



TAOGLAS®



Datasheet

Part No:
GW.40.2153

Description

Tri Band Wi-Fi Terminal Mount Antenna

Features:

Wi-Fi 2.4/5.8/7.125MHz

Hinge Rotatable

Connector: RP-SMA(M)

Material: TPU Housing

Dims: Ø10mm x 109mm

RoHS & REACH Compliant

1.	Introduction	3
2.	Specification	4
3.	Mechanical Drawing	5
4.	Packaging	6
5.	Antenna Characteristics	7
6.	Radiation Patterns	11
	Changelog	24

Taoglas makes no warranties based on the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Taoglas reserves all rights to this document and the information contained herein. Reproduction, use or disclosure to third parties without express permission is strictly prohibited.

Ireland & USA
ISO 9001:2015
Certified



Taiwan
ISO 9001:2015
Certified



1. Introduction



The Taoglas **GW.40** is a tri-band Wi-Fi® terminal mount antenna with a RP-SMA(M) connector. The dipole design makes it ideal for all wireless applications such as Bluetooth® and Wireless LAN. At just 109mm in length, it has an omnidirectional radiation pattern.

Typical applications include:

- Routers/Gateways
- Industrial IoT
- Connected Enterprise

The antenna structure is designed with a robust TPU enclosure with a high quality finish. The antenna can be rotated 90 degrees on the base hinge for ease of placement. The GW.40 can be installed in MIMO configurations and orientated away from each other to improve isolation if necessary.

Contact your regional Taoglas Customer Support Team if you require installation instructions or any further support.

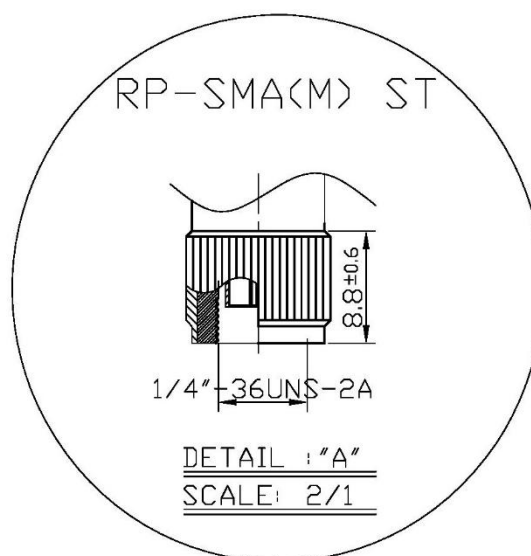
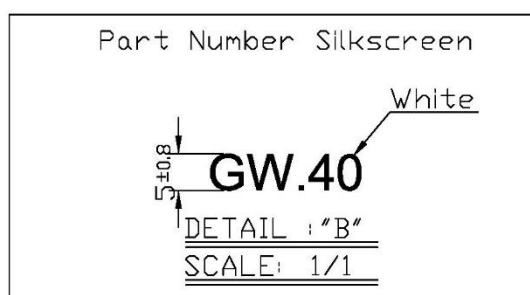
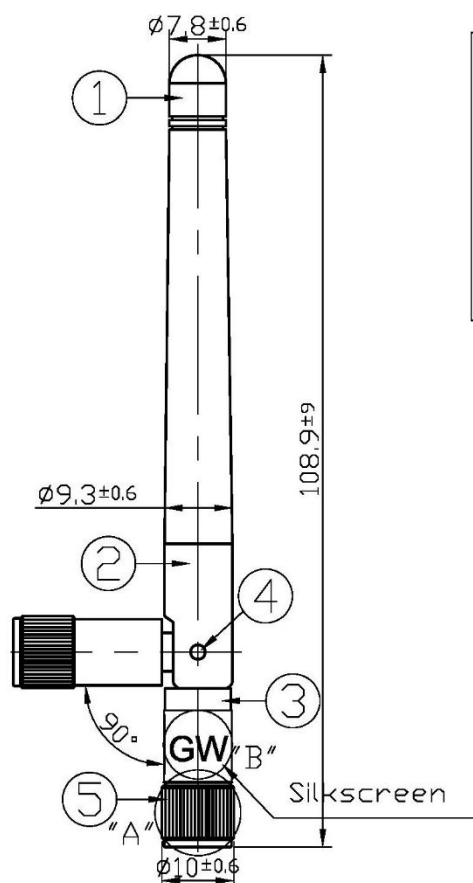
2. Specification

Electrical									
Band	Frequency (MHz)	Measurement	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. input power
Wi-Fi - 2GHz	2400-2500	Bent - 15x9cm Ground Plane	72.7	-1.39	3.67	50 Ω	Linear	Omni directional	2W
		Bent - Free Space	81.3	-0.90	4.84				
		Straight - 15x9cm Ground Plane	65.5	-1.84	2.94				
		Straight - Free Space	68.9	-1.62	5.56				
Wi-Fi - 5GHz	5150-5850	Bent - 15x9cm Ground Plane	66.4	-1.78	3.55				
		Bent - Free Space	65.5	-1.84	4.28				
		Straight - 15x9cm Ground Plane	58.1	-2.36	3.47				
		Straight - Free Space	58.5	-2.33	4.40				
Wi-Fi - 6GHz	5925-7125	Bent - 15x9cm Ground Plane	55.9	-2.52	5.30				
		Bent - Free Space	60.7	-2.17	6.34				
		Straight - 15x9cm Ground Plane	56.5	-2.48	3.27				
		Straight - Free Space	49.8	-3.03	6.01				

Mechanical	
Dimensions	Ø10mm x 109mm
Weight	10g
Material (Cover)	TPU
Material (Antenna Base)	Nylon
Connector	RP-SMA(M)

Environmental	
Operation Temperature	-40°C ~ +85°C
Storage Temperature	-40°C ~ +85°C
Relative Humidity	Non-condensing 65°C 95% RH

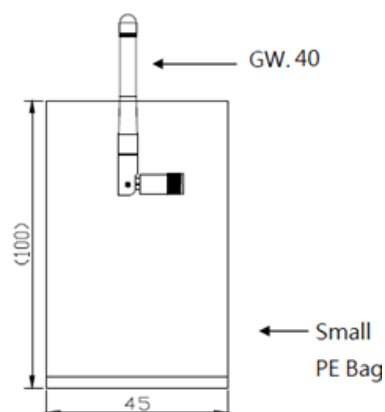
3. Mechanical Drawing



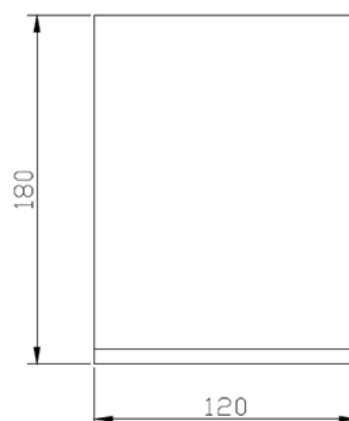
	Name	P/N	Material	Finish	QTY
①	Housing	000114E000002A	TPU	Black	1
②	Base 1	000114E010002A	Nylon	Black	1
③	Base 2	000114E020002A	Nylon	Black	1
④	Rotary Shaft	000611I000002A	Brass	Black	1
⑤	RP-SMA(M) ST	210214E020002A	Brass	Black	1

