

Inverted F Antenna Test report

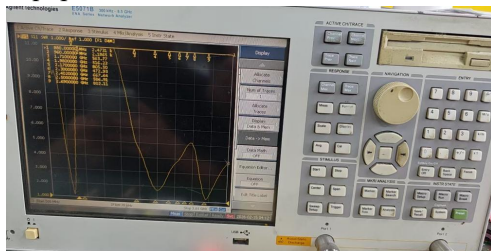
Summary

ITEM	ANT SPEC					
Model Name	2.4G ANT					
Center Frequency	Horizontal			Vertical		
	2400MHz	2400MHz	2500MHz	2400MHz	2400MHz	2500MHz
	-1.26	-0.76	-0.58	-5.25	-2.46	-1.86
MAX. Gain	-0.58dB					
Polarization	Horizontal and Vertical					
Azimuth Beam Pattern	Omni-directional					
Impedance	50 Ohm					
Antenna Length	38.20mm					
Manufacture	ZHUHAI JIELI TECHNOLOGY CO.,LTD					

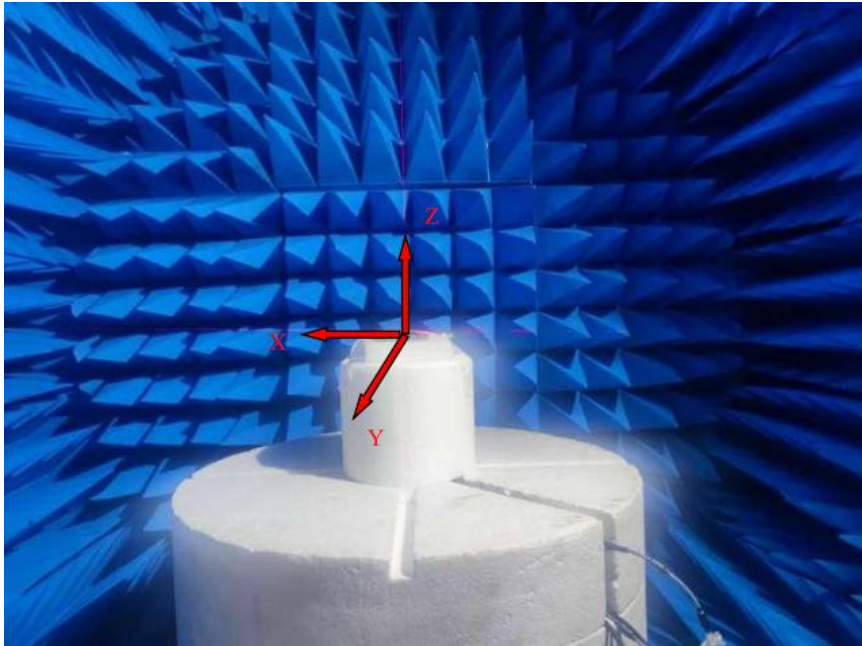
1.Test Projects and Equipment Introduction

List	Test Item	Equipment	Model No	Calibration Date
S11 Parameter	Standing wave ratio, return loss	Network analyzer	E5071B	2025. 11. 02
Active test	TRP,TIS	Integrated tester, microwave darkroom	CMW500	2025. 11. 02
Passive test	Gain, efficiency	Network analyzer	E5071B	2025. 11. 02

