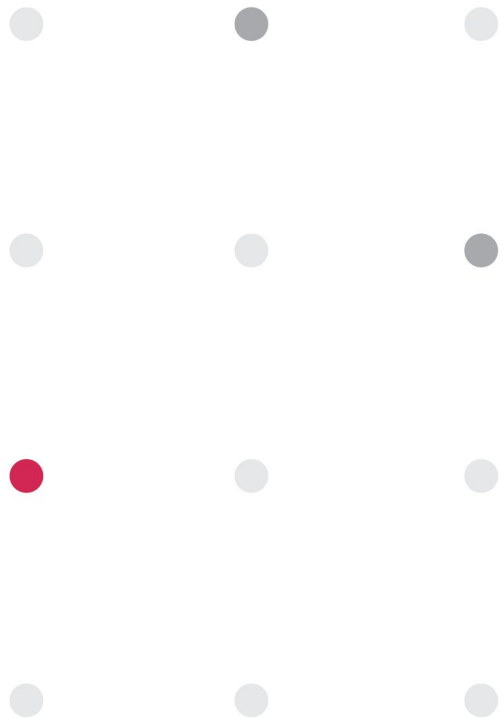


PSA

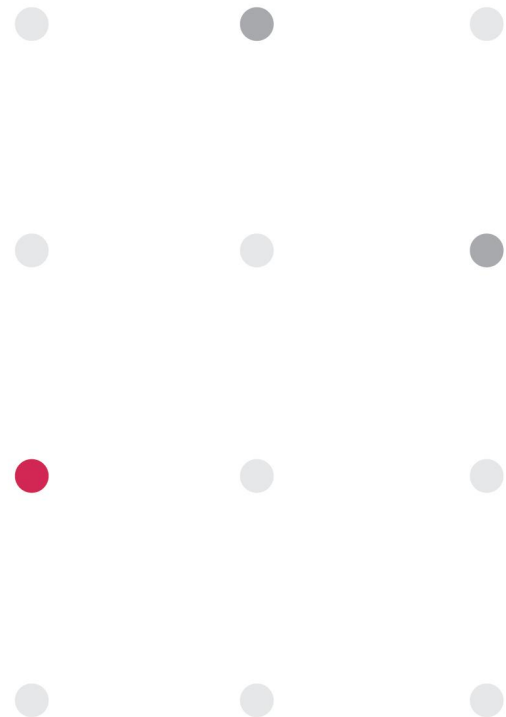
佳邦科技股份有限公司

INPAQ TECHNOLOGY CO., LTD.



PSA

PASSIVE SYSTEM ALLIANCE
INPAQ TECHNOLOGY CO., LTD.



三奕电子-无线游戏手柄

Presented by

郑冲

2025/ 04/ 28



Version	Date	Description	Author
V01	2024/11/04	New Release	郑冲
V02	2024/11/29	新完整整机重新调试验证	郑冲
V03	2024/12/17	新前面壳重新调试验证	郑冲
V04	2025/01/08	新主板和前面壳重新优化	郑冲
V05	2025/04/28	新主板和前面壳重新优化	郑冲

