

# SMD Power Inductor

## 0624CDMCC/DS



### Description

- Metal compound molding type construction.
- Magnetically shielded.
- Low audible core noise.
- Suitable for large current.
- LxWxH: 7.3x6.8x2.4mm Max.
- Product weight:0.6g (Ref.)
- Moisture Sensitivity Level: 1



### Environmental Data

- Operating temperature range: -55°C~+125°C(including coil's self temperature rise)
- Storage temperature range: -55°C~+125°C

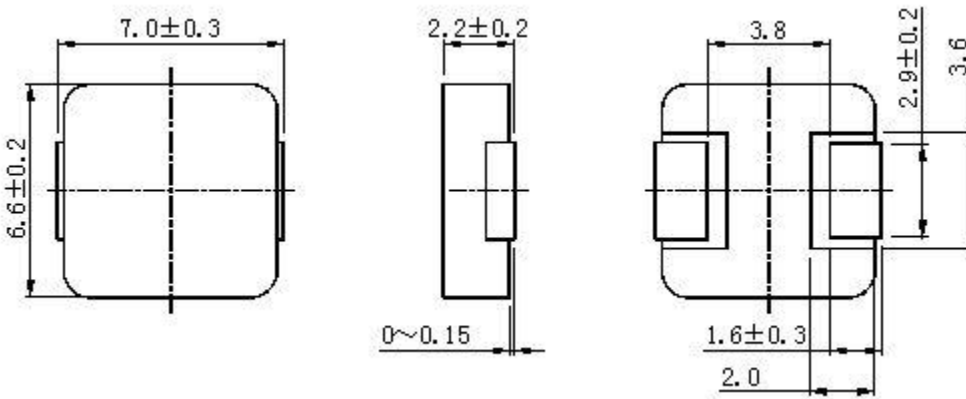
### Packaging

- Carrier tape and reel packaging.
- 1500pcs/Reel.

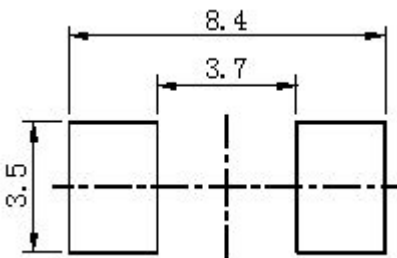
### Applications

- Qualified consumer-level applications (Ideally used in tablet PC, LCD display , Server application). High current, POL converters.
- Low profile, high current power supplies.
- Battery powered devices.
- DC/DC converters in distributed power systems.

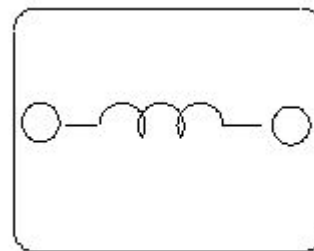
### Dimension - [mm]



### Recommended Land pattern - [mm]



### Wire Connection



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### Electrical Characteristics

