

WIFI Specification

项目信息

客户 Customer	
项目名 Project	JL005
频段 Band	2400~2500MHZ,MHZ
TTY 料号 Part number	TTY2006-1P
版本 Version	01
射频 RF	唐工
结构 ME	蒋工
日期 Date	2024.03.13
报告版本 project Version	V1.0
客户料号 Customer part number	

1、规格

Test the electrical performance parameters of the model, The YY2006-1P antenna is a WIFI built-in antenna, and the WIFI antenna is composed of FPC+RF lines.

(如下图 1 所示)

The finished product features			
电 性 能 指 标		Electrical Specifications	
频率范围	2400~2500MHZ	Frequency Range	2400~2500MHZ
电压驻波比	≤ 1.5	VSWR	≤ 1.5
最大增益	2.85DBI	Max GAIN	2.85DBI
输入阻抗	50 Ω	Input Impedance	50 Ω
机 械 指 标		Mechanical Specifications	
天线颜色	黑色	Antenna Color	BLACK
接口形式	NO	Input connector	NO
线长度	25mm	Cable length	25mm
工作温度	-40°C~+85°C	Working Temperature	-40°C~+85°C
工作湿度	20~80%	Working Humidity	20~80%

图 1 TYY2006-1P 尺寸图

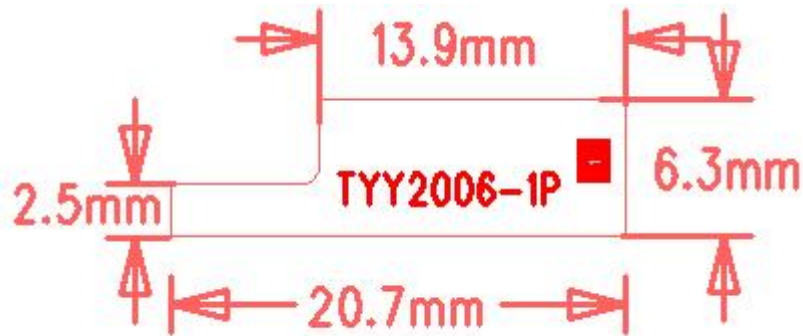


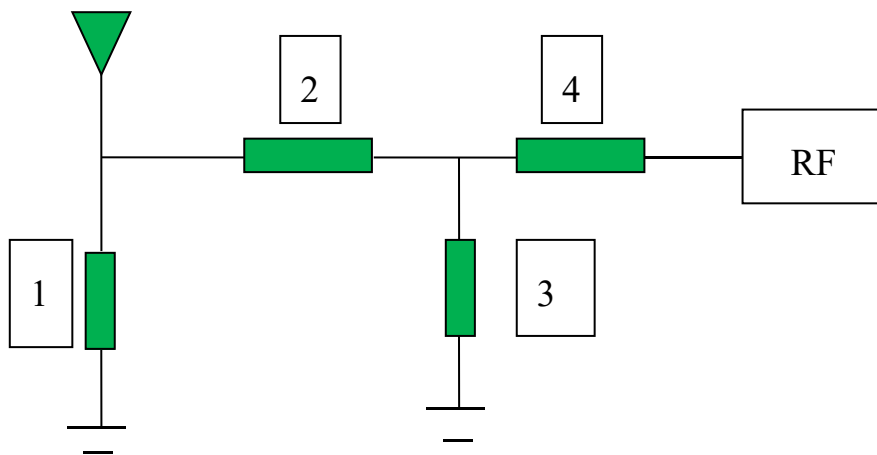
图 2 TYY2006-1P WIFI 天线成品(线长 25mm)



Note: First tear the tape on the back of the FPC, paste it in the middle of the bevel Angle, close to the column or skeleton rectangular antenna, away from the metal on the back of the screen, away from the horn hardware, if the antenna near the metal causes the WIFI signal frequency deviation, follow the antenna position marked above, thank you! 2.

