

# Antenna Testing Report

**Customer:** apical Technology

**Project Name:** BM04-RX

**Report Number:** SZ24408IB77

**Manufacturer:** Sunnyway Technology(CHINA)

**Address:** Floor 6, Building 5, Nam Tai Inno Park, Guangming District, Shenzhen

**Report version:** Nov.26, 2024

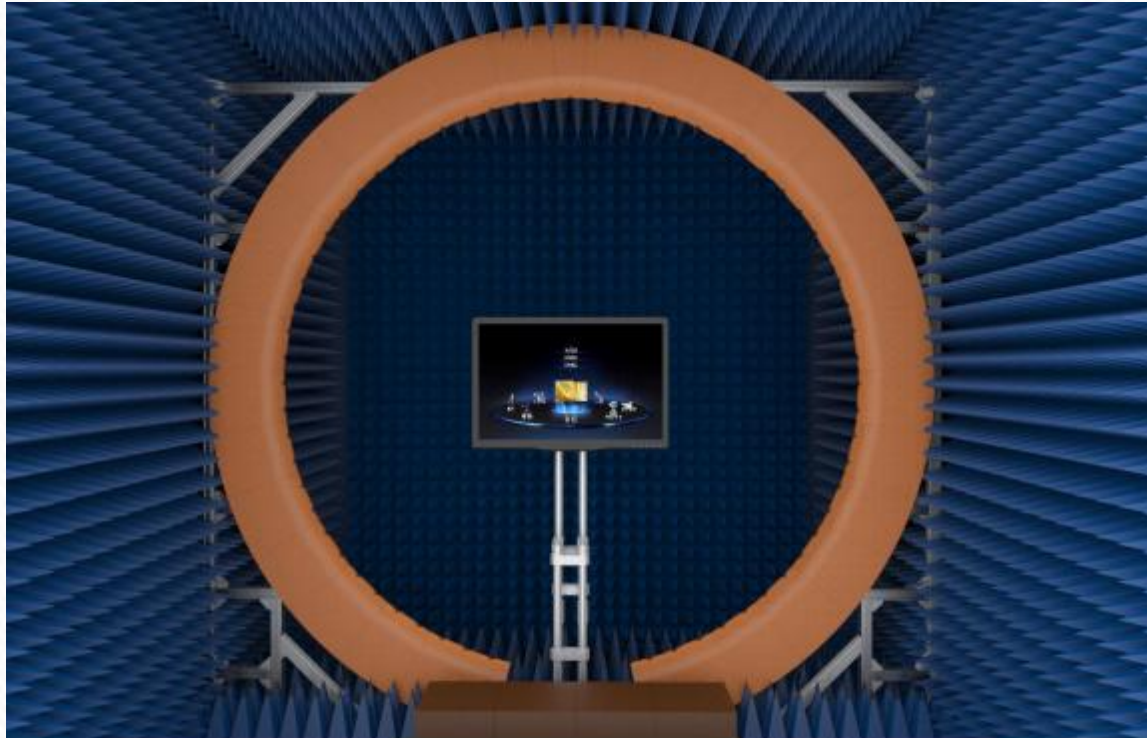
**Author:** Li Jia Bin

Version	Report date	Remark
A0	2024.11.26	Latest test data
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# Project Overview

Prototype status	Debugging machine
Device type	IPC Videography head
Number of antennas	WIFI antenna
Frequency band	2.4 B/G/N
Structural style	FPC Antenna
Environment adjustment	No change
Matching modification	No change



