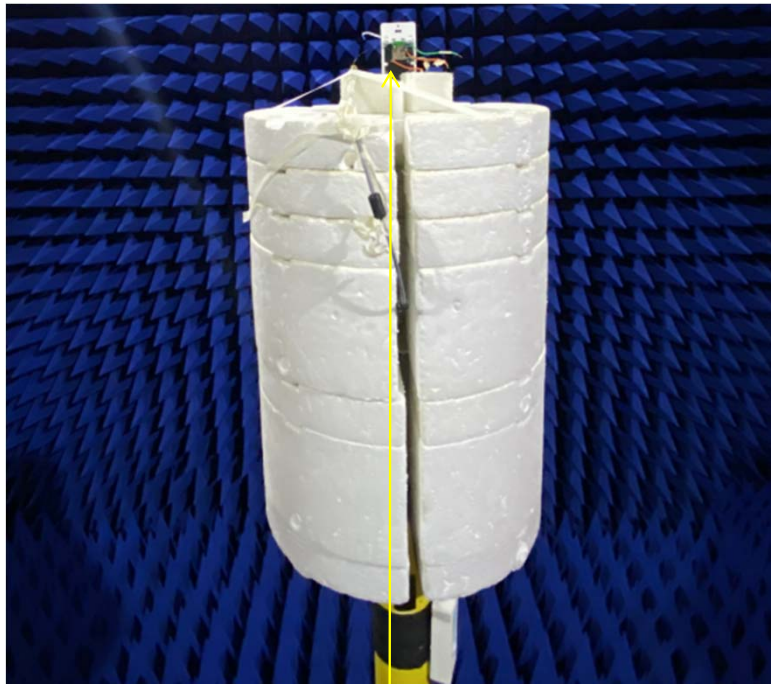


Antenna Study

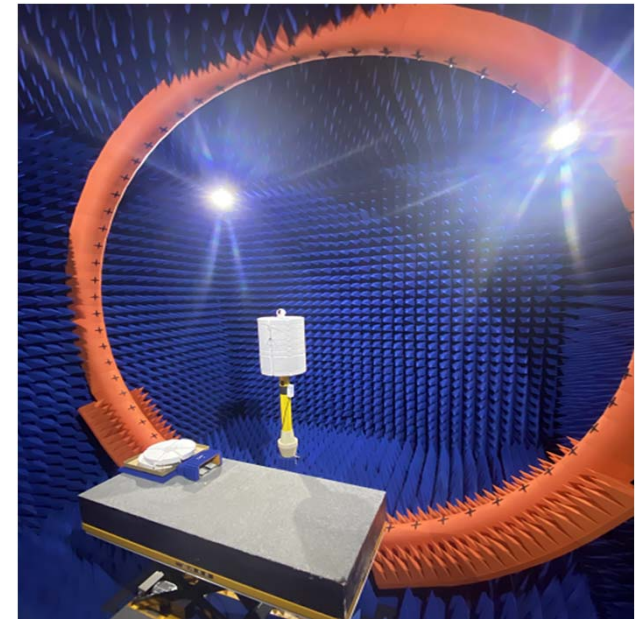
- **Client Name:U-tec Group Inc.**
- **Project Name : Smart Switch**
- **Debugging frequency band: 2400-2500HMz**
- **Valuation date: 2023.10.24**

