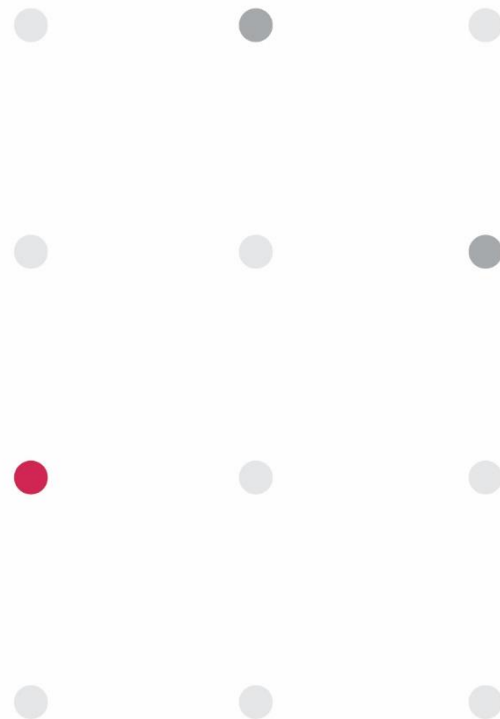


PSA

PASSIVE SYSTEM ALLIANCE
INPAQ TECHNOLOGY CO., LTD.



Presented by : YiAn Nien

Checked by : Hong XianXiu

Approved by : LeeTing Hsieh

INPAQ Technology Co., Ltd.

Last updated in Sep. 28.2022

Version :V0.5

Customer : Qisda

Project : Phoenix II

Product :Wi-Fi Dual Band +6E

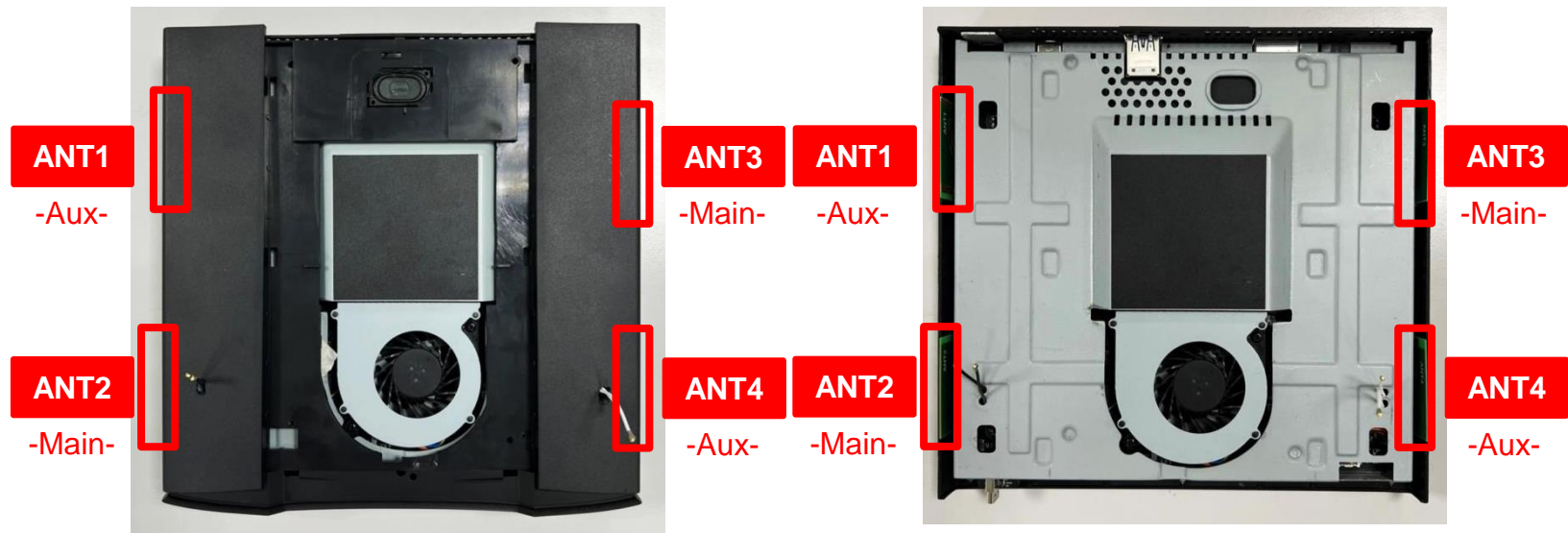
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 - 2D Radiation Pattern
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- **Conclusions**

Revised History

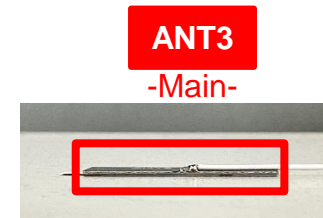
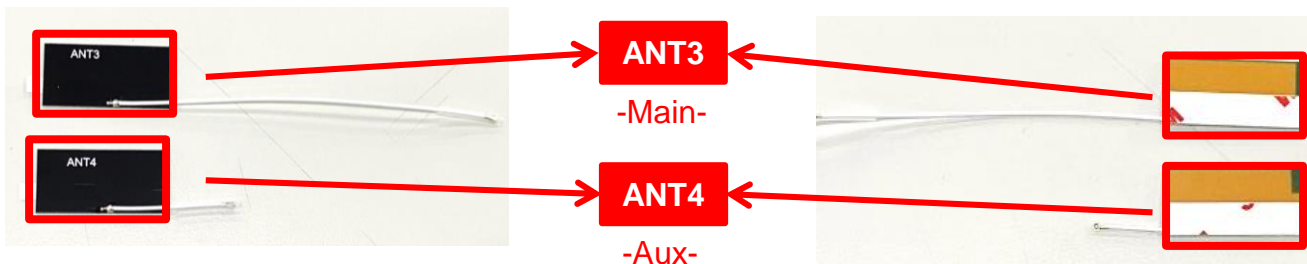
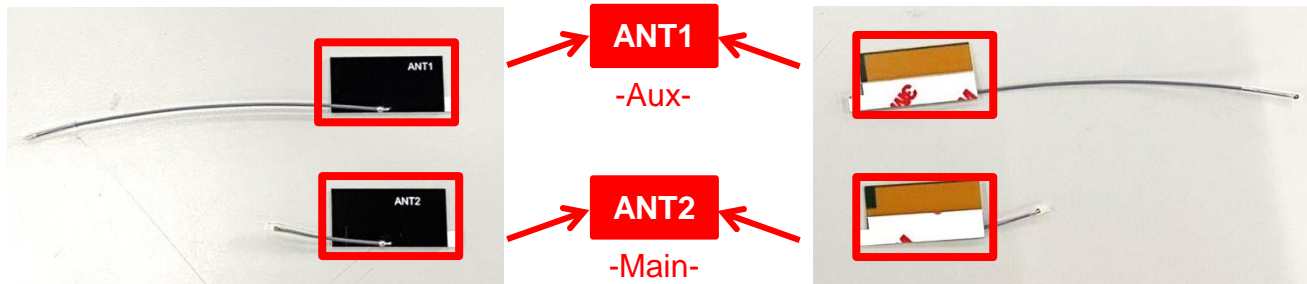
Released Date	Version	Record
Oct. 27 th , 2021	0.0	Initial report
Apr. 18 th , 2022	0.1	Antenna Fine Tune
May. 18 th , 2022	0.2	Antenna Fine Tune
Aug. 04 th , 2022	0.3	Antenna Fine Tune
Sep. 26 th , 2022	0.4	Antenna Fine Tune
Sep. 28 th , 2022	0.5	Antenna Fine Tune

Product / Antenna Overview



Application	Frequency(MHz)
ANT1-4	2400-2500 5150-5850 5925-7125

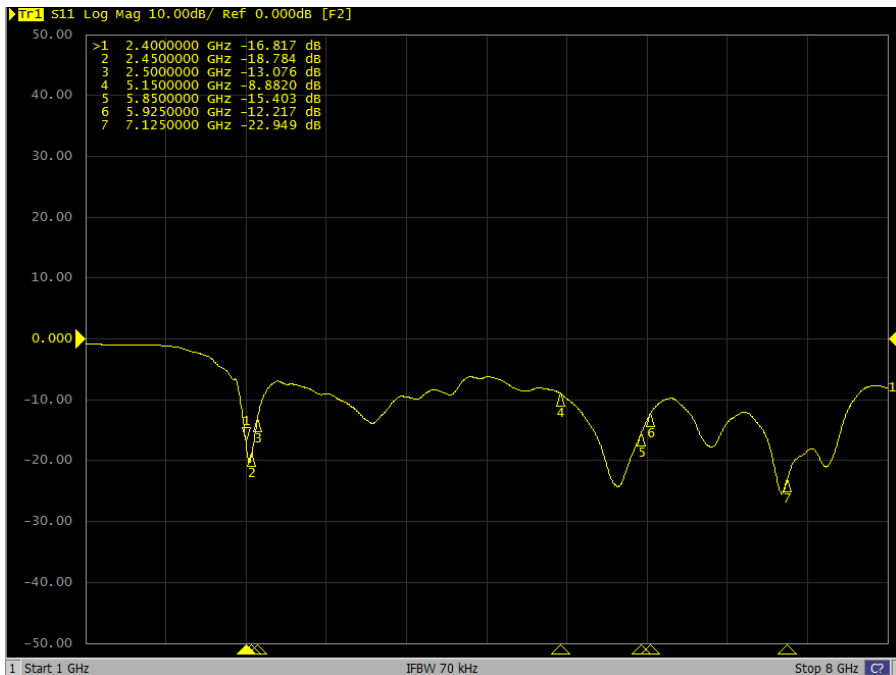
Antenna Overview



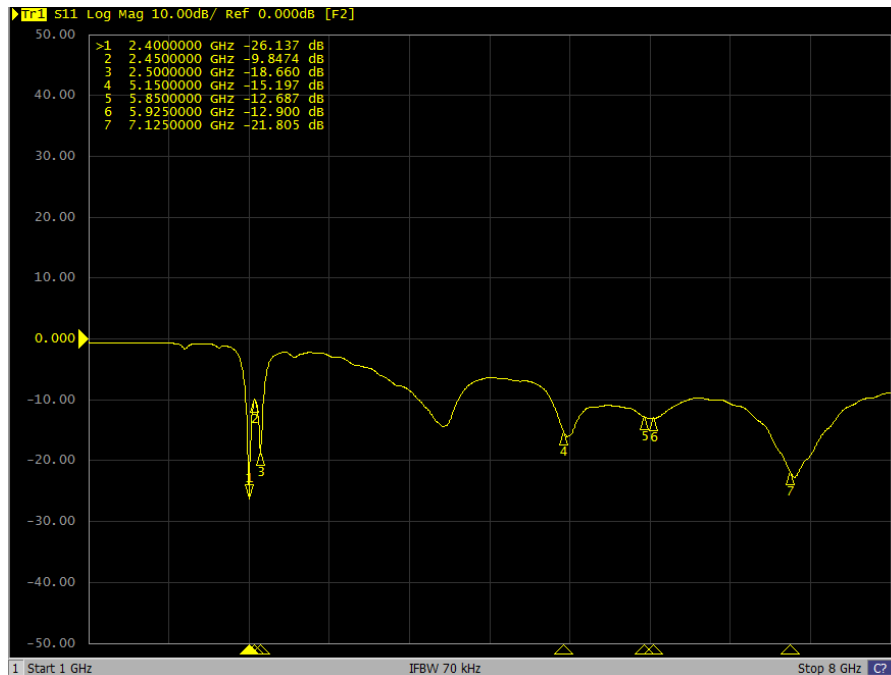
Antenna	Antenna Part	Product Name	Type
ANT1	Aux	WA-P-LE-03-022	PIFA
ANT2	Main	WA-P-LE-03-023	PIFA
ANT3	Main	WA-P-LE-01-015	PIFA
ANT4	Aux	WA-P-LE-01-016	PIFA

