

# SMD Power Inductor

## CDRH50D28B/T150



### Description

- Ferrite drum core construction
- Magnetically shielded
- LxWxH: 5.6 x 5.3 x 3.0 mm Max.
- Product weight: 0.24g (Ref.)
- Qualified AEC-Q200
- RoHS compliance
- Absolute Maximum Voltage (across inductor): 250V
- Vibration resistance: 10Hz~20000Hz/30G (MIL standard)



### Environmental Data

- Operating Temperature: -55°C to +150°C (including self-heating)

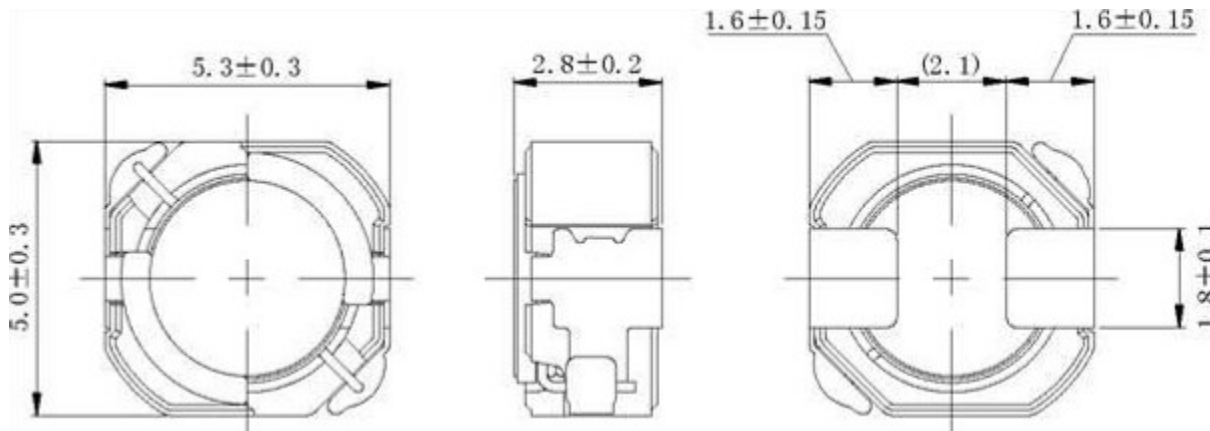
### Packaging

- Carrier tape and reel packaging

### Applications

- ADAS DC/DC converter
- Other high temperature / high reliability applications for automotive

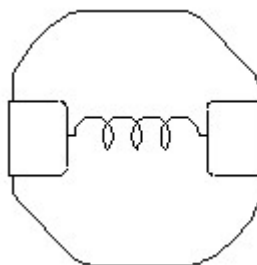
### Dimension - [mm]



### Recommended Land pattern - [mm]



### Wire Connection



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### Electrical Characteristics

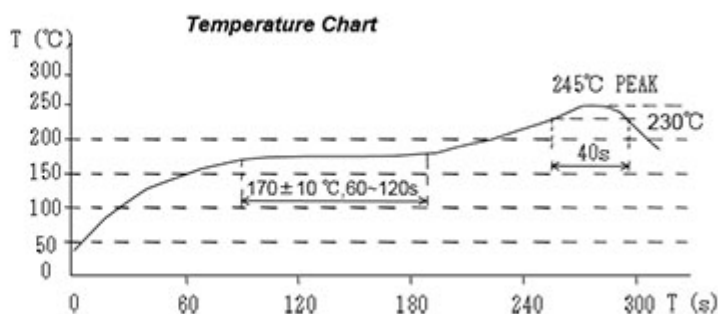
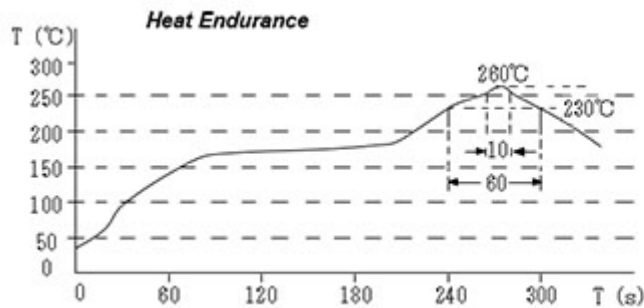
| Part Number            | Inductance [Within] ( $\mu$ H) ※1 | D.C.R. at 20°C Max.(Typ.) (m $\Omega$ ) | Saturation Current (A) Max.(Typ.) ※2 | Temperature Rise Current (A) Max.(Typ.) ※3 |
|------------------------|-----------------------------------|---|--------------------------------------|--|
| CDRH50D28BT150NP-1R0NC | 1.00 $\pm$ 30%                    | 23.40 (18.00)                           | 5.50 (6.50)                          | 3.20 (3.60)                                |
| CDRH50D28BT150NP-1R5NC | 1.50 $\pm$ 30%                    | 26.00 (20.00)                           | 5.50 (5.20)                          | 3.00 (3.40)                                |
| CDRH50D28BT150NP-2R2NC | 2.20 $\pm$ 30%                    | 33.80 (26.00)                           | 3.50 (4.20)                          | 2.80 (3.20)                                |
| CDRH50D28BT150NP-3R3NC | 3.30 $\pm$ 30%                    | 41.60 (32.00)                           | 2.90 (3.40)                          | 2.40 (2.70)                                |
| CDRH50D28BT150NP-4R7NC | 4.70 $\pm$ 30%                    | 67.60 (52.00)                           | 2.40 (2.90)                          | 2.20 (2.50)                                |
| CDRH50D28BT150NP-6R8NC | 6.80 $\pm$ 30%                    | 97.50 (75.00)                           | 2.00 (2.40)                          | 1.70 (1.92)                                |
| CDRH50D28BT150NP-100MC | 10.00 $\pm$ 20%                   | 114 (95.00)                             | 1.70 (2.00)                          | 1.55 (1.75)                                |
| CDRH50D28BT150NP-150MC | 15.00 $\pm$ 20%                   | 156 (130)                               | 1.40 (1.70)                          | 1.22 (1.38)                                |
| CDRH50D28BT150NP-220MC | 22.00 $\pm$ 20%                   | 180 (150)                               | 1.20 (1.40)                          | 1.00 (1.14)                                |
| CDRH50D28BT150NP-330MC | 33.00 $\pm$ 20%                   | 336 (280)                               | 0.93 (1.10)                          | 0.88 (0.90)                                |
| CDRH50D28BT150NP-470MC | 47.00 $\pm$ 20%                   | 516 (430)                               | 0.78 (0.92)                          | 0.68 (0.76)                                |
| CDRH50D28BT150NP-680MC | 68.00 $\pm$ 20%                   | 756 (630)                               | 0.67 (0.79)                          | 0.56 (0.65)                                |
| CDRH50D28BT150NP-101MC | 100 $\pm$ 20%                     | 930 (780)                               | 0.55 (0.65)                          | 0.40 (0.46)                                |

