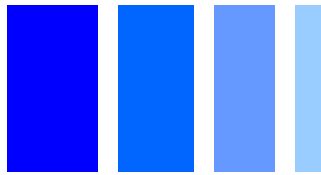




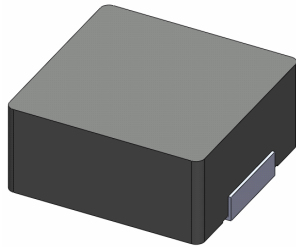
**THE DATASHEET OF  
0630CDMCDDS-4R7MC**



# SMD Power Inductor 0630CDMCD/DS



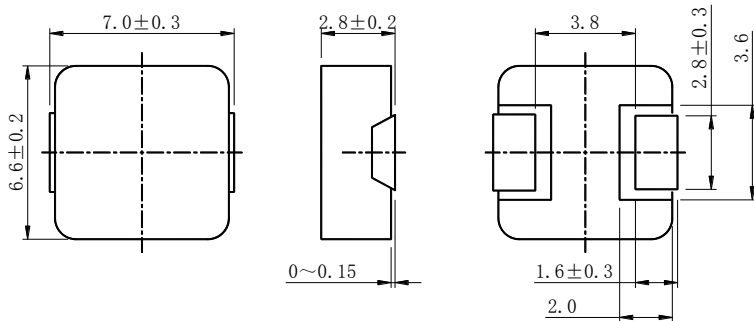
**Halogen Free**



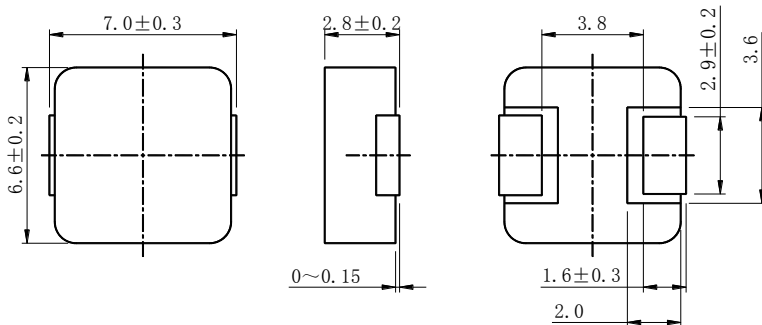
## Description

- Carbonyl powder compound molding type construction.
- Magnetically shielded.
- Low audible core noise.
- Suitable for large current.
- L × W × H: 7.3 × 6.8 × 3.0mm Max.
- Product weight: 0.73g (Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.
- Halogen Free available.

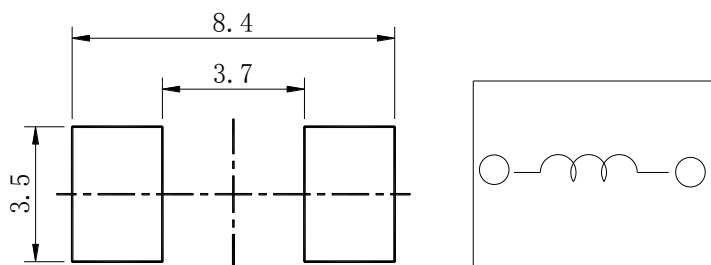
## Dimension - [mm] (0.10μH、0.15μH)



## Dimension - [mm] (0.20μH~6.8μH)



## Land pattern and Schematics - [mm]



## Environmental Data

- Operating temperature range: -55°C ~ +125°C (including coil's self temperature rise)
- Storage temperature range: -55°C ~ +125°C
- Solder reflow temperature: 260 °C peak.

## Packaging

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

## Applications

- Ideally used in notebook, ultrabook, 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.



