Datasheet

Apex II

Part No:
TG.35.8113W

Description

Apex II - Hinged TG.35 Wideband 5G/4G and Wi-Fi Antenna

Features:

Operates from 600MHz - 7125MHz
Highest efficiency for worldwide LTE and Wi-Fi Bands
Covering LTE / CAT-M1 / NB-IoT / GPS / Wi-Fi
High-performance Dipole Terminal Antenna Design
Hinged 90° termination with SMA(M) Connector
Enhanced hinge for high vibration environments
Dimensions: 224mm * 58mm * 13mm
RoHS & REACH Compliant

1. Introduction

The hinged Apex II TG.35 Wideband Dipole Antenna has been designed to cover all Cellular, ISM and Wi-Fi working frequencies in the 600-7500MHz spectrum. Evolved from the already highly successful Apex TG.30, this second generation has the highest wide-band efficiency in its range of any terminal antenna on the market today.

The Apex II has been primarily designed for use with 5G/4G celllular modules and devices that require the highest possible efficiency and peak gain to deliver best in class throughput on all major cellular bands worldwide for access points, terminals and routers. This also includes CAT-M1 and NB-IoT and the recently introduced 600MHz Extended LTE Band 71. High efficiency is vital for applications such as high speed video and real-time streaming, or high capacity MIMO networks on public transportation. The product also covers Wi-Fi 6 bands up to 7.125GHz.

This attractive slim-line antenna is ground plane independent, meaning it does not need to be connected to the ground-plane of a device to radiate efficiently, on the other hand neither is it seriously detuned by connecting to a ground-plane, thus avoiding a problem notorious to smaller antennas.

It comes with an SMA(M) connector and swivel mechanism that allows the antenna part to be rotated to fit in tight environments. The 90° hinge structure has been improved and strengthened so that the antenna in a 90° position would not fall down to 180° in vibration environment.

The Apex II is backward compatible with 3G/2G cellular applications such as HSPA, GSM, GPRS, UMTS, Wi-Fi and even has GPS included for Assisted GPS and/or E911 applications.

In summary the Apex II is the ideal solution for any device requiring high, reliable performance. It will meet most type approval or carrier certification requirements from an efficiency standpoint. The antenna also makes an excellent reference antenna for test purposes. It has been designed as an omni-directional antenna and the radiation patterns prove this, being stable across all bands.

Connector type is customizable. Housing is also available in black. Contact Taoglas regional sales office for more information.

2. Specifications

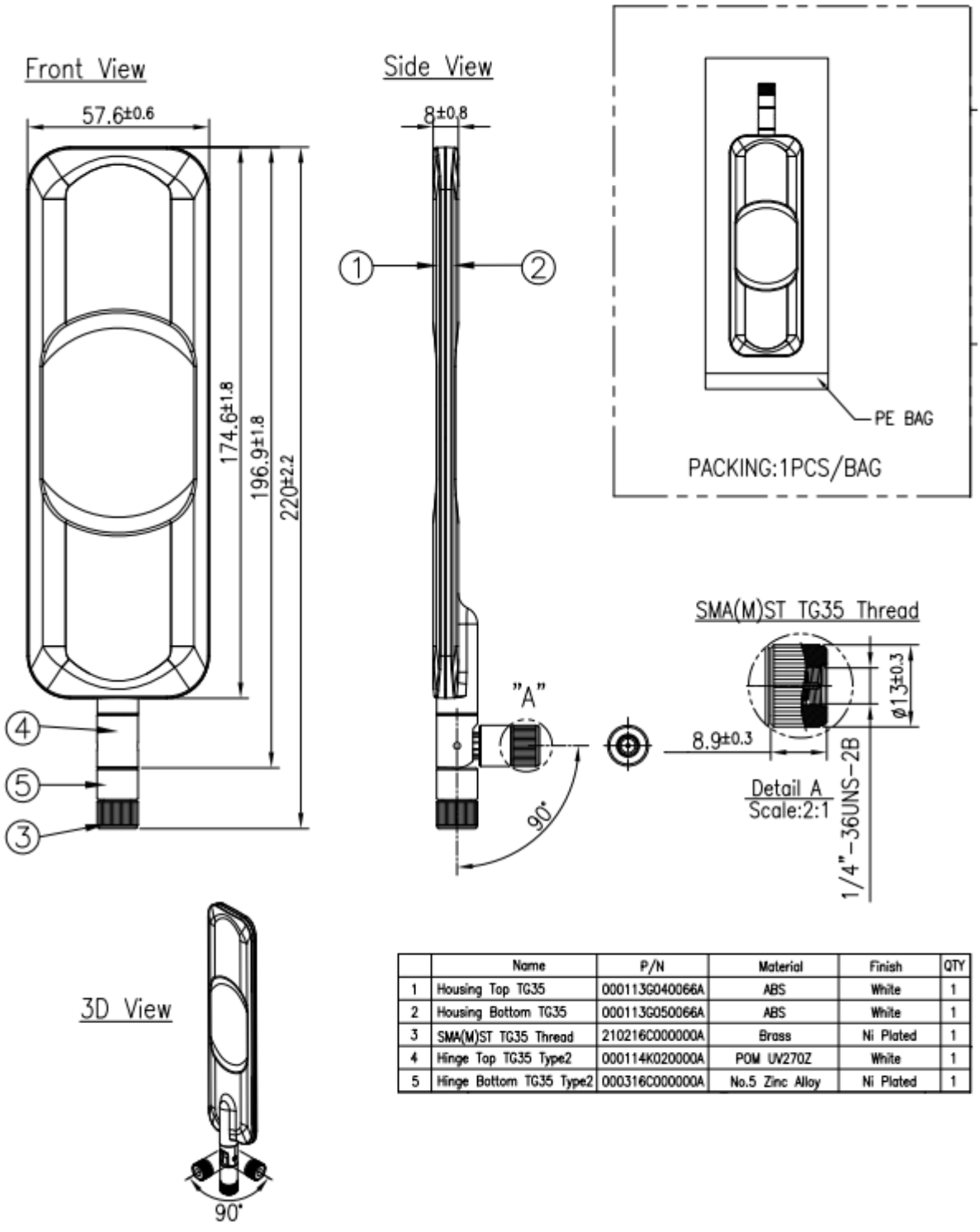
Electrical								
Band	Frequency (MHz)	Measurement	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern
5GNR/4G Band71	617-698	Bent Centre Ground Plane	37.6	-4.25	3.87	50 Ω	Linear	Omni
		Bent Edge Ground Plane	70.3	-1.53	2.87			
		Bent Free Space	75.4	-1.23	4.35			
		Straight Centre Ground Plane	81.5	-0.89	4.19			
		Straight Edge Ground Plane	69.6	-1.57	3.83			
		Straight Free Space	67.5	-1.71	3.73			
4G/3G Band 12,13,14,17,28,29	698-806	Bent Centre Ground Plane	52.8	-2.77	3.87			
		Bent Edge Ground Plane	81.9	-0.87	4.04			
		Bent Free Space	87.9	-0.56	4.35			
		Straight Centre Ground Plane	91.1	-0.40	4.01			
		Straight Edge Ground Plane	83.5	-0.78	3.83			
		Straight Free Space	82.1	-0.86	2.50			
4G/3G/NB-IoT/Cat M Band 5,8,18,19,20,26,27	824-960	Bent Centre Ground Plane	48.5	-3.14	3.01			
		Bent Edge Ground Plane	80.7	-0.93	3.08			
		Bent Free Space	75.4	-1.22	3.48			
		Straight Centre Ground Plane	87.7	-0.57	4.00			
		Straight Edge Ground Plane	86.7	-0.62	3.70			
		Straight Free Space	78.2	-1.07	3.06			
5GNR/4G Band 21,32,74,75,76	1427-1518	Bent Centre Ground Plane	46.5	-3.32	4.71			
		Bent Edge Ground Plane	56.4	-2.49	1.61			
		Bent Free Space	69.1	-1.61	2.27			
		Straight Centre Ground Plane	68.4	-1.65	1.71			
		Straight Edge Ground Plane	54.2	-2.66	2.13			
		Straight Free Space	65.7	-1.83	2.58			
4G/3G Band 1,2,3,4,9,23,25,35,39,66	1710-2200	Bent Centre Ground Plane	64.0	-1.94	6.31			
		Bent Edge Ground Plane	56.8	-2.46	3.50			
		Bent Free Space	68.2	-1.66	4.28			
		Straight Centre Ground Plane	63.2	-1.99	3.04			
		Straight Edge Ground Plane	52.3	-2.81	3.11			
		Straight Free Space	67.3	-1.72	4.99			
4G/3G Band 7,30,38,40,41	2300-2690	Bent Centre Ground Plane	64.5	-1.91	8.37			
		Bent Edge Ground Plane	46.8	-3.30	6.47			
		Bent Free Space	61.2	-2.14	3.92			
		Straight Centre Ground Plane	63.0	-2.00	7.95			
		Straight Edge Ground Plane	43.1	-3.65	3.25			
		Straight Free Space	59.3	-2.27	4.31			
5GNR/4G Band 22,42,48,77,78,79	3300-3850	Bent Centre Ground Plane	29.8	-5.26	4.54			
		Bent Edge Ground Plane	23.3	-6.33	4.60			
		Bent Free Space	28.4	-5.46	1.80			
		Straight Centre Ground Plane	32.7	-4.86	6.76			
		Straight Edge Ground Plane	21.6	-6.65	0.36			
		Straight Free Space	28.3	-5.48	1.97			
LTE5200/Wi-Fi5800	5150-5925	Bent Centre Ground Plane	66.5	-1.77	8.06			
		Bent Edge Ground Plane	44.7	-3.49	4.32			
		Bent Free Space	66.5	-1.77	5.05			
		Straight Centre Ground Plane	61.6	-2.11	8.79			
		Straight Edge Ground Plane	41.7	-3.80	4.56			
		Straight Free Space	64.3	-1.92	5.49			
Wi-Fi - 6GHz	5925-7125	Bent Centre Ground Plane	41.7	-3.80	7.89			
		Bent Edge Ground Plane	31.7	-4.98	3.11			
		Bent Free Space	55.4	-2.56	3.88			
		Straight Centre Ground Plane	38.5	-4.14	5.88			
		Straight Edge Ground Plane	32.3	-4.91	4.28			
		Straight Free Space	53.4	-2.72	3.95			

5G/4G Bands								
Band Number	5GNR / FR1 / LTE / LTE-Advanced / WCDMA / HSPA / HSPA+ / TD-SCDMA							
	Uplink	Downlink	Bent Centre Ground Plane	Bent Edge Ground Plane	Bent Free Space	Straight Centre Ground Plane	Straight Edge Ground Plane	Straight Free Space
B1	1920 to 1980	2110 to 2170	✓	✓	✓	✓	✓	✓
B2	1850 to 1910	1930 to 1990	✓	✓	✓	✓	✓	✓
B3	1710 to 1785	1805 to 1880	✓	✓	✓	✓	✓	✓
B4	1710 to 1755	2110 to 2155	✓	✓	✓	✓	✓	✓
B5	824 to 849	869 to 894	✓	✓	✓	✓	✓	✓
B7	2500 to 2570	2620 to 2690	✓	✓	✓	✓	✓	✓
B8	880 to 915	925 to 960	✓	✓	✓	✓	✓	✓
B9*	1749.9 to 1784.9	1844.9 to 1879.9	✓	✓	✓	✓	✓	✓
B11	1427.9 to 1447.9	1475.9 to 1495.9	✓	✓	✓	✓	✓	✓
B12	699 to 716	729 to 746	✓	✓	✓	✓	✓	✓
B13	777 to 787	746 to 756	✓	✓	✓	✓	✓	✓
B14	788 to 798	758 to 768	✓	✓	✓	✓	✓	✓
B17	704 to 716	734 to 746	✓	✓	✓	✓	✓	✓
B18	815 to 830	860 to 875	✓	✓	✓	✓	✓	✓
B19	830 to 845	875 to 890	✓	✓	✓	✓	✓	✓
B20	832 to 862	791 to 821	✓	✓	✓	✓	✓	✓
B21	1447.9 to 1462.9	1495.9 to 1510.9	✓	✓	✓	✓	✓	✓
B22*	3410 to 3490	3510 to 3590	✓	✓	✓	✓	✓	✓
B23*	2000 to 2020	2180 to 2200	✓	✓	✓	✓	✓	✓
B24	1626.5 to 1660.5	1525 to 1559	✓	✓	✓	✓	✓	✓
B25	1850 to 1915	1930 to 1995	✓	✓	✓	✓	✓	✓
B26	814 to 849	859 to 894	✓	✓	✓	✓	✓	✓
B27*	807 to 824	852 to 869	✓	✓	✓	✓	✓	✓
B28	703 to 748	758 to 803	✓	✓	✓	✓	✓	✓
B29	717 to 728		✓	✓	✓	✓	✓	✓
B30	2305 to 2315	2350 to 2360	✓	✓	✓	✓	✓	✓
B31	452.5 to 457.5	462.5 to 467.5	✗	✗	✗	✗	✗	✗
B32	1452 to 1496		✓	✓	✓	✓	✓	✓
B34	2010 to 2025		✓	✓	✓	✓	✓	✓
B35	1850 to 1910		✓	✓	✓	✓	✓	✓
B36	1930 to 1990		✓	✓	✓	✓	✓	✓
B37	1910 to 1930		✓	✓	✓	✓	✓	✓
B38	2570 to 2620		✓	✓	✓	✓	✓	✓
B39	1880 to 1920		✓	✓	✓	✓	✓	✓
B40	2300 to 2400		✓	✓	✓	✓	✓	✓
B41	2496 to 2690		✓	✓	✓	✓	✓	✓
B42	3400 to 3600		✓	✓	✓	✓	✓	✓
B43	3600 to 3800		✓	✓	✓	✓	✓	✓
B45	1447 to 1467		✓	✓	✓	✓	✓	✓
B46	5150 to 5925		✓	✓	✓	✓	✓	✓
B47	5855 to 5925		✓	✓	✓	✓	✓	✓
B48	3550 to 3700		✓	✓	✓	✓	✓	✓
B49	3550 to 3700		✓	✓	✓	✓	✓	✓
B50	1432 to 1517		✓	✓	✓	✓	✓	✓
B51	1427 to 1432		✓	✓	✓	✓	✓	✓
B52	3300 to 3400		✓	✓	✓	✓	✓	✓
B53	2483.5 to 2495		✓	✓	✓	✓	✓	✓
B65	1920 to 2010	2110 to 2200	✓	✓	✓	✓	✓	✓
B66	1710 to 1780	2110 to 2200	✓	✓	✓	✓	✓	✓
B68	698 to 728	753 to 783	✓	✓	✓	✓	✓	✓
B69	2570 to 2620		✓	✓	✓	✓	✓	✓
B70	1695 to 1710	1995 to 2020	✓	✓	✓	✓	✓	✓
B71	663 to 698	617 to 652	✓	✓	✓	✓	✓	✓
B72	451 to 456	461 to 466	✗	✗	✗	✗	✗	✗
B73	450 to 455	460 to 465	✗	✗	✗	✗	✗	✗
B74	1427 to 1470	1475 to 1518	✓	✓	✓	✓	✓	✓
B75	1432 to 1517		✓	✓	✓	✓	✓	✓
B76	1427 to 1432		✓	✓	✓	✓	✓	✓
B77	3300 to 4200		✓	✓	✓	✓	✓	✓
B78	3300 to 3800		✓	✓	✓	✓	✓	✓
B79	4400 to 5000		✓	✓	✓	✓	✓	✓
B85	698 to 716	728 to 746	✓	✓	✓	✓	✓	✓
B87	410 to 415	420 to 425	✗	✗	✗	✗	✗	✗
B88	412 to 417	422 to 427	✗	✗	✗	✗	✗	✗

Mechanical	
Casing	UV Resistant PC/ABS
Connector	SMA Male Hinged 90°
Weight	75g
Recommended Torque for Mounting	0.9 N·m
Max torque for Mounting	1.176 N·m

Environmental	
Temperature Range (Use and Storage)	-40°C to 85°C
Humidity	Non-condensing 65°C 95% RH

3. Mechanical Drawing



	Name	P/N	Material	Finish	QTY
1	Housing Top TG35	000113G040066A	ABS	White	1
2	Housing Bottom TG35	000113G050066A	ABS	White	1
3	SMA(M)ST TG35 Thread	210216C000000A	Brass	Ni Plated	1
4	Hinge Top TG35 Type2	000114K020000A	POM UV270Z	White	1
5	Hinge Bottom TG35 Type2	000316C000000A	No.5 Zinc Alloy	Ni Plated	1

4. Installation Recommendation

Taoglas produces a range of antennas have independent rotating SMA connectors. This enables the user to install the antenna in a preferable direction. After tightening the SMA connector, the antenna will sit firmly on users' base/router on either a table or on a wall. This installation sheet is illustrated using the TG.45 on a wall mounted device as an example.

Step 1.
Adjust the antenna to preferable direction or orientation, then mount the antennas SMA(M) connector onto the SMA(F) connector of the device. (See figure 1)

Step 2.
Firmly old the antenna housing with one hand, while rotating the SMA(M) connector with the other hand until the connector is tight and holds a fixed position. (See figure 2) Recommended torque is 0.34 - 0.57 NM or 3 - 5in-lbs.

Note: If more than one antenna is being used and for ease of installation, it is best practice to install the largest antenna first.

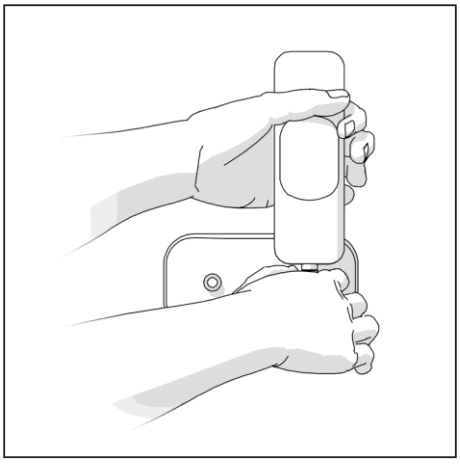


Figure 1.
Place the antenna onto the connector of the device and hold the antenna in the preferred orientation.

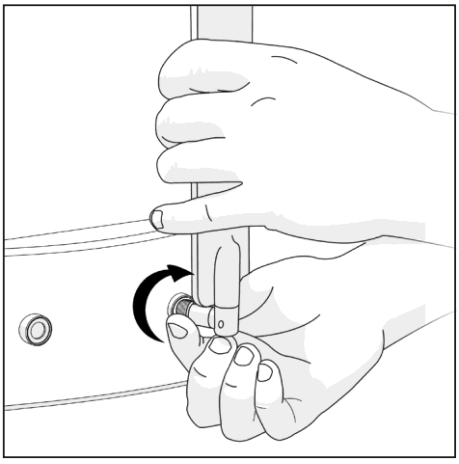


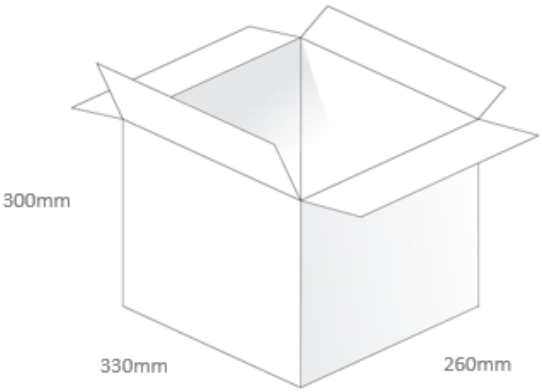
Figure 2.
Fix the connector to the device by twisting the rotating head of the SMA connector until it is tight enough to hold the antenna in the correct position.

5. Packaging

1pc TG.35.8113 per Small PE Bag with Video Link label
Dimensions: 100*280mm
Weight: 73.5g

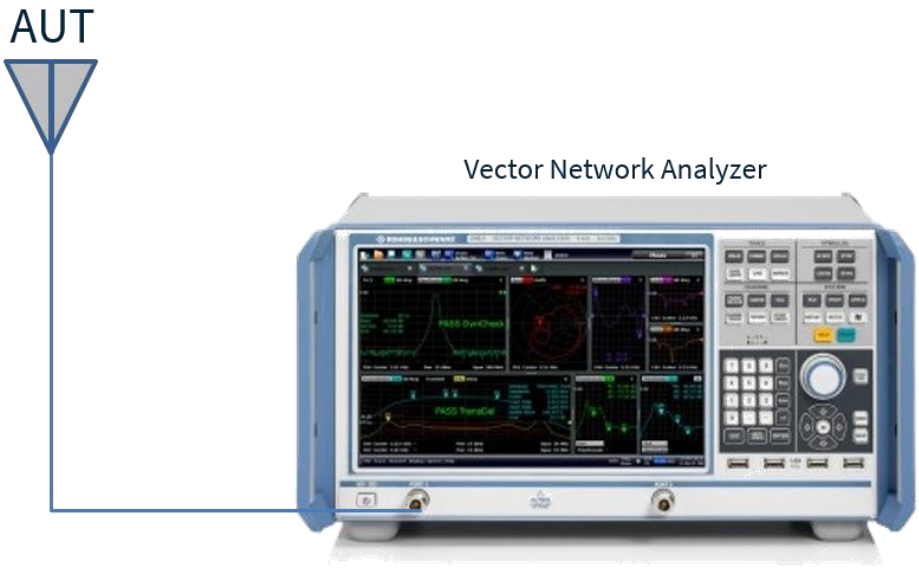
25pcs per Large PE Bag
Dimensions: 280*430mm
Weight: 1.85Kg

75pcs TG.35.8113 per Carton
Carton Dimensions: 330*260*300mm
Weight: 6.1Kg

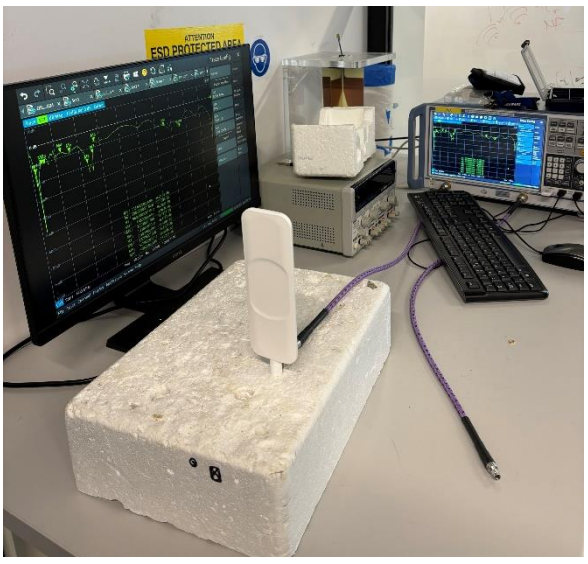


6. Antenna Characteristics

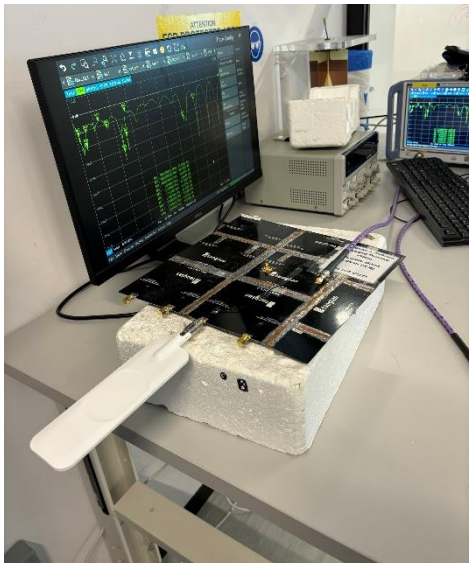
6.1 Test Setup



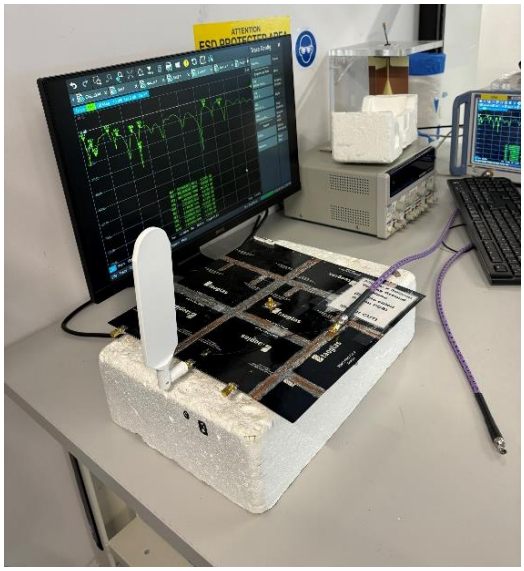
VNA Set up Straight in Free Space



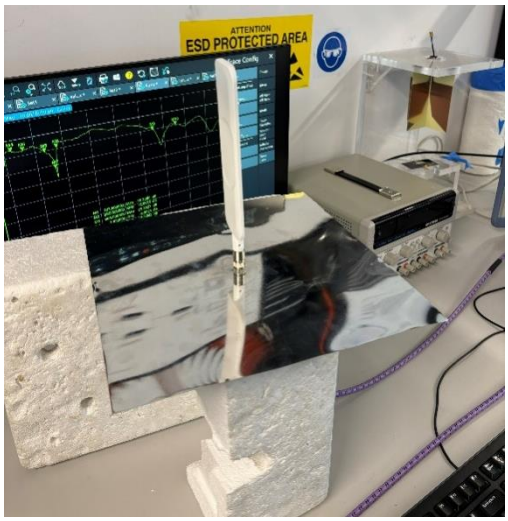
VNA Set up Bent in Free Space



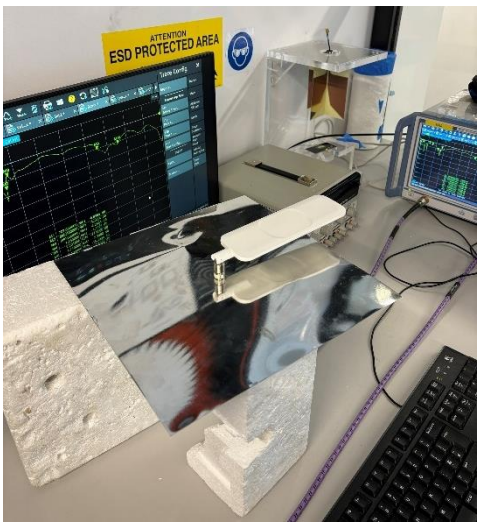
VNA Set up Straight on Edge of 30x30cm Ground Plane



