TAOGLAS®



Datasheet

Part No:
GW.54.A153

Description

Wi-Fi Tri-Band 2.4/5.8/7.125GHz IP67 Terminal Mount Antenna w/ Hinged RP-SMA Plug

Features:

Terminal Mount Tri-Band Wi-Fi Antenna
Covering: Wi-Fi 2.4/5.8/7.125GHz
IP67 Waterproof Enclosure
Dims: Ø12.9 x 123mm
Connector: Hinged RP-SMA Plug
RoHS & Reach Compliant

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1. Introduction



The Taoglas **GW.54.A153** is a compact, high-performance tri-band Wi-Fi terminal mount antenna designed to provide reliable wireless connectivity across the **2.4 GHz, 5 GHz and 6 GHz frequency bands**. Covering 2400–7125 MHz, the GW.54 supports **Wi-Fi 6E and Wi-Fi 7 applications**, providing a single antenna solution for current and next-generation wireless devices.

A key feature of the GW.54 is its **IP67-rated hinged construction**, combining flexible antenna positioning with protection against dust and water ingress. The rugged enclosure makes the antenna well suited to access points, gateways, security cameras, industrial IoT equipment and other connected devices deployed in demanding indoor or outdoor environments. IP67 protection and hinged RP-SMA mounting are established features within the Taoglas tri-band Wi-Fi terminal antenna range.

The hinged **RP-SMA (M) connector** allows the antenna to be positioned to suit different device orientations and space-constrained installations. This flexibility is particularly useful when multiple antennas are installed on Wi-Fi access points, routers and gateways, where antenna orientation and placement are important considerations during integration. The GW.54 provides **omnidirectional coverage across its supported Wi-Fi bands**, helping deliver dependable wireless connectivity across a wide range of networking and IoT applications. Omnidirectional performance is also used across existing Taoglas tri-band Wi-Fi terminal antennas.

Typical Applications:

- Wi-Fi 6E & Wi-Fi 7 Access Points, Gateways & Routers
- Outdoor Security & Surveillance Cameras
- Industrial IoT & Remote Monitoring
- Smart Building Infrastructure and Smart City Infrastructure
- Wireless Networking Equipment
- Connected Kiosks & Vending Machines

For integration support, testing services or additional technical assistance, please contact your regional Taoglas customer support team.

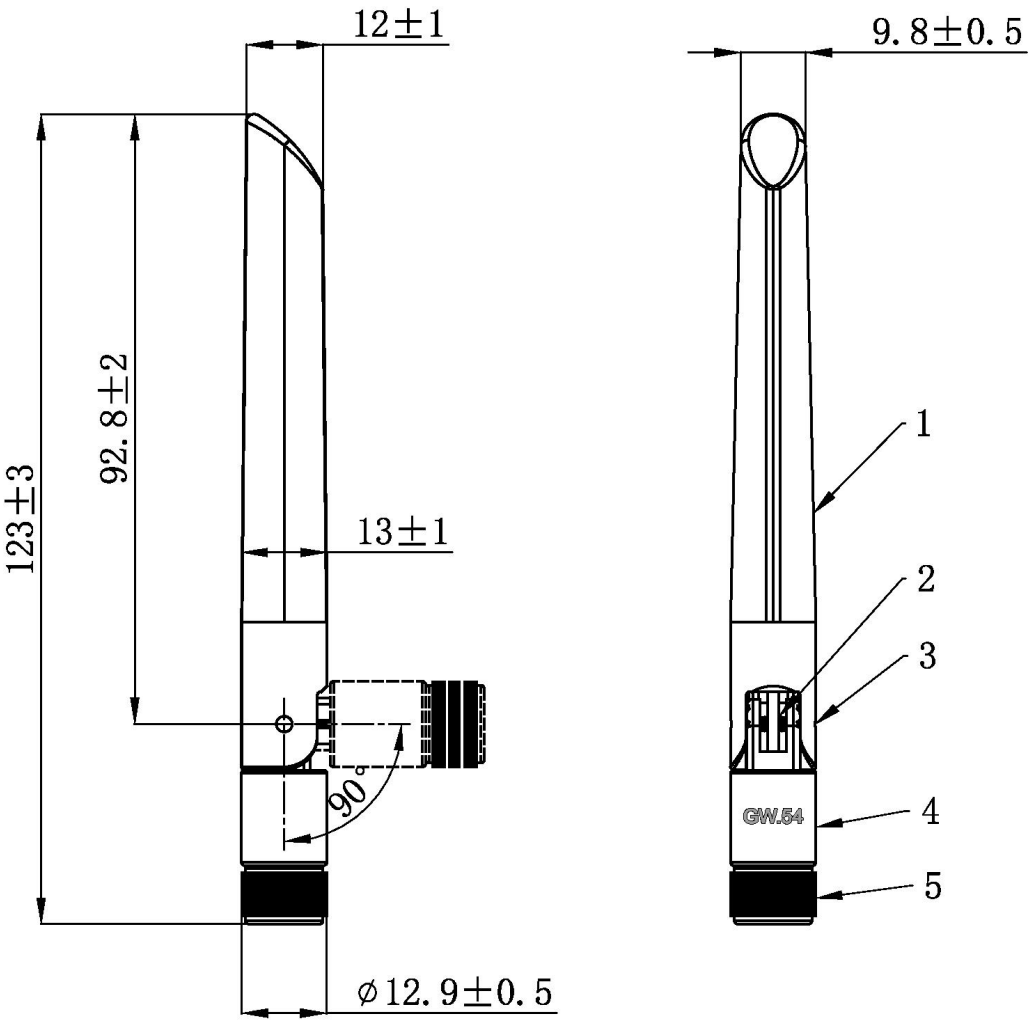
2. Specification

Electrical									
Band	Frequency (MHz)	Measurement	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. input power
Wi-Fi - 2GHz	2400-2500	15x9cm - Bent	76.9	-1.14	3.37	50 Ω	Linear	Omni directional	10W
		15x9cm - Straight	74.8	-1.26	2.68				
		9x15cm - Bent	84.2	-0.75	3.56				
		9x15cm - Straight	78.8	-1.04	2.25				
		Free Space - Bent	91.3	-0.39	3.82				
		Free Space - Straight	97.3	-0.12	2.73				
Wi-Fi - 5GHz	5150-5850	15x9cm - Bent	58.1	-2.36	5.74				
		15x9cm - Straight	60.3	-2.20	2.32				
		9x15cm - Bent	69.3	-1.59	5.69				
		9x15cm - Straight	62.5	-2.04	2.32				
		Free Space - Bent	78.2	-1.07	4.72				
		Free Space - Straight	85.0	-0.71	2.80				
Wi-Fi - 6GHz	5925-7125	15x9cm - Bent	53.7	-2.70	5.05				
		15x9cm - Straight	59.2	-2.28	4.25				
		9x15cm - Bent	64.9	-1.88	5.66				
		9x15cm - Straight	58.2	-2.35	3.27				
		Free Space - Bent	76.8	-1.15	5.24				
		Free Space - Straight	84.1	-0.75	4.32				

Mechanical	
Dimensions	Ø12.9mm x 123mm
Weight	16.1g / 0.57 oz
Material	ASA
Connector	RP-SMA(M)

Environmental	
Waterproof Rating	IP 67 Enclosure
Operation Temperature	-40°C- +85°C
Storage Temperature	-40°C- +85°C
Relative Humidity	Non-condensing 65°C 95% RH

3. Mechanical Drawing



	Name	Material	Number	Finish
5	RP-SMA(M)	Brass	1	Black
4	SMA holder	PC+PBT	1	Black
3	Pin	POM	2	Black
2	Rg178 Cable	FEP	1	Brown
1	Antenna Enclosure	ASA	1	Black

4. Packaging



☑ 10 PCS / Ten-pack bag

☑ Ten-pack Bag (mm): 400x(140+10) (Ref.)

☑ Weight (g): 174 ±3%



☑ 50 PCS / PE Bag

☑ PE Bag(mm): 230x330 (Ref.)

