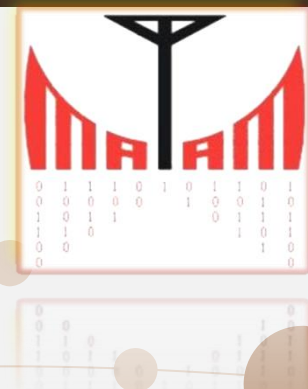




OTA TEST REPORT

Applicant Shenzhen Lynknex Communications Co., Ltd
Project Name PX5
Date of report May 25,2023
Engineer WangZhiFeng

A decorative graphic on the left side of the page. It features a central dark brown circle containing the text '目录' and 'contents'. Surrounding this central circle are several other circles in shades of orange, brown, and beige, connected by thin, light gray lines. Some of these lines radiate from the central circle, while others connect the peripheral circles. There are also small orange and brown circles scattered around the main structure.

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01

Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **Shenzhen Maya Communication Equipment Co. , Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2 Test facility

CERTIFICATE OF COMPLIANCE N° CC.126.2.16.MVI.A

Shenzhen Maya Communication Equipment Co. , Ltd. has been included in the Italian Institute of Laboratory Accreditation Executive Measurement

1.3 Testing Location

Company: Shenzhen Maya Communication Equipment Co. , Ltd.

Address: 2/F, Unit 2, Building 1, Guanghui Science and Technology Park, Minqing Road,
Longhua District, Shenzhen City, Guangdong Province

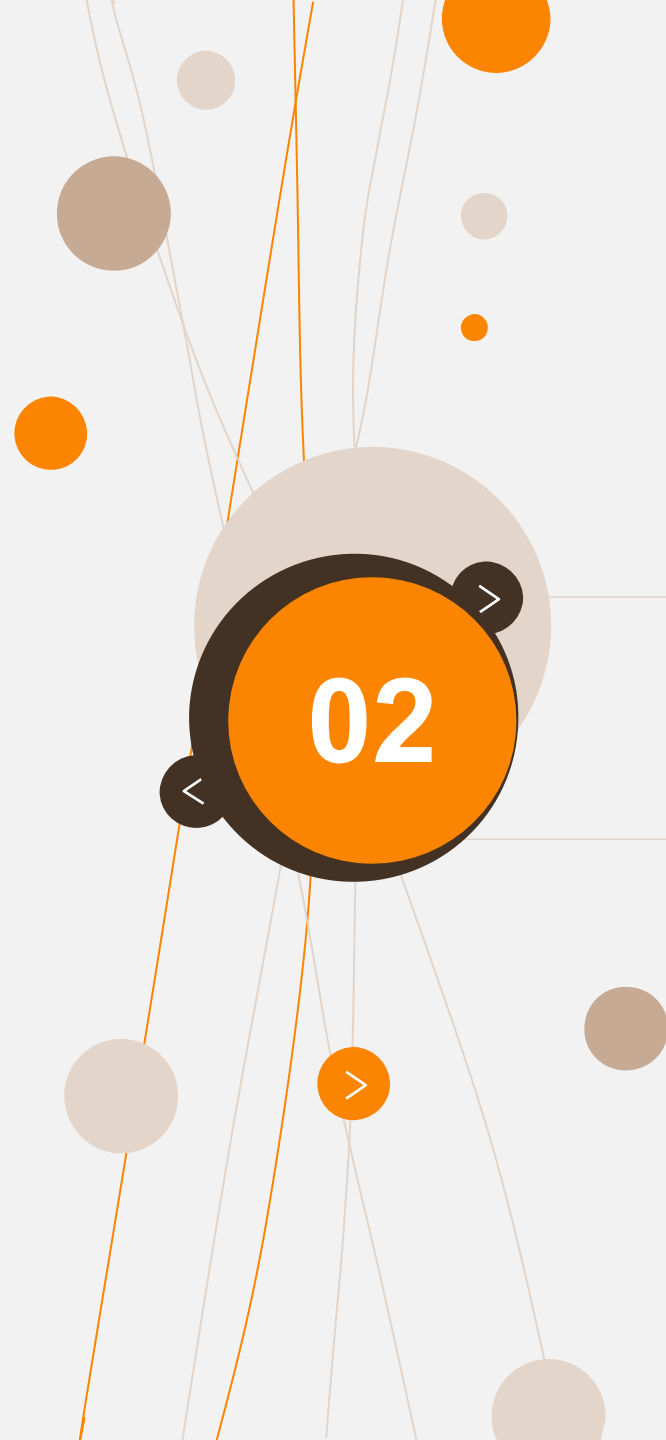
Post code: 518000

Contact: WangZhiFeng

Telephone: 13823540870

Laboratory Environment

Temperature	22°C-25°C	
Relative humidity	≤80%	
Shield effect	0.7-6GHz	> 100dB
Ground resistance	<0.5Ω	



02

General Description of Equipment under Test

2.1 Applicant and Manufacturer Information

Applicant Name	Shenzhen Lynknex Communications Co., Ltd.
Applicant address	Room 101、 103 Building A5, Hangcheng Innovative Venture Park, Hangcheng Avenue, Bao'an District, Shenzhen, P.R. China 518128
Manufacturer Name	Shenzhen Maya Communication Equipment Co. , Ltd.
Manufacturer address	2/F, Unit 2, Building 1, Guanghui Science and Technology Park, Minqing Road, Longhua District, Shenzhen City, Guangdong Province

2.2 General Information

EUT Description	
Project name	PX5
Antenna Type	PIFA
Antenna Manufacturer	Shenzhen Maya Communication Equipment Co. , Ltd.
Test Frequency	698-2700MHZ 2400-2500MHZ 1570-1580MHZ 5200-5800MHZ
Note:The EUT is sent from the applicant to MAYA and the information of the EUT is declared by the applicant. All indications of Pass/Fail in this report are opinions expressed by MAYA based on interpretations and/or observations of test results.Measurement Uncertainties were not taken into account and are published for informational purposes only.	

2.3

Test Date

The test is performed from May 20,2023to May 25,2023

2.4

Receiving Date

The sample was received on May 20,2023

2.5

Applied Standards

According to the specifications of the manufacturer,it must comply with the requirements of the following standards.

Test Method:Have been manufactured and tested following the MV Italy procedure and according to ISO 9001 requirements.

Test lab.of the antenna gain and radiation pattern measurement :
Shenzhen Maya Communication Equipment Co. , Ltd.



