深圳市扬跃电子通信科技有限公司
Shenzhen Yangyue Electronic Communication Technology Co., Ltd.

SPECIFICATION FOR APPROVAL

Customer Name	SHENZHEN SAMOON TECHNOLOGY CO.,LTD
Product name	WIFI antenna /2.4Ghz/ cable diameter 0.81 Black /coaxial cable length 60.5 1.5mm/with 1st generation antenna button /385GWX model.
Product number	332-200000066
Prepared By	Tony-Men
Checked By	
Approved By	
Apply Date	July 3(rd), 2024

CUSTOMER SIGNATURE		
Prepared By	**Checked By**	**Approved By**

PLEASE RETURN TO US ONE COPY OF"SPECIFICATION FOR APPROVAL"WITH YOUR APPROVED SIGNATURES.

频率范围 **Frequency range**	2400 ~ 2500 MHz
增益 **Gain**	2.68dBi/MAX@2400 ~ 2500 MHz
驻波比系数 **VSWR**	<2.1
输入阻抗 **Input Impedance**	50±5（Ω）
极化方式 **Polarization**	Vertical polarization+horizontal polarization
半功率波束（**3dB**）**HPW**	180° H-plane 120° E-plane
天线类型（**Antenna type**）	2.4 GHz FPC antenna

Antenna position

Revision History

Date	Revision	Description of Changes
2024-3-19	RA	Measured with 2.4GHz antenna sample.

1 Technical Summary

This report summarizes the electrical results of the proposed antenna to support the 2.4GHz antenna 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 (S11) 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.

