

Mobile communication terminal antenna

Product design and manufacturing specifications

◆ Customer:

◆ Project: birdfy2 副摄

◆ Name: 2.4GWiFi Antenna

shrapnel ☐

FPC ☒

support ☐

coaxial ☐

◆ Part no: ANT

◆ Designer: LuoJingxiao

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Content:

1.Antenna finished product

2.Technical indicators

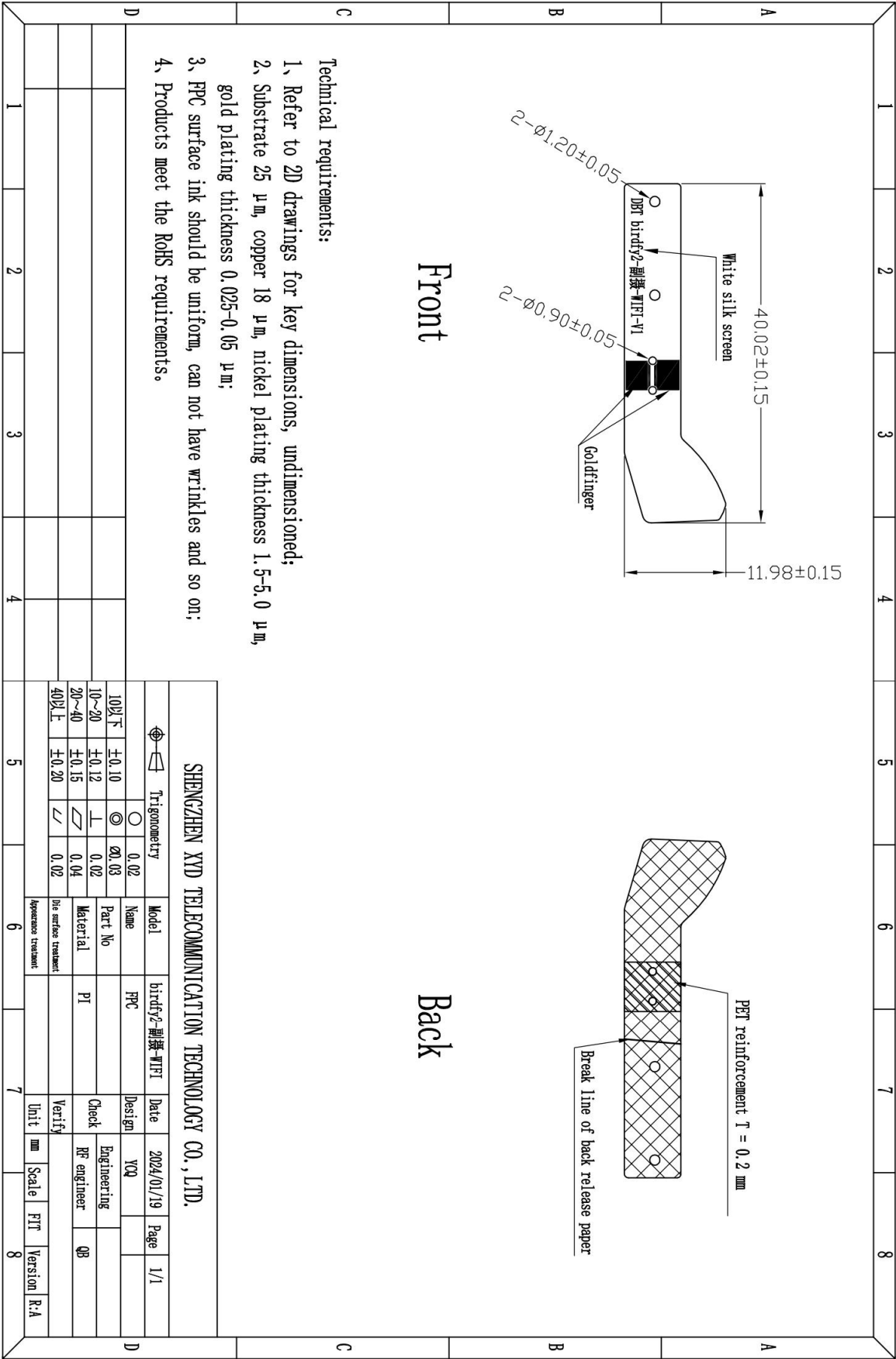
3. Dynamic test data

4.Diagram of antenna installation

5.Antenna matching circuit

6. Actual test data of the antenna

1. Antenna finished product

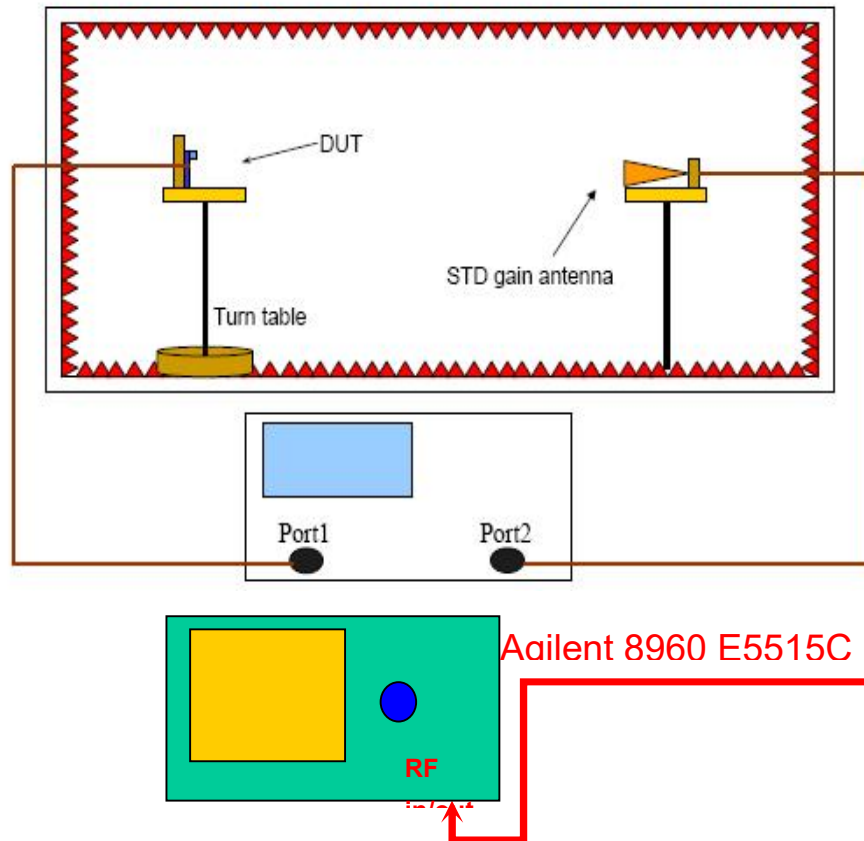


2. Technical indicators

