



**THE DATASHEET OF  
CDRH127NP-471MC**



# SMD Power Inductor CDRH127



## Description

- Ferrite drum core construction.
- Magnetically shielded.
- L × W × H: 12.3 × 12.3 × 8.0 mm Max.
- Product weight: 3.6g(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.

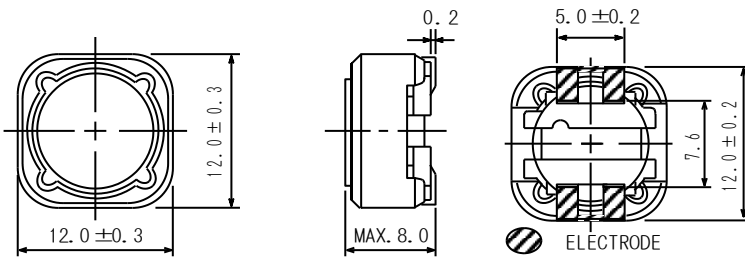
## Packaging

- Carrier tape and reel packaging
- 13" diameter reel
- 500pcs per reel

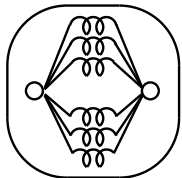
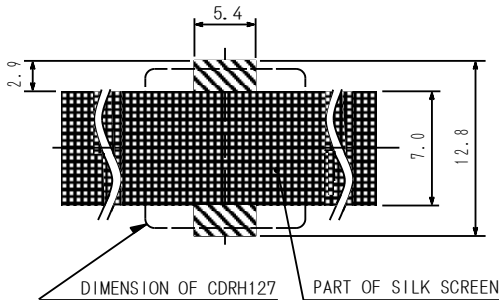
## Applications

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

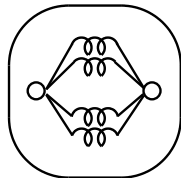
## Dimension - [mm]



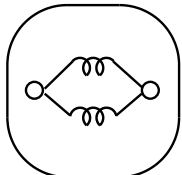
## Land pattern and Schematics - [mm]



