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

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Taiwan
ISO 9001:2015
Certified

046

IATF16949

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.

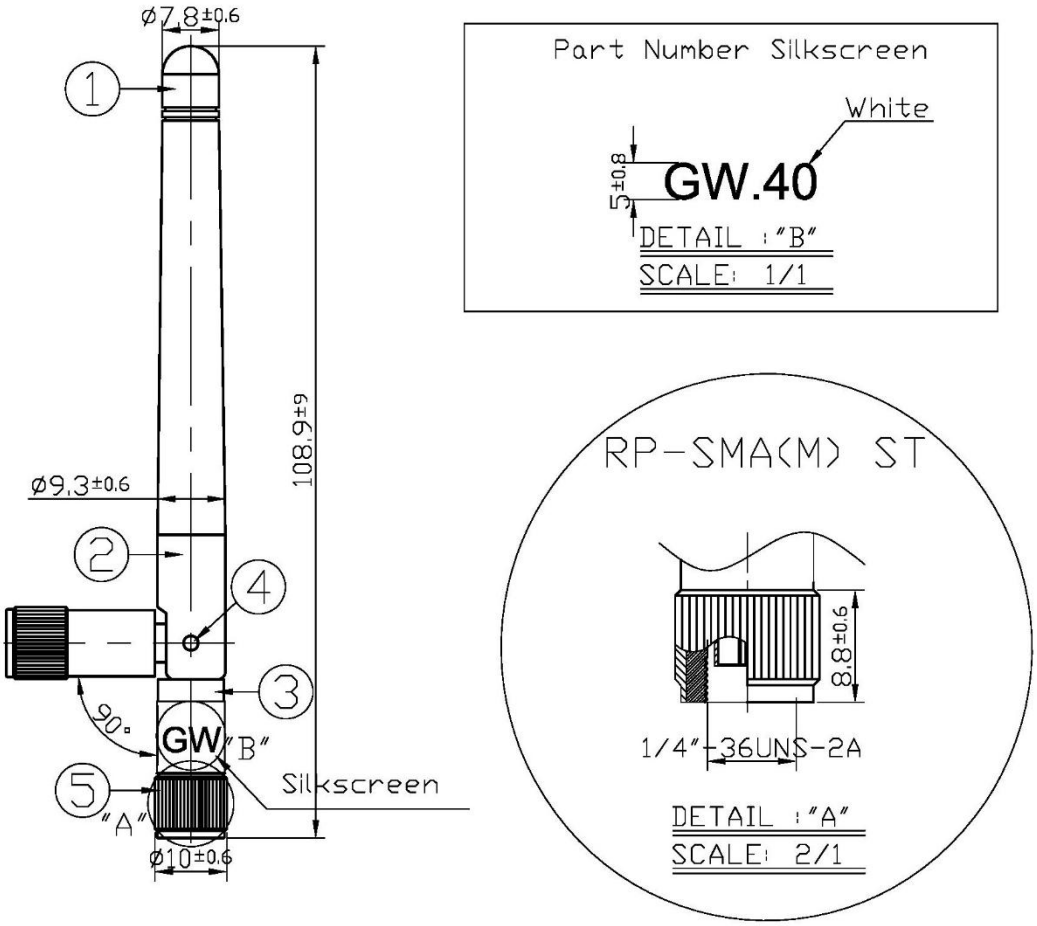
2. Specification

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

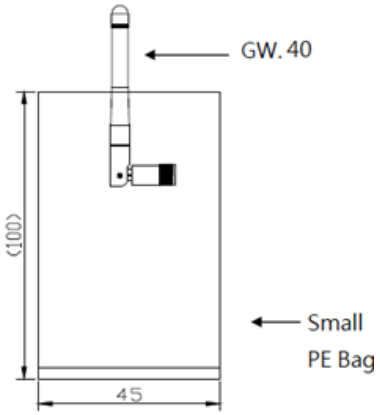
3. Mechanical Drawing



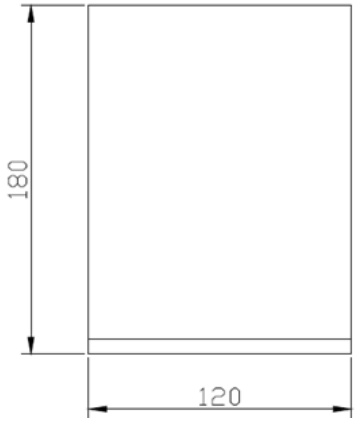
	Name	P/N	Material	Finish	QTY
1	Housing	000114E000002A	TPU	Black	1
2	Base 1	000114E010002A	Nylon	Black	1
3	Base 2	000114E020002A	Nylon	Black	1
4	Rotary Shaft	000611I000002A	Brass	Black	1
5	RP-SMA(M) ST	210214E020002A	Brass	Black	1

4. Packaging

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

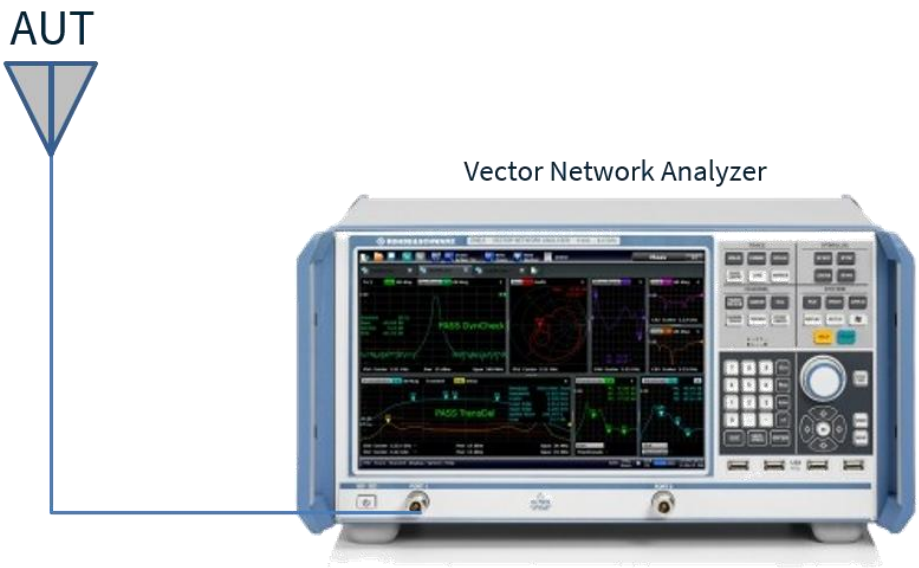


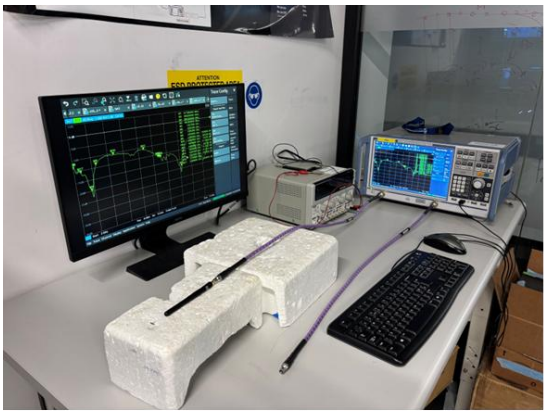
20pcs GW.40.2153 per Large PE Bag
Dimensions - 180*120mm
Weight – 200g



