

Antenna Test report

Model Name: P07B

Date: 10th Aug, 2023

Shenzhen ANWEI Technology Co., Ltd.

www.aw168.cn

Catalogue

CO NT E NT

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01.Project Introducation and Photoes-Project Introducation

RF Engineer	WUXI	Email	303810988@qq.com
		Mobile	13751118278
Antenna Overview			
Status of Sample machine	Whole machine	Project Name	P07B
Antenna Type	PIFA	Structure mode	FPC
Main Antenna	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. 38. 39. 40. 41		
Other Antenna	Diversity Three-in-one antenna		

02.Report Versions

Version	Report Time	Commissioning Overview
A0	2023.10.18	Antenna Test Report
A1		
A2		
A3		
A4		
A5		
A6		
A7		
A8		
A9		
A10		

03.Introduction of Company and Test Environment-Test Environment



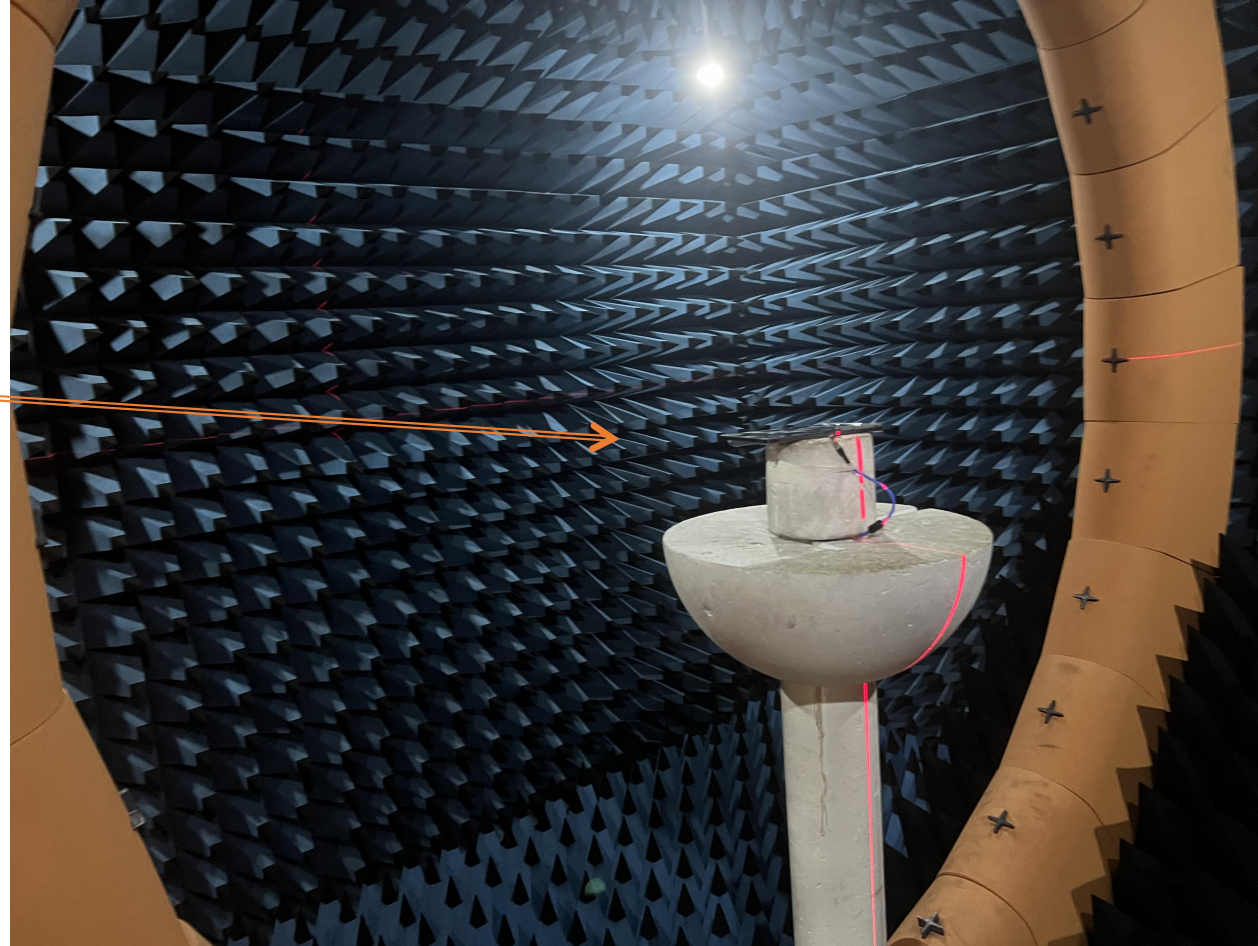
The company owns several OTA darkrooms whose frequency bands covers from 400mhz to 8.5ghz.

- ☞ Providing OTA test for whole machine which include but not be limited to 5G NSA, SA(trp/tis), WiFi active test (supporting 11b/11g/11n/11ax mode), bluetooth/GPS active test

- ☞ Providing antenna gain and efficiency
- ☞ Providing 2D pattern / Apple chart analysis
- ☞ Providing upper and lower hemisphere efficiency
- ☞ Providing mutual interference correlation coefficient test items.

04.Environment Test

Location of
Tested
Machine



05.Antenna correlation data

Main antenna active data

	Channel	TRP (dBm)	TIS (dBm)			Channel	TRP (dBm)	TIS (dBm)			Channel	TRP (dBm)	TIS (dBm)	
FDD B1	18050	18.04		FDD B17	23780	17.54		FDD-66	132022	18.35		FDD-66	132022	18.35
	18300	18.24			23790	17.6			132322	17.07			132322	17.07
	18550	18.34	-91.6		23800	18.03	-90.5		132622	17.48	-90.5		132622	17.48
FDD B2	18650	17.54		FDD 18	23900	18.24								
	18900	18.04			23925	18.4								
	19150	18.24	-91.4		23950	18.54	-91.5							
FDD B3	19250	17.68		FDD-19	24050	18.6		TDD 38	37850	18.21		TDD 38	37850	18.21
	19575	17.54			24075	18.43			38000	18.14			38000	18.14
	19900	17.34	-92.0		24100	18.64	-91.6		38150	17.24	-90.3		38150	17.24
FDD B4	20000	17.34		FDD B20	24200	18.25		TDD 39	38350	17.34		TDD 39	38350	17.34
	20175	17.41			24300	18.42			38450	17.54			38450	17.54
	20350	17.15	-91.57		24400	18.46	-90.4		38550	17.43	-90.51		38550	17.43
FDD B5	20450	18.21		FDD-25	26090	18.34		TDD 40	38750	18.2		TDD 40	38750	18.2
	20525	18.31			26365	18.04			39150	17.14			39150	17.14
	20600	18.64	-90.35		26640	17.43	-90.6		39550	18.08	-90.76		39550	18.08
FDD B7	20800	18.64		FDD-26	26740	17.35		TDD 41				TDD 41		
	21100	18.54			26865	17.57			40620	17.24	-90.56		40620	17.24
	21400	18.64	-90.5		26990	17.59	-91.5							
FDD B8	21500	18.54		FDD B28A	27260	17.35								
	21625	18.56			27370	17.46								
	21750	18.54	-90.35		27469	17.54	-90.5							
FDD B12	23060	17.52		FDD B28B	27410	17.35								
	23095	17.42			27510	17.46								
	23130	17.52	-90.1		27600	17.79	-90.4							

06.Antenna correlation data

Main antenna active data

	Channel	TRP (dBm)	TIS (dBm)			Channel	TRP (dBm)	TIS (dBm)	
GSM 850	128	28.67							
	190	28.59							
	251	28.57	-103.1						
GSM 900	1	28.09			W 1	LOW	18.42		
	62	28.44				medium	18.13		
	124	28.59	-103.2			high	17.01	-103.34	
DCS 1800	512	24.43			W 2	LOW	18.06		
	698	25.46				medium	17.19		
	885	25.32	-103.5			high	18.02	-103.2	
PCS 1900	512	25.07			W 4	LOW	17.56		
	661	25.16				medium	17.52		
	810	25.26	-103.2			high	17.42	-103.4	
					W 5	LOW	18.04		
						medium	18.17		
						high	18.16	-103.5	
					W 8	LOW	18.21		
						medium	18.54		
						high	18.02	-103.3	

