



# 深圳市德仕勤科技有限公司

## DOSKING Antenna Test Report

客户名称	锋迈	项目名称	X1-M
整机类型	手机		
天线种类及频段信息		天线形式	
主天线	GSM:2. 3. 5. 8 WCDMA:1. 2. 5 LTE:2. 4. 5. 7. 17. 28AB		PIFA
副天线	WIFI/GPS/BT		PIFA
分集天线	GSM:2. 3. 5. 8 WCDMA:1. 2. 5 LTE:2. 4. 5. 7. 17. 28AB		PIFA
天线类型	FPC	版本号	V1.0



ESHIQIN

## 1.The Equipment of Active Test

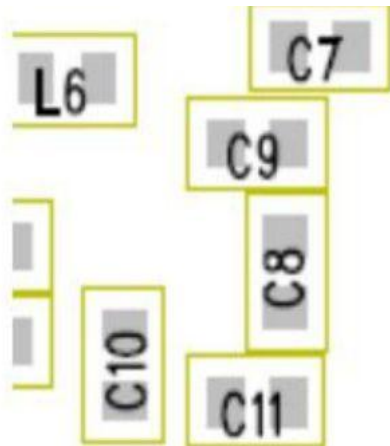
1. ETS Chamber (m) (3D 暗室)

2. 矢量网络分析仪 (无源测试仪)

3. Network analyzer-5071E/B/Comprehensive measuring instrument-8960/LTE-RS-CMW500/MT8820C 支持 2G、3G、

4G / BT、WIFI、NB

2. Matching Circuit 主天线 (匹配有更改)



Element	匹配值
C11	0.5PF
C7, C8	0 欧姆
C9	NC



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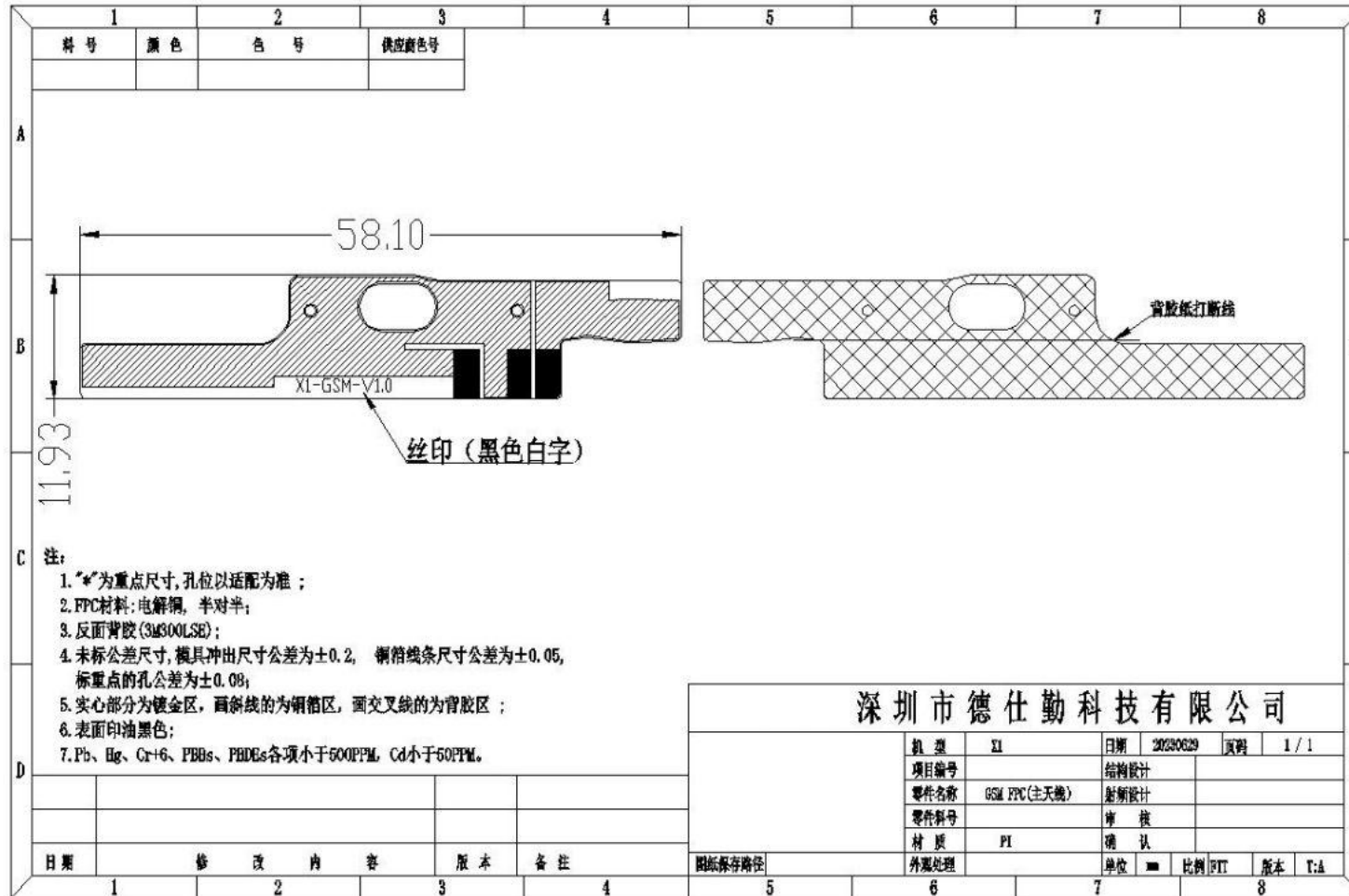
天线分布：



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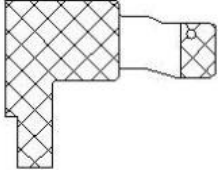


天线尺寸:



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1		2	3	4	5	6	7	8	
科号	颜色	色号	供应商色号						
				丝印（黑色白字）					A
A		0							
B		3							
C		4			深圳市德仕勤科技有限公司				
1. “*”为重点尺寸，孔位以适配为准； 注： 2. FPC 材料：电解钢，半对半； 3. 反面青胶（3M300LSE）： 4. 未标公差尺寸，模具冲出尺寸公差为±0.2, 铜箔线条尺寸公差为±0.08； 5. 实心部分为镀金区，画斜线的为背胶区； 6. 表面印油黑色；		18.00	为±0.05,						
D		7. Pb、Bg、Cr+6、PBBs、PBDEe 各项小于500PPM, Cd 小于 50PPM。			税型	II	日期	20230629	页码
					项目编		结构设计		
					零件名称	LTE 分集 FPC	射■设计		
					零件料		审核		
					材质	PI	确认		
日期	修	¥	内	槽	版本	备注	国纸保存径	外观处	单位
1	2	3	4	5	6	7	8	比例	FIT
								版本	T:A



