

Shenzhen Qianli Technology Co. , Ltd.

Antenna test report

Clients	Kawada
Products	S 1(metal shell)
Engineer	Chen Gong
Telephone	19171423590
Mailboxes	
Date	2022-11-16

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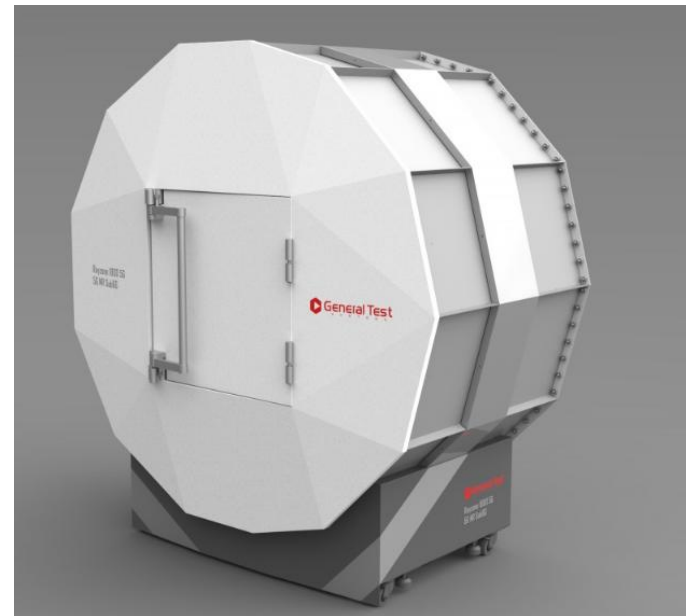
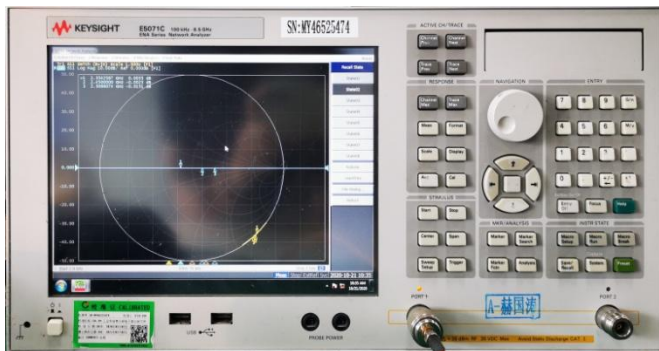
Report Catalogue

- Test Condition
- Antenna product size diagram
- Physical drawing of product
- The S-parameter of the antenna is adjusted in the net
- Microwave anechoic chamber test antenna efficiency field type
- Debugging summary

