Shenzhen yimingyuan Technology Co.， Ltd

APPROVAL SHEET

客户 Customer	友宏	规格型号 Specs	2032
亿铭远料号 Part Number	3.2032.25.000	频　　段 Frequency Band	GSM2/3/5/8 WCDMA1/2/4/5/8 LTE1/2/3/4/5/7/8/12/17/20/28/38/39/40/41
2G/3G/4G ANT	2032-MAIN-YMY	2.4G　ANT	2032-WiFi-YMY
颜　色 Color	黑色(Black)	版　　本 Edition	REV:A0
销　售 Salesperson	杨一鸣	设　　计 Design	吴希
结　构 Structure	覃云林	确　　认 Confirm	
日　期 Date	2023.2.28	签字日期 Signing Date	
制造商 manufacturer	Shenzhen yimingyuan Technology Co.， Ltd		
客户确认 Customer confirmation:			
携手共进 共创未来 Join hands to create the future			

Table of contents

1. Product specifications

The report mainly provides the parameter test of 2032 antenna performance. The 2032 antenna is a 4G antenna. (As shown in Figure 1 below)

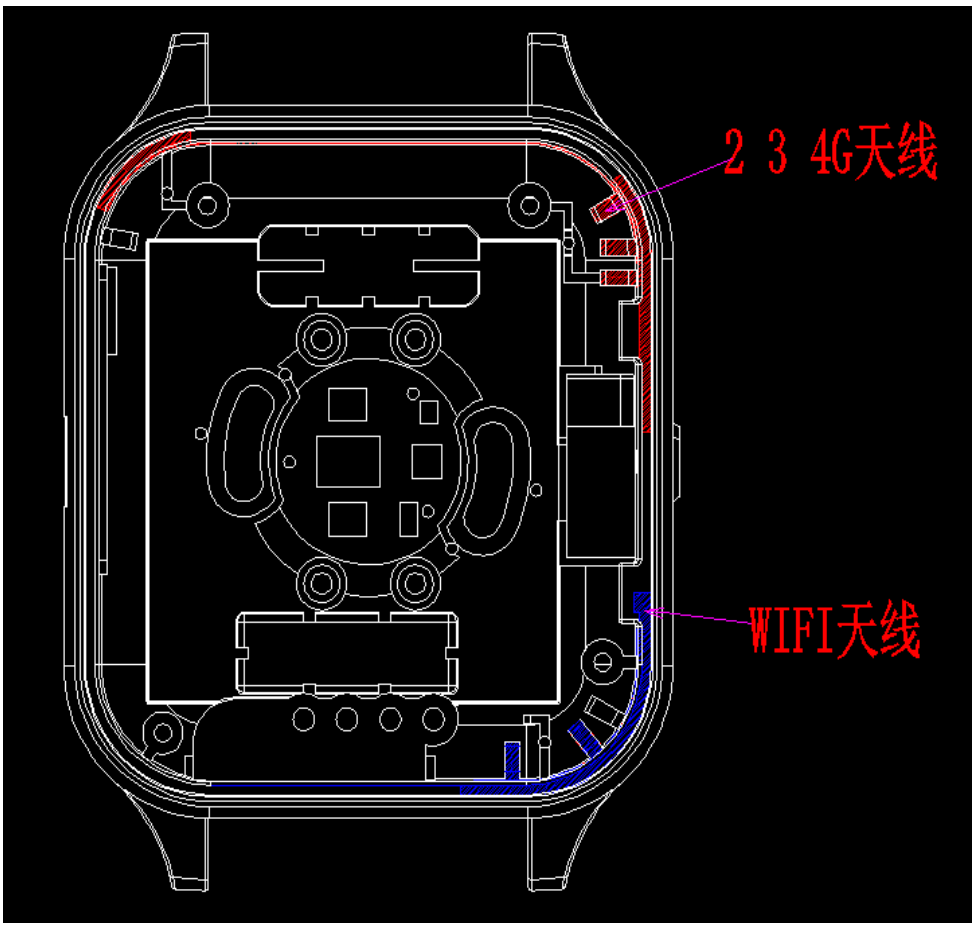


figure 1 2032 antenna

2. Electrical performance

1. Specifications and standards

The working frequency band of the 2032 antenna is 820--2700MHZ , and resonance occurs in this frequency band.