VNA Set up Bent on Edge of 30x30cm Ground Plane

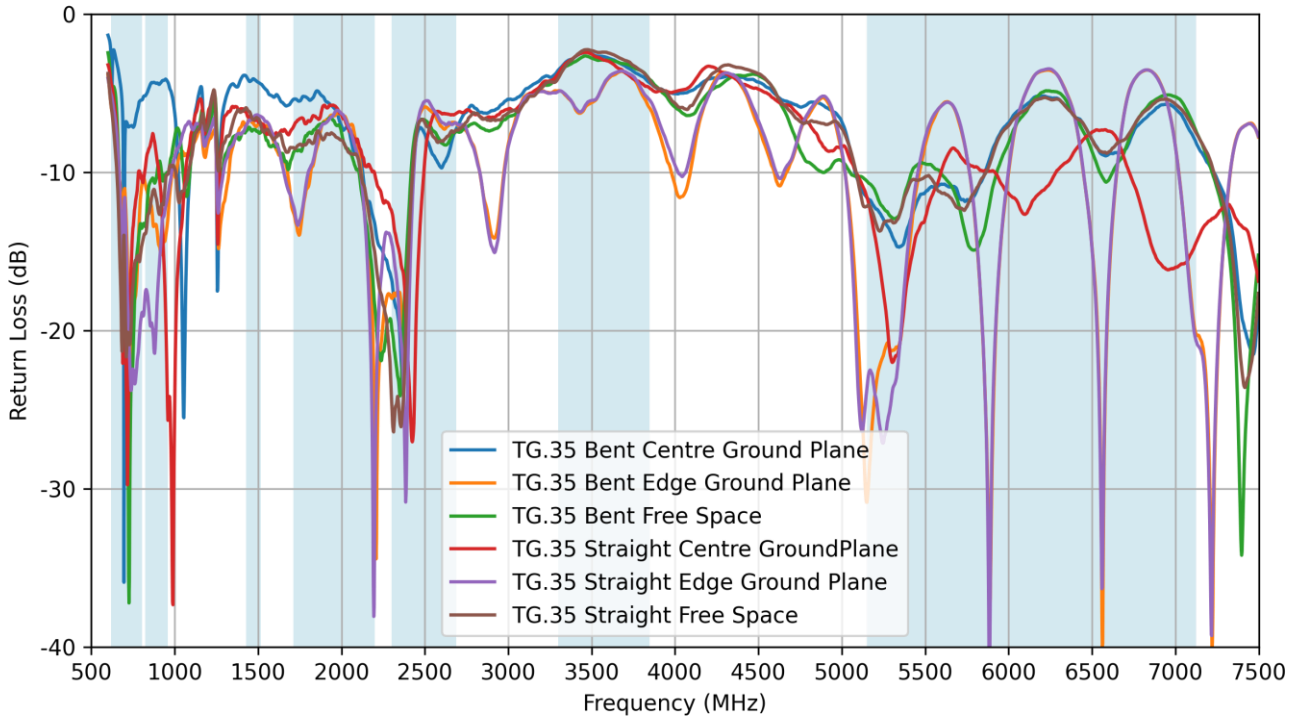


VNA Set up Straight in Centre of 30x30cm Ground Plane

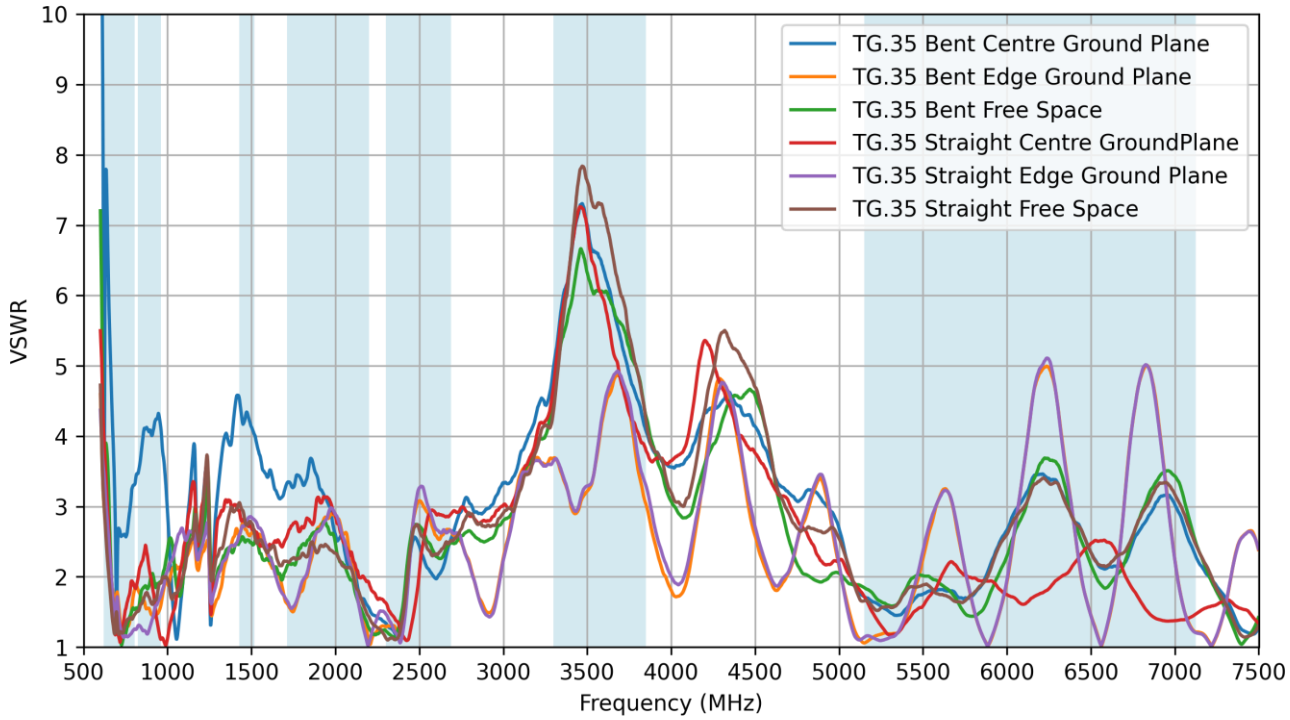


VNA Set up Bent in Centre of 30x30cm Ground Plane

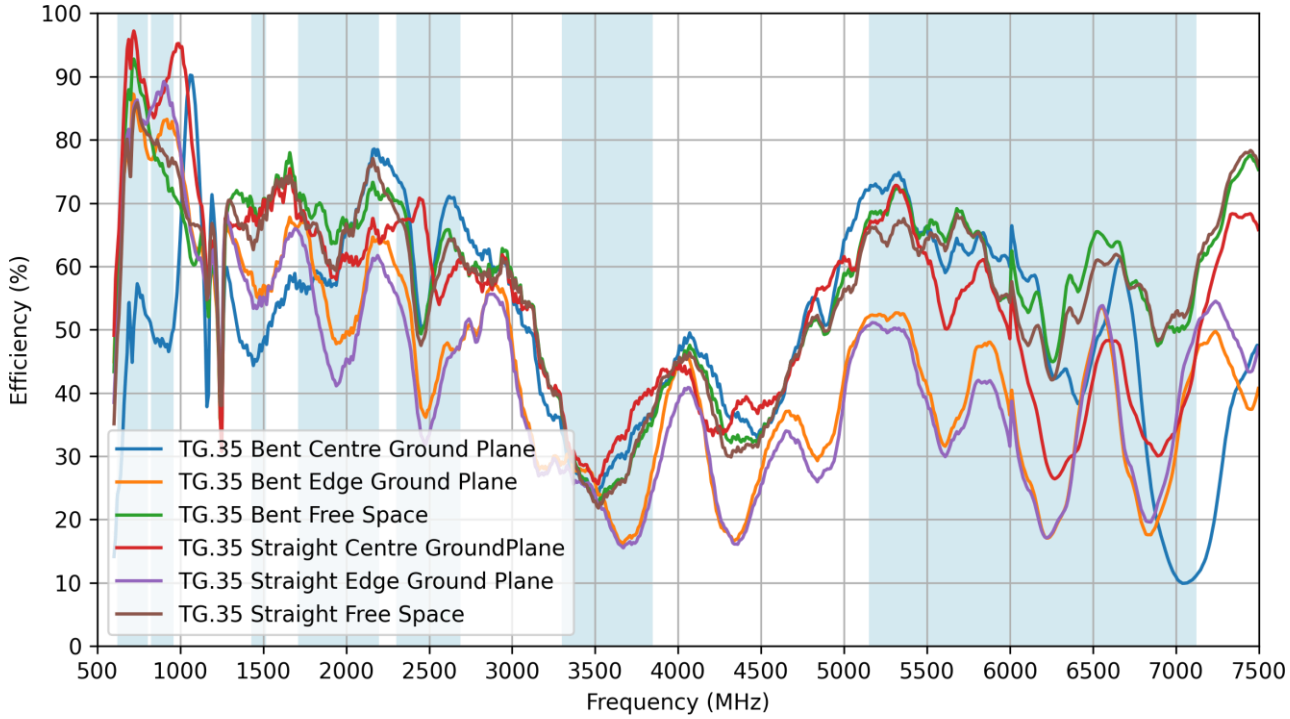
6.2 Return Loss



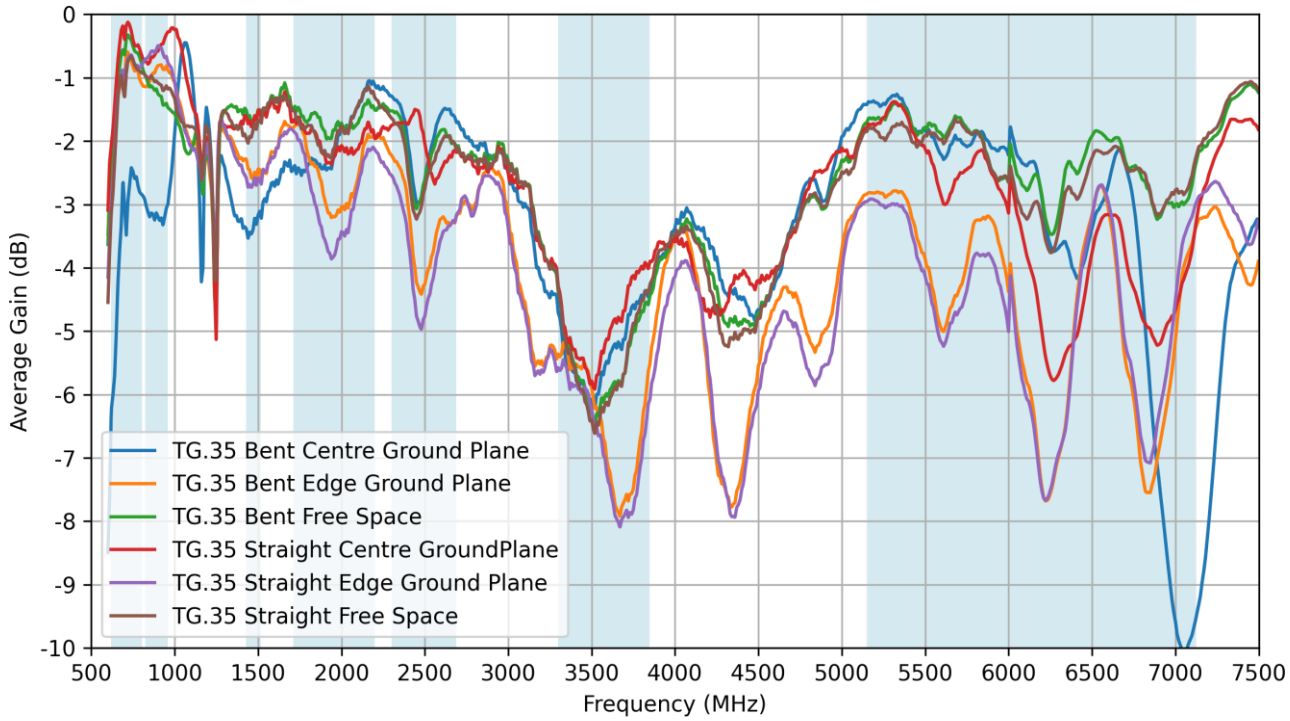
6.3 VSWR



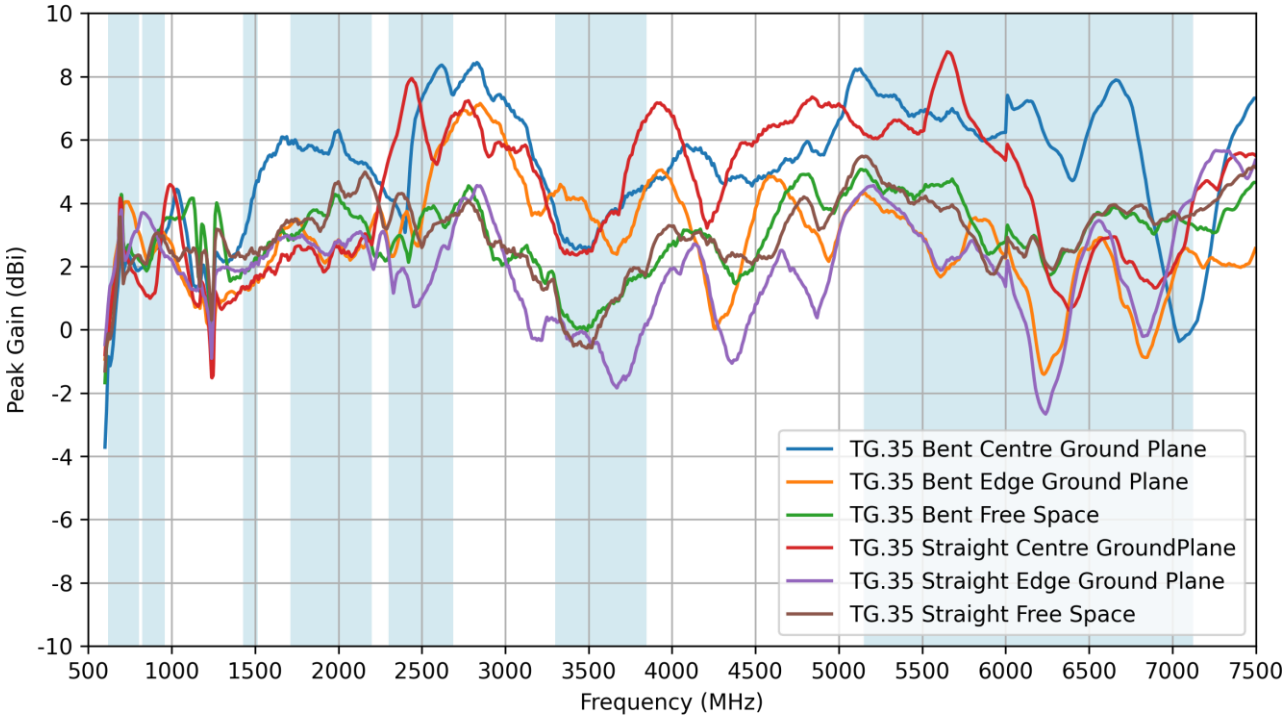
6.4 Efficiency



6.5 Average Gain

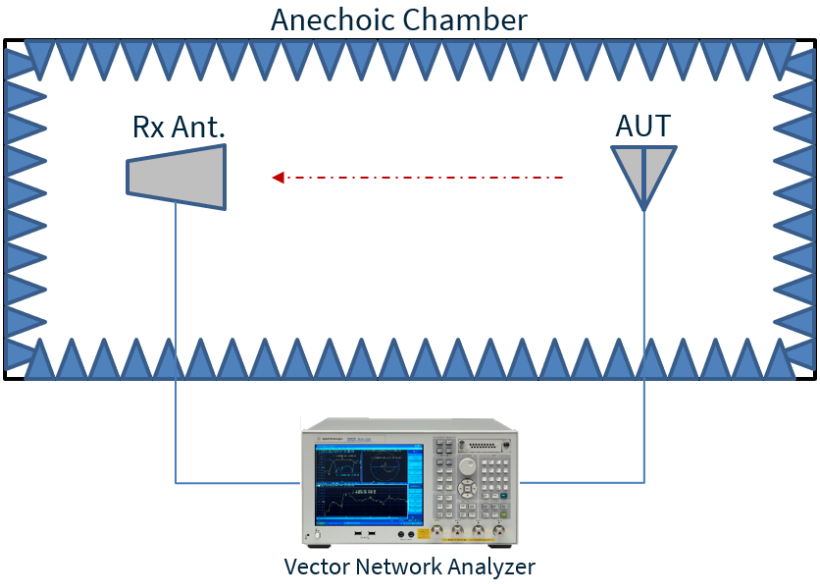


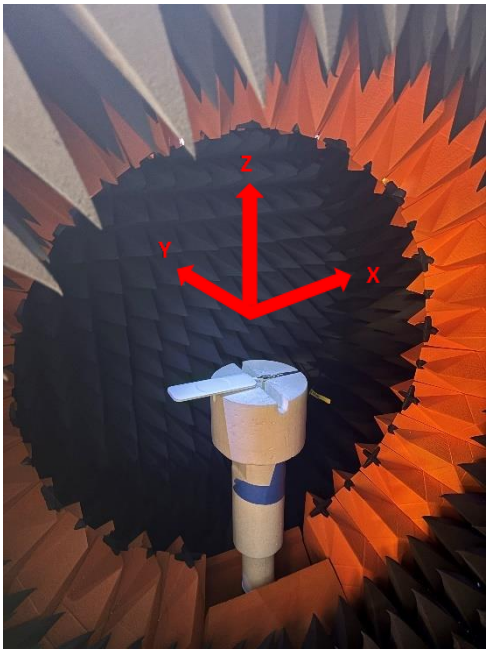
6.6 Peak Gain


Peak Gain (dBi)
Frequency (MHz)
TG.35 Bent Centre Ground Plane
TG.35 Bent Edge Ground Plane
TG.35 Bent Free Space
TG.35 Straight Centre GroundPlane
TG.35 Straight Edge Ground Plane
TG.35 Straight Free Space

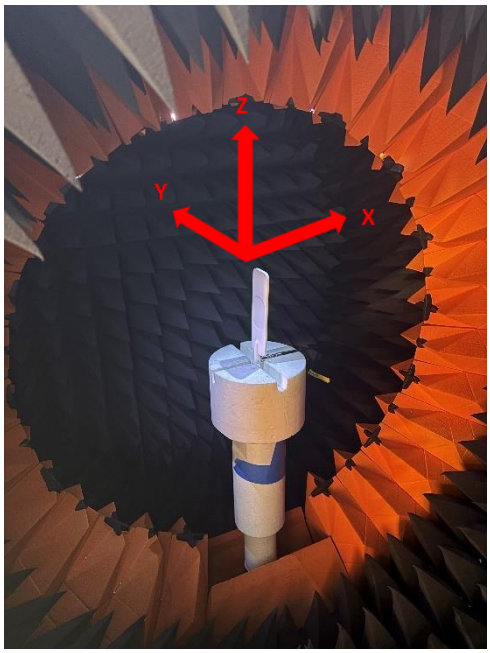
7. Radiation Patterns

7.1 Test Setup

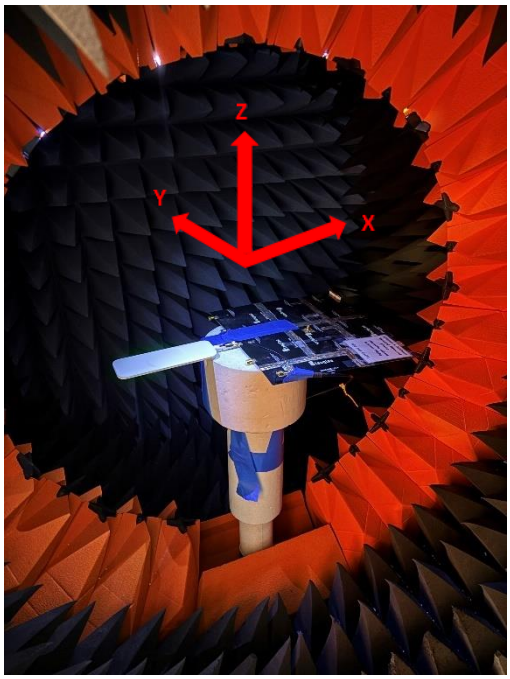




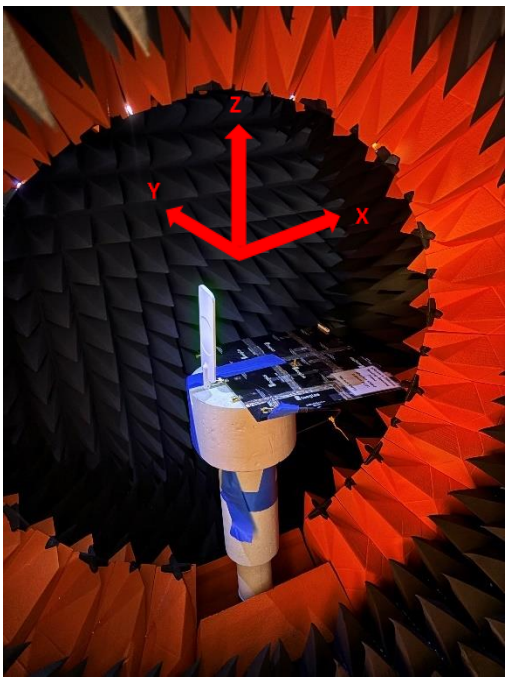
Chamber Set up Straight
in Free Space



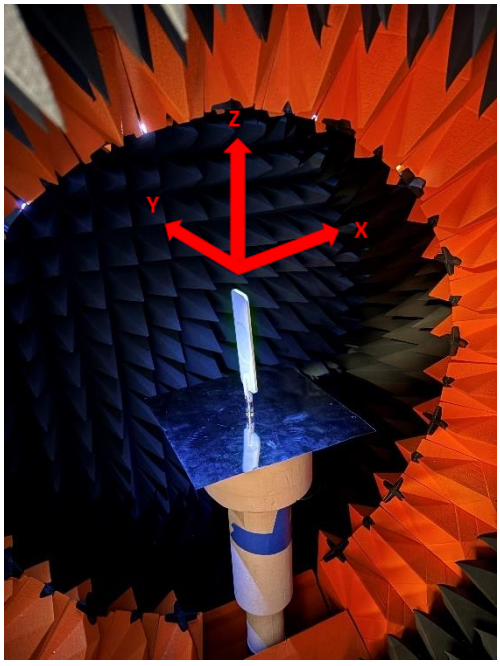
Chamber Set up Bent
in Free Space



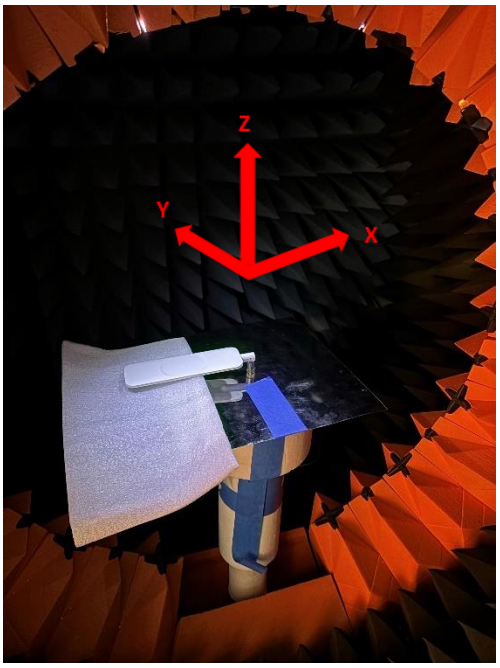
Chamber Set up Straight on Edge of 30x30cm Ground Plane



Chamber Set up Bent on Edge of 30x30cm Ground Plane

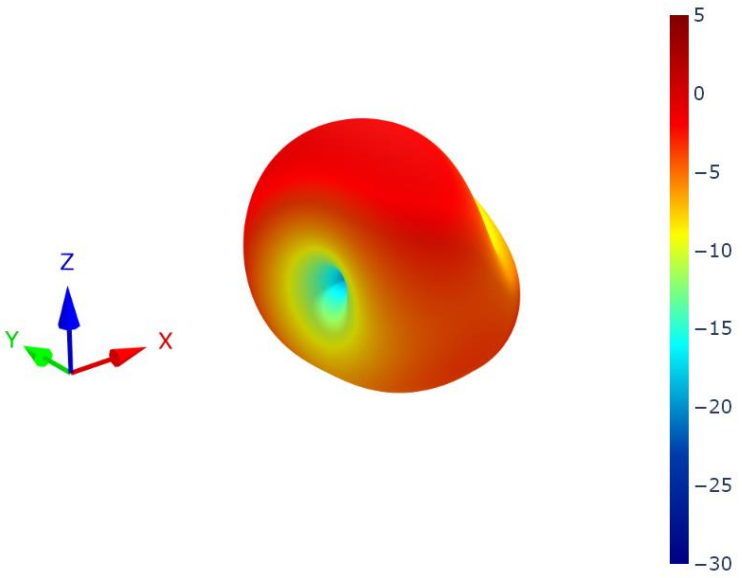


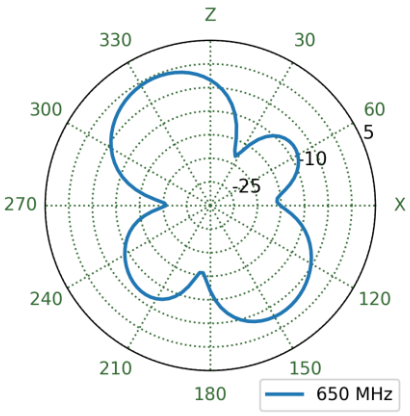
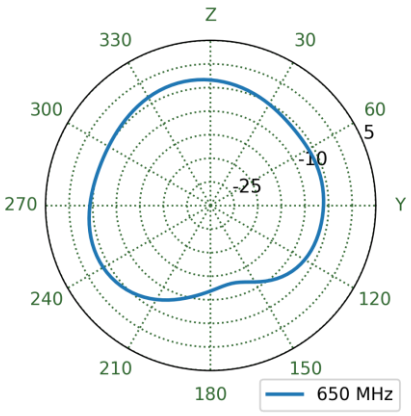
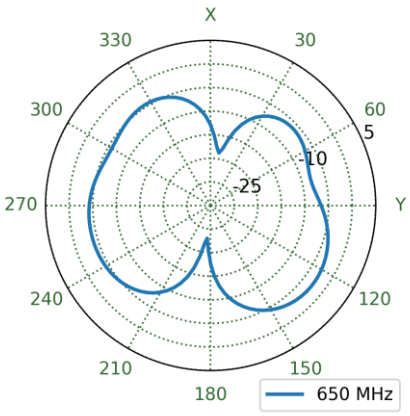
Chamber Set up Straight in Centre of 30x30cm Ground Plane



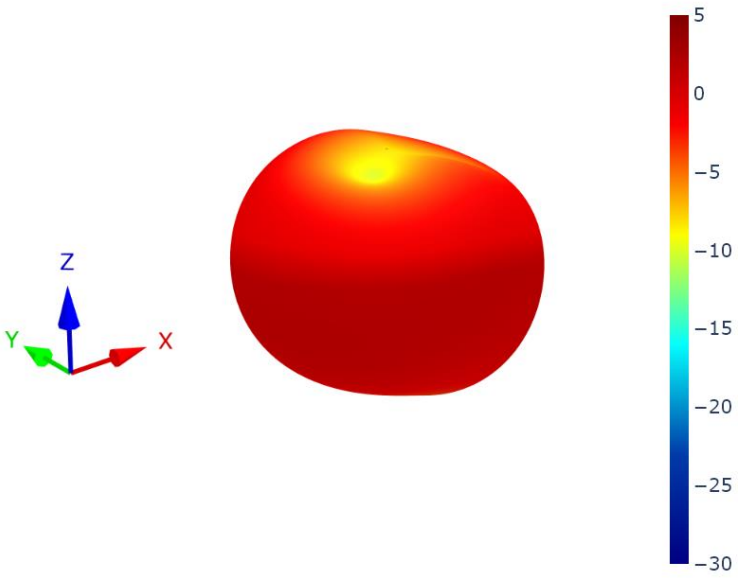
Chamber Set up Bent in Centre of 30x30cm Ground Plane

