TAOGLAS

Datasheet

IP 67 Rated Cellular Hinged Terminal Antenna

Part No:
TG.62.A113

Description

WideBand Cellular (600-7125MHz) Monopole IP67 Terminal Antenna with 90° Hinged R/A SMA(M)

Features:

Low-profile Housing with Wall Mount
Worldwide 5G/4G Bands including Wi-Fi 6
IP67 Waterproof Enclosure
Dimensions: Ø12.7 x 203mm
Connector: SMA(M)
RoHS & Reach Compliant

1.	Introduction	2
2.	Specification	3
3.	Antenna Characteristics	4
4.	Radiation Patterns	7
5.	Mechanical Drawing	29
6.	Packaging	30
	Changelog	31

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1. Introduction

The Taoglas TG.62.8113 is a 5G/4G monopole antenna, designed primarily for use with modules and IoT devices that require high efficiency and peak gain from a cellular antenna. It delivers best in class throughput on all major cellular bands worldwide, perfect for access points, terminals, and routers. The TG.62 operates from 600-7125MHz cover all cellular and Wi-Fi bands.

It has an SMA (M) connector as standard and is an ideal solution for any device requiring reliable performance in a slim form factor. The innovative hinge design not only provides flexibility when mounting the antenna, but it is also weatherproof with an IP67 rating, ensuring that it can be used in outdoor locations where potential water ingress would prevent other terminal mount antennas from being used.

Typical Applications include:

- Gateways & Routers
- Industrial IoT
- Exterior Cameras
- Smart Home
- Vending Machines
- Wastewater Monitoring

The TG.62 exhibits an efficiency of up to 80% across wideband 5G/4G bands and is backward compatible with 3G/2G cellular applications. The TG.62 is a fully omnidirectional antenna as seen in the radiation patterns and is stable across all bands, ideal for applications requiring reliable throughput.

The hinged SMA (M) connector mechanism allows the antenna to be rotated into the preferred orientation which helps to avoid objects or other antennas. The antenna can swivel 90 degrees from the connector accommodating different installation configurations helping with antenna isolation by positioning them in alternate directions when using multiple antennas in MIMO systems or on a device.

Contact your regional Taoglas customer support team to request testing services or additional support to integrate and test this antenna's performance in your device.

2. Specification

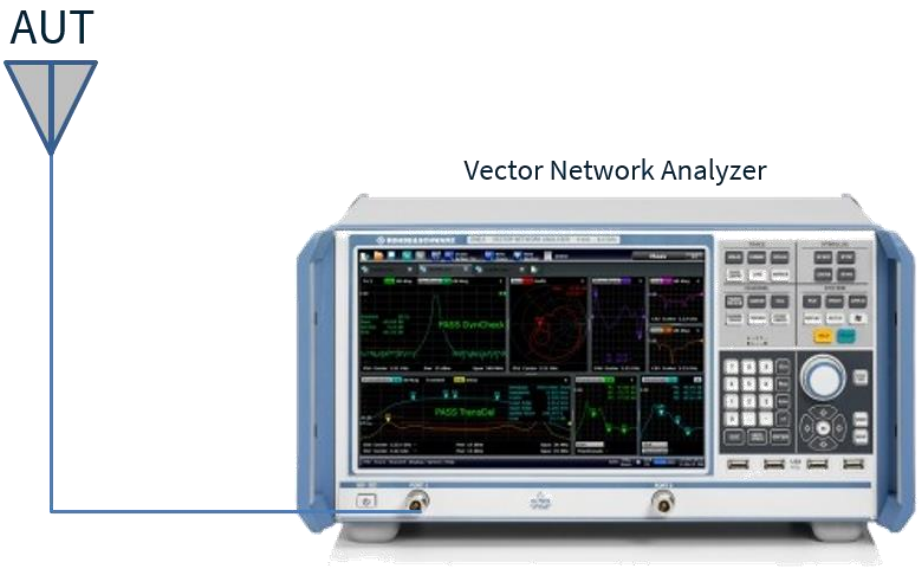
LTE Electrical							
Frequency (MHz)	Test Set-up	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern
617-960	Free space	44.4	-3.52	2.87	50 Ω	Linear	Omni
	on 15x9 Ground	70.4	-1.52	3.34			
	on 9x15 Ground	75.3	-1.23	4.63			
1710-2700	Free space	37.2	-4.30	1.39			
	on 15x9 Ground	56.3	-2.49	5.00			
	on 9x15 Ground	57.6	-2.40	5.23			
3300-3800	Free space	58.7	-2.31	1.45			
	on 15x9 Ground	56.6	-2.48	5.77			
	on 9x15 Ground	51.6	-2.87	4.83			
4400-5000	Free space	40.1	-3.97	2.55			
	on 15x9 Ground	43.5	-3.61	4.36			
	on 9x15 Ground	43.8	-3.58	3.10			
5850-5850	Free space	58.3	-2.35	3.53			
	on 15x9 Ground	41.4	-3.83	3.15			
	on 9x15 Ground	45.5	-3.42	3.30			
5925-7125	Free space	46.8	-3.06	3.87			
	on 15x9 Ground	37.6	-4.11	5.52			
	on 9x15 Ground	37.2	-5.38	5.03			

Mechanical	
Dimensions	Ø12.7 x 203mm
Material	PC+PBT
Connector	SMA(M)

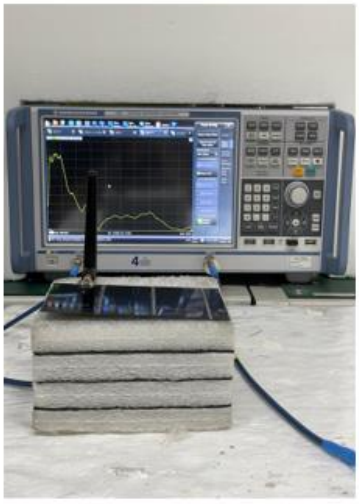
Environmental	
Operation Temperature	-40°C - +85°C
Storage Temperature	-40°C - +85°C
Waterproof Rating	IP67

