

PSA

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华阳 上汽HS3101A Antenna test report

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INPAQ Technology Co., Ltd.

Last updated in Jan.27th, 2026

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Revision History

Released Date	Version	Record
Jan.27 th ,2026	V0	首版样机天线调试



Requirements of Antenna Design and Measurement

Requirements of Antenna Design

RF Function	Frequency Band	Remark
BT-L	2400-2500MHz&5150-5850MHz	
BT/WIFI-R	2400-2500MHz&5150-5850MHz	

Requirements of Measurement

Test Item	Specification	Remark
VSWR		
Efficiency(%)		
Peak gain	N/A	

Antenna Placement & Solution

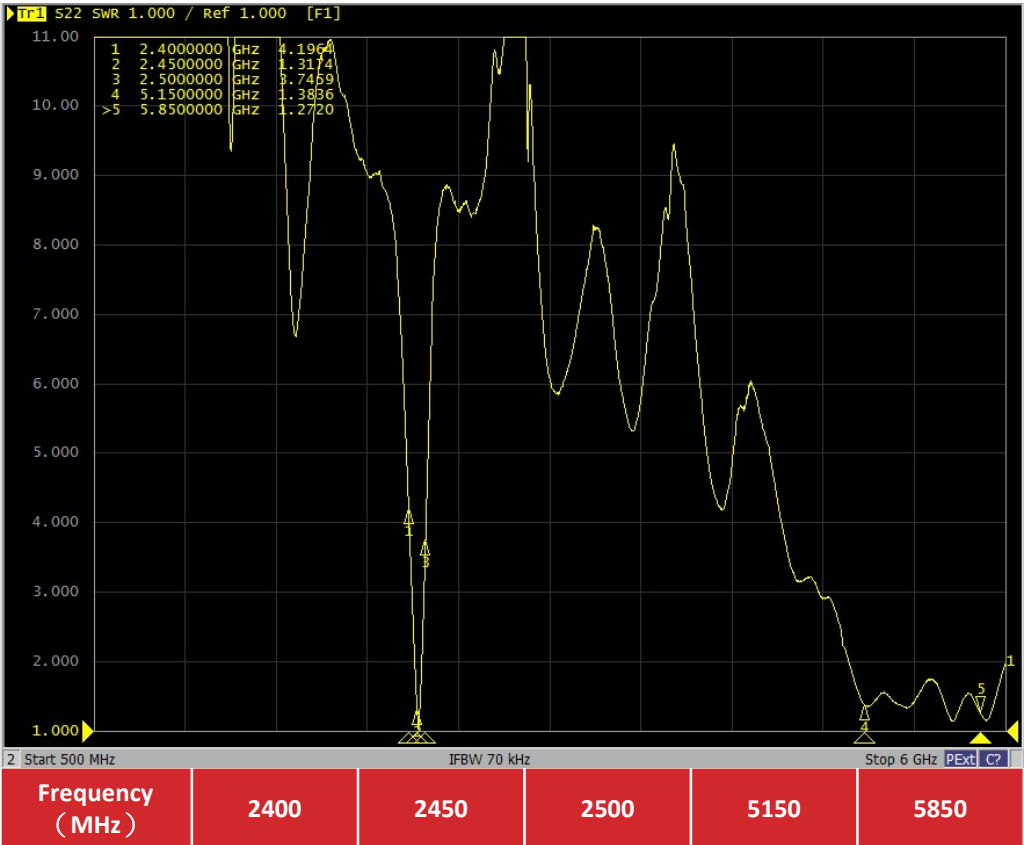


Antenna Placement & Solution

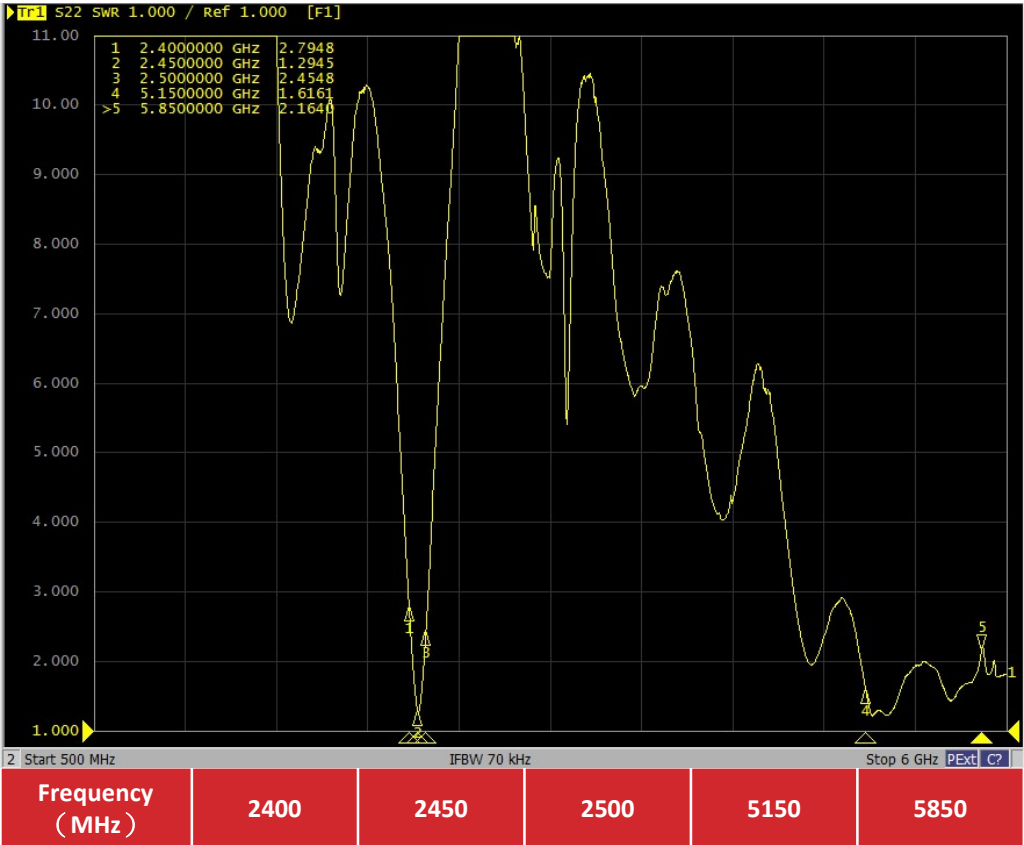


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VSWR Results BT-L

