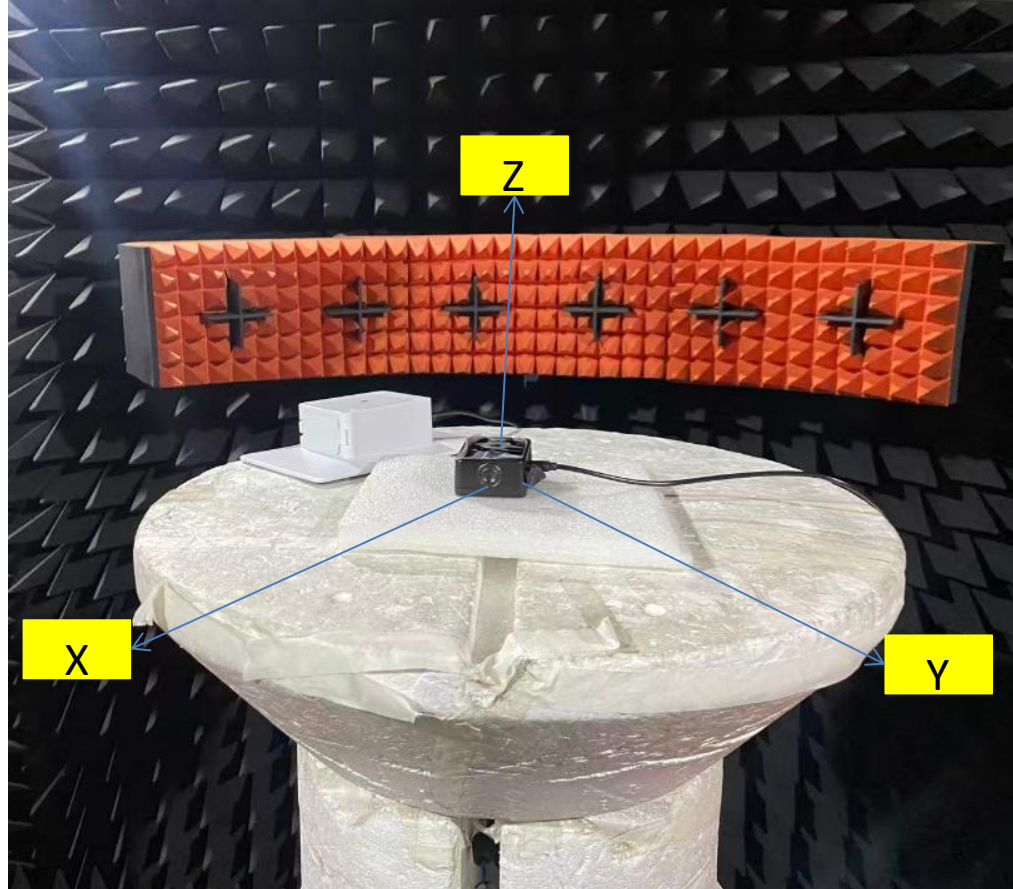
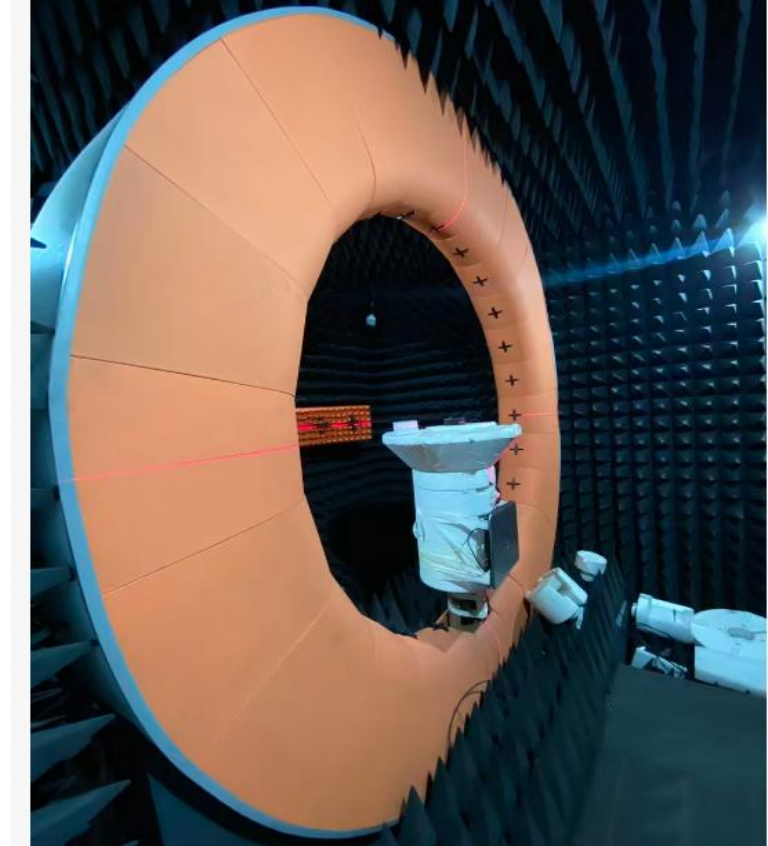