3. Antenna Characteristics

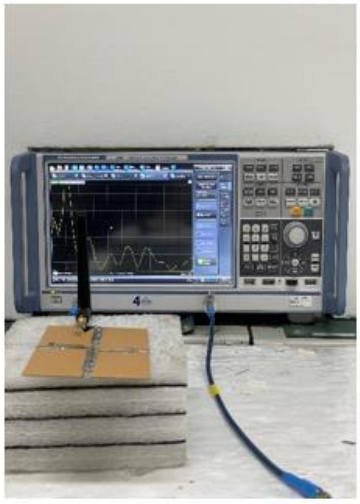
3.1 Test Set-up



Free Space

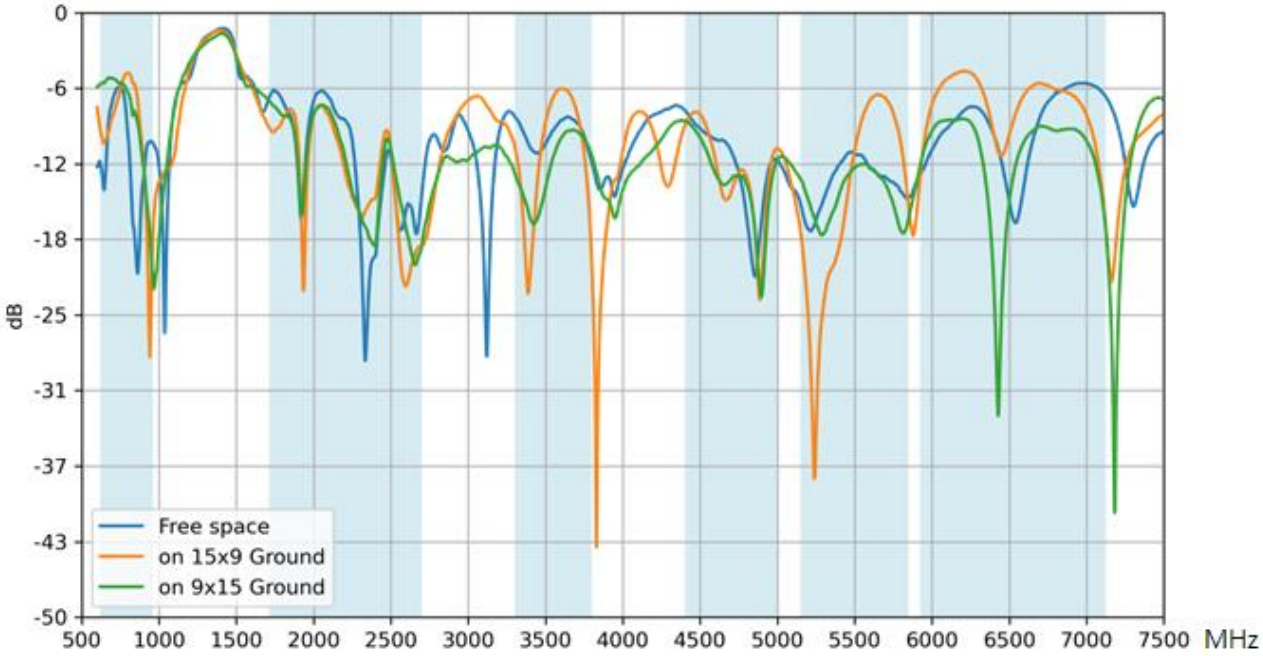


On 15x9cm Ground

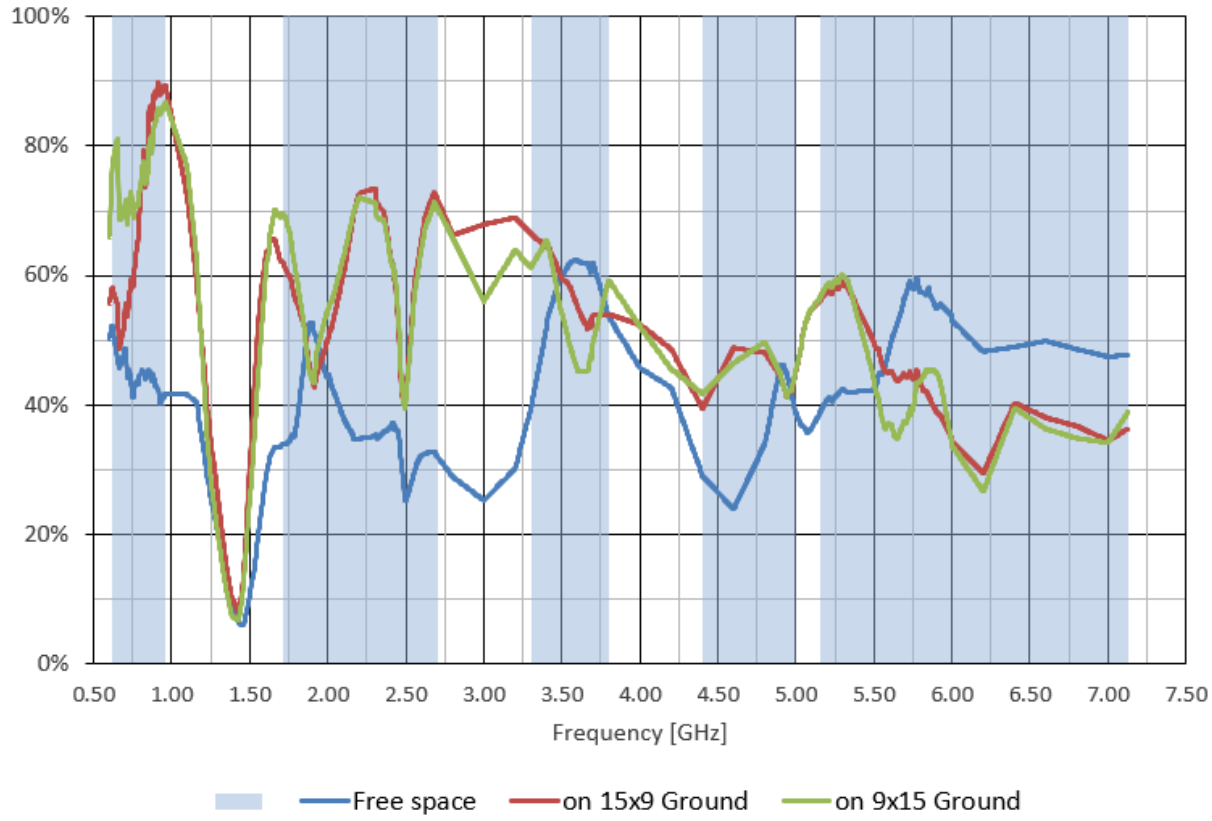


On 9x15cm Ground

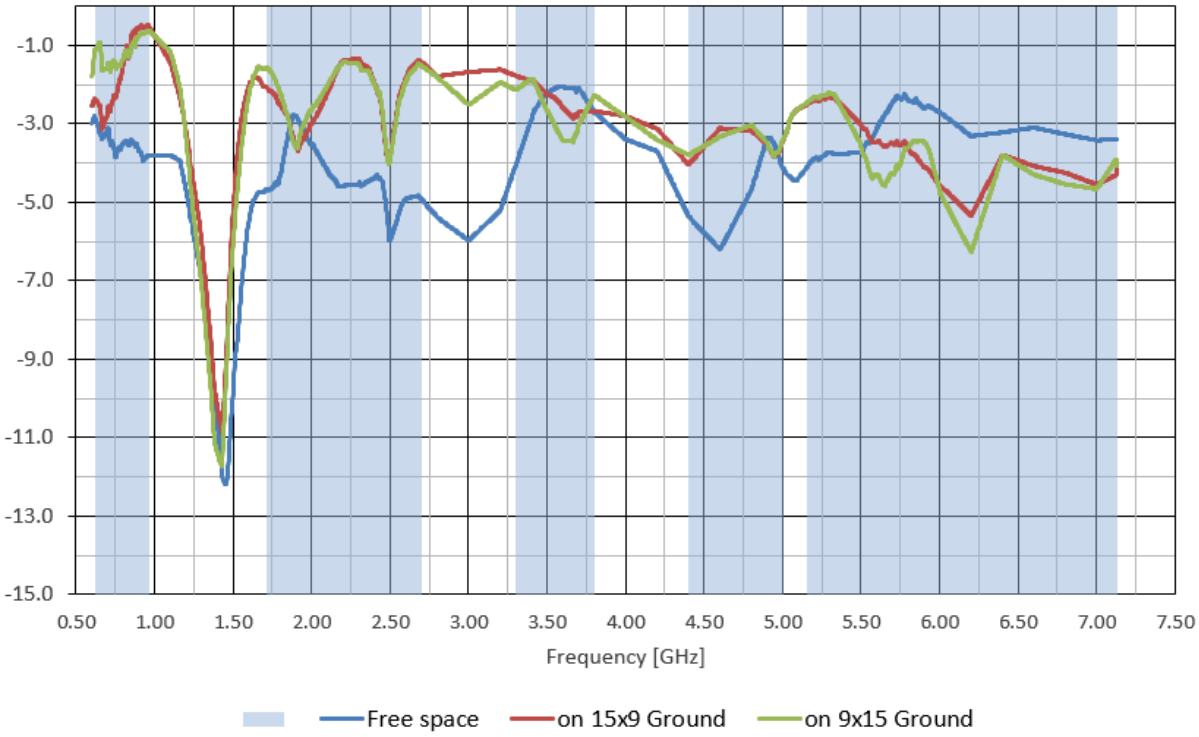
3.2 Return Loss



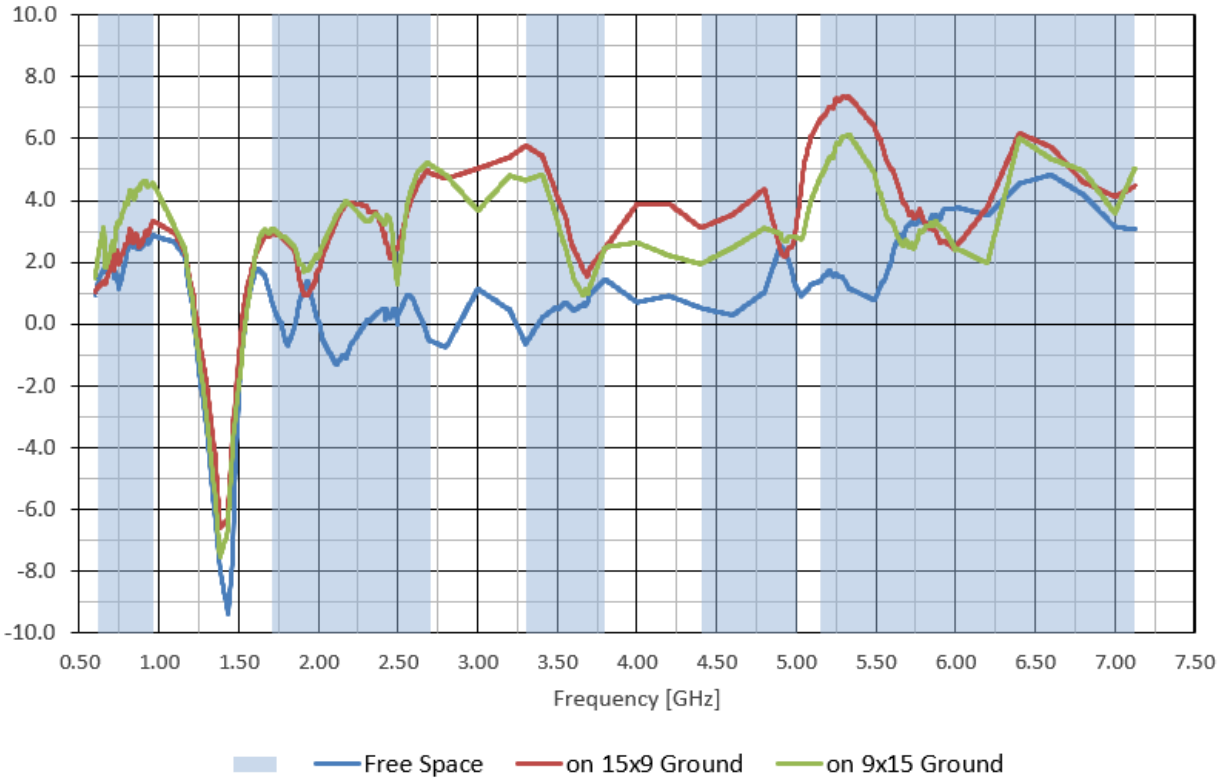
3.3 Efficiency



3.4 Average Gain

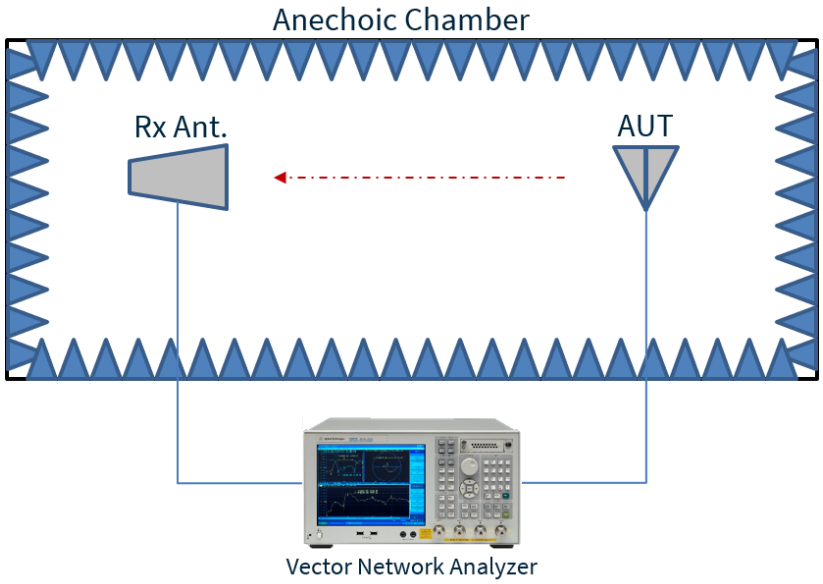


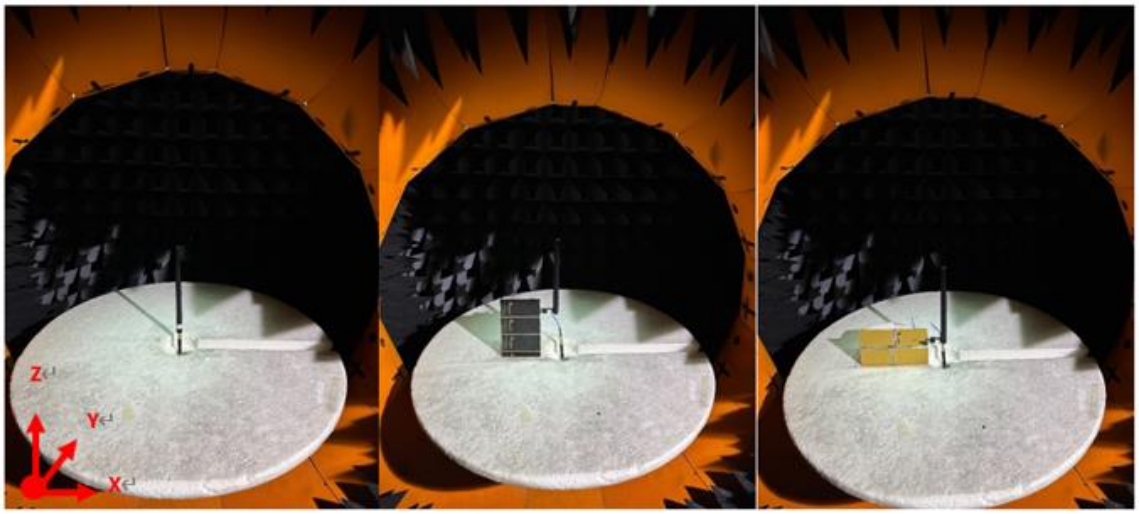
3.5 Peak Gain



4. Radiation Patterns

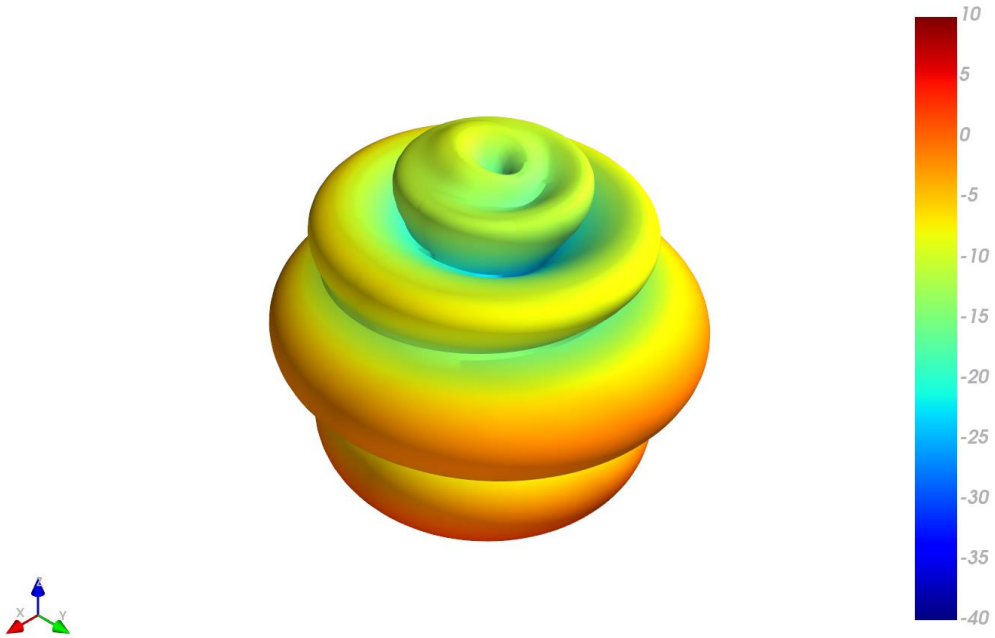
4.1 Test Setup

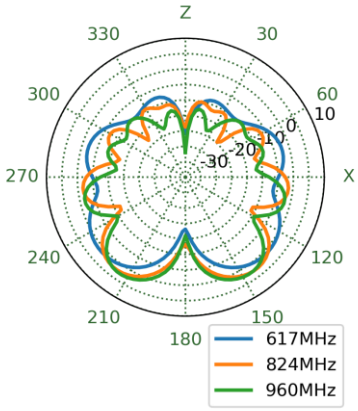
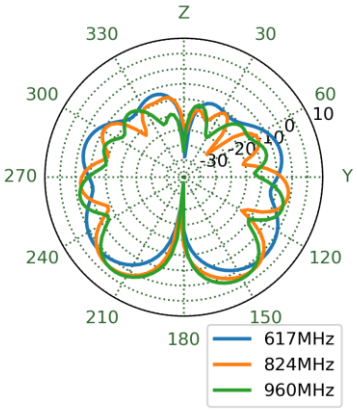
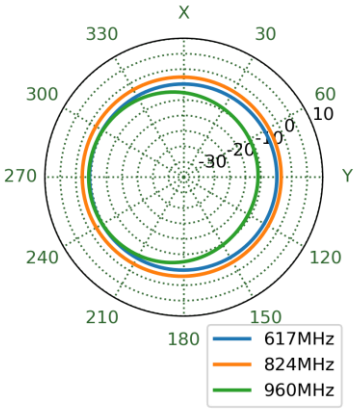




