



SPECIFICATION FOR APPROVAL

Customer Name	
Product name	WIFI 2.4G/5G antenna/cable diameter 1.13/coaxial cable length 150 ± 3 /with antenna button/NB2 IPCAM project
Product number	YY-20240110-01
Prepared By	Tony-Men
Checked By	
Approved By	
Apply Date	2024 January 10

CUSTOMER SIGNATURE		
Prepared By	Checked By	Approved By

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Frequency range	2400 ~ 2500 MHz 5150 ~ 5850 MHz
Gain	4.02dBi/MAX @2400 ~ 2500 MHz 2.77dBi/MAX @5150 ~ 5850 MHz
VSWR	<2.0
Input Impedance	$50 \pm 5 (\Omega)$
Polarization	Vertical Polarization
(3dB) HPW	180° H-plane 120° E-plane

Antenna position





Revision History

Date	Revision	Description of Changes
2024-1-10	RA	Measured with 2.4GHz/5.8GHZ antenna sample.

1 Technical Summary

This report summarizes the electrical results of the proposed antenna to support the 2.4GHz/5.8GHZ 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

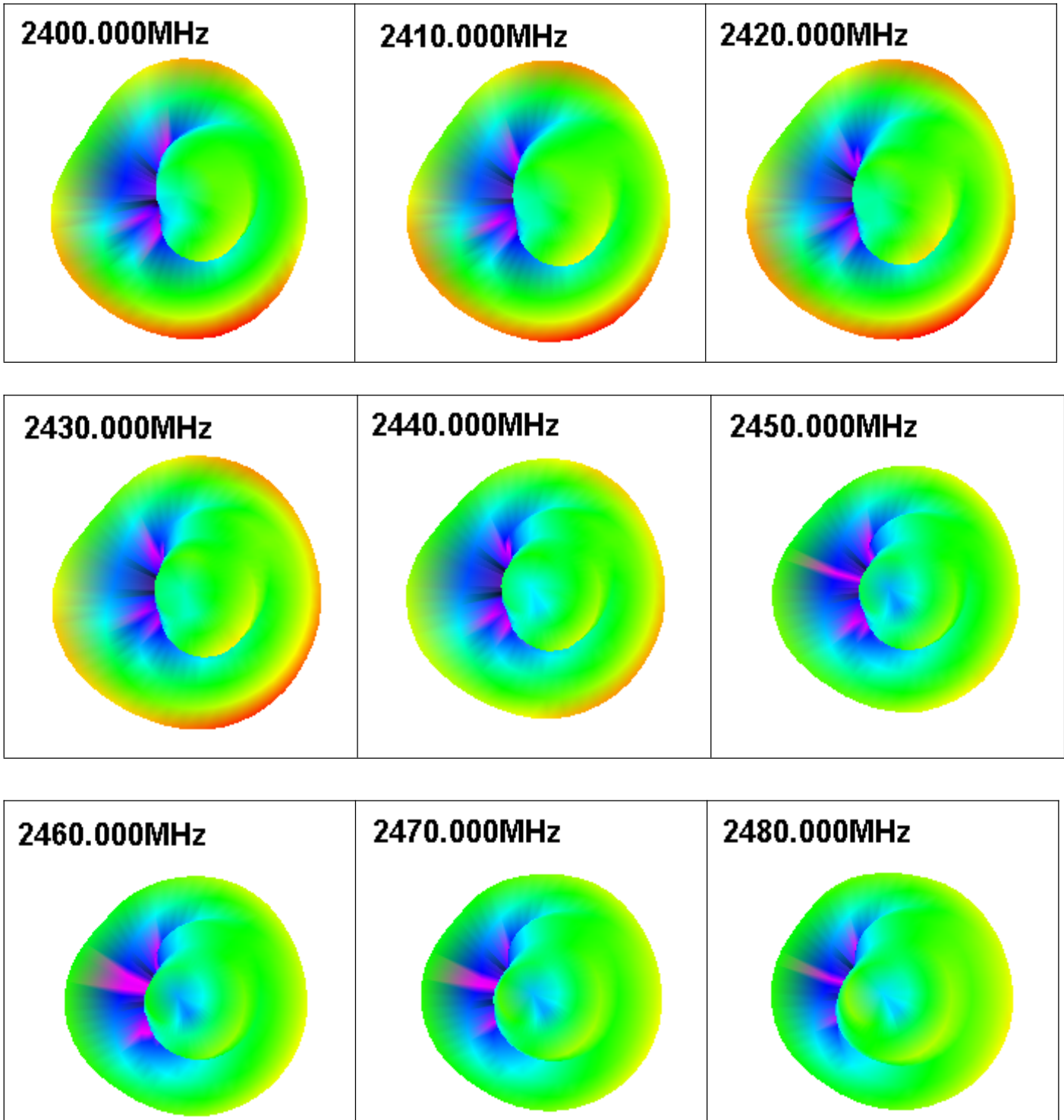
The gain of the antenna was measured in the Lxc's anechoic chamber. Coaxial chokes on the feed cable were used to mitigate surface currents. The chamber provides less than -30 dB reflectivity from 300 MHz through 6 GHz and an 18" diameter spherical quiet zone. The measurement results are calibrated using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