OUTLINE

1. Measurement Information

1.1 Experimental Setup

1.2 Antenna Solution Detail

2. Antenna Characteristics

2.1 S-Parameter

2.2 Antenna Efficiency and Peak Gain

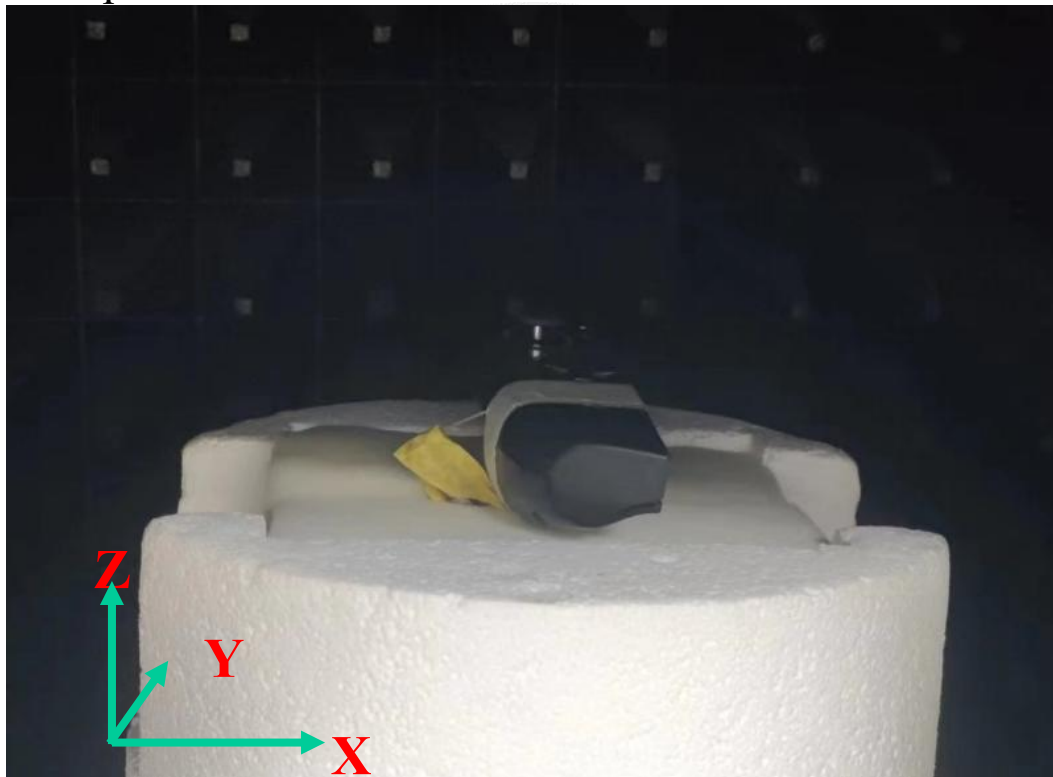
2.3 3 views of antenna & 2D Radiation Patterns

