

Antenna Testing Report

Model Name : X76

**Antenna model : antenna 1: LTE antenna
antenna 2: wifi 2.4G+5G+Bluetooth antenna**

Brand Name : Shenzhen Anwei Wireless Technology Co., Ltd

**Address: : 2nd Floor, East Block, Building 5, Yifenghua
Industrial Zone, Huaning Road, Dalang Street,
Longhua New District, Shenzhen**

Date : March 8,2025

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Project Information

Sample status		Mass production machine		Product type		POS machine	
Antenna overview							
	Frequency		Structural style	Type	Location	Matching modification	Antenna version
Main antenna	2G		FCB + coaxial line			no	sample
	3G	WCDMA1/2/4/5/6/8/19					
	4G	34/38/39/40/41/1/2/3/4/5/7/8/12/17/18/19/20/25/26/28					
Other antennas	WIFI	2.4G+5G	FCB + coaxial line			no	sample
	DIV	3G: WCDMA1/2/4/5/6/8/19 4G: 34/38/39/40/41/1/2/3/4/5/7/8/12/17/18/19/20/25/26/28	FCB + coaxial line			no	sample
Environment adjustment				NO			

Report Version and Remarks

Version	Report date	Remark
A0	August 8, 2025	Active test data
A1		
A2		
A3		
A4		
A5		
A6		
A7		
A8		
A9		
A10		
A11		

Company Profile and Test Environment

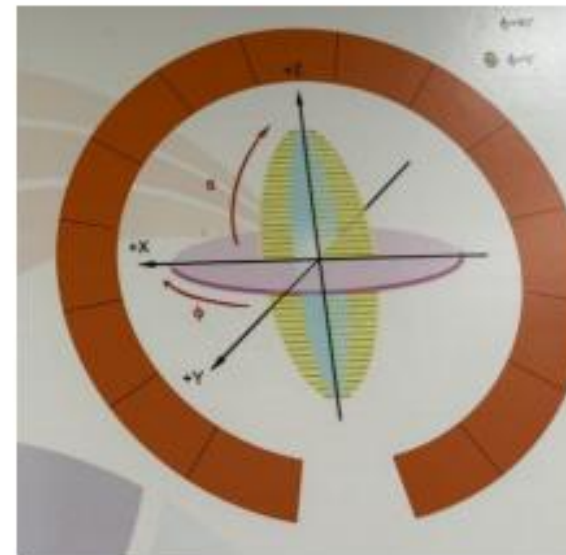
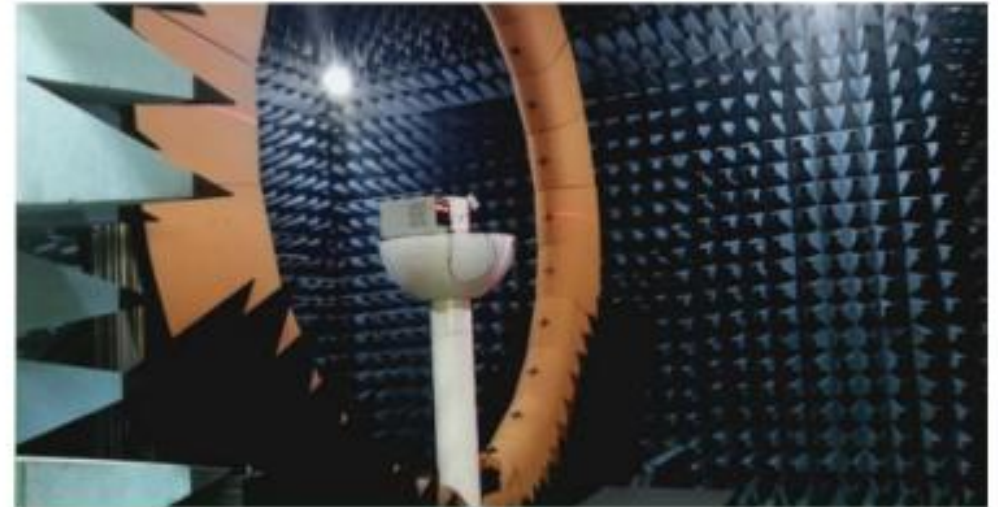
Anwei Wireless was founded in 2008 and has multiple antenna RFR&D laboratories and established an antenna RF R&D team.

Committed to becoming an antenna research and development manufacturer for mobile communication devices, the Internet of Things,

and other products. With exquisite technology, outstanding hardware, and an excellent engineering service team, we connect every key

