Shenzhen Hongdezhixin Technology Co., LTD

WIFI/GPS Antenna Specs

Customer name: Pipo Technology Co.,Ltd			Model No ： P101
Frequency：2.4G/ 5G		Date：2023.10.23	Version：R:A
R&D	Gechong.Zhu Jan.Sun		Approve：Lin. Zhang

HDZX-550 L=180MM
0.81 line black , with the 3rd generation 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 .

1.1 Frequency Band:

Frequency Band	MHz
1.75G/2.4G/5G	1575/2400-2500/4950-5850

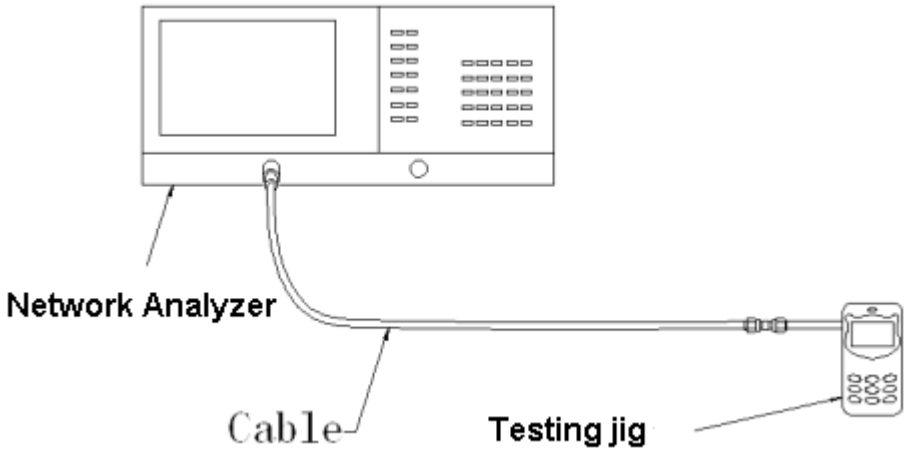
2.VSWR

2-1 Measuring Method:

1. A 50Ωcoaxial 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.

The test diagram is as follows：



2-2 S11 parameter values

Frequency（MHZ）	1550	1580	2389	2450	2500	5800
Standing wave	1.3	1.2	1.38	1.63	1.23	2.1

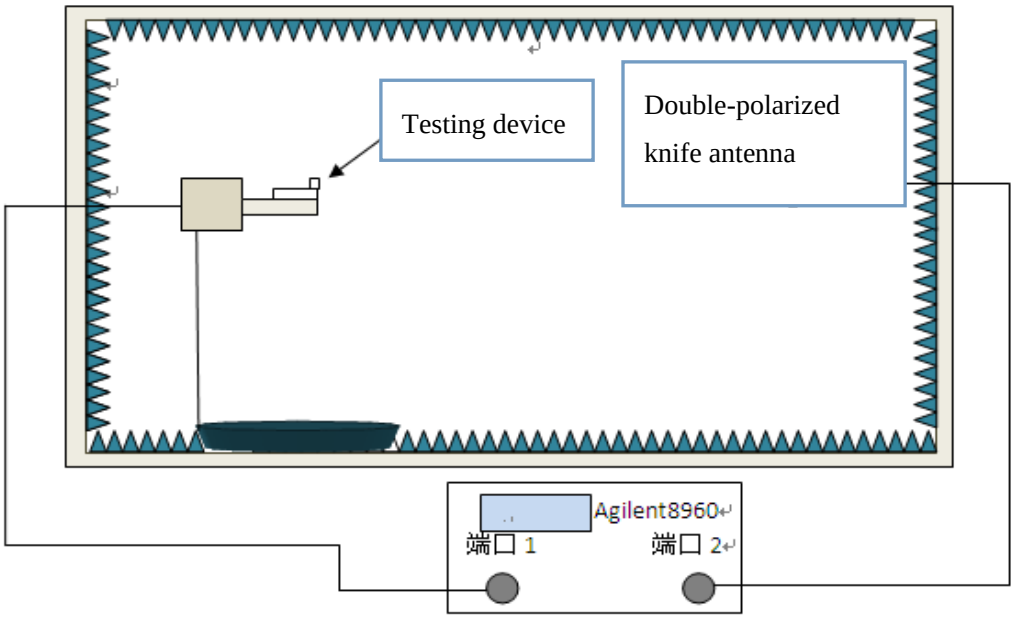
3. Efficiency and Gain

***measuring and test instruments:**

Microwave darkroom, Agilent network analyzer, Agilent spectrum analyzer, 8960 comprehensive tester, standard antenna

***test method:**

It is fixed in the center position of the turntable with the H plane, and the center position of the horn antenna is on the same horizontal line