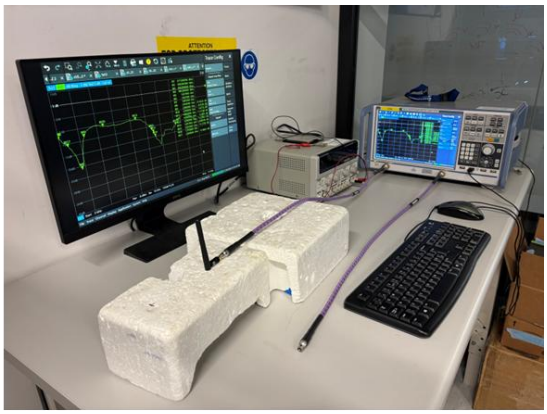
5. Antenna Characteristics

5.1 Test Setup

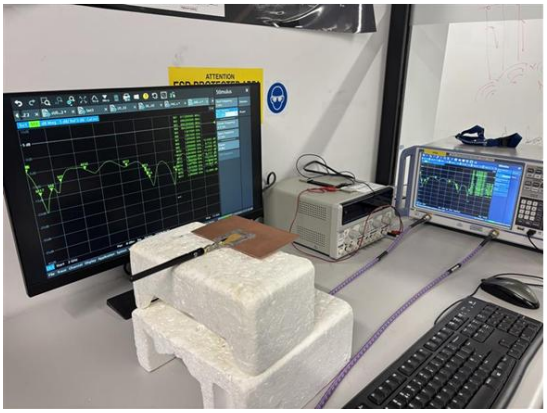




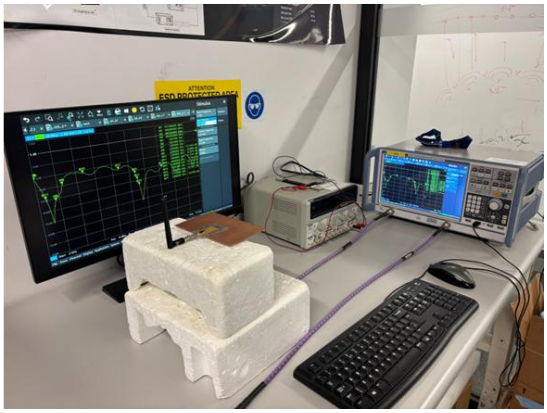
Straight – Free Space



Bent – Free Space

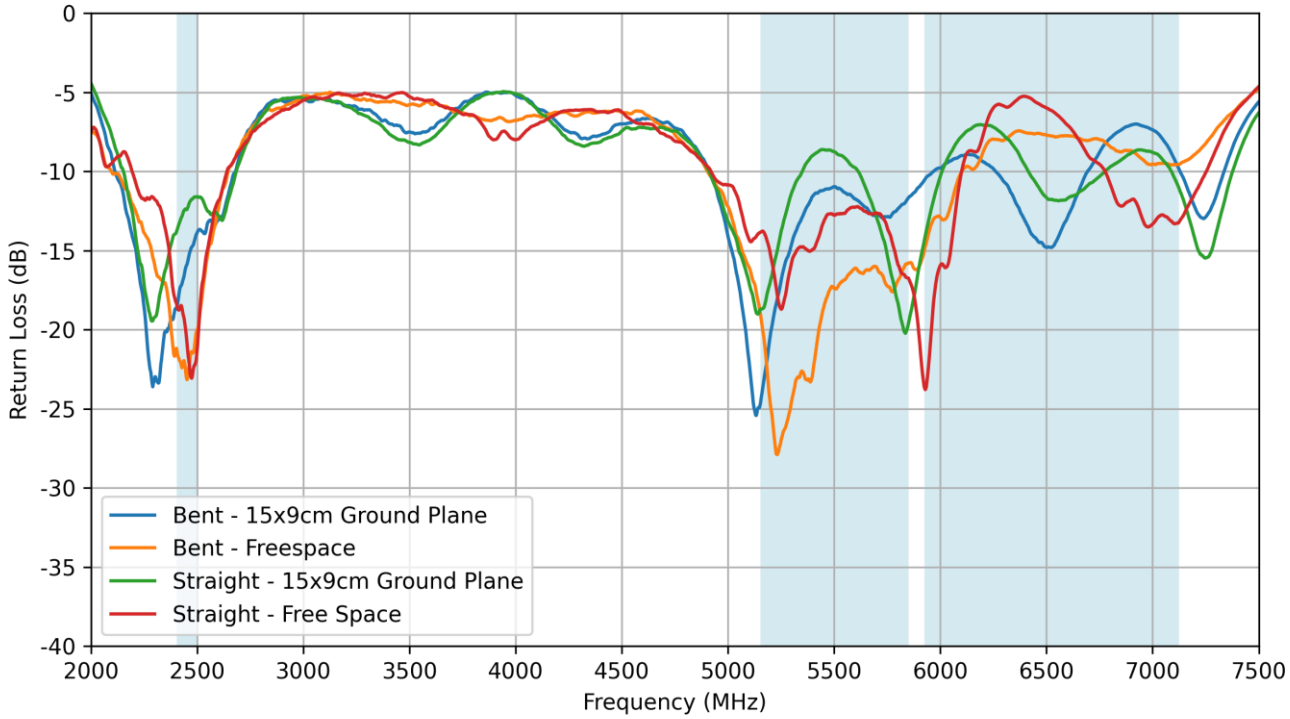


