



TAOGLAS®



Datasheet

Part No:
TU.66.3131

Description

Terminal Mount Wideband Antenna (123.5mm) with SMA(M) Plug Connector covering 600MHz-7125MHz for 5G/Wi-Fi® 7

Features:

Covers all Global Cellular Bands from 600-8000MHz
Covers 2.4, 5.8 and 7.125GHz Wi-Fi® Bands
Rugged ABS, IP67 Rated Enclosure
Connector: SMA(M) Plug
Dimensions: Length 125mm, Ø22.8mm
RoHS & Reach Compliant

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1. Introduction



The Taoglas TU.66 is a compact, high-performance, unique terminal mount, wideband cellular antenna designed to cover all global 5G, 4G and Wi-Fi® Bands between 600 and 8000MHz. It supports all major cellular carriers and Wi-Fi® bands including the 7.125GHz band, and delivers excellent efficiency across the full bandwidth. The robust SMA (M) Plug connector ensures easy integration with terminal-mounted equipment, providing a secure and stable connection. With high gain and an omnidirectional radiation pattern for improved signal strength, it is ideal for a variety of IoT and M2M applications.

Typical Applications Include:

- Gateways, Routers and Private LTE Networks
- In-Building Connectivity Systems
- Point of Sales Kiosks and Digital Signage
- Connected Industries and Smart Metering

The TU.66 features a durable ABS enclosure with an IP67 rating, providing a robust solution for both indoor and outdoor use. Designed for easy integration in space-constrained environments, this compact cellular antenna delivers reliable performance without compromise. When mated, the connector also maintains IP67 protection, ensuring complete environmental sealing.

[Contact](#) your regional Taoglas customer support team for further information or samples.