3. Summary

1. Measurement Information

1.1 Experimental Setup

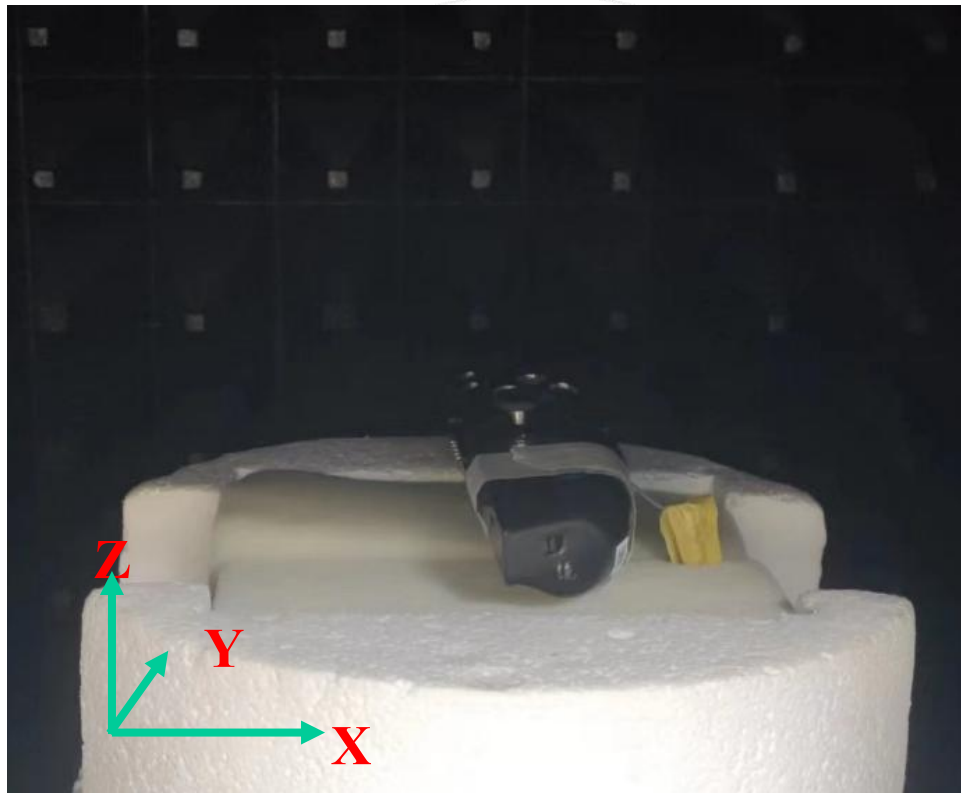
左手柄



1. Measurement Information

1.1 Experimental Setup

右手柄



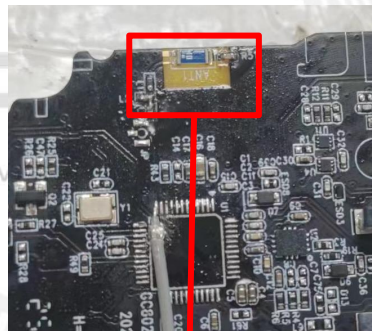
1. Measurement Information

1.2 Antenna Solution Detail



前壳溅镀金
属漆分布

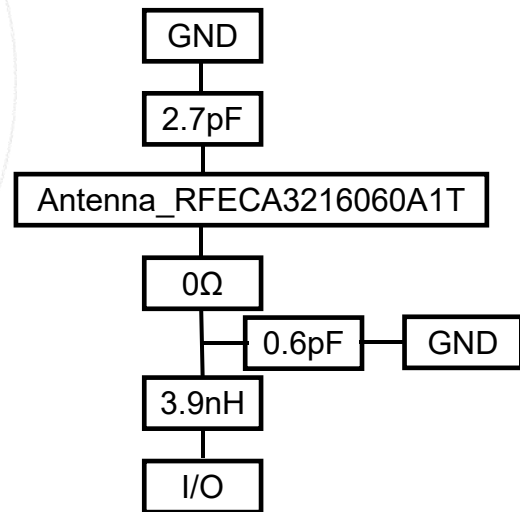
左手柄



ANT

	對應料號
0Ω	WR04X000 PTL
2.7pF	RF15N2R7A500CTNA
0.6pF	RF15N0R6A500CTNA
3.9nH	WLCM1005Z0B3N9TB

Matching values



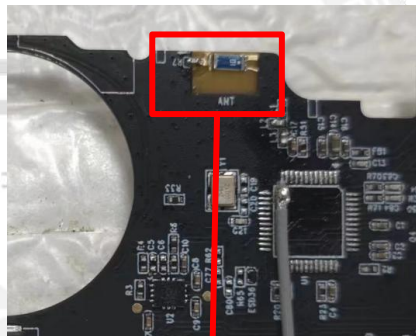
1. Measurement Information

