

Antenna Specification

Manufacturer: Dongguan Weichen Communication Technology Co., Ltd.

ADD: No. 5, Xifang 11th Lane, Daning Community, Humen Town, Dongguan City, Guangdong Province

2. Overview of Product Categories and Models

2.1 category

This mobile communication terminal Wi-Fi antenna is a monopole antenna.

2.2Product Model Overview

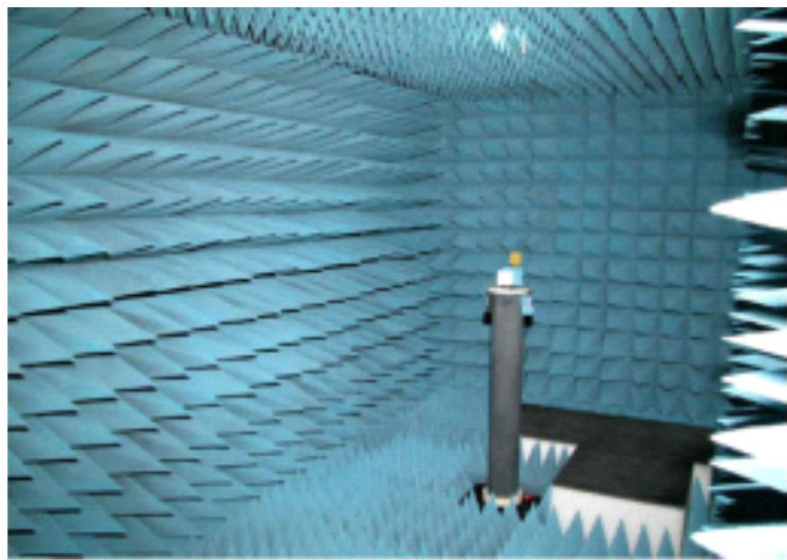
This antenna is designed for the 2400 - 2500 MHz and
5150 - 5850 MHz frequency bands.

3.Technical Specifications and Instrumentation

3.1 Technical specifications

Product electrical performance specifications	
Operating frequency range	2400-2500MHz 5150-5850 MHz
Standing Wave Ratio (SWR)	2400-2500MHz<3.0 5150-5850 MHz<2.5
Antenna type	Monopole antenna
Radiation efficiency	2400-2500MHz> 30% 5150-5850 MHz> 35%
impedance	50 ohm
Product Material Specifications	
wire	0.8 x 35mm wire, single-end solder-dipped
Product Environment Description	
Operating temperature	- 30℃ ~ + 85 ℃
Storage temperature	- 30℃ ~ + 85 ℃

