

客户 Customer: _____

日期 DATE: _____

纳入仕様书 SPECIFICATION

产品名称 PRODUCT NAME: 微波低通滤波器

Microwave Low-Pass Filter

贵司料号 YOUR PART NO.: _____

敝司料号 OUR PART NO.: MLPF18M1880P69-L18

版本号 VERSION.: V2.1

接受 RECEPTION THE SPECIFICATION HAS BEEN ACCEPTED. 该纳入仕様书已被我司接受 日期: DATE: 公司: COMPANY:		
批准 CFMD	审核 CHKD	接收 RCVD

本纳入仕様书共 12 页

MANUFACTURING NAME

深圳市麦捷微电子科技股份有限公司
 SHENZHEN MICROGATE TECHNOLOGY CO., LTD
 TEL: 86-755-28085000
 FAX: 86-755-28085605

CFMD. 批准	CHKD. 审核	DSGD. 担当
梁启新	付迎华	曾艳锋

深圳市麦捷微电子科技股份有限公司
 地址: 深圳市坪山新区坪山大道 6075 号龙田科技园二巷 6 号
 电话(Tel): 0755-28085000 传真(Fax): 0755-28085605

邮编(Postcode): 518118

纳入仕様书改定履历 MODIFY HISTORY OF SPECIFICATION

Ver.	DATE	CONTENT	APPROVED
1.0	2015.05.16	初稿	梁启新
1.1	2015.08.14	修订电性参数，添加曲线图	梁启新
1.2	2018.01.09	增加功率容量	梁启新
2.0	2020.06.12	更新信赖性试验内容	付迎华
2.1	2020.11.16	更新包装方式 Modify Packaging	付迎华

目录 CATALOG

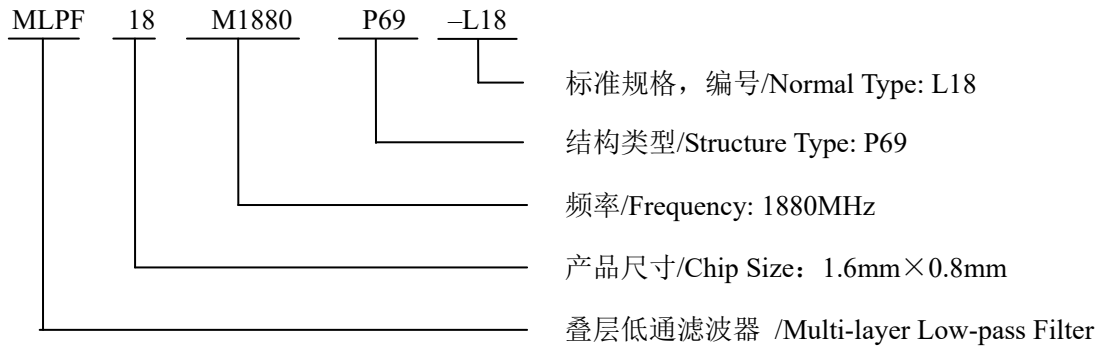
1 适用范围 Scope.....	4
2 品名构成 Product Identification.....	4
3 形状和尺寸 Appearance and Dimensions.....	4
4 测试条件 Testing Conditions.....	5
5 电气性能 Electrical Characteristics.....	5
6 信赖性试验 Reliable Performance.....	6
7 焊接条件 Recommended Soldering Conditions.....	8
8 包装 Packaging.....	9

1 适用范围 Scope

“麦捷”微波低通滤波器系列产品设计用于 WIFI、GSM、Bluetooth、PDA 和无绳电话机中，具有低的插入损耗、高的衰减和小体积 SMD 片式设计，能减少复杂的调校工作，可以简化电路设计。

