

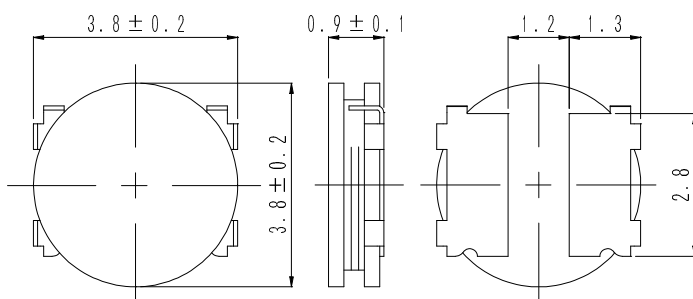
# SMD Power Inductor CDH38D09/SHP



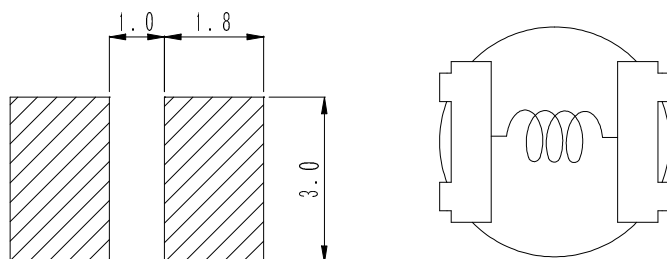
Halogen  
Free



## Dimension - [mm]



## Land pattern and Schematics - [mm]



## Description

- Ferrite drum core construction.
- Magnetically unshielded.
- L × W × H: 4.0 × 4.0 × 1.0mm Max.
- Product weight: 49mg(Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.
- Halogen Free available.

## Environmental Data

- Operating temperature range: -40°C~+105°C (including coil's self temperature rise)
- Storage temperature range: -40°C~+105°C
- Solder reflow temperature: 260 °C peak.

## Packaging

- Carrier tape and reel packaging.
- 7.0" diameter reel
- 1000pcs per reel

## Applications

- Ideally used in Mobilephone, PDA, MP3, DSC/ DVC, HDD etc as DC-DC converter inductors.

# SMD Power Inductor CDH38D09/SHP



## Electrical Characteristics

| Part Name           | Stamp | Inductance<br>( $\mu$ H)<br>[ within ] ※1 | D.C.R. (m $\Omega$ )<br>[ within ]<br>( at 20°C ) | Saturation<br>Current<br>(A) ※2 | Temperature<br>Rise Current<br>(A) ※3 |
|---------------------|-------|-------------------------------------------|---------------------------------------------------|---------------------------------|---------------------------------------|
| CDH38D09SHPNP-2R5MC | 2R5   | 2.5 $\pm$ 20%                             | 110 $\pm$ 20%                                     | 1.60                            | 1.60                                  |
| CDH38D09SHPNP-3R3MC | 3R3   | 3.3 $\pm$ 20%                             | 132 $\pm$ 20%                                     | 1.48                            | 1.45                                  |
| CDH38D09SHPNP-3R8MC | 3R8   | 3.8 $\pm$ 20%                             | 165 $\pm$ 20%                                     | 1.30                            | 1.30                                  |
| CDH38D09SHPNP-4R7MC | 4R7   | 4.7 $\pm$ 20%                             | 185 $\pm$ 20%                                     | 1.24                            | 1.22                                  |
| CDH38D09SHPNP-5R4MC | 5R4   | 5.4 $\pm$ 20%                             | 245 $\pm$ 20%                                     | 1.08                            | 1.08                                  |
| CDH38D09SHPNP-6R0MC | 6R0   | 6.0 $\pm$ 20%                             | 270 $\pm$ 20%                                     | 1.04                            | 1.00                                  |
| CDH38D09SHPNP-7R4MC | 7R4   | 7.4 $\pm$ 20%                             | 335 $\pm$ 20%                                     | 0.88                            | 0.90                                  |
| CDH38D09SHPNP-8R2MC | 8R2   | 8.2 $\pm$ 20%                             | 365 $\pm$ 20%                                     | 0.84                            | 0.85                                  |
| CDH38D09SHPNP-100MC | 100   | 10 $\pm$ 20%                              | 472 $\pm$ 20%                                     | 0.75                            | 0.78                                  |
| CDH38D09SHPNP-120MC | 120   | 12 $\pm$ 20%                              | 543 $\pm$ 20%                                     | 0.66                            | 0.74                                  |
| CDH38D09SHPNP-150MC | 150   | 15 $\pm$ 20%                              | 612 $\pm$ 20%                                     | 0.60                            | 0.68                                  |
| CDH38D09SHPNP-180MC | 180   | 18 $\pm$ 20%                              | 896 $\pm$ 20%                                     | 0.56                            | 0.55                                  |
| CDH38D09SHPNP-220MC | 220   | 22 $\pm$ 20%                              | 983 $\pm$ 20%                                     | 0.52                            | 0.53                                  |

※1. Inductance measuring condition: at 100kHz.

※2. Saturation current: The value of D.C. current when the inductance decreases to 70% of it's nominal value.