2. Antenna matching circuit

match unchanged

The structure of the antenna : LDS

3. Parameter test

1. Test setup

The connections of the VSWR test setup in turn are:

E5071B network analyzer → 50 ohm coaxial cable → 110mm long copper tube → test fixture

Handling of test fixtures:

Use a hard cable to lead out the SMA-J connector from the 50 ohm test point of the antenna on the mobile phone PCB, connect it to the copper tube covered with the choke coil, and then connect to other devices in turn.

2. Test results

everything is ok.

4. Active test setup

The connections of the active test device in turn are :

Agilent8960 → 50 ohm coaxial Cable → Satimo S 2032 test system → mobile phone to be tested

1. Test site

AW microwave anechoic chamber: the test frequency range is 400MHz-6GHz, the quiet zone range is 40cm circumference, and the reflectivity is less than -90 dB.

2. Test results

The maximum radiated power and maximum receiving sensitivity reflect the maximum

power radiation value and the best receiving performance of the antenna in the entire radiation space. TRP and TIS reflect the average radiation power and average receiving sensitivity of the antenna, that is, reflect the overall receiving performance of the antenna.

The following is the 2032 antenna test results:

主天线暗室数据　美版

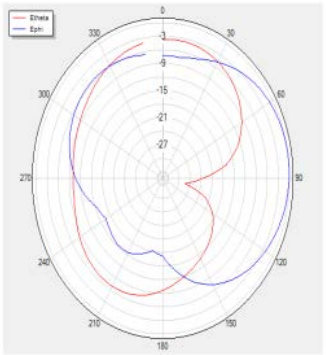
	Channel	TRP (dBm)	TIS (dBm)
FDD B2	LOW	17.76	
	medium	17.54	
	high	17.46	-89.35
FDD B4	LOW	17.27	
	medium	17.55	
	high	17.31	-87
FDD B5	LOW	10.26	
	medium	10.51	
	high	10.82	-84.2
FDD B7	LOW	14.42	
	medium	14.14	
	high	14.76	-89.02
FDD B12	LOW	4.2	
	medium	4.31	
	high	5.3	-81.5
FDD B17	LOW	5.04	
	medium	5.14	
	high	5.5	-81.3

	Channel	TRP (dBm)	TIS (dBm)
WCDMA1900	LOW	17.5	
	medium	17.57	
	high	17.47	-102.5
WCDMA850	LOW	10.04	
	medium	10.0	
	high	11.3	-98.3
WCDMA1700	LOW	15.76	
	medium	16.34	
	high	17.0	-100.25

	Channel	TRP (dBm)	TIS (dBm)
GSM900	1	20.24	
	62	19.43	
	124	19.04	-96.24
DCS1800	512	23.2	
	698	25.35	
	885	25.1	-102.24
GSM850	128	18.02	
	190	18.21	
	251	19.75	-95.2
PCS1900	512	25.2	
	661	25.12	
	810	25.34	-102.5

Gain&Efficiency		
frequency 频率(MHz)	gain 增益(dBi)	efficiency 效率(%)
LTE:FDD:B12	-17	2.59
LTE:FDD:B17	-16.5	2.67
GSM850/WCDMAB5/FDD5	-10.3	6.59
WCDMAB4/FDDB4	-1.5	28.28
PCS1900/WCDMAB2/FDD2	1.2	34.58
FDD:B7	-2.0	24.06

H Theta=90 freq=800MHz



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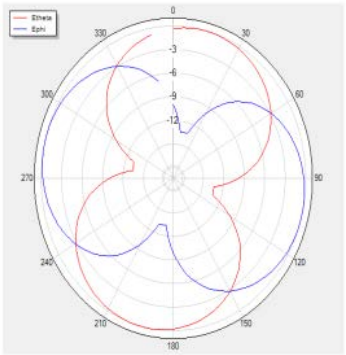

