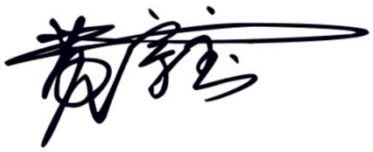
SPECIFICATION FOR APPROVAL

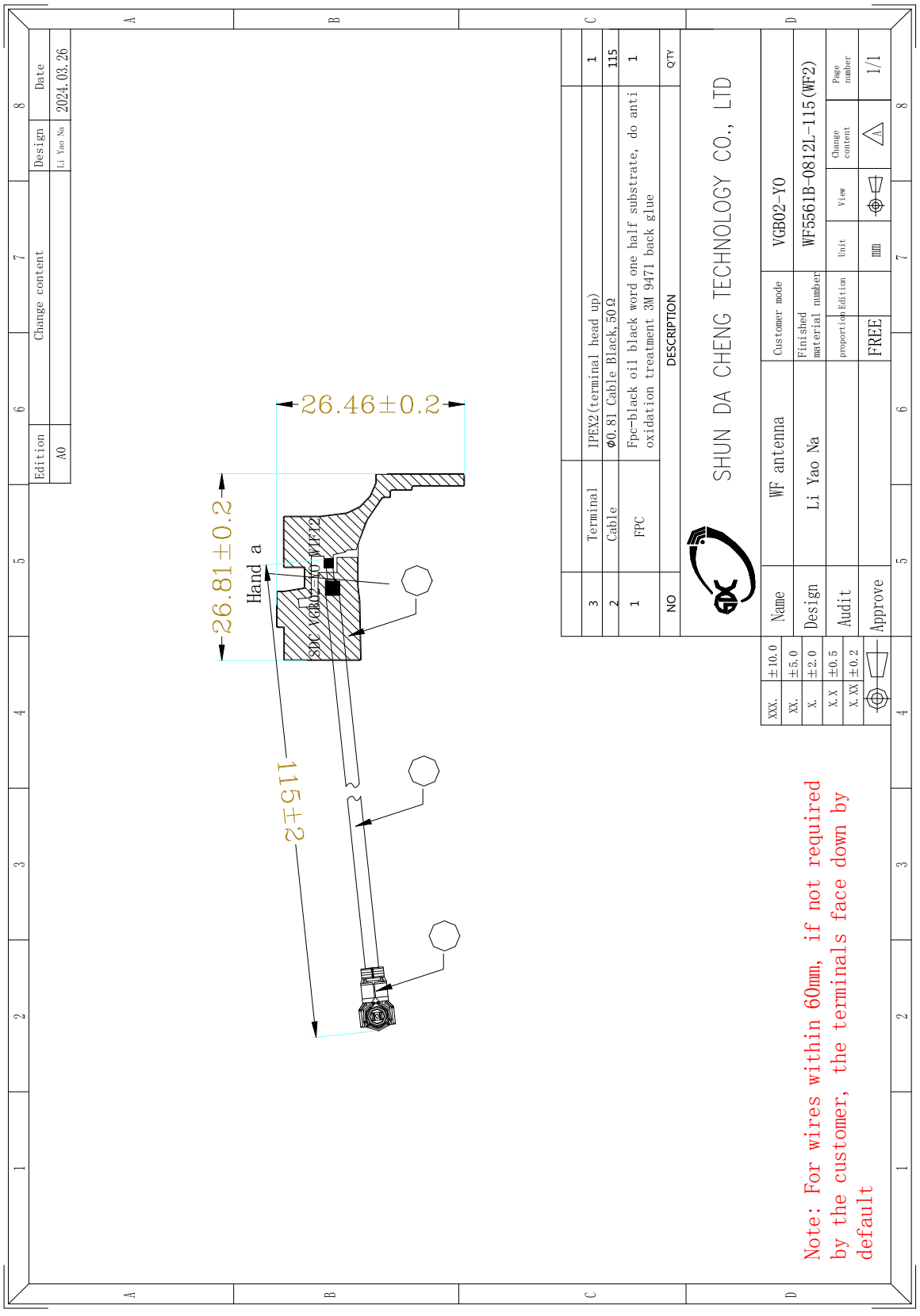
Customer Name	Grab		
Customer Project Name	VGB02-Y0	Project Name	VGB02-Y0
Antenna type		SDC P/N	WF5561B-0812L-115(WF2)
Band	WiFi2.4G/5.8G/BT(wifi2)		
Version	A0		
Designer Information			
RF Engineer		R&D Diretor	
ME Engineer			

