



Antenna sample specification Sheet



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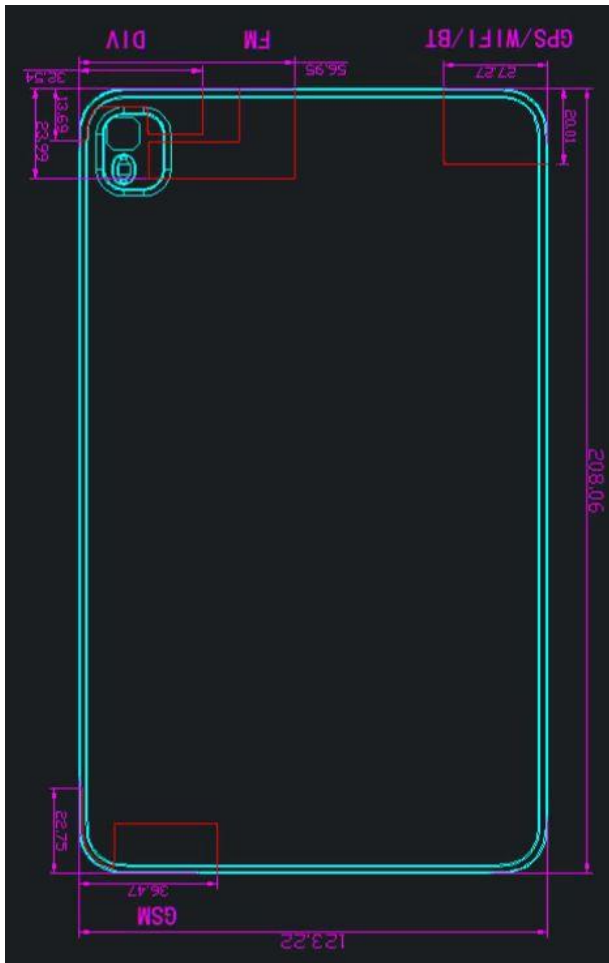
Customer	WATER WORLD		
Item No.	GT001		
Material code			
Version	T:A		
Date	2022.09.01		
Made by	RF checked by	PE checked by	Approved by
Kun Zhu	Mulong Lv	Fulun Li	Liao Jian
Customer Confirmation:			

Project basic information

Antenna Type	PIFA
Antenna Material	FPC
Frequency Band	GPS WIFI 2.4G WIFI5.8G BT
OperatingFrequency(MHz)	2400MHz-2500MHz 5150MHz-5850MHz 1575.42MHZ BT2400-2500
Shell Material	Plastics

1、

Mobile phone appearance and antenna sample picture



Structural specification standard

The composition of the antenna, the antenna is attached to the antenna area of the inner frame of the mobile phone, and is realized by crimping the gold finger immersion gold motherboard.