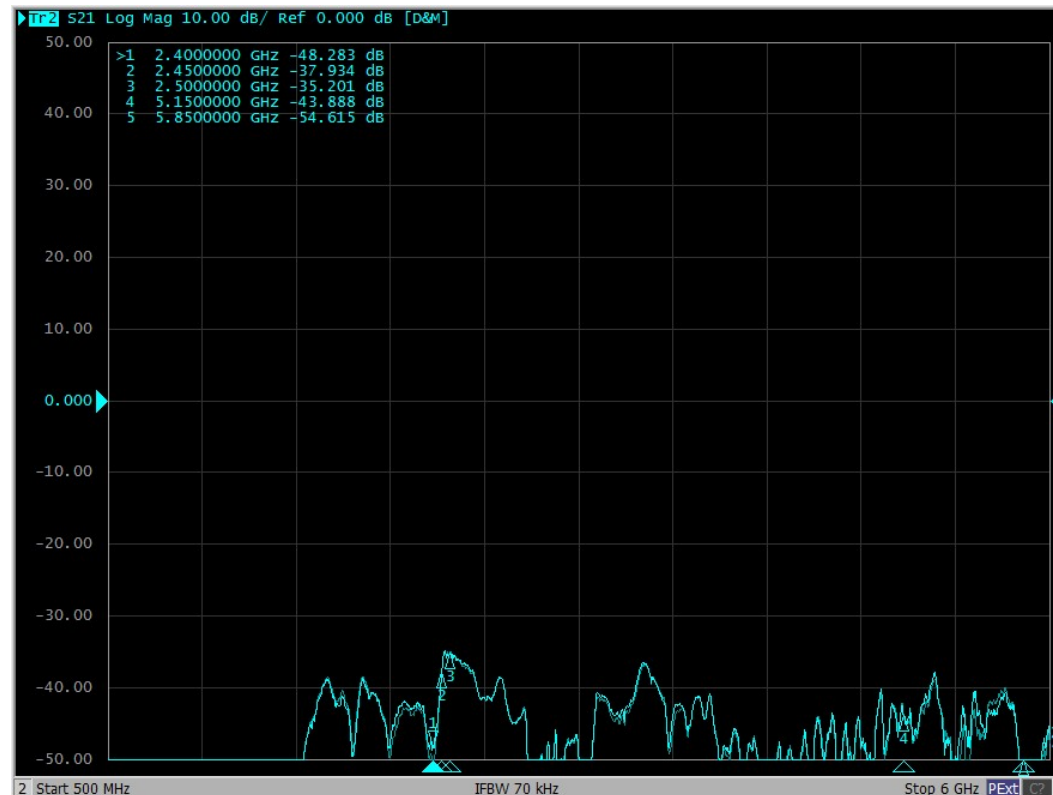


VSWR Results BT/WIFI-R



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Isolation Results



Frequency (MHz)	2400	2450	2500	5150	5850
Isolation(dB)	-48	-37	-35	-43	-54

Test Setup for Radiation Pattern Measurement

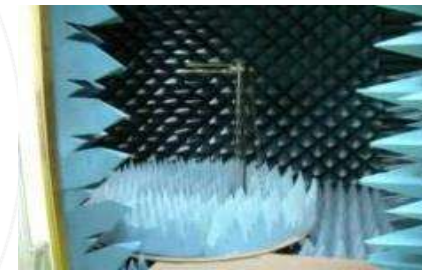
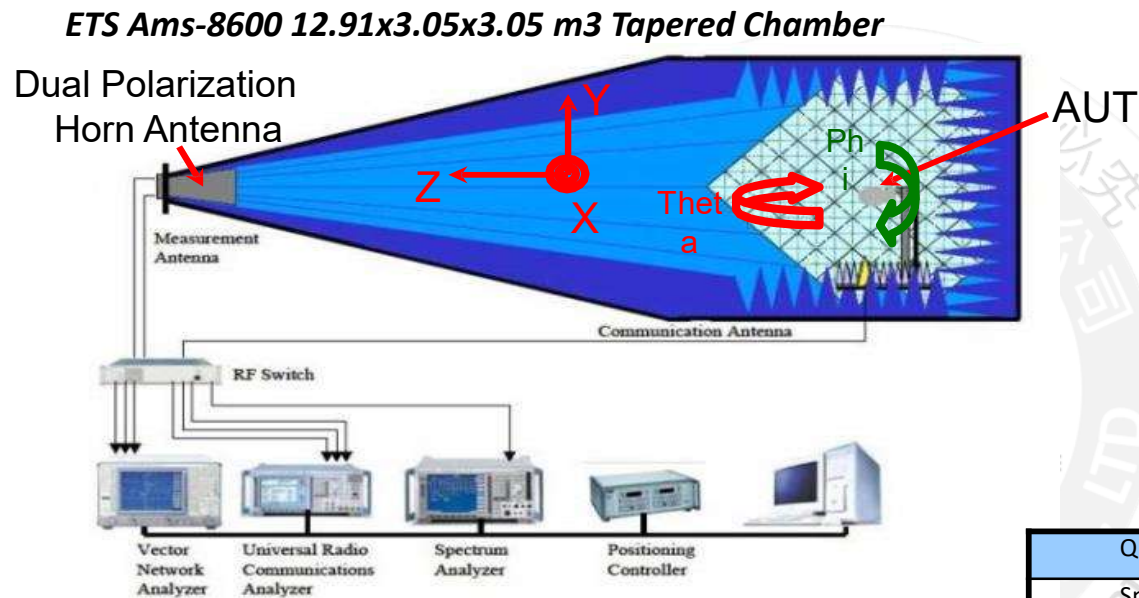
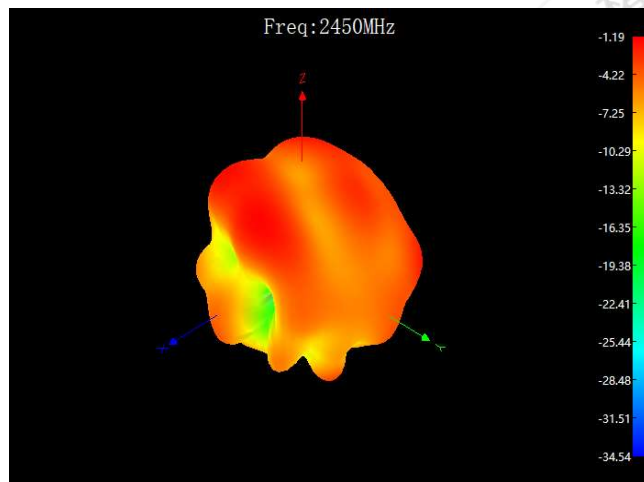


