

Part No: TG.64.8113

Description

Wideband (600-6000MHz) LTE Dipole Terminal Antenna With 90 degrees Hinged RA SMA (M) Connector

Features:

600-6000MHz Wideband 5G/4G Cellular Antenna Fantastic Efficiency Across all Bands Small Form Factor with Rotatable Hinged Design for Flexible Positioning Dipole Antenna Design Suitable for Small Ground Plane Omnidirectional Gain Patterns for Optimum Coverage Connector: 90 degrees Hinged RA SMA (M) Connector Dimensions: 135 x 19.4 x 10 mm RoHS & Reach Compliant

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Introduction

1.



The TG.64 is a dipole 5G/4G antenna designed for use with the next generation of router and gateway applications. Covering the full 600-6000MHz cellular frequency spectrum, the TG.64 is ideal for applications where a wideband dipole antenna may be required. The TG.64 can also be used for NB-IoT, Cat-M, assisted GNSS and dual-band Wi-Fi and due to its full spectrum coverage is backwards compatible with legacy technologies such as 3G and GSM.

The TG.64 has a sleek yet robust PC+ABS enclosure allowing it to be used with a wide variety of devices. The TG.64 is designed to work with any ground plane size or in free space for ease of integration.

Typical applications include:

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

The TG.64 is supplied with a hinged SMA connector for ease of mounting in MIMO systems. The dimensions of the TG.64 are 135x19.4x6 mm, meaning it can be covertly installed on routers and other similar devices unlike some of the bulkier products on the market. For further information please contact your regional Taoglas customer support team.



Specification

2.

LTE Electrical										
Band	Frequency	Measurer	nont	Efficiency	Average Gain	Peak Gain	Impedance	Polarization	Radiation	
Dallu	(MHz)	Weasurer	nent	(%)	(dB)	(dBi)	Impedance	Polarization	Pattern	
		Free Space	Straight	40.4	-3.94	1.91				
	617-698	Fiee space	Bent	37.9	-4.22	1.38				
5G NR Band 71		Ground Plane 1	Straight	51.2	49.4	0.71				
Se fill Balla / 1			Bent	49.4	-3.06	1.09				
		Ground Plane 2	Straight	69.2	-1.60	2.54				
			Bent	69.0	-1.61	1.49				
	698-824	Free Space Ground Plane 1	Straight	44.6	-3.50	2.46				
			Bent	42.8	-3.68	1.62				
LTE700			Straight	44.3	-3.53	1.73				
		Ground Plane 2	Bent	53.6	-2.71	1.03				
			Straight	64.2	-1.93	2.95				
			Bent	69.4	-1.58	1.79				
		Free Space	Straight	42.1	-3.76	2.48				
			Bent	40.1	-3.96	1.54				
GSM800/900	824-960	Ground Plane 1	Straight	57.9	-2.37	3.10				
			Bent	68.1	-1.67	1.98				
		Ground Plane 2	Straight	65.7	-1.83	2.95				
			Bent	66.1	-1.80	2.06				
		Free Space	Straight	28.0	-5.52	1.20				
			Bent	39.1	-4.07	0.02				
5G NR Band 1500	1427-1518	Ground Plane 1	Straight	65.3	-1.85	3.12				
			Bent	55.7	-2.54	1.92				
		Ground Plane 2	Straight Bent	70.7 58.4	-1.51 -2.33	3.71 1.89				
	1710-2200	Free Space	Straight	51.3	-2.90	2.00			Linear Omni	
			Bent	65.1	-1.87	3.11	50 Ω			
5G NR N66		Ground Plane 1	Straight Bent	63.9 67.4	-1.95	3.35 3.47		Linear		
		Ground Plane 2			-1.71 -2.08					
			Straight Bent	62.0	-2.08	4.58 3.52				
			Straight	67.3 68.6	-1.64	3.06				
		Free Space	Bent	70.8	-1.50	3.19				
			Straight	54.4	-2.64	3.35				
LTE2600	2300-2690	Ground Plane 1	Bent	58.6	-2.32	5.09				
		Ground Plane 2	Straight	49.4	-3.06	2.08				
			Bent	56.2	-2.50	4.99				
	3300-4200		Straight	47.3	-3.25	1.81				
		Free Space	Bent	49.5	-3.05	2.49				
			Straight	34.9	-4.57	1.33				
5G NR N77		Ground Plane 1	Bent	36.3	-4.41	2.45				
			Straight	34.1	-4.67	2.39				
		Ground Plane 2	Bent	37.4	-4.27	1.24				
	3300-3800			Straight	47.7	-3.22	1.77			
		Free Space	Bent	47.1	-3.27	1.36				
		Ground Plane 1	Straight	33.7	-4.73	0.17				
5G NR N78			Bent	35.1	-4.55	0.05				
			Straight	33.9	-4.69	0.15				
		Ground Plane 2	Bent	37.2	-4.30	0.35				
	79 4400-5000	Free Space	Straight	54.5	-2.64	3.26				
			Bent	59.4	-2.26	2.79				
			Straight	37.4	-4.27	1.73				
5G NR N79			Bent	36.6	-4.36	2.00				
		Ground Plane 2	Straight	31.0	-5.09	2.16				
			Bent	32.9	-4.83	1.62				
	5150-5925	Free Space	Straight	43.1	-3.65	3.01				
			Bent	62.0	-2.07	3.99				
		925 Ground Plane 1	Straight	41.0	-3.87	3.22				
LTE5200			Bent	45.9	-3.38	4.12				
			Straight	30.8	-5.12	3.08				
		Ground Plane 2	Bent	36.7	-4.35	2.63				

Note: Ground Plane 1 - 15x9cm, Ground Plane 2 - 9x15cm



Mechanical				
Dimensions	135 x 19.4 x 6 mm			
Weight				
Material	ABS			
Connector	SMA(M)			

Environmental				
Operation Temperature	-40°C to 85°C			
Storage Temperature	-40°C to 85°C			
RoHs Compliant	Yes			

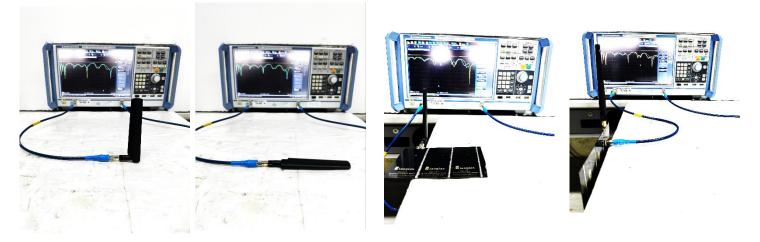




Antenna Characteristics

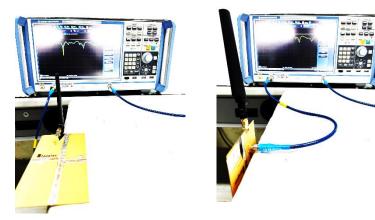






In Free space

On 15X9cm Ground plane

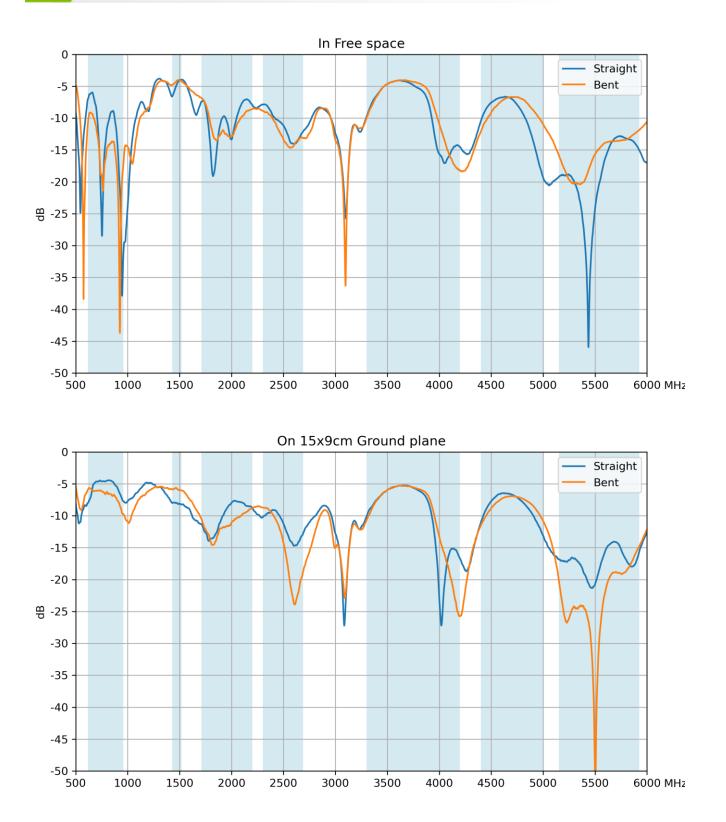


On 9X15cm Ground plane

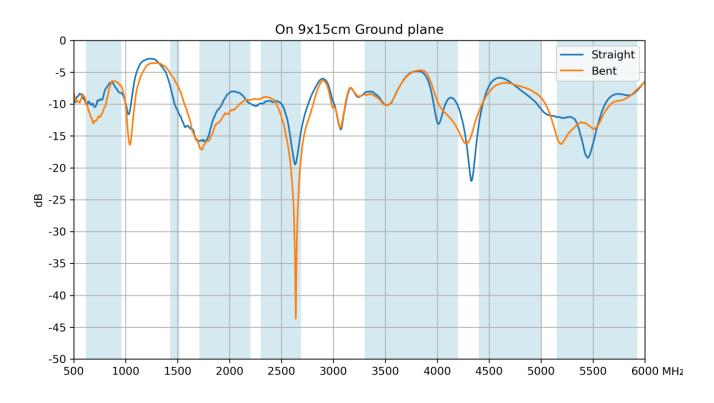




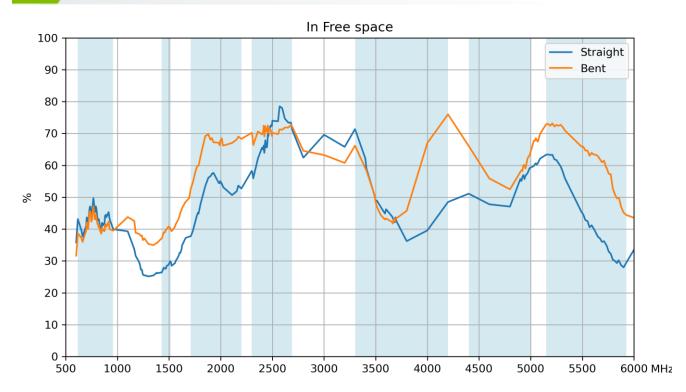
3.2 Return Loss



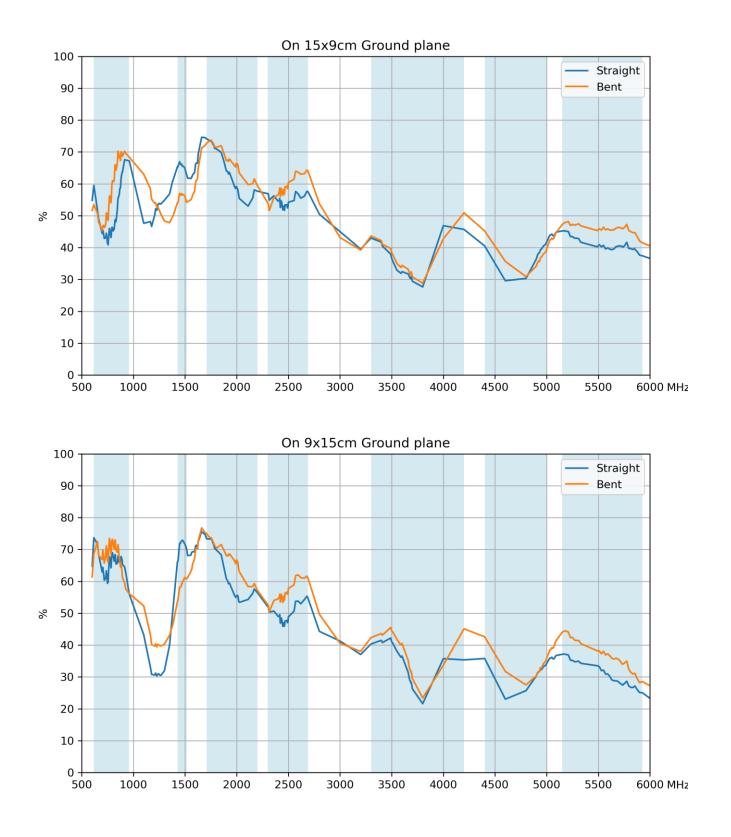




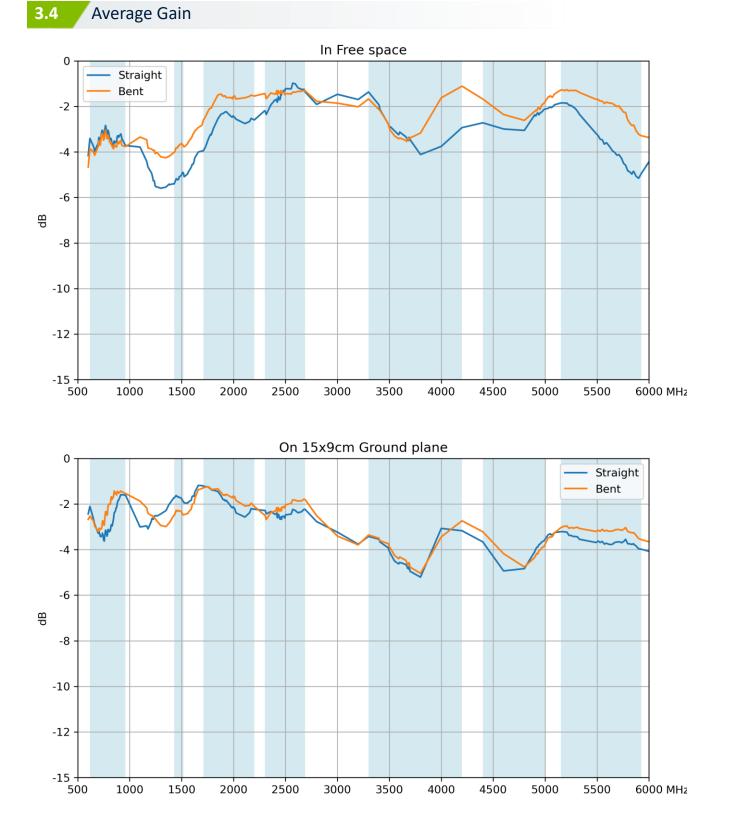
3.3 Efficiency



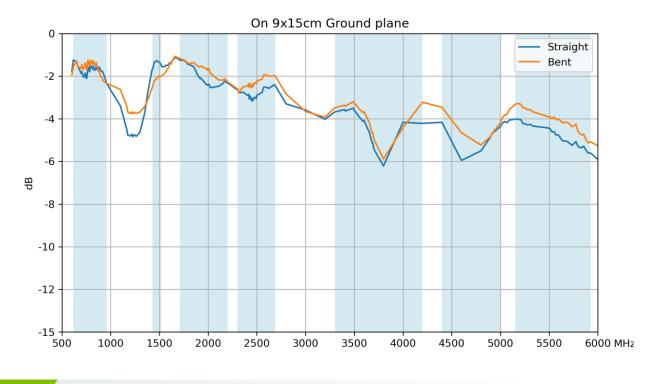




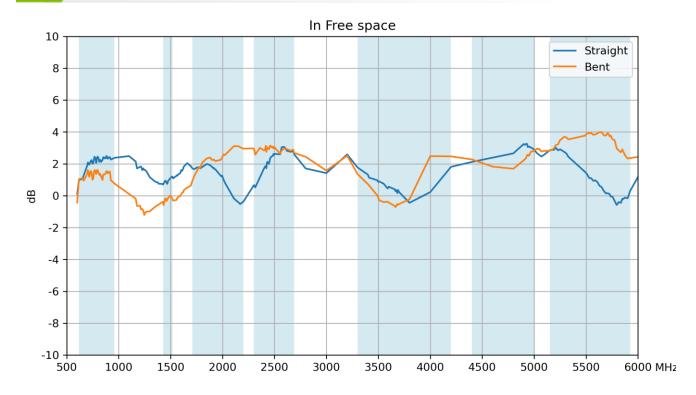








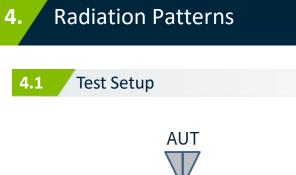
















In Free space

On 15X9cm Ground plane

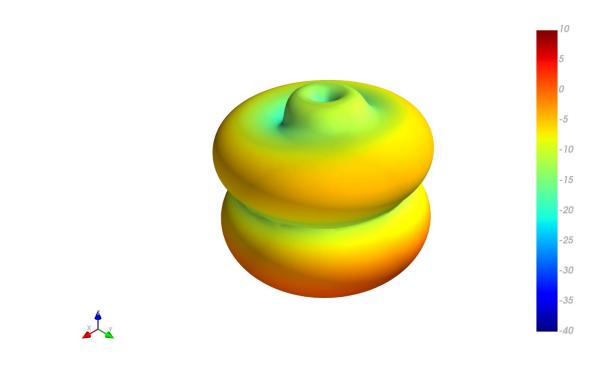


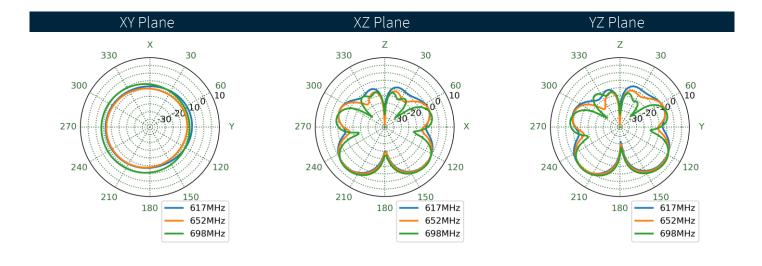
On 9X15cm Ground plane

SPE-23-8-314-A



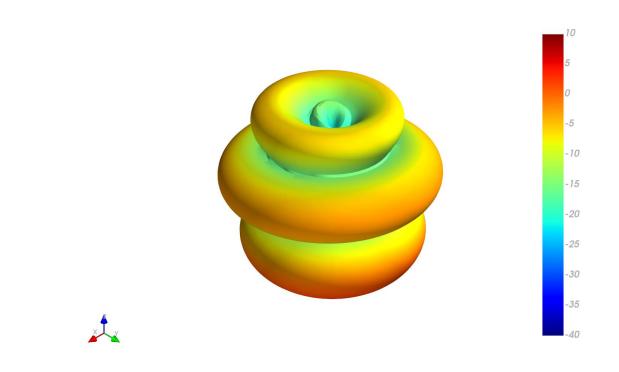
4.2 3D and 2D Radiation Patterns in Free Space - Straight at 625MHz

