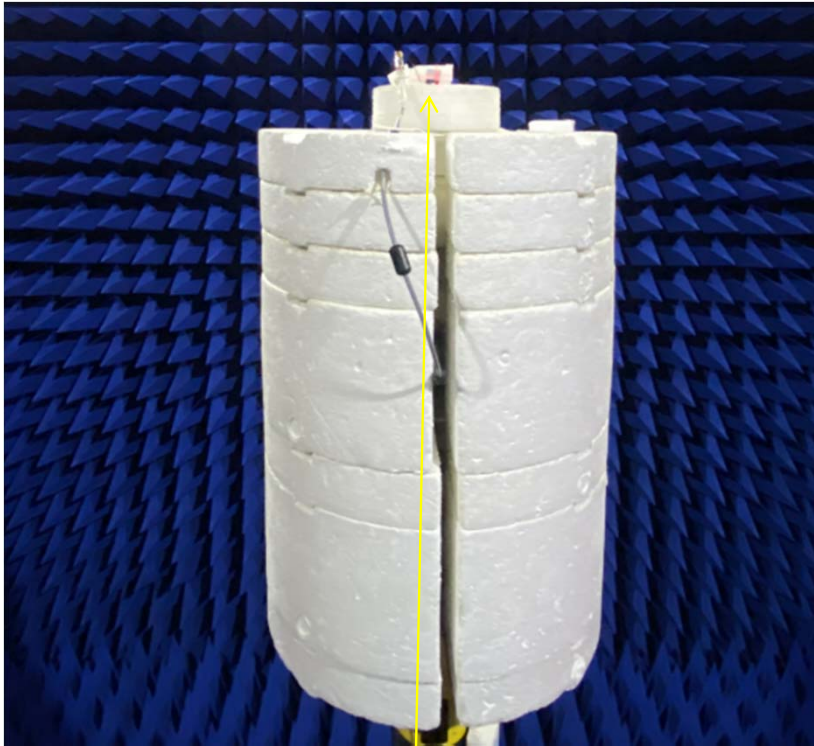


Antenna Study

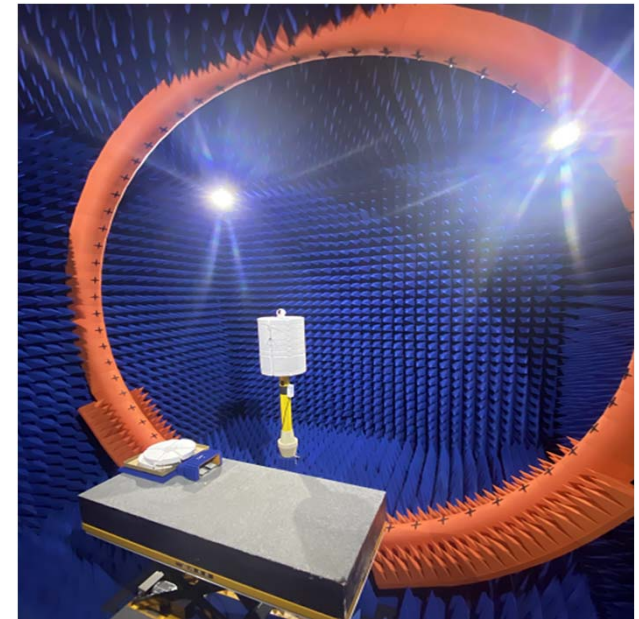
- **Client Name: Beyond Lighting Technology (Shanghai) Co., Ltd.**
- **Project Name : BWMZB06 Module**
- **Debugging frequency band: 2400-2500HMz**
- **Valuation date: 2023.09.08**

