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# SMD Power Inductor CDRH8D38



## Description

- Ferrite drum core construction.
- Magnetically shielded.
- L × W × H: 8.3 × 8.3 × 4.0 mm Max.
- Product weight: 0.9 g (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.

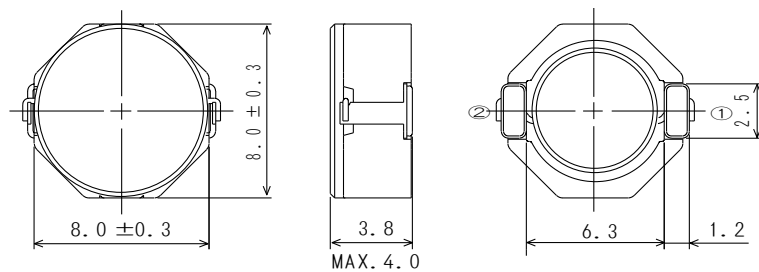
## Packaging

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

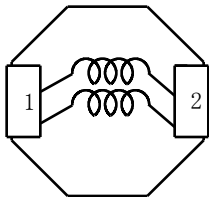
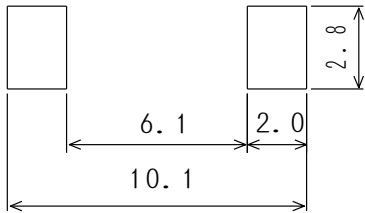
## Applications

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

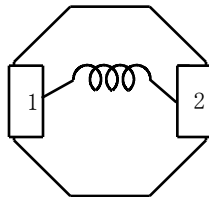
## Dimension - [mm]



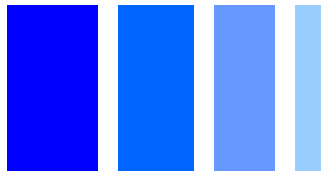
## Land pattern and Schematics - [mm]



(1.8µH~10µH)



(15µH~100µH)



### Electrical Characteristics

Part Name	Stamp	Inductance ( $\mu\text{H}$ ) [within] ※1	D.C.R. (m $\Omega$ ) Max. (Typ.) (at 20°C)	Saturation Current (A) ※2		Temperature Rise Current (A) ※3
				(at 20°C)	(at 105°C)	
CDRH8D38NP-1R8NC	1R8	1.8 $\mu\text{H} \pm 30\%$	15.6(12.5)	7.00	6.20	6.80
CDRH8D38NP-2R5NC	2R5	2.5 $\mu\text{H} \pm 30\%$	17.5(14)	6.50	5.50	6.00
CDRH8D38NP-3R5NC	3R5	3.5 $\mu\text{H} \pm 30\%$	24(19)	5.00	4.40	5.20
CDRH8D38NP-4R7NC	4R7	4.7 $\mu\text{H} \pm 30\%$	29(23)	4.60	4.00	4.40
CDRH8D38NP-6R0NC	6R0	6.0 $\mu\text{H} \pm 30\%$	32(25)	4.20	3.50	4.00
CDRH8D38NP-100NC	100	10 $\mu\text{H} \pm 30\%$	48(38)	3.00	2.60	3.20
CDRH8D38NP-150NC	150	15 $\mu\text{H} \pm 30\%$	67(53)	2.75	2.30	2.50
CDRH8D38NP-220NC	220	22 $\mu\text{H} \pm 30\%$	105(84)	2.30	1.88	2.00
CDRH8D38NP-330NC	330	33 $\mu\text{H} \pm 30\%$	157(125)	1.75	1.52	1.60
CDRH8D38NP-470NC	470	47 $\mu\text{H} \pm 30\%$	189(151)	1.52	1.28	1.42
CDRH8D38NP-680NC	680	68 $\mu\text{H} \pm 30\%$	290(232)	1.30	1.10	1.08
CDRH8D38NP-101NC	101	100 $\mu\text{H} \pm 30\%$	410(328)	1.05	0.88	0.88

※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.

