

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.: MS16U1G95-DU01C

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

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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

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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。

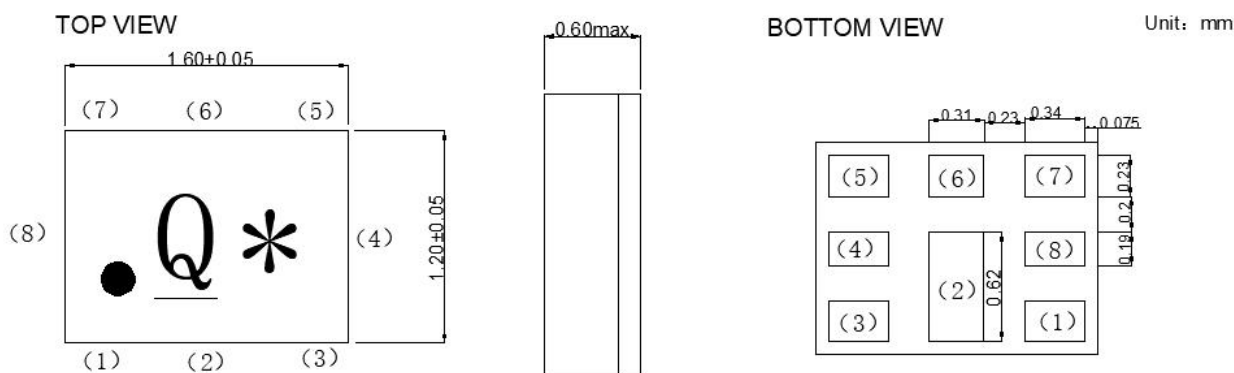
Microgate SAW Component is applicable for WIFI/GPS/Mobile phone/Cordless phone relevant market.

2 品名构成 Product Identification

MS 16 U 1G95 - DU 01 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: U (B-Balance out, U-Unbalance out)
- ④ 频率/Frequency: 1G95-1.95GHz
- ⑤ 型号/Type: DU (QP-QPX, DU-Duplexer, DI-Diplexer, Tx-Tx SAW, Rx-Rx SAW)
- ⑥ 频段/Band: 01-Band1
- ⑦ 流水号/Serial number

3 尺寸和管脚定义 Dimensions and PIN Configurations

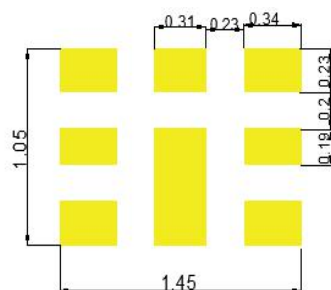


PIN NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PIN Name	Rx	GND	Tx	GND	GND	ANT	GND	GND

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

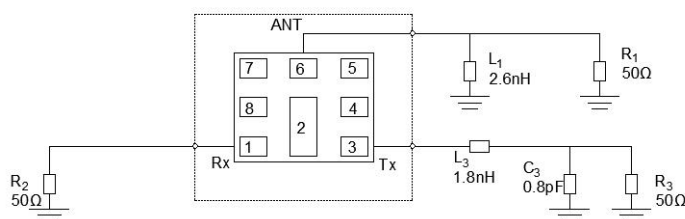
Land Pattern

Unit:mm



Test Circuit

Top View



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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

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	1920 ~1980		1.6	2.1	dB
2		Ripple Deviation	1920 ~1980		0.5	1.2	dB
3		Absolute Attenuation	10~1574	29	34		dB
4			420~494	40	45		dB
5			814~849	30	37		dB
6			880~915	30	36		dB
7			925~960	30	25		dB
8			1226~1250	30	35		dB
9			1427.9~1462.9	30	42		dB
10			1475~1511	34	45		dB
11			1559~1606	40	50		dB
12			1605.88~1805	25	33		dB
13			1805~1865	20	24		dB
14			1865~1880	10	26		dB
15			2110~2170	44	55		dB
16			2300~2400	38	43		dB
17			2400~2500	34	39		dB
18			2620~2690	29	33		dB
19			3840~3960	20	26		dB
20			4900~5950	17	25		dB
21		VSWR	1920~1980(Tx)		1.4	2.0	
22			1920~1980(ANT)		1.4	2.0	
23	Input Signal Level		+30dBm, 5000h(55℃)				