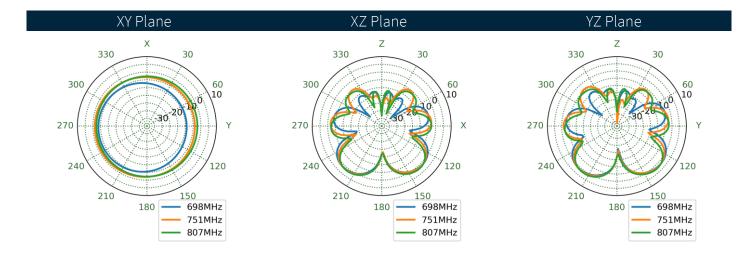






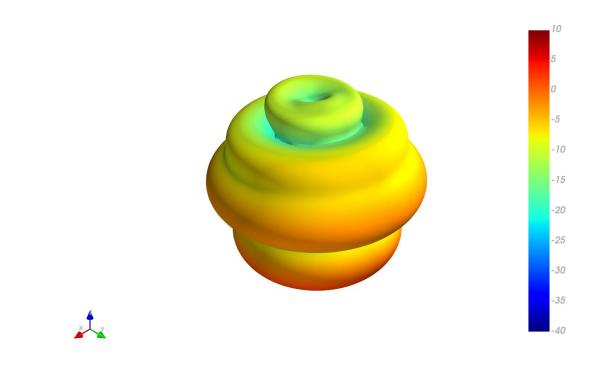
4.3 3D and 2D Radiation Patterns in Free Space – Straight at 751 MHz

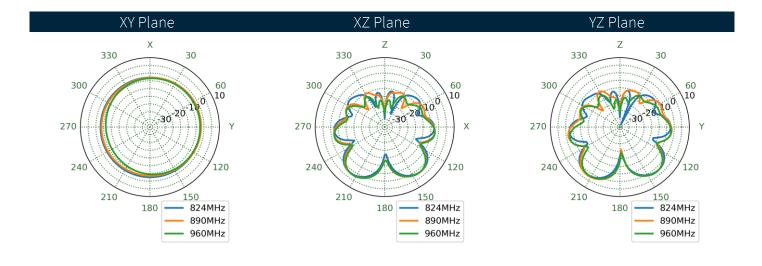






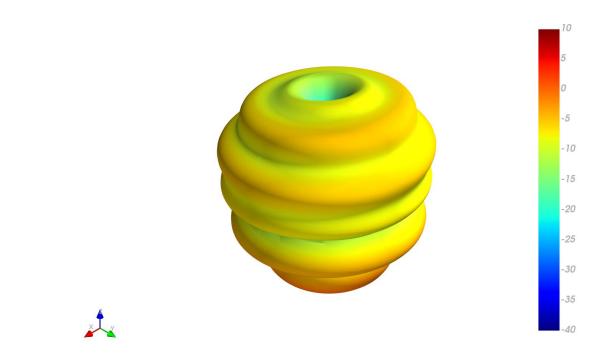
4.4 3D and 2D Radiation Patterns in Free Space – Straight at 890 MHz

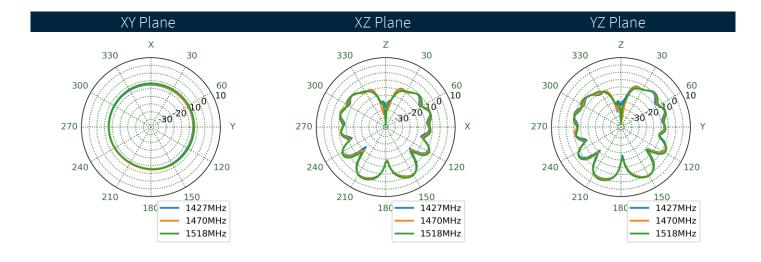






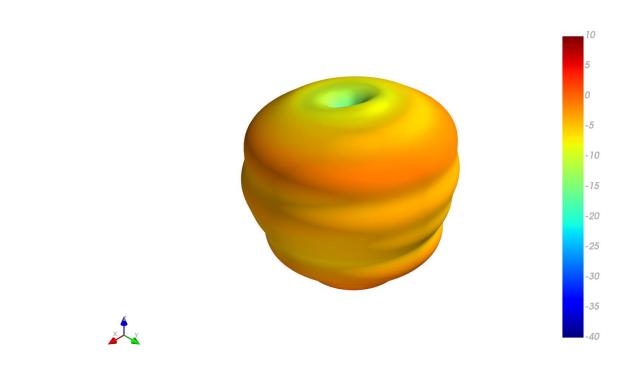
4.5 3D and 2D Radiation Patterns in Free Space – Straight at 1470 MHz

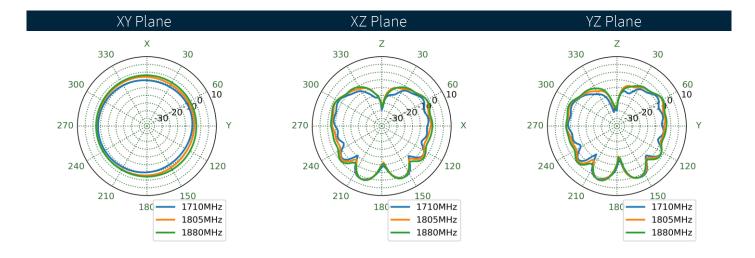






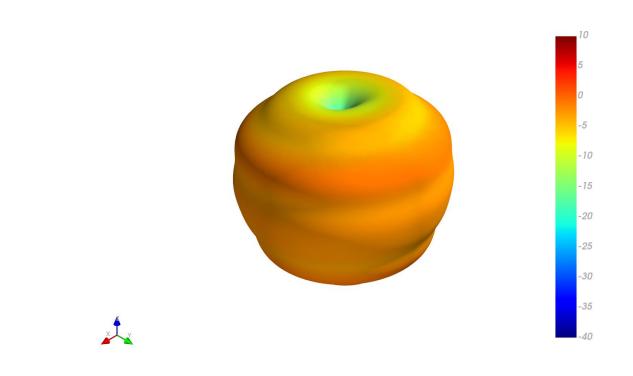
4.6 3D and 2D Radiation Patterns in Free Space – Straight at 1805 MHz

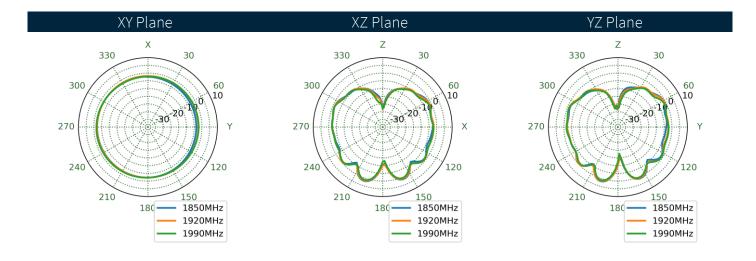






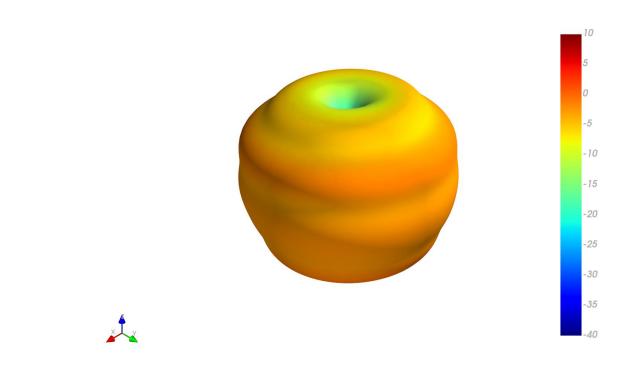
4.7 3D and 2D Radiation Patterns in Free Space – Straight at 1920 MHz

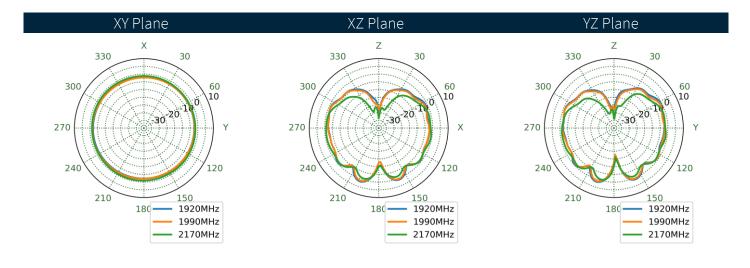






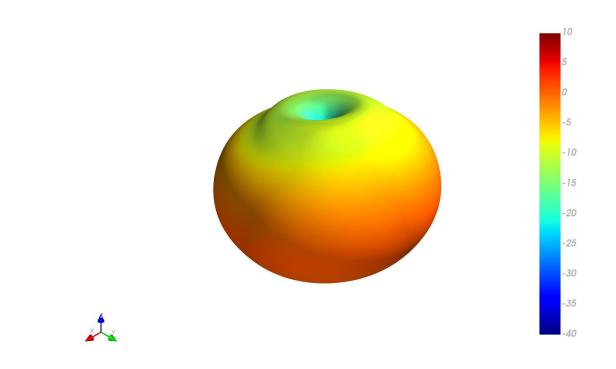
4.8 3D and 2D Radiation Patterns in Free Space – Straight at 1990 MHz

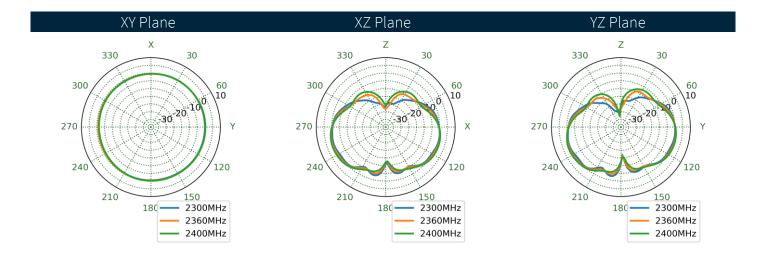






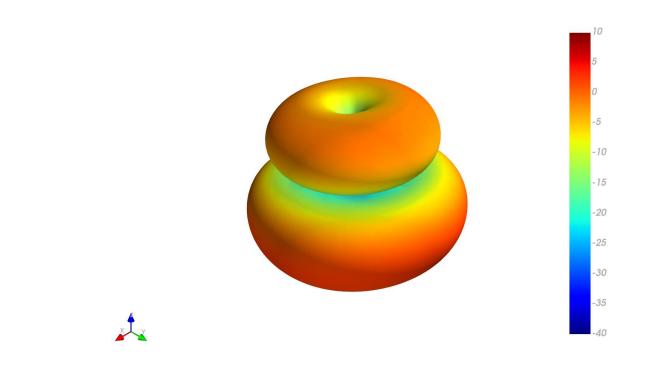
4.9 3D and 2D Radiation Patterns in Free Space – Straight at 2360 MHz

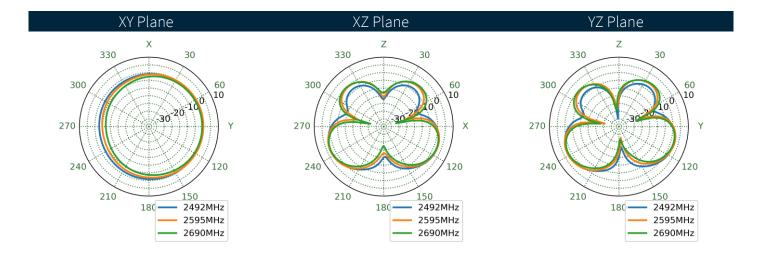






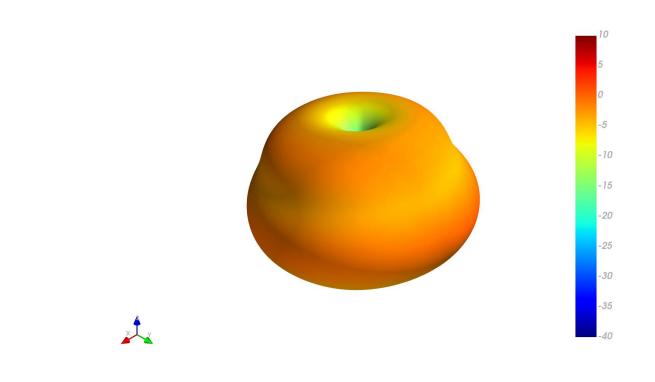
4.10 3D and 2D Radiation Patterns in Free Space – Straight at 2595 MHz

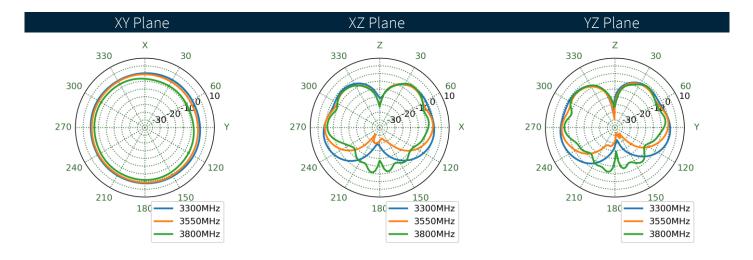






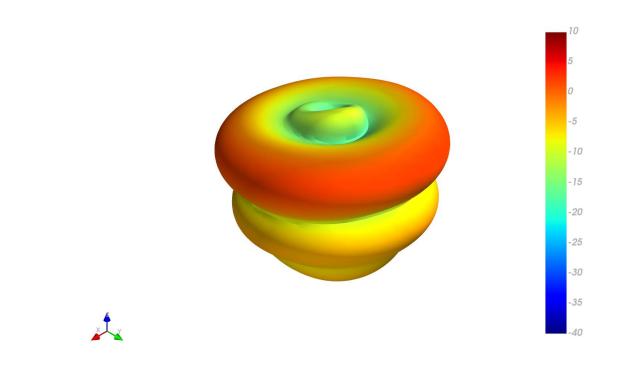
4.11 3D and 2D Radiation Patterns in Free Space – Straight at 3550 MHz

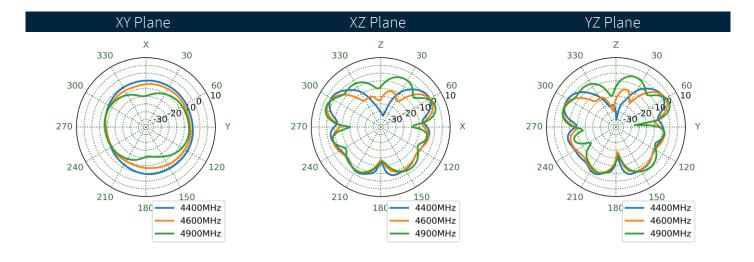






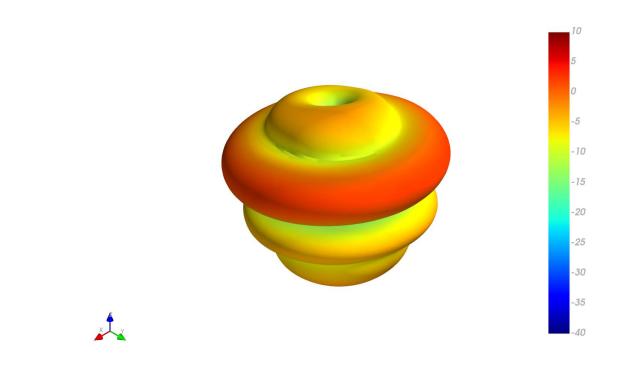
4.12 3D and 2D Radiation Patterns in Free Space – Straight at 4600 MHz