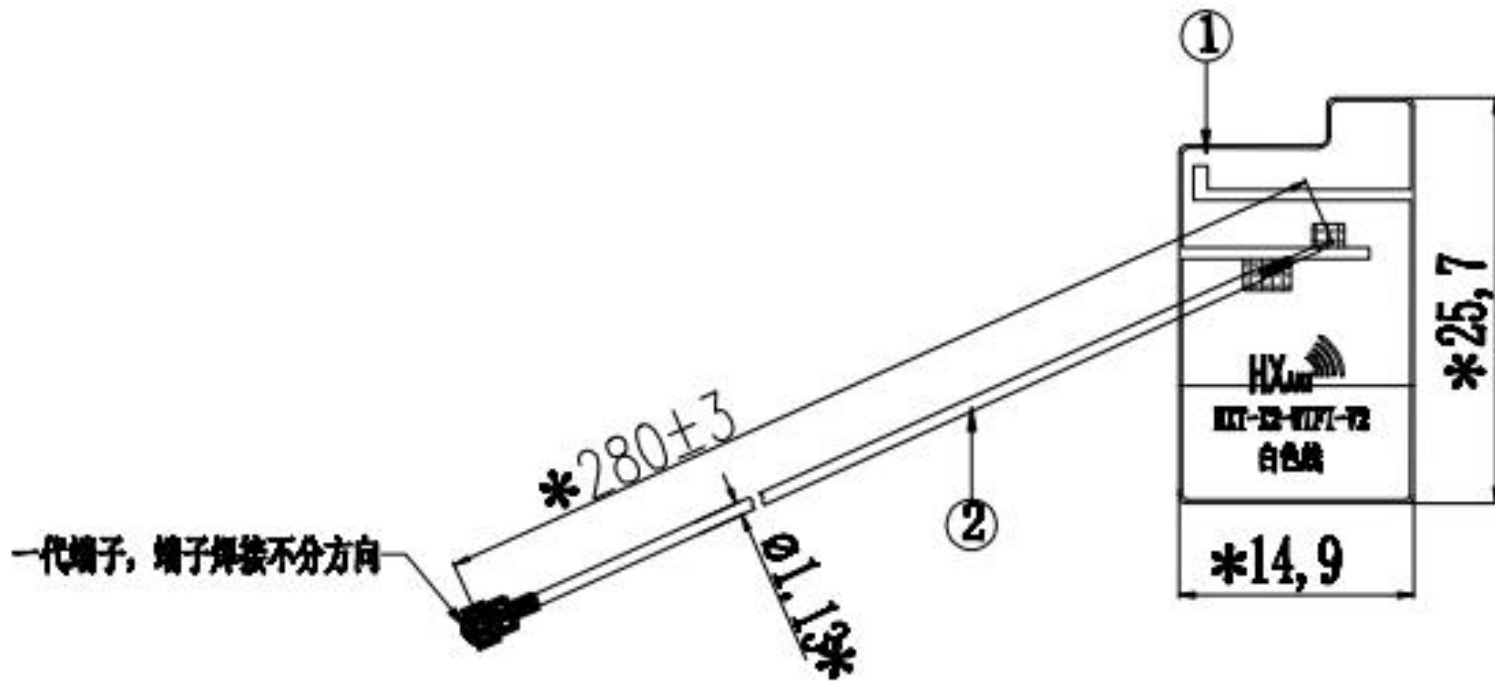
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Test Condition

- 1. S parameter measurement
- 2. Equipment: Network Analyzer (Agilent E5062A) , microwave anechoic chamber
- 3. Items: impedance, echo loss, VSWR, efficiency, gain, radiation field type, sensitivity, power, frequency offset



Antenna product size diagram



WiFi

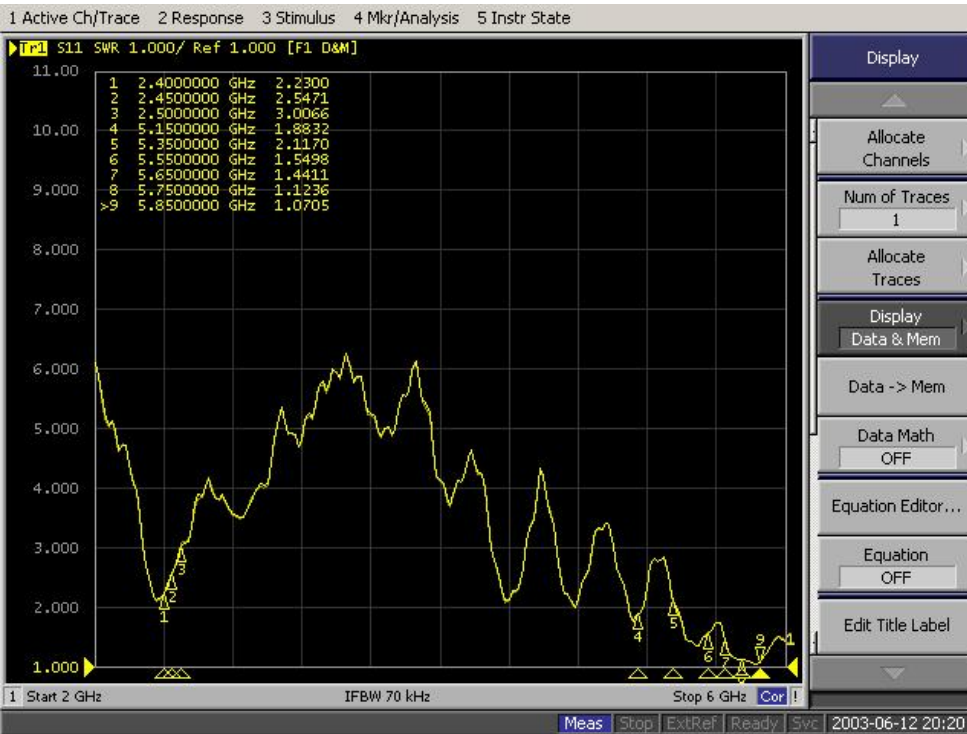
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Physical drawing of product