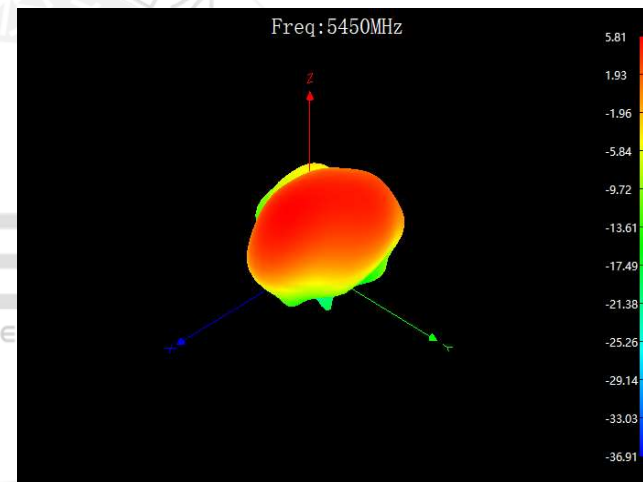
Figure 1: System diagram for test system including compact-size tapered anechoic chamber and optional test instrumentation

QUIPMENT	BRAND	MODULE TYPE
Spectrum	Agilent	E4402B
Signal Generator	Agilent	8960
Switch	Agilent	3499A
Switch	ETS	2090
Network Analyzer	Agilent	N5230A