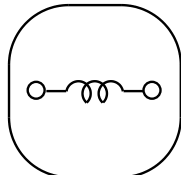
1.2  $\mu$ H



2.4  $\mu$ H ~ 56  $\mu$ H



68  $\mu$ H ~ 150  $\mu$ H



180  $\mu$ H ~ 1 mH



### Electrical Characteristics

PART NO.	STAMP	INDUCTANCE [WITHIN] ※1	D.C.R. ( $\Omega$ ) (at 20°C) MAX.(TYP.)	SATURATION CURRENT (A)※2 MAX.(TYP.)	TEMPERATURE RISE CURRENT (A)※3
CDRH127NP-1R2NC	1R2	+ 40 1.2 $\mu$ H - 20%	7.0m(5.2m)	19.2(24.0)	11.3
CDRH127NP-2R4NC	2R4	+ 40 2.4 $\mu$ H - 20%	11.5m(8.5m)	15.2(19.0)	8.9
CDRH127NP-3R5NC	3R5	+ 40 3.5 $\mu$ H - 20%	13.5m(10.0m)	12.4(15.5)	8.4
CDRH127NP-4R7NC	4R7	+ 40 4.7 $\mu$ H - 20%	15.8m(11.7m)	11.3(14.2)	7.8
CDRH127NP-6R1NC	6R1	+ 40 6.1 $\mu$ H - 20%	17.6m(13.0m)	9.4(11.8)	7.2
CDRH127NP-7R6NC	7R6	+ 40 7.6 $\mu$ H - 20%	20.0m(15.0m)	8.8(11.0)	6.5
CDRH127NP-100MC	100	10 $\mu$ H $\pm$ 20%	21.6m(16.0m)	7.6(9.5)	6.3
CDRH127NP-120MC	120	12 $\mu$ H $\pm$ 20%	24.3m(18.0m)	7.3(9.2)	5.8
CDRH127NP-150MC	150	15 $\mu$ H $\pm$ 20%	27.0m(20.0m)	6.2(7.8)	5.5
CDRH127NP-180MC	180	18 $\mu$ H $\pm$ 20%	39.2m(29.0m)	5.6(7.1)	4.9
CDRH127NP-220MC	220	22 $\mu$ H $\pm$ 20%	43.2m(32.0m)	5.1(6.4)	4.4
CDRH127NP-270MC	270	27 $\mu$ H $\pm$ 20%	45.9m(34.0m)	4.7(5.9)	3.9
CDRH127NP-330MC	330	33 $\mu$ H $\pm$ 20%	64.8m(48.0m)	4.2(5.3)	3.5
CDRH127NP-390MC	390	39 $\mu$ H $\pm$ 20%	72.9m(54.0m)	4.0(5.0)	3.4
CDRH127NP-470MC	470	47 $\mu$ H $\pm$ 20%	0.10 (76.0m)	3.6(4.5)	3.2
CDRH127NP-560MC	560	56 $\mu$ H $\pm$ 20%	0.11 (83.0m)	3.0(3.8)	2.80
CDRH127NP-680MC	680	68 $\mu$ H $\pm$ 20%	0.14 (0.10)	2.80(3.5)	2.50
CDRH127NP-820MC	820	82 $\mu$ H $\pm$ 20%	0.16 (0.12)	2.56(3.2)	2.35
CDRH127NP-101MC	101	100 $\mu$ H $\pm$ 20%	0.22 (0.17)	2.40(3.0)	2.05
CDRH127NP-121MC	121	120 $\mu$ H $\pm$ 20%	0.25 (0.18)	2.28(2.85)	1.95
CDRH127NP-151MC	151	150 $\mu$ H $\pm$ 20%	0.28 (0.21)	1.96(2.45)	1.80
CDRH127NP-181MC	181	180 $\mu$ H $\pm$ 20%	0.35 (0.26)	1.84(2.30)	1.68
CDRH127NP-221MC	221	220 $\mu$ H $\pm$ 20%	0.39 (0.29)	1.60(2.00)	1.55
CDRH127NP-271MC	271	270 $\mu$ H $\pm$ 20%	0.56 (0.42)	1.48(1.85)	1.40
CDRH127NP-331MC	331	330 $\mu$ H $\pm$ 20%	0.64 (0.47)	1.32(1.65)	1.30
CDRH127NP-391MC	391	390 $\mu$ H $\pm$ 20%	0.70 (0.52)	1.24(1.55)	1.20
CDRH127NP-471MC	471	470 $\mu$ H $\pm$ 20%	0.98 (0.73)	1.12(1.40)	1.08
CDRH127NP-561MC	561	560 $\mu$ H $\pm$ 20%	1.07 (0.79)	1.02(1.28)	0.98
CDRH127NP-681MC	681	680 $\mu$ H $\pm$ 20%	1.46 (1.12)	0.96(1.20)	0.82
CDRH127NP-821MC	821	820 $\mu$ H $\pm$ 20%	1.64 (1.26)	0.86(1.08)	0.75
CDRH127NP-102MC	102	1.0 mH $\pm$ 20%	1.82 (1.40)	0.77(0.96)	0.70

※1 Measured frequency  $L$  1.2 $\mu$ H ~ 7.6 $\mu$ H ; at 100 kHz  
10  $\mu$ H ~ 1 mH ; at 1 kHz

※2 Saturation current: This indicates the value of D.C. current when the inductance becomes 25% lower than its initial value. (Ta=20°C)

