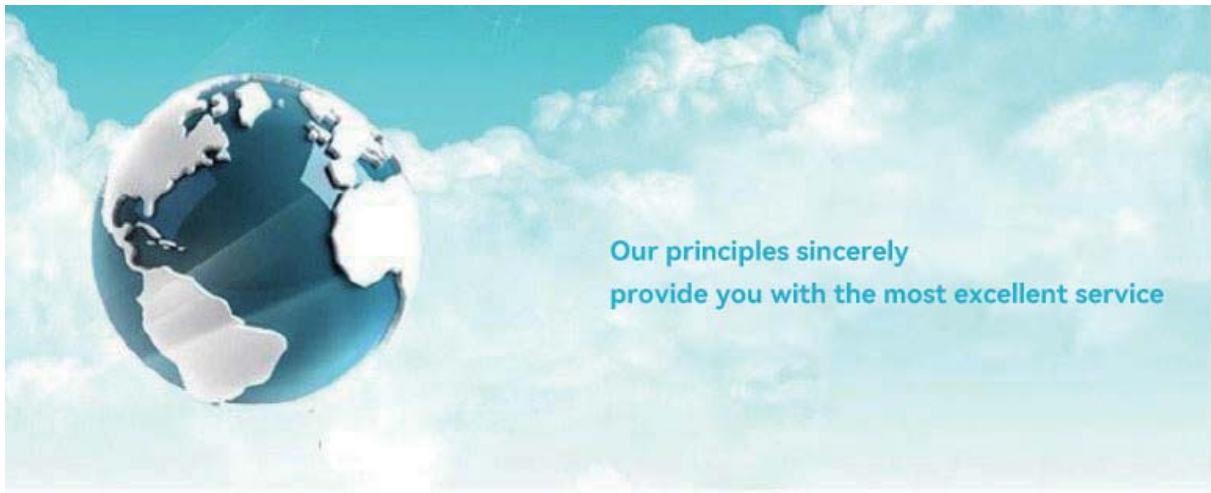
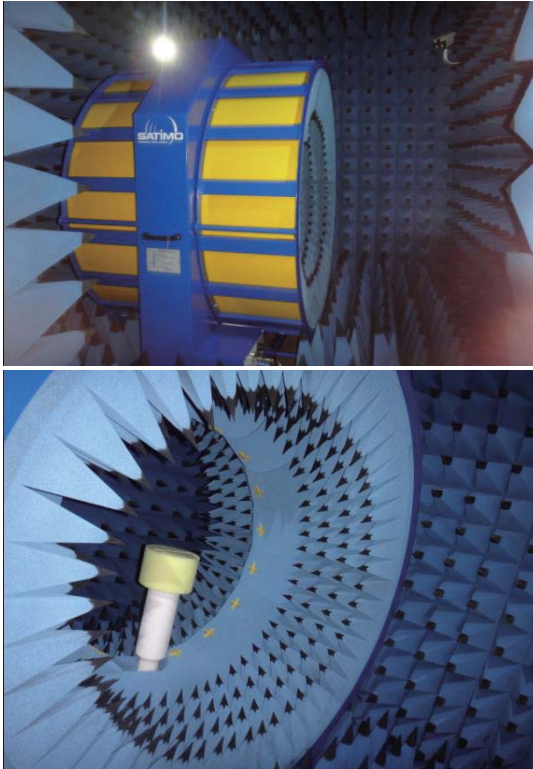


Debugging report



Customer Name	Chong qing Taomi Technology Co. ,Ltd.	Project Name	
Test Frequency Band	2.4G	Antenna Type	Spring Antenna
RF Engineer	Engineer Zhuang	Mechanical Engineer	Engineer Zou
Date	2025/05/22	Prepared by	Engineer Zou



Imported from the SATIMO StarLab3D laboratory in France, this device can accurately and quickly test mobilephones, tablet PCs, notebooks and other communication terminal products for their TRP, TIS, efficiency, gain, Apple diagram and direction map, as well as other parameters.

