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Antenna Specification Document

Customer name: 泉州紫盒电子有限公司		Project name: GC07	
Working frequency band:BT2.4			
Hardware version: V1.0			
intop material specifications			
specifications and models	specifications and models	specifications and models	
BT FPC 天线	itp093003-BTF0-1		

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Preparation / change date	Preparation / change date	Preparation / change date	Preparation / change date
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R&D	R&D	R&D	R&D	R&D
mechanical engineer:	mechanical engineer:	mechanical engineer:	mechanical engineer:	mechanical engineer:
examine and verify:				
Quality Engineer:	Quality Engineer:	Quality Engineer:	Quality Engineer:	

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Antenna matching circuit

No modification of the matching circuit



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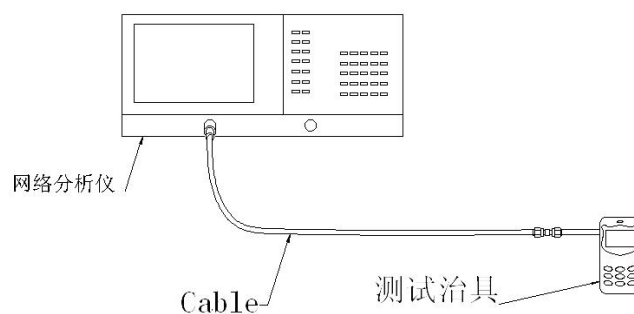
Complete machine test data

3.1 S11 Description of the test method

Test equipment: Network Analyzer (Agilent E5071C)

Test method: Export a 50 Ohm CABLE cable from the instrument test port, connect the SMA connector of the test device after the calibrator, and record the echo loss and standing wave ratio corresponding to the relevant frequency point.

The test schematic diagram is as follows:



测试示意图

3.2 Schematic diagram of the test

Test system: RTS100 24 Probe OTA measurement system

Test environment: temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$

Test equipment: Use the network analyzer E5071C when testing the passive data

When testing active data: use the comprehensive meter CMW500

The RTS-100 test system

The system can meet the OTA test of small and medium-sized wireless terminals and modules for mobile phones, smart watches, tablets, laptops, Bluetooth headphones, routers, GPS antennas, small drones, smart door locks and so on

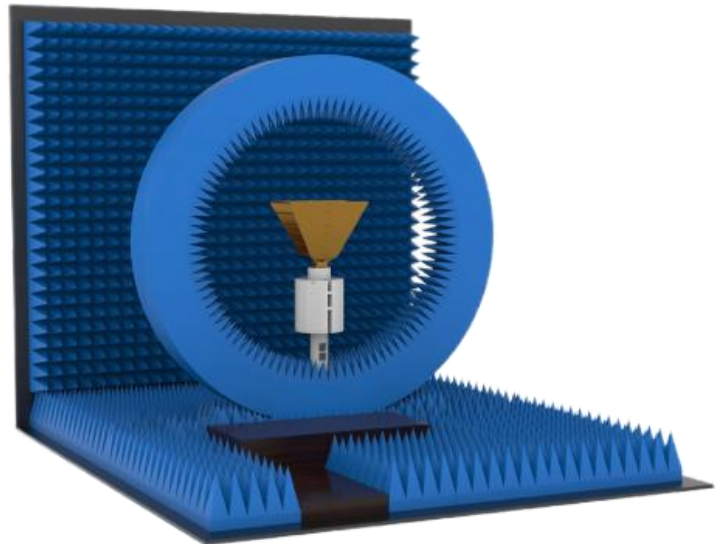
Support frequency: 600 MHz-8GHz

Support polarization: linear polarization, circular polarization, elliptic polarization