4. Packaging

1pcs GW.40.2153 per Small PE Bag
 Dimensions - 100*45mm
 Weight - 10g



20pcs GW.40.2153 per Large PE Bag
 Dimensions - 180*120mm
 Weight – 200g



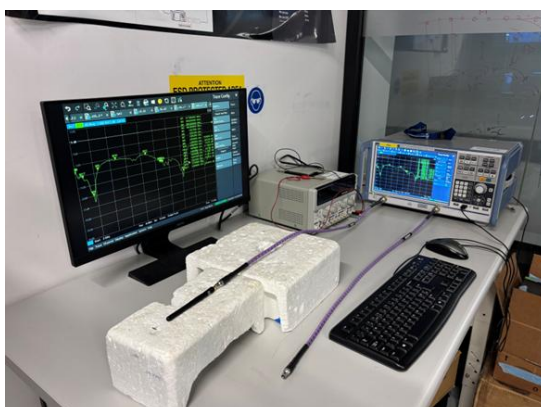
5. Antenna Characteristics

5.1 Test Setup

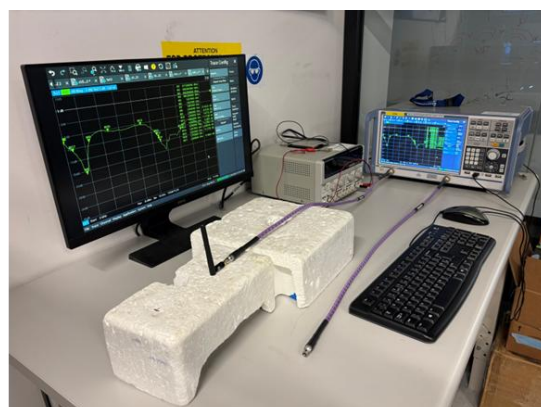


AUT

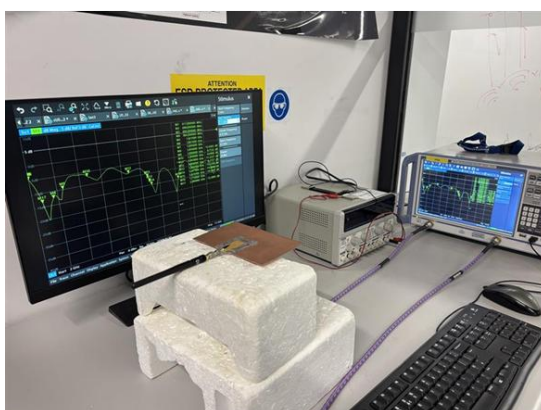
Vector Network Analyzer



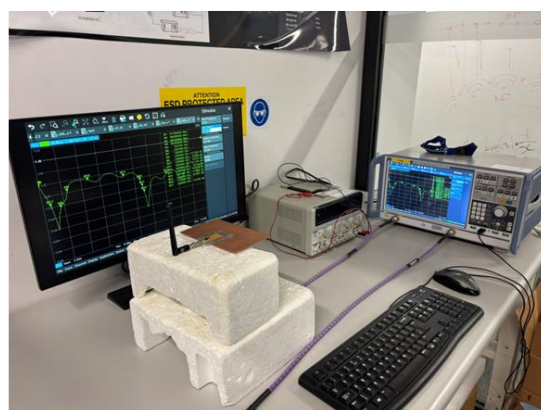
Straight – Free Space



Bent – Free Space

