SMD Power Inductor
CDRCH12D78B

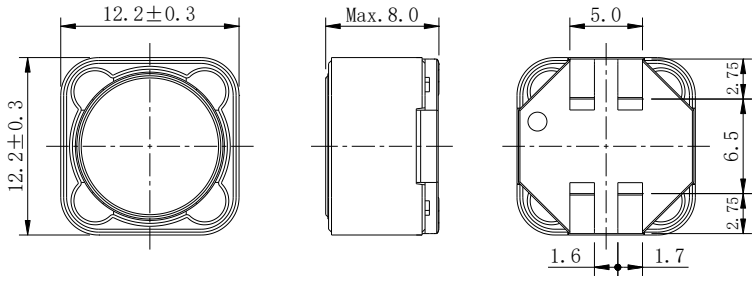
Description
- Ferrite drum core construction
- Magnetically shielded
- L×W×H: 12.5×12.5×8.0 mm Max.
- Product weight: 4.1g(Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance

Environmental Data
- Operating temperature range: -40℃~+125℃ (including coil's self temperature rise)
- Storage temperature range: -40℃～+125℃
- Solder reflow temperature: 260 ℃ peak

Packaging
- Carrier tape and reel packaging
- 13.0" diameter reel
- 500pcs per reel

Applications
- Ideally used in LED modules, DC/DC converters and 1:1 Transformer, etc.

Dimension - [mm]



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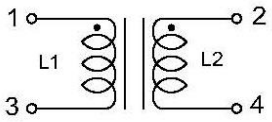
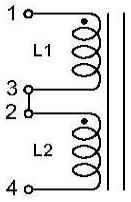
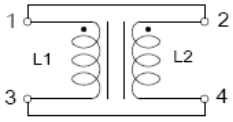
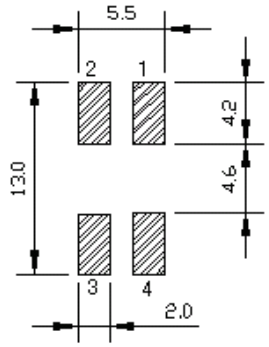
Reference Land pattern – [mm] and Connection

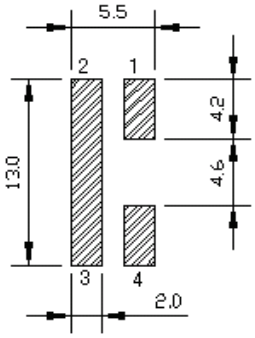




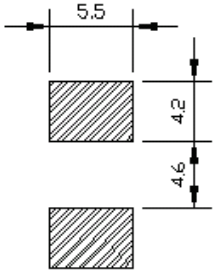




Single winding



Leads connected in series



Leads connected in parallel

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Electrical Characteristics

Part Name	Stamp	Inductance (μH) [within] ※1	D.C.R. (Ω) Max. (Typ.)	Saturation Current (A) Max. (Typ.) ※2	Temperature rise current (A) Max. (Typ.) ※3	Mode
CDRCH12D78BNP-4R7NC	4R7	4.7±30%	40m(30m)	13.2(15.6)	3.9(4.4)	Single winding
		18.8±30%	80m(60m)	6.6(7.8)	2.8(3.1)	Leads connected in series
		4.7±30%	20m(16m)	13.2(15.6)	5.4(6.1)	Leads connected in parallel
CDRCH12D78BNP-6R8NC	6R8	6.8±30%	46m(36m)	12.0(14.2)	3.6(4.1)	Single winding
		27.2±30%	92m(72m)	6.0(7.1)	2.6(3.0)	Leads connected in series
		6.8±30%	23m(18m)	12.0(14.2)	5.0(5.6)	Leads connected in parallel
CDRCH12D78BNP-100MC	100	10±20%	54m(42m)	10.0(11.8)	3.2(3.6)	Single winding
		40±20%	108m(84m)	5.0(5.9)	2.3(2.6)	Leads connected in series
		10±20%	27m(21m)	10.0(11.8)	4.4(5.0)	Leads connected in parallel
CDRCH12D78BNP-150MC	150	15±20%	72m(58m)	8.2(9.7)	2.8(3.2)	Single winding
		60±20%	144m(116m)	4.1(4.8)	2.0(2.3)	Leads connected in series
		15±20%	36m(29m)	8.2(9.7)	4.0(4.6)	Leads connected in parallel
CDRCH12D78BNP-220MC	220	22±20%	96m(80m)	7.0(8.2)	2.3(2.6)	Single winding
		88±20%	192m(160m)	3.5(4.1)	1.6(1.8)	Leads connected in series
		22±20%	48m(40m)	7.0(8.2)	3.3(3.7)	Leads connected in parallel
CDRCH12D78BNP-330MC	330	33±20%	144m(120m)	5.5(6.5)	1.8(2.1)	Single winding
		132±20%	290m(240m)	2.75(3.25)	1.3(1.5)	Leads connected in series
		33±20%	72m(60m)	5.5(6.5)	2.7(3.0)	Leads connected in parallel