PCBAntenna

Dongguan UB Electronics Co., Ltd



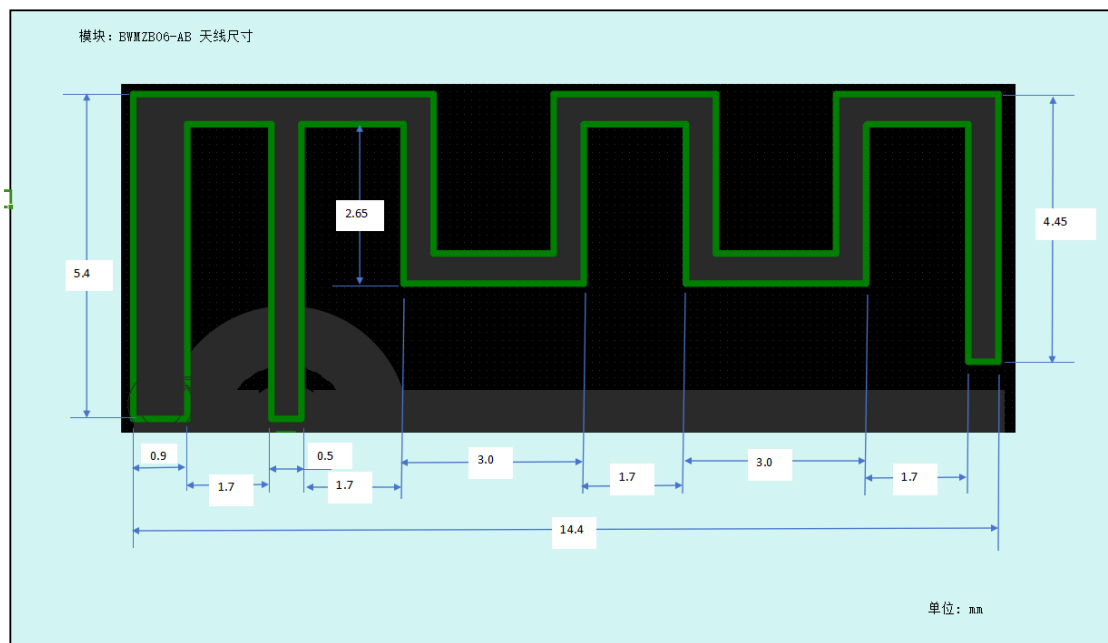
Testing environment



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

PCB Antenna

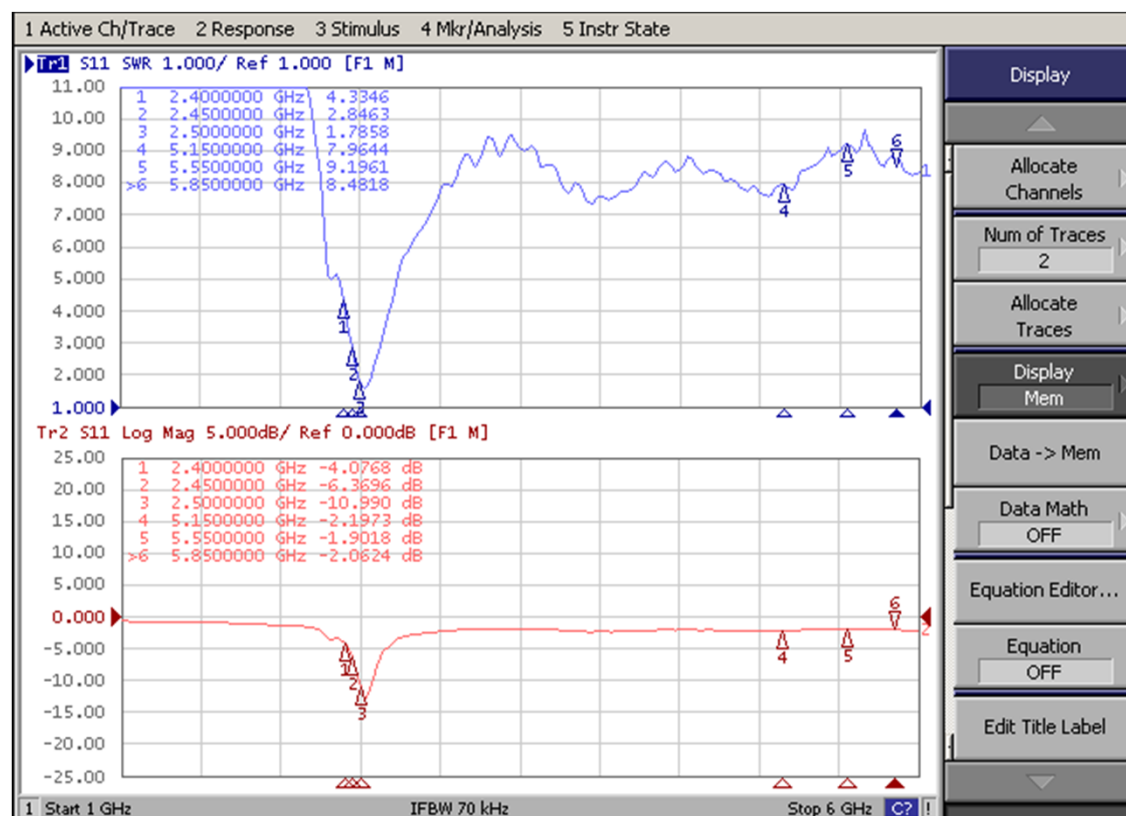
Dongguan UB Electronics Co., Ltd



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

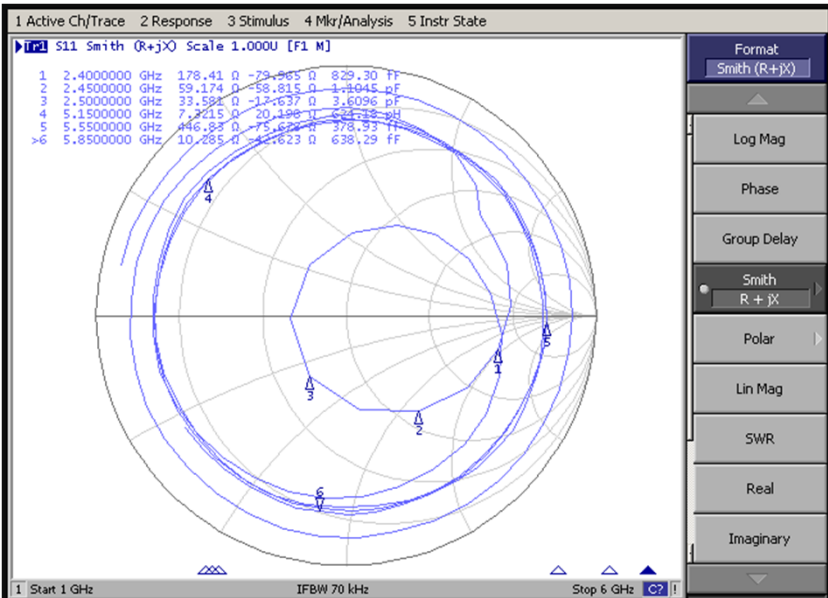
S Parameter_Return Loss&VSWR

Dongguan UB Electronics Co., Ltd



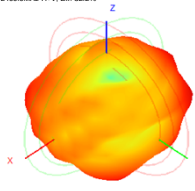
Efficiency and Gain-Smith

Dongguan UB Electronics Co., Ltd

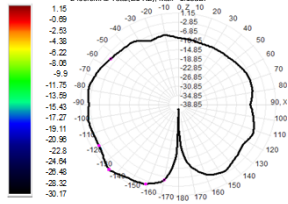
