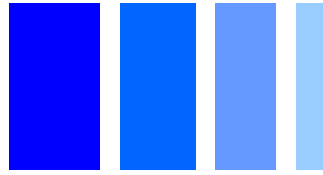




**THE DATASHEET OF  
CDRH105RNP-8R2NC**



# SMD Power Inductor CDRH105R



## Description

- Ferrite drum core construction.
- Magnetically shielded.
- L × W × H: 10.5 × 10.3 × 5.1 mm Max.
- Product weight: 2.5g (Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.

## Environmental Data

- Operating temperature range: -40°C ~ +100°C (including coil's self temperature rise)
- Storage temperature range: -40°C ~ +100°C
- Solder reflow temperature: 260 °C peak.

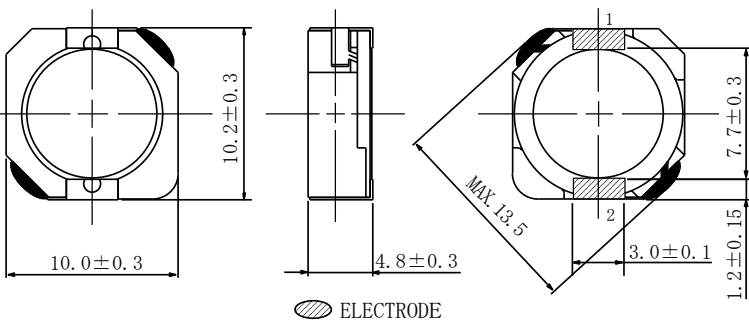
## Packaging

- Carrier tape and reel packaging.
- 12.9" diameter reel.
- 500pcs per reel.

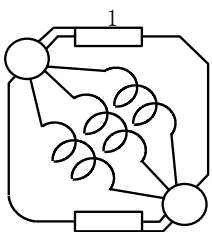
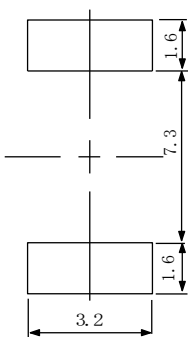
## Applications

- Ideally used in Notebook PC, LCD TV, DVD, Game machine, STB, Projector etc as DC-DC converter inductors.

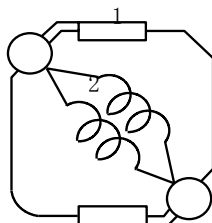
## Dimension - [mm]



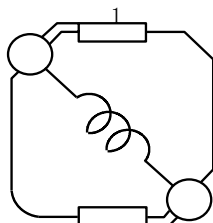
## Land pattern and Schematics - [mm]



2  
(0.8μH ~ 22μH)



(27μH ~ 82μH)



2  
(100μH ~ 1.0mH)