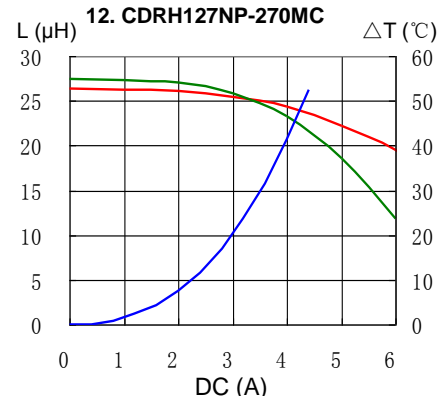
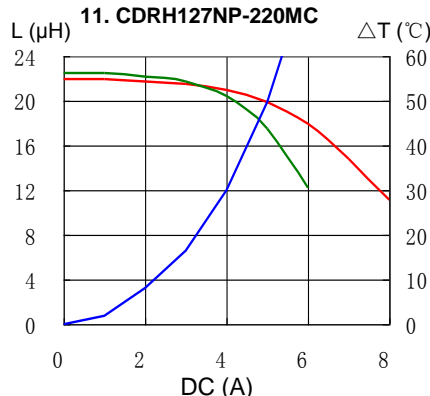
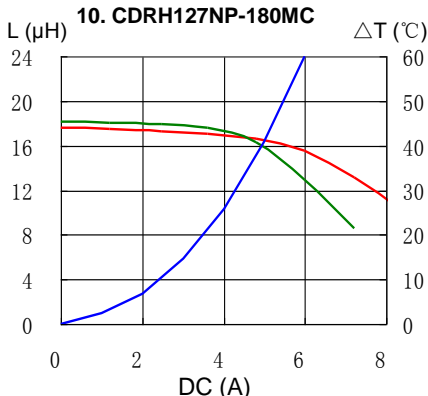
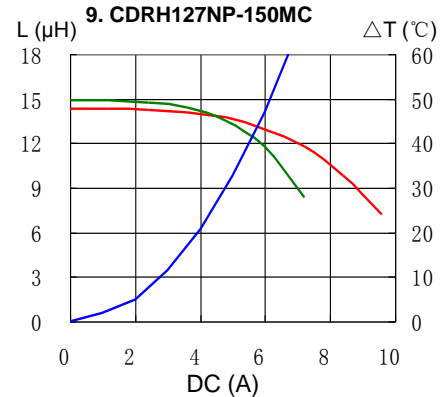
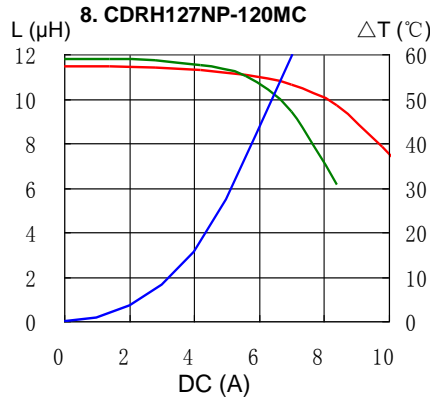
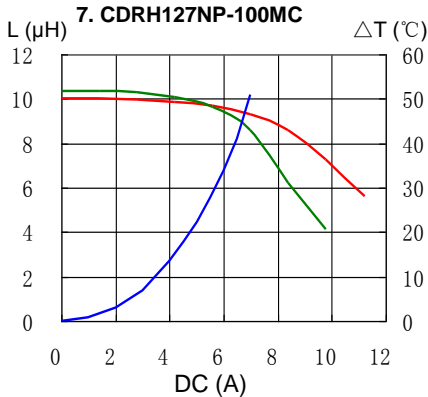
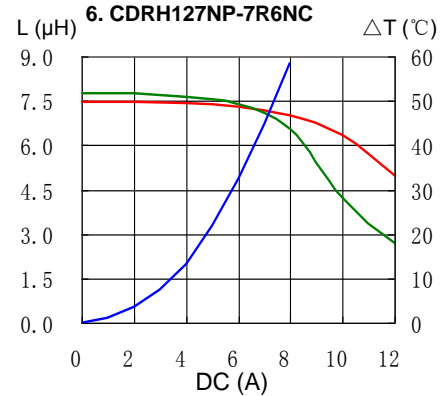
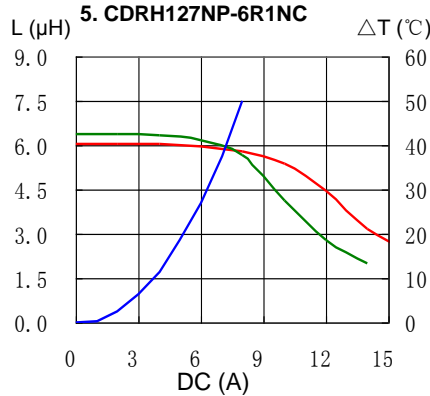
