ANWEI 深圳市安威无线科技有限公司

行业领先的一站式通信射频天线解决方案制造商

An wei customer antenna test report

Client: Tulgao

Project name: HT05A-A1581

Anwei Radio frequency: Lei Yaobo

Cell phone: 15986728949

manufacturer: Shenzhen Anwei Wireless Technology Co., Ltdaddress: 2nd Floor, Building 5, Dafenghua Industrial Zone, Dalangyi, Longhua District, Shenzhen

Time: 2025.2.19

携手共进 共创未来

目录

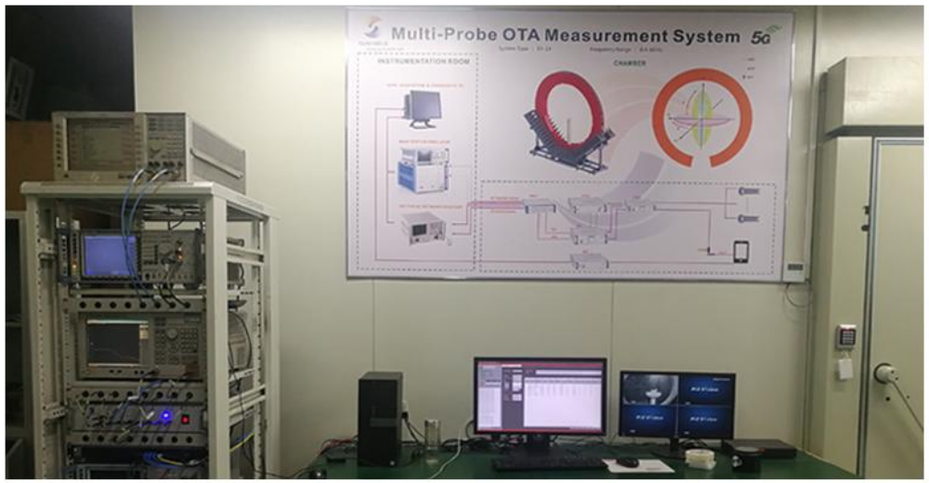
Introduction to project debugging

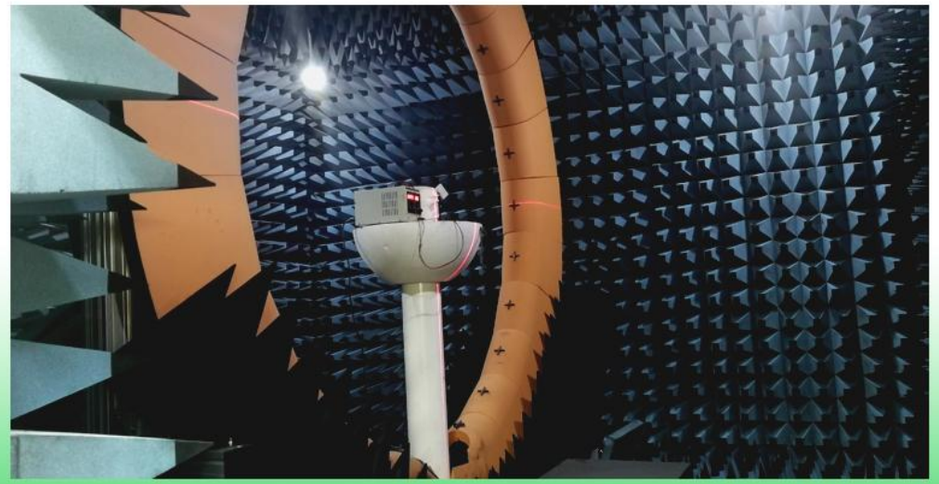
Plate cut	Complete machine					
Antenna profile	Main antenna	Frequency band		Antenna state	Antenna form	Design area	Match change
		2G	GSM2/3/5/8 W1/2/5/8	FPC	PIFA	Bottom of the phone	have
		3G					
		4G	FDD1/2/3/4/5/7/8/12/17/28/66				
		5G	N/A				
	Other antennas	BT/WIFI		FPC	PIFA	Top of phone	NO
		GPS	1575.42MHz				NO
		分集		FPC	PIFA	Top of phone	NO
rototype status	HT05A-A1581		Environmental treatment				

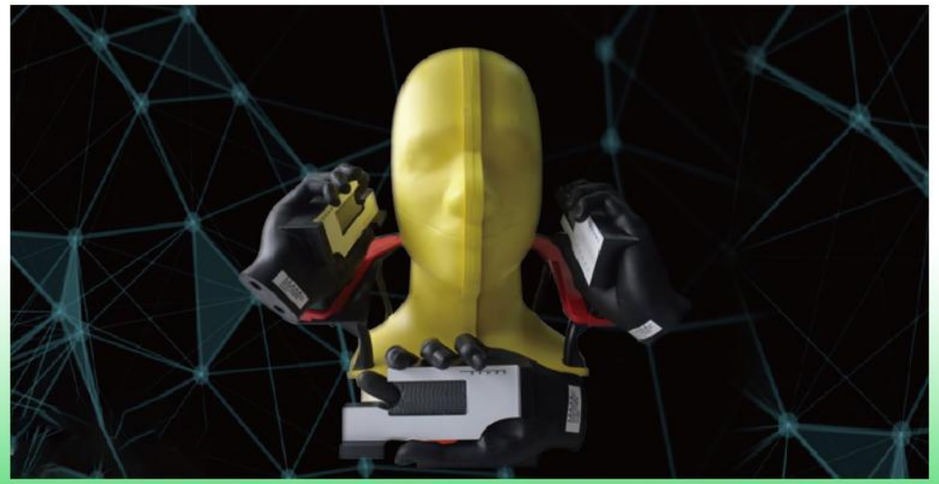
Report version summary

edition	Time	Content overview
HT05A-A1581	2025.2.19	Commissioning antenna report

Project development environment







安威无线一直都是您值得信赖且优秀的合作伙伴，我们为您提供全方位一站式的产品以及技术服务!

“质量第一，服务至上”是安威一直以来的发展宗旨

Main antenna matching circuit

HT05A-A1581The tuning switch band is divided as follows:			
Frequency band	Switching path	Normal	remark
GSM900/1800 W4/8 FDD 3/4/7/8/66	RF1(C2407)	0欧姆	
GSM850 W5 FDD5	RF2(C2406)	8.2NH	
FDD 12/17/28AB	RF3(C2404)	47NH	
GSM1900 W1/2 LTE 1/2	RF4(C2405)	33NH	
进开关 目前用A2404弹片 通开关	R2404=NC C2401=NC R2405=0欧姆 C2409=NC		
信号路： C2402=8.2NH R2402=0欧姆 C2403=1PF R2403=3.9NH			

Main antenna darkroom data (off screen)

	Channel	TRP (dBm)	TIS (dBm)
FDD B1	18050	16.23	
	18300	17.76	
	18550	18.25	-91.17
FDD B2	18650	16.1	
	18900	17.51	
	19150	18.61	-91.02
FDD B3	19250	18.12	
	19575	15.42	
	19900	15.02	-91.15
FDD B4	20000	17.37	
	20175	15.19	
	20350	14.7	-90.93
FDD B5	20450	19.24	
	20525	18.38	
	20600	16.88	-88.26
FDD B7	20800	16.22	
	21100	14.52	
	21400	14.05	-92.68
FDD B8	21500	17.32	
	21625	16.2	
	21750	14.65	-90.52
FDD B12	23060	15.35	
	23095	16.01	
	23130	16.21	-90.78

	Channel	TRP (dBm)	TIS (dBm)
FDD B17	23780	16.18	
	23790	15.85	
	23800	16.1	-89.98
FDD B28A	27260	15.81	
	27370	16.51	
	27469	16.79	-93.37
FDD B28B	27410	16.96	
	27510	16.15	
	27600	17.14	-89.84
FDD B66	132022	15.79	
	132322	14.29	
	132622	14.18	-92.08
GSM 850	128	24.26	
	190	24.21	
	251	24.11	-101.29
GSM 900	1	24.25	
	62	24.92	
	124	25.11	-102.74
DCS1800	512	25.47	
	698	24.21	
	885	22.6	-99.41
PCS 1900	512	22.09	
	661	23.22	
	810	23.9	-102.65

	Channel	TRP (dBm)	TIS (dBm)
WCDMA B1	10562	13.76	
	10700	13.77	
	10838	14.8	-105.58
WCDMA B2	9262	16.02	
	9400	16.3	
	9538	16.74	-104.04
WCDMA B4	1312	18.56	
	1413	16.35	
	1513	19.48	-104.24
WCDMA B5	4132	15.15	
	4183	17.08	
	4233	15.23	-102.03
WCDMA B8	2712	16.6	
	2787	16.91	
	2863	16.02	-103.61

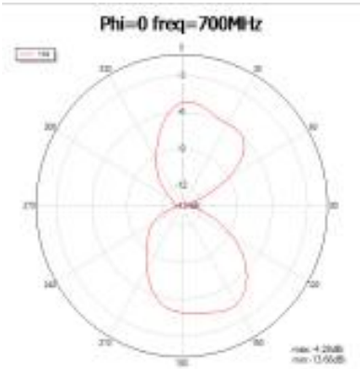
WIFI testing

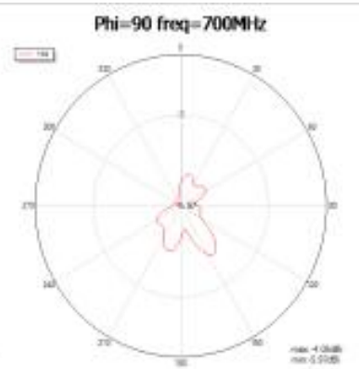
GPS testing

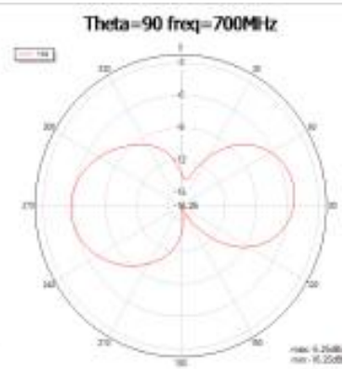

15:06
GNSS Status
3D Fix
Accuracy (± m)
24
In View
11
In Use
8
23 25 39 38 42 35 22 26 37 37 40
01 06 14 17 19 22 30 85 207 235 240
SNR
00 10 20 30 50 99
1
15:06

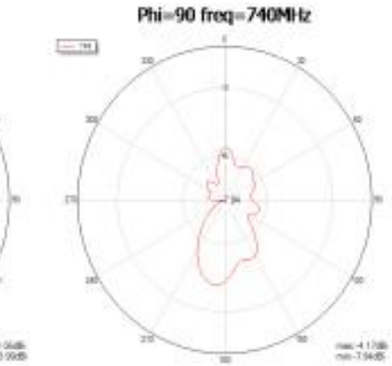

15:06
GNSS Status
3D Fix
Accuracy (± m)
24
In View
12
In Use
8
28 25 44 38 40 35 22 27 42 32 39 39
01 06 14 17 19 22 30 85 207 210 235 240
SNR
00 10 20 30 50 99

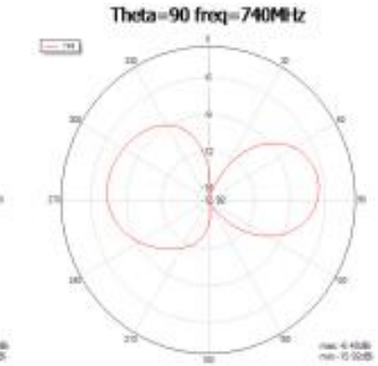
LTE B12/17/28A/BApple diagram and directional diagram

