VLG TECHNOLOGY

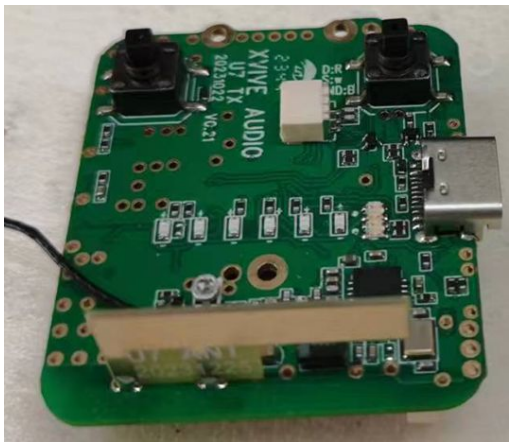
Antenna Specification Report

Customer/Project	FZONE/U7			Frequency	WIFI 2.4G		
VLG No:	V1516-006-A-01			Version	R：A		
RF	Hu Shuai	confirm		Quality	Yu Hong	confirm	
Structure	He Farong			PM	Bai Fenglian		
Date	2024-2-24						

Antenna picture：

1、Antenna picture

The report mainly provides the testing status of various electrical performance parameters of U7WIFI antenna. The main antenna of U7 is a single frequency antenna, and the WIFI antenna is 2.4G. The antenna diagram is shown below.



天线图片

2、Antenna testing equipment

Antenna input characteristic testing using Agilent E5071C vector network analyzer； Antenna radiation characteristic testing using Satimo Starlab 3D near-field microwave anechoic chamber;Use the Agilent E5071C comprehensive measuring instrument. The coordinates for darkroom testing are as follows.

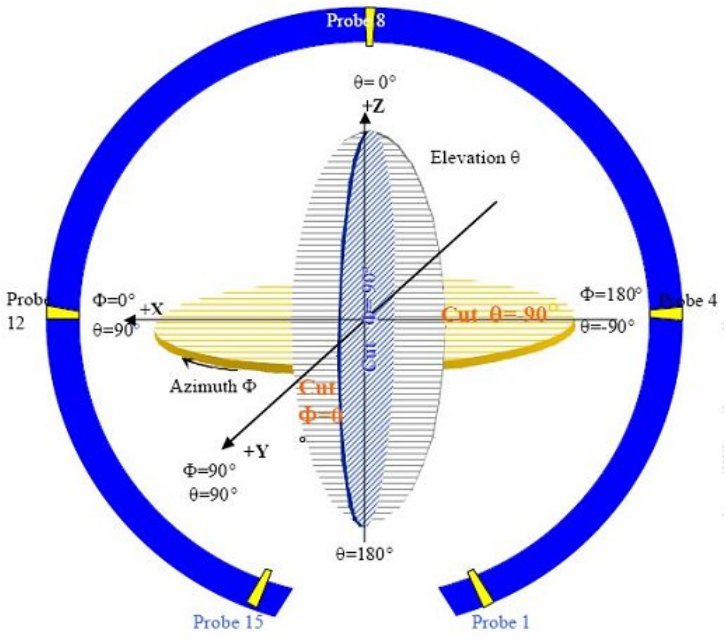
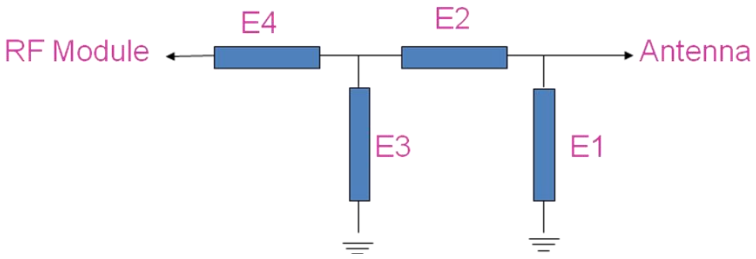


图 4 3D 微波暗室测试坐标系(back view)

Matching circuit of antenna

The WIFI antenna is composed of PCB, and the matching circuit for this project is provided by the customer.



