

客户 Customer: _____

日期 DATE: _____

纳入仕様书

SPECIFICATION

产 品 名 称 PRODUCT NAME: 声表双工器

SAW Duplexer

贵 司 料 号 YOUR PART NO.: _____

敝 司 料 号 OUR PART NO.: MS16U836M-DU05C

版 本 号 VERSION.: V1.0

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

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
赵拥军	赖定权	赵新佳

深圳市麦捷微电子科技股份有限公司
地址:深圳市坪山区龙田街道竹坑社区科技路麦捷科技智慧园
电话(Tel): 0755-28085000 传真(Fax): 0755-28085605

邮编(Postcode): 518110

1

纳入仕様书改定履历

MODIFY HISTORY OF SPECIFICATION

NO.	修改日期/DATE	修改内容/CONTENT	批准/APPROVED
1.0	2022.02.28	初稿 /New Released	赵拥军

目录 CATALOG

1 适用范围 Scope.....	4
2 品名构成 Product Identification.....	4
3 尺寸和管脚定义 Dimensions and PIN Configurations.....	4
4 推荐焊盘与测试电路 Recommended Land Pattern and Test Circuit.....	4
5 电气性能 Electrical Characteristics.....	5
6 包装 Packaging.....	11
7 装箱清单及标志 Packing documents and marking.....	12
8 保管 Storage.....	14

1 适用范围 Scope

麦捷声表滤波器系列产品设计用于 WIFI、GPS、移动电话和无绳电话机等相关市场中。

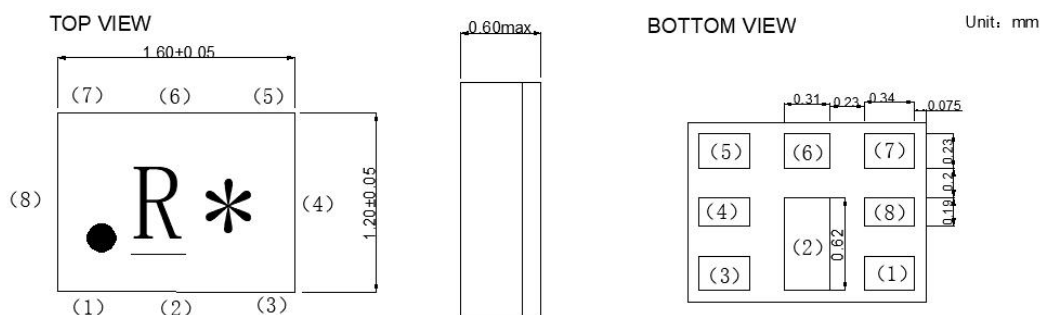
Microgate SAW Component is applicable for WIFI/GPS/Mobile phone/Cordless phone relevant market.

2 品名构成 Product Identification

MS 16 U 836M - DU 05 C
① ② ③ ④ ⑤ ⑥ ⑦

- ① 麦捷声表滤波器/Microgate SAW
- ② 尺寸/Size: 16 (18-1814, 16-1612, 15-1511, 14-1411, 11-1109)
- ③ 输出/Output: (B-Balance out, U-Unbalance out)
- ④ 频率/Frequency: 836M-836MHz
- ⑤ 型号/Type: (QP-QPX, DU-Duplexer, DI-Diplexer, Tx-Tx SAW, Rx-Rx SAW)
- ⑥ 频段/Band: 05-Band5
- ⑦ 流水号/Serial number

3 尺寸和管脚定义 Dimensions and PIN Configurations

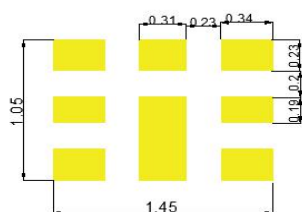


PIN NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PIN Name	Rx	GND	Tx	GND	GND	ANT	GND	GND

4 推荐焊盘与测试电路 Recommended Land Pattern and Test Circuit

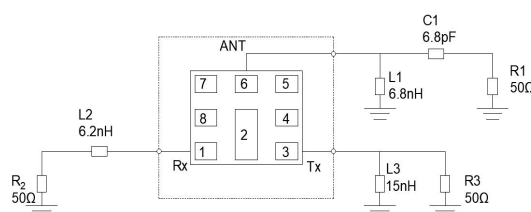
Land Pattern

Unit:mm



Test Circuit

Top View



深圳市麦捷微电子科技股份有限公司

地址:深圳市坪山区龙田街道竹坑社区科技路麦捷科技智慧园

电话(Tel): 0755-28085000

传真(Fax): 0755-28085605

邮编(Postcode): 518110

5 电气性能 Electrical Characteristics

操作温度范围 Operating Temperature Range : -20 to +85°C

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

测试温度范围 Test Temperature: 25°C±2°C

湿度敏感等级 Moisture Sensitivity Level: MSL 2a

静电敏感等级 Electrostatic Discharge(ESD) Sensitivity: 250V (Human Body Model)