| Part Number       | Inductance<br>[Within]<br>( $\mu$ H) ※1 | D.C.R. at 20°C<br>Max.(Typ.) (m $\Omega$ ) | Saturation Current<br>(A) Max.(Typ.) ※2 | Temperature<br>Rise Current<br>(A) Max.(Typ.)<br>※3 |
|-------------------|---|--|---|---|
| 0624CDMCCDS-R08MC | 0.08 $\pm$ 20%                          | 0.85<br>(0.70)                             | 72.00<br>(85.00)                        | (42.00)   |
| 0624CDMCCDS-R10MC | 0.10 $\pm$ 20%                          | 0.96<br>(0.80)                             | 40.00<br>(47.00)                        | (40.00)   |
| 0624CDMCCDS-R12MC | 0.12 $\pm$ 20%                          | 0.96<br>(0.80)                             | 33.00<br>(39.00)                        | (40.00)   |
| 0624CDMCCDS-R15MC | 0.15 $\pm$ 20%                          | 1.08<br>(0.90)                             | 35.00<br>(37.00)                        | (38.00)   |
| 0624CDMCCDS-R22MC | 0.22 $\pm$ 20%                          | 3.00<br>(2.50)                             | 30.60<br>(36.10)                        | (22.00)   |
| 0624CDMCCDS-R33MC | 0.33 $\pm$ 20%                          | 4.10<br>(3.50)                             | 24.20<br>(28.50)                        | (20.50)   |
| 0624CDMCCDS-R47MC | 0.47 $\pm$ 20%                          | 5.10<br>(4.50)                             | 20.80<br>(24.50)                        | (17.50)   |
| 0624CDMCCDS-R56MC | 0.56 $\pm$ 20%                          | 6.50<br>(5.50)                             | 17.00<br>(20.00)                        | (15.40)   |
| 0624CDMCCDS-R68MC | 0.68 $\pm$ 20%                          | 7.00<br>(6.20)                             | 16.00<br>(18.80)                        | (15.00)   |
| 0624CDMCCDS-1R0MC | 1.00 $\pm$ 20%                          | 9.60<br>(8.00)                             | 13.70<br>(16.20)                        | (12.60)   |
| 0624CDMCCDS-1R5MC | 1.50 $\pm$ 20%                          | 19.20<br>(16.00)                           | 12.70<br>(15.00)                        | (8.70)  |
| 0624CDMCCDS-2R2MC | 2.20 $\pm$ 20%                          | 28.00<br>(23.00)                           | 10.90<br>(12.80)                        | (7.00)  |
| 0624CDMCCDS-3R3MC | 3.30 $\pm$ 20%                          | 48.00<br>(40.00)                           | 9.00<br>(10.60)                         | (5.50)  |
| 0624CDMCCDS-4R7MC | 4.70 $\pm$ 20%                          | 54.00<br>(45.00)                           | 6.50<br>(7.60)                          | (4.80)  |
| 0624CDMCCDS-6R8MC | 6.80 $\pm$ 20%                          | 66.00<br>(55.00)                           | 5.70<br>(6.70)                          | (4.20)  |
| 0624CDMCCDS-100MC | 10.00 $\pm$ 20%                         | 101<br>(92.00)                             | 4.70<br>(5.50)                          | (3.10)  |
| 0624CDMCCDS-150MC | 15.00 $\pm$ 20%                         | 160<br>(145)                               | 3.10<br>(3.70)                          | (2.50)  |
| 0624CDMCCDS-220MC | 22.00 $\pm$ 20%                         | 242<br>(222)                               | 2.70<br>(3.20)                          | (1.90)  |

※1 Measuring frequency Inductance at 100kHz , 1.0V

※2 Saturation current: The actual value of DC current when the inductance is over 70% of its initial value. (at 25°C )

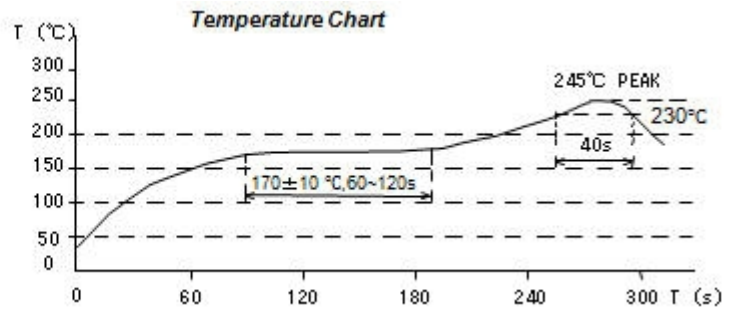
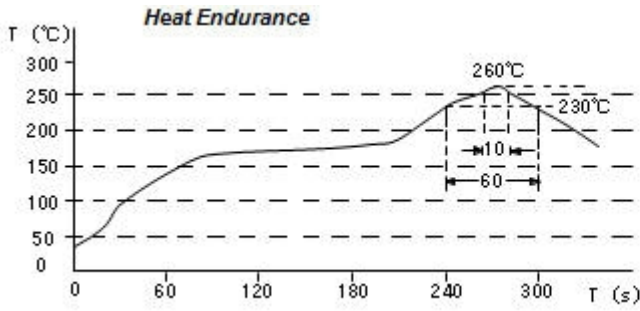
※3 Temperature rise current: The actual value of DC current when temperature of coil rise is  $\Delta T=40^{\circ}\text{C}$ ( $T_a=25^{\circ}\text{C}$ ) Board conditions: FR4, Copper=70  $\mu$  m, four-layer PWB, t=1.6mm.

