

# PIN Power Inductor RCR1010



## Description

- Ferrite drum core construction.
- Magnetically shielded.
- L × W × H: 10.5 × 10.5 × 10.5mm Max.
- Product weight: 2.9 g(Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.

## Environmental Data

- Operating temperature range: -40°C ~ +85°C (including coil's self temperature rise)
- Storage temperature range: -40°C ~ +85°C

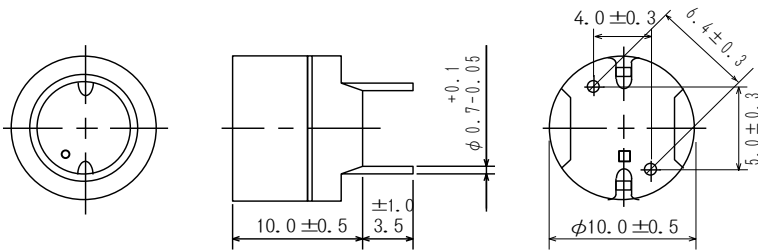
## Packaging

- Box packaging.

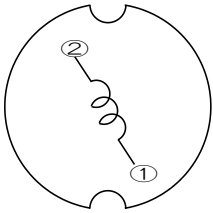
## Applications

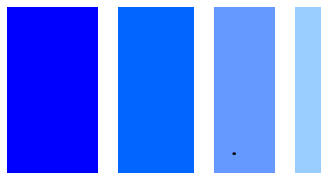
- Ideally used in Printers, LCD TV, DVD, Copy Machine, Mainboard of the compounding machines etc. as DC-DC Converter inductors.

## Dimension - [mm]



## Schematics - [mm]





### Electrical Characteristics

| Part Name      | Stamp | Inductance<br>( $\mu\text{H}$ )<br>[Within] ※1 | D.C.R. (m $\Omega$ )<br>Max. (Typ.)<br>(at 20°C) | Saturation Current<br>(A) ※2 |            | Temperature<br>Rise current<br>(A) ※3 |
|----------------|-------|--|--|------------------------------|------------|---------------------------------------|
|                |       |  |  | (at 20°C)                    | (at 105°C) |                                       |
| RCR1010NP-100M | 100M  | 10 $\mu\text{H} \pm 20\%$                      | 25.1(20.1)                                       | 4.8                          | 3.8        | 4.3                                   |
| RCR1010NP-120M | 120M  | 12 $\mu\text{H} \pm 20\%$                      | 26.6(21.3)                                       | 4.5                          | 3.5        | 4.2                                   |
| RCR1010NP-150M | 150M  | 15 $\mu\text{H} \pm 20\%$                      | 31.3(25.1)                                       | 4.0                          | 3.2        | 4.1                                   |
| RCR1010NP-180M | 180M  | 18 $\mu\text{H} \pm 20\%$                      | 33.8(27.1)                                       | 3.8                          | 2.9        | 4.0                                   |
| RCR1010NP-220M | 220M  | 22 $\mu\text{H} \pm 20\%$                      | 38.3(30.6)                                       | 3.4                          | 2.6        | 3.8                                   |
| RCR1010NP-270M | 270M  | 27 $\mu\text{H} \pm 20\%$                      | 40.9(32.7)                                       | 3.0                          | 2.5        | 3.6                                   |
| RCR1010NP-330M | 330M  | 33 $\mu\text{H} \pm 20\%$                      | 53.8(43.1)                                       | 2.7                          | 2.2        | 3.2                                   |
| RCR1010NP-390M | 390M  | 39 $\mu\text{H} \pm 20\%$                      | 73.4(58.7)                                       | 2.5                          | 2.0        | 2.5                                   |
| RCR1010NP-470M | 470M  | 47 $\mu\text{H} \pm 20\%$                      | 102.1(81.7)                                      | 2.2                          | 1.8        | 2.2                                   |
| RCR1010NP-560M | 560M  | 56 $\mu\text{H} \pm 20\%$                      | 111.3(89.0)                                      | 2.1                          | 1.7        | 2.1                                   |
| RCR1010NP-680M | 680M  | 68 $\mu\text{H} \pm 20\%$                      | 137.5(110.0)                                     | 1.8                          | 1.4        | 1.9                                   |
| RCR1010NP-820M | 820M  | 82 $\mu\text{H} \pm 20\%$                      | 160.0(128.0)                                     | 1.7                          | 1.3        | 1.8                                   |
| RCR1010NP-101M | 101M  | 100 $\mu\text{H} \pm 20\%$                     | 175.3(140.2)                                     | 1.5                          | 1.2        | 1.7                                   |
| RCR1010NP-121M | 121M  | 120 $\mu\text{H} \pm 20\%$                     | 193.8(155.0)                                     | 1.4                          | 1.1        | 1.6                                   |
| RCR1010NP-151M | 151M  | 150 $\mu\text{H} \pm 20\%$                     | 225.6(180.5)                                     | 1.2                          | 1.0        | 1.5                                   |
| RCR1010NP-181M | 181M  | 180 $\mu\text{H} \pm 20\%$                     | 275.3(220.2)                                     | 1.1                          | 0.9        | 1.4                                   |
| RCR1010NP-221M | 221M  | 220 $\mu\text{H} \pm 20\%$                     | 313.0(250.5)                                     | 1.0                          | 0.8        | 1.3                                   |
| RCR1010NP-271M | 271M  | 270 $\mu\text{H} \pm 20\%$                     | 450.6(360.5)                                     | 0.95                         | 0.74       | 1.0                                   |
| RCR1010NP-331M | 331M  | 330 $\mu\text{H} \pm 20\%$                     | 500.6(400.5)                                     | 0.88                         | 0.64       | 0.98                                  |
| RCR1010NP-391M | 391M  | 390 $\mu\text{H} \pm 20\%$                     | 563.0(450.5)                                     | 0.78                         | 0.60       | 0.94                                  |
| RCR1010NP-471M | 471M  | 470 $\mu\text{H} \pm 20\%$                     | 748.8(599.0)                                     | 0.72                         | 0.58       | 0.80                                  |
| RCR1010NP-561M | 561M  | 560 $\mu\text{H} \pm 20\%$                     | 848.8(682.9)                                     | 0.68                         | 0.55       | 0.75                                  |
| RCR1010NP-681M | 681M  | 680 $\mu\text{H} \pm 20\%$                     | 1202(962.0)                                      | 0.60                         | 0.48       | 0.63                                  |
| RCR1010NP-821M | 821M  | 820 $\mu\text{H} \pm 20\%$                     | 1342(1074)                                       | 0.57                         | 0.45       | 0.60                                  |
| RCR1010NP-102M | 102M  | 1.0mH $\pm 20\%$                               | 1490(1192)                                       | 0.48                         | 0.39       | 0.55                                  |

