



TAOGLAS®



Datasheet

4x6 Inch 8 Ohm Speaker with Wi-Fi

Part No:
SPKW.46.8.01

Description

4x6 Inch 8 Ohm Speaker with Integrated Wi-Fi antenna assembly

Features:

8 Ohm Impedance
Rated Input Power 25W RMS
Max Input Power 50W Peak
Dimensions 158 x 107 x 56 mm
Connector FAKRA Code I
RoHS & Reach Compliant

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1. Introduction



The SPKW.46.8.01 is a high-performance 4x6 inch, 8 Ohm speaker featuring an integrated high-performance Wi-Fi antenna. As with all Taoglas audio products, the speaker is engineered to deliver clear, balanced audio output. It supports 25W RMS rated input power and up to 50W peak power handling, making it suitable for a wide range of connected audio applications. By combining reliable speaker performance with integrated antenna functionality, the SPKW.46.8.01 helps reduce system complexity, save on space and minimise additional installations, while maintaining consistent connectivity.

Designed with a compact form factor of 158 x 107 x 56 mm, the speaker is optimized for use in environments where space is limited but high-quality sound and wireless performance are required. The robust design is RoHS and REACH compliant, and the assembly includes a secure FAKRA Code I connector for ease of integration of Wi-Fi.

Typical Applications Include:

- Smart home audio systems
- Connected kiosks and point of sale terminals
- Digital signage and public information systems
- Automotive infotainment and telematics solutions
- Industrial and commercial communication devices

The SPKW.46.8.01 provides a durable and reliable audio solution with integrated Wi-Fi capability, ensuring reduced component count and simplified installation. Custom connector and cable options are available upon request—contact your regional support team for more information.

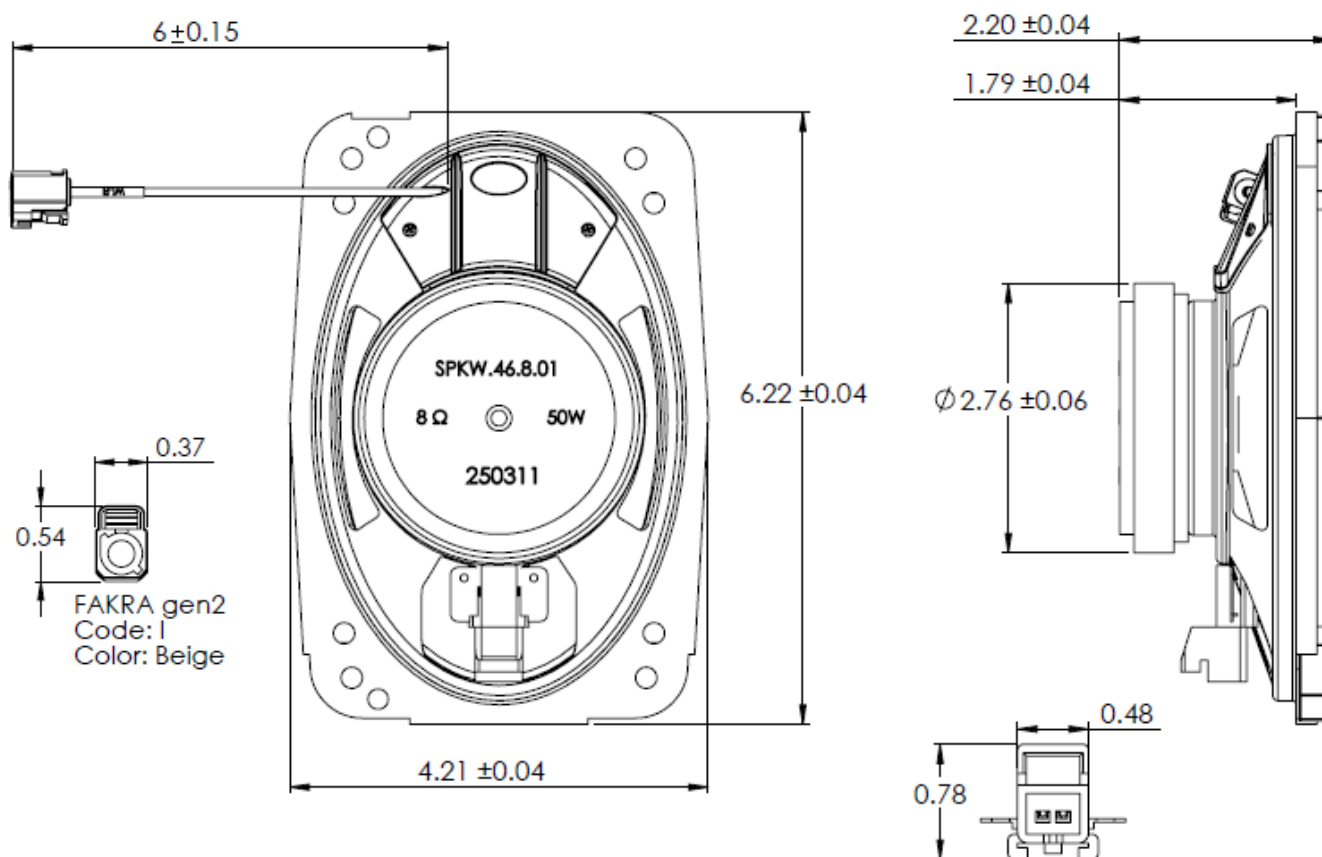
2. Specification

Electrical									
Band	Frequency (MHz)	Measurement	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. input power
Wi-Fi - 2GHz	2400-2500	60 x 60cm Ground Plane with 1inch Foam Spacer	55.0	-2.59	6.61	50 Ω	Linear	Omni directional	10W
		60 x 60cm Ground Plane	44.1	-3.55	3.54				
		Free Space	50.2	-3.00	4.29				
Wi-Fi - 5GHz	5150-5850	60 x 60cm Ground Plane with 1inch Foam Spacer	55.3	-2.57	8.45				
		60 x 60cm Ground Plane	55.1	-2.59	6.75				
		Free Space	63.0	-2.00	6.02				
Wi-Fi - 6GHz	5925-7125	60 x 60cm Ground Plane with 1inch Foam Spacer	48.3	-3.16	9.80				
		60 x 60cm Ground Plane	50.8	-2.94	9.02				
		Free Space	55.4	-2.56	5.07				

Mechanical	
Dimensions	101 x 101 x 20 mm
Weight	670g
Antenna Connector	FAKRA gen 2 Code: I (Beige)
Speaker Connector	DELPI 10252832
Antenna Cable	6mm of RG178