07.GPS measured data



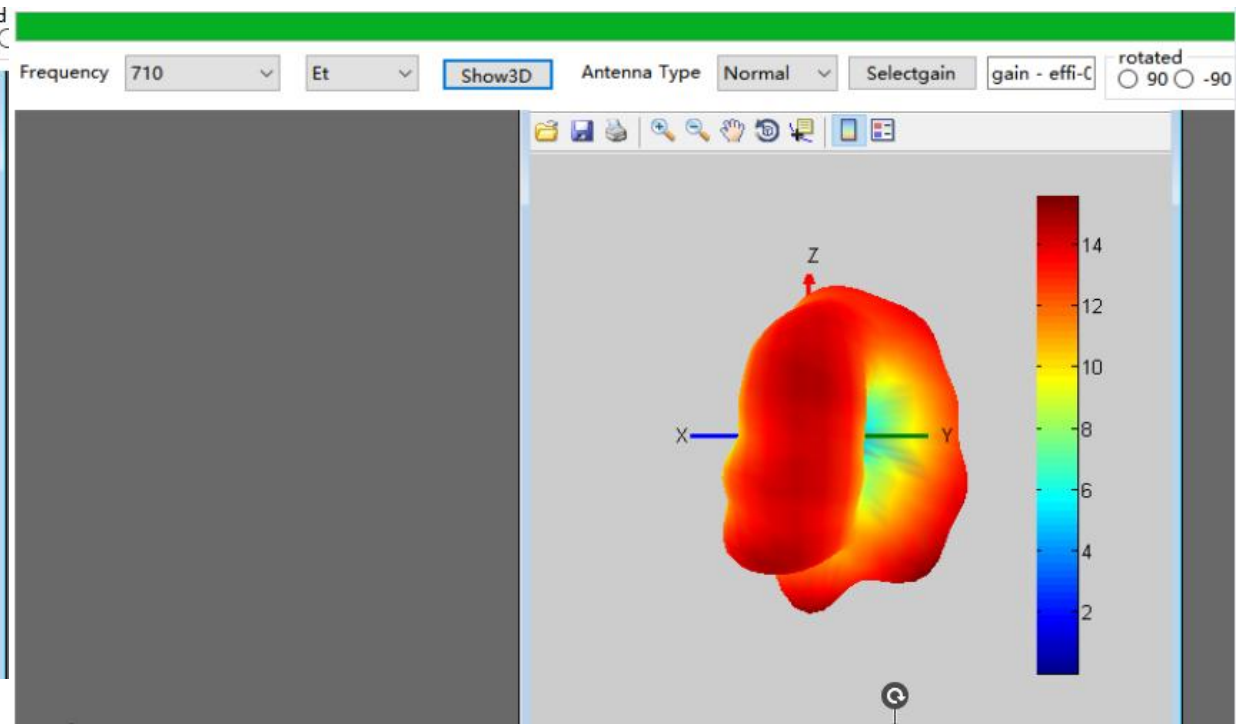
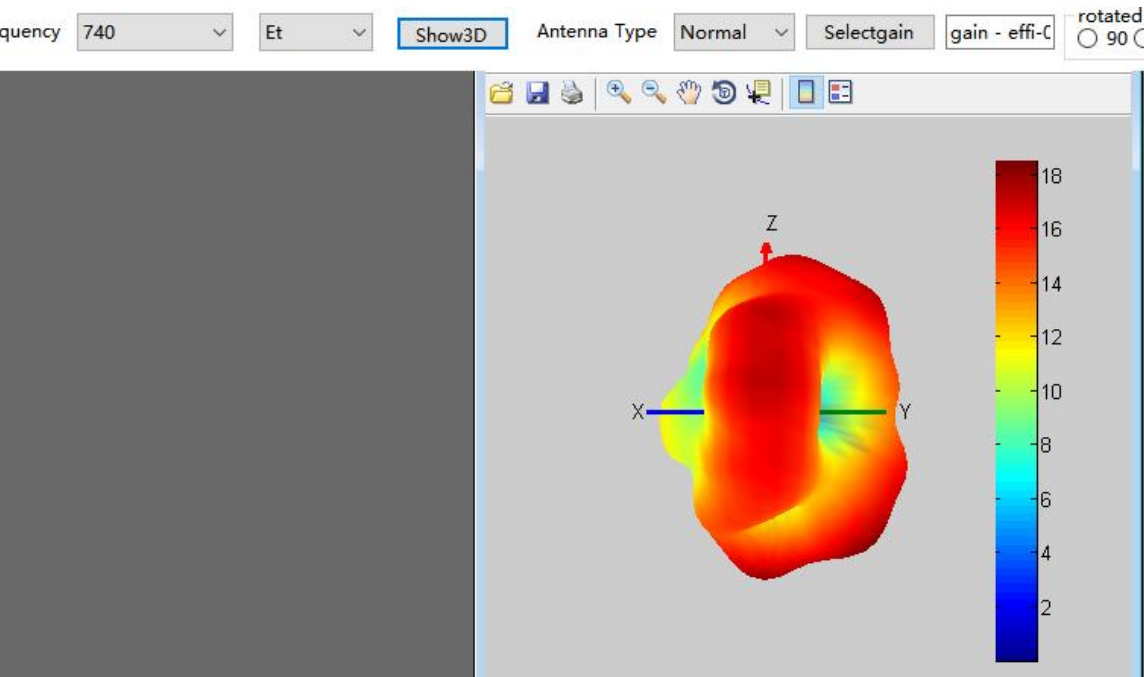
08. WIFI active data

BAND	2.4GWIFI			5.8WIFI		
CHANNEL	low	medium	high	low	medium	high
TRP (dBm)	12.53	12.43	12.12	10.34	10.56	10.67
TIS (dBm)	-81.4	-81.21	-81.5	-71.6	-71.4	-71.5

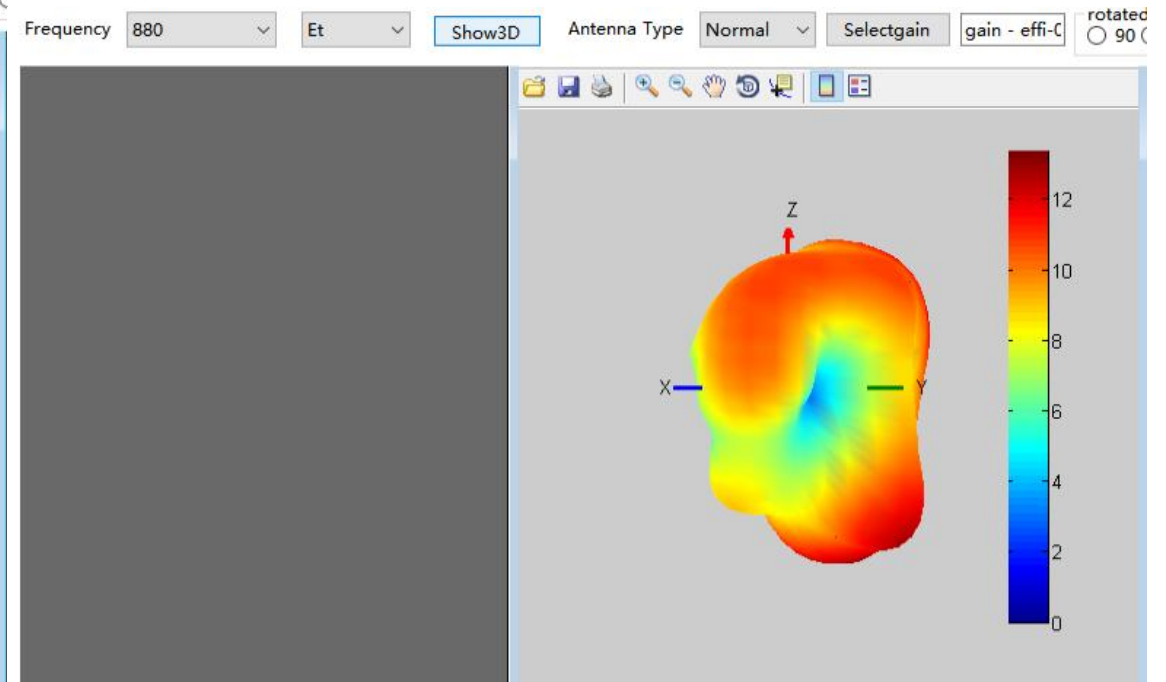
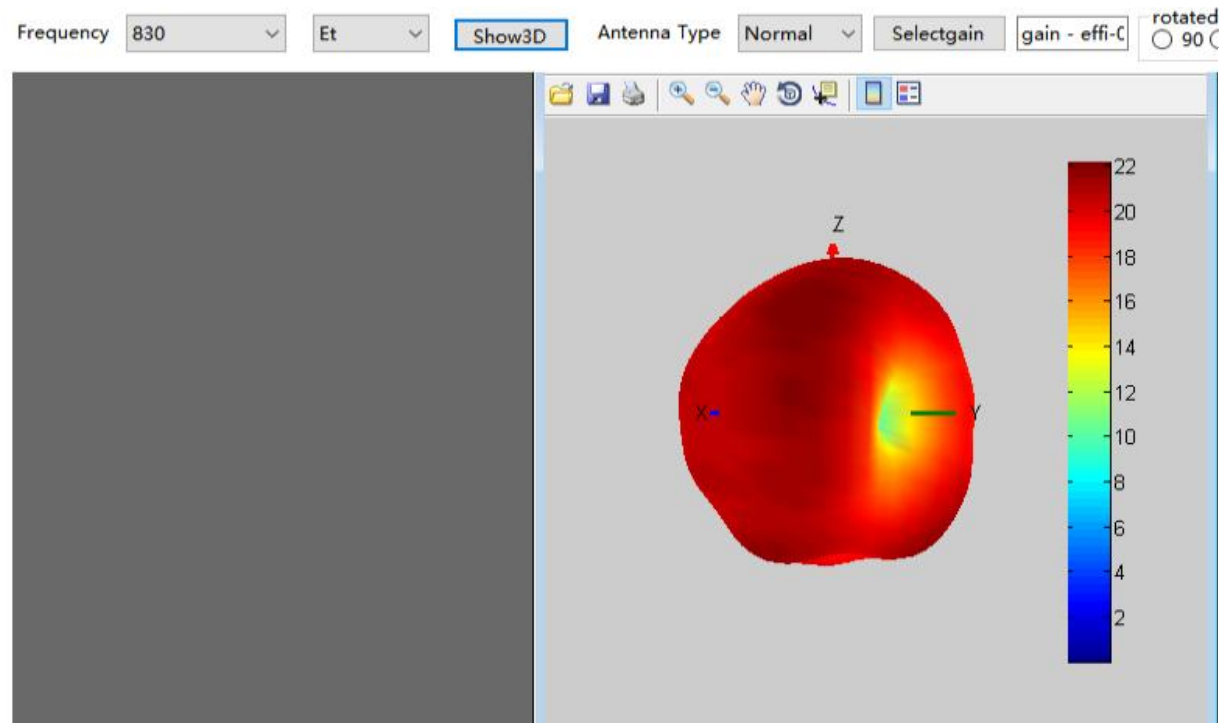
09. Antenna passive data

