

客户 CUSTOMER: _____

日期 DATE: _____

规格确认书

APPROVAL SPECIFICATION

产 品 名 称 PRODUCT NAME: 共模滤波器 Common Mode Filter

贵 司 料 号 YOUR PART NO.: _____

敝 司 料 号 OUR PART NO.: MGCC1210M900T-2-LF

接受 RECEPTION		
THE SPECIFICATION HAS BEEN ACCEPTED.		
该规格书已被我司接受		
日期: DATE:		
公司: COMPANY:		
批准 CFMD	审核 CHKD	接收 RCVD

本纳入仕様书共 10 页

MANUFACTURING NAME

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CFMD. 批准	CHKD. 审核	DSGD. 担当
梁启新	陈鑫	曾艳锋

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1. 适用范围 Scope

本规格书适用于 MGCC 系列共模滤波器。
This specification applies to the MGCC series of Common mode filter.

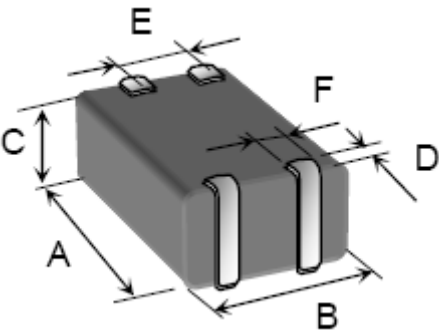
2. 品名构成 Product Identification

MGCC 1210 M 900 T - 2 - LF
① ② ③ ④ ⑤ ⑥ ⑦

- ① 系列名称 Series name
- ② 产品尺寸 Dimensions L×W: (1210=1.25×1.00 mm)
- ③ 材料编码 Material code
- ④ 阻抗 Impedance: (900=90×10⁰=90 Ω)
- ⑤ 包装方式 Packing Style: (T: Taping 编带盘装 B: Bulk 散装)
- ⑥ 信号线数目 Number of signal lines
- ⑦ 环保标示 Lead Free

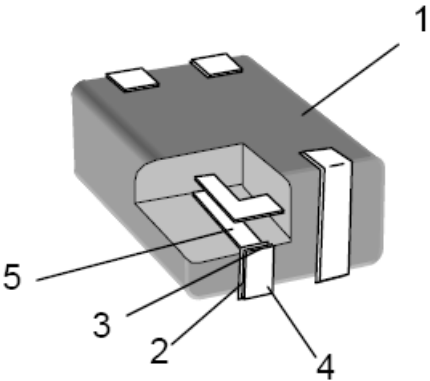
3. 外观、尺寸和结构 Appearance, Dimensions and Structure

3.1 外观尺寸 Appearance and dimensions



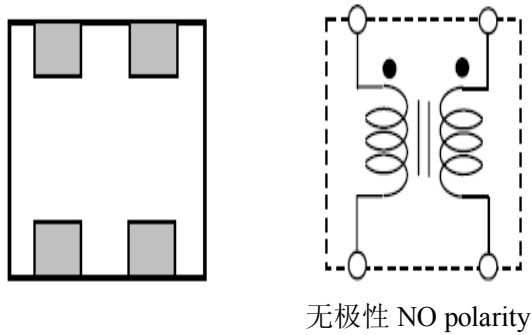
Type 型号	尺寸 Dimensions (mm) [inch]					
	A	B	C	D	E	F
1210 [0504]	1.25±0.15 [0.049±0.006]	1.00±0.15 [0.039±0.006]	0.5±0.1 [0.02±0.004]	0.20±0.15 [0.008±0.006]	0.55±0.10 [0.022±0.004]	0.3±0.1 [0.012±0.004]

3.2 结构 Structure



No.	项目 Item	材料 Material
1	本体 Base Material	铁氧体 Ferrite
2	端电极 Terminal Electrode	银 Ag
3	端电极 Terminal Electrode	镍 Ni
4	端电极 Terminal Electrode	锡Sn
5	内导体 Internal Conductor	银Ag

4. 电气原理图 Electrical Schematic



5. 测试条件 Testing Conditions

除非另有规定，否则在以下条件下测试 <Unless otherwise specified>

温度 Temperature : Ordinary Temperature (5 to 35℃)

湿度 Humidity : Ordinary Humidity (25 to 85% RH)