端口电压 D.C. Volatage between the terminals: 3V (25°C±2°C)

Table1. Electrical Specification

No.	Item		Frequency (MHz)	Specification			
				Min	Typ	Max.	Unit
1	Tx to ANT	Insertion Loss	824~849		1.7	2	dB
2		Ripple Deviation	824~849		0.6	1.2	dB
3		Absolute Attenuation	10~420	35	44		dB
4			420~494	32	38		dB
5			494~701	24	28		dB
6			699~716	24	27		dB
7			701~728	24	27		dB
8			728~764	24	27		dB
9			764~804	26	29		dB
10			869~894	45	49		dB
11			1559~1606	32	38		dB
12			1638~1708	30	40		dB
13			1710~1785	30	41		dB
14			1850~1880	30	41		dB
15			1885~1920	30	42		dB
16			1920~1980	27	40		dB
17			2110~2170	25	36		dB
18			2400~2494	22	32		dB
19			2472~2547	22	31		dB
20			3286~3406	15	25		dB
21			3300~3800	15	22		dB
22			3300~4200	15	20		dB
23			4110~4255	12	20		dB
24			4400~5000	12	18		dB
25			4900~5950	10	17		dB
26		VSWR	824~849(Tx)		1.6	2.0	
27			824~849(ANT)		1.6	2.0	
28	Input Signal Level		+30dBm, 5000h(55℃)				

Table2. Electrical Specification

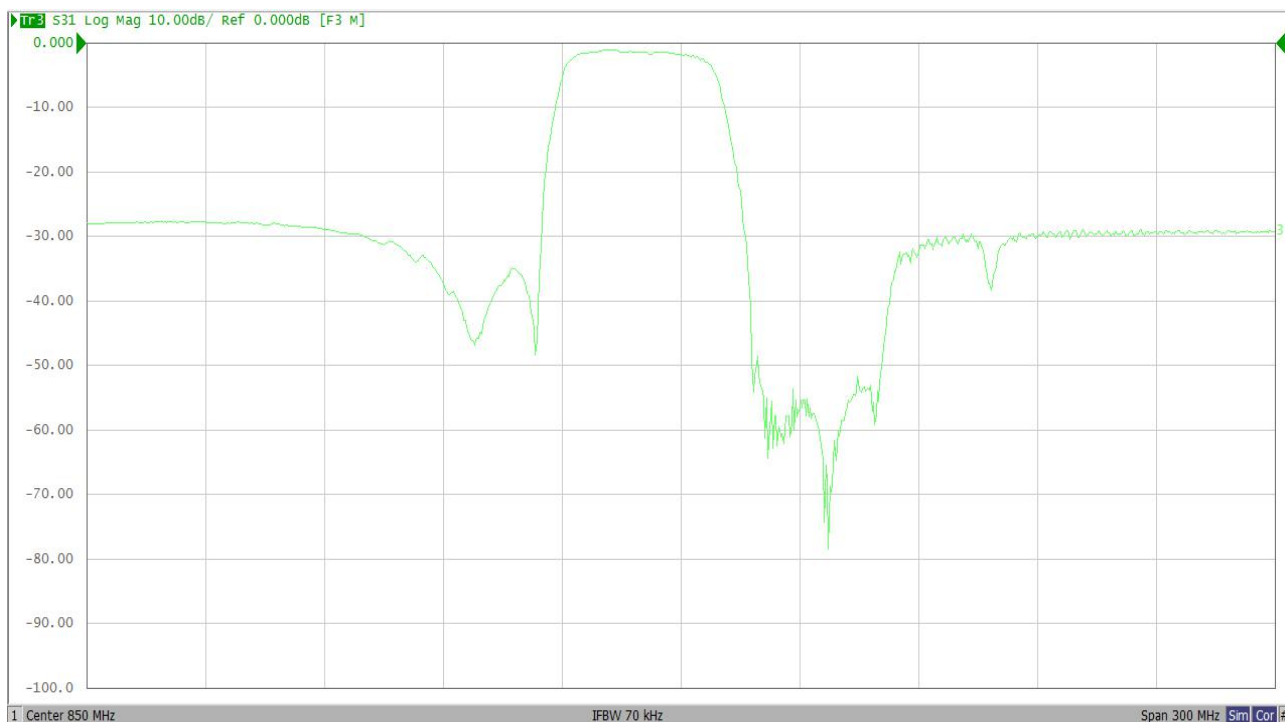
No.	Item		Frequency (MHz)	Specification			
				Min	Typ.	Max.	Unit
1	ANT to Rx	Insertion Loss	869~894		2	2.3	dB
2		Ripple Deviation	869~894		0.8	1.5	dB
3		Absolute Attenuation	10~447	48	58		dB
4			447~824	41	49		dB
5			824~849	45	58		dB
6			849~854	33	45		dB
7			909~979	15	18		dB
8			1693~1743	48	60		dB
9			1710~1785	50	61		dB
10			1850~1920	50	65		dB
11			1920~1980	50	66		dB
12			1980~2400	50	68		dB
13			2400~2500	50	72		dB
14			2517~2592	50	73		dB
15			2607~2682	50	73		dB
16			3300~3800	40	58		dB
17			3300~4200	38	53		dB
18			4400~5000	32	46		dB
19			4900~5950	30	41		dB
20		VSWR	869~894(ANT)		1.7	2.0	
21			869~894(Rx)		1.7	2.0	