Straight – 15x9cm Ground Plane



Bent – 15x9cm Ground Plane

5.2 Return Loss



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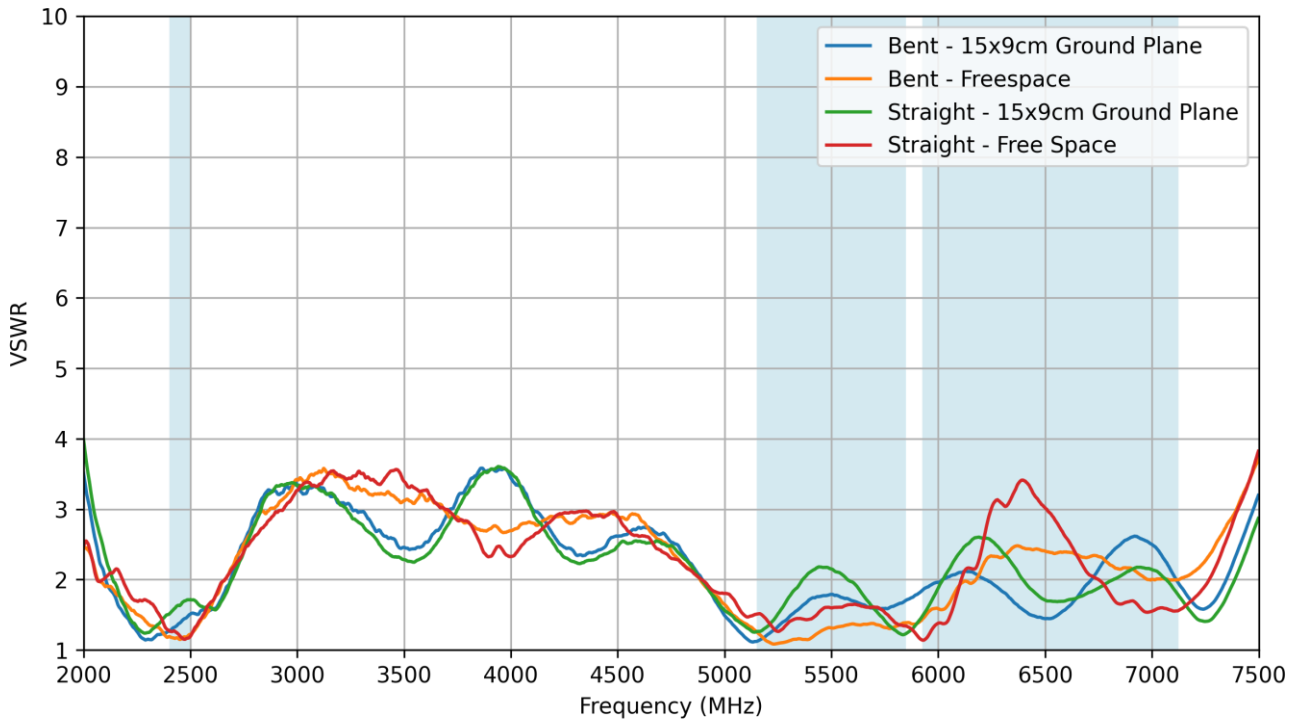
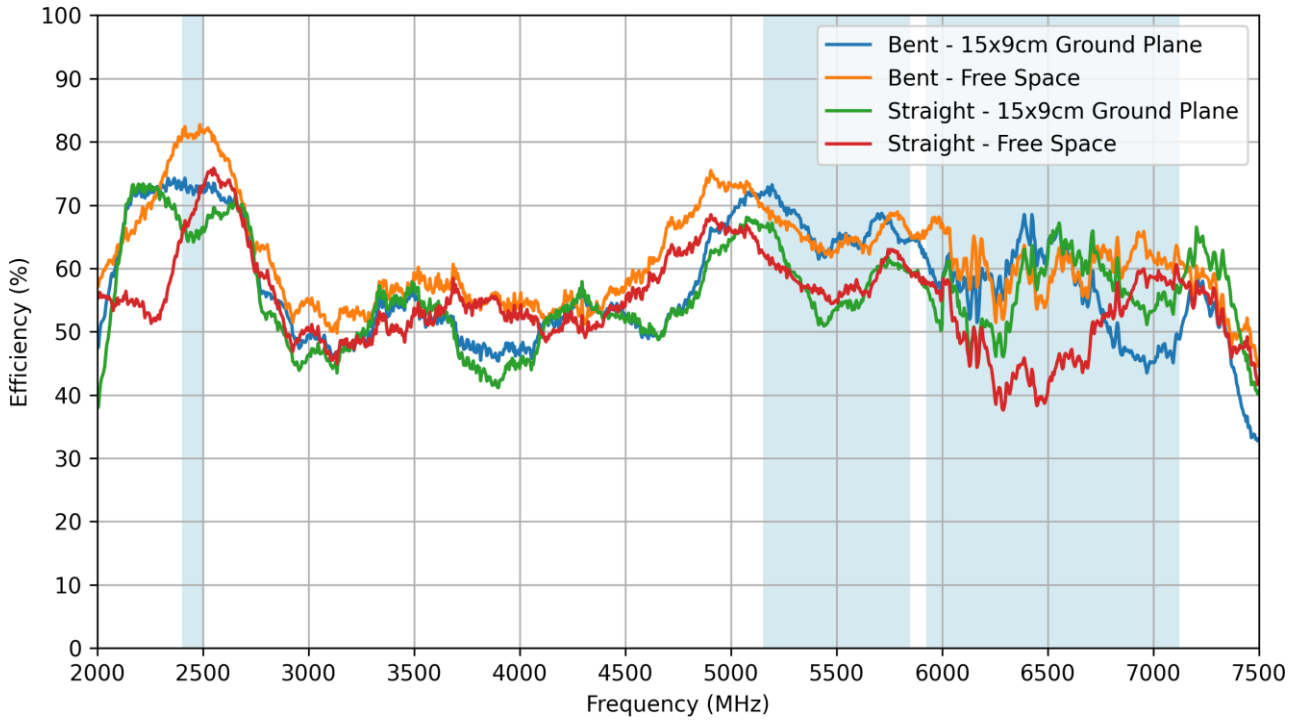
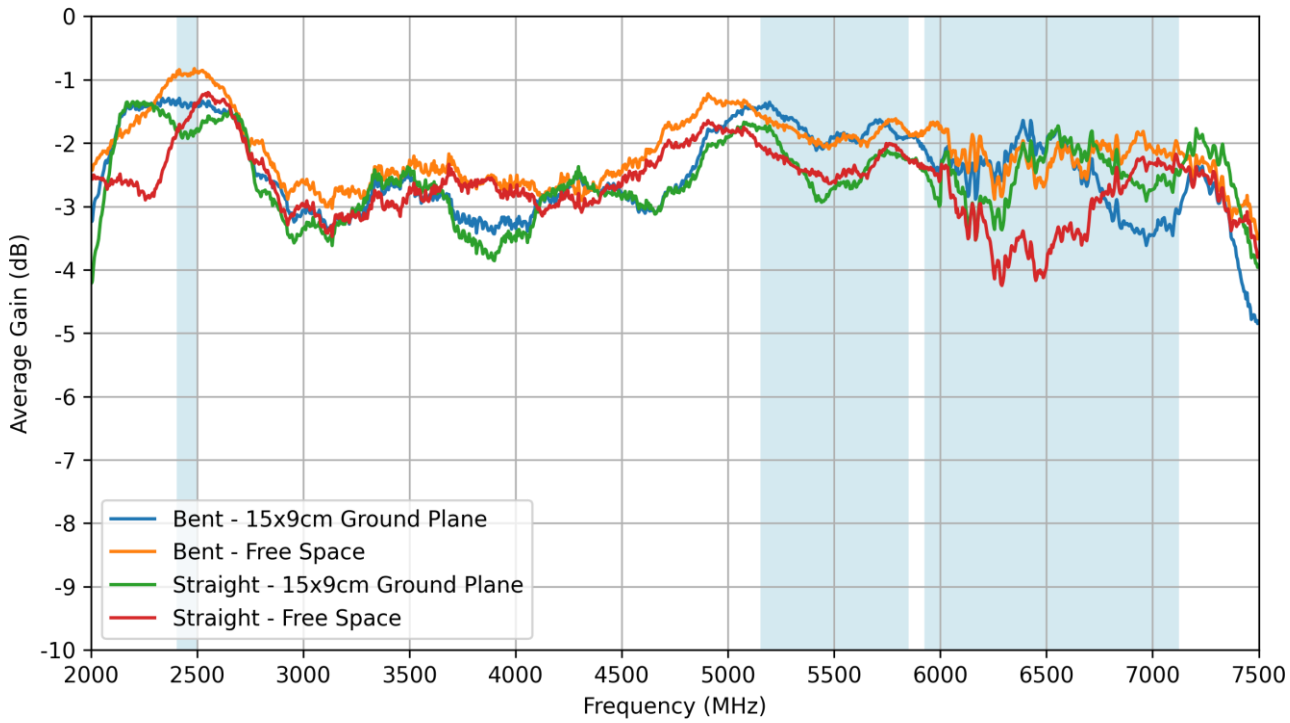


