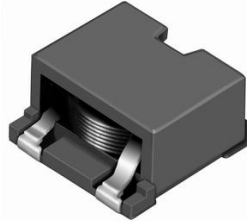




**THE DATASHEET OF  
CDEP147NP-120MC-125**



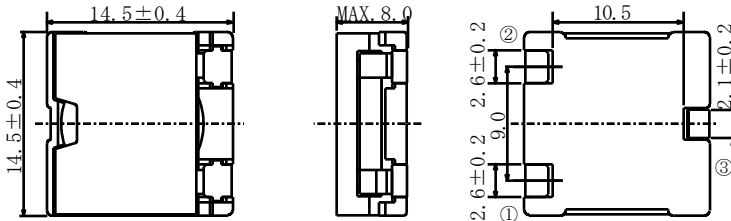
# SMD Power Inductor CDEP147



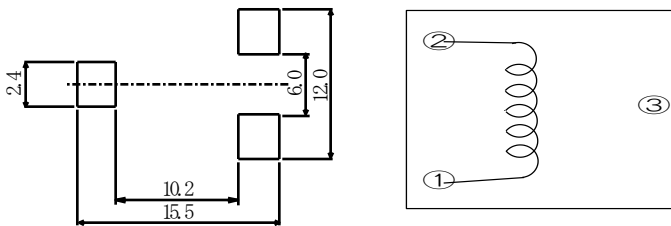
## Description

- Ferrite core construction.
- Magnetically shielded.
- L × W × H: 14.9 × 14.9 × 8.0 mm Max.
- Product weight: 5.3g(Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.

## Dimension - [mm]



## Land pattern and Schematics - [mm]



## Environmental Data

- Operating temperature range: -40°C ~ +125°C (including coil's self temperature rise)
- Storage temperature range: -40°C ~ +125°C
- Solder reflow temperature: 260 °C peak.

## Packaging

- Carrier tape and reel packaging
- 13.0" diameter reel
- 300pcs per reel

## Applications

- Ideally used in personal computer CPU power supply.

## Electrical Characteristics

Electrical Characteristics-low D.C.R. type

| PART NO.            | STAMP | INDUCTANCE<br>[WITHIN] ※1 | D.C.R. (mΩ)<br>[MAX.] (Typ.)<br>(at 20°C) | SATURATION<br>CURRENT ( A ) ※2 |            | TEMPERATURE<br>RISE CURRENT<br>( A ) ※3 |
|---------------------|-------|---------------------------|---|--------------------------------|------------|---|
|                     |       |                           |   | (at 20°C)                      | (at 100°C) |   |
| CDEP147NP-0R5MC-125 | 0R5ML | 0.5μH ± 20%               | 1.18(0.98)                                | 39.6(49.5)                     | 33.9(42.4) | 23.0                                    |
| CDEP147NP-1R1MC-125 | 1R1ML | 1.1μH ± 20%               | 1.46(1.22)                                | 26.4(33.0)                     | 22.8(28.5) | 21.5                                    |
| CDEP147NP-2R0MC-125 | 2R0ML | 2.0μH ± 20%               | 2.02(1.69)                                | 19.6(24.5)                     | 16.8(21.0) | 20.0                                    |
| CDEP147NP-3R1MC-125 | 3R1ML | 3.1μH ± 20%               | 3.23(2.70)                                | 16.0(20.0)                     | 13.6(17.0) | 17.5                                    |
| CDEP147NP-4R5MC-125 | 4R5ML | 4.5μH ± 20%               | 4.97(4.14)                                | 13.6(17.0)                     | 11.6(14.5) | 16.0                                    |
| CDEP147NP-6R1MC-125 | 6R1ML | 6.1μH ± 20%               | 6.03(5.02)                                | 11.6(14.5)                     | 10.0(12.5) | 12.5                                    |
| CDEP147NP-8R0MC-125 | 8R0ML | 8.0μH ± 20%               | 7.80(6.50)                                | 10.0(12.5)                     | 8.2(10.3)  | 11.0                                    |
| CDEP147NP-100MC-125 | 100ML | 10.0μH ± 20%              | 9.85(8.21)                                | 9.2(11.5)                      | 7.6(9.5)   | 10.0                                    |
| CDEP147NP-120MC-125 | 120ML | 12.0μH ± 20%              | 13.31(11.1)                               | 8.0(10.0)                      | 6.6(8.2)   | 8.5                                     |



