



### Antenna Specification

Customer	Qixiang	Model	588UVP
Item number	--	Frequency band	BT/WIFI
Color	Black	Version	V1.2
Confirmation	Hu Zhaobin	Signature Date	2020-12-29
Customer Confirmation.	N/A		
N/A			

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**Shenzhen Ocean Flux Technology Co., Ltd.**

**1、规格 Specification**

报告主要提供 BT\WIFI 天线的无源性能参数的测试。

The report mainly provides testing of passive performance parameters of BT\WIFI antennas

**2、电器性 Electrical**

**2-1 规格标准 Specification standards**

BT/WIFI 天线工作频段为 2400-2500MHz 在此频段产生谐振。下表是海磁通为设计 588UVP 天线的量产性能测试指标。

The BT/WIFI antenna operates in the 2400-2500MHz frequency band and generates resonance in this band. The following table shows the mass production performance test specifications of Seamagnetic for the design of the 588UVP antenna.

天线 Antenna	频率 (MHz) Frequency	VSWR
BT/WIFI	2400-2500	≤ 2.0

**2-2 天线的匹配电路 Antenna Matching Circuit**

无匹配 N/A

**3、驻波比 (VSWR) 的测试 VSWR (VSWR) testing**

**3-1 测试的设置 Setup of the test**

The VSWR test device is connected as follows:

B5071B → 50 Ω Cable → 170 mm copper tube → test sample

测试治具的处理:

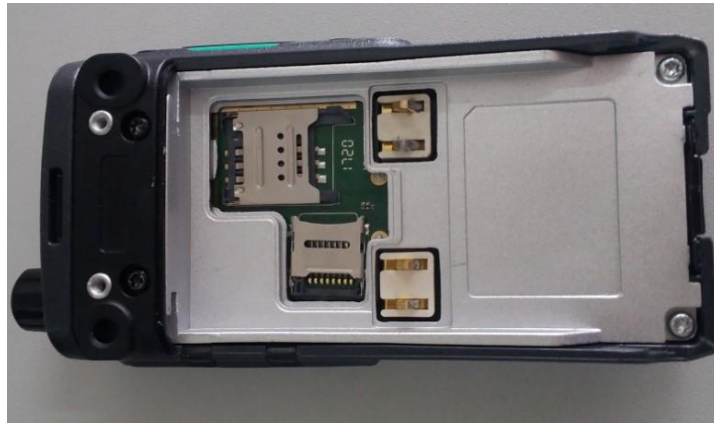
从手机 PCB 上天线 50Ω 欧姆测试点处用一根硬质电缆引出 SMA-J 接头，与套有扼流圈的铜管连接，再依次连接其他装置。

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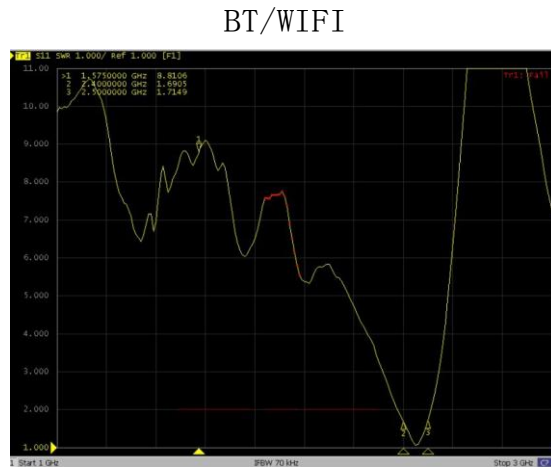
Test fixture processing:

From the antenna 50Ω ohm test point on the cell phone PCB with a rigid cable SMA-J connector, connected to the copper tube with a choke, and then connected to other devices in turn

