

SMD Power Inductor CDEP1810



Description

- Ferrite core construction.
- Magnetically shielded.
- L × W × H: 22.4 × 19.2 × 11.0 mm Max.
- Product weight: 14.5 g(Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.

Environmental Data

- Operating temperature range: -40°C ~ +105°C (including coil's self temperature rise)
- Storage temperature range: -40°C ~ +85°C
- Solder reflow temperature: 260 °C peak.

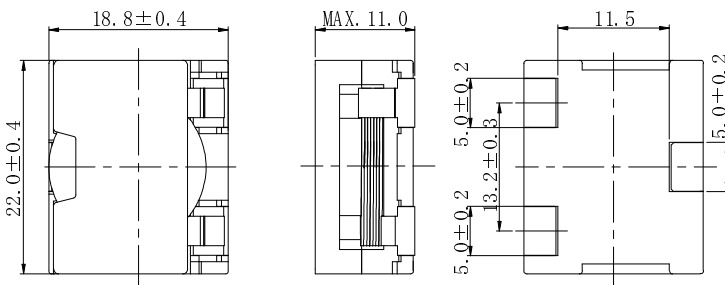
Packaging

- Carrier tape and reel packaging

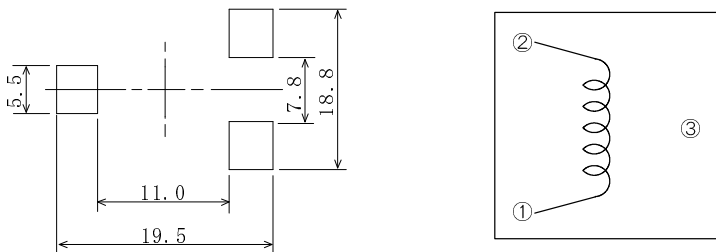
Applications

- Ideally used in PC , game machine and other large current power supply.

Dimension - [mm]



Land pattern and Schematics - [mm]



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Electrical Characteristics - 1

Part Name	Stamp	Inductance (μ H) [within] ※1	D.C.R. (m Ω) Max. (Typ.) (20°C)	Saturation Current (A) ※2		Temperature Rise Current (A) ※3
				at 20°C	at 105°C	
CDEP1810NP-3R0MC-180	3R0MH	3.0 \pm 20%	2.00(1.67)	25.5	20	22.5
CDEP1810NP-4R7MC-180	4R7MH	4.7 \pm 20%	2.42(2.02)	22.4	18.4	19.5
CDEP1810NP-6R4MC-180	6R4MH	6.4 \pm 20%	3.29(2.74)	19.2	15.2	18
CDEP1810NP-8R8MC-180	8R8MH	8.8 \pm 20%	4.33(3.61)	14.8	12	16.5
CDEP1810NP-120MC-180	120MH	12 \pm 20%	5.60(4.67)	12.8	10.4	16
CDEP1810NP-150MC-180	150MH	15 \pm 20%	7.92(6.60)	11.6	9	12.5
CDEP1810NP-180MC-180	180MH	18 \pm 20%	8.94(7.45)	10.4	8.2	12
CDEP1810NP-220MC-180	220MH	22 \pm 20%	11.3(9.35)	10	8.4	10.2

Electrical Characteristics - 2

Part Name	Stamp	Inductance (μ H) [within] ※1	D.C.R. (m Ω) Max. (Typ.) (20°C)	Saturation Current (A) ※2		Temperature Rise Current (A) ※3
				at 20°C	at 105°C	
CDEP1810NP-3R9MC-245	3R9MS	3.9 \pm 20%	2.00(1.67)	18.8	15.2	22.5
CDEP1810NP-6R2MC-245	6R2MS	6.2 \pm 20%	2.42(2.02)	14.7	12	19.5
CDEP1810NP-8R8MC-245	8R8MS	8.8 \pm 20%	3.29(2.74)	12	10	18
CDEP1810NP-120MC-245	120MS	12 \pm 20%	4.33(3.61)	10.5	8.5	16.5
CDEP1810NP-150MC-245	150MS	15 \pm 20%	5.60(4.67)	9.2	7.2	16
CDEP1810NP-200MC-245	200MS	20 \pm 20%	7.92(6.60)	8.4	6.8	12.5
CDEP1810NP-240MC-245	240MS	24 \pm 20%	8.94(7.45)	7.4	6	12
CDEP1810NP-300MC-245	300MS	30 \pm 20%	11.22(9.35)	6.8	5.5	10.2