## Electrical Characteristics—standard type

| PART NO.           | STAMP | INDUCTANCE<br>[WITHIN] ※1 | D.C.R. (mΩ)<br>[MAX.] (Typ.)<br>(at 20°C) | SATURATION<br>CURRENT ( A ) ※2 |            | TEMPERATURE<br>RISE CURRENT<br>( A ) ※3 |
|--------------------|-------|---------------------------|---|--------------------------------|------------|---|
|                    |       |                           |   | (at 20°C)                      | (at100°C)  |   |
| CDEP147NP-0R4NC-95 | 0R4NS | 0.4μH±25%                 | 1.18(0.98)                                | 52.8(66.0)                     | 45.6(57.0) | 23.0                                    |
| CDEP147NP-0R9MC-95 | 0R9MS | 0.9μH±20%                 | 1.46(1.22)                                | 36.0(45.0)                     | 30.8(38.5) | 21.5                                    |
| CDEP147NP-1R5MC-95 | 1R5MS | 1.5μH±20%                 | 2.02(1.69)                                | 27.2(34.0)                     | 22.8(28.5) | 20.0                                    |
| CDEP147NP-2R4MC-95 | 2R4MS | 2.4μH±20%                 | 3.23(2.70)                                | 22.4(28.0)                     | 19.2(24.0) | 17.5                                    |
| CDEP147NP-3R4MC-95 | 3R4MS | 3.4μH±20%                 | 4.97(4.14)                                | 18.4(23.0)                     | 16.0(20.0) | 16.0                                    |
| CDEP147NP-4R7MC-95 | 4R7MS | 4.7μH±20%                 | 6.03(5.02)                                | 15.2(19.0)                     | 14.2(17.8) | 12.5                                    |
| CDEP147NP-6R1MC-95 | 6R1MS | 6.1μH±20%                 | 7.80(6.50)                                | 14.8(18.5)                     | 12.4(15.5) | 11.0                                    |
| CDEP147NP-7R7MC-95 | 7R7MS | 7.7μH±20%                 | 9.85(8.21)                                | 12.4(15.5)                     | 10.6(13.2) | 10.0                                    |
| CDEP147NP-9R5MC-95 | 9R5MS | 9.5μH±20%                 | 13.31(11.1)                               | 11.2(14.0)                     | 9.6(12.0)  | 8.5                                     |

