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深圳市南斗星科技有限公司

SHENZHEN SOUTH STAR TECHNOLOGY CO.,LTD

ANTENNA SPEC

客户名称 **Customer Name:** H3C

产品型号 **Product Model:** N12 (for
ANT1 Model) N102 (for ANT2&3&4 model)

制作日期 **Production date:** 2022-05-23

制作版本 **Revision:** 1.0

制造厂商：深圳市南斗星科技有限公司

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The basic parameters

A. 电性能Electrical Characteristics	
Frequency频率	2412MHz-2472MHz /5150MHz-5850MHz
VSWR电压驻波比	<2
Efficiency效率	>60%
Impedance阻抗	50 Ohm
Polarization极化	Linear
PeakGain增益 Note备注:	5dBi
B. 材料&物理性能Material & Mechanical Characteristics	
射频材料Material of Radiator	外置天线
射频线类型Cable Type	1.13
接头类型Connector Type	焊接
C. 环境Environmental	
工作温度Operation Temperature	- 20 °C ~ + 65°C
存放温度Storage Temperature	- 30°C ~ + 75°C



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Antenna Design for NX30 PLUS V1.00

Document Number	NDX-191031
1st Released Date	23/05/2022
Last Released Date	23/05/2022
Author	Yangyang Liao
Review By	Hui Zhang



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Specification

Rough description	2.4G&5.8G ANT
Item	Initial Specification
Dimensions	
Impedance	50Ω Norminal
Test environment	With housing
Spectrum	None
Frequecy range	2.412GHz~2.472GHz 5.15GHz~5.85GHz
Antenna Type	Dipole
VSWR	<2
Gain(Peak)	SEE P19-P20
Radiation	Omni
Polarization	Linear
Rad. efficiency	≥60%
Power	1W
Connector Type	Soldering
Cable Type	Φ1.13mm coaxial cable
Cable Length	
Isolation	None



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1.Antennas' setup and enviroment With housing

Ant3 2.4G
外露线长为44mm

Ant2 5.8G
外露线长为175mm



Ant4 2.4G
外露线长为 140mm

Ant1 5.8G
外露线长为 45mm

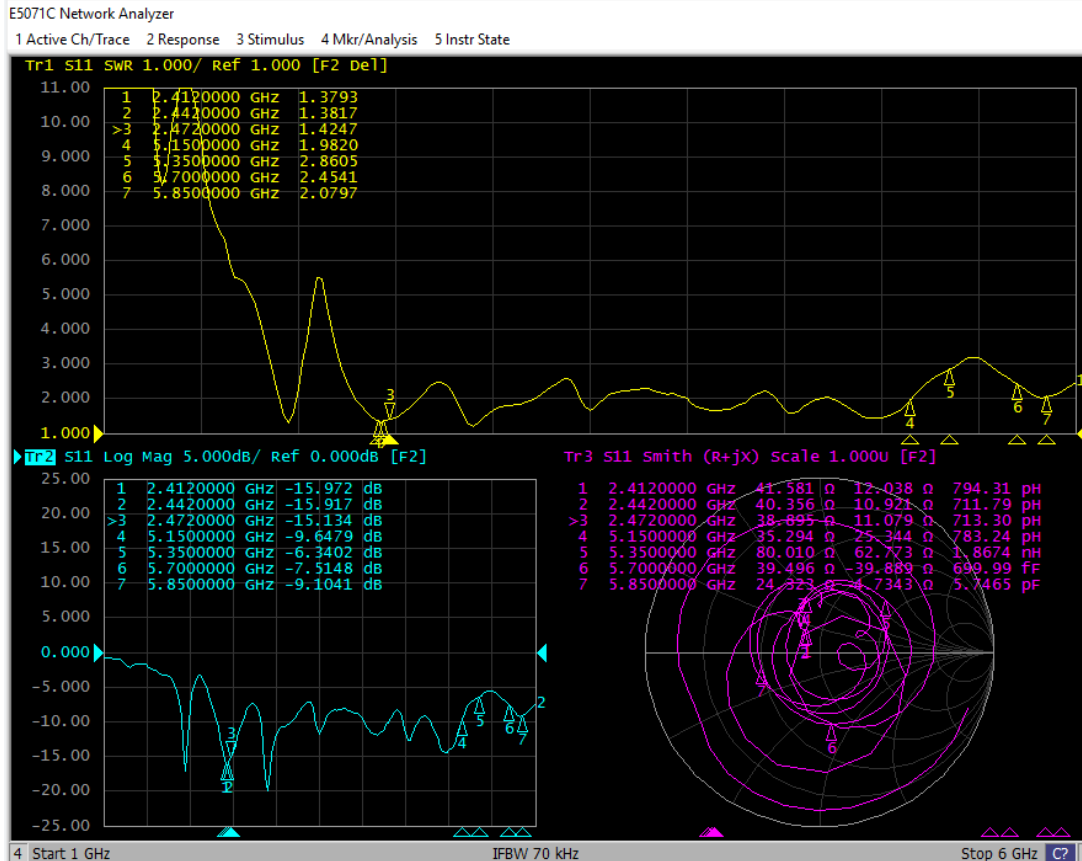


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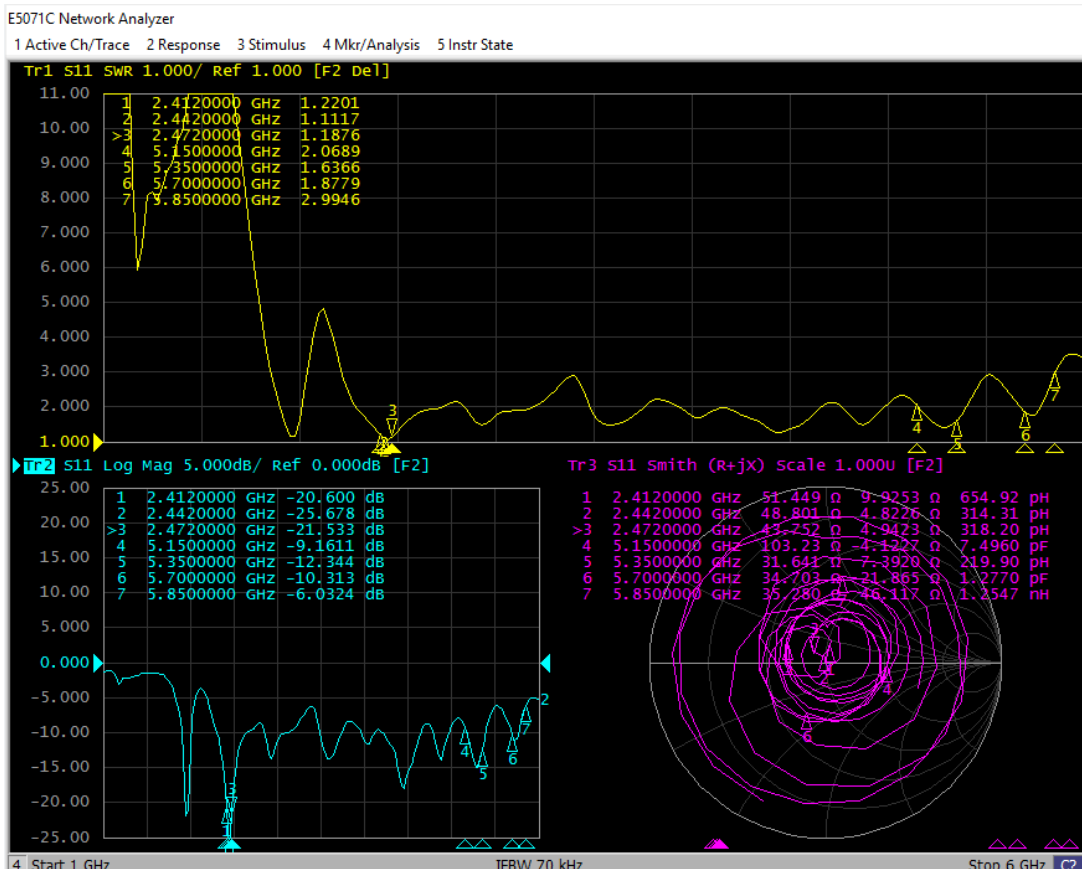
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2.Analyzer Measurement