1		2		3		4		5		6		7		8	
中	颜色	色号	供应商色号												
				背胶纸打新线 B 丝印（黑色白字）											
				A. 50											
				0 公差											
				为±0.05,											
A															
B															
				深圳市德仕勤科技有限公司											
C注:															
1. “*”为重点尺寸，孔位以适配为准； 2. FPC材料：电解钢，半对半， 3. 反面青胶（3M300LSE）； 4. 未标公差尺寸，模具冲出尺寸公差为±0.2，铜箔线条尺寸 标重点的孔公差为±0.08； 5. 实心部分为镀金区，画斜线的为制箱区，百交叉线的为背胶区；															
				日期 20330629 W											
				1 / 1											



ESHIQIN

1		2		3		4		5		6		7		8	
料号	颜色	色号	供应商色号												
				丝印（黑色白字） ■胶纸打断线 A15.00 B 0 寸公差为 ±0.05,											
A				3 深圳市德仕勤科技有限公司											
B															
C															
D															
1. “*为重点尺寸，孔位以适配为准； 此 2. FPC 材料：电解铜，半对半； 3. 反面背胶（3M300LSE）； 4. 未标公差尺寸，模具冲出尺寸公差为±0.2, 铜箔线条尺 标重点的孔公差为±0.08； 5. 实心部分为镀金区，画斜线的为铜箔区，画交叉线的为青胶区； 6. 表面印油黑色； 7. Pb、Hg、Cr+6、PBBs、PBDEs 各项小于 500PPM，Ca 小于 50PPM。				机量 项目编号		11		日期 20330629 页 码 1/1		结构设计					

					零件名称	FIFI 天 ■ FC	财频设计	
					零件料号		审核	
					材质	PI	确认	
 DESHIQIN	华	改	内	容	版本	出	单位 - 版本	比 例 PT T:A
1	2	3	4	5	6	7	8	

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ESHIQIN

1		2		3		4		5		6		7		8			
科号	颜色	色号	供应商色号	A													
A				B				C				反面					
00				注:				48.0 <sup>+</sup> 正				深圳市德仕勤科技有限公司					
1. **”为重点尺寸, 孔位以适配为准;				2. FPC 材料: 电解铜, 一对半;				3. 反面背胶 (3M300LSE);				4. 未标公差尺寸, 模具冲出尺寸公差为±0.2, 钢箔标重点的孔公差为±0.081					
5. 实心部分为镀金区, 面解线的为钢箔区, 面交叉线				线条尺寸公差为±0.05, 的为背胶区;													
6. 表面印油黑色;																	
7. Pb、Bg、Cr+6、PBBs、PBDEs 各项小于 500PPM, Cd 小于 50PPM。								机型		XI		日期 2083-07-01		页码		1/1	
								项目编号				结构设计					
								零并名称		NFC AMT		射频设计					
								零件料号				审核					
								材质		PI		确认					
日期		修 改 内 容		版本		备注		图纸保存路径		外观处理		单位 -		比例 FIT 版本 T:A			
1		2		3		4		5		6		7		8			

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### 3: 天线测试

#### OTA 测试数据:

Model: X1/X2				天线实现方式: FPC							单位: dBm	
信道	GSM850			GSM900			DCS1800			PCS1900		
	CH128	CH192	CH251	CH1	CH62	CH124	CH512	CH698	CH885	CH512	CH661	CH810
TRP	26.27	26.42	26.65	26.02	27.2	27.58	24.47	24.89	24.71	24.47	24.16	24.41
TIS			-101.41			-101.05			-101.52			-102.47
信道	WCDMA-2100			WCDMA-1900			WCDMA-850			WCDMA-900		
	CH10562	CH10700	CH10838	CH9663	CH9800	CH9938	CH4357	CH4408	CH4458	CH2937	CH3013	CH3083
TRP	18.16	18.07	18.58	18.81	18.61	18.47	16.5	16.98	17.07			
TIS			-102.67			-103.15			-102.16			



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信道	LTE-FDD-B2			LTE-FDD-B4			LTE-FDD-B5			LTE-FDD-B7		
	CH18650	CH18900	CH19150	CH20000	CH20175	CH20350	CH20450	CH20525	CH20600	CH20800	CH21100	CH21400
TRP	18.36	18.11	18.28	18.1	18.01	18.16	16.3	16.69	17.02	18.3	17.78	17.55
TIS			-91.57			-91.18			-91.71			-91.63
信道	LTE-FDD-B17			LTE-FDD-B28A			LTE-FDD-B28B					
	CH23780	CH23790	CH23800	CH27300	CH27370	CH27430	CH27590	CH27600	CH27610			
TRP	15.43	15.54	15.79	15.35	15.83	16.21	16.01	16.17	16.27			
TIS			-89.36			-89.73			-90.17			



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### 天线无源效率 / 增益

Freq (MHz)	Gain (dBi)	Efficiency (%)	Freq (MHz)	Gain (dBi)	Efficiency (%)	Freq (MHz)	Gain (dBi)	Efficiency (%)
700	-2.98	17.65	810	-0.33	28.42	920	0.40	33.83
710	-2.44	20.86	820	-0.26	29.90	930	0.51	33.97
720	-2.09	23.07	830	-0.02	32.88	940	0.40	32.12
730	-1.74	25.46	840	0	32.70	950	0.41	31.51
740	-1.69	25.67	850	0.3	35.94	960	0.27	29.43
750	-1.35	28.25	860	0.26	34.74			
760	-1.31	28.77	870	0.15	34.21			
770	-1.08	30.70	880	0.35	35.06			
780	-0.81	33.27	890	0.29	34.27			
790	-0.62	34.84	900	0.42	34.98			
800	-0.39	27.65	910	0.56	35.78			



eq (MHz) G	ain (dBi)	Efficiency (%)	Freq (MHz)	Gain (dBi)	Efficiency (%)
1700	-0.35	26.62	1940	1.82	49.49
1720	0.27	30.35	1960	1.84	50.38
1740	0.96	35.3	1980	1.74	49.46
1760	1.27	38.05	2000	1.53	47.97
1780	1.48	40.83	2020	1.46	47.61
1800	1.55	42.42	2040	1.31	46.88
1820	1.76	44.31	2060	1.04	45.60
1840	1.81	45.71	2080	0.67	43.61
1860	1.82	45.49	2100	0.22	41.43
1880	1.87	45.27	2120	0.31	43.59
1900	1.87	46.60	2140	0.44	44.83
1920	1.83	48.35	2160	0.022	41.98

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req (MHz)	FGain(dBi)	Efficiency(%)	Freq (MHz)	Gain(dBi)	Efficiency(%)
2300	0.2	43.15	2520	0.12	28.83
2320	0.244	43.42	2540	-0.17	26.41
2340	0.55	46.02	2560	-0.51	24.54
2360	0.84	47.68	2580	-0.97	21.58
2380	0.83	45.31	2600	-1.76	17.85
2400	0.81	44.27	2620	-1.78	16.41
2420	0.96	44.64	2640	-1.84	15.72
2440	0.94	41.75	2660	-1.90	14.89
2460	1.02	39.72	2680	-2.12	14.45
2480	0.56	34.55			
2500	0.42	31.15			

