

SMD Power Inductor CD105B



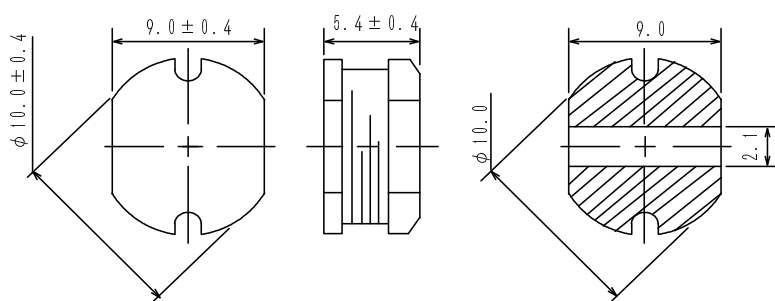
Halogen
Free



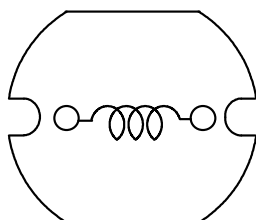
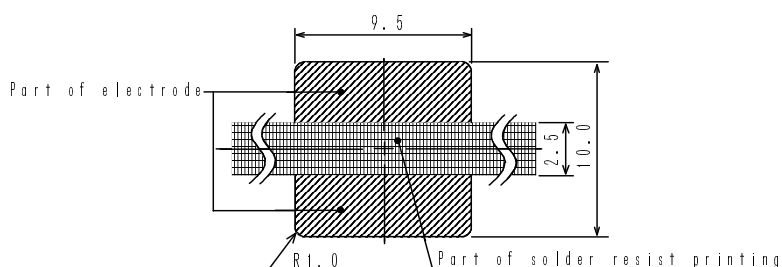
Description

- Ferrite drum core construction.
- Magnetically unshielded.
- L × W × H: 10.4 × 9.4 × 5.8mm Max.
- Product weight: 1.3 g(Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.
- Halogen Free available.

Dimension - [mm]



Land pattern and Schematics - [mm]



Environmental Data

- Operating temperature range: $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$ (including coil's self temperature rise)
- Storage temperature range: $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$
- Solder reflow temperature: 260°C peak.

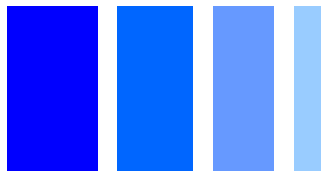
Packaging

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

Applications

- Ideally used in PDA, MP3, DSC/DVC, HDD, Portable DVD, etc as DC-DC converter inductors.

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Electrical Characteristics

Part Name	Inductance (μ H) [within] ※1	D.C.R. (Ω) [Max.] (at 20°C)	Rated Current (A) ※2	
			(at 20°C)	(at 105°C)
CD105BNP-100MC	10 $\pm$ 20%	0.06	2.60	1.92
CD105BNP-120MC	12 $\pm$ 20%	0.07	2.45	1.44
CD105BNP-150MC	15 $\pm$ 20%	0.08	2.27	1.36
CD105BNP-180MC	18 $\pm$ 20%	0.09	2.15	1.29
CD105BNP-220MC	22 $\pm$ 20%	0.10	1.95	1.24
CD105BNP-270MC	27 $\pm$ 20%	0.11	1.76	1.20
CD105BNP-330MC	33 $\pm$ 20%	0.12	1.50	1.04
CD105BNP-390MC	39 $\pm$ 20%	0.14	1.37	1.00
CD105BNP-470KC	47 $\pm$ 10%	0.17	1.28	0.88
CD105BNP-560KC	56 $\pm$ 10%	0.19	1.17	0.80
CD105BNP-680KC	68 $\pm$ 10%	0.22	1.11	0.71
CD105BNP-820KC	82 $\pm$ 10%	0.25	1.00	0.66
CD105BNP-101KC	100 $\pm$ 10%	0.35	0.97	0.63
CD105BNP-121KC	120 $\pm$ 10%	0.40	0.89	0.53
CD105BNP-151KC	150 $\pm$ 10%	0.47	0.78	0.47
CD105BNP-181KC	180 $\pm$ 10%	0.63	0.72	0.43
CD105BNP-221KC	220 $\pm$ 10%	0.73	0.66	0.40
CD105BNP-271KC	270 $\pm$ 10%	0.97	0.57	0.35
CD105BNP-331KC	330 $\pm$ 10%	1.15	0.52	0.33
CD105BNP-391KC	390 $\pm$ 10%	1.30	0.48	0.32
CD105BNP-471KC	470 $\pm$ 10%	1.48	0.42	0.30
CD105BNP-561KC	560 $\pm$ 10%	1.90	0.33	0.29
CD105BNP-681KC	680 $\pm$ 10%	2.25	0.28	0.24
CD105BNP-821KC	820 $\pm$ 10%	2.55	0.24	0.22

