

Low Rdc, High Idc, Small Power Inductor

PLN4018 / 5018 Series

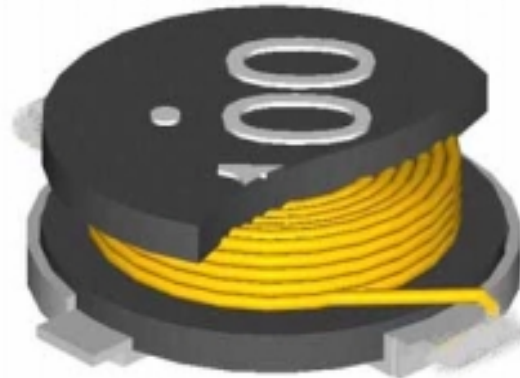


No Resin Base, Pb-Free

SIZE : L4.0xW4.0xT1.8mm MAX
L5.0xW5.0xT1.8mm MAX

Application

- Cellular, GSM Phone,
- Digital Camera,
- Digital Video Camera,
- MD, MP3-Player,
- HDD, DVC, PDA, etc.



For Every kind of small hand-held electrical equipment

It provides a High efficiency through Advanced Technology

Low Power consumption and It needed small mount space.



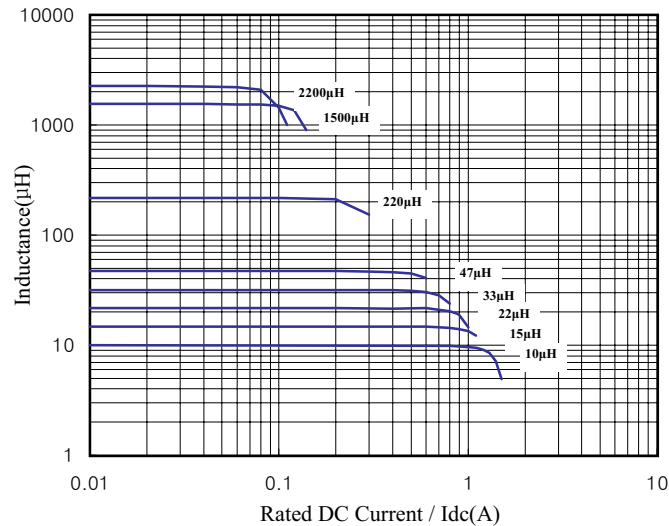
Application Circuit

- Power regulator of small Hand-held electrical equipment.
- Step-Down Converter/EL-Display and
- Boost Voltage Coil for Every Display Panel, etc.

- 1 Low Power Consumption**
PLN Series are designed **Low Rdc**
- 2 High Current Performance**
PLN Series are designed **High DC Rated Current** from the efficient Ferrite Core, 10 μ H's Idc is 900mA, Rdc is 0.22 Ω <PLN4018Type>
10 μ H's Idc is 1.1A, Rdc is 0.15 Ω <PLN5018Type>
- 3 An Ideal Product Structure**
PLN Series are designed simple of **just 3-Materials**,
Core, Frame and Wire.
- 4 It Provides a High Intuctance**
PLN Series provide a Wide Range Inductance
PLN Series are available for **3.3 μ H~2.2mH**
- 5 Pb-Free Product, Affinity Environment**
PLN Series are designed not contained any of environment load material and No resin Base.
- 6 We added Cost-Merit** according to the Automatic Product Line in QingTao TDK in CHINA.
PLN Series provides an Optimized Costs to the Costomer.

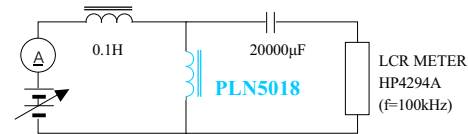
Low Profile Surface Mount Power Inductors, PLN5018 series

Inductance vs. DC Superposition Characteristics



PLN5018

TEST CIRCUIT



SPECIFICATIONS

OPERATING TEMP. [Include Self-Temp. Rise]	-20 ~ +85°C
STORAGE TEMP. [UNIT of Products]	-40 ~ +85°C

ELECTRICAL CHARACTERISTICS

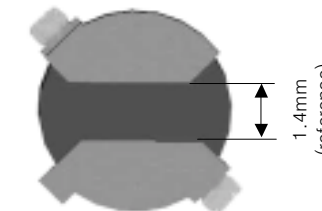
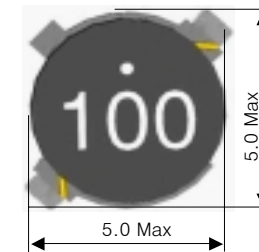
PRODUCT NO.	Inductance(µH)	DC Resistance(Ω)		DC Current*(mA)	
	L(at 100KHz)	Rdc(Ω)		Idc-1(max.)	Idc-2(typ.)
PLN5018T- 100M1R1	10 ±20%	0.15	±20%	1100	1300
PLN5018T- 150MR90	15 ±20%	0.22	±20%	900	1160
PLN5018T- 220MR70	22 ±20%	0.29	±20%	700	890
PLN5018T- 330MR60	33 ±20%	0.43	±20%	600	773
PLN5018T- 470MR50	47 ±20%	0.60	±20%	500	680
PLN5018T- 221MR20	220 ±20%	3.10	±20%	200	260
PLN5018T- 152MR08	1500 ±20%	24.0	±20%	100	81
PLN5018T- 222MR06	2200 ±20%	32.0	±20%	80	67

*Value obtained when current flows and the temperature has risen to 30°C or when DC current flows and the initial value of inductance fallen by 10%, whichever is smaller.

