



好天线 · 优比造

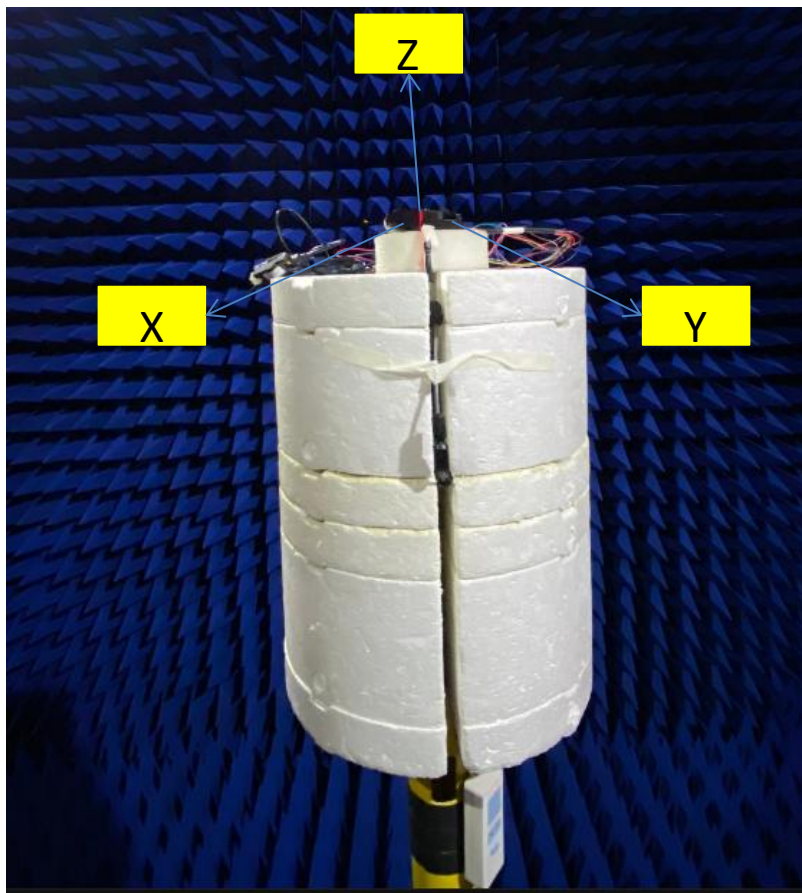
东莞市优比电子有限公司

Dongguan UB Electronics Co., Ltd

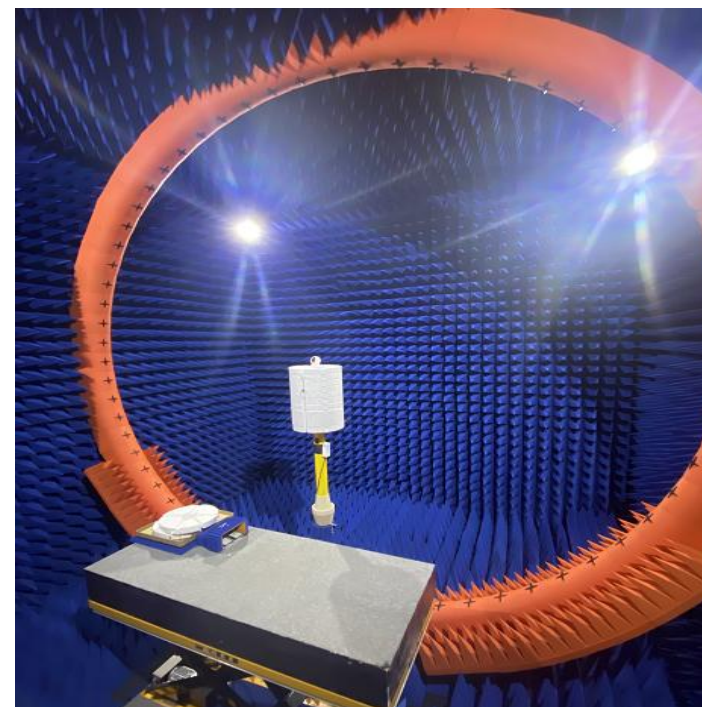
Room 101, Building 2, No. 9 Xinfu Road, Lincun, Tangxia Town, Dongguan, Guangdong, China