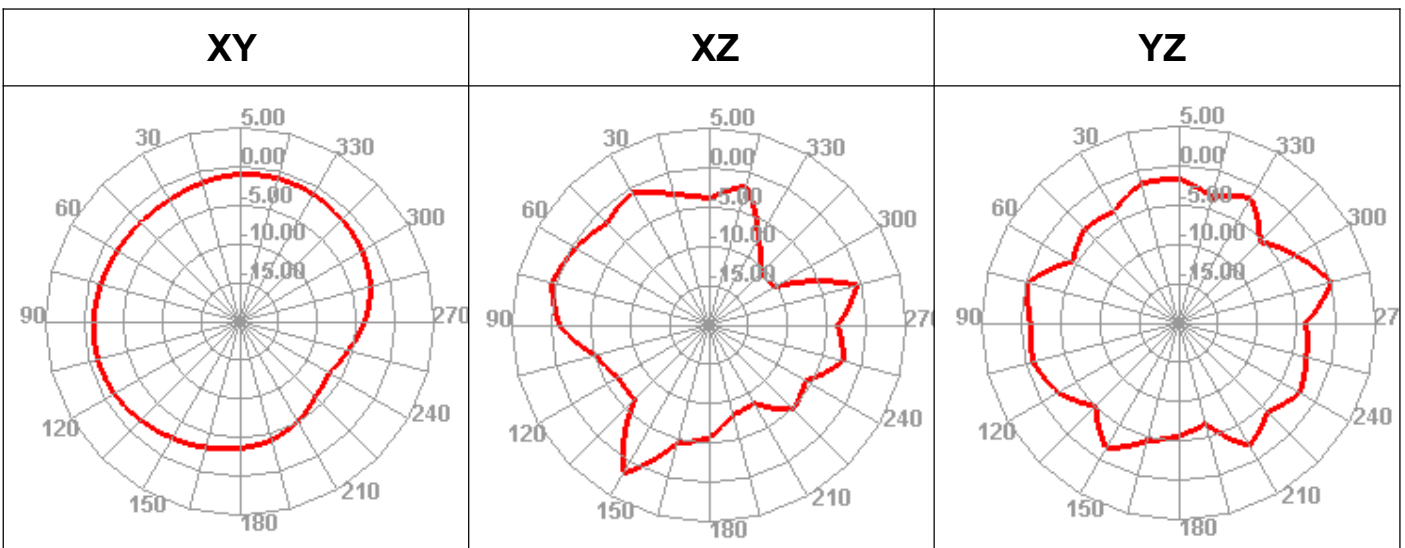
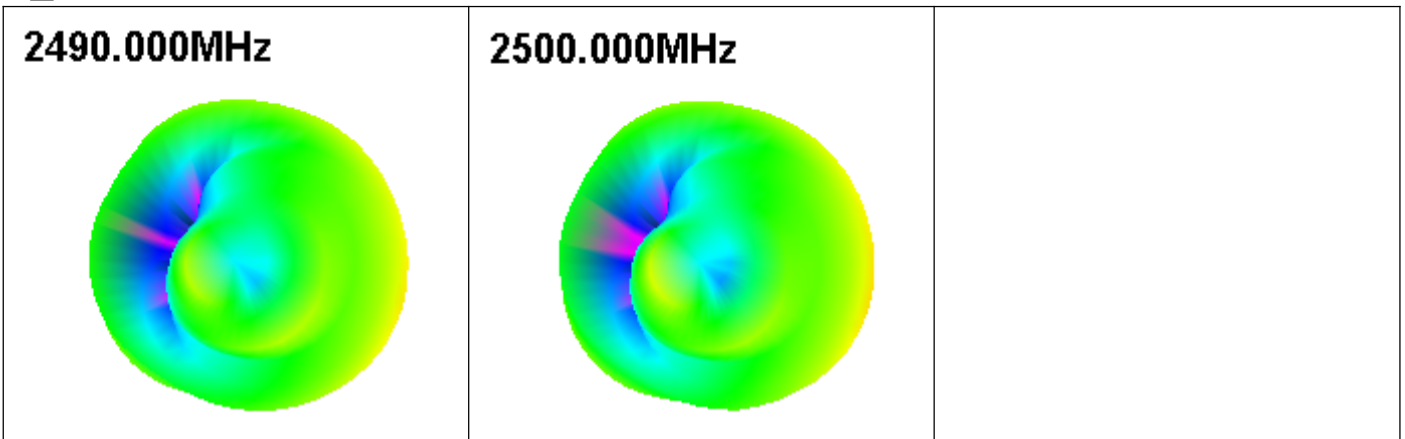
4.1.3 Matching Circuit Description