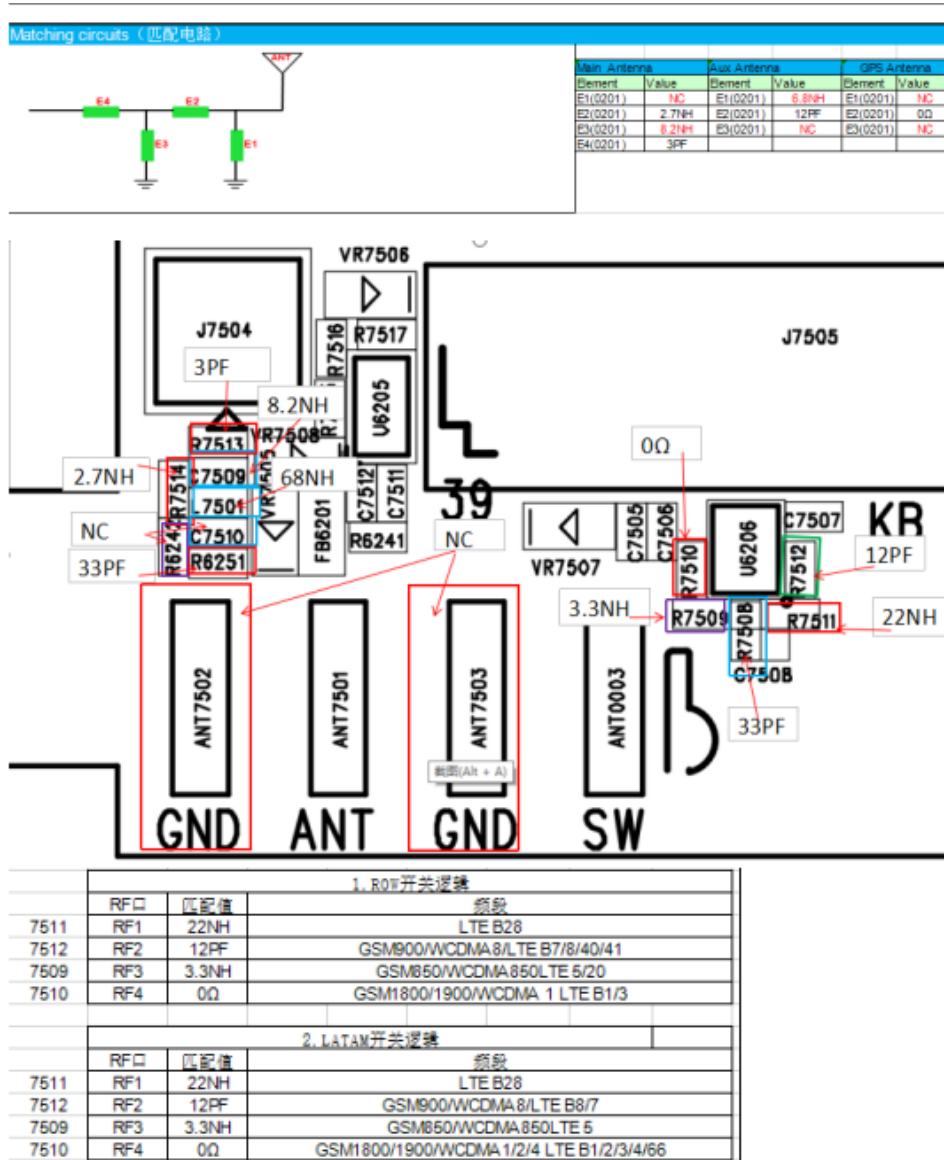
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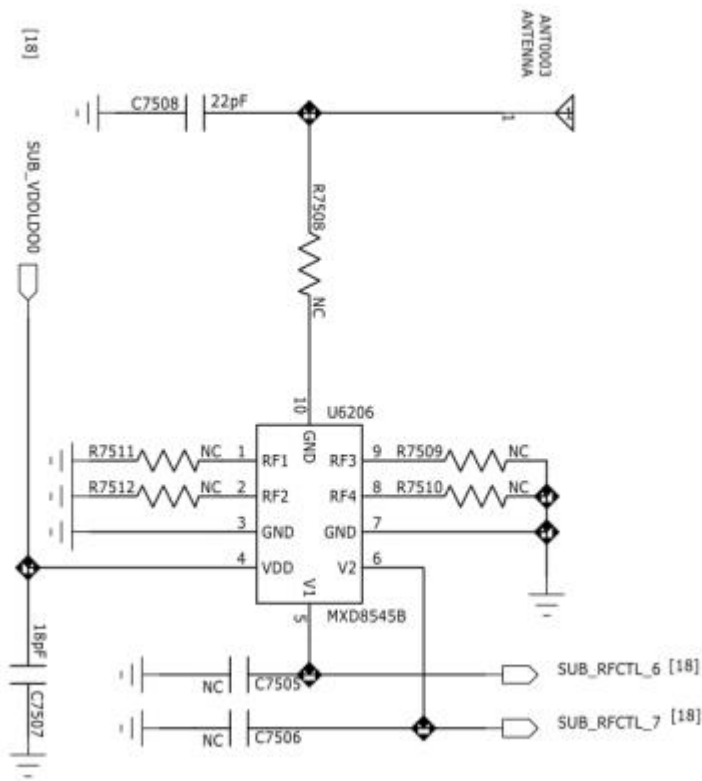
Environments processed as following:

Environmental treatment of the whole machine is temporarily unavailable.