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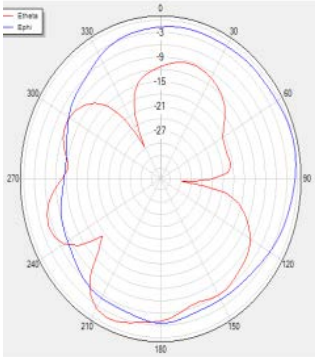
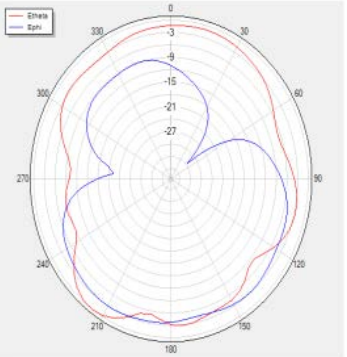


V Phi=0 freq=800MHz



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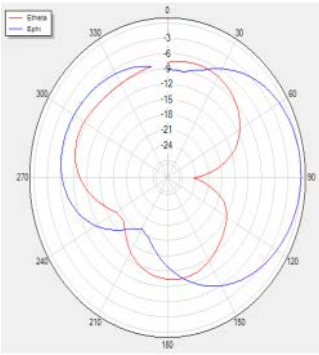

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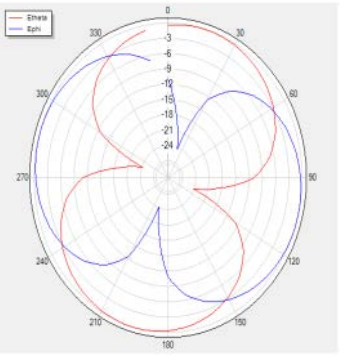

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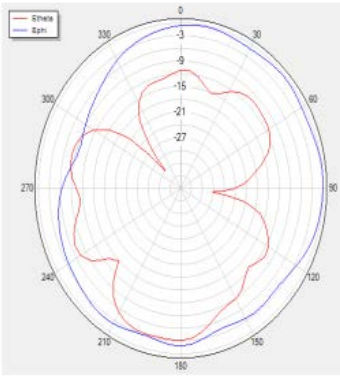

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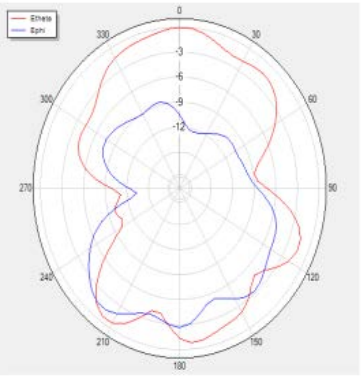

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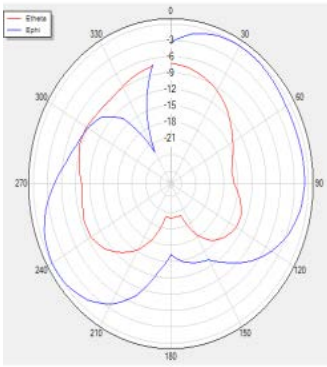

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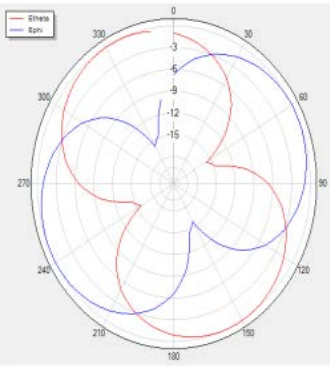

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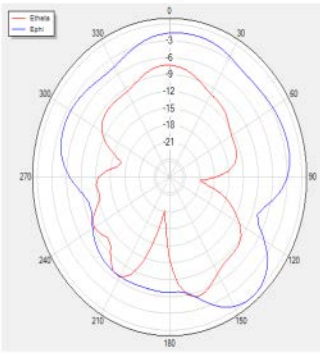

