

# Pin type Power Inductor

## RCH114



### Description

- Ferrite drum core construction.
- Magnetically unshielded.
- LxWxH: 10.5x10.5x14.4mm Max.
- Product weight: 4.1 g(Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.



### Applications

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

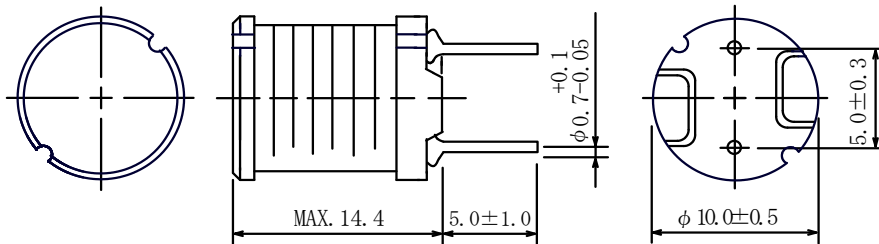
### Environmental Data

- Operating temperature range:  $-40^{\circ}\text{C} \sim +100^{\circ}\text{C}$   
(including coil's self temperature rise)
- Storage temperature range:  $-40^{\circ}\text{C} \sim +100^{\circ}\text{C}$

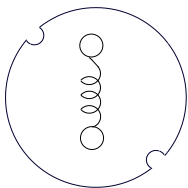
### Packaging

- Box packaging (100pcs/box).

### Dimensions - [mm]



### Schematics- [mm]



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### Electrical Characteristics

| Part No.        | Inductance<br>[Within]<br>( $\mu$ H)※1 | D.C.R( $\Omega$ )<br>Max.(Typ.) | Saturation<br>Current(A)※2<br>Max.(Typ.) 20°C | Temperature<br>rise current (A)<br>(Typ.) ※3 |
|-----------------|--|---------------------------------|---|--|
| RCH114NP-6R3MB  | 6.3 $\pm$ 20%                          | 26.0m (20.0m)                   | 8.20(9.20)                                    | (5.60)                                       |
| RCH114NP-7R5MB  | 7.5 $\pm$ 20%                          | 29.0m(22.0m)                    | 7.70(8.60)                                    | (5.40)                                       |
| RCH114NP-8R8MB  | 8.8 $\pm$ 20%                          | 30.0m(23.0m)                    | 7.00(7.80)                                    | (5.00)                                       |
| RCH114NP -100KB | 10 $\pm$ 10%                           | 33.0m(25.0m)                    | 6.70(7.50)                                    | (4.80)                                       |
| RCH114NP-120KB  | 12 $\pm$ 10%                           | 35.0m(27.0m)                    | 5.90(6.60)                                    | (4.60)                                       |
| RCH114NP -150KB | 15 $\pm$ 10%                           | 39.0m(30.0m)                    | 5.30(5.90)                                    | (4.40)                                       |
| RCH114NP-180KB  | 18 $\pm$ 10%                           | 47.0m(36.0m)                    | 4.90(5.50)                                    | (4.20)                                       |
| RCH114NP-220KB  | 22 $\pm$ 10%                           | 51.0m(39.0m)                    | 4.50(5.00)                                    | (4.00)                                       |
| RCH114NP -270KB | 27 $\pm$ 10%                           | 57.0m(44.0m)                    | 4.00(4.50)                                    | (3.70)                                       |
| RCH114NP -330KB | 33 $\pm$ 10%                           | 64.0m(49.0m)                    | 3.70(4.20)                                    | (3.60)                                       |
| RCH114NP-390KB  | 39 $\pm$ 10%                           | 74.0m(57.0m)                    | 3.30(3.70)                                    | (3.30)                                       |
| RCH114NP -470KB | 47 $\pm$ 10%                           | 83.0m(64.0m)                    | 3.00(3.40)                                    | (3.10)                                       |
| RCH114NP-560KB  | 56 $\pm$ 10%                           | 104m(80.0m)                     | 2.70(3.10)                                    | (2.70)                                       |
| RCH114NP-680KB  | 68 $\pm$ 10%                           | 117m(90.0m)                     | 2.50(2.80)                                    | (2.50)                                       |
| RCH114NP-820KB  | 82 $\pm$ 10%                           | 130m(100m)                      | 2.30(2.60)                                    | (2.40)                                       |
| RCH114NP-101KB  | 100 $\pm$ 10%                          | 143m(110m)                      | 1.90(2.20)                                    | (2.30)                                       |
| RCH114NP-121KB  | 120 $\pm$ 10%                          | 195m(150m)                      | 1.80(2.00)                                    | (2.10)                                       |
| RCH114NP-151KB  | 150 $\pm$ 10%                          | 221m(170m)                      | 1.70(1.90)                                    | (1.90)                                       |
| RCH114NP-181KB  | 180 $\pm$ 10%                          | 260m(200m)                      | 1.50(1.72)                                    | (1.80)                                       |
| RCH114NP-221KB  | 220 $\pm$ 10%                          | 350m(270m)                      | 1.30(1.50)                                    | (1.68)                                       |
| RCH114NP 271KB  | 270 $\pm$ 10%                          | 390m(300m)                      | 1.20(1.36)                                    | (1.50)                                       |
| RCH114NP-331KB  | 330 $\pm$ 10%                          | 520m(400m)                      | 1.10(1.22)                                    | (1.30)                                       |
| RCH114NP-391KB  | 390 $\pm$ 10%                          | 570m(440m)                      | 970m(1.08)                                    | (1.25)                                       |
| RCH114NP-471KB  | 470 $\pm$ 10%                          | 650m(500m)                      | 950m(1.05)                                    | (1.19)                                       |
| RCH114NP-561KB  | 560 $\pm$ 10%                          | 790m(610m)                      | 860m(950m)                                    | (1.04)                                       |
| RCH114NP-681KB  | 680 $\pm$ 10%                          | 960m(740m)                      | 780m(880m)                                    | (850m)                                       |
| RCH114NP-821KB  | 820 $\pm$ 10%                          | 1.22(940m)                      | 700m(780m)                                    | (790m)                                       |
| RCH114NP-102KB  | 1000 $\pm$ 10%                         | 1.60(1.30)                      | 620m(690m)                                    | (680m)                                       |