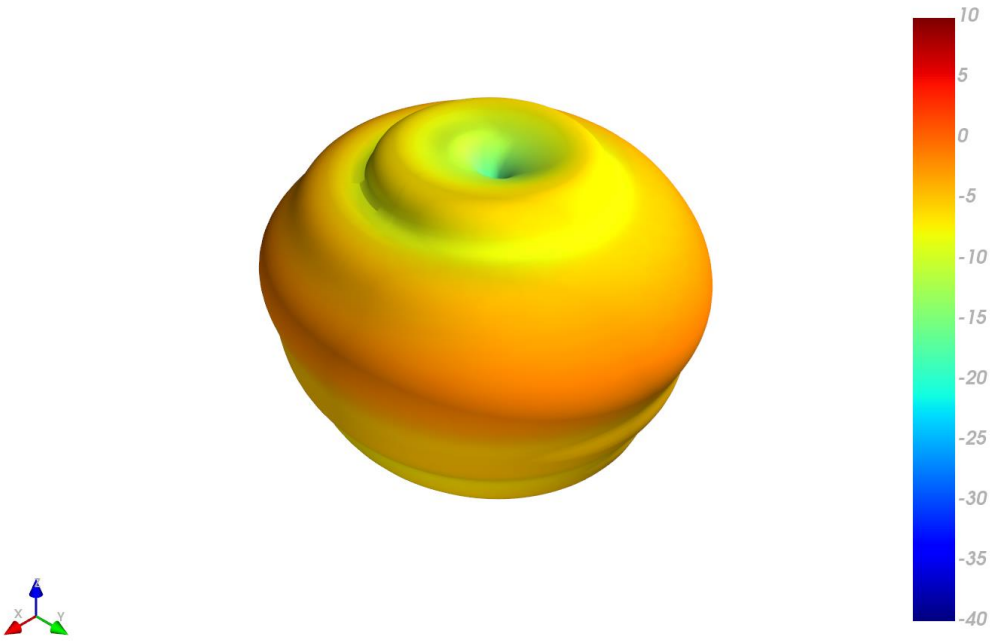
Free Space | On 15x9cm Ground | On 9x15cm Ground

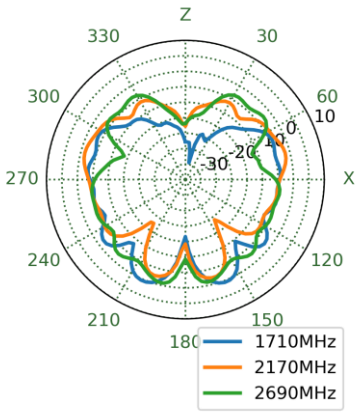
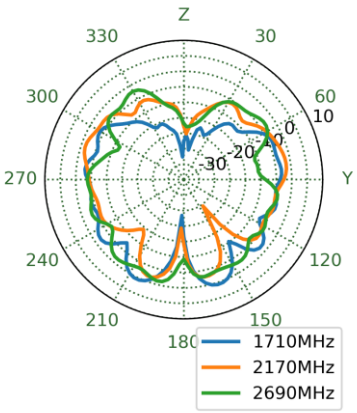
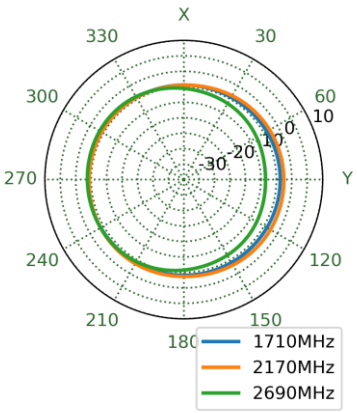
4.2 Free space - Patterns at 824 MHz



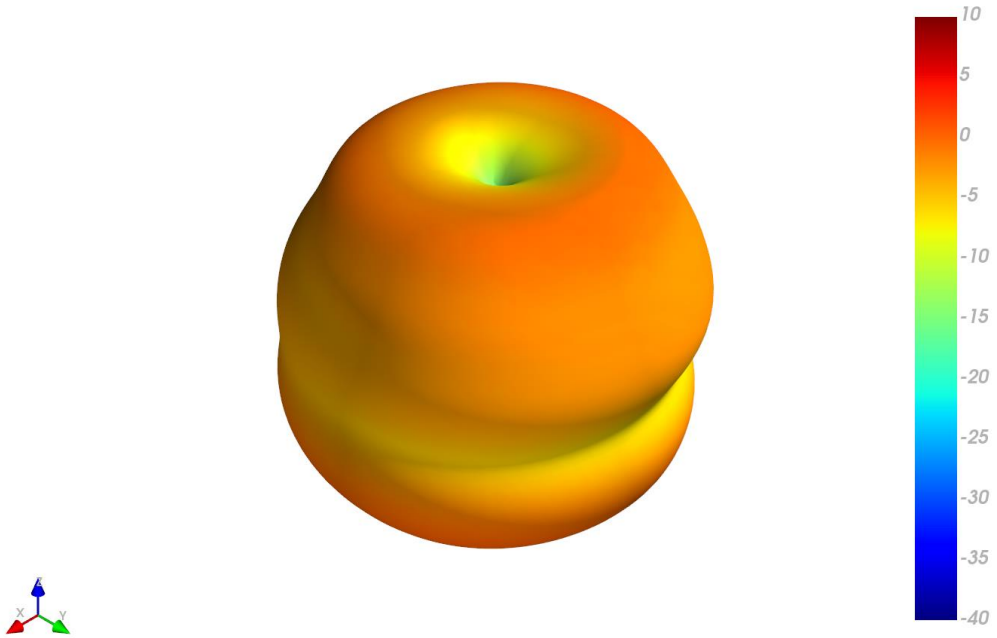
XZ Plane	YZ Plane	XY Plane
		

4.3 Free space - Patterns at 2170 MHz

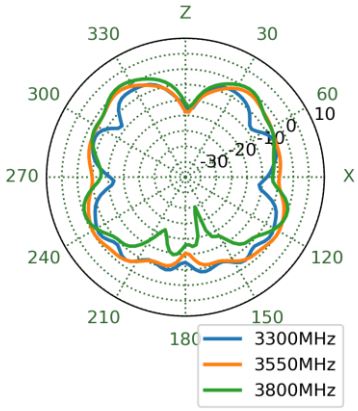


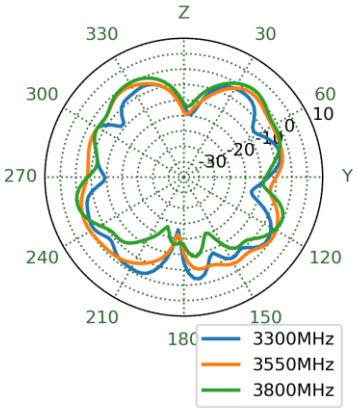
XZ Plane	YZ Plane	XY Plane
		

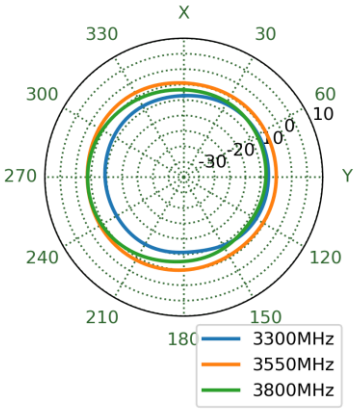
4.4 Free space - Patterns at 3550 MHz



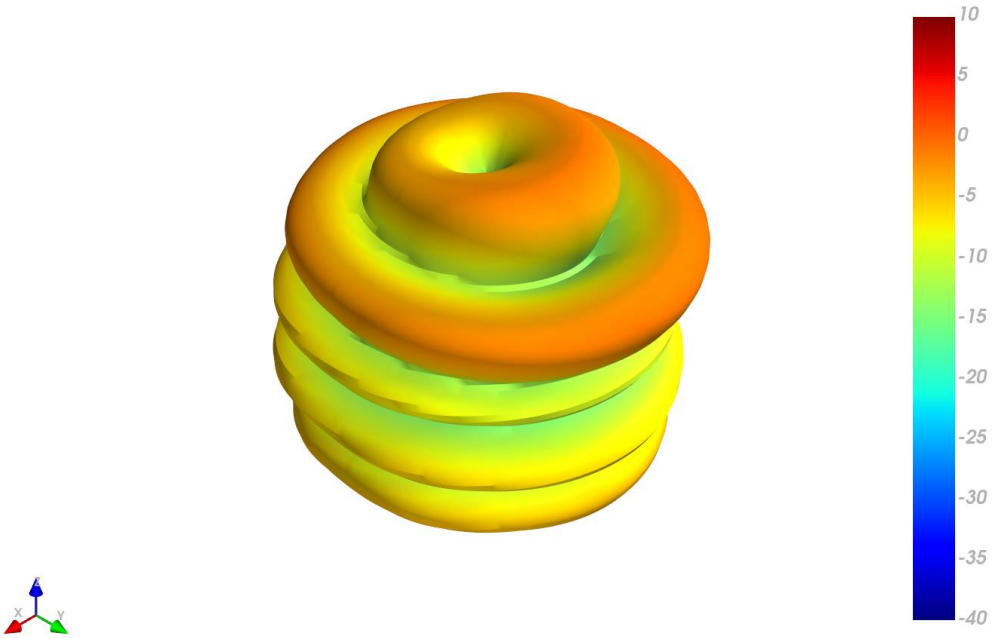
XZ Plane	YZ Plane	XY Plane

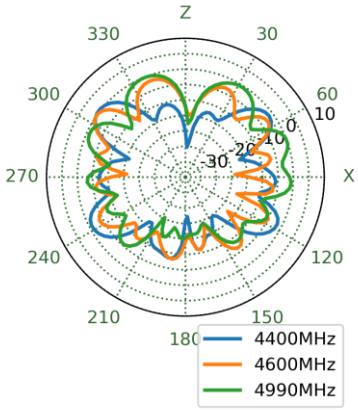
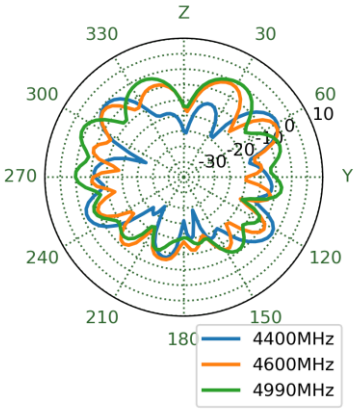
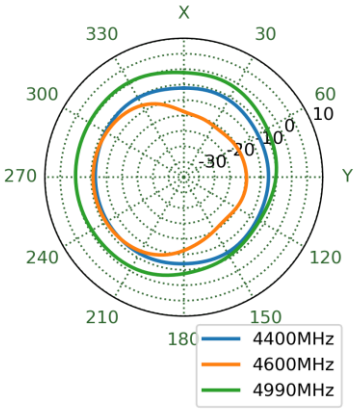




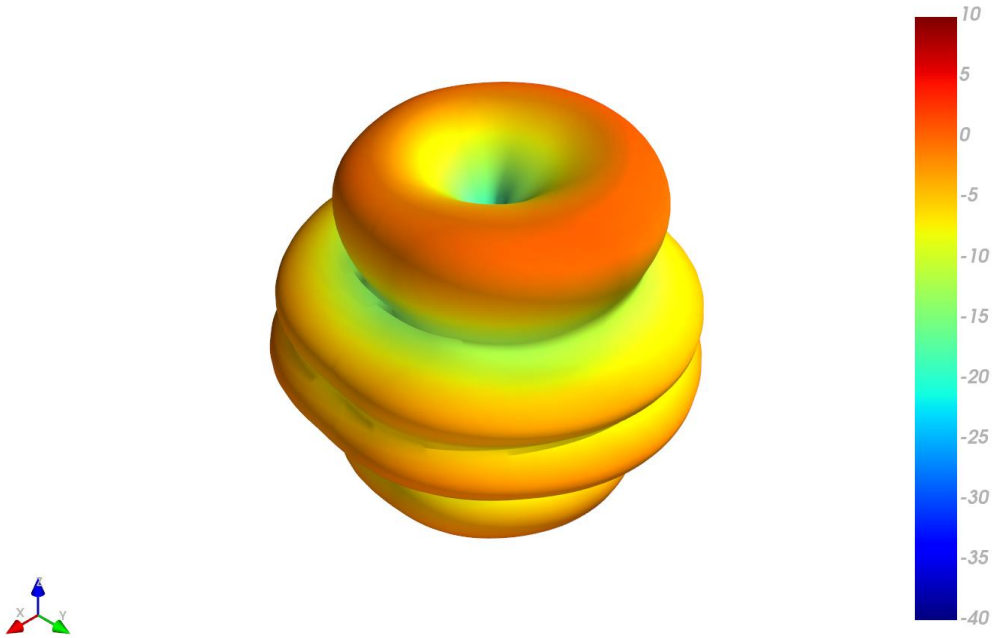


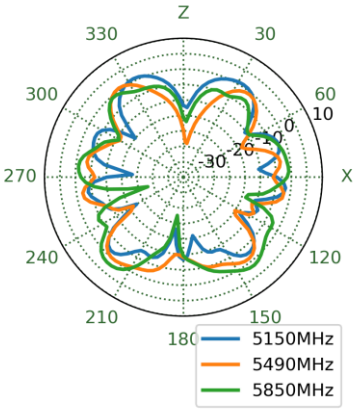
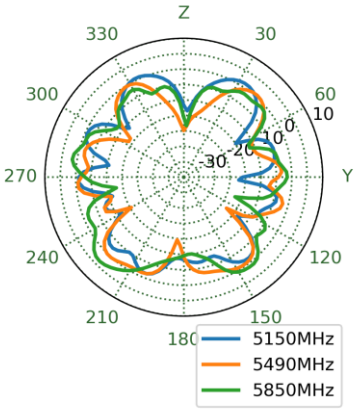
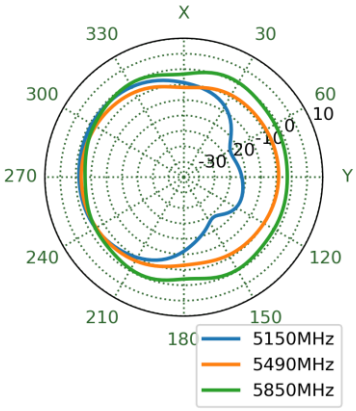
4.5 Free space - Patterns at 4600 MHz