※1: Inductance measuring frequency: 10 μ H $\sim$ 82 μ H ; at 2.52 MHz.
100 μ H $\sim$ 820 μ H ; at 1 kHz.

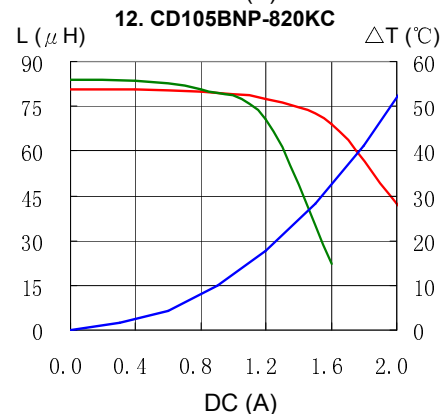
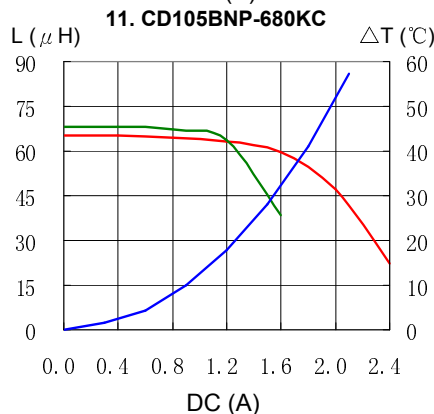
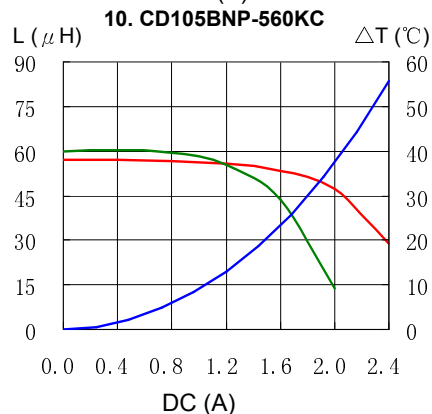
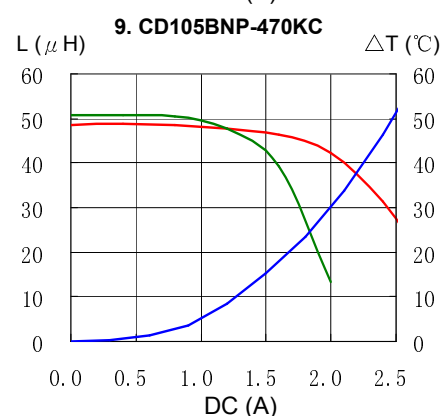
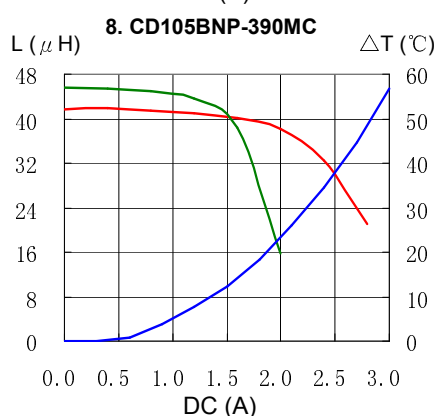
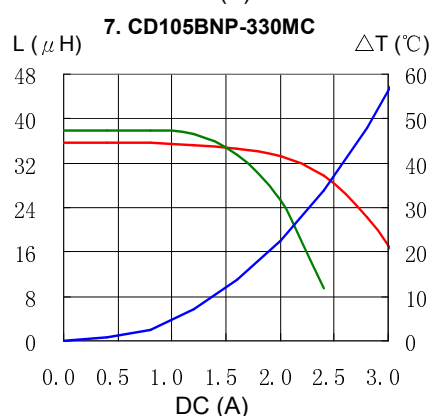
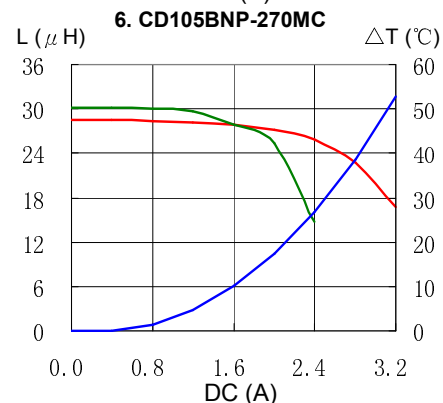
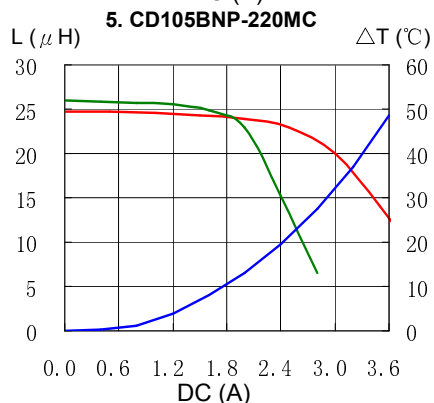
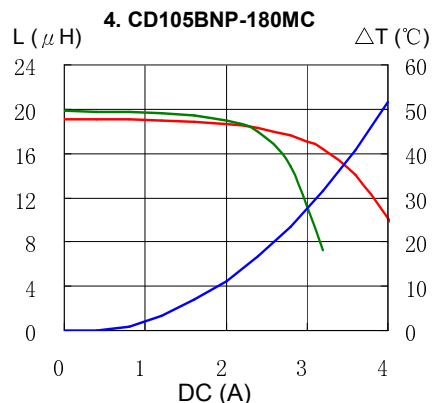
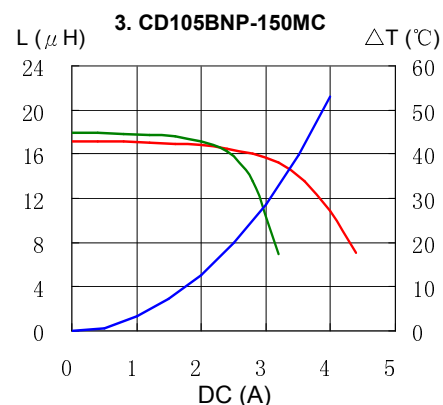
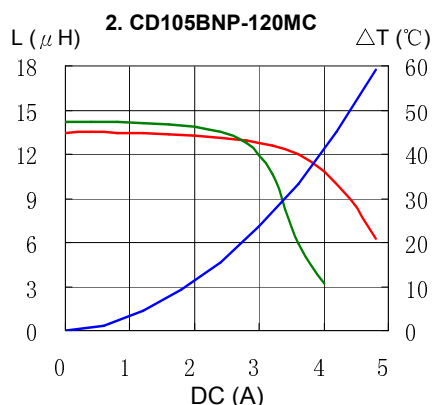
※2: Rated current: The DC current at which the inductance decreases to 90 % of it's initial value or when $\Delta t = 40^\circ\text{C}$, whichever is lower ($T_a = 20^\circ\text{C}$).