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The S-parameter of the antenna is adjusted in the net



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Microwave anechoic chamber test antenna efficiency (2.4G wifi)

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	44.46	-3.52	1.2	-0.95	27.249	17.216	1.2	-12.43	4.72	30	45.51	45.06
2410	43.16	-3.65	0.88	-1.27	26.086	17.069	0.88	-13.3	4.53	30	45.14	44.7
2420	43.04	-3.66	0.48	-1.67	25.462	17.582	0.48	-13.62	4.14	30	45.67	45.27
2430	42.14	-3.75	0.45	-1.7	24.351	17.793	0.45	-13.63	4.2	30	45.28	44.87
2440	42.01	-3.77	0.45	-1.7	23.682	18.328	0.45	-12.42	4.22	30	45.75	45.35
2450	39.67	-4.02	0.04	-2.11	21.895	17.772	0.04	-12.86	4.05	30	45.36	44.92
2460	37.72	-4.23	-0.42	-2.57	20.511	17.21	-0.42	-13.71	3.82	30	45.39	44.93
2470	34.94	-4.57	-0.65	-2.8	18.788	16.156	-0.65	-15.88	3.92	30	45.43	44.94
2480	34.54	-4.62	-0.53	-2.68	18.349	16.187	-0.53	-19.48	4.08	30	45.48	45
2490	35.16	-4.54	-0.19	-2.34	18.491	16.672	-0.19	-21.7	4.35	0	45.64	45.23
2500	33.98	-4.69	-0.2	-2.35	17.824	16.155	-0.2	-21.94	4.48	0	45.93	45.51

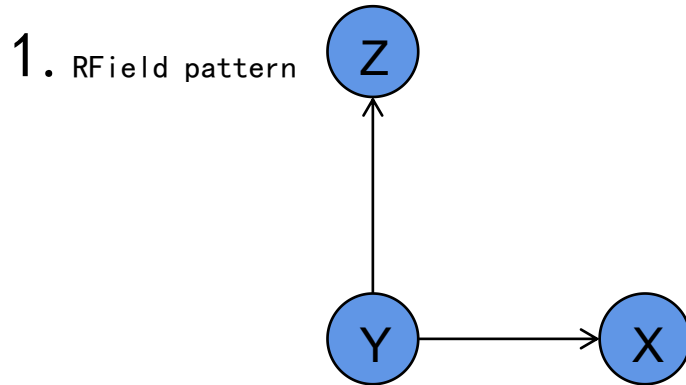
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Microwave anechoic chamber test antenna efficiency (5G wifi)

