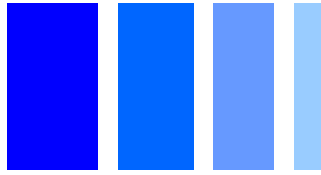




**THE DATASHEET OF  
CDRH105RNP-270NC**



# SMD Power Inductor CDRH105R



## Description

- Ferrite drum core construction.
- Magnetically shielded.
- L × W × H: 10.5 × 10.3 × 5.1 mm Max.
- Product weight: 2.5g (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.

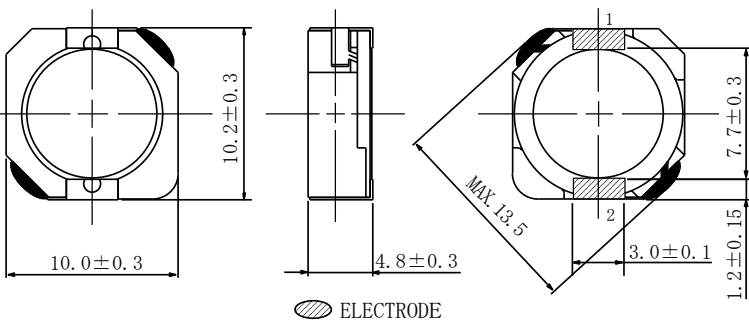
## Packaging

- Carrier tape and reel packaging.
- 12.9" diameter reel.
- 500pcs per reel.

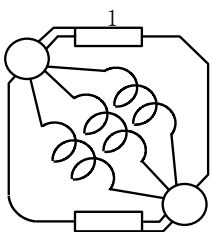
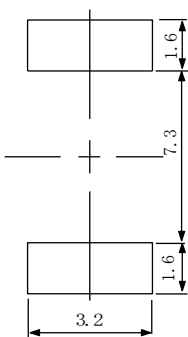
## Applications

- Ideally used in Notebook PC, LCD TV, DVD, Game machine, STB, Projector etc as DC-DC converter inductors.

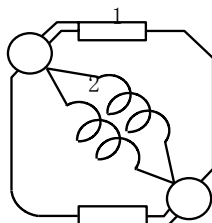
## Dimension - [mm]



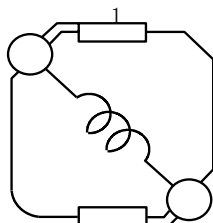
## Land pattern and Schematics - [mm]



2  
(0.8µH ~ 22µH)



2  
(27µH ~ 82µH)



2  
(100µH ~ 1.0mH)

