

# **WiFi Antenna Specs**

**(Secondary antenna)**

Customer name: Pipo Technology Co.,Ltd

Model Name: X1

Antenna model name: HDZX-PCB-K

Bands: WiFi 2.4G&5.8G

Antenna Length: L=130MM black with the 4th connector

R&D engineer: Mr Wang

Confirmed by: Chen Weiming

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Version: V02

## **1. Project information and Electrical Specification**

*Those specifications were specially defined for WIFI/BT model, and all characteristics were measured under the model's handset testing jig .*

## 1-1 Project picture



## 1-2 Frequency Band:

Frequency Band	MHz
WiFi/BT frequency	2400-2500 4900~5800
WiFi gain	2.4G:1.42dBi 5G:1.73 dBi
Antenna Max power	15.18dbi
Type	Coaxial cable+FPC welding
Wireless communication Standard	802.11
Size	40*4

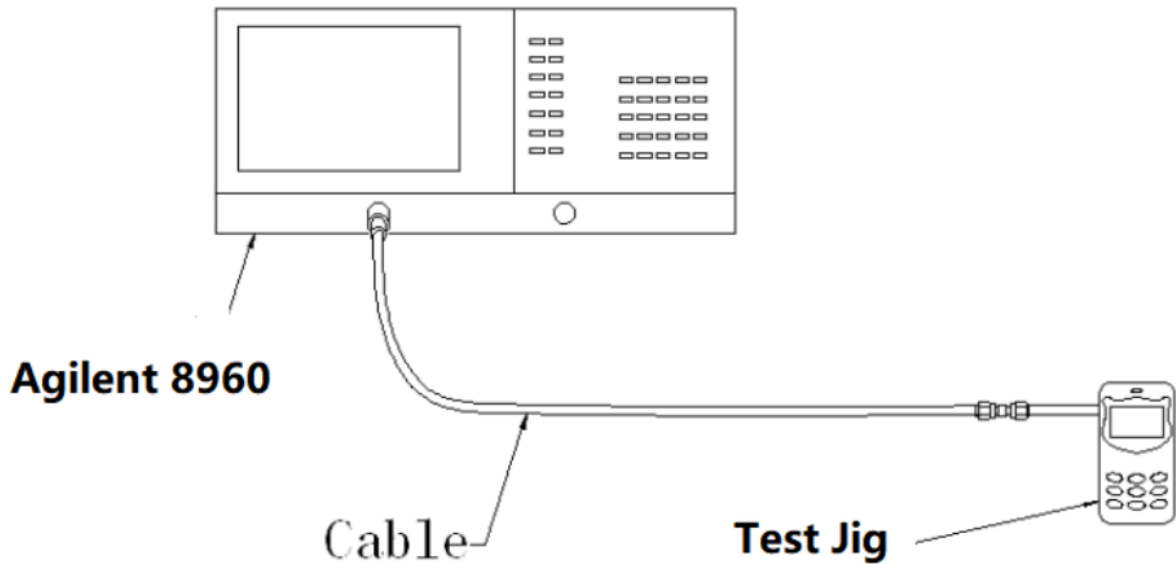
## 1-3 Impedance matching

## 2.VSWR

### 2-1 Measuring Method:

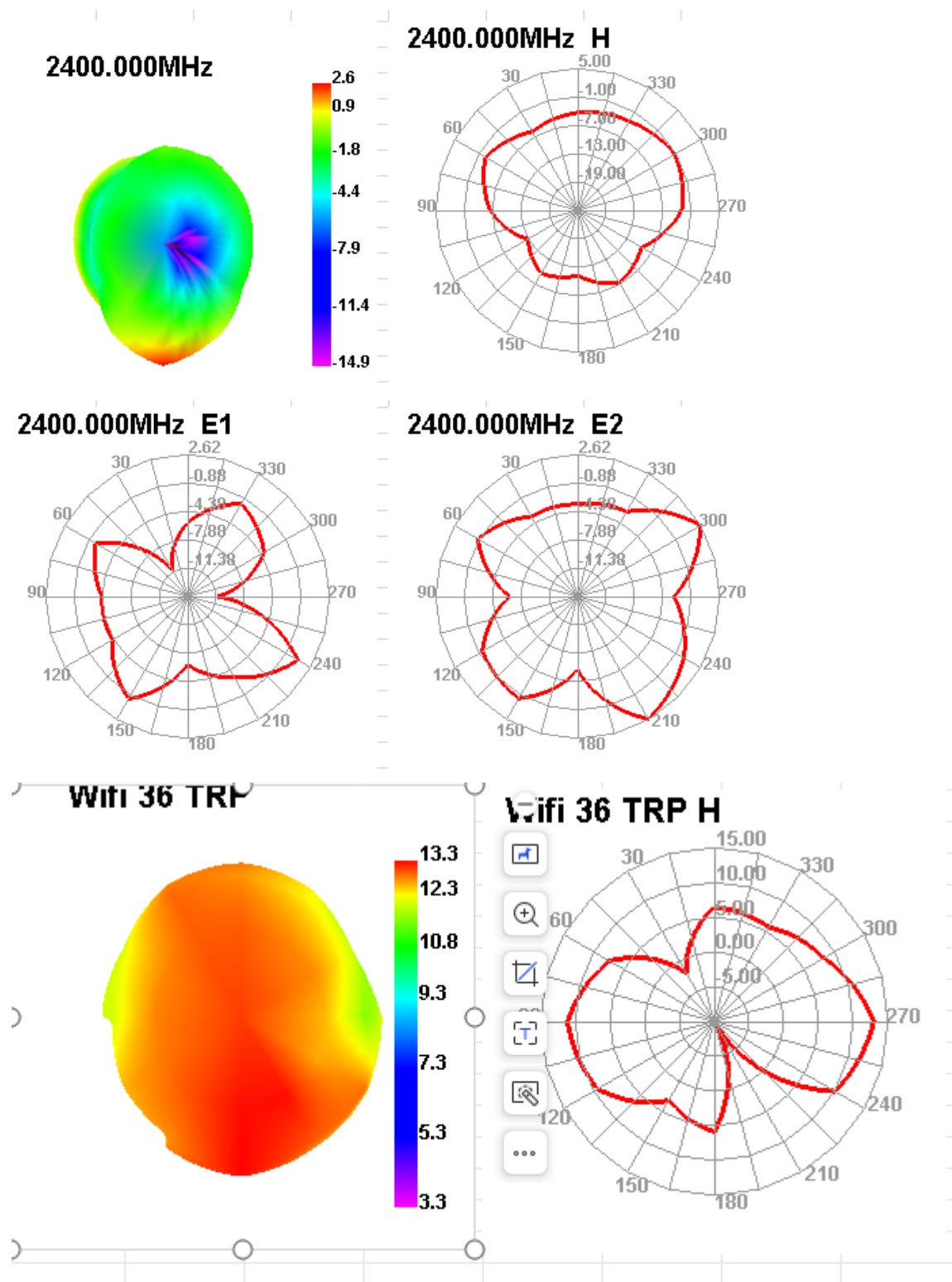
1. A 50  $\Omega$  coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR,