2.1 Ant1# 2.4G S11 test results



2.2 Ant3# 2.4G S11 test results





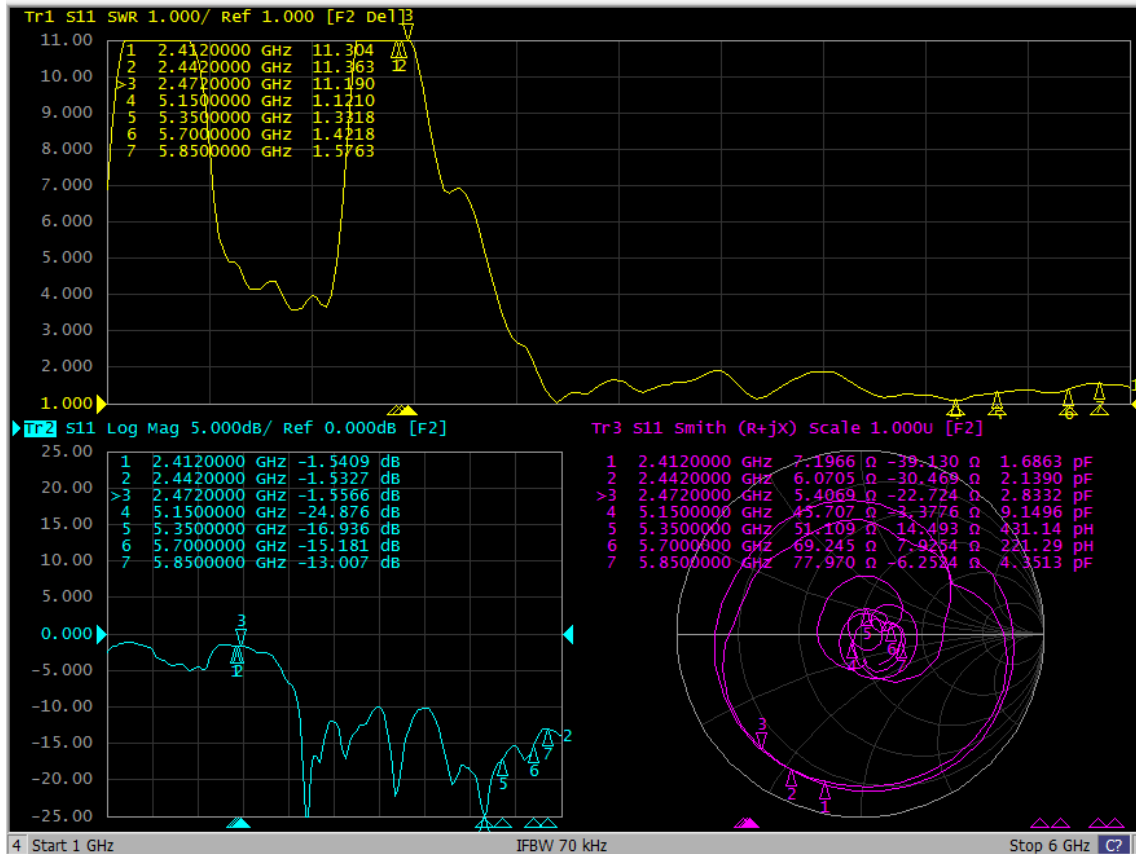
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2.3 Ant 2# 5.8G S11 test results

E5071C Network Analyzer

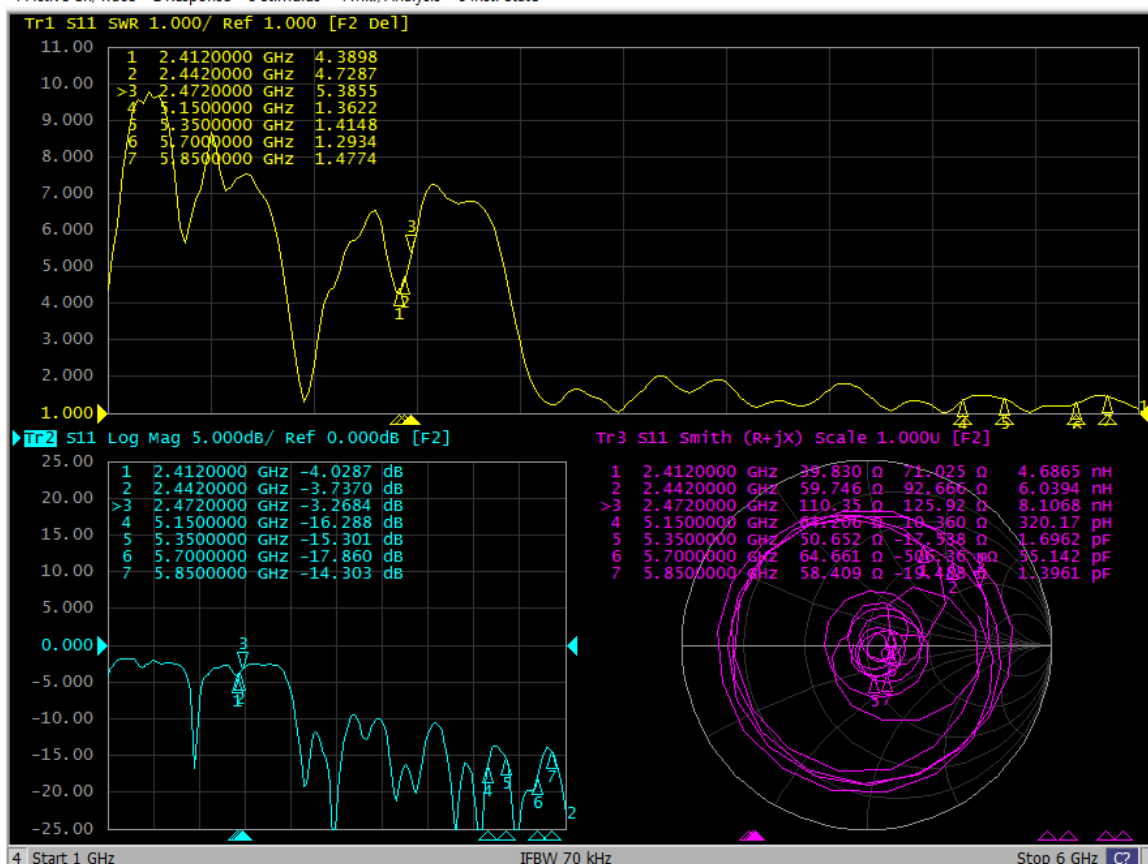
1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State