Gain		
Band	gain(dBi)	Efficiency
LTE-B12/B17/B28 (704-798MHz)	-1.1	
GSM850,WCDMA-B5,LTE-B5/B20 (824-894MHz)	-0.75	
GSM900,WCDMA-B8,LTE-B8 (880-960MHz)	-0.86	
DCS1800,WCDMA-B4,LTE-B4/B3/B66 (1710-1880MHz)	0.46	
PCS1900,WCDMA-B2,LTE-B2/B39 (1850-1990MHz)	0.67	
WCDMA-B1,LTE-B1/B34 (1920-2170MHz)	1.2	
LTE-B7/B38/B41, (2500-2690MHz)	2.24	
LTE-B40 (2300-2400MHz)	1.6	
GPS (1575MHZ)	0.75	
2.4G WIFI/BT	2.1	
5G WIFI	0.8	

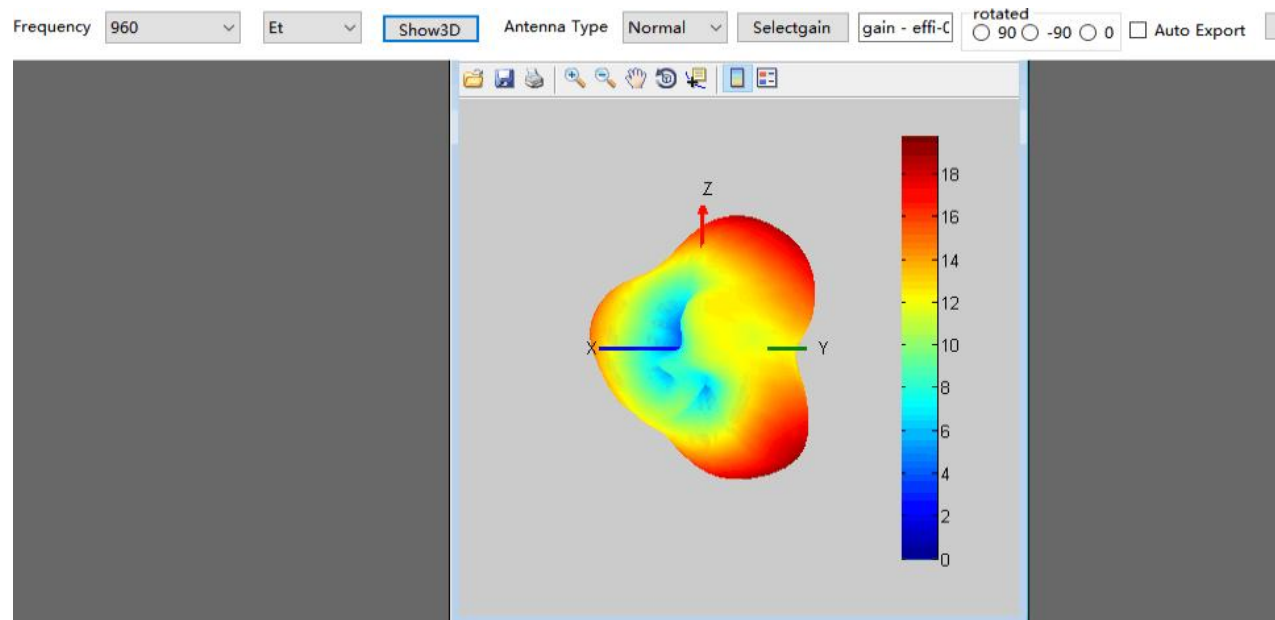
10. Antenna correlation data



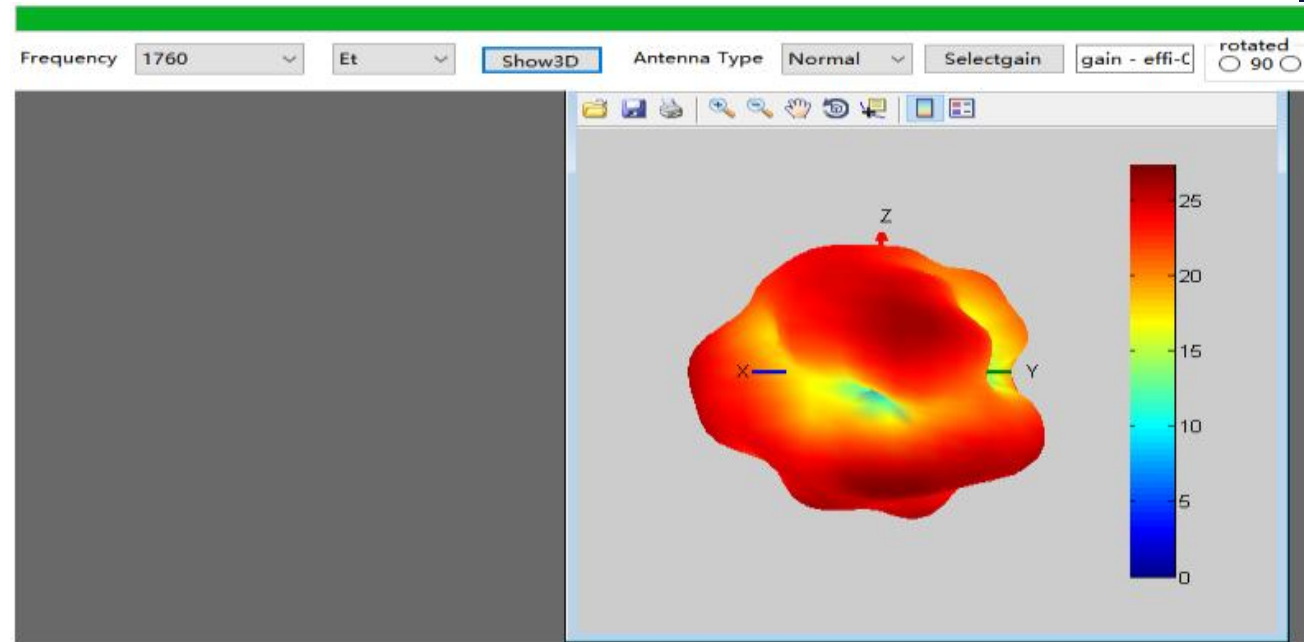
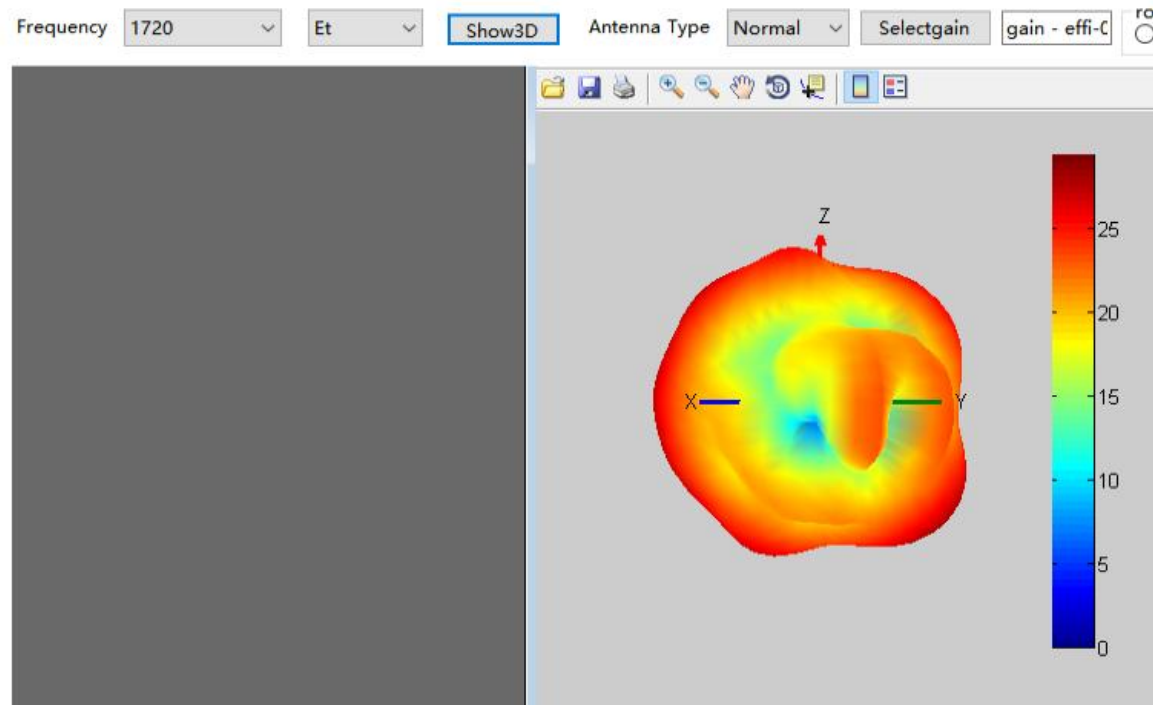
11. Antenna correlation data