3、

The antenna matching circuit



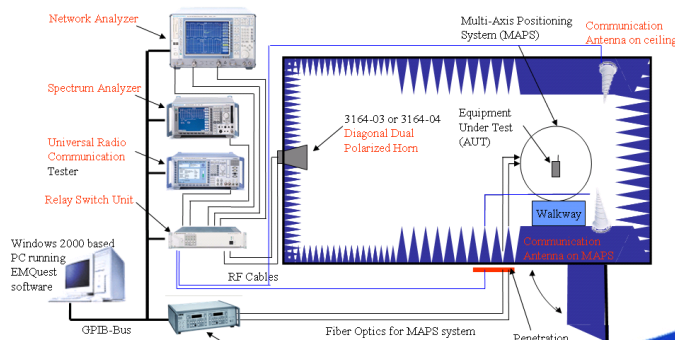


4、

Antenna test equipment

4.1

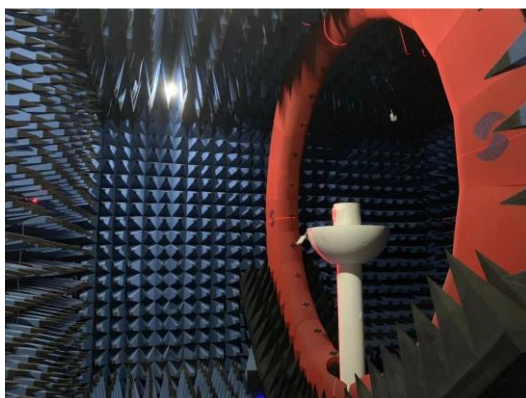
The principle diagram of the ETS anechoic chamber



Picture 1. Dark room system assembly test connection diagram

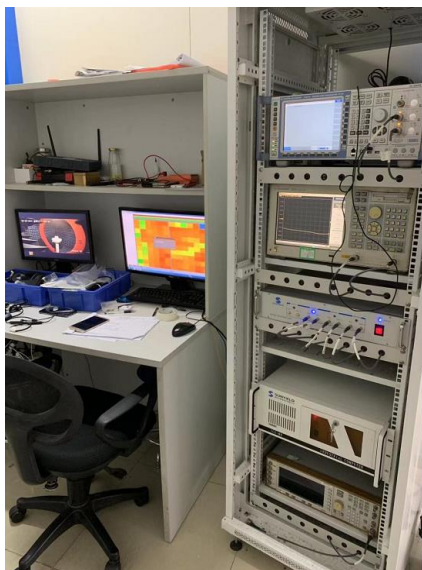
4.2

Pictures of the ETS anechoic chamber



Inside the ETS anechoic chamber

- 1. CMW500
- 2. Agilent Technologies E5071B
- 3. 5G ACTIVE SWITCHING UNIT



- 1. CMW500
- 2. Geneial Test Dual-channel Amplifier DA-4303
- 3. StarPoint SP9500 5G Wireless Test Platform