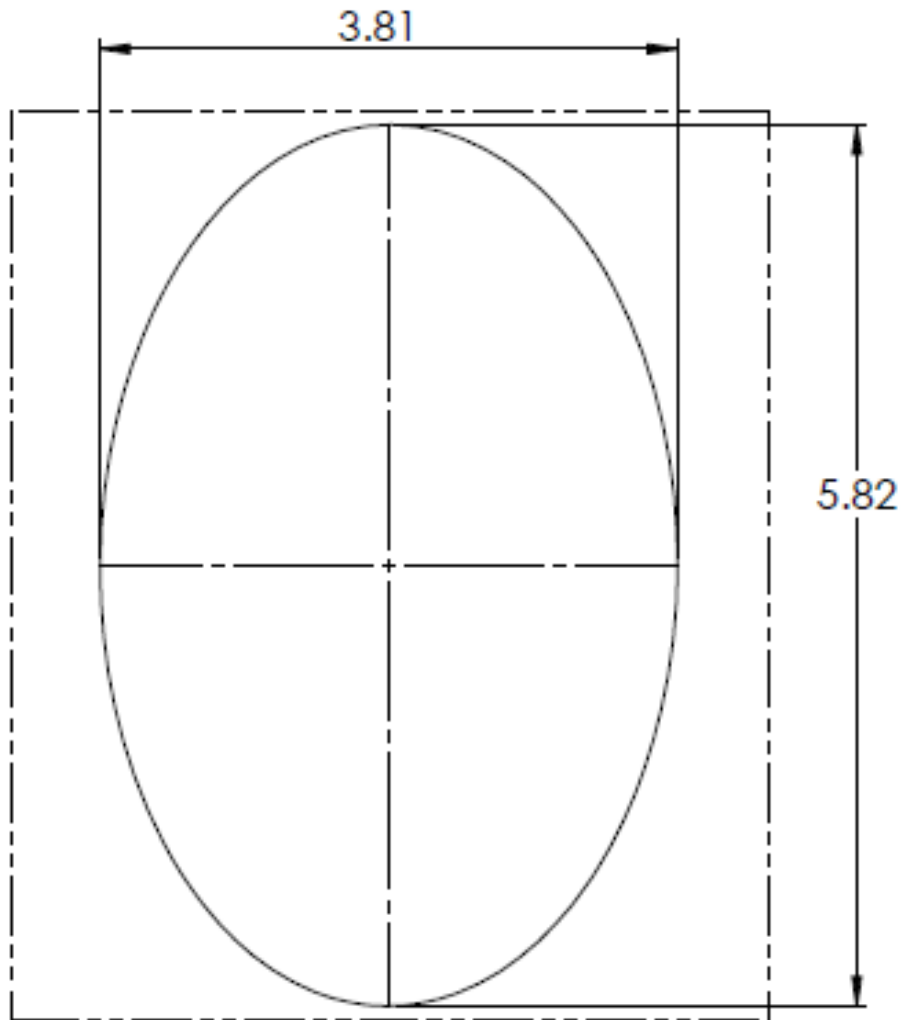
Environmental	
Operation Temperature	-40°C to 85°C
Storage Temperature	-40°C to 85°C
Relative Humidity	Non-condensing 65°C 95% RH

3. Mechanical Drawing



MATING CONNECTOR: DELPHI 12052832
PIN A (-) PIN B (+)