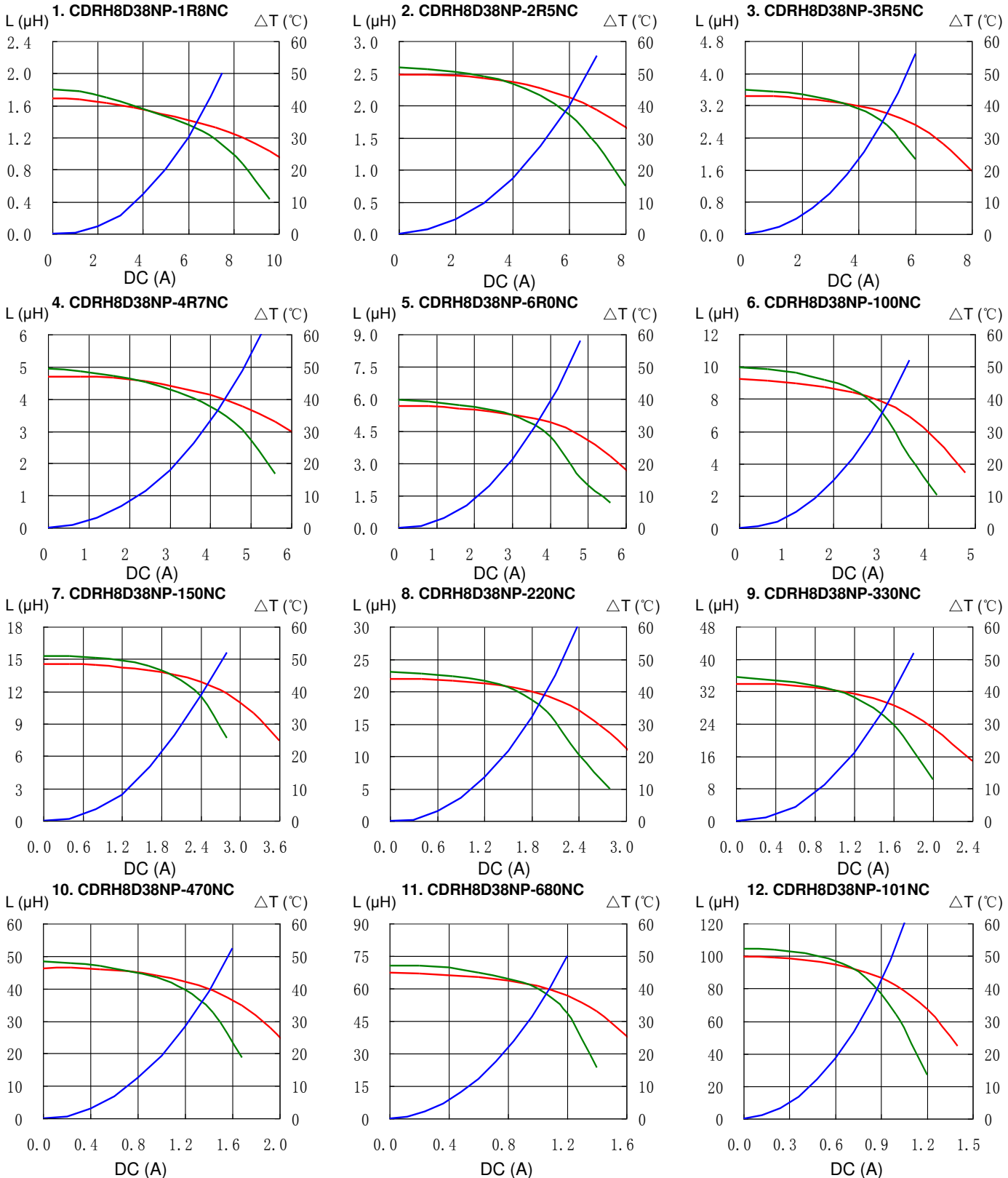
※3. Temperature rise current: The value of D.C. current when the temperature rise is  $\Delta t = 40^\circ\text{C}$  ( $T_a = 20^\circ\text{C}$ ).

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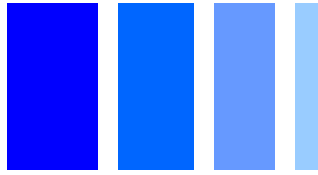


## Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) —  $\Delta T$

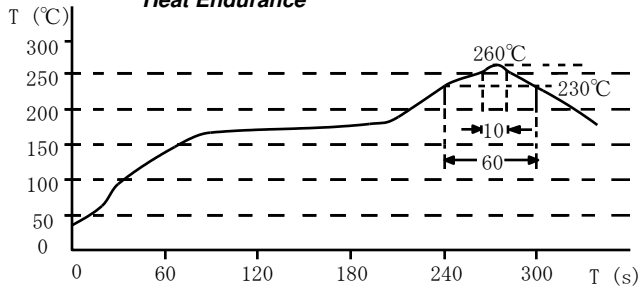


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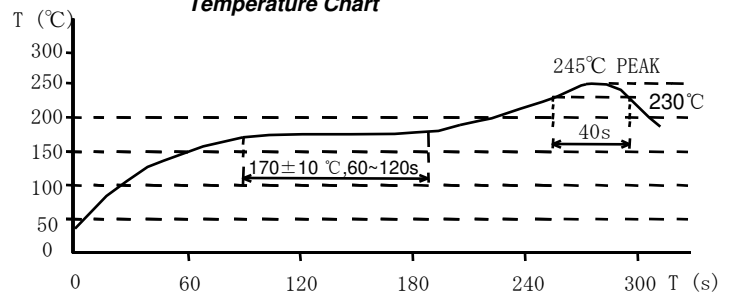


## Solder Reflow Condition

Heat Endurance



Temperature Chart



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