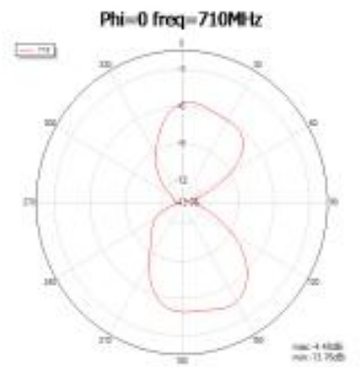


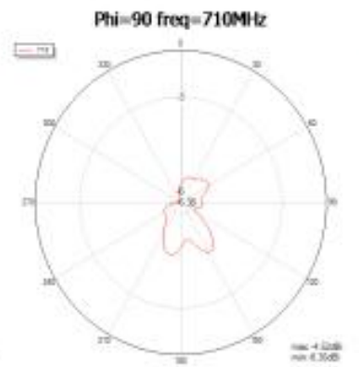


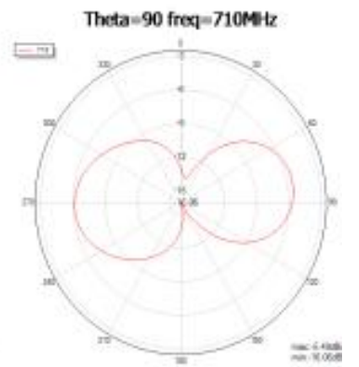


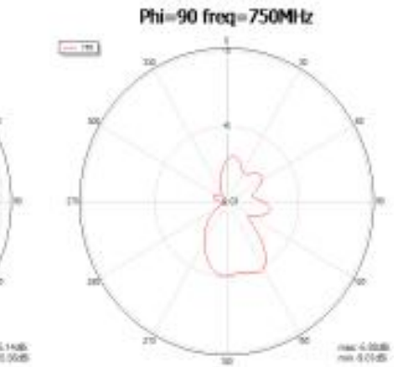


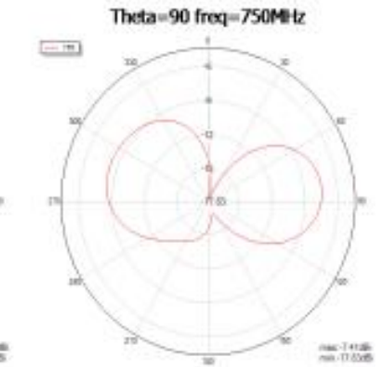


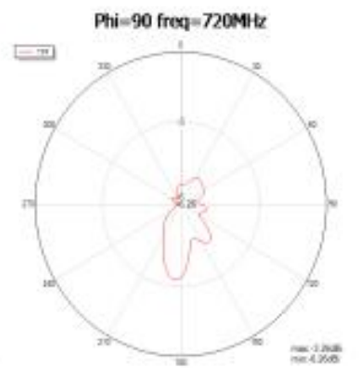


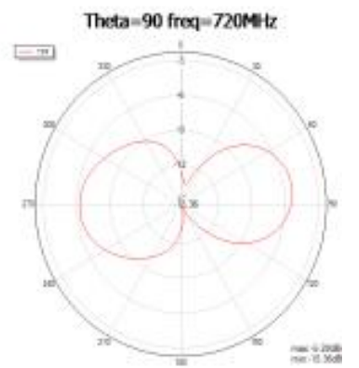


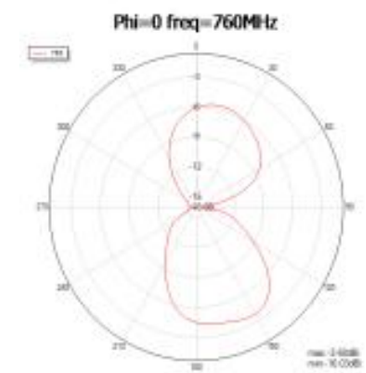


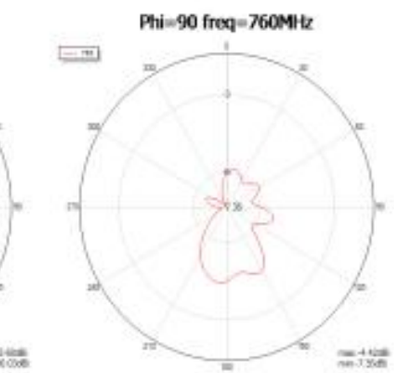


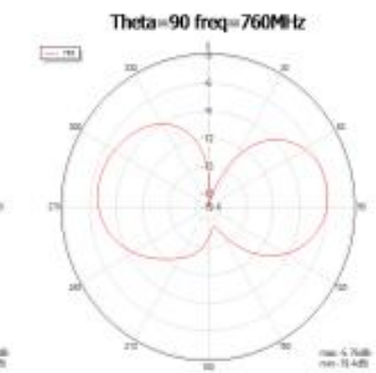


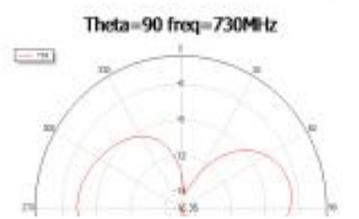


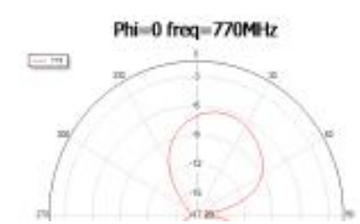


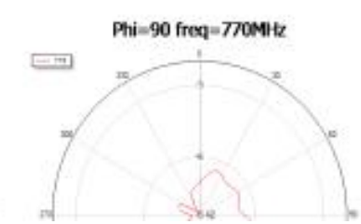


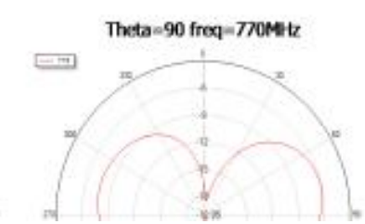




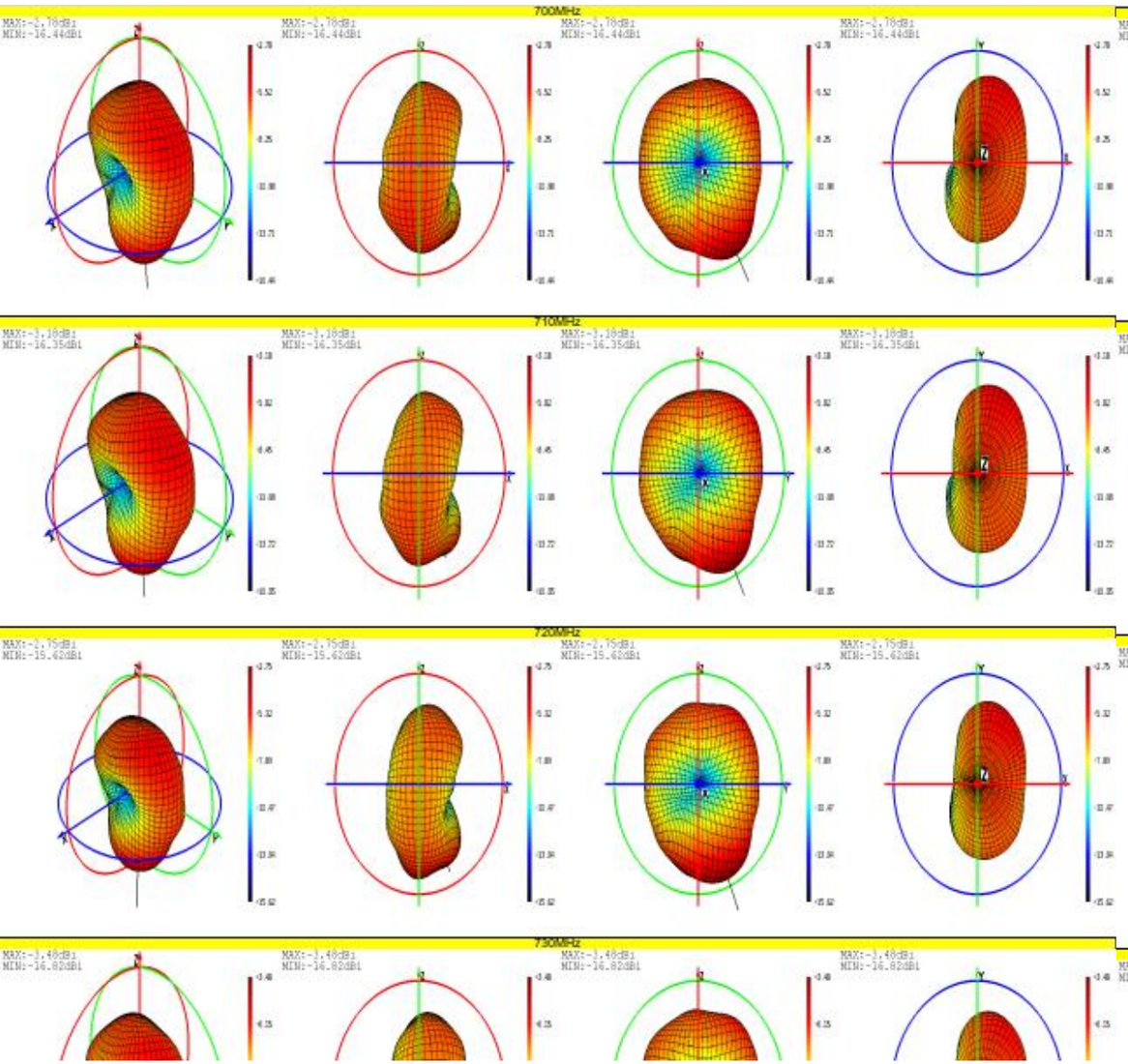