4. Installation Guide



MOUNTING HOLE DIMENSION

5. Packaging



☑ 1 PCS / PE bag



☑ 1 PCS / Box

☑ Box (mm): 214x165x90

☑ Weight (Kg): 0.67 ±3%



☑ 12 PCS / Carton

☑ Carton (mm): 490x380x330

☑ Weight (Kg): 10.55 ±3%

☑ Carton Label

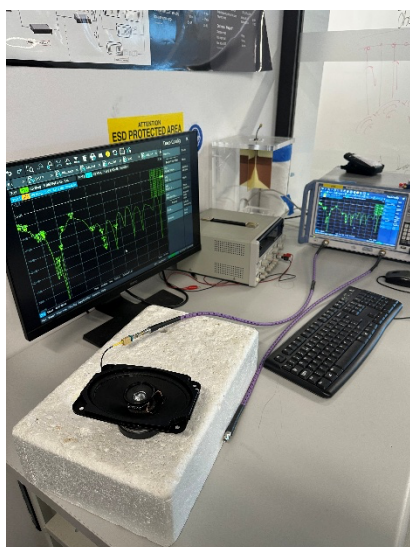
6. Antenna Characteristics

6.1 Test Setup

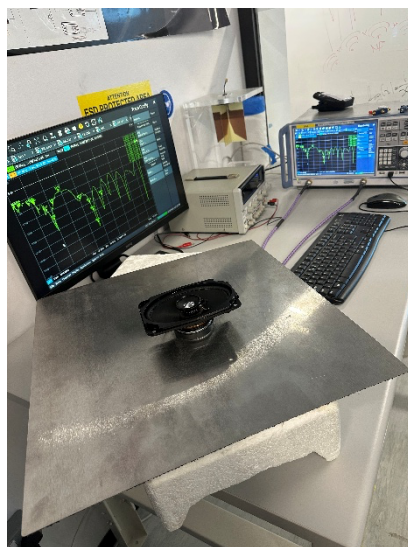
AUT



Vector Network Analyzer



Free Space