☑ Weight (Kg): 0.87 ±3%

☑ SPQ Label



☑ 500 PCS / Carton

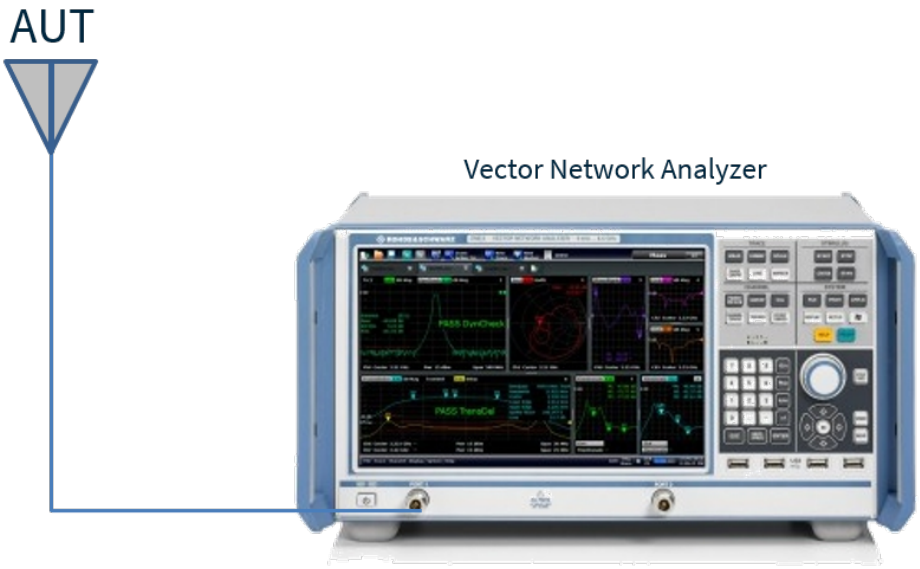
☑ Carton(mm): 320x250x290

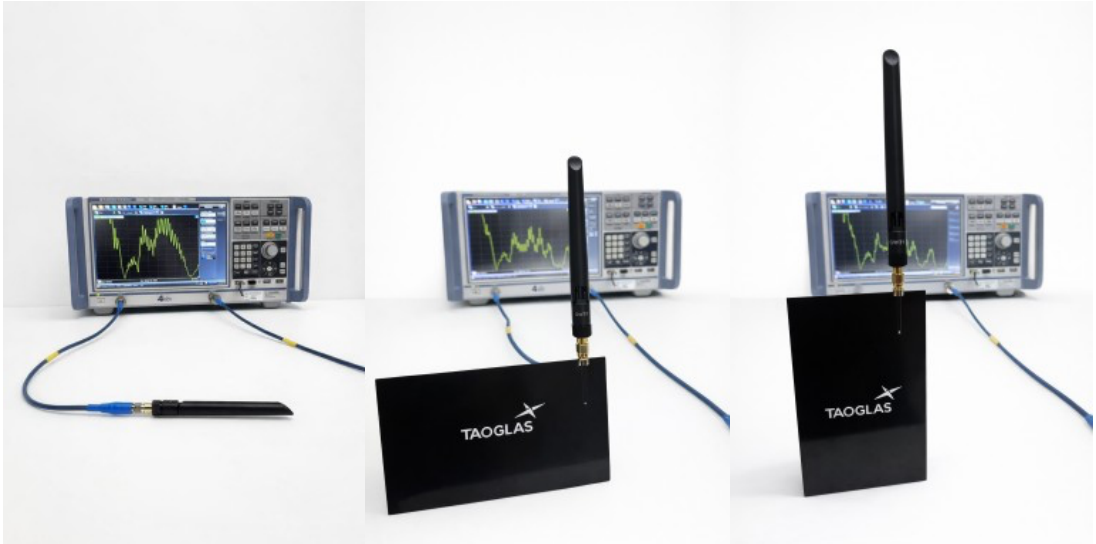
☑ Weight (Kg): 9.3 ±3%

☑ Carton Label

5. Antenna Characteristics

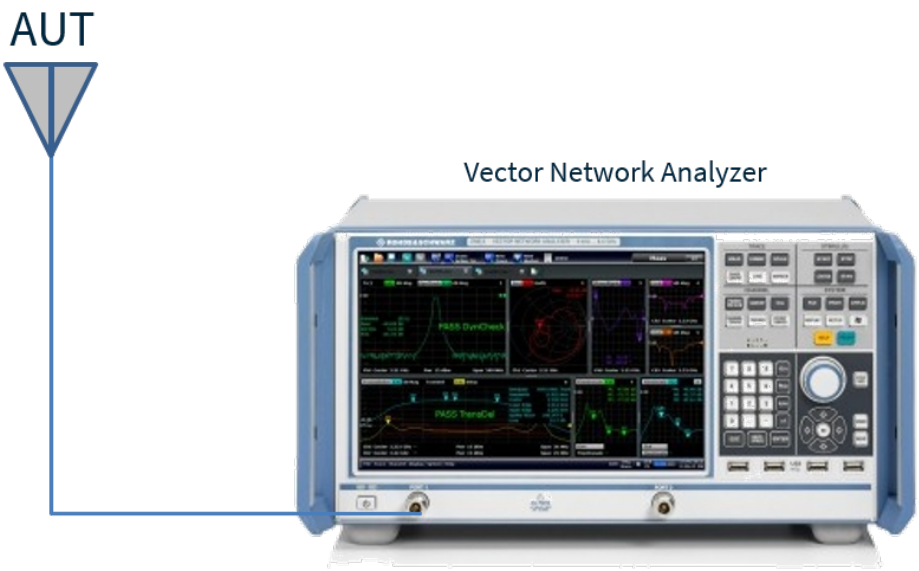
5.1 Test Setup - Straight





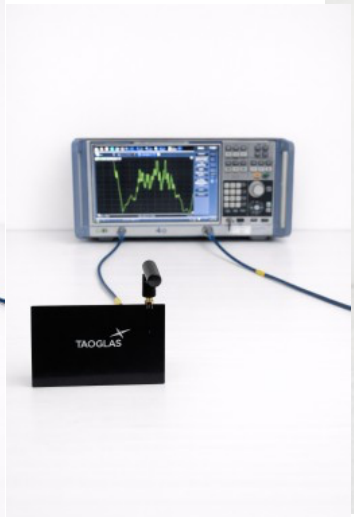
Free Space | 15x9cm Ground Plane | 9x15cm Ground Plane