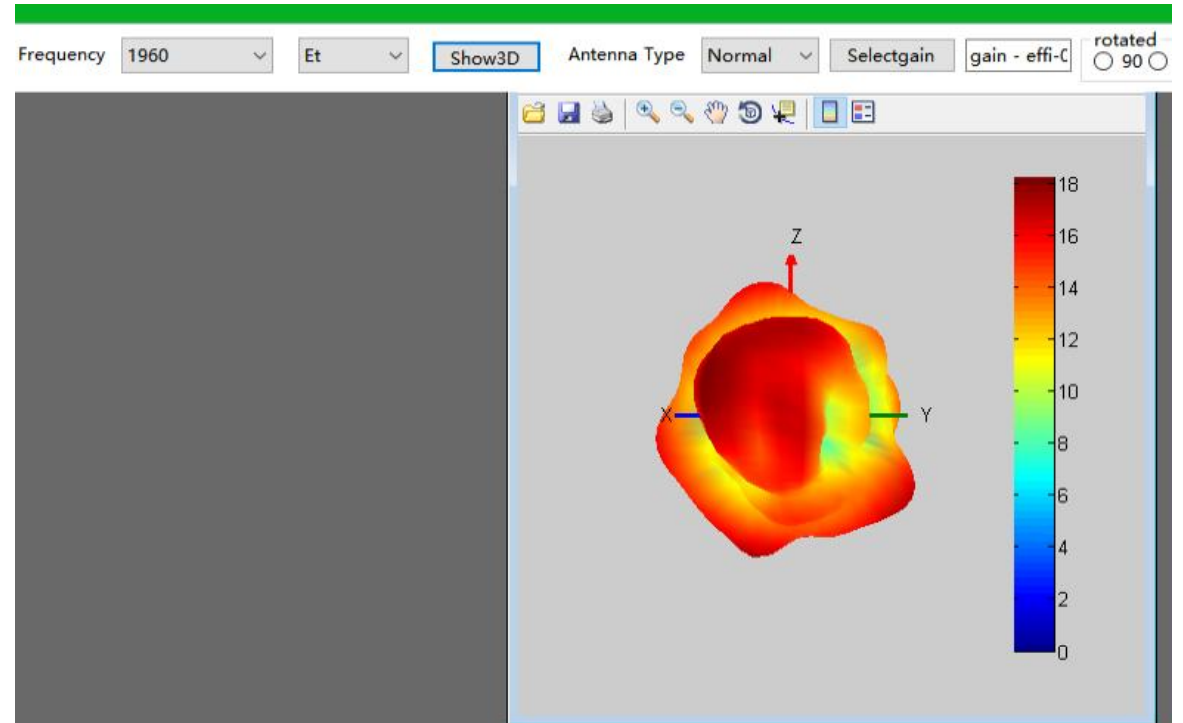
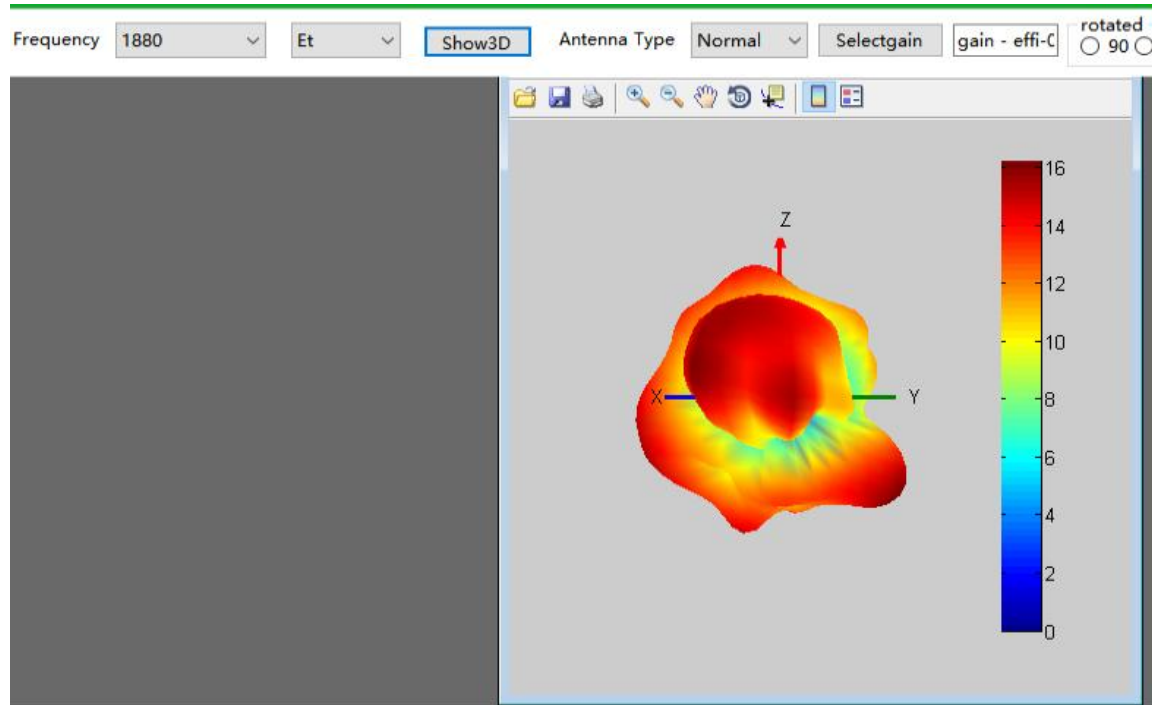
12. Antenna correlation data



