

承 认 书

APPROVAL SHEET

客户名称: _____
Customer Name _____

产品名称: 绕线共模片式电感器（整体无铅）
Product Name Chip Common Mode Choke Coils (Free-Lead)

制造商料号: _____
Manufacturer P/N CMC 系列

客户料号: _____
Customer P/N _____

版本号: 15.01 标准类型: 标准品 Standard product
Version No. _____ Standard type 非标准品 Custom product

制造厂商 Manufacturer		
拟制 Draft	审核 Check	
	品管部	技术部
林晓华	徐雪枫	区军沛
日期 Date	2015-05-22	2015-05-22

客户承认印章 APPROVAL SIGNET	
日期 Date	

注：请确认后签回，如不签回，则视贵公司默认产品发货按我司标准品标准执行。

Note: Please confirm and sign back, if not we will considered the acceptance as our standard.

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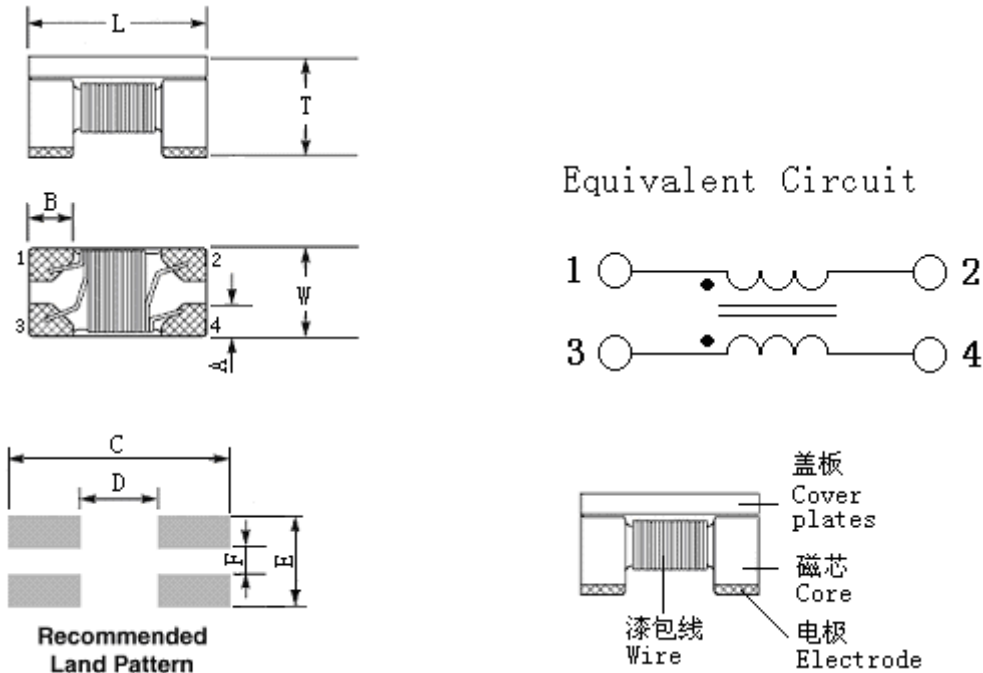
网址 Web: <http://www.fenghua-advanced.com>

邮箱 E-mail: 2008lihuiqin@163.com

【 样单号 Sample No: _____ 】



1 外形尺寸与内部结构 Dimension & Inner-configuration:



序号 No.	部位 Component	材料 Material		
1	磁芯 Core	镍锌铁氧体 Ni-Zn ferrite		
2	盖板 Cover plates	镍锌铁氧体 Ni-Zn ferrite		
3	电极 Electrode	底层 Layout 0	中层 Layout 1	表层 Layout 2
		银 Ag	镍 Ni	锡 Sn
4	漆包线 Wire	铜 Cu		
5	封装层 Encapsulation layer	树脂 Epoxy		