# SMD Power Inductor

## CDRH105R



### Electrical Characteristics

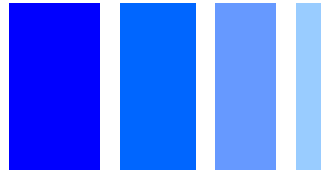
| Part Name        | Stamp | Inductance<br>( $\mu\text{H}$ )<br>[ within ] ※1 | D.C.R. (m $\Omega$ )<br>Max. (Typ.)<br>(at 20°C) | Saturation Current<br>Max. (Typ.)<br>(A) ※2 | Temperature<br>Rise Current<br>(Typ.)<br>(A) ※3 |
|------------------|-------|--|--|---|---|
| CDRH105RNP-0R8NC | 0R8   | 0.8 $\pm$ 30%                                    | 4.30 (3.30)                                      | 13.5 (17.0)                                 | (10.5)  |
| CDRH105RNP-1R5NC | 1R5   | 1.5 $\pm$ 30%                                    | 5.80 (4.50)                                      | 10.5 (13.0)                                 | (9.80)  |
| CDRH105RNP-2R2NC | 2R2   | 2.2 $\pm$ 30%                                    | 7.20(5.60)                                       | 9.25 (12.0)                                 | (8.80)  |
| CDRH105RNP-3R3NC | 3R3   | 3.3 $\pm$ 30%                                    | 10.4 (8.00)                                      | 7.80 (9.30)                                 | (7.80)  |
| CDRH105RNP-4R7NC | 4R7   | 4.7 $\pm$ 30%                                    | 12.3 (9.50)                                      | 6.40 (7.25)                                 | (7.10)  |
| CDRH105RNP-6R8NC | 6R8   | 6.8 $\pm$ 30%                                    | 18.0 (14.0)                                      | 5.40 (6.28)                                 | (6.20)  |
| CDRH105RNP-8R2NC | 8R2   | 8.2 $\pm$ 30%                                    | 20.0 (16.0)                                      | 4.85 (5.90)                                 | (5.80)  |
| CDRH105RNP-100NC | 100   | 10 $\pm$ 30%                                     | 26.0 (20.0)                                      | 4.45 (5.35)                                 | (5.00)  |
| CDRH105RNP-120NC | 120   | 12 $\pm$ 30%                                     | 33.0 (25.0)                                      | 4.00 (4.50)                                 | (4.40)  |
| CDRH105RNP-150NC | 150   | 15 $\pm$ 30%                                     | 41.0 (32.0)                                      | 3.60 (4.15)                                 | (3.90)  |
| CDRH105RNP-180NC | 180   | 18 $\pm$ 30%                                     | 46.0 (35.0)                                      | 3.20 (3.85)                                 | (3.70)  |
| CDRH105RNP-220NC | 220   | 22 $\pm$ 30%                                     | 61.0 (47.0)                                      | 2.95 (3.60)                                 | (3.30)  |
| CDRH105RNP-270NC | 270   | 27 $\pm$ 30%                                     | 69.0 (53.0)                                      | 2.70 (3.25)                                 | (3.20)  |
| CDRH105RNP-330NC | 330   | 33 $\pm$ 30%                                     | 84.0 (65.0)                                      | 2.40 (2.95)                                 | (2.75)  |
| CDRH105RNP-390NC | 390   | 39 $\pm$ 30%                                     | 106 (82.0)                                       | 2.30 (2.73)                                 | (2.65)  |
| CDRH105RNP-470NC | 470   | 47 $\pm$ 30%                                     | 130 (100)  | 2.00 (2.38)                                 | (2.30)  |
| CDRH105RNP-560NC | 560   | 56 $\pm$ 30%                                     | 149 (115)  | 1.90 (2.33)                                 | (2.15)  |
| CDRH105RNP-680NC | 680   | 68 $\pm$ 30%                                     | 201 (155)  | 1.65 (1.90)                                 | (1.75)  |
| CDRH105RNP-820NC | 820   | 82 $\pm$ 30%                                     | 227 (175)  | 1.50 (1.75)                                 | (1.68)  |
| CDRH105RNP-101NC | 101   | 100 $\pm$ 30%                                    | 253 (195)  | 1.35 (1.61)                                 | (1.52)  |
| CDRH105RNP-121NC | 121   | 120 $\pm$ 30%                                    | 303 (233)  | 1.28 (1.53)                                 | (1.43)  |
| CDRH105RNP-151NC | 151   | 150 $\pm$ 30%                                    | 370 (285)  | 1.12 (1.39)                                 | (1.23)  |
| CDRH105RNP-181NC | 181   | 180 $\pm$ 30%                                    | 419 (322)  | 1.04 (1.24)                                 | (1.17)  |
| CDRH105RNP-221NC | 221   | 220 $\pm$ 30%                                    | 500 (385)  | 0.94 (1.17)                                 | (1.08)  |
| CDRH105RNP-271NC | 271   | 270 $\pm$ 30%                                    | 672 (512)  | 0.84 (0.97)                                 | (0.92)  |
| CDRH105RNP-331NC | 331   | 330 $\pm$ 30%                                    | 812 (625)  | 0.75 (0.89)                                 | (0.85)  |
| CDRH105RNP-391NC | 391   | 390 $\pm$ 30%                                    | 953 (733)  | 0.70 (0.81)                                 | (0.80)  |
| CDRH105RNP-471NC | 471   | 470 $\pm$ 30%                                    | 1,289 (992)                                      | 0.60 (0.77)                                 | (0.65)  |
| CDRH105RNP-561NC | 561   | 560 $\pm$ 30%                                    | 1,430 (1,100)                                    | 0.54 (0.71)                                 | (0.62)  |
| CDRH105RNP-681NC | 681   | 680 $\pm$ 30%                                    | 1,599 (1,230)                                    | 0.52 (0.64)                                 | (0.60)  |
| CDRH105RNP-821NC | 821   | 820 $\pm$ 30%                                    | 1,768 (1,360)                                    | 0.48 (0.59)                                 | (0.57)  |
| CDRH105RNP-102NC | 102   | 1000 $\pm$ 30%                                   | 1,989 (1,530)                                    | 0.42 (0.56)                                 | (0.52)  |