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req (MHz)	FGain (dBi)	Efficiency (%)	Freq (MHz)	Gain (dBi)	Efficiency (%)	Freq (MHz)	Gain (dBi)	Efficiency (%)
2400	-0.42	43.45	5150	2.54	44.21	5750	2.81	51.25
2410	-0.81	42.67	5200	2.91	48.14	5800	2.96	50.83
2420	-0.21	45.08	5250	3.48	52.93	5850	2.65	49.27
2430	-0.06	44.65	5300	3.24	51.11			
2440	0.00	44.39	5350	3.69	56.29			
2450	0.18	44.74	5400	3.74	58.90			
2460	0.27	45.49	5450	3.49	57.22			
2470	0.15	44.19	5500	2.97	51.39			
2480	0.12	43.17	5550	3.50	55.66			
2490	0.18	41.58	5600	3.70	57.71			
2500	0.43	42.95	5650	3.18	53.86			
			5700	3.07	52.75			

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ESHIQIN

Freq (MHz)	Gain (dBi)	Efficiency (%)
1550.00	-3.03	20.08
1555.00	-3.19	20.56
1560.00	-3.27	21.11
1565.00	-3.25	21.78
1570.00	-3.31	22.60
1575.00	-3.51	23.34
1580.00	-3.73	23.54
1585.00	-3.65	23.60
1590.00	-3.46	23.81
1595.00	-3.38	23.90
1600.00	-3.33	23.87

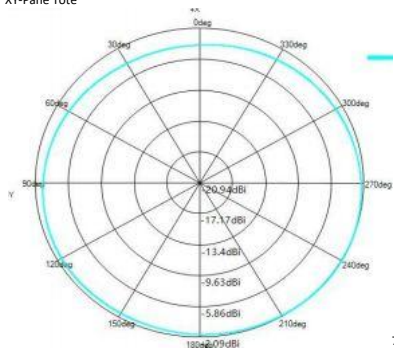
Shenzhen Dosking Technology Co.,Ltd



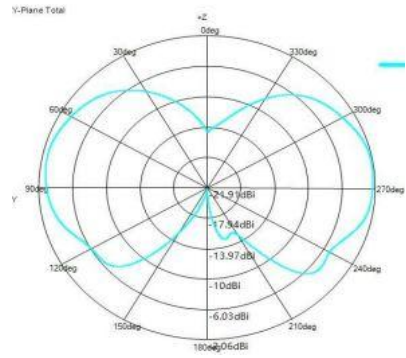
ESHIQIN

## 2D/3DPhi

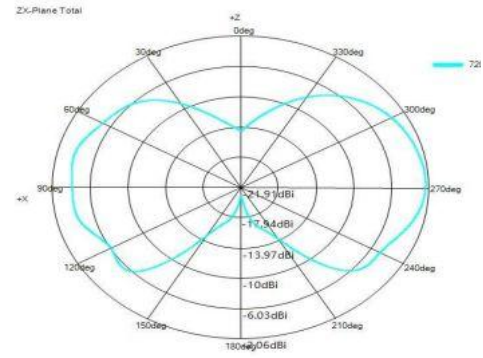
XY-Plane Total



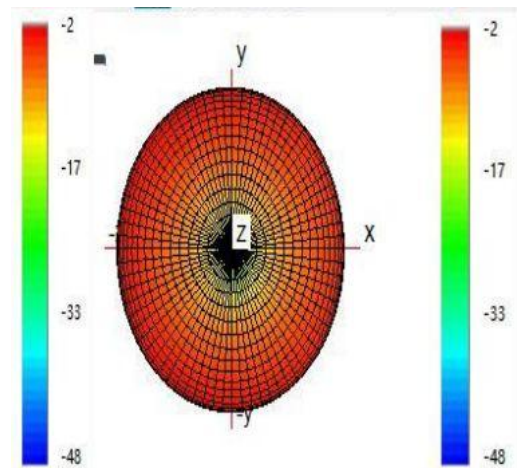
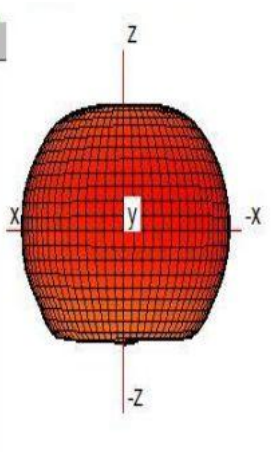
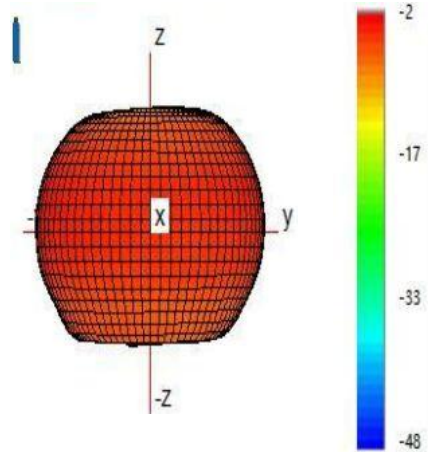
Y-Plane Total



ZX-Plane Total



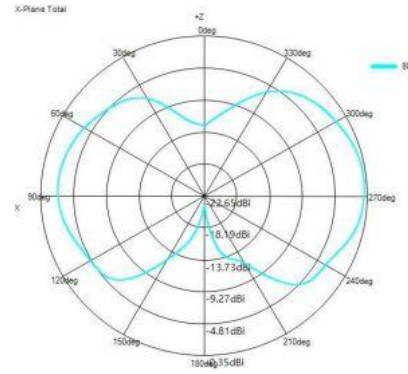
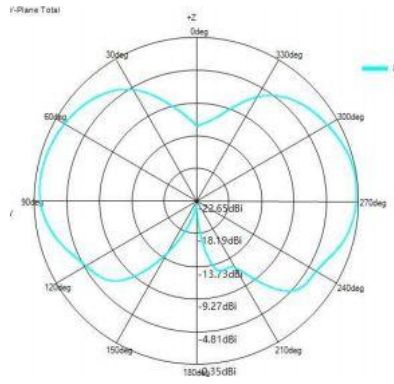
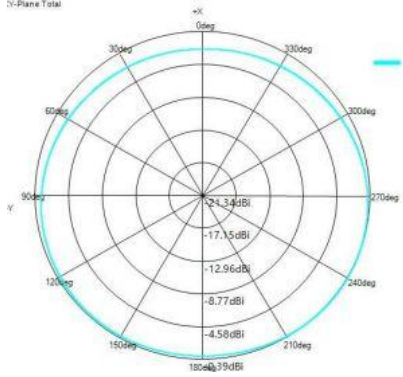
720



