

SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD

Antenna report

Applicant:: YUNJI

Model: **S120**

Frequency band:

GSM:2/3/5/8 CDMA:BC0/BC1/BC10 WCDMA:1/2/4/5/6/8/19

LTE:1/2/3/4/5/7/8/12/13/17/18/19/20/25/26/28/34/38/39/40/41/66/71

NR:1/2/3/5/7/8/12/20/25/28/34/38/39/40/41/66/71/77/78/79

1. Test Project

	Test Project	Equipment
1. S Parameter	1. Return Loss (RL) 2. VSWR	Network Analyzer: Agilent 5071B
2. RF Test (2/3/4/5G)	1. power 2. level 3. TRP/TIS	Comprehensive Test: SP9500/CMW500/8960 Test Environment: Anechoic Chamber

2. Test Equipment



Agilent 5071B (S Parameter (RL/VSWR) Test Equipment)



Agilent 8960 (2G/3G Test Equipment)

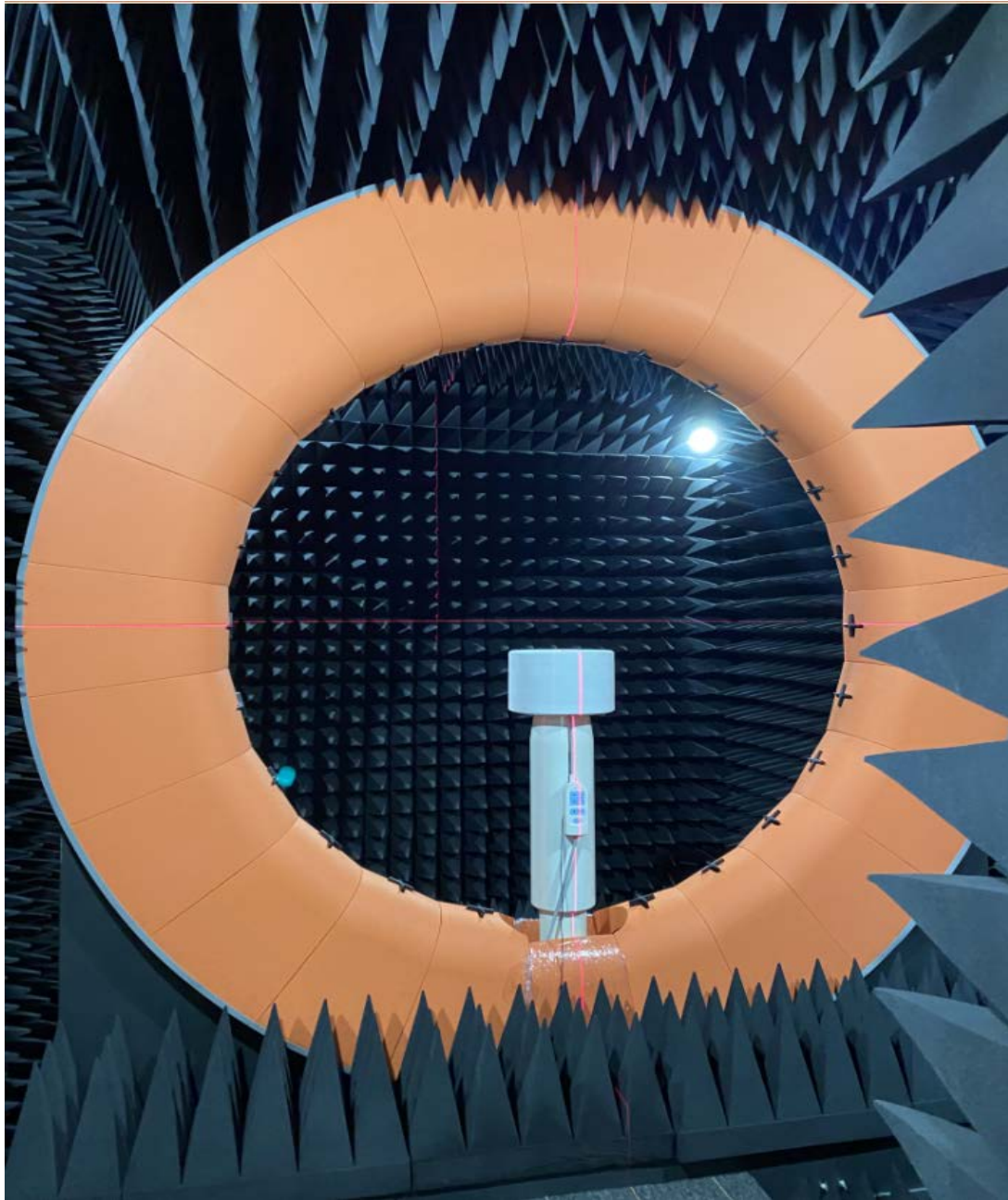


CMW 500 (2G/3G/4G Test Equipment)



SP9500 (5G Test Equipment)

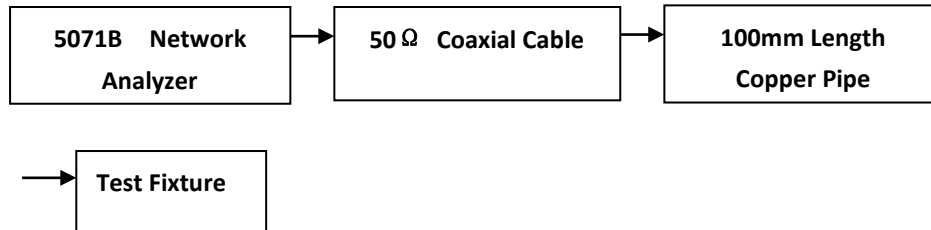
3. TestEnvironment



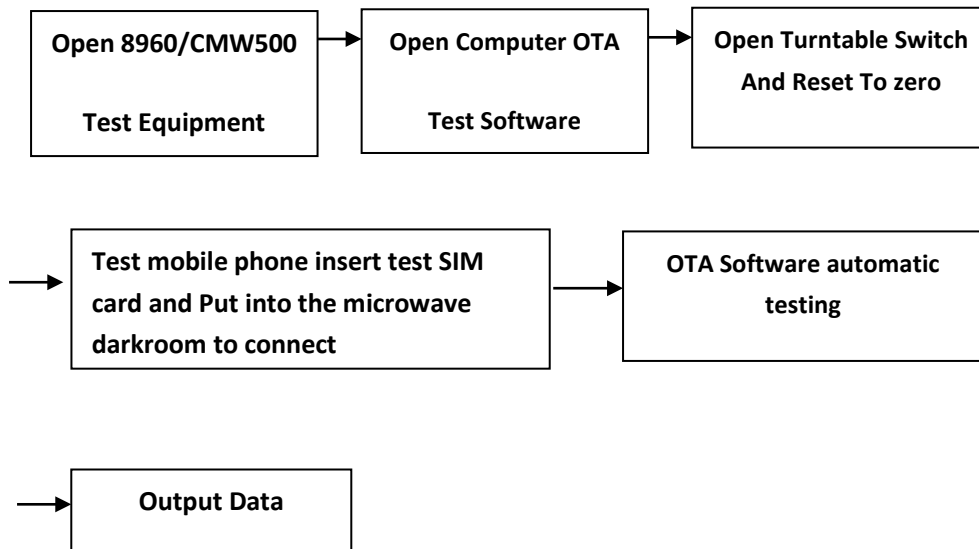
Microwave Anechoic Chamber

4.Test Steps

Passive VSWR/RL Test Steps:



Active TRP/TIS Test Steps:

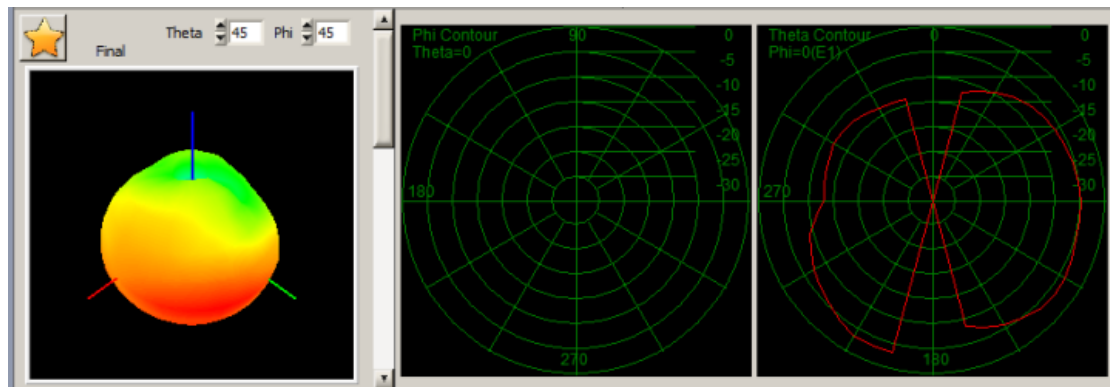


5. Antenna Gain

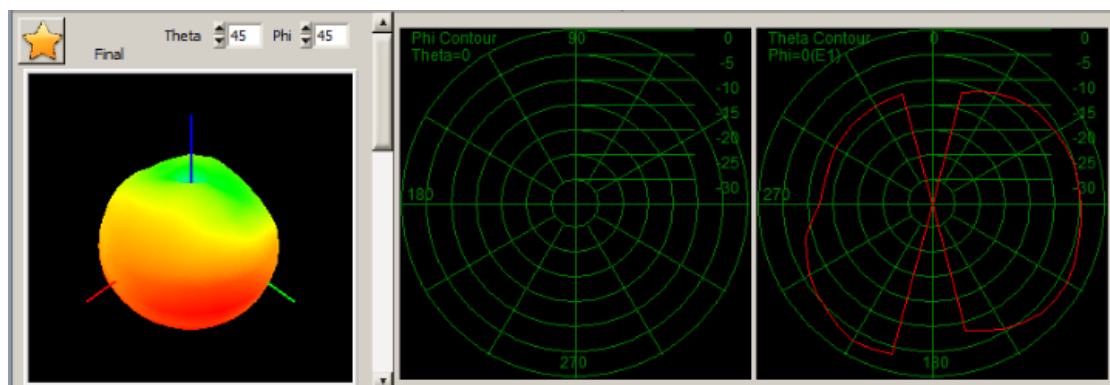
Band	Max Gain	Efficiency	Band	Max Gain	Efficiency
GSM850	-0.43	31%	NR-B1	-0.36	32%
GSM900	-0.39	32%	NR-B2	-0.36	32%
DCS1800	-0.52	30%	NR-B3	-0.52	30%
PCS1900	-0.36	32%	NR-B5	-0.43	31%
WCDMA1	-0.36	32%	NR-B7	0.22	37%
WCDMA2	-0.36	32%	NR-B8	-0.39	32%
WCDMA4	-0.36	32%	NR-B12	-0.89	23%
WCDMA5	-0.43	31%	NR-B20	-0.43	31%
WCDMA6	-0.43	31%	NR-B25	-0.52	30%
WCDMA8	-0.39	32%	NR-B28	-0.89	23%
WCDMA19	-0.43	31%	NR-B34	-0.36	32%
CDMA-BC0	-0.43	31%	NR-B38	-0.42	31%
CDMA-BC1	-0.36	32%	NR-B39	-0.36	32%
CDMA-BC10	-0.43	31%	NR-B40	0.13	35%
LTE-B1	-0.36	32%	NR-B41	-0.42	31%
LTE-B2	-0.36	32%	NR-B66	-0.36	32%
LTE-B3	-0.52	30%	NR-B71	-1.22	21%
LTE-B4	-0.36	32%	NR-B77	-0.38	32%
LTE-B5	-0.43	31%	NR-B78	-0.40	31%
LTE-B7	0.22	37%	NR-B79	0.10	36%
LTE-B8	-0.39	32%			
LTE-B12	-0.89	23%			
LTE-B13	-0.89	23%			
LTE-B17	-0.89	23%	Bluetooth	-0.33	32%
LTE-B18	-0.43	31%	WIFI-2.4G	-0.33	32%
LTE-B19	-0.43	31%	WIFI-5.1G	-0.41	31%
LTE-B20	-0.43	31%	WIFI-5.8G	-0.15	33%
LTE-B25	-0.52	30%	GPS-L1	-0.13	33%
LTE-B26	-0.43	31%	GPS-L5	-0.69	26%
LTE-B28	-0.89	23%			
LTE-B66	-0.36	32%			
LTE-B71	-1.22	21%			
LTE-B34	-0.36	32%			
LTE-B38	0.22	37%			
LTE-B39	-0.36	32%			
LTE-B40	0.13	35%			
LTE-B41	0.22	37%			