Electrical Characteristics - 3

Part No.	Stamp	Inductance (μ H) [Within] ※1	D.C.R. (m Ω) [Max.] (Typ.) (at 20°C)	Saturation current (A) ※2		Temperature rise current (A) ※3
				at 20°C	at 105°C	
CDEP1810NP-5R6MC-333	5R6ML	5.6 \pm 20%	2.00(1.67)	12.0	11.0	22.5
CDEP1810NP-8R2MC-333	8R2ML	8.2 \pm 20%	2.42(2.02)	10.8	9.3	19.5
CDEP1810NP-120MC-333	120ML	12.0 \pm 20%	3.29(2.74)	9.0	7.8	18.0
CDEP1810NP-150MC-333	150ML	15.0 \pm 20%	4.33(3.61)	8.0	6.8	16.5
CDEP1810NP-220MC-333	220ML	22.0 \pm 20%	5.60(4.67)	6.8	5.6	16.0
CDEP1810NP-270MC-333	270ML	27.0 \pm 20%	7.92(6.60)	6.7	5.3	12.5
CDEP1810NP-330MC-333	330ML	33.0 \pm 20%	8.94(7.45)	5.5	4.5	12.0
CDEP1810NP-390MC-333	390ML	39.0 \pm 20%	11.3(9.35)	4.8	4.0	10.2

※1. Inductance measuring condition: at 100kHz.

※2. Saturation current: The value of D.C. current when the inductance decreases to 75% of it's nominal value.

