

Antenna Testing Report

Customer : SIM

Project Name : 2FR015

Report version: 2025.06.04 A0

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Version	Report date	Remark
A0	2025. 03. 03	Preliminary Commissioning Report.
A1	2025. 03. 06	Antenna debugging data after the flat cable is raised with bubble pad.
A2	2025. 05. 07	The latest debugging data of machine antenna is provided.
A3	2025. 05. 30	Increase antenna gain.
A4		
A5		
A6		
A7		
A8		
A9		

Project Overview

Prototype status	Debugging machine
Device type	AR glasses
Number of antennas	1 (BT/2.4/5g WIFI antenna)
Frequency band	BT WiFi 2.4+5G
Structural style	FPC+cable
Environment adjustment	No change
Matching modification	No change

Equipment List

The industry's top 64 sensors OTA chamber

Frequency range: 400MHz-11GHz

Device Llimitation: 2M

Load-bearing limitation:100KG

Equipments Items	Total Quantity	Quantity for Shanghai R&D	Quantity for Shenzhen R&D	Quantity for ChongQing R&D
OTA chamber	10	4	5	1
5G Tester (SP9500-CTS)	3	1	1	1
R&S Tester (high configuration CMW500)	6	3	2	1
Japan Anritsu Tester (Dual Channel 8820)	4	2	2	--
NB-IoT Tester (SP8315)	3	1	1	1
Agilent Tester (8960)	9	4	4	--
Agilent Network Analyzer (E5062A)	7	3	3	1
Agilent Network Analyzer (E5071C 8.5GHZ)	11	5	5	1
Agilent Network Analyzer (E5071B 8.5GHZ)	7	3	3	1
R&S Network Analyzer (ZND)	9	4	4	1
R&S Network Analyzer (ZVB)	3	1	1	1
OTA head hand / ear hand / arm hand	5	2	2	1
GPS/WIFI active test equipment	5	2	2	1

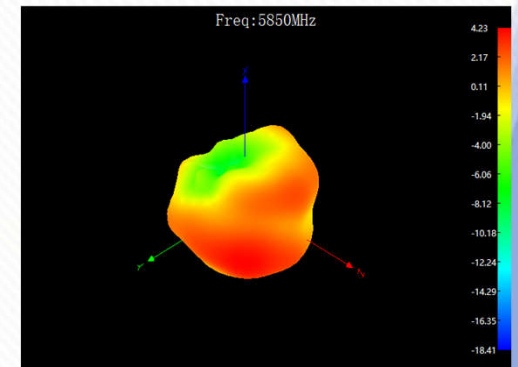
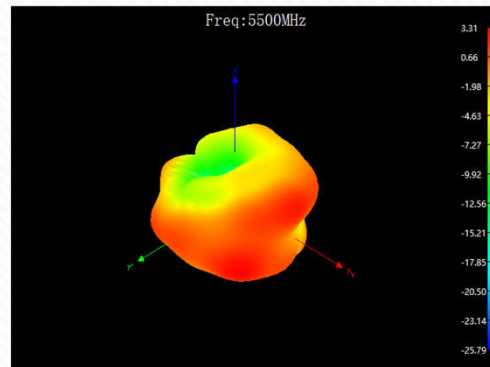
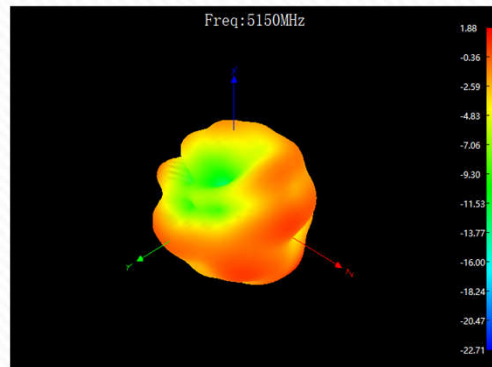
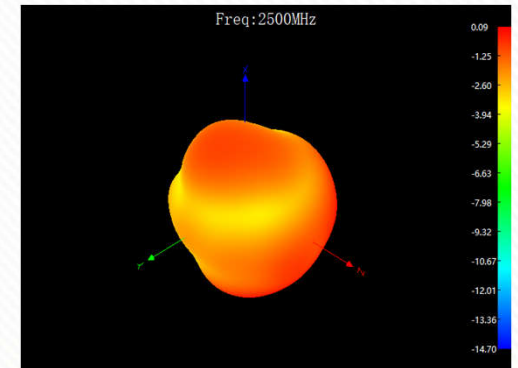
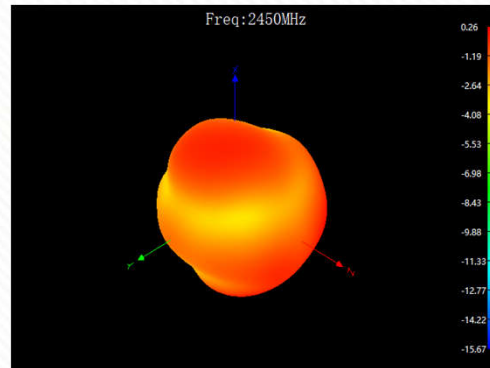
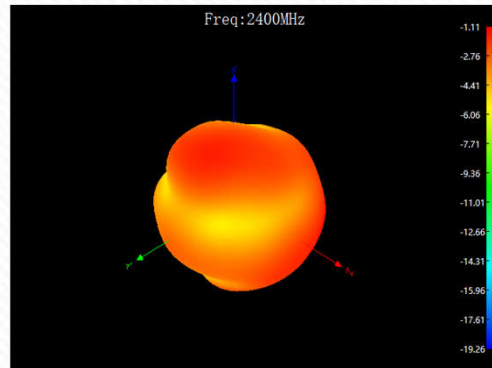
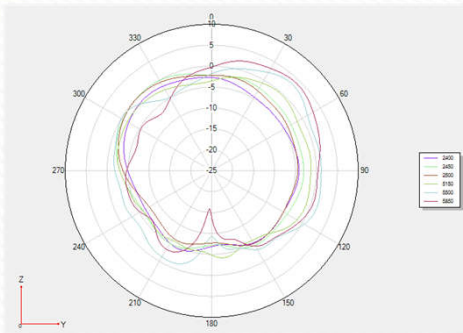
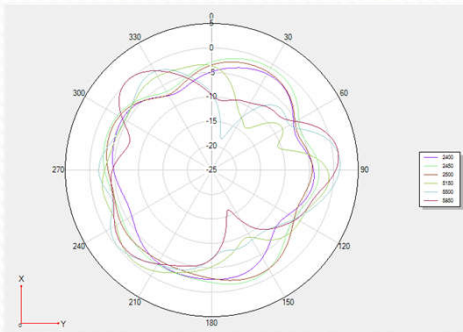
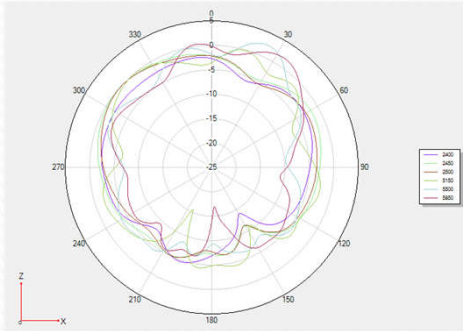
Version Information