TEST Equipments

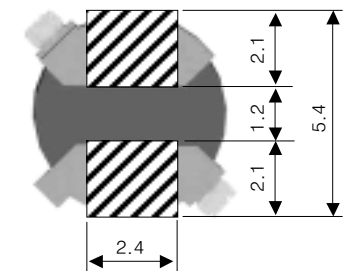
- L: HP4294A(40Hz~110MHz) Precision Impedance Analyzer at 100kHz
- Rdc : Digital milliohm Meter VP-2941A

SHAPES and DIMENSIONS

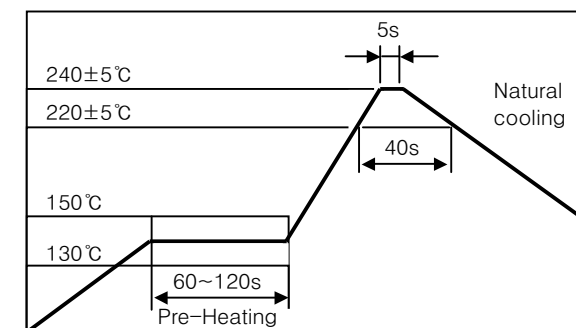


Dimensions in mm

Land Pattern- Reflow (Recommand)



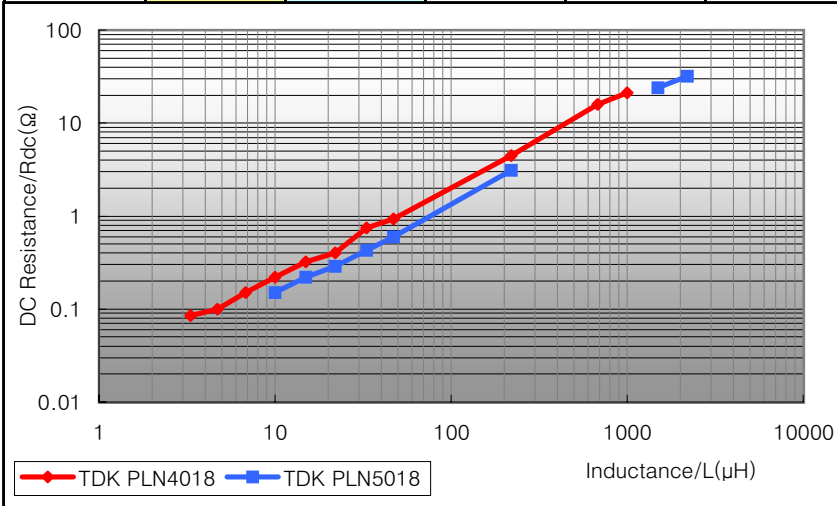
RECOMMEND REFLOW CONDITION



Technical Data Comparison of Low Profile Inductors

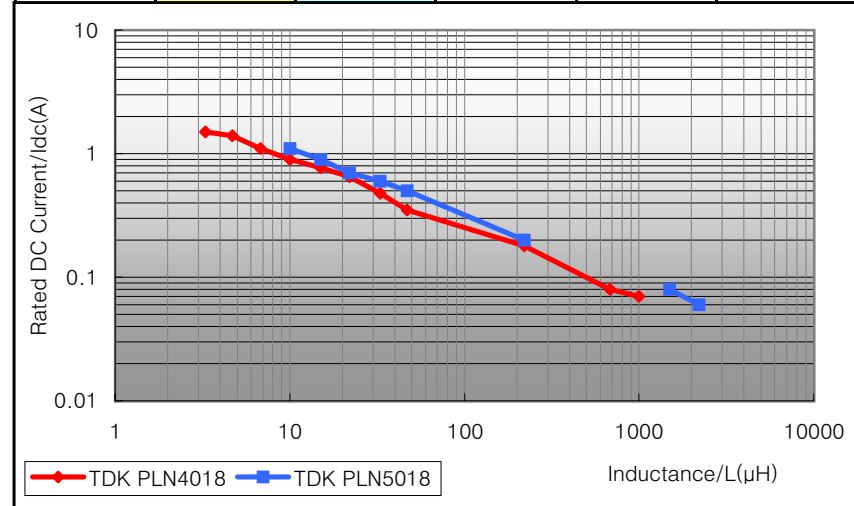
The Characteristic of Rdc(Ω)

L(μ H)	P/N	PLN4018	PLN5018
3.3		0.085	
4.7		0.10	
6.8		0.15	
10		0.22	0.15
15		0.32	0.22
22		0.40	0.29
33		0.75	0.43
47		0.93	0.6
220		4.50	3.1
680		16.00	
1000		21.00	
1500			24
2200			32



The Characteristic Idc(A)

L(μ H)	P/N	PLN4018	PLN5018
3.3		1.5	
4.7		1.4	
6.8		1.1	
10		0.9	1.1
15		0.77	0.9
22		0.65	0.7
33		0.48	0.6
47		0.35	0.5
220		0.18	0.2
680		0.08	
1000		0.07	
1500			0.08
2200			0.06



The Comparison of the Inductance Ranges

Name	3.3 μ H	4.7 μ H	6.8 μ H	10 μ H	15 μ H	22 μ H	33 μ H	47 μ H	220 μ H	680 μ H	1000 μ H	1500 μ H	2200 μ H
PLN4018	○	○	○	○	○	○	○	○	○	○	○		
PLN5018				○	○	○	○	○	○			○	○