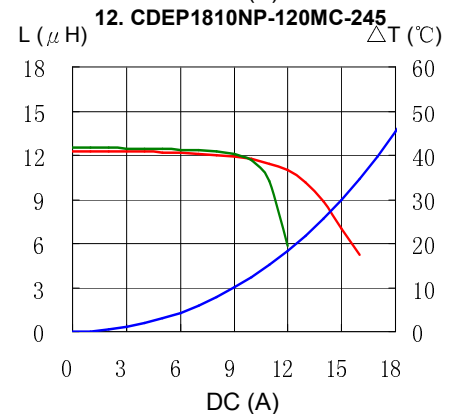
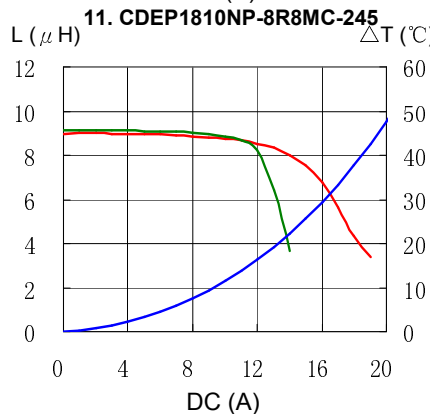
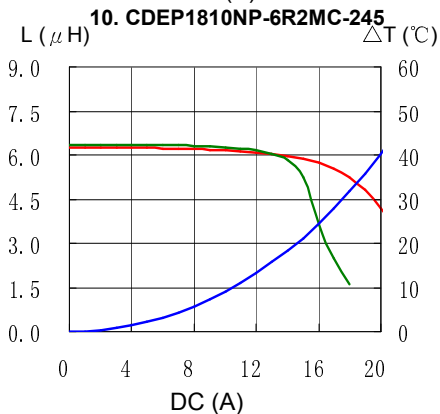
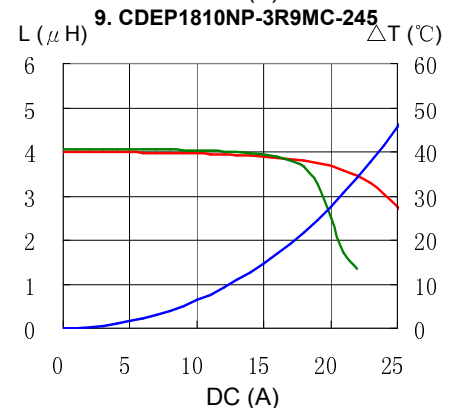
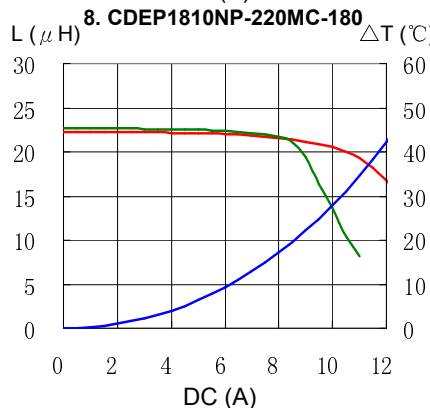
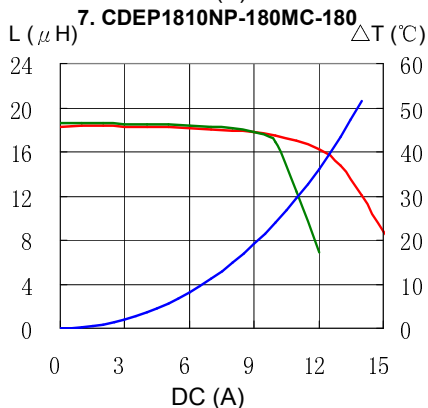
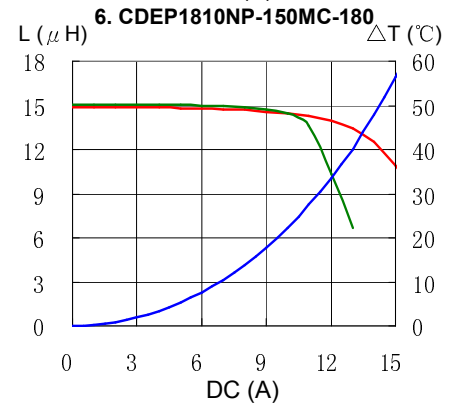
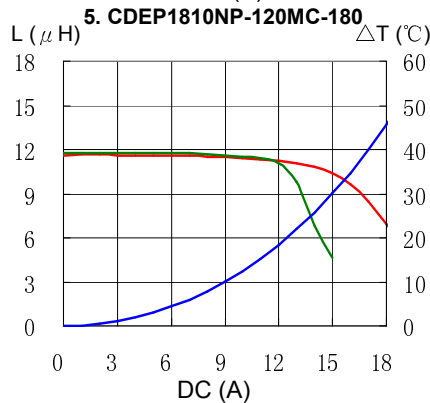
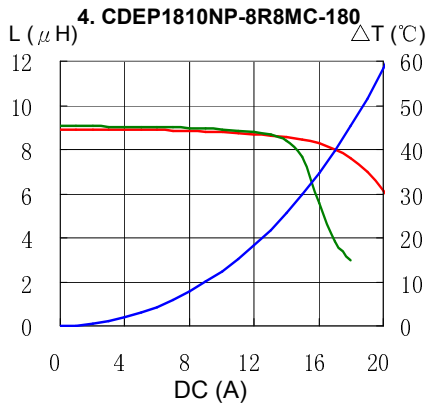
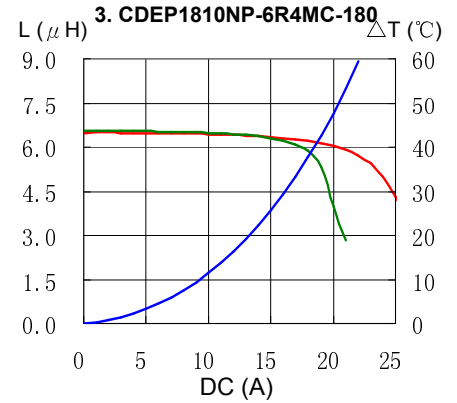
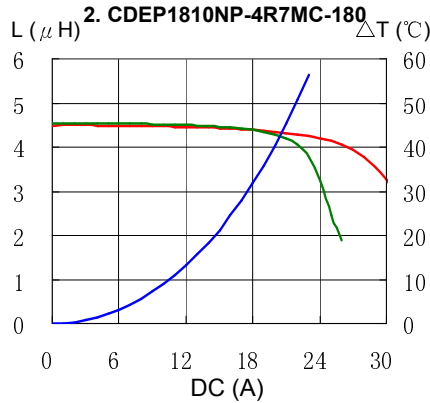
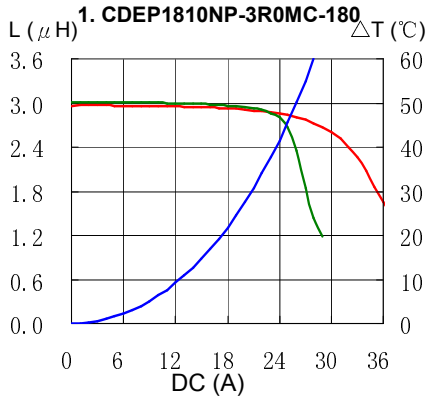
※3. Temperature rise current: The value of D.C. current when the temperature rise is $\Delta t=40^{\circ}\text{C}$ ($T_a=20^{\circ}\text{C}$).

