

Recognition book

SPECIFICATION FOR APPROVAL

Name: FPC Antenna

Item No: TTY-TX1807

antenna company: Shenzhen Tianyiyuan Elec& Technology co., Ltd

Company address: Sixth Floor, No. 50A Fengtang Avenue, Xintian
Community, Fuhai Street, Bao'an District, Shenzhen, China

drawing			Customer approve
MADE	CHECKED	APPROVED	
QIU	jack	Miketang	
DATE: 2026.06.24			DATE

1、Specifications

The report provides a test of the electrical performance parameters of the **TTY-TX1807** Technical parameters of antenna electrical appliances antenna, which is a science and technology model. TTY-TX1807 WIFI Built in antenna, WIFI Antenna is made by copper pipe+RF Line composition. (As follows 1 Shown)

Electrical technical parameters			
Electrical Specifications		Electrical Specifications	
频率范围	2400 ~ 2500MHz	Frequency Range	5725~5850MHz
VSWR	≤2.0	VSWR	≤2.0
GAIN	3.13dBi	GAIN	3.55dBi
Input Impedance	50 Ω	Input Impedance	50 Ω
Mechanical Specifications		Mechanical Specifications	
Antenna Color	BLACK	Antenna Color	BLACK
Input connector	IPEX-3	Input connector	IPEX-3
Cable length	35mm	Cable length	35mm
Working Temperature	-40°C~+85°C	Working Temperature	-40°C~+85°C
Working Humidity	20~80%	Working Humidity	20~80%

Chart 1 TTY-TX1807 Product size

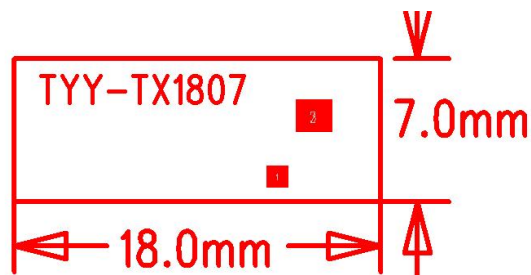


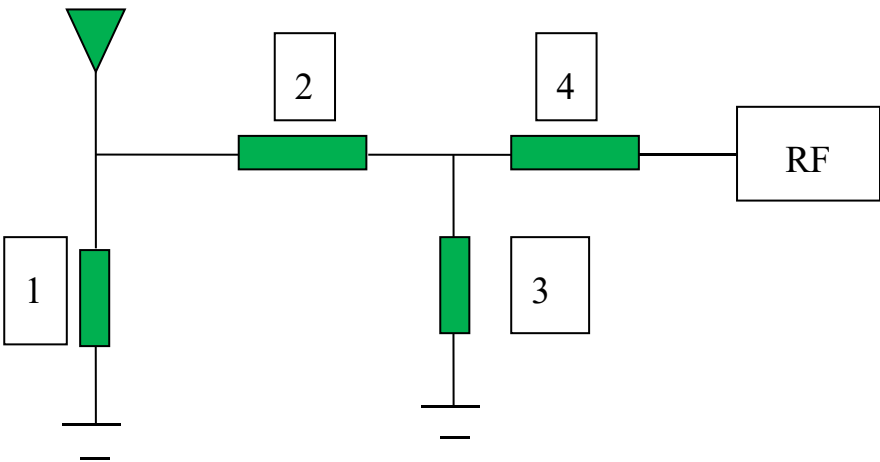
Chart 2 TTY-TX1807 Antenna finished (Line length 35+/-2mm 3-IPEX)