Equipment Photo



Test engineer:Alex



2. Test Instructions

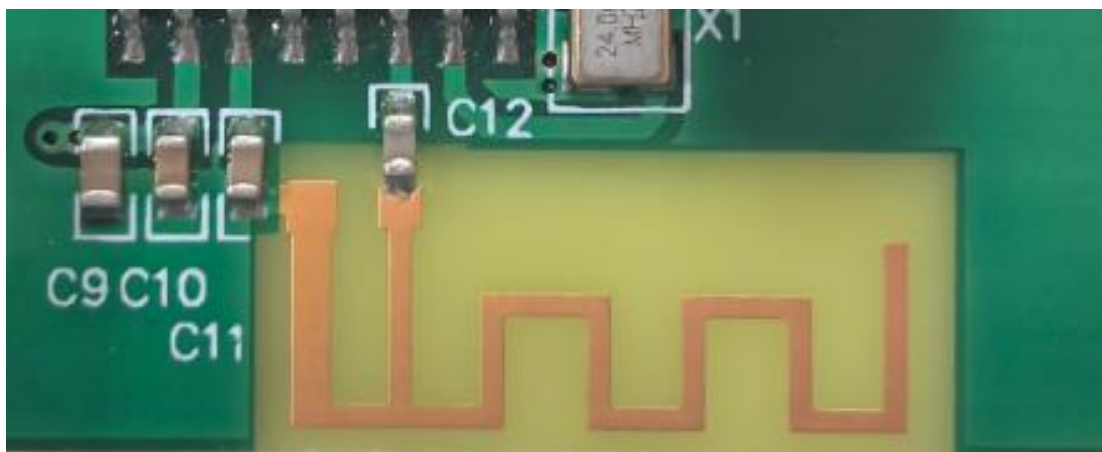
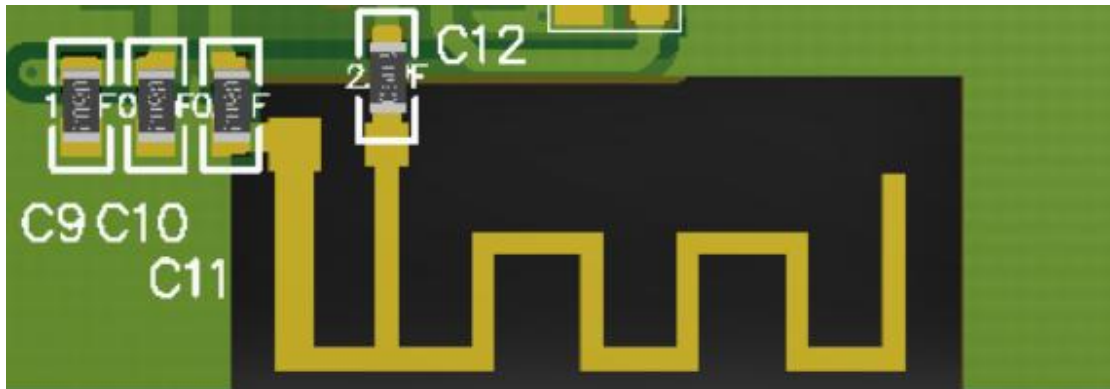
Test tools: Agilent E5071B network analyzer, R&S CMW500, ETS anechoic chamber for full-band far-field testing, high-precision positioning system and its controller, and a computer with automated test programs. Test environment: temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$

3. Test Steps

The DUT is placed H-side down at the center of the turntable and fixed, aligning with the center of the horn antenna on the same horizontal line. The positioning system allows the DUT to rotate across the entire spherical surface, achieving high-precision 3D positioning. All RF instruments, the

turntable controller, and the PC with automatic test software communicate via the GPIB interface.