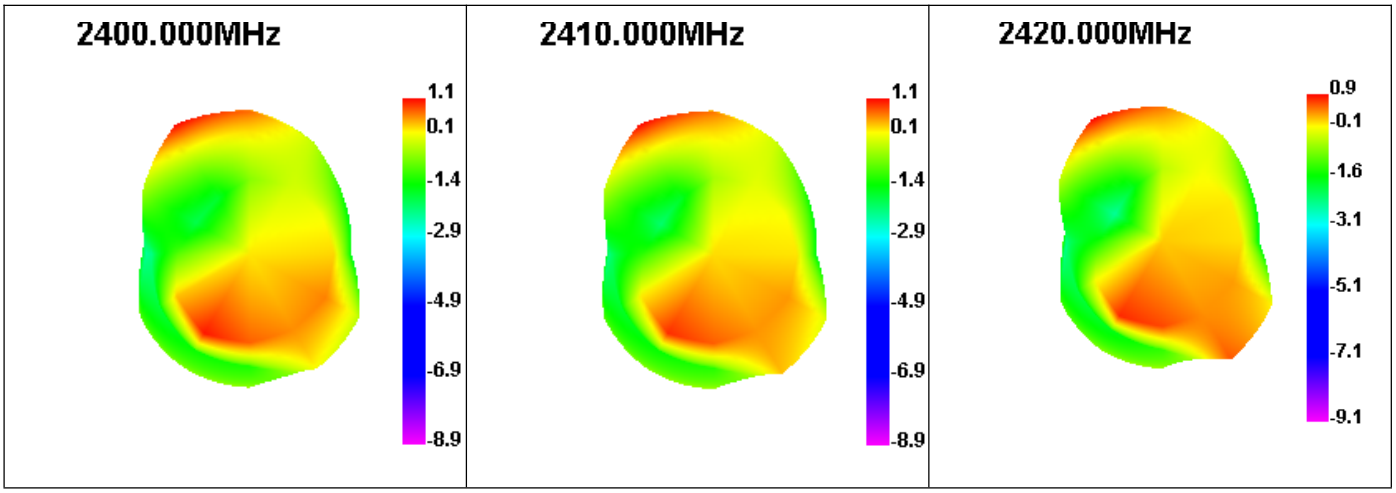
4.1.2 Gain & Radiation Patterns

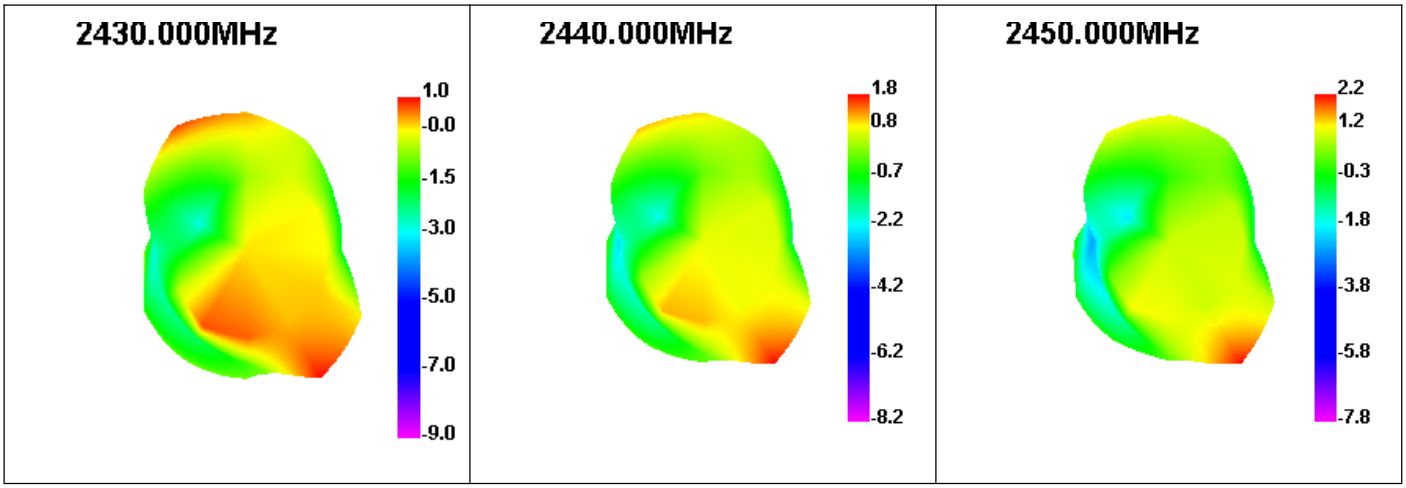
The gain of the antenna was measured in the Lxc's anechoic chamber. Coaxial chokes on the feed cable were used to mitigate surface currents. The chamber provides less than –30 dB reflectivity from 300 MHz through 6 GHz and an 18" diameter spherical quite zone. The measurement results are calibrated using both dipole and leaky wave horn standards.