## Electrical Characteristics—high power type

| PART NO.           | STAMP | INDUCTANCE<br>[WITHIN] ※1 | D.C.R. (mΩ)<br>[MAX.] (Typ.)<br>(at 20°C) | SATURATION<br>CURRENT ( A ) ※2 |            | TEMPERATURE<br>RISE CURRENT<br>( A ) ※3 |
|--------------------|-------|---------------------------|---|--------------------------------|------------|---|
|                    |       |                           |   | (at 20°C)                      | (at100°C)  |   |
| CDEP147NP-0R3NC-73 | 0R3NH | 0.3μH±25%                 | 1.18(0.98)                                | 70.0(87.6)                     | 59.8(74.8) | 23.0                                    |
| CDEP147NP-0R7MC-73 | 0R7MH | 0.7μH±20%                 | 1.46(1.22)                                | 46.4(58.0)                     | 39.2(49.0) | 21.5                                    |
| CDEP147NP-1R2MC-73 | 1R2MH | 1.2μH±20%                 | 2.02(1.69)                                | 35.7(44.7)                     | 30.0(37.5) | 20.0                                    |
| CDEP147NP-1R8MC-73 | 1R8MH | 1.8μH±20%                 | 3.23(2.70)                                | 29.6(37.0)                     | 24.0(30.0) | 17.5                                    |
| CDEP147NP-2R6MC-73 | 2R6MH | 2.6μH±20%                 | 4.97(4.14)                                | 24.4(30.5)                     | 20.4(25.5) | 16.0                                    |
| CDEP147NP-3R5MC-73 | 3R5MH | 3.5μH±20%                 | 6.03(5.02)                                | 20.8(26.0)                     | 17.2(21.5) | 12.5                                    |
| CDEP147NP-4R7MC-73 | 4R7MH | 4.7μH±20%                 | 7.80(6.50)                                | 17.6(22.0)                     | 16.0(20.0) | 11.0                                    |
| CDEP147NP-5R9MC-73 | 5R9MH | 5.9μH±20%                 | 9.85(8.21)                                | 16.4(20.5)                     | 14.0(17.5) | 10.0                                    |
| CDEP147NP-7R3MC-73 | 7R3MH | 7.3μH±20%                 | 13.31(11.1)                               | 14.6(18.3)                     | 12.2(15.3) | 8.5                                     |

※1. Measuring condition: at 100kHz.

※2. Saturation current: The value of D.C. current when the inductance decreases to 75% of it's nominal value.