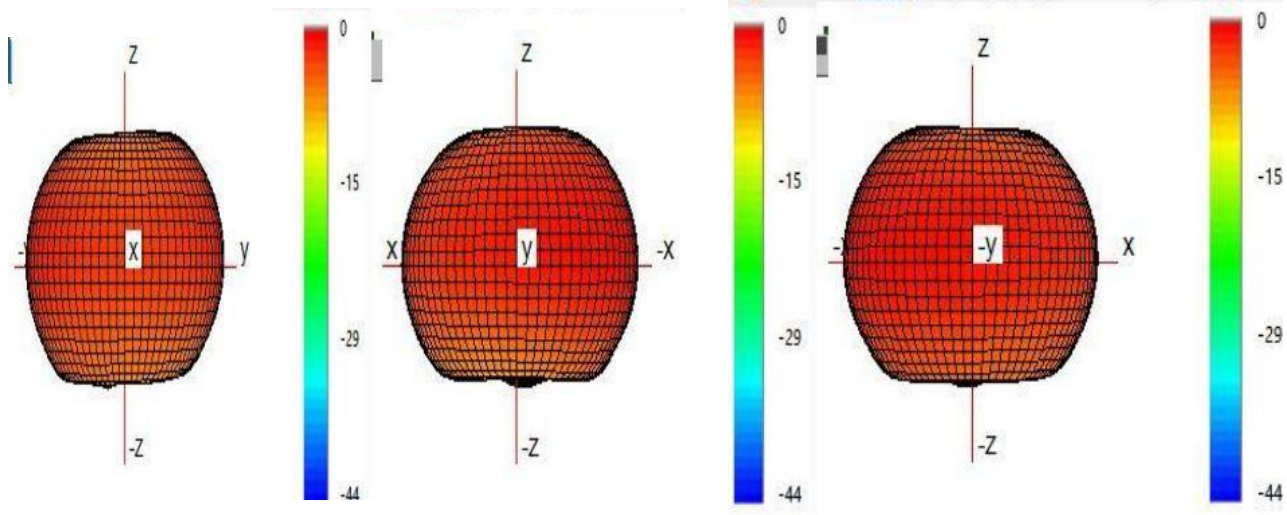
700MHz



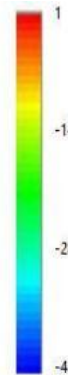
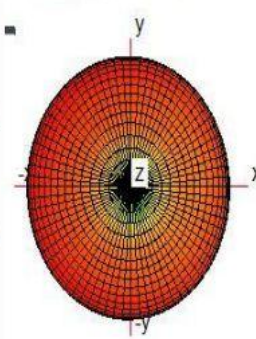
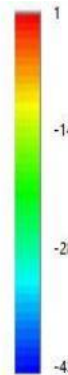
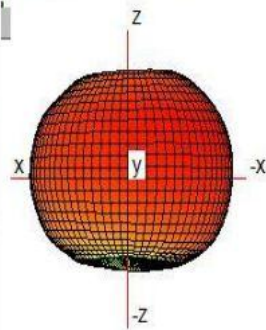
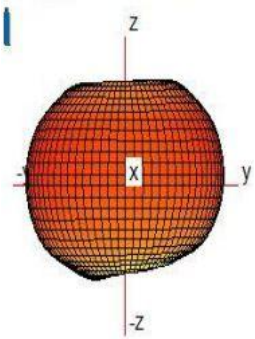
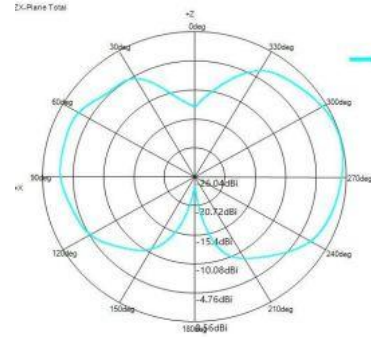
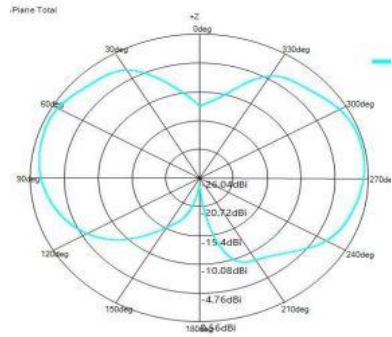
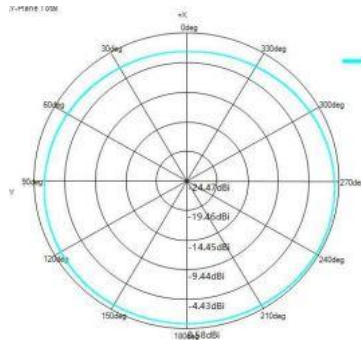
XY-Plane Total  
YZ-Plane Total



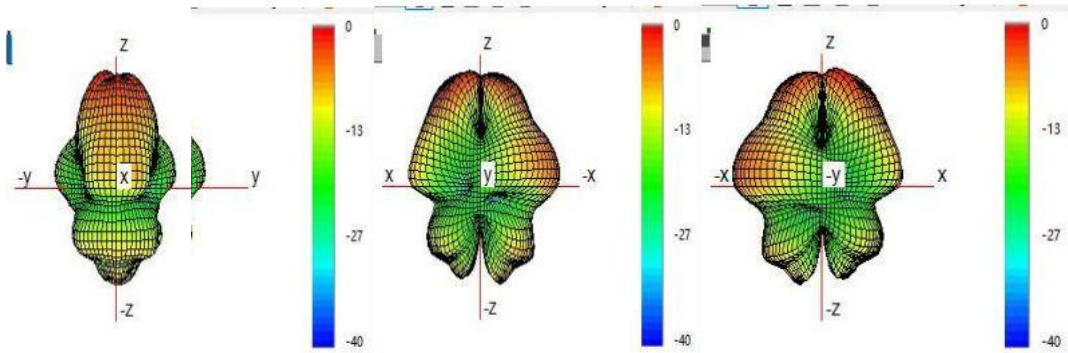
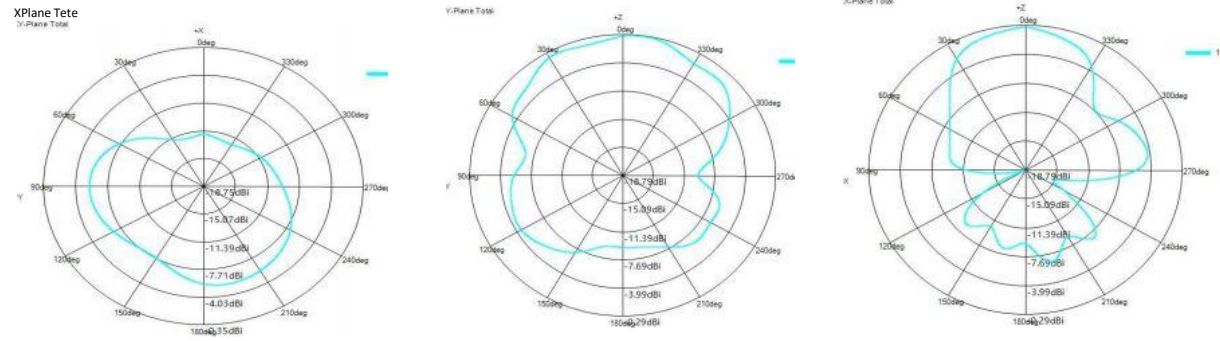
800