Element	Value
E1(0402)	NA
E2(0402)	0 Ω
E3(0402)	NA
E4(0402)	0 Ω

3、Electrical performance

3.1 Specification standards

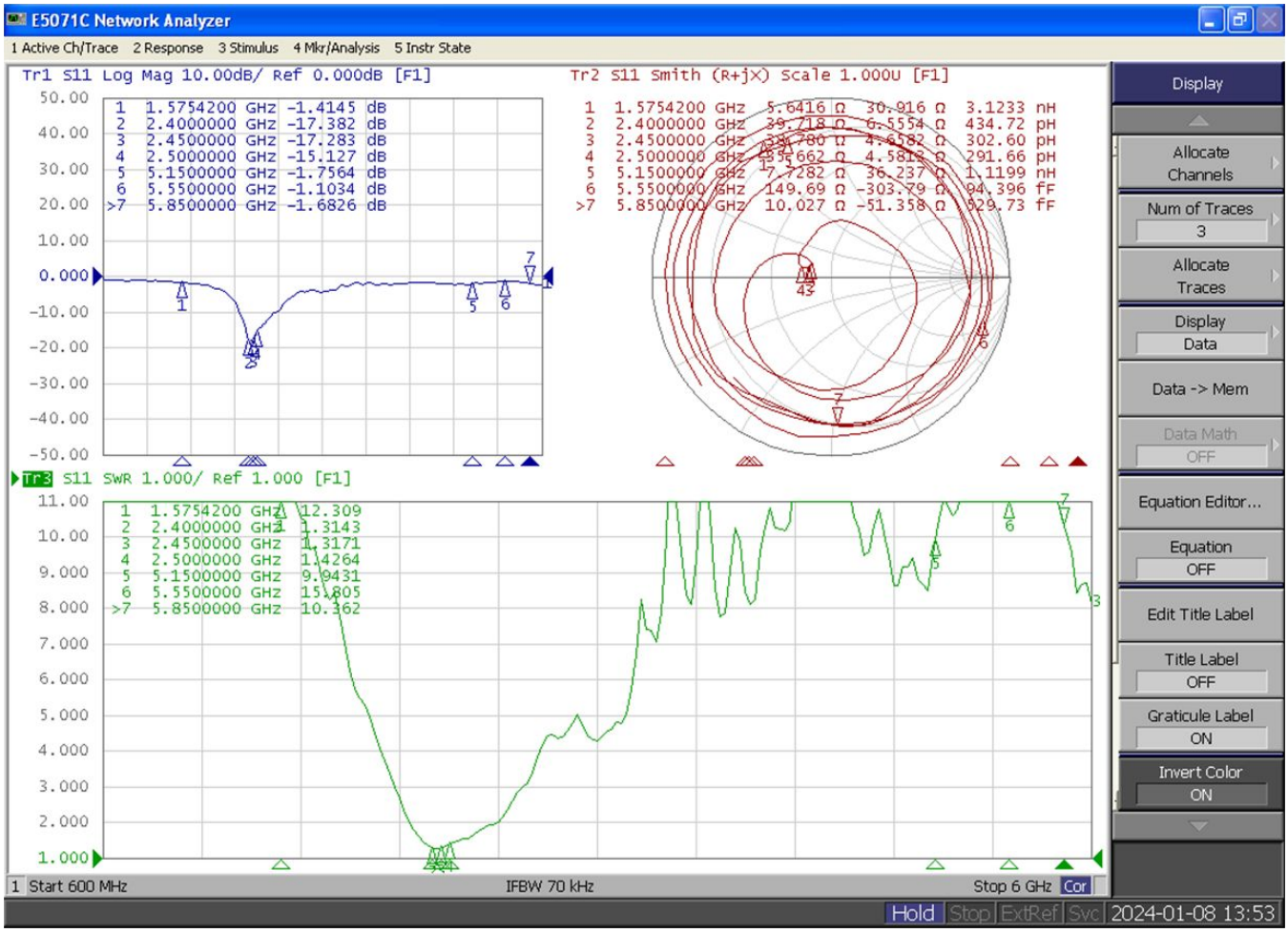
The working frequency range of U7 WIFI antenna is 2400-2500MHz; Resonance occurs in this frequency band. The following table shows the performance test indicators of VLG for U7 WIFI antenna.