Approval				ustomer Approval	
	Prepared By	Checked By	Approval By	Checked By	Approval By
Signature	Huang Zongbao	Fu Xuerong	Xia Chenglei		
Date	2024.03.26	2024.03.26	2024.03.26		

hange Log				
Version	Change Description	Person in Charge	Approval By	Date

Company Address: 4th Floor, Building B5, Xinfu Industrial Park, Chongqing Road, Fuyong Town, Bao'an District, Shenzhen TEL:0755-27211658 FAX:0755-29485750

Drawing or Product Image



Sample Dimensions Test Report

Test Date	2024.03.26	Sample Qty.	3	Inspector	Xu Yanfang
Dimension No.	Standard	Sample 1	Sample 2	Sample 3	Pass/NG
①length	26.81±0.2mm	26.81	26.91	26.81	Pass
②width	26.46±0.2mm	26.46	26.56	26.46	Pass
③thickness	0.1±0.03mm	0.1	0.1	0.1	Pass
④Line length	115±2mm	115	116	115	Pass
Conclusion					PASS
Inspector & Date	Xu Yanfang 2024.03.26		Approval &D ate		

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Antenna Test Equipment Introduction

Test of antenna input characteristics using **Agilent E5071C and Agilent 5062A** vector network analyzer; The radiation pattern of the antenna are tested using the guangping 3D near field Anechoic Chamber, and the instrument is used to agilent8960 E5515 and Agilent E4438C. The test coordinates of the darkroom are as follows:

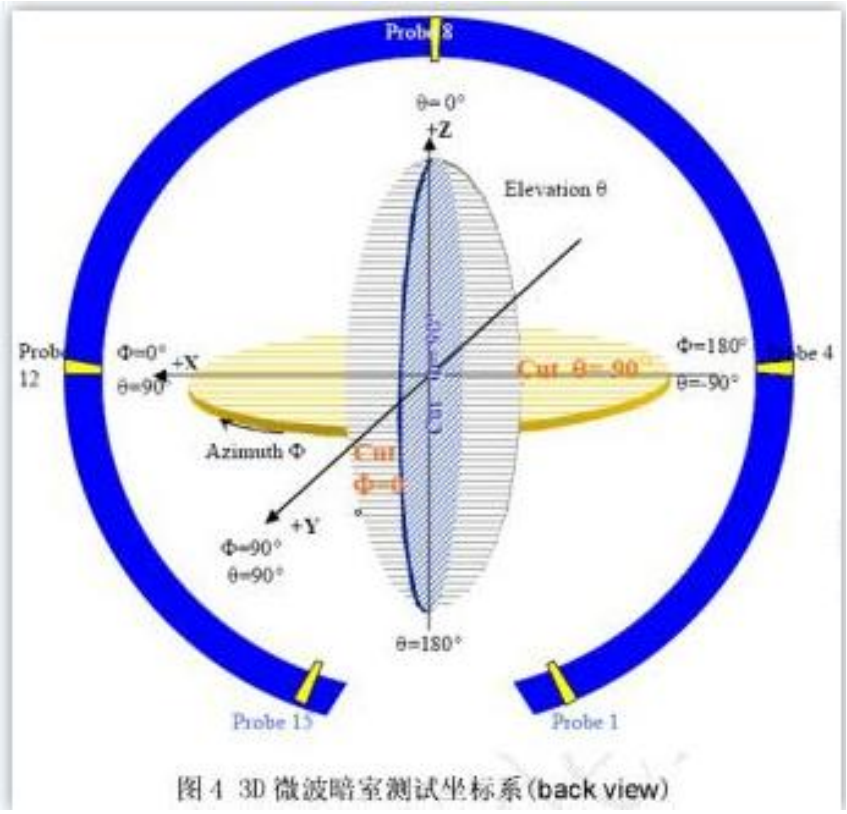


图 4 3D 微波暗室测试坐标系(back view)