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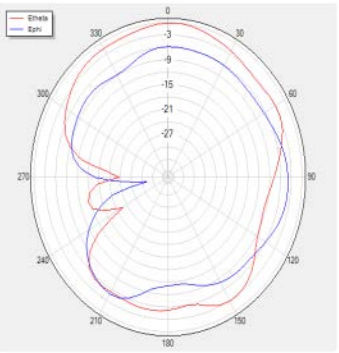

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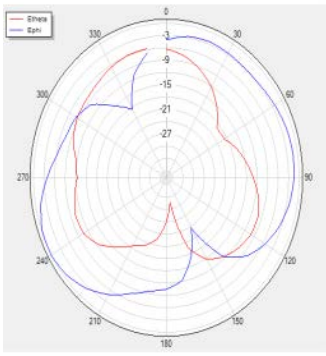

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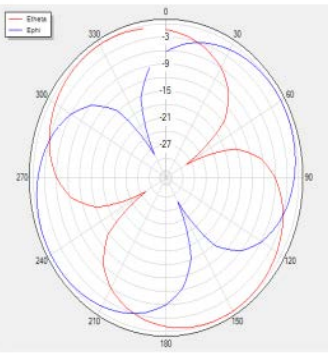

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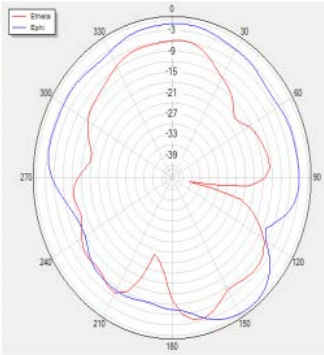

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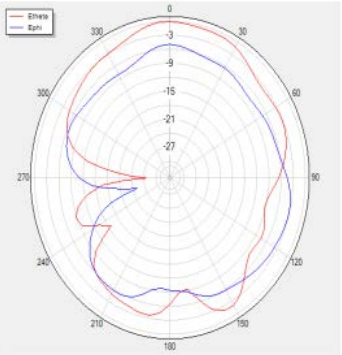

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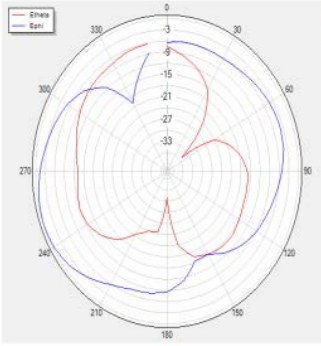

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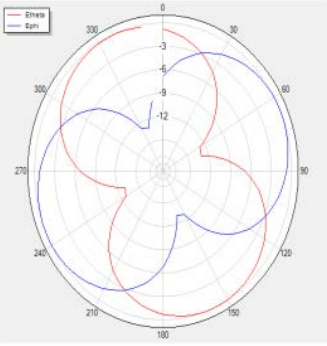

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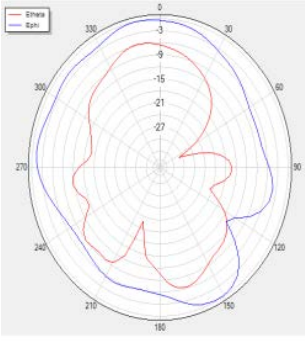

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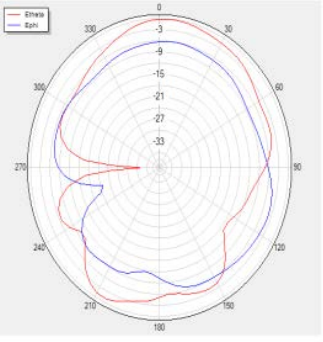