Antenna Study

- **Client Name:ERM ELECTRONIC SYSTEMS LTD**
- **Project Name: TRACKER 4G/GL SF iRF WG**
- **Model: Bluetooth antenna**
- **Debugging frequency band: 2400-2500HMz**
- **Valuation date: 2025.03.03**



Testing environment



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

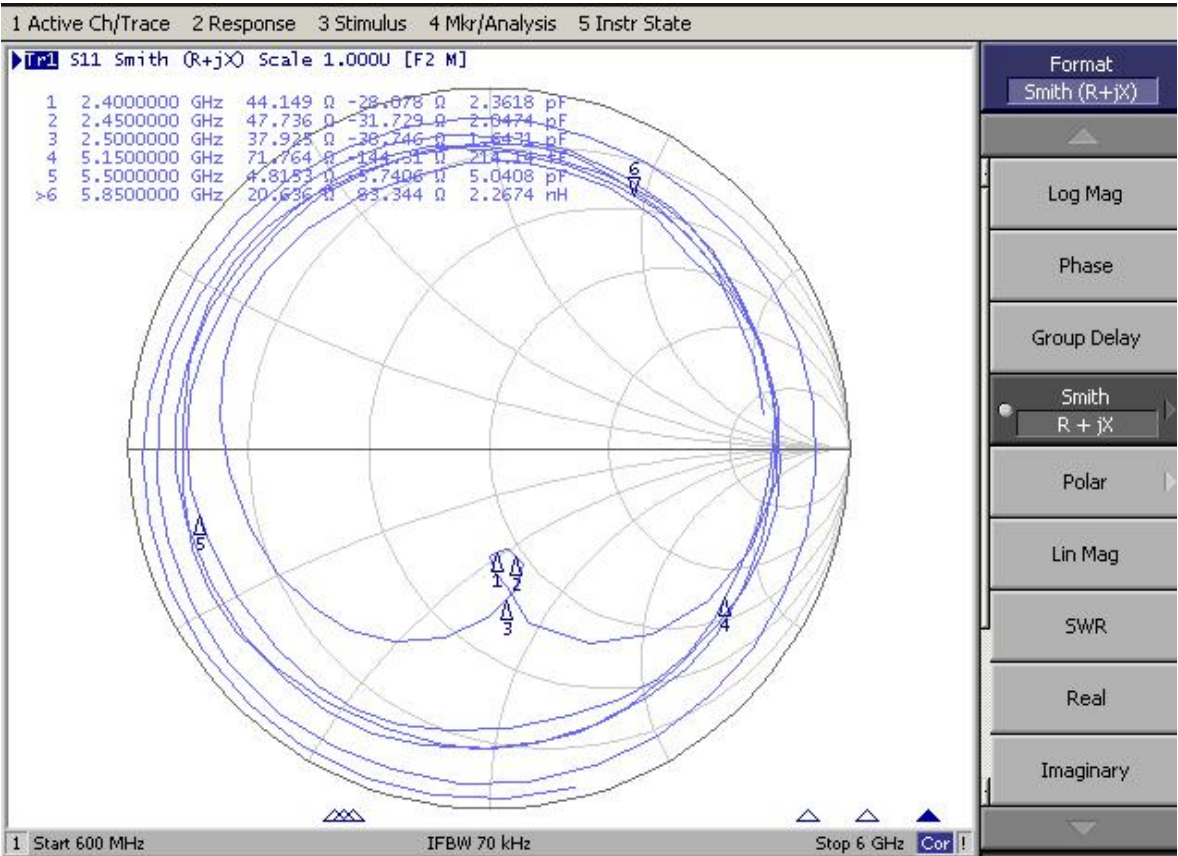
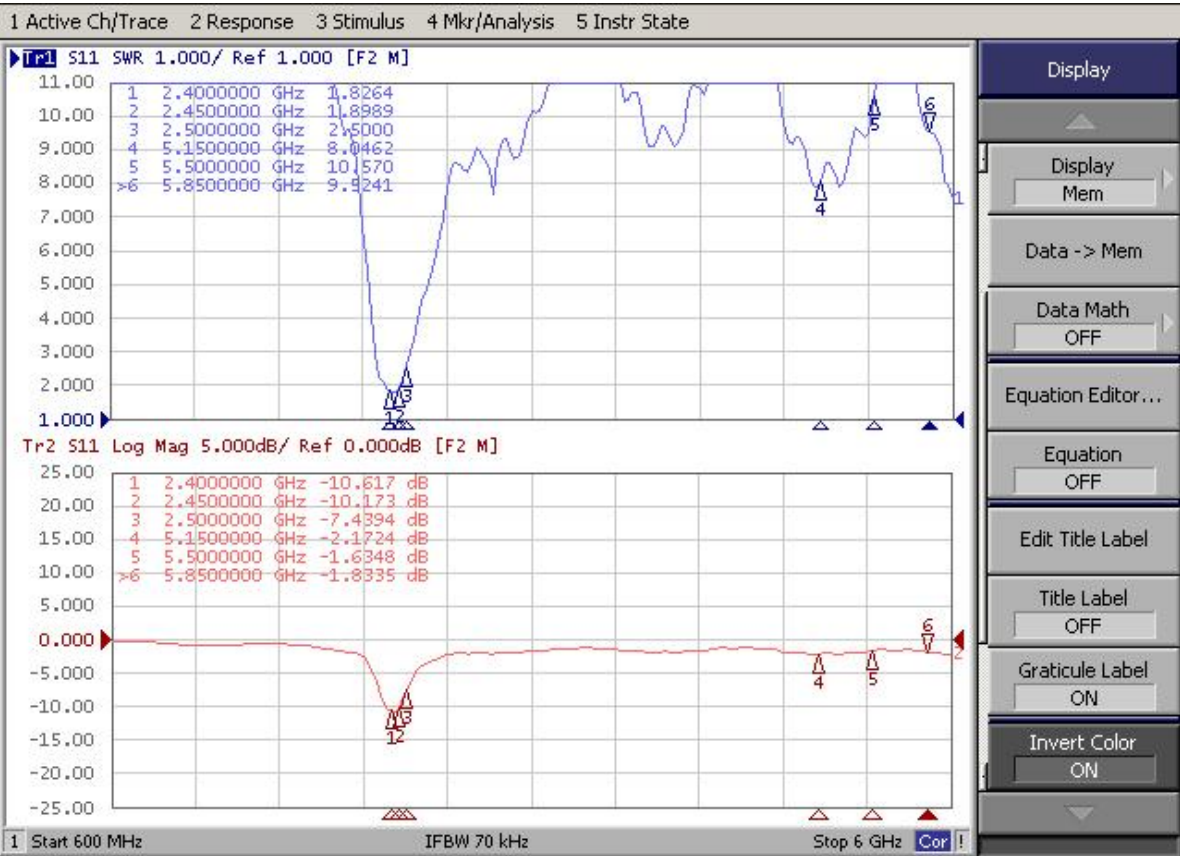