Figure 1 Test Fixture



3-2 测试结果 Test results



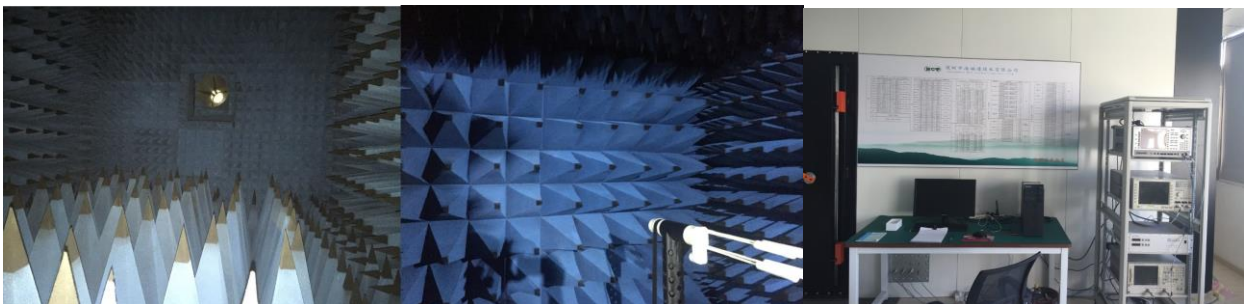
4 有源测试的设置 Active test setup

有源测试装置依次连接为: Agilent E5062A → 50 欧姆的同轴 Cable → EST 远场测试系统 → 待测试手机。

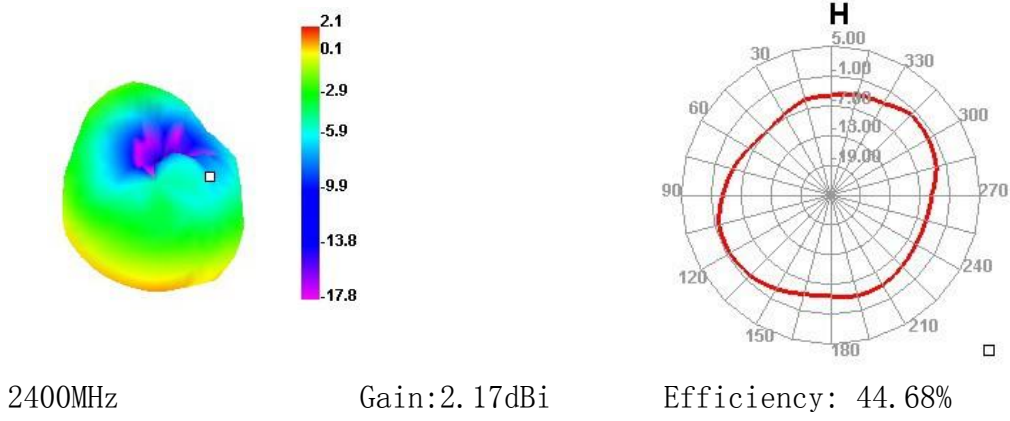
The active test set is connected as follows: Agilent E5062A → 50 Ohm coaxial cable → EST far-field test system → sample to be tested