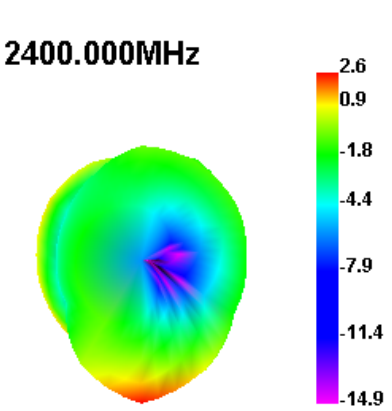


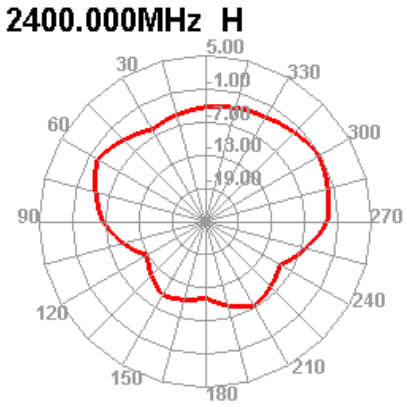
3-1 Efficiency/Gain- WIFI

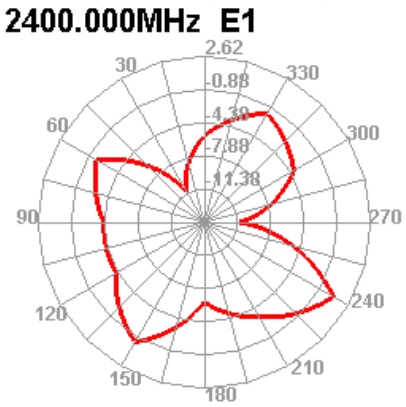
Passive Test For WIFI_BT								
Freq (MHz)	Effi (%%)	Effi (dB)	Gain (dBi)	Gain (dBd)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
2400	64.61	-1.9	2.62	0.47	2.62	-14.89	51.03	51.21
2450	59.76	-2.24	2.47	0.32	2.47	-13.7	51.78	51.74
2500	53.62	-2.71	2.2	0.05	2.2	-10.59	51.76	51.66

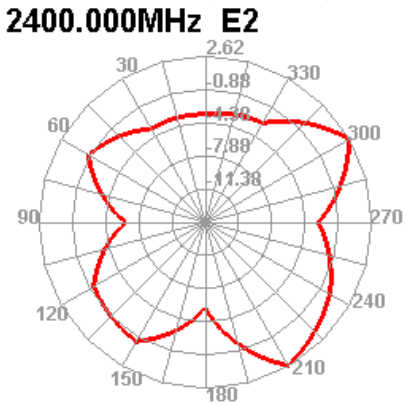
Passive Test For 5.8								
Freq (MHz)	Effi (%%)	Effi (dB)	Gain (dBi)	Gain (dBd)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
4950	53.52	-2.71	2.33	0.18	2.33	-16.16	62.44	62.5
5400	66.72	-1.76	4.64	2.49	4.64	-19.6	63.55	63.99
5850	64.22	-1.92	3.44	1.29	3.44	-11.42	66.35	66.32

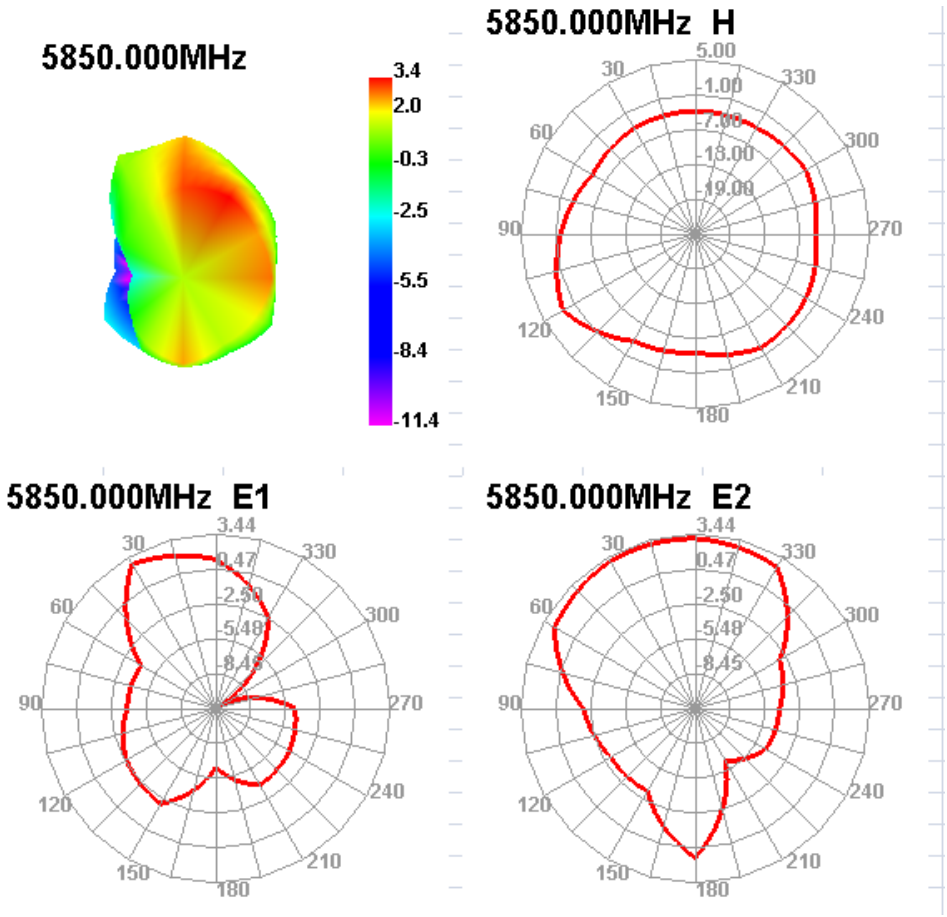
	Channel	TRP	TIS
11g 54m	1	13.19	-56.43
	6	13.67	-58.29
	11	13.62	-58.15











4. The production index

In the mass production of antenna, the standing wave ratio is used as the test standard. According to the differences of the project itself, the following criteria are given:

Frequency	MP Standard
GPS(1560_1580MHZ) WIFI (2400-2500Mhz/)	VSWR（MP one）<VSWR(Sample)+0.5

The antenna position on tablet, as followed:

GPS effect:

At least 5pcs with signal over 36, and can be located within 90 seconds.