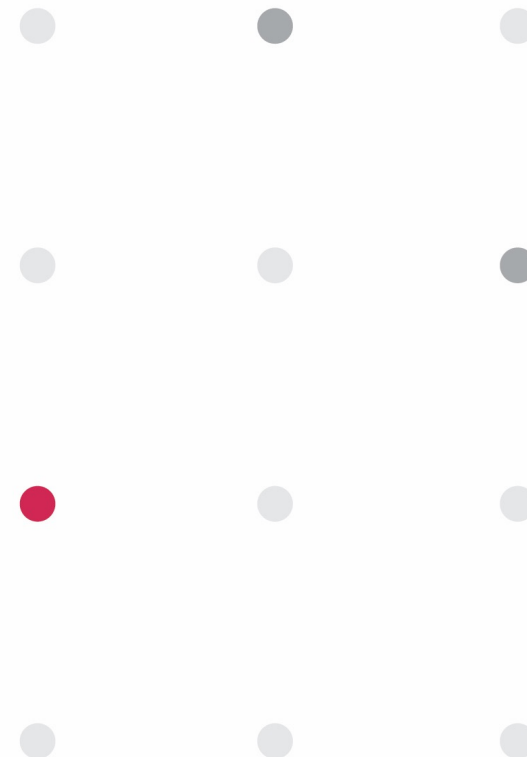


PSA

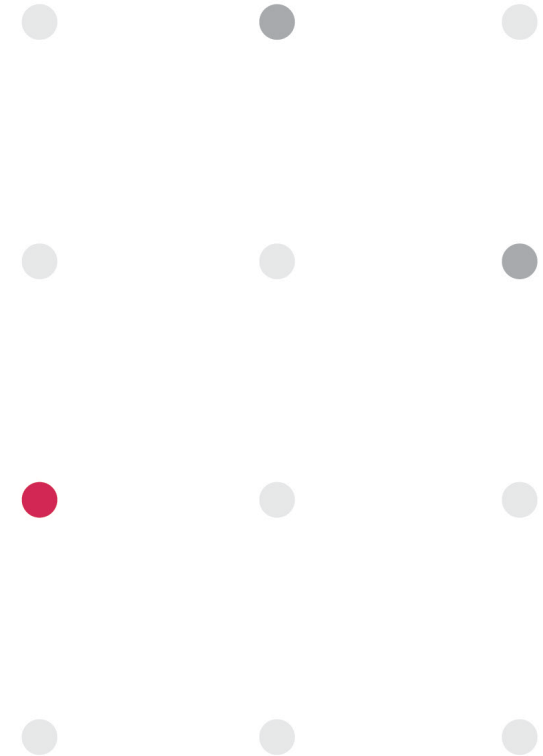
佳邦科技股份有限公司

INPAQ TECHNOLOGY CO., LTD.



PSA

PASSIVE SYSTEM ALLIANCE
INPAQ TECHNOLOGY CO., LTD.



PASSIVE SYSTEM ALLIANCE



Presented by
Simon Huang
2024/08/22

Version	Date	Description	Author
V01	2024/03/19	New Release(Free space)	Simon Huang
V02	2024/08/15	更新測報	Simon Huang
V03	2024/08/22	更新測報	Simon Huang
V04	2024/02/24	新增頻點至P.17	Simon Huang



OUTLINE

1. Measurement Information

- 1.1 Experimental Setup
- 1.2 Antenna Solution Detail

2. Antenna Characteristics

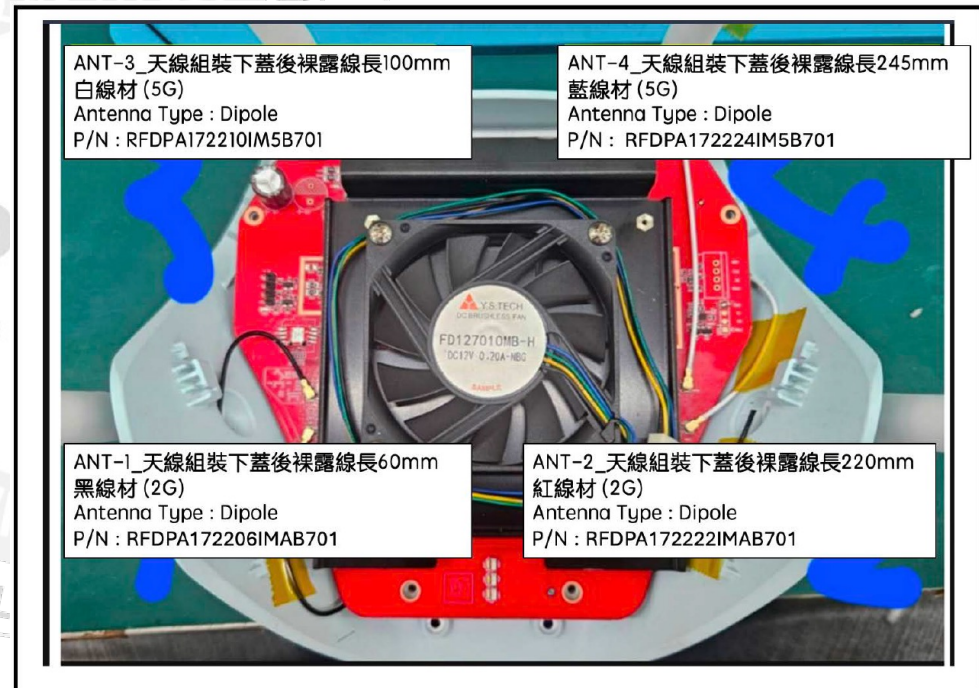
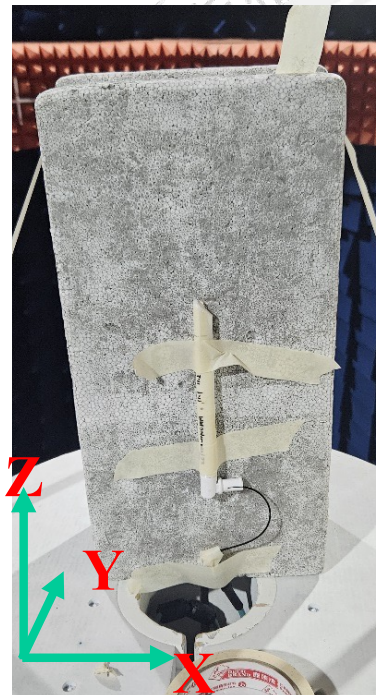
- 2.1 Return Loss & Isolation
- 2.2 Antenna Efficiency and Peak Gain
- 2.3 3 views of antenna & 2D Radiation Patterns