2.4 Ant 4# 5.8G S11 test results

E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State





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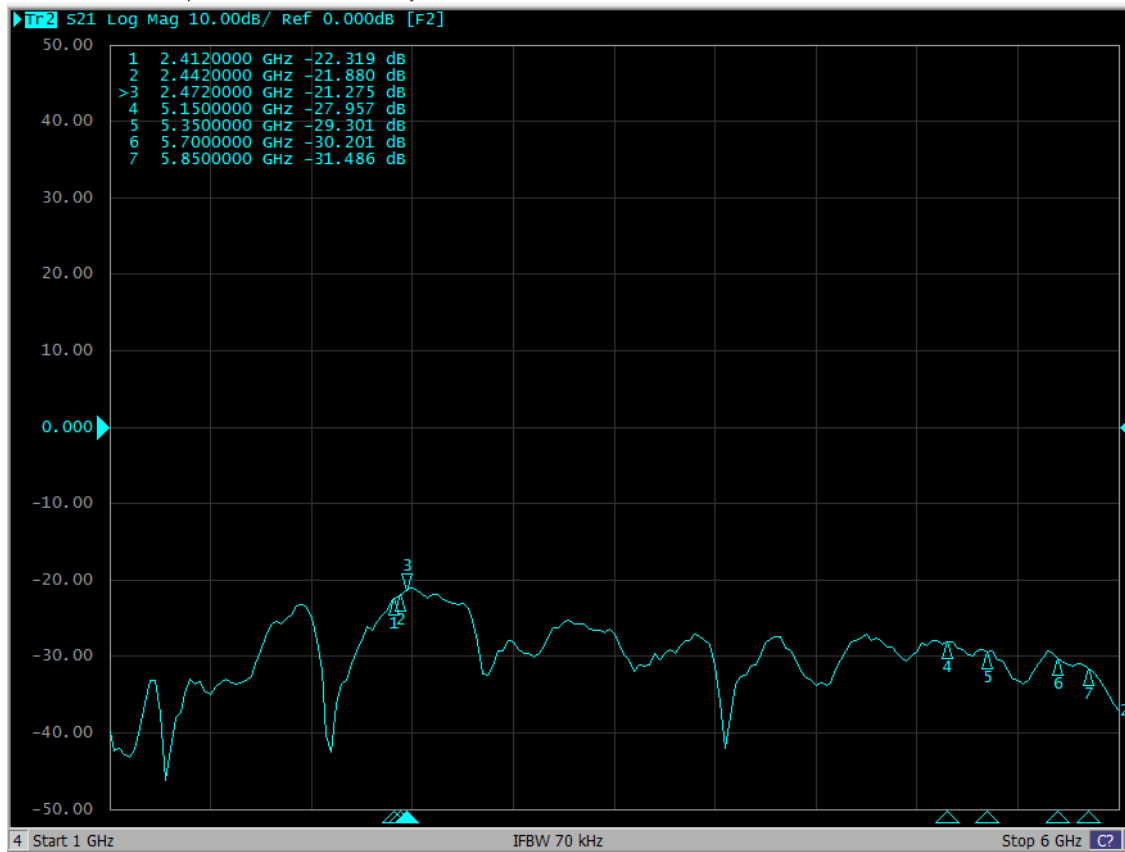
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2.5 Ant 1#-3# 2.4G S21 test isolation

E5071C Network Analyzer

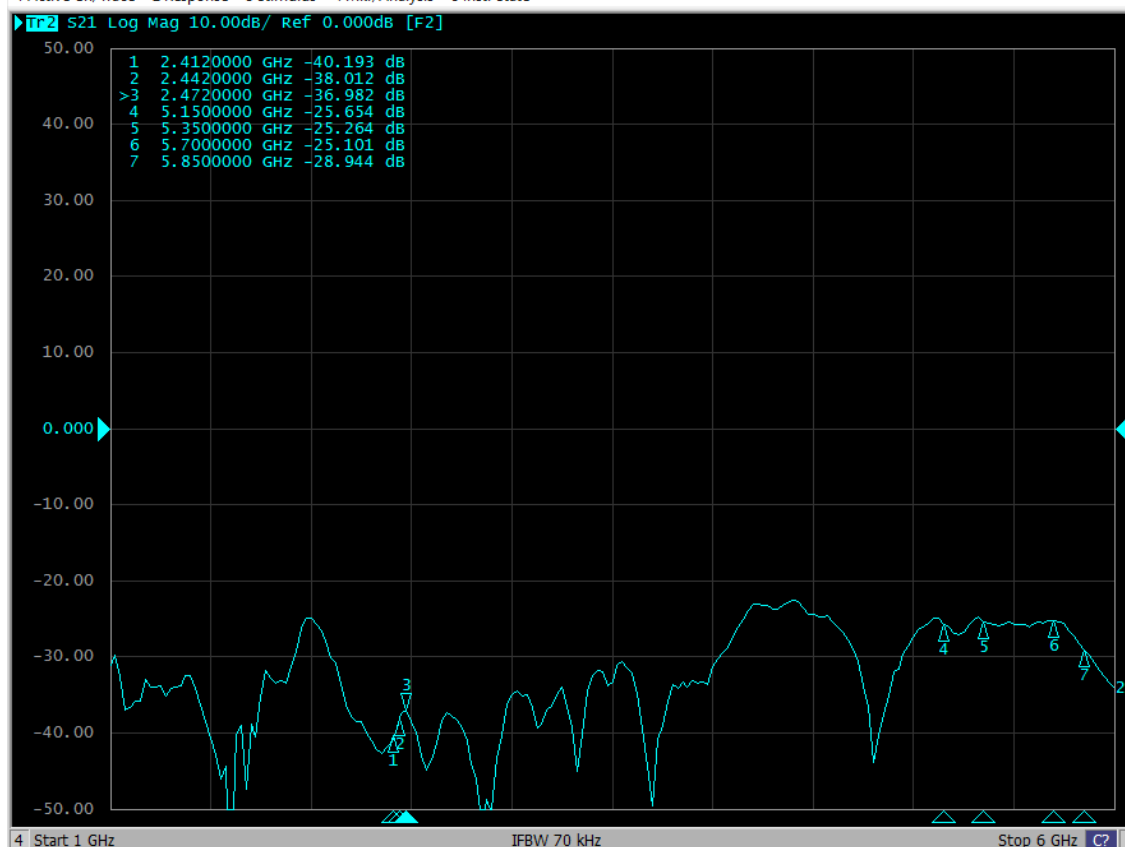
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2.6 Ant 2#-4# 5.8G S21 test isolation

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1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State





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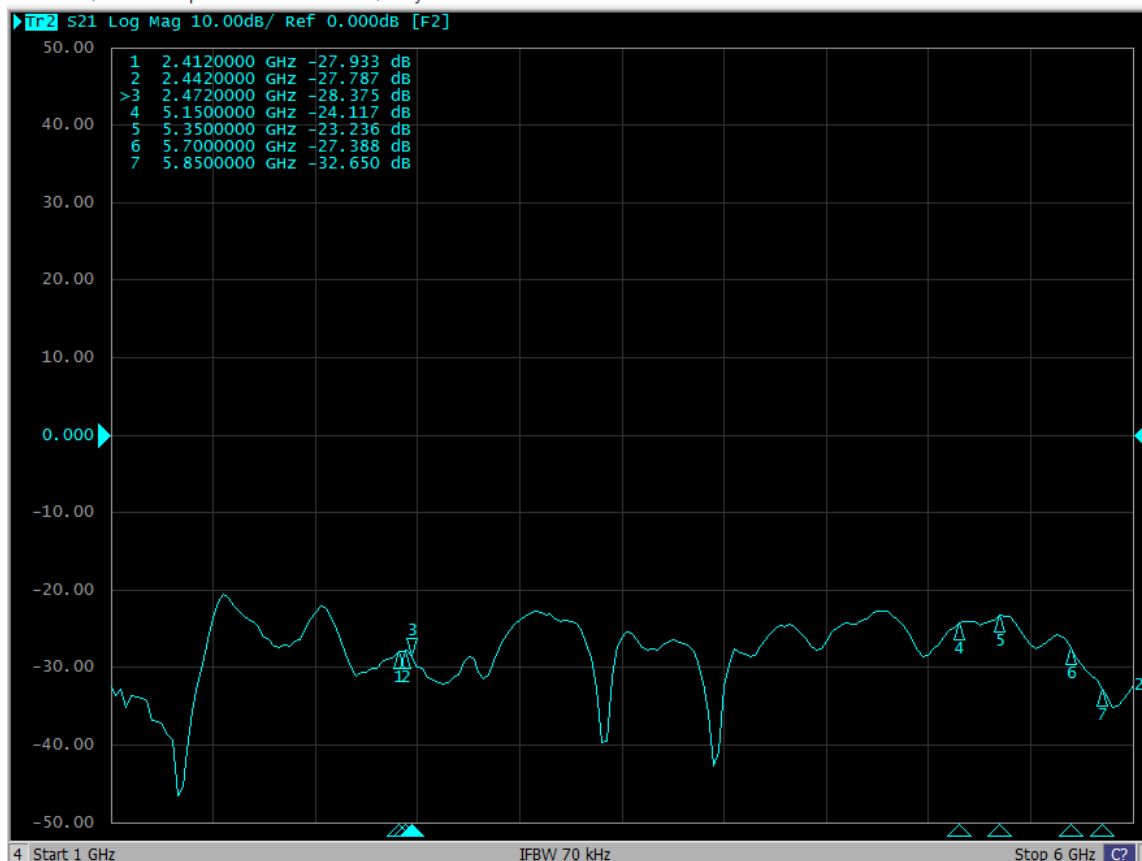
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2.7 Ant 1#-2# 2.4G-1/5.8G-2 S21 test isolation

