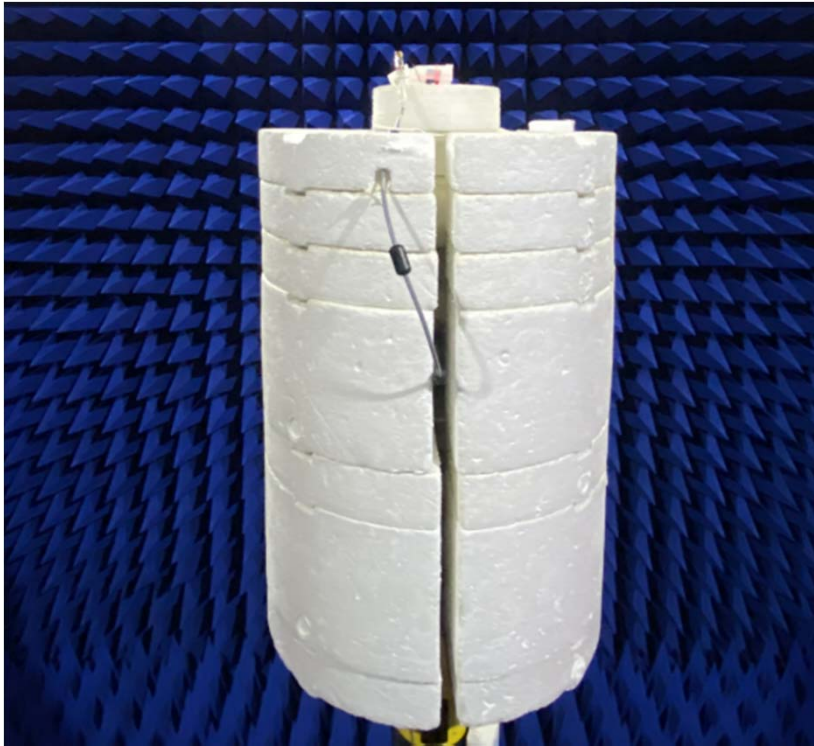


Antenna Study

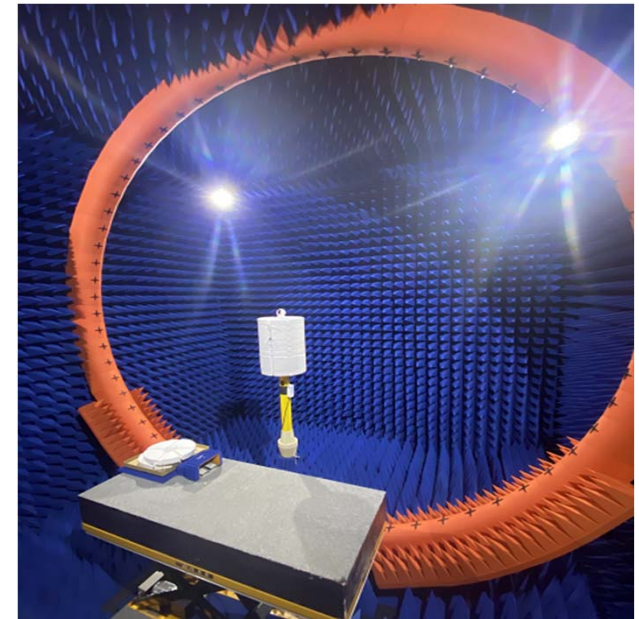
- **Client Name:Shinwa industries(China) ltd.**
- **Project Name : BT-MN10-1**
- **Debugging frequency band: 2400-2500HMz**
- **Valuation date: 2024.3.8**

