TAOGLAS

Datasheet

Triton

Part No:
TG.10.0113

Features:

5G/4G Cellular Antenna
600-6000MHz Operational
Monopole Terminal Antenna
Hinged SMA(M) Connector
Dimensions: 168*18*13mm
CE Certified
RoHS and REACH Compliant

1. Introduction

The TG.10 Triton is a dipole 5G/4G antenna designed for use with the next generation of router and gateway applications. Covering the full 600-6000MHz cellular frequency spectrum, the TG.10 Triton is ideal for applications where a wideband dipole antenna may be required. The TG.10 Triton can also be used for NB-IoT, Cat-M, assisted GNSS and dual-band Wi-Fi and due to its full spectrum coverage is backwards compatible with legacy technologies such as 3G and GSM.

The TG.10 Triton has a sleek yet robust PC+ABS enclosure, which makes it ideal for mounting onto routers which are often using this PC+ABS material.

Typical applications include:

- Gateways and Routers
- In-Building Connectivity Systems
- Point of Sales Kiosks
- Connected Industries
- Smart Metering

The TG.10 Triton is supplied with a hinged SMA connector for ease of mounting in MIMO systems. The dimensions of the TG.10 are 168*18*13mm meaning it can be covertly installed on routers and other similar devices unlike some of the bulkier products on the market. For further information please contact your regional Taoglas customer support team.

2. Specifications

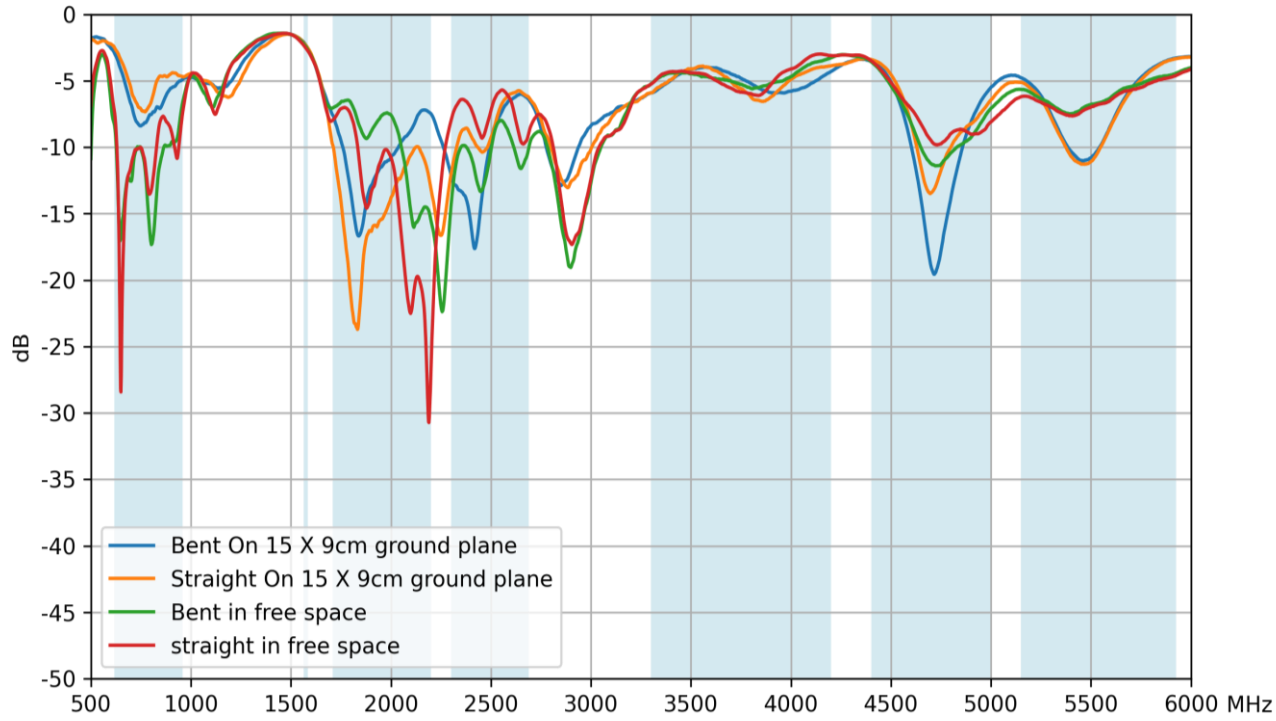
Electrical										
Frequency (MHz)	5G Band 71	LTE700	GSM800 900	GNSS L1	5GNR N66	LTE2600	5GNR N77	5GNR N78	5GNR N79	LTE5200
	617-698	698-824	824-960	1563-1587	1710-2200	2300-2690	3300-4200	3300-3800	4400-5000	5150-5925
Efficiency (%)										
Bent - 15 X 9cm ground plane	45.7	69.1	61.0	27.5	74.6	65.4	37.5	38.0	49.2	42.5
Straight – 15 X 9cm ground plane	45.1	64.5	54.7	22.4	75.0	59.7	35.9	37.1	47.3	39.8
Bent - free space	34.2	39.0	31.8	24.8	54.3	55.2	42.1	42.9	54.2	50.8
straight - free space	35.8	41.0	32.4	24.8	43.7	36.5	36.8	38.3	44.8	51.5
Average Gain (dB)										
Bent - 15 X 9cm ground plane	-3.40	-1.60	-2.14	-5.61	-1.27	-1.84	-4.26	-4.21	-3.08	-3.71
Straight – 15 X 9cm ground plane	-3.46	-1.90	-2.62	-6.49	-1.25	-2.24	-4.45	-4.31	-3.25	-4.00
Bent - free space	-4.66	-4.09	-4.97	-6.06	-2.65	-2.58	-3.76	-3.67	-2.66	-2.94
straight - free space	-4.46	-3.88	-4.89	-6.06	-3.59	-4.38	-4.35	-4.17	-3.49	-2.88
Peak Gain (dBi)										
Bent - 15 X 9cm ground plane	0.64	3.16	2.82	-0.59	3.98	5.05	5.63	5.63	5.68	4.48
Straight – 15 X 9cm ground plane	2.93	4.60	4.28	-1.67	4.16	4.19	3.45	3.45	3.89	3.43
Bent - free space	1.95	2.97	2.10	-2.99	2.08	2.29	3.12	3.12	5.59	2.89
straight - free space	2.73	3.42	2.84	-2.69	2.33	2.56	3.73	3.73	2.15	3.42

Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni
Max. input power	5W

Mechanical	
Dimensions	Length 168*18*13mm,Φ13mm
Weight	24g
Material	PC+ABS
Recommended Torque for Mounting	0.9 N·m
Max Torque for Mounting	1.176 N·m
Environmental	
Temperature Range	-40°C to 85°C

3. Antenna Characteristics

3.1 Return Loss



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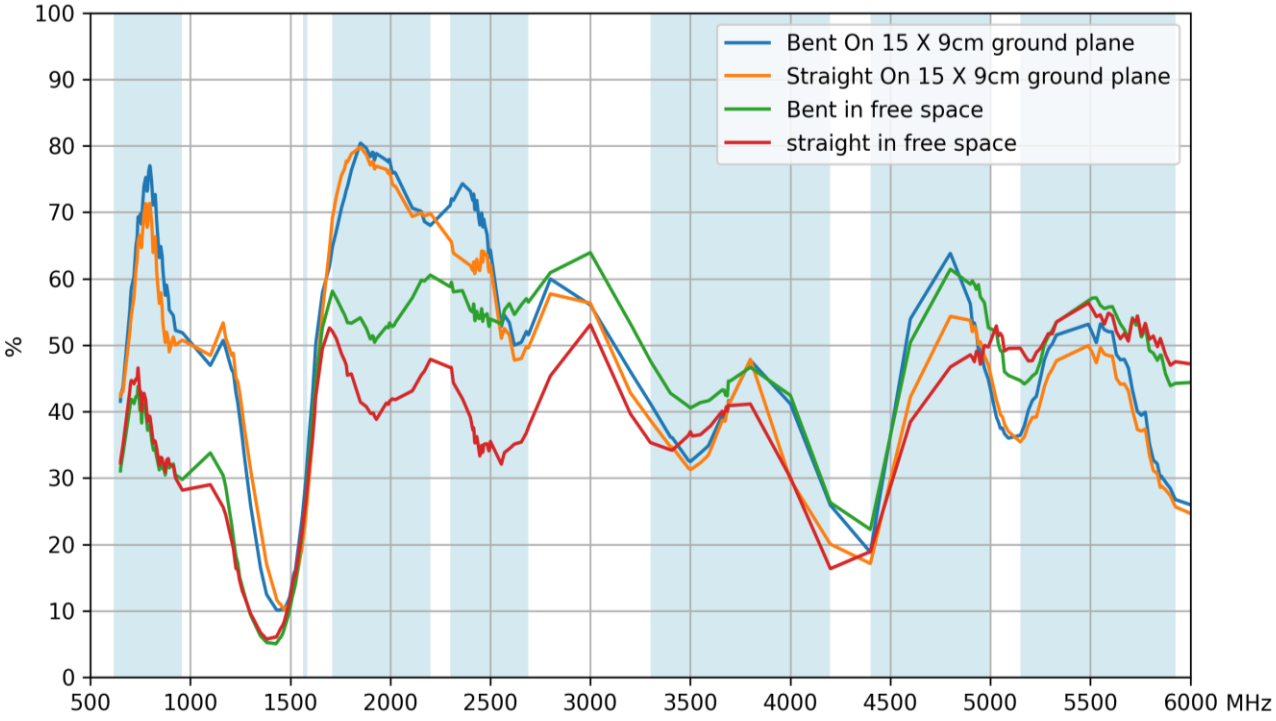

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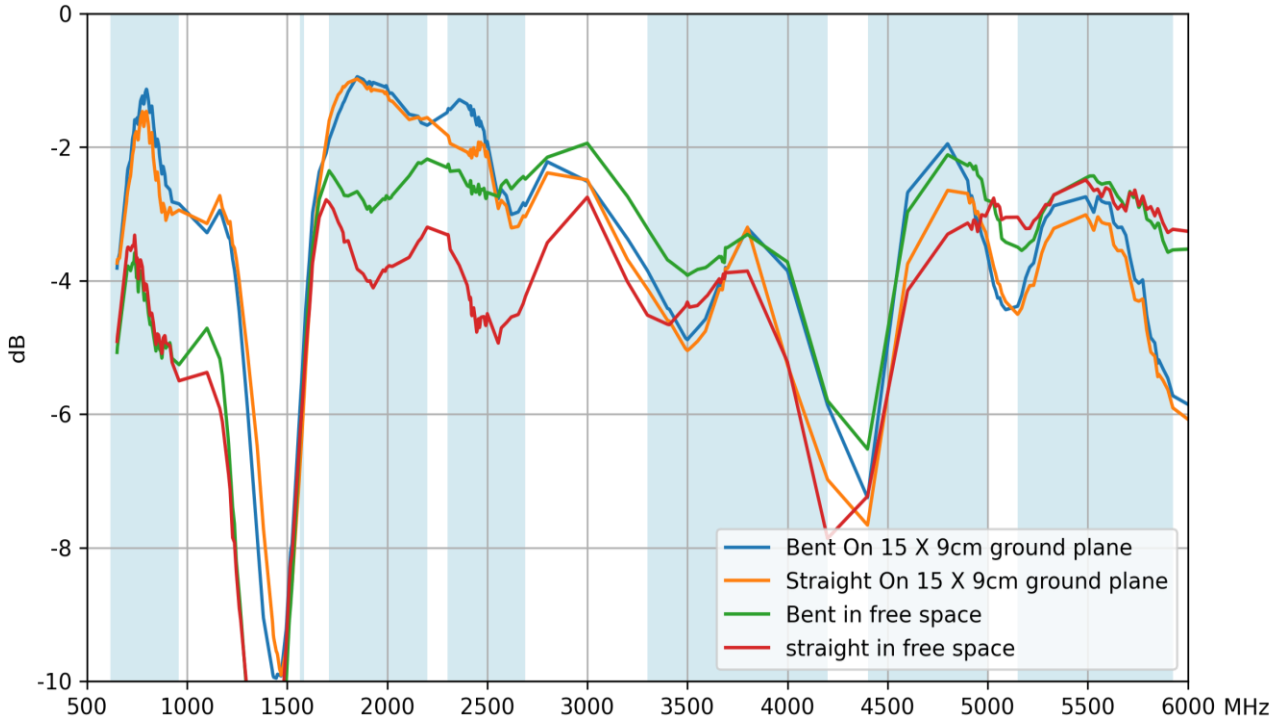

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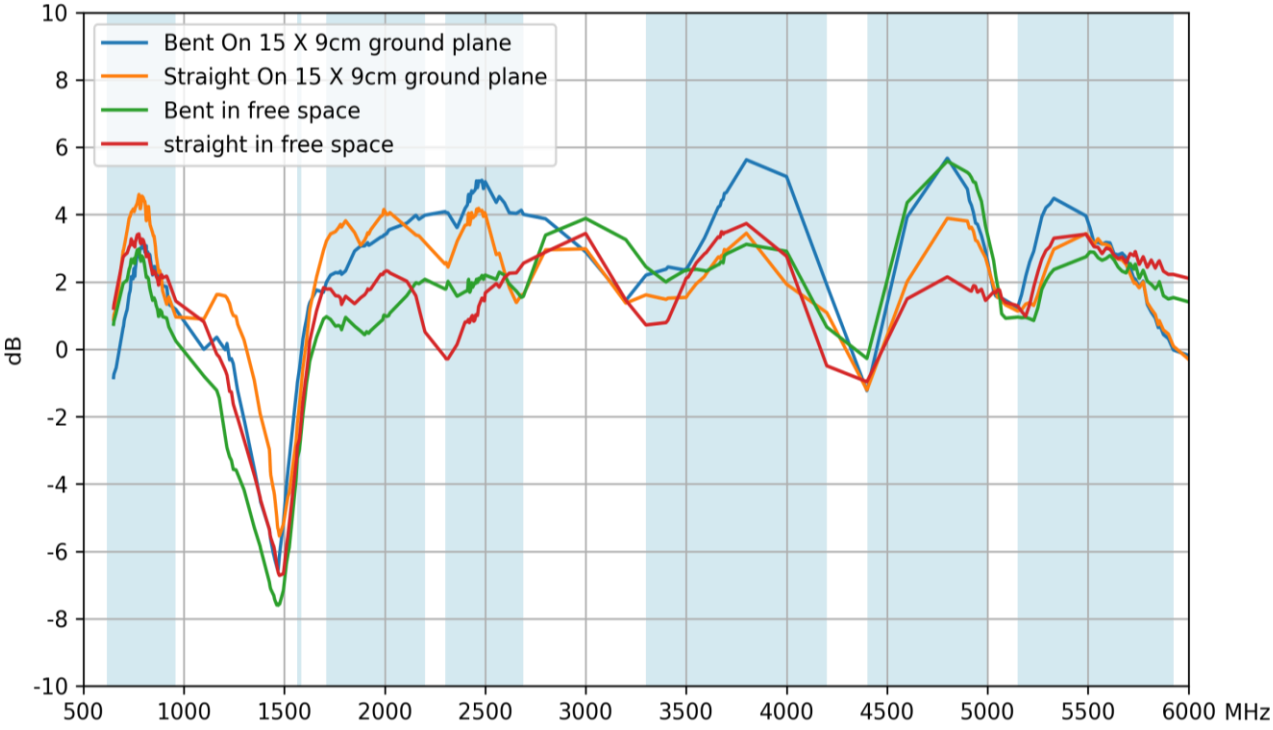
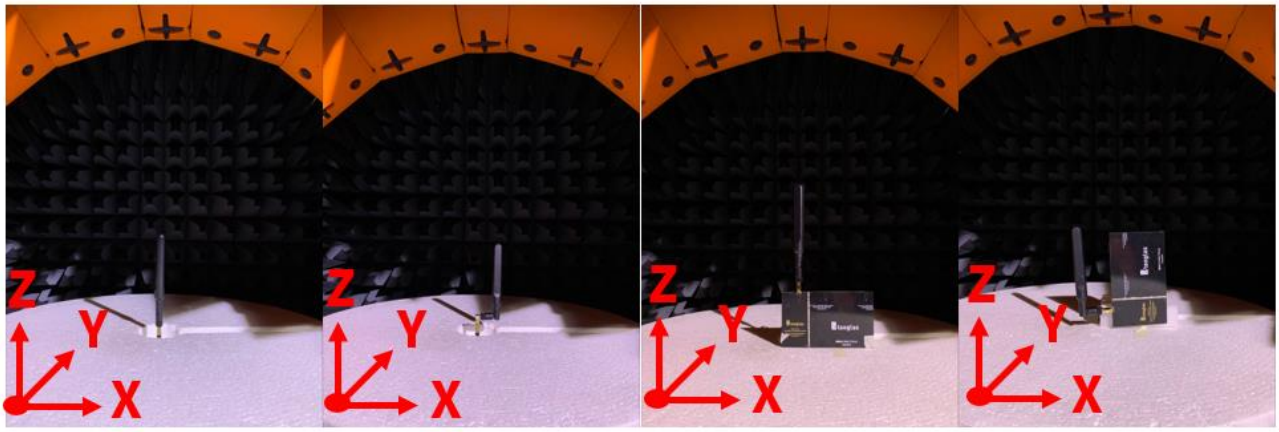


4. Radiation Patterns

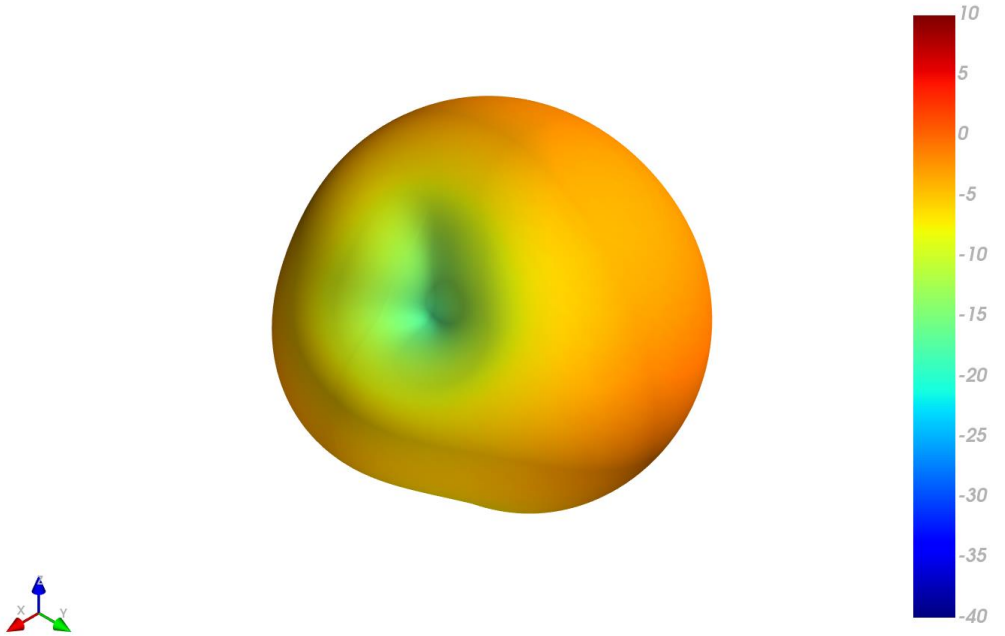
4.1 Test Setup



Straight in Free space | Bent in Free space | Straight On 15 X 9cm Ground plane | Bent On 15 X 9cm Ground plane