No changed..

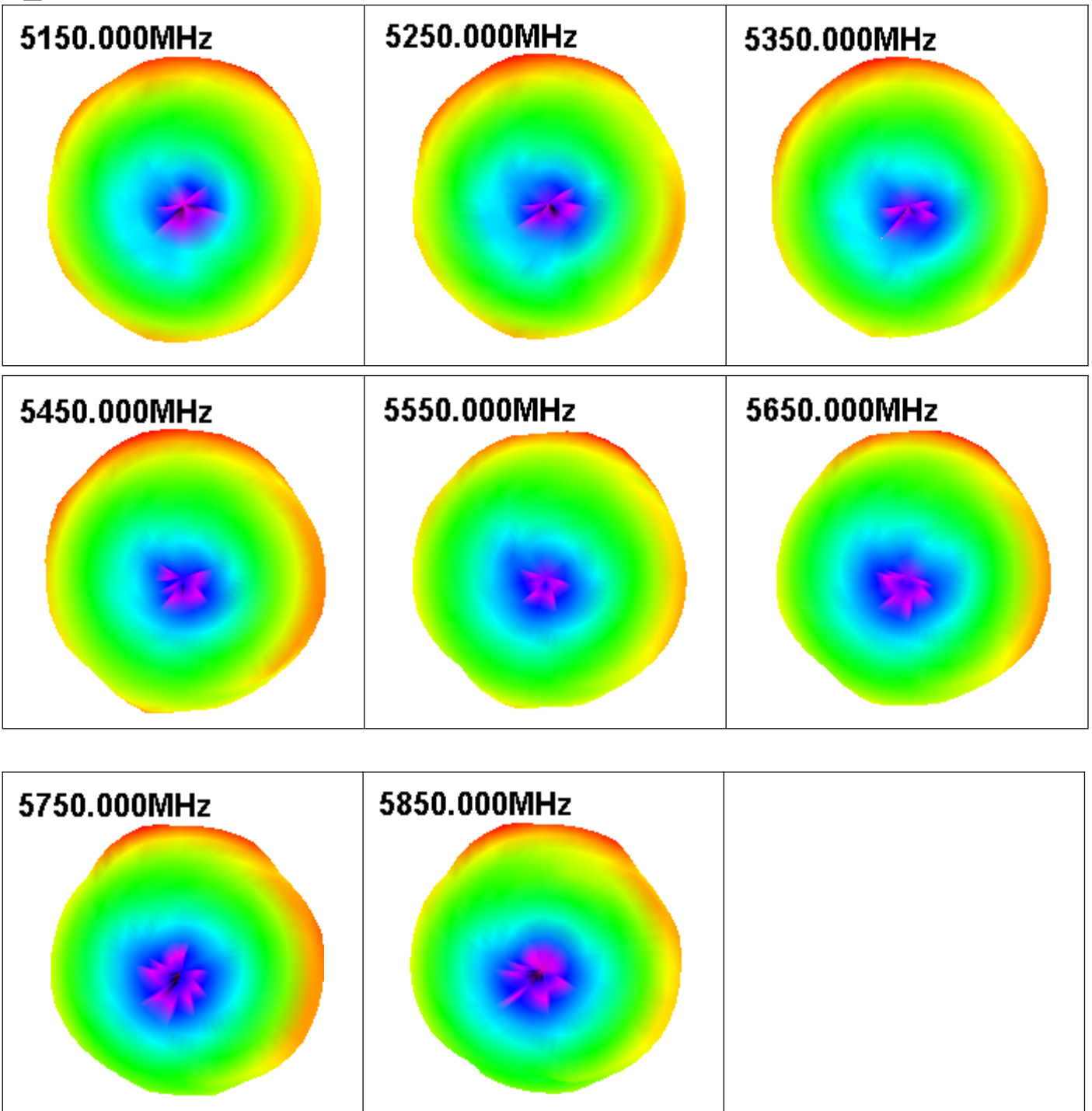


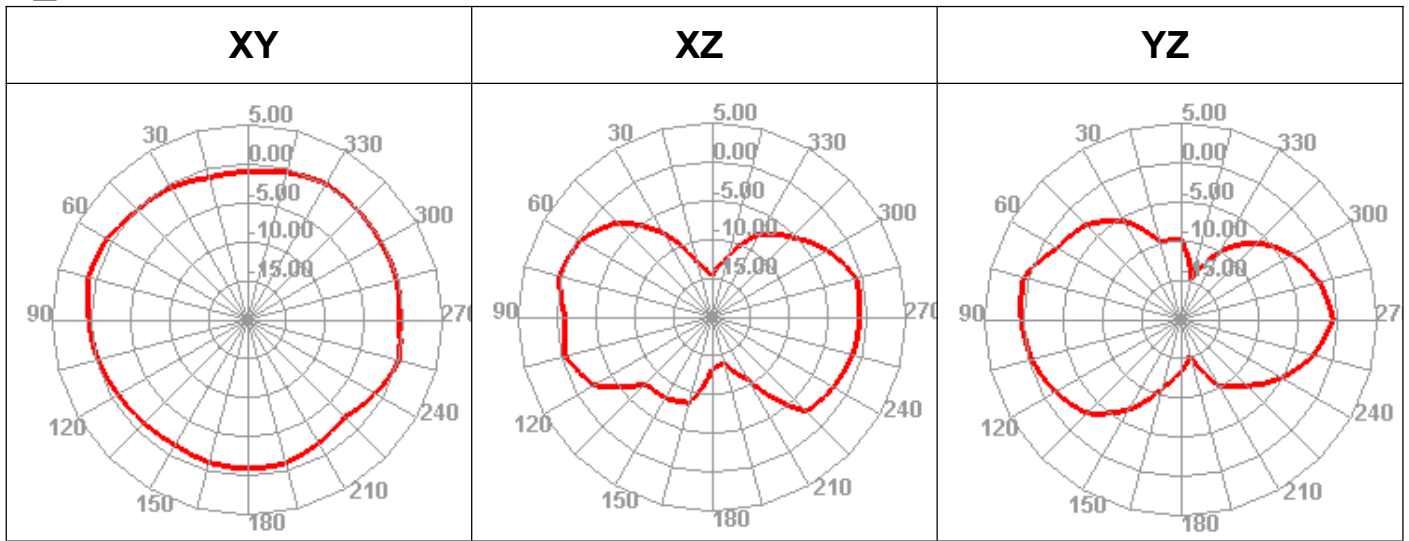
4.2 Antenna - Radiation Pattern Test Data





Passive Test For WIFI		
Freq (MHz)	Effi (%)	Gain (dBi)
2400	63.57	3.62
2410	62.93	3.53
2420	61.69	3.33
2430	64.13	3.73
2440	64.84	4.02
2450	63.23	3.75
2460	62.18	3.61
2470	60.54	3.32
2480	58.94	3.18
2490	56.18	3.05
2500	55.79	2.98