The industry's top 64 sensors OTA chamber

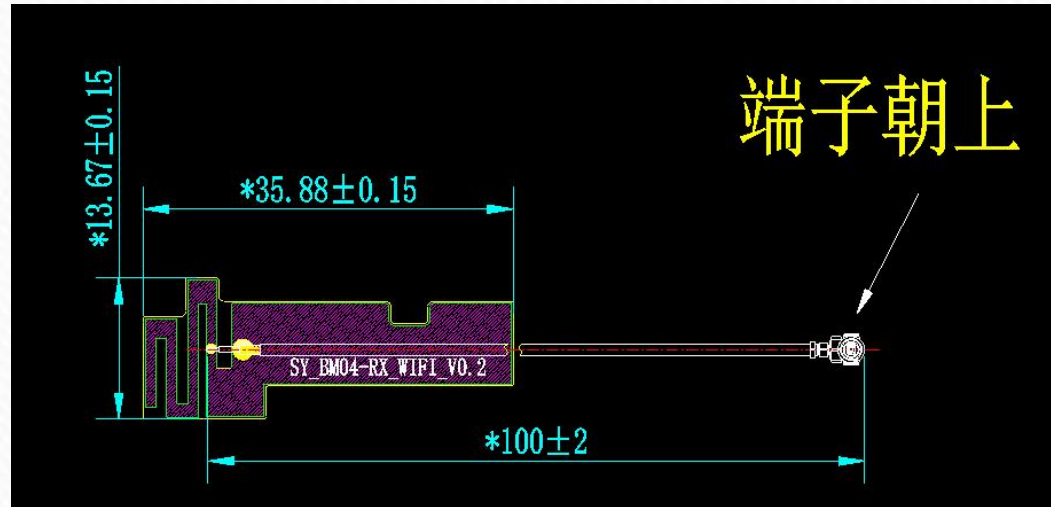
Frequency range: 400MHz-11GHz

Device Llimitation: 2M

Load-bearing limitation:100KG

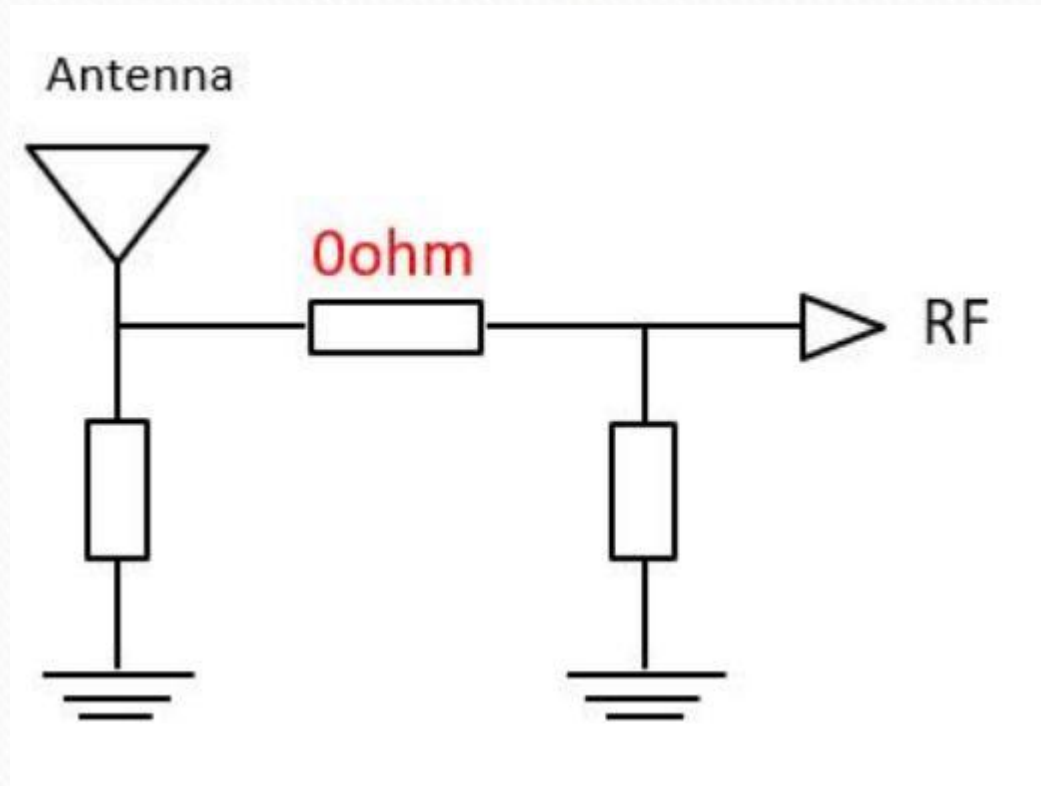
Equipments Items	Total Quantity	Quantity for Shanghai R&D	Quantity for Shenzhen R&D	Quantity for ChongQing R&D
OTA chamber	10	4	5	1
5G Tester ( SP9500-CTS )	3	1	1	1
R&S Tester ( high configuration CMW500 )	6	3	2	1
Japan Anritsu Tester ( Dual Channel 8820 )	4	2	2	--
NB-IoT Tester (SP8315)	3	1	1	1
Agilent 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