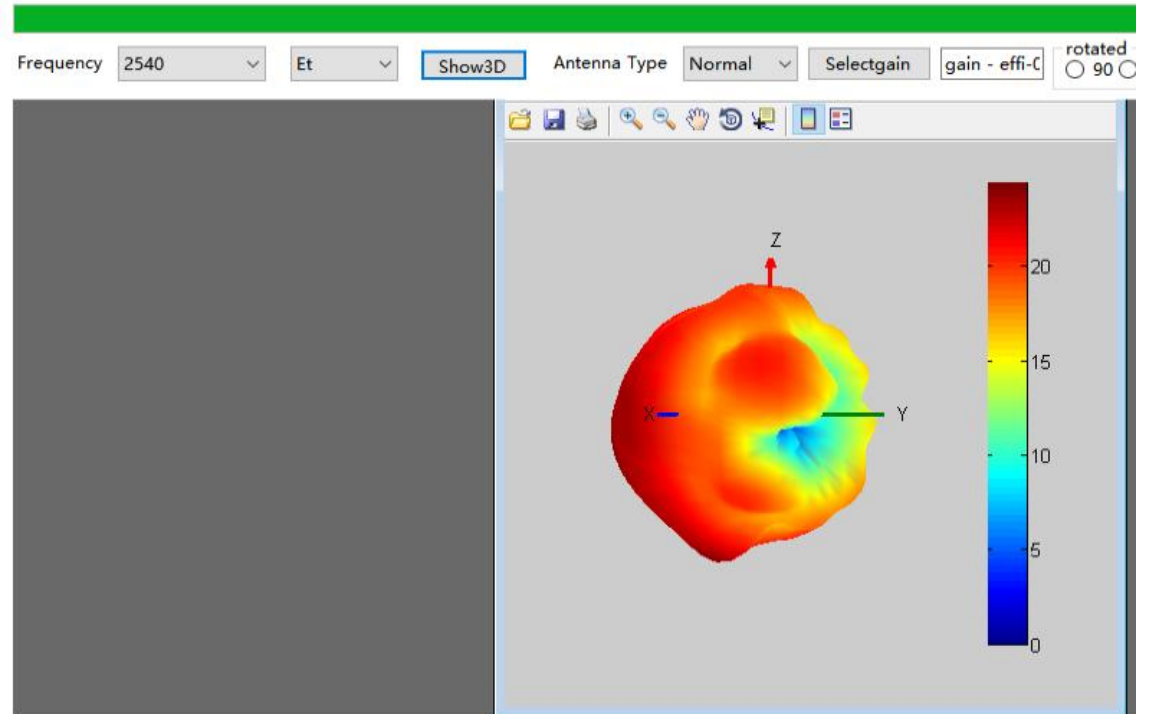
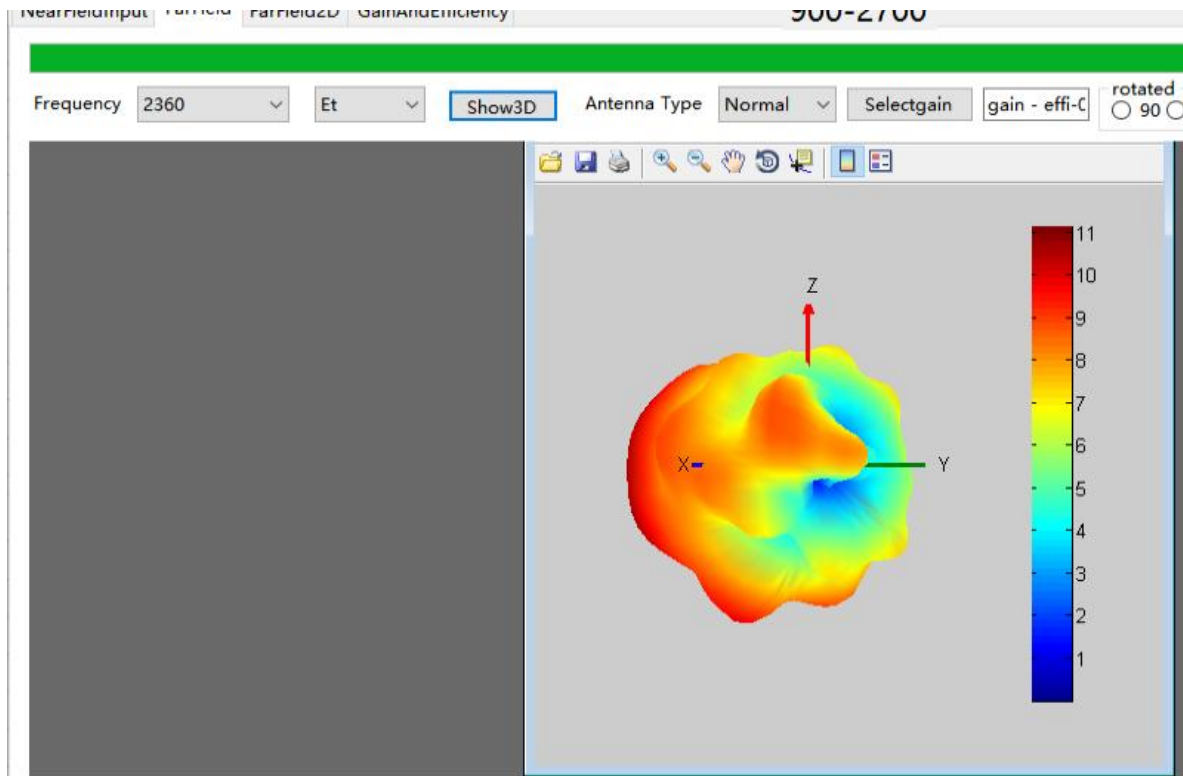
13. Antenna correlation data



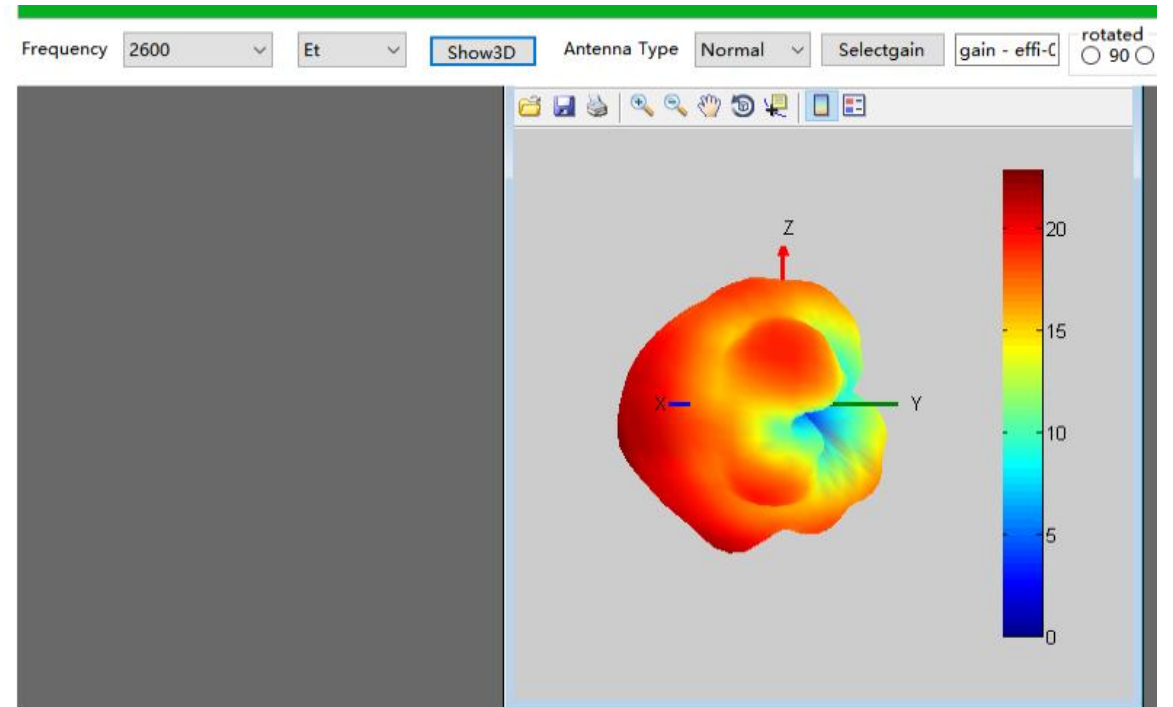
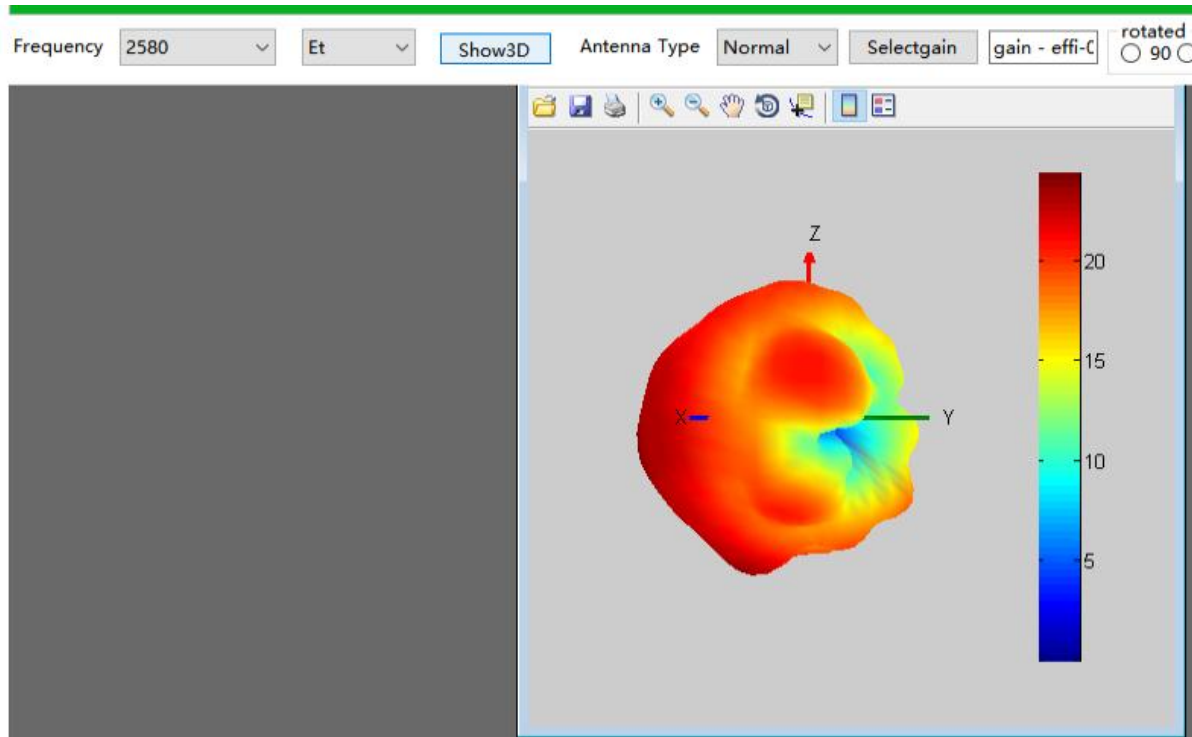
14. Antenna correlation data