3. Summary

1. Measurement Information

1.1 Experimental Setup

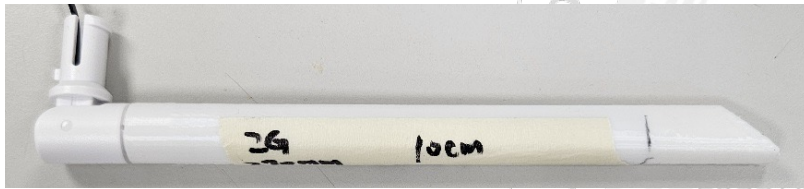
New Design



1. Measurement Information

1.2 Antenna Solution Detail

New design



New design 2G 60mm
Frequency : 2400 – 2500 MHz
外露線長 : 60 mm 1.37 normal 灰色線 I-pex 一代頭

New design 2G 220mm
Frequency : 2400 – 2500 MHz
外露線長 : 220 mm 1.37 normal 白色線 I-pex 一代頭

New design 5G 100mm
Frequency : 5150 – 5850 MHz
外露線長 : 100 mm 1.37 normal 紅色線 I-pex 一代頭

New design 5G 250mm
Frequency : 5150 – 5850 MHz
外露線長 : 250 mm 1.37 normal 黑色線 ipex 一代頭

2. Antenna Characteristics

New design 2G 60mm

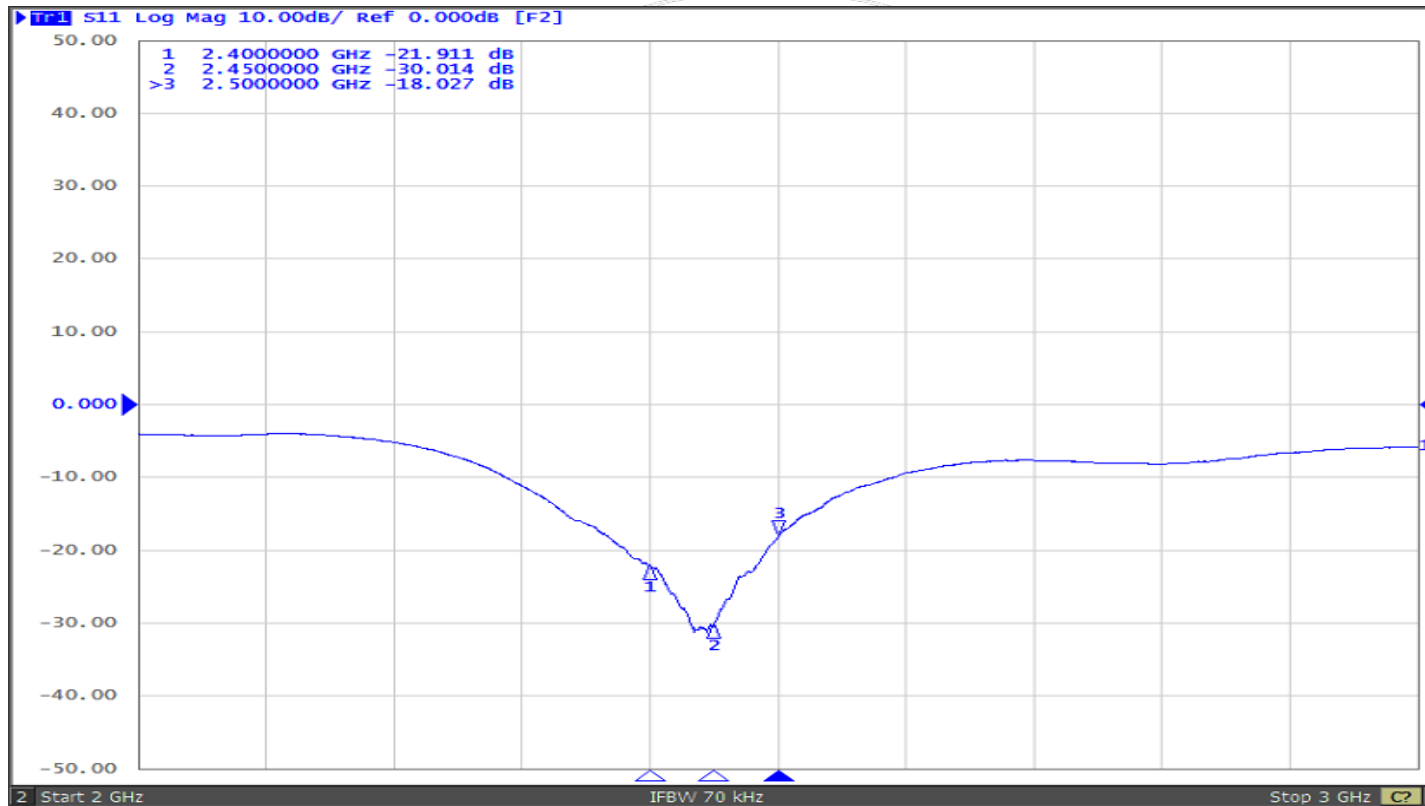
2.1 Return Loss