# SMD Power Inductor

## CDRH105R



### Electrical Characteristics

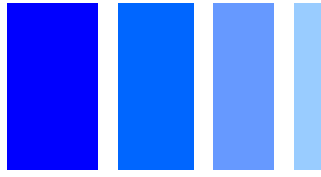
Part Name	Stamp	Inductance ( $\mu\text{H}$ ) [ within ] ※1	D.C.R. (m $\Omega$ ) Max. (Typ.) (at 20°C)	Saturation Current Max. (Typ.) (A) ※2	Temperature Rise Current (Typ.) (A) ※3
CDRH105RNP-0R8NC	0R8	0.8 $\pm$ 30%	4.30 (3.30)	13.5 (17.0)	(10.5)
CDRH105RNP-1R5NC	1R5	1.5 $\pm$ 30%	5.80 (4.50)	10.5 (13.0)	(9.80)
CDRH105RNP-2R2NC	2R2	2.2 $\pm$ 30%	7.20(5.60)	9.25 (12.0)	(8.80)
CDRH105RNP-3R3NC	3R3	3.3 $\pm$ 30%	10.4 (8.00)	7.80 (9.30)	(7.80)
CDRH105RNP-4R7NC	4R7	4.7 $\pm$ 30%	12.3 (9.50)	6.40 (7.25)	(7.10)
CDRH105RNP-6R8NC	6R8	6.8 $\pm$ 30%	18.0 (14.0)	5.40 (6.28)	(6.20)
CDRH105RNP-8R2NC	8R2	8.2 $\pm$ 30%	20.0 (16.0)	4.85 (5.90)	(5.80)
CDRH105RNP-100NC	100	10 $\pm$ 30%	26.0 (20.0)	4.45 (5.35)	(5.00)
CDRH105RNP-120NC	120	12 $\pm$ 30%	33.0 (25.0)	4.00 (4.50)	(4.40)
CDRH105RNP-150NC	150	15 $\pm$ 30%	41.0 (32.0)	3.60 (4.15)	(3.90)
CDRH105RNP-180NC	180	18 $\pm$ 30%	46.0 (35.0)	3.20 (3.85)	(3.70)
CDRH105RNP-220NC	220	22 $\pm$ 30%	61.0 (47.0)	2.95 (3.60)	(3.30)
CDRH105RNP-270NC	270	27 $\pm$ 30%	69.0 (53.0)	2.70 (3.25)	(3.20)
CDRH105RNP-330NC	330	33 $\pm$ 30%	84.0 (65.0)	2.40 (2.95)	(2.75)
CDRH105RNP-390NC	390	39 $\pm$ 30%	106 (82.0)	2.30 (2.73)	(2.65)
CDRH105RNP-470NC	470	47 $\pm$ 30%	130 (100)	2.00 (2.38)	(2.30)
CDRH105RNP-560NC	560	56 $\pm$ 30%	149 (115)	1.90 (2.33)	(2.15)
CDRH105RNP-680NC	680	68 $\pm$ 30%	201 (155)	1.65 (1.90)	(1.75)
CDRH105RNP-820NC	820	82 $\pm$ 30%	227 (175)	1.50 (1.75)	(1.68)
CDRH105RNP-101NC	101	100 $\pm$ 30%	253 (195)	1.35 (1.61)	(1.52)
CDRH105RNP-121NC	121	120 $\pm$ 30%	303 (233)	1.28 (1.53)	(1.43)
CDRH105RNP-151NC	151	150 $\pm$ 30%	370 (285)	1.12 (1.39)	(1.23)
CDRH105RNP-181NC	181	180 $\pm$ 30%	419 (322)	1.04 (1.24)	(1.17)
CDRH105RNP-221NC	221	220 $\pm$ 30%	500 (385)	0.94 (1.17)	(1.08)
CDRH105RNP-271NC	271	270 $\pm$ 30%	672 (512)	0.84 (0.97)	(0.92)
CDRH105RNP-331NC	331	330 $\pm$ 30%	812 (625)	0.75 (0.89)	(0.85)
CDRH105RNP-391NC	391	390 $\pm$ 30%	953 (733)	0.70 (0.81)	(0.80)
CDRH105RNP-471NC	471	470 $\pm$ 30%	1,289 (992)	0.60 (0.77)	(0.65)
CDRH105RNP-561NC	561	560 $\pm$ 30%	1,430 (1,100)	0.54 (0.71)	(0.62)
CDRH105RNP-681NC	681	680 $\pm$ 30%	1,599 (1,230)	0.52 (0.64)	(0.60)
CDRH105RNP-821NC	821	820 $\pm$ 30%	1,768 (1,360)	0.48 (0.59)	(0.57)
CDRH105RNP-102NC	102	1000 $\pm$ 30%	1,989 (1,530)	0.42 (0.56)	(0.52)

※1 Inductance measuring condition: at 100kHz.

※2 The saturation current: This indicates the value of DC current when the inductance decreases to 65% of its nominal.