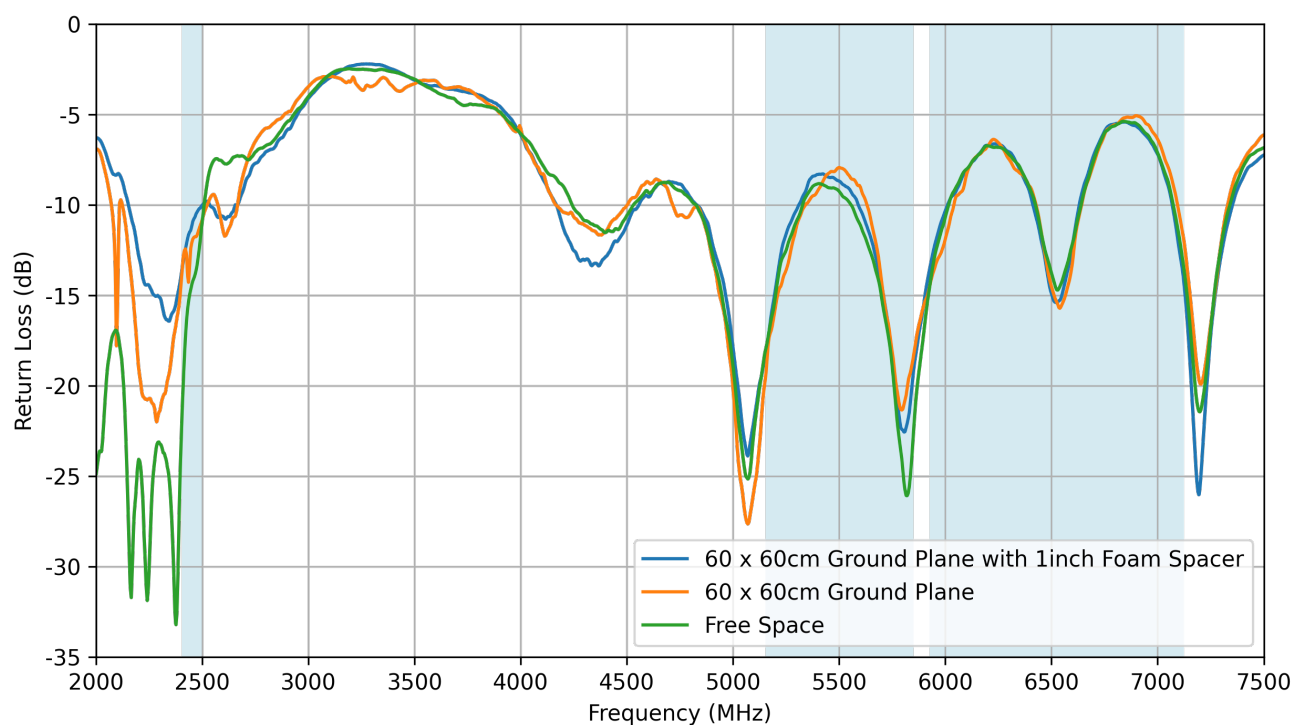


60 x 60cm Ground Plane

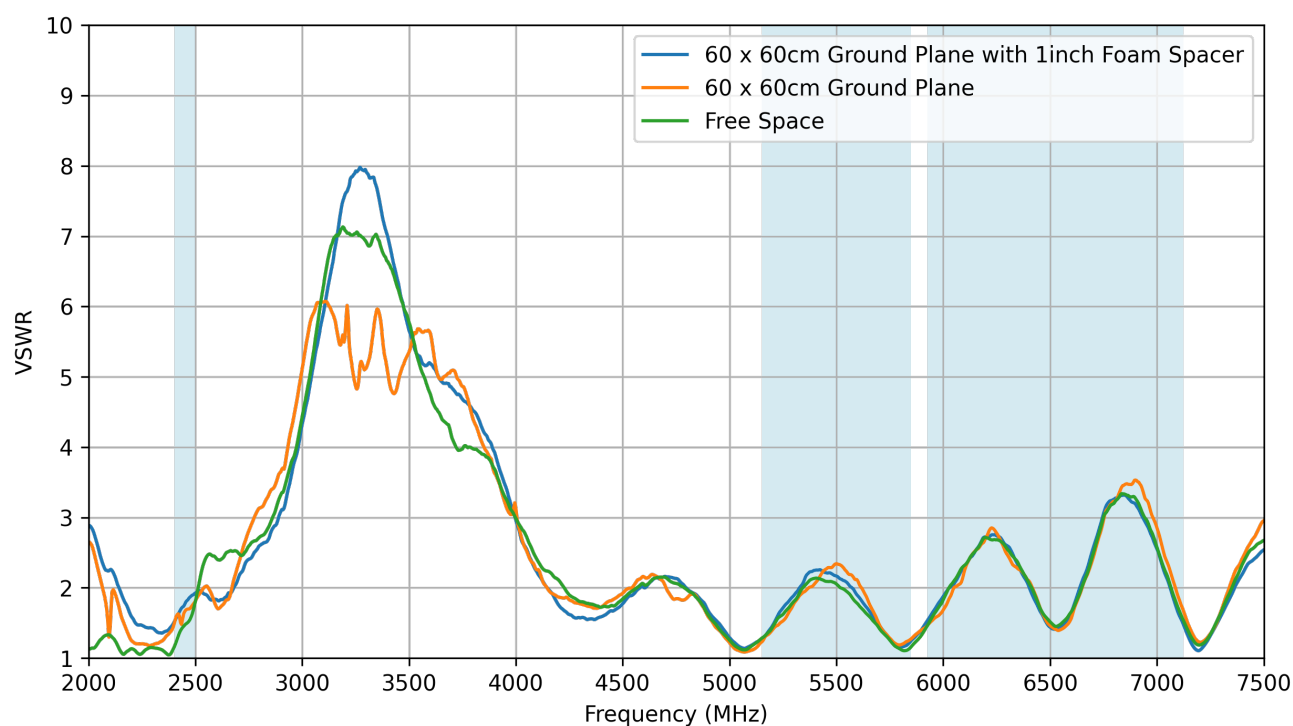


60 x 60cm Ground Plane
With 1in Foam Spacer

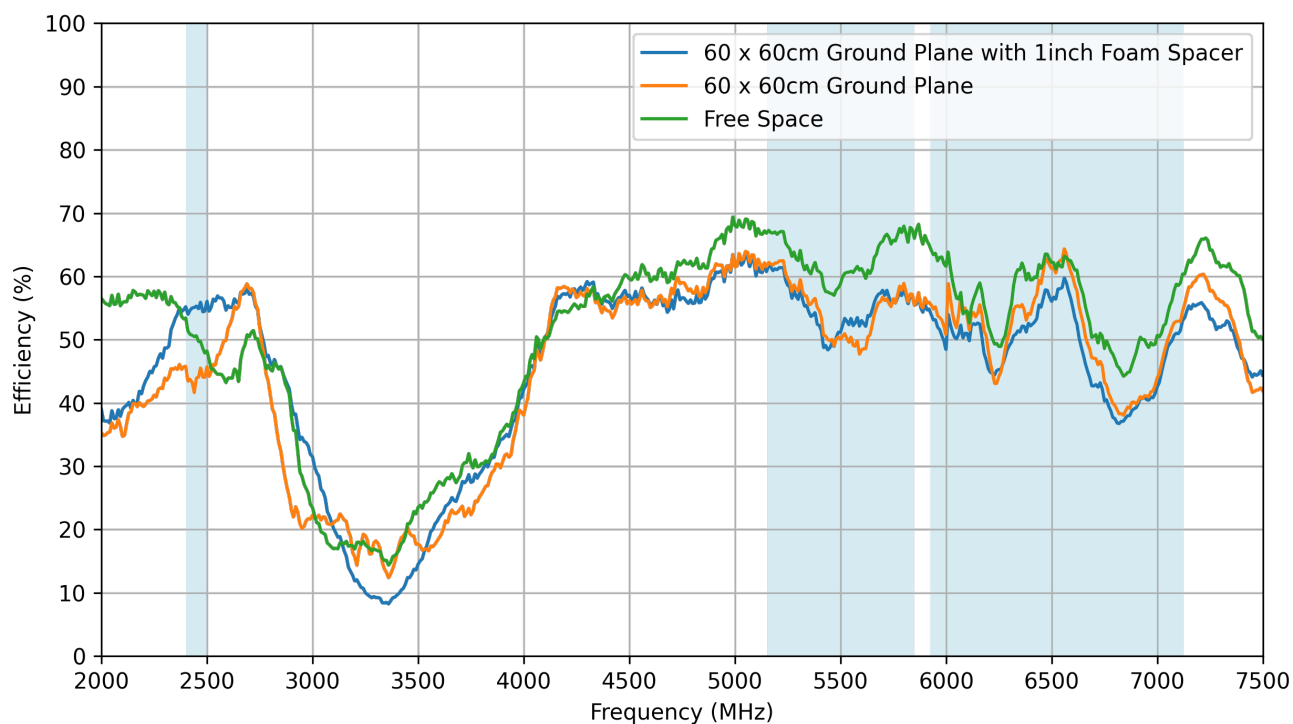
6.2 Return Loss



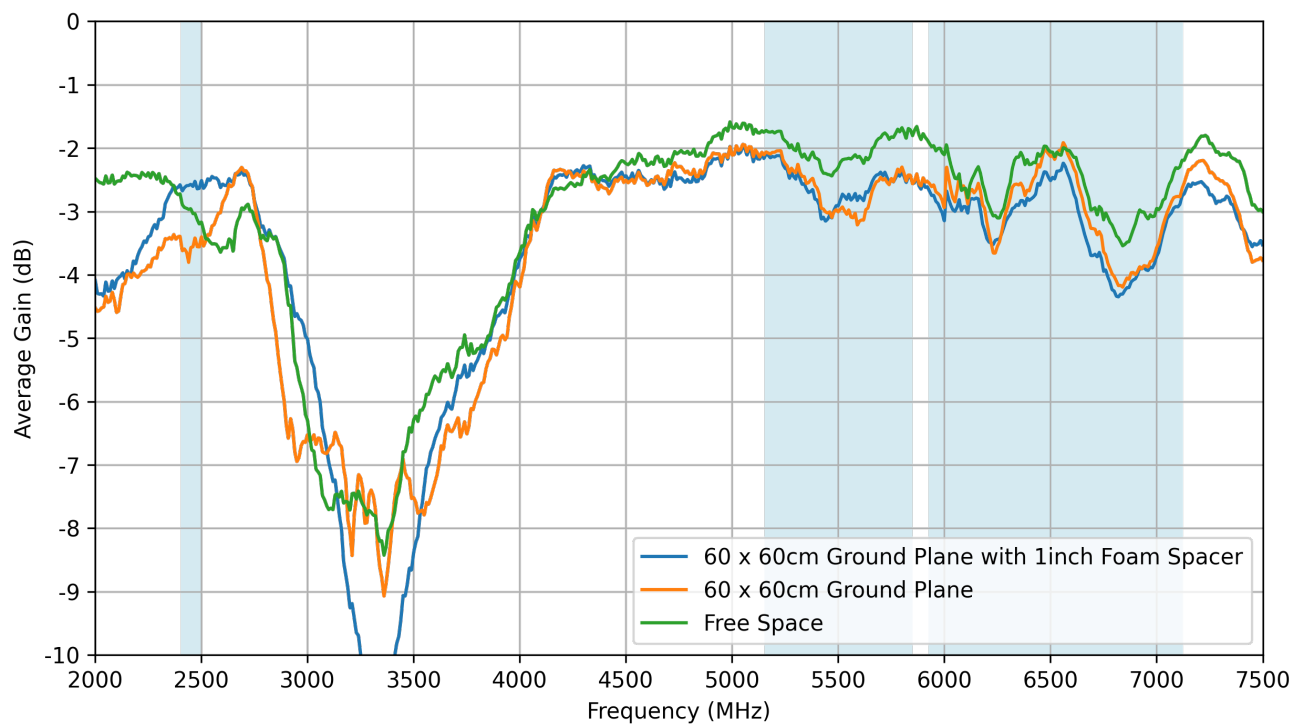
6.3 VSWR



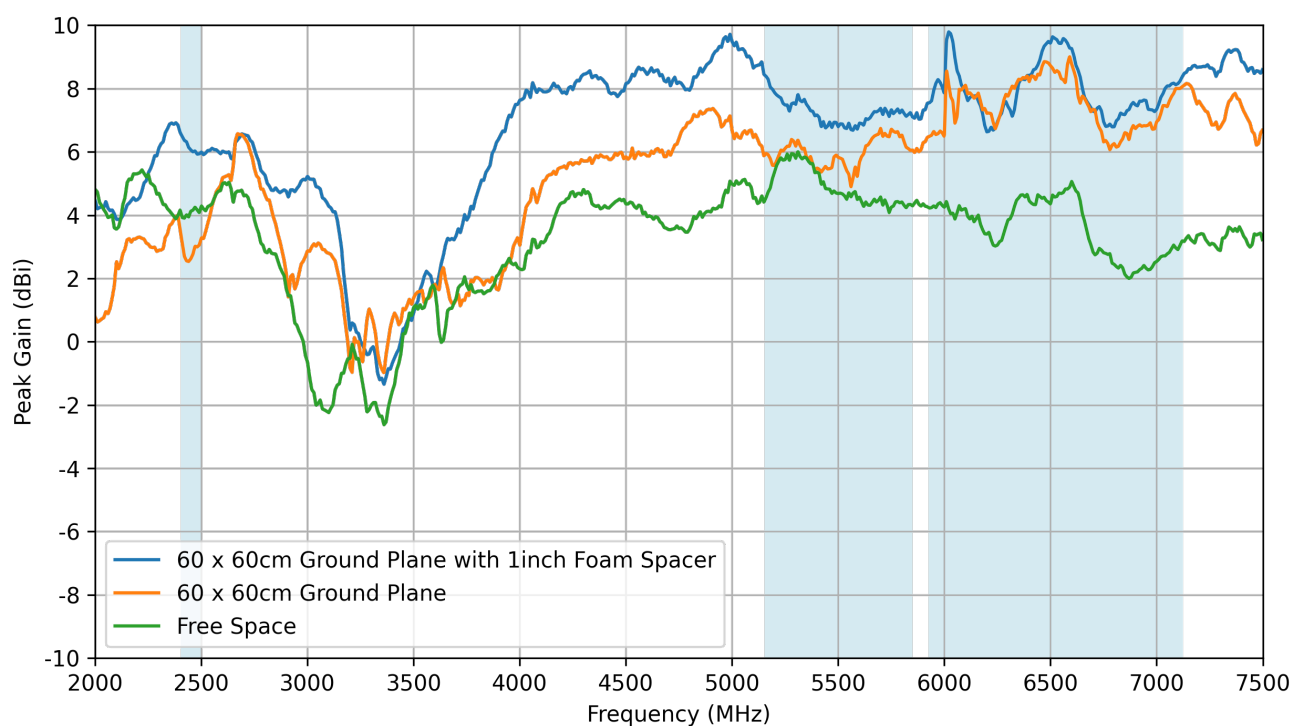
6.4 Efficiency



6.5 Average Gain

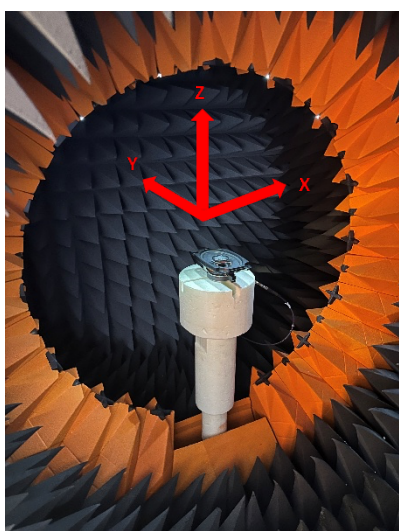
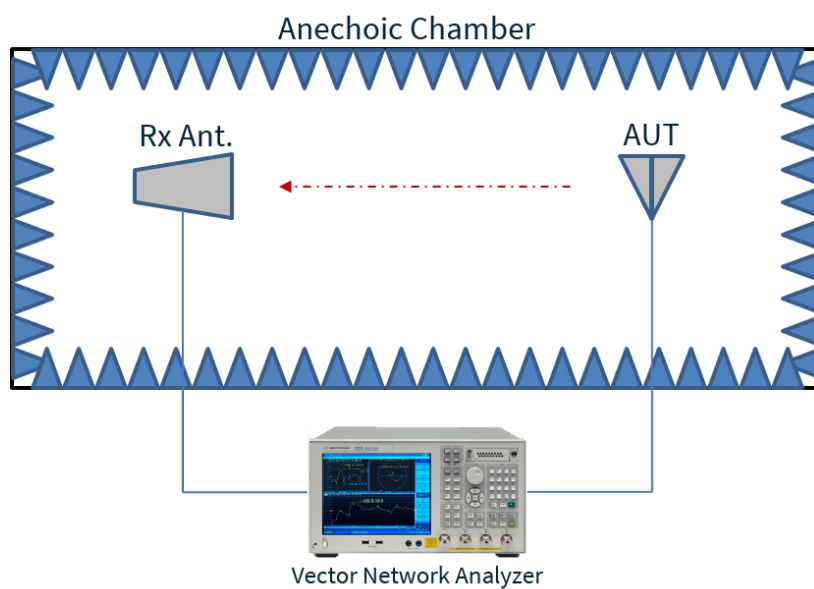