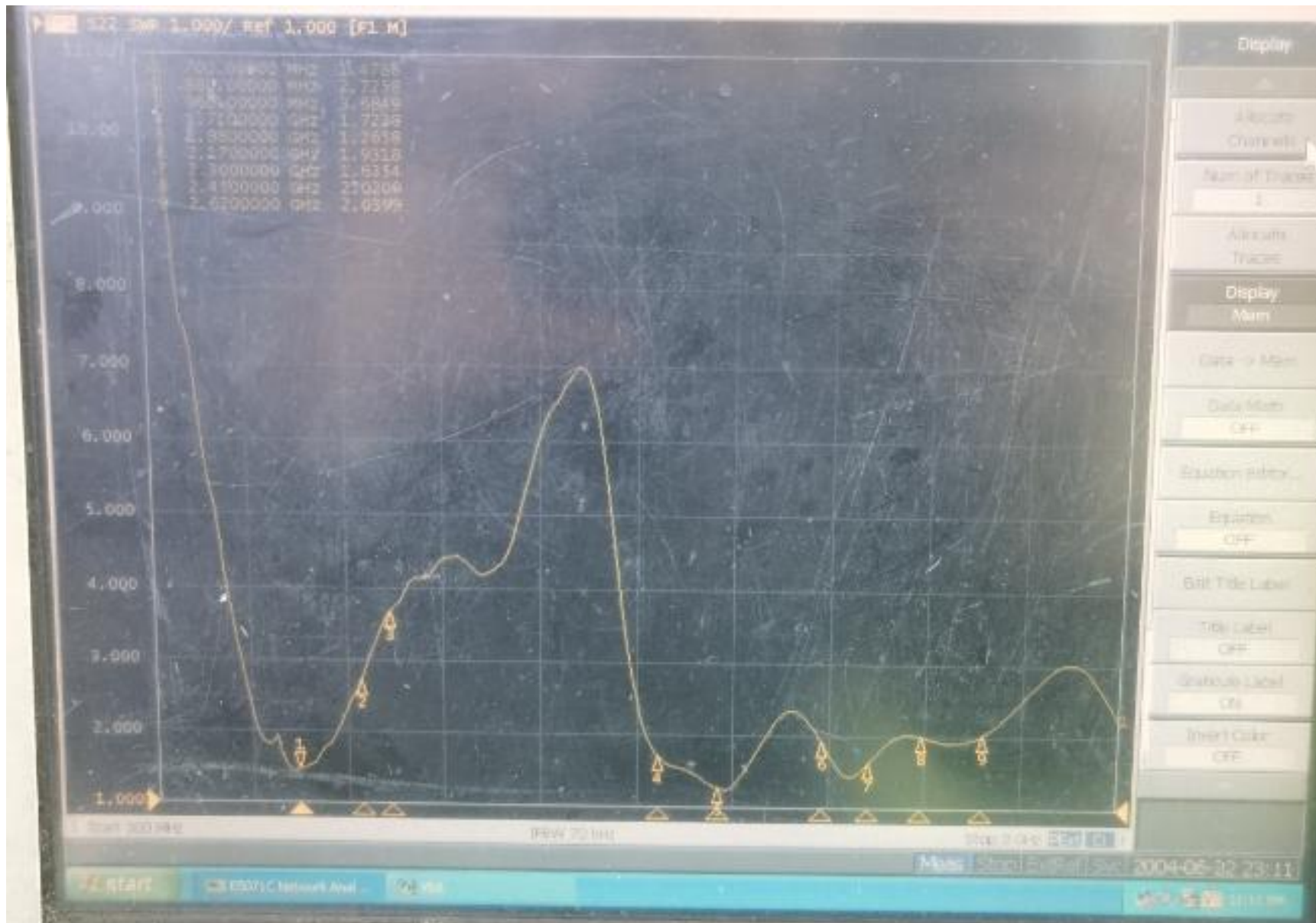
aspect of antenna research and development throughout the entire process, and provide customers with a one-stop communication signal solution that integrates design, research and development, production, sales, and service through a system to system approach.

Anwei Wireless has multiple OTA testing rooms covering a frequency range of 400MHz~8.5GHz. It can provide whole machine OTA testing (TRP/TIS), WIFI active testing (supporting 11b/11g/11n mode testing projects), Bluetooth/GPS active testing projects, and can provide antenna gain and efficiency, two-dimensional pattern/apple chart analysis, upper and lower hemisphere efficiency values, and mutual interference correlation coefficient testing projects.



Efficiency test

antenna 1: LTE antenna S11



antenna 1: LTE antenna efficiency

Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Frequency (MHz)	700	720	740	760	780	800	820	840	860	880	900	920	940	960	980
Gain (dBi)	-6.24	-4.94	-3.17	-0.55	0.66	1.32	0.95	1.50	1.99	1.54	1.02	0.29	-0.13	-2.15	-3.02
Efficiency (dB)	-11.48	-9.55	-7.08	-4.56	-3.41	-3.29	-4.39	-4.17	-3.65	-3.64	-3.88	-4.62	-5.21	-6.75	-7.77
Efficiency (%)	7.11	11.08	19.60	35.02	45.65	46.91	36.38	38.31	43.11	43.22	40.97	34.55	30.12	21.14	16.71
Plane: Phi=0	700	720	740	760	780	800	820	840	860	880	900	920	940	960	980
Plane: Phi=90	700	720	740	760	780	800	820	840	860	880	900	920	940	960	980
Plane: Theta=90	700	720	740	760	780	800	820	840	860	880	900	920	940	960	980

52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
1720	1740	1760	1780	1800	1820	1840	1860	1880	1900	1920	1940	1960	1980	2000	2020	2040
-4.58	-3.46	-1.66	0.66	1.09	1.32	2.33	2.75	2.93	2.09	1.99	1.13	-0.35	-0.70	-0.48	-1.01	-0.61
-12.15	-10.75	-8.84	-6.16	-5.02	-4.37	-3.32	-2.92	-2.78	-3.46	-3.72	-4.28	-5.23	-5.42	-5.20	-5.74	-5.42
6.09	8.41	13.05	24.20	31.50	36.58	46.60	51.08	52.70	45.08	42.43	37.33	29.99	28.69	30.17	26.67	28.73
1720	1740	1760	1780	1800	1820	1840	1860	1880	1900	1920	1940	1960	1980	2000	2020	2040
1720	1740	1760	1780	1800	1820	1840	1860	1880	1900	1920	1940	1960	1980	2000	2020	2040
1720	1740	1760	1780	1800	1820	1840	1860	1880	1900	1920	1940	1960	1980	2000	2020	2040

