

# SMD Power Inductor CDRH125/L125



## Description

- Ferrite drum core construction.
- Magnetically shielded.
- L × W × H: 12.3 × 12.3 × 6.0 mm Max.
- Product weight: 3.0g(Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.
- Qualified to AEC-Q200.

## 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.

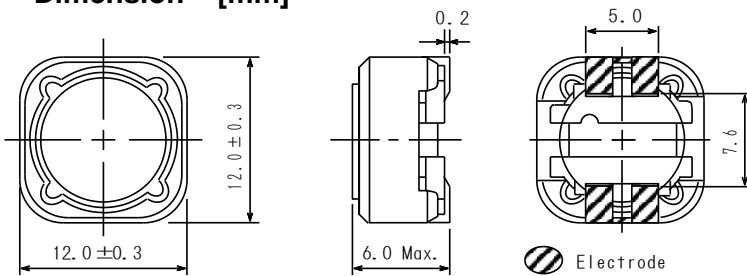
## Packaging

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

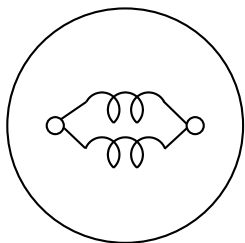
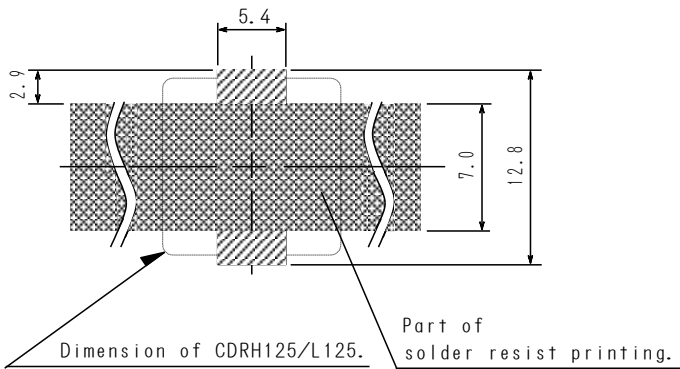
## Applications

- Automotive.

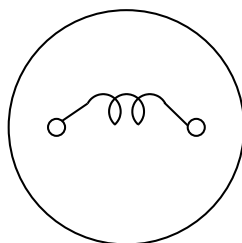
## Dimension - [mm]



## Land pattern and Schematics - [mm]



(1.2µH~47µH)



(68µH~1.0mH)



### Electrical Characteristics

| Part Name           | Stamp | Inductance<br>( $\mu$ H) ※1 | D.C.R.( $\Omega$ )<br>Max.(Typ.)<br>(at 20°C) | Saturation Current<br>(A) ※2 |          | Temperature<br>Rise Current<br>(A) ※3 |
|---------------------|-------|-----------------------------|---|------------------------------|----------|---------------------------------------|
|                     |       |                             |   | at 20°C                      | at 125°C |                                       |
| CDRH125L125NP-1R2NC | 1R2   | 1.2 $\pm$ 30%               | 8.5m(6.8m)                                    | 14.20                        | 11.60    | 9.00                                  |
| CDRH125L125NP-1R8NC | 1R8   | 1.8 $\pm$ 30%               | 10.6m(8.5m)                                   | 12.60                        | 10.10    | 8.00                                  |
| CDRH125L125NP-2R7NC | 2R7   | 2.7 $\pm$ 30%               | 12.8m(10.2m)                                  | 10.20                        | 8.20     | 7.40                                  |
| CDRH125L125NP-3R9NC | 3R9   | 3.9 $\pm$ 30%               | 15.0m(12.0m)                                  | 8.20                         | 6.70     | 6.80                                  |
| CDRH125L125NP-5R1NC | 5R1   | 5.1 $\pm$ 30%               | 17.5m(14.0m)                                  | 7.20                         | 5.90     | 6.50                                  |
| CDRH125L125NP-6R8NC | 6R8   | 6.8 $\pm$ 30%               | 20.0m(16.0m)                                  | 6.20                         | 4.90     | 5.90                                  |
| CDRH125L125NP-100MC | 100   | 10 $\pm$ 20%                | 25.0m(20.0m)                                  | 5.20                         | 4.10     | 5.30                                  |
| CDRH125L125NP-150MC | 150   | 15 $\pm$ 20%                | 33.8m(27.0m)                                  | 4.40                         | 3.50     | 4.50                                  |
| CDRH125L125NP-220MC | 220   | 22 $\pm$ 20%                | 39.5m(31.5m)                                  | 3.50                         | 2.81     | 3.70                                  |
| CDRH125L125NP-330MC | 330   | 33 $\pm$ 20%                | 59.0m(47.0m)                                  | 2.93                         | 2.38     | 3.00                                  |
| CDRH125L125NP-470MC | 470   | 47 $\pm$ 20%                | 93.0m(74.0m)                                  | 2.44                         | 2.00     | 2.42                                  |
| CDRH125L125NP-680MC | 680   | 68 $\pm$ 20%                | 131m(105m)                                    | 2.02                         | 1.65     | 2.05                                  |
| CDRH125L125NP-101MC | 101   | 100 $\pm$ 20%               | 166m(133m)                                    | 1.70                         | 1.37     | 1.82                                  |
| CDRH125L125NP-151MC | 151   | 150 $\pm$ 20%               | 271m(217m)                                    | 1.36                         | 1.11     | 1.40                                  |
| CDRH125L125NP-221MC | 221   | 220 $\pm$ 20%               | 394m(315m)                                    | 1.12                         | 0.90     | 1.15                                  |
| CDRH125L125NP-331MC | 331   | 330 $\pm$ 20%               | 674m(539m)                                    | 0.90                         | 0.73     | 0.90                                  |
| CDRH125L125NP-471MC | 471   | 470 $\pm$ 20%               | 858m(686m)                                    | 0.75                         | 0.61     | 0.81                                  |
| CDRH125L125NP-681MC | 681   | 680 $\pm$ 20%               | 1.22(1.02)                                    | 0.62                         | 0.50     | 0.65                                  |
| CDRH125L125NP-102MC | 102   | 1000 $\pm$ 20%              | 1.90(1.58)                                    | 0.52                         | 0.42     | 0.50                                  |

