

深圳市云希科技有限公司

ShenZhen Yunxi Technology Co.,Ltd.

Antenna test Report

Customer: 合悦丰

Project Name: BH507

RF Engineer: 吴工

Testing Date: 2022-8-30

Operating band: WIFI/BT

ShenZhen Yunxi Technology Co.,Ltd.

Address: 3rd Floor, Building A1, Xinyuan Industrial Zone, Gushu Shangwei Garden, Xixiang Street, Bao'an District, Shenzhen, China



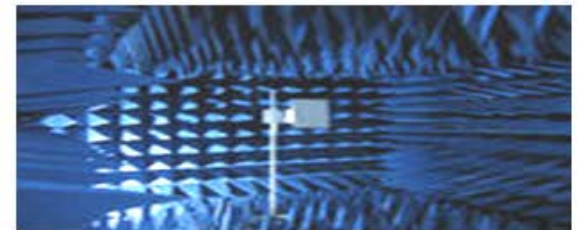
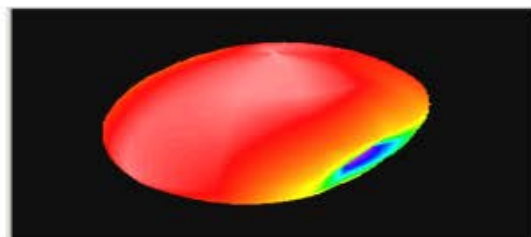
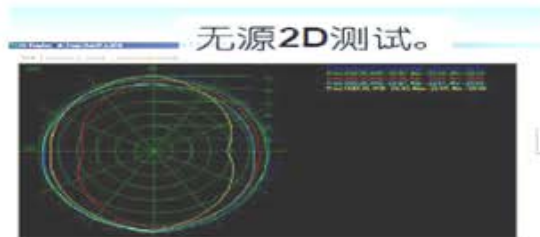
云希科技射频空间

1.Project brief

NO.	ITEMS	DETAILS
1	Operating band	BT/WIFI
2	Frequency range	(2400~2500MHz) (5150~5850MHz)
3	Antenna Type	FPC
4	Antenna material and implementation form	The antenna is pasted on the surface shell with FPC
5	Antenna part number	F791C- 1R23B-100-A
6	Input Impedance	50 (Ω)
7	Gain(Max)	BT/WiFi2.4G: 1.43 dBi WiFi5G: 2.52 dBi
8	Antenna Model	FA1135

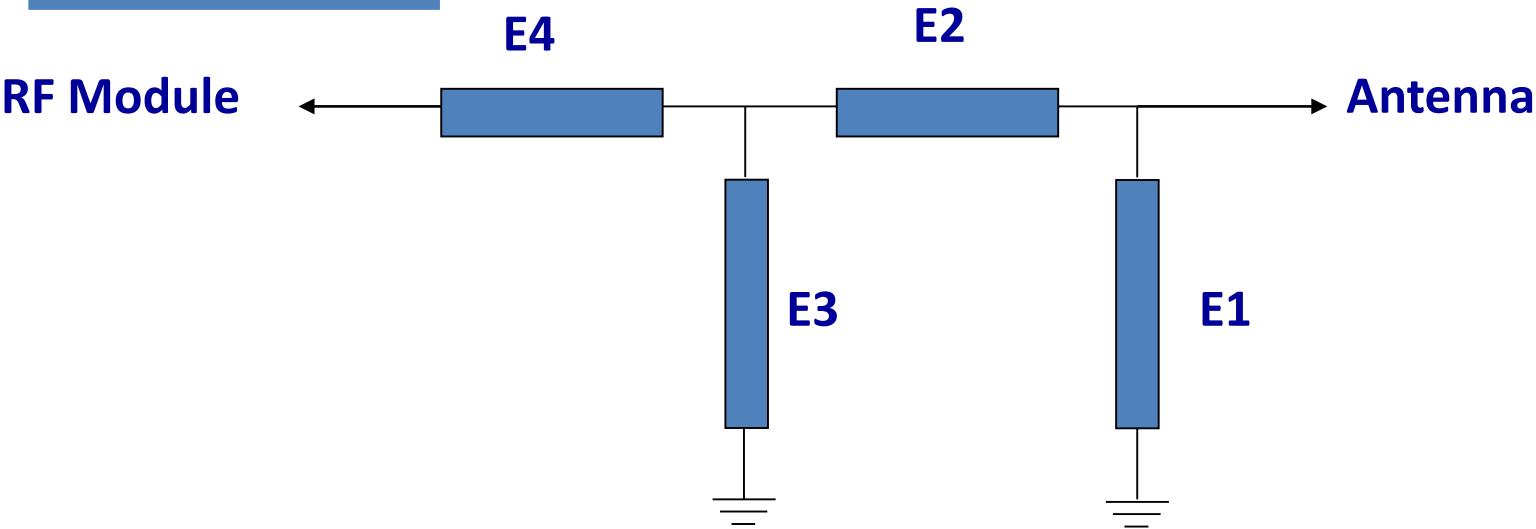
3.Test system and equipment

	Test items	equipment
1. S parameter	1.Return loss 2. Standing wave ratio	network analyzer: HP E5071C/Agilent8753D
2.Coupled power test	1. Transmit power 2. Receiving sensitivity	GSM Tester: Agilent 8960 LTE Tester: CMW500
3. Radiation mode and gain	1. Radiation mode 2. Antenna gain	1. darkroom: 7x4x3 m (ETS-3D) 2. network analyzer: HP Agilent8753ES