Test Machine

5. Antenna gain & Passive Efficiency Test

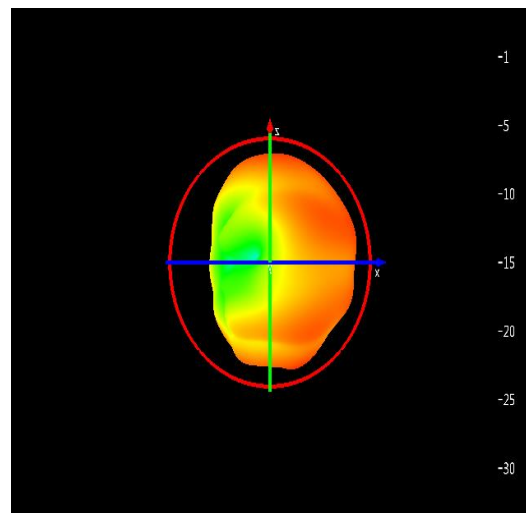
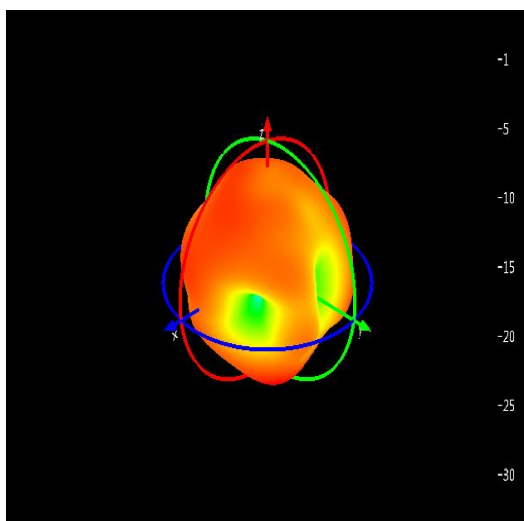
Operating frequency band	Operating frequency range	Maximum Gain (dBi)	Average Gain(dBi)	efficiency 效率(%)	Type
WiFi 2.4G	2420-2480MHZ	-0.5	-4.3	36.1%	FPC
WiFi 5G	5150-5180MHZ	-0.5	-5.32	29.28%	FPC
BT	2420-2480MHZ	-0.5	-4.3	36.1%	FPC
GPS	1575.42	-1.5	-3.99	39.92%	FPC