单位 Unit: mm

型号 type	L	W	T	A	B	C	D	E	F
CMC0805S	2.0±0.2	1.2±0.2	1.2±0.2	0.45	0.45	2.6	0.8	1.2	0.4
CMC1206S	3.2±0.2	1.6±0.2	1.8±0.2	0.6	0.7	3.7	1.6	1.6	0.4

2 产品品名构成 Product Spec. Model

CMC 0805 S — 900 T
① ② ③ ④ ⑤

- ① 绕线共模片式电感器系列 WIRE WOUND CHIP COMMON MODE CHOKE COILS;
- ② 外型尺寸代号 DIMENSIONS: 0805(2.0×1.2mm), 1206(3.2×1.6mm);
- ③ 设计代号 DESIGN SYMBOL: S—电磁屏蔽型 Magnetically Shielded
- ④ 标称阻抗 IMPEDANCE: 900=90Ω; 371=370Ω; 102=1000Ω;
- ⑤ 包装类型 PACKAGING TYPE: T—卷盘包装 Tape&Reel; B—散装 Bulk。

注: CMC 系列产品阻抗公差精度均为±25%。

3 电性能参数表 Electrical Characteristics List

型号规格 Part NO.	客户料号 Customer P/N	误差范围 Tolerance (%)	标称阻抗 Impedance (Ω)	测试频率 Test frequency (MHz)	直流电阻 Rdc (Ω) max	额定电压 Rated Voltage (Vdc)max	额定电流 Idc (mA) max	绝缘电阻 IR (M Ω) min
CMC0805S-670T		± 25	67	100	0.25	50	400	10
CMC0805S-700T		± 25	70	100	0.30	50	400	10
CMC0805S-750T		± 25	75	100	0.30	50	400	10
CMC0805S-900T		± 25	90	100	0.35	50	330	10
CMC0805S-121T		± 25	120	100	0.30	50	370	10
CMC0805S-161T		± 25	160	100	0.35	50	330	10
CMC0805S-181T		± 25	180	100	0.35	50	330	10
CMC0805S-261T		± 25	260	100	0.40	50	300	10
CMC0805S-301T		± 25	300	100	0.42	50	290	10
CMC0805S-361T		± 25	360	100	0.45	50	280	10
CMC0805S-371T		± 25	370	100	0.45	50	280	10
CMC0805S-451T		± 25	450	100	0.50	50	250	10
CMC0805S-601T		± 25	600	100	0.60	50	220	10

型号规格 Part NO.	客户料号 Customer P/N	误差范围 Tolerance (%)	标称阻抗 Impedance (Ω)	测试频率 Test frequency (MHz)	直流电阻 Rdc (Ω) max	额定电压 Rated Voltage (Vdc)max	额定电流 Idc (mA)max	绝缘电阻 IR (MΩ)min
CMC1206S-900T		±25	90	100	0.30	50	370	10
CMC1206S-161T		±25	160	100	0.40	50	340	10
CMC1206S-261T		±25	260	100	0.50	50	310	10
CMC1206S-601T		±25	600	100	0.80	50	260	10
CMC1206S-102T		±25	1000	100	1.00	50	230	10
CMC1206S-222T		±25	2200	100	1.20	50	200	10

