

SMD Power Inductor CR54



Halogen Free



Description

- Ferrite drum core construction.
- Magnetically unshielded.
- L × W × H: 6.1 × 5.6 × 4.85 mm Max.
- Product weight: 0.41g(Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.
- Halogen Free available.

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.

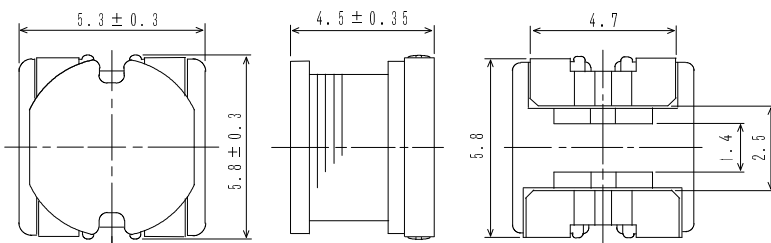
Packaging

- Carrier tape and reel packaging
- 12.9" diameter reel
- 1500pcs per reel

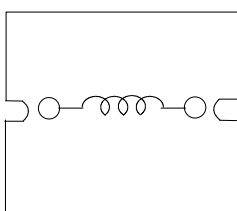
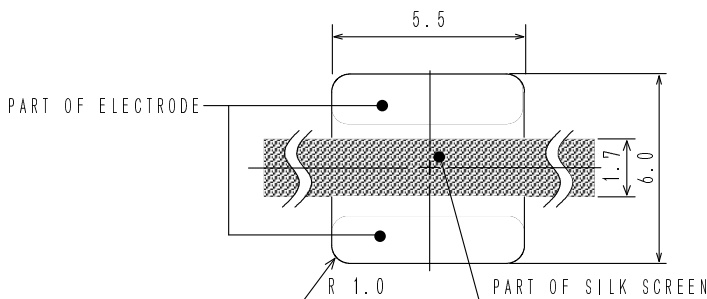
Applications

- Ideally used in A/V equipment, LCD TV, DSC/DVC, Game Machine, DVC, HDD, Notebook PC, etc as DC-DC converter inductors.

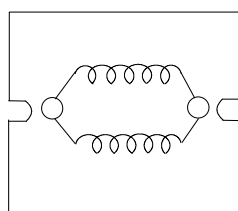
Dimension - [mm]



Land pattern and Schematics - [mm]



10 μ H ~ 220 μ H



2.2 μ H ~ 8.5 μ H

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Electrical Characteristics

| Part Name | Stamp | Inductance (μ H) [within] ※ 1 | D.C.R. (Ω) [Max.] (at 20°C) | Rated Current (A)※2 |
|--------------|-------|--|--|------------------------|
| CR54NP-2R2MC | 2R2 | 2.2 \pm 20 % | 23.4m | 3.84 |
| CR54NP-2R7MC | 2R7 | 2.7 \pm 20 % | 26.0m | 3.44 |
| CR54NP-3R3MC | 3R3 | 3.3 \pm 20 % | 28.6m | 3.20 |
| CR54NP-3R9MC | 3R9 | 3.9 \pm 20 % | 35.1m | 3.00 |
| CR54NP-4R4MC | 4R4 | 4.4 \pm 20 % | 39.0m | 2.80 |
| CR54NP-5R0MC | 5R0 | 5.0 \pm 20 % | 44.2m | 2.60 |
| CR54NP-5R6MC | 5R6 | 5.6 \pm 20 % | 49.4m | 2.48 |
| CR54NP-6R4MC | 6R4 | 6.4 \pm 20 % | 52.0m | 2.20 |
| CR54NP-7R6MC | 7R6 | 7.6 \pm 20 % | 62.4m | 2.08 |
| CR54NP-8R5MC | 8R5 | 8.5 \pm 20 % | 67.6m | 1.84 |
| CR54NP-100MC | 100 | 10 \pm 20 % | 0.10 | 1.44 |
| CR54NP-120MC | 120 | 12 \pm 20 % | 0.12 | 1.40 |
| CR54NP-150MC | 150 | 15 \pm 20 % | 0.14 | 1.30 |
| CR54NP-180MC | 180 | 18 \pm 20 % | 0.15 | 1.23 |
| CR54NP-220MC | 220 | 22 \pm 20 % | 0.18 | 1.11 |
| CR54NP-270MC | 270 | 27 \pm 20 % | 0.20 | 0.97 |
| CR54NP-330LC | 330 | 33 \pm 15 % | 0.23 | 0.88 |
| CR54NP-390LC | 390 | 39 \pm 15 % | 0.32 | 0.80 |
| CR54NP-470LC | 470 | 47 \pm 15 % | 0.37 | 0.72 |
| CR54NP-560KC | 560 | 56 \pm 10 % | 0.42 | 0.68 |
| CR54NP-680KC | 680 | 68 \pm 10 % | 0.46 | 0.61 |
| CR54NP-820KC | 820 | 82 \pm 10 % | 0.60 | 0.58 |
| CR54NP-101KC | 101 | 100 \pm 10 % | 0.70 | 0.52 |
| CR54NP-121KC | 121 | 120 \pm 10 % | 0.93 | 0.48 |
| CR54NP-151KC | 151 | 150 \pm 10 % | 1.10 | 0.40 |
| CR54NP-181KC | 181 | 180 \pm 10 % | 1.38 | 0.38 |
| CR54NP-221KC | 221 | 220 \pm 10 % | 1.57 | 0.35 |

