Antenna
YE0038AA Datasheet

Antenna Services

Version: 0.1

Date: 2024-03-26

Status: Preliminary

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Or our local offices. For more information, please visit:
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About the Document

Revision History

Version	Date	Author	Note
-	2024-03-26	Aria CHU	Creation of the document
0.1	2024-03-26	Aria CHU	First official release

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

- Wi-Fi+Band48
- High efficiency
- Excellent performance

3 Product Specifications

- **WIFI**

Passive Electrical Specifications	
Frequency Range	2.4–2.5 GHz, 5.15–5.85 GHz,5.9-7.2GHz
Input Impendence	50 Ω
VSWR	2.4GHz: ≤ 2.0, 5GHz: ≤ 2.8 5.9-7.2GHz: ≤3.0
Peak Gain	2.4GHz: ≤ 0.73dBi, 5GHz: ≤1.14dBi 5.9-7.2GHz: ≤-0.24dBi
Antenna Type	Dipole

- **Band48**

Passive Electrical Specifications	
Frequency Range	3400-3800MHz
Input Impendence	50 Ω
VSWR	≤ 6.0
Peak Gain	≤ -0.56 dBi
AntennaType	Dipole

Mechanical Specifications	
Antenna Size	195 mm x Φ 13 mm
Casing	ABS
Connector Type	RP-SMA Male
Working Temperature	-40 °C to +85 °C
Radome Color	Black
IP Rating	IP55

4 Overall Performance

4.1. Test Environment

● Network Analyzer: Keysight E5071C (Device number: QTB6331E; Calibration date: 2022-06-24)

● Chamber: OTA RayZone 2800 GTS (Device number: QTA0709; Calibration date: 2021-10-19)

● Testing Software: Libra

● Manufacturer: Quectel Wireless Solutions (Changzhou) Co., Ltd.
Address: No.8 Nanhu West Road, Wujin District, Changzhou City, Jiangsu Province, China

4.2. Data-WIFI

● **VSWR**
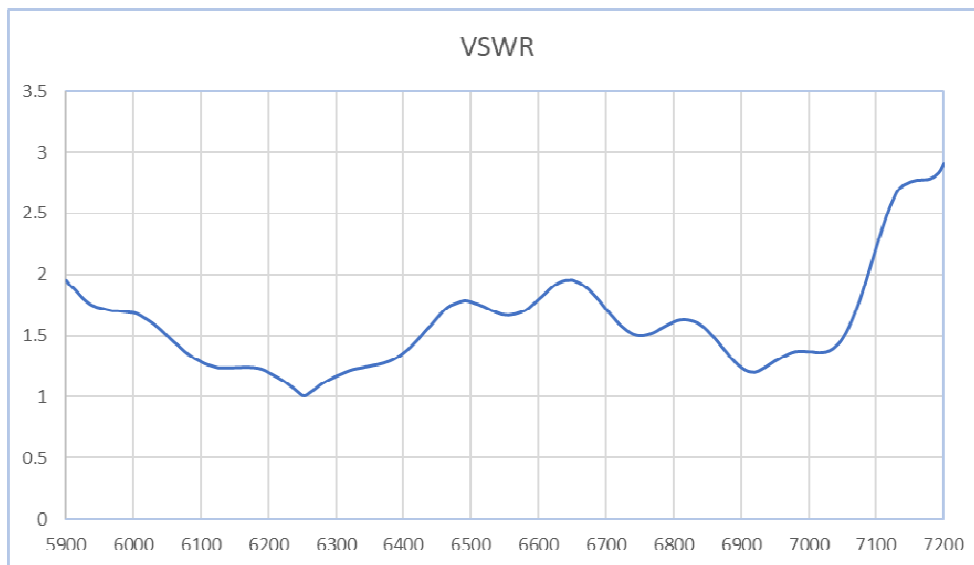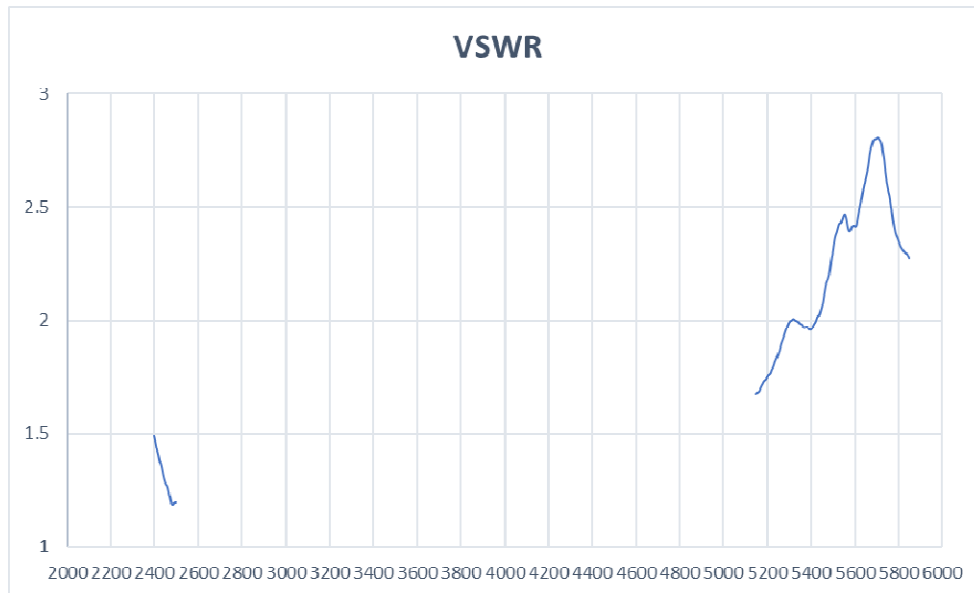
Frequency (MHz)	2400	2500	5150	5850
VSWR	1.49	1.19	1.67	2.27