Table3. Electrical Specification

No.	Item		Frequency (MHz)	Specification			
				Min	Typ	Max.	Unit
1	Tx to Rx	Isolation	824~849	50	52		dB
2			869~894	50	54		dB

Frequency Performance

Tx to ANT



深圳市麦捷微电子科技股份有限公司

地址:深圳市坪山区龙田街道竹坑社区科技路麦捷科技智慧园

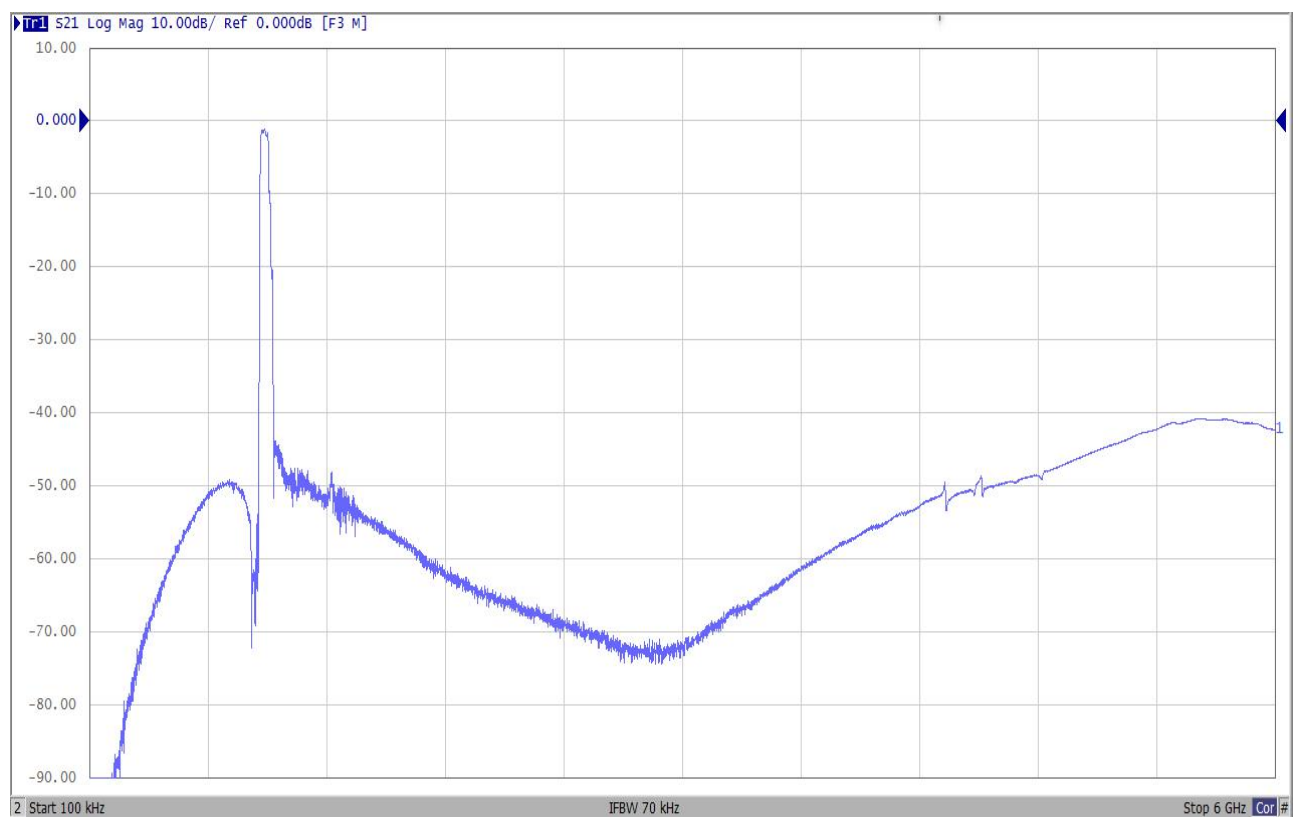
电话(Tel): 0755-28085000

传真(Fax): 0755-28085605

邮编(Postcode): 518110

7

ANT to Rx



深圳市麦捷微电子科技股份有限公司

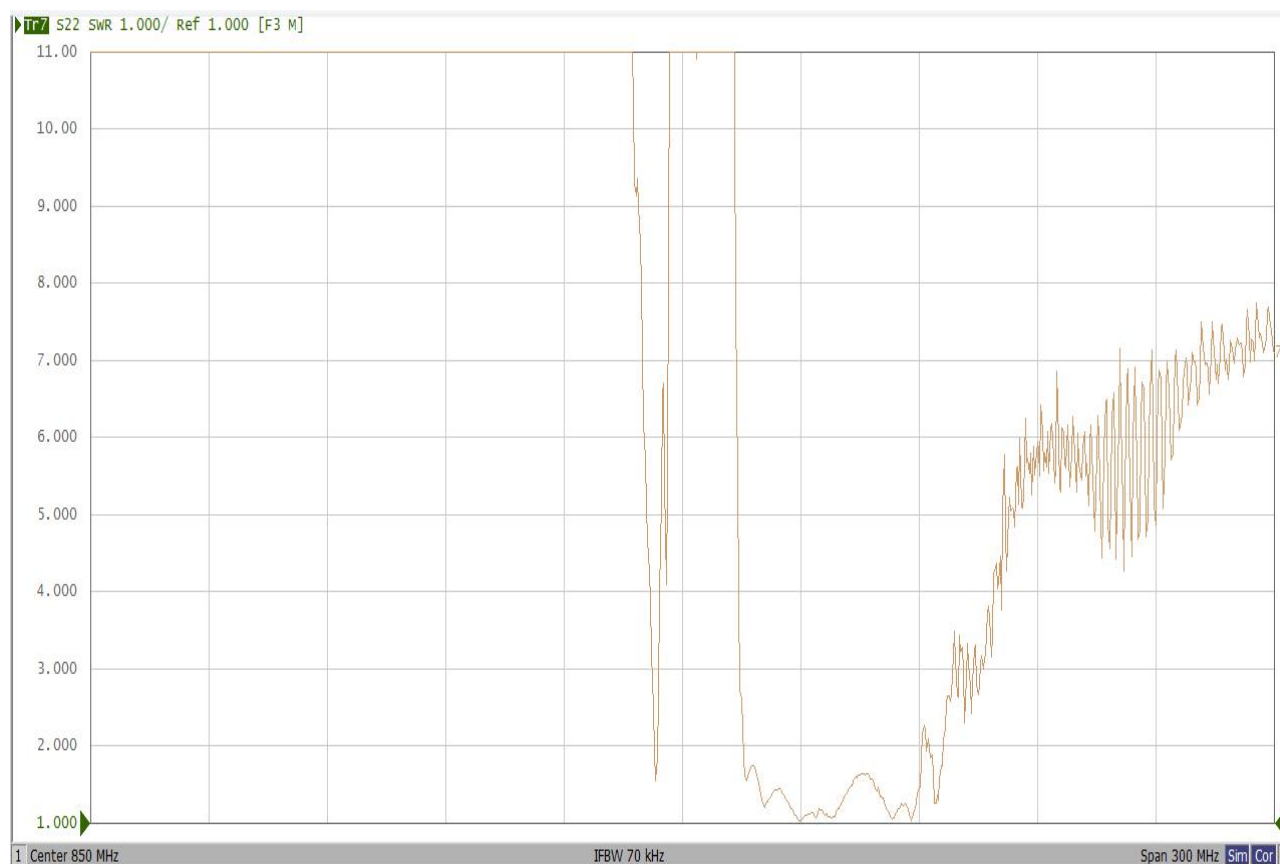
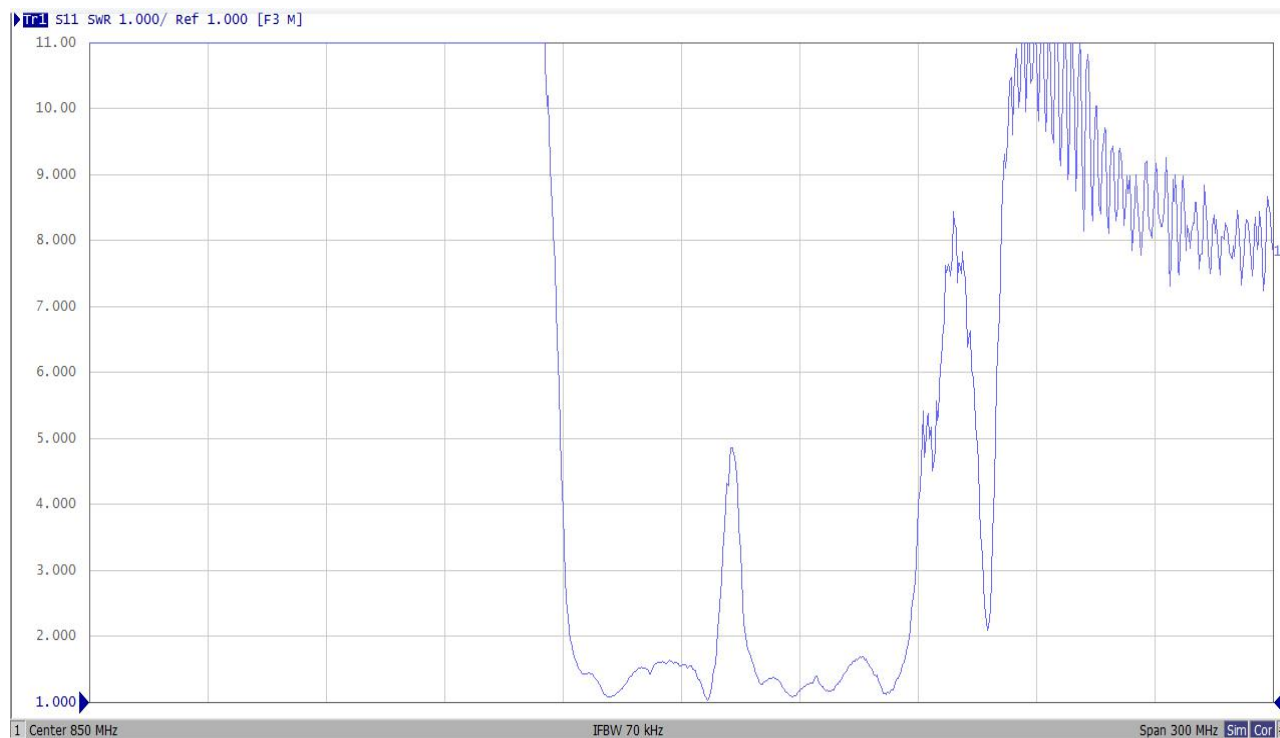
地址:深圳市坪山区龙田街道竹坑社区科技路麦捷科技智慧园