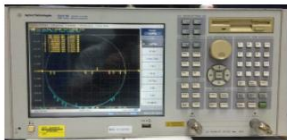
3.2 Instruments and Equipment



ETS Chamber
天线测试暗室
L x W x H =8x4x4M



R&S CMW500



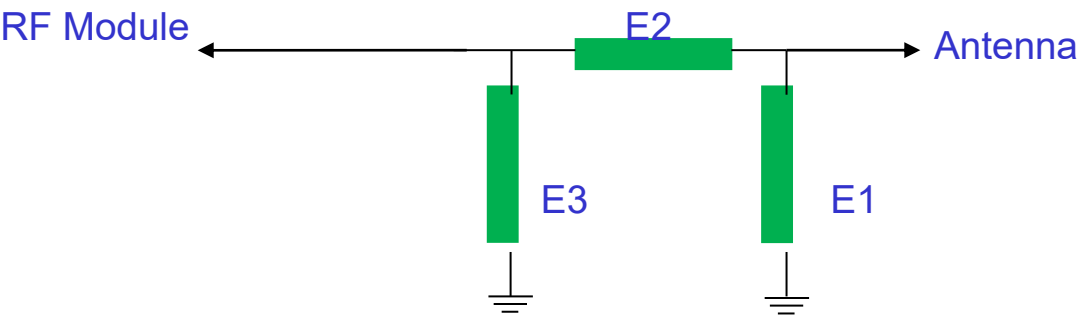
Agilent E5071B



Agilent 8960

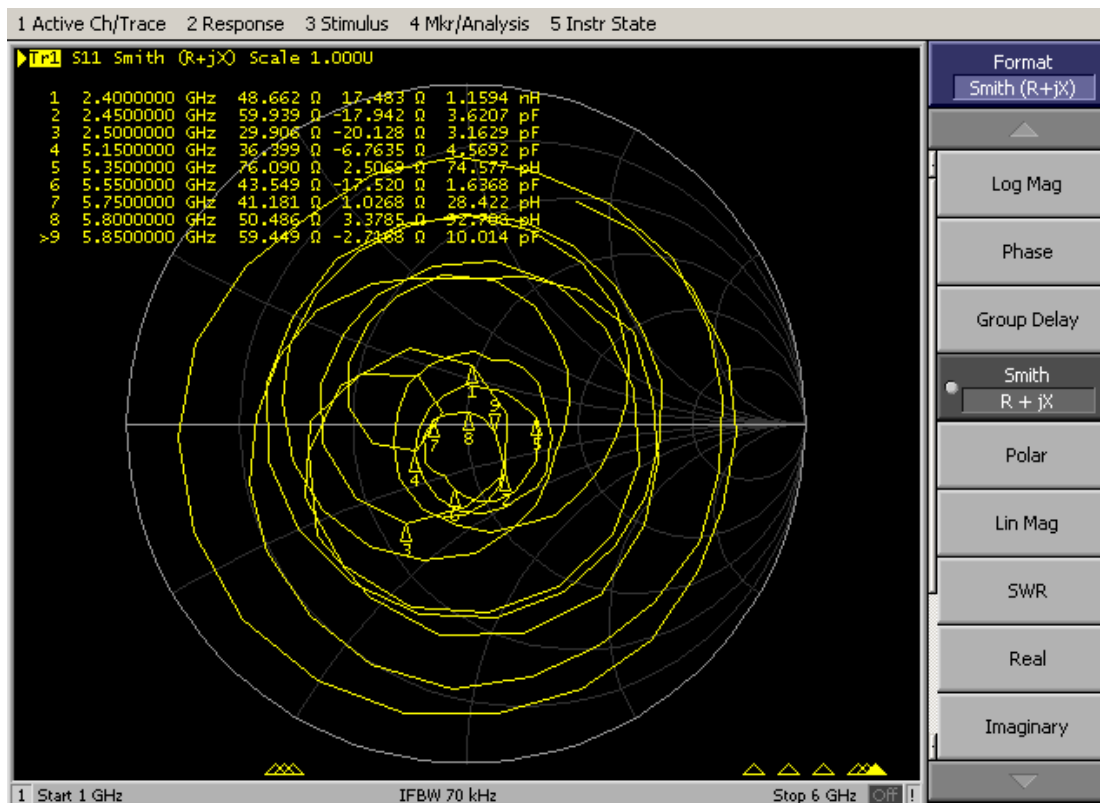
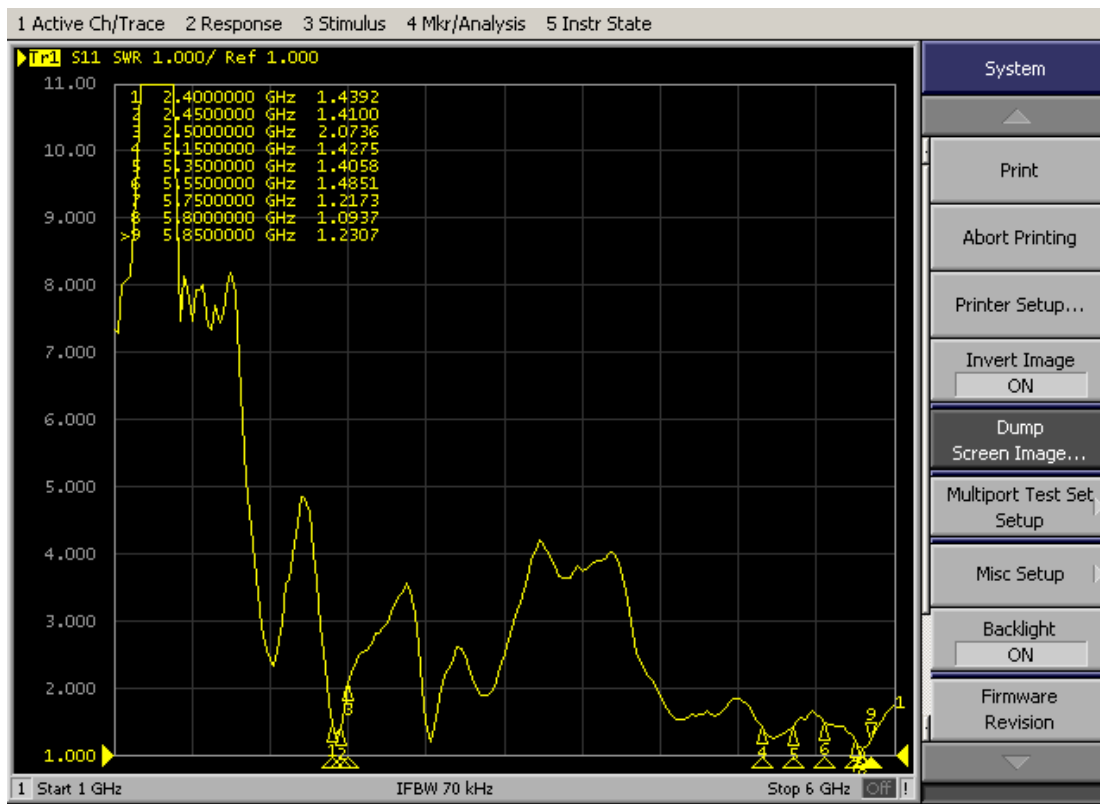
4. Matching Circuit Description:

Our company has not modified the original matching circuit of the Wi-Fi antenna.



