

ANT Manufacturers: ANWEI commnuication Equipment Co.,Ltd
Address:2nd Floor, East Block, Building 5, Yifenghua Innovation Industrial Park,
Huaning Road, Dalang Street, Longhua District, Shenzhen City, Guangdong Province

APPROVAL SHEET

客户 Customer	Youmi	规格型号 Specs	A13 Tab
安威料号 Part Number	AW006-A13TAB-021-A0 AW006-A13TAB-022-A0 AW006-A13TAB-023-A0	频 段 Frequency Band	BT&2.5G WIFI:2400~2483.5MHZ 5G WIFI:5100~5800MHZ GSM850/900/1800/1900 WCDMA1/2/4/5/8 B1.2.3.4.5.7.8.12.17.18.19.20.25.26.28.66.34.38 .39.40.41
颜 色 Color	black	版 本 Edition	REV:A0
销 售 Salesperson	Mr.Xie	设 计 Design	WUXI
结 构 Structure	QIN YUN LIN	确 认 Confirm	
日 期 Date	2023.4.4	签字日期 Signing Date	

客户确认 Customer confirmation:

携手共进 共创未来
Join hands to create the future

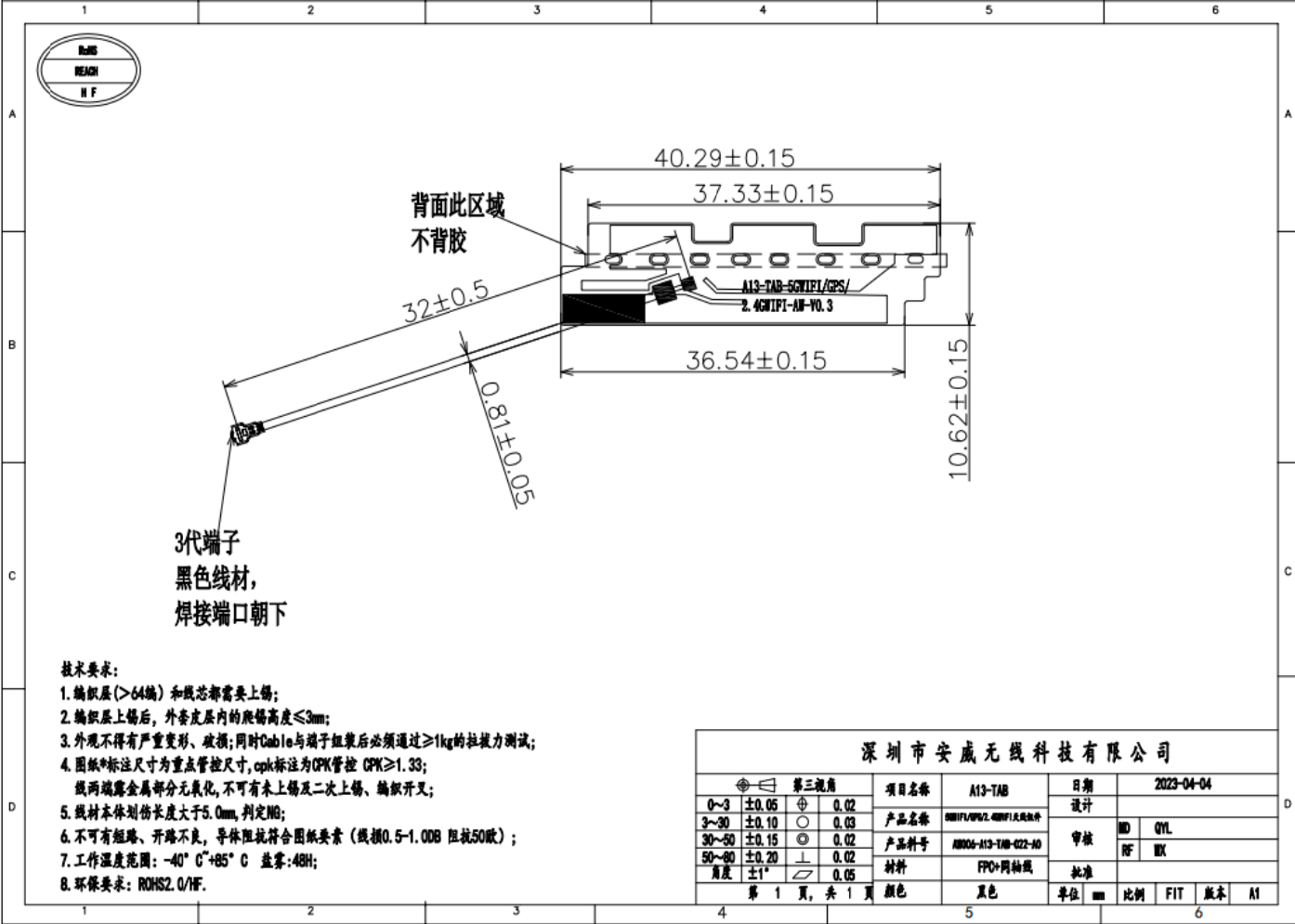
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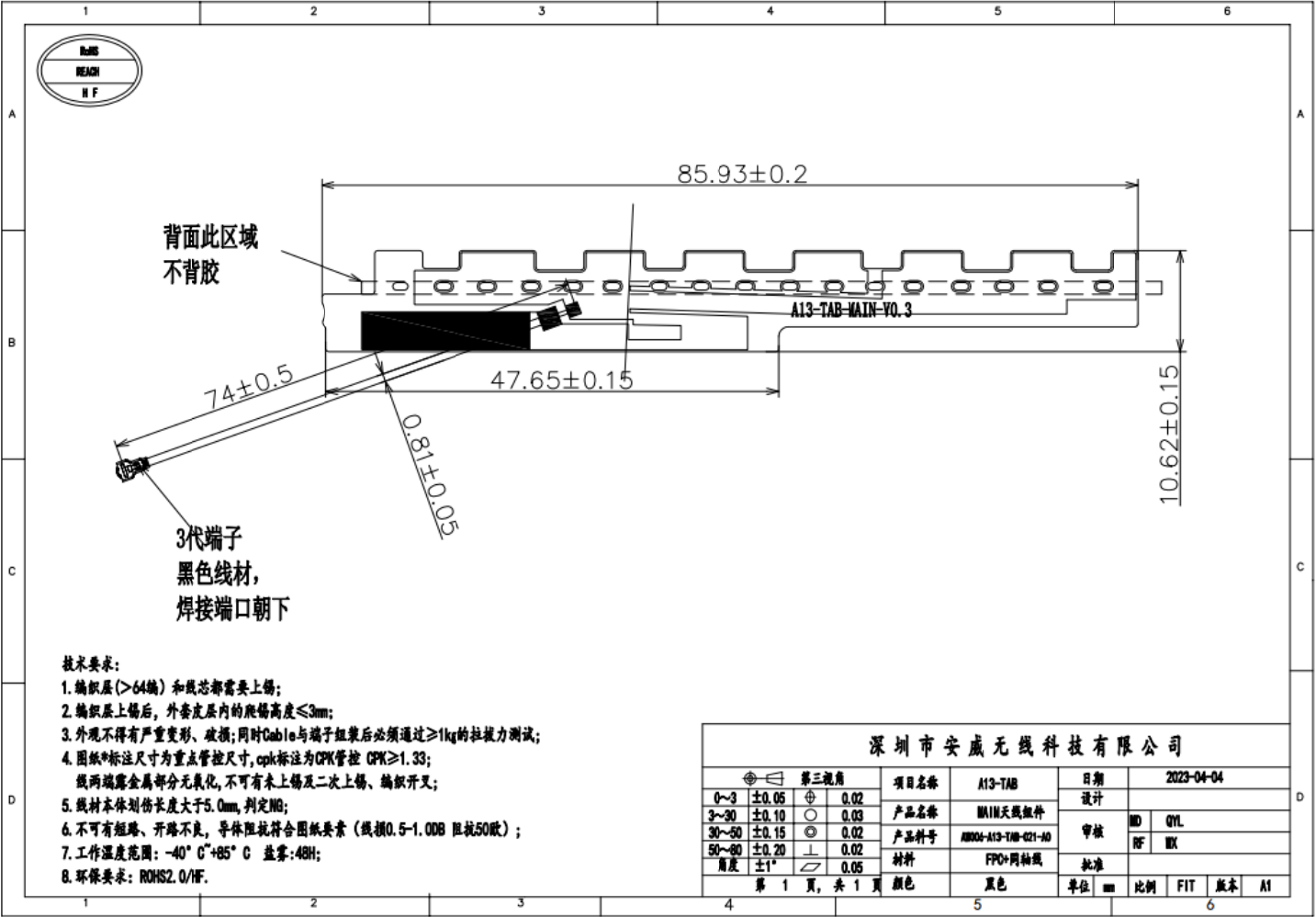
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一、产品规格(Product specification)