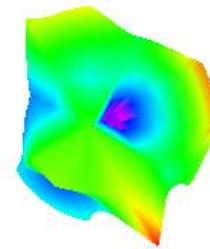
A	B	C	D	E	F	G	H	I	J	K	L	M
Passive Test For 5.8G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	25.6	-5.92	2.37	0.22	18.498	7.103	2.37	-19.51	8.28	0	49.51	49.62
5220	26.33	-5.8	0.82	-1.33	18.639	7.692	0.82	-21.62	6.61	60	49.94	49.98
5290	28.92	-5.39	1.32	-0.83	20.912	8.011	1.32	-21.26	6.7	30	49.93	49.91
5360	29.1	-5.36	2.16	0.01	20.51	8.593	2.16	-15.93	7.52	0	49.98	49.95
5430	29.29	-5.33	0.84	-1.31	20.961	8.331	0.84	-16.5	6.17	0	49.81	49.78
5500	35.31	-4.52	1.46	-0.69	25.675	9.636	1.46	-26.93	5.98	60	50.05	50.1
5570	39.76	-4.01	2.15	0	30.11	9.649	2.15	-15.88	6.15	90	50.23	50.33
5640	34.92	-4.57	3.27	1.12	27.644	7.276	3.27	-17.96	7.84	30	50.63	50.65
5710	35.08	-4.55	2.41	0.26	27.393	7.687	2.41	-25.25	6.96	30	50.44	50.44
5780	39.23	-4.06	2.67	0.52	29.976	9.258	2.67	-18.49	6.74	0	50.48	50.44
5850	40.32	-3.94	3.74	1.59	32.315	8.008	3.74	-21.08	7.68	90	51.22	51.05

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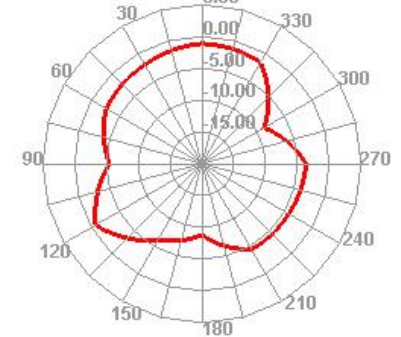
Microwave anechoic chamber test antenna efficiency field type (2.4G wifi)



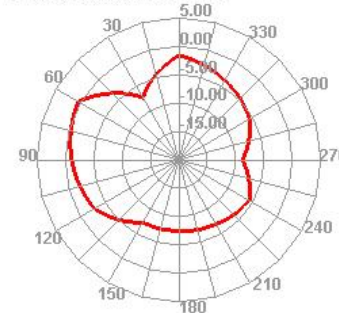
2400.000MHz



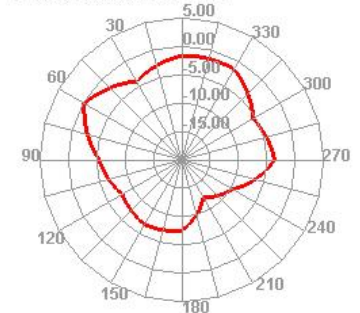
2400.000MHz H



2400.000MHz E1



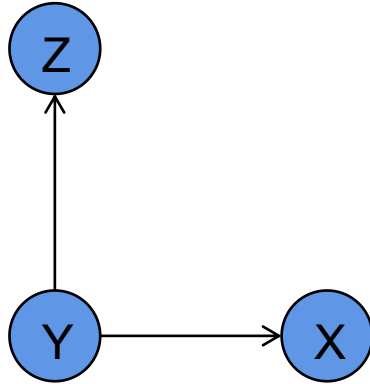
2400.000MHz E2



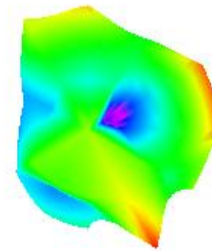
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Microwave anechoic chamber test antenna efficiency field type (2.4G wifi)