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|                |             |            |             |        |
|----------------|-------------|------------|-------------|--------|
| RCH114NP-122KB | 1200 ± 10%  | 2.20(1.80) | 580m(660m)  | (650m) |
| RCH114NP-152KB | 1500 ± 10%  | 2.50(2.00) | 550m(610m)  | (600m) |
| RCH114NP-182KB | 1800 ± 10%  | 2.90(2.30) | 500m(550m)  | (500m) |
| RCH114NP-222KB | 2200 ± 10%  | 3.20(2.60) | 430m(480m)  | (460m) |
| RCH114NP-272KB | 2700 ± 10%  | 3.70(3.00) | 390m(430m)  | (430m) |
| RCH114NP-332KB | 3300 ± 10%  | 5.00(4.00) | 360m(400m)  | (370m) |
| RCH114NP-392KB | 3900 ± 10%  | 5.60(4.50) | 320m(360m)  | (360m) |
| RCH114NP-472KB | 4700 ± 10%  | 7.40(5.90) | 310m(350m)  | (310m) |
| RCH114NP-562KB | 5600 ± 10%  | 8.20(6.60) | 280m(310m)  | (300m) |
| RCH114NP-682KB | 6800 ± 10%  | 11.9(9.50) | 250m(280m)  | (260m) |
| RCH114NP-822KB | 8200 ± 10%  | 14.0(11.0) | 230m(250m)  | (240m) |
| RCH114NP-103KB | 10000 ± 10% | 16.0(13.0) | 200m (220m) | (230m) |
| RCH114NP-123KB | 12000 ± 10% | 21.0(17.0) | 190m(210m)  | (200m) |
| RCH114NP-153KB | 15000 ± 10% | 24.0(19.0) | 160m(180m)  | (190m) |
| RCH114NP-183KB | 18000 ± 10% | 27.0(22.0) | 150m(170m)  | (180m) |
| RCH114NP-223KB | 22000 ± 10% | 34.0(27.0) | 140m(160m)  | (160m) |
| RCH114NP-273KB | 27000 ± 10% | 39.0(31.0) | 130m(140m)  | (150m) |
| RCH114NP-333KB | 33000 ± 10% | 51.0(41.0) | 120m(130m)  | (140m) |
| RCH114NP-393KB | 39000 ± 10% | 58.0(46.0) | 110m(120m)  | (120m) |

※ 1 Measuring frequency Inductance: 6.3μH – 8.8μH (7.96MHz), 10μH – 39mH (1kHz)

※ 2 Saturation current: This indicates the value of D.C. current when the inductance becomes 10% lower than its initial value.

