ikotek

Antenna

QDM047NA Datasheet

Antenna Services

Version: 1.0

Date: 2022-11-30

Status: Preliminary

At ikotek, our aim is to provide timely and comprehensive services to our customers. If you require any assistance, please contact our headquarters:

Ikotek Wireless Solutions Co., Ltd.
Building 2, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai 200233, China

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About the Document

Revision History

Version	Date	Author	Note
V1.0	2022-11-25	Morris MA	Creation of the document

Contents

1 Product Description

The antenna is designed for superior performance, and can be widely used for wireless applications.

We provide comprehensive antenna design support such as simulation, testing and manufacturing for custom antenna solutions to meet your specific application needs.

2 Product Features

- WWAN 4*4 、WIFI 2.4G*2、WiFi5G *4
- High efficiency
- Excellent performance

3 Product Specifications

Passive Electrical Specifications(MAIN_ANT)	
Frequency Range	600–960 MHz,1710–4200 MHz
Input Impendence	50 Ω
VSWR	≤ 3.5
Gain	≤ 3.53 dBi
Polarization Type	Linear

Passive Electrical Specifications(AUX_ANT)	
Frequency Range	600–960 MHz,1710–4200 MHz
Input Impendence	50 Ω
VSWR	≤ 3
Gain	≤ 3.24dBi
Polarization Type	Linear

Passive Electrical Specifications(MIMO1_ANT)	
Frequency Range	600–960 MHz,1710–4200 MHz
Input Impendence	50 Ω
VSWR	≤ 4
Gain	≤3.13dBi
Polarization Type	Linear

Passive Electrical Specifications(MIMO2_ANT)	
Frequency Range	600–960 MHz,1710–4200 MHz
Input Impendence	50 Ω

VSWR	≤ 3.5
Gain	≤ 2.95 dBi
Polarization Type	Linear

Passive Electrical Specifications(WIFI 2.4G_ANT1)	
Frequency Range	2400–2500 MHz
Input Impendence	50 Ω
VSWR	≤ 2.0
Gain	≤ 2.61 dBi
Polarization Type	Linear

Passive Electrical Specifications(WIFI 2.4G_ANT2)	
Frequency Range	2400–2500 MHz
Input Impendence	50 Ω
VSWR	≤ 2.0
Gain	≤ 1.57 dBi
Polarization Type	Linear

Passive Electrical Specifications(WIFI 5G_ ANT1)	
Frequency Range	5150-5850 MHz
Input Impendence	50 Ω
VSWR	≤ 2.0
Gain	≤ 2.33 dBi
Polarization Type	Linear

Passive Electrical Specifications(WIFI 5G_ ANT2)	
Frequency Range	5150-5850 MHz
Input Impendence	50 Ω
VSWR	≤ 2.0
Gain	≤ 2.49 dBi
Polarization Type	Linear

Passive Electrical Specifications(WIFI 5G_ ANT3)	
Frequency Range	5150-5850 MHz
Input Impendence	50 Ω
VSWR	≤ 2.0
Gain	≤ 2.14 dBi
Polarization Type	Linear

Passive Electrical Specifications(WIFI 5G_ ANT4)

Frequency Range	5150-5850 MHz
Input Impendence	50 Ω
VSWR	≤ 2.0
Gain	≤ 2.17 dBi
Polarization Type	Linear

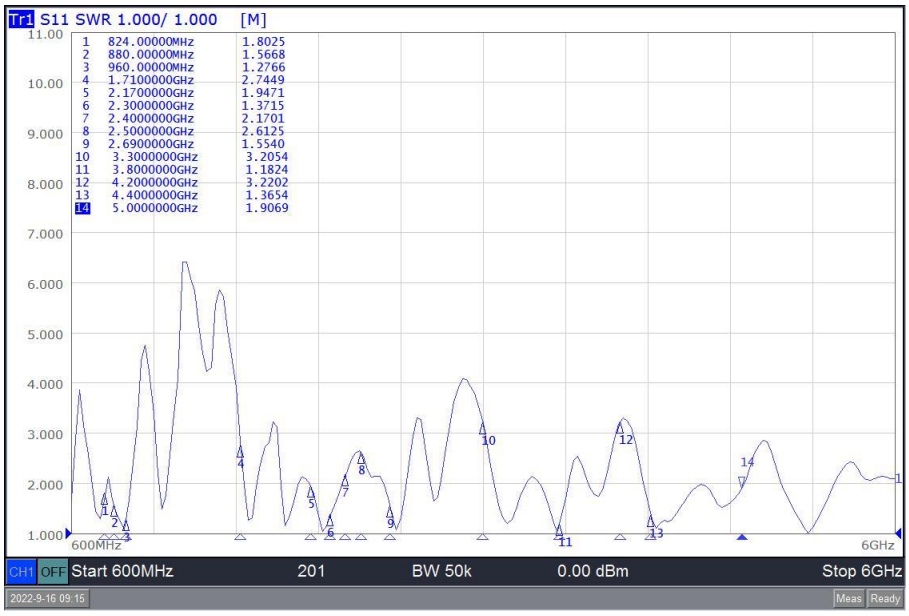
4 Overall Performance

4.1. Test Environment

- KEYSIGHT ENA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 600 MHz – 8.5 GHz

4.2. VSWR

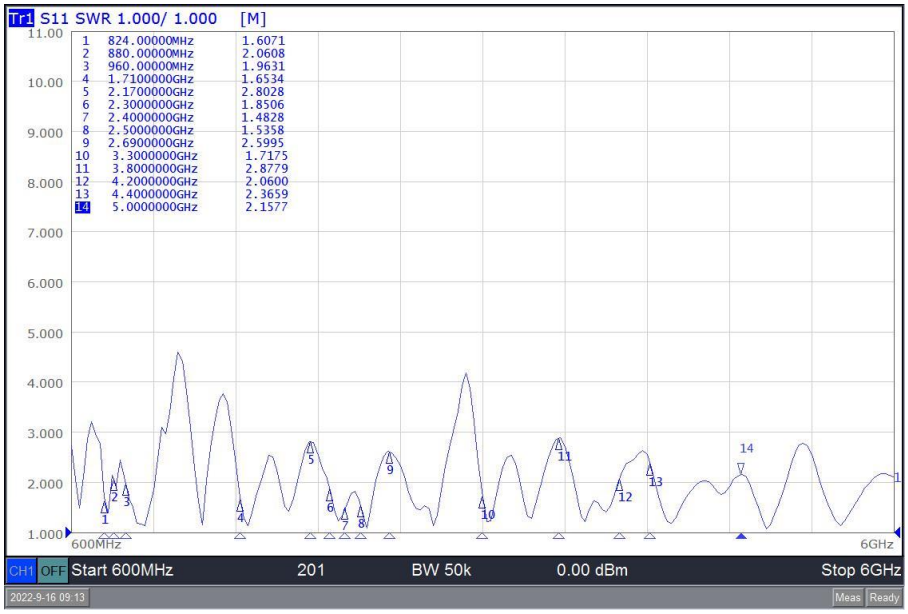
NR0(ant1):



Frequency (MHz)	824	880	960	1710	2170	2300	2400	2500	2690
VSWR	1.80	1.56	1.27	2.74	1.94	1.37	2.17	2.61	1.55

Frequency (MHz)	3300	3800	4200	4400	5000
VSWR	3.20	1.18	3.22	1.36	1.90

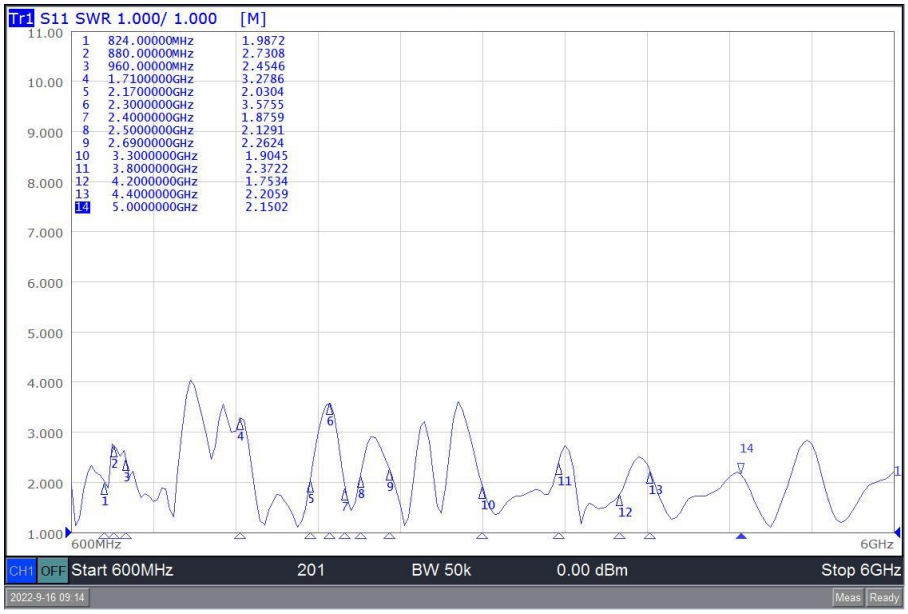
NR1(ant2):



Frequency (MHz)	824	880	960	1710	2170	2300	2400	2500	2690
VSWR	1.60	2.06	1.96	1.65	1.65	1.85	1.48	1.53	2.59

Frequency (MHz)	3300	3800	4200	4400	5000
VSWR	1.17	2.87	2.06	2.36	2.15

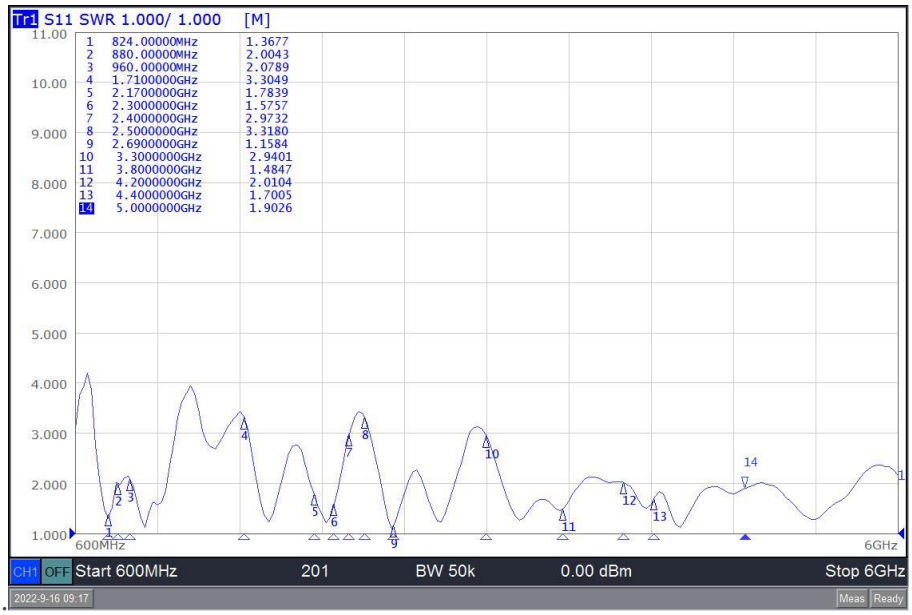
NR2(ant3):



Frequency (MHz)	824	880	960	1710	2170	2300	2400	2500	2690
VSWR	1.98	2.73	2.45	3.27	2.03	3.57	1.87	2.12	2.26

Frequency (MHz)	3300	3800	4200	4400	5000
VSWR	1.90	2.37	1.75	2.20	2.15

NR3(ant0)：



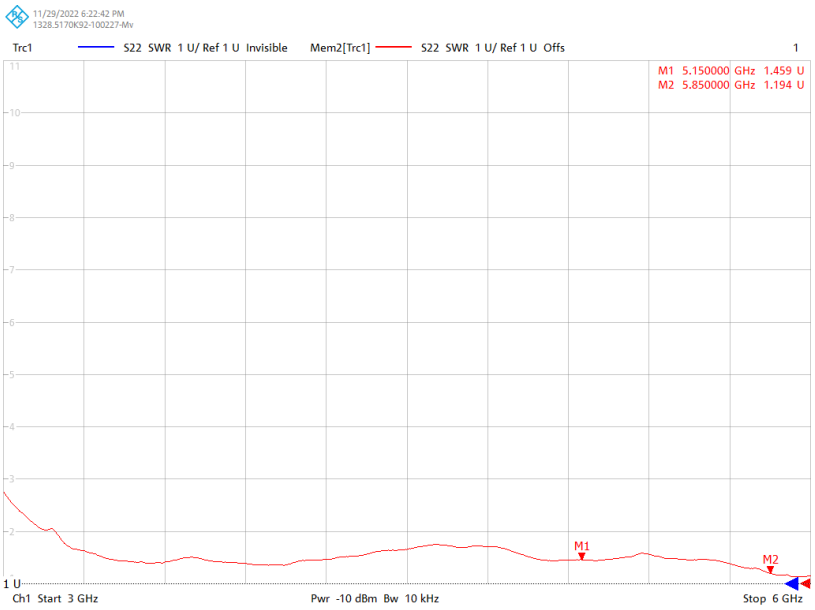
Frequency (MHz)	824	880	960	1710	2170	2300	2400	2500	2690
VSWR	1.36	2.00	2.07	3.30	1.78	1.57	2.97	3.31	1.15

Frequency (MHz)	3300	3800	4200	4400	5000
VSWR	2.94	1.48	2.01	1.70	1.90

WIFI 1：

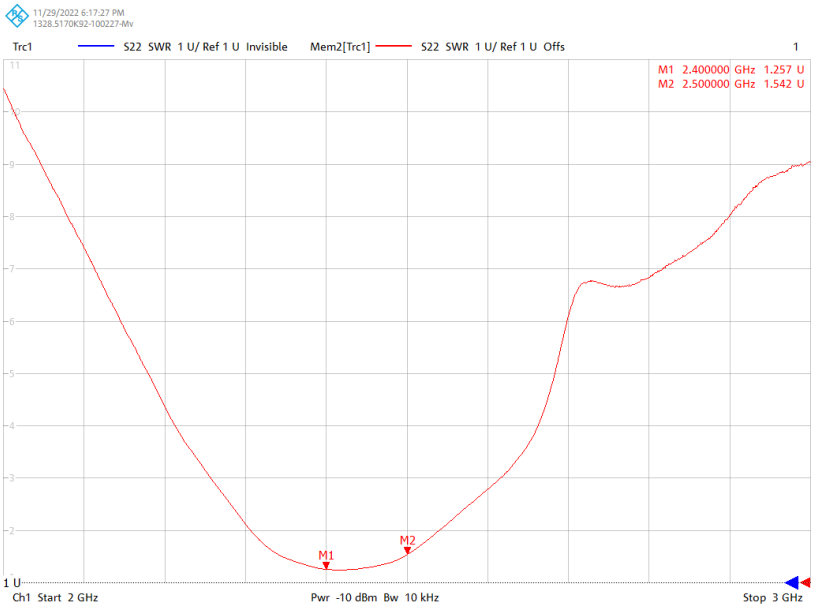
Frequency (MHz)	5150	5850
VSWR	1.78	1.45

WIFI 2：



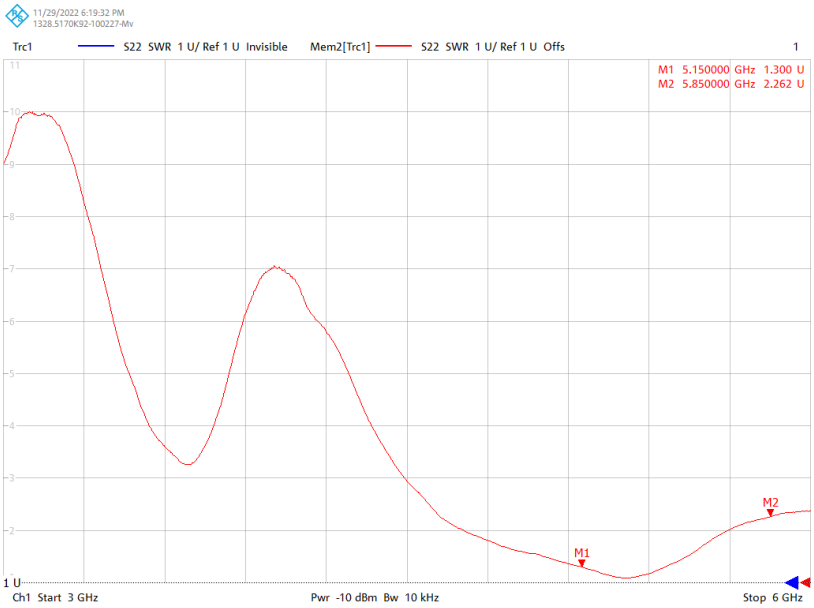
Frequency (MHz)	5150	5850
VSWR	1.45	1.19