### Electrical Characteristics

| No. | 品名                | 表示  | インダクタンス<br>( $\mu$ H)<br>[以内]<br>※1 | D. C. R<br>(m $\Omega$ )<br>at 25°C<br>Max. (Typ.) | 直流重畳電流<br>(A)<br>(at 25°C)<br>Max. (Typ.)<br>※2 | 温度上昇電流<br>(A)<br>Typ.<br>※3 |
|-----|-------------------|-----|-------------------------------------|--|---|-----------------------------|
| 01  | 0630CDMCDDS-R10MC | R10 | 0.10 $\pm$ 20%                      | 1.7(1.5)   | 52.5(61.8)                                      | 32.5                        |
| 02  | 0630CDMCDDS-R15MC | R15 | 0.15 $\pm$ 20%                      | 1.1(0.9)   | 47.6(56.0)                                      | 37.0                        |
| 03  | 0630CDMCDDS-R20MC | R20 | 0.20 $\pm$ 20%                      | 3.0(2.4)   | 41.0(51.0)                                      | 24.0                        |
| 04  | 0630CDMCDDS-R22MC | R22 | 0.22 $\pm$ 20%                      | 3.2(2.5)   | 40.0(47.5)                                      | 23.0                        |
| 05  | 0630CDMCDDS-R33MC | R33 | 0.33 $\pm$ 20%                      | 3.9(3.5)   | 30.0(35.5)                                      | 20.0                        |
| 06  | 0630CDMCDDS-R47MC | R47 | 0.47 $\pm$ 20%                      | 4.2(4.0)   | 24.6(29.0)                                      | 19.5                        |
| 07  | 0630CDMCDDS-R56MC | R56 | 0.56 $\pm$ 20%                      | 5.0(4.7)   | 23.8(28.0)                                      | 18.8                        |
| 08  | 0630CDMCDDS-R68MC | R68 | 0.68 $\pm$ 20%                      | 5.5(5.0)   | 21.8(25.6)                                      | 18.0                        |
| 09  | 0630CDMCDDS-R75MC | R75 | 0.75 $\pm$ 20%                      | 6.2(5.4)   | 21.0(25.0)                                      | 17.5                        |
| 10  | 0630CDMCDDS-R82MC | R82 | 0.82 $\pm$ 20%                      | 8.0(6.7)   | 20.8(24.5)                                      | 16.0                        |
| 11  | 0630CDMCDDS-1R0MC | 1R0 | 1.0 $\pm$ 20%                       | 10.0(9.0)  | 18.7(22.0)                                      | 13.0                        |
| 12  | 0630CDMCDDS-1R2MC | 1R2 | 1.2 $\pm$ 20%                       | 12.0(10.0)   | 17.8(20.9)                                      | 12.5                        |
| 13  | 0630CDMCDDS-1R5MC | 1R5 | 1.5 $\pm$ 20%                       | 15.0(14.0)   | 17.4(20.5)                                      | 10.2                        |
| 14  | 0630CDMCDDS-2R0MC | 2R0 | 2.0 $\pm$ 20%                       | 18.0(16.0)   | 14.8(17.5)                                      | 9.5                         |
| 15  | 0630CDMCDDS-2R2MC | 2R2 | 2.2 $\pm$ 20%                       | 20.0(18.0)   | 14.4(17.0)                                      | 9.2                         |
| 16  | 0630CDMCDDS-2R5MC | 2R5 | 2.5 $\pm$ 20%                       | 22.0(20.0)   | 12.0(14.0)                                      | 7.8                         |
| 17  | 0630CDMCDDS-3R3MC | 3R3 | 3.3 $\pm$ 20%                       | 30.0(28.0)   | 11.5(13.5)                                      | 6.3                         |
| 18  | 0630CDMCDDS-4R7MC | 4R7 | 4.7 $\pm$ 20%                       | 40.0(37.0)   | 10.5(12.3)                                      | 5.5                         |
| 19  | 0630CDMCDDS-6R8MC | 6R8 | 6.8 $\pm$ 20%                       | 60.0(54.0)   | 7.2(8.5)  | 4.8                         |
| 20  | 0630CDMCDDS-100MC | 100 | 10 $\pm$ 20%                        | 62.0(55.0)   | 4.6(5.4)  | 4.5                         |

※1 Measuring frequency Inductance at 100kHz ,1.0V

※2 Saturation current: The value of DC current when the inductance is over 80% of its initial value.