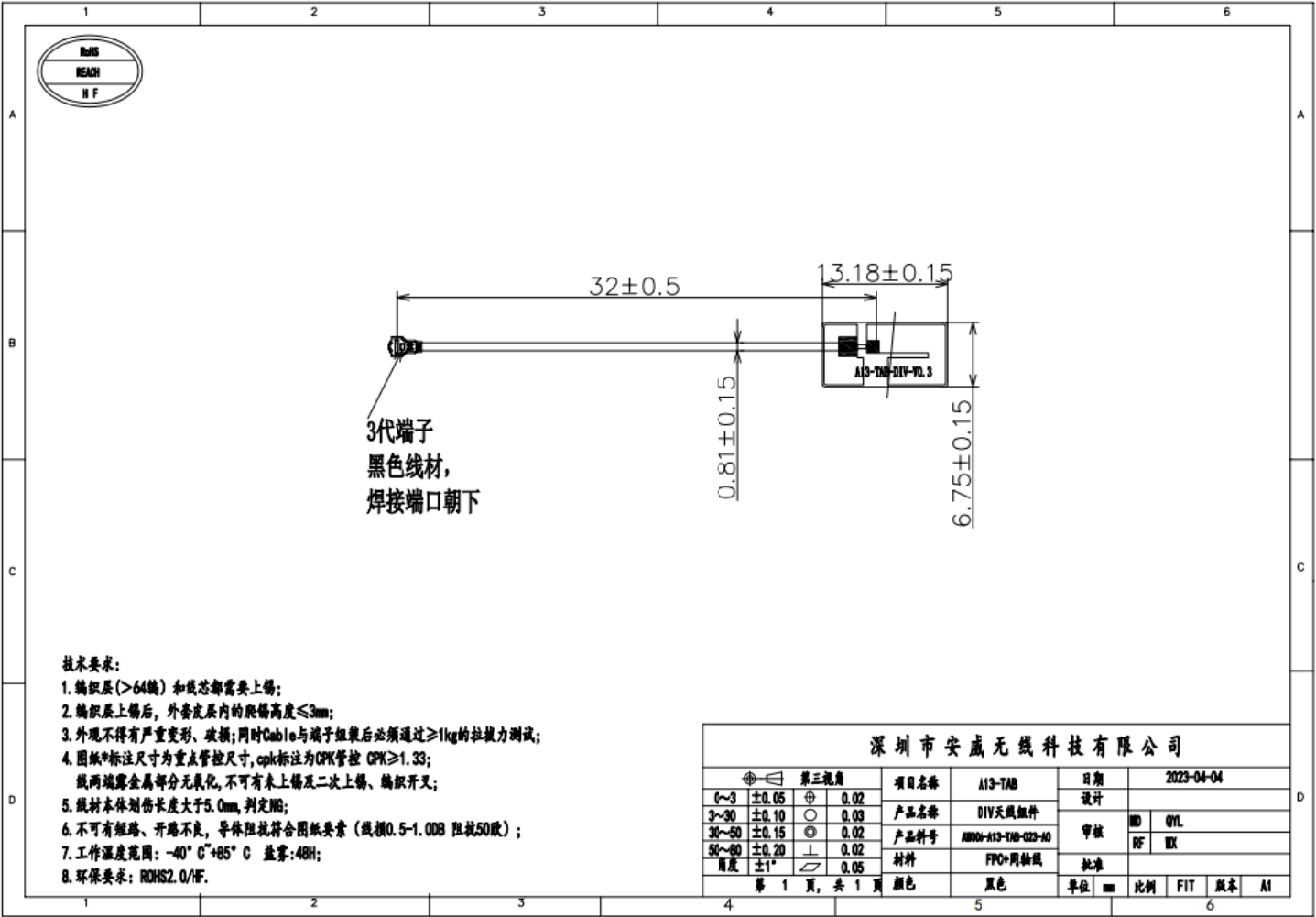
The report mainly provides the parameter test of A13 Tab antenna performance. The A13 Tab antenna is a 4G antenna. (As shown below)



BT&WIFI&GNSS ANT



Main ANT



DIV ANT

二、电器性能(Electrical performance)

1.规格标准(Specification standard)

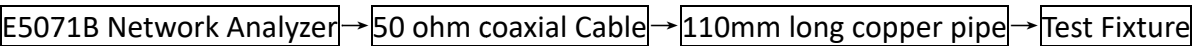
The working frequency band of A13 Tab antenna is 699~960MHZ, 1710~2700MHZ, and resonance occurs in this frequency band