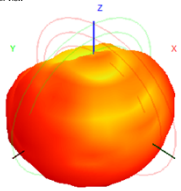


Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Gain (dBi)	1.15	1.15	0.64	0.38	0.27	0.18	0.18	0.14	-0.49	-0.61	-0.93
Efficiency (%)	32.24	30.95	29.16	28.48	27.35	25.87	26.24	25.44	23.47	23.26	21.89

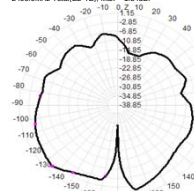
2400.0MHz H+V, E# 32.2%



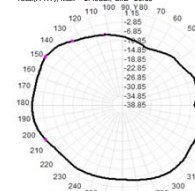
Back View



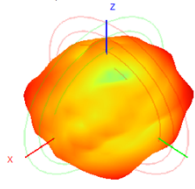
2400.0MHz Total(E2-YZ), Max=-1.34dBi



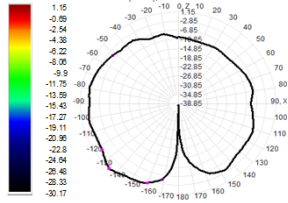
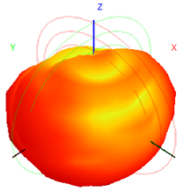
Total(H+V), Max=-1.49dBi, C/D=10.69