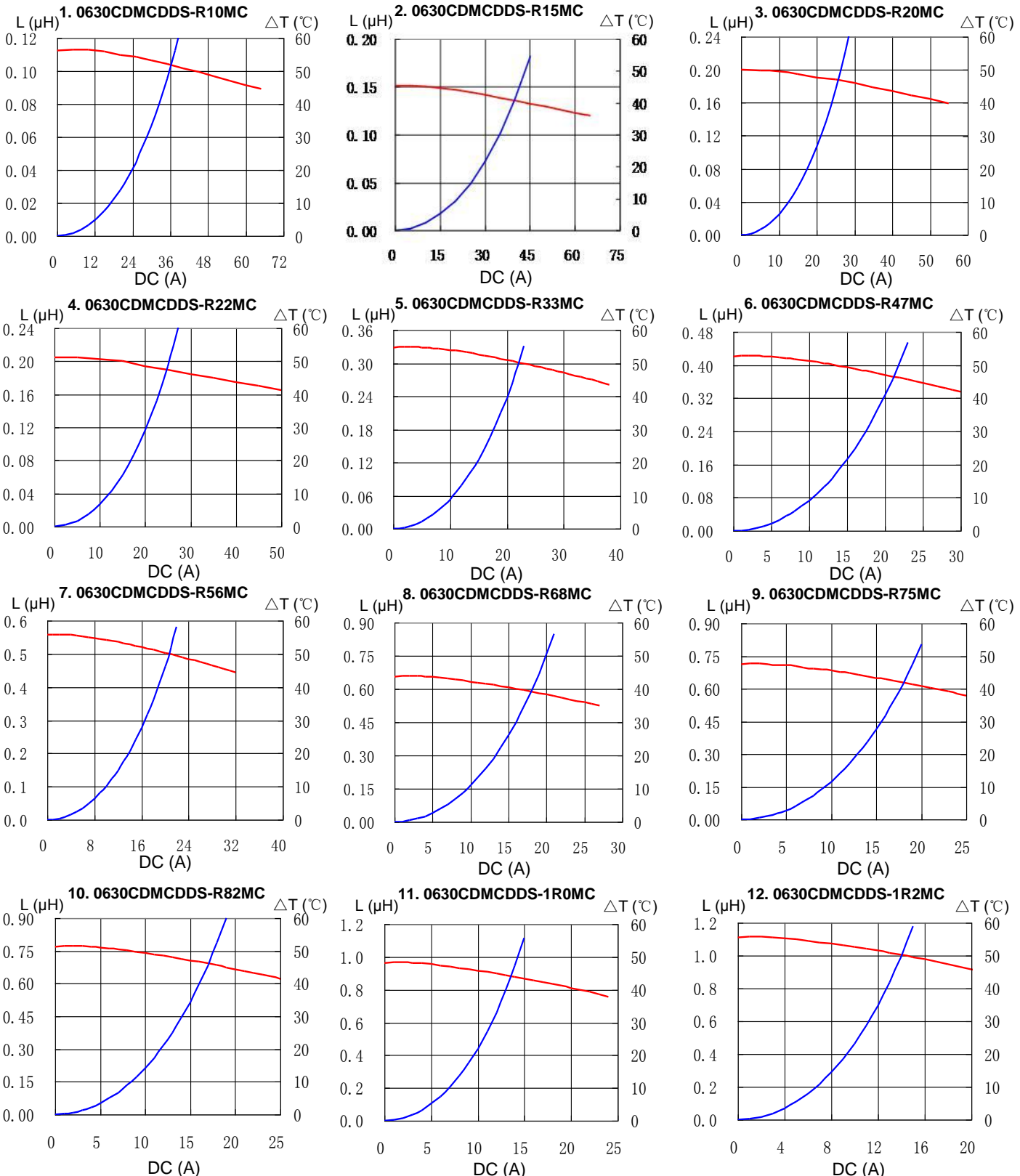
※3 Temperature rise current: The actual value of DC current when temperature of coil rise is  $\Delta T=40^{\circ}\text{C}$  ( $T_a=25^{\circ}\text{C}$ ) Board conditions: FR4, Copper=70 $\mu\text{m}$ , four-layer PWB, t=1.6mm.