	Frequency (MHz)	VSWR	Frequency (MHz)	VSWR
Frequency band	TX		RX	
WIFI	2400MHz~2500MHz	≤2.0	2400MHz~2500MHz	≤2.0

3.2 Passive S11 parameters：

回波损耗（Return loss）、驻波比（VSWR）、阻抗图（Smith chart）测试

WIFI te



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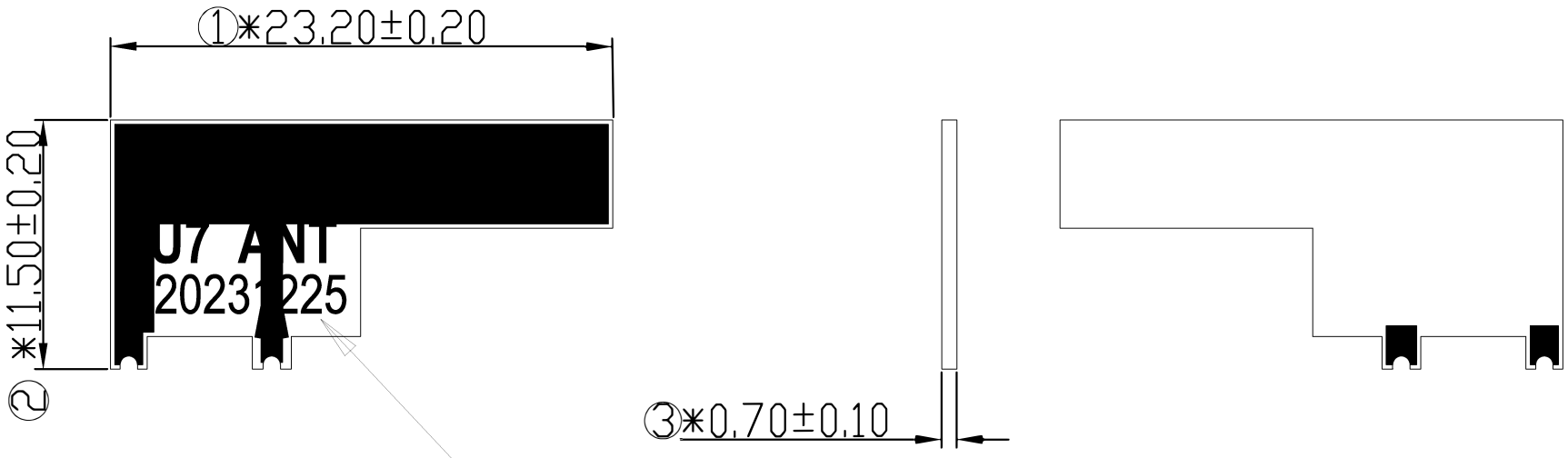
3.3 WIFI test data

Frequency (MHz）	Efficiency	**Gain.dBi**
2400	63.01%	2.89
2410	64.24%	3.04
2420	65.77%	3.21
2430	65.41%	3.16
2440	65.83%	3.23
2450	65.09%	3.16
2460	65.05%	3.16
2470	64.33%	3.12
2480	63.82%	3.08
2490	63.60%	3.09
2500	63.61%	3.04

版本	变 更 履 历	设计	日期
R:A	初版	何发荣	20231225

线路沉金处理

Antenna size:



ShenZhen VLG Wireless Technology Co.,Ltd								何发荣
第三角法		机种号	V1516-006-01					射 频 胡帅
0～10	±0.10	项目名	U7					品 质
11～20	±0.15	品 名	U7 PCB板天线					审 核
21～40	±0.20	料 号	V1516-006-A-01					批 准
>40	±0.25	版 本	R:A					
图幅	A4	比例	1:1	单位	mm	页码	1/1	