A. Electrical properties	
Operating frequency range	2400~ 2500 MHz
Standing wave ratio	2400~ 2500 MHz: <1.7
Antenna gain (Peak)	2400~ 2500 MHz: 2.21 dBi
Radiation Efficiency (average)	2400~ 2500MHz : 55.8 %
Impedance	50 ohm
B. Material	
FPC	
C. Environment	
Operating temperature	- 30 °C ~ + 85 °C
Stored temperature	- 30 °C ~ + 85 °C

3.Dynamic test data

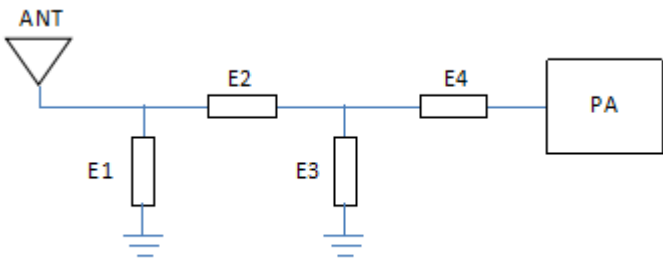
Test instrument: Agilent 8960 E5515B+ Shield Box



4.Diagram of antenna installation



5.Antenna matching circuit



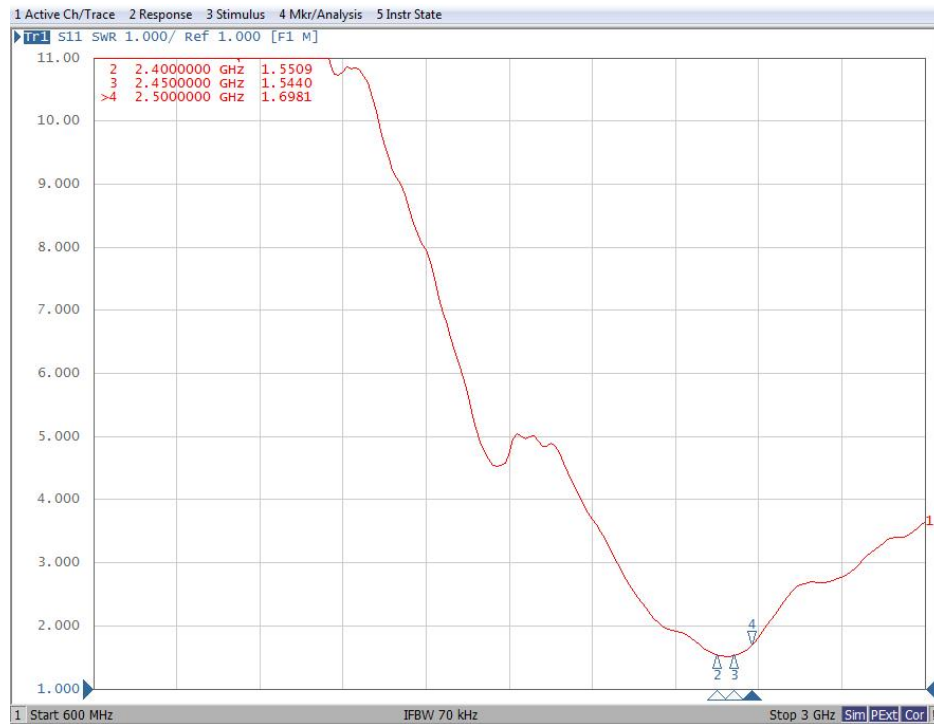
Element	2.4G			
E1	N/C			
E2	0Ω			
E3	N/C			
E4				