Frequency (MHz)	5900	6500	7200
VSWR	1.95	1.77	2.91

● **Efficiency**

5.9-7.2GHz Efficiency
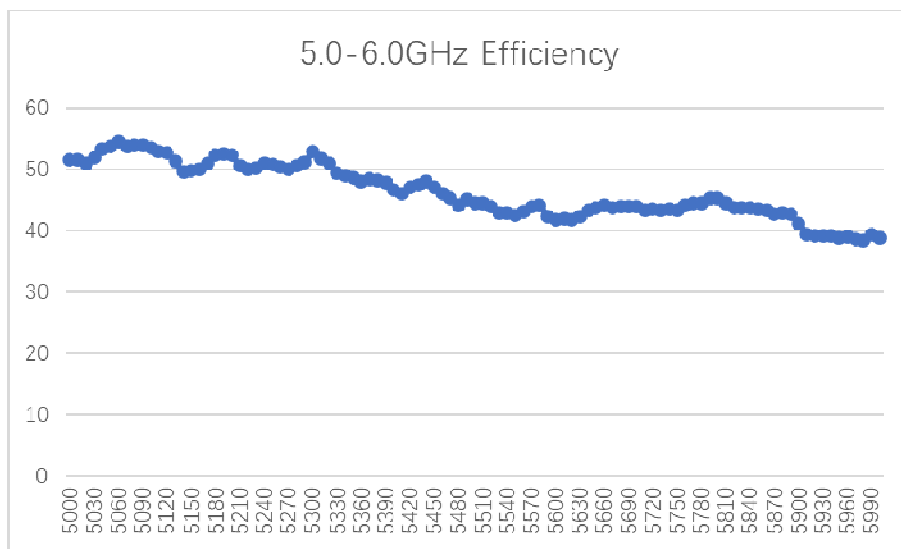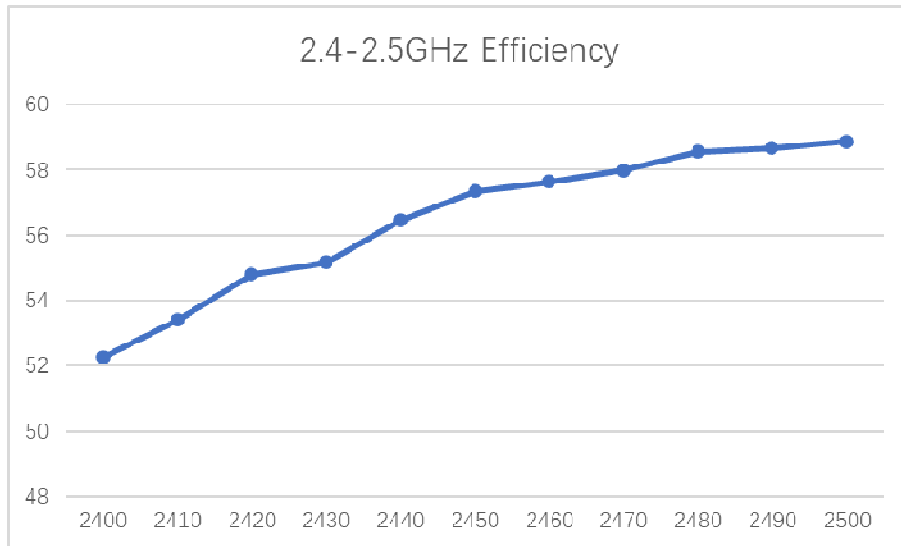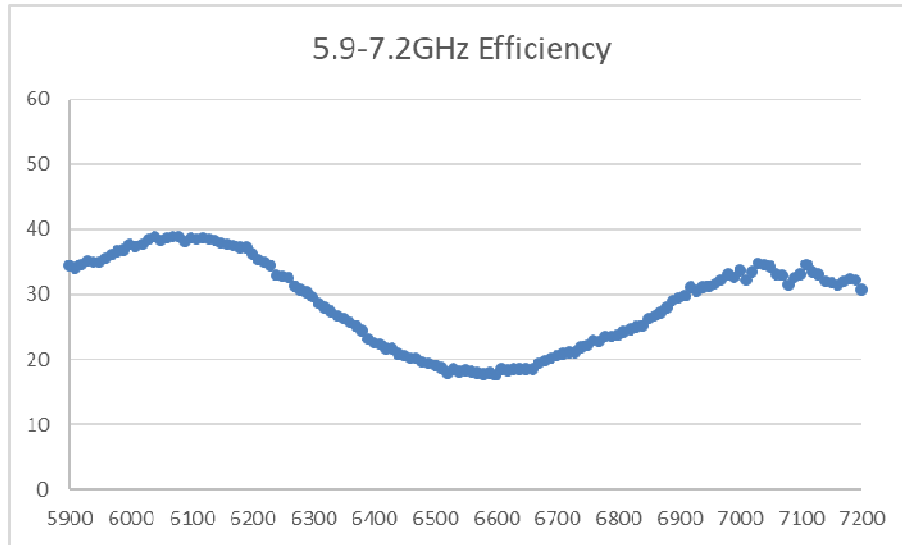
Frequency (MHz)	2400	2500	5150	5850
Efficiency (%)	52.26	59.64	49.76	43.45

Frequency (MHz)	5900	6500	7200
Efficiency (%)	34.35	18.9	30.58

- **Gain**

5.9-7.2GHz Gain
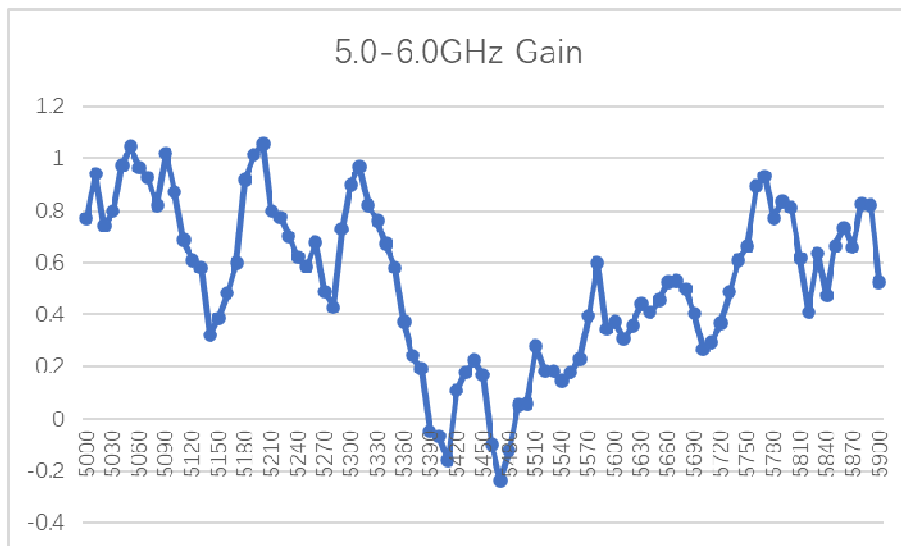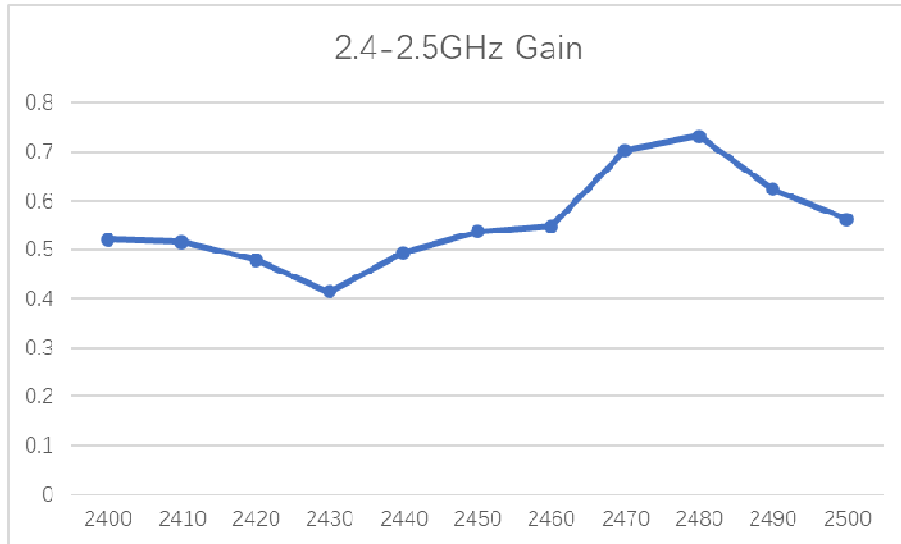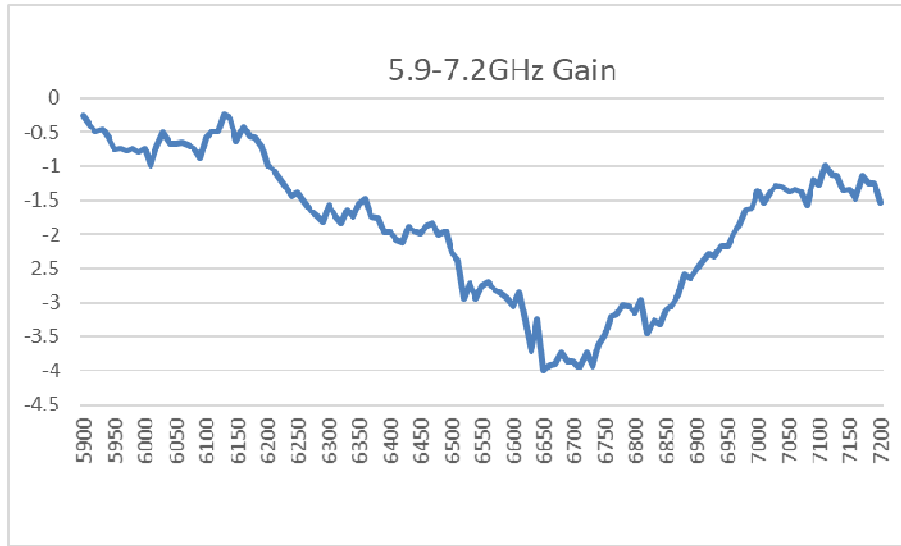
Frequency (MHz)	2400-2483.5	5150-5250	5250-5350	5470-5725	5725-5850	5900-7200
Peak Gain (dBi)	0.73	1.14	1.00	0.60	0.95	-0.24

