

SHENZHEN JY COMMUNICATION CO.,LTD.

J52

Guests	AnxinTaihe	Frequency band Range	WIFI 2.4G/5G
Model	KS-95	Version	New version
Engineering code	TLT4713	Approval	
RF Designer	Maohangzhou	RD Designer	Tangchunzheng
Date	2022-10-10	Date	2022-10.10
Customer Information: WIFI 2.4G/5G			

目录

1. Antenna parameters
 - 1.1 Electrical parameters
 - 1.1.1 Electrical Performance Assessment
 - 1.1.2 Matching circuit
 - 1.2 Structural parameters
 - 1.2.1 Antenna assembly
 - 1.2.2 Performance testing requirements
 2. Test
 - 2.1 Voltage Standing Wave Ratio Test
 - 2.1.1 Test connection
 - 2.1.2 Voltage Standing Ratio
 - 2.2 Gain and Power Testing
 - 2.2.1 Test environment
 - 2.2.2 Testing equipment
 - 2.2.3 WIFI5G
 - 2.3 Test Date
 - 2.3.1 WIFI 2.4G Test data
 3. Summary
 4. Annex Figure
 - 4.1.1 Test environment
 - 4.2 Antenna placement
 - 4.3 2D Structured Chart
 5. Commissioning and Commissioning drawings
-

1. Antenna Parameters

This report mainly provides the test conditions and results of various electrical and structural properties in mobile phone testing

1.1 Electrical parameters

1.1.1 Electrical Performance Assessment

The band range of the antenna is 2.40 G. The following table is the basic parameter of the electrical performance of the antenna.

WIFI Frequency Range			
Frequency Range	Frequency (MHz)	VSWR	Gain (dBi)
	TX		Free Space
WIFI	2.40G	≤3	2dBi

1.1.2 Matching circuit

A matching circuit diagram on the PCB board

1.2 Structural parameters

The structure file is shown below

1.2.1 Antenna assembly

Composition FPC antenna coaxial connection

1.2.2 Performance testing requirements

Test project	Description	Acceptance criteries
1.Low temperature test	Temperature: -20 °C Hours : 24 hours	1. No apparent damage 2. Electrical performance up to standard
2. High temperature test	Temperature: 80 °C Hours : 24 hours	1.No apparent damage 2.Electrical performance up to standard
3. Salt spray test	5±0.1% Salt spray PH : 6.5-7.2 Temperature: 35±1 °C Hours::24 hours	1. no color change 2. No apparent damage
4.Environmental adaptability test	Total value of Pb、Hg、Cr+6、Cd in packing materials is smaller thall 50PPM Pb、Hg、Cr+6、PBBs、PBDEs in components are smaller than 500PPM, Cd is smaller than 50PPM	