WIFI 1-2.4G



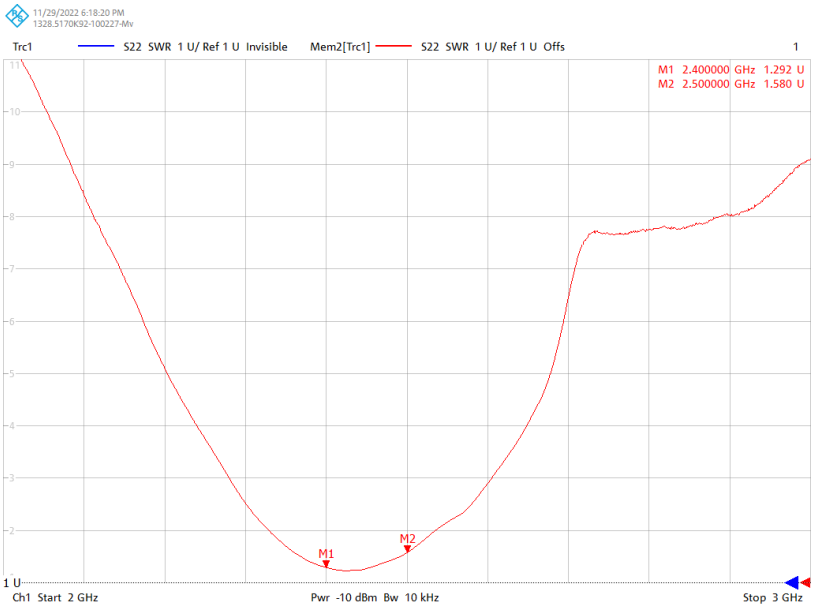
Frequency (MHz)	2400	2500
VSWR	1.25	1.54

WIFI 1-5G：



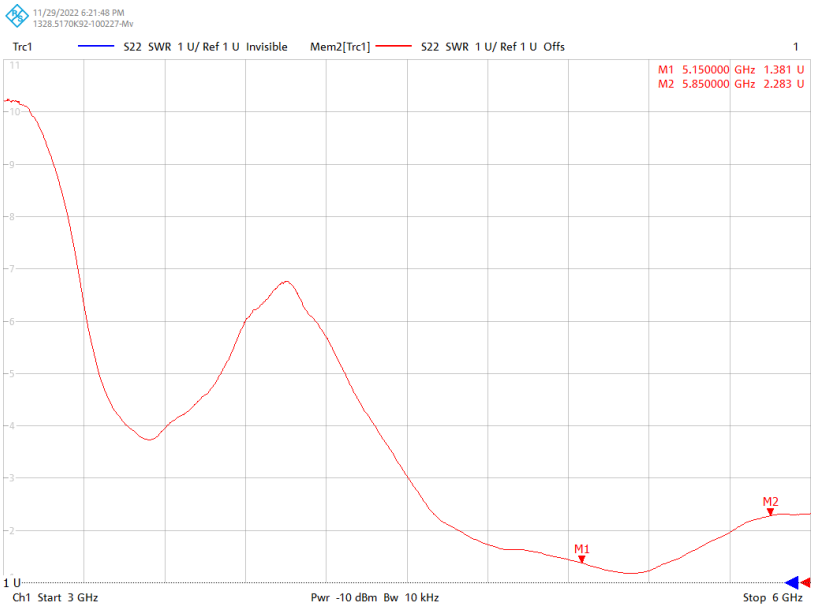
Frequency (MHz)	5150	5850
VSWR	1.30	2.26

WIFI 2-2.4G



Frequency (MHz)	2400	2500
VSWR	1.29	1.58

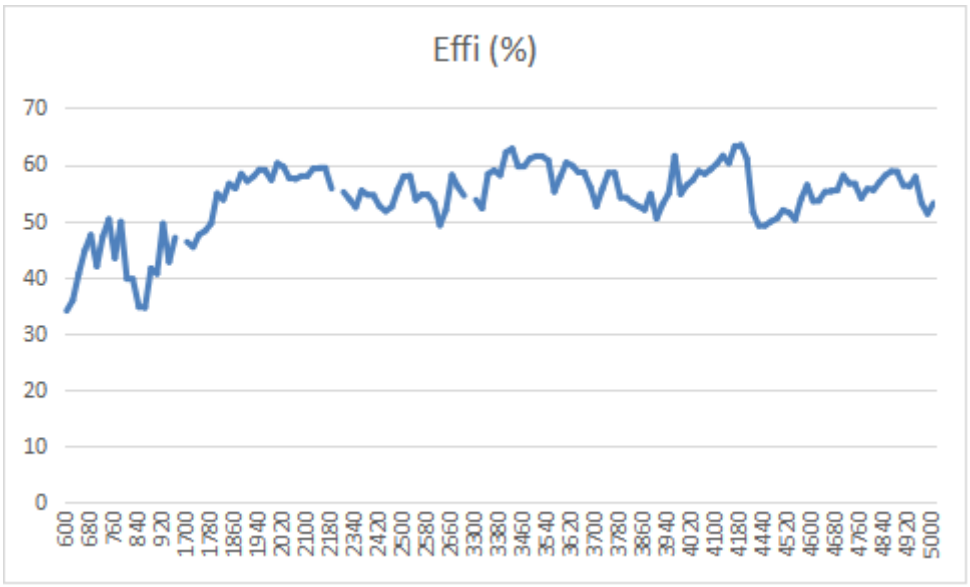
WIFI 2-5G：



Frequency (MHz)	5150	5850
VSWR	1.38	2.28

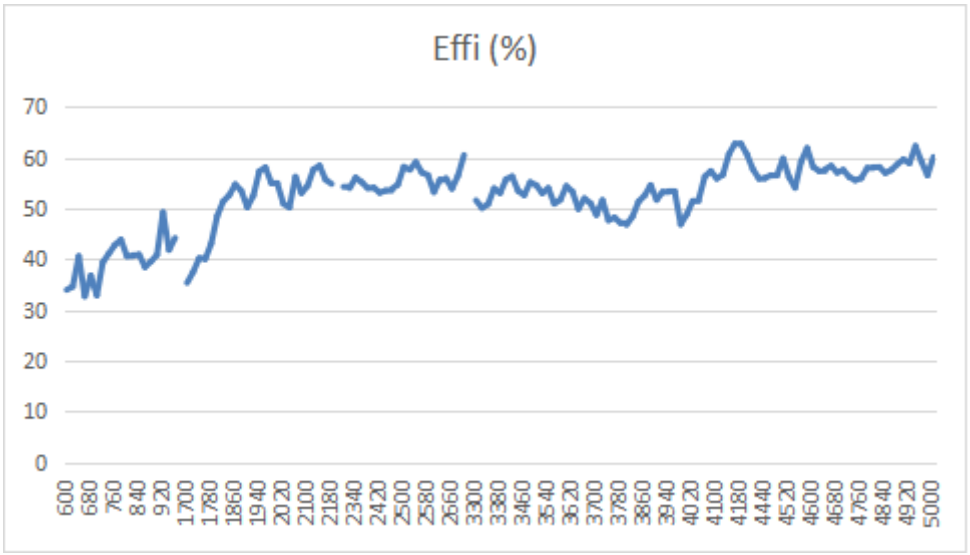
4.3. Efficiency

NR0(ant1):



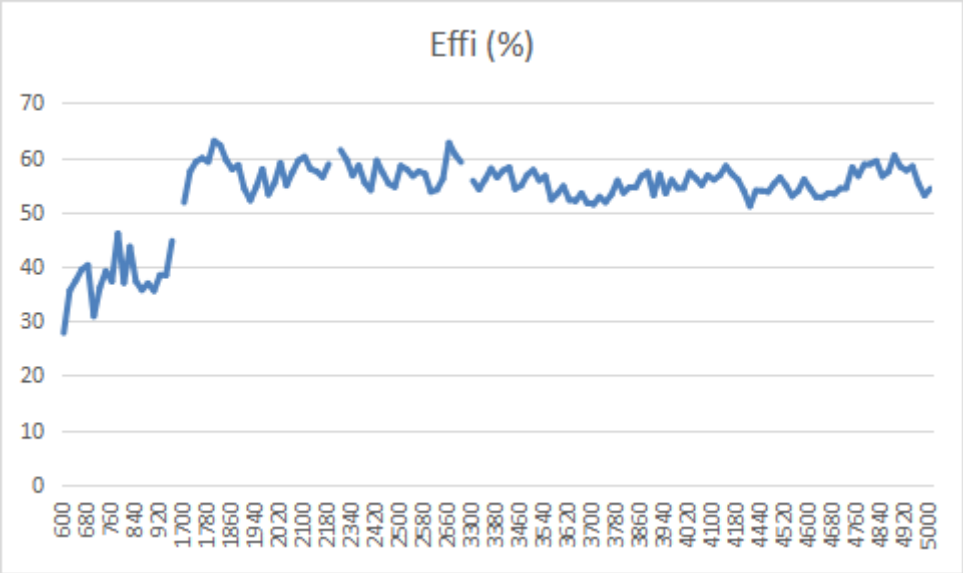
Frequency (MHz)	600	960	1700	2180	2300	2700	3300	3800	4200	5000
Efficiency (%)	33.96	46.95	46.19	55.69	55.06	54.44	53.67	53.97	60.99	53.09

NR1(ant2):



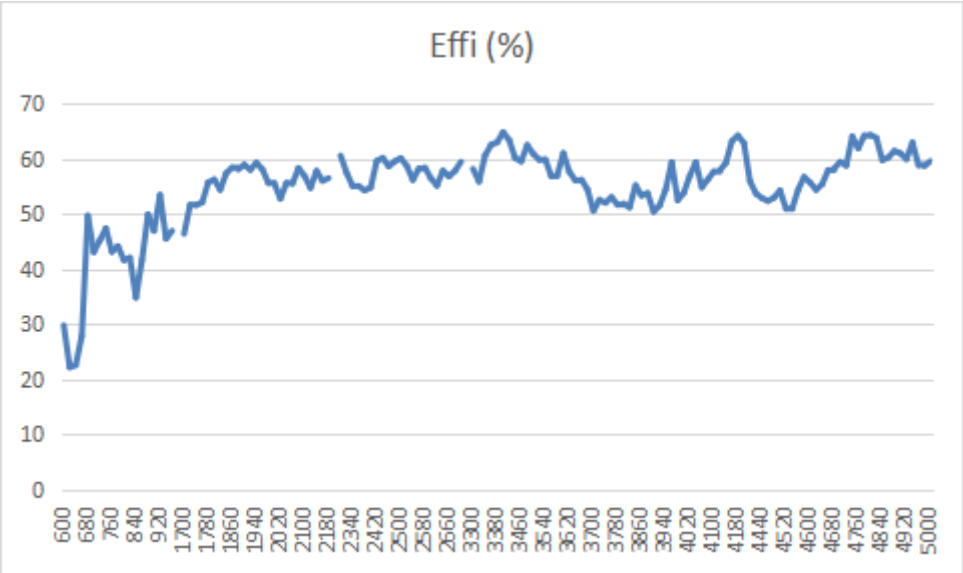
Frequency (MHz)	600	960	1700	2180	2300	2700	3300	3800	4200	5000
Efficiency (%)	33.99	44.21	35.38	54.87	54.3	60.54	51.63	46.79	60.7	60.17

NR2(ant3):



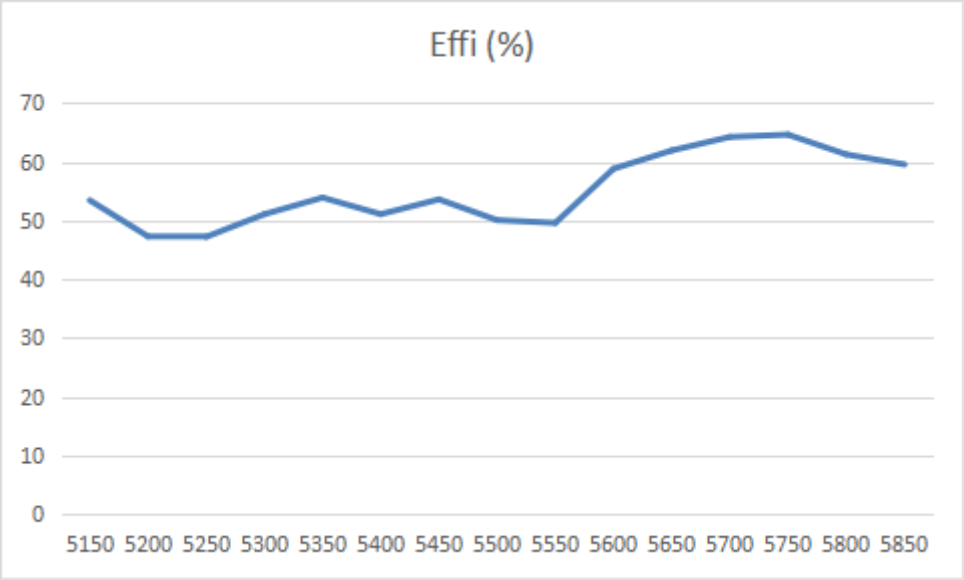
Frequency (MHz)	600	960	1700	2180	2300	2700	3300	3800	4200	5000
Efficiency (%)	27.82	44.69	51.78	58.77	61.39	59.17	55.74	53.54	53.84	54.3

NR3(ant0):



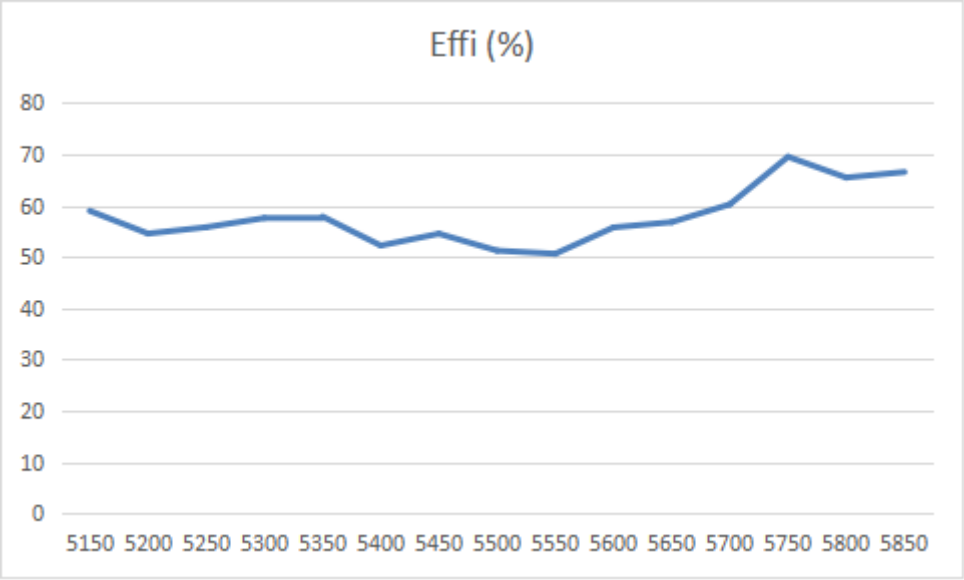
Frequency (MHz)	600	960	1700	2180	2300	2700	3300	3800	4200	5000
Efficiency (%)	29.81	46.97	46.45	56.55	60.64	59.52	58.22	51.95	62.93	59.64

WIFI1：



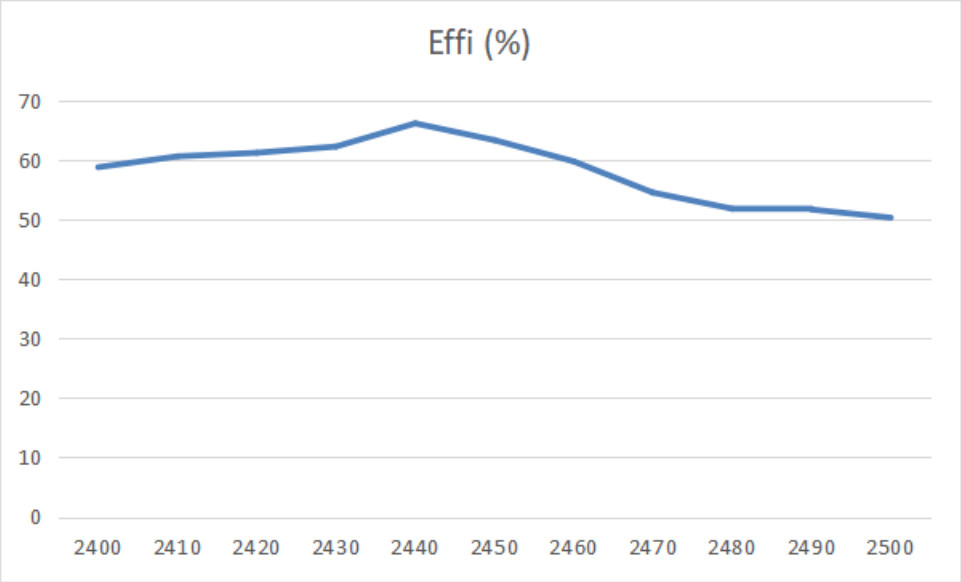
Frequency (MHz)	5150	5500	5850
Efficiency (%)	53.47	50.1	59.58