※3 Temperature rise current: The actual current when temperature of coil rise is  $\Delta T=40^{\circ}\text{C}$  (Ta=20°C)

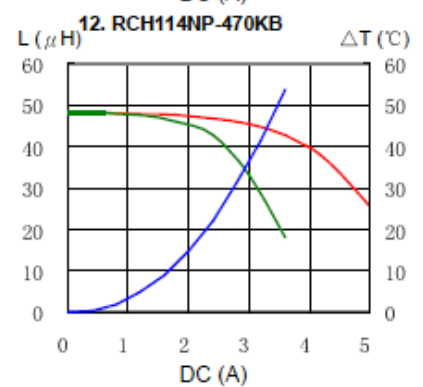
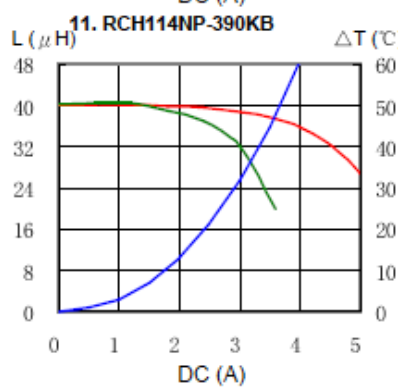
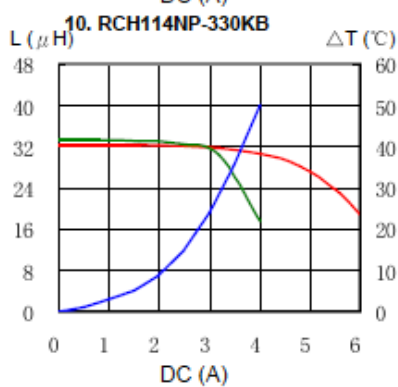
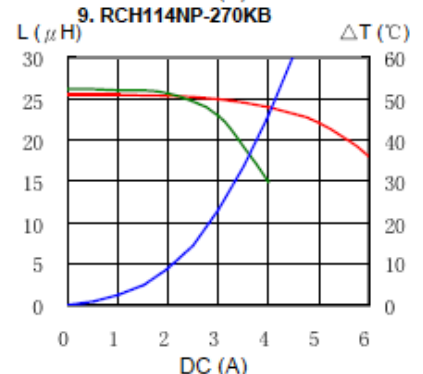
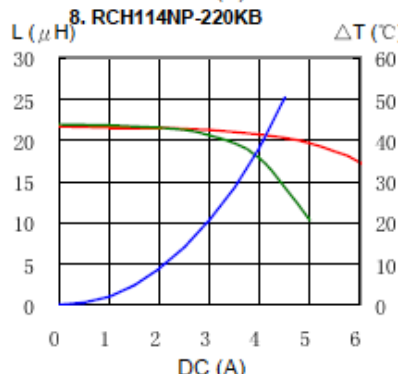
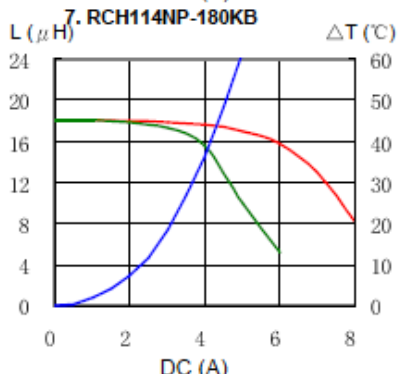