4-1 测试的场地 Test site

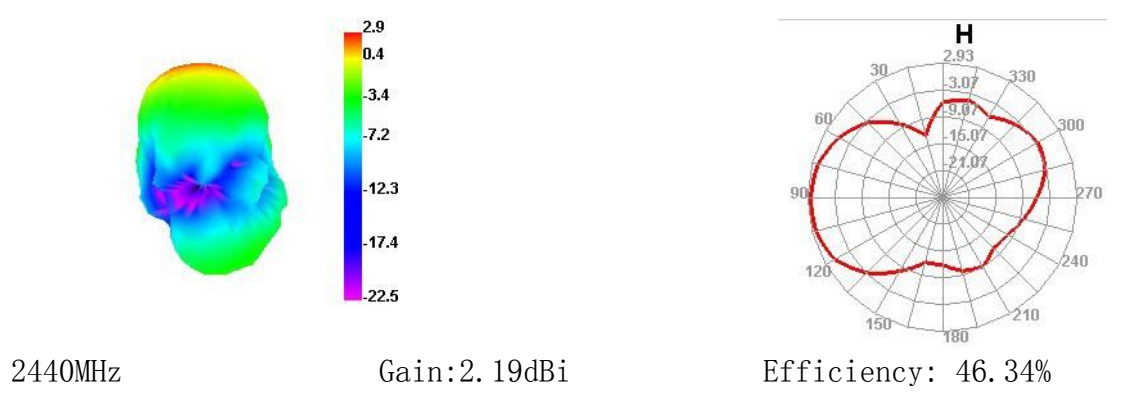
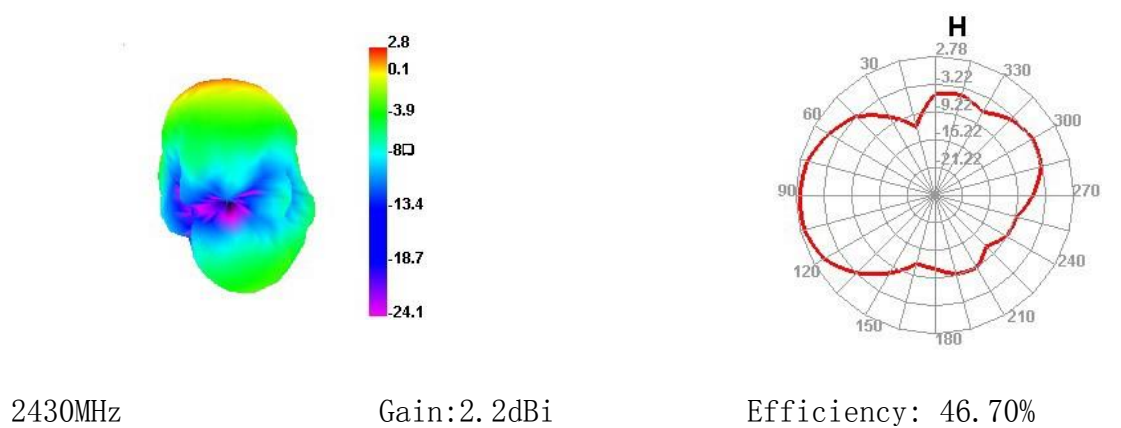
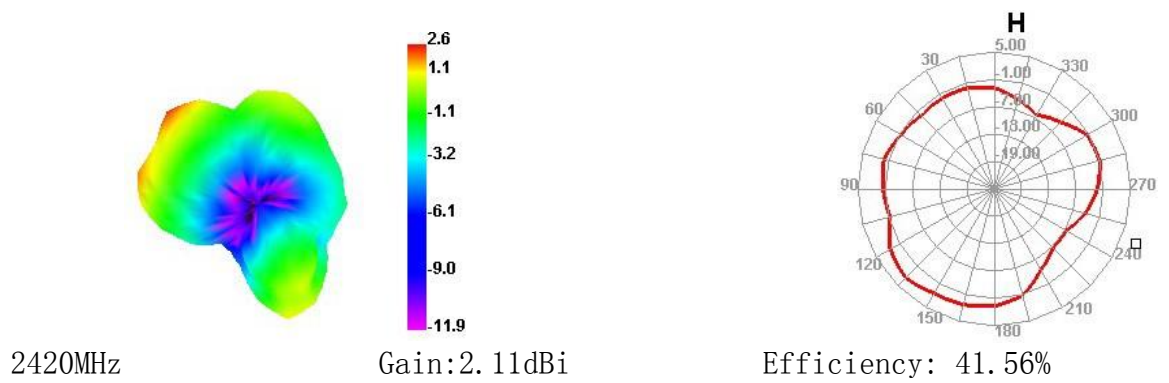
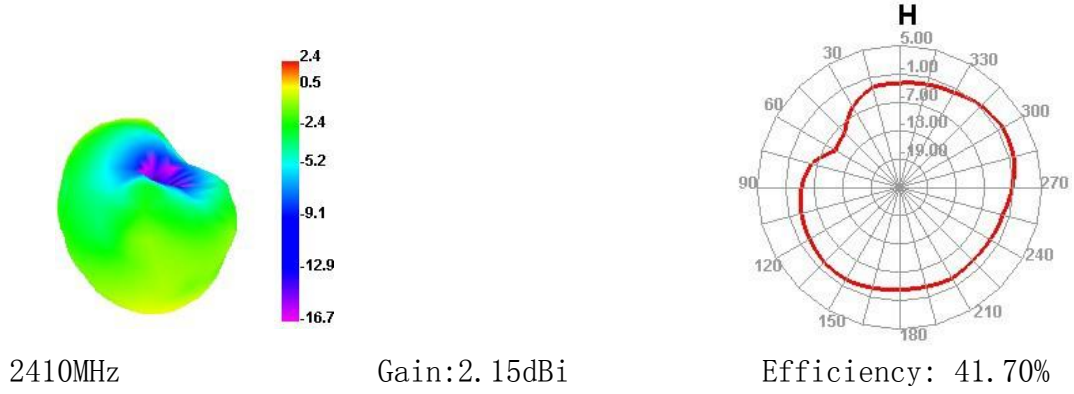
海磁通采用国内最先进的 3D/2D ETS 微波暗室测试系统, 测试方式属于远场测试, 频率范围为 600MHz—6GHz, 暗室屏蔽衰减在-120dBm, Ocean Flux using the most advanced 3D/2D ETS microwave darkroom test system, the test method belongs to the far field test, the frequency range is 600MHz-6GHz, darkroom shielding attenuation in -120dBm.