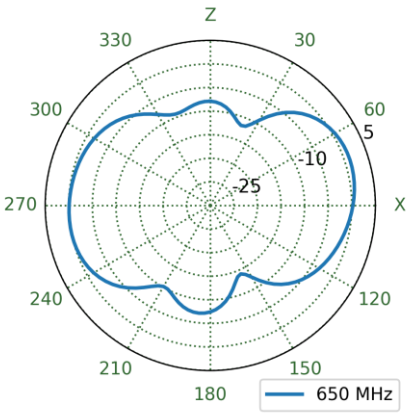
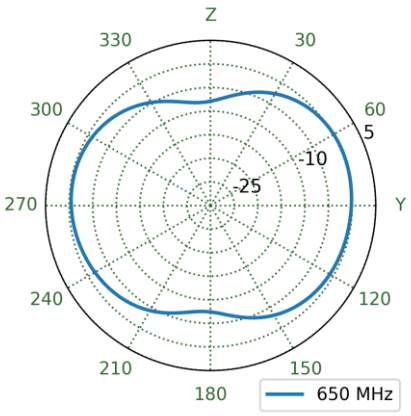
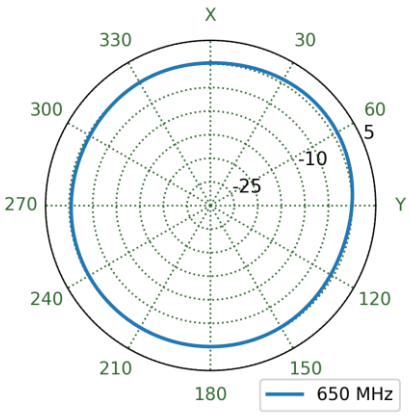
7.2 Bent Centre Ground Plane Patterns at 650 MHz



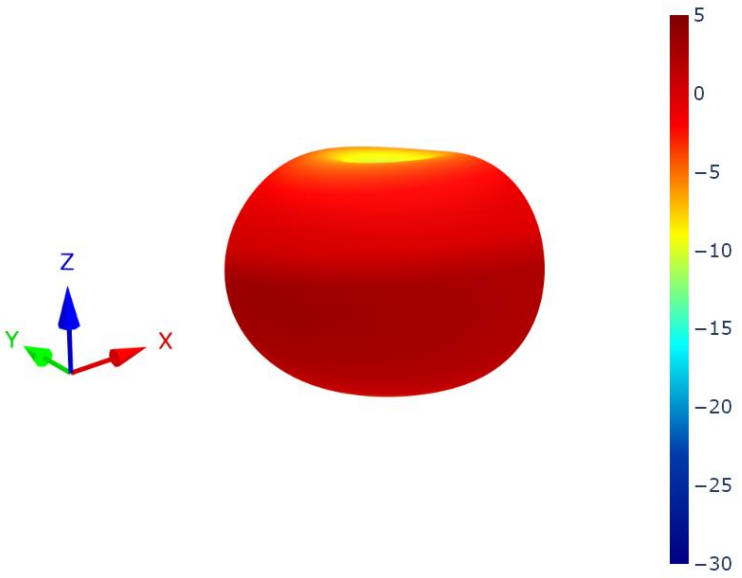
XZ Plane	YZ Plane	XY Plane
		

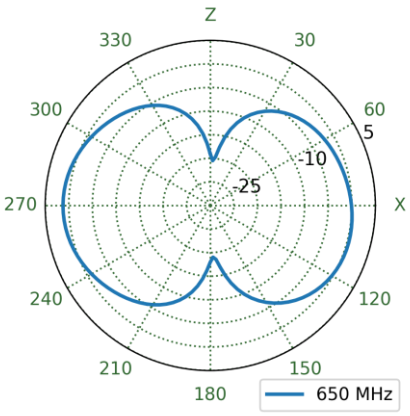
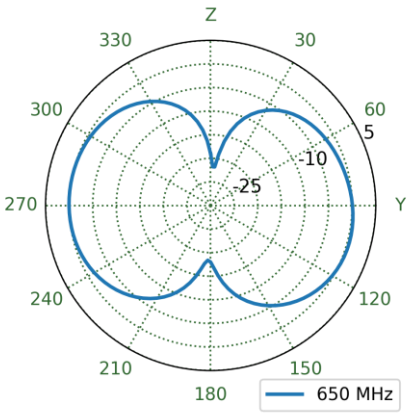
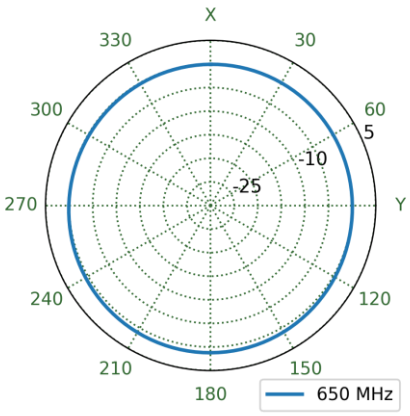
7.3 Bent Edge Ground Plane Patterns at 650 MHz



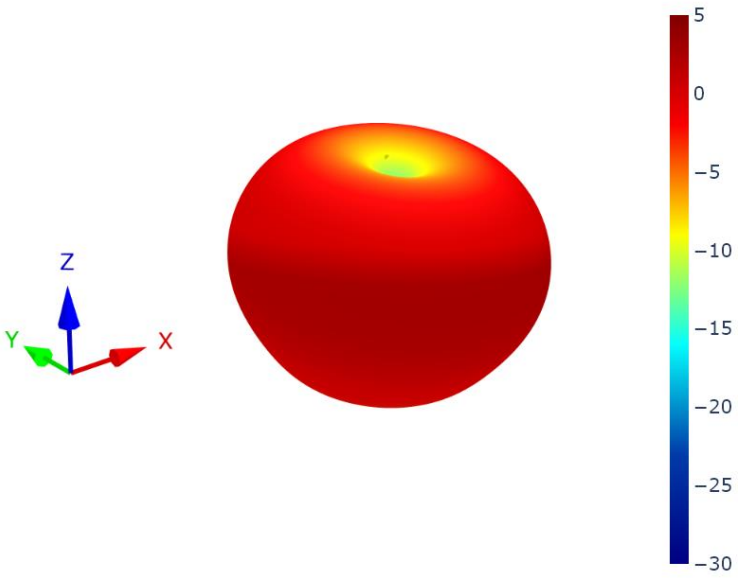
XZ Plane	YZ Plane	XY Plane
		

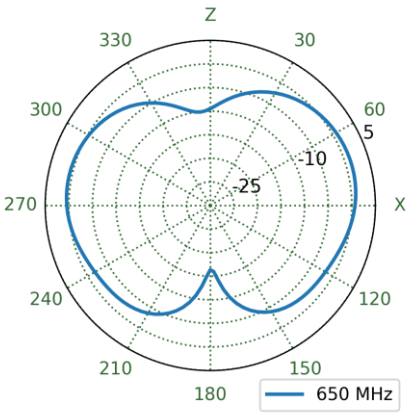
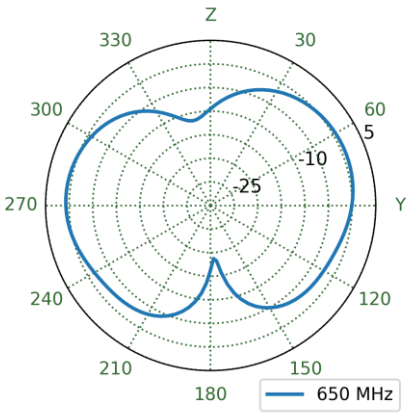
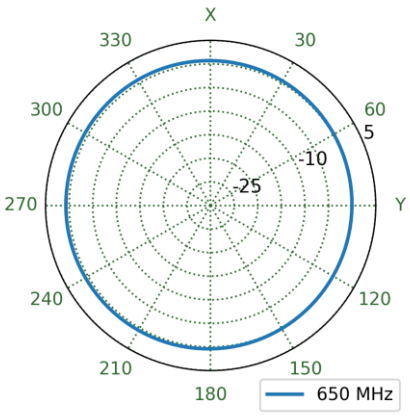
7.4 Bent Free Space Patterns at 650 MHz



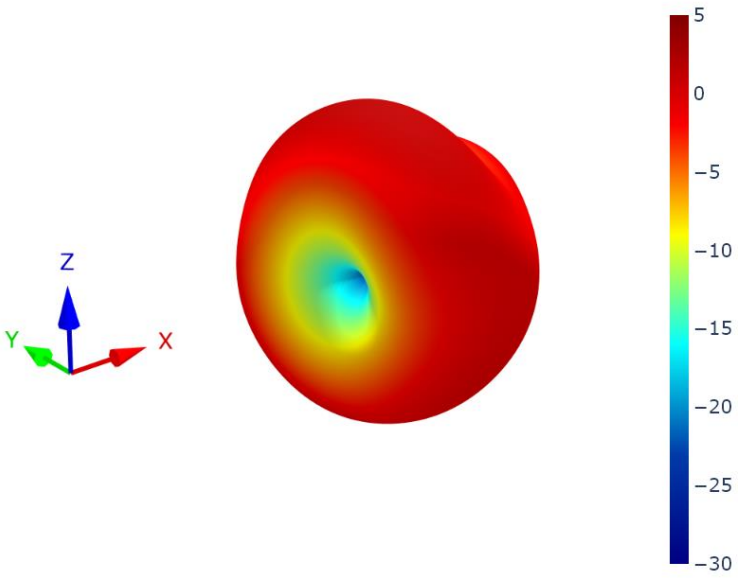
XZ Plane	YZ Plane	XY Plane
		

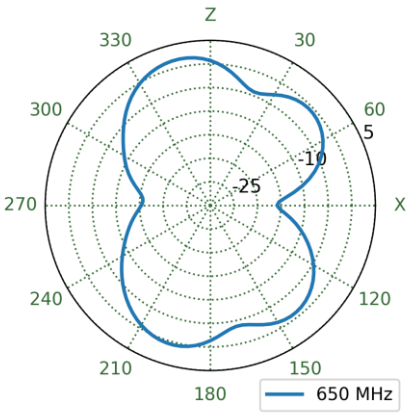
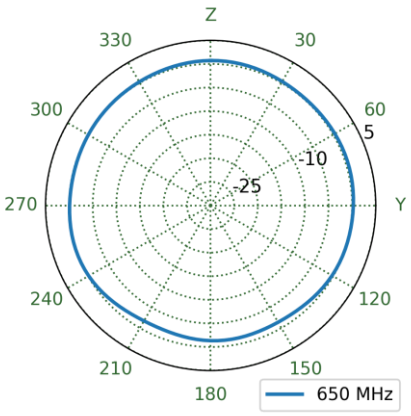
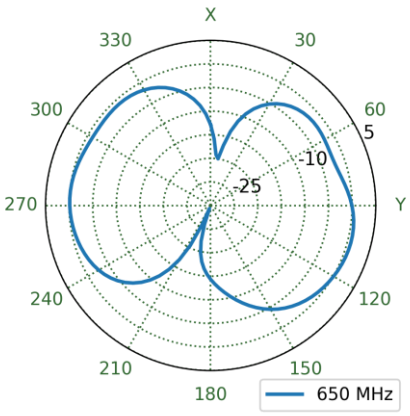
7.5 Straight Centre Ground Plane Patterns at 650 MHz



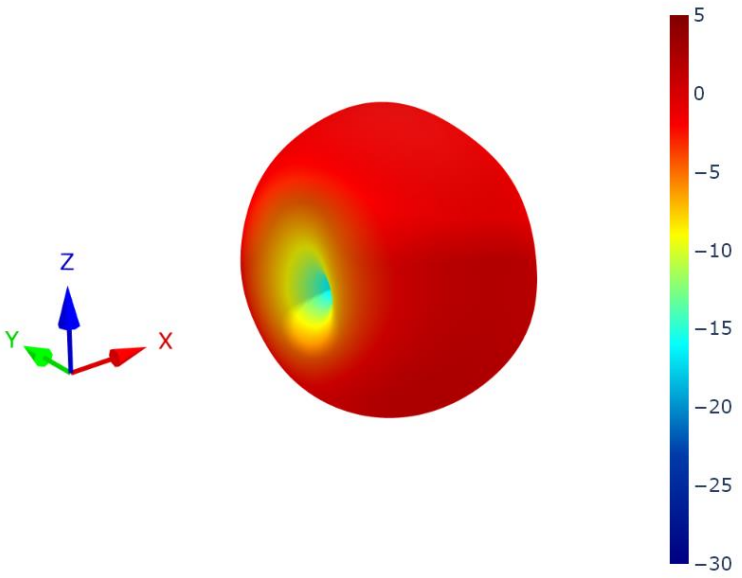
XZ Plane	YZ Plane	XY Plane
		

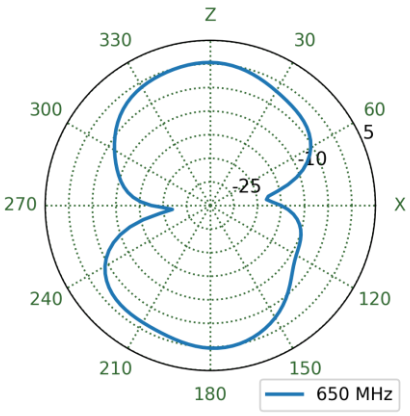
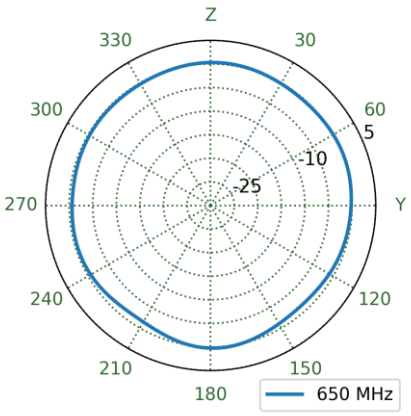
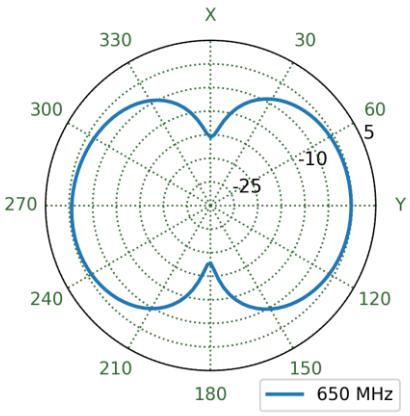
7.6 Straight Edge Ground Plane Patterns at 650 MHz



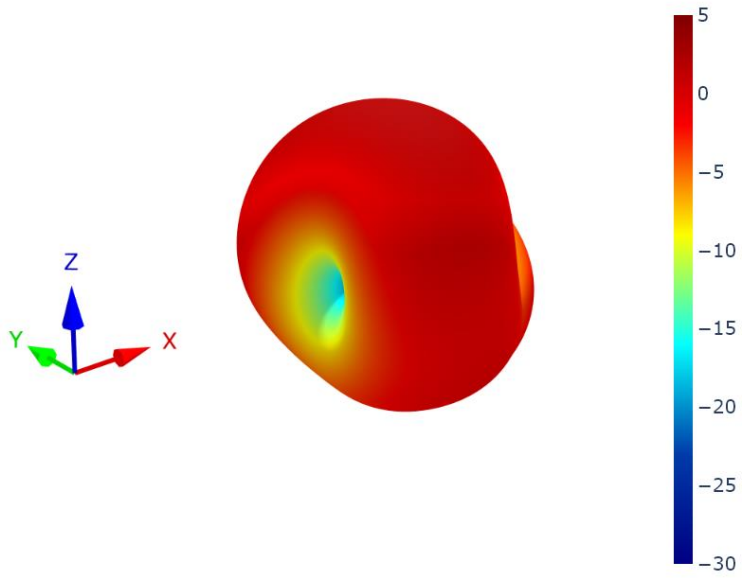
XZ Plane	YZ Plane	XY Plane
		

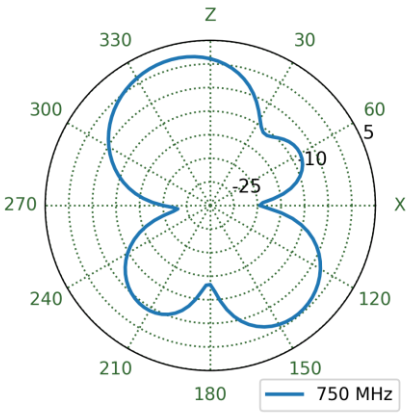
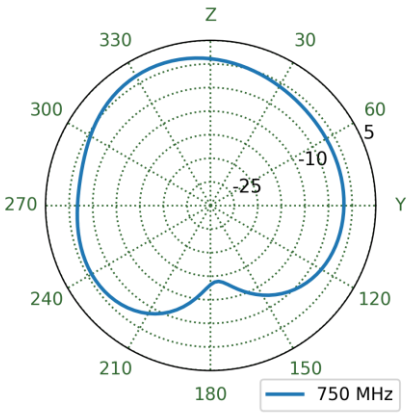
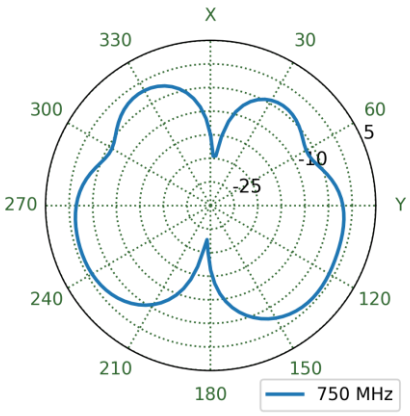
7.7 Straight Free Space Patterns at 650 MHz



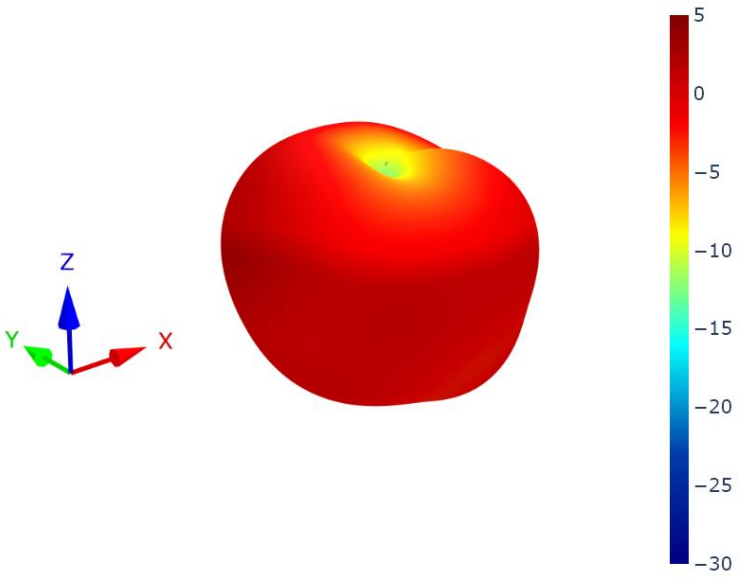
XZ Plane	YZ Plane	XY Plane
		

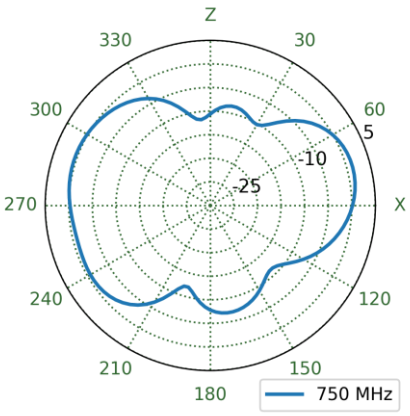
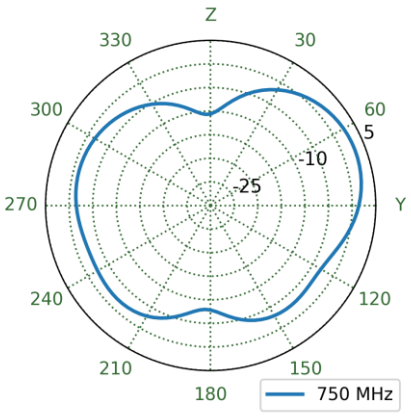
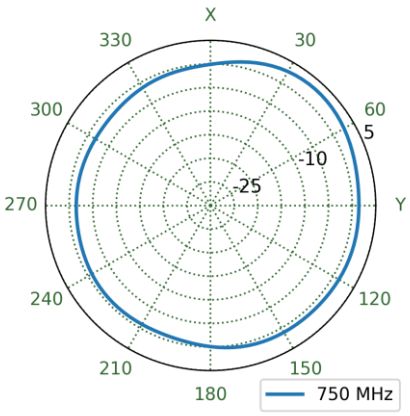
7.8 Bent Centre Ground Plane Patterns at 750 MHz



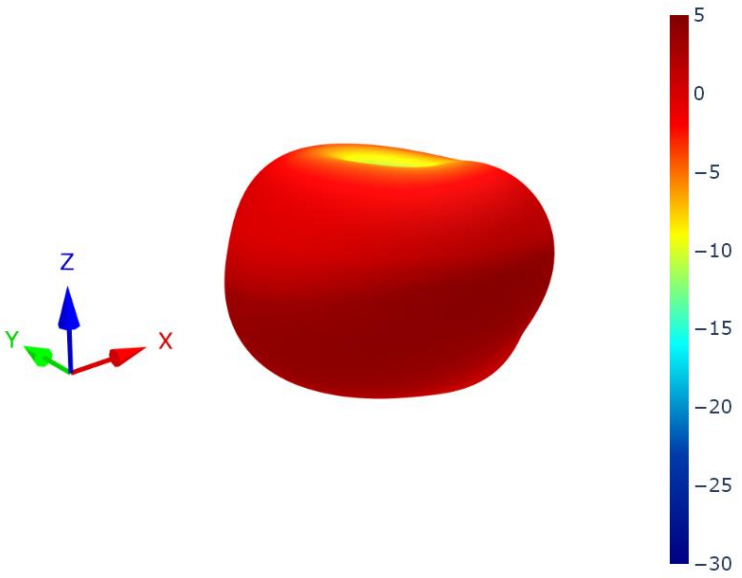
XZ Plane	YZ Plane	XY Plane
		

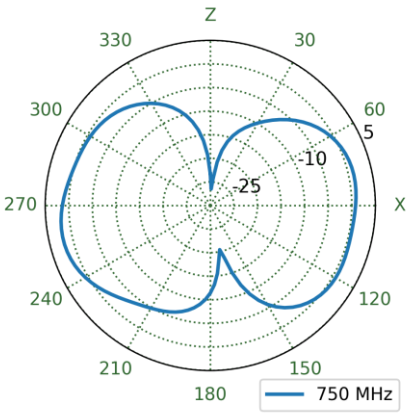
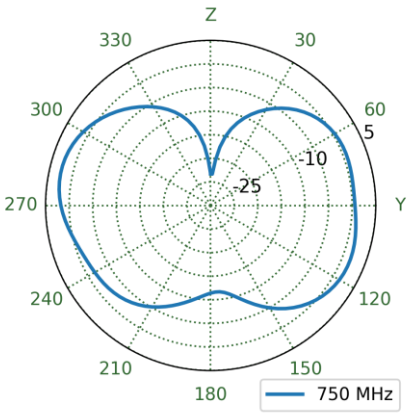
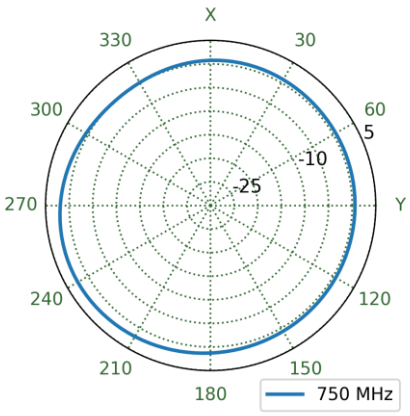
7.9 Bent Edge Ground Plane Patterns at 750 MHz



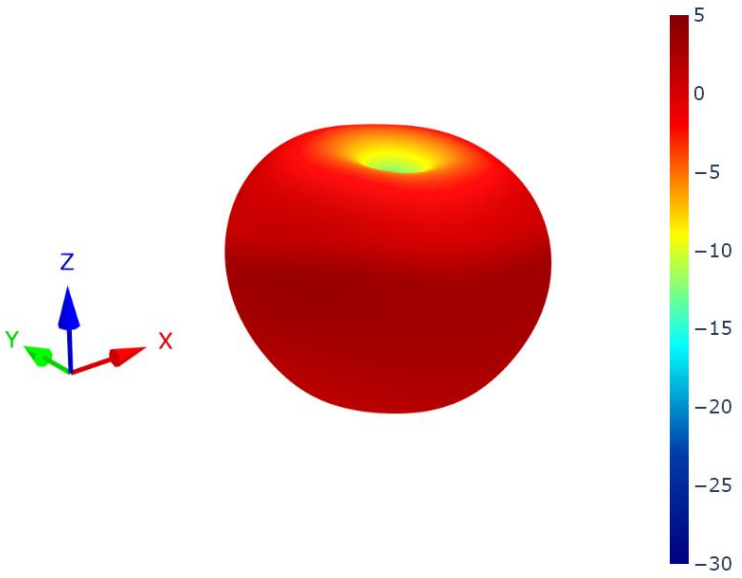
XZ Plane	YZ Plane	XY Plane
		

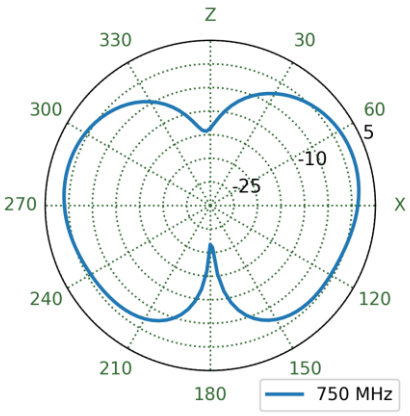
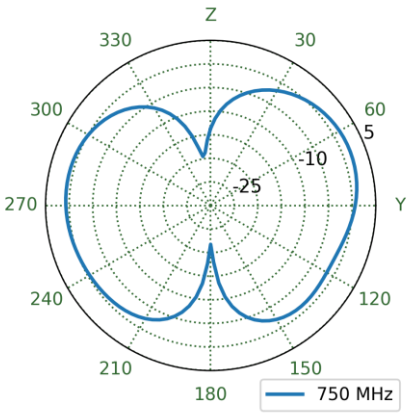
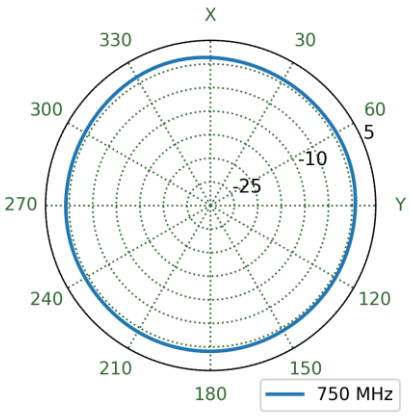
7.10 Bent Free Space Patterns at 750 MHz



