

Test Reports

Applicant : Gosuncn Intelligent IOT Technology Co.,Ltd.

Sample Name : Outdoor Fixed UHF RFID Reader Antenna

Model No. : ZXRIS AU04

Trademark : 

Brand Name : GOSUNCN

Test Standard : GB/T 9410-2008
ANSI/IEEE Std 149-2008

Received Date : 2025-08-18

Test Date : 2025-08-19

Issue Date : 2025-08-20

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1. Basic Information

Note: Provided by the applicant and manufacturer.

1.1. Applicant and manufacturer information

Applicant:	Gosuncn Intelligent IOT Technology Co.,Ltd.
Applicant Address:	West 7th Road,Dongli Airport Economic Zone,Tianjin
Manufacturer:	N/A
Manufacturer Address:	N/A

1.2. Sample Information

Frequency Range:	902MHz-928MHz
Polarization Method:	Line Polarization
IMEI:	N/A
Sample Number:	1#

Remarks:

1. For detailed information of the samples, please refer to the instructions for use provided by the applicant or the manufacturer.

2. Test Results

2.1. References

Test main reference documents:

No.	Document Name	Document Title
1	GB/T 9410-2008	General Technical
2	ANSI/IEEE Std 149-2008	IEEE Standard Test Procedures for Antennas

2.2. Sample Test Conditions

During testing, the environmental conditions are within the ranges listed:

Temperature (°C).	10 - 30
Relative humidity (%).	25- 75

2.3. Measurement uncertainty

Measurement uncertainty is calculated according to the "Guide to the Expression of Uncertainty in Measurement" (GUM) issued by ISO. If the test result is a critical limit value, we will issue the measurement uncertainty and give the judgment result according to the 95% confidence interval.

Item	Measurement uncertainty
Gain	±0.5
Voltage VSWR	±0.2
Extended uncertainties are expressed using a K=2 inclusion factor and	

3. Test Results List

3.1. Gain

Frequency	Antenna Gain (dBi)
902MHz	10.9
902.75MHz	10.9
915.25MHz	11.02
920MHz	11.04
920.125MHz	11.05
922.625MHz	11.07
924.875MHz	11.1
925MHz	11.1
927.25MHz	11.11
928MHz	11.11

3.2. Half-power beamwidth (degrees)

Frequency	Half-power beamwidth	
	Phi=0°	Phi=90°
902MHz	30.97	74.19
902.75MHz	30.94	74.34
915.25MHz	30.47	74.52
920MHz	30.35	75.64
920.125MHz	30.35	75.58
922.625MHz	30.23	75.19
924.875MHz	30.16	74.9
925MHz	30.14	74.83
927.25MHz	30.06	74.66
928MHz	30.05	74.63

3.3. Level Ratio of Primary to **Secondary***

Frequency	Level Ratio (dB)
	Phi=0 degrees
902MHz	11.70
902.75MHz	11.68
915.25MHz	11.36
920MHz	11.62
920.125MHz	11.61
922.625MHz	11.53
924.875MHz	11.45
925MHz	11.44
927.25MHz	11.36
928MHz	11.32

3.4. Front-to-back ratio (dB)

Frequency	Front-to-back ratio	
	Phi=0	Phi=90
902MHz	21.35	21.58
902.75MHz	21.37	21.61
915.25MHz	21.89	22.35
920MHz	22.20	22.67
920.125MHz	22.22	22.69
922.625MHz	22.38	22.83
924.875MHz	22.58	23.01
925MHz	22.58	23.02
927.25MHz	22.86	23.29
928MHz	22.95	23.39