4.3. Data-Band48

● **Detailed Band48 data**

Frequency(MHz)	Efficiency(%)	Gain(dBi)	VSWR
3400	31.31	-0.62	1.7595953
3410	30.54	-0.6	1.7594879
3420	30.27	-0.56	1.7583804
3430	29.99	-0.6	1.7557133
3440	29.58	-0.67	1.7407261
3450	29.52	-0.72	1.7120283
3460	29.22	-0.7	1.6657989
3470	28.71	-0.85	1.6026738
3480	28.37	-0.89	1.5193631
3490	28.14	-1.02	1.4232132
3500	27.8	-1.1	1.3214646
3510	27.73	-1.21	1.2190003
3520	26.99	-1.24	1.1431093
3530	26.8	-1.16	1.1454306
3540	26.01	-1.3	1.2251233
3550	25.45	-1.36	1.3391756
3560	24.91	-1.42	1.4751243
3570	24.52	-1.48	1.6197301
3580	24.18	-1.5	1.7623735
3590	23.06	-1.73	1.9009234
3600	22.27	-2.09	2.046213
3610	21.58	-2.25	2.1994422
3610	21.58	-2.25	2.1994422
3620	20.81	-2.44	2.3669588
3630	20.19	-2.46	2.5564068
3640	20.17	-2.44	2.7623186
3650	19.58	-2.61	3.0100725
3660	19.5	-2.46	3.283869
3670	19.34	-2.51	3.5730605
3680	18.15	-2.77	3.8926434
3690	18.59	-2.63	4.2036292
3700	18.34	-2.72	4.5103584
3710	17.64	-3	4.8055132
3720	17.31	-3	5.0332462
3730	16.93	-3.14	5.2320687
3740	16.36	-3.21	5.3770512
3750	16.24	-3.23	5.5003468
3760	16.63	-3.26	5.5554026
3770	15.87	-3.42	5.608513
3780	15.96	-3.26	5.6901719
3790	16.14	-3.16	5.6804135
3800	16.84	-3.08	5.6561165

- **VSWR**
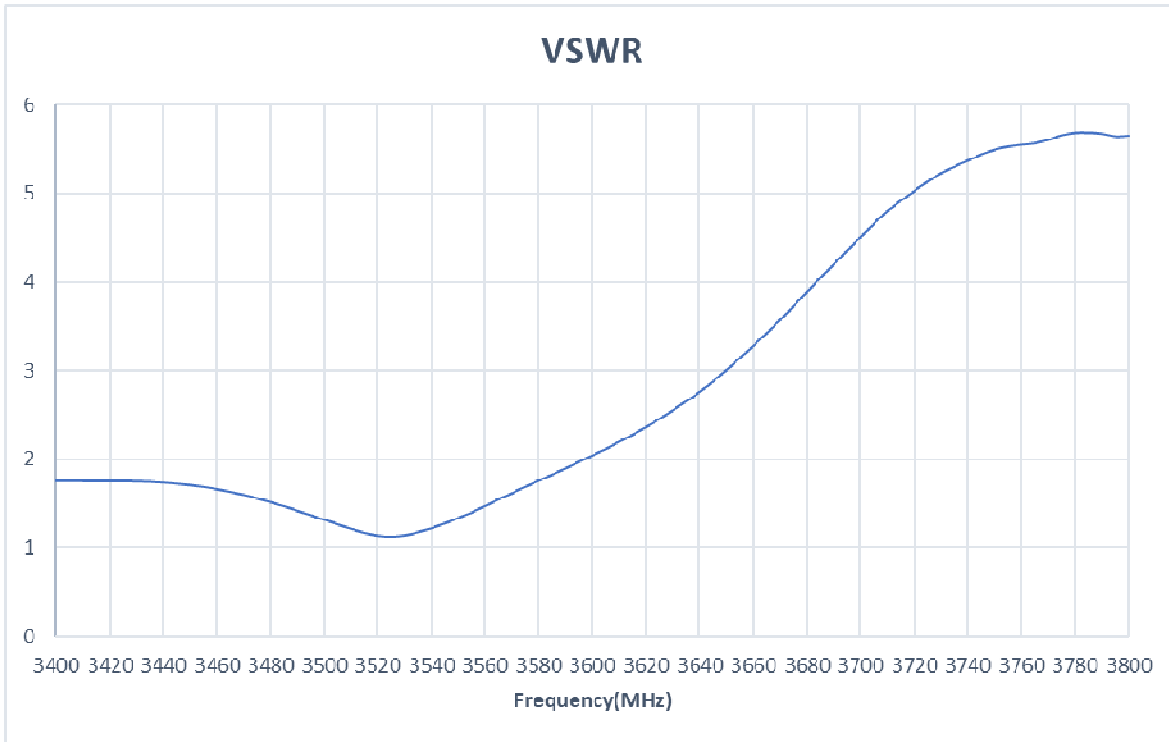
Frequency (MHz)	3400	3600	3800
VSWR	1.75	2.04	5.65