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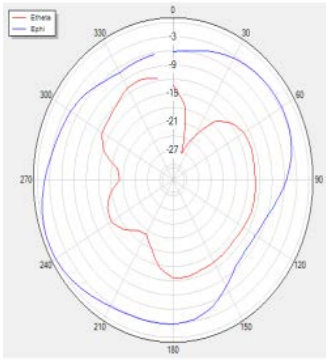

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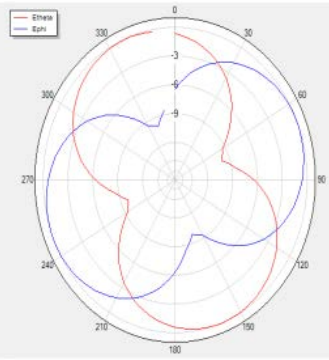

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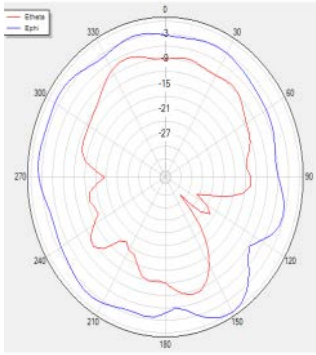

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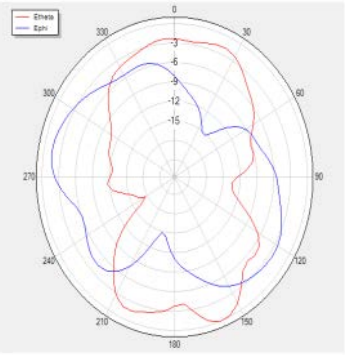

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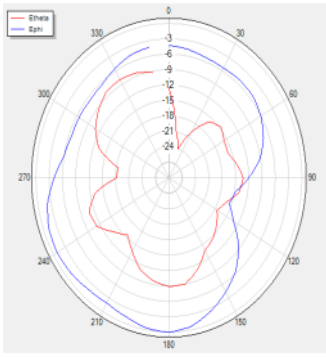

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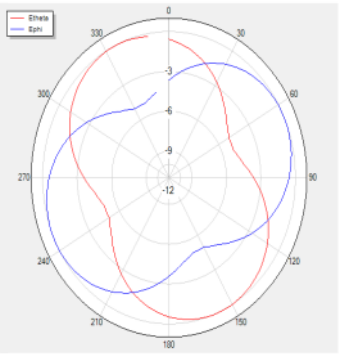

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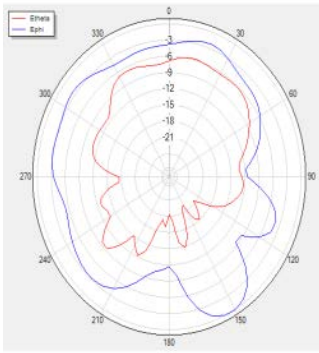

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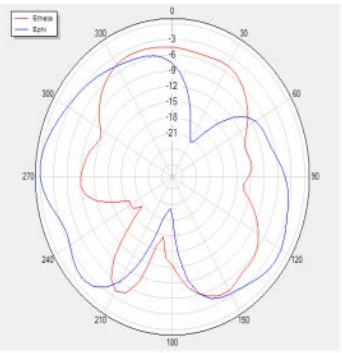

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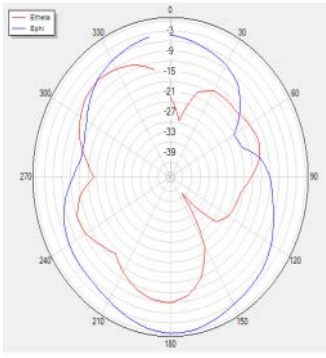

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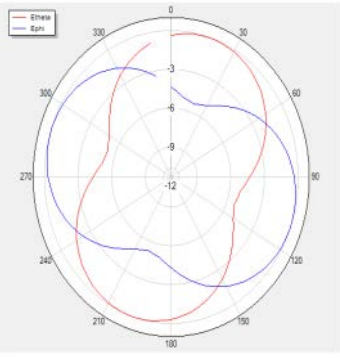

