

One-piece molding powerinductor size C0518CDMCC

1.Feature

- Small volume,large current,in high frequency and high temperature environment to maintain excellent temperature current and saturation current characteristics.
- Low loss alloy powder die casing,ultra low buzz noise,Acomposite structure.
- Low impedance, small parasitic capacitance.suitable for high density SMT.

2. Applications

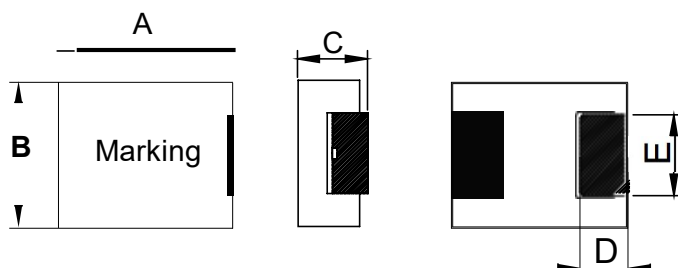
Notebook,Server,audio,netcom,
security,mobilephone,smart home.

TCDRH 6D 38 T 125 NP - 6R8 N C

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Type name	形名
Dimensions	外形尺寸
Height (H)	高度尺寸
Characteristic	特性规格
L(D)	Low DCR.Type低DCR类型
H(P)	High Sturation Current Type高饱和电流类型
None or T	Sundard Tye标准类型
Operation Temperature	使用温度
None	sandnrd Tpre 标准品
125	Theupperlimit ofoperatfon temperature is+125 ° (Including cols selftemperature rise) 使用温度上限+125C(包含线圈发热)
150	The upperlimit ofoperatonemperatureis+150 C (Inctuding cois selftemperature rise) 使用温度上限+150C(包含线圈发热)
) Feature	分类
Lead-free	NP无铅
Halogen-free	无卤素
Induetance	电感值
	1R0 1.0uH 100 10uH 101 100uH
Tolerance of inductance	电感值公差
	K ± 10% M ± 20% N ± 30%
Packing	据包规格
	C 载带Carrier tape B 箱子 Box

EXTERNALDIMENSIONS (Unit:mm)



TYPE	A	B	C	D	E
C0420CDMCC/DS	4.6±0.3	4.1±0.35	1.8±0.2	0.76±0.3	/
C0518CDMCC/DS	5.7±0.25	5.1±0.35	2.0Max	1.3±0.3	2.3±0.3
C0610CDMCD/DS	6.4±0.2	6.6±0.2	1.0Max	1.8±0.3	/
C0640CDMCC/DS	7.4 Max	6.6±0.2	3.0 Max	1.6±0.3	3.0±0.2
C0830CDMCD/DS	7.8±0.2	7.8±0.2	1.7Max	2.6±0.3	/
C104CDMCC/DS	11.1±0.5	10.1±0.3	4.0Max	2.5±0.5	3.0±0.5
C125CDMCC/DS	13.8Max	12.6±0.3	5.0Max	2.7±0.7	3.0±0.5/3.5±0.5
C177CDMCC/DS	17.5±1.0	17.5Max	7.0Max	2.5±0.5	11.94±0.3

Electrical Properties:

Part No	Inductance (μ H)	D.C.R.(m Ω) Max.(Typ.) at 25℃	Isat (A)*A Max.(Typ.) at 25℃	Irms(A)*B Max.(Typ.)
C0518CDMCCDS-R47MC	0.47 ($\pm$ 20%)	9.0 (7.0)	12.0	10.5
C0518CDMCCDS-R68MC	0.68 ($\pm$ 20%)	13.0 (10.0)	10.0	9.0
C0518CDMCCDS-1R0MC	1.0 ($\pm$ 20%)	20.0 (16.5)	9.0	7.0
C0518CDMCCDS-1R5MC	1.5 ($\pm$ 20%)	32.0 (26.0)	6.5	5.5
C0518CDMCCDS-2R2MC	2.2 ($\pm$ 20%)	42.0 (32.0)	6.0	4.5
C0518CDMCCDS-3R3MC	3.3 ($\pm$ 20%)	68.0 (55.0)	5.0	3.5
C0518CDMCCDS-4R7MC	4.7 ($\pm$ 20%)	95.0 (82.0)	4.0	3.0
C0518CDMCCDS-5R6MC	5.6 ($\pm$ 20%)	108.0 (100.0)	3.8	2.9
C0518CDMCCDS-6R8MC	6.8 ($\pm$ 20%)	130.0 (108.0)	3.5	2.8
C0518CDMCCDS-100MC	10 ($\pm$ 20%)	180.0 (152.0)	2.8	2.3

■ All data is tested based on 25℃ ambient temperature.