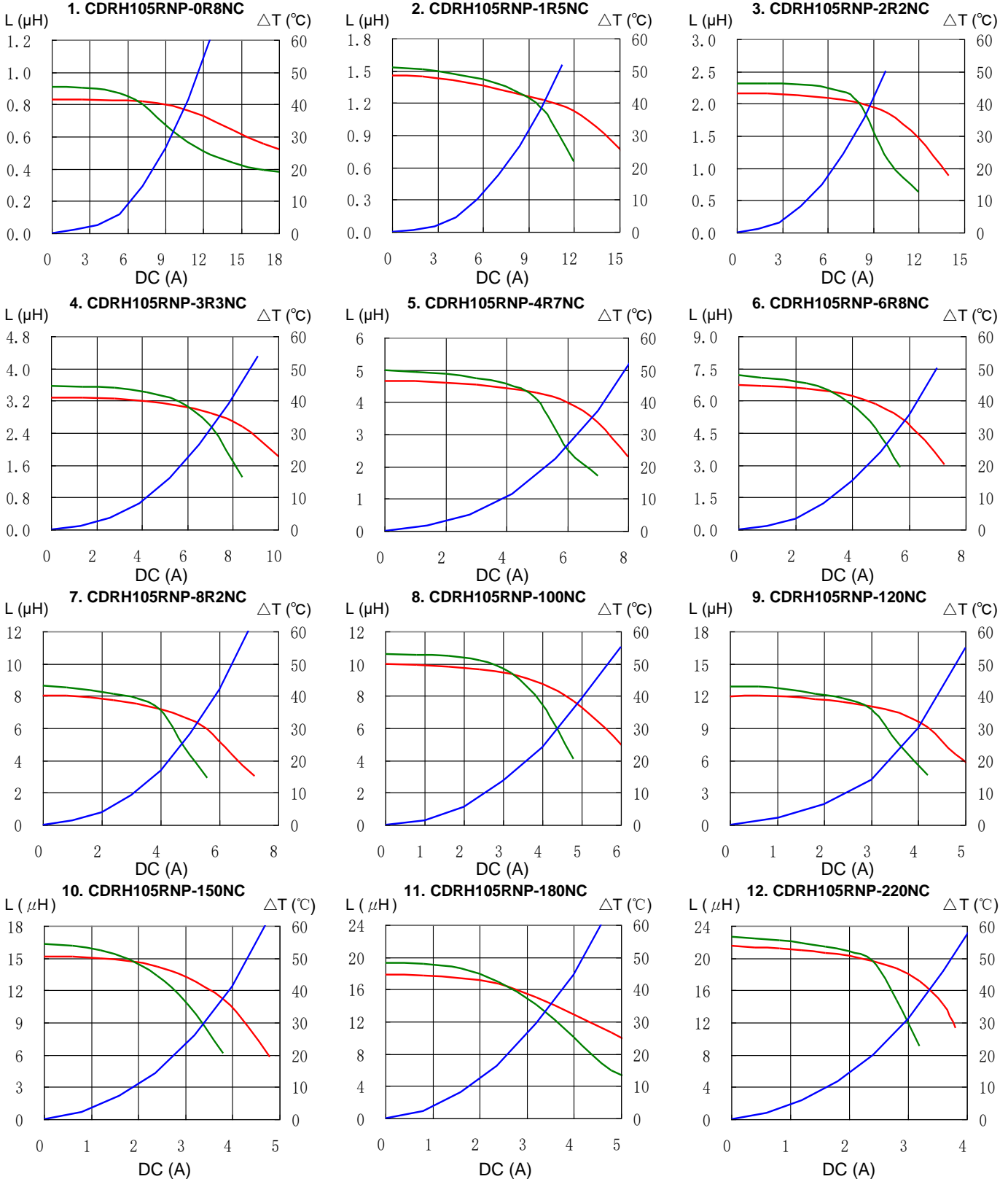
※3 The temperature rise: The value of DC current when the temperature rise is  $\Delta T=40^\circ\text{C}$  ( $T_a=20^\circ\text{C}$ ).