※1 Inductance measuring condition: at 100kHz.

※2 The saturation current: This indicates the value of DC current when the inductance decreases to 65% of its nominal.

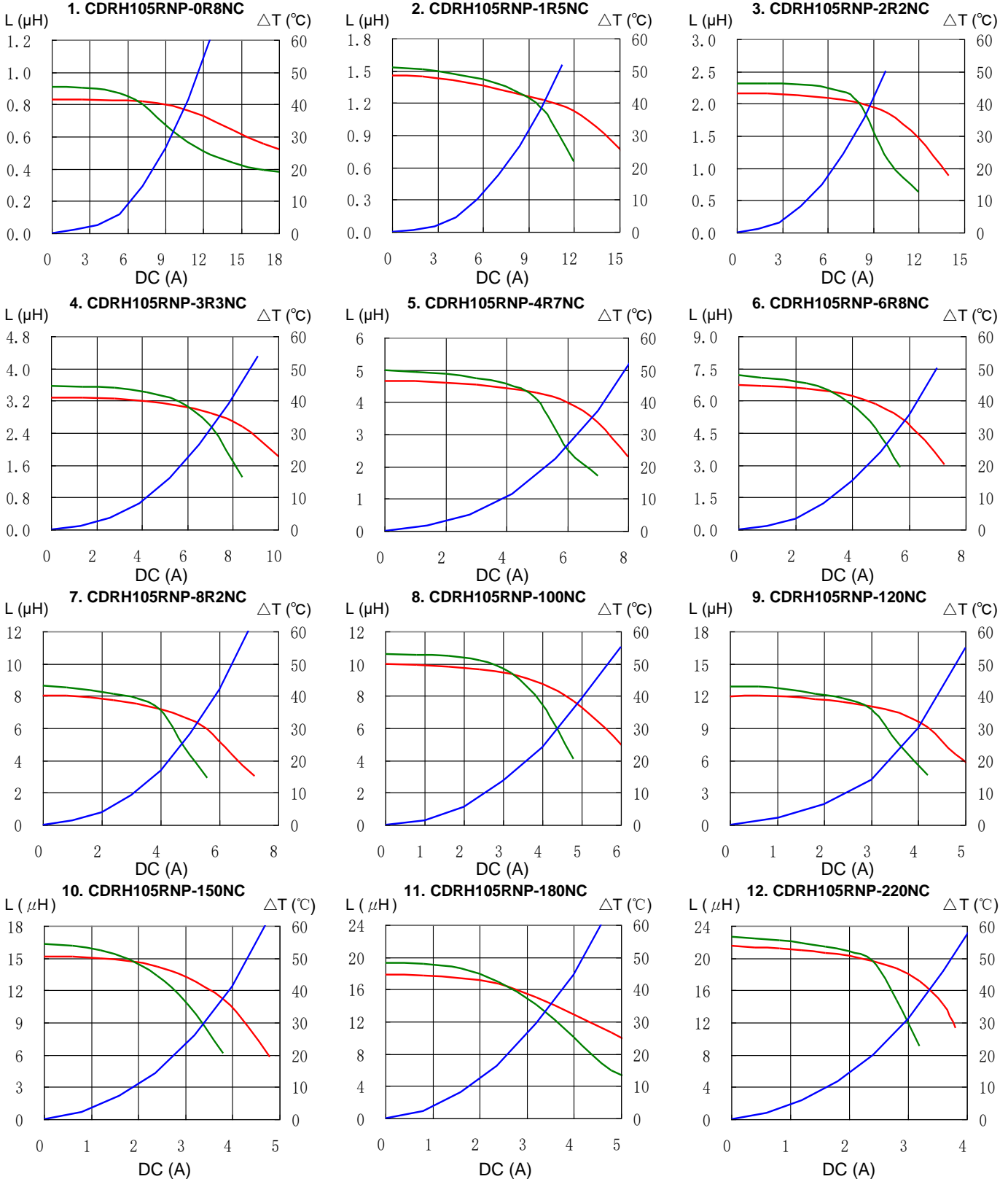
※3 The temperature rise: The value of DC current when the temperature rise is  $\Delta T=40^\circ\text{C}$  ( $T_a=20^\circ\text{C}$ ).