3D Radiation Pattern Results BT-L

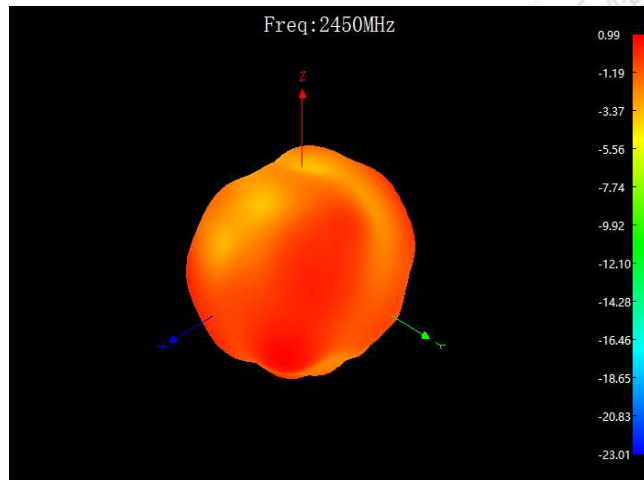


2450MHz

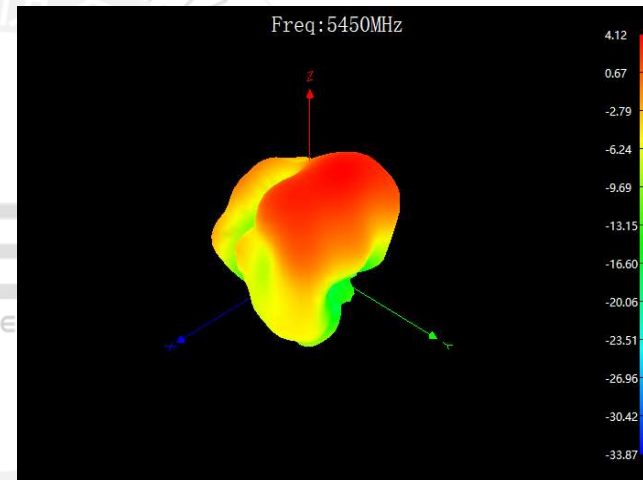


5450MHz

3D Radiation Pattern Results BT/WIFI-R

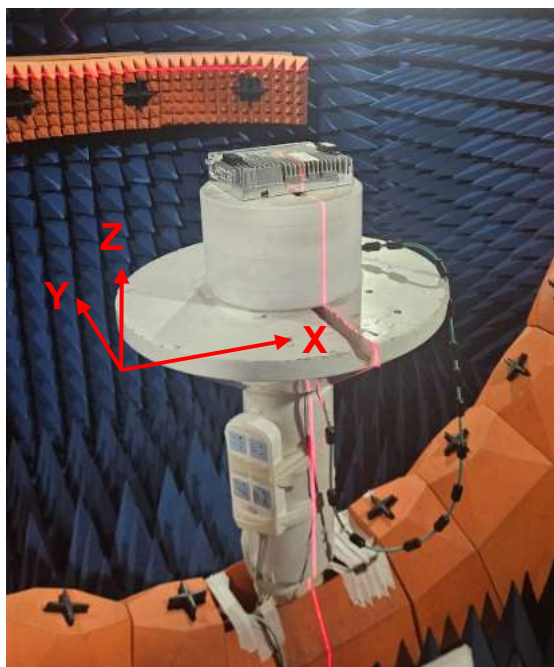


2450MHz

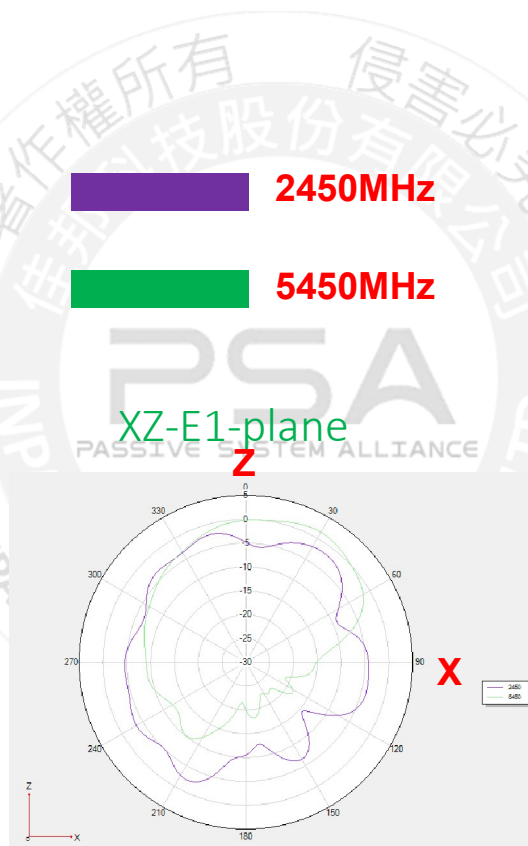


5450MHz

