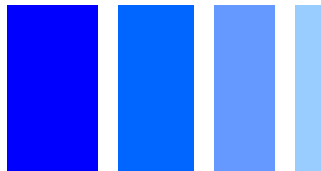
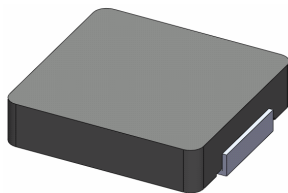


# SMD Power Inductor

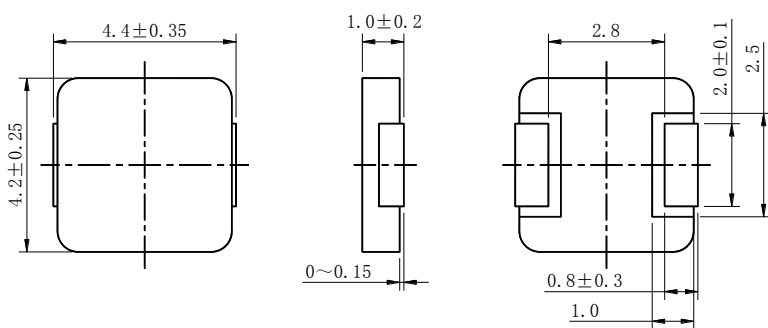
## 0412CDMCC/DS



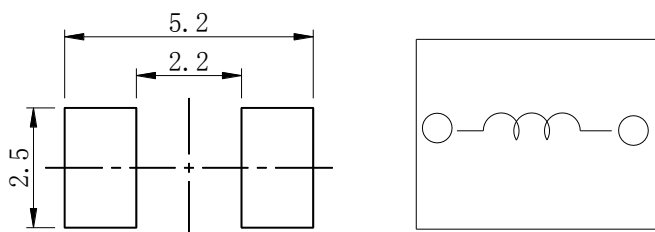
Halogen  
Free



### Dimension - [mm]



### Land pattern and Schematics - [mm]



### Description

- Metal compound molding type construction.
- Magnetically shielded.
- Low audible core noise.
- Suitable for large current.
- L × W × H:  $4.75 \times 4.45 \times 1.2$  mm Max.
- Product weight: 0.16g (Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.
- Halogen Free available.

### Environmental Data

- Operating temperature range:  $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$  (including coil's self temperature rise)
- Storage temperature range:  $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- Solder reflow temperature:  $260^{\circ}\text{C}$  peak.

### Packaging

- Carrier tape and reel packaging.
- 3000pcs/Reel.

### Applications

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



### Electrical Characteristics

| Part No.          | Stamp | Inductance( $\mu$ H)<br>[Within]<br>※1 | D.C.R(m $\Omega$ )<br>Max.(Typ.)<br>at 25℃ | Saturation Current<br>(A)Max.(Typ.)<br>at 25℃ ※2 | Temperature<br>rise current(A)<br>Typ.※3 |
|-------------------|-------|----------------------------------------|--------------------------------------------|--------------------------------------------------|------------------------------------------|
| 0412CDMCCDS-R10MC | R10   | 0.10 $\pm$ 20%                         | 7.2(6.0)                                   | 16.5(19.5)                                       | 11.5                                     |
| 0412CDMCCDS-R12MC | R12   | 0.12 $\pm$ 20%                         | 7.8(6.5)                                   | 16.0(19.0)                                       | 11.0                                     |
| 0412CDMCCDS-R15MC | R15   | 0.15 $\pm$ 20%                         | 9.6(8.0)                                   | 14.5(17.0)                                       | 9.4                                      |
| 0412CDMCCDS-R22MC | R22   | 0.22 $\pm$ 20%                         | 11.0(9.2)                                  | 12.0(14.0)                                       | 9.0                                      |
| 0412CDMCCDS-R33MC | R33   | 0.33 $\pm$ 20%                         | 19(17)                                     | 9.4(11.0)                                        | 6.5                                      |
| 0412CDMCCDS-R47MC | R47   | 0.47 $\pm$ 20%                         | 21(19)                                     | 8.2(9.7)                                         | 6.0                                      |
| 0412CDMCCDS-R68MC | R68   | 0.68 $\pm$ 20%                         | 36(32)                                     | 6.9(8.0)                                         | 4.7                                      |
| 0412CDMCCDS-1R0MC | 1R0   | 1.0 $\pm$ 20%                          | 47(43)                                     | 6.0(7.1)                                         | 4.1                                      |
| 0412CDMCCDS-1R5MC | 1R5   | 1.5 $\pm$ 20%                          | 75(68)                                     | 3.6(4.2)                                         | 2.9                                      |
| 0412CDMCCDS-2R2MC | 2R2   | 2.2 $\pm$ 20%                          | 84(80)                                     | 3.4(4.0)                                         | 2.7                                      |
| 0412CDMCCDS-3R3MC | 3R3   | 3.3 $\pm$ 20%                          | 140(125)                                   | 3.2(3.8)                                         | 2.1                                      |
| 0412CDMCCDS-4R7MC | 4R7   | 4.7 $\pm$ 20%                          | 195(175)                                   | 2.6(3.1)                                         | 1.8                                      |

※1 Measuring frequency Inductance at 100kHz 1V.

※2 Saturation current: This indicates the 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  $\Delta T=40^{\circ}\text{C}$  ( $T_a=25^{\circ}\text{C}$ ).