# SMD Power Inductor CDRH105R

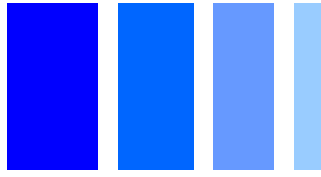


## Saturation Current & Temperature Rise Graph

— L (20°C)    — L (100°C)    —  $\Delta T$

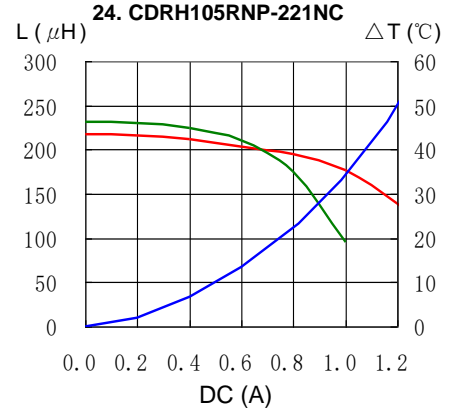
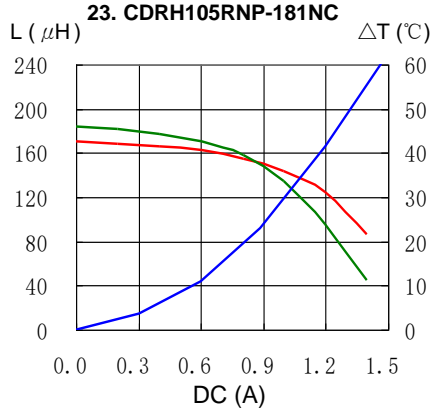
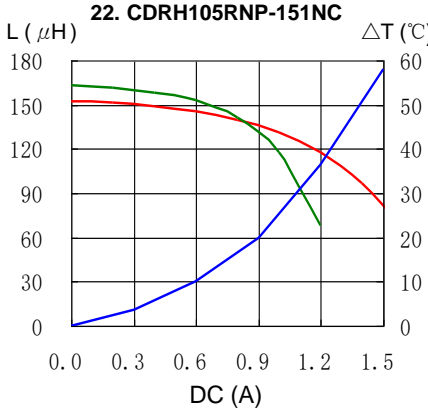
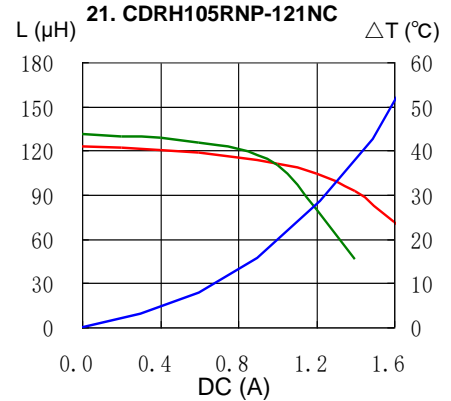
