Shenzhen Anwei Wireless Technology Co., Ltd

Specification

客户 Customer	Cloud base	规格型号 Specs	S105
安威料号 Part Number	AW006-S105-020-A0 AW006-S105-021-A0 AW006-S105-022-A0	频　段 Frequency Band	BT&2.5G WIFI:2400~2483.5MHZ 5G WIFI:5100~5800MHZ GSM850/900/1800/1900 WCDMA1/2/4/5/6/8/19 CDMA BC0 BC1 BC10 B1.2.3.4.5.7.8.12.13.17.18.19.20.25.26.28.66.71 .34.38.39.40.41
颜　色 Color	black	版　本 Edition	REV:A1
销　售 Salesperson	Mr.Xie	设　计 Design	WUXI
结　构 Structure	QIN YUN LIN	确　认 Confirm	
日　期 Date	2022/11/16	签字日期 Signing Date	

客户确认 Customer confirmation:

<div align="center">

携手共进　共创未来

Join hands to create the future

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目录

一、 **Product specifications**

The report mainly provides parameter tests of S105 antenna performance. S105 antenna is 4G antenna. (As shown in the figure below)

NFCantenna
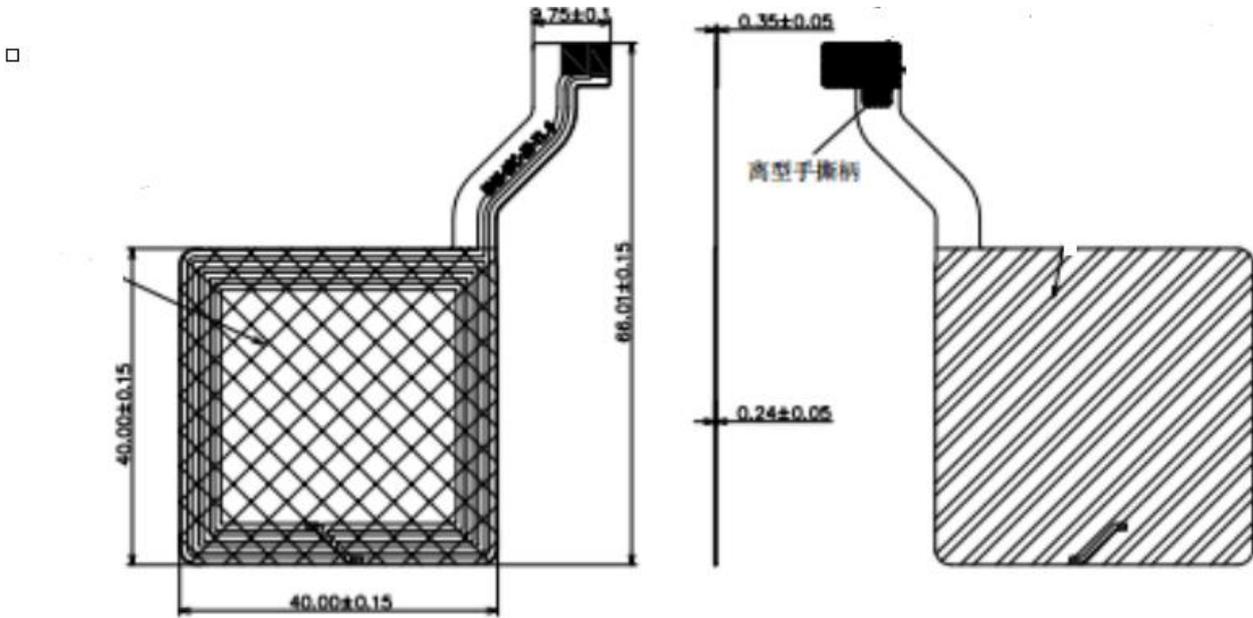
Three in one antenna

Main set antenna

S105-MAIN-AW-V1.0

25.10±0.15

59.68±0.15

□
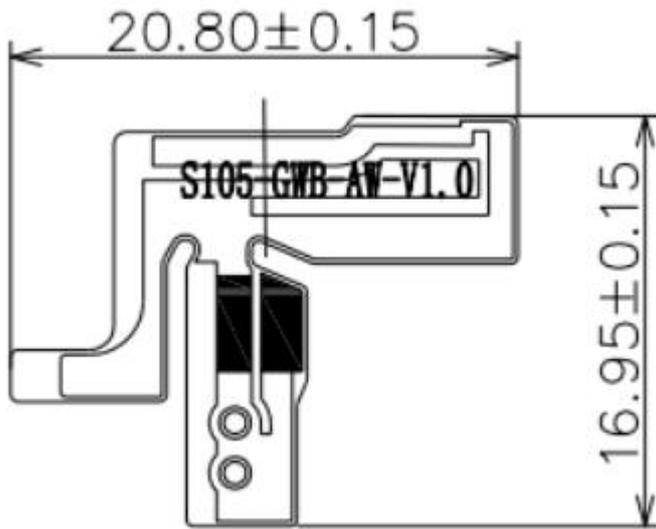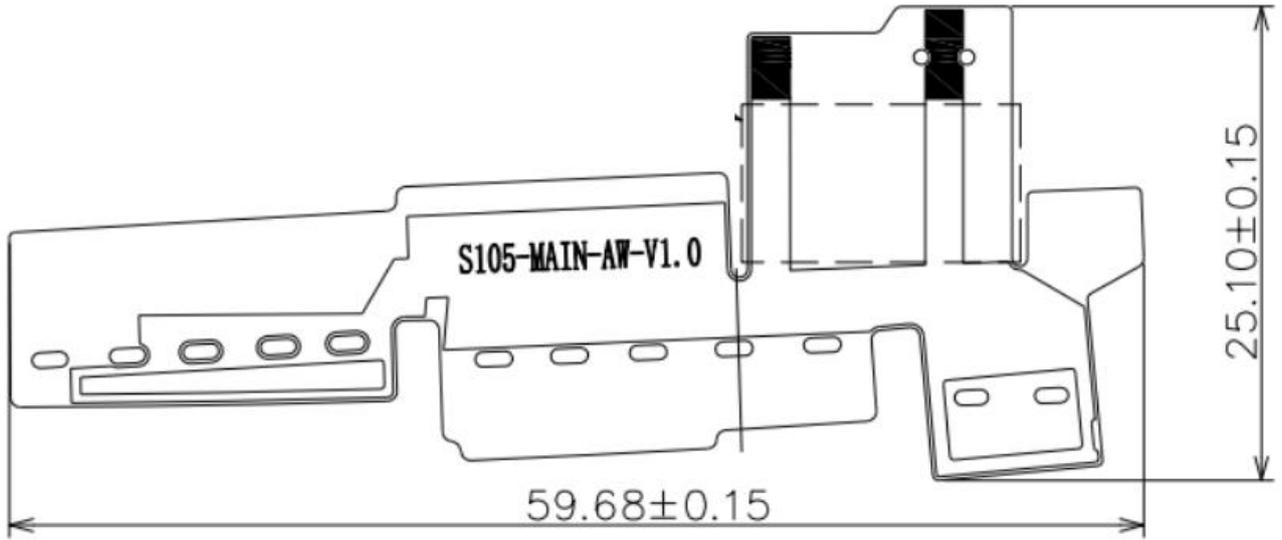
Diversity antenna
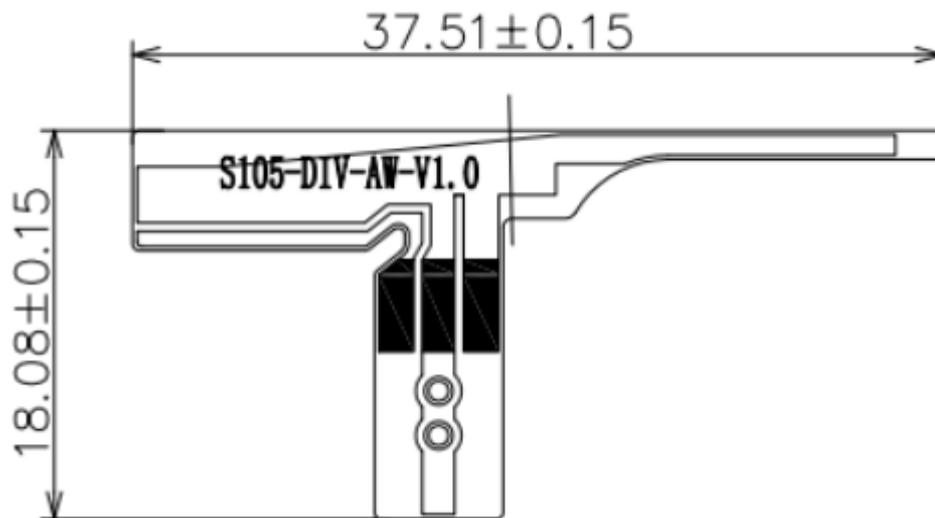
## 二、 Electrical performance

1.Specifications