XZ Plane	YZ Plane	XY Plane
		

4.6 Free space - Patterns at 5490 MHz



XZ Plane	YZ Plane	XY Plane
		

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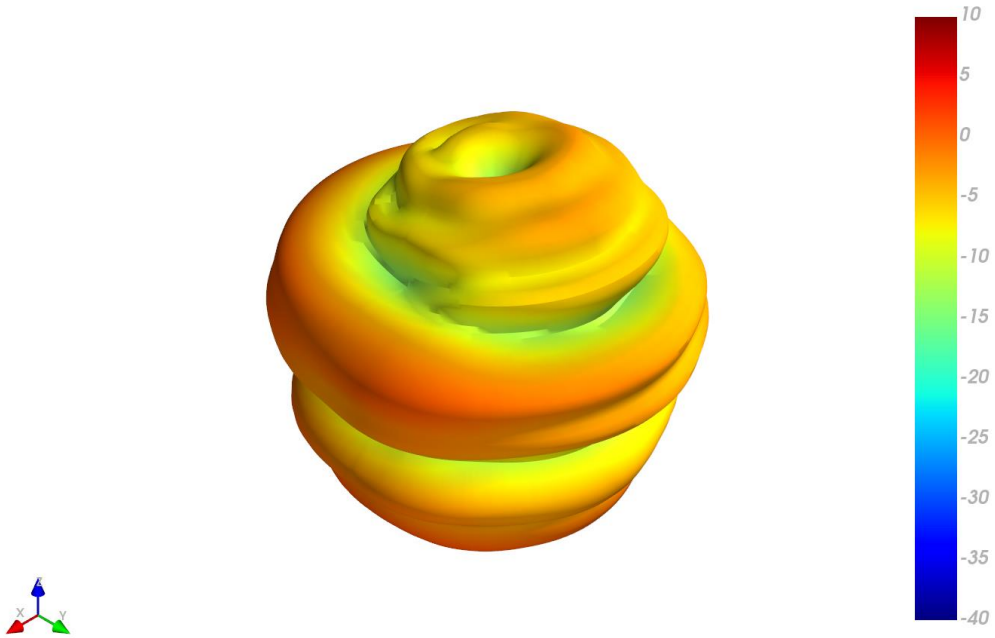
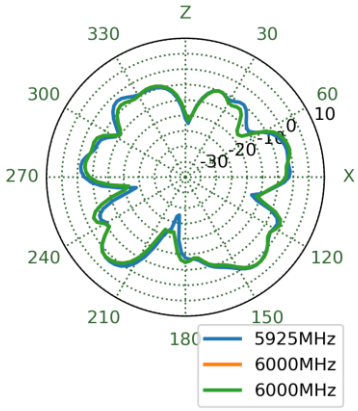
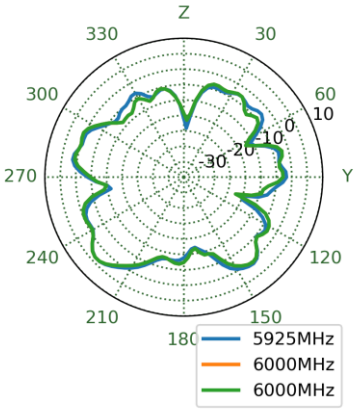
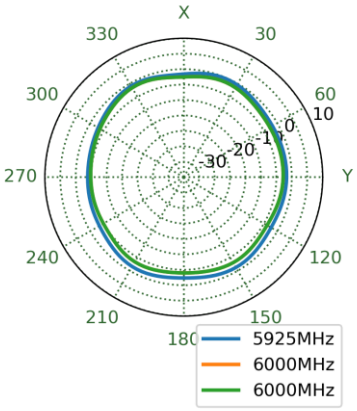
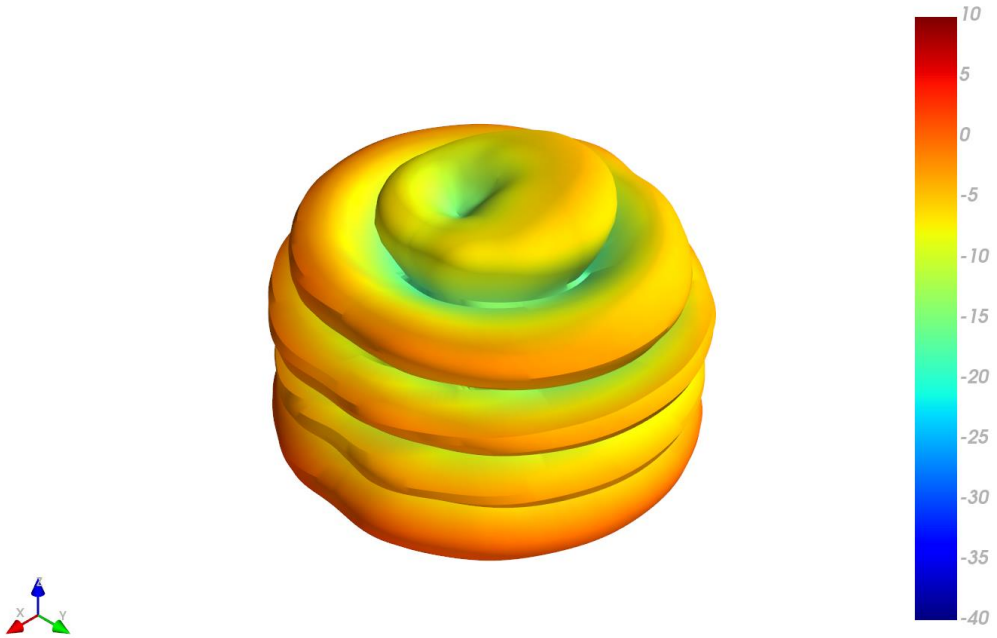
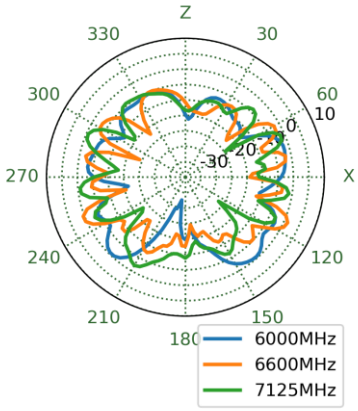
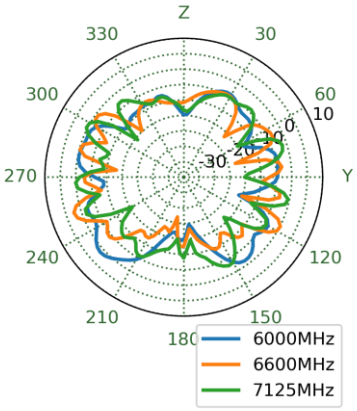
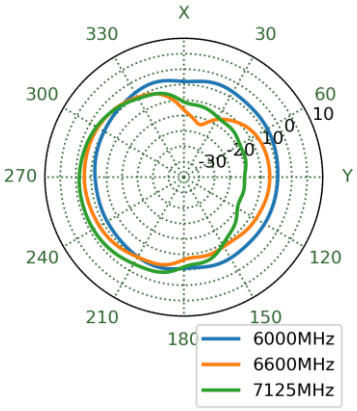


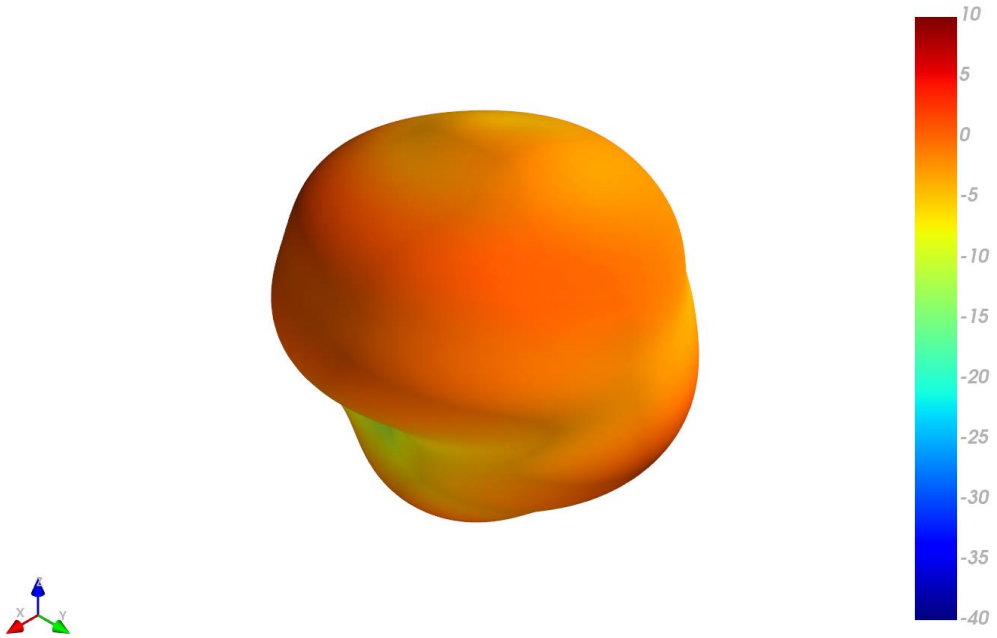
XZ Plane	YZ Plane	XY Plane
		

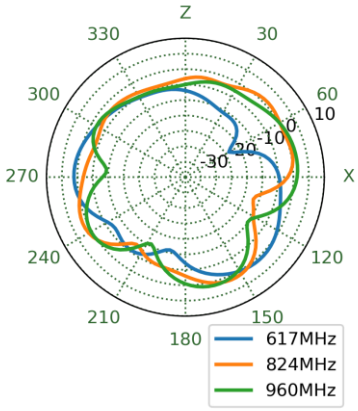
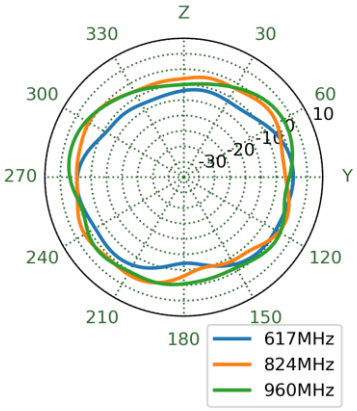
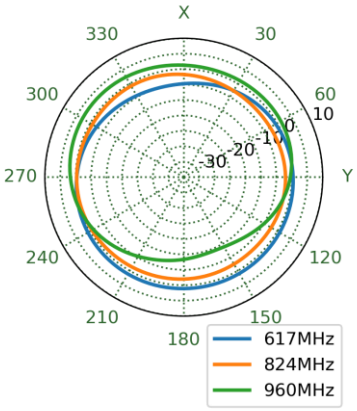
4.8 Free space - Patterns at 6600 MHz