当对测量结果有疑问时<In case of doubt>

温度 Temperature : 20±2℃

湿度 Humidity : 60 to 75% RH

大气压强 Atmospheric Pressure : 86 to 106 kPa

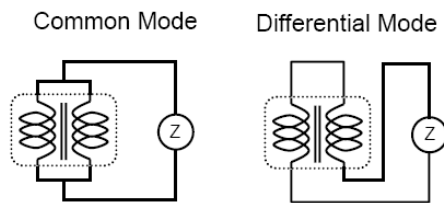
6. 标称值 Rating

Part No.	Common mode Impedance at 100MHz ($\Omega \pm 25\%$)	Differential mode Impedance at 100MHz ($\Omega \text{ max.}$)	Rated Voltage (V DC)	Rated Current (mA DC)	DC Resistance ($\Omega \text{ max.}$)
MGCC1210M900T-2-LF	90	15	5	160	4.0

测试仪器和备注 and remarks

*测试仪器 Test instruments: HP4982 或相应的设备 HP4982 or corresponding equipment.

*阻抗测量电路 Impedance measurement circuit:



* 使用温度范围操作温度范围 Operating Temperature Range : -40 to +85℃

* 保存温度范围 Storage Temperature Range : -40 to +125℃

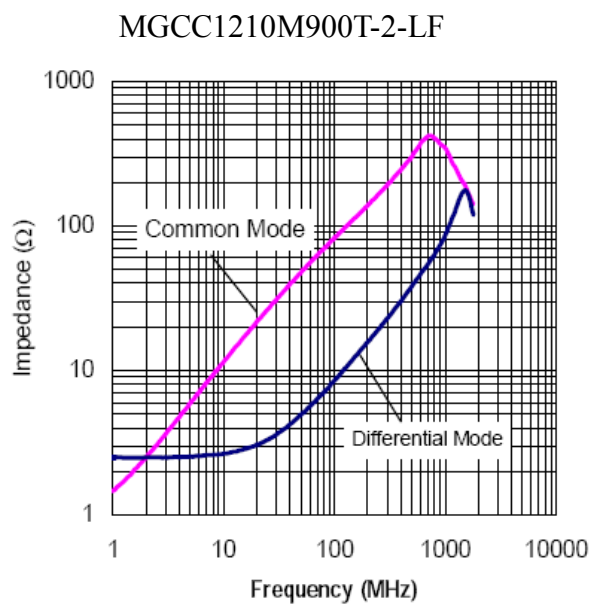
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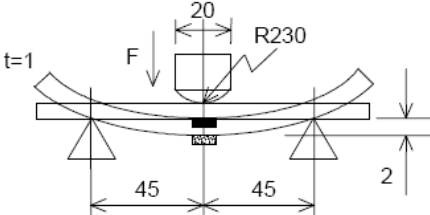
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7 信赖性试验 Reliable Performance

NO.	Item 项目	Specifications 规范	Test Methods 测试方法
1	Solder-Ability 可焊性	More than 90% of termination should be covered with new solder. 端电极焊锡覆盖率为 90%以上。	预热温度 Preheating temperature: 150 °C 预热时间 Preheating time: 1 min 焊锡温度 Solder temperature: 230±5 °C 时间 Duration: 4±0.5 s 浸入速度 Immersion speed: 25 mm/s
2	Resistance to Soldering Heat	Impedance variation: within ±30 % Remaining terminal: 70 % min. 阻抗变化: ±30%以内 端子附锡: 70%以上	预热温度 Preheating temperature: 150 °C 预热时间 Preheating time: 1 min 焊锡温度 Solder temperature: 260±5 °C 时间 Duration: 10±0.5 s 浸入速度 Immersion speed: 25 mm/s 试验后常温常湿环境中放置 (48±4) 小时后测量 48±4 hours of recovery under the standard condition after the test.
3	Bending Strength 弯曲试验	No abnormality of appearance Impedance variation: within ±30 % 外观无异常。 阻抗变化: ±30%以内	试验线路板: 玻璃环氧树脂 Testing board: Glass-epoxy 厚度 Thickness: 1.0 mm 
4	Vibration 振动	No abnormality of appearance Impedance variation: within ±30 % 外观无异常。 阻抗变化: ±30%以内	频率 Frequency: 10 to 55Hz 振幅 Amplitude: 1.5mm 方向及时间 Direction and time: X, Y and Z directions for 2 hours each.
5	Heat Cycle 热循环	No abnormality of appearance Impedance variation: within ±30 % 外观无异常 阻抗变化: ±30%以内	循环条件 Conditions for 1 cycle Step 1: -40±3 °C, 30±3 min Step 2: +25±2 °C, 0 to 5 min Step 3: +85±3 °C, 30±3 min Step 4: +25±2 °C, 0 to 5 min 共 5 次循环 Number of cycle: 5 cycle 放置 1-2 小时后, 在标准状态下测试 1 to 2 hours of recovery under the standard condition after the test
6	Load Life 负载寿命	No abnormality of appearance Impedance variation: within ±30 % 外观无异常 阻抗变化: ±30%以内	温度 Temperature: 85±2 °C 叠加额定电流 Applied current: Rated current 时间 Duration: 500 h 放置 1-2 小时后, 在标准状态下测试 1 to 2 hours of recovery under the standard condition after the test
7	Humidity 湿度	No abnormality of appearance Impedance variation: within ±30 % 外观无异常 阻抗变化: ±30%以内	温度 Temperature: 40±2 °C 湿度 Humidity: 90 to 95 %RH 时间 Duration: 500 h 放置 1-2 小时后, 在标准状态下测试 1 to 2 hours of recovery under the standard condition after the test
8	Humidity Load Life 湿度负载寿命	No abnormality of appearance Impedance variation: within ±30 % 外观无异常 阻抗变化: ±30%以内	温度 Temperature: 40±2 °C 湿度 Humidity: 90 to 95 %RH 叠加额定电流 Applied current: Rated current 时间 Duration: 500 h 放置 1-2 小时后, 在标准状态下测试 1 to 2 hours of recovery under the standard condition after the test