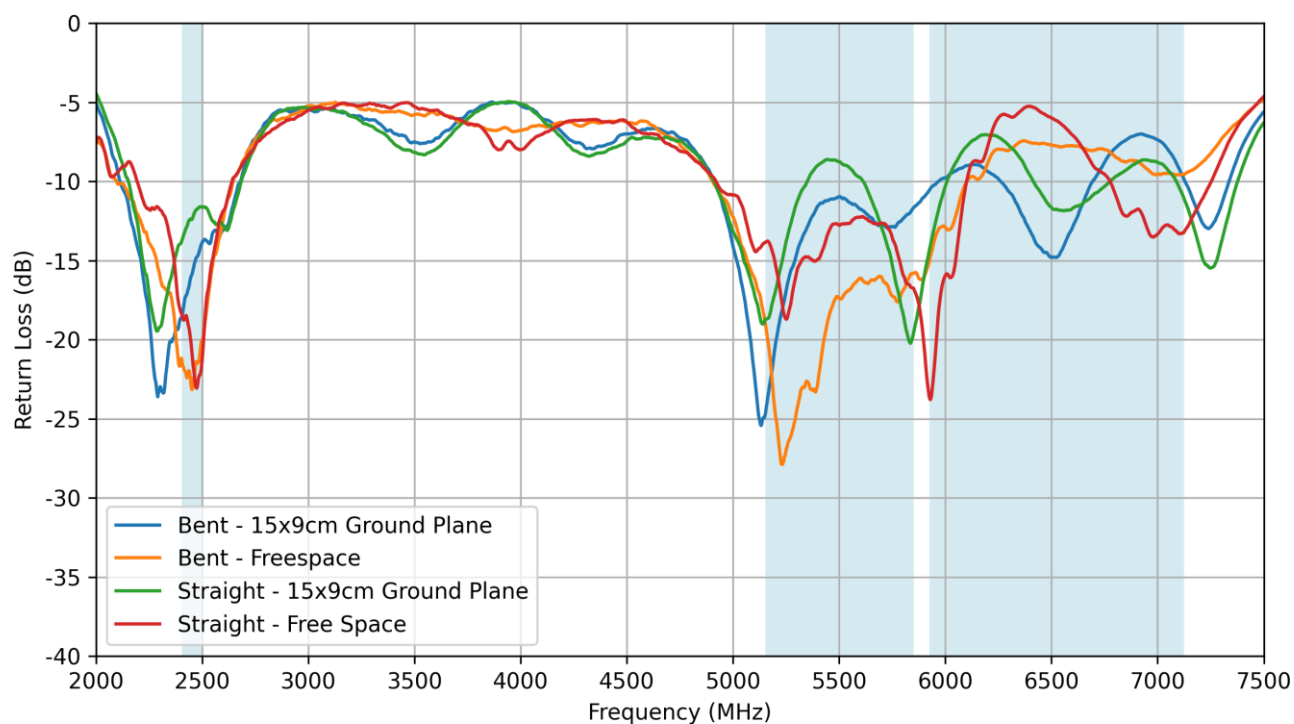


Straight – 15x9cm Ground Plane

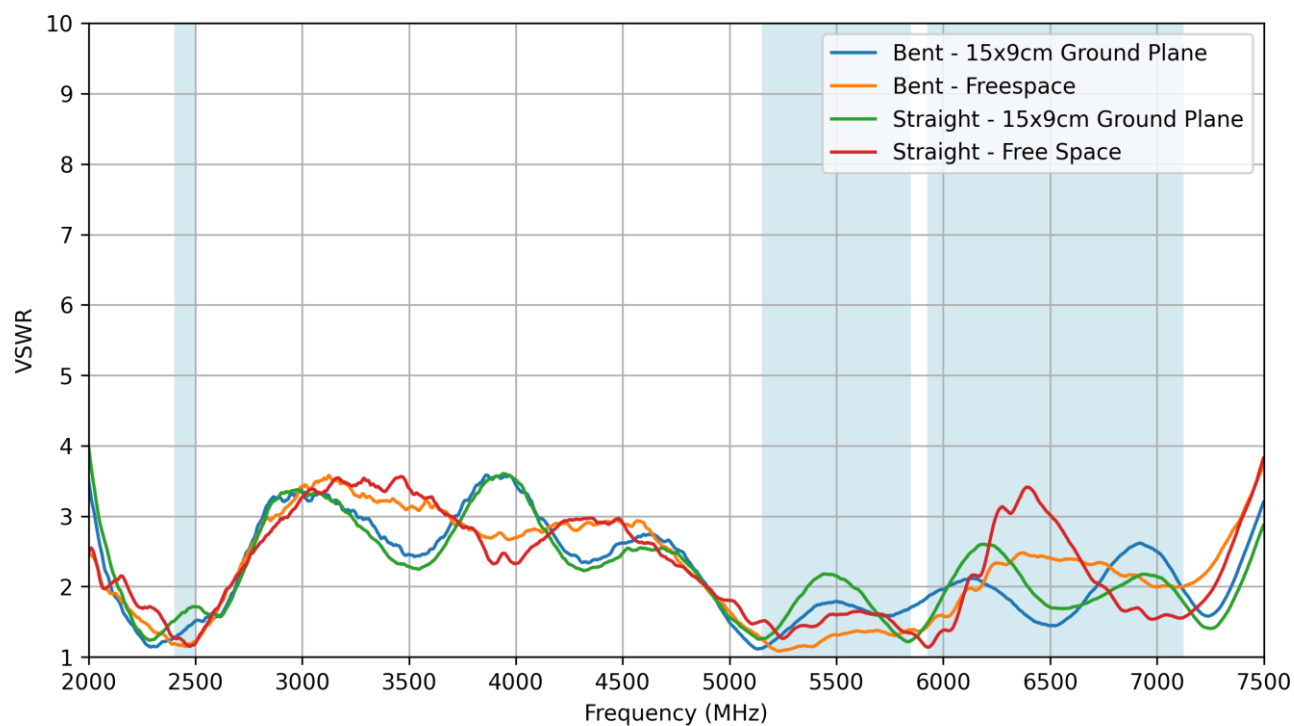


Bent – 15x9cm Ground Plane

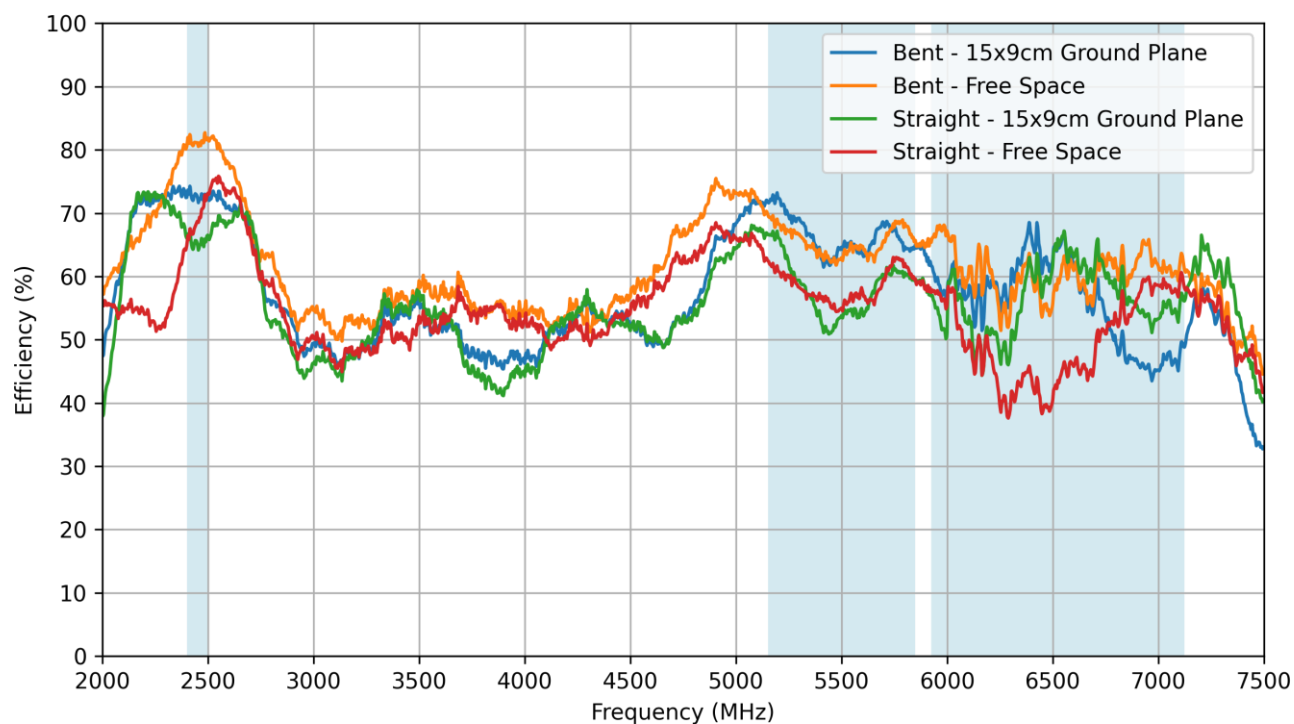
5.2 Return Loss



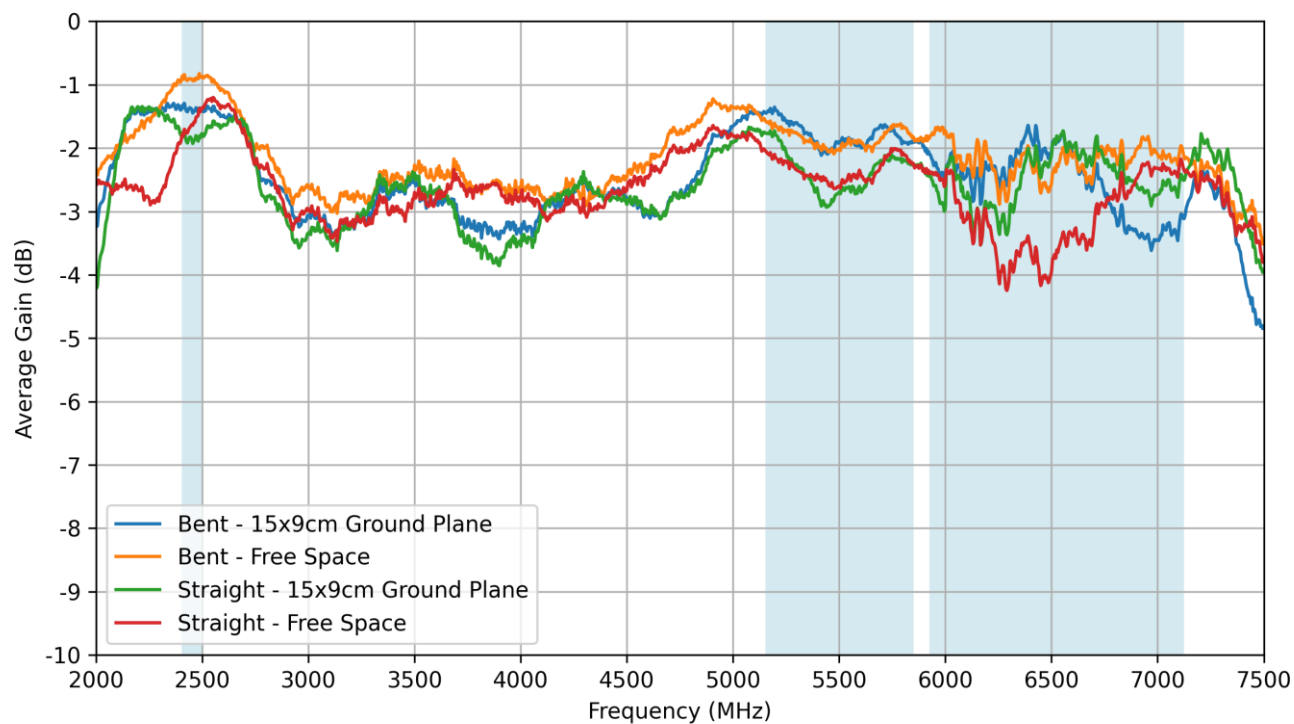
5.3 VSWR



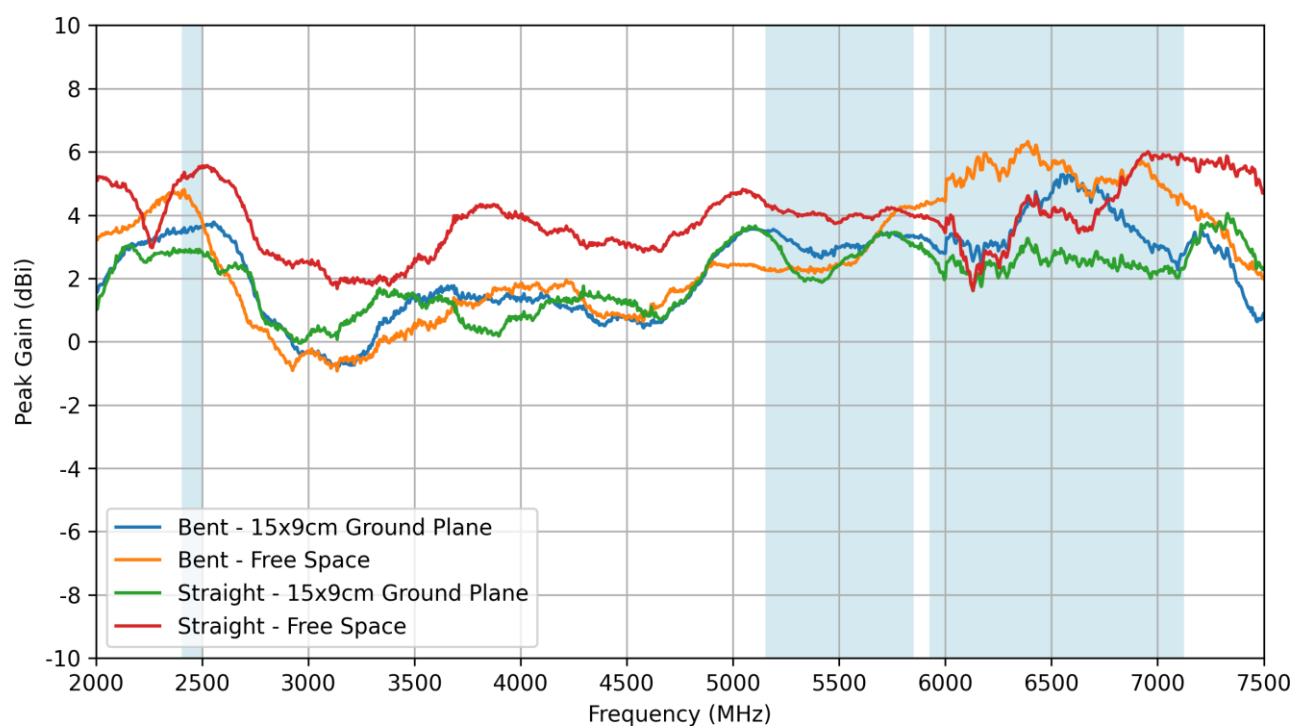
5.4 Efficiency



5.5 Average Gain

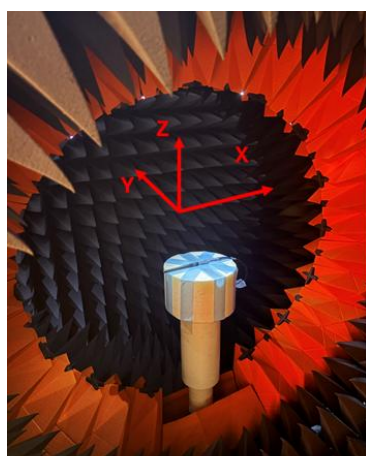
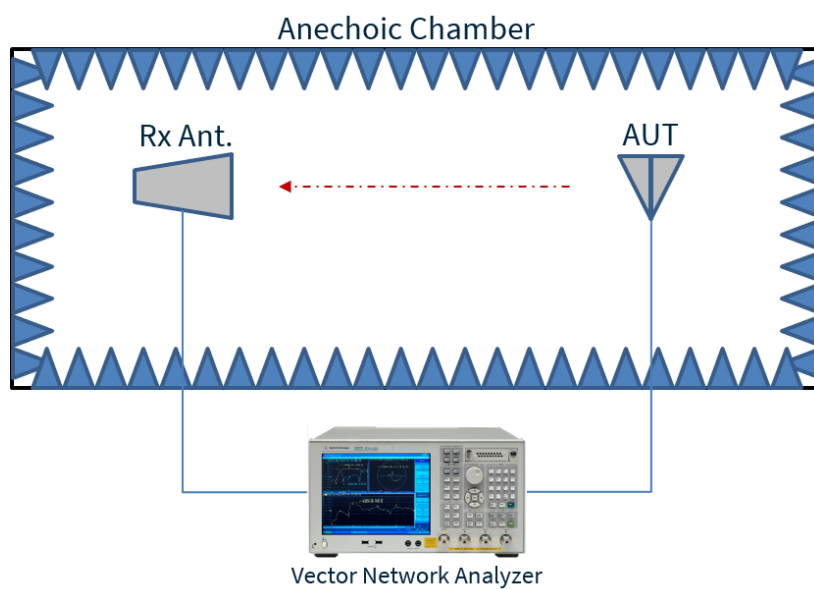


5.6 Peak Gain