4.2 Bent On 15 X 9cm Ground Plane 3D & 2D Radiation Patterns

Gain total, 652MHz



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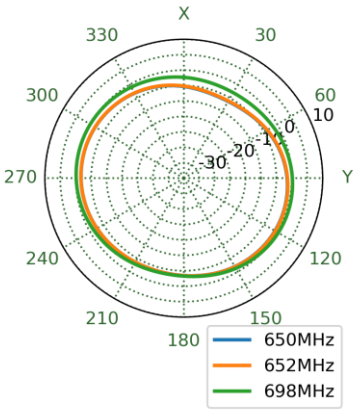
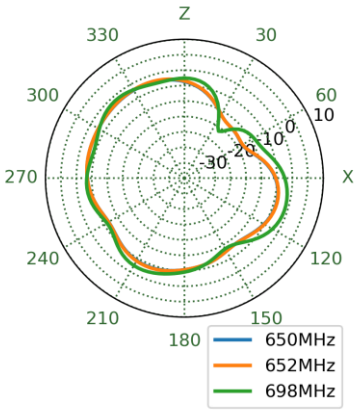
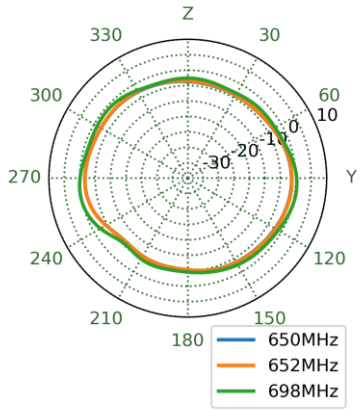
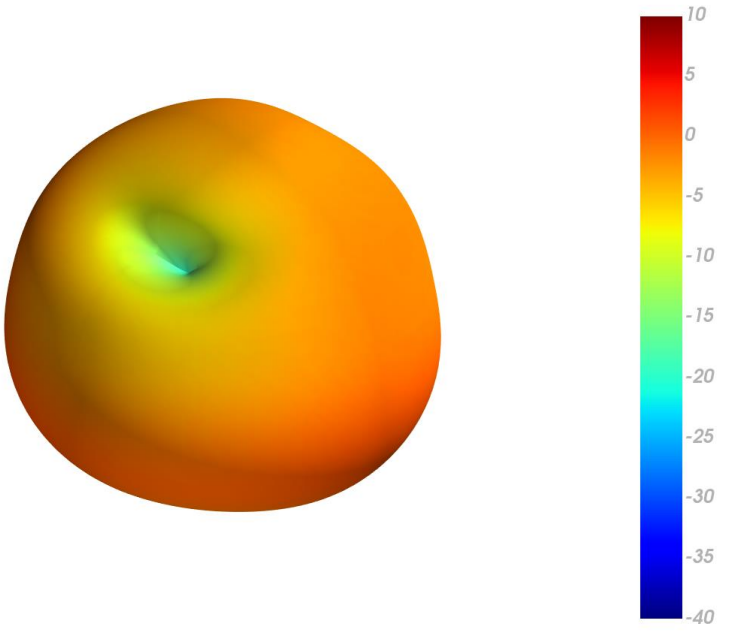
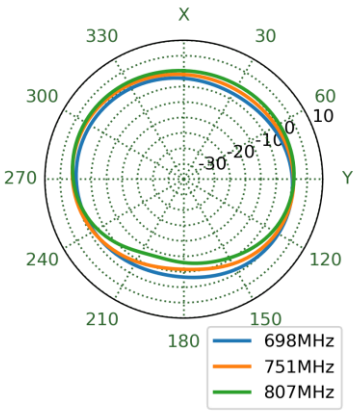
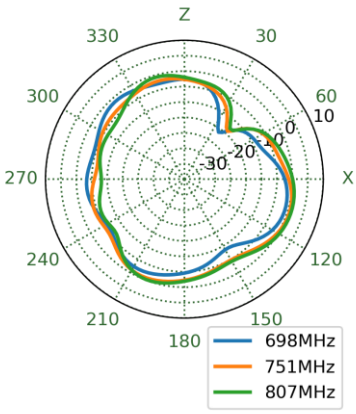
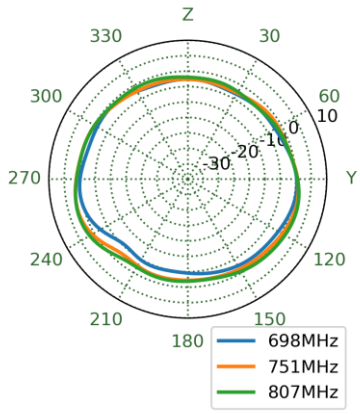
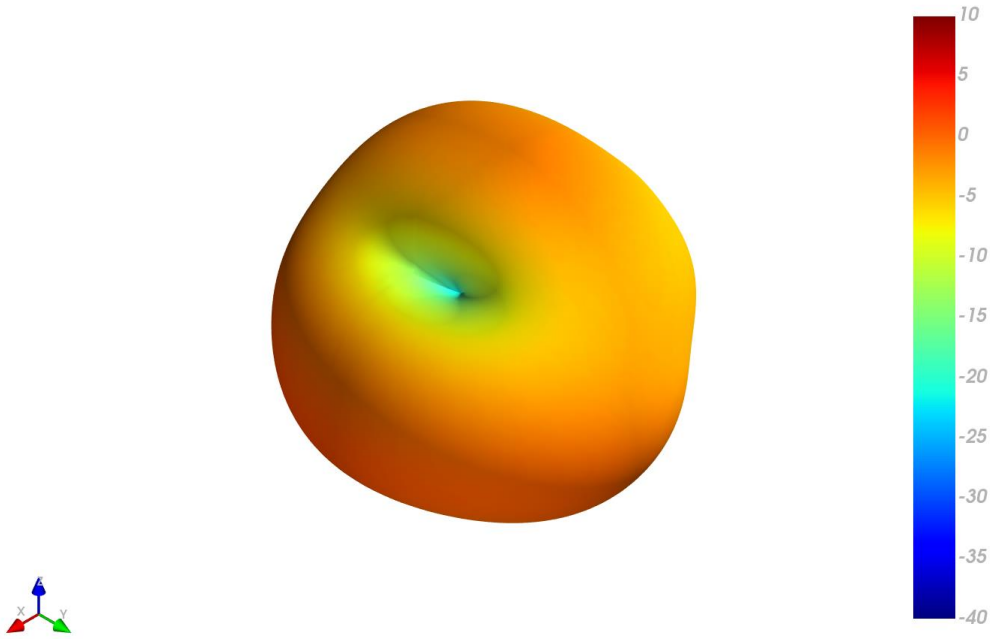
		

Gain total, 751MHz

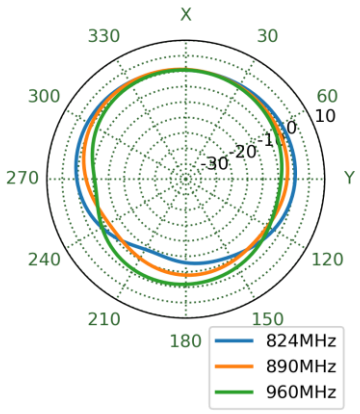


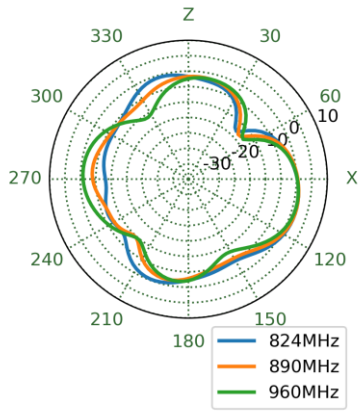
XY Plane	XZ Plane	YZ Plane
		

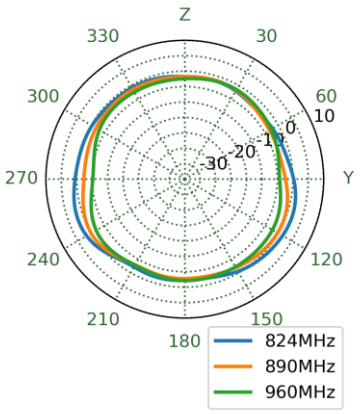
Gain total, 890MHz



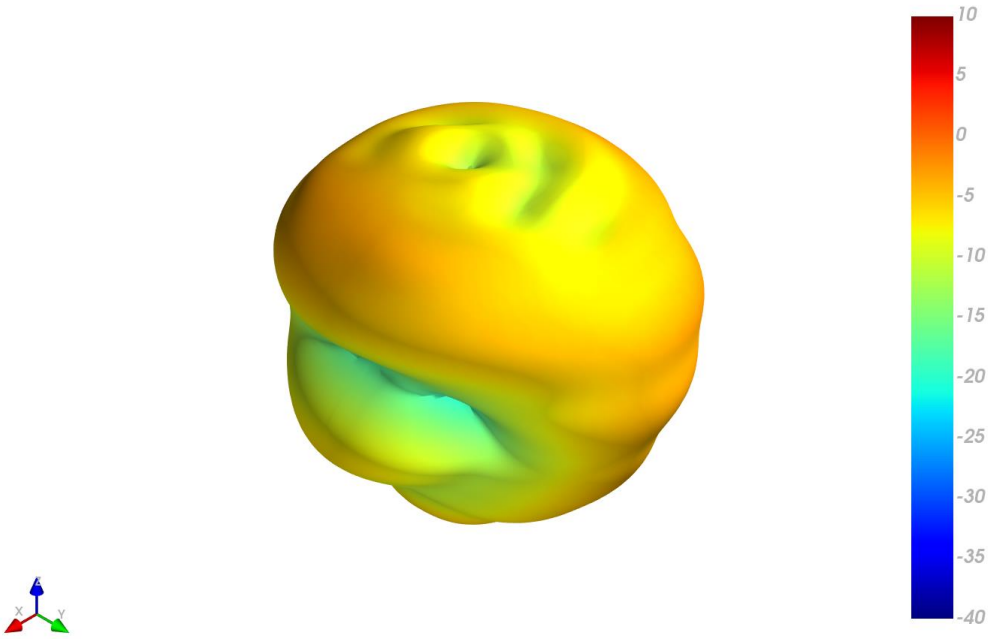
XY Plane	XZ Plane	YZ Plane

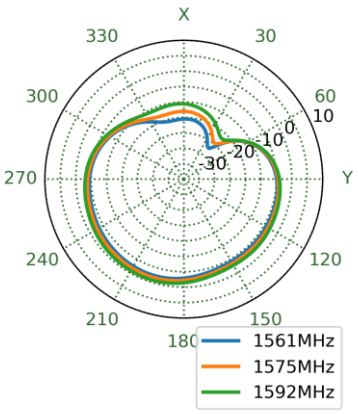
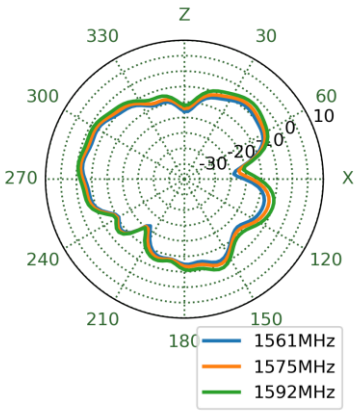
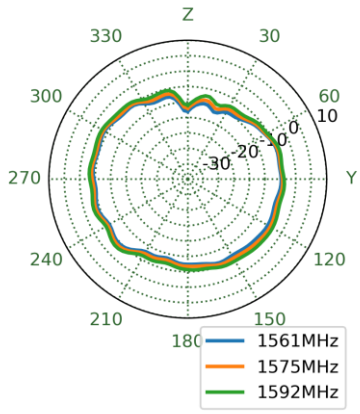