※1. Inductance measuring frequency: 2.2 μ H ~ 8.5 μ H ; at 7.96 MHz
 10 μ H ~ 82 μ H ; at 2.52 MHz
 100 μ H ~ 220 μ H ; at 1 kHz

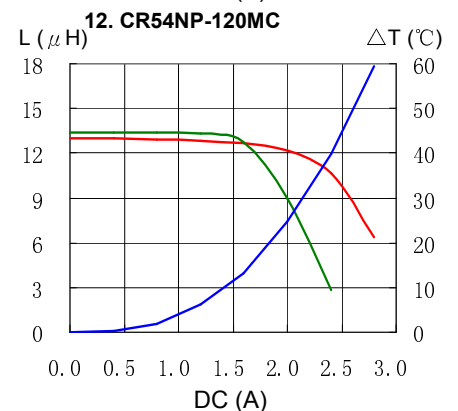
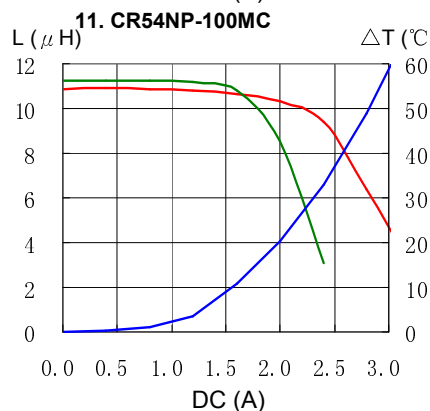
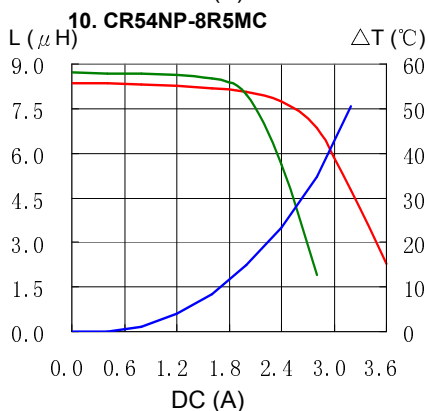
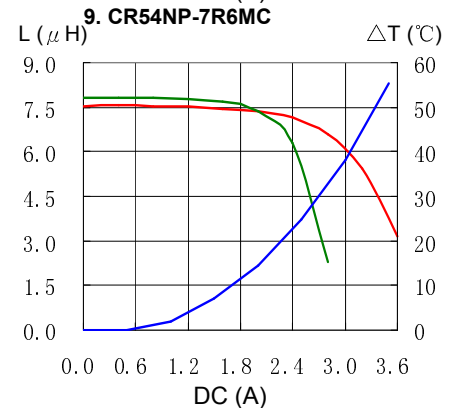
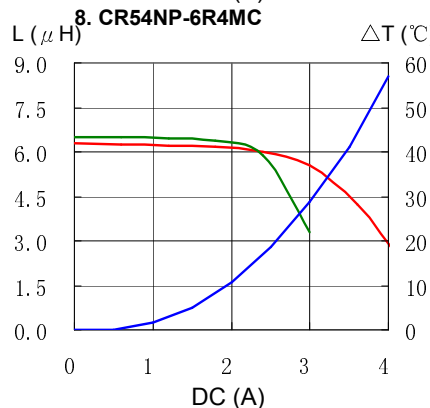
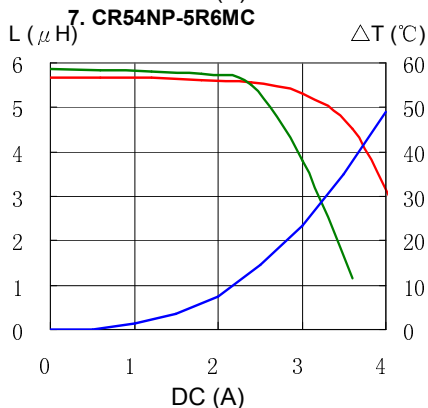
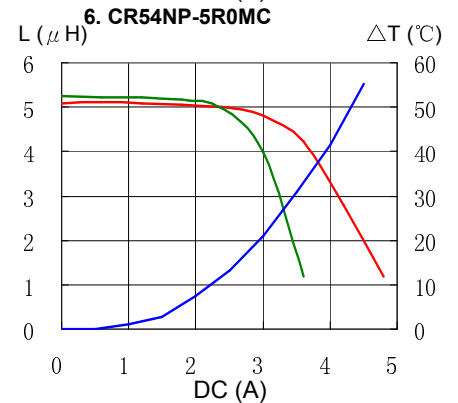