6. 3D Lobe Diagram

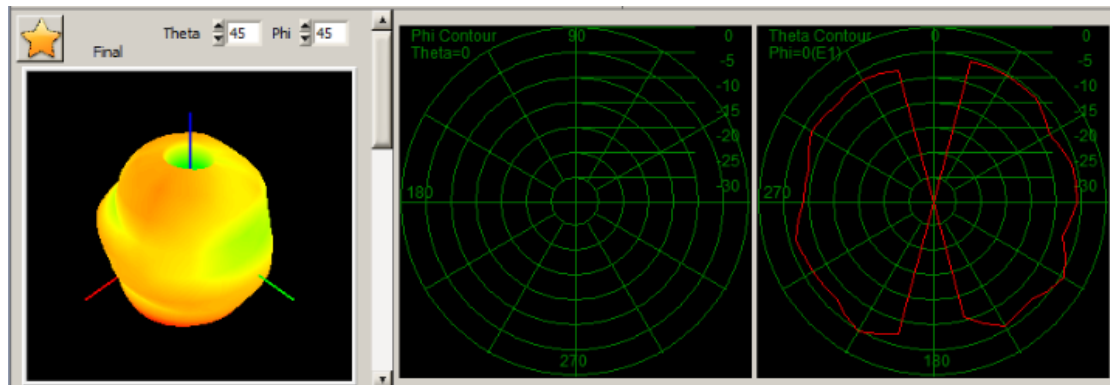
GSM850



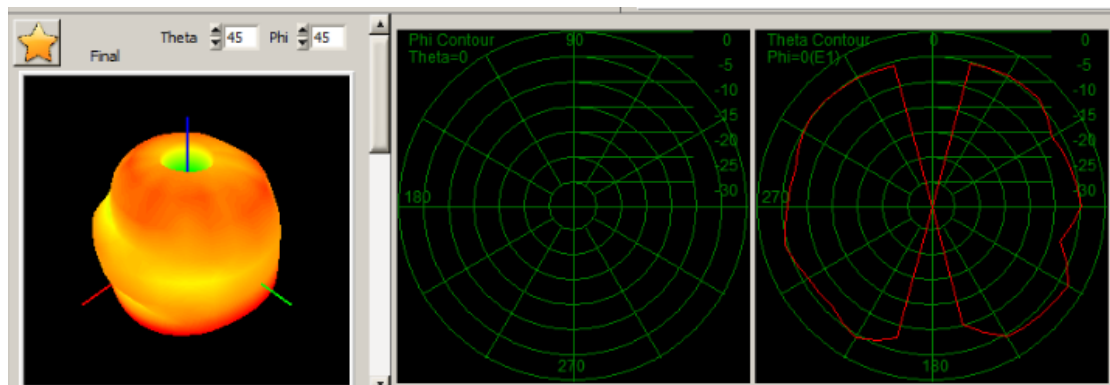
GSM900



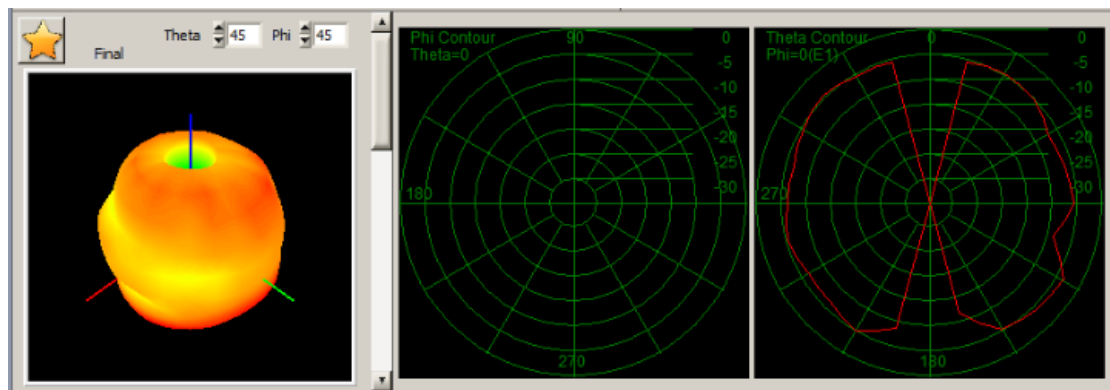
DSC1800



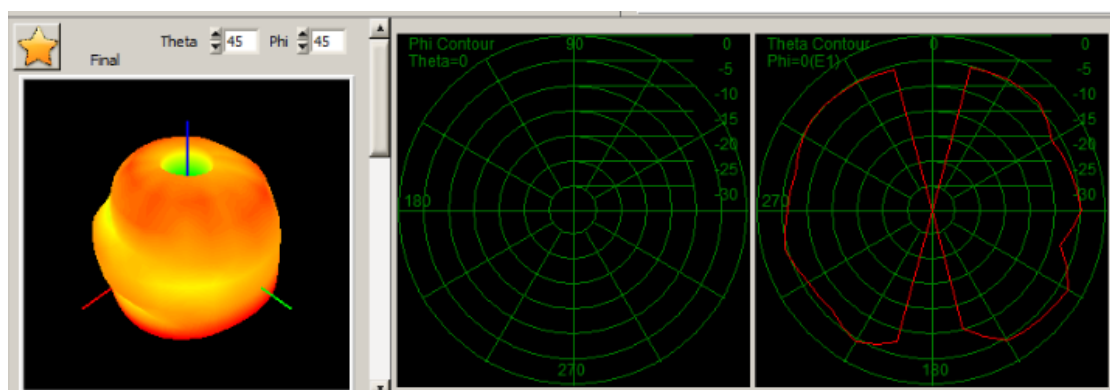
PCS1900



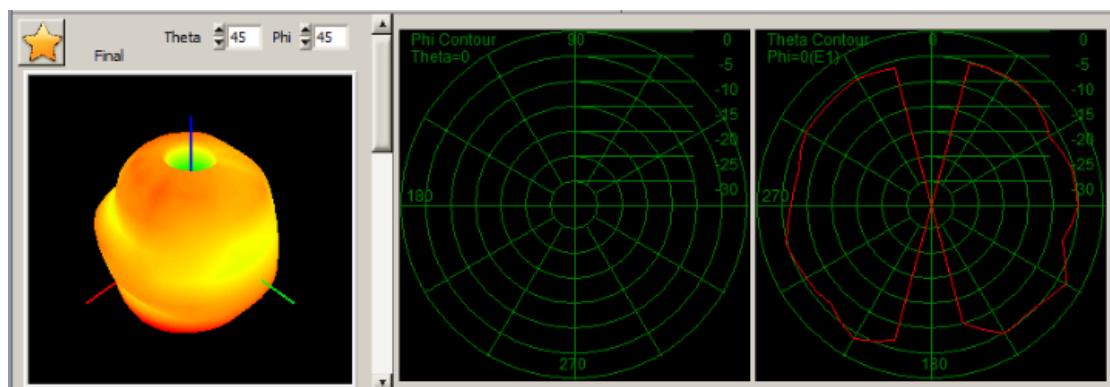
W1



W2



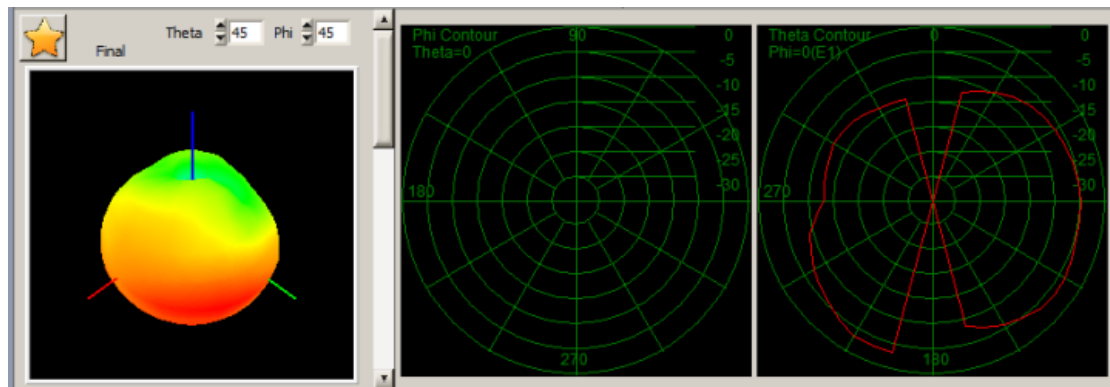
W4



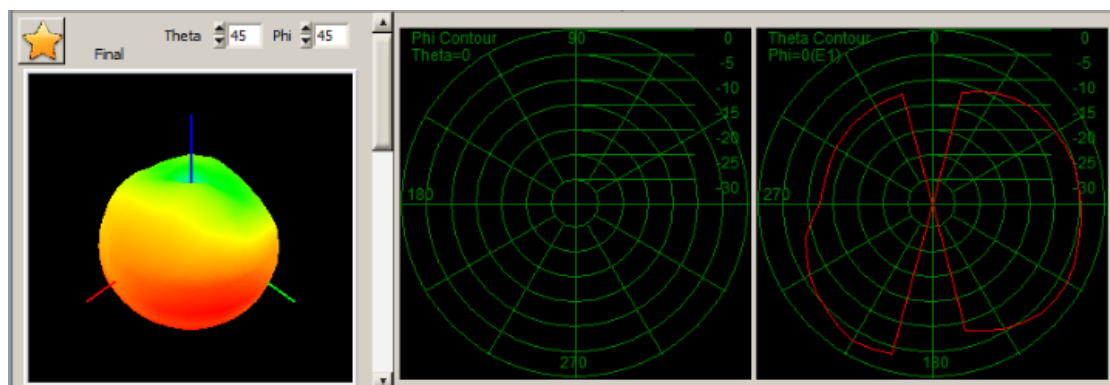
W5



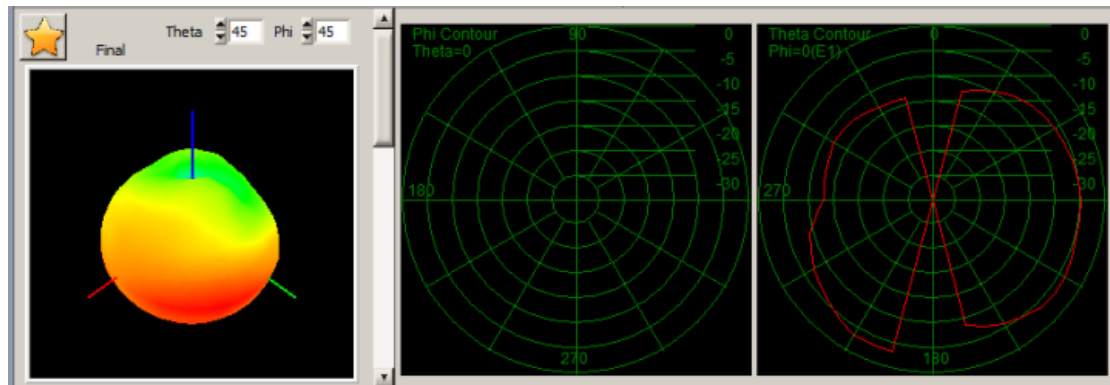
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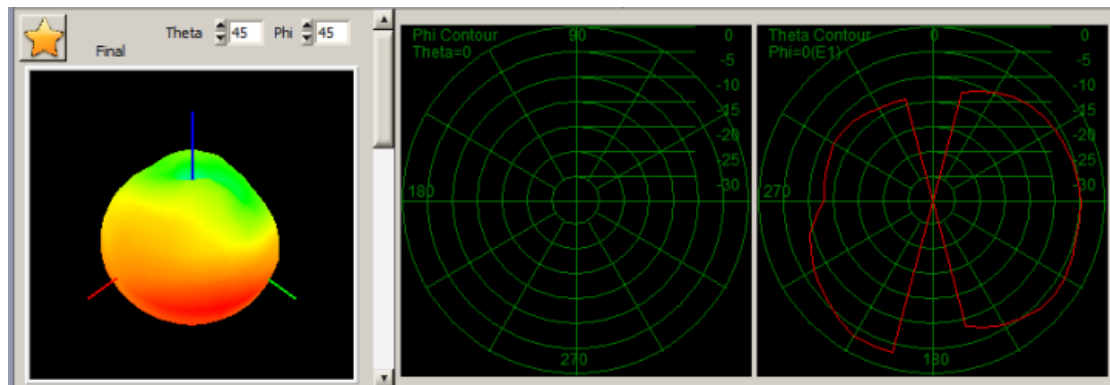
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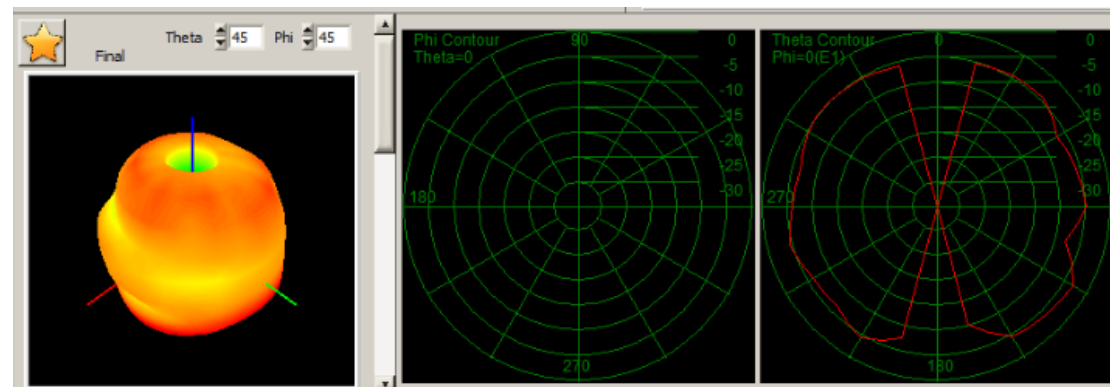
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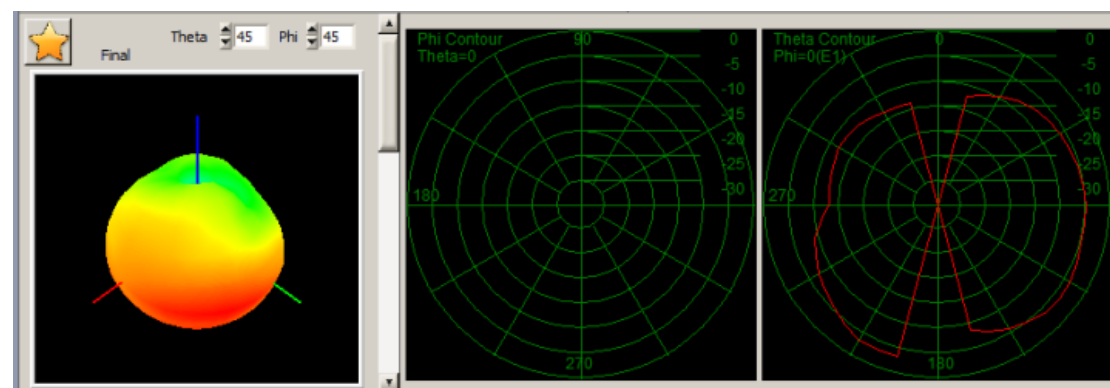
CDMA-BC0