- Antenna name: 2.4G
- Covers : 2400/2500MHz

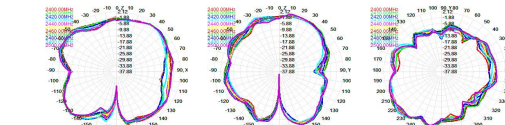
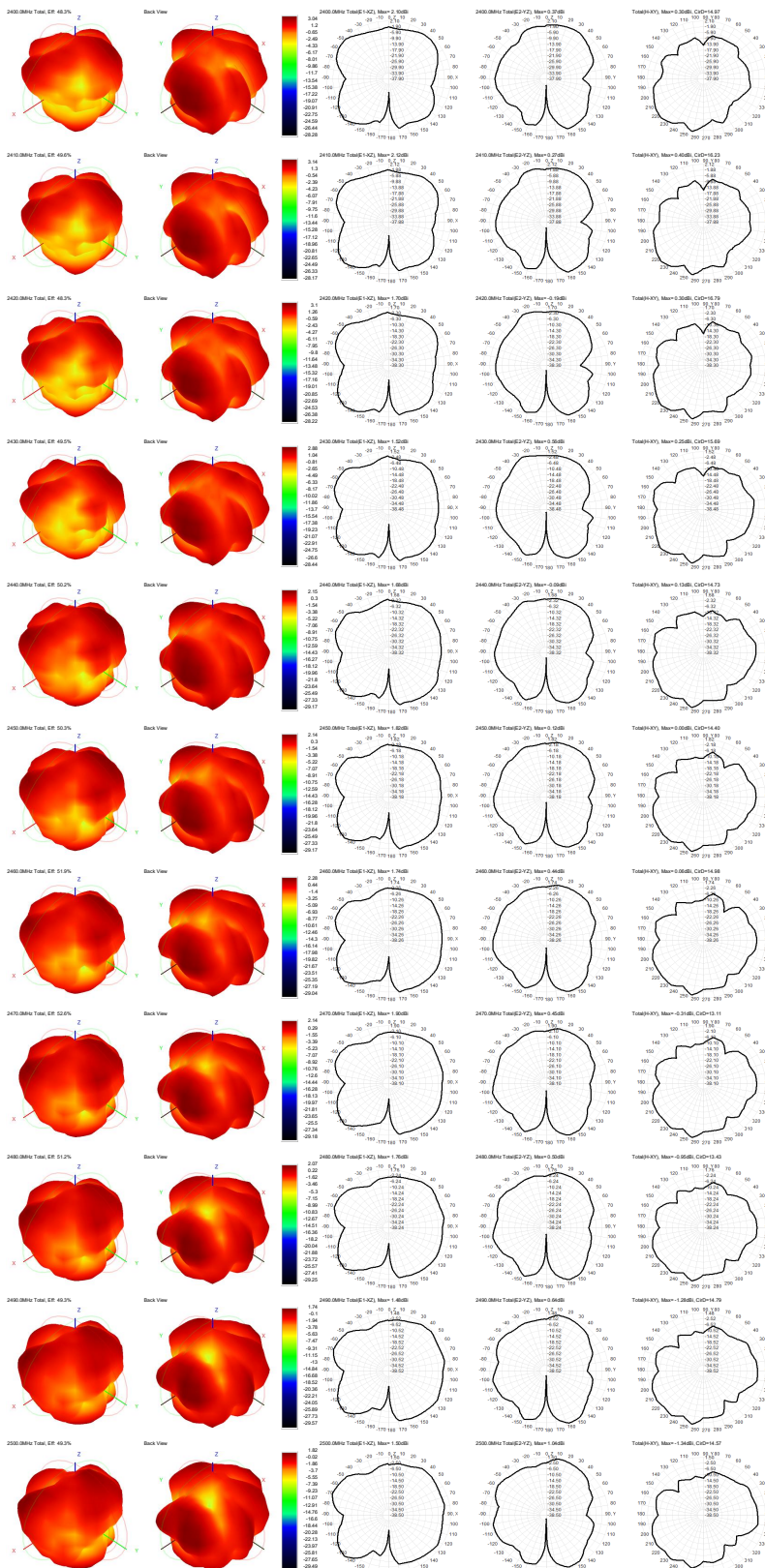


Antenna

S Parameter_Return Loss&VSWR-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)	3.04	3.14	3.10	2.88	2.15	2.14	2.28	2.14	2.07	1.74	1.82
Efficiency (%)	48.34	49.60	48.35	49.50	50.16	50.27	51.95	52.55	51.16	49.26	49.27