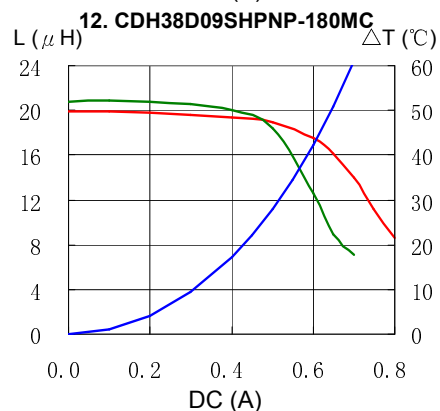
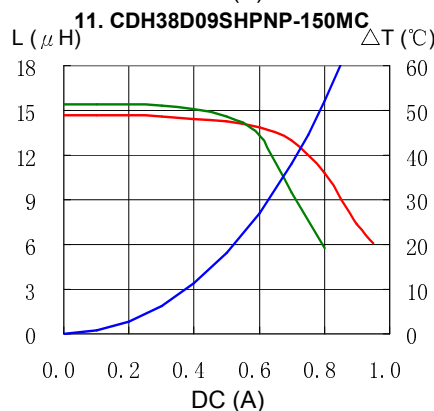
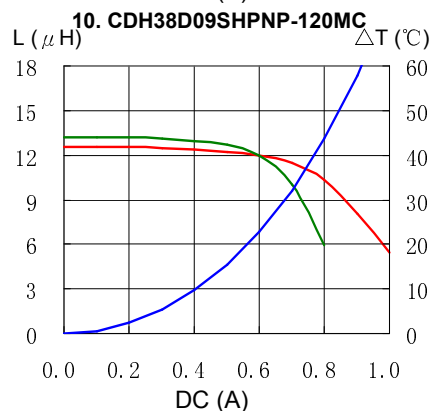
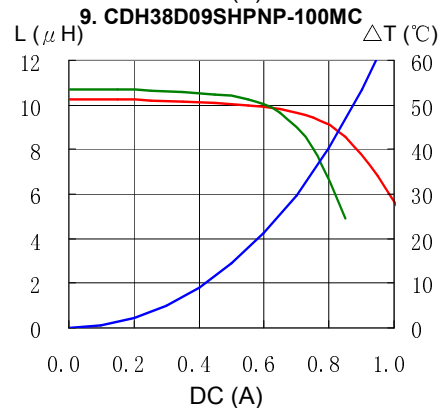
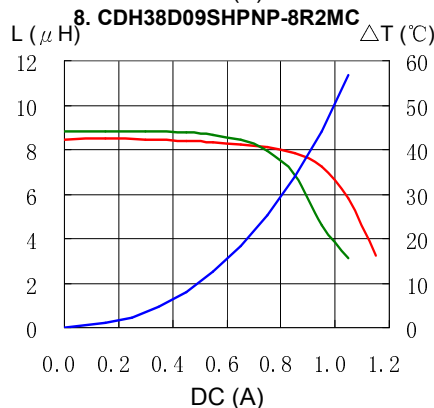
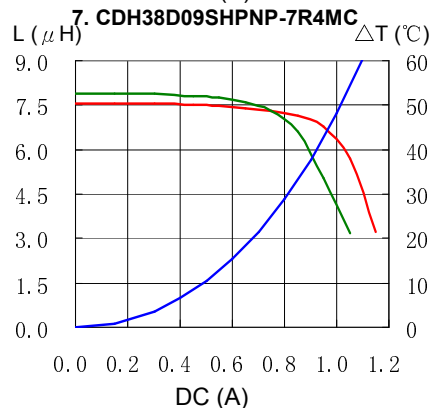
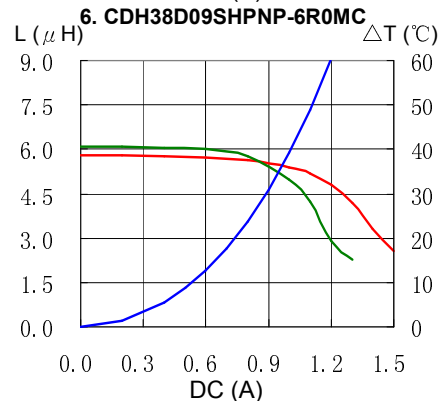
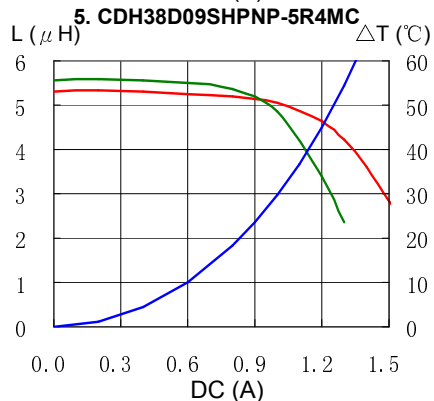
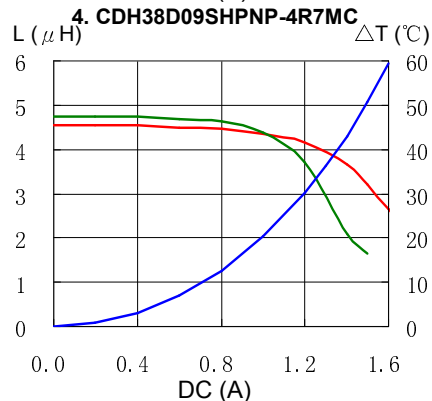
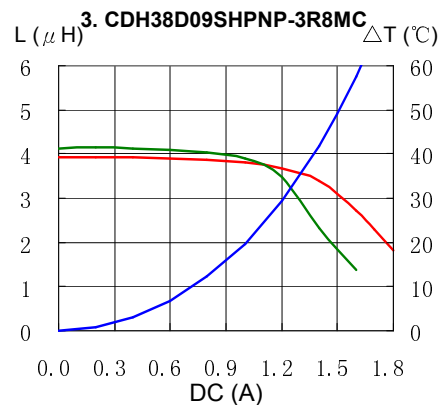
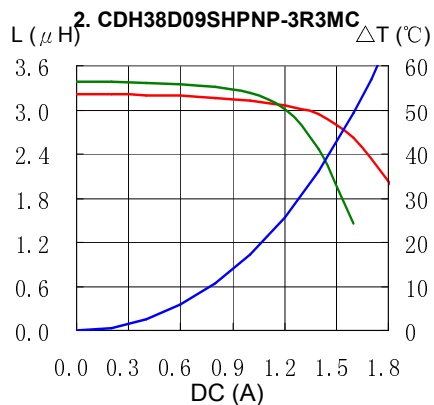
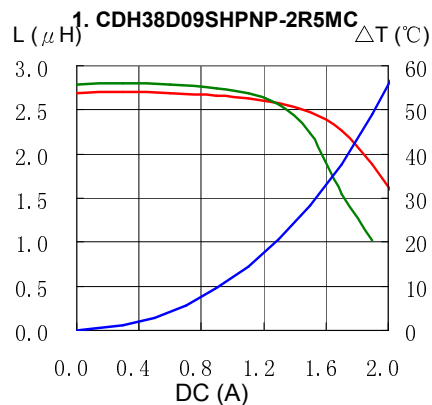
※3. Temperature rise current: The value of D.C. current when the temperature rise is  $\Delta t=40^{\circ}\text{C}$  ( $T_a=20^{\circ}\text{C}$ ).