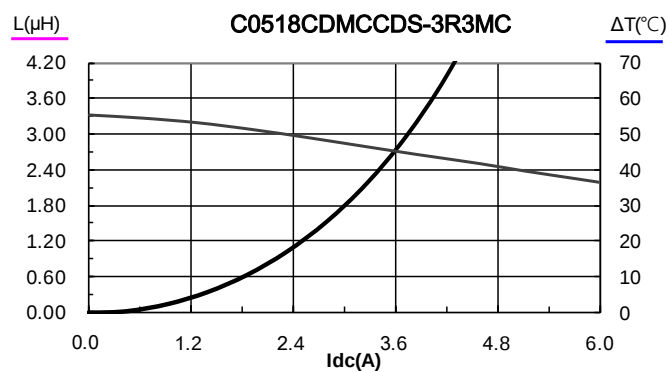
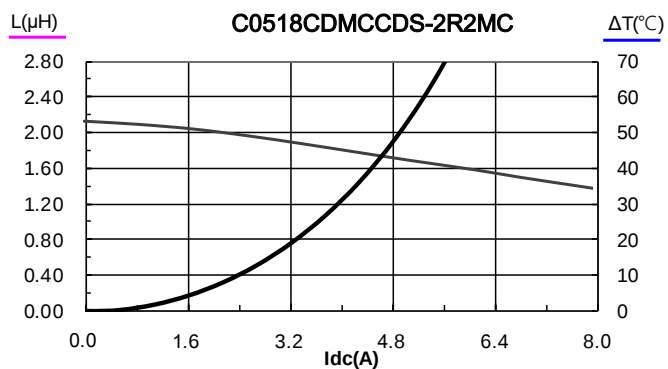
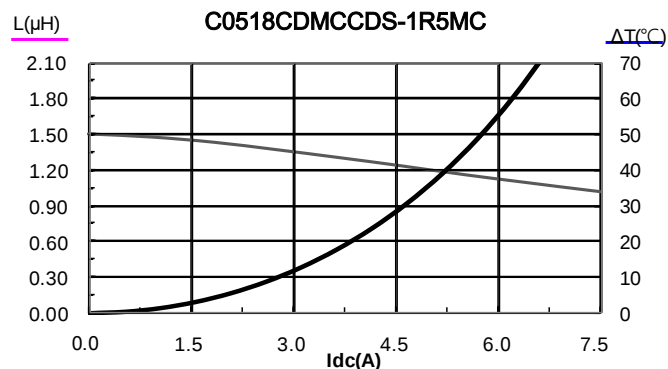
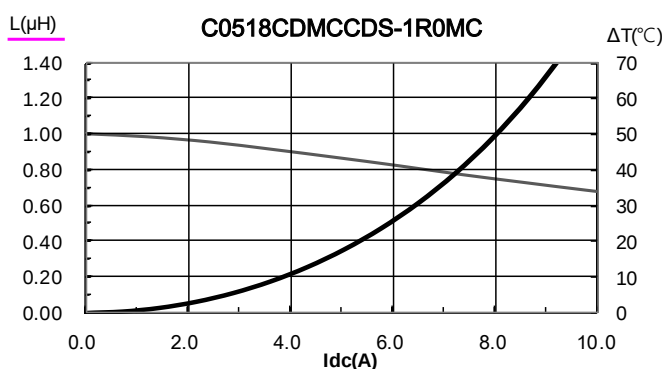
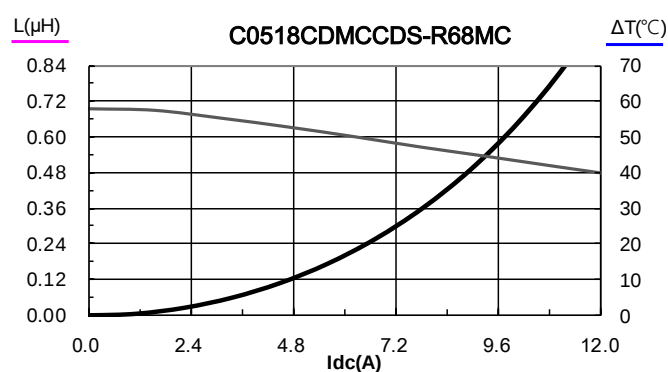
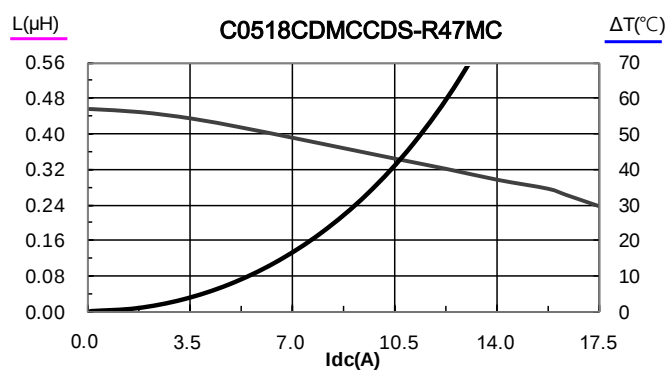
1 Inductance measure condition at 100kHz, 0.1V.