800MHz

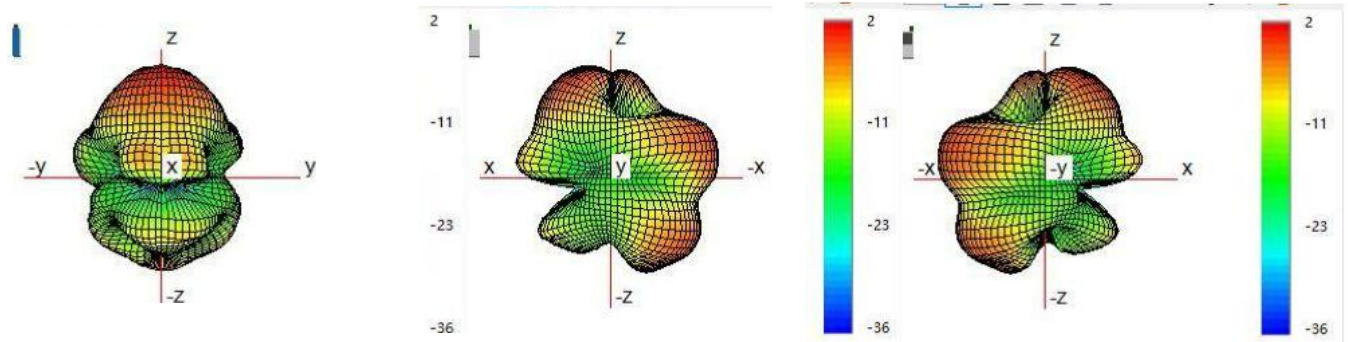
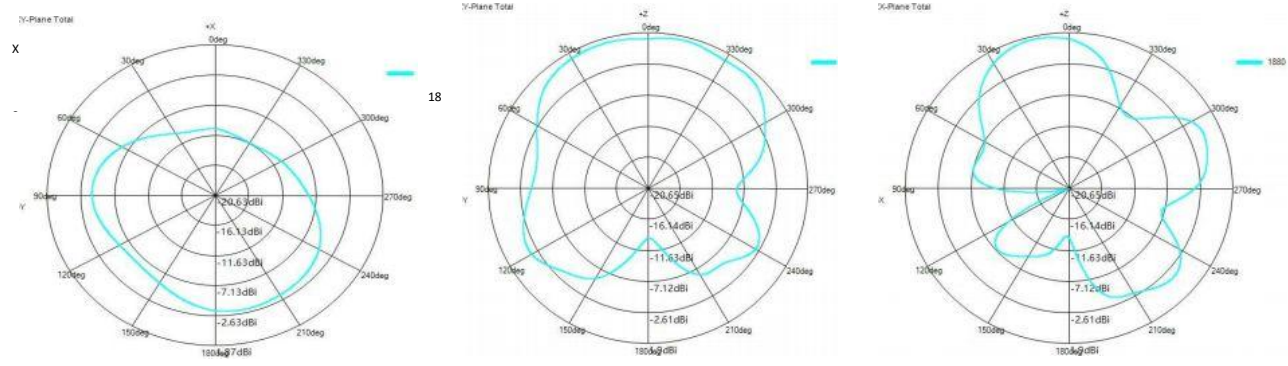


900MHz

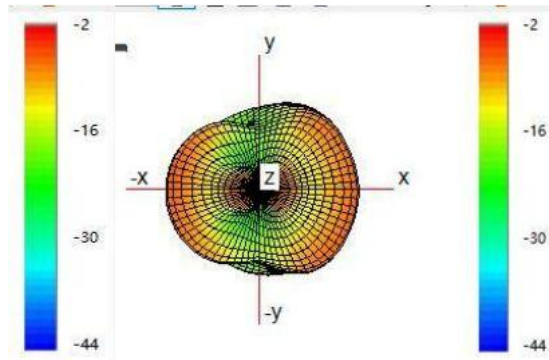
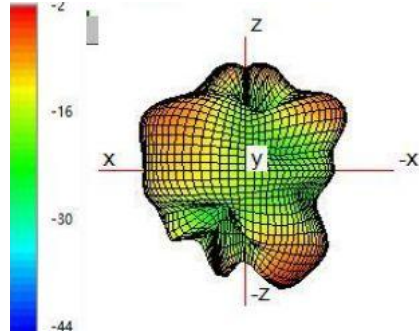
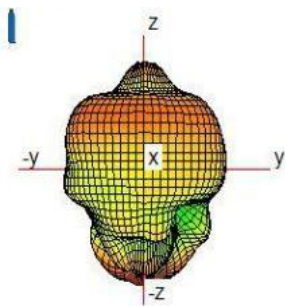
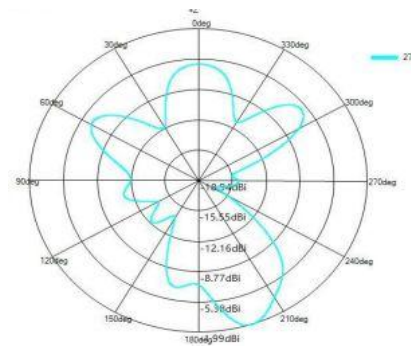
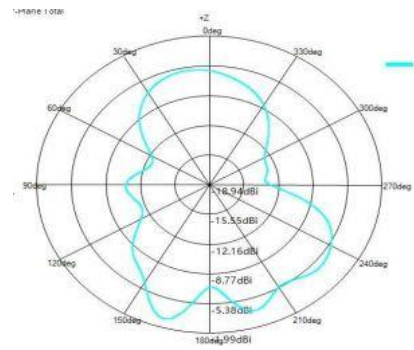
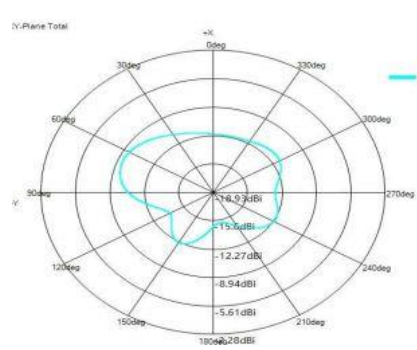