03

Test Conditions

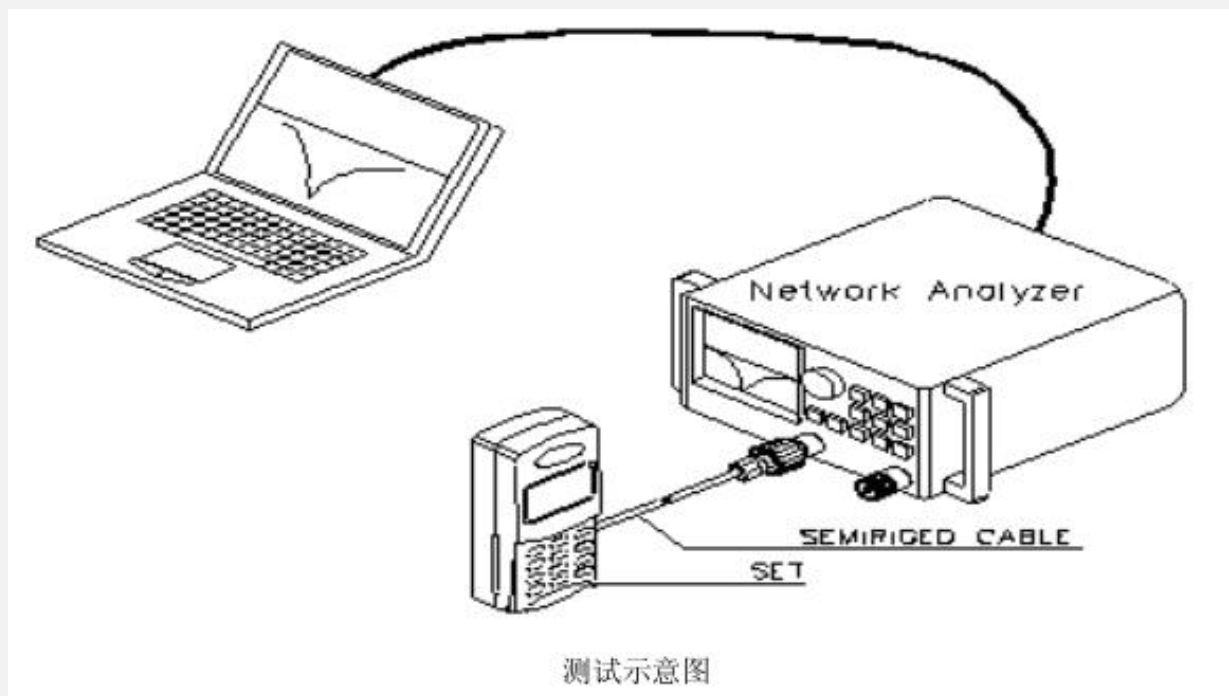
Test method description and data

Device name	Purpose
Vector Network Analyzer	S11/Impedance/ Passive Test
Agilent 8960 SP6010 R&S CMU200	Mobile Communication Device Test including GSM, GPRS, EDGE, CDMA2000,1XEV-DO, TD-SCDMA, WCDMA, HSDPA
R&S CMW500 MT8820C	Mobile phone test including TD-SCDMA, WCDMA, HSDPA, LTE, WIFI, GPS
SP9500E	Contains 5G, SA, NSA
Agilent E4438C	Test active GPS
MVG Chamber	Passive Test / OTA active Test / Efficiency/Gain

Passive Test Report

Test Equipment: Network analyzer

Test method: A 50 ohm CABLE is used to export from the instrument test port. After calibration, the SMA Joint of the handset is connected with the calibrated parts, and the data of the relevant frequency points such as echo loss or standing wave ratio is recorded.



TRP/TIS

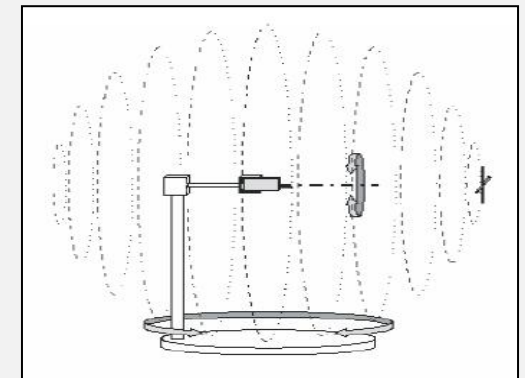
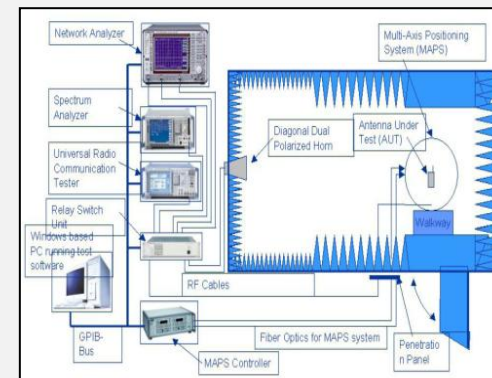
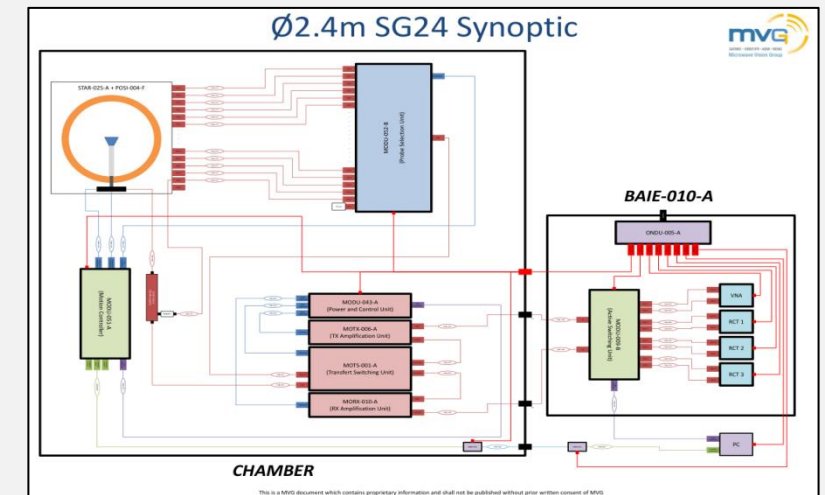
Testing Tools: General Surveyor, Network Analyzer, full-wave Far-field ETS, French MVG SG24LT (Satmio) near-field 3D anechoic chamber, High Precision positioning system and its controller and computer test environment with automatic test program: Temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $60\% \pm 15\%$: Using the Test Method and calculation of TRP in EST or Satimo 24LT system software, DUT (Device Under Test) is in the state of maximum transmitting power when TRP is tested, the position of the DUT is controlled by the positioning system. The 15-degree step is used to measure the 3D effective radiated power (EIRP) at each point. The mean value on the sphere is calculated by integrating, The formula is as follows:

$$TRP \cong \frac{\pi}{2NM} \sum_{i=1}^{N-1} \sum_{j=0}^{M-1} [EiRP_{\theta}(\theta_i, \phi_j) + EiRP(\theta_i, \phi_j)] \sin(\theta_i)$$

Active Test Report

In the TIS test, the DUT is in the state of maximum transmitting power. Three channels are selected to test. By controlling the position of the DUT, the receiving sensitivity of each point of the 3D is measured at a step length of 30 degrees, the mean value on the sphere is calculated by integration, The formula is as follows:

$$TIS \cong \frac{2NM}{\pi \sum_{i=1}^{N-1} \sum_{j=0}^{M-1} \left[\frac{1}{EIS_{\theta}(\theta_i, \phi_j)} + \frac{1}{EIS_{\phi}(\theta_i, \phi_j)} \right] \sin(\theta_i)}$$





