



GY-CPE-SUB-6G antenna specification sheet

Project Name:	CPE		Freq:	Sub-6G:600MHz-5.0GMHZ 5Ghz-7.125Ghz	
Inter number:	CPE Ant:SH-061-002-02-OK-B		VERSIO N :	A4	
Date:	2024/05/30				
Futen Technology (ShangHai) Co.,LTD..					
Examine	RF	Frank wu	Desig n	RF	Frank wu
	ME	吴小芳		ME	吴小芳
	Quality	汪圣滨			
	Sales	王乔			
FAIOT					
Date:					
Confirm	RF				
	ME				
Remark					

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1. Project images and testing fixtures

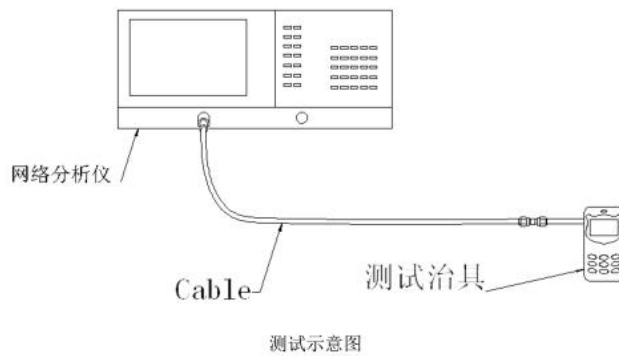
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2. Matching circuit

No matching

3. S11 Testing

4.0 S11 test method

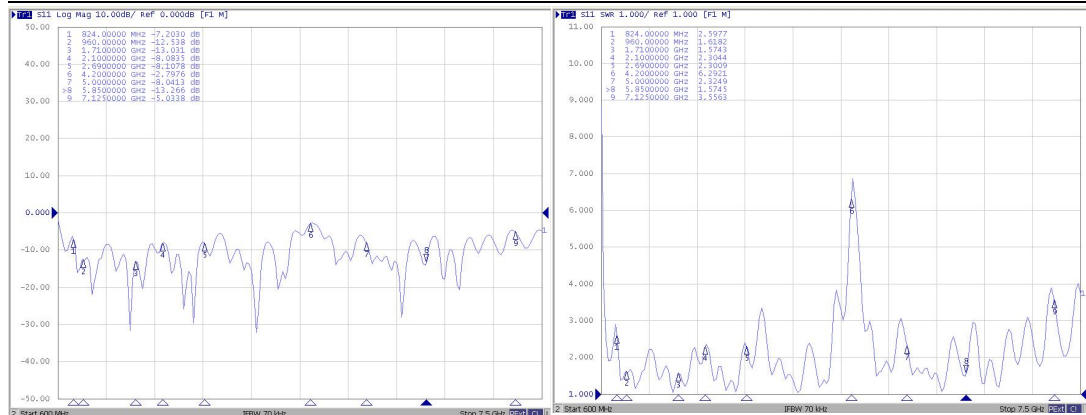


4.1 S11 parameter

Fre'q	0.824G	0.96G	1.710G	2.1G	2.690G	5G	5.8G	7.125G
VSWR	2.5	1.61	1.57	2.31	2.3	2.32	1.57	3.55
RL	-7.2	-12.53	-13.0	-8.0	-8.1	-8.04	-13.2	-5.0