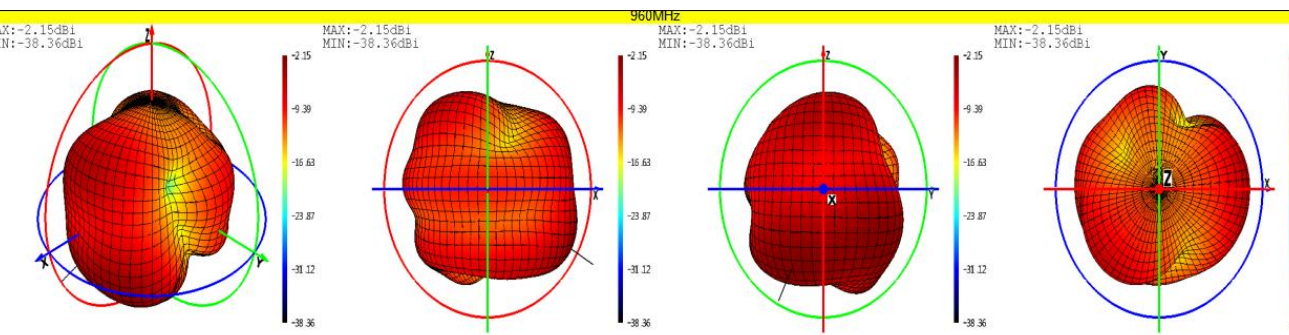
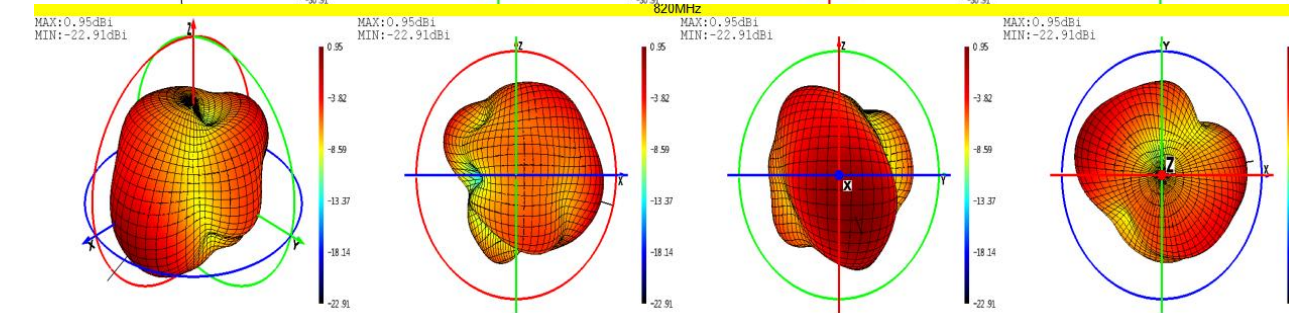
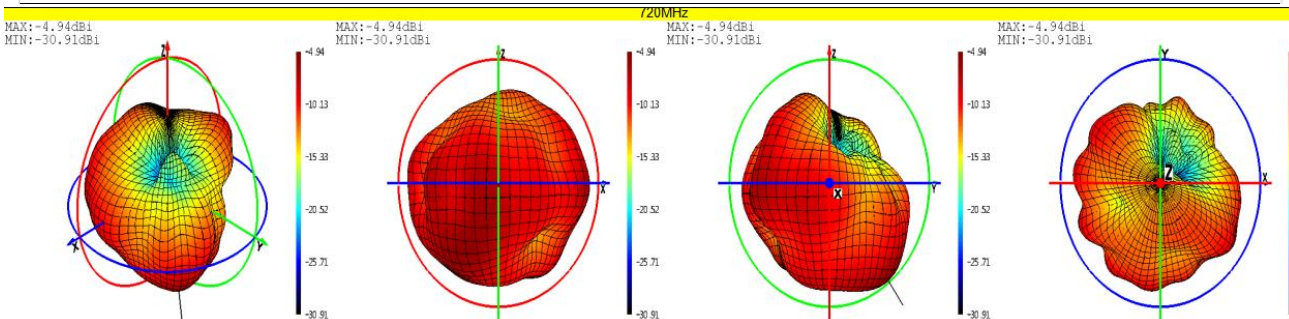
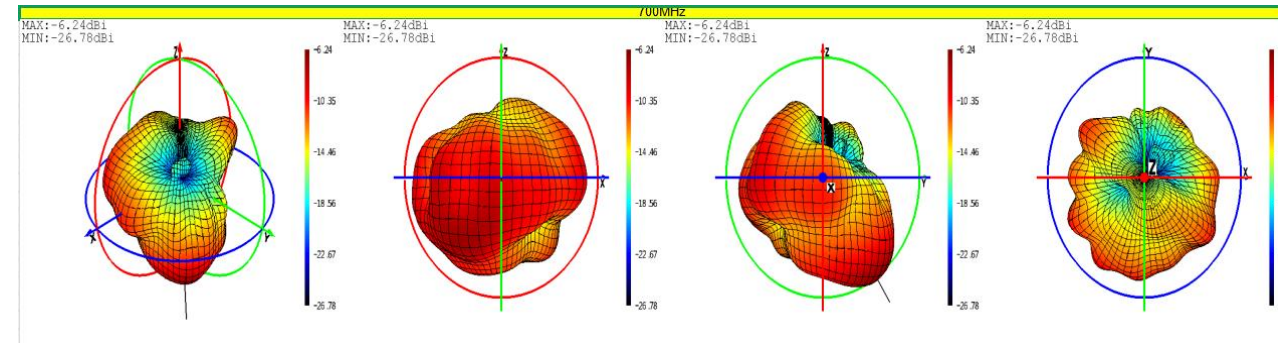
69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
2060	2080	2100	2120	2140	2160	2180	2200	2220	2240	2260	2280	2300	2320	2340	2360	2380
0.19	0.24	1.00	0.99	2.11	1.81	2.68	3.40	3.68	3.23	3.00	2.24	1.06	0.76	0.81	1.52	0.82
-4.43	-4.62	-4.19	-4.20	-3.27	-3.62	-2.89	-2.55	-2.50	-2.69	-3.00	-3.31	-4.47	-4.54	-5.15	-4.42	-5.22
36.08	34.55	38.14	38.06	47.05	43.41	51.37	55.58	56.30	53.88	50.15	46.72	35.74	35.14	30.55	36.14	30.09
2060	2080	2100	2120	2140	2160	2180	2200	2220	2240	2260	2280	2300	2320	2340	2360	2380
2060	2080	2100	2120	2140	2160	2180	2200	2220	2240	2260	2280	2300	2320	2340	2360	2380
2060	2080	2100	2120	2140	2160	2180	2200	2220	2240	2260	2280	2300	2320	2340	2360	2380