6.6 Peak Gain



7. Radiation Patterns

7.1 Test Setup



Free Space

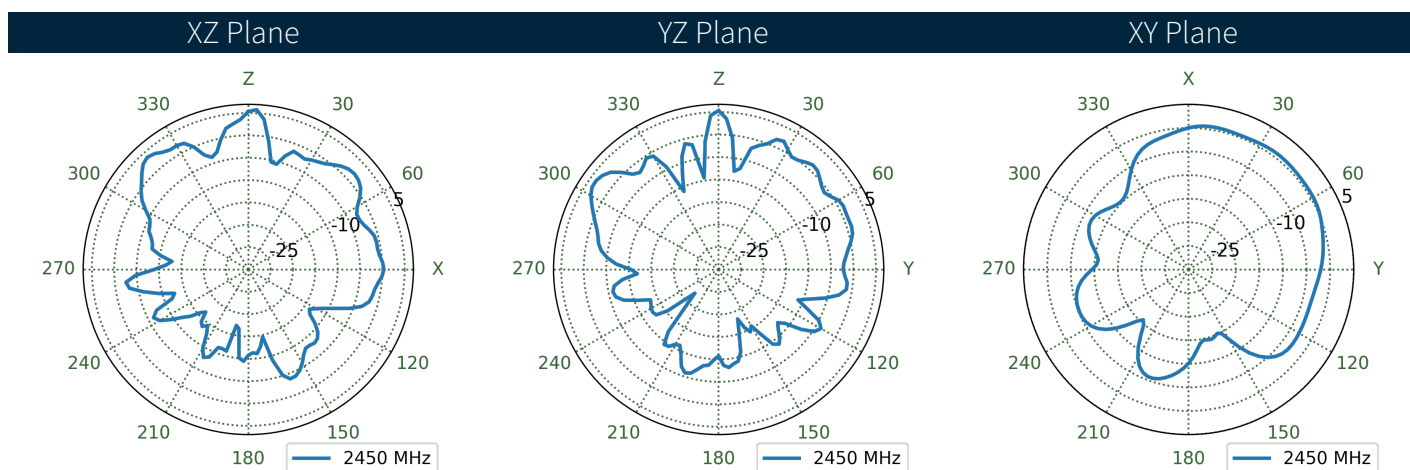
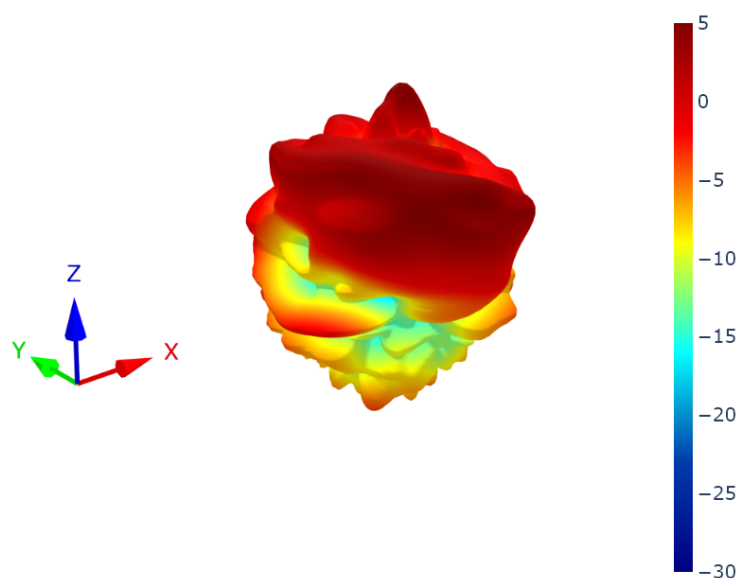


60 x 60cm Ground Plane

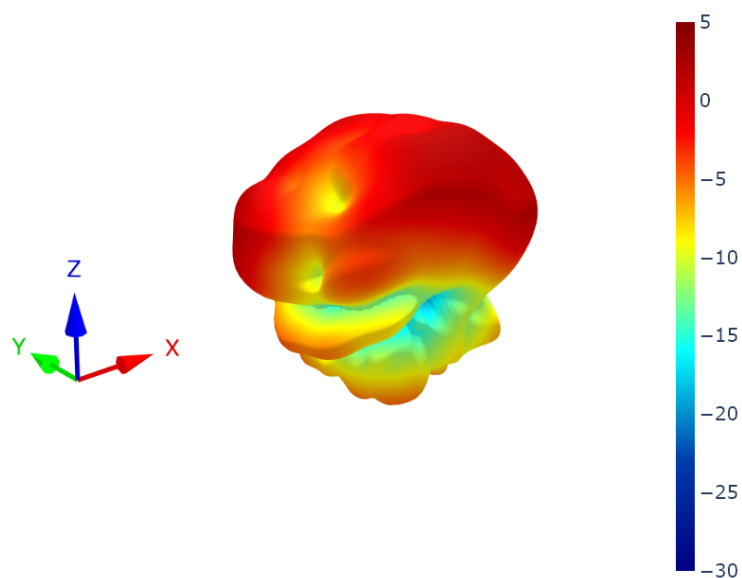


60 x 60cm Ground Plane
With 1in Foam Spacer

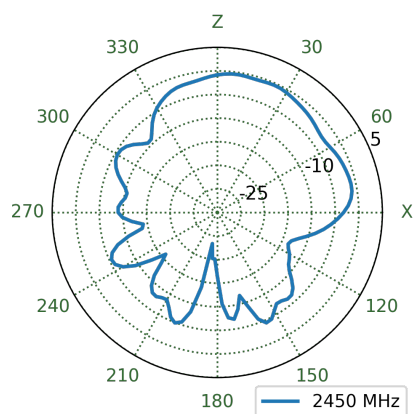
7.2 60 x 60cm Ground Plane with 1inch Foam Spacer Patterns at 2450 MHz



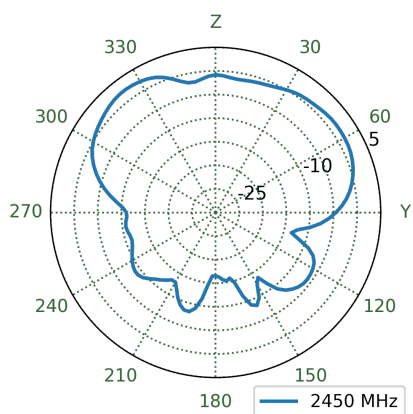
7.3 60 x 60cm Ground Plane Patterns at 2450 MHz