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### Solder Reflow Condition



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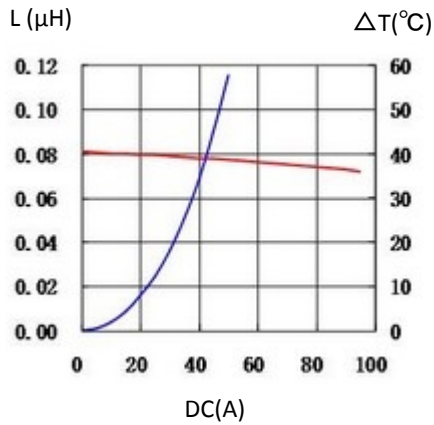
## 0624CDMCC/DS



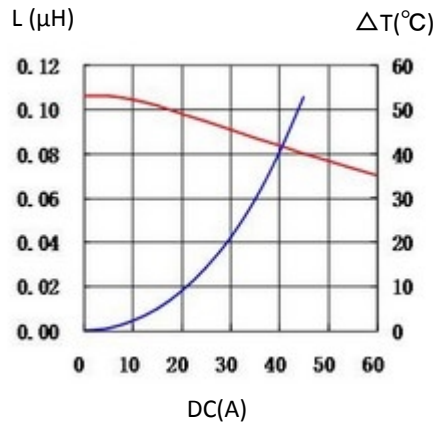
### Saturation Current & Temperature Rise Graph