5.2 Test Setup - Bent





Free Space

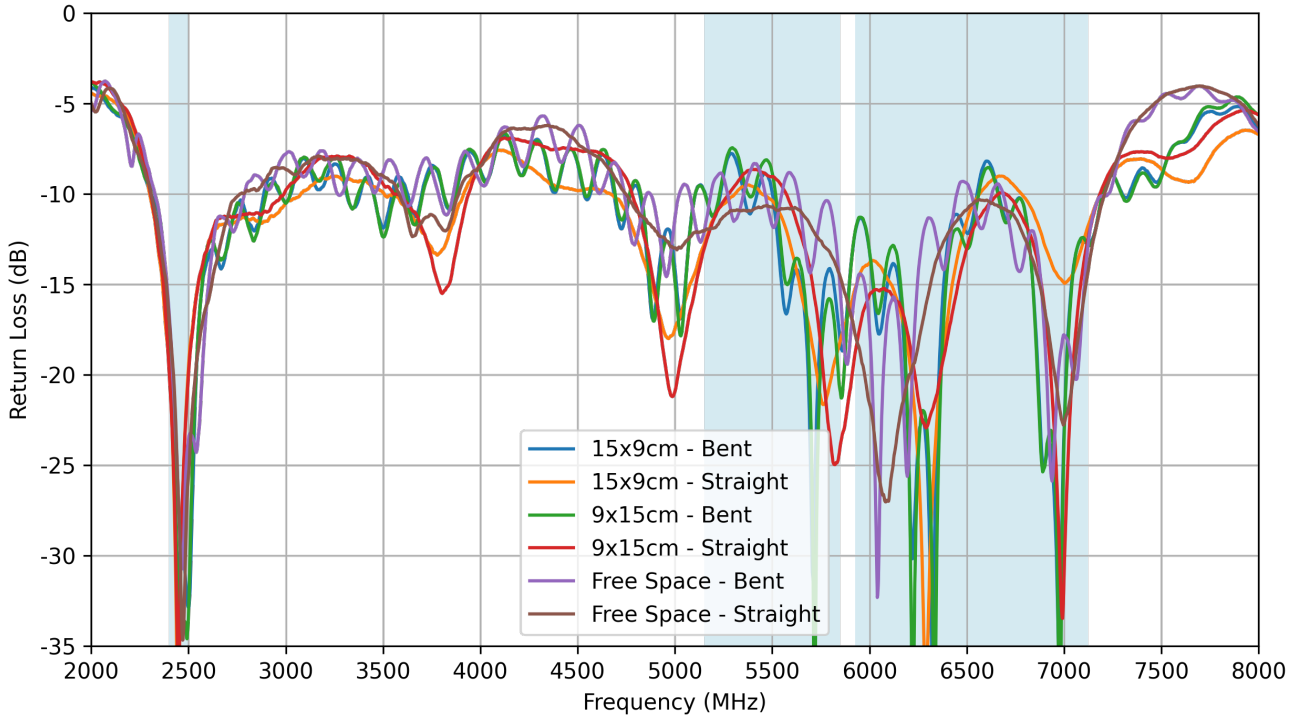


15x9cm Ground Plane

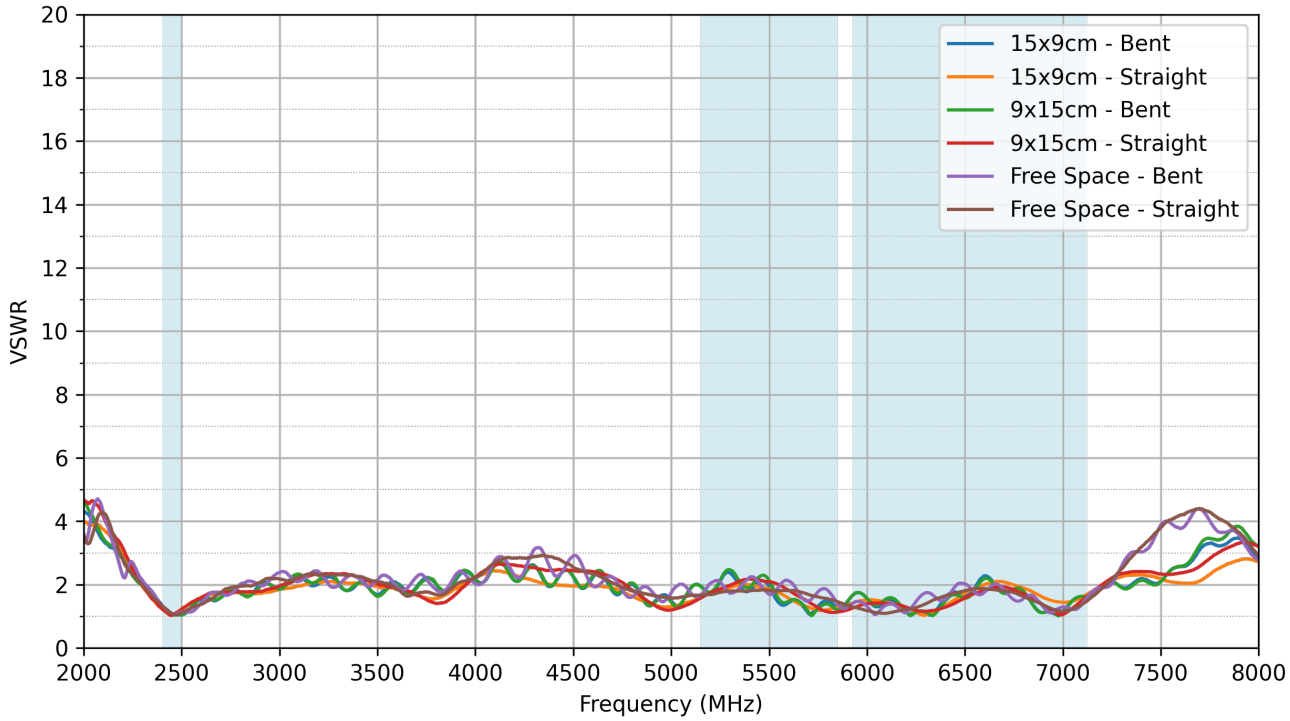


9x15cm Ground Plane

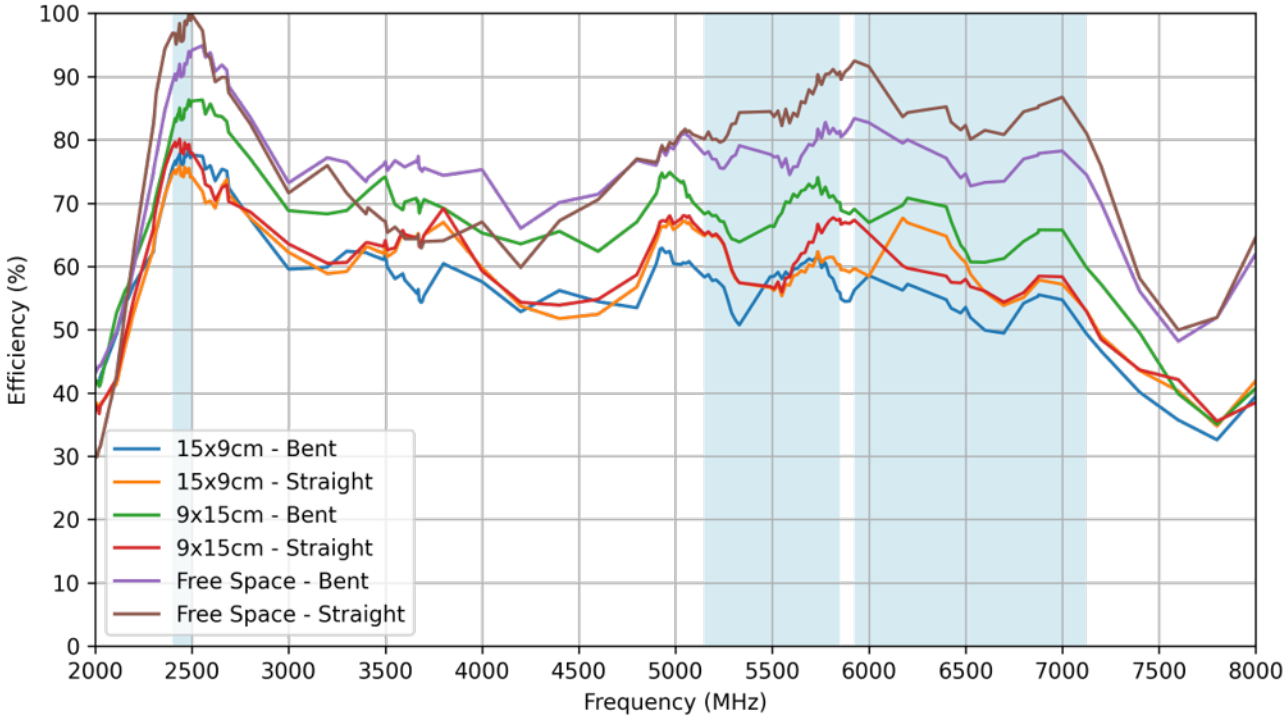
5.3 Return Loss



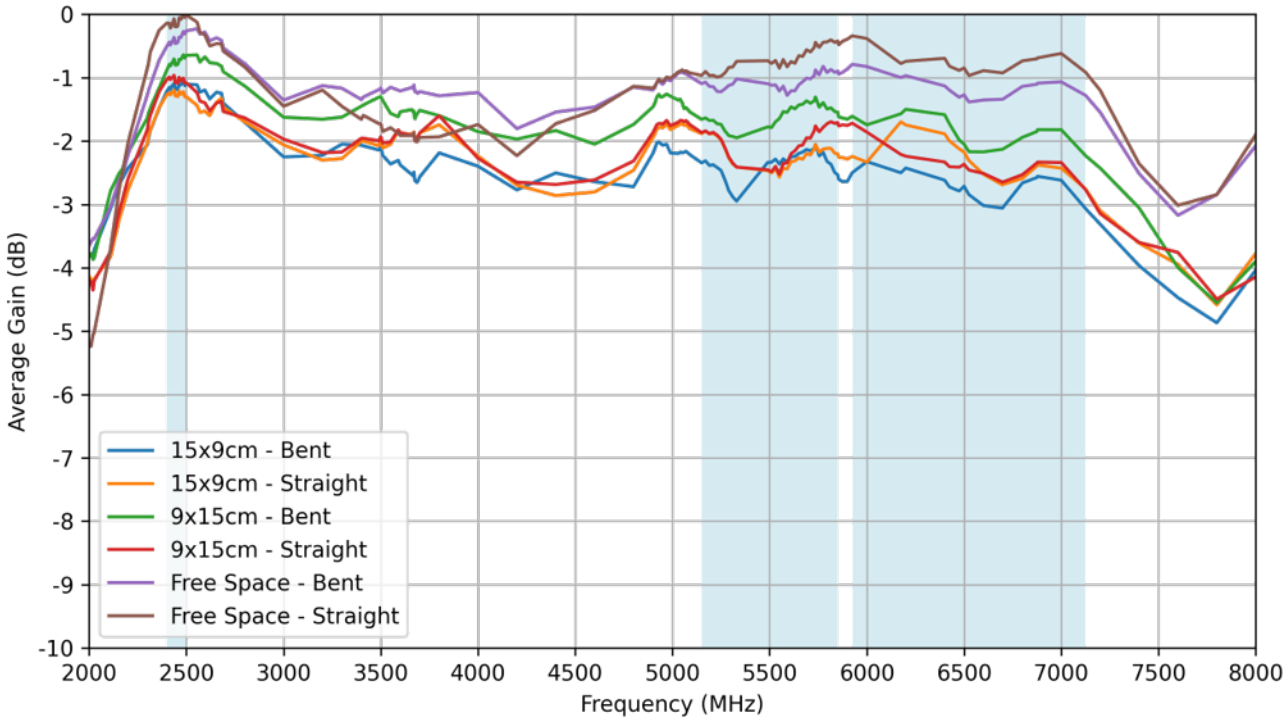
5.4 VSWR



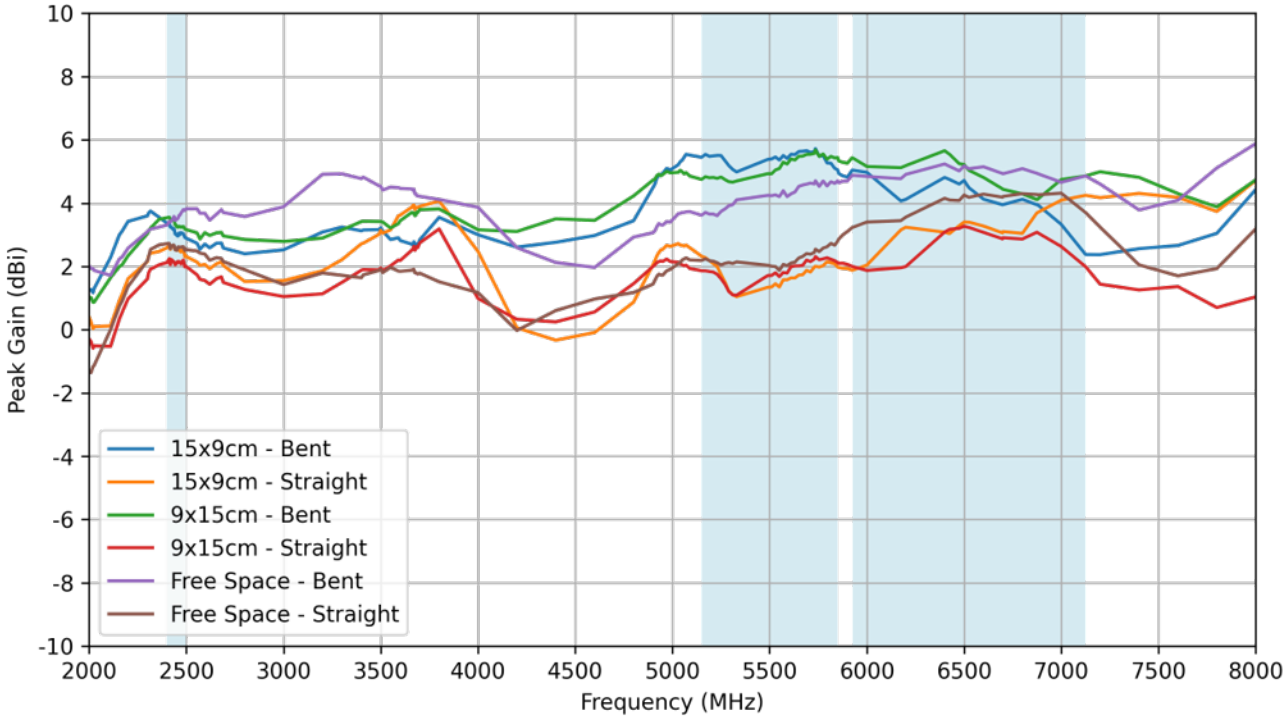
5.5 Efficiency



5.6 Average Gain

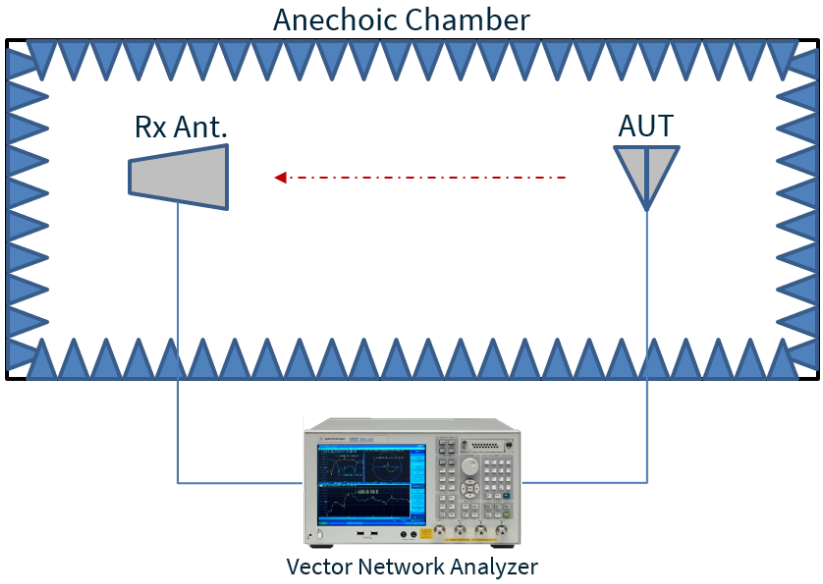


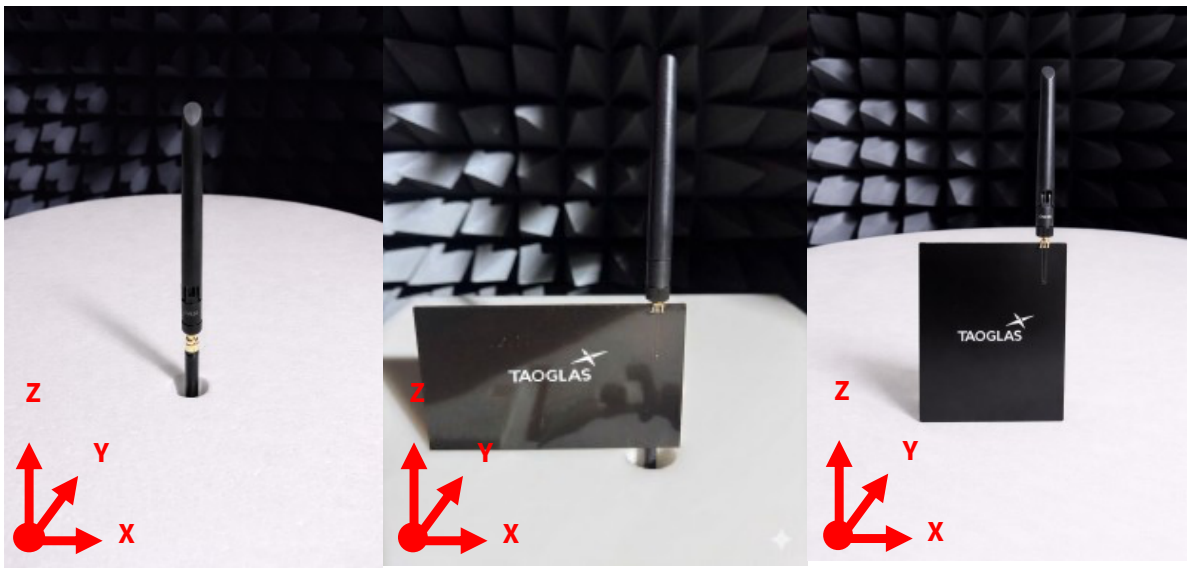
5.7 Peak Gain


Peak Gain (dBi)
Frequency (MHz)
15x9cm - Bent
15x9cm - Straight
9x15cm - Bent
9x15cm - Straight
Free Space - Bent
Free Space - Straight

6. Radiation Patterns

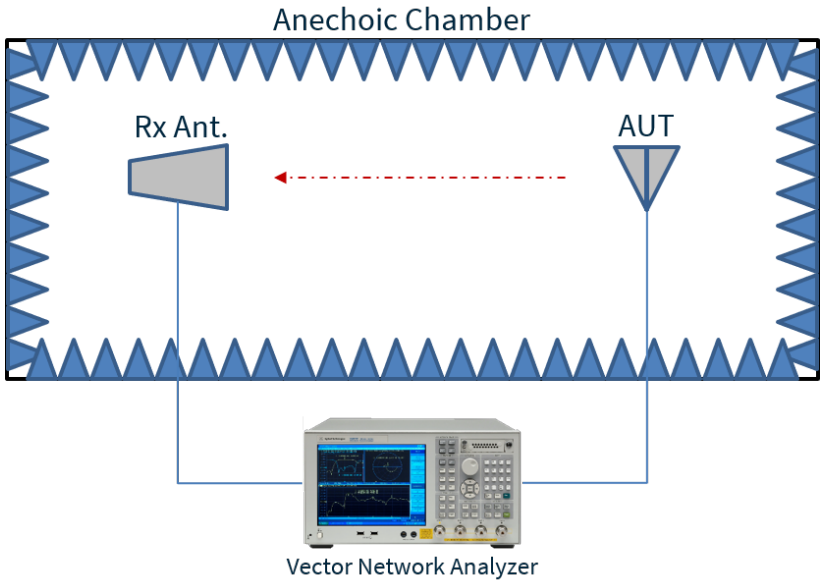
6.1 Test Setup - Straight

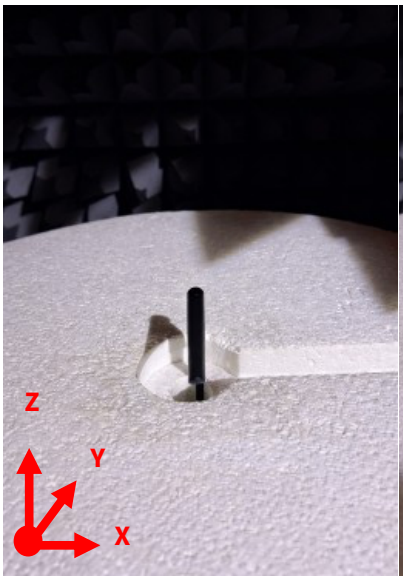




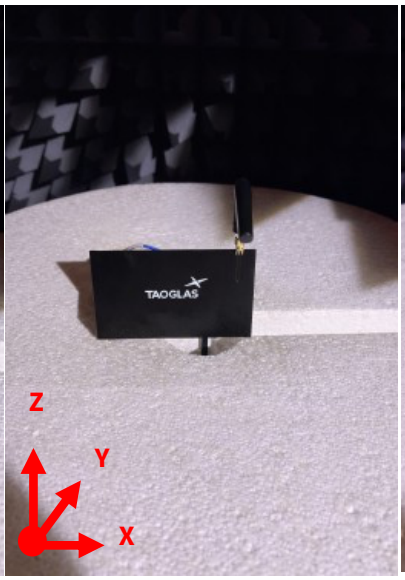
Free Space | 15x9cm Ground Plane | 9x15cm Ground Plane

