

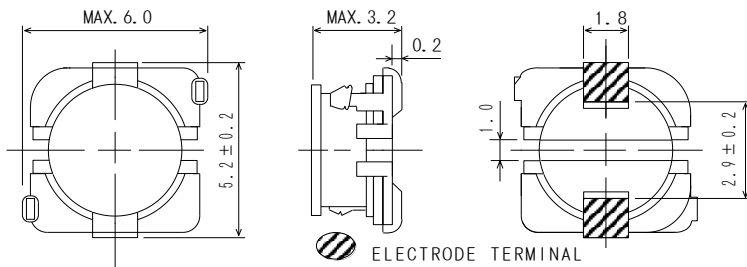
# SMD Power Inductor CDH53



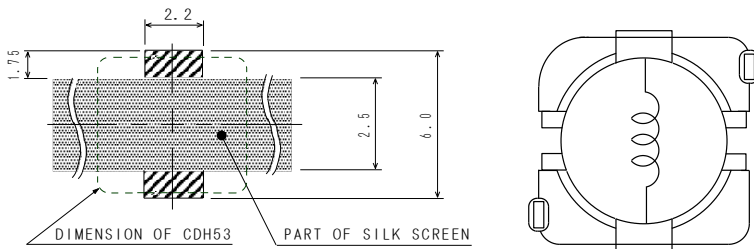
## Description

- Ferrite drum core construction.
- Magnetically unshielded.
- L × W × H: 6.0 × 5.4 × 3.2 mm Max.
- Product weight: 0.18g(Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.

## Dimension - [mm]



## Land pattern and Schematics - [mm]



## 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.
- 13" diameter reel
- 1500pcs per reel

## Applications

- Ideally used in PDA, DVD, HDD, DVC, Game machine, Notebook PC, etc as DC-DC converter



### Electrical Characteristics

| Part Name     | Stamp | Inductance<br>( $\mu\text{H}$ )<br>[ within ] ※1 | D.C.R. ( $\Omega$ )<br>Max. (Typ.)<br>(at 20°C) | Rated Current<br>(A) ※2 |
|---------------|-------|--------------------------------------------------|-------------------------------------------------|-------------------------|
| CDH53NP-2R2MC | 2R2   | 2.2 $\pm$ 20%                                    | 66m (51m)                                       | 2.03                    |
| CDH53NP-3R3MC | 3R3   | 3.3 $\pm$ 20%                                    | 88m (68m)                                       | 1.88                    |
| CDH53NP-4R7MC | 4R7   | 4.7 $\pm$ 20%                                    | 96m (74m)                                       | 1.68                    |
| CDH53NP-100LC | 100   | 10 $\pm$ 15%                                     | 0.16(0.13)                                      | 1.23                    |
| CDH53NP-120LC | 120   | 12 $\pm$ 15%                                     | 0.18(0.14)                                      | 1.12                    |
| CDH53NP-150KC | 150   | 15 $\pm$ 10%                                     | 0.25(0.20)                                      | 1.00                    |
| CDH53NP-180KC | 180   | 18 $\pm$ 10%                                     | 0.28(0.21)                                      | 0.88                    |
| CDH53NP-220KC | 220   | 22 $\pm$ 10%                                     | 0.39(0.30)                                      | 0.80                    |
| CDH53NP-270KC | 270   | 27 $\pm$ 10%                                     | 0.42(0.32)                                      | 0.72                    |
| CDH53NP-330KC | 330   | 33 $\pm$ 10%                                     | 0.49(0.38)                                      | 0.67                    |
| CDH53NP-390KC | 390   | 39 $\pm$ 10%                                     | 0.55(0.43)                                      | 0.64                    |
| CDH53NP-470KC | 470   | 47 $\pm$ 10%                                     | 0.77(0.59)                                      | 0.53                    |
| CDH53NP-560KC | 560   | 56 $\pm$ 10%                                     | 0.87(0.67)                                      | 0.50                    |
| CDH53NP-680JC | 680   | 68 $\pm$ 5%                                      | 1.21(0.96)                                      | 0.45                    |
| CDH53NP-820JC | 820   | 82 $\pm$ 5%                                      | 1.34(1.07)                                      | 0.39                    |
| CDH53NP-101JC | 101   | 100 $\pm$ 5%                                     | 1.57(1.25)                                      | 0.37                    |
| CDH53NP-121JC | 121   | 120 $\pm$ 5%                                     | 1.80(1.44)                                      | 0.34                    |
| CDH53NP-151JC | 151   | 150 $\pm$ 5%                                     | 2.40(1.92)                                      | 0.31                    |
| CDH53NP-181JC | 181   | 180 $\pm$ 5%                                     | 2.66(2.13)                                      | 0.30                    |
| CDH53NP-221JC | 221   | 220 $\pm$ 5%                                     | 3.73(2.99)                                      | 0.26                    |