WIFI2：



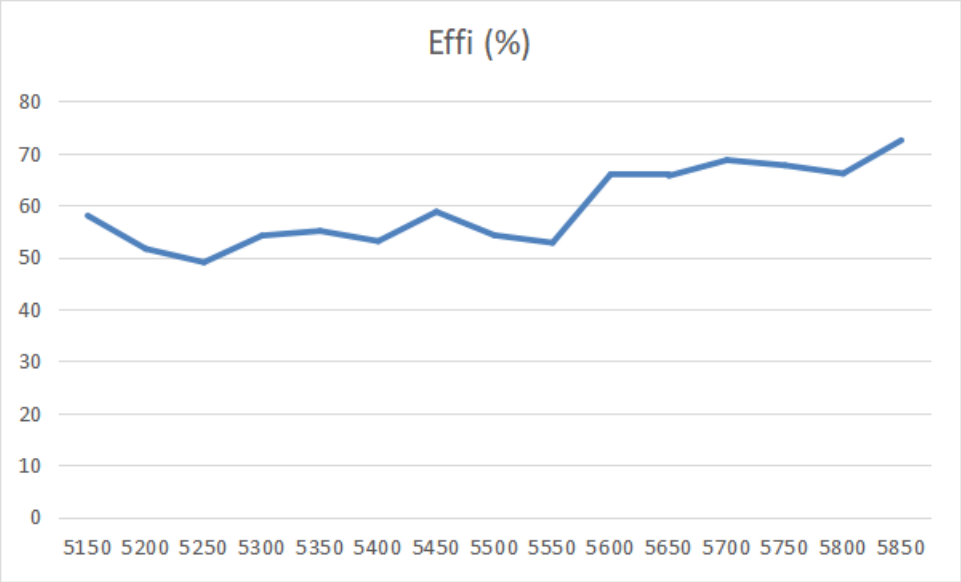
Frequency (MHz)	5150	5500	5850
Efficiency (%)	58.99	51.23	66.56

WiFi1-2.4G：



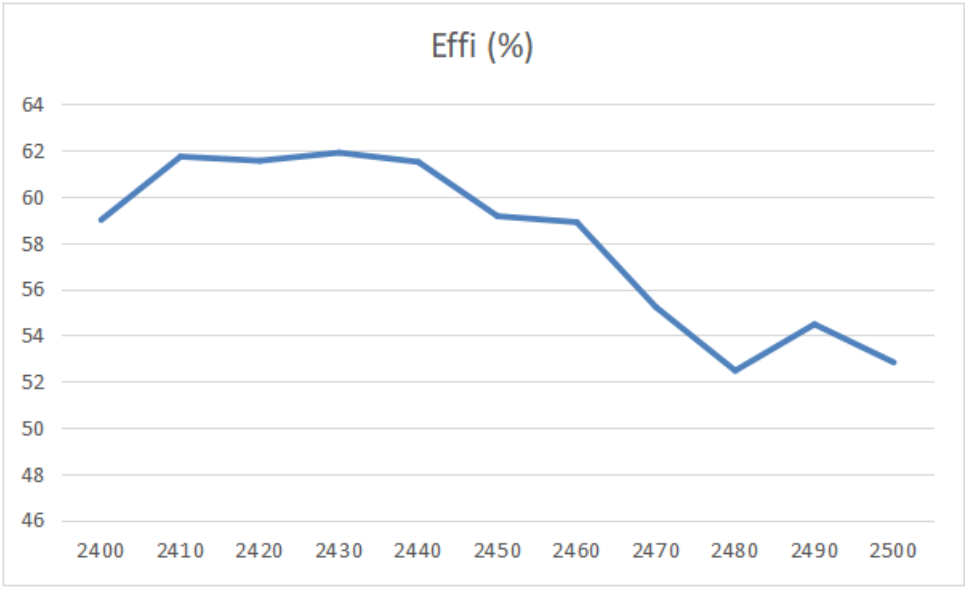
Frequency (MHz)	2400	2500
Efficiency (%)	58.88	50.38

WiFi1-5G:



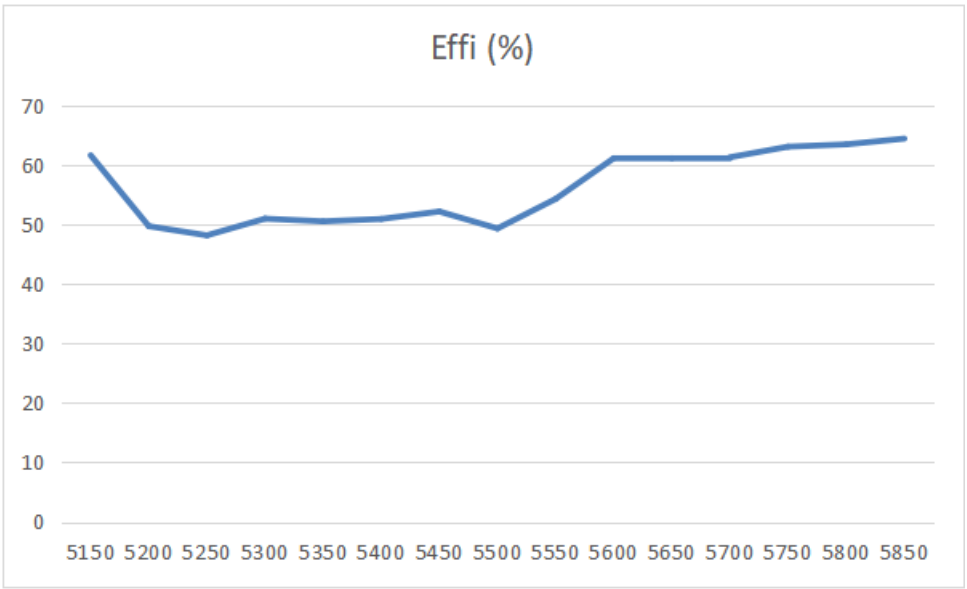
Frequency (MHz)	5150	5500	5850
Efficiency (%)	57.97	54.19	72.47

WiFi2-2.4G：



Frequency (MHz)	2400	2500
Efficiency (%)	58.99	52.82

WiFi2-2.4G：



Frequency (MHz)	5150	5500	5850
Efficiency (%)	61.73	49.41	64.54

4.4. Gain

NR0(ant1)：

Freq(MHz)	Gain(dBi)
600~800	1.57
800~960	1.6
1710~2170	2.4
2300~2690	2.36
3300~4200	2.75
4200~5000	2.95

NR1(ant2)：

Freq(MHz)	Gain(dBi)
600~800	1.73
800~960	1.69
1710~2170	3.13
2300~2690	2.69
3300~4200	2.96
4200~5000	2.99

NR2(ant3)：

Freq(MHz)	Gain(dBi)
600~800	1.32
800~960	1.47
1710~2170	3.09
2300~2690	2.84
3300~4200	2.76
4200~5000	3.24

NR3(ant0)：

Freq(MHz)	Gain(dBi)
600~800	1.64
800~960	1.94
1710~2170	3.53
2300~2690	3.24
3300~4200	3.33
4200~5000	3.37

WIFI1：

Freq (MHz)	Gain (dBi)
5150	1.49
5200	1.31
5250	1.27
5300	1.11
5350	1.63
5400	1.59
5450	1.62
5500	0.97
5550	0.24
5600	1.18
5650	1.09
5700	1.64
5750	2.07
5800	2.33
5850	2.22

WIFI2：

Freq (MHz)	Gain (dBi)
5150	1.44
5200	0.93
5250	1.04
5300	0.47
5350	0.26
5400	1.02
5450	0.6
5500	0.73
5550	1
5600	2.01
5650	1.59
5700	2.12
5750	2.49
5800	1.95
5850	1.66

WiFi1-2.4G：

Freq (MHz)	Gain (dBi)
2400	1.63
2410	1.95
2420	2.13
2430	2.31
2440	2.61
2450	2.43
2460	2.3
2470	1.85
2480	1.77
2490	1.37
2500	0.98

WiFi1-5G：

Freq (MHz)	Gain (dBi)
5150	1.79
5200	0.51
5250	0.28
5300	0.73
5350	0.82
5400	1.34
5450	1.5
5500	1.01
5550	0.73
5600	1.39
5650	1.35
5700	2.05
5750	2.1
5800	2.12
5850	2.14

WiFi1-2.4G：

Freq (MHz)	Gain (dBi)
2400	1.57
2410	1.53
2420	1.49
2430	1.26
2440	1.39
2450	1.27
2460	1.02
2470	0.58
2480	0.87
2490	1.1
2500	1.47

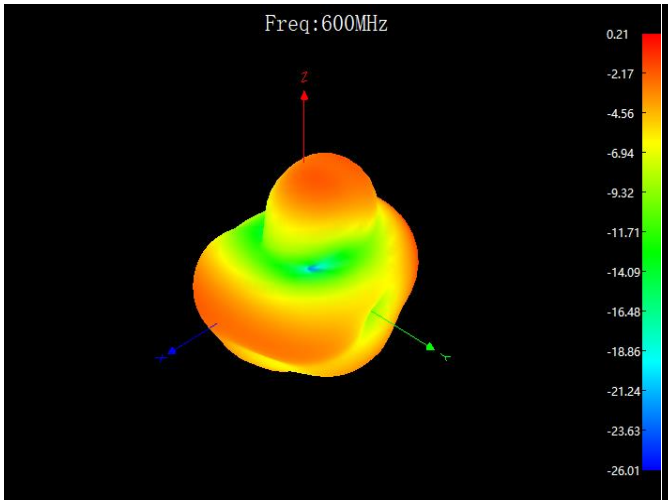
WiFi1-5G：

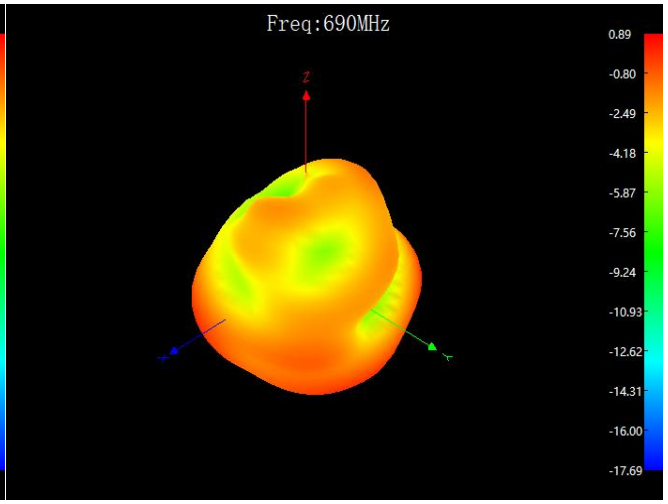
Freq (MHz)	Gain (dBi)
5150	1.63
5200	1.28
5250	1.25
5300	1.14
5350	0.98
5400	0.97
5450	1.17
5500	0.56
5550	0.77
5600	1.34
5650	1.89
5700	1.25
5750	2.3
5800	2.17
5850	2.11

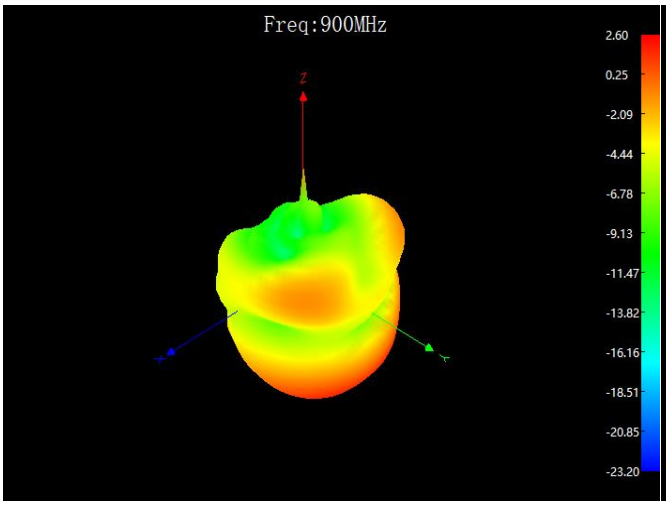
4.5. Radiation Pattern

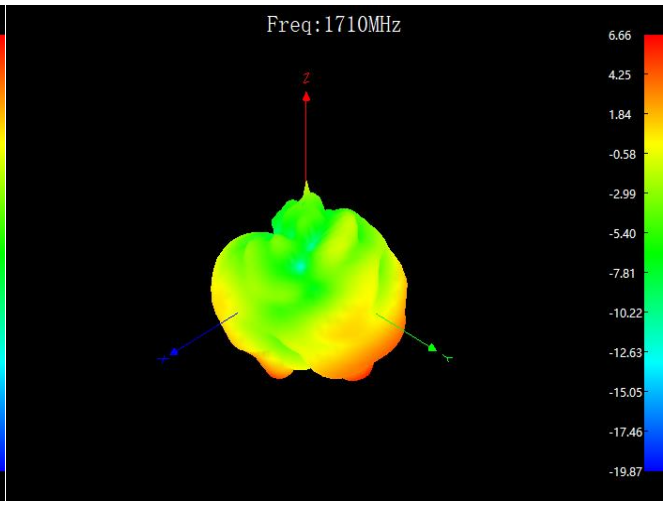
- Test condition: free space.