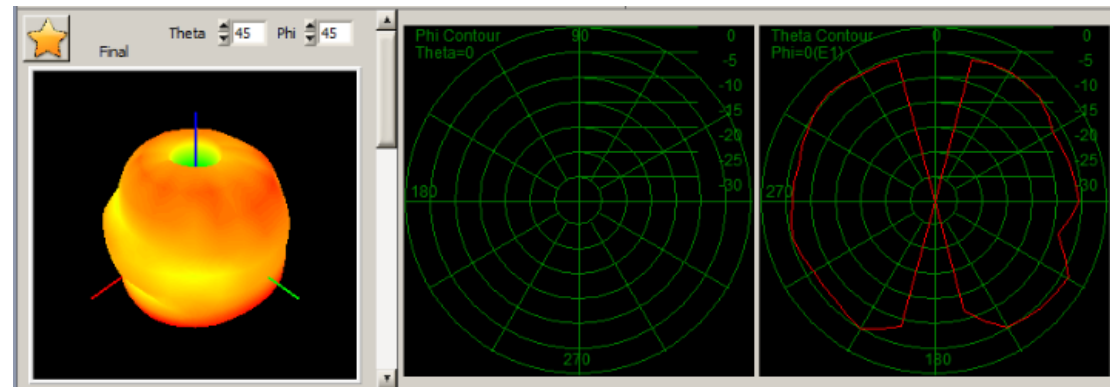
CDMA-BC1



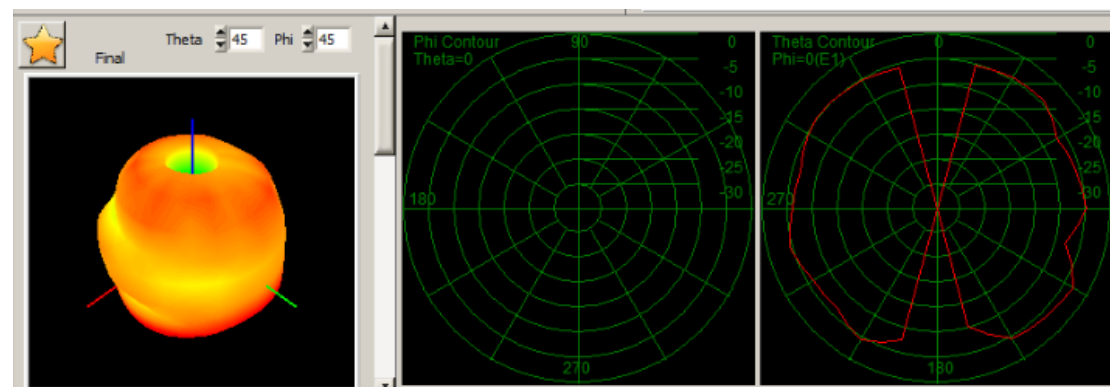
CDMA-BC10



FDD-B1



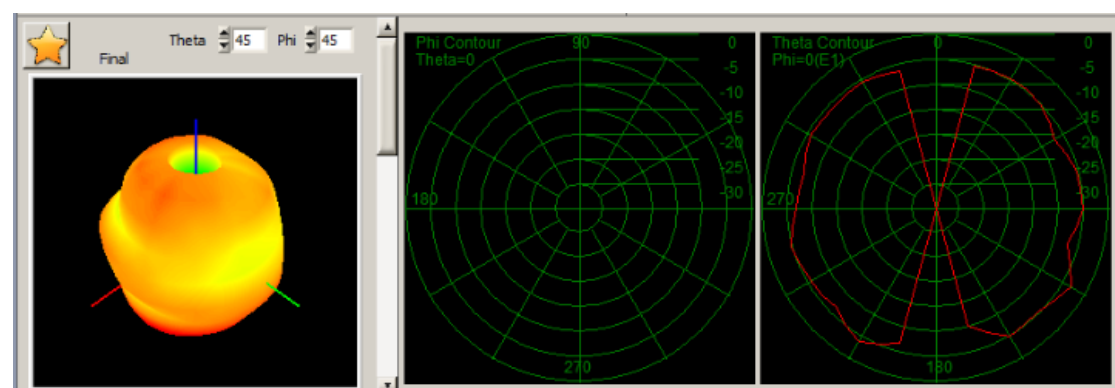
FDD-B2



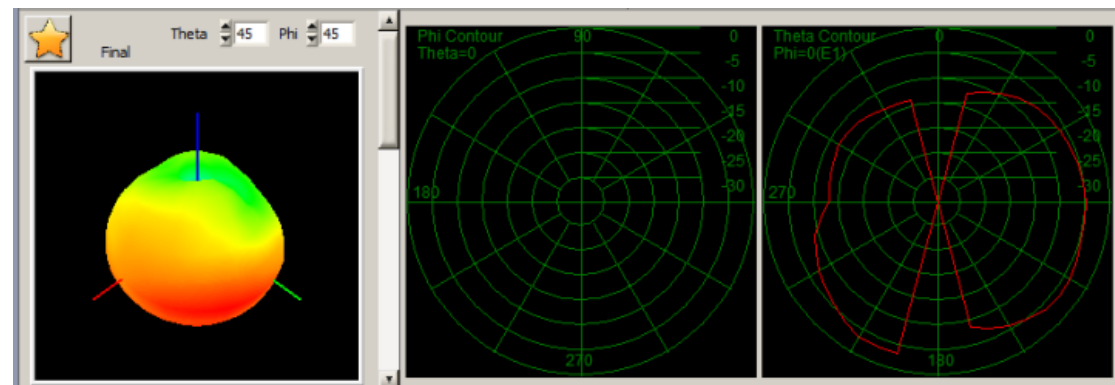
FDD-B3



FDD-B4



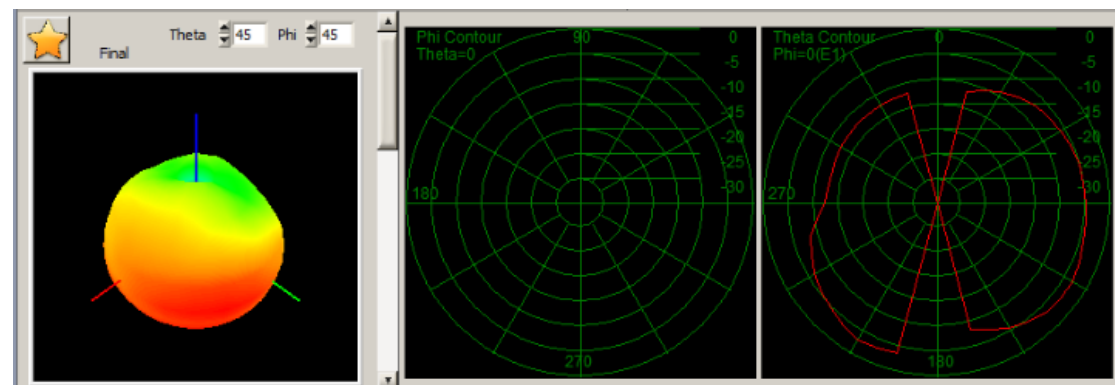
FDD-B5



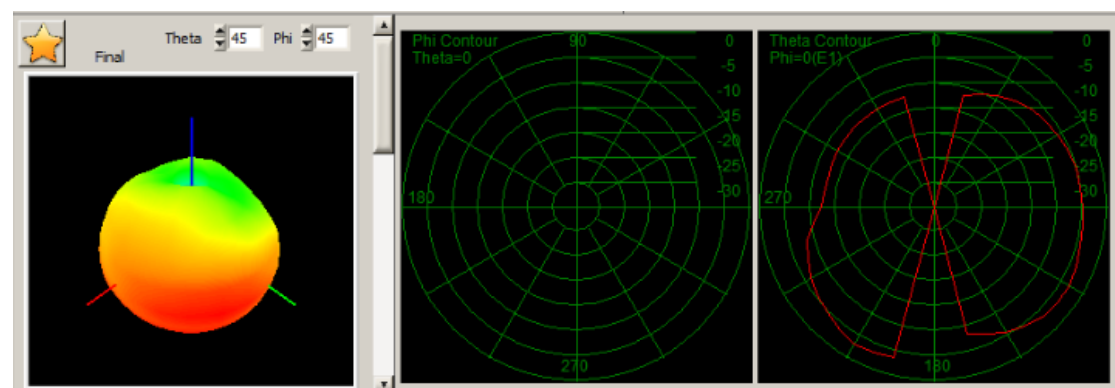
FDD-B7



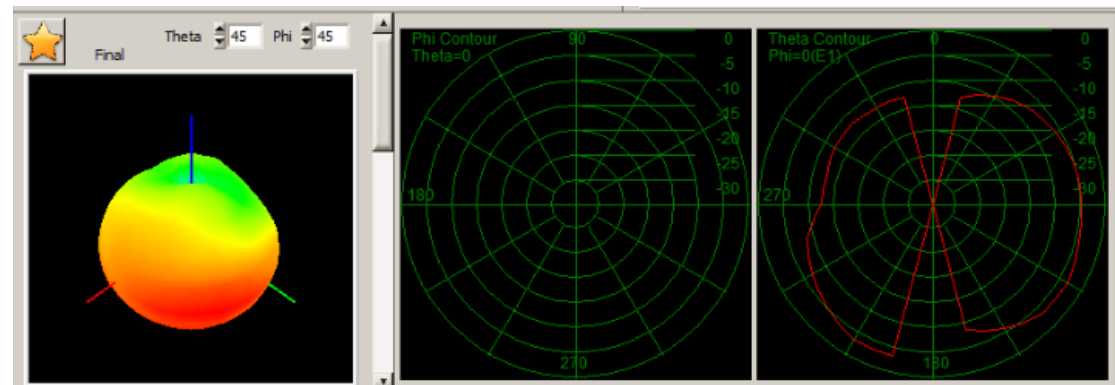
FDD-B8



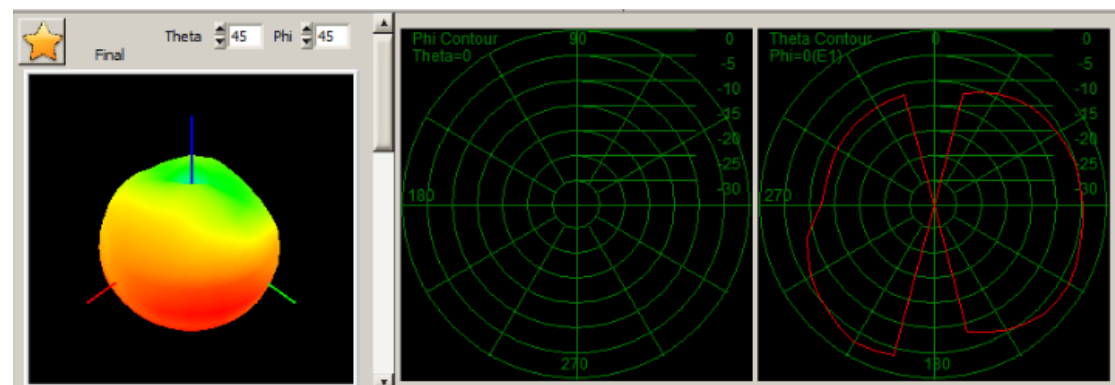