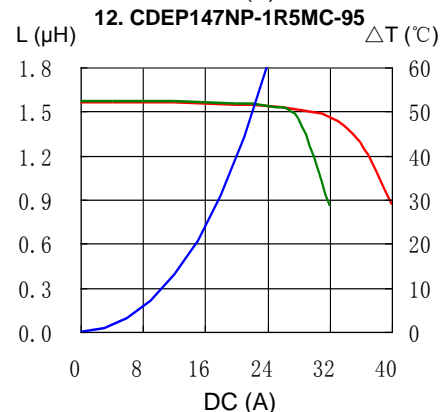
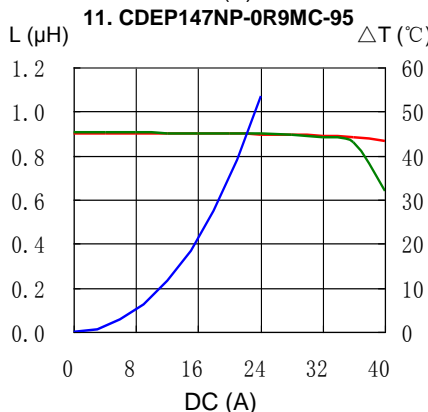
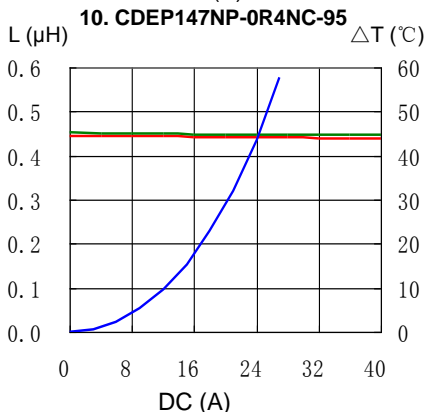
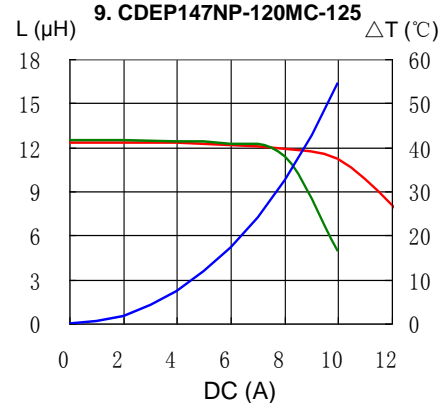
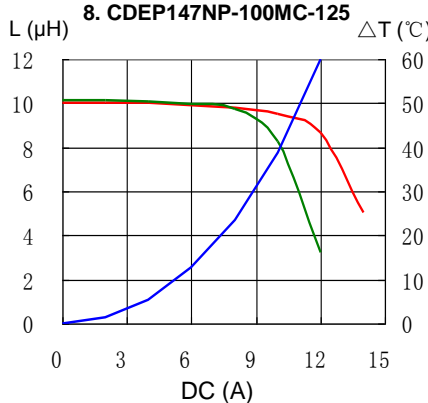
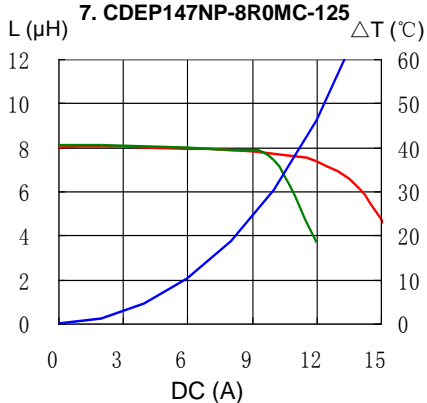
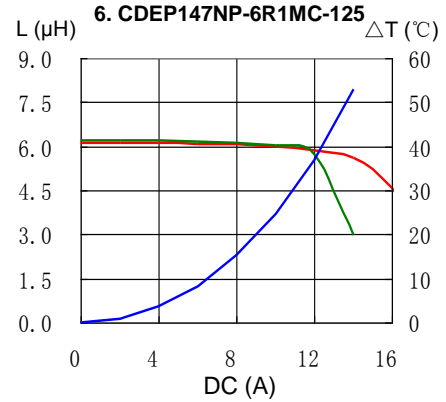
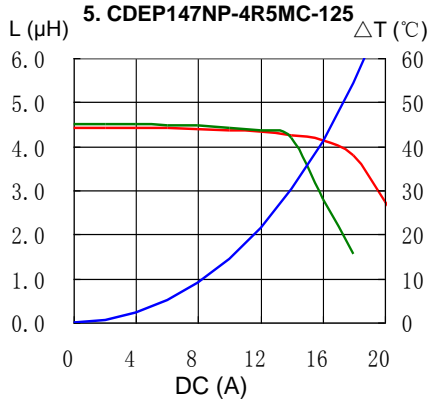