2. Electrical properties

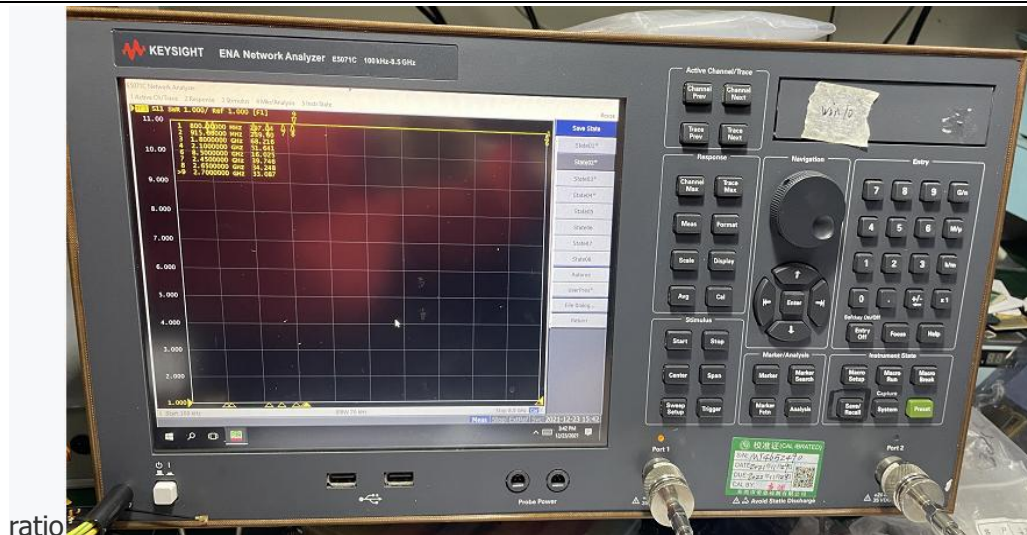
2.1WIFI Antenna matching circuit

This item matching circuit is provided by the customer.



Element number	1	2	3	4
WIFI optimum	NC	0 ohm	NC	
Original (spare)	50 ohm matching (inductance capacitance / sunlord Darfon)			