2. Keeping this jig away from metal at least 20cm.

The test way as followed photo:



### 2-2 S11 parameter values

Frequency (MHZ)	2400	5500	5800
The standing wave	1.4	1.6	1.5

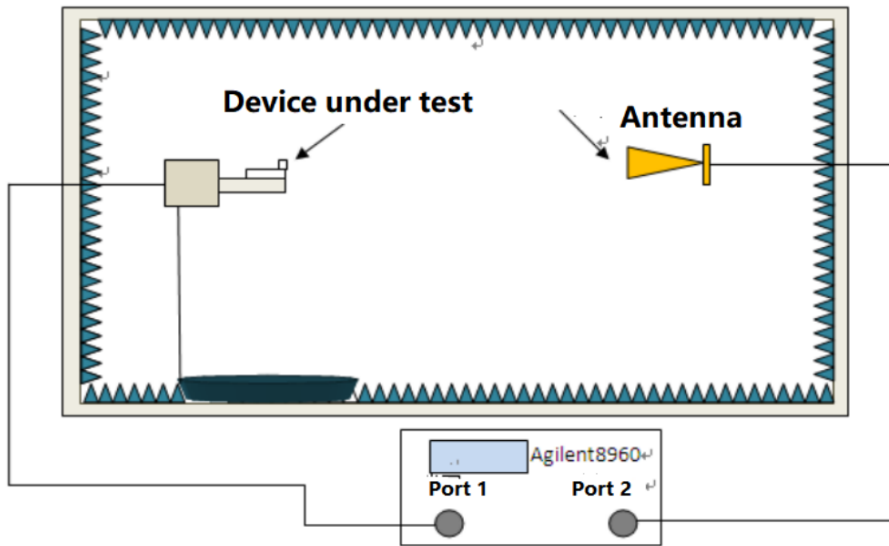


2. \*measuring and test instruments:

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/Peak Gain-

2. 4G

Test Result	802.11B, Wifi 2.4G 11M		
	12	6	1
Frequency (MHz)	2467	2437	2412
TRP (dBm)	12.03	12.60	12.19
TIS (dBm)	-76.21	-77.07	-77.32

5. 8G

Test Result	802.11A, Wifi 5, 8G 54M		
	36	149	161
Frequency (MHz)	5180	5745	5805
TRP (dBm)	10.13	9.56	9.89
TIS (dBm)	-68.01	-68.07	-68.32

Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)
2400	1.26	5000	1.11	5550	1.08
2410	1.25	5050	0.89	5600	0.99
2420	0.75	5100	0.24	5650	0.91
2430	0.59	5150	0.24	5700	1.42
2440	0.81	5200	0.43	5750	1.73
2450	1.14	5250	0.44	5800	0.23
2460	0.92	5300	1.07	5850	0.87
2470	1.42	5350	0.97	5900	0.44
2480	1.09	5400	0.68	5950	0.56
2490	1.06	5450	0.48	6000	0.10
2500	1.43	5500	0.29		