Antenna S11

ANT1

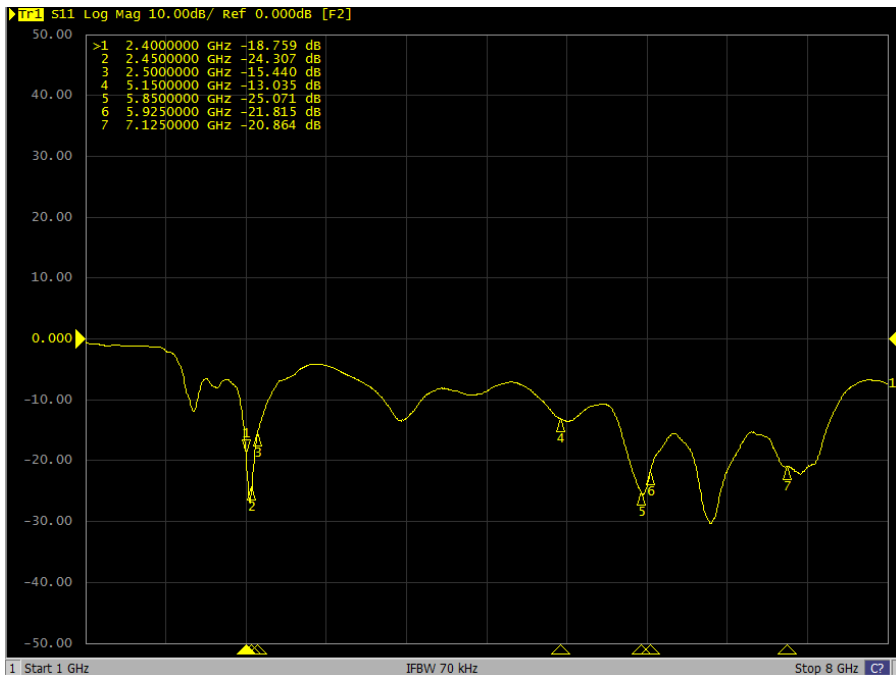


ANT2

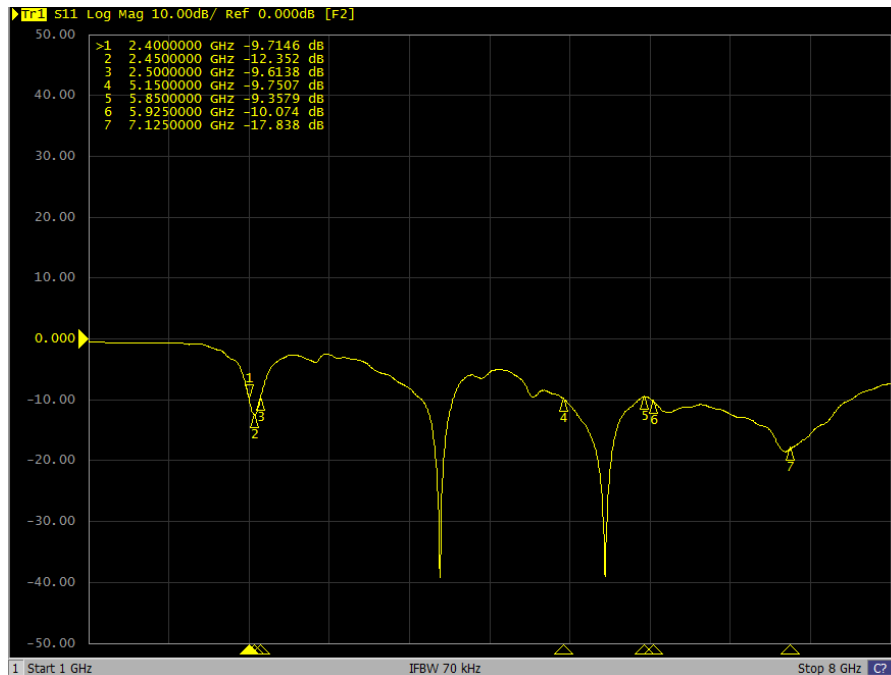


Antenna S11

ANT3

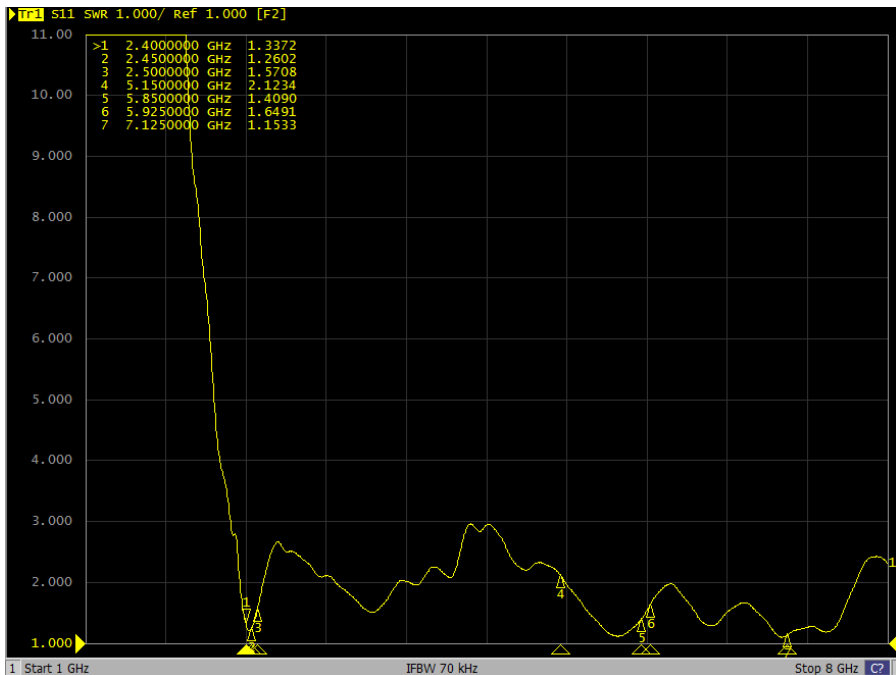


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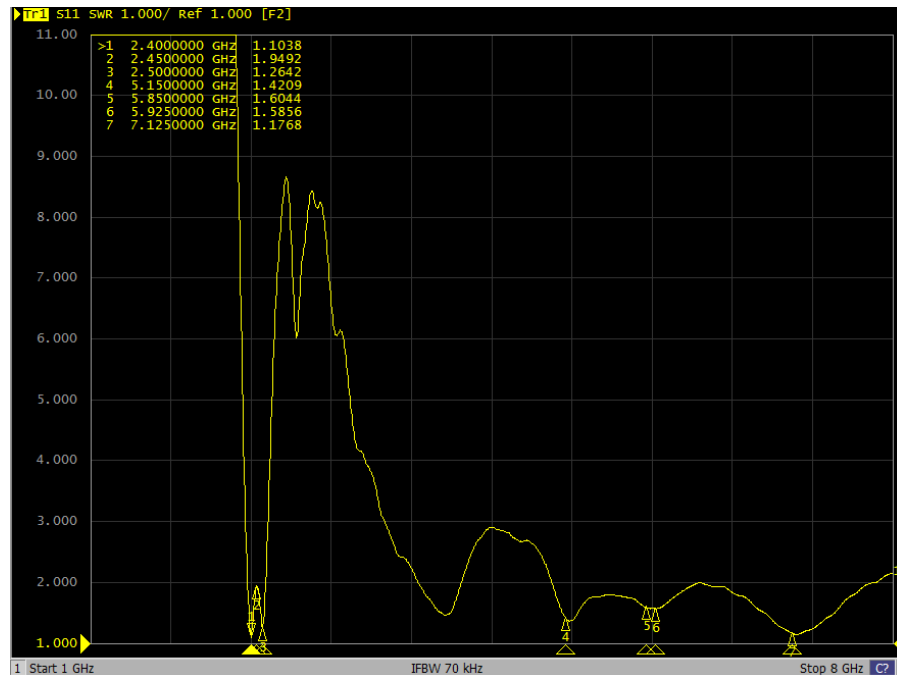


Antenna VSWR

ANT1

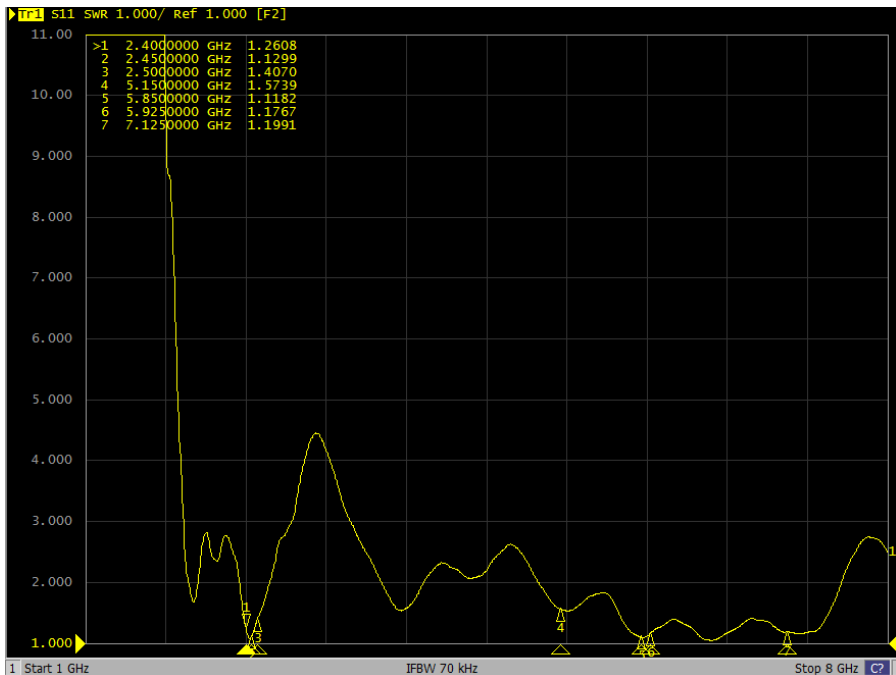


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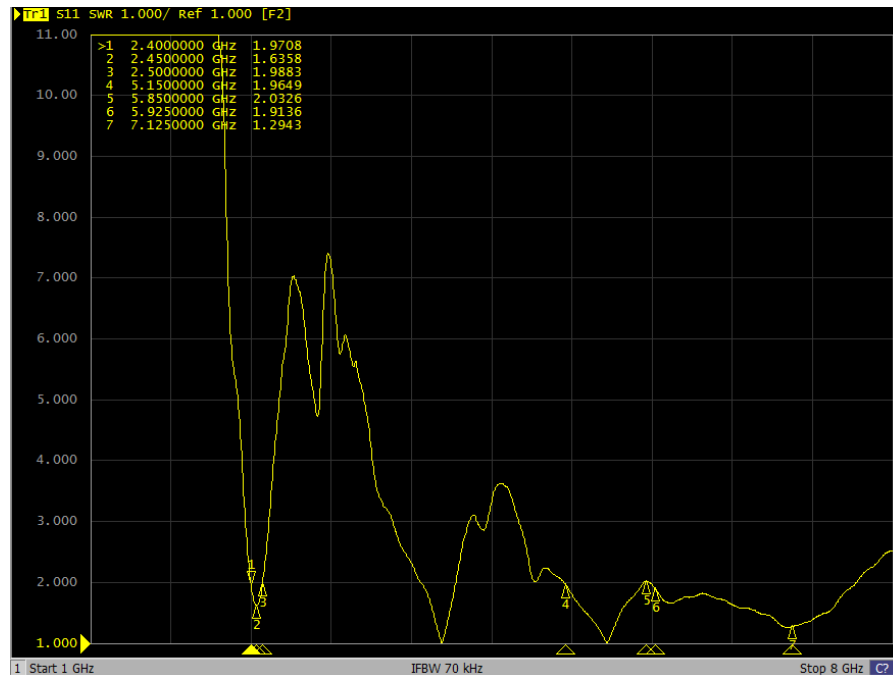