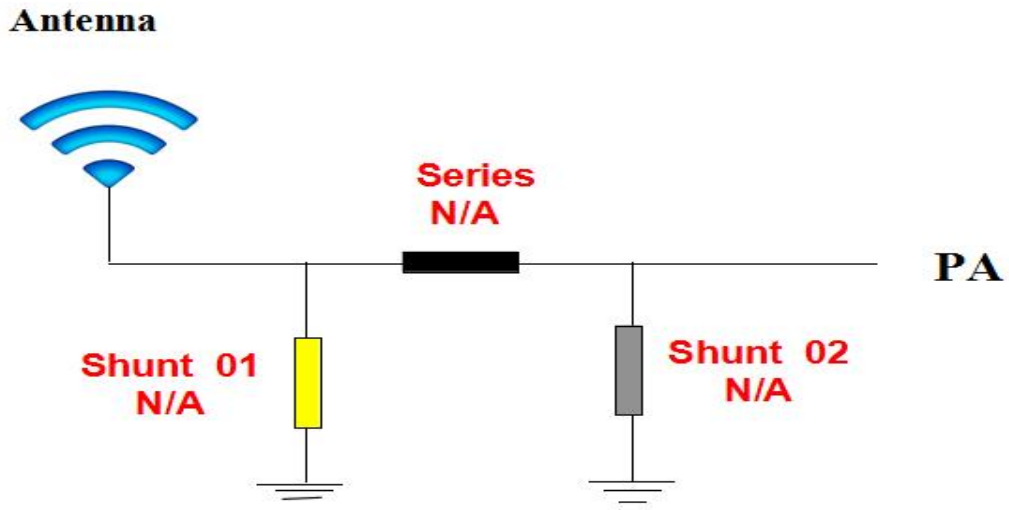
1. *S11 Parameter-VSWR*

Measuring Method is a 50Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the S11 parameter, Keeping this fixture away from metal at least 20cm.