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Part Name	Stamp	Inductance (μH) [within] ※1	D.C.R. (Ω) Max. (Typ.)	Saturation Current (A) Max. (Typ.) ※2	Temperature rise current (A) Max. (Typ.) ※3	Mode
CDRCH12D78BNP-470MC	470	47±20%	186m(155m)	4.6(5.5)	1.5(1.7)	Single winding
		188±20%	372m(310m)	2.3(2.75)	1.1(1.3)	Leads connected in series
		47±20%	93m(77m)	4.6(5.5)	2.4(2.6)	Leads connected in parallel
CDRCH12D78BNP-680MC	680	68±20%	266m(222m)	3.9(4.6)	1.3(1.5)	Single winding
		272±20%	532m(444m)	1.95(2.3)	0.94(1.05)	Leads connected in series
		68±20%	133m(111m)	3.9(4.6)	2.0(2.3)	Leads connected in parallel
CDRCH12D78BNP-101MC	101	100±20%	384m(320m)	3.1(3.7)	1.10(1.25)	Single winding
		440±20%	768m(640m)	1.55(1.85)	0.78(0.88)	Leads connected in series
		100±20%	192m(160m)	3.1(3.7)	1.6(1.8)	Leads connected in parallel
CDRCH12D78BNP-151MC	151	150±20%	648m(540m)	2.5(3.0)	0.83(0.95)	Single winding
		600±20%	1.29(1.08)	1.25(1.50)	0.60(0.68)	Leads connected in series
		150±20%	324m(270m)	2.5(3.0)	1.2(1.4)	Leads connected in parallel
CDRCH12D78BNP-221MC	221	220±20%	936m(780m)	2.1(2.5)	0.68(0.78)	Single winding
		880±20%	1.87(1.56)	1.05(1.25)	0.48(0.55)	Leads connected in series
		220±20%	468m(390m)	2.1(2.5)	1.0(1.15)	Leads connected in parallel
CDRCH12D78BNP-331MC	331	330±20%	1.35(1.17)	1.7(2.1)	0.56(0.64)	Single winding
		1320±20%	2.7(2.34)	0.85(1.05)	0.40(0.45)	Leads connected in series
		330±20%	675m(585m)	1.7(2.1)	0.83(0.94)	Leads connected in parallel

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Part Name	Stamp	Inductance (μH) [within] ※1	D.C.R. (Ω) Max. (Typ.)	Saturation Current (A) Max. (Typ.) ※2	Temperature rise current (A) Max. (Typ.) ※3	Mode
CDRCH12D78BNP-471MC	471	470±20%	2.01(1.75)	1.5(1.75)	0.45(0.52)	Single winding
		1880±20%	4.02(3.50)	0.75(0.88)	0.31(0.35)	Leads connected in series
		470±20%	1005m(875m)	1.5(1.75)	0.67(0.76)	Leads connected in parallel

※1 Measuring frequency inductance at 100KHz.

※2 Saturation current: The value of D.C. current when the inductance is over 70% of the initial value.

