



好天线 · 优比造

东莞市优比电子有限公司

Dongguan Youbi Electronics Co., Ltd

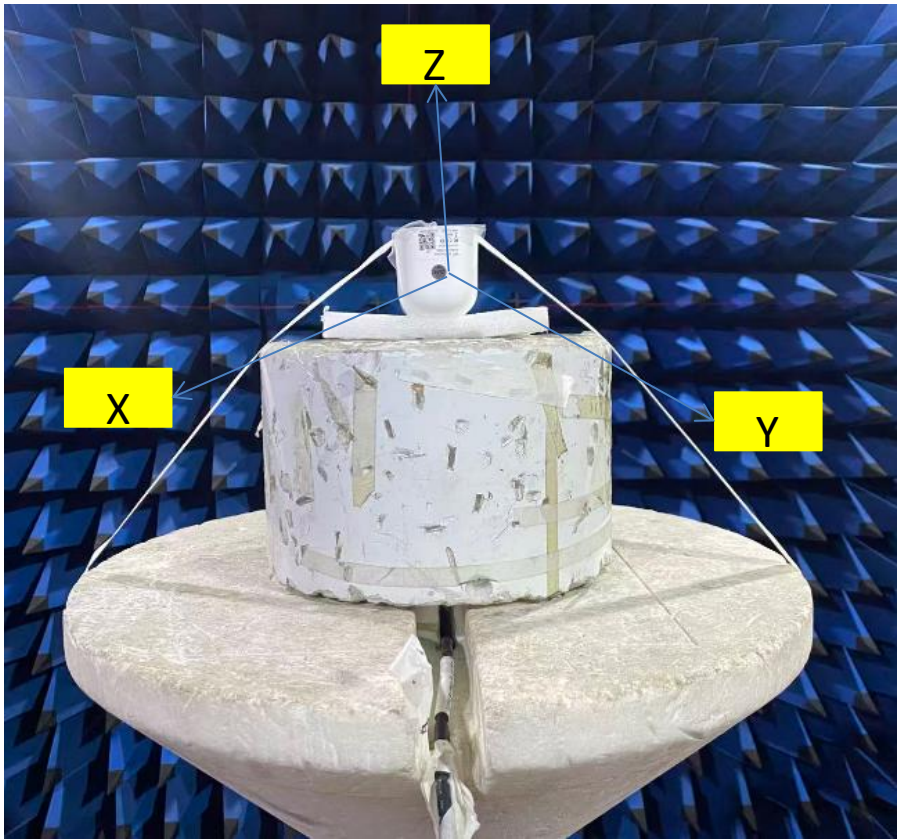
Antenna Study

- **Client Name:** TianNuo
- **Project Name:** CG6K
- **Debugging frequency band:** 2400/2500MHz
- **Valuation date:** 2025.12.26

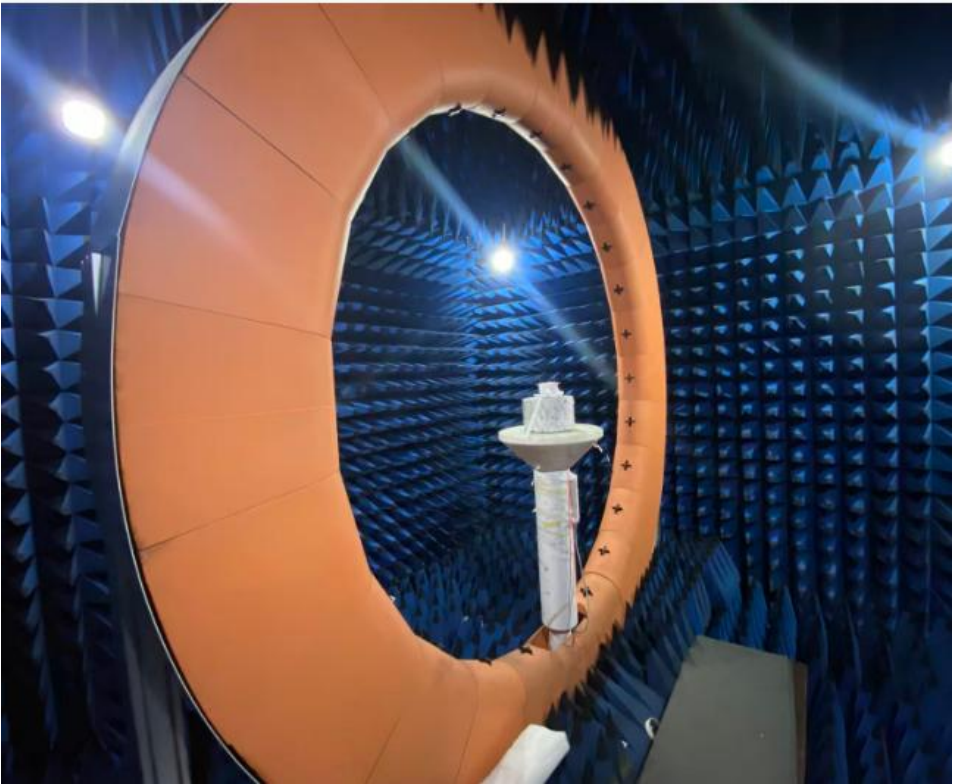
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Internal Antenna

