

Product Number:TLT4668-T8045PC-LK

Product Name:Mobile Phone Antenna

深圳天路通电子有限公司



SHENZHEN TLT COMMUNICATION CO.,LTD.

T8045PC-LK antenna

The Product Recognition Letter



The Customer	Sawink	Band range	W/G/B
Mobile phone types	T8045PC-LK	Version	Latest version
Project code name	TLT 4668	Approval	
RF Designer	Mao Hangzhou	RD Designer	Tang Chunzheng
Date of this	2022-11-15	Date of this	2022-11-15
Customer Information: 2.4G+5G+BT+GPS			

metric

1. Antenna parameters

1.1 Electrical parameters

1.1.1 Electrical Performance Assessment

1.1.2 matching circuit diagram

1.2 Structural parameters

The 1.2.1 antenna assembly

1.2.2 Performance test requirements

The 2. test

2.1 Voltage standing wave ratio test

2.1.1 test connection

2.1.2 voltage standing to wave ratio

2.2 Gain and power tests

2.2.1 测 test environment

2.2.2 Test Equipment

3. summary

4. attachment diagram

4.1 Parameter diagram of return loss and voltage standing wave ratio

4.2 Test Report

4.3 Structure 2D profile

Attfigure of 5. debugging processing

1. Antenna parameters

This report mainly provides test conditions and results for various electrical and structural properties in mobile phone tests,

An antenna designed by SkyRoad.

Electrical parameters

1.1.1 Electrical Performance Assessment

The band range of the antenna is 2400MHz-2500MHz and 5000MHz~5800MHz. below are the basic parameters of the electrical performance of the antenna. This is designed antenna and produced by Tian Lu Tong.

1.1.2 distribution circuit diagram

Use the original matching circuit diagram on the PCB board

1.2 Structural parameters

1.2.1 antenna assembly

Antennas generally consisted of plastic supports and hardware pieces.

1.2.2 can test the requirements

Test item	description	Acceptance criteria
1. cryotemperature test	temperature:-20℃ Time: 24 hours	The 1. had no obvious damage The 2. electrical performance meets the standard
The 2. high-temperature test	temperature.: 80℃ Time: 24 hours	The 1. had no obvious damage The 2. electrical performance meets the standard
3. salt fog test	5 ± 0.1% salt mist PH-value: 6.5-7.2 temperature: 35±1℃ Time: 24 hours	1.No color was changed 2.There are no obvious cracks in the appearance
4. environmental adaptability test	Total value of Pb, Hg, Cr+6, Cd in packing materials is smaller than 50PPM Pb, Hg, Cr+6, PBBs, PBDEs in components are smaller than 500PPM,Cd is smaller than 50PPM	

The 2. test

Antenna are installed in a customer provided phone for testing. describes the antenna in mobile) for the equipment (electrical performance test.

The VSWR test

Test the connection

Test VSWR order of device connections: Agilent E8753 network analyzer → test cable → customer-provided machine

2.1.2 VSWR

The table below describes the values of the voltage resident wave ratio of the antenna at the two endpoints of the frequency band, involving drawings about the return impairment and resident wave ratio, please refer .

	GPS	WIFI-2.4G		WIFI-5.0G	
Frequency (MHz)	1.575G	2.4G	2.48G	5.15G	5.85G
VSWR	1.22	1.31	1.32	1.34	1.36
Return Loss	-19.2	-18.7	-19.1	-16.7	-15.8

2.2 Gain and efficiency tests

Frequency (GHz)	2.40G	2.44G	2.48G	5.2G	5.8G
Gain (dBi)	1.38	1.50	1.48	1.50	1.50
Efficiency (%)	40.3	41.7	40.8	40.2	40.1

2.2.1 test environment

Skyway microwave dark chamber: The test frequency range from 800MHz to 6GHz, in a 50cm diameter spherical area, and the dark chamber is reflected less than-50 dB. from 800MHz—6GHz