S11 Parameter-VSWR

Frequency(MHz)	2400	2450	2500	5150	5720	5850
VSWR	1.29	1.21	1.51	1.52	1.67	1.21

2. Antenna Matching Network

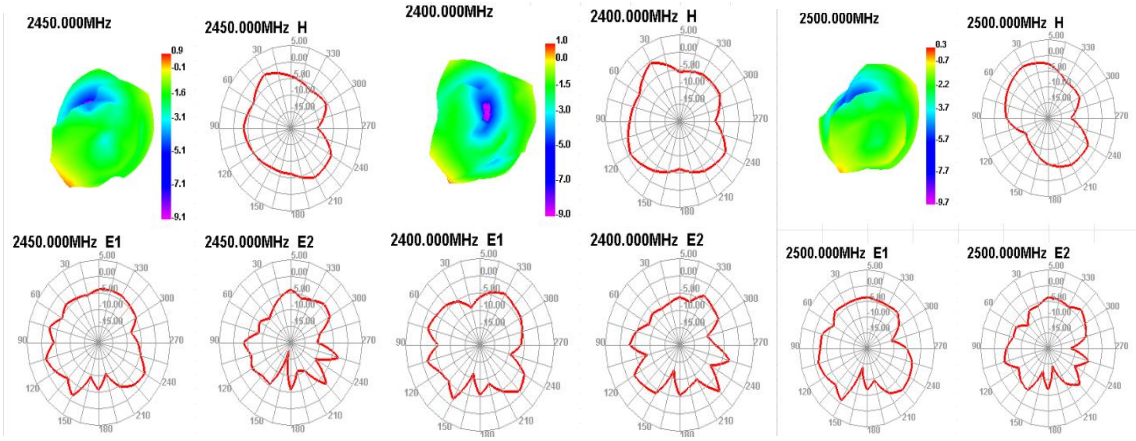


3. Electrical parameter：

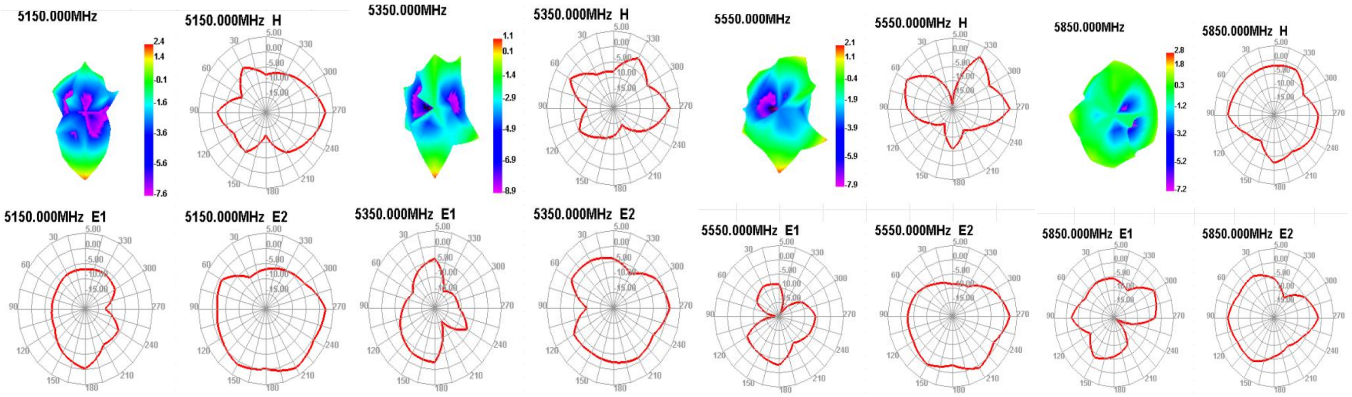
Electrical parameter	
（Frequency range）	2400-5850Mhz
Polarization mode	Horizontal and vertical polarization
Measurement program	Wide screen
Test equipment	Agilent(5071B ） /Agilent （ 8960 ） /ROHDE&SCHWARZ(CMW500)
Test Settings	Insert the testing white card, fix the entire machine on the testing turntable, open the testing software, and select the corresponding testing frequency band
Testing location	OTA microwave anechoic chamber
Antenna manufacturer	Shenzhen Shundacheng Technology Co., Ltd
Debugging mode	PIFA
Antenna material	FPC+coaxial line

4. Gain & Efficiency

Passive Test For 2.4G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	irectivit (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	43.54	-3.61	1.03	-1.12	20.581	22.962	1.03	-15.9	4.64	15	48.93	49.09
2425	45.48	-2.97	1.96	-0.19	23.926	26.555	1.96	-16.48	4.93	15	49.09	49.22
2450	36.53	-4.37	0.87	-1.28	17.136	19.397	0.87	-19.74	5.24	15	49.25	49.27
2475	35.97	-4.44	0.52	-1.63	17.205	18.763	0.52	-23.22	4.96	75	49.98	49.91
2500	36.94	-4.32	0.32	-1.83	17.676	19.267	0.32	-18.36	4.64	75	49.71	49.62



Passive Test For 5.8G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	irectivit (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	42.13	-3.75	2.36	0.21	16.688	25.441	2.36	-12.69	6.11	0	58.6	58.01
5250	36.5	-4.38	1.37	-0.78	16.245	20.256	1.37	-11.52	5.75	30	58.53	57.74
5350	33.61	-4.73	1.07	-1.08	14.487	19.127	1.07	-15.18	5.81	60	57.99	57.08
5450	38.75	-4.12	2.03	-0.12	14.442	24.308	2.03	-15.14	6.15	0	59.19	57.9
5550	43.16	-3.65	2.14	-0.01	15.599	27.564	2.14	-19.43	5.79	60	60.21	58.81
5650	45.41	-3.43	2.1	-0.05	16.711	28.699	2.1	-20.47	5.53	0	60.31	59.42
5750	46.58	-3.32	2.17	0.02	17.996	28.581	2.17	-18	5.49	30	60.88	60.28
5850	44.83	-3.48	2.78	0.63	18.496	26.336	2.78	-23.77	6.27	30	61.09	60.41



5. OTA data

频段	信道	模态	频率宽度	TRP	TIS
2.4G	1	802.11B	11M	12.84	-82.29
	6			12.77	
	11			12.64	-82.33
5.8G	36	802.11A	54M	12.38	-72.15
	60			13.12	
	161			13.28	-72.45