Antenna VSWR

ANT3

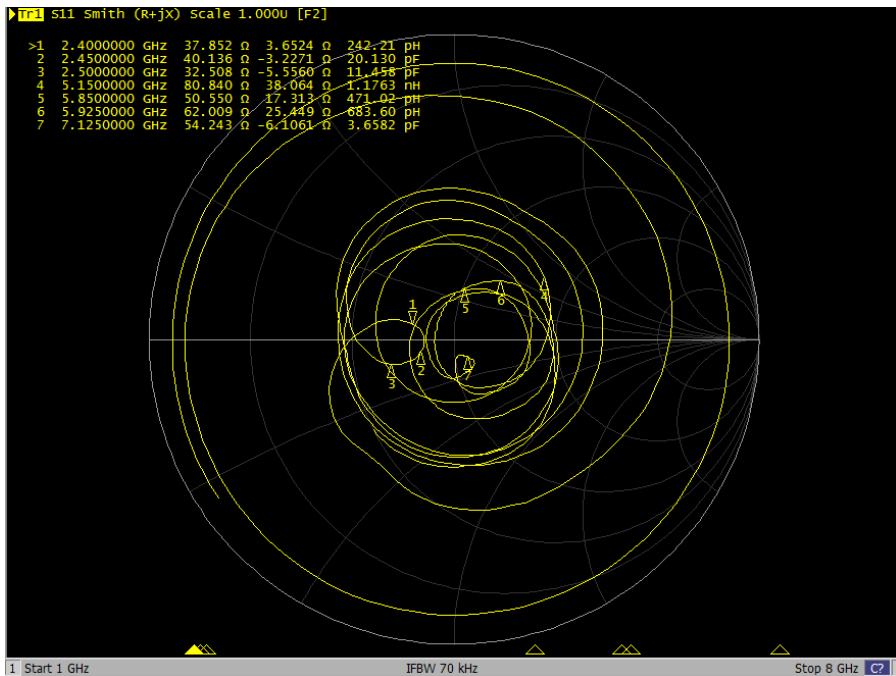


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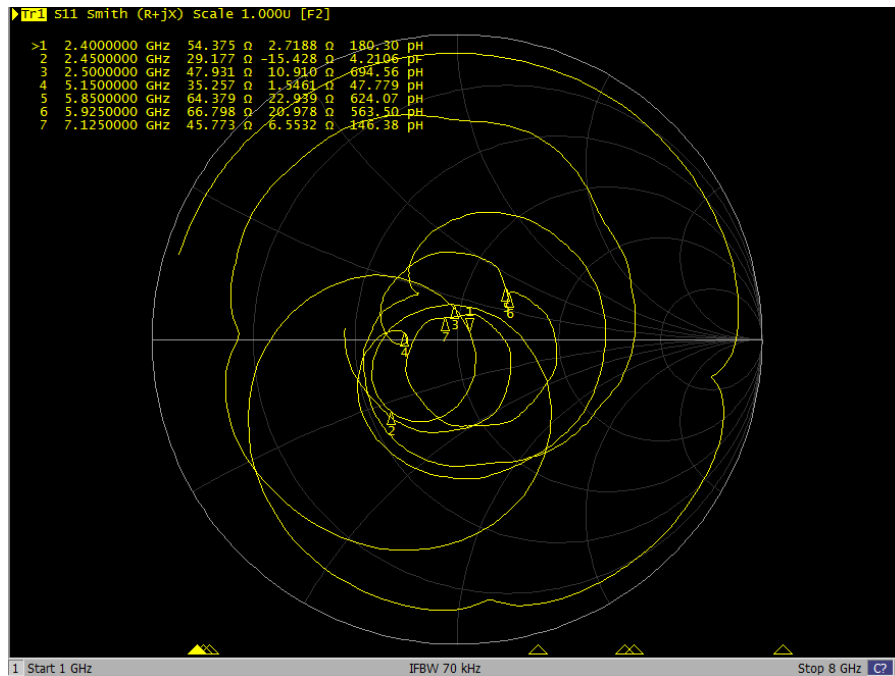