# SMD Power Inductor CDRH105R

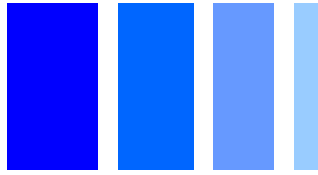


## Saturation Current & Temperature Rise Graph

— L (20°C)    — L (100°C)    —  $\Delta T$

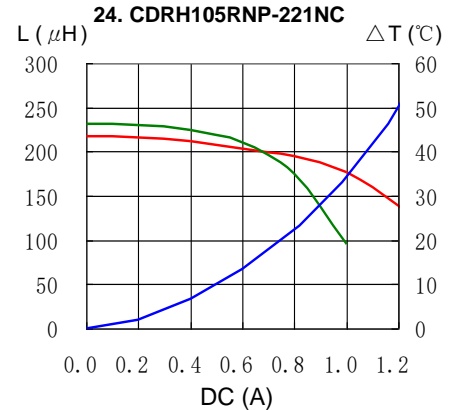
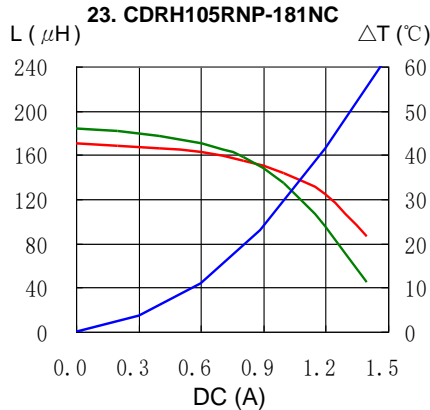
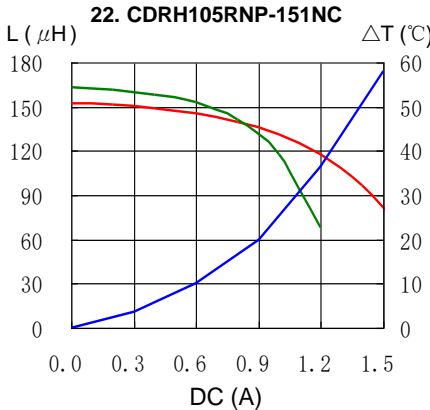
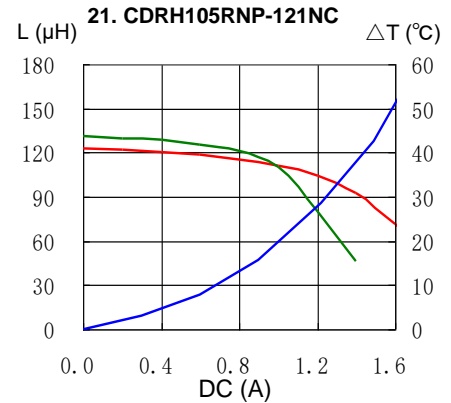