# SMD Power Inductor 0630CDMCD/DS



## Saturation Current & Temperature Rise Graph

— L (20°C) —  $\Delta T$

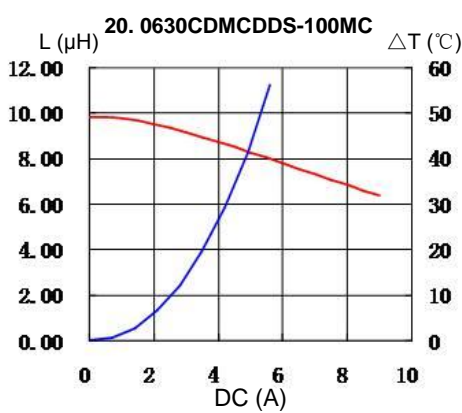
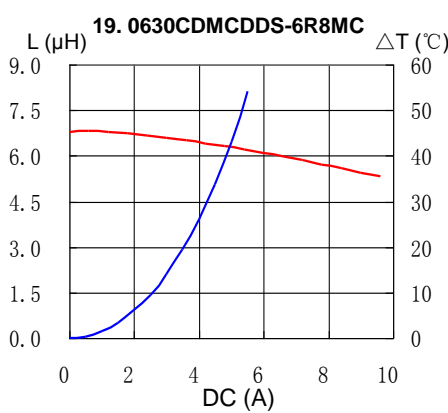
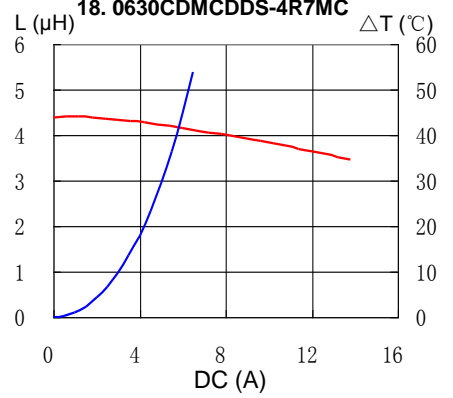
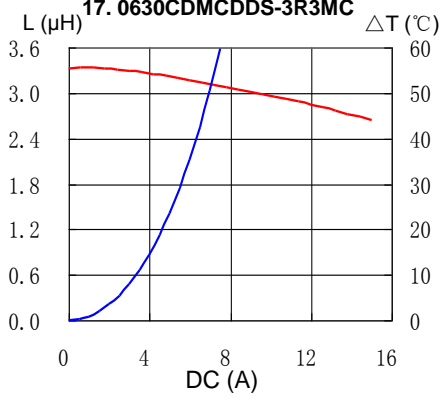
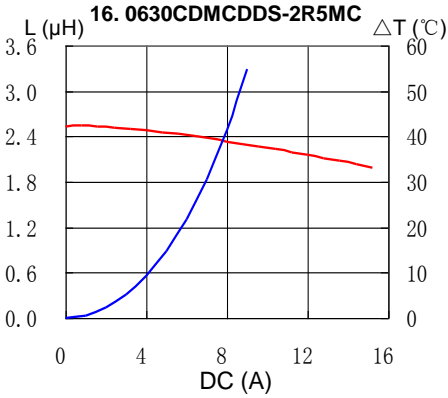
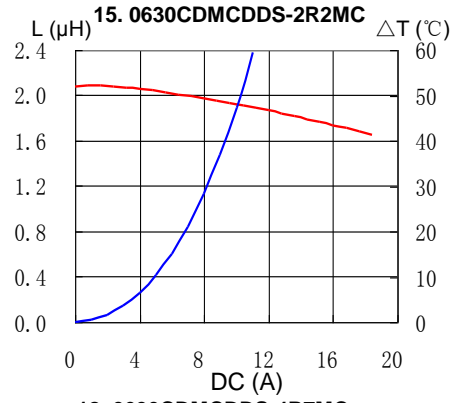
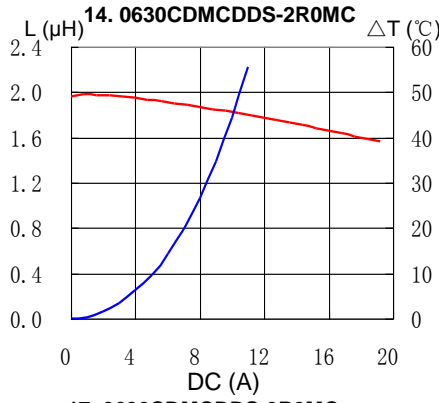
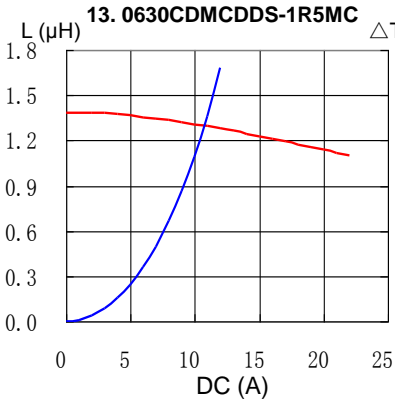