PCB Antenna

Dongguan UB Electronics Co., Ltd



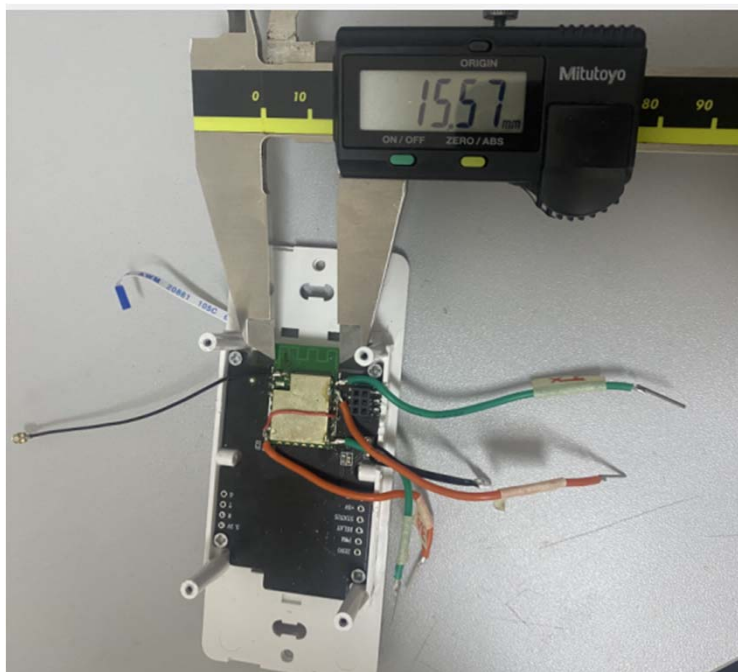
Testing environment



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

PCB Antenna

Dongguan UB Electronics Co., Ltd

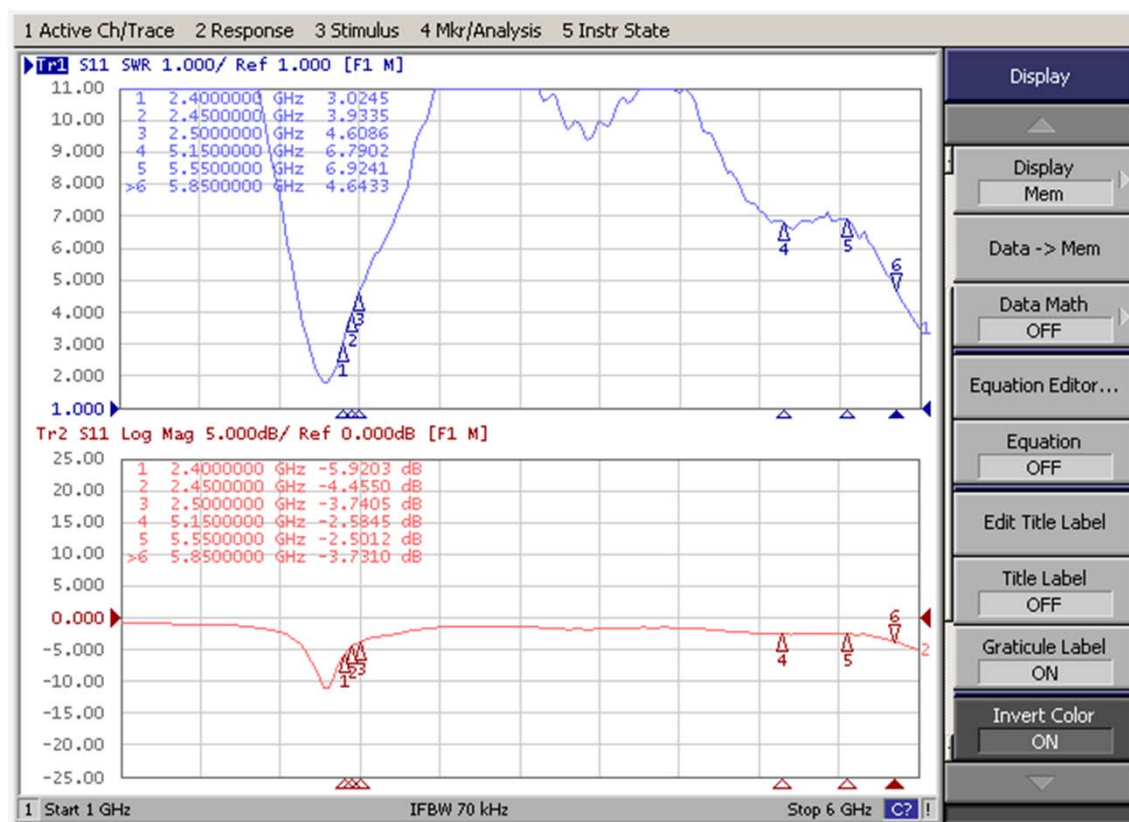


Antenna

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

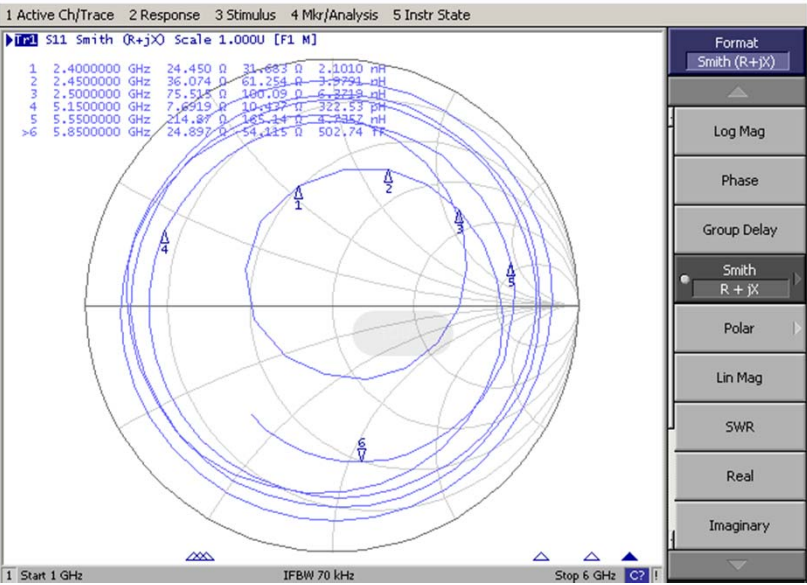
S Parameter_Return Loss&VSWR

Dongguan UB Electronics Co., Ltd

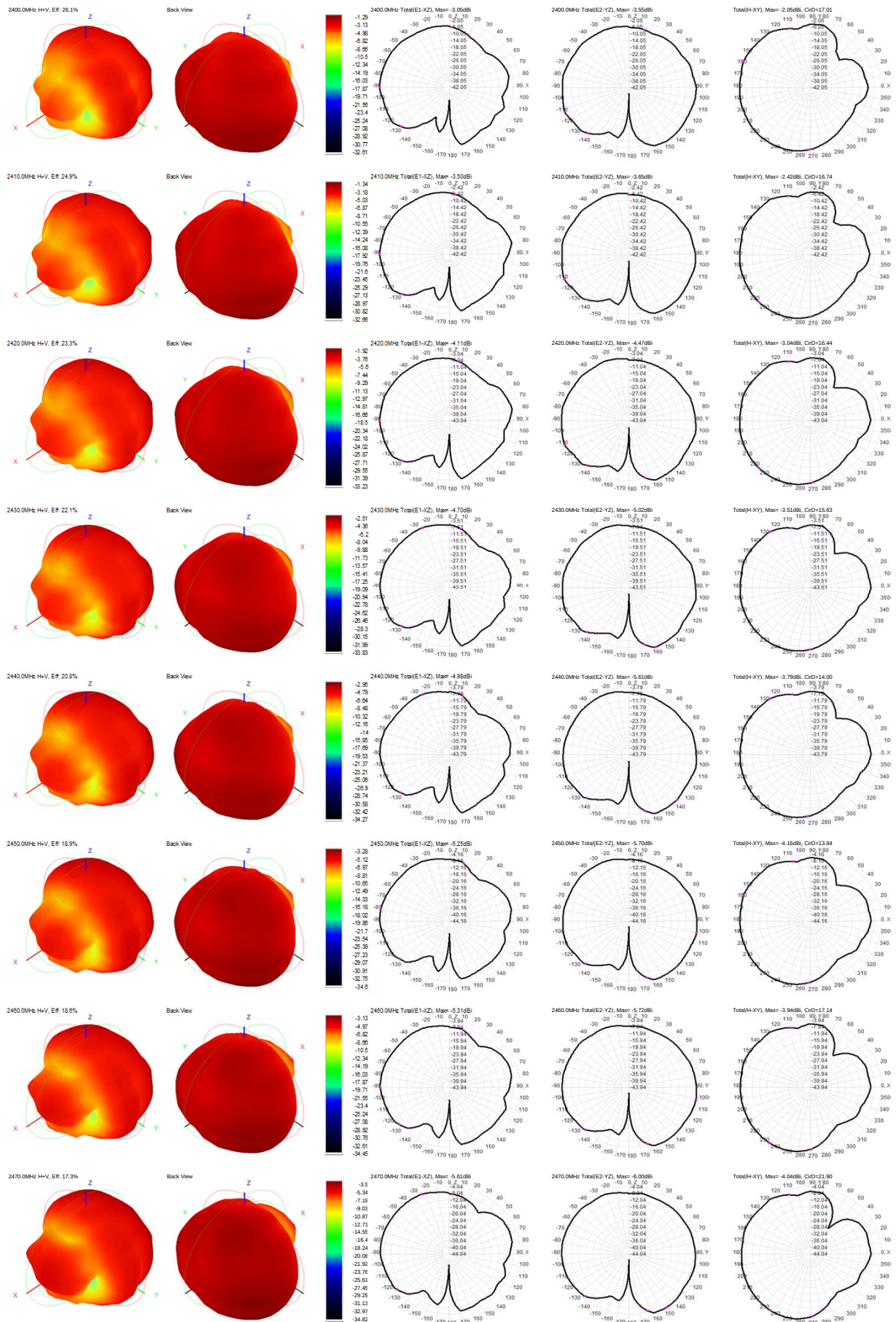


Efficiency and Gain-Smith

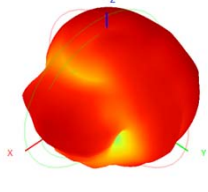
Dongguan UB Electronics Co., Ltd