※1. Inductance measuring condition: at 100kHz.

※2. Saturation current: The value of D.C. current when the inductance decreases to 80% of it's nominal value.

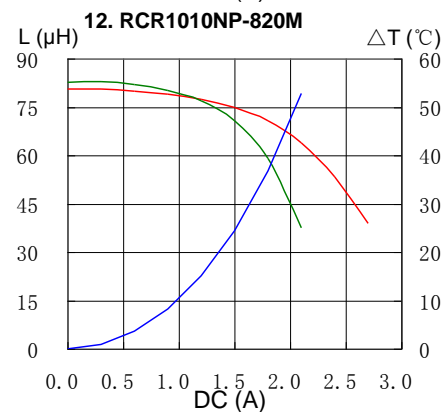
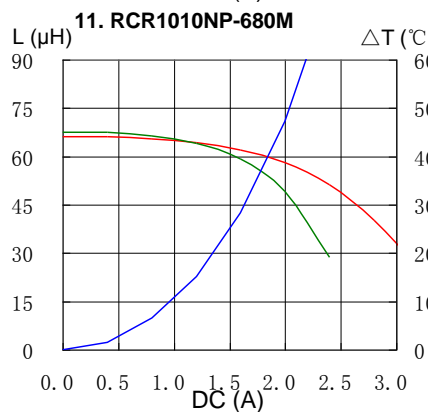
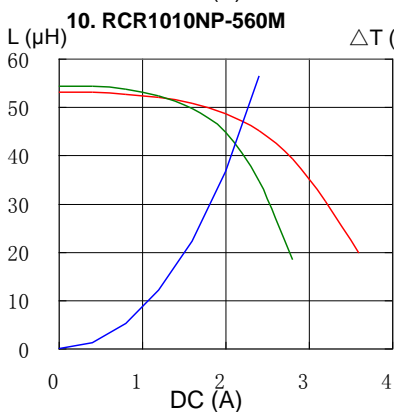
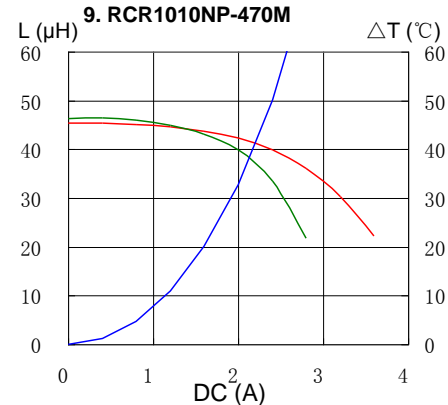
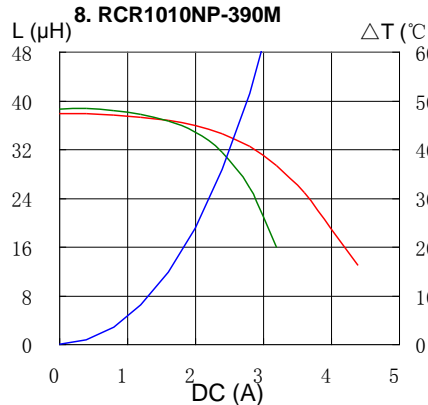
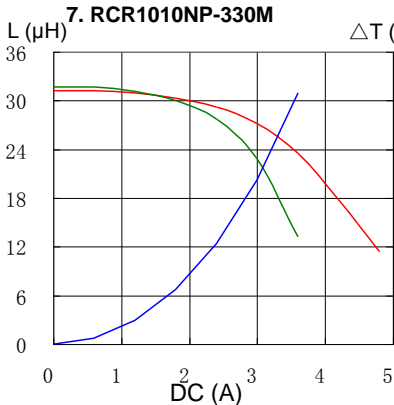