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Testing environment

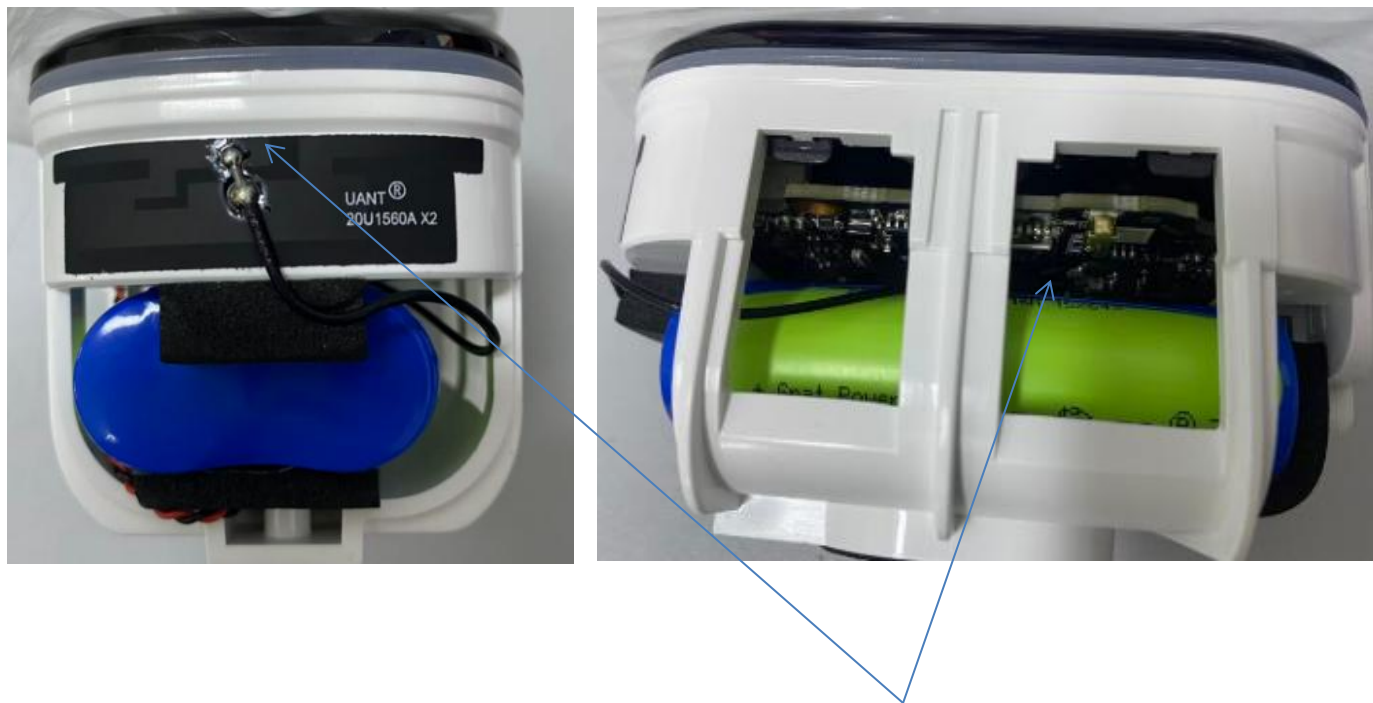


Testing 3D microwave darkroom(5m*4m*4m)

External Antenna

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- Antenna name: 2.4G
- Antenna Type: FPC
- P/N: UB01C100F2D5551A
- Coaxial cable: 100mm



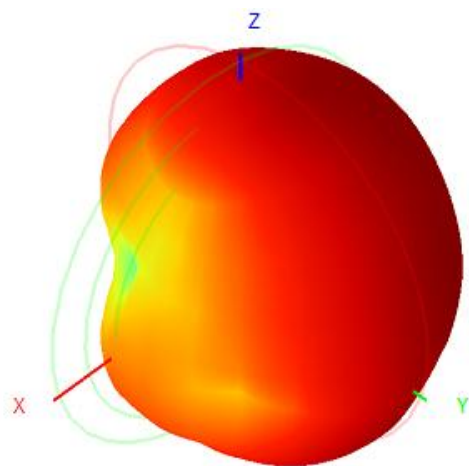
As shown in the figure: The antenna is assembled at the center position, and the coaxial cable runs through it from the inside.