04

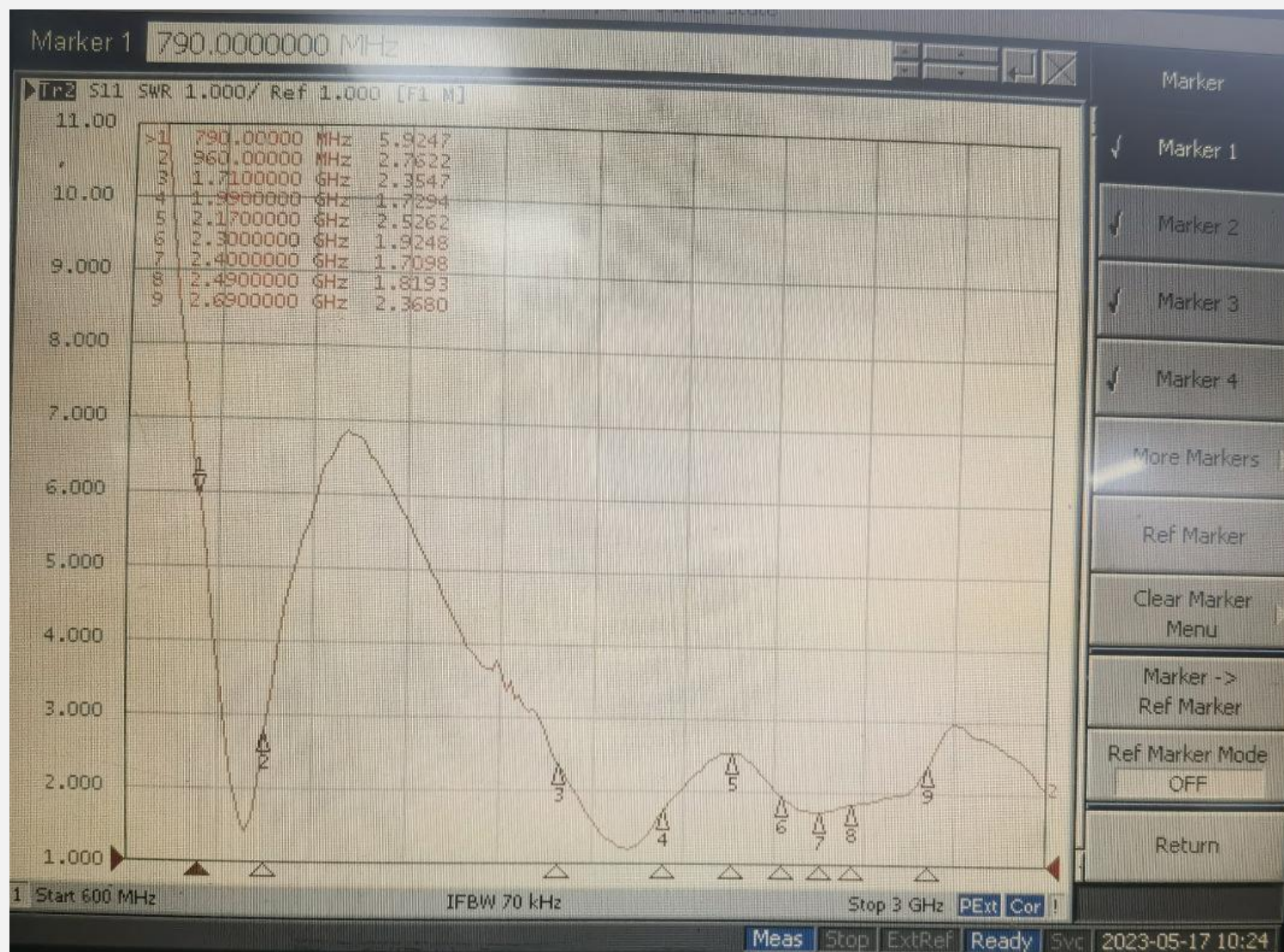
Test Results

Active test

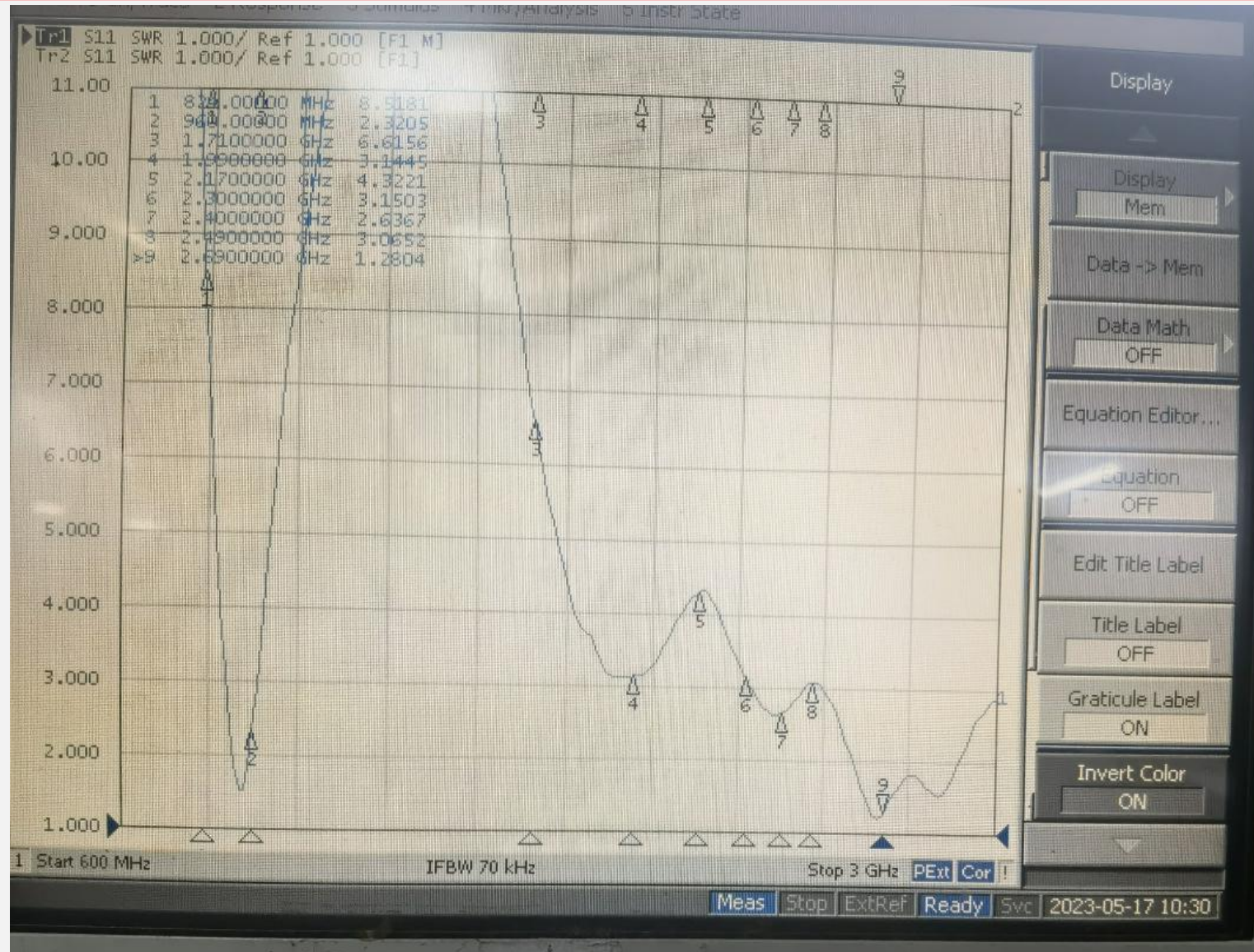
BAND	GSM850			PCS1900		
CHANNEL	128	192	251	512	661	810
TRP	26.19	26.27	26.42	24.82	25.26	25.13
TIS			-101.59			-102.11
BAND	WCDMA-B1			WCDMA-B2		
CHANNEL	Low	Medium	High	Low	Medium	High
TRP	17.56	17.17	16.49	17.78	17.82	18
TIS			-103.66			-102.84
BAND	WCDMA-B4			WCDMA-B5		
CHANNEL	Low	Medium	High	Low	Medium	High
TRP	16.86	16.44	16.29	16.32	16.47	16.58
TIS			-104.18			-103.15
BAND	LTE-B1			LTE-B2		
CHANNEL	Low	Medium	High	Low	Medium	High
TRP	17.19	16.75	16.44	17.17	17.12	16.63
TIS			-94.43			-93.46
BAND	LTE-B4			LTE-B5		
CHANNEL	Low	Medium	High	Low	Medium	High
TRP	16.11	16.49	16.38	16.39	16.62	16.31
TIS			-94.88			-89.56

BAND	LTE-B7			LTE-B12		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	17.9	17.82	17.16	16.19	16.48	16.13
TIS			-90.27			-89.57
BAND	LTE-B13			LTE-B17		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	16.5	16.47	16.34	16.35	16.48	16.39
TIS			-89.43			-89.19
BAND	LTE-B19			LTE-28A		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	16.41	16.52	16.37	15.47	15.26	15.53
TIS			-89.25			-88.12

