

# SMD Power Inductor

## CDRH7D16



### Description

- Ferrite drum core construction.
- Magnetically shielded.
- L × W × H: 8.0 × 7.7 × 1.8 mm Max.
- Product weight: 0.4g(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.

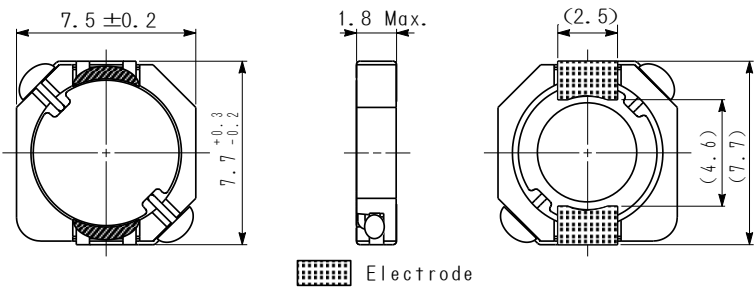
### Packaging

- Carrier tape and reel packaging
- 12.9" diameter reel
- 2000pcs per reel

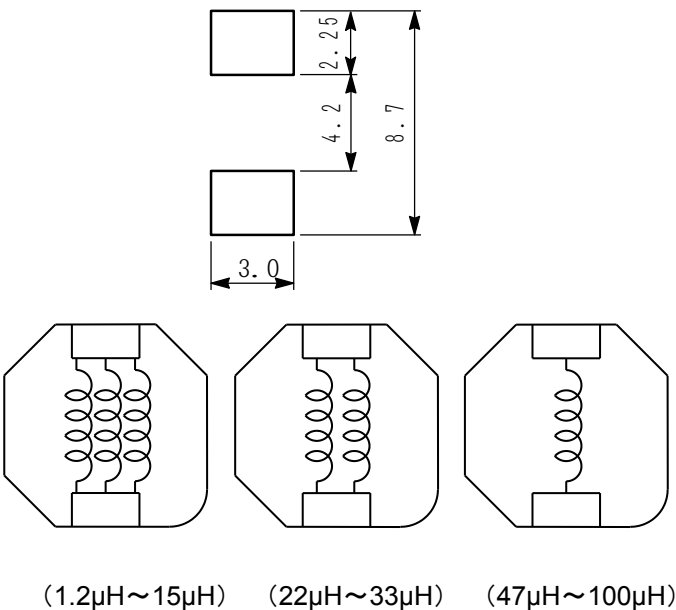
### Applications

- Ideally used in Notebook PC, Game machine, HDD, DVC, LCD TV etc. as DC-DC converter inductors.

### Dimension - [mm]



### Land pattern and Schematics - [mm]



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### Electrical Characteristics