Antenna Smith

ANT1

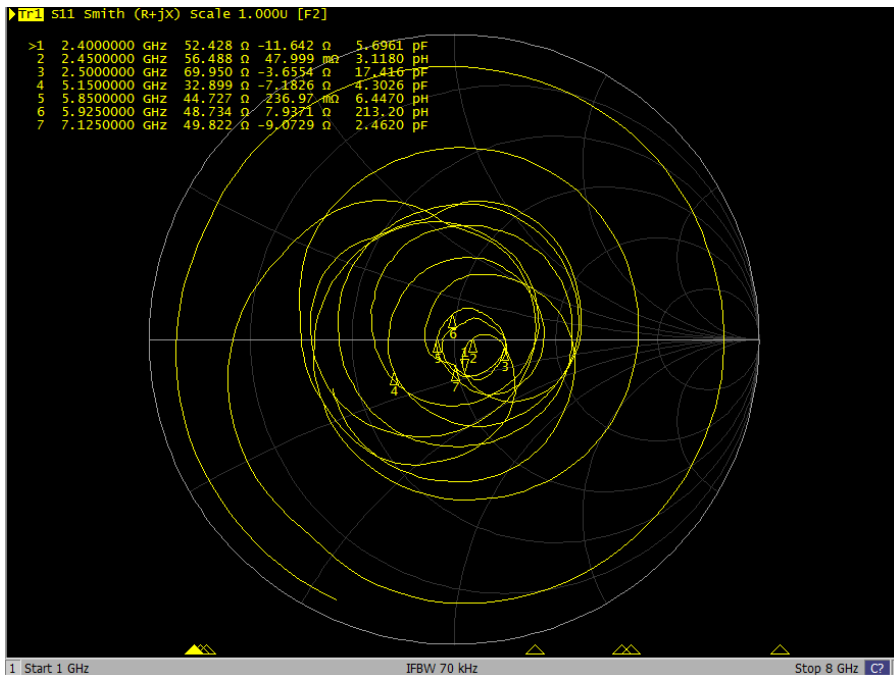


ANT2

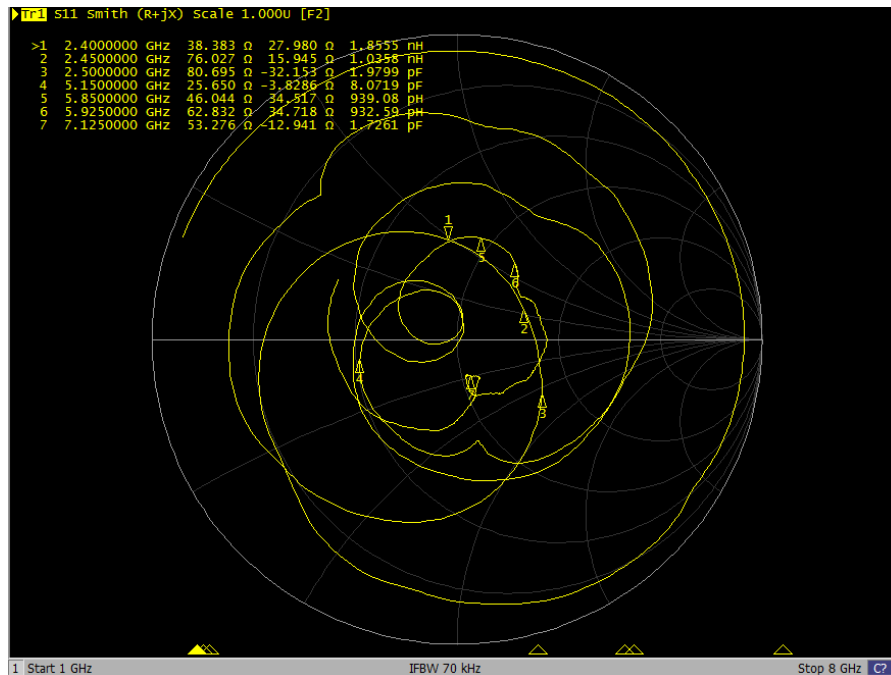


Antenna Smith

ANT3

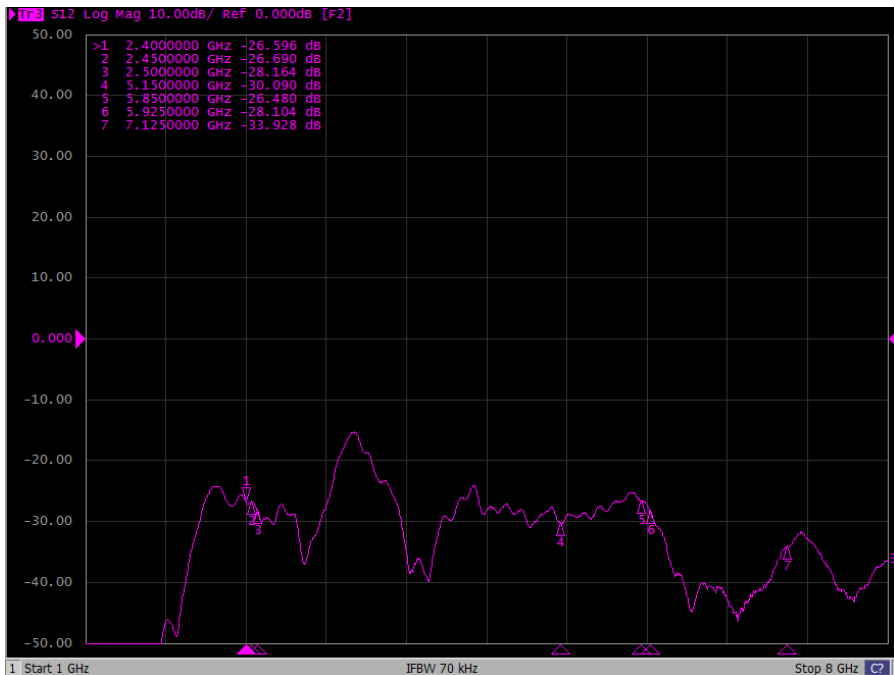


ANT4

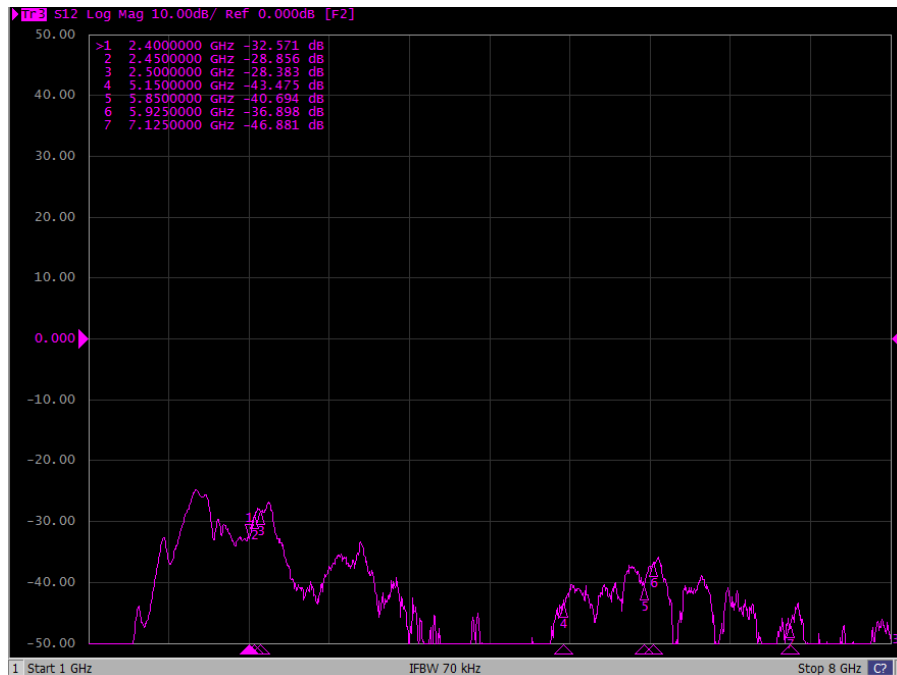


Antenna Isolation

ANT1&ANT2

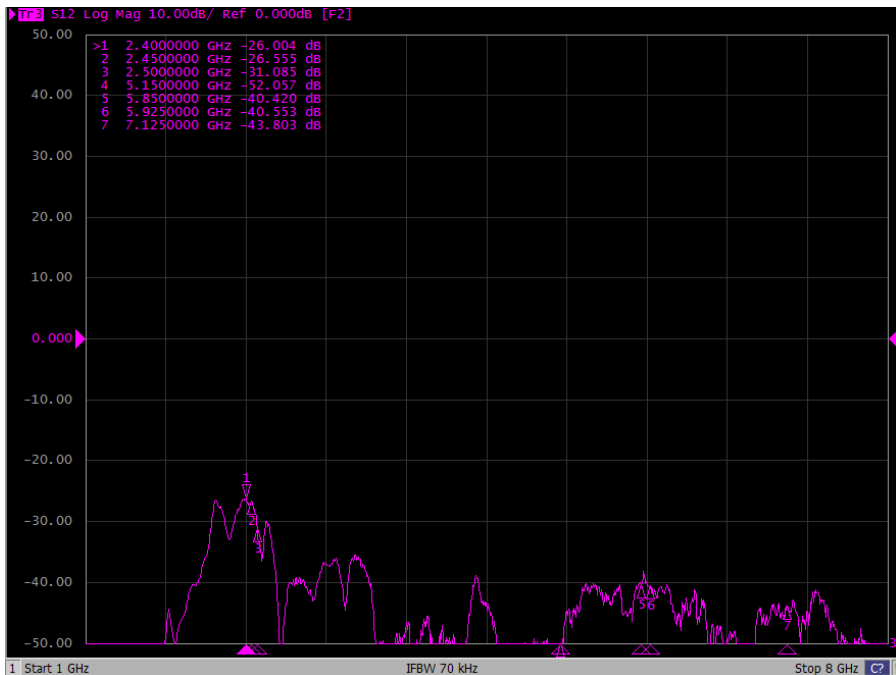


ANT1&ANT3

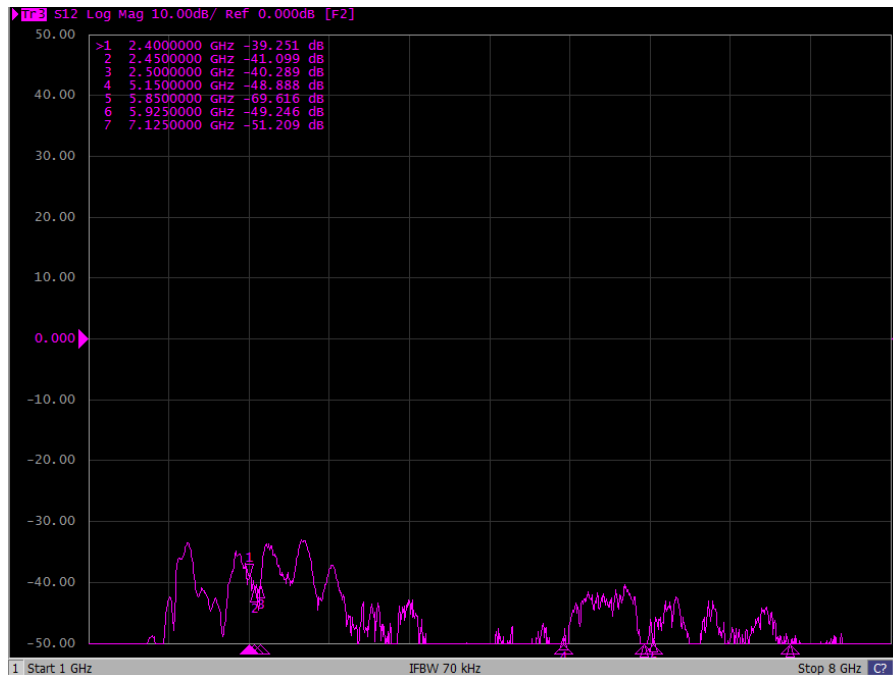


Antenna Isolation

ANT1&ANT4

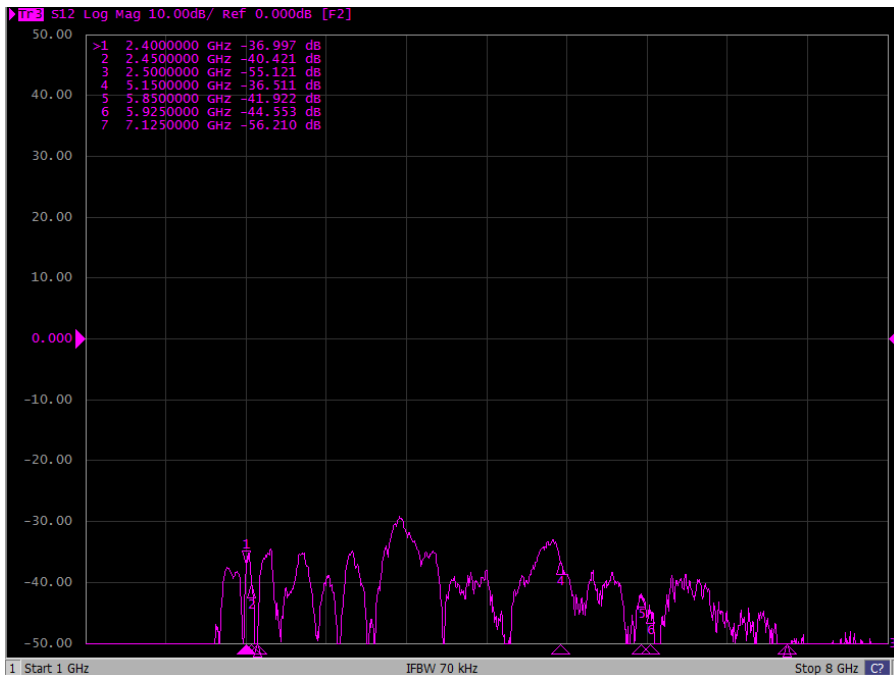


ANT2&ANT3

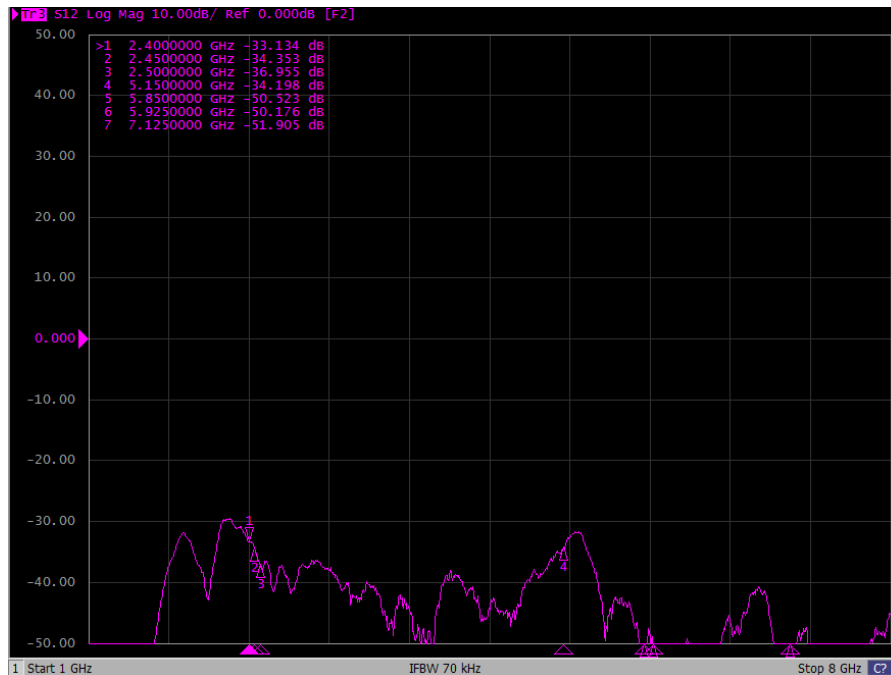


Antenna Isolation

ANT2&ANT4



ANT3&ANT4



Efficiency & Peak Gain

ANT1

Frequency (MHz)	Efficiency(%)	Peak Gain (dBi)
2400	41.31	2.28
2450	44.85	2.57
2500	40.67	2.33
5150	46.45	2.27
5450	53.34	3.29
5850	48.83	3.57
5925	46.81	4.22
6525	48.24	4.18
7125	54.39	4.33

ANT2

Frequency (MHz)	Efficiency(%)	Peak Gain (dBi)
2400	45.62	2.66
2450	41.61	2.73
2500	43.22	2.74
5150	52.24	2.85
5450	50.89	4.42
5850	51.90	4.07
5925	52.59	4.46
6525	49.15	4.56
7125	54.06	4.70

Efficiency & Peak Gain

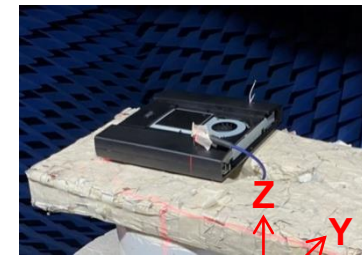
ANT3

Frequency (MHz)	Efficiency(%)	Peak Gain (dBi)
2400	41.44	2.11
2450	44.10	2.05
2500	42.06	2.24
5150	48.40	2.81
5450	52.66	3.52
5850	54.35	3.74
5925	53.12	4.58
6525	55.77	4.62
7125	50.99	4.75

ANT4

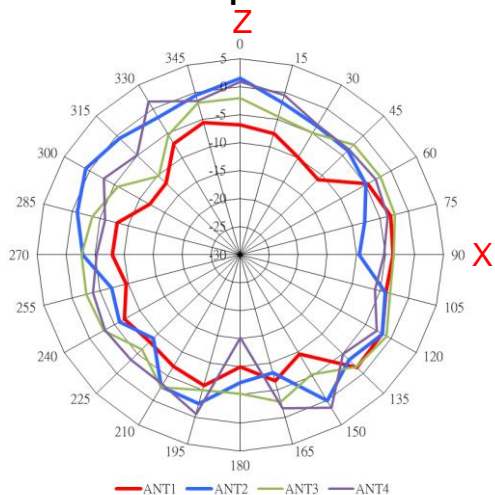
Frequency (MHz)	Efficiency(%)	Peak Gain (dBi)
2400	42.41	2.13
2450	46.92	2.24
2500	44.57	2.43
5150	48.91	2.23
5450	54.04	3.34
5850	49.63	3.67
5925	50.26	4.06
6525	52.14	4.17
7125	57.63	4.32

2D Radiation Pattern(2450MHz)

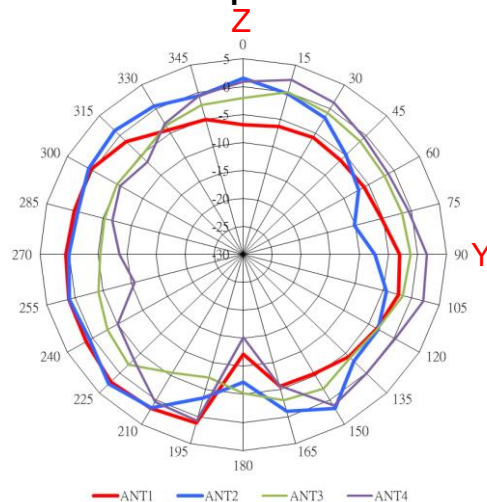


— ANT1 — ANT2 — ANT3 — ANT4

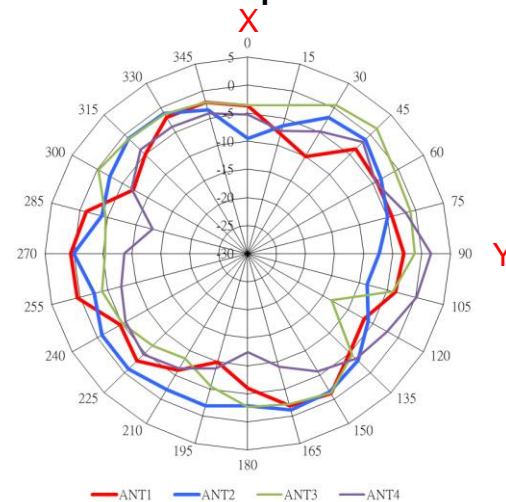
X-Z plane



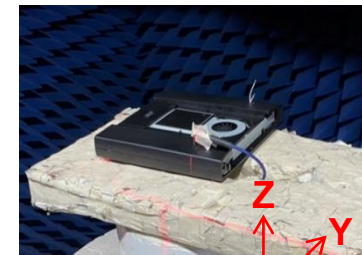
Y-Z plane



X-Y plane

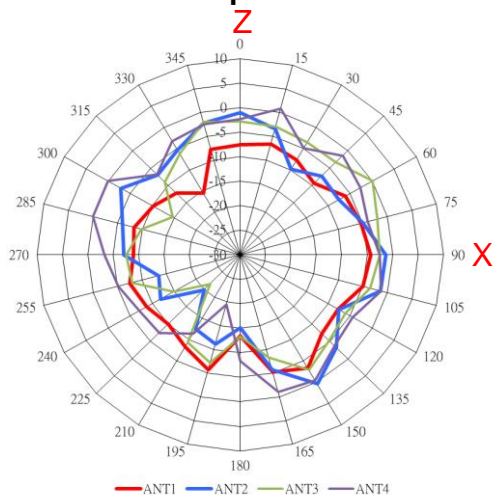


2D Radiation Pattern(5450MHz)