E5071C Network Analyzer

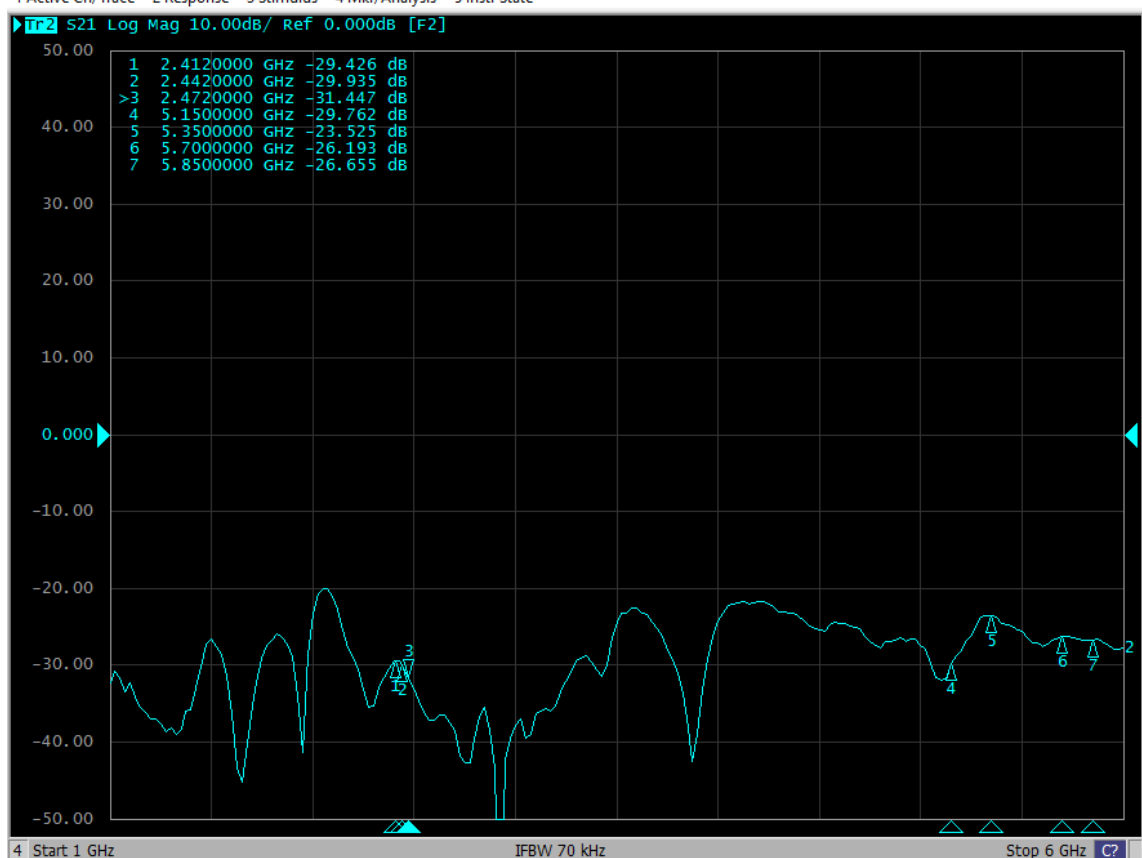
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2.8 Ant 2#-3# 2.4G-2/5.8G-2 S21 test isolation

E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State





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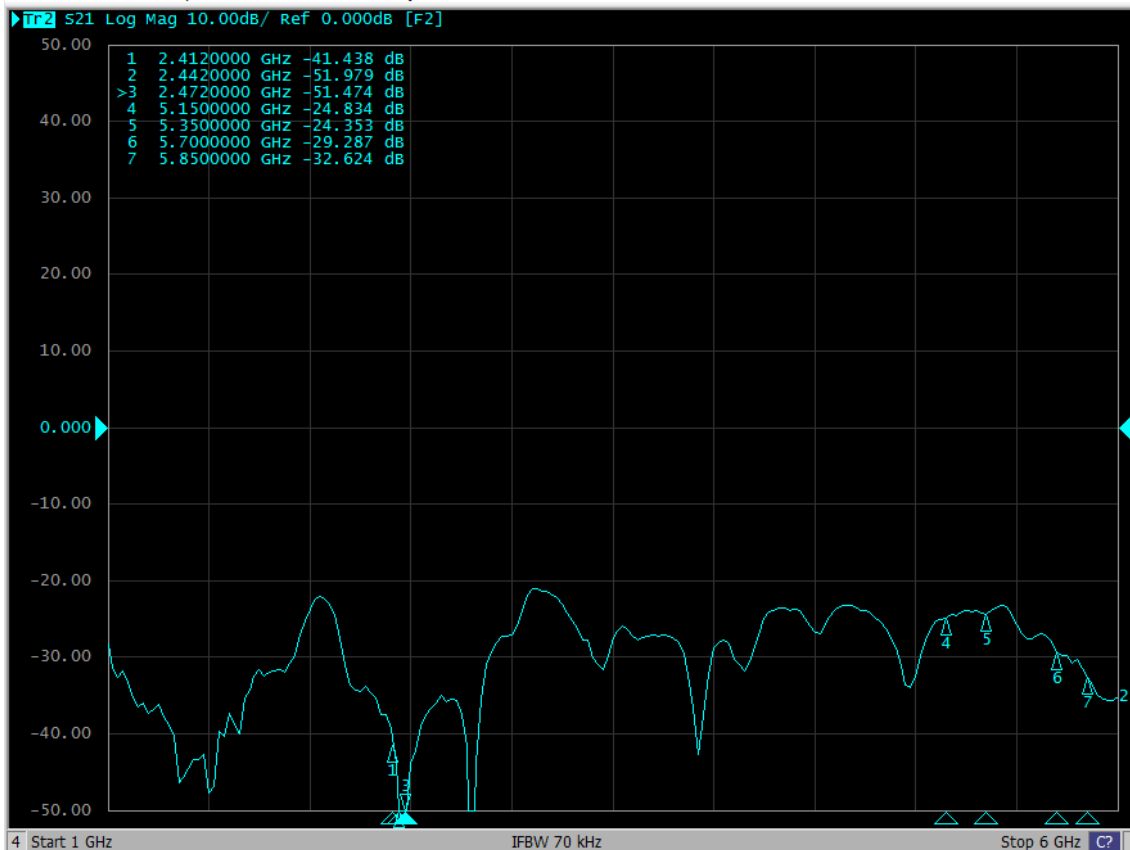
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2.9 Ant 3#-4# 2.4G-2/5.8G-1 S21 test isolation