1.2 Antenna Solution Detail



前壳溅镀金
属漆分布

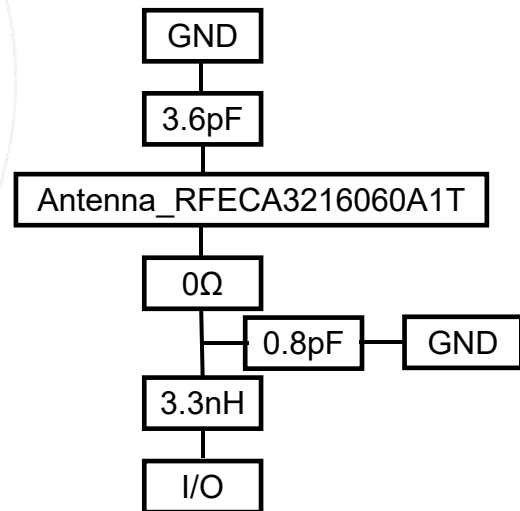
右手柄



ANT

	對應料號
0Ω	WR04X000 PTL
3.6pF	RF15N3R6A500CTNA
0.8pF	RF15N0R8A500CTNA
3.3nH	WLCM1005Z0B3N3TB

Matching values

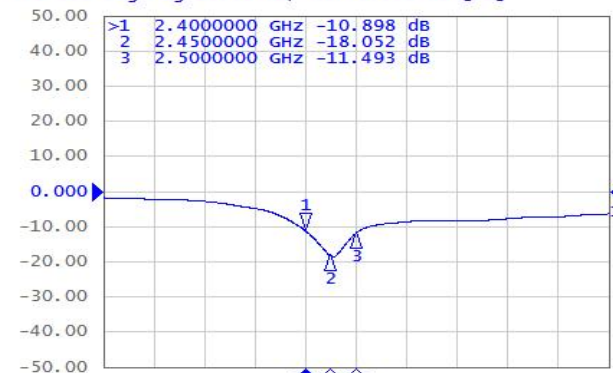


2. Antenna Characteristics

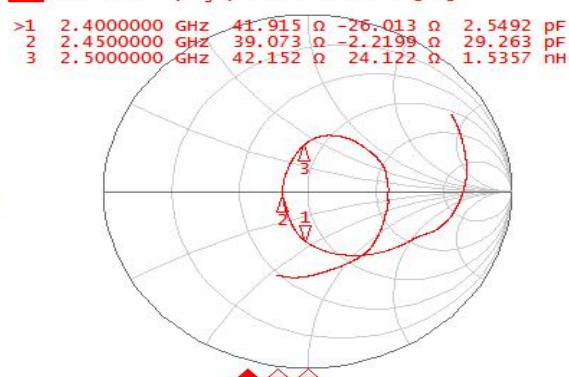
左手柄

2.1 S-Parameter

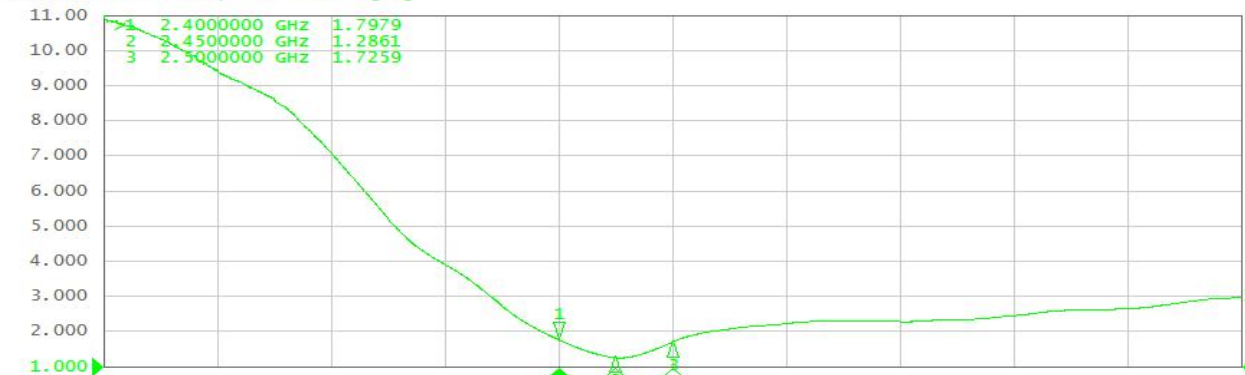
Tr1 S22 Log Mag 10.00 dB/ Ref 0.000 dB [F1]



Tr2 S22 Smith (R+jX) Scale 1.000 u [F1]



Tr3 S22 SWR 1.000 / Ref 1.000 [F1]