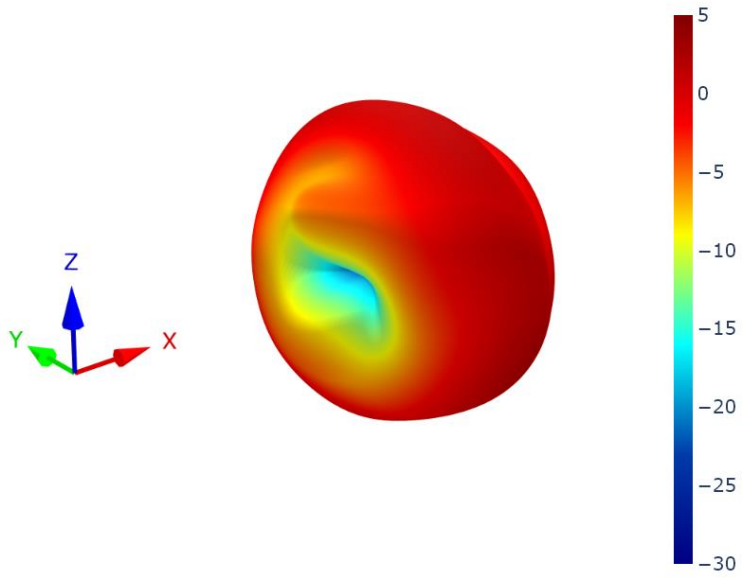
XZ Plane	YZ Plane	XY Plane
		

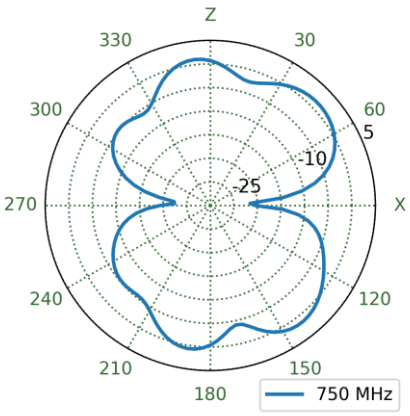
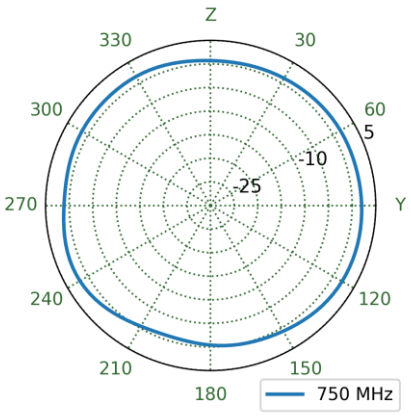
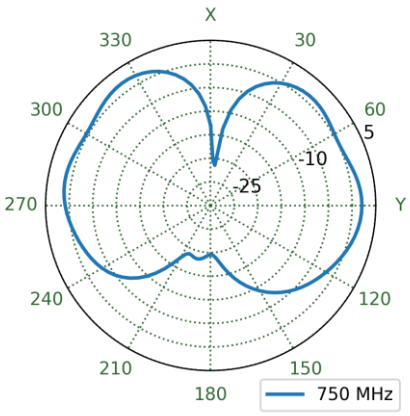
7.11 Straight Centre Ground Plane Patterns at 750 MHz



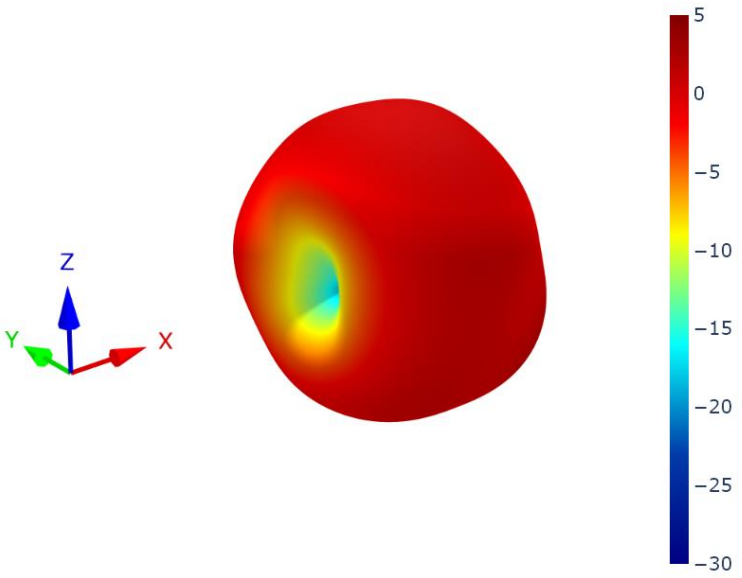
XZ Plane	YZ Plane	XY Plane
		

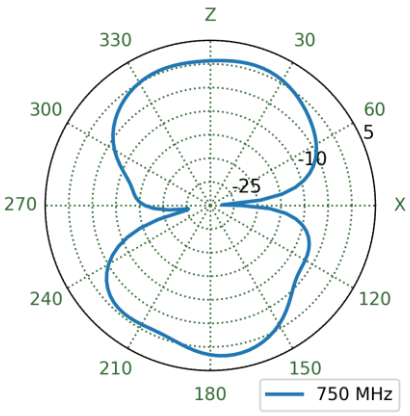
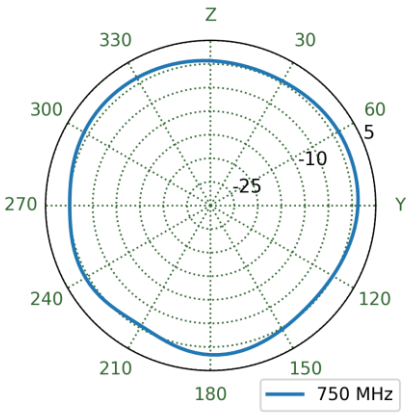
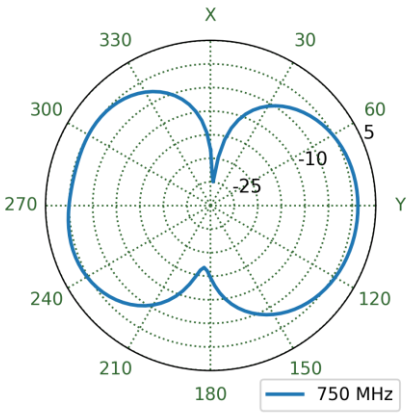
7.12 Straight Edge Ground Plane Patterns at 750 MHz



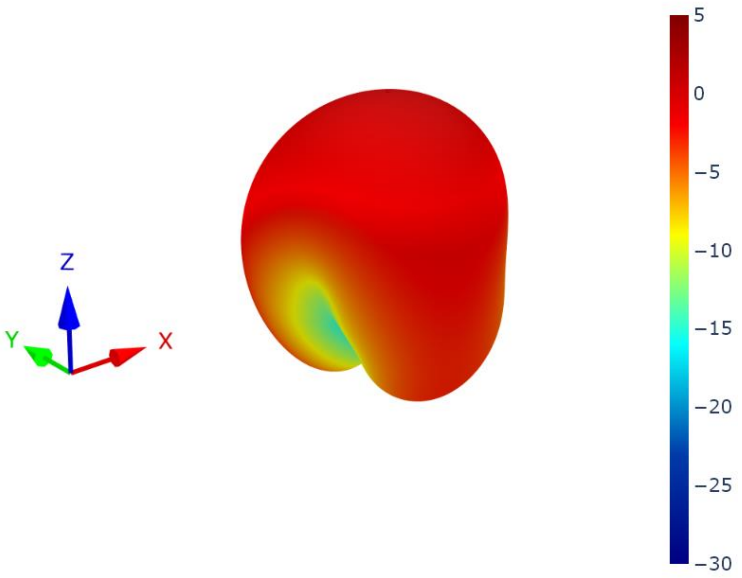
XZ Plane	YZ Plane	XY Plane
		

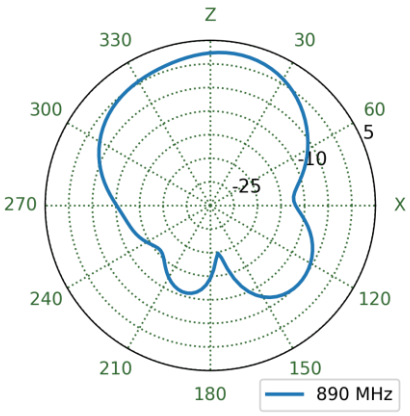
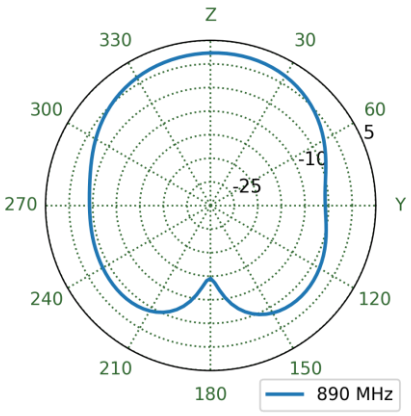
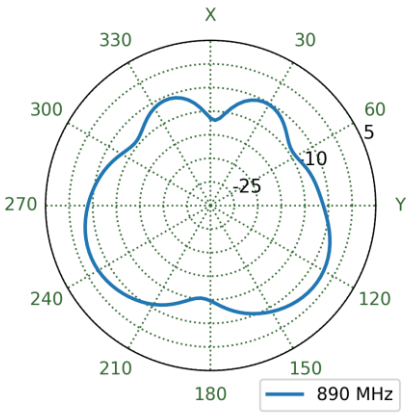
7.13 Straight Free Space Patterns at 750 MHz



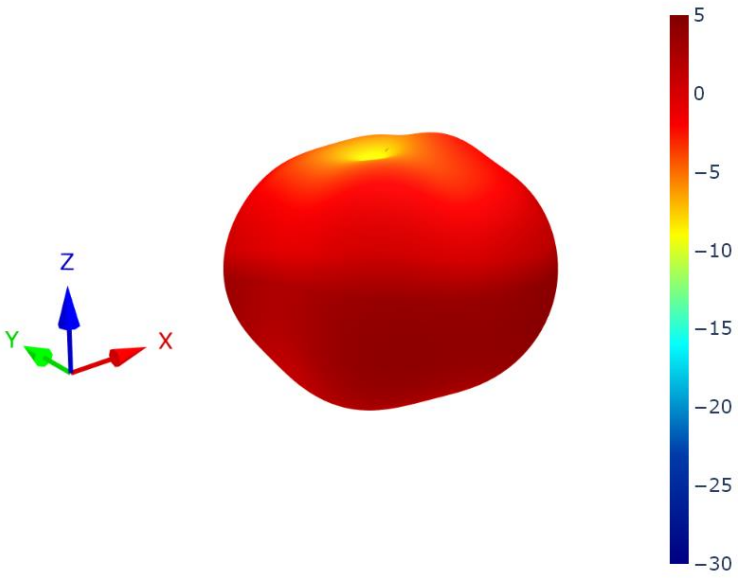
XZ Plane	YZ Plane	XY Plane
		

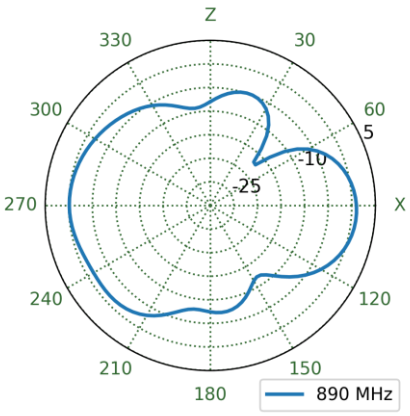
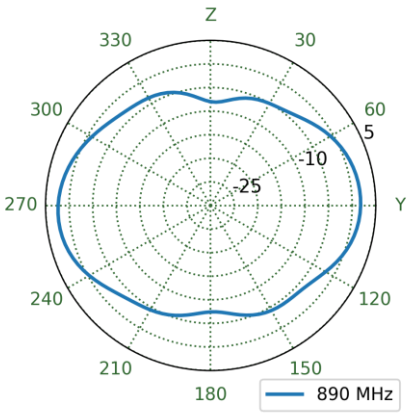
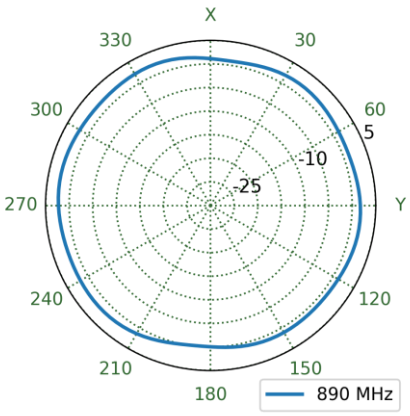
7.14 Bent Centre Ground Plane Patterns at 890 MHz



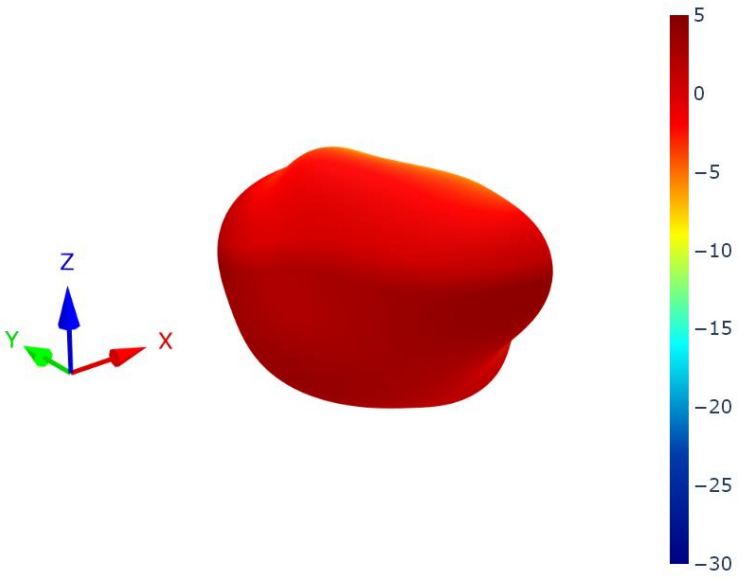
XZ Plane	YZ Plane	XY Plane
		

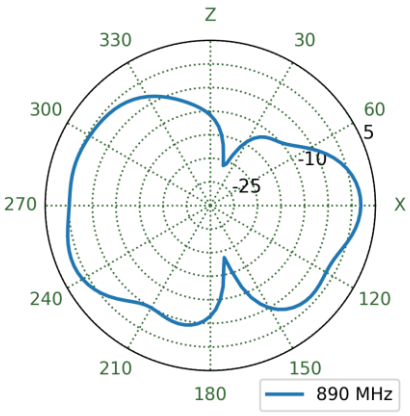
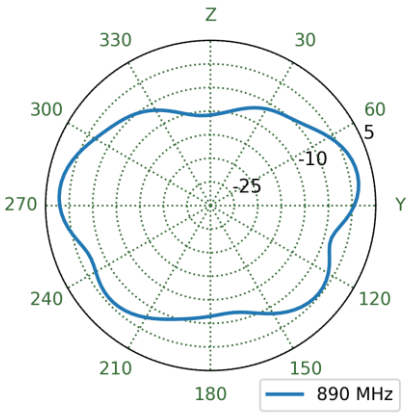
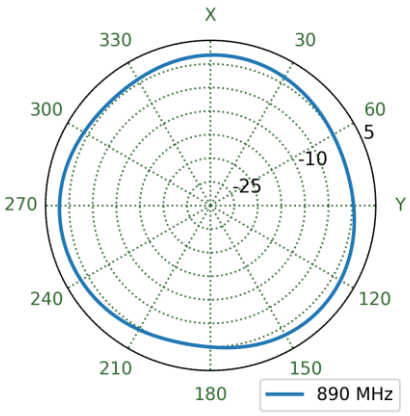
7.15 Bent Edge Ground Plane Patterns at 890 MHz



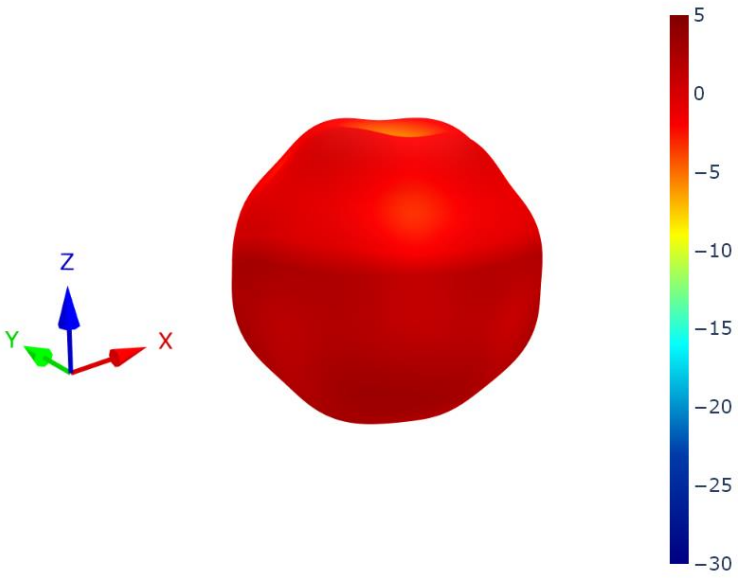
XZ Plane	YZ Plane	XY Plane
		

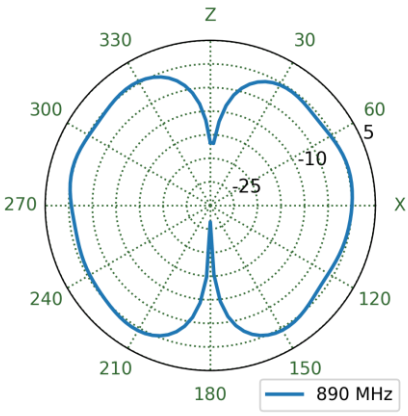
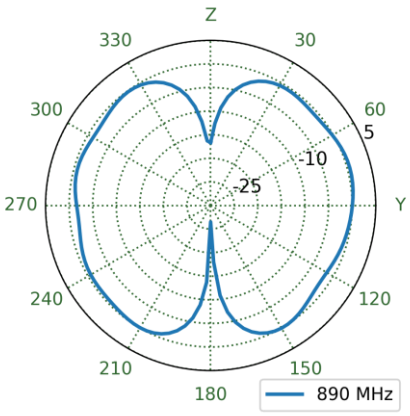
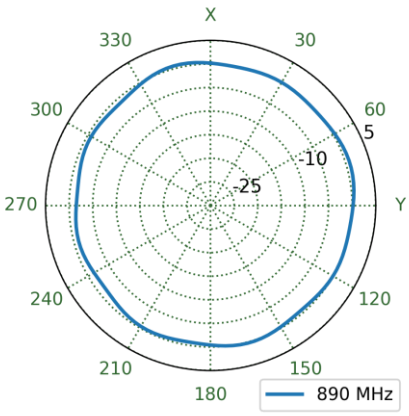
7.16 Bent Free Space Patterns at 890 MHz



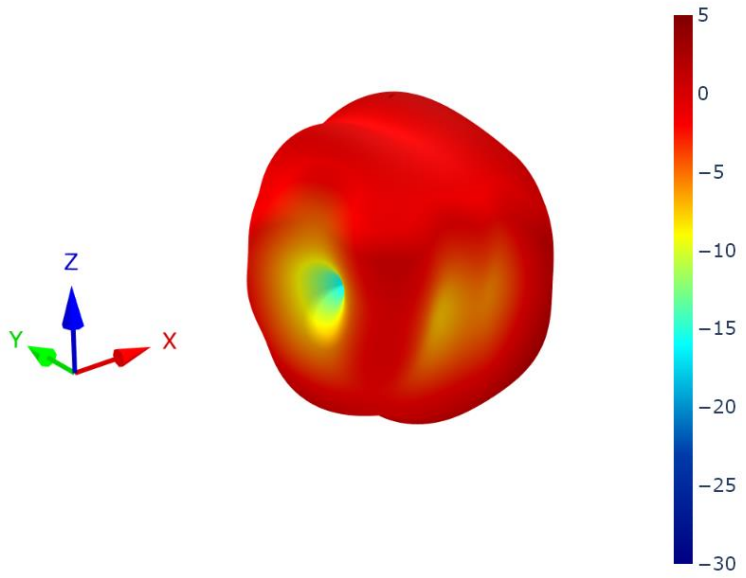
XZ Plane	YZ Plane	XY Plane
		

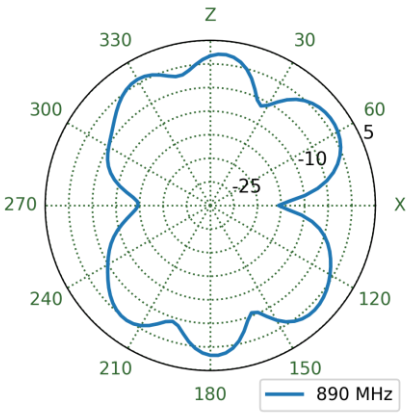
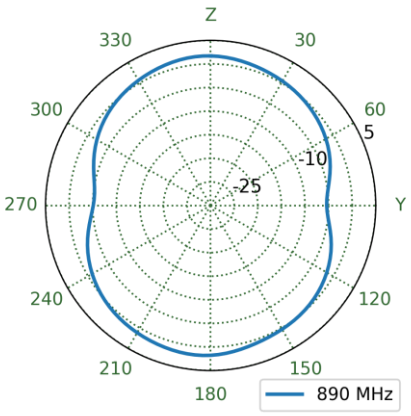
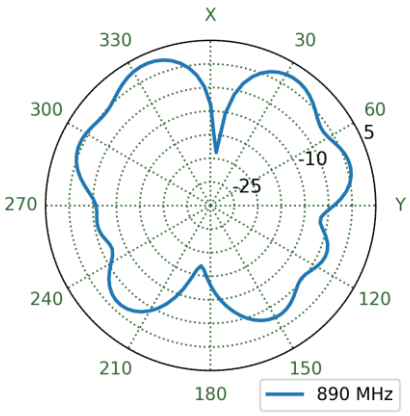
7.17 Straight Centre Ground Plane Patterns at 890 MHz



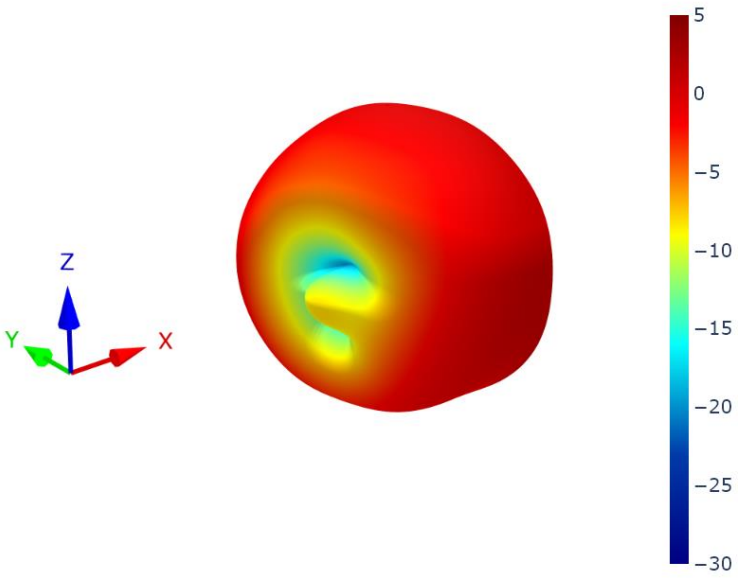
XZ Plane	YZ Plane	XY Plane
		

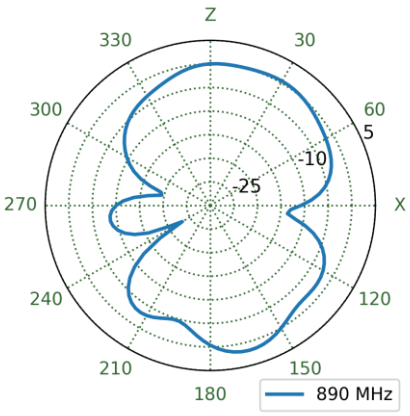
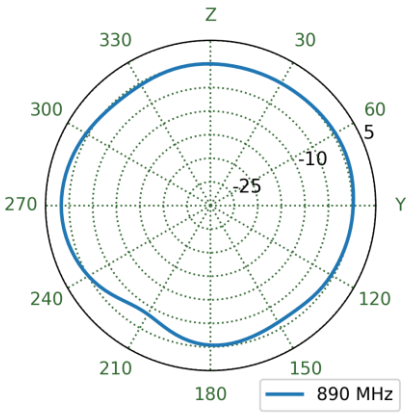
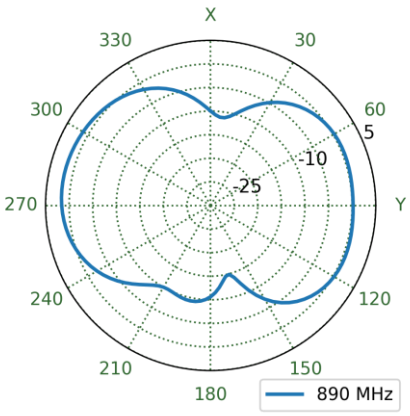
7.18 Straight Edge Ground Plane Patterns at 890 MHz



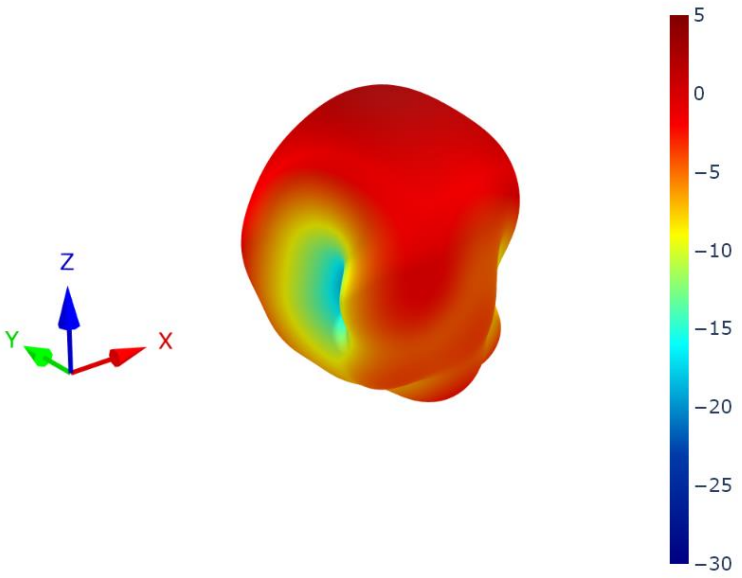
XZ Plane	YZ Plane	XY Plane
		

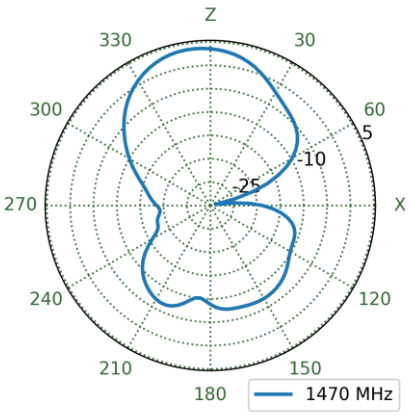
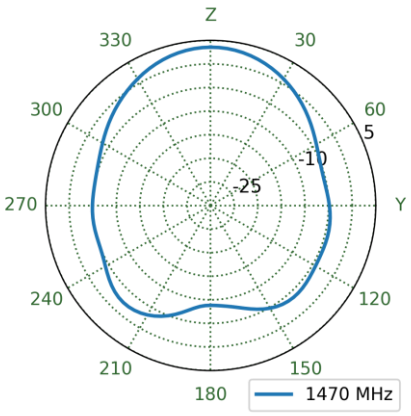
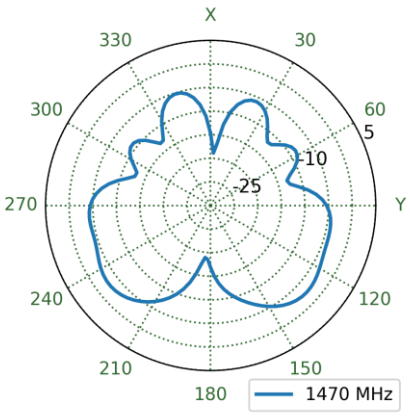
7.19 Straight Free Space Patterns at 890 MHz