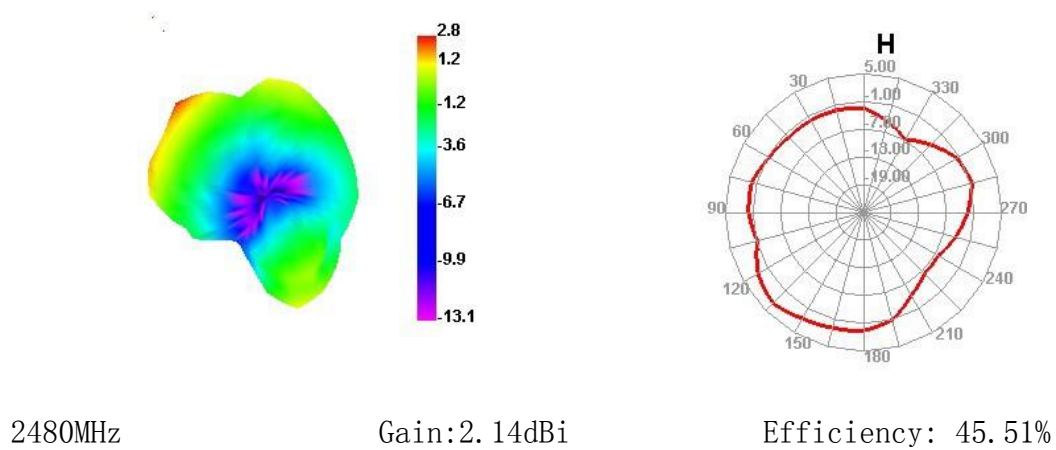
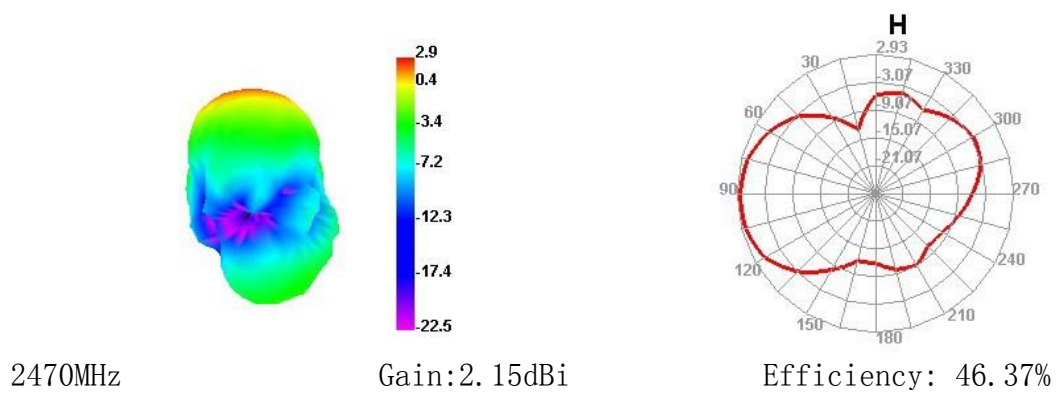
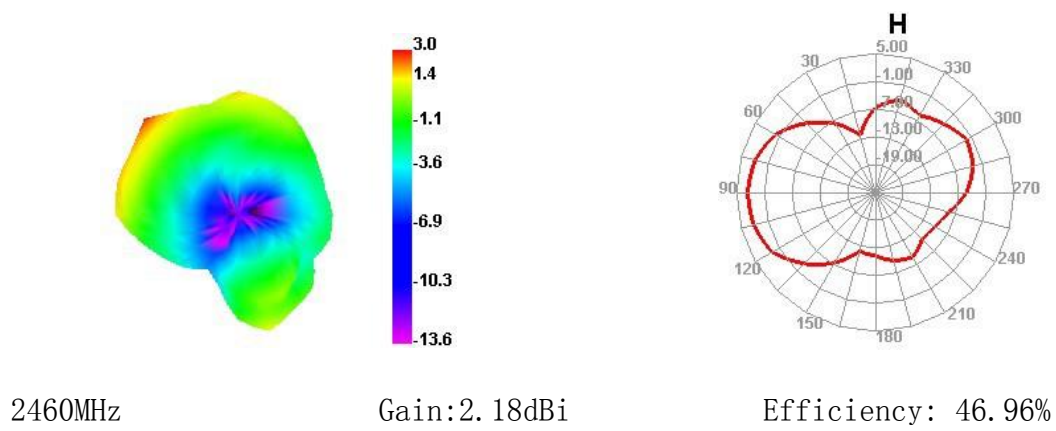
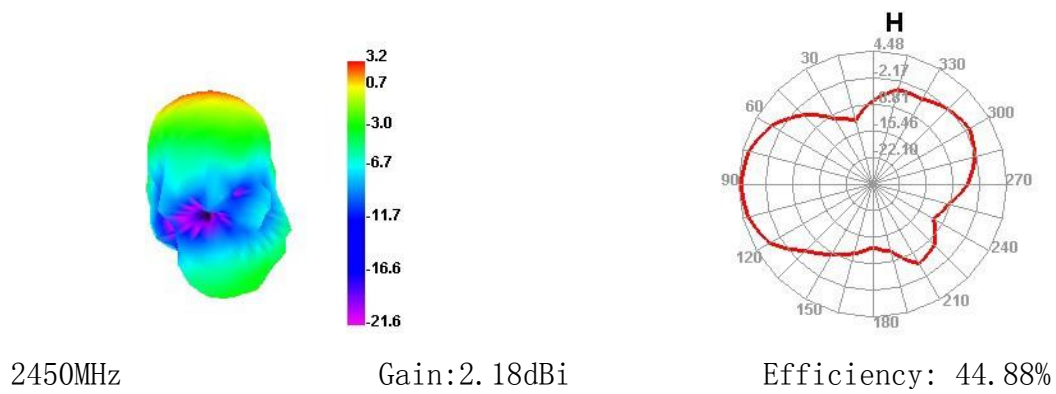
4-2 测试结果 Test Results