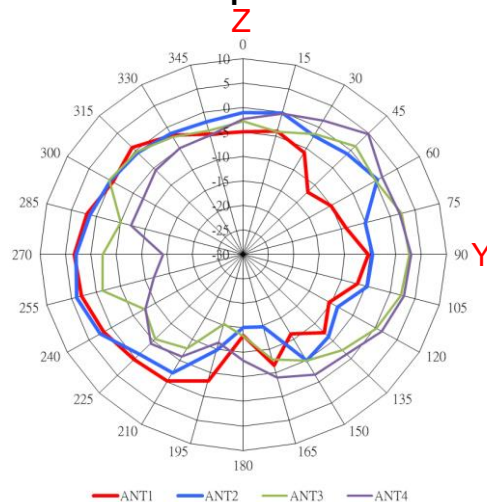


— ANT1 — ANT2 — ANT3 — ANT4

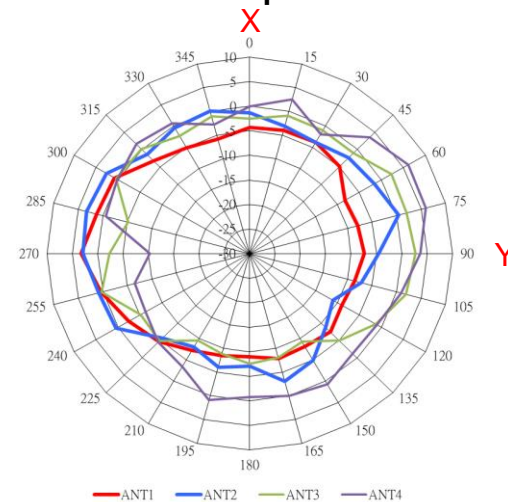
X-Z plane



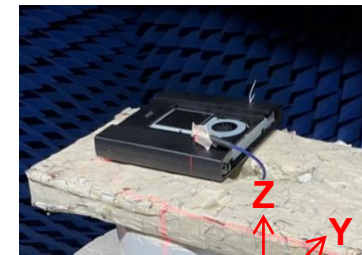
Y-Z plane



X-Y plane

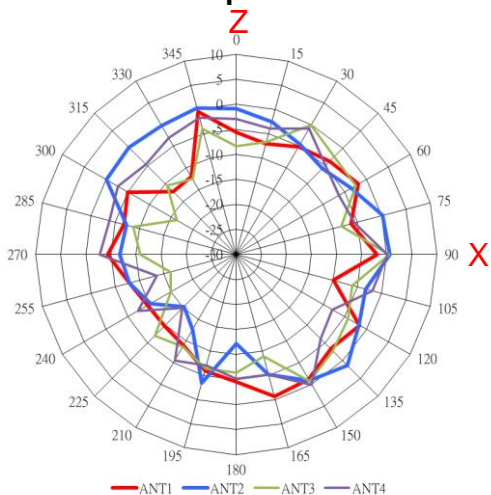


2D Radiation Pattern(6525MHz)

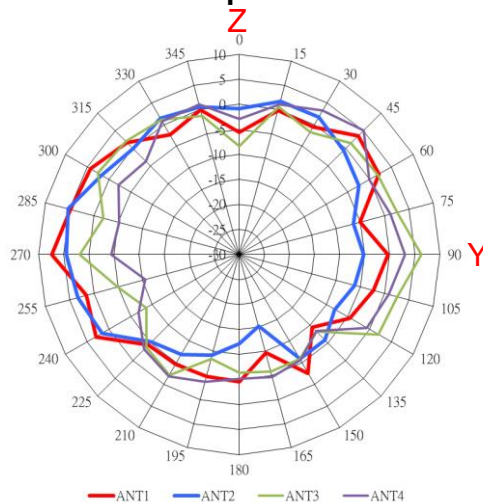


— ANT1 — ANT2 — ANT3 — ANT4

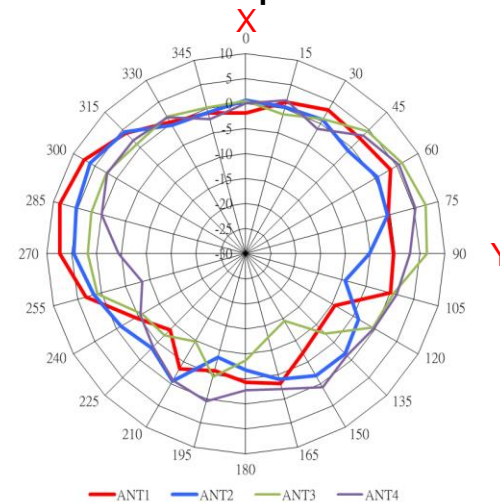
X-Z plane



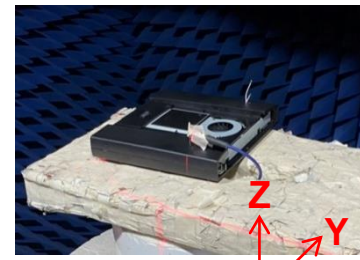
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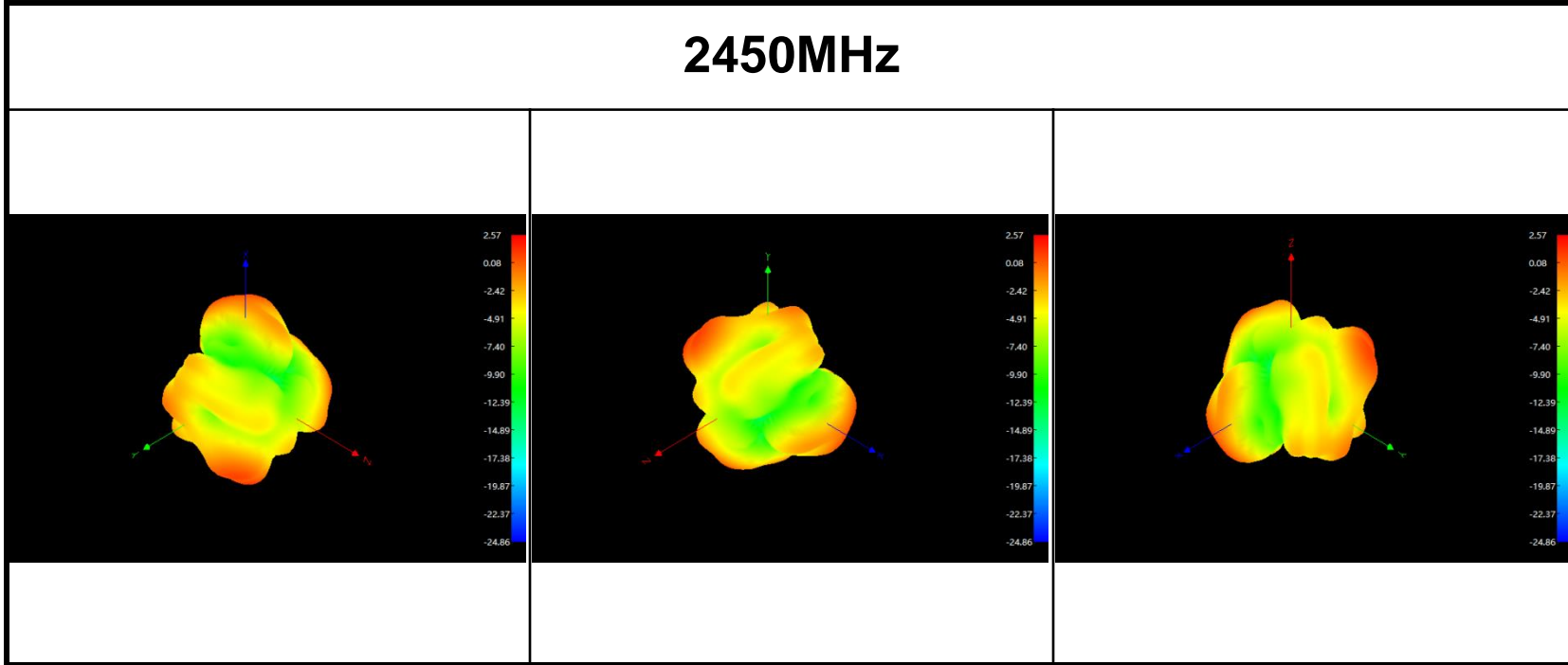
X-Y plane



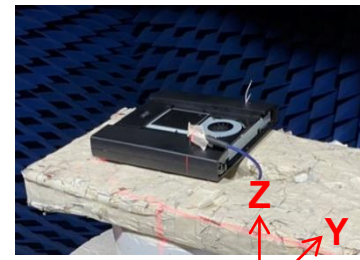
3D Radiation Gain Pattern(ANT1)



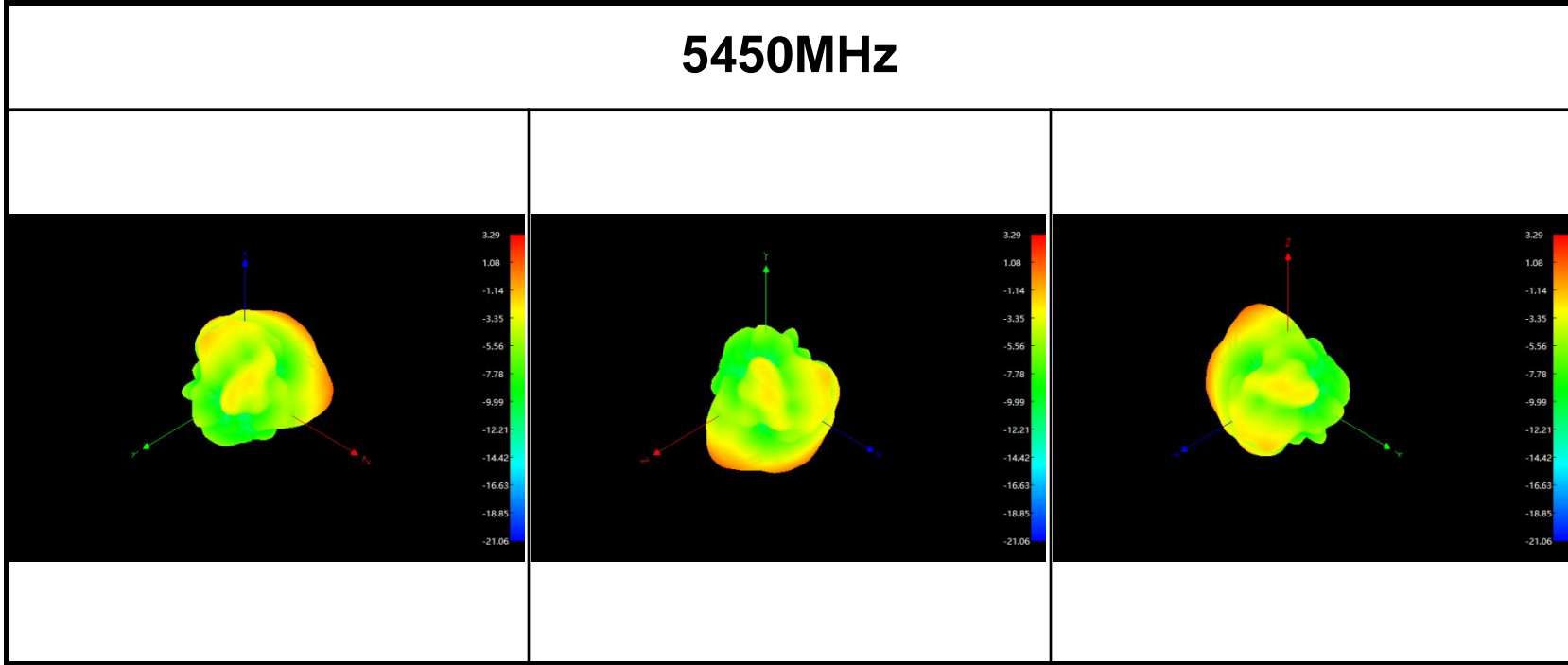
2450MHz



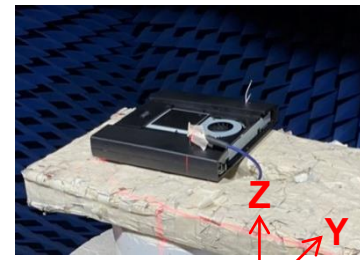
3D Radiation Gain Pattern(ANT1)