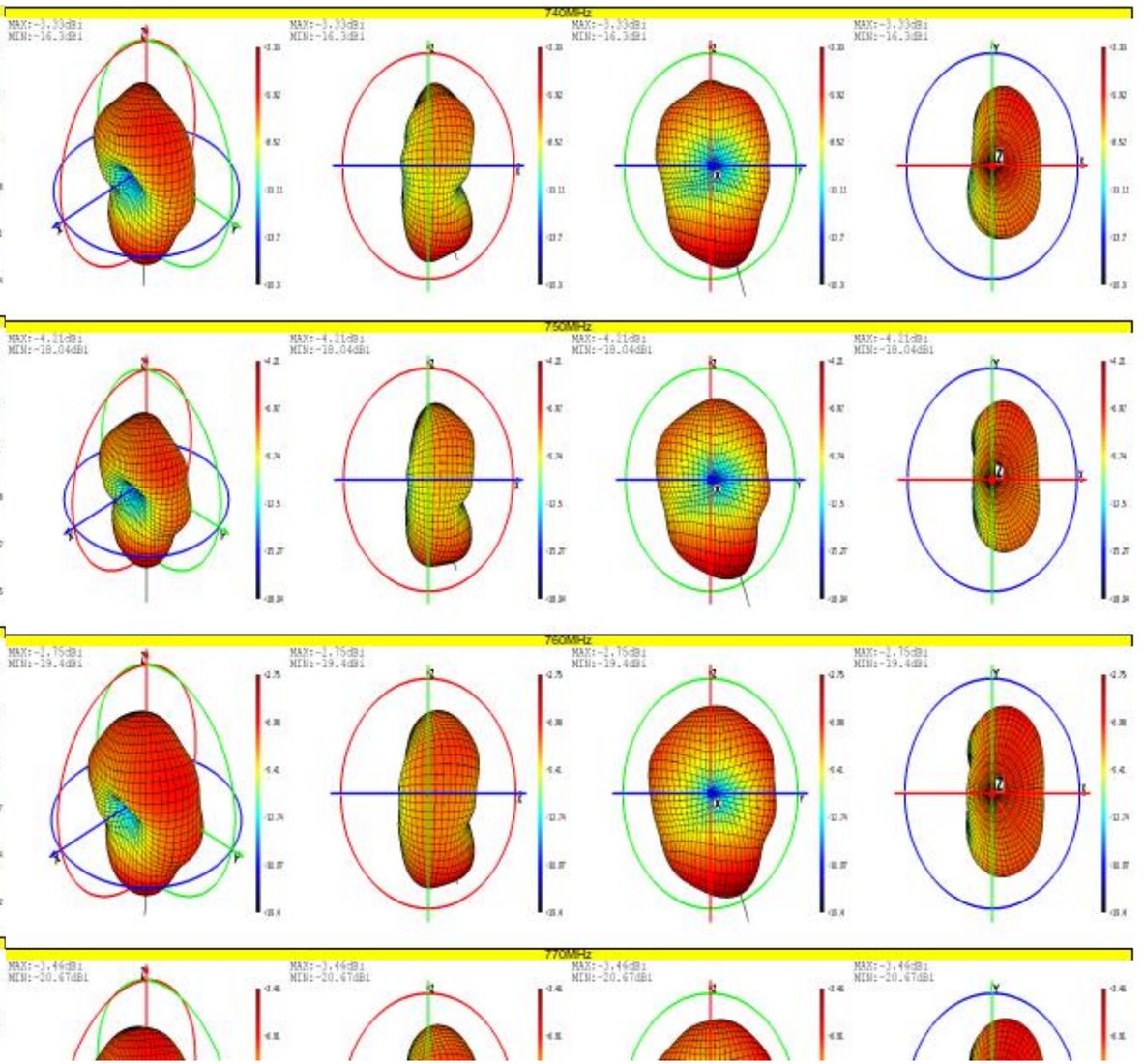




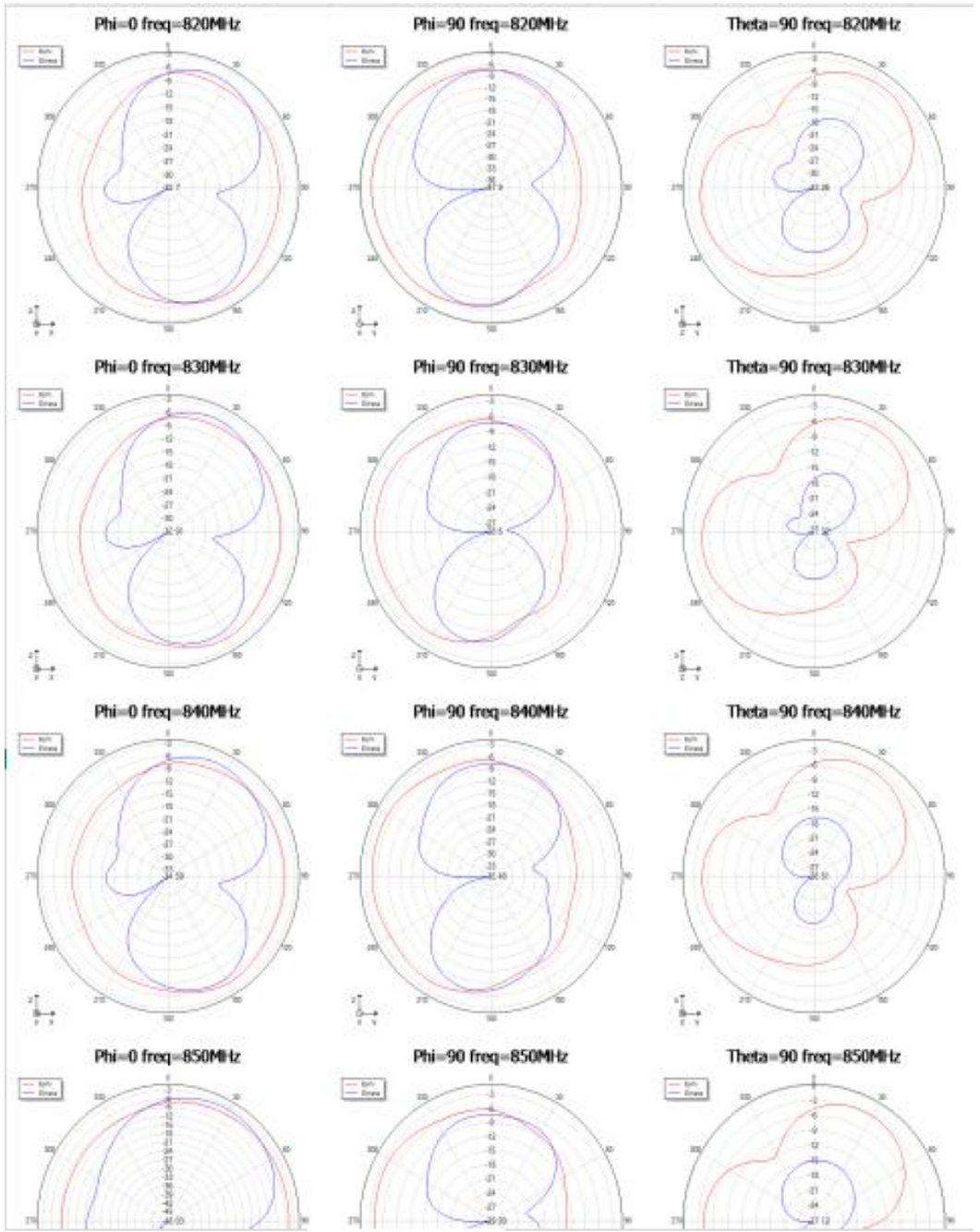


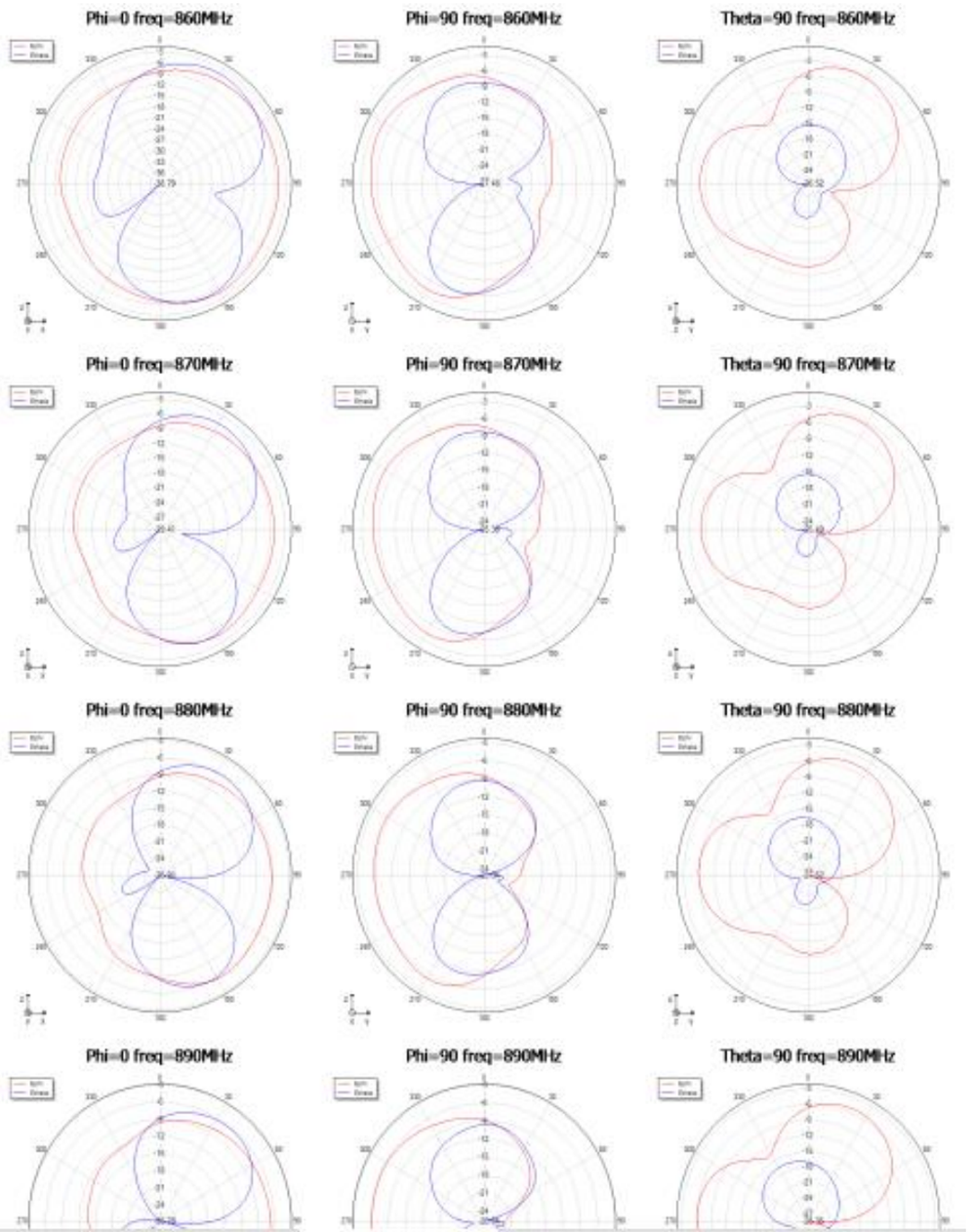
LTE B12/17/28A/BApple diagram and directional diagram



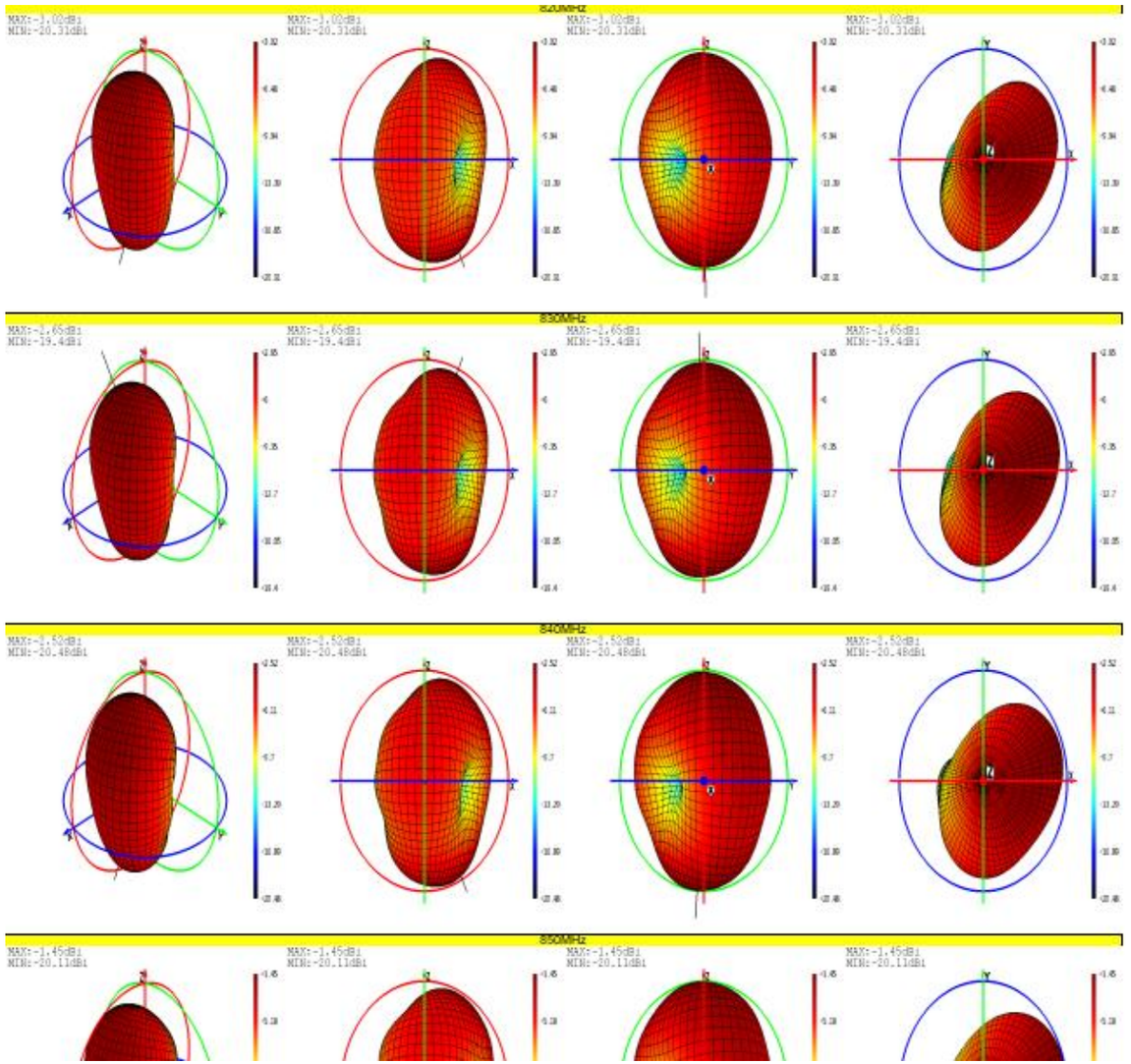


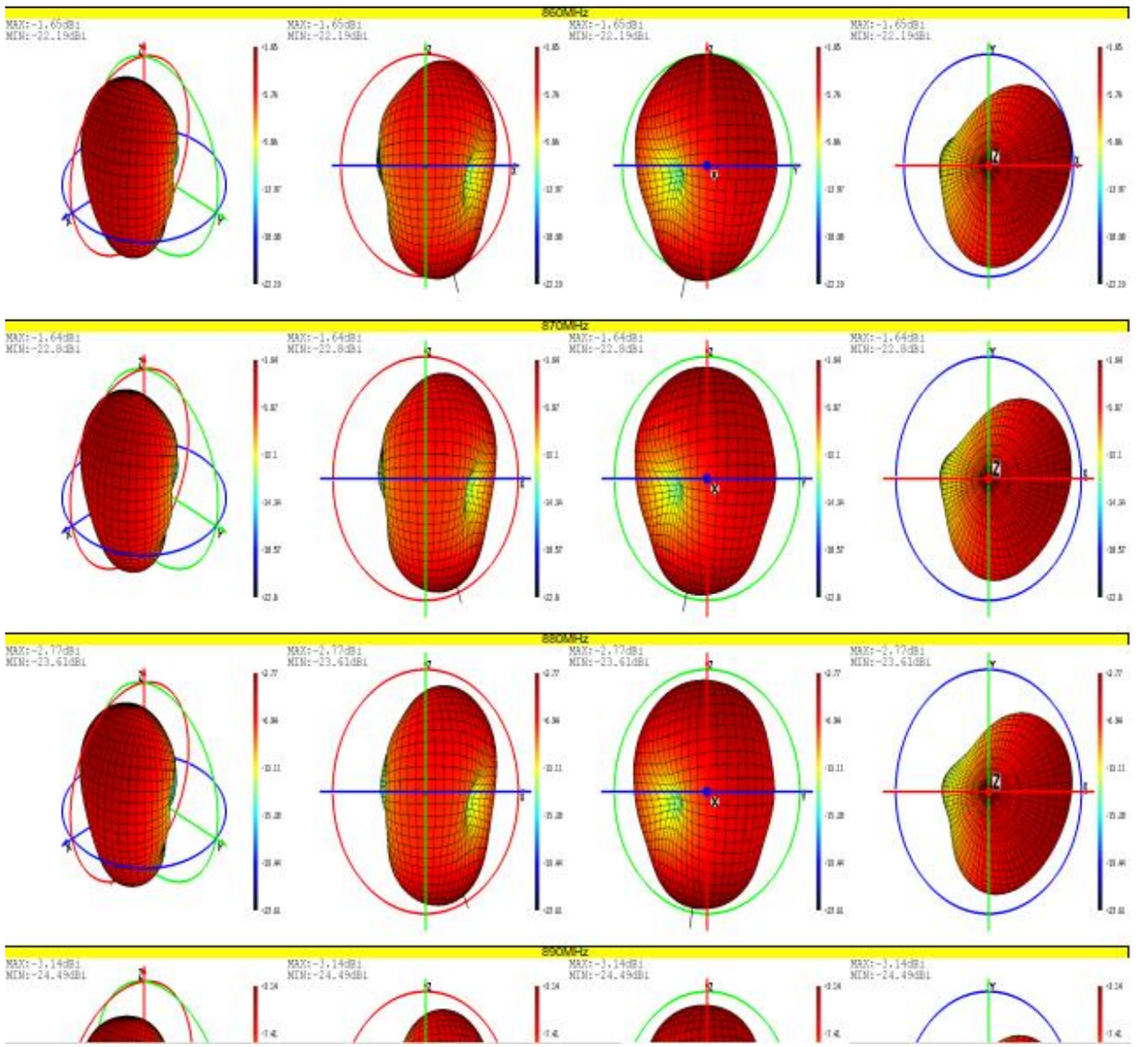
LTE B5 GSM850 W5Apple diagram and directional diagram



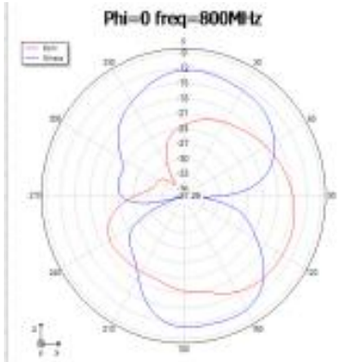


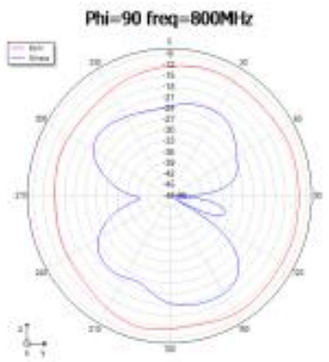
LTE B5 GSM850 W5Apple diagram and directional diagram

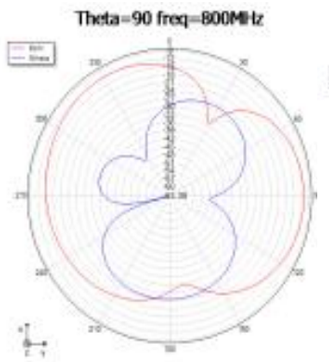


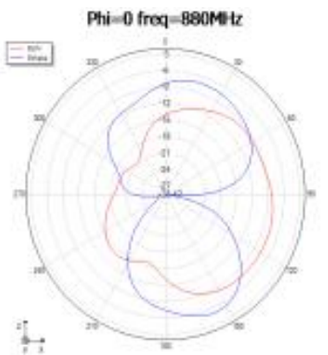


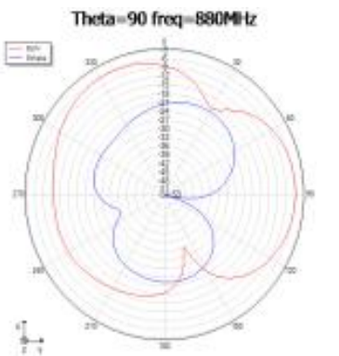
LTE B8 GSM 900 W8Apple diagram and directional diagram