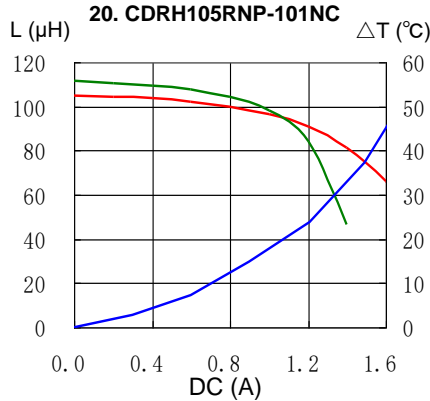
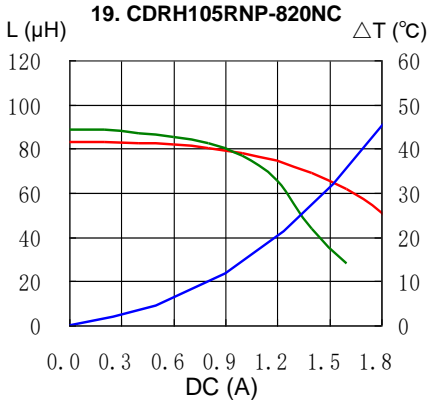
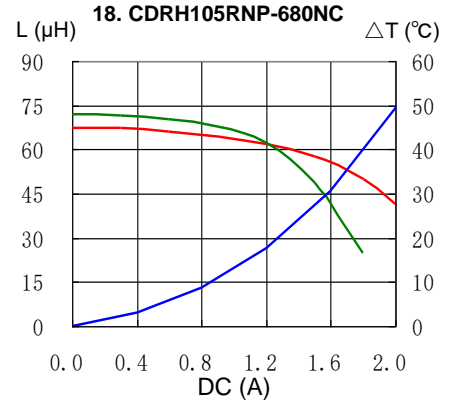
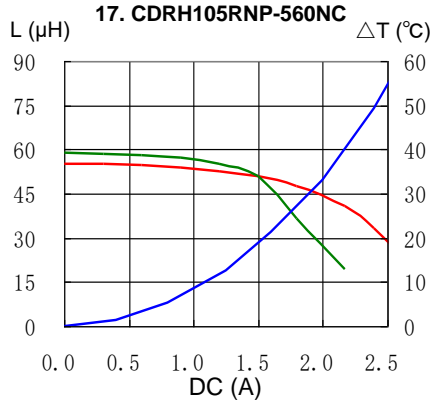
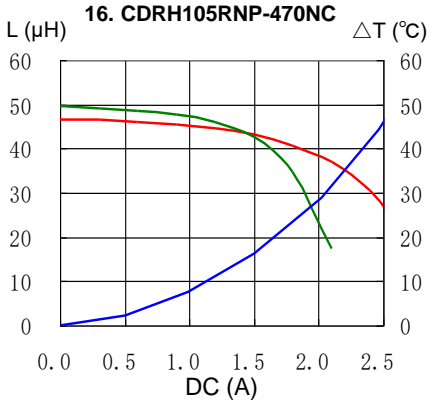
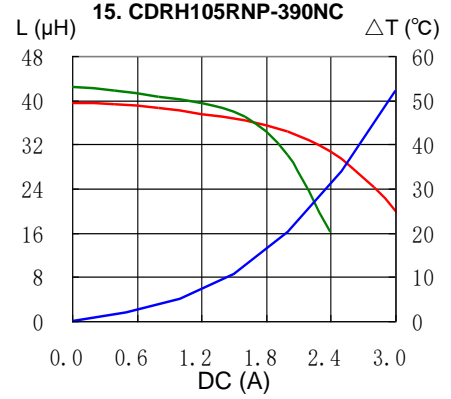
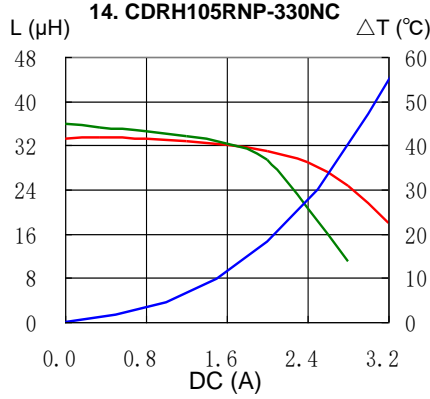
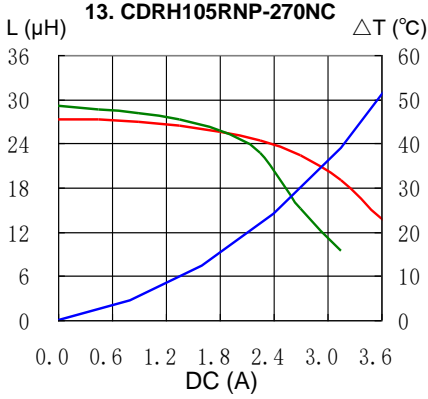


