

深圳天路通电子有限公司



SHENZHEN TLT COMMUNICATION CO.,LTD.

L806PC antenna

The Product Recognition Letter



The Customer	康佳	Band range	4G
Mobile phone types	L806PC	Version	Latest version
Project code name	TLT 5154	Approval	
RF Designer	Mao Hangzhou	RD Designer	Tang Chunzheng
Date of this	2023-1-5	Date of this	2023-1-5
Customer Information:			

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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. crytemperature 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	

2. The test

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

2.1 The VSWR test

2.1.1Test 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 .

GSM900 Frequency Range						
Frequency Range	Frequency (MHz)	VSWR	Gain (dBi)	Frequency (MHz)	VSWR	Gain (dBi)
	TX		Free Space	RX		Free Space
EGSM	880~915	≤3	≥0dBi±0.5dBi	935~960	≤3	≥0dBi±0.5dBi

DCS1800 Frequency Range						
Frequency Range	Frequency (MHz)	VSWR	Gain (dBi)	Frequency (MHz)	VSWR	Gain(dBi)
	TX		Free Space	RX		Free Space
DCS	1710~1785	≤3	≥-2.5dBi±0.5dBi	1805~1890	≤3	≥-2.5dBi±0.5dBi

GSM850 Frequency Range						
Frequency Range	Frequency (MHz)	VSWR	Gain (dBi)	Frequency (MHz)	VSWR	Gain (dBi)
	TX		Free Space	RX		Free Space
EGSM	824~844	≤3	≥≥0dBi±0.5dBi	854~894	≤3	≥≥0dBi±0.5dBi

PCS1900 Frequency Range						
Frequency Range	Frequency (MHz)	VSWR	Gain (dBi)	Frequency (MHz)	VSWR	Gain(dBi)
	TX		Free Space	RX		Free Space
DCS	1850~1910	≤ 3	$\geq -2.5\text{dBi}$ $\pm 0.5\text{dBi}$	1930~1990	≤ 3	$\geq -2.5\text{dBi} \pm 0.5\text{dBi}$

2.2 Gain and power tests

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

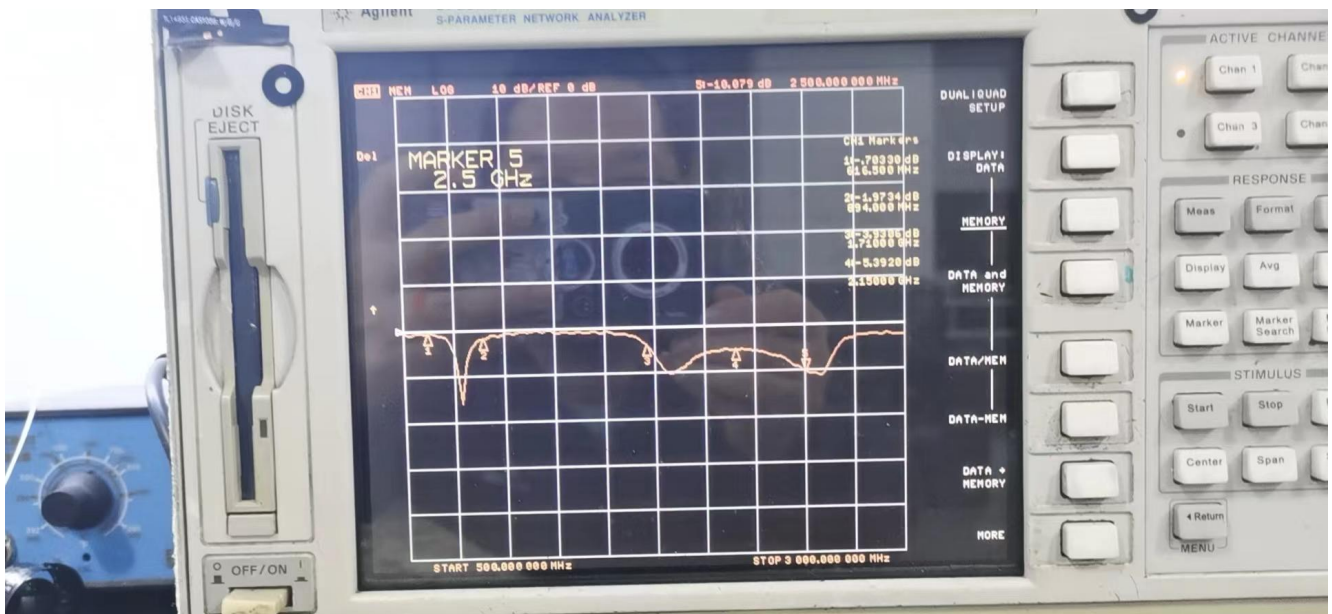
Agilent 8960 ((5515C) Wireless Communication Test Device, Dipole antenna, French Sa t imo Antenna Test System, Printer, etc.