6.2 Test Setup - Bent

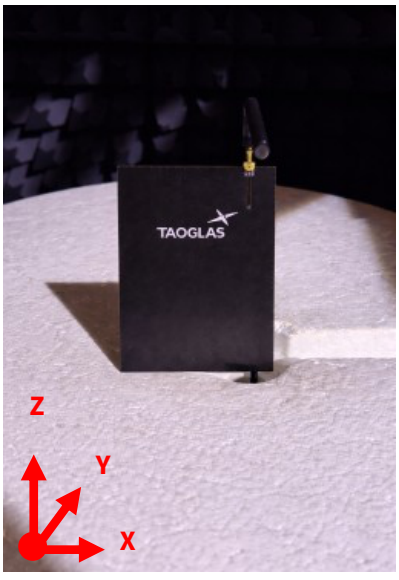




Free Space

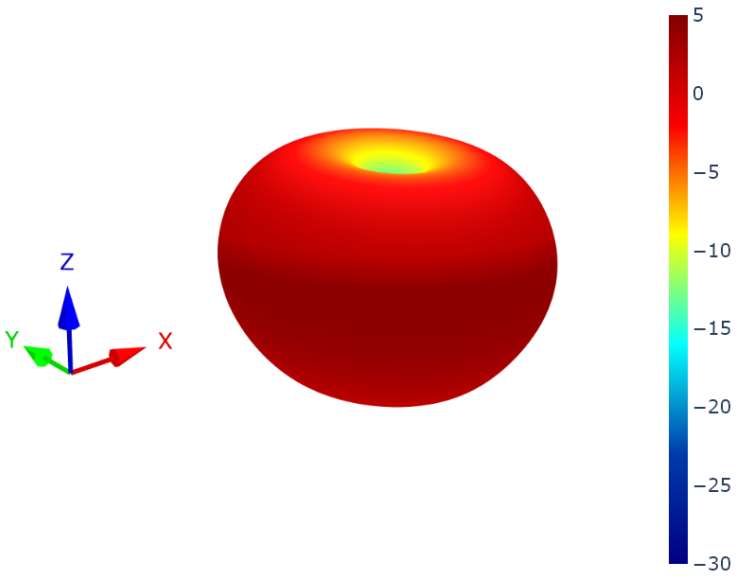


15x9cm Ground Plane

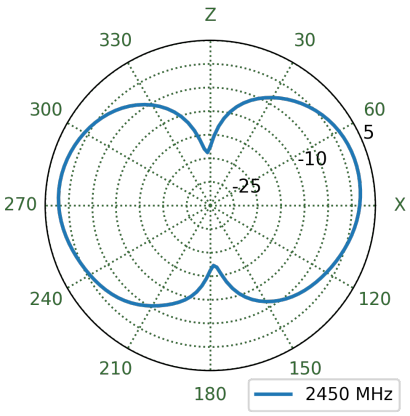


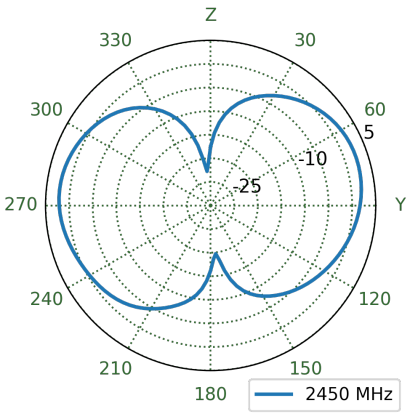
9x15cm Ground Plane

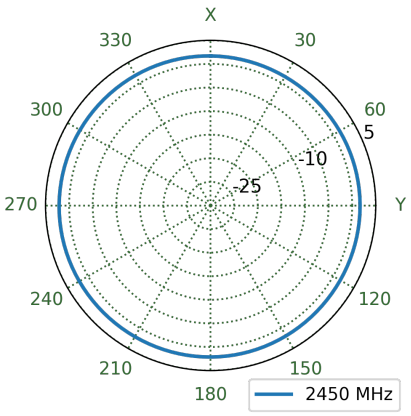
6.3 Free Space - Straight Patterns at 2450 MHz



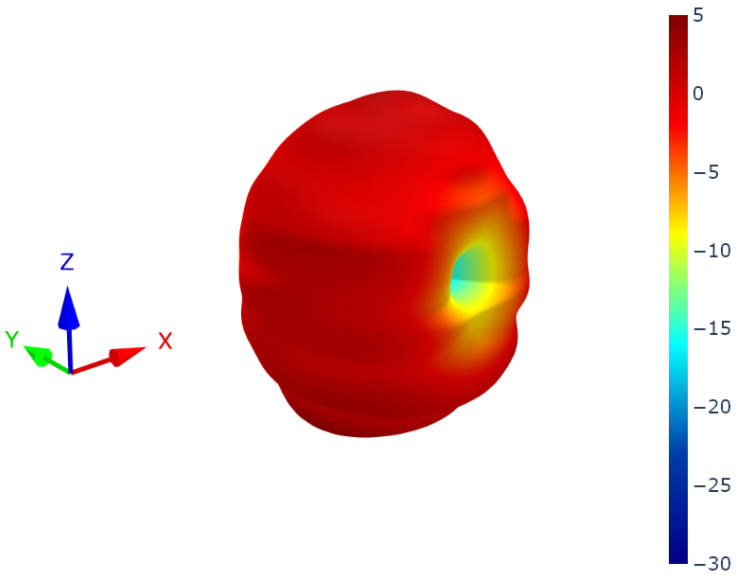
XZ Plane	YZ Plane	XY Plane

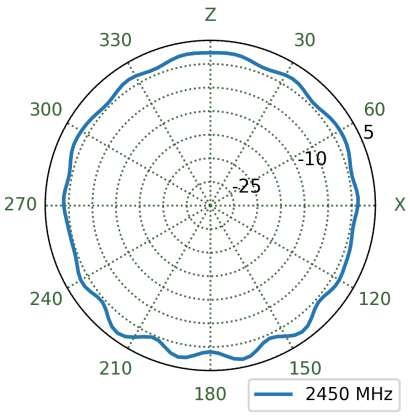
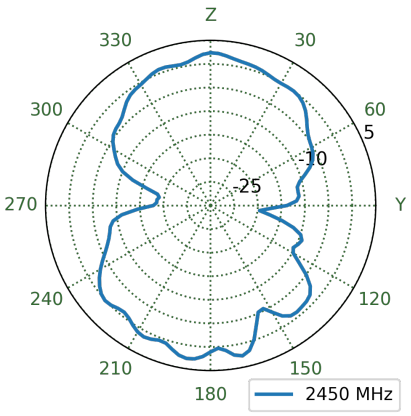
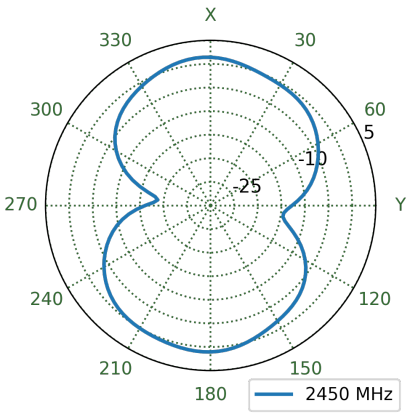




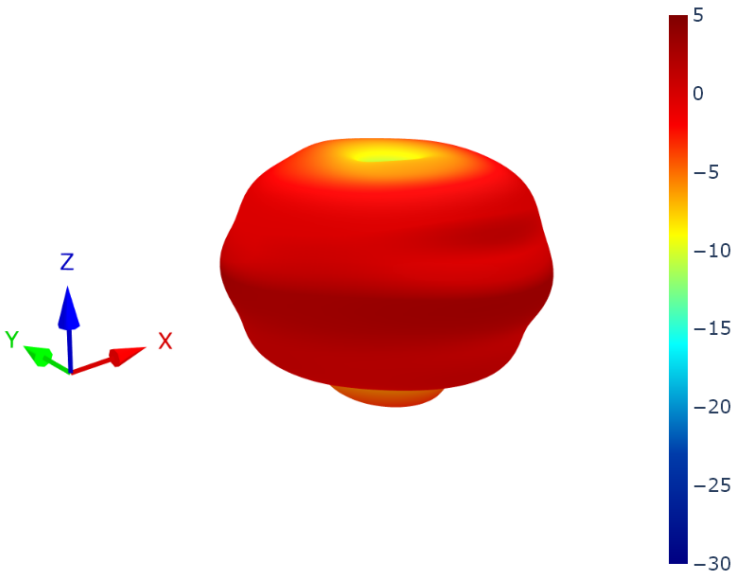


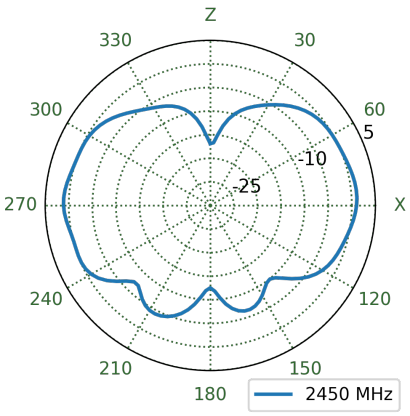
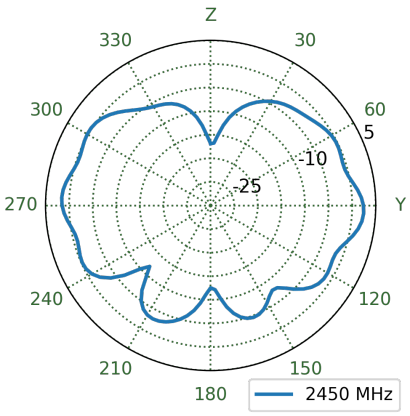
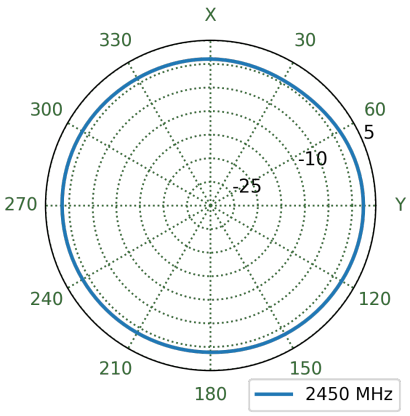
6.4 Free Space - Bent Patterns at 2450 MHz