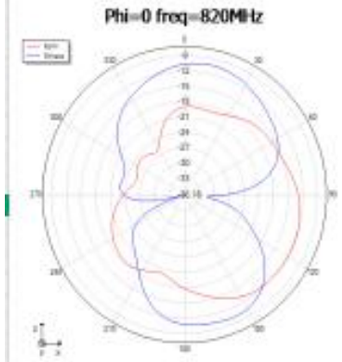


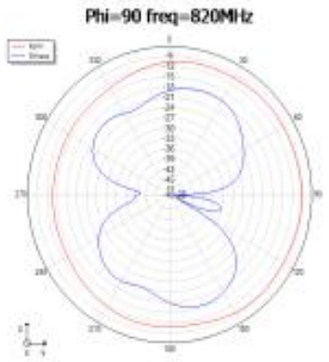


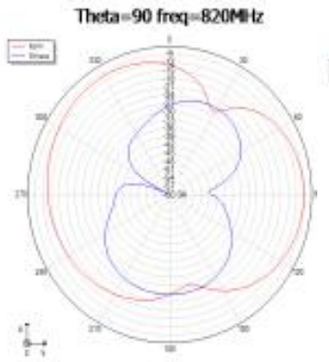


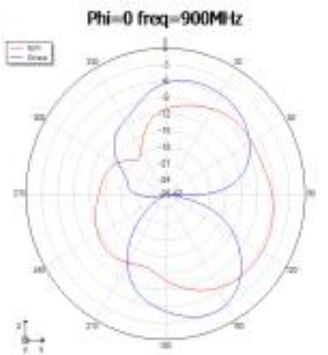


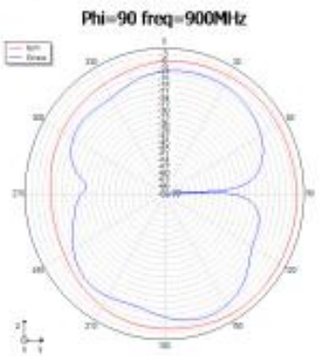


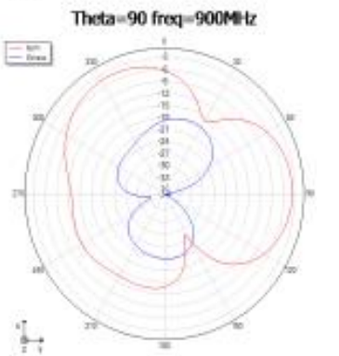


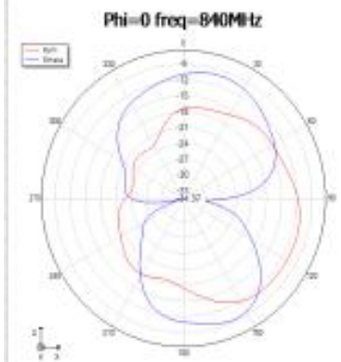


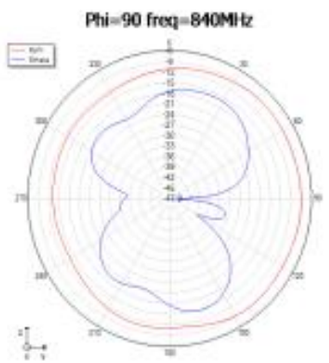


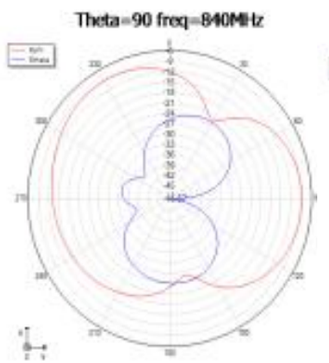


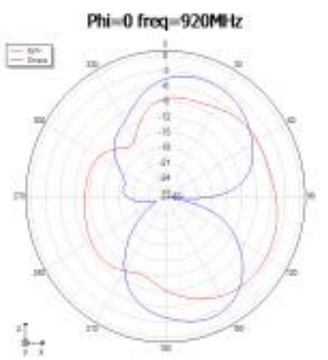


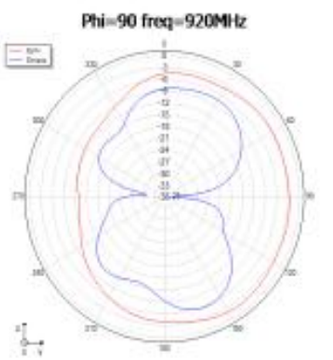


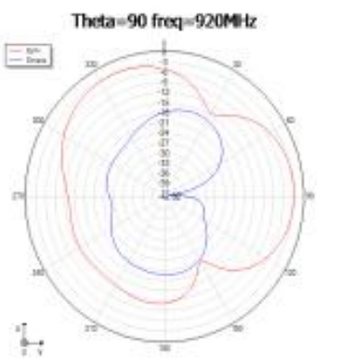


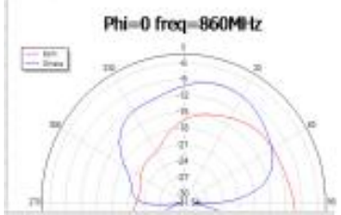


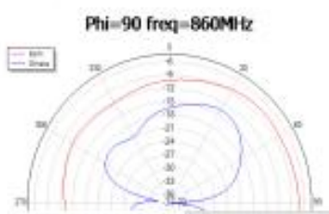


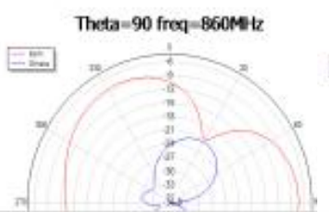


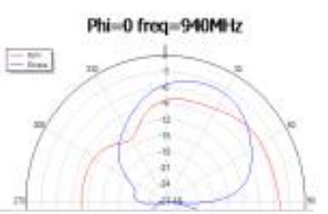


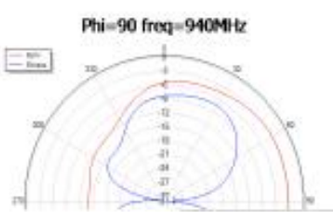


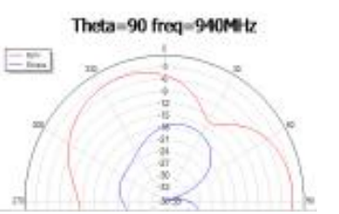




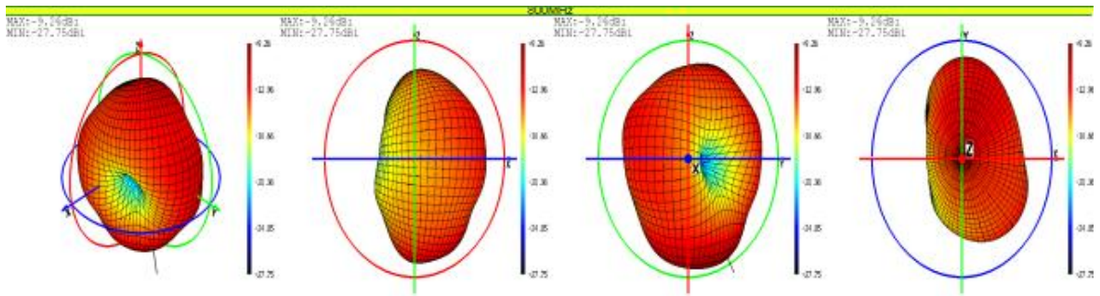


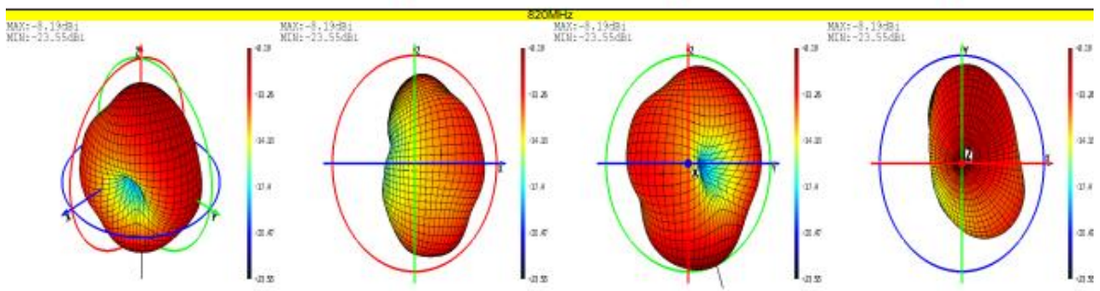


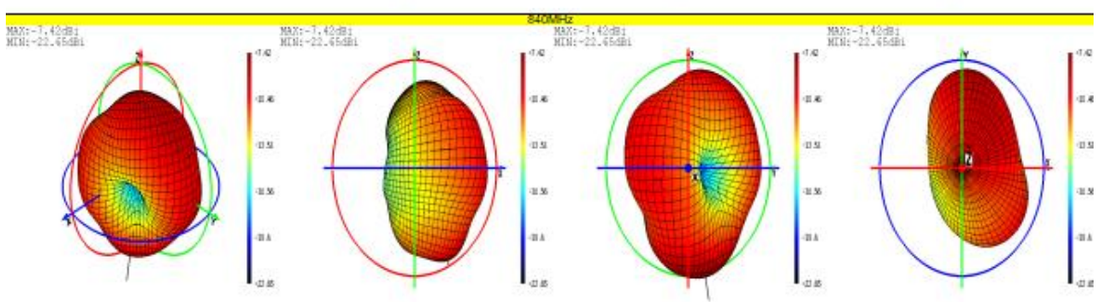


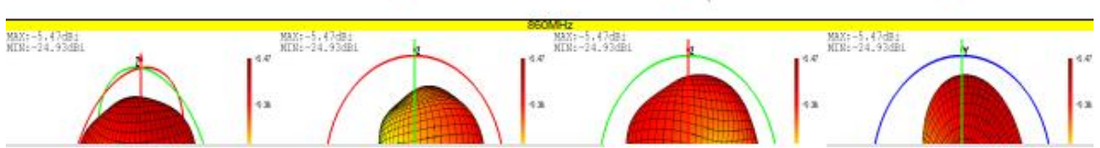


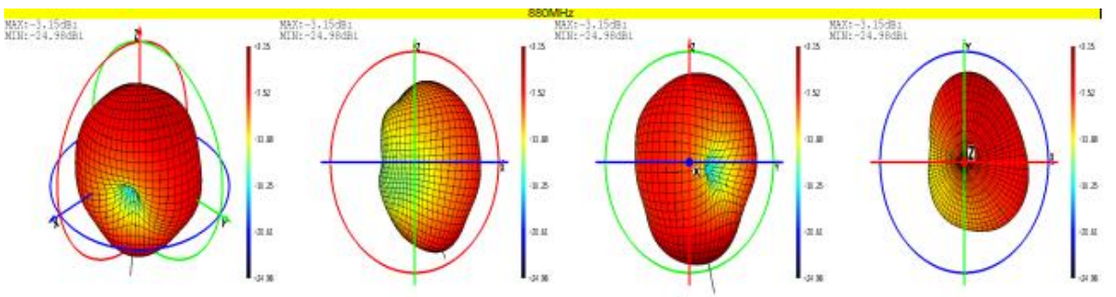
LTE B8 GSM 900 W8Apple diagram and directional diagram