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Saturation Current & Temperature Rise Graph

— L (20°C) — L (105°C) — ΔT

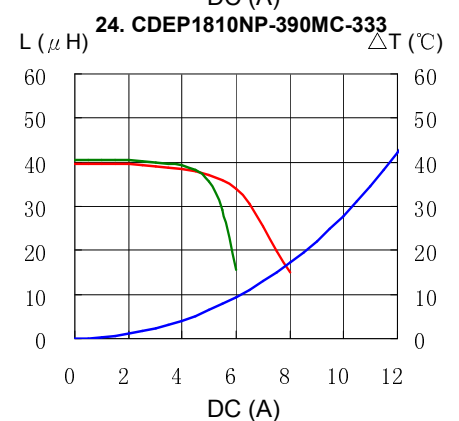
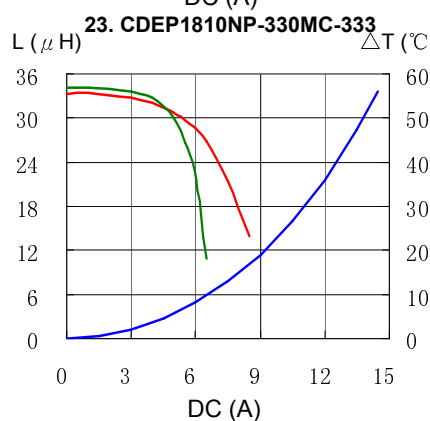
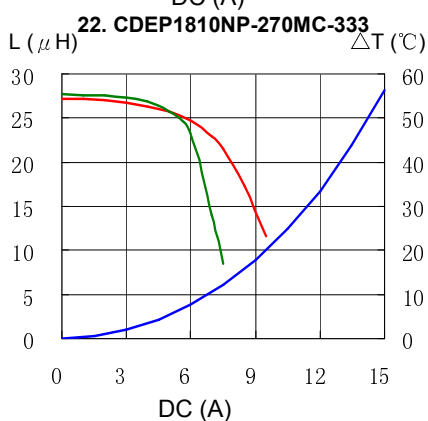
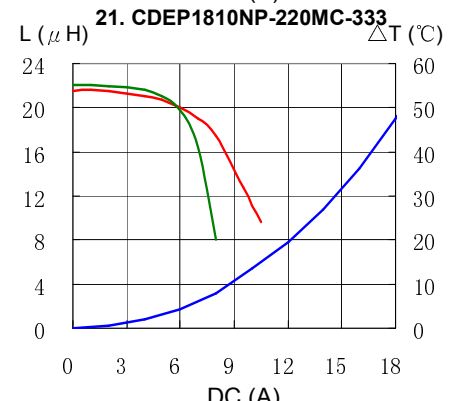
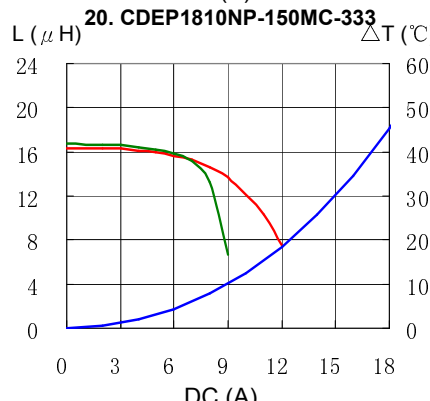
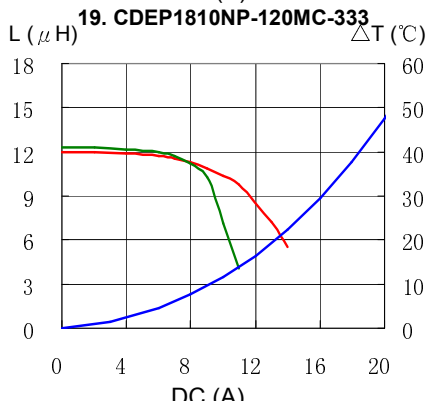
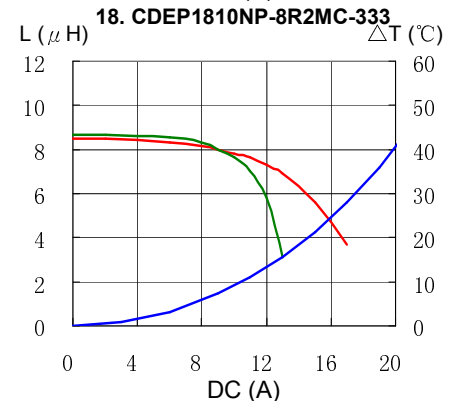
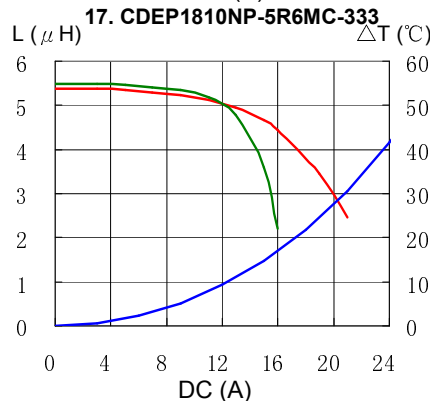