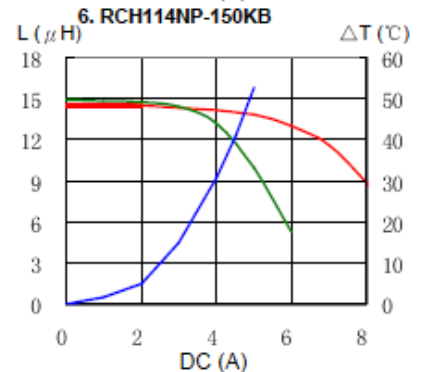
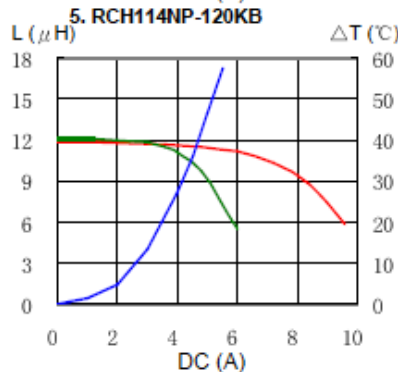
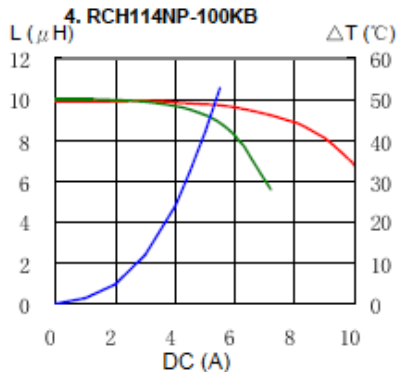
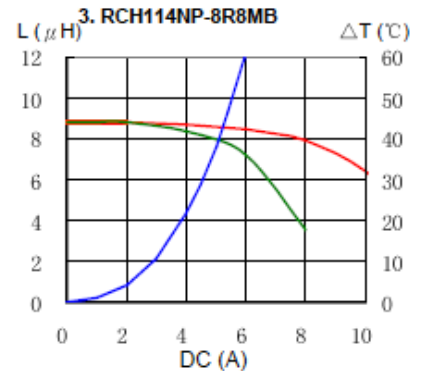
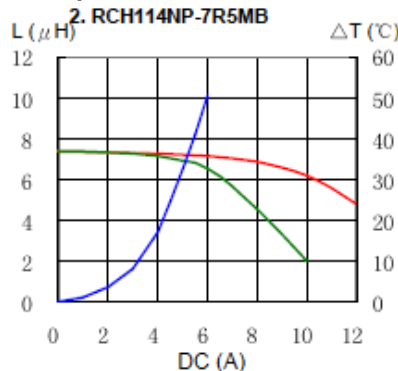
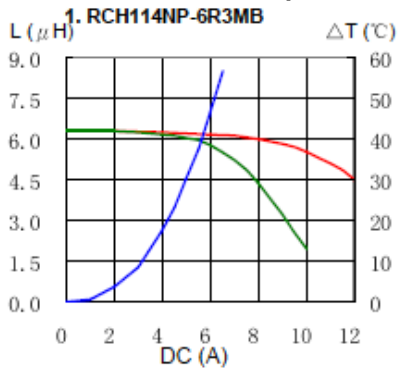
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### Saturation Current & Temperature Rise Graph