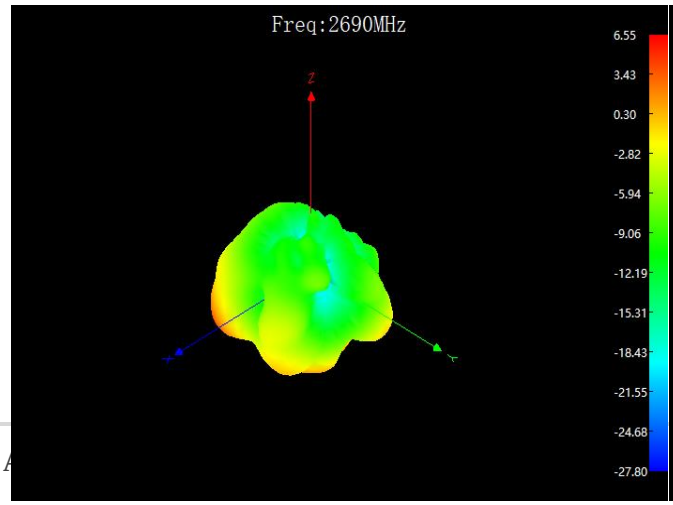
NR0(ant1)：

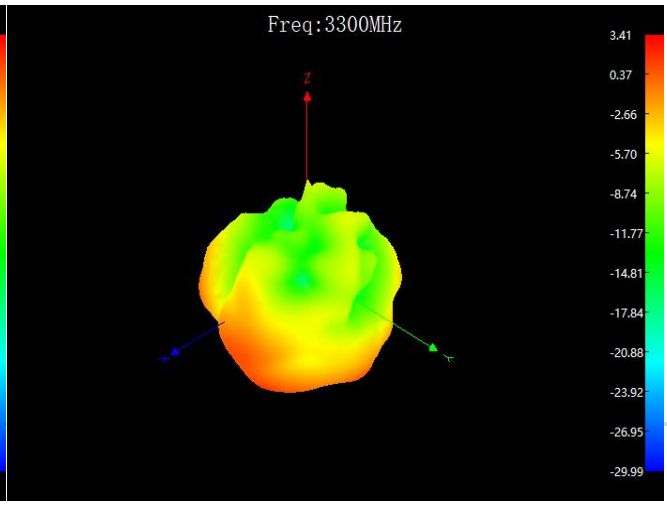


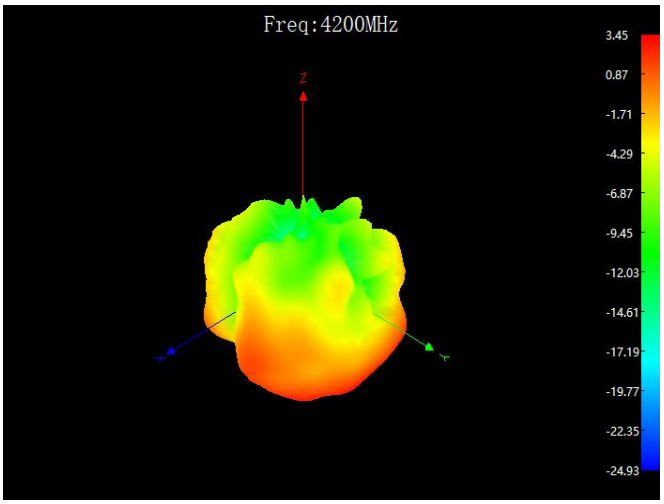








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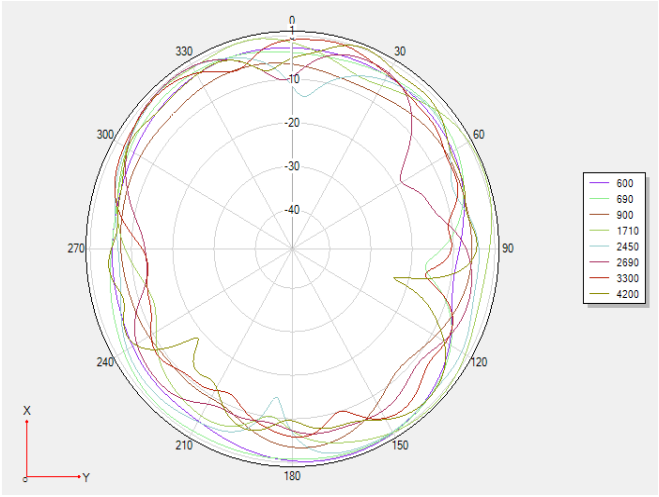
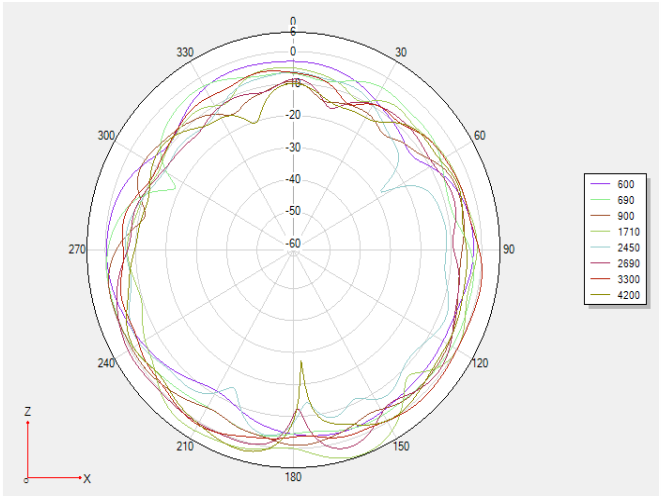
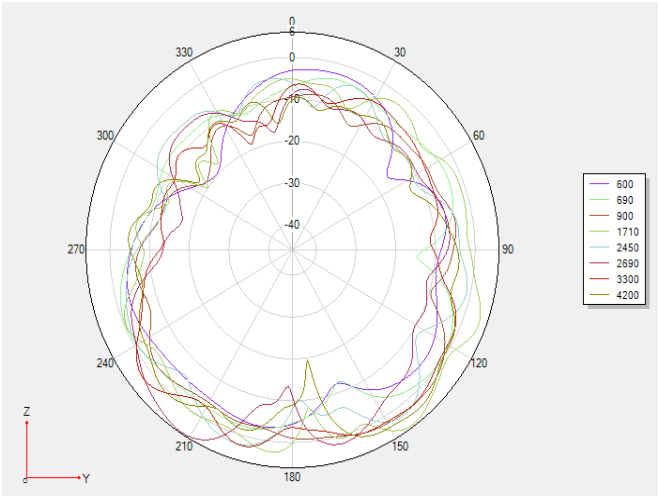
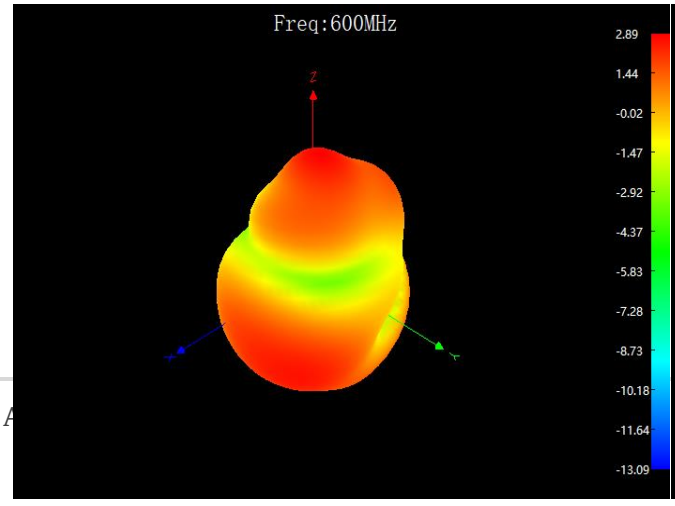
3.45
0.87
-1.71
-4.29
-6.87
-9.45
-12.03
-14.61
-17.19
-19.77
-22.35
-24.93

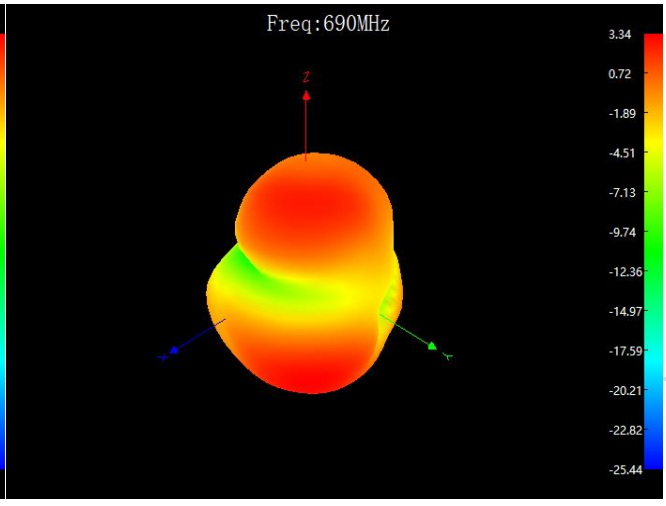

600
690
900
1710
2450
2690
3300
4200

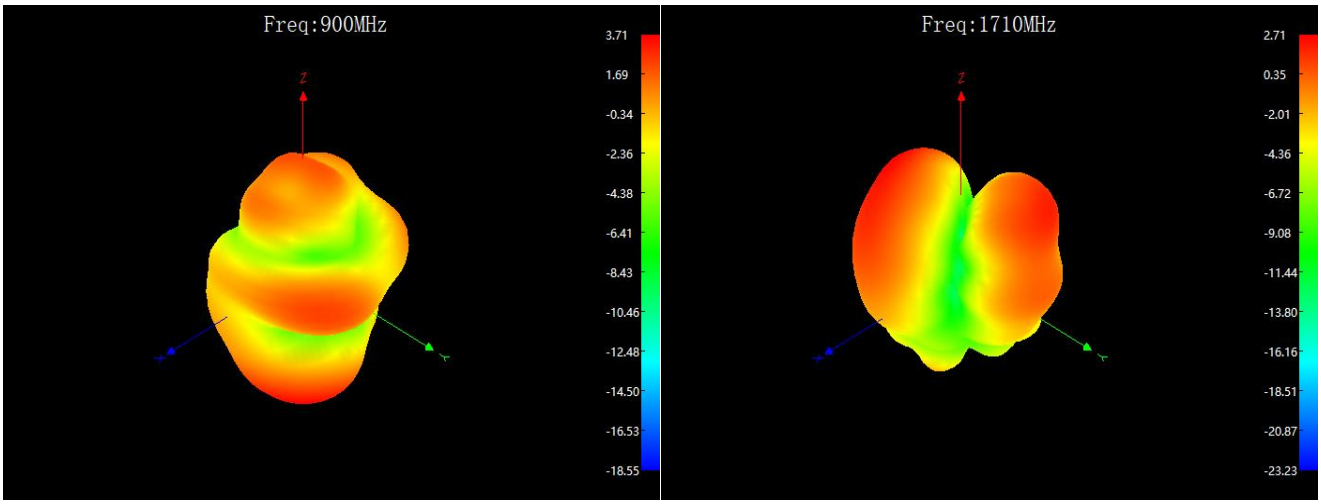

600
690
900
1710
2450
2690
3300
4200

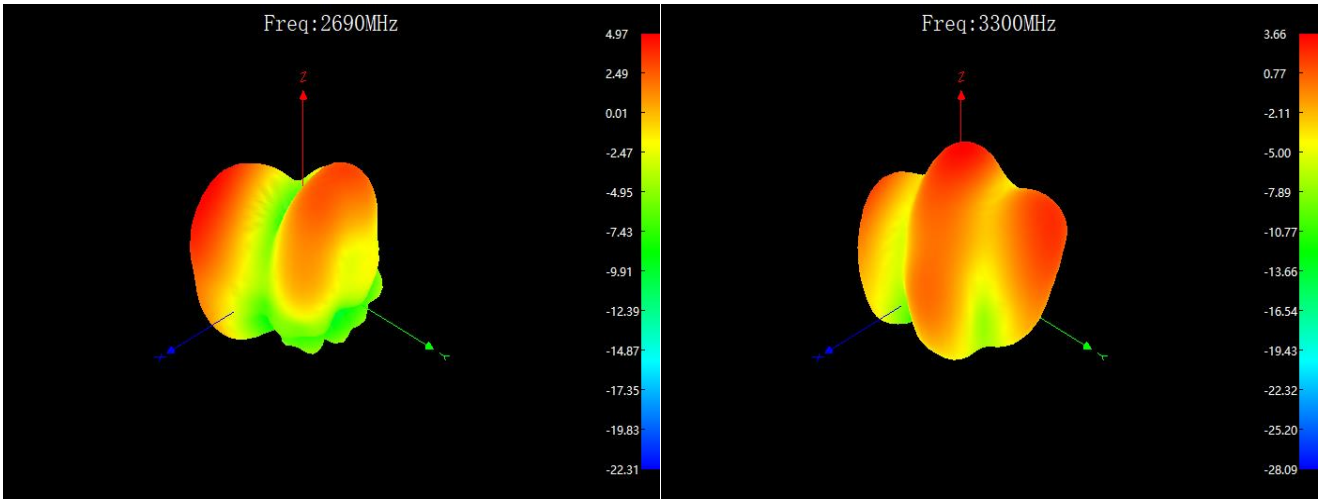

600
690
900
1710
2450
2690
3300
4200

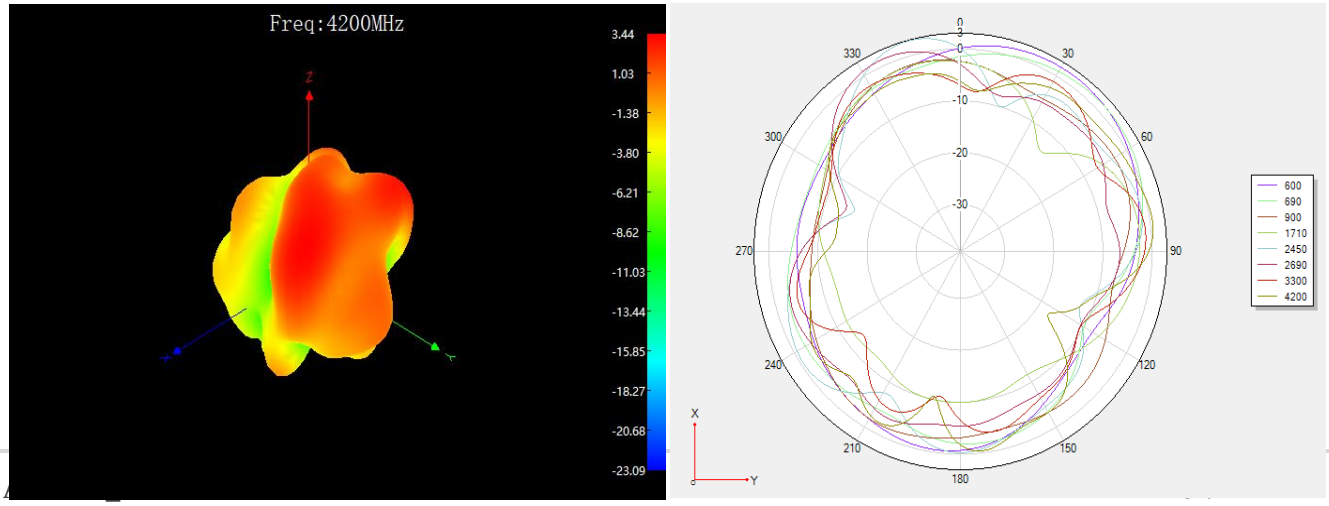
NR1(ant2):

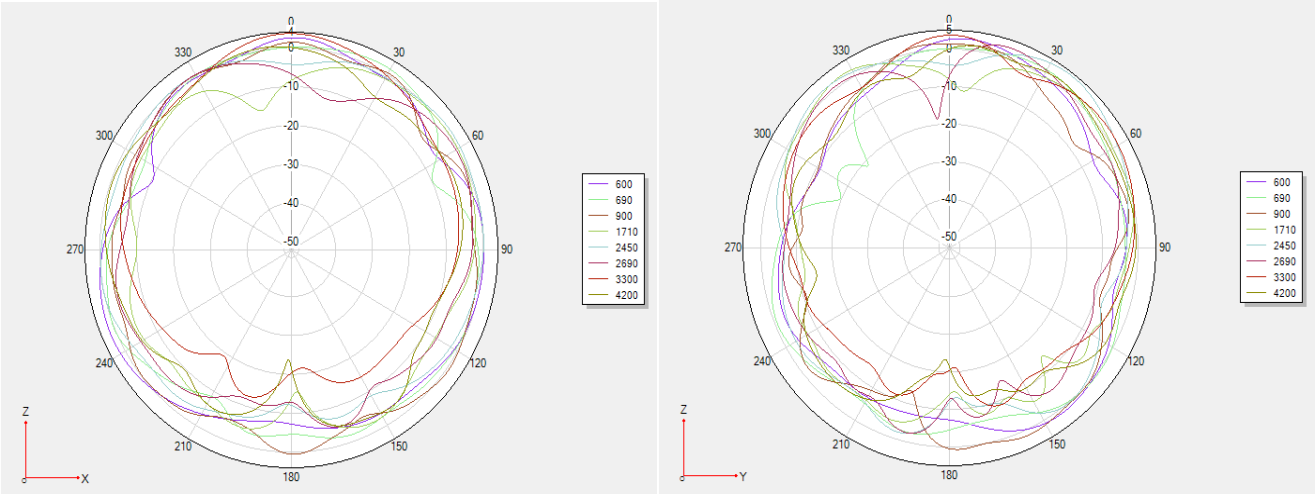

Freq:600MHz
2.89
1.44
-0.02
-1.47
-2.92
-4.37
-5.83
-7.28
-8.73
-10.18
-11.64
-13.09


Freq:690MHz
3.34
0.72
-1.89
-4.51
-7.13
-9.74
-12.36
-14.97
-17.59
-20.21
-22.82
-25.44

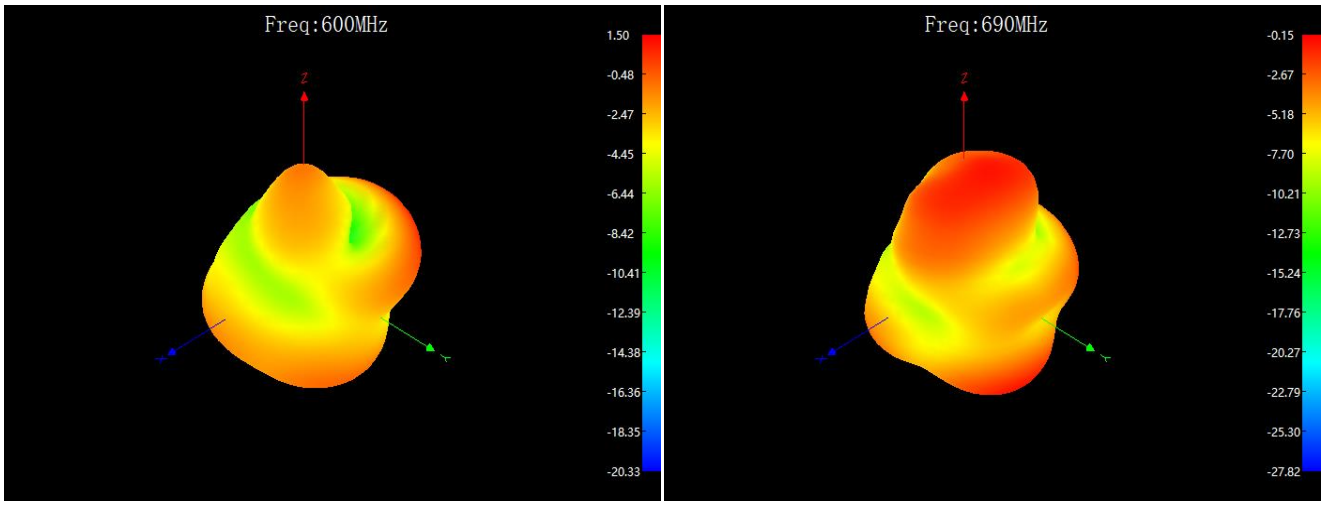

Freq:900MHz
3.71
1.69
-0.34
-2.36
-4.38
-6.41
-8.43
-10.46
-12.48
-14.50
-16.53
-18.55
Freq:1710MHz
2.71
0.35
-2.01
-4.36
-6.72
-9.08
-11.44
-13.80
-16.16
-18.51
-20.87
-23.23

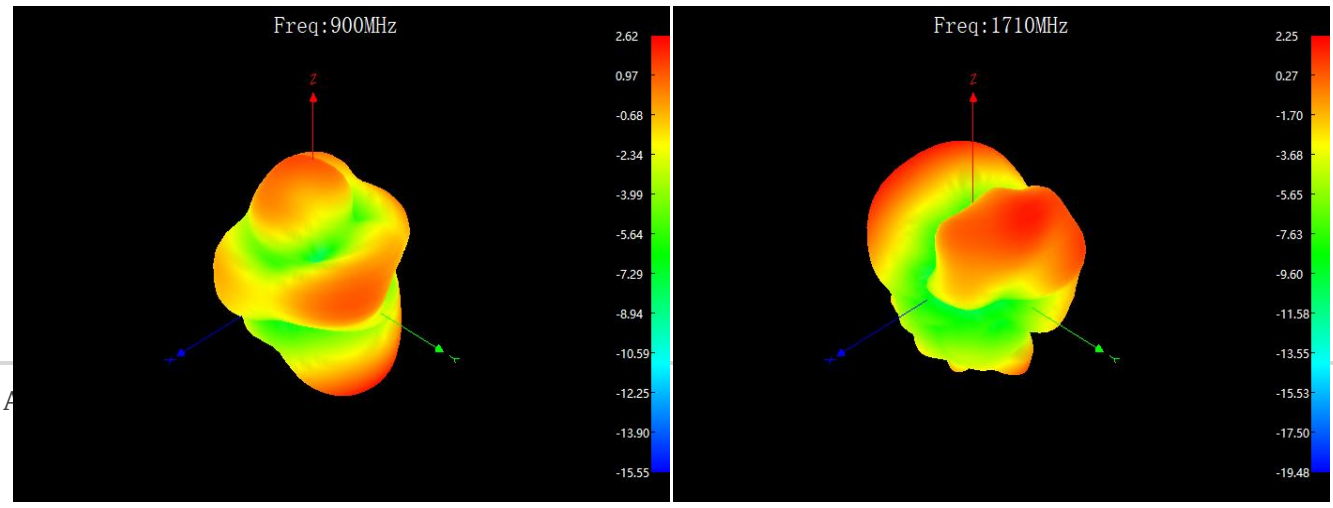

Freq:2690MHz
4.97
2.49
0.01
-2.47
-4.95
-7.43
-9.91
-12.39
-14.87
-17.35
-19.83
-22.31
Freq:3300MHz
3.66
0.77
-2.11
-5.00
-7.89
-10.77
-13.66
-16.54
-19.43
-22.32
-25.20
-28.09