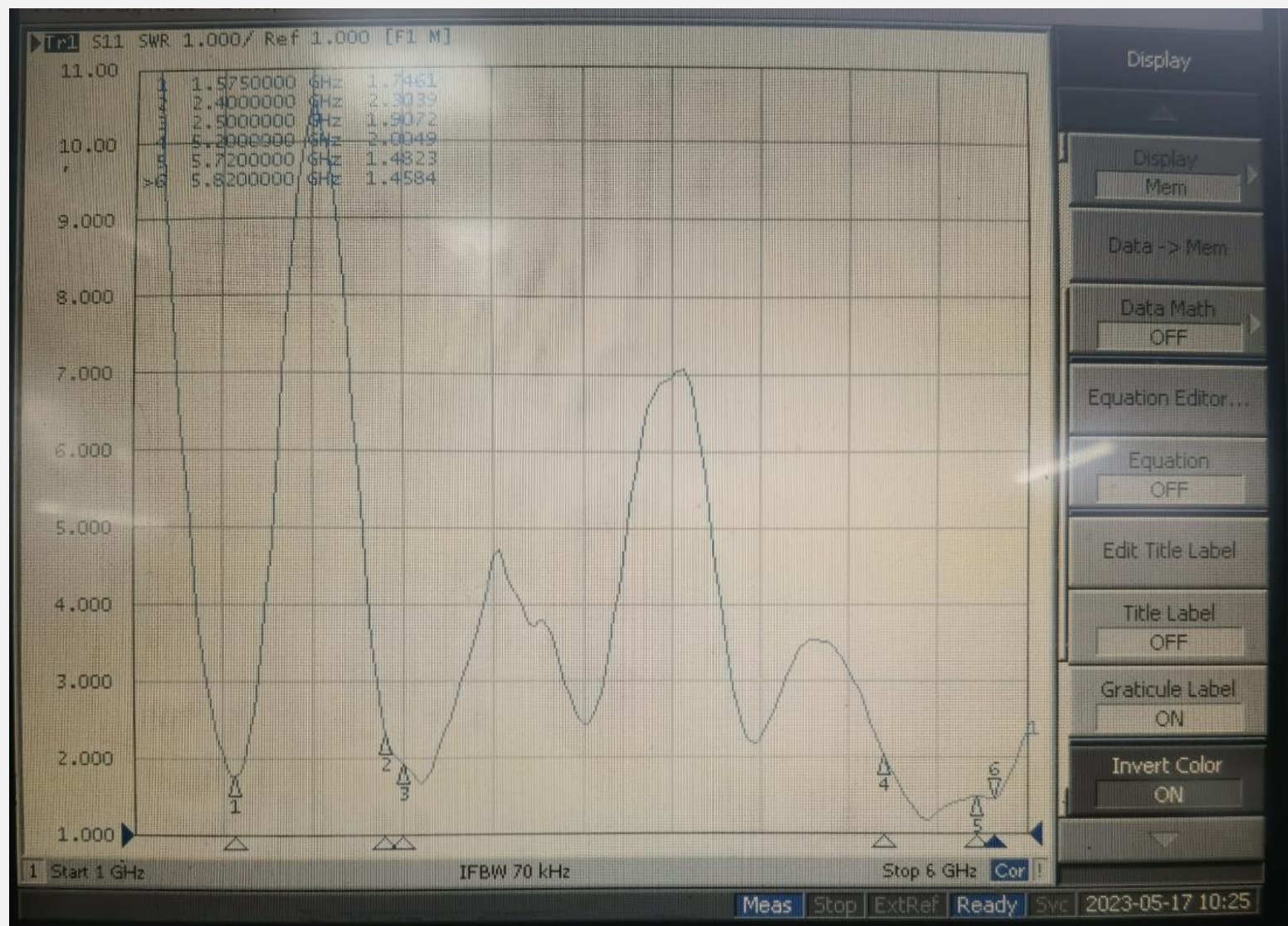
MAINstationary wave pattern



DIVstationary wave pattern

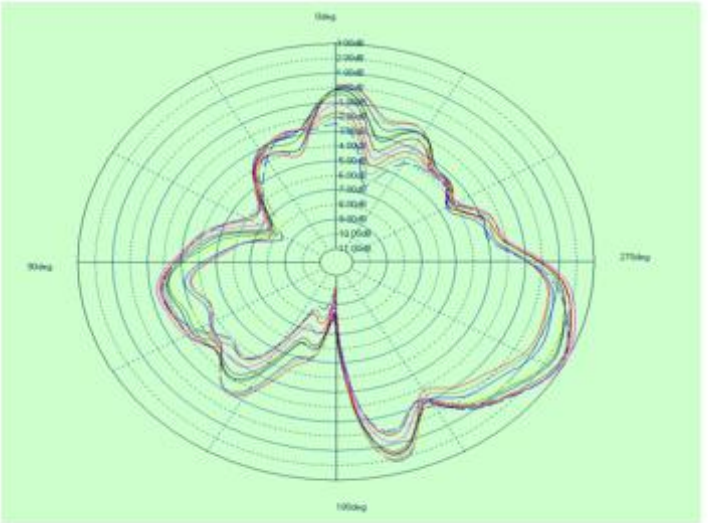
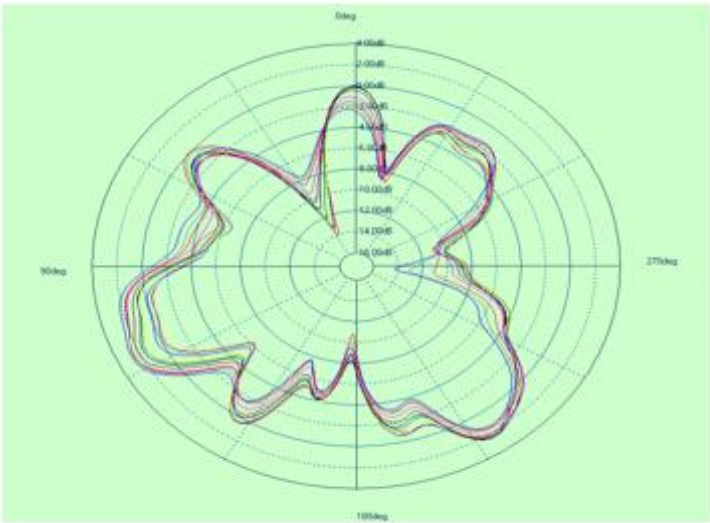
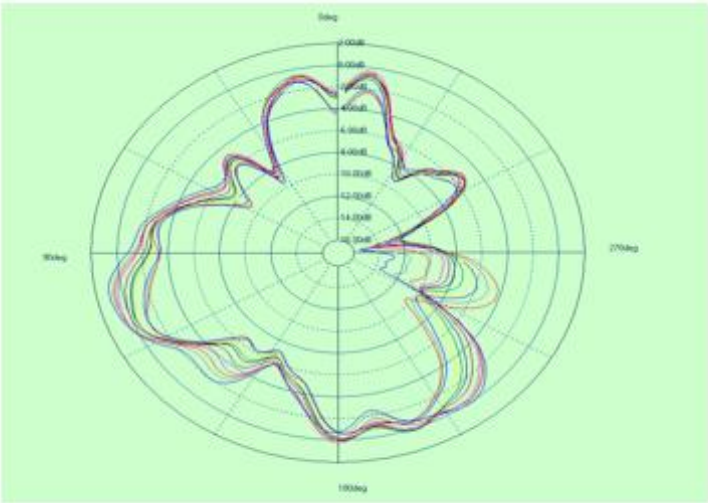
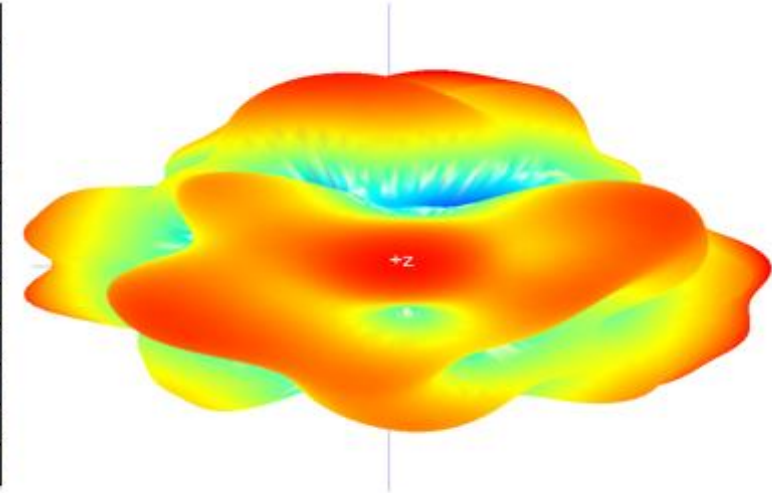