WiFi antenna/Antenna size

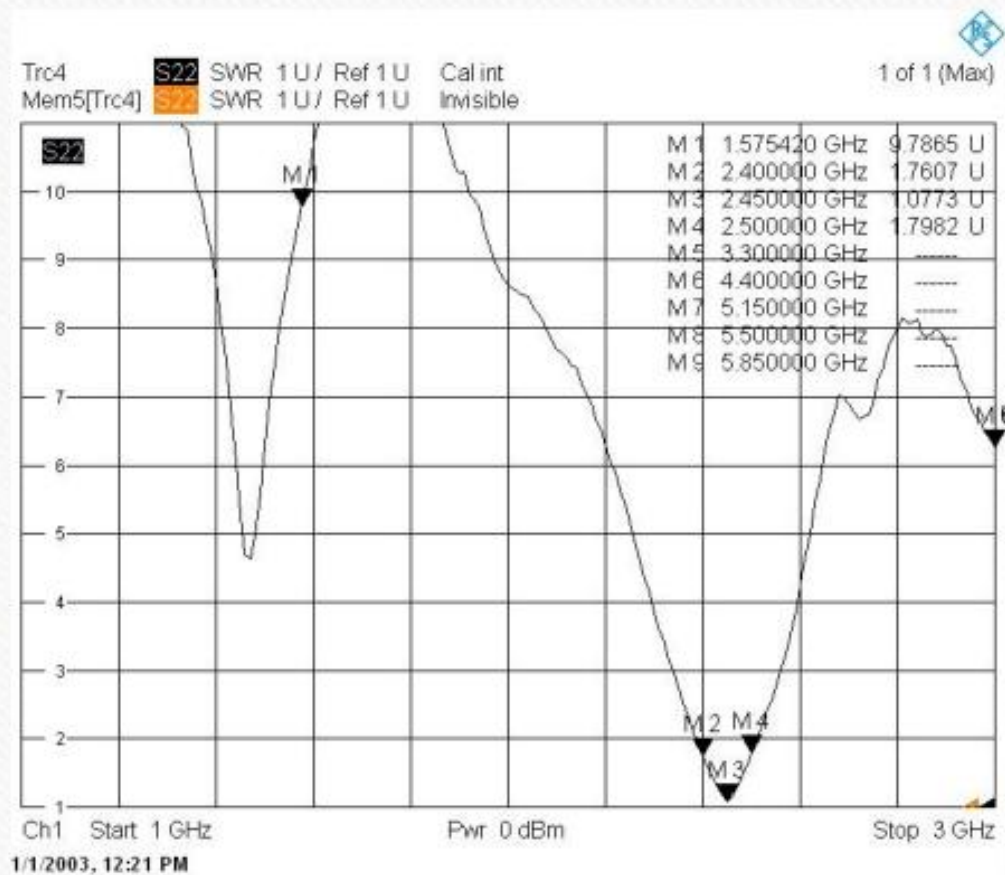


WiFi Antenna type: FPC Antenna

WiFi Antenna model: SZ24408IB77