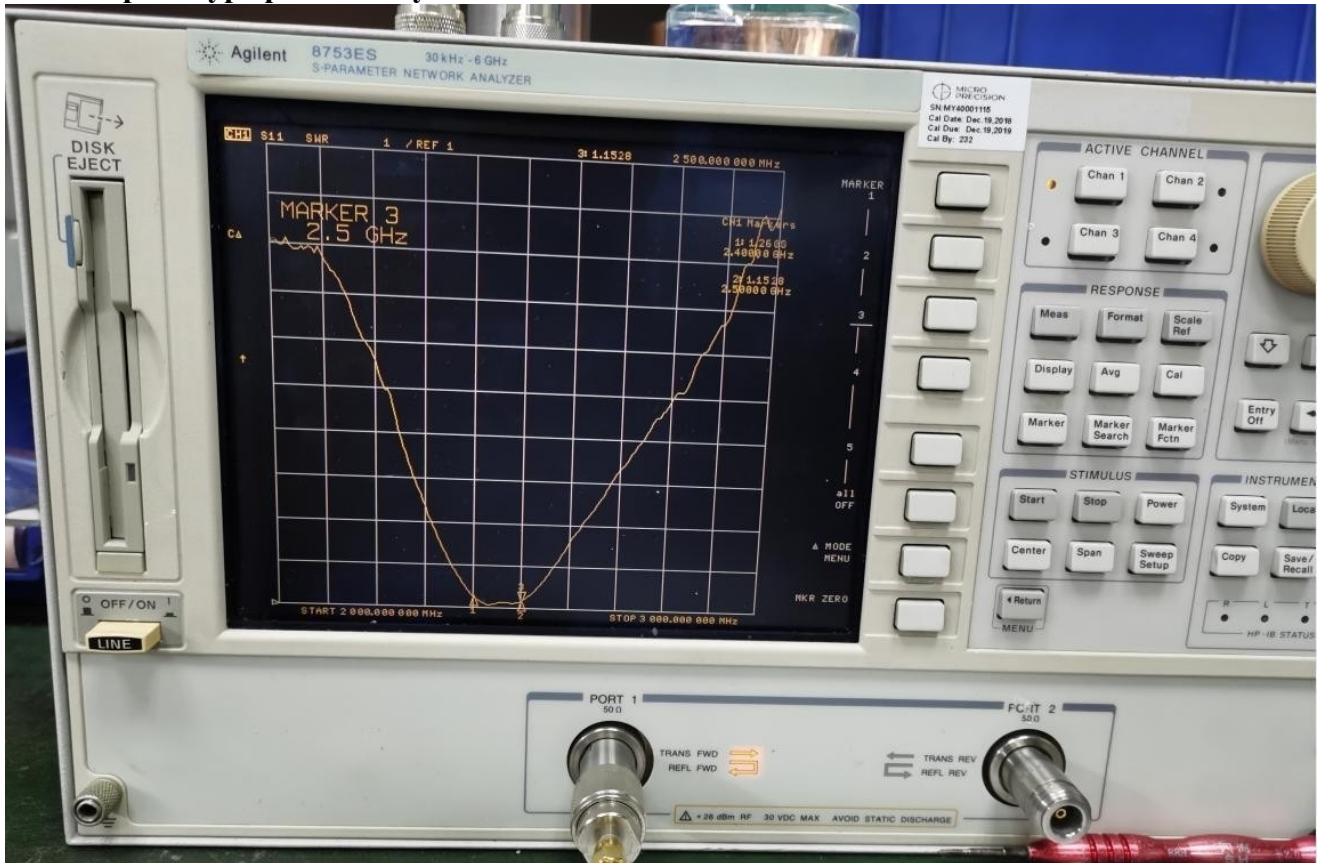
2. Test

The antenna is installed in the equipment provided by the customer for testing. Figure 3 describes the electrical performance of the antenna as installed in the device.

2.1 VSWR Test

2.1.1 Test connection

Test VSWR equipment connection sequence: AgilentE5062A network analyzer → test connection line and prototype provided by customer



2.1.2 Voltage Standing Ratio

the table below describes the value of the voltage standing wave ratio of the antenna at the two endpoints of the frequency band, involving the figure regarding the return loss and standing wave ratio.

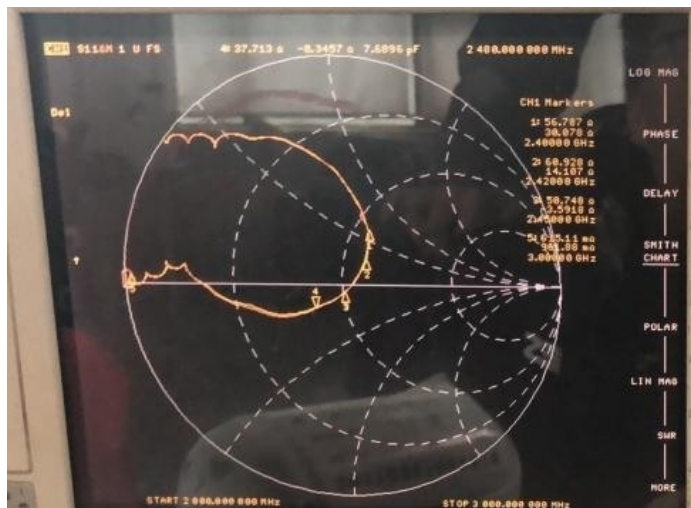
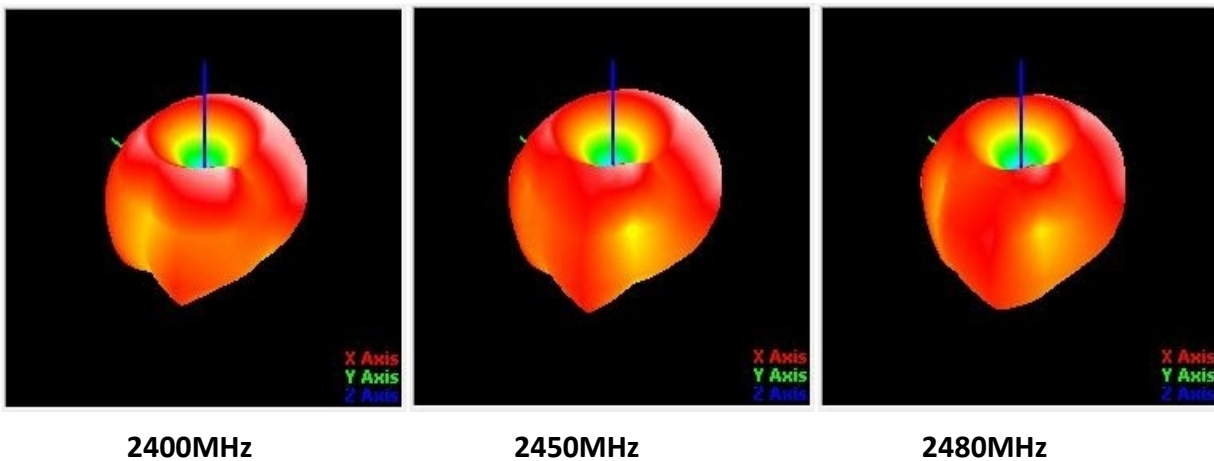
	GPS	WIFI-2.4G		
Frequency (MHz)	1.575G	2.4G	2.48G	
VSWR		1.32	1.30	
Return Loss		-17.2	-17.8	