The structure of the antenna: FPC

三、参数的测试(Parameter test)

1.测试的设置(Test settings)

The connections of the VSWR test setup in turn are:



Handling of test fixtures:

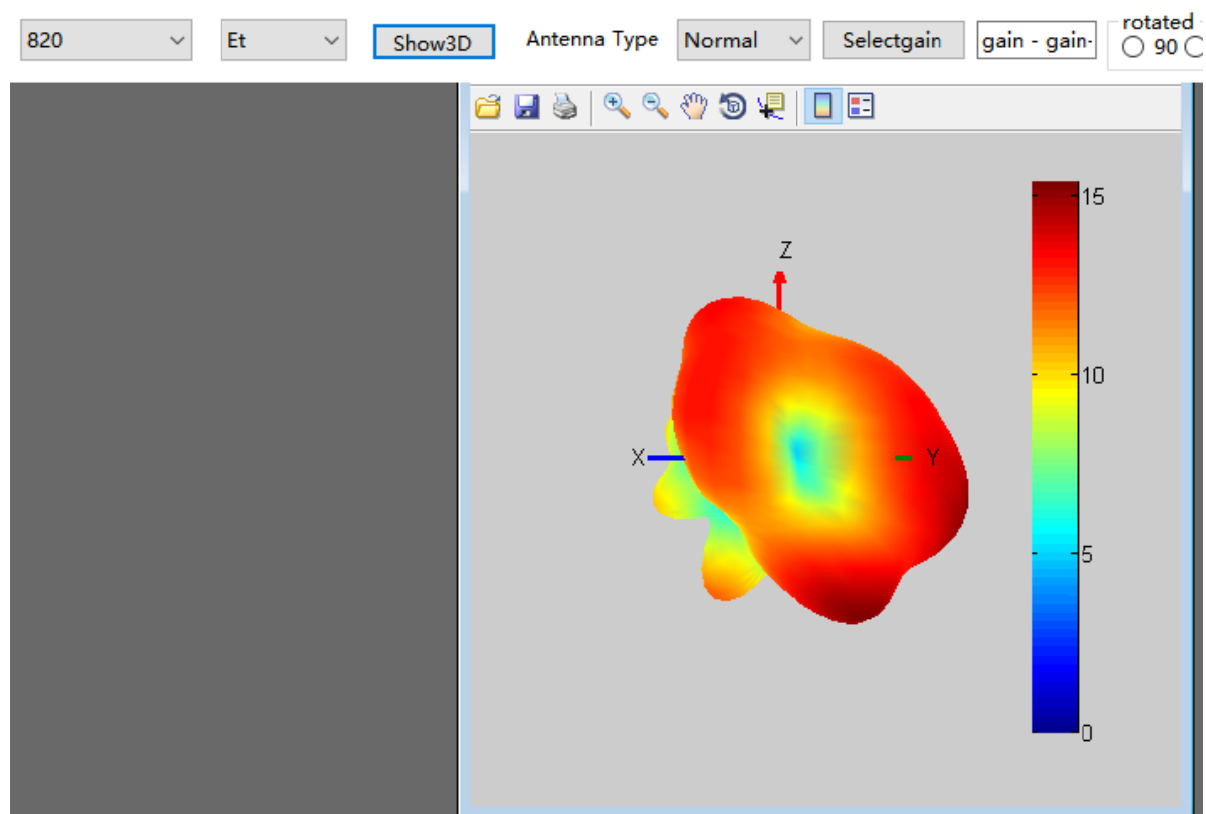
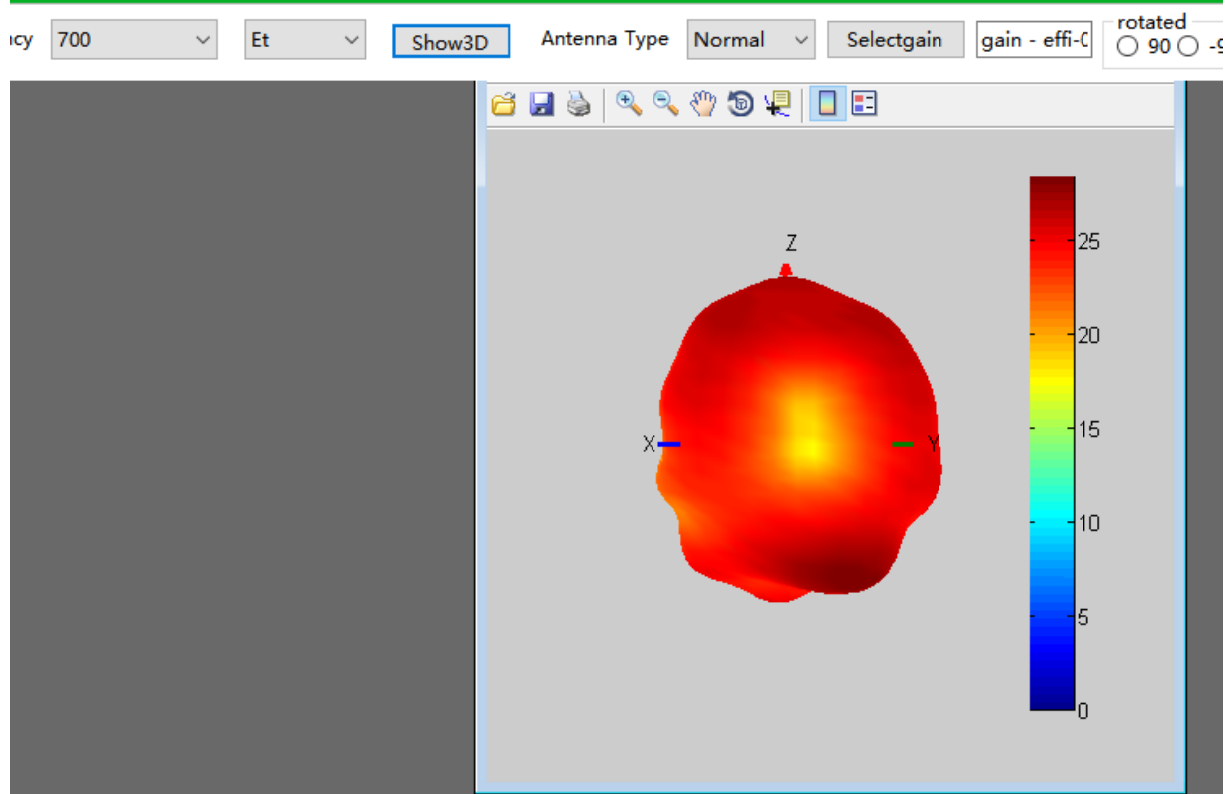
Use a hard cable to lead out the SMA-J connector from the 50 ohm test point of the antenna on the mobile phone PCB, connect it to the copper tube covered with the choke coil, and then connect to other devices in turn.