| Part No.         | Stamp | Inductance<br>( $\mu$ H)<br>[ within ] $\times 1$ | D.C.R. (m $\Omega$ )<br>[ within ]<br>(at 20°C) | Saturation Current<br>(A) $\times 2$ |          | Temperature<br>Rise Current<br>(A) $\times 3$ |
|------------------|-------|---------------------------------------------------|-------------------------------------------------|--------------------------------------|----------|-----------------------------------------------|
|                  |       |                                                   |                                                 | at 20°C                              | at 100°C |                                               |
| CDRH7D16NP-1R2PC | 1R2   | $1.2 \pm 25\%$                                    | $16.8 \pm 25\%$                                 | 4.60                                 | 4.00     | 4.94                                          |
| CDRH7D16NP-1R8PC | 1R8   | $1.8 \pm 25\%$                                    | $20.4 \pm 25\%$                                 | 3.60                                 | 3.00     | 4.21                                          |
| CDRH7D16NP-2R4PC | 2R4   | $2.4 \pm 25\%$                                    | $24.8 \pm 25\%$                                 | 3.10                                 | 2.50     | 3.77                                          |
| CDRH7D16NP-3R3PC | 3R3   | $3.3 \pm 25\%$                                    | $30.9 \pm 25\%$                                 | 2.70                                 | 2.30     | 3.23                                          |
| CDRH7D16NP-4R7PC | 4R7   | $4.7 \pm 25\%$                                    | $45.4 \pm 25\%$                                 | 2.40                                 | 1.90     | 2.65                                          |
| CDRH7D16NP-6R8PC | 6R8   | $6.8 \pm 25\%$                                    | $61.0 \pm 25\%$                                 | 2.00                                 | 1.60     | 2.24                                          |
| CDRH7D16NP-100MC | 100   | $10 \pm 20\%$                                     | $78.6 \pm 25\%$                                 | 1.60                                 | 1.30     | 1.97                                          |
| CDRH7D16NP-150MC | 150   | $15 \pm 20\%$                                     | $115 \pm 20\%$                                  | 1.30                                 | 1.10     | 1.59                                          |
| CDRH7D16NP-220MC | 220   | $22 \pm 20\%$                                     | $161 \pm 20\%$                                  | 1.10                                 | 0.90     | 1.23                                          |
| CDRH7D16NP-330MC | 330   | $33 \pm 20\%$                                     | $246 \pm 20\%$                                  | 0.92                                 | 0.75     | 1.04                                          |
| CDRH7D16NP-470MC | 470   | $47 \pm 20\%$                                     | $369 \pm 20\%$                                  | 0.76                                 | 0.60     | 0.81                                          |
| CDRH7D16NP-680MC | 680   | $68 \pm 20\%$                                     | $517 \pm 20\%$                                  | 0.64                                 | 0.50     | 0.71                                          |
| CDRH7D16NP-101MC | 101   | $100 \pm 20\%$                                    | $696 \pm 20\%$                                  | 0.53                                 | 0.40     | 0.59                                          |

※1. Inductance measuring conditions at 100kHz.

※2. Saturation current: The DC current at which the inductance decreases to 65% of its nominal value.

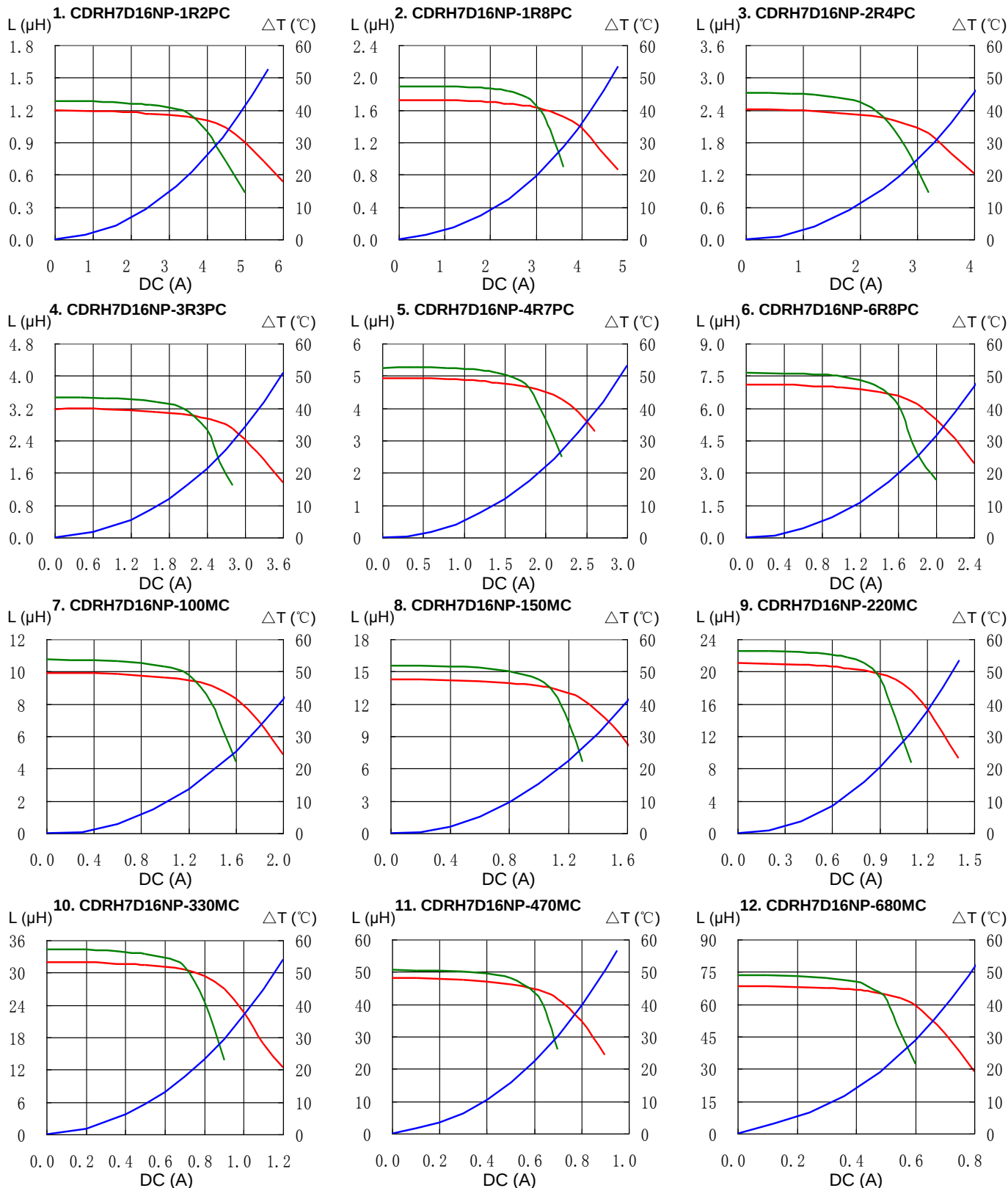
※3. Temperature rise current: The DC current at which the temperature rise is  $\Delta t = 40^\circ\text{C}$ . ( $T_a = 20^\circ\text{C}$ )