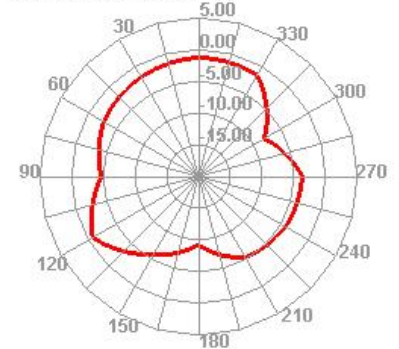
2. RField pattern



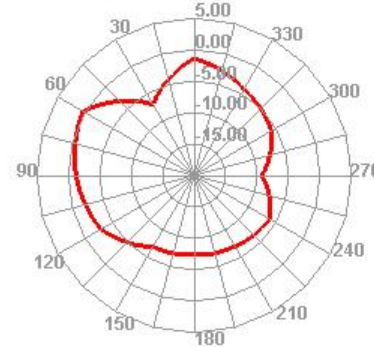
2410.000MHz



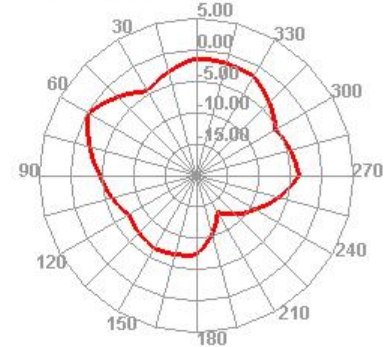
2410.000MHz H



2410.000MHz E1

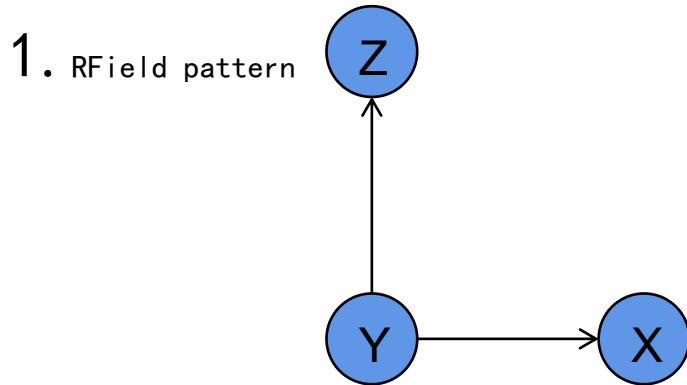


2410.000MHz E2

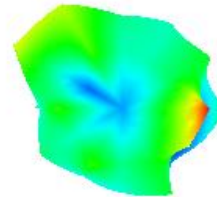


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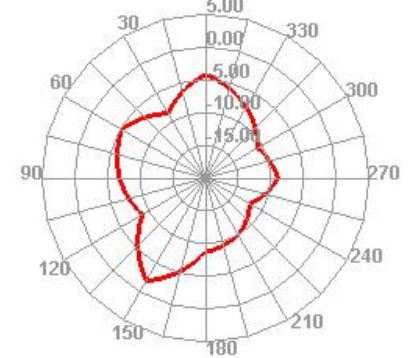
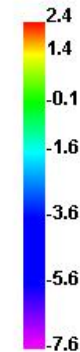
Microwave anechoic chamber test antenna efficiency field type (5G wifi)