5.1 Active test report

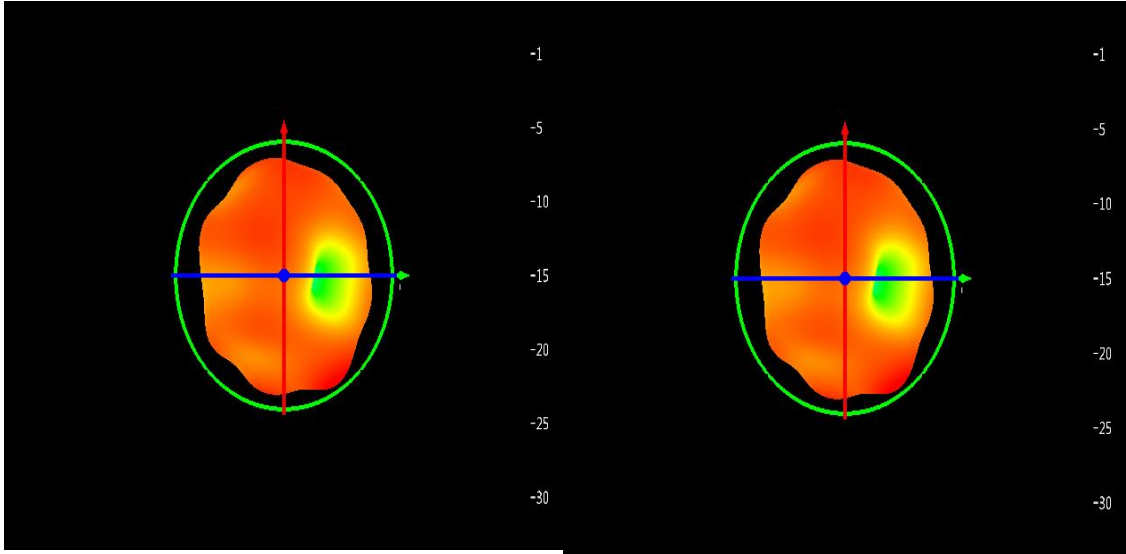
BAND	BAND	DATA RATE (Mbit/s)	CH	MP Conduction		Conduction Class B FS		FS OTA		GAP FS	
				TX	RX	TRP	TIS	TRP	TIS	TRP	TIS
WIFI 2.4g	802-11B	TRP@1Mbps TIS@11Mbps	1	17.5	-86	12.50	-83.00	12.65	-80.59	0.15	-2.41
			6	17.6	-87	12.50	-83.00	12.25	-80.24	-0.25	-2.76
			13	17.2	-86	12.50	-83.00	13.18	-81.47	0.68	-1.53
	802-11G	TRP@6Mbps TIS@54Mbps	1	16.1	-75.8	11.00	-71.00	11.34	-68.69	0.34	-2.31
			6	16.3	-75.9	11.00	-71.00	10.89	-67.59	-0.11	-3.41
			13	15.8	-75.7	11.00	-71.00	11.34	-67.21	0.34	-3.79
	802-11N	MSC7.65Mbps	1	14.7	-70	8.00	-68.00	10.79	-63.32	2.79	-4.68
			6	14.8	-70	8.00	-68.00	10.05	-63.61	2.05	-4.39
			13	14.3	-70	8.00	-68.00	10.63	-63.87	2.63	-4.13
WIFI 5G	11A	A@6Mbps N@MSO	36	13.5	-89	11.00	-84.00	11.24	-85.16	0.24	1.16
			56	13.25	-89	11.00	-84.00	11.37	-85.42	0.37	1.42
			165	13.5	-89	11.00	-84.00	11.21	-85.33	0.21	1.33
	11AC	MCS9	36			8.00	-56.00	8.14	-55.29	0.14	-0.71
			56			8.00	-56.00	8.23	-55.38	0.23	-0.62
			165			8.00	-56.00	8.17	-55.64	0.17	-0.36
GPS	捕获										