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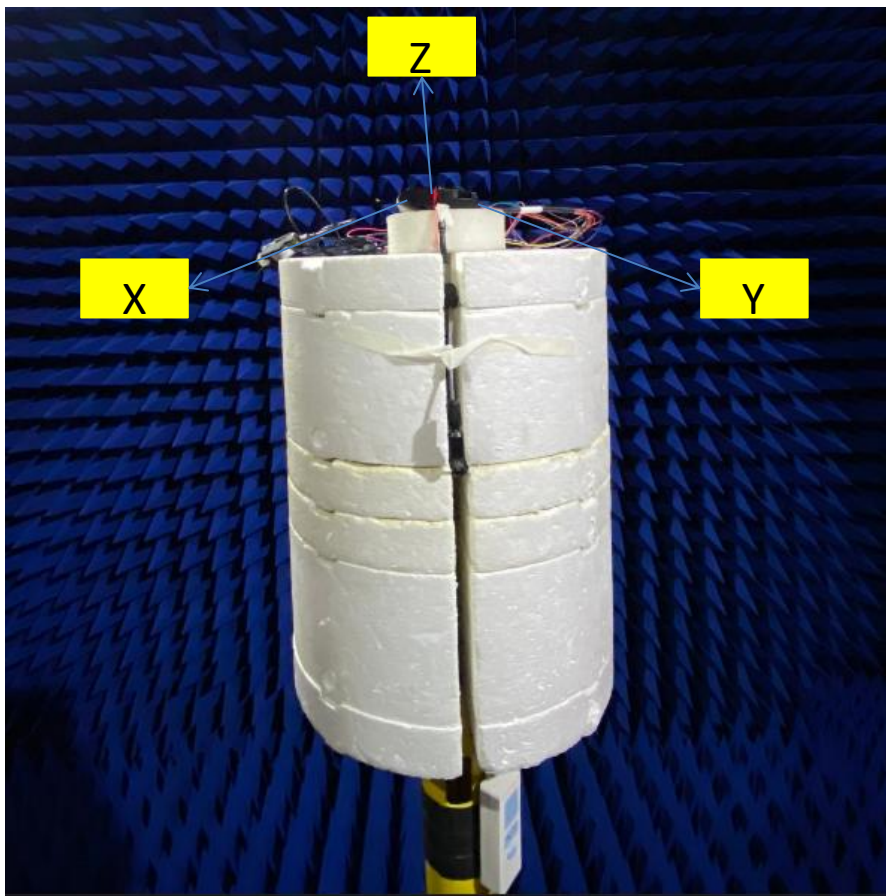
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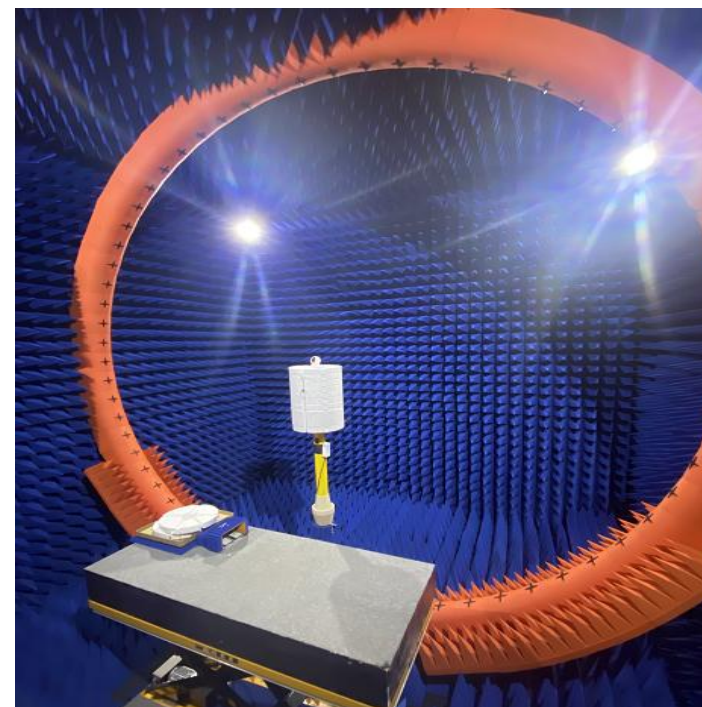
Room 101, Building 2, No. 9 Xinfu Road, Lincun, Tangxia Town, Dongguan, Guangdong, China

Antenna Study

- **Client Name:ERM ELECTRONIC SYSTEMS LTD**
- **Project Name: TRACKER 4G/GL SF iRF WG**
- **Model: 4G antenna**
- **Debugging frequency band: 700-2700HMz**
- **Valuation date: 2025.03.03**



Testing environment

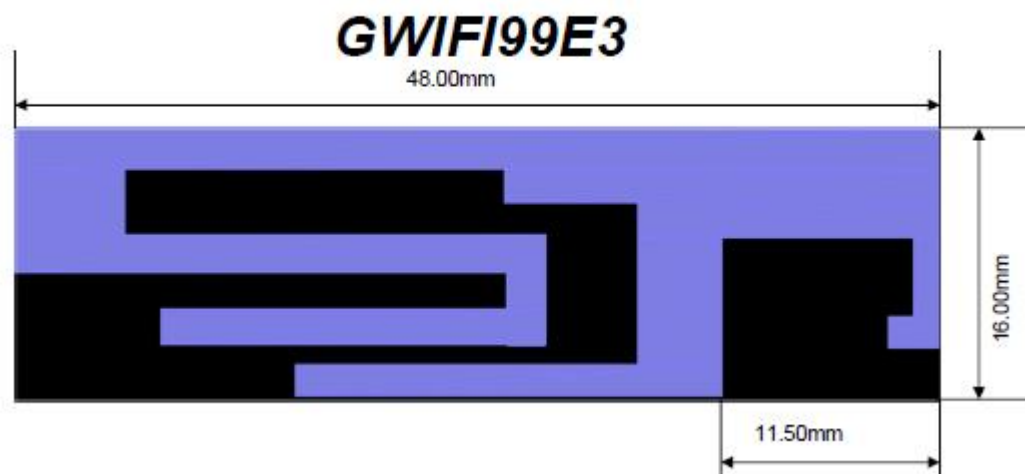


Testing 3D microwave darkroom(6m*6m*6m)