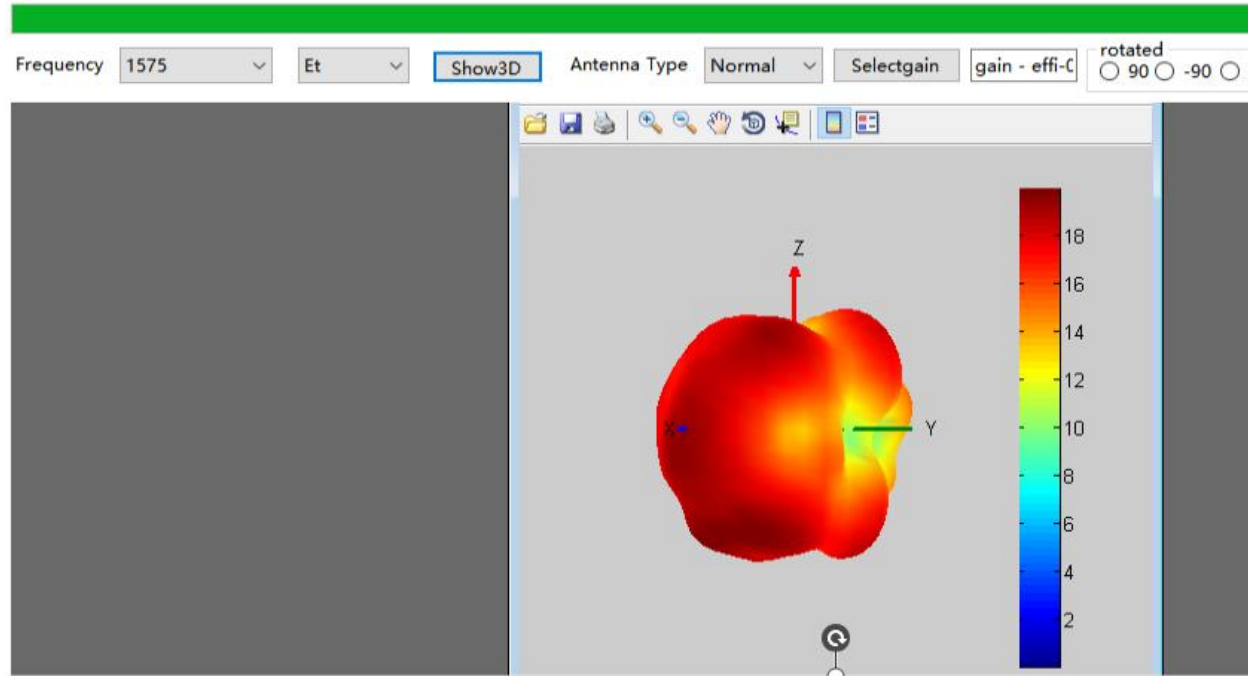
15. Antenna correlation data



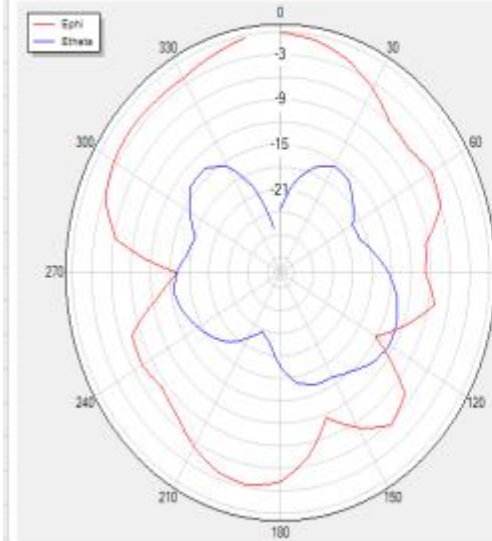
16. Antenna correlation data



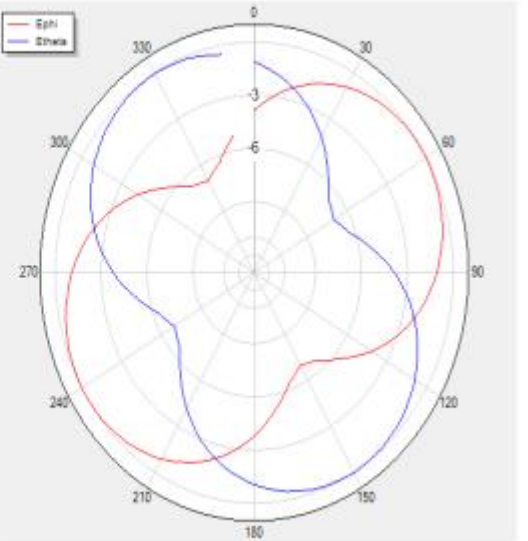
17. Antenna correlation data



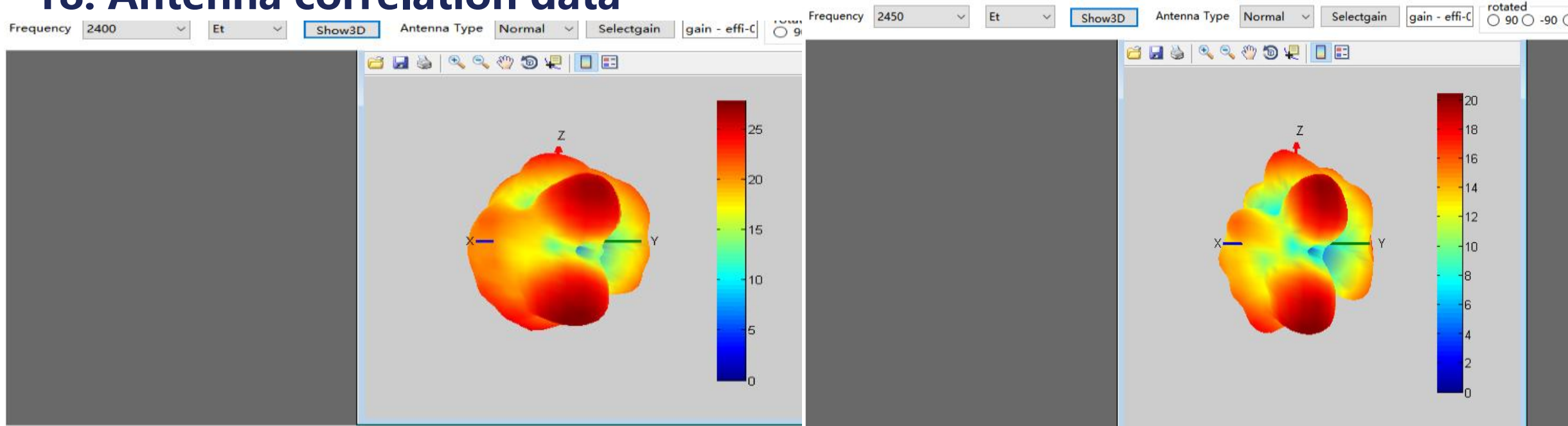
H Theta=90 freq=1575MHz



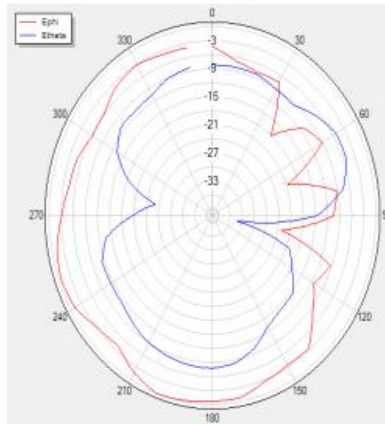
H Theta=0 freq=1575MHz



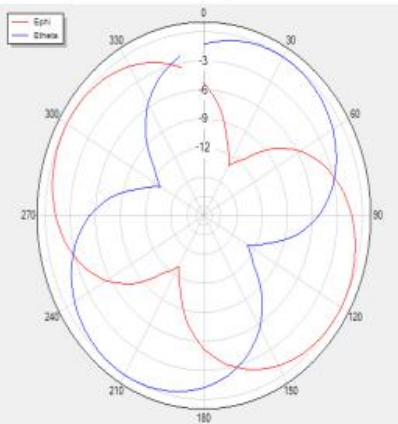
18. Antenna correlation data