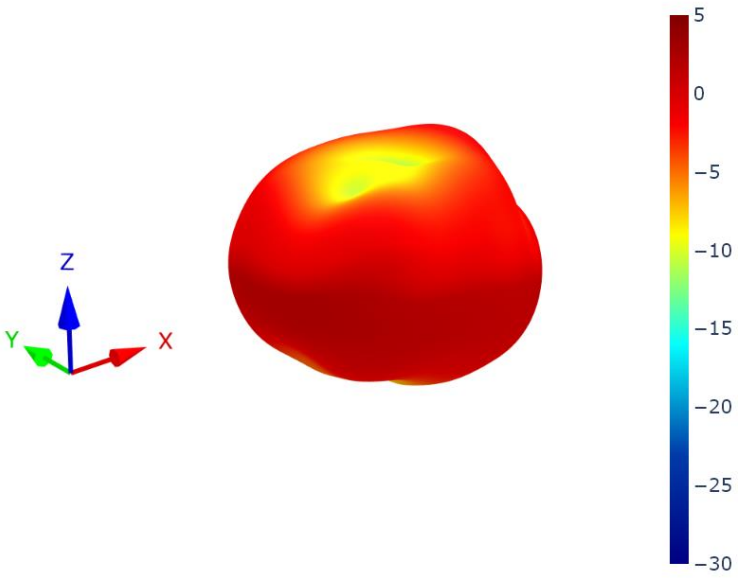
XZ Plane	YZ Plane	XY Plane
		

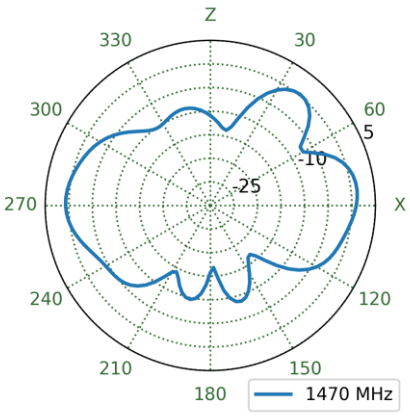
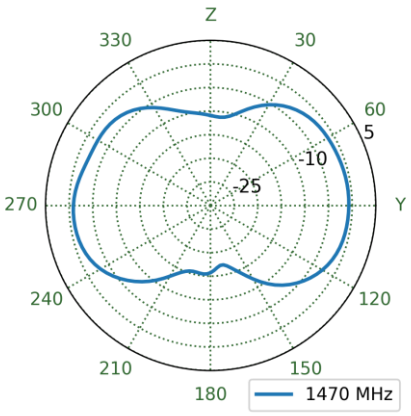
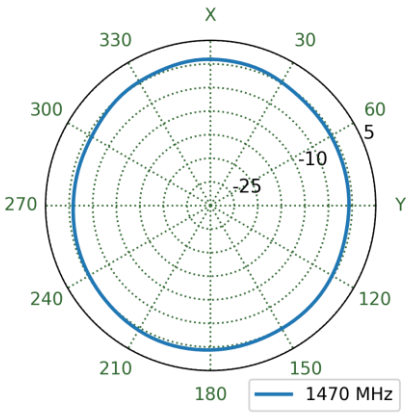
7.20 Bent Centre Ground Plane Patterns at 1475 MHz



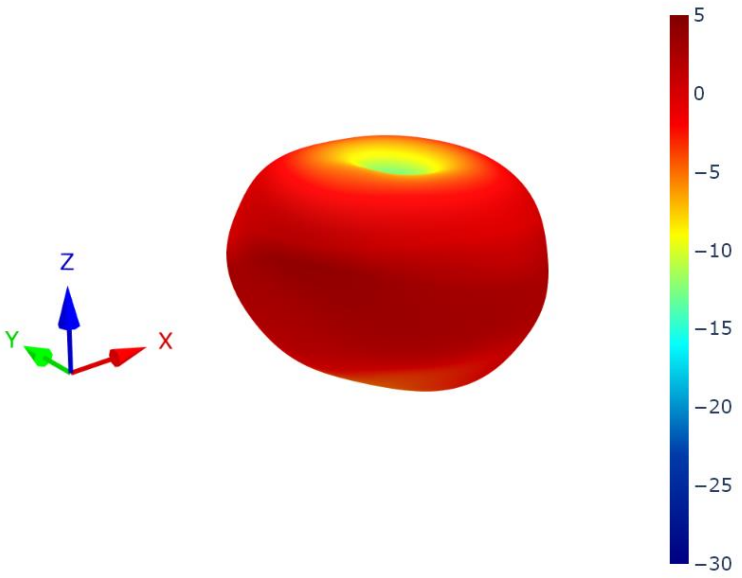
XZ Plane	YZ Plane	XY Plane
		

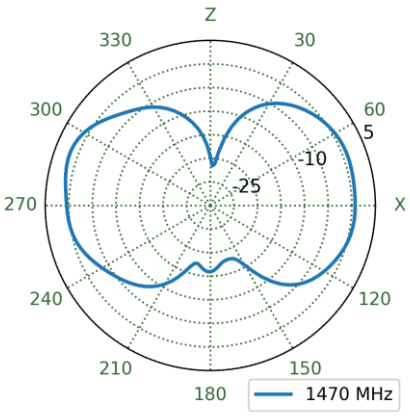
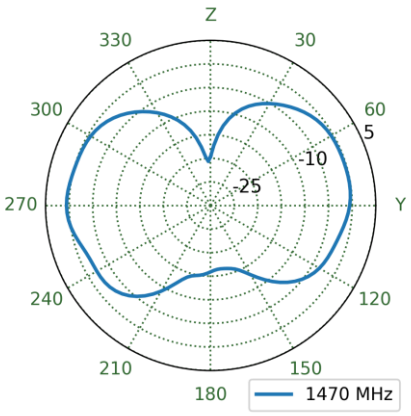
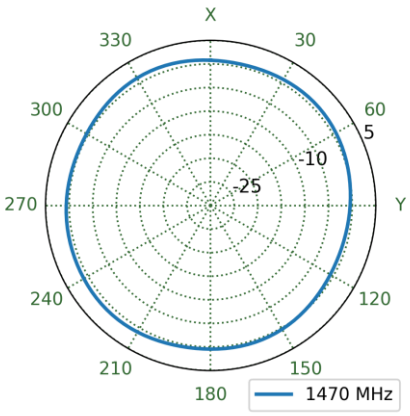
7.21 Bent Edge Ground Plane Patterns at 1475 MHz



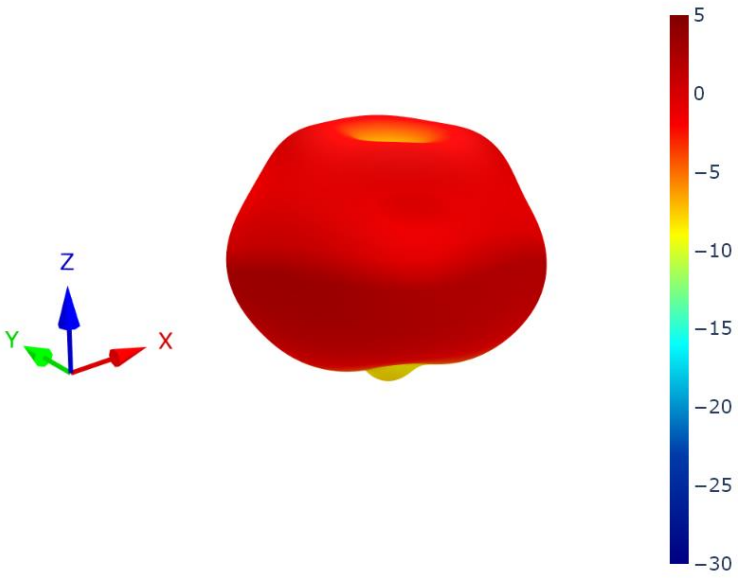
XZ Plane	YZ Plane	XY Plane
		

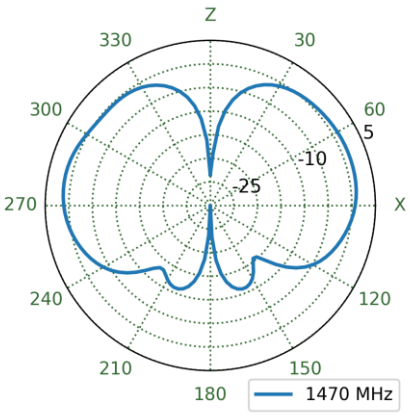
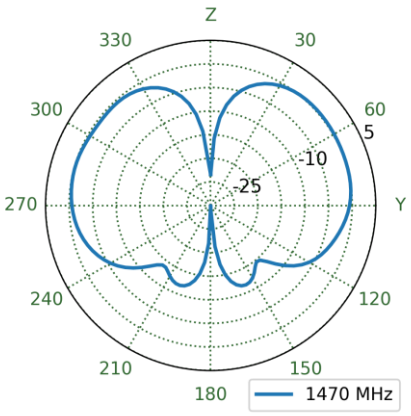
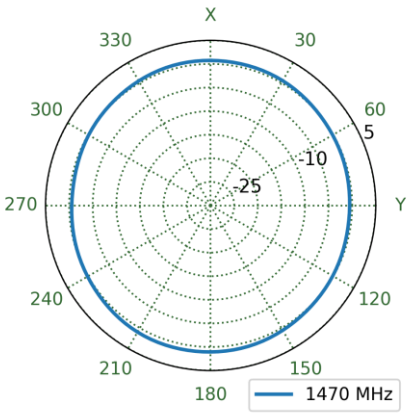
7.22 Bent Free Space Patterns at 1475 MHz



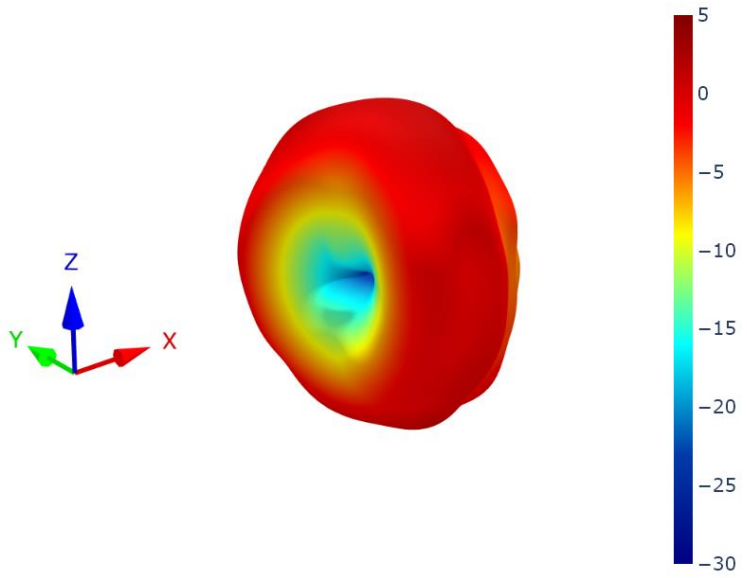
XZ Plane	YZ Plane	XY Plane
		

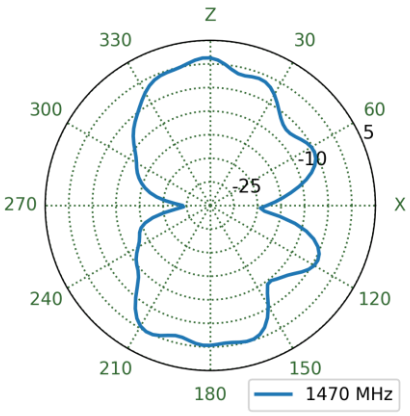
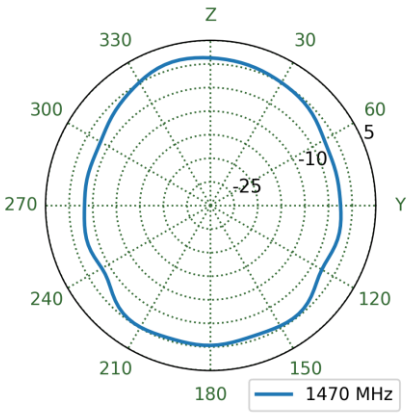
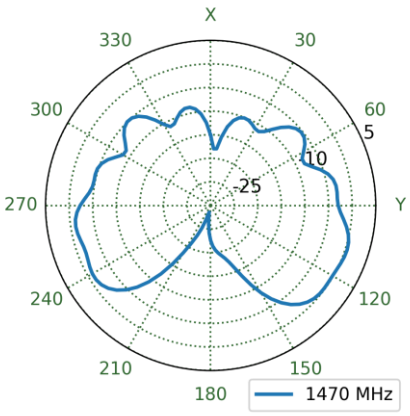
7.23 Straight Centre Ground Plane Patterns at 1475 MHz



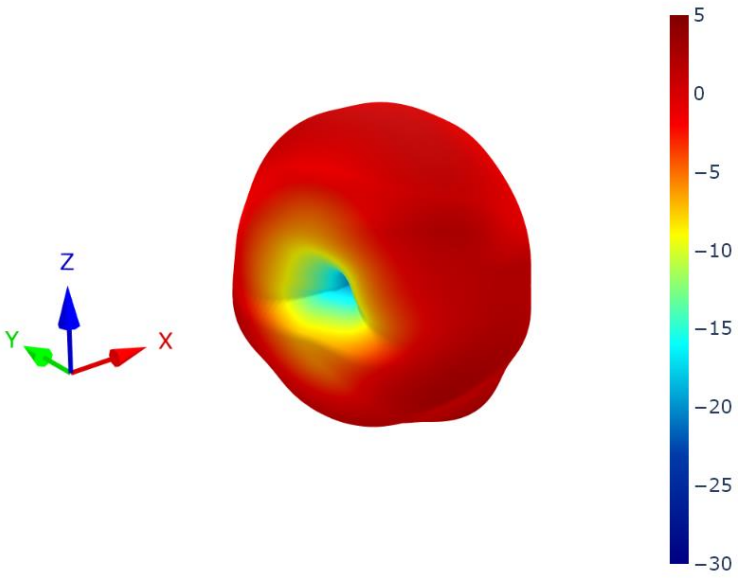
XZ Plane	YZ Plane	XY Plane
		

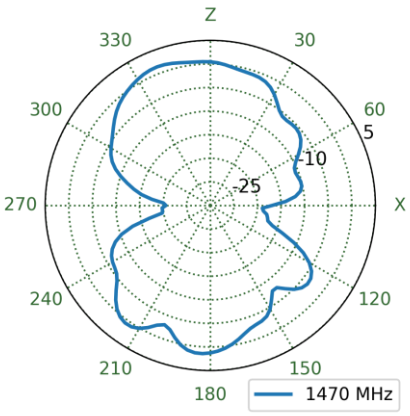
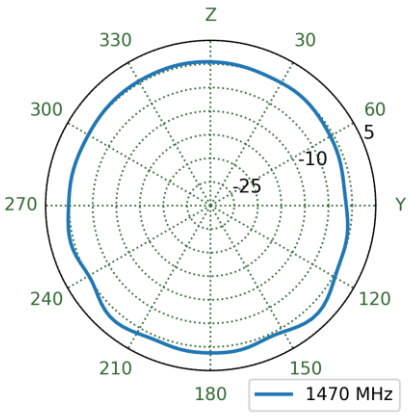
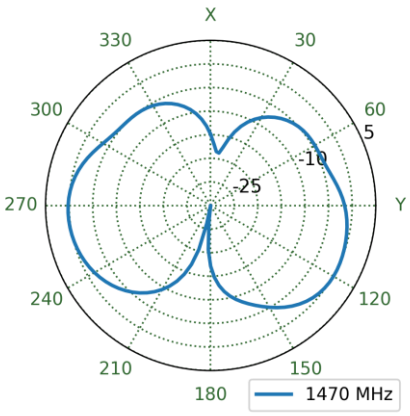
7.24 Straight Edge Ground Plane Patterns at 1475 MHz



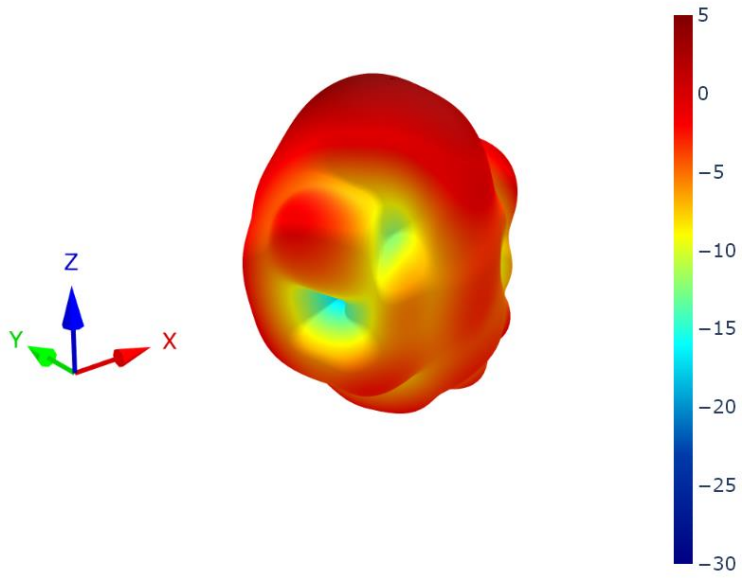
XZ Plane	YZ Plane	XY Plane
		

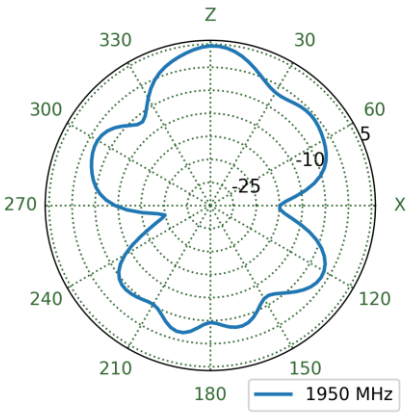
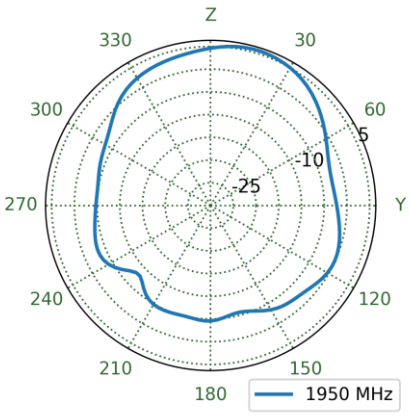
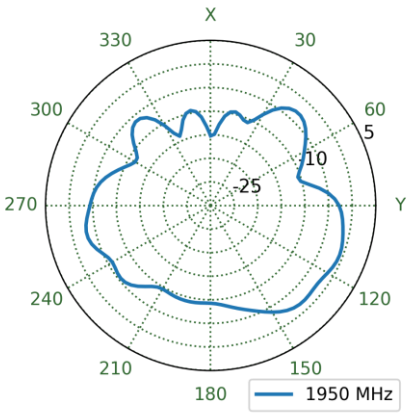
7.25 Straight Free Space Patterns at 1475 MHz



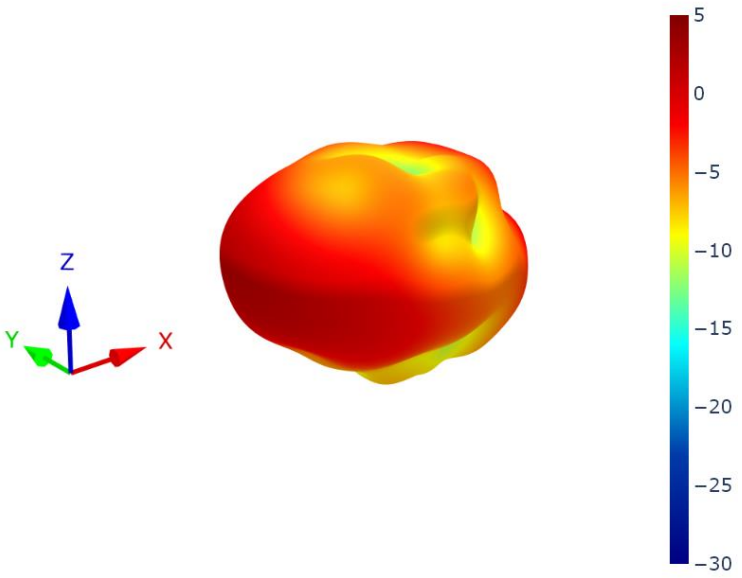
XZ Plane	YZ Plane	XY Plane
		

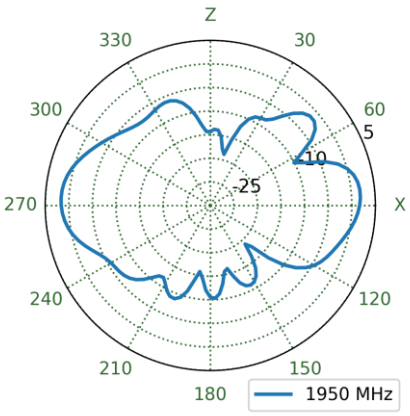
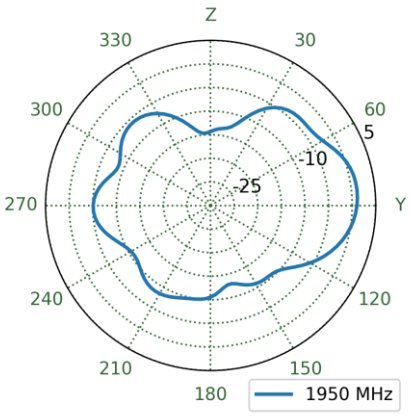
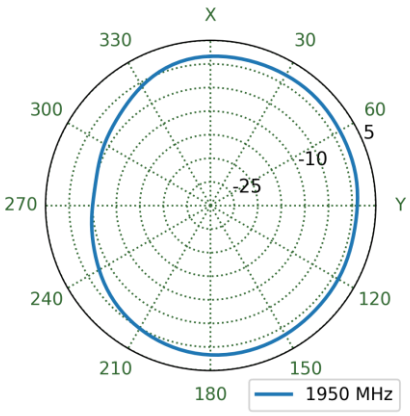
7.26 Bent Centre Ground Plane Patterns at 1955 MHz



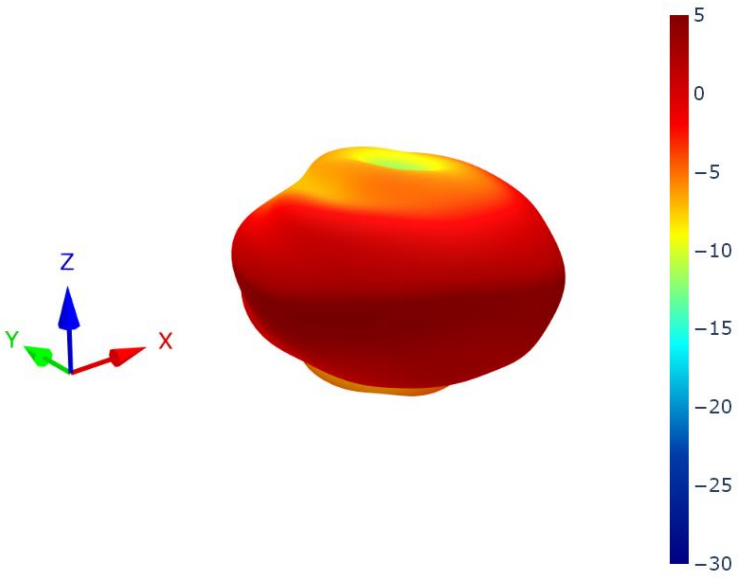
XZ Plane	YZ Plane	XY Plane
		

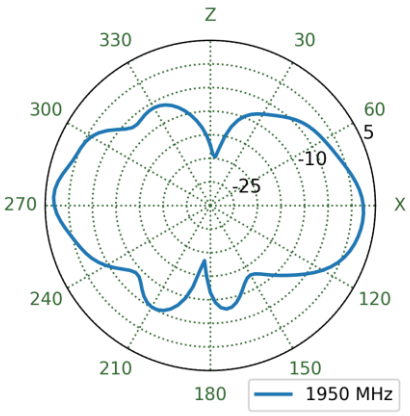
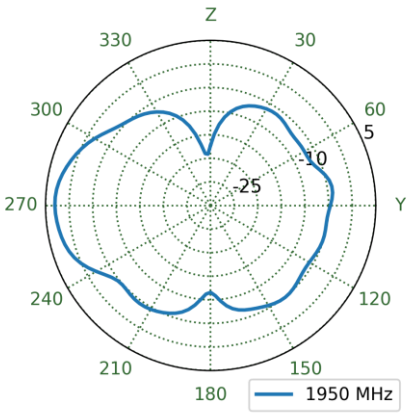
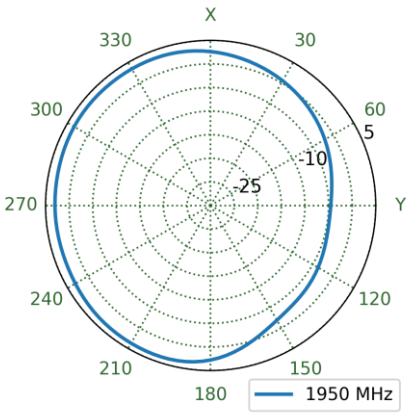
7.27 Bent Edge Ground Plane Patterns at 1955 MHz



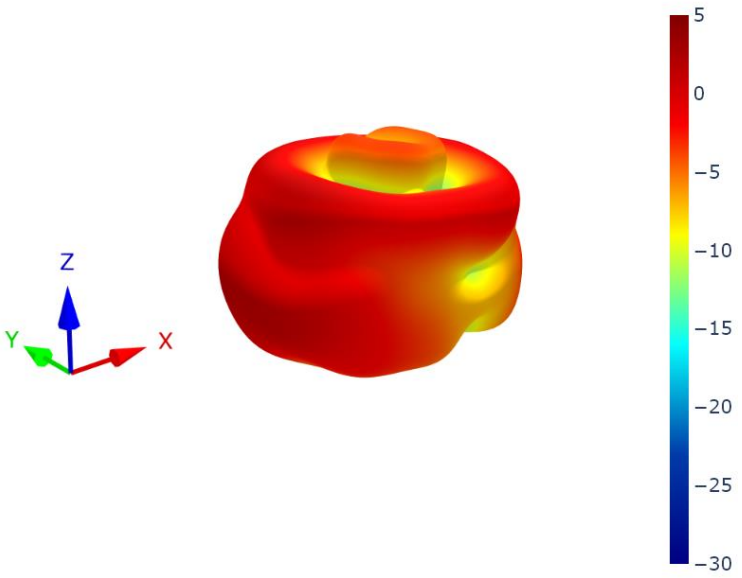
XZ Plane	YZ Plane	XY Plane
		

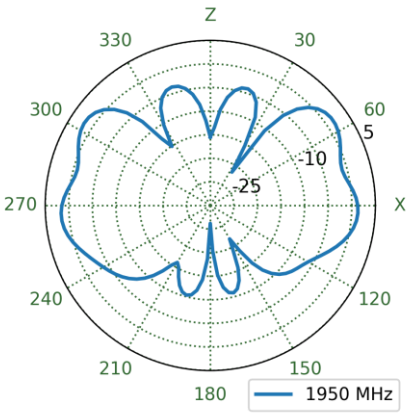
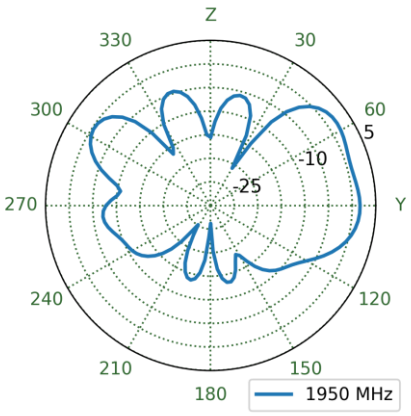
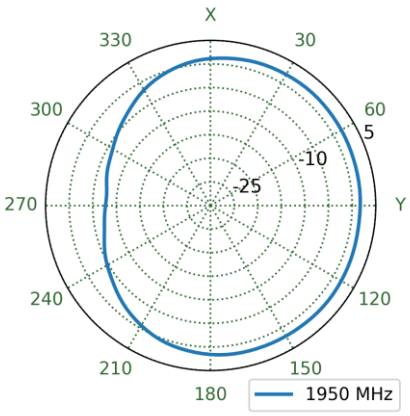
7.28 Bent Free Space Patterns at 1955 MHz



