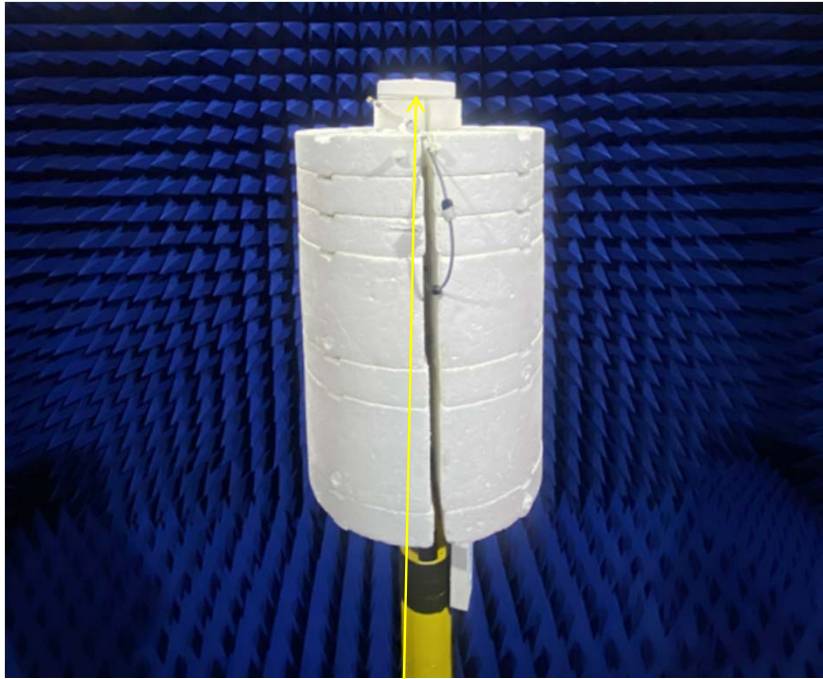


Antenna Study

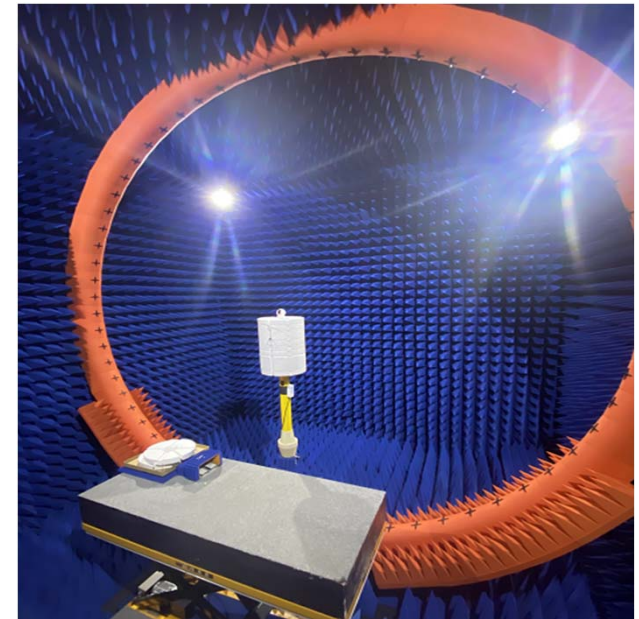
- **Client Name: DwarfConnection GmbH & Co KG**
- **Project Name: Wireless Video Transmission Kit**
- **Debugging frequency band: 2400-2500MHz**
- **Valuation date: 2023.05.20**