※3 Temperature rise current: The value of D.C. current when the temperature rise is △t=40℃.(Ta=20℃)

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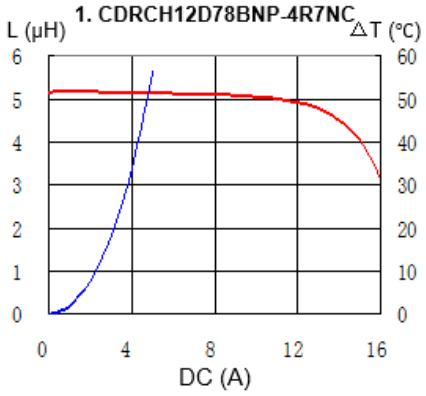
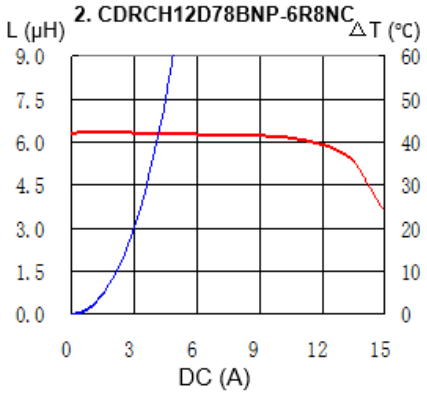
SMD Power Inductor

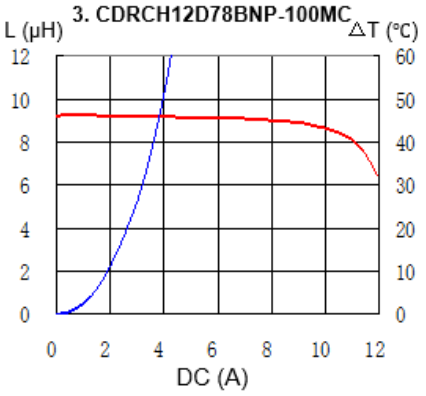
CDRCH12D78B

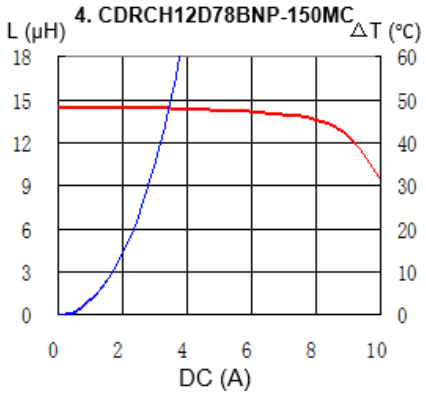
Saturation Current & Temperature Rise Graph — L (20℃) — ⊿T