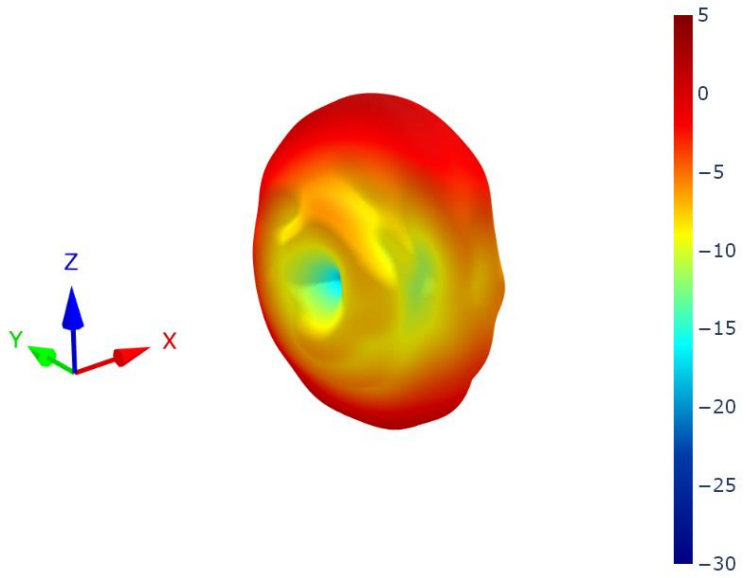
XZ Plane	YZ Plane	XY Plane
		

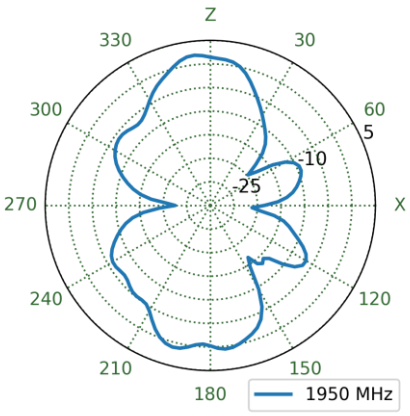
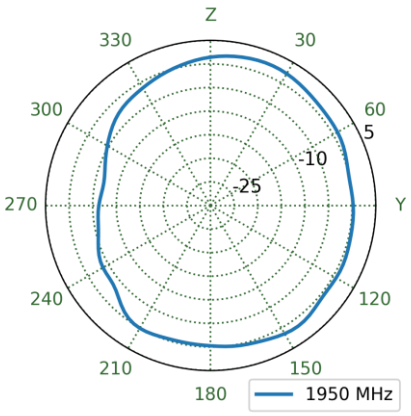
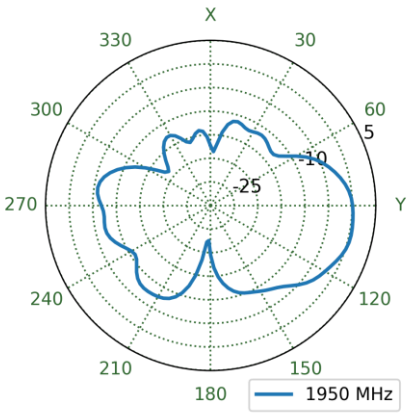
7.29 Straight Centre Ground Plane Patterns at 1955 MHz



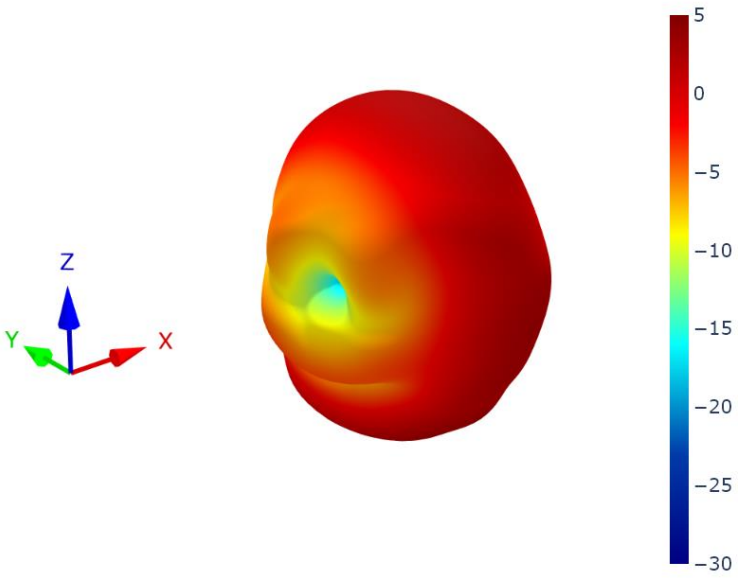
XZ Plane	YZ Plane	XY Plane
		

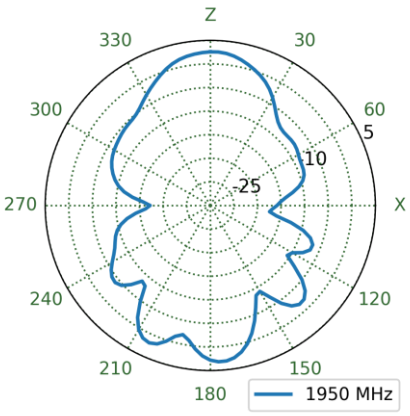
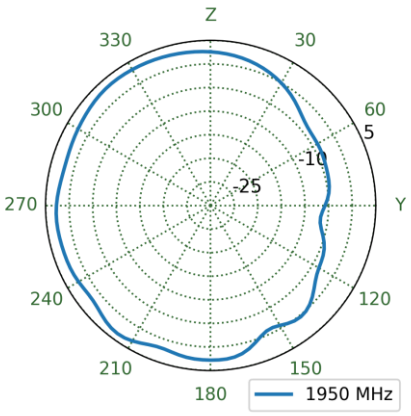
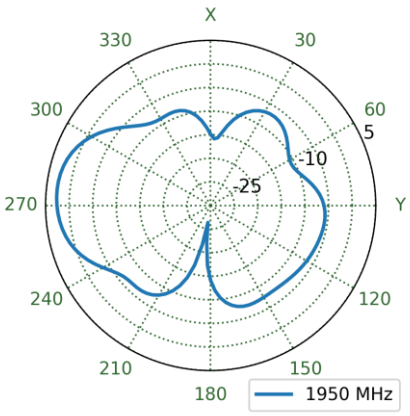
7.30 Straight Edge Ground Plane Patterns at 1955 MHz



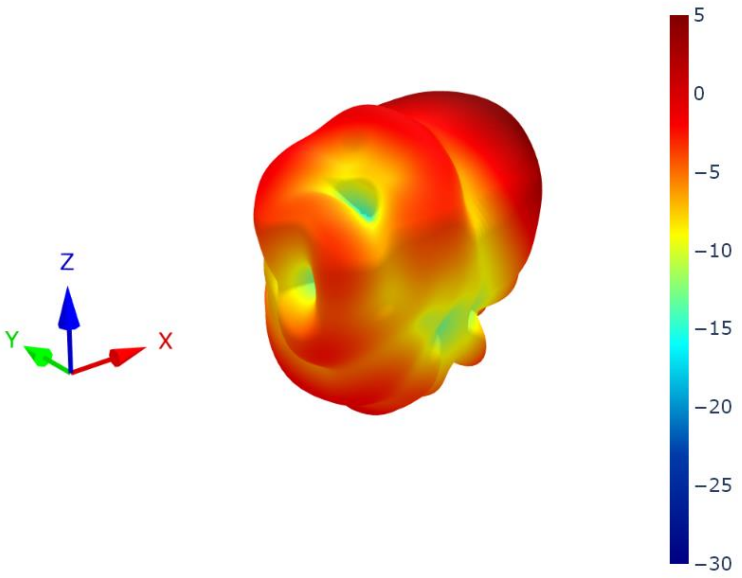
XZ Plane	YZ Plane	XY Plane
		

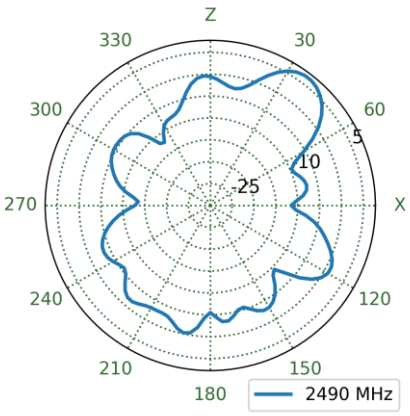
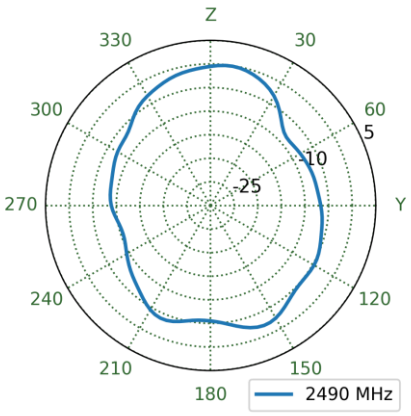
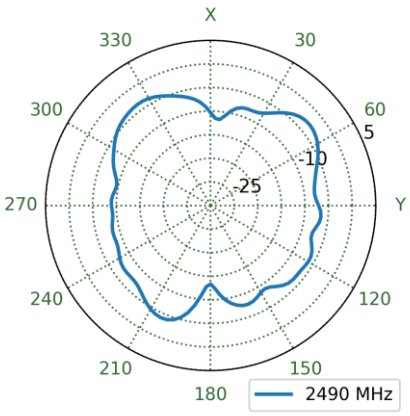
7.31 Straight Free Space Patterns at 1955 MHz



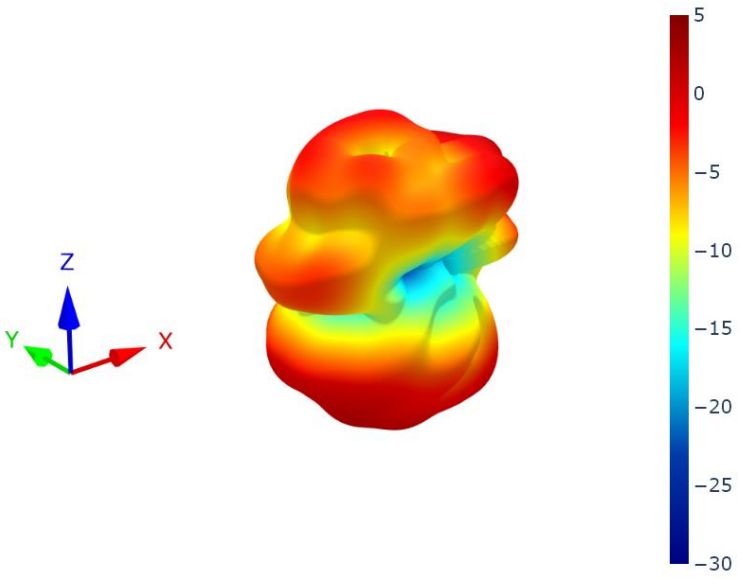
XZ Plane	YZ Plane	XY Plane
		

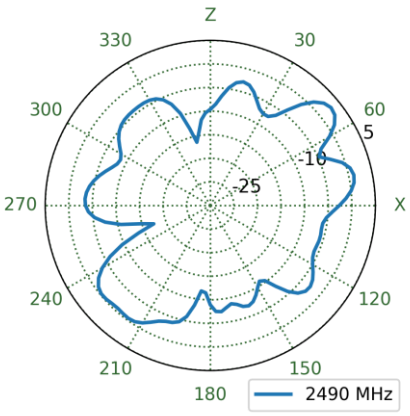
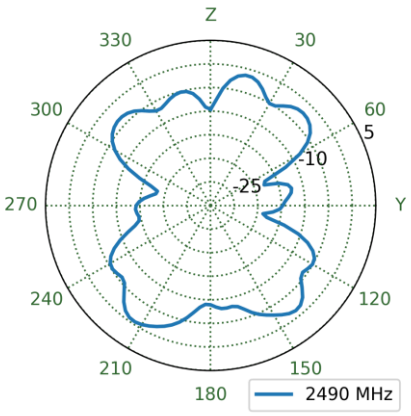
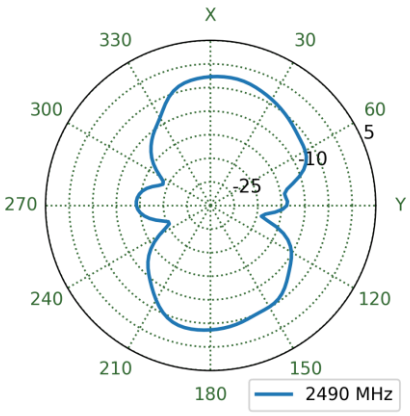
7.32 Bent Centre Ground Plane Patterns at 2495 MHz



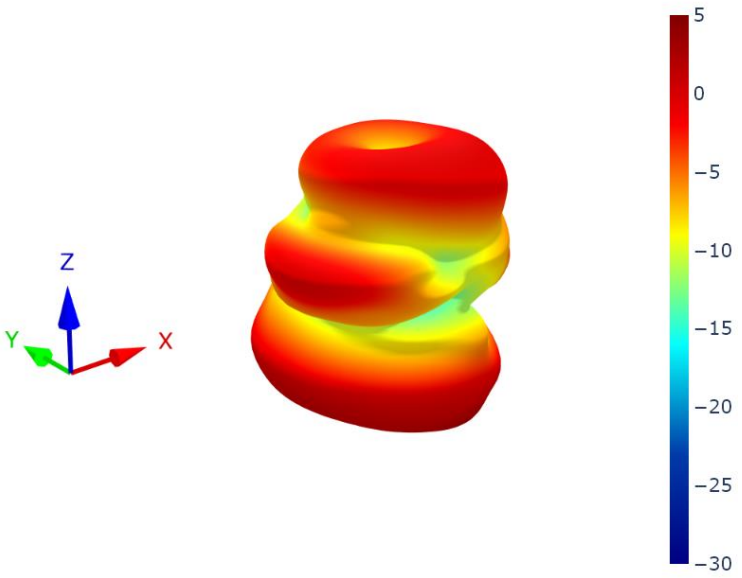
XZ Plane	YZ Plane	XY Plane
		

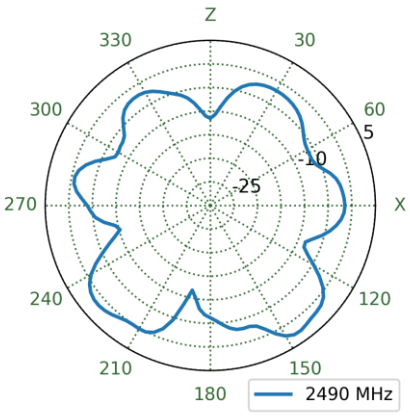
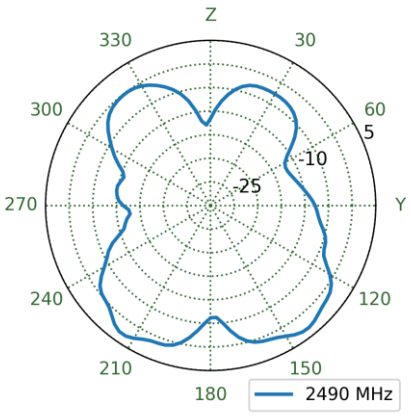
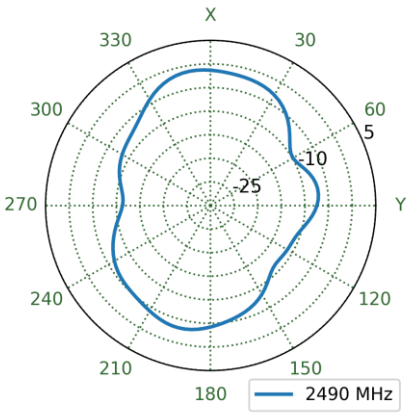
7.33 Bent Edge Ground Plane Patterns at 2495 MHz



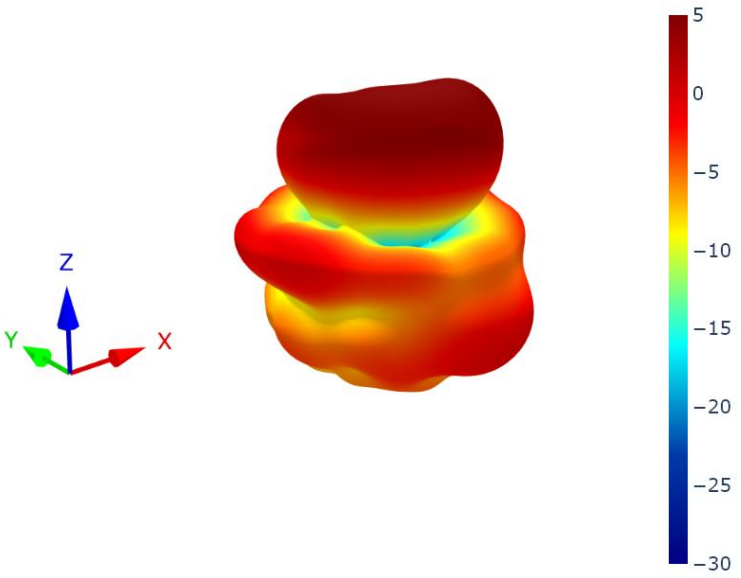
XZ Plane	YZ Plane	XY Plane
		

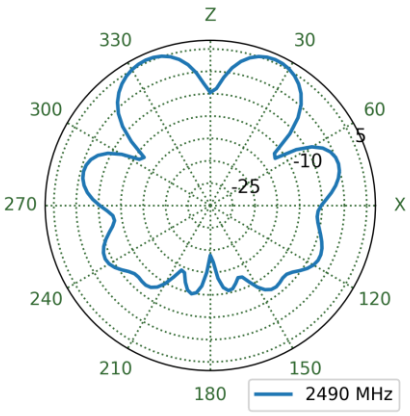
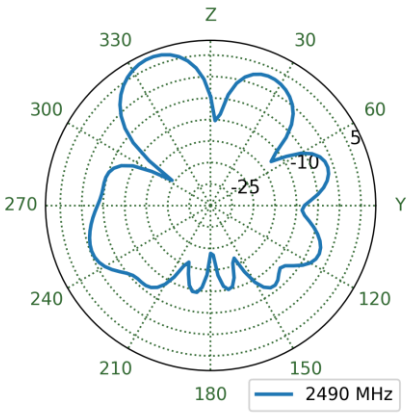
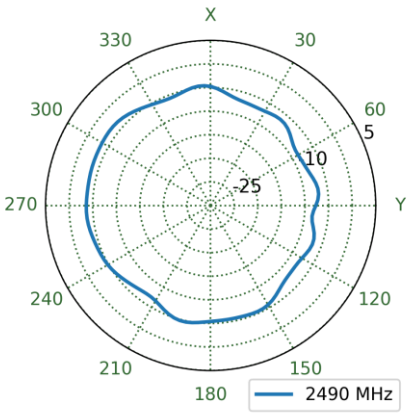
7.34 Bent Free Space Patterns at 2495 MHz



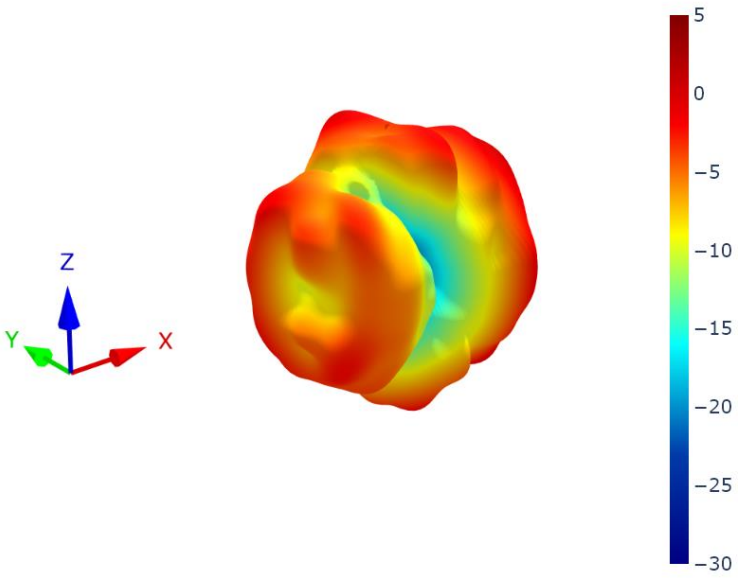
XZ Plane	YZ Plane	XY Plane
		

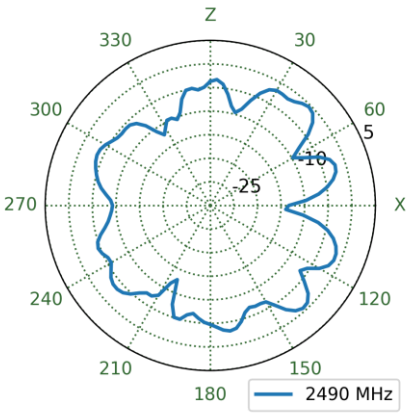
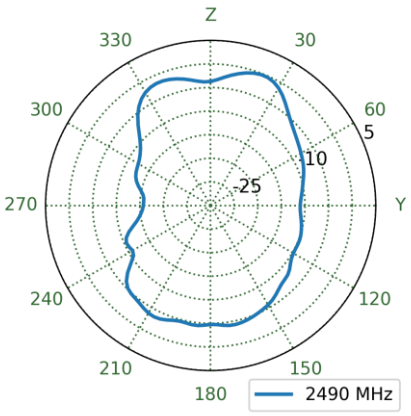
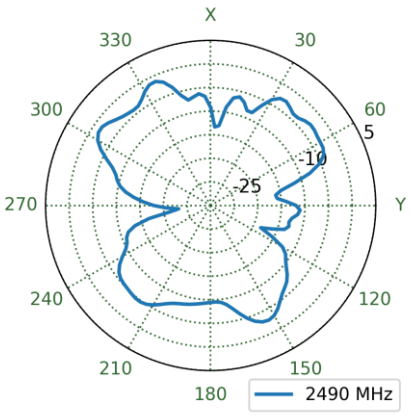
7.35 Straight Centre Ground Plane Patterns at 2495 MHz



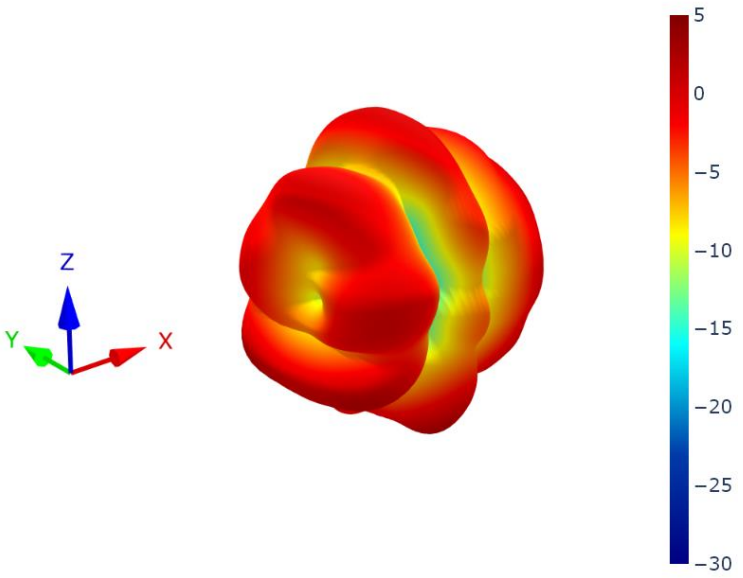
XZ Plane	YZ Plane	XY Plane
		

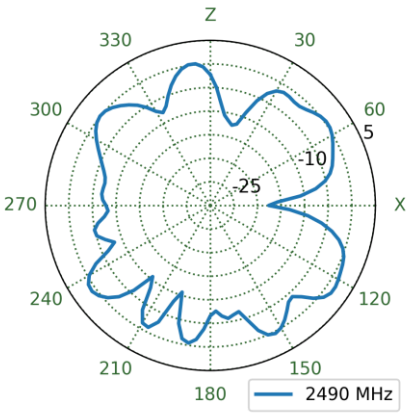
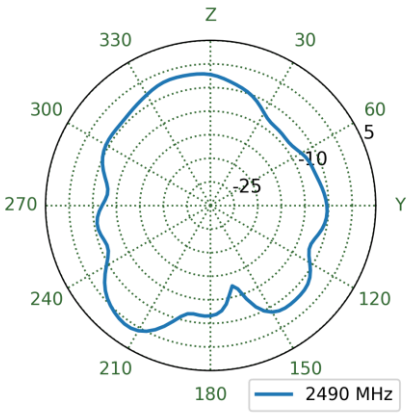
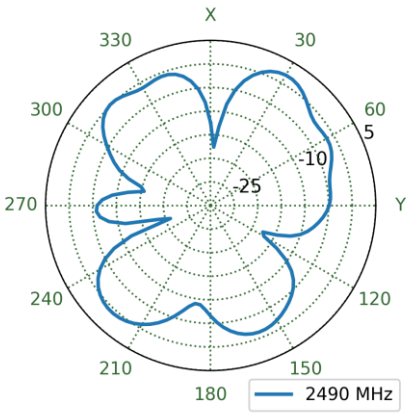
7.36 Straight Edge Ground Plane Patterns at 2495 MHz



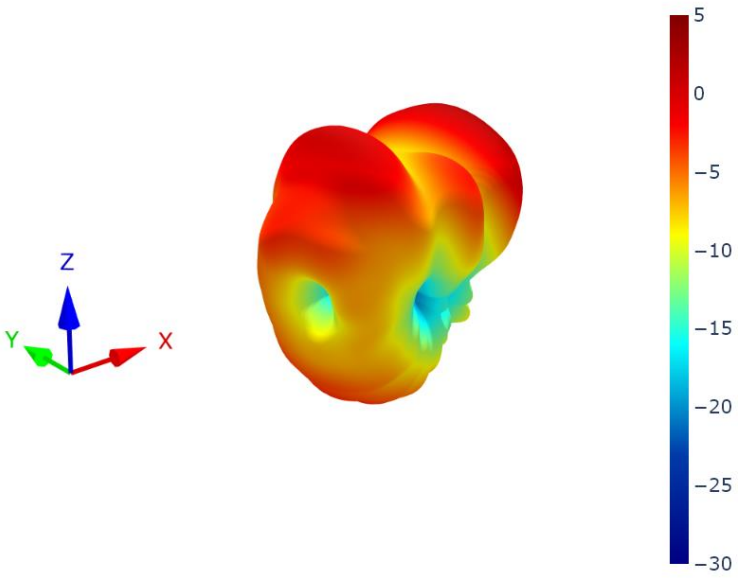
XZ Plane	YZ Plane	XY Plane
		

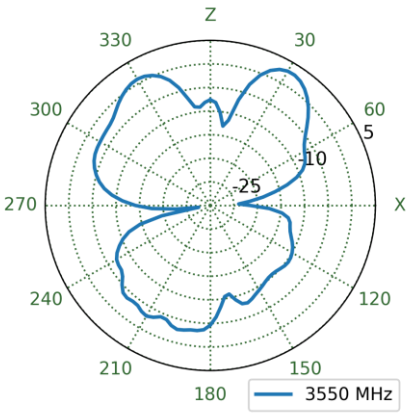
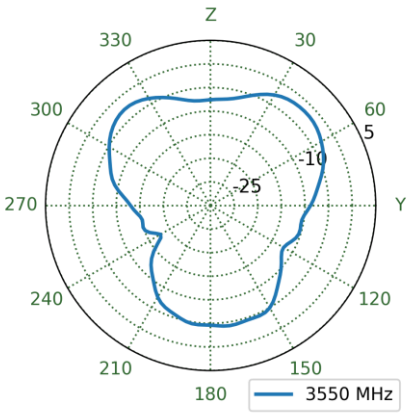
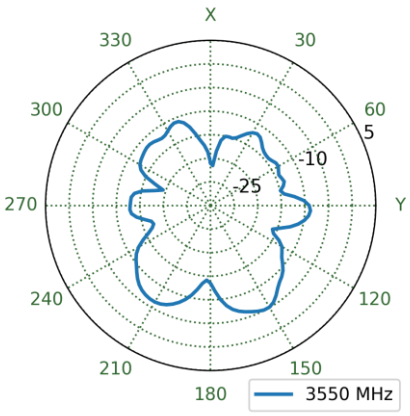
7.37 Straight Free Space Patterns at 2495 MHz