※1 Measuring frequency : Inductance at 100kHz

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

※3 Temperature rise current: The actual current when temperature of coil becomes  $\Delta T=40^{\circ}\text{C}$  ( $T_a=20^{\circ}\text{C}$ ).

### Solder Reflow Condition



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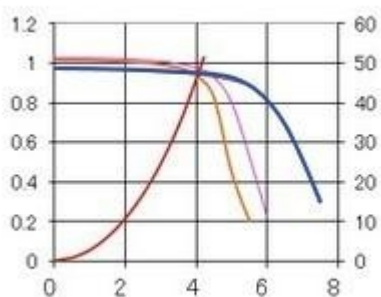
Recommended Type

### Saturation Current & Temperature Rise Graph

— L (20°C) — L (125°C) — L (150°C) —  $\Delta T$

1. CDRH50D28BT150NP-1R0NC

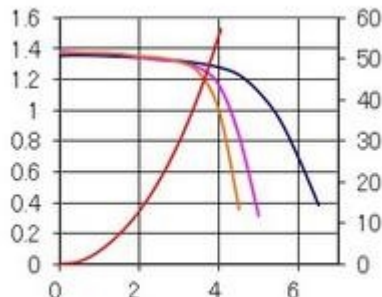
L ( $\mu\text{H}$ )  $\Delta T$ (°C)



DC(A)

2. CDRH50D28BT150NP-1R5NC

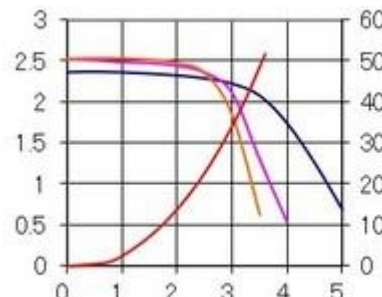
L ( $\mu\text{H}$ )  $\Delta T$ (°C)



DC(A)

3. CDRH50D28BT150NP-2R2NC

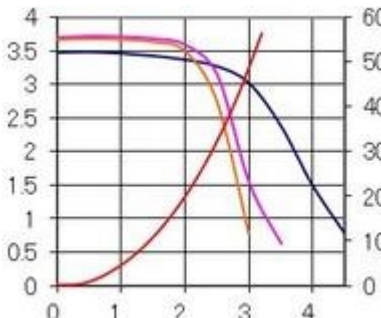
L ( $\mu\text{H}$ )  $\Delta T$ (°C)



DC(A)

4. CDRH50D28BT150NP-3R3NC

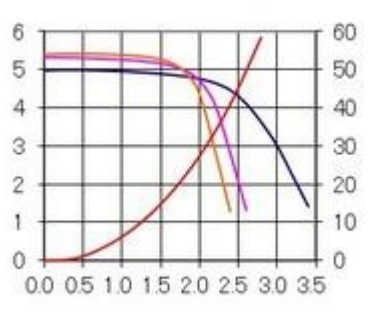
L ( $\mu\text{H}$ )  $\Delta T$ (°C)



DC(A)