4.2 Parameter image

1. Sub-6G Ant

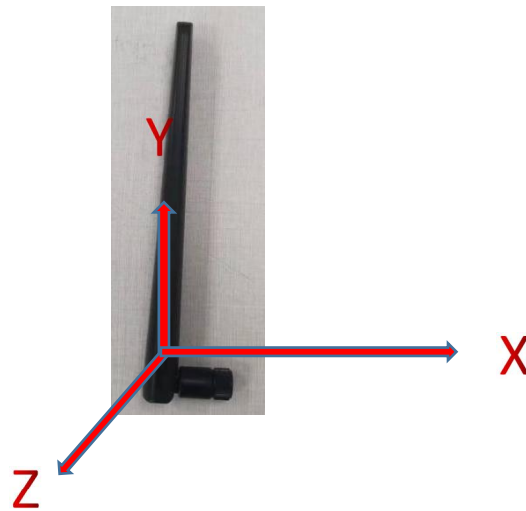


RL

VSWR

4.3 Gain (dBi) & EFF(%)

1. Test diagram



2. Gain & EFF test date

Sub-6G Ant----Gain&Efficiency				
frequency (MHz)	gain (dBi)	mingain (dBi)	efficiency (dBi)	efficiency (%)
600	2.37	-20.22	-2.42	33.61
650	3.62	-18.09	-2.09	48.89
700	4.44	-16.74	-1.63	68.66
750	5.19	-20.08	-1.8	66.13
800	4.92	-32.31	-2.08	61.98
850	4.8	-27.95	-2.51	56.14
900	6.32	-21.14	-2.48	56.43
950	7.3	-23.22	-2.03	62.63
1000	6.77	-20.32	-1.46	71.51



1050	6.13	-27.53	-1.68	67.87
1100	7.23	-26.56	-0.98	79.82
1150	7.09	-25.46	-1.23	75.35
1200	6.09	-32.75	-1.64	68.55
1250	5.43	-28.96	-2.19	60.42
1300	4.89	-18.88	-2.68	53.99
1350	4.2	-26.61	-2.55	55.56
1400	4.18	-27.44	-2.08	61.90
1450	4.32	-31.98	-1.44	71.82
1500	4.41	-23.44	-1.44	71.82
1550	4.85	-21.68	-1.45	71.59
1600	4.39	-27.47	-1.39	72.61
1650	5.44	-26.56	-0.7	85.09
1700	5.38	-29.73	-1.2	75.93
1750	5.1	-26.91	-1.4	72.38
1800	4.78	-26.35	-1.29	74.26
1850	4.17	-31.02	-1.85	65.33
1900	4.33	-29.23	-1.75	66.88
1950	4.67	-29.99	-1.77	66.60
2000	4.58	-36.51	-2.11	61.59
2050	4.58	-32.24	-1.93	64.05
2100	4.4	-23.19	-2.05	62.38
2150	4.49	-32.81	-2.15	60.90
2200	4.65	-27.19	-1.91	64.44
2250	5.1	-32.98	-1.76	66.72
2300	4.66	-29.99	-2.23	59.87
2350	4.49	-33.47	-2.22	59.97
2400	5.5	-27.98	-1.95	63.79
2450	5.25	-31.97	-2.4	57.52
2500	5.82	-32.62	-2.03	62.66
2550	5.64	-35.57	-1.96	63.75
2600	5.19	-29.62	-1.62	68.85
2650	5.32	-29.28	-1.53	70.37
2700	5.18	-23.7	-1.51	70.64
2750	4.96	-26.75	-1.73	67.14
2800	4.65	-28.66	-1.65	68.35
2850	3.92	-24.22	-1.99	63.30
2900	3.98	-30.15	-2	63.16
2950	3.68	-25.75	-2.19	60.34
3000	3.16	-25.6	-2.31	58.72

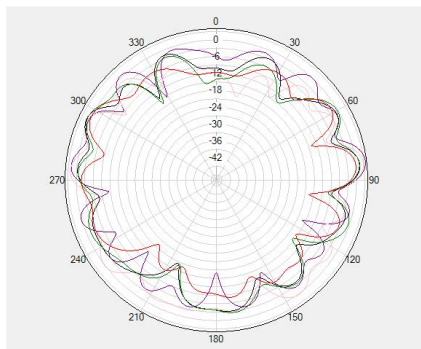
3050	3.01	-40.2	-2.42	57.22
3100	3.35	-22.34	-2.21	60.17
3150	4.13	-23.13	-2.01	63.01
3200	3.92	-24.3	-1.93	64.07
3250	3.96	-30.26	-1.42	72.18
3300	4.22	-28.82	-1.43	71.96
3350	4.43	-32.71	-1.39	72.66
3400	4.17	-29.72	-1.69	67.83
3450	4.43	-24.17	-1.63	68.78
3500	4.11	-27.36	-1.61	69.02
3700	4.5	-31.95	-1.5	70.86
3750	4.35	-34.72	-1.37	72.91
3800	4.13	-29.4	-1.3	74.11
3850	3.62	-30.38	-1.23	75.36
3900	4.34	-24.51	-0.7	85.17
3950	4.85	-24.8	-0.81	82.95
4000	4.81	-21.36	-1	79.40
4050	5.2	-28.36	-1.12	77.18
4100	4.7	-27.01	-1.37	72.95
4150	4.14	-29.89	-1.81	65.85
4200	3.48	-26.61	-2.51	56.12
4250	3.95	-24.27	-2.25	59.58
4300	4.48	-29.47	-1.86	65.14
4350	4.37	-23.42	-1.97	63.55
4400	4.29	-23.72	-2.28	59.22
4450	4.71	-26.76	-1.94	63.98
4500	5.06	-31.03	-1.65	68.39
4550	4.68	-36.4	-2.14	61.13
4600	4.54	-34.04	-2.28	59.21
4650	4.95	-24.59	-2.16	60.86
4700	5	-26.89	-2.05	62.35
4750	4.35	-29.37	-2.8	52.49
4800	3.85	-28.6	-3.01	49.96
4850	3.7	-34	-3.08	49.26
4900	3.37	-39.4	-3.25	47.27
4950	3.26	-40.49	-3.37	46.07
5000	2.9	-36.25	-3.77	42.02