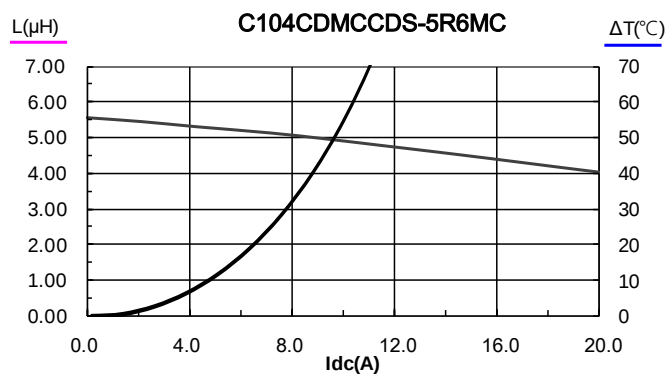
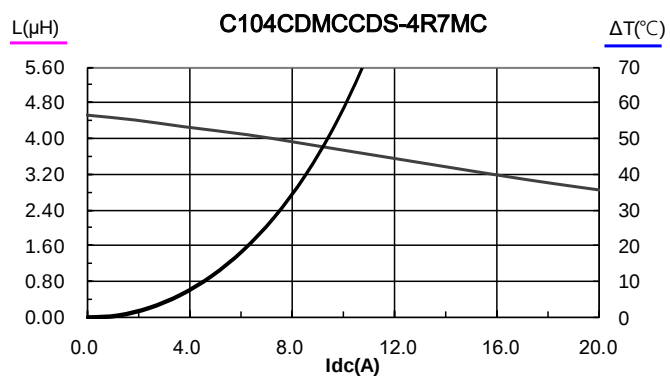
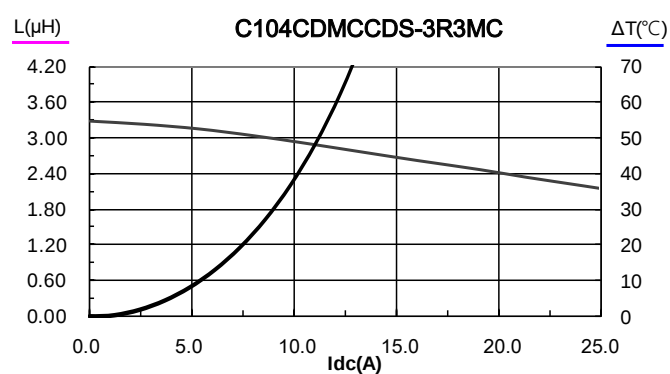
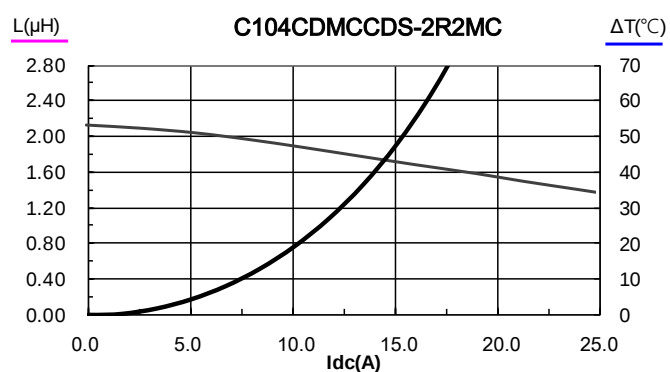
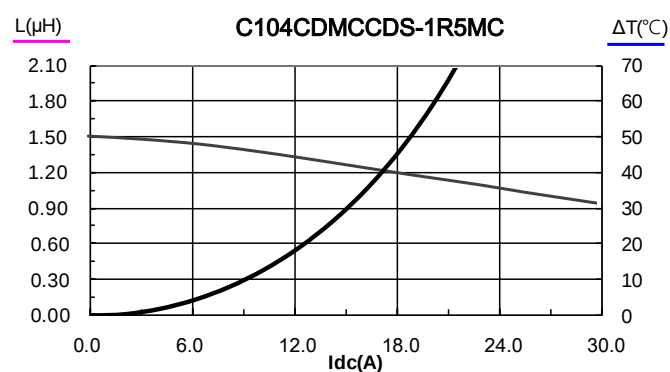
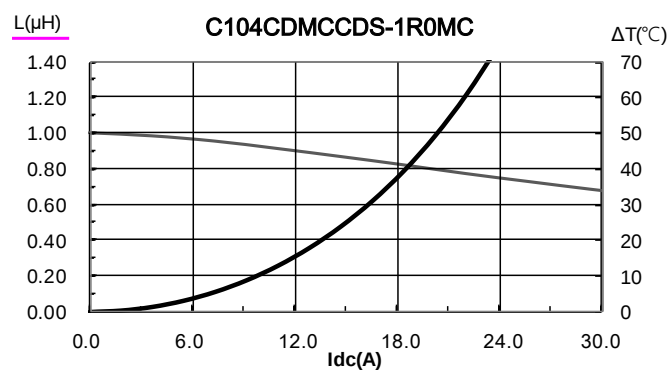
2 Saturation current: the actual value of DC current when the inductance decrease 20% of its initial value.