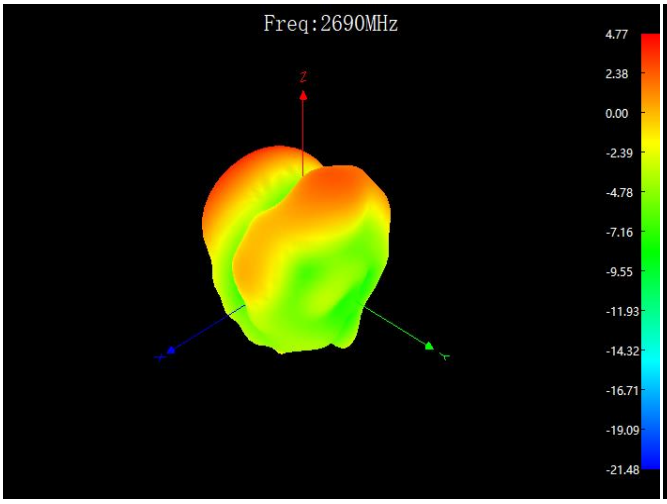

Freq:4200MHz
3.44
1.03
-1.38
-3.80
-6.21
-8.62
-11.03
-13.44
-15.85
-18.27
-20.68
-23.09
0
30
60
90
120
150
180
210
240
270
300
330
-10
-20
-30
600
690
900
1710
2450
2690
3300
4200
X
Y

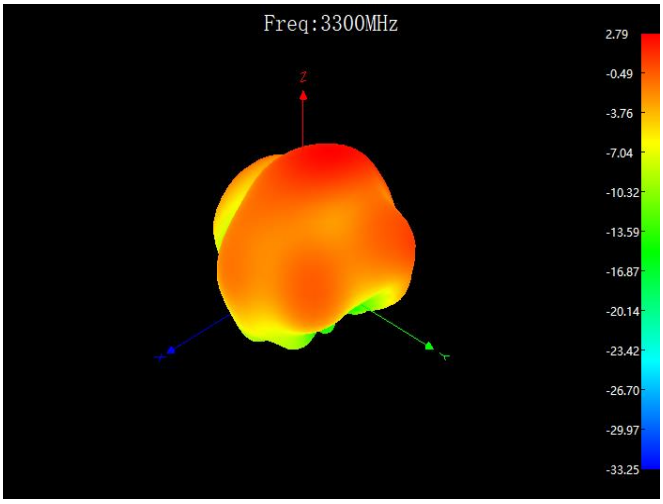

0
30
60
90
120
150
180
210
240
270
300
330
-10
-20
-30
-40
-50
600
690
900
1710
2450
2690
3300
4200
Z
X
Y

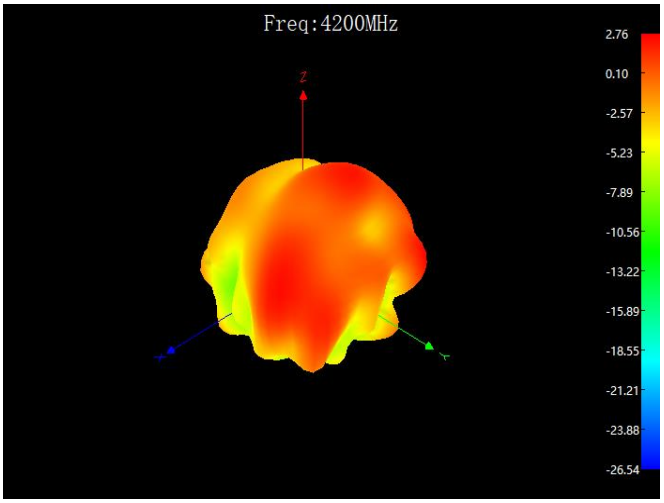
NR2(ant3):

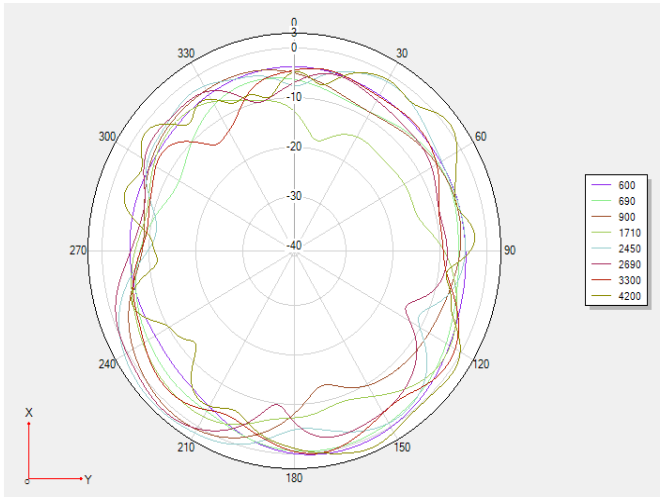

Freq:600MHz
1.50
-0.48
-2.47
-4.45
-6.44
-8.42
-10.41
-12.39
-14.38
-16.36
-18.35
-20.33
Freq:690MHz
-0.15
-2.67
-5.18
-7.70
-10.21
-12.73
-15.24
-17.76
-20.27
-22.79
-25.30
-27.82

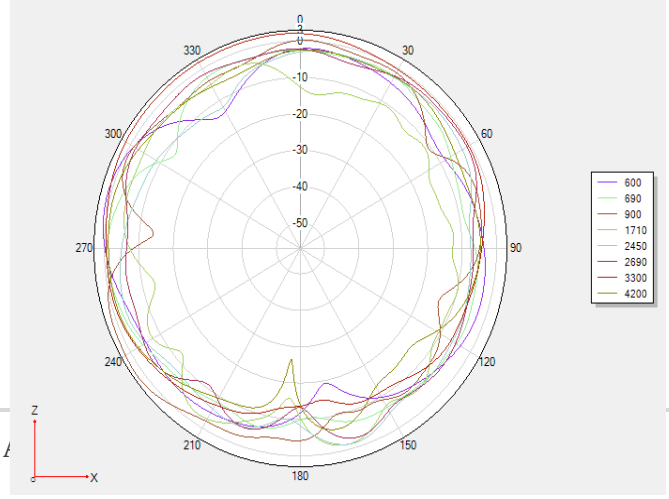

Freq:900MHz
2.62
0.97
-0.68
-2.34
-3.99
-5.64
-7.29
-8.94
-10.59
-12.25
-13.90
-15.55
Freq:1710MHz
2.25
0.27
-1.70
-3.68
-5.65
-7.63
-9.60
-11.58
-13.55
-15.53
-17.50
-19.48

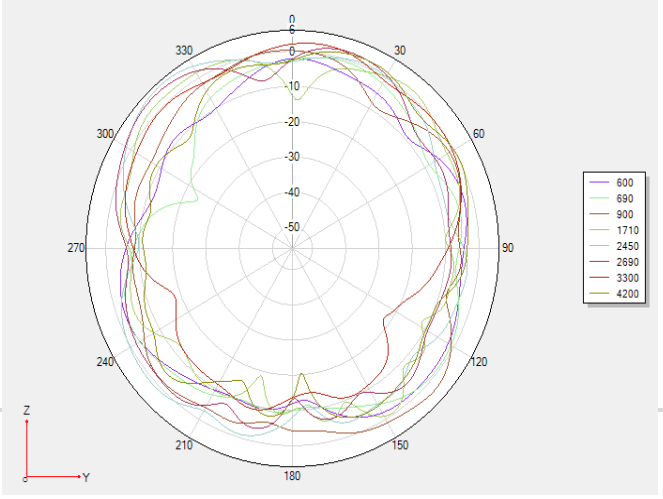

Freq:2690MHz
4.77
2.38
0.00
-2.39
-4.78
-7.16
-9.55
-11.93
-14.32
-16.71
-19.09
-21.48


Freq:3300MHz
2.79
-0.49
-3.76
-7.04
-10.32
-13.59
-16.87
-20.14
-23.42
-26.70
-29.97
-33.25

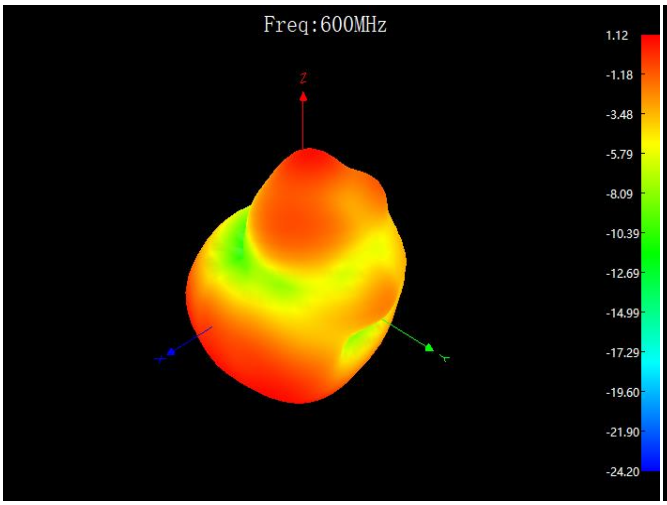

Freq:4200MHz
2.76
0.10
-2.57
-5.23
-7.89
-10.56
-13.22
-15.89
-18.55
-21.21
-23.88
-26.54

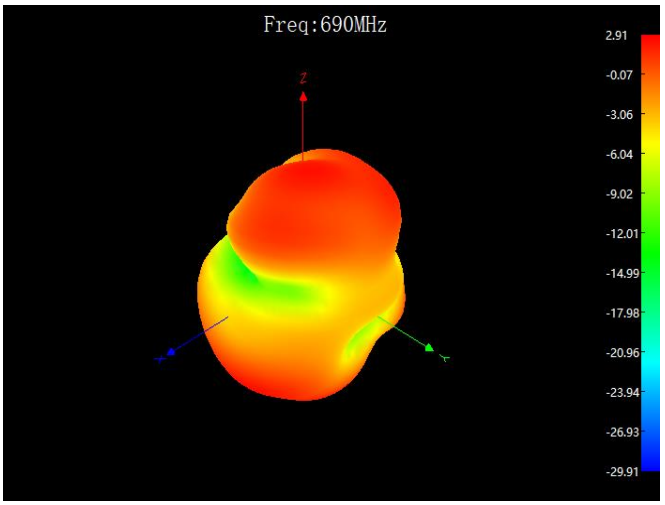

600
690
900
1710
2450
2690
3300
4200

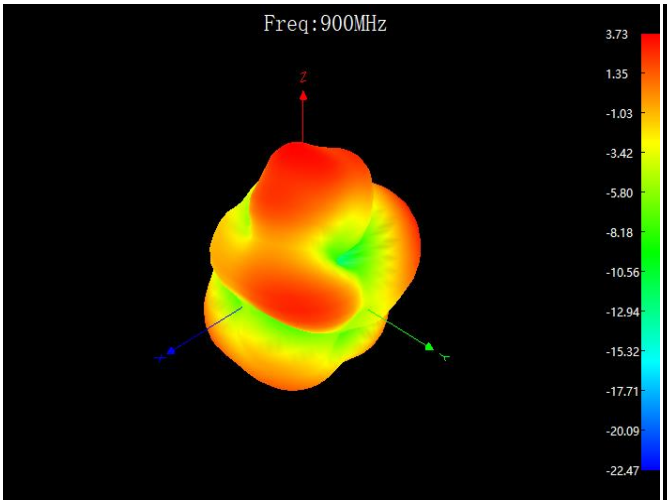

600
690
900
1710
2450
2690
3300
4200

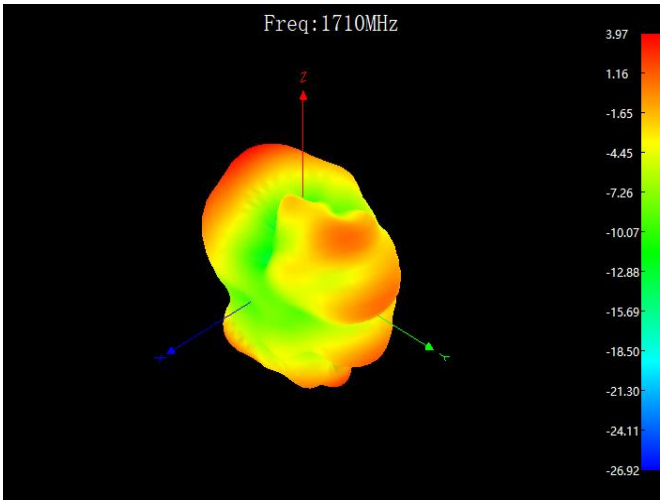

600
690
900
1710
2450
2690
3300
4200

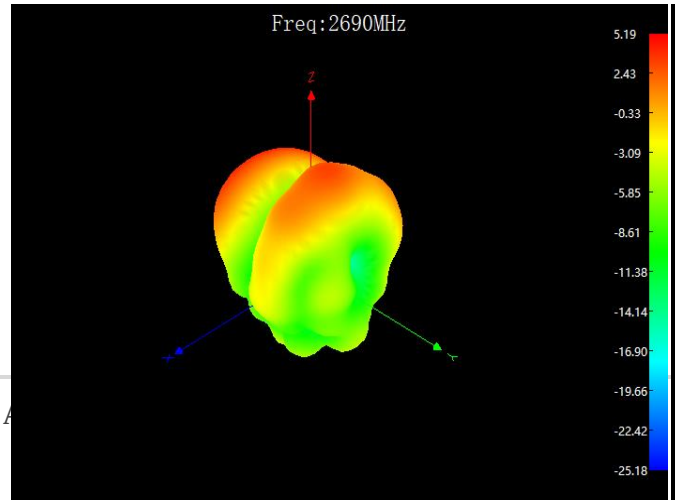
NR3(ant4):


Freq:600MHz
1.12
-1.18
-3.48
-5.79
-8.09
-10.39
-12.69
-14.99
-17.29
-19.60
-21.90
-24.20


Freq:690MHz
2.91
-0.07
-3.06
-6.04
-9.02
-12.01
-14.99
-17.98
-20.96
-23.94
-26.93
-29.91


Freq:900MHz
3.73
1.35
-1.03
-3.42
-5.80
-8.18
-10.56
-12.94
-15.32
-17.71
-20.09
-22.47


Freq:1710MHz
3.97
1.16
-1.65
-4.45
-7.26
-10.07
-12.88
-15.69
-18.50
-21.30
-24.11
-26.92


Freq:2690MHz
5.19
2.43
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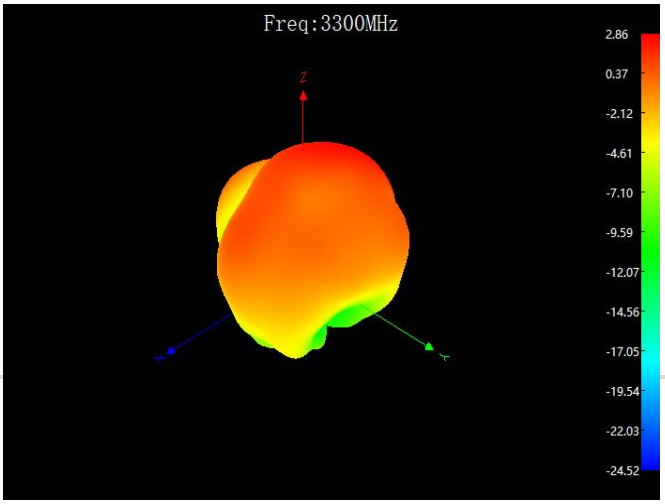
-3.09
-5.85
-8.61
-11.38
-14.14
-16.90
-19.66
-22.42
-25.18