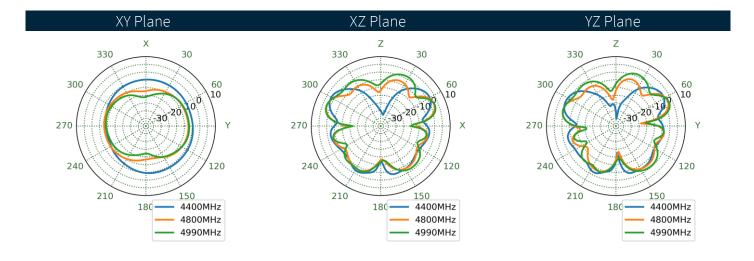






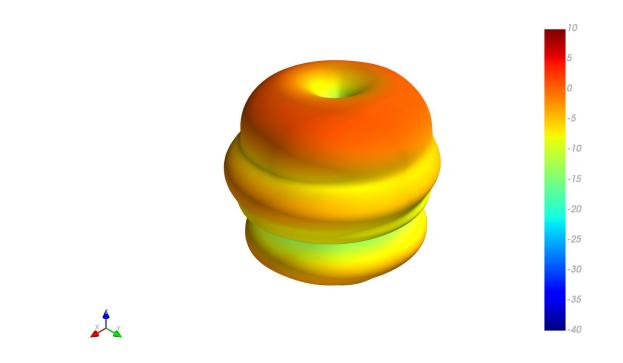
4.13 3D and 2D Radiation Patterns in Free Space – Straight at 4800 MHz

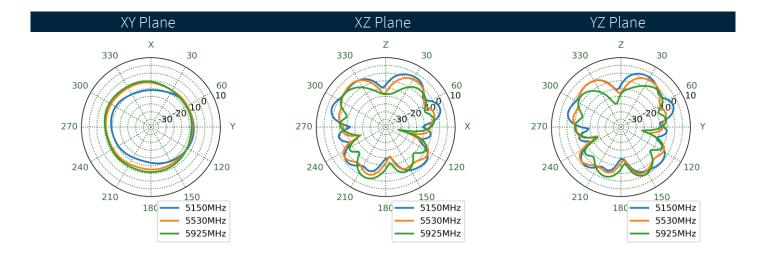






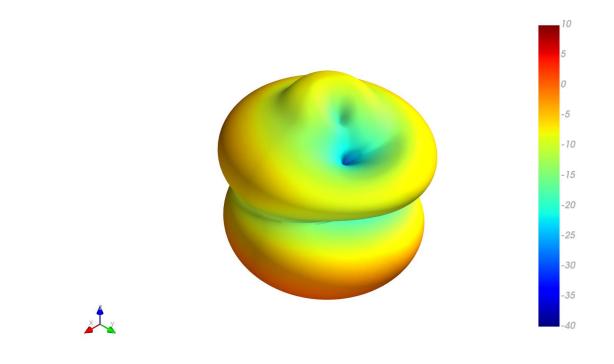
4.14 3D and 2D Radiation Patterns in Free Space – Straight at 5530 MHz

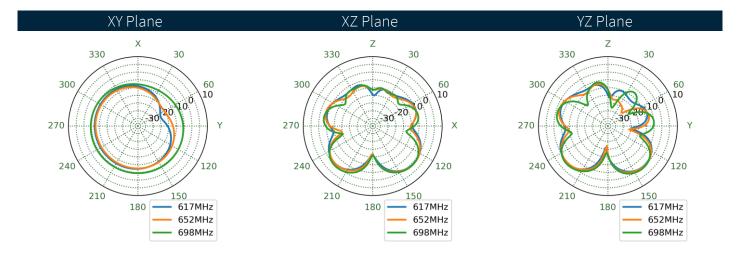






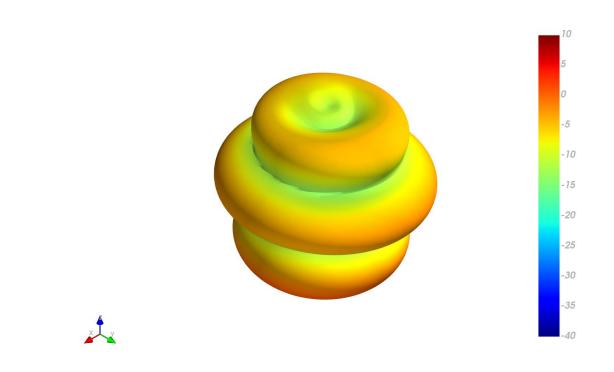
4.15 3D and 2D Radiation Patterns in Free Space – Bent at 652 MHz

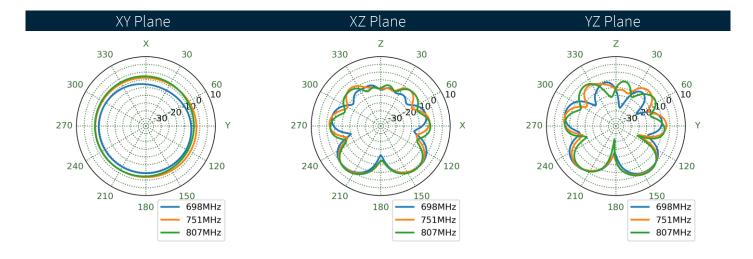






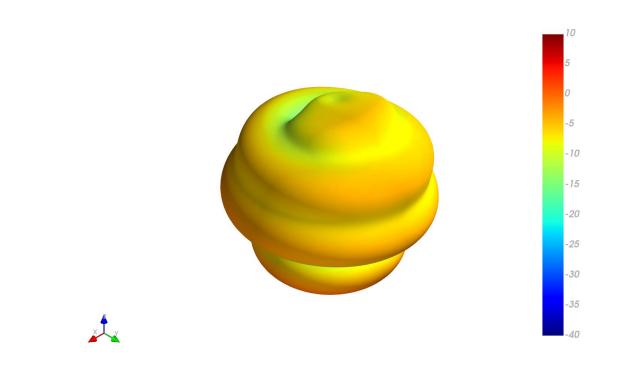
4.16 3D and 2D Radiation Patterns in Free Space – Bent at 751 MHz

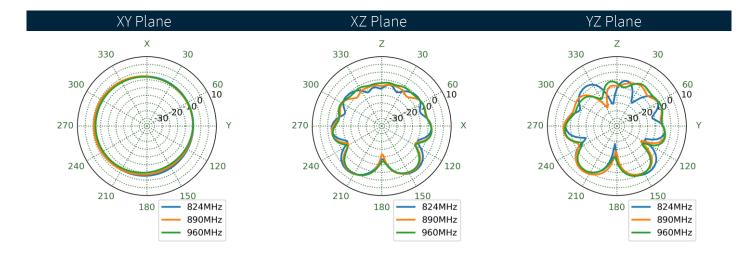




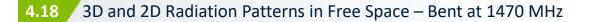


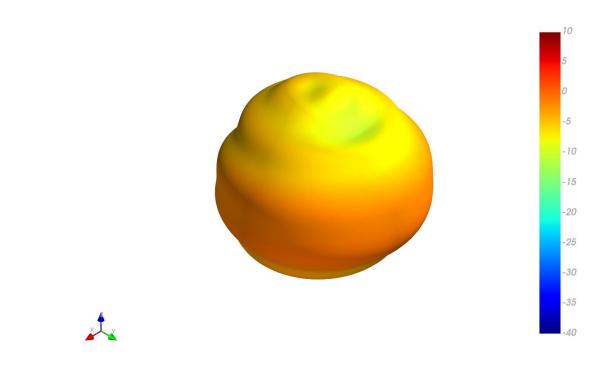
4.17 3D and 2D Radiation Patterns in Free Space – Bent at 890 MHz

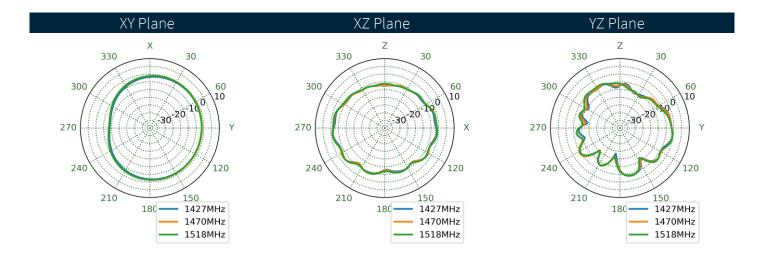






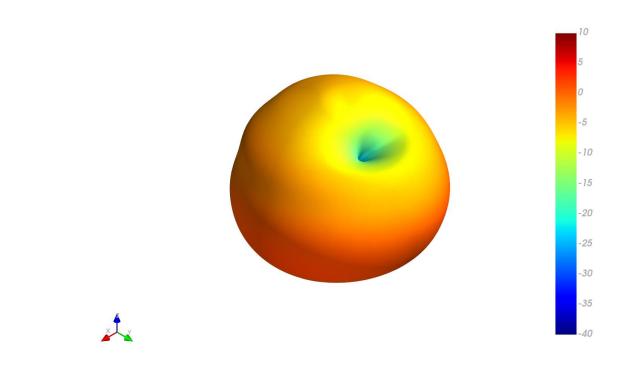


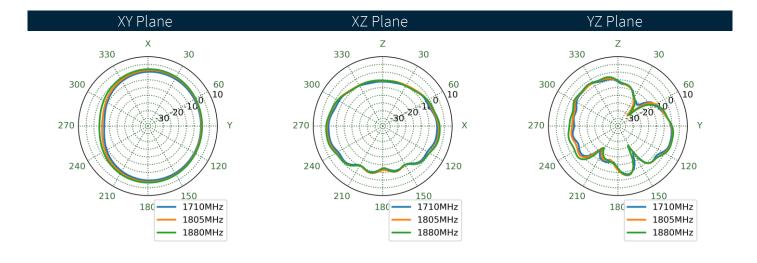






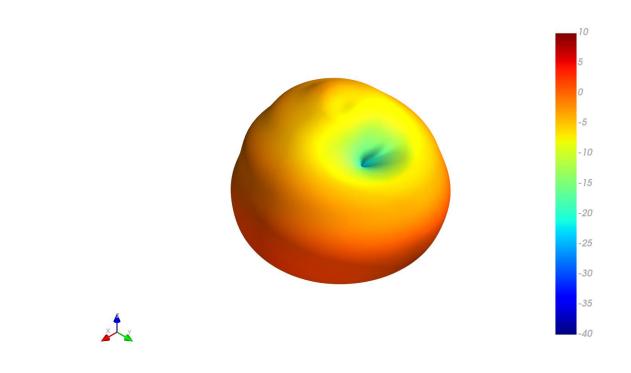
4.19 3D and 2D Radiation Patterns in Free Space – Bent at 1805 MHz

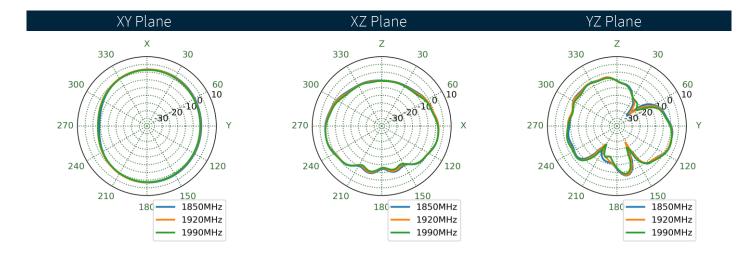






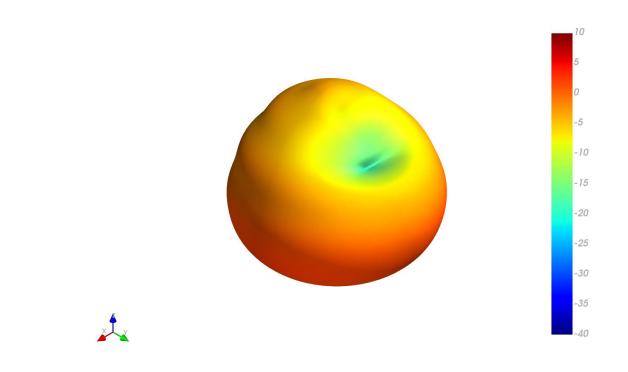
4.20 3D and 2D Radiation Patterns in Free Space – Bent at 1920 MHz

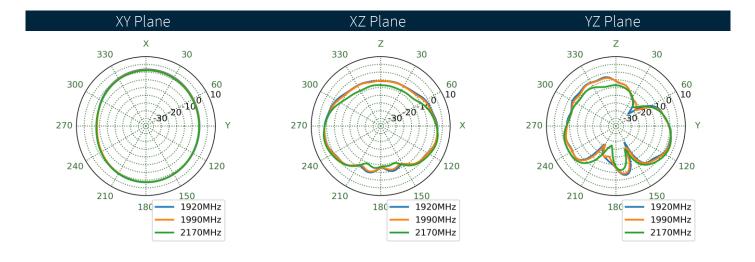






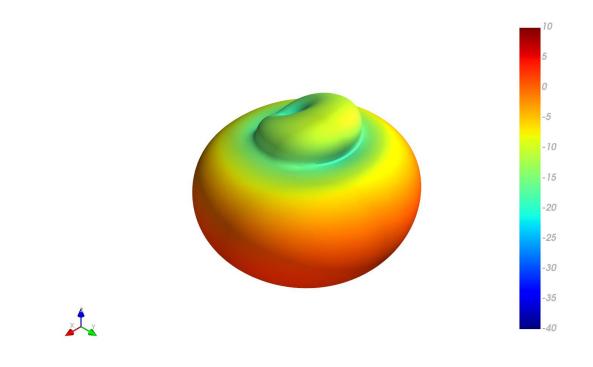
4.21 3D and 2D Radiation Patterns in Free Space – Bent at 1990 MHz

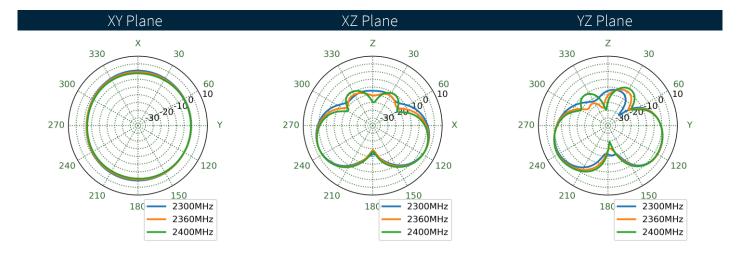






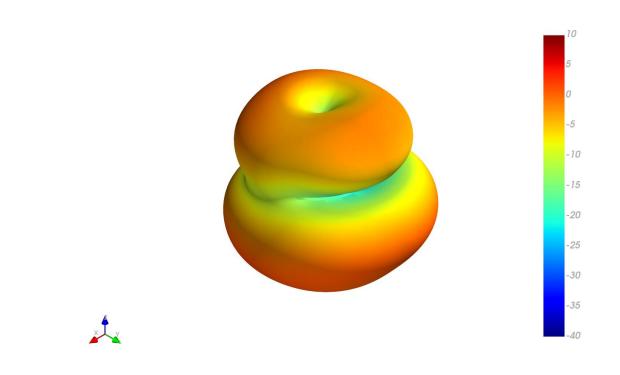
4.22 3D and 2D Radiation Patterns in Free Space – Bent at 2360 MHz

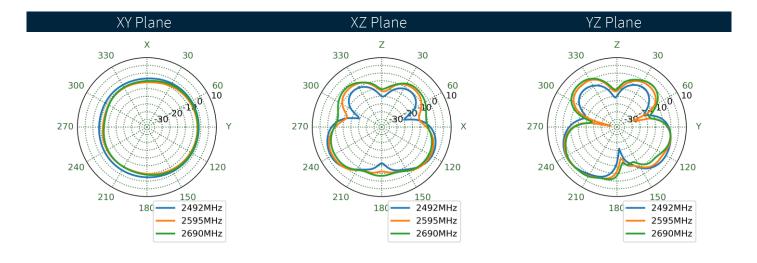






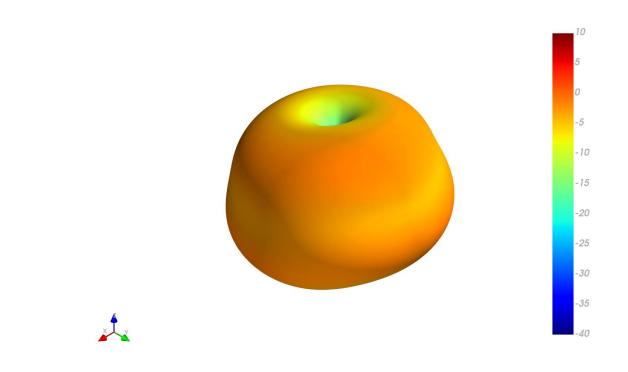
4.23 3D and 2D Radiation Patterns in Free Space – Bent at 2595 MHz