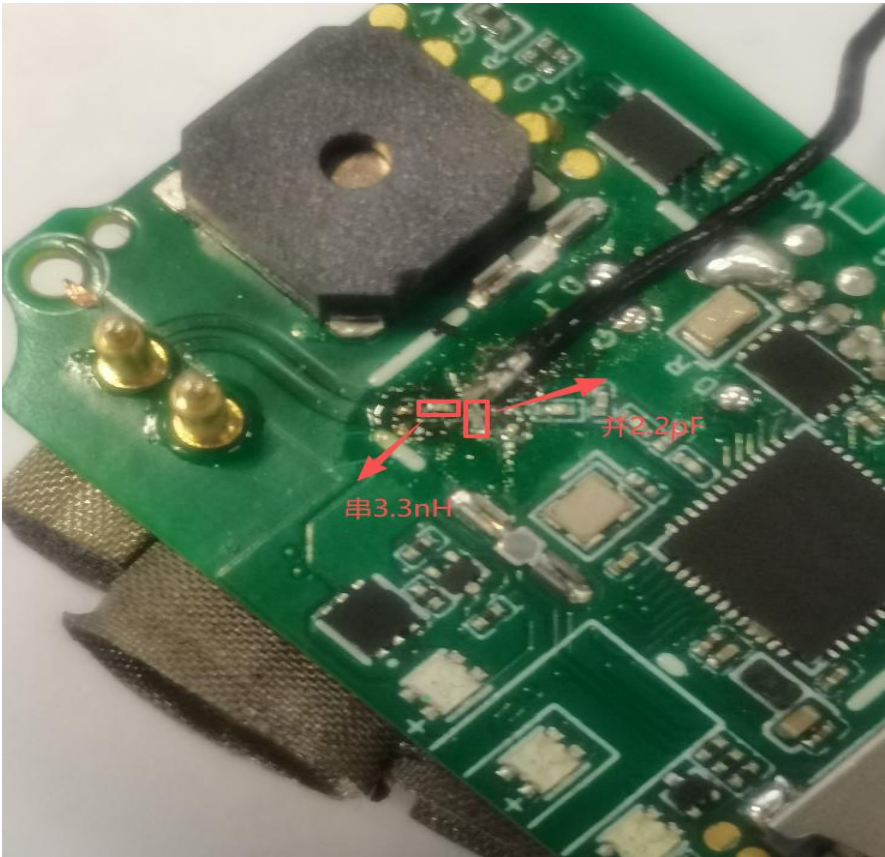
Passive test content: gain, efficiency, 2D orientation map, 3D orientation map, noncircularity, axis ratio, etc

Active test content: complete machine TRP, TIS, EIRP, EIS;

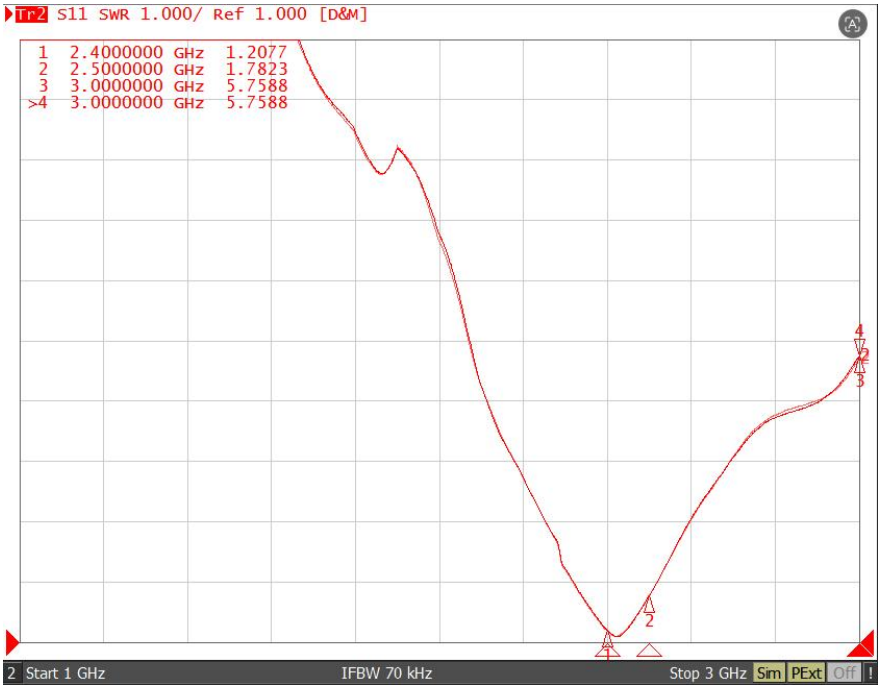
Test system: 2G / 3G / 4G / 5G, Wi-Fi / g / n / a / ac / ax, Bluetooth, NB-IOT, Cat-M



