Shenzhen Hongde Zhixin Technology Co., Ltd

Dual bands WiFi Specification

| Customer：Pipo Technology Co.,Ltd		Model name：W9
Bands：2.4G/5G	Date：2024.05.19	Version：R:A

WiFi dual bands antenna   HDZX-J6624   L:75mm black 4th terminal

WiFi dual bands antenna   HDZX-a742   L:165mm black 4th terminal

1. Project information and Electrical Specification

Those specifications were specially defined for 2.4G/5G model, and all characteristics were measured under the model's handset testing jig .

1-1Antenna picture
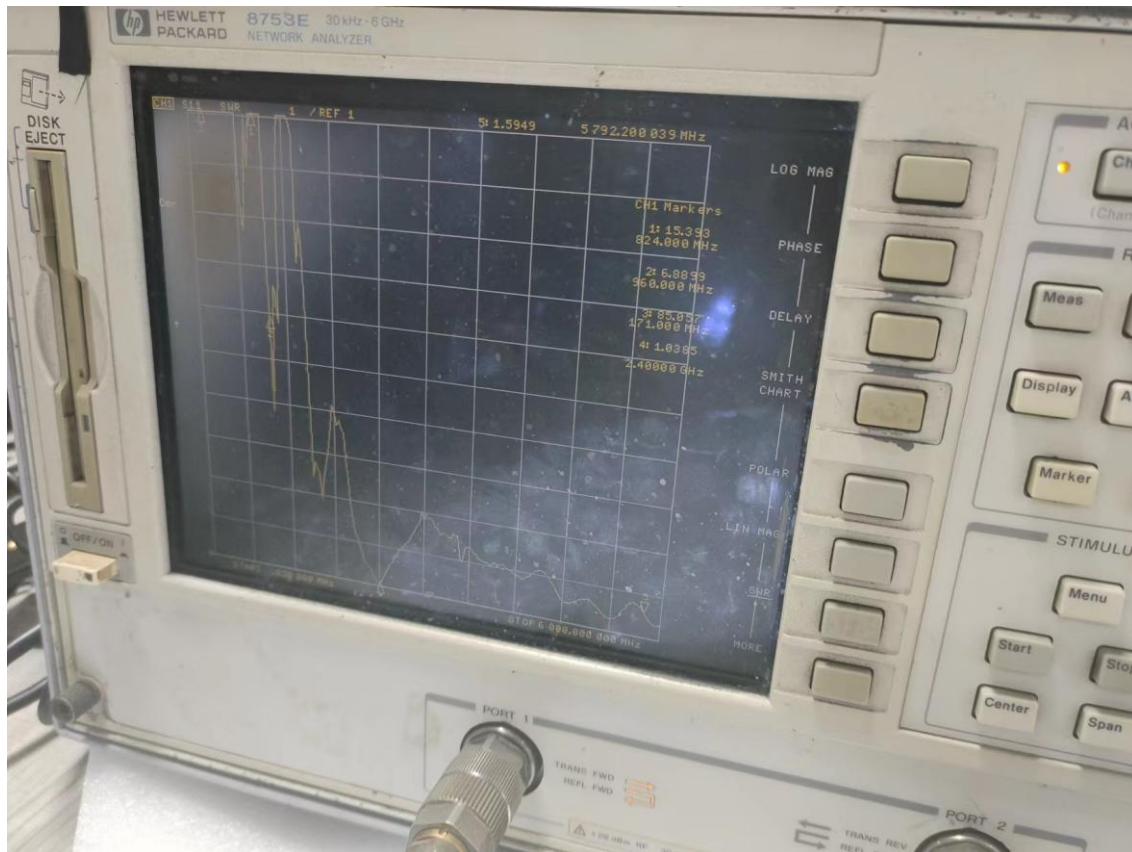
1-2 Frequency Band:

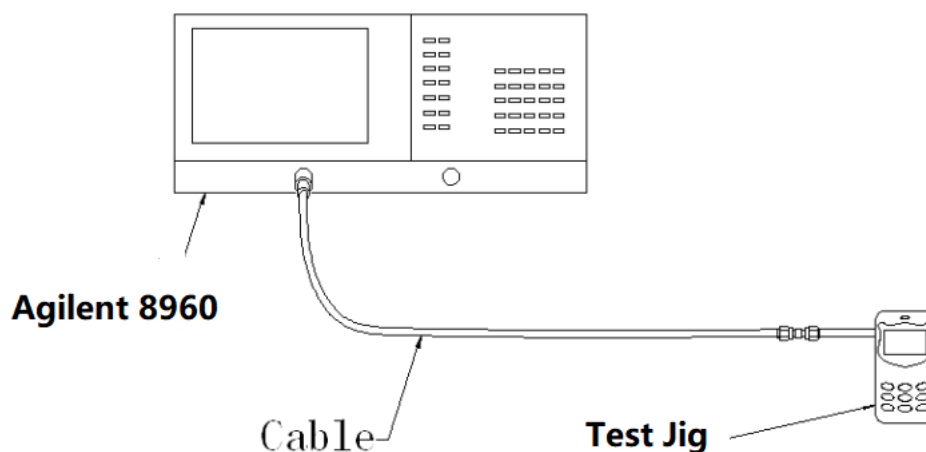| Frequency Band	MHz
2.4G/5G	2400-2500/4950-5850

1-3 Impedance matching

2.VSWR

2-1 Measuring Method:

1. A 50Ω coaxial cable is connected to the antenna. Then this cable
   is connected to a network analyzer to measure the VSWR,
2. Keeping this jig away from metal at least 20cm.

Test results：

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	55.85	−2.53	1.9
2410	55.89	−2.53	1.98
2420	54.99	−2.6	2.03
2430	57.86	−2.38	2.18
2440	54.6	−2.63	1.88
2450	58.49	−2.33	2.24
2460	56.02	−2.52	1.96
2470	59.43	−2.26	2.27
2480	59.74	−2.24	2.27
2490	61.93	−2.08	2.35
2500	62.65	−2.03	2.41

Passive Test For WIFI5.8			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
5150	40.81	−3.89	1.98
5250	41.75	−3.79	1.22
5350	40.81	−3.89	0.75
5450	45.68	−3.4	1.59
5550	45.15	−3.45	1.37
5650	48.82	−3.11	1.66
5700	44.78	−3.49	1.36
5750	43.38	−3.63	1.14
5800	45.4	−3.43	1.98
5850	43.24	−3.64	1.6

Agilent 8960   Cable   **Test Jig**

2-2   S11 parameter values

| Frequency（MHZ）	2400	2500	4950	5400	5850
Standing Wave	1.3	1.2	1.78	1.63	1.23

2.   Efficienc

3. and Gain
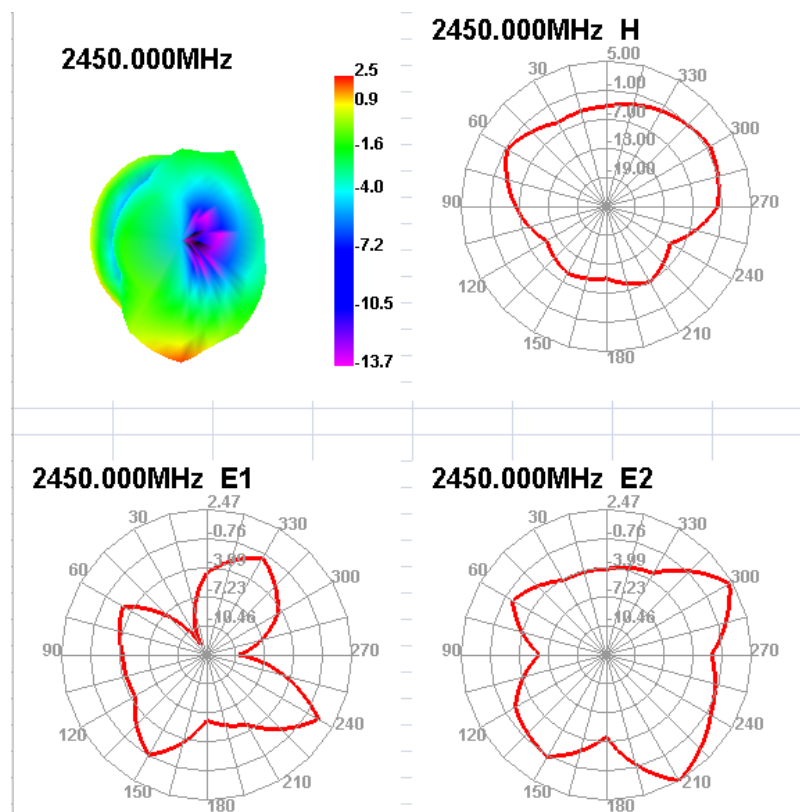
*measuring and test instruments:

Microwave darkroom, Agilent network analyzer, Agilent spectrum analyzer, 8960 comprehensive tester, standard antenna
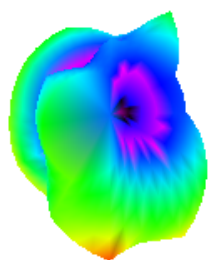
*test method:
Put the device at the center position of the desk and fix it on the same horizontal line as the center position of the antenna.
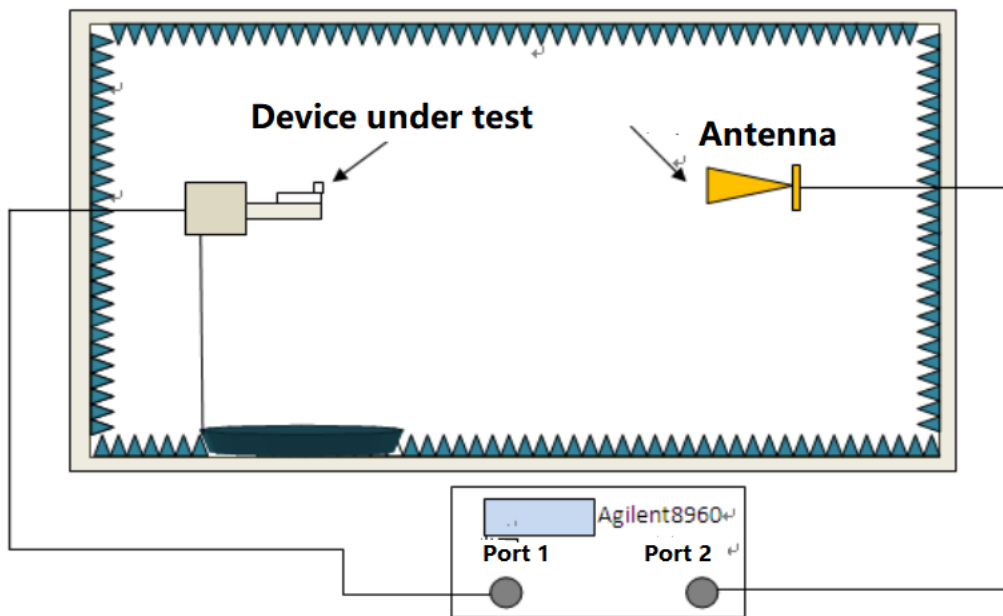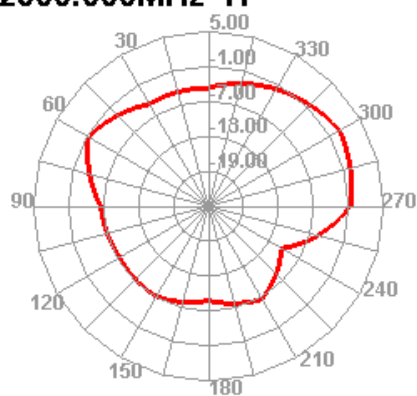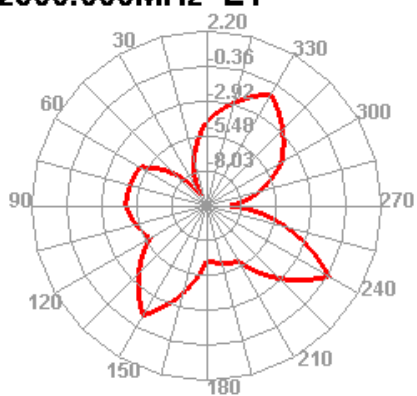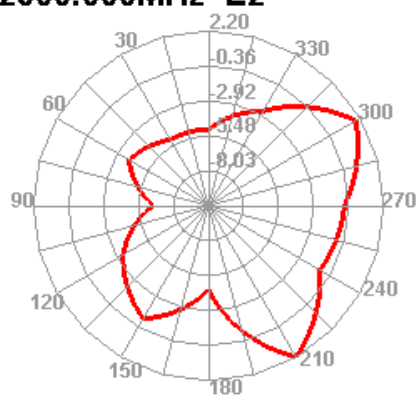

3-1 Efficiency/Gain- WIFI
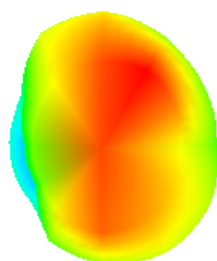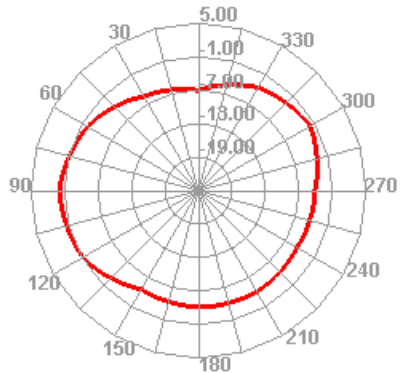
2500.000MHz