2.2 Gain and Power Testing

Frequency (GHz)	1.575G	2.40G	2.48G		
Gain (dBi)		2.00	2.05		
Efficiency (%)		41.7	41.5		

Tianlu Tong microwave darkroom: test frequency range from 800 MHz to 6GHz, in 50 cm diameter spherical area, darkroom reflection from 800 MHz—6GHz ,reflection less than -50 dB.

2.2.1 GPS&WIFI Efficiency gain 3D pattern WIFI 2.4G

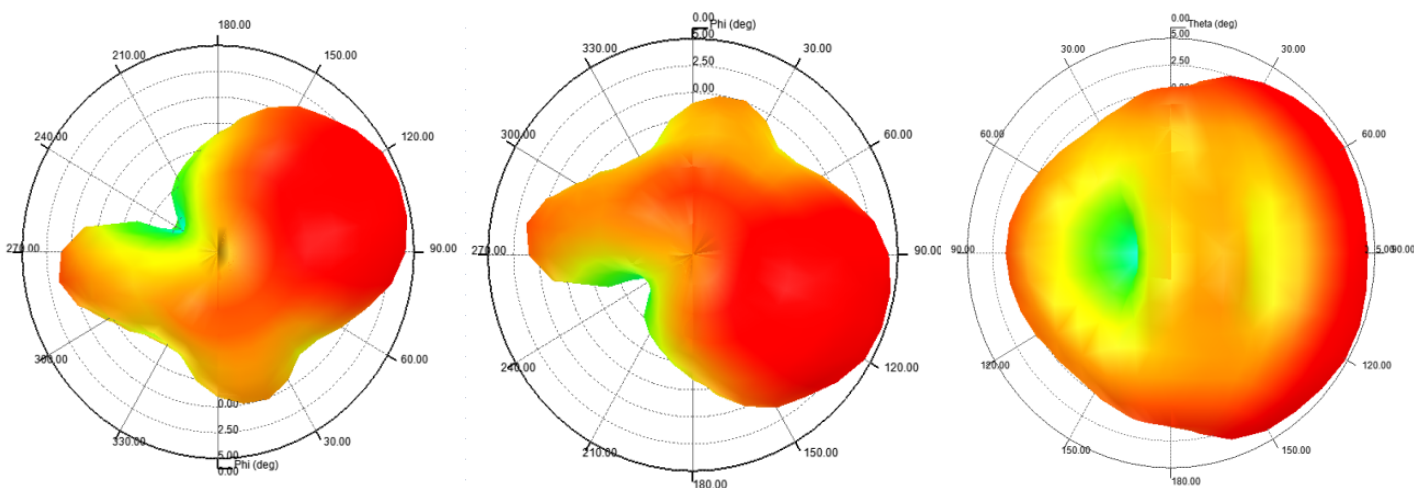


2.2.2 Testing equipment

Agilent 8960(5515 C), Network Analyzer (E5062A) Communication Test device, dipole Antenna, French Satimo Antenna Test system, Printer, etc.

2.2.3 WIFI 5G

FETUKEJI															
Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Frequency (MHz)	5150.0	5200.0	5250.0	5300.0	5350.0	5400.0	5450.0	5500.0	5550.0	5600.0	5650.0	5700.0	5750.0	5800.0	5850.0
Point Values															
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-1.02	-1.03	-1.03	-1.03	-1.03	-1.03	-1.03	-1.04	-1.04	-1.04	-1.04	-1.03	-1.03	-1.01	-1.00
Peak EIRP (dBm)	3.12	3.10	3.06	3.00	2.93	2.86	2.77	2.68	2.61	2.54	2.45	2.34	2.17	1.96	1.96
Directivity (dBi)	4.98	4.98	4.95	4.89	4.80	4.69	4.55	4.41	4.30	4.17	4.01	3.80	3.45	2.91	2.87
Efficiency (dB)	-1.02	-1.03	-1.03	-1.03	-1.03	-1.03	-1.03	-1.04	-1.04	-1.04	-1.04	-1.03	-1.03	-1.01	-1.00
Efficiency (%)	70.10	70.30	72.20	75.60	80.40	81.20	79.40	77.10	75.20	74.50	73.80	73.30	72.80	69.70	67.80
Gain (dBi)	3.95	3.95	3.92	3.86	3.77	3.65	3.52	3.38	3.26	3.13	2.97	2.76	2.42	1.90	1.86



3. Summary

The antenna is designed according to the sample of the mobile phone provided by the customer. The electrical parameters and result performance of the antenna are up to standard. We believe it will satisfy you.



4.3 Figure 2 D Structure

