

Antenna sample specification Sheet



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Customer	Shenzhen Guanqun Electronics Co., Ltd		
Item No.	GQ3110-DH1		
Material code			
Version	T:A		
Date	2023.2.24		
Made by	RF checked by	PE checked by	Approved by
Kun Zhu	Mulong Lv	Fulun Li	Peiqaun Yan
Customer Confirmation:			

Add Room 501-508,
jinfulai Building, No.49-1, Dabao Road, Baoan District, Shenzhen

Project basic information

Antenna Type	IFA
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Antenna Material	FPC
Frequency Band	GSM850/900/1800/1900 WCDMA1/2/5/8
Operating Frequency(MHz)	824MHz-960MHz 1710MHz-2170MHz 1575.42MHz 2400MHz-2500MHz
Shell Material	Plastics

1、
Mobile phone appearance and antenna sample picture



2、

Environments processed as following:



The conductive sponge attached to the metal frame is fully grounded to the mainboard



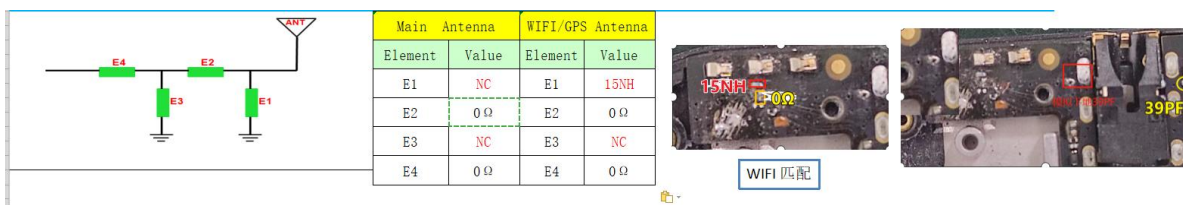
The small camera attaches a double-sided conductive cloth to access the shielding cover



The rest environmental treatment shall be subject to the state of the trial production machine. The camera and vibration motor are fully grounded

3、

The antenna matching circuit

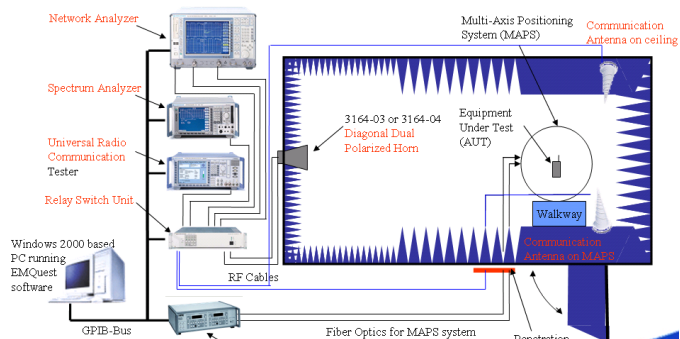


4、

Antenna test equipment

4.1

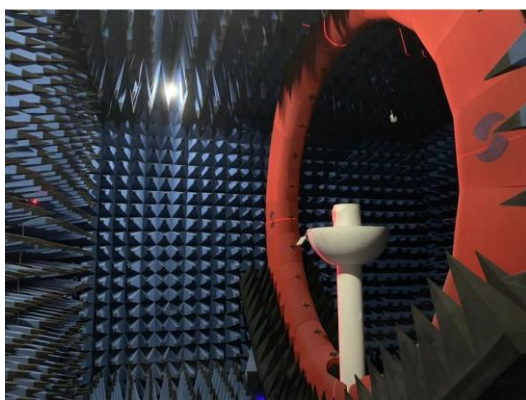
The principle diagram of the ETS anechoic chamber



Picture 1. Dark room system assembly test connection diagram

4.2

Pictures of the ETS anechoic chamber



Inside the ETS anechoic chamber



- 1. CMW500
- 2. Agilent Technologies E5071B
- 3. 5G ACTIVE SWITCHING UNIT



- 1. CMW500
- 2. Geneial Test Dual-channel Amplifier DA-4303
- 3. StarPoint SP9500 5G Wireless Test Platform

Test Machine



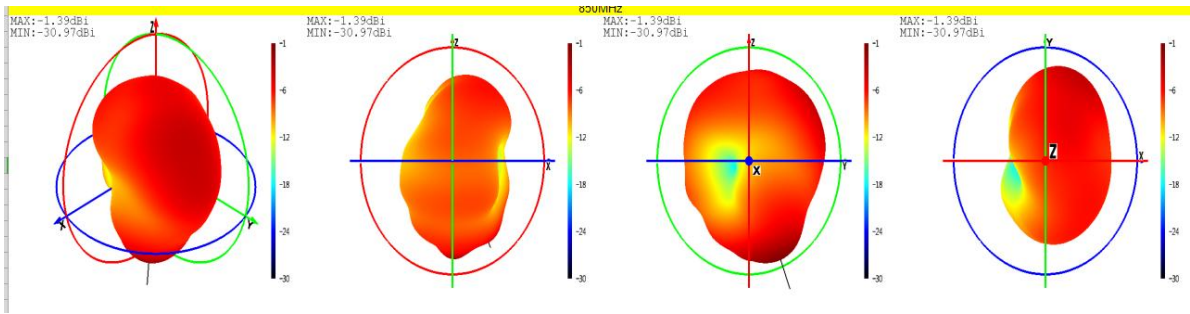
5、

Active test beport

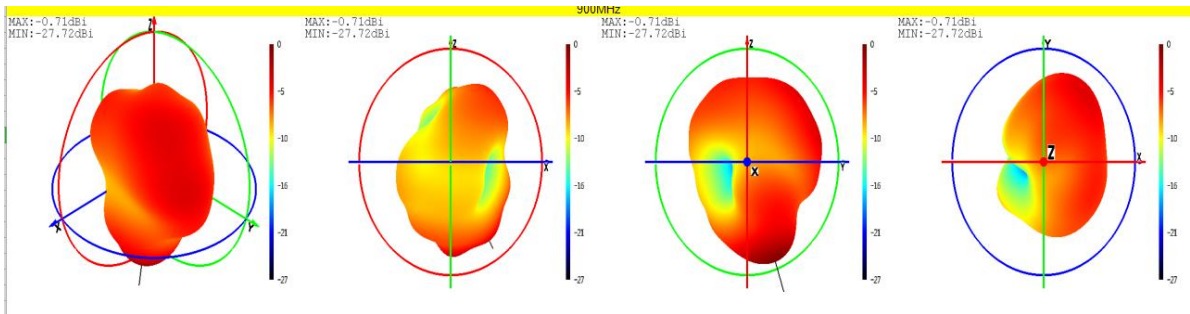
frequency 频率(MHz)	gain 增益(dBi)	efficiency 效率(dB)	efficiency 效率(%)	frequency 频率	gain 增益(dBi)	efficiency 效率(dB)	efficiency 效率(%)	frequency 频率	gain 增益(dBi)	efficiency 效率(dB)	efficiency 效率(%)
1700	-0.04	-7.16	19.22%	1960	3.58	-4	39.77%	820	-2.83	-8.28	14.85%
1710	0.03	-7.06	19.68%	1970	3.38	-4.21	37.92%	830	-1.77	-7.33	18.51%
1720	-0.81	-7.89	16.25%	1980	3.22	-4.33	36.91%	840	-1.81	-7.66	17.15%
1730	1.24	-5.87	25.88%	1990	3.67	-3.8	41.65%	850	-1.39	-7.74	16.82%
1740	0.07	-6.99	19.99%	2000	3.29	-4.31	37.10%	860	-0.55	-6.88	20.51%
1750	0.84	-6.39	22.94%	2010	3.5	-4.24	37.69%	870	-0.96	-7.61	17.35%
1760	2.33	-5.27	29.73%	2020	3.31	-4.4	36.29%	880	-0.44	-7.16	19.24%
1770	1.74	-5.78	26.40%	2030	2.92	-4.91	32.31%	890	-0.74	-7.35	18.39%
1780	1.78	-5.46	28.45%	2040	3.38	-4.6	34.65%	900	-0.71	-7.35	18.41%
1790	2.51	-4.95	32.00%	2050	3.21	-4.47	35.70%	910	-0.28	-7.15	19.29%
1800	2.45	-5.21	30.11%	2060	2.32	-5.13	30.72%	920	-0.62	-7.44	18.04%
1810	2.38	-5.26	29.76%	2070	2.65	-4.99	31.67%	930	-0.41	-7.05	19.70%
1820	3.28	-4.67	34.15%	2080	2.81	-4.82	32.97%	940	-0.53	-7.15	19.25%
1830	3.2	-4.94	32.06%	2090	1.35	-6.16	24.23%	950	-1.79	-7.88	16.30%
1840	3.28	-4.50	35.50%	2100	2.75	-5.15	30.53%	960	-1.39	-7.43	18.07%
1850	3.39	-4.36	36.62%	2110	2.41	-5.68	27.05%				
1860	3.89	-4.16	38.39%	2120	1.62	-6.28	23.57%				
1870	3.91	-3.89	40.81%	2130	2.85	-5.34	29.25%				
1880	3.52	-4.09	38.96%	2140	2.36	-5.96	25.35%				
1890	3.87	-4.09	38.96%	2150	1.68	-6.46	22.60%				
1900	4.04	-3.88	40.92%	2160	3.26	-5.14	30.64%				
1910	3.79	-3.77	41.95%	2170	2.21	-6.57	22.05%				
1920	3.59	-4.04	39.49%	2180	3.14	-5.41	28.77%				
1930	4.12	-3.97	40.05%	2190	2.18	-6.24	23.74%				
1940	3.59	-3.92	40.57%	2200	1.99	-6.73	21.22%				
1950	3.11	-4.36	36.66%								

frequency 频率(MHz)	gain 增益(dBi)	efficiency 效率(dB)	efficiency 效率(%)	frequency 频率	gain 增益(dBi)	efficiency 效率(dB)	efficiency 效率(%)
2400	1.53	-5.05	31.28%	1500	0.42	-3.92	40.54%
2410	2.16	-5.06	31.17%	1510	-0.11	-3.98	39.97%
2420	1.94	-5.12	30.74%	1520	0.42	-3.94	40.34%
2430	1.74	-5.15	30.58%	1530	0.74	-3.97	40.06%
2440	2.25	-5.08	31.07%	1540	0.47	-4.09	38.98%
2450	1.88	-5.32	29.36%	1550	1.44	-4.10	38.94%
2460	1.83	-5.00	31.61%	1560	1.03	-4.14	38.53%
2470	2.42	-4.96	31.93%	1570	0.3	-4.24	37.66%
2480	2.55	-5.03	31.40%	1580	0.98	-4.50	35.49%
2490	2.71	-4.49	35.58%	1590	-0.21	-4.48	35.64%
2500	2.18	-5.20	30.17%	1600	0.2	-4.01	39.74%

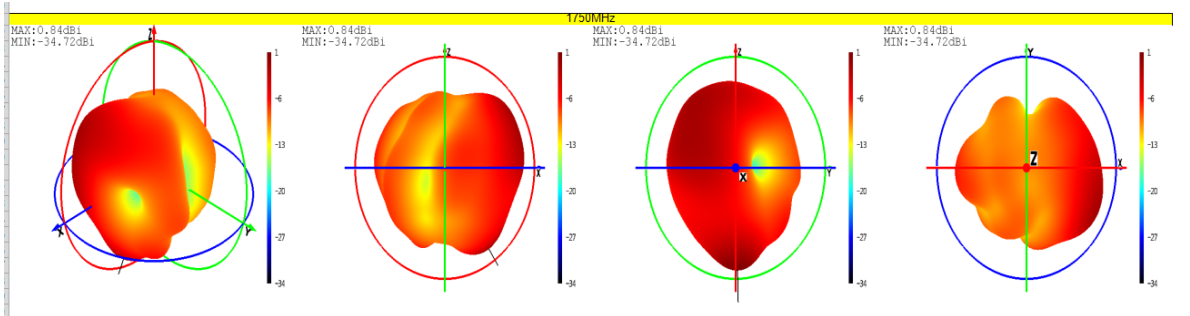
850



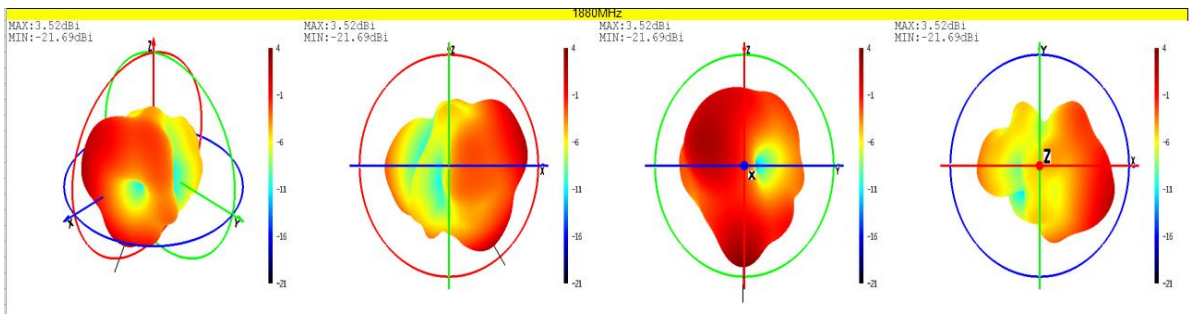
900



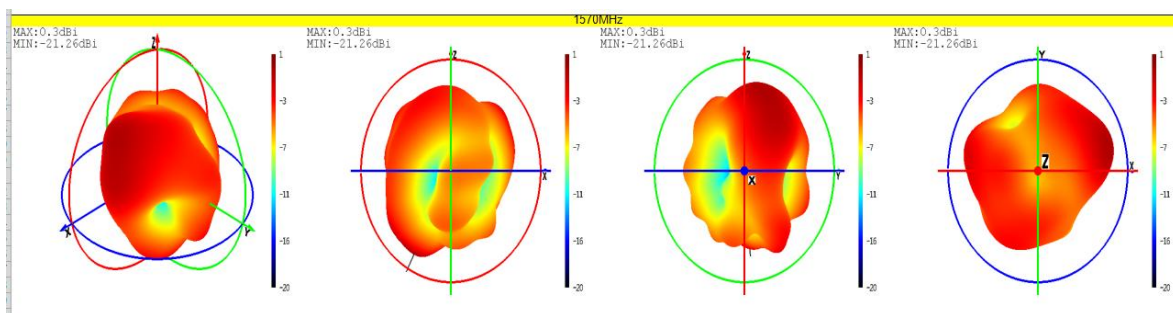
1800



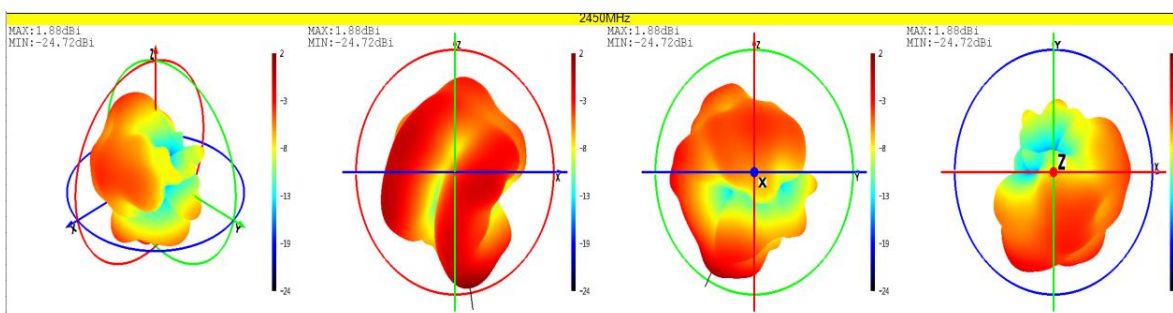
1900



GPS



WiFi



5.1 Passive Efficiency Test

5.1-1 test site

SUNYIELD microwave anechoic chamber: the test frequency range is 800MHz-6GHz, the quiet zone range is 50cm circumference, and the reflectivity is less than -50 dB.

6、 Test conclusion

The index can meet normal antenna index such as GSM850/900/1800/1900 WCDMA1/2/5/8

Note: This antenna only apply to sample debug.Any change of main board version,RF material or mobile accessories such as mic,screen,speaker,and motor have to be used after our company's test and verification.