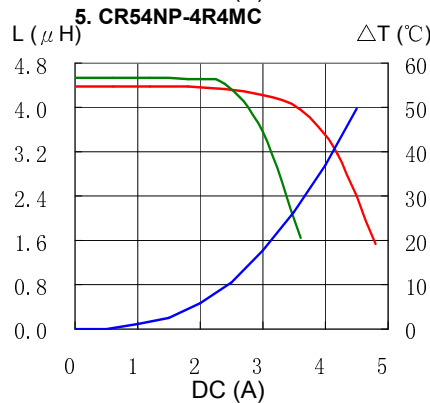
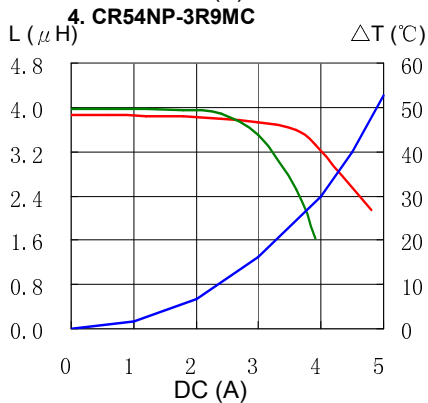
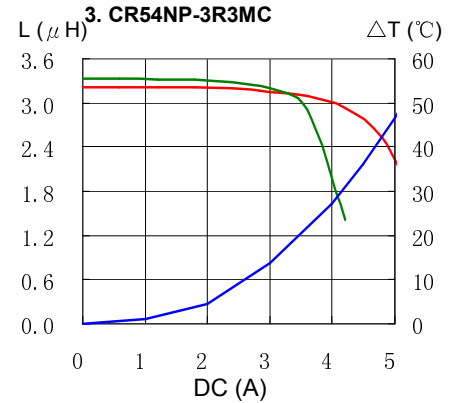
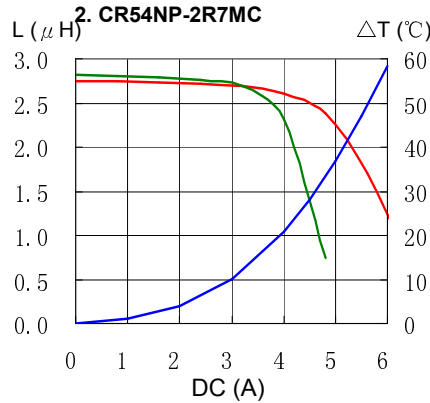
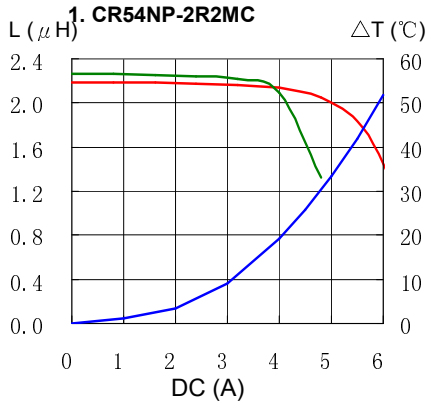
※2. Rated current: The D.C. current at which the inductance decreases to 90% of its initial value or when $\Delta t=40^\circ\text{C}$, whichever is lower ($T_a=20^\circ\text{C}$).

