



**THE DATASHEET OF
CDRH6D38T125NP-470PC**



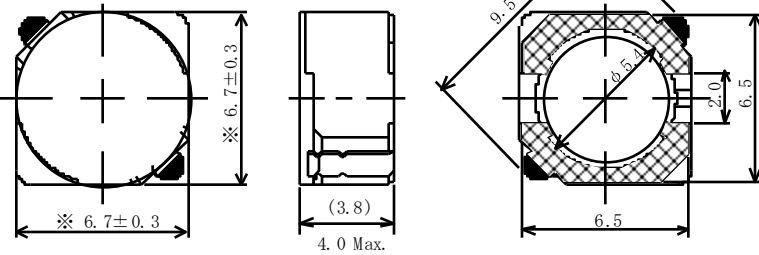
SMD Power Inductor CDRH6D38/T125



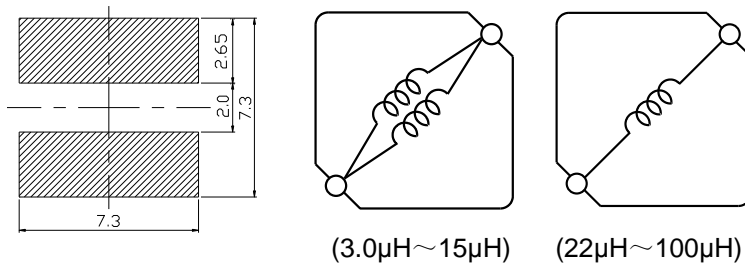
Description

- Ferrite drum core construction.
- Magnetically shielded.
- L × W × H: 7.0 × 7.0 × 4.0 mm Max.
- Product weight: 0.6g (Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.
- Qualification to AEC-Q200.

Dimension - [mm]



Land pattern and Schematics - [mm]



Environmental Data

- Operating temperature range: $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$ (including coil's self temperature rise)
- Storage temperature range: $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- Solder reflow temperature: 260°C peak.

Packaging

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

Applications

- Automotive and other high temperature, high reliability application.



Electrical Characteristics

| Part Name | Stamp | Inductance (μ H) 100kHz | D.C.R.(m Ω) [Max.] (at 20°C) | Saturation Current (A) ※1 | | Temperature Rise Current (A) ※2 |
|----------------------|-------|------------------------------------|--|------------------------------|---------------------|---------------------------------------|
| | | | | (at20°C) | (at125°C) (Typ.) | |
| CDRH6D38T125NP-3R0NC | 3R0 | 3.0 \pm 30% | 22.0(17.5) | 3.90 | 3.00 | 4.50 |
| CDRH6D38T125NP-3R9NC | 3R9 | 3.9 \pm 30% | 24.5(19.6) | 3.30 | 2.50 | 4.00 |
| CDRH6D38T125NP-4R7NC | 4R7 | 4.7 \pm 30% | 27.5(22.0) | 3.10 | 2.40 | 3.80 |
| CDRH6D38T125NP-5R6NC | 5R6 | 5.6 \pm 30% | 30.5(24.4) | 2.85 | 2.10 | 3.50 |
| CDRH6D38T125NP-6R8NC | 6R8 | 6.8 \pm 30% | 33.0(26.4) | 2.65 | 2.00 | 3.30 |
| CDRH6D38T125NP-100PC | 100 | 10 \pm 25% | 43.5(34.8) | 2.20 | 1.70 | 3.00 |
| CDRH6D38T125NP-150PC | 150 | 15 \pm 25% | 59.8(47.8) | 1.80 | 1.50 | 2.20 |
| CDRH6D38T125NP-220PC | 220 | 22 \pm 25% | 103.4(82.7) | 1.50 | 1.00 | 1.65 |
| CDRH6D38T125NP-330PC | 330 | 33 \pm 25% | 145(116) | 1.25 | 0.95 | 1.45 |
| CDRH6D38T125NP-470PC | 470 | 47 \pm 25% | 181(145) | 1.00 | 0.80 | 1.20 |
| CDRH6D38T125NP-680PC | 680 | 68 \pm 25% | 250(200) | 0.85 | 0.65 | 1.00 |
| CDRH6D38T125NP-101PC | 101 | 100 \pm 25% | 372(298) | 0.68 | 0.55 | 0.85 |

