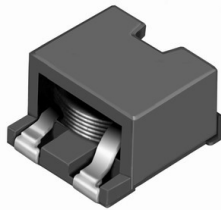


SMD Power Inductor CDEP85



Halogen Free



Description

- Ferrite core construction.
- Magnetically shielded.
- L × W × H: 8.4 × 8.4 × 5.5 mm Max.
- Product weight: 1.2 g(Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.

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.

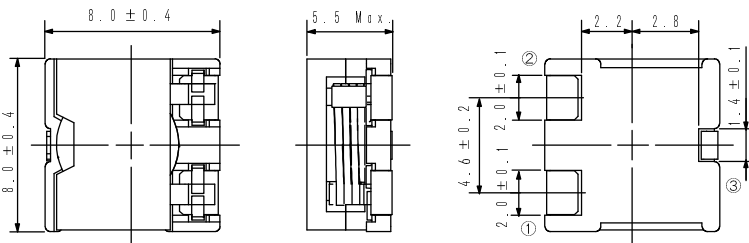
Packaging

- Carrier tape and reel packaging.
- 13.0" diameter reel
- 1000pcs per reel

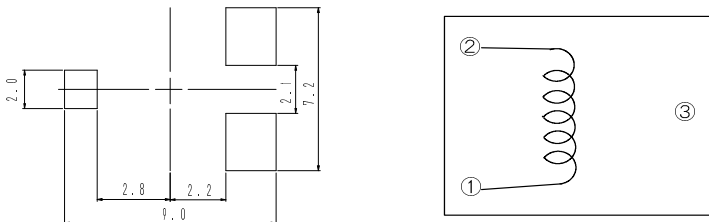
Applications

- Ideally used in portable computer CPU power supply.

Dimension - [mm]



Land pattern and Schematics - [mm]



Electrical Characteristics

Electrical characteristics - Low D.C.R. Type

| Part No. | Stamp | Inductance [Within]※1 | D.C.R. (mΩ)[Max.] (at20°C) | Saturation current (A)※2 | | Temperature Rise Current (A)※3 |
|--------------------|-------|--------------------------|----------------------------------|-----------------------------|------------|--------------------------------------|
| | | | | (at 20°C) | (at105°C) | |
| CDEP85NP-R5ØMC-125 | R50ML | 0.5 μH ±20% | 2.5(2.1) | 12.0(15.0) | 10.4(13.0) | 18.0 |
| CDEP85NP-1R1MC-125 | 1R1ML | 1.1 μH ±20% | 3.4(2.8) | 7.8(9.8) | 6.8(8.5) | 17.0 |
| CDEP85NP-2RØMC-125 | 2R0ML | 2.0 μH ±20% | 4.8(4.0) | 5.3(6.6) | 4.7(5.9) | 13.5 |
| CDEP85NP-3R1MC-125 | 3R1ML | 3.1 μH ±20% | 7.0(5.9) | 4.4(5.5) | 3.7(4.6) | 10.8 |
| CDEP85NP-4R5MC-125 | 4R5ML | 4.5 μH ±20% | 8.1(6.8) | 3.6(4.5) | 3.2(4.0) | 9.7 |
| CDEP85NP-6R1MC-125 | 6R1ML | 6.1 μH ±20% | 9.8(8.2) | 3.4(4.2) | 2.9(3.6) | 8.3 |
| CDEP85NP-8RØMC-125 | 8R0ML | 8.0 μH ±20% | 11.7(9.8) | 2.9(3.6) | 2.6(3.2) | 7.5 |
| CDEP85NP-1ØØMC-125 | 100ML | 10.0 μH ±20% | 15.1(12.6) | 2.6(3.2) | 2.2(2.8) | 6.5 |