-  Report Version Summary
-  Picture of the antenna
-  VSWR, Return Loss
-  Antenna Matching Circuit
-  Gain, Efficiency, Radiation Pattern

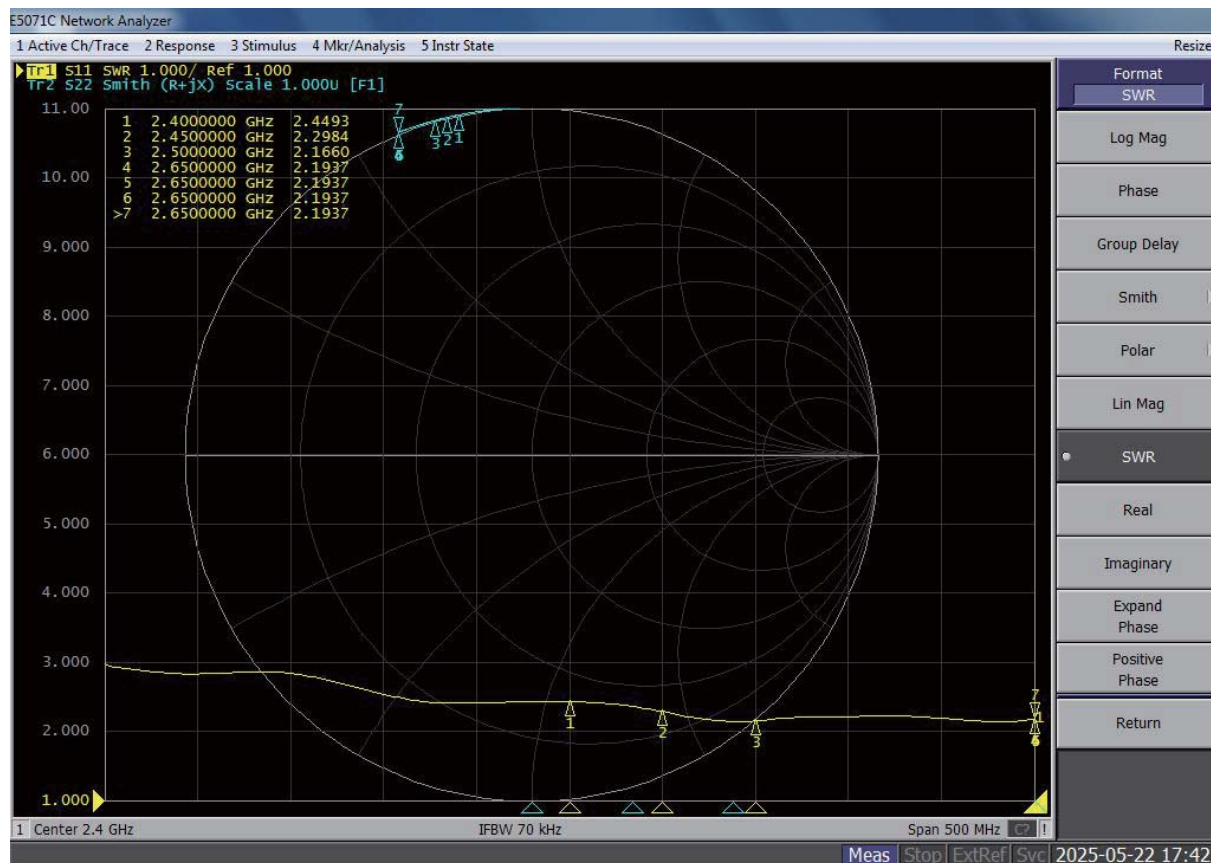
1. Report Version Summary

Version	Date	Content Overview
V1.0	2025/05/22	initial version

2. Picture of the antenna

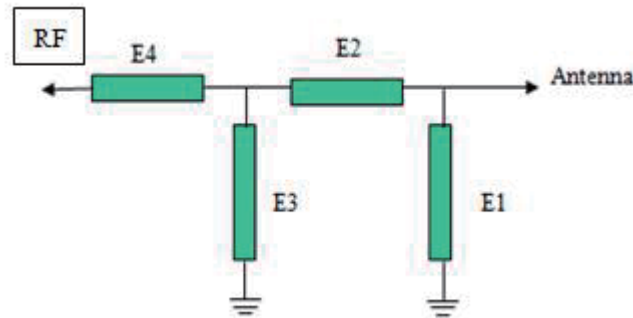


3. VSWR, Return Loss



4. Antenna Matching Circuit

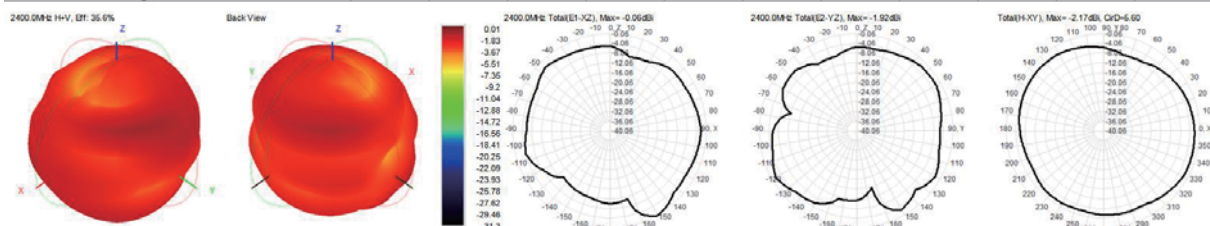
Element	E1	E1	E1	E1
Value	NC	NC	NC	NC



Our company has not made any modifications to the matching circuit!

