



Shenzhen Deshiqin Technology Co., Ltd

DOSKING Antenna Test Report



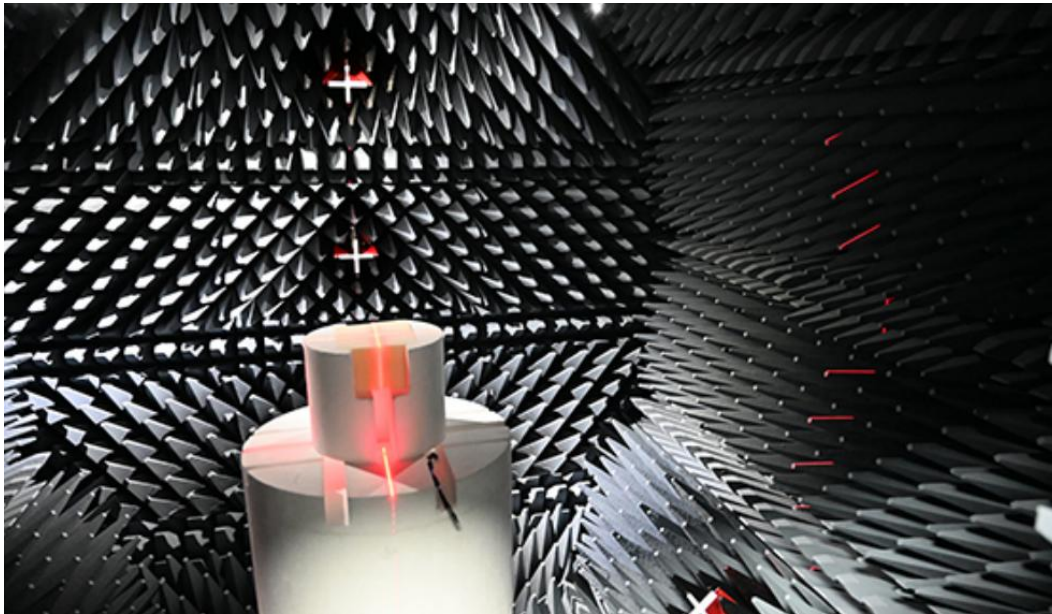
Shenzhen Deshiqin Technology Co., Ltd

1. Project Overview:

Customer Name	麦孚瑞	Entry Name	MS35	
Machine type	Handheld barcode scanner		Version	V3.0
Frequency band information		Antenna type	Matching changes	
Main antenna			PIFA	NO
Sub antenna	WIFI;NFC		PIFA	
DIV antenna			PIFA	
Antenna material	FPC			

2. Main testing equipment

1. ETS Chamber $5 \times 3 \times 3$ (m)(3D Laboratory) / $3 \times 3 \times 3$ (m)(3D Laboratory)/1800(3D Laboratory) , Network Analyzer
2. Network analyzer-8960/LTE CMW500/8820/CMW500/MT8000A Support 2G、3G、4G、5G Comprehensive testing instruments, Also supports 2.4/5.8WIFI6/NB.





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3.Passive efficiency of antenna

WiFi 0:

Passive Test For 2400-2500				Passive Test For 5150-5850				Passive Test For 5900-7200			
Freq	Effi	Effi	Gain	Freq	Effi	Effi	Gain	Freq	Effi	Effi	Gain
(MHz)	(%)	(dB)	(dBi)	(MHz)	(%)	(dB)	(dBi)	(MHz)	(%)	(dB)	(dBi)
2400	40.53	-3.92	-0.9	5150	52.12	-2.83	1.57	5900	43.05	-3.66	3.05
2410	45.1	-3.46	-0.24	5200	48.53	-3.14	1.62	6000	39.36	-4.05	2.77
2420	43.35	-3.63	-0.49	5250	49.54	-3.05	1.58	6100	35.81	-4.46	2.76
2430	46.41	-3.33	-0.06	5300	49.07	-3.09	1.69	6200	33.81	-4.71	3.11
2440	48.23	-3.17	0.19	5350	57.68	-2.39	2.7	6300	33.57	-4.74	2.84
2450	54.48	-2.64	1.03	5400	63.51	-1.97	3.08	6400	35.24	-4.53	2.64
2460	58.43	-2.33	1.46	5450	57.29	-2.42	2.79	6500	34.43	-4.63	1.99
2470	58.26	-2.35	1.63	5500	58.01	-2.37	2.68	6600	38.64	-4.13	2.09
2480	64.1	-1.93	2.08	5550	60.29	-2.2	2.62	6700	38.73	-4.12	1.8
2490	66.05	-1.8	2.24	5600	65.39	-1.85	2.91	6800	39.26	-4.06	2.11
2500	64.02	-1.94	1.92	5650	66.29	-1.79	2.53	6900	34.91	-4.57	2.28
				5700	60.18	-2.21	1.74	7000	33.81	-4.71	1.53
				5750	64.07	-1.93	1.7	7100	27.1	-5.67	0.56
				5800	56.54	-2.48	1.23	7200	32.21	-4.92	2.78
				5850	54.2	-2.66	1.11				