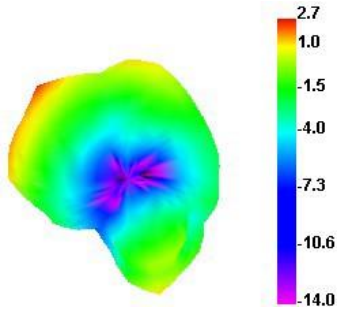
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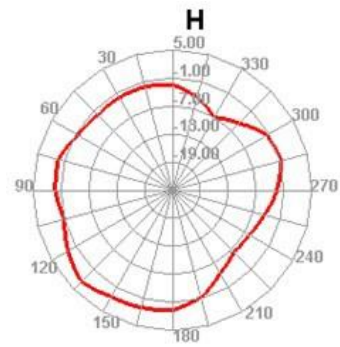




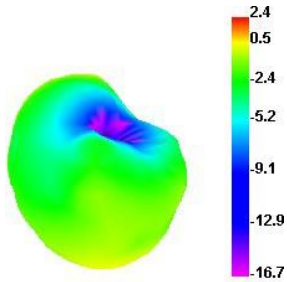


2490MHz

Gain:2.11dBi

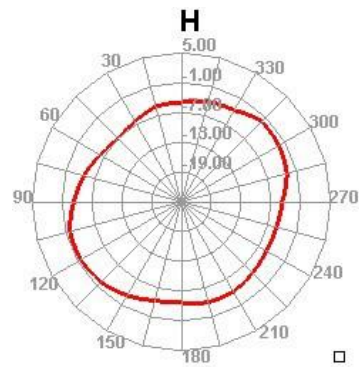


Efficiency: 47.79%



2500MHz

Gain:2.12dBi



Efficiency:44.69%

#### 4-3 环境处理（如果有环境处理，必须附图说明）

Environmental treatment (if there is an environmental treatment, it must be accompanied by a diagram)

