

# SMD Power Inductor

## 0512CDMCC/DS



### Description

- Metal compound molding type construction
- Magnetically shielded
- Low audible core noise
- Suitable for large current.
- L×W×H: 5.7×5.4×1.2mm Max.
- Product weight: 0.164g (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

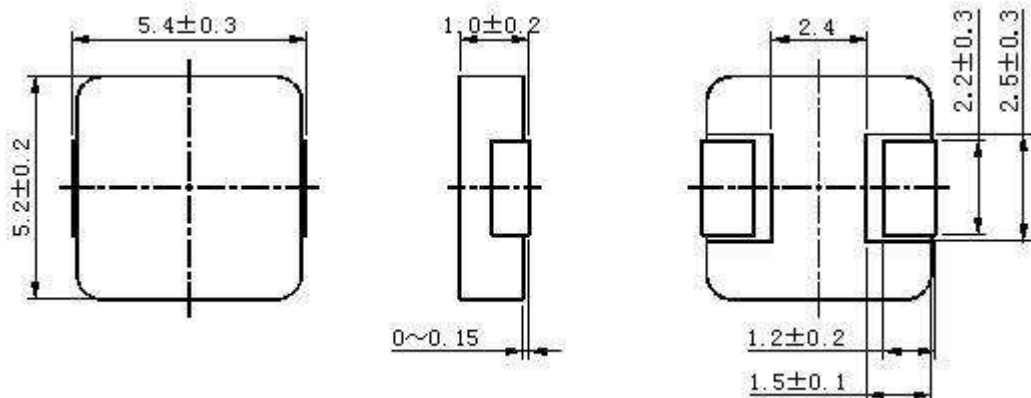
### Packaging

- Carrier tape and reel packaging.
- 2000pcs per reel

### Applications

- Ideally used in notebook, ultrabook, tablet PC, LCD display, server application.
- HDD, SSD modules application.
- Low profile, high current power supplies.
- Battery powered devices.
- High current, POL converters.
- DC/DC converter in distributed power systems.

### Dimension - [mm]

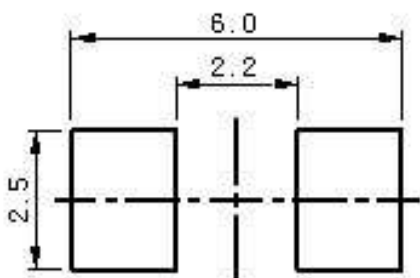


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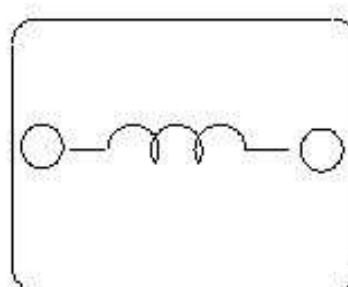
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### Recommended Land pattern - [mm]



### Wire Connection



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### Electrical Characteristics

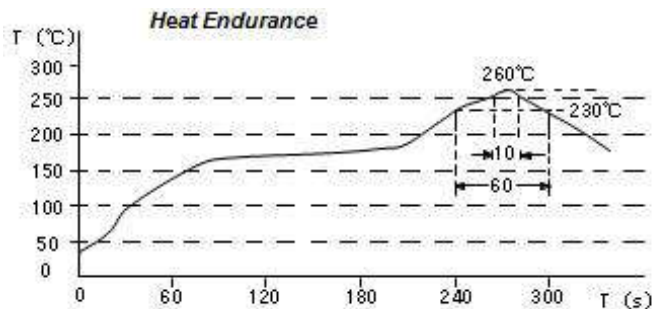
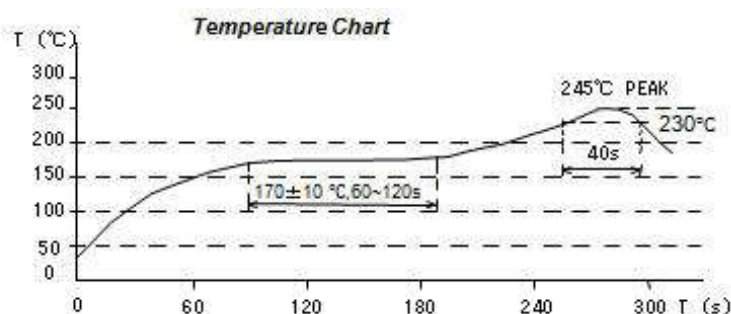
| Part Number       | Inductance<br>[Within]<br>( $\mu$ H) ※1 | D.C.R. at 20°C<br>max(typ) (m $\Omega$ ) | Saturation Current<br>at 20°C(A) ※2 | Temperature<br>Rise Current<br>(A) ※3 |
|-------------------|-----------------------------------------|------------------------------------------|-------------------------------------|---------------------------------------|
| 0512CDMCCDS-R10MC | 0.10 $\pm$ 20%                          | 5.40 (4.50)                              | 17.00                               | 14.00                                 |
| 0512CDMCCDS-R22MC | 0.22 $\pm$ 20%                          | 8.40 (7.00)                              | 14.00                               | 10.60                                 |
| 0512CDMCCDS-R33MC | 0.33 $\pm$ 20%                          | 10.80 (9.00)                             | 13.00                               | 10.70                                 |
| 0512CDMCCDS-R47MC | 0.47 $\pm$ 20%                          | 13.20<br>(11.00)                         | 11.00                               | 8.80                                  |
| 0512CDMCCDS-R56MC | 0.56 $\pm$ 20%                          | 18.60<br>(15.50)                         | 8.00                                | 7.20                                  |
| 0512CDMCCDS-R68MC | 0.68 $\pm$ 20%                          | 20.40<br>(17.00)                         | 7.80                                | 7.00                                  |
| 0512CDMCCDS-1R0MC | 1.00 $\pm$ 20%                          | 31.80<br>(26.50)                         | 6.50                                | 5.70                                  |
| 0512CDMCCDS-1R5MC | 1.50 $\pm$ 20%                          | 42.00<br>(35.00)                         | 6.00                                | 5.30                                  |
| 0512CDMCCDS-2R2MC | 2.20 $\pm$ 20%                          | 72.60<br>(60.50)                         | 4.80                                | 3.60                                  |
| 0512CDMCCDS-3R3MC | 3.30 $\pm$ 20%                          | 107.40<br>(89.50)                        | 3.80                                | 2.90                                  |
| 0512CDMCCDS-4R7MC | 4.70 $\pm$ 20%                          | 166.20<br>(138.50)                       | 3.20                                | 2.30                                  |