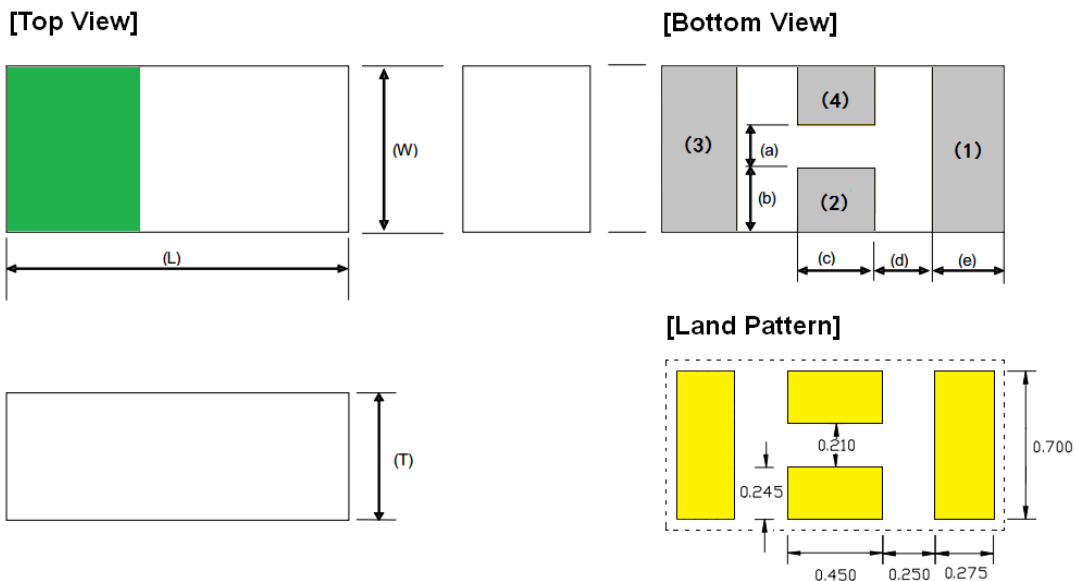
“Microgate” Microwave Band-Pass filter series are designed to be used in WLAN、GSM、Bluetooth、PDA & cordless phones with low insertion loss and high attenuation as well as small size SMD chip design, which can simplify your complex tuning and circuit design.

2 品名构成 Product Identification



3 形状、尺寸和材料 Appearance, Dimensions and Material

Unit:mm



[Terminal Configuration]

(1)	(2)	(3)	(4)
IN/OUT	GND	OUT / IN	GND

[Dimension]

L	W	T	a	b	c	d	e
1.6±0.1	0.8±0.1	0.6±0.1	0.21±0.05	0.295±0.05	0.4±0.05	0.3±0.05	0.3±0.05

4 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 (-40 to +85°C)

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

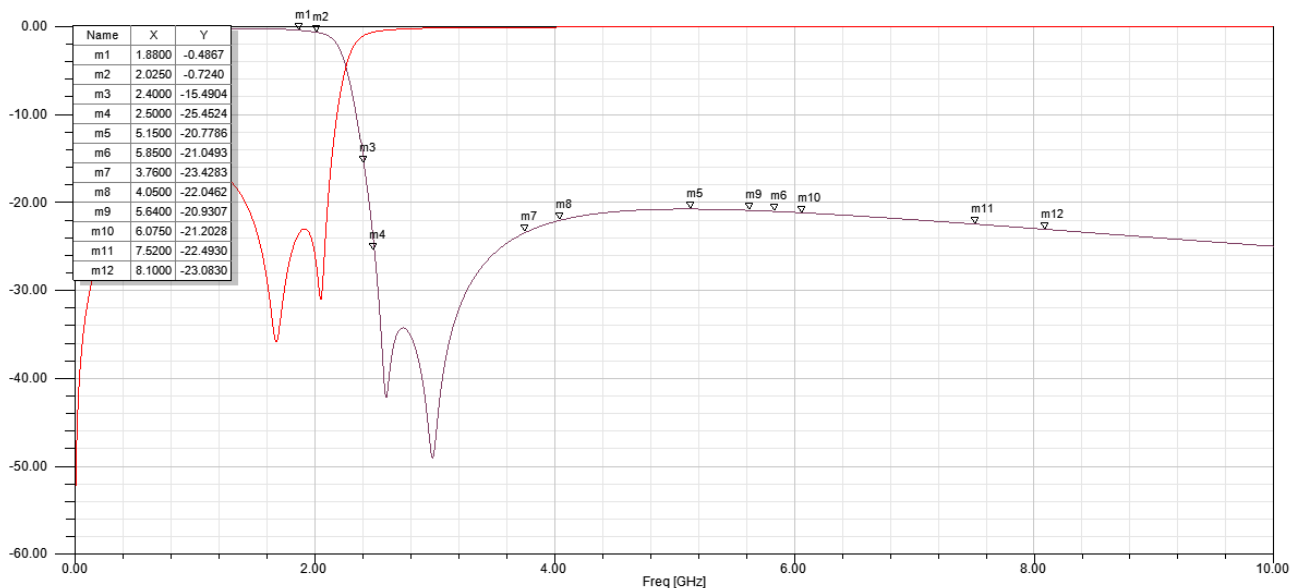
大气压强 Atmospheric Pressure : 86 to 106 kPa