无环境处理 N/A

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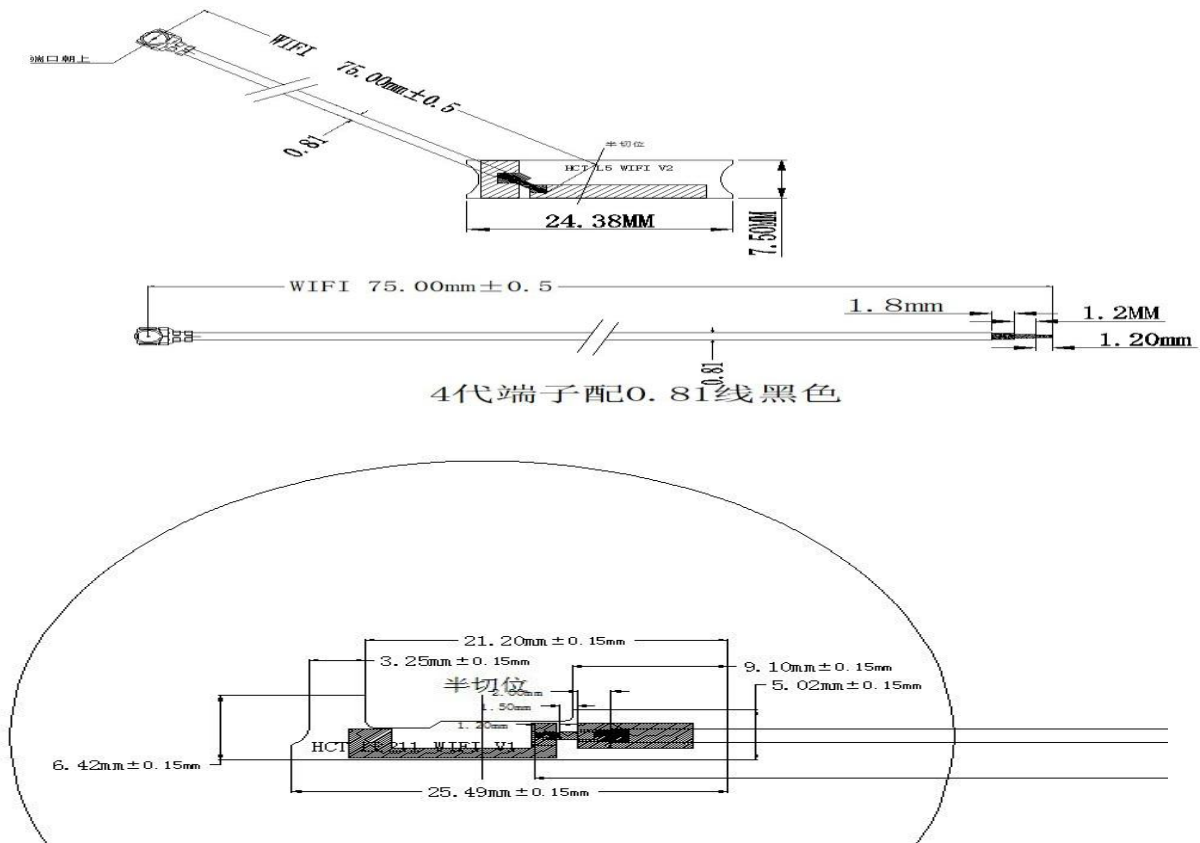
### 5、建议与结论 Recommendations and Conclusions

此报告是根据客户提 588UVP 的最终版测得的天线电器性能。从如上测试数据可以看到，此天线提供了较好的电器性能。

This report is the electrical performance of the antenna based on the final version of the customer's proposed 588UVP. As you can see from the above test data, this antenna provides good electrical performance.

### 5. 结构图纸 Structural drawings

#### 5.2 BT/WIFI 产品 2D 图 BT/WIFI Products 2D Figure



#### 技术要求

1. 所有外表面不允许有划痕、碰伤及毛边;
2. 产品已注公差按实际公差控制，未注公差按图中公差表严格执行;
3. 材料:单面电解铜透明 PI 正面丝印感光油墨+双面胶+离型纸;
4. 基材: 单面电解铜 18/25;触点镀金厚度 0.01-0.03um.
5. FPC 表面丝印阻焊哑光黑油, 丝印油墨和实际壳体外观纹路一致;
6. 双面胶型号为 3M9471, 背原装含双面胶品牌型号离形纸;
7. 可靠性测试: 盐水喷雾试验\橡皮摩擦测试\耐醇性测试\恒温恒湿试验\冷热冲击试验;
8. 触点不能存在任何折痕, 划伤, 脏污;