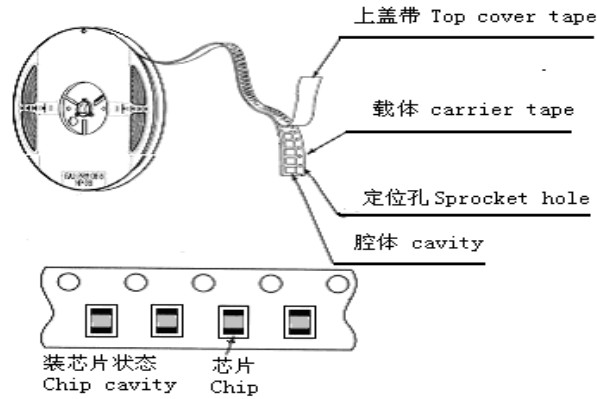
4 可靠性试验项目 Reliability Testing Items

序号 No.	项目 Items	要求 Requirements	试验方法及备注 Test Methods and Remarks
1	工作温度范围 Operating Temperature Range	-40°C~+85°C	
2	可焊性 Solder ability	外观不发生变化; 超过 90% 的焊锡覆盖在端电极表面 There shall be no case deformation or change in appearance. The metalized area must have more than 90% solder coverage.	在 245±5°C 熔融的焊锡 (96.5Sn/3.0Ag/0.5Cu) 中浸置 5±1 秒钟。 Dip pads in flux and dip in solder pot (96.5Sn/3.0Ag/0.5Cu) at 245±5°C for 5±1 seconds.
3	耐焊接热 Soldering Heat Resistance	外观不发生变化; 阻抗变化不超过 ±20%。 There shall be no case deformation or change in appearance. Impedance shall not change more than ±20%.	在 260±5°C 熔融的焊锡 (96.5Sn/3.0Ag/0.5Cu) 中浸置 10±1 秒钟。 Dip pads in flux and dip in solder pot (96.5Sn/3.0Ag/0.5Cu) at 260±5°C for 10±1 seconds.
4	耐电压 Rated voltage	外观不发生变化; 无击穿现象 here shall be no case deformation or change in appearance.No evidence of voltage breakdown.	施加额定电压, 持续一分钟。 Input rated voltage and keep on one minute.
5	绝缘电阻 Insulation Resistance	≥10 MΩ	施加额定电压, 持续一分钟。 Input rated voltage and keep on one minute.
6	端电极附着力 (推力测试) Component Adhesion (Push of test)	0805 series ≥0.5Kg; 1206 series ≥1.0Kg.	
7	过载 Over Loading	外观不发生变化; 电感器不开路。 There shall be no case deformation or change in appearance. Inductors shall not have a open winding.	将规定额定电流 2 倍的直流电流加于电感器, 其电流误差为 ±2%, 保持 5 分钟。 Direct current of rating current between inductor terminals, Direct current error ±2%, and keep on five minutes.

序号 No.	项目 Items	要求 Requirements	试验方法及备注 Test Methods and Remarks
8	振动 Vibration	无开路或短路； 阻抗变化不超过±20%。 Inductors shall not have a shorted or open winding. Impedance shall not change more than ±20%.	振幅 1.5mm，频率 10~55Hz，每个方向保持 2 小时。 Inductors shall be subjected to vibration of 1.5mm amplitude frequency 10~55Hz (10Hz to 55Hz to 10Hz in a period of 1 minute) for 2 hours in each of three (X、Y、Z) axes.
9	温度变化 Temperature Change	外观不发生变化； 阻抗变化不超过±20%。 There shall be no case deformation or change in appearance. Impedance shall not change more than ±20%.	+85℃ 60 分钟 ↔ -40℃ 60 分，钟循环 5 次； 室温下放置一小时后测试。 +85℃ 60minutes ↔ -40℃ 60minutes 5 Cycles； Inductors are to be tested after 1 hour at room temperature.
10	高温 High temperature	外观不发生变化； 阻抗变化不超过±20%。 There shall be no case deformation or change in appearance. Impedance shall not change more than ±20%.	产品放置于温度+85±5℃的环境中存放 96±2 小时； 在室温下放置 1 小时后进行测试。 shall be subjected to +85±5℃ for 96±2 hours； Inductors are to be tested after one hour at room temperature.
11	低温 Low temperature	外观不发生变化； 阻抗变化不超过±20%。 There shall be no case deformation or change in appearance. Impedance shall not change more than ±20%.	将电感器放置于温度-40±2℃的环境中存放 96±2 小时，然后在室温下放置 1 小时后进行测试。 Inductors shall be subjected to -40±2℃ for 96±2 hours. Inductors are to be tested after one hour at room temperature.
12	恒定湿热 Static Humidity	外观不发生变化； 阻抗变化不超过±20%。 There shall be no case deformation or change in appearance. Impedance shall not change more than ±20%.	将电感器放置于湿度 93±3%，温度 50±2℃的环境中存放 96±2 小时，经过 1 小时的风干后进行测试。 Inductors shall be subjected to 93±3% R.H. at 50±2℃ for 96±2 hours .Inductors are to be tested after having air dried for one hou.
13	耐久性 durability (Life)	电感器不应短路或断路。 Inductors shall not have a shorted or open winding.	产品加额定电流在 85±2℃温度条件下存放 1000 小时； 然后在室温下放置 4 小时后进行测试。 Inductors shall be store at 85±2℃ for 1000 hours with rated current applied； Inductors shall be tested after four hours at room temperature.