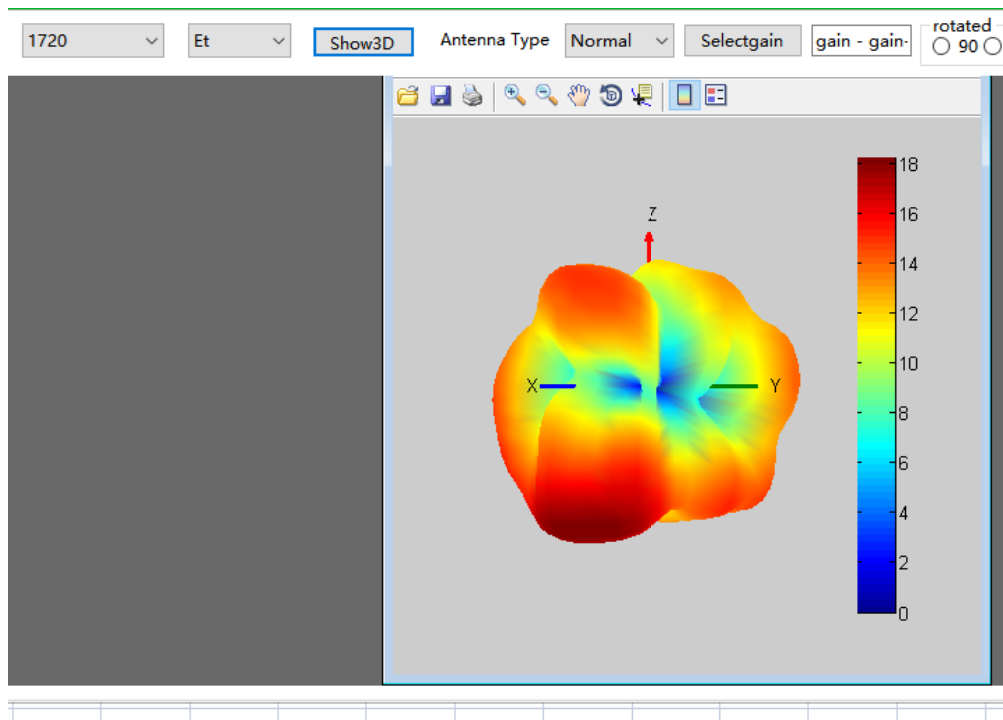
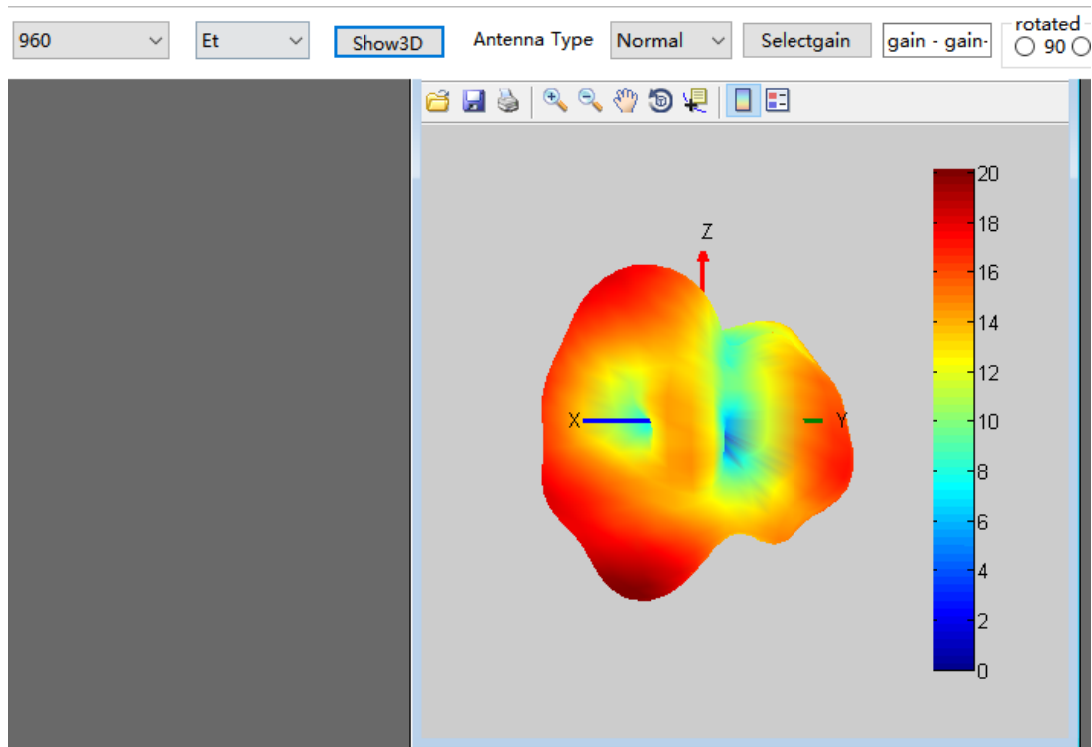
Main antenna passive parameters:

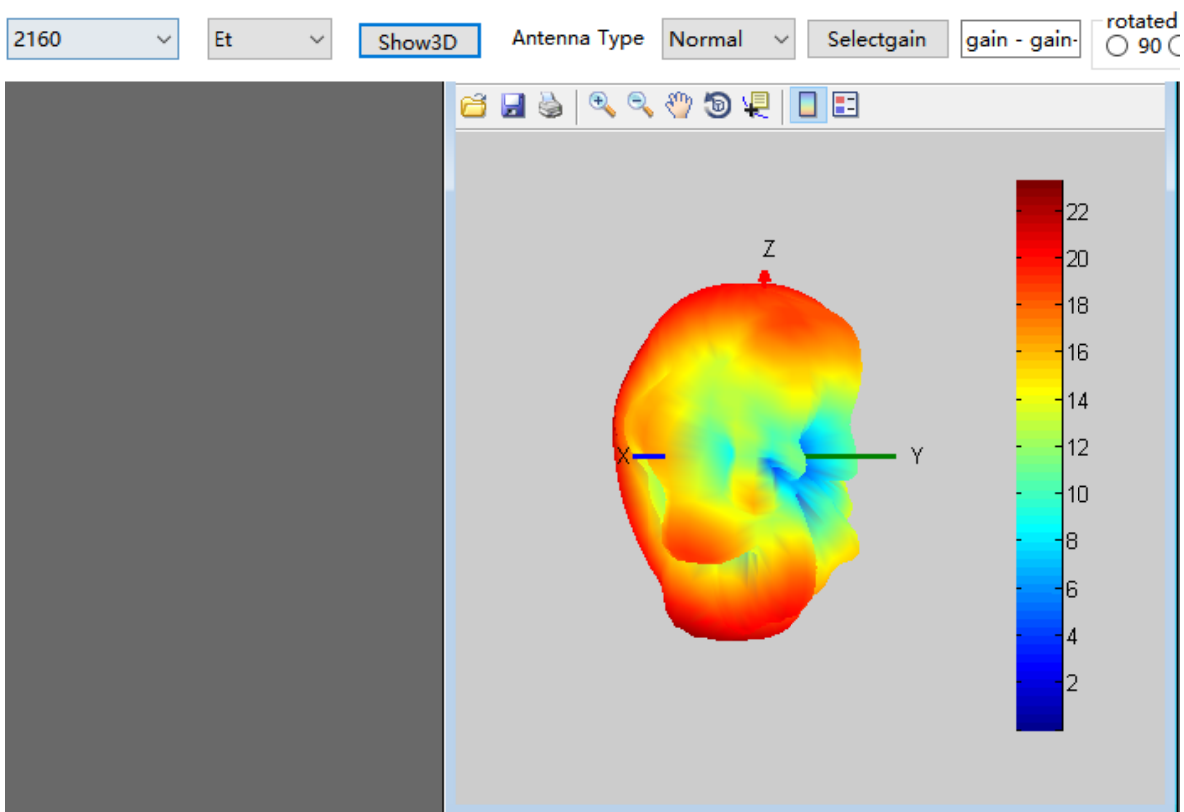
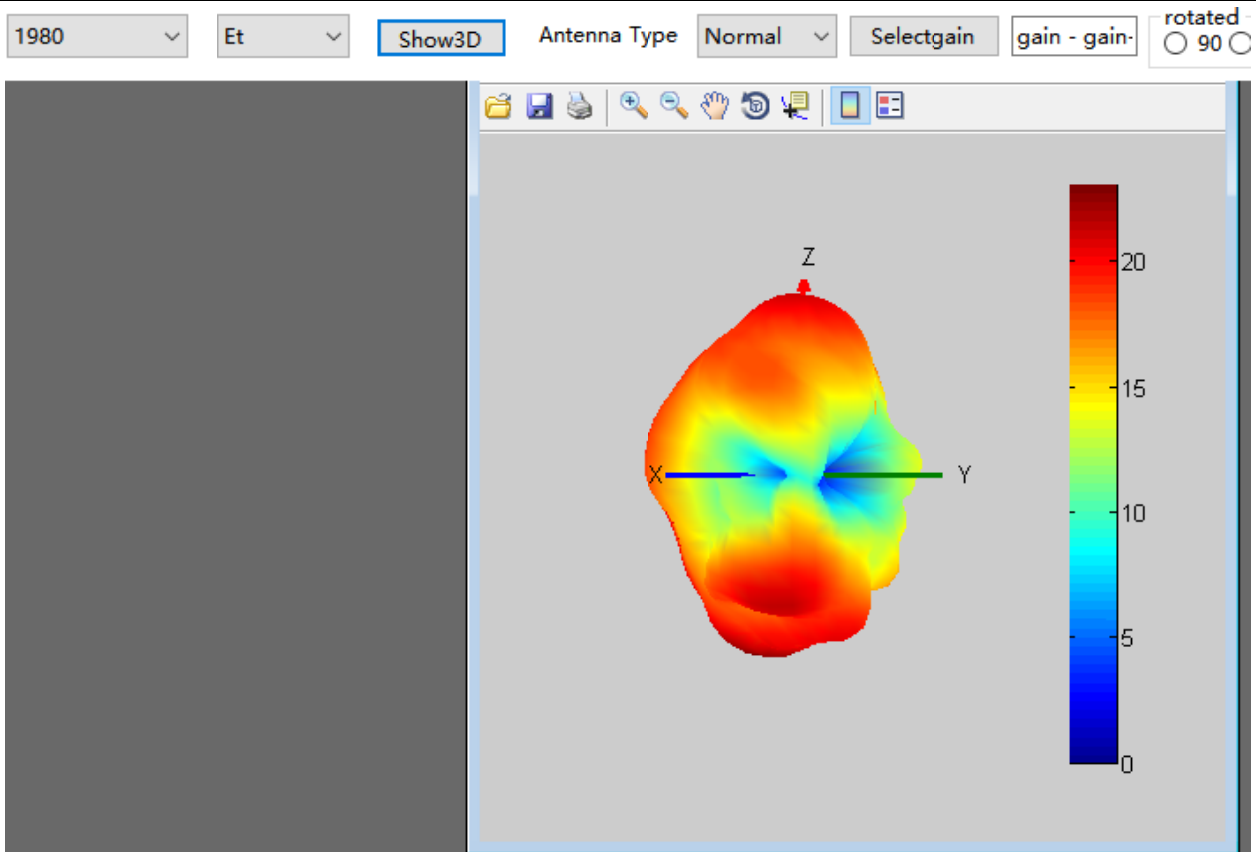
工作频段(Working frequency band): 699~960MHZ, 1710~2700MHZ