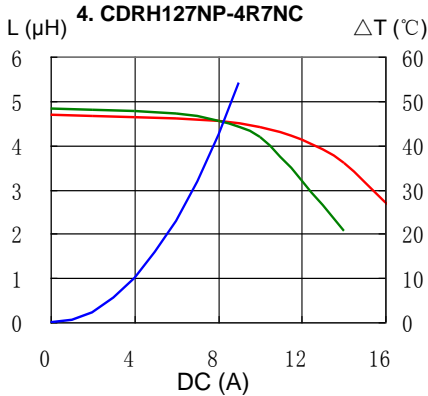
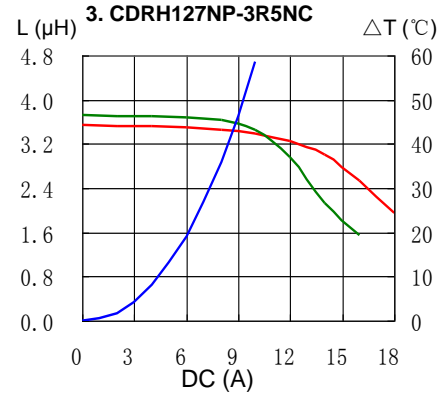
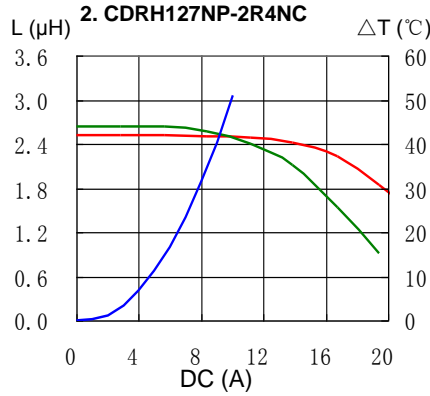
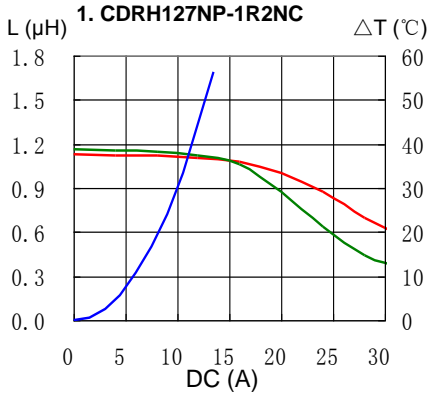
※3 Temperature rise current : The actual value of D.C. current when the temperature of coil becomes  $\Delta T=40^\circ\text{C}$  (Ta=20°C).