3.3 S11 test parameters



VSWR



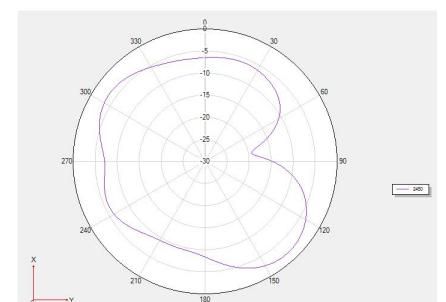
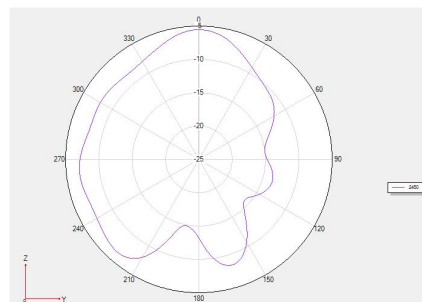
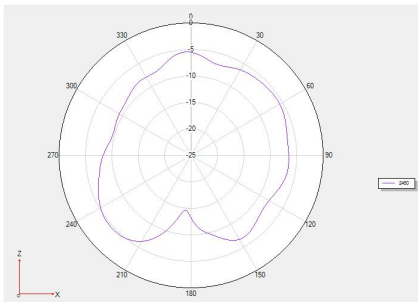
3.4 Passive data

3.4.1 efficiency and gain

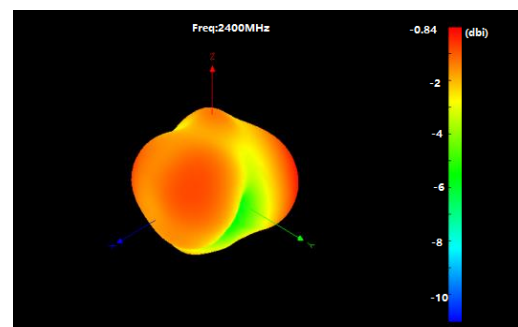
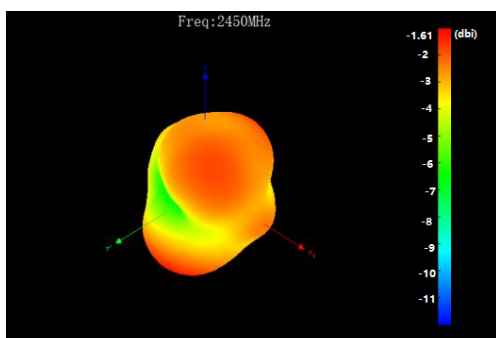
Frequency/Mhz	MaxGain/dBi	Efficiency / %
2400	-0.84	26.24
2410	-1.1	25.06
2420	-0.89	26.3
2430	-1.41	25.29
2440	-1.59	24.21
2450	-1.61	24.43
2460	-2.02	23.28
2470	-2.33	22.03
2480	-2.26	22.8
2490	-2.91	22.03
2500	-3.32	20.8

2.4.2, Radiation direction diagram

2D cross-sectional view



3D



3.5 Electrical performance

Frequency (MHz)	2400~2500MHz
input impedance	50Ω
standing-wave ratio	<5
gain	-3.3~-0.8dBi
Efficiency	20.8~26.3%
Polarization mode	Polarization mode
linear polarization	linear polarization

3.6 Mechanical properties

Mounting Type	Mounting Type
Adhesive Mounting	Adhesive Mounting
Connector Type	金手指与弹片接触
Antenna size(mm)	14.05mm (L) *6.9mm(W)*0.14mm (T)
Material	FPC
Cable length(mm)	/
Operating Temperature (°C)	-40 °C ~ +85 °C
Storage Temperature(°C)	-40 °C ~ +85 °C

Mass production antenna indexa

When the antenna is in mass production, the standing wave ratio is used as the test standard for mass production.

Based on the differences of the project itself, the following criteria are given:

:

Frequency (MHz)	Frequency (MHz)
2400-2500MHz	VSWR (量产性能) <VSWR(承认性能)+0.5

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