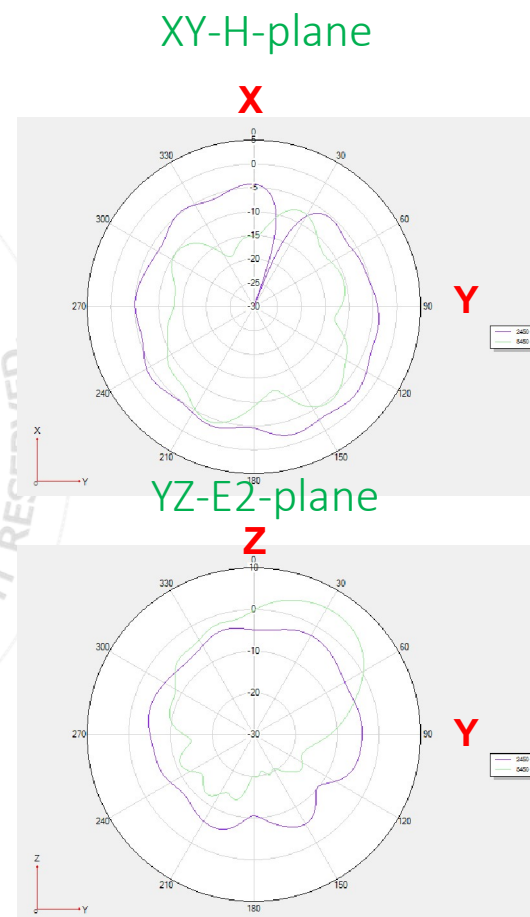
2D Radiation Pattern Results BT-L



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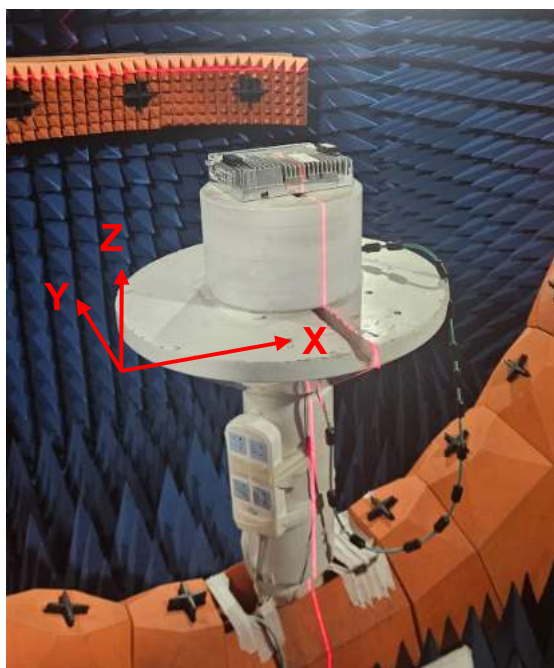


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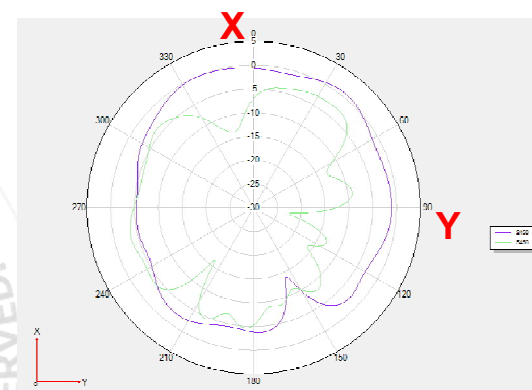
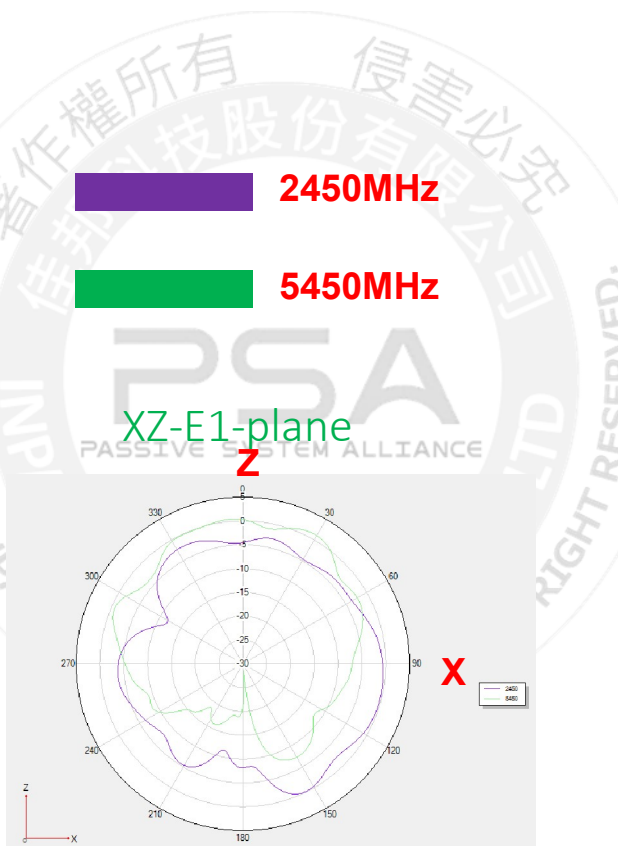