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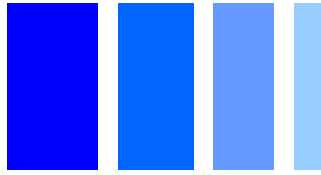


## Saturation Current & Temperature Rise Graph

— L (20°C)    — L (100°C)    —  $\Delta T$

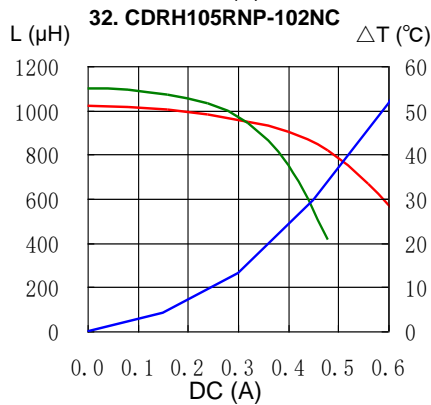
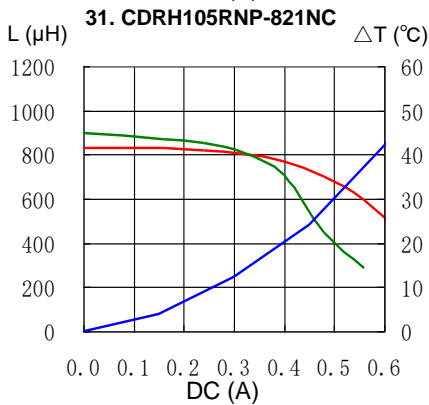
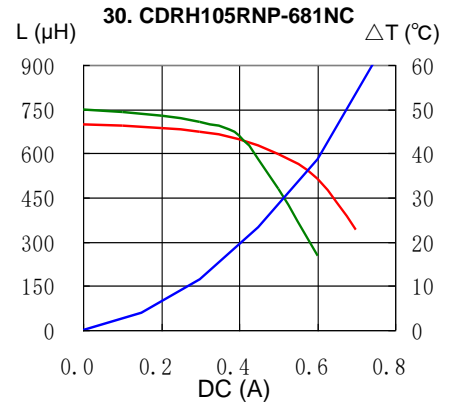
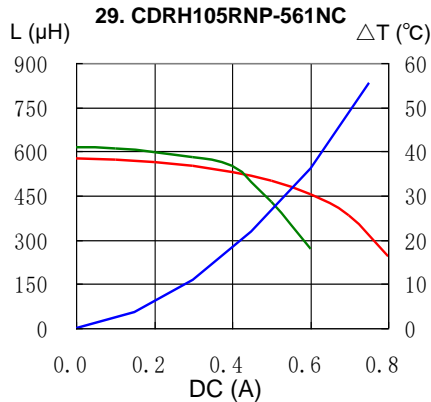
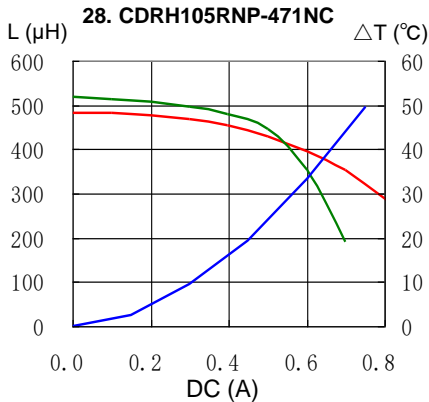
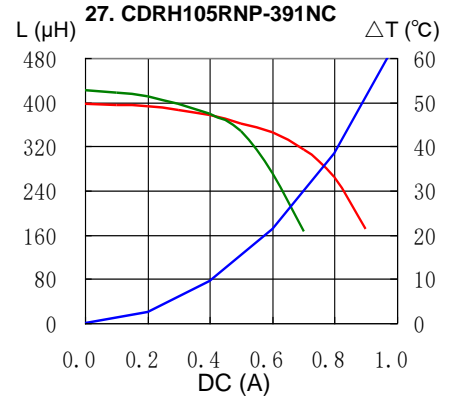
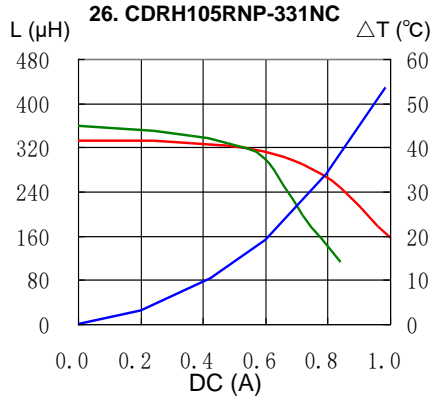
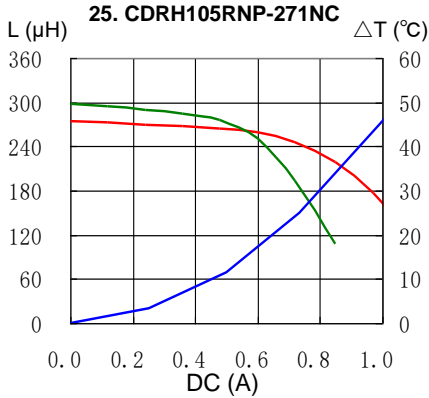