● **Efficiency**
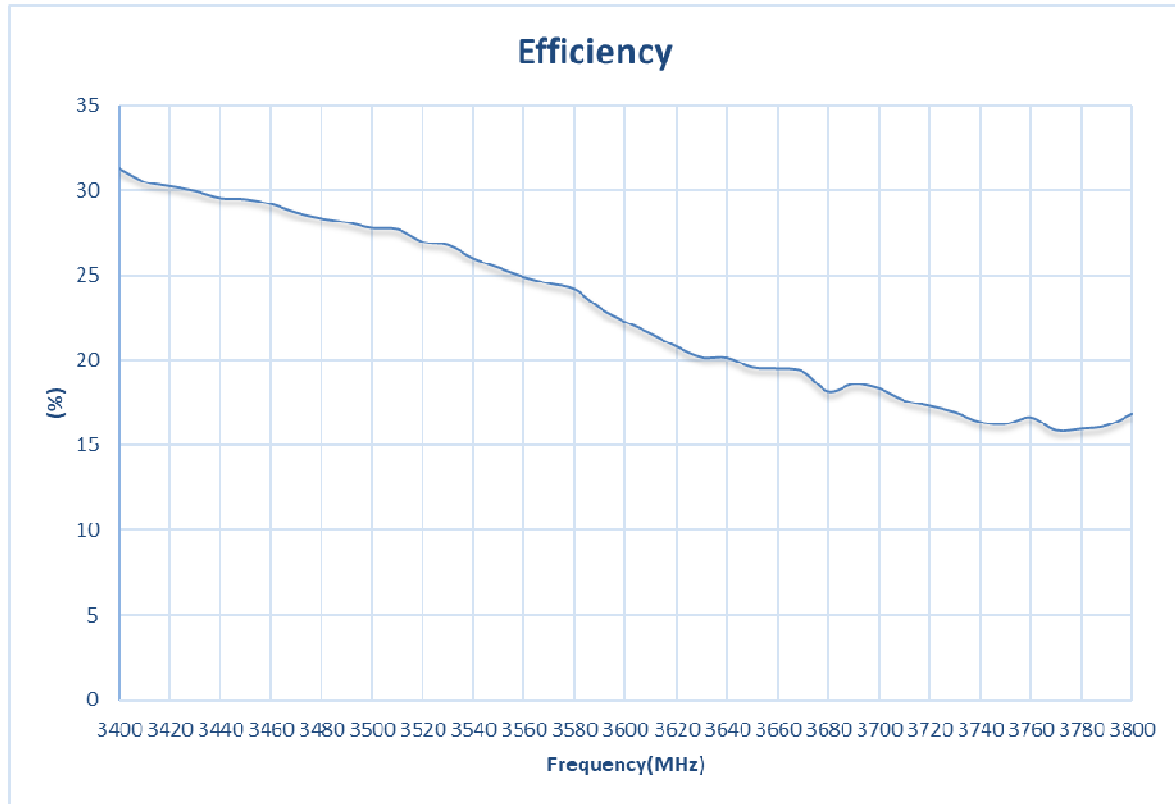
Frequency (MHz)	3400	3600	3800
Efficiency (%)	31.31	22.27	16.84

● **Gain**
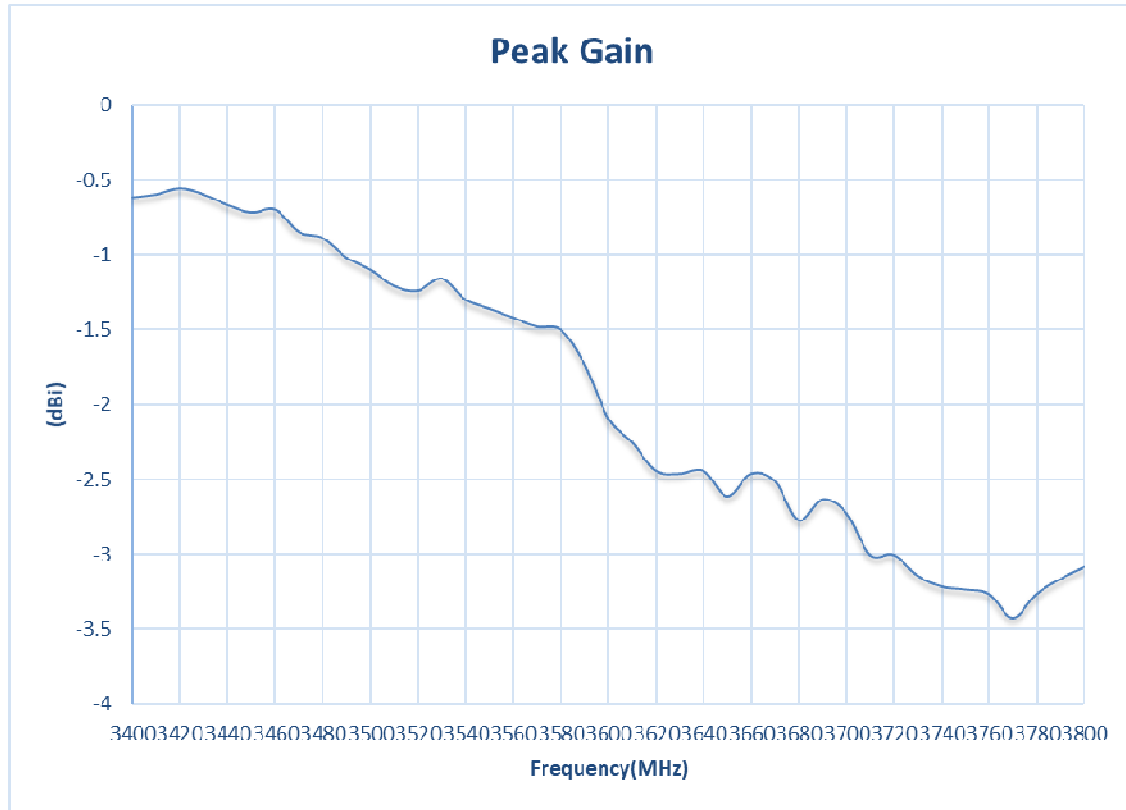
Frequency (MHz)	3400	3600	3800
Gain (dBi)	-0.62	-2.09	-3.08