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Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) — ΔT

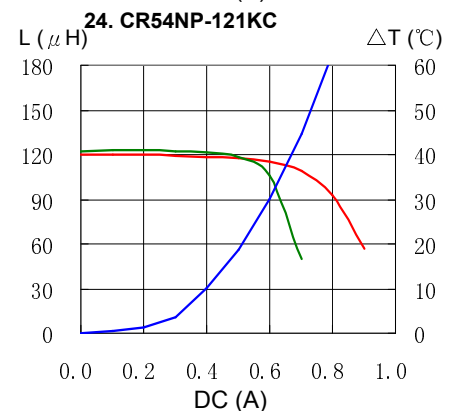
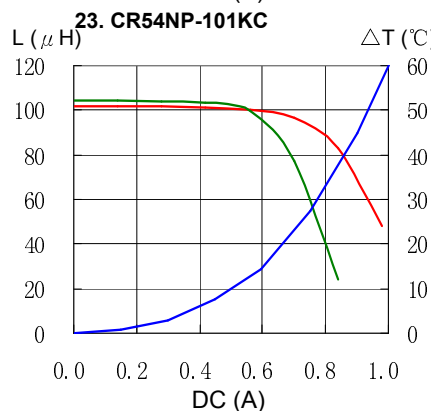
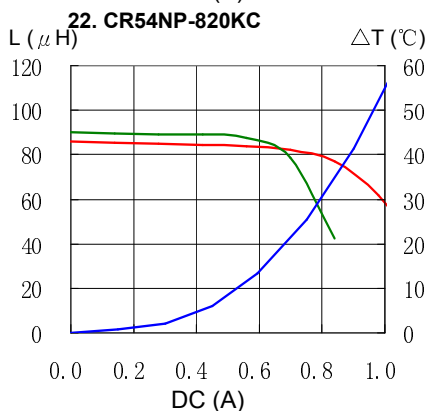
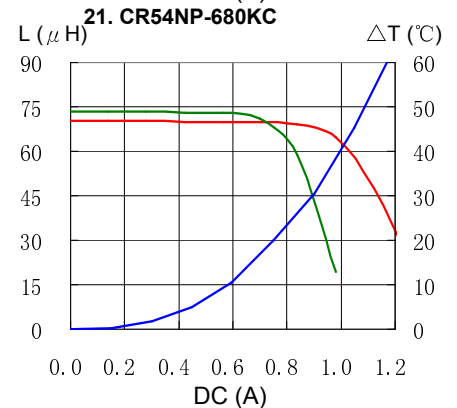
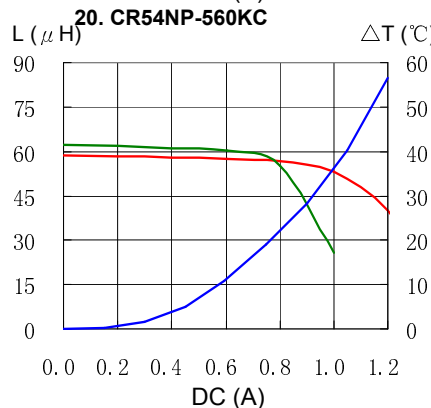