Chart 3 Agilent E5071C network analyzer



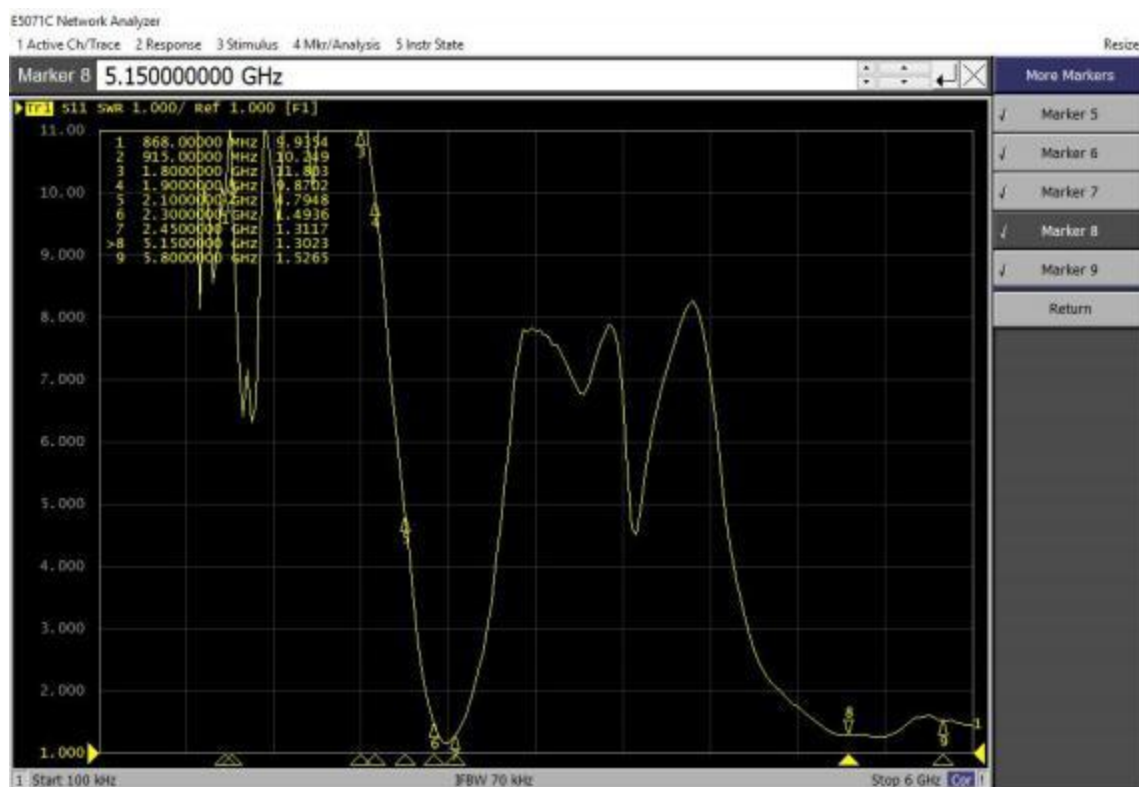
ratio

2.3 Bobbi (VSWR) test

2.3.1. Test setup

Connect the VSWR test device are: Agilent E5071C network analyzer from 50 ohm coaxial Cable 120mm long Brass & test fixture Processing test fixture: 50 ohm antenna leads to SMA-J connector from the test point on the plate PCB with a rigid cable, and a Connect the choke tube, and then sequentially connected with other devices.

Chart 4 WIFI VSWR



standard	Low frequency		High frequency		
frequency (MHz)	2400	2500	5150	5700	5850
VSWR	1.6	1.1	1.3	2.3	1.5