E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State



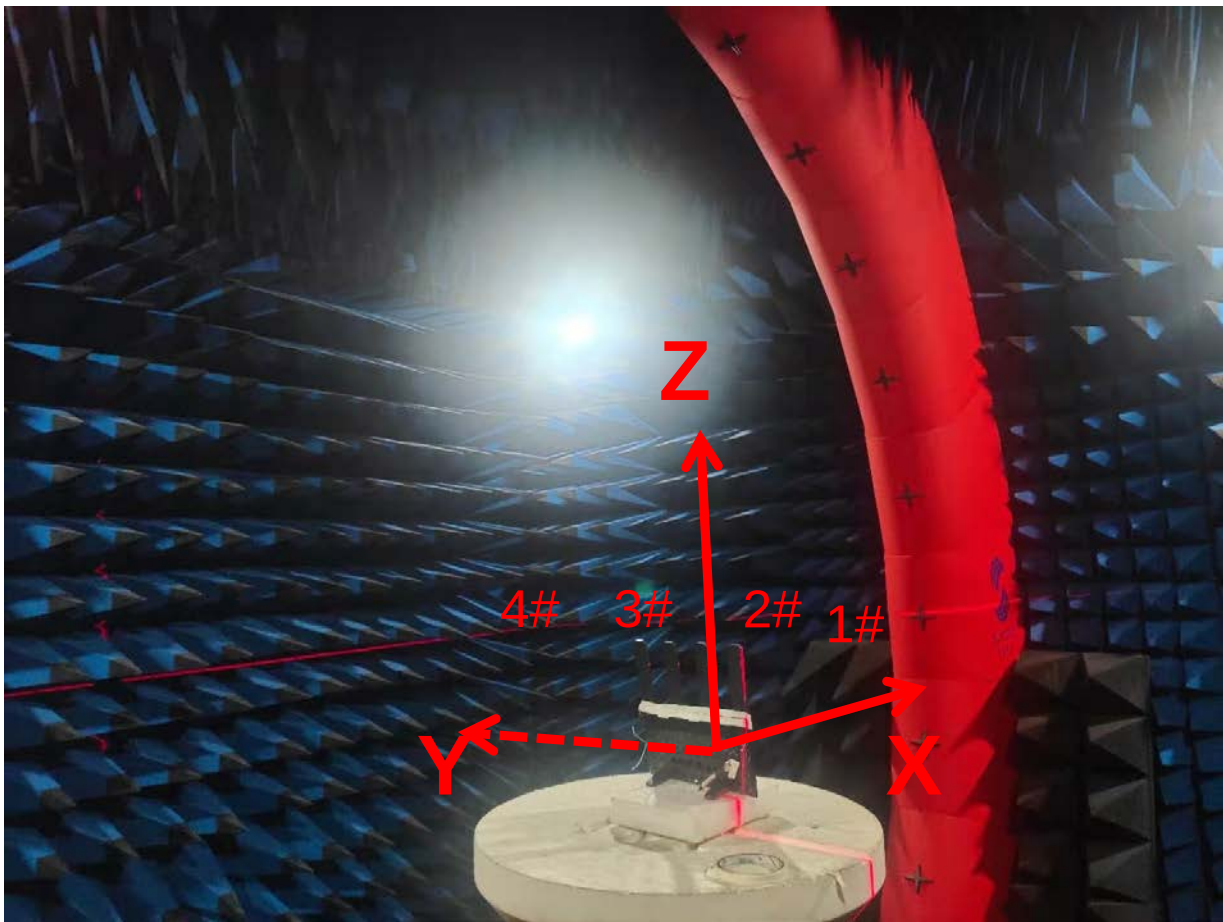


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3. Gain & Patterns test results

3.1 Measurement setting

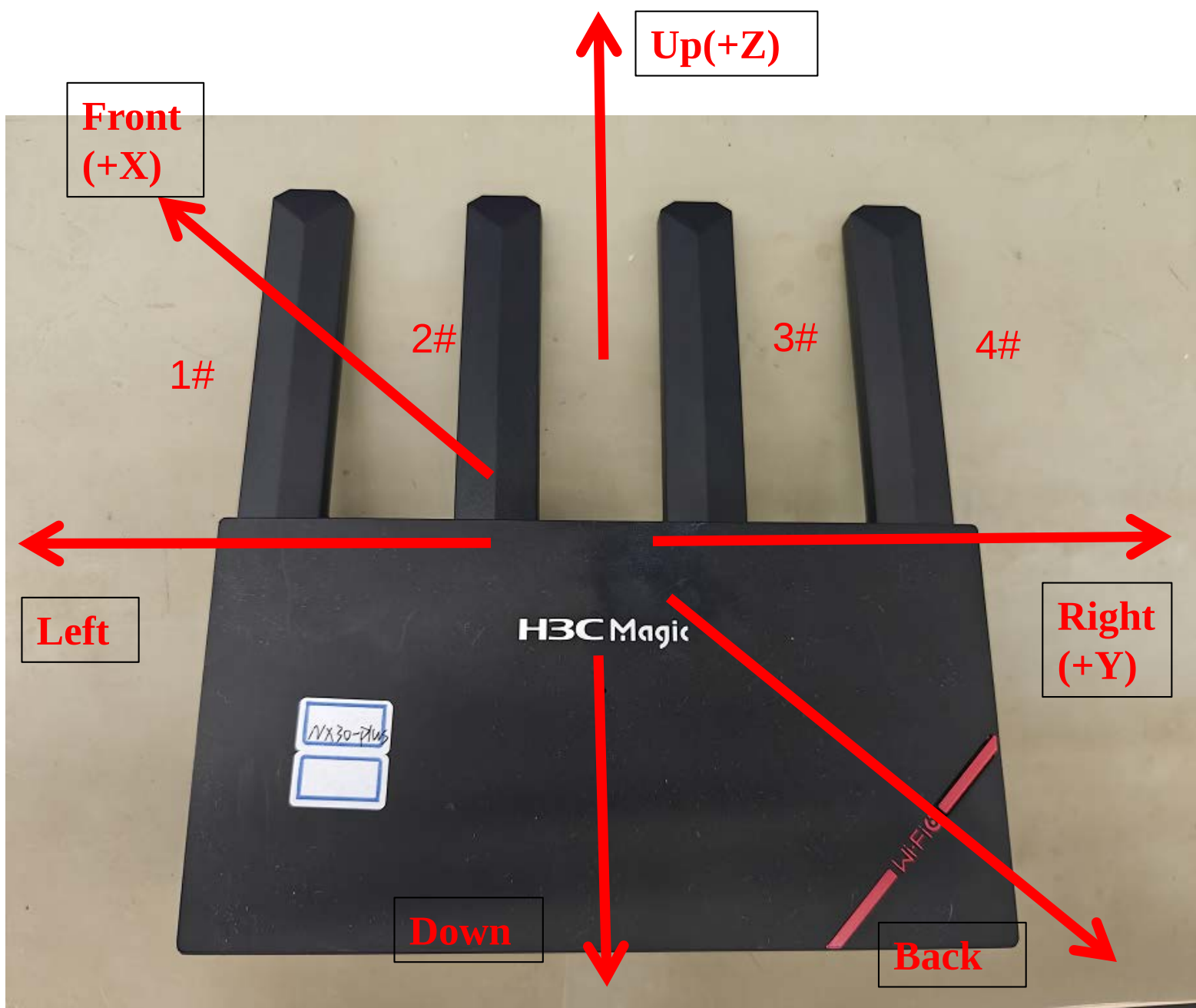




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	XY	YZ	ZX
0°	Front	Up	Up
90°	Right	Right	Front
180°	Back	Down	Down
270°	Left	Left	Back