SMD Power Inductor CDEP85



Electrical characteristics - Standard Type

| Part No. | Stamp | Inductance [Within] ※1 | D.C.R.(mΩ) [Max.] (at 20°C) | Saturation current (A)※2 | | Temperature Rise current (A)※3 |
|-------------------|-------|------------------------------|-----------------------------------|-----------------------------|------------|--------------------------------------|
| | | | | (at 20°C) | (at 105°C) | |
| CDEP85NP-R35MC-88 | R35MS | 0.35 μH ± 20% | 2.5(2.1) | 18.4(23.0) | 15.2(19.0) | 18.0 |
| CDEP85NP-R80MC-88 | R80MS | 0.8 μH ± 20% | 3.4(2.8) | 11.4(14.2) | 10.0(12.5) | 17.0 |
| CDEP85NP-1R4MC-88 | 1R4MS | 1.4 μH ± 20% | 4.8(4.0) | 8.8(11.0) | 7.6(9.5) | 13.5 |
| CDEP85NP-2R2MC-88 | 2R2MS | 2.2 μH ± 20% | 7.0(5.9) | 7.0(8.7) | 5.8(7.3) | 10.8 |
| CDEP85NP-3R2MC-88 | 3R2MS | 3.2 μH ± 20% | 8.1(6.8) | 5.8(7.2) | 5.0(6.2) | 9.7 |
| CDEP85NP-4R3MC-88 | 4R3MS | 4.3 μH ± 20% | 9.8(8.2) | 5.0(6.2) | 4.1(5.1) | 8.3 |
| CDEP85NP-5R6MC-88 | 5R6MS | 5.6 μH ± 20% | 11.7(9.8) | 4.3(5.4) | 3.6(4.5) | 7.5 |
| CDEP85NP-7R1MC-88 | 7R1MS | 7.1 μH ± 20% | 15.1(12.6) | 3.8(4.8) | 3.3(4.1) | 6.5 |

Electrical characteristics - High Power Type

| Part No. | Stamp | Inductance [Within] ※1 | D.C.R.(mΩ) [Max.] (at 20°C) | Saturation current (A) ※2 | | Temperature Rise current (A) ※3 |
|-------------------|-------|------------------------------|-----------------------------------|------------------------------|------------|---------------------------------------|
| | | | | (at 20°C) | (at 105°C) | |
| CDEP85NP-R20MC-5Ø | R20MH | 0.2 μH ± 20% | 2.5(2.1) | 32.0(40.0) | 26.0(32.5) | 18.0 |
| CDEP85NP-R45MC-5Ø | R45MH | 0.45 μH ± 20% | 3.4(2.8) | 22.0(27.5) | 18.0(22.5) | 17.0 |
| CDEP85NP-R80MC-5Ø | R80MH | 0.8 μH ± 20% | 4.8(4.0) | 16.0(20.0) | 13.2(16.5) | 13.5 |
| CDEP85NP-1R2MC-5Ø | 1R2MH | 1.2 μH ± 20% | 7.0(5.9) | 12.8(16.0) | 10.6(13.2) | 10.8 |
| CDEP85NP-1R8MC-5Ø | 1R8MH | 1.8 μH ± 20% | 8.1(6.8) | 10.8(13.5) | 8.8(11.0) | 9.7 |
| CDEP85NP-2R4MC-5Ø | 2R4MH | 2.4 μH ± 20% | 9.8(8.2) | 9.3(11.6) | 7.7(9.6) | 8.3 |
| CDEP85NP-3R2MC-5Ø | 3R2MH | 3.2 μH ± 20% | 11.7(9.8) | 8.0(10.0) | 6.5(8.1) | 7.5 |
| CDEP85NP-4R0MC-5Ø | 4R0MH | 4.0 μH ± 20% | 15.1(12.6) | 7.2(9.0) | 5.9(7.4) | 6.5 |

※1. Measuring condition: at 100 kHz.