电话(Tel): 0755-28085000

传真(Fax): 0755-28085605

邮编(Postcode): 518110

VSWR



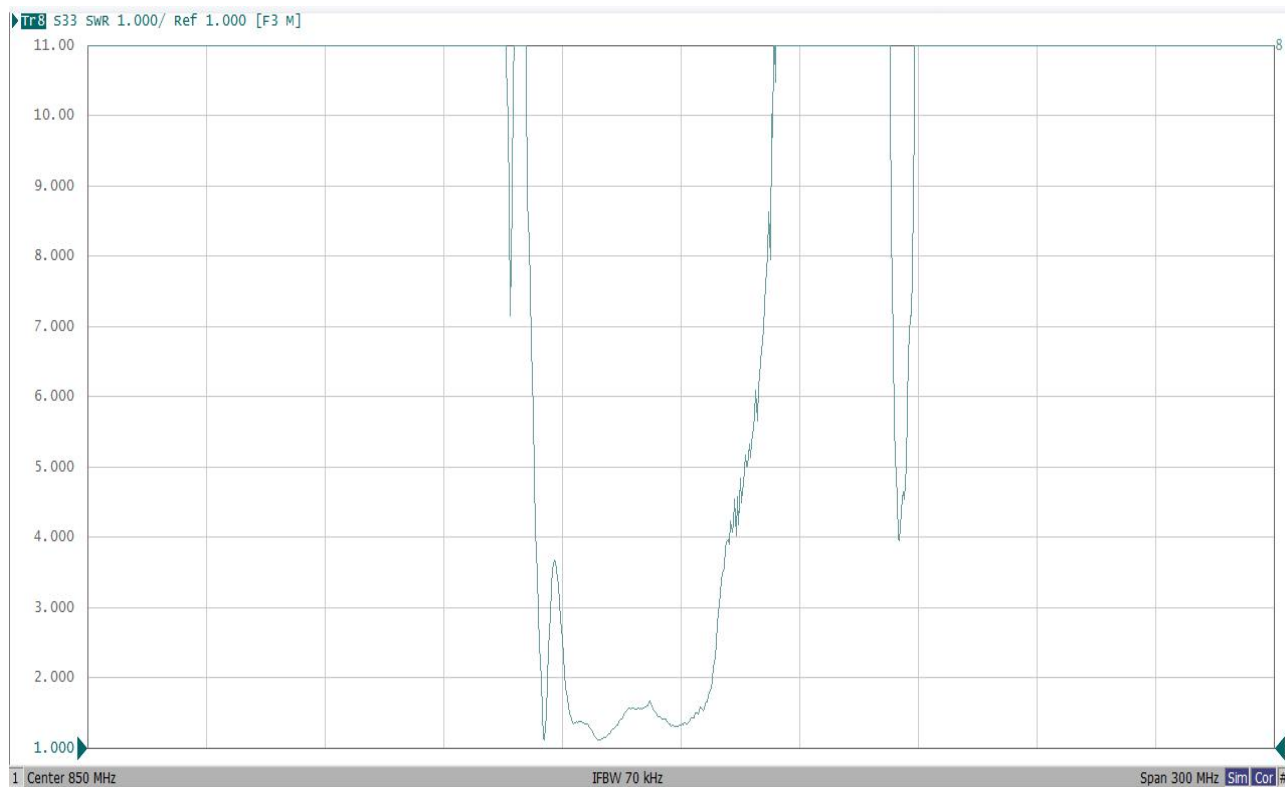
深圳市麦捷微电子科技股份有限公司

地址:深圳市坪山区龙田街道竹坑社区科技路麦捷科技智慧园

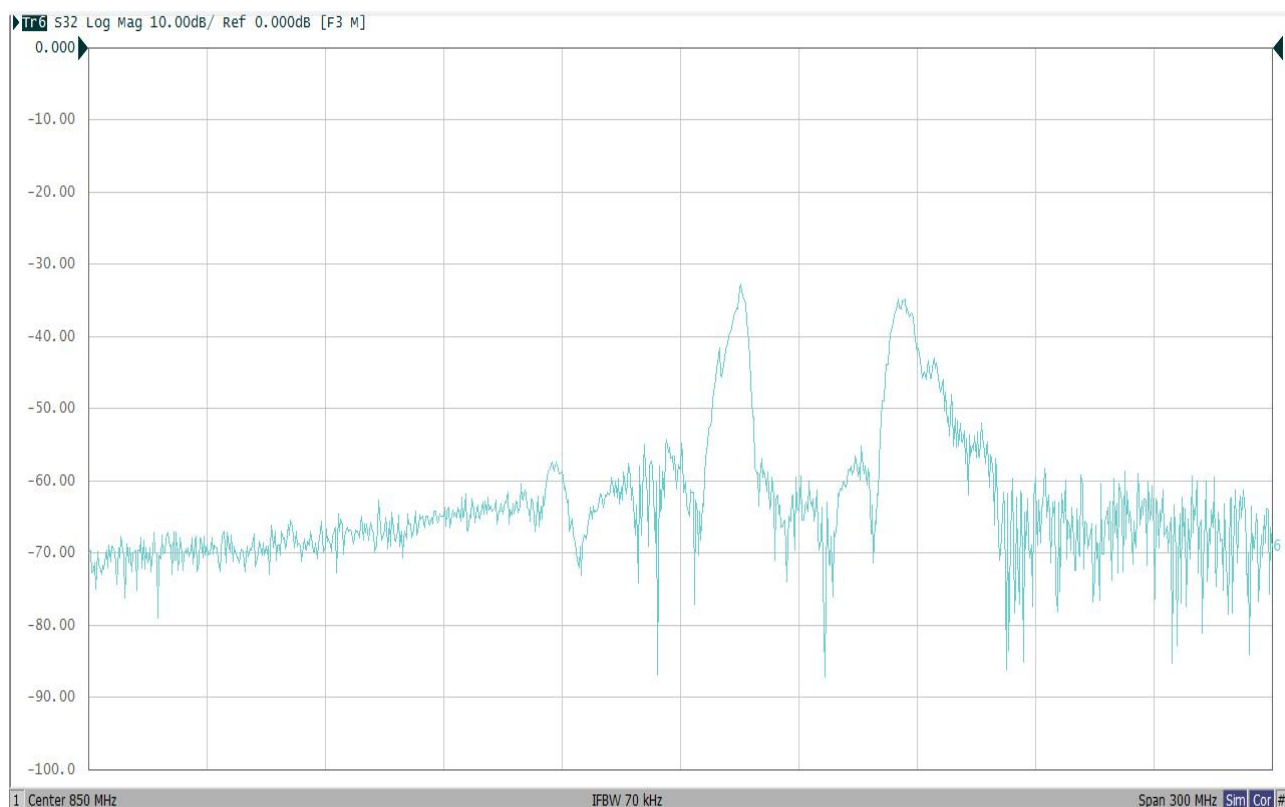