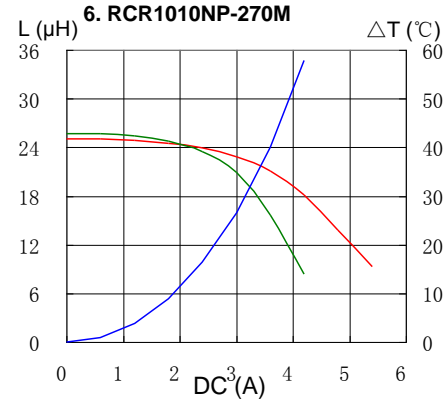
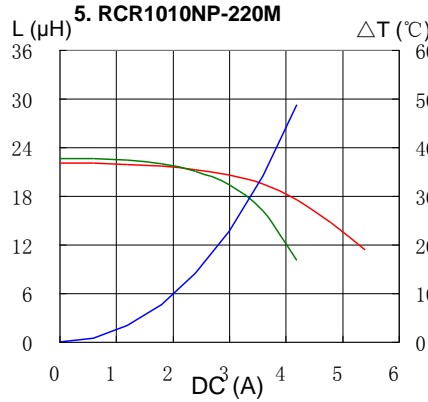
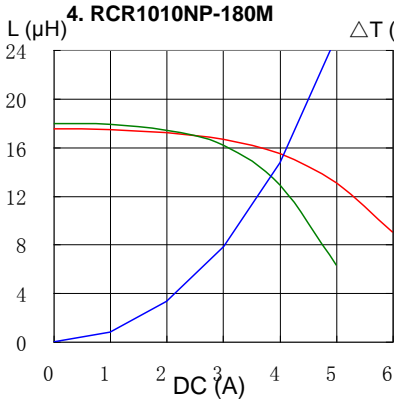
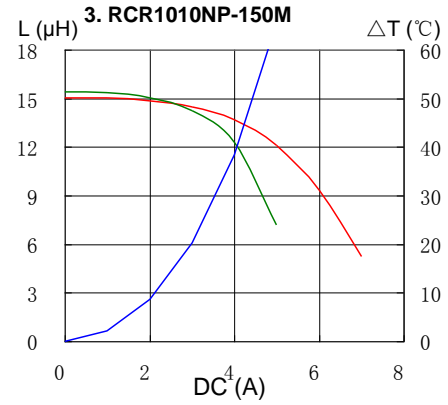
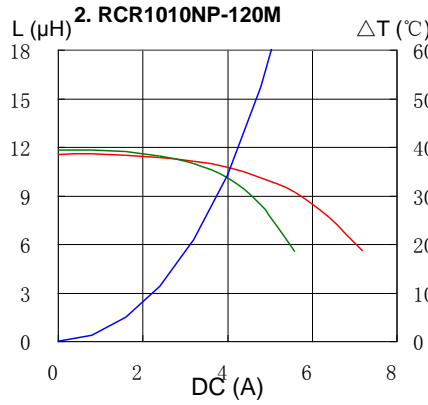
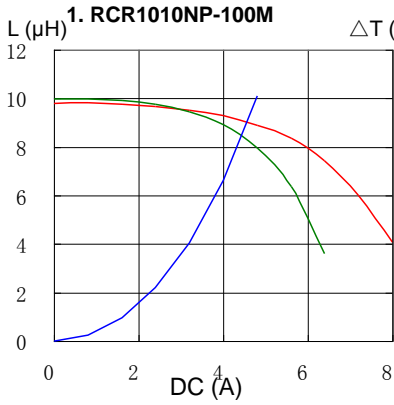
※3. Temperature rise current: The value of D.C. current when the temperature rise is  $\Delta t = 40^\circ\text{C}$  ( $T_a = 20^\circ\text{C}$ ).