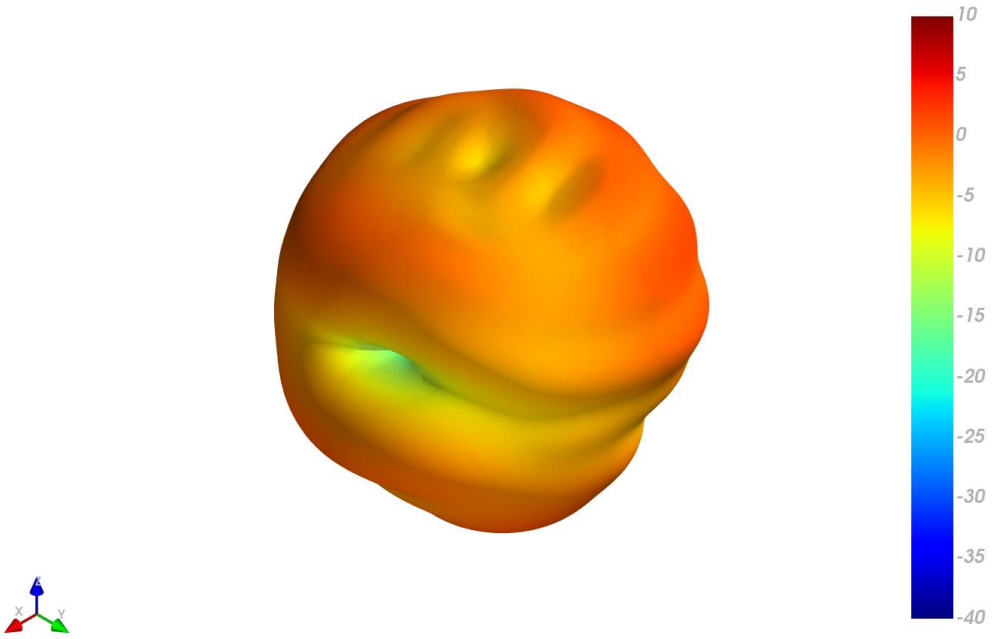


Gain total, 1575MHz

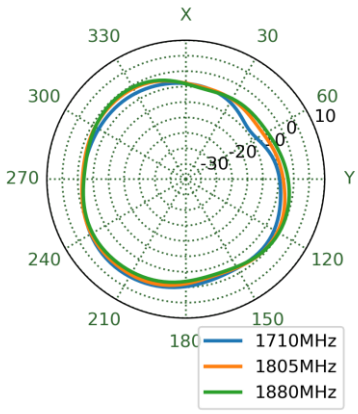


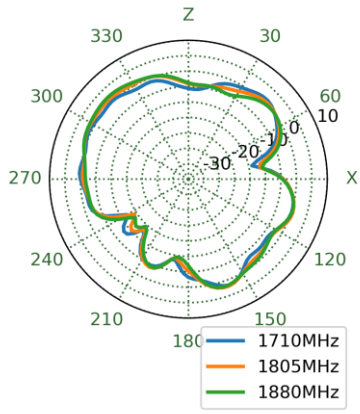
XY Plane	XZ Plane	YZ Plane
		

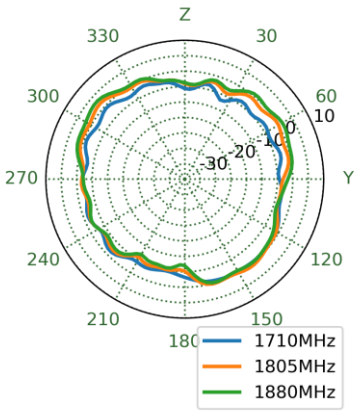
Gain total, 1805MHz



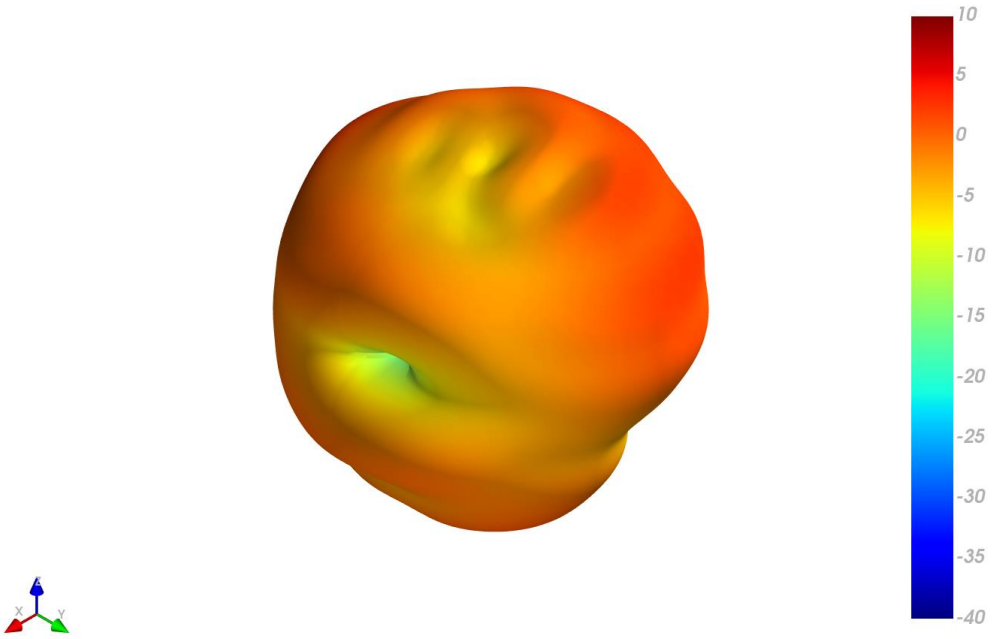
XY Plane	XZ Plane	YZ Plane



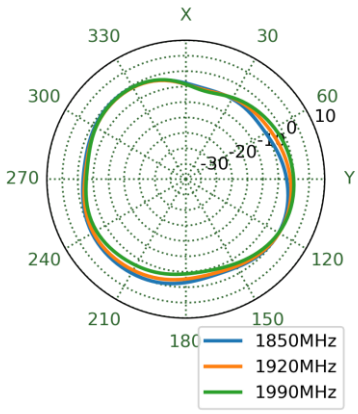


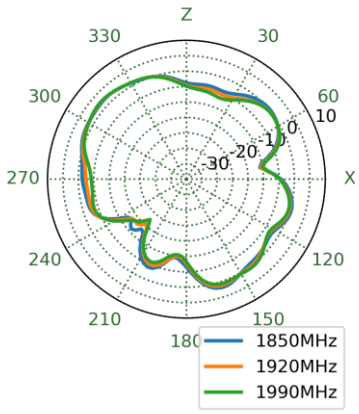


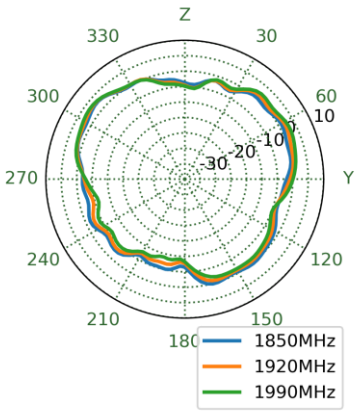
Gain total, 1920MHz



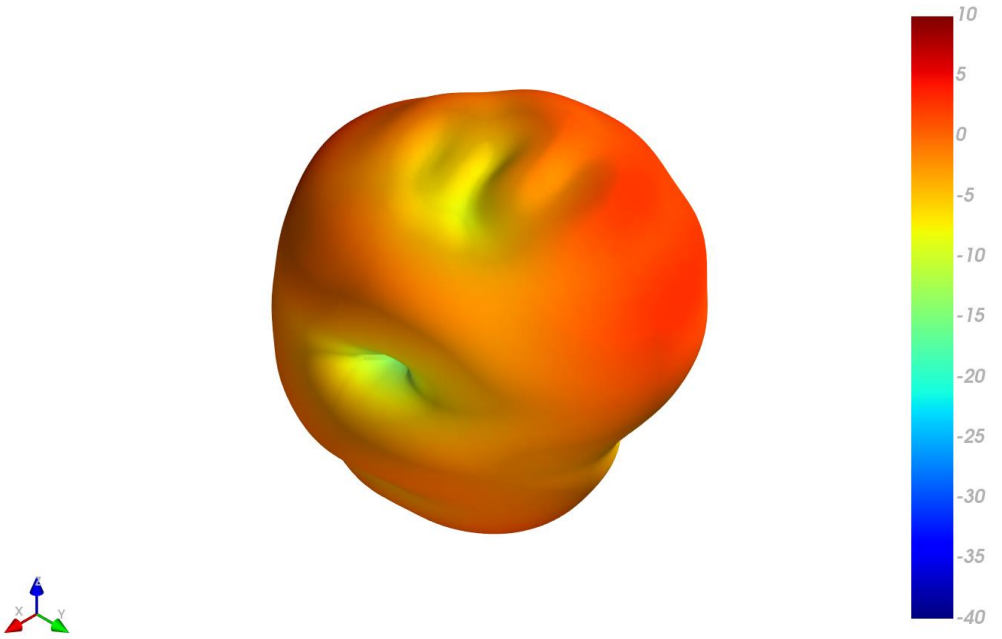
XY Plane	XZ Plane	YZ Plane



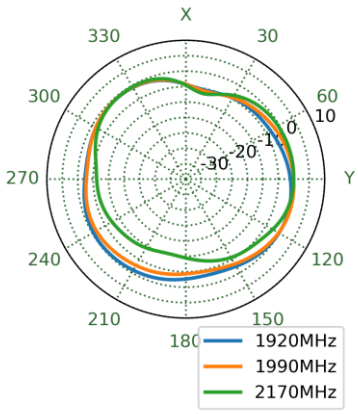


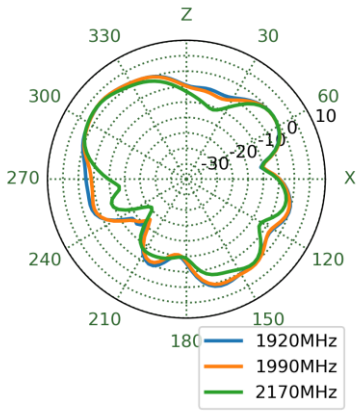


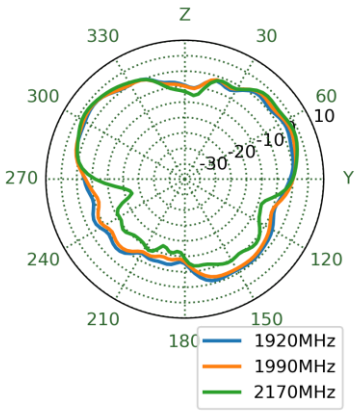
Gain total, 1990MHz



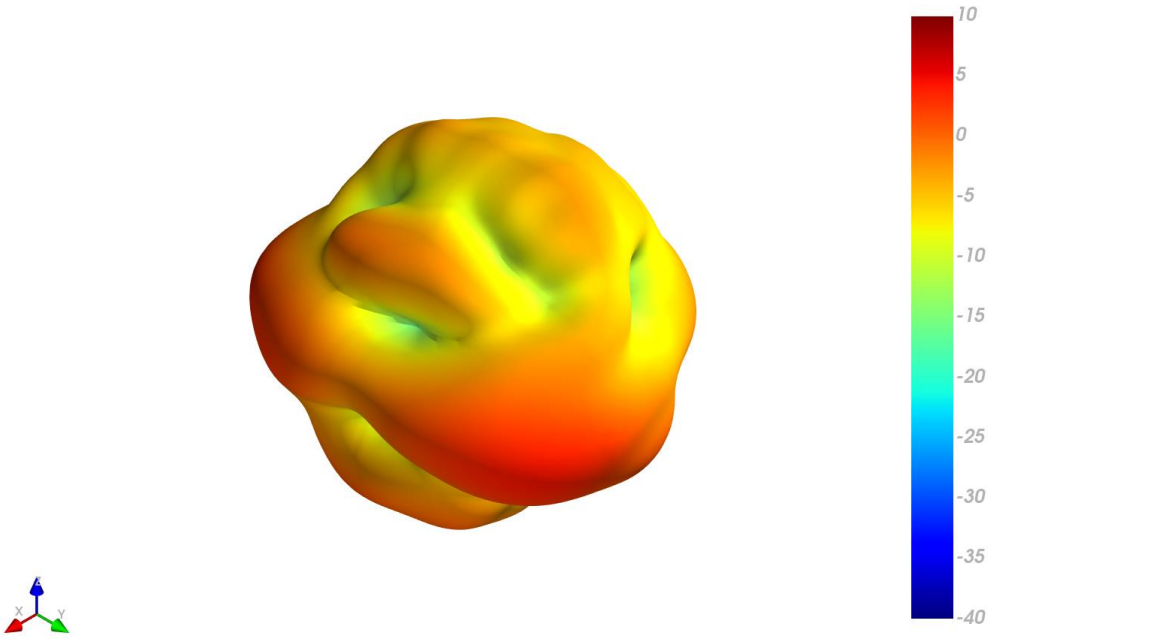
XY Plane	YZ Plane	YZ Plane



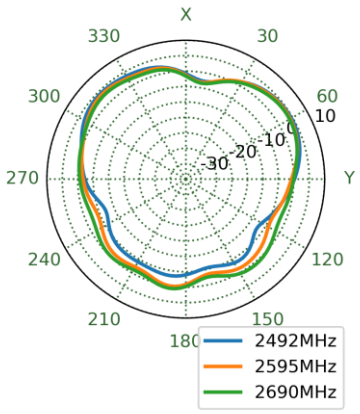


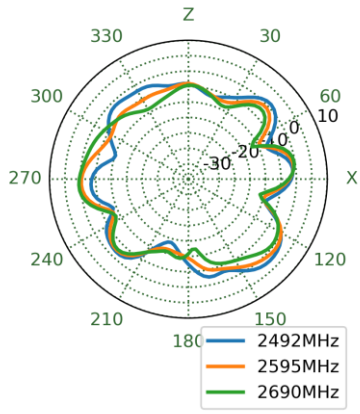


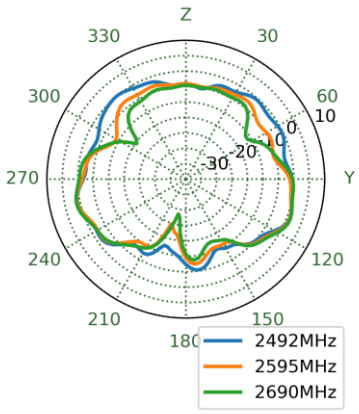
Gain total, 2595MHz



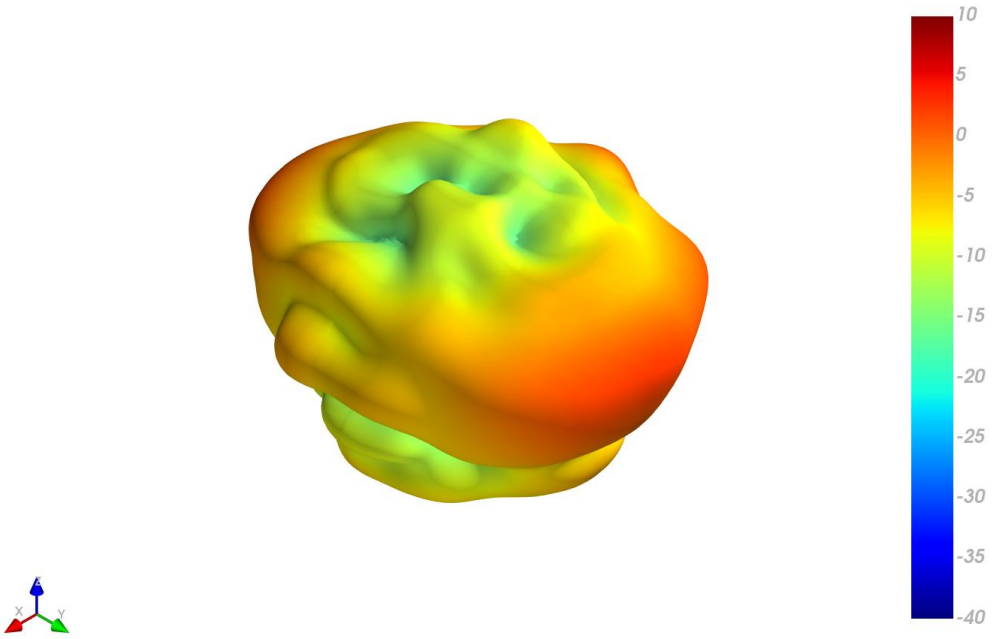
XY Plane	XZ Plane	YZ Plane



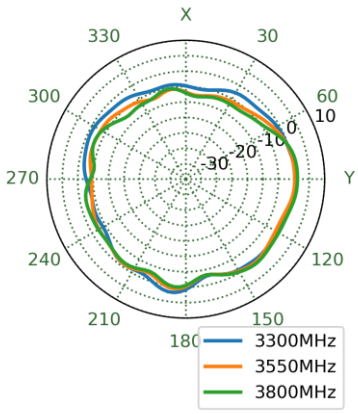


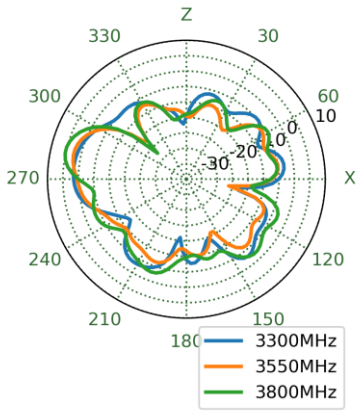


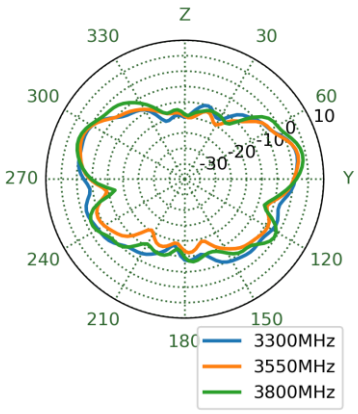
Gain total, 3550MHz



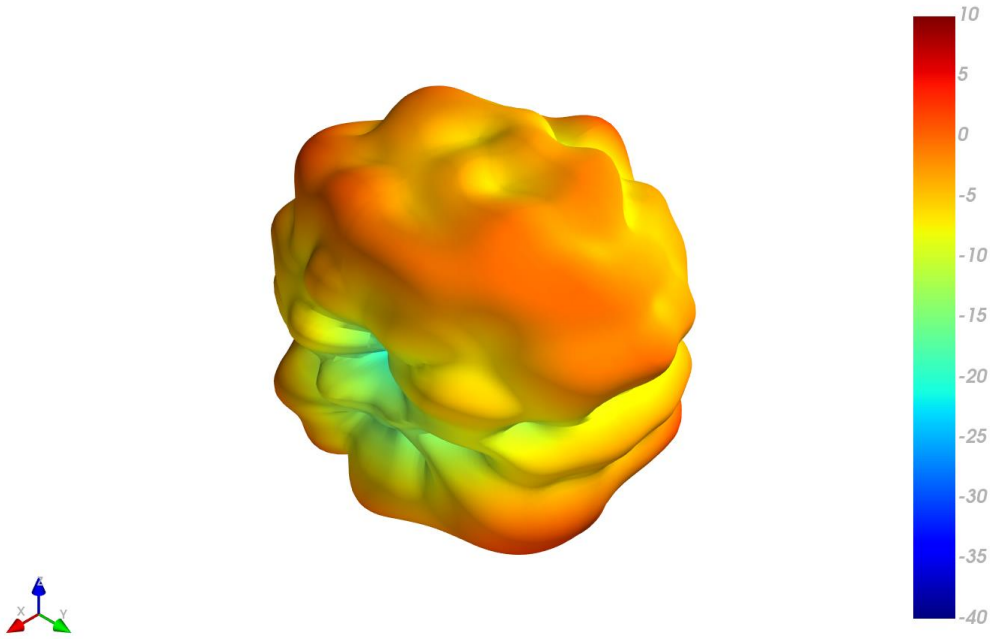
XY Plane	XZ Plane	YZ Plane



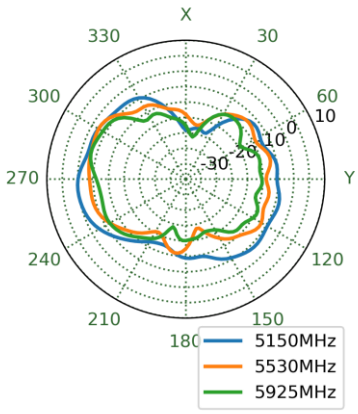


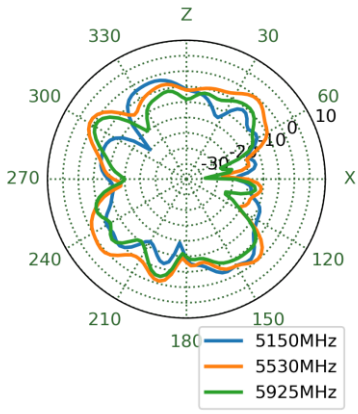


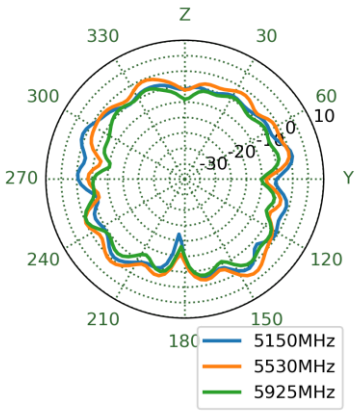
Gain total, 5530MHz



XY Plane	XZ Plane	YZ Plane

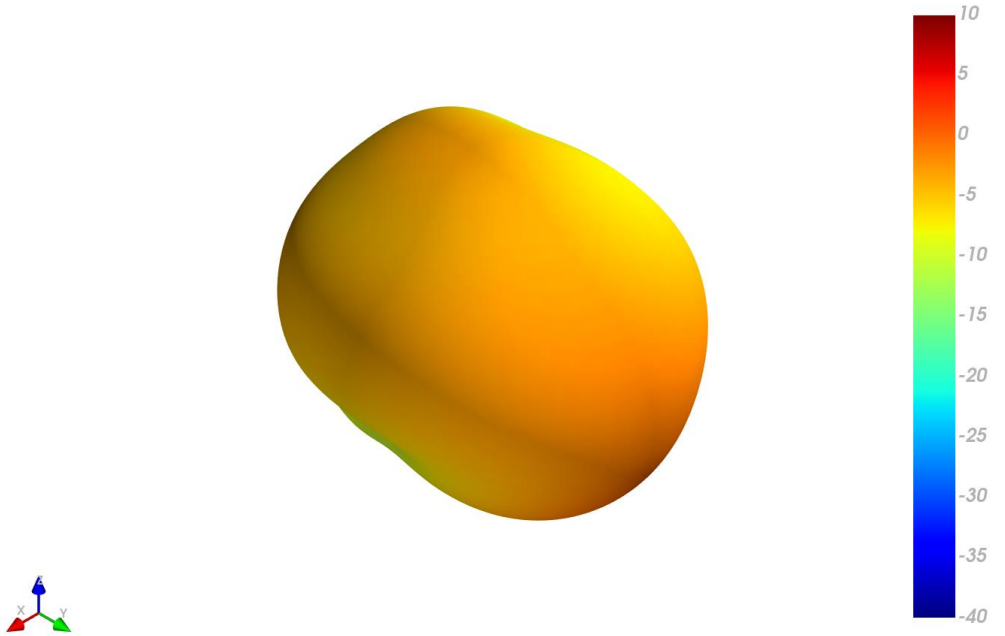


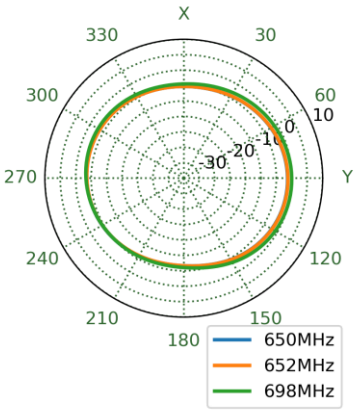
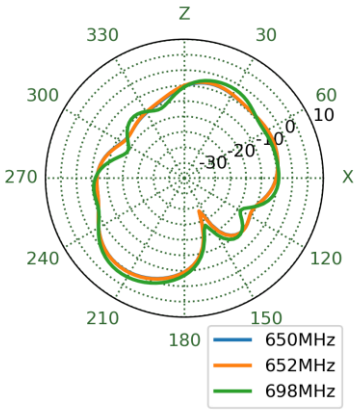
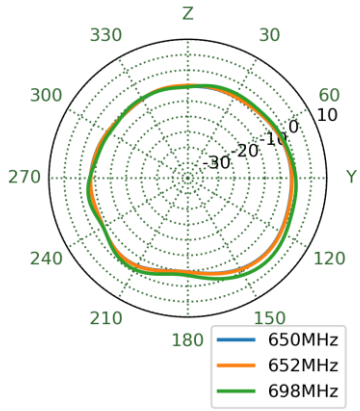




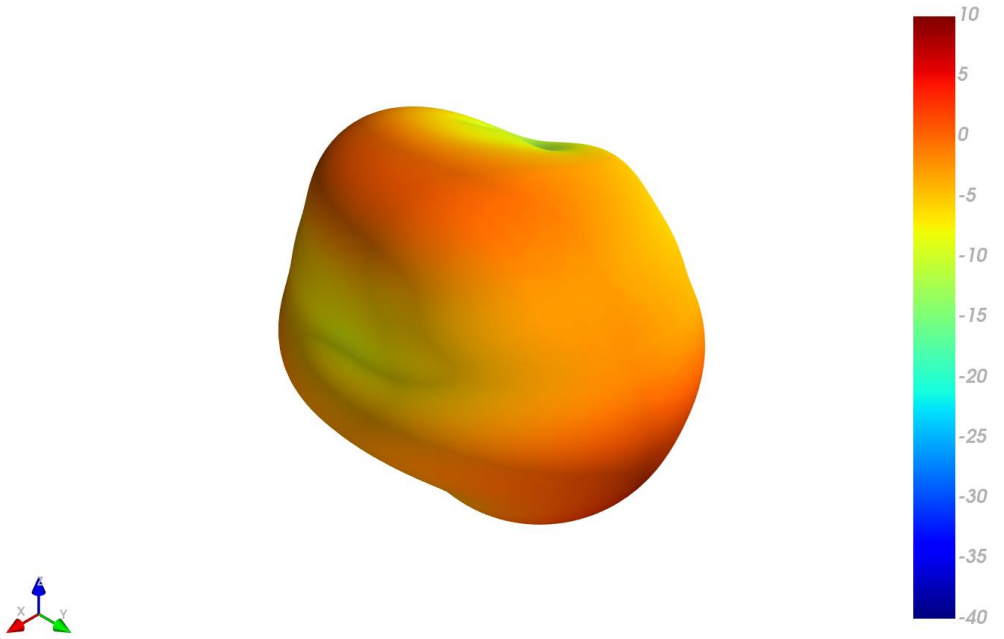
4.3 Straight On 15 X 9cm Ground Plane 3D & 2D Radiation Patterns

