

# SMD Power Inductor CDRH6D12



## Description

- Ferrite drum core construction.
- Magnetically shielded.
- L × W × H: 6.7 × 6.7 × 1.5 mm Max.
- Product weight: 165mg (Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.

## Environmental Data

- Operating temperature range: -40°C ~ +100°C (including coil's self temperature rise)
- Storage temperature range: -40°C ~ +100°C
- Solder reflow temperature: 260 °C peak.

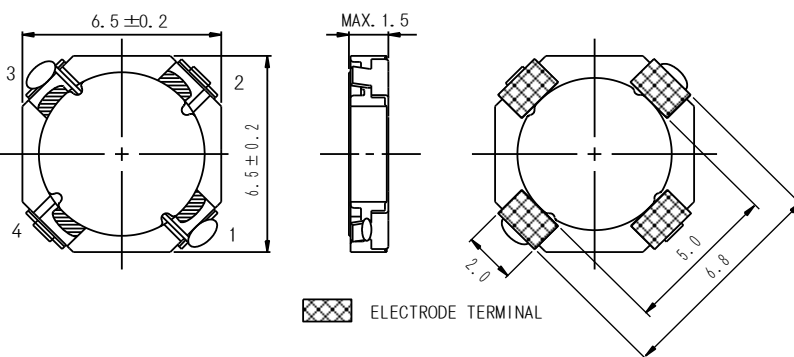
## Packaging

- Carrier tape and reel packaging
- 13.0" diameter reel
- 1000 pcs per reel

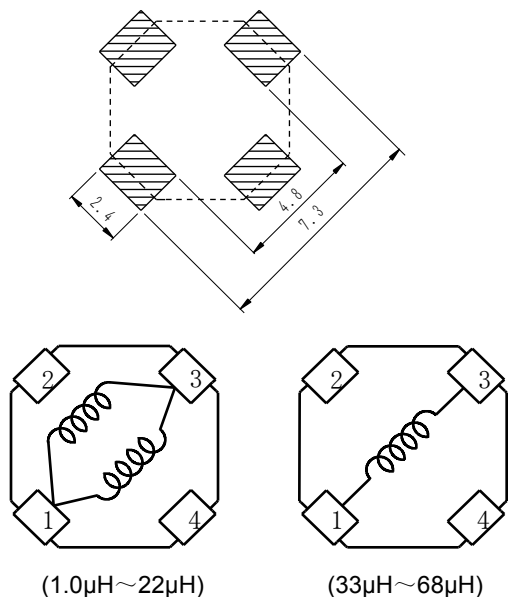
## Applications

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

## Dimension - [mm]



## Land pattern and Schematics - [mm]



# SMD Power Inductor

## CDRH6D12



### Electrical Characteristics

| Part Name        | Stamp | Inductance<br>( $\mu$ H)<br>[within] ※1 | D.C.R. (m $\Omega$ )<br>Max. (Typ.)<br>(at 20°C) | Saturation<br>Current<br>(A) ※2 | Temperature<br>Rise Current<br>(A) ※3 |
|------------------|-------|-----------------------------------------|--------------------------------------------------|---------------------------------|---------------------------------------|
| CDRH6D12NP-1R0NC | 1R0   | 1.0 $\pm$ 30%                           | 37.5(30.0)                                       | 3.50                            | 2.80                                  |
| CDRH6D12NP-1R5NC | 1R5   | 1.5 $\pm$ 30%                           | 41.3(33.0)                                       | 2.80                            | 2.50                                  |
| CDRH6D12NP-2R2NC | 2R2   | 2.2 $\pm$ 30%                           | 50.0(40.0)                                       | 2.50                            | 2.30                                  |
| CDRH6D12NP-2R6NC | 2R6   | 2.6 $\pm$ 30%                           | 56.3(45.0)                                       | 2.30                            | 2.10                                  |
| CDRH6D12NP-3R3NC | 3R3   | 3.3 $\pm$ 30%                           | 62.5(50.0)                                       | 2.20                            | 1.90                                  |
| CDRH6D12NP-4R2NC | 4R2   | 4.2 $\pm$ 30%                           | 75.0(60.0)                                       | 1.90                            | 1.80                                  |
| CDRH6D12NP-6R4NC | 6R4   | 6.4 $\pm$ 30%                           | 119.0(95.0)                                      | 1.50                            | 1.40                                  |
| CDRH6D12NP-100NC | 100   | 10.0 $\pm$ 30%                          | 165.0(132.0)                                     | 1.20                            | 1.10                                  |
| CDRH6D12NP-150NC | 150   | 15.0 $\pm$ 30%                          | 243.8(195.0)                                     | 0.95                            | 0.90                                  |
| CDRH6D12NP-220NC | 220   | 22.0 $\pm$ 30%                          | 325.0(260.0)                                     | 0.80                            | 0.75                                  |
| CDRH6D12NP-330NC | 330   | 33.0 $\pm$ 30%                          | 500.0(400.0)                                     | 0.65                            | 0.60                                  |
| CDRH6D12NP-470NC | 470   | 47.0 $\pm$ 30%                          | 675.0(540.0)                                     | 0.55                            | 0.50                                  |
| CDRH6D12NP-680NC | 680   | 68.0 $\pm$ 30%                          | 918.8(735.0)                                     | 0.45                            | 0.40                                  |