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## Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) —  $\Delta T$

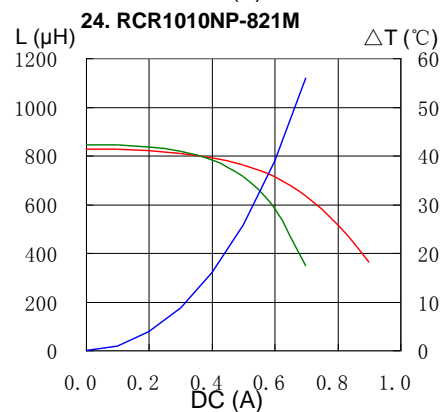
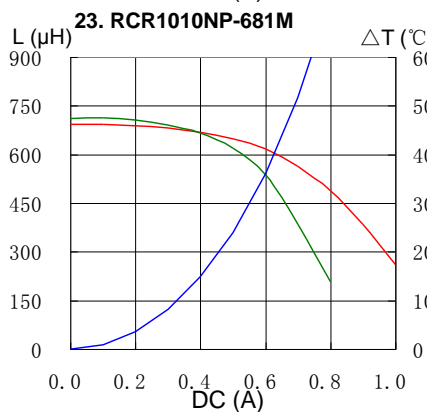
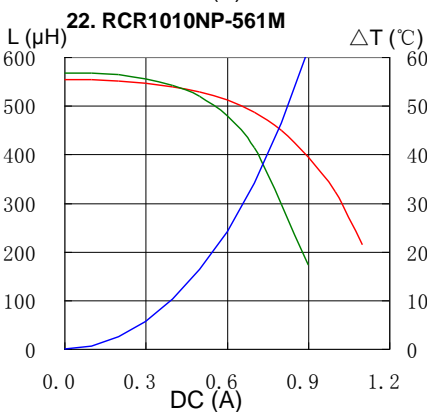
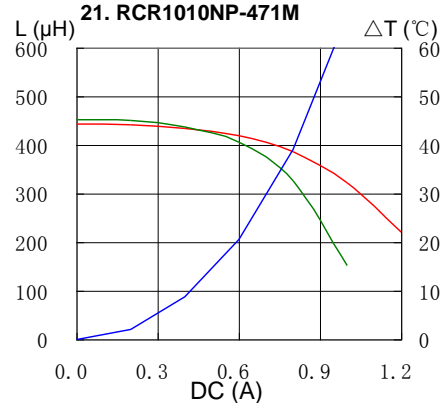
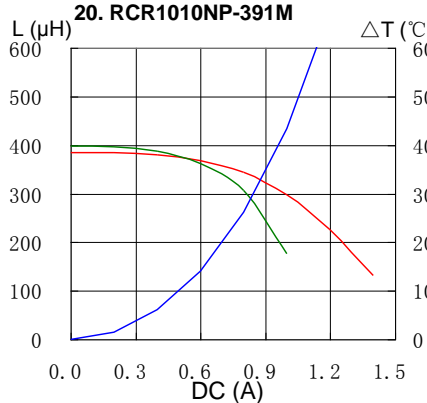
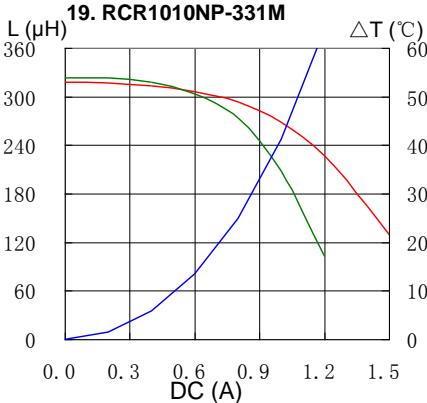
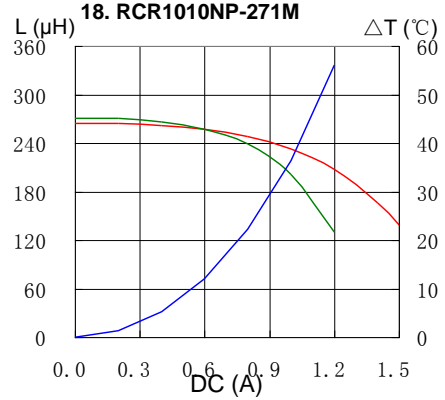
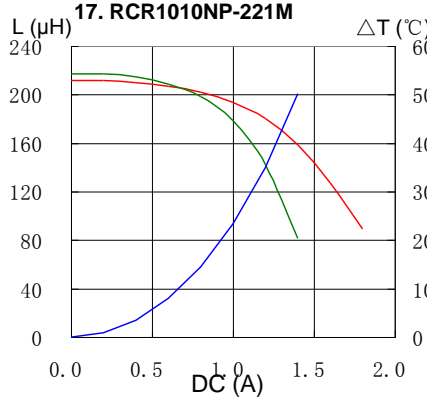