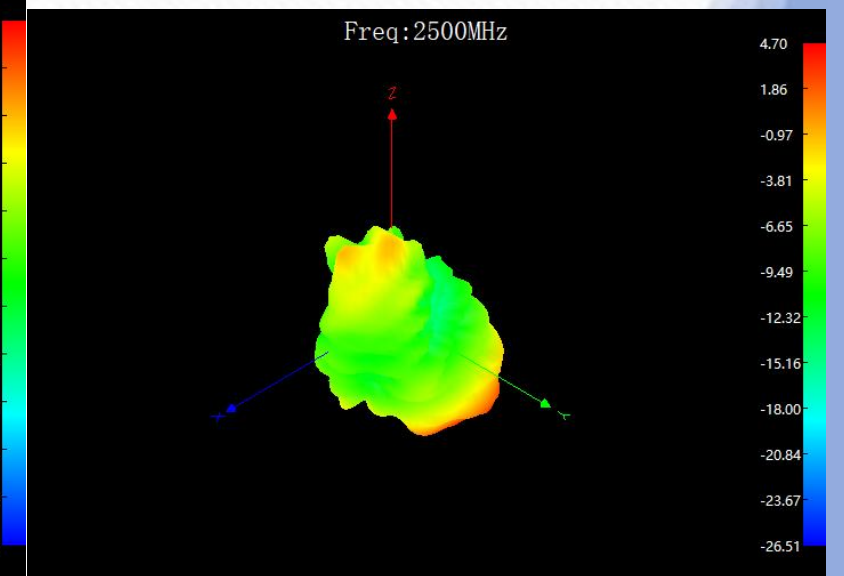
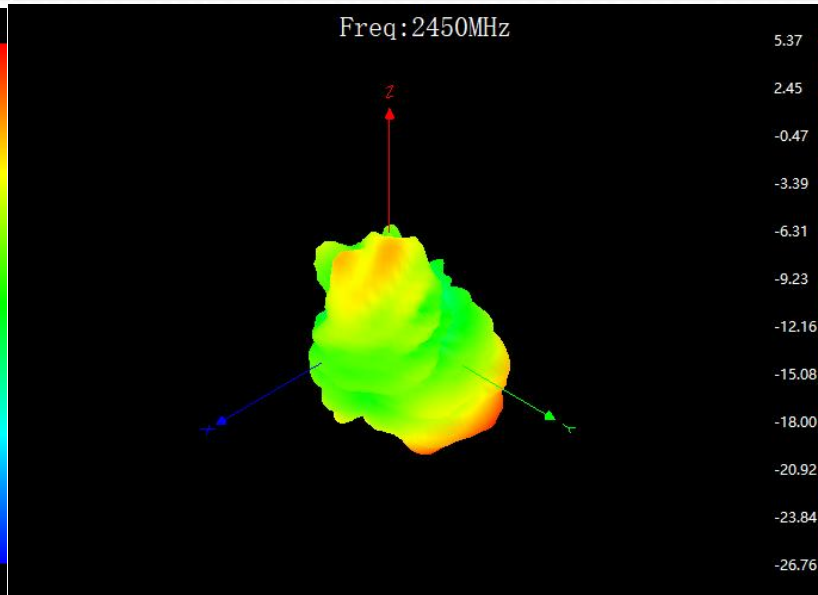
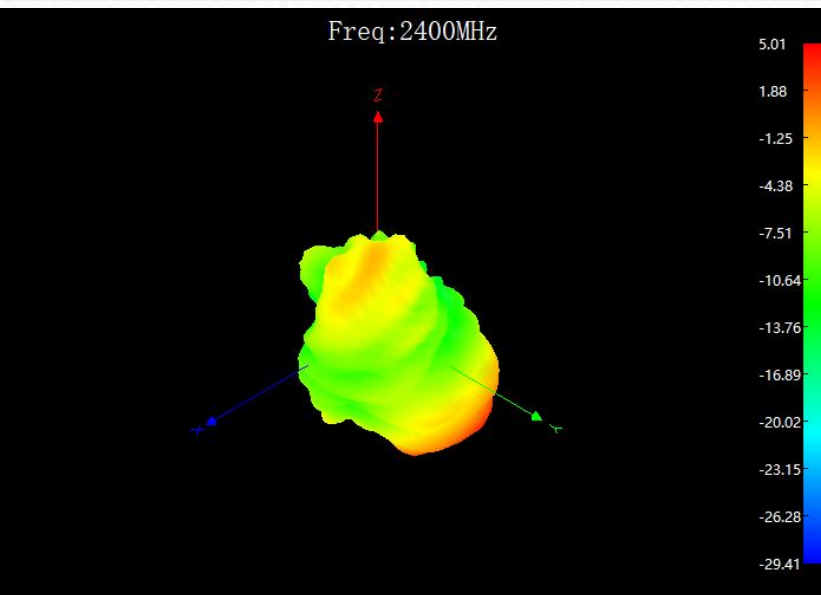