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
5000	62.62	-2.03	3.25	6100	42.4	-3.73	2.04
5050	48.8	-3.12	1.56	6150	48.18	-3.17	1.96
5100	53.55	-2.71	2.34	6200	51.24	-2.9	2.22
5150	52.87	-2.77	2.08	6250	63.31	-1.98	2.69
5200	57.79	-2.38	2.2	6300	59.04	-2.29	2.66
5250	59.1	-2.28	2.16	6350	44.08	-3.56	1.66
5300	63.59	-1.97	2.6	6400	46.51	-3.32	2.39
5350	61.08	-2.14	2.97	6450	39.54	-4.03	1.84
5400	66.3	-1.78	3.58	6500	43.34	-3.63	2
5450	65.94	-1.81	3.76	6550	51.11	-2.91	2.7
5500	55.38	-2.57	2.91	6600	48.19	-3.17	2.38
5550	58.92	-2.3	3.08	6650	51.2	-2.91	2.74
5600	52.97	-2.76	2.63	6700	55.36	-2.57	3.06
5650	46.5	-3.33	1.8	6750	56.13	-2.51	3.07
5700	50.29	-2.99	2.31	6800	52.49	-2.8	2.54
5750	59.15	-2.28	3.05	6850	44.05	-3.56	1.27
5800	43.64	-3.6	1.83	6900	56.17	-2.5	2.45
5850	43.67	-3.6	1.47	6950	46.86	-3.29	1.66
5900	43.65	-3.6	1.7	7000	50.93	-2.93	2.04
5950	39.72	-4.01	1.46	7050	68.44	-1.65	3.18
6000	41.65	-3.8	1.86	7100	53.89	-2.68	2
6050	40.65	-3.91	1.6	7150	50.96	-2.93	1.83

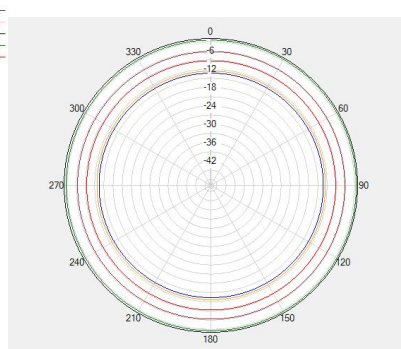
3.Polarization diagram of antenna

3.1 Sub-6G Ant

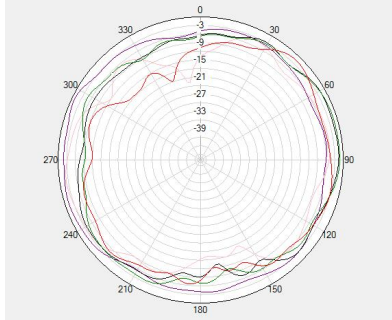
H-Plane (XY)



E1-Plane (XZ)



E2-Plane (YZ)



5.0 Test equipment

test system : Shielded darkroom

Test environment: temperature $22\text{ }^{\circ}\text{C} \pm 3\text{ }^{\circ}\text{C}$, humidity $50\% \pm$

15% Test equipment: When testing passive data, use the network analyzer Agilent E5071C

5.1 Active data

5.1.1 Sub-6G Active data of antenna

6. Prototype grounding treatment

No changer

7. Antenna 2D diagram