Gain total, 652MHz

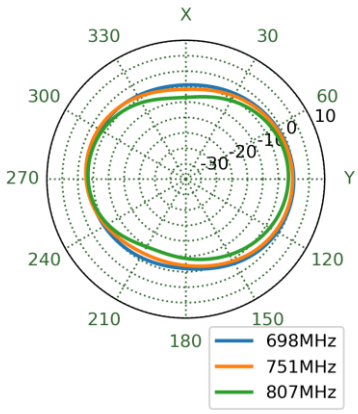


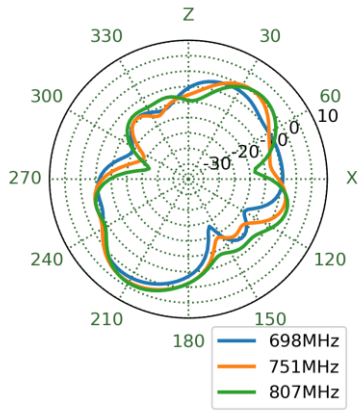
XY Plane	XZ Plane	YZ Plane
		

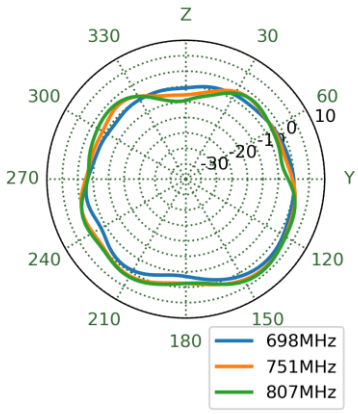
Gain total, 751MHz



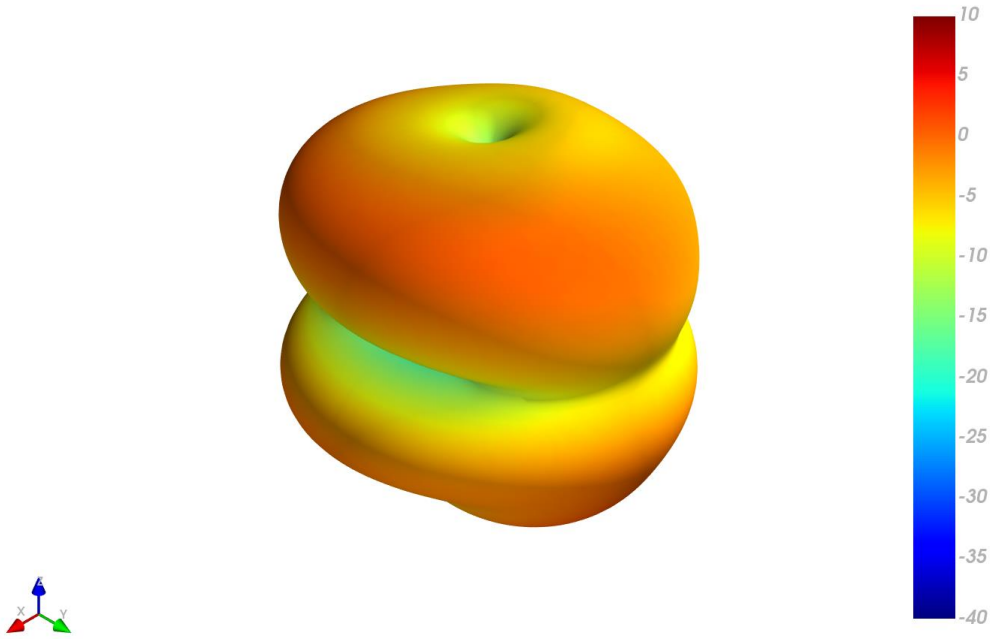
XY Plane	XZ Plane	YZ Plane



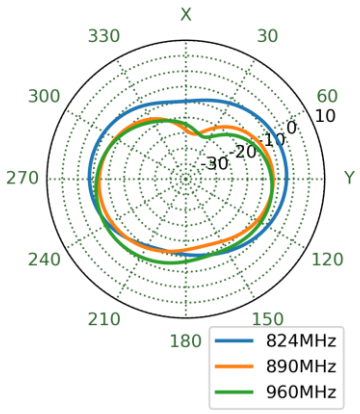


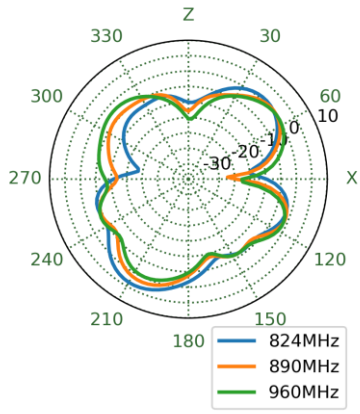


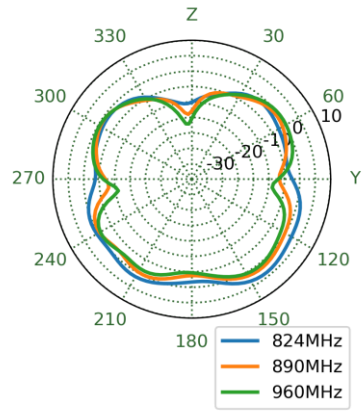
Gain total, 890MHz



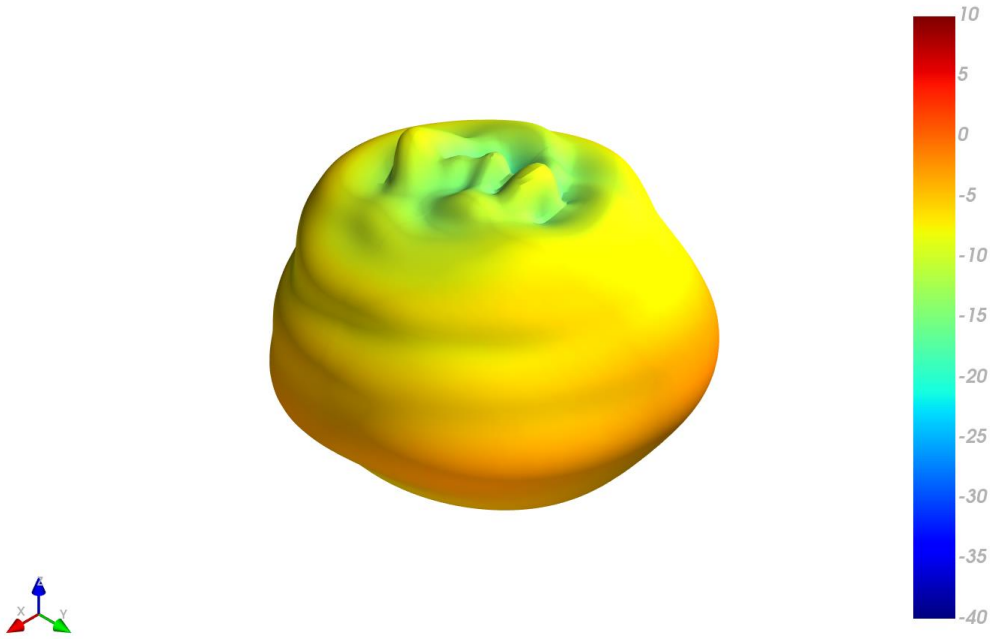
XY Plane	XZ Plane	YZ Plane



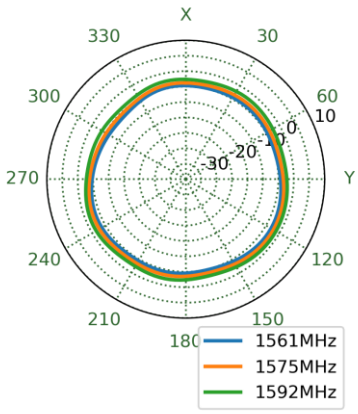


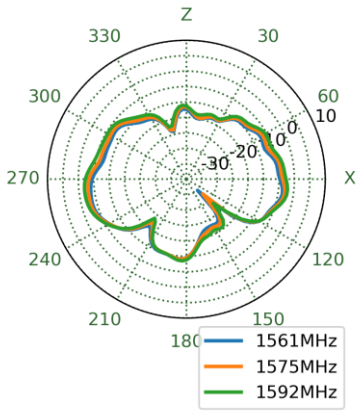


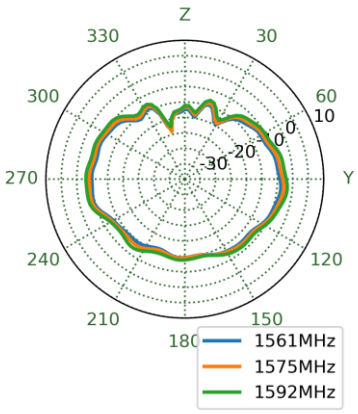
Gain total, 1575MHz



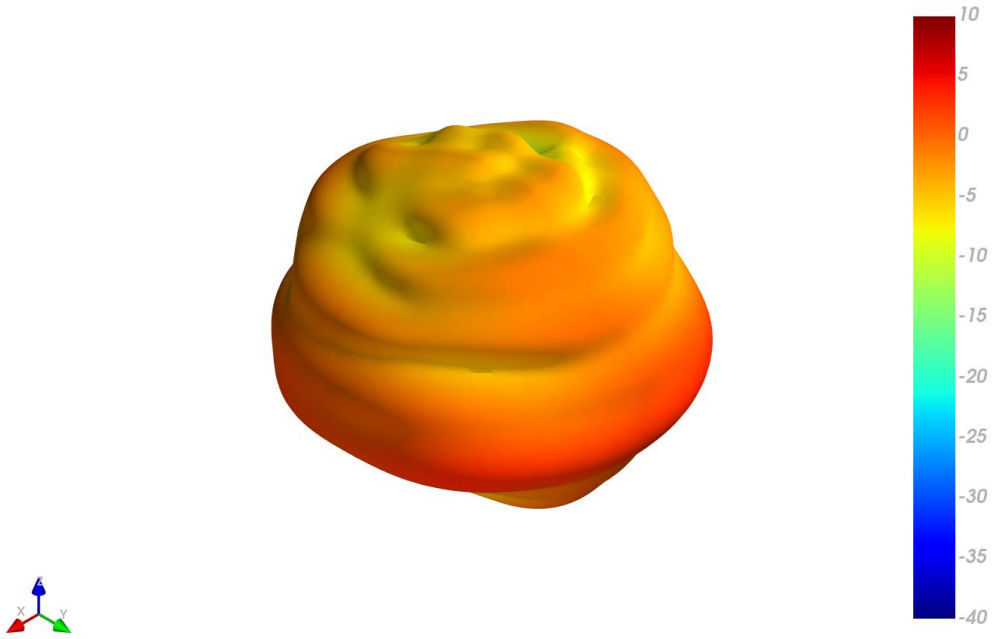
XY Plane	XZ Plane	YZ Plane



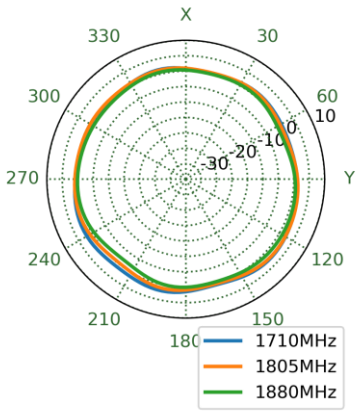


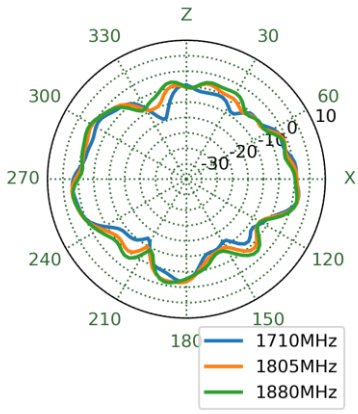


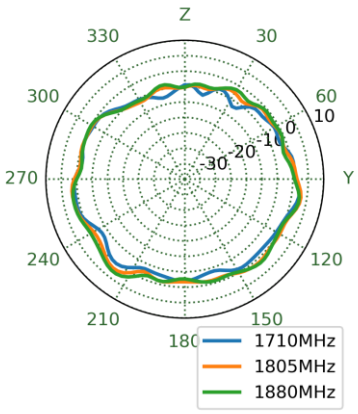
Gain total, 1805MHz



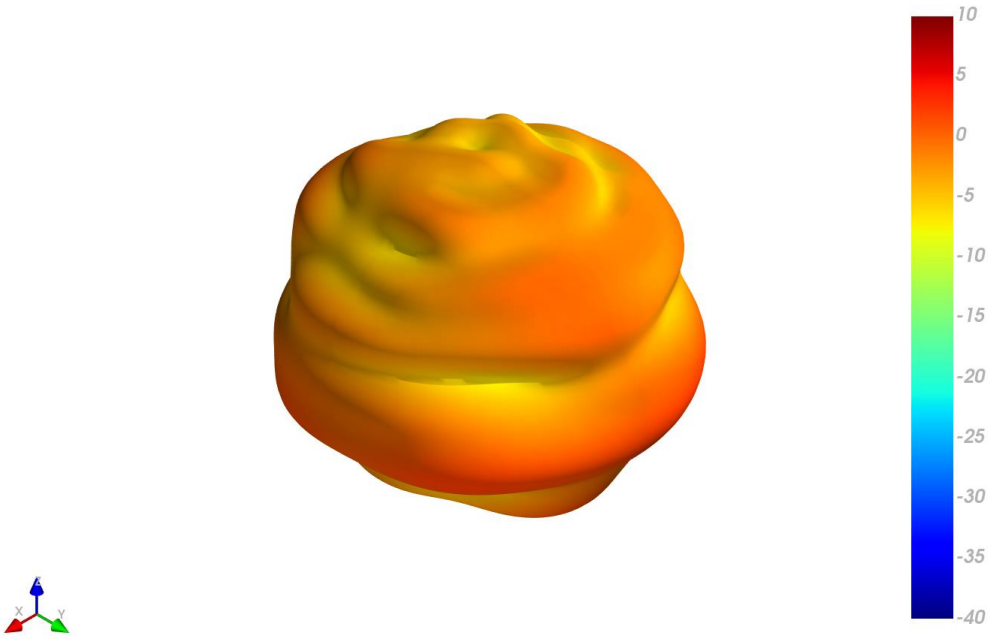
XY Plane	XZ Plane	YZ Plane



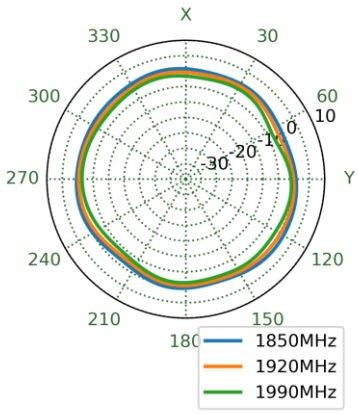


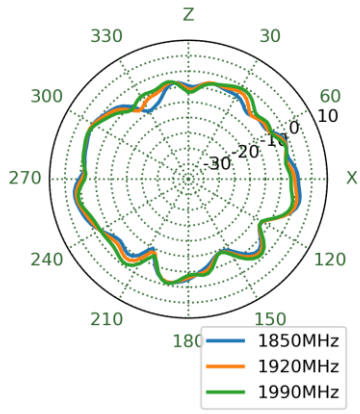


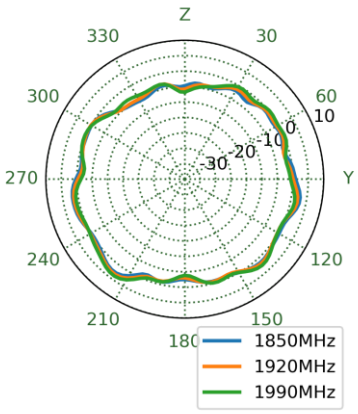
Gain total, 1920MHz



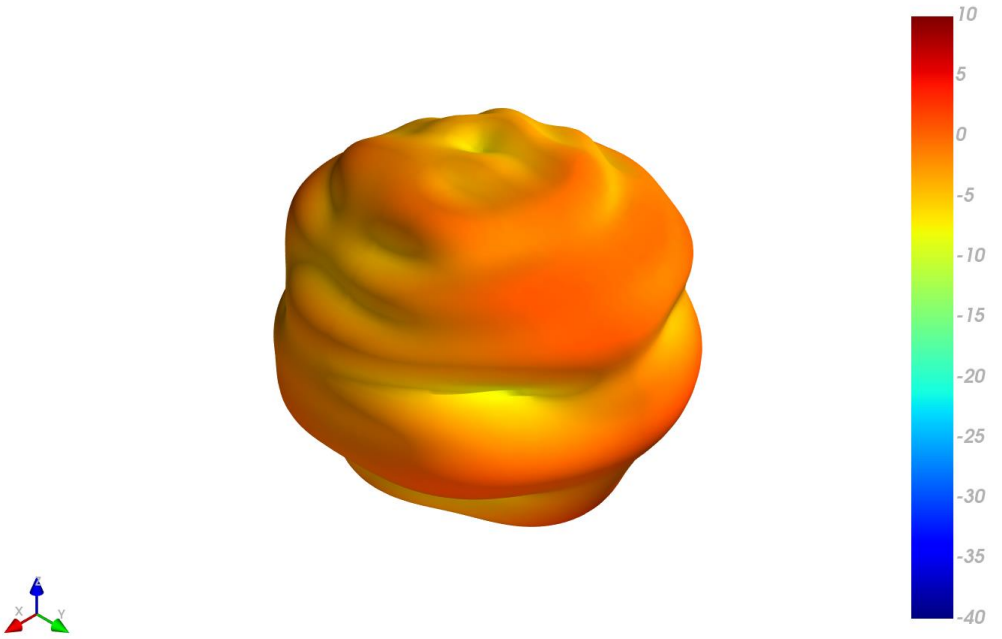
XY Plane	XZ Plane	YZ Plane



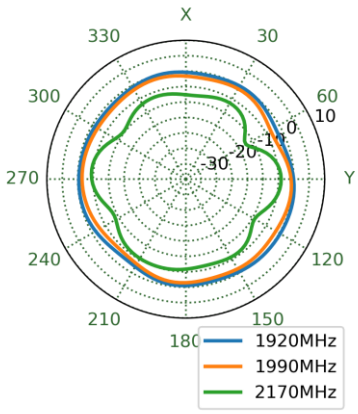


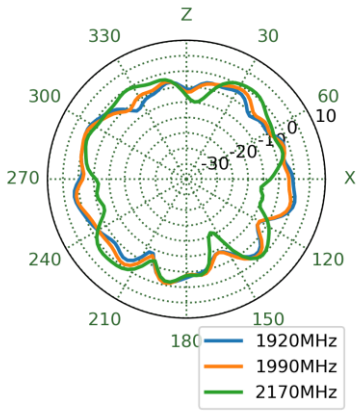


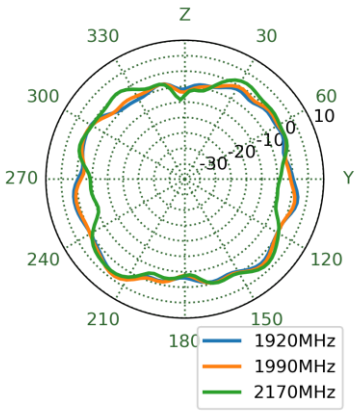
Gain total, 1990MHz



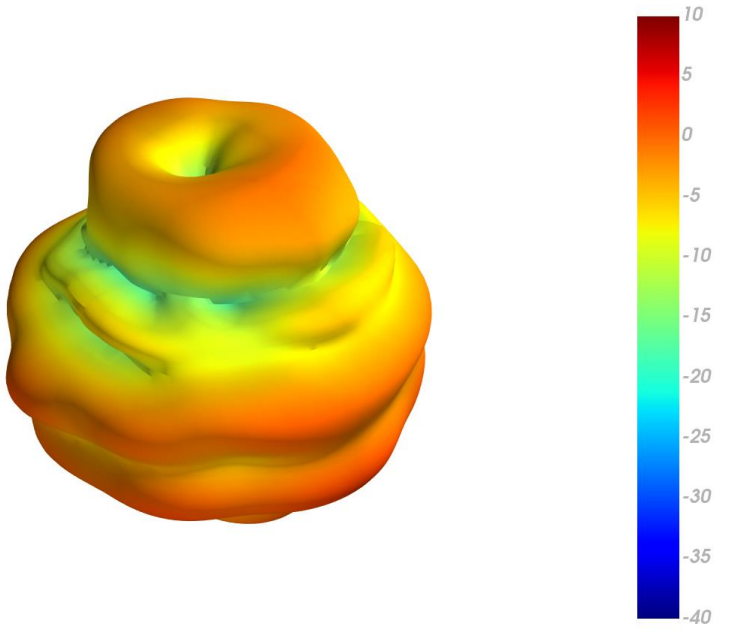
XY Plane	XZ Plane	YZ Plane



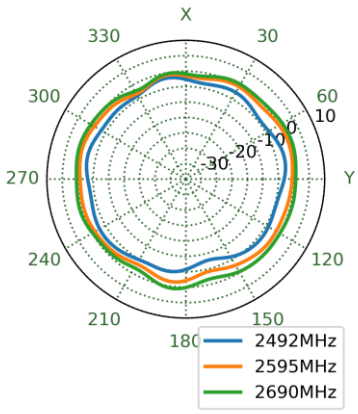


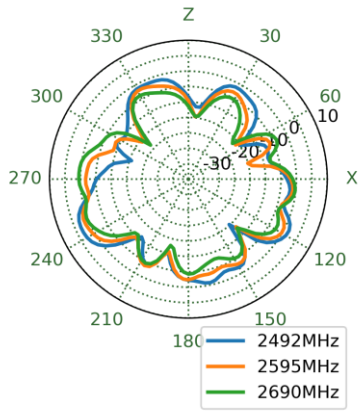


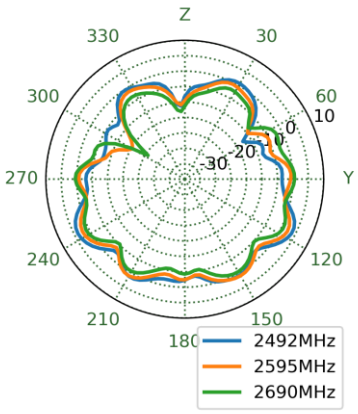
Gain total, 2595MHz



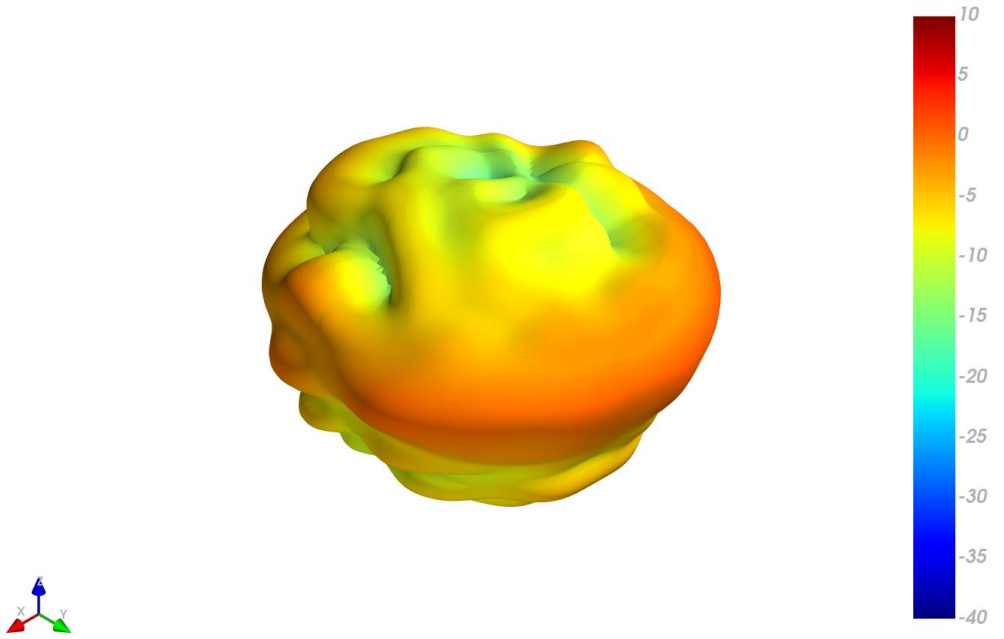
XY Plane	XZ Plane	YZ Plane



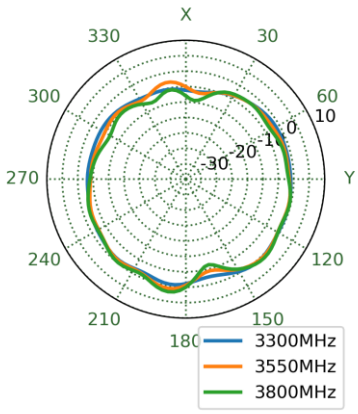


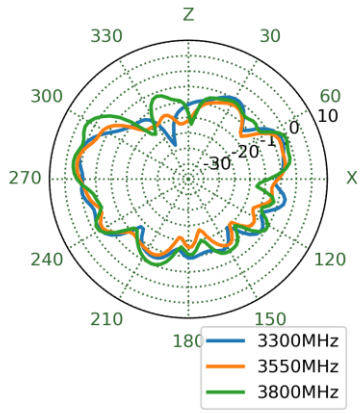


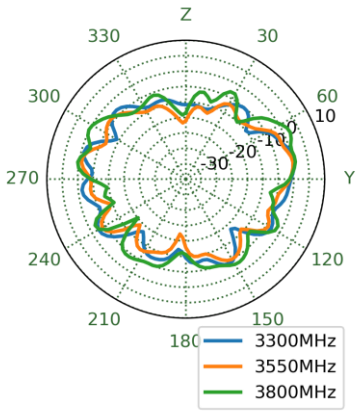
Gain total, 3550MHz



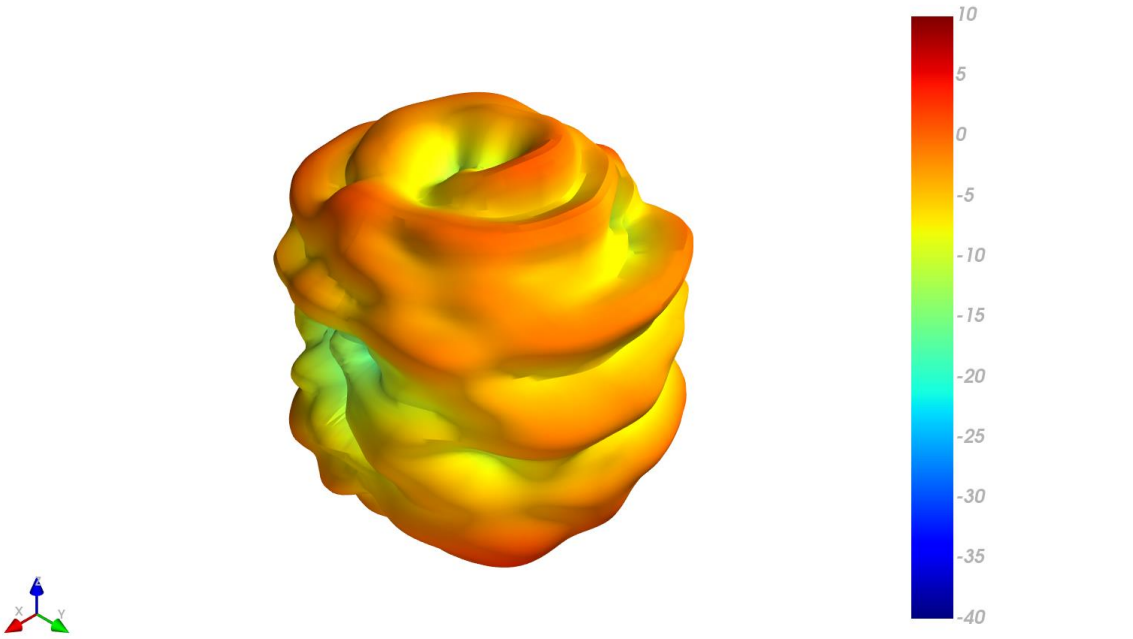
XY Plane	XZ Plane	YZ Plane

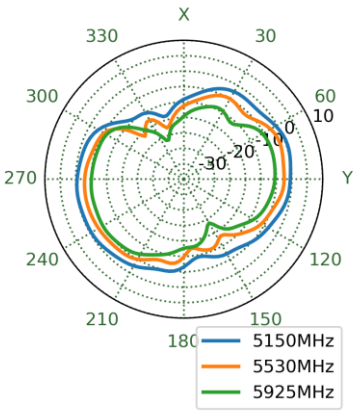
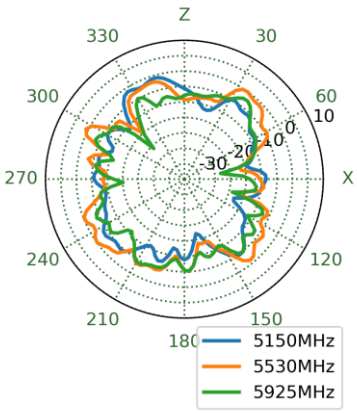
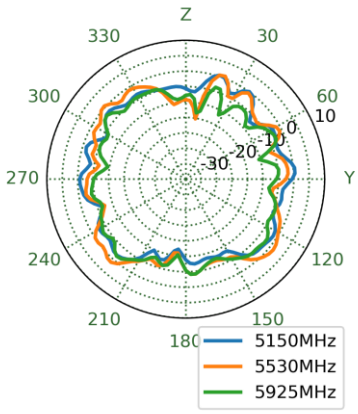






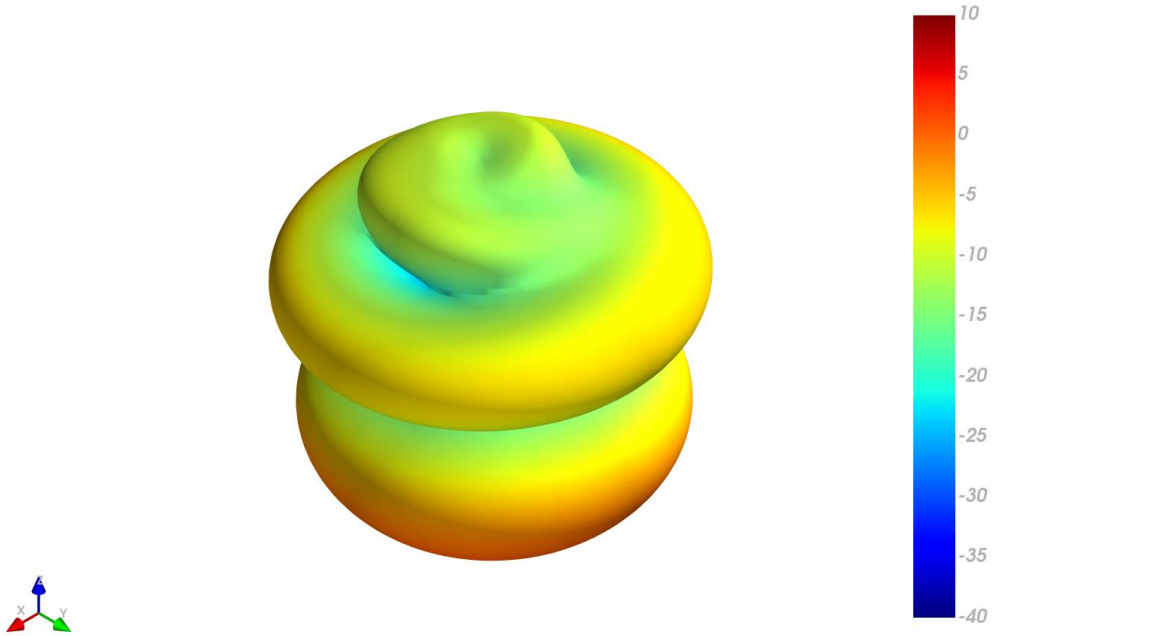
Gain total, 5530MHz

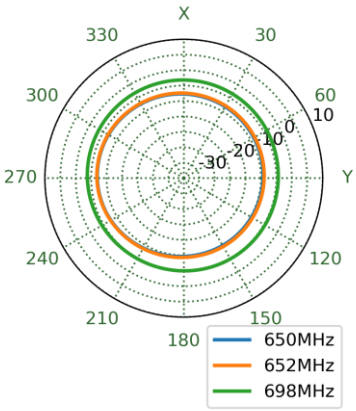
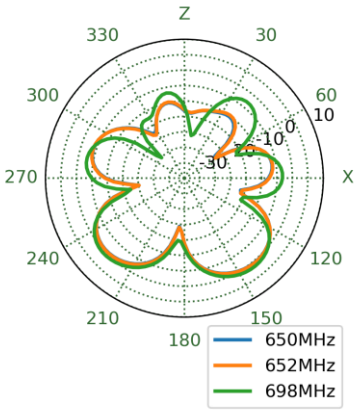
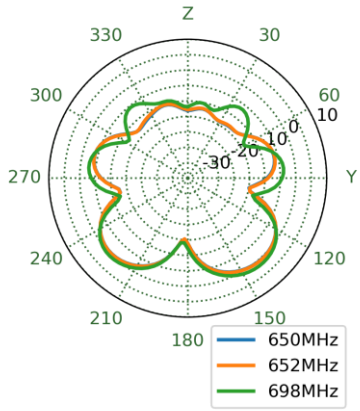


XY Plane	XZ Plane	YZ Plane
		

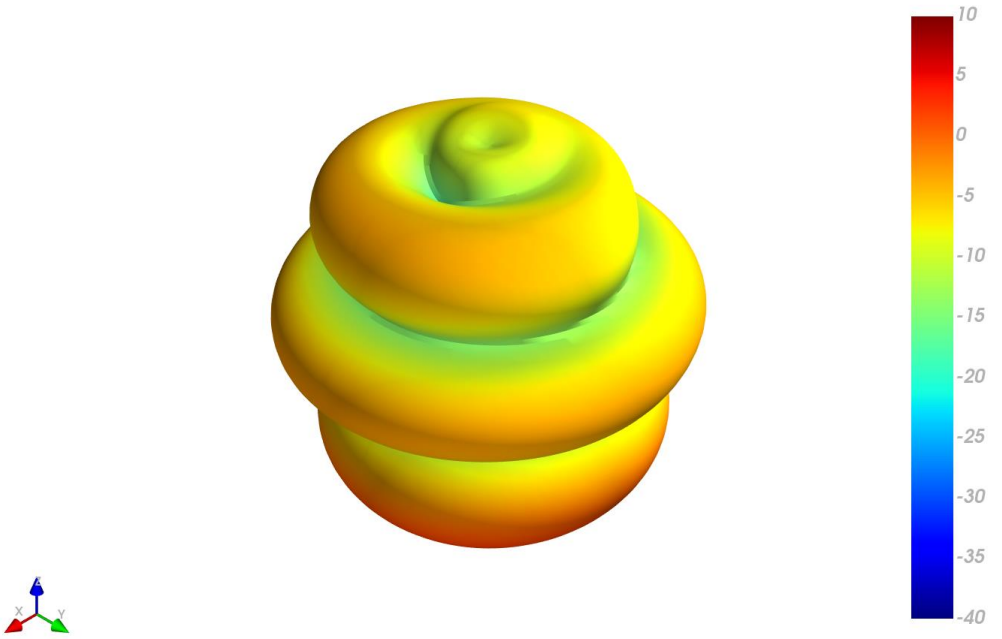
4.4 Bent in Free Space 3D & 2D Radiation Patterns