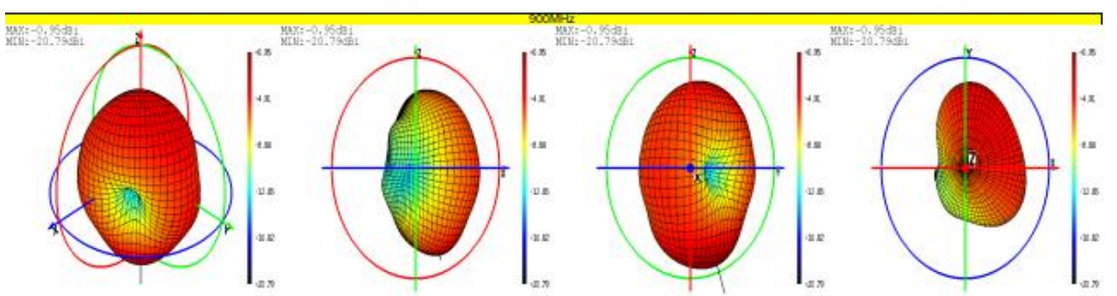


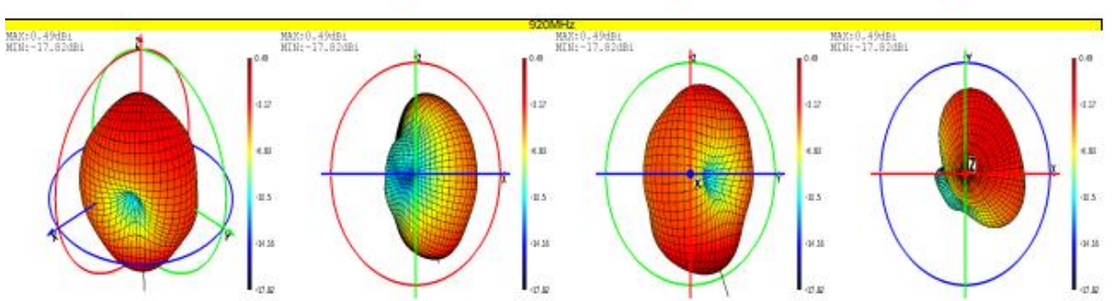


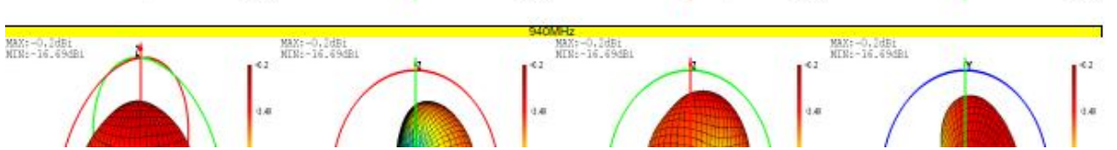




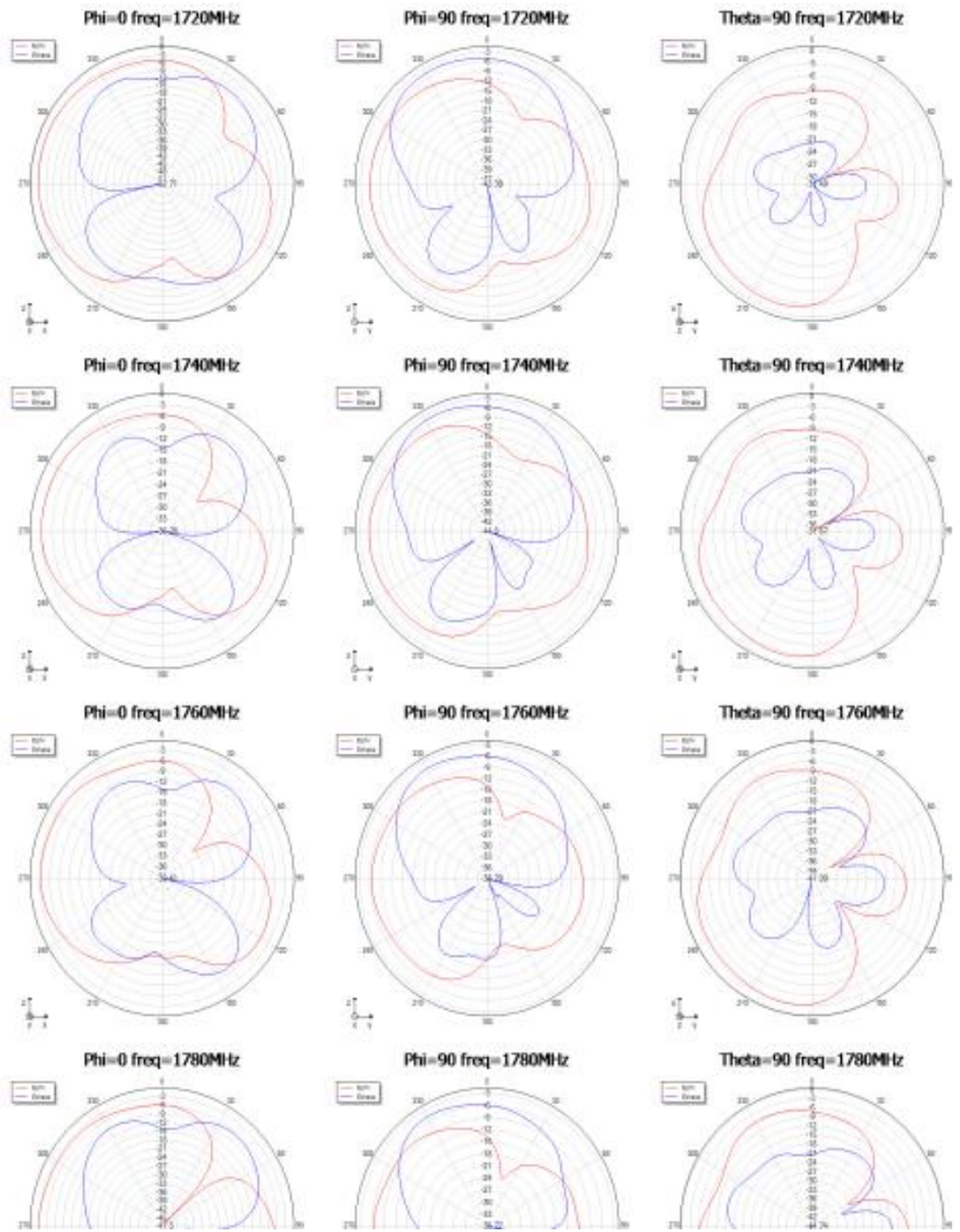




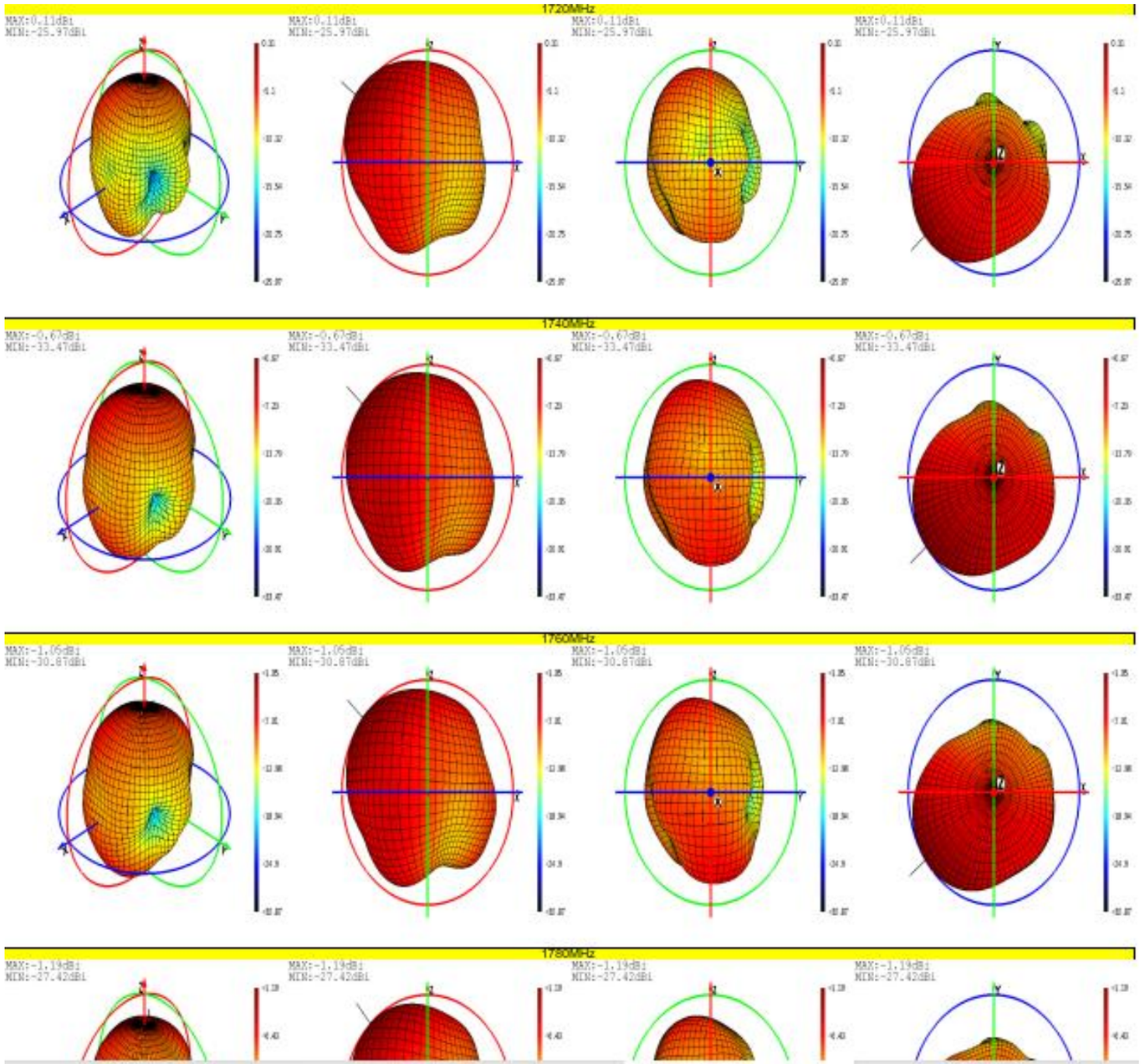




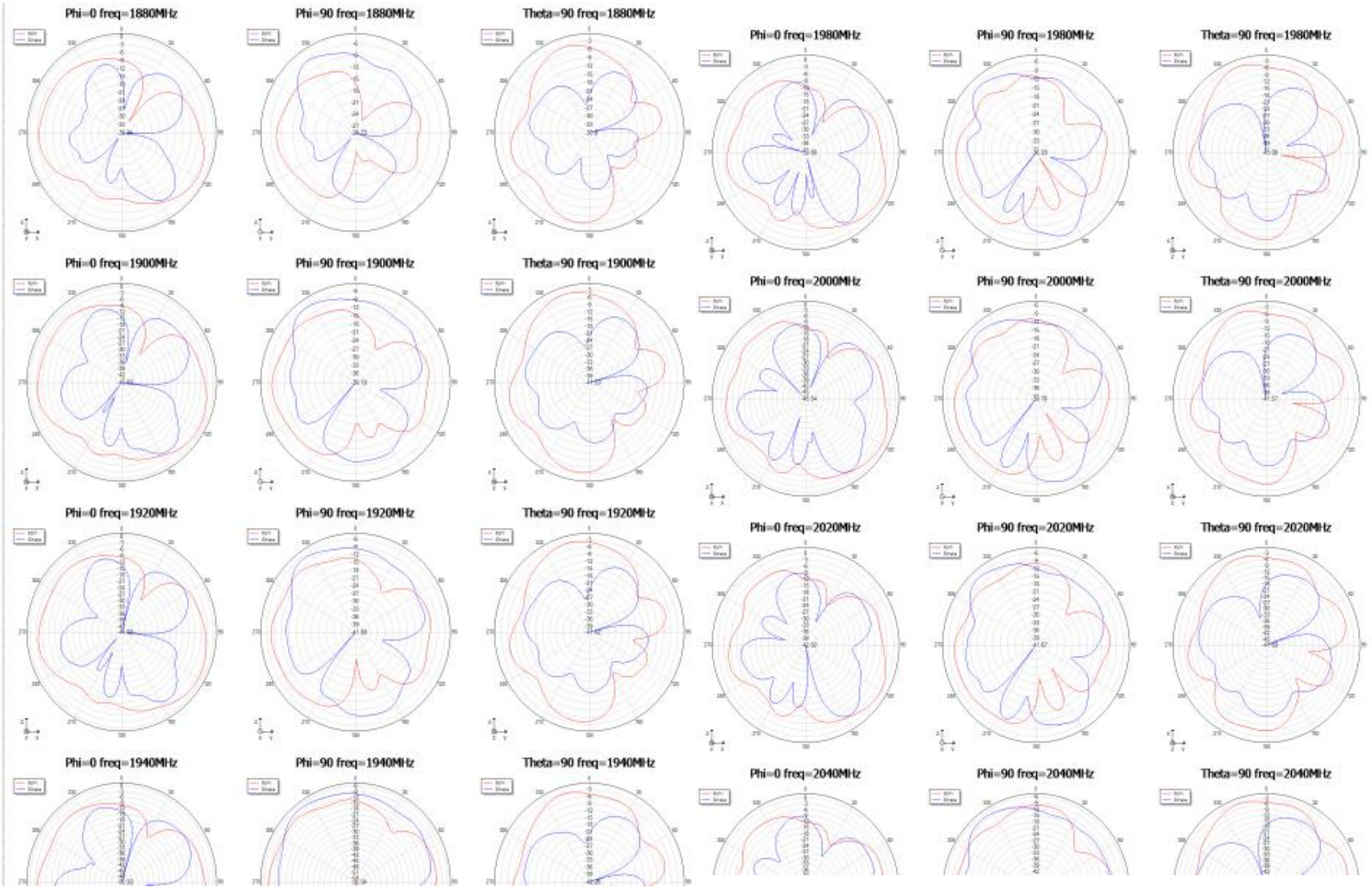
LTE B3/4/66 GSM1800 W4Apple diagram and directional diagram



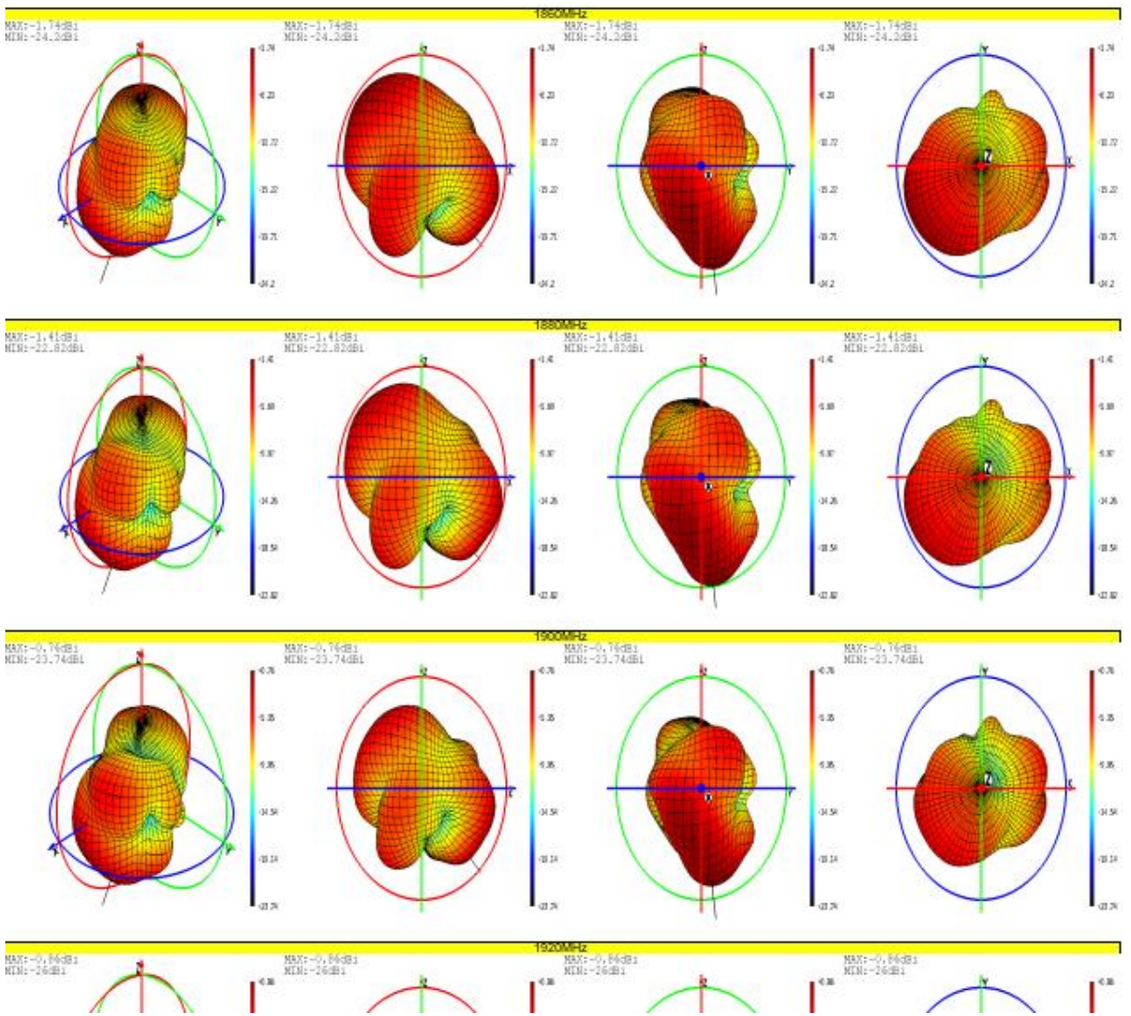
LTE LTE B3/4/66 GSM1800 W4Apple diagram and directional diagram