- Antenna name: 4G
- Covers : 700/2700MHz



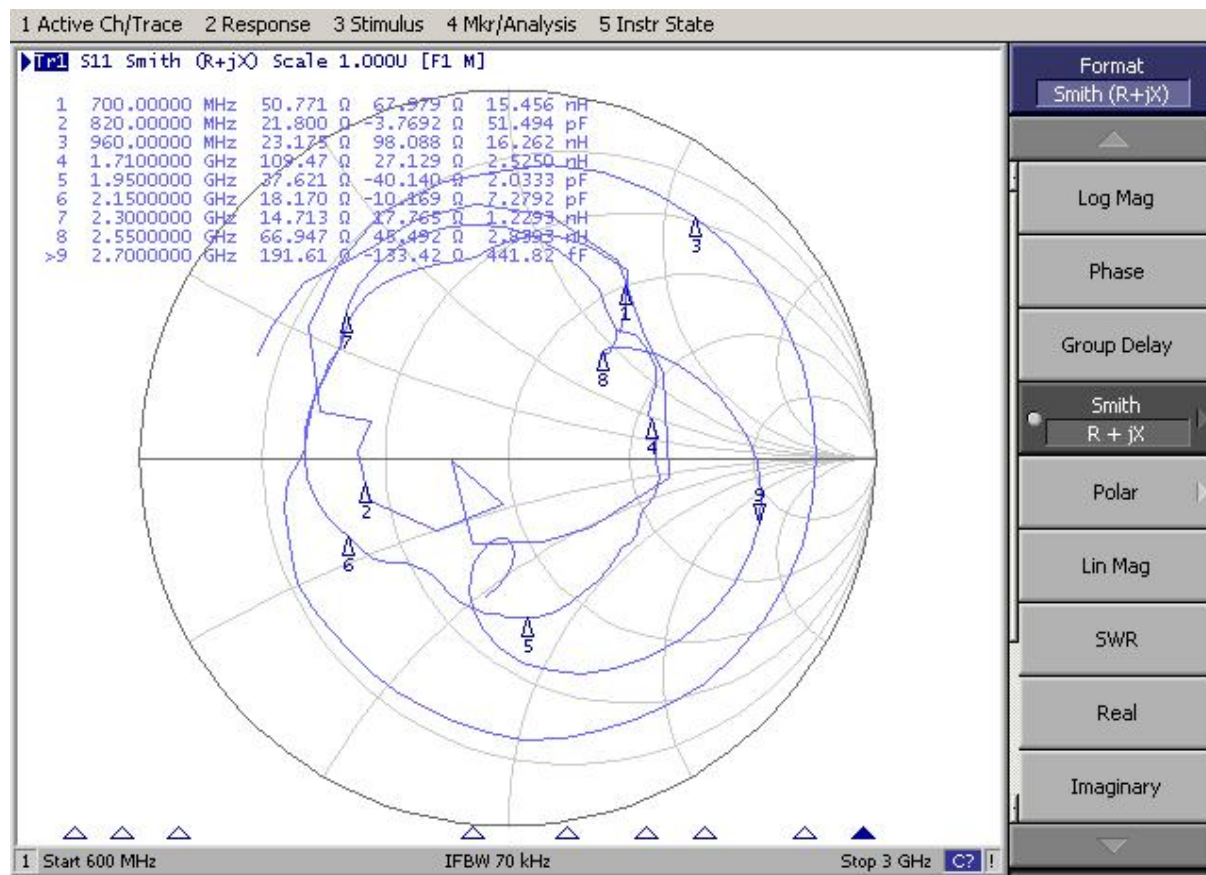