4. Antenna drawings and actual items

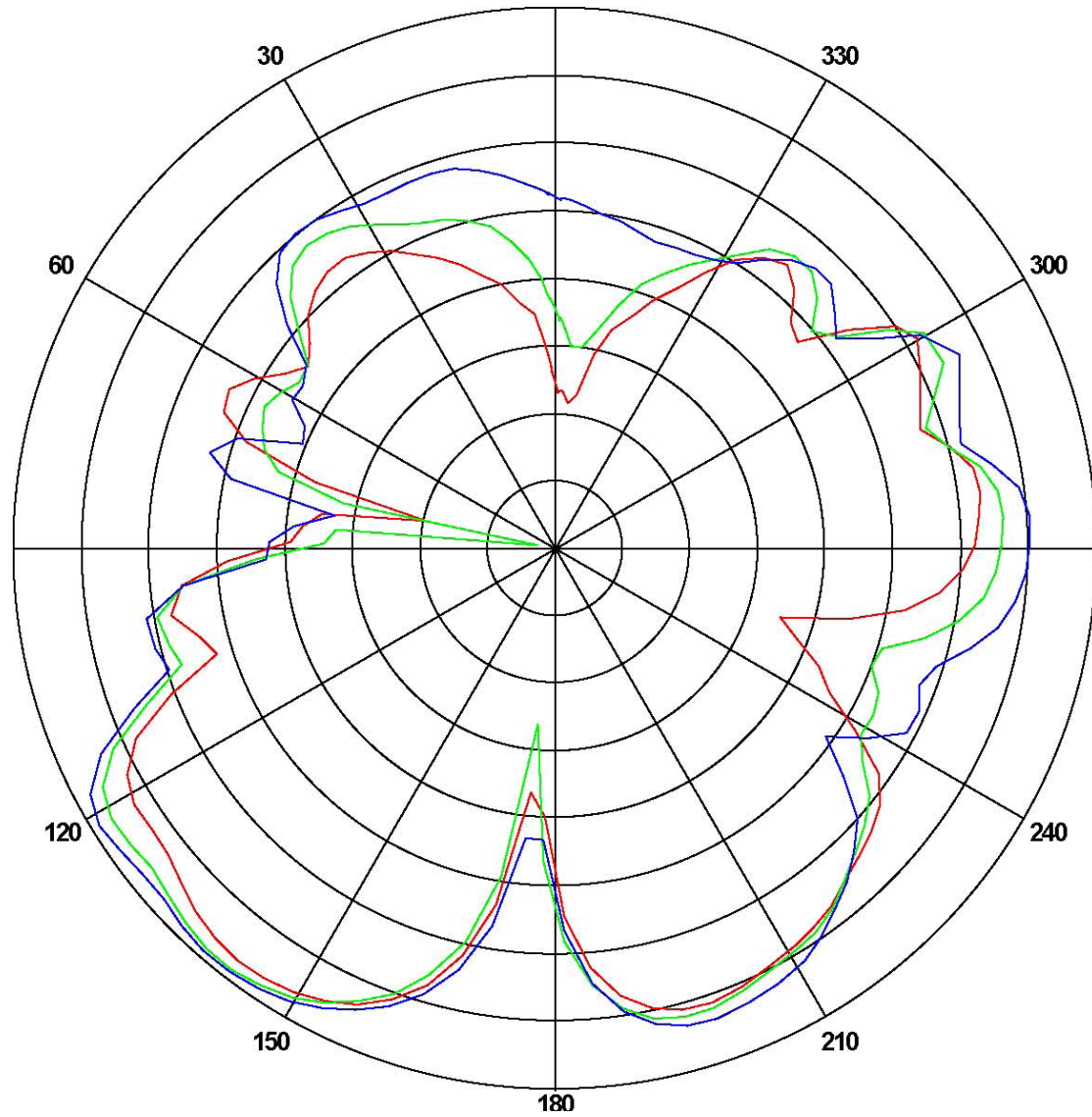


Size: 12*4.5MM

Horizontal: 2400 MHz 2450 MHz 2500 MHz

Power (dBm)