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

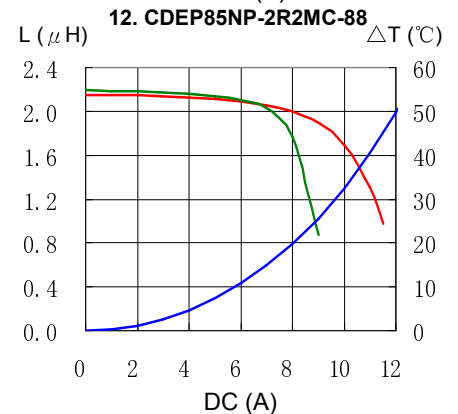
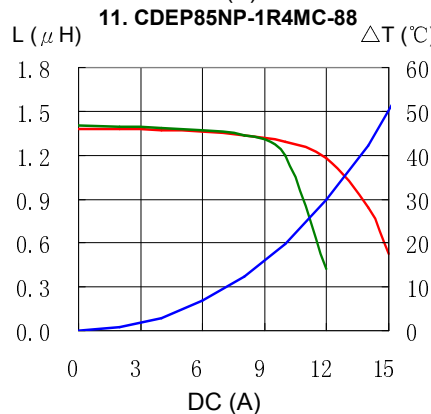
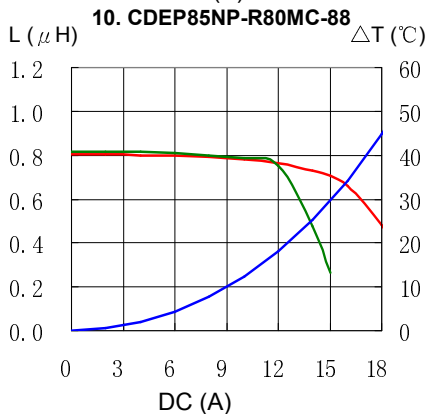
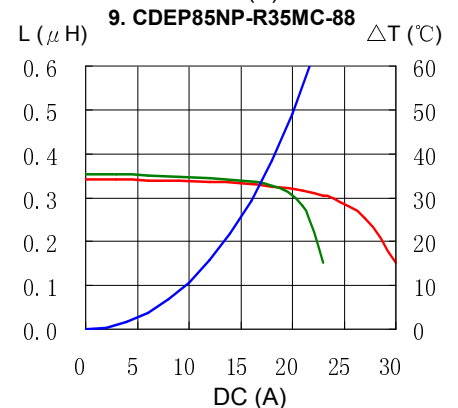
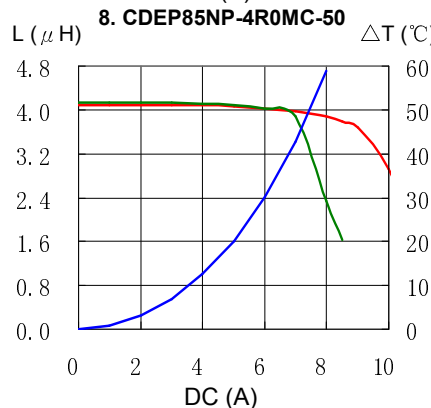
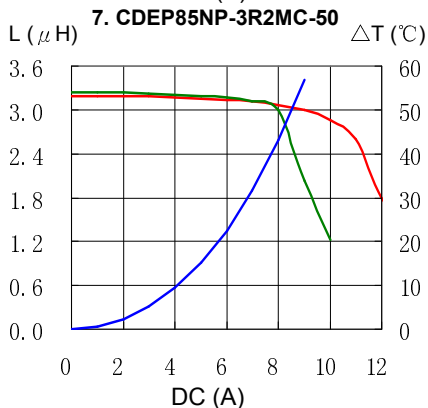
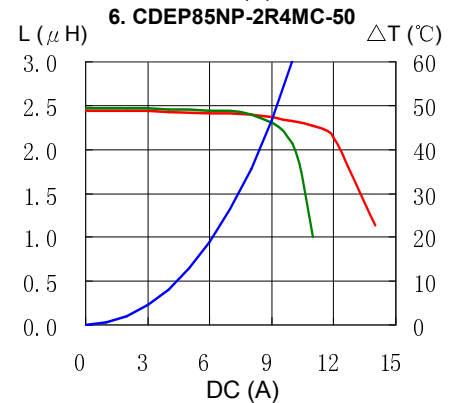