Table2. Electrical Specification

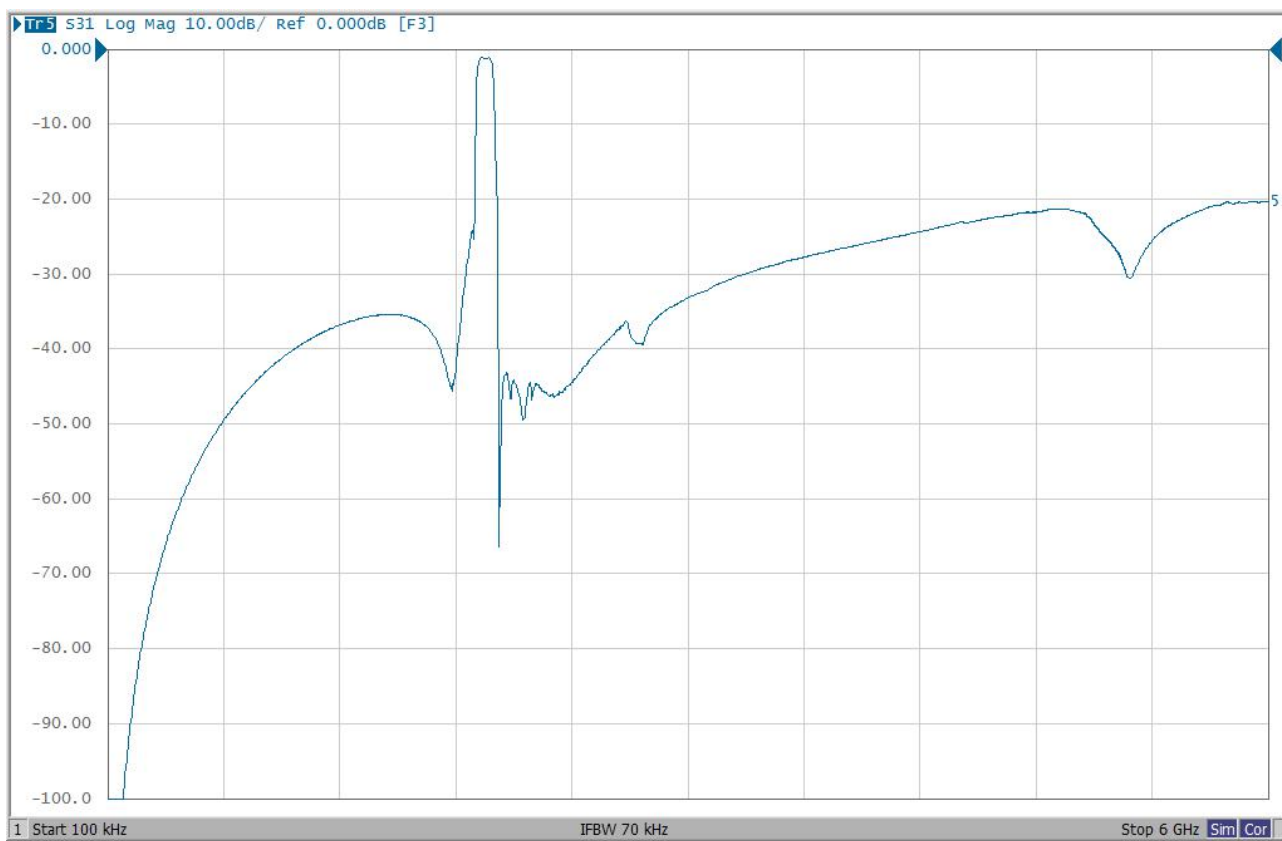
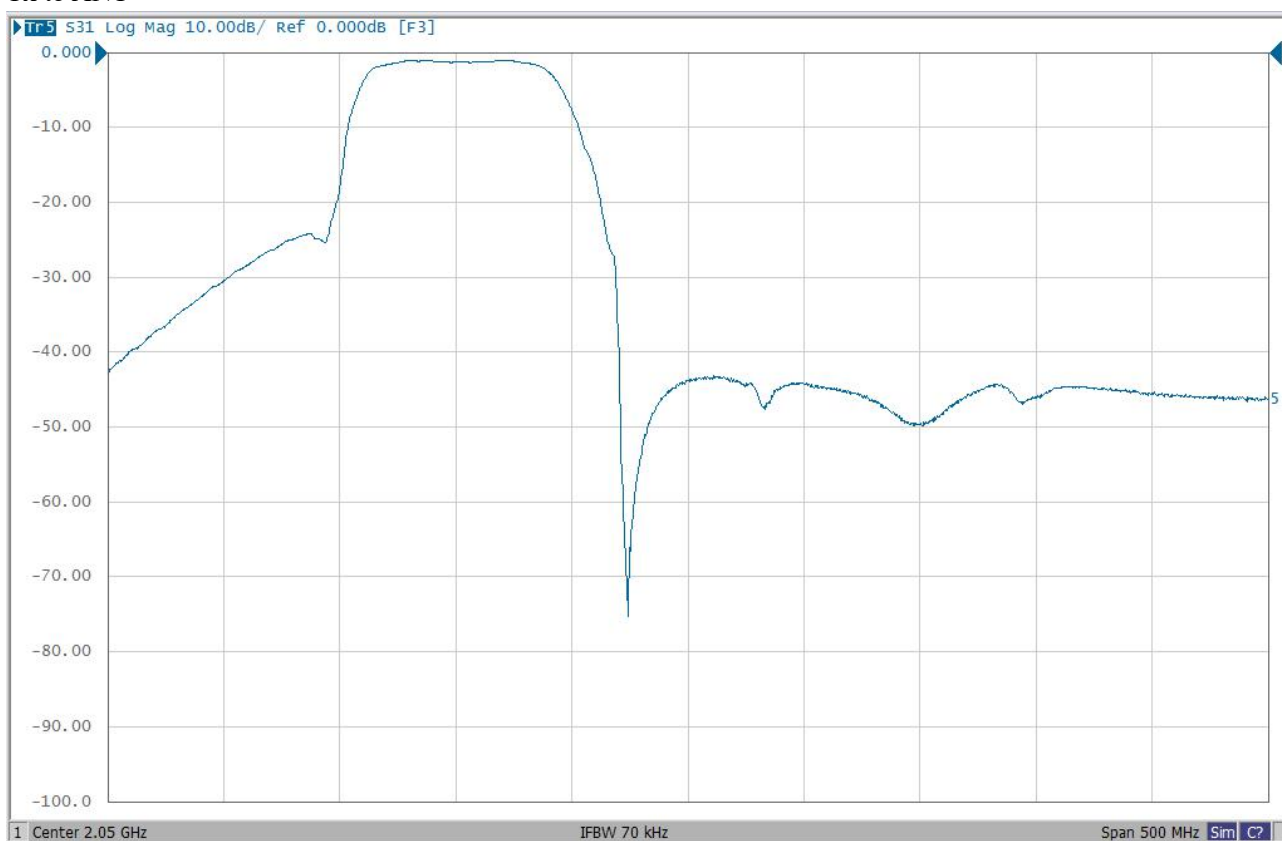
No.	Item		Frequency (MHz)	Specification			
				Min	Typ.	Max.	Unit
1	ANT to Rx	Insertion Loss	2110~2170		1.9	2.5	dB
2		Ripple Deviation	2110 ~2170		0.6	1.5	dB
3		Absolute Attenuation	1~1920	33	39		dB
4			718~748	40	55		dB
5			814~849	40	53		dB
6			880~915	40	50		dB
7			1427~1447	39	45		dB
8			1730~1790	35	41		dB
9			1710~1785	33	39		dB
10			1920~1980	45	49		dB
11			1980~2015	15	45		dB
12			2255~6000	24	30		dB
13			2300~2400	26	31		dB
14			2400~2500	30	35		dB
15			2500~2570	38	45		dB
16			4030~4150	33	40		dB
17			4220~4340	32	39		dB
18			4900~5950	27	35		dB
19		VSWR	2110 ~2170(ANT)		1.6	2.1	
20			2110 ~2170(Rx)		1.7	2.1	