S Parameter_Return Loss&VSWR

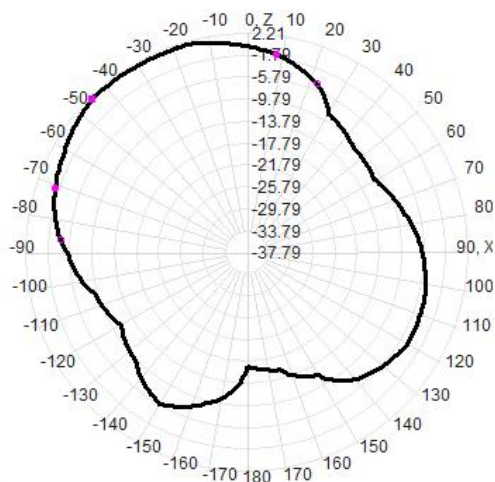


Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Gain (dBi)	3.49	3.29	2.88	2.86	2.61	2.57	2.50	2.48	2.59	2.65	2.91
Efficiency (%)	57.42	56.73	53.03	54.36	52.25	52.62	53.65	54.08	55.22	54.76	55.73

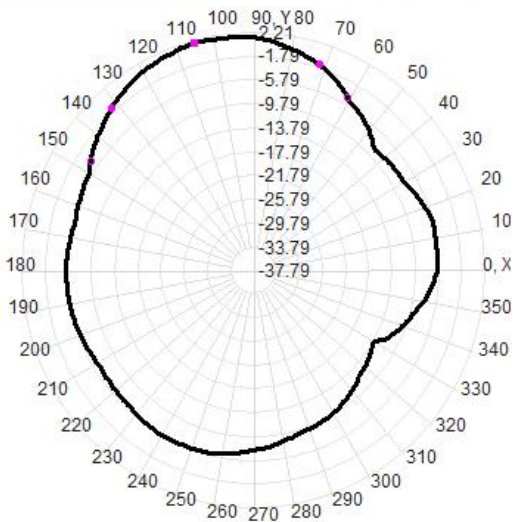
2D/3D pattern



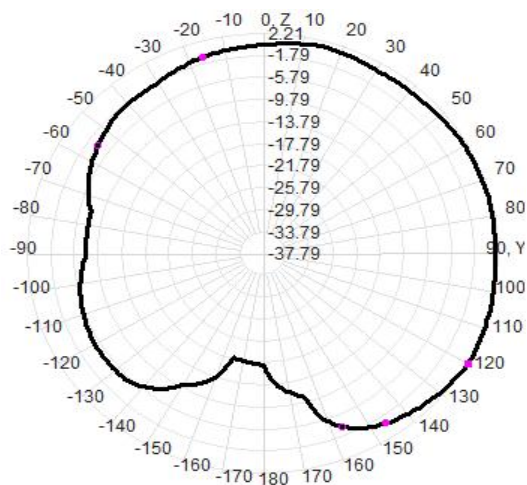
far-field pattern



E1-XZ



H-XY



E2-YZ

Main Antenna(3D Free Space)-1#

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WIFI	route	TRP	TIS
B（11M）	CH1	17.83	-86.16
	CH6	17.32	-85.19
	CH11	17.38	-82.69
G（54M）	CH1	17.12	-71.04
	CH6	16.57	-70.51
	CH11	16.80	-69.76
N（MCS7）	CH1	16.33	-67.78
	CH6	16.19	-67.25
	CH11	16.13	-66.40

Main Antenna(3D Free Space)-2#

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WIFI	route	TRP	TIS
B (11M)	CH1	17.82	-87.37
	CH6	17.48	-85.17
	CH11	17.41	-83.69
G (54M)	CH1	16.45	-72.11
	CH6	16.17	-69.77
	CH11	16.57	-70.43
N (MCS7)	CH1	16.62	-68.65
	CH6	16.15	-66.46
	CH11	16.16	-67.36

Main Antenna(3D Free Space)-3#

Dongguan UB Electronics Co., Ltd

WIFI	route	TRP	TIS
B (11M)	CH1	17.85	-86.99
	CH6	17.47	-84.10
	CH11	17.59	-83.17
G (54M)	CH1	17.06	-71.25
	CH6	16.89	-69.60
	CH11	16.93	-70.12
N (MCS7)	CH1	16.81	-68.40
	CH6	16.91	-67.18
	CH11	16.54	-68.09

Conclusion

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