5 电气性能 Electrical Characteristics

操作温度范围 Operating Temperature Range : -40 to +85°C

保存温度范围 Storage Temperature Range : -40 to +85°C

No.	Item (项目)	Specifications (特性)
5.1	Frequency Range 频率范围	1880~2025MHz
5.2	Insertion Loss 插入衰耗	0.8dB max (at 25 °C) 1.0dB max (at -40 ~ +85 °C)
5.3	V.S.W.R (in BW) 驻波比	≤2.0
5.4	Attenuation 阻带衰耗	≥15dB (2400MHz~2500MHz) ≥20dB (5150MHz~5850MHz) ≥20dB (3760MHz~4050MHz) ≥15dB (5640MHz~6075MHz) ≥20dB (7520MHz~8100MHz)
5.5	Power Capacity 功率容量	2.0 W Max.



6 信赖性试验 Reliable Performance

Item 项目	分类	Test condition 测试方法	Standard 标准
Solderability 可焊性	焊接 可靠性	245±5°C,5±1s	a. No mechanical damage be noticed. 外观不应见机械损伤 b. More than 95% of termination should be covered with new solder. 端电极焊锡覆盖率大于 95%。
Leaching Resistance 耐焊性		260±5°C,10±1s	a. No mechanical damage should be noticed. 外观不应见机械损伤 b. More than 75% of termination should be covered with new solder. 端电极焊锡覆盖率大于 75%。
Termination Strength 引出端强度	机械 可靠性	The device should not be broken after tensile force of 1.0kg is slowly applied to pull a lead pin of the fixed device in the lead axis direction for 10±1 seconds. 在产品电极端子上或表面上应能承受 1kg 垂直拉力 10±1 秒	a. The terminal and body should be no damage 端头和瓷体不应见损伤
抗弯强度 Board Flex	机械 可靠性	1、The test samples shall be soldered to the board 2、 Bending speed is 1mm/s 3、 Keeping the P.C Board 2 mm minimum for 60 seconds 1、将产品焊在 P.C.B 板上 2、弯曲速度是 1 毫米/秒 3、保持 PCB 板 2 毫米的最低 60 秒钟	1、 a. No mechanical damage should be noticed. 不应见机械损伤; 2、 Samples shall satisfy electrical specification after test. 样品电性能符合规格要求
Drop 跌落	机械 可靠性	Drop 10 times on a concrete floor from a height of 1m. 从距混凝土地面 1m 高度自由下落, 重复 10 次	1、 a. No mechanical damage should be noticed. 不应见机械损伤; 2、 Samples shall satisfy electrical specification after test. 样品电性能符合规格要求;
Vibration 振动	机械 可靠性	Frequency 频率: 10 to 55Hz Amplitude 振幅: 1.5mm Direction and time 方向及时间 :X,Y and Z directions for 2 hours each.	1、 a. No mechanical damage should be noticed. 不应见机械损伤; 2、 Samples shall satisfy electrical specification after test. 样品电性能符合规格要求;
*High Temperature Storage 高温贮存	环境可靠 性	Temperature 温度:125±2°C Time 时间: :1000hrs; Measurement to be made after keeping at room temperature for 2~3hrs; 室温下静置 2~3hrs 后进行测试;	1、 a. No mechanical damage should be noticed. 不应见机械损伤; 2、 Samples shall satisfy electrical specification after test. 样品电性能符合规格要求;电性能参考