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## Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) —  $\Delta T$

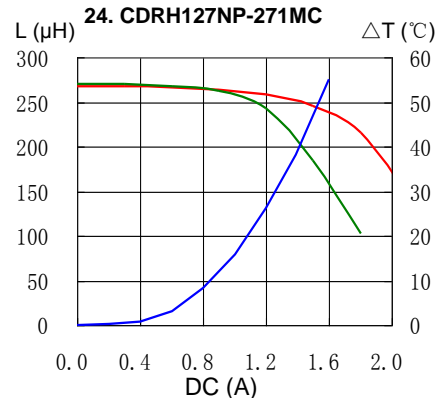
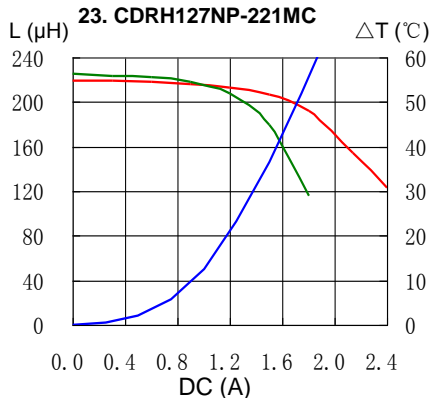
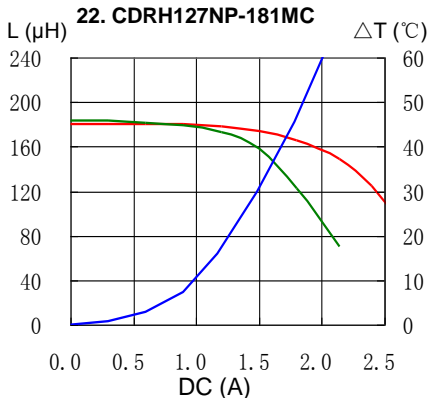
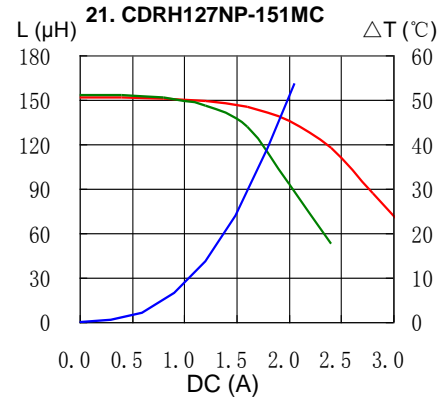