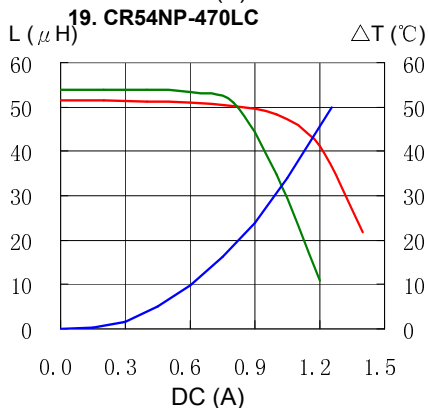
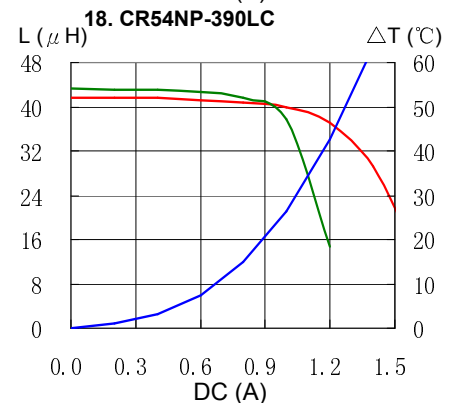
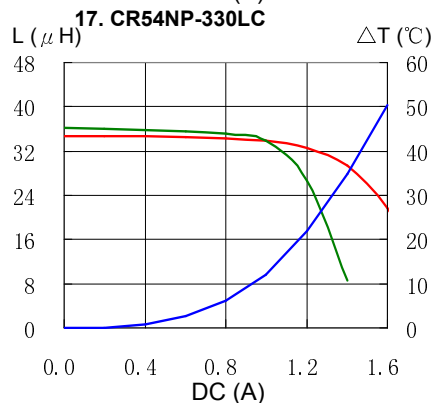
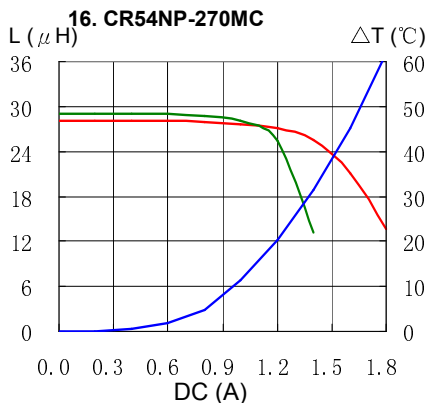
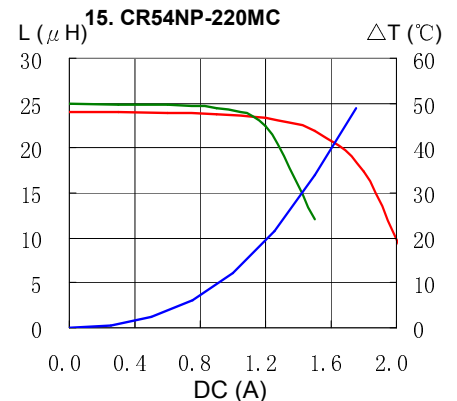
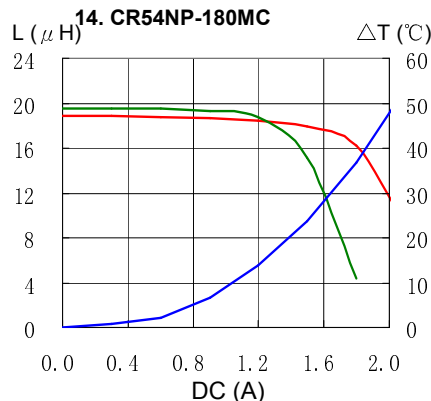
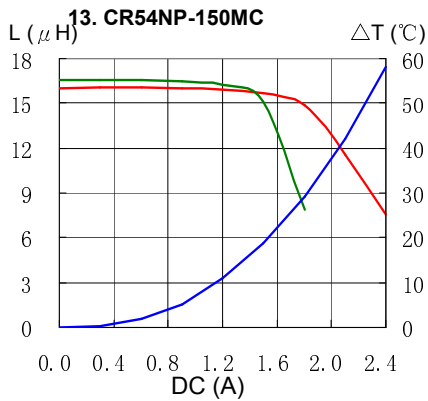