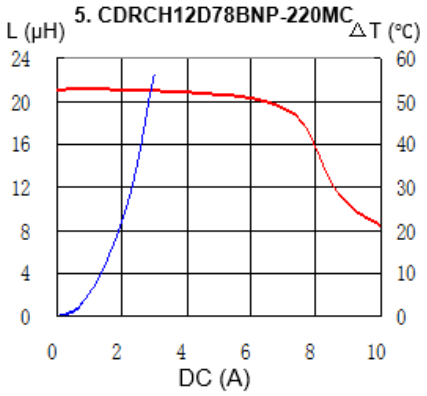
Single winding inductor

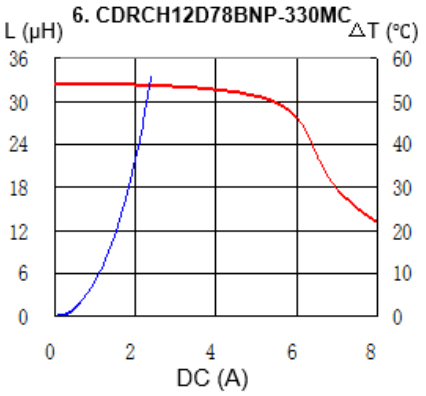


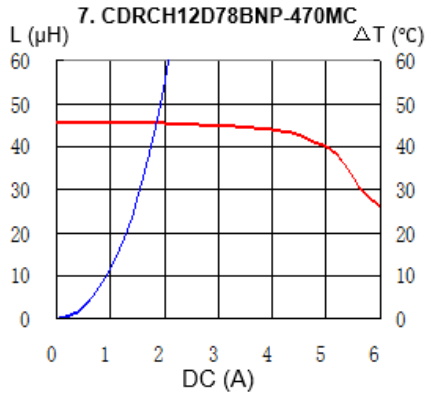


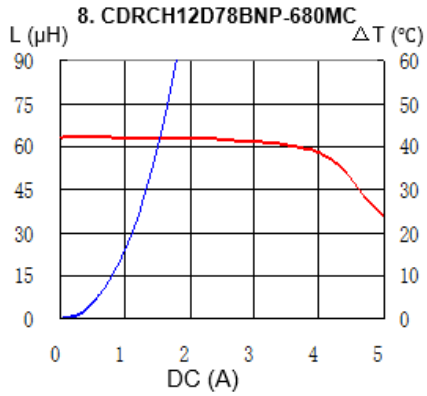


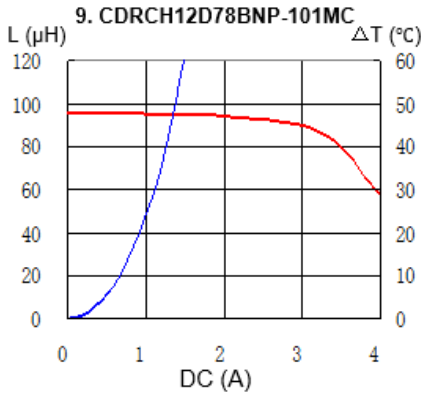












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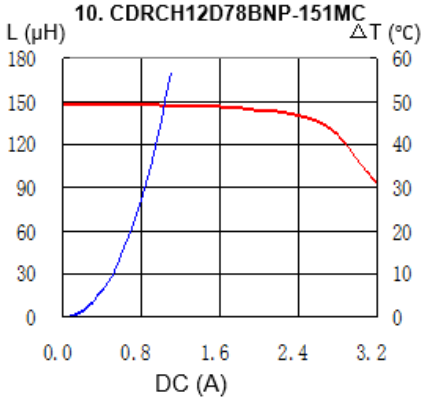
SMD Power Inductor
CDRCH12D78B

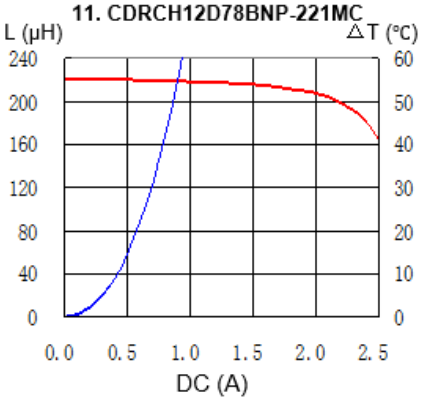
Saturation Current & Temperature Rise Graph — L (20℃) — ⊿T

Single winding inductor

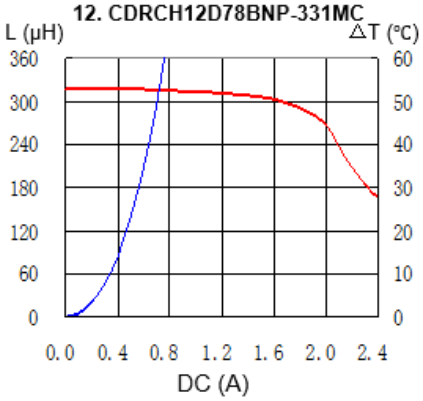
10. CDRCH12D78BNP-151MC



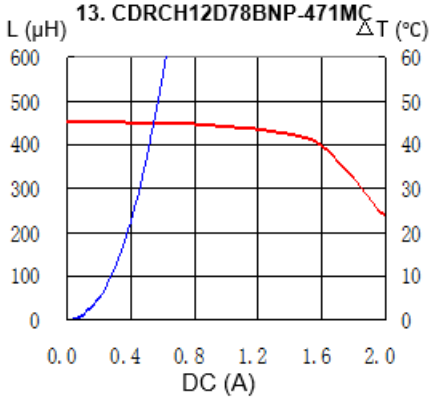
11. CDRCH12D78BNP-221MC



12. CDRCH12D78BNP-331MC



13. CDRCH12D78BNP-471MC



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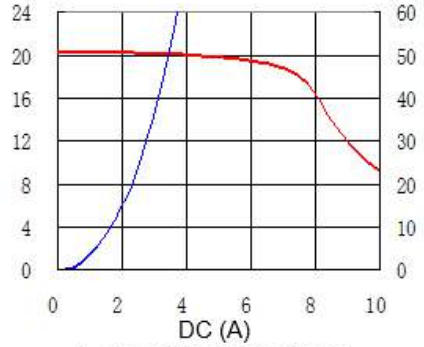
SMD Power Inductor