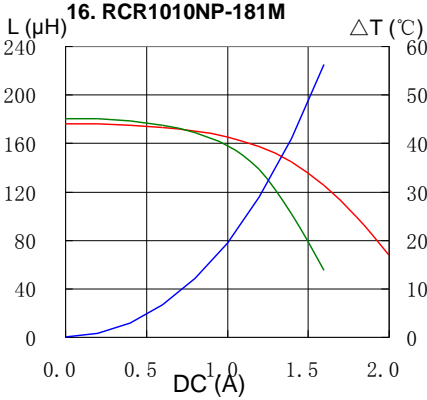
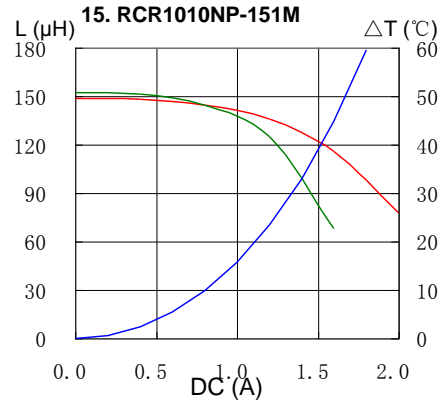
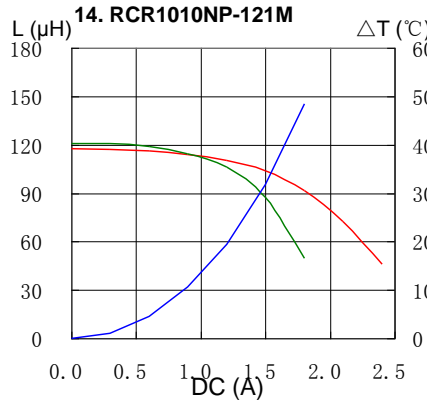
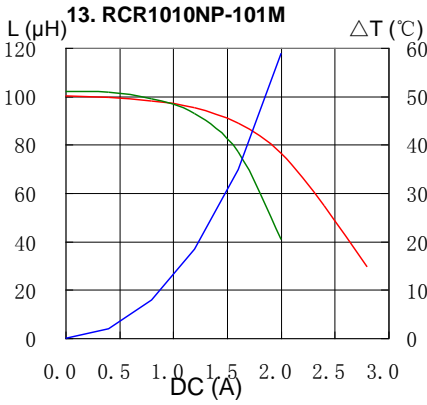


# PIN Power Inductor RCR1010



## Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) —  $\Delta T$

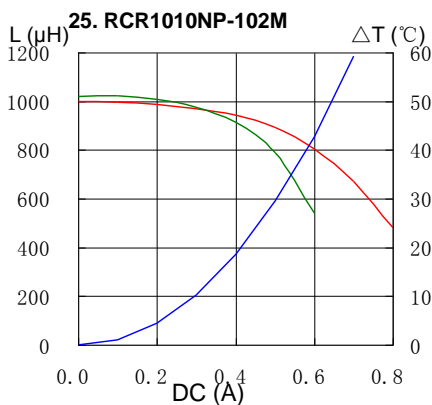


# PIN Power Inductor RCR1010



## Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) —  $\Delta T$



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