

SMT Power Inductors

Toroid - Bobcat Series



-  **Height:** 5.5mm Max
-  **Footprint:** 12.7mm x 12.7mm Max
-  **Current Rating:** up to 3.8A
-  **Inductance Range:** 9.4μH to 439μH

Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C¹¹

Part Number	Inductance @ I _{rated} (μH)	I _{rated} (A)	DCR (m Ω)		ET (V-μsec)	Inductance @ OADC (μH ±20%)	100 Gauss ET ₁₀₀ (V-μsec)	1 Amp DC H ₁ (Orsted)
			TYP	MAX				
P0144NL	9.4	3.80	27	31	15.2	10.4	2.65	11.95
P0145NL	13.3	3.13	40	46	18.8	14.6	3.13	14.12
P0146NL	23	2.43	65	75	24.3	25	4.10	18.46
P0147NL	50	1.65	121	139	37.0	56	6.15	27.69
P0148NL	75	1.35	181	208	44.3	83	7.47	33.67
P0149NL	90	1.23	246	283	49.2	100	8.19	36.93
P0150NL	137	0.99	387	445	59.4	152	10.12	45.61
P0151NL	200	0.81	585	673	71.3	220	12.17	54.85
P0152NL	305	0.65	845	972	85.8	331	14.94	67.34
P0153NL	439	0.53	1322	1520	99.6	472	17.83	80.37

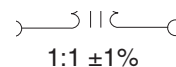
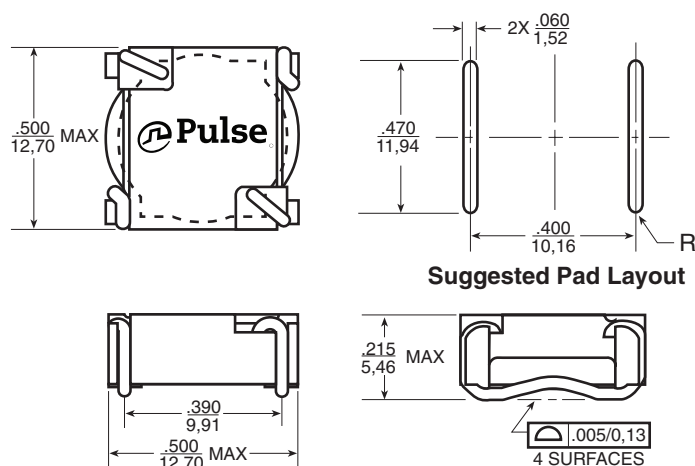
Notes:

- Temperature rise is 50°C in typical buck or boost circuits at 250kHz and with the reference ET applied to the inductor.
- Total loss in the inductor is 380mW for 50°C temperature rise above ambient.
- To estimate temperature rise in a given application, determine copper and core losses, divide by 380 and multiply by 50.
- For the copper loss (mW), calculate $IDC^2 * RN$.
- For core loss (mW), using frequency (f in Hertz) and operating flux density (B in Gauss), calculate $6.11 * 10^{-18} * B^{2.7} * f^{2.04}$
- For flux density (B in Gauss), calculate ET (V-sec) for the application, divide by ET₁₀₀ from the table, and multiply by 100. Limit the DC bias (H) to 46 orsted. Calculate H by multiplying H₁ from the table IDC of the application.
- Limit the DC bias (H) to 46 orsted. Calculate H by multiplying H₁ from the table by I_{dc} of the application.
- Optional Tape & Reel application packaging can be ordered by adding a "T" suffix to the part number (i.e. P0144NL becomes P0144NLT). 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.
- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

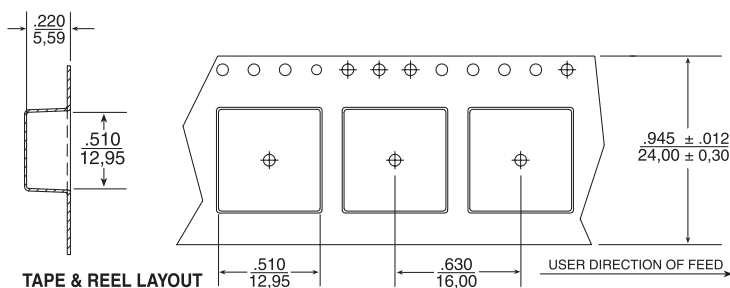
Mechanical

Schematic

PXXXXXNL



Weight1.5grams
Tape & Reel500/reel
Tube40/tube
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are: $\pm \frac{0,10}{0,25}$



For More Information

Pulse Worldwide Headquarters

15255 Innovation Drive Ste 100
San Diego, CA 92128
U.S.A.

Pulse Europe

Pulse Electronics GmbH
Am Rottland 12
58540 Meinerzhagen
Germany

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

Pulse North China

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

Pulse South Asia

3 Fraser Street 0428
DUO Tower
Singapore 189352

Pulse North Asia

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

Tel: 858 674 8100
Fax: 858 674 8262

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

Tel: 86 755 33966678
Fax: 86 755 33966700

Tel: 86 21 62787060
Fax: 86 21 62786973

Tel: 65 6287 8998
Fax: 65 6280 0080

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.

单击下面可查看定价，库存，交付和生命周期等信息

[>>Pulse\(普思\)](#)