4.4. Radiation Pattern-WIFI
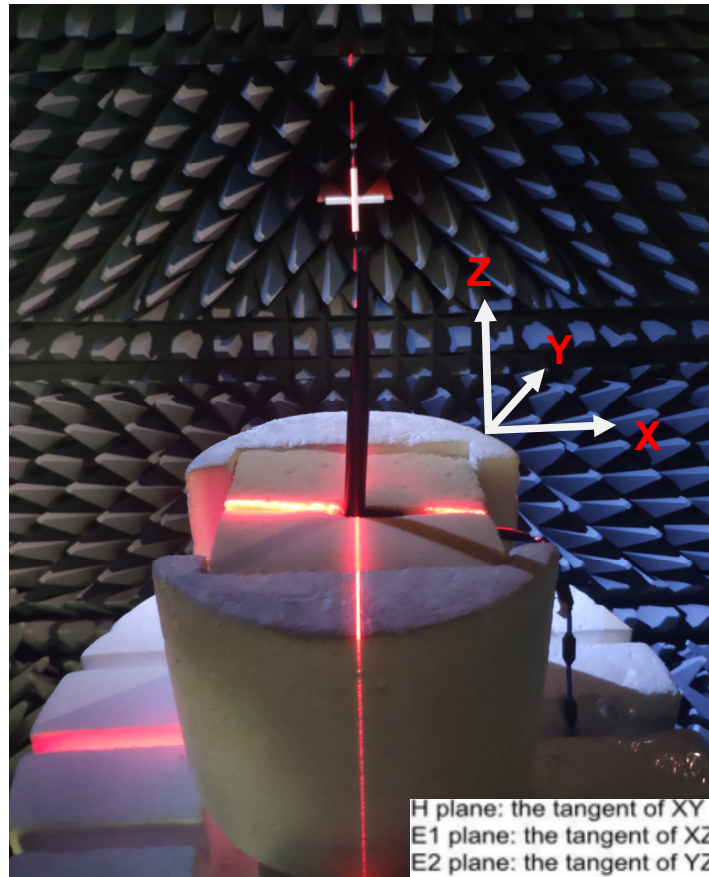
2400 MHz
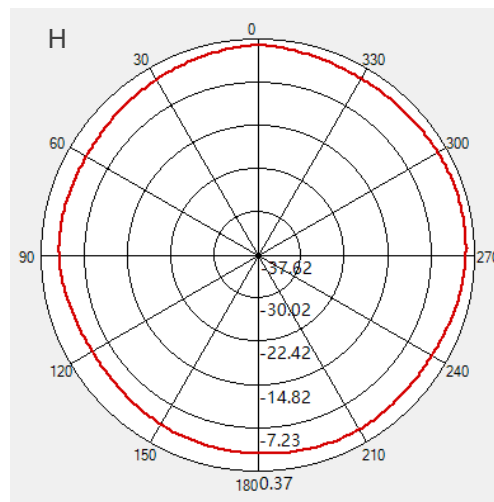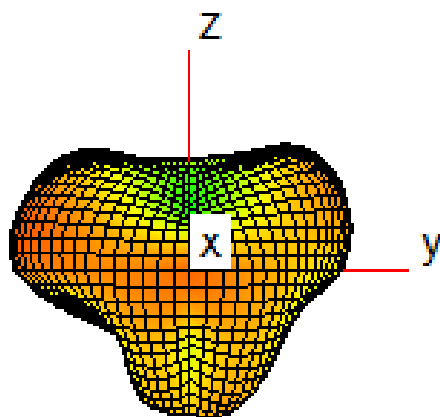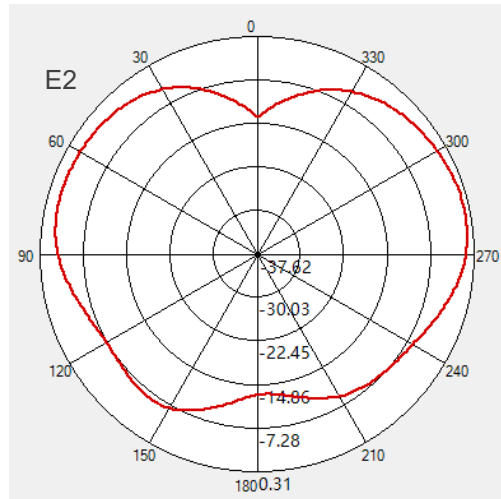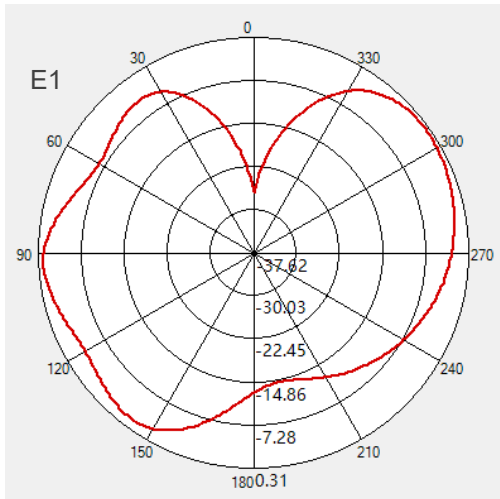
2500 MHz