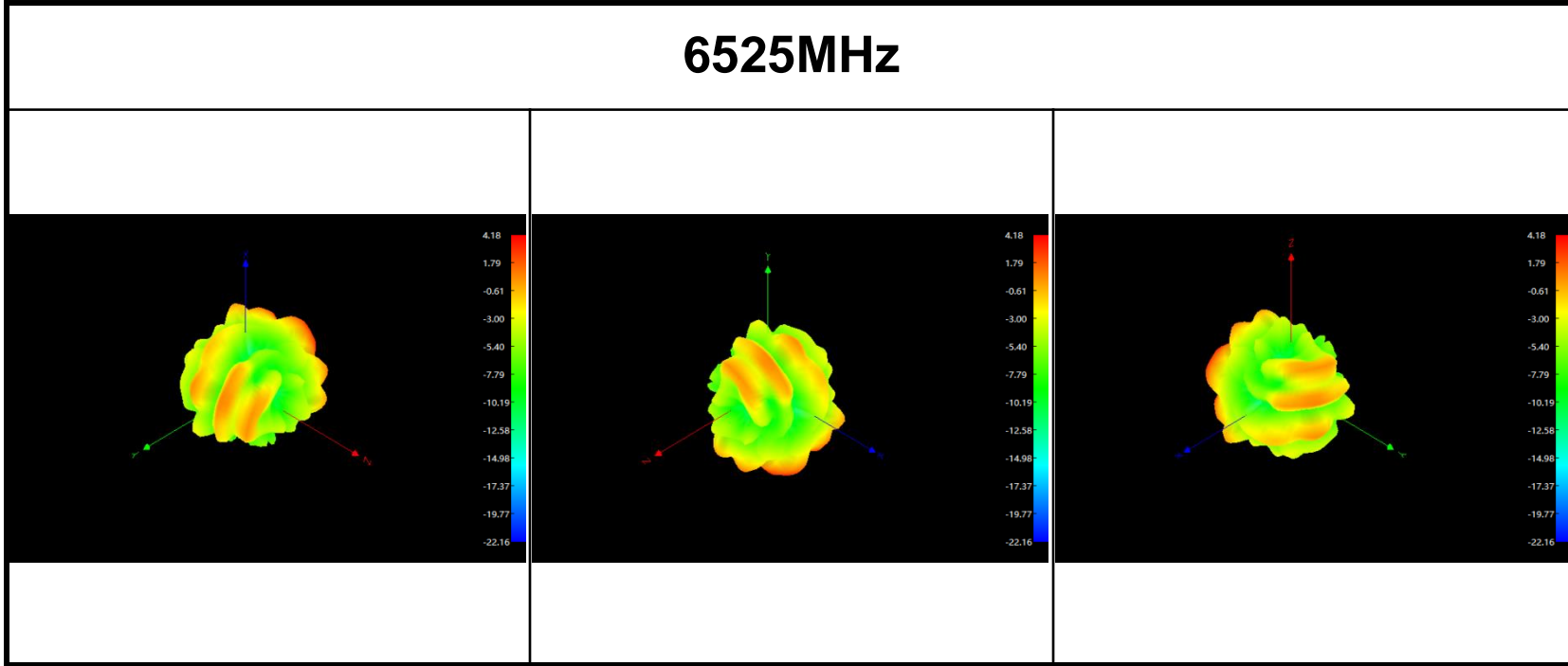
5450MHz



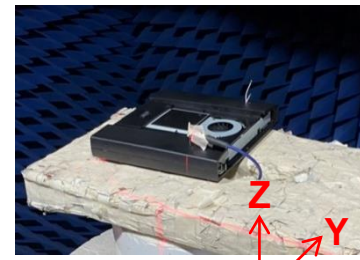
3D Radiation Gain Pattern(ANT1)



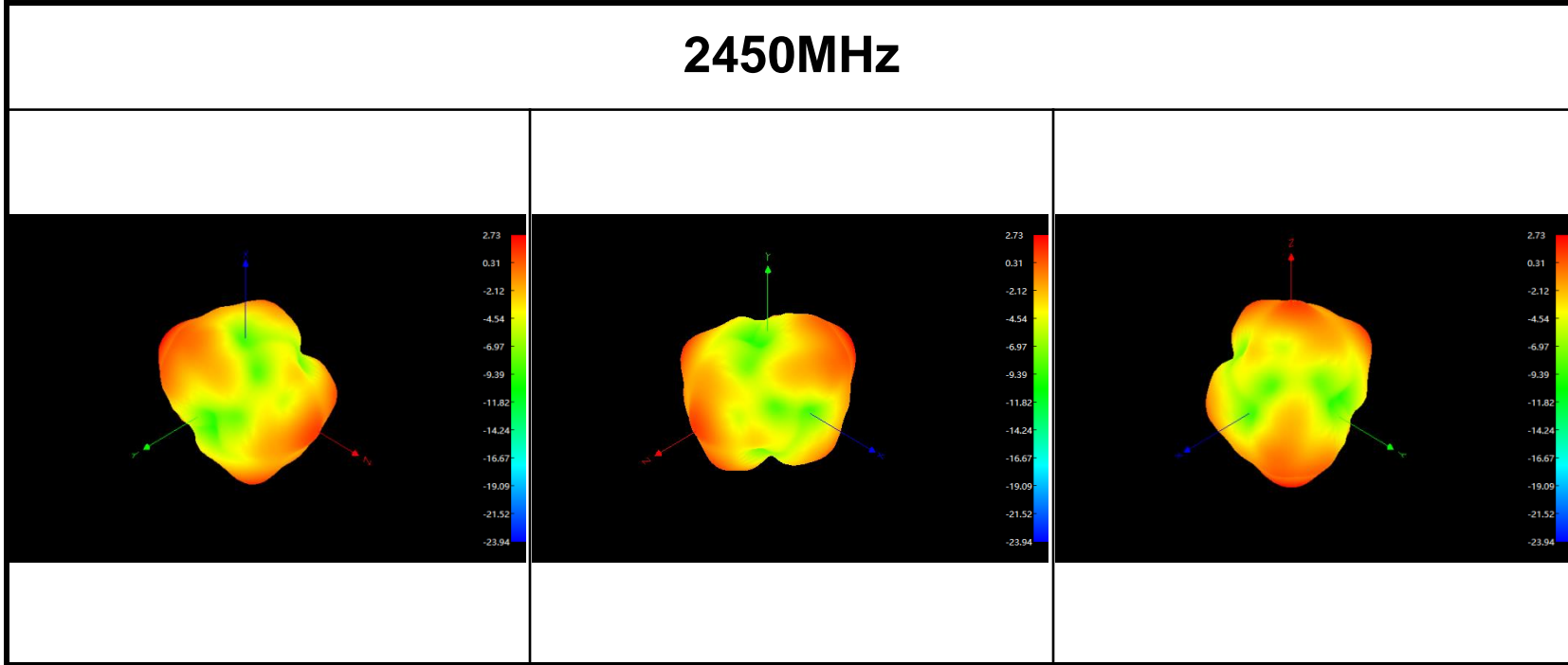
6525MHz



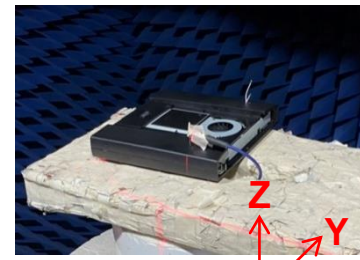
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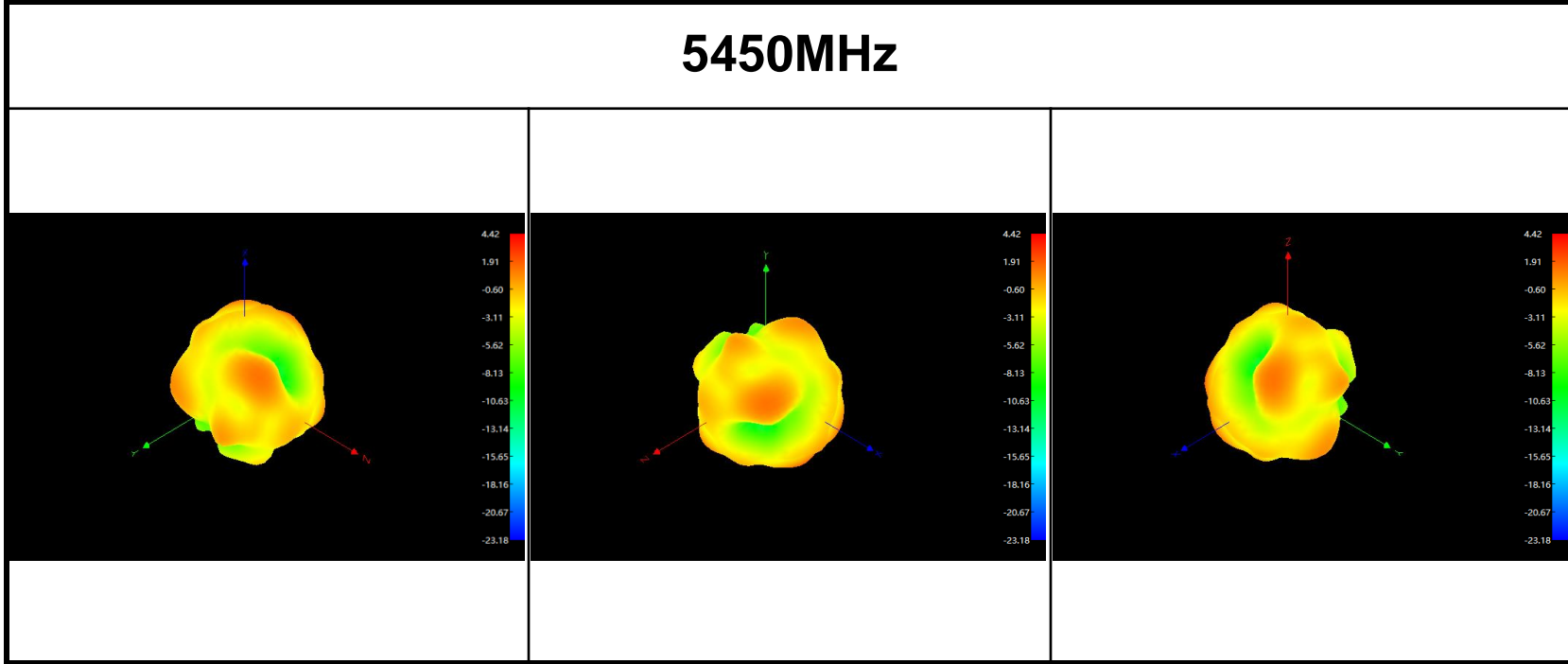
2450MHz



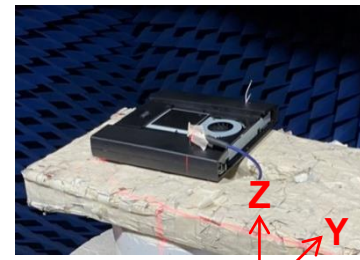
3D Radiation Gain Pattern(ANT2)