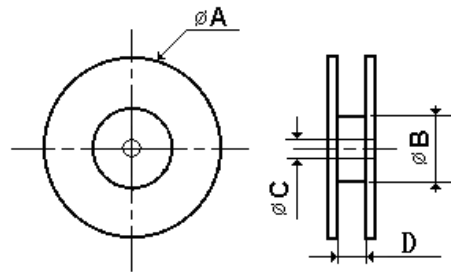
5 产品包装 Packaging

1) 编带图 Taping drawings

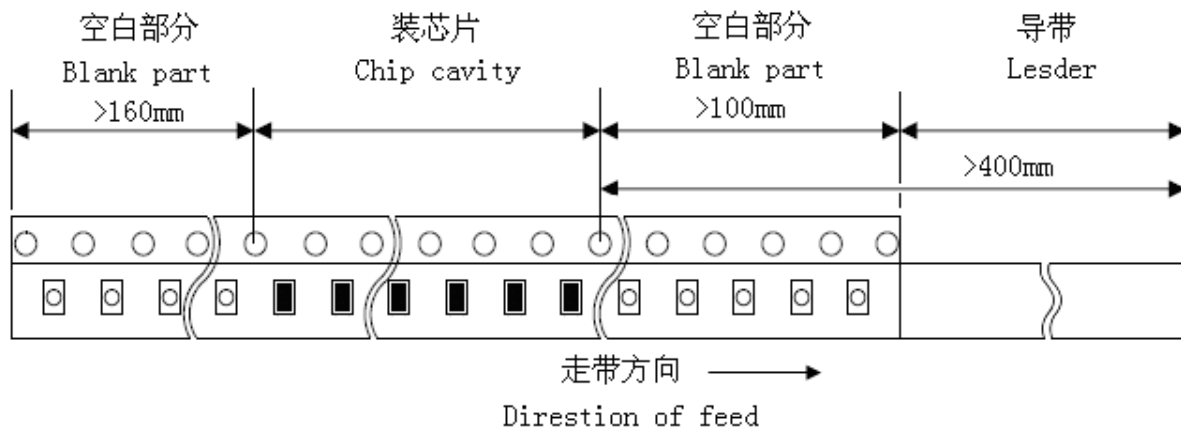


2) 卷盘尺寸 Reel dimensions (Unit:mm)