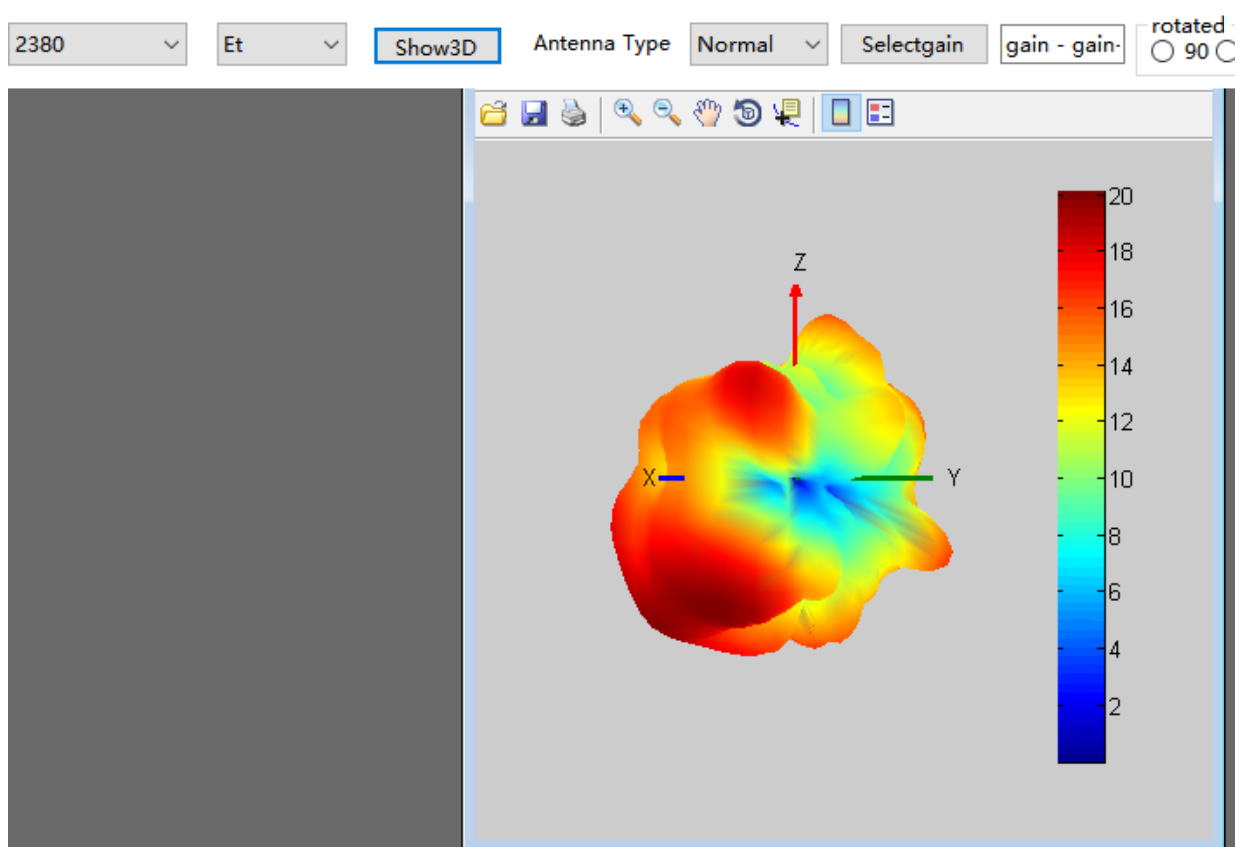
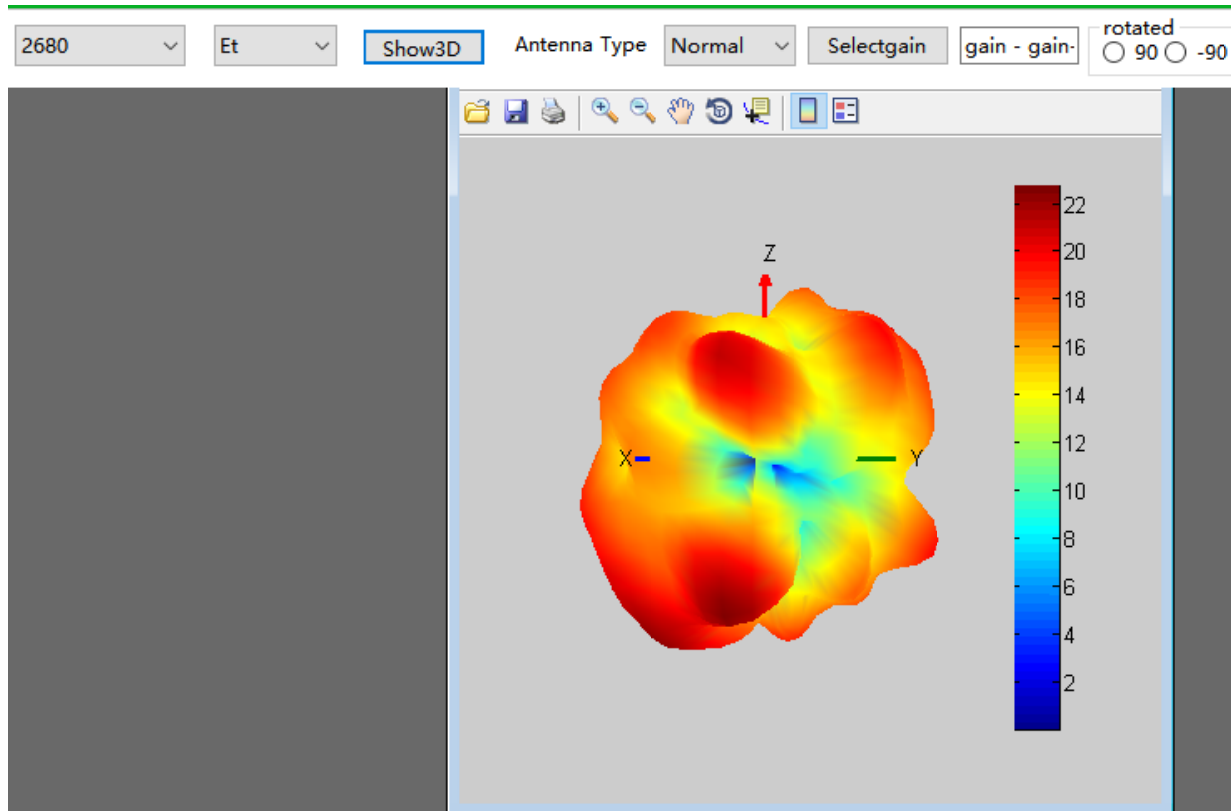
2G	2/3/5/8
3G	1/2/4/5/8
4G	B1/2/3/4/5/7/8/12/17/18/19/20/25/26/28/66/34/38/39/40/41
BT/WIFI	2. 4G+5G
GPS	1575. 42MHz

频段 Band	gain 增益 (dBi)	
LTE-B12//B17/B28	-8.7	700MHZ
GSM850,WCDMA-B5/,LTE-B5/B18/B19/B20/B26	-5.8	820MHZ
GSM900,WCDMA-B8,LTE-B8	-8.1	960MHZ
DCS1800,LTE-B3,WCDMA-B4,LTE-B4/B66	0.42	1720MHZ
PCS1900,WCDMA-B2,LTE-B2/B25/B39	0.2	1980MHZ
WCDMA-B1,LTE-B1/B34	-0.95	2160MHZ
LTE-B7/B38/B41,	2.47	2680MHZ
LTE-B40	0.91	2380MHZ
GPS	0.7	1575MHZ
2.4G WIFI/BT	2.1	2400MHZ
5G WIFI	0.8	5100MHZ