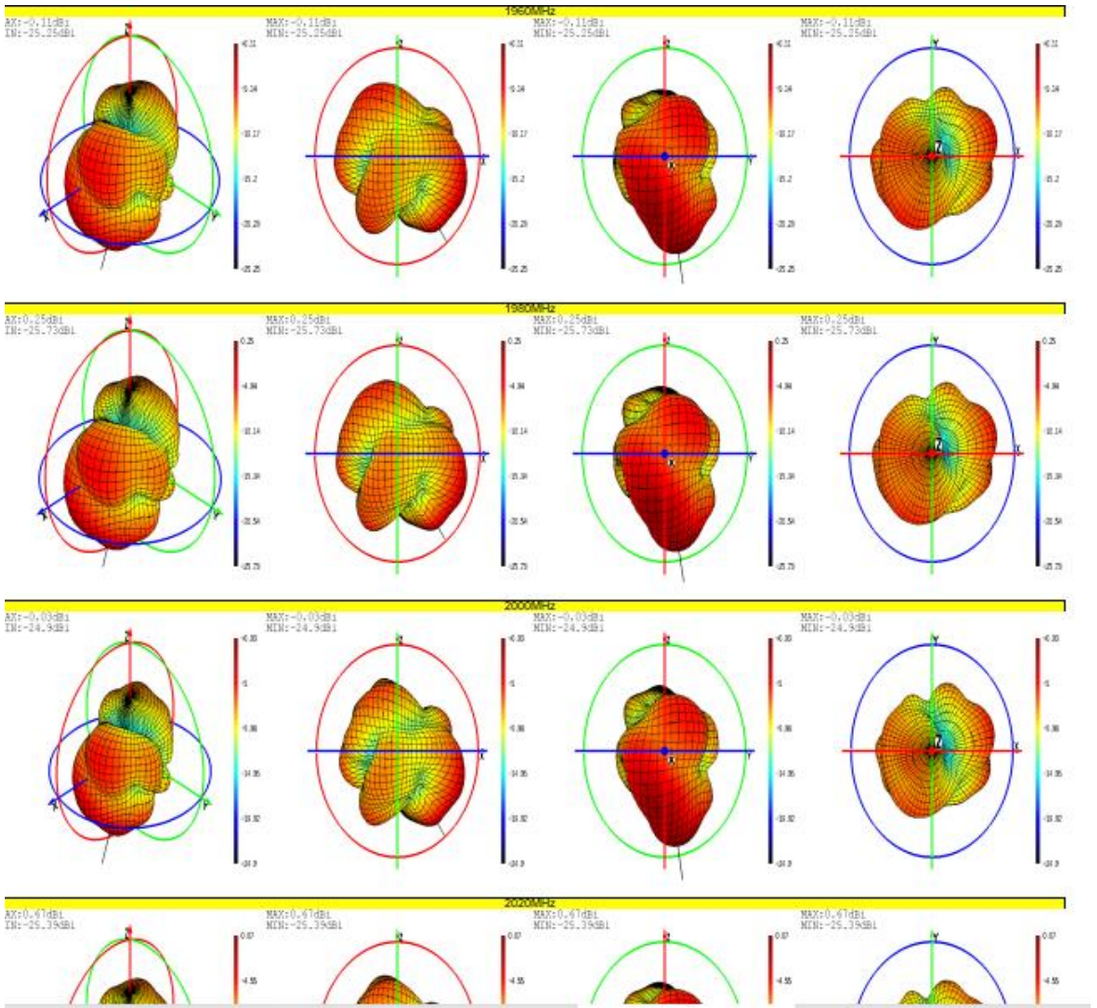


LTE B1/2 GSM 1900 W1/2Apple diagram and directional diagram

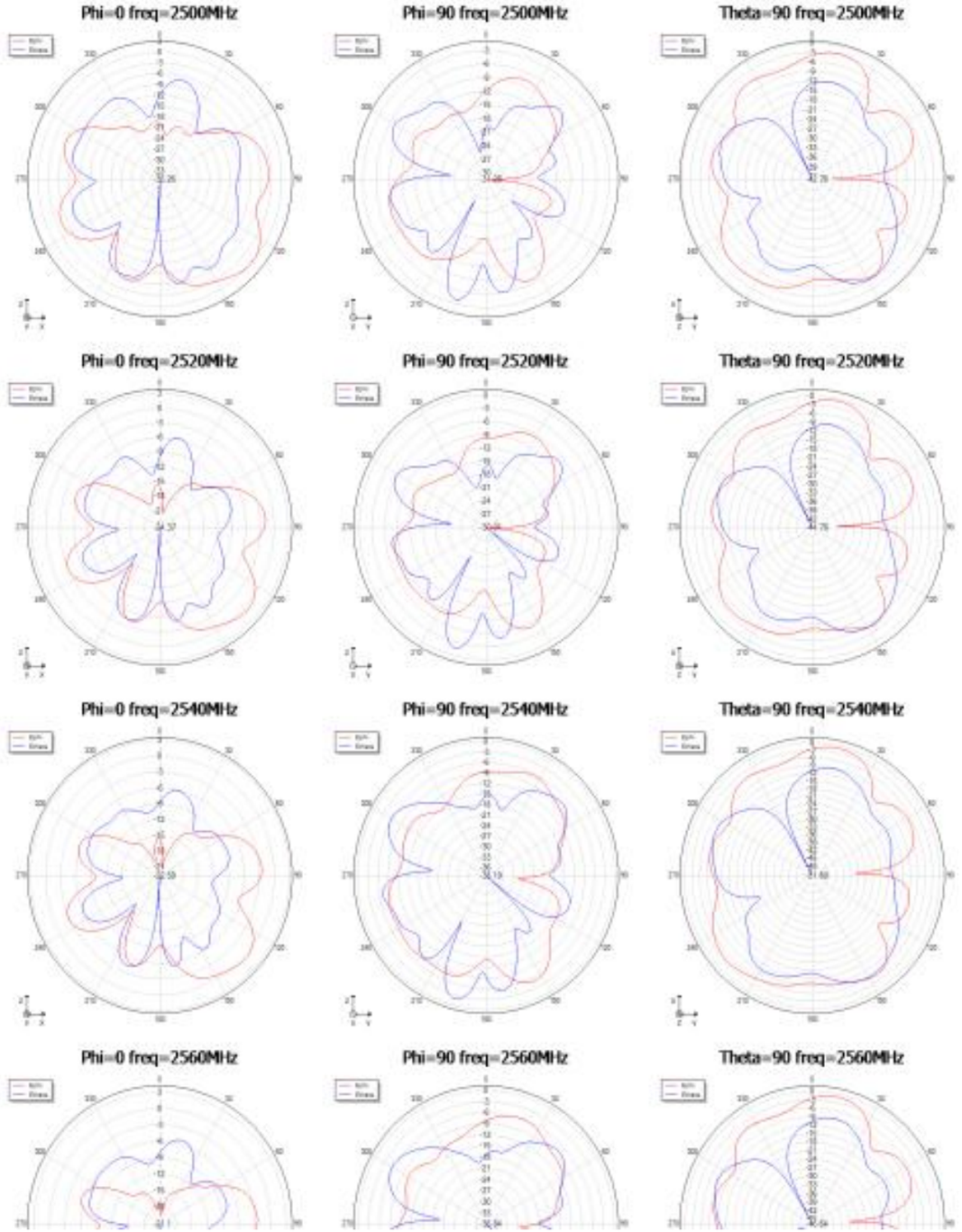


LTE B1/2 GSM 1900 W1/2Apple diagram and directional diagram

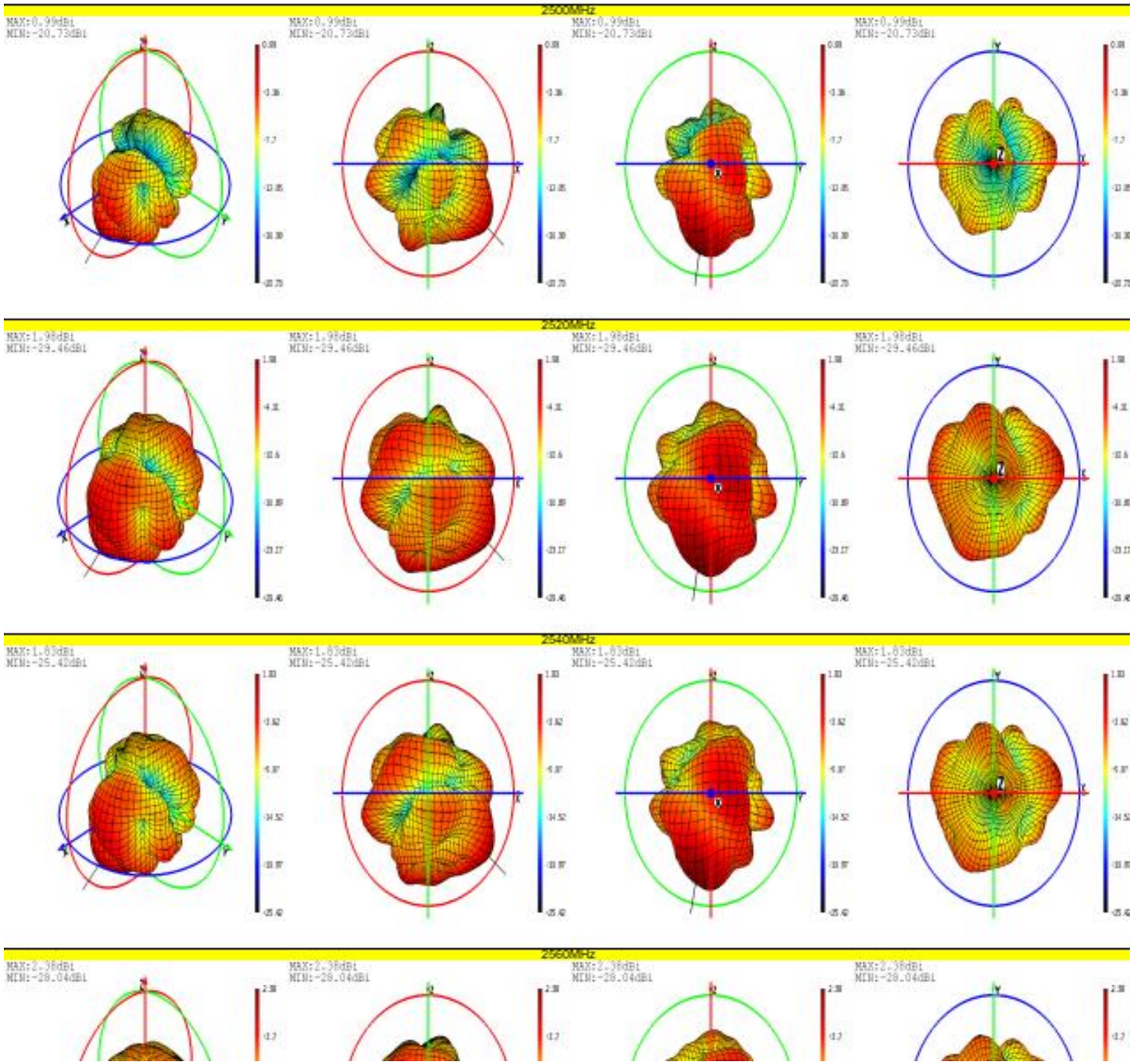




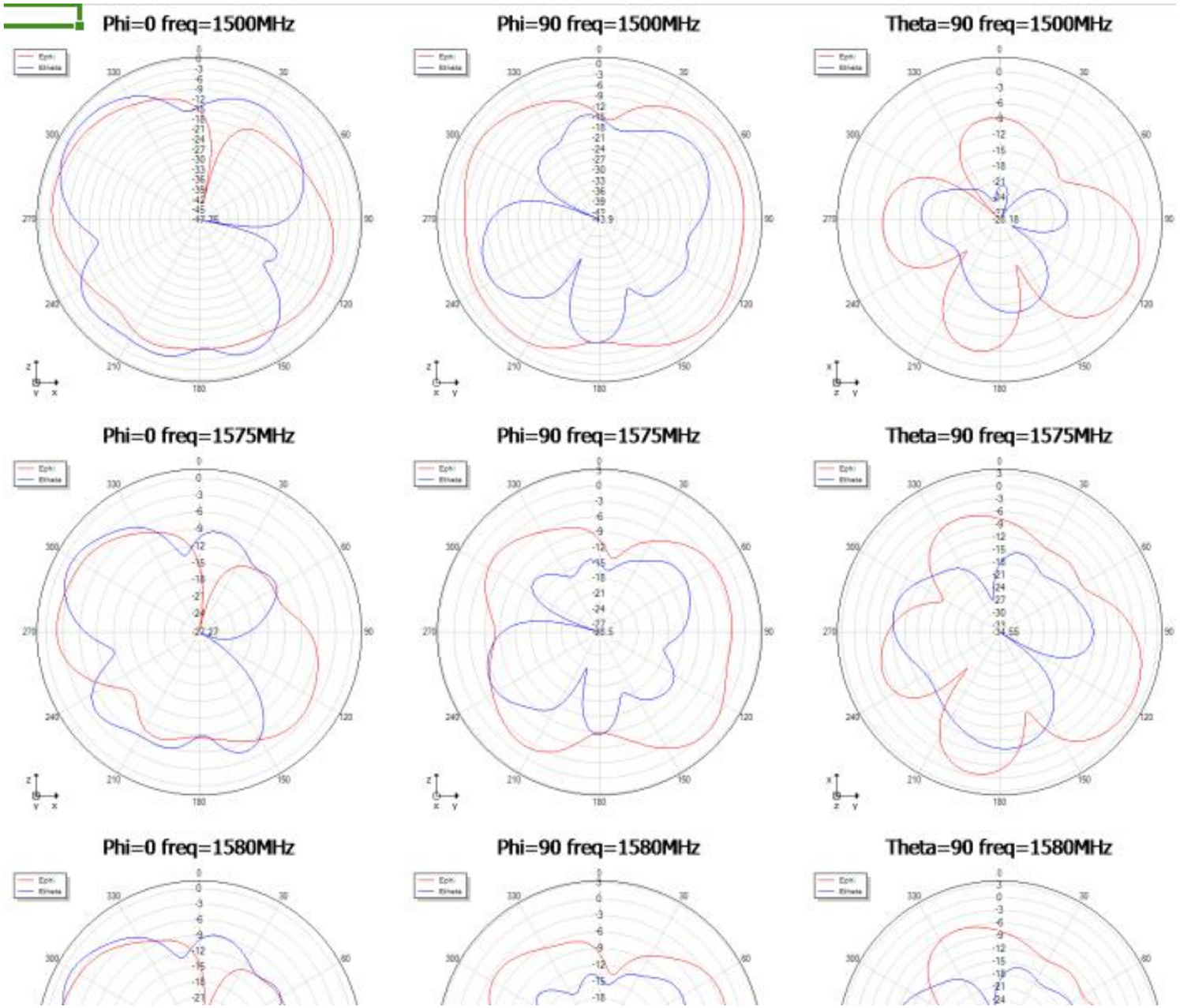
LTE B7Apple diagram and directional diagram



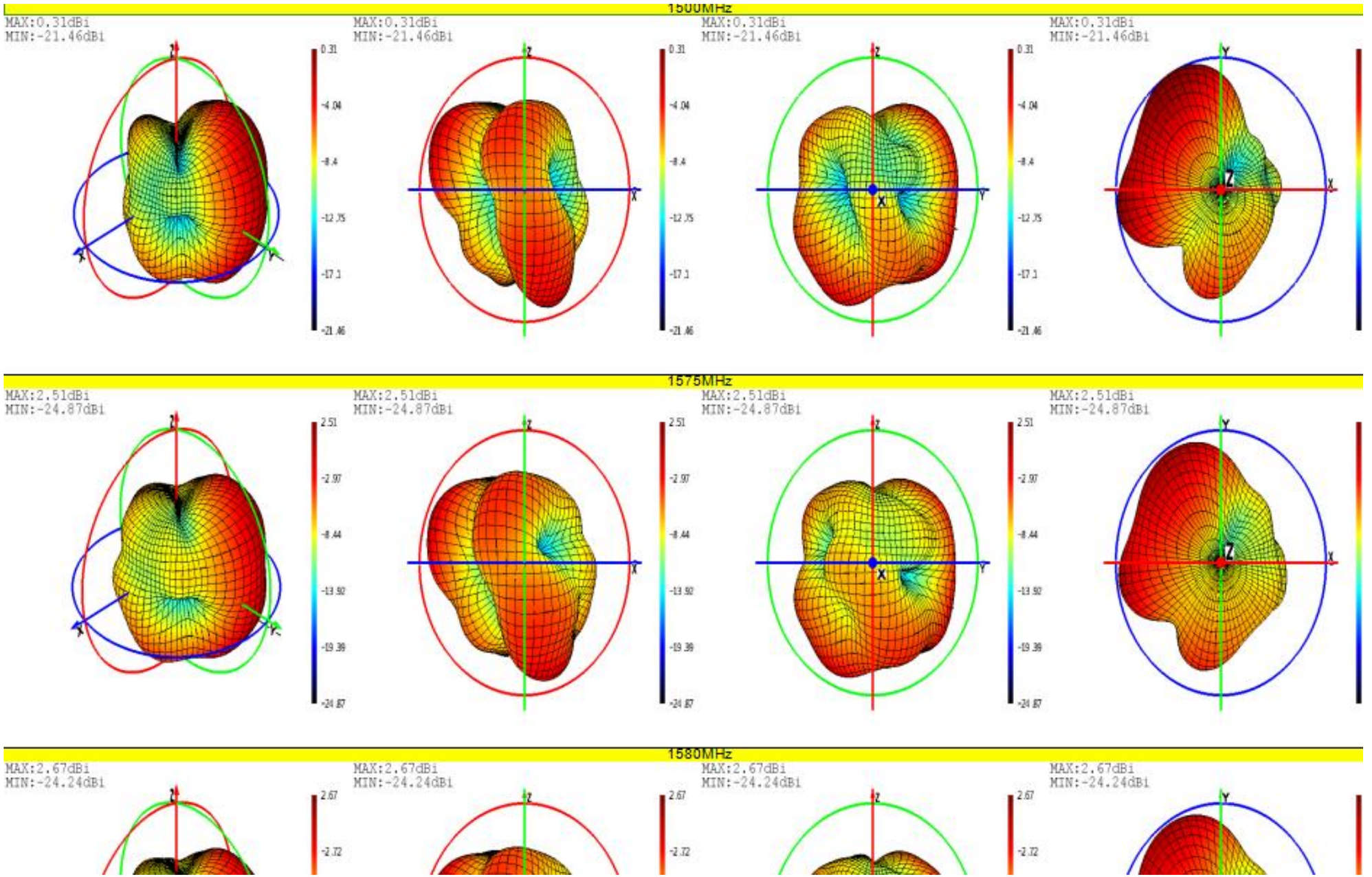