※1. Inductance measuring condition: at 100kHz.

※2. Saturation current: The value of D.C. current when the inductance decreases to 65% of it's nominal value.

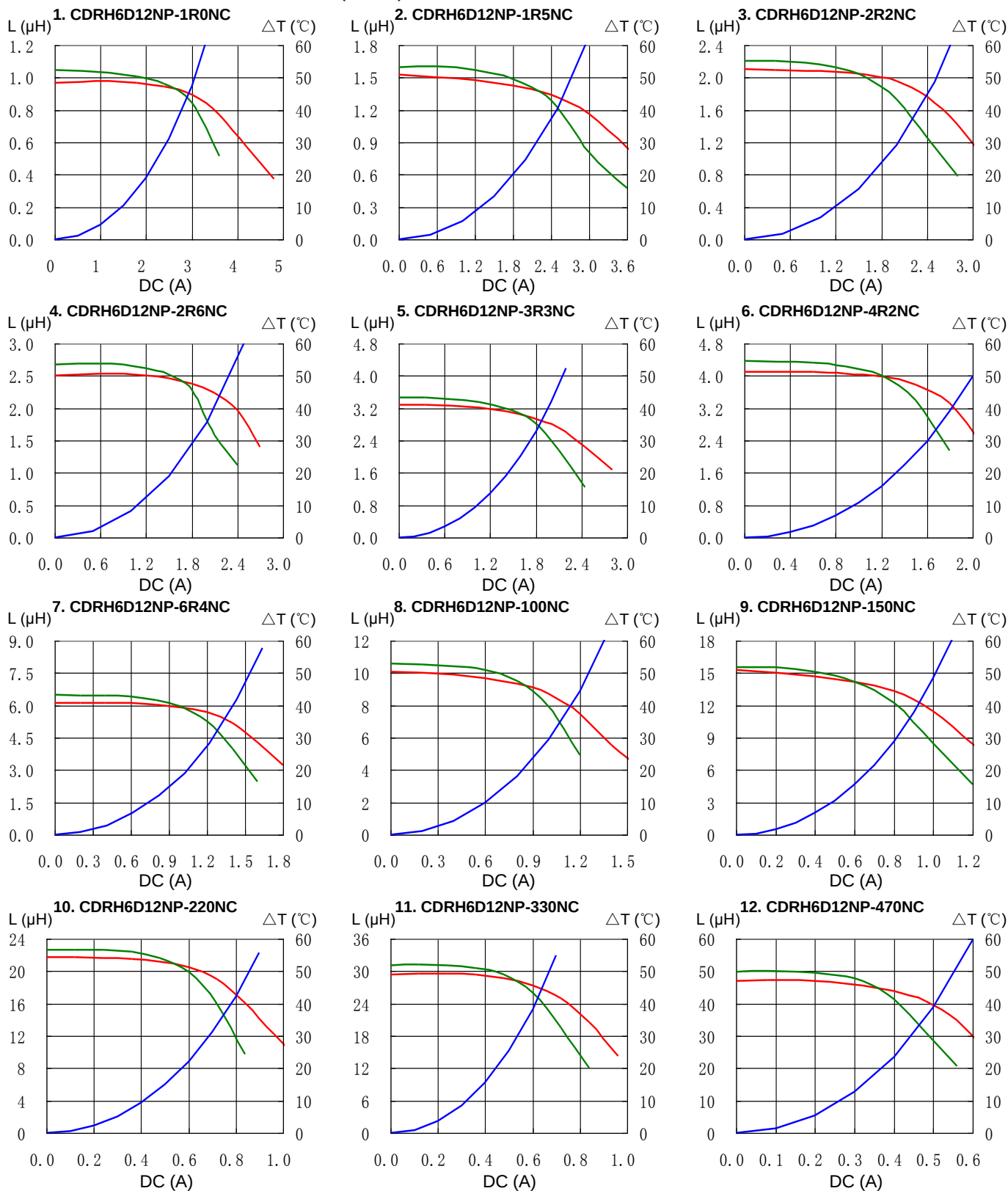
※3. Temperature rise current: The value of D.C. current when the temperature rise is  $\Delta t=40^{\circ}\text{C}$  ( $T_a=20^{\circ}\text{C}$ ).