— L (20°C) —  $\Delta T$

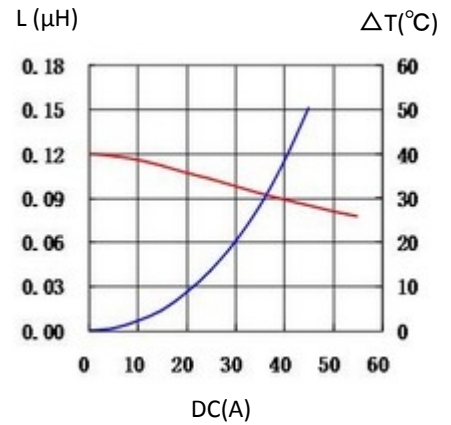
1. 0624CDMCCDS-R08MC



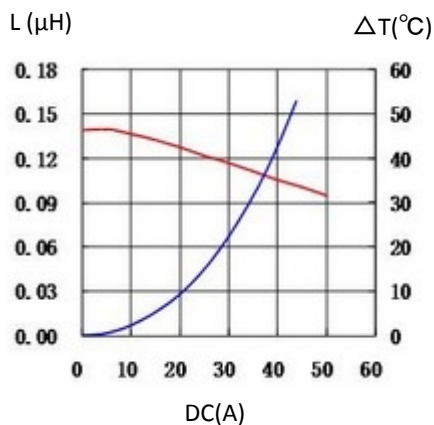
2. 0624CDMCCDS-R10MC



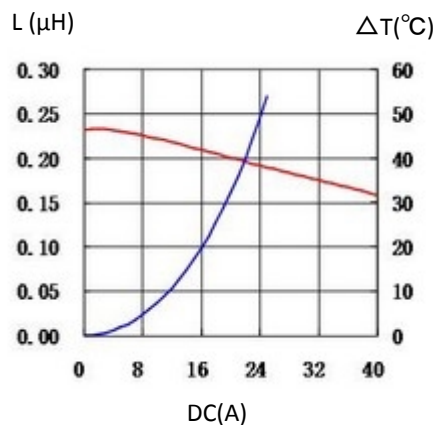
3. 0624CDMCCDS-R12MC



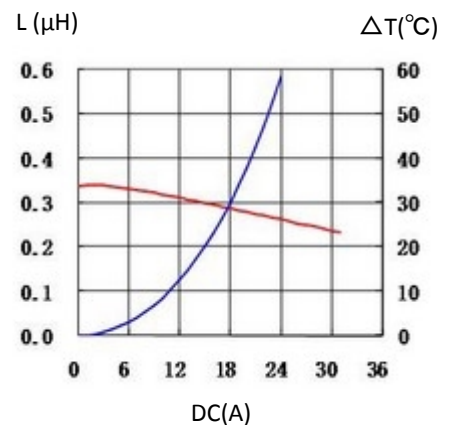
4. 0624CDMCCDS-R15MC



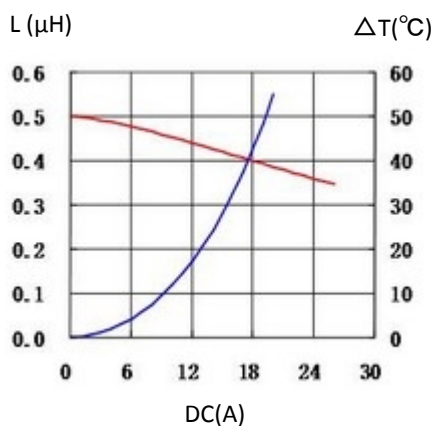
5. 0624CDMCCDS-R22MC



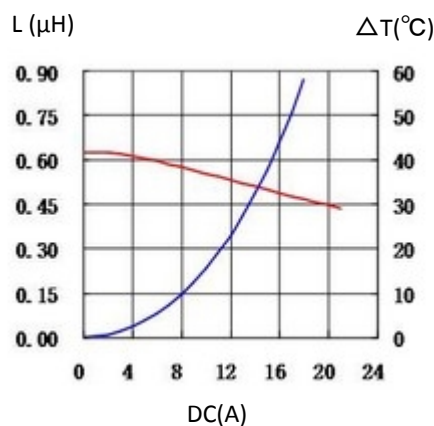
6. 0624CDMCCDS-R33MC



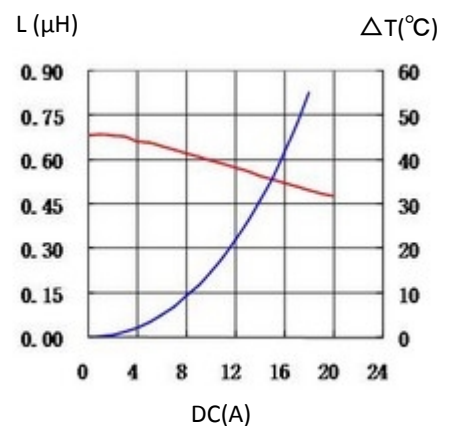
7. 0624CDMCCDS-R47MC



8. 0624CDMCCDS-R56MC



9. 0624CDMCCDS-R68MC

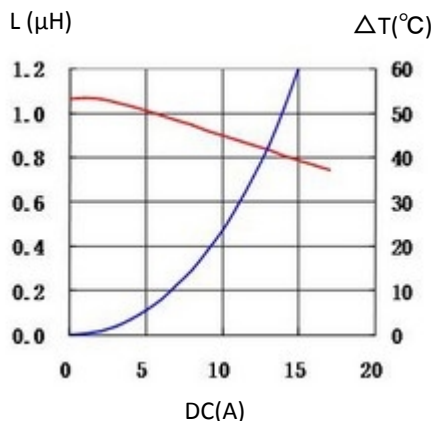


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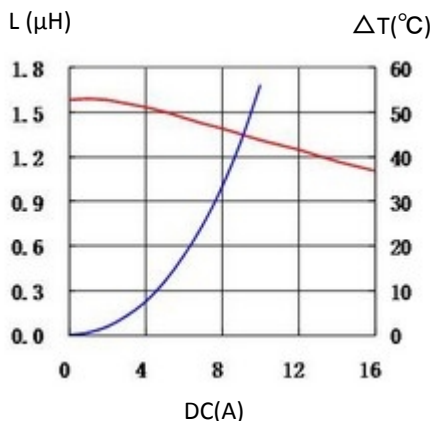
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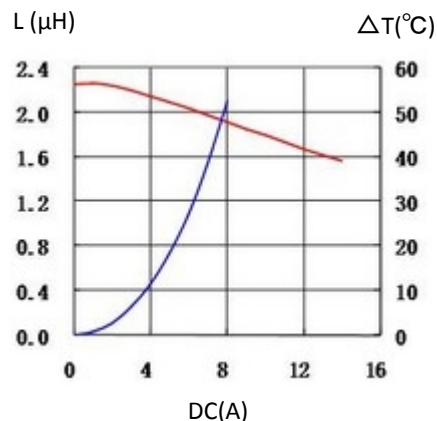
10. 0624CDMCCDS-1R0MC