<p>*Low Temperature Storage 低温贮存</p>	<p>环境可靠性</p>	<p>Temperature 温度: $-55 \pm 2^{\circ}\text{C}$ Time 时间: :1000hrs; Measurement to be made after keeping at room temperature for 2~3hrs 室温下静置 2~3hrs 后进行测试;</p>	<p>1、 a. No mechanical damage should be noticed. 不应见机械损伤; 2、 Samples shall satisfy electrical specification after test. 样品电性能符合规格要求;电性能参考<QW-QA-227></p>
<p>*Humidity Resistance 稳态湿热</p>	<p>环境可靠性</p>	<p>Temperature 温度: $85 \pm 2^{\circ}\text{C}$ Time 时间: 1000hrs Humidity 湿度: 85%~90% Measurement to be made after keeping at room temperature for 2~3hrs 室温下静置 2~3hrs 后进行测试;</p>	<p>1、 a. No mechanical damage should be noticed. 不应见机械损伤; 2、 Samples shall satisfy electrical specification after test. 样品电性能符合规格要求;</p>
<p>*Temperature Cycling 温度循环</p>	<p>环境可靠性</p>	<p>1、 1000 cycles (-40°C to $+125^{\circ}\text{C}$). 2、 30min maximum dwell time at each temperature extreme. 1 min. maximum transition time. 3、 Measurement at 2~3 hours after test conclusion. 1、 1000 次循环 (-40°C 到 125°C) 2、 在每个温度极端区最大停留时间 30 分钟, 最大的过渡时间 1 分钟。 3、 室温下静置 2~3 小时后进行测试。</p>	<p>1、 a. No mechanical damage should be noticed. 不应见机械损伤; 2、 Samples shall satisfy electrical specification after test. 样品电性能符合规格要求;电性能参考</p>
<p>High Temperature Power Test 高温功率耐受试验</p>	<p>环境可靠性</p>	<p>1、 Power range depend on SPEC. 2、 Temperature: 85°C; 3、 Time: 30min 1、 在产品输入端加载额定功率信号进行试验; 2、 温度: 85°C; 3、 时间: 30min;</p>	<p>1、 a. No mechanical damage should be noticed. 不应见机械损伤; 2、 Samples shall satisfy electrical specification after test. 样品电性能符合规格要求</p>

7 焊接条件 Recommended Soldering Conditions

1、焊剂 Flux, Solder

① 使用松香助焊剂，禁止使用卤化物含量超过 0.2wt% 的强酸性助焊剂。

Use rosin-based flux. Don't use highly acidic flux with halide content exceeding 0.2wt% (chlorine conversion value).