3.5. Impedance (Ω)

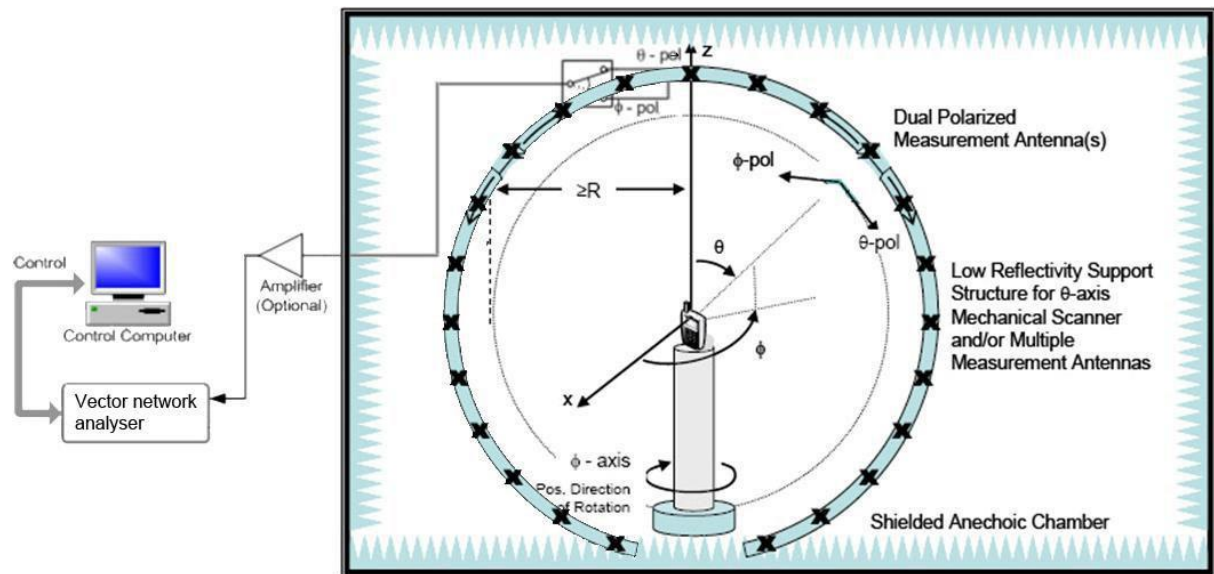
Frequency	Impedance(Ω)
902MHz	54.38
902.75MHz	54.51
915.25MHz	55.63
920MHz	52.12
920.125MHz	52.08
922.625MHz	51.36
924.875MHz	51.01
925MHz	51.07

927.25MHz	51.92
928MHz	52.57

3.6. Voltage VSWR

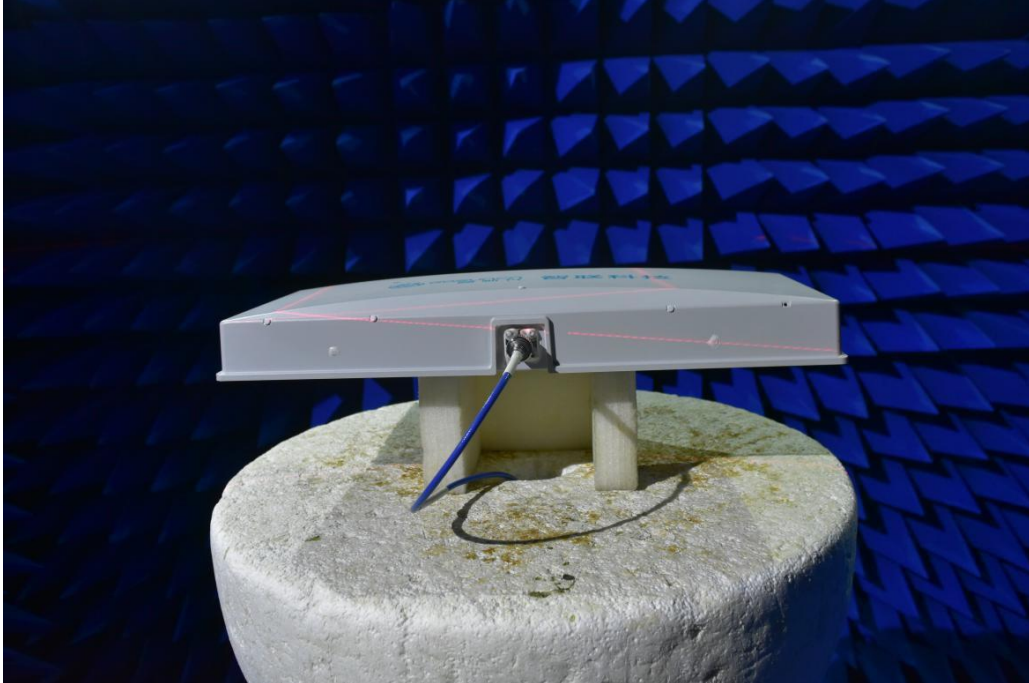
Frequency	Voltage VSWR
902MHz	1.08
902.75MHz	1.09
915.25MHz	1.13
920MHz	1.06
920.125MHz	1.05
922.625MHz	1.02
924.875MHz	1.03
925MHz	1.03
927.25MHz	1.09
928MHz	1.10