WGBstationary wave pattern



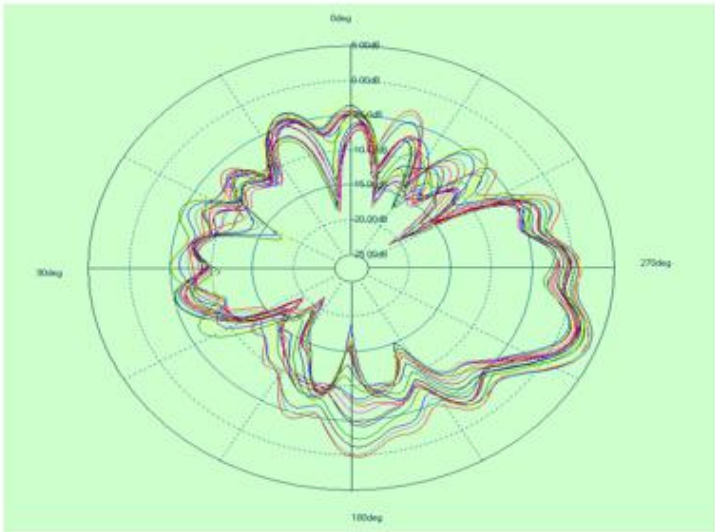
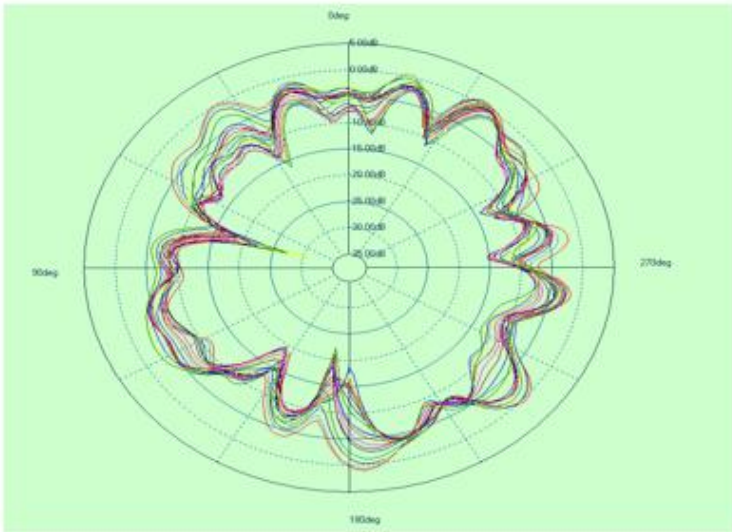
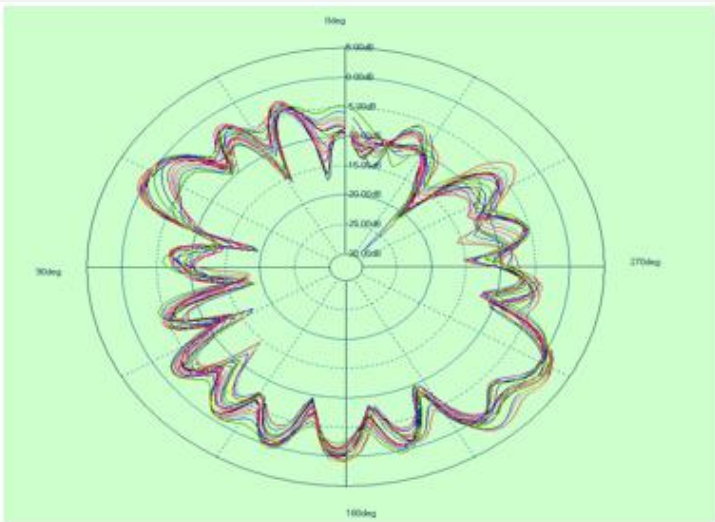
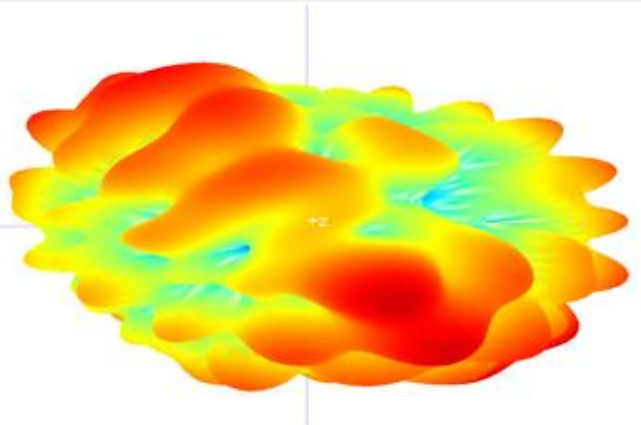
WIFI2.4G 3-D Pattern Plots

Frequency	Efficiency	Efficiency . dB	Frequency	Gain . dB
2.4E+09	43.06%	-3.65901	2.4E+09	2.252408
2.41E+09	42.76%	-3.68912	2.41E+09	2.327334
2.42E+09	42.50%	-3.71617	2.42E+09	2.437924
2.43E+09	45.63%	-3.40722	2.43E+09	2.617427
2.44E+09	46.71%	-3.3061	2.44E+09	2.534799
2.45E+09	47.13%	-3.26702	2.45E+09	2.630075
2.46E+09	48.25%	-3.16509	2.46E+09	2.798598
2.47E+09	49.93%	-3.01599	2.47E+09	3.05076
2.48E+09	49.31%	-3.07106	2.48E+09	2.895756
2.49E+09	48.87%	-3.10992	2.49E+09	2.781153
2.5E+09	50.00%	-3.01071	2.5E+09	2.851769

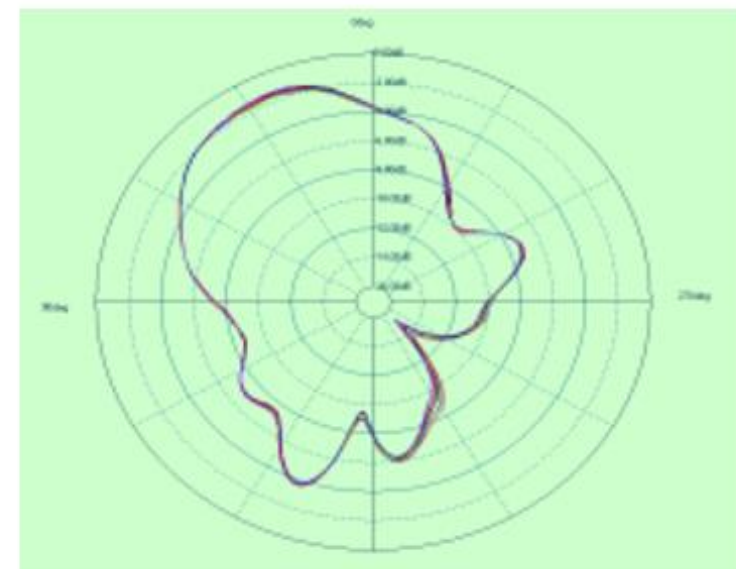
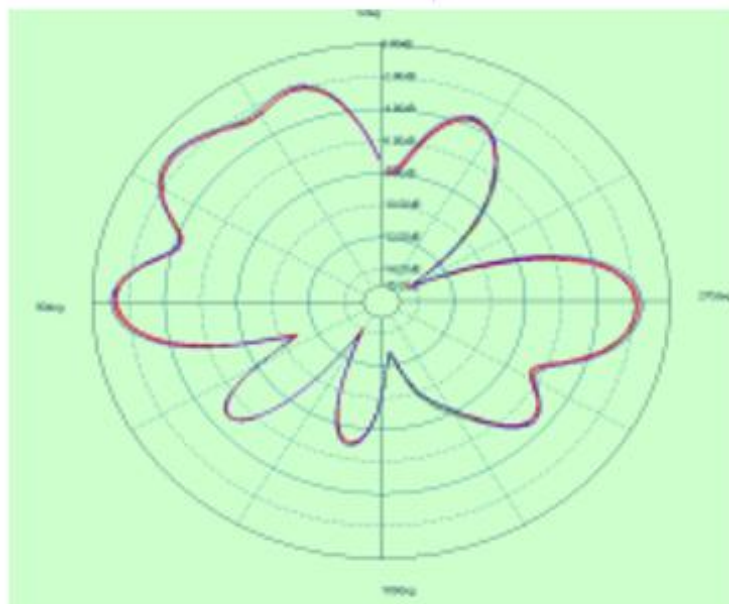
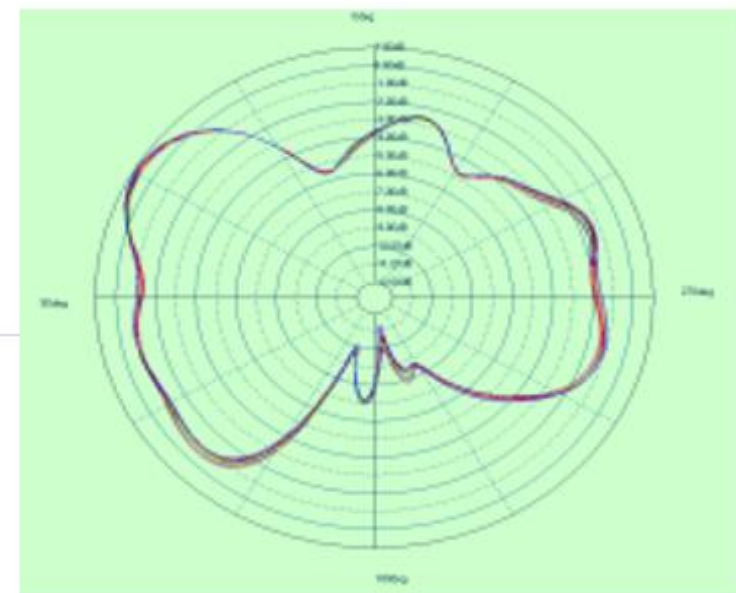
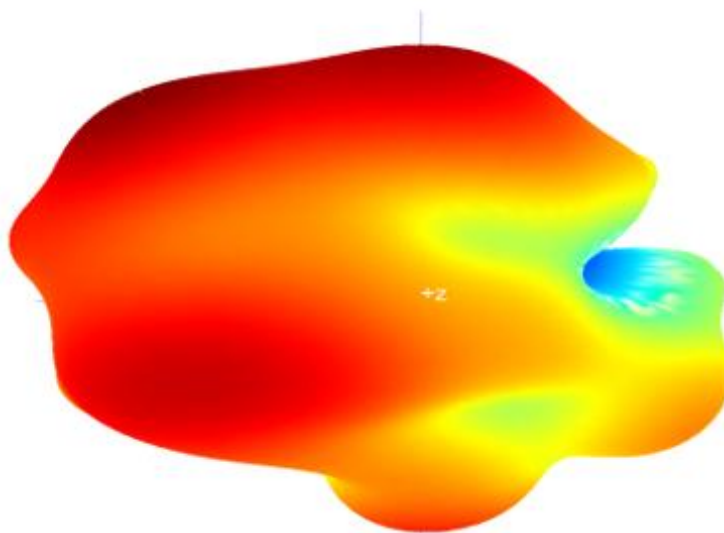