Matching Circuits

Antenna matching

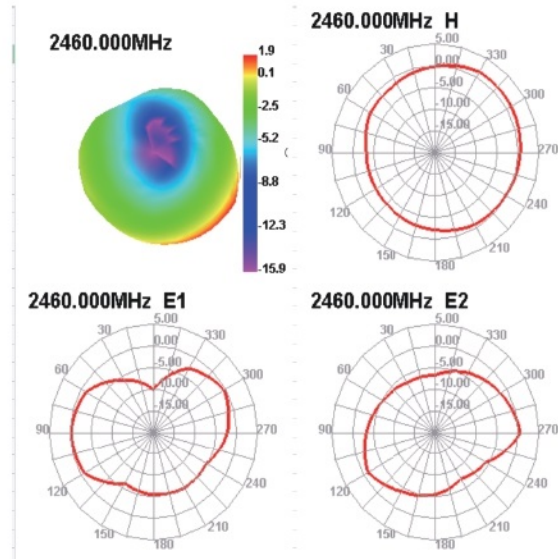


Element	Value	Vender
E1(0402)		
E2(0402)		
E3(0402)		
E4(0402)		

The original matching circuit has no modification

Antenna efficiency and gain

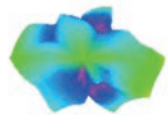
Passive Test For WIFI2.4										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
2400	37.69	-4.24	0.56	-2.15	17.449	20.243	0.56	-12.31	48.17	48.27
2410	35.54	-3.42	0.85	-1.3	20.964	24.579	0.85	-11.91	48.82	48.98
2420	37.74	-2.39	1.13	-0.12	26.191	31.545	1.13	-11.52	49.21	49.73
2430	40.67	-3.91	0.44	-1.71	18.158	22.516	0.44	-13.03	47.85	48.18
2440	34.06	-4.68	0.45	-2.6	14.987	19.072	0.45	-13.62	47.45	47.61
2450	34.9	-4.57	0.29	-2.44	15.113	19.787	0.29	-13.56	47.52	47.61
2460	36.57	-2.47	1.15	-0.25	24.236	32.339	1.89	-11.63	49.2	49.47
2470	36.51	-3.32	1.08	-1.07	19.846	26.666	1.08	-13.34	48.51	48.69
2480	34.89	-4.57	0.17	-2.32	14.858	20.033	0.17	-14.91	47.62	47.62
2490	36.59	-4.37	0.04	-2.11	15.569	21.018	0.04	-15.22	47.76	47.65
2500	40.14	-3	1.43	-0.72	21.317	28.824	1.43	-14.63	48.93	48.83



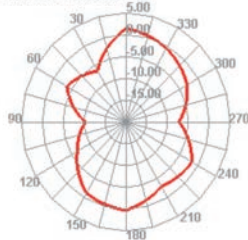
Antenna efficiency and gain

Passive Test For 5G										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
5150	43.94	-3.57	1.55	-0.6	20.193	23.748	1.55	-16.13	58.72	58.81
5220	37.16	-4.3	1.68	-0.47	19.098	18.06	1.68	-14.3	58.8	58.71
5290	34.34	-4.64	1.75	-0.4	18.297	16.043	1.75	-15.3	58.78	59.21
5360	42.18	-3.75	2.17	0.42	21.901	20.275	2.17	-13.42	59.21	59.5
5430	30.05	-5.22	0.16	-1.99	14.887	15.159	0.16	-17.97	57.23	57.98
5500	31.81	-4.97	0.36	-1.79	14.869	16.938	0.36	-24.25	58.2	59.03
5570	35.62	-3.41	2.52	0.37	19.906	25.718	2.52	-24.85	60.39	61.24
5640	31.43	-5.03	1.67	-0.48	12.587	18.841	1.67	-22.96	60.05	60.8
5710	39.68	-4.01	2.05	1.3	14.852	24.826	2.05	-19.05	60.39	61.3
5780	42.95	-3.67	1.23	2.08	16.021	26.933	1.23	-13.39	60.92	61.62
5850	41.27	-2.9	2.13	2.98	19.672	31.599	2.13	-11.63	62.18	63.1

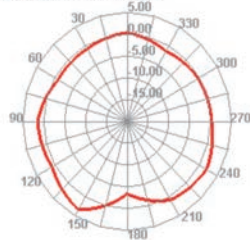
5570.000MHz



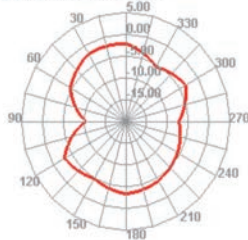
5570.000MHz H



5570.000MHz E1



5570.000MHz E2



The end , thanks!