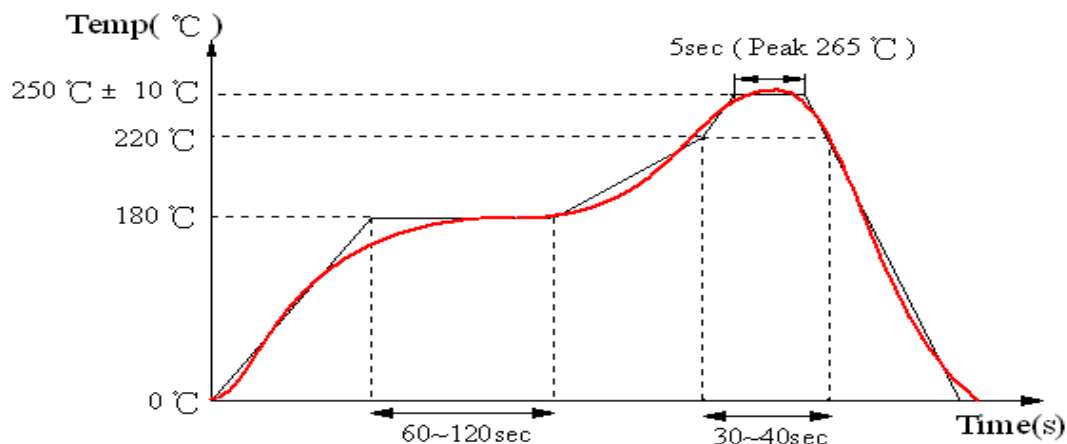
② 使用纯锡焊料 Use Sn solder.

2、回流焊条件 Reflow 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℃，焊接完后冷却时，产品表温与溶剂温度之间的温差最大不允许超出 100℃。预热不足有可能引发产品表面裂纹，导致产品品质下降。

Pre-heating should be in such a way that the temperature difference between solder and product surface is limited to 150℃ max. Cooling into solvent after soldering also should be in such a way that temperature difference is limited to 100℃ max. Unwrought pre-heating may cause cracks on the product, resulting in the deterioration of products quality.

● 标准回流焊曲线 Standard soldering profile.



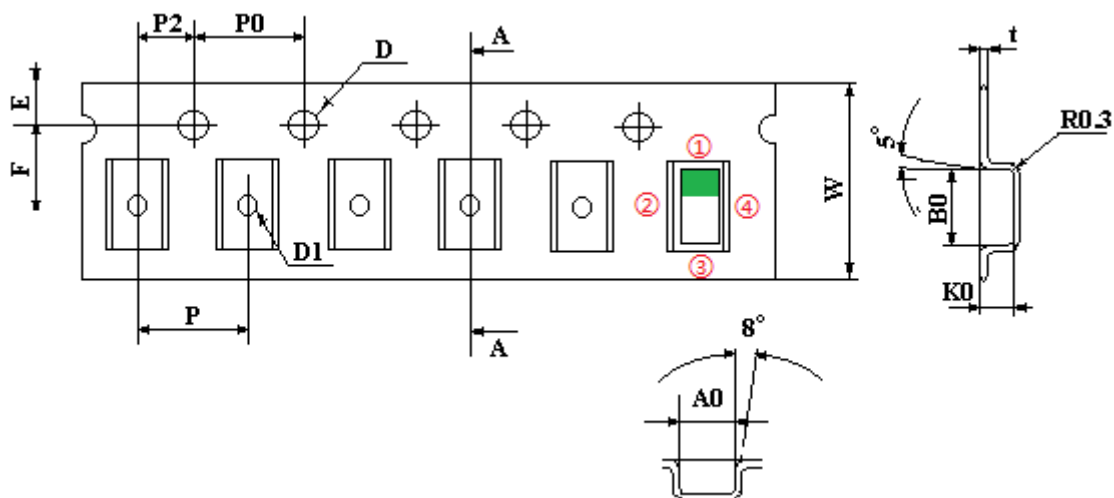
3、手工返工 Reworking with soldering iron

当使用电烙铁进行手工焊接时，以下条件必须严格遵守 The following conditions must be strictly followed when using a soldering iron.