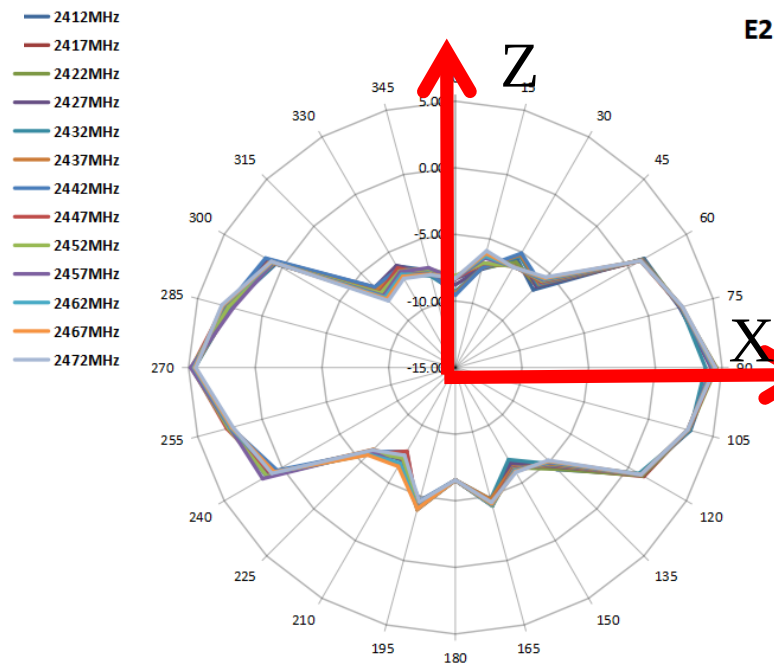
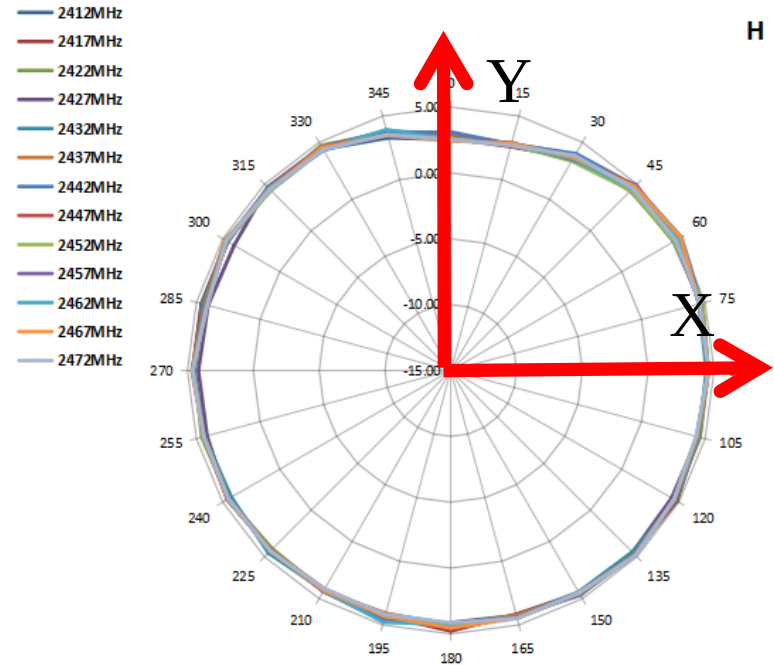
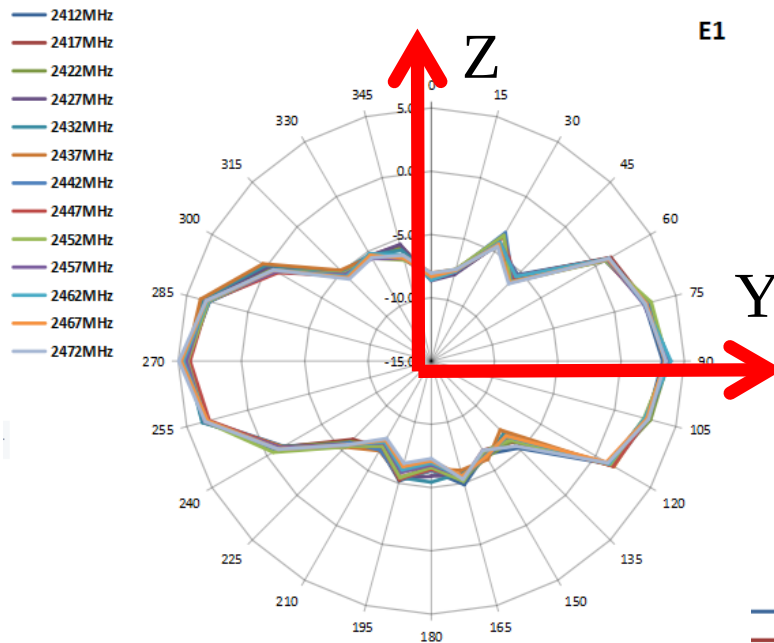
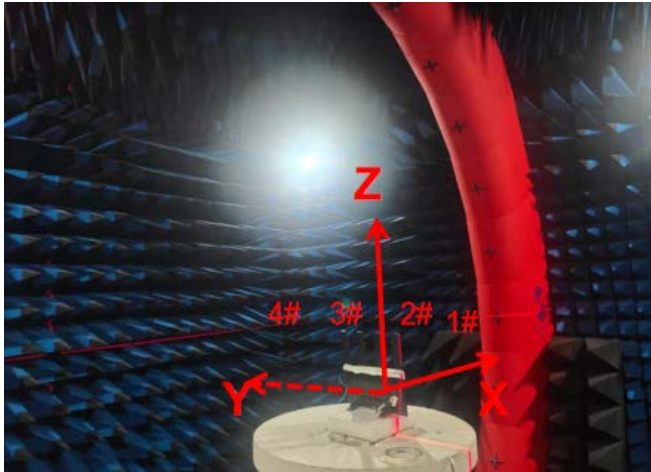


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3.2.1 Ant 1# 2.4G



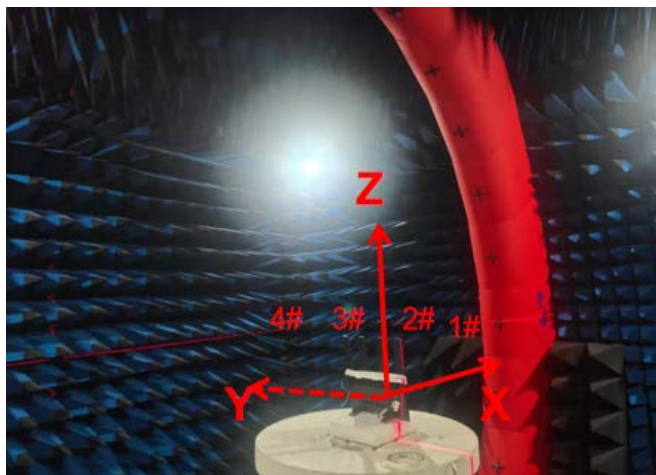


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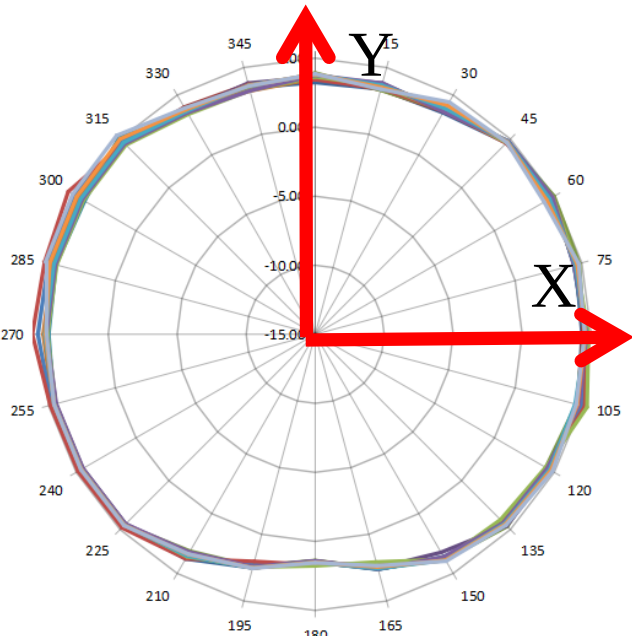
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3.2.2 Ant 3# 2.4G

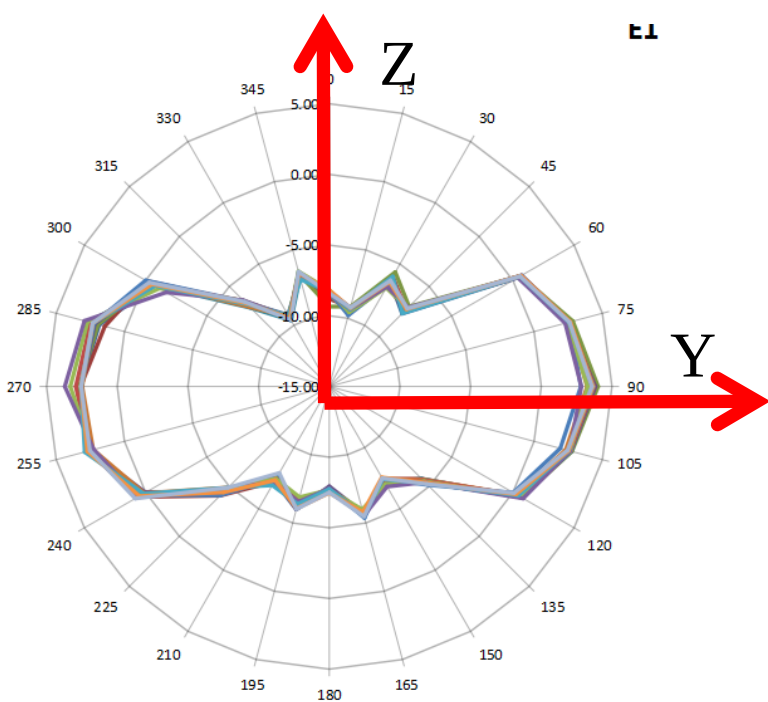


— 2412MHz
— 2417MHz
— 2422MHz
— 2427MHz
— 2432MHz
— 2437MHz
— 2442MHz
— 2447MHz
— 2452MHz
— 2457MHz
— 2462MHz
— 2467MHz
— 2472MHz