Element	Value	Vender
E1(0201)		
E2(0201)		
E3(0201)		

5. Wi-Fi Antenna Passive Polar Plot & Smith Chart:



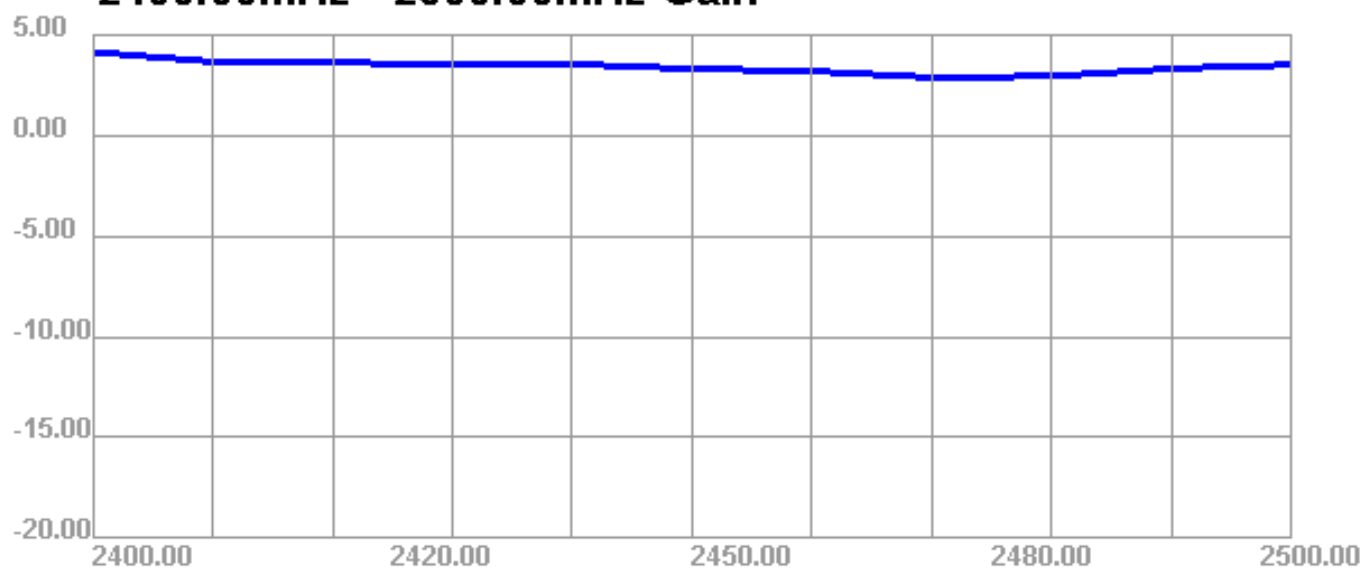
6. Antenna Efficiency and Gain

Passive Test For 2.4G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	74.98	-1.25	4.14	1.99	47.911	27.066	4.14	-21.58	5.39	15	49.14	49.28
2410	67.86	-1.68	3.66	1.51	44.047	23.814	3.66	-21.47	5.35	15	48.58	48.85
2420	66.16	-1.79	3.6	1.45	43.175	22.987	3.6	-22.85	5.4	30	48.53	48.45
2430	65.88	-1.81	3.56	1.41	43.261	22.623	3.56	-21.71	5.37	30	48.03	47.97
2440	64.37	-1.91	3.54	1.39	42.446	21.92	3.54	-20.26	5.45	15	48	47.92
2450	59.91	-2.22	3.3	1.15	39.683	20.231	3.3	-19.85	5.52	15	47.72	47.6
2460	58.63	-2.32	3.19	1.04	38.614	20.012	3.19	-19.21	5.51	15	47.89	48.03
2470	54.38	-2.65	2.88	0.73	35.445	18.937	2.88	-19.06	5.52	15	47.95	47.98
2480	53.84	-2.69	2.94	0.79	34.66	19.178	2.94	-17.71	5.63	15	48.07	48.16
2490	56.31	-2.49	3.31	1.16	36.143	20.164	3.31	-18.02	5.81	15	48.36	48.58
2500	56.48	-2.48	3.5	1.35	36.787	19.693	3.5	-21.83	5.99	15	48.3	48.54