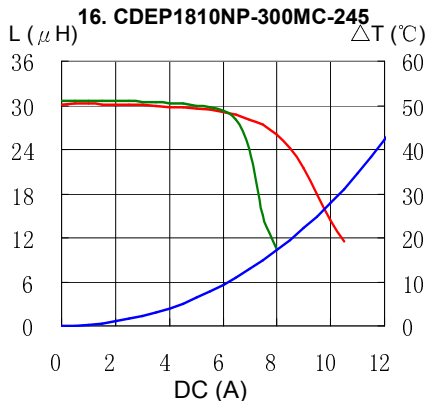
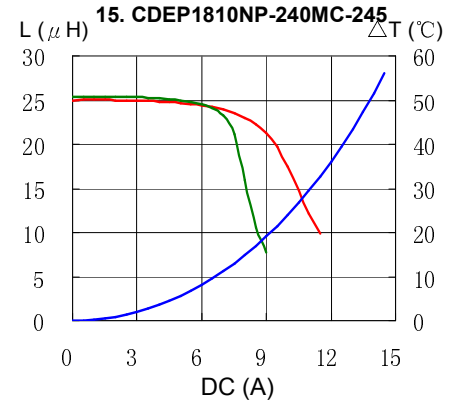
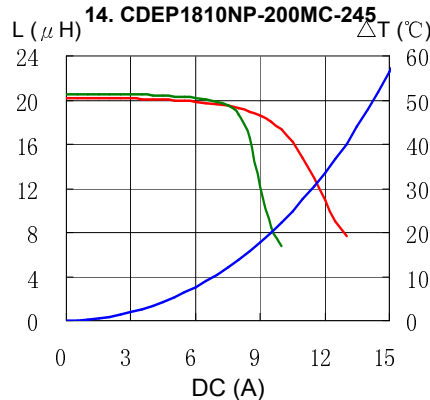
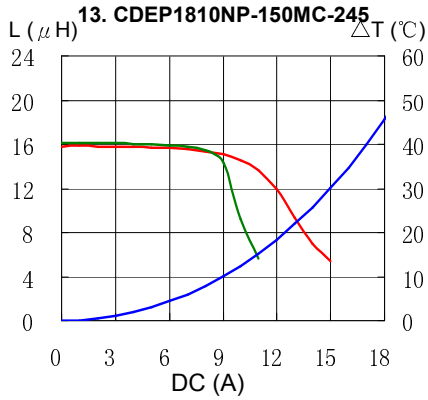


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Saturation Current & Temperature Rise Graph

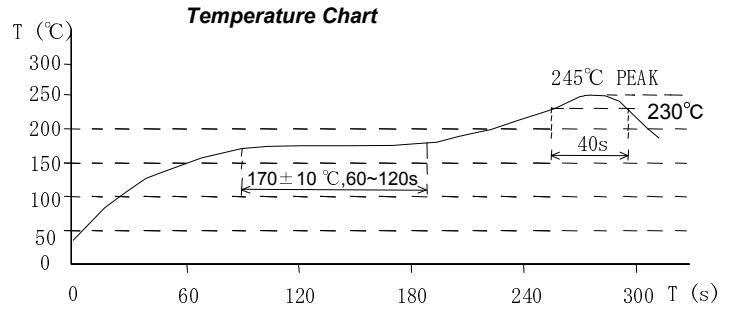
— L (20°C) — L (105°C) — ΔT



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Solder Reflow Condition



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