主板0R匹配,其它匹配N/C

6.Actual test data of the antenna

6.1)Passive antenna test data



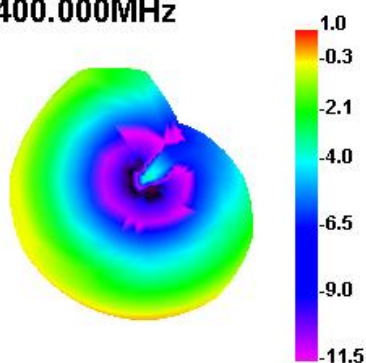
6.2)Active antenna test data

802.11b : 11Mbps			
Test Result	Wifi 2G TRP		
	1	6	11
Frequency (MHz)	2412	2437	2462
Txp Ave(dBm)	16.36	16.04	15.79
Test Result	Wifi 2G TIS		
	1	6	11
Frequency (MHz)	2412	2437	2462
Sens Ave(dBm)	-87.39	-87.49	-87.39
802.11g : 54Mbps			
Test Result	Wifi 2G TRP		
	1	6	11
Frequency (MHz)	2412	2437	2462
Txp Ave(dBm)	14.7	14.1	13.58
Test Result	Wifi 2G TIS		
	1	6	11
Frequency (MHz)	2412	2437	2462
Sens Ave(dBm)	-74.18	-73.9	-73.12
802.11n : MCS7			
Test Result	Wifi 2G TRP		
	1	6	11
Frequency (MHz)	2412	2437	2462
Txp Ave(dBm)	14.46	13.68	13.34
Test Result	Wifi 2G TIS		
	1	6	11
Frequency (MHz)	2412	2437	2462
Sens Ave(dBm)	-71.87	-72.55	-71.58

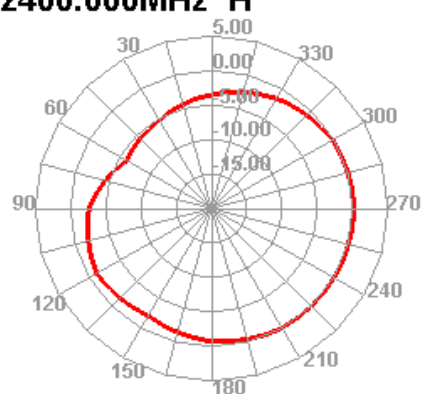
6. 3)Antenna Efficiency/gain/pattern

Freq (MHz)	Effi (%)	Gain (dBi)
2400	56.54	0.96
2410	55.94	0.71
2420	53.08	1.25
2430	54.52	1.05
2440	57.42	1.72
2450	52.79	1.37
2460	56.37	1.64
2470	54.15	1.47
2480	58.5	2.02
2490	54.18	1.56
2500	59.99	2.21
平均效率/增益	55.77	1.45

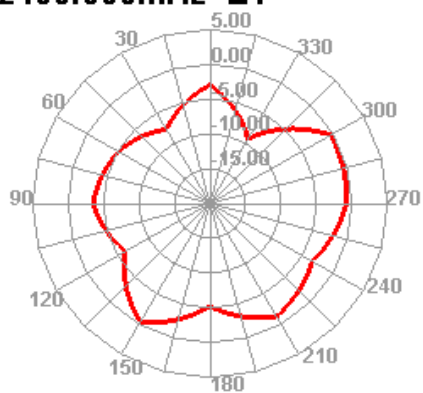
2400.000MHz



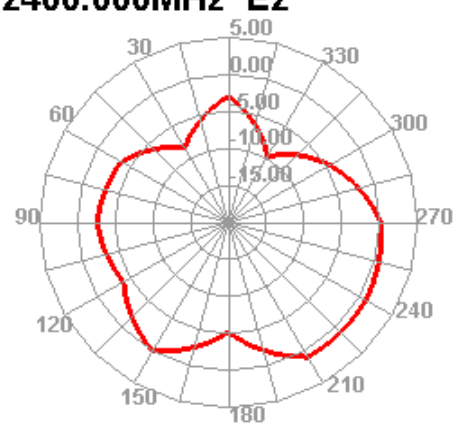
2400.000MHz H



2400.000MHz E1



2400.000MHz E2



Note:

- 1. The above test results are limited to the test prototype**
- 2. Changes in the overall casing material process, software version, accessories (camera FPC, speakers, earpieces, motors, batteries, etc.), and chips will lead to changes in the performance of the overall antenna.**
- 3. Changes in the environmental processing of the whole machine (such as grounding position, size, shielding method, etc.) lead to changes in the performance of the whole machine**

Solemnly declare:

The intellectual property rights of this antenna design and research and development are owned by our company. If we find that the same products are supplied to your company without our permission, our company will investigate the corresponding legal responsibilities according to law. Please respect the intellectual property rights. Your support is our unlimited power. , thank you for your cooperation!