PCB Antenna

Dongguan UB Electronics Co., Ltd



Testing environment



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

PCB Antenna

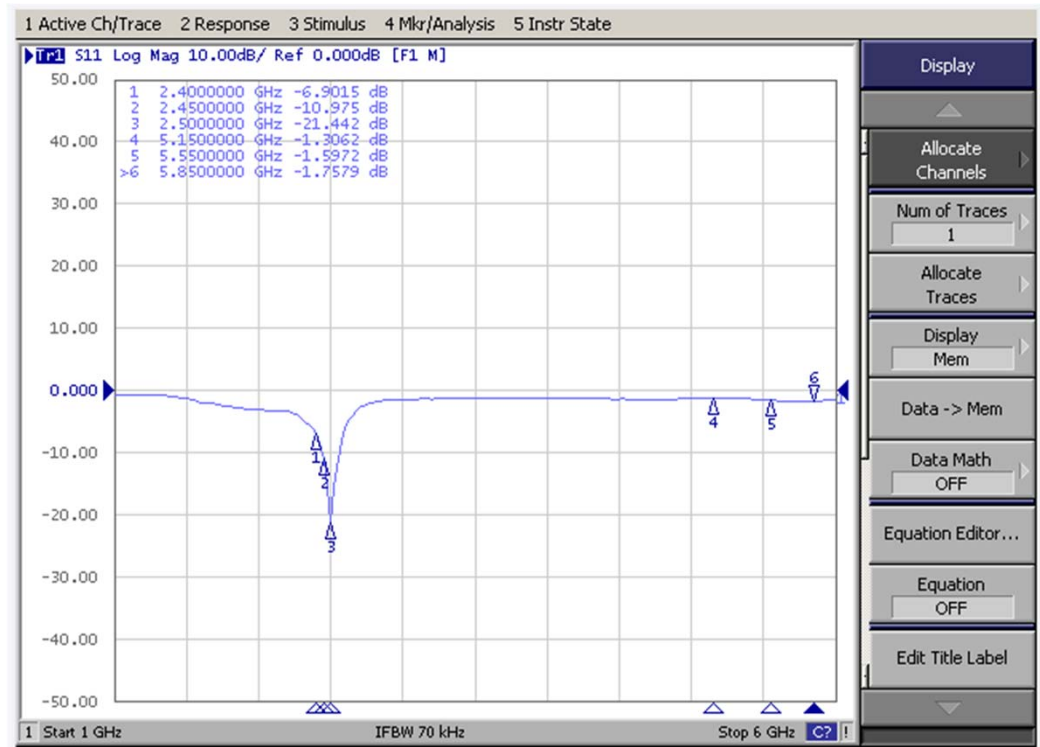
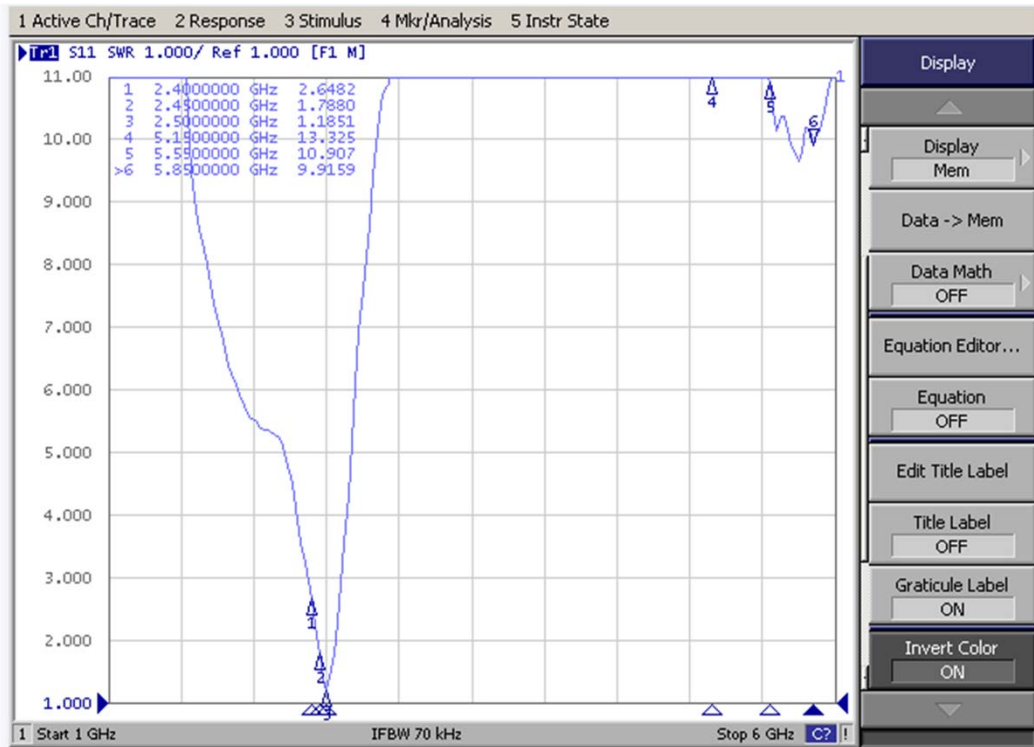
Dongguan UB Electronics Co., Ltd