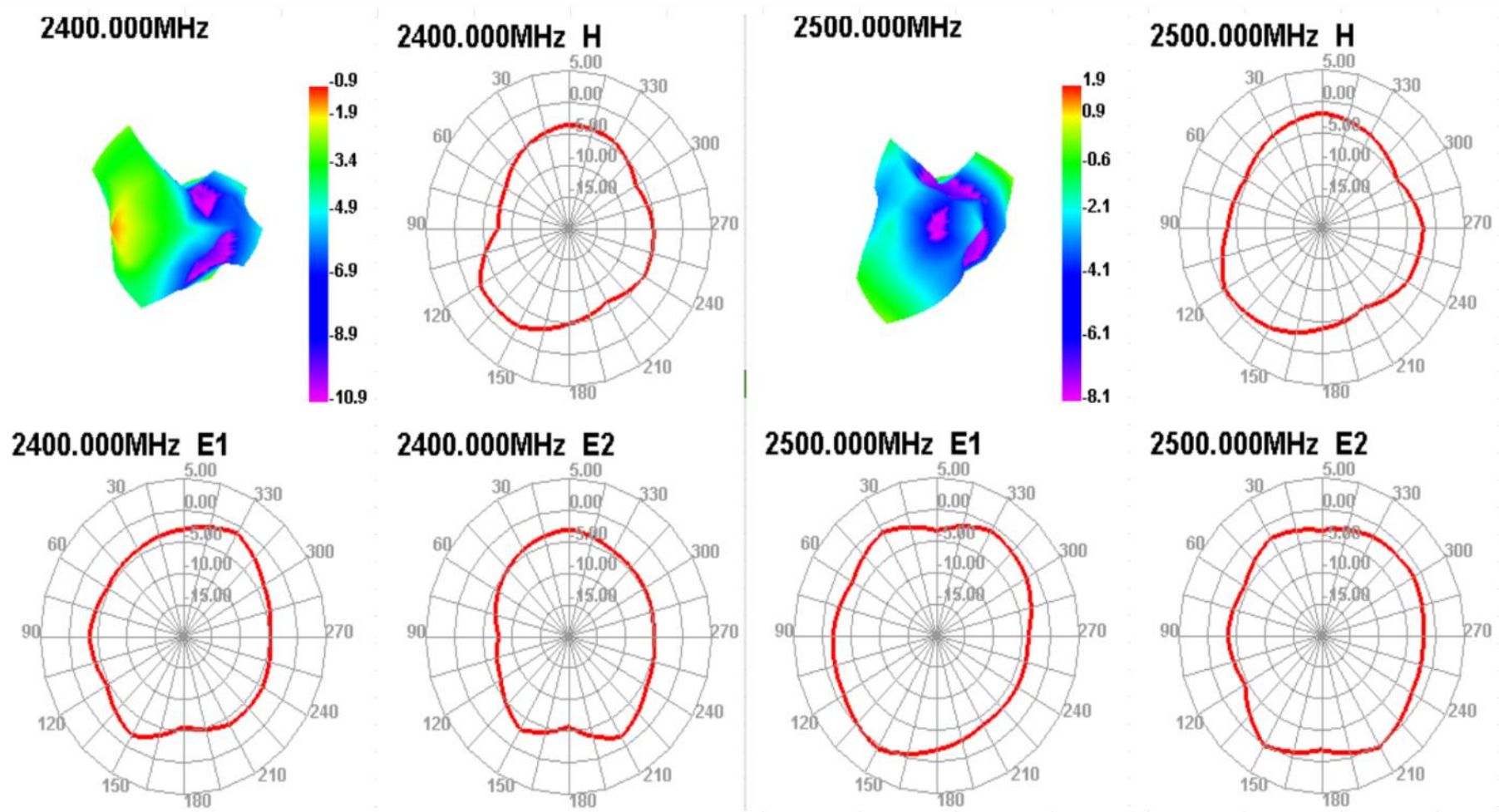
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WiFi 1

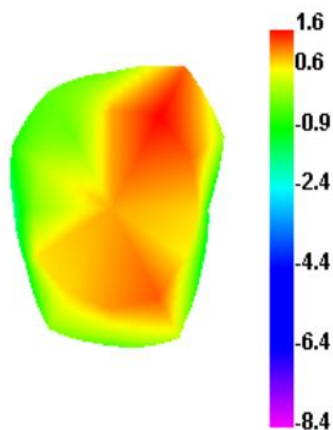
Passive Test For 2400-2500				Passive Test For 5150-5850				Passive Test For 5900-7200			
Freq	Effi	Effi	Gain	Freq	Effi	Effi	Gain	Freq	Effi	Effi	Gain
(MHz)	(%)	(dB)	(dBi)	(MHz)	(%)	(dB)	(dBi)	(MHz)	(%)	(dB)	(dBi)
2400	45.78	-3.39	1.37	5150	45.34	-3.43	1.21	5900	48.87	-3.11	2.76
2410	44.37	-3.53	1.23	5200	42.68	-3.7	0.96	6000	50.23	-2.99	3.29
2420	44.22	-3.54	1.28	5250	42.26	-3.74	0.7	6100	46.77	-3.3	2.18
2430	43.58	-3.61	1.08	5300	41.66	-3.8	0.89	6200	39.36	-4.05	1.75
2440	44.22	-3.54	1.11	5350	49.67	-3.04	1.75	6300	32.36	-4.9	0.88
2450	45.62	-3.41	1.08	5400	55.31	-2.57	2.56	6400	33.57	-4.74	1.47
2460	43.82	-3.58	0.84	5450	45.92	-3.38	1.96	6500	36.31	-4.4	2.08
2470	46.27	-3.35	1.03	5500	46.76	-3.3	2.16	6600	39.99	-3.98	2.21
2480	44.64	-3.5	1.02	5550	47.7	-3.21	2.51	6700	39.81	-4	2.49
2490	45.48	-3.42	1.15	5600	53.72	-2.7	3.08	6800	41.88	-3.78	2.01
2500	40.21	-3.96	0.72	5650	58.65	-2.32	3.63	6900	37.58	-4.25	1.32
				5700	57.46	-2.41	3.37	7000	44.16	-3.55	2.17
				5750	61.49	-2.11	3.45	7100	44.36	-3.53	1.95
				5800	60.87	-2.16	2.92	7200	53.83	-2.69	2.92
				5850	65.3	-1.85	3.17				