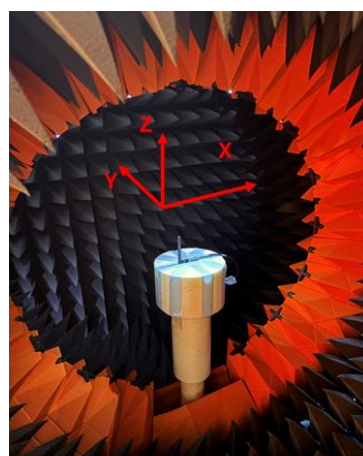


6. Radiation Patterns

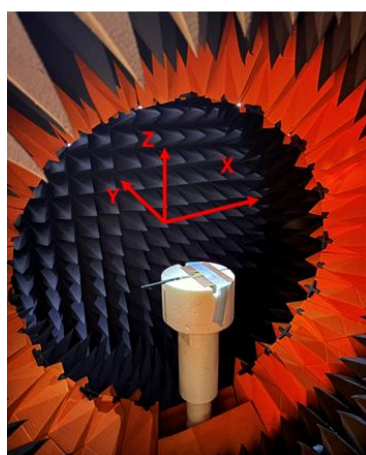
6.1 Test Setup



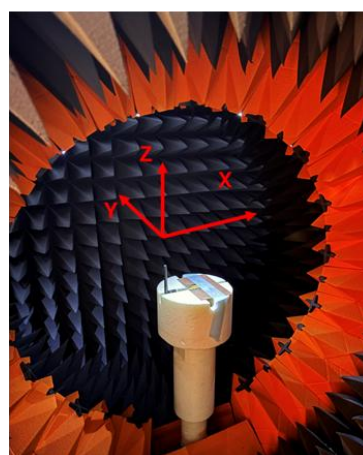
Straight – Free Space



Bent – Free Space

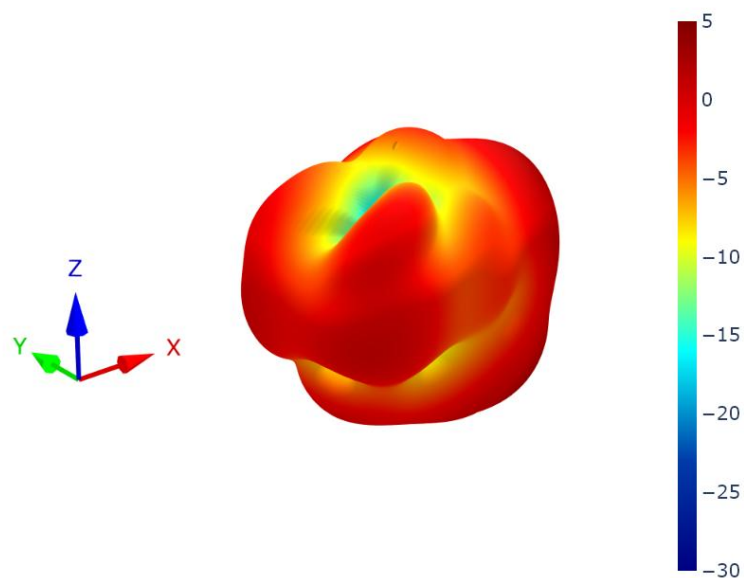


Straight – 15x9cm Ground Plane

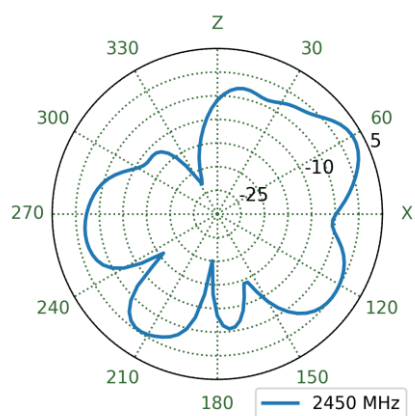


Bent – 15x9cm Ground Plane

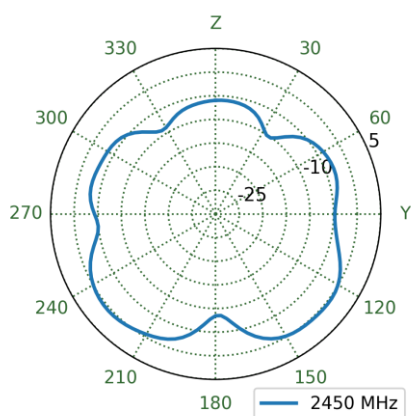
6.2 Bent - 15x9cm Ground Plane Patterns at 2450 MHz