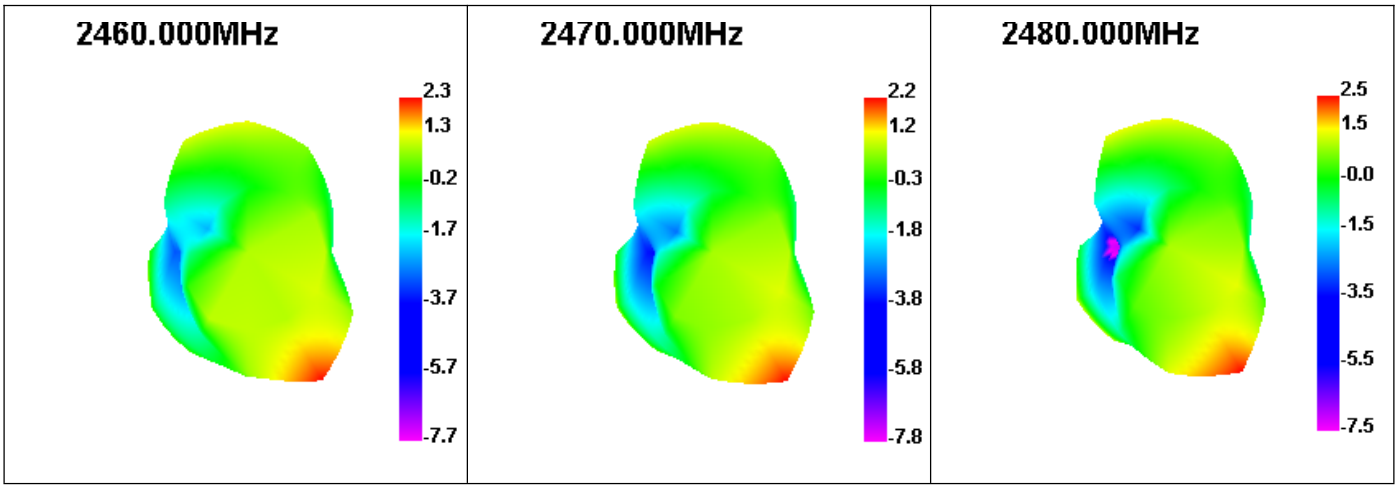
4.1.3 Matching Circuit Description

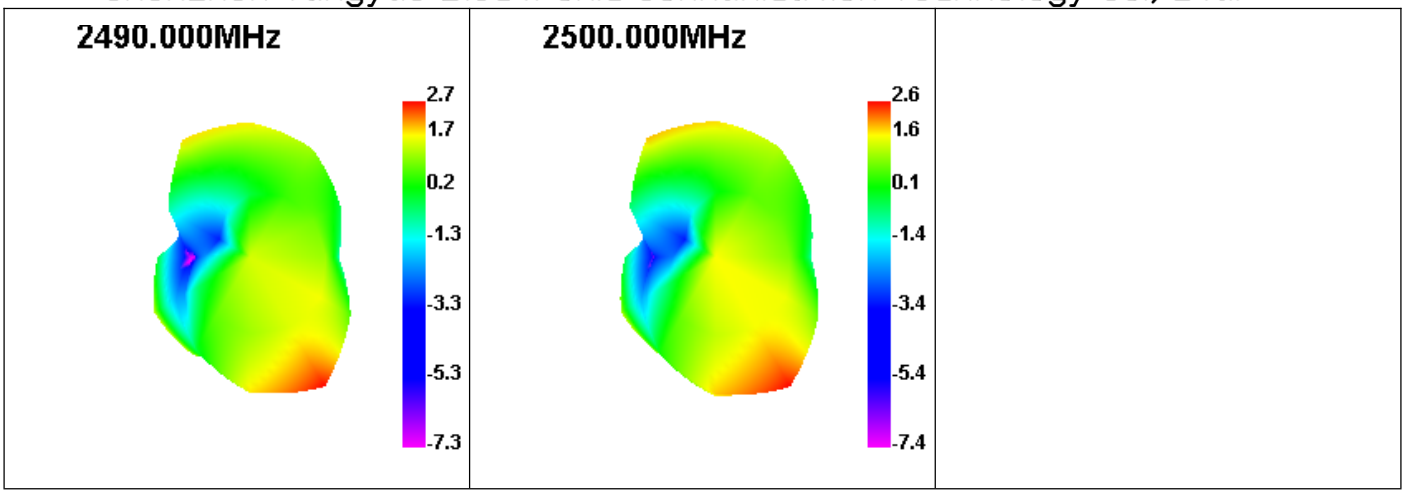
No changed..