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

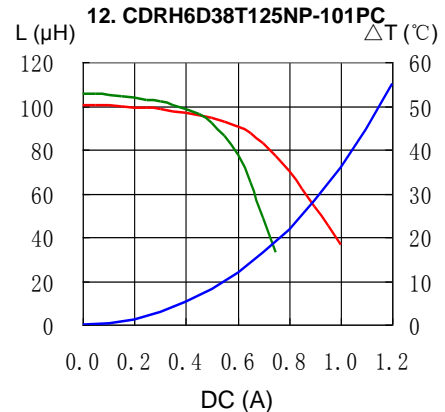
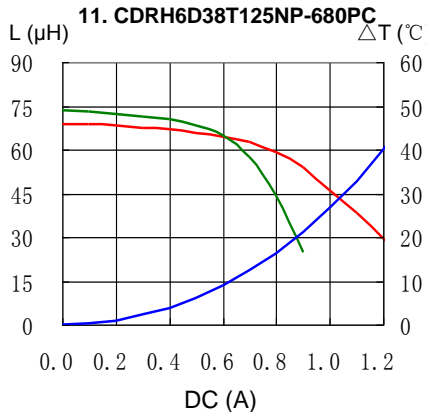
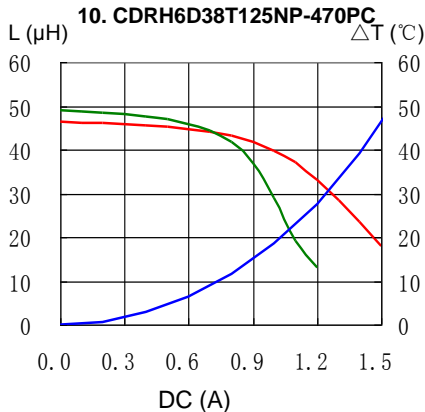
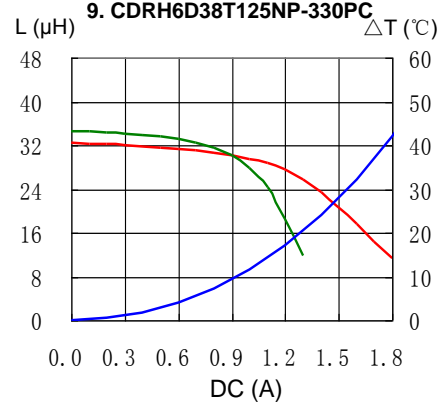
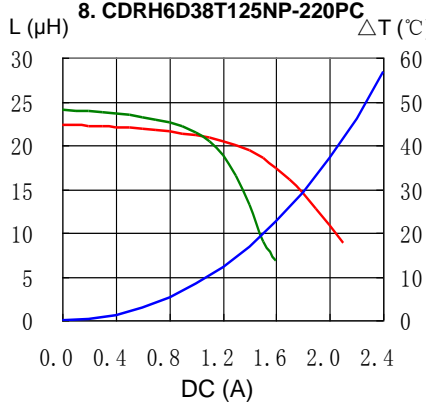
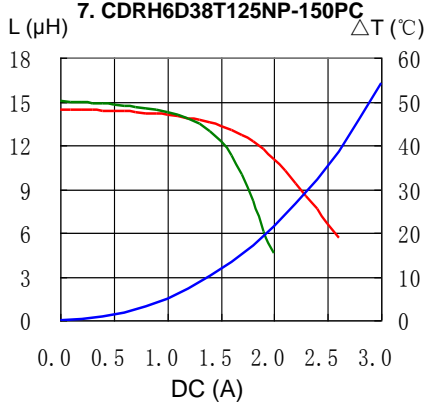
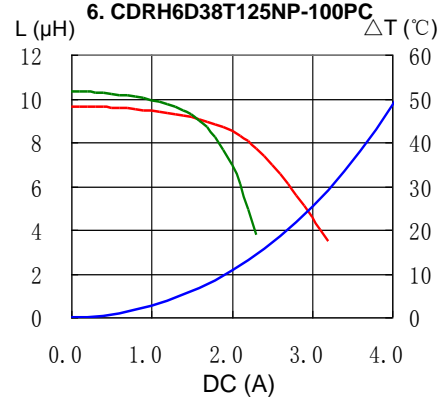
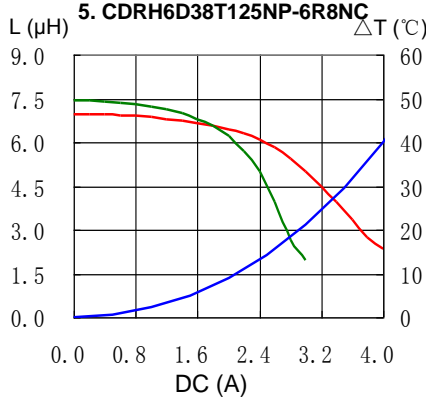
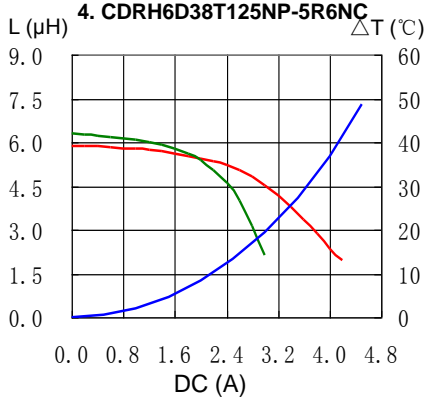
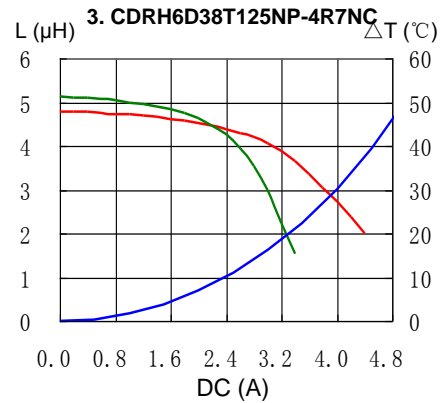
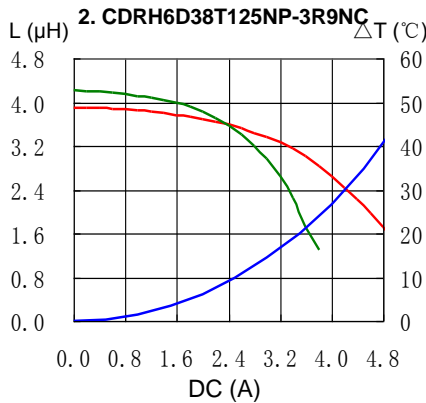
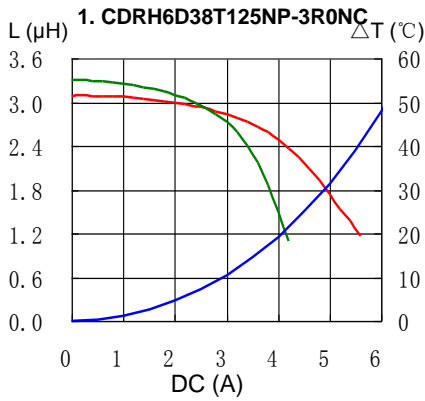
※2. Temperature rise current: The value of D.C. current when the temperature rise is $\Delta t=40^{\circ}\text{C}$ ($T_a=20^{\circ}\text{C}$).