※1. Inductance measuring frequency: 2.2 $\mu\text{H}$  ~ 4.7 $\mu\text{H}$  at 7.96 MHz;  
10 $\mu\text{H}$  ~ 220 $\mu\text{H}$  at 1kHz.

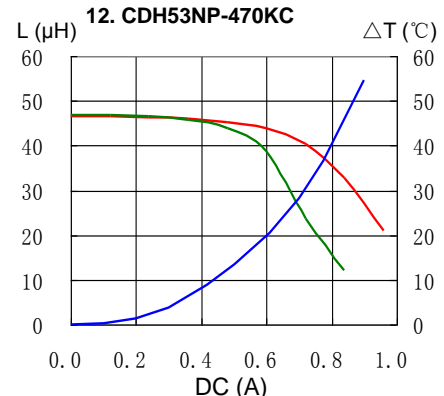
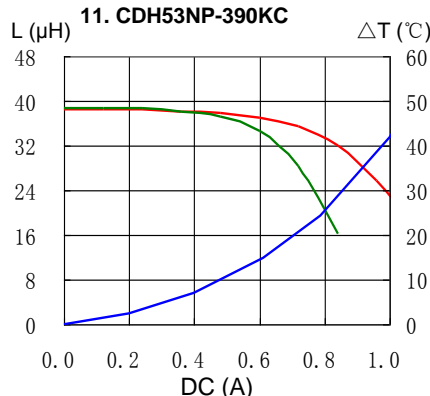
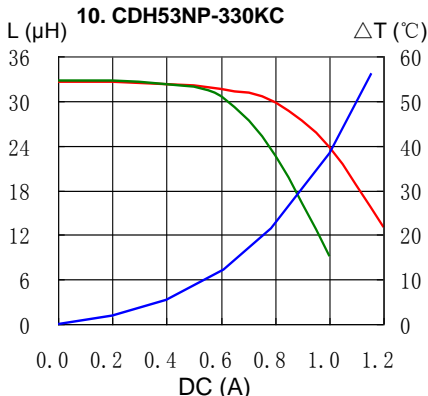
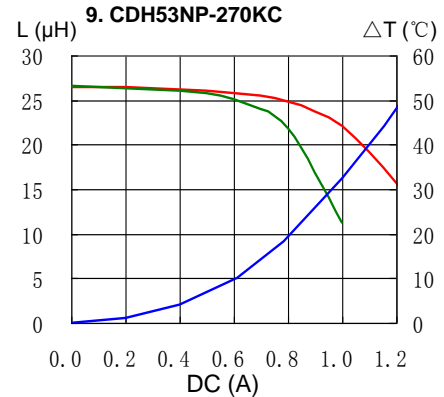
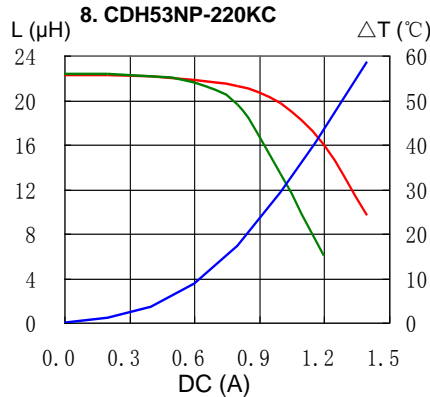
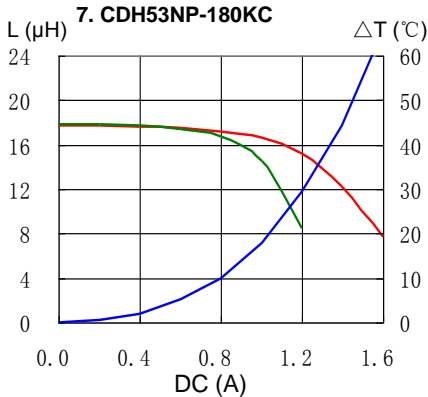
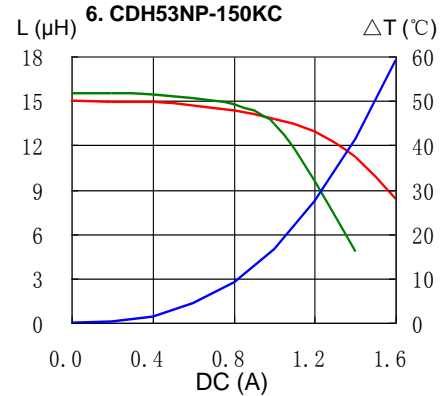