Table3. Electrical Specification

No.	Item		Frequency (MHz)	Specification			
				Min	Typ.	Max.	Unit
1	Tx to Rx	Isolation	1920~1980	50	53		dB
2			2110~2170	50	53		dB

Frequency Performance

Tx to ANT



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ANT to Rx



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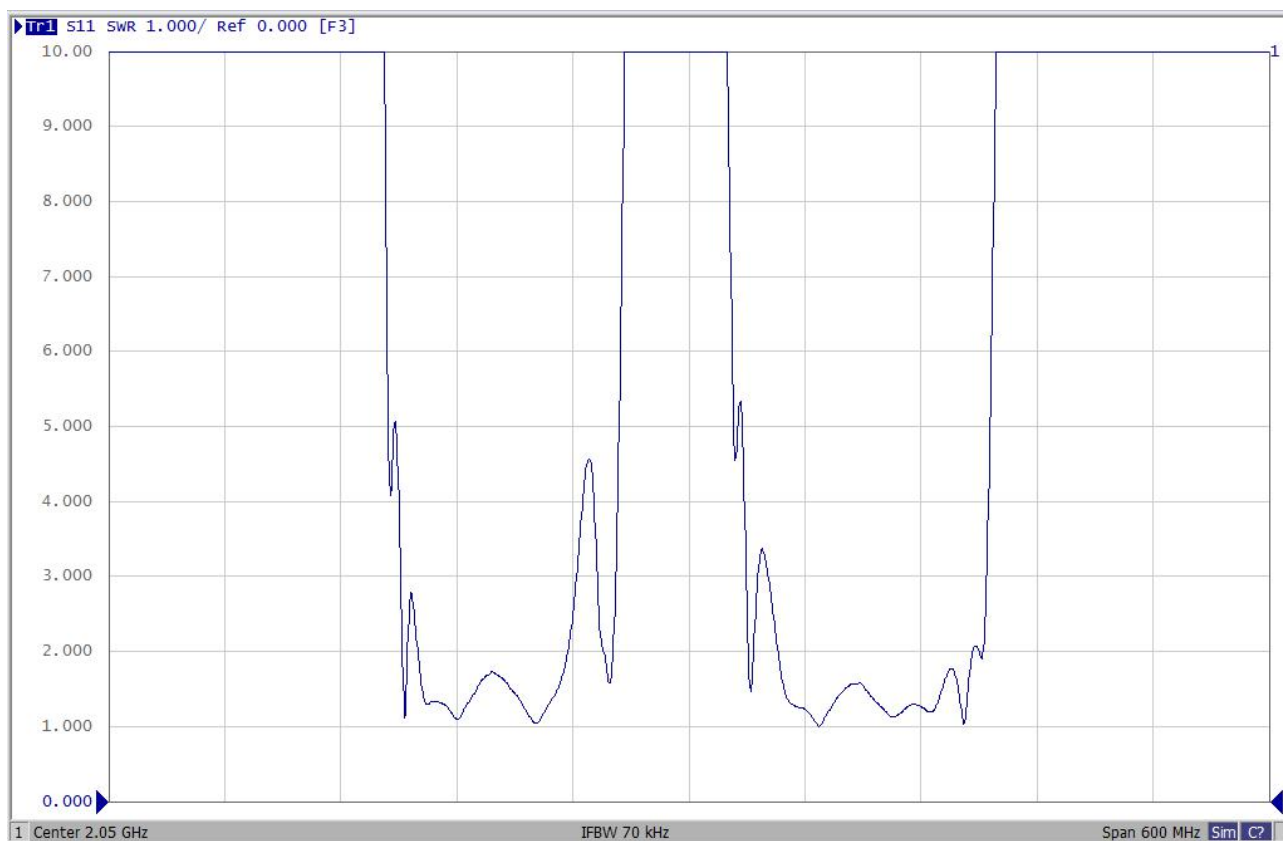
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VSWR