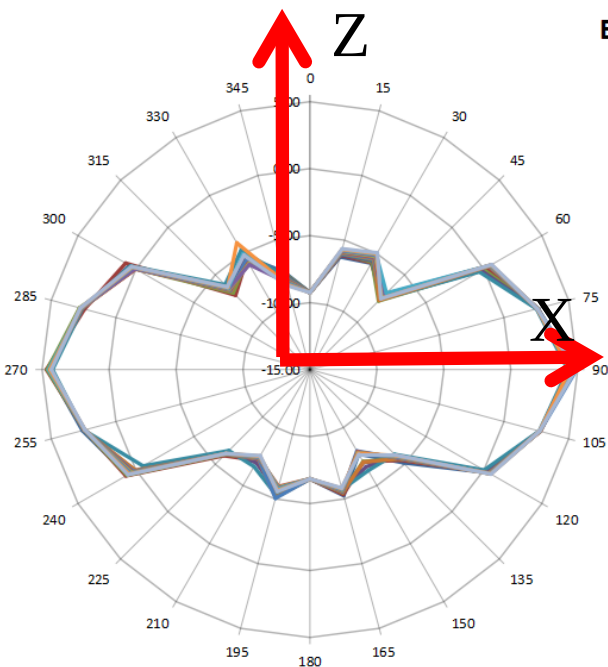
H

E1



E2

— 2412MHz
— 2417MHz
— 2422MHz
— 2427MHz
— 2432MHz
— 2437MHz
— 2442MHz
— 2447MHz
— 2452MHz
— 2457MHz
— 2462MHz
— 2467MHz
— 2472MHz



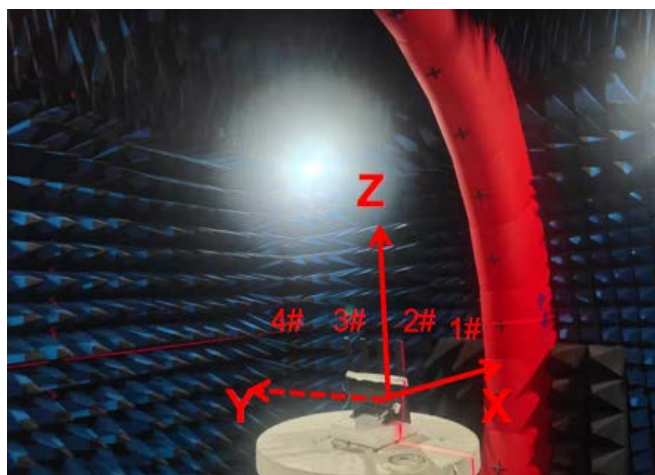


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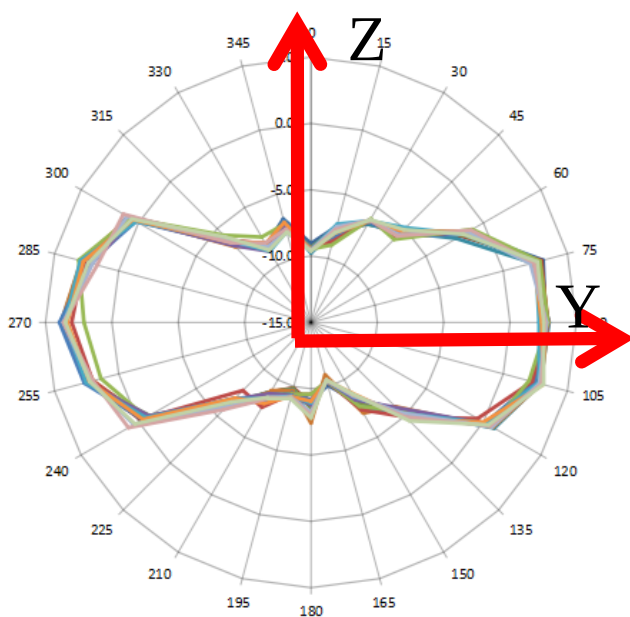
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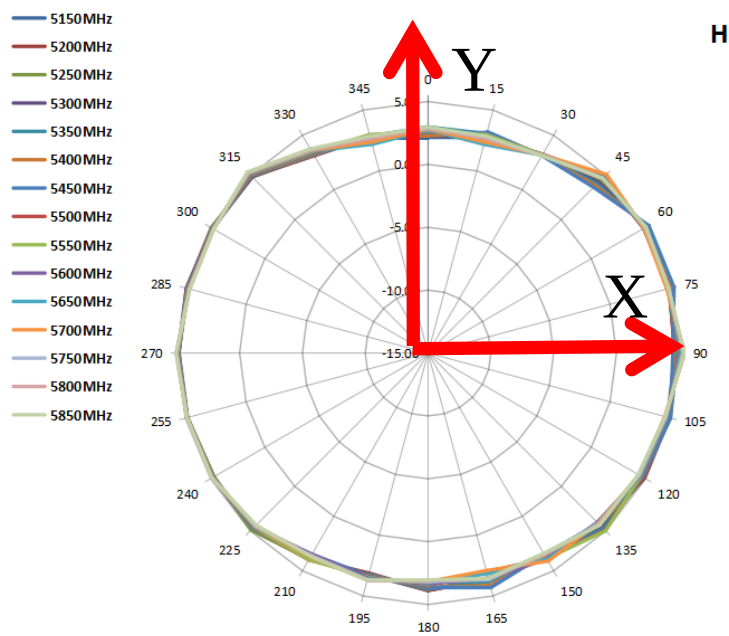
3.2.3 Ant 2# 5.8G



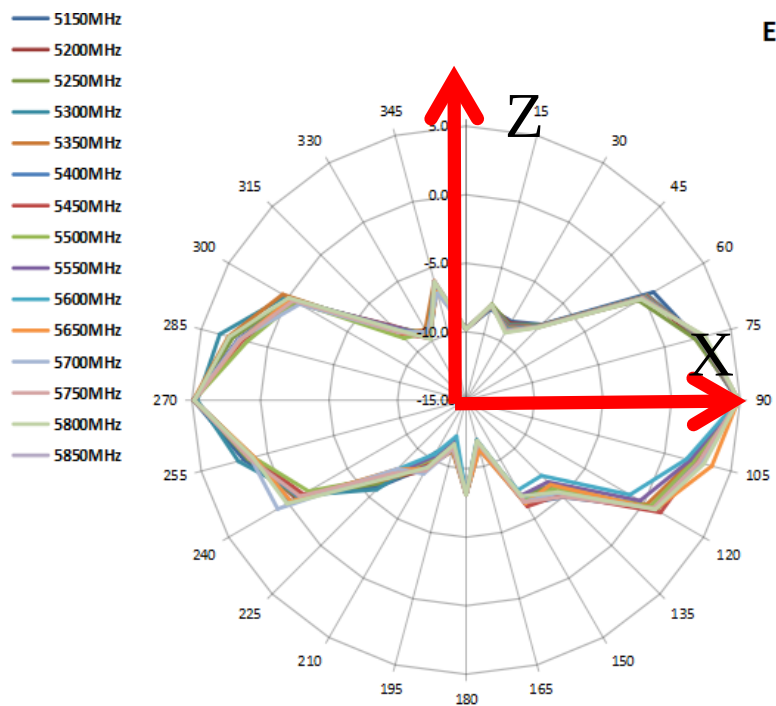
5150MHz
5200MHz
5250MHz
5300MHz
5350MHz
5400MHz
5450MHz
5500MHz
5550MHz
5600MHz
5650MHz
5700MHz
5750MHz
5800MHz
5850MHz