5180 MHz

5300 MHz

E1

E2
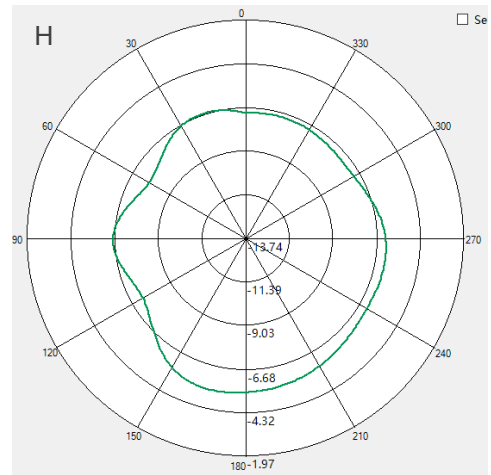
5725 MHz

H

E1

E2
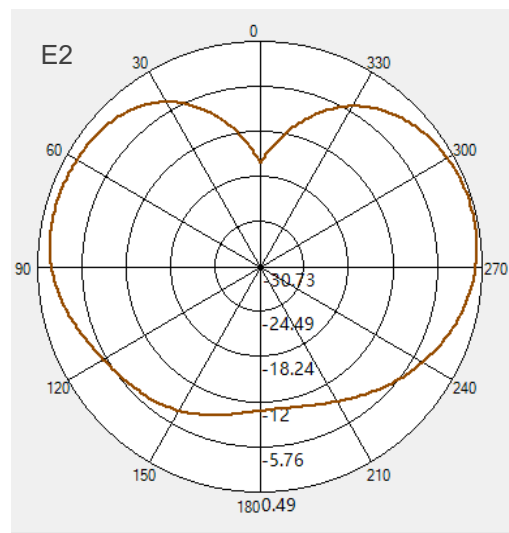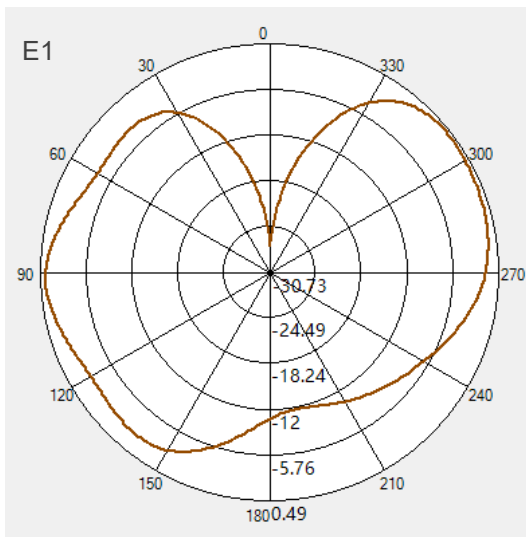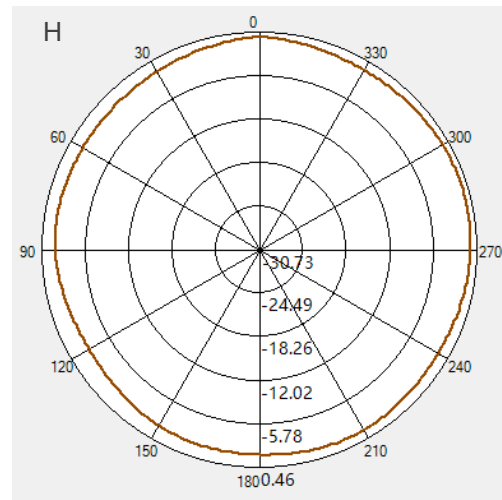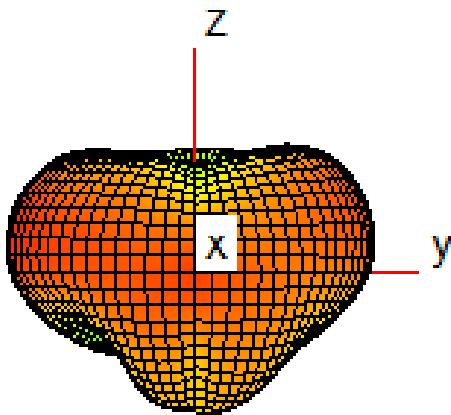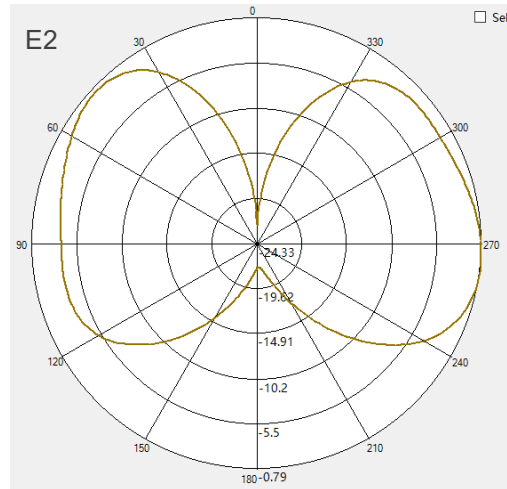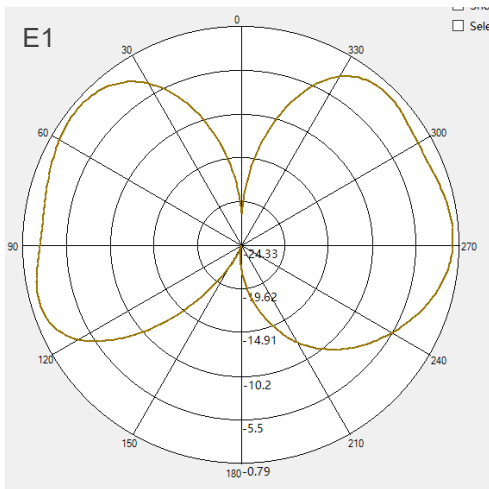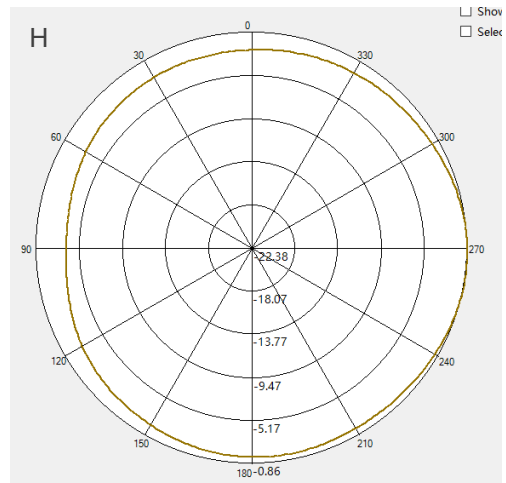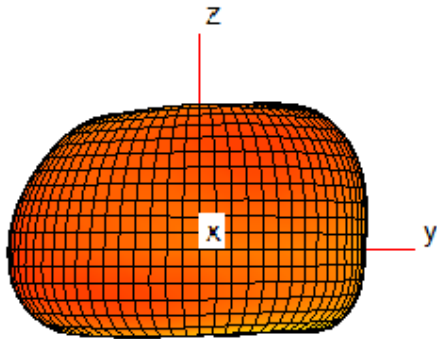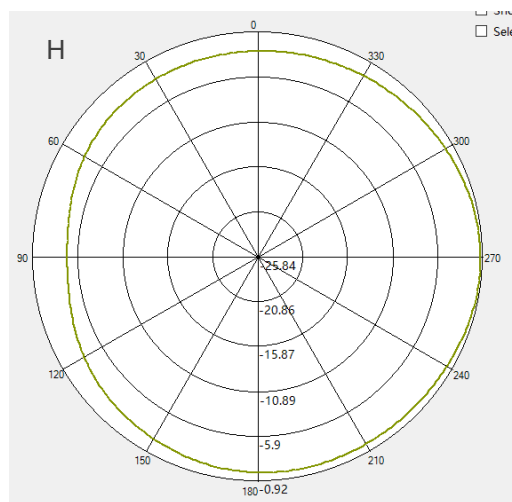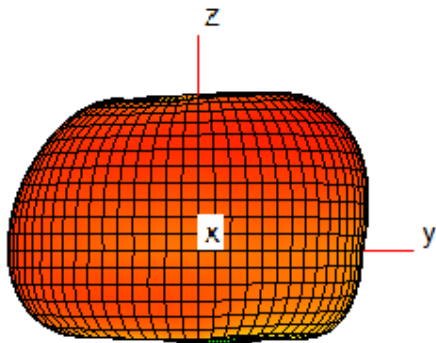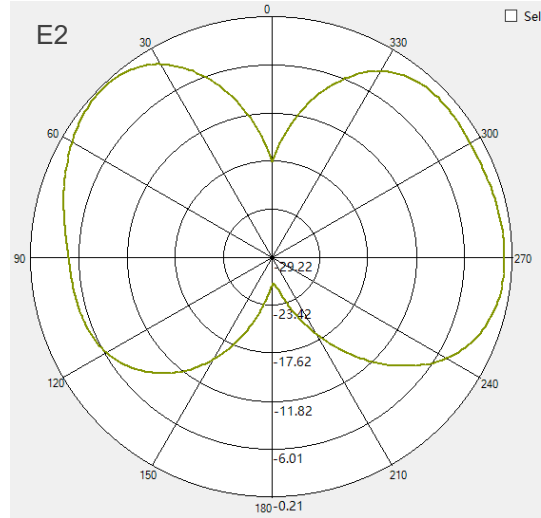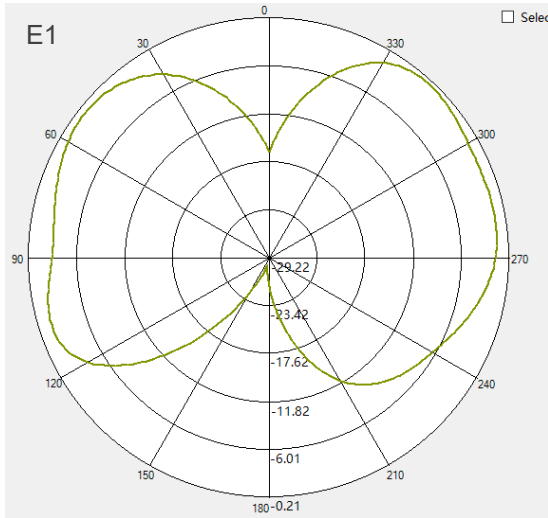