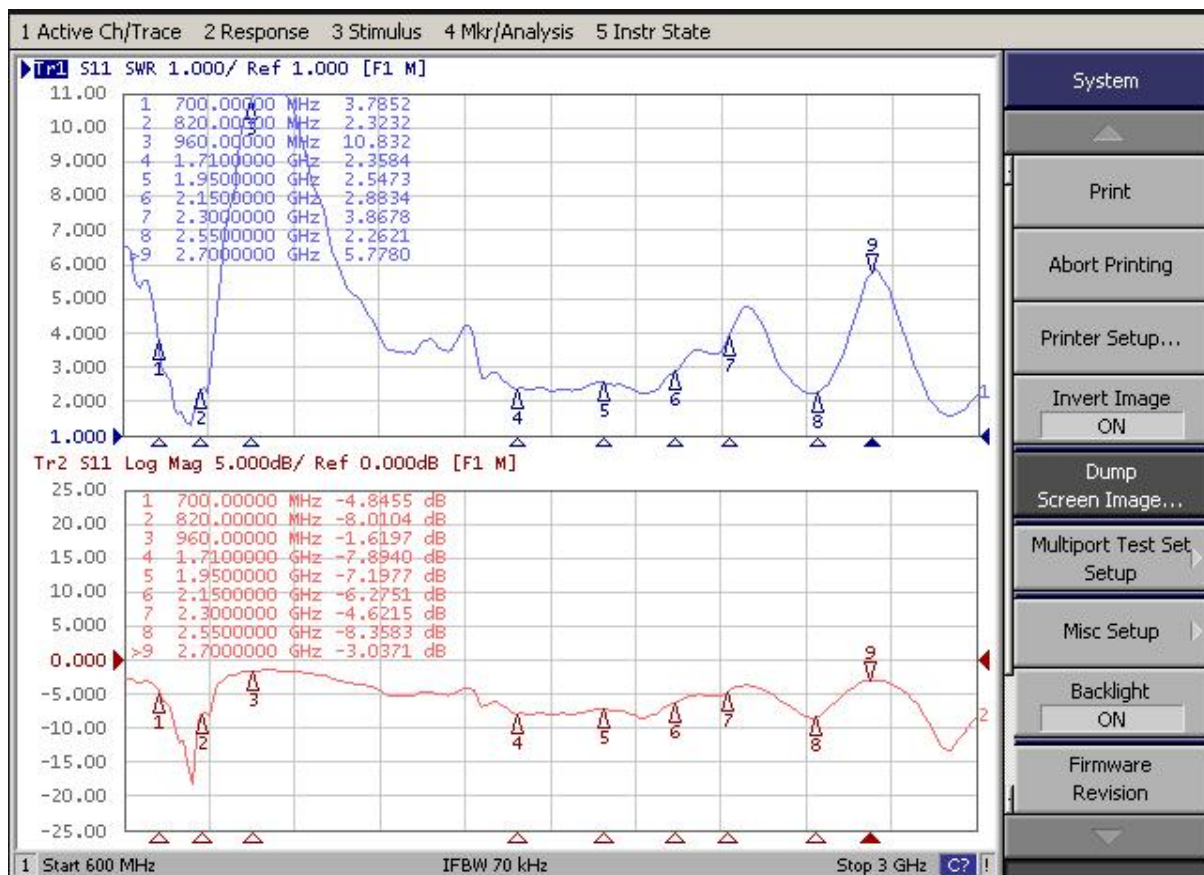
5. Antenna layout