Gain total, 652MHz

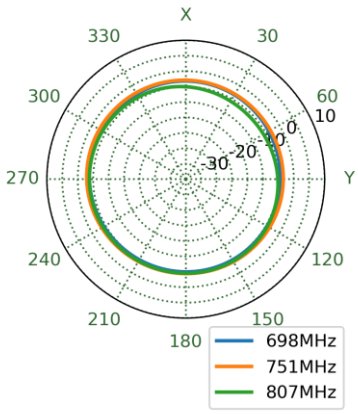


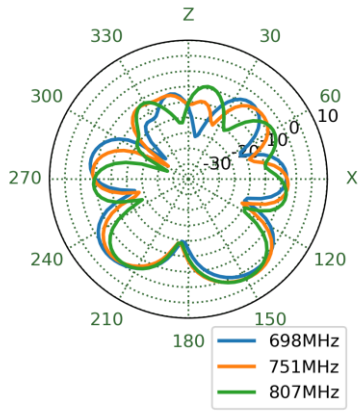
XY Plane	XZ Plane	YZ Plane
		

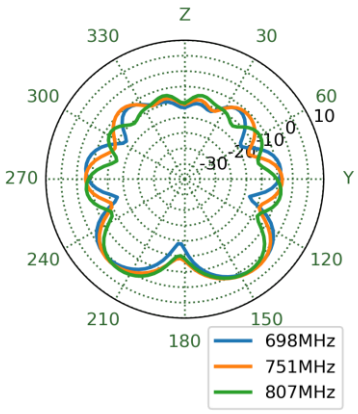
Gain total, 751MHz



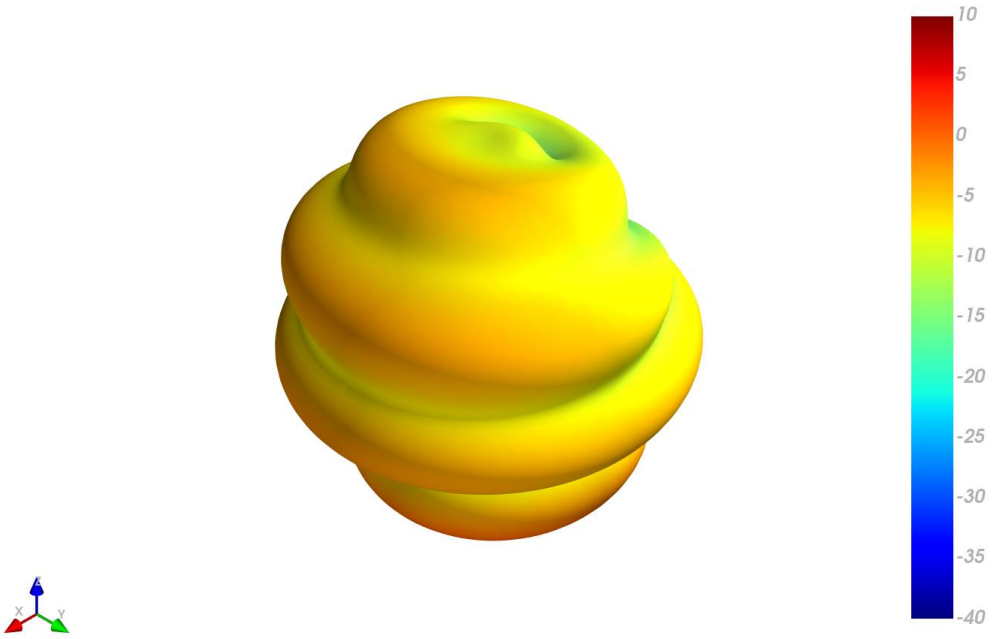
XY Plane	XZ Plane	YZ Plane



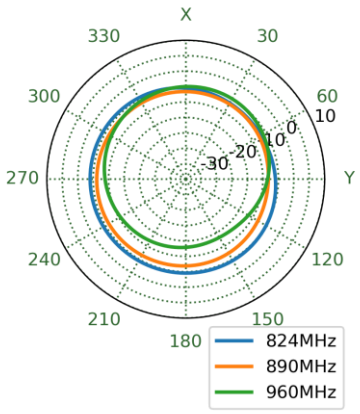


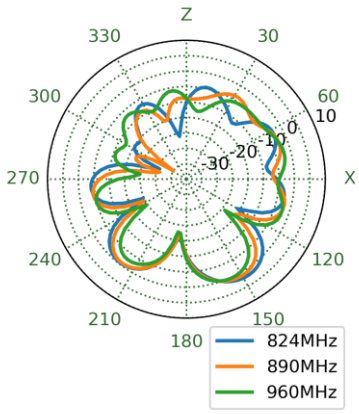


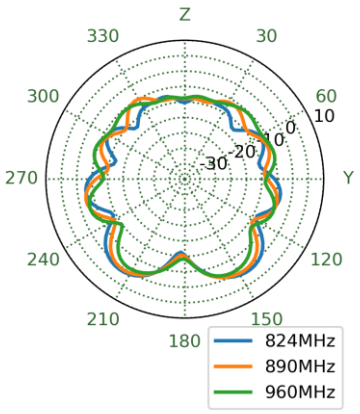
Gain total, 890MHz



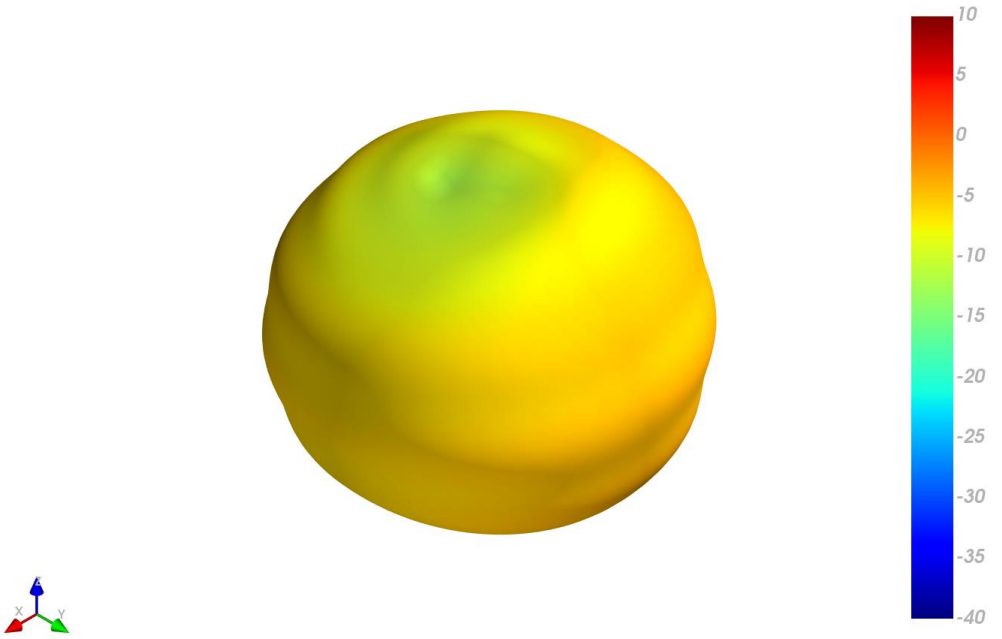
XY Plane	XZ Plane	YZ Plane



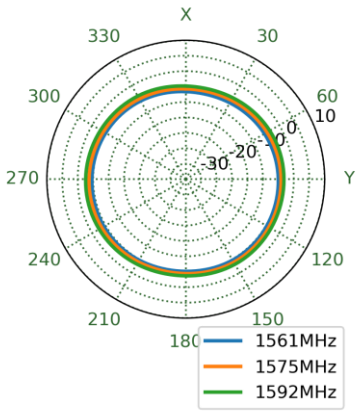


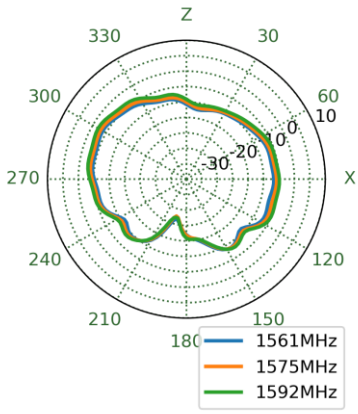


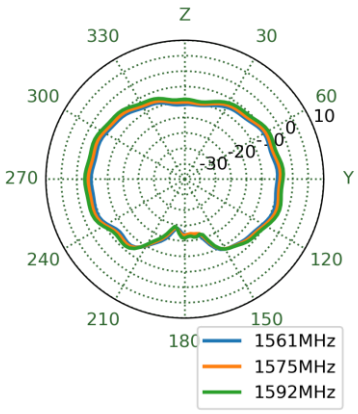
Gain total, 1575MHz



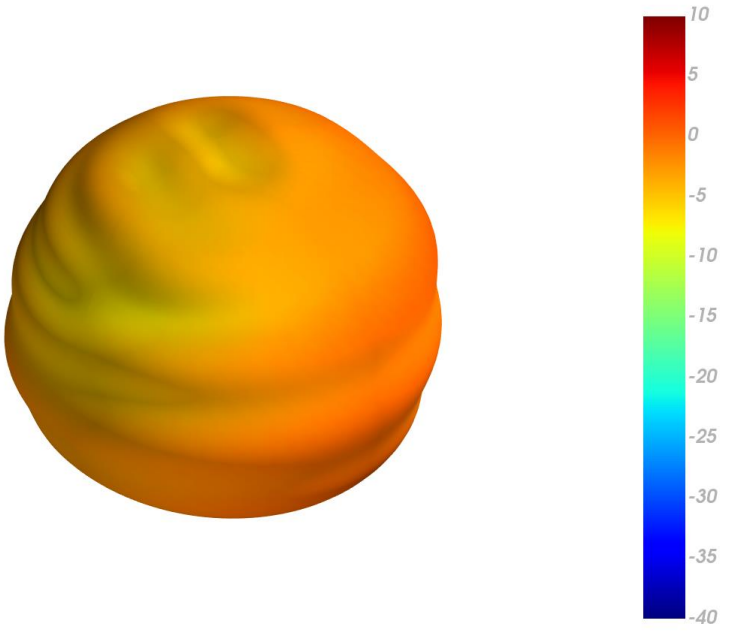
XY Plane	XZ Plane	YZ Plane



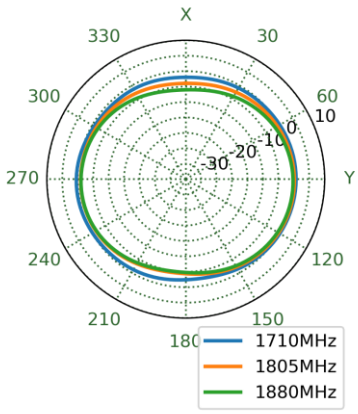


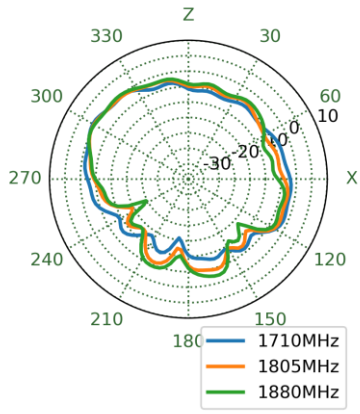


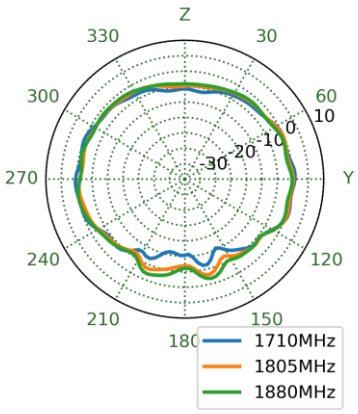
Gain total, 1805MHz



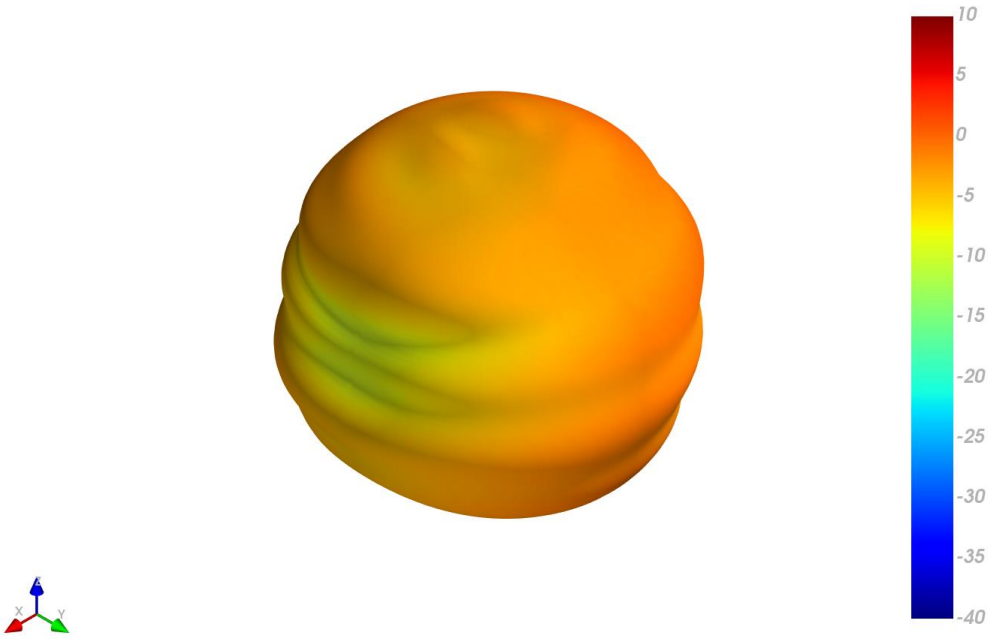
XY Plane	XZ Plane	YZ Plane



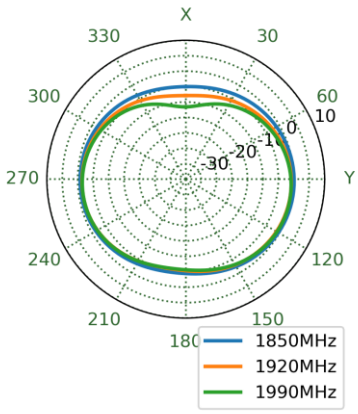


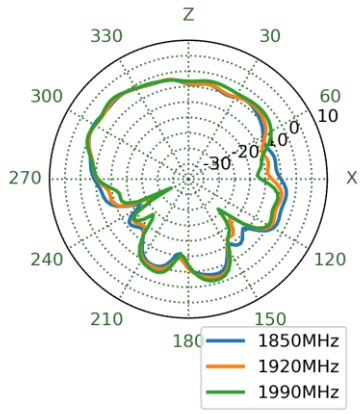


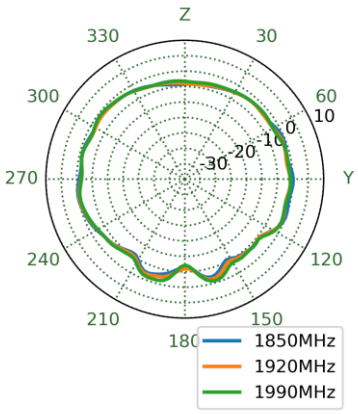
Gain total, 1920MHz



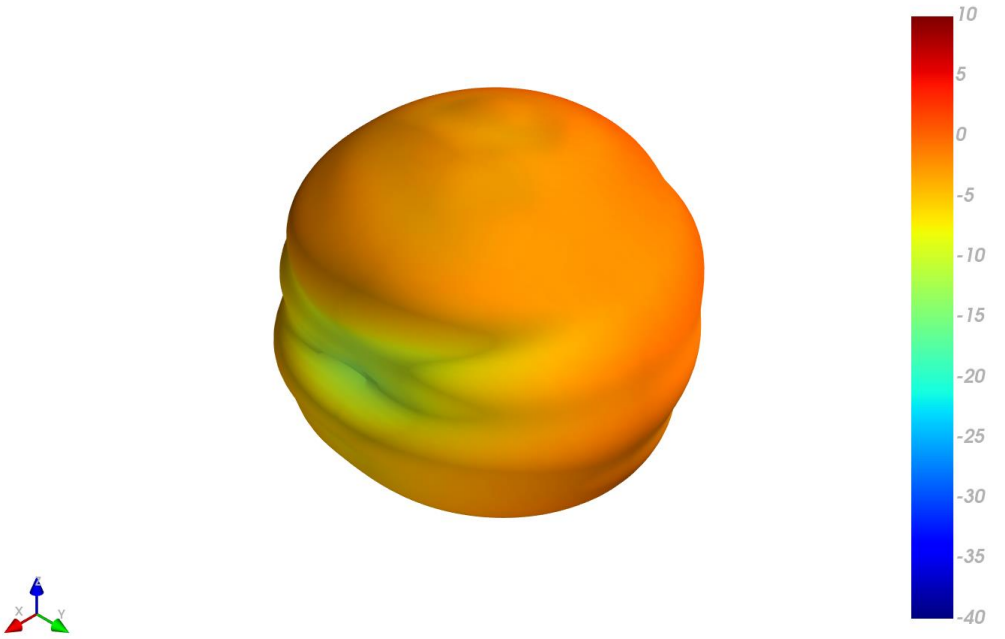
XY Plane	XZ Plane	YZ Plane



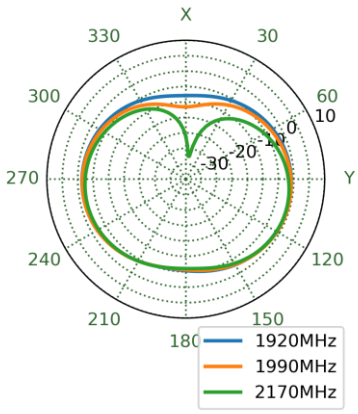


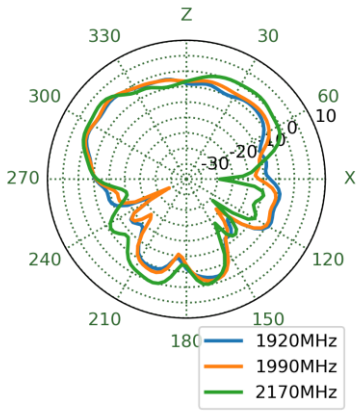


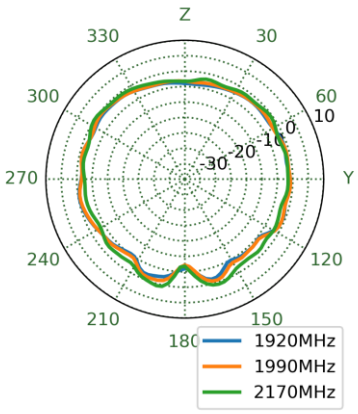
Gain total, 1990MHz



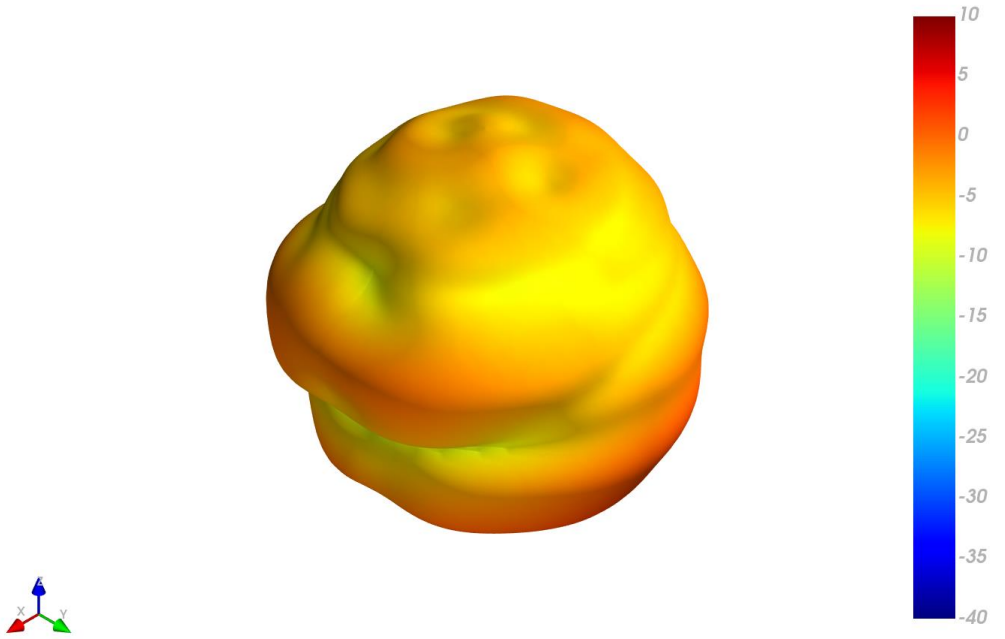
XY Plane	XZ Plane	YZ Plane



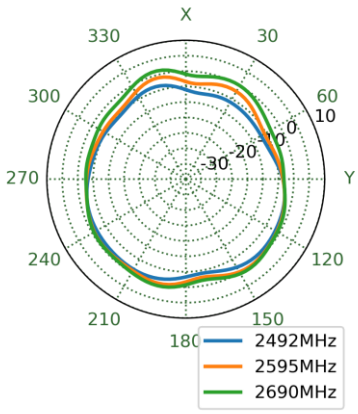


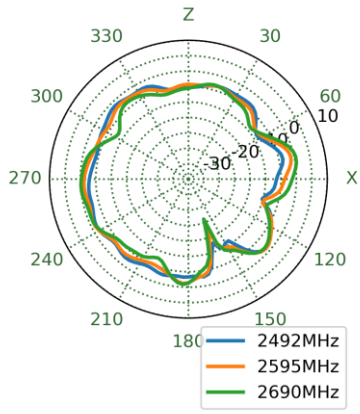


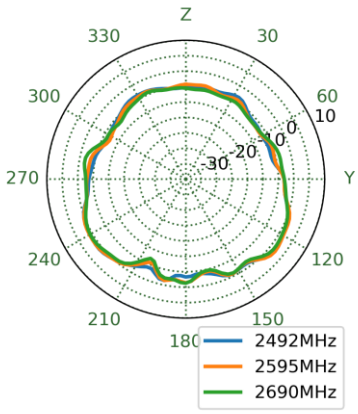
Gain total, 2595MHz



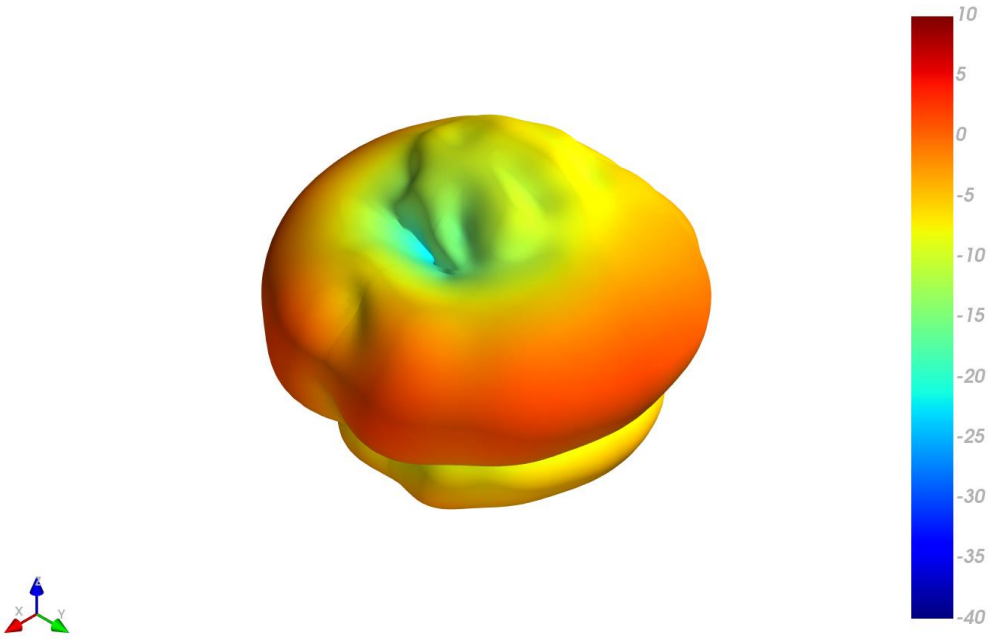
XY Plane	XZ Plane	YZ Plane



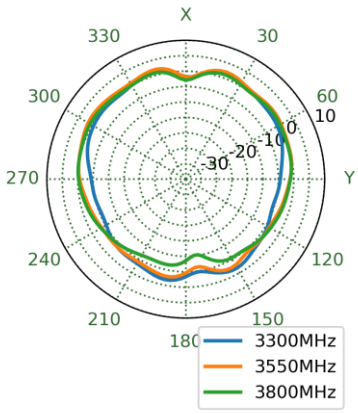


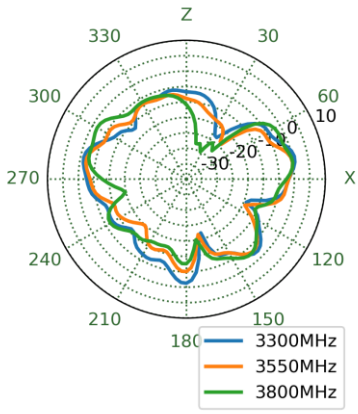


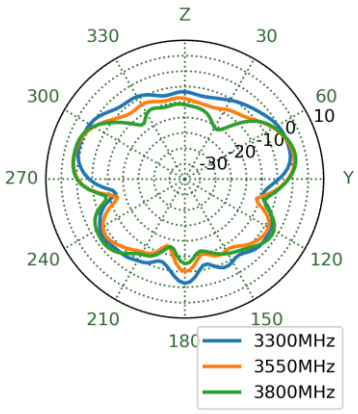
Gain total, 3550MHz



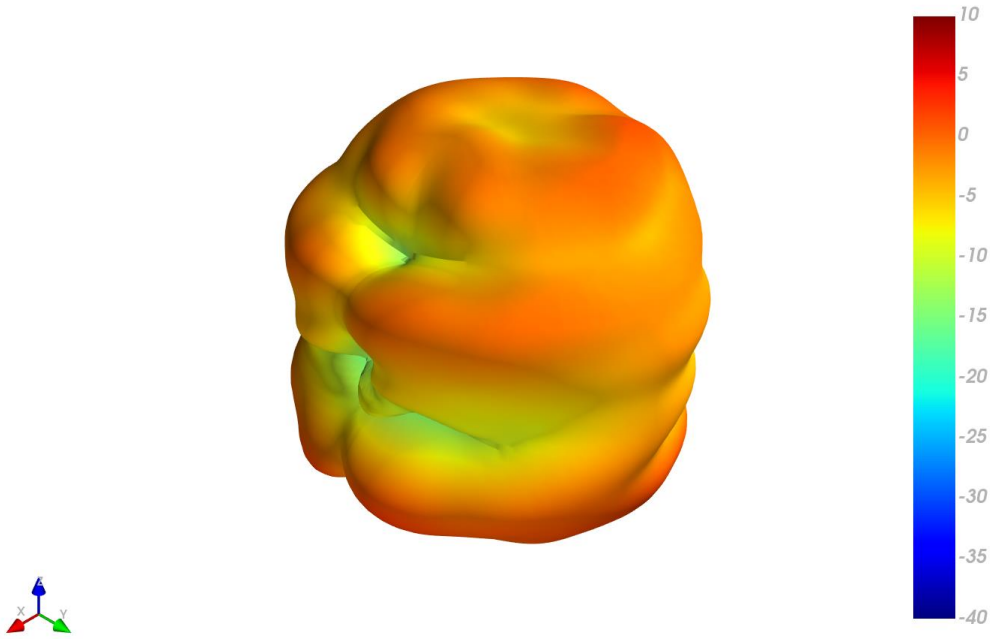
XY Plane	XZ Plane	YZ Plane



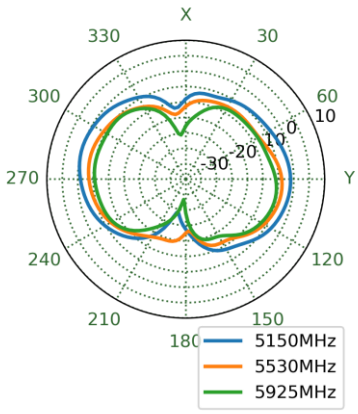


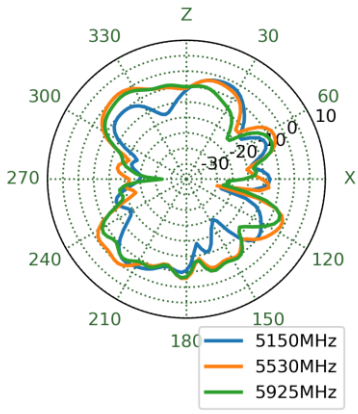


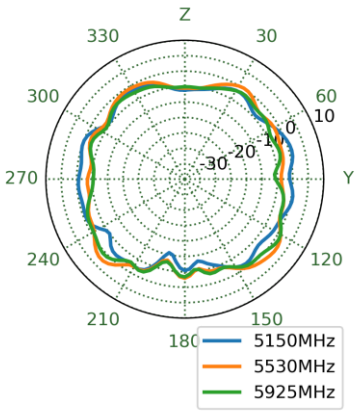
Gain total, 5530MHz



XY Plane	XZ Plane	YZ Plane

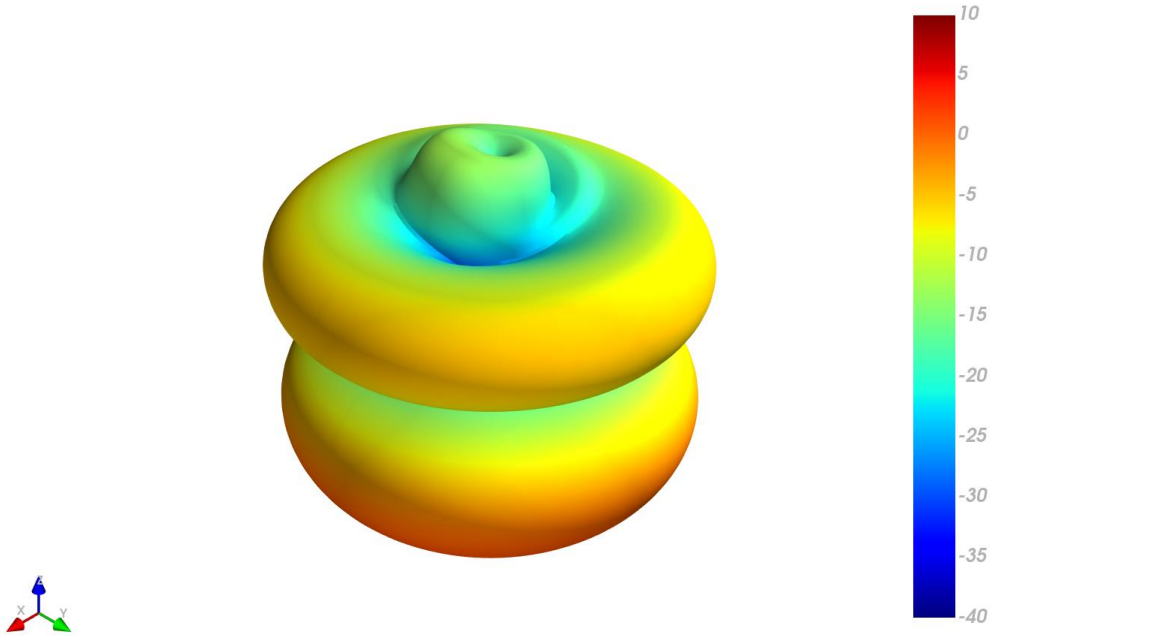


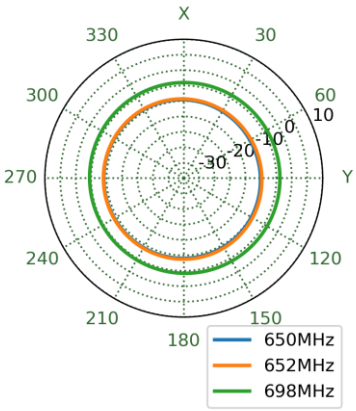
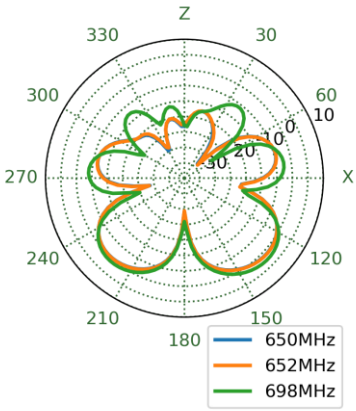
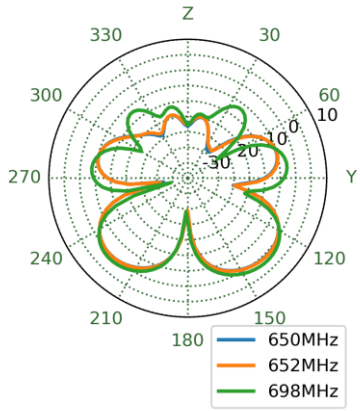