LTE B7Apple diagram and directional diagram



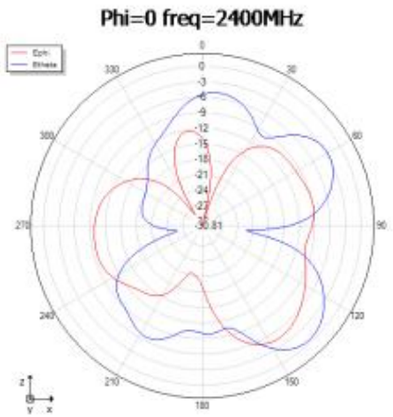
GPS Apple diagram and directional diagram

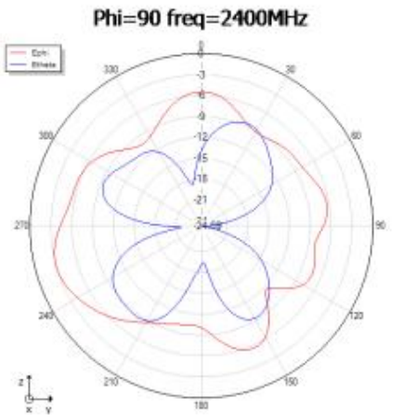


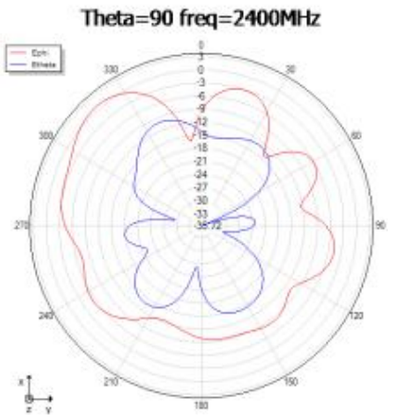
GPS Apple diagram and directional diagram

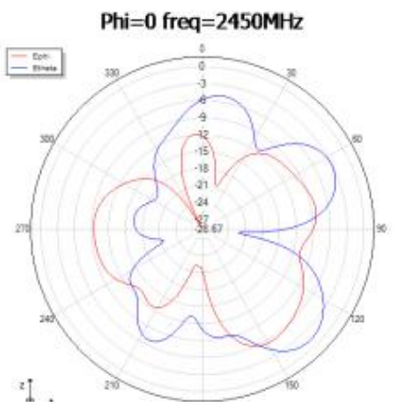


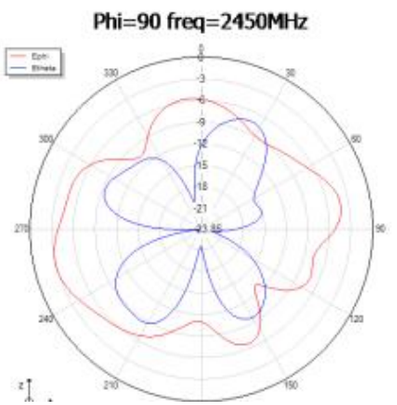
2.4GWIFI Apple diagram and directional diagram