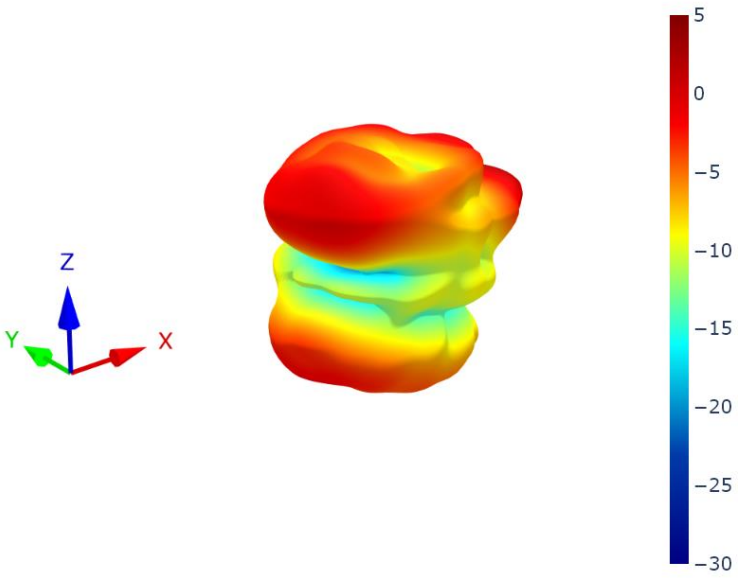
XZ Plane	YZ Plane	XY Plane
		

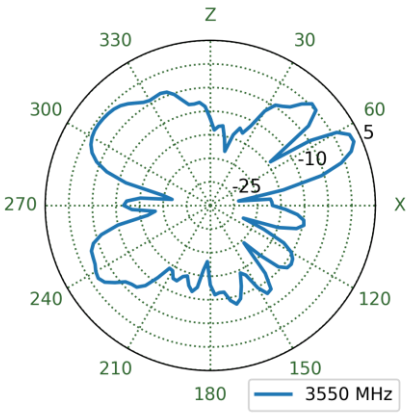
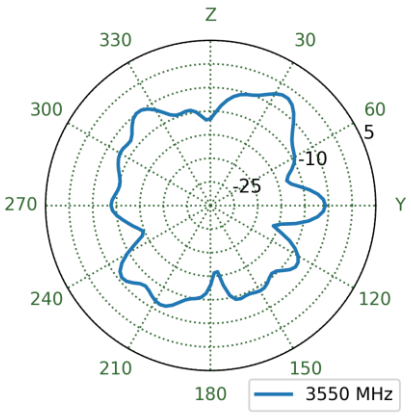
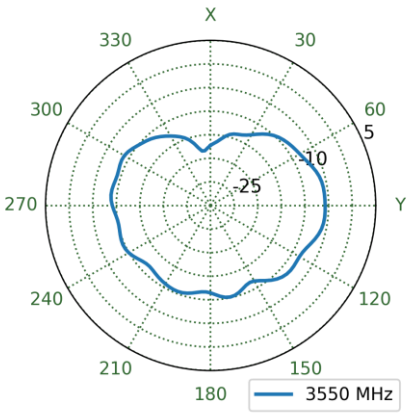
7.38 Bent Centre Ground Plane Patterns at 3550 MHz



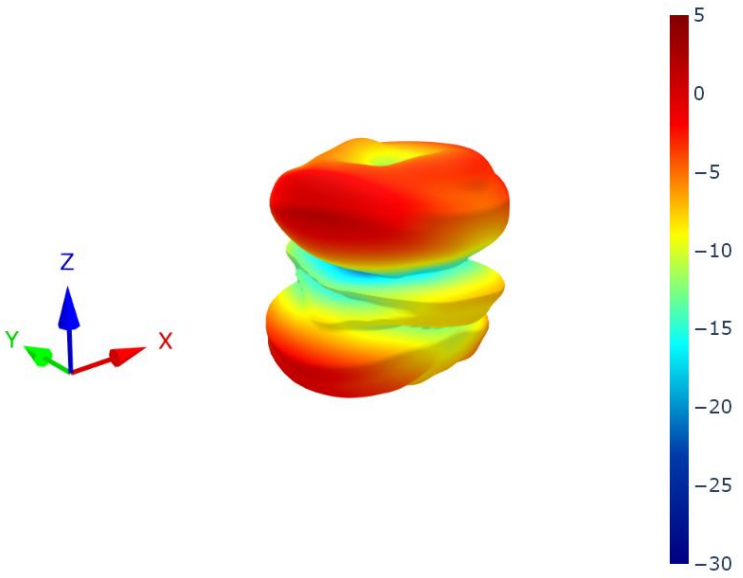
XZ Plane	YZ Plane	XY Plane
		

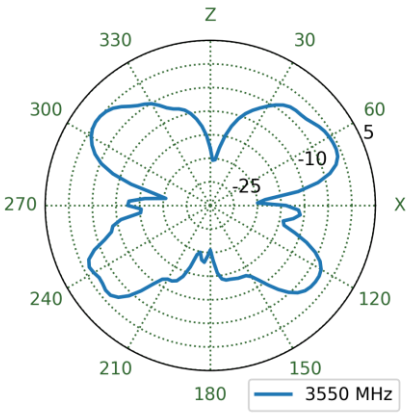
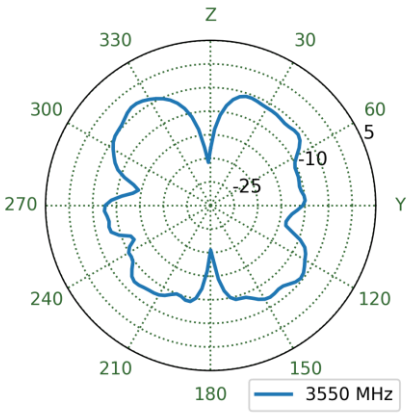
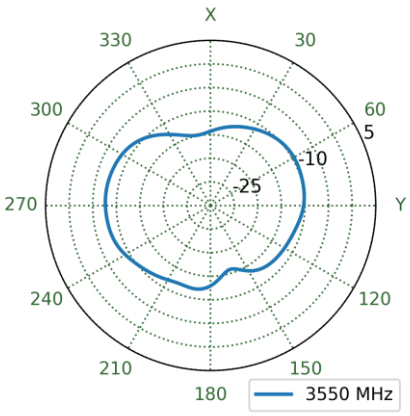
7.39 Bent Edge Ground Plane Patterns at 3550 MHz



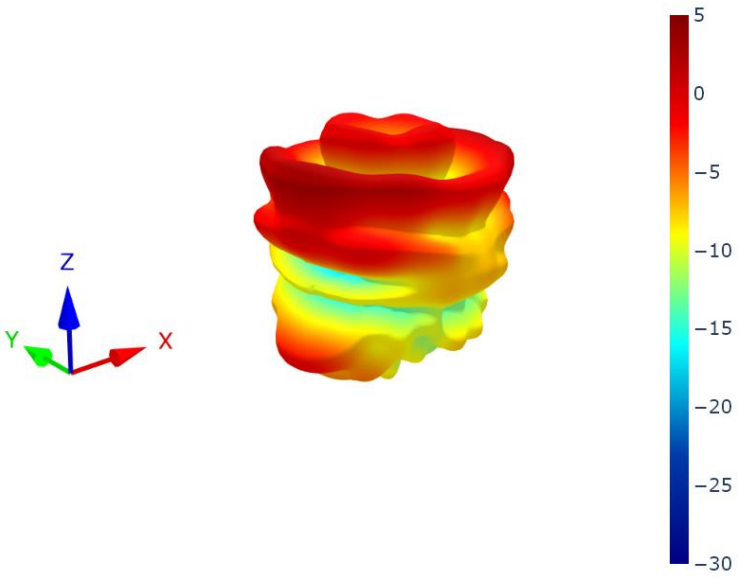
XZ Plane	YZ Plane	XY Plane
		

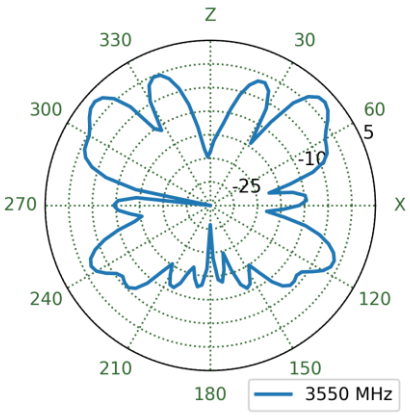
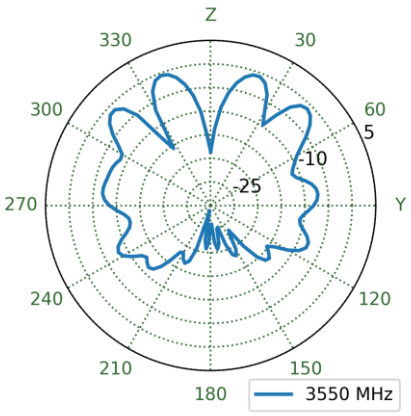
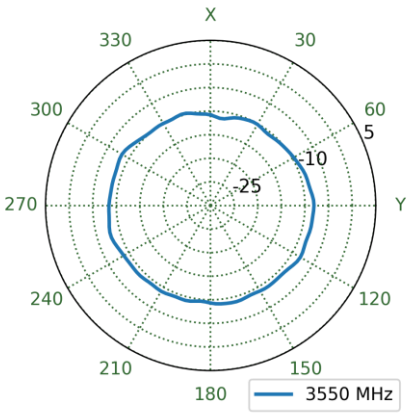
7.40 Bent Free Space Patterns at 3550 MHz



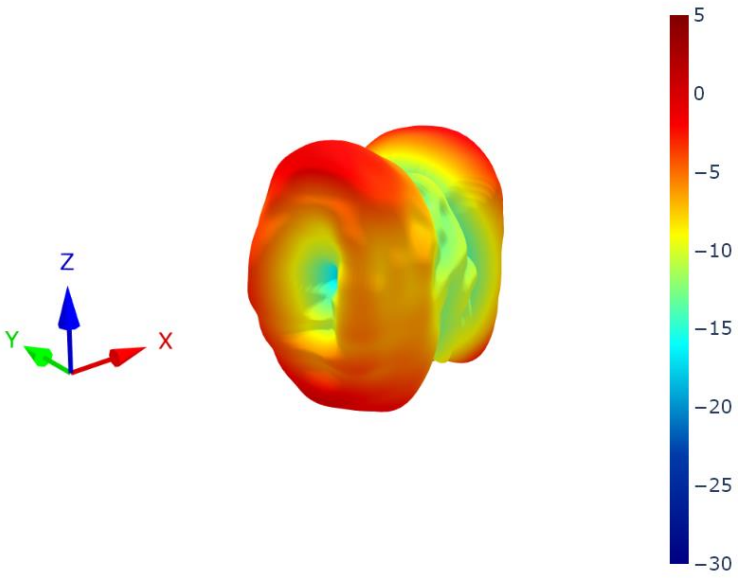
XZ Plane	YZ Plane	XY Plane
		

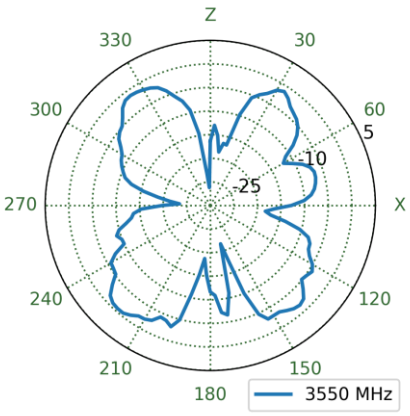
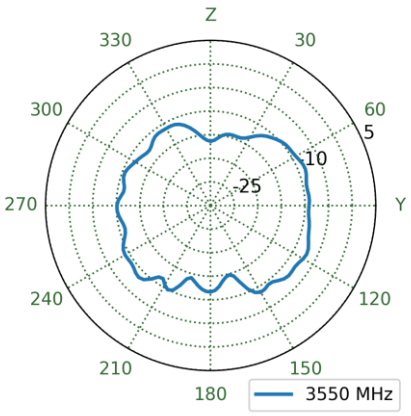
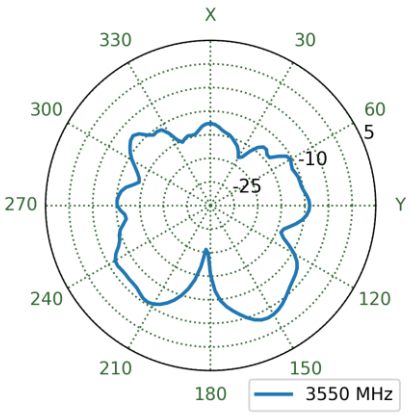
7.41 Straight Centre Ground Plane Patterns at 3550 MHz



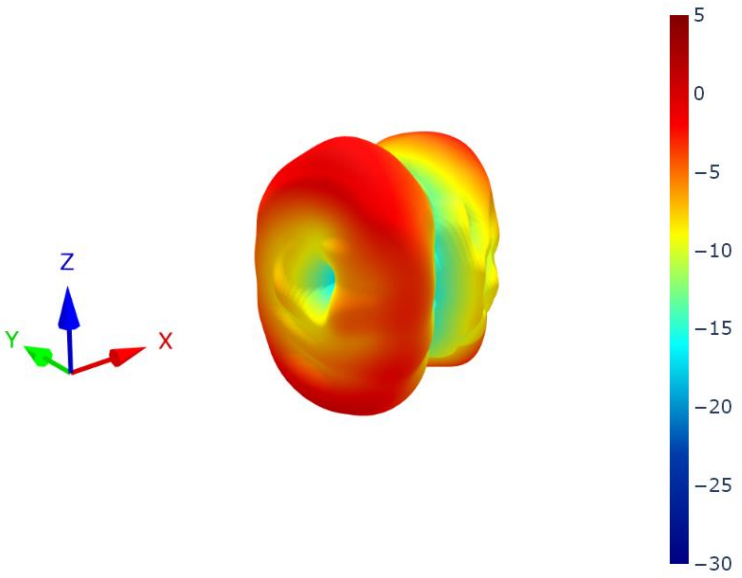
XZ Plane	YZ Plane	XY Plane
		

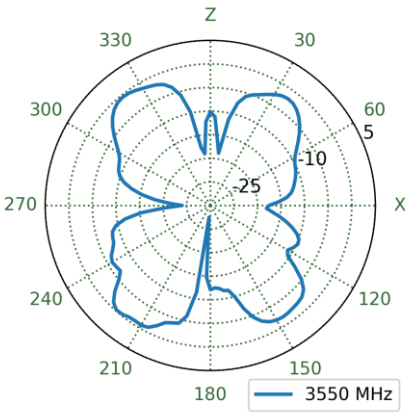
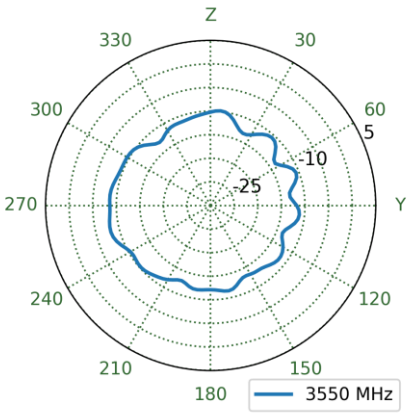
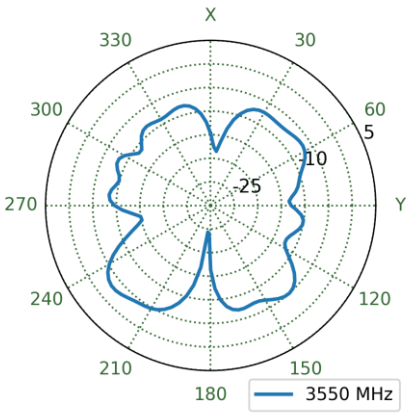
7.42 Straight Edge Ground Plane Patterns at 3550 MHz



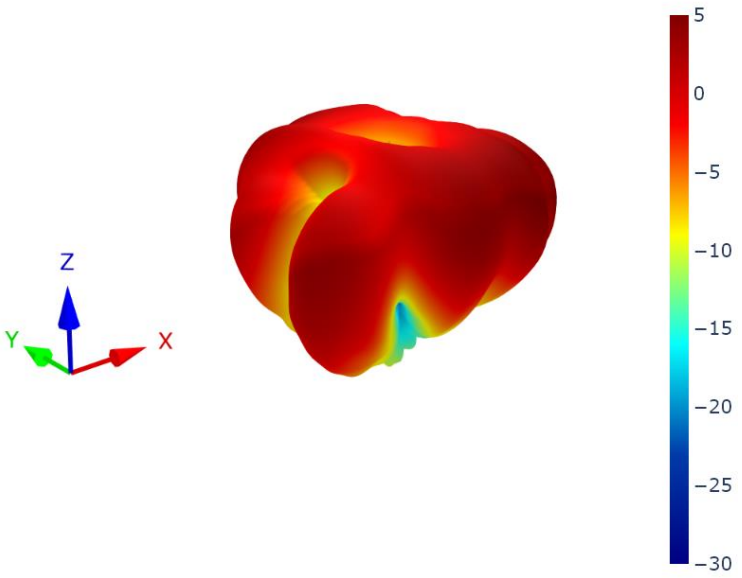
XZ Plane	YZ Plane	XY Plane
		

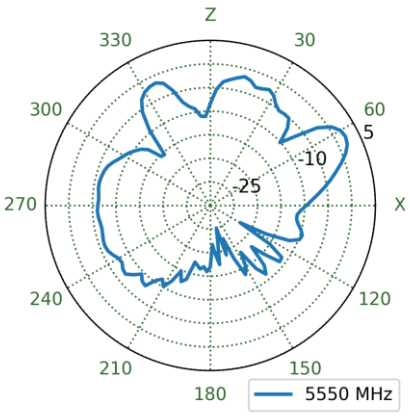
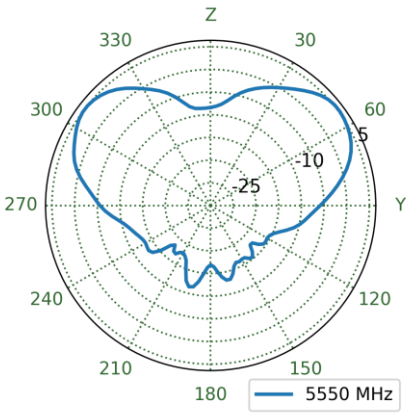
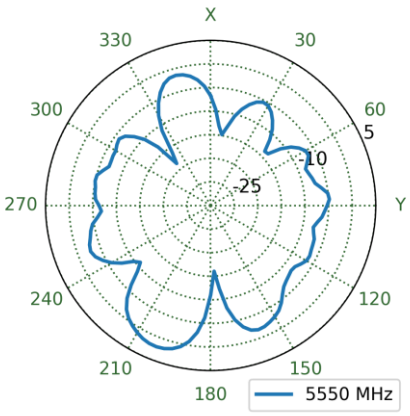
7.43 Straight Free Space Patterns at 3550 MHz



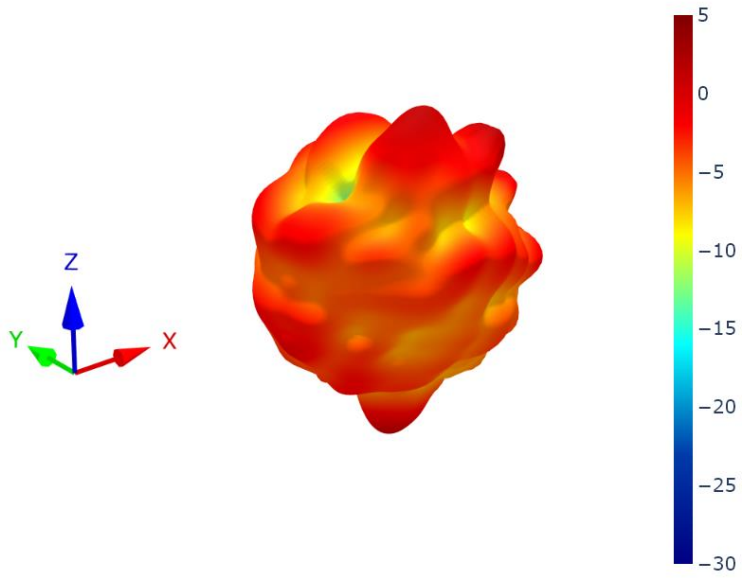
XZ Plane	YZ Plane	XY Plane
		

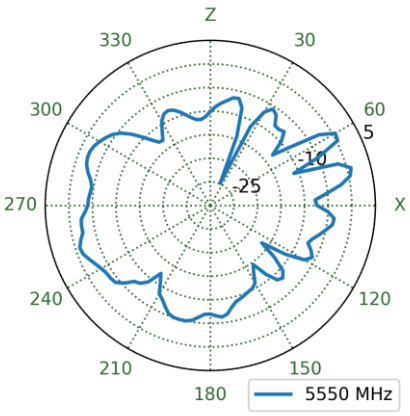
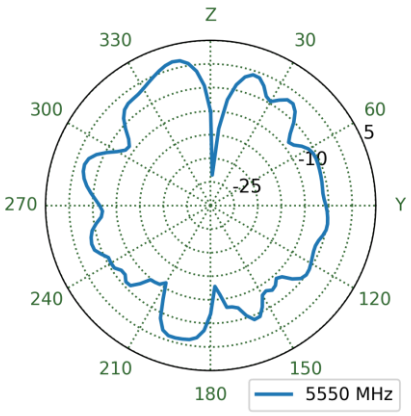
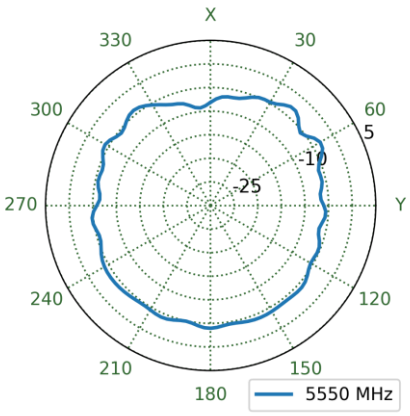
7.44 Bent Centre Ground Plane Patterns at 5550 MHz



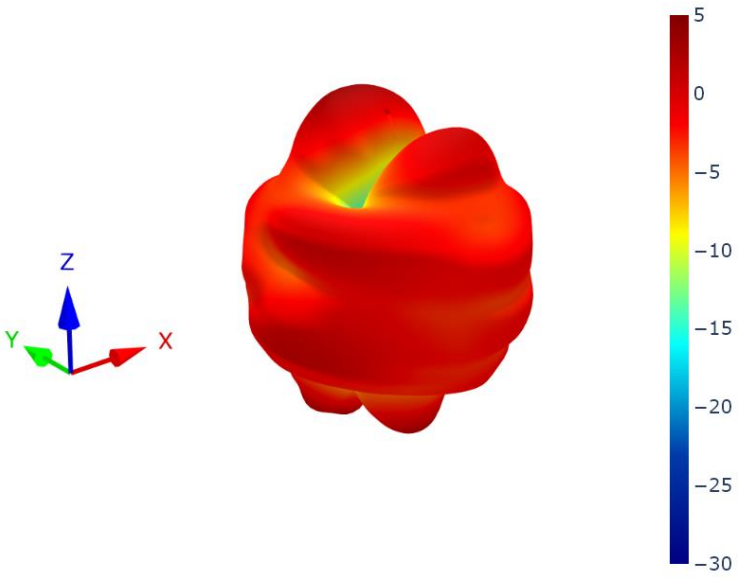
XZ Plane	YZ Plane	XY Plane
		

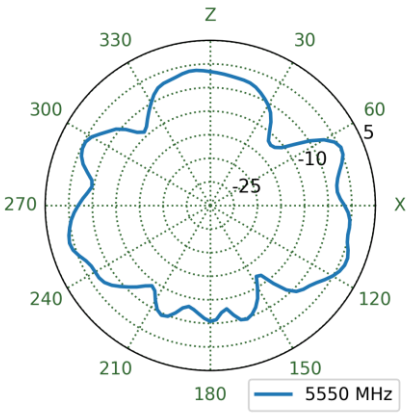
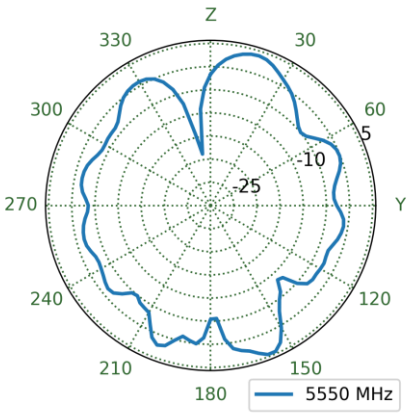
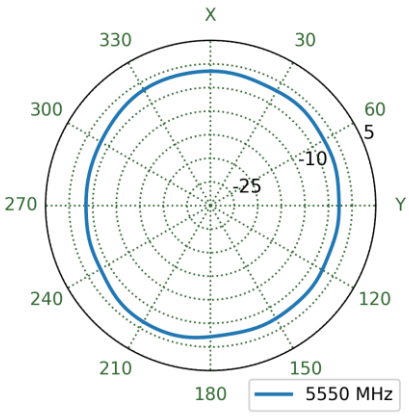
7.45 Bent Edge Ground Plane Patterns at 5550 MHz



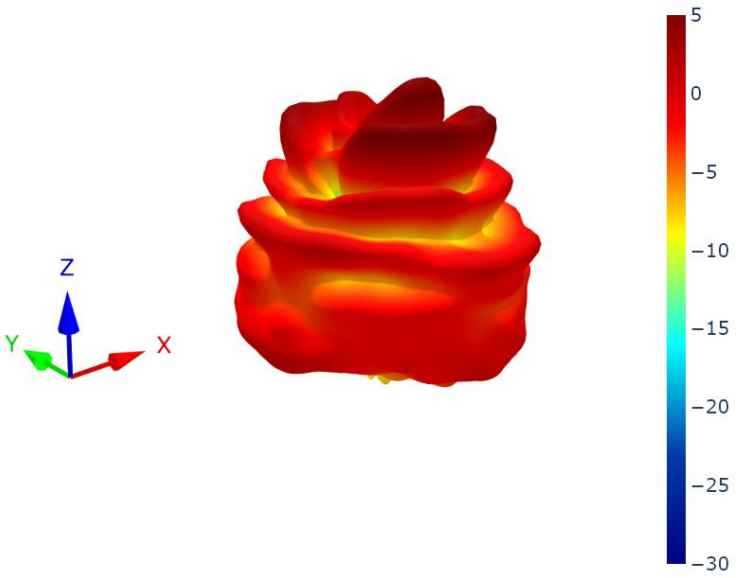
XZ Plane	YZ Plane	XY Plane
		

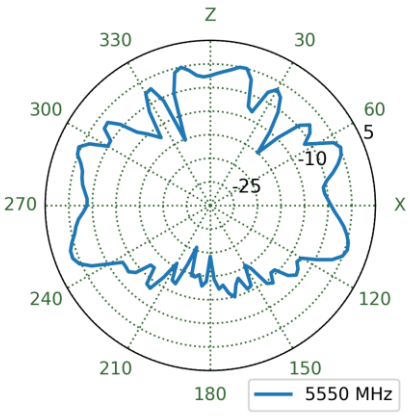
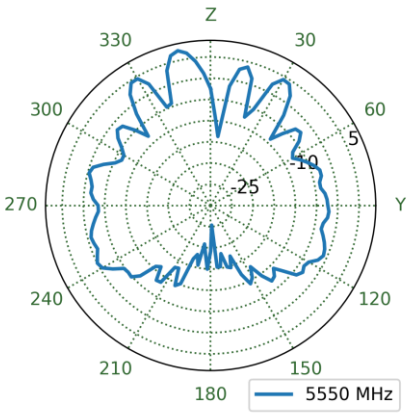
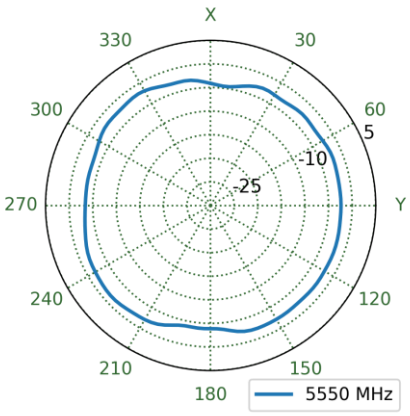
7.46 Bent Free Space Patterns at 5550 MHz