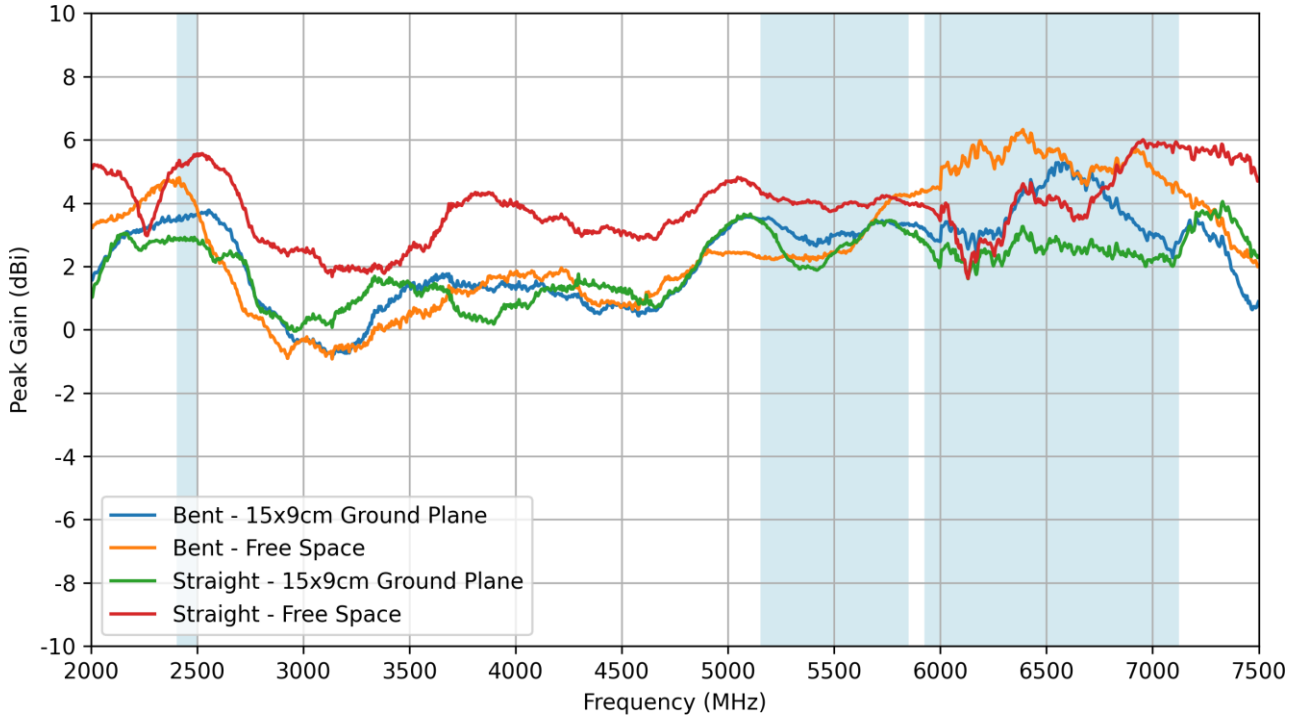
5.4 Efficiency



5.5 Average Gain

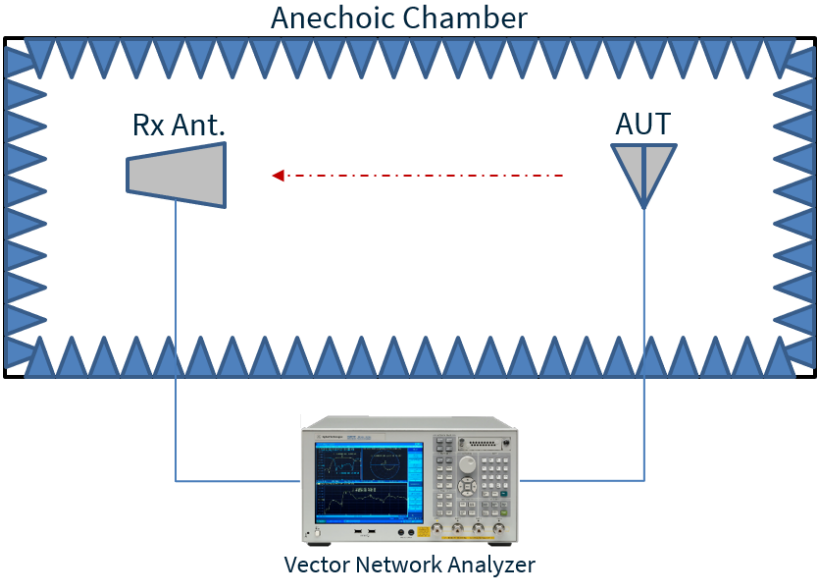


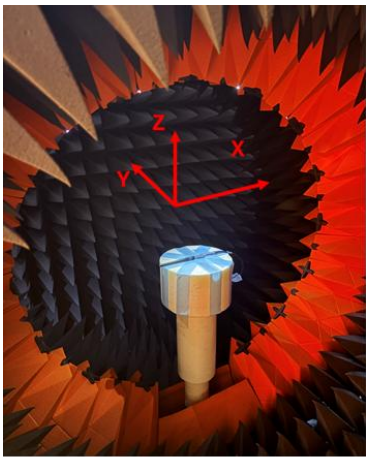
5.6 Peak Gain


Peak Gain (dBi)
Frequency (MHz)
Bent - 15x9cm Ground Plane
Bent - Free Space
Straight - 15x9cm Ground Plane
Straight - Free Space
10
8
6
4
2
0
-2
-4
-6
-8
-10
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500

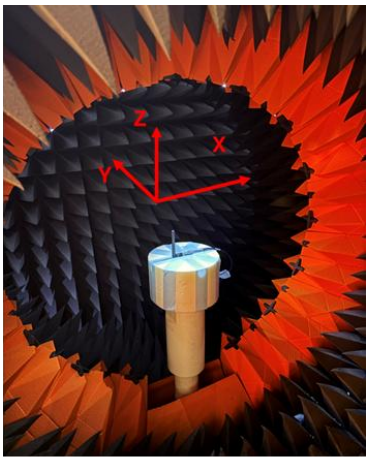
6. Radiation Patterns

6.1 Test Setup

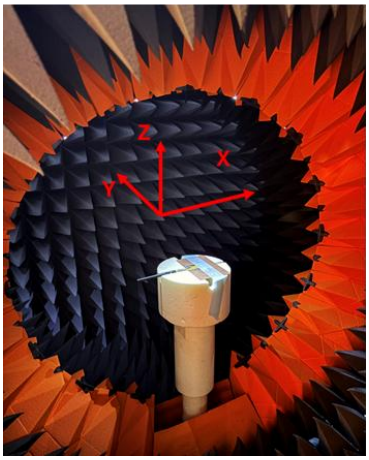




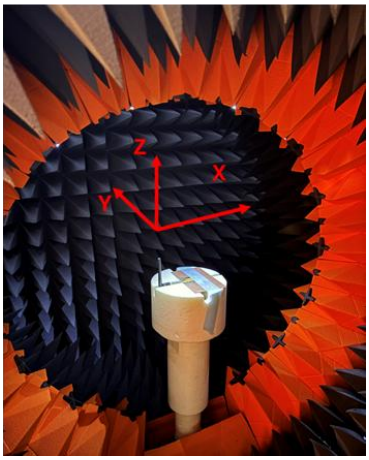
Straight – Free Space



Bent – Free Space

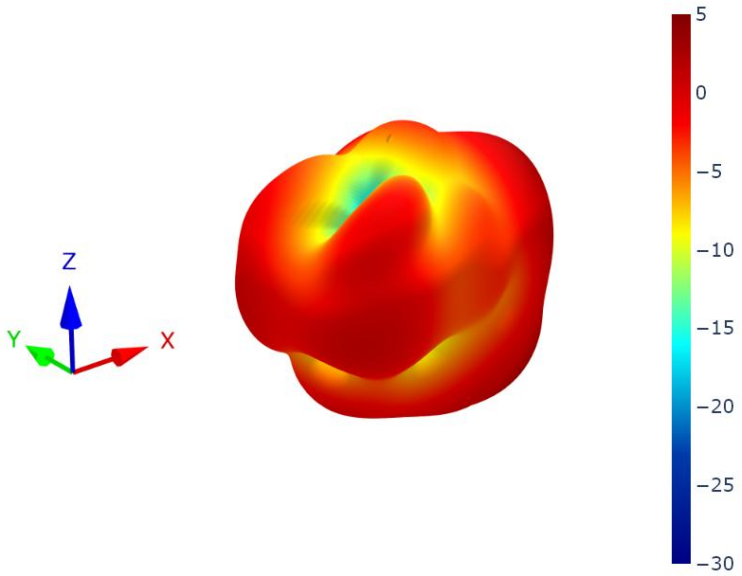


Straight – 15x9cm Ground Plane

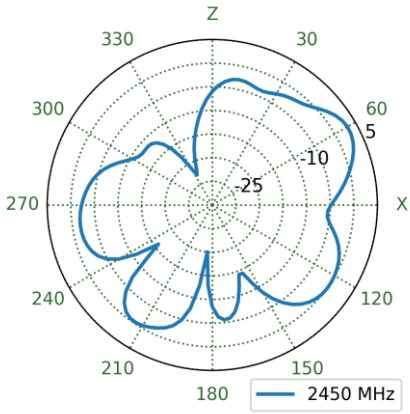


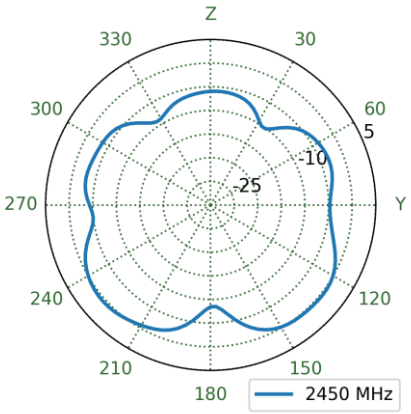
Bent – 15x9cm Ground Plane

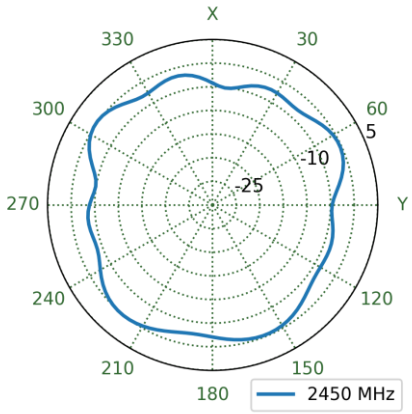
6.2 Bent - 15x9cm Ground Plane Patterns at 2450 MHz