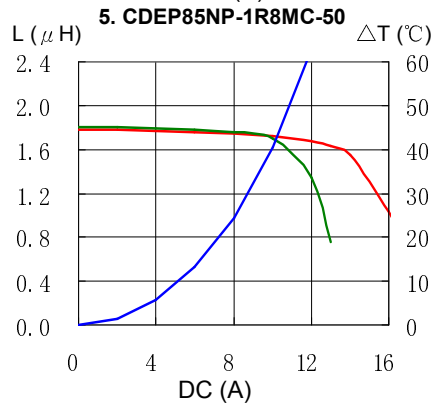
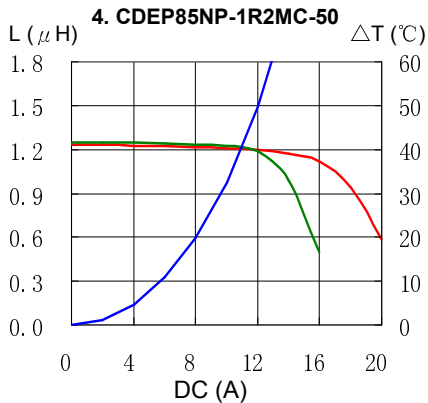
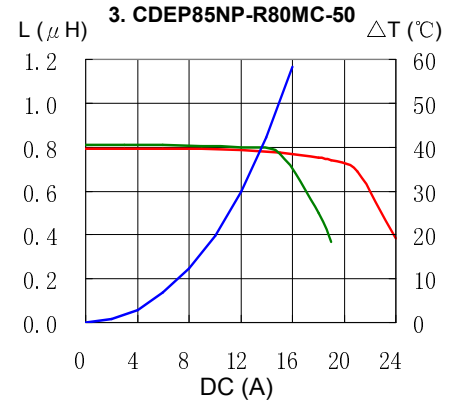
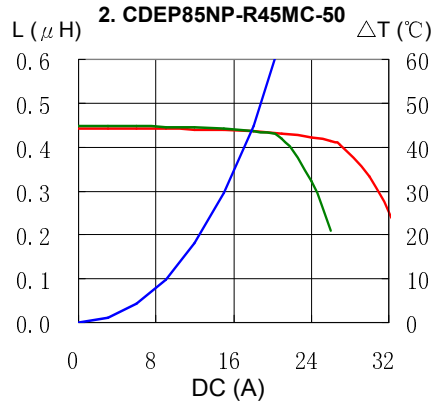
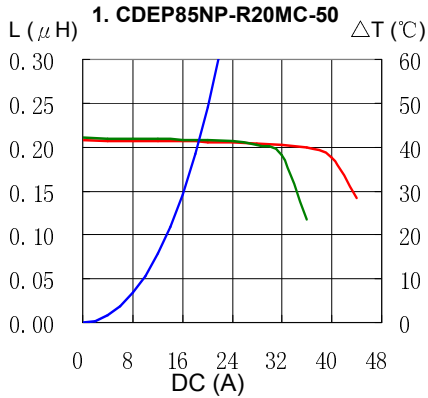
※3. Temperature rise current: The value of D.C. current when the temperature rise is $\Delta t = 40^\circ\text{C}$ ($T_a = 20^\circ\text{C}$).