WE CONNECT WE PROTECT **PSA**

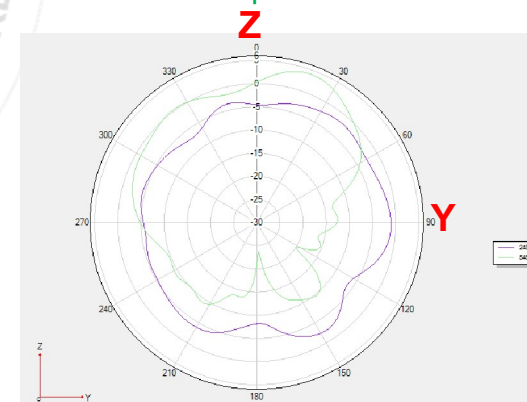
2D Radiation Pattern Results BT/WIFI-R



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YZ-E2-plane



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Results Summary-Peak Gain & Efficiency

Frequency (MHz)	BT-L(2.4G)		
	Efficiency (dB)	Efficiency (%)	MaxGain/dBi
2400	-5.64	27.29	-4.1
2410	-5.36	29.11	-3.54
2420	-4.55	35.08	-2.83
2430	-4.39	36.39	-2.36
2440	-3.64	43.25	-1.82
2450	-3.82	41.5	-1.19
2460	-3.58	43.85	-0.96
2470	-4.24	37.67	-0.4
2480	-4.61	34.59	0.07
2490	-5.42	28.71	0.36
2500	-6.04	24.89	0.32

Frequency (MHz)	BT-L(5G)		
	Efficiency (dB)	Efficiency (%)	MaxGain/dBi
5150	-3.38	45.93	5.45
5200	-3.2	47.84	5.82
5250	-3.31	46.62	5.73
5300	-3.44	45.28	5.9
5350	-3.3	46.75	5.38
5400	-3.27	47.15	5.38
5450	-3.39	45.82	5.81
5500	-3.06	49.43	4.29
5550	-3.24	47.42	4.32
5600	-3.55	44.16	3.89
5650	-3.51	44.57	2.37
5700	-3.57	43.92	2.48
5750	-3.23	47.48	3.45
5800	-3.25	47.36	4.07
5850	-3.1	48.95	4.3

Results Summary-Peak Gain & Efficiency

Frequency (MHz)	BT/WIFI-R(2.4G)		
	Efficiency (dB)	Efficiency (%)	MaxGain/ dBi
2400	-4.34	36.81	-1.4
2410	-3.82	41.5	-1.12
2420	-3.56	44.06	-0.29
2430	-3.33	46.4	0.03
2440	-3.23	47.52	0.45
2450	-3.13	48.61	0.99
2460	-3.03	49.83	0.36
2470	-3.17	48.23	0.8
2480	-3.21	47.75	0.21
2490	-3.56	44.06	0.39
2500	-4.39	36.39	-0.28

Frequency (MHz)	BT/WIFI-R(5G)		
	Efficiency (dB)	Efficiency (%)	MaxGain/dB i
5150	-3.37	45.98	4.53
5200	-4.11	38.81	3.62
5250	-4.33	36.91	2.72
5300	-3.67	42.95	3.77
5350	-3.04	49.66	4.34
5400	-3.35	46.2	4.12
5450	-3.74	42.23	4.12
5500	-3.78	41.89	3.28
5550	-3.13	48.64	3.66
5600	-3.48	44.87	3.71
5650	-3.66	43.05	3.06
5700	-3.4	45.7	2.61
5750	-3.34	46.39	3.31
5800	-3.28	46.95	4.02
5850	-3.59	43.76	3.52

Conclusion

1. **BT -L天线Cable长193mm; BT / WIFI-R天线Cable166mm 。**
2. 以上数据为手工样测试，正在打样验证。
3. 从以上无源数据看，天线性能基本可以满足。

以上请知悉，感谢！

Thank you

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