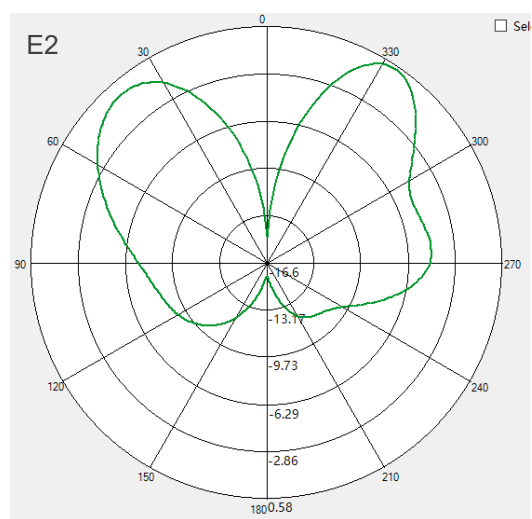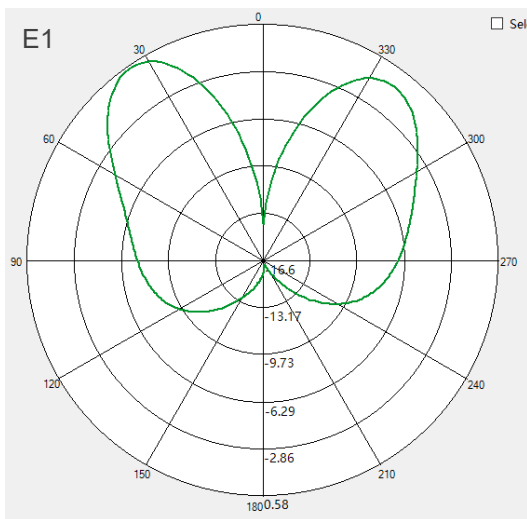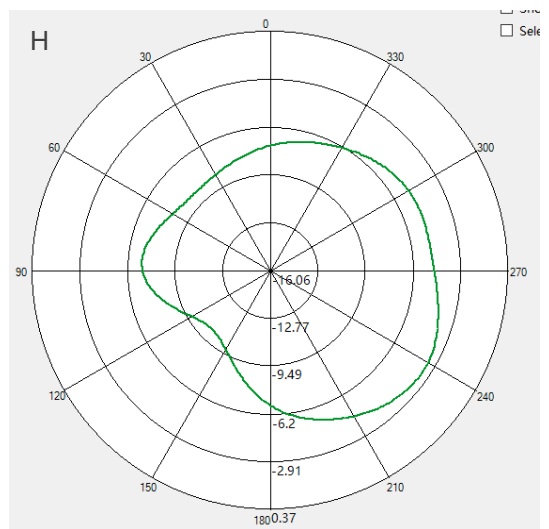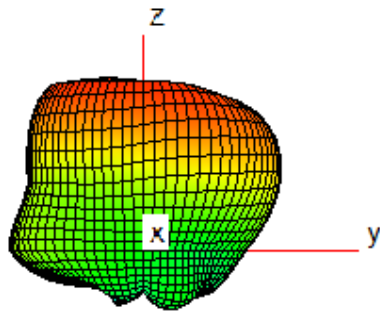
5750 MHz
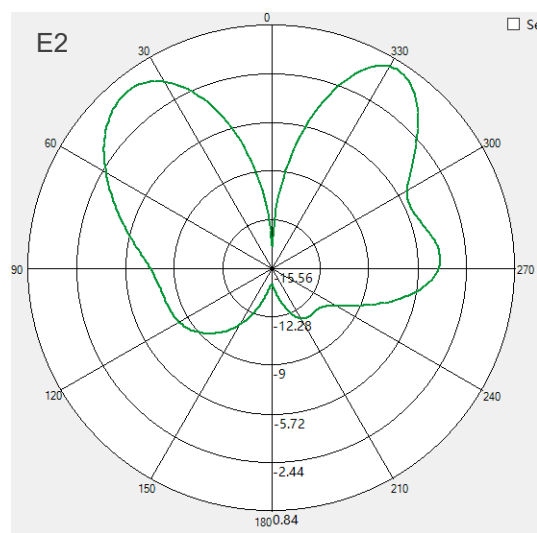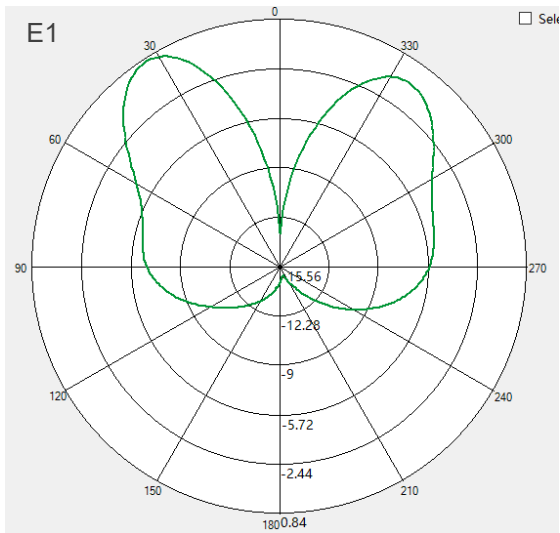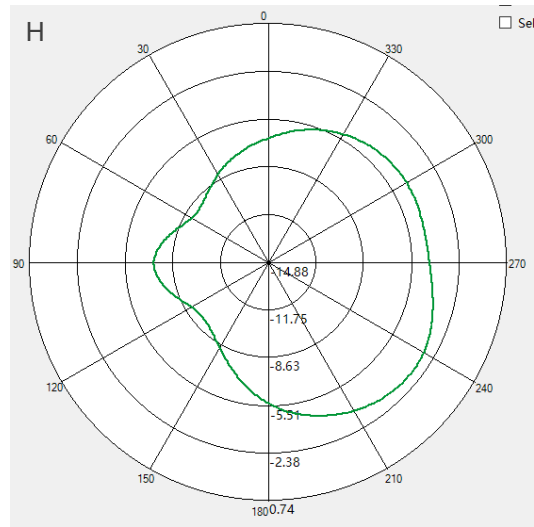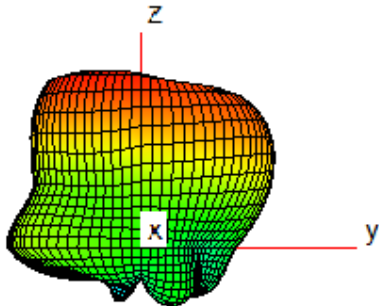
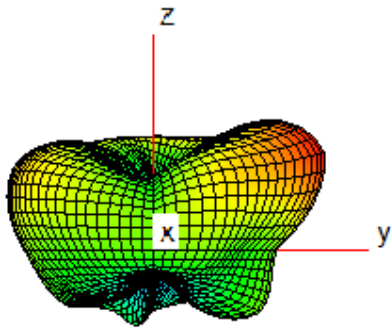## 4.5. Radiation Pattern-Band48
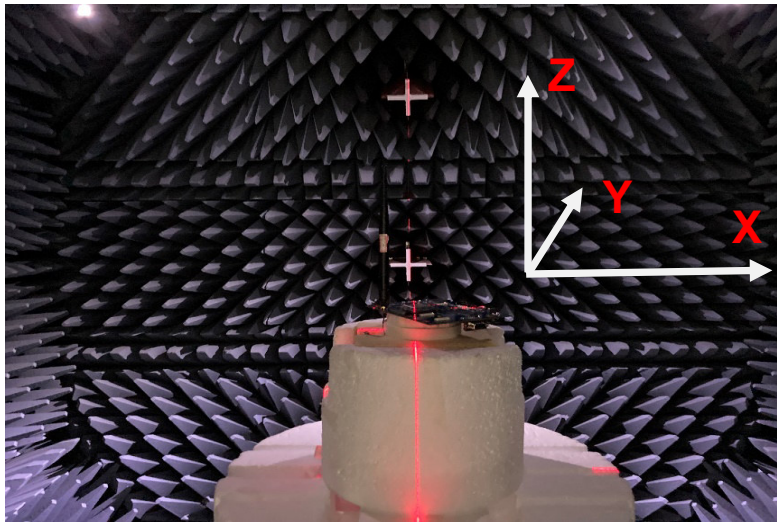
H plane: the tangent of XY
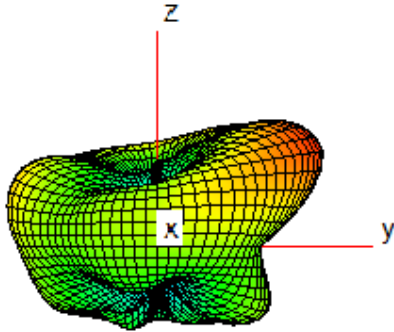E1 plane: the tangent of XZ
E2 plane: the tangent of YZ