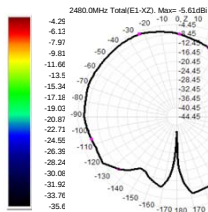
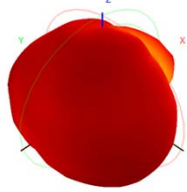
Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain (dBi)	-1.29	-1.34	-1.92	-2.51	-2.95	-3.28	-3.13	-3.50	-4.29	-4.36	-4.65
Efficiency (%)	26.06	24.87	23.32	22.10	20.82	18.94	18.59	17.27	15.57	15.88	15.21



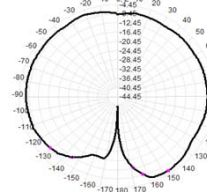
2480.0MHz H+V, Ef: 15.6%



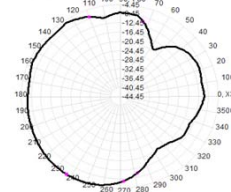
Back View



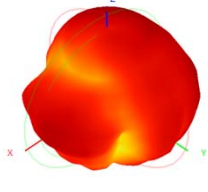
2480.0MHz Total(E2-YZ), Max=-6.28dB



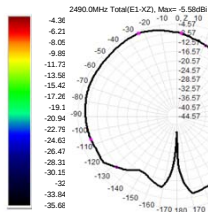