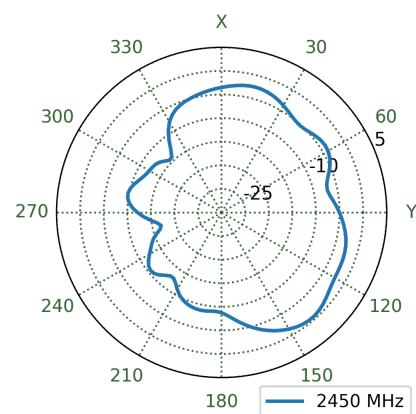
XZ Plane



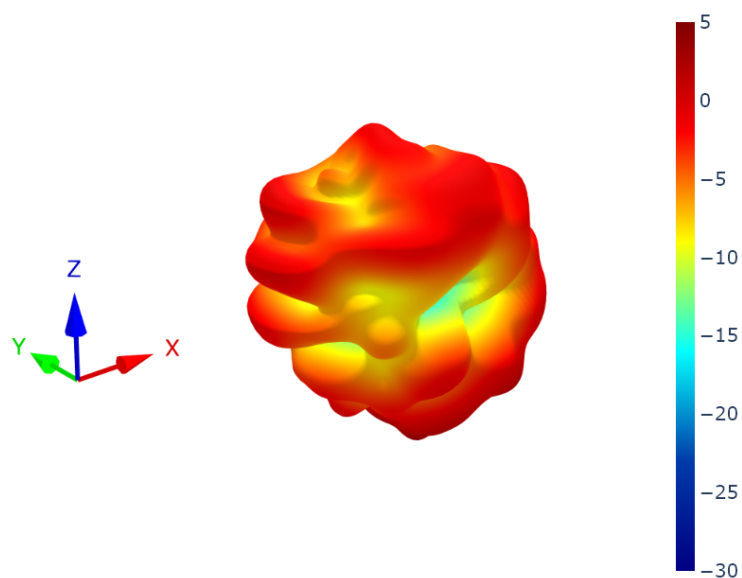
YZ Plane



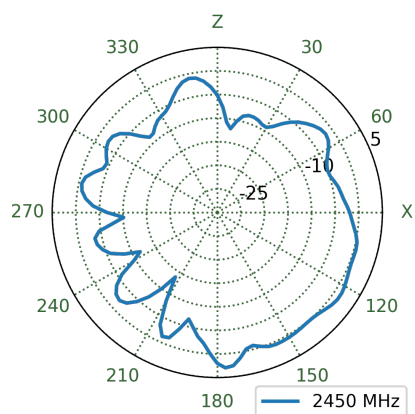
XY Plane



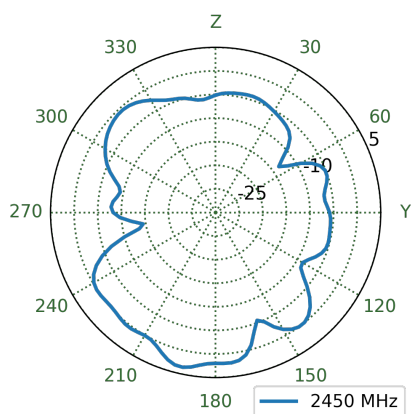
7.4 Free Space Patterns at 2450 MHz



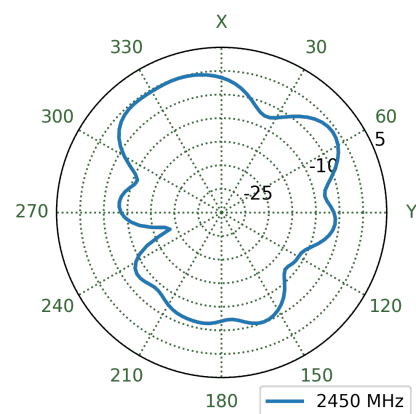
XZ Plane



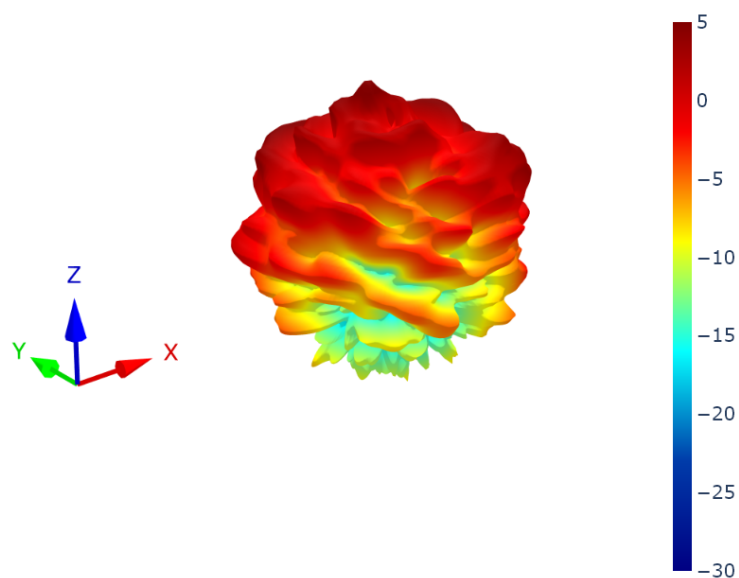
YZ Plane



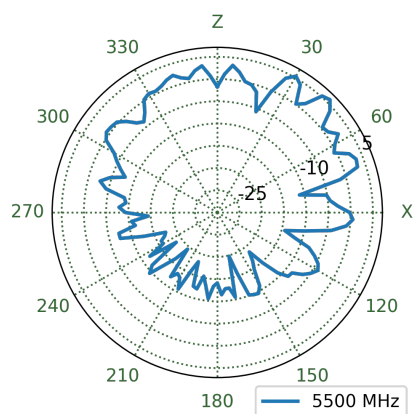
XY Plane



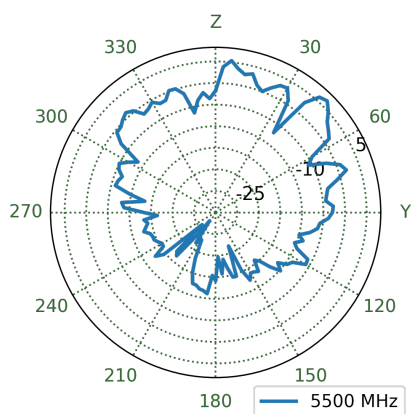
7.5 60 x 60cm Ground Plane with 1inch Foam Spacer Patterns at 5500 MHz