CDRCH12D78B

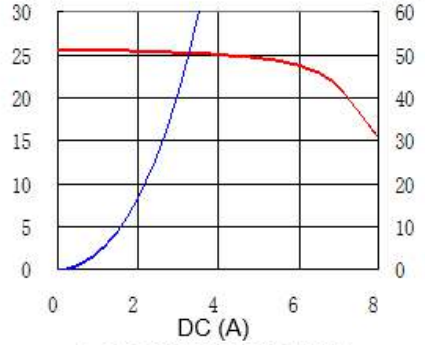
Saturation Current & Temperature Rise Graph — L (20℃) — ⊿T

Leads connected in series Mode

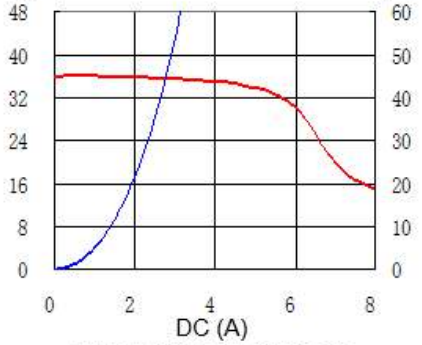
1. CDRCH12D78BNP-4R7NC



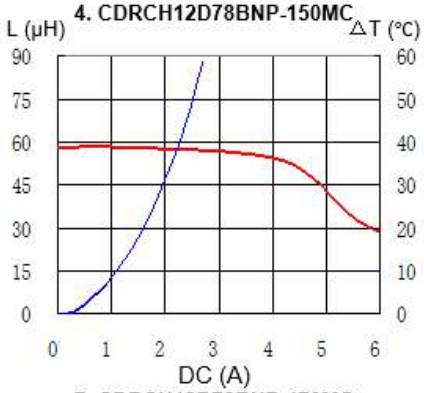
2. CDRCH12D78BNP-6R8NC



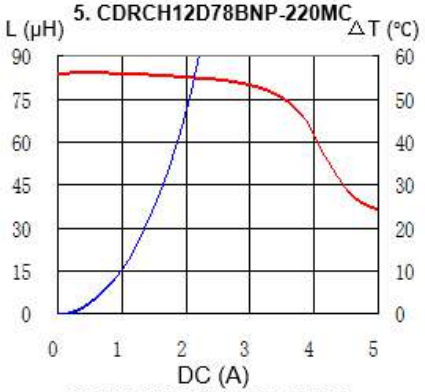
3. CDRCH12D78BNP-100MC



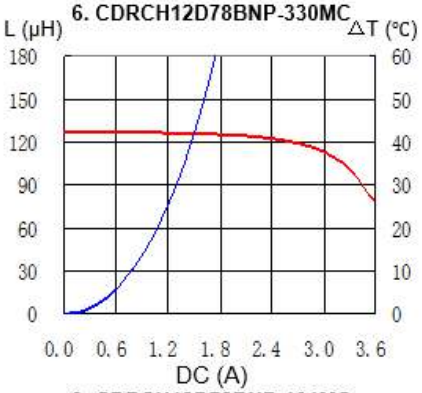
4. CDRCH12D78BNP-150MC