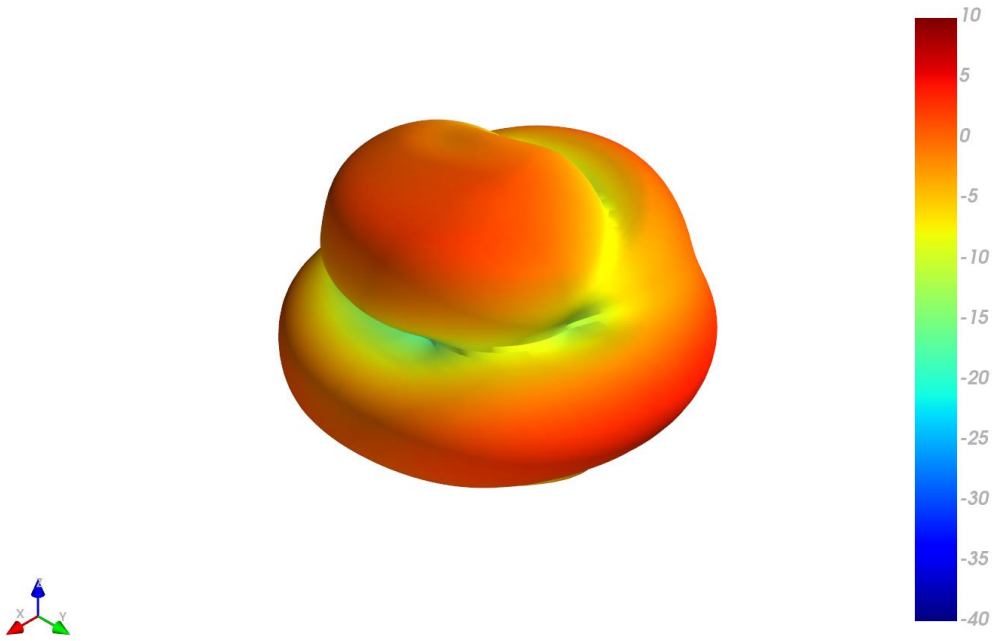
XZ Plane	YZ Plane	XY Plane
		

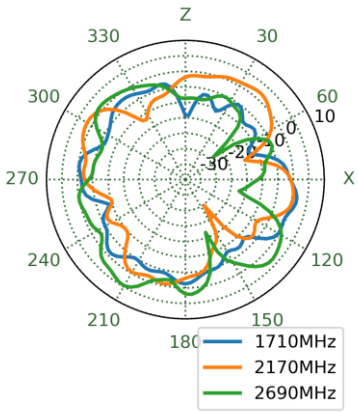
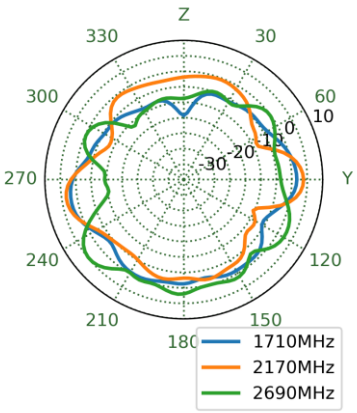
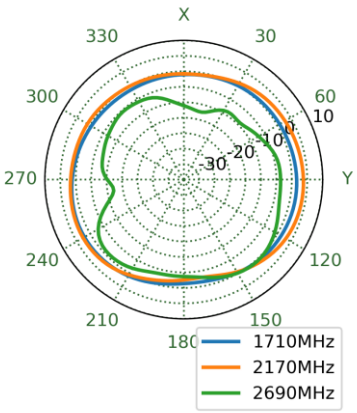
4.9 On 15x9cm Ground - Patterns at 824 MHz



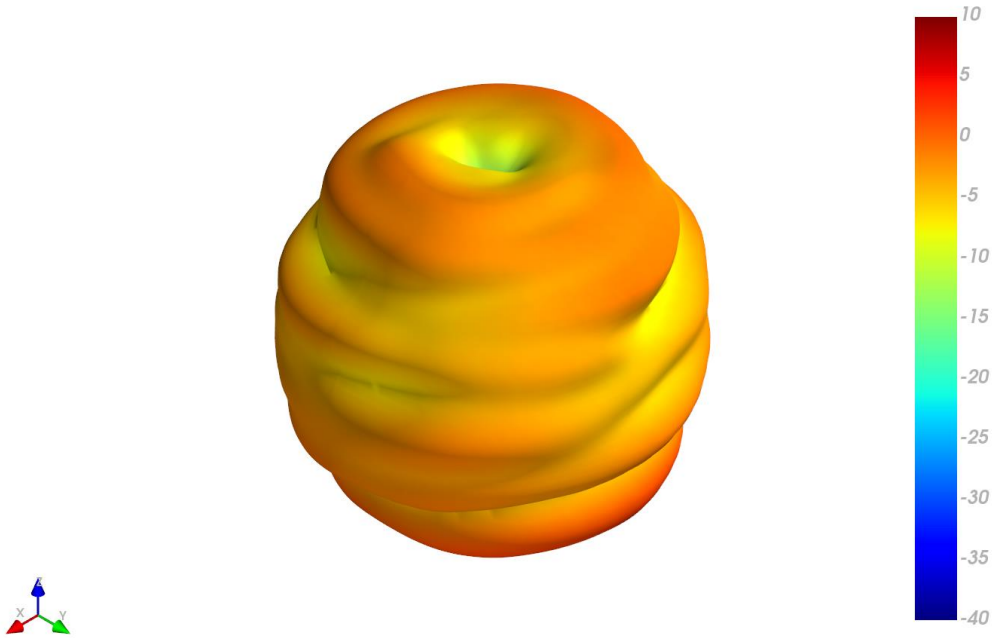
XZ Plane	YZ Plane	XY Plane
		

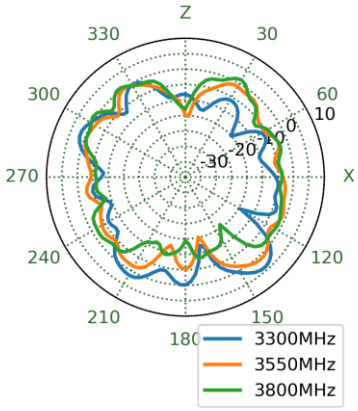
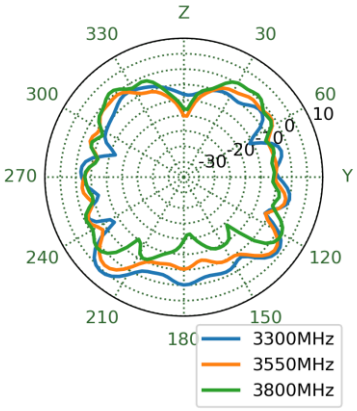
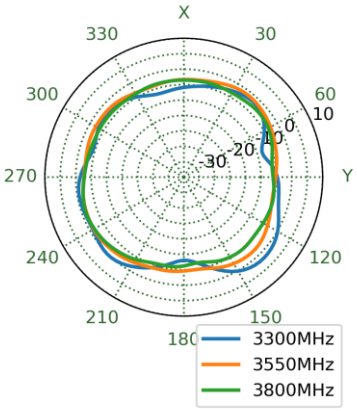
4.10 On 15x9cm Ground - Patterns at 2170 MHz



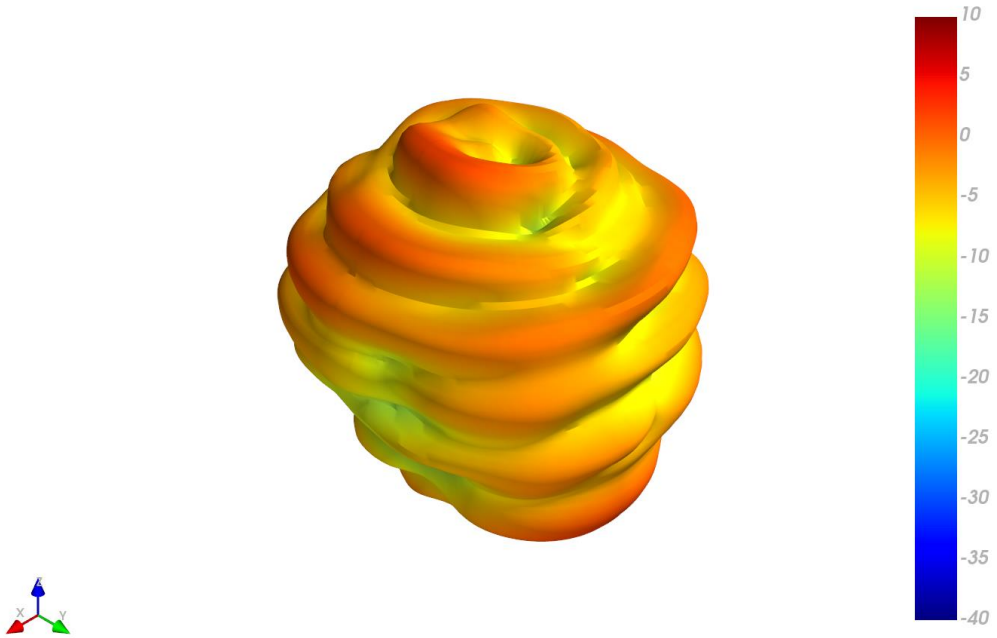
XZ Plane	YZ Plane	XY Plane
		

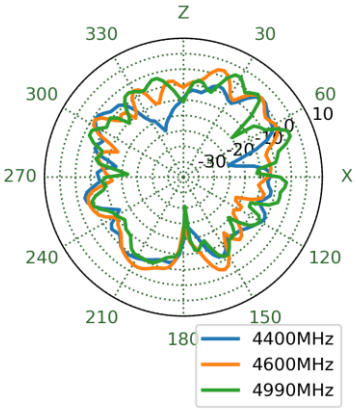
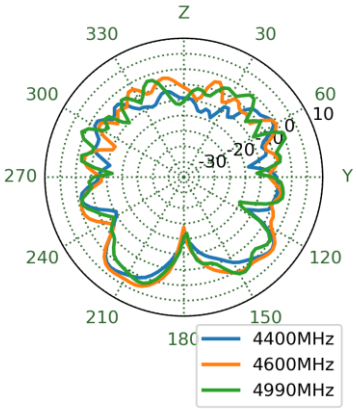
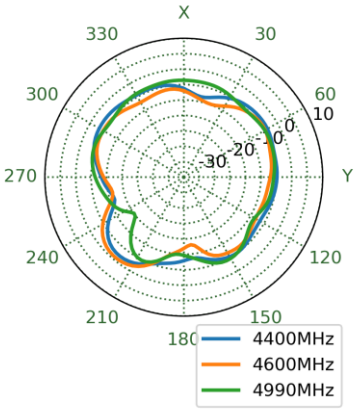
4.11 On 15x9cm Ground - Patterns at 3550 MHz



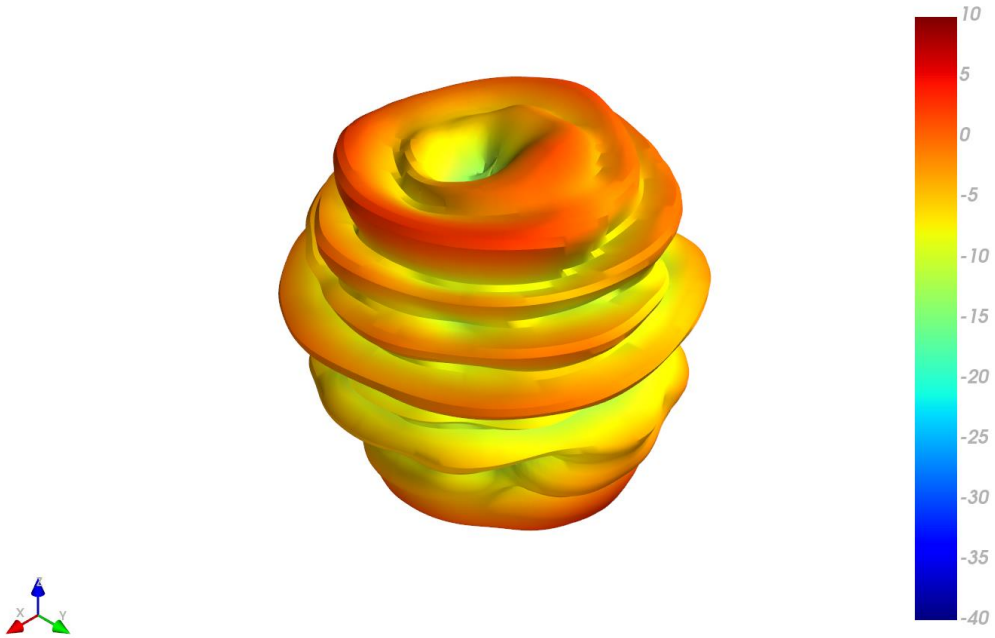
XZ Plane	YZ Plane	XY Plane
		

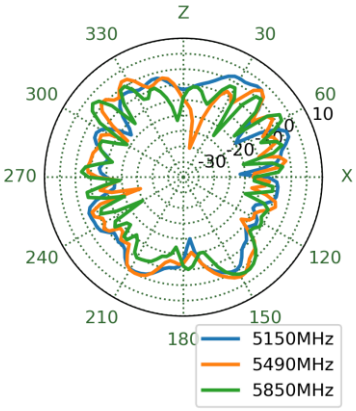
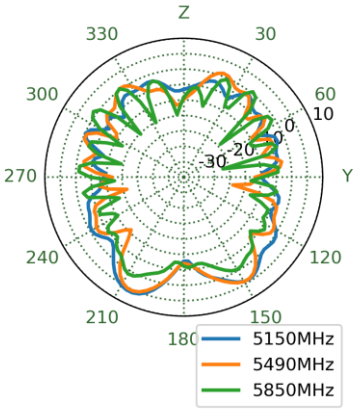
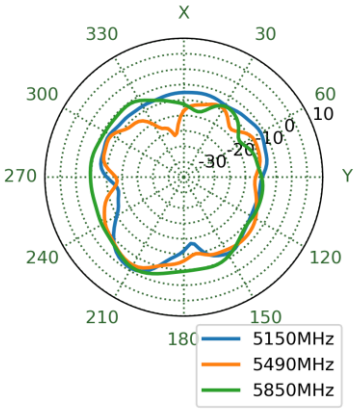
4.12 On 15x9cm Ground - Patterns at 4600 MHz