※1. Measuring condition: at 100kHz.

※2. Saturation current: The value of D.C. current when the inductance decreases to 65% of it's nominal value.

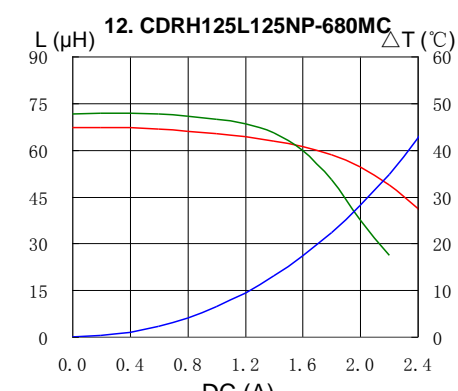
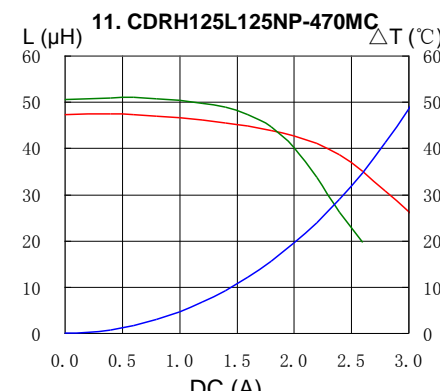
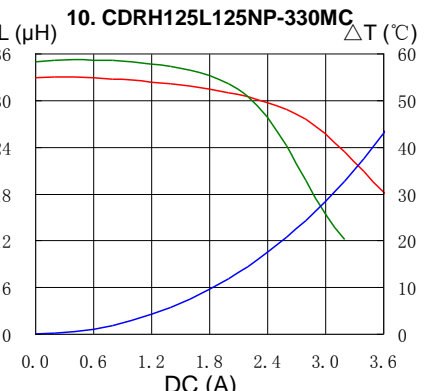
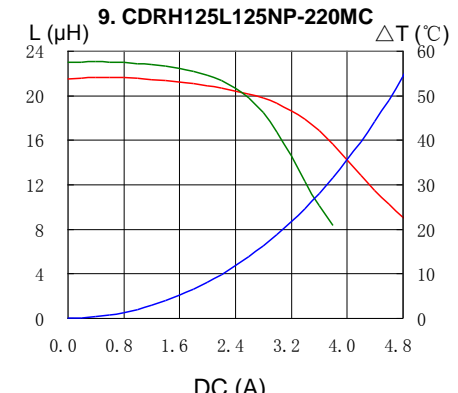
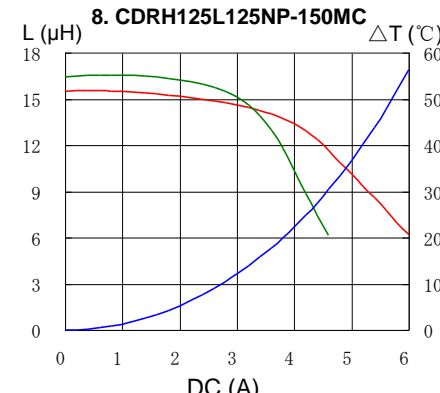
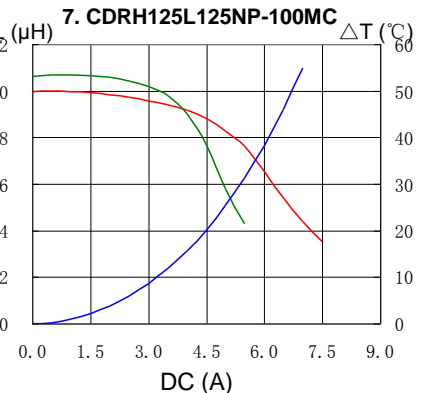