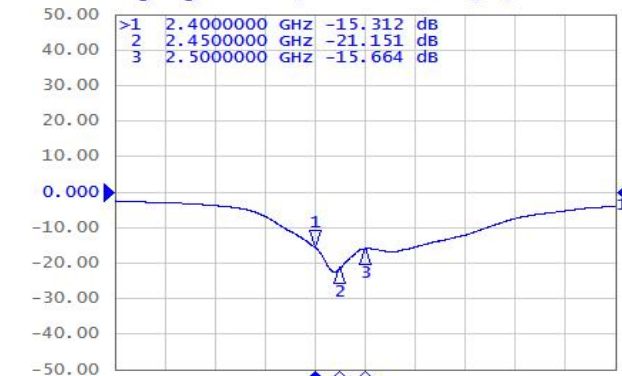


2. Antenna Characteristics

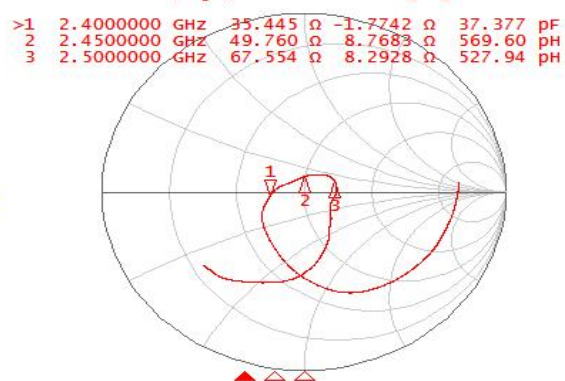
2.1 S-Parameter

右手柄

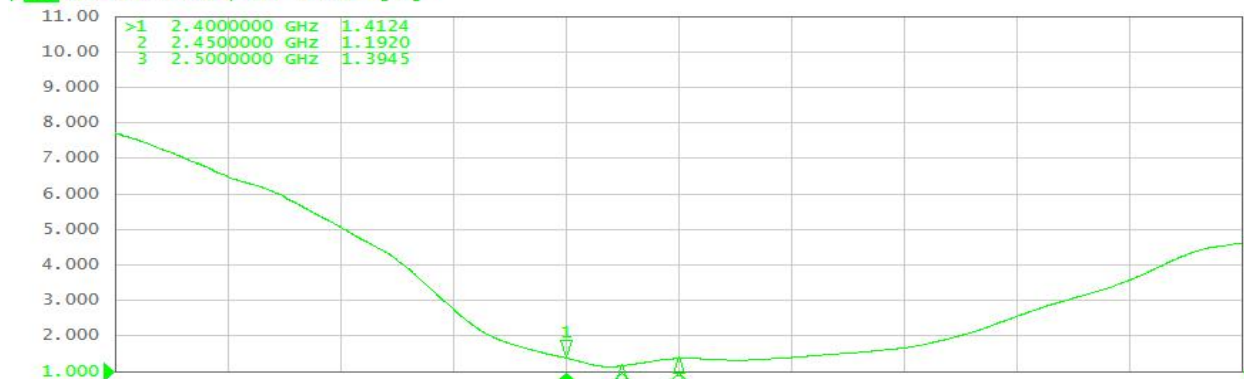
Tr1 S22 Log Mag 10.00 dB/ Ref 0.000 dB [F1]



Tr2 S22 Smith (R+jX) Scale 1.000 U [F1]



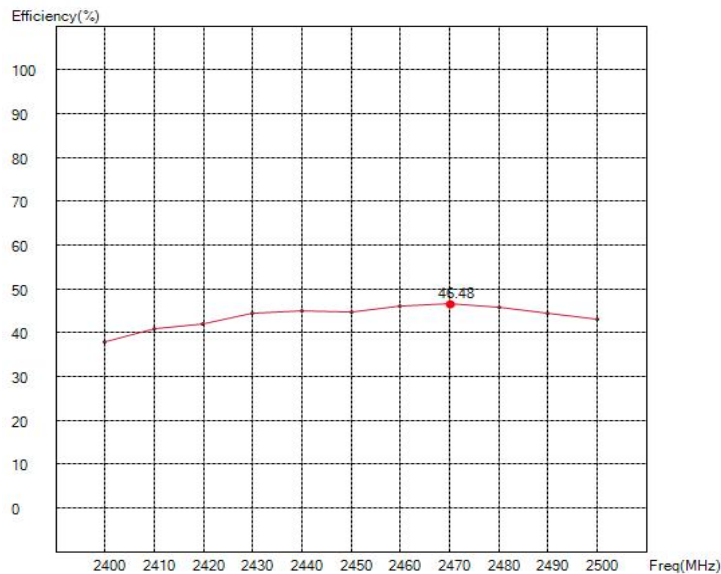
Tr3 S22 SWR 1.000 / Ref 1.000 [F1]



