing the thermocouple between the winding and the shield.
5. 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 loss (or temperature rise) for a given application, both copper losses and core losses should be taken into account.



Weight . . . . . 2.5 grams  
 Tape & Reel . . . . . 500/reel  
 Dimensions: Inches  
                   mm  
 Unless otherwise specified,  
 all tolerances are  $\pm \frac{.010}{0,25}$

### Inductance vs Current Characteristics



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