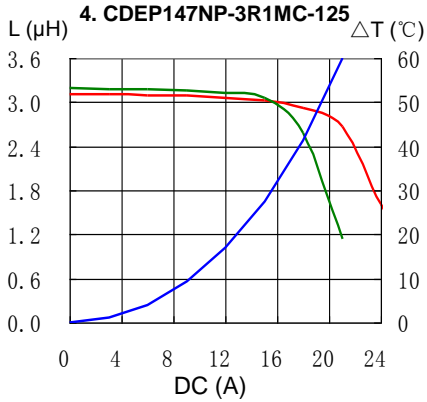
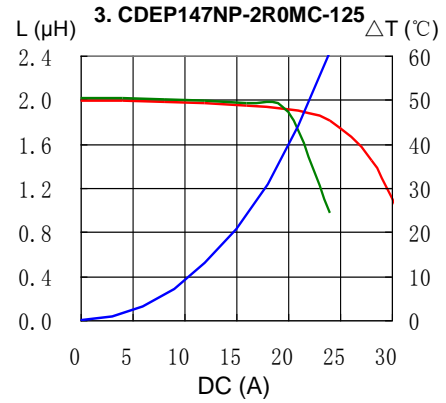
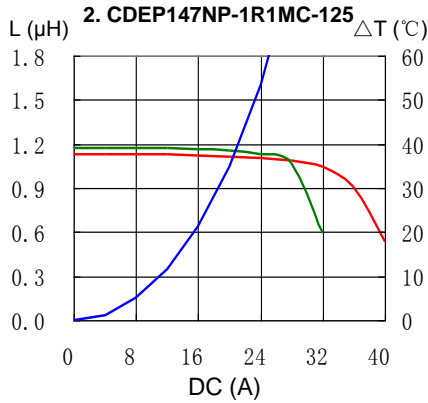
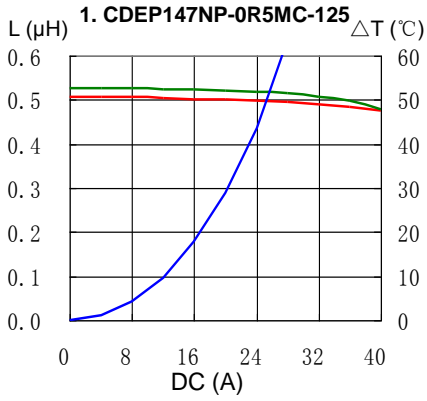
※3. Temperature rise current: The value of D.C. current when the temperature rise is  $\Delta t=40^{\circ}\text{C}$  ( $T_a=20^{\circ}\text{C}$ ).