2. Antenna Characteristics

New design 2G 220mm

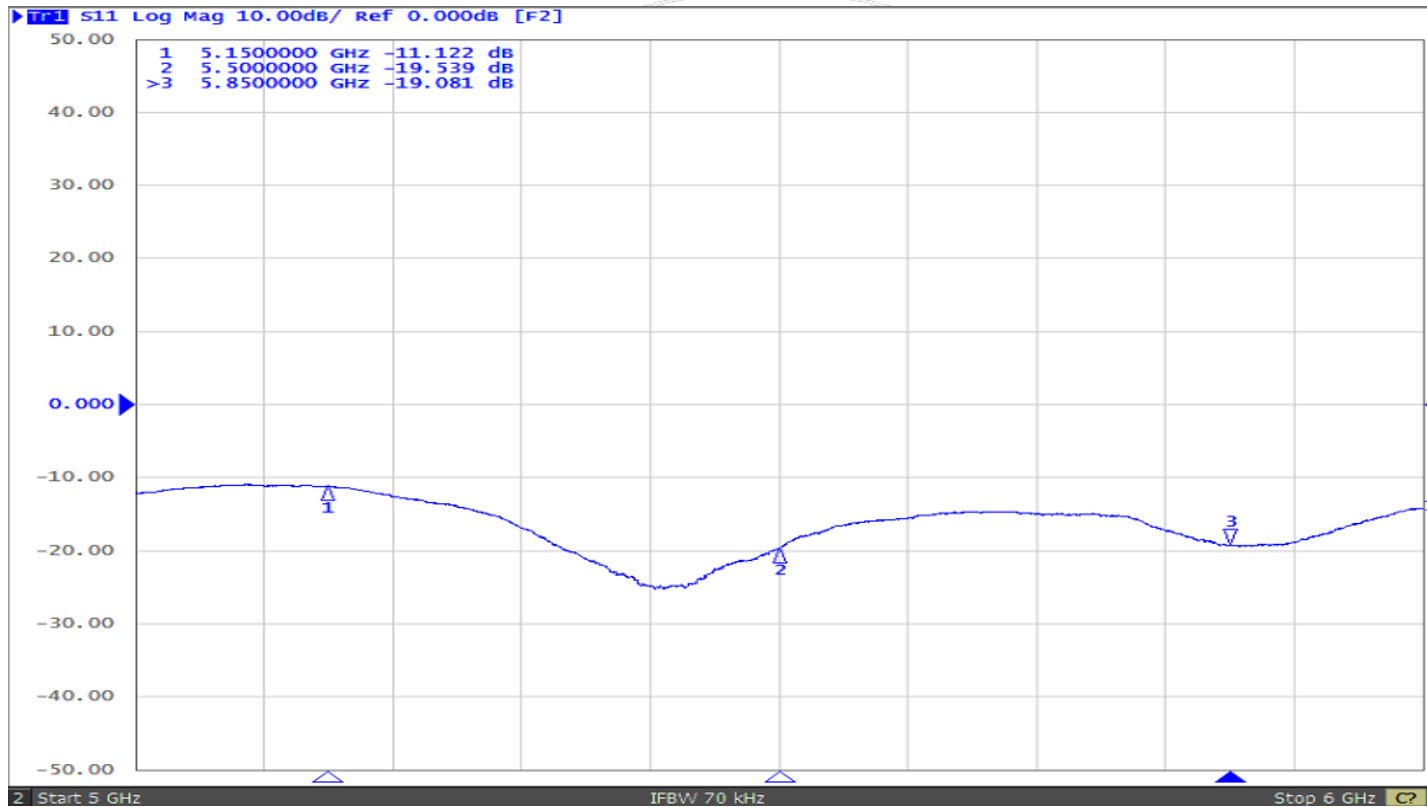
2.1 Return Loss



2. Antenna Characteristics

New design 5G 100mm

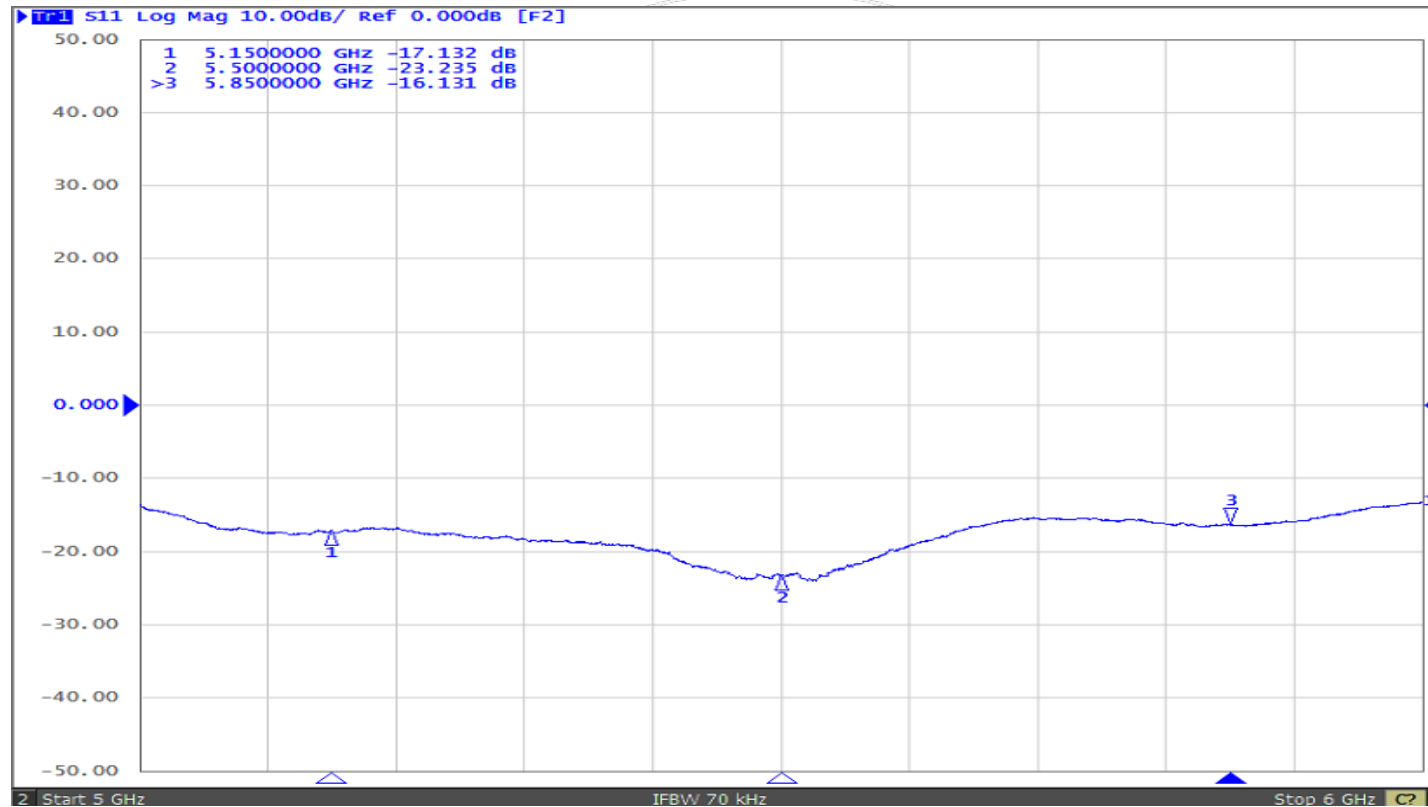
2.1 Return Loss



2. Antenna Characteristics

New design 5G 250mm

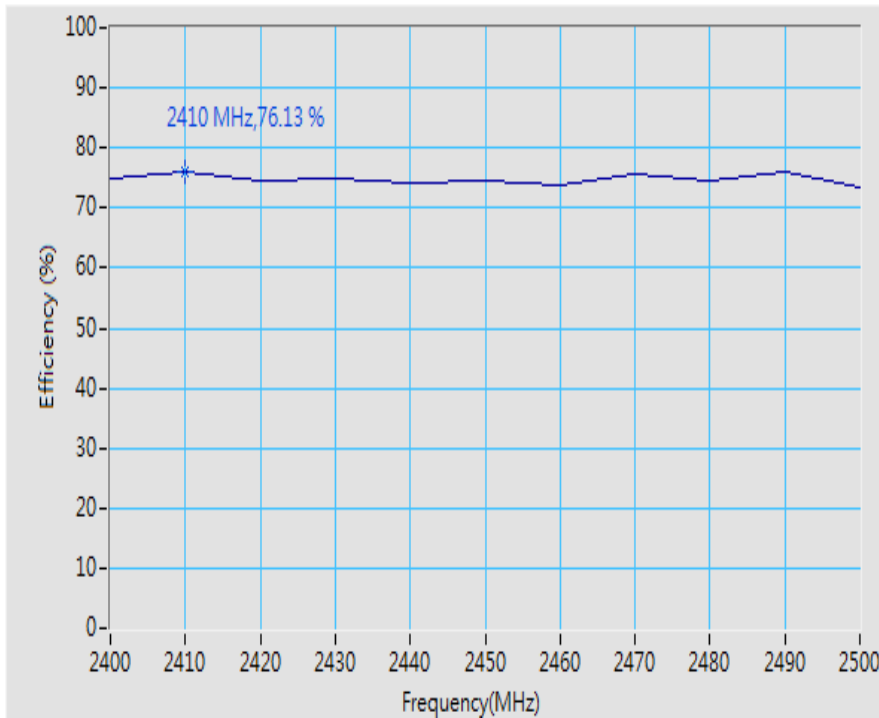
2.1 Return Loss



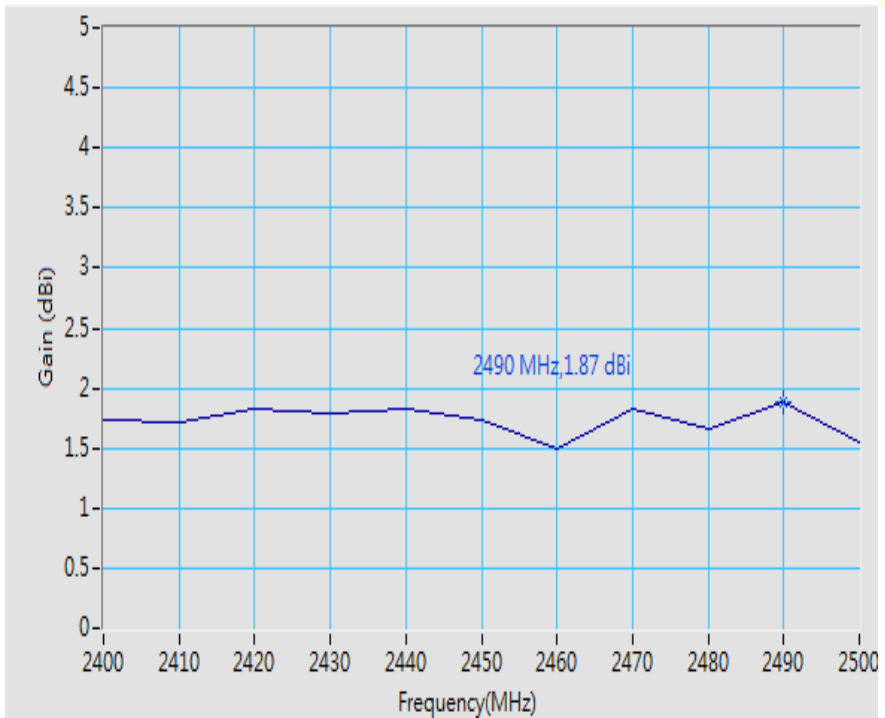
2. Antenna Characteristics

2.2 Antenna Efficiency and Peak Gain

**New design 2G 60mm
2400 – 2500 MHz**



Maximum Efficiency at 2410 MHz : 76.13 %

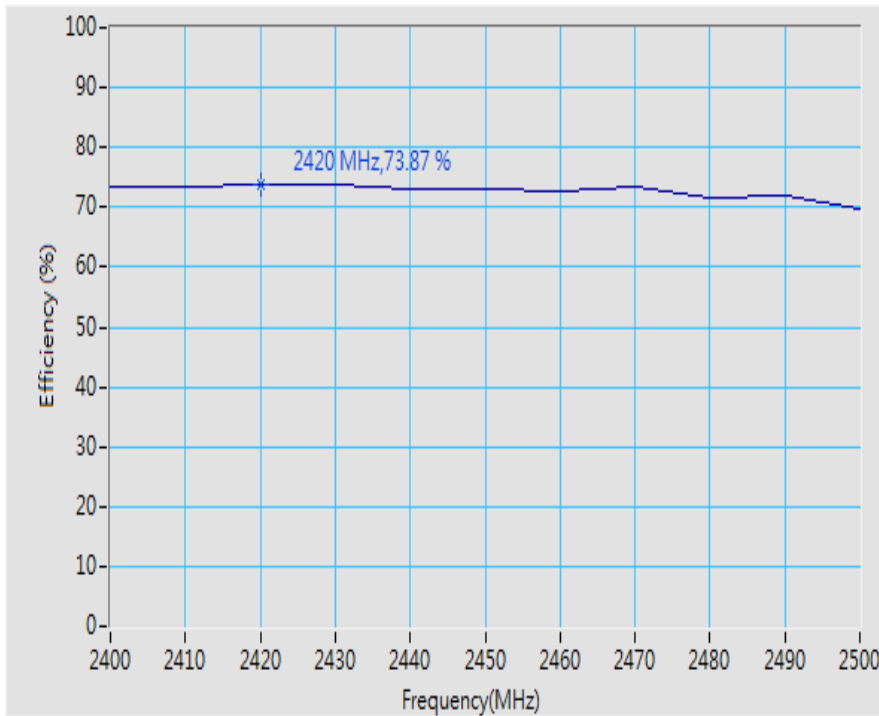


Maximum Peak Gain at 2490 MHz : 1.87 dBi

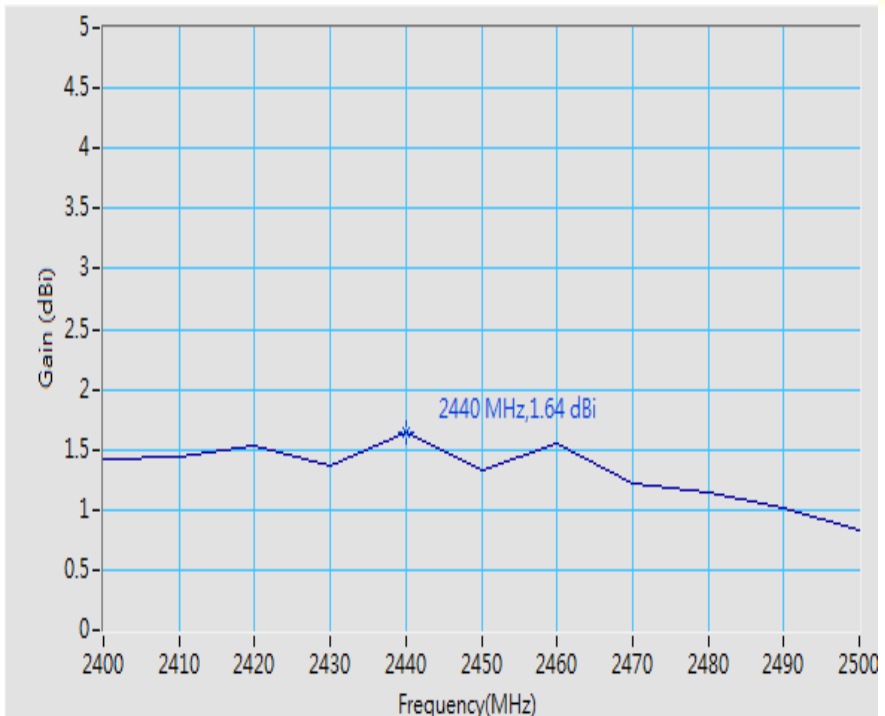