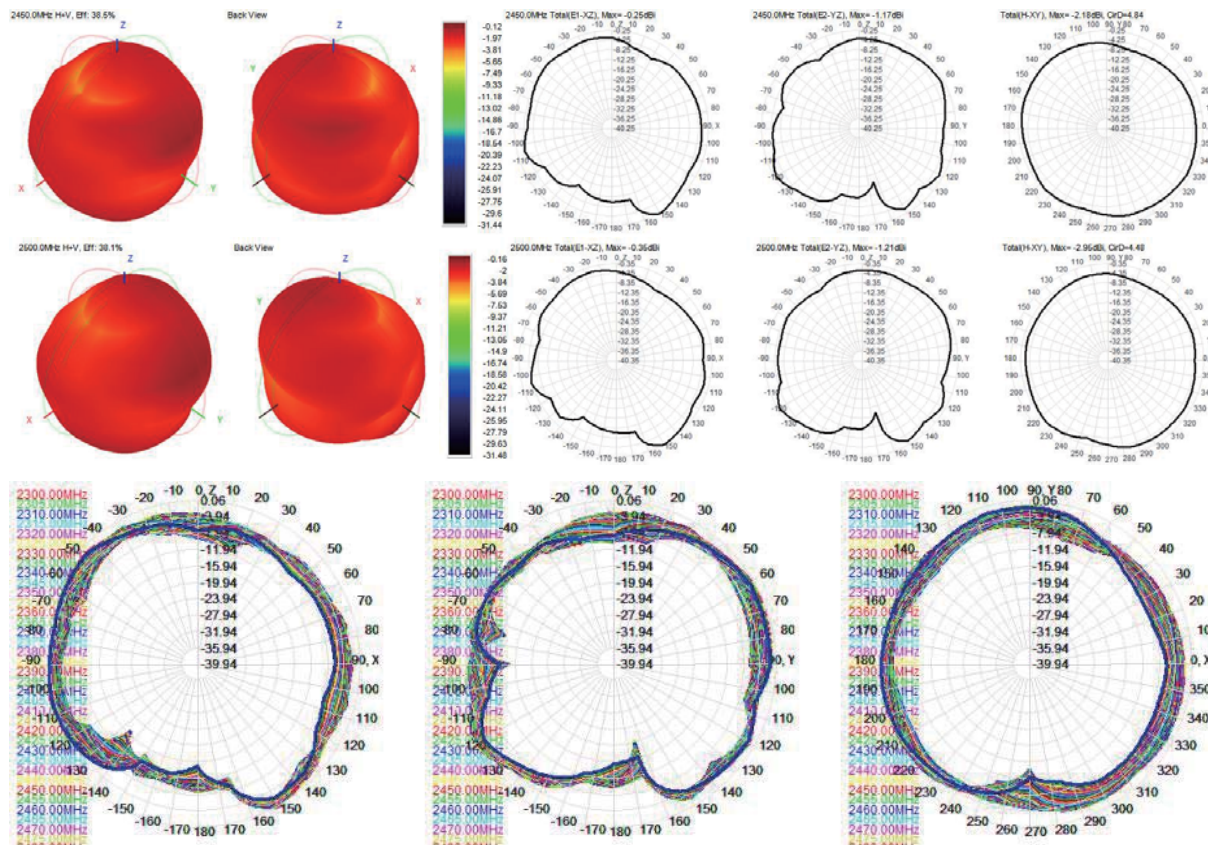
5. Gain, Efficiency, Radiation Pattern

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
Efficiency (dBi)	-4.48	-4.36	-4.23	-4.19	-4.15	-4.15	-4.19	-4.32	-4.36	-4.28	-4.19
Gain (dBi)	0.01	0.14	0.21	0.09	0.00	-0.12	-0.24	-0.33	-0.34	-0.32	-0.16
Efficiency (%)	35.63	36.65	37.72	38.12	38.47	38.49	38.13	36.98	36.61	37.33	38.12
Directivity (dB)	4.50	4.49	4.44	4.27	4.15	4.02	3.95	3.99	4.02	3.96	4.03
Peak Gain Position (Theta)	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00
Peak Gain Position (Phi)	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Efficiency ThetaPol (%)	23.48	24.20	25.05	25.63	26.20	26.39	26.14	25.28	24.93	25.33	25.91
Efficiency PhiPol (%)	12.15	12.45	12.67	12.49	12.27	12.09	11.98	11.70	11.68	12.00	12.21
Upper Hem. Efficiency (%)	17.10	17.61	18.09	18.31	18.48	18.51	18.37	17.85	17.71	18.09	18.49
Lower Hem. Efficiency (%)	18.53	19.04	19.62	19.82	19.99	19.98	19.75	19.13	18.90	19.24	19.63
T90(H) Roundness	5.60	5.58	5.48	5.44	4.96	4.84	4.56	4.18	3.78	4.03	4.48
Gain 15deg (dBi)											
E1(XZ) Beam width	24.00	25.00	29.00	32.00	33.00	34.00	35.00	36.00	37.00	38.00	38.00