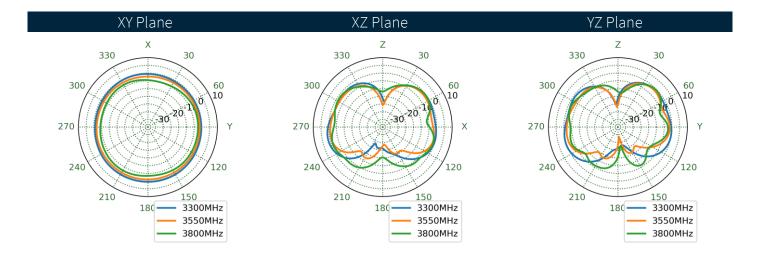






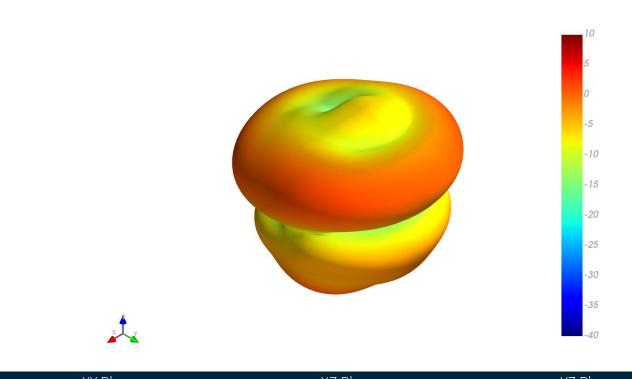
4.24 3D and 2D Radiation Patterns in Free Space – Bent at 3550 MHz

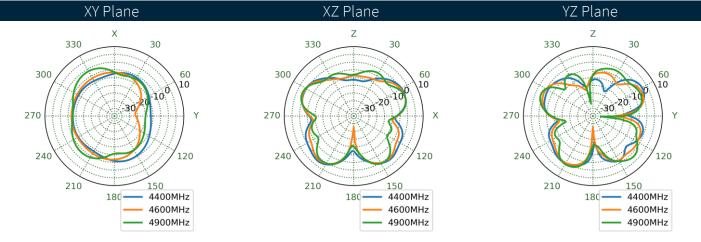






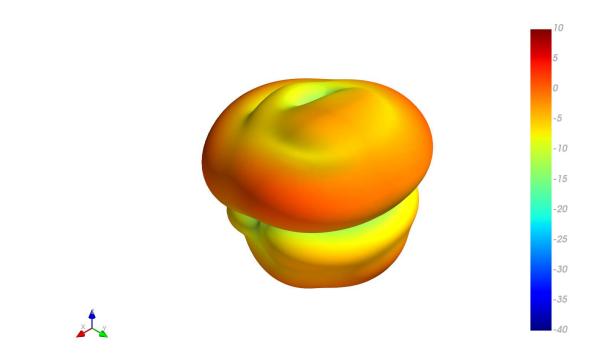
4.25 3D and 2D Radiation Patterns in Free Space – Bent at 4600 MHz

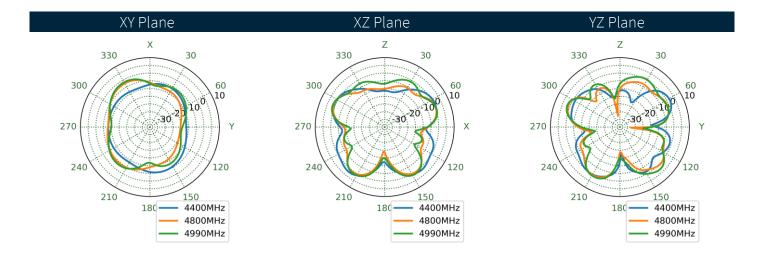






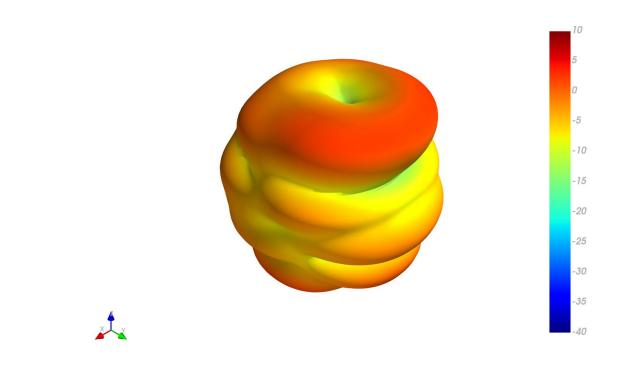
4.26 3D and 2D Radiation Patterns in Free Space – Bent at 4800 MHz

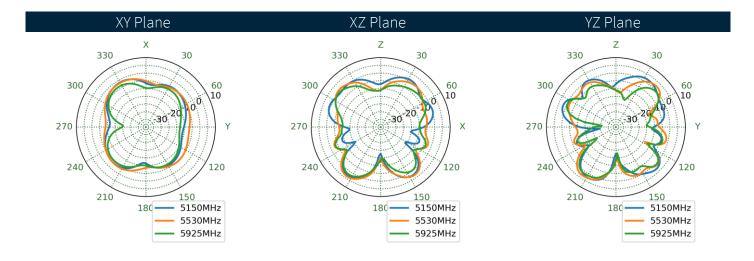






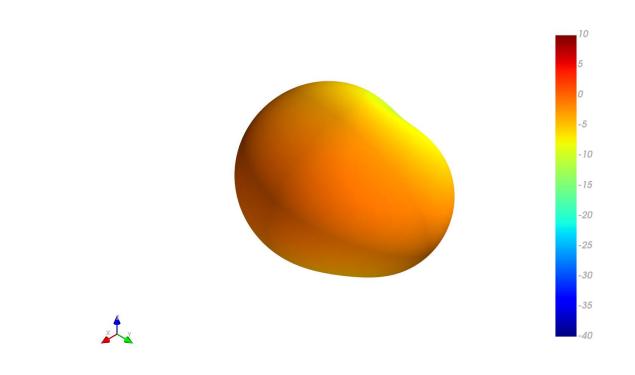
4.27 3D and 2D Radiation Patterns in Free Space – Bent at 5530 MHz

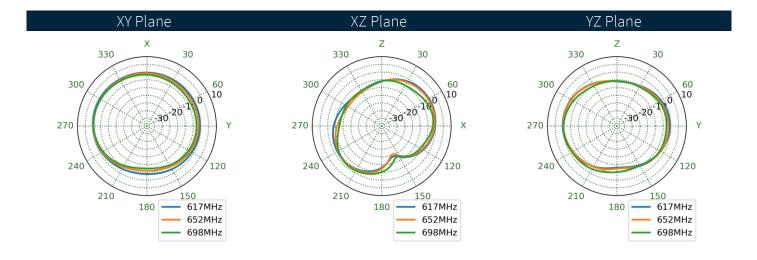






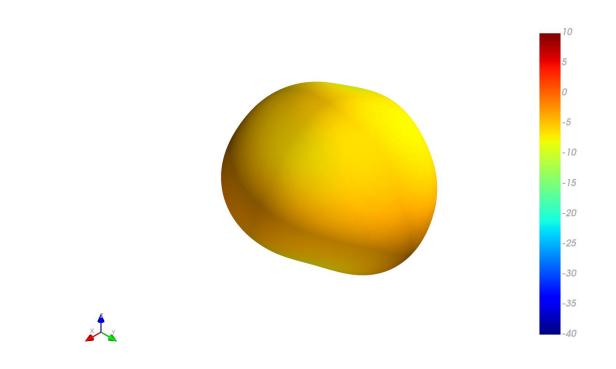
4.28 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Straight at 652 MHz

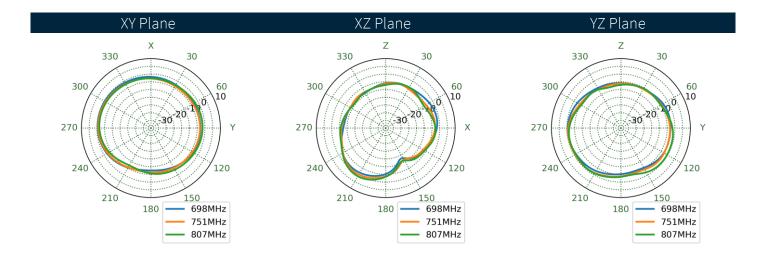






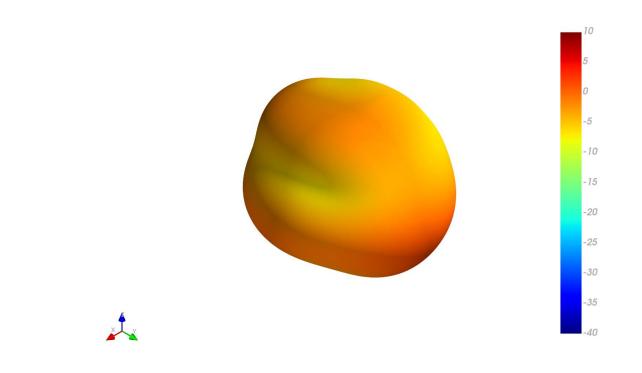
4.29 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Straight at 751 MHz

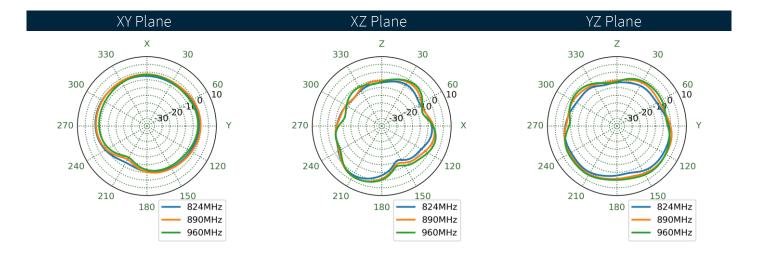






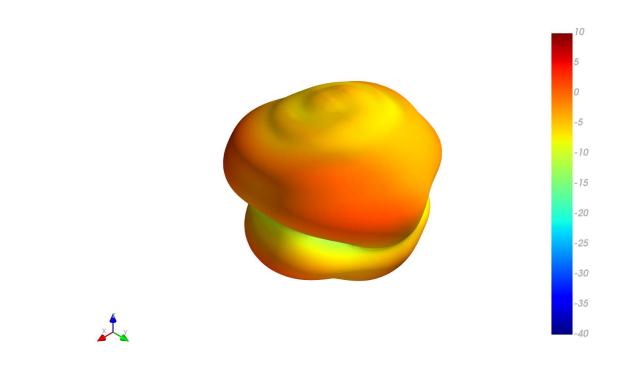
4.30 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Straight at 890 MHz

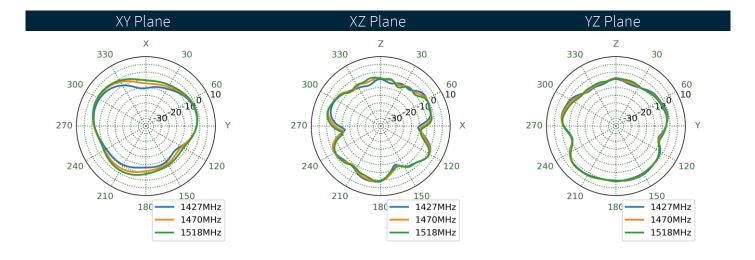






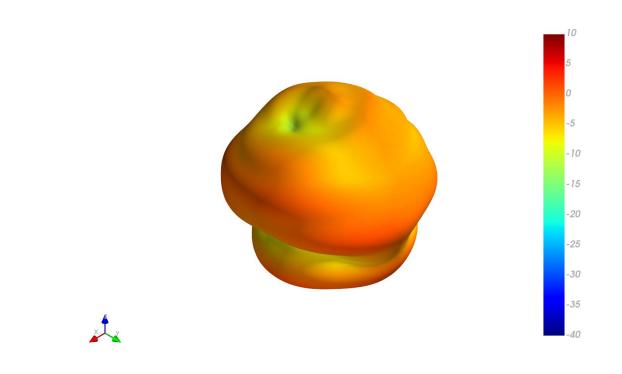
4.31 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Straight at 1470 MHz

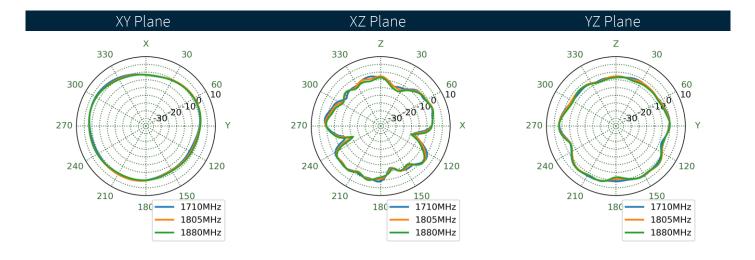






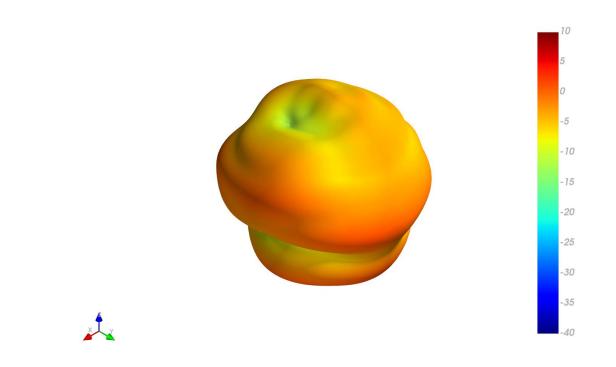
4.32 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Straight at 1805 MHz

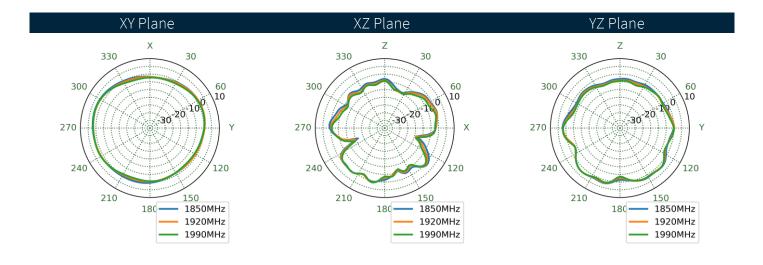






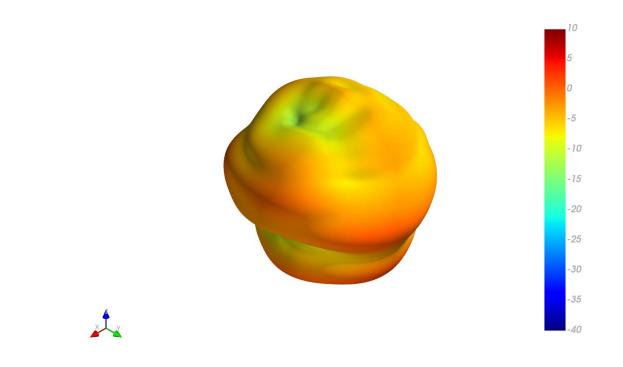
4.33 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Straight at 1920 MHz

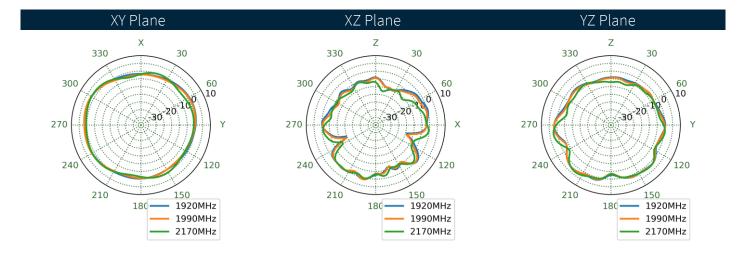






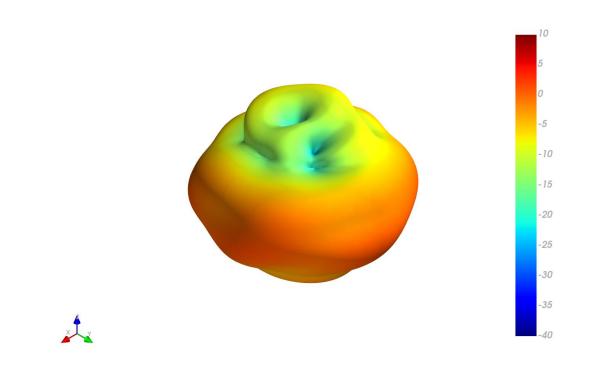
4.34 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Straight at 1990 MHz

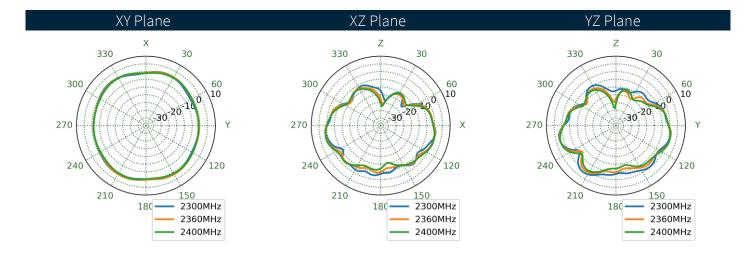






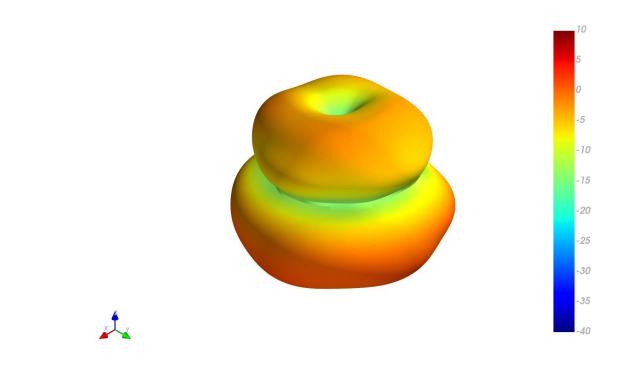
4.35 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Straight at 2360 MHz