The operating frequency band of WP21 antenna is 699~960MHZ and 1710~2700MHZ, in which resonance occurs.

2.Matching circuit of antenna

小板开关匹配逻辑

云基 S105　V2小板开关逻辑				
RF1 C547 0欧姆	GSM900		WCDMA8	FDD8
RF2 C548 NC		TDD38/41 FDD7		
RF3 C549 12NH	FDD 12 13 17 28 71			
RF4 C550 4.7NH	GSM850	CDMA BC0 / BC10	WCDMA5/6/19	FDD 5/18/19/20/26

818004111

C106 C109 R136 R500 R501 L508 U512 C548 C547 C550 C549 C546

C546 OR GND

U512
SKY19245

5 CTL1　　RFC
6 CTL2
3 CTL3/EN
4 VDD　　GND

RF1 1 C547 NC
RF2 2 C548 NC
RF3 9 C549 NC
RF4 8 C550 NC　　GND

R501
OR

ANT203

< > >| Report +
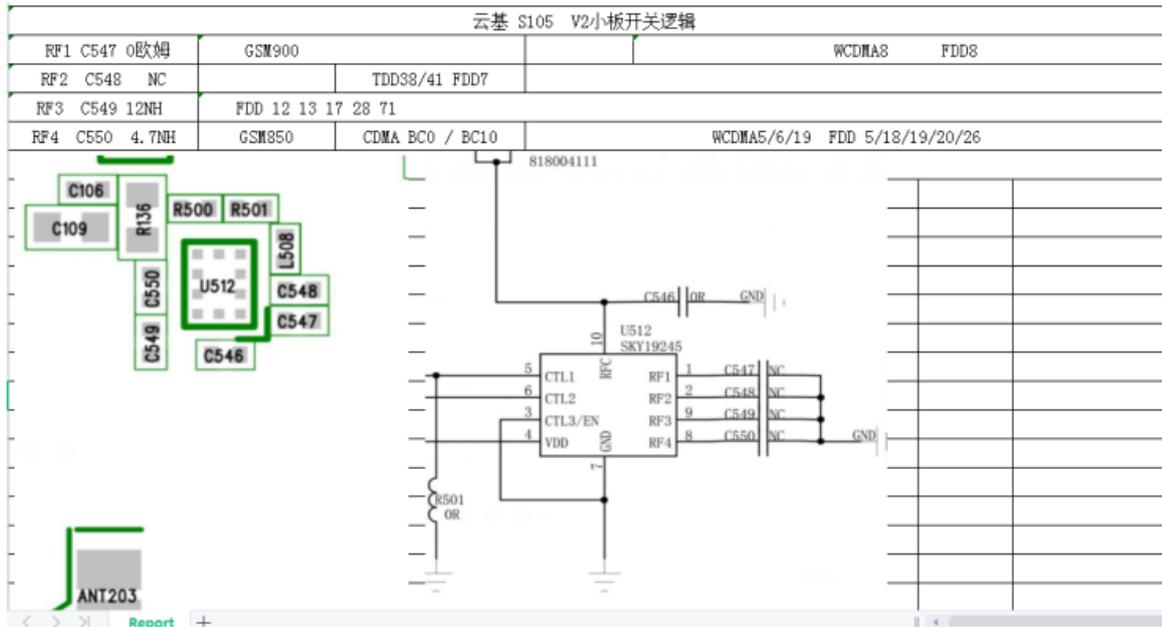
主板DPDT开关频段:
分集: DCS1800/PCS1900　WCDMA1/2/4　CDMA/BC1
FDD1/2/3/4/25/66　TDD/34/39/40

小板主路匹配

L201:0.5PF电容
C201:3.3NH电感
L1:15NH电感
C202:0欧姆
T201:NC

Structure of antenna：FPC

三、Test of parameters

1.Test settings

The connection of VSWR test device is：

E5071Bnetwork analyzer → 50Ohmic coaxialCable → 110mmLong copper tube → Test fixture
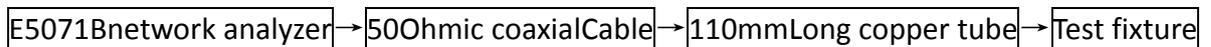
Treatment of test fixture:

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 with a choke, and then connect other devices in turn.