Freq:3300MHz
2.86
0.37
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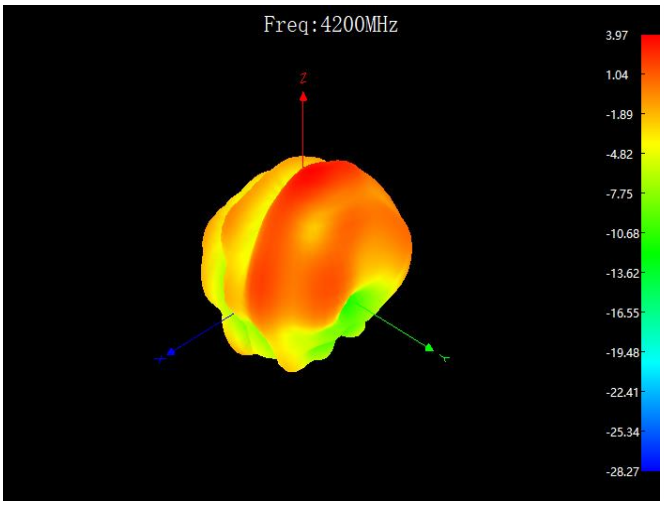
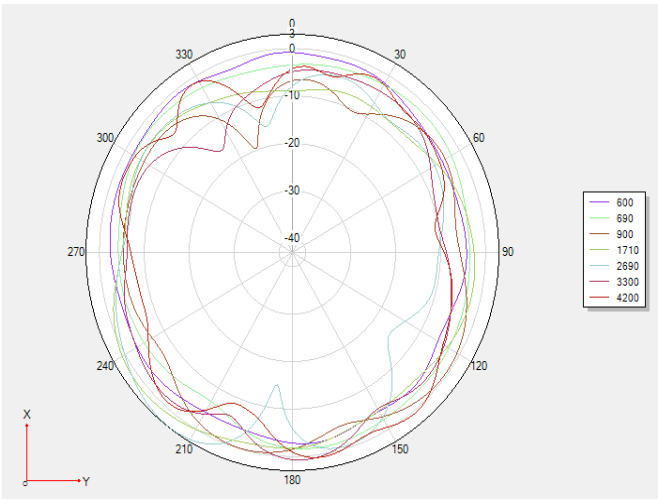
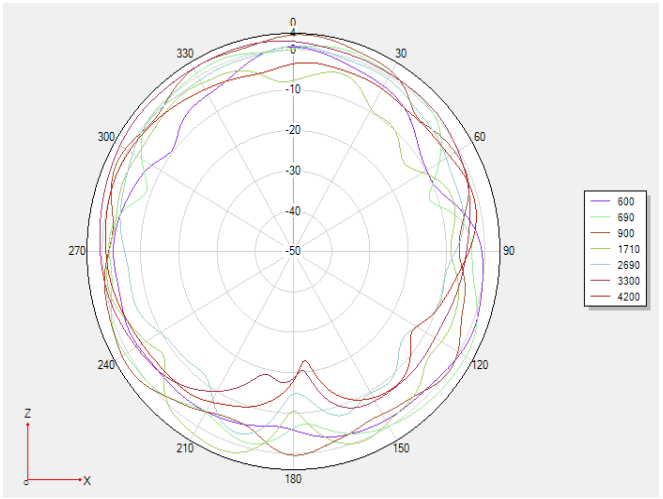
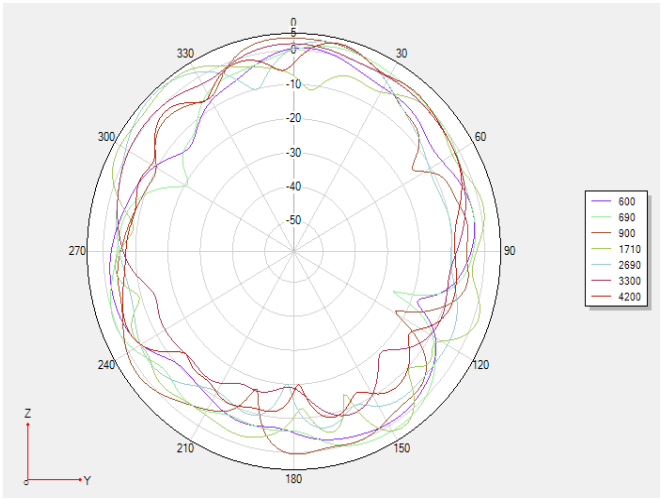
-4.61
-7.10
-9.59
-12.07
-14.56
-17.05
-19.54
-22.03
-24.52

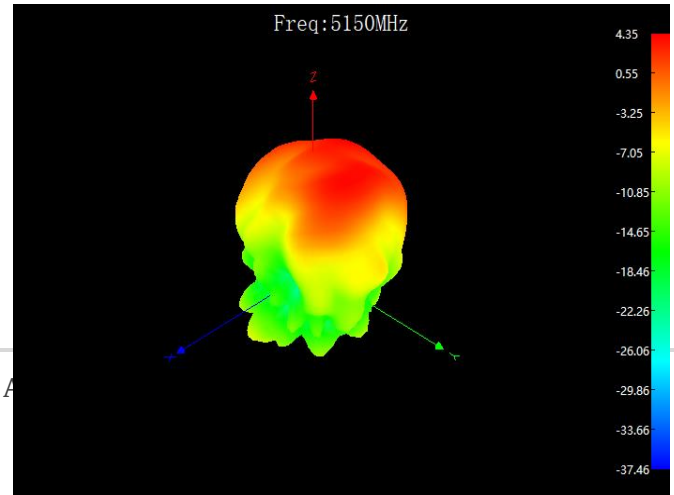

Freq:4200MHz
3.97
1.04
-1.89
-4.82
-7.75
-10.68
-13.62
-16.55
-19.48
-22.41
-25.34
-28.27


600
690
900
1710
2690
3300
4200


600
690
900
1710
2690
3300
4200


600
690
900
1710
2690
3300
4200

WIFI 1:


Freq:5150MHz
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0.55
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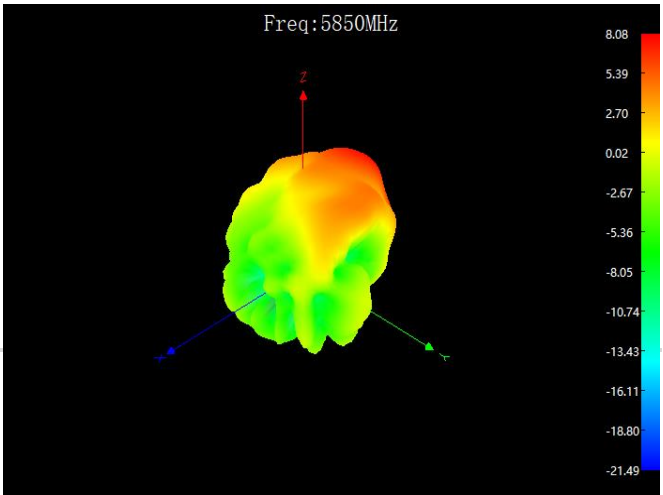
-7.05
-10.85
-14.65
-18.46
-22.26
-26.06
-29.86
-33.66
-37.46


Freq:5850MHz
8.08
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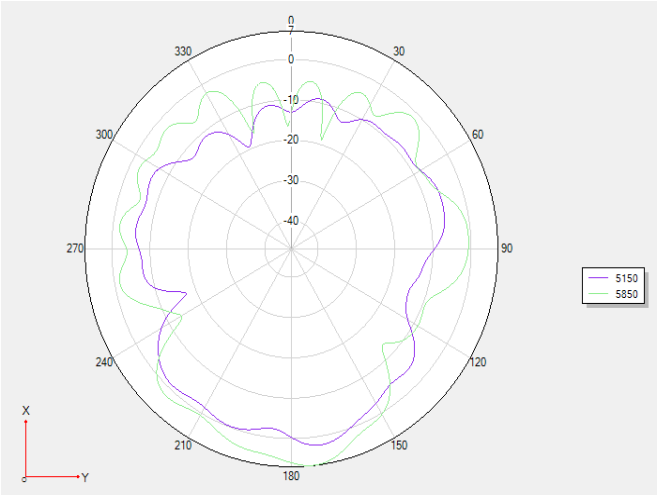
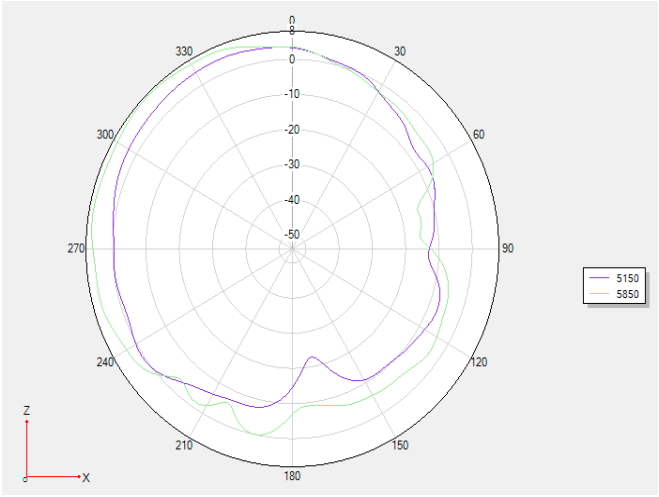
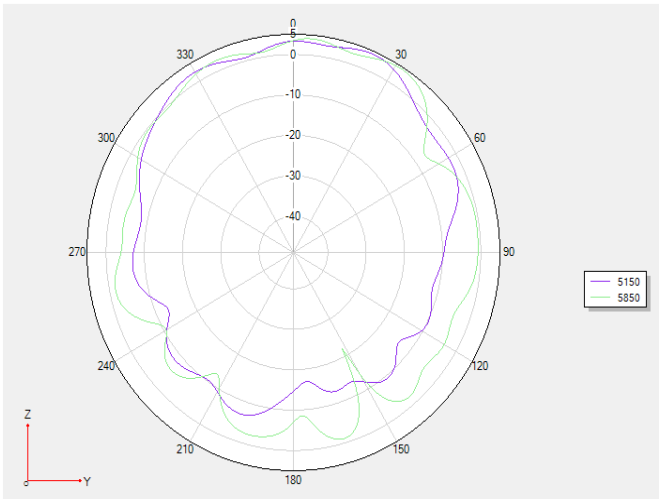
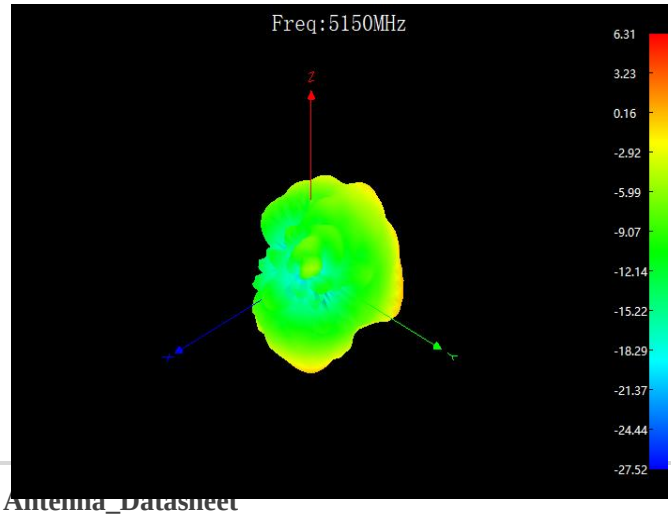
2.70
0.02
-2.67
-5.36
-8.05
-10.74
-13.43
-16.11
-18.80
-21.49

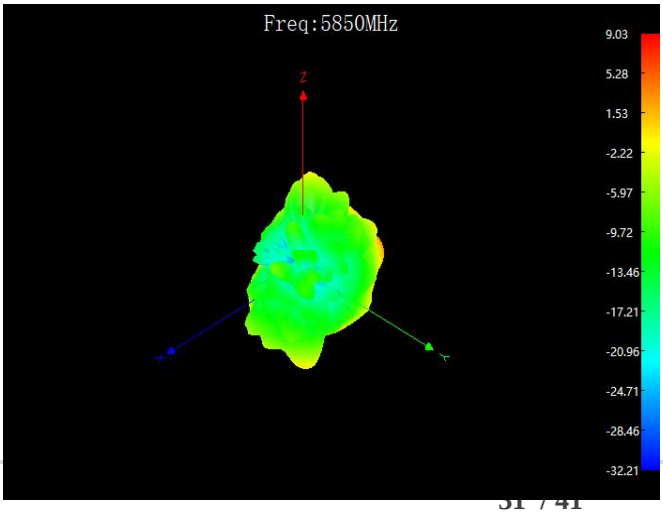

0
30
60
90
120
150
180
210
240
270
300
330
-10
-20
-30
-40
5150
5850
X
Y

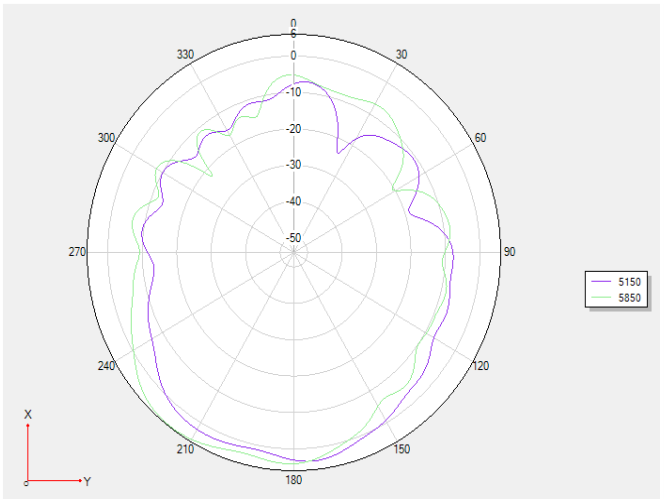

0
30
60
90
120
150
180
210
240
270
300
330
-10
-20
-30
-40
-50
5150
5850
Z
X

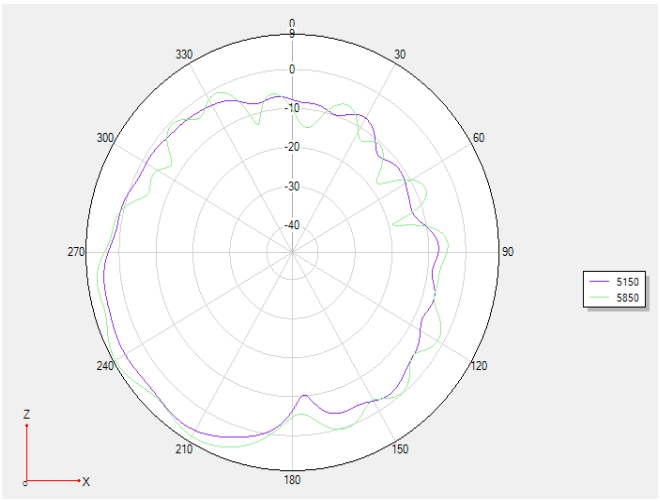

0
30
60
90
120
150
180
210
240
270
300
330
-10
-20
-30
-40
5150
5850
Z
Y

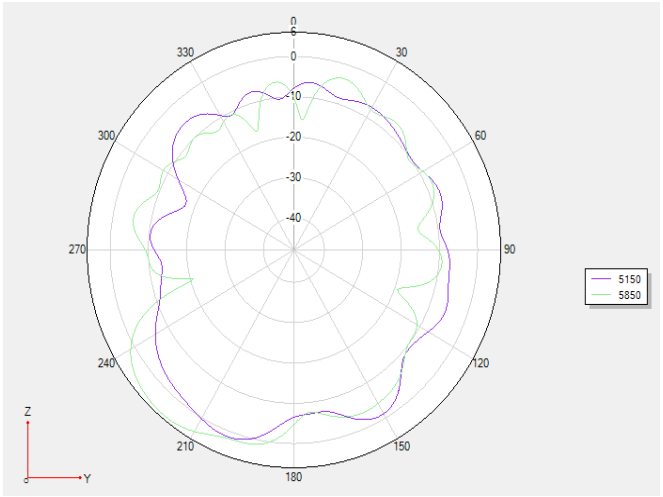
WIFI 2


Freq:5150MHz
Z
6.31
3.23
0.16
-2.92
-5.99
-9.07
-12.14
-15.22
-18.29
-21.37
-24.44
-27.52

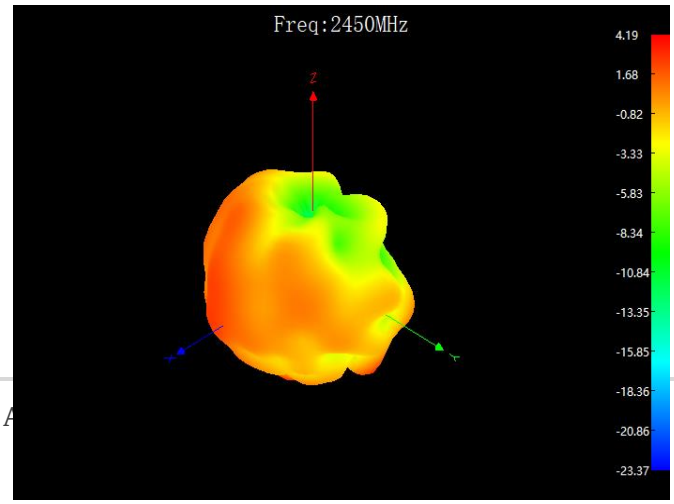

Freq:5850MHz
Z
9.03
5.28
1.53
-2.22
-5.97
-9.72
-13.46
-17.21
-20.96
-24.71
-28.46
-32.21