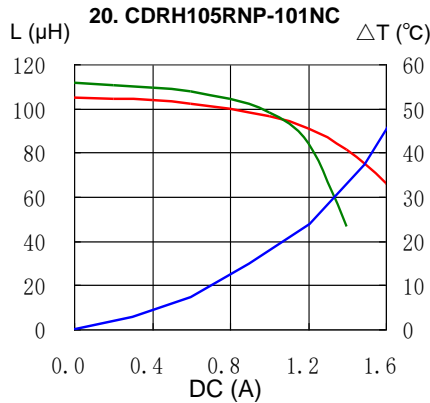
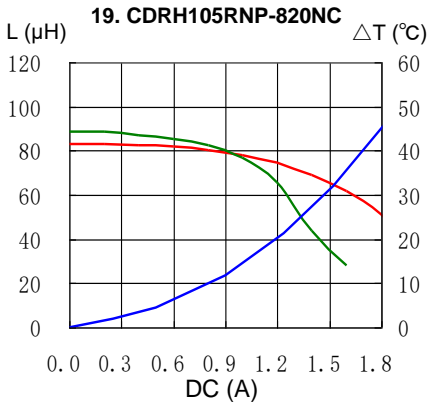
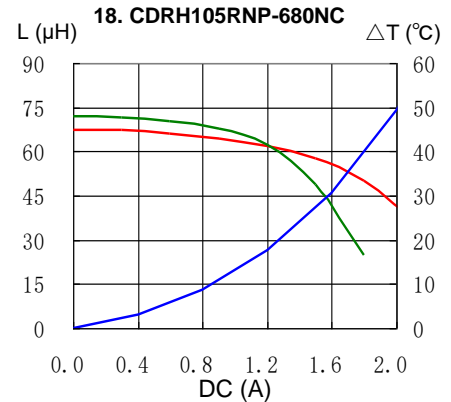
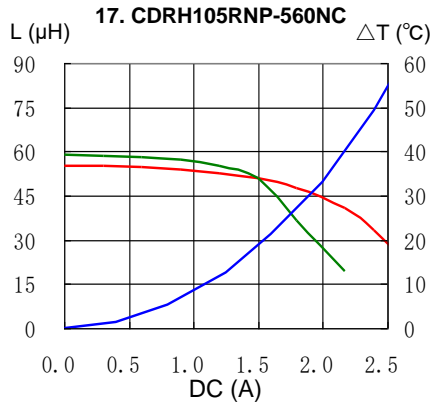
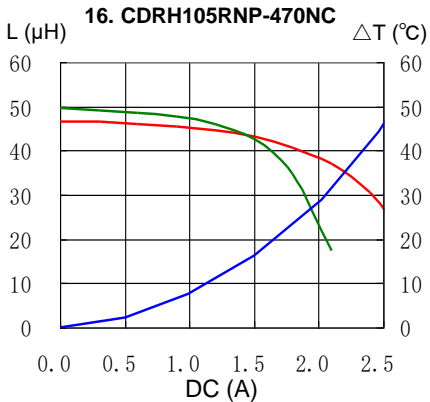
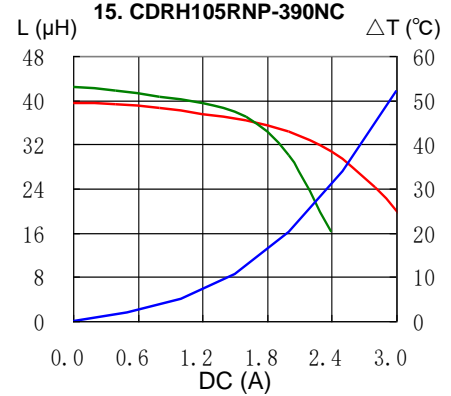
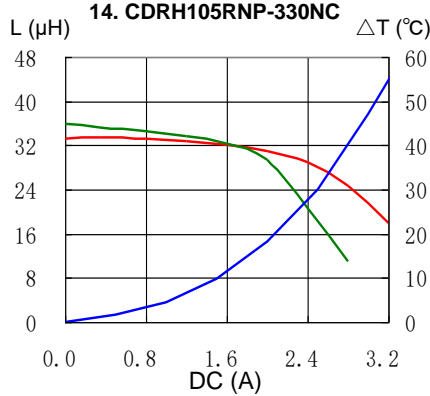
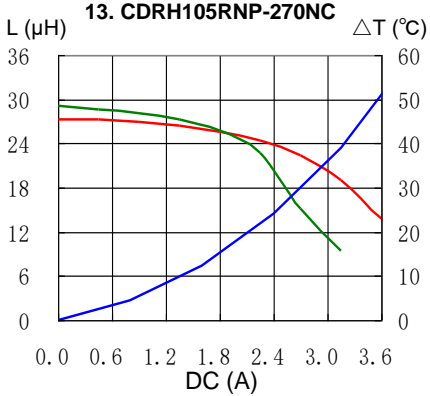