PCB Antenna

Dongguan UB Electronics Co., Ltd



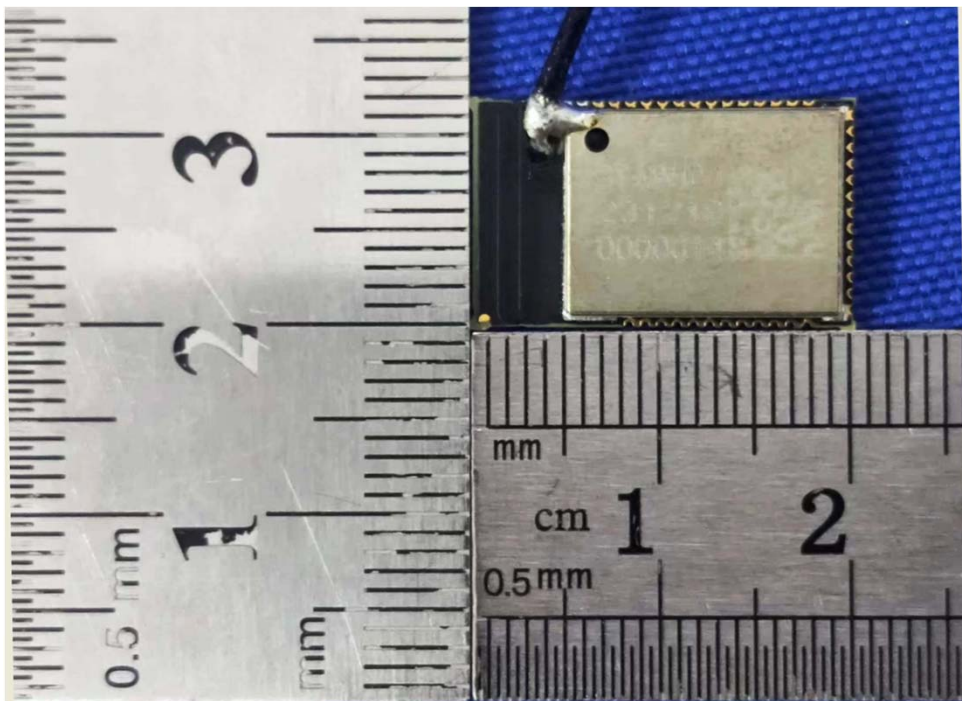
Testing environment



Testing 3D microwave darkroom(6m*6m*6m)