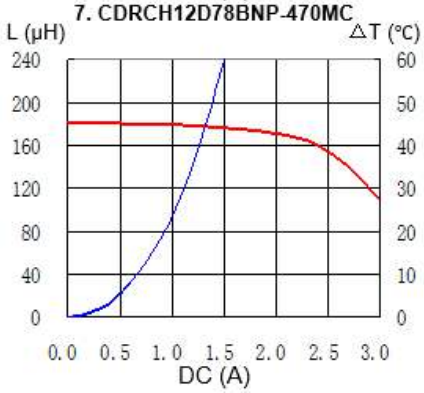
5. CDRCH12D78BNP-220MC



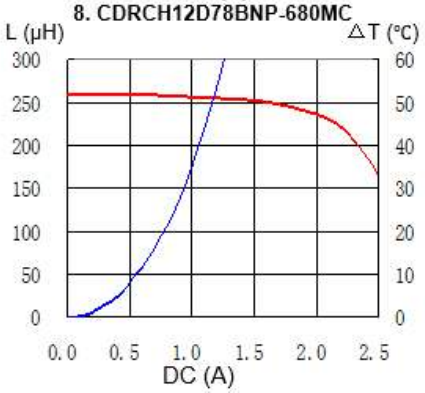
6. CDRCH12D78BNP-330MC



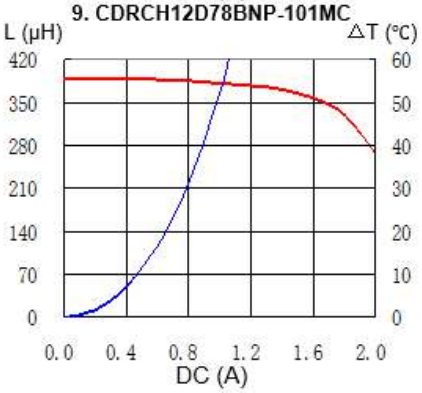
7. CDRCH12D78BNP-470MC



8. CDRCH12D78BNP-680MC



9. CDRCH12D78BNP-101MC



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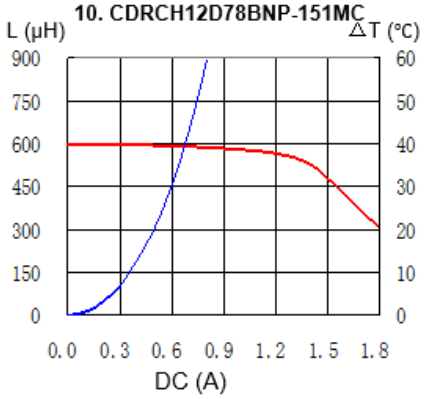
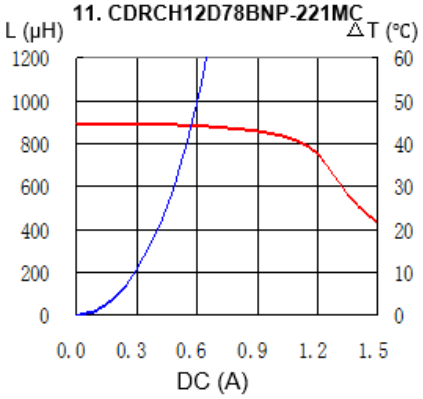
Saturation Current & Temperature Rise Graph — L (20℃) — ⊿T

