



**THE DATASHEET OF
CEP125NP-0R8NC-U**



SMD Power Inductor CEP125



Description

- Ferrite core construction.
- Magnetically shielded.
- L × W × H: 12.9 × 12.9 × 5.6 mm Max.
- Product weight: 2.7g(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.

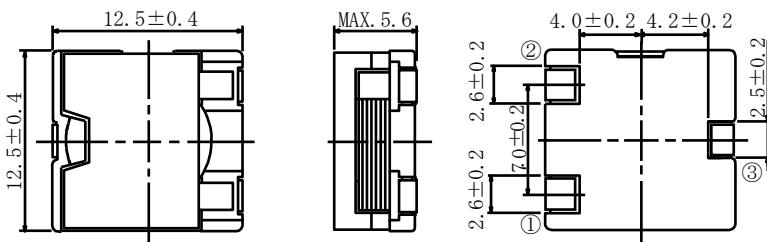
Packaging

- Carrier tape and reel packaging
- 13.0" diameter reel
- 500pcs per reel

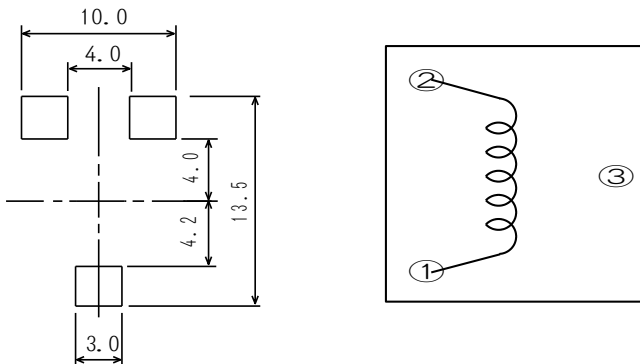
Applications

- Ideally used in portable computer CPU and other power supply.

Dimension - [mm]



Land pattern and Schematics - [mm]





Electrical Characteristics - 1

| PART NO. | STAMP | INDUCTANCE [WITHIN] ※1 | D.C.R. (mΩ) [MAX.] (Typ.) (at 20°C) | SATURATION CURRENT(A) ※2 | | TEMPERATURE RISE CURRENT (A) ※3 |
|----------------|-------|---------------------------|---|-----------------------------|-----------|---------------------------------------|
| | | | | (at 20°C) | (at100°C) | |
| CEP125NP-1R5MC | 1R5M | 1.5μH±20% | 2.5(2.1) | 14.0 | 11.8 | 16.5 |
| CEP125NP-2R5MC | 2R5M | 2.5μH±20% | 3.4(2.8) | 10.0 | 8.8 | 15.5 |
| CEP125NP-4R0MC | 4R0M | 4.0μH±20% | 5.4(4.5) | 8.3 | 7.2 | 12.5 |
| CEP125NP-6R0MC | 6R0M | 6.0μH±20% | 8.0(6.6) | 6.7 | 5.8 | 9.9 |
| CEP125NP-8R2MC | 8R2M | 8.2μH±20% | 11.4(9.5) | 5.8 | 5.1 | 8.2 |
| CEP125NP-100MC | 100M | 10.0μH±20% | 13.5(11.2) | 5.0 | 4.6 | 7.6 |

Electrical Characteristics - 2

| PART NO. | STAMP | INDUCTANCE [WITHIN] ※1 | D.C.R. (mΩ) [MAX.] (Typ.) (at 20°C) | SATURATION CURRENT (A) ※2 | | TEMPERATURE RISE CURRENT (A) ※3 |
|------------------|-------|---------------------------|---|--------------------------------|-----------|---|
| | | | | (at 20°C) | (at100°C) | |
| CEP125NP-1R0MC-H | 1R0MH | 1.0μH±20% | 2.5(2.1) | 20.0 | 17.4 | 16.5 |
| CEP125NP-1R8MC-H | 1R8MH | 1.8μH±20% | 3.4(2.8) | 15.3 | 12.9 | 15.5 |
| CEP125NP-2R8MC-H | 2R8MH | 2.8μH±20% | 5.4(4.5) | 12.3 | 10.2 | 12.5 |
| CEP125NP-4R0MC-H | 4R0MH | 4.0μH±20% | 8.0(6.6) | 10.3 | 8.6 | 9.9 |
| CEP125NP-5R6MC-H | 5R6MH | 5.6μH±20% | 11.4(9.5) | 8.8 | 7.7 | 8.2 |
| CEP125NP-7R2MC-H | 7R2MH | 7.2μH±20% | 13.5(11.2) | 7.8 | 6.6 | 7.6 |