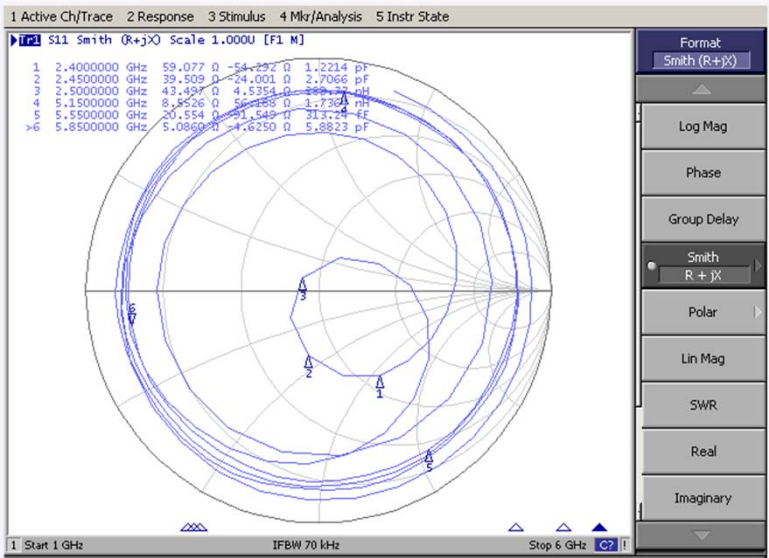
Antenna

- Antenna name: 2.4G
- Antenna Type: PCB
- Covers : 2400-2500MHz

S Parameter_Return Loss&VSWR

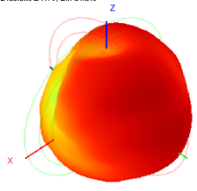


Efficiency and Gain-Smith

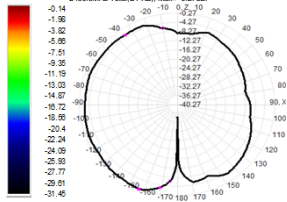
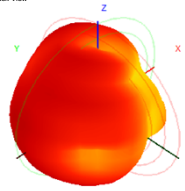


Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Gain (dBi)	-0.14	0.12	0.27	0.13	0.02	0.37	0.82	1.00	0.75	0.50	0.27
Efficiency (%)	31.48	31.95	33.95	35.46	36.95	39.59	41.25	42.77	42.35	41.43	40.57

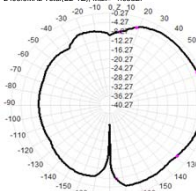
2400.0MHz H+V, Ef: 31.5%



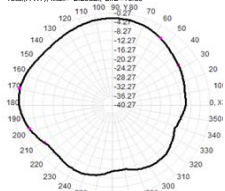
Back View



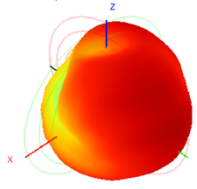
2400.0MHz Total(E2-YZ), Max=-1.90dB



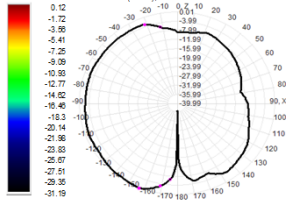
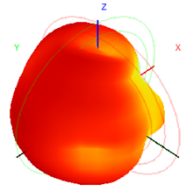
Total(H+V), Max=-2.28dB, C/D=10.69



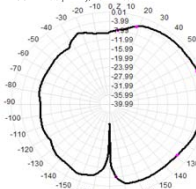
2410.0MHz H+V, Ef: 32.0%



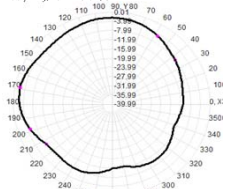
Back View



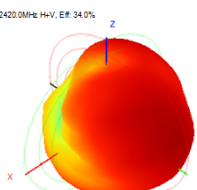
2410.0MHz Total(E2-YZ), Max=-1.55dB



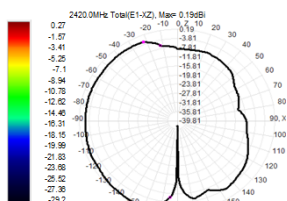
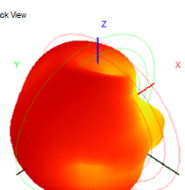
Total(H+V), Max=-2.07dB, C/D=11.11