E1



H



E2

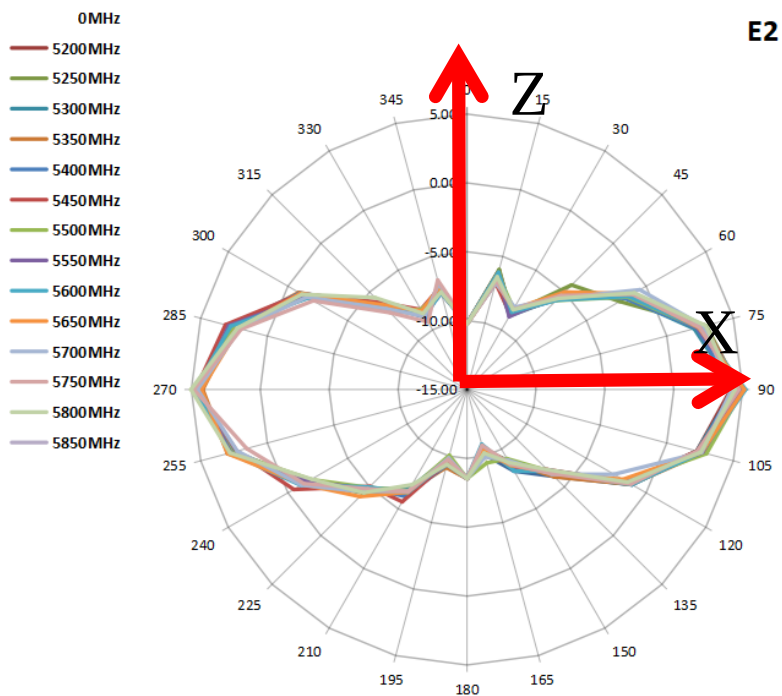
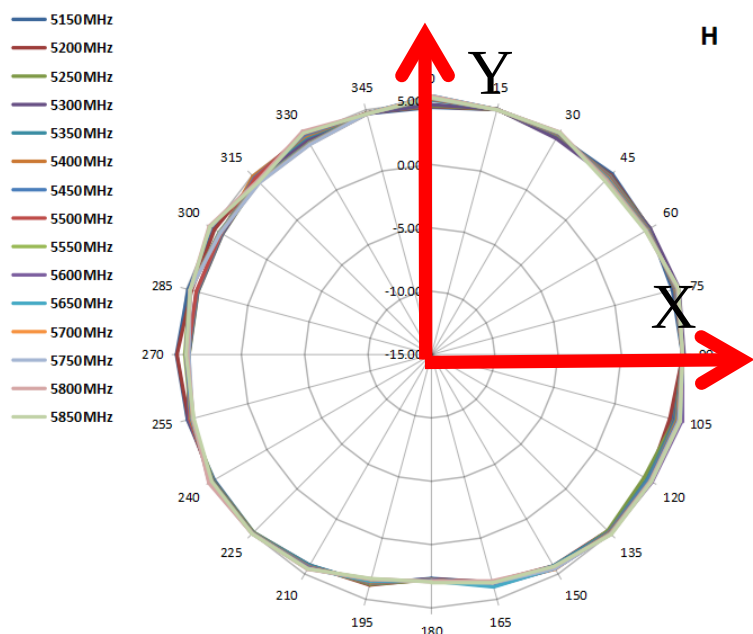
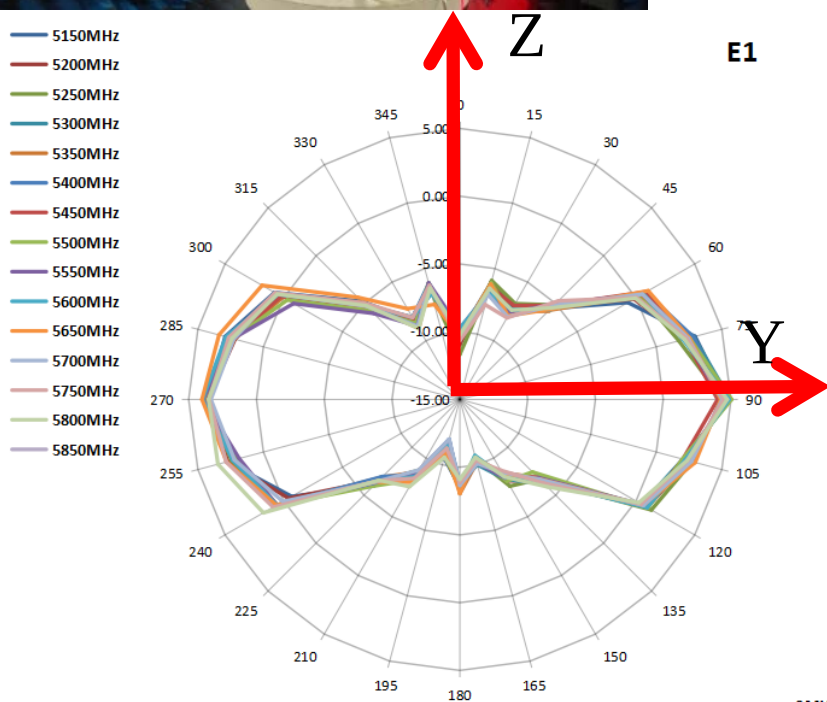
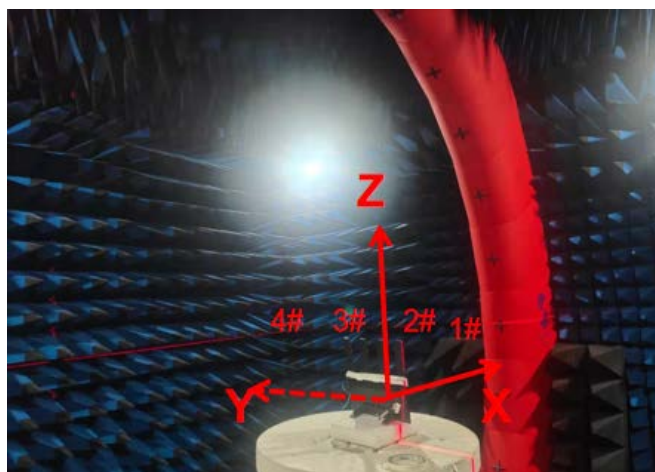


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3.2.4 Ant 4# 5.8G





4.Summary

4.1 ANT 2.4G

	Ant 1		Ant 3	
Freq	Effi	Gain	Effi	Gain
(MHz)	(%)	(dBi)	(%)	(dBi)
2412	73.13	4.43	70.72	4.11
2417	72.83	4.39	70.74	4.02
2422	74.15	4.49	75.16	4.1
2427	75.05	4.52	75.36	4.12
2432	73.27	4.35	69.53	4.15
2437	74.72	4.56	70.51	4.25
2442	75.46	4.31	69.53	4.15
2447	74.85	4.34	70.51	4.55
2452	72.32	4.25	69.81	4.19
2457	74.64	4.36	70.15	4.2
2462	72.32	4.37	70.64	4.3
2467	74.64	4.51	71.48	4.21
2472	74.77	4.44	70.95	4.05



4.2 ANT 5.8G

	Ant 4		Ant 2	
Freq	Effi	Gain	Effi	Gain
(MHz)	(%)	(dBi)	(%)	(dBi)
5150	73.53	5.48	70.62	5.53
5200	70.5	5.53	70.11	5.36
5250	72.99	5.38	69.38	5.52
5300	74.02	5.26	68.2	5.15
5350	74.54	5.23	68.69	5.57
5400	73.27	5.81	68.92	5.57
5450	72.52	5.57	68.96	5.33
5500	70.98	5.03	70.79	5.4
5550	72.37	5.22	70.2	5.57
5600	70.6	5.6	67.96	5.28
5650	74.06	5.04	68.76	5.32
5700	75.33	5.52	67.42	5.78
5750	71.26	5.58	68.18	5.52
5800	70.29	5.55	68.34	5.47
5850	73.56	5.64	70.93	5.56