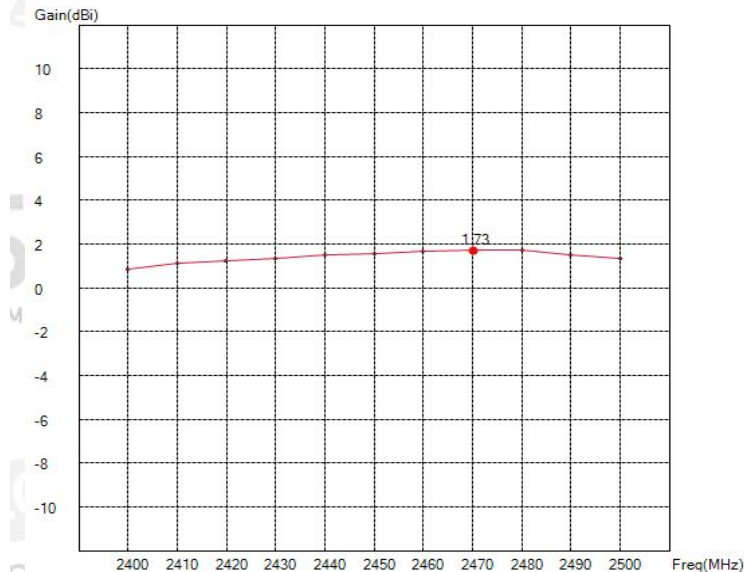
2. Antenna Characteristics

2.2 Antenna Efficiency and Peak Gain

左手柄



Maximum Efficiency at 2470MHz : 46.48%

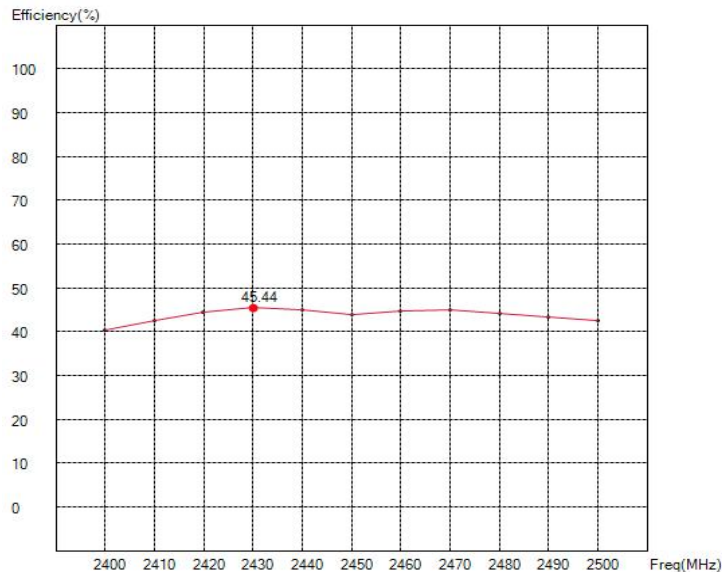


Maximum Peak Gain at 2470MHz : 1.73dBi

2. Antenna Characteristics

2.2 Antenna Efficiency and Peak Gain

右手柄



Maximum Efficiency at 2430MHz : 45.44%



Maximum Peak Gain at 2490MHz : 0.7dBi

2. Antenna Characteristics

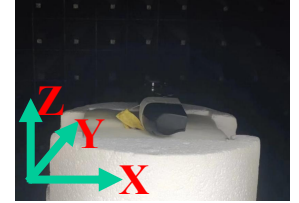
2.2 Antenna Efficiency and Peak Gain

	左手柄			右手柄		
Freq(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)	Gain(dBi)	Efficiency(dB)	Efficiency(%)
2400	0.84	-4.22	37.87	-0.53	-3.96	40.22
2410	1.14	-3.90	40.75	-0.34	-3.73	42.41
2420	1.23	-3.77	41.99	-0.06	-3.53	44.40
2430	1.34	-3.53	44.38	0.10	-3.43	45.44
2440	1.51	-3.46	45.05	0.17	-3.47	44.95
2450	1.53	-3.49	44.78	0.27	-3.59	43.80
2460	1.65	-3.37	46.07	0.46	-3.50	44.67
2470	1.73	-3.33	46.48	0.62	-3.48	44.84
2480	1.70	-3.39	45.78	0.62	-3.55	44.11
2490	1.52	-3.53	44.38	0.70	-3.64	43.25
2500	1.36	-3.66	43.01	0.69	-3.71	42.55