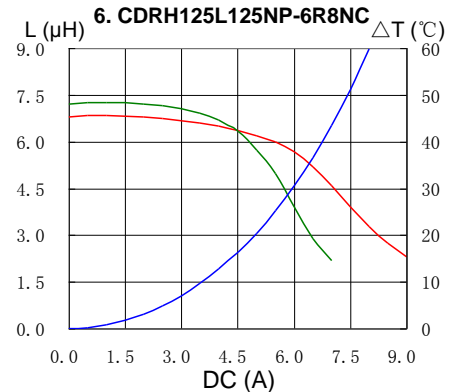
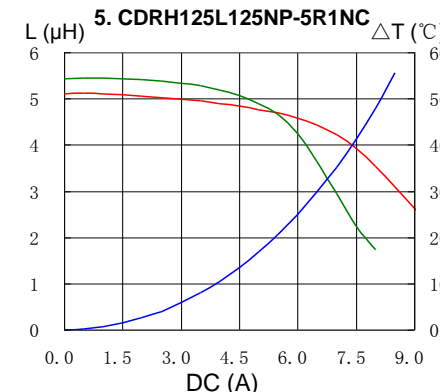
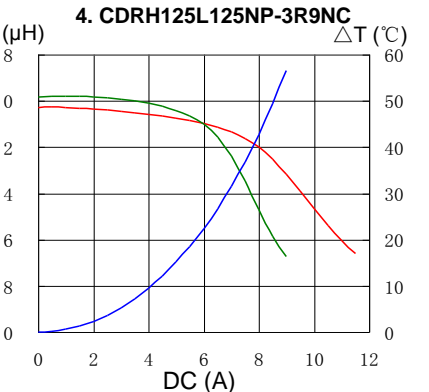
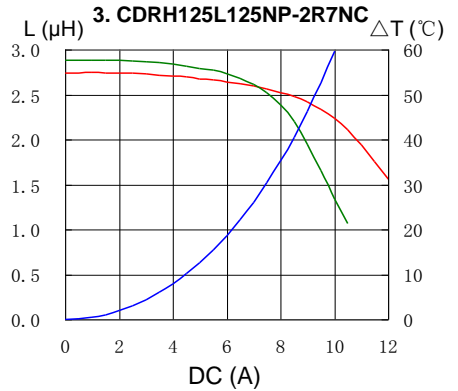
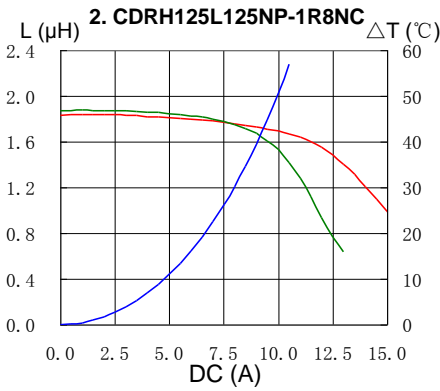
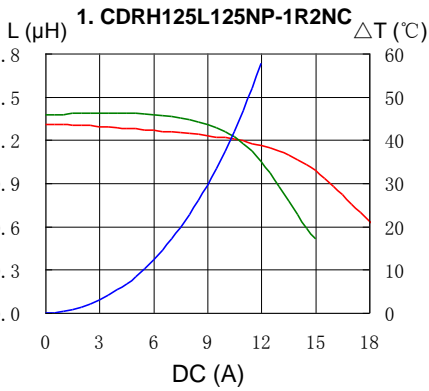
※3. Temperature rise current: The value of D.C. current when the temperature rise is  $\Delta t=40^{\circ}\text{C}$  ( $T_a=20^{\circ}\text{C}$ ).