Chart 5 OTA Microwave dark room

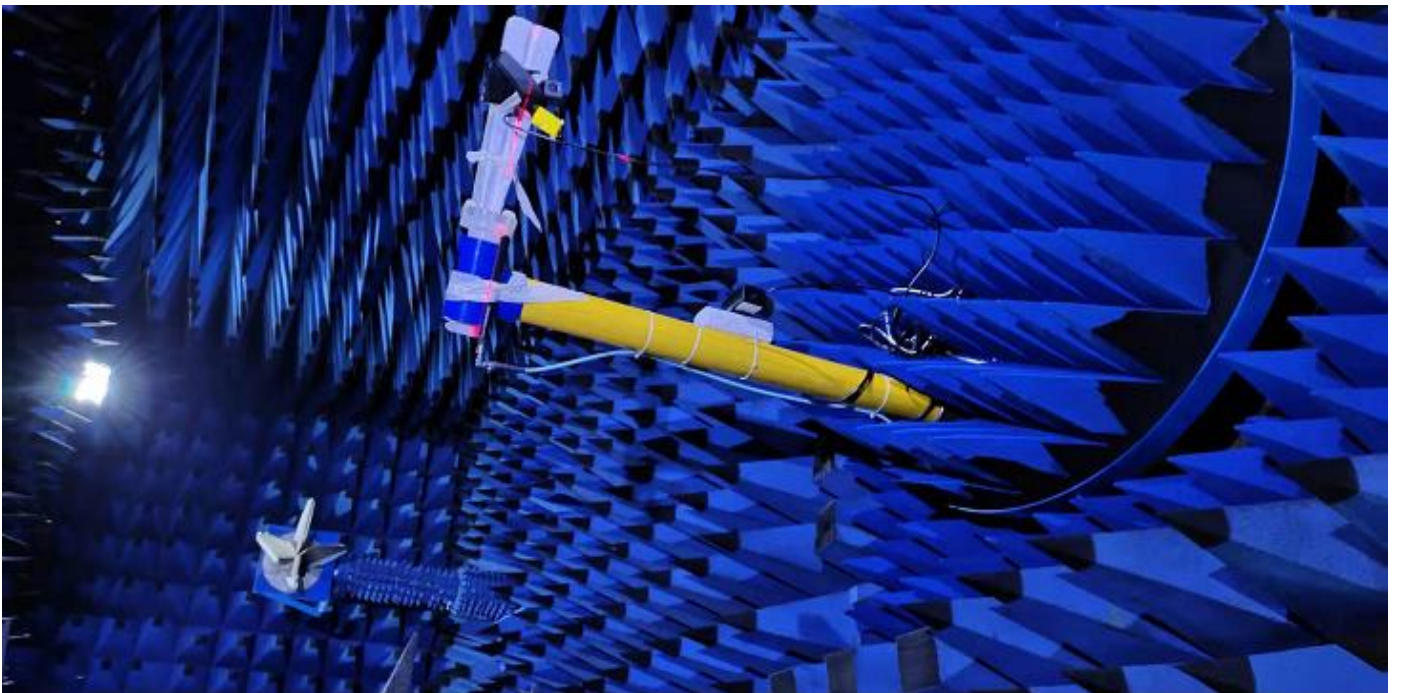
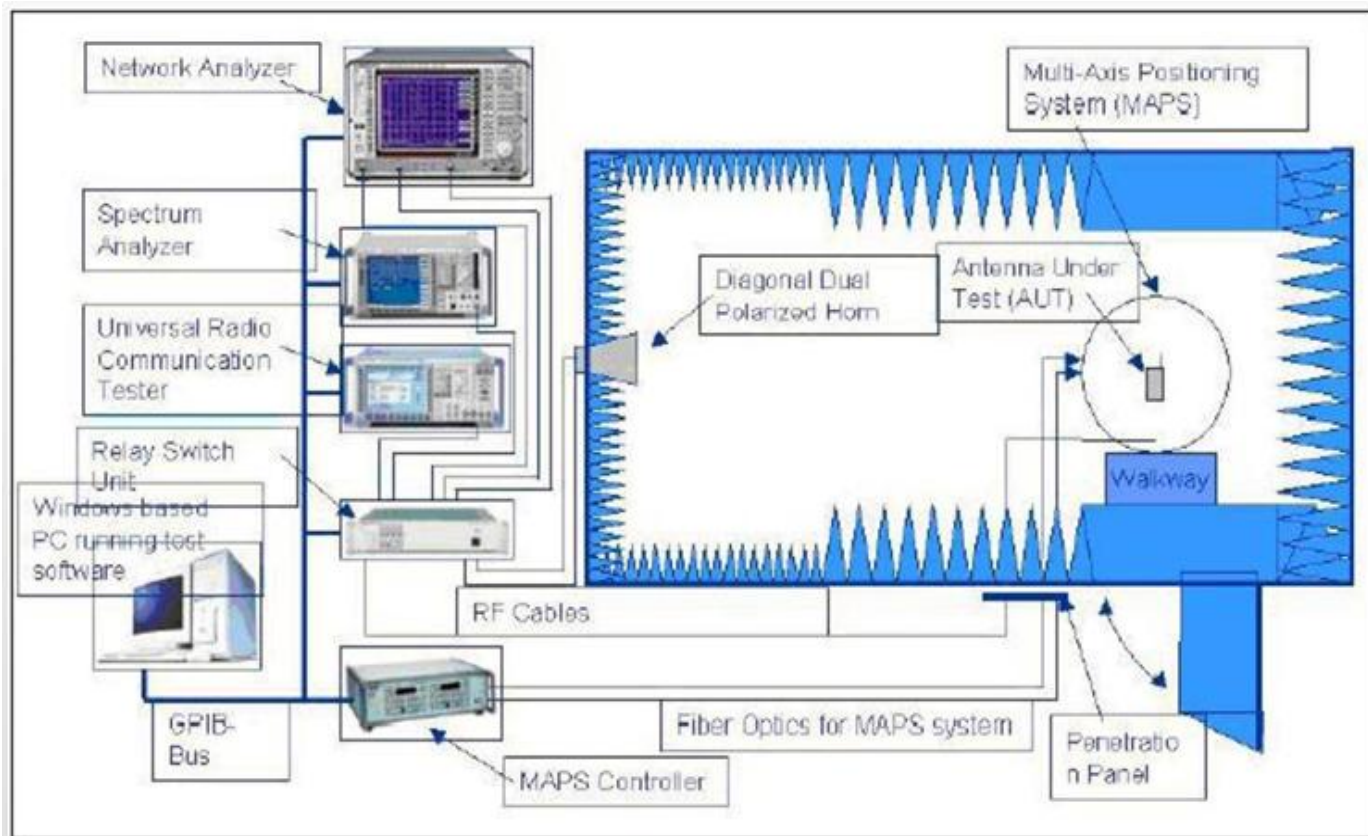


Chart 6 Test environment: OTA743 darkroom, W500/8960/8753ES /5071C, the machine is placed with its back to the turntable 4 meters away from the standard horn

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WIFI passive test report.

Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	12	13	14	15	16	17
Frequency (MHz)	2400.0	2420.0	2440.0	2460.0	2480.0	2500.0	5180.0	5200.0	5240.0	5260.0	5280.0	5300.0	5320.0	5720.0	5745.0	5770.0	5800.0	5825.0
Efficiency (dBi)	-2.16	-2.00	-1.91	-1.63	-1.73	-1.69	-1.55	-1.27	-1.54	-1.72	-1.83	-1.51	-1.51	-1.38	-1.06	-1.62	-1.84	-1.06
Gain (dBi)	1.92	2.20	2.38	2.11	2.97	3.13	3.23	3.29	2.56	2.22	2.38	3.08	3.08	3.55	3.25	2.82	2.80	2.63
Efficiency (%)	60.79	63.03	64.48	68.74	67.12	67.72	70.06	74.67	70.12	67.23	65.55	70.59	70.59	72.70	68.38	68.93	65.41	68.37
Directivity (dB)	4.08	4.20	4.29	4.74	4.70	4.82	4.78	4.56	4.10	3.95	4.21	4.59	4.59	4.93	5.31	5.43	5.64	5.29
Peak Gain Position (Theta)	79.00	79.00	40.00	44.00	44.00	139.00	137.00	83.00	140.00	140.00	140.00	140.00	42.00	42.00	42.00	39.00	33.00	33.00
Peak Gain Position (Phi)	330.00	330.00	30.00	30.00	30.00	30.00	30.00	330.00	360.00	360.00	360.00	360.00	240.00	240.00	240.00	240.00	210.00	180.00
Efficiency ThetaPol (%)	46.42	47.51	48.72	51.70	50.50	51.25	52.44	55.54	52.09	49.87	48.68	39.98	39.98	40.88	43.24	42.73	44.99	50.03
Efficiency PhiPol (%)	14.37	15.52	15.76	17.04	16.62	16.48	17.62	19.13	18.03	17.36	16.87	30.60	30.60	31.82	35.14	26.21	20.41	28.35
Upper Hem. Efficiency (%)	31.95	32.81	33.10	34.94	34.05	34.58	36.33	39.45	37.43	35.90	34.75	38.74	38.74	39.89	42.65	38.19	36.56	42.89
Lower Hem. Efficiency (%)	28.83	30.22	31.38	33.80	33.07	33.14	33.73	35.22	32.69	31.33	30.80	31.84	31.84	32.82	29.73	34.74	33.84	30.48