5. CDRH50D28BT150NP-4R7NC

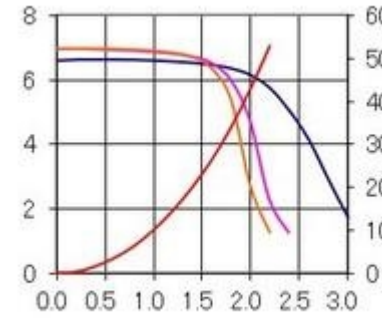
L ( $\mu\text{H}$ )  $\Delta T$ (°C)



DC(A)

6. CDRH50D28BT150NP-6R8NC

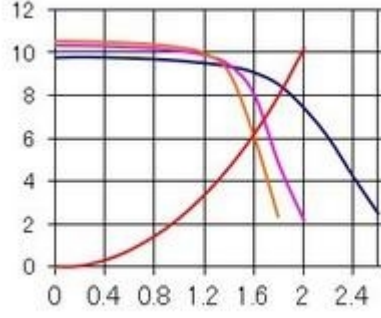
L ( $\mu\text{H}$ )  $\Delta T$ (°C)



DC(A)

7. CDRH50D28BT150NP-100MC

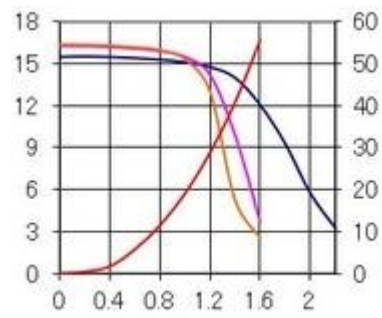
L ( $\mu\text{H}$ )  $\Delta T$ (°C)



DC(A)

8. CDRH50D28BT150NP-150MC

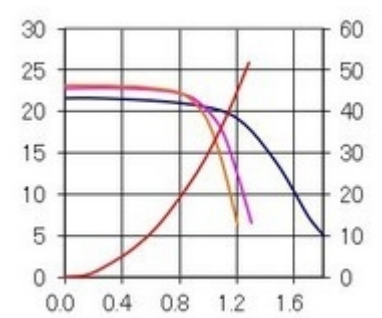
L ( $\mu\text{H}$ )  $\Delta T$ (°C)



DC(A)

9. CDRH50D28BT150NP-220MC

L ( $\mu\text{H}$ )  $\Delta T$ (°C)



DC(A)

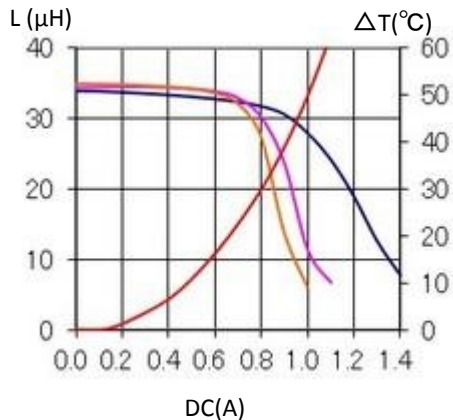
Note: This specification is subject to change without notice. Please contact your nearest sales office for updated information when placing an order.

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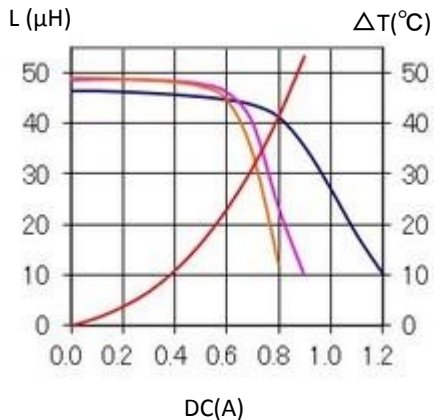
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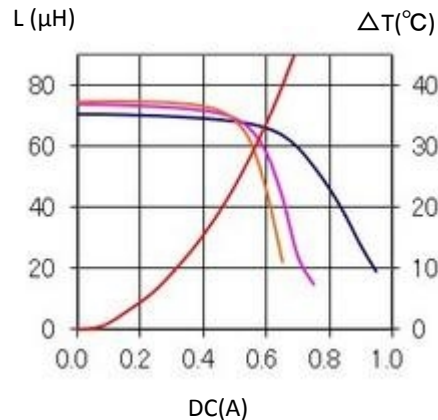
10. CDRH50D28BT150NP-330MC



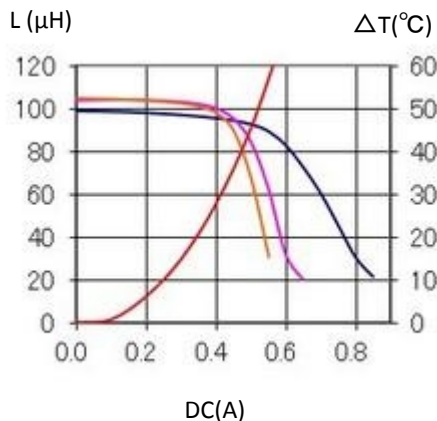
11. CDRH50D28BT150NP-470MC



12. CDRH50D28BT150NP-680MC



13. CDRH50D28BT150NP-101MC



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