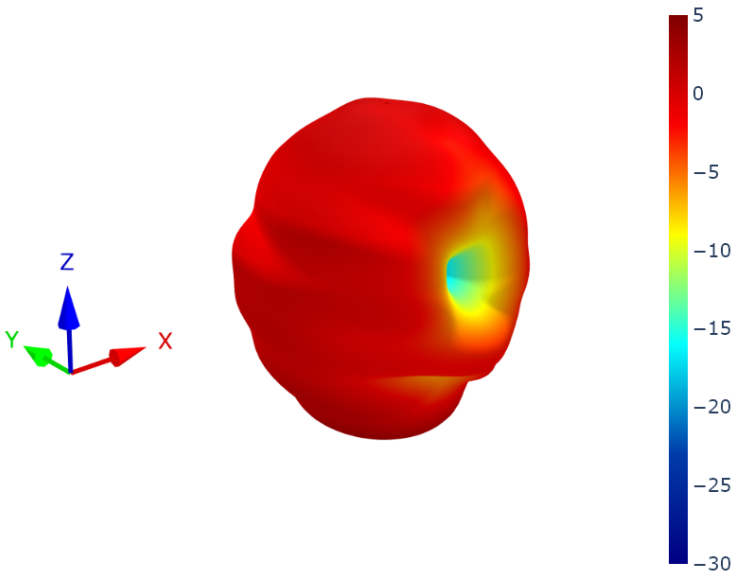
XZ Plane	YZ Plane	XY Plane
		

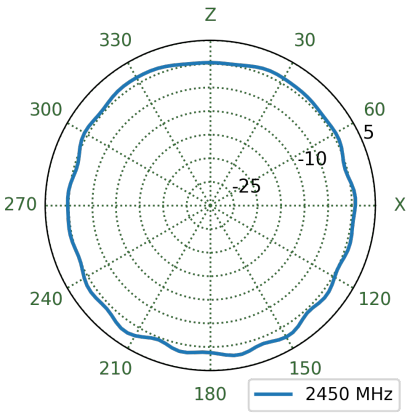
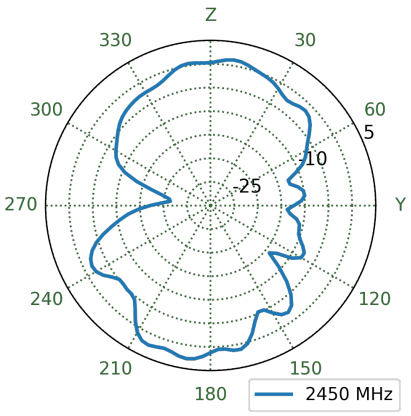
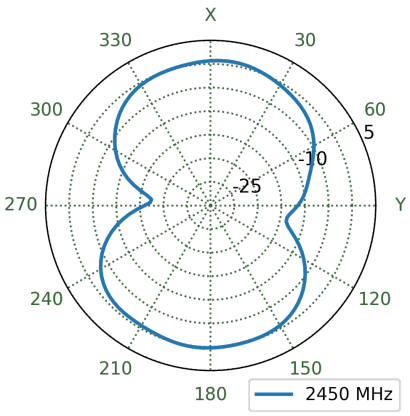
6.5 15x9cm - Straight Patterns at 2450 MHz



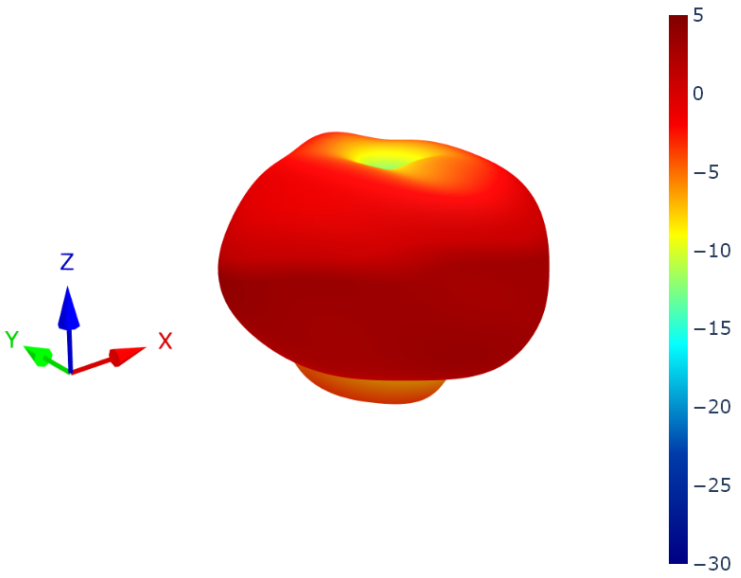
XZ Plane	YZ Plane	XY Plane
		

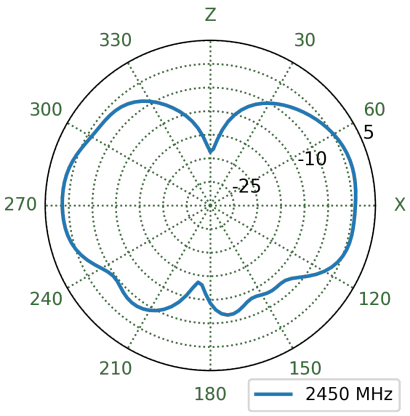
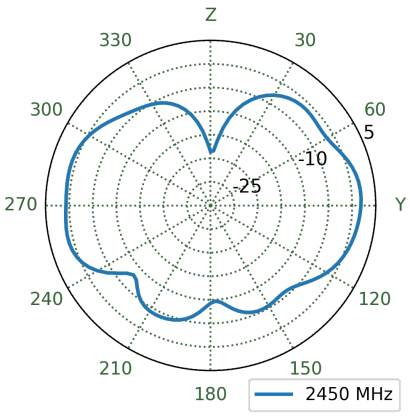
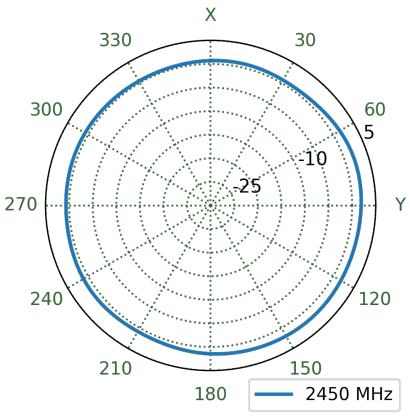
6.6 15x9cm - Bent Patterns at 2450 MHz



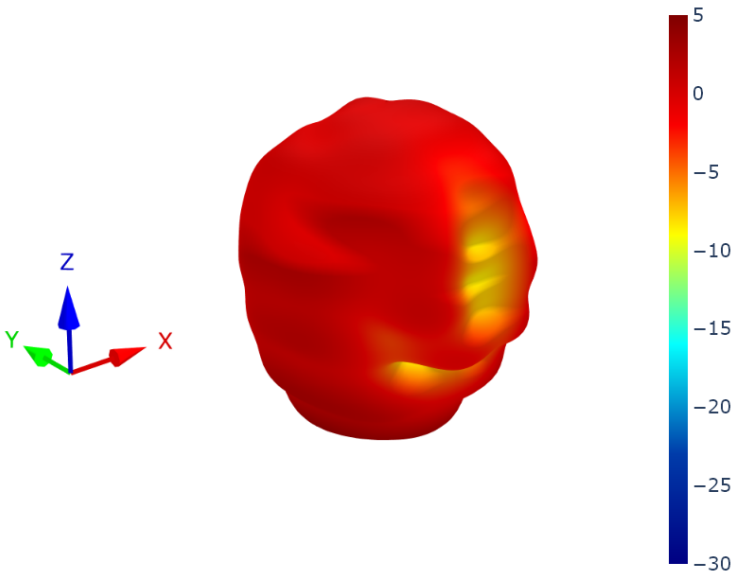
XZ Plane	YZ Plane	XY Plane
		

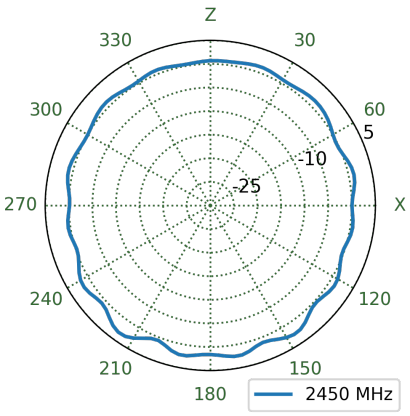
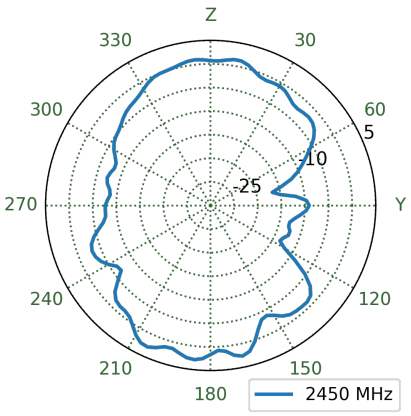
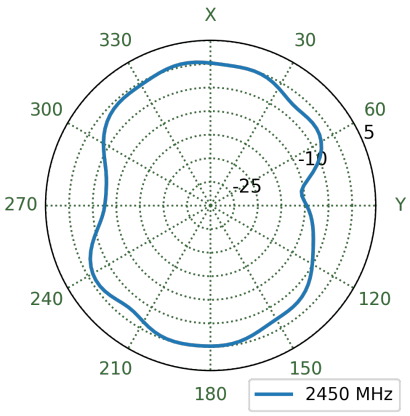
6.7 9x15cm - Straight Patterns at 2450 MHz



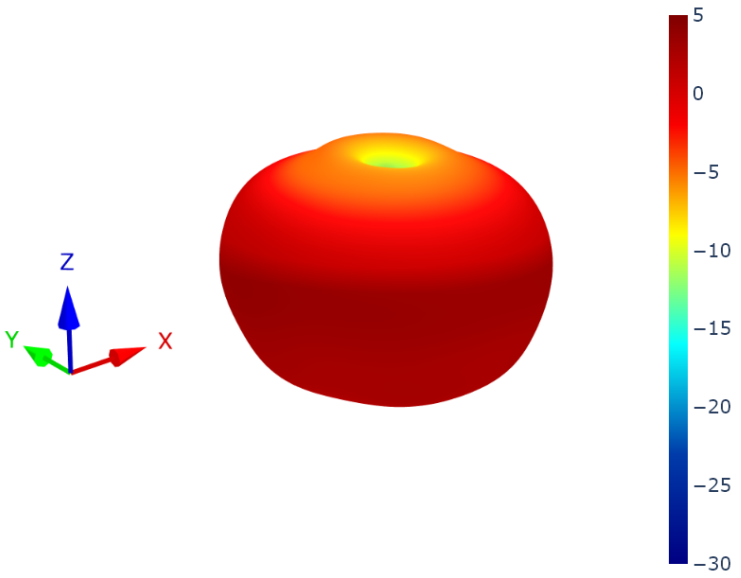
XZ Plane	YZ Plane	XY Plane
		

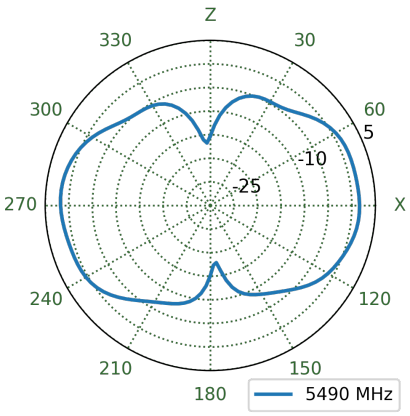
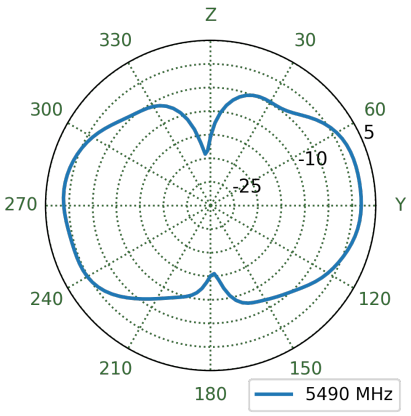
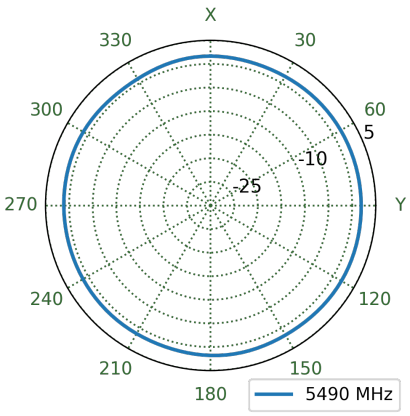
6.8 9x15cm - Bent Patterns at 2450 MHz