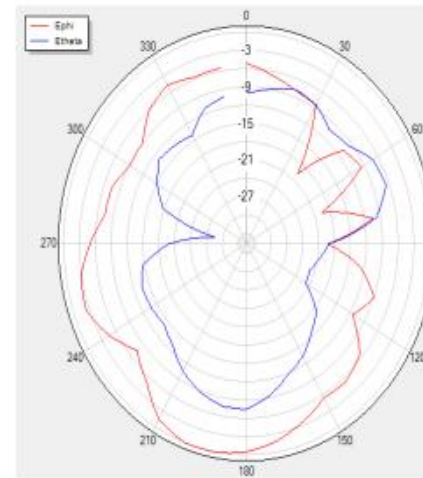
H Theta=90 freq=2400MHz



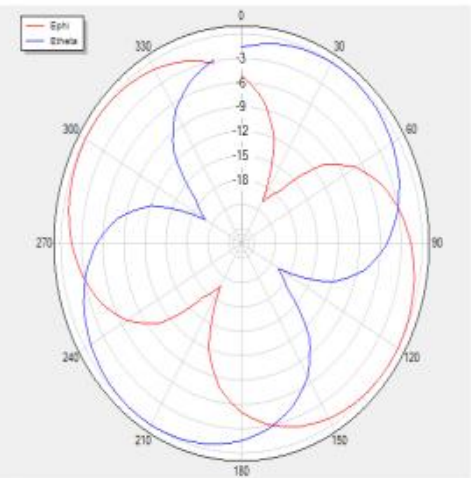
H Theta=0 freq=2400MHz



H Theta=90 freq=2450MHz

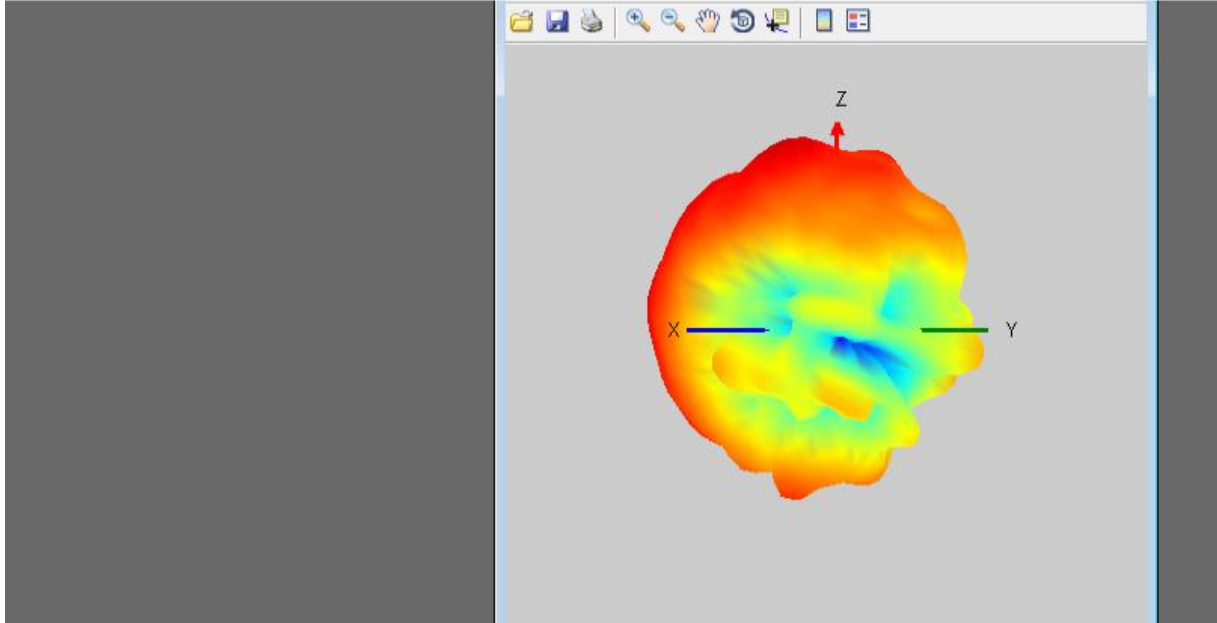


H Theta=0 freq=2450MHz

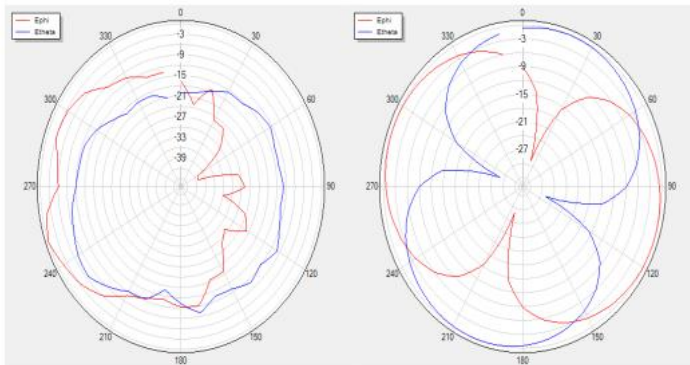


19. Antenna correlation data

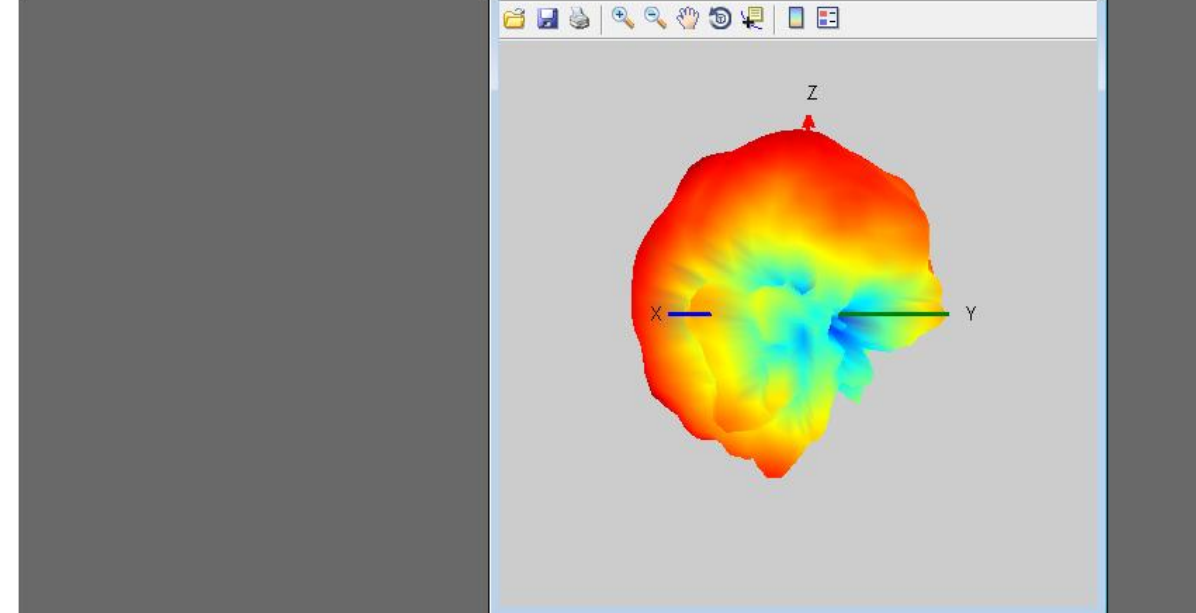
frequency 5100 Et Show3D Antenna Type Normal Selectgain gain - effi-C rotated 90 0 -90