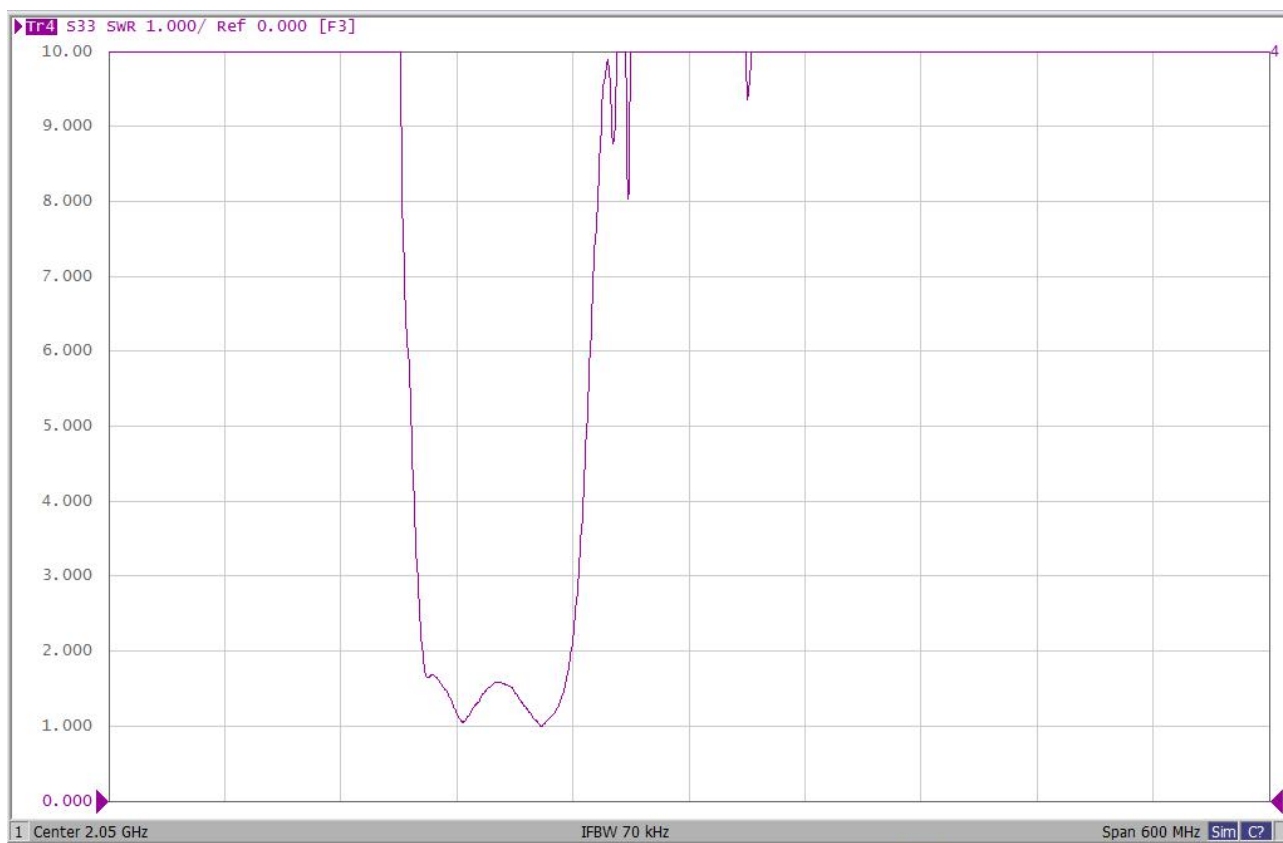
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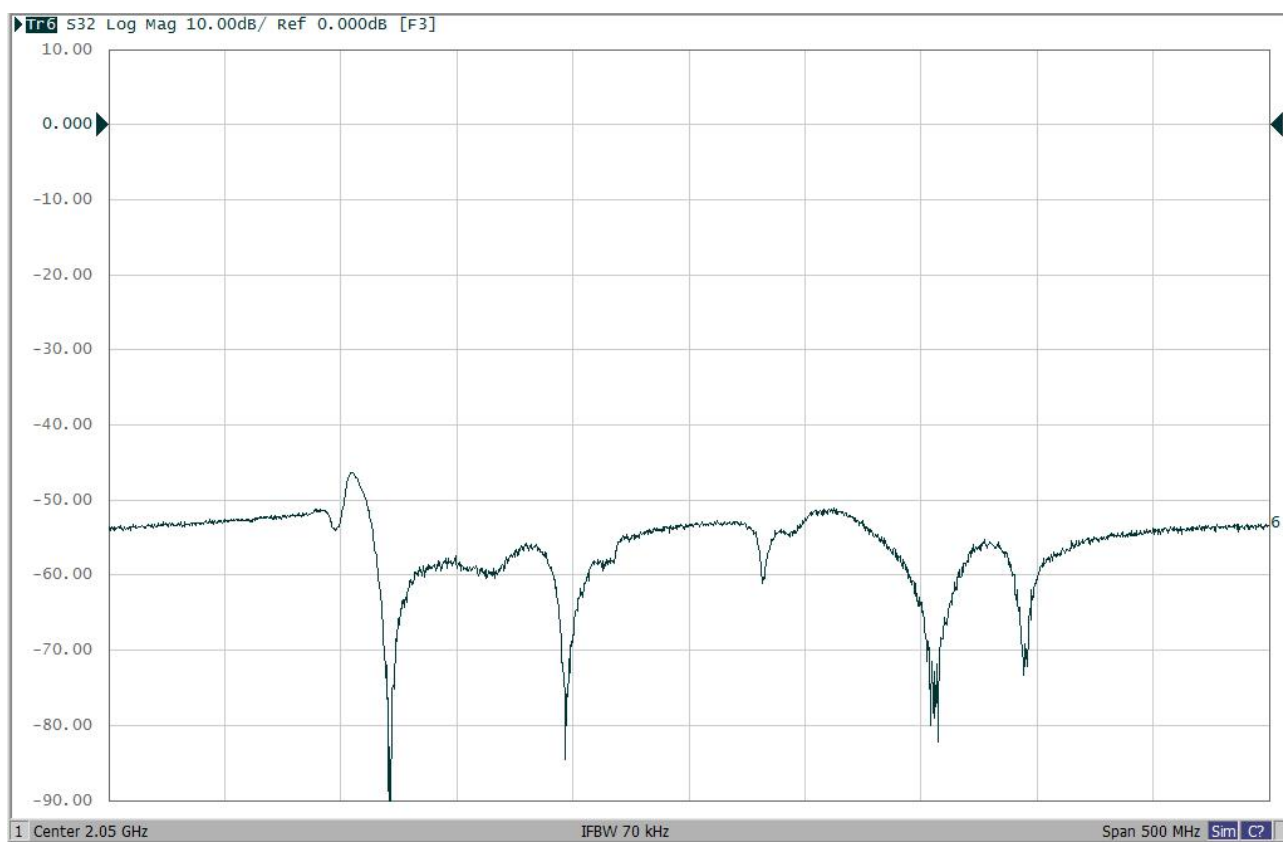
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Isolation Tx to Rx