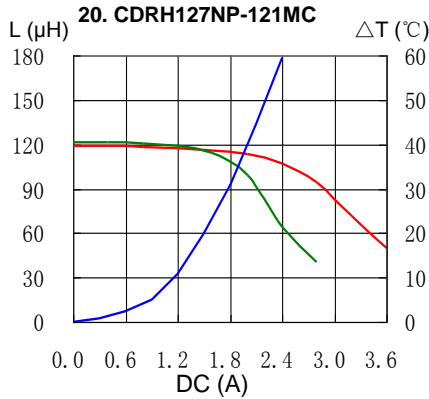
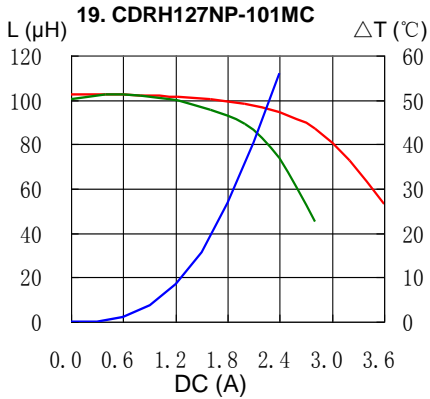
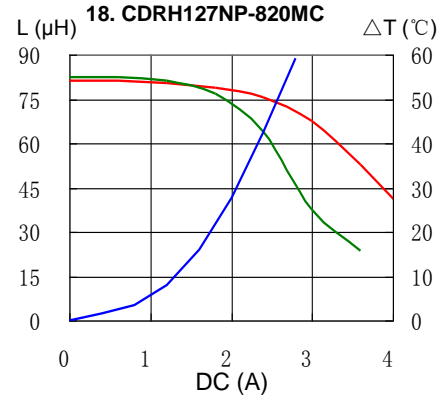
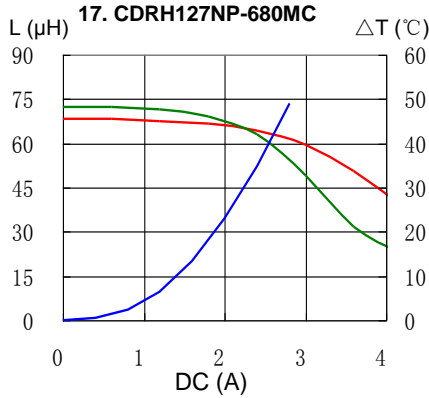
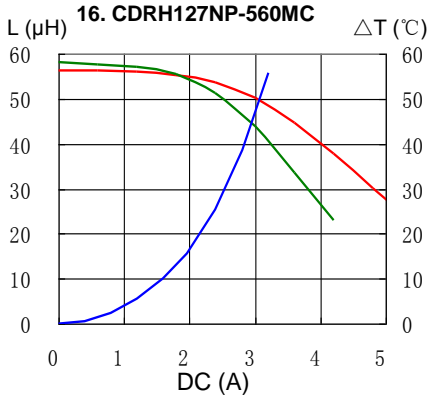
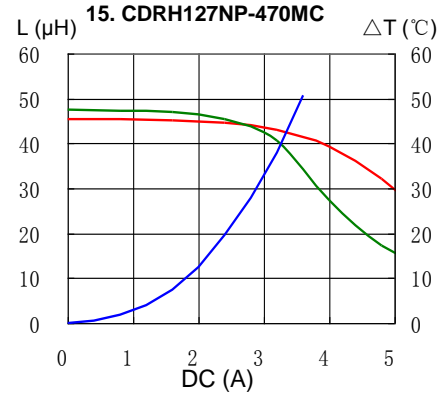
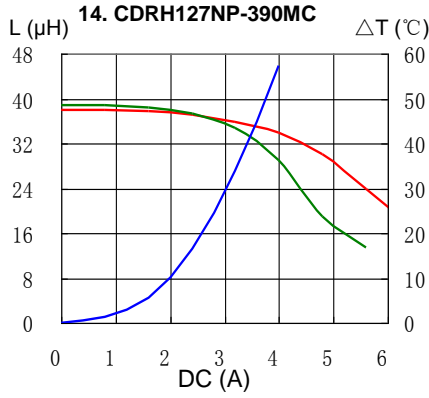
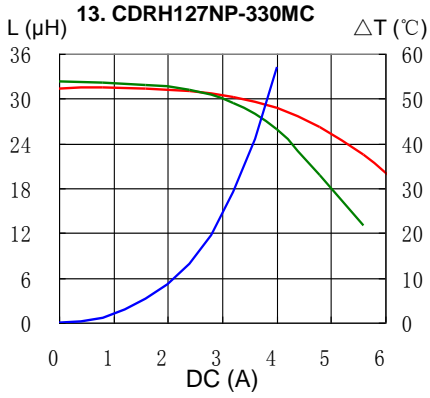