Max: 0 Min: -40 Scale: 5/div

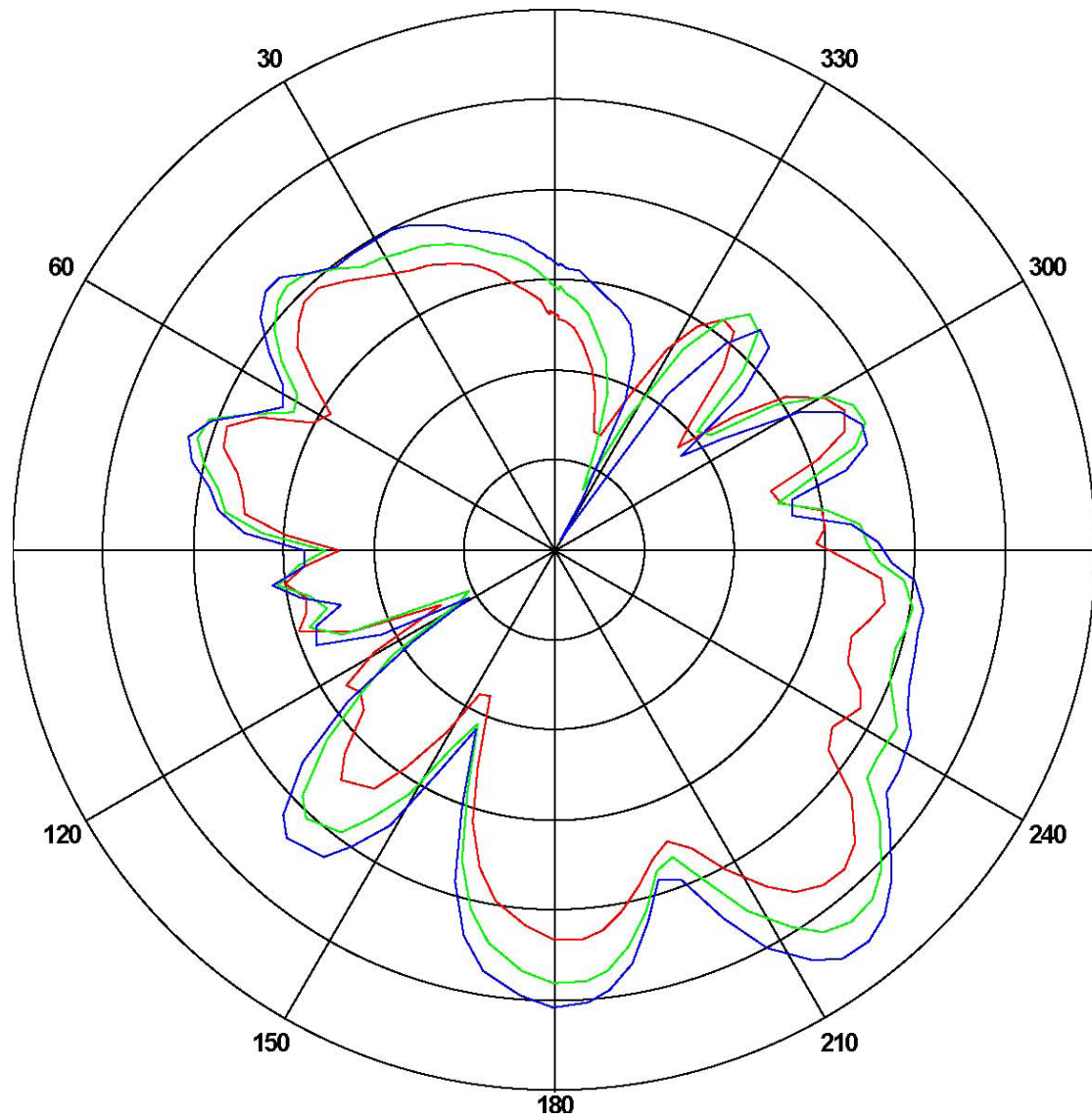


Frequency (MHz)	Gain(dB)		
	Max		Avg
2400	-1.26174	-30.0801	-7.18716
2450	-0.765802	-36.5604	-7.48023
2500	-0.585582	-22.0315	-6.59127

Vertical: 2400 MHz 2450 MHz 2500 MHz

Power (dBm)

Max: 0 Min: -30 Scale: 5/div



Frequency (MHz)	Gain(dB)		
	Max		Avg
2400	-5.2537	-22.1424	-12.4294
2450	-2.4652	-24.5837	-10.4702
2500	-1.86120	-29.5214	-9.20432