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Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) — ΔT

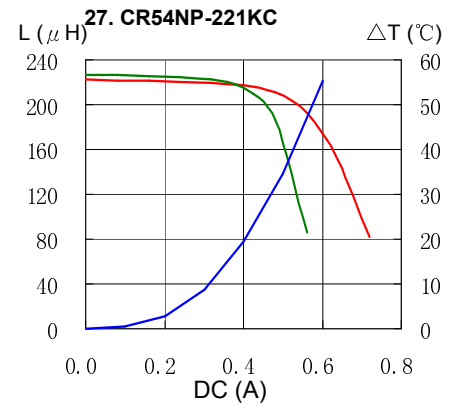
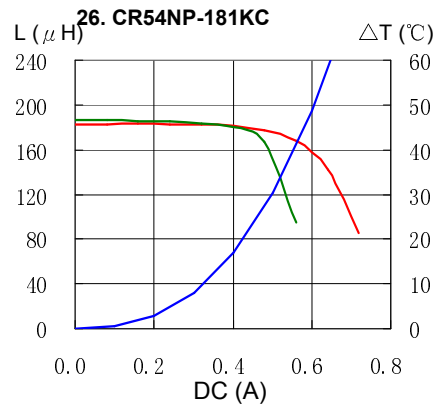
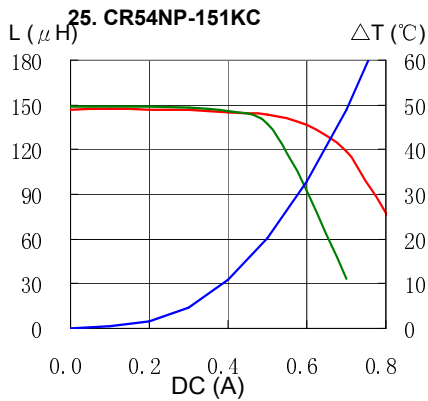


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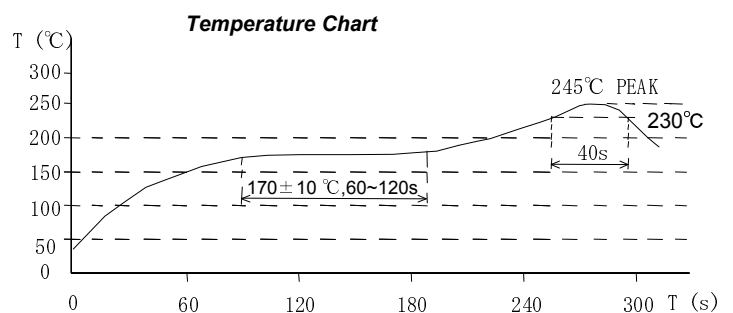
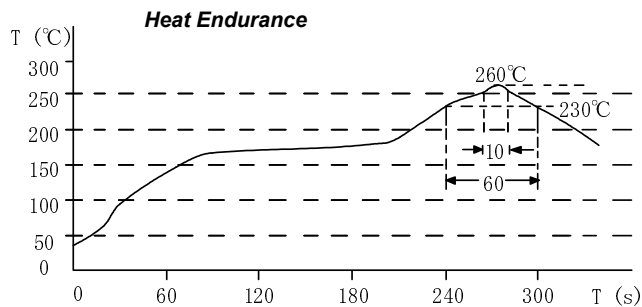


Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) — ΔT



Solder Reflow Condition



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