4: Directional pattern

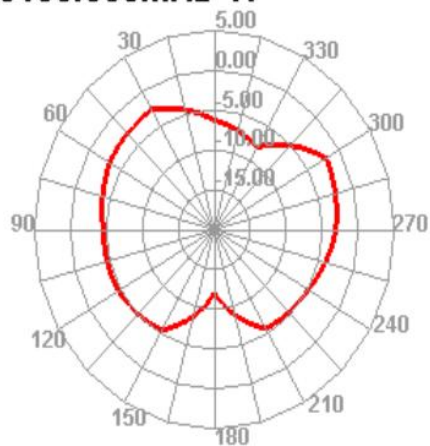
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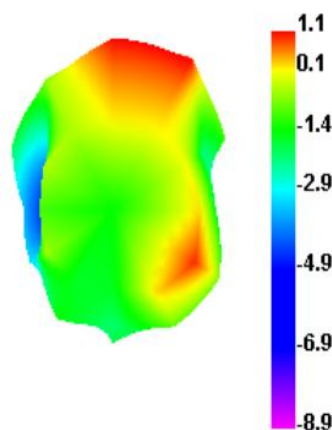
5150.000MHz



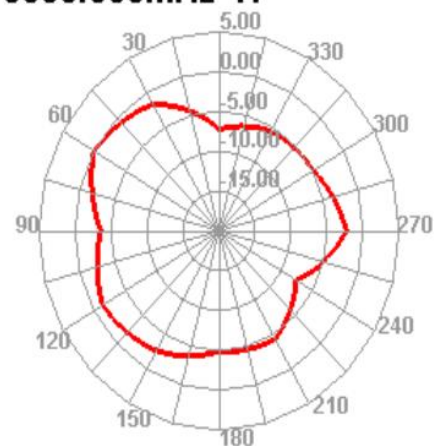
5150.000MHz H



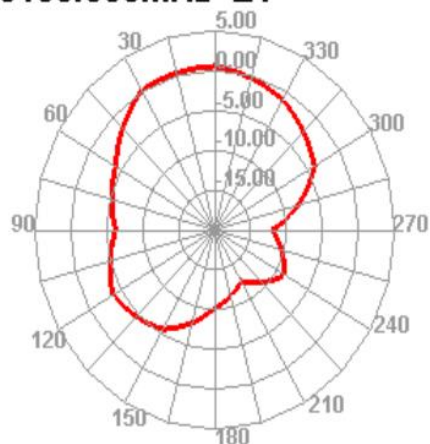
5850.000MHz



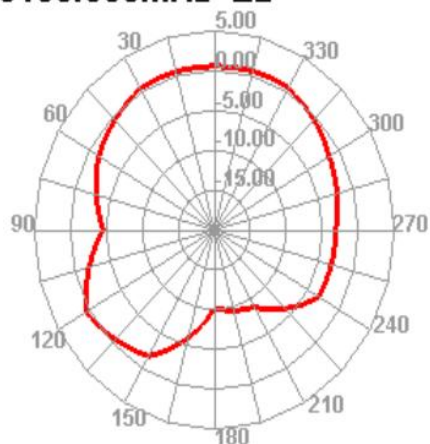
5850.000MHz H