2.2.2 Test the equipment

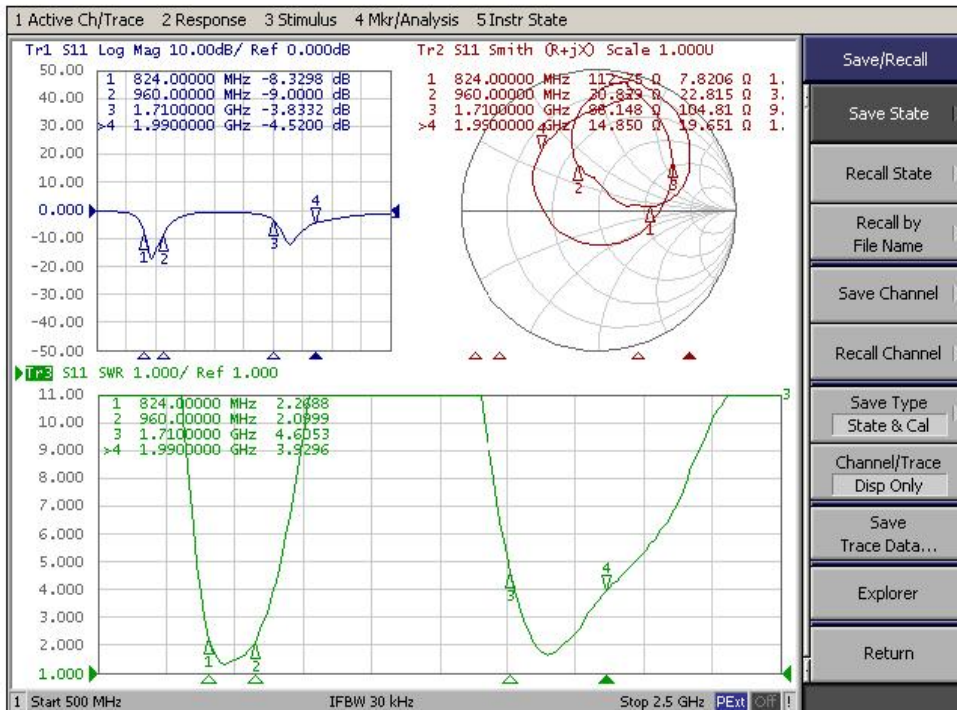
Agilent 8960 ((5515C) Wireless Communication Test Device, Dipole antenna, French Sa t imo Antenna Test System, Printer, etc.

3. summary

The antenna is designed according to the machine samples provided by the customer, and the electrical parameters and result performance of the antenna meet the standard, and we are sure to make you satisfied.