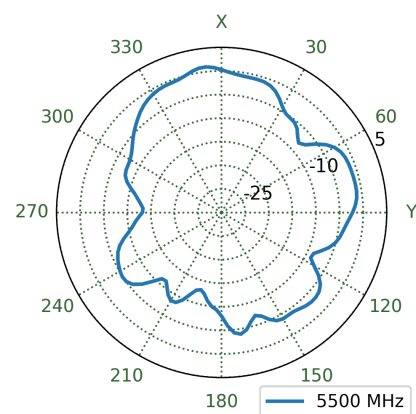
XZ Plane



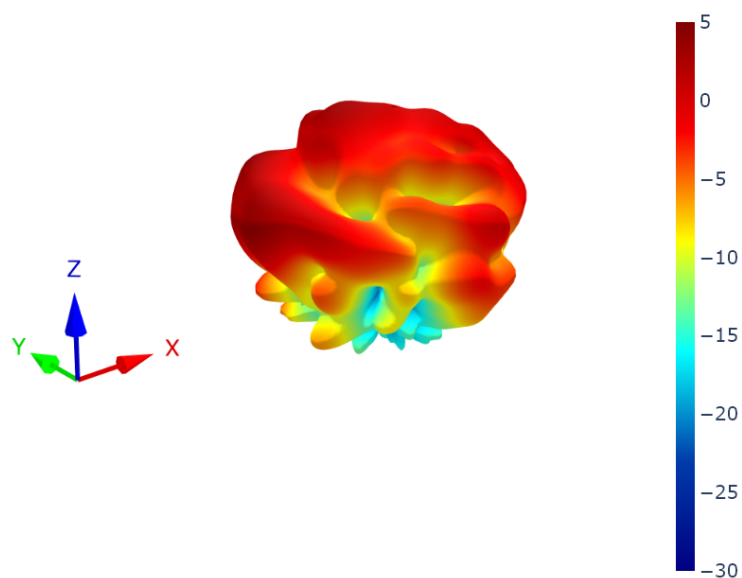
YZ Plane



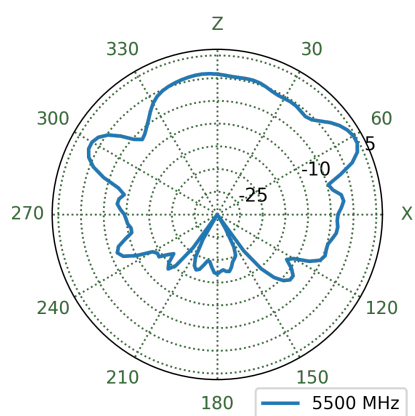
XY Plane



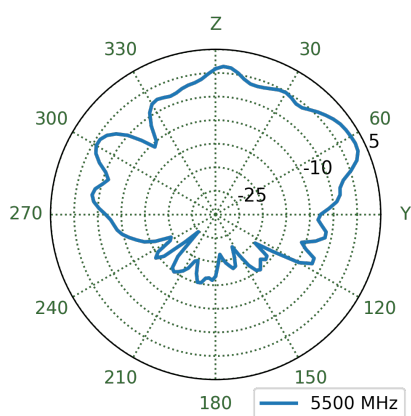
7.6 60 x 60cm Ground Plane Patterns at 5500 MHz



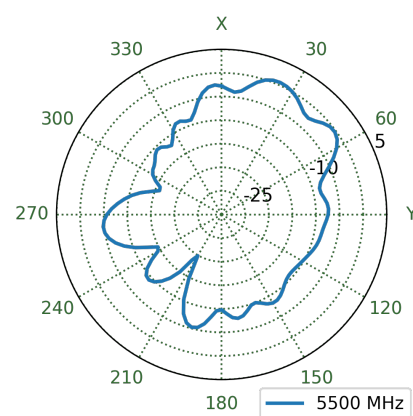
XZ Plane



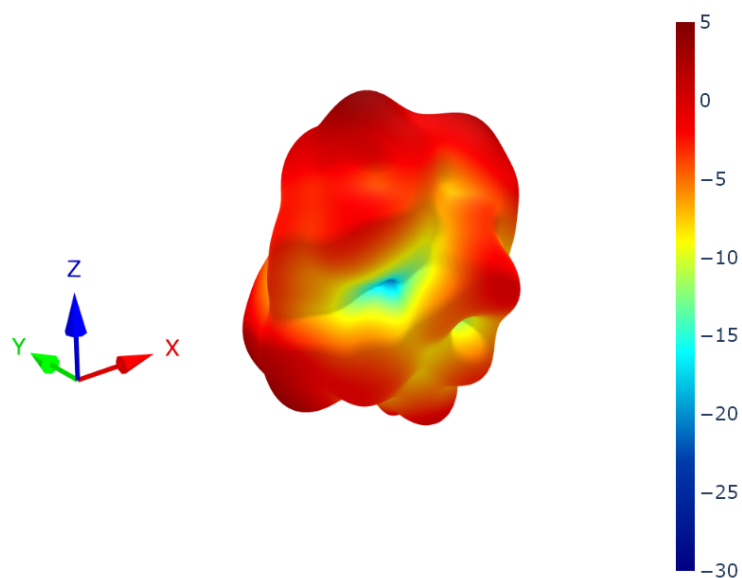
YZ Plane



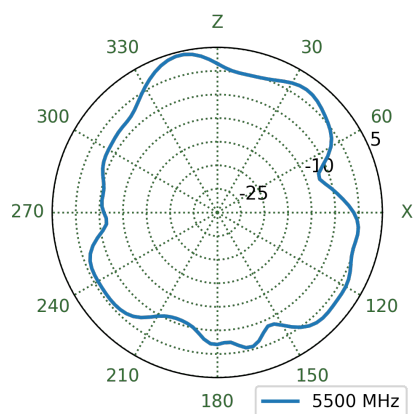
XY Plane



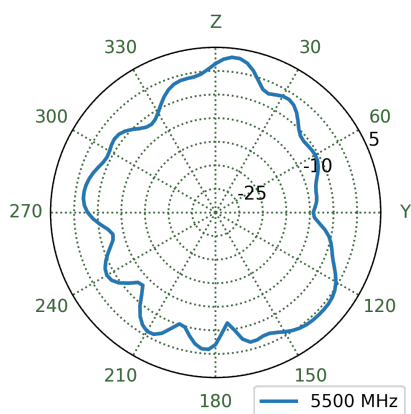
7.7 Free Space Patterns at 5500 MHz



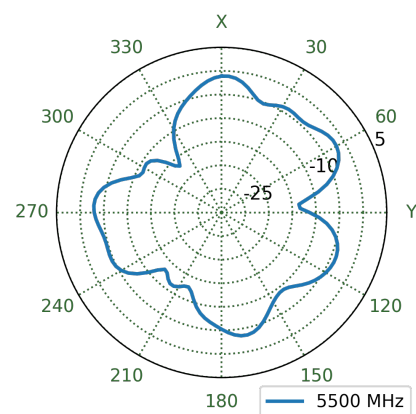
XZ Plane



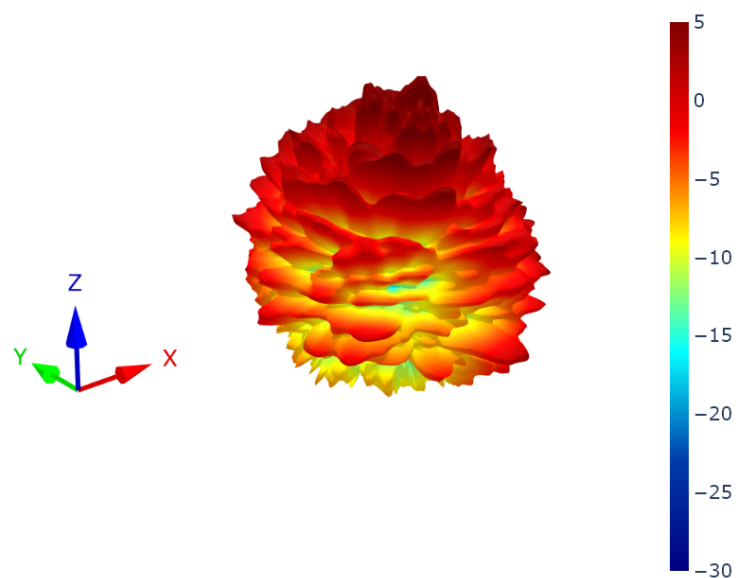
YZ Plane



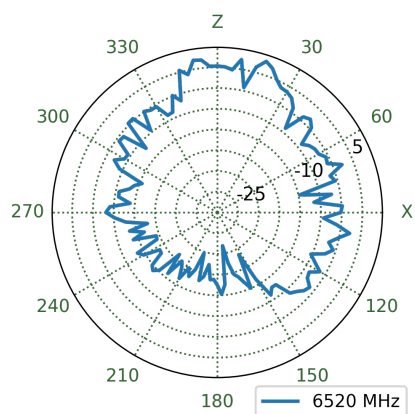
XY Plane



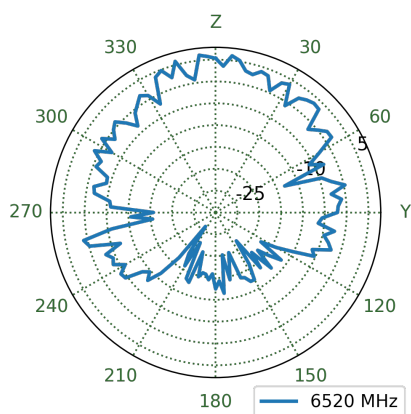
7.8 60 x 60cm Ground Plane with 1inch Foam Spacer Patterns at 6520 MHz