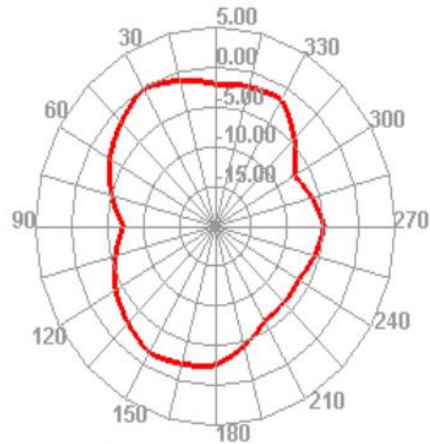
5150.000MHz E1



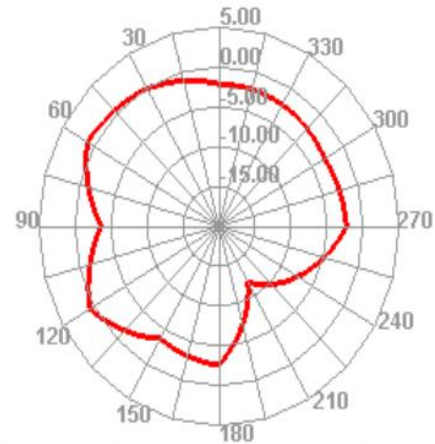
5150.000MHz E2

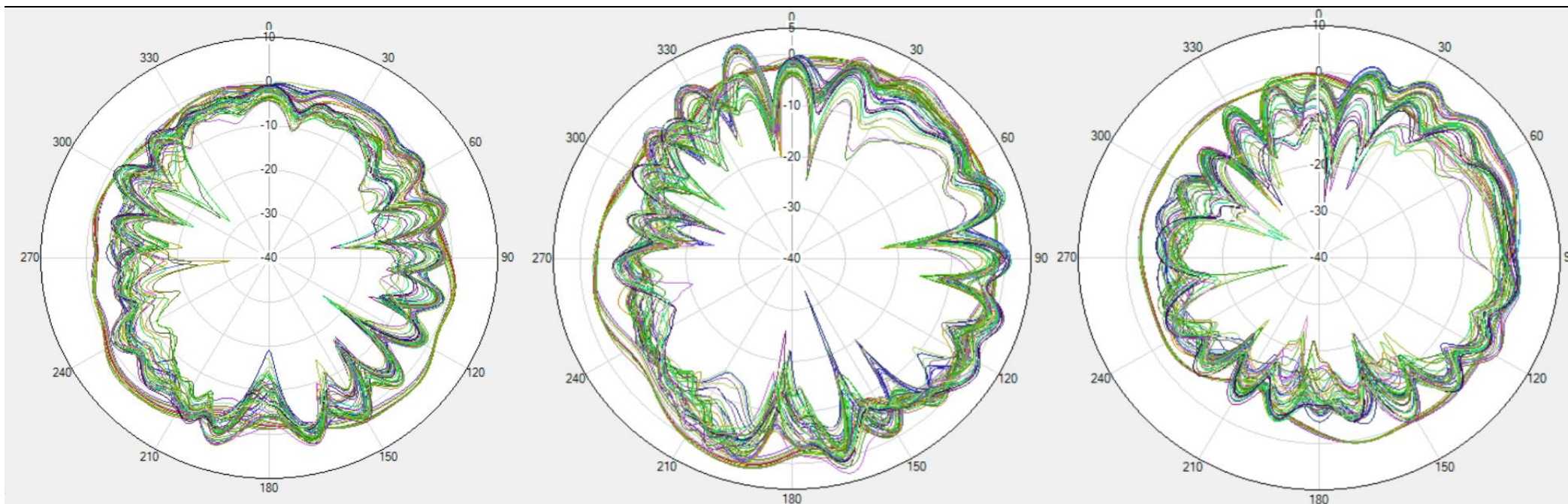


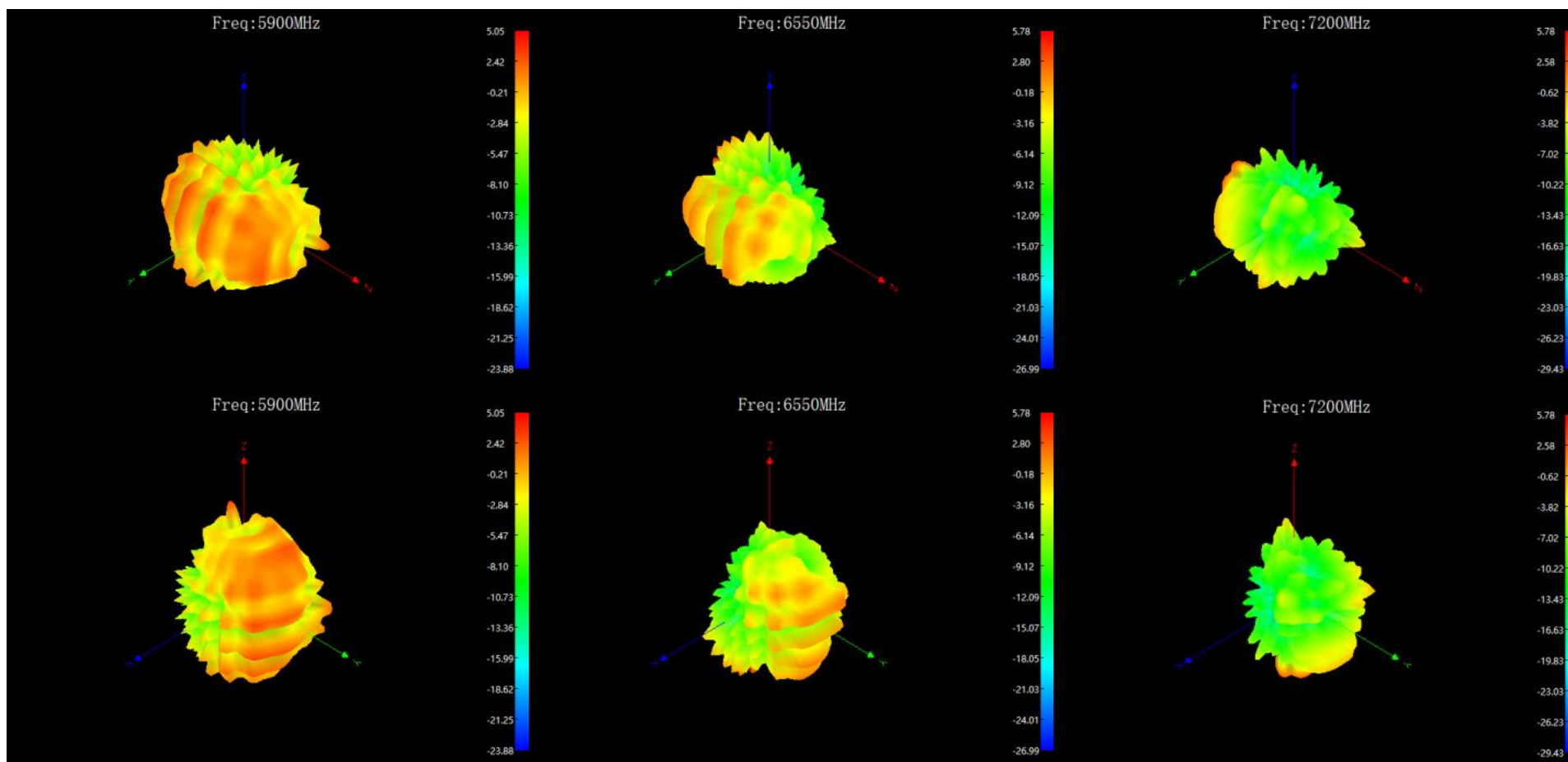
5850.000MHz E1



5850.000MHz E2

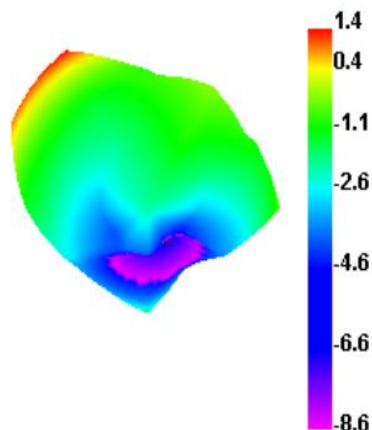




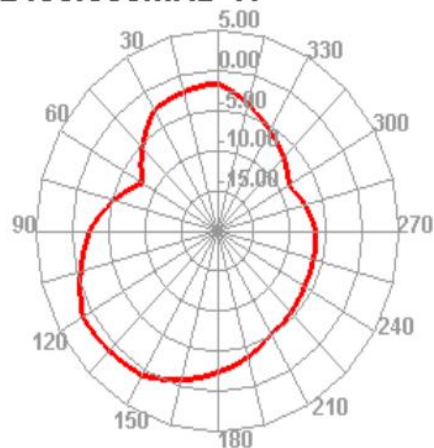


WiFi 1:

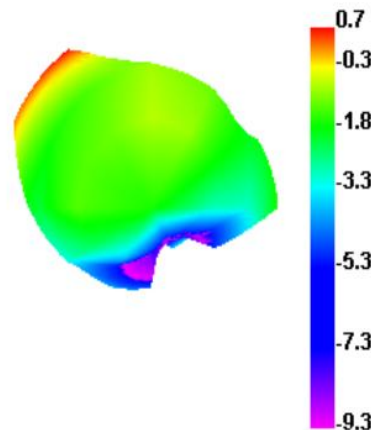
2400.000MHz



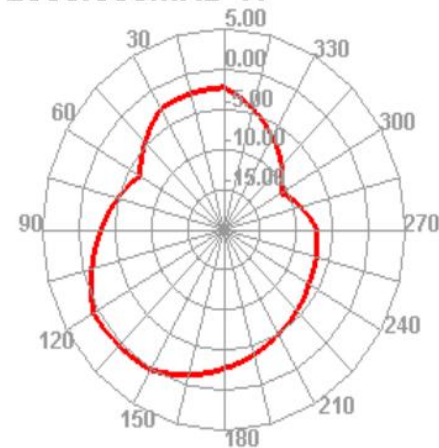
2400.000MHz H



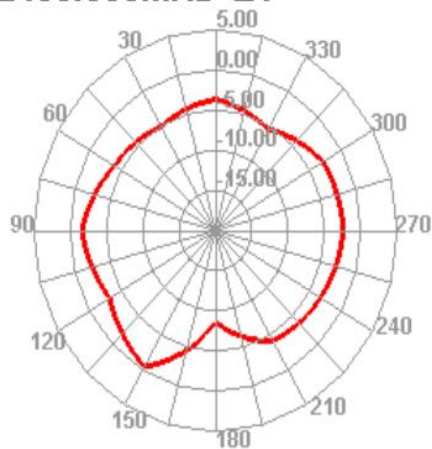
2500.000MHz



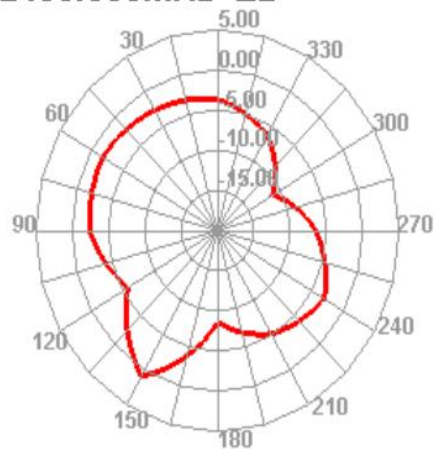
2500.000MHz H



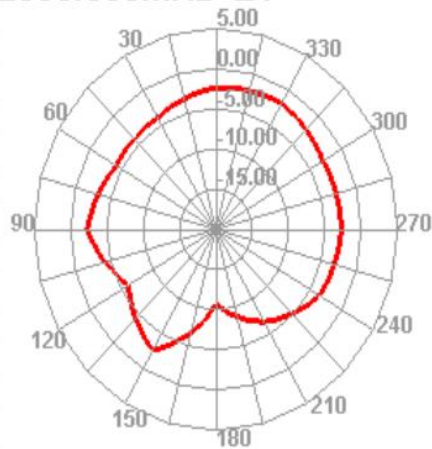
2400.000MHz E1



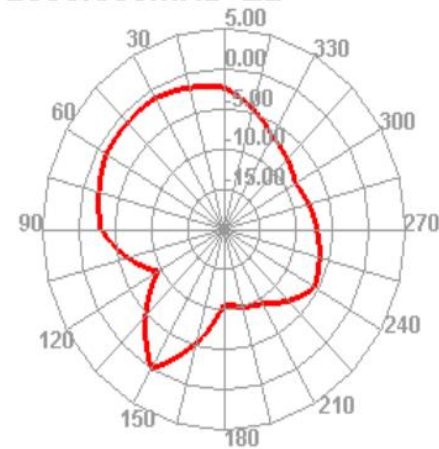
2400.000MHz E2



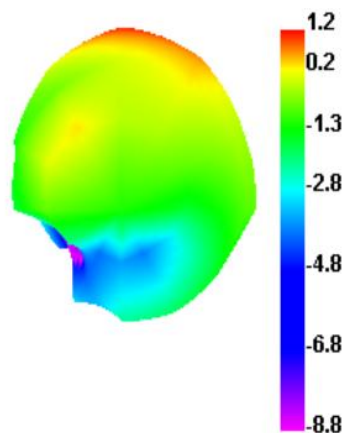
2500.000MHz E1



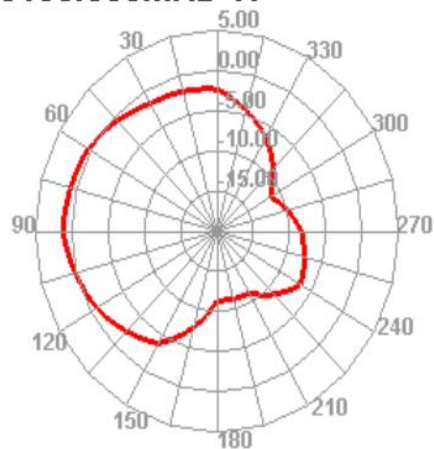
2500.000MHz E2