# SMD Power Inductor CDRH105R

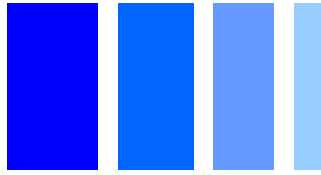


## Saturation Current & Temperature Rise Graph

— L (20°C)    — L (100°C)    —  $\Delta T$

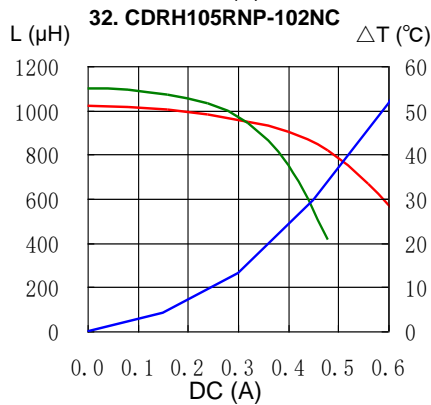
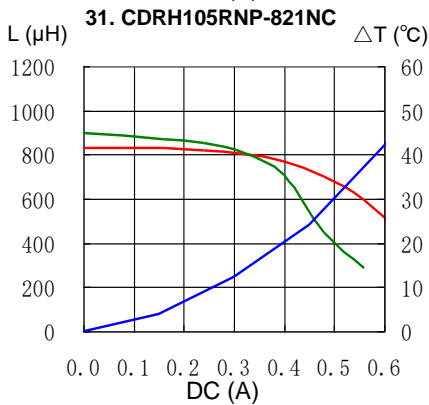
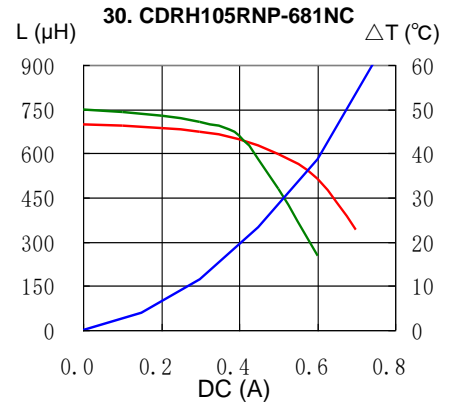
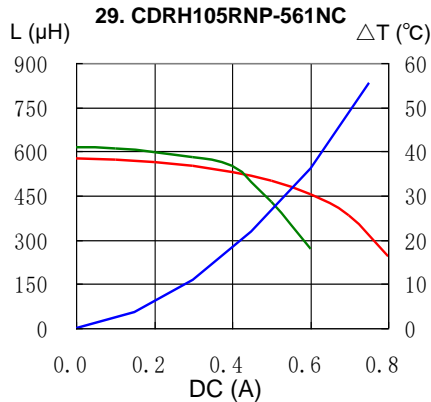
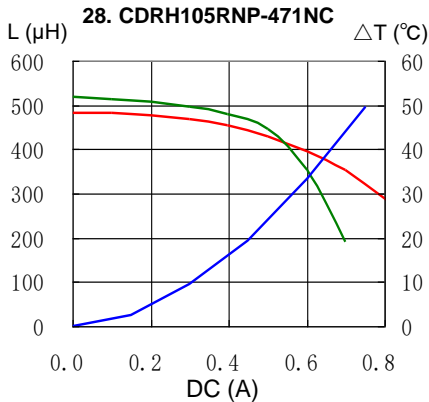
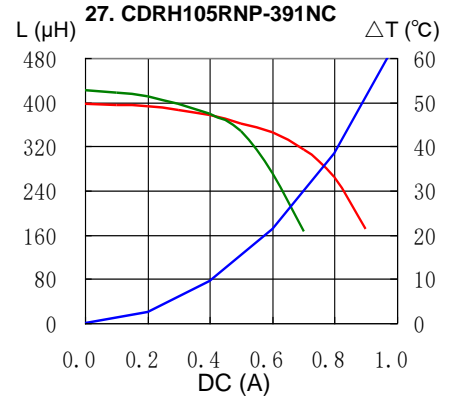
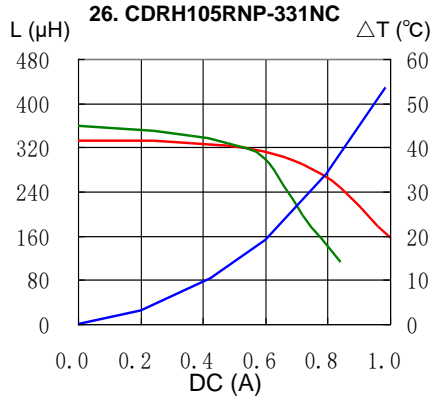
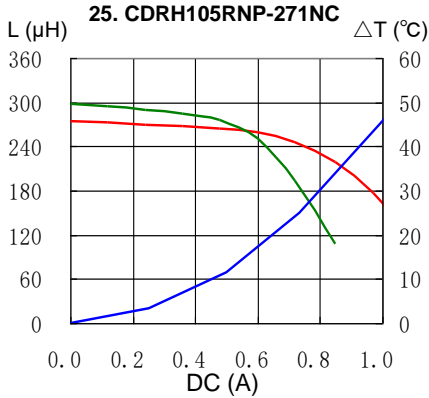


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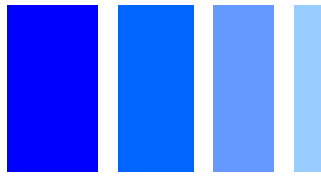


## Saturation Current & Temperature Rise Graph

— L (20°C)    — L (100°C)    —  $\Delta T$

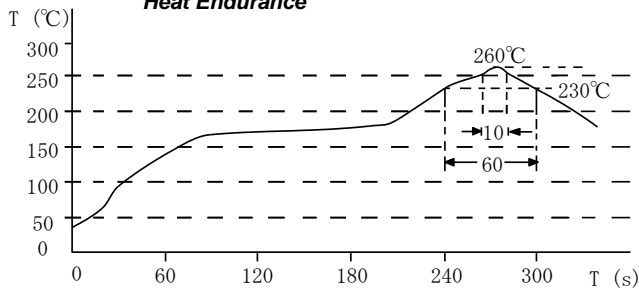


# SMD Power Inductor CDRH105R

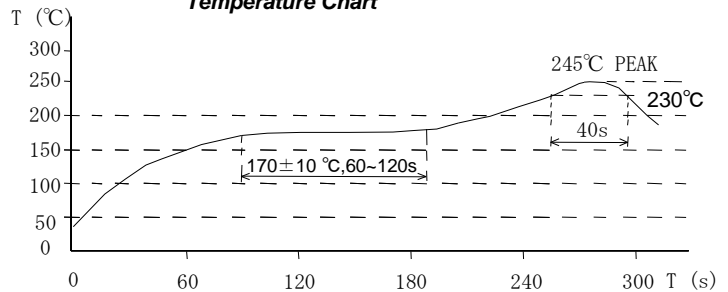


## Solder Reflow Condition

Heat Endurance



Temperature Chart



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

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