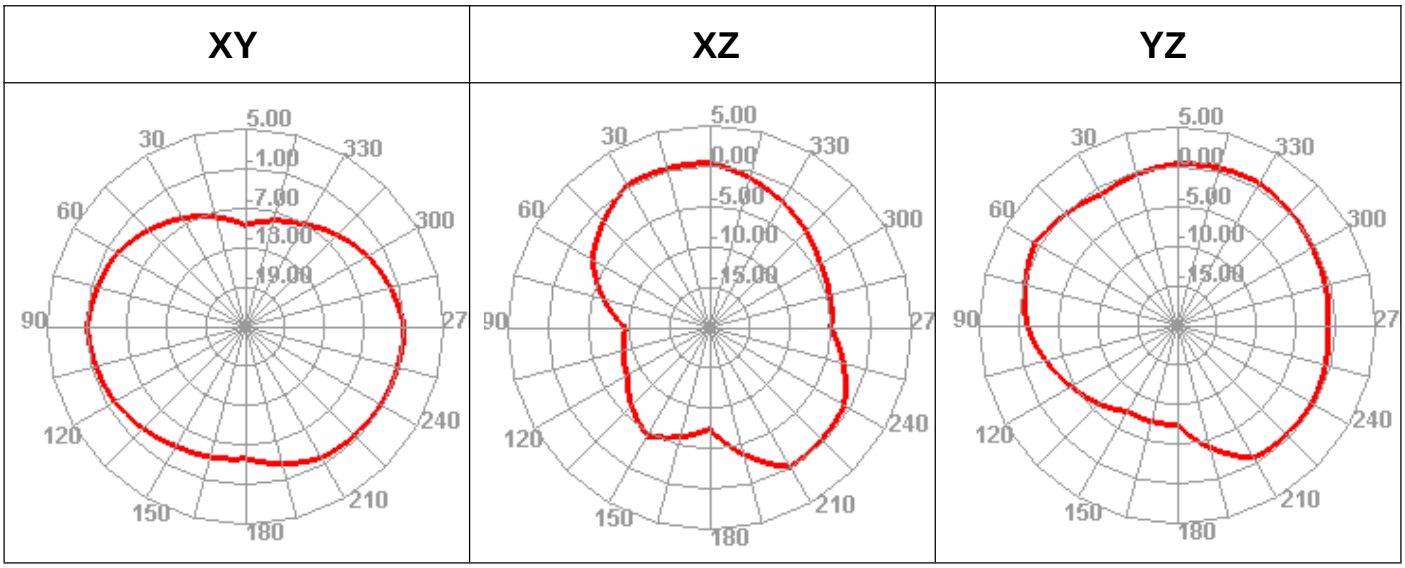
5. Antenna - Radiation Pattern Test Data