5.3 3D

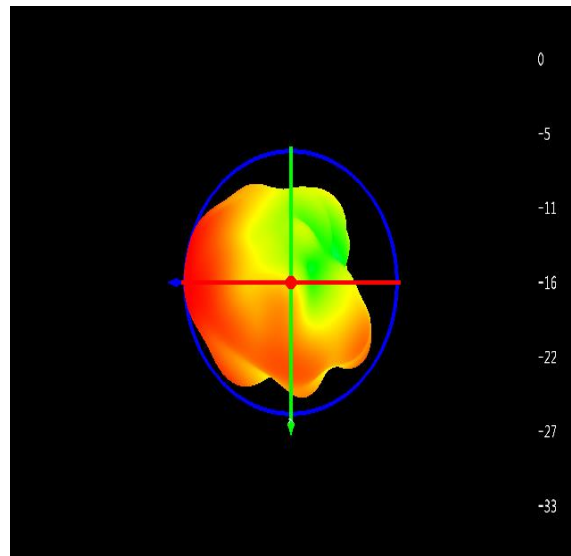
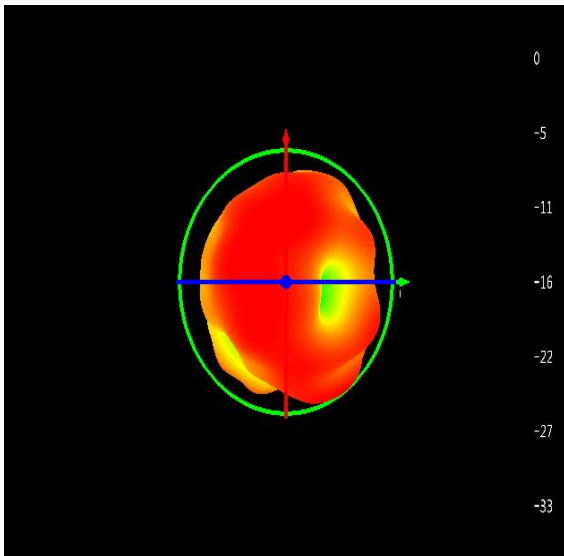
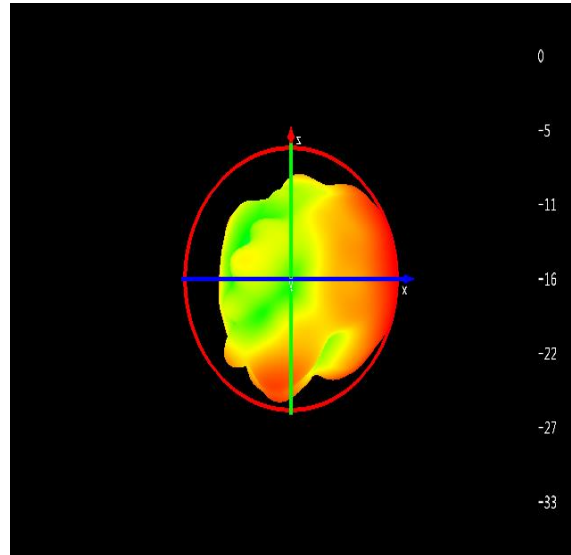
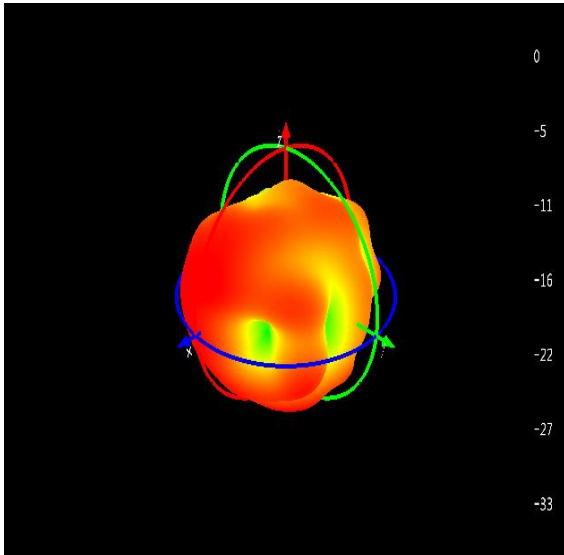
GPS