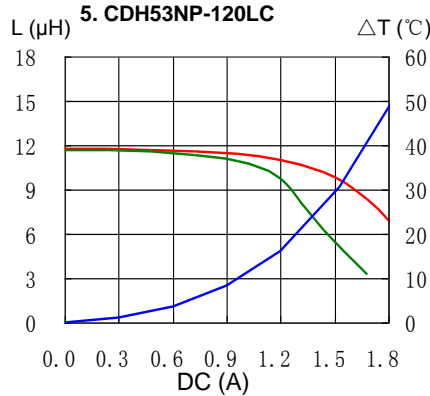
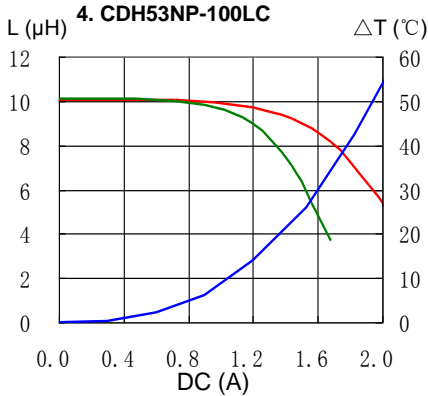
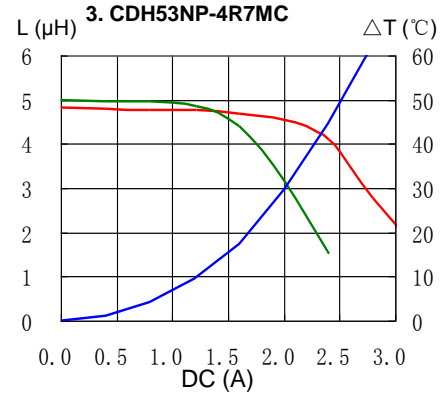
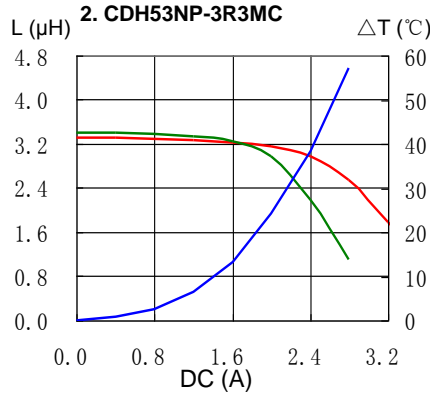
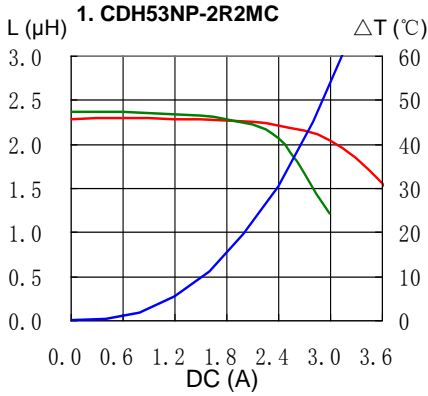
※2. Rated current: The DC current at which the inductance decreases to 90% of its initial value or when  $\Delta t=40^\circ\text{C}$ , whichever is lower ( $T_a=20^\circ\text{C}$ ).