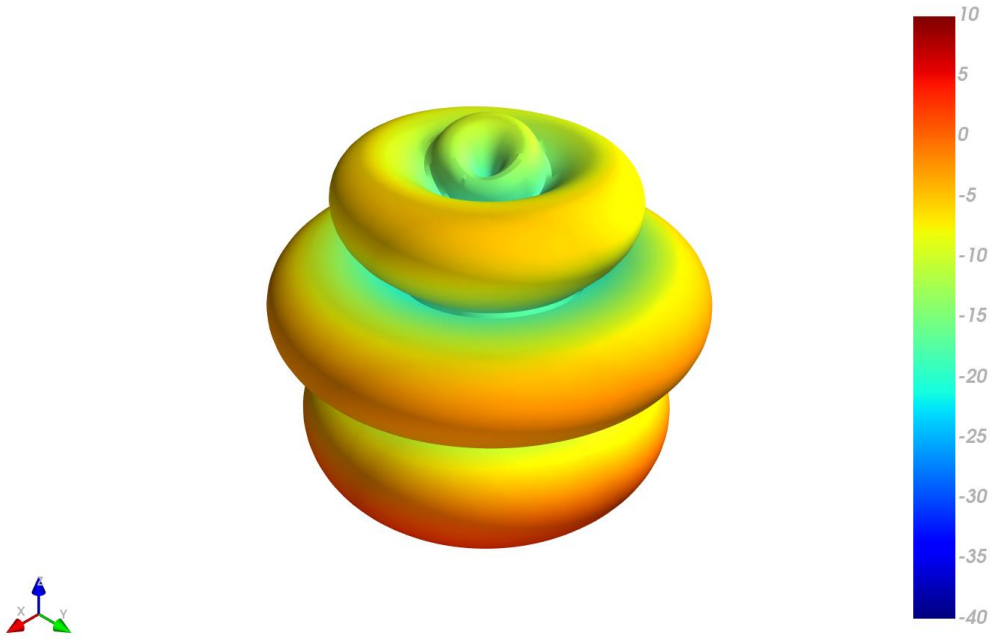
4.5 Straight in Free Space 3D & 2D Radiation Patterns