WIFI 5G 3-D Pattern Plots

Frequency	Efficiency	Efficiency . dB	Frequency	Gain . dB
5.2E+09	51.10%	-2.91539	5.2E+09	0.51
5.23E+09	47.55%	-3.22852	5.23E+09	0.64
5.26E+09	47.02%	-3.27735	5.26E+09	0.84
5.29E+09	45.71%	-3.39977	5.29E+09	1.04
5.32E+09	40.63%	-3.91154	5.32E+09	1.20
5.35E+09	34.68%	-4.59983	5.35E+09	1.26
5.38E+09	33.68%	-4.7264	5.38E+09	1.43
5.41E+09	36.29%	-4.40263	5.41E+09	1.53
5.44E+09	38.89%	-4.10119	5.44E+09	1.56
5.47E+09	37.16%	-4.29896	5.47E+09	1.66
5.5E+09	39.34%	-4.05139	5.5E+09	1.74
5.53E+09	40.39%	-3.93777	5.53E+09	1.68
5.56E+09	40.68%	-3.90574	5.56E+09	1.87
5.59E+09	35.84%	-4.45688	5.59E+09	1.95
5.62E+09	32.09%	-4.93657	5.62E+09	2.09
5.65E+09	30.66%	-5.13451	5.65E+09	2.14
5.68E+09	29.74%	-5.26732	5.68E+09	2.10
5.71E+09	29.07%	-5.3658	5.71E+09	2.16
5.74E+09	30.81%	-5.11336	5.74E+09	2.18
5.77E+09	33.76%	-4.71571	5.77E+09	2.20
5.8E+09	33.95%	-4.69148	5.8E+09	2.19

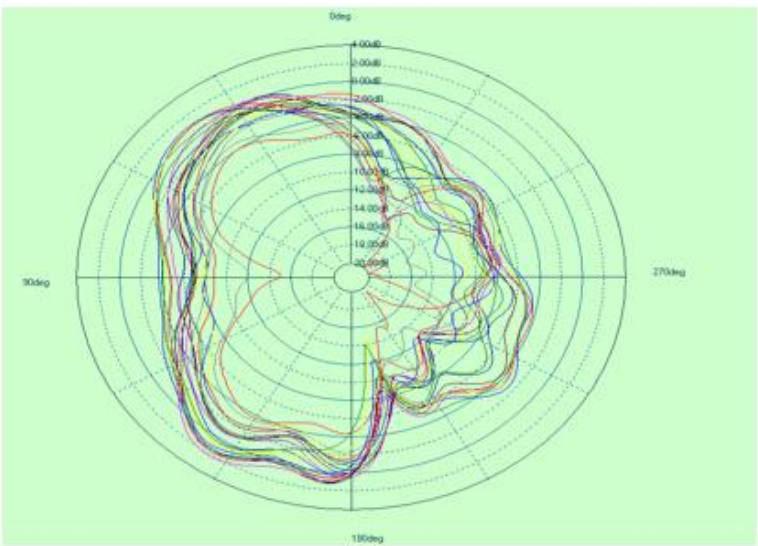
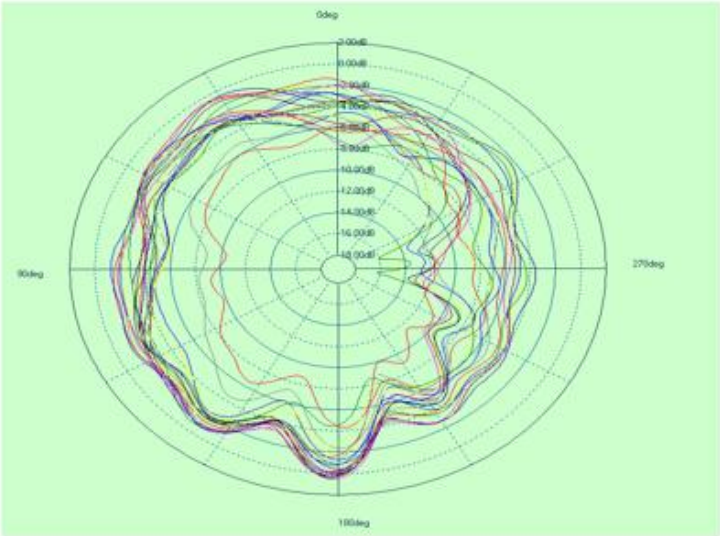
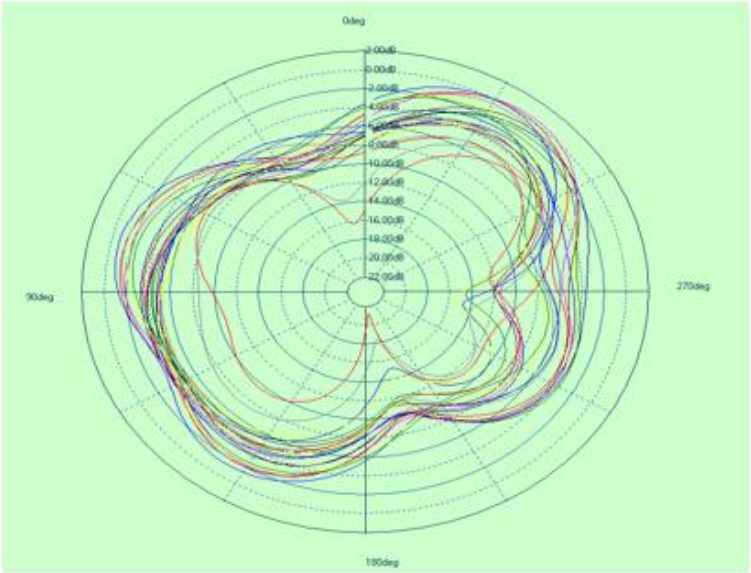
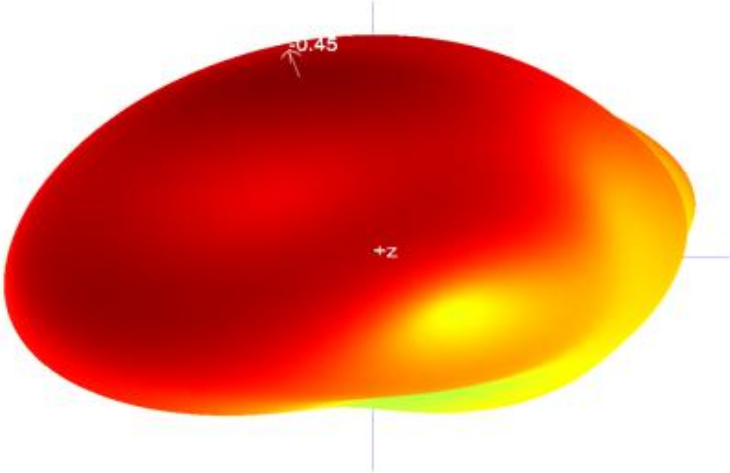