E1(XZ) Front-to-Back Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E2(YZ) Beam width	37.00	34.00	33.00	30.00	30.00	29.00	28.00	28.00	28.00	27.00	27.00
E2(YZ) Front-to-Back Ratio	0.92	0.72	0.65	0.81	1.00	1.21	1.37	1.38	1.34	1.21	0.99
Axial Ratio at Max Gain (P)	26.39	27.89	26.98	26.84	26.74	26.87	29.93	32.10	38.77	40.11	38.66
Axis ratio (P) at vertex (Theta=0)	13.76	13.18	12.45	12.03	11.24	11.08	11.03	10.99	10.92	10.88	10.08
Worst Axial Ratio at 10° Elevation (P)	60.11	51.53	65.28	94.64	58.38	55.20	70.76	96.48	52.55	47.10	47.54
Hc(XY) Beam width	103.00	103.00	126.00	130.00	133.00	136.00	140.00	146.00	149.00	152.00	221.00
Hc(XY) Front-to-Back Ratio	3.18	3.01	2.46	2.03	1.59	1.37	1.17	0.81	0.68	0.35	0.13
LHCP Efficiency (%)	17.92	18.51	18.96	19.19	19.39	19.45	19.40	18.85	18.64	19.03	19.34
RHCP Efficiency (%)	17.71	18.14	18.76	18.94	19.08	19.04	18.72	18.13	17.96	18.30	18.78



Tel: 0755-23205219 Website: <http://www.hxrf-antenna.com>

Address: Floors 2-5, West Side of Building C10, Xin'an Second Industrial Zone, Guxing Community, Xixiang Street, Bao'an District, Shenzhen, China



Tel: 0755-23205219 Website: <http://www.hxrf-antenna.com>

Address: Floors 2-5, West Side of Building C10, Xin'an Second Industrial Zone, Guxing Community, Xixiang Street, Bao'an District, Shenzhen, China