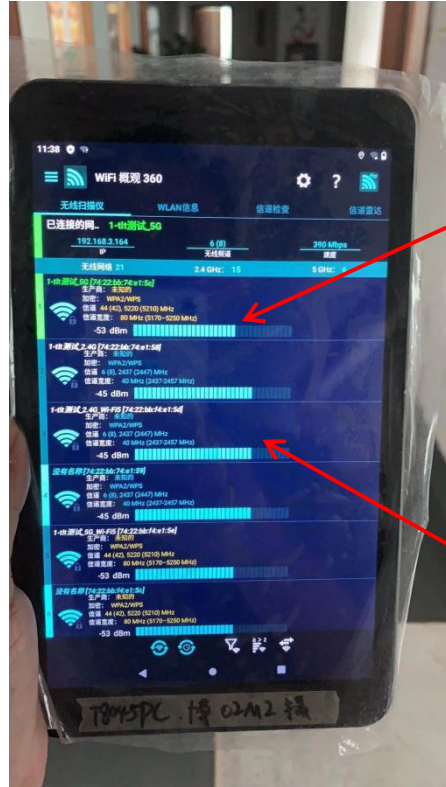
4. additional graphics

4.1 Drawing of return loss and voltage standing wave ratio parameters



3. WIFI & GPS graphics and test data

3.1 WIFI field test: Test environment: open environment, 15 meters away from our router. The test is as follows:



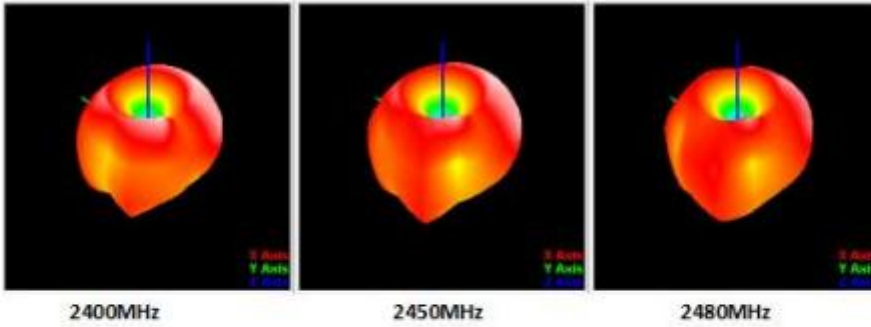
5.0G-WIFI Show -53dBm, signal full case

2.4G-WIFI Show -45dBm, signal full case

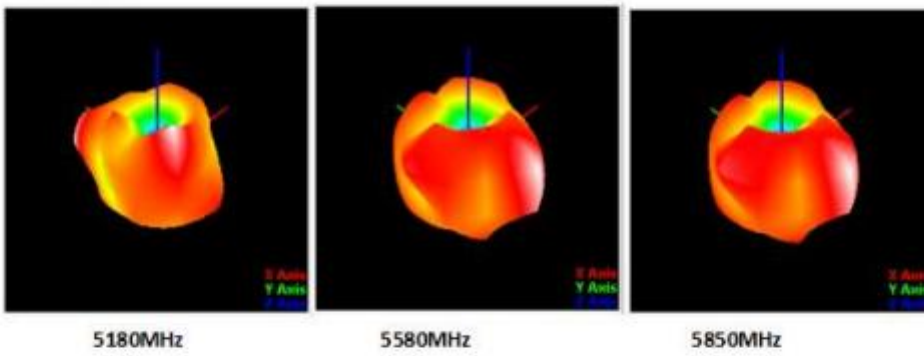
3.2 GPS field test: Test environment: on the roof of our 13th floor, use GPS test to test as follows:



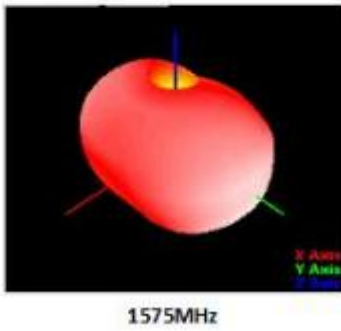
3.3 GPS&WiFi Gain efficiency 3D Pattern



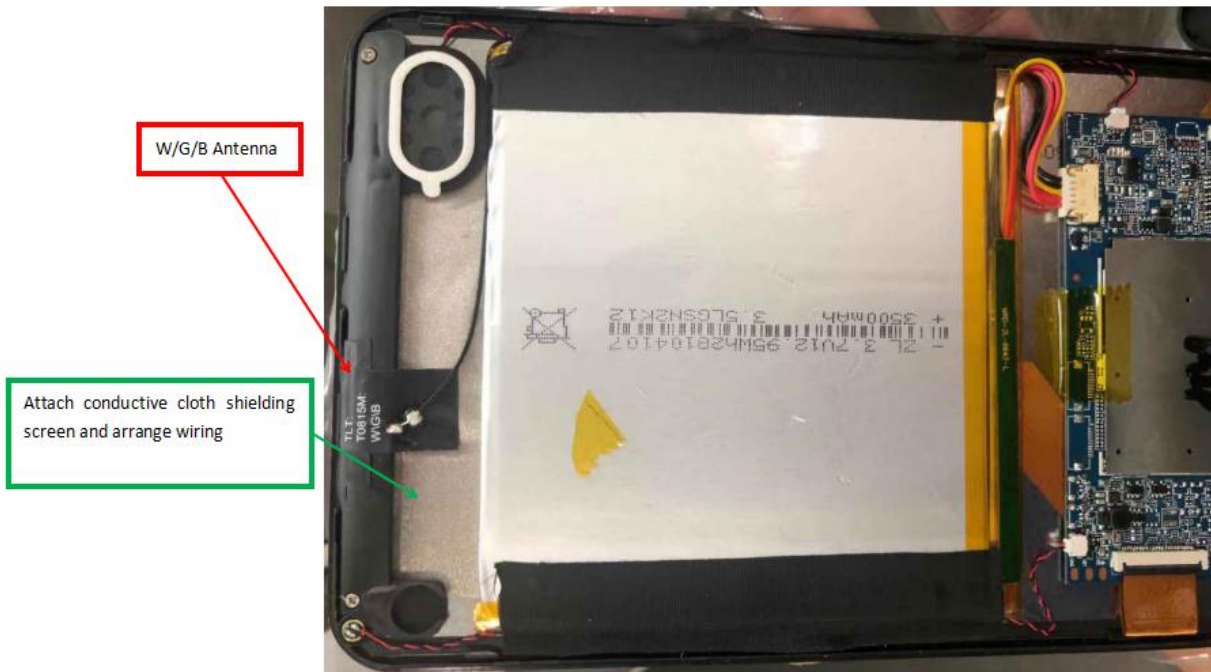
WiFi 5G



GPS



4. Antenna assembly and processing drawing file



5. antenna 2D profile