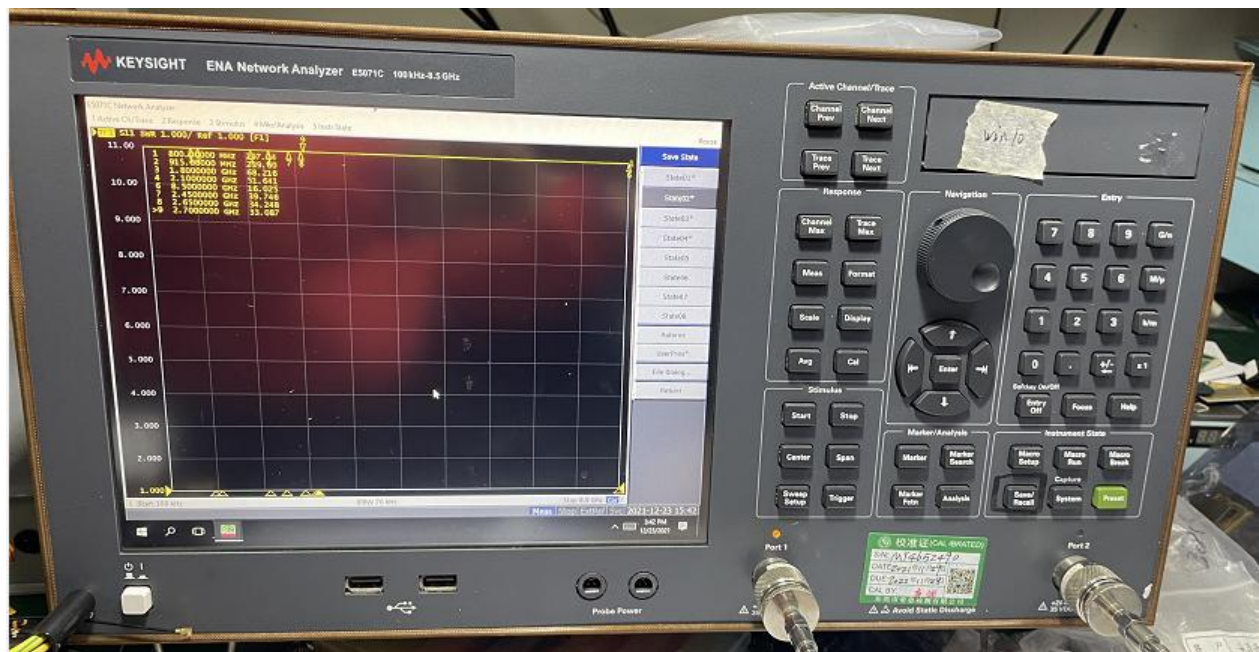
Electrical performance

2.1 Matching circuit of WIFI antenna. The matching circuit of this project is provided by the customer.



元件编号	1	2	3	4
WIFI 最佳	NC	0 欧姆	NC	
原始 (备用)	50 欧姆匹配			

图 3 Agilent E5071C 络分析仪



OTA Microwave darkroom: The test frequency range is 800MHz - 6GHz, the static zone range is 50cm circle, and the reflectivity is less than -90dB.

2.4.2 Instrument for testing

AgilentE5071B network analyzer, log-period antenna, computer, transmitting turntable, receiving antenna, printer, jacket choke (in order to reduce the loss of signal connection line).