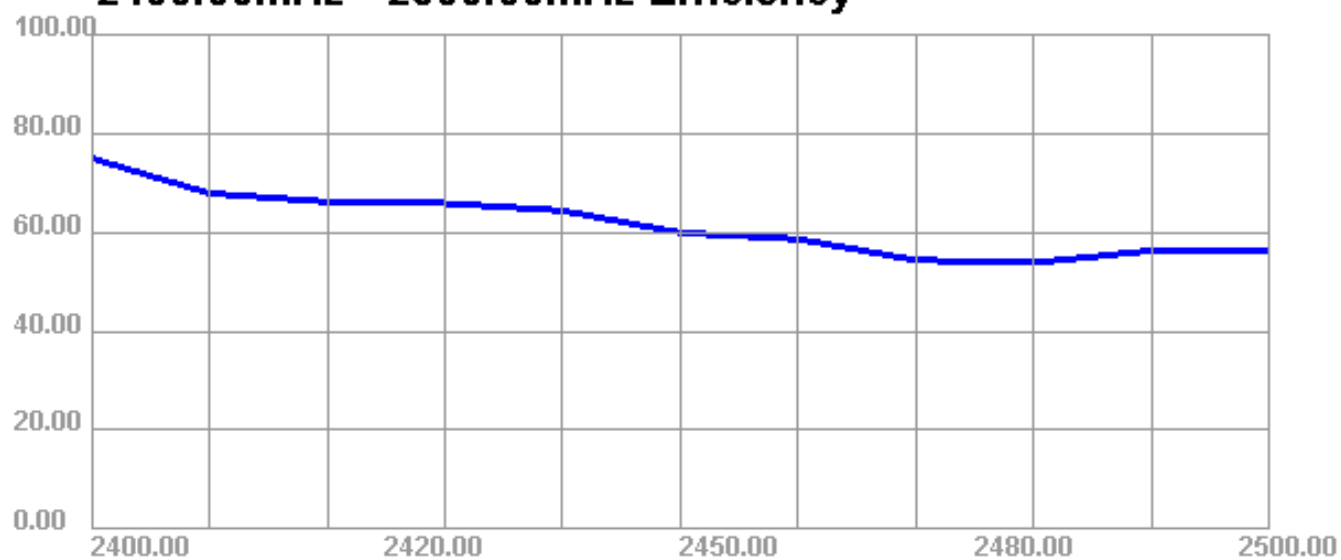
Passive Test For 5.8												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	56.75	-2.46	4	1.85	31.53	25.22	4	-22.58	6.46	0	58.28	58.7
5200	62.73	-2.02	4.66	2.51	34.954	27.78	4.66	-21.36	6.68	0	57.61	57.96
5250	65.05	-1.87	4.8	2.65	36.507	28.543	4.8	-24.34	6.66	0	58.57	59.2
5300	62.88	-2.01	5.04	2.89	36.002	26.881	5.04	-22.41	7.05	0	57.28	57.55
5350	70.35	-1.53	5.69	3.54	40.889	29.461	5.69	-22.32	7.21	0	58.38	58.8
5400	74.34	-1.29	6.08	3.93	43.741	30.6	6.08	-19.32	7.37	0	57.64	58.51
5450	72.1	-1.42	5.67	3.52	42.826	29.277	5.67	-17.65	7.09	0	58.1	59.25
5500	74.76	-1.26	5.82	3.67	44.868	29.89	5.82	-18.05	7.08	0	58.46	59.87
5550	82.99	-0.81	6.23	4.08	50.34	32.651	6.23	-21.91	7.04	0	60.23	60.9
5600	77.77	-1.09	5.82	3.67	47.986	29.78	5.82	-22.39	6.91	0	60.3	61.95
5650	74.75	-1.26	5.48	3.33	47.358	27.396	5.48	-23.7	6.74	0	60.01	60.87
5700	70.18	-1.54	5.11	2.96	45.793	24.387	5.11	-22.78	6.65	0	59.97	60.89
5750	70.05	-1.55	5.1	2.95	47.486	22.565	5.1	-23.44	6.64	0	60.02	60.72
5800	67.82	-1.69	5.19	3.04	46.767	21.049	5.19	-21.78	6.88	15	60.6	61.71
5850	65.51	-1.84	5.42	3.27	44.06	21.446	5.42	-17.79	7.26	15	60.22	61.21