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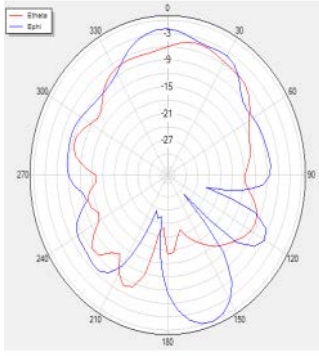

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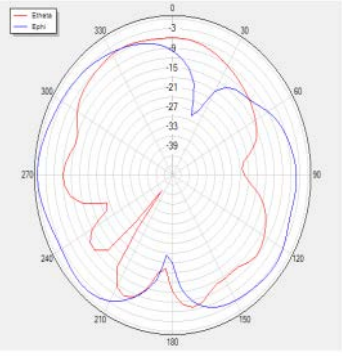
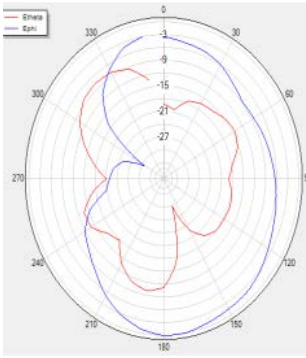


Gain&Efficiency				
frequency 频率(MHz)	gain 增益(dBi)	efficiency 效率(%)		
2400	-2.15	24.17		
2450	-2.04	24.83	WiFi2.4G	
2500	-2.09	23.49		

H Theta=90 freq=2400MHz



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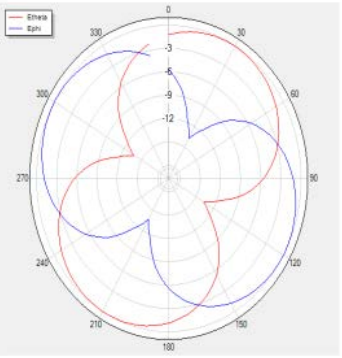

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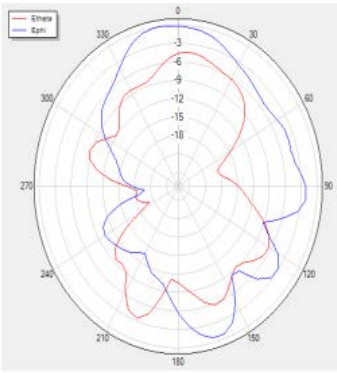

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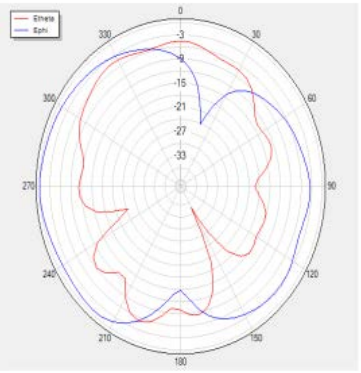

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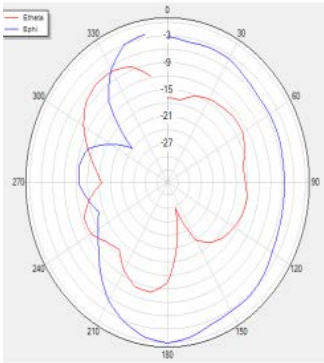

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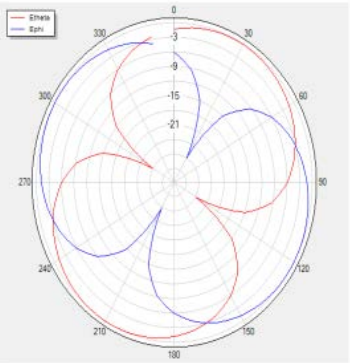

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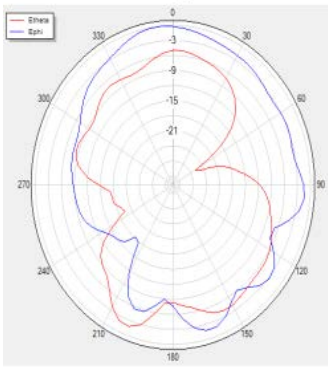