# SMD Power Inductor CDH38D09/SHP



## Saturation Current & Temperature Rise Graph

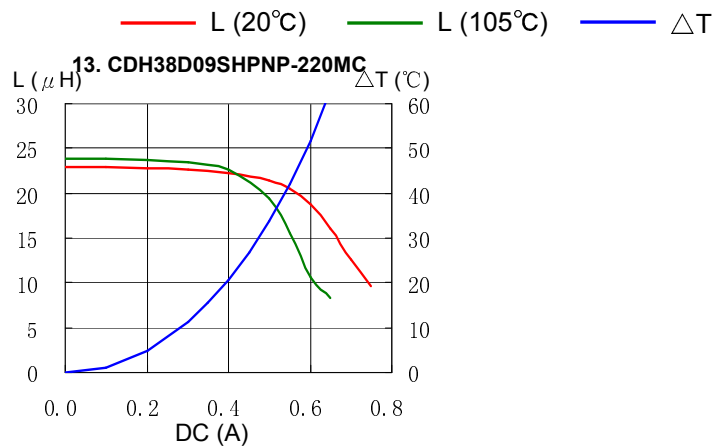
— L (20°C) — L (105°C) —  $\Delta T$



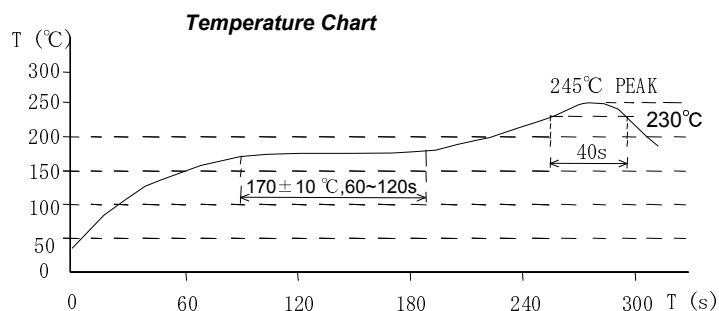
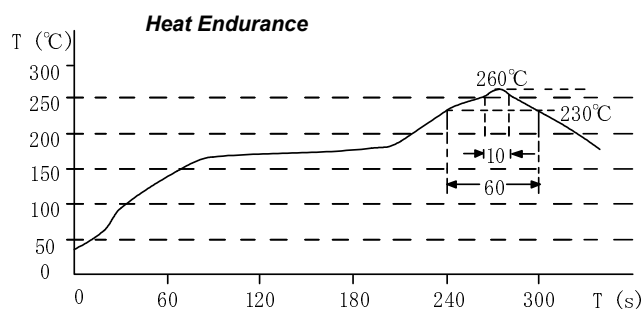
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## Saturation Current & Temperature Rise Graph



## Solder Reflow Condition



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