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## Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) —  $\Delta T$

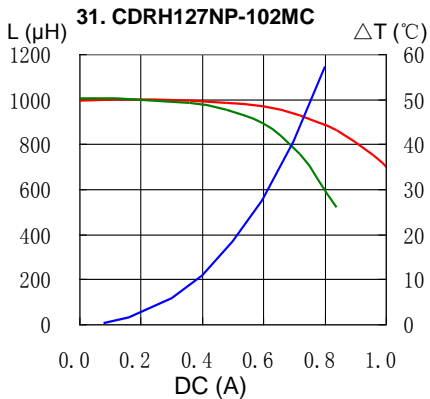
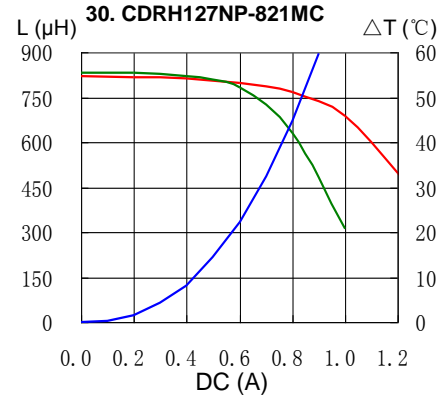
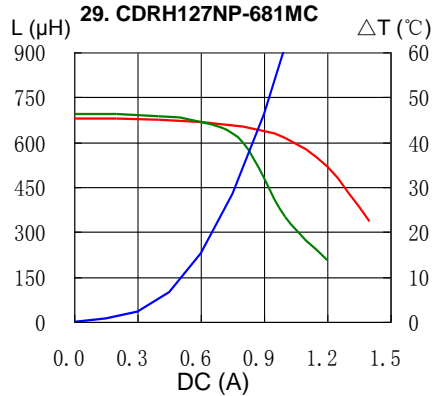
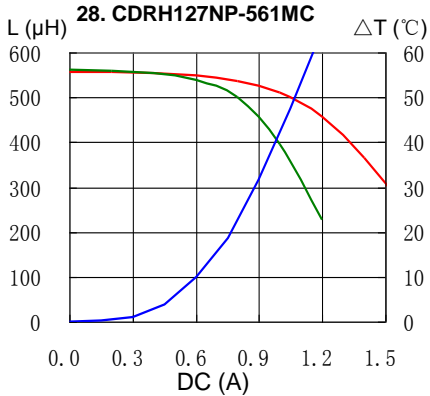
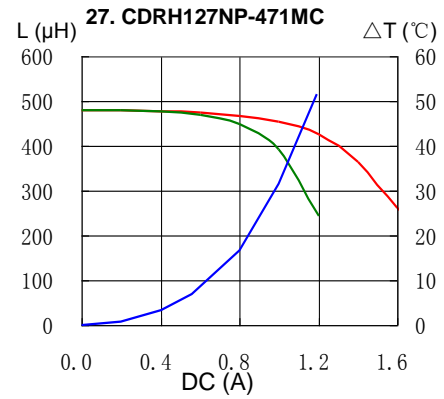
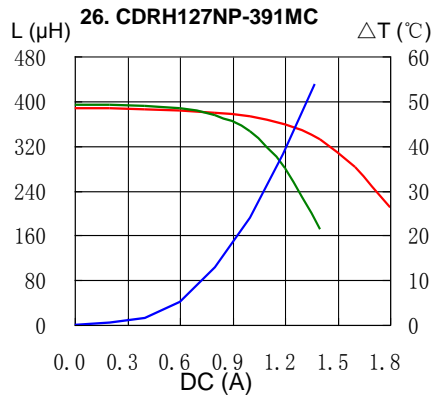
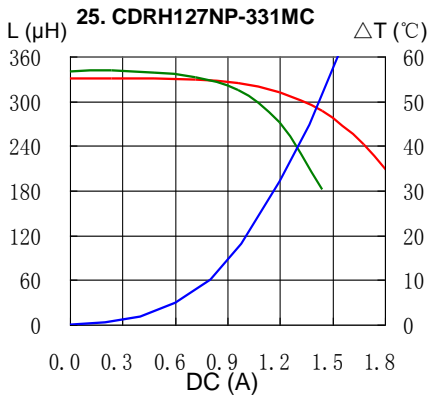


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## Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) —  $\Delta T$

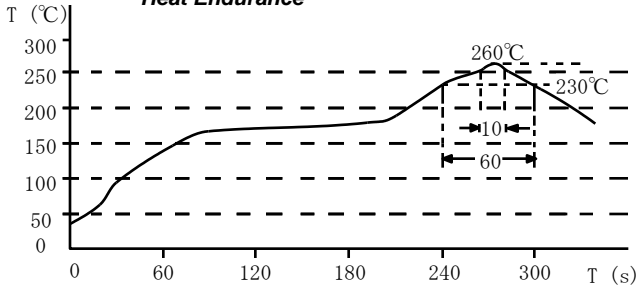


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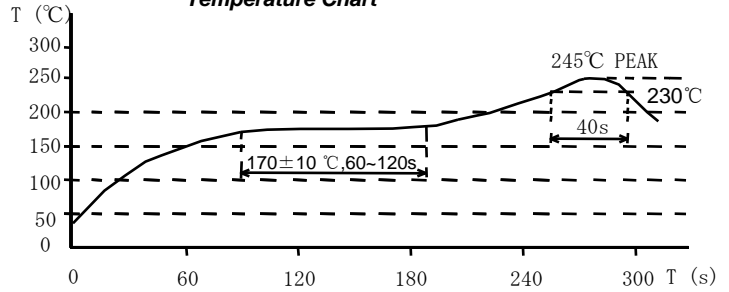


## Solder Reflow Condition

**Heat Endurance**



**Temperature Chart**



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