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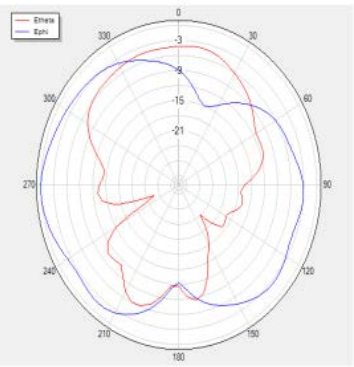
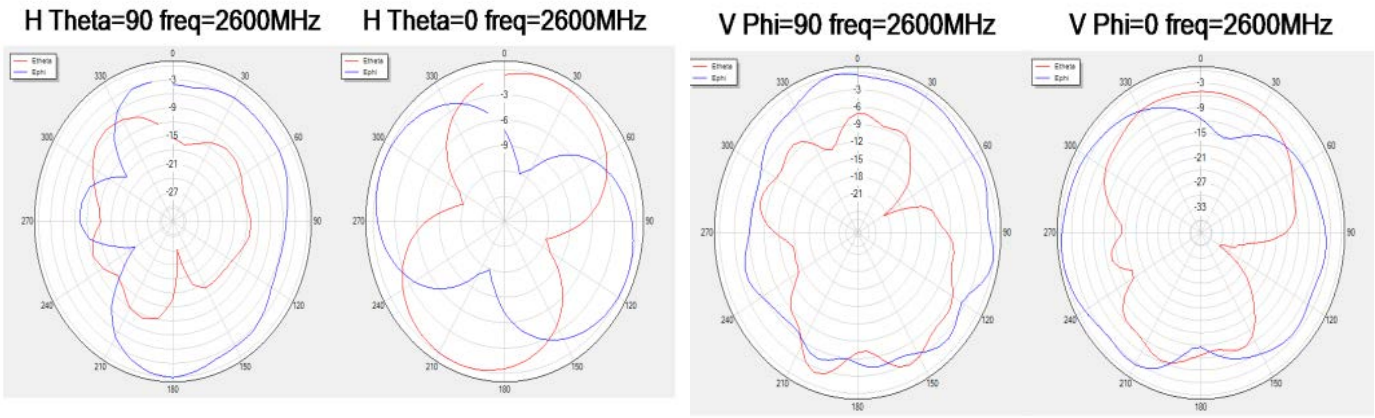
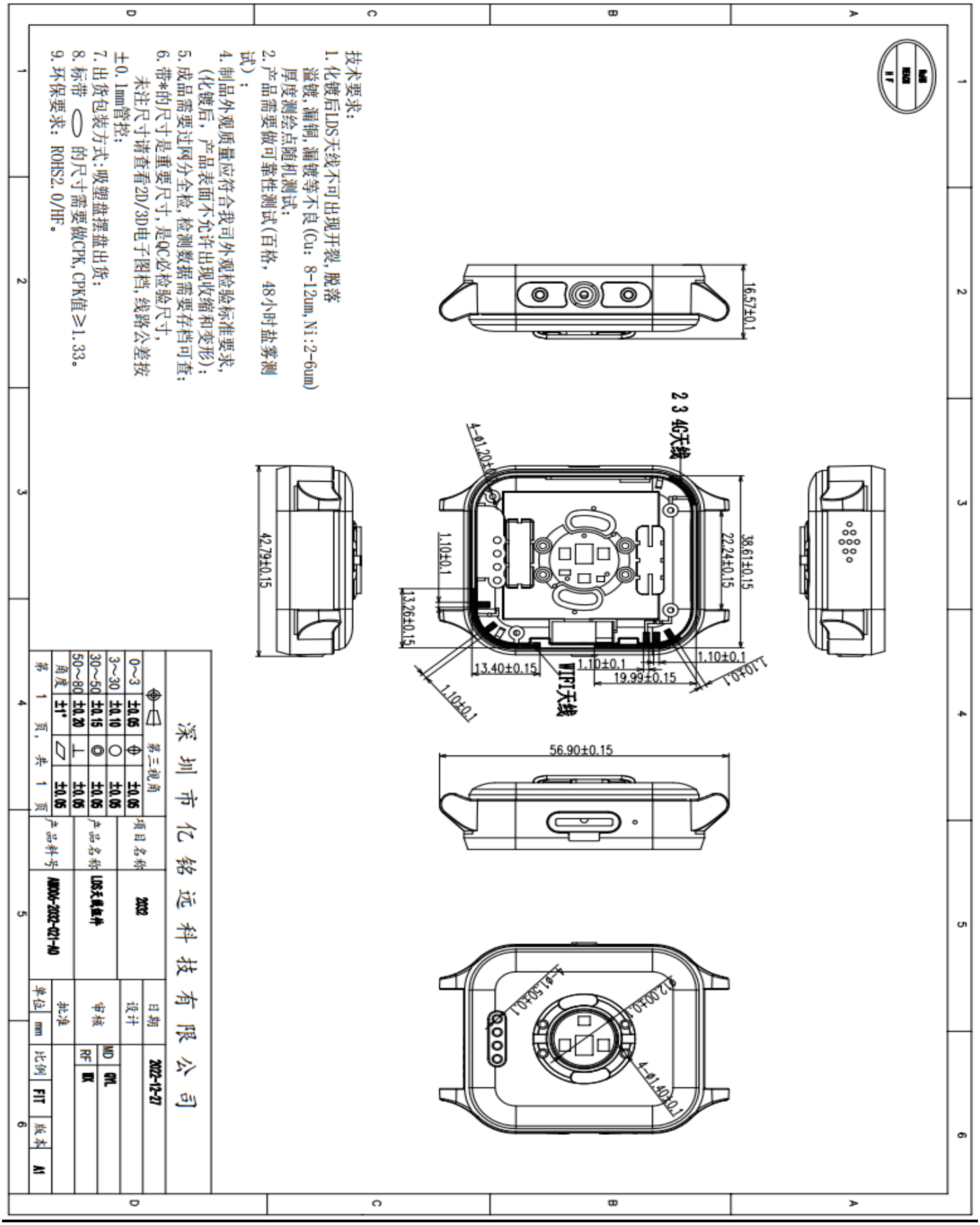