PCB Antenna

Dongguan UB Electronics Co., Ltd

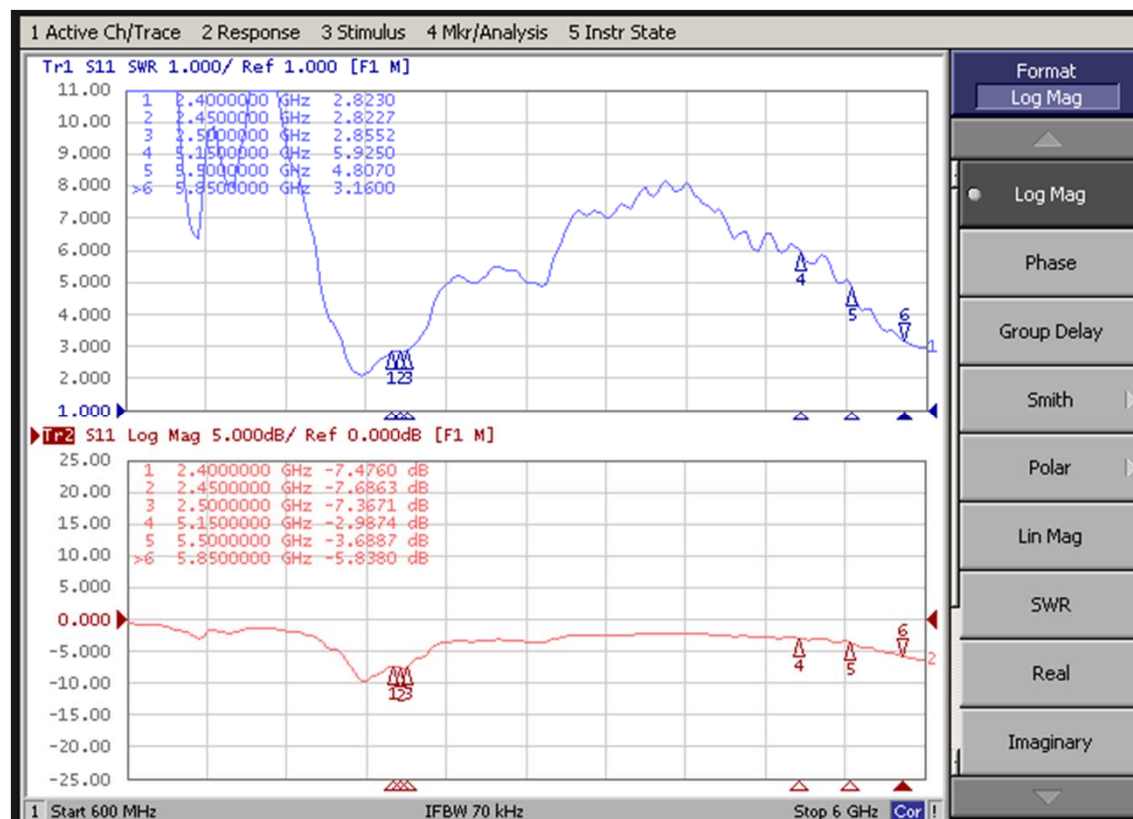


- Antenna name: 2.4G
- Antenna Type: PCB
- Covers : 2.4G

Antenna

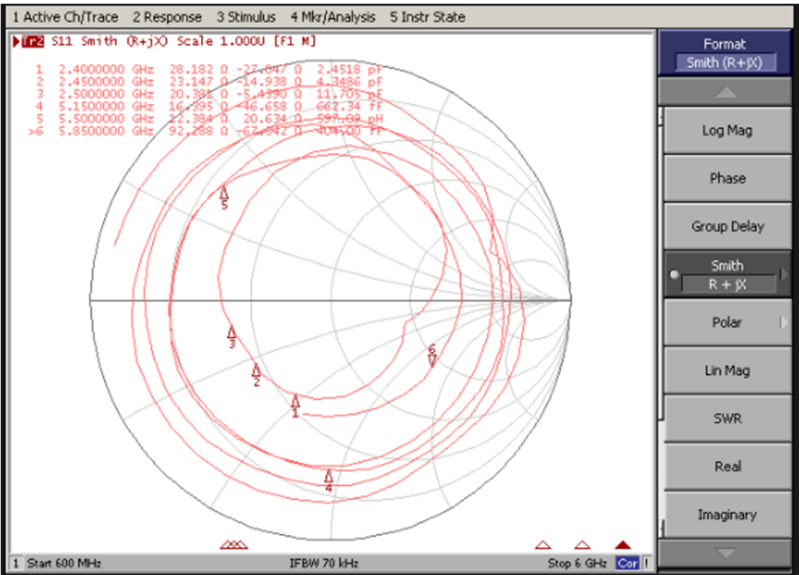
S Parameter_Return Loss&VSWR

Dongguan UB Electronics Co., Ltd

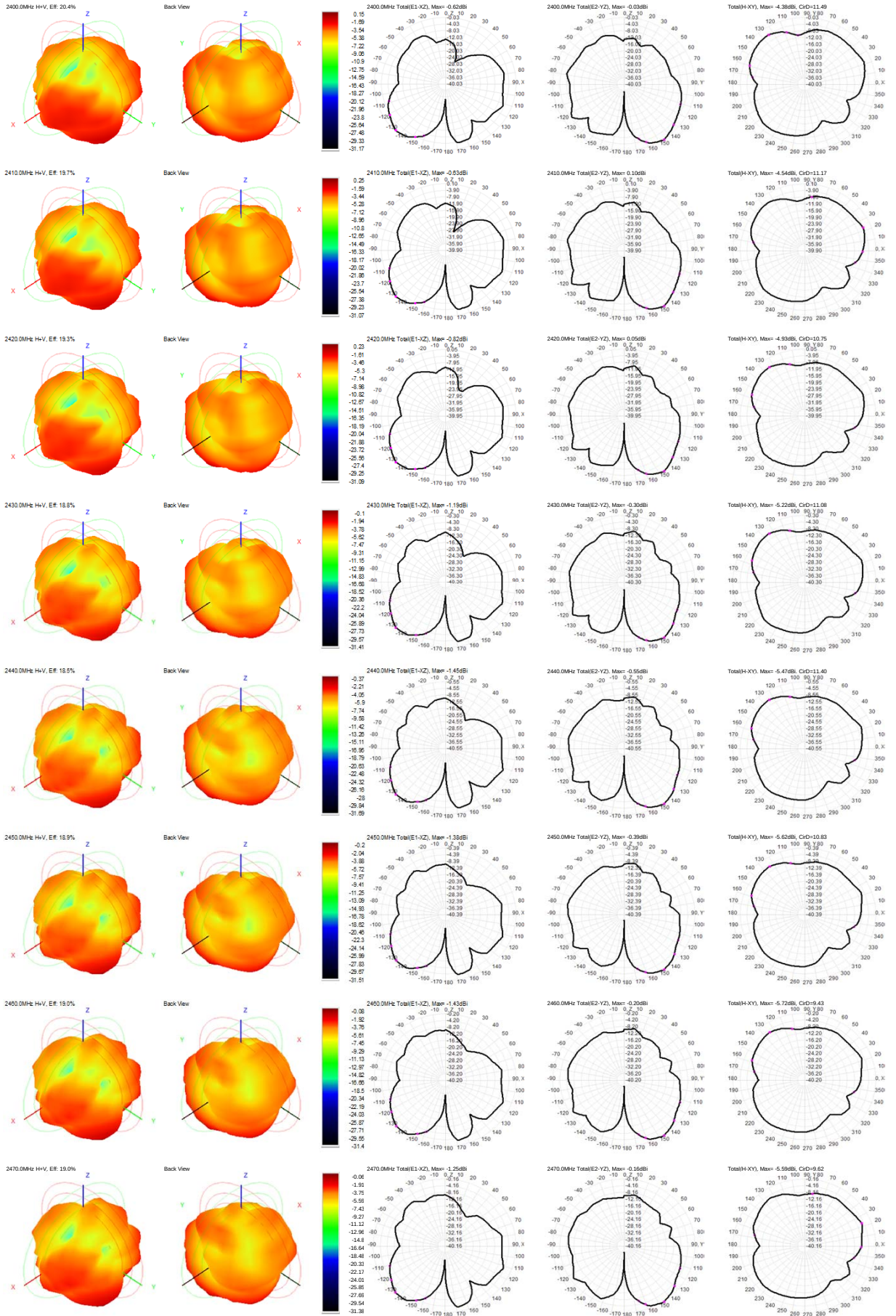


Efficiency and Gain-Smith

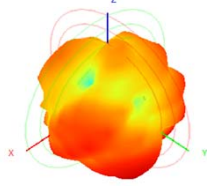
Dongguan UB Electronics Co., Ltd



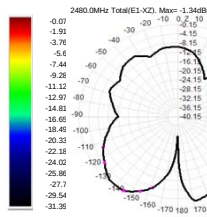
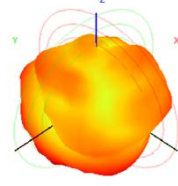
Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Gain (dBi)	0.15	0.25	0.23	-0.10	-0.37	-0.20	-0.08	-0.06	-0.07	-0.44	-0.57
Efficiency (%)	20.36	19.73	19.33	18.78	18.50	18.86	19.04	19.02	18.25	16.99	16.75



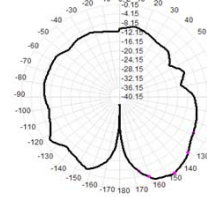