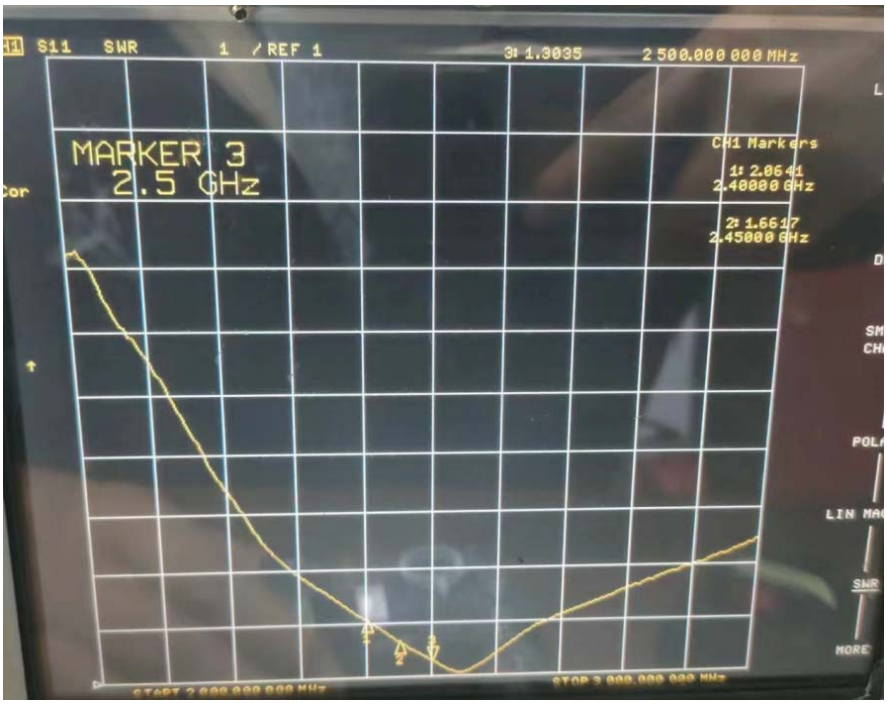




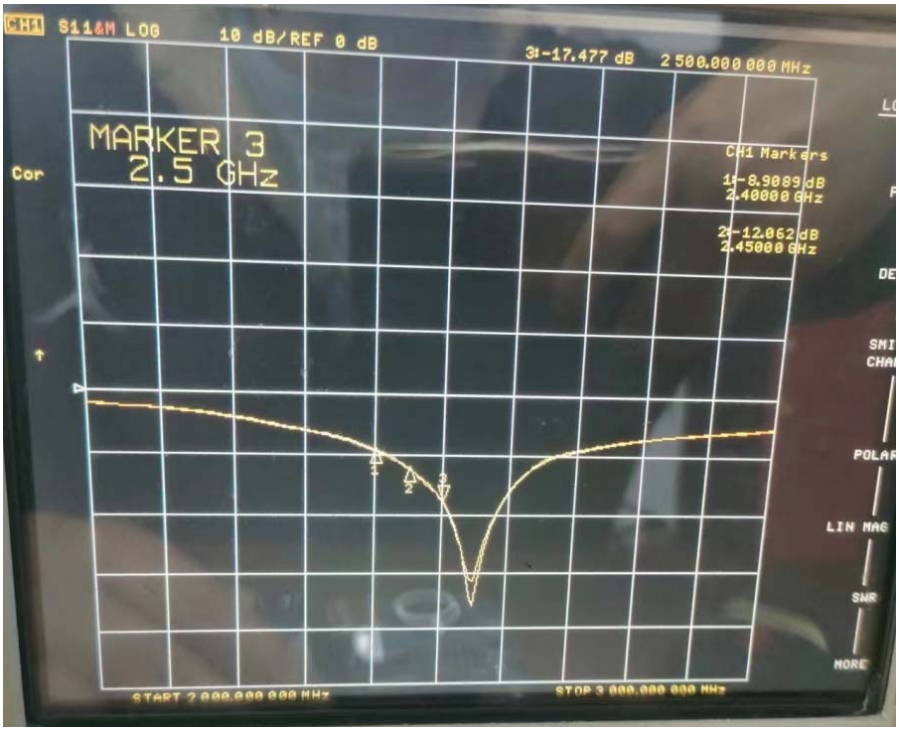
Freq	(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Effi	(%)	54.41	55.74	55.28	56.94	62.08	64.17	63.86	62.89	66.69	72.04	73.36
Gain	(dBi)	1.08	1.13	0.85	0.99	1.75	2.15	2.27	2.25	2.46	2.68	2.65