Appendix A Test System Connections

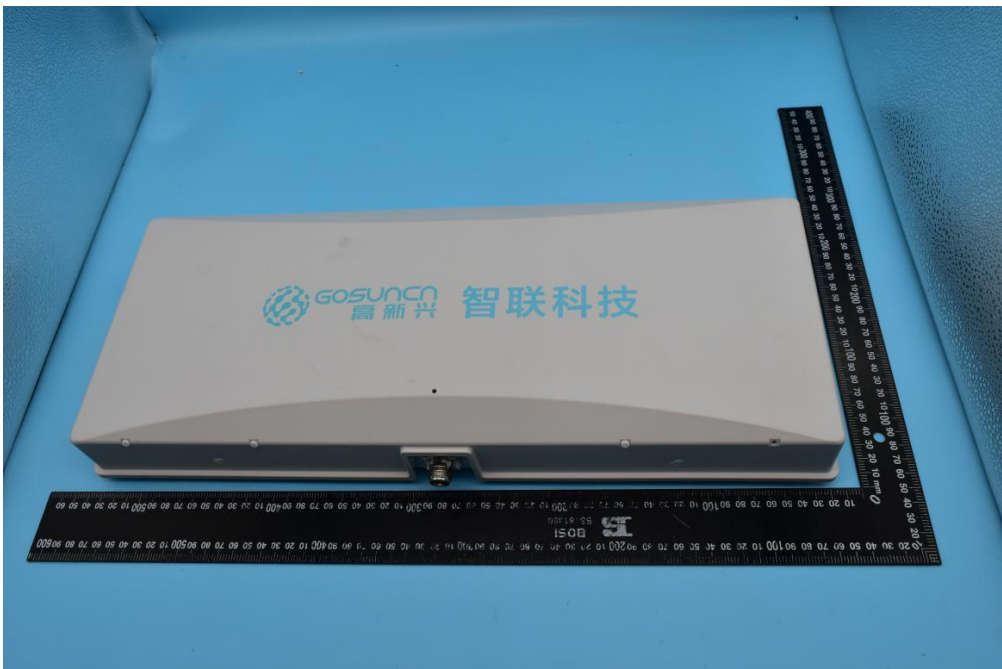


Appendix B Sample Photos