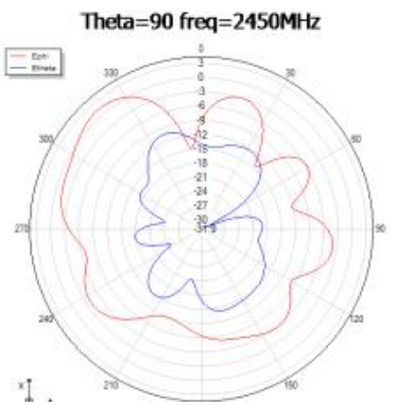


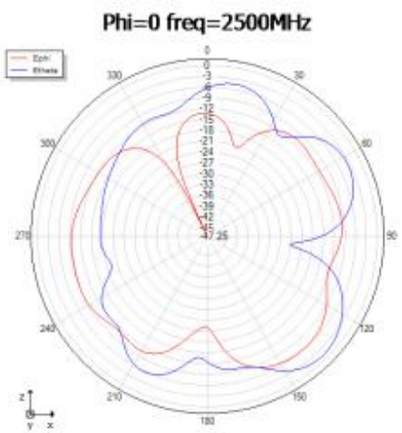


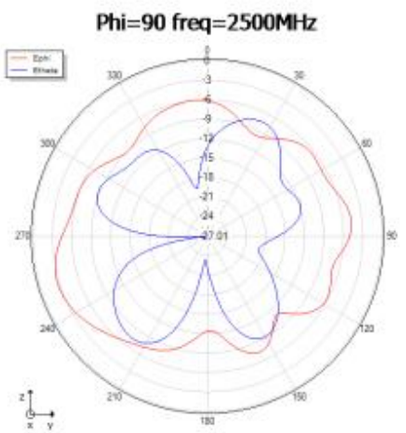


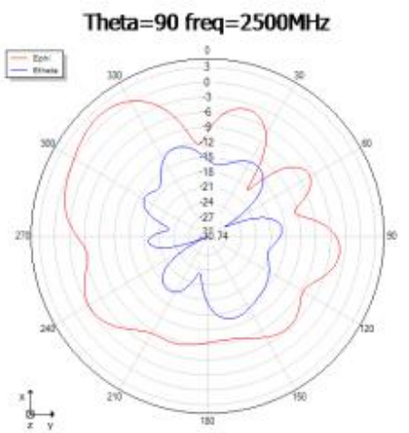




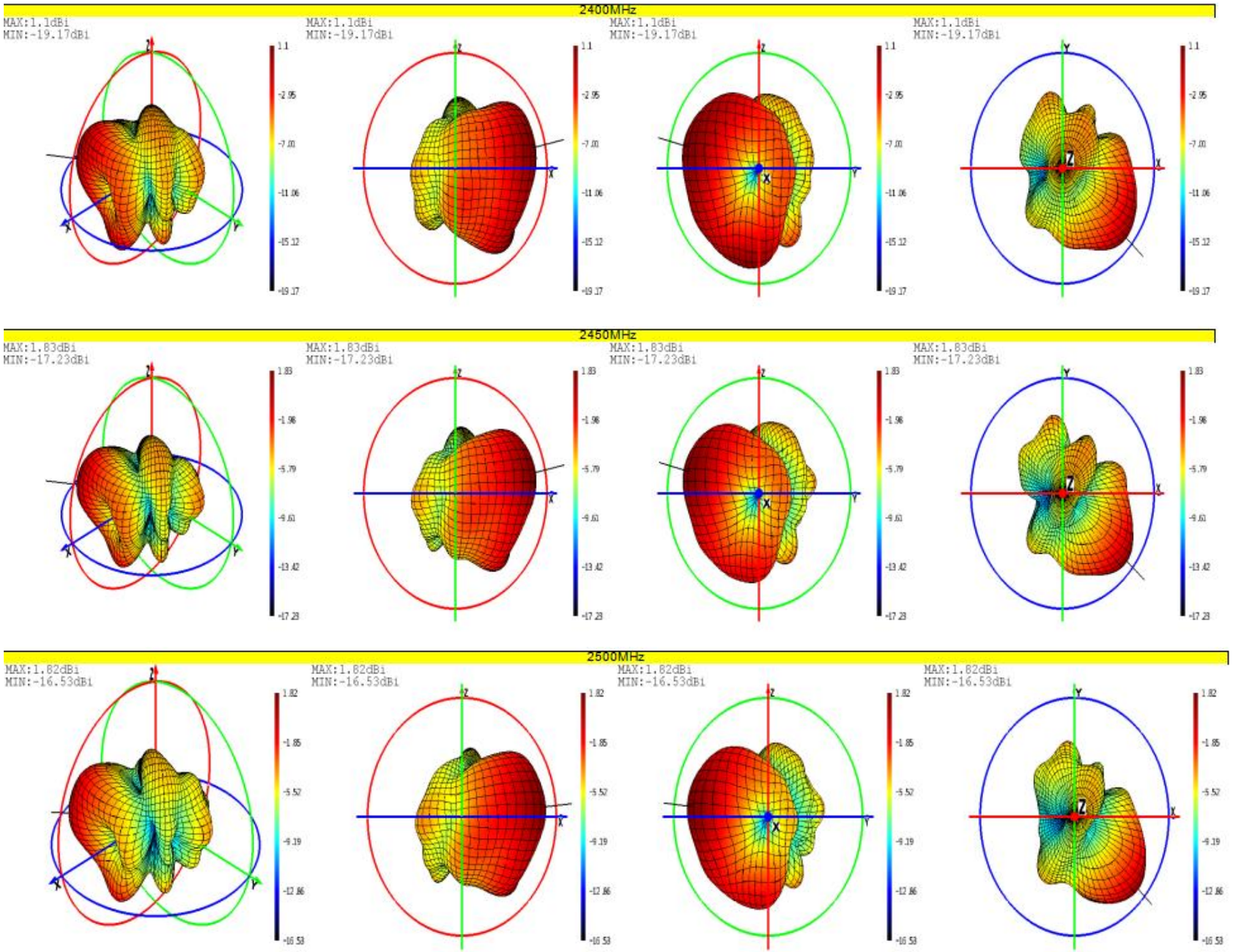








2.4GWIFI Apple diagram and directional diagram

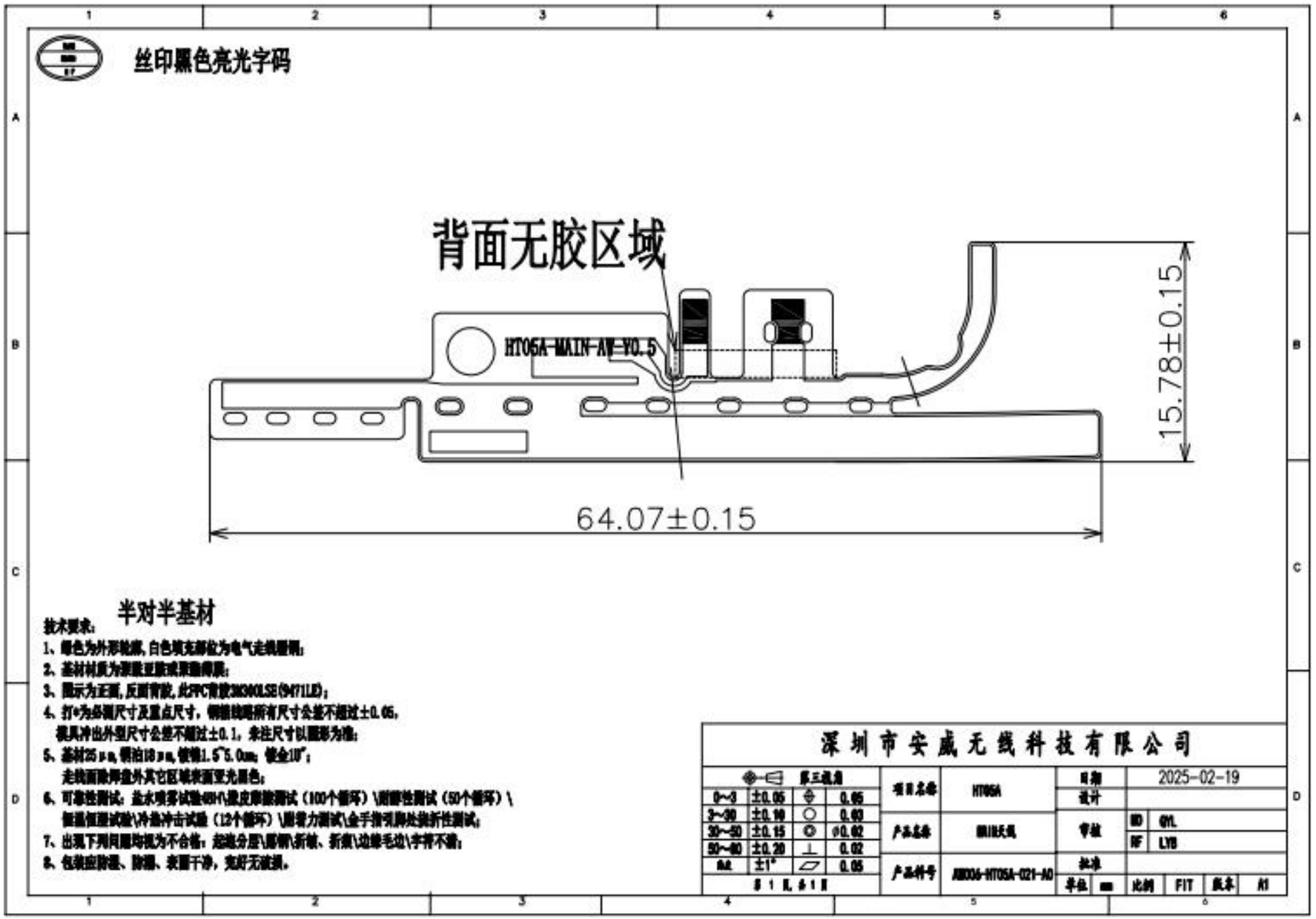


ANTENNA GAIN

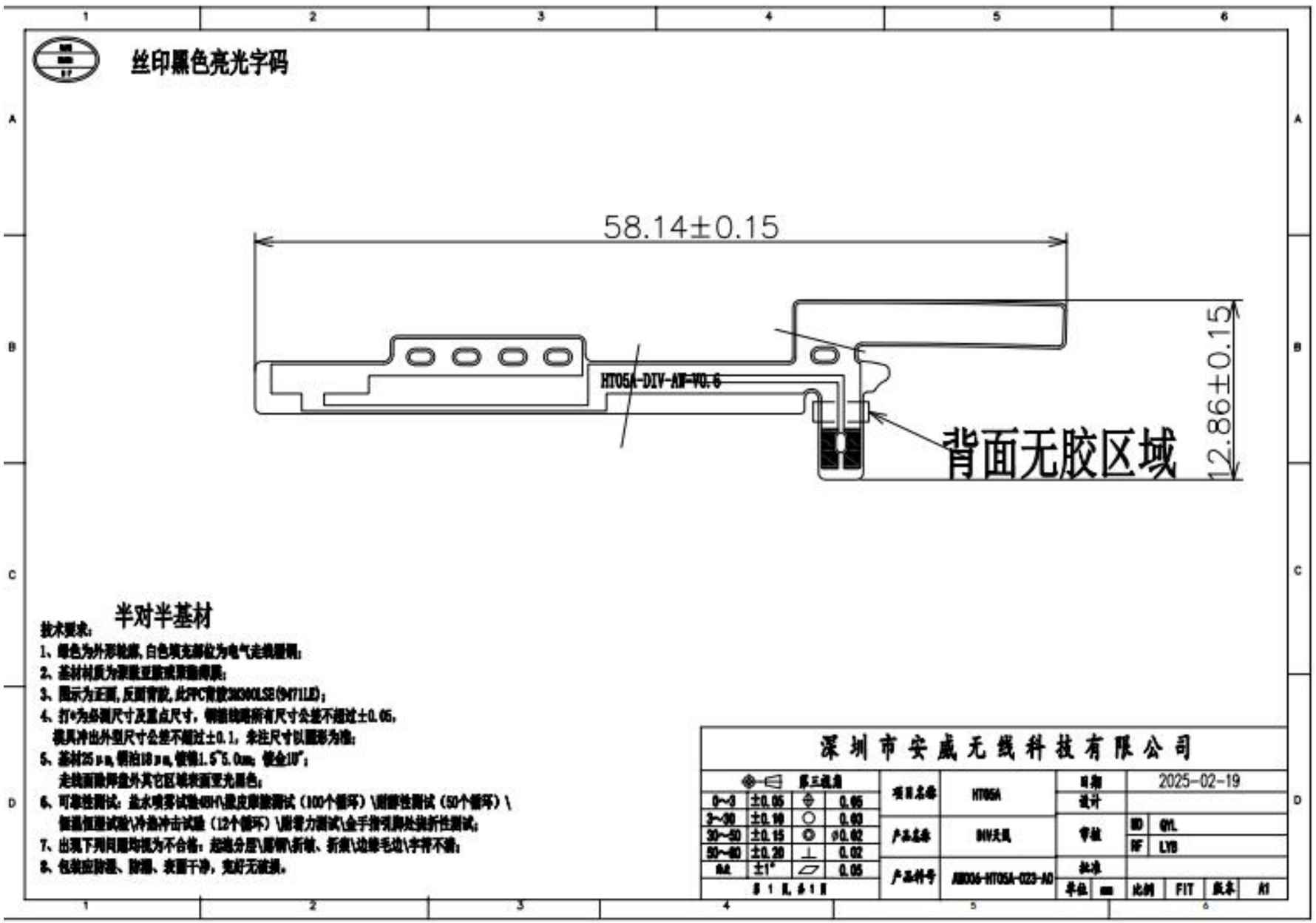
天线增益(Antenna gain)

Standard	Band	Frequency	Gain(dbi)
FDD_LTE	FDD_B1	1925	-0.85
FDD_LTE	FDD_B2	1855	-1.31
FDD_LTE	FDD_B3	1715	0.14
FDD_LTE	FDD_B4	1715	0.14
FDD_LTE	FDD_B5	829	-2.15
FDD_LTE	FDD_B7	2505	0.98
FDD_LTE	FDD_B8	885	-1.13
FDD_LTE	FDD_B12	707	-2.75
FDD_LTE	FDD_B17	709	-2.83
FDD_LTE	FDD_B28	708	-2.81
FDD_LTE	FDD_B28	723	-2.79
FDD_LTE	FDD_B66	1745	0.15
WCDMA	WCDMA_B1	1922.4	-0.85
WCDMA	WCDMA_B2	1852.4	-1.31
WCDMA	WCDMA B4	1715	0.14
WCDMA	WCDMA B5	826.4	-2.15
WCDMA	WCDMA_B8	882.4	-1.13
GSM	GSM850	824.2	-2.15
GSM	GSM900	890.2	-1.13
GSM	PCS1900	1850.2	-1.51
GSM	DCS1800	1710.2	0.13
2.4GWIFI		2412	1.83
BT		2400	1.83
GPS		1575	2.51

Main antenna size

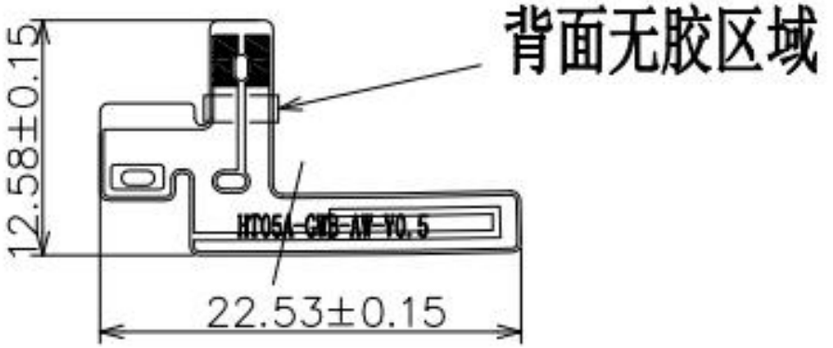


Diversity antenna size



Three in one antenna size

丝印黑色亮光字码



半对半基材

技术要求：

1、绿色为外形轮廓，白色填充部位为电气走线铺铜；
2、基材材质为聚酰亚胺或聚酯薄膜；
3、图示为正面，反面背胶，此FPC背胶3630OLSS(9471LE)；
4、打*为必测尺寸及重点尺寸，铜箔线路所有尺寸公差不超过±0.05，
模具冲出外型尺寸公差不超过±0.1，未注尺寸以图形为准；
5、基材25μm，铜箔18μm，镀镍1.5~5.0um，镀金10"；
走线面除焊盘外其它区域表面亚光黑色；
6、可靠性测试：盐水喷雾试验48H\温度摩擦测试（100个循环）\耐弯性测试（50个循环）\
恒温恒湿试验\冷热冲击试验（12个循环）\耐剥力测试\金手指弯曲处撕折性测试；
7、出现下列问题均视为不合格：起翘分层\露铜\折皱、折痕\边缘毛边\字符不清；
8、包装应防潮、防漏、表面干净，完好无破损。

深圳市安威无线科技有限公司					
一般公差			项目名称	HT05A	日期 2025-02-19
0~3	±0.05	0.05			设计
3~30	±0.10	0.03	产品名称	铜箔天线	审核 ID QYL
30~50	±0.15	Φ0.02			PF LYB
50~80	±0.20	0.02	产品料号	AN006-HT05A-022-A0	批准
80	±1°	0.05			单位 mm 比例 FIT 版本 A1
第三视角					

Environmental treatment methods

Current customer installation environment testing

附加说明

- 请仔细确认报告中提到的匹配电路是否修改、以及环境处理是否导入，这将直接影响天线性能。
- 本报告所提供的参数仅为客户给到我司调测样机的参数，不代表贵司最终项目的最终量产状态。
- 倘若贵司有最新试产、或者更新状态（更换物料、更新软件、更换环境处理等）的样机，请尽快交由我司进行验证，以确认天线性能是否受到影响。
- 倘若贵司需要送往第三方复测或者送往客户测试，请务必将需要测试的机器交由我司进行测试确认，因为主板的一致性、装配的一致性，以及天线组装差异等因素，均可能导致天线参数的偏差。

ANWEI 深圳市安威无线科技有限公司

行业领先的一站式通信射频天线解决方案制造商

The End

携手共进 共创未来