One-piece molding power inductor size C177CDMCC

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,mobile phone,smart home.

TCDRH 6D 38 T 125 NP - 6R8 N C
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① 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

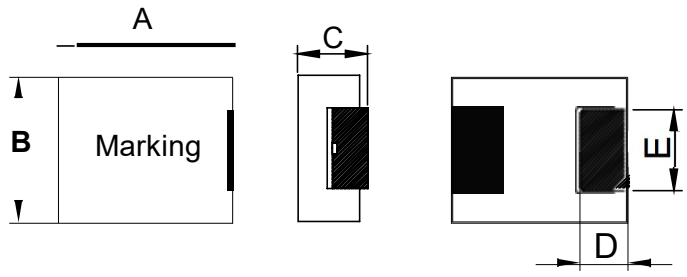
) Feature 分类
Lead-free NP无铅
Halogen-free 无卤素

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Carier 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

ElectricalProperties:

Part No	Inductance (μH)	D.C.R.(mΩ) Max.(Typ.) at 25℃	Isat (A)*A Max.(Typ.) at 25℃	Irms(A) *B Max.(Typ.)
C177CDMCCDS-1R0MC	1.0(±20%)	1.9(1.5)	55.5	40.0
C177CDMCCDS-1R5MC	1.5(±20%)	2.8(2.1)	40.0	35.0
C177CDMCCDS-2R2MC	2.2(±20%)	3.0(2.3)	40.0	32.0
C177CDMCCDS-3R3MC	3.3(±20%)	3.2(2.9)	35.0	30.0
C177CDMCCDS-4R7MC	4.7(±20%)	5.8(4.4)	30.0	25.0
C177CDMCCDS-6R8MC	6.8(±20%)	8.0(6.2)	22.5	19.0
C177CDMCCDS-8R2MC	8.2(±20%)	13.0(10.0)	20.0	17.0
C177CDMCCDS-100MC	10(±20%)	13.0(10.0)	19.0	16.0
C177CDMCCDS-150MC	15(±20%)	20.0(16.5)	14.0	13.0
C177CDMCCDS-220MC	22(±20%)	26.0(20.0)	12.0	12.0
C177CDMCCDS-330MC	33(±20%)	38.5(30.0)	10.7	10.0
C177CDMCCDS-470MC	47(±20%)	53.0(43.0)	8.7	8.7
C177CDMCCDS-560MC	56(±20%)	60.5(55.0)	7.2	7.0
C177CDMCCDS-680MC	68(±20%)	79.0(58.0)	6.1	6.0
C177CDMCCDS-101MC	100(±20%)	123.0(103.0)	5.0	5.0

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

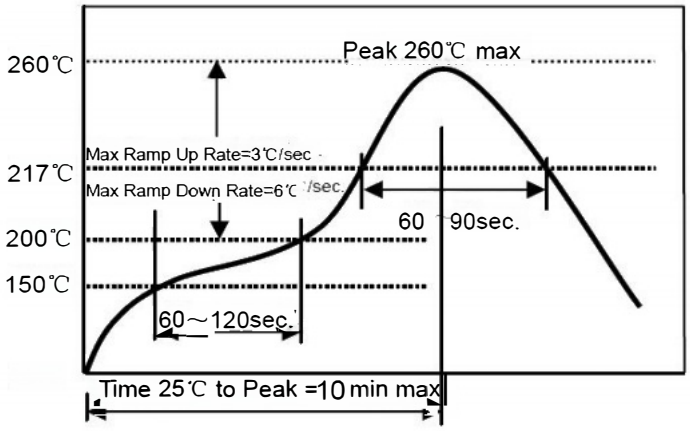
1 Inductance measure condition at 100kHz, 0.1V.

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△T40℃(Ta=25℃)

· 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.

Reflow Profile for SMT Components



Re-flowing Profile

Preheat condition: 150 ~200℃/60~120sec

Allowed time above 217℃: 80~90sec.

Max temp: 260℃

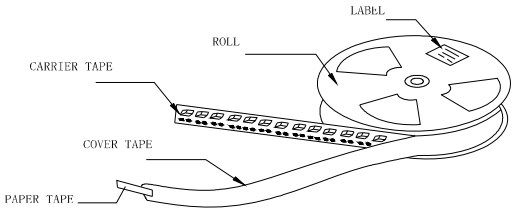
Max time at max temp: 5 sec.

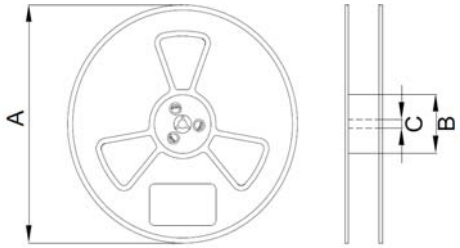
Solder paste: Sn/3.0Ag/0.5Cu

Allowed Reflow time: 2x

Reflow is reiened tostandad
IPCJJEDECJSTD02OD.

Remark:
- All test data is reference to 25℃ 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, △T<40℃: for Typ.Value,△T is approximate 40℃.
- Operat between temperature range-40℃to+125℃(Including self-temperature rise)
- Absolute maximum voltage:DC 70V





ProductSerie	Quantity Reel	InnerCartonQuantity
C177CDMCC/DS	300PCS	(300×2)=600pcs

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