86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101
2400	2420	2440	2460	2480	2500	2520	2540	2560	2580	2600	2620	2640	2660	2680	2700
2.41	2.77	3.78	4.41	4.99	5.43	5.04	5.15	4.94	4.66	4.14	4.01	3.65	3.00	3.81	3.41
-3.45	-3.19	-2.92	-2.52	-2.00	-1.93	-2.21	-2.19	-2.53	-2.67	-3.00	-2.79	-2.77	-3.39	-2.83	-3.55
45.23	47.98	51.01	55.91	63.07	64.15	60.09	60.35	55.91	54.05	50.13	52.62	52.86	45.77	52.08	44.21
2400	2420	2440	2460	2480	2500	2520	2540	2560	2580	2600	2620	2640	2660	2680	2700
2400	2420	2440	2460	2480	2500	2520	2540	2560	2580	2600	2620	2640	2660	2680	2700
2400	2420	2440	2460	2480	2500	2520	2540	2560	2580	2600	2620	2640	2660	2680	2700



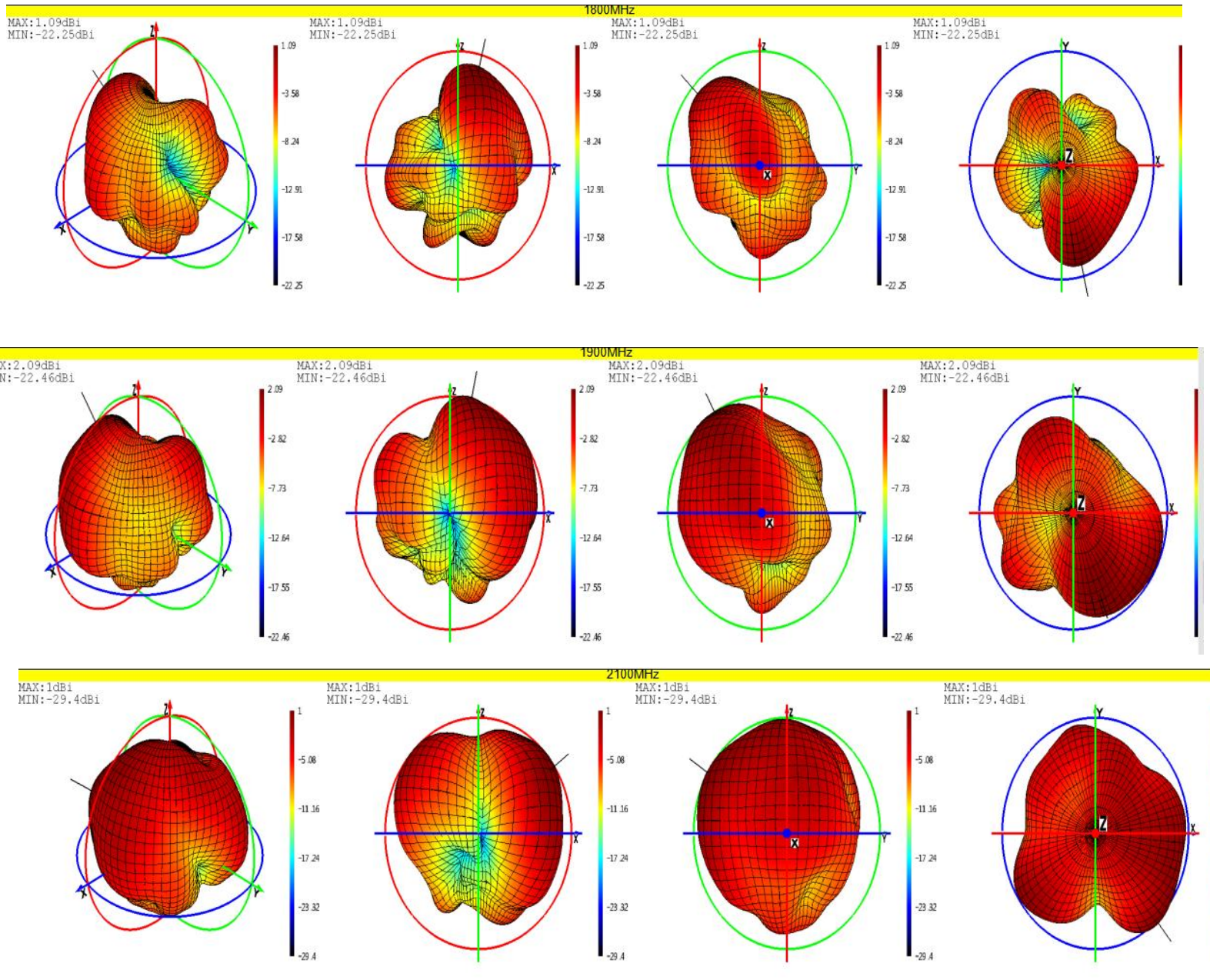
3D Etotal

antenna 1: LTE antenna 700MHz 824MHz 960MHz



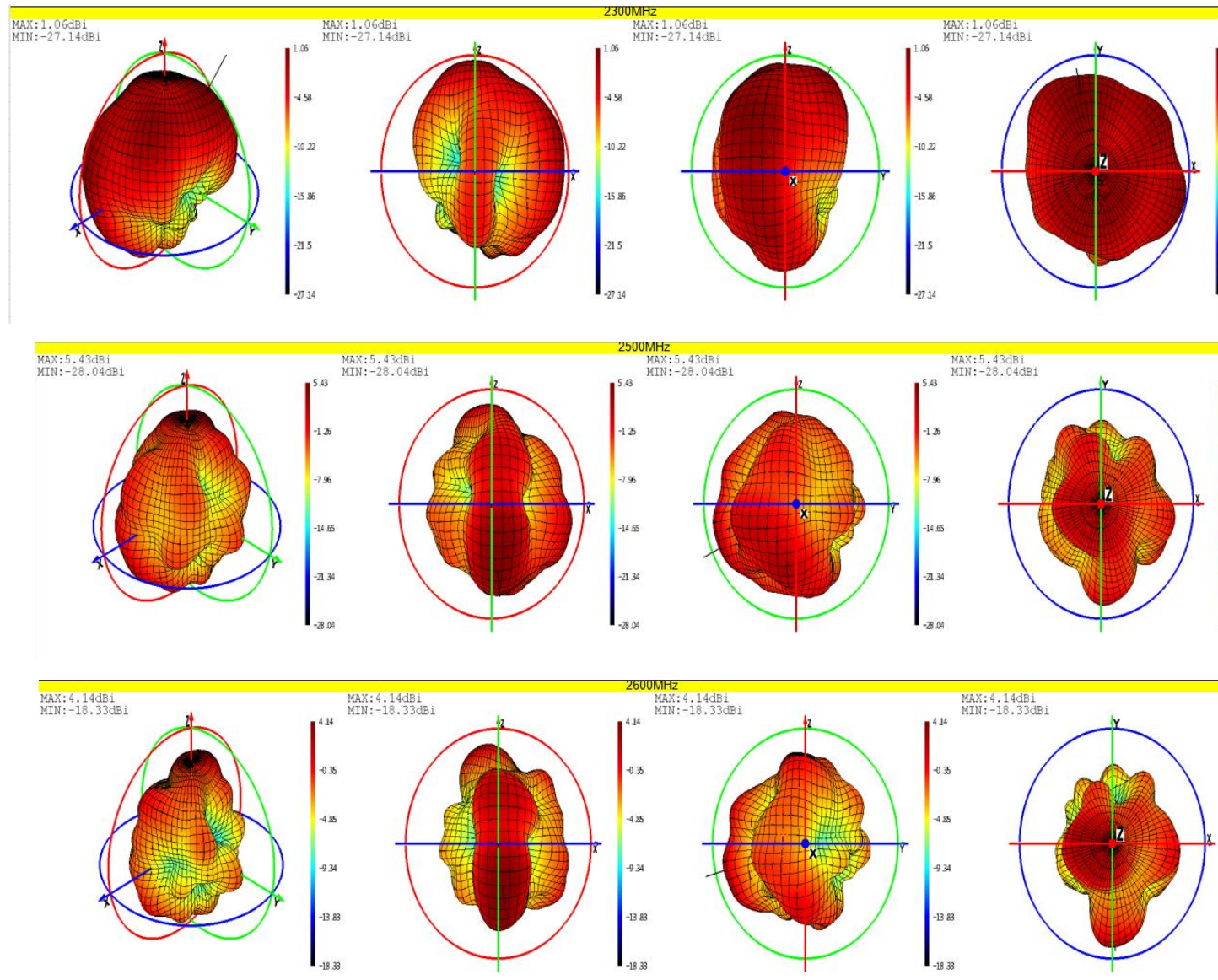
3D Etotal

antenna 1: LTE antenna 1710MHz 2170MHz



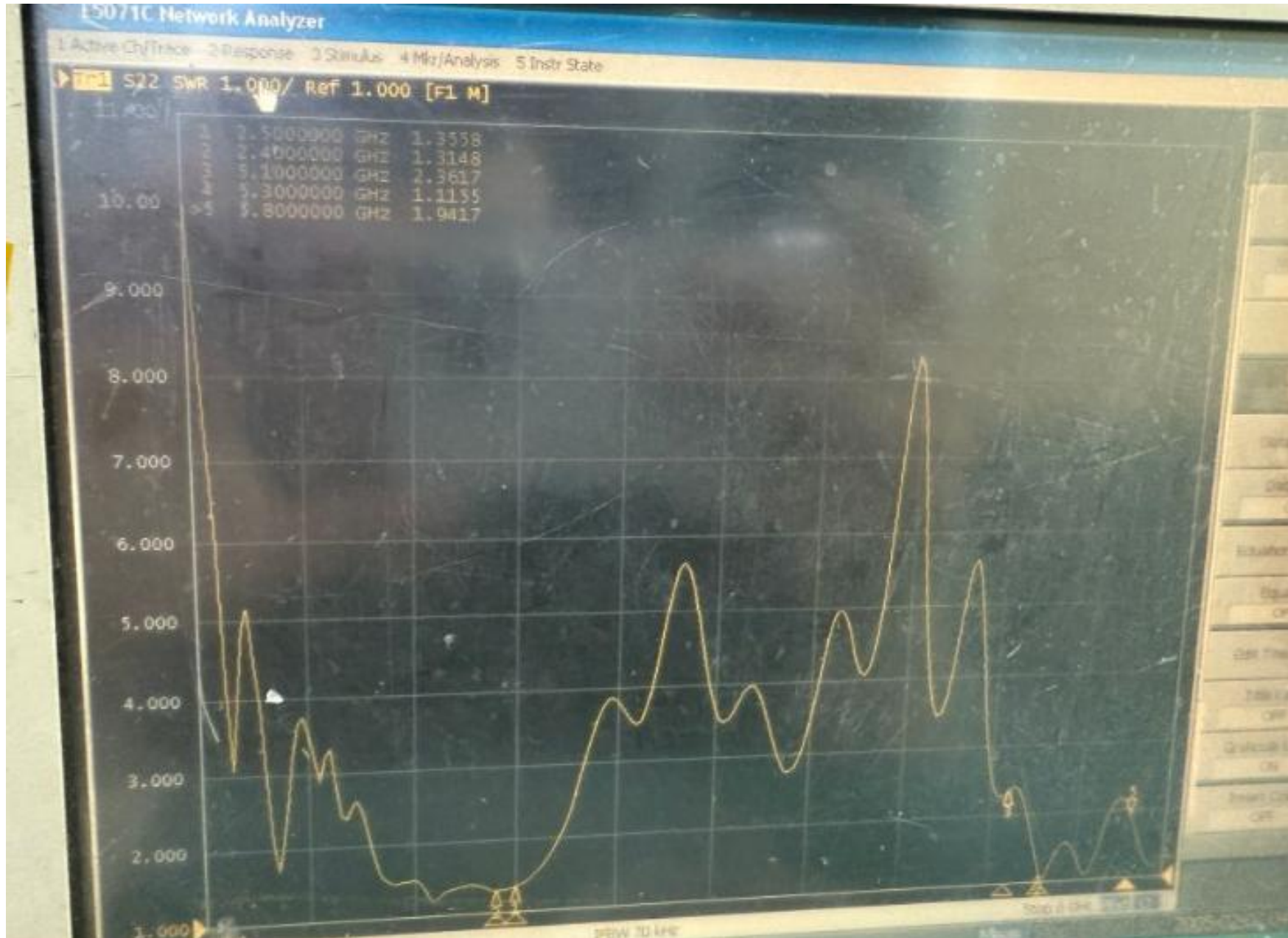
3D Etotal

antenna 1: LTE antenna 2300 MHz 2400MHz 2690MHz



Efficiency test