2480.0MHz H+V, EF: 18.2%



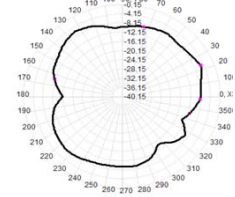
Back View



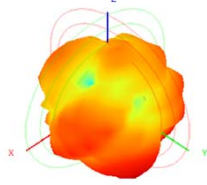
2480.0MHz Total(E2-YZ), Max=-0.15dBi



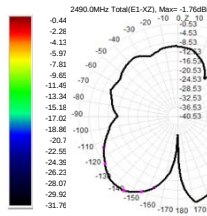
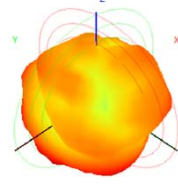
Total(H+V), Max=-5.65dBi, Crd=10.48



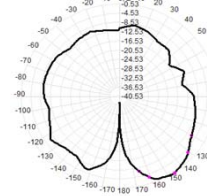
2490.0MHz H+V, EF: 17.0%



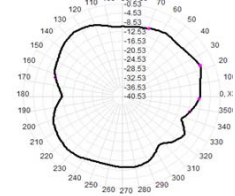
Back View



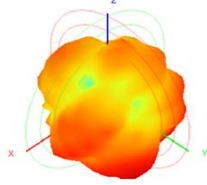
2490.0MHz Total(E2-YZ), Max=-0.53dBi



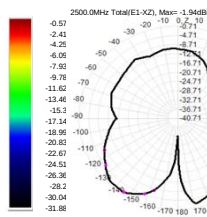
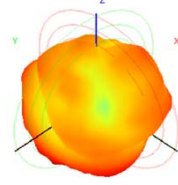
Total(H+V), Max=-6.26dBi, Crd=10.03



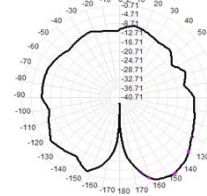
2500.0MHz H+V, EF: 16.7%



Back View



2500.0MHz Total(E2-YZ), Max=-0.71dBi



Total(H+V), Max=-6.37dBi, Crd=9.77