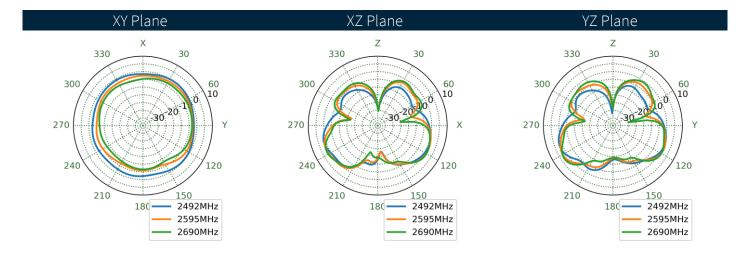






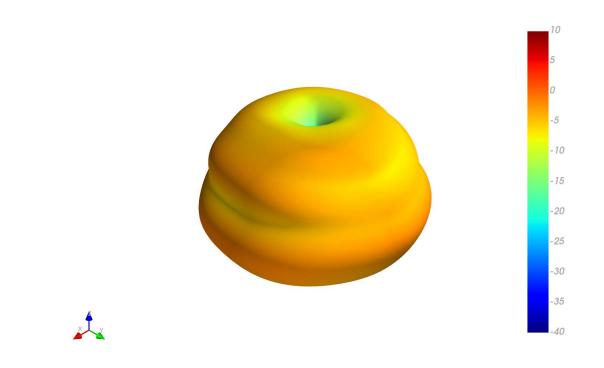
4.36 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Straight at 2595 MHz

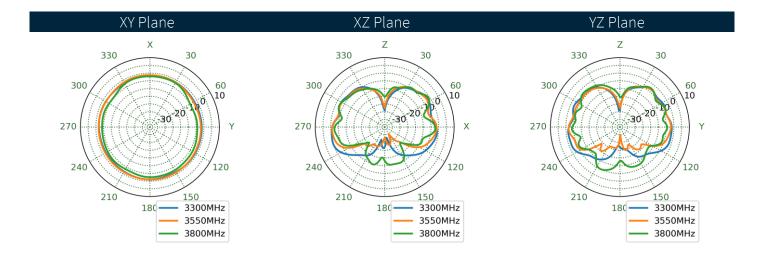






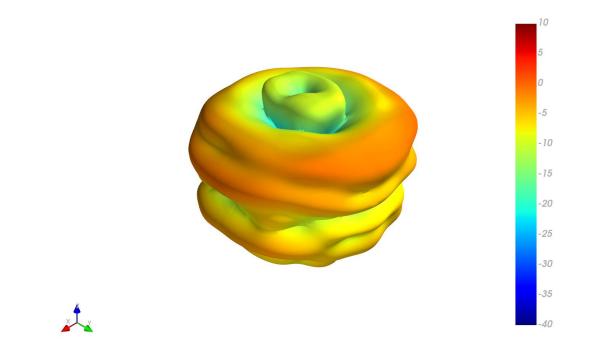
4.37 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Straight at 3550 MHz

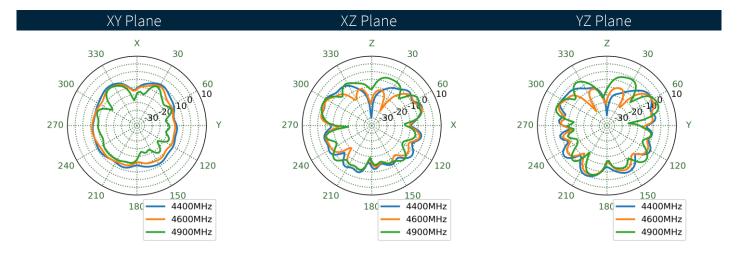






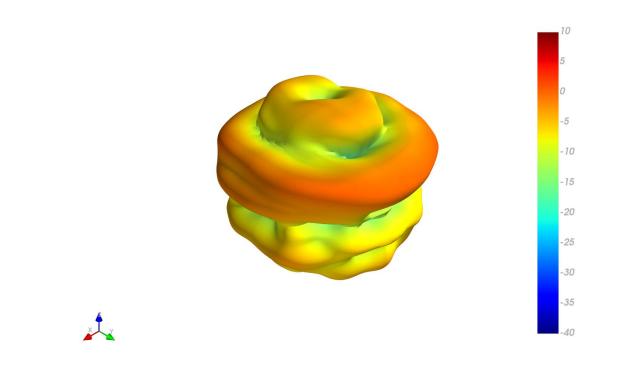
4.38 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Straight at 4600 MHz

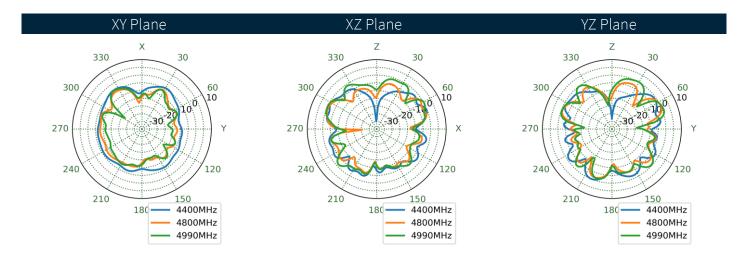






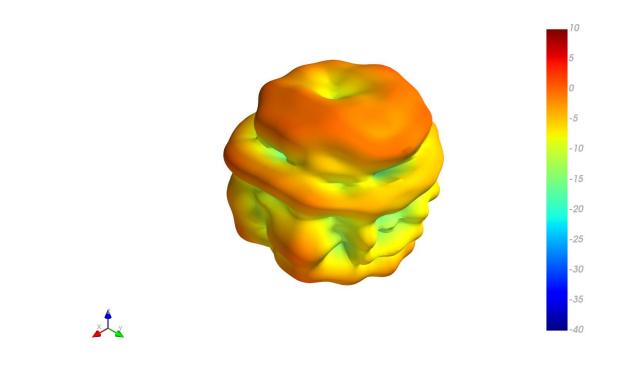
4.39 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Straight at 4800 MHz

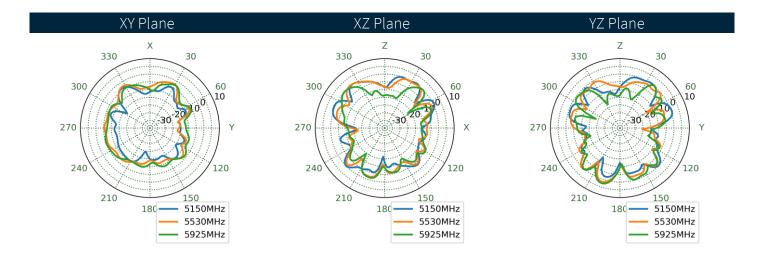






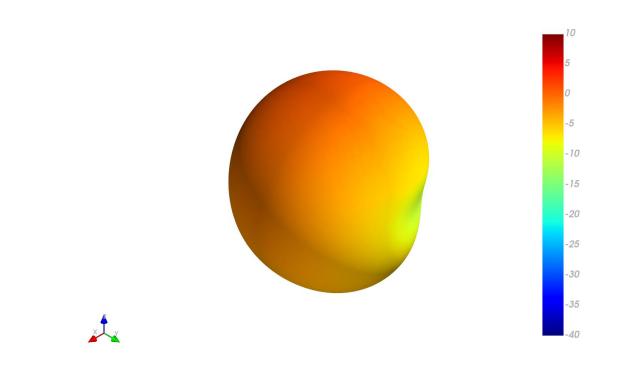
4.40 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Straight at 5530 MHz

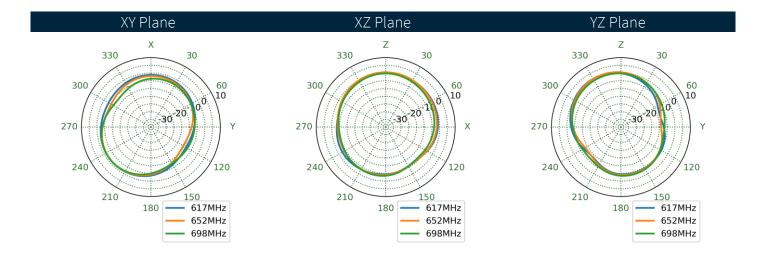






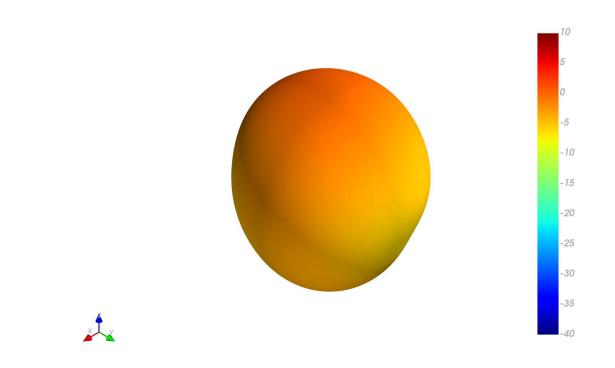
4.41 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Bent at 652 MHz

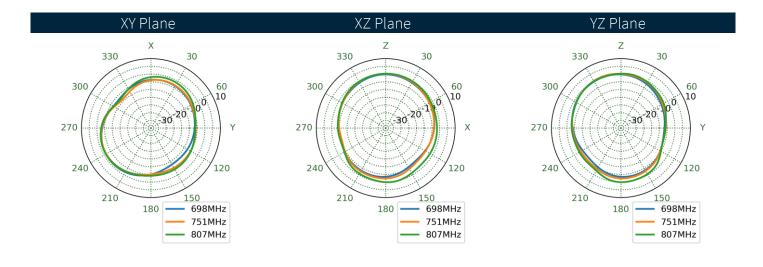






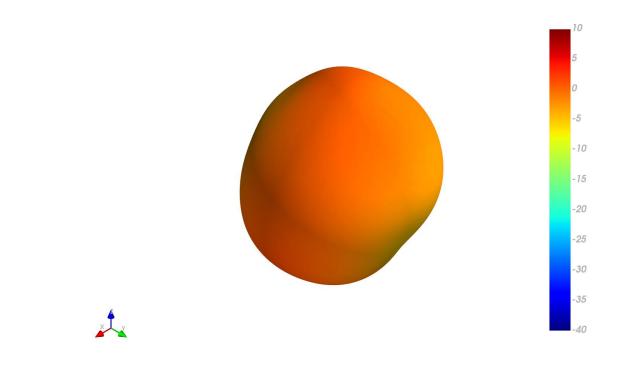
4.42 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Bent at 751 MHz

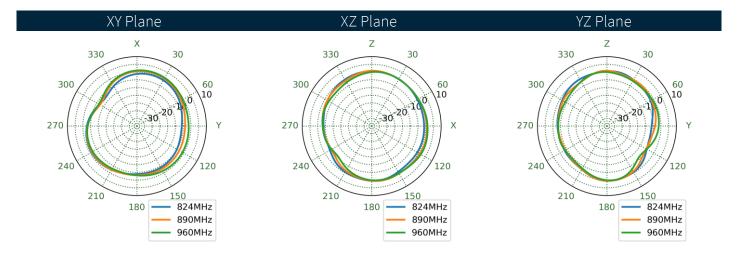






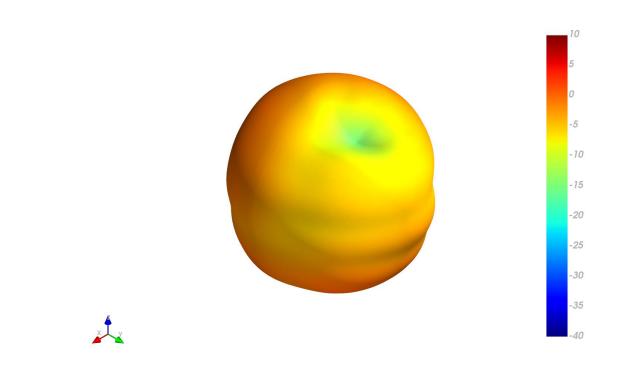
4.43 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Bent at 890 MHz

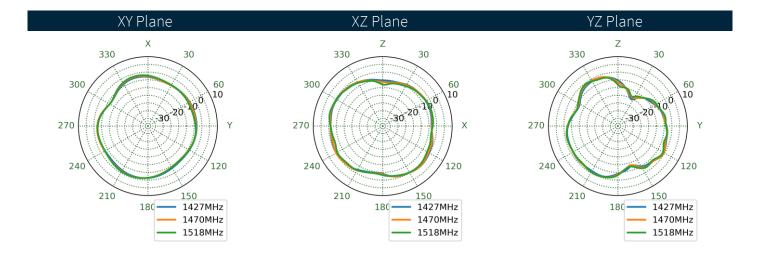






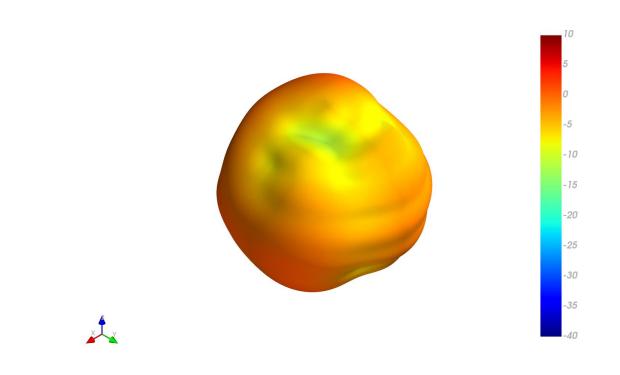
4.44 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Bent at 1470 MHz

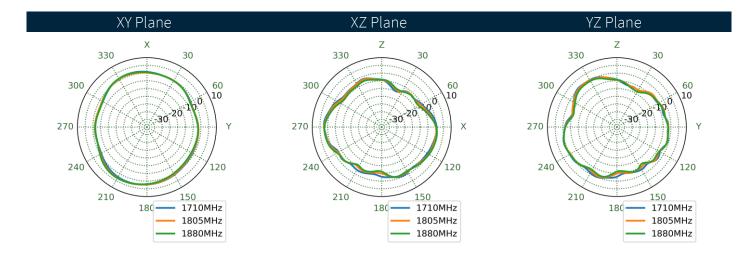






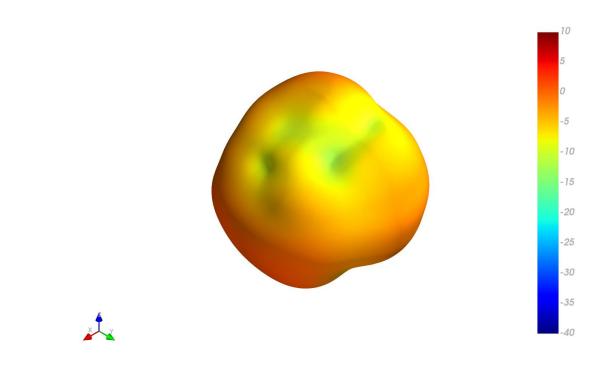
4.45 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Bent at 1805 MHz

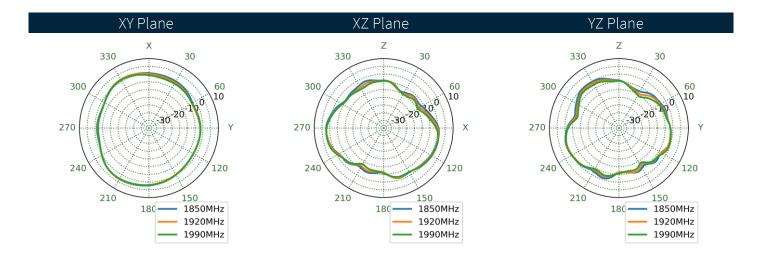






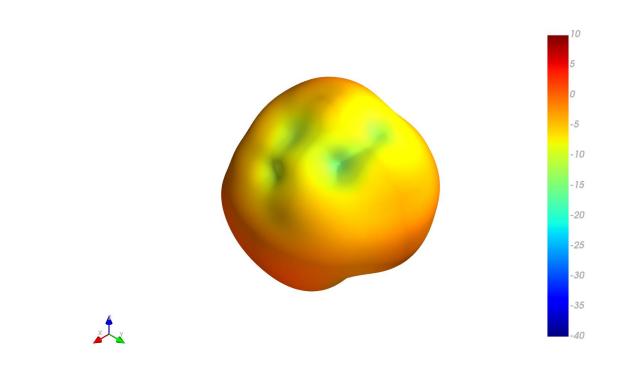
4.46 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Bent at 1920 MHz