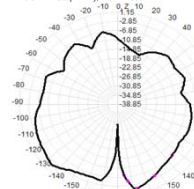
2410.0MHz H+V, E# 29.9%



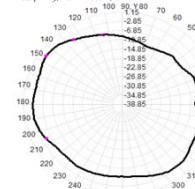
Back View



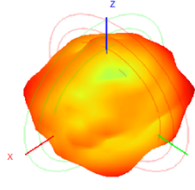
2410.0MHz Total(E2-YZ), Max=-1.23dBi



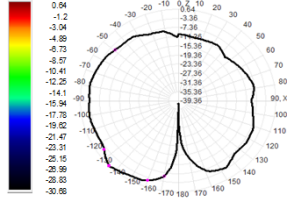
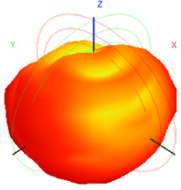
Total(H+V), Max=-1.66dBi, C/D=10.24



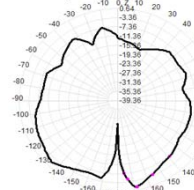
2420.0MHz H+V, E# 29.2%



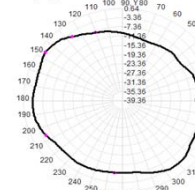
Back View



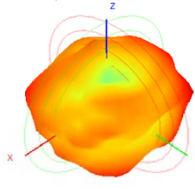
2420.0MHz Total(E2-YZ), Max=-1.15dBi



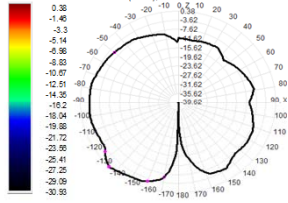
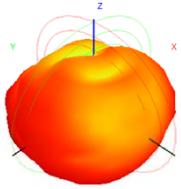
Total(H+V), Max=-1.96dBi, C/D=9.95



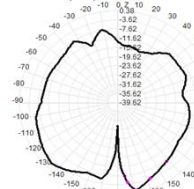
2430.0MHz H+V, E# 28.5%



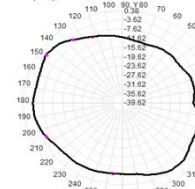
Back View



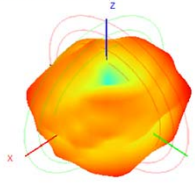
2430.0MHz Total(E2-YZ), Max=-1.07dBi



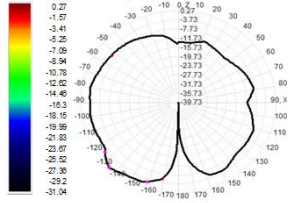
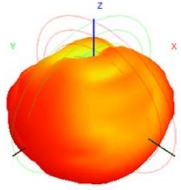
Total(H+V), Max=-3.63dBi, C/D=9.84



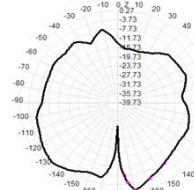
2440.0MHz H+V, E# 27.3%



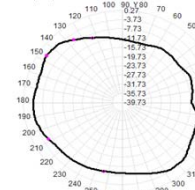
Back View



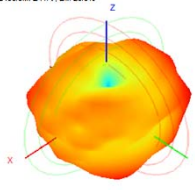
2440.0MHz Total(E2-YZ), Max=-1.21dBi



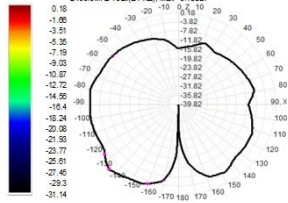
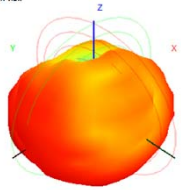
Total(H+V), Max=-3.00dBi, C/D=10.04



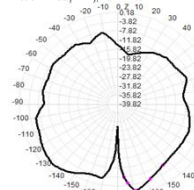
2450.0MHz H+V, E# 25.9%



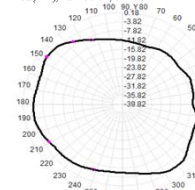
Back View



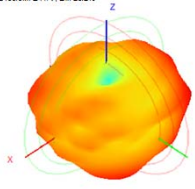
2450.0MHz Total(E2-YZ), Max=-1.49dBi



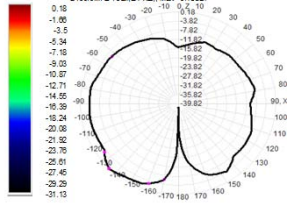
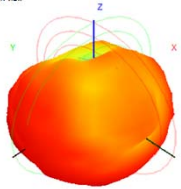
Total(H+V), Max=-3.01dBi, C/D=9.82