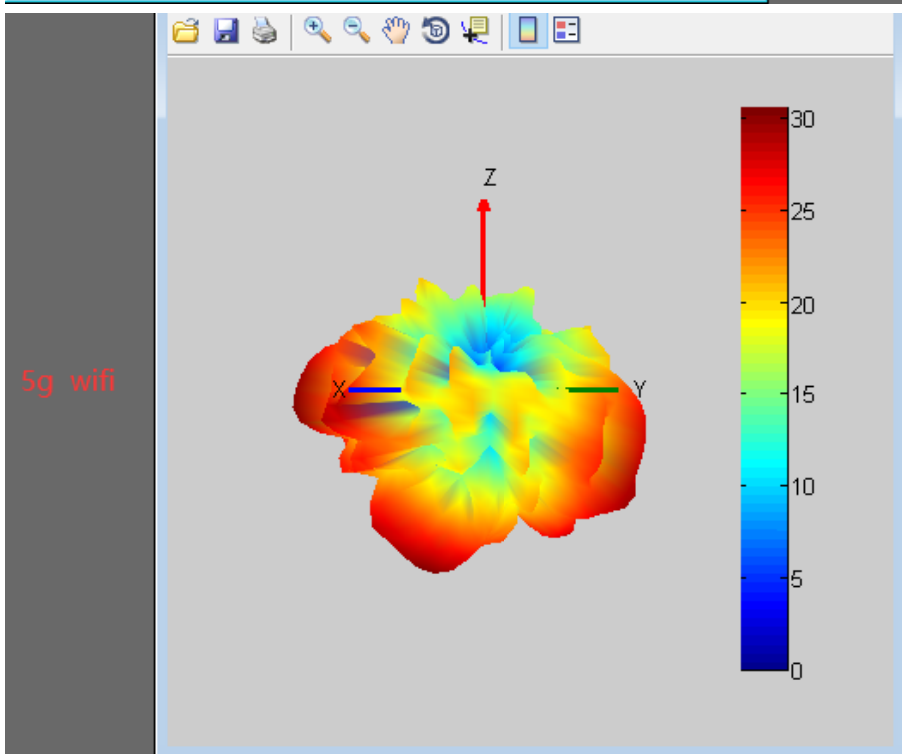
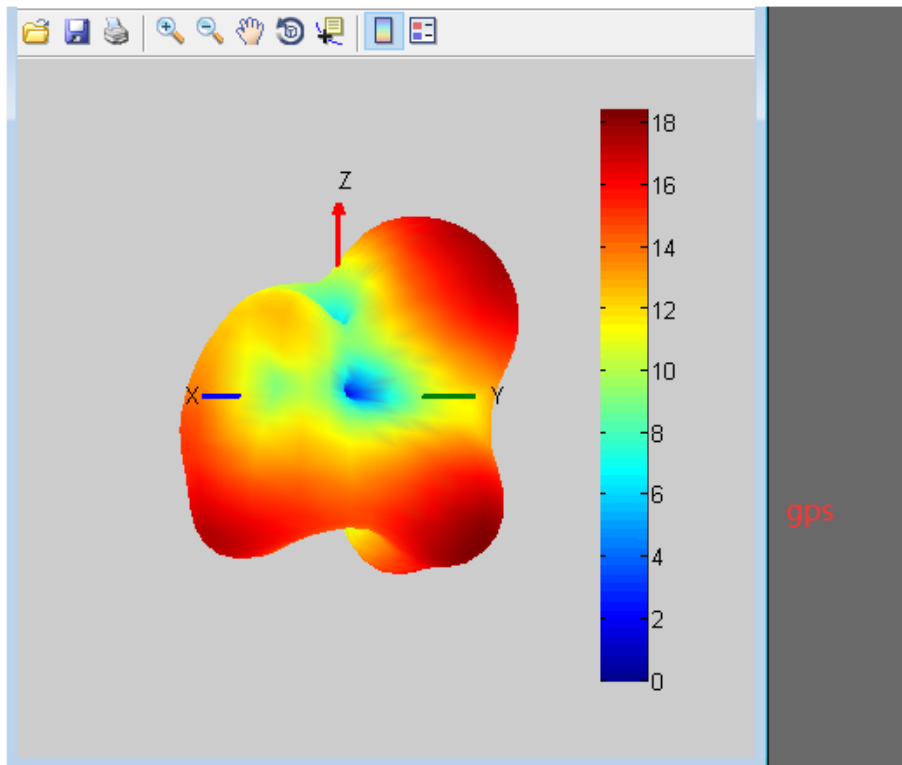