SMD Power Inductor CDEP85



Saturation Current & Temperature Rise Graph

— L (20°C) — L (105°C) — ΔT

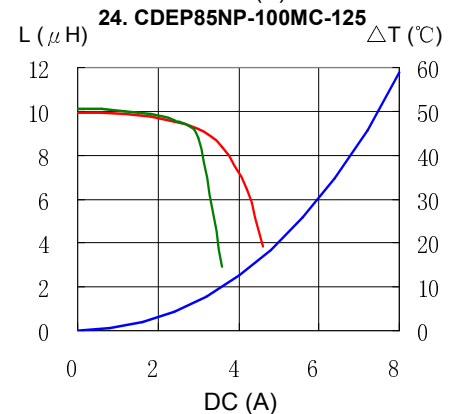
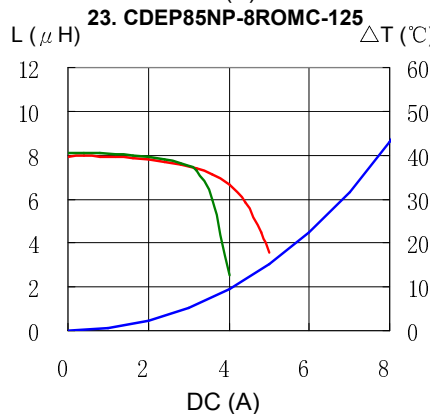
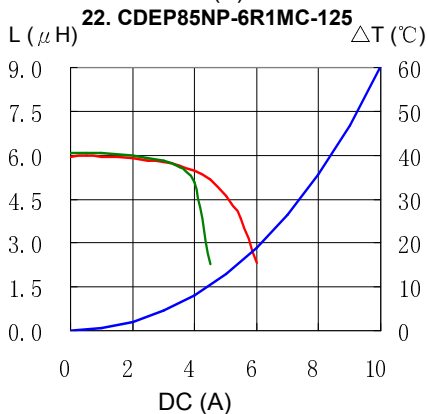
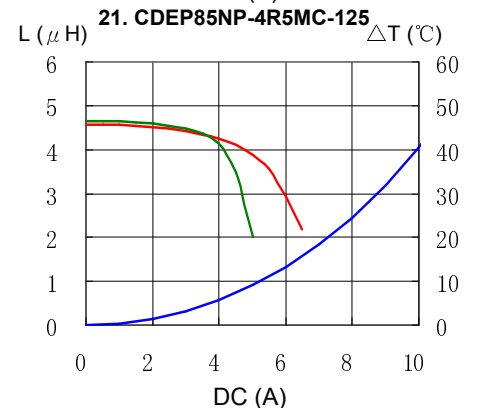
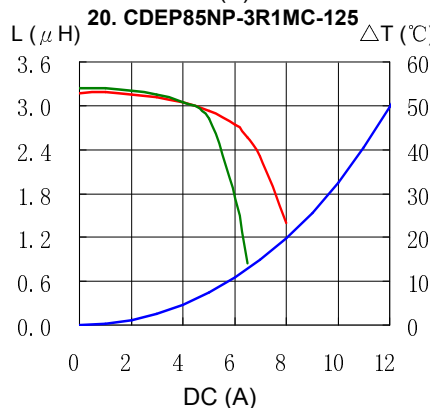
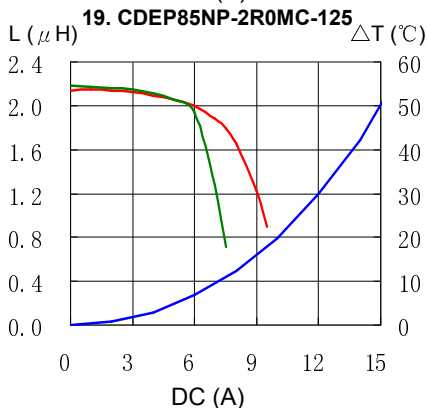
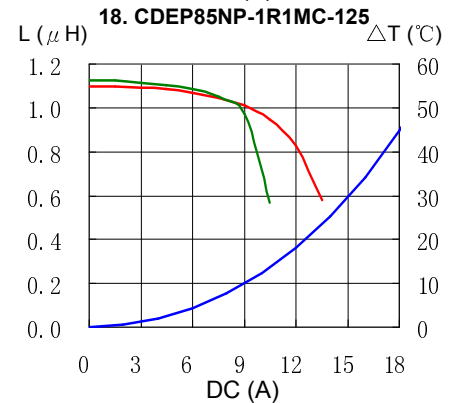
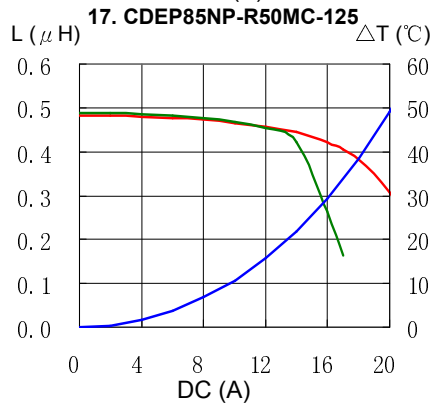