# SMD Power Inductor CDEP147



## Saturation Current & Temperature Rise Graph

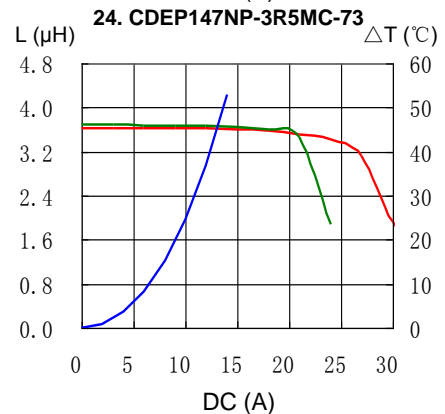
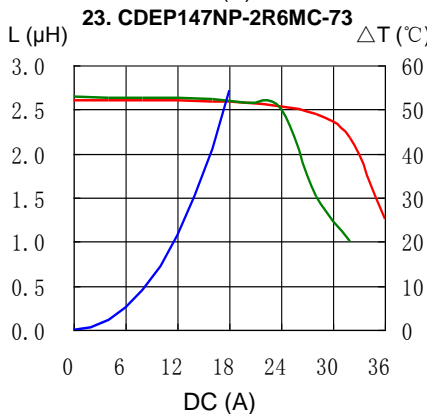
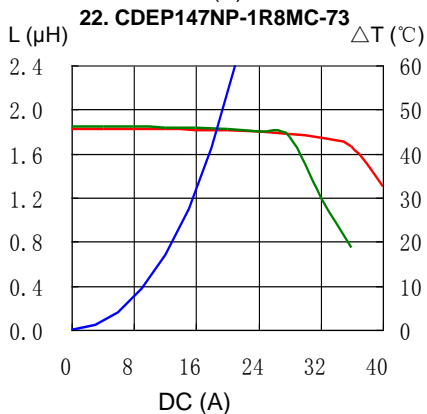
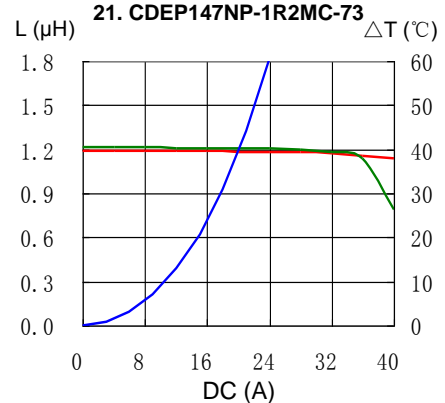
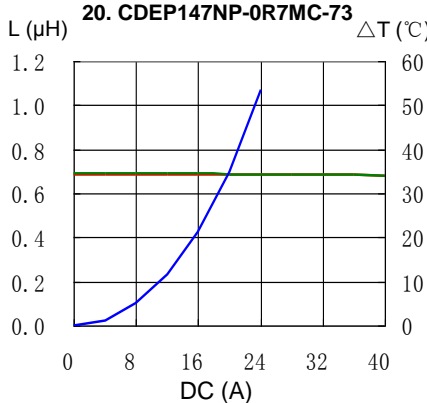
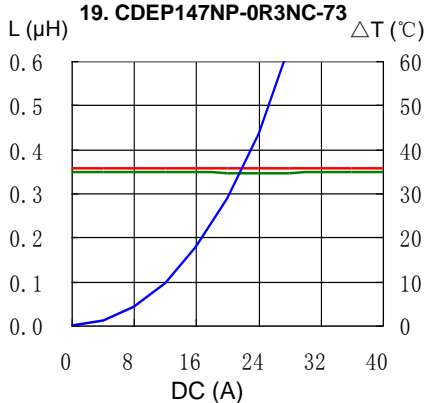
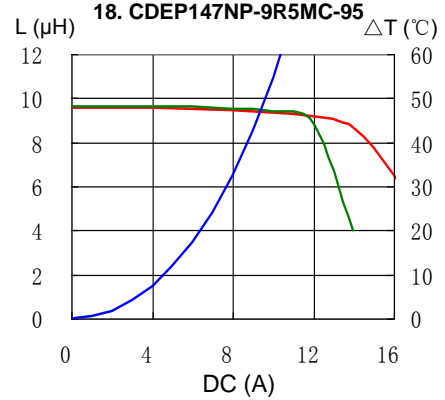
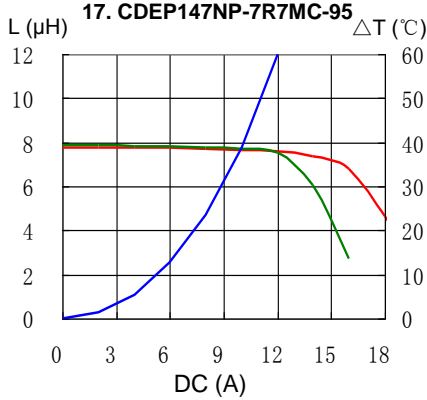
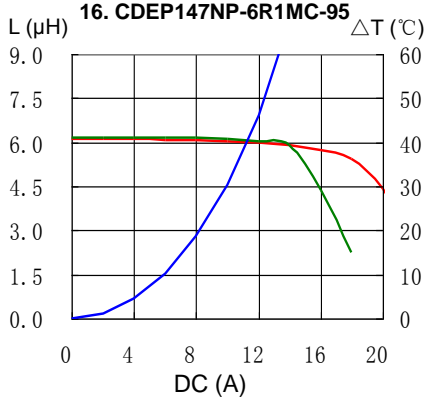
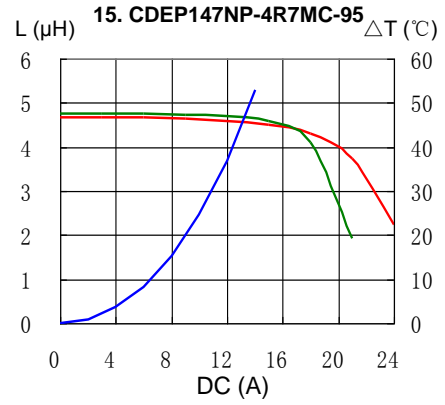
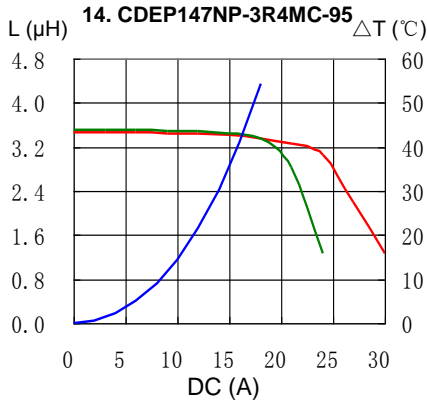
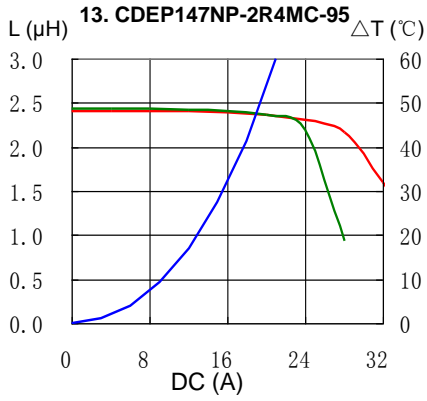
— L (20°C) — L (100°C) —  $\Delta T$





## Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) —  $\Delta T$

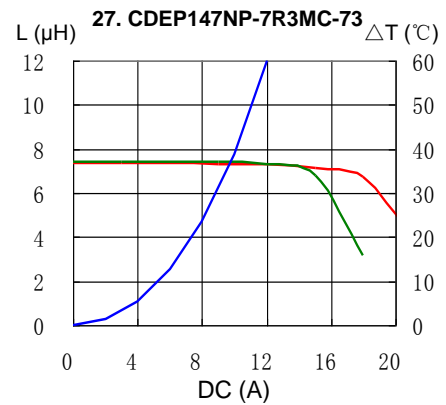
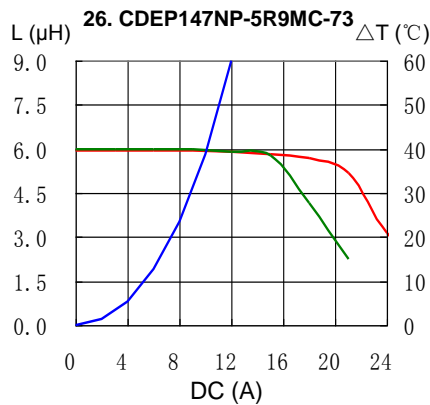
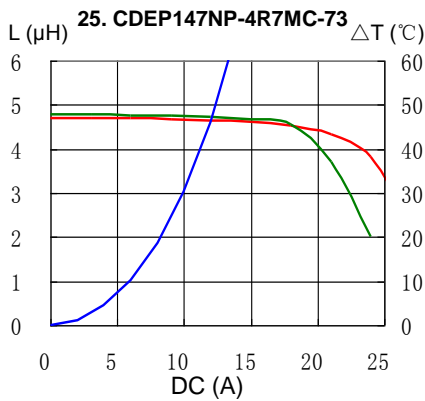


# SMD Power Inductor CDEP147



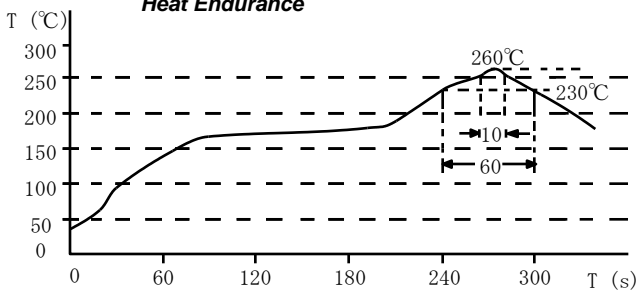
## Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) —  $\Delta T$

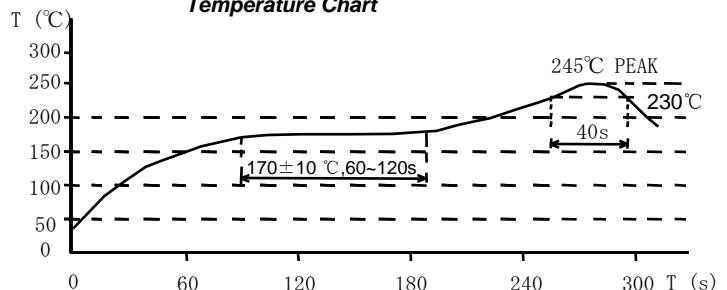


## Solder Reflow Condition

**Heat Endurance**



**Temperature Chart**



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