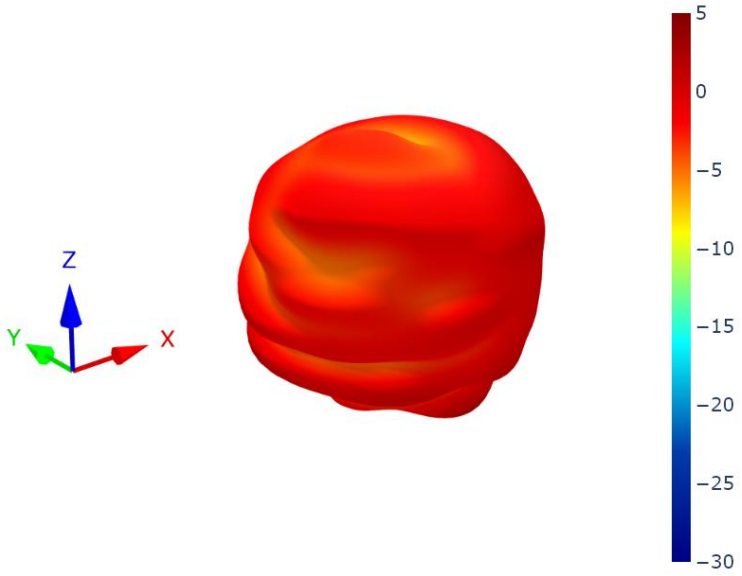
XZ Plane	YZ Plane	XY Plane



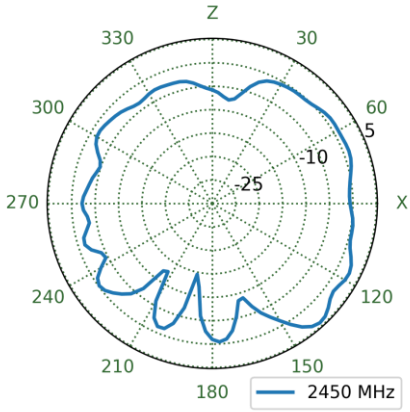


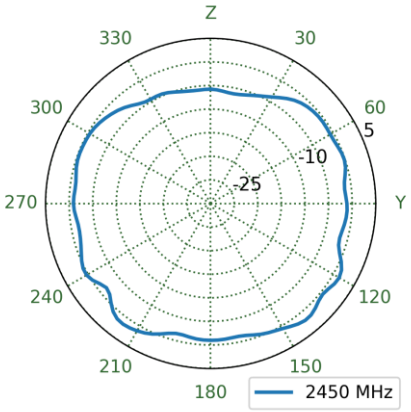


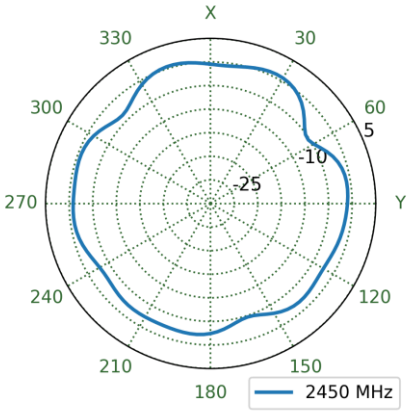
6.3 Bent - Free Space Patterns at 2450 MHz



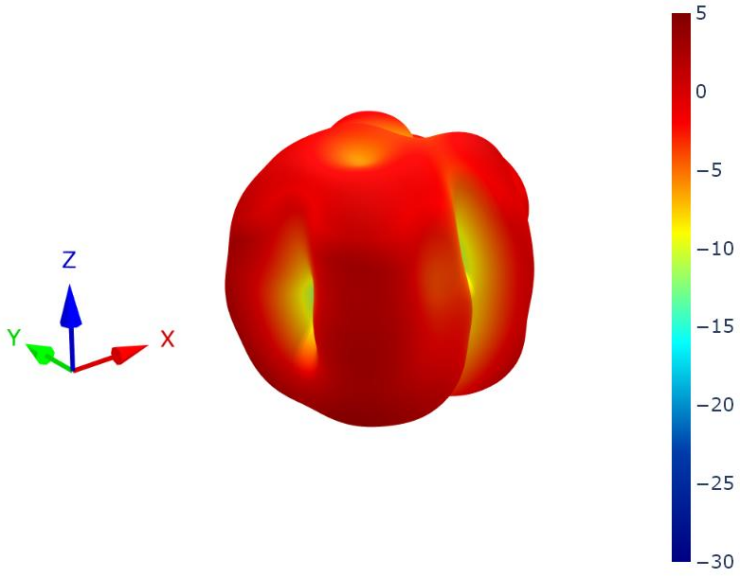
XZ Plane	YZ Plane	XY Plane



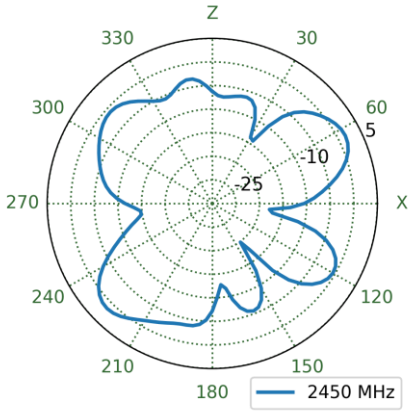


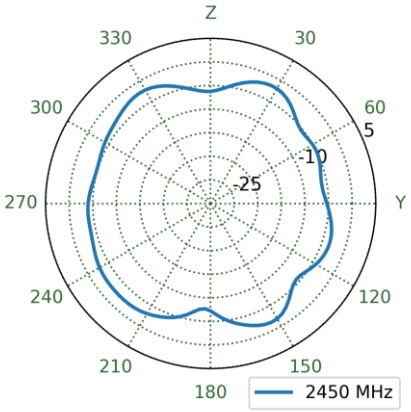


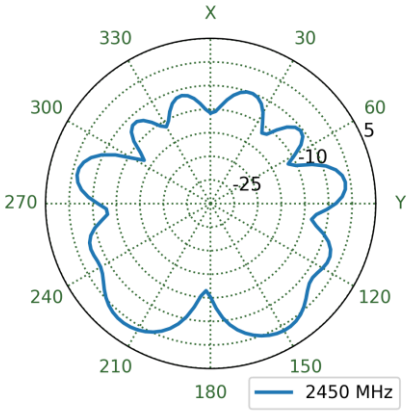
6.4 Straight - 15x9cm Ground Plane Patterns at 2450 MHz



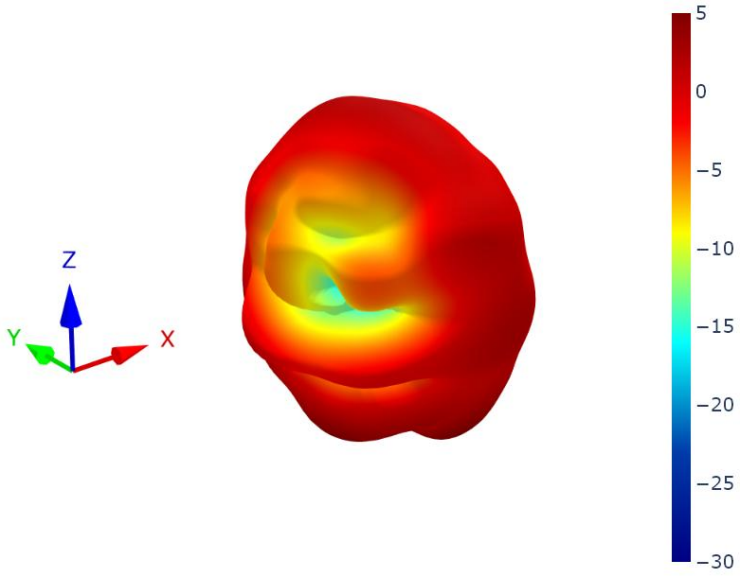
XZ Plane	YZ Plane	XY Plane



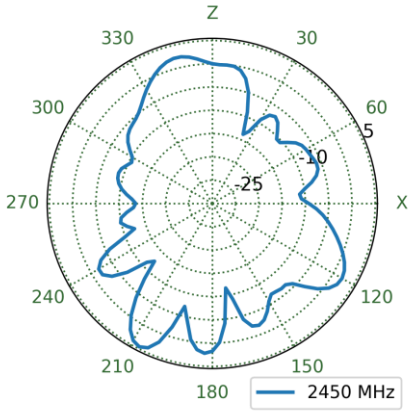


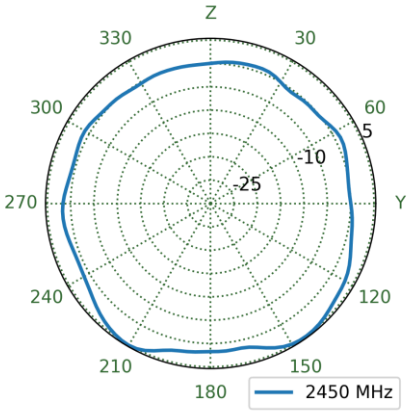


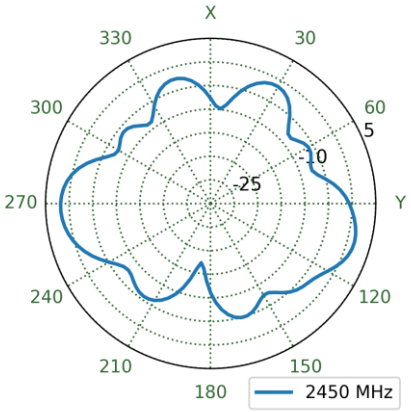
6.5 Straight - Free Space Patterns at 2450 MHz