Part NO.	ΦA typ.	ΦB typ.	ΦC typ.	D typ.
0805~1206	178	60	13	8.4

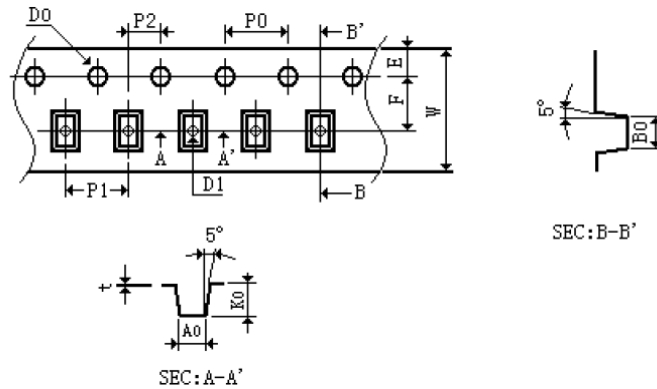


3) 导带及空格部分 Leader and blank portion



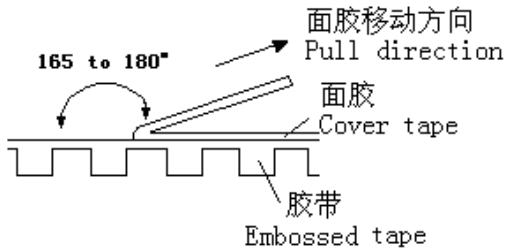
4) 编带尺寸 Taping dimensions (Unit: mm)

● 塑料胶带 Embossed tape



Part NO.	W	E	F	D0	D1	P0	P1	P2	P0×10	t	A0	B0	K0
0805	8.00	1.75	3.50	1.50	0.65	4.00	4.00	2.00	40.00	0.23	1.50	2.25	1.40
1206	8.00	1.75	3.50	1.50	0.65	4.00	4.00	2.00	40.00	0.23	1.90	3.55	2.00

5) 剥离力检验 Peeling off force



① 盖带的剥离力要求 Peeling required

0805~1206 系列 : 20 克~80 克

0805~1206 series : 20g~80g

② 测试条件 Test condition

盖带剥离速度: 300mm/min±10%

Speed of peeling off : 300mm/min±10%

盖带剥离角度: 165° ~180°

Angle of peeling off: 165° ~180°

6) 包装数量 (单位: 粒) Packaging number (Unit: Pcs)

类型 Size		1206	0805
每卷数量 Per Reel		2000	3000
每盒数量 Per Box	3 卷盒	6000	9000
	5 卷盒	10000	15000
	10 卷盒	20000	30000
每箱数量 Per Case	1.5 盒箱	30000	45000
	3 盒箱	60000	90000
	4 盒箱	80000	120000
	5 盒箱	120000	180000

7) 标签粘贴位置 Label stick station

卷盘标签	纸盒标签	纸盒标签	外箱标签
			

6 推荐焊接条件 Recommend Soldering Conditions

1) 焊接条件 Soldering Conditions

本产品建议使用回流焊接法。

Applicable soldering process to the products is reflow soldering.

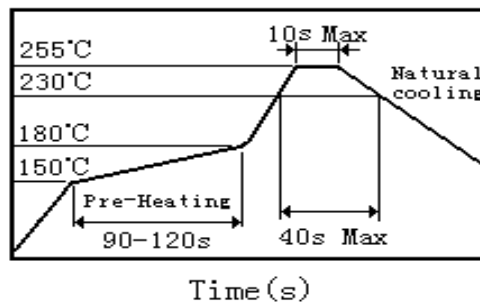
① 焊剂要求 Flux, Solder

- 使用松香基助焊剂，禁止使用卤化物含量超过 0.2(wt)%的强酸性助焊剂。
Don't use highly acidic flux with halide content exceeding 0.2(wt)%(chlorine conversion value).
- 使用无铅焊料 (96.5Sn /3.0Ag/0.5Cu)。
Using lead-free solder (96.5Sn /3.0Ag/0.5Cu)。

② 焊接要求 Soldering conditions

- 预热时，产品表温与焊料温度的温差最大不允许超出 150℃，焊接完冷却时，产品表温与溶剂温度之间的温差最大不超过 100℃。预热不足有可能引发产品表面裂纹，从而导致产品品质下降。
Pre-heating should be in such a way that the temperature difference between solder and ferrite surface is limited to 150℃ max. Also cooling into solvent after soldering should be in such way that the temperature difference is limited to 100℃ max. Un-enough pre-heating may cause cracks on the ferrite, resulting in the deterioration of product quality.
- 产品要在以下画出的曲线允许的范围进行焊接。其它焊接条件可能引起产品电极的腐蚀。当焊接重复时，允许的时间为第一次做的累计时间。
Products should be soldered within the following allowable range indicated by the slanted line. The excessive soldering conditions may cause the corrosion of the electrode. When soldering is repeated, allowable time is the accumulated time.