7. 2.4G&5G Gain & Efficiency Plot

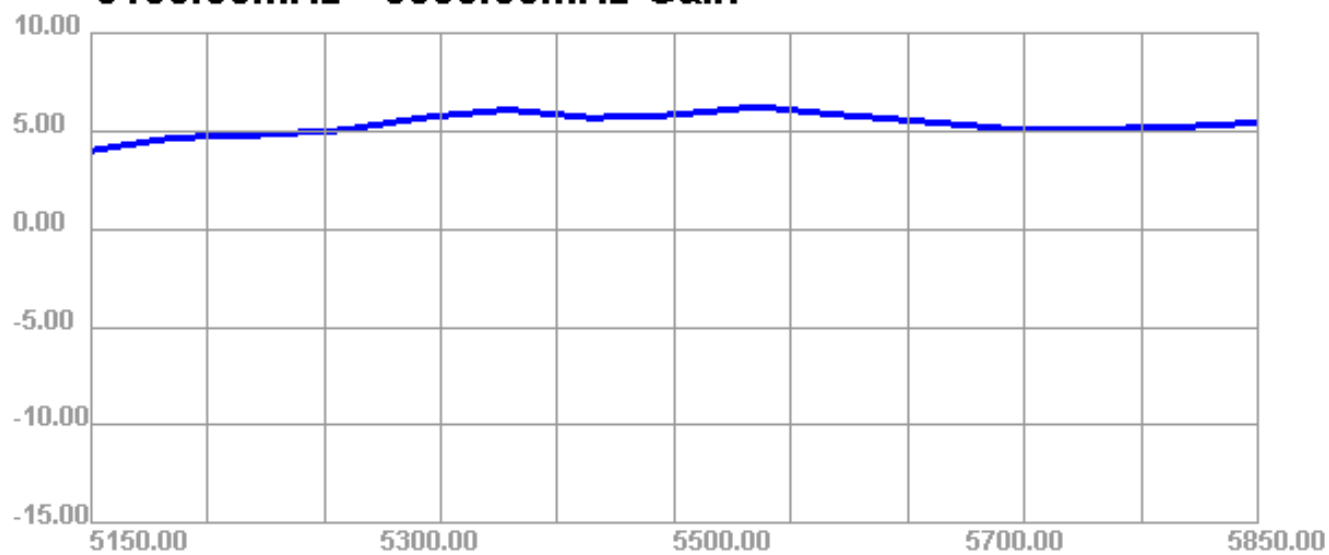
2400.00MHz - 2500.00MHz Gain



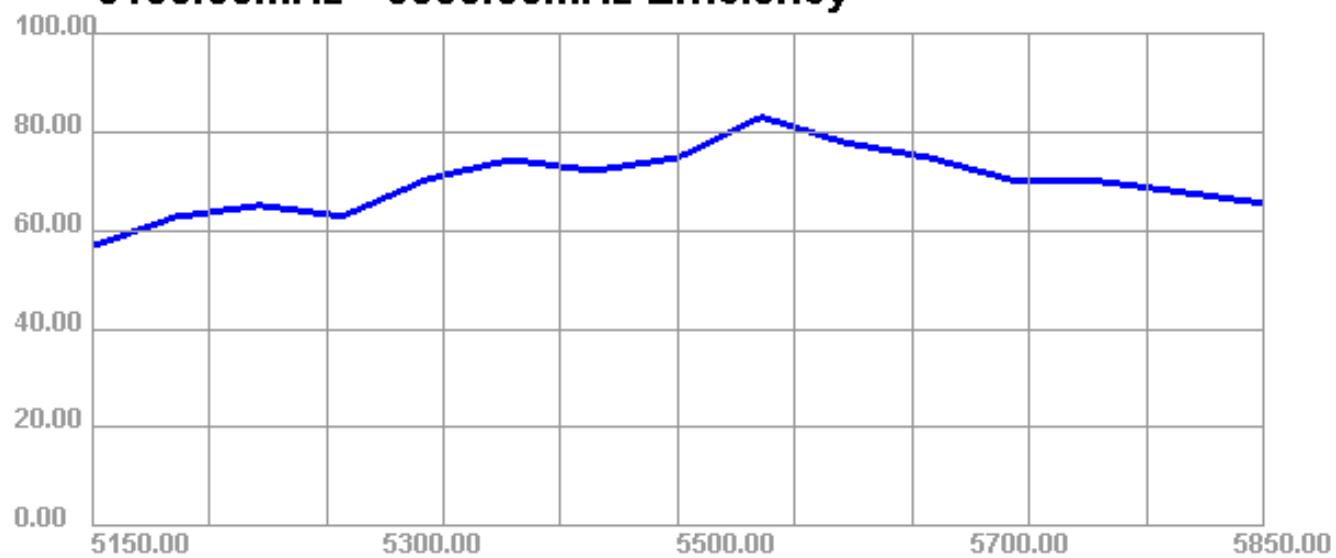