# SMD Power Inductor CDH53



## Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) —  $\Delta T$

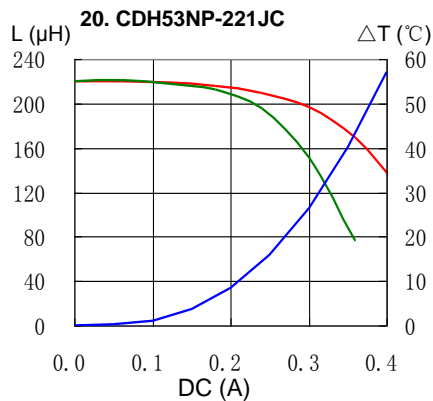
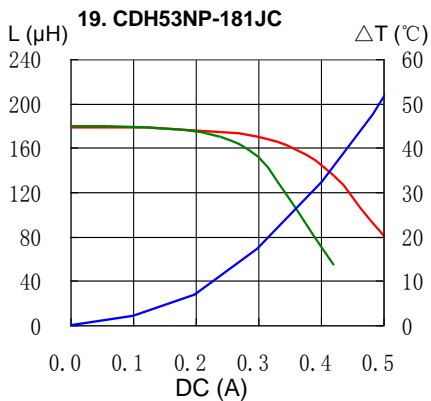
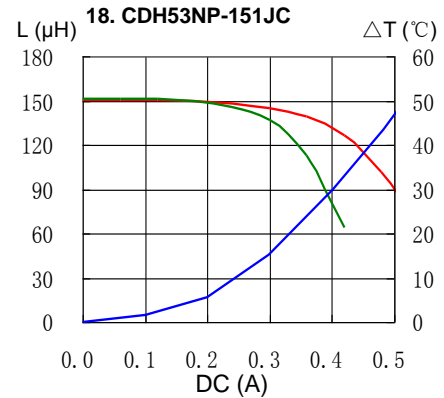
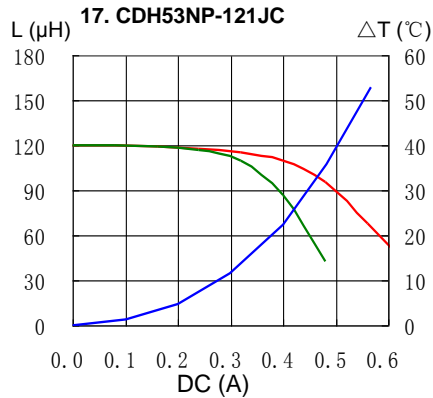
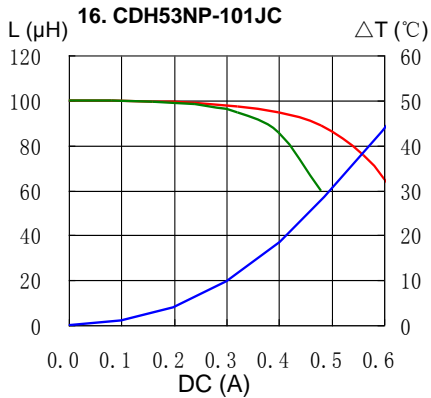
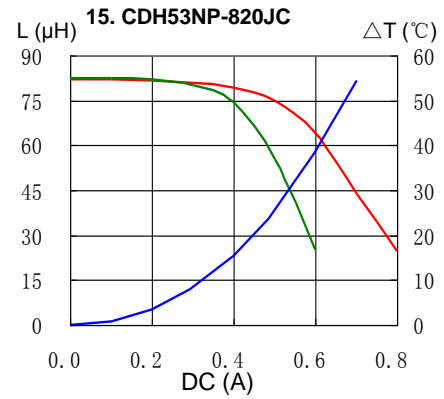
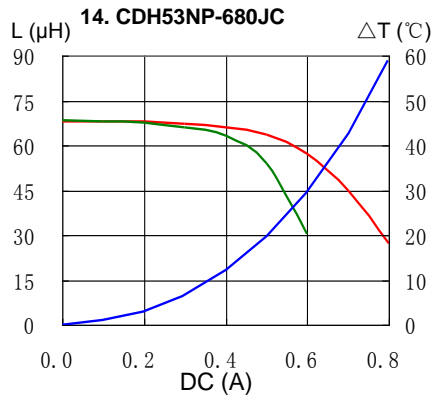
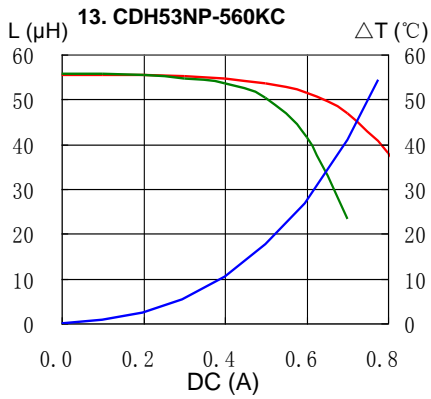