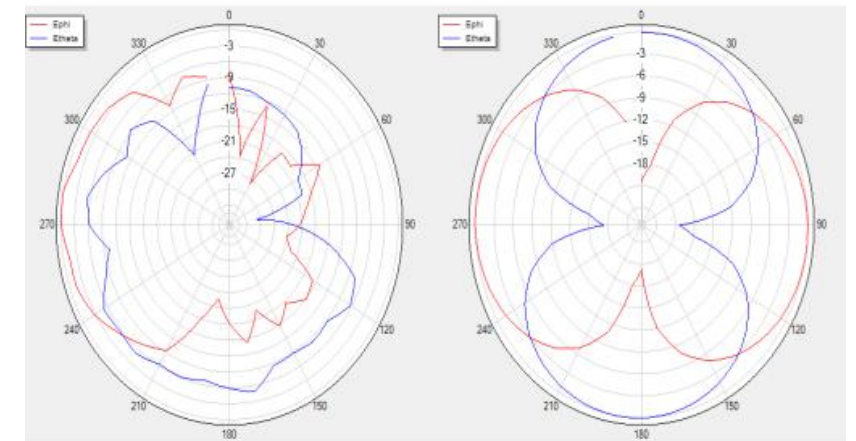
H Theta=90 freq=5100MHz H Theta=0 freq=5100MHz



Frequency 5800 Et Show3D Antenna Type Normal Selectgain gain - effi-C rotated 90 0 -90

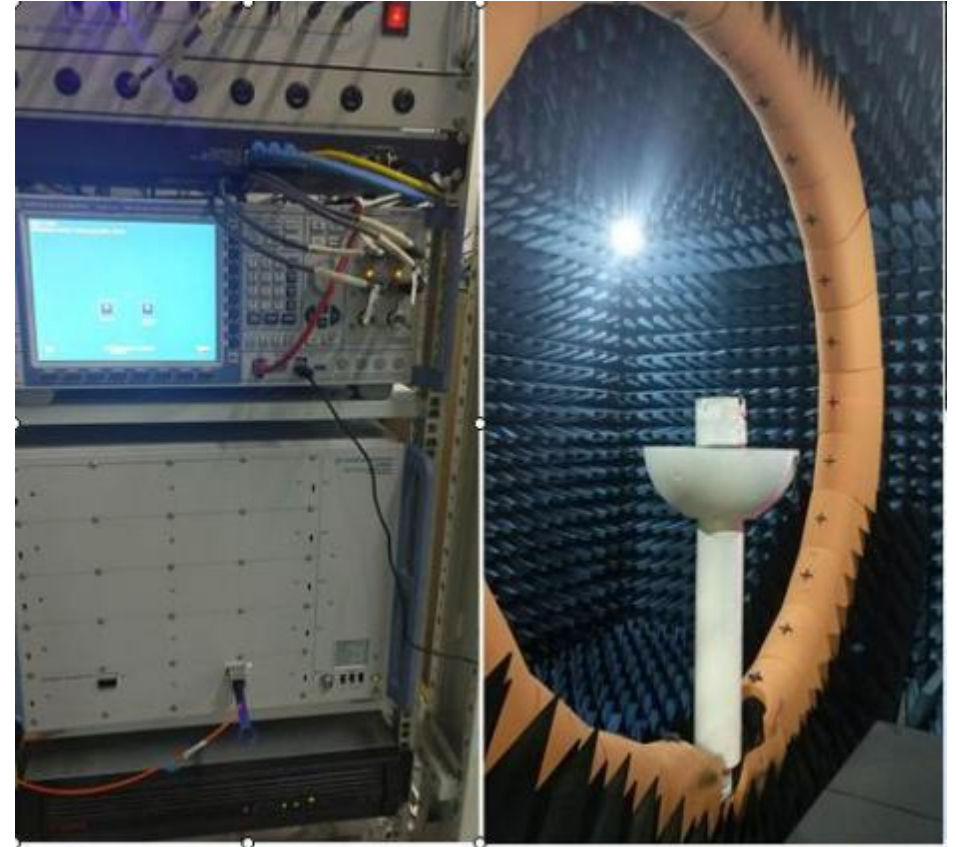


H Theta=90 freq=5800MHz H Theta=0 freq=5800MHz

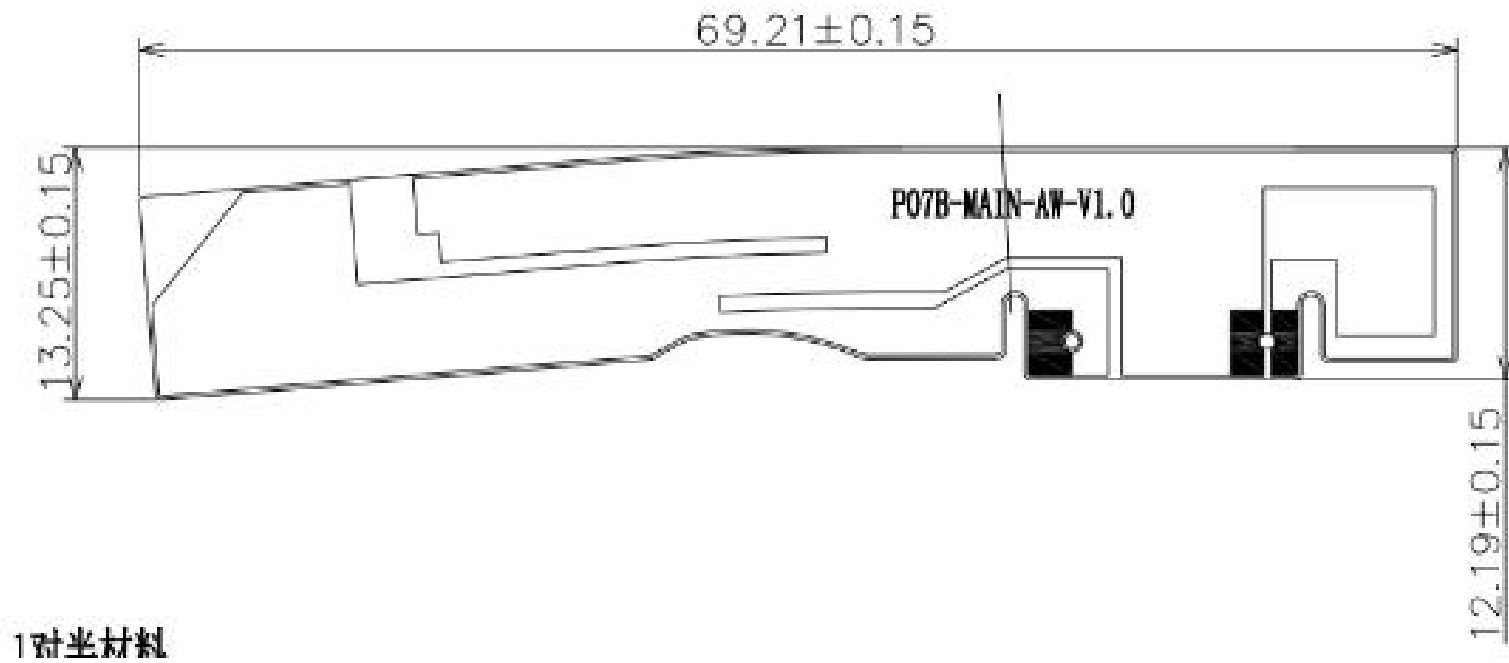


20.Conclusion

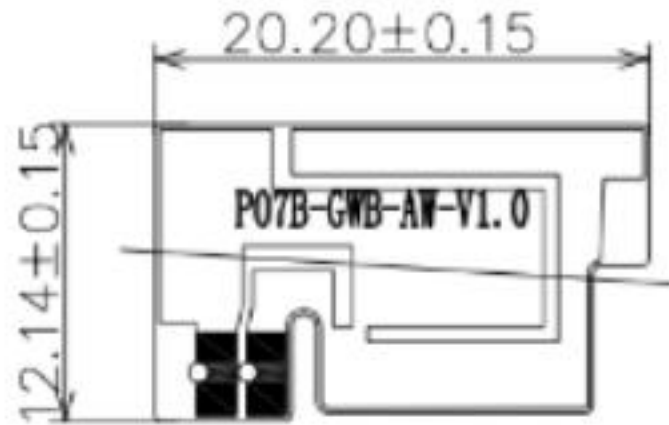
The software and hardware of batch production should be the same as the sample machine.



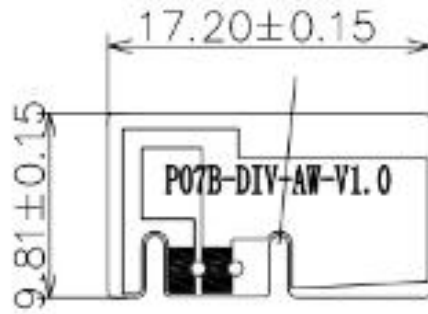
21.Main antenna size



22.Three in one antenna size



23.Diversity antenna size





THANKS!

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