Antenna

S Parameter_Return Loss&VSWR-Smith

Dongguan UB Electronics Co., Ltd



Efficiency and Gain

Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Frequency (MHz)	820.0	830.0	840.0	850.0	860.0	870.0	880.0	890.0	900.0	910.0	920.0	930.0	940.0	950.0	960.0
Gain (dBi)	0.32	-0.81	1.42	1.92	2.06	0.99	-0.43	-1.29	-1.95	-1.96	-3.41	-4.98	-5.54	-5.81	-6.73
Efficiency (%)	39.06	35.68	35.40	37.52	35.39	28.27	23.82	18.62	14.88	13.50	11.20	9.64	8.86	7.72	6.34

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
1700.0	1750.0	1800.0	1850.0	1900.0	1950.0	2000.0	2050.0	2100.0	2150.0	2200.0	2250.0	2300.0	2350.0	2400.0	2450.0	2500.0	2550.0	2600.0	2650.0	2700.0
2.33	3.01	3.04	3.18	3.41	3.28	2.69	2.60	3.38	2.24	1.78	1.48	0.47	1.68	2.50	2.80	2.80	2.87	2.02	1.63	-1.76
37.22	38.64	42.45	45.68	49.04	46.77	47.54	47.99	40.07	33.07	31.33	32.12	30.10	32.64	36.00	37.90	41.98	47.27	38.48	25.77	13.53