# SMD Power Inductor 0630CDMCD/DS

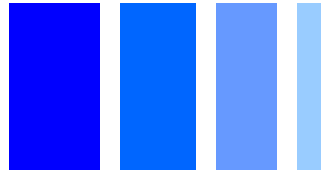


## Saturation Current & Temperature Rise Graph

— L (20°C)    —  $\Delta T$

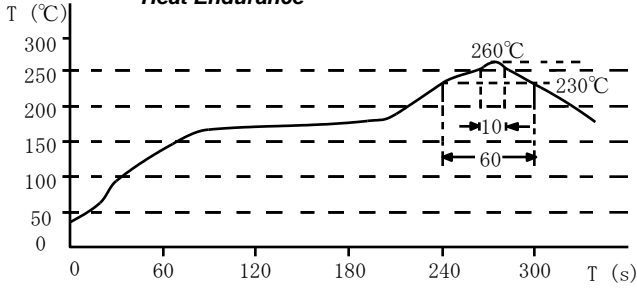


# SMD Power Inductor 0630CDMCD/DS

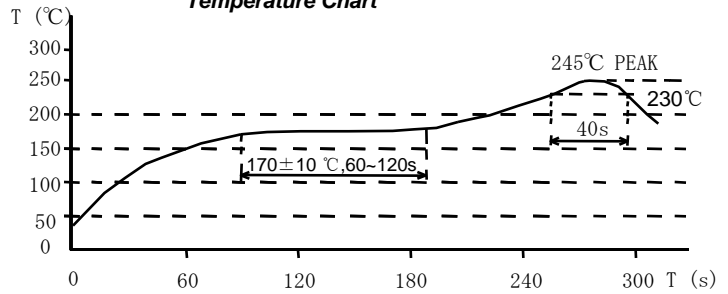


## Solder Reflow Condition

**Heat Endurance**



**Temperature Chart**



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### Hong Kong

Tel.+852-2880-6781  
FAX.+852-2565-9600  
[sales@hk.sumida.com](mailto:sales@hk.sumida.com)

### Saitama(Japan)

Tel.+81-48-691-7300  
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[sales@jp.sumida.com](mailto:sales@jp.sumida.com)

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Tel.+1-847-545-6700  
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Tel.+86-21-5836-3299  
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[shanghai.sales@cn.sumida.com](mailto:shanghai.sales@cn.sumida.com)

### Seoul

Tel.+82-2-6237-0777  
FAX.+82-2-6237-0778  
[sales@kr.sumida.com](mailto:sales@kr.sumida.com)

### Obernzell

Tel.+49-8591-937-0  
FAX. +49-8591-937-103  
[contact@eu.sumida.com](mailto:contact@eu.sumida.com)

### Shenzhen

Tel.+86-755-8291-0228  
FAX.+86-755-8291-0338  
[shenzhen.sales@cn.sumida.com](mailto:shenzhen.sales@cn.sumida.com)

### Singapore

Tel.+65-6296-3388  
FAX.+65-6841-4426  
[sales@sg.sumida.com](mailto:sales@sg.sumida.com)

### Neumarkt

Tel.+49-9181-4509-110  
FAX. +49-9181-4509-310  
[infocomp@eu.sumida.com](mailto:infocomp@eu.sumida.com)

### Taipei

Tel.+886-2-8751-2737  
FAX.+886-2-8751-2738  
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