1. CD105BNP-100MC

Graph 1 shows the relationship between Inductance L (μH) and DC current (A) for the CD105BNP-100MC component. The left y-axis represents L (μH) from 0 to 12. The right y-axis represents ΔT ($^{\circ}\text{C}$) from 0 to 60. The x-axis represents DC (A) from 0 to 5. The green curve represents L (μH) and the red curve represents L (μH). The blue curve represents ΔT ($^{\circ}\text{C}$).

DC (A)	L (μH) (Green)	L (μH) (Red)	ΔT ($^{\circ}\text{C}$) (Blue)
0	11.2	10.5	0
1	11.1	10.4	5
2	11.0	10.3	12
3	10.5	10.0	22
4	6.5	9.0	38
5	2.5	7.0	50

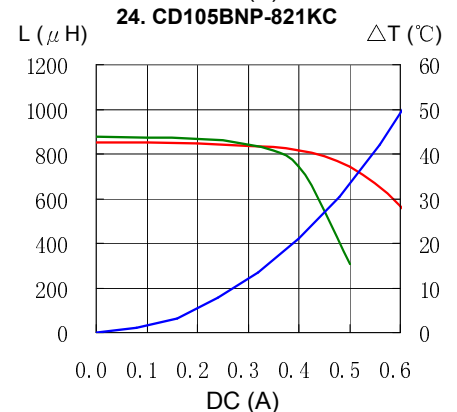
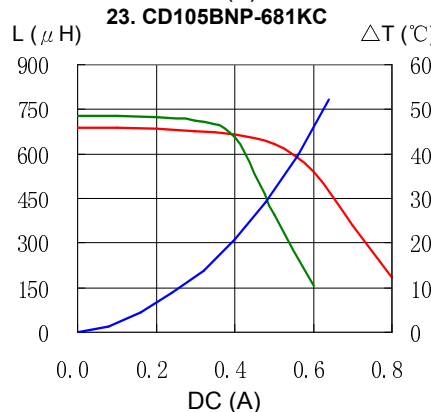
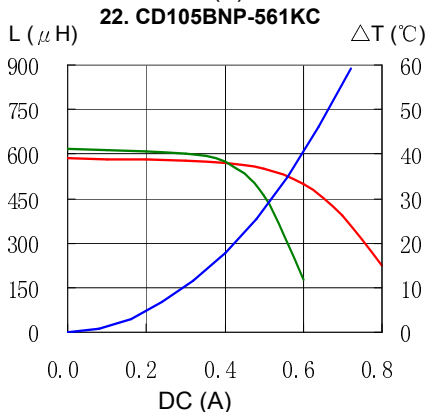
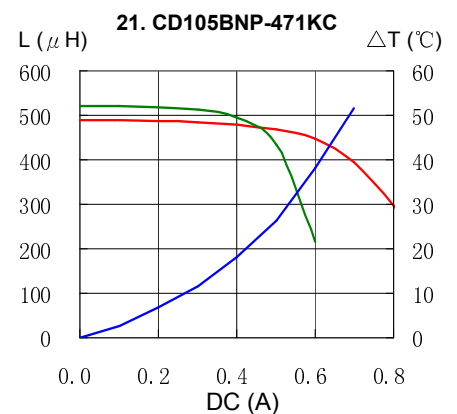
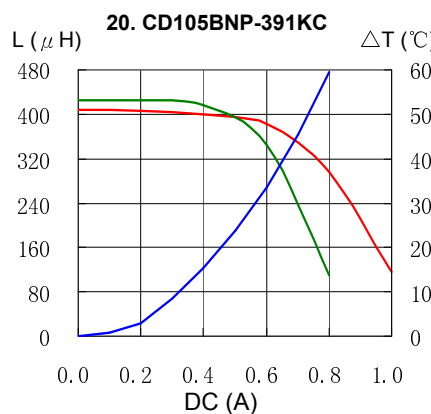
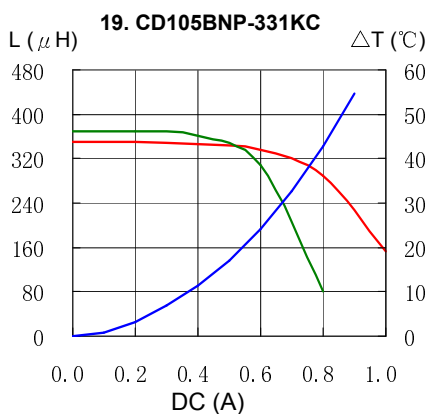
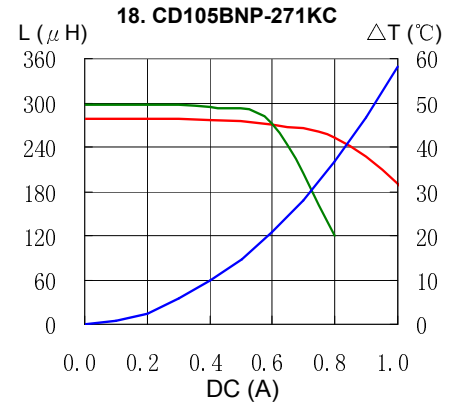
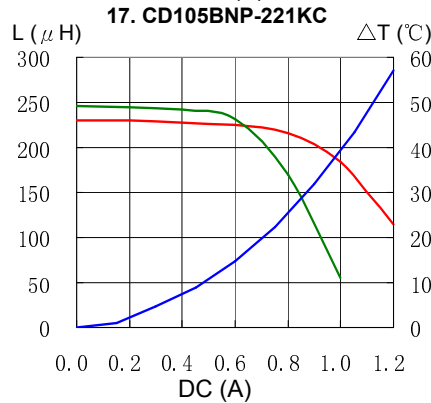
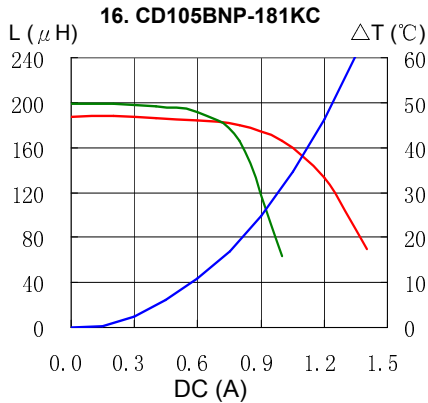
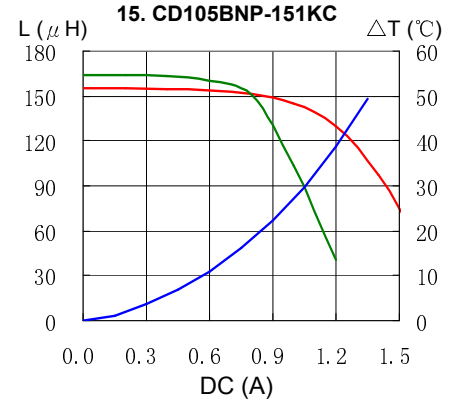
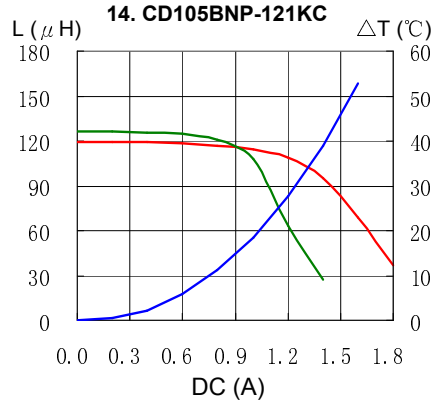
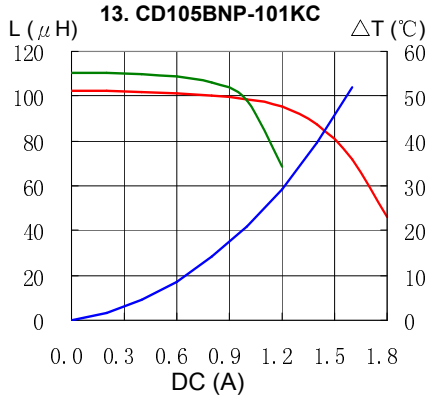


