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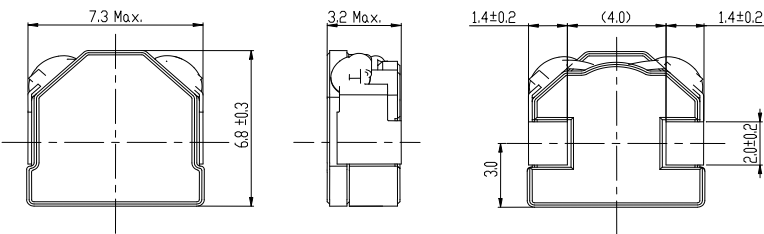
# SMD Power Inductor CDEIR6D31F



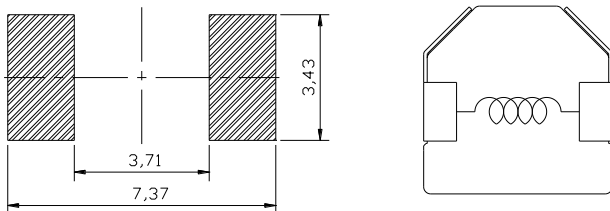
## Description

- Ferrite core construction.
- Magnetically shielded.
- L × W × H: 7.3 × 7.1 × 3.2 mm Max.
- Product weight: 0.53g(Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.

## Dimension - [mm]



## Land pattern and Schematics - [mm]



## Environmental Data

- Operating temperature range: -40°C ~ +105°C (including coil's self temperature rise)
- Storage temperature range: -40°C ~ +105°C
- Solder reflow temperature: 260 °C peak.

## Packaging

- Carrier tape and reel packaging.
- 13.0" diameter reel
- 1500pcs per reel

## Applications

- Ideally used in HDD, Notebook and Mobile computer etc.

## Electrical Characteristics

| Part No.           | Stamp | Inductance (μH)<br>[Within] ※1 | D.C.R.(mΩ)<br>[Max.] (Typ.)<br>(at 20°C) | saturation current<br>(A) ※2 | Temperature<br>rise current<br>(A) ※3 |
|--------------------|-------|--------------------------------|--|------------------------------|---------------------------------------|
| CDEIR6D31FNP-1R0NC | 1R0   | 1.0±30%                        | 8.8(7.3)                                 | 7.7(9.7)                     | 7.4(8.5)                              |
| CDEIR6D31FNP-1R5NC | 1R5   | 1.5±30%                        | 9.6(8.0)                                 | 6.8(8.5)                     | 6.8(7.9)                              |
| CDEIR6D31FNP-2R2MC | 2R2   | 2.2±20%                        | 12(10)                                   | 6.0(7.5)                     | 6.5(7.4)                              |
| CDEIR6D31FNP-3R3MC | 3R3   | 3.3±20%                        | 19(15)                                   | 4.8(6.0)                     | 5.5(6.3)                              |
| CDEIR6D31FNP-4R7MC | 4R7   | 4.7±20%                        | 26(21)                                   | 4.0(5.0)                     | 4.7(5.4)                              |
| CDEIR6D31FNP-5R6MC | 5R6   | 5.6±20%                        | 29(23)                                   | 3.5(4.4)                     | 4.4(5.0)                              |
| CDEIR6D31FNP-6R8MC | 6R8   | 6.8±20%                        | 40(32)                                   | 3.0(3.8)                     | 3.5(4.0)                              |
| CDEIR6D31FNP-8R2MC | 8R2   | 8.2±20%                        | 43(34)                                   | 2.8(3.5)                     | 3.6(4.1)                              |
| CDEIR6D31FNP-100MC | 100   | 10.0±20%                       | 66(53)                                   | 2.6(3.2)                     | 2.6(2.9)                              |
| CDEIR6D31FNP-120MC | 120   | 12.0±20%                       | 76(61)                                   | 2.4(3.0)                     | 2.2(2.5)                              |

※1. Measuring condition: at 100kHz.

※2. Saturation current: The value of D.C. current when the inductance decreases to 70% of it's nominal value.