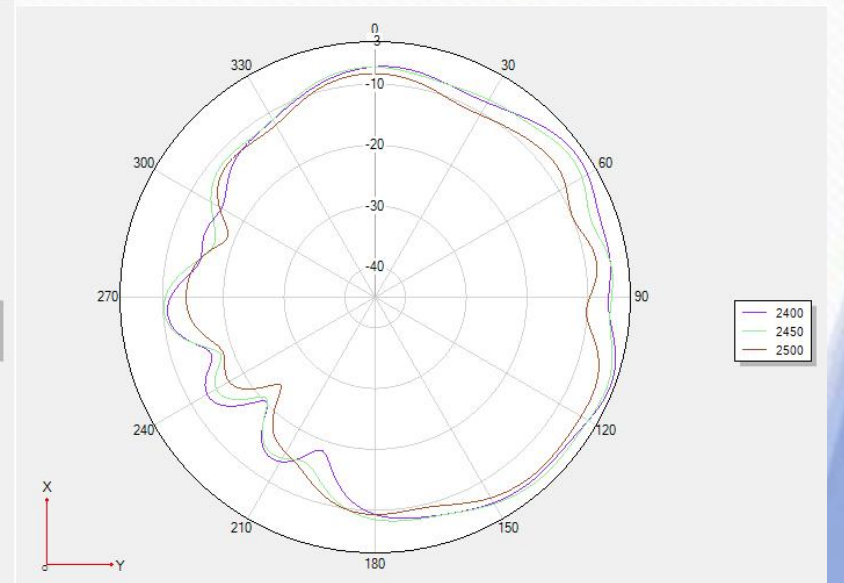
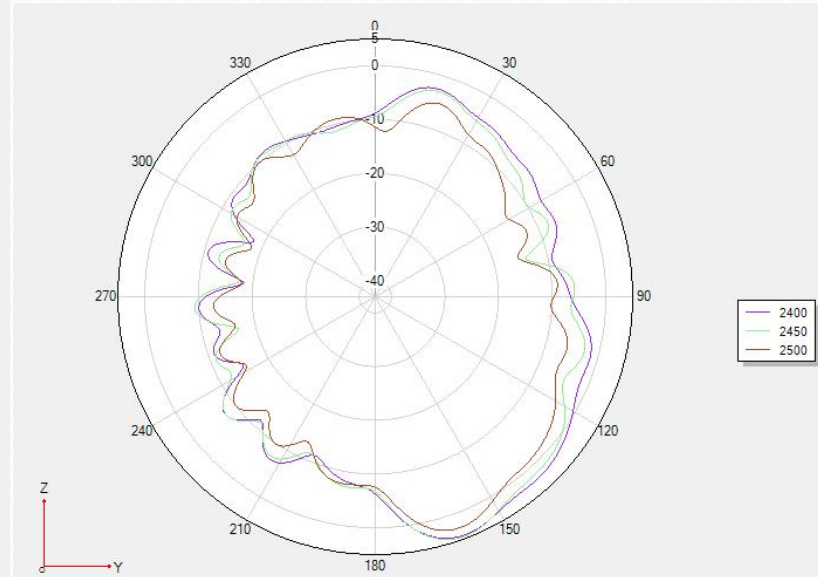
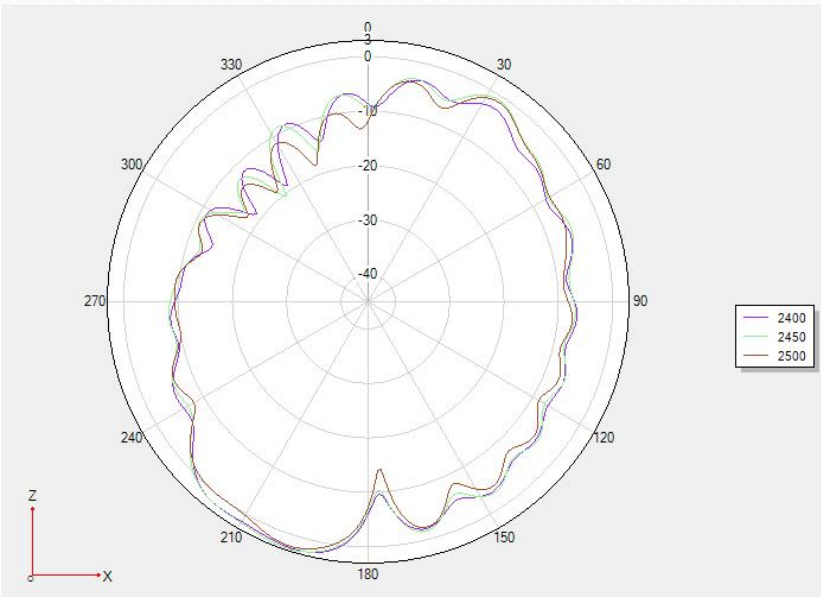
频率	2400	2450	2500
驻波比	1.7	1	1.7