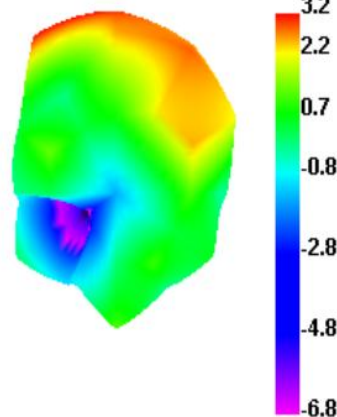
5150.000MHz



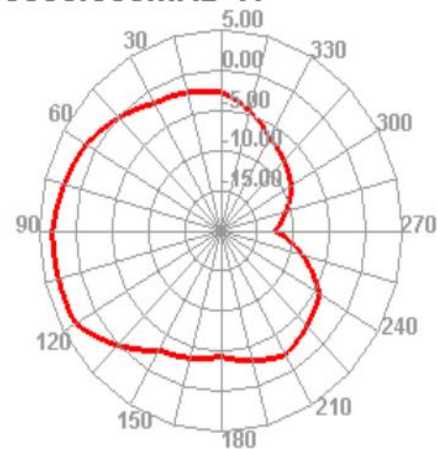
5150.000MHz H



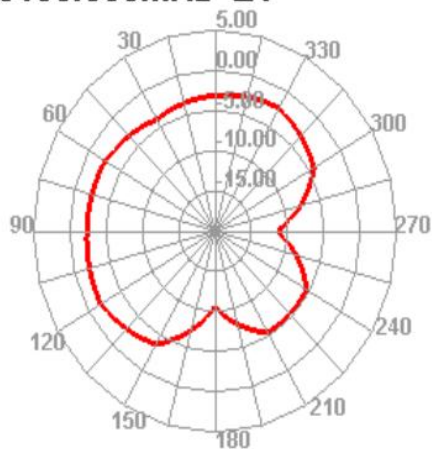
5850.000MHz



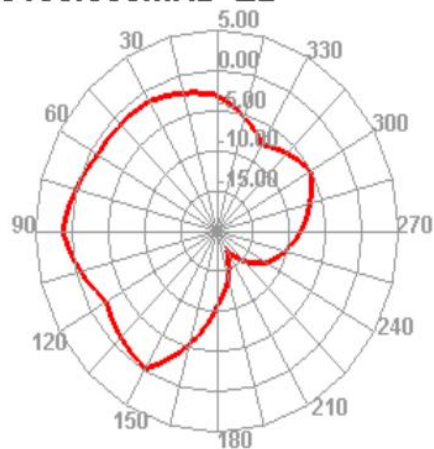
5850.000MHz H



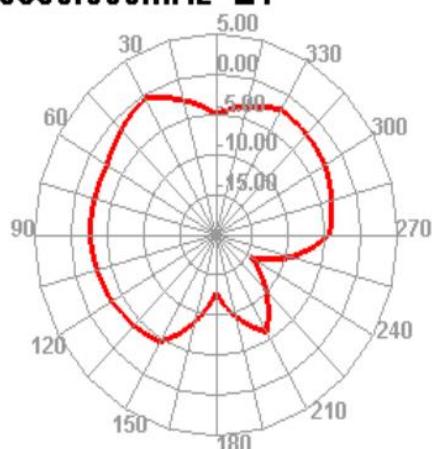
5150.000MHz E1



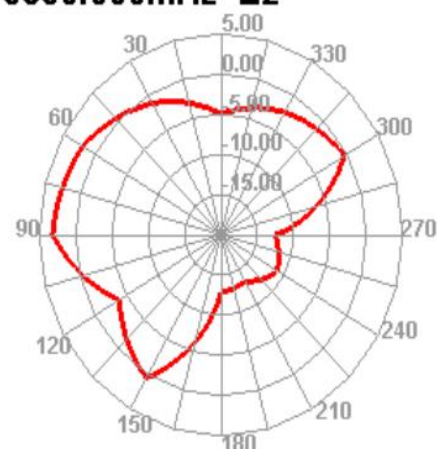
5150.000MHz E2

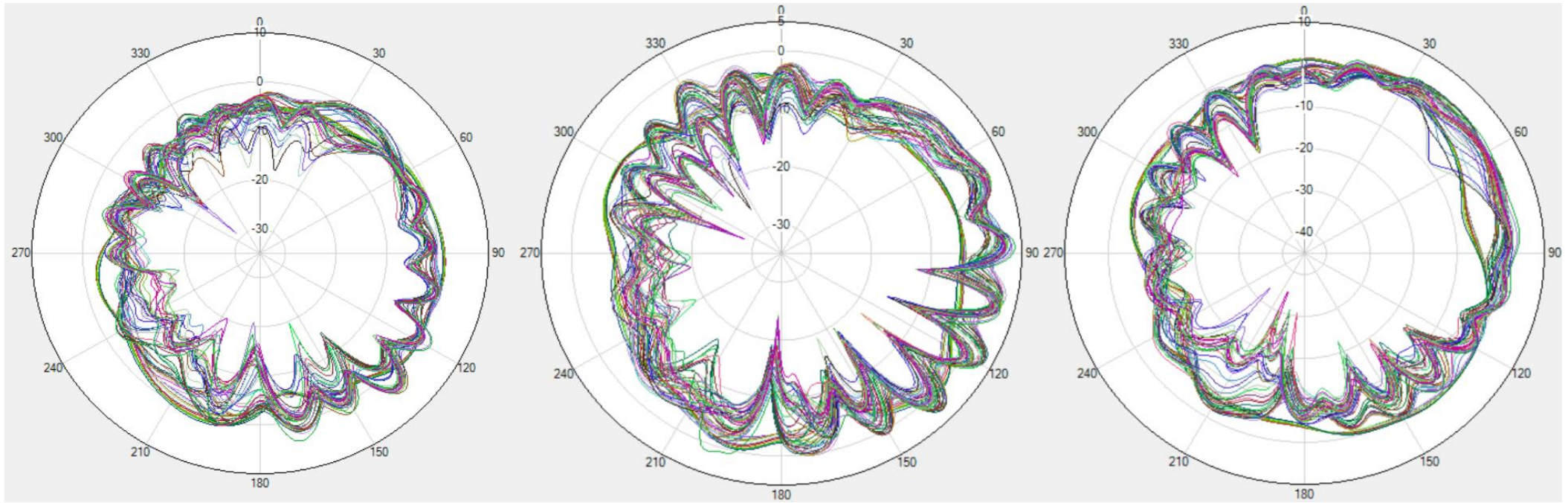


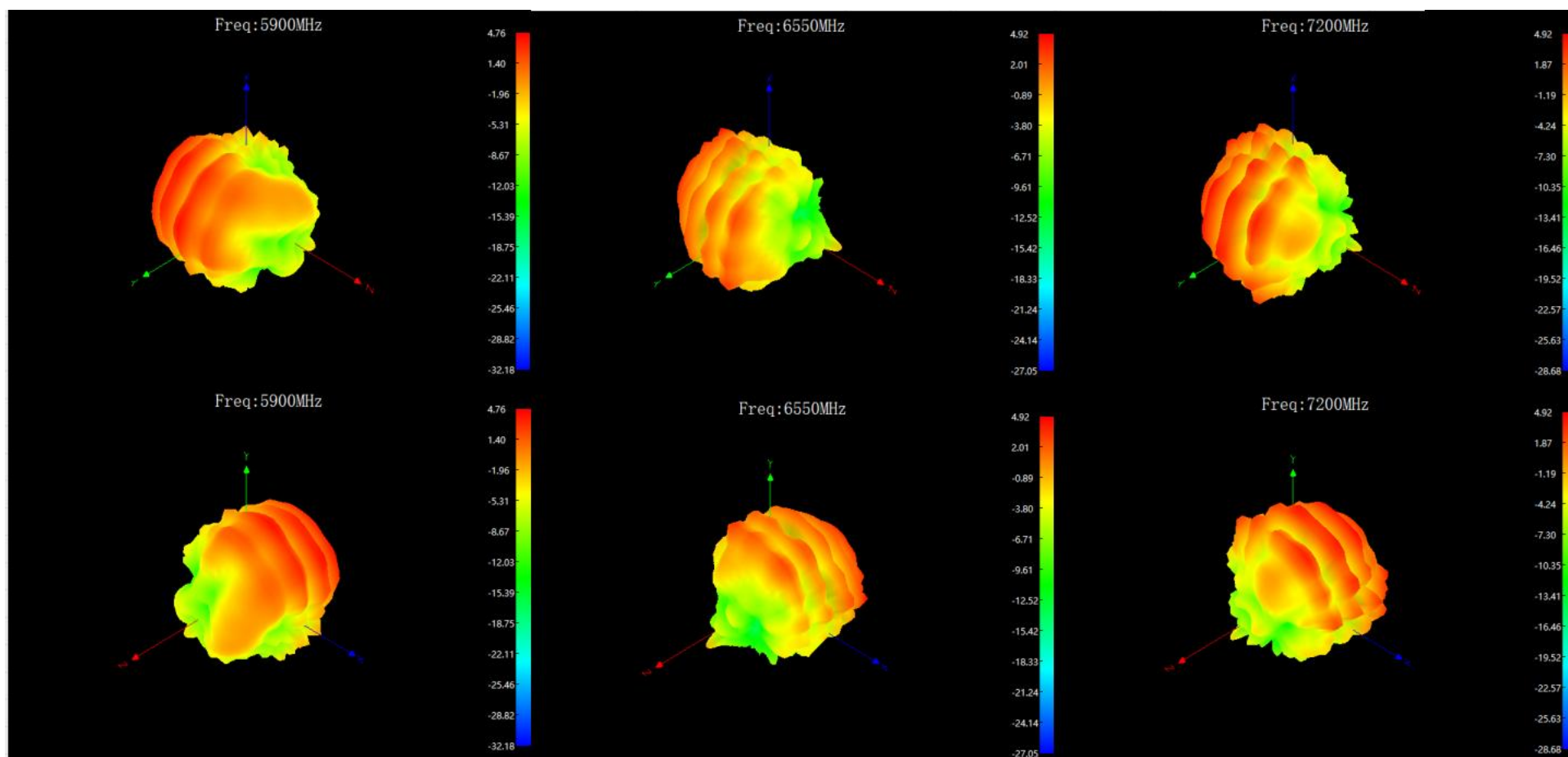
5850.000MHz E1



5850.000MHz E2







5. WIFI OTA Data:

Channel	2.4G-11B			2.4G-11G			2.4-11N		
	CH1	CH7	CH13	CH1	CH7	CH13	CH1	CH7	CH13
TRP	16.05	16.14	16.12	15.06	15.50	15.30	14.82	15.33	15.15
TIS	-86.68	-86.49	-87.38	-74.22	-74.58	-74.37	-70.61	-70.66	-70.32
Channel	2.4G 11AX			5G 11A			5G 11AX		
	CH1	CH7	CH13	CH36	CH60	CH165	CH36	CH60	CH165
TRP	14.61	14.75	14.66	15.42	15.36	14.94	14.68	14.71	14.45
TIS	-61.87	-61.96	-61.72	-74.08	-74.12	-74.44	-62.41	-62.42	-61.76