Antenna manufacturer	Sunnyway
Test LAB	ETS
Calibration time	2025.05.06
Test instrument	CMW-500
Test instrument due date	2025.1.22-2026.1.21
Testing software	TAsuite
Antenna form	PIFA
Frequency band	WIFI 2.4&BT: 2.4~2.5GHz WIFI 5G: 5150~5850MHz
Antenna Model	2FR015-ANT-V0.1
Test engineer	Chen Zhen can

Passive efficiency

Frequency/ Mhz	Efficiency / dB	Efficiency / %	MaxGain/ dBi	Frequency/ Mhz	Efficiency / dB	Efficiency / %	MaxGain/ dBi
2400	-3.9	40.71	0.07	5150	-4.32	37.02	1.88
2410	-3.74	42.27	0.26	5200	-4.2	38.06	1.7
2420	-3.61	43.53	0.51	5250	-4.01	39.75	1.97
2430	-3.47	45	0.42	5300	-3.89	40.87	2.08
2440	-3.4	45.71	0.34	5350	-3.84	41.32	1.92
2450	-3.34	46.33	0.08	5400	-3.79	41.8	1.67
2460	-3.41	45.61	0.09	5450	-3.67	42.96	1.84
2470	-3.46	45.1	0.03	5500	-3.69	42.77	1.51
2480	-3.61	43.6	0.2	5550	-3.69	42.77	1.74
2490	-3.7	42.63	0.1	5600	-3.76	42.08	1.81
2500	-3.89	40.84	0.04	5650	-3.73	42.38	1.61
				5700	-3.79	41.8	1.46
				5750	-3.8	41.7	1.59
				5800	-3.82	41.51	1.84
				5850	-3.97	40.1	1.73

Directional pattern



OTA test data

WIFI OTA test			
frequency	Channel	Bright screen	
		TRP	TIS
WIFI 11b (11M)	1	15.3	
	6	15.41	
	11	14.95	-80.24
WIFI 11G (54M)	1	14.24	
	6	14.36	
	11	14.9	-71.46
WIFI 11N (65M)	1	14.06	
	6	13.17	
	11	14.3	-71.4
WIFI 11a (54M)	36	14.49	
	149	14.4	
	165	14.87	-65.33

Thank You

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