Leads connected in series Mode

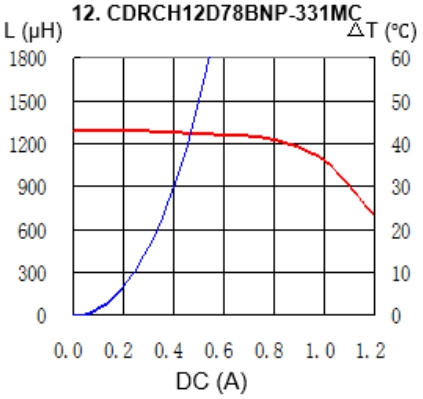
10. CDRCH12D78BNP-151MC



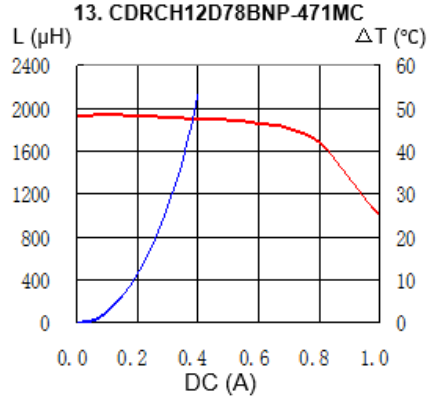
11. CDRCH12D78BNP-221MC



12. CDRCH12D78BNP-331MC



13. CDRCH12D78BNP-471MC



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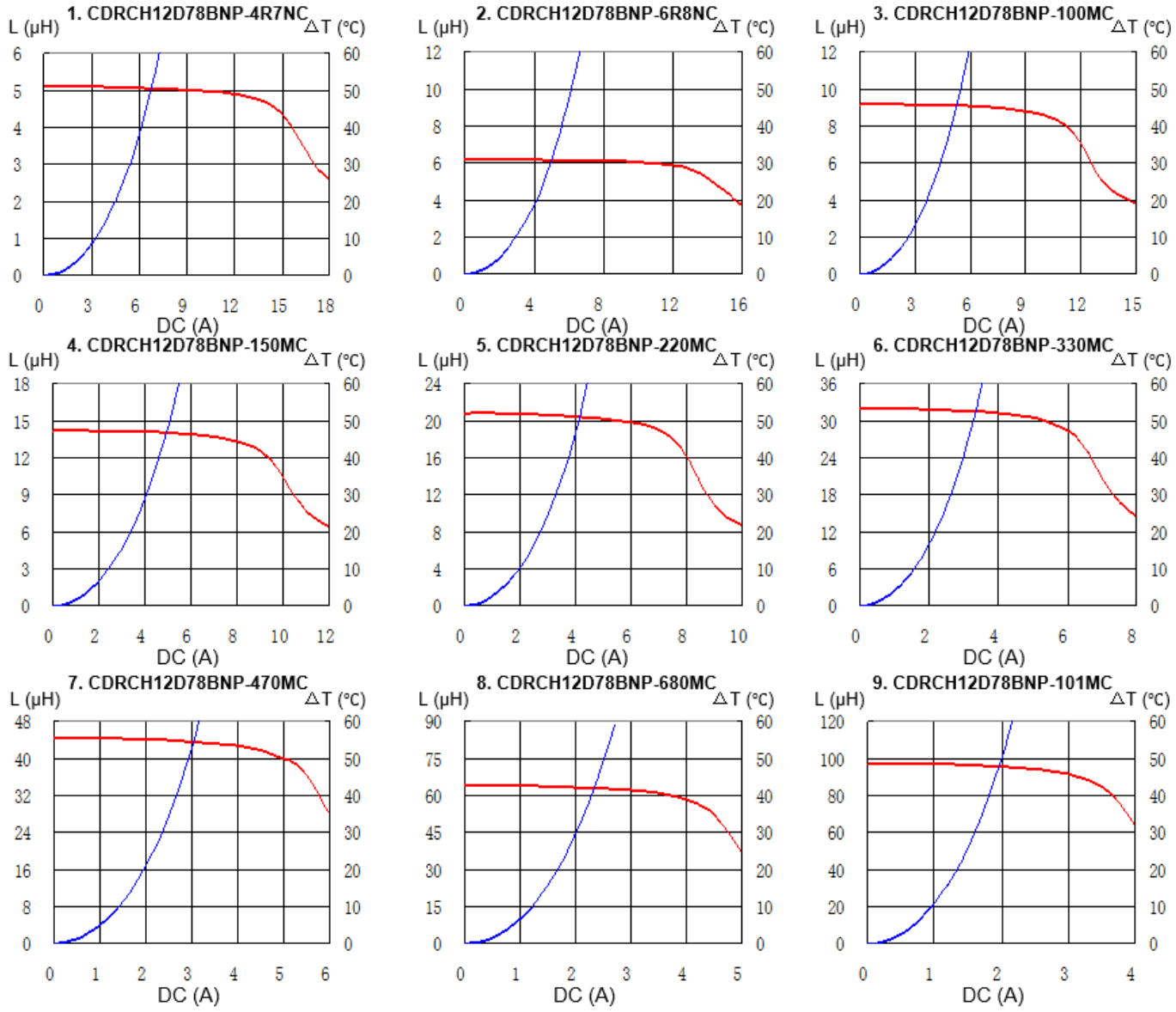
Saturation Current & Temperature Rise Graph — L (20℃) — ⊿T