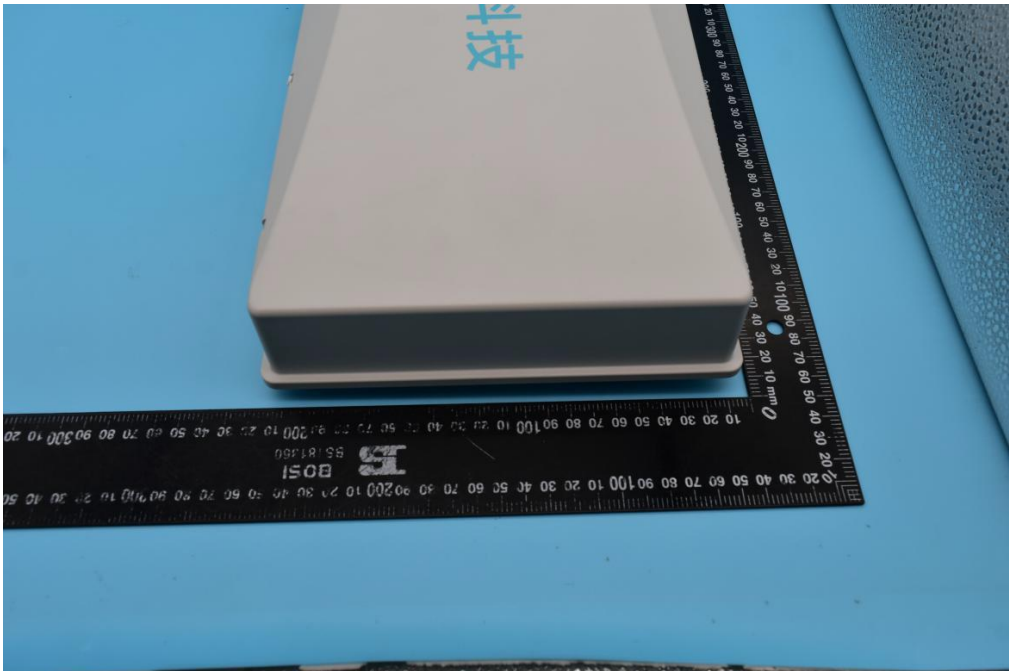
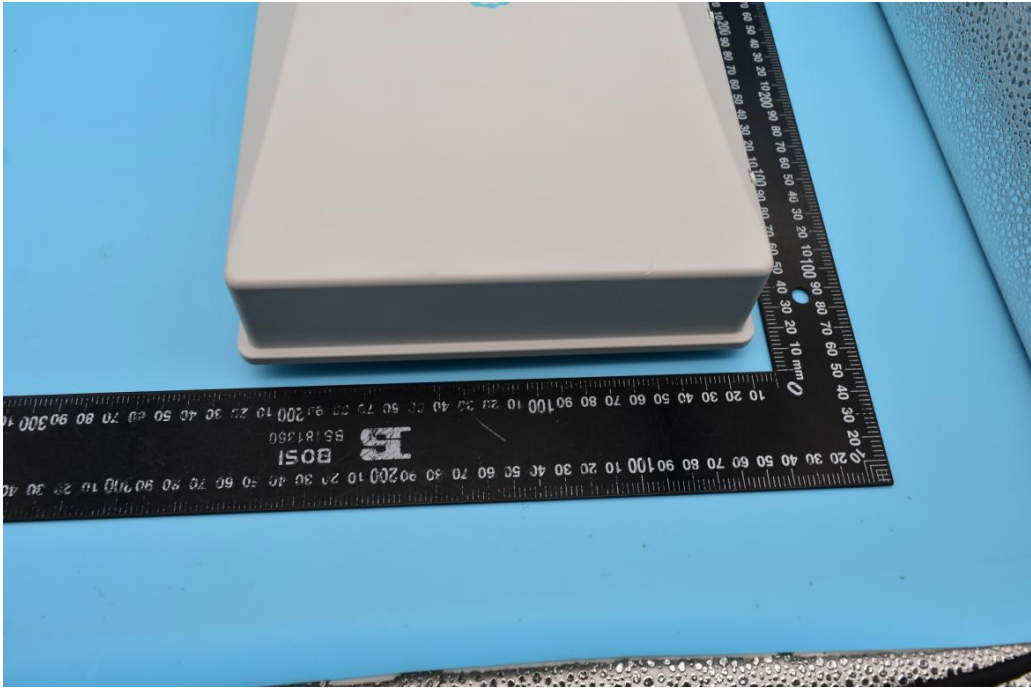
1. Test Environment