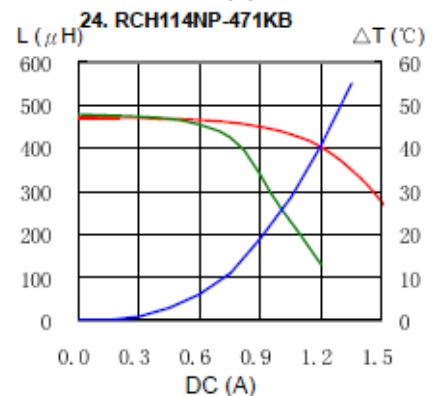
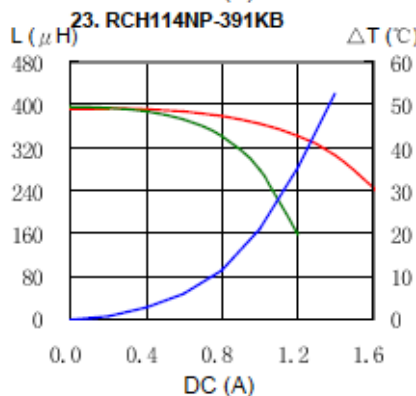
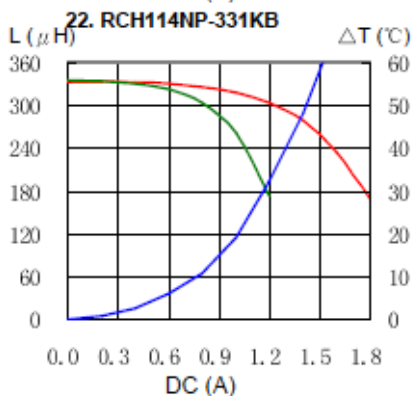
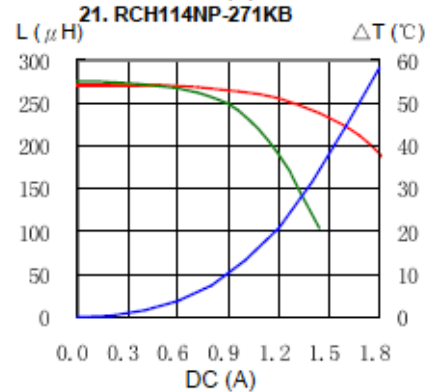
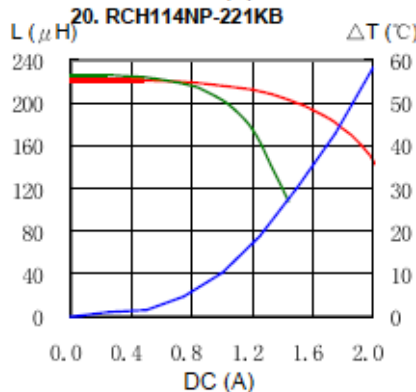
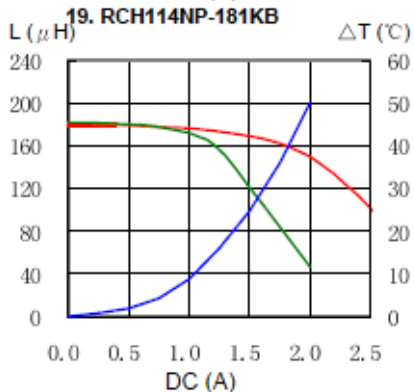
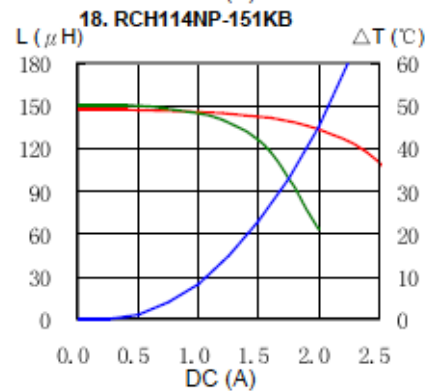
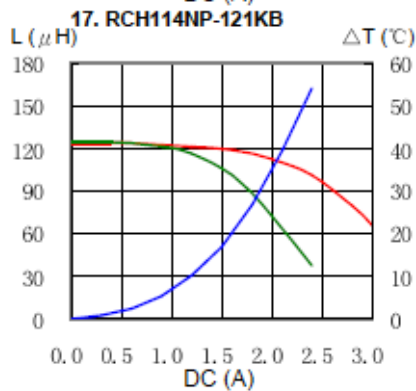
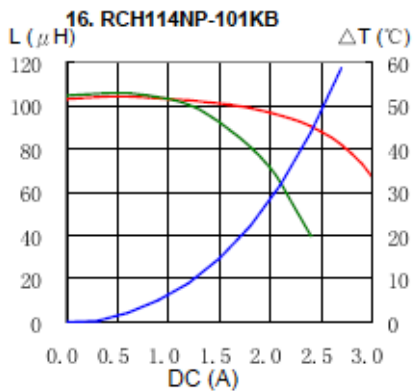
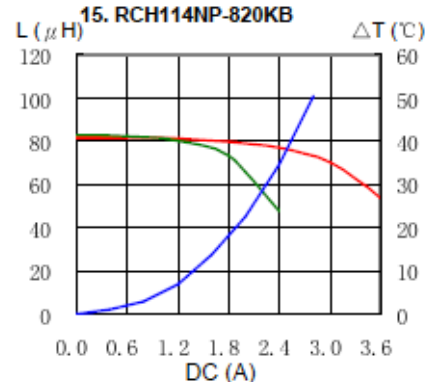
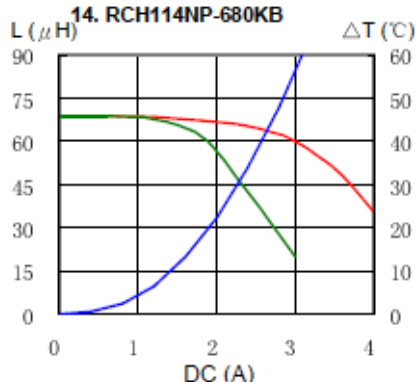
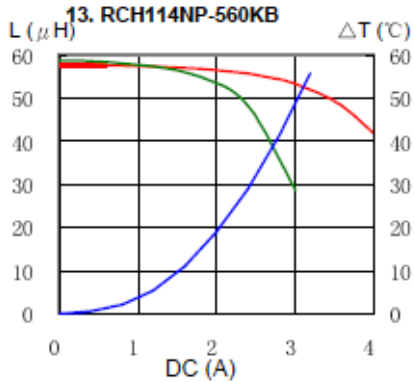
— L(20°C) — L(100°C) — ΔT