# SMD Power Inductor CDRH105R

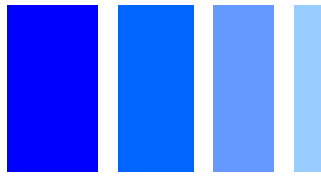


## Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) —  $\Delta T$

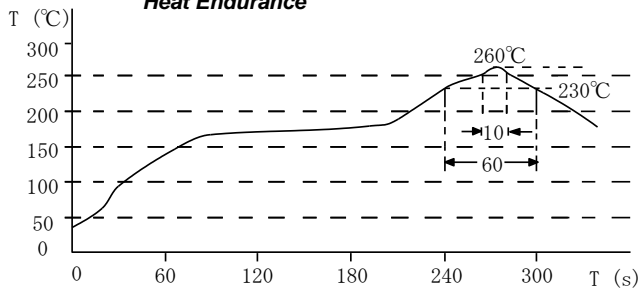


# SMD Power Inductor CDRH105R

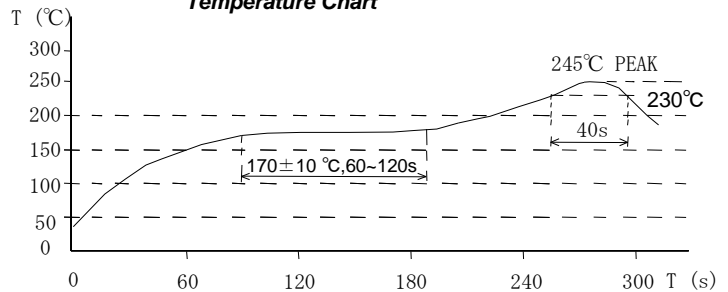


## Solder Reflow Condition

Heat Endurance



Temperature Chart



Please refer to the sales offices on our website - <http://www.sumida.com>

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