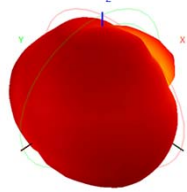
Total(H+V), Max=-4.45dB, Crd=15.44



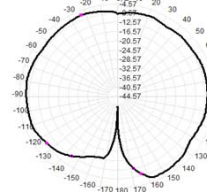
2490.0MHz H+V, Ef: 15.9%



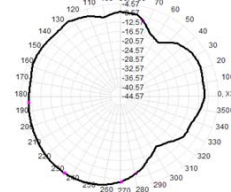
Back View



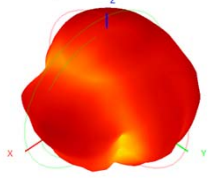
2490.0MHz Total(E2-YZ), Max=-6.45dB



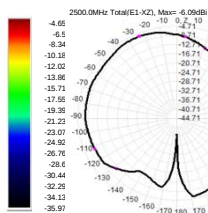
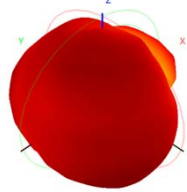
Total(H+V), Max=-4.57dB, Crd=13.85



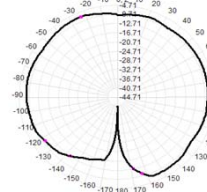
2500.0MHz H+V, Ef: 15.2%



Back View



2500.0MHz Total(E2-YZ), Max=-6.70dB



Total(H+V), Max=-4.71dB, Crd=14.53