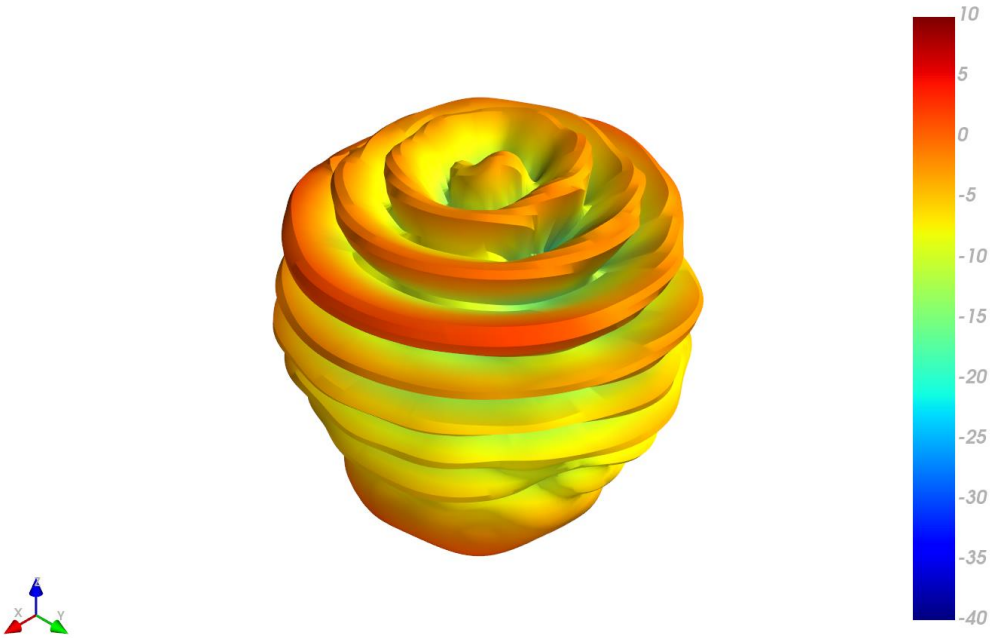
XZ Plane	YZ Plane	XY Plane
		

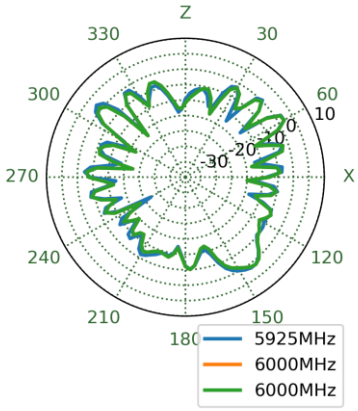
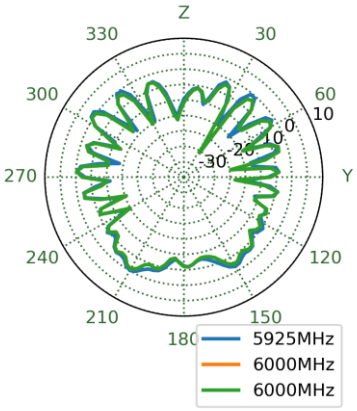
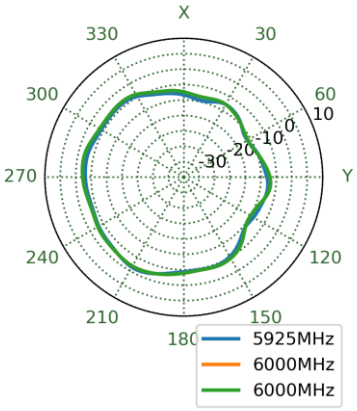
4.13 On 15x9cm Ground - Patterns at 5490 MHz



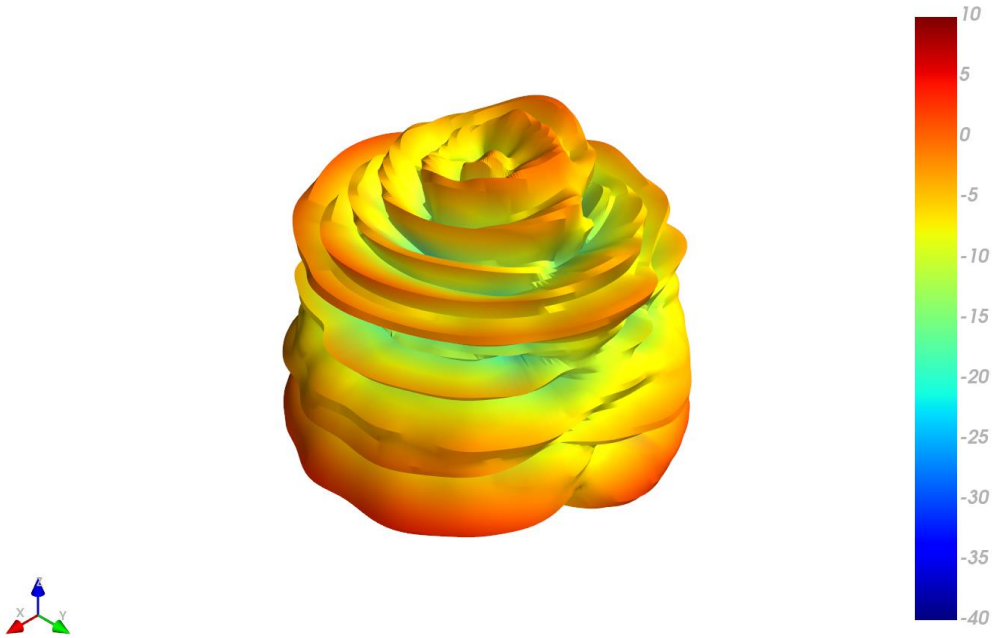
XZ Plane	YZ Plane	XY Plane
		

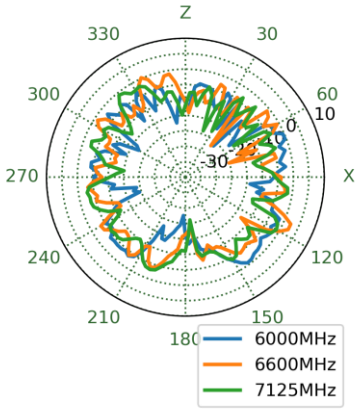
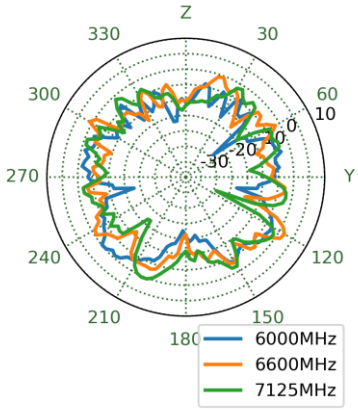
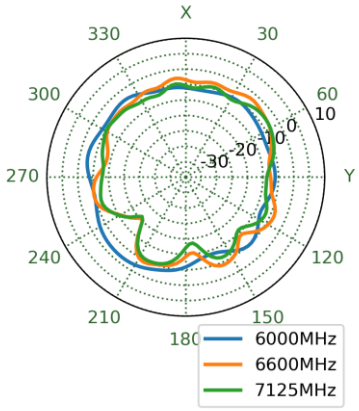
4.14 On 15x9cm Ground - Patterns at 6000 MHz



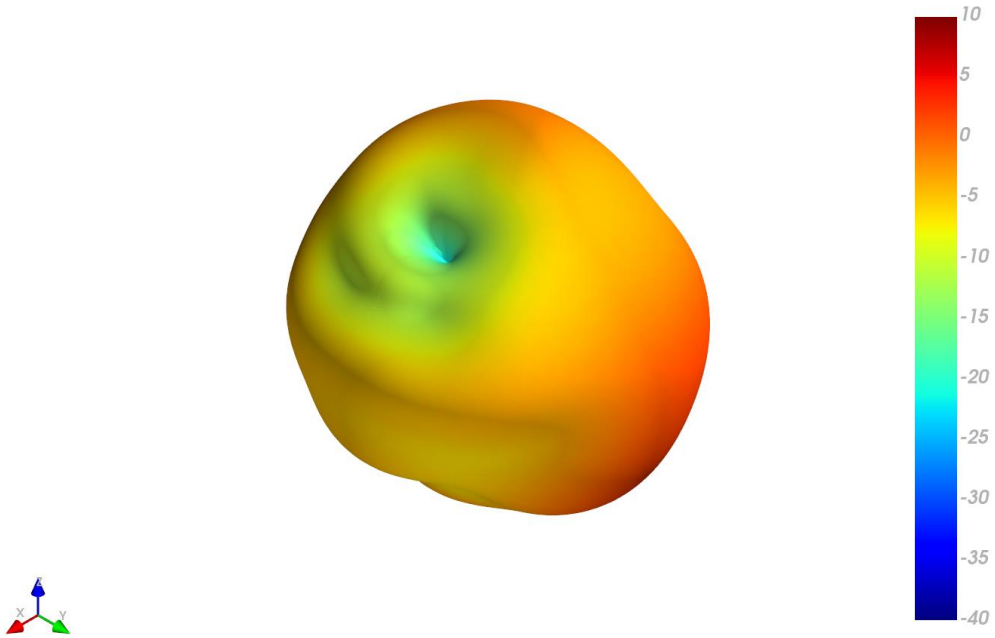
XZ Plane	YZ Plane	XY Plane
		

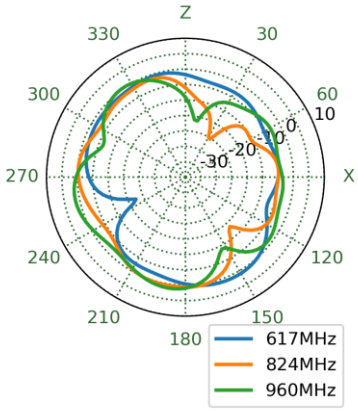
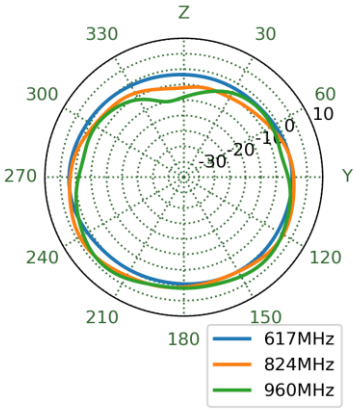
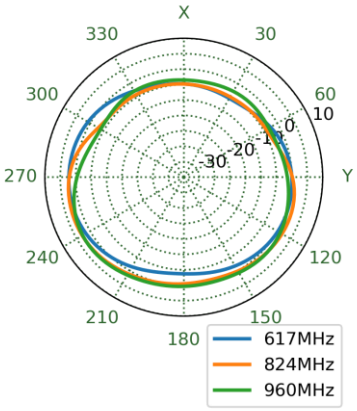
4.15 On 15x9cm Ground - Patterns at 6600 MHz