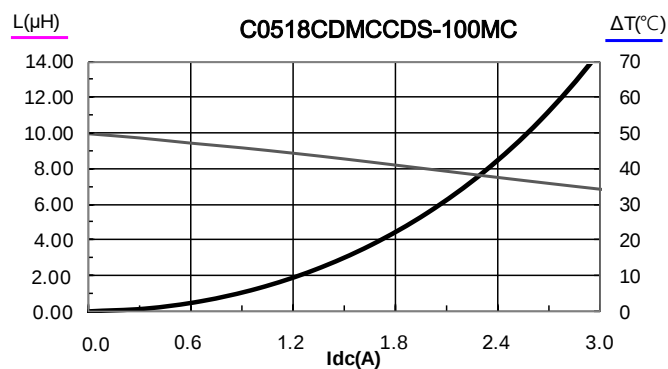
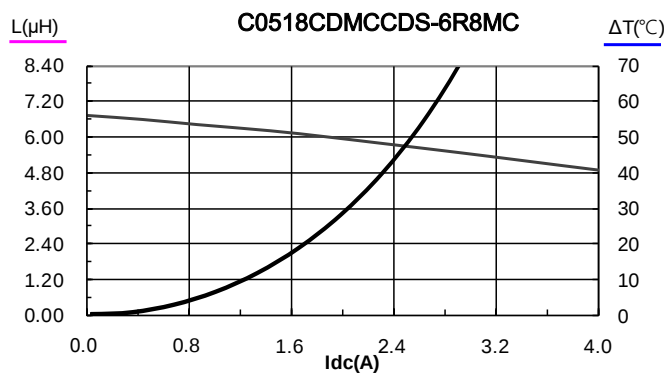
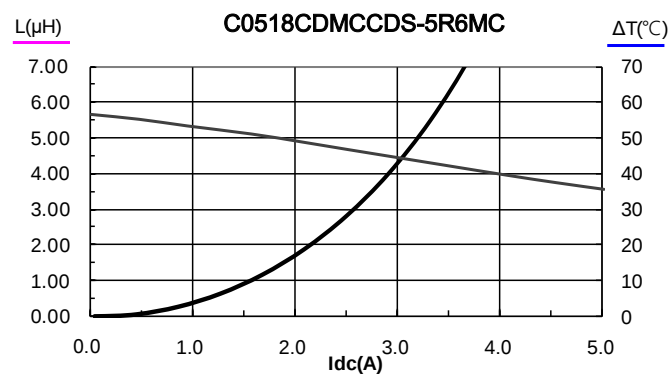
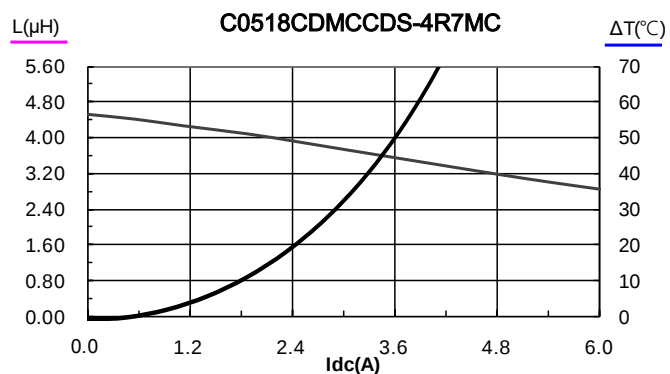
3 Temperature rise current :the actual value of DC current when the temperature rise is $\Delta T 40^{\circ}\text{C}$ ($T_a=25^{\circ}\text{C}$)

· Special remind:Circuit design,component placement,PCB size and thickness,cooling system and etc.all will affect the product temperature.Please verify the product temperature in the final application.