2. Antenna Characteristics

2.2 Antenna Efficiency and Peak Gain

**New design 2G 220mm
2400 – 2500 MHz**



Maximum Efficiency at 2420 MHz : 73.87 %

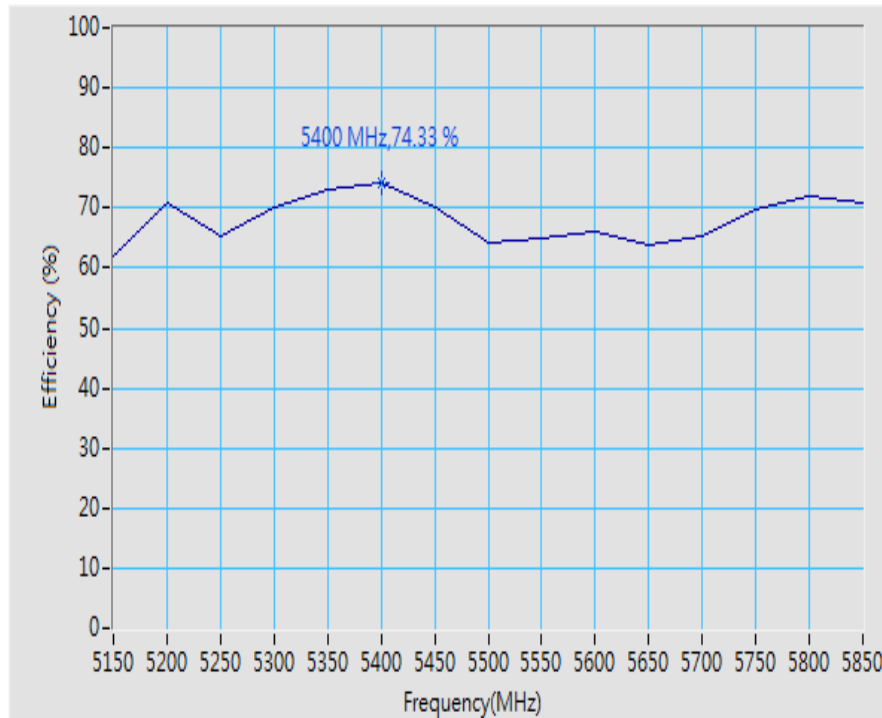


Maximum Peak Gain at 2440 MHz : 1.64 dBi

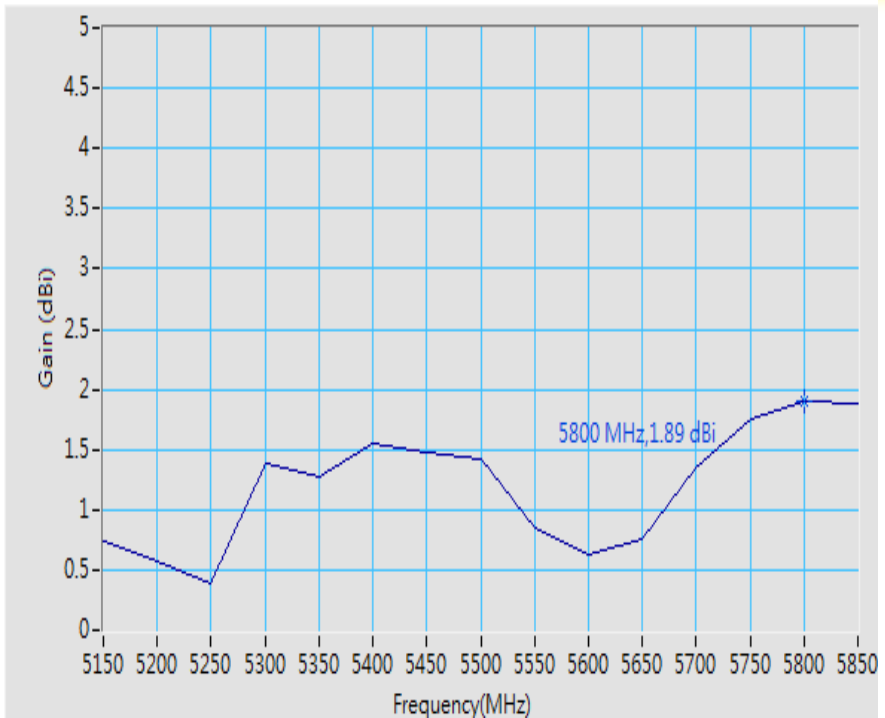
2. Antenna Characteristics

2.2 Antenna Efficiency and Peak Gain

**New design 5G 100mm
5150 – 5850 MHz**



Maximum Efficiency at 5400 MHz : 74.33 %

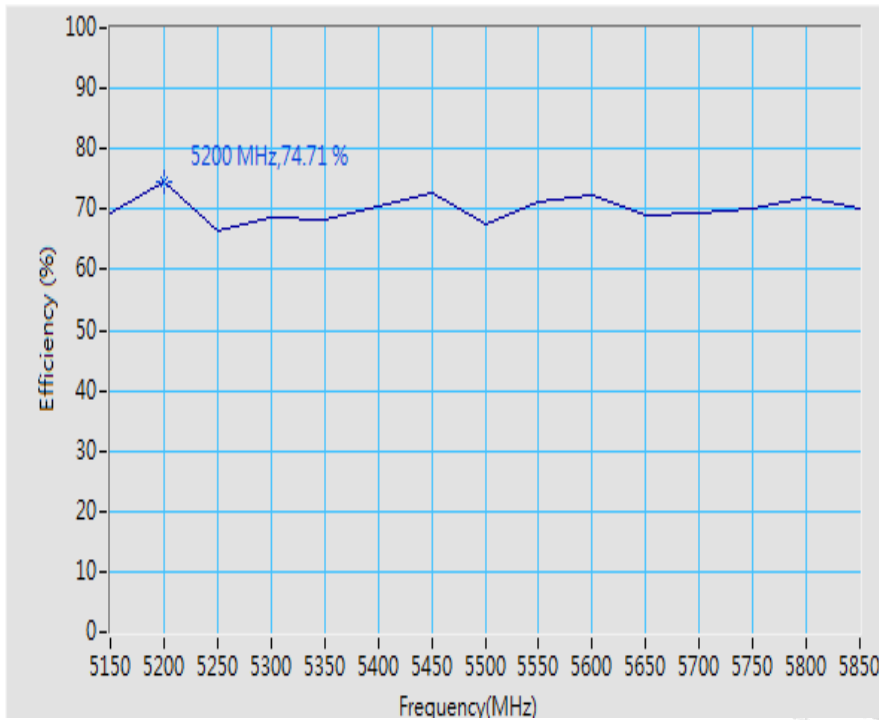


Maximum Peak Gain at 5800 MHz : 1.89 dBi

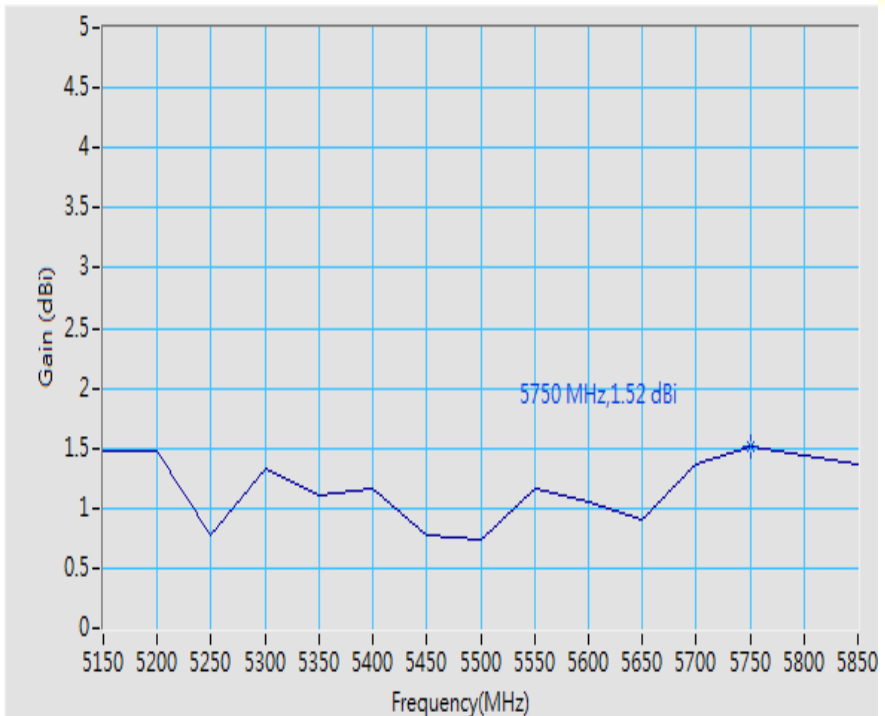
2. Antenna Characteristics

2.2 Antenna Efficiency and Peak Gain