Antenna Study

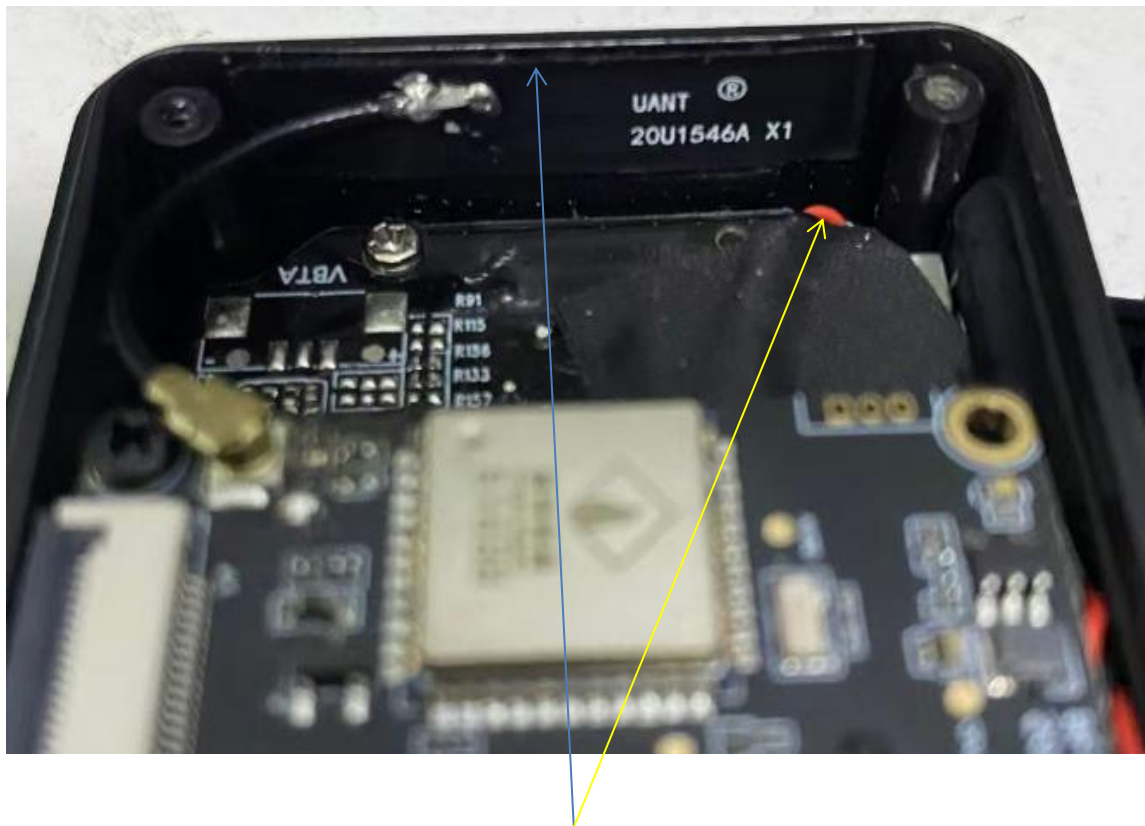
- **Client Name: Songzhi**
- **Project Name: BF37C**
- **Debugging frequency band: 2400/2500MHz**
- **Valuation date: 2025.09.11**