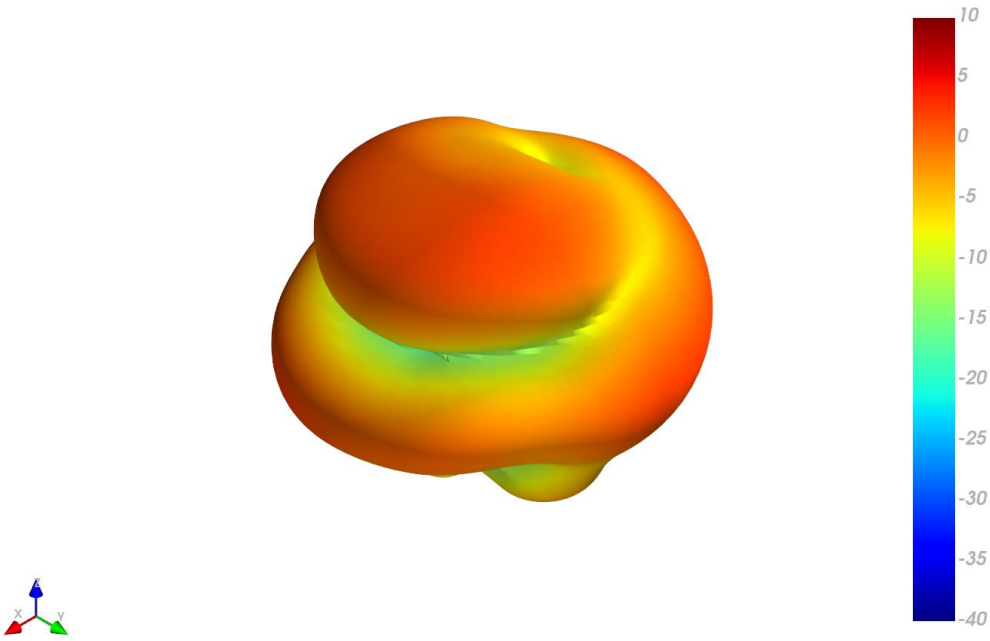
XZ Plane	YZ Plane	XY Plane
		

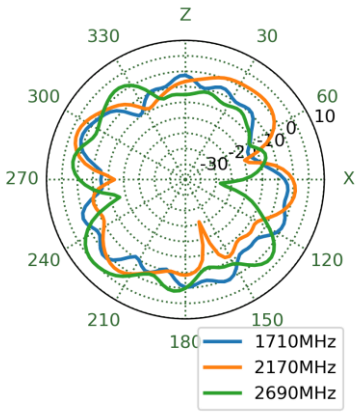
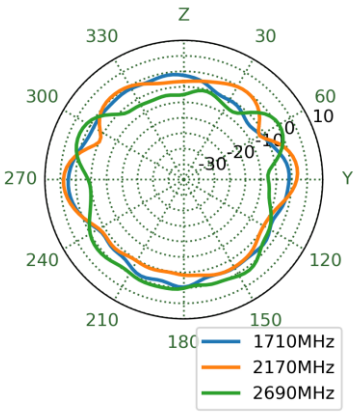
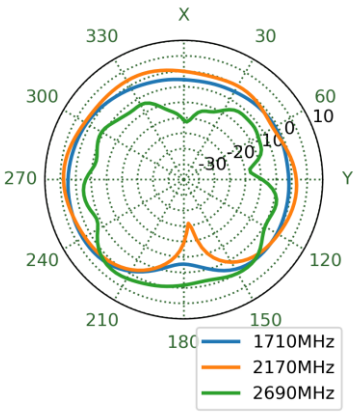
4.16 On 9x15cm Ground - Patterns at 824 MHz



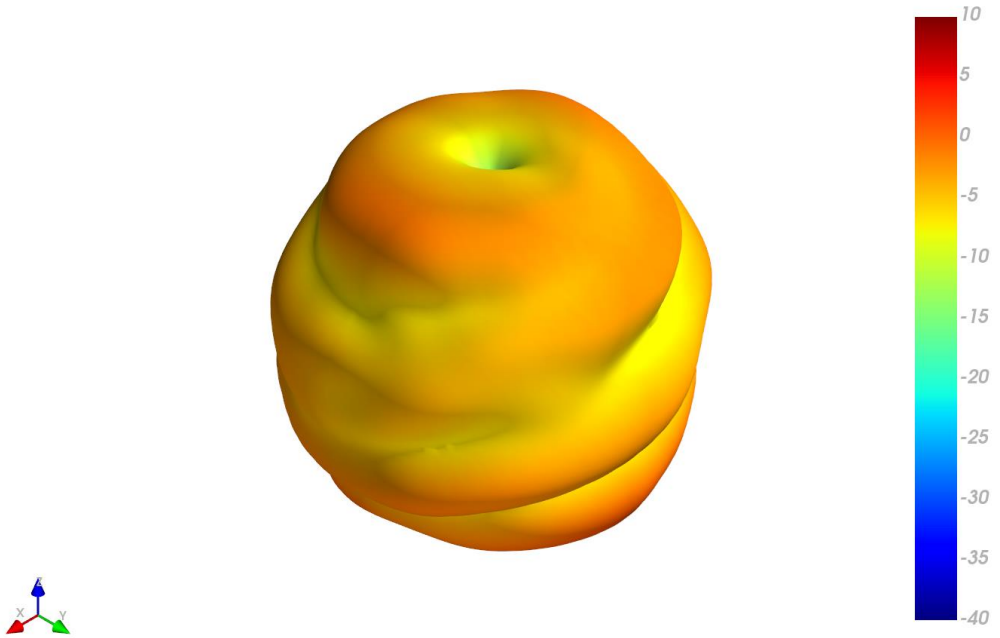
XZ Plane	YZ Plane	XY Plane
		

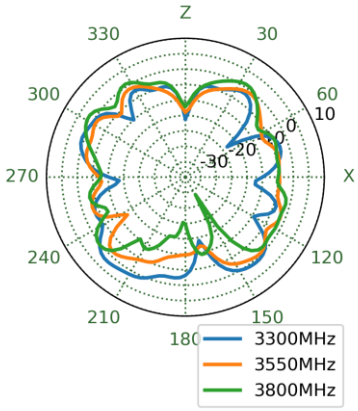
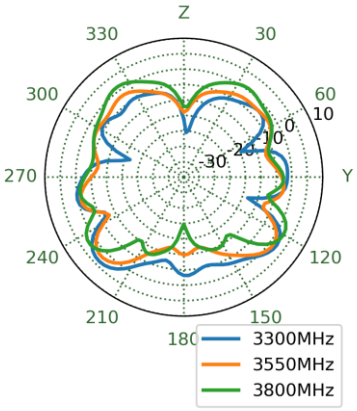
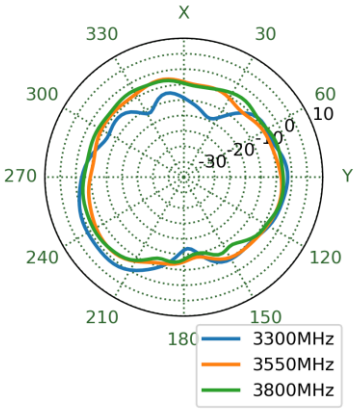
4.17 On 9x15cm Ground - Patterns at 2170 MHz



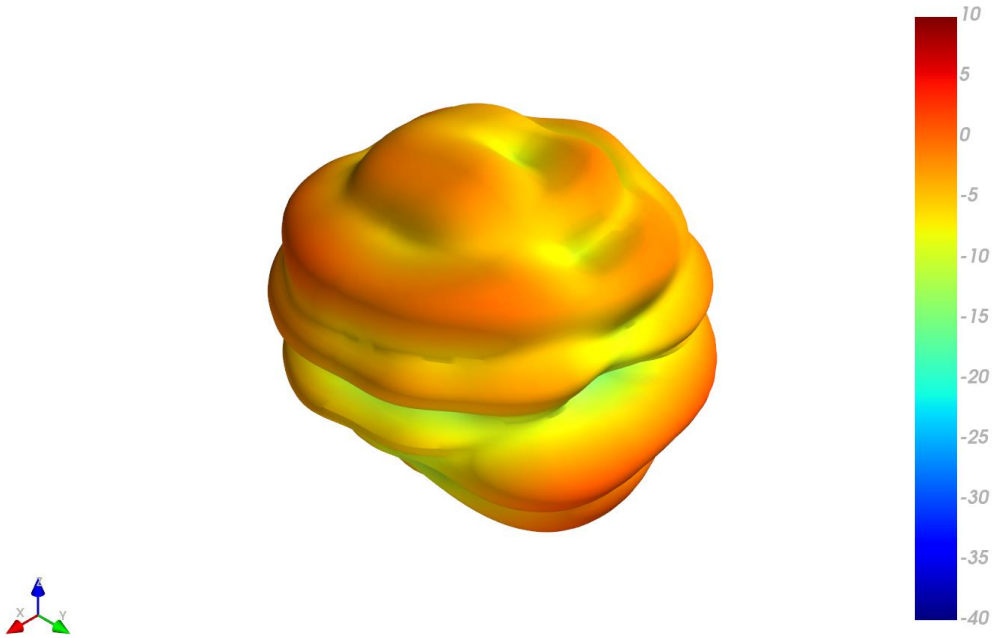
XZ Plane	YZ Plane	XY Plane
		

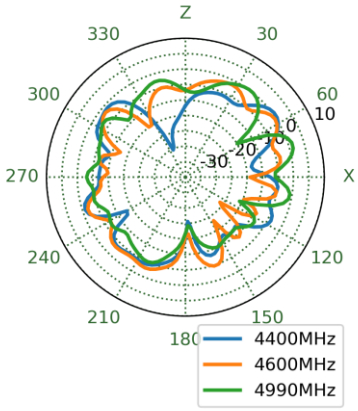
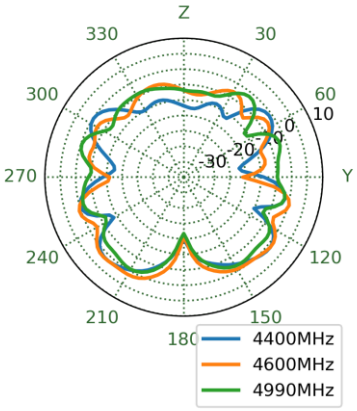
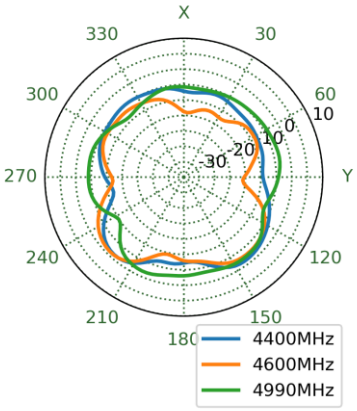
4.18 On 9x15cm Ground - Patterns at 3550 MHz



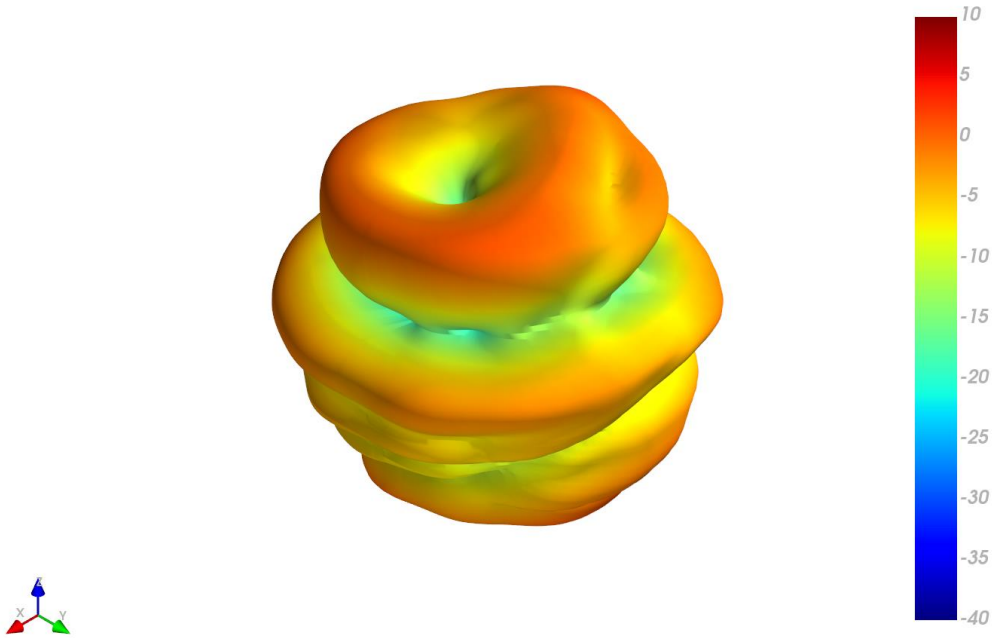
XZ Plane	YZ Plane	XY Plane
		

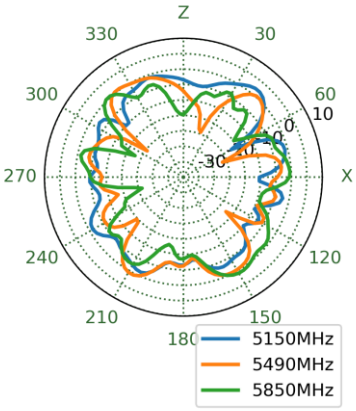
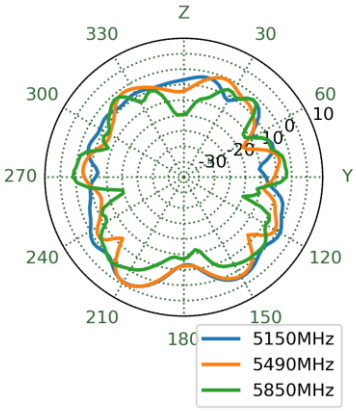
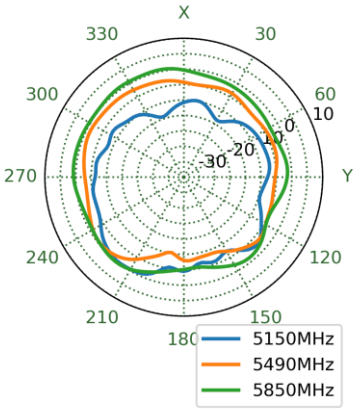
4.19 On 9x15cm Ground - Patterns at 4600 MHz