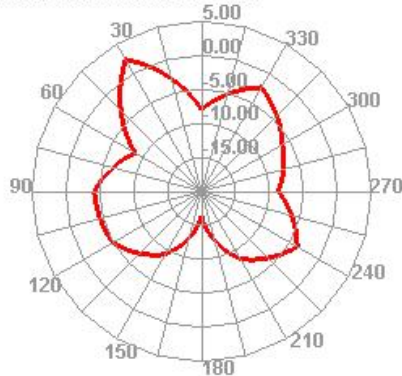
5150.000MHz



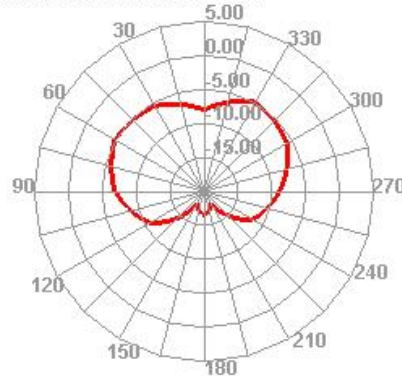
5150.000MHz H



5150.000MHz E1



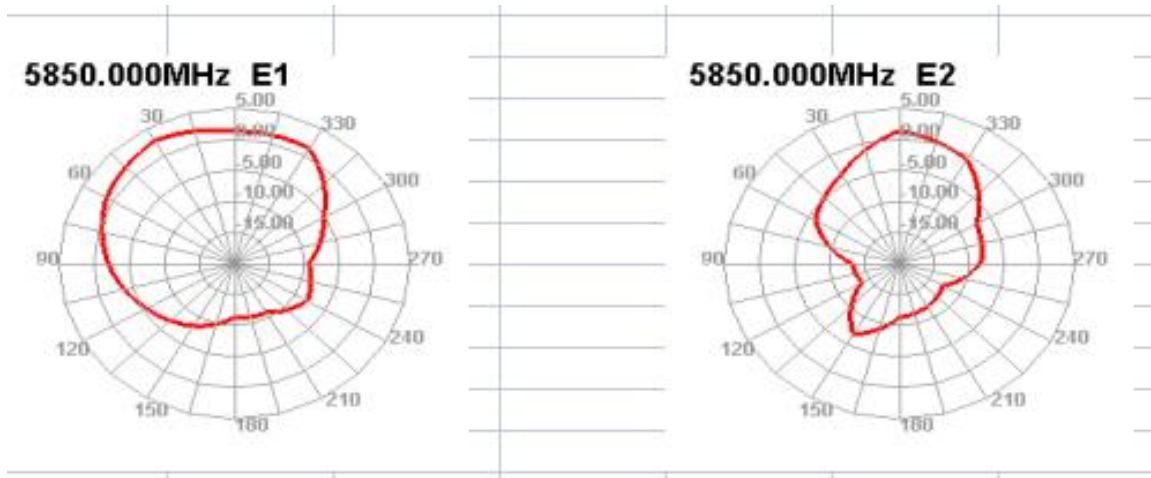
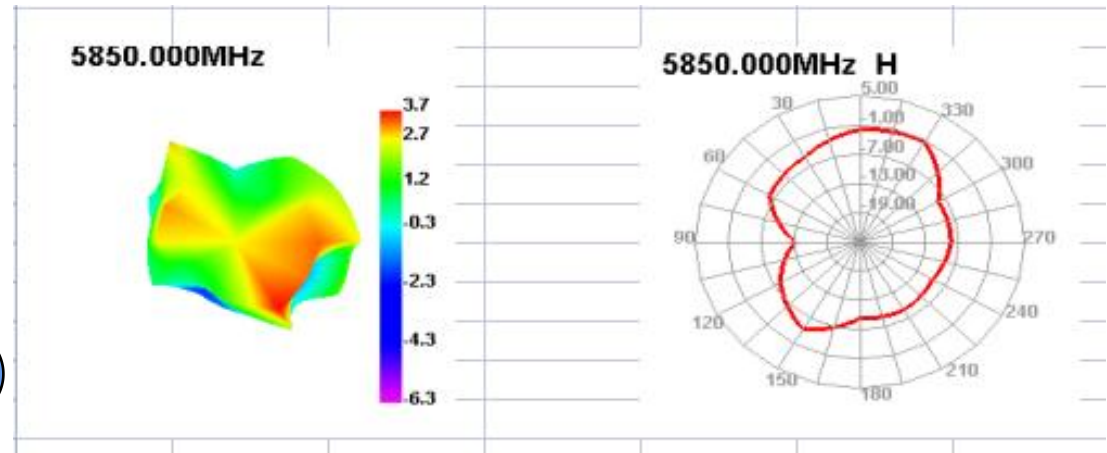
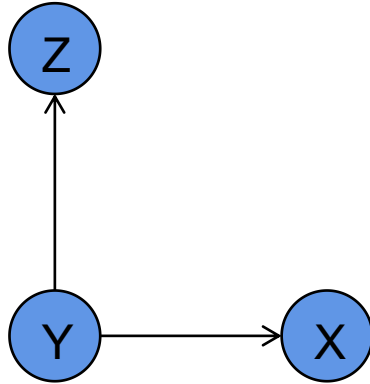
5150.000MHz E2



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Microwave anechoic chamber test antenna efficiency field type (5G wifi)

1. RField pattern



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Thanks for Your Attention