预热 Pre-heating	150°C, 1 minute
尖端温度 Tip temperature	350°C max
输出功率 Soldering iron output	80w max
电烙铁头尖端尺寸 End of soldering iron	φ3mm max
焊接时间 Soldering time	3 seconds max

8 包装 Packaging

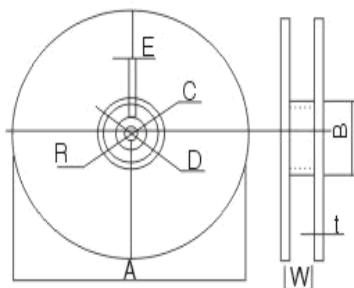
①编带尺寸 Dimensions of Tape:



W	P	E	F	P2	D	D1
8.00+0.30/-0.10	4.00±0.10	1.75±0.10	3.50±0.05	2.00±0.05	1.50+0.10/-0.00	0.70+0.25/-0.10
P0	10P0	A0	B0	K0	T	Tape Material
4.00±0.10	40.00±0.20	0.95±0.10	1.82±0.10	0.75±0.10	0.22±0.05	塑带 plastic carrier tape

②带轮尺寸 Dimensions of Reel

Unit: mm



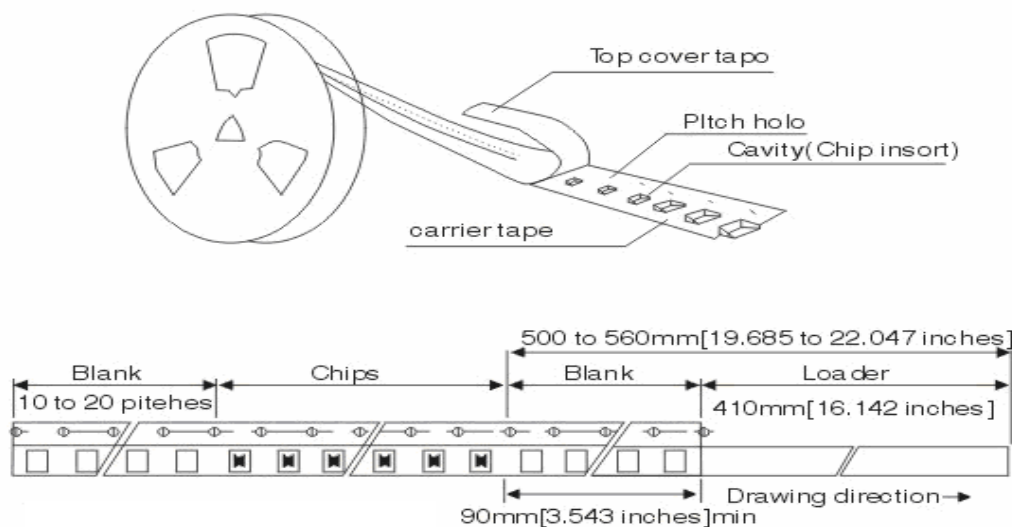
Reel material: PS (Polystyrene)

A	178±2
B	60±2
C	13.0±0.5
D	21.0±0.8
E	2.0±0.5
W	8.5±1.0
t	1.2±0.2
R	1.0±0.25

③编带抗拉强度 Pulling strength of tapes:

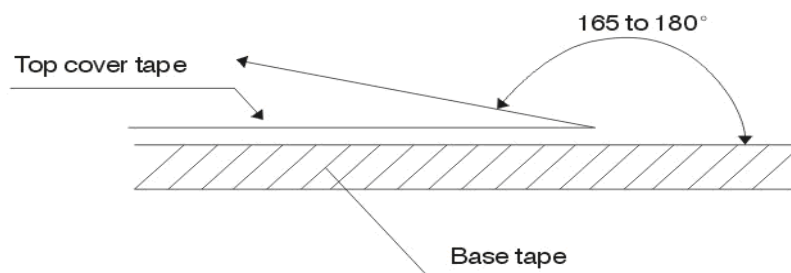
载带 Carrier tape	10N or more (1kgf or more)
上盖带 Cover tape	5N or more (1kgf or more)

④编带简图及拉伸方向 Taping figure and drawing direction:



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

盖带 Cover tape	0.3~0.7N (30gf~70gf)
---------------	----------------------



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±10%.

⑥ 包装数量 Packaging quantities: 4000 PCS / Reel