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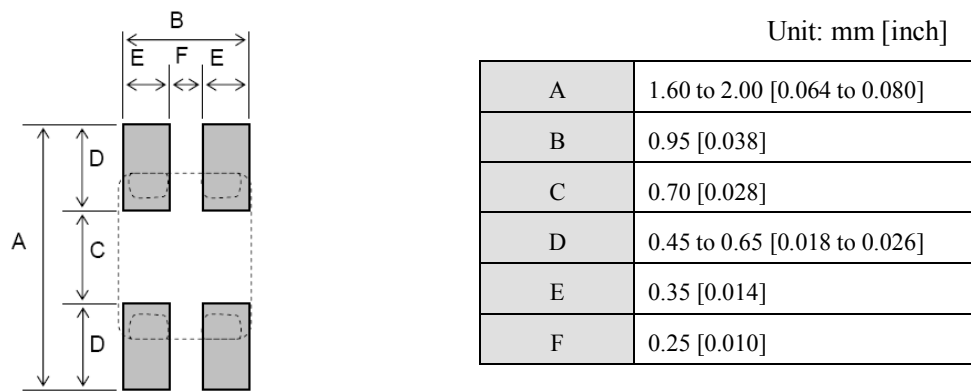
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8 焊接条件 Recommended Soldering Conditions

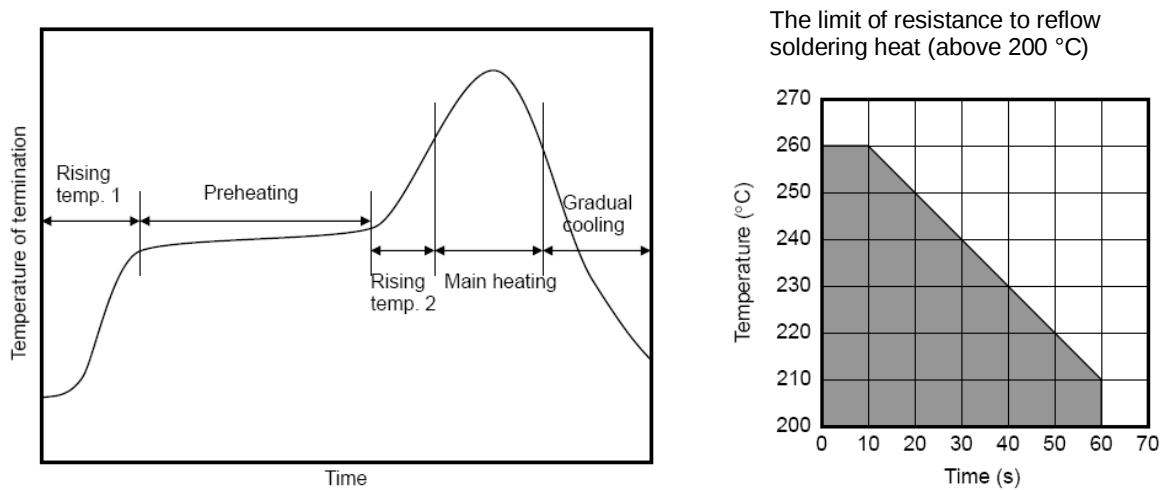
产品可用于回流焊 Product can be applied to reflow soldering.