FDD-B12



FDD-B13



FDD-B17



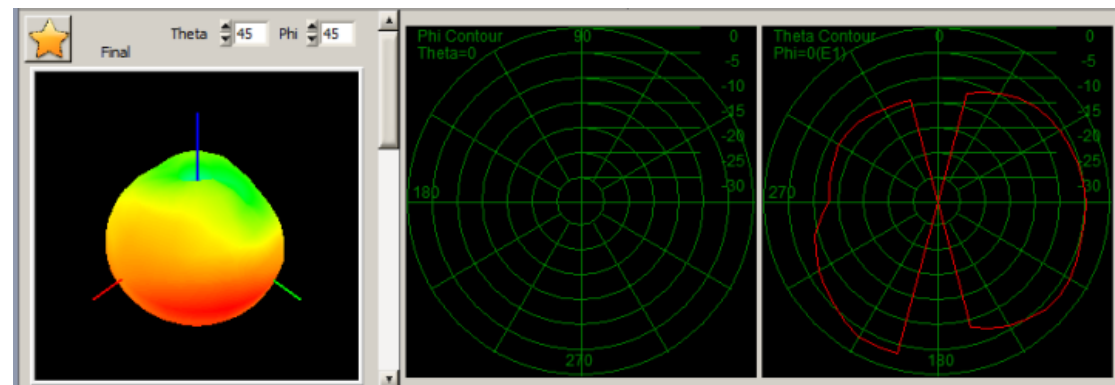
FDD-B18



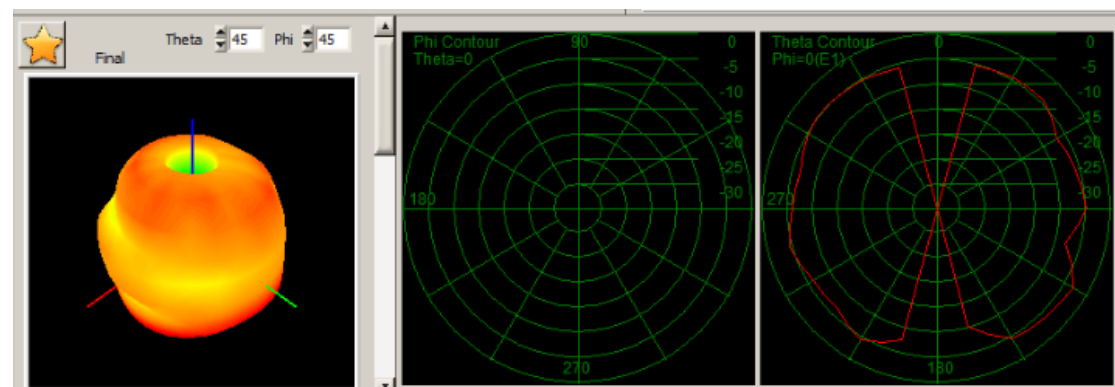
FDD-B19



FDD-B20



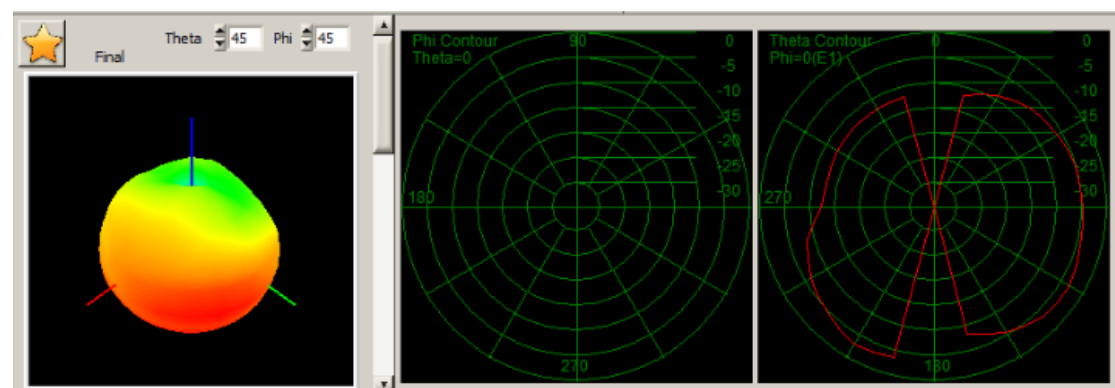
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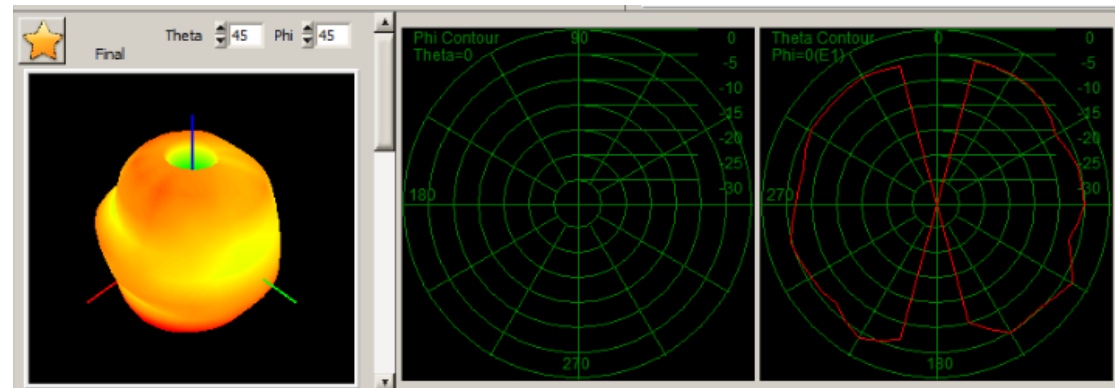
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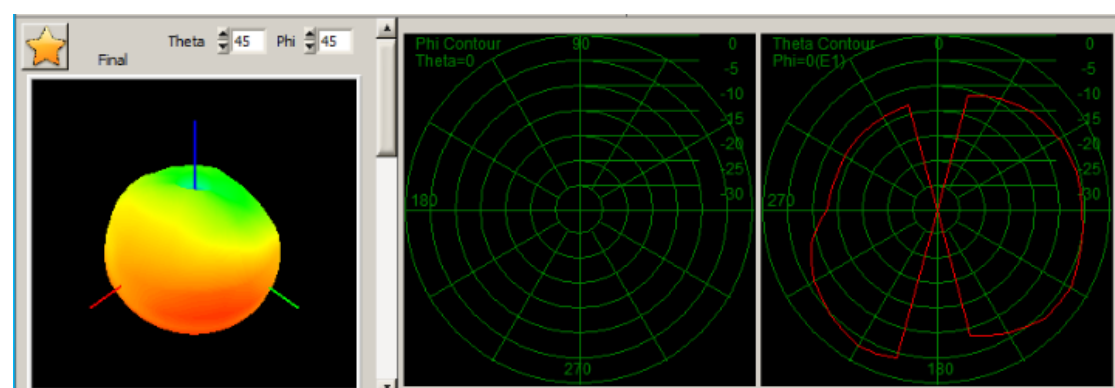
FDD-B28