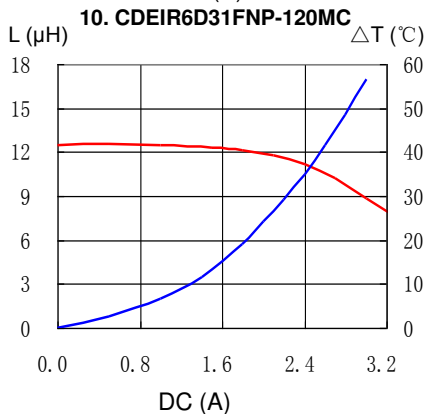
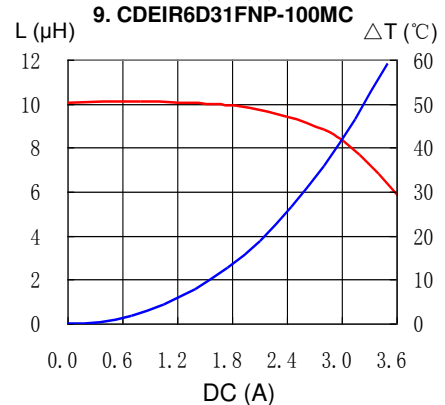
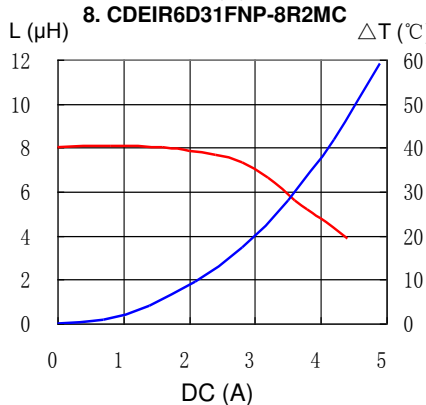
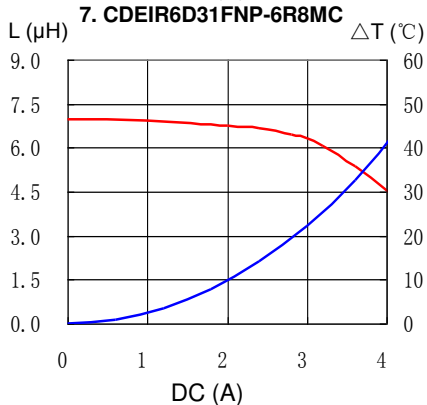
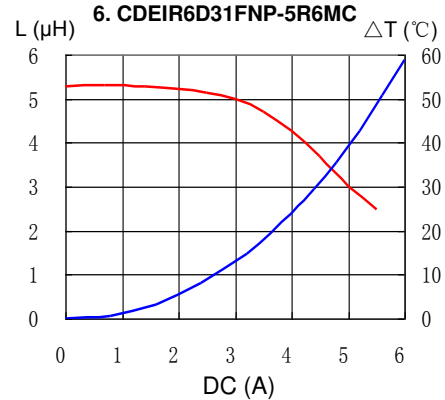
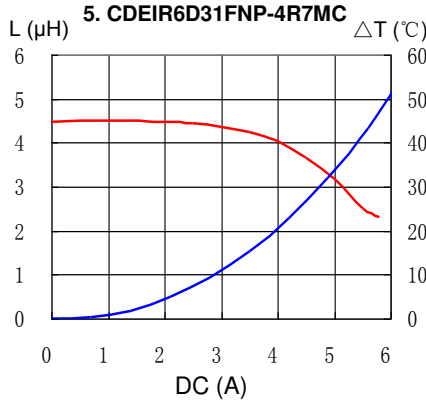
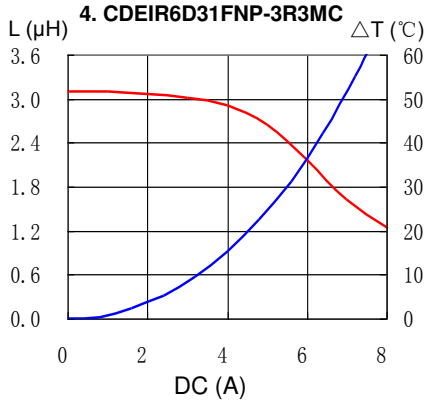
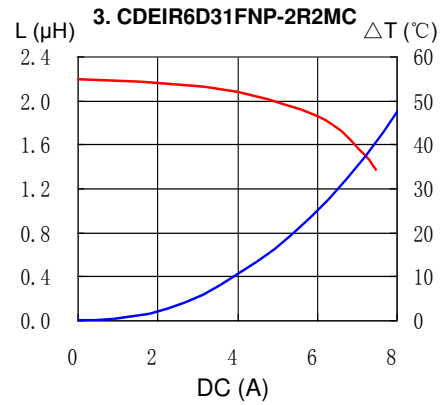
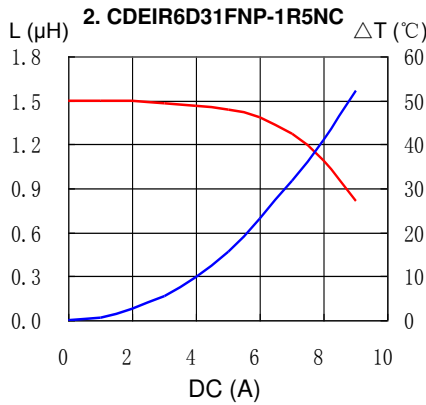
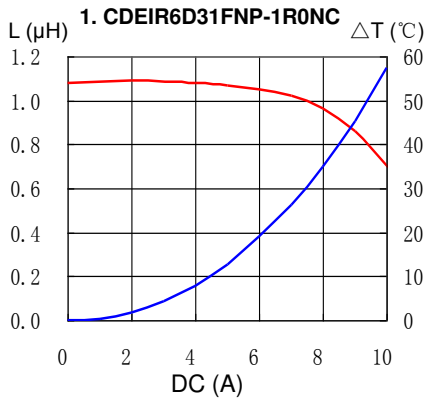
※3. Temperature rise current: The value of D.C. current when the temperature rise is  $\Delta t=40^{\circ}\text{C}$  ( $T_a=20^{\circ}\text{C}$ ).