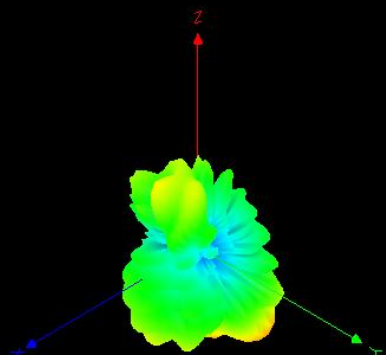


Frequency/Mhz	Efficiency / %	MaxGain/dBi	AvgGain/dBi
2400	36.48	3.01	-4.38
2410	36.56	3.35	-4.37
2420	36.98	3.07	-4.32
2430	36.14	3.2	-4.42
2440	36.48	3.17	-4.38
2450	35.81	3.37	-4.46
2460	34.83	3.33	-4.58
2470	33.27	3.42	-4.78
2480	32.43	3.4	-4.89
2490	29.72	3.14	-5.27
2500	26.55	2.7	-5.76

# Direction map

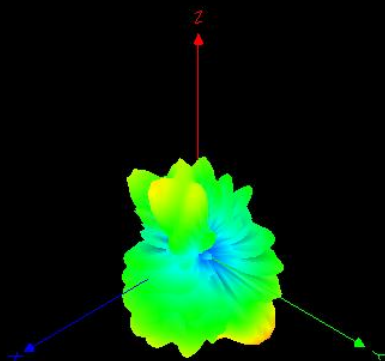


Freq: 2400MHz



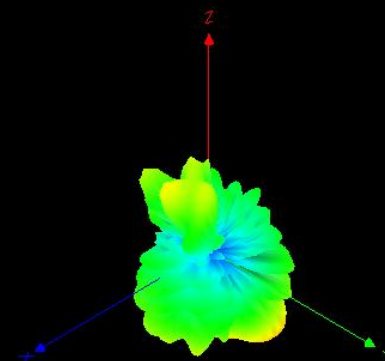
5.01  
-0.25  
-5.51  
-10.77  
-16.03  
-21.29  
-26.55  
-31.81  
-37.07  
-42.33  
-47.59  
-52.85