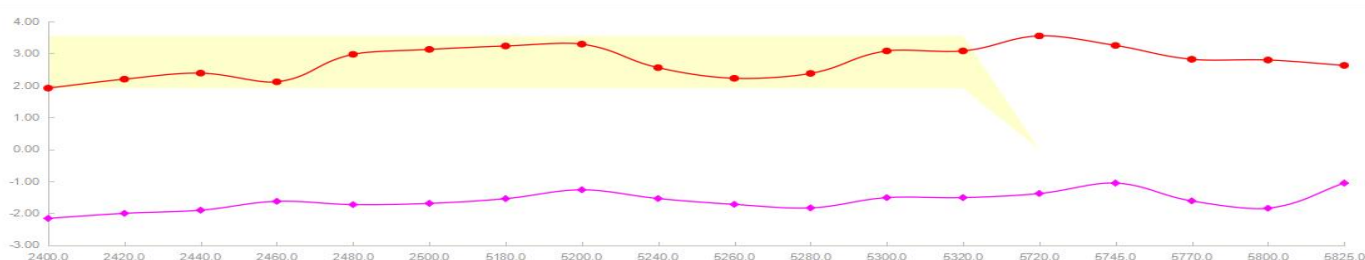
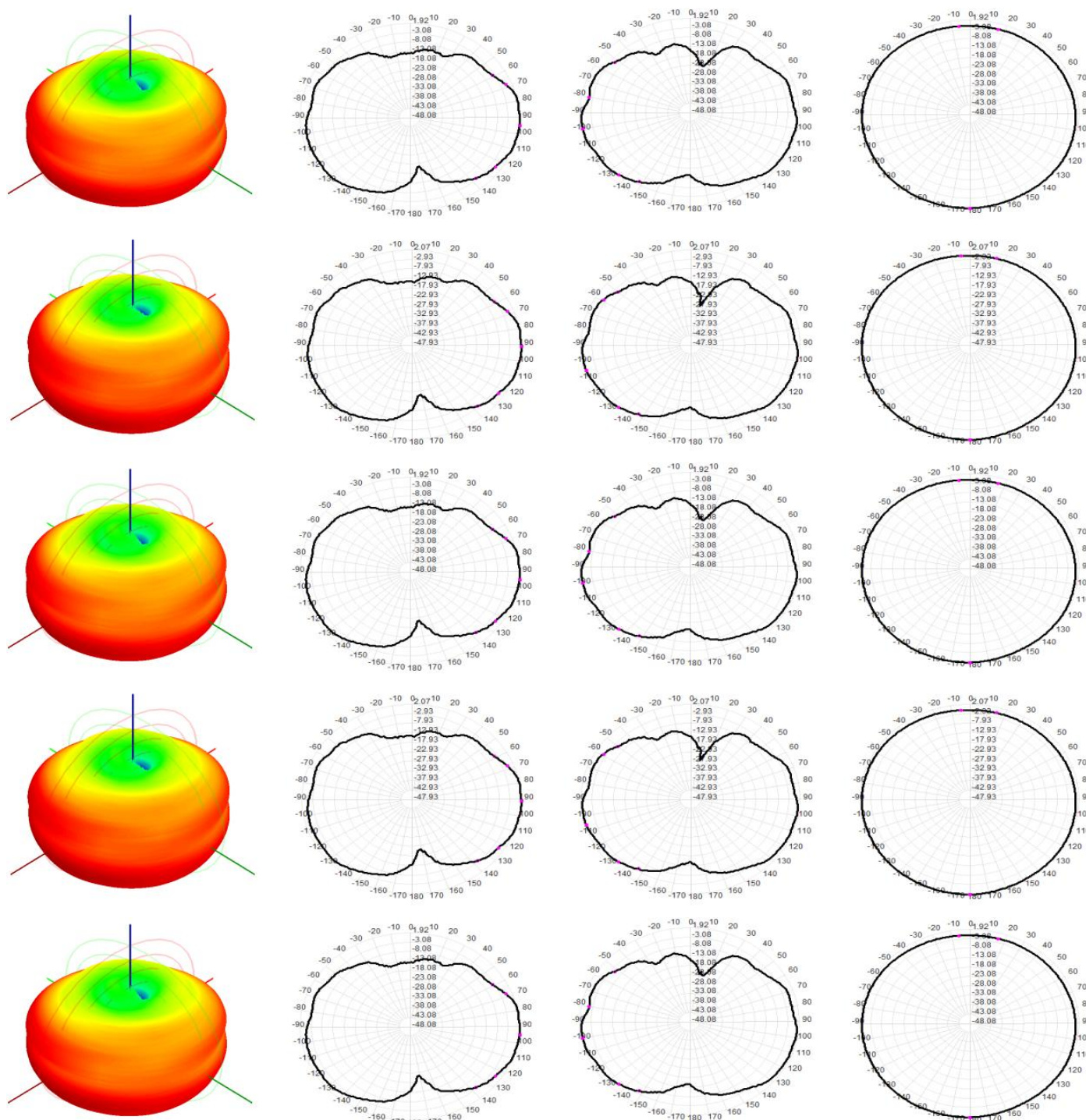
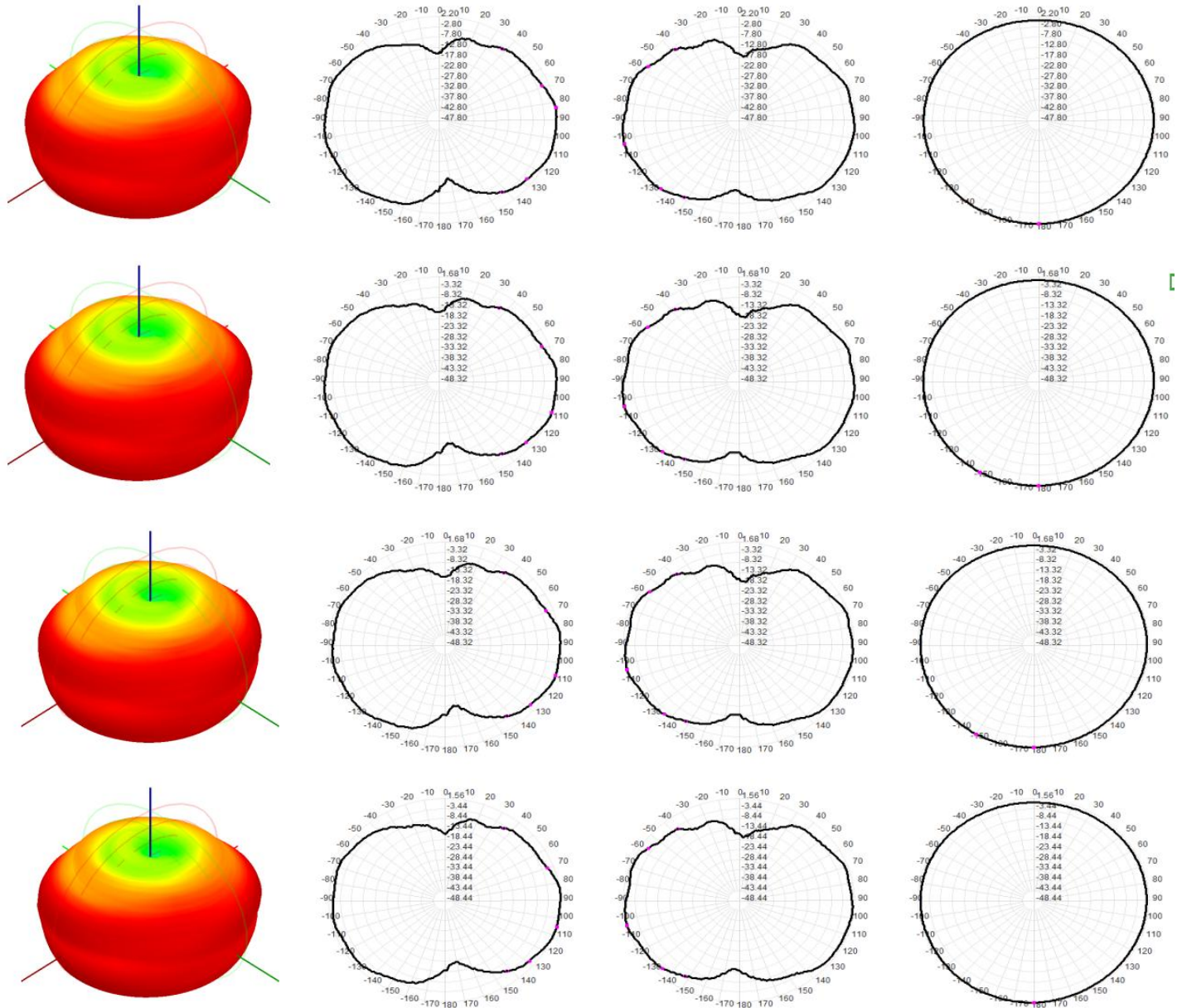




Chart 7 Three-dimensional rendering (efficiency and gain)





3, recommendations and conclusions

This report is based on the antenna electrical performance measured by the customer based on the final version of the model project of Shenzhen WanPai Electronics Co., LTD

As can be seen from the above test data, the antenna provides good electrical performance.

Tianyiyuan is looking forward to your confirmation. Thank you for your cooperation!