2. Sample Appearance



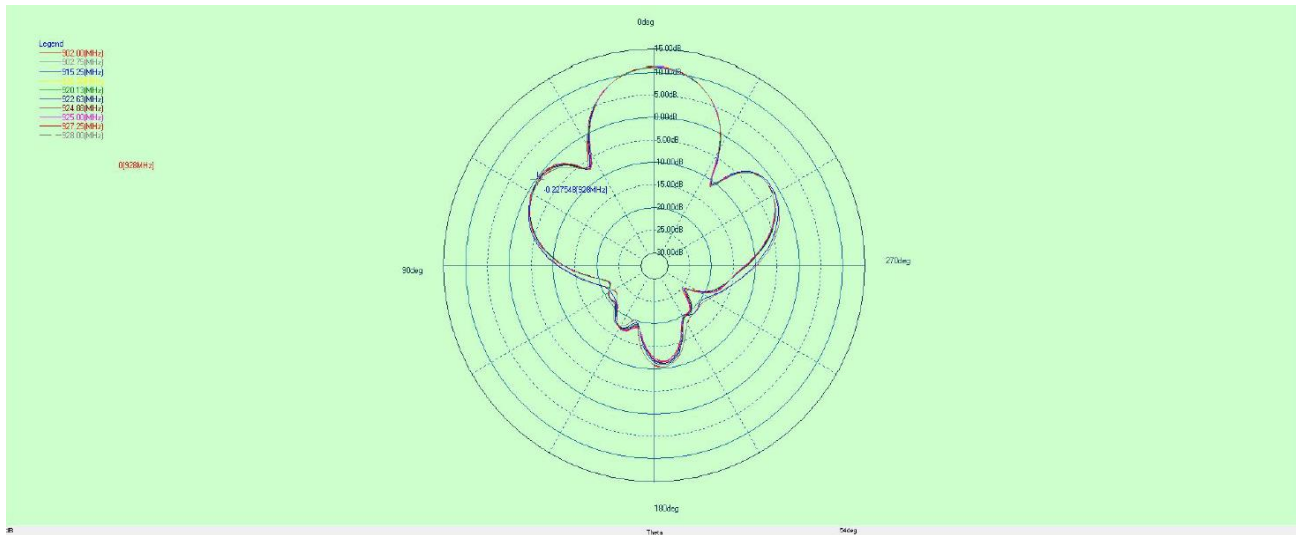




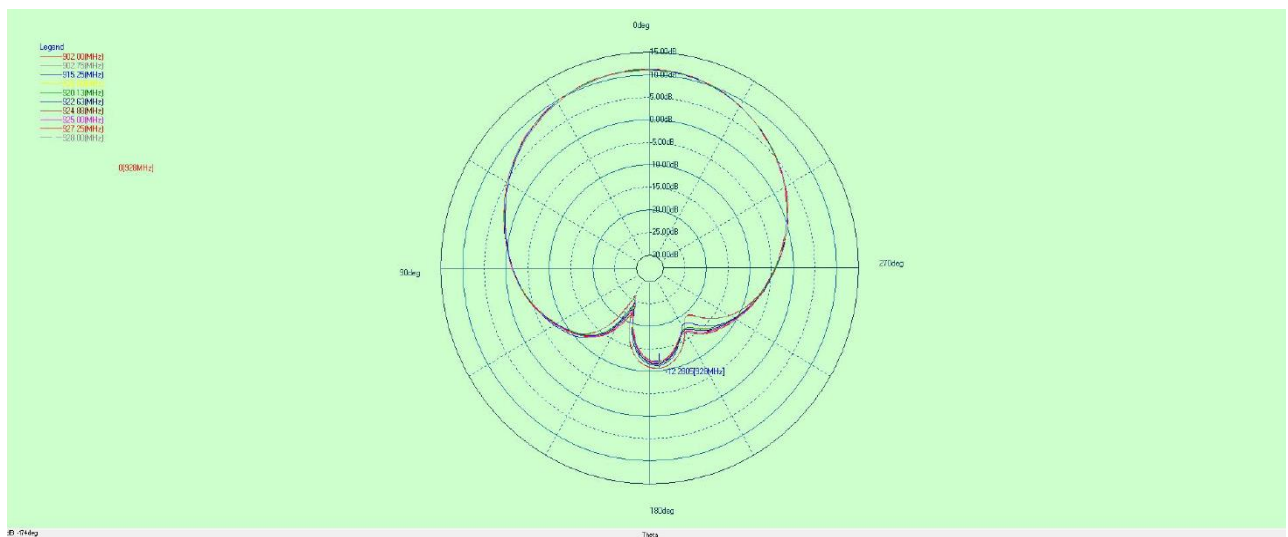


Appendix C Test Antenna Radiation Diagram

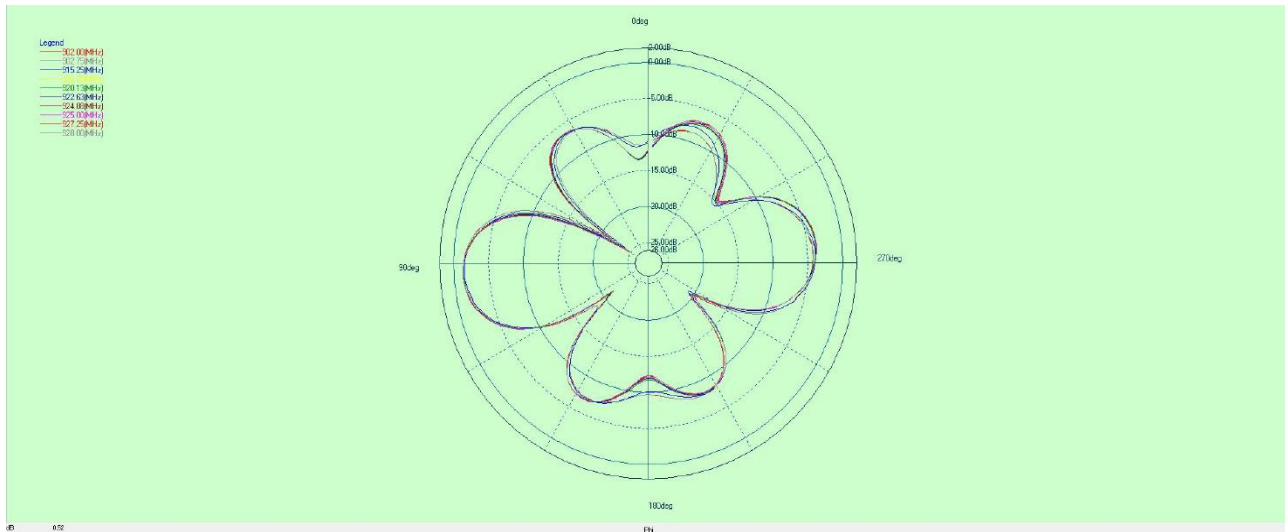