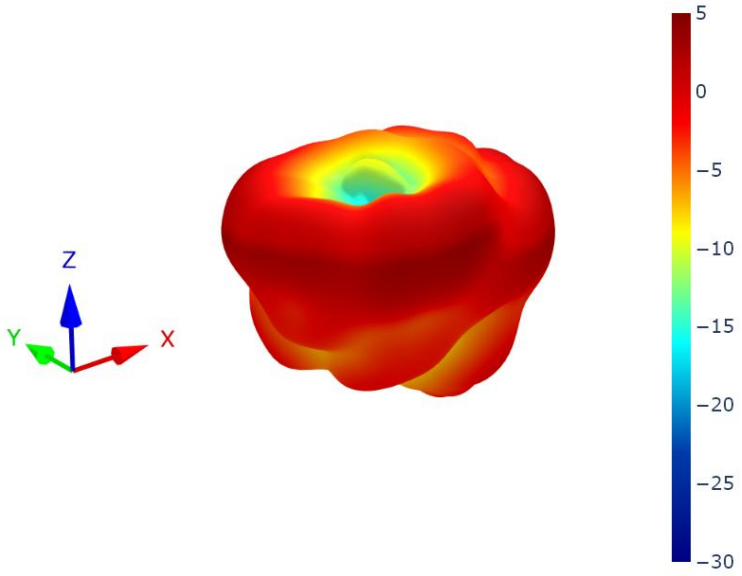
XZ Plane	YZ Plane	XY Plane



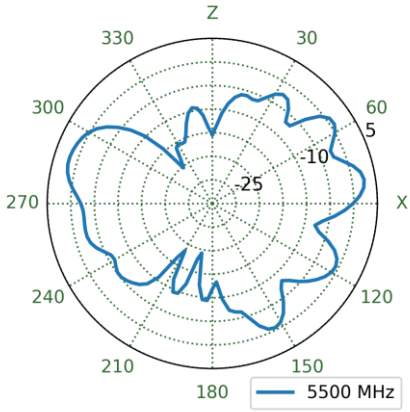


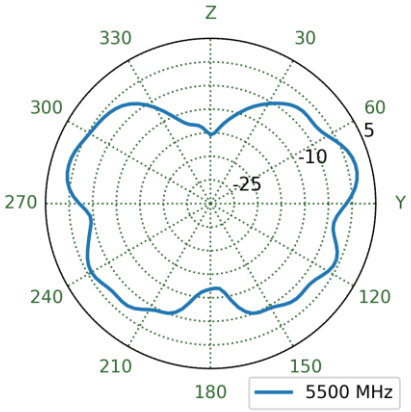


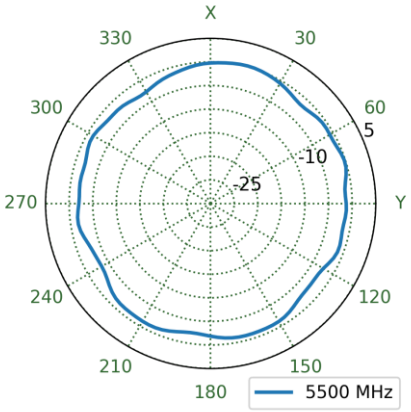
6.6 Bent - 15x9cm Ground Plane Patterns at 5500 MHz



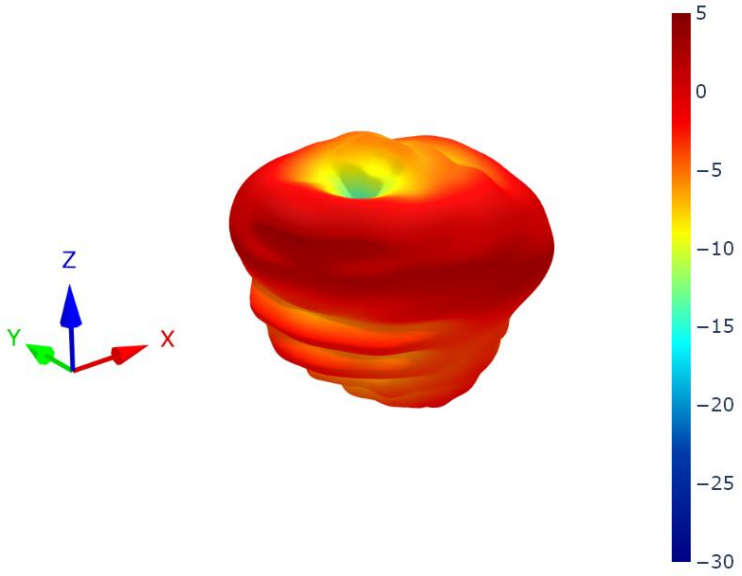
XZ Plane	YZ Plane	XY Plane



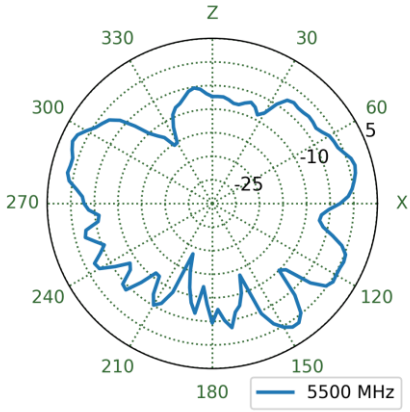


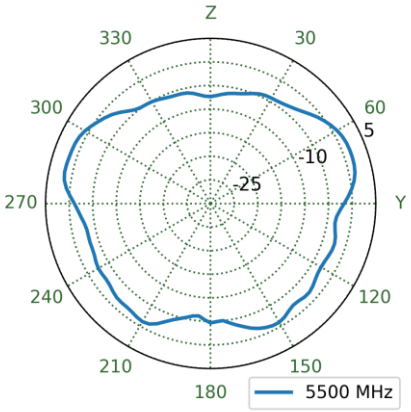


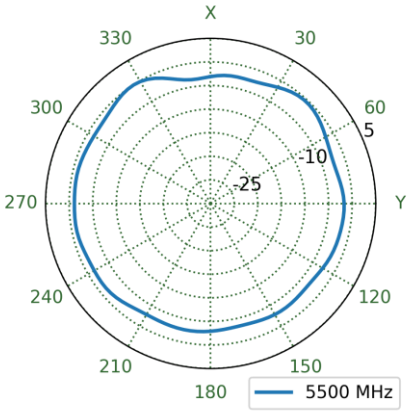
6.7 Bent - Free Space Patterns at 5500 MHz



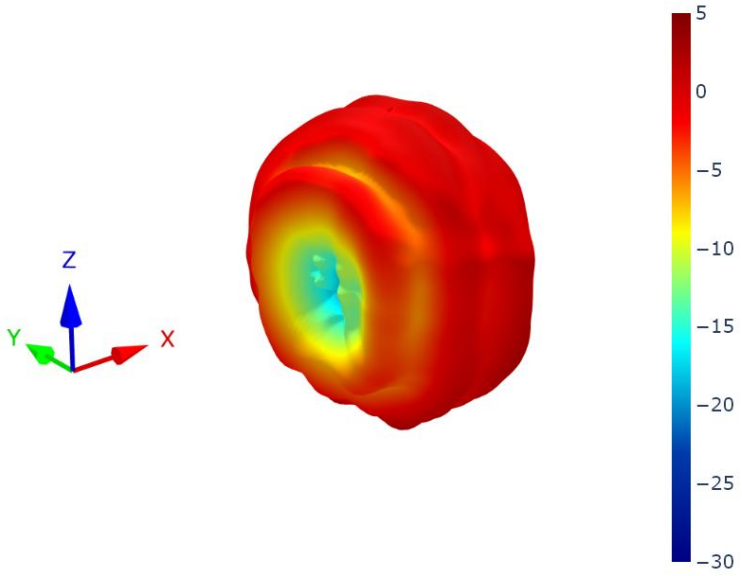
XZ Plane	YZ Plane	XY Plane



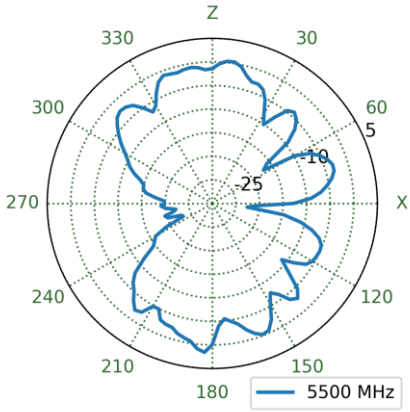


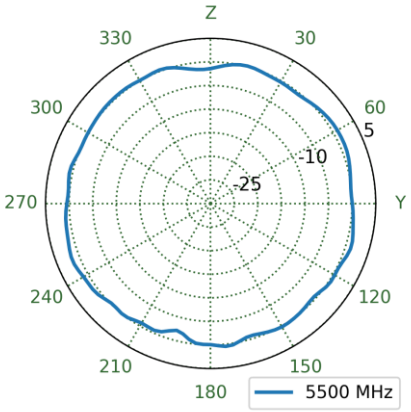


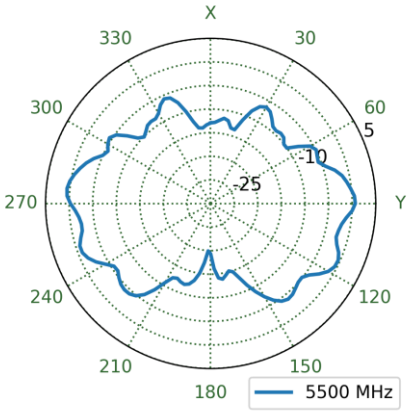
6.8 Straight - 15x9cm Ground Plane Patterns at 5500 MHz