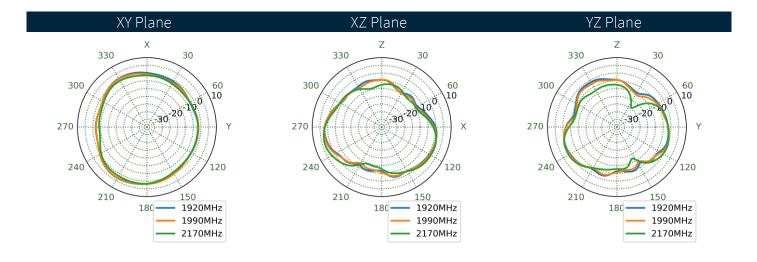






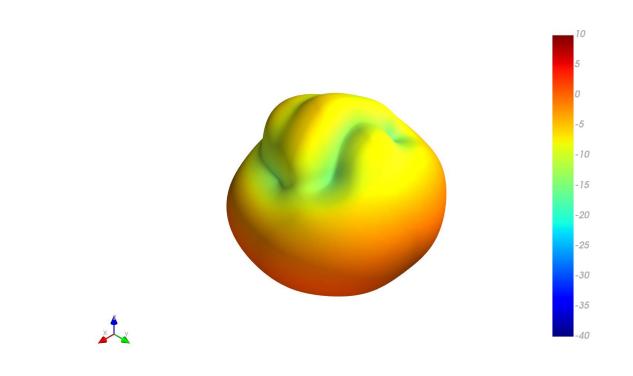
4.47 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Bent at 1990 MHz

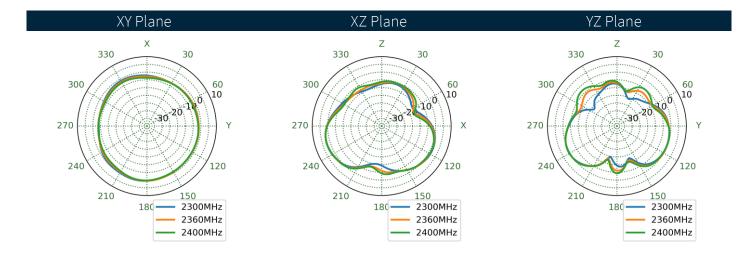






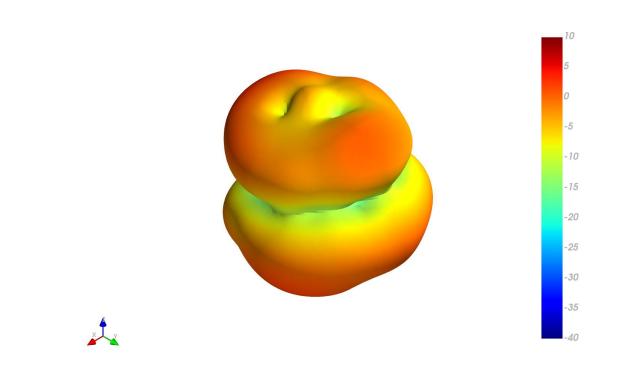
4.48 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Bent at 2360 MHz

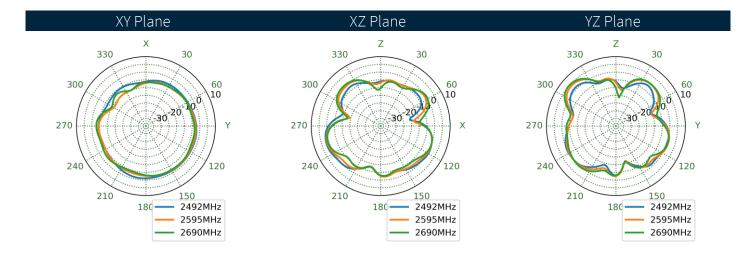






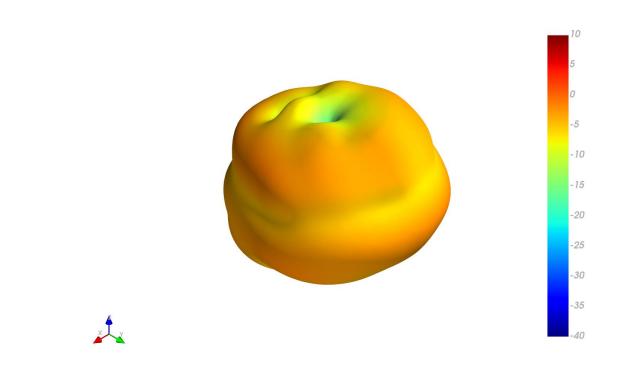
4.49 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Bent at 2595 MHz

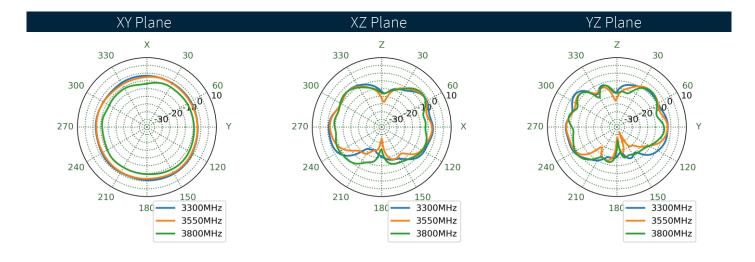






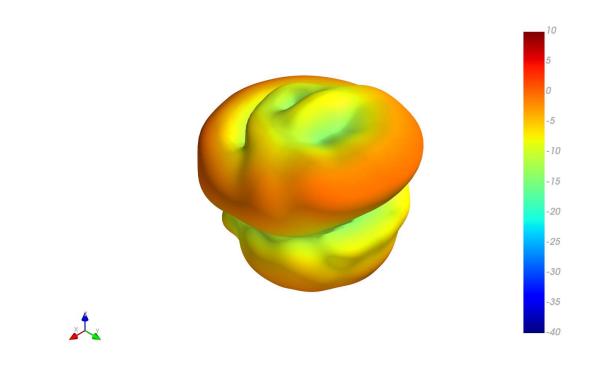
4.50 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Bent at 3550 MHz

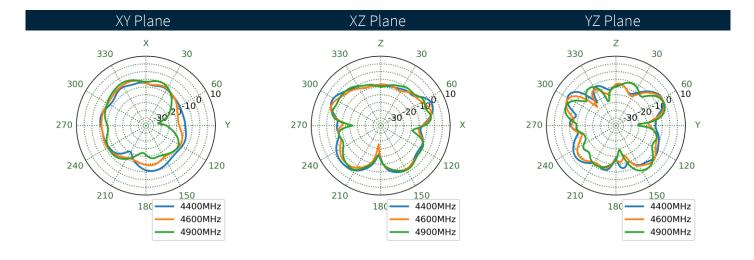






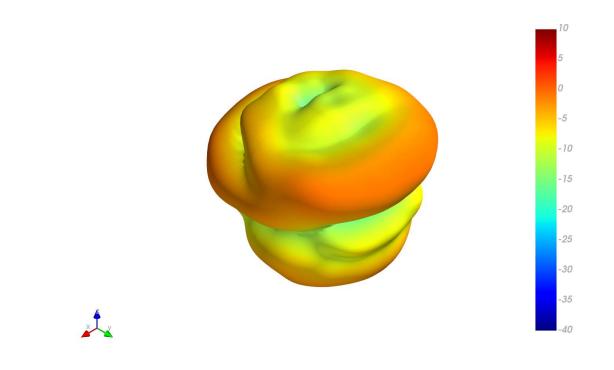
4.51 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Bent at 4600 MHz

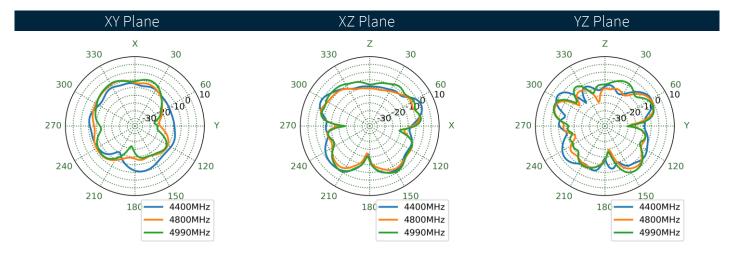






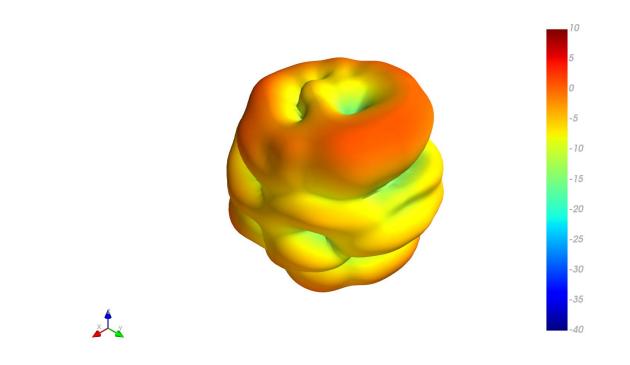
4.52 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Bent at 4800 MHz

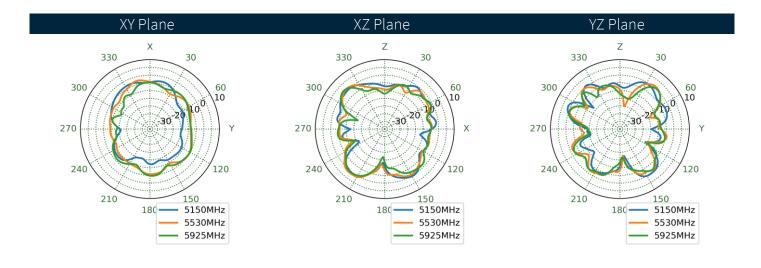






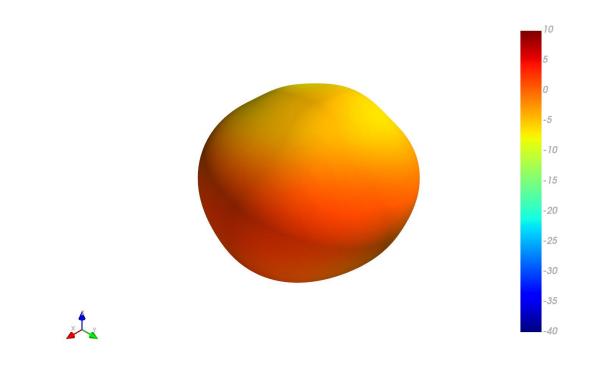
4.53 3D and 2D Radiation Patterns on 15x9cm Ground Plane - Bent at 5530 MHz

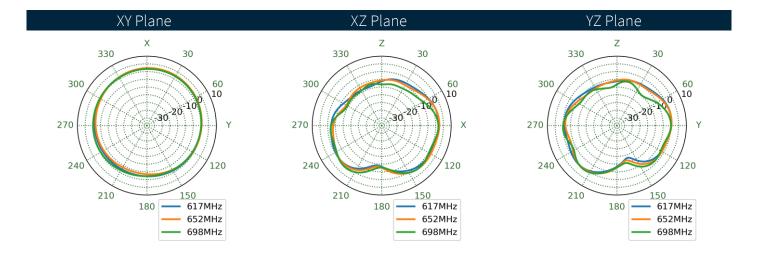






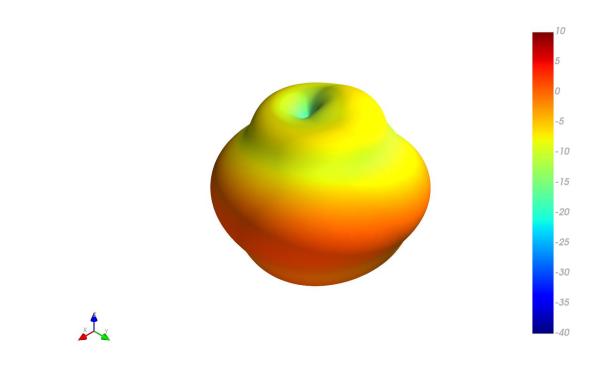
4.54 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Straight at 652 MHz

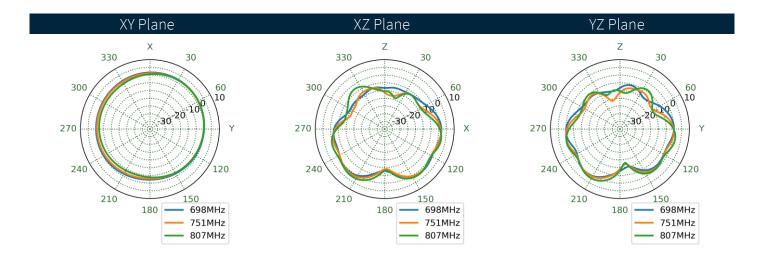






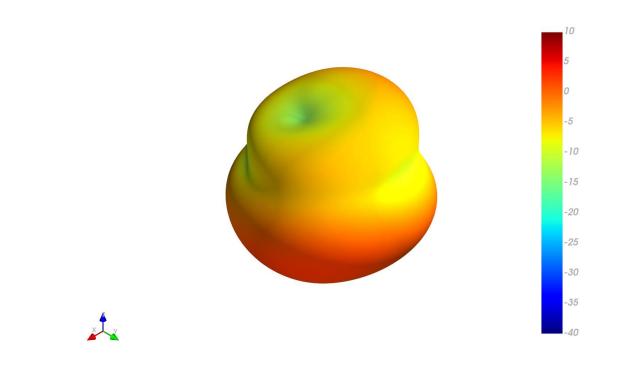
4.55 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Straight at 751 MHz

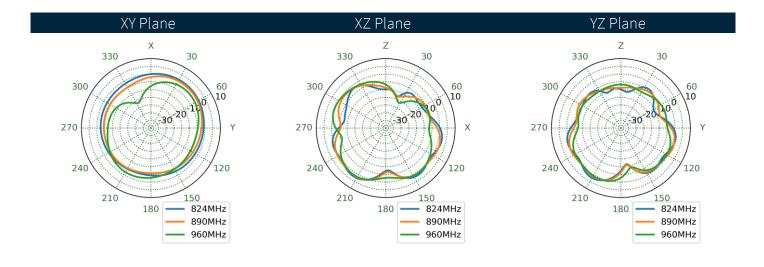






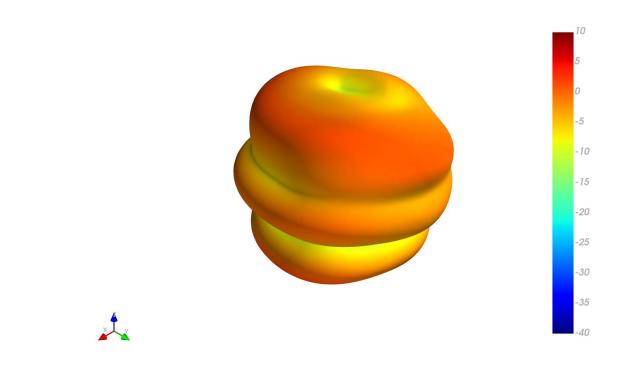
4.56 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Straight at 890 MHz

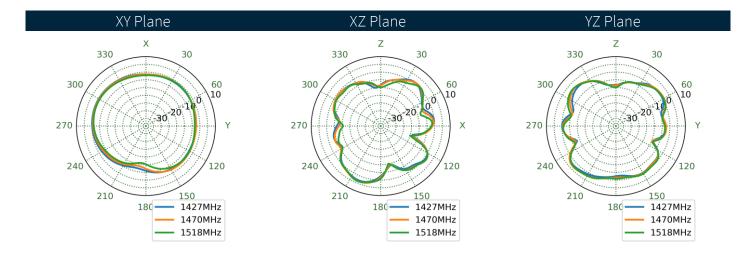






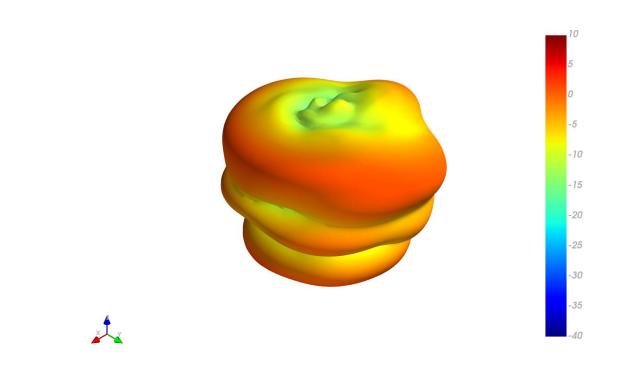
4.57 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Straight at 1470 MHz