Electrical Characteristics - 3

| PART NO. | STAMP | INDUCTANCE [WITHIN] ※1 | D.C.R. (mΩ) [MAX.] (Typ.) (at 20°C) | SATURATION CURRENT (A) ※2 | | TEMPERATURE RISE CURRENT (A) ※3 |
|------------------|-------|---------------------------|---|--------------------------------|-----------|---|
| | | | | (at 20°C) | (at100°C) | |
| CEP125NP-0R3NC-U | 0R3NU | 0.35μH±30% | 1.8(1.5) | 35.0 | 32.0 | 18.5 |
| CEP125NP-0R8NC-U | 0R8NU | 0.8μH±30% | 2.5(2.1) | 25.7 | 21.8 | 16.5 |
| CEP125NP-1R4MC-U | 1R4MU | 1.4μH±20% | 3.4(2.8) | 19.2 | 16.4 | 15.5 |
| CEP125NP-2R2MC-U | 2R2MU | 2.2μH±20% | 5.4(4.5) | 14.8 | 12.8 | 12.5 |
| CEP125NP-3R2MC-U | 3R2MU | 3.2μH±20% | 8.0(6.6) | 12.8 | 10.9 | 9.9 |
| CEP125NP-4R3MC-U | 4R3MU | 4.3μH±20% | 11.4(9.5) | 11.0 | 9.1 | 8.2 |
| CEP125NP-5R6MC-U | 5R6MU | 5.6μH±20% | 13.5(11.2) | 9.5 | 7.8 | 7.6 |

※1. Measuring condition: at 100kHz.

※2. Saturation current :The value of D.C. current when the inductance decreases to 65% (while the tolerance is ±30%) or 75% (while the tolerance is ±20%) of it's nominal.