# SMD Power Inductor CDRH125/L125



## Saturation Current & Temperature Rise Graph

— L (20°C) — L (125°C) —  $\Delta T$

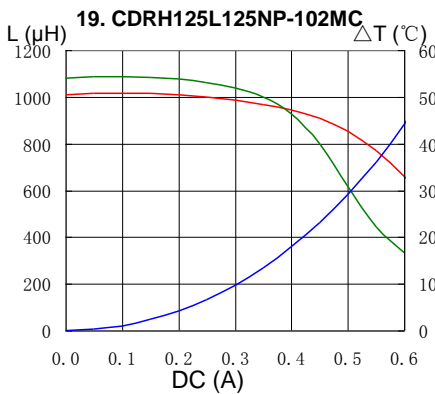
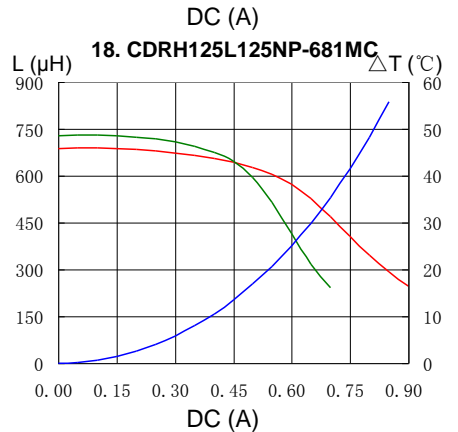
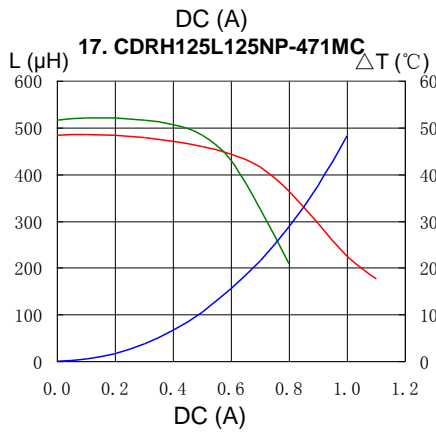
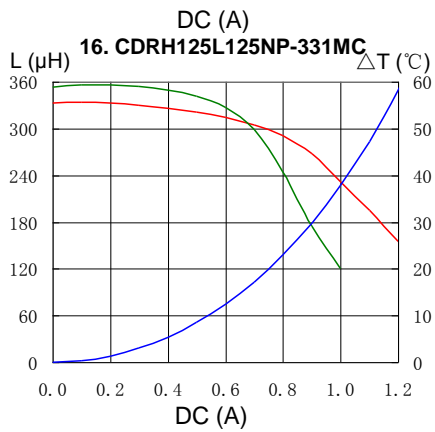
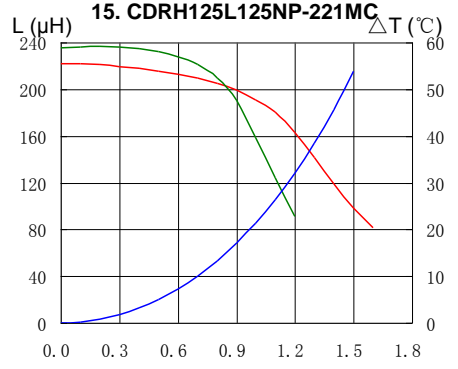
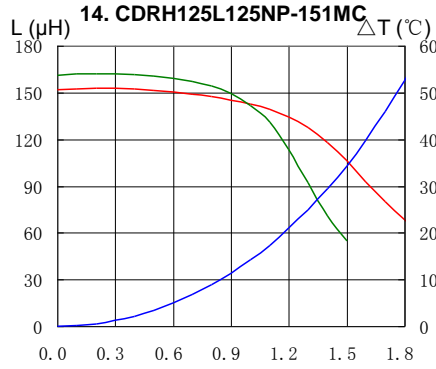
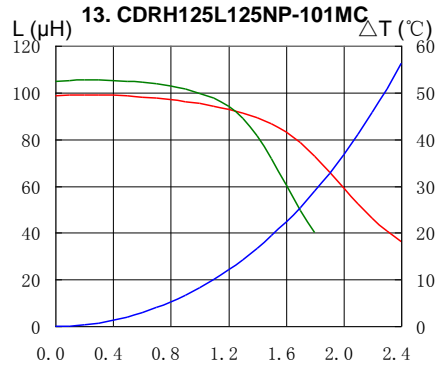


# SMD Power Inductor

## CDRH125/L125



— L (20°C) — L (125°C) —  $\Delta T$



# SMD Power Inductor CDRH125/L125



## Solder Reflow Condition

Heat Endurance



Temperature Chart



Please refer to the sales offices on our website - <http://www.sumida.com>

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