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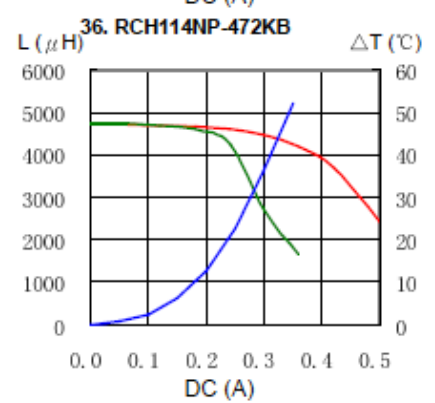
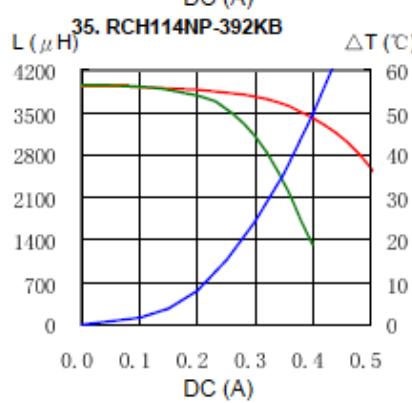
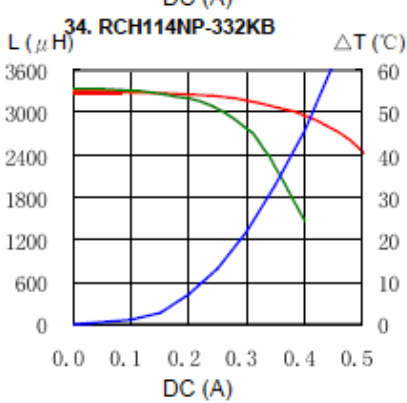
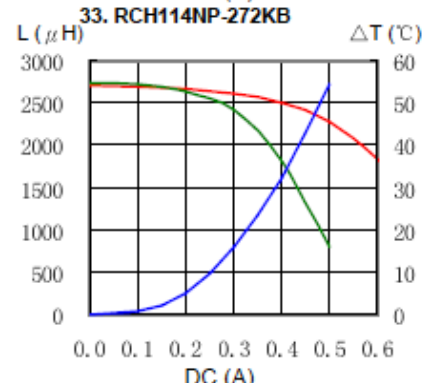
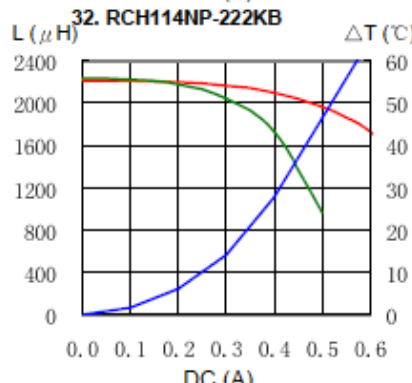
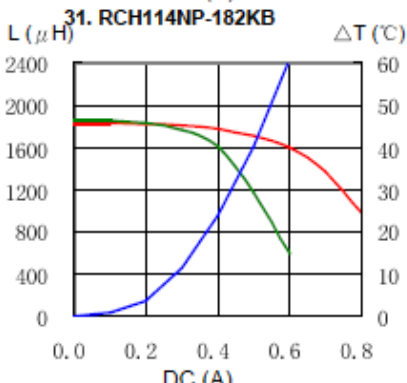
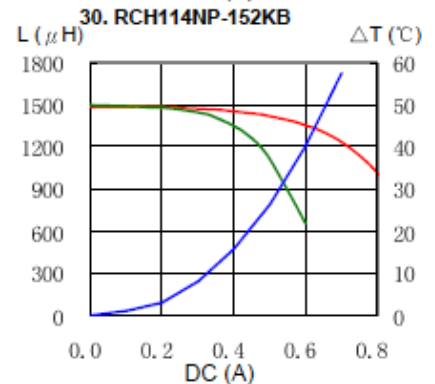
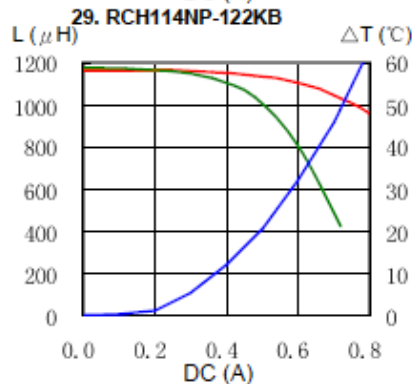