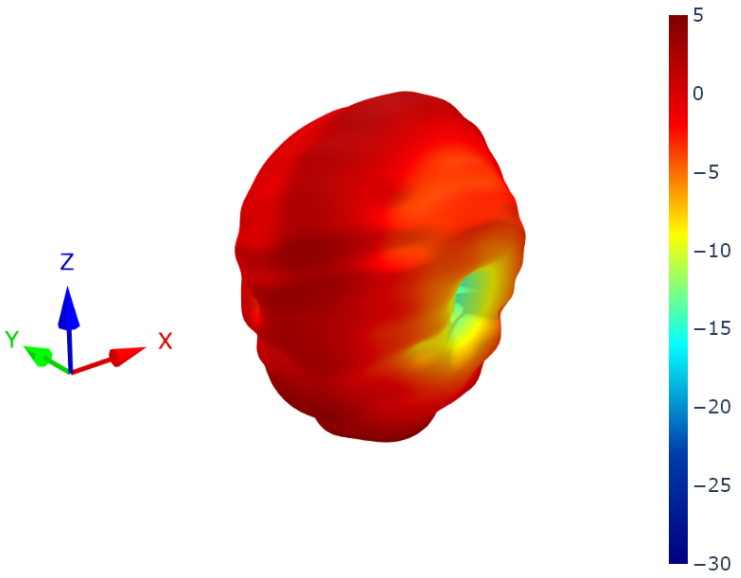
XZ Plane	YZ Plane	XY Plane
		

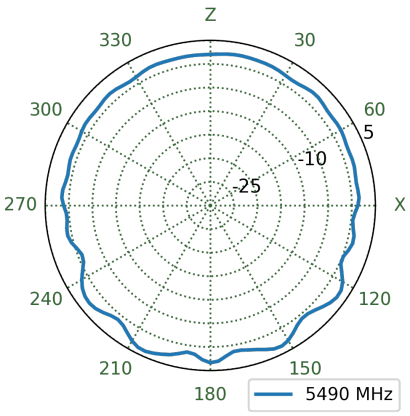
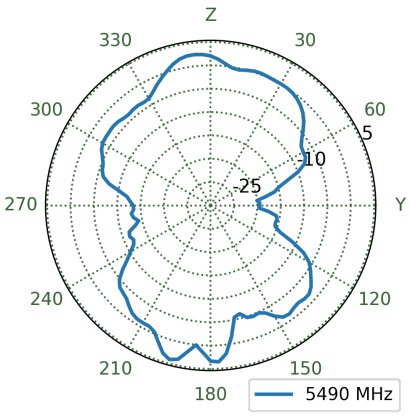
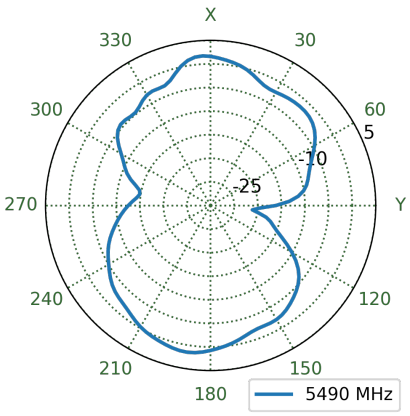
6.9 Free Space - Straight Patterns at 5490 MHz



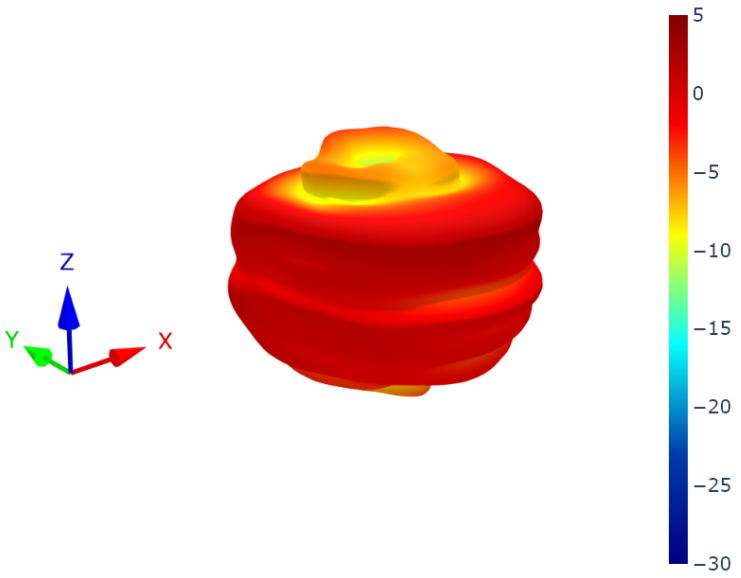
XZ Plane	YZ Plane	XY Plane
		

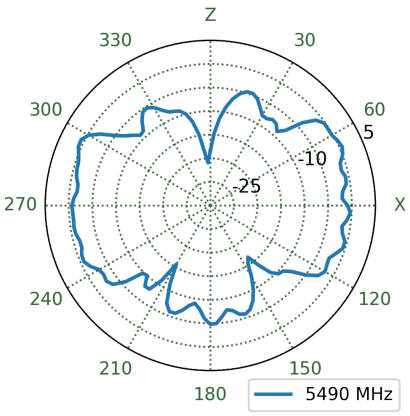
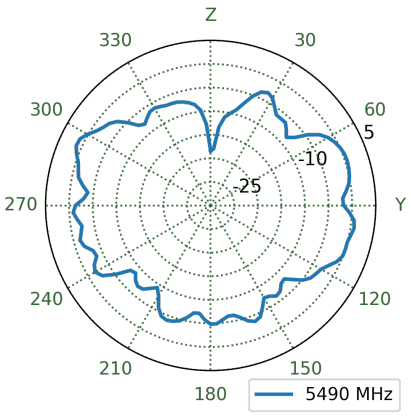
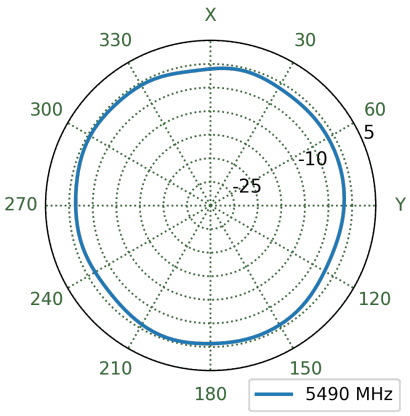
6.10 Free Space - Bent Patterns at 5490 MHz



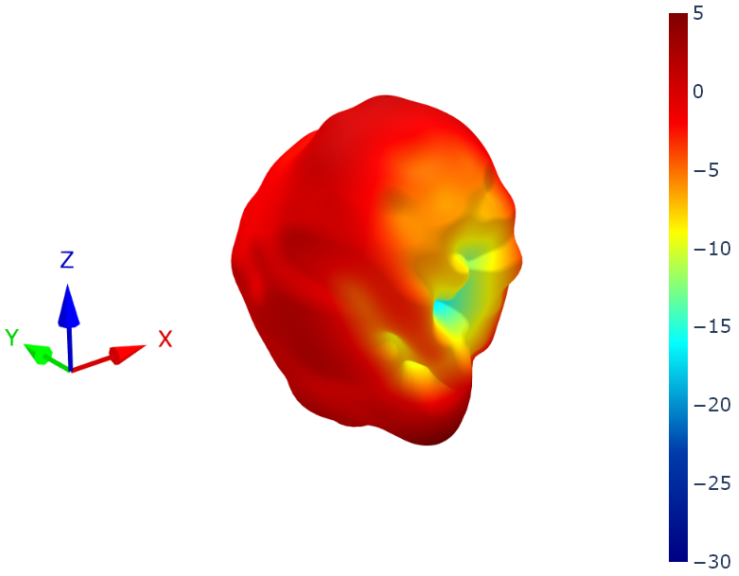
XZ Plane	YZ Plane	XY Plane
		

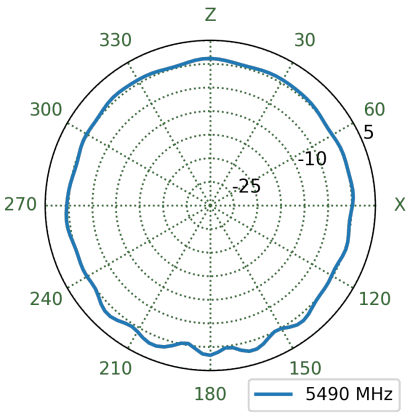
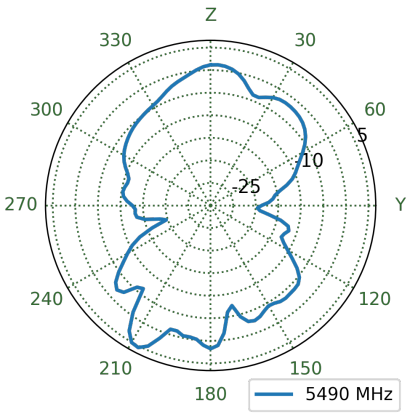
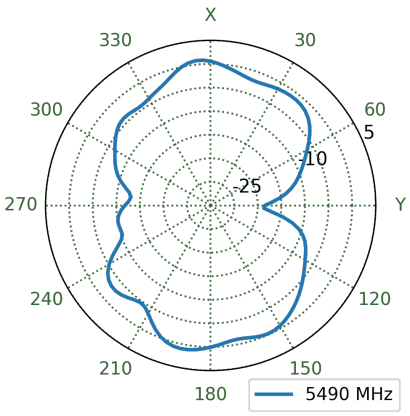
6.11 15x9cm - Straight Patterns at 5490 MHz



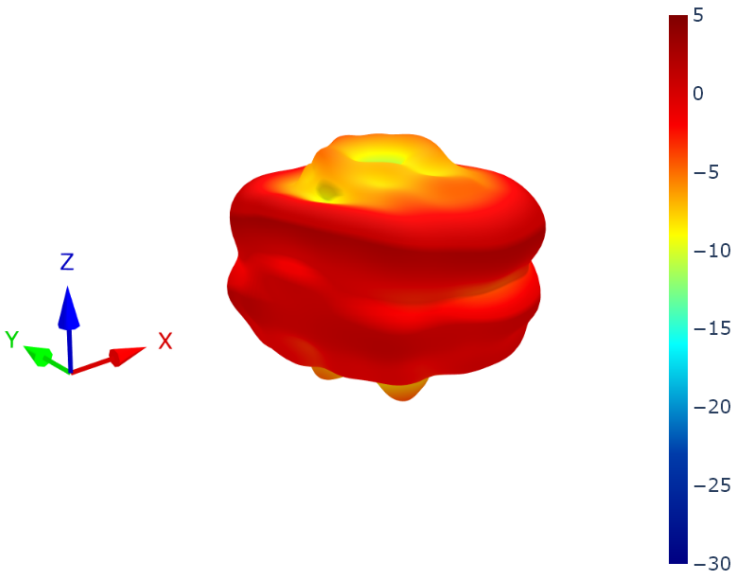
XZ Plane	YZ Plane	XY Plane
		

6.12 15x9cm - Bent Patterns at 5490 MHz

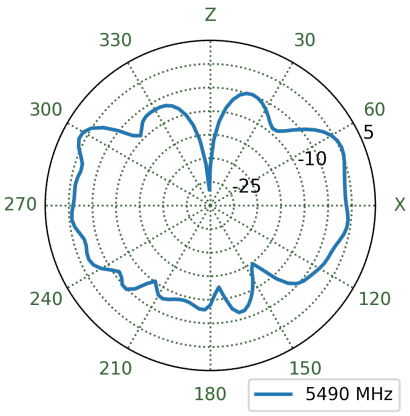


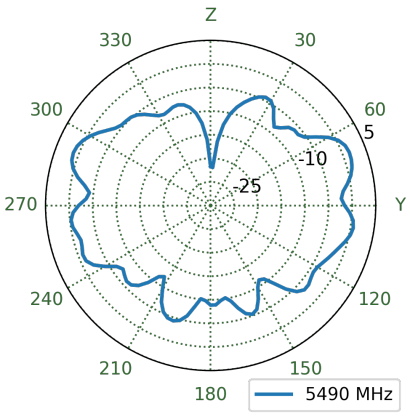
XZ Plane	YZ Plane	XY Plane
		

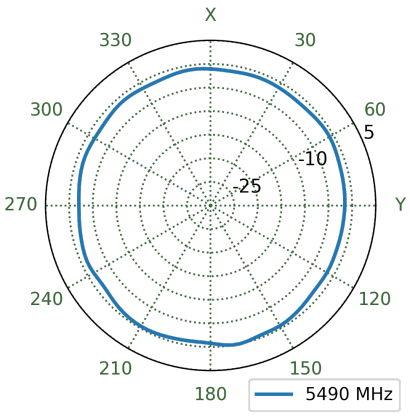
6.13 9x15cm - Straight Patterns at 5490 MHz