V. Suggestions and conclusions

This report is based on the electrical performance of the antenna measured by the prototype provided by the customer. Please refer to it carefully.

6. Structural drawings


技术要求:
1. 化镀后LDS天线不可出现开裂,脱落
溢镀,漏铜,漏镀等不良(Cu: 8-12um, Ni:2-6um)
厚度测绘点随机测试;
2. 产品需要做可靠性测试(百格, 48小时盐雾测试);
4. 制品外观质量应符合我司外观检验标准要求,(化镀后, 产品表面不允许出现收缩和变形);
5. 成品需要过网分全检, 检测数据需要存档可查;
6. 带*的尺寸是重要尺寸, 是QC必检验尺寸,
未注尺寸请查看2D/3D电子图档,线路公差按±0.1mm管控;
7. 出货包装方式:吸塑盘摆盘出货;
8. 标带 ⬭ 的尺寸需要做CPK, CPK值≥1.33。
9. 环保要求: ROHS2.0/HF。
16.57±0.1
2 3 4G天线
38.61±0.15
22.24±0.15
42.79±0.15
1.10±0.1
13.26±0.15
13.40±0.15
WIFI天线
19.99±0.15
56.90±0.15
深圳市亿铭远科技有限公司
项目名称 2032
产品名称 LDS天线组件
产品料号 AM06-2032-021-40
日期 2022-12-27
设计
审核
批准
单位 mm
比例 FIT
版本 A1

亿铭远与您携手共进　共创未来

Join Hands To Create The Future