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



5. Antenna Test Data

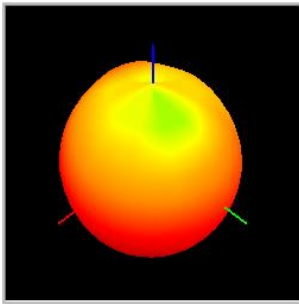
2G 频段	信道	TRP	TIS	频段	信道	TRP	TIS
GSM850	128	25.6	-102	GSM1900	512	25.7	-102
	190	25.3	-101		660	25.4	-104
	251	25.2	-101		810	25.3	-103
GSM1800	512	27.0	-104				
	698	27.3	-103				
	885	26.6	-103				
3G 频段	信道	TRP	TIS	频段	信道	TRP	TIS
W850	4357	17.0	-102	W1900	9662	16.6	-106
	4407	16.5	-103		9800	16.8	-107
	4458	15.3	-103		9938	17.2	-106

4G 频段	信道	TRP	TIS	频段	信道	TRP	TIS
LTE-B2	18650	17.0	-92	LTE-B4	20000	19.3	-91
	18900	16.7	-93		20175	18.9	-91
	19150	17.3	-93		20350	18.9	-91
LTE-B5	20450	16.4	-91	LTE-B12	23010	16.2	-90
	20525	16.5	-91		23095	16.6	-90
	20600	15.8	-92		23179	16.5	-89
LTE-B17	23730	16.2	-90	LTE-B41	39750	16.2	-90
	23790	17.4	-90		40620	16.4	-90
	23849	16.6	-89		41490	16.9	-91
LTE-B66	132022	19.9	-90	LTE-B71	133172	15.7	-90
	132322	19.2	-91		133297	16.5	-91
	132622	17.6	-93		133422	16.9	-91

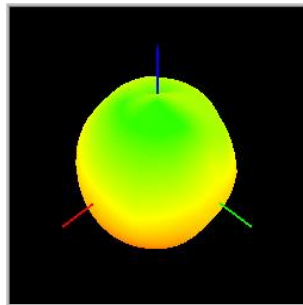
5.1Antenna Gain

Band	GSM850	GSM1900	GSM1800	WCDMA B2	WCDMA B5	LTE-B2	LTE-B4
Frequency (MHz)	824~894	1850-1990	1710-1880	1850-1990	824-894	1850-1990	1710-2155
Gain (dBi)	-2.9	1.7	2.0	1.7	-2.9	1.7	2.0
Band	LTE-B5	LTE-B12	LTE-B17	LTE-B66	LTE-B71	LTE-B41	WIFI/BT
Frequency (MHz)	824~894	699-746	704-746	1710-2200	617-698	2496-2690	2400
Gain (dBi)	-2.9	-2.0	-2.0	2.0	-1.9	2.5	2.1

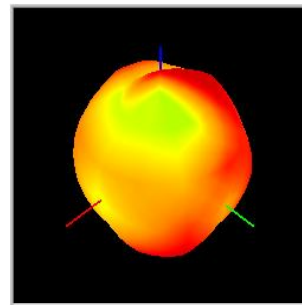
5.2 Antenna Pattern



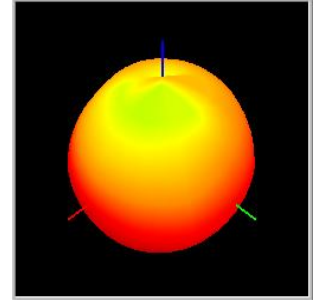
B71



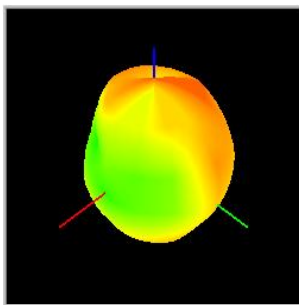
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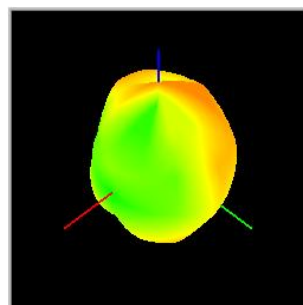
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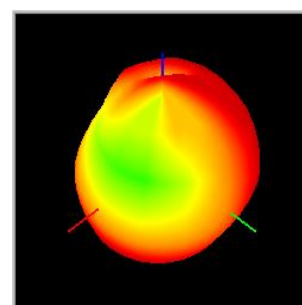
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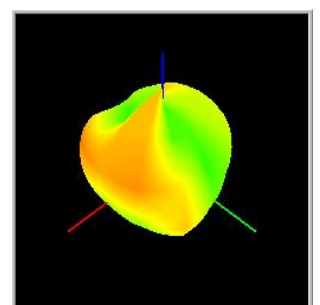
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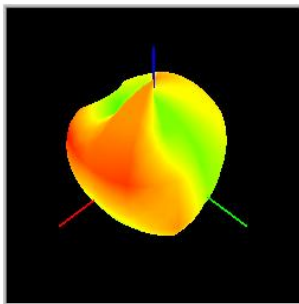
B66



B5



B38



B41

6.Antenna assembly and processing drawing file



用导电布屏蔽屏排线和 MIC 排线, 按图中所示操作





4G 主天线连接板背面贴
导电布接地

振动马达接地



4G 主天线

W/B/G 天线

7. Antenna 2D Profile