Gain total, 652MHz

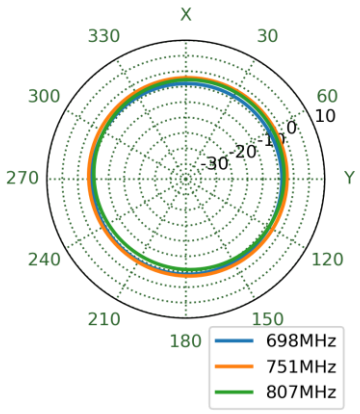


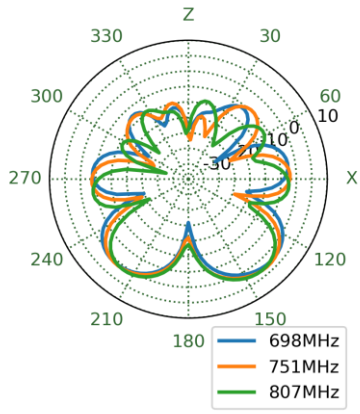
XY Plane	XZ Plane	YZ Plane
		

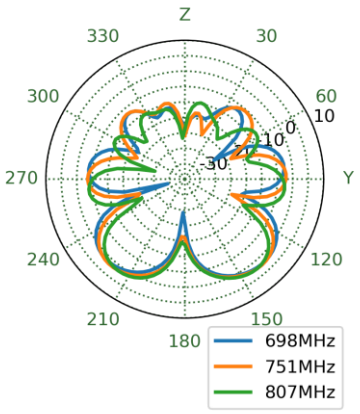
Gain total, 751MHz



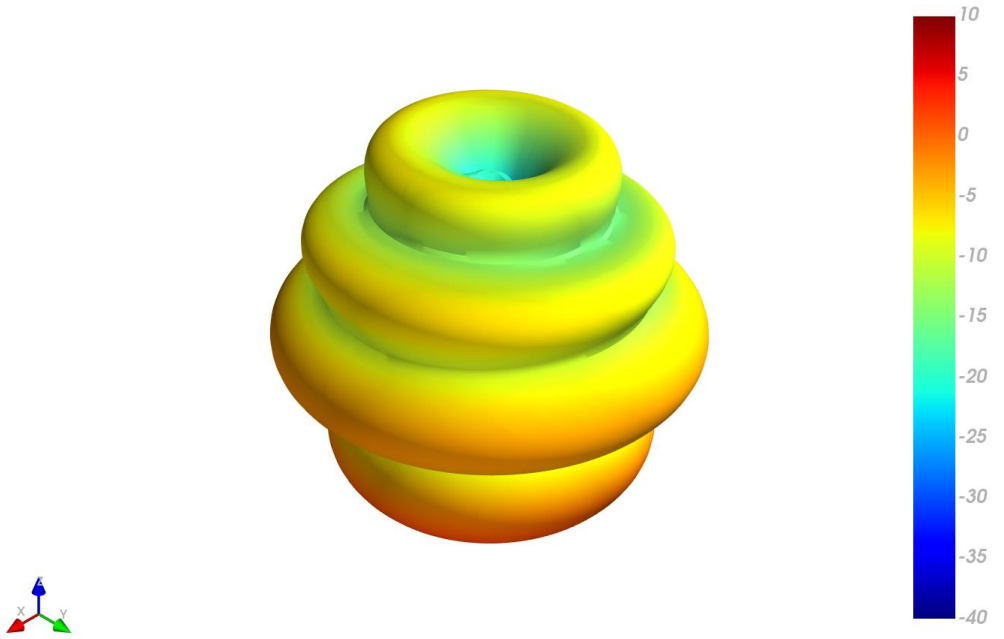
XY Plane	XZ Plane	YZ Plane



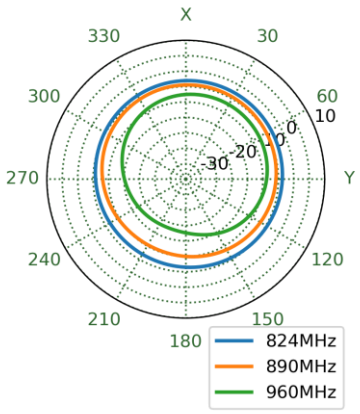


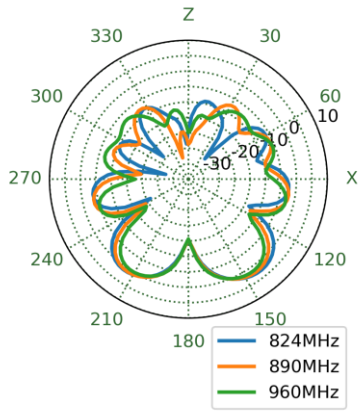


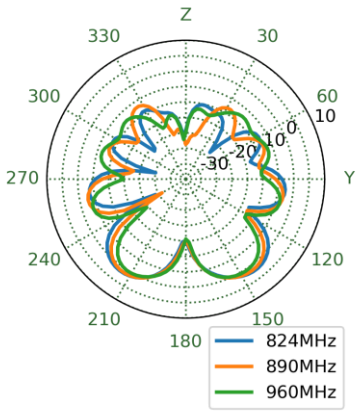
Gain total, 890MHz



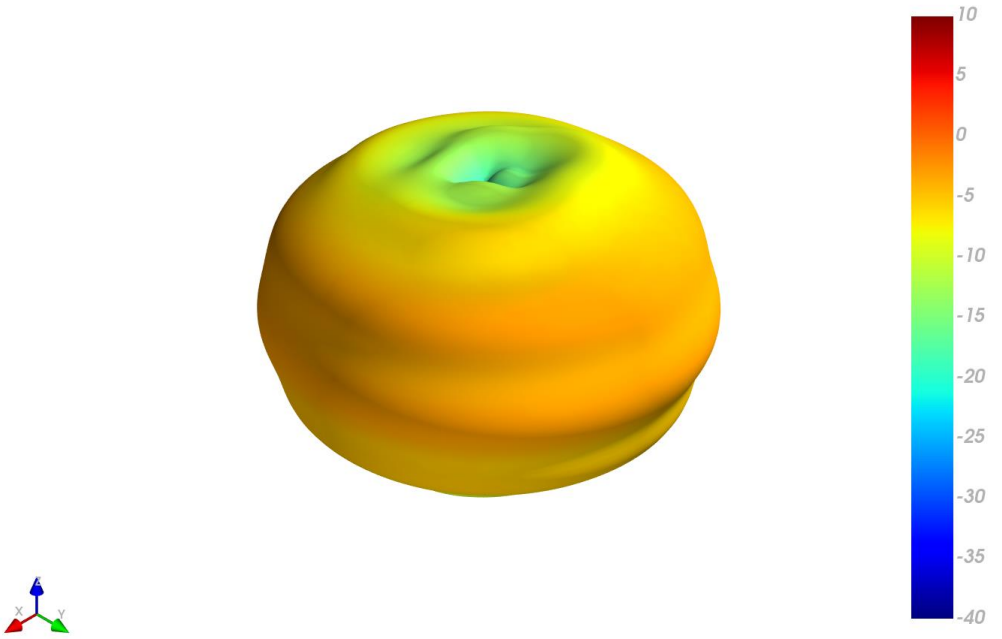
XY Plane	XZ Plane	YZ Plane



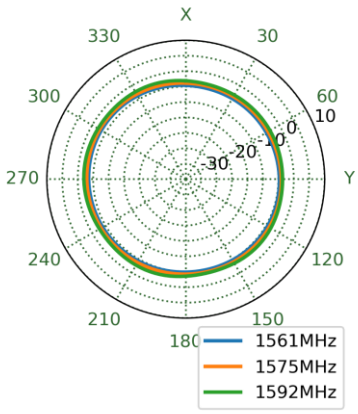


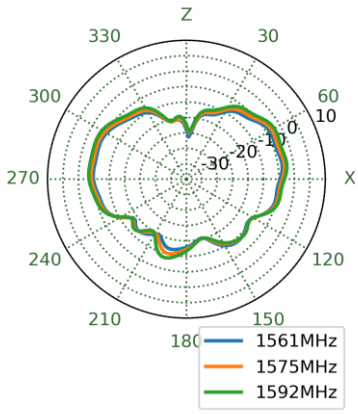


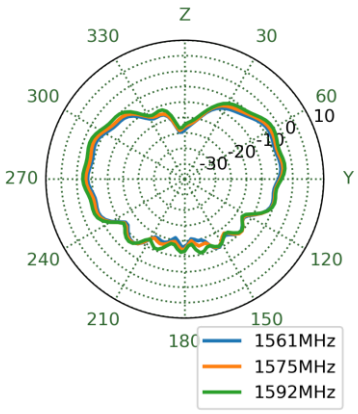
Gain total, 1575MHz



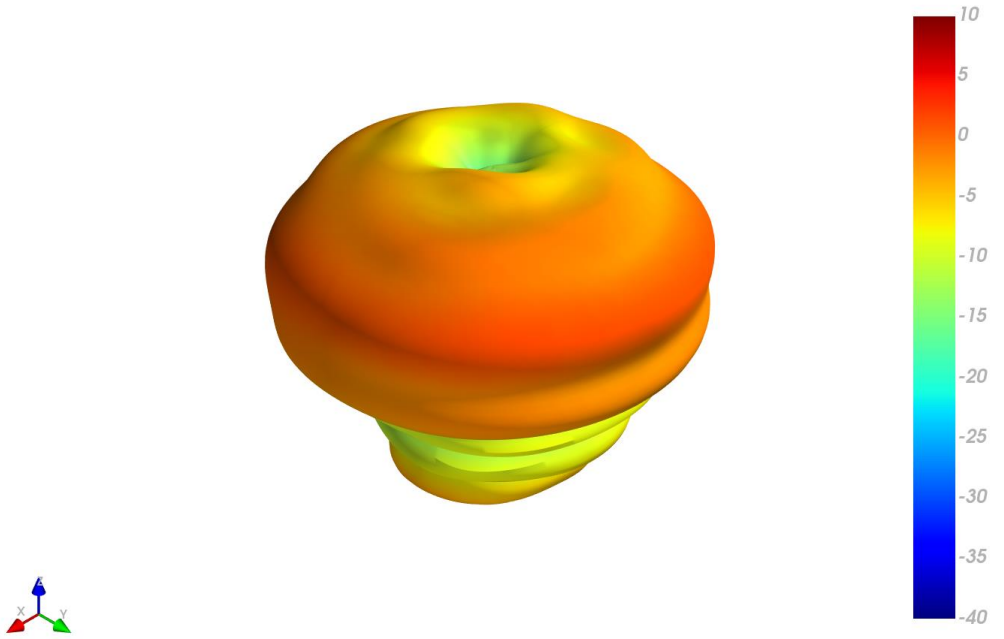
XY Plane	XZ Plane	YZ Plane



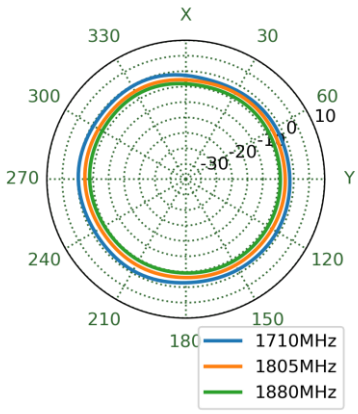


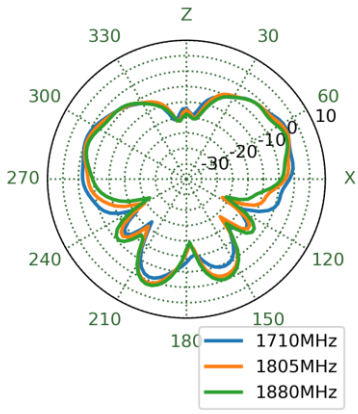


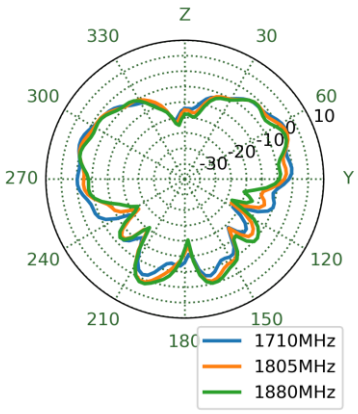
Gain total, 1805MHz



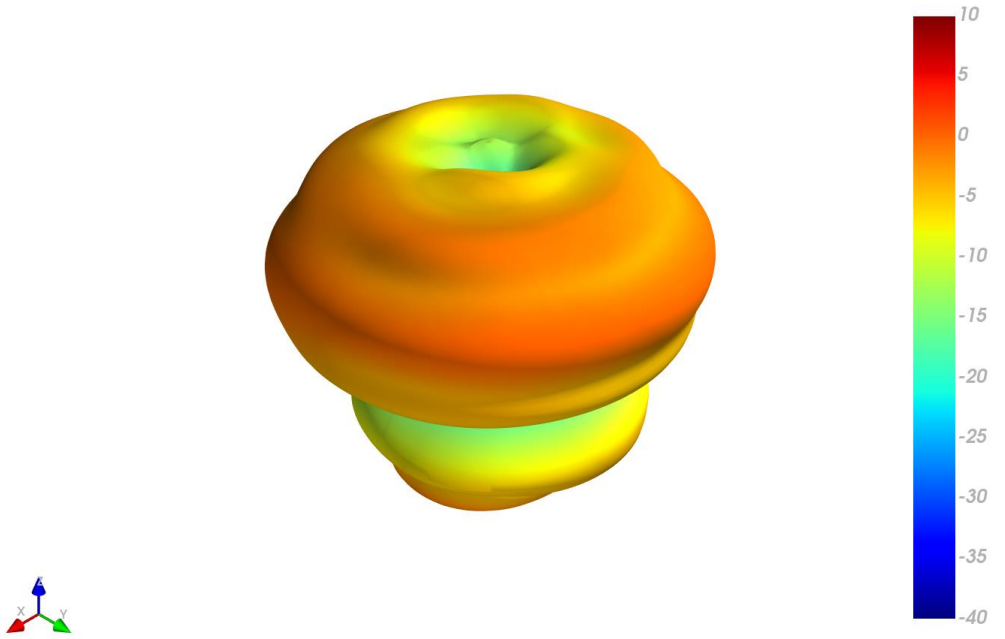
XY Plane	XZ Plane	YZ Plane



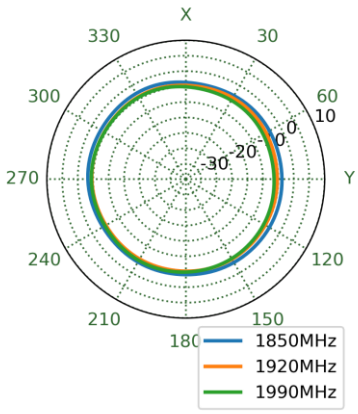


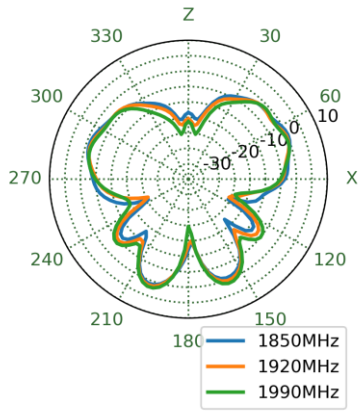


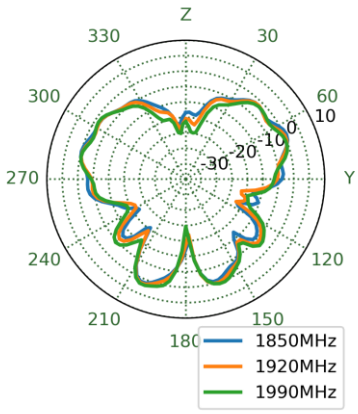
Gain total, 1920MHz



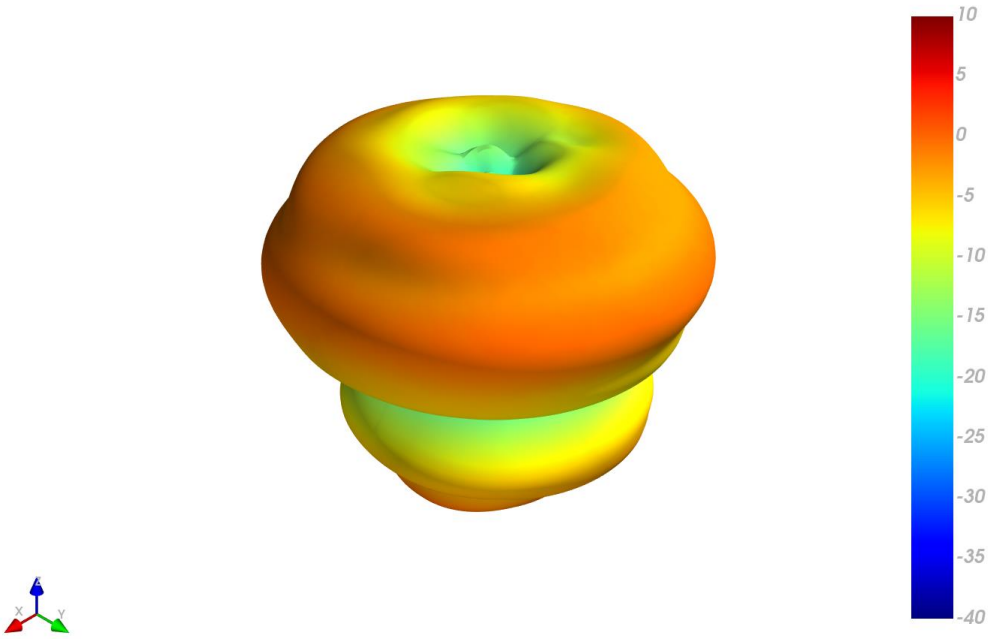
XY Plane	XZ Plane	YZ Plane



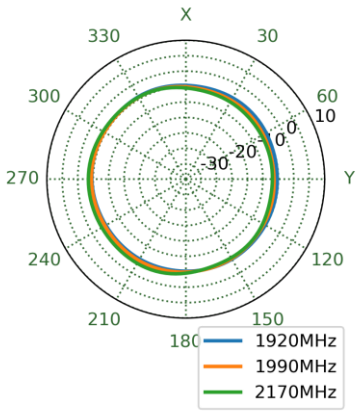


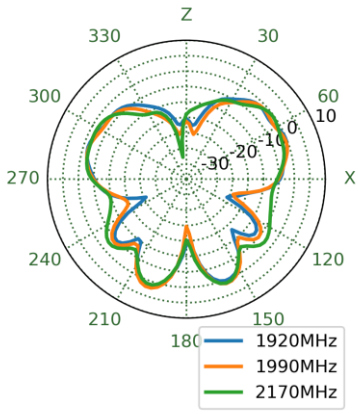


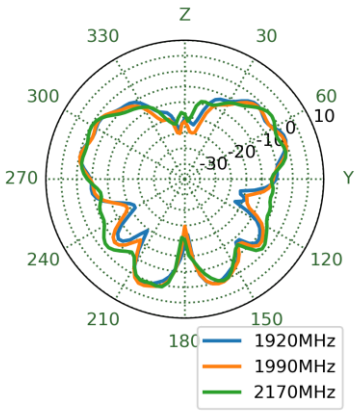
Gain total, 1990MHz



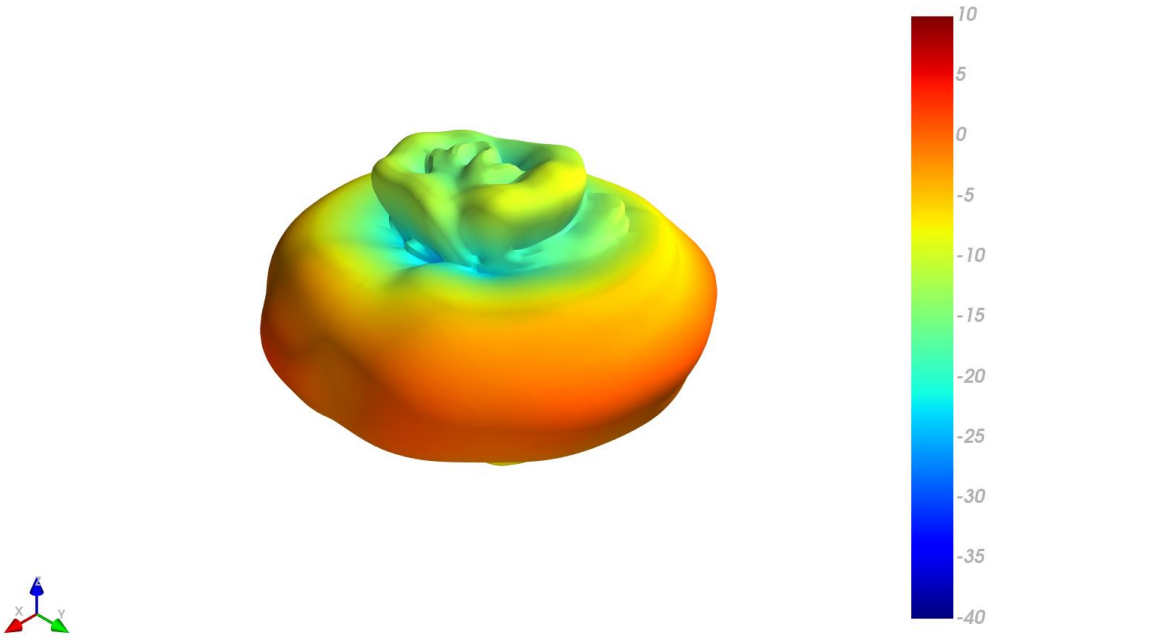
XY Plane	XZ Plane	YZ Plane



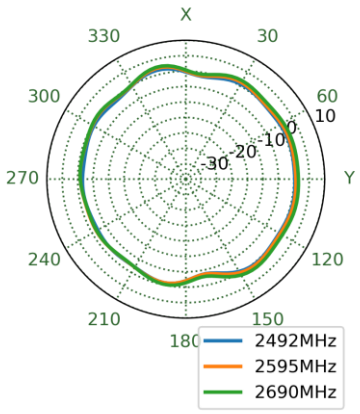


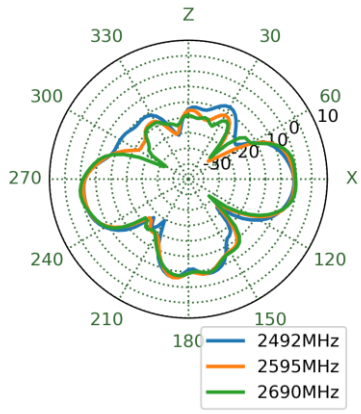


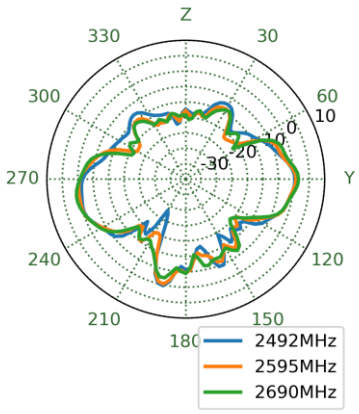
Gain total, 2595MHz



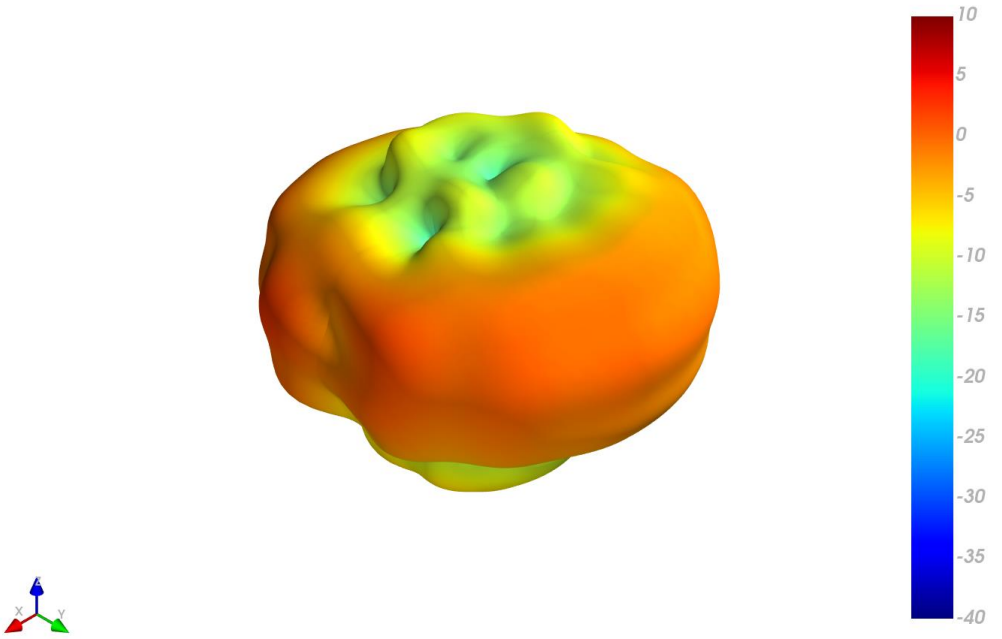
XY Plane	XZ Plane	YZ Plane



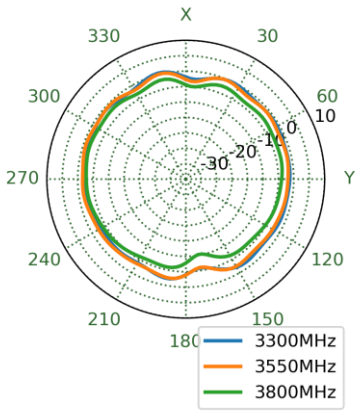


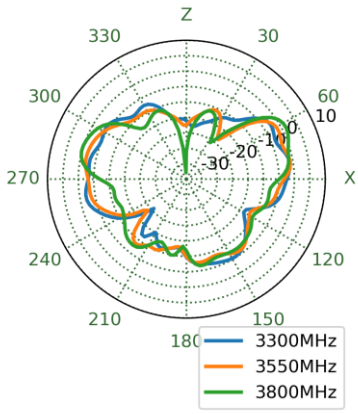


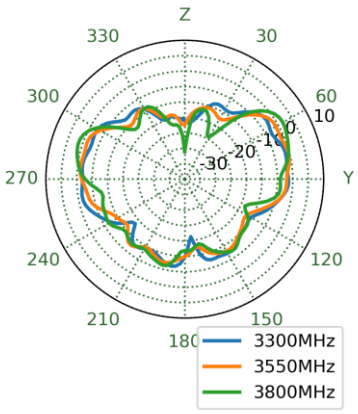
Gain total, 3550MHz



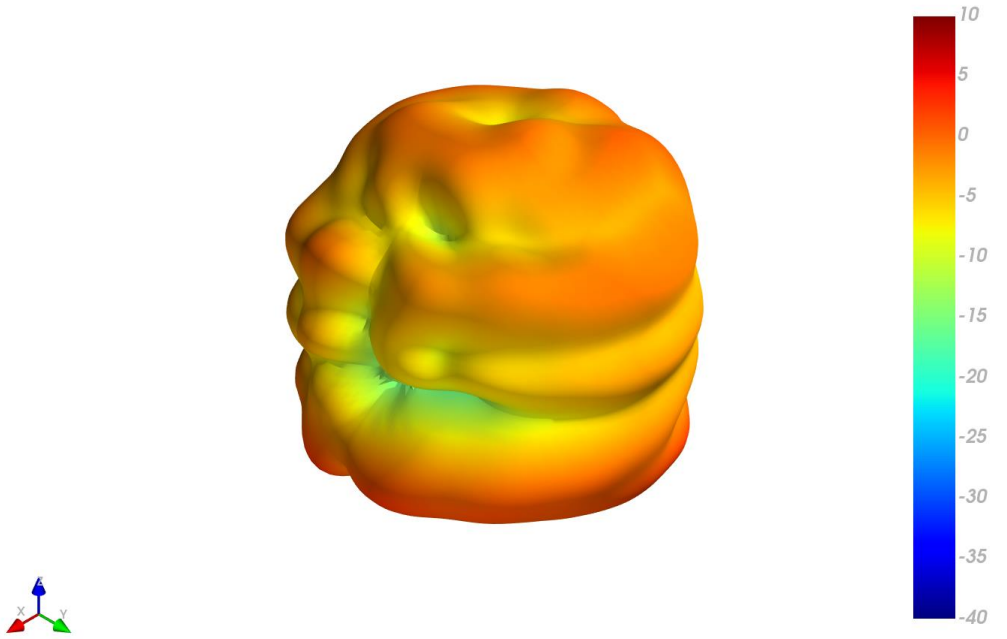
XY Plane	XZ Plane	YZ Plane