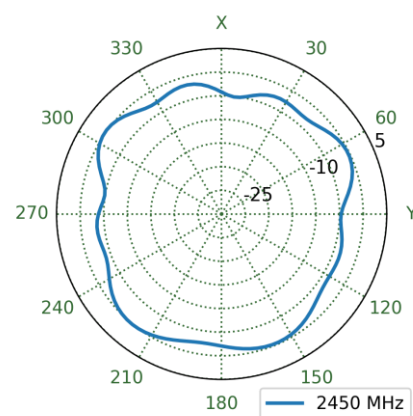
XZ Plane



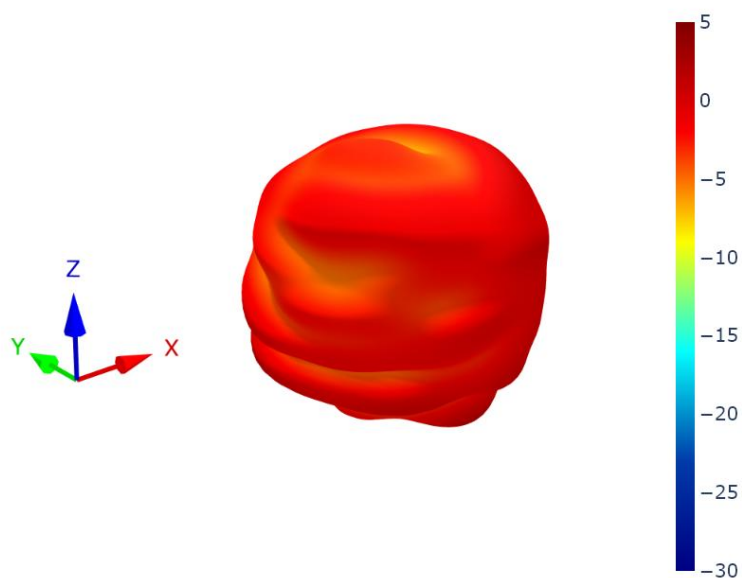
YZ Plane



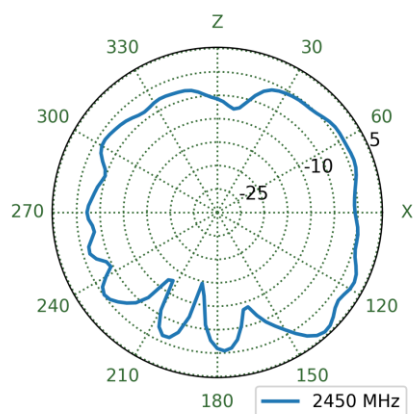
XY Plane



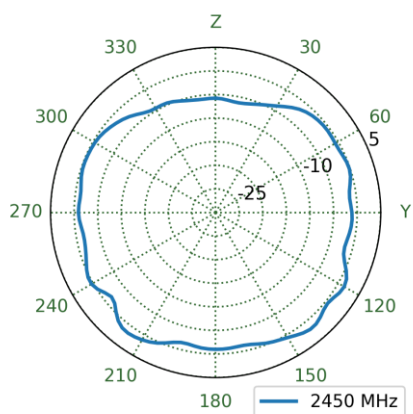
6.3 Bent - Free Space Patterns at 2450 MHz



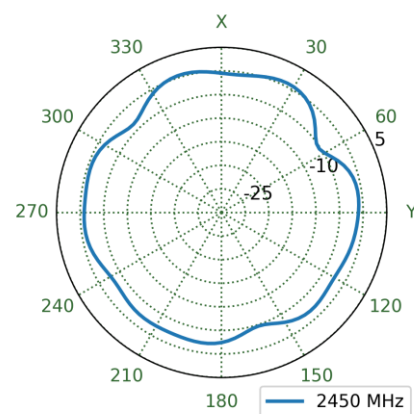
XZ Plane



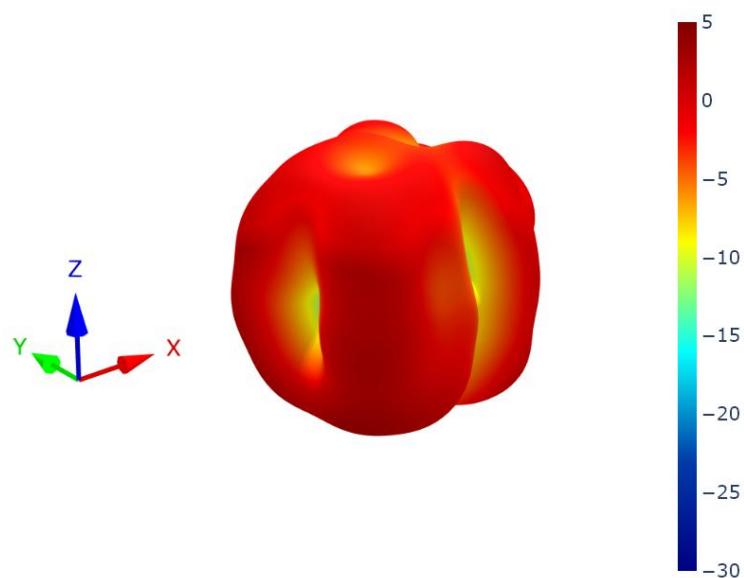
YZ Plane



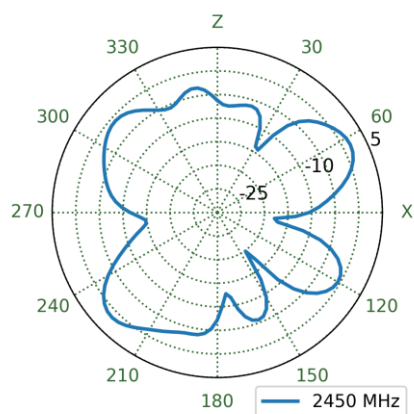
XY Plane



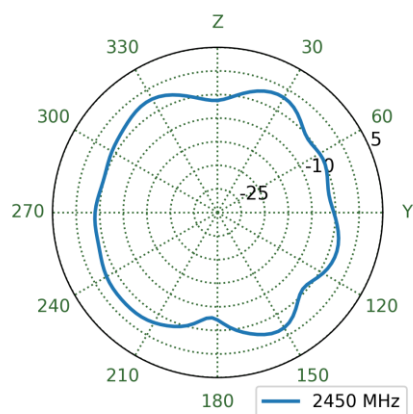
6.4 Straight - 15x9cm Ground Plane Patterns at 2450 MHz



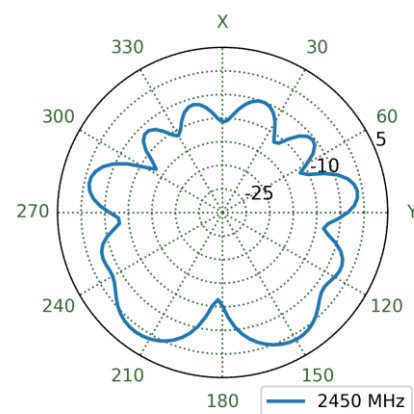
XZ Plane



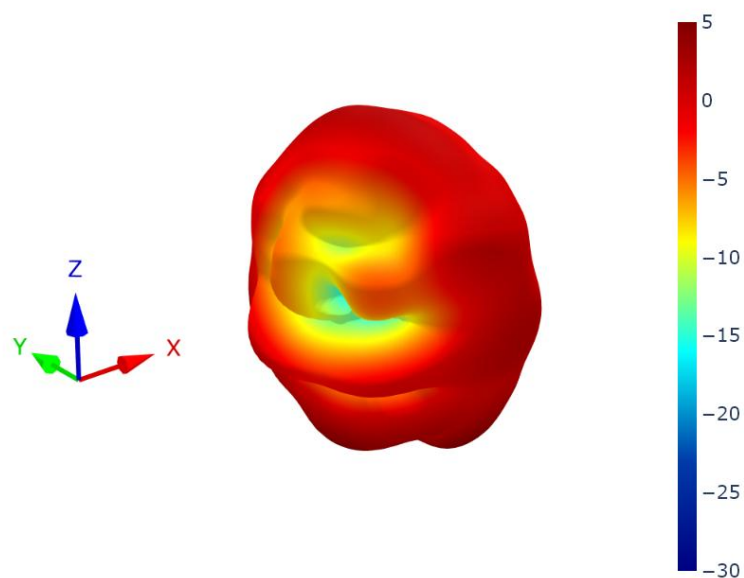
YZ Plane



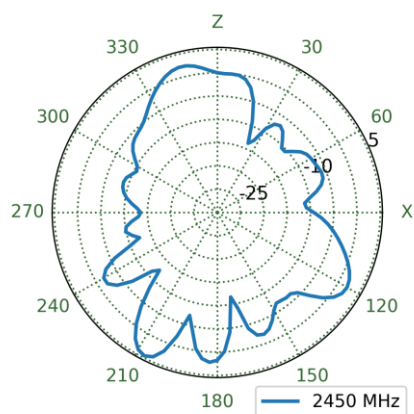
XY Plane



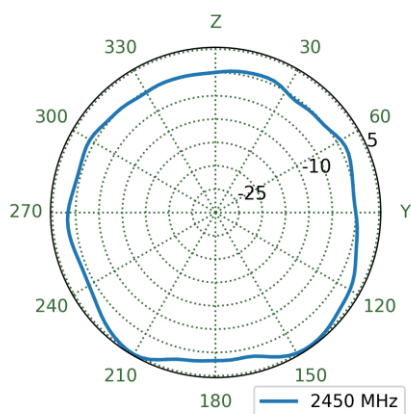
6.5 Straight - Free Space Patterns at 2450 MHz