FDD-B66



FDD-B71



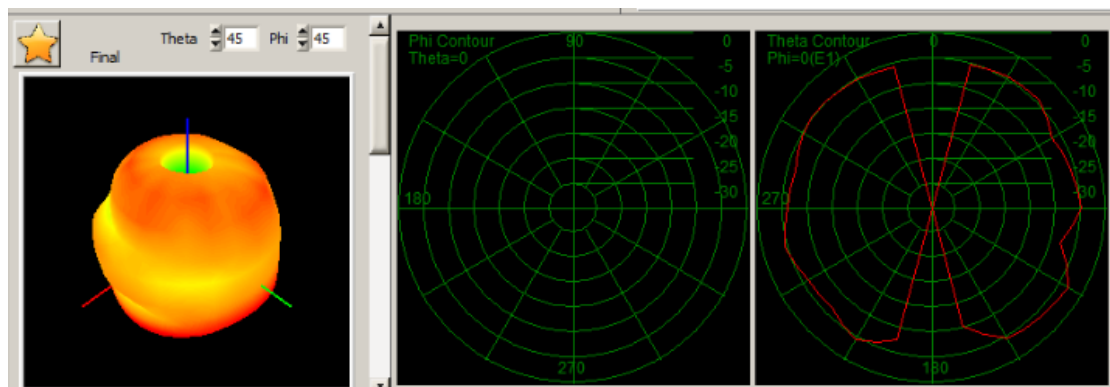
TDD-B34



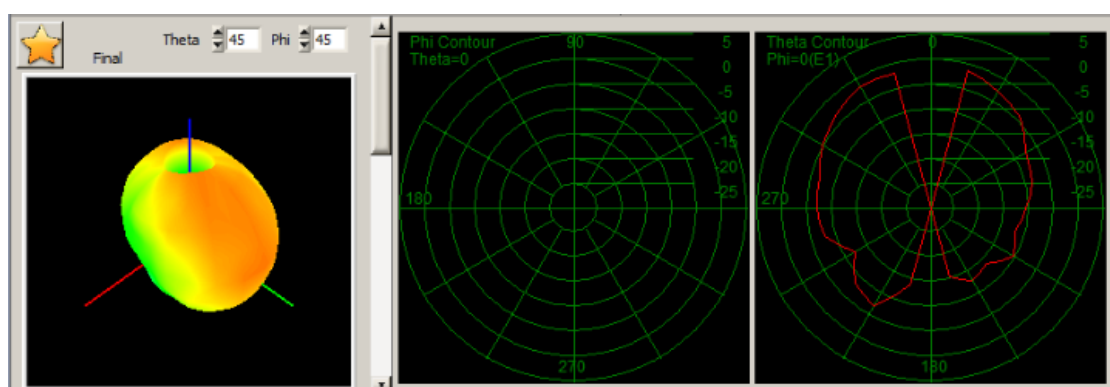
TDD-B38



TDD-B39



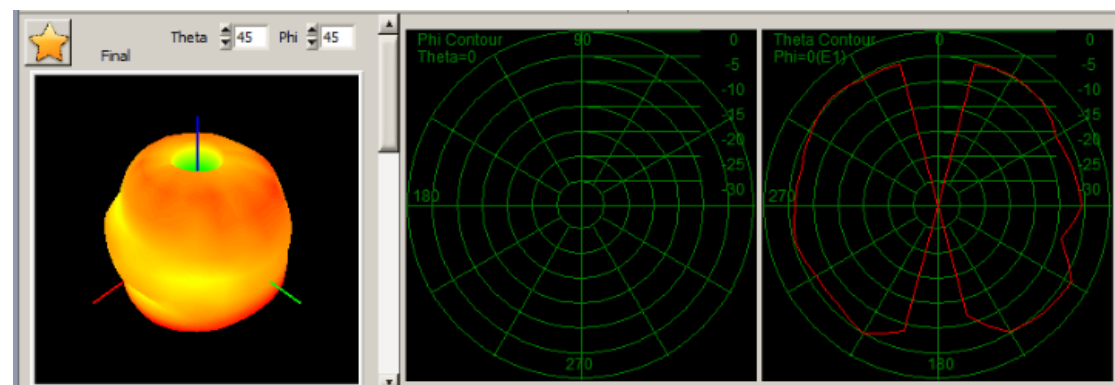
TDD-B40



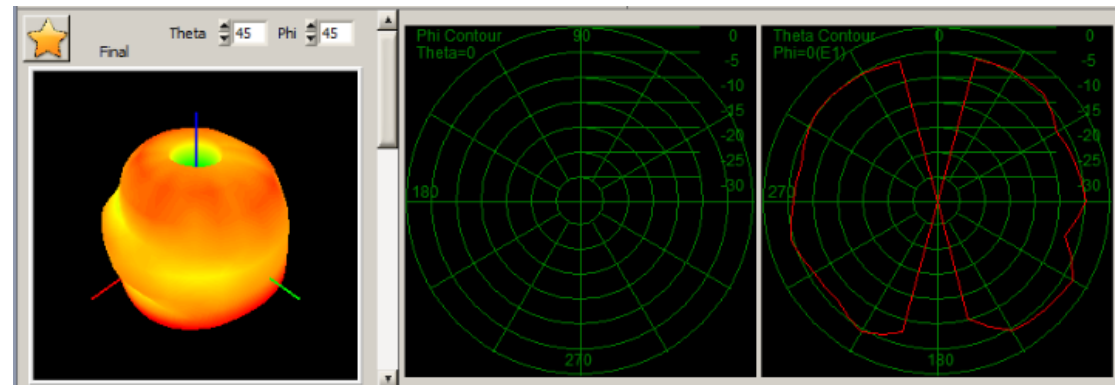
TDD-B41



NR-1



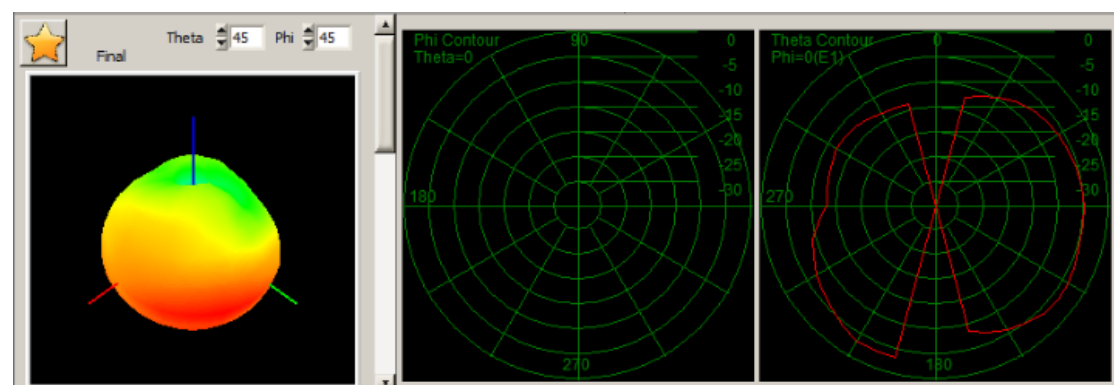
NR-2



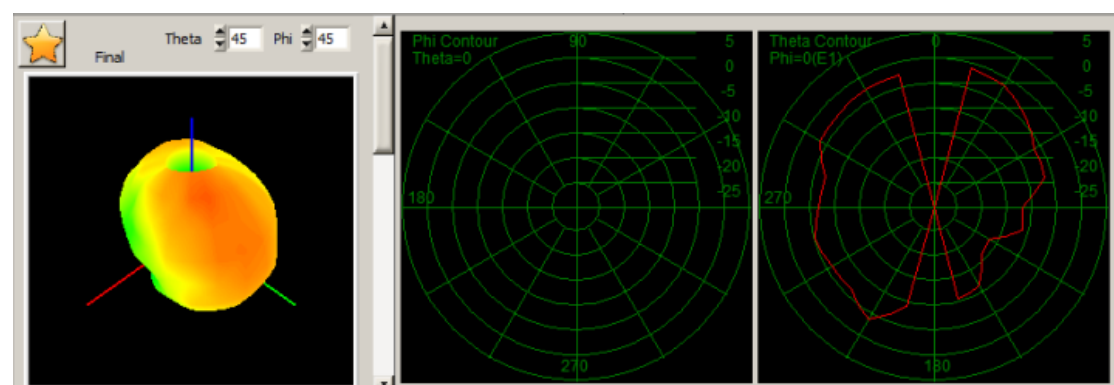
NR-3



NR-5



NR-7



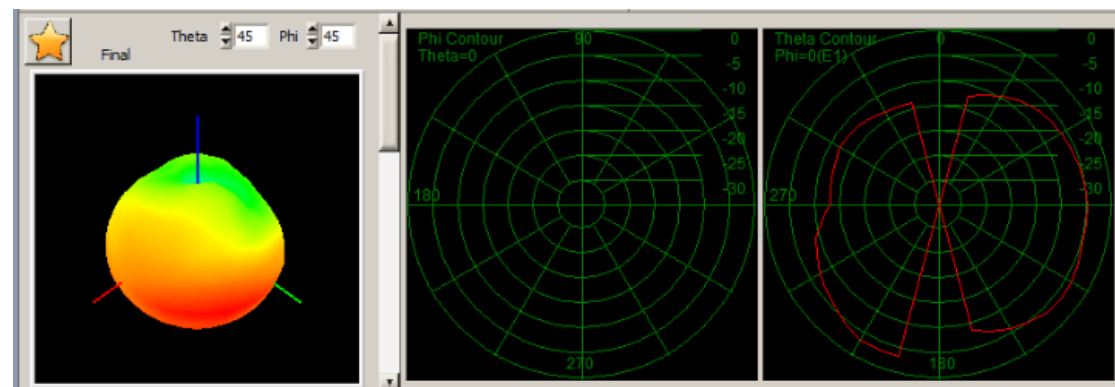
NR-8



NR-12



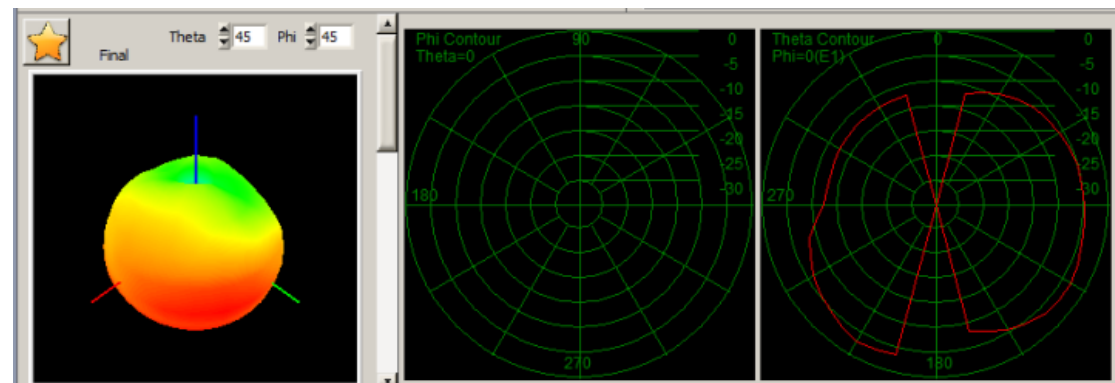
NR-20



NR-25



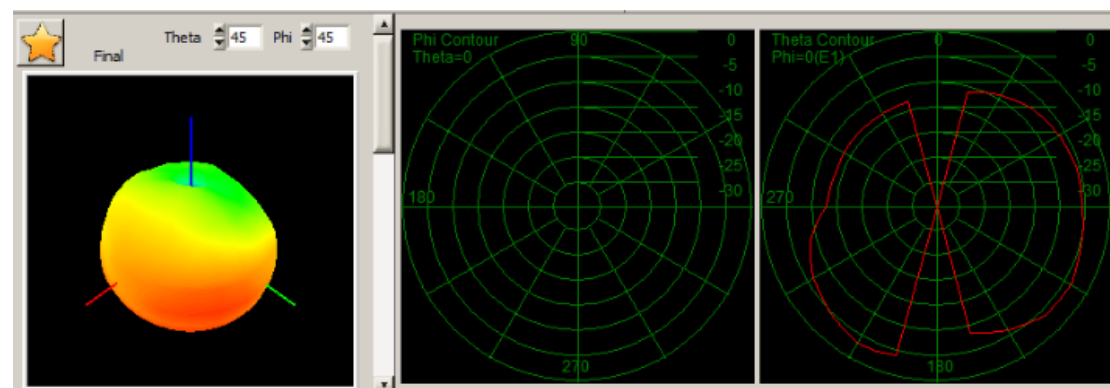
NR-28



NR-66



NR-71