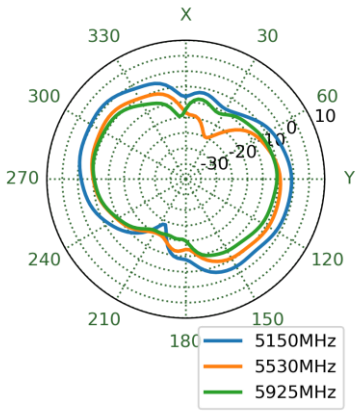


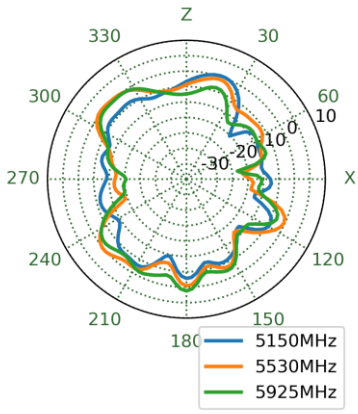


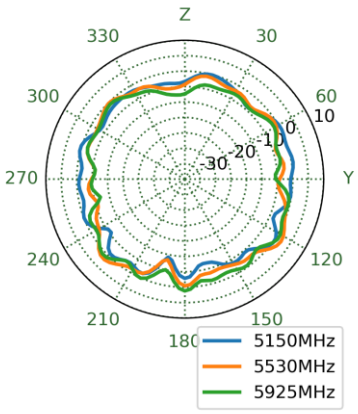
Gain total, 5530MHz



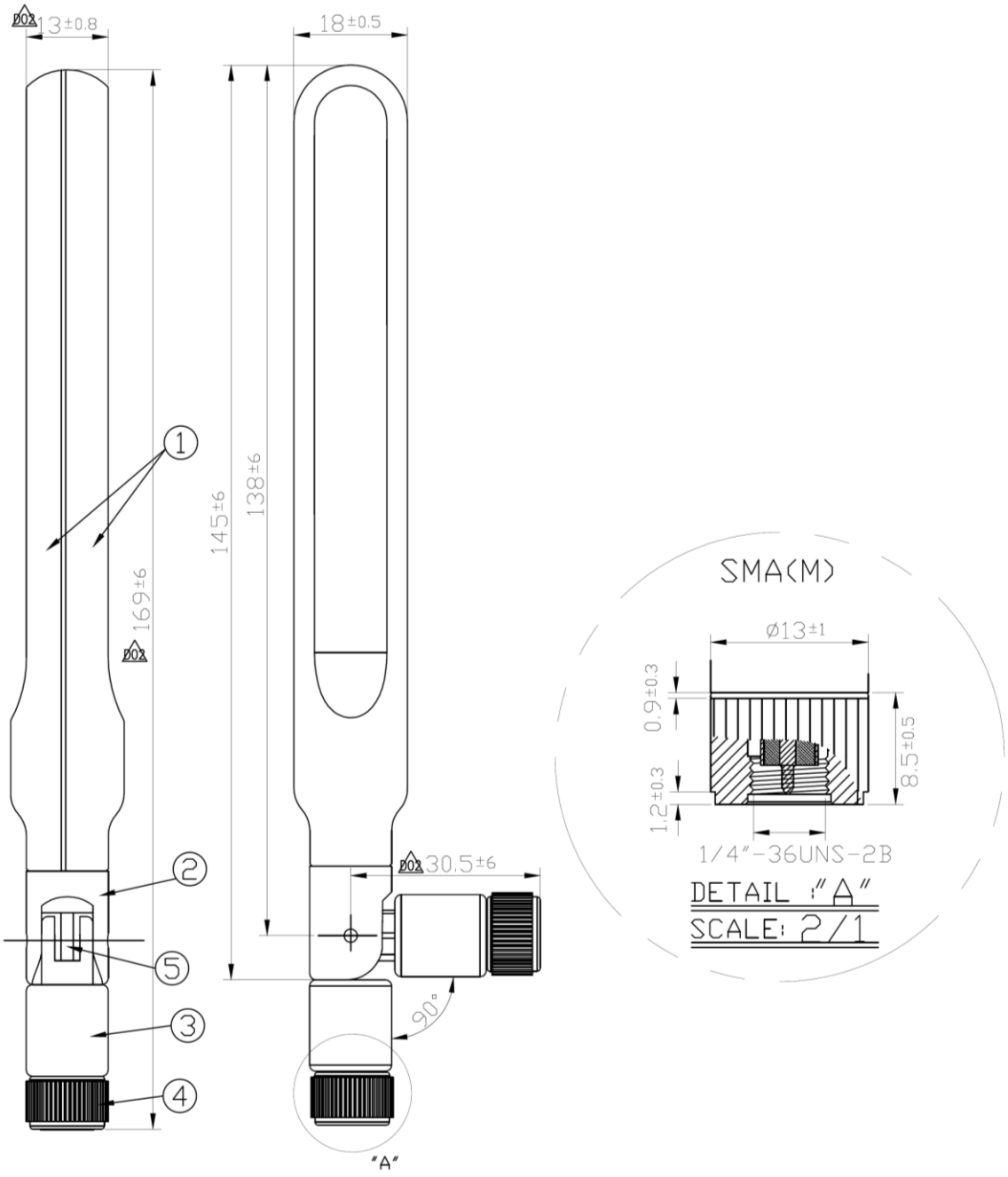
XY Plane	XZ Plane	YZ Plane





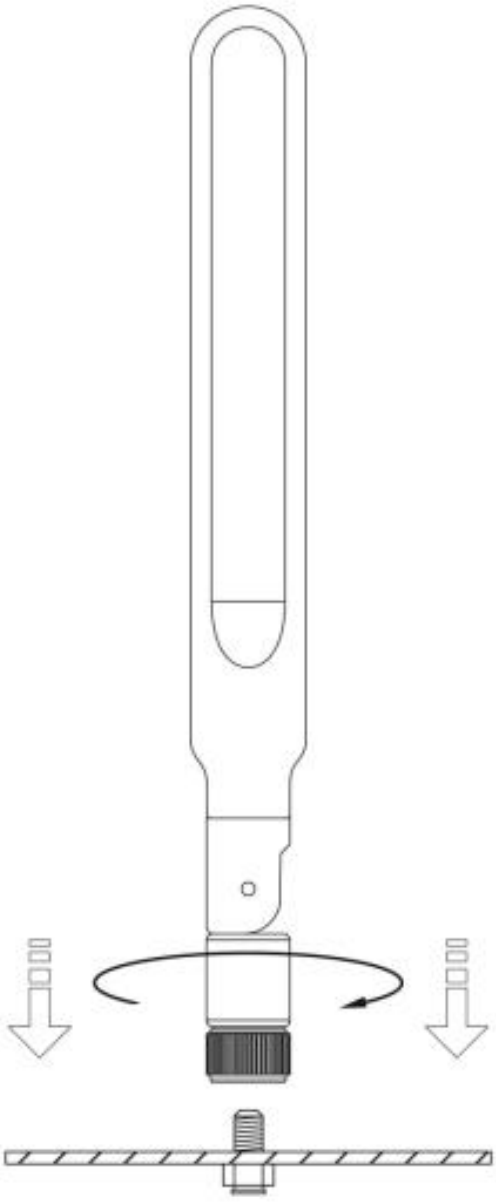


5. Mechanical Drawing (Units: mm)



	Name	P/N	Material	Finish	QTY
1	TG.10 Antenna Housing	000111K070015A	PC+ABS	Black	1
2	TG.10 Antenna Base1	000111K080015A	PC+ABS	Black	2
3	TG.10 Antenna Base2	000111K090015A	PBT	Black	1
4	SMA(M)	210211L000015A	Brass	Black	1
5	RG178 Cable	301111K000015A	FEP	Brown	1

6. Installation Guide

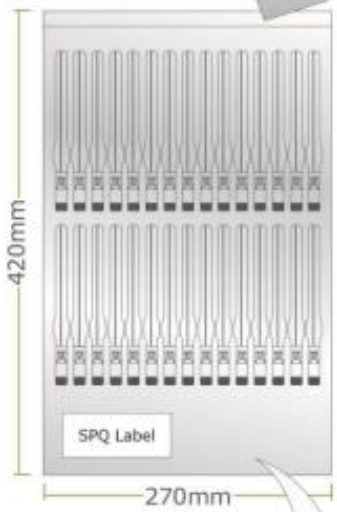


Recommended torque for mounting is 0.9 N·m
Maximum torque for mounting is 1.176 N·m

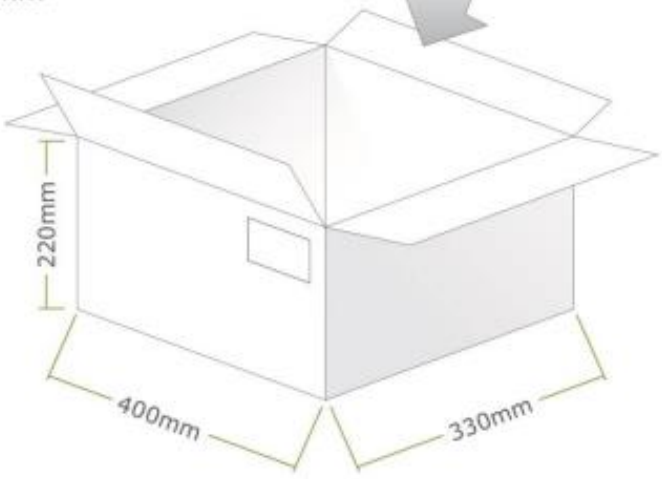
7. Packaging

10pc TG.10.0113 per PE Bag
Bag Dimensions - 260*105mm
Weight - 0.23Kg

50pc TG.10.0113 per SPQ Bag
Bag Dimensions - 270*420mm
Weight - 1.2Kg



300pcs TG.10.0113 per Carton
Carton Dimensions - 400*330*220mm
Weight - 8Kg



Changelog for the datasheet

SPE-11-8-147 - TG.10.0113

Revision: I (Current Version)	
Date:	2021-11-26
Changes:	Updated datasheet template & data.
Changes Made by:	Gary West

Previous Revisions

Revision: H	
Date:	2018-11-30
Changes:	Added VSWR Tables
Changes Made by:	Jack Conroy

Revision: G	
Date:	
Changes:	
Changes Made by:	

Revision: F	
Date:	2017-04-04
Changes:	
Changes Made by:	

Revision: E	
Date:	2014-10-17
Changes:	Updated performance
Changes Made by:	Aine Doyle

Revision: D	
Date:	2013-10-17
Changes:	Amended dimensions
Changes Made by:	Aine Doyle

Revision: C	
Date:	2012-02-02
Changes:	
Changes Made by:	

Revision: B	
Date:	2011-12-15
Changes:	
Changes Made by:	

Revision: A (Original First Release)	
Date:	2011-12-09
Notes:	
Author:	

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