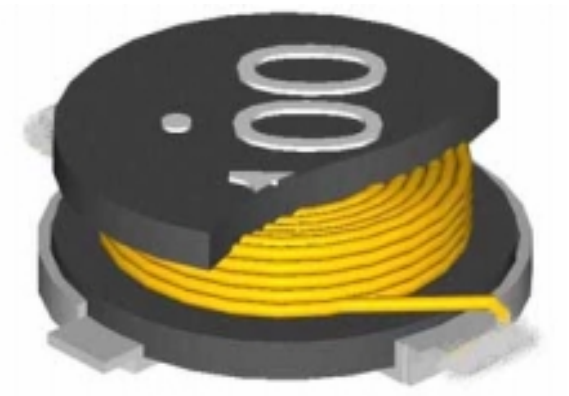
## Low Rdc, High Idc, Small Power Inductor

# PLN4018 /5018 Series

Pb Free

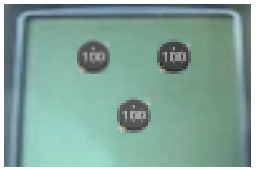
No Resin Base, Pb-Free

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, 10µH's Idc is 900mA, Rdc is 0.22Ω <PLN4018Type>
10µH's Idc is 1.1A, Rdc is 0.15Ω <PLN5018Type>

**3** An **Ideal Product Structure**
PLN Series are designed simple of **just 3-Meterials,**
Core, Frame and Wire.

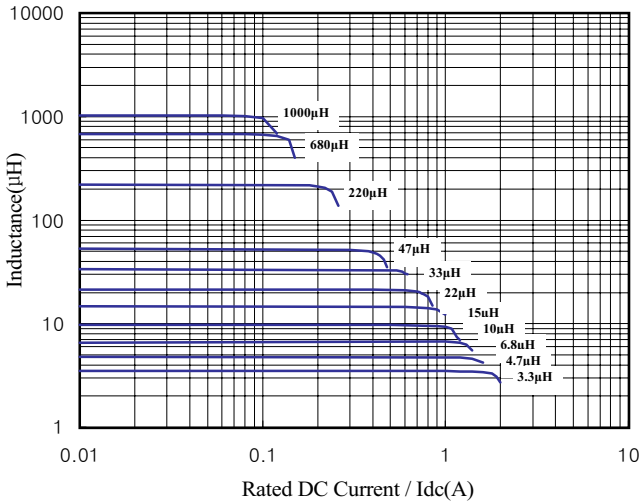
**4** It Provids a **High Intuctance**
PLN Series provide a Wide Range Inductance
PLN Series are available for **3.3µH~2.2mH**

**5 Pb-Free Product, Affinity Environment**
PLN Series are designed not contained any of environment load meterial and No resin Base.

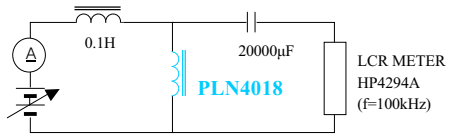
**6** We added **Cost-Merit** according to the Automatic Product Line in QingTao TDK in CHINA.
PLN Series provides an Optimized Costs to the Costomer.

# PLN4018

## Inductance vs. DC Superposition Characteristics



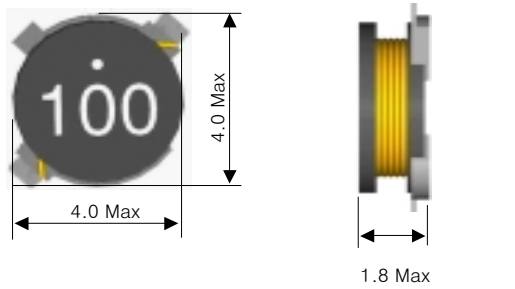

## TEST CIRCUIT




## SPECIFICATIONS

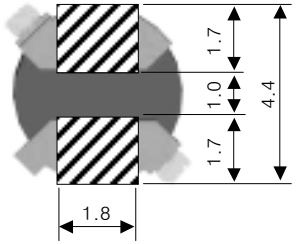
| | |
|---|---|
| OPERATING TEMP. [Include Self-Temp. Rise] | -20 ~ +85℃ |
| STORAGE TEMP. [UNIT of Products] | -40 ~ +85℃ |

## SHAPES and DIMENSIONS




Dimensions in mm

## Land Pattern-Reflow (Recommand)




## ELECTRICAL CHARACTERISTICS

| PRODUCT NO. | Inductance(μH) L(at 100KHz) | DC Resistance(Ω) Rdc(Ω) | DC Current*(mA) Idc-1(max.) | Idc-2(typ.) |
|---|---|---|---|---|
| PLN4018T- 3R3M1R5 | 3.3 ±20% | 0.085 ±20% | 1750 | 1530 |
| PLN4018T- 4R7M1R4 | 4.7 ±20% | 0.10 ±20% | 1400 | 1400 |
| PLN4018T- 6R8M1R1 | 6.8 ±20% | 0.15 ±20% | 1250 | 1130 |
| PLN4018T- 100MR90 | 10 ±20% | 0.22 ±20% | 900 | 1040 |
| PLN4018T- 150MR77 | 15 ±20% | 0.32 ±20% | 800 | 779 |
| PLN4018T- 220MR65 | 22 ±20% | 0.40 ±20% | 650 | 730 |
| PLN4018T- 330MR48 | 33 ±20% | 0.75 ±20% | 480 | 537 |
| PLN4018T- 470MR35 | 47 ±20% | 0.93 ±20% | 350 | 488 |
| PLN4018T- 221MR18 | 220 ±20% | 4.50 ±20% | 220 | 185 |
| PLN4018T- 681MR08 | 680 ±20% | 16.0 ±20% | 120 | 83 |
| PLN4018T- 102MR07 | 1000 ±20% | 21.0 ±20% | 100 | 72 |