3400MHz

E1

E2

3600MHz

H

E1

E2
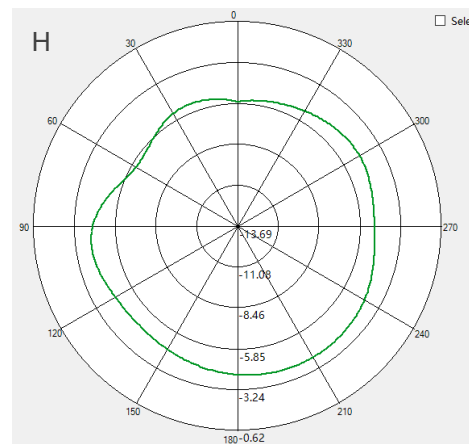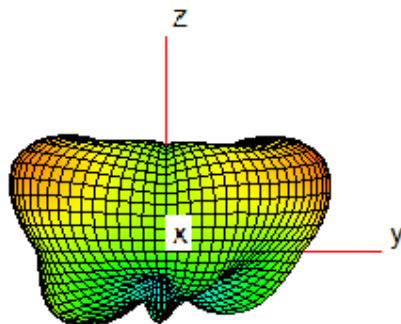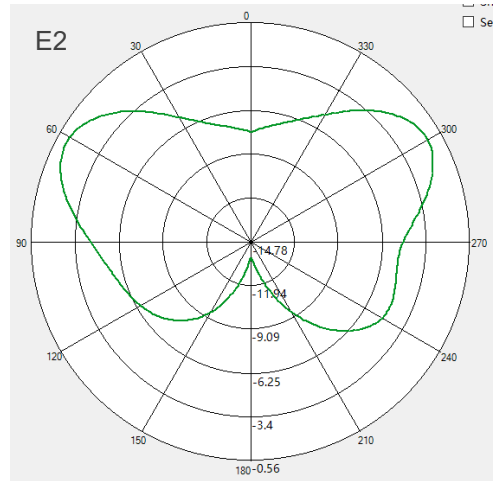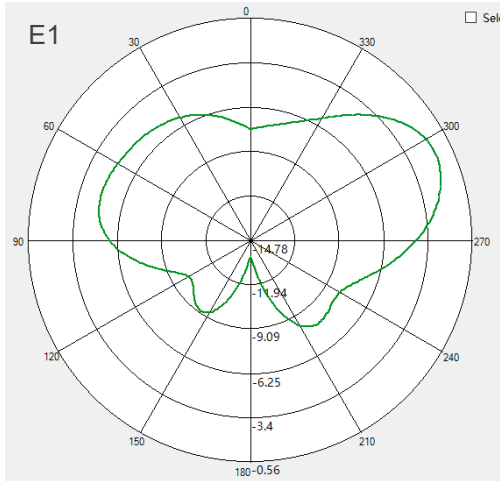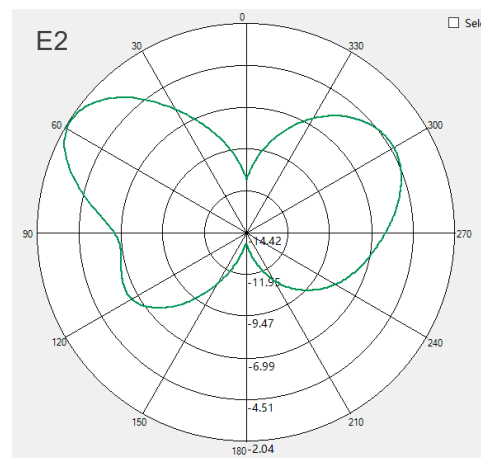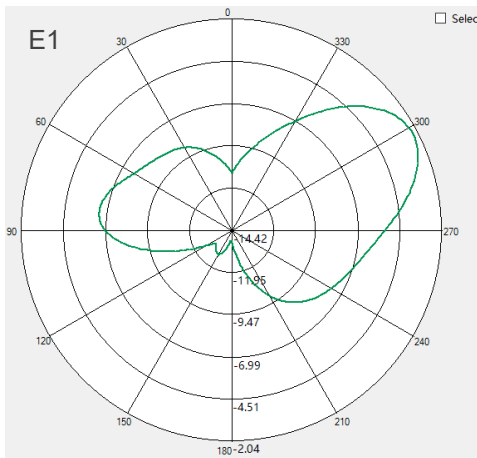
3800MHz

5 Product Size

RoHS

*195±3

RP- SMA Male

*165±3

*∅13±0.2

*∅6.0±0.5

*37±1

*172±3