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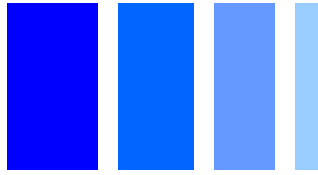


## Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) —  $\Delta T$

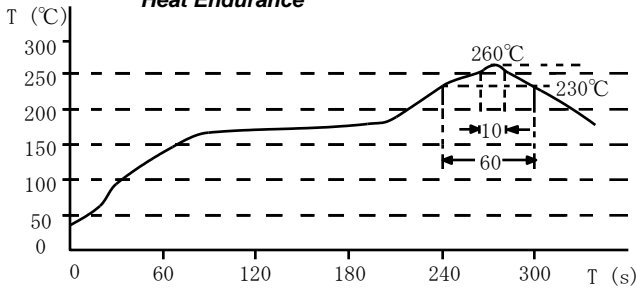


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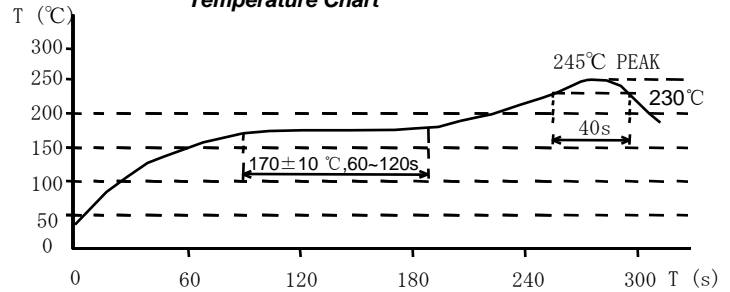


## Solder Reflow Condition

Heat Endurance



Temperature Chart



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