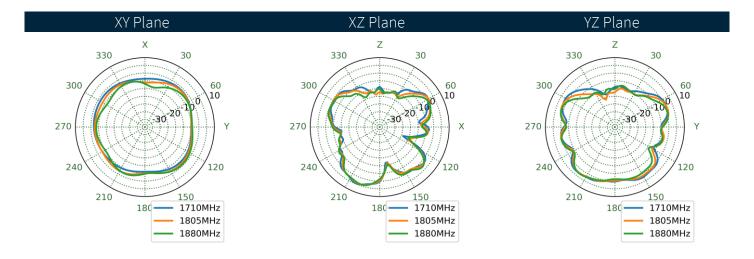






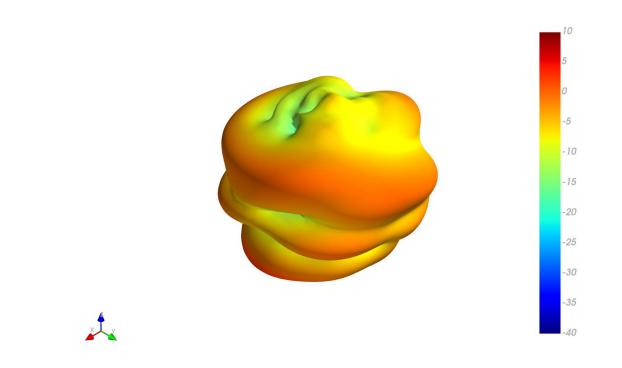
4.58 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Straight at 1805 MHz

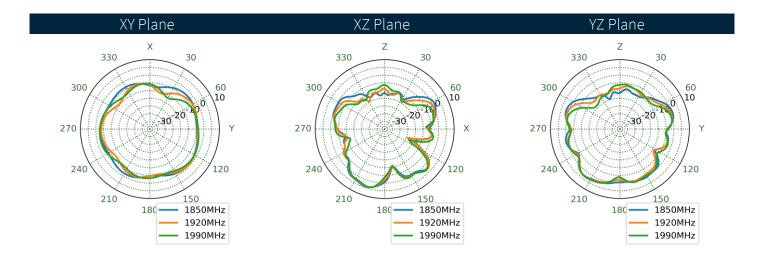






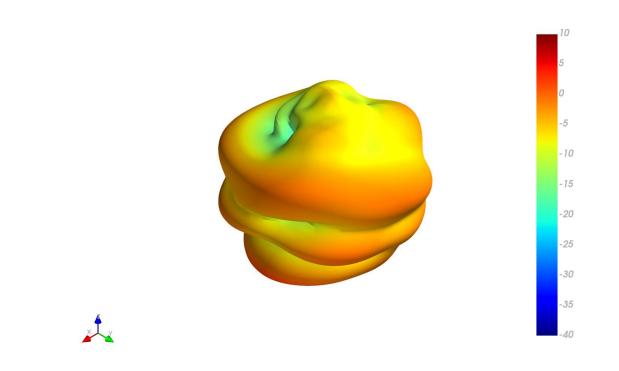
4.59 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Straight at 1920 MHz

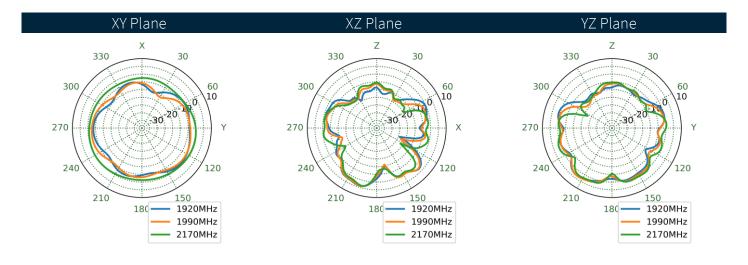






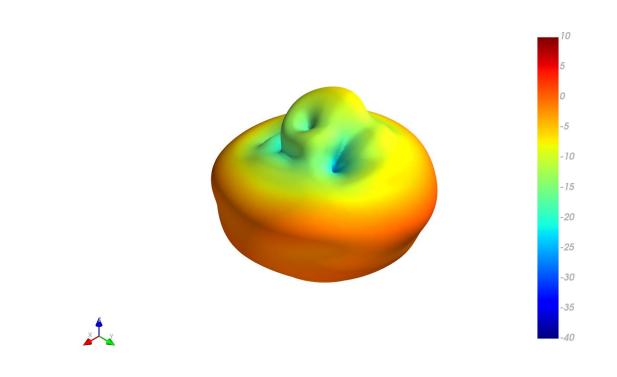
4.60 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Straight at 1990 MHz

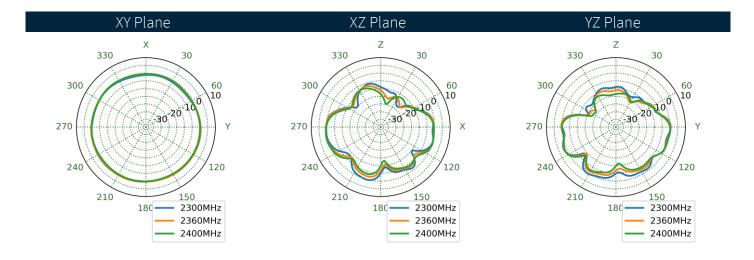






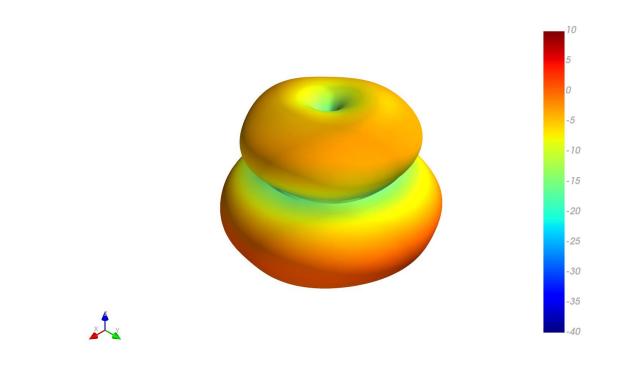
4.61 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Straight at 2360 MHz

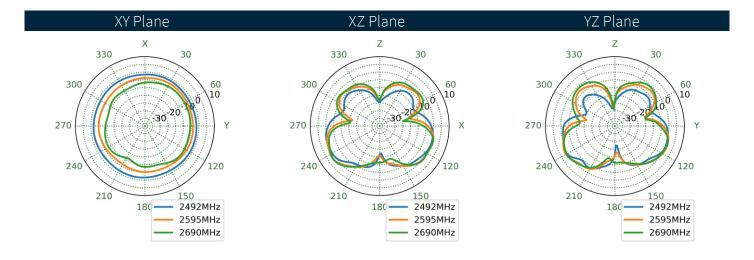






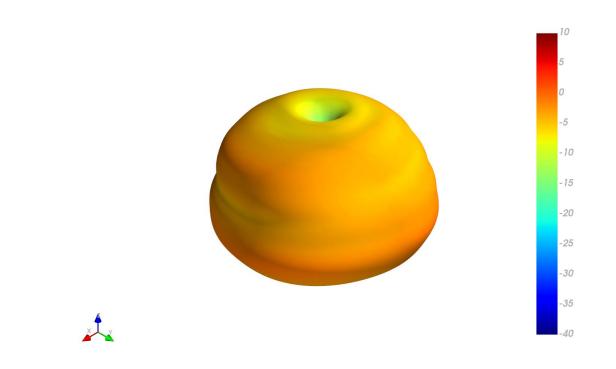
4.62 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Straight at 2595 MHz

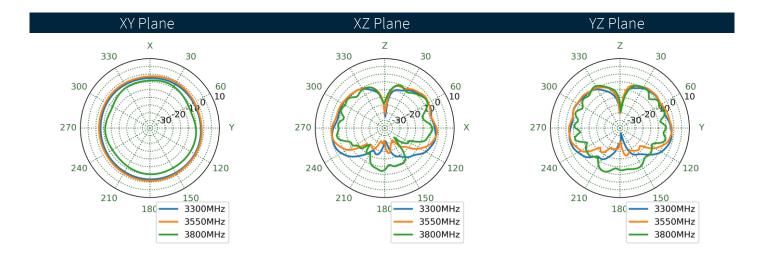






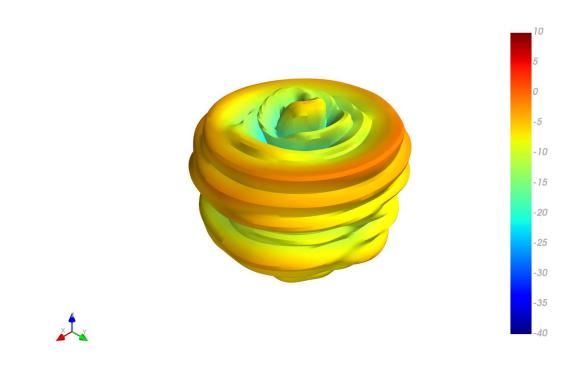
4.63 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Straight at 3550 MHz

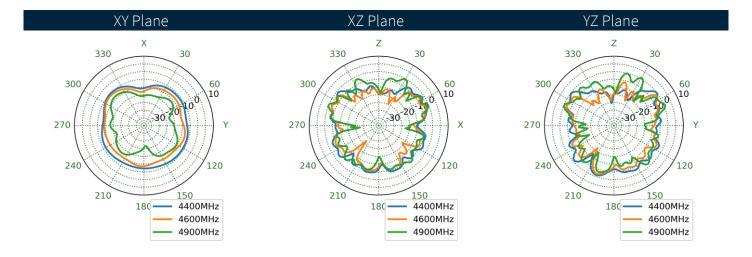






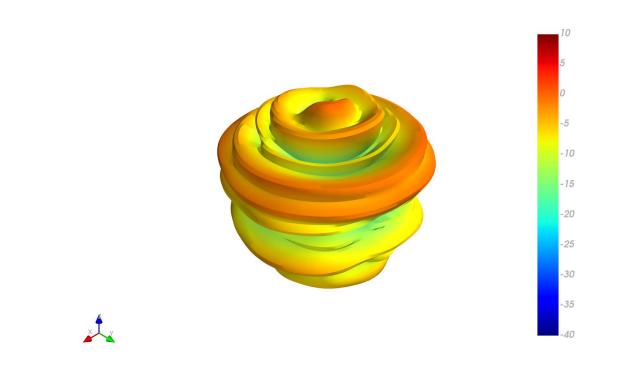
4.64 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Straight at 4600 MHz

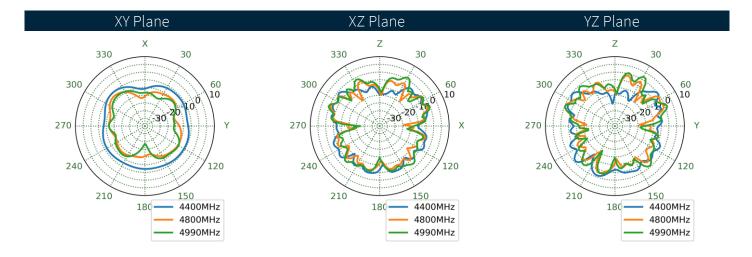






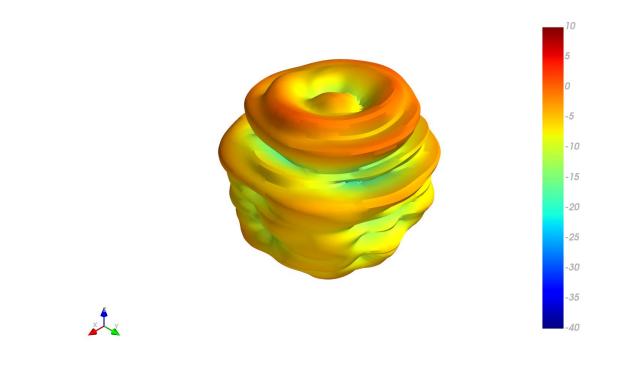
4.65 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Straight at 4800 MHz

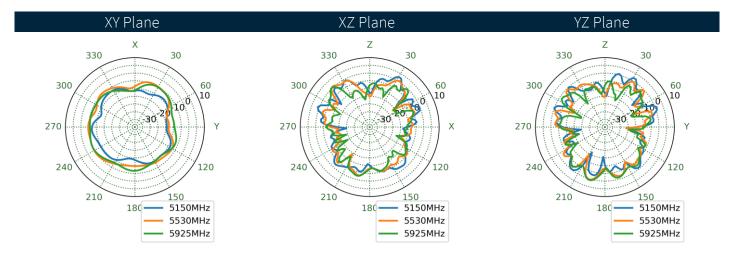






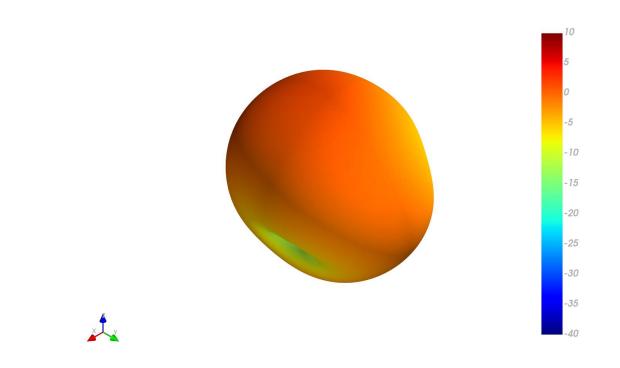
4.66 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Straight at 5530 MHz

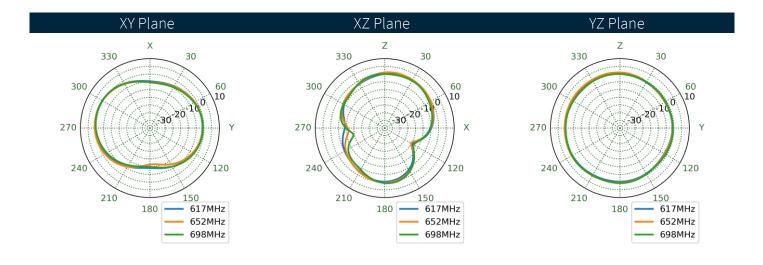






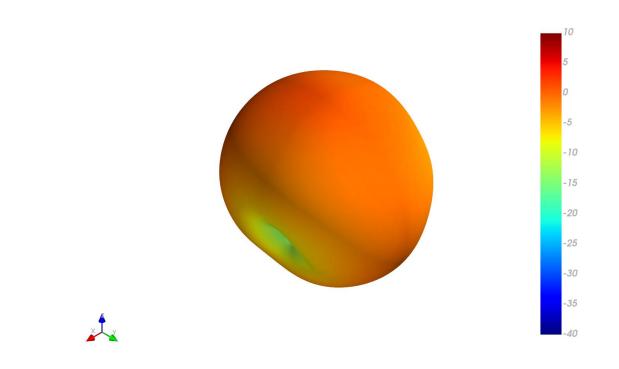
4.67 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Bent at 625 MHz

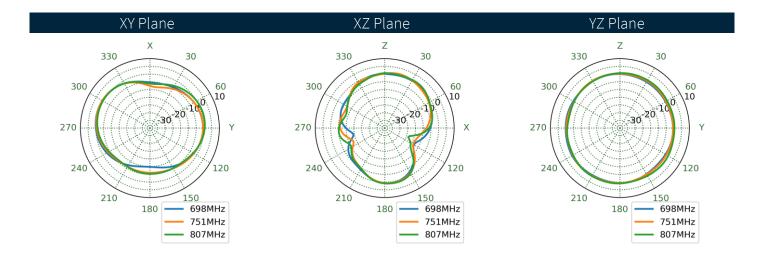






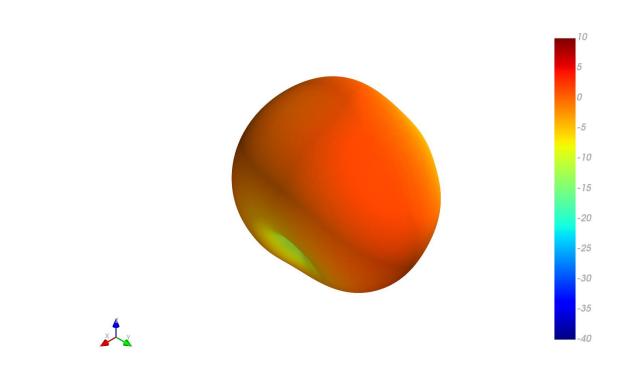
4.68 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Bent at 751 MHz

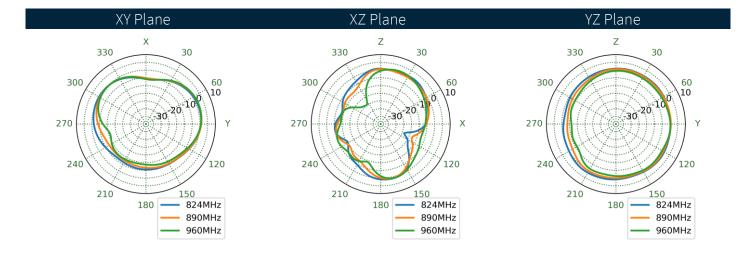






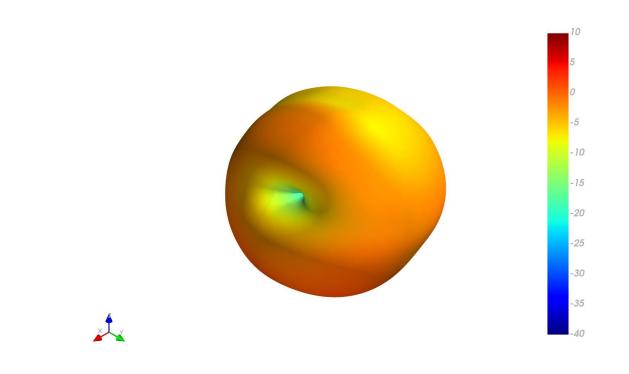
4.69 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Bent at 890 MHz