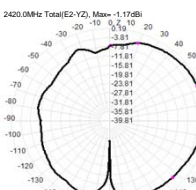
2420.0MHz H+V, Ef: 34.0%



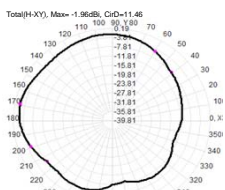
Back View



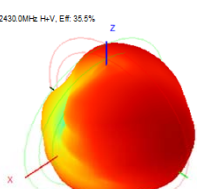
2420.0MHz Total(E2-YZ), Max=-1.17dB



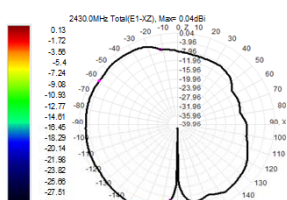
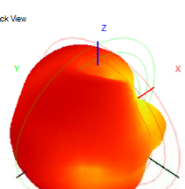
Total(H+V), Max=-1.96dB, C/D=11.46



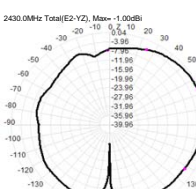
2430.0MHz H+V, Ef: 35.5%



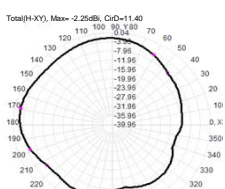
Back View



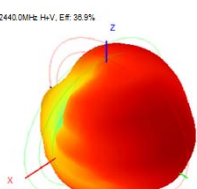
2430.0MHz Total(E2-YZ), Max=-1.05dB



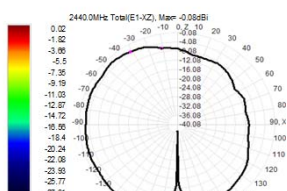
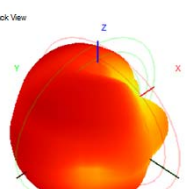
Total(H+V), Max=-2.25dB, C/D=11.40



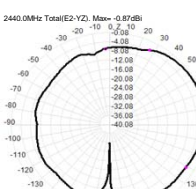
2440.0MHz H+V, Ef: 36.9%



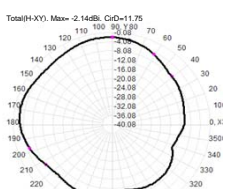
Back View



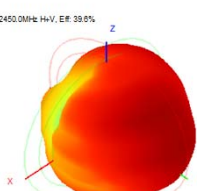
2440.0MHz Total(E2-YZ), Max=-0.87dB



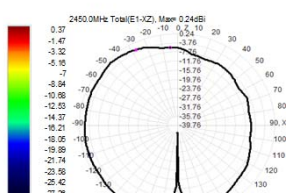
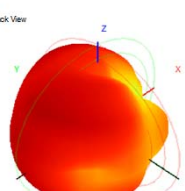
Total(H+V), Max=-2.14dB, C/D=11.75



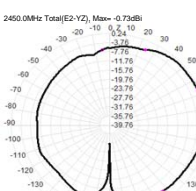
2450.0MHz H+V, Ef: 39.6%



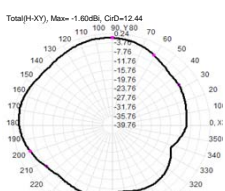
Back View



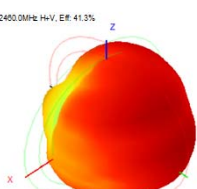
2450.0MHz Total(E2-YZ), Max=-0.73dB



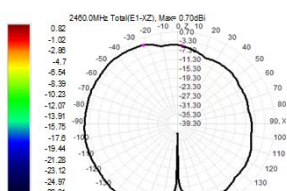
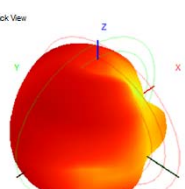
Total(H+V), Max=-1.60dB, C/D=12.44