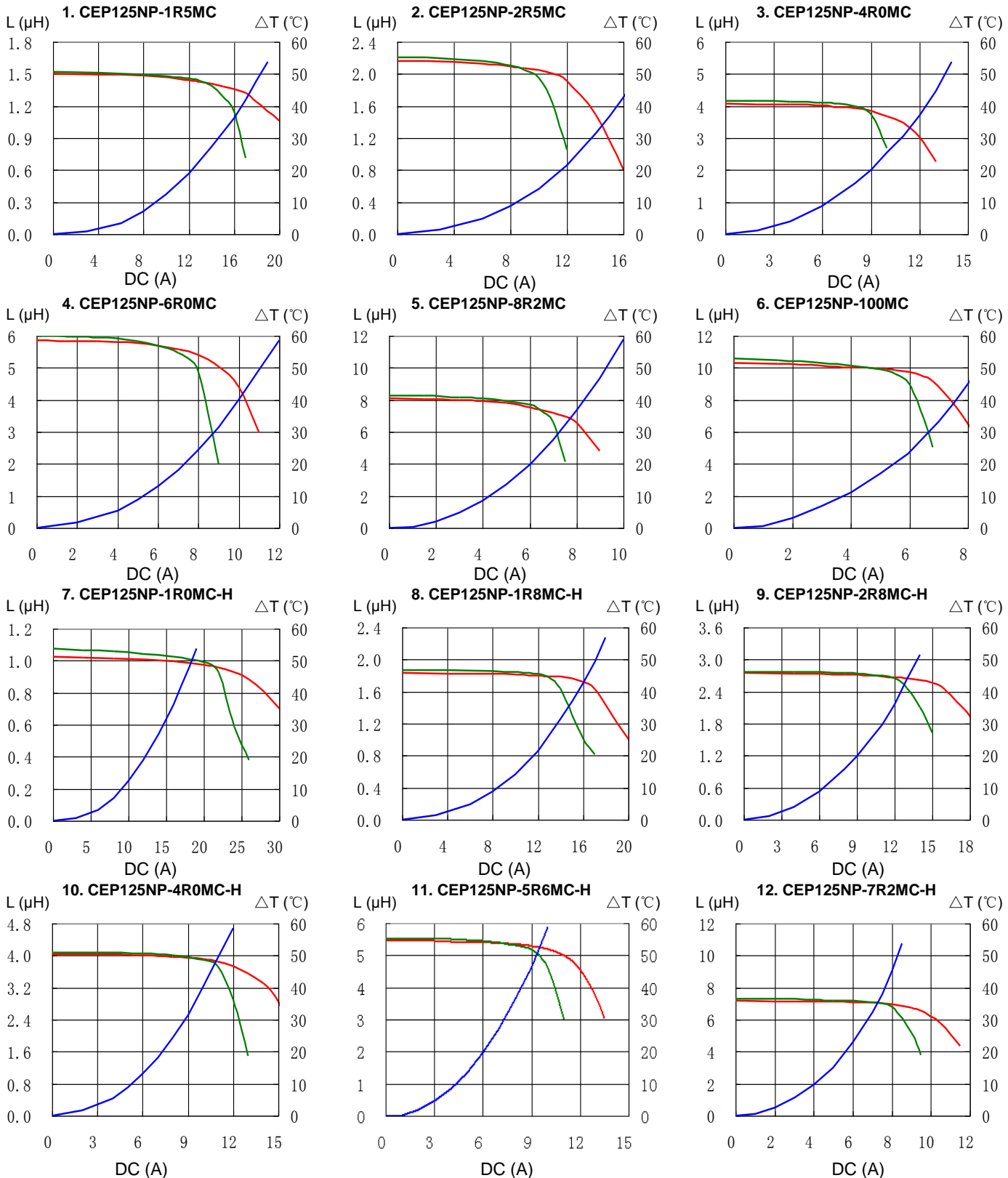
※3. Temperature rise current: The value of D.C. current when the temperature rise is $\Delta t=40^{\circ}\text{C}$ ($T_a=20^{\circ}\text{C}$).

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Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) — ΔT

