



Approval Sheet

客户名称 博格纳 (Bogena)

(Customer Name)

产品名称 A300 (main antenna/GWB/diversity antenna)

(Specification)

客户料号

(Customer P/N)

产品料号

(O/I)

送样日期 2025-7-28

Frequency band	2G:2/5/8 3G:1/2/4/5/8 4G:1/2/4/5/7/8/20/25/26/66//34/38/39/40/41		
Version	A		
RF	Chenmeidui	Confirm	
Structural Engineer	Yangyuzhen		
Customer confirmation			
Date			



Catalogue

1. Project image

2. Test fixture

3. Matching circuit

4. S11 Test electrical performance

4.1 S11 Test Method Description Specification Standards

4.2 S11 Parameter

4.3 S11 Parameter image

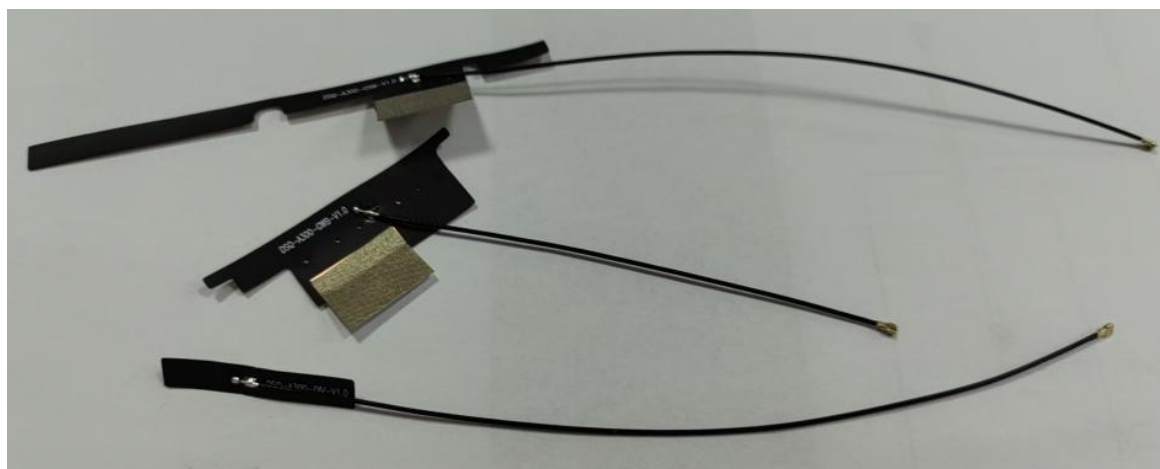
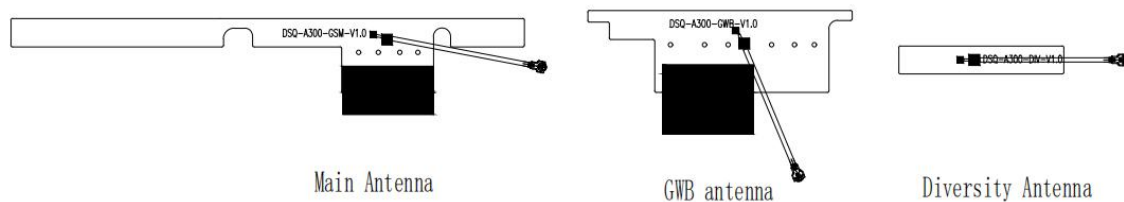
5. Power and sensitivity testing

5.1 Test data

6. Structural drawings



1. Project image (for reference only)

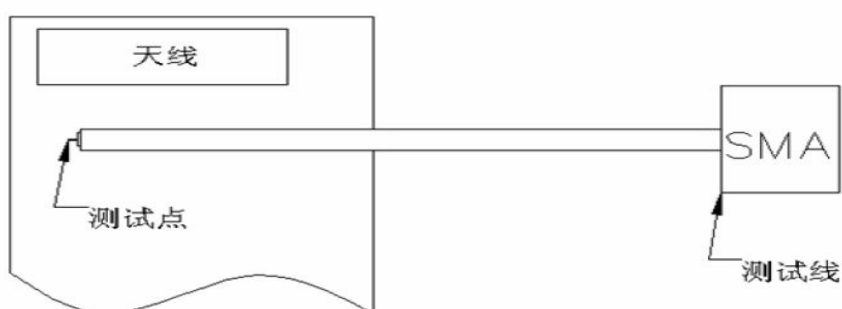




2. Passive Test

Purpose: To test the passive parameters of the antenna as accurately as possible.