Passive parameters of main antenna：

工作频段(**Working frequency band**)：699~960MHZ，1710~2700MHZ
GSM850/900/1800/1900
WCDMA1/2/4/5/6/8/19
CDMA BC0 BC1 BC10
B1.2.3.4.5.7.8.12.13.17.18.19.20.25.26.28.66.71.34.38.39.40.41

Gain	
频段 Band	gain 增益 (dBi)
LTE-B12/B13/B17/B28	-3.0
BC0/BC10/GSM850,WCDMA-B5/B6/B19,LTE-B5/B18/B19/B20/B26	-2.3
GSM900,WCDMA-B8,LTE-B8	-1.1
DCS1800,LTE-B3,	1.59
WCDMA-B4,LTE-B4/B66	1.62
BC1,PCS1900,WCDMA-B2,LTE-B2/B25/B39	2.5
WCDMA-B1,LTE-B1/B34	0.8
LTE-B7/B38/B41,	0.5
LTE-B40	-0.2
LTE71	-3.2
GPS	0.7
2.4G WIFI/BT	1.3
5G WIFI	0.6
NFC	1.5

900mhz

1700mh
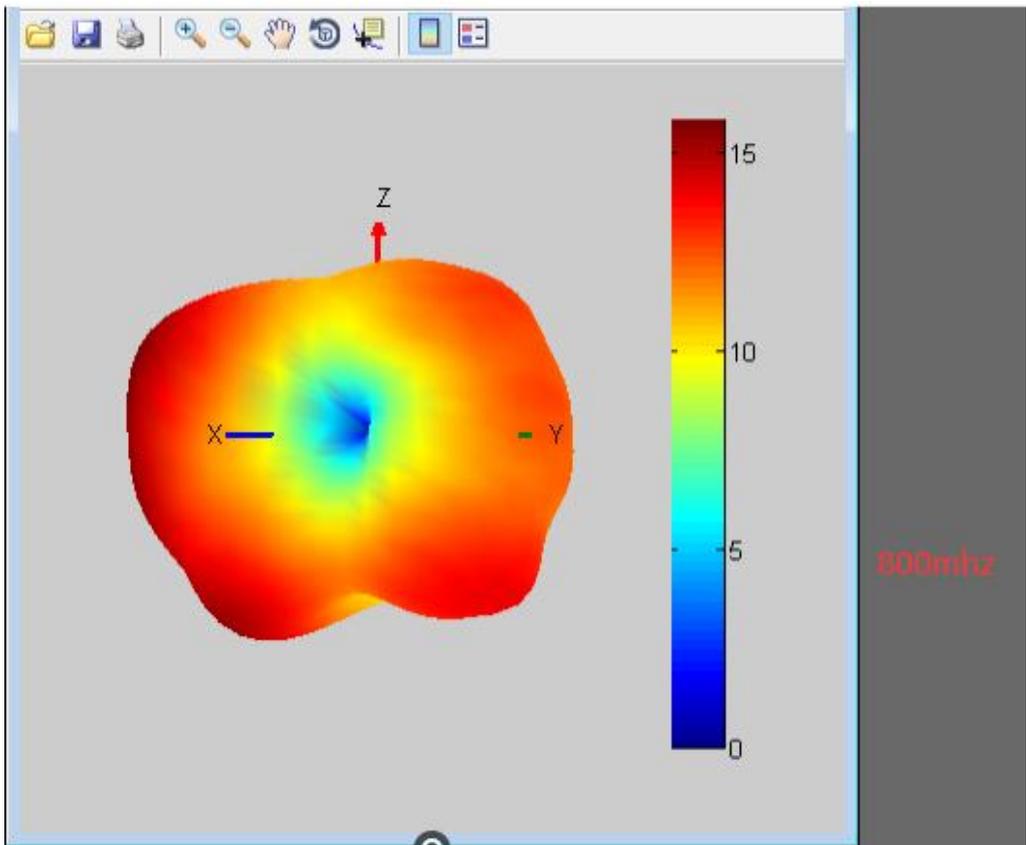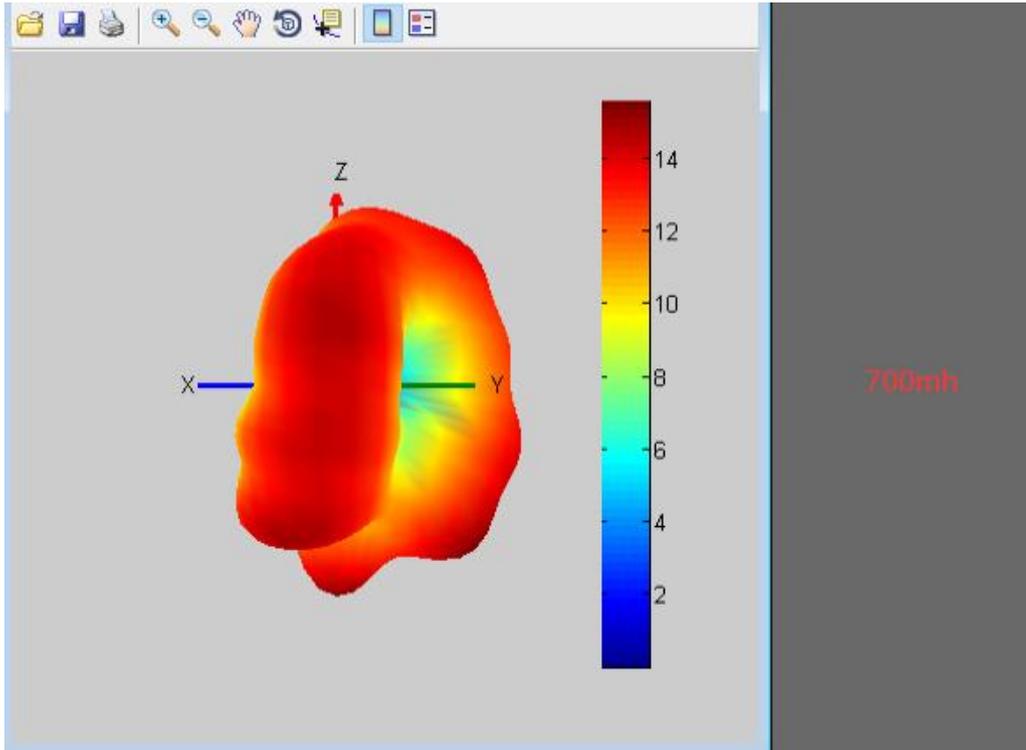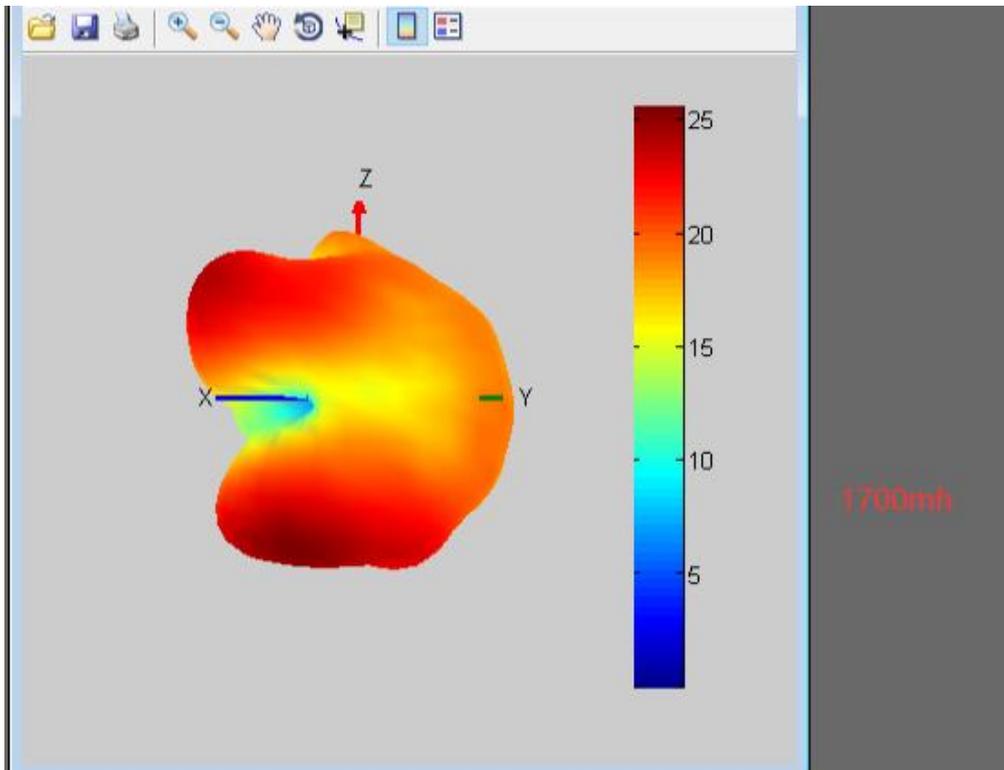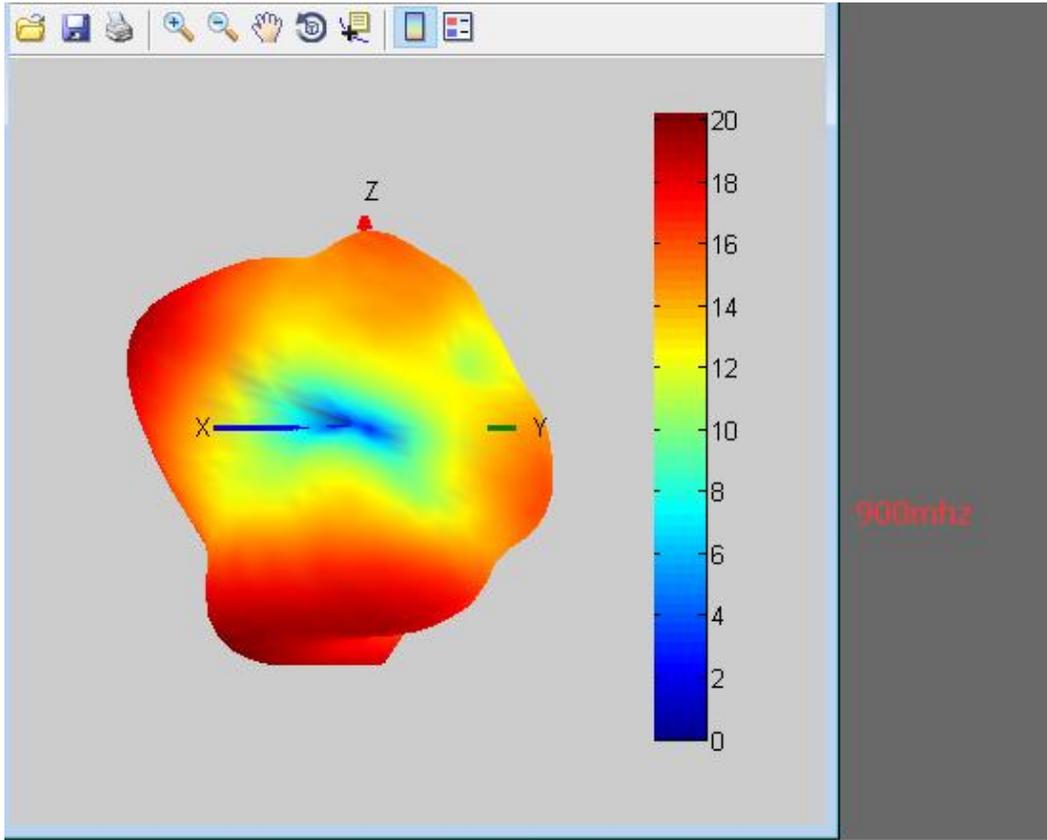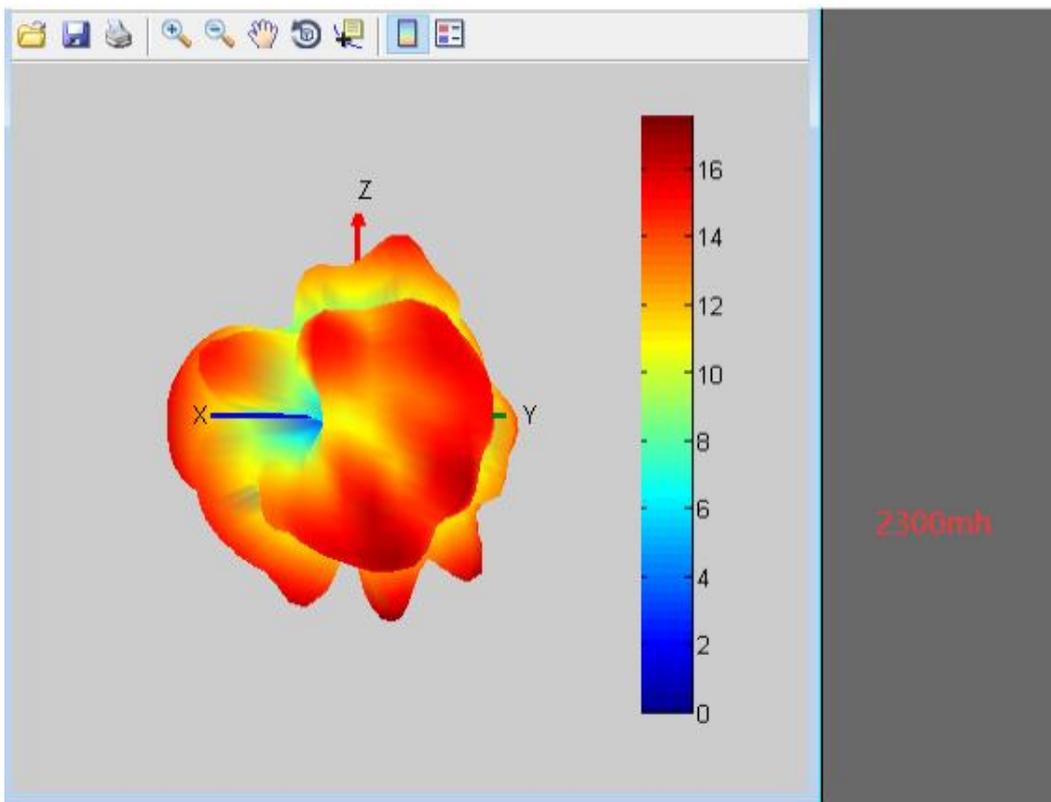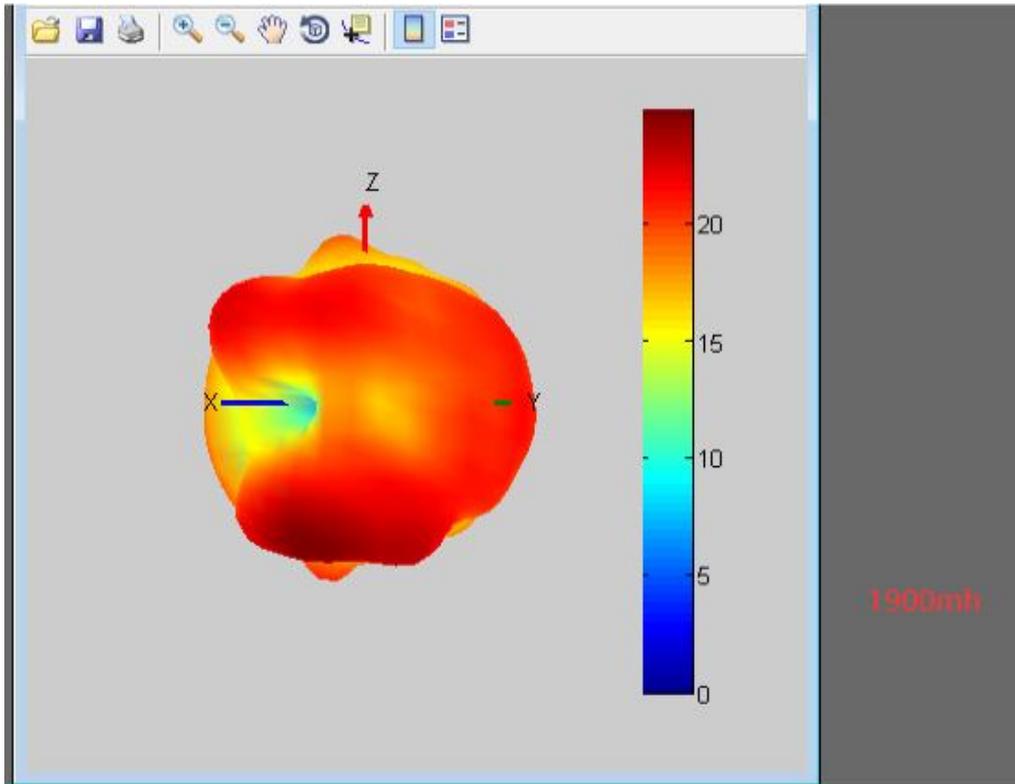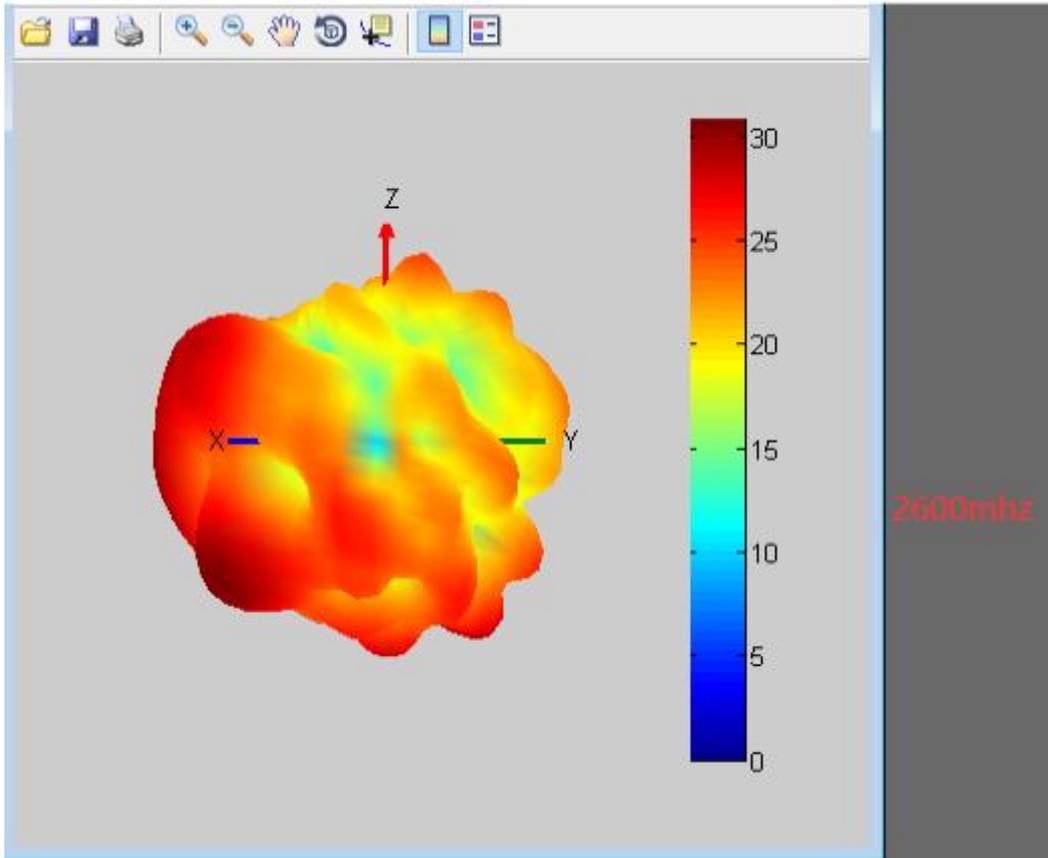
GPS/WIFI/BTPassive parameters of antenna：