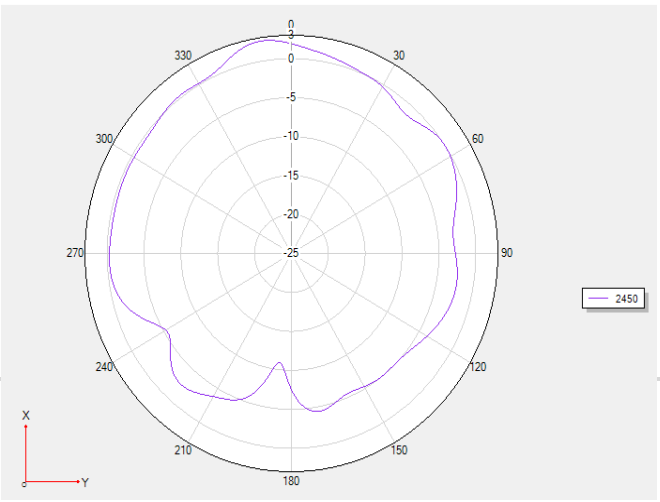

0
30
60
90
120
150
180
210
240
270
300
330
-10
-20
-30
-40
-50
5150
5850
X
Y

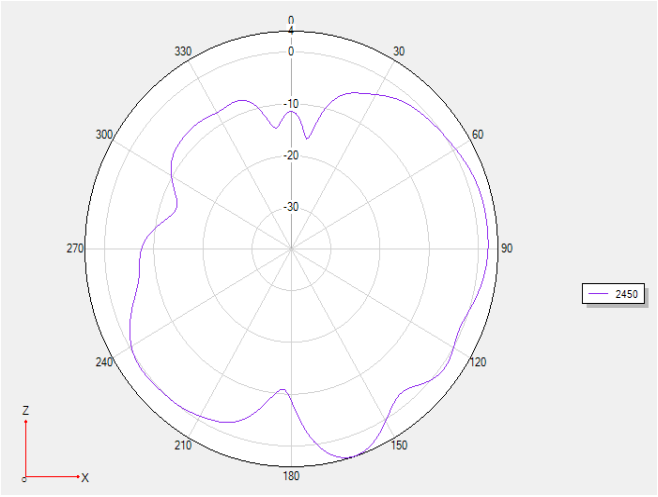

0
30
60
90
120
150
180
210
240
270
300
330
-10
-20
-30
-40
5150
5850
Z
X

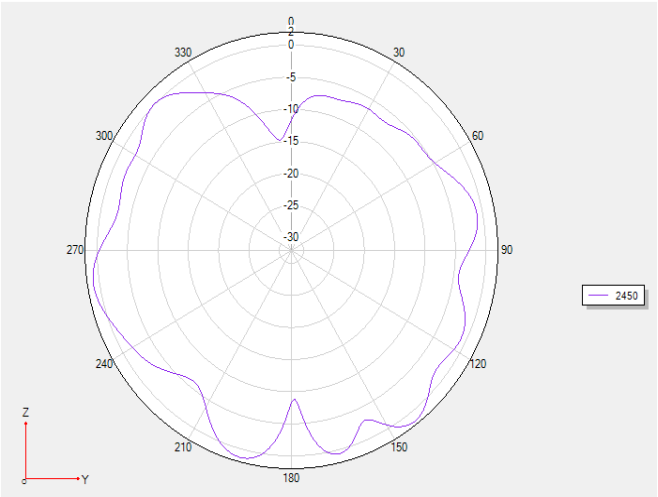

0
30
60
90
120
150
180
210
240
270
300
330
-10
-20
-30
-40
5150
5850
Z
Y

WIFI 1-2.4G:

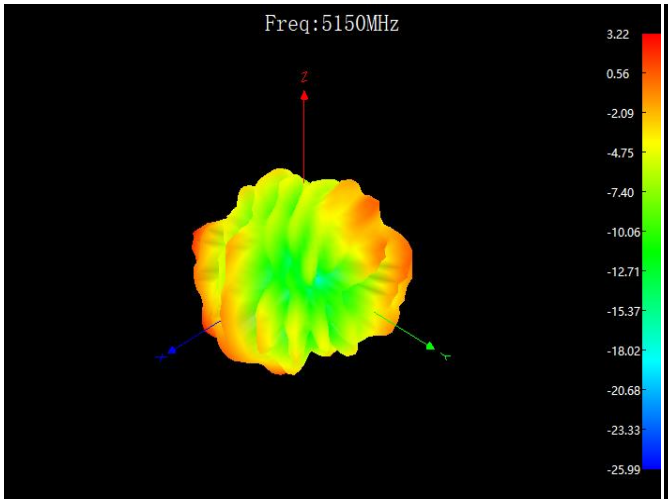

Freq:2450MHz
Z
4.19
1.68
-0.82
-3.33
-5.83
-8.34
-10.84
-13.35
-15.85
-18.36
-20.86
-23.37

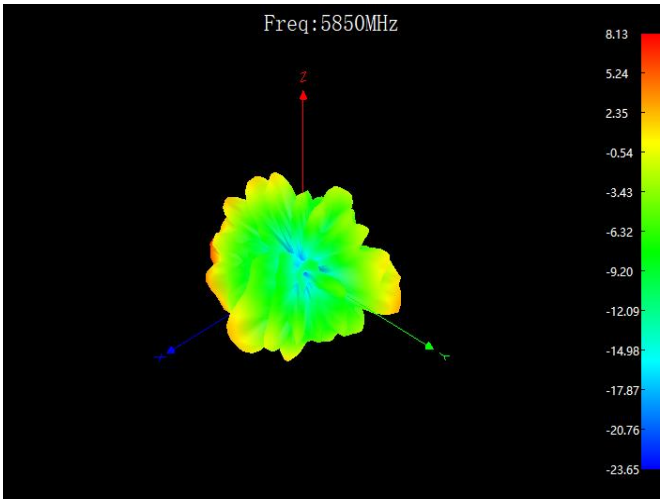

0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
2450
X
Y

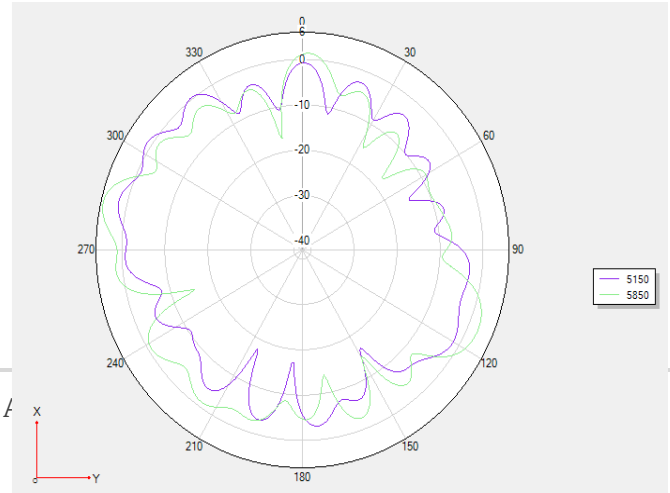

2450
Z
X

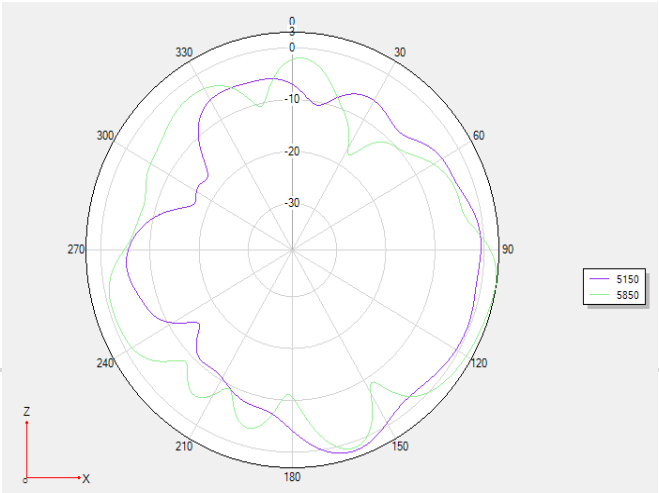

2450
Z
Y

WIFI 1-5G:


Freq:5150MHz
3.22
0.56
-2.09
-4.75
-7.40
-10.06
-12.71
-15.37
-18.02
-20.68
-23.33
-25.99


Freq:5850MHz
8.13
5.24
2.35
-0.54
-3.43
-6.32
-9.20
-12.09
-14.98
-17.87
-20.76
-23.65


5150
5850
X
Y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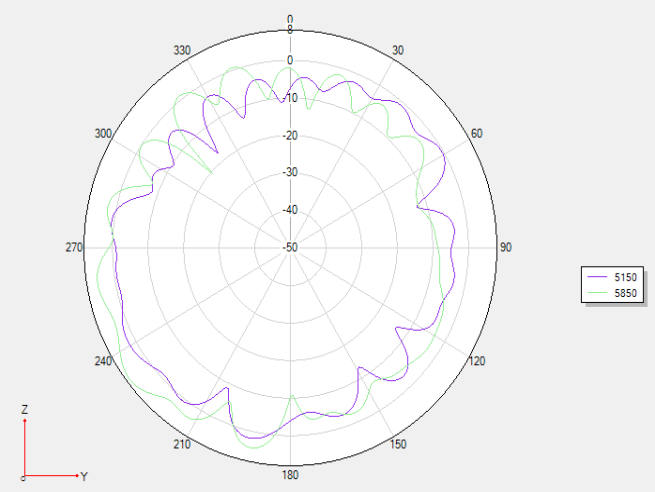
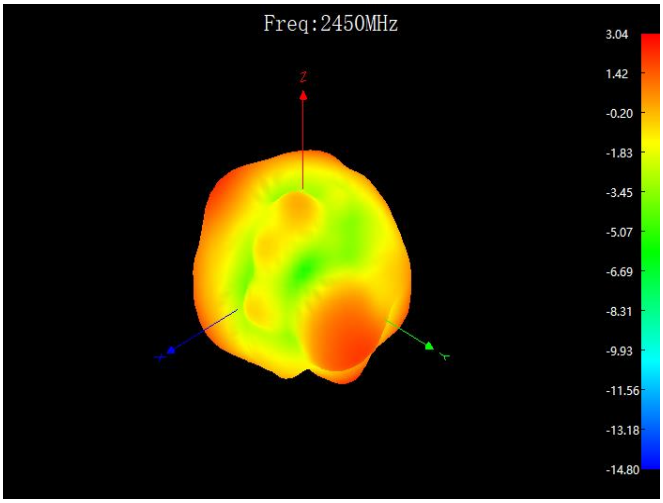
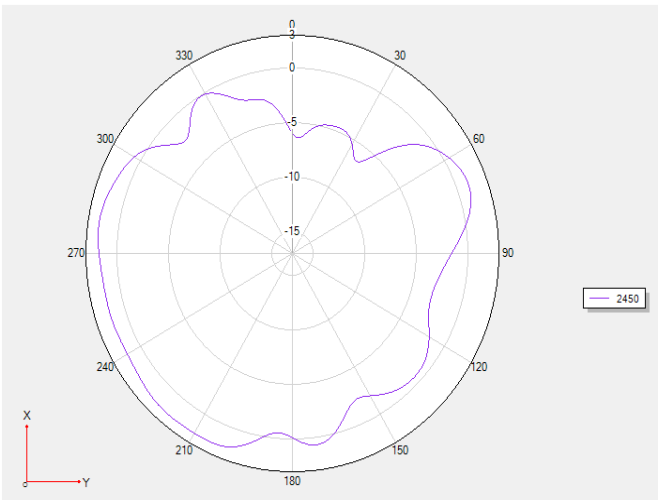
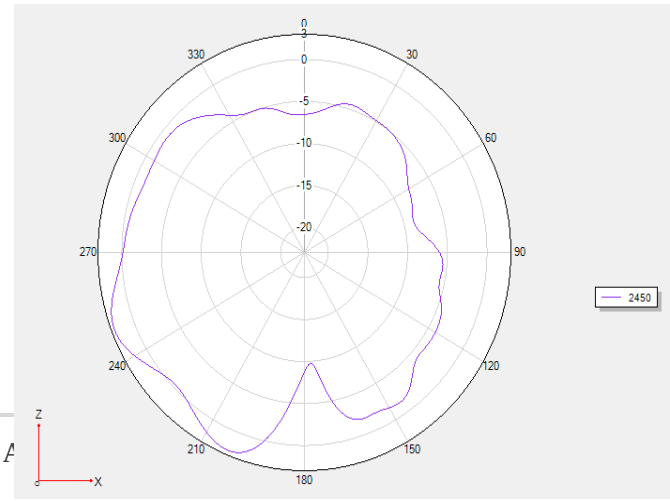
5850
Z
X

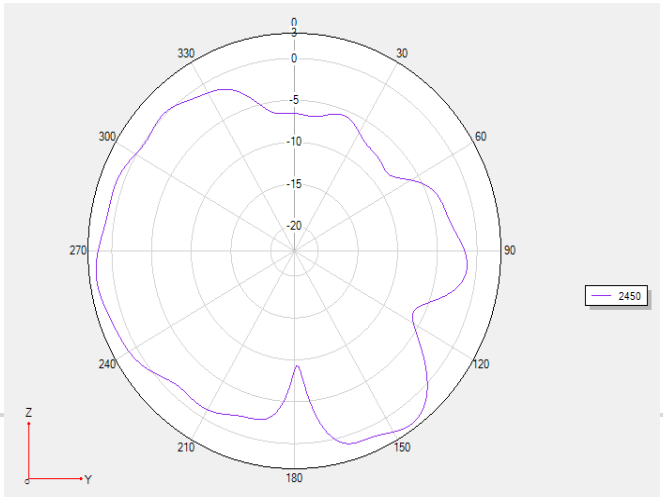

0
30
60
90
120
150
180
210
240
270
300
330
-10
-20
-30
-40
-50
5150
5850
Z
Y

WIFI 2-2.4G:

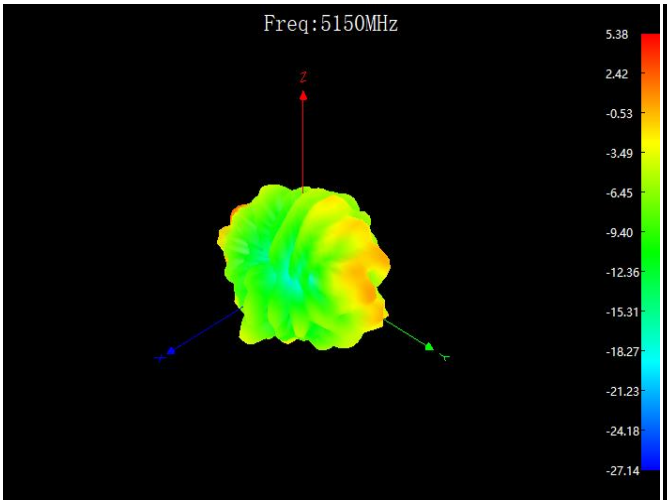

Freq:2450MHz
3.04
1.42
-0.20
-1.83
-3.45
-5.07
-6.69
-8.31
-9.93
-11.56
-13.18
-14.80

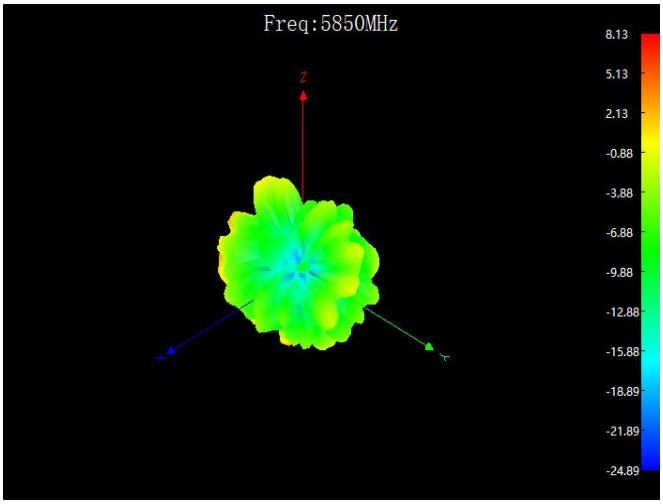

0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
2450
X
Y

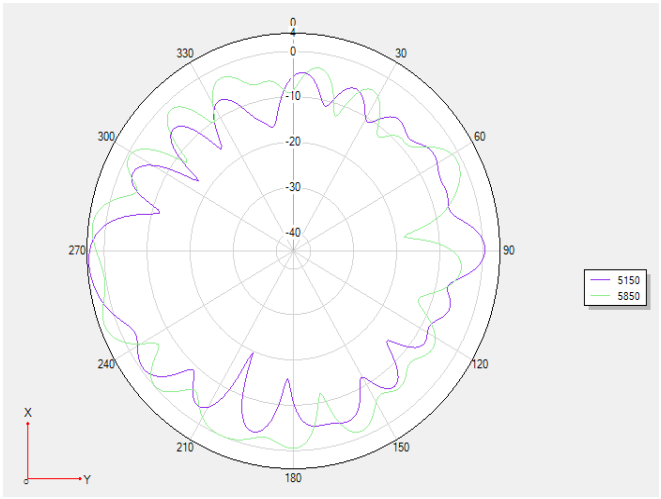

0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
2450
Z
X

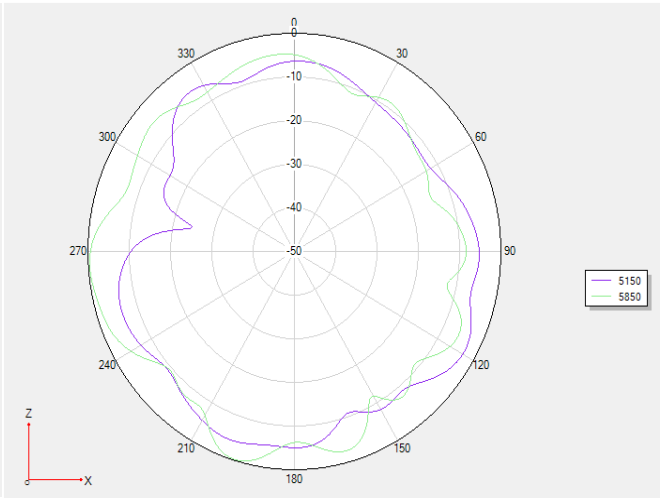

0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
2450
Z
Y

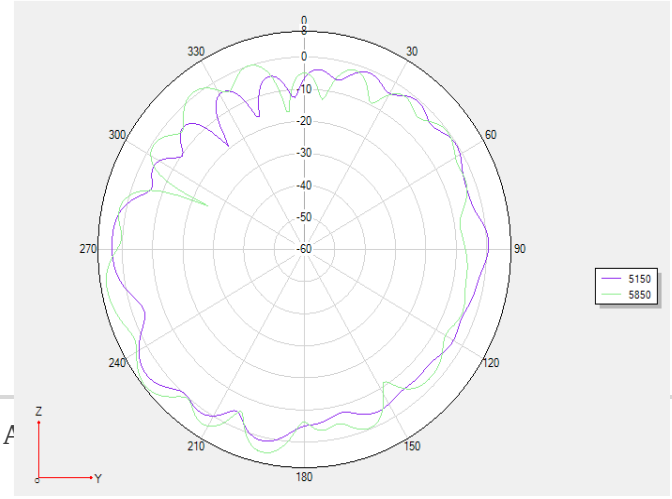
WIFI 2-5G:


Freq:5150MHz
5.38
2.42
-0.53
-3.49
-6.45
-9.40
-12.36
-15.31
-18.27
-21.23
-24.18
-27.14

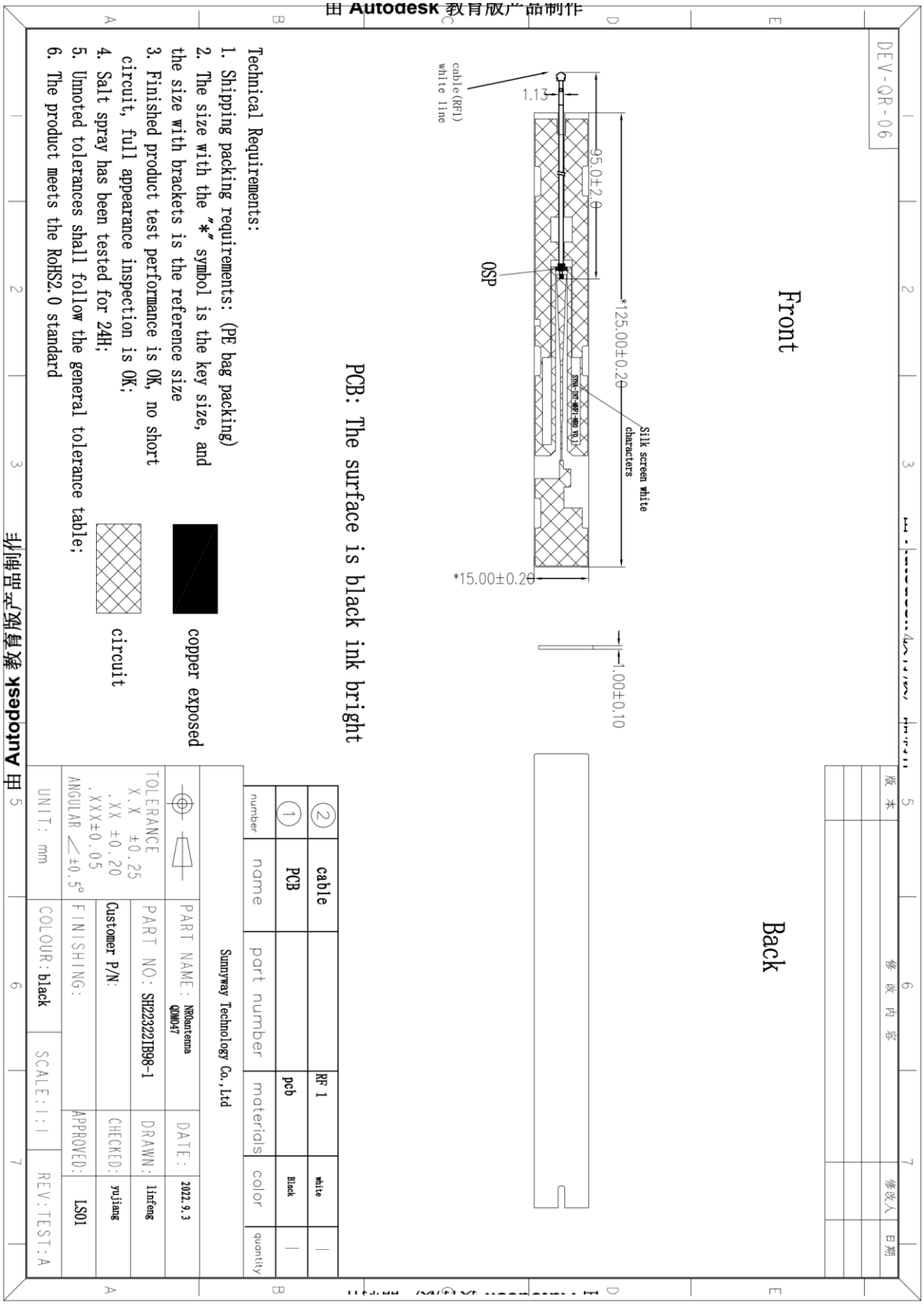

Freq:5850MHz
8.13
5.13
2.13
-0.88
-3.88
-6.88
-9.88
-12.88
-15.88
-18.89
-21.89
-24.89


5150
5850


5150
5850


5150
5850

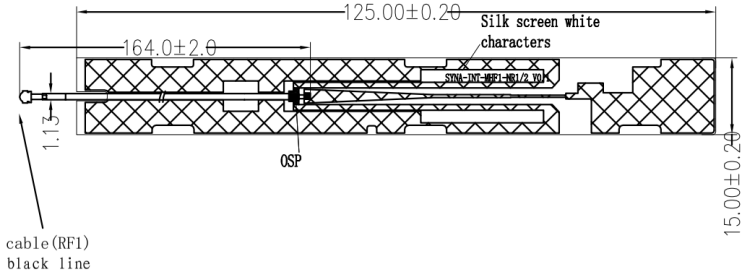
5 Product Size



DEV-QR-06

版 本	修 改 内 容	修改人	日期

Front



Back

PCB: The surface is black ink bright

Technical Requirements:

1. Shipping packing requirements: (PE bag packing)
2. The size with the "*" symbol is the key size, and the size with brackets is the reference size
3. Finished product test performance is OK, no short circuit, full appearance inspection is OK;
4. Salt spray has been tested for 24H;
5. Unnoted tolerances shall follow the general tolerance table;
6. The product meets the RoHS2.0 standard

copper exposed

circuit

number	name	part number	materials	color	quantity
②	cable		RF 1	Black	1
①	PCB		pcb	Black	1

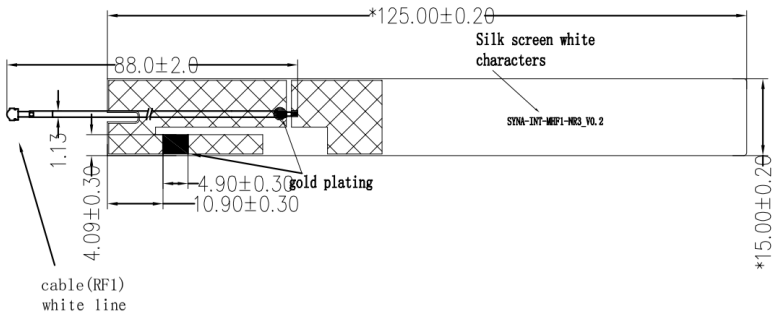
Sunnyway Technology Co.,Ltd

TOLERANCE X.X ±0.25 .XX ±0.20 .XXX±0.05 ANGULAR ∠ ±0.5°	PART NAME: NR1/2antenna QDM047	DATE:	2022.9.6
	PART NO: SH22322IB98-2	DRAWN:	linfeng
	Customer P/N:	CHECKED:	yujiang
	FINISHING:	APPROVED:	LS01
UNIT: mm	COLOUR: black	SCALE: 1:1	REV:TEST:A

DEV-QR-06

版 本	修 改 内 容	修改人	日期

Front



Back

PCB: The surface is black ink bright

number	name	part number	materials	color	quantity
②	cable		RF 1	white	
①	PCB		pcb	Black	

Technical Requirements:

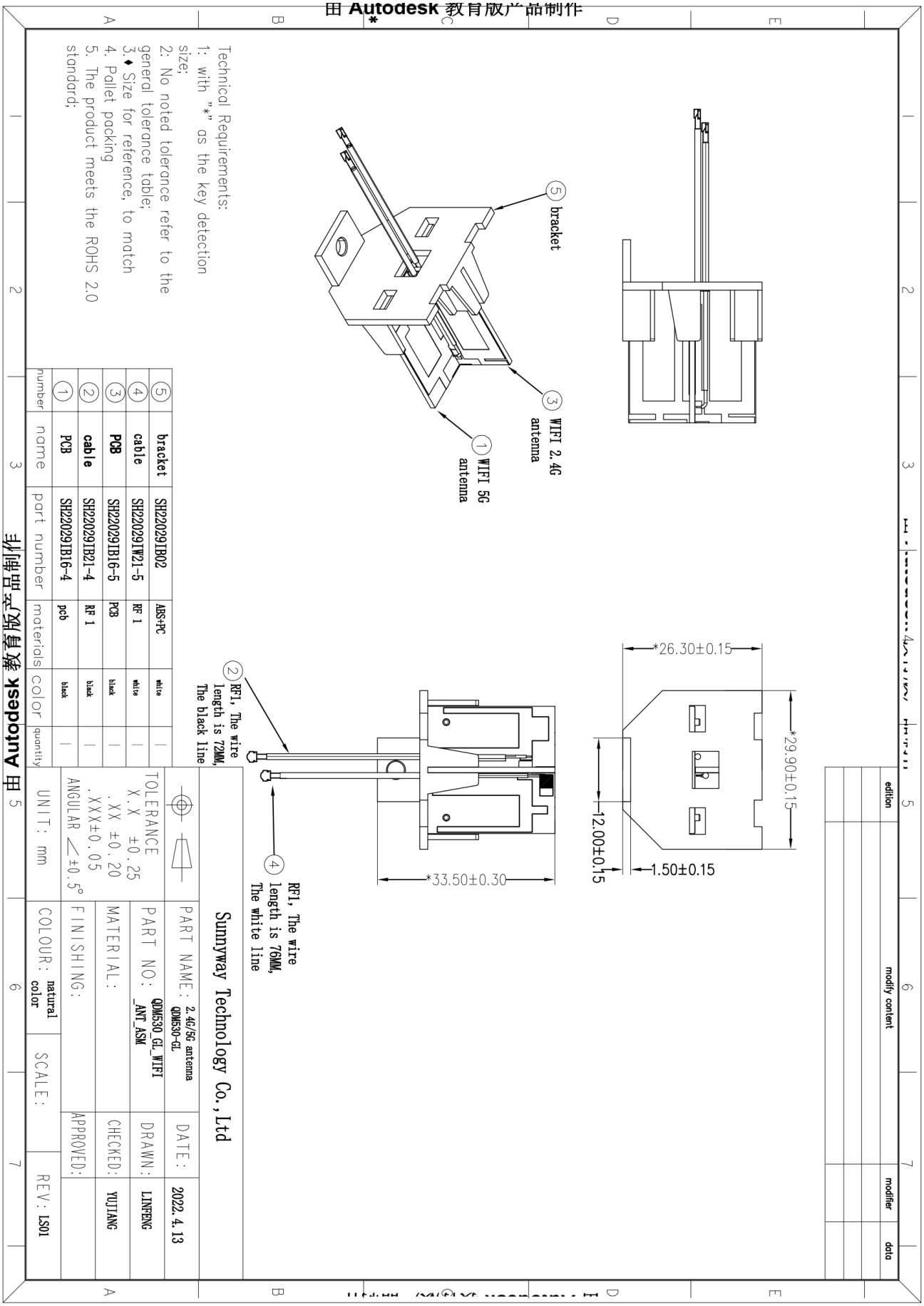
1. Shipping packing requirements: (PE bag packing)
2. The size with the "*" symbol is the key size, and the size with brackets is the reference size
3. Finished product test performance is OK, no short circuit, full appearance inspection is OK;
4. Salt spray has been tested for 24H;
5. Unnoted tolerances shall follow the general tolerance table;
6. The product meets the RoHS2.0 standard

copper exposed

circuit

Sunnyway Technology Co.,Ltd

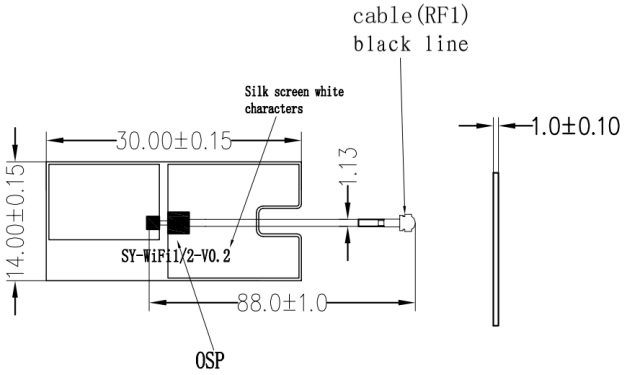
TOLERANCE X.X ±0.25 .XX ±0.20 .XXX±0.05 ANGULAR ±0.5°	PART NAME: NR3 antenna QDM047	DATE:	2022.9.16
	PART NO: SH22322IB98-3	DRAWN:	linfeng
	Customer P/N:	CHECKED:	yujiang
	FINISHING:	APPROVED:	LS01
UNIT: mm	COLOUR: black	SCALE: 1:1	REV:TEST:A


由 Autodesk 教育版产品制作
Technical Requirements:
1: with "*" as the key detection size;
2: No noted tolerance refer to the general tolerance table;
3.◆ Size for reference, to match
4. Pallet packing
5. The product meets the ROHS 2.0 standard;
⑤ bracket
③ WIFI 2.4G antenna
① WIFI 5G antenna
*26.30±0.15
*29.90±0.15
12.00±0.15
1.50±0.15
② RF1, The wire length is 72MM, The black line
④ RF1, The wire length is 76MM, The white line
*33.50±0.30
⑤ bracket SH22029IB02 ABS+PC white
④ cable SH22029IW21-5 RF 1 white
③ PCB SH22029IB16-5 PCB black
② cable SH22029IB21-4 RF 1 black
① PCB SH22029IB16-4 pcb black
number name part number materials color quantity
Sunnyway Technology Co.,Ltd
PART NAME: 2.4G/5G antenna QDM530-GL
PART NO: QDM530_GL_WIFI _ANT_ASM
MATERIAL:
FINISHING:
COLOUR: natural color
UNIT: mm
TOLERANCE
X.X ±0.25
.XX ±0.20
.XXX±0.05
ANGULAR ∠ ±0.5°
DATE: 2022.4.13
DRAWN: LINFENG
CHECKED: YUJIANG
APPROVED:
SCALE:
REV: LS01
edition modify content modifier data

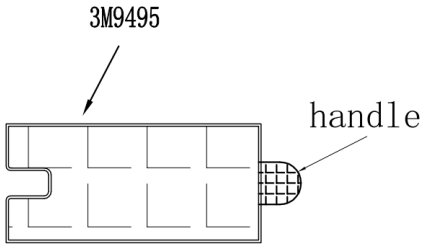
DEV-QR-06

版 本	修 改 内 容	修改人	日期

Front



Back



PCB: The surface is black ink bright

number	name	part number	materials	color	quantity
③	adhesive	SH22029IA05	3M9495		
②	cable	SH22029IB21-3	RF 1	black	
①	PCB	SH22029IB16-3	pcb	black	

Technical Requirements:

1. Material: yellow core material;
1. Shipping packing requirements: (PE bag packing)
2. The size with the "*" symbol is the key size, and the size with brackets is the reference size
3. No tip, burr ≤0.2MM, deformation indentation, coating off, etc.;
5. Finished product test performance is OK, no short circuit, full appearance inspection is OK;
6. Salt spray has been tested for 24H;
7. Unnoted tolerances shall follow the general tolerance table;
8. The product meets the RoHS2.0 and REACH3.0 standards

copper exposed

circuit

Sunnyway Technology Co.,Ltd

TOLERANCE X.X ±0.25 .XX ±0.20 .XXX±0.05 ANGULAR ∠ ±0.5°	PART NAME: WiFi1/2antenna QDM530-GL	DATE:	2022.3.12
	PART NO: QDM530_GL_WIFI _5G_ANT_ASM	DRAWN:	linfeng
	MATERIAL:	CHECKED:	yujiang
	FINISHING:	APPROVED:	LS01
UNIT: mm	COLOUR:	SCALE:1:1	REV:TEST:A