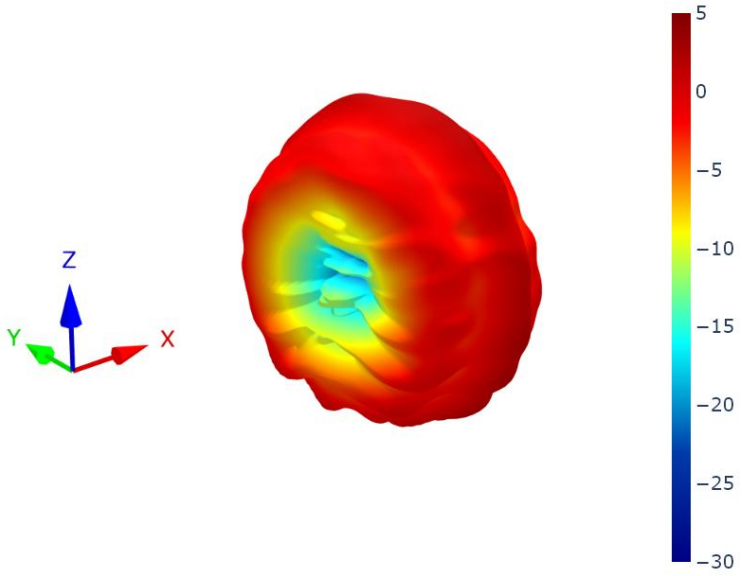
XZ Plane	YZ Plane	XY Plane



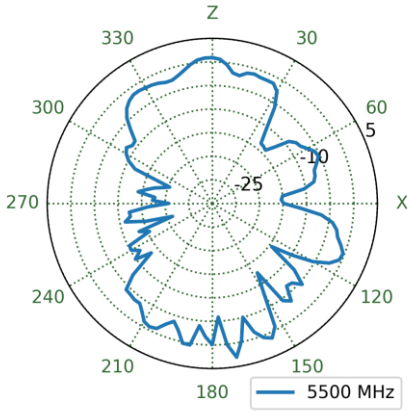


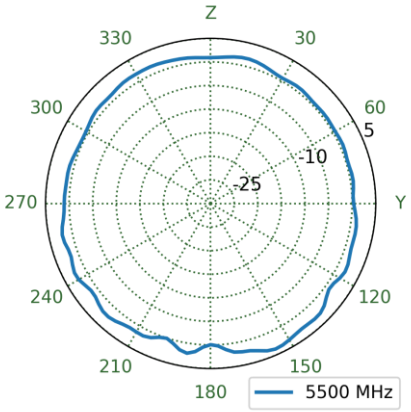


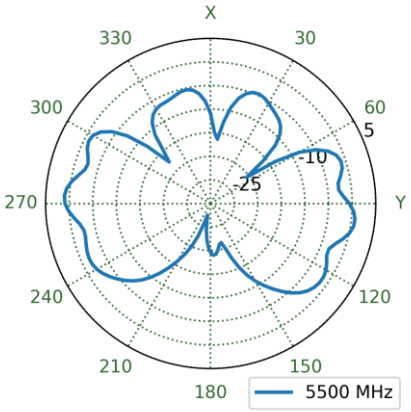
6.9 Straight - Free Space Patterns at 5500 MHz



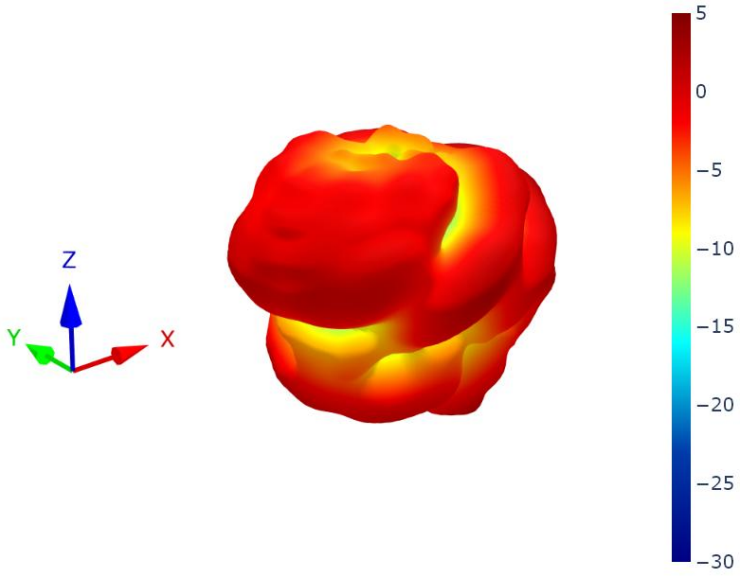
XZ Plane	YZ Plane	XY Plane



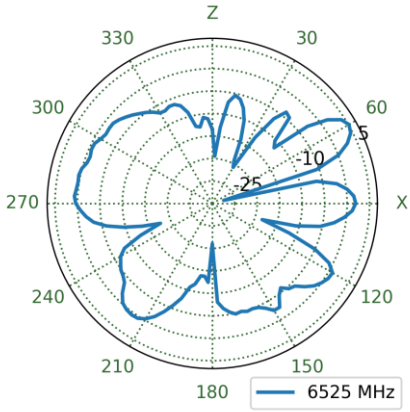


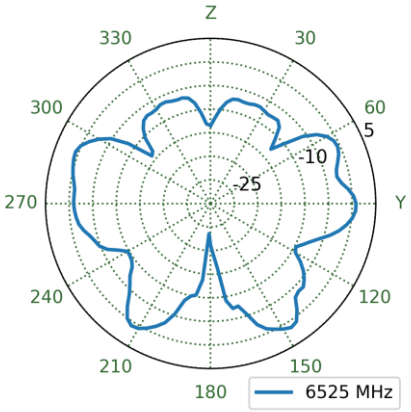


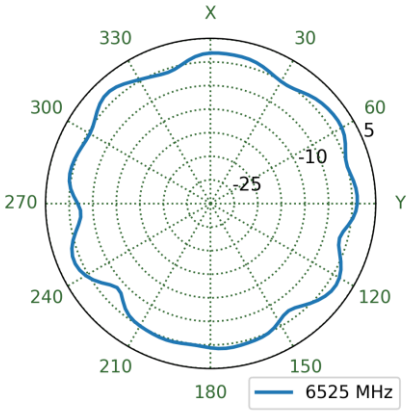
6.10 Bent - 15x9cm Ground Plane Patterns at 6525 MHz