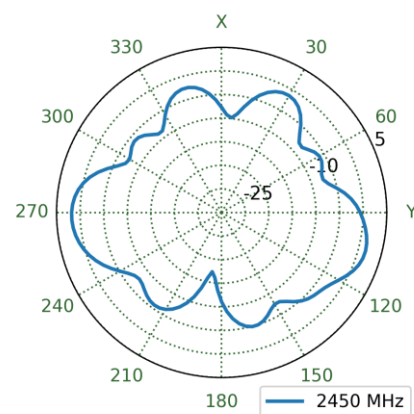
XZ Plane



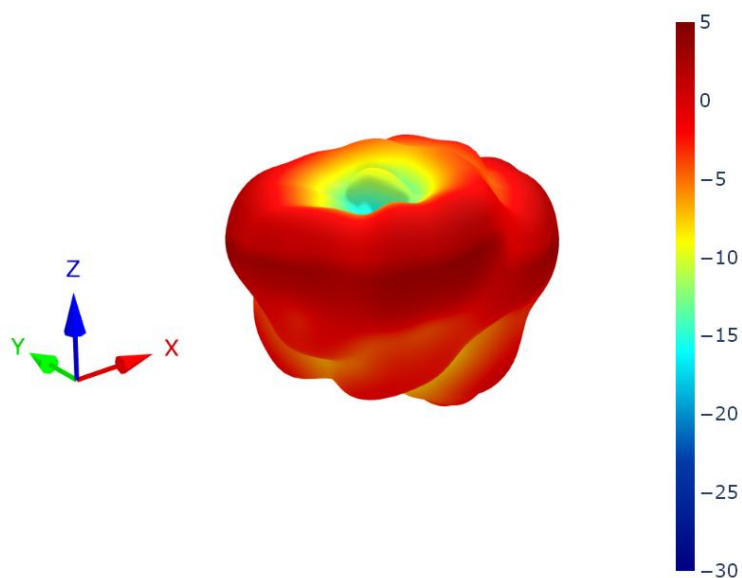
YZ Plane



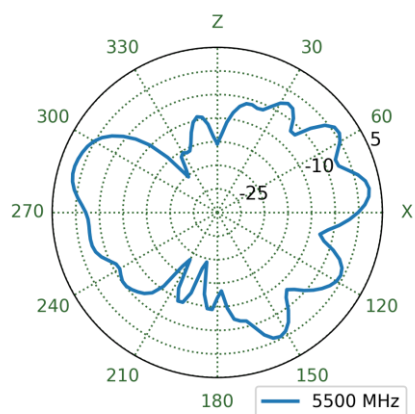
XY Plane



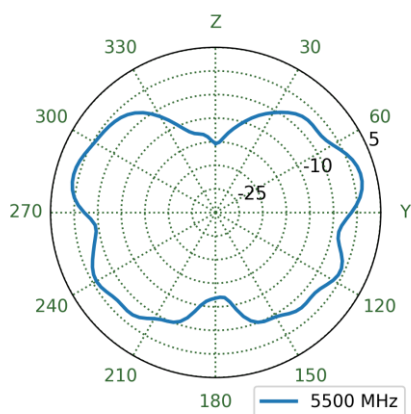
6.6 Bent - 15x9cm Ground Plane Patterns at 5500 MHz



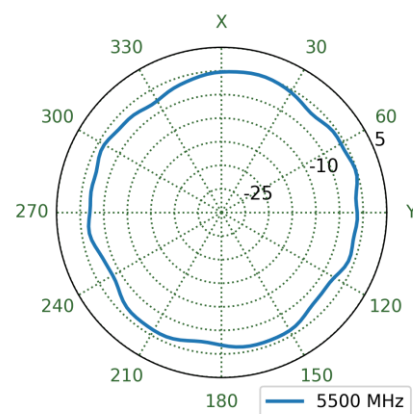
XZ Plane



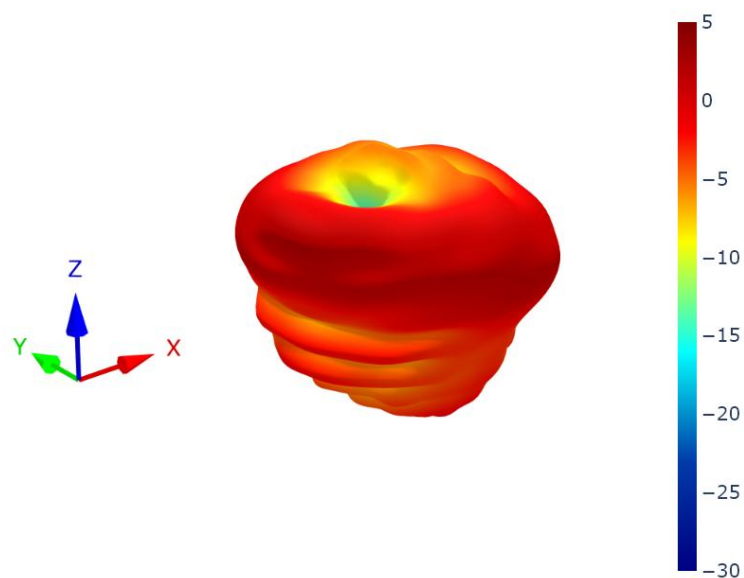
YZ Plane



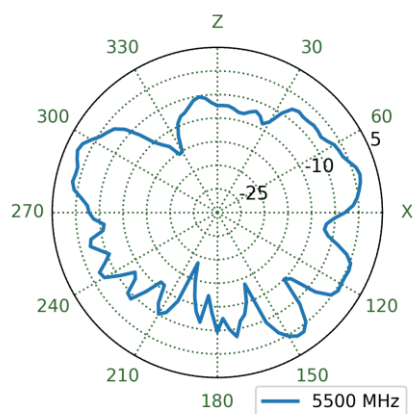
XY Plane



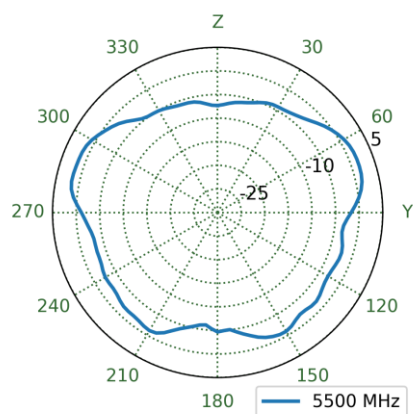
6.7 Bent - Free Space Patterns at 5500 MHz



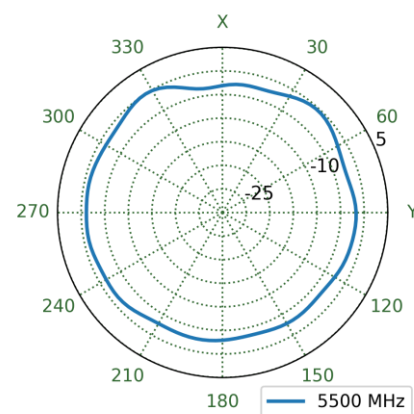
XZ Plane



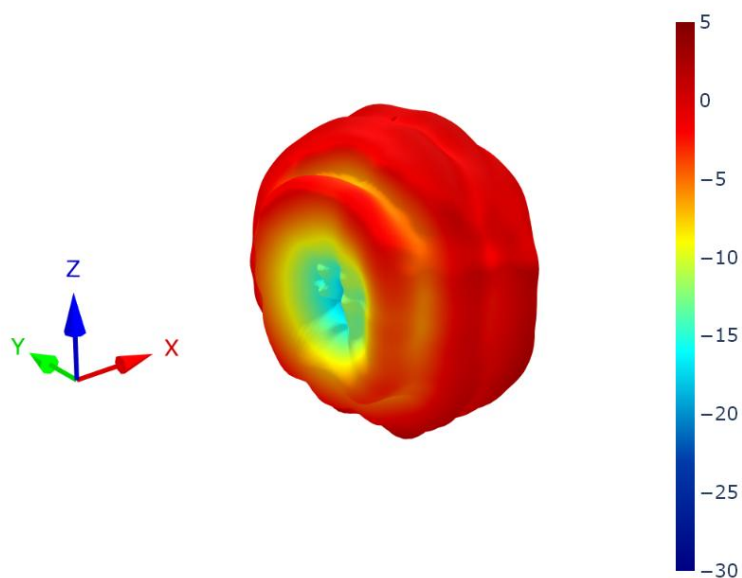
YZ Plane



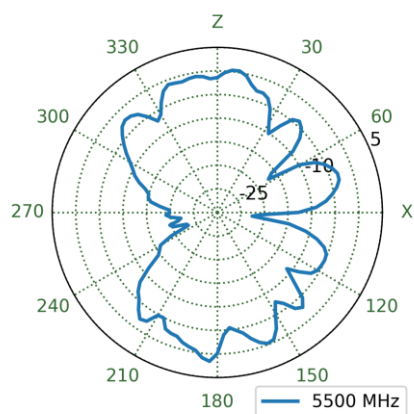
XY Plane



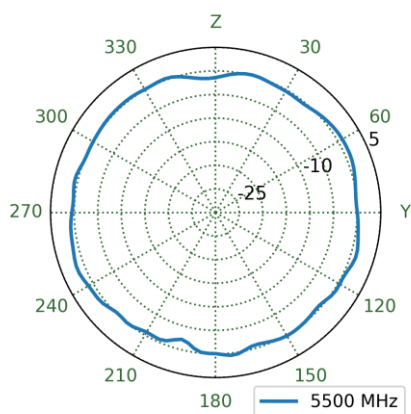
6.8 Straight - 15x9cm Ground Plane Patterns at 5500 MHz