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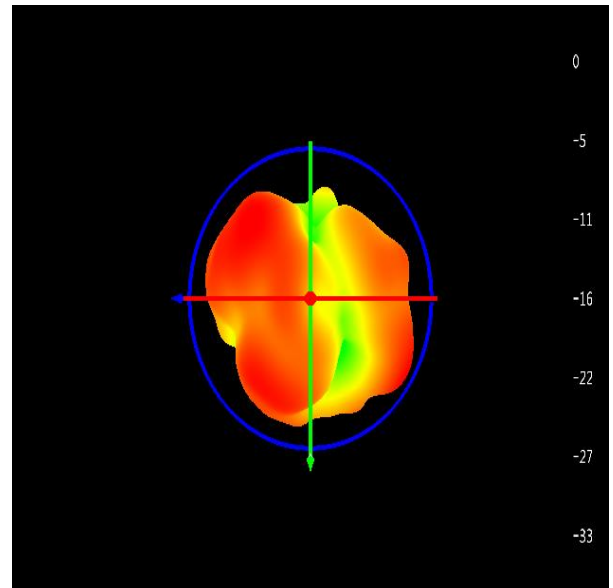
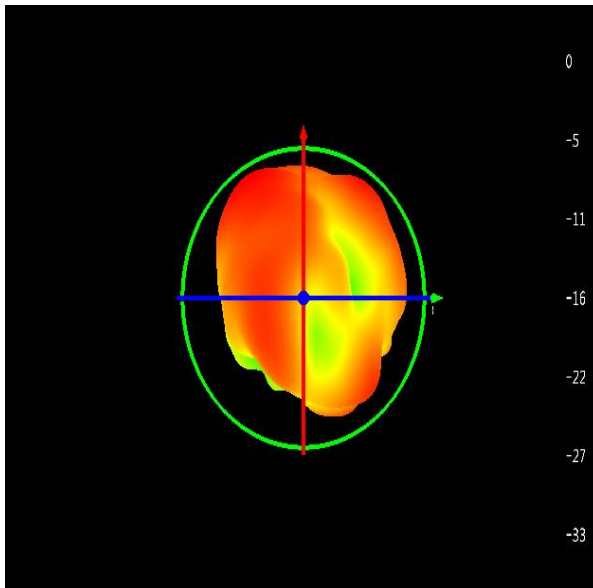
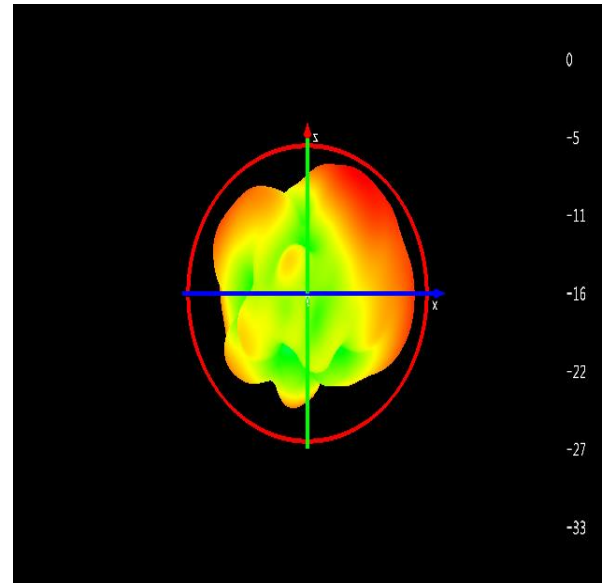
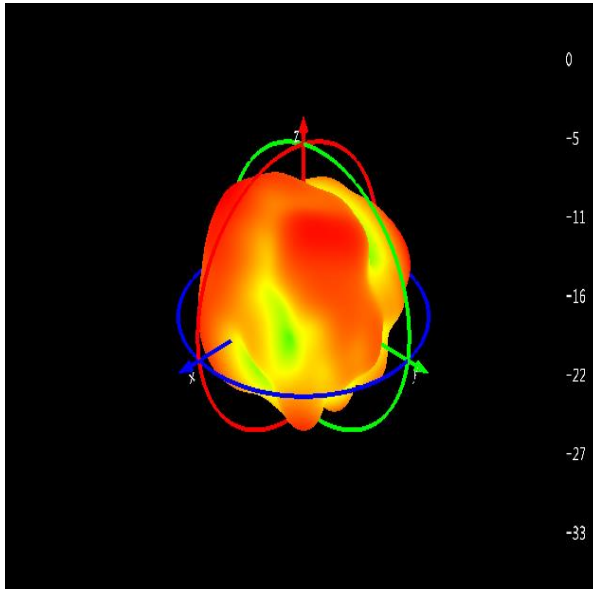


Wifi 2.4G



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Wifi 5G



5.1-1 test site

SUNYIELD microwave anechoic chamber: the test frequency range is 800MHz-6GHz, the quiet zone range is 50cm circumference, and the reflectivity is less than -50 dB.

6、 Test conclusion

The index can meet normal antenna index such asGPS WIFI BT

Note: This antenna only apply to sample debug.Any change of main board version,RF material or mobile accessories such as mic,screen,speaker,and motor have to be used after our company’s test and verification.