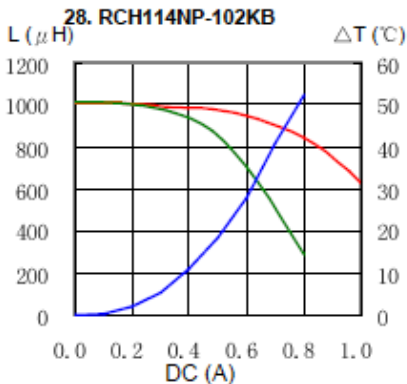
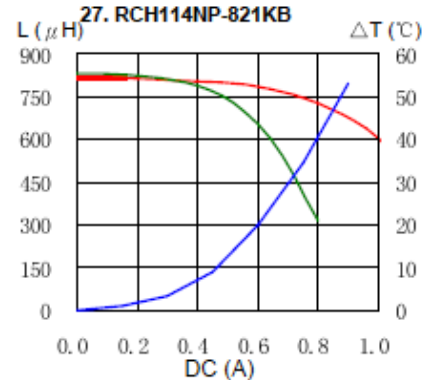
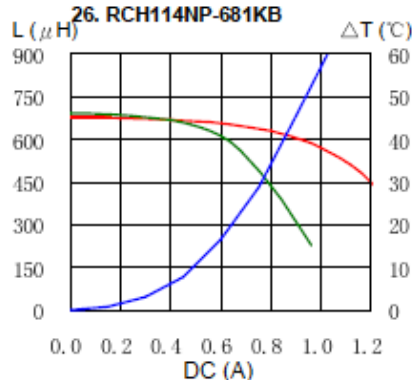
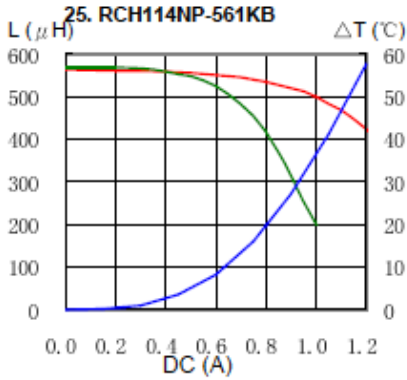
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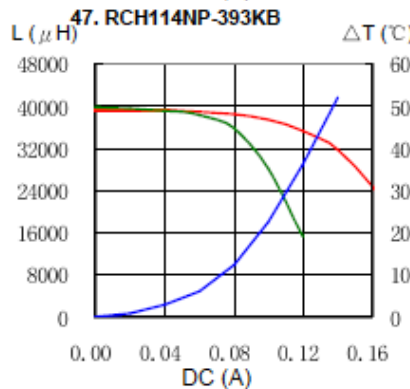
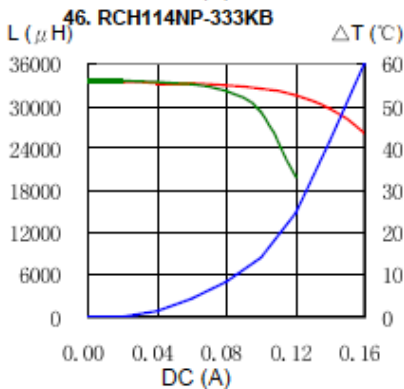
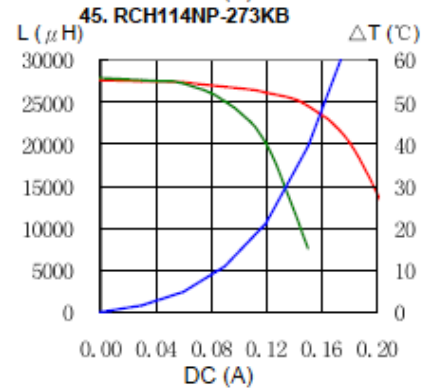