**New design 5G 250mm
5150 – 5850 MHz**



Maximum Efficiency at 5200 MHz : 74.71 %



Maximum Peak Gain at 5750 MHz : 1.52 dBi

2. Antenna Characteristics

2.3 Antenna Efficiency and Peak Gain

Frequency (MHz)	New design 2G 60mm		New design 2G 220mm		New design 5G 100mm		New design 5G 250mm	
	Average Efficiency (%)	Peak gain (dBi)	Average Efficiency (%)	Peak gain (dBi)	Average Efficiency (%)	Peak gain (dBi)	Average Efficiency (%)	Peak gain (dBi)
2400	75.01	1.74	73.44	1.42	-	-	-	-
2450	74.38	1.73	72.94	1.33	-	-	-	-
2500	73.29	1.55	69.66	0.83	-	-	-	-
5150	-	-	-	-	61.92	0.74	69.44	1.48
5500	-	-	-	-	64.21	1.43	67.57	0.74
5850	-	-	-	-	70.87	1.88	70.19	1.37

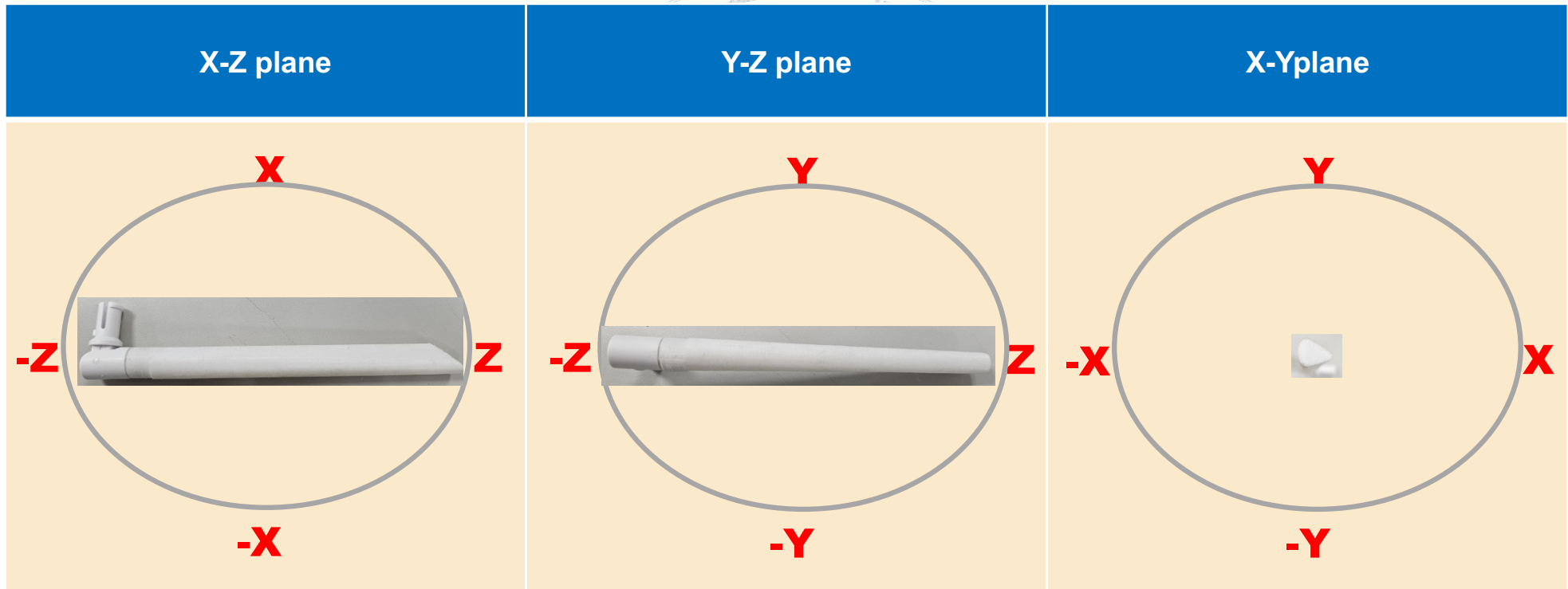
2. Antenna Characteristics

2.3 Antenna Efficiency and Peak Gain

Frequency (MHz)	New design 2G 60mm		New design 2G 220mm		New design 5G 100mm		New design 5G 250mm	
	Average Efficiency (%)	Peak gain (dBi)	Average Efficiency (%)	Peak gain (dBi)	Average Efficiency (%)	Peak gain (dBi)	Average Efficiency (%)	Peak gain (dBi)
2400	75.01	1.74	73.44	1.42	-	-	-	-
2483.5	74.41	1.66	71.46	1.15				
5150	-	-	-	-	61.92	0.74	69.44	1.48
5250	-	-	-	-	65.19	0.39	66.37	0.77
5350	-	-	-	-	73.23	1.28	68.31	1.11
5470	-	-	-	-	70.09	1.47	72.54	0.78
5725	-	-	-	-	65.19	1.34	69.55	1.37
5850	-	-	-	-	70.87	1.88	70.19	1.37

