



ShenzhenXingtongWieressTechnologyCo.,Ltd

# 深圳市星通无线技术有限公司

For

# 深圳市九洲智和科技有限公司

R1030D - WIFI-ANT

# 产品规格书

客户料号/Part No. :

产品型号/STYLE: R1030D-WIFI/BT-FPC天线

规格书编号/Specification No. :20230220-A

客户 Client	
承认 Approved	

核准 Approved by	审核 Checked by	设计 Designed by
<b>黄加俊</b>	<b>吴延龙</b>	<b>朱永建</b>

Project:R1030D		Author: HUANG	File Name:  <b>R1030D-APP-RA</b>
Date: 2023-2-20			
TEST:	Language:	Check: XIE	
A	English		
地址: 深圳市宝安区西乡九围强荣东工业区 A1 栋 3 楼 电话: 0755-27850514 传真: 0755-27850514 Shenzhen Xingtong Wieress Technology Co., Ltd			

## Revision History

Date	Revision	Description of Changes
2023-02-20	RA	Measured with <b>FPC</b> sample.

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# 1 Technical Summary

This report summarizes the electrical results of the proposed antenna to support the R1030D program. We test the antenna with the latest version handset. And it seems to be acceptable.

# 2 General Description

## 2.1 Components/Part revisions

VSWR: Voltage Standing Wave Rate.

# 3 Mechanical Description

# 4 Electrical Performance

## 4.1 Set-up

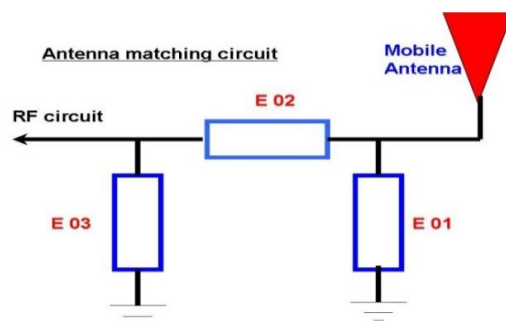
### 4.1.1 VSWR

VSWR measurements (S21) were performed using an Agilent 8753D Network Analyzer and the previously described test fixture. Coaxial chokes were used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

### 4.1.2 Gain & Radiation Patterns

The gain of the antenna was measured in the Xingtong’s anechoic chamber. Coaxial chokes on the feed cable were used to mitigate surface currents. The chamber provides less than -30 dB reflectivity from 2 GHz through 3 GHz and an 18” diameter spherical quiet zone. The measurement results are calibrated using both dipole and leaky wave horn standards.