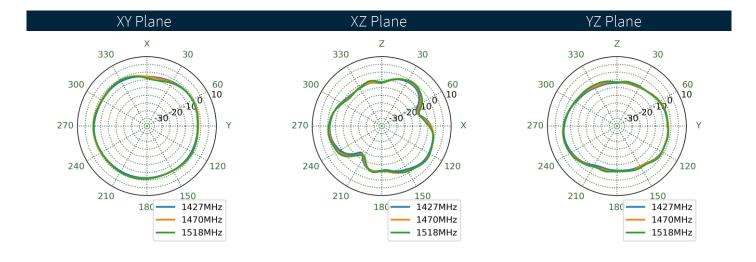






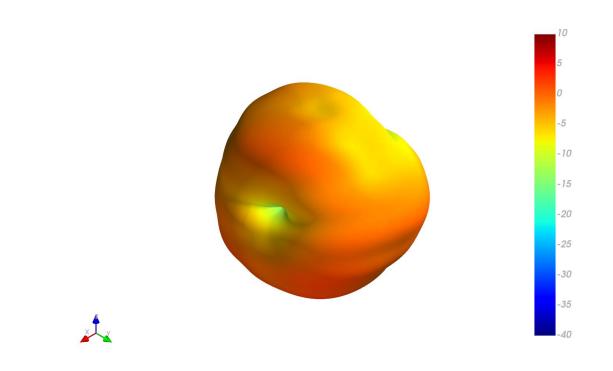
4.70 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Bent at 1470 MHz

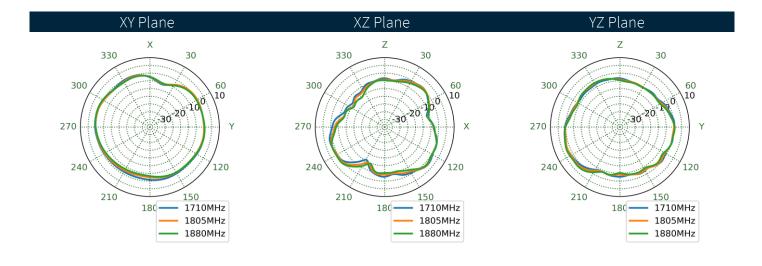






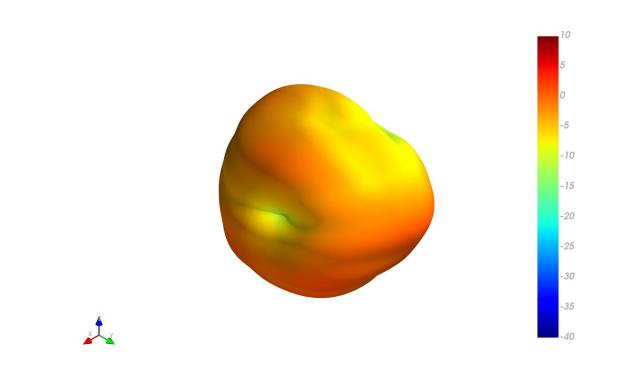
4.71 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Bent at 1805 MHz

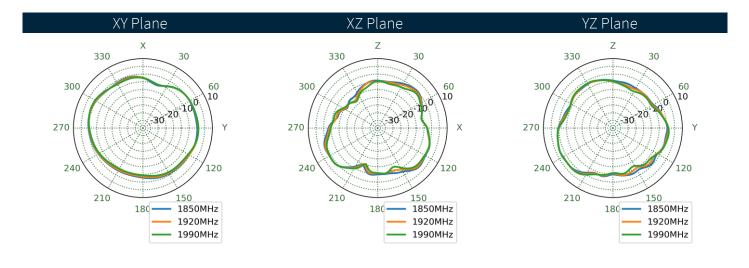






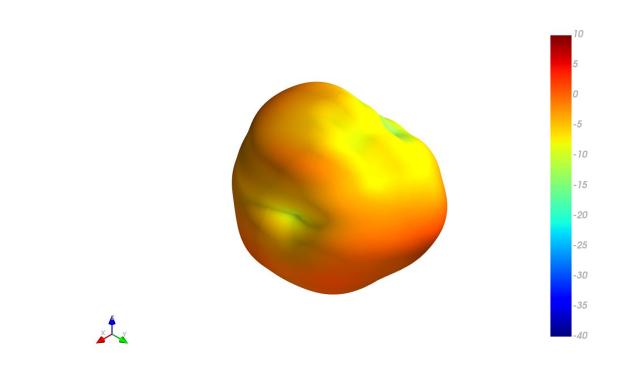
4.72 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Bent at 1920 MHz

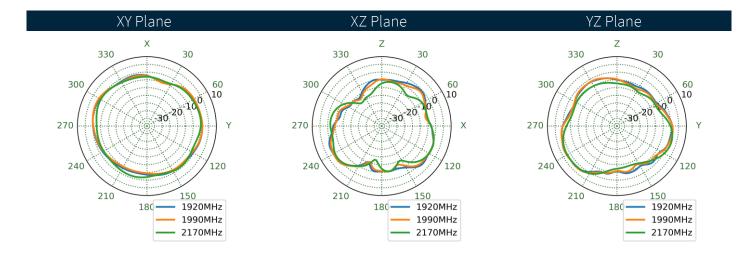






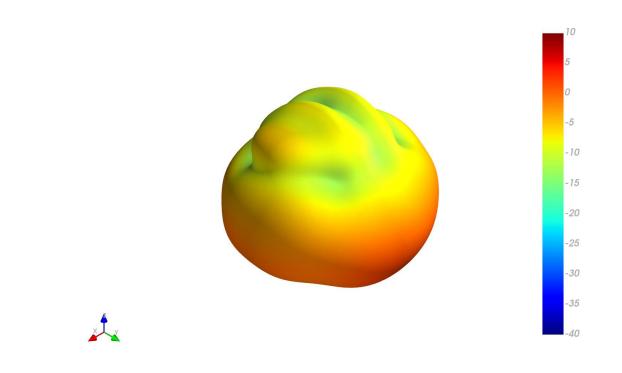
4.73 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Bent at 1990 MHz

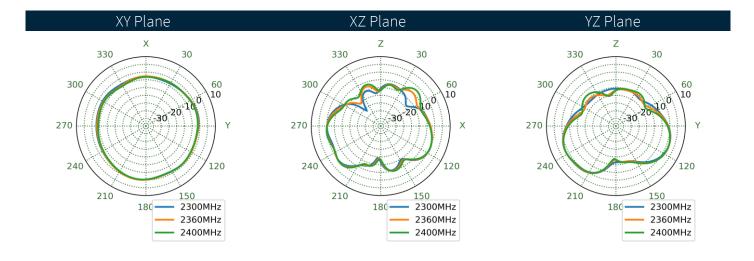






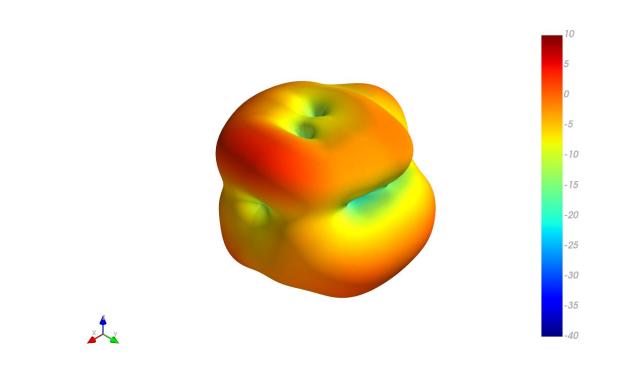
4.74 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Bent at 2360 MHz

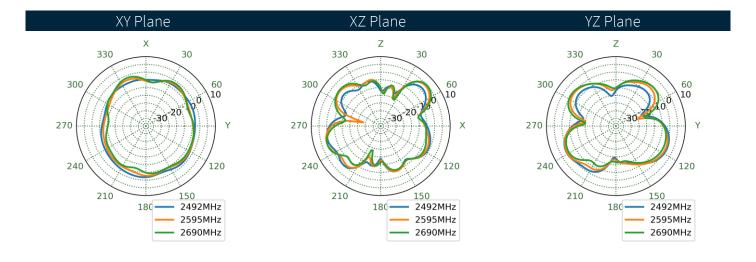






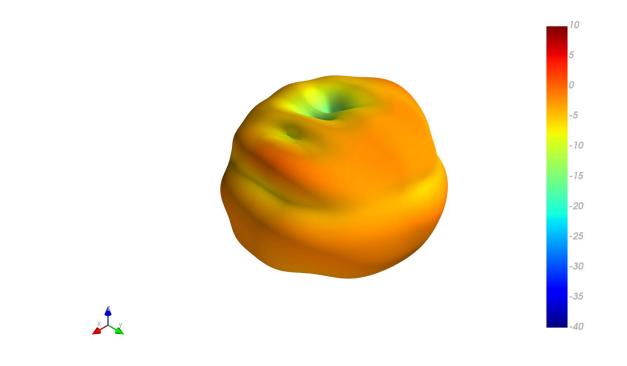
4.75 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Bent at 2595 MHz

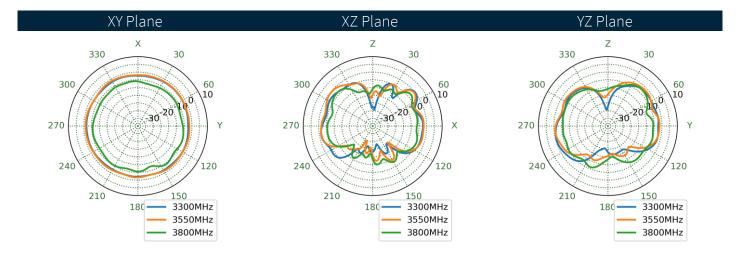






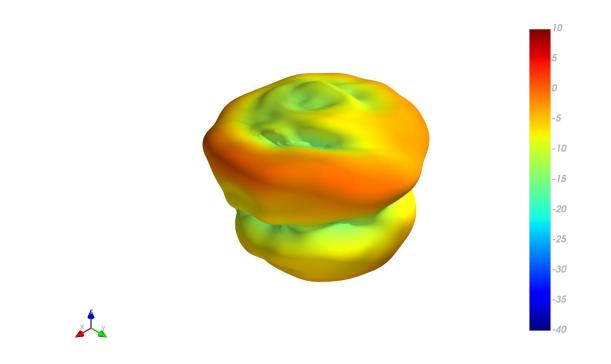
4.76 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Bent at 3550 MHz

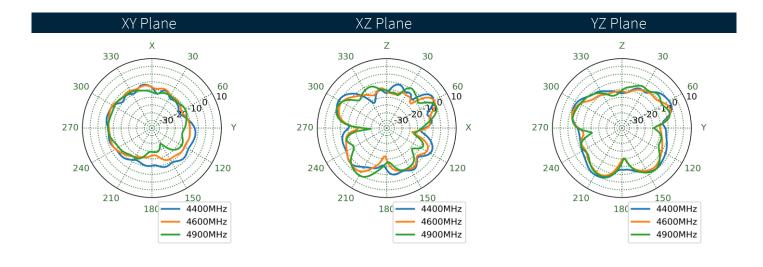






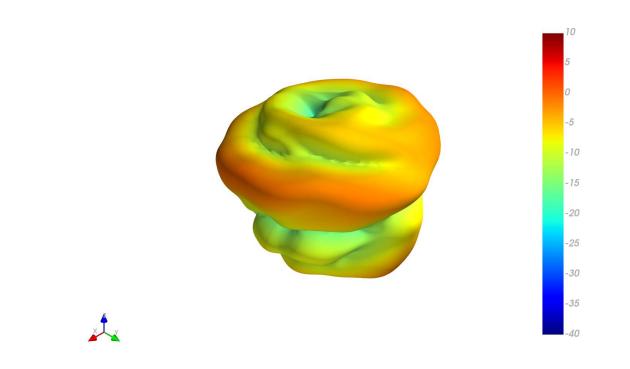
4.77 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Bent at 4600 MHz

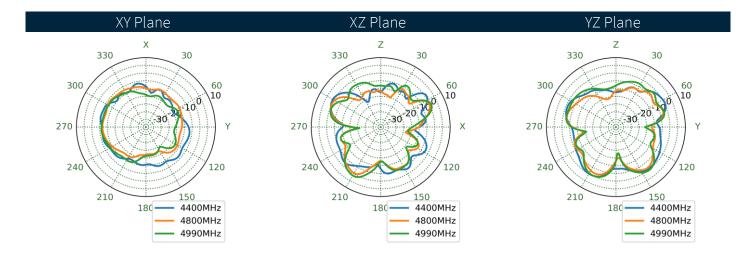






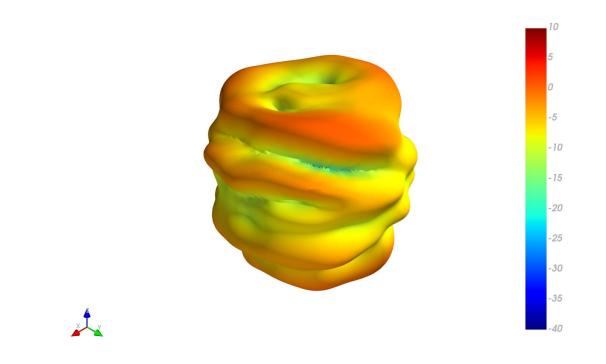
4.78 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Bent at 4800 MHz

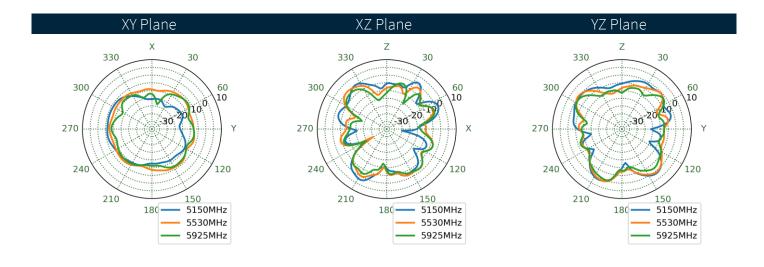




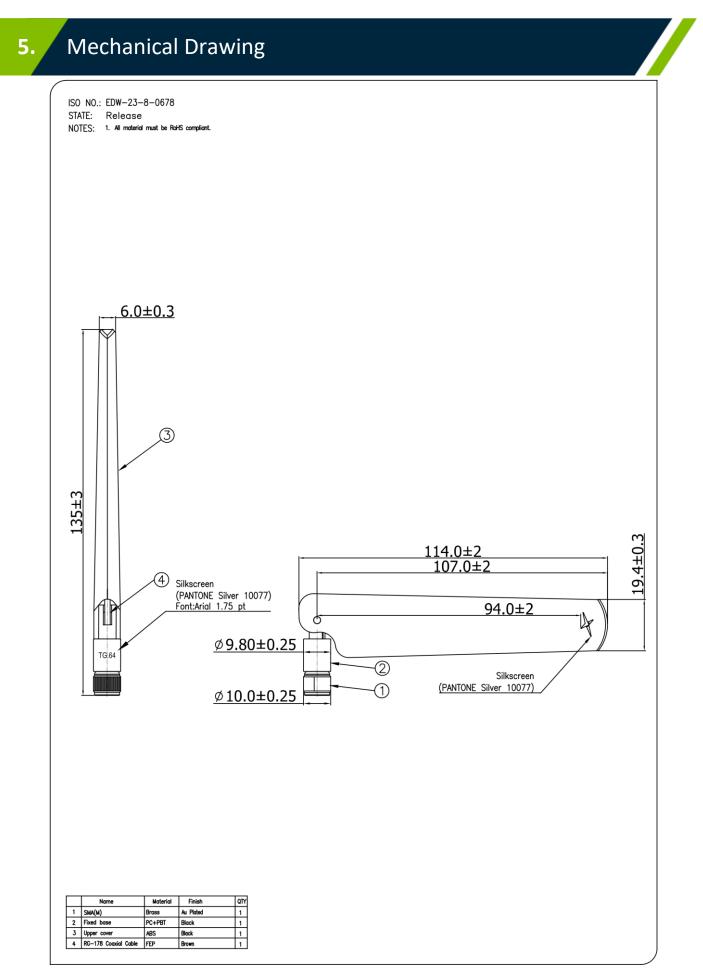


4.79 3D and 2D Radiation Patterns on 9x15cm Ground Plane - Bent at 5530 MHz







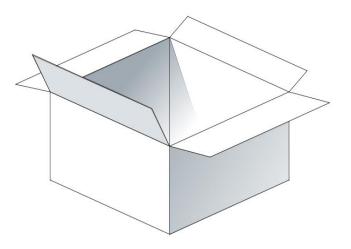




TG.64.8113 1 PCS Tape/ PE Bag



200 PCS/ Cartoon Carton Dimensions: 230x175x160mm Carton Label





Changelog for the datasheet

SPE-23-8-284- TG.64.8113

Revision: A (Original First Release)		
Date:	2023-11-01	
Notes:	Initial Release	
Author:	Cesar Sousa	

Previous Revisions





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