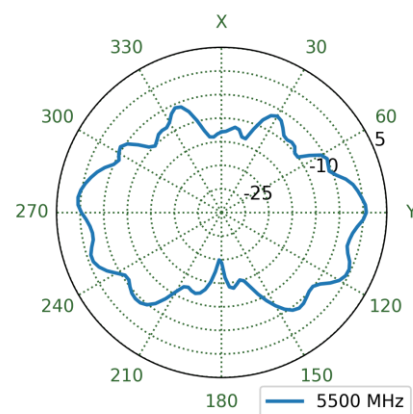
XZ Plane



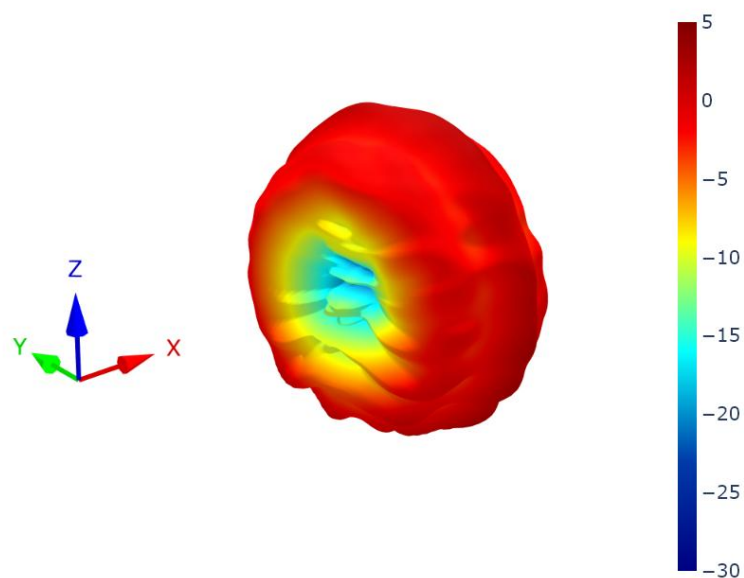
YZ Plane



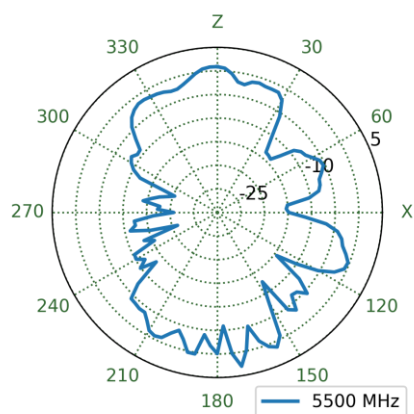
XY Plane



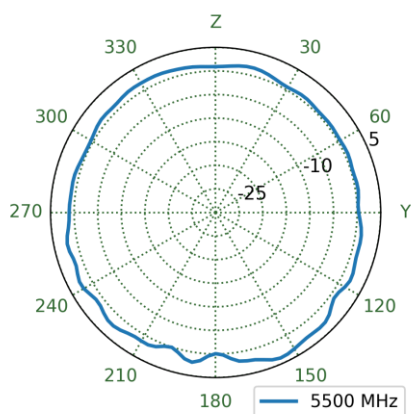
6.9 Straight - Free Space Patterns at 5500 MHz



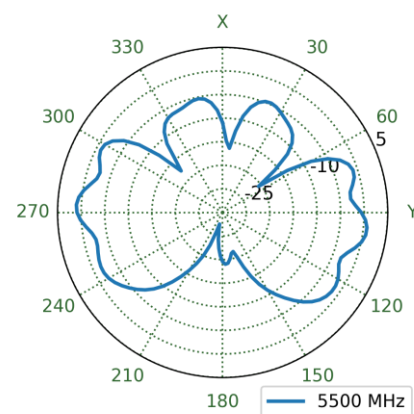
XZ Plane



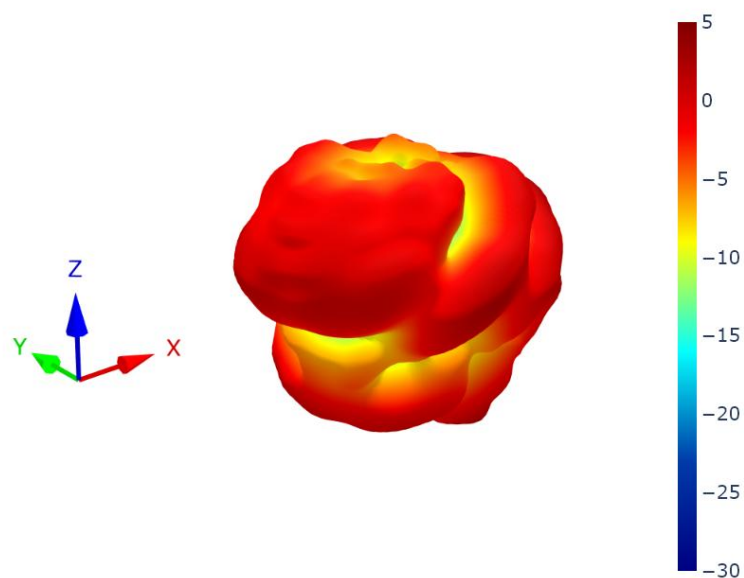
YZ Plane



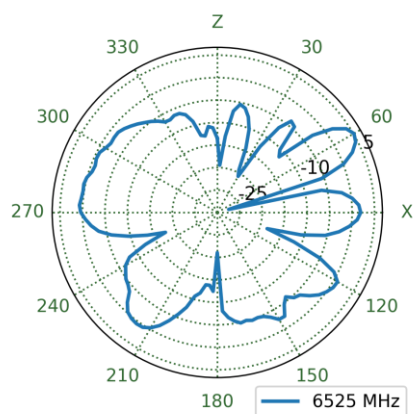
XY Plane



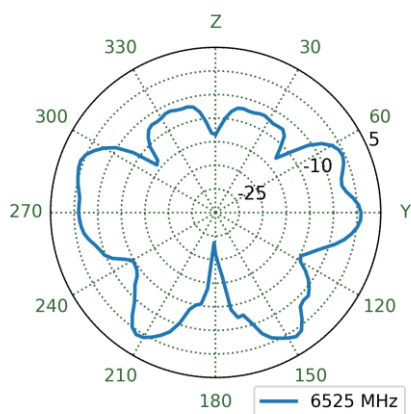
6.10 Bent - 15x9cm Ground Plane Patterns at 6525 MHz



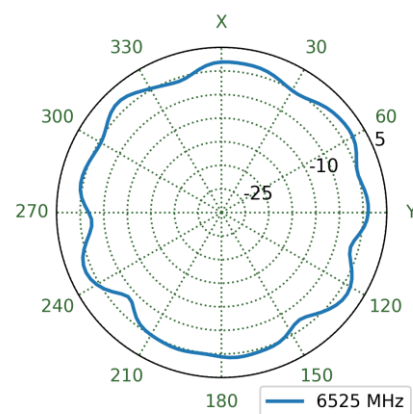
XZ Plane



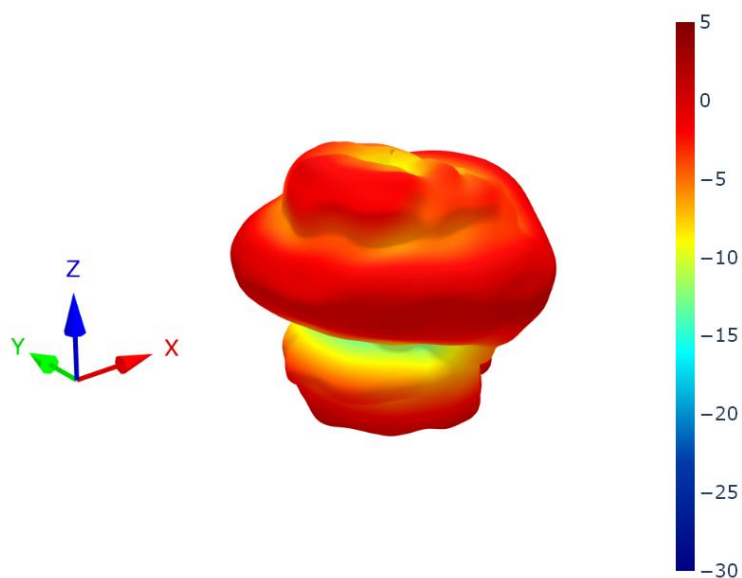
YZ Plane



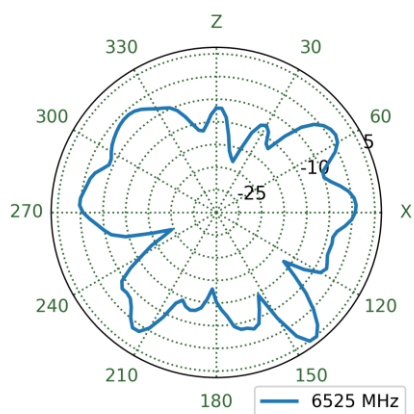
XY Plane



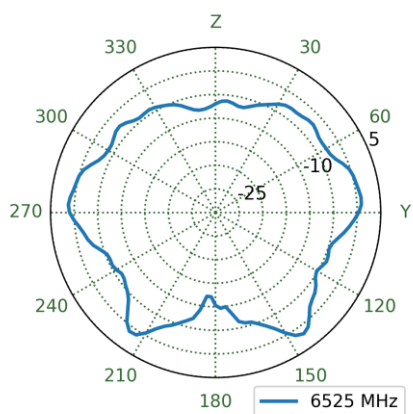
6.11 Bent - Free Space Patterns at 6525 MHz