# SMD Power Inductor CDRH6D12



## Saturation Current & Temperature Rise Graph

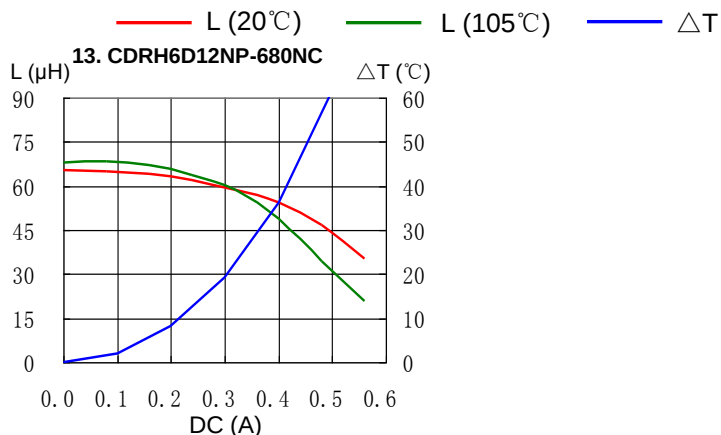
— L (20°C) — L (105°C) —  $\Delta T$



# SMD Power Inductor CDRH6D12

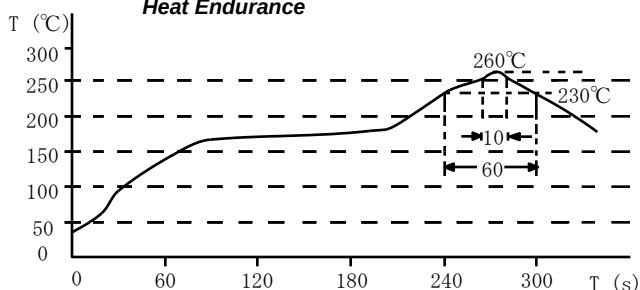


## Saturation Current & Temperature Rise Graph

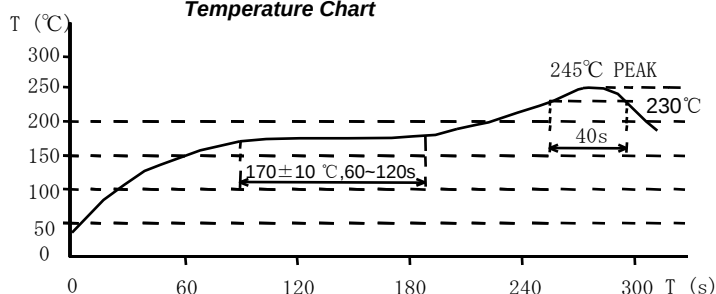


## Solder Reflow Condition

Heat Endurance



Temperature Chart



Please refer to the sales offices on our website - <http://www.sumida.com>

### 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  
FAX.+81-48-691-7340  
[sales@jp.sumida.com](mailto:sales@jp.sumida.com)

### Chicago

Tel.+1-847-545-6700  
FAX. +1-847-545-6720  
[sales@us.sumida.com](mailto:sales@us.sumida.com)

### Shanghai

Tel.+86-21-5836-3299  
FAX.+86-21-5836-3266  
[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  
[sales@tw.sumida.com](mailto:sales@tw.sumida.com)

### San Jose

Tel.+1-408-321-9660  
FAX.+1-408-321-9308  
[sales@us.sumida.com](mailto:sales@us.sumida.com)