2400.00MHz - 2500.00MHz Efficiency



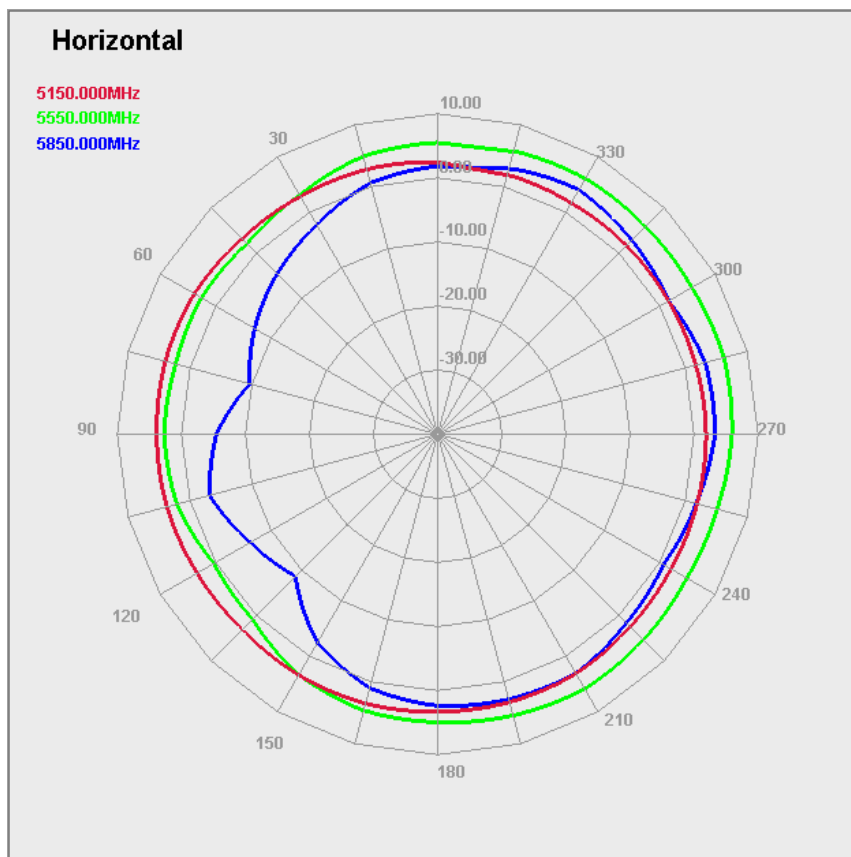
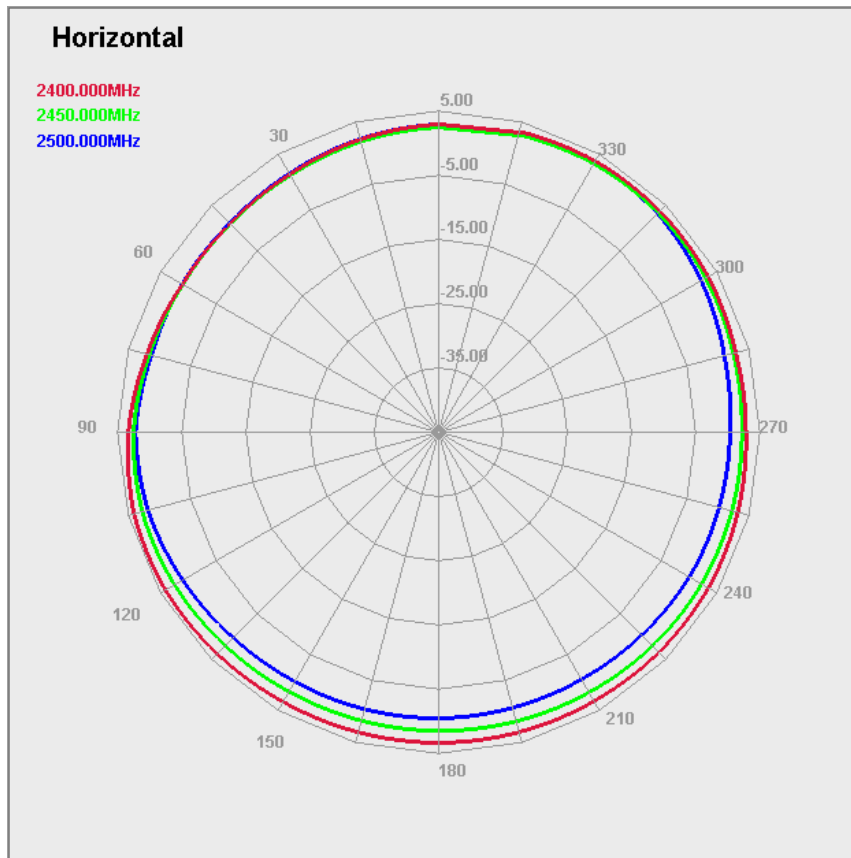
5150.00MHz - 5850.00MHz Gain