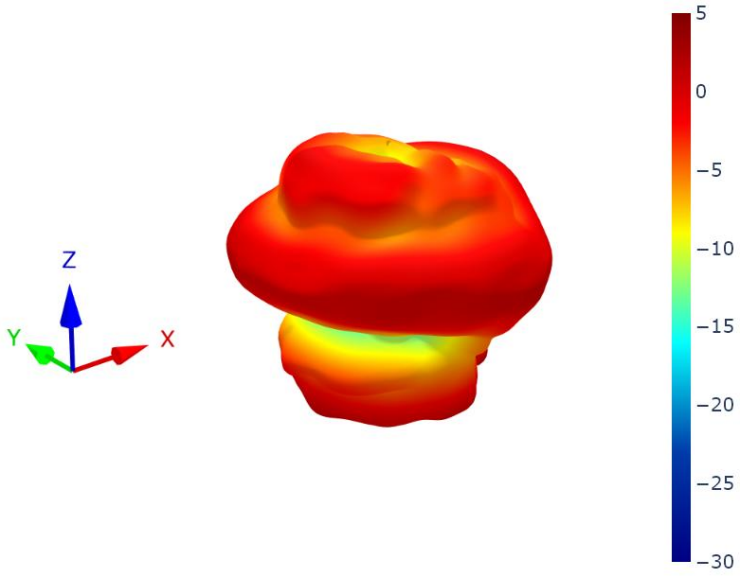
XZ Plane	YZ Plane	XY Plane



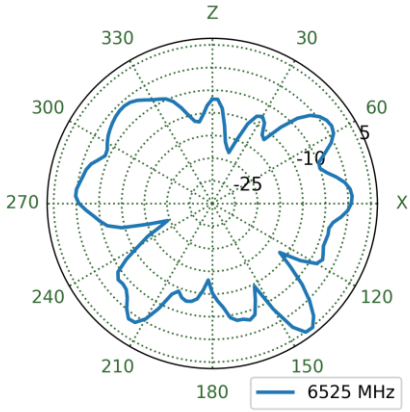


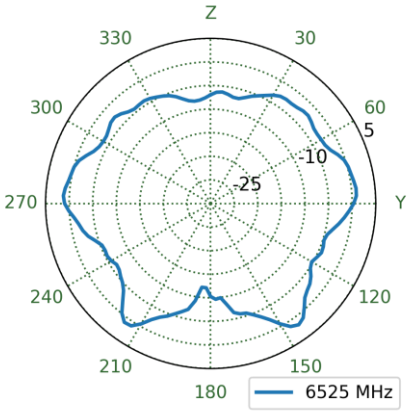


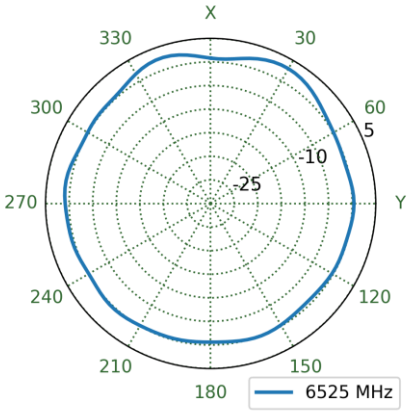
6.11 Bent - Free Space Patterns at 6525 MHz



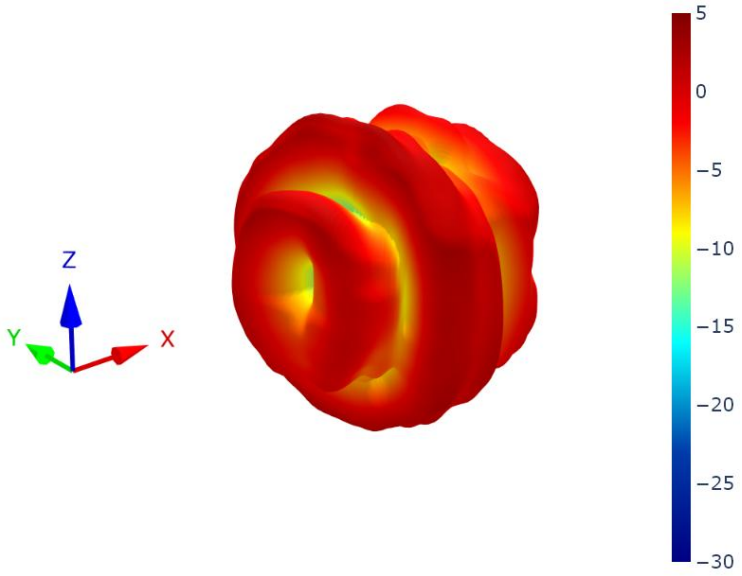
XZ Plane	YZ Plane	XY Plane



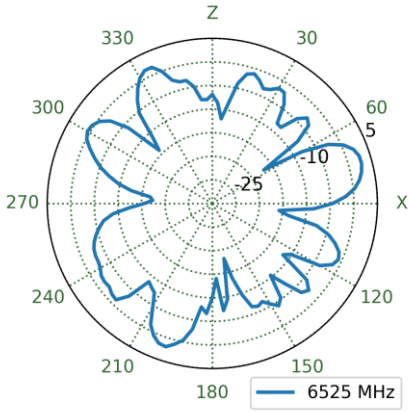


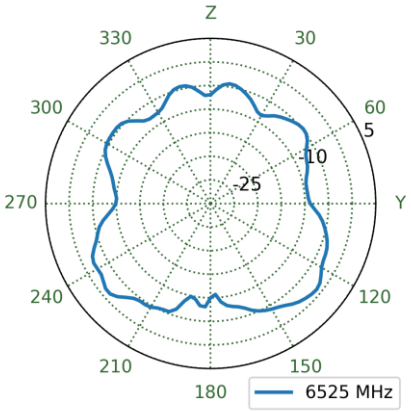


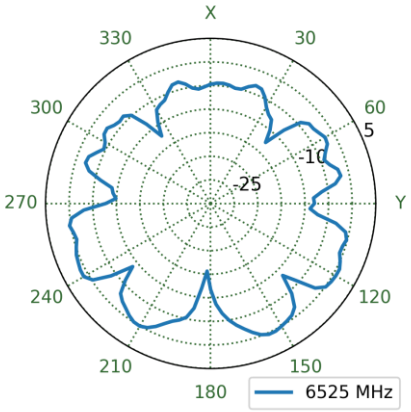
6.12 Straight - 15x9cm Ground Plane Patterns at 6525 MHz



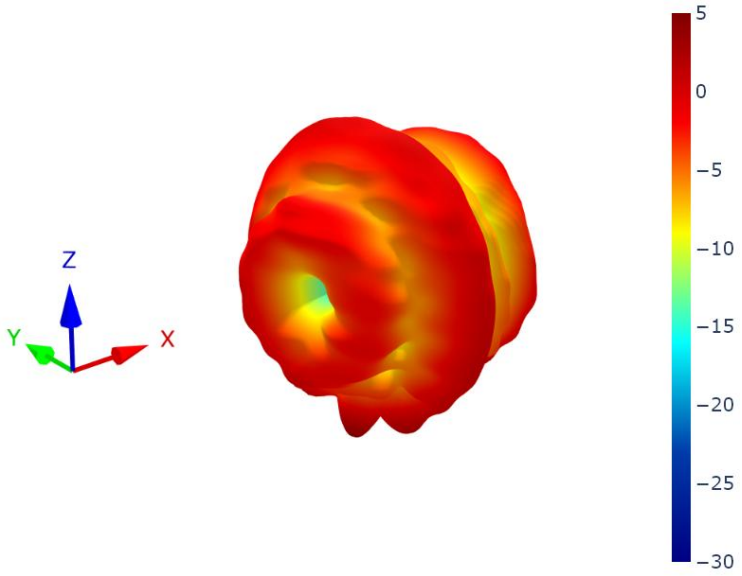
XZ Plane	YZ Plane	XY Plane



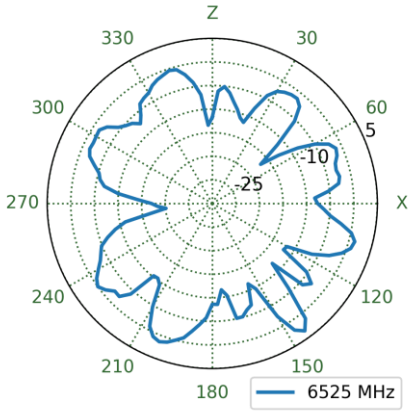


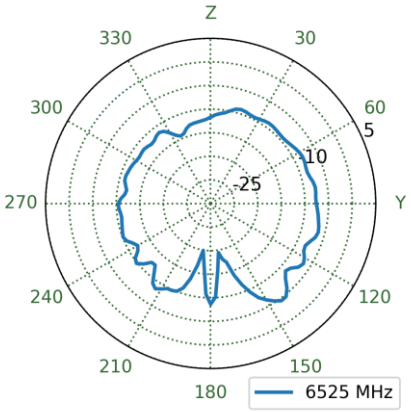


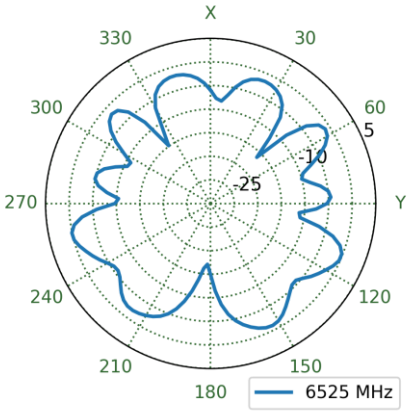
6.13 Straight - Free Space Patterns at 6525 MHz



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

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