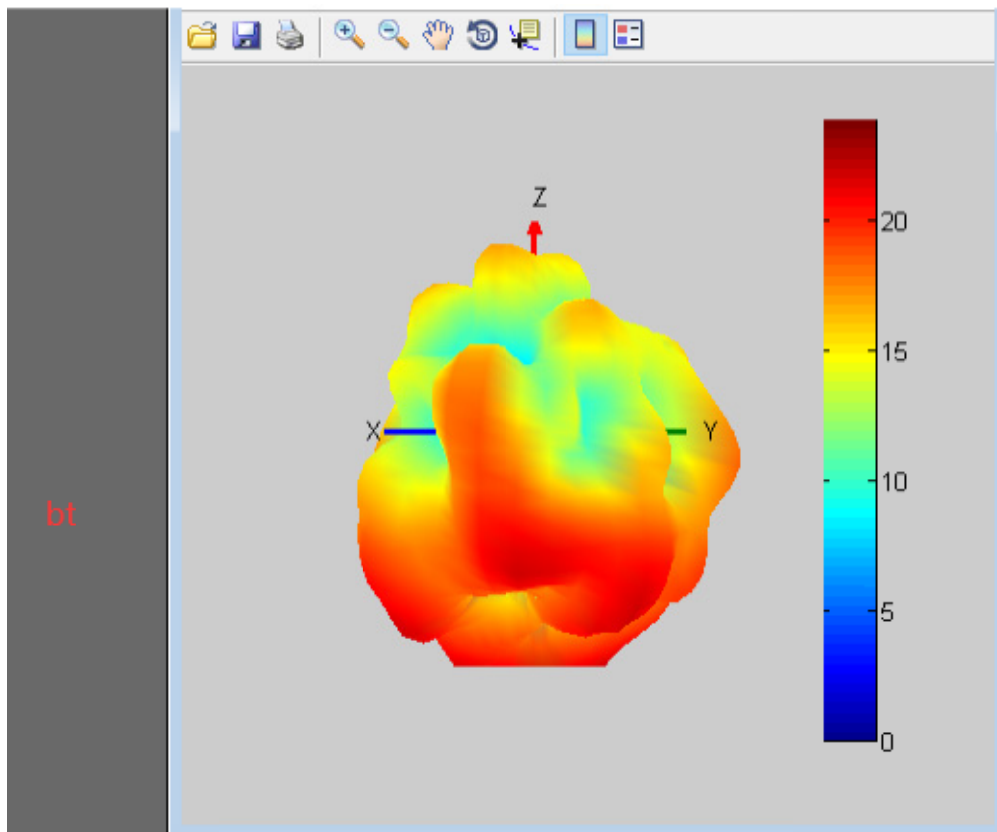
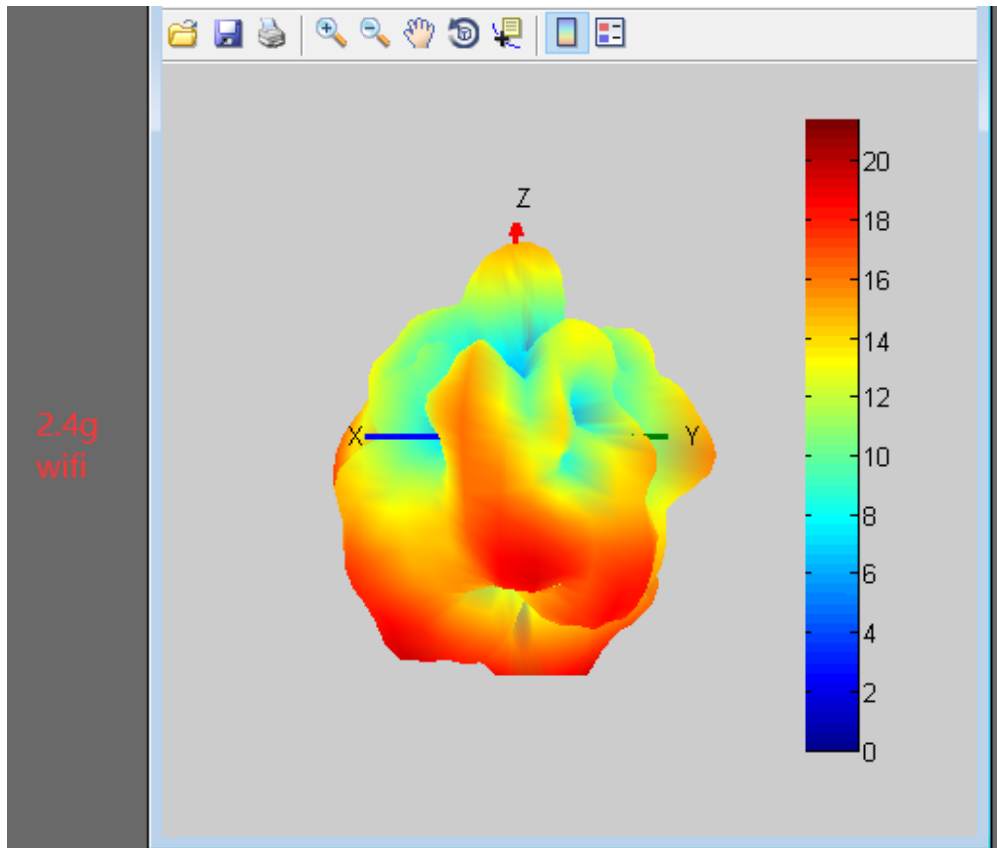




GPS/WIFI/BT antenna passive parameters:

工作频段(Working frequency band): 1560~1580MHZ, 2400~2500MHZ,5180~8525MHZ





2.测试结果(Test result)

everything is normal.

四、有源测试的设置(Active test setup)

The connections of the active test device in turn are:

Agilent8960→50 ohm coaxial cable→Satimo SG16 Test System→device under test

1.测试的场地(Test site)

AW microwave anechoic chamber: the test frequency range is 400MHz—6GHz, the quiet zone range is 40cm circumference, and the reflectivity is less than -90 dB.

2.测试结果(Test result)

The maximum radiated power and maximum receiving sensitivity reflect the maximum power radiation value and the best receiving performance of the antenna in the entire radiation space. TRP and TIS reflect the average radiation power and average receiving sensitivity of the antenna, that is, reflect the overall receiving performance of the antenna.

The following are the active test results of the main antenna of the A13 Tab Smart Tablet Computer:

主天线暗室数据

	Channel	TRP (dBm)	TIS (dBm)								Channel	TRP (dBm)	TIS (dBm)	
FDD B1	LOW	16.38			FDD B17	LOW	14.19			FDD B66	LOW	15.13		
	medium	16.34				medium	14.14				medium	15.11		
	high	16.05	-90.2			high	14.08	-85.4			high	15.21	-88.5	
FDD B2	LOW	17.12			FDD B18	LOW	14.57							
	medium	17.32				medium	14.91							
	high	17.01	-90.3			high	14.95	-90.3						
FDD B3	LOW	14.16			FDD B19	LOW	14.81							
	medium	14.06				medium	15.4							
	high	15.03	-90.2			high	15.61	-90.5						
FDD B4	LOW	15.35			FDD B20	LOW	15.59							
	medium	14.07				medium	15.16							
	high	15.14	-89.5			high	15.6	-87.5						
FDD B5	LOW	15.04			FDD B25	LOW	14.78							
	medium	15.11				medium	14.25							
	high	15.26	-90.2			high	14.86	-86.8						
FDD B7	LOW	17.4			FDD B26	LOW	14.13			TDD B38	LOW	17.31		
	medium	17.08				medium	14.88				medium	16.04		
	high	17.03	-90.5			high	15.33	-90.3			high	15.55	-86	
FDD B8	LOW	16.36			FDD B28A	LOW	14.11			TDD B40	LOW	16.22		
	medium	15.53			medium	14.09			medium	16.4				
	high	15.04	-90		high	15.18	-86.1		high	17.08	-85			
FDD B12	LOW	13.55		FDD B28B	LOW	14.11		TDD B41	LOW					
	medium	14.12			medium	15.07			medium	16.05	-84.2			
	high	14.23	-88.1		high	16.14	-87.2		high					

主天线暗室数据

GSM 850	128	25.52		W 1	LOW	17.29		
	190	24.17			medium	17.1		
	251	24.05	-101.2		high	16.57	-103.	
GSM 900	1	24.15		W 2	LOW	16.06		
	62	23.50			medium	17.19		
	124	23.09	-102.3		high	17.62	-102.0	
DCS 1800	512	23.01		W 4	LOW	15.3		
	698	22.12			medium	15.31		
	885	22.1	-103.1		high	15.1	-103.3	
PCS 1900	512	23.34		W 5	LOW	15.17		
	661	23.24			medium	15.78		
	810	23.24	-102.2		high	15.11	-102.5	
				W 8	LOW	15.13		
					medium	14.01		
					high	14.62	-101.5	

WIFI测试效果：

BAND	2.4GWIFI			5GWIFI		
CHANNEL	low	medium	high	low	medium	high
TRP (dBm)	12.42	12.24	12.1	9.74	10.42	11.35
TIS (dBm)	-80.3	-81.5	-81.35	-70.78	-70.9	-71

GPS天线实际测试效果：



Recommendations and Conclusions

This report is based on the electrical performance of the antenna measured by the mobile phone provided by the customer, please review it carefully.

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