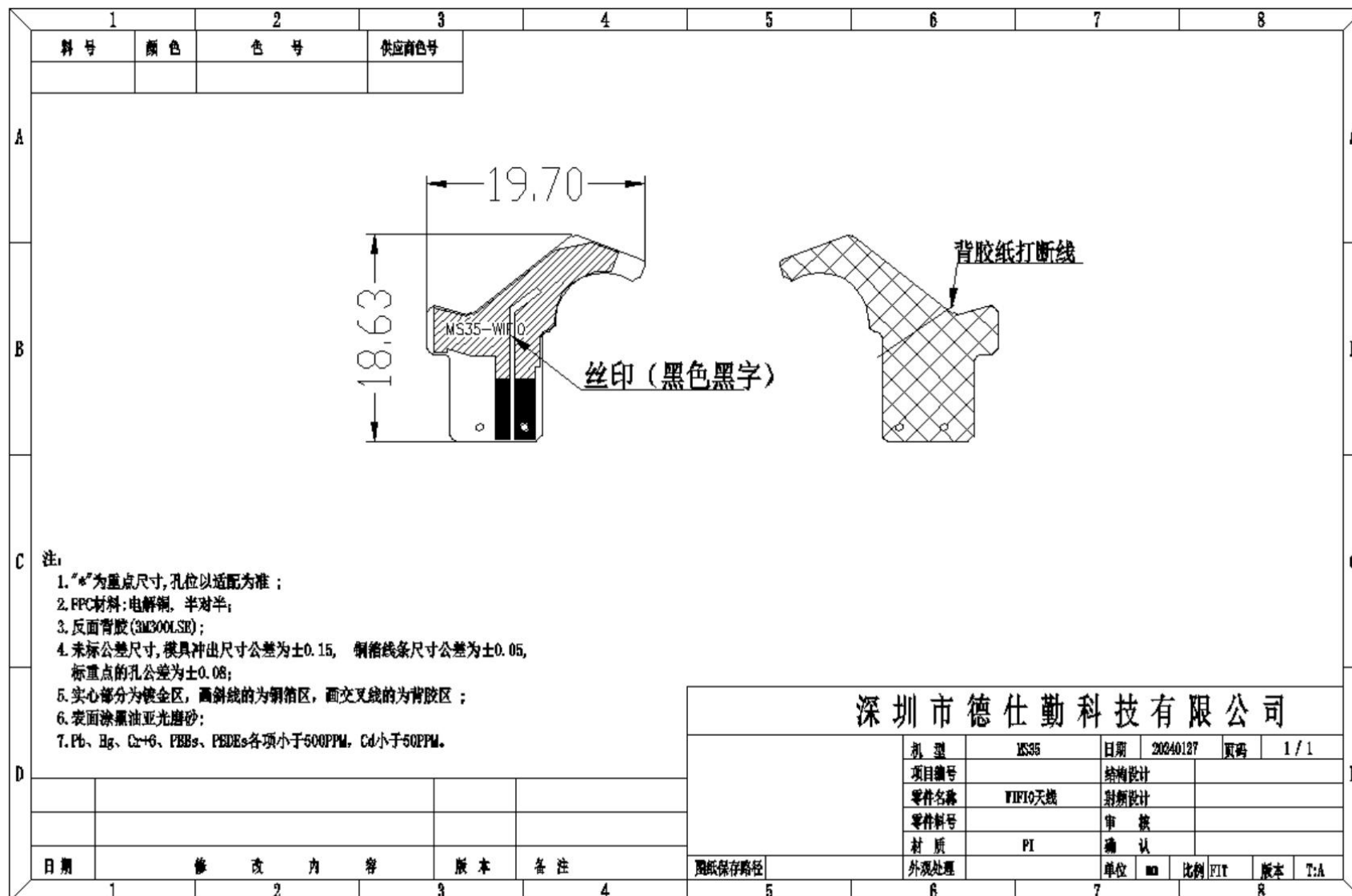


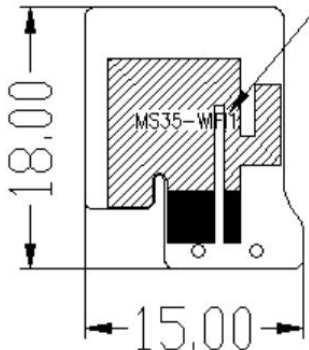
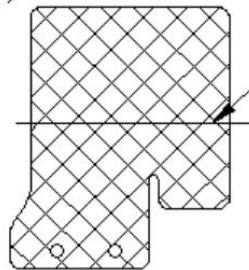
6: NFC Antenna (Under the screen NFC)

Actual measurement data:

Card type	Actual reading distance (mm)
Type 1	35
Type 2	35
Type 3	40
Type 4	5-10
Type 5	55

7:Antenna size diagram



1		2		3		4		5		6		7		8			
料号		颜色		色号		供应颜色号											
 18.00 15.00 MS35-WIFI 丝印 (黑色黑字)  背胶纸打断线																	
注: 1. "*"为重点尺寸, 孔位以适配为准; 2. FPC材料: 电解铜, 半对半; 3. 反面背胶 (3M900LSE); 4. 未标公差尺寸, 模具冲出尺寸公差为±0.15, 铜箔线条尺寸公差为±0.05, 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, 画交叉线的为背胶区; 6. 表面涂黑油亚光磨砂; 7. Pb、Hg、Cr+6、PBBa、PBDEs各项小于500PPM, Cd小于50PPM。																	
深圳市德仕勤科技有限公司																	
					机 型		MS35		日期		20240127		页码		1 / 1		
					项目编号				结构设计								
					零件名称		WIFI天线		射频设计								
					零件料号				审 核								
					材 质		PI		确 认								
					外观处理				单 位		■		比 例		1:1		
					图纸保存路径				单 位		■		比 例		1:1		
日期		修 改 内 容		版 本		备 注											
1		2		3		4		5		6		7		8			