2500.000MHz H

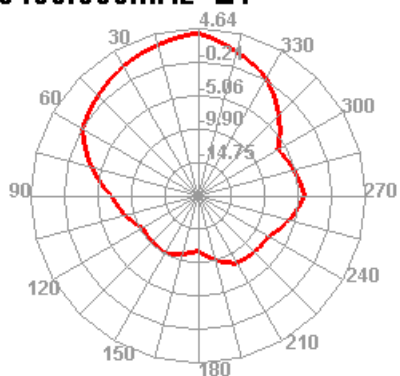# 2500.000MHz E1
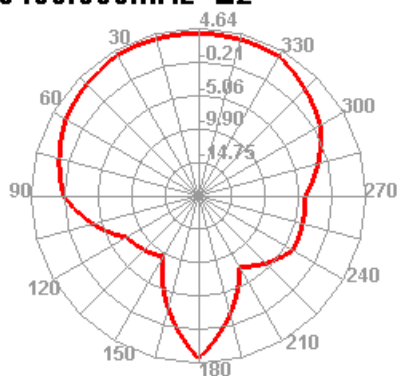

2500.000MHz E2

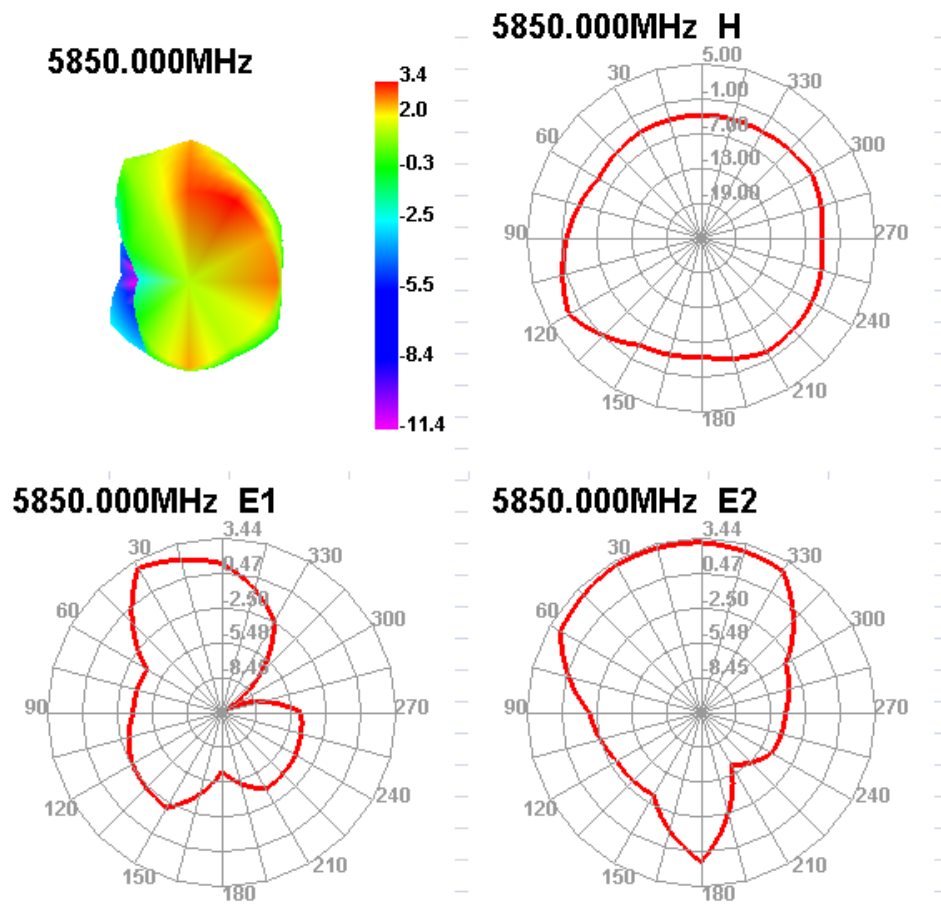# 5400.000MHz

5400.000MHz H

5400.000MHz E1

5400.000MHz E2

4. The production index

When producing antennas, the standing wave ratio is used as the production testing standard.

Based on the differences in the project itself, the following standards are provided:

Frequency	MP stand
WIFI (2400-2500Mhz/4950-5850MHZ)	VSWR（MP）<VSWR(sample)+0.5