Testing environment

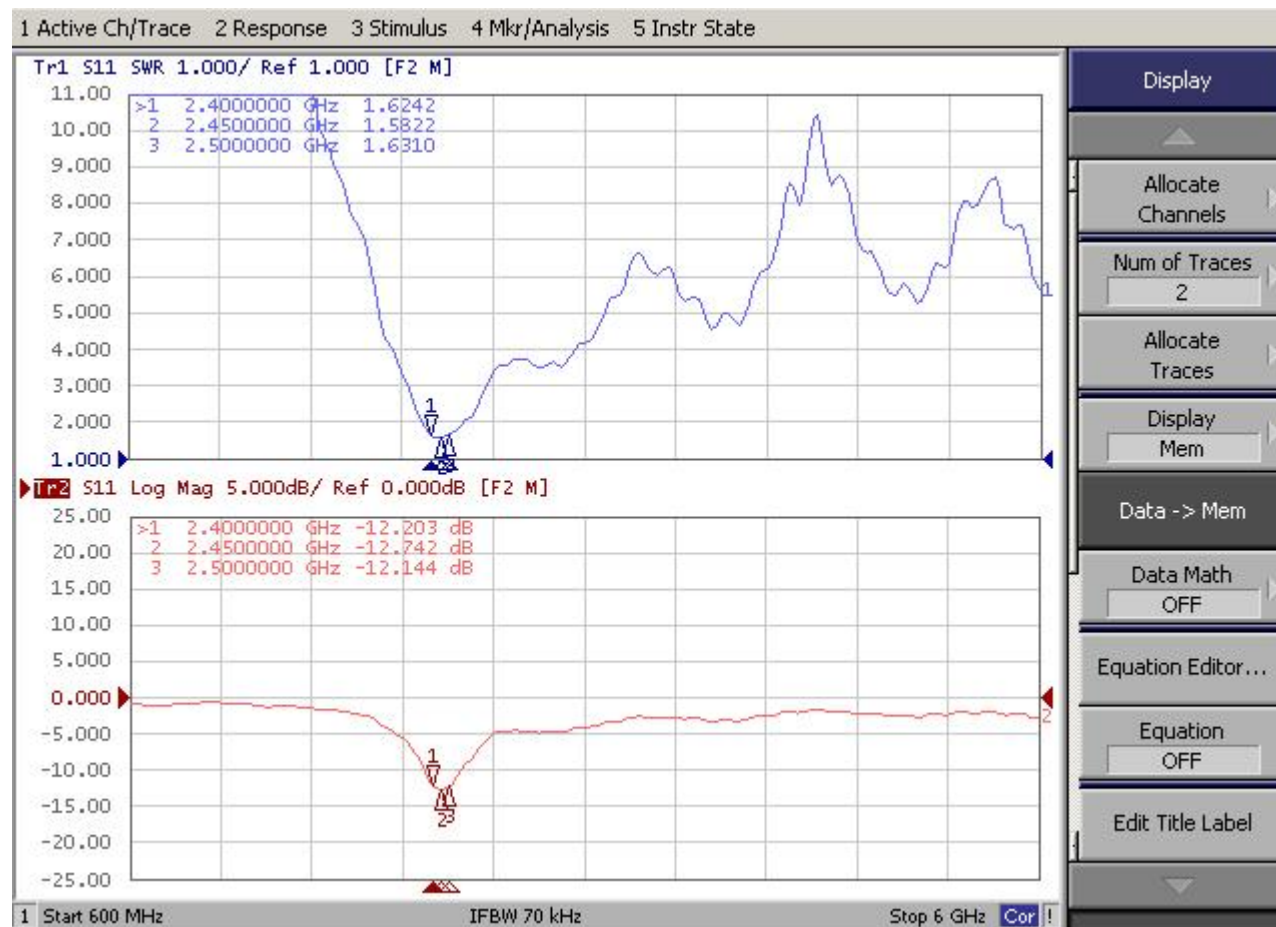


Testing 3D microwave darkroom(3m*3m*3m)

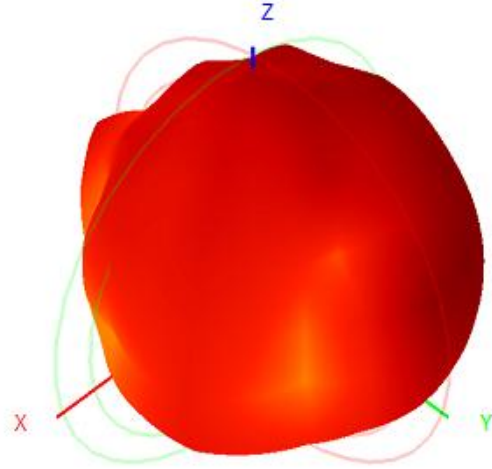


The antenna should be positioned at the center above the mounting shell, with the connecting wires attached to the board without touching the antenna.

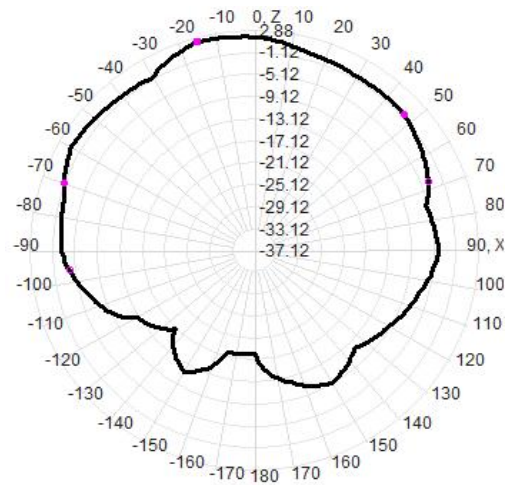
- Antenna name: 2.4G
- Antenna Type: PIFA
- P/N: UB01C35F2D5509A
- Covers: 2400/2500MHz