Frequency	Efficiency	Efficiency . dB	Frequency	Gain . dB
1.57E+09	39.01%	-4.08863	1.57E+09	1.242873
1.57E+09	39.08%	-4.08073	1.57E+09	1.259806
1.57E+09	39.08%	-4.08084	1.57E+09	1.272351
1.57E+09	39.00%	-4.08882	1.57E+09	1.284661
1.57E+09	38.89%	-4.10174	1.57E+09	1.280465
1.58E+09	38.78%	-4.11343	1.58E+09	1.270929
1.58E+09	38.75%	-4.11698	1.58E+09	1.258223
1.58E+09	38.82%	-4.1094	1.58E+09	1.245493
1.58E+09	38.96%	-4.09369	1.58E+09	1.247438
1.58E+09	39.11%	-4.07693	1.58E+09	1.254757
1.58E+09	39.17%	-4.07101	1.58E+09	1.269778



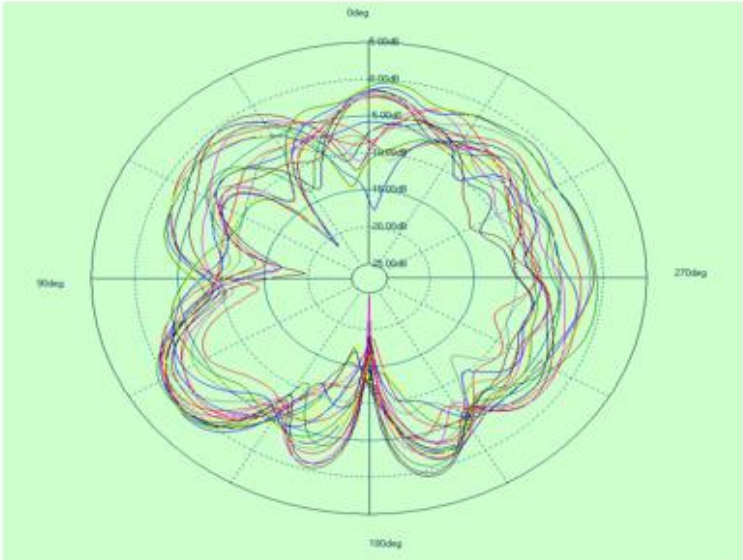
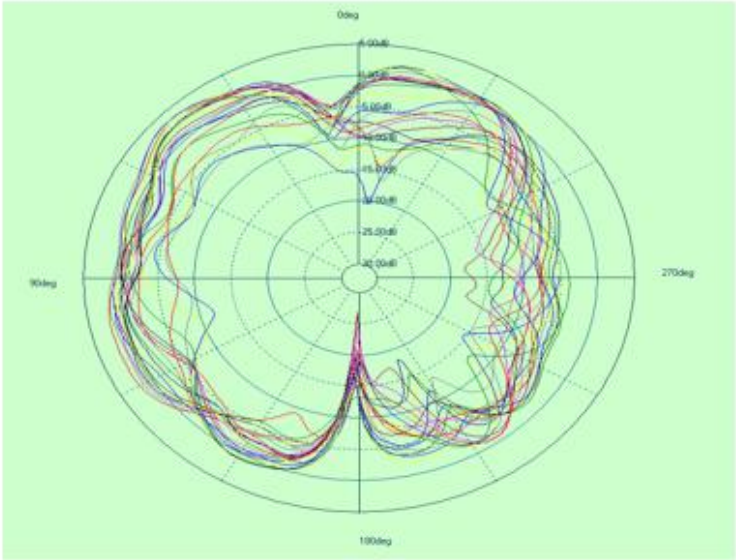
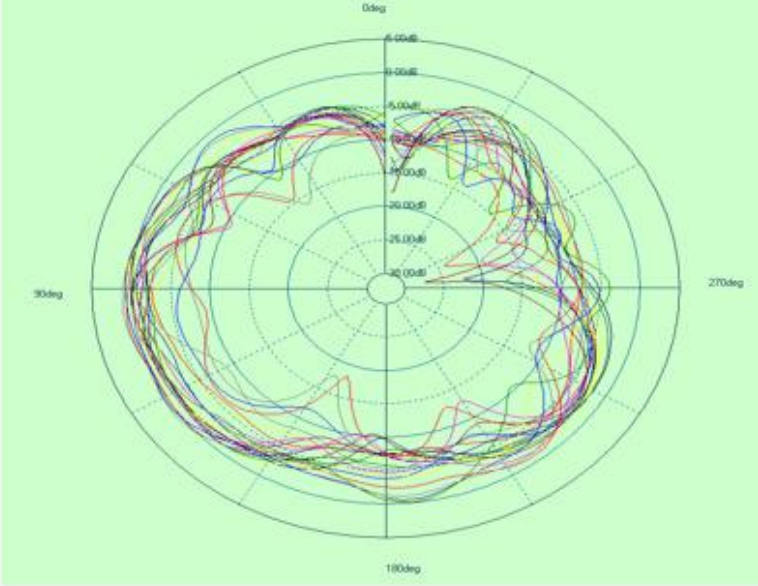
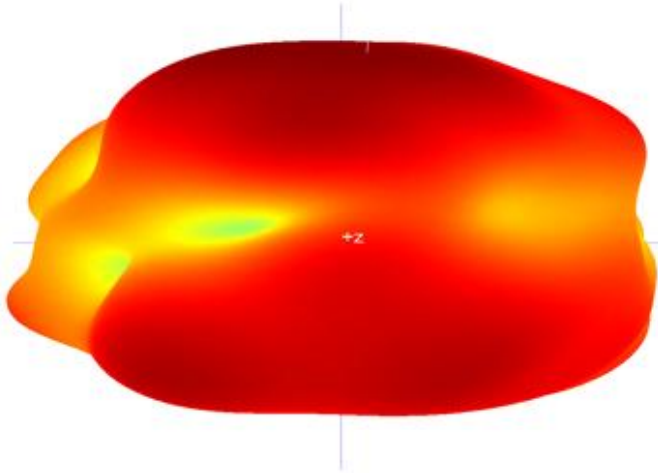
MAIN 3-D Pattern Plots

Frequency	Efficiency	Efficiency . dB	Frequency	Gain . dB
7E+08	14.21%	-8.47494	7.65E+08	-4.47014
7.13E+08	14.43%	-8.40623	7.78E+08	-4.22103
7.26E+08	17.72%	-7.51603	7.91E+08	-2.55823
7.39E+08	18.17%	-7.40697	8.04E+08	-2.20786
7.52E+08	18.28%	-7.38139	8.17E+08	-1.53531
7.65E+08	19.98%	-6.99339	8.3E+08	-1.07992
7.78E+08	18.57%	-7.3115	8.43E+08	-0.92915
7.91E+08	17.49%	-7.57204	8.56E+08	-0.86561
8.04E+08	22.89%	-6.40383	8.69E+08	-1.13707
8.17E+08	23.60%	-6.27103	8.82E+08	-1.05699
8.3E+08	26.39%	-5.78629	8.95E+08	-0.90687
8.43E+08	26.39%	-5.78588	9.08E+08	-0.862
8.56E+08	25.23%	-5.98163	9.21E+08	-0.24426
8.69E+08	27.19%	-5.6559	9.34E+08	-0.44127
8.82E+08	23.52%	-6.28577	9.47E+08	-1.54991
8.95E+08	23.46%	-6.29641	9.6E+08	-0.85246