antenna 2: wifi 2.4G+5G+Bluetooth antenna S11

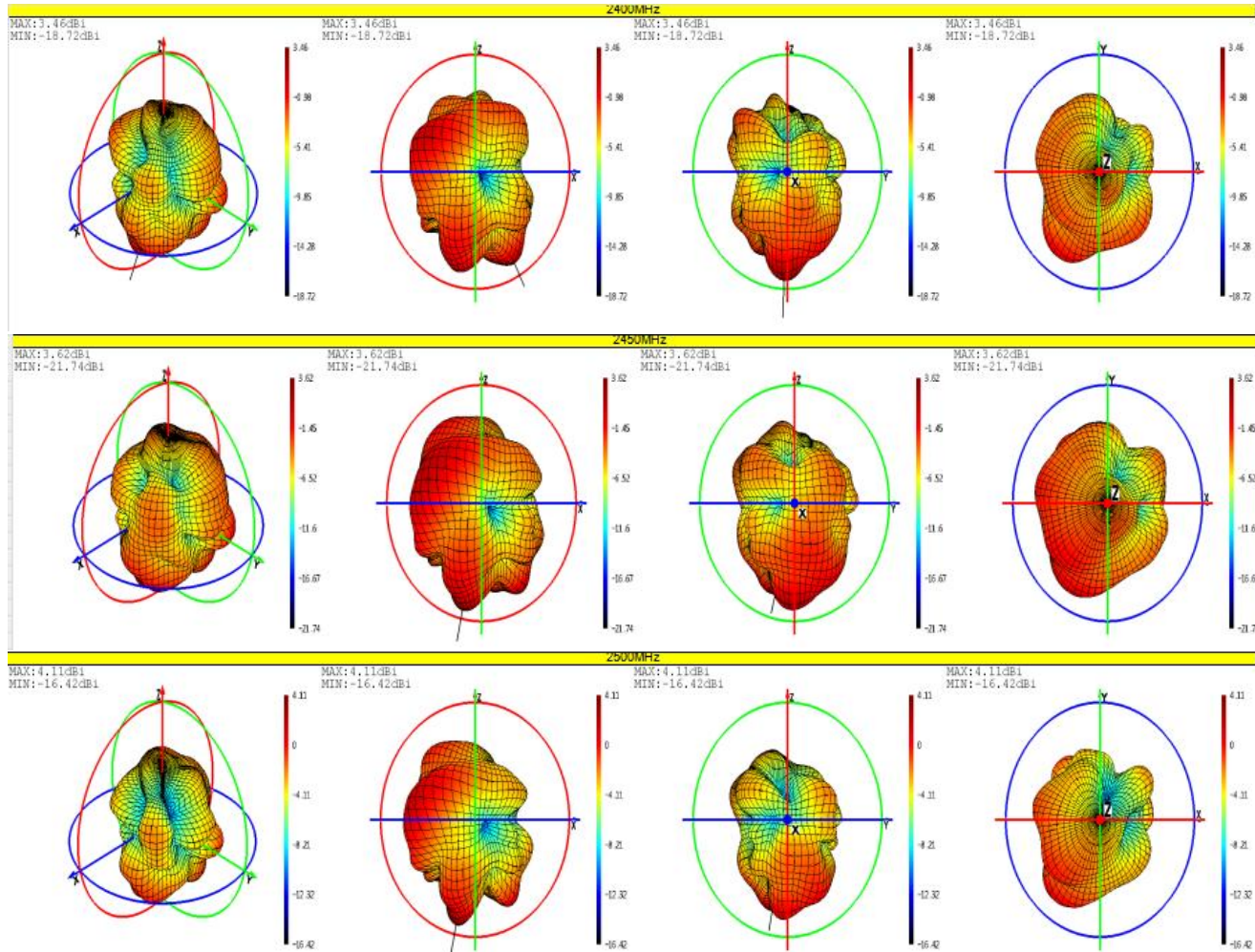


antenna 2: wifi 2.4G+5G+Bluetooth antenna efficiency

Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400	2450	2500	5100	5200	5300	5400	5500	5600	5700	5800
Gain (dBi)	3.46	3.62	4.11	1.64	2.32	3.32	4.24	4.78	5.17	4.44	4.89
Efficiency (dB)	-2.73	-2.72	-2.65	-3.72	-3.35	-2.72	-2.76	-3.10	-2.79	-3.70	-3.27
Efficiency (%)	53.37	53.40	54.39	42.46	46.28	53.51	52.93	48.99	52.55	42.61	47.08