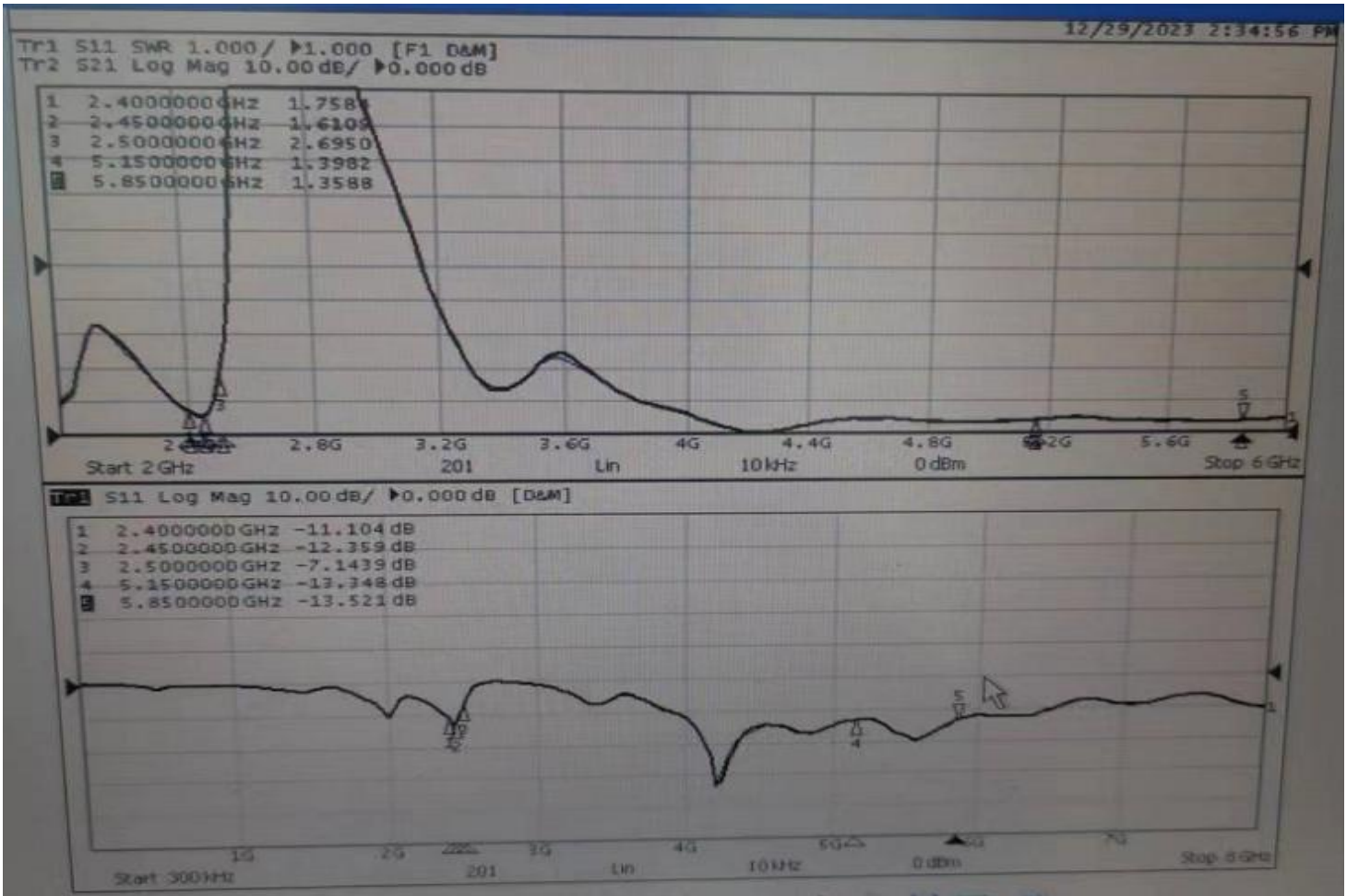


Passive Test For D5		
Freq (MHz)	Effi (%)	Gain (dBi)
5200	50.23	2.63
5250	52.46	2.77
5300	55.84	3.02
5350	54.15	3.14
5400	56.17	3.75
5500	58.1	3.8
5550	53.32	3.09
5600	60.24	4.11
5650	51.2	2.97
5700	50.56	2.82
5750	54.54	3.26
5800	61.55	4.12
5850	58.85	3.85