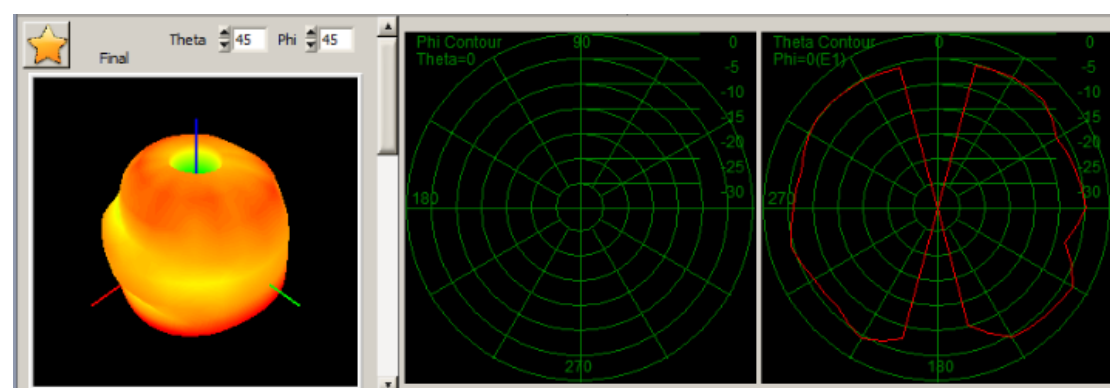
NR-34



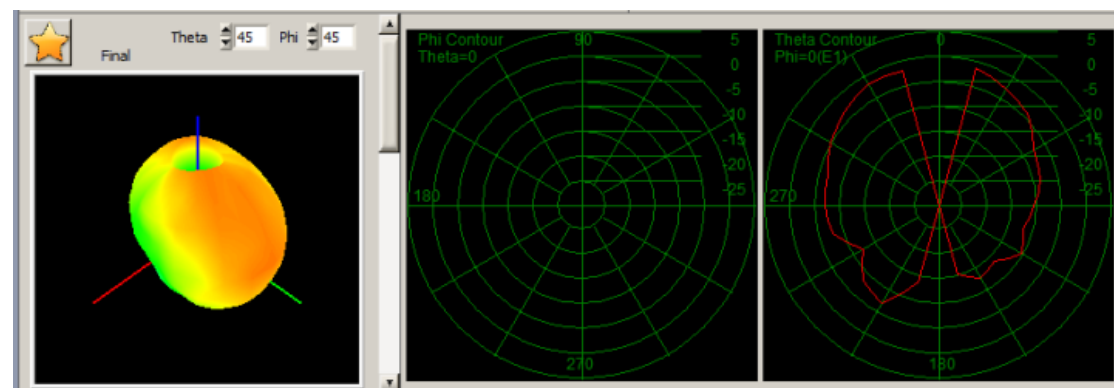
NR-38



NR-39



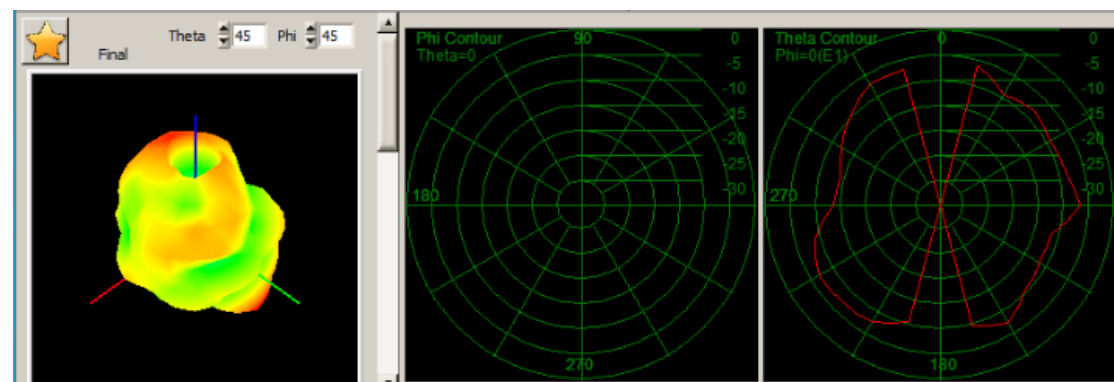
NR-40



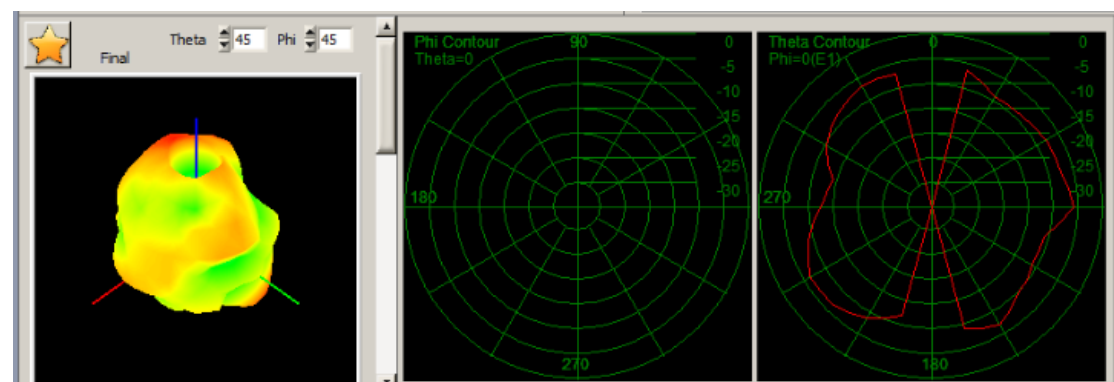
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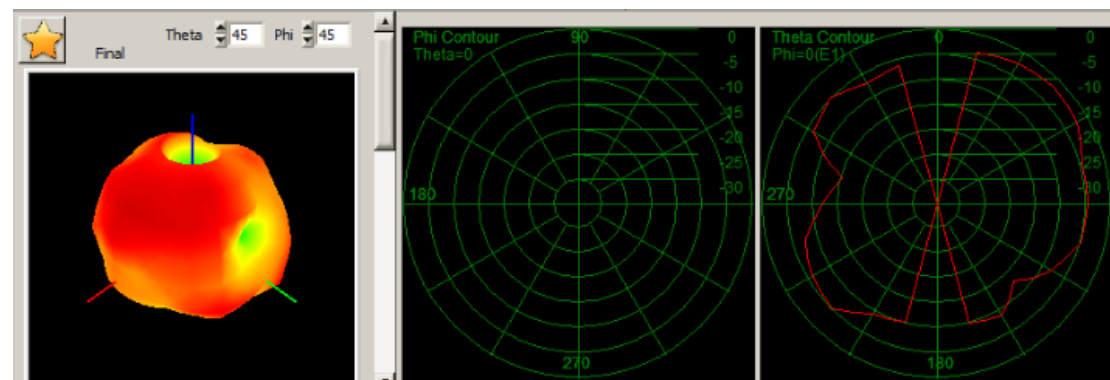
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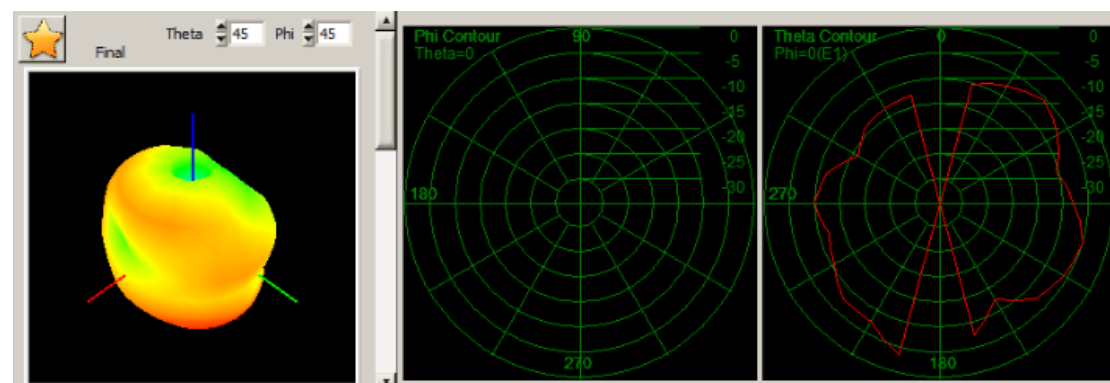
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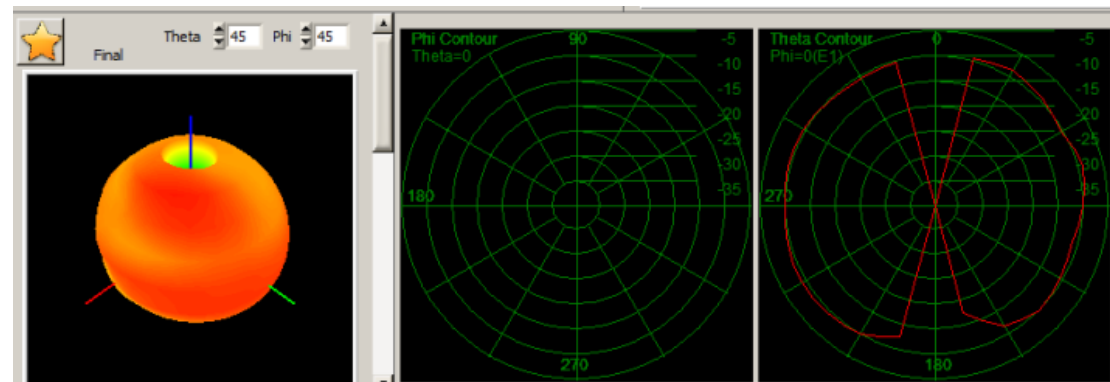
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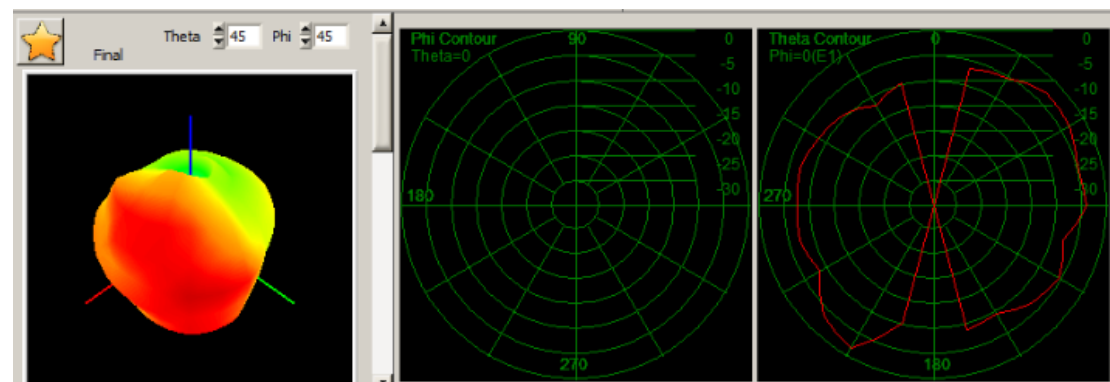
GPS-L1