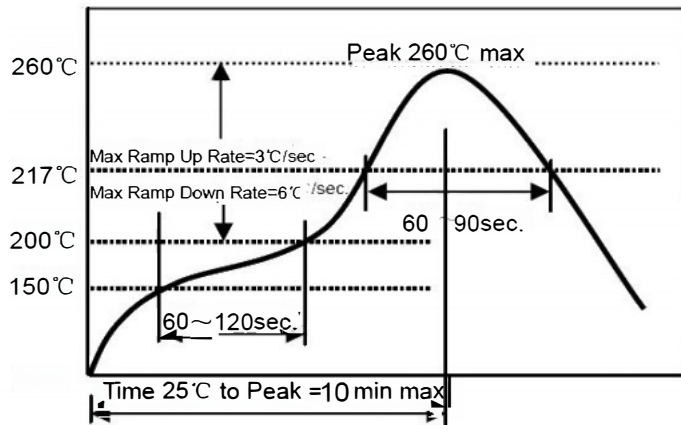
Saturation current VS temperature rise current curve







Reflow Profile for SMT Components



Re-flowing Profile

Preheat condition: 150 ~200°C/60~120sec

Allowed time above 217°C: 80~90sec.

Max temp: 260°C

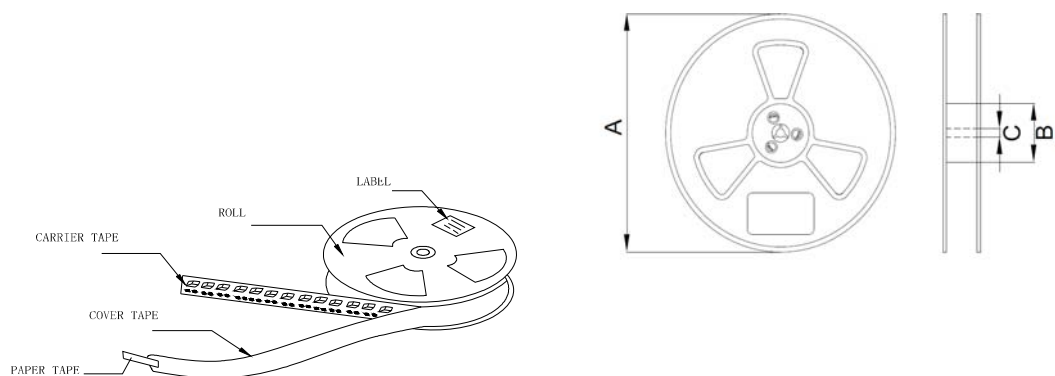
Max time at max temp: 5 sec.

Solder paste: Sn/3.0Ag/0.5Cu

Allowed Reflow time: 2x

Reflow is reiened tostandad IPCJJEDECJSTD02OD.

- Remark:
- All test data is reference to 25°C ambient.
 - Test Condition: 1MHz, 0.1Vrms
 - Isat:Max.Value,DC current at which the inductance drops less than 30%from its value without current;
 - Typ.Value,DC current at which the inductance drops 30%from its value without current.
 - Irms: For Max.Value, $\Delta T < 40^{\circ}\text{C}$: for Typ.Value, ΔT is approximate 40°C .
 - Operat between temperature range-40°C to +125°C (Including self-temperature rise)
 - Absolute maximum voltage:DC 70V



ProductSerie	Quantity Reel	InnerCartonQuantity
C0518CDMCC/DS	2000PCS	(2000×2)=4000pcs

Type	Reel Dimension (mm)			Quantity (Pcs/Reel)
	A	B	C	
C0420CDMCC/DS	330	100	13	3000
C0518CDMCC/DS	330	100	13	2000
C0610CDMCC/DS	330	100	13	2000
C0640CDMCD/DS	330	100	13	1500
C8030CDMCC/DS	330	100	13	2000
C104CDMCC/DS	330	100	13	1000
C125CDMCC/DS	330	100	13	400
C177CDMCC/DS	330	100	13	300