6.Plots

VSWR/S11

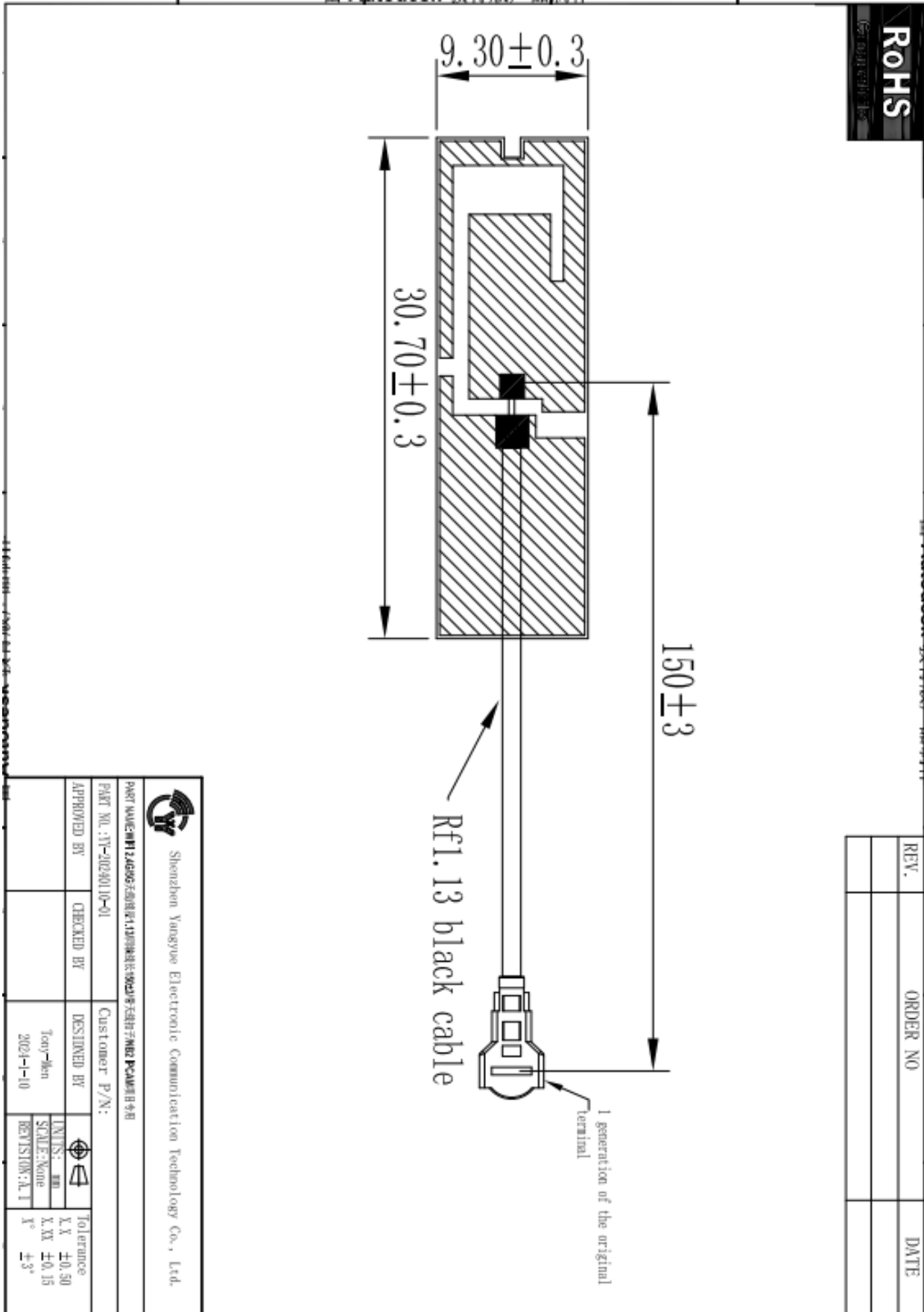


3.Smith





6.Mechanical drawing





7 Reliability tests

7.1 Test content

No	Pilot projects	Test method	Benchmark
1	Salt water spray test	A solution of 5% salt was sprayed for 24 hr	Can not have discoloration, slanting (deformation) off and other shortcomings, corrosion area can not be too large

7.2 Test results

NO	Number of samples	Test time	The results of the experiment	Notes
1	10	24 hours	OK	The technical grade is grade 9 corrosion & LT; 0.4 mm

8 Conclusion

The data above show that the antenna parameters of 2.4 ghz/5.8 ghz have reached the standard. Performance is based on 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 !