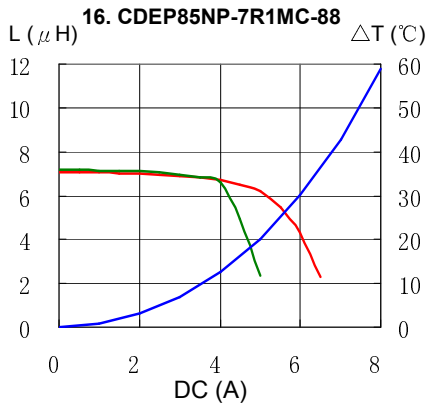
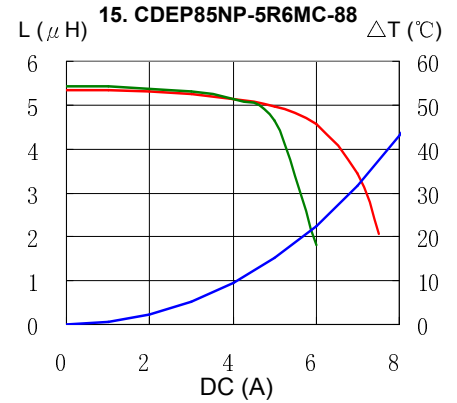
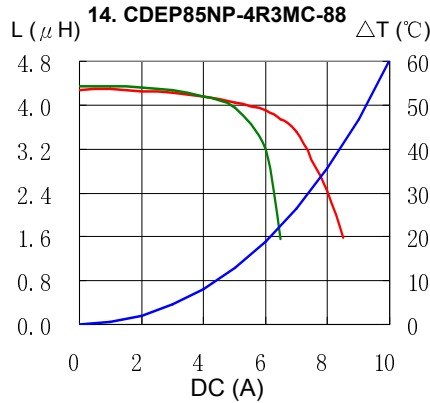
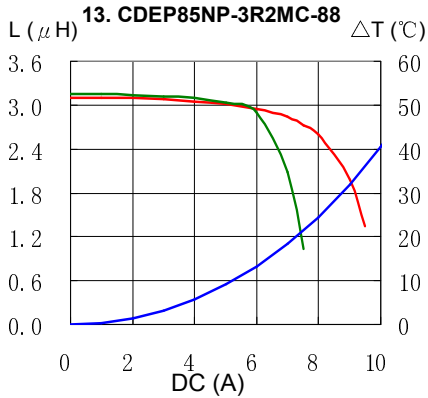


SMD Power Inductor CDEP85



Saturation Current & Temperature Rise Graph

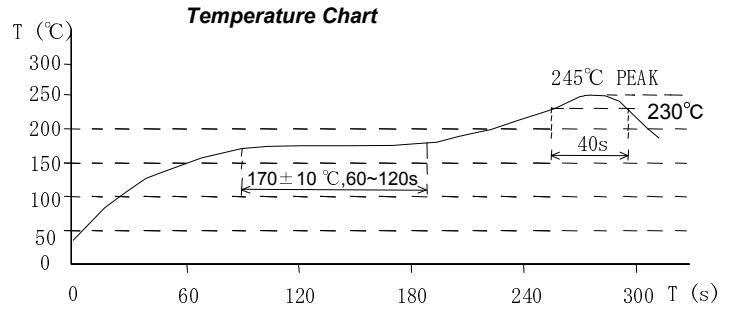
— L (20°C) — L (105°C) — ΔT



SMD Power Inductor CDEP85



Solder Reflow Condition



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