Method: This fixture uses a 50 ohm coaxial cable, with one end connected to the test point at the back end of the matching circuit (RF test hole front section) of the mobile phone motherboard, and the other end connected to the SMA connector. As shown in the following figure:



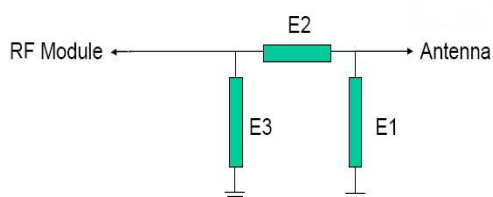
The following table shows the performance test indicators for F10-3G mass-produced antennas:

A300- Antenna				
频段	频率 (MHz) 发射端	VSWR	频率 (MHz) 接收端	VSWR
频段	发射端		接收端	
GSM850	824-849	≤3.5	869-894	≤3.5
GSM900	880-915	≤3.5	925-960	≤3.5
PCS1900	1850-1910	≤3.5	1930-1990	≤3.5
WCDMA-850	824-849	≤3.5	869-894	≤3.5
WCDMA-1700	1710-1755	≤3.5	2110-2155	≤3.5
WCDMA-1900	1850-1910	≤3.5	1930-1990	≤3.5
WCDMA-2100	1710-1755	≤3.5	2110-2155	≤3.5
WCDMA-900	880-915	≤3.5	925-960	≤3.5
LTE-FDD-B1	1920-1980	≤3.5	2110-2170	≤3.5



LTE-FDD-B2/34	1850-1910	≤ 3.5	1930-1990	≤ 3.5
LTE-TDD-B5	824-849	≤ 3.5	869-894	≤ 3.5
LTE-TDD-B7	2505-2565	≤ 3.5	2625-2685	≤ 3.5
LTE-FDD-B8	880-913	≤ 3.5	930-955	≤ 3.5
LTE-FDD-B25	1850-1915	≤ 3.5	1930-1995	≤ 3.5
LTE-FDD-B26	814-849	≤ 3.5	859-894	≤ 3.5
LTE-FDD-B20	837-857	≤ 3.5	796-816	≤ 3.5
LTE-TDD-B38	2570-2620	≤ 3.5	2570-2620	≤ 3.5
LTE-TDD-B39	1880-1920	≤ 3.5	1880-1920	≤ 3.5
LTE-TDD-B40	2310-2390	≤ 3.5	2310-2390	≤ 3.5
LTE-TDD-B41	2550-2660	≤ 3.5	2550-2660	≤ 3.5
LTE-FDD-66	1710-1780	≤ 3.5	2110-2200	≤ 3.5

3. Matching circuit



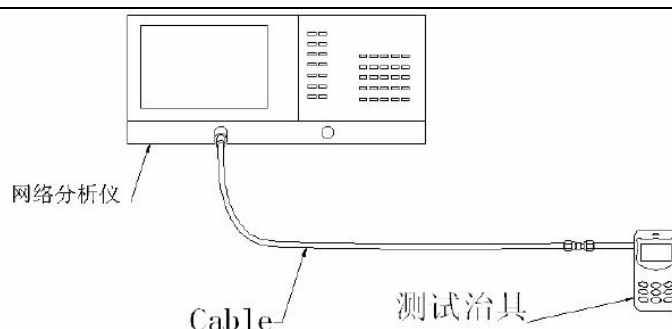
Element	Matching Value
E1	
E2	0
E3	

4. S11Test

4.1 S11Test Method Description Specification Standards

VSWR The testing devices are sequentially connected as follows :
 E5071B Network analyzer → 50Ω Coaxial line → 120mm Copper tube → Test fixture.

Treatment of testing fixture: Use a hard cable to lead out the SMA-J connector from the 50 ohm test point of the antenna on the mobile phone PCB, connect it to a copper pipe with a choke ring, and then connect other devices in sequence.



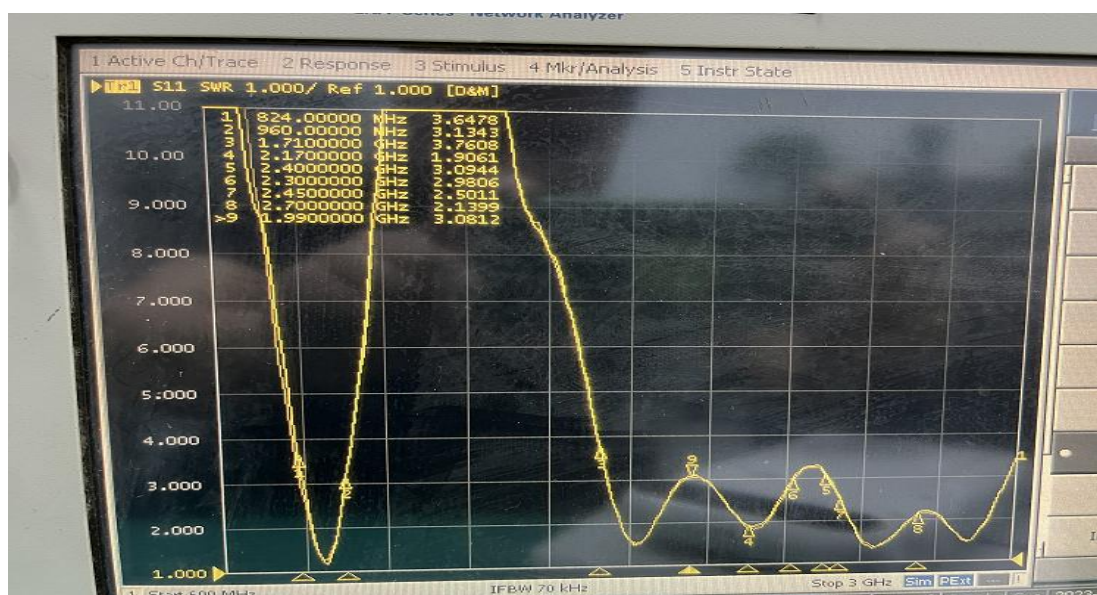
Test diagram

4.2 S11Parameter

The following table shows the standing wave ratio values at the edge frequency points of the ME61 antenna operating frequency band. The waveform diagrams of Return Loss and VSWR obtained from the test are shown in the attachment.

	A300- Antenna							
Frequency (MHz)	824	960	1710	1990	2170	2300	2450	2700
Free space	3.6	3.1	3.7	1.9	2.1	1.9	2.51	2.1

4.3 S11





5. Power and sensitivity testing

5.1 Test data

Model:				天线实现方式：PIFA						单位: dBm		
信道	GSM850			GSM900						PCS1900		
	CH128	CH192	CH251	CH1	CH62	CH124				CH512	CH661	CH810
TRP	26.71	27.0	27.0	27.17	27.17	26.14				24.28	24.08	24.3
TIS			-101.51			-100.41						-102.11
信道	WCDMA-850			WCDMA-900			WCDMA-1900			WCDMA-2100		
	CH4357	CH4408	CH4458	CH2937	CH3013	CH3088	CH9662	CH9800	CH9938	CH10562	CH10730	CH10838
TRP	16.11	16.8	17.02	17.6	16.9	16.8	17.3	16.8	16.4	17.09	16.9	17.4
TIS			-102.11			-102.6			-103.9			-102.9

3G :

信道	WCDMA-1700		
	CH4357	CH4408	CH4458
TRP	16.3	17.4	17.5
TIS			-100.7

4G :

信道	LTE-FDD-B1(10M)			LTE-FDD-B2(10M)			LTE-FDD-B4(10M)			LTE-FDD-B5(10M)		
	CH18050	CH18300	CH20000	CH20175	CH20350	CH19150	CH20000	CH20175	CH20350	CH20450	CH20525	CH20600
TRP	17.0	16.1	16.4	16.6	16	15.5	15.3	16.4	16.7	15.1	16.3	17.2
TIS			-90.1			-90.8			-90.1			-90.6

4G :

信道	LTE-FDD-B7(10M)			LTE-TDD-B8(10M)			LTE-FDD-B20(10M)			LTE-TDD-B25(10M)		
	CH20800	CH21100	CH21400	CH21500	CH21625	CH21750	CH24200	CH24300	CH24400	CH26090	CH26365	CH26640
TRP	17.4	17.3	16.4	16.1	16.3	15.7	16.63	16.5	16.8	16.8	16.0	16.4
TIS			-86.63			-88.04			-90.6			-90.12
信道	LTE-TDD-B26(10M)			LTE-TDD-B66(10M)			LTE-FDD-B34(10M)			LTE-TDD-B38(20M)		
	CH26740	CH26865	CH26990	CH132022	CH132322	CH132622	CH36250	CH36275	CH36300	CH37850	CH38000	CH38150
TRP	15.1	16.4	16.8	15.4	16.5	17.02	16.7	17.0	16.7	17.4	17	17.5
TIS			-92.1			-91.1			-90.6			-89.7



4G :

信道	LTE-TDD-B39(20M)			LTE-TDD-B40(20M)			LTE-FDD-B41(20M)					
	CH38350	CH38450	CH38550	CH27370	CH27430	CH27435	CH27590	CH27600	CH27610			
TRP	17.5	17.3	17.7	16.3	17.5	16.3	17.2	16.8	16.6			
TIS			-89.8			-90.4			-87.66			

6.WIFI/BT

GPS/WIFI/BT 注:	GPS	Maximum signal strength	Number of received stars	Average positioning time (s)	Weather conditions
		40	7-12	60-80	晴
	WIFI	Normal internet distance (m)		Smooth distance for online browsing (m)	
		10-12		10-12	
	BT	Clear call distance (m)			
		10			

The actual test





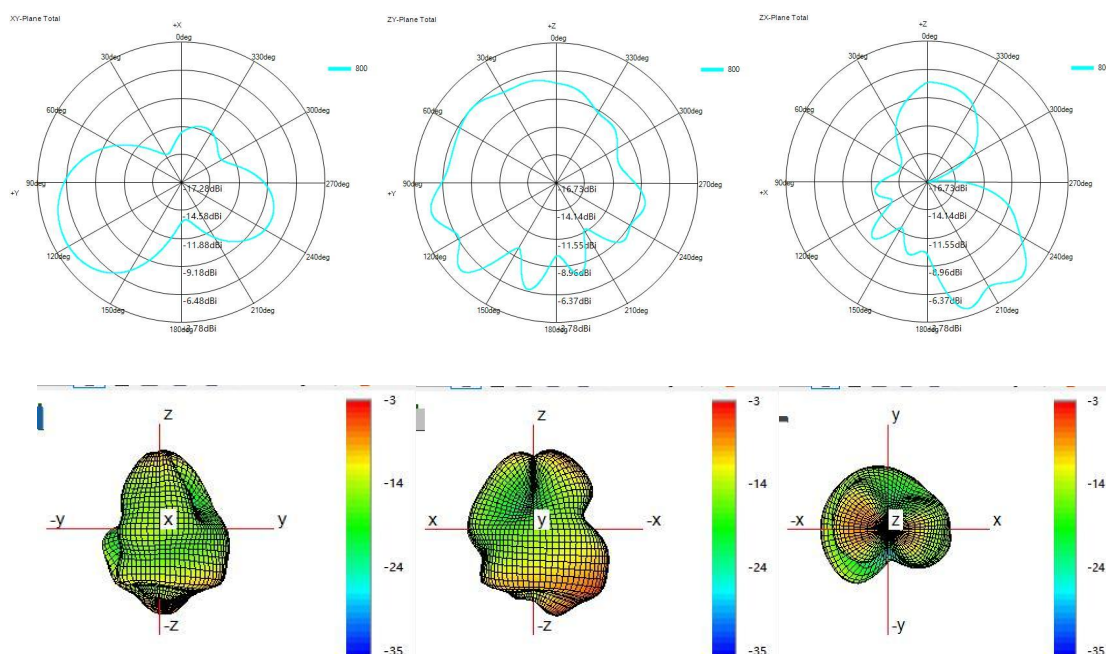
7. passiv test

7.1,820-960MHZ

Freq (MHz)	Efficiency (dB)	Gain (dBi)	Efficiency (%)
820	-8.22	-2.75	18.05
840	-6.6	-0.79	21.76
860	-6.41	-1.21	22.55
880	-7.69	-2.05	19.02
900	-6.98	-2.07	20.12
920	-7.02	-1.56	19.85
940	-6.79	-1.12	20.91
960	-6.56	-0.94	22.3

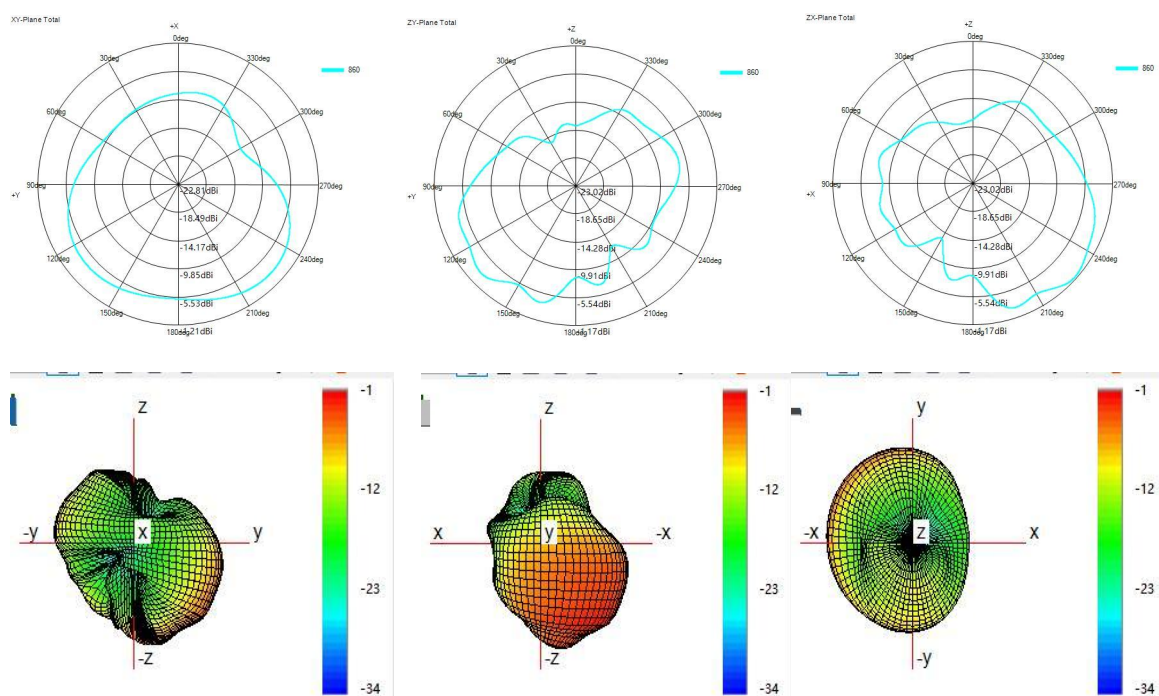
7.2 2D/3D

820 (MHz):

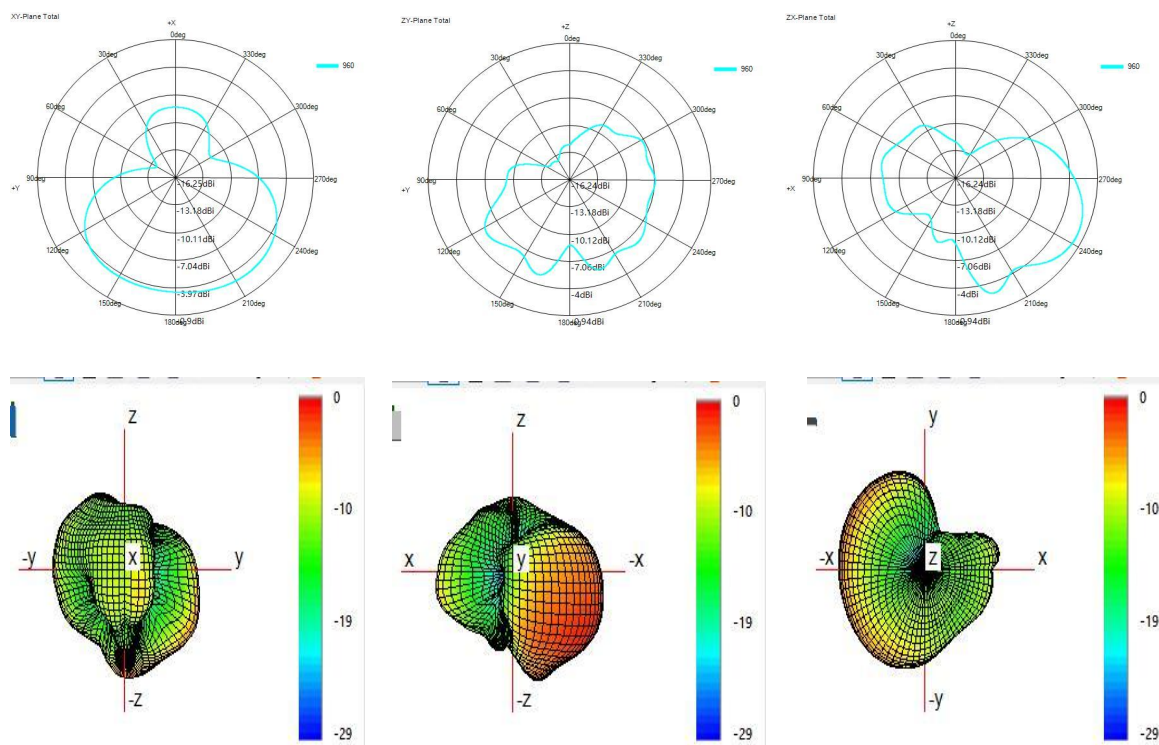




890 (MHz) :



960 (MHz) :



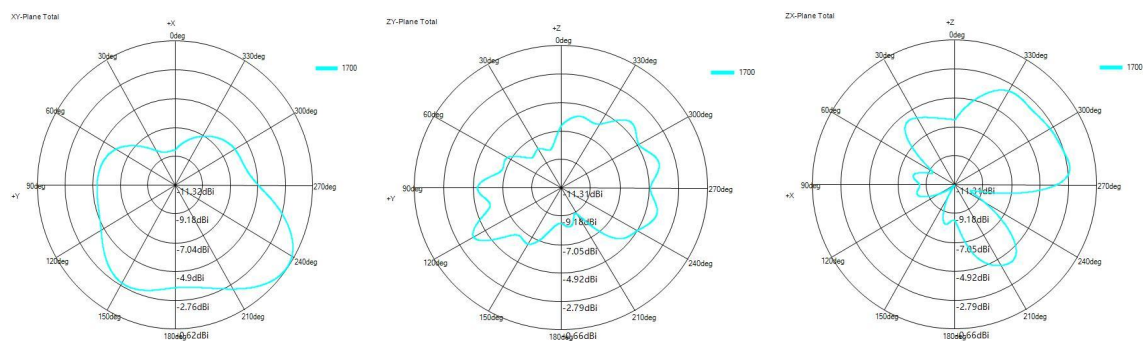


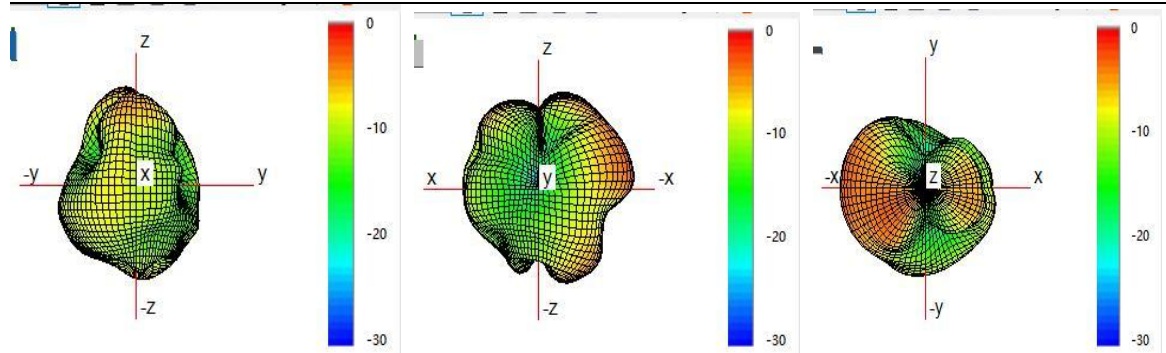
7.3:1700-2700MHZ

Freq(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)	Freq(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)
1700	-0.71	-4.95	32.00	2220	1.56	-2.97	50.45
1740	-0.89	-4.67	34.16	2260	1.85	-2.93	50.96
1780	-0.25	-4.33	36.94	2300	0.99	-3.52	44.43
1820	0.36	-4.07	39.18	2340	0.37	-4.19	38.12
1860	0.57	-4.21	37.91	2380	0.24	-4.38	36.50
1900	0.38	-4.34	36.79	2420	0.88	-4.29	37.23
1940	0.92	-4.27	37.44	2460	0.90	-4.65	34.25
1980	1.23	-4.15	38.42	2500	0.49	-4.97	31.88
2020	1.36	-3.70	42.65	2540	0.05	-4.70	33.90
2060	1.22	-3.22	47.62	2580	-0.11	-4.33	36.86
2100	0.77	-3.29	46.91	2620	-0.25	-4.20	37.99
2140	0.65	-3.27	47.15	2660	-0.88	-4.67	34.14
2180	0.97	-3.28	46.96	2700	-0.85	-4.64	34.38

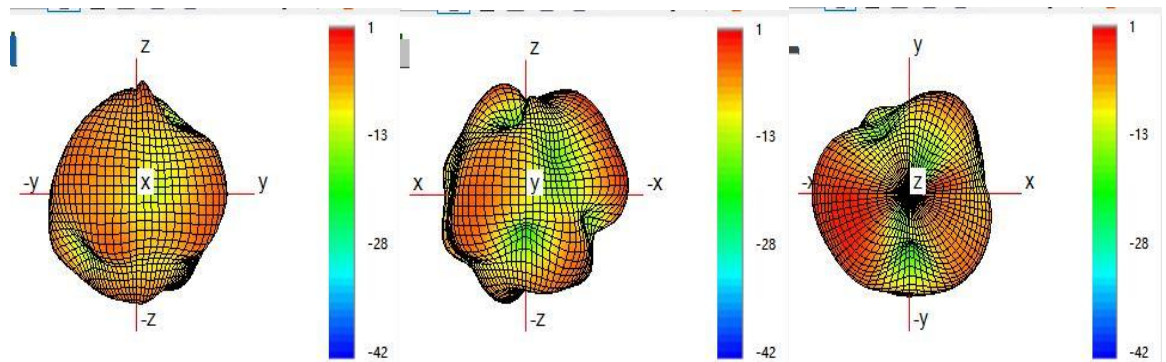
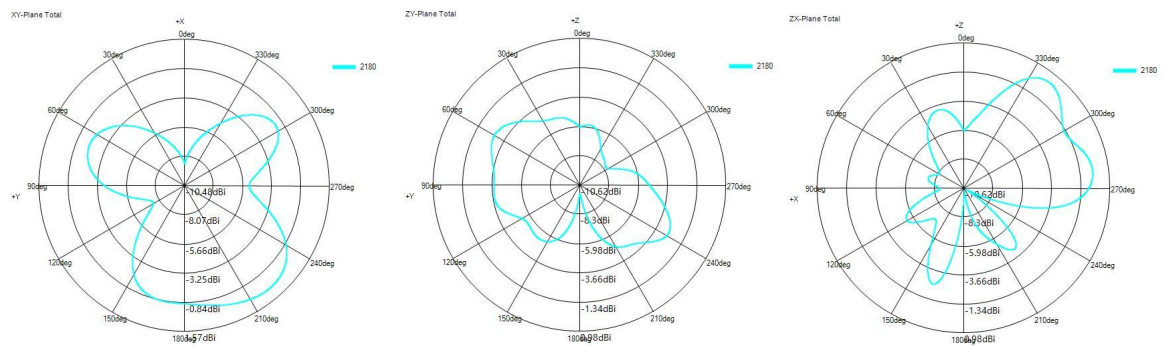
7.4 2D/3D

1700(MHz):

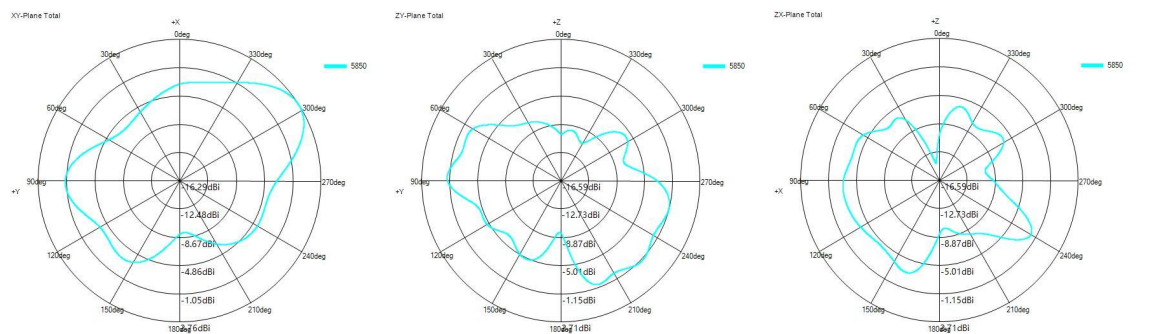


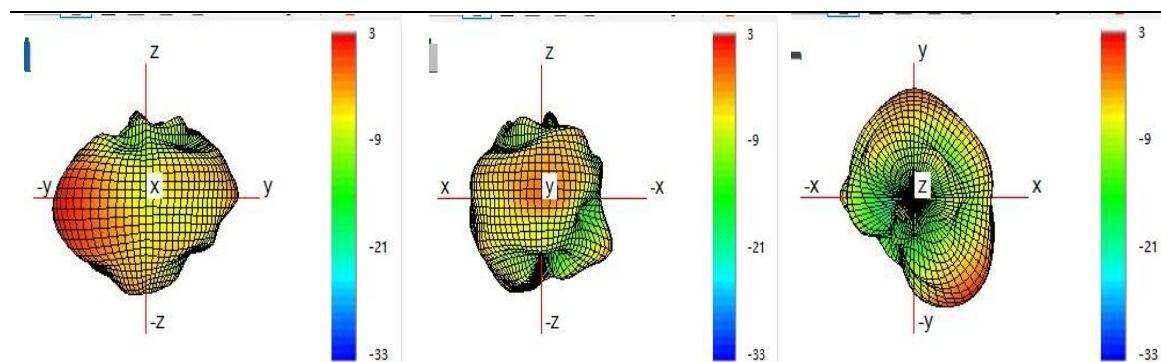


2000(MHz):



2600(MHz):





7.5:GPS/2.4GWIFI

Freq(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)	Freq(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)
1550	-0.74	-3.85	41.20	2400	2.93	-3.41	45.61
1555	-0.69	-3.86	41.08	2410	3.33	-3.26	47.18
1560	-0.50	-3.86	41.07	2420	3.48	-3.22	47.60
1565	-0.46	-3.84	41.31	2430	3.63	-3.27	47.07
1570	-0.60	-3.79	41.79	2440	3.74	-3.24	47.46
1575	-0.52	-3.75	42.13	2450	3.80	-3.27	47.11
1580	-0.44	-3.81	41.63	2460	3.80	-3.37	46.00
1585	-0.51	-3.88	40.92	2470	3.71	-3.52	44.47
1590	-0.54	-3.92	40.56	2480	3.61	-3.64	43.25
				2490	3.62	-3.64	43.27
				2500	3.60	-3.63	43.37
5150	0.48	-4.85	32.72				
5250	1.35	-4.55	35.09				
5350	1.23	-4.60	34.66				
5450	0.38	-4.75	33.52				
5550	-0.87	-4.80	33.10				
5650	-0.35	-4.92	32.25				
5750	-0.07	-5.67	27.07				
5800	-0.10	-5.98	25.21				
5850	-0.39	-6.32	23.31				

7.6: 2D/3D

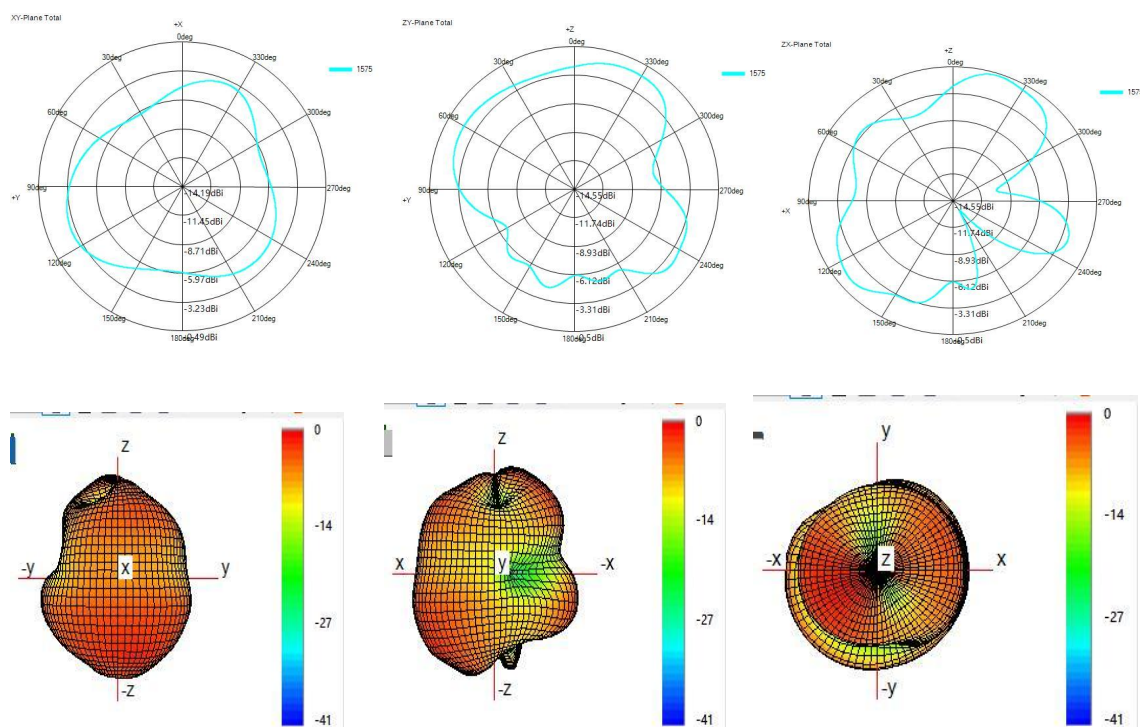
Shenzhen Deshiqin Technology Co., Ltd. - Recognition Letter

Dosking MicroElectronics Co.,Ltd

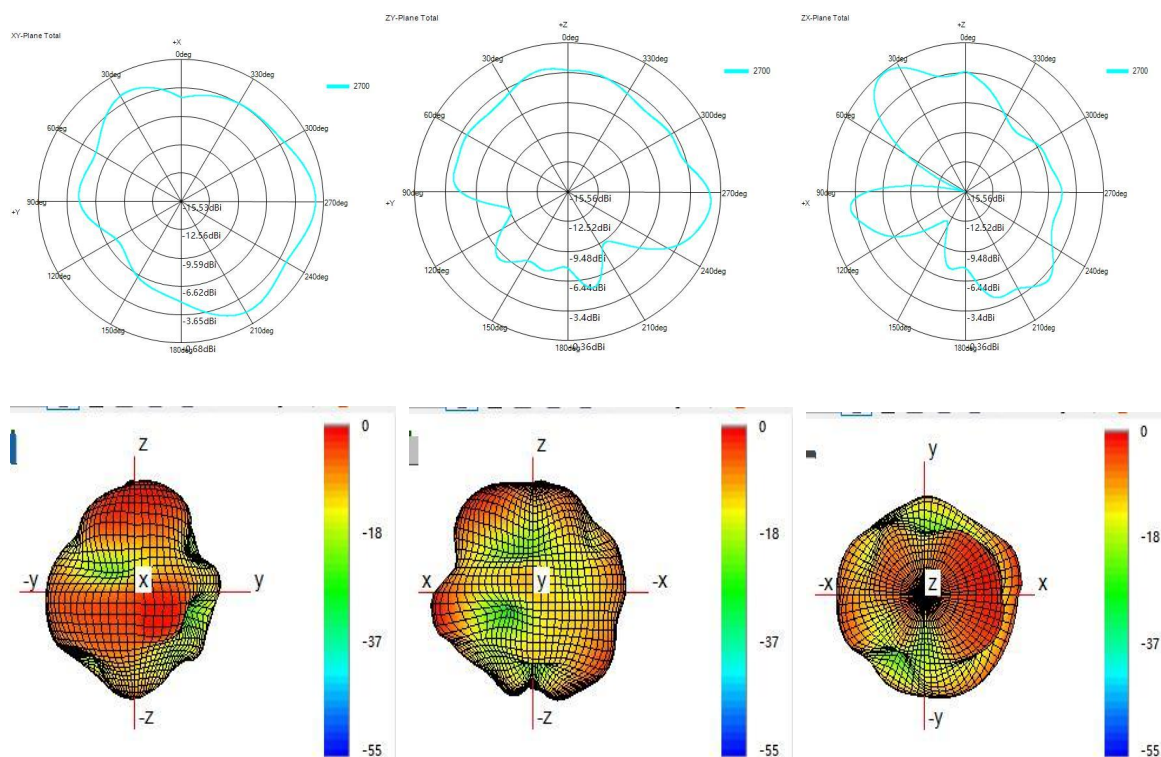
Address: Building 2, Private Enterprise Technology Park, Xili University City, Nanshan District, Shenzhen (Hongji Building), West Block 403 TEL:0755-88602767 FAX:0755-82793883



GPS-1575 (MHz):

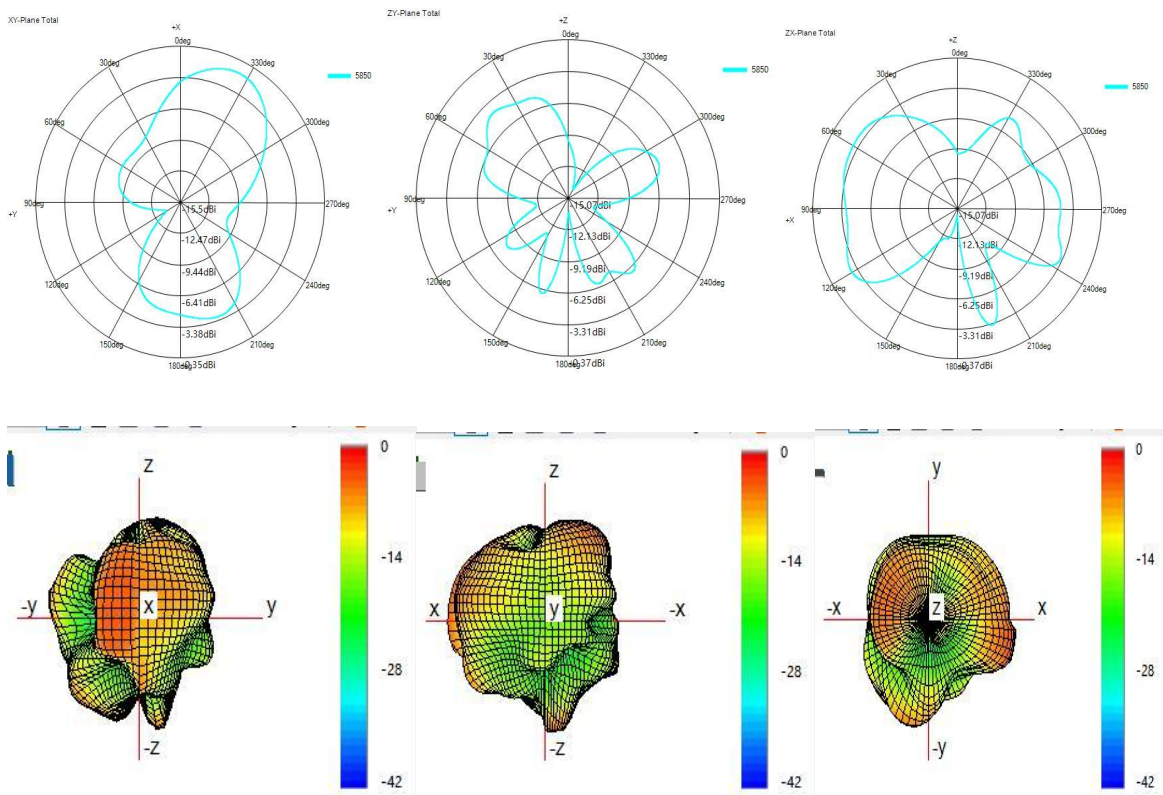


WIFI-2400 (MHz):





WIFI-5.8G



8. Structural drawings