1700MHz





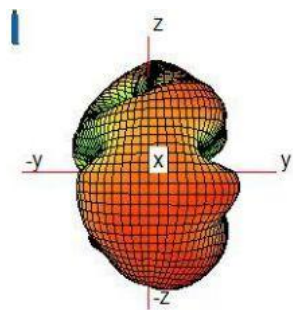
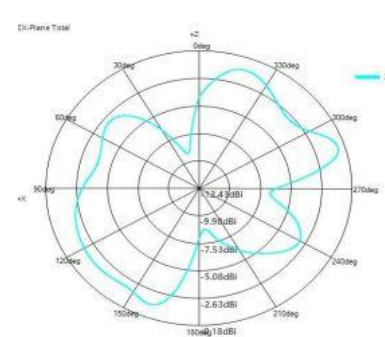
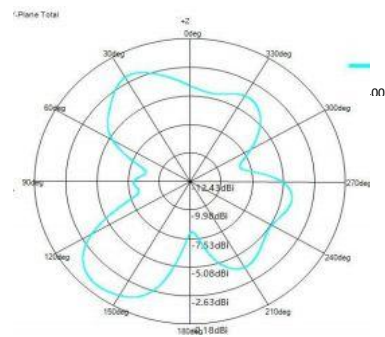
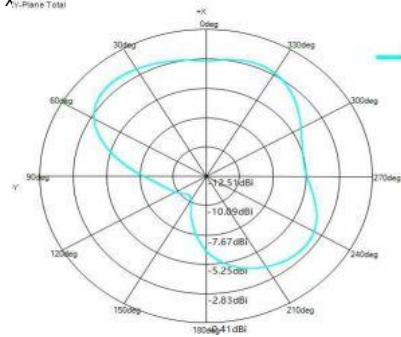
1900MHz



2700MHz

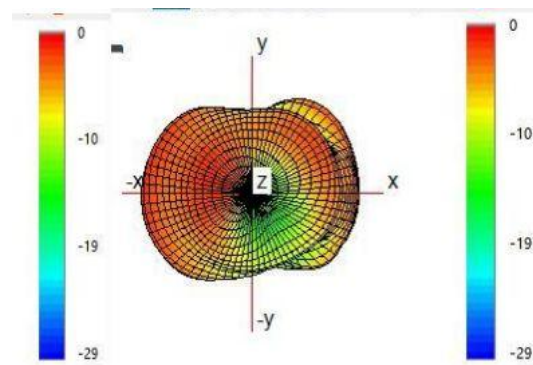


DSHIQIN  
XY Plane Total



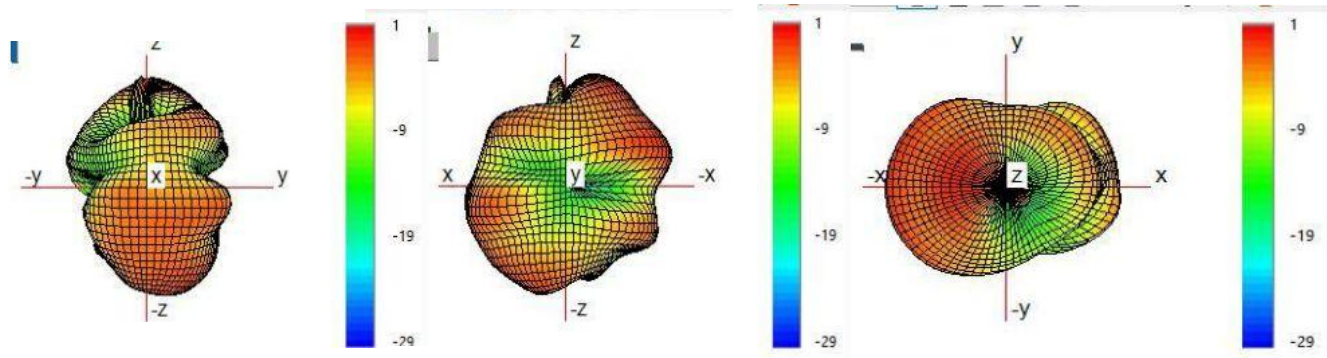
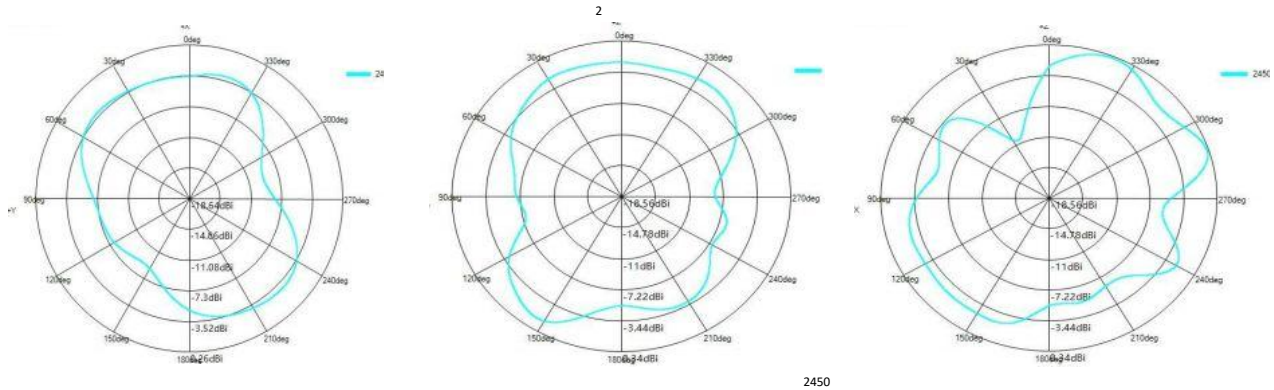
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-10  
-19

Z



2400MHz

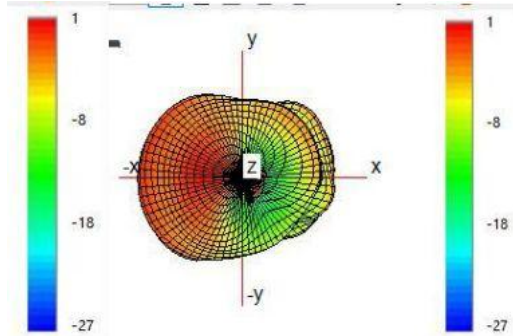
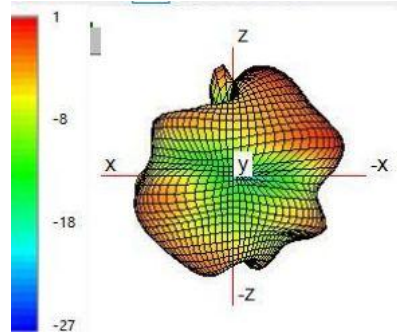
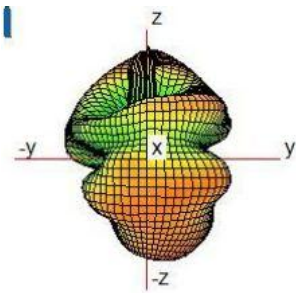
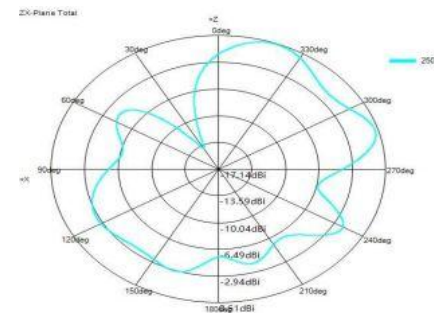
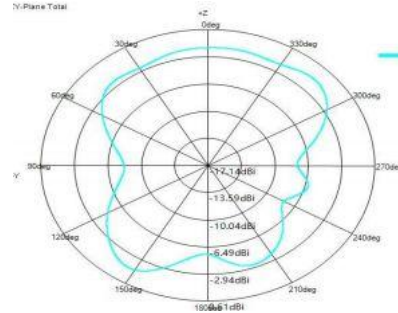
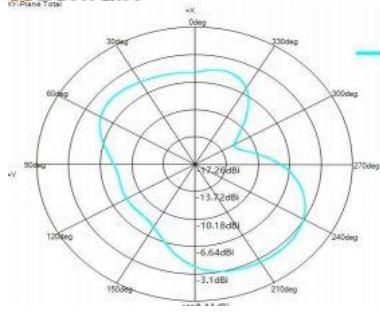




2450MHz



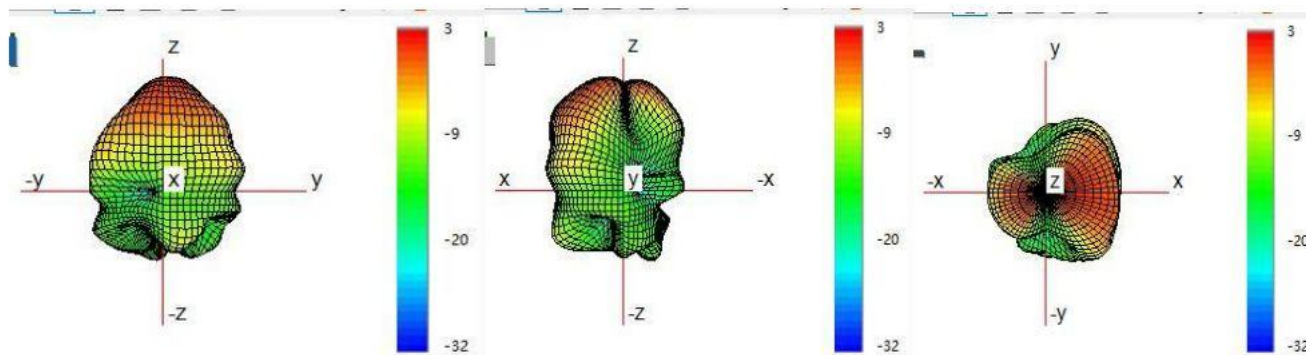
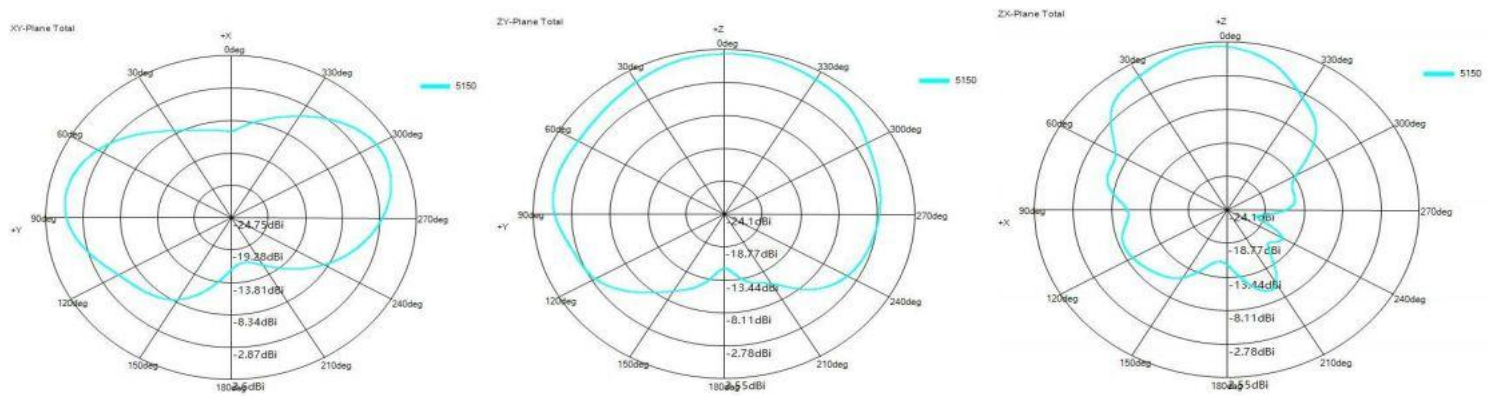
ESHIQIN



2500MHz

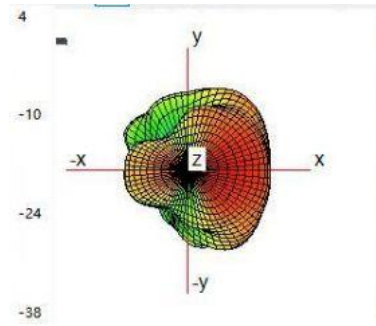
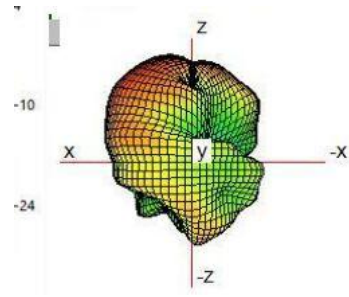
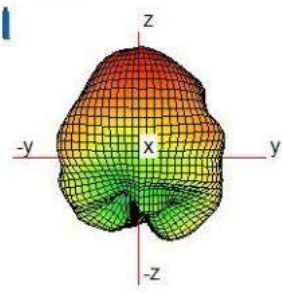
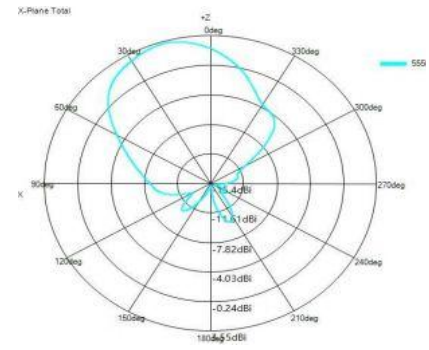
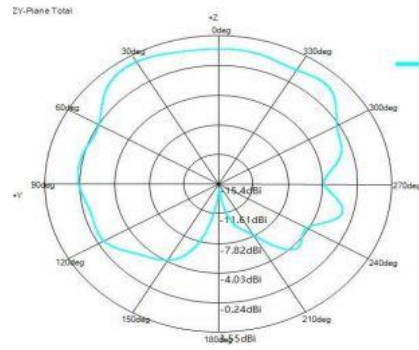
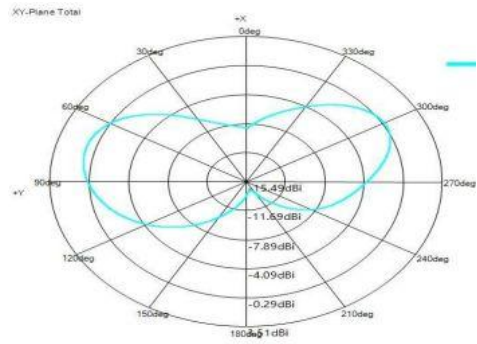


ESHIQIN

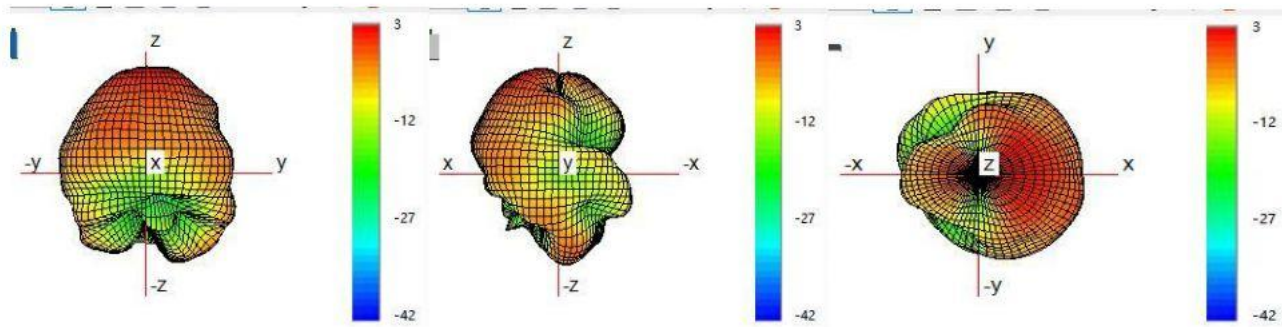
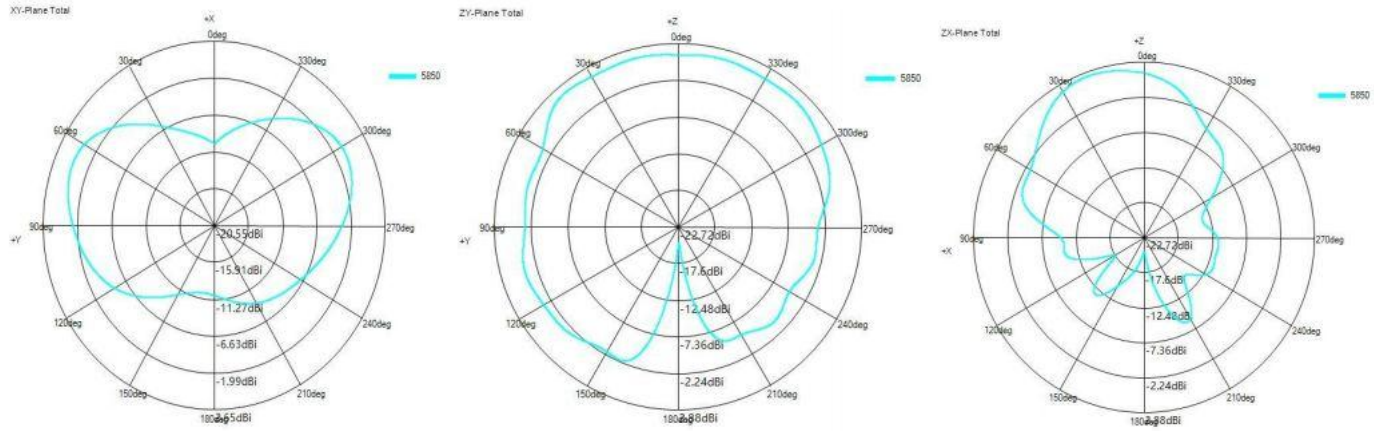


5150MHz

Shenzhen Dosking Technology Co., Ltd



5550MHz

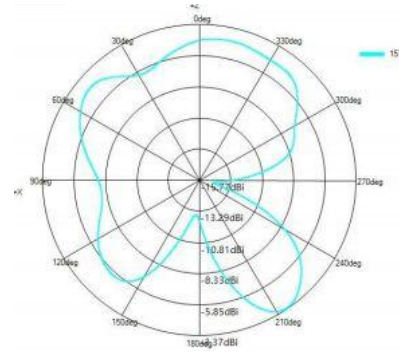
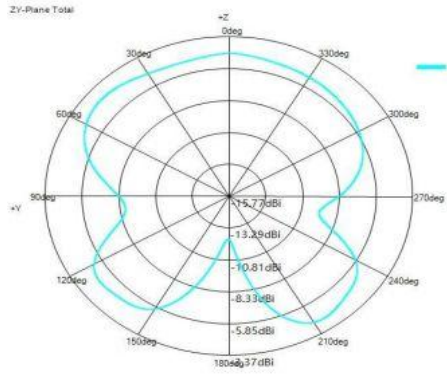
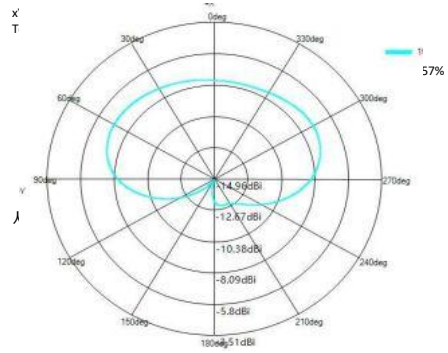


5850MHz

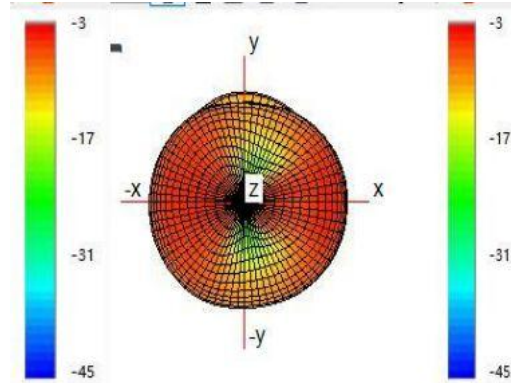
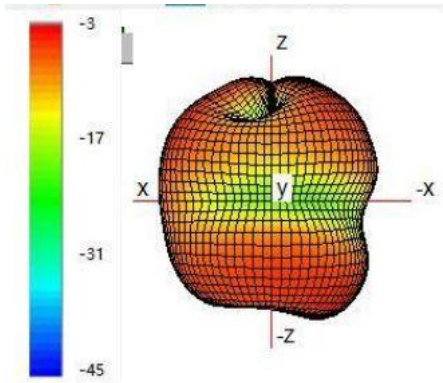
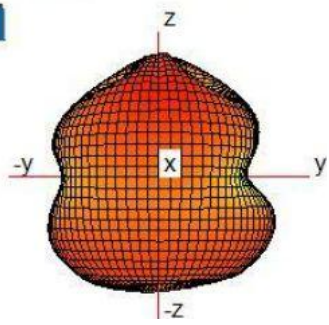




ESHIQIN



1575



1575MHz