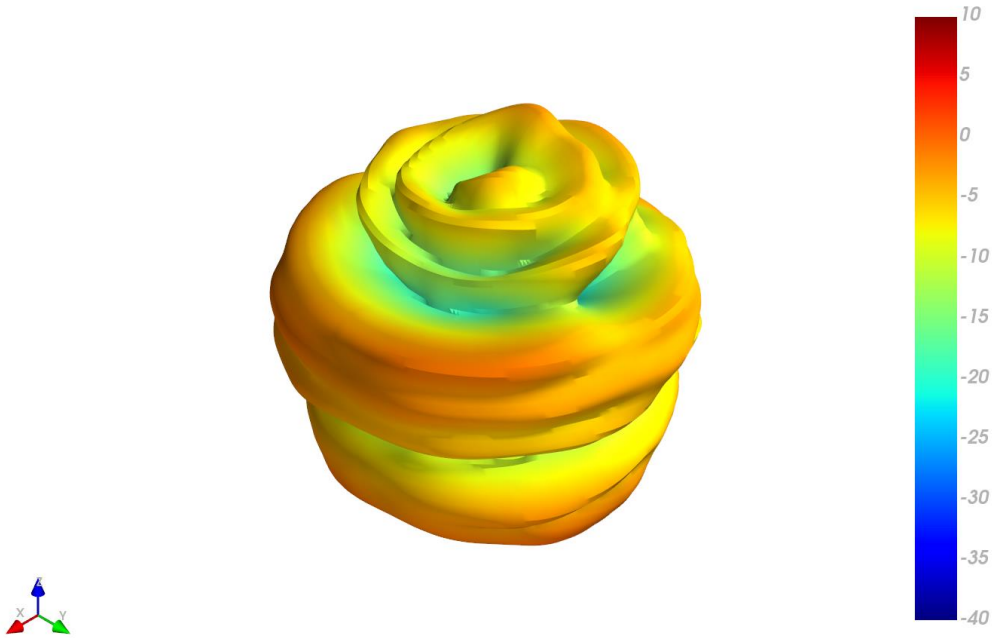
XZ Plane	YZ Plane	XY Plane
		

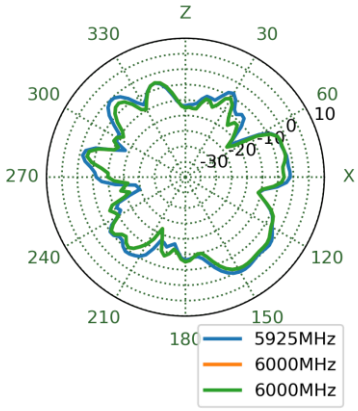
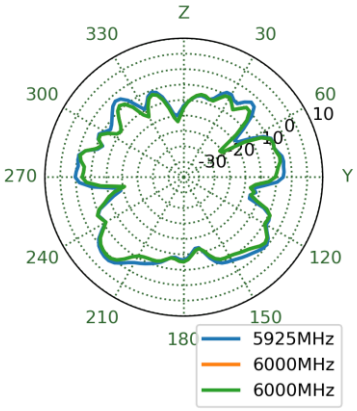
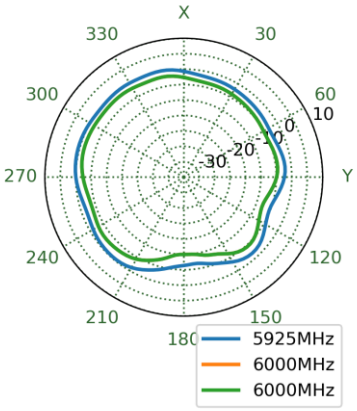
4.20 On 9x15cm Ground - Patterns at 5490 MHz



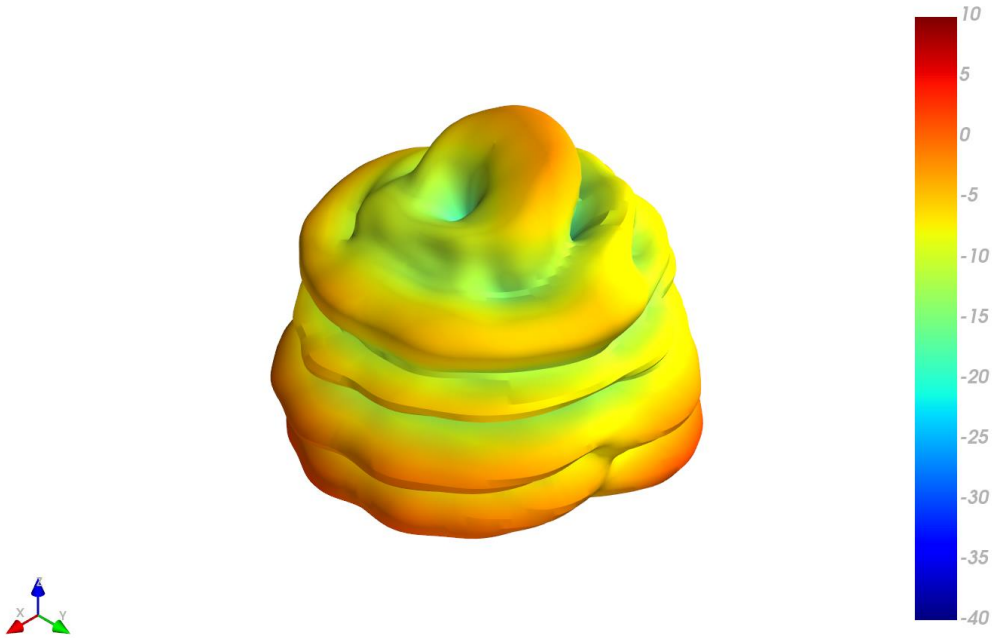
XZ Plane	YZ Plane	XY Plane
		

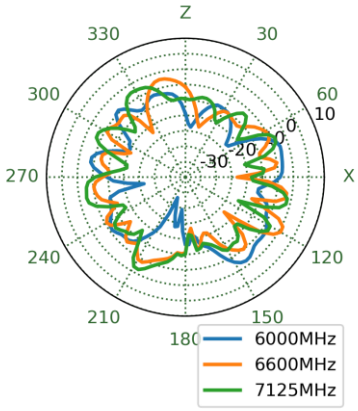
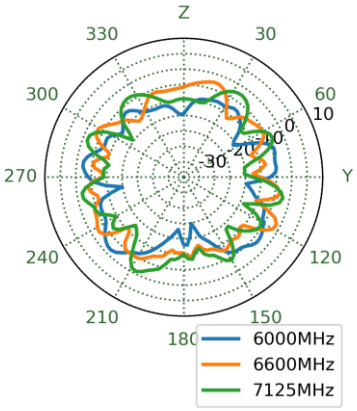
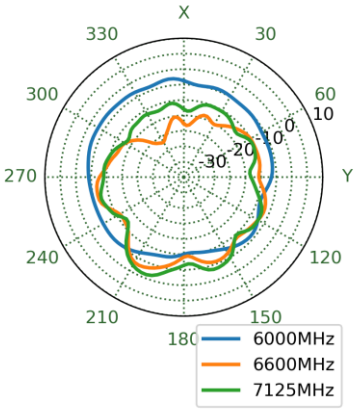
4.21 On 9x15cm Ground - Patterns at 6000 MHz



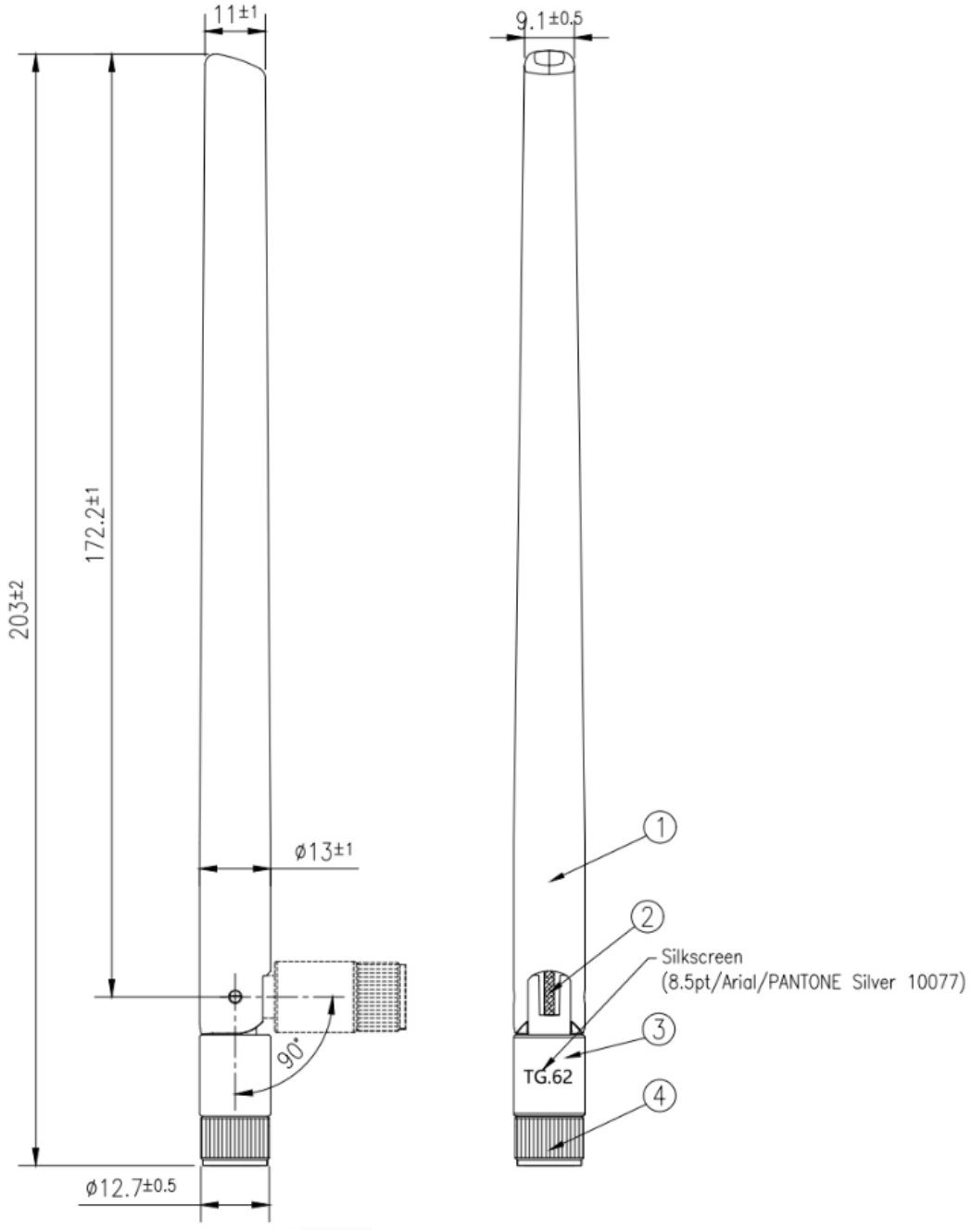
XZ Plane	YZ Plane	XY Plane
		

4.22 On 9x15cm Ground - Patterns at 6600 MHz



XZ Plane	YZ Plane	XY Plane
		

5. Mechanical Drawing



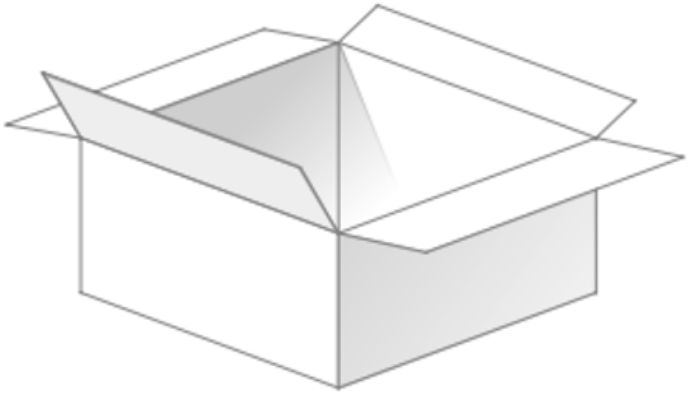
	Name	Material	Finish	QTY
1	Radome	PC+PBT	Black	1
2	RG178 coaxial cable	FEP	Brown	1
3	Lower Holder	PC+PBT	Black	1
4	SMA(M)	PC+PBT	Black	1

6. Packaging

1pc TG. TG.62.A113 per Small PE Bag
Weight - 26g

50pcs TG.62.A113 per Large PE Bag
Weight - 1.3Kg

300pcs TG.62.A113 per carton
Dimensions 320 x 250 x 230mm
Weight - 8.2Kg



Changelog for the datasheet

SPE-23-8-274 – TG.62.A113

Revision: B (Current Version)	
Date:	2024-02-16
Changes:	Changed from Dipole to Monopole and added packaging information.
Changes Made by:	Jack Conroy

Previous Revisions

Revision: A (Original First Release)	
Date:	2023-09-27
Notes:	Initial Release
Author:	Gary West

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