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Saturation Current & Temperature Rise Graph

— L (20°C) — L (125°C) — ΔT

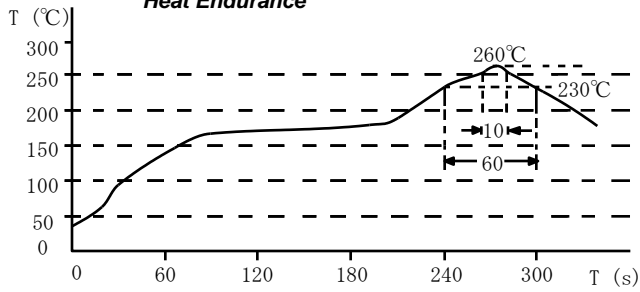


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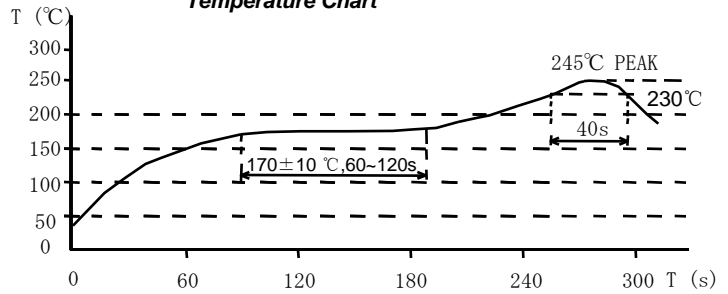


Solder Reflow Condition

Heat Endurance



Temperature Chart



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Hong Kong

Tel.+852-2880-6781
FAX.+852-2565-9600
sales@hk.sumida.com

Saitama(Japan)

Tel.+81-48-691-7300
FAX.+81-48-691-7340
sales@jp.sumida.com

Chicago

Tel.+1-847-545-6700
FAX. +1-847-545-6720
sales@us.sumida.com

Shanghai

Tel.+86-21-5836-3299
FAX.+86-21-5836-3266
shanghai.sales@cn.sumida.com

Seoul

Tel.+82-2-6237-0777
FAX.+82-2-6237-0778
sales@kr.sumida.com

Obernzell

Tel.+49-8591-937-0
FAX. +49-8591-937-103
contact@eu.sumida.com

Shenzhen

Tel.+86-755-8291-0228
FAX.+86-755-8291-0338
shenzhen.sales@cn.sumida.com

Singapore

Tel.+65-6296-3388
FAX.+65-6841-4426
sales@sg.sumida.com

Neumarkt

Tel.+49-9181-4509-110
FAX. +49-9181-4509-310
infocomp@eu.sumida.com

Taipei

Tel.+886-2-8751-2737
FAX.+886-2-8751-2738
sales@tw.sumida.com

San Jose

Tel.+1-408-321-9660
FAX.+1-408-321-9308
sales@us.sumida.com

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