### 4.1.3 Matching Circuit Description



匹配无修改

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## 4.2 Measurement Data

### 4.2.1 WIFI-OTA

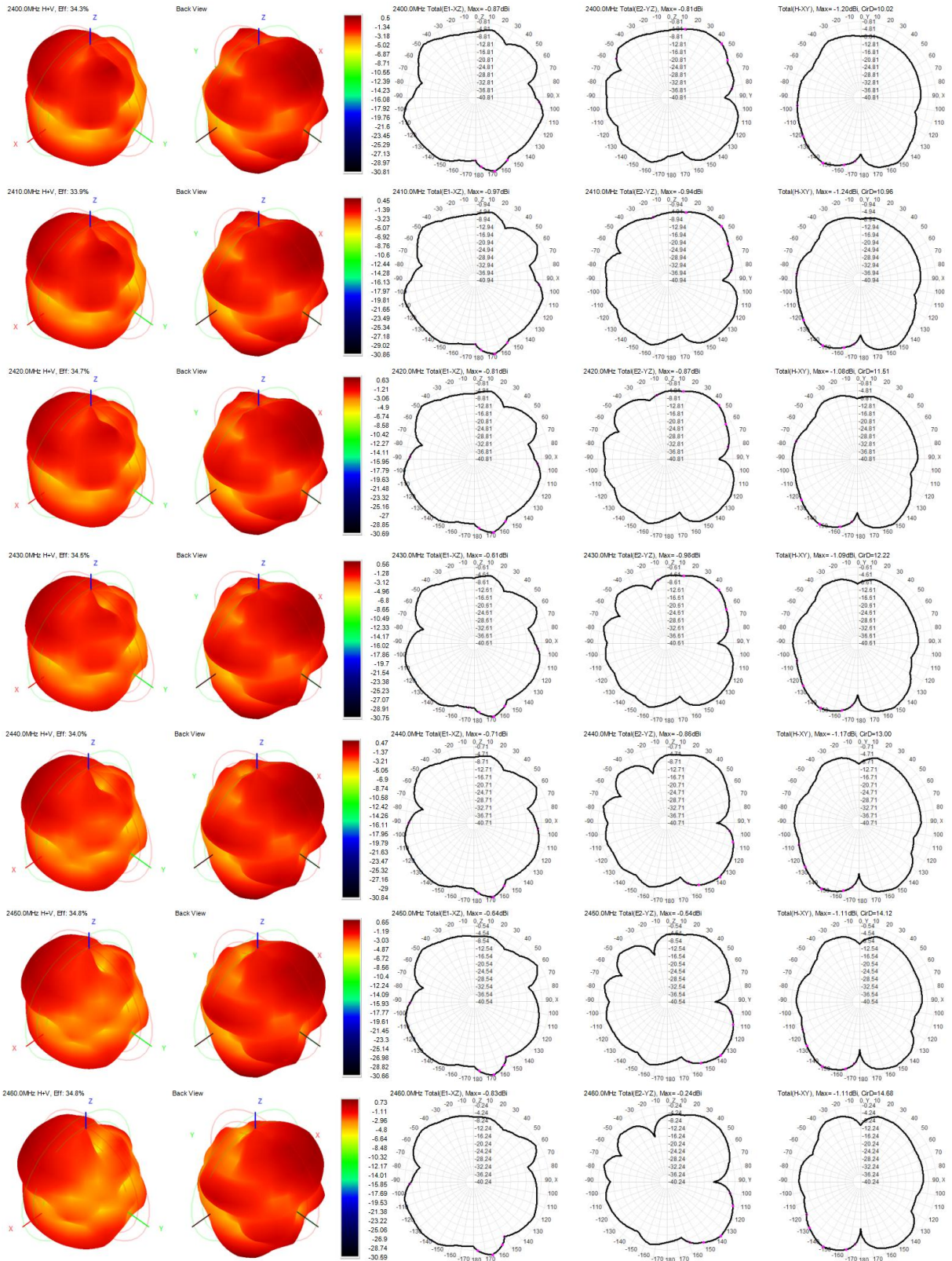
Cell	Band	Channel	TRP	Cell	Band	Channel	TIS
WIFI/2.4G/TRP	802.11b (11M)	1	6.19	WIFI/2.4G/TIS	802.11b (11M)	1	-81.06
		6	5.99			6	-81.53
		11	7.11			11	-81.89
	802.11g (54M)	1	5.12		802.11g (54M)	1	-70.28
		6	5.19			6	-70.39
		11	6.39			11	-70.65
	802.11gn (MCS7)	1	4.68		802.11gn (MCS7)	1	-69.22
		6	5.16			6	-69.17
		11	5.25			11	-69.29
BT/TRP/2LE	2402	0	2.36	BT/TIS/2LE	2402	0	-86.35
	2441	39	2.38		2441	39	-86.57
	2480	78	3.15		2480	78	-86.57