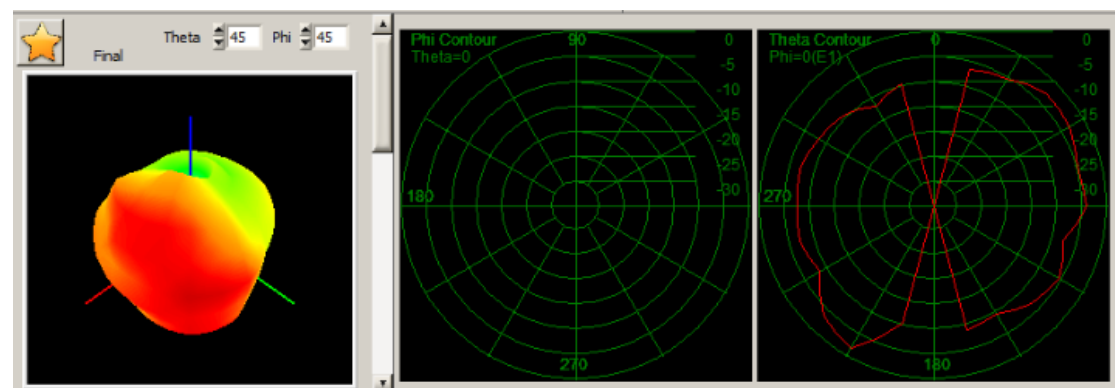
GPS-L5



BT



2.4G-WIFI



5.1G-WIFI



5.8G-WIFI



7. Antenna OTA

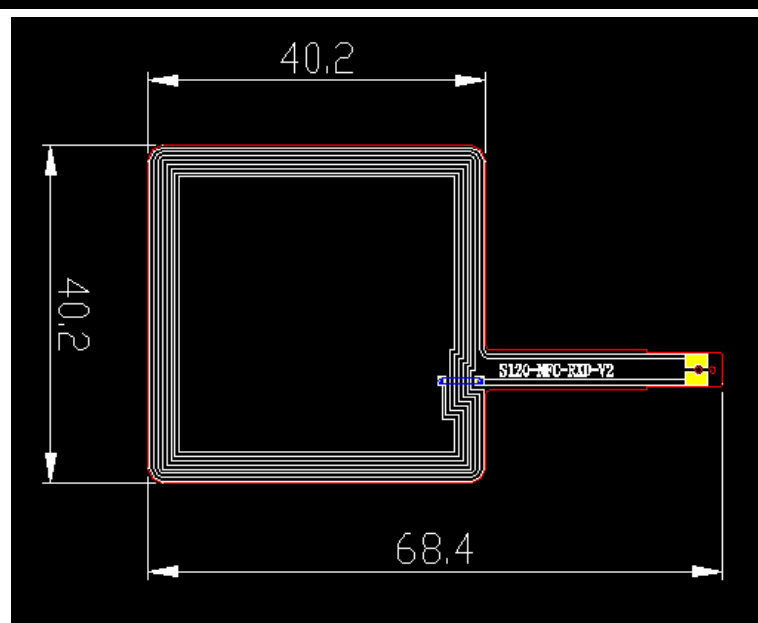
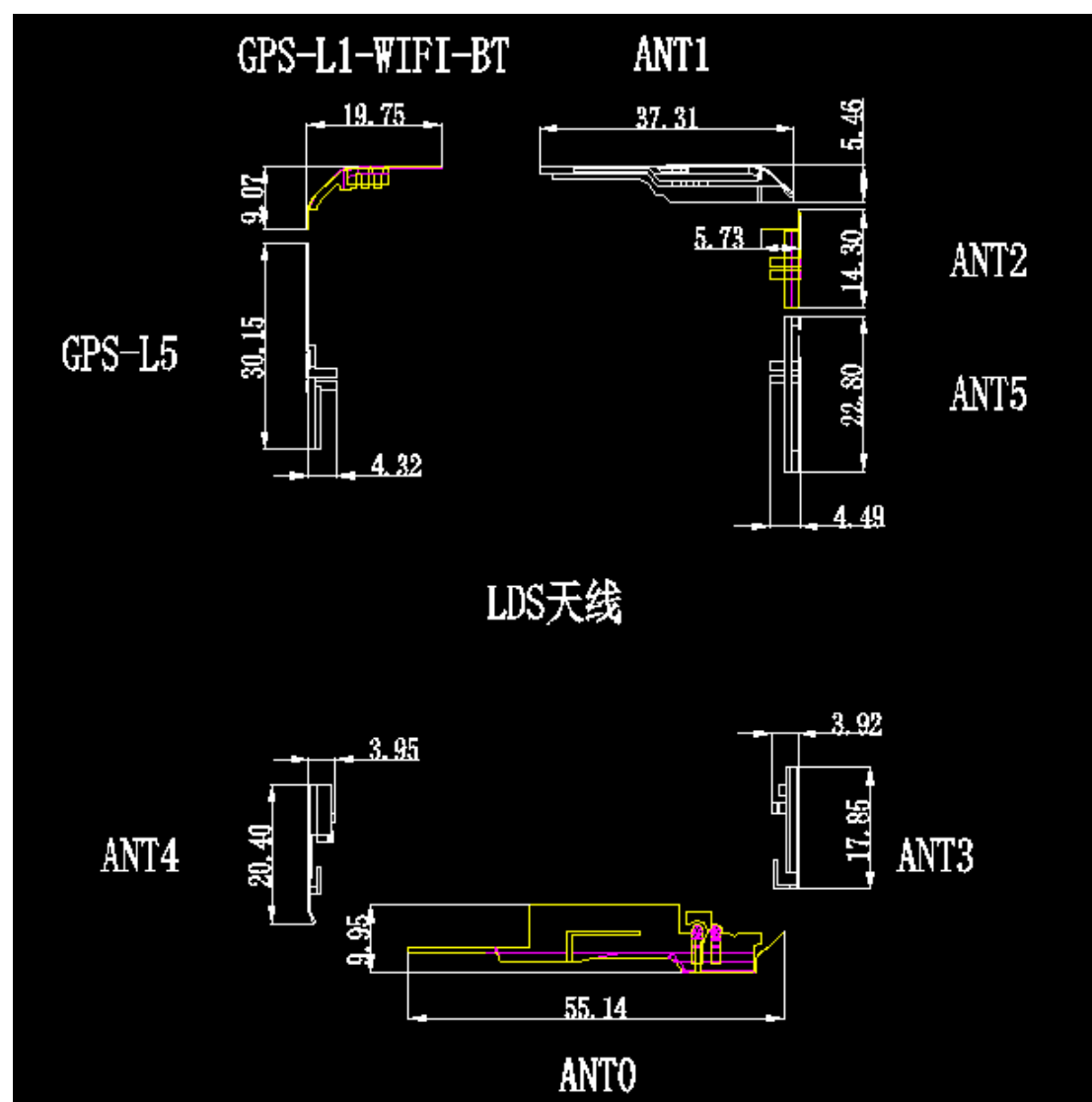
型号		说明	OTA 测试						
测试项目	GSM850 测量数值			GSM900 测量数值			DCS1800 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	25.4	25.5	26	25.3	26.5	26.8	23.2	23.6	24.2
TIS (dBm)			-102.5			-101.2			-104.3
测试项目	PCS1900 测量数值			WCDMA850 测量数值			WCDMA900 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	24.5	24.2	23.7	16.3	16.3	16.6	16.5	17.2	17.9
TIS (dBm)			-104.1			-103.9			-103.1
测试项目	WCDMA-B6 测量数值			WCDMA-B19 测量数值			WCDMA1700 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	16.3	16.5	16.6	16.3	16.5	16.5	15.9	16.2	16.8
TIS (dBm)			-103.5			-103.6			-105.8
测试项目	WCDMA1900 测量数值			WCDMA2100 测量数值					
信 道	L	M	H	L	M	H			
TRP (dBm)	18.5	18.8	18.6	18	17.8	17			
TIS (dBm)			-105.2			-105.6			
型号		说明	OTA 测试						
测试项目	CDMA-BC0 测量数值			CDMA-BC1 测量数值			CDMA-BC10 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	16.3	16.4	16.5	17.8	17.8	17.7	16.3	16.3	16.5
TIS (dBm)			-102.3			-103.9			-102.3
测试项目	FDD-B1 测量数值			FDD-B2 测量数值			FDD-B3 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	18.8	18.3	18.1	18.2	18.3	18.1	16.4	16.8	17.8
TIS (dBm)			-94.1			-93.7			-94.6
测试项目	FDD-B4 测量数值			FDD-B5 测量数值			FDD-B7 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	15.8	16	16.5	16.3	16.3	16.5	16.7	16.8	17.3
TIS (dBm)			-94.2			-92.8			-93.6
测试项目	FDD-B8 测量数值			FDD-B12 测量数值			FDD-B13 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	16.6	17.4	17.6	16.6	16.6	16.3	15.1	15.1	15.1
TIS (dBm)			-92.7			-91.6			-92.3

型号		说明	OTA 测试						
测试项目	FDD-B17 测量数值			FDD-B18 测量数值			FDD-B19 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	16.8	16.8	16.6	16.3	16.3	16.2	16.2	16.3	16.3
TIS (dBm)			-92.1			-92.3			-91.8
测试项目	FDD-B20 测量数值			FDD-B25 测量数值			FDD-B26 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	16.2	16.5	16.6	17.5	18.1	18.1	16.2	16.2	16.3
TIS (dBm)			-93			-93.9			-92.1
测试项目	FDD-B28 测量数值			FDD-B66 测量数值			FDD-B71 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	16.6	16.3	15.8	16.6	16.7	17.2	15.3	15.6	15.3
TIS (dBm)			-93.1			-93.6			-91.6
测试项目	TDD-B34 测量数值			TDD-B38 测量数值			TDD-B39 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	16.6	16.6	16.6	17	16.9	16.5	18.6	18.3	18.2
TIS (dBm)			-92.2			-92.6			-92.1

型号		说明	OTA 测试						
测试项目	TDD-B40 测量数值			TDD-B41 测量数值					
信 道	L	M	H	L	M	H			
TRP (dBm)	17.8	17.9	17	18.5	18.6	19.1			
TIS (dBm)			-91			-92.5			
测试项目	NR-B1 测量数值			NR-B2 测量数值			NR-B3 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	18.5	18.3	17.3	17.8	18	17.6	16.3	16.8	17.2
TIS (dBm)			-89.3			-89.8			-90.9
测试项目	NR-B5 测量数值			NR-B7 测量数值			NR-B8 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	16.2	16.2	16.5	17.7	17.2	17.9	17	17.5	17.6
TIS (dBm)			-88.7			-90.6			-88.3
测试项目	NR-B12 测量数值			NR-B20 测量数值			NR-B25 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	16.3	16.4	16.3	16.5	16.6	16.7	17.2	17.2	17.1
TIS (dBm)			-89.3			-88.7			-89.5

型号		说明	OTA 测试						
测试项目	NR-B28 测量数值			NR-B66 测量数值			NR-B71 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	16.6	16.5	15.9	16.5	16.7	17.1	15.3	15.5	15.2
TIS (dBm)			-88.6			-91			-87.5
测试项目	NR-B34 测量数值 (15MHz/30KHz)			NR-B38 测量数值			NR-B39 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	16.5	16.5	16.5	16.1	16.2	16.2	18.5	18.3	18.1
TIS (dBm)			-91.3			-91.2			-92.2
测试项目	NR-B40 测量数值			NR-B41 测量数值					
信 道	L	M	H	L	M	H			
TRP (dBm)	17.5	16.8	16.3	18.5	18.2	18			
TIS (dBm)			-90.2			-86.9			
测试项目	NR-B77 测量数值			NR-B78 测量数值			NR-B79 测量数值		
信 道	L	M	H	L	M	H	L	M	H
TRP (dBm)	18.9	18.1	18.3	19.2	18.8	17.6	17.2	17.2	18.6
TIS (dBm)			-87.6			-87.7			-87

8. Antenna Dimensions



9. Introduction to Antenna Information

S120	
Antenna type and frequency band	MAIN ANTENNA(<u>PIFA</u>):2G/3G/4G/5G DIV ANTENNA(<u>PIFA</u>):2G/3G/4G/5G GPS/WIFI/BT ANTENNA(<u>PIFA</u>):L1/2.4GWIFI/BT
Antenna materia	LDS