2. Antenna Characteristics

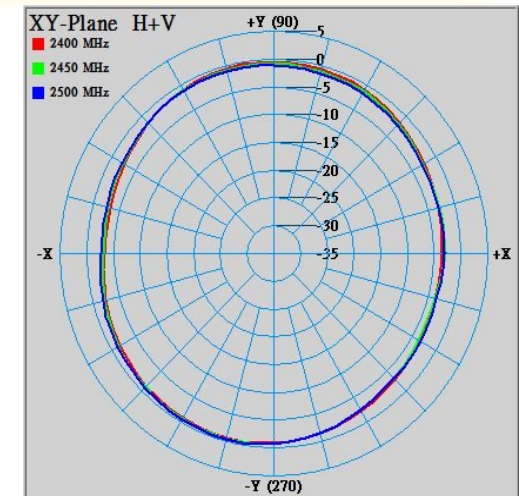
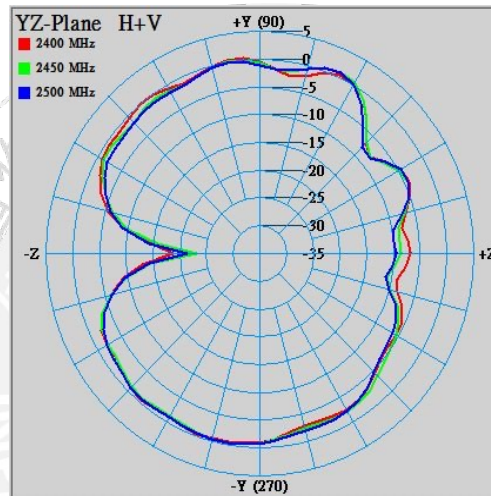
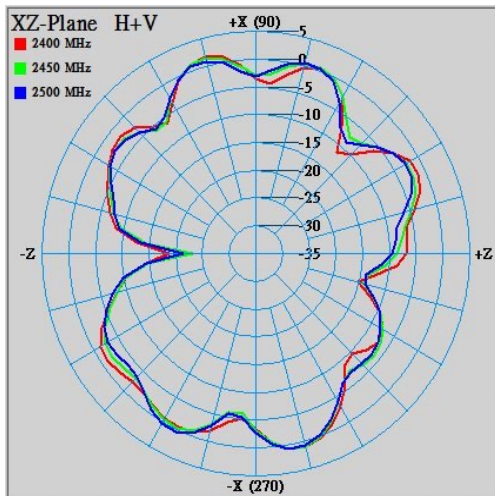
2.3 3 views of antenna



2. Antenna Characteristics

New design 2G 60mm
2400 – 2500 MHz

2.3 2D Radiation Patterns

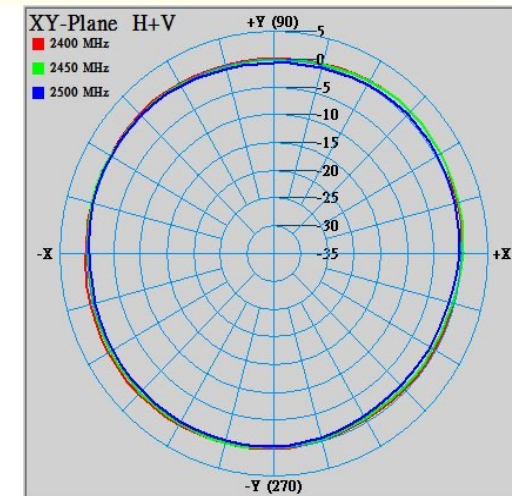
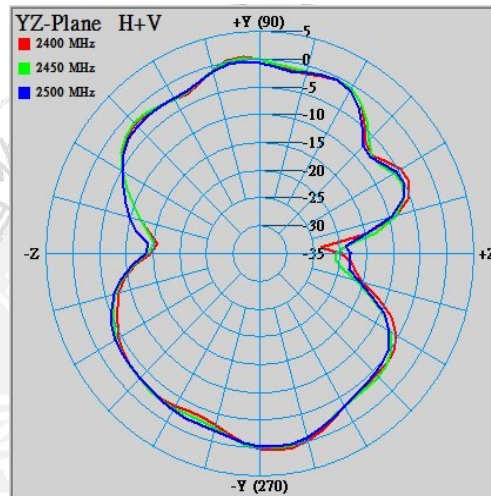
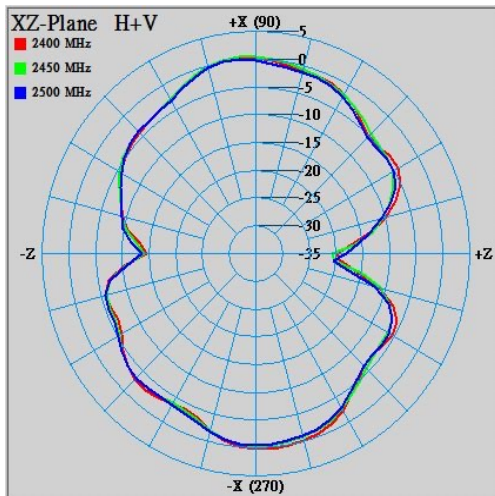


Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
2400	1.56	-3.12	0.53	-2.57	-0.48	-1.88
2450	1.39	-3.26	1.01	-2.66	-0.5	-1.88
2500	0.86	-3.37	0.84	-2.78	-0.45	-1.87

2. Antenna Characteristics

New design 2G 220mm
2400 – 2500 MHz

2.3 2D Radiation Patterns

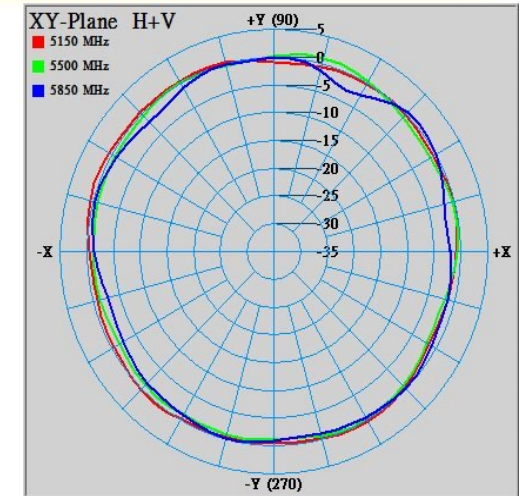
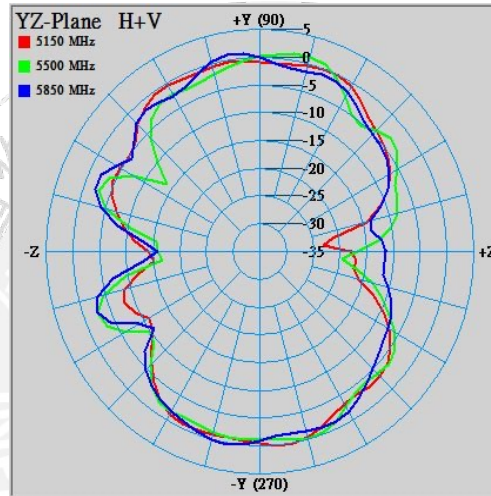
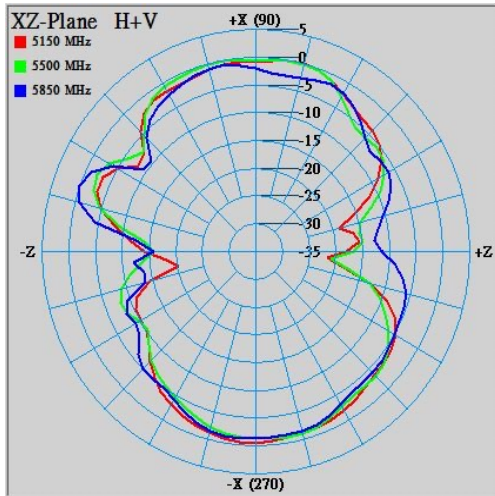


Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
2400	0.36	-3.52	0.6	-3.51	1.12	0.29
2450	0.53	-3.59	0.2	-3.5	1.14	0.13
2500	0.05	-3.82	-0.1	-3.65	0.36	-0.35

2. Antenna Characteristics

New design 5G 100mm
5150 – 5850 MHz

2.3 2D Radiation Patterns

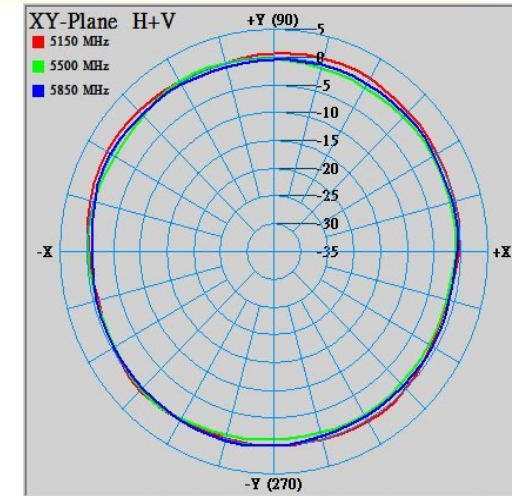
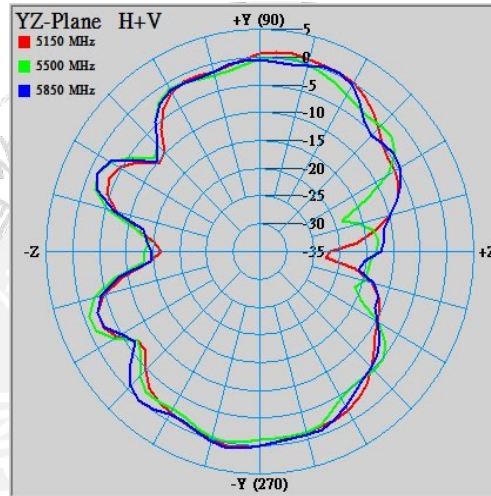
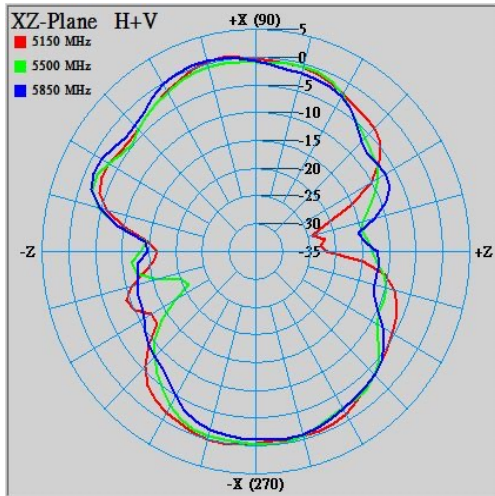


Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
5150	-0.03	-3.77	0.08	-3.4	0.74	-0.27
5500	-0.08	-3.86	1.31	-3.43	1	-0.7
5850	0.01	-3.97	1.02	-3.28	0.56	-1.06

2. Antenna Characteristics

New design 5G 250mm
5150 – 5850 MHz

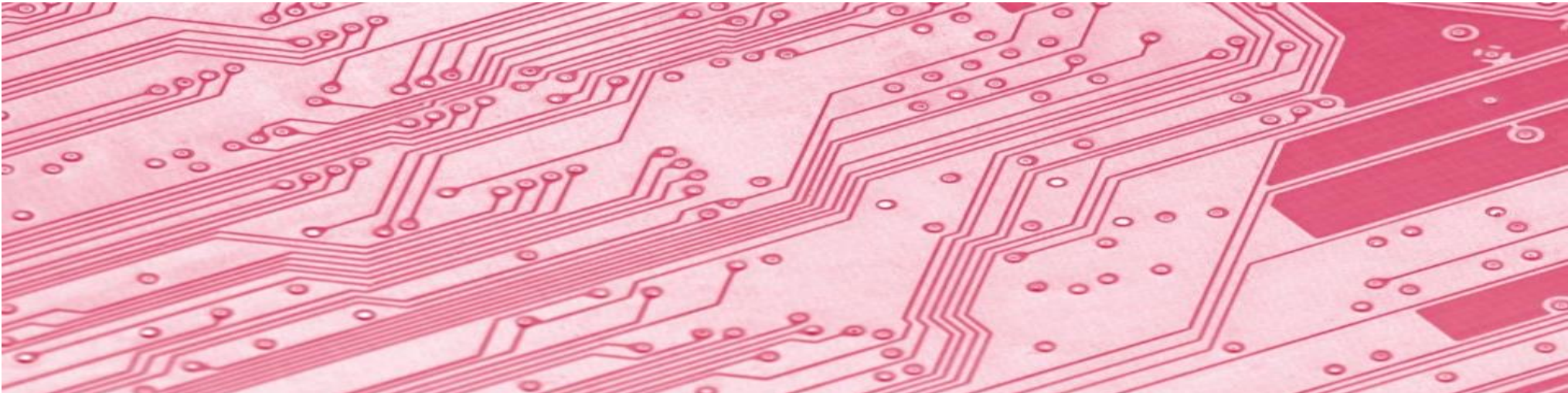
2.3 2D Radiation Patterns



	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
5150	0.44	-3.29	1.1	-3.1	1.11	0.11
5500	-0.15	-3.77	0.21	-3.43	0.32	-0.67
5850	0.48	-3.69	0.82	-3.01	0.26	-0.42

3. Summary

	New design 2G 60mm		New design 2G 220mm		New design 5G 100mm		New design 5G 250mm	
	Efficiency (%)	Peak Gain (dBi)	Efficiency (%)	Peak Gain (dBi)	Efficiency (%)	Peak Gain (dBi)	Efficiency (%)	Peak Gain (dBi)
2400 – 2500 MHz	75.01	1.74	73.44	1.42	-	-	-	-
5150 – 5850 Mhz	-	-	-	-	73.23	1.88	72.54	1.48



Title for Image (above image could be replaced)

Content Details

PASSIVE SYSTEM ALLIANCE
INPAQ TECHNOLOGY CO., LTD.



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