图 4 OTA 微波暗室

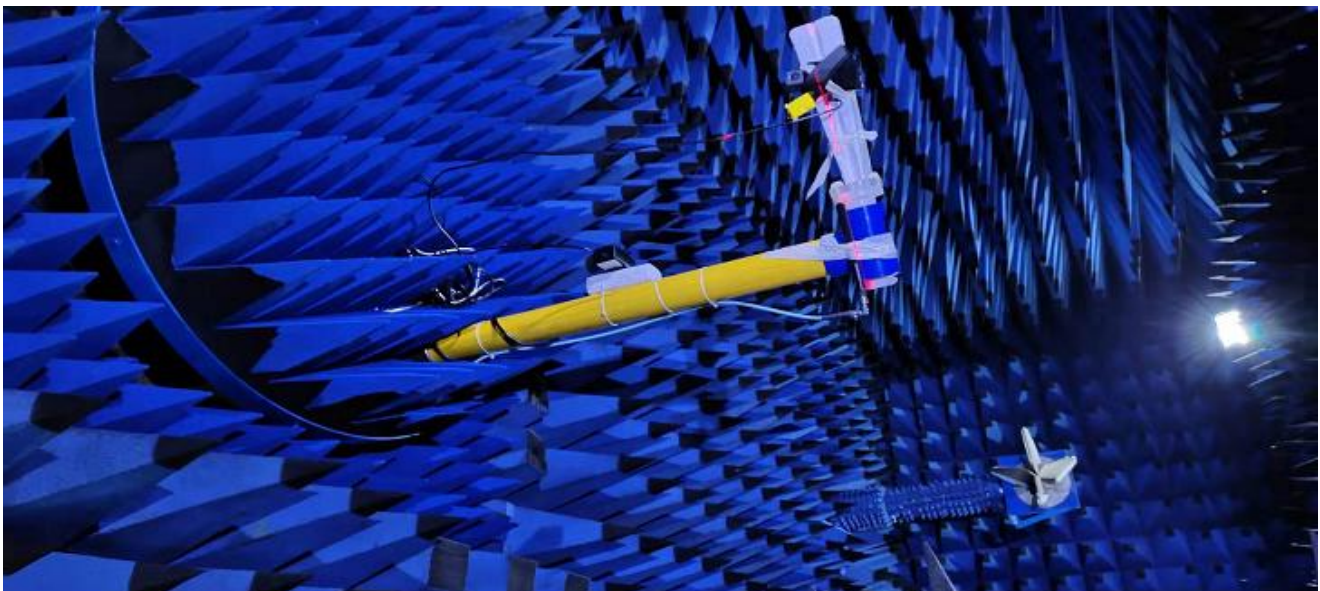
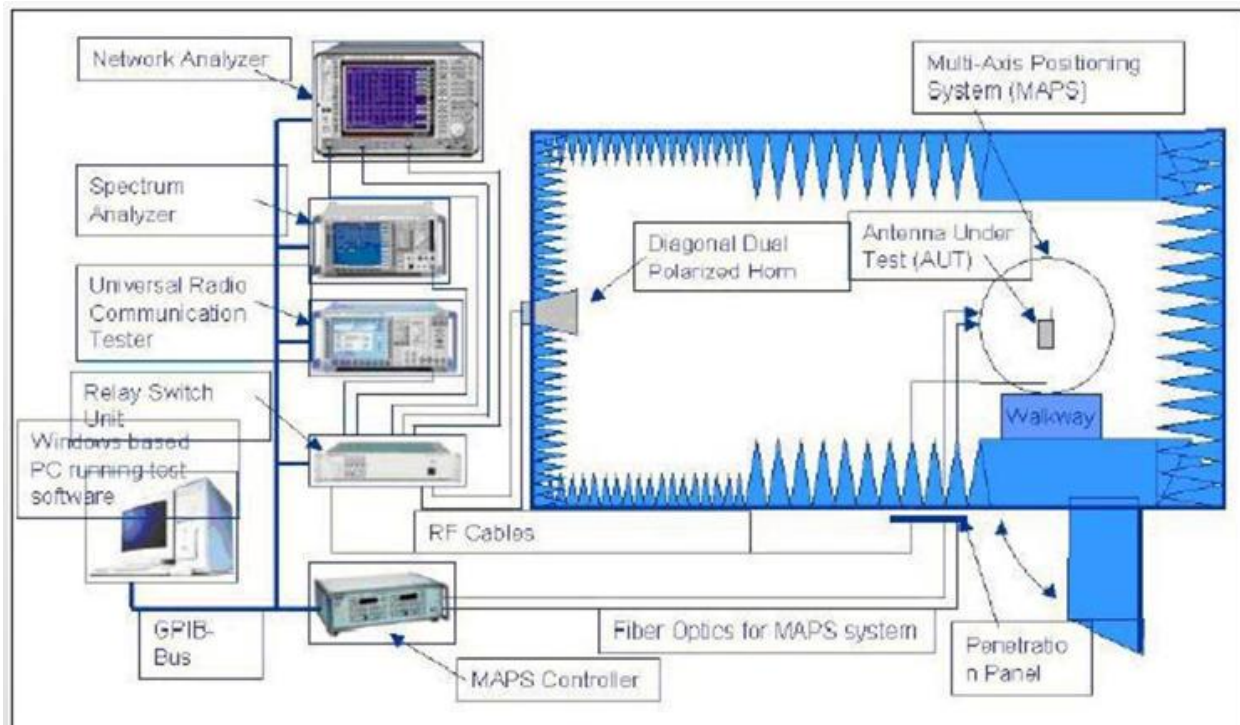




Figure 6 Test environment: OTA743 darkroom, 8960/W500/8753ES/5071C, the machine is placed at the turntable 4 meters away from the standard horn antenna