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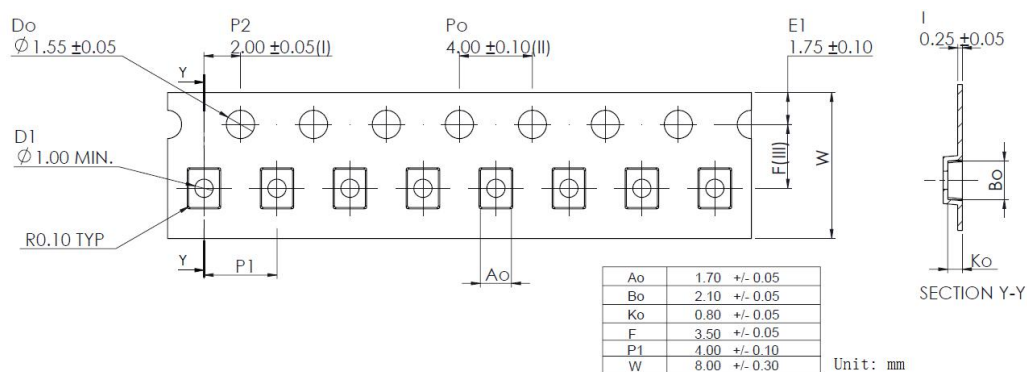
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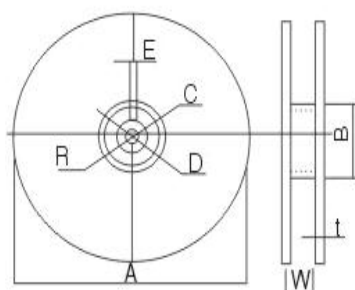
6 包装 Packaging

① 编带尺寸 Dimensions of Tape:



② 带轮尺寸 Dimensions of Reel

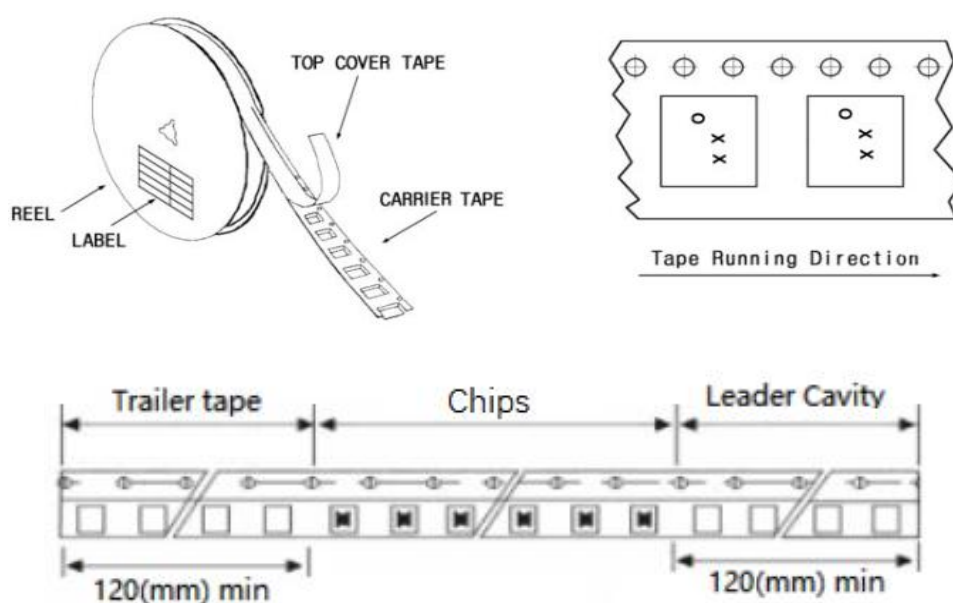
Unit: mm



Reel material: PS (Polystyrene)

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

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



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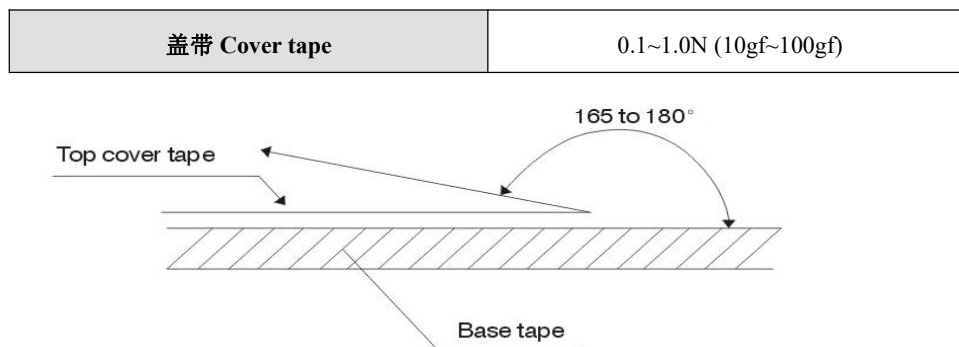
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④ 盖带的剥离强度 Peeling strength of cover tape:



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

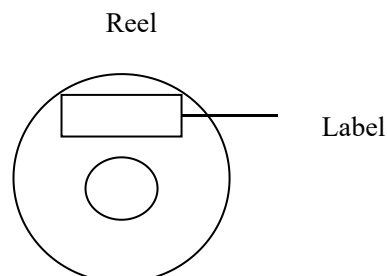
7 装箱清单及标志 Packing documents and marking

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

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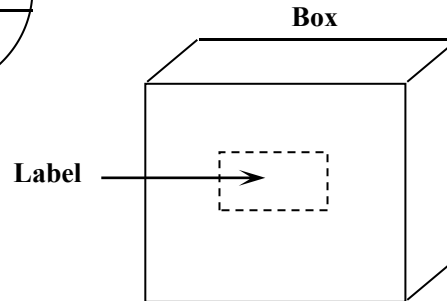
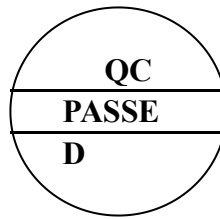
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检验合格后, 检验员在标签上盖上合格章。合格章如下所示: The eligible reels will be pressed a mark onto the surface. The mark will be as following:



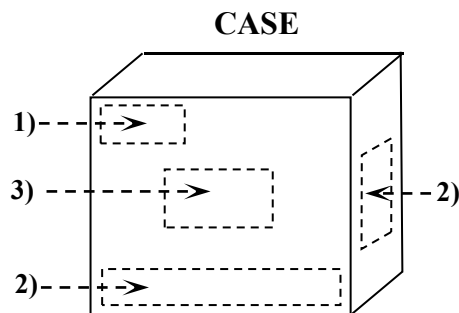
③ 内包装盒标记: Marking on inner box

- 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.