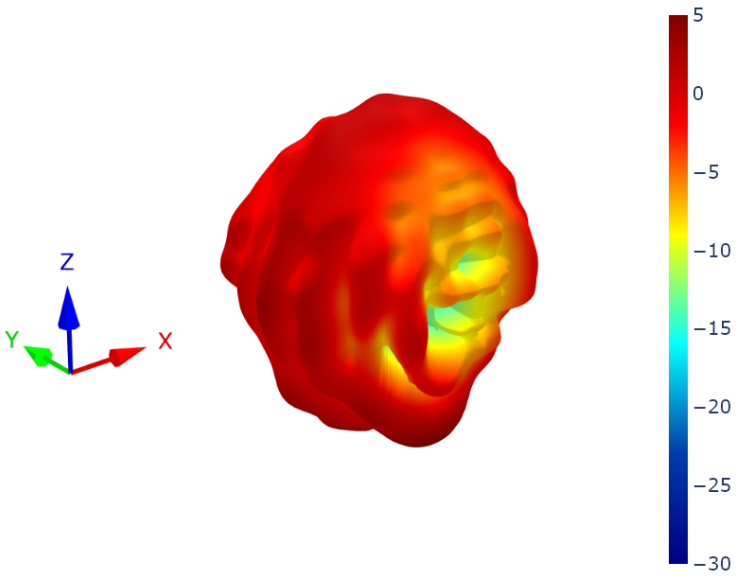
XZ Plane	YZ Plane	XY Plane

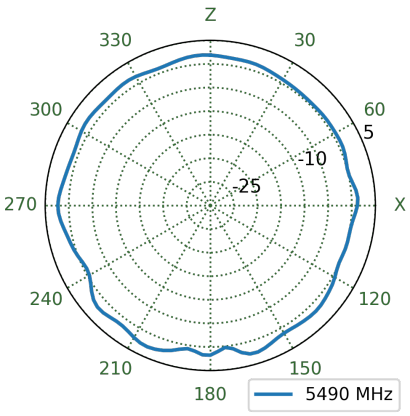
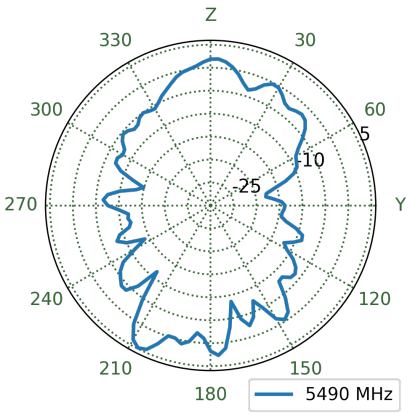
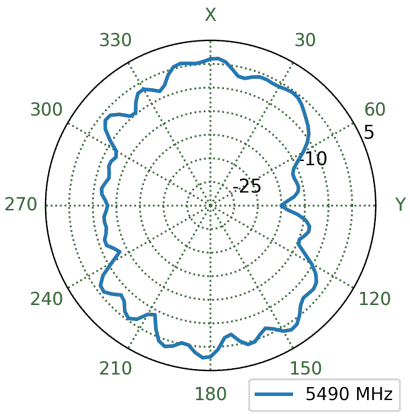




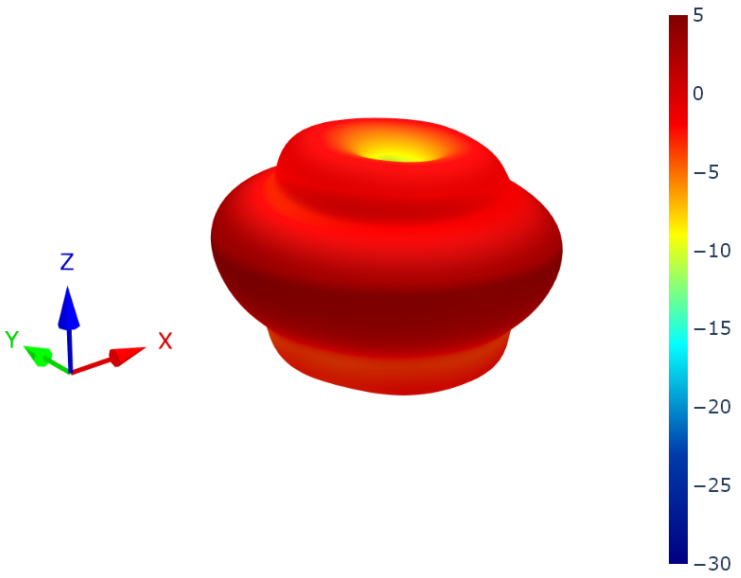


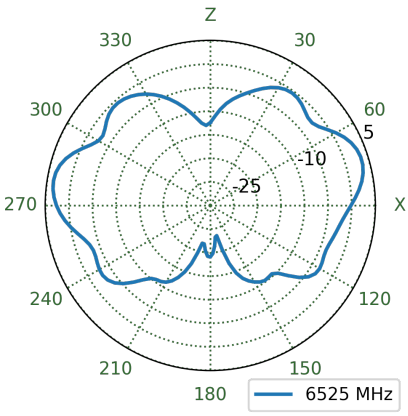
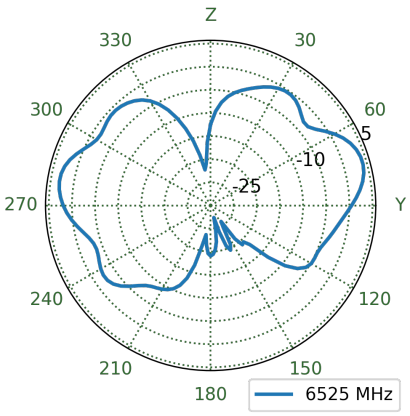
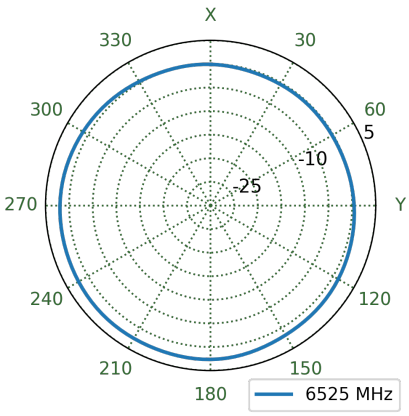
6.14 9x15cm - Bent Patterns at 5490 MHz



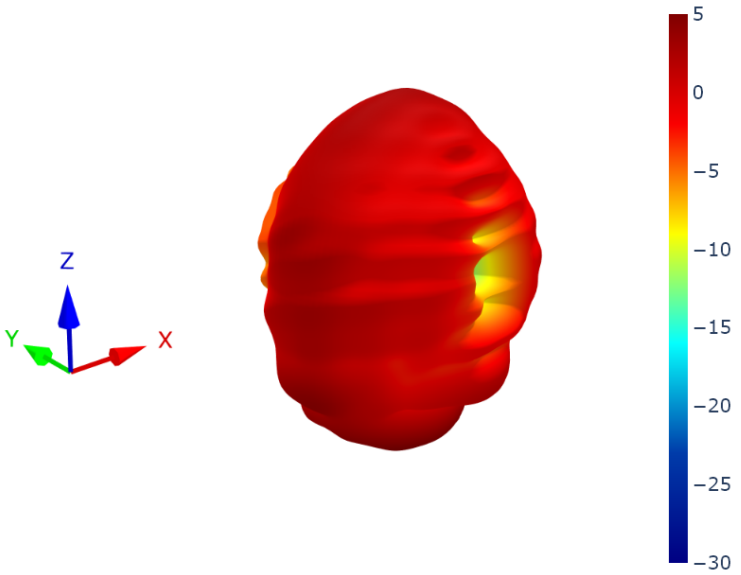
XZ Plane	YZ Plane	XY Plane
		

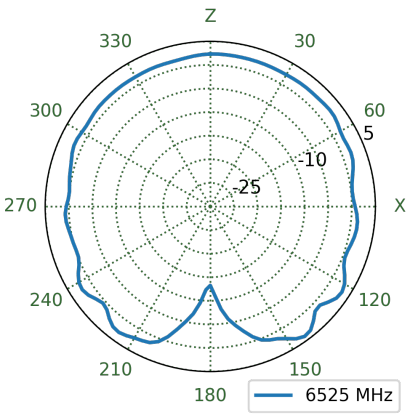
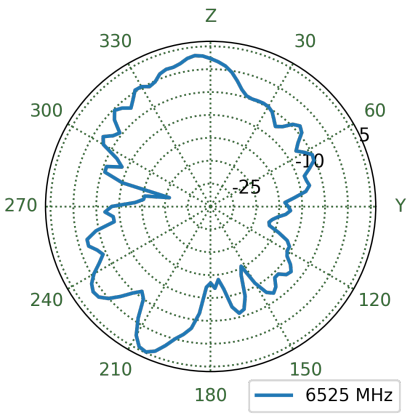
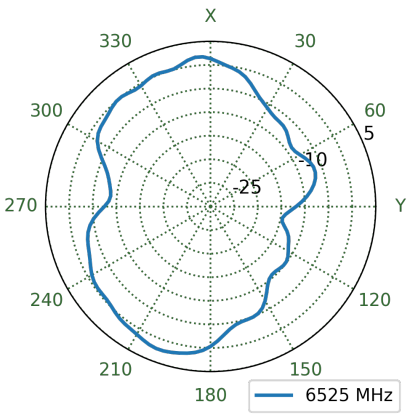
6.15 Free Space - Straight Patterns at 6525 MHz