Freq: 2450MHz



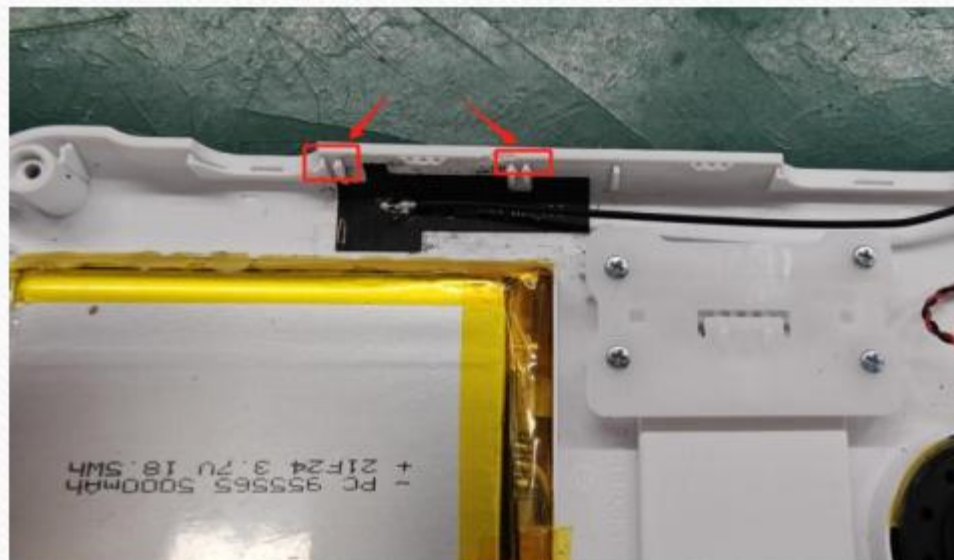
5.37  
0.77  
-3.83  
-8.44  
-13.04  
-17.64  
-22.24  
-26.85  
-31.45  
-36.05  
-40.65  
-45.25

Freq: 2500MHz



4.70  
0.32  
-4.06  
-8.44  
-12.82  
-17.20  
-21.58  
-25.96  
-30.34  
-34.72  
-39.10  
-43.48

Measurement	Band	Channel	Total
TRP	WIFI_B (1M)	1	13.48
TRP	WIFI_B (1M)	6	14.28
TRP	WIFI_B (1M)	11	15.36
TIS(EIRP)	WIFI_B (11M)	11	-82.6
TRP	WIFI_G (6M)	1	12.53
TRP	WIFI_G (6M)	6	13.26
TRP	WIFI_G (6M)	11	14.57
TIS(EIRP)	WIFI_G (54M)	11	-69.42
TRP	WIFI_N_ISM (6.5M)	1	12.18
TRP	WIFI_N_ISM (6.5M)	6	14.4
TRP	WIFI_N_ISM (6.5M)	11	14.09
TIS(EIRP)	WIFI_N_ISM (65M)	11	-67.47



The bone position at the arrow is the positioning datum attached to the antenna

The above is the latest validation test data.

# Thank You

**Shanghai R&D Center:** 1F, Building 4, No.99, Lane 215, Gaoguang Road, Qingpu District, Shanghai, 201799, PRC

**Shenzhen R&D Center:** Floor 6, Building 5, Nam Tai Inno Park, Guangming District, Shenzhen, 518057, PRC

**ChongQing R&D Center:** 1F, ARM Ecological Industrial Park, 19 East Datugu Road, Xiantao, Yubei District, Chongqing, 401120, PRC

**Huizhou Factory:** F4-6, Building 8, Xiongtao Tech Park, No.15, Qingli 2nd Rd, Huicheng Dist, Huizhou City,516255,PRC

TEL: 021-60835368      E-mail: [sales@sunnyway-iot.com](mailto:sales@sunnyway-iot.com)

[www.sunnyway-iot.com](http://www.sunnyway-iot.com)