(1) 推荐焊盘 Recommended Land Pattern (Only for Reflow Soldering)



(2) 回流焊条件 Reflow soldering conditions

<推荐的回流焊接温度曲线 Recommended Temperature Profile in Reflow Soldering >



Solder	Rising temp. 1	Preheating	Rising temp. 2	Main heating	Gradual cooling
SnAgCu lead-free (Sn-3Ag-0.5Cu)	The normal to Preheating temp.	150 to 170°C	Preheating to 210°C	250+10/-5°C	210 to 100°C
	30 to 60 S	60 to 120 S	20 to 40 S	Peak	1 to 4°C/S

Note :

- 1) 应在两次回流焊完成 Reflow soldering shall be within twice.
- 2) 当您使用不同的条件时，可以咨询我们。Please inquire of us when you use the different conditions.
- 3) 温度可根据电路板的尺寸和安装密度等改变
The temperature may be changed according to the size of the board and the mounting density, etc.
请在实际使用每种类型的板前测量温度
Please measure the temperature of termination in each type of the board before actual use.

(3) 手工返工 Repair with Hand Soldering

- 1) 允许采用热风或类似的方法预热。Allow enough preheating with a blast of hot air or similar method.
使用电烙铁的前端温度为 350℃或更低。Use a soldering iron with the tip temperature 350 °C or less.
焊接时间小于 3 秒 Solder for 3 seconds or less for each termination.
- 2) 不要用烙铁尖碰触产品 Never touch this product with a tip of the solder iron.

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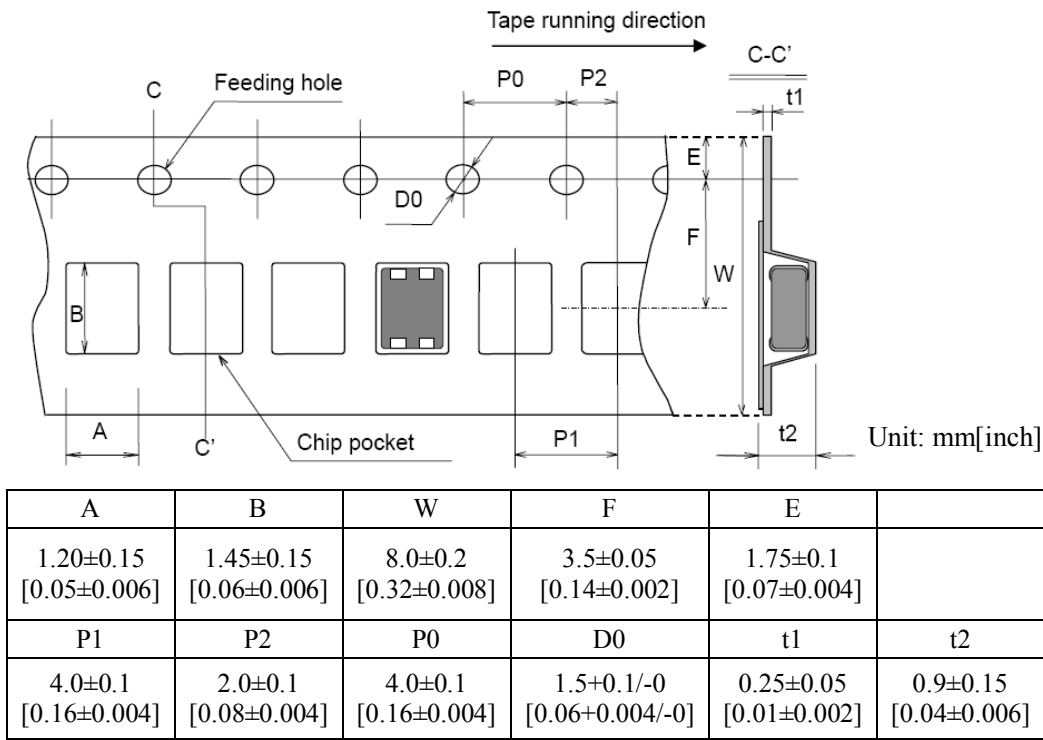
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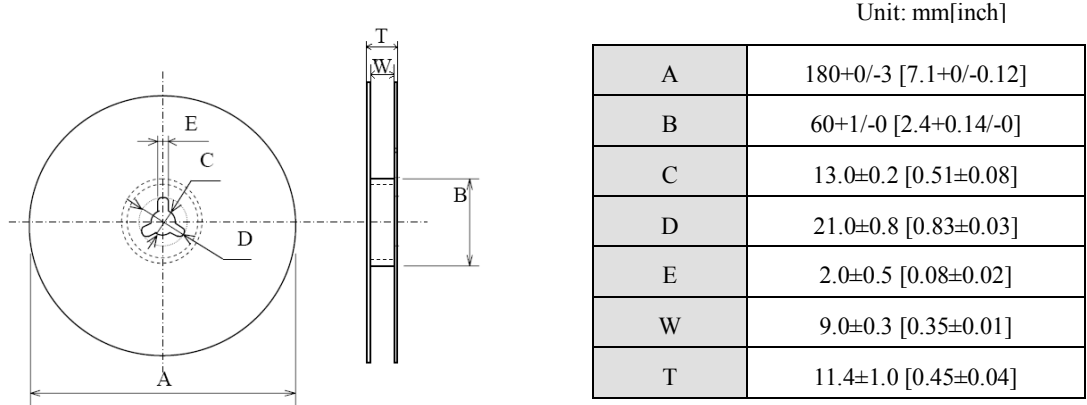
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9 包装 Packaging