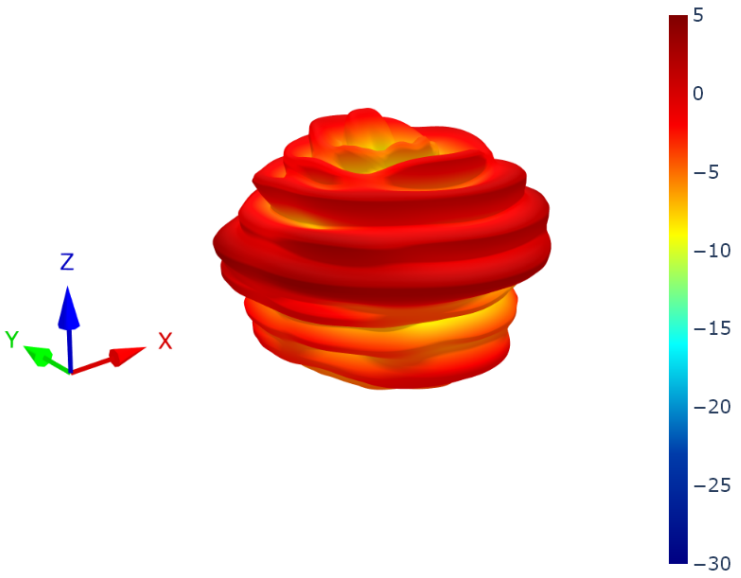
XZ Plane	YZ Plane	XY Plane
		

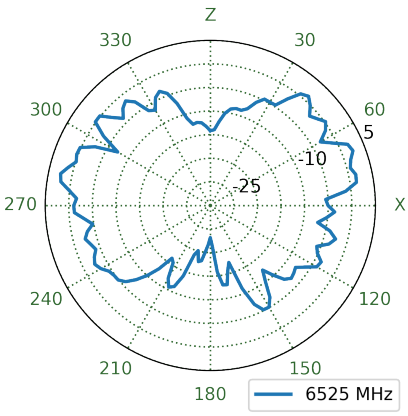
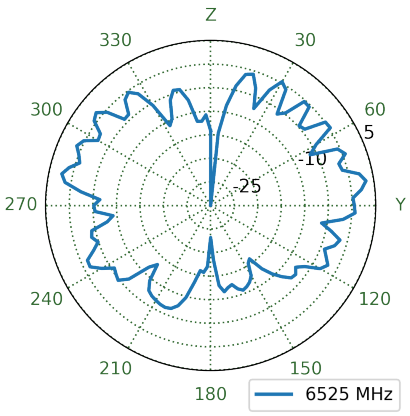
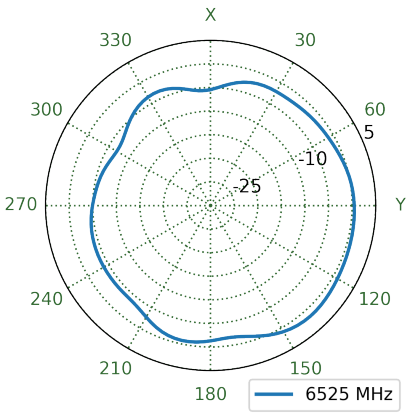
6.16 Free Space - Bent Patterns at 6525 MHz



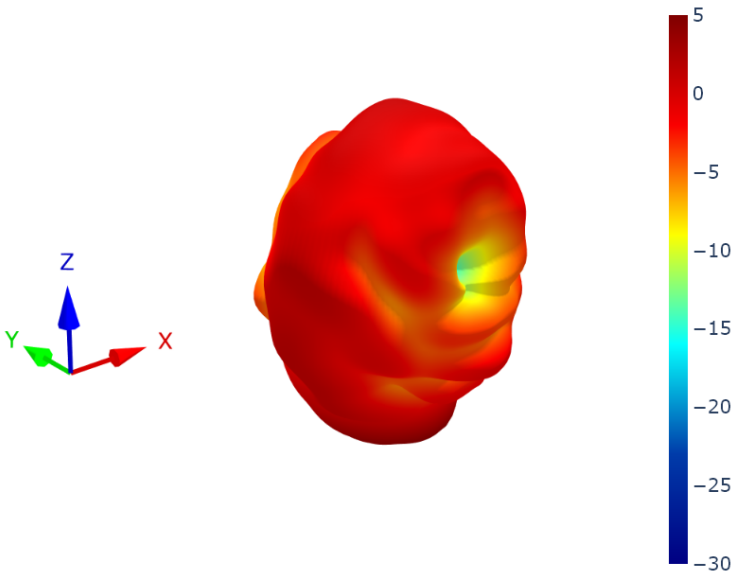
XZ Plane	YZ Plane	XY Plane
		

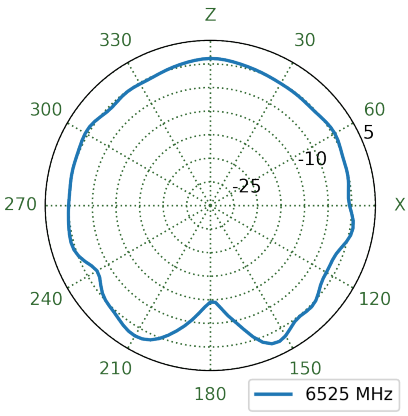
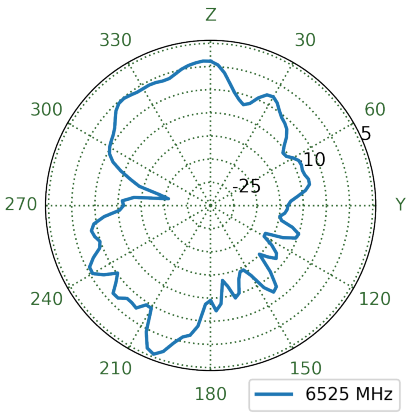
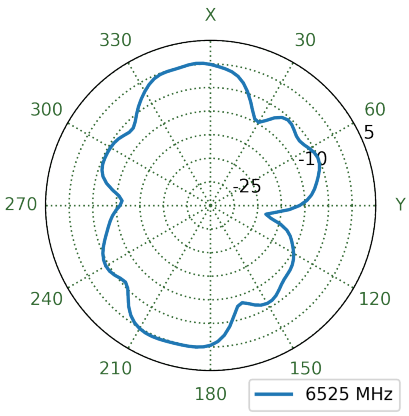
6.17 15x9cm - Straight Patterns at 6525 MHz



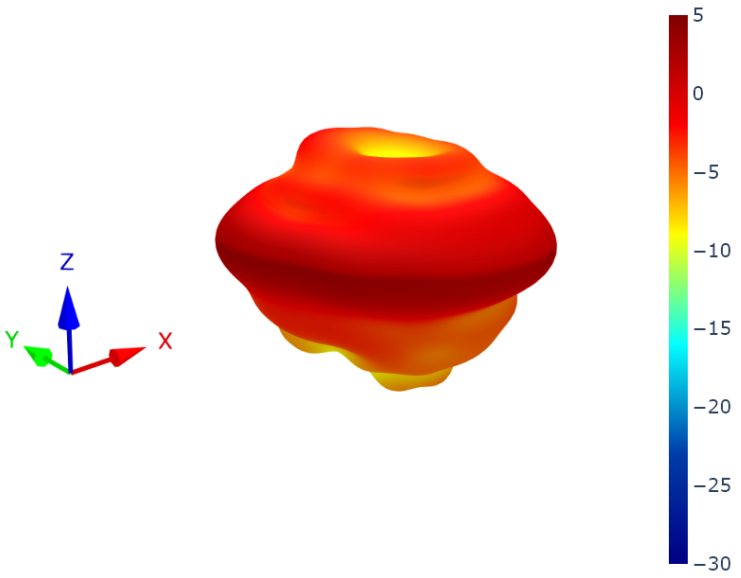
XZ Plane	YZ Plane	XY Plane
		

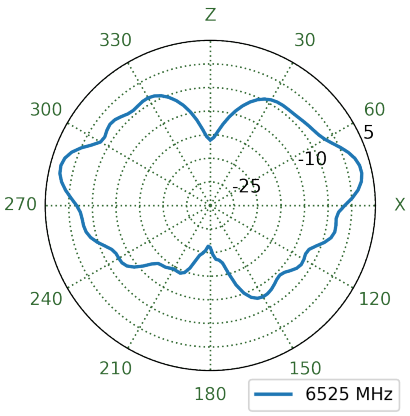
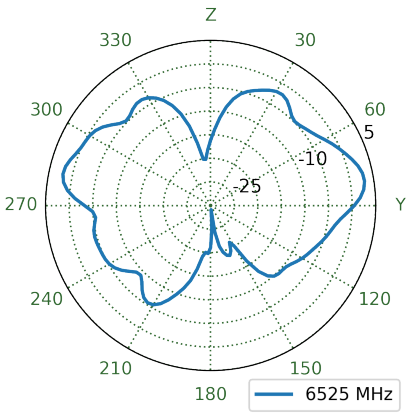
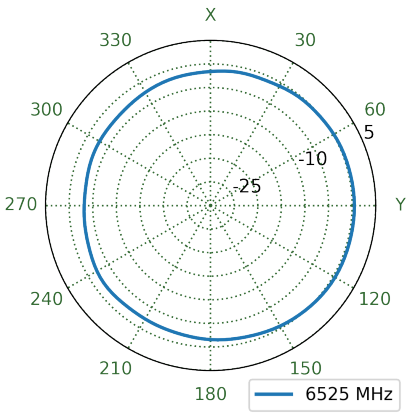
6.18 15x9cm - Bent Patterns at 6525 MHz



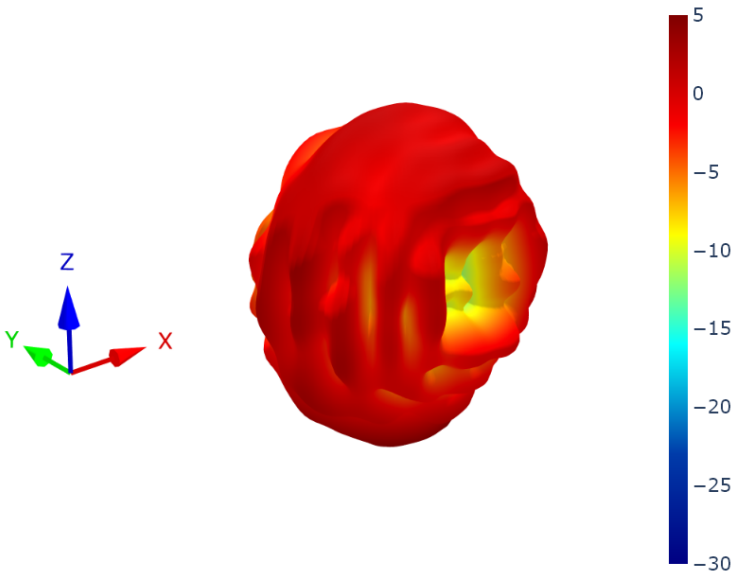
XZ Plane	YZ Plane	XY Plane
		

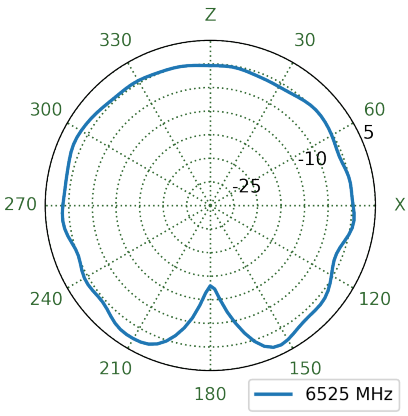
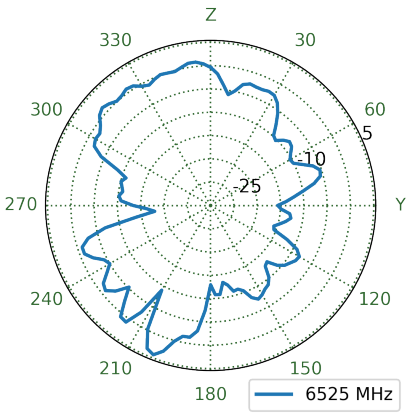
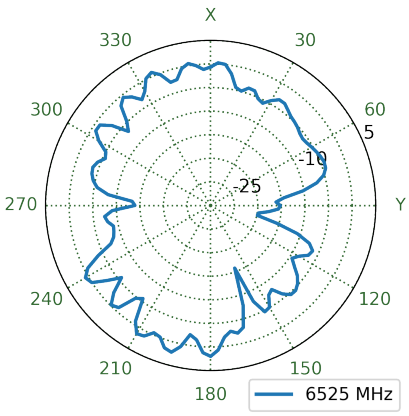
6.19 9x15cm - Straight Patterns at 6525 MHz



XZ Plane	YZ Plane	XY Plane
		

6.20 9x15cm - Bent Patterns at 6525 MHz



XZ Plane	YZ Plane	XY Plane
		

Changelog for the datasheet

SPE-26-8-143– GW.54.A153

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Date:	2026-07-22
Notes:	Initial Release
Author:	Gary West

Previous Revisions

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