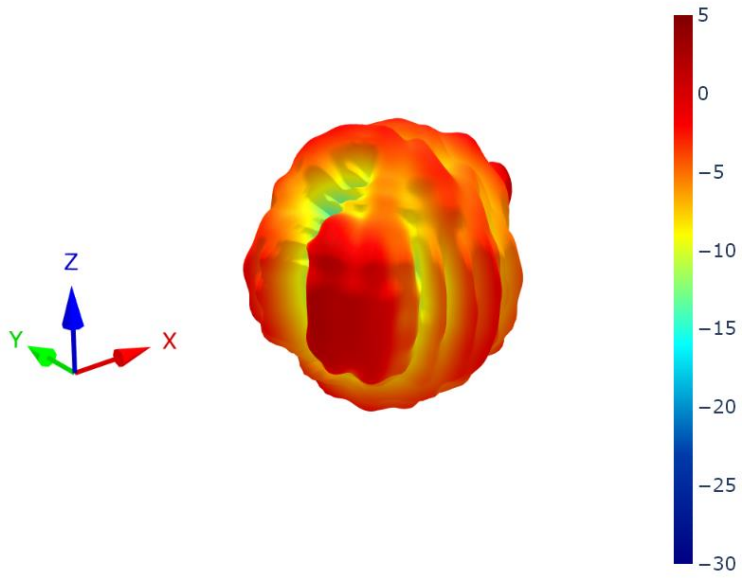
XZ Plane	YZ Plane	XY Plane
		

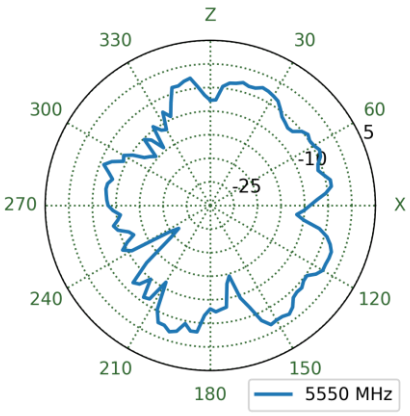
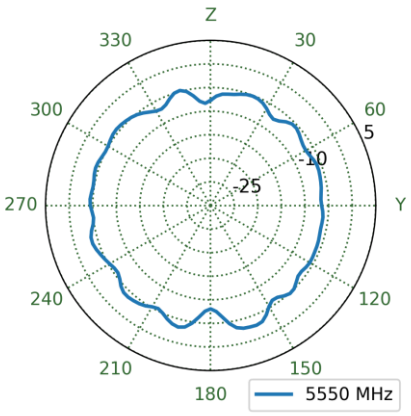
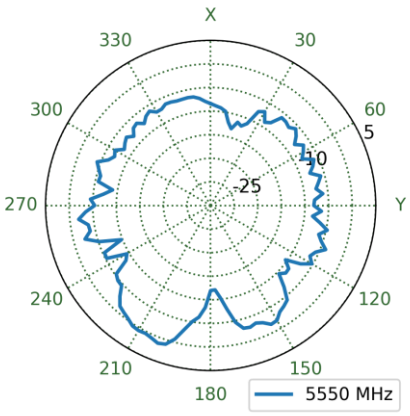
7.47 Straight Centre Ground Plane Patterns at 5550 MHz



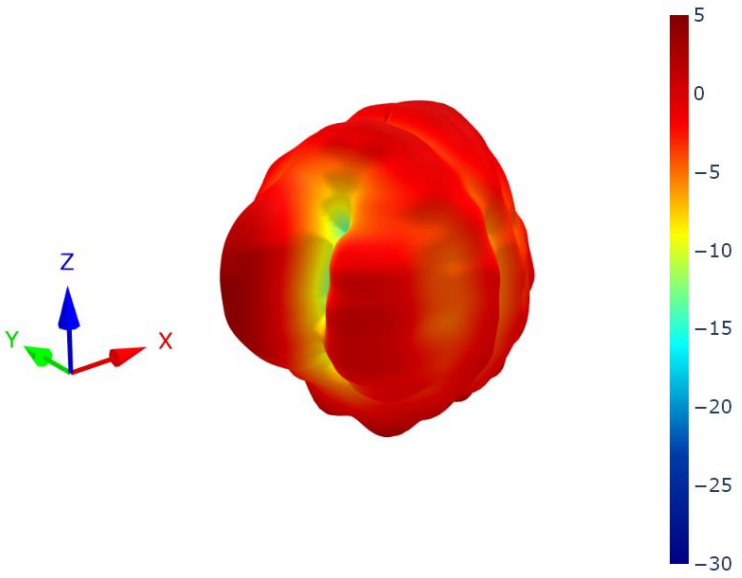
XZ Plane	YZ Plane	XY Plane
		

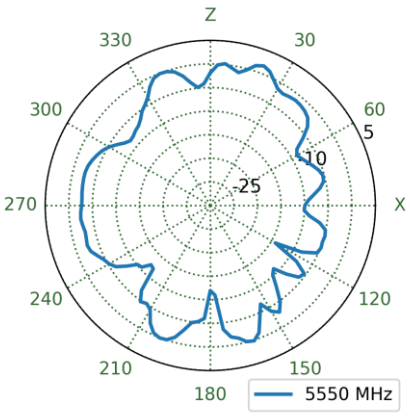
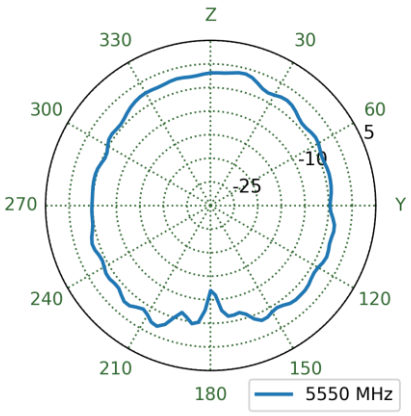
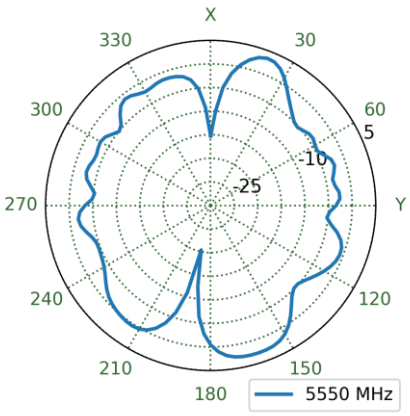
7.48 Straight Edge Ground Plane Patterns at 5550 MHz



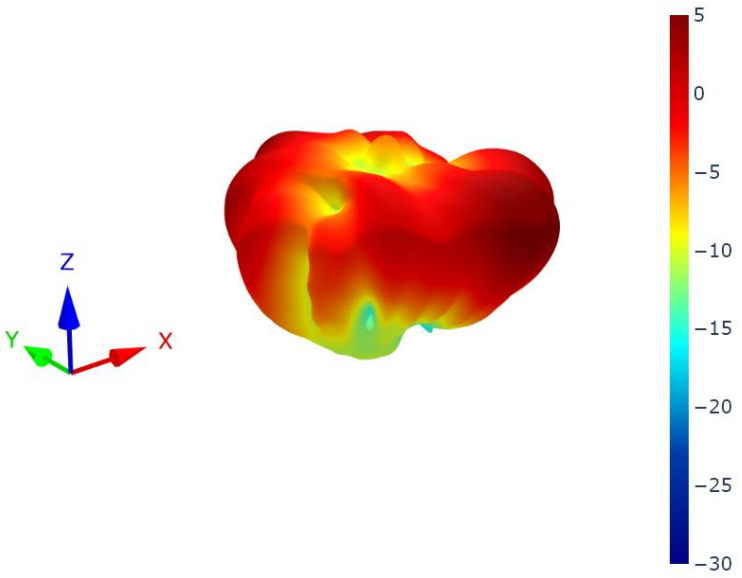
XZ Plane	YZ Plane	XY Plane
		

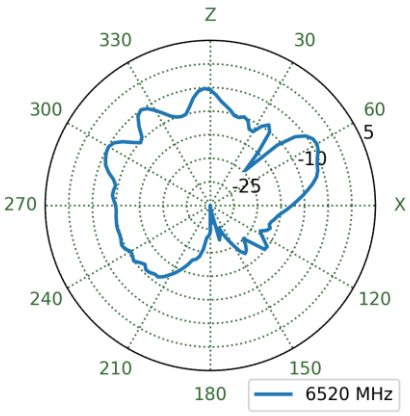
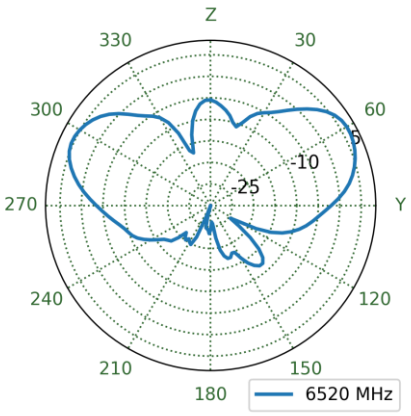
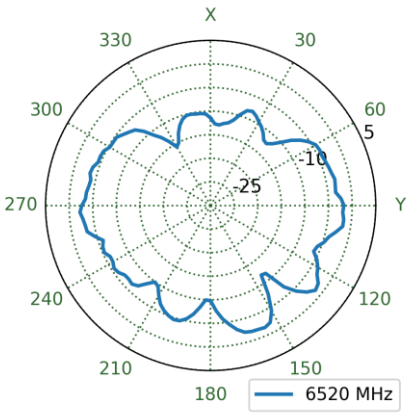
7.49 Straight Free Space Patterns at 5550 MHz



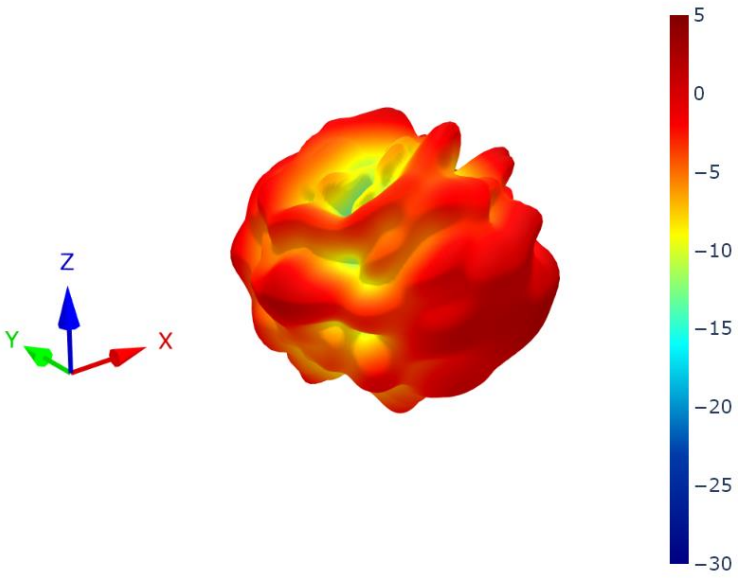
XZ Plane	YZ Plane	XY Plane
		

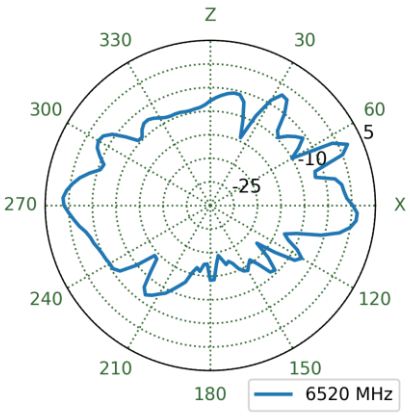
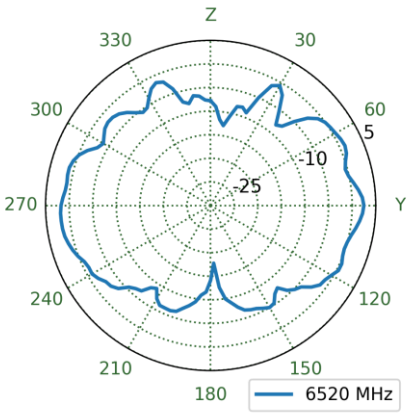
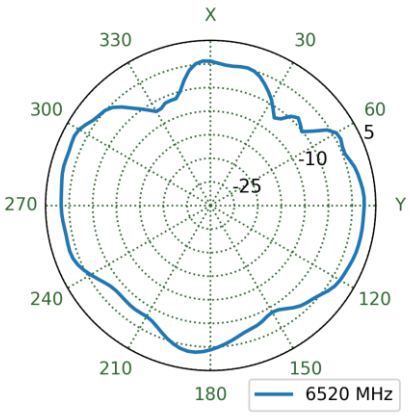
7.50 Bent Centre Ground Plane Patterns at 6525 MHz



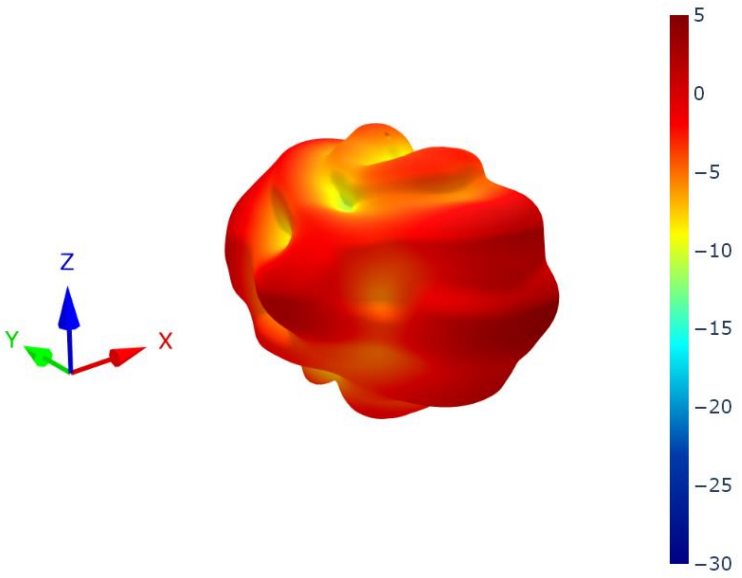
XZ Plane	YZ Plane	XY Plane
		

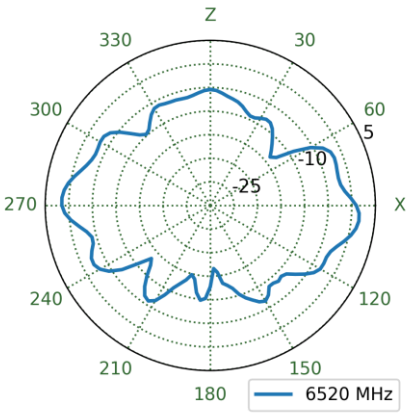
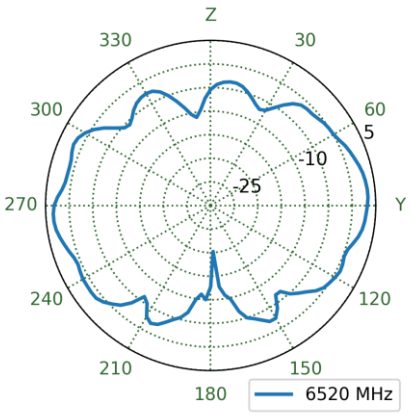
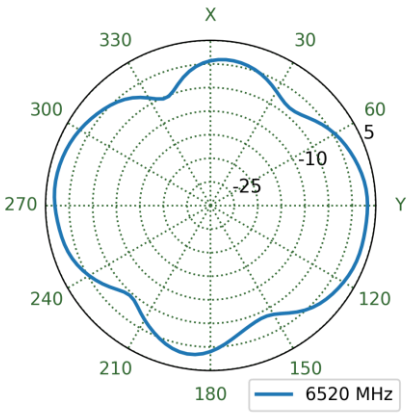
7.51 Bent Edge Ground Plane Patterns at 6525 MHz



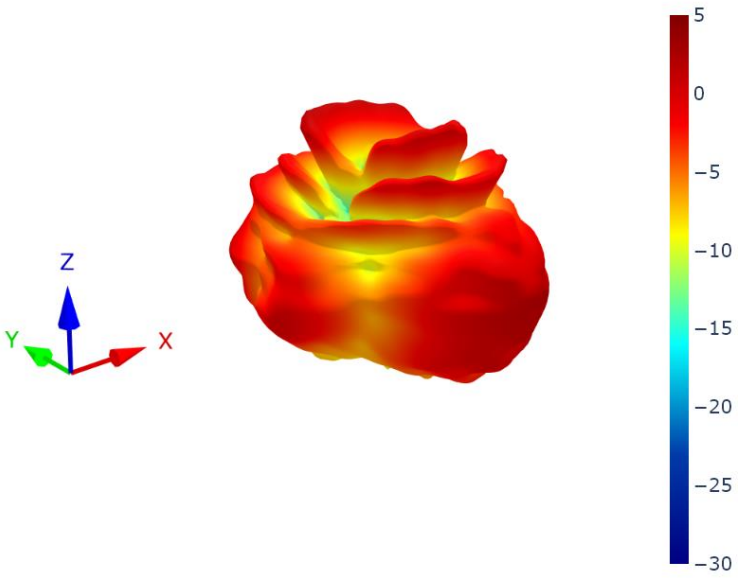
XZ Plane	YZ Plane	XY Plane
		

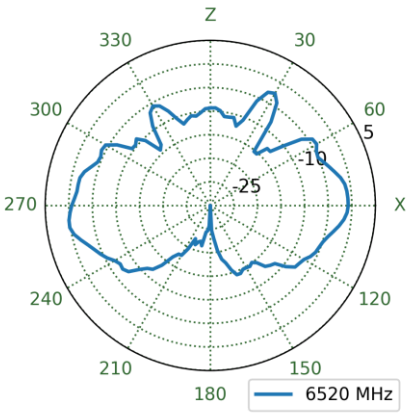
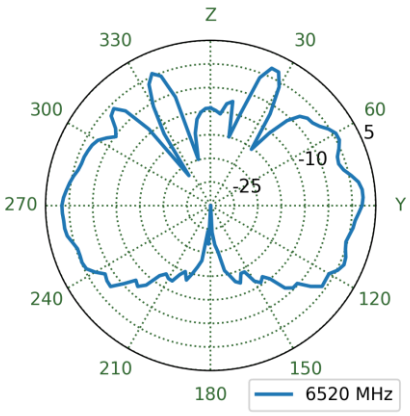
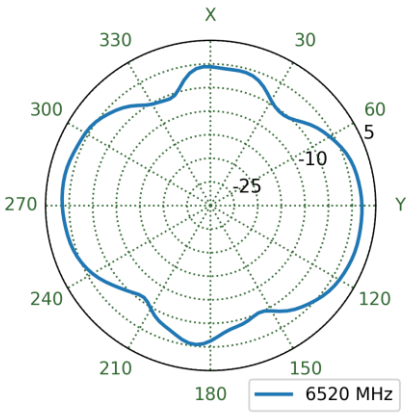
7.52 Bent Free Space Patterns at 6525 MHz



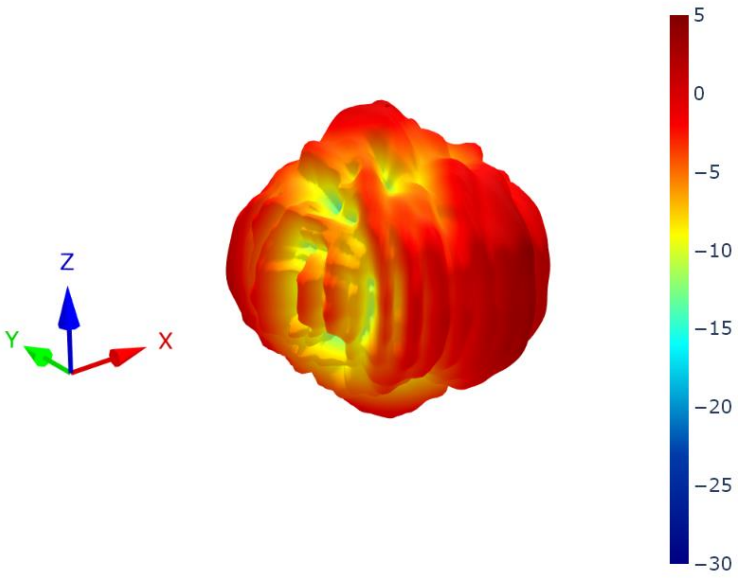
XZ Plane	YZ Plane	XY Plane
		

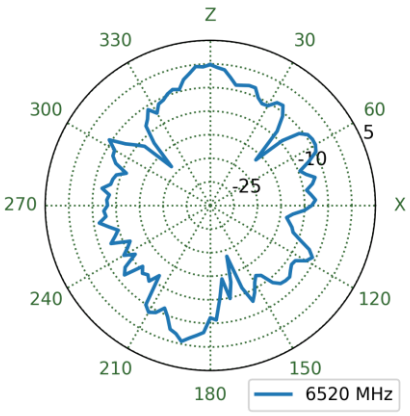
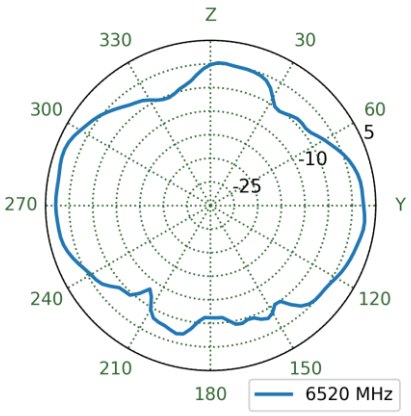
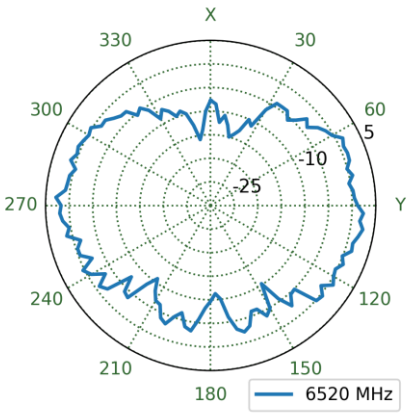
7.53 Straight Centre Ground Plane Patterns at 6525 MHz



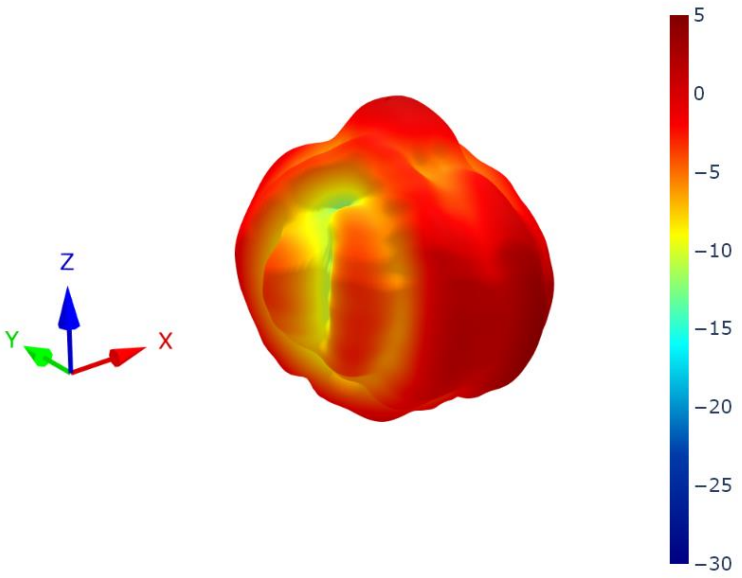
XZ Plane	YZ Plane	XY Plane
		

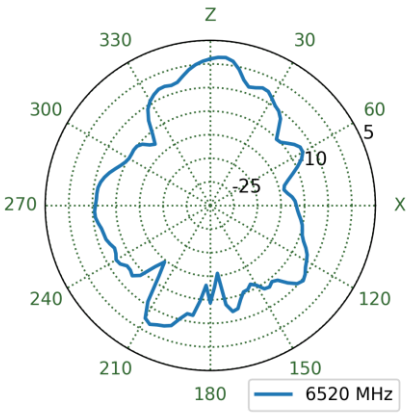
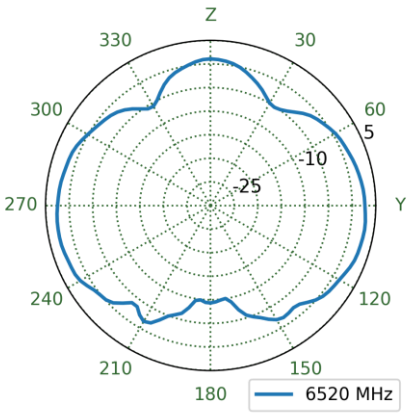
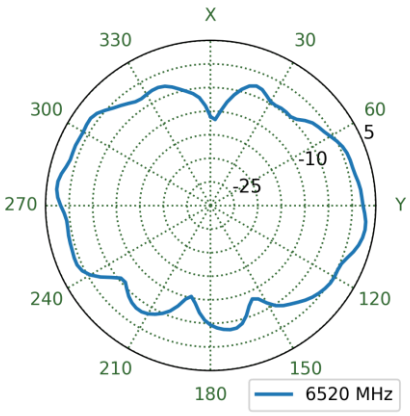
7.54 Straight Edge Ground Plane Patterns at 6525 MHz



XZ Plane	YZ Plane	XY Plane
		

7.55 Straight Free Space Patterns at 6525 MHz



XZ Plane	YZ Plane	XY Plane
		

Changelog for the datasheet

SPE-14-8-083 – TG.35.8113W

Revision: G (Current Version)	
Date:	2024-09-04
Changes:	Full update to include Wi-Fi 6.
Changes Made by:	Gary West

Previous Revisions

Revision: F	
Date:	2019-04-19
Changes:	Updated Frequency range
Changes Made by:	Jack Conroy

Revision: A (Original First Release)	
Date:	2014-08-22
Notes:	
Author:	Aine Doyle

Revision: E	
Date:	2018-12-10
Changes:	Amended Average Gain
Changes Made by:	David Connolly

Revision: D	
Date:	2017-03-30
Changes:	Added LTE Table
Changes Made by:	Andy Mahoney

Revision: C	
Date:	2015-09-18
Changes:	Updated Hinge
Changes Made by:	Aine Doyle

Revision: B	
Date:	2014-09-04
Changes:	Added Note
Changes Made by:	Aine Doyle

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