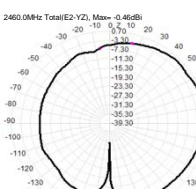
2460.0MHz H+V, Ef: 41.3%



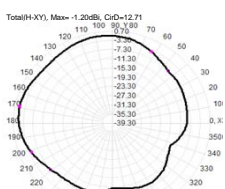
Back View



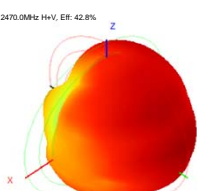
2460.0MHz Total(E2-YZ), Max=-0.45dB



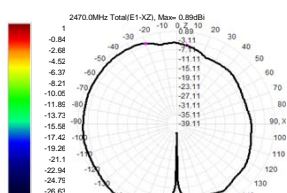
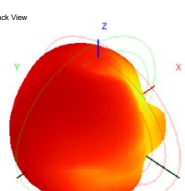
Total(H+V), Max=-1.20dB, C/D=12.71



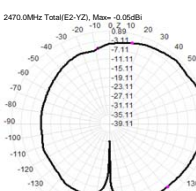
2470.0MHz H+V, Ef: 42.8%



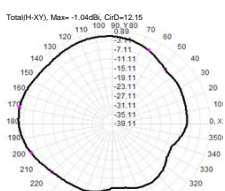
Back View



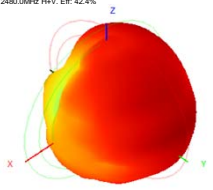
2470.0MHz Total(E2-YZ), Max=-0.55dB



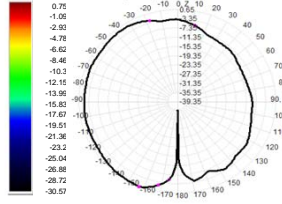
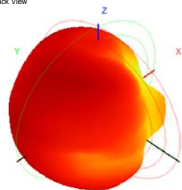
Total(H+V), Max=-1.04dB, C/D=12.15



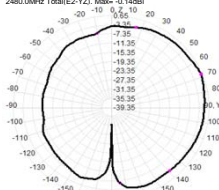
2480.0MHz H+V, EE: 42.4%



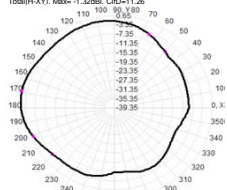
Back View



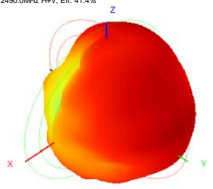
2480.0MHz Total(E2-YZ), Max= -0.14dB



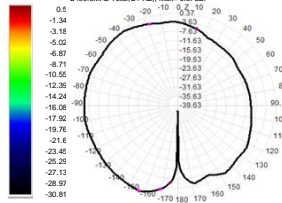
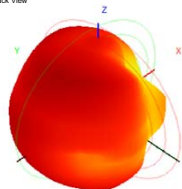
Total(H+V), Max= -1.32dB, C/D=11.26



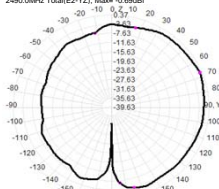
2490.0MHz H+V, EE: 41.4%



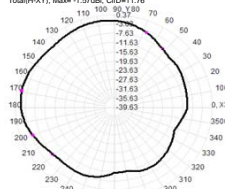
Back View



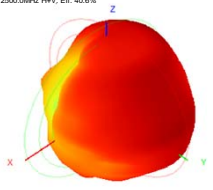
2490.0MHz Total(E2-YZ), Max= -0.69dB



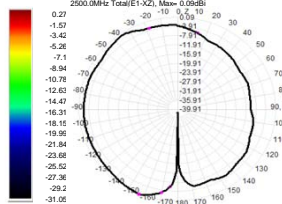
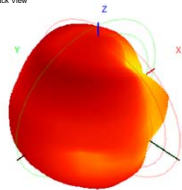
Total(H+V), Max= -1.57dB, C/D=11.76



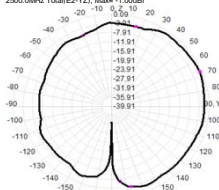
2500.0MHz H+V, EE: 40.6%



Back View



2500.0MHz Total(E2-YZ), Max= -1.00dB



Total(H+V), Max= -1.62dB, C/D=13.29