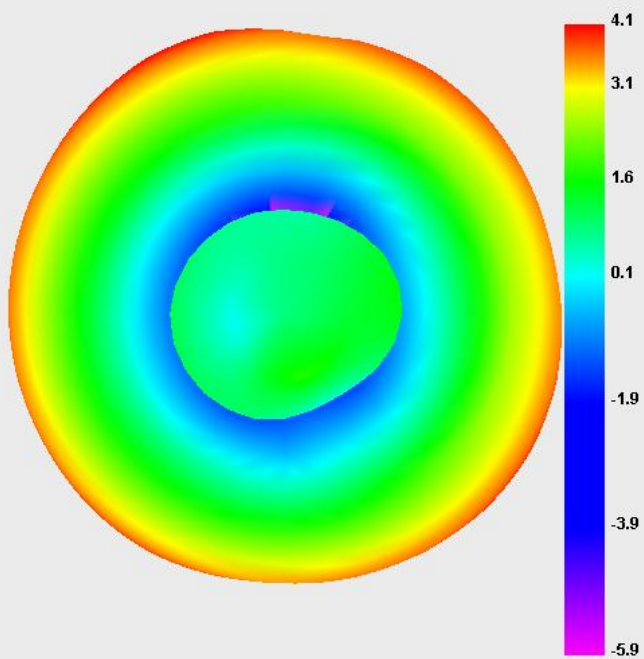
5150.00MHz - 5850.00MHz Efficiency



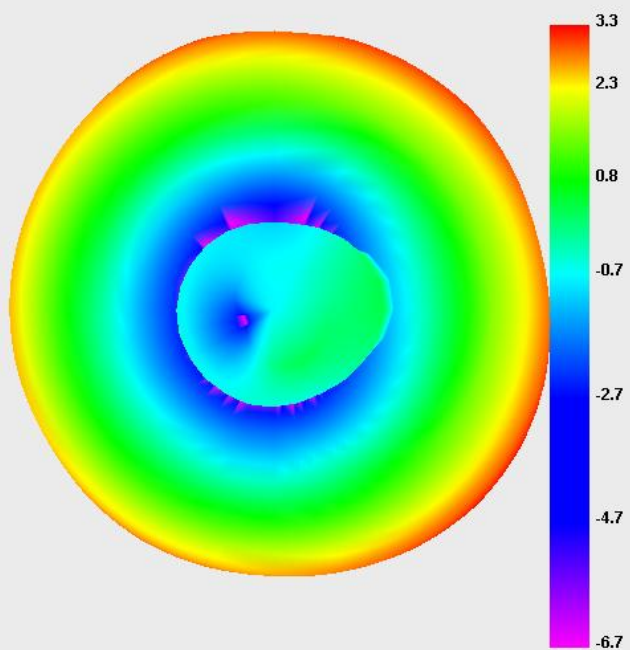
8. 2.4G&5G 2D&3D Radiation pattern



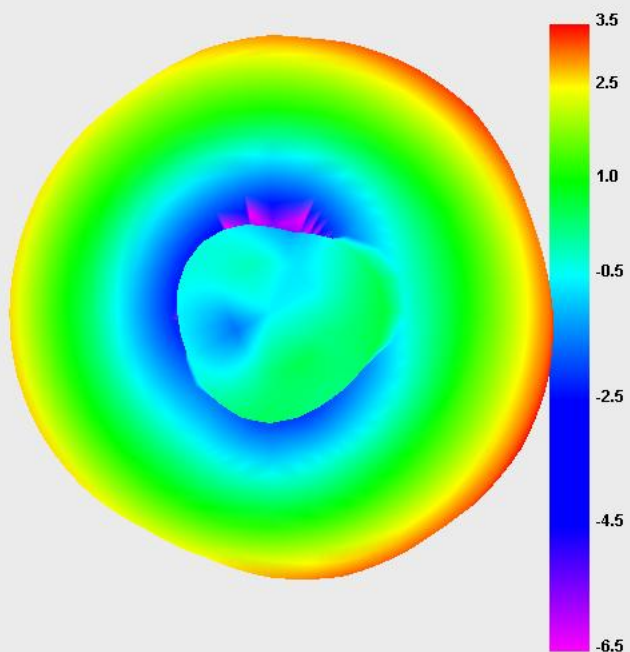
2400.000MHz



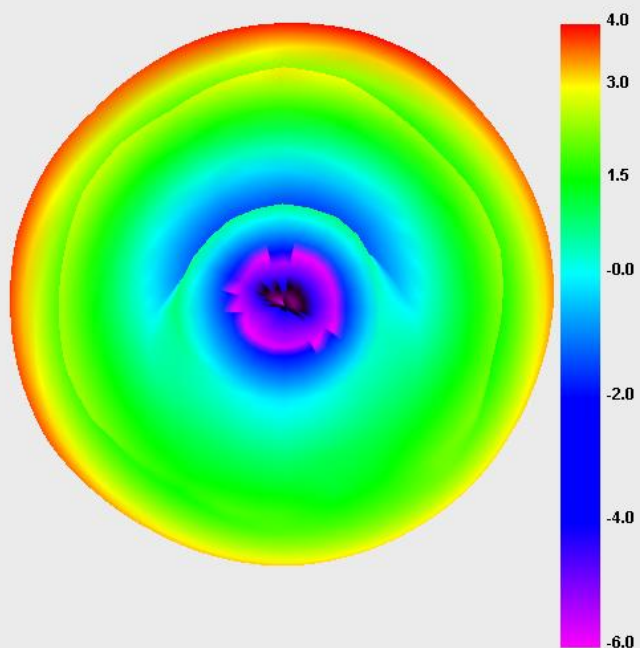