### 4.2.2 WIFI-Efficiency(%) OTA

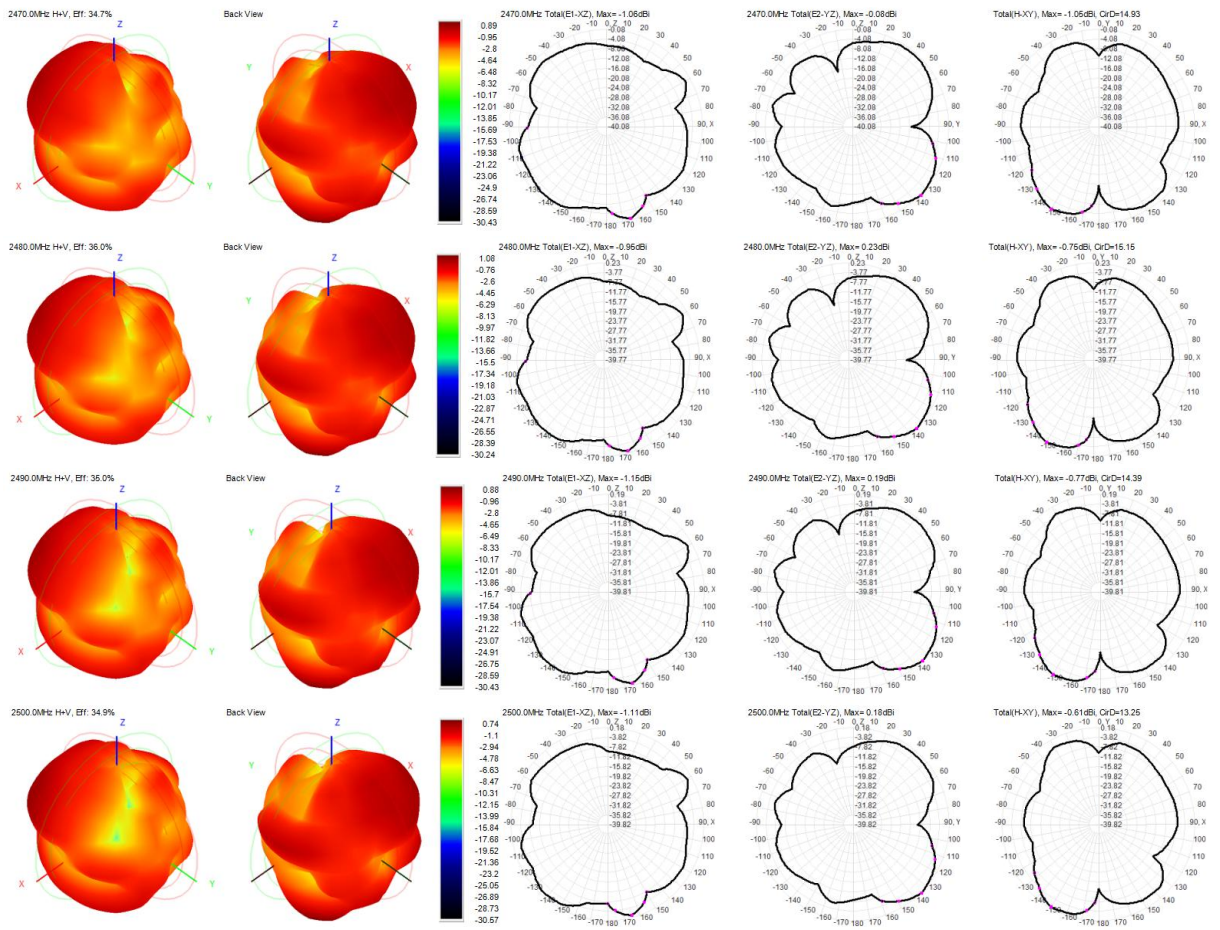
Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dBi)	-4.64	-4.70	-4.60	-4.62	-4.68	-4.58	-4.59	-4.60	-4.44	-4.56	-4.58
Gain (dBi)	0.50	0.45	0.63	0.56	0.47	0.65	0.73	0.89	1.08	0.88	0.74
Efficiency (%)	34.32	33.86	34.68	34.52	34.05	34.83	34.79	34.69	36.00	35.03	34.87
Directivity (dB)	5.15	5.16	5.23	5.18	5.15	5.23	5.31	5.49	5.52	5.44	5.32
Peak Gain Position (Theta)	120.00	120.00	120.00	120.00	120.00	120.00	135.00	135.00	135.00	135.00	135.00
Peak Gain Position (Phi)	225.00	225.00	225.00	225.00	225.00	210.00	285.00	285.00	285.00	285.00	285.00
Efficiency ThetaPol (%)	17.58	17.22	17.75	17.64	17.31	17.29	17.20	17.40	17.98	17.46	17.23
Efficiency PhiPol (%)	16.74	16.64	16.92	16.88	16.74	17.54	17.59	17.29	18.02	17.57	17.64
Upper Hem. Efficiency (%)	15.07	15.00	15.41	15.36	15.17	15.57	15.52	15.45	16.06	15.66	15.62
Lower Hem. Efficiency (%)	19.25	18.86	19.27	19.16	18.87	19.26	19.27	19.24	19.93	19.37	19.25

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## 4.2.3 WiFi 天线方向图:



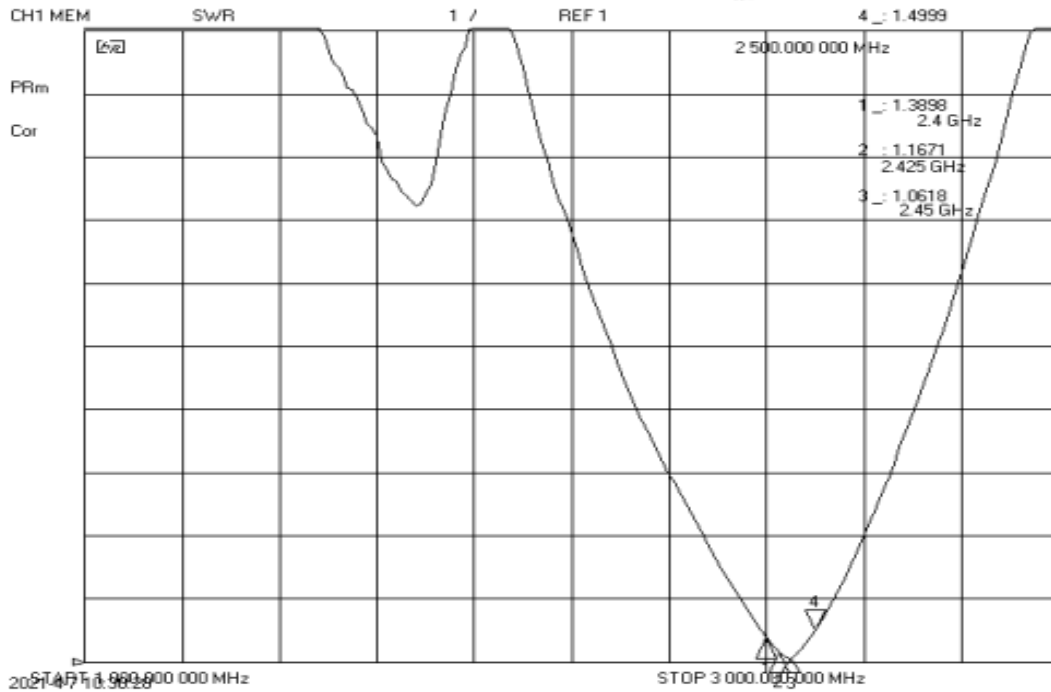
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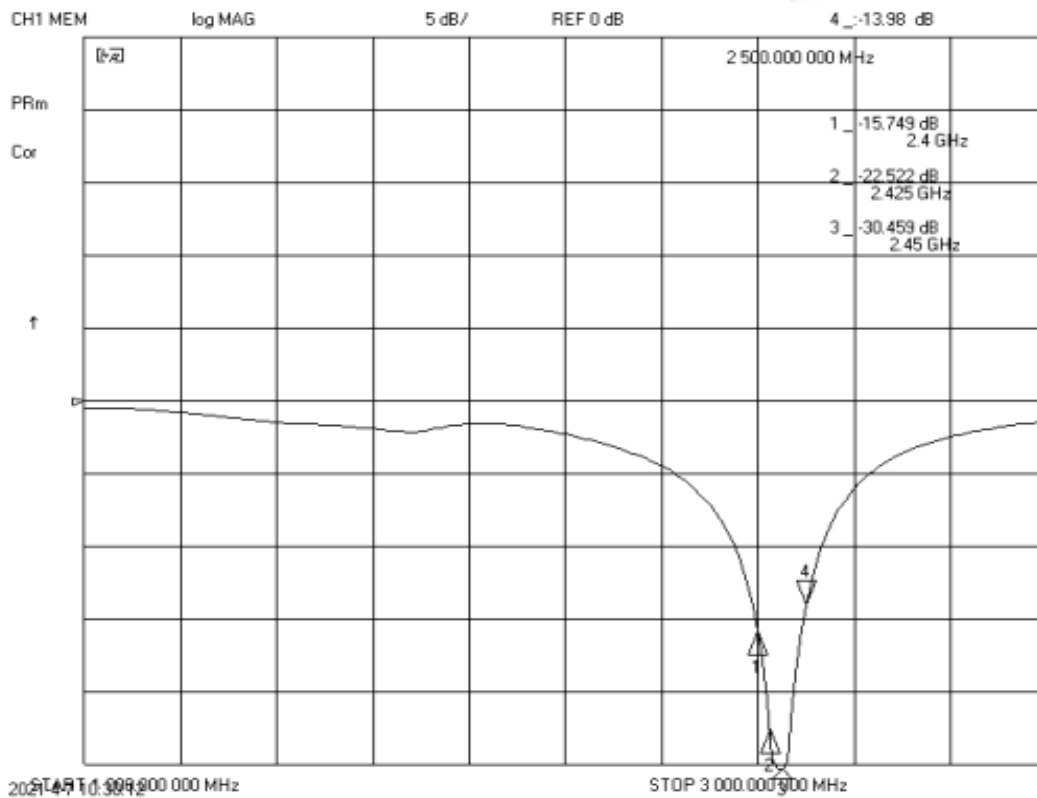
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# 5 Plots