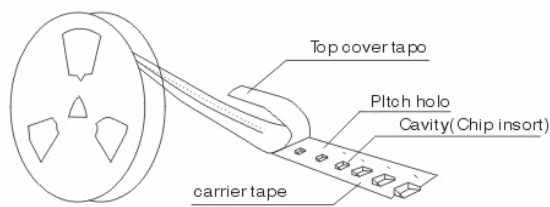
(1) 编带尺寸 Dimensions of Tape:



(2) 带轮尺寸 Dimensions of Reel



(3) 编带简图及拉伸方向 Taping figure and drawing direction:



(4) 包装数量 Packaging quantities: 5,000PCS/Reel.

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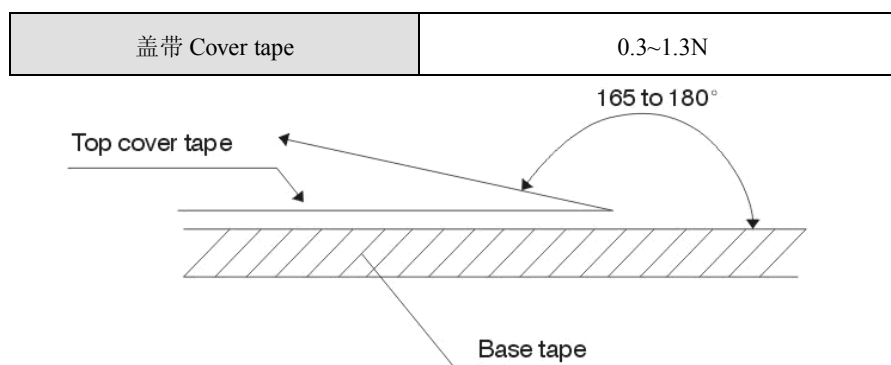
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(5) 盖带的剥离强度 Peeling strength of cover tape:



测试条件 Test condition:

- 1) 剥离角度 peel angle: 165°~180° vs. carrier tape.
- 2) 剥离速度 peel speed: 300mm/min $\pm$ 10%.

10 保管 Storage

(1) 保管期限 Storage period

距麦捷出厂检验时间六个月内，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；若时间超出六个月，应检查焊接性能后方可使用。

Products which inspected in MICROGATE 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) 保管条件 Storage conditions

① 存放货物的库房应满足以下条件

Products should be storage in the warehouse on the following conditions

温度 Temperature: $\leq 40^{\circ}\text{C}$

湿度 Humidity : $\leq 70\%$ relative humidity

不允许温、湿度有极剧变化。

No rapid change on temperature and humidity

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

Don't keep products in corrosive gases such as sulfur, chlorine gas or acid, or it may cause oxidization of electrode, resulting in poor solder ability.

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。

Products should be storage on the palette for the prevention of the influence from humidity, dust and so on.

④ 产品保管在库房中时，应避免热冲击，振动以及直接光照等等。

Products should be storage in the warehouse without heat shock, vibration, direct sunlight and so on.

⑤ 产品应密封包装

Products should be storage under the airtight packaged condition.

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