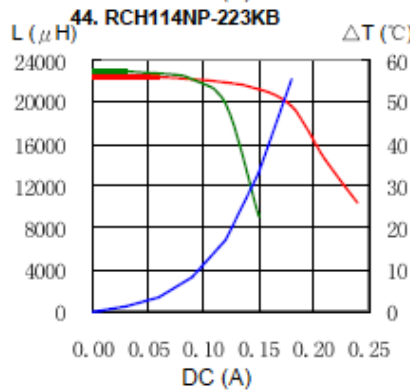
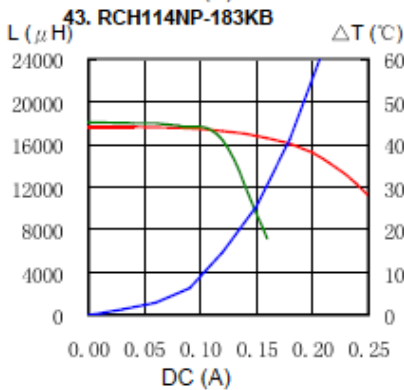
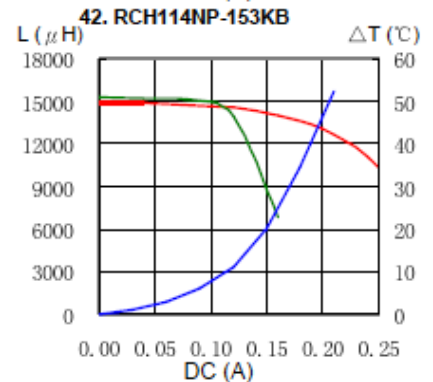
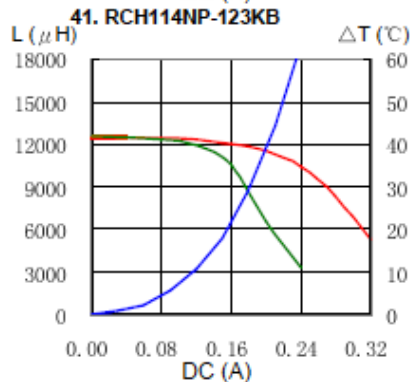
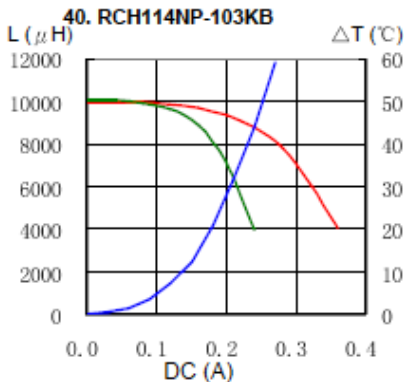
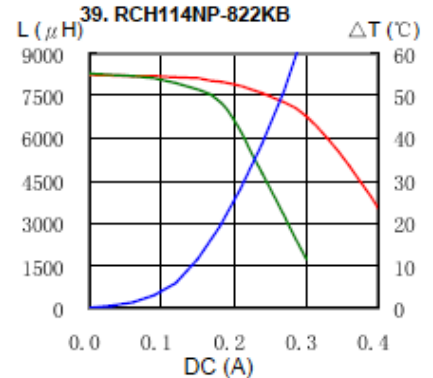
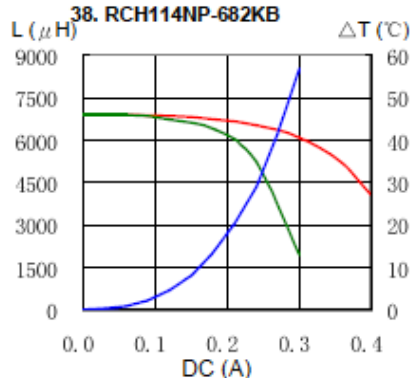
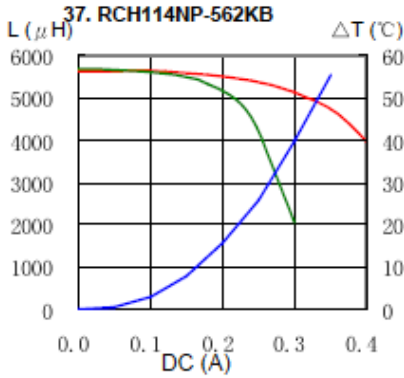
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