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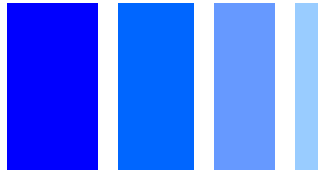


## Saturation Current & Temperature Rise Graph

— L (20°C)    —  $\Delta T$

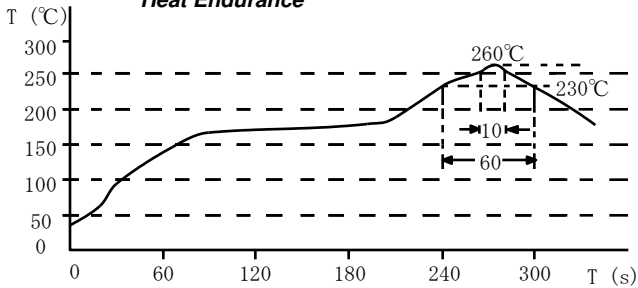


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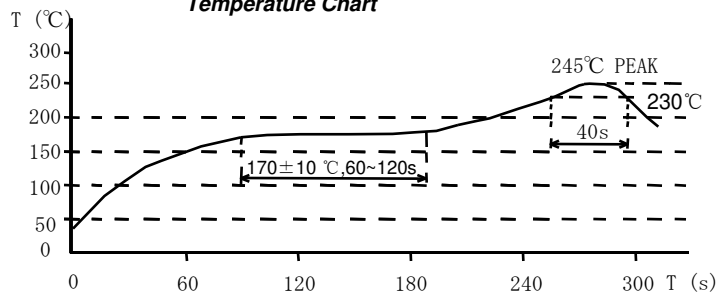


## Solder Reflow Condition

Heat Endurance



Temperature Chart



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