6.Plots

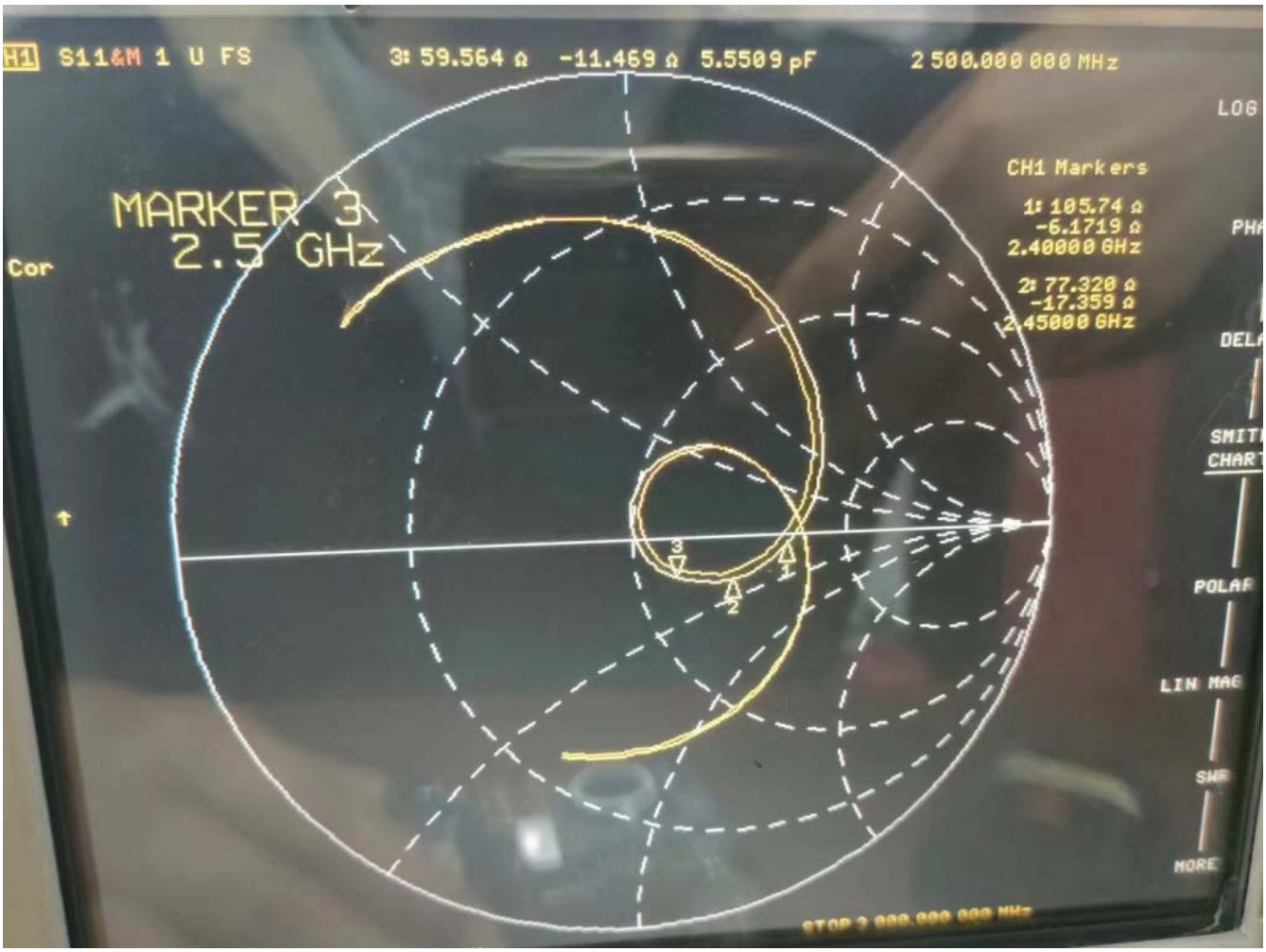
VSWR



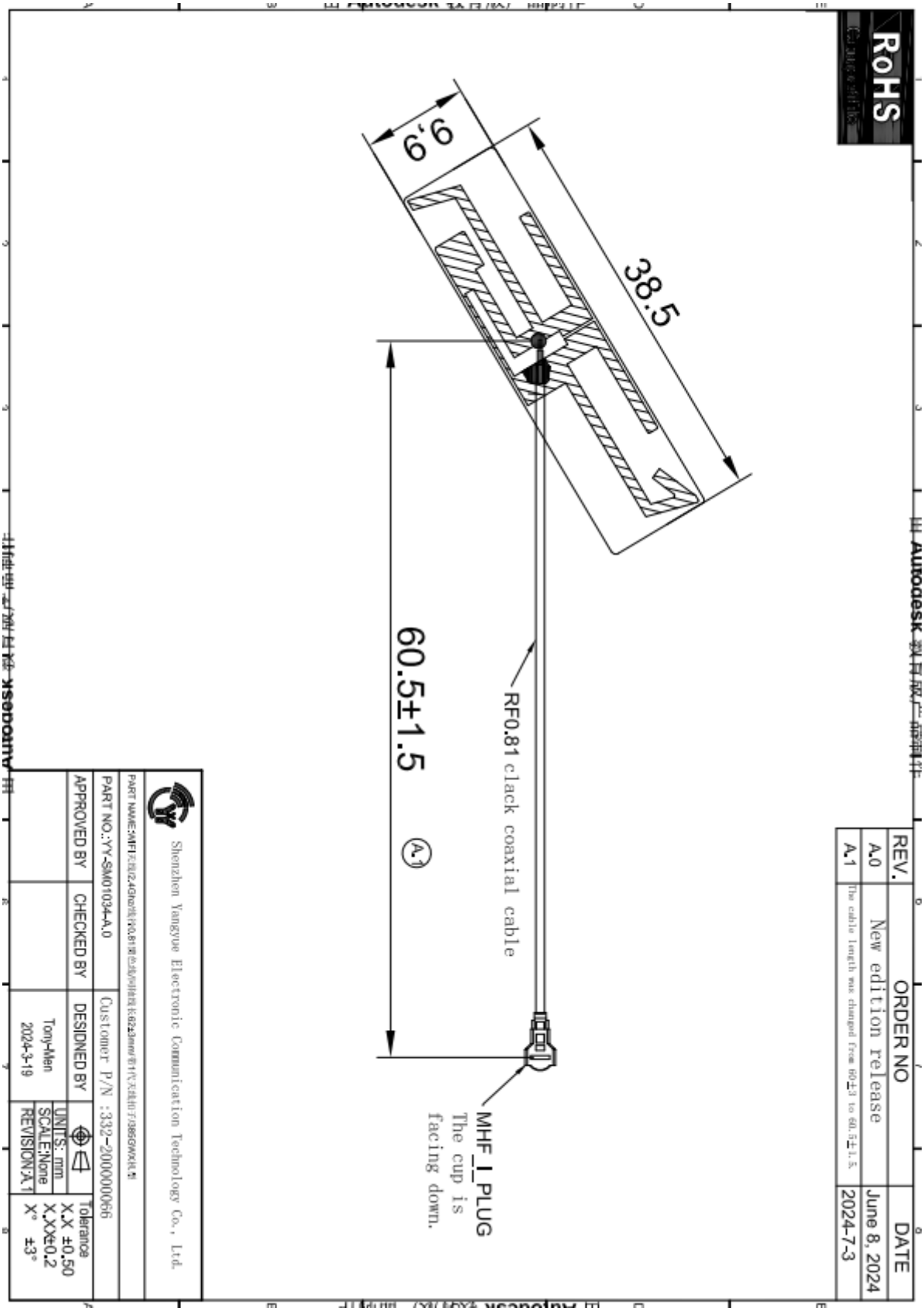
ReturnLoss



Smith chart


H1 S11&M 1 U FS
3: 59.564 Ω -11.469 Ω 5.5509 pF
2 500.000 000 MHz
MARKER 3
2.5 GHz
Cor
LOG
CH1 Markers
1: 105.74 Ω
-6.1719 Ω
2.40000 GHz
2: 77.320 Ω
-17.359 Ω
2.45000 GHz
SMITH CHART
POLAR
LIN MAG
SWR
MORE

6.Mechanical drawing



7 Reliability tests

7.1 Test content

No	试验项目 Test item	试验方法 Test method	判定基准 Criterion
1	盐水喷雾试验 Salt water spray test	把盐浓度 5%的溶液喷雾 24HR Spray the solution with salt concentration of 5% for 24HR.	不能有变色，歪（变形）脱落等的缺点 腐蚀面积不能过大 There should be no discoloration, slanting (deformation) and falling off, and the corrosion area should not be too large.

7.2 Test results

NO	样品数 Sample number	试验期间 Testing time	实验结果 Result	备注 Remarks
1	10	24HR	**OK**	技术等级为 9 级 腐蚀<0.4mm The technical level is 9. Corrosion < 0.4mm

8 Conclusion

以上数据表明此 2.4GHz 天线参数均已达标。性能以装机后的实际使用效果为准。

The above data show that the parameters of this 2.4GHz antenna have reached the standard. The performance is subject to the actual use effect after installation.

From the above test results, we can know the electrical performance of the antenna is seems good.

Shenzhen Yangyue Electronic Communication Technology Co., Ltd, look forward to your confirmation, thank you for your cooperation!