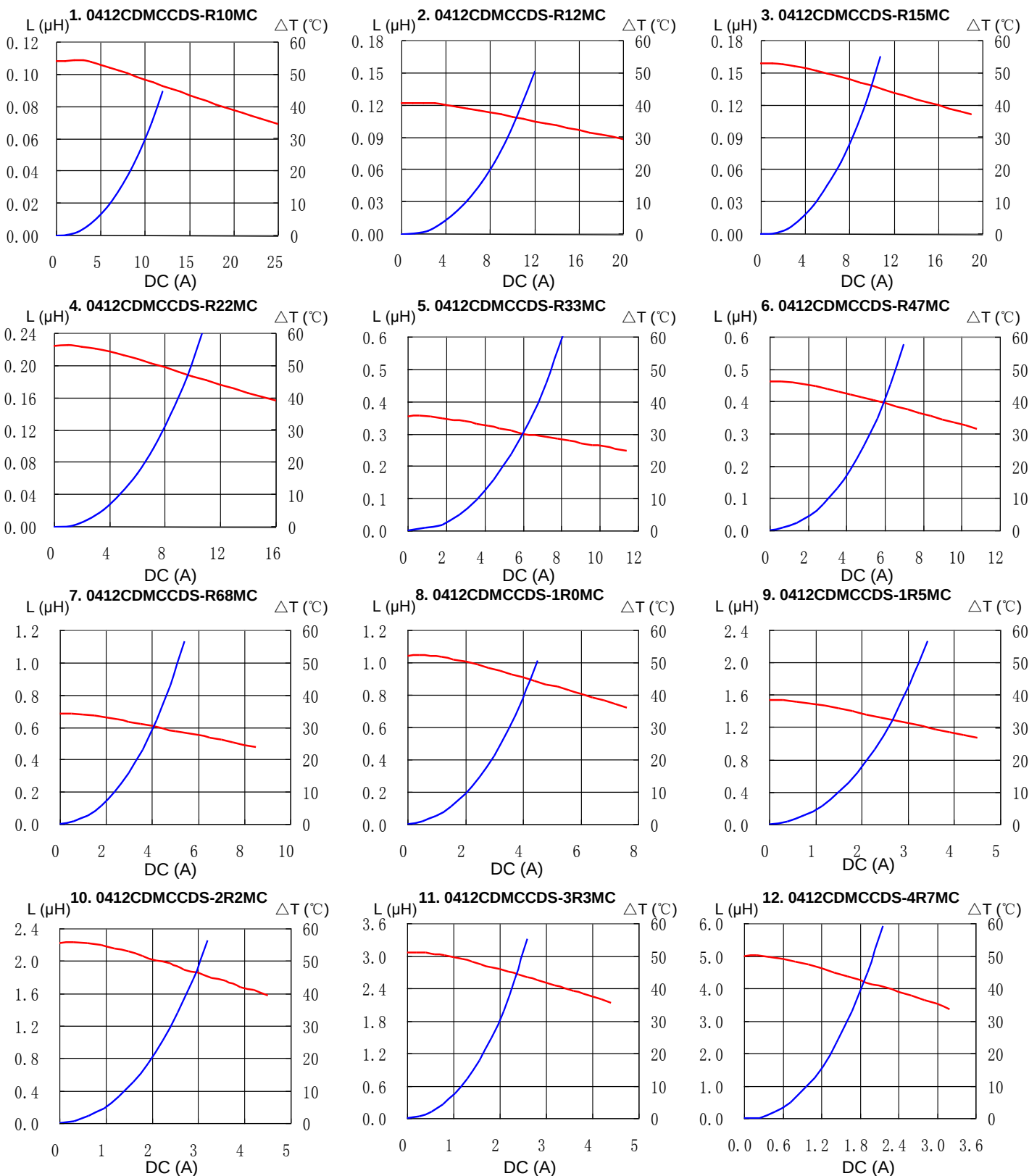
(Test board condition: FR4, Copper=70 $\mu\text{m}$ , four-layer PWB t=1.6mm)

# SMD Power Inductor 0412CDMCC/DS



## Saturation Current & Temperature Rise Graph

— L (20°C) —  $\Delta T$

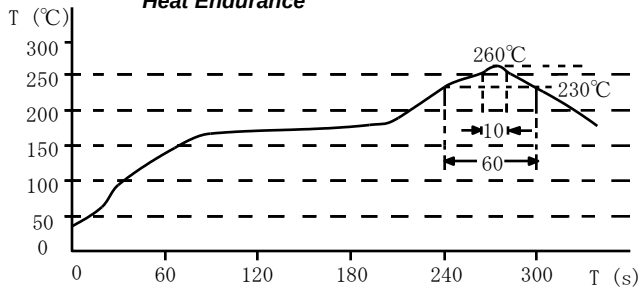


# SMD Power Inductor 0412CDMCC/DS

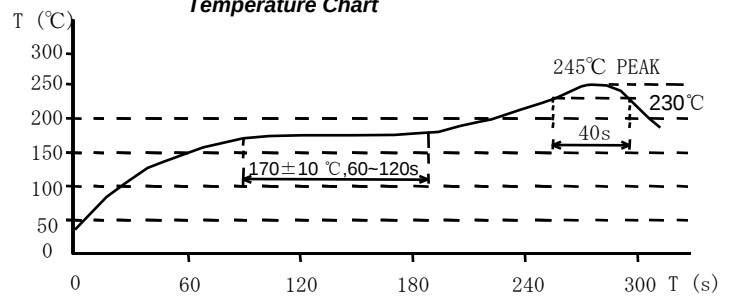


## Solder Reflow Condition

Heat Endurance



Temperature Chart



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