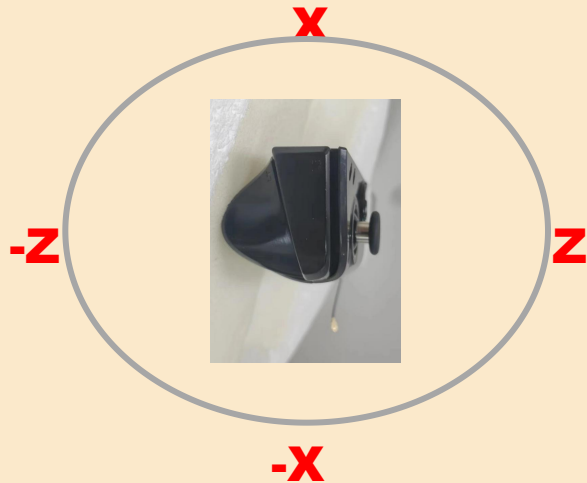
2. Antenna Characteristics

2.3 3 views of antenna

左手柄



X-Z plane



Y-Z plane



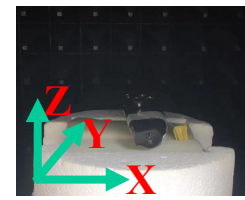
X-Y plane



2. Antenna Characteristics

2.3 3 views of antenna

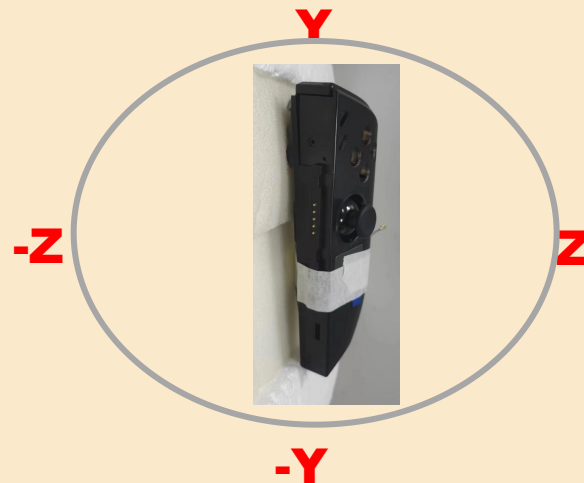
右手柄



X-Z plane



Y-Z plane

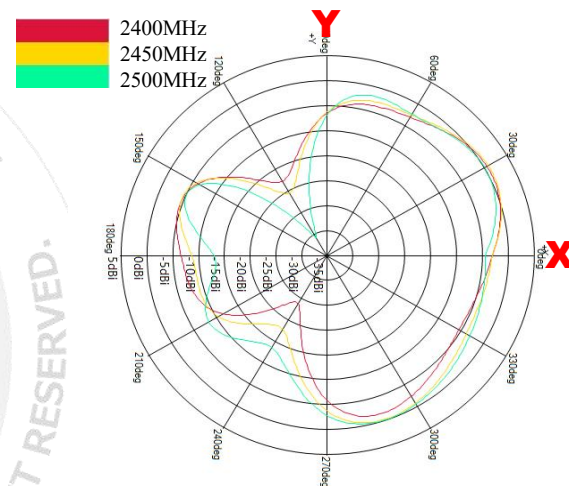
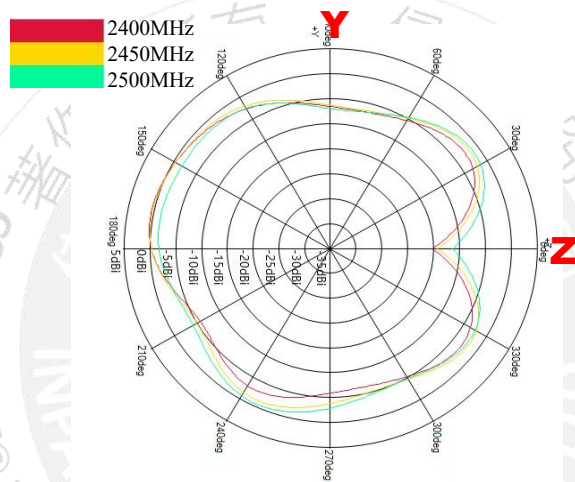
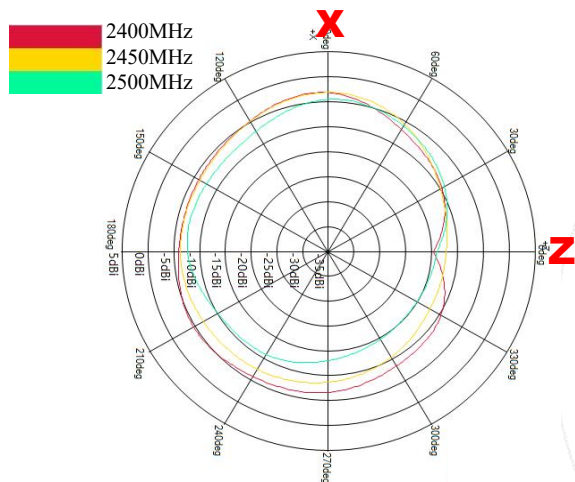