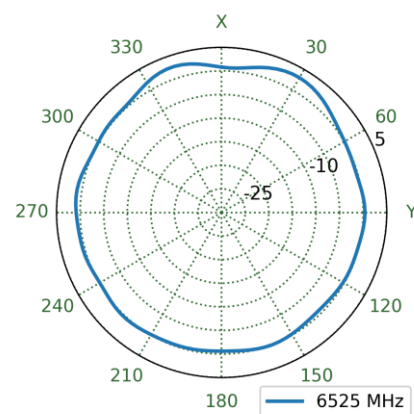
XZ Plane



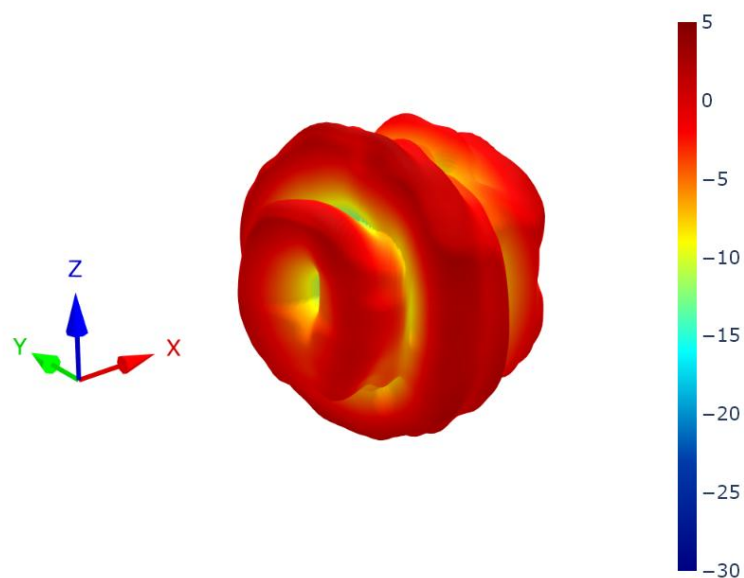
YZ Plane



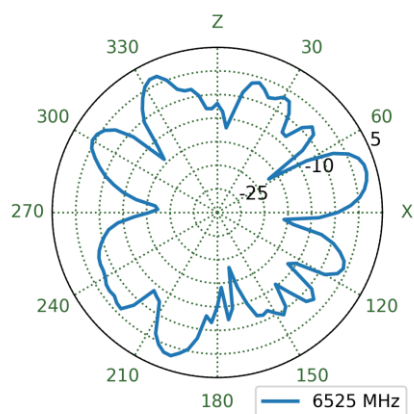
XY Plane



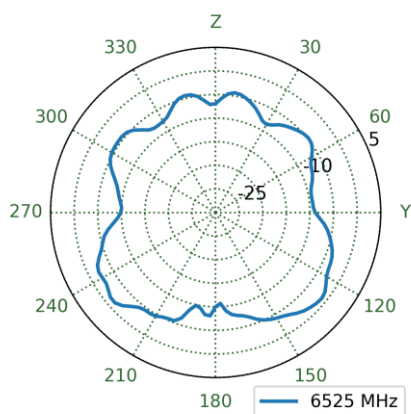
6.12 Straight - 15x9cm Ground Plane Patterns at 6525 MHz



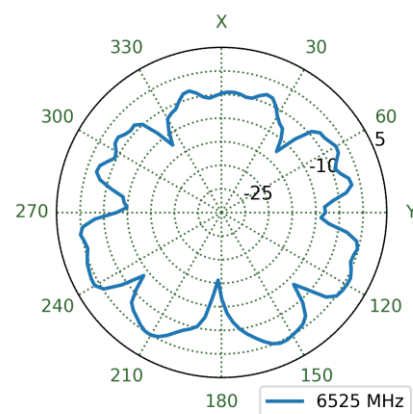
XZ Plane



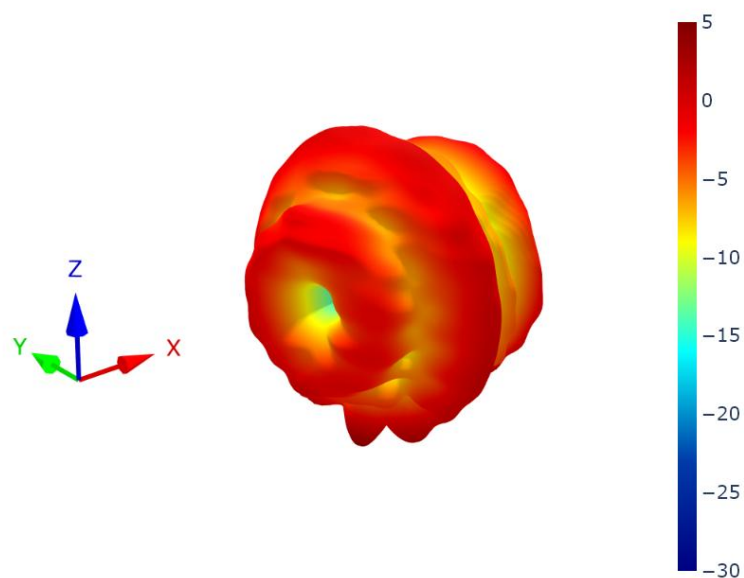
YZ Plane



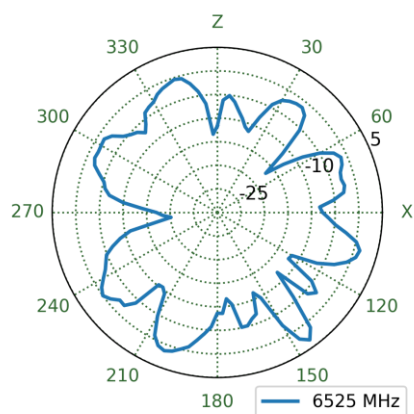
XY Plane



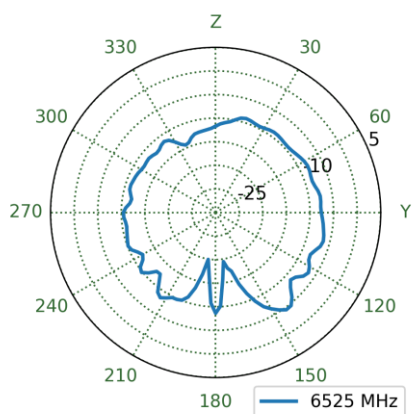
6.13 Straight - Free Space Patterns at 6525 MHz



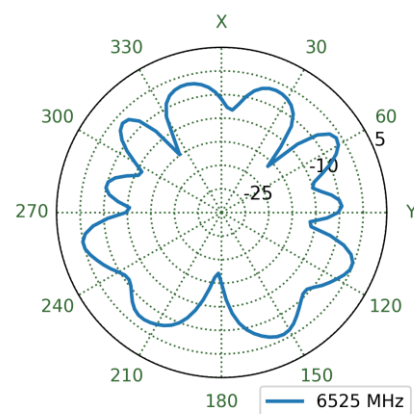
XZ Plane



YZ Plane



XY Plane



Changelog for the datasheet

SPE-19-8-042 – GW.40.2153

Revision: B (Current Version)	
Date:	2026-02-12
Changes:	Full datasheet update.
Changes Made by:	Gary West

Previous Revisions

Revision: A (Original First Release)	
Date:	2019-06-18
Notes:	
Author:	Jack Conroy



www.taoglas.com