2450.000MHz



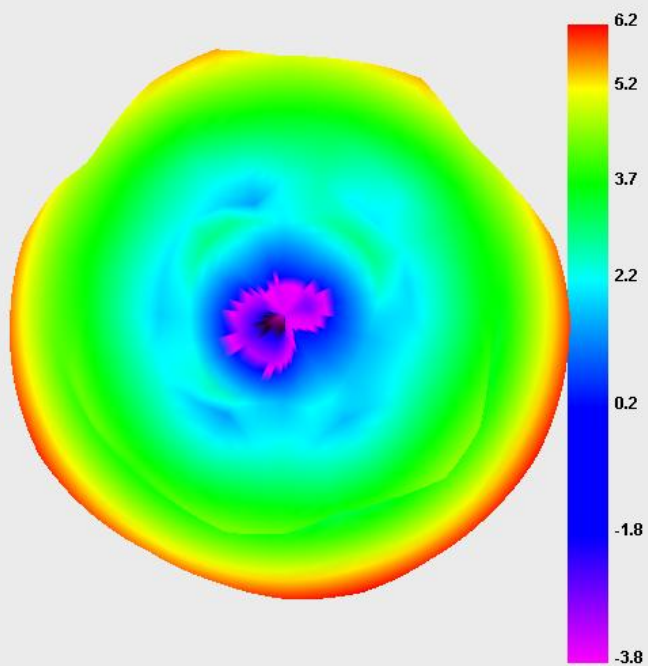
2500.000MHz



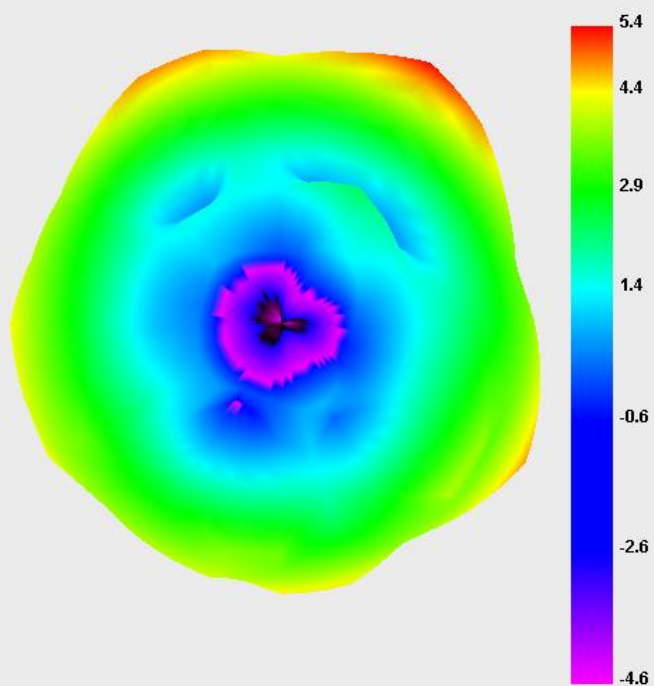
5150.000MHz



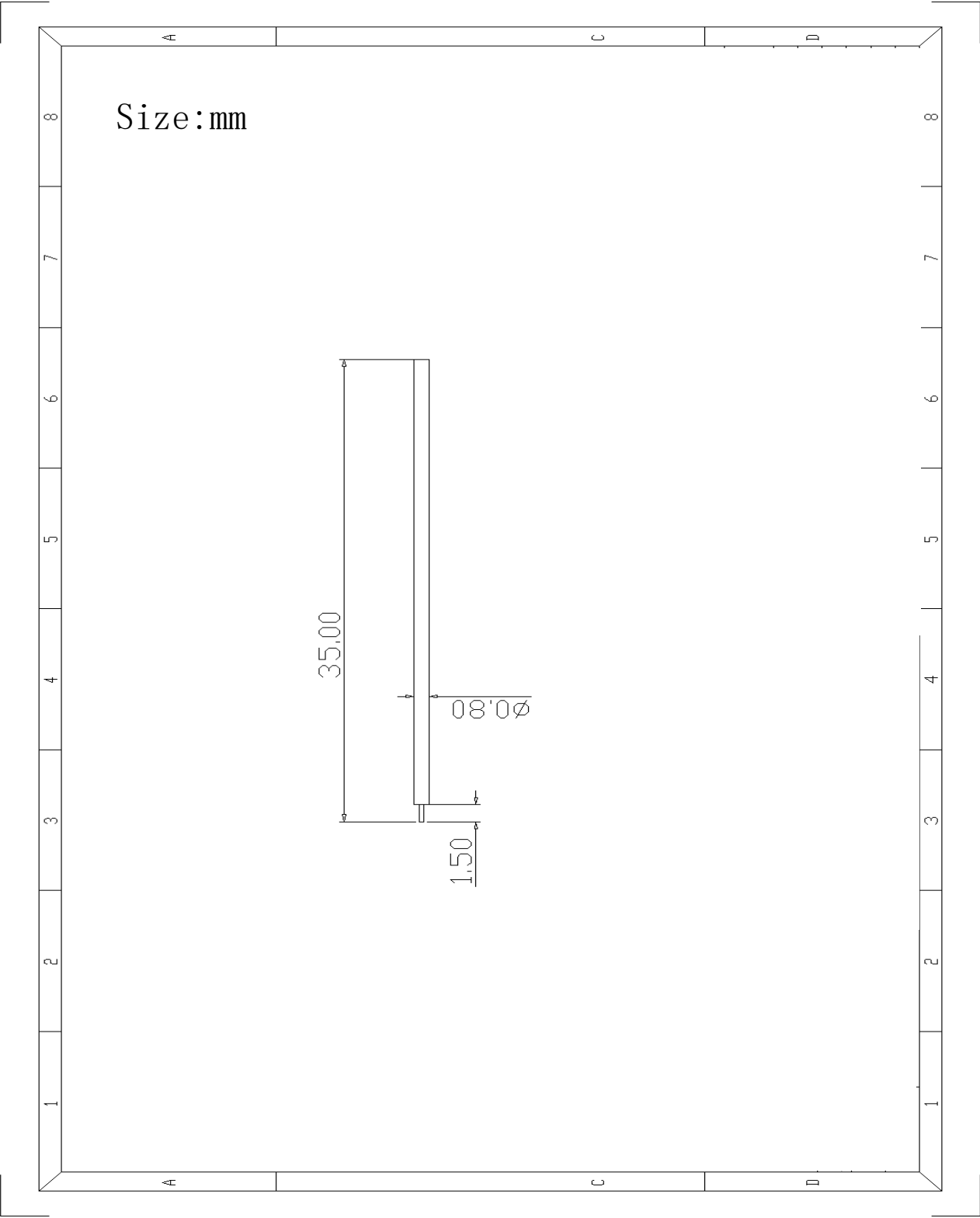
5550.000MHz



5850.000MHz



9.Product Structure Diagram:



10.Packaging: Bagged