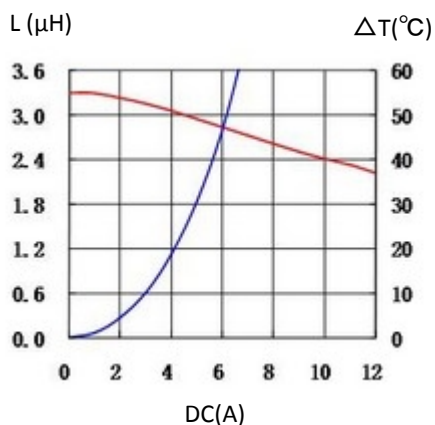
11. 0624CDMCCDS-1R5MC



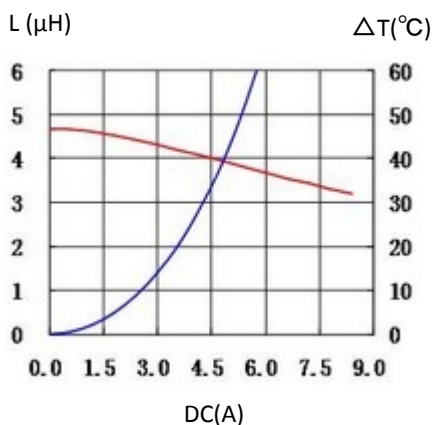
12. 0624CDMCCDS-2R2MC



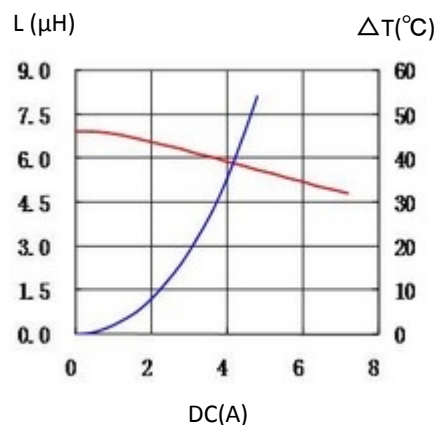
13. 0624CDMCCDS-3R3MC



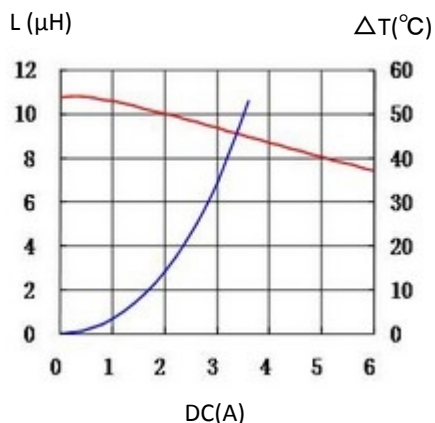
14. 0624CDMCCDS-4R7MC



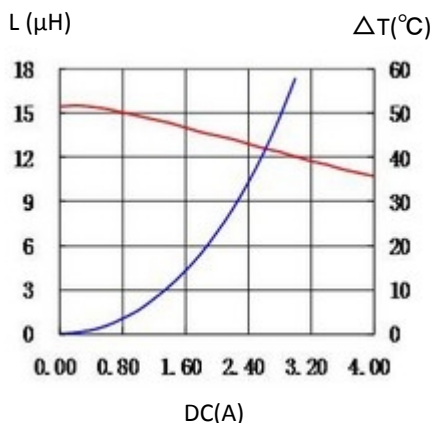
15. 0624CDMCCDS-6R8MC



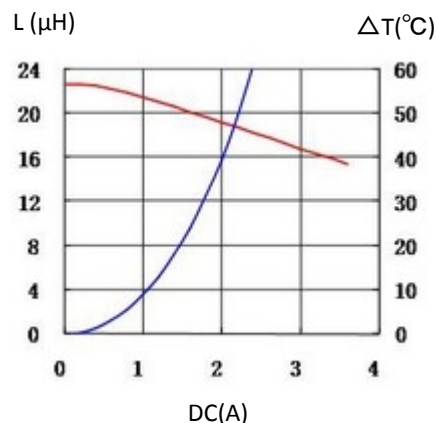
16. 0624CDMCCDS-100MC



17. 0624CDMCCDS-150MC



18. 0624CDMCCDS-220MC



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