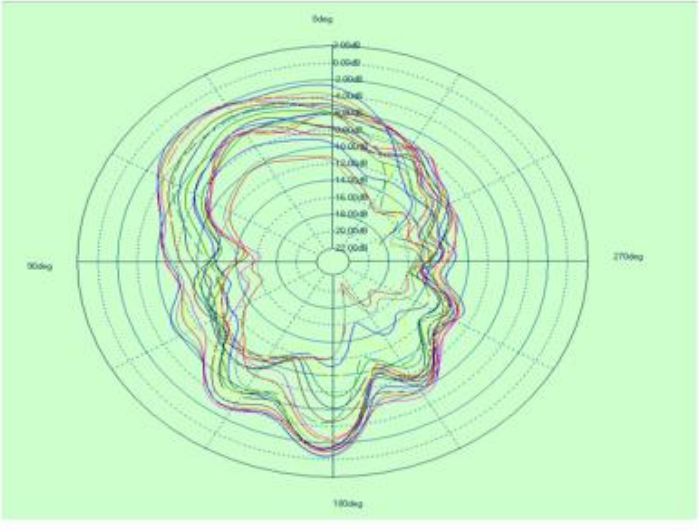
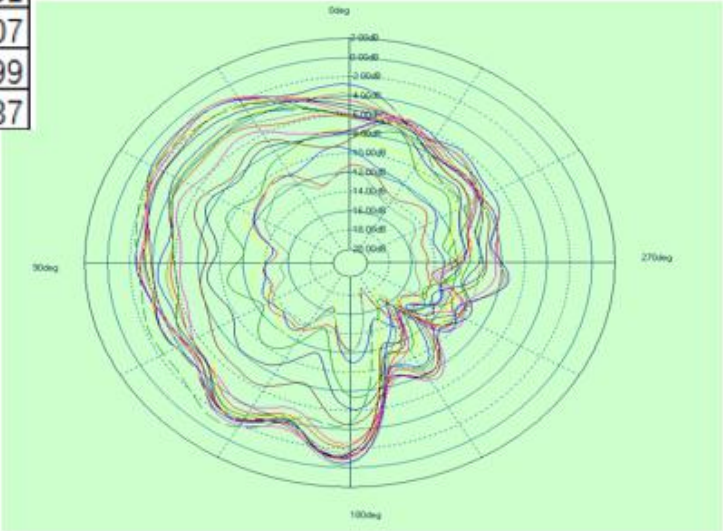
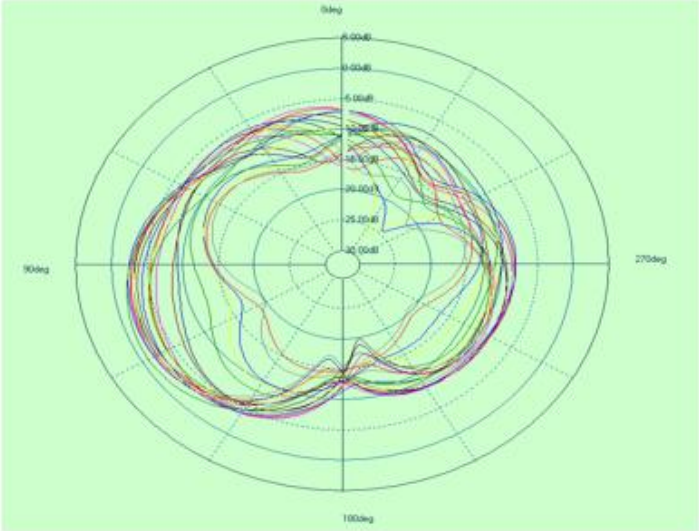
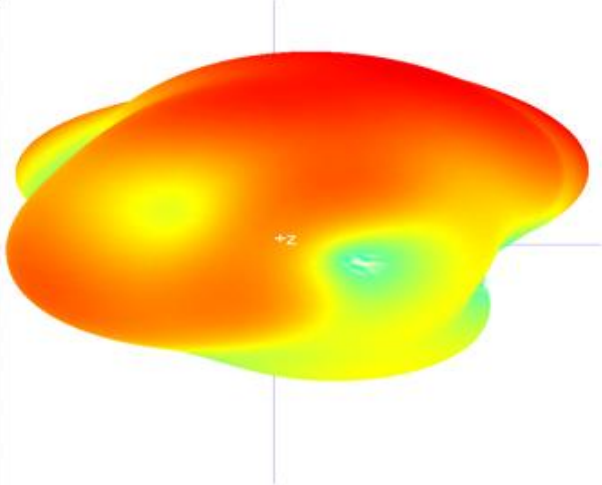
MAIN 3-D Pattern Plots

Frequency	Efficiency	Efficiency . dB	Frequency	Gain . dB
1.71E+09	27.49%	-5.60751	1.71E+09	-0.1288
1.76E+09	27.26%	-5.64536	1.76E+09	-0.07028
1.81E+09	31.58%	-5.00535	1.81E+09	1.333159
1.86E+09	36.68%	-4.35536	1.86E+09	2.011759
1.91E+09	40.87%	-3.88644	1.91E+09	1.988711
1.96E+09	44.43%	-3.52327	1.96E+09	1.617356
2.01E+09	40.26%	-3.95134	2.01E+09	1.765523
2.06E+09	34.88%	-4.57463	2.06E+09	1.370896
2.11E+09	27.59%	-5.59257	2.11E+09	-0.35633
2.16E+09	31.42%	-5.02862	2.16E+09	1.906809
2.21E+09	47.41%	-3.24104	2.21E+09	3.002712
2.25E+09	50.95%	-2.92866	2.25E+09	2.140629
2.3E+09	49.12%	-3.08779	2.3E+09	2.53248
2.35E+09	49.16%	-3.08425	2.35E+09	2.69621
2.4E+09	50.21%	-2.99201	2.4E+09	2.491761
2.45E+09	51.99%	-2.84054	2.45E+09	2.542067
2.5E+09	56.74%	-2.46085	2.5E+09	3.201052
2.55E+09	58.17%	-2.35266	2.55E+09	3.528996
2.6E+09	53.56%	-2.71192	2.6E+09	3.58489
2.65E+09	49.10%	-3.08905	2.65E+09	3.162071
2.7E+09	44.72%	-3.49538	2.7E+09	2.562153



DIV 3-D Pattern Plots

Frequency	Efficiency	Efficiency . dB	Frequency	Gain . dB
7E+08	4.51%	-13.4616	7E+08	-9.68645
7.13E+08	4.27%	-13.6953	7.13E+08	-9.37709
7.26E+08	6.27%	-12.0289	7.26E+08	-7.47866
7.39E+08	7.43%	-11.29	7.39E+08	-6.74147
7.52E+08	10.19%	-9.91676	7.52E+08	-5.66931
7.65E+08	14.21%	-8.47494	7.65E+08	-4.47014
7.78E+08	14.43%	-8.40623	7.78E+08	-4.22103
7.91E+08	17.72%	-7.51603	7.91E+08	-2.55823
8.04E+08	18.17%	-7.40697	8.04E+08	-2.20786
8.17E+08	18.28%	-7.38139	8.17E+08	-1.53531
8.3E+08	19.98%	-6.99339	8.3E+08	-1.07992
8.43E+08	18.57%	-7.3115	8.43E+08	-0.92915
8.56E+08	17.49%	-7.57204	8.56E+08	-0.86561
8.69E+08	22.89%	-6.40383	8.69E+08	-1.13707
8.82E+08	23.60%	-6.27103	8.82E+08	-1.05699
8.95E+08	26.39%	-5.78629	8.95E+08	-0.90687



DIV 3-D Pattern Plots

Frequency	Efficiency	Efficiency . dB	Frequency	Gain . dB
1.71E+09	20.30%	-6.92567	1.71E+09	-2.48213
1.76E+09	26.03%	-5.84508	1.76E+09	-0.98609
1.81E+09	34.74%	-4.59203	1.81E+09	0.007208
1.86E+09	40.02%	-3.97705	1.86E+09	0.975916
1.91E+09	40.68%	-3.90573	1.91E+09	1.207227
1.96E+09	39.39%	-4.04628	1.96E+09	1.858514
2.01E+09	32.96%	-4.82004	2.01E+09	1.991599
2.06E+09	34.59%	-4.6105	2.06E+09	2.860346
2.11E+09	37.30%	-4.28246	2.11E+09	2.918205
2.16E+09	38.12%	-4.18862	2.16E+09	2.147749
2.21E+09	41.60%	-3.80912	2.21E+09	2.547935
2.25E+09	41.61%	-3.80817	2.25E+09	1.980158
2.3E+09	38.99%	-4.09062	2.3E+09	1.356942
2.35E+09	37.57%	-4.25107	2.35E+09	1.006813
2.4E+09	39.95%	-3.98505	2.4E+09	0.845539
2.45E+09	41.04%	-3.86769	2.45E+09	0.740869
2.5E+09	44.24%	-3.54189	2.5E+09	1.483705
2.55E+09	45.27%	-3.44147	2.55E+09	1.48
2.6E+09	42.22%	-3.74514	2.6E+09	0.808105
2.65E+09	38.76%	-4.11603	2.65E+09	0.977946
2.7E+09	36.21%	-4.41157	2.7E+09	1.079784