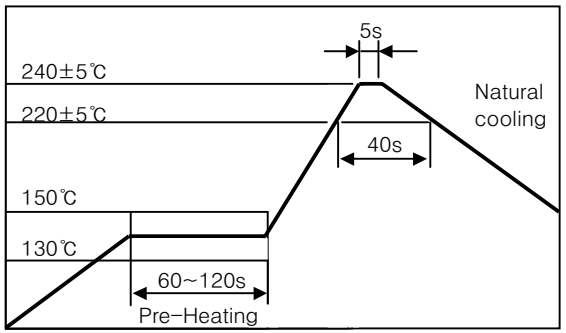
*Value obtained when current flows and the temperature has risen to 30℃ or
when DC current flows and the initial value of inductance fallen by 10%, whichever is smaller.

TEST Equipments

L: HP4294A(40Hz~110MHz) Precision Impedance Analyzer at 100kHz

Rdc : Digital milliohm Meter VP-2941A

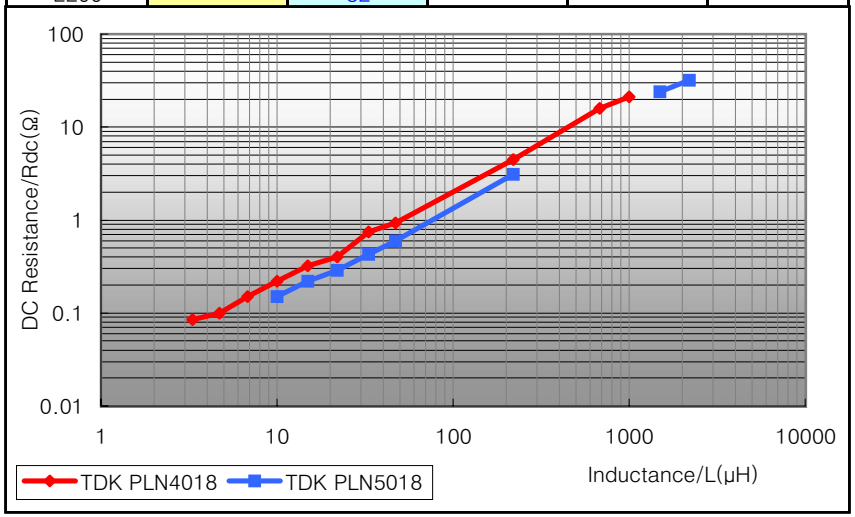
## RECOMMEND REFLOW CONDITION



# Technical Data Comparison of Low Profile Inductors

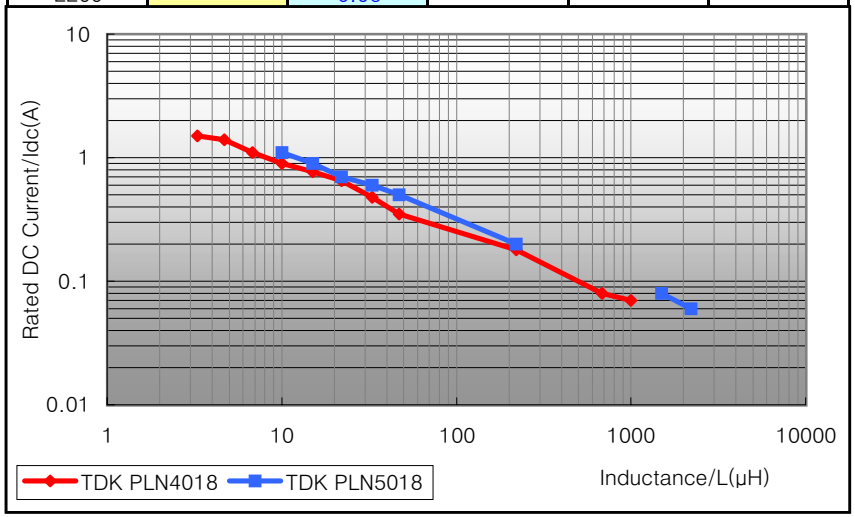
## The Characteristic of Rdc(Ω)

| P/N / L(μH) | 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 Characterristic Idc(A)

| P/N / L(μH) | 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 | 3.3μH | 4.7μH | 6.8μH | 10μH | 15μH | 22μH | 33μH | 47μH | 220μH | 680μH | 1000μH | 1500μH | 2200μH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PLN4018 | O | O | O | O | O | O | O | O | O | O | O | | |
| PLN5018 | | | | O | O | O | O | O | O | | | O | O |