a) $\Phi=0$ degrees



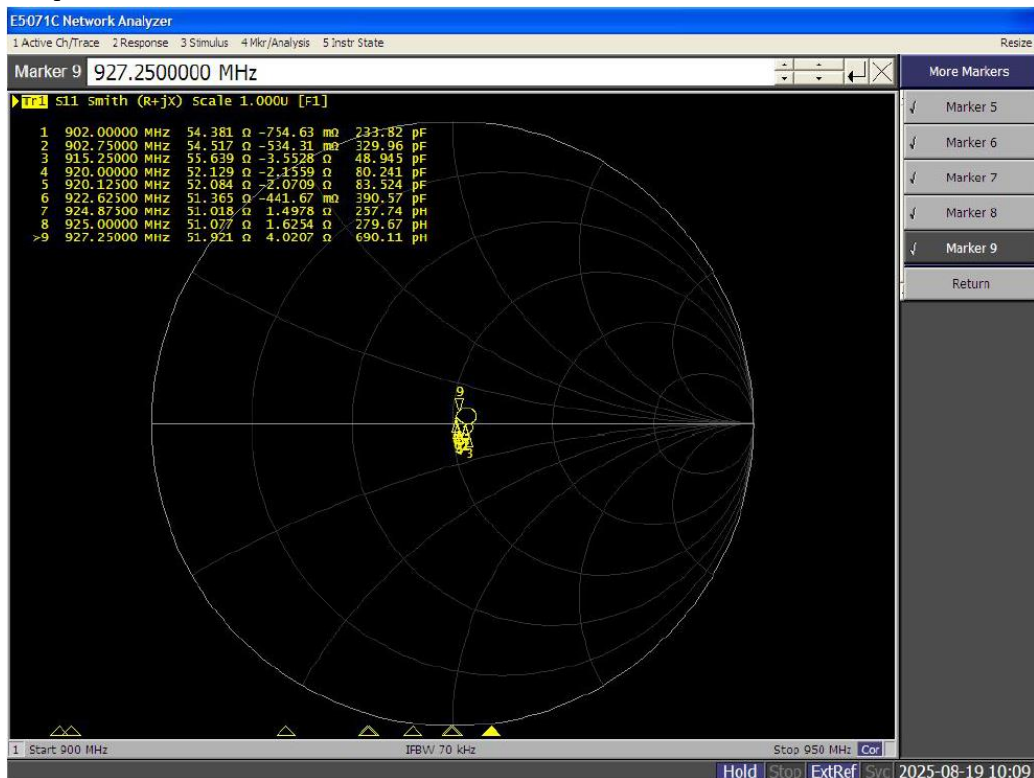
b) $\Phi=90$ degrees

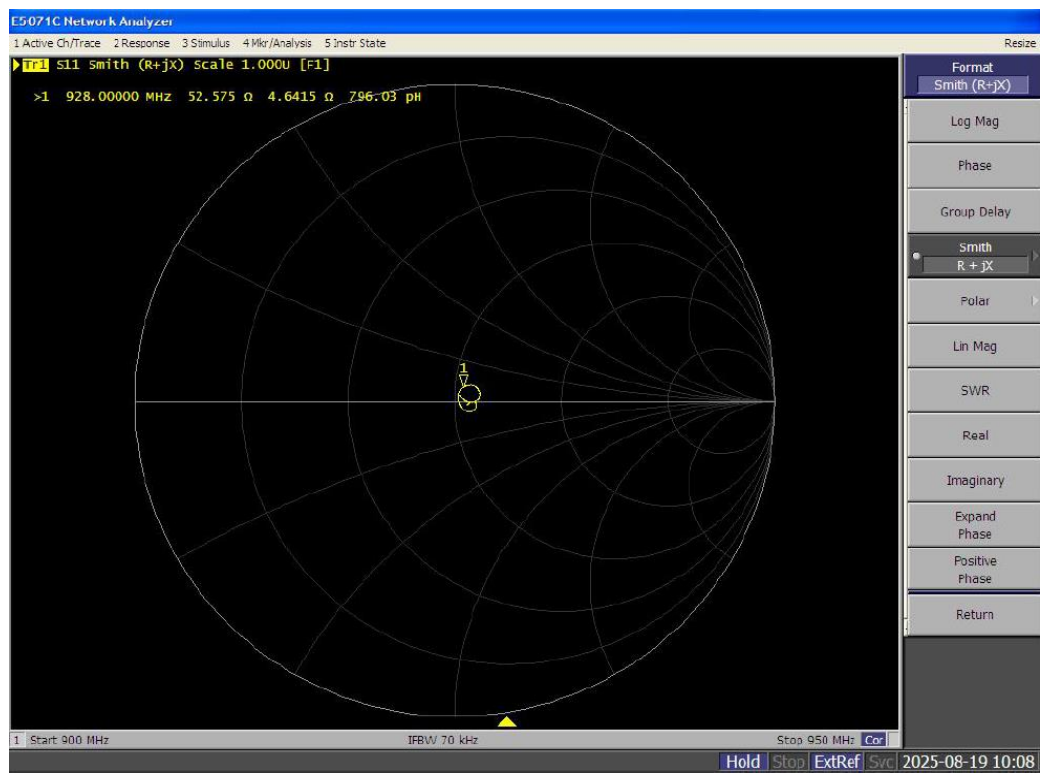


c) Theta=90 degrees

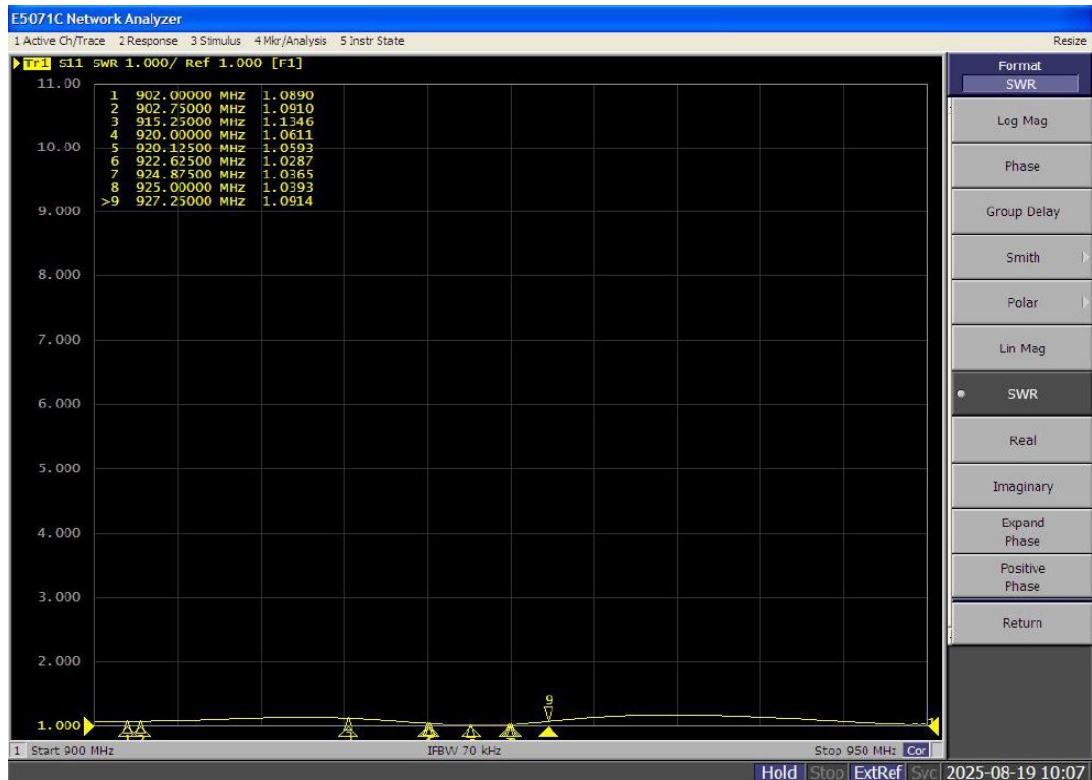


d) Impedance





e) Voltage VSWR



Appendix D Test Organization Information

1. Test Equipment List

Equipment Name	Manufacturer	Model No.	Serial Number	Calibration Date	Effective Date
Network Analyzer	Agilent	E5071C	MY46214666	2025.01.09	2026.01.08
4*4*4 Full Wave	SATIMO	SG24	SATIMO SG24	2025.01.11	2028.01.10
Antenna Test Systems	SATIMO	Satenv V1.4.1.14 build1	N/A	N/A	N/A

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