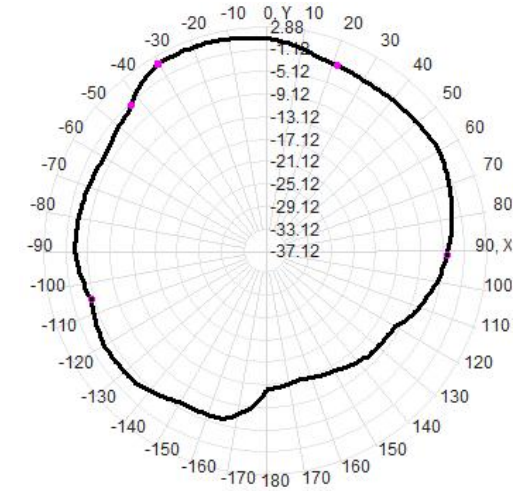
Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Gain (dBi)	2.19	2.21	2.02	1.66	1.62	1.42	1.54	1.41	1.69	1.45	1.66
Efficiency (%)	49.88	50.23	52.46	48.93	51.97	49.20	50.12	47.91	49.92	47.83	50.59



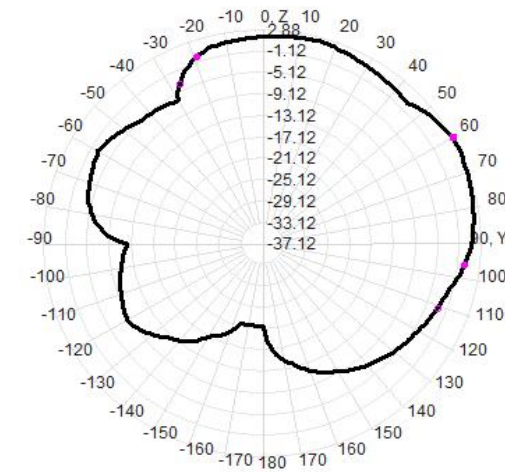
Far-field pattern



E1-XZ



H-XY



E2-YZ

Item	Measurement	Azimuths	Elevations	Standard	Band	Channel	Frequency	Max	Min	Total
1	TRP	Every30	Every30	WIFI (AP)	WIFI_B (11M)	1	2412	19.62	-0.19	17.04
2	TRP	Every30	Every30	WIFI (AP)	WIFI_B (11M)	7	2442	19.65	2.48	16.51
3	TRP	Every30	Every30	WIFI (AP)	WIFI_B (11M)	13	2472	19.36	3.72	16.27
4	TIS(EIRP)	Every30	Every30	WIFI (AP)	WIFI_B (11M)	1	2412	-73.97	-92.74	-88.34
5	TIS(EIRP)	Every30	Every30	WIFI (AP)	WIFI_B (11M)	7	2442	-73.28	-92.34	-88.3
6	TIS(EIRP)	Every30	Every30	WIFI (AP)	WIFI_B (11M)	13	2472	-72.87	-91.46	-87.58
1	TRP	Every30	Every30	WIFI (AP)	WIFI_G (54M)	1	2412	19.83	0.12	16.91
2	TRP	Every30	Every30	WIFI (AP)	WIFI_G (54M)	7	2442	19.52	2.53	16.38
3	TRP	Every30	Every30	WIFI (AP)	WIFI_G (54M)	13	2472	18.97	3.34	15.95
4	TIS(EIRP)	Every30	Every30	WIFI (AP)	WIFI_G (54M)	1	2412	-58.72	-78.42	-75.5
5	TIS(EIRP)	Every30	Every30	WIFI (AP)	WIFI_G (54M)	7	2442	-62.62	-78.57	-75.14
6	TIS(EIRP)	Every30	Every30	WIFI (AP)	WIFI_G (54M)	13	2472	-63.01	-78.64	-74.83
7	TRP	Every30	Every30	WIFI (AP)	WIFI_N_ISM (65 M)	1	2412	19.99	0.27	16.97
8	TRP	Every30	Every30	WIFI (AP)	WIFI_N_ISM (65 M)	7	2442	20.13	3.17	16.69
9	TRP	Every30	Every30	WIFI (AP)	WIFI_N_ISM (65 M)	13	2472	19.04	3.42	16.08
10	TIS(EIRP)	Every30	Every30	WIFI (AP)	WIFI_N_ISM (65 M)	1	2412	-55.48	-75.24	-72.29
11	TIS(EIRP)	Every30	Every30	WIFI (AP)	WIFI_N_ISM (65 M)	7	2442	-60.51	-76.14	-72.32
12	TIS(EIRP)	Every30	Every30	WIFI (AP)	WIFI_N_ISM (65 M)	13	2472	-59.24	-74.85	-71.03

- Antenna covers 2.4G
- Test shows excellent performance, VSWR match < 2.0 in working band.