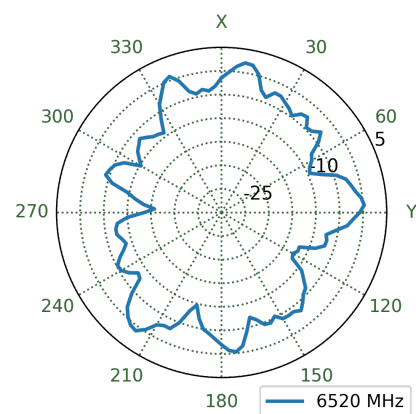
XZ Plane



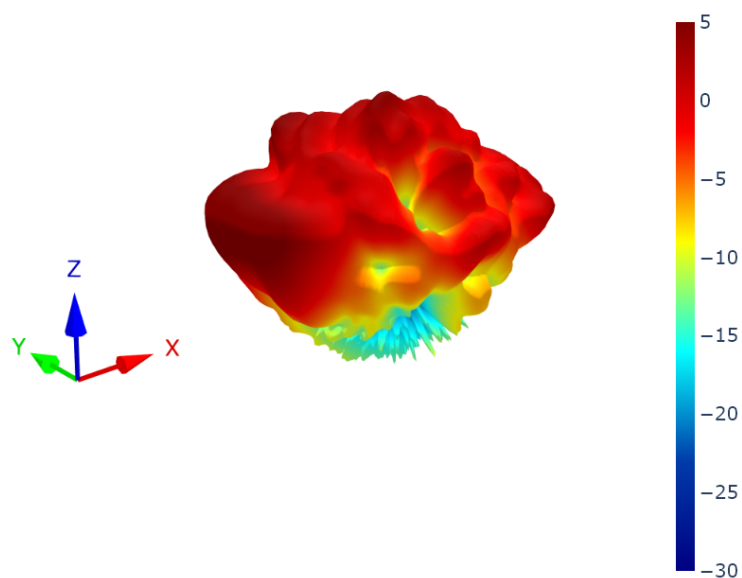
YZ Plane



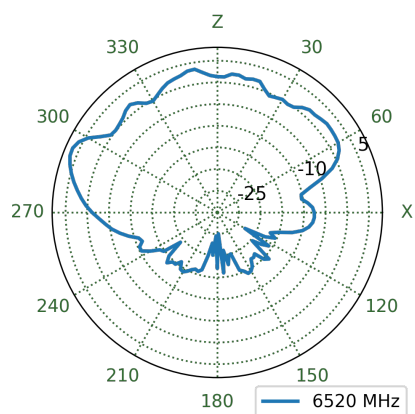
XY Plane



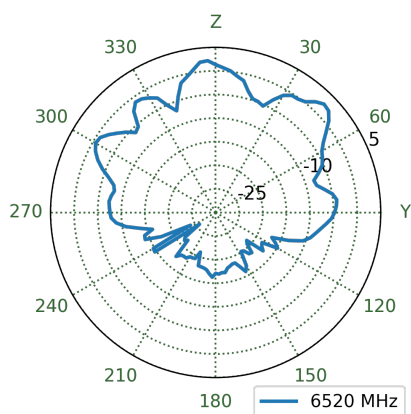
7.9 60 x 60cm Ground Plane Patterns at 6520 MHz



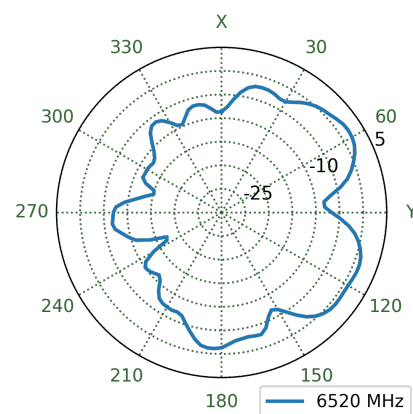
XZ Plane



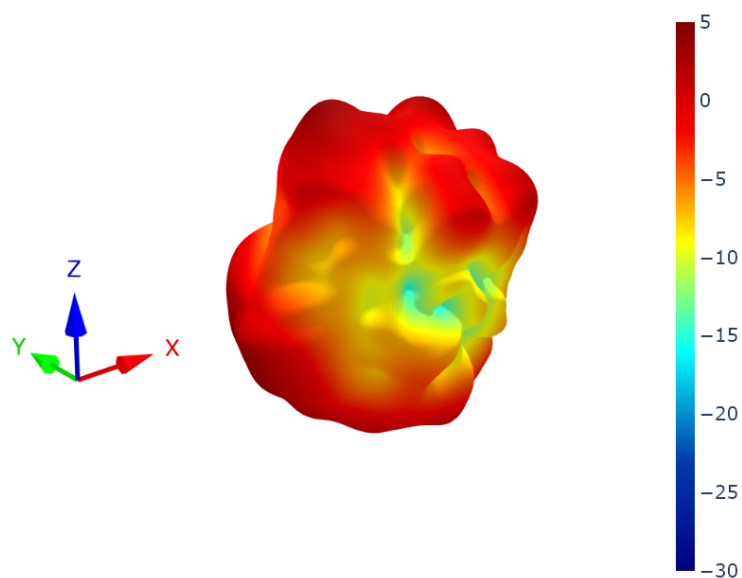
YZ Plane



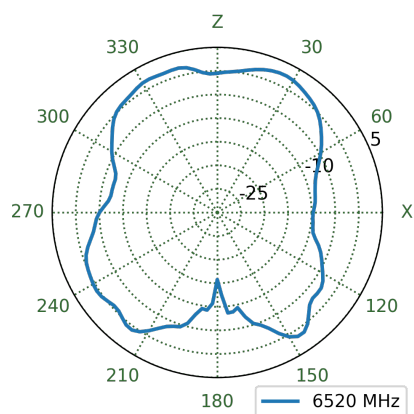
XY Plane



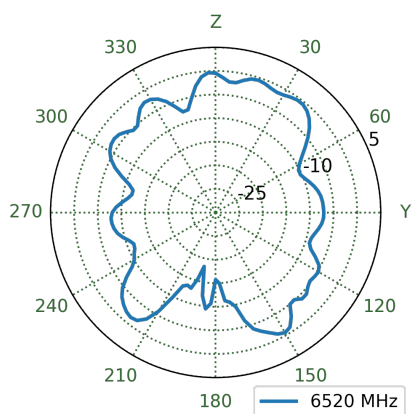
7.10 Free Space Patterns at 6520 MHz



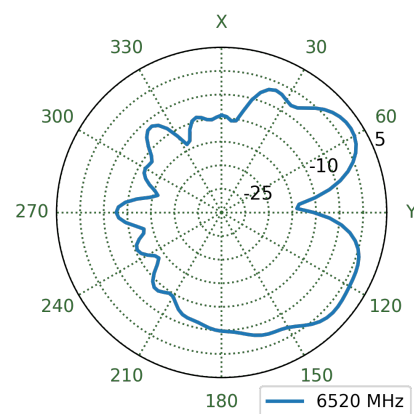
XZ Plane



YZ Plane



XY Plane



Changelog for the datasheet

SPE-25-8-212 - SPKW.46.8.01

Revision: A (Initial Release)

Date:	2025-07-22
Notes:	Initial Datasheet Release
Author:	Gary West

Previous Revisions



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