Leads connected in parallel Mode



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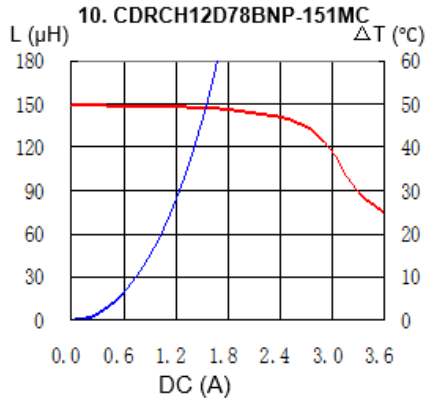
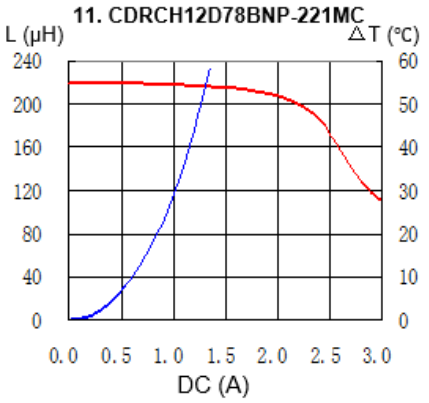
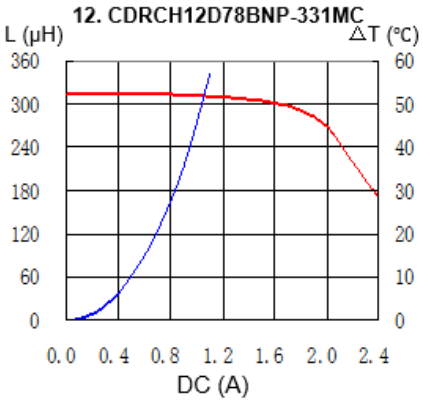
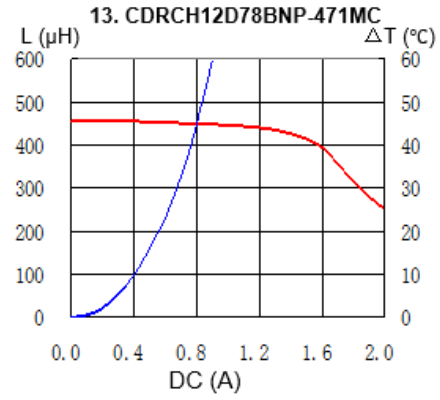
Saturation Current & Temperature Rise Graph — L (20℃) — ⊿T

Leads connected in parallel Mode

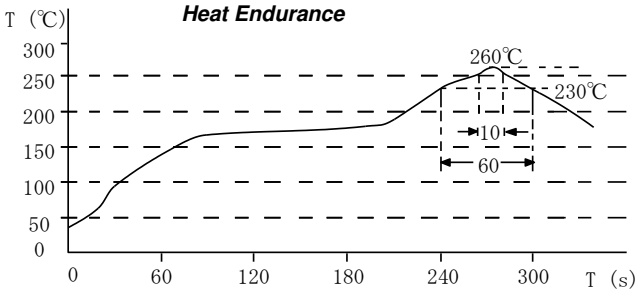


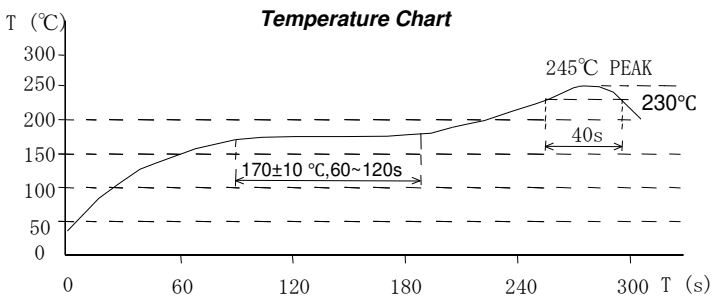






Solder Reflow Condition





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