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Saturation Current & Temperature Rise Graph

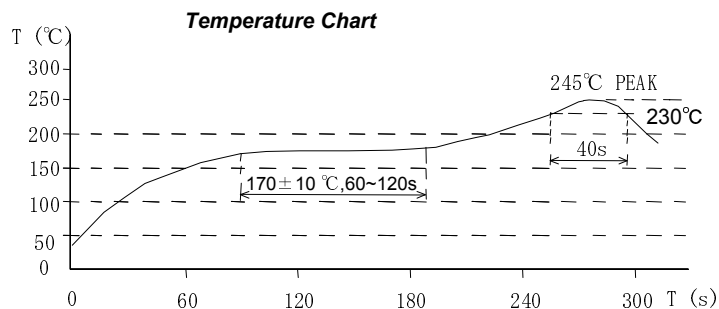
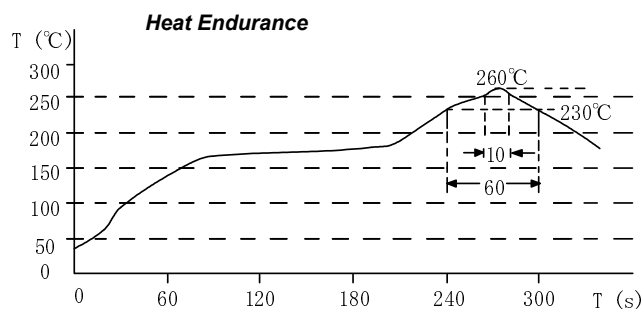
— L (20°C) — L (105°C) — ΔT



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Solder Reflow Condition



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

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