电话(Tel): 0755-28085000

传真(Fax): 0755-28085605

邮编(Postcode): 518110

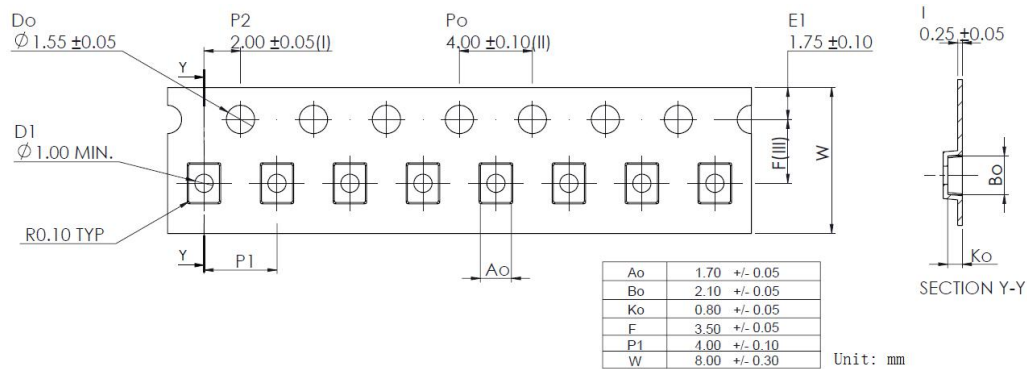


Isolation Tx to Rx



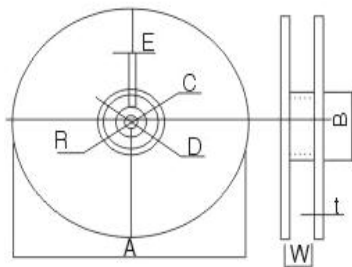
6 包装 Packaging

① 编带尺寸 Dimensions of Tape:



② 带轮尺寸 Dimensions of Reel

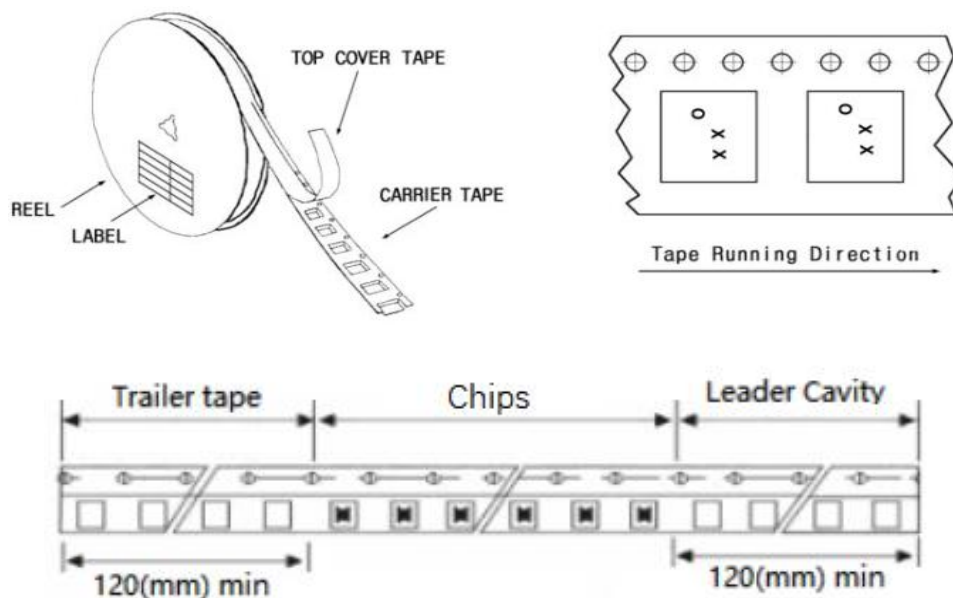
Unit: mm



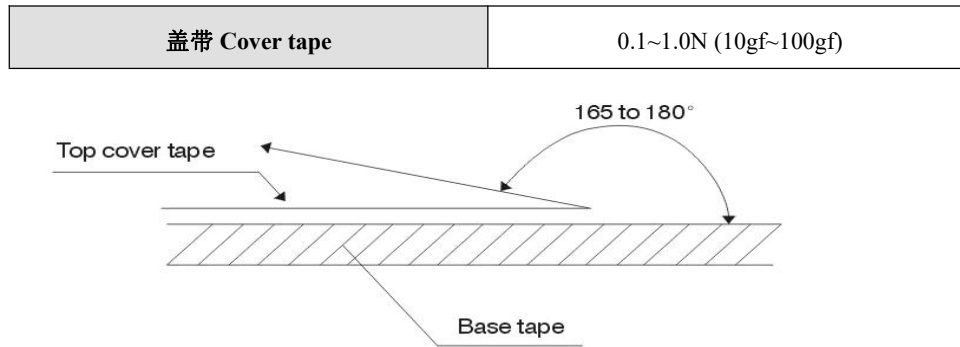
Reel material: PS (Polystyrene)

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



④ 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±10%.

⑤ 包装数量 Packaging quantities: 3000 PCS / Reel

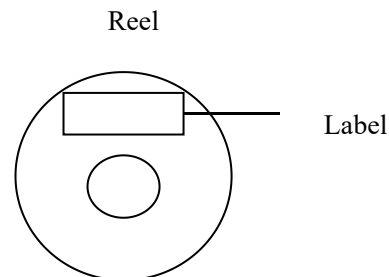
7 装箱清单及标志 Packing documents and marking

① 包装文件 Packing documents

- a. 装箱清单 Packing list.
- b. 合格证书 Certificate of compliance.

② 盘上标记 Marking on reels:

- a. 麦捷料号 MICROGATE Part No.
- b. 生产批号 Lot number
- c. 盘装数量 Quantity per reel
- d. 检验员号 Inspector No.



以上内容必须在标签上注明. All above shall be shown on marking label

麦捷公司标签如下所示: MICROGATE marking label will be as following:

MICROGATE		
CUSTOMER:	P. O. NO	
CUSTOMER PART NO:	DATE CODE	LOT NO
MG PART NO:	QUANTITY	INSP. NO



MG PART NO

深圳市麦捷微电子科技股份有限公司

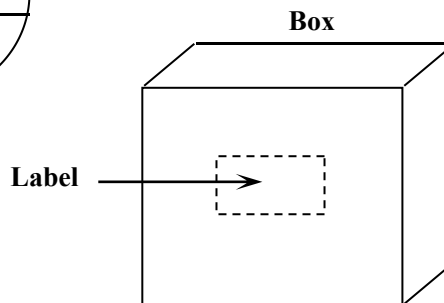
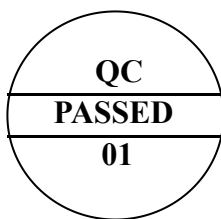
地址: 深圳市坪山区龙田街道竹坑社区科技路麦捷科技智慧园

电话(Tel): 0755-28085000

传真(Fax): 0755-28085605

邮编(Postcode): 518110

检验合格后, 检验员在标签上盖上合格章。合格章如下所示: The eligible reels will be pressed a mark onto the surface. The mark will be as following:



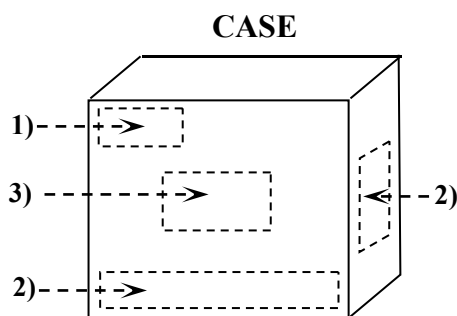
③ 内包装盒标记: Marking on inner box

- a. 型号 MICROGATE part No.
- b. 每盒数量 Quantity per box
- c. 包装日期 Date

以上内容必须在标签上注明 (标签见 7.2 所示)。Above shall be shown on marking label (The marking label is shown in item 7.2).

④ 外包装箱标记 Marking on outer case:

- 1) 制造商 Manufacturer: "MICROGATE" ①
- "中国深圳制造" "Made in Shenzhen CHINA" ②
- 2) 发运标记 Ship marking:
"向上" "UP", "小心轻放" "HAND CARE", "防潮" "MOISTURE-PROOF".
- 3) 包装标签包括以下内容 Packing label include the following:
 - a. 型号 MICROGATE Part No
 - b. 总数量 Total quantity per case
 - c. 包装日期 Date;



以上内容必须在标签上注明。(参见 7.2 所示)

All above shall be shown on marking label. (The marking label is shown in item 7.2)

8 保管 Storage

保存条件 Storage conditions

- 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

- 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.

- 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.

●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, and direct sunlight and so on.

- 产品应密封包装 Products should be storage under the airtight packaged condition.