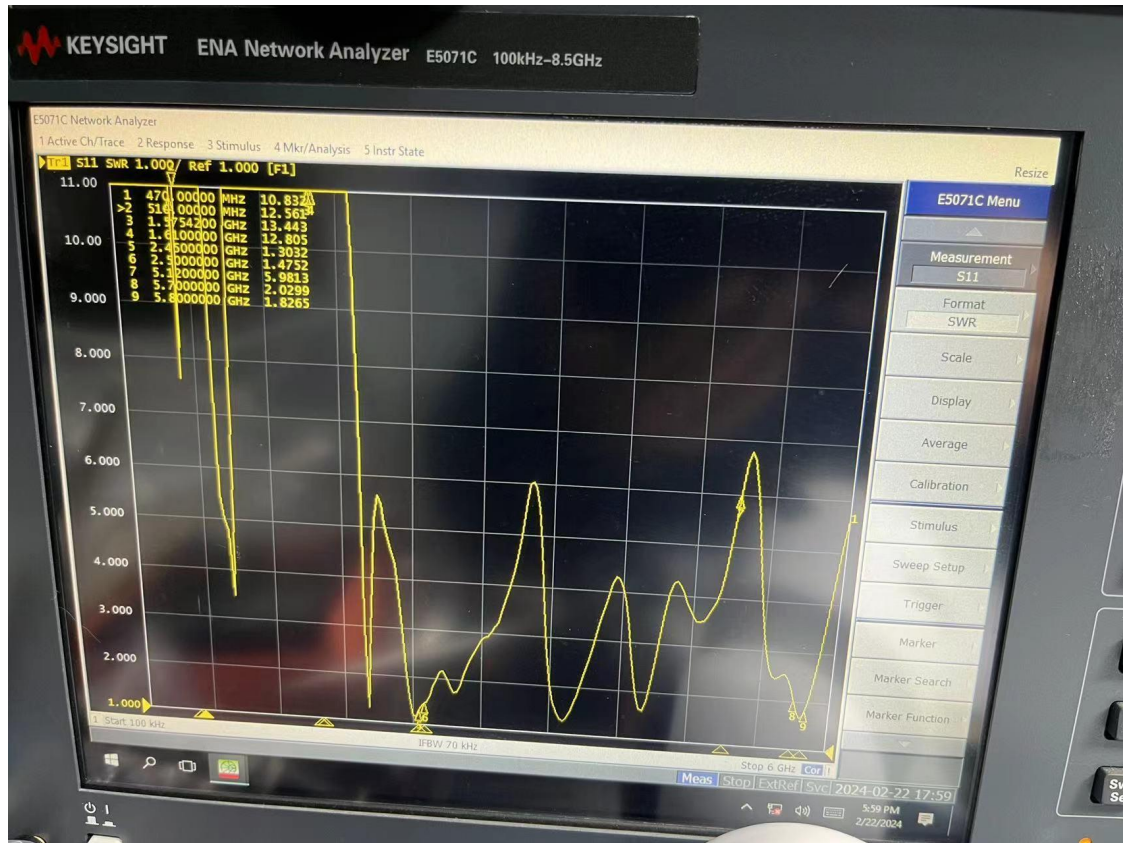
2.3 VSWR (Standing wave Ratio) test

2.3.1. Test Settings

The VSWR test device is connected in sequence to: Agilent E5071C network analyzer @ 50 ohm coaxial Cable @ 25mm long copper tube @ test fixture

Treatment of test fixtures: A hard cable is used to lead out the SMA-J connector from the 50 ohm test point of the antenna on the flat PCB, which is connected to the copper tube with the choke, and then connected to the other devices in turn.

图 7 驻波比图(VSWR)



VSWR 驻波比

制式	2.4~2.5GHz		5.1~5.8GHz		
频率(MHz)	2450	2500			
VSWR	1.3	1.4			

WIFI 测试报告

FEITUKEJI											
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
Efficiency (dBi)	-2.80	-2.82	-2.70	-2.24	-2.10	-2.57	-2.15	-2.12	-1.92	-2.71	-3.14
Gain (dBi)	1.62	1.71	1.89	2.73	2.80	2.29	2.85	2.64	2.64	1.72	1.47
Efficiency (%)	52.43	52.24	53.74	59.72	61.65	55.33	60.93	61.44	64.27	53.54	48.48
Directivity (dB)	4.43	4.53	4.59	4.97	4.90	4.86	5.00	4.75	4.56	4.43	4.61
Peak Gain Position (Theta)	73.00	72.00	75.00	88.00	91.00	90.00	108.00	76.00	77.00	77.00	77.00
Peak Gain Position (Phi)	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
Efficiency ThetaPol (%)	13.38	13.13	13.89	15.52	16.48	15.25	16.40	16.45	17.38	14.53	13.14
Efficiency PhiPol (%)	39.04	39.11	39.84	44.20	45.17	40.08	44.54	44.99	46.88	39.01	35.34
Upper Hem. Efficiency (%)	34.87	34.39	35.05	38.85	40.02	35.60	38.62	38.70	40.51	33.83	30.39
Lower Hem. Efficiency (%)	17.56	17.85	18.68	20.87	21.63	19.73	22.31	22.74	23.75	19.71	18.09

directional diagram