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## Saturation Current & Temperature Rise Graph

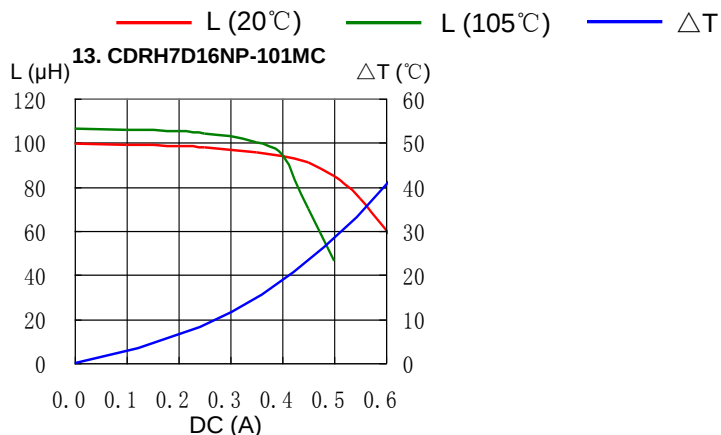
— L (20°C) — L (105°C) —  $\Delta T$



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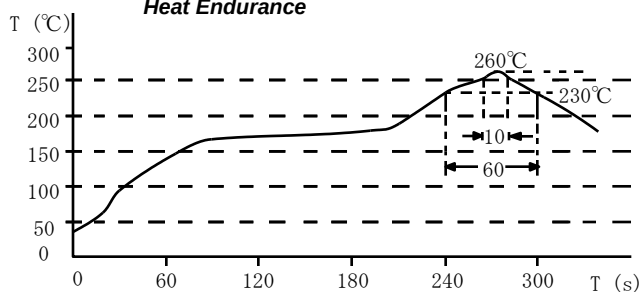


## Saturation Current & Temperature Rise Graph

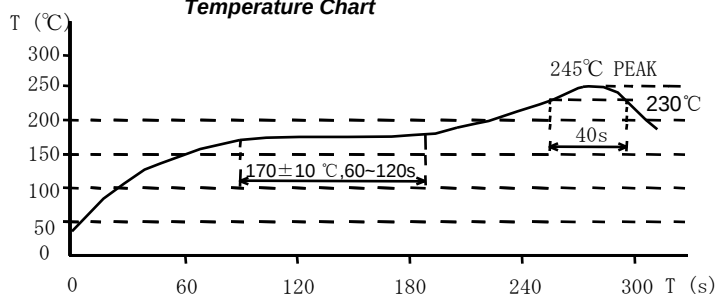


## Solder Reflow Condition

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  
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)