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

工作频段**(Working frequency band)**：1560~1580MHZ，2400~2500MHZ,5180~8525MHZ
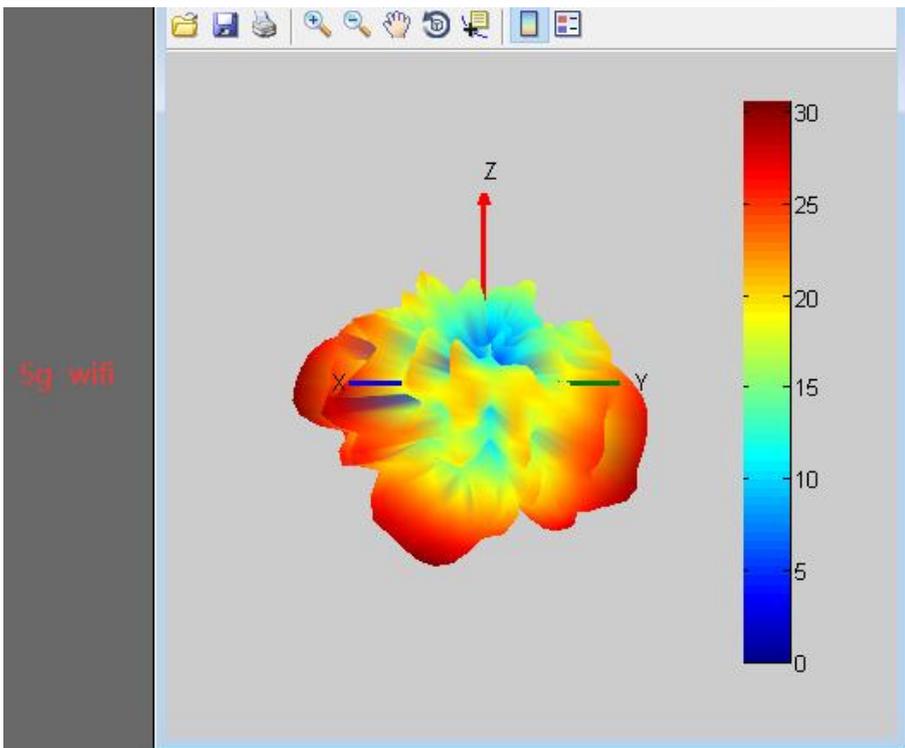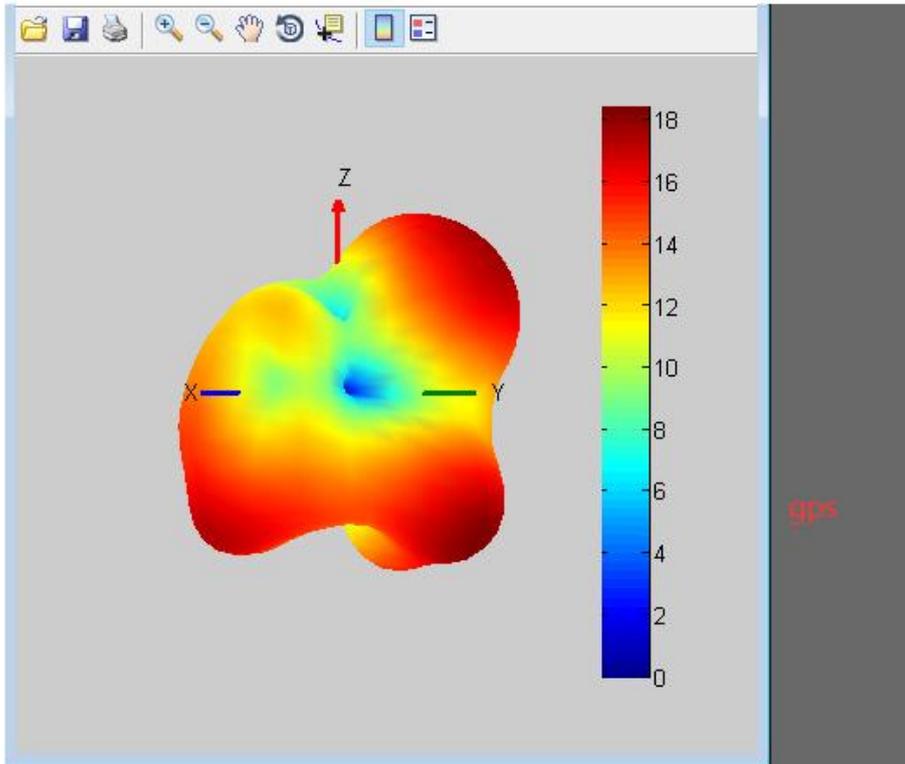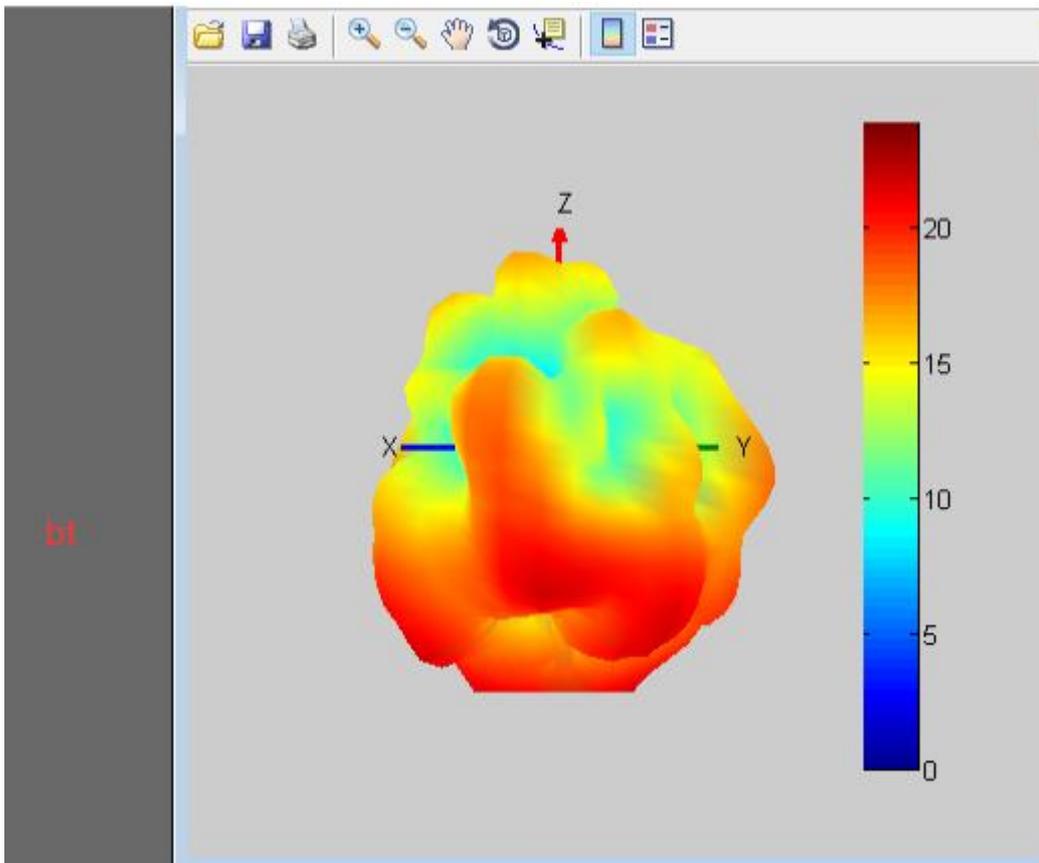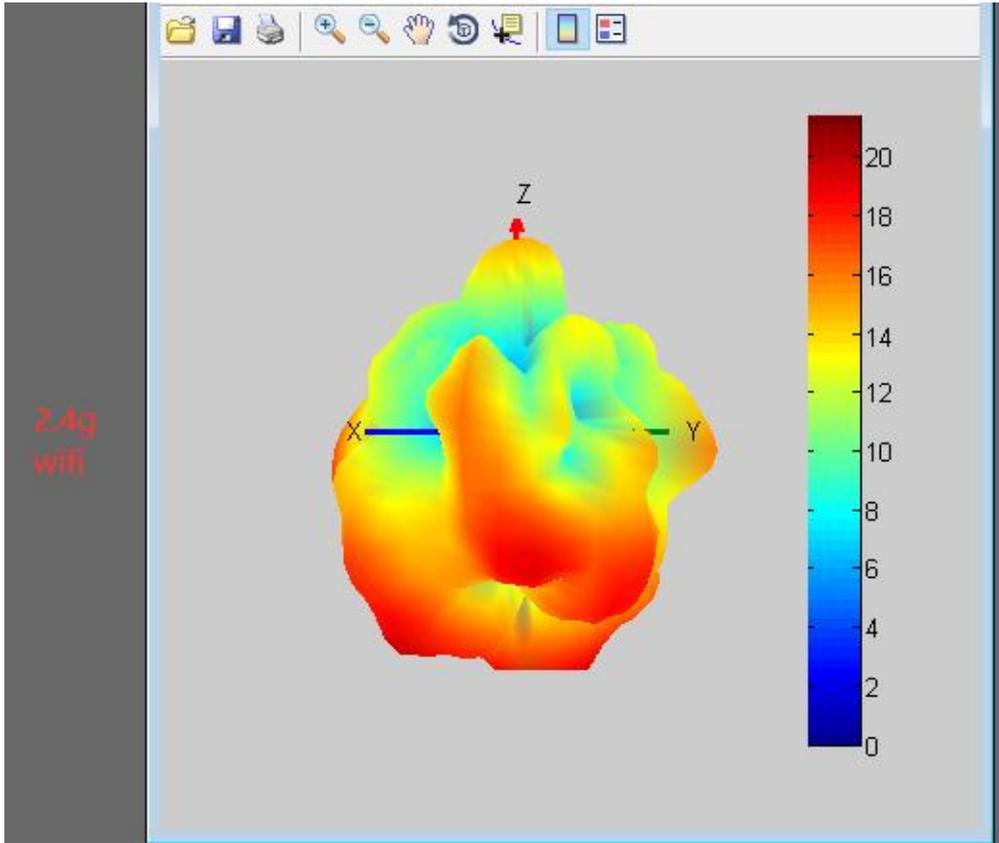
2.test result

business as usual.

四、**Active test setup**

The active test devices are sequentially connected as follows：

| Agilent8960 | → | 50Ohmic coaxialCable | → | Satimo SG16Test system | → | Mobile phone to be tested |
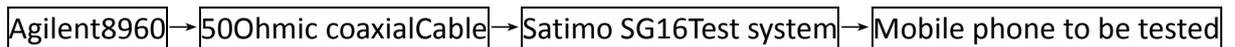
1.Test site

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.test result

The maximum radiation power and maximum receiving sensitivity reflect the maximum power radiation value and the optimal 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, the overall receiving performance of the antenna.