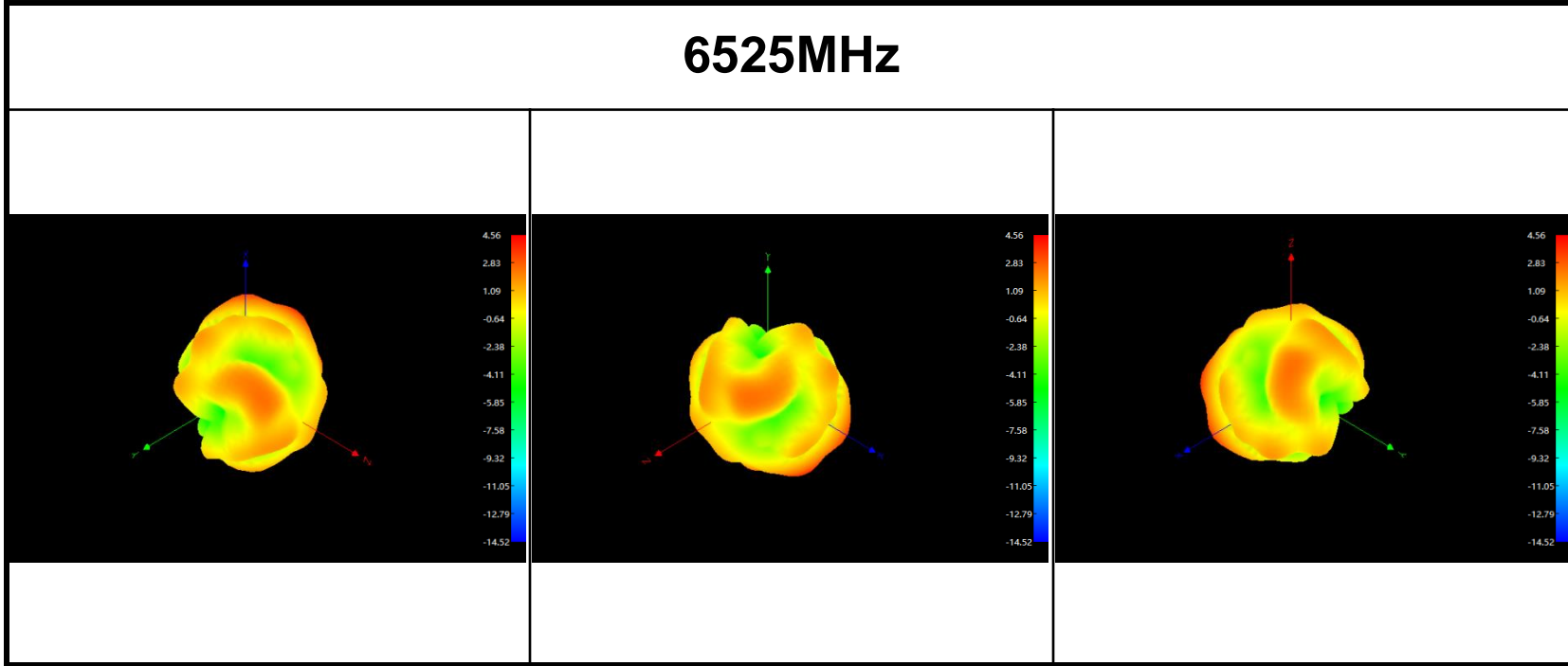
5450MHz



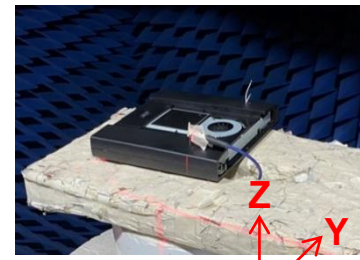
3D Radiation Gain Pattern(ANT2)



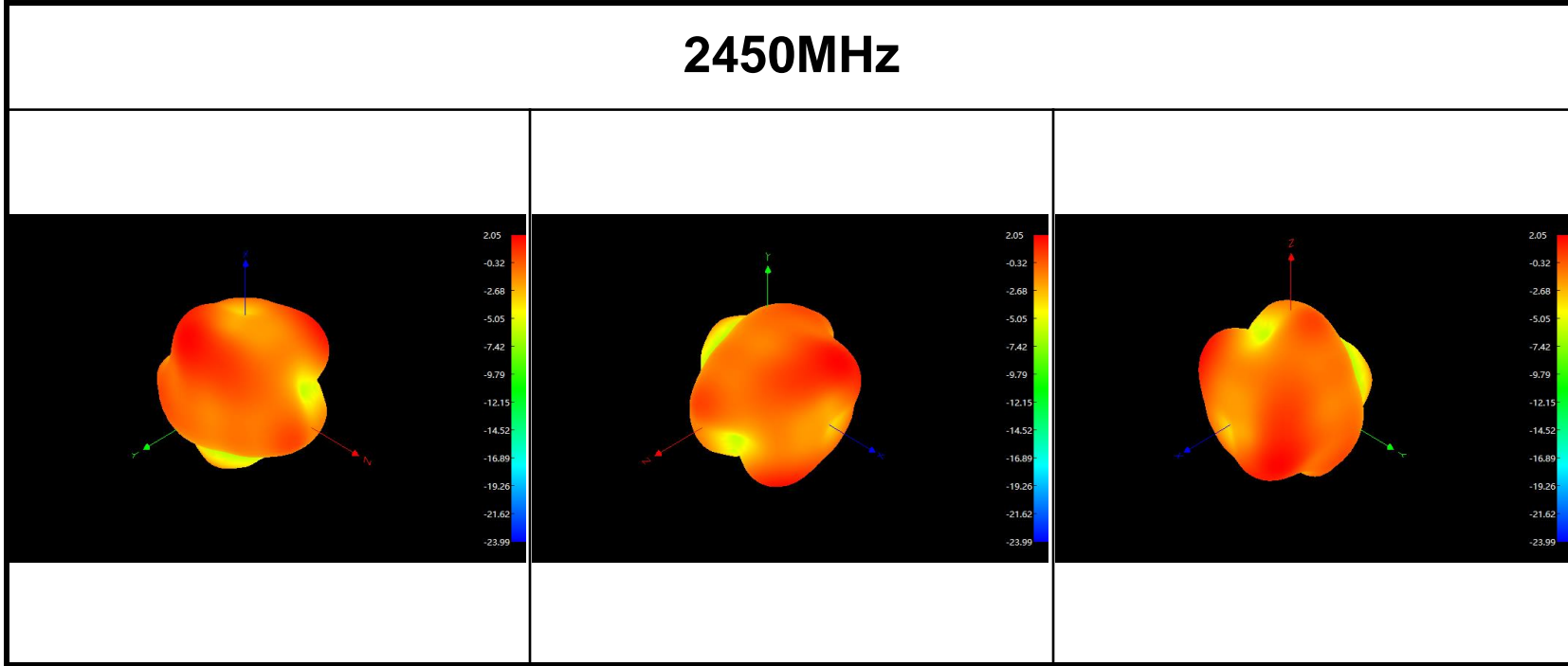
6525MHz



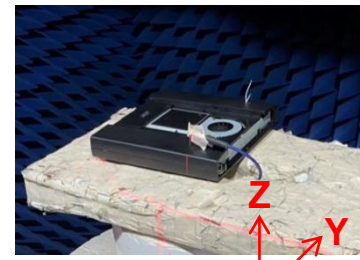
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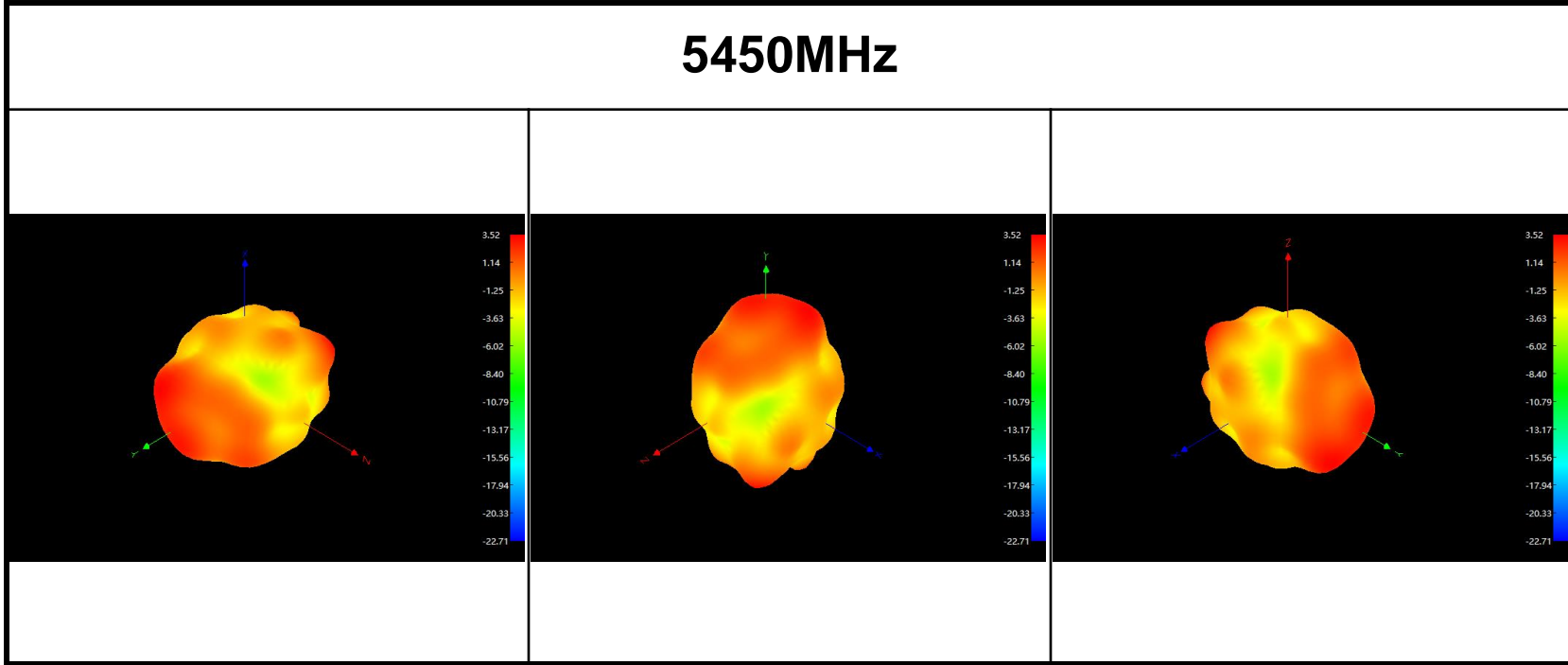
2450MHz



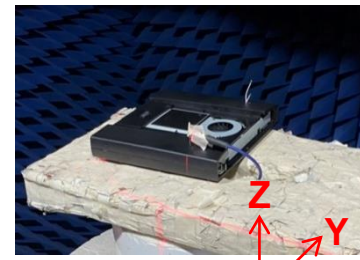
3D Radiation Gain Pattern(ANT3)