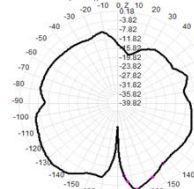
2460.0MHz H+V, E# 26.2%



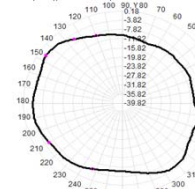
Back View



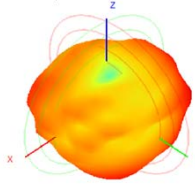
2460.0MHz Total(E2-YZ), Max=-1.59dBi



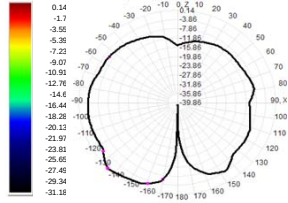
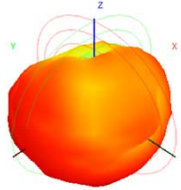
Total(H+V), Max=-2.74dBi, C/D=9.36



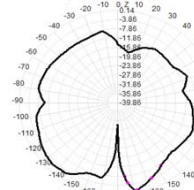
2470.0MHz H+V, E# 25.4%



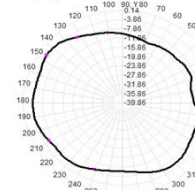
Back View



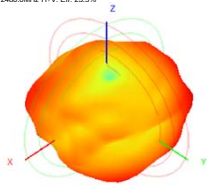
2470.0MHz Total(E2-YZ), Max=-1.53dBi



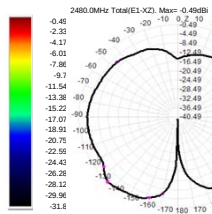
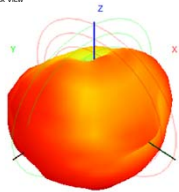
Total(H+V), Max=-2.99dBi, C/D=9.19



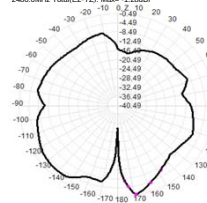
2480.0MHz H+V, EF: 23.5%



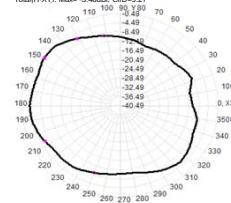
Back View



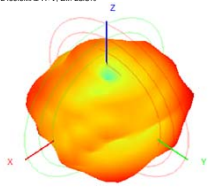
2480.0MHz Total(E2-YZ), Max=-1.29dBi



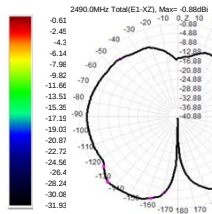
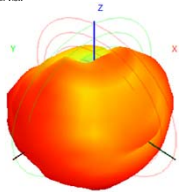
Total(H+V), Max=-3.48dBi, C/D=9.27



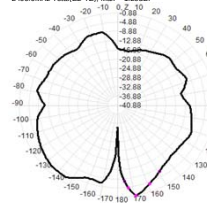
2490.0MHz H+V, EF: 23.3%



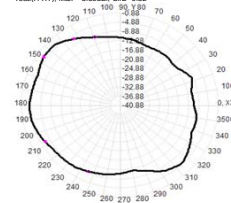
Back View



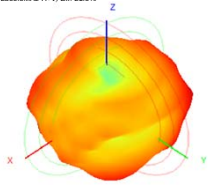
2490.0MHz Total(E2-YZ), Max=-1.29dBi



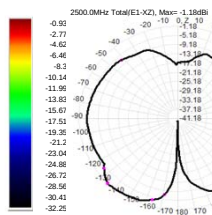
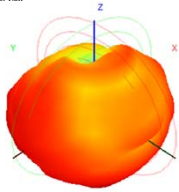
Total(H+V), Max=-3.59dBi, C/D=9.52



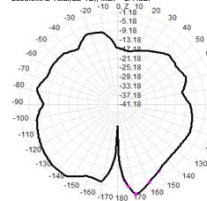
2500.0MHz H+V, EF: 21.9%



Back View



2500.0MHz Total(E2-YZ), Max=-1.44dBi



Total(H+V), Max=-3.51dBi, C/D=9.82