The following is the active test result of WP21 mobile phone main antenna：

主天线暗室数据

	Channel	TRP（dBm)	TIS（dBm)			Channel	TRP（dBm)	TIS（dBm)			Channel	TRP（dBm)	TIS（dBm)
	CH 128	26.12				LOW	18.09					LOW	17.15	
GSM850	CH 190	26.43			WCDMA B1	medium	17.55			TDD B34	medium	17.41	
	CH 251	27.04	−102.0	−101.		high	17.24	−103.5	−102.3.		high	17.5	−89.5
													−88.2
	CH 1	26.89				LOW	17.04					LOW	16.43	
GSM900	CH 62	27.25			WCDMA B2	medium	17.57			TDD B38	medium	16.57	
	CH 124	27.35	−102.6	−102.		high	18.05	−103.2	−102.2		high	16.05	−88.4
													−87
	CH 512	24.25				LOW	17.04					LOW	16.5	
DCS1800	CH 698	24.55			WCDMA B4	medium	17.53			TDD B39	medium	16.34	
	CH 885	25.24	−103.2	−102.1		high	17.61	−103.5	−102		high	16.23	−89.5
													−88.2
	CH 512	25.35				LOW	17.35					LOW	16.34	
PCS1900	CH 661	25.12			WCDMA B5	medium	17.5			TDD B40	medium	16.14	
	CH 810	24.55	−103.3	−102.3		high	17.46	−103.3	−101		high	16.0	−88.5
													−86.5
	LOW	16.31				LOW	17.65					LOW		
CDMA BC10	medium	16.57			WCDMA B6	medium	17.57			TDD B41	medium	16.06	−88
	high	17.0	−101	−100		high	17.53	−103.4	−101.5		high		−87
	LOW	16.1	−102.5			LOW	18.0							
CDMA BC0	medium	16.35	−102.1		WCDMA B8	medium	17.34							
	high	16.57	−101.5	−100.3		high	17.46	−102.6	−101.3					
	LOW	16.45				LOW	17.21							
CDMA BC1	medium	17.31			WCDMA B19	medium	17.34							
	high	17.09	−102.6	−101		high	17.0	−103.2	−101	亮屏数据				

	Channel	TRP (dBm)	TIS (dBm)			Channel	TRP (dBm)	TIS (dBm)			Channel	TRP (dBm)	TIS (dBm)	
FDD B1	LOW	17.34		-90.5	FDD B13	LOW			-89	FDD B28B	LOW	16.68		-89
	medium	17.24				medium	17.0	-90.5			medium	17.15		
	high	17.31	-91.2			high					high	17.27	-90.6	
FDD B2	LOW	16.55		-90.2	FDD B17	LOW	16.57		-88.5	FDD B66	LOW	17.05		-88.2
	medium	17.24				medium	17.14				medium	17.24		
	high	17.3	-91.3			high	16.98	-90.5			high	17.42	-90.3	
FDD B3	LOW	16.44		-89.5	FDD B18	LOW	16.57		-88.5	FDD B71	LOW	16.2		-87.5
	medium	16.3				medium	16.43				medium	16.14		
	high	17.25	-91.3			high	16.51	-89.4			high	16.0	-89.0	
FDD B4	LOW	16.2		-89.3	FDD B19	LOW	16.56		-88.5					
	medium	16.35				medium	16.57							
	high	16.24	-90.2			high	16.46	-90.5						
FDD B5	LOW	17.31		-88.3	FDD B20	LOW	17.2		-88					
	medium	17.54				medium	17.09							
	high	17.46	-90			high	16.56.	-89.3						
FDD B7	LOW	16.76		-89	FDD B25	LOW	16.54		-89					
	medium	16.59				medium	17.14							
	high	16.21	-90.5			high	17.13	-90.5						
FDD B8	LOW	17.0		-89	FDD B26	LOW	16.29		-89					
	medium	17.1				medium	16.56							
	high	17.3	-90.5			high	16.51	-90						
FDD B12	LOW	16.1		-88.5	FDD B28A	LOW	16.45		-88.3	亮屏数据				
	medium	16.24				medium	16.51							
	high	16.51	-90			high	17.1	-90						

2-1.Three in one test results

GPS

WIFI

BAND	2.4GWIFI			5GWIFI		
CHANNEL	low	medium	high	low	medium	high
TRP(dBm)	11.24	11.46	11.35	9.35	9.51	9.75
TIS (dBm)	-80.52	-80.6	-80.6	-69.43	-69.5	-69.35

2-2.蓝牙测试（Bluetooth Test）：

10 meters online listening to music, making calls smoothly without interruption

NFCpart

一. 无源调试
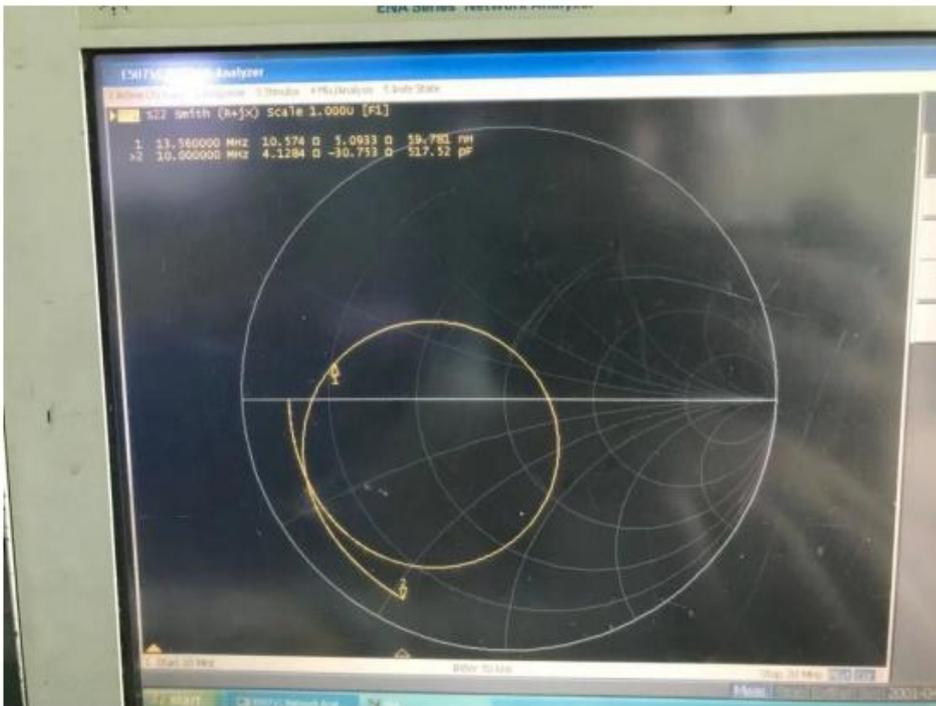
Passive graph

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