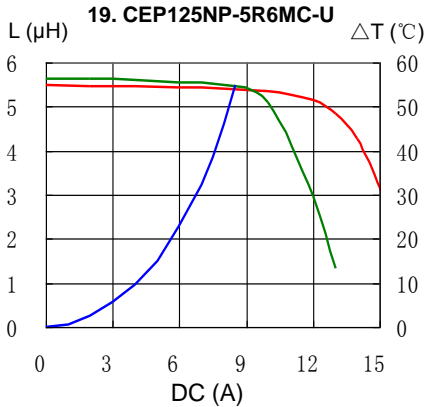
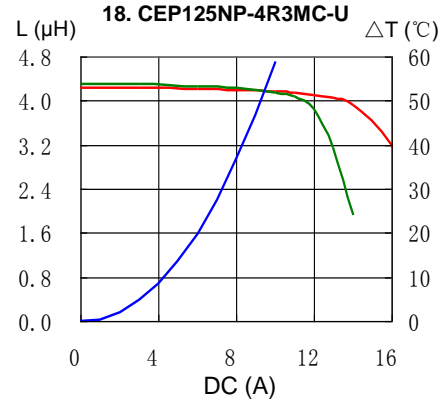
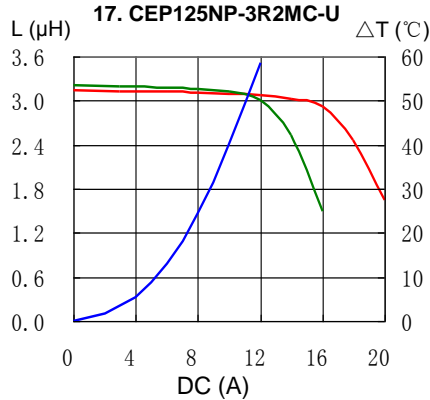
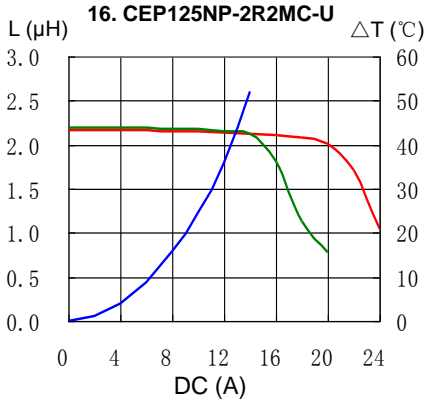
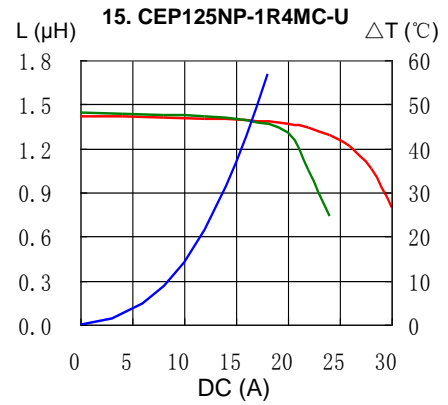
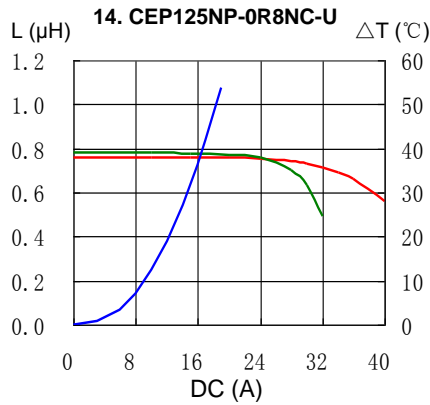
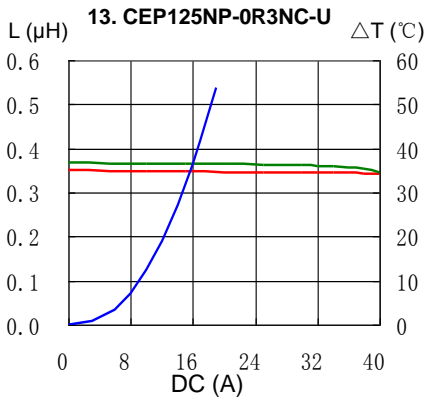


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Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) — ΔT

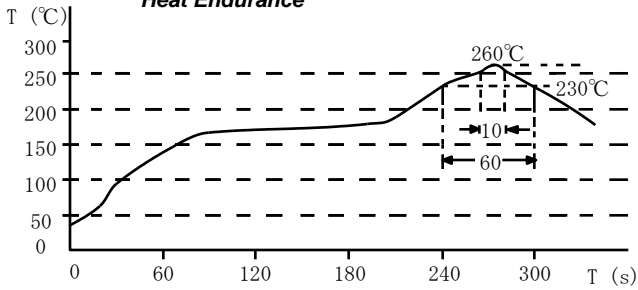


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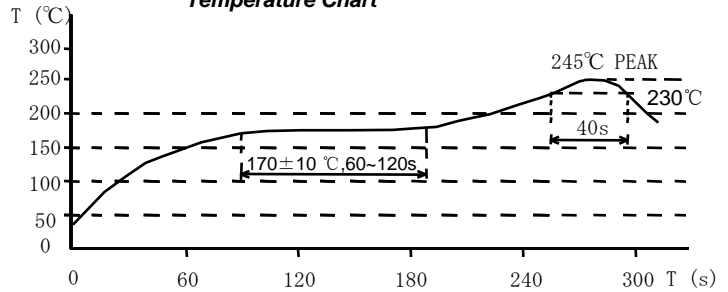


Solder Reflow Condition

Heat Endurance



Temperature Chart



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