2) 回流焊曲线 Reflow soldering profile



3) 手工焊接 Iron soldering

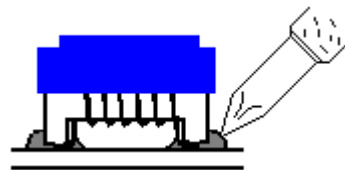
烙铁温度：350°C (Max)

功率：最大为 30W

烙铁停留时间：<5S (注意不要将烙铁碰到产品线圈及包封层)。

Perform soldering at 350°C on 30W max.

Soldering Time: < 5S (Take care not to apply the tip of the soldering iron to the terminal electrodes)。



4) 清洗条件 Cleaning Conditions

a. 清洗温度：60°C (Max) Cleaning temperature : 60°C max.

b. 清洗时间：5 分钟 (Max) Cleaning time: 5 minutes Max.

c. 超声波功率：最大为 200W Ultrasonic output power: 200W max.

7 存储要求 Storage Requirements

1) 存距电感公司出厂检验时间 6 个月内，产品可以使用检验时间可以通过包装外侧标记的检验号确认。若时间超过 6 个月，应检查焊接性能后方可使用。

Products which inspected in INDUCTOR COMPANY over 6 months ago should be examined and used, which can be Confirmed with inspection No. marked on the container. Solder ability should be checked if this period is exceeded.

2) 存储条件 Storage conditions

(1) 存放货物的库房应满足以下条件：温度：-10 ~ +40°C，相对湿度：30 ~ 70%。

(2) 禁止将产品保管在腐蚀性物质中，如硫磺、氯气或酸，否则将引起端头氧化，导致降低焊接性。

(3) 为了避免受潮气、灰尘等物质的影响，产品应保管于货架上。

(4) 产品保管在库房中，应避免热冲击、振动以及直接光照等等。

(5) 产品应密封包装。

(1) Products should be storage in the warehouse on the following conditions:

Temperature : -10~+40°C Humidity: 30~70% relative humidity

(2) Don't keep products in corrosive gases such as sulfur, chlorine gas or acid , or it may case oxidization of Electrodes resulting in poor solder ability.

(3) Products should be stored on the palette for the prevention of the influence from humidity, dust and so on.

(4) Products should be stored in the warehouse without heat shock, vibration, direct sunlight and so on.

(5) Products should be stored under the airtight packaged condition.

8 ODS（消耗臭氧层物质）的使用情况 Usage Of ODS

对于以下所列物质，我公司在生产过程中绝不使用。

ODS: CCl₄（四氯化碳）、HCFC 等。

For ODS listed below , we don't use in process.

ODS: CCl₄, HCFC, etc.

9 注意事项 Notes

(1) RoHS 指令 Response to RoHS directive

本公司产品符合 RoHS 指令。

Our products are RoHS compliance.

(2) 本承诺书保证我司产品作为一个单体时的质量情况，当我司产品被安装到贵司产品上时请保证贵司的产品已根据贵司的规范进行了有效评价和确认。

This product specification guarantees the quality of our product as a single unit, Please make sure that your product has been evaluated and confirmed against your specifications when our product is mounted to your product.

(3) 如果贵司对我司产品的试用已超过了本测试规范所界定的产品功能，对于此所引发的失效我司将不予保证。

We can't warrant against failure caused by any use of our product that deviates from the intended use as described in this product specification.

(4) 为防止断线，请不要使用锋利的物体接触线圈，如镊子。

Do not touch wire with sharp objects such as tweezers to prevent wire breakage.