X-Y plane



2. Antenna Characteristics

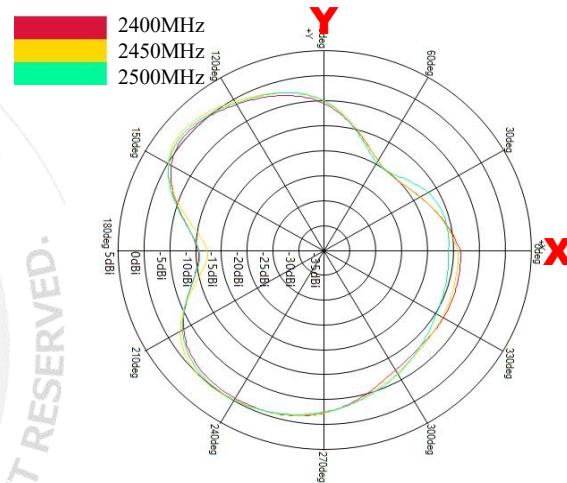
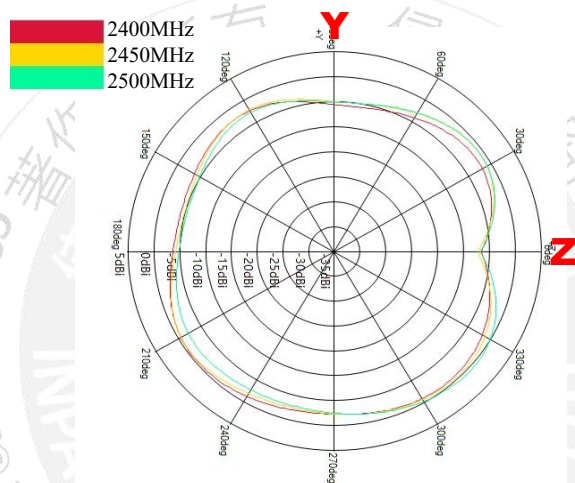
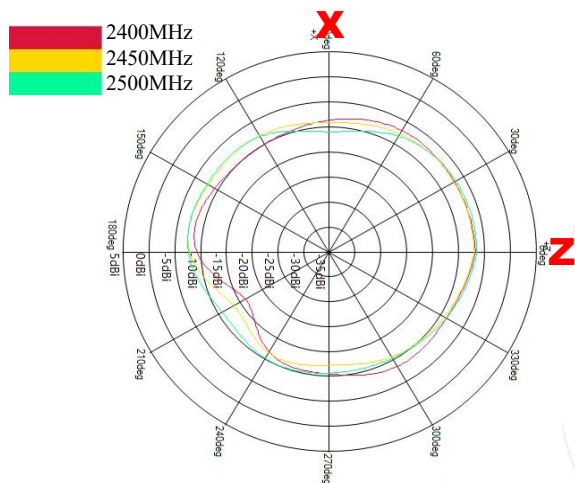
2.3 2D Radiation Patterns



	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
2400	-3.04	-6.89	-0.46	-5.16	0.84	-4.66
2450	-3.02	-7.44	-0.49	-4.16	1.14	-4.00
2500	-4.42	-9.25	-0.92	-3.81	0.31	-4.18

2. Antenna Characteristics

2.3 2D Radiation Patterns

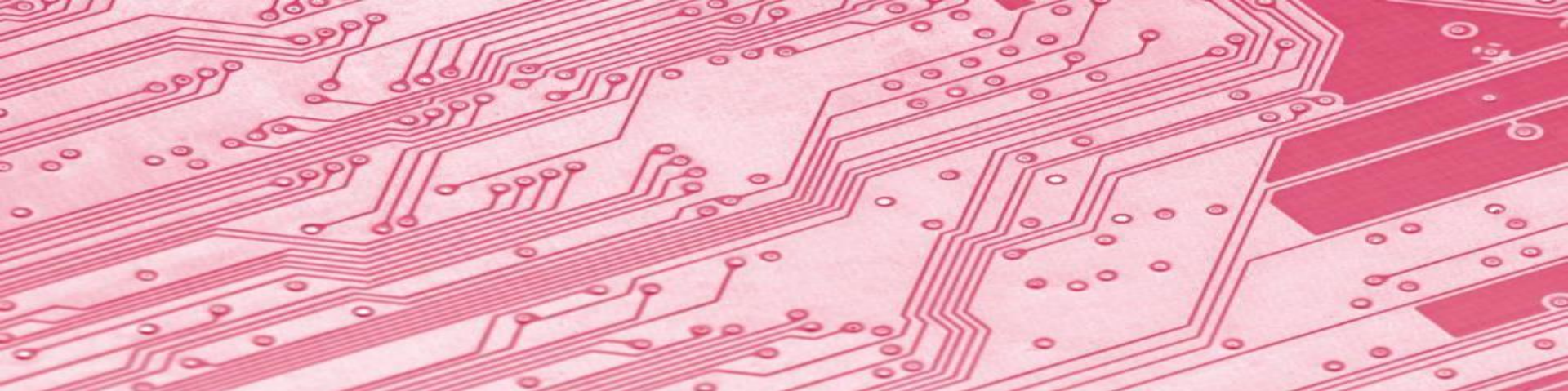


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
2400	-6.66	-8.56	-0.80	-2.64	-0.82	-4.40
2450	-6.93	-8.86	-0.74	-2.43	-0.18	-3.98
2500	-6.37	-8.54	0.01	-2.48	-0.32	-4.18

3. Summary

- The performance of antennas is shown in table

	ANT(左)	ANT(右)
Maximum Efficiency (%)	46.48	45.44
Maximum Gain (dBi)	1.73	0.7



Title for Image (above image could be replaced)

Content Details

PASSIVE SYSTEM ALLIANCE
INPAQ TECHNOLOGY CO., LTD.

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