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9. 离型纸撕取方便，不允许存在撕取离型纸造成 FPC 扯裂情况；
10. FPC 组件来料表面不能存在任何起泡，颗粒等不良现象；
11. 若有文字丝印增加要求，文字要求清晰，且附着力和油墨一样满足测试；
12. 丝印字体颜色黑色高光，字体华文细黑，大小 3.5PT；
13. 标有\*的尺寸做为重要尺寸，其余进行抽测以及和壳体进行试装配检测是否合格；
14. 产品包装必须干净，整洁，包装过程不允许对产品造成脏污；
15. 蓝色虚线框为金手指与弹片馈点接触位置。

### Technical requirements

1. All external surfaces are not allowed to have scratches, bruises and rough edges.
2. The product has been noted tolerance control according to the actual tolerance, not noted tolerance according to the strict implementation of the tolerance table.
3. Material: single-sided electrolytic copper transparent PI front screen printing photopolymer ink + double-sided adhesive + release paper.
4. Substrate: single-sided electrolytic copper 18/25; contact gold plating thickness 0.01-0.03um.
5. FPC surface screen printing solder resist matte black oil, screen printing ink and the actual shell appearance of the same pattern.
6. double-sided adhesive type 3M9471, back original with double-sided adhesive brand type release paper;
7. reliability test: salt spray test \ rubber friction test \ alcohol resistance test \ constant temperature and humidity test \ hot and cold shock test.
8. contacts can't exist any creases, scratches, dirt;
9. easy to tear the release paper, do not allow the existence of tearing the release paper caused by FPC tearing situation;
10. FPC components from the surface of the material can't exist any bubbles, particles and other undesirable phenomena;
11. If there is a text screen printing increase requirements, the text requirements are clear, and adhesion and ink to meet the same test;
12. screen printing font color black high gloss, font Chinese fine black, size 3.5PT;
13. marked with \* size as an important size, the rest for random testing as well as and the shell for test assembly to test whether qualified;
14. product packaging must be clean, tidy, the packaging process does not allow the product to cause dirt;
15. blue dashed box for the gold finger and shrapnel feed point contact position.

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6. 尺寸检测报告 Dimensional inspection report

产品型号 Model No:		检验仪器 Instrument		检验日期 Date:		计量单位 Unit:			
天线		2D Measurement		2020-12-29		M M			
项目序号	图纸标准		检验结果 Inspection Result					判定	备注
ItemNO.	Customer'Sspec		1	2	3	4	5	Decisioc	Remark
1	55.00	±0.15	54.96	55.08	55.05	54.92	55.11	ACC	
2	40.00	±0.15	39.96	40.08	40.05	39.92	40.13	ACC	
3	40.00	±0.10	39.95	40.08	40.05	39.92	40.11	ACC	
4	27.19	±0.10	27.15	27.26	27.24	27.11	27.32	ACC	
5	39.65	±0.15	39.60	39.73	39.70	39.57	39.76	ACC	
6	13.16	±0.15	13.12	13.23	13.21	13.08	13.29	ACC	
7	25.9	±0.15	25.86	25.97	25.95	25.82	26.03	ACC	
8	9.65	±0.15	9.60	9.73	9.70	9.57	9.76	ACC	
9	25.00	±0.15	24.96	25.08	25.05	24.92	25.11	ACC	
10	11.00	±0.15	10.96	11.08	11.05	10.92	11.13	ACC	
11	6.42	±0.10	6.37	6.50	6.47	6.34	6.53	ACC	
12	25.49	±0.10	25.45	25.56	25.54	25.41	25.62	ACC	
13	21.20	±0.15	21.15	21.28	21.25	21.12	21.31	ACC	
14	3.25	±0.15	3.21	3.32	3.30	3.17	3.38	ACC	
15	9.1	±0.15	9.06	9.17	9.15	9.02	9.23	ACC	
16	5.02	±0.15	4.97	5.10	5.07	4.94	5.13	ACC	
17	1.20	±0.15	1.15	1.28	1.25	1.12	1.31	ACC	

From No. : QR-QA-IV-009