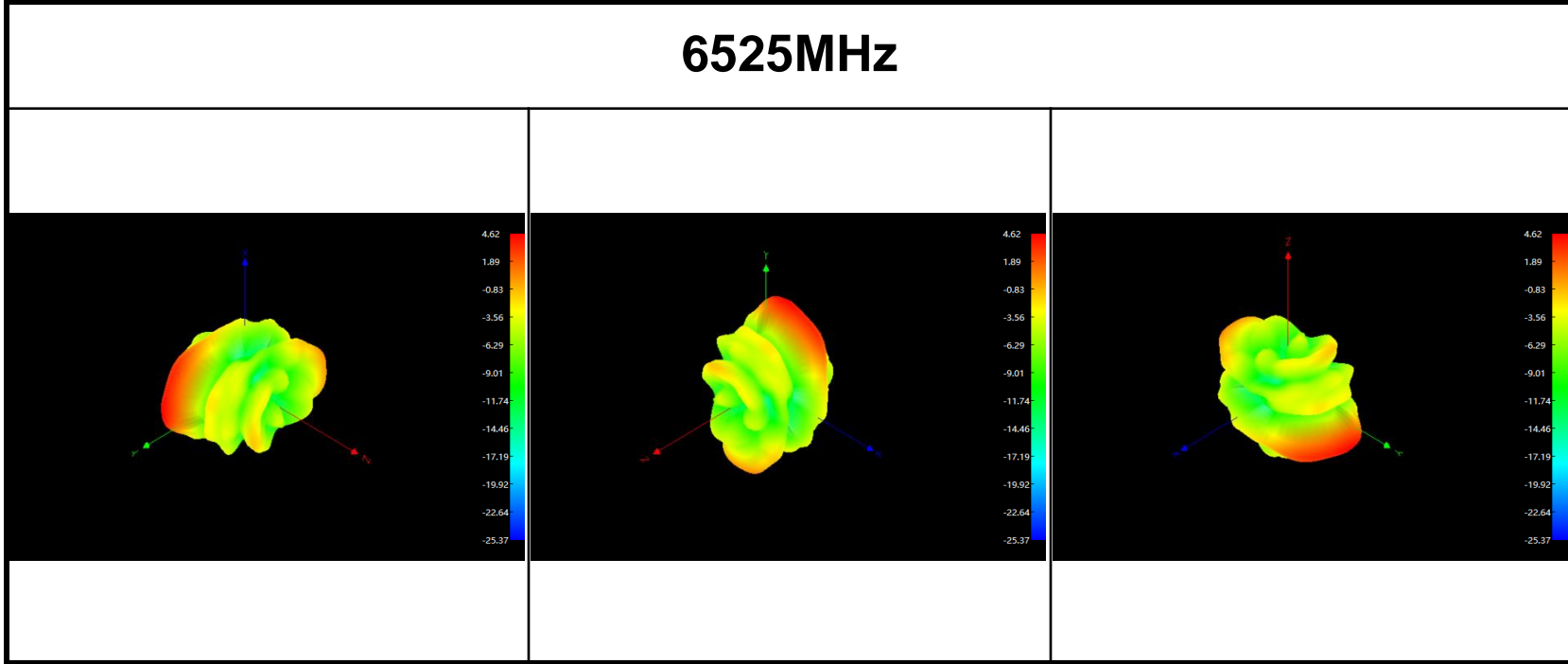
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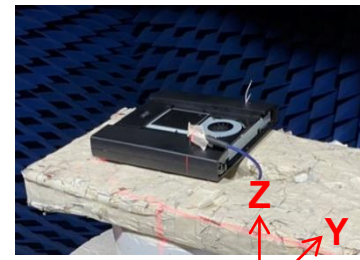
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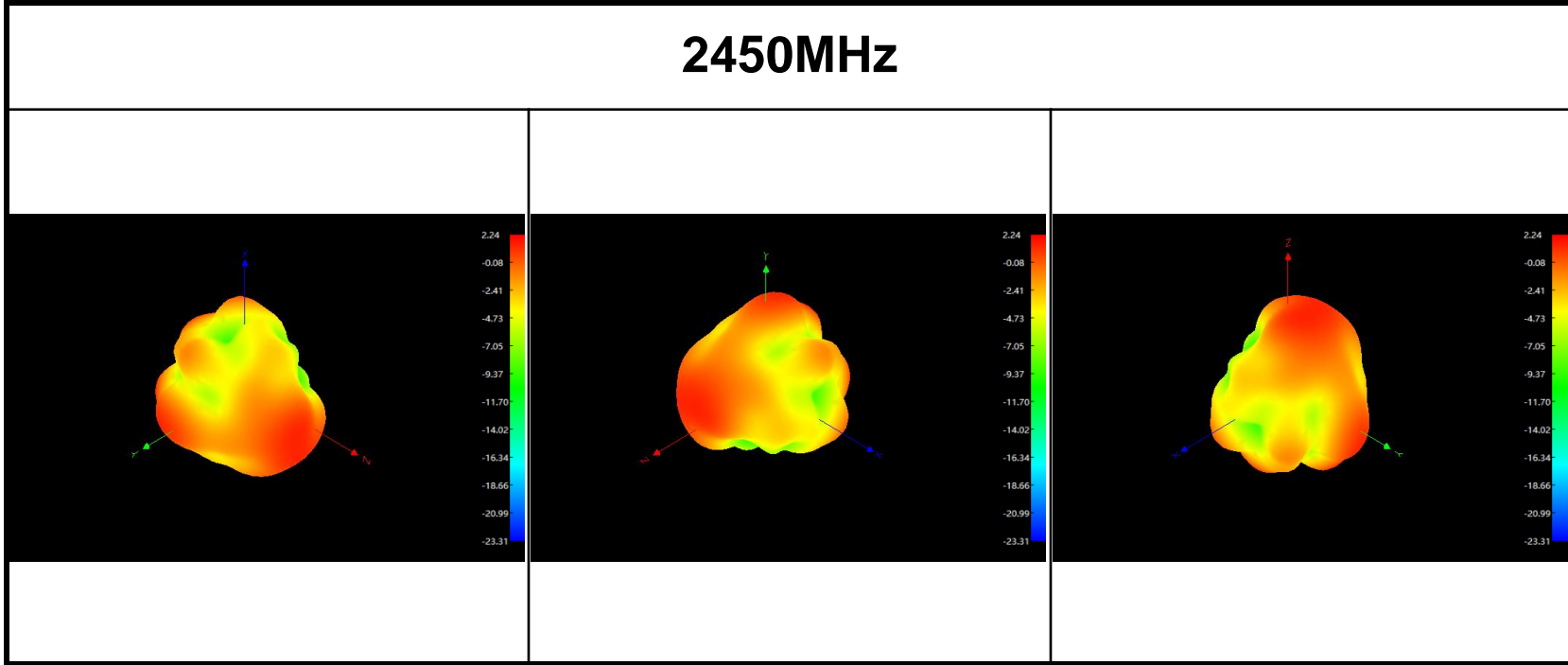
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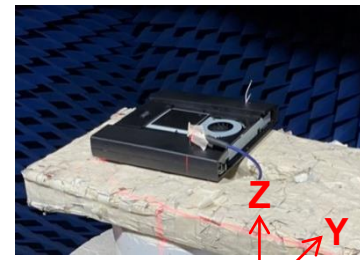
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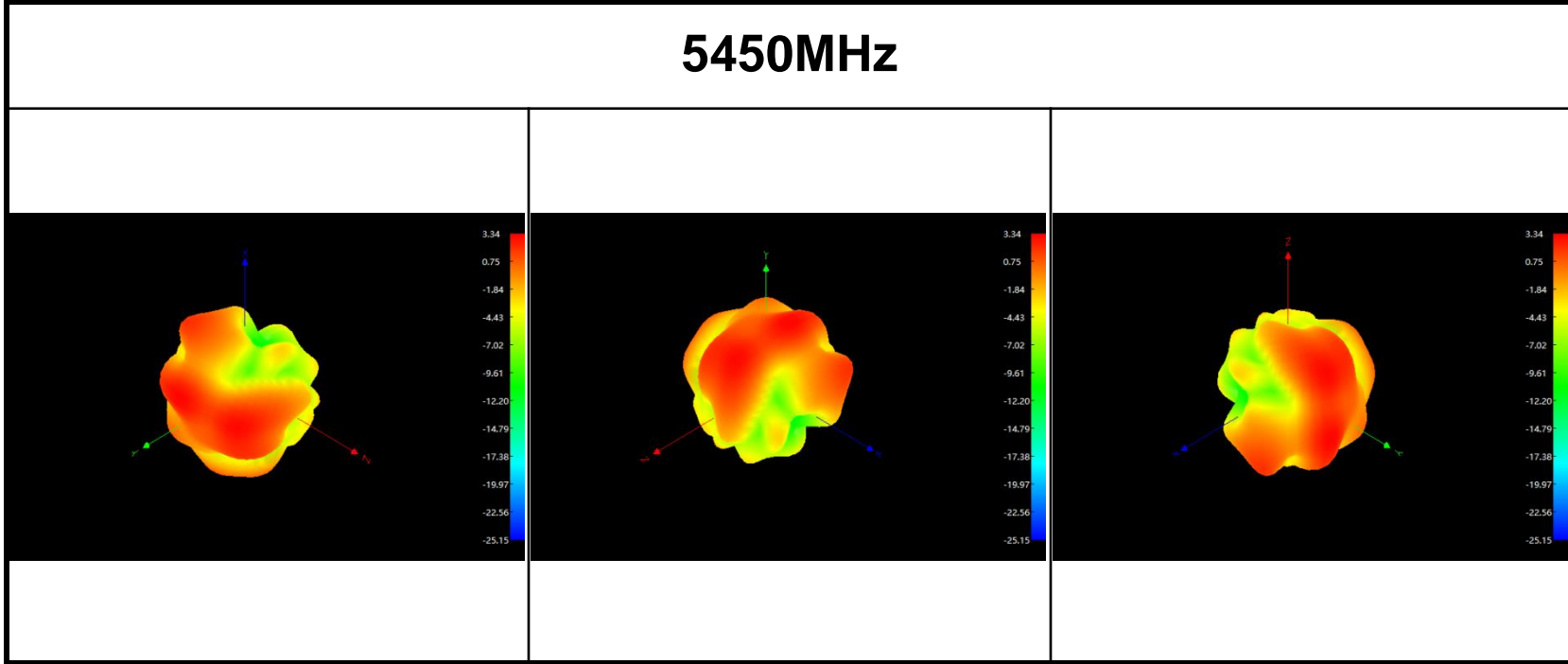
2450MHz



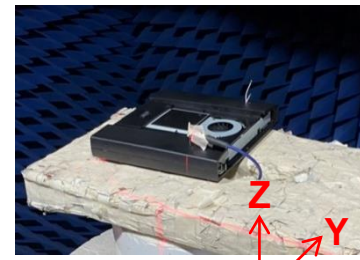
3D Radiation Gain Pattern(ANT4)



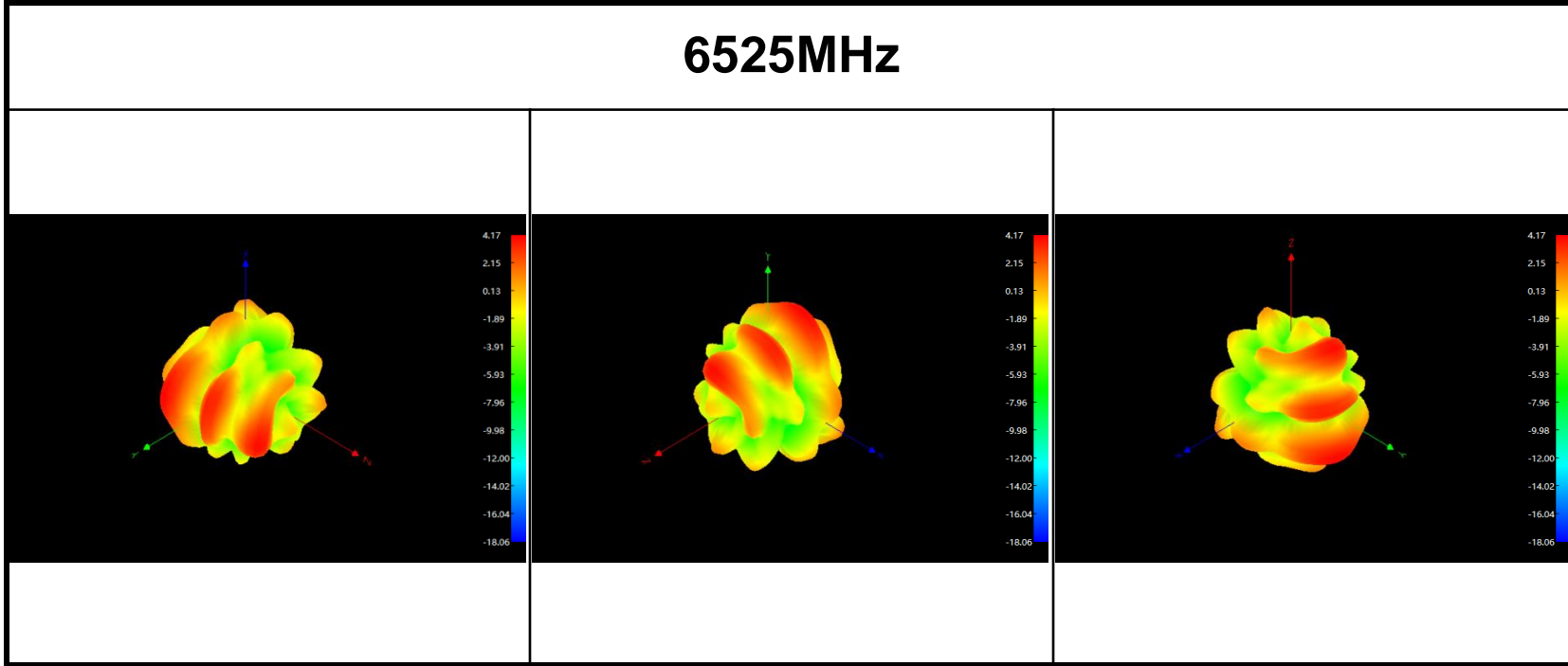
5450MHz



3D Radiation Gain Pattern(ANT4)



6525MHz



Conclusions

- The ANT1 antenna had efficiency about 40%~54%
- The ANT2 antenna had efficiency about 41%~54%
- The ANT3 antenna had efficiency about 41%~55%
- The ANT4 antenna had efficiency about 42%~57%
- The peak gain of the ANT1 are 2.27 to 4.33 dBi.
- The peak gain of the ANT2 are 2.66 to 4.70dBi.
- The peak gain of the ANT3 are 2.05 to 4.75 dBi.
- The peak gain of the ANT4 are 2.13 to 4.32 dBi.