## 5.1 VSWR (S11) BT



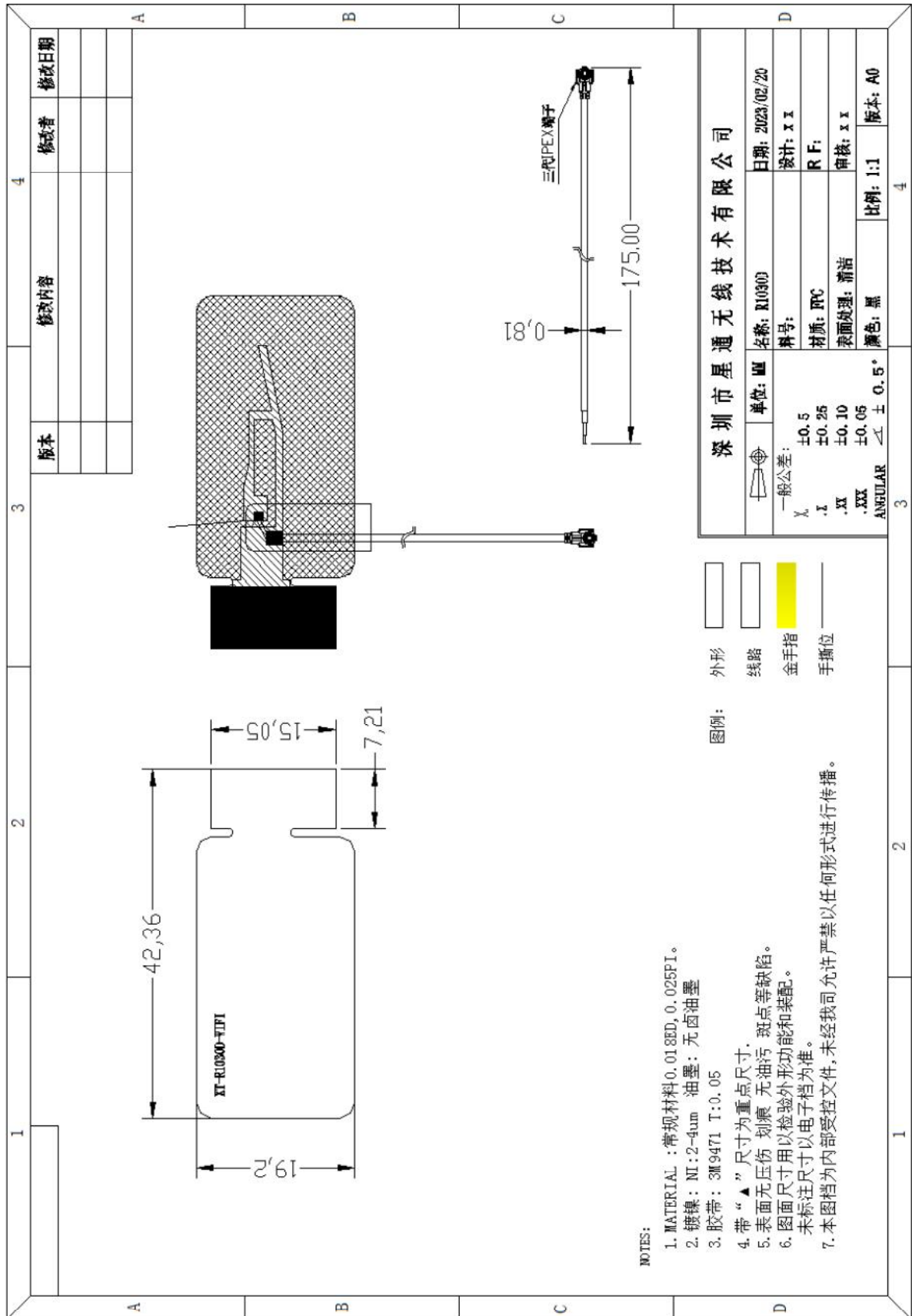
## 5.2 LOG MAG (S11) BT



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# 6 Mechanical drawing

WiFi 工程图



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# 7 Reliability tests

## 7.1 Test content

No	试验项目	试验方法	判定基准
1	盐水喷雾试验	把盐浓度 5%的溶液喷雾 48HR	不能有变色, 歪 (变形) 脱落等的缺点 无腐蚀面积
2	工作温度 (Operational Temperature)	-40°C~+65°C	
3	储存温度 (Storage Temperature)	-50°C~+85°C	
4	湿度 (Humidity)	40%~95%	

## 7.2 Test results

NO	样品数	试验期间	实验结果	备注
1	50	24 小时	<b>OK</b>	技术等级为 9 级 腐蚀<0.4mm
2	50	24 小时	<b>OK</b>	技术等级为 9 级 腐蚀<0.4mm

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