※1 Measuring frequency Inductance at 100kHz 1V.

※2 Saturation current: This indicates the actual value of D.C. current when the inductance becomes 30% lower than its initial value.

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

### Solder Reflow Condition



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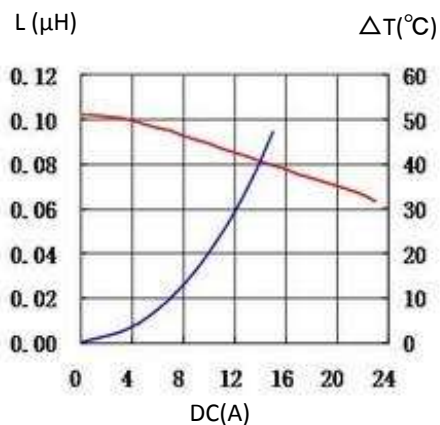
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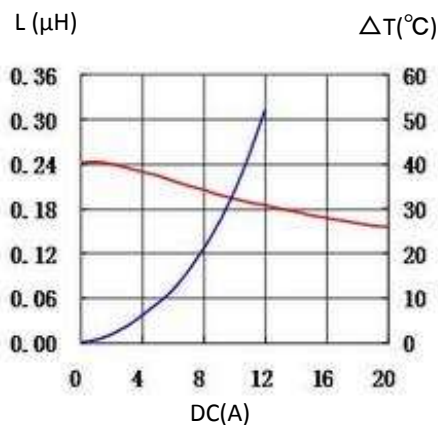
### Saturation Current & Temperature Rise Graph

— L (20°C) —  $\Delta T$

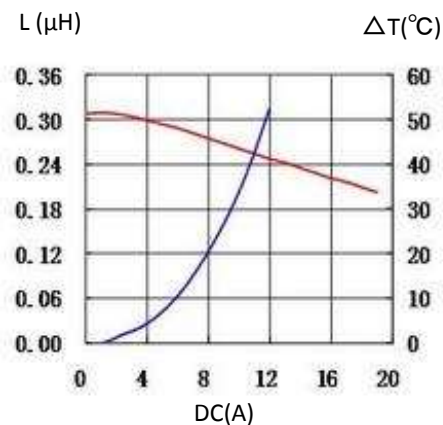
1. 0512CDMCCDS-R10MC



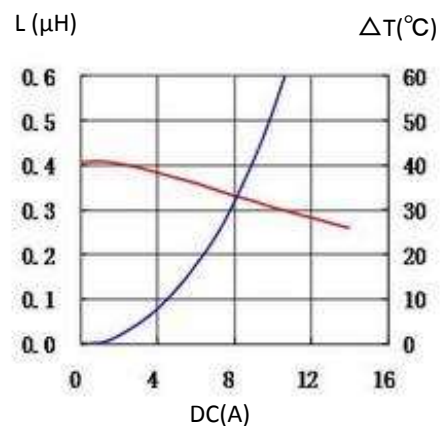
2. 0512CDMCCDS-R22MC



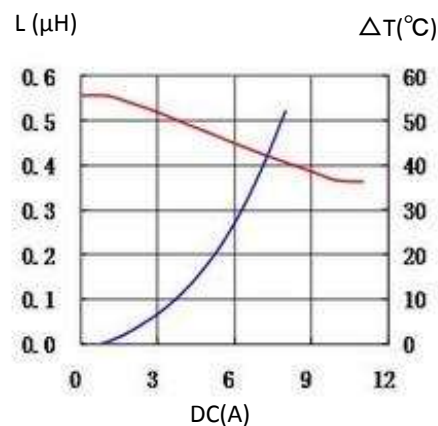
3. 0512CDMCCDS-R33MC



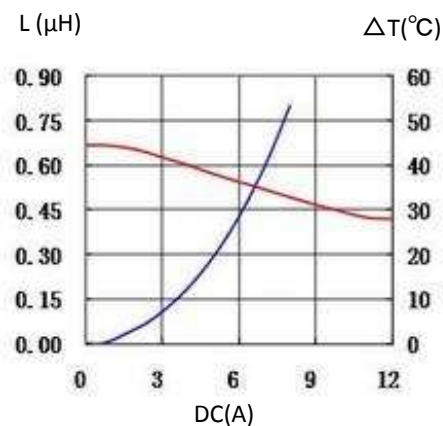
4. 0512CDMCCDS-R47MC



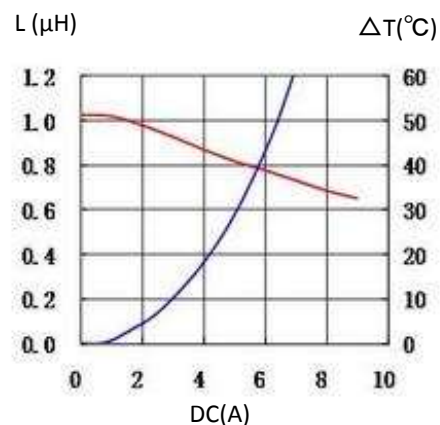
5. 0512CDMCCDS-R56MC



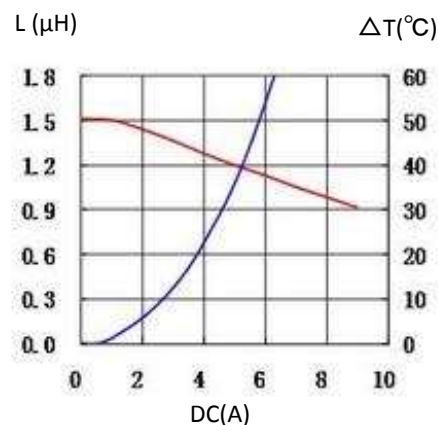
6. 0512CDMCCDS-R68MC



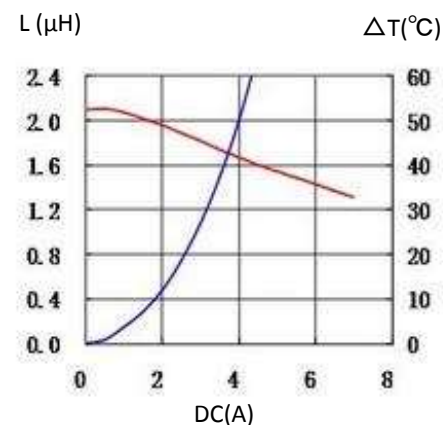
7. 0512CDMCCDS-1R0MC



8. 0512CDMCCDS-1R5MC



9. 0512CDMCCDS-2R2MC



Note: This specification is subject to change without notice. Please contact your nearest sales office for updated information when placing an order.

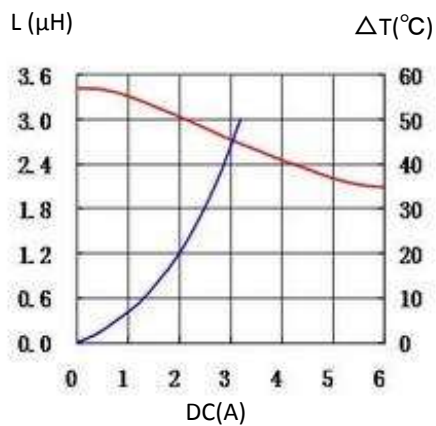
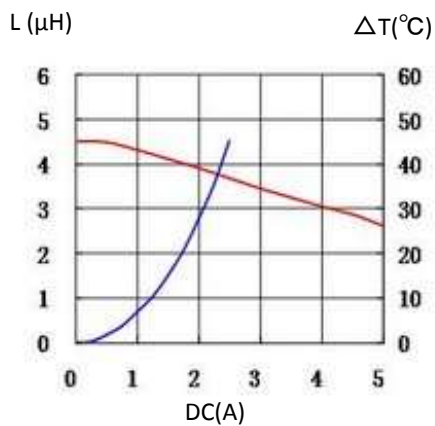
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10. 0512CDMCCDS-3R3MC

11. 0512CDMCCDS-4R7MC



For sales office information, please [click here](#) to visit our website.