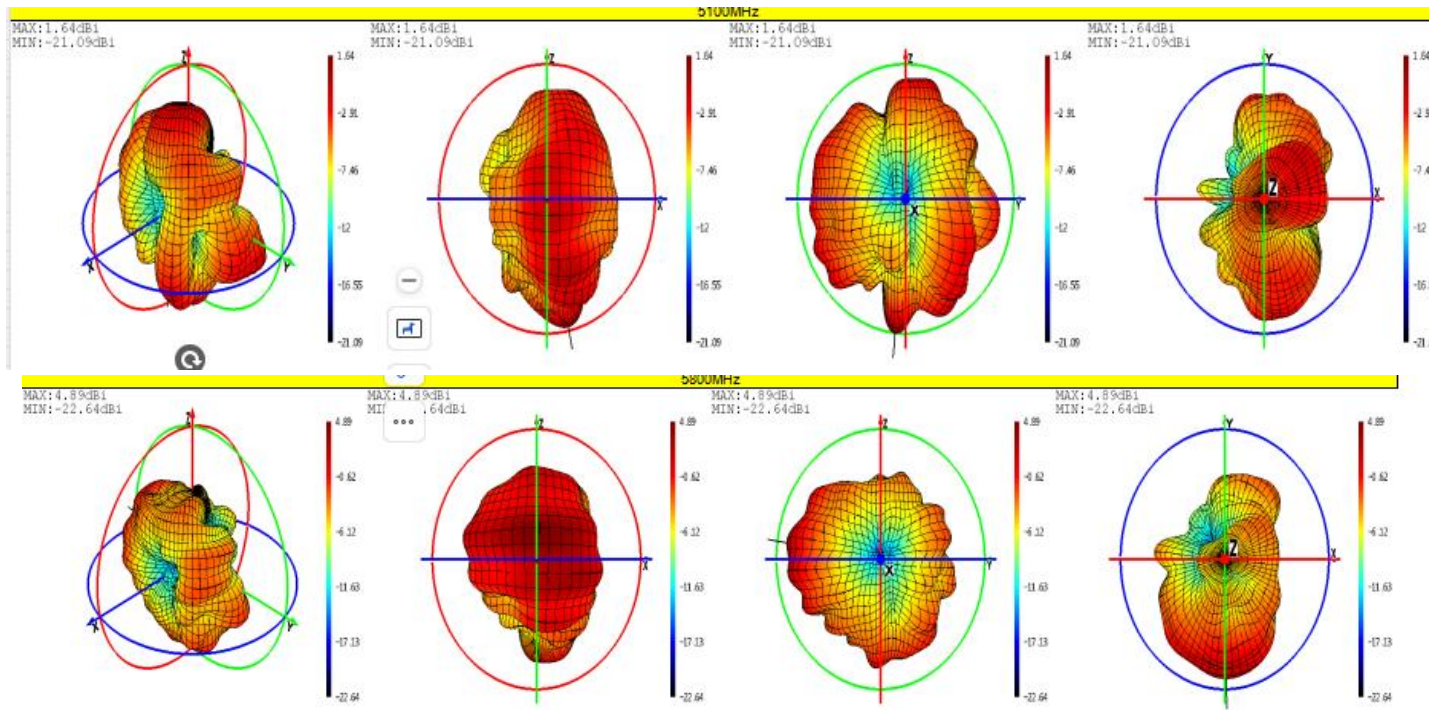
3D Etotal

antenna 2: wifi 2.4G+5G+Bluetooth antenna 2400MHz 2500MHZ



3D Etotal

antenna 2: wifi 2.4G+5G+Bluetooth antenna 5150MHz 5850MHZ



antenna 1: LTE antenna Active test data

	Channel	TRP (dBm)	TIS (dBm)		Channel	TRP (dBm)	TIS (dBm)
FDD B1	LOW	17.1		FDD B17	LOW	18.99	
	medium	15.86			medium	17.32	
	high	15.85	-96.1		high	15.93	-89.2
FDD B2	LOW	17.62		FDD 18	LOW	16.97	
	medium	19			medium	17.25	
	high	18.29	-94.5		high	17.83	-95.3
FDD B3	LOW	16.99		FDD-19	LOW	18.22	
	medium	16.96			medium	18.92	
	high	18.47	-95.99		high	19.49	-95.0
FDD B4	LOW	15.96		FDD-20	LOW	18.65	
	medium	15.58			medium	19.9	
	high	16.71	-93.2		high	20.77	-92.7
FDD B5	LOW	18.67		FDD B25	LOW	14.93	
	medium	19.48			medium	17.36	
	high	20.09	-94.6		high	16.78	-94.0
FDD B7	LOW	13.64		FDD-26	LOW	16.03	
	medium	14.87			medium	17.47	
	high	16.01	-96.1		high	19.25	-96.05
FDD B8	LOW	22.3		FDD B28A	LOW	20.11	
	medium	21.46			medium	14.31	
	high	19.77	-89.5		high	19.34	-91.05
FDD B12	LOW	19.58		FDD B28B	LOW	14.6	
	medium	18.03			medium	18.95	
	high	15.04	-89.5		high	18.03	-92.5

	Channel	TRP (dBm)	TIS (dBm)
TDD 34	LOW	16.6	
	medium	16.87	
	high	16.54	-95.98
TDD 38	LOW	18.3	
	medium	17.73	
	high	17.09	-93.61
TDD 39	LOW	19.92	
	medium	18.64	
	high	17.57	-92.31
TDD 40	LOW	15.87	
	medium	17.34	
	high	16.17	-92.03
TDD 41	LOW	16.83	
	medium	17.31	
	high	17.05	-94.99

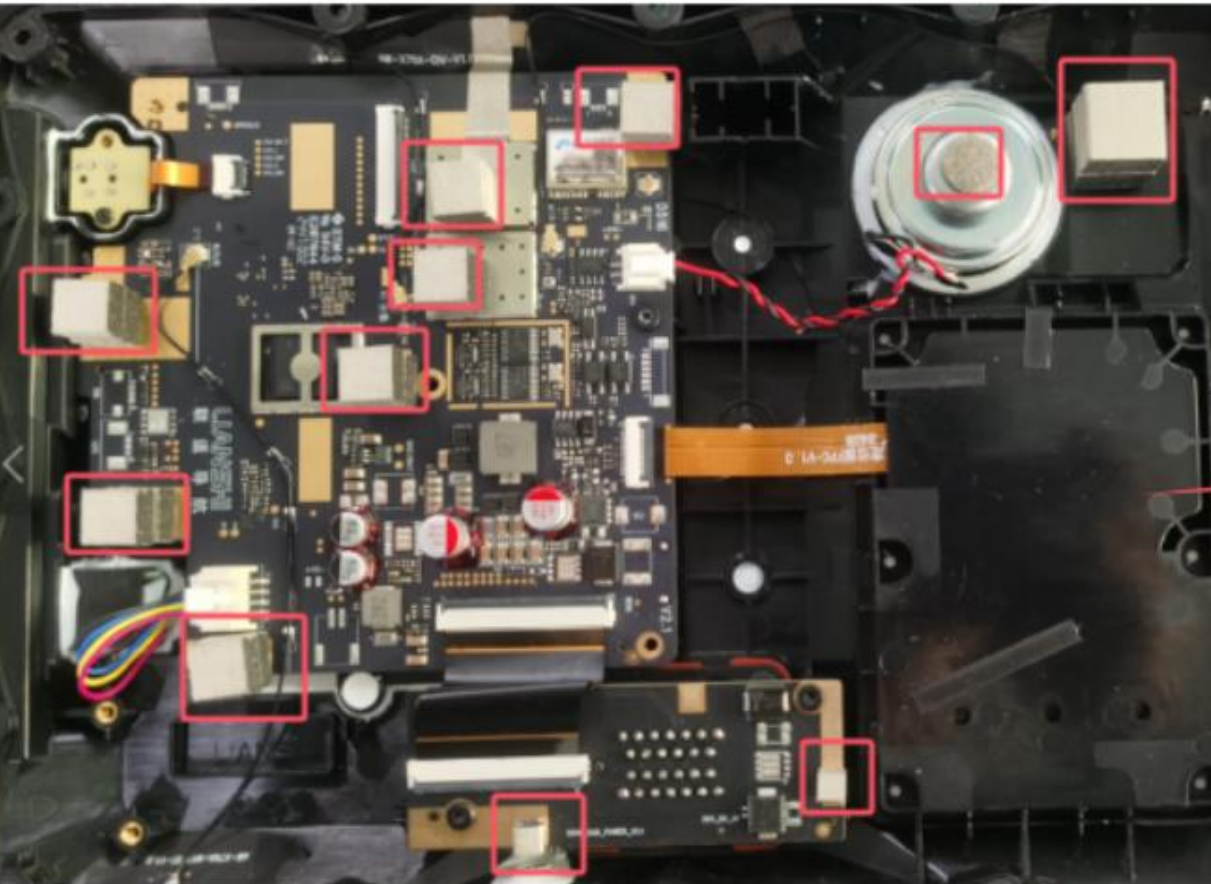
antenna 1: LTE antenna Active test data

	Channel	TRP (dBm)	TIS (dBm)			Channel	TRP (dBm)	TIS (dBm)	
W 1	LOW	16.39							
	medium	15.15							
	high	15.26	-110.0						
W 2	LOW	17.12							
	medium	18.61							
	high	17.99	-106.5						
W 4	LOW	15.86							
	medium	16.36							
	high	17.89	-109.8						
W 5	LOW	17.99							
	medium	19.6							
	high	20.54	-107.4						
W 6	LOW	18.34							
	medium	18.08							
	high	17.98	-110.64						
W 8	LOW	20.31							
	medium	19.43							
	high	18.48	-102.2						
W 19	LOW	19.15							
	medium	19.73							
	high	20.28	-105.35						
18									
	SUNNYWAY CATALOGUE					www.sunny-way.com			

antenna 2: wifi 2.4G+5G+Bluetooth antenna **test data**

BAND	2.4GWIFI			5G WIFI		
CHANNEL	low	medium	high	low	medium	high
TRP (dBm)	14.56	14.35	13.29	11.06	11.51	12.34
TIS (dBm)	-82.43	-81.52	-81.4	-72.32	-72.04	-72.46

Environmental treatment:



The motherboard is grounded with conductive sponge and screen zinc alloy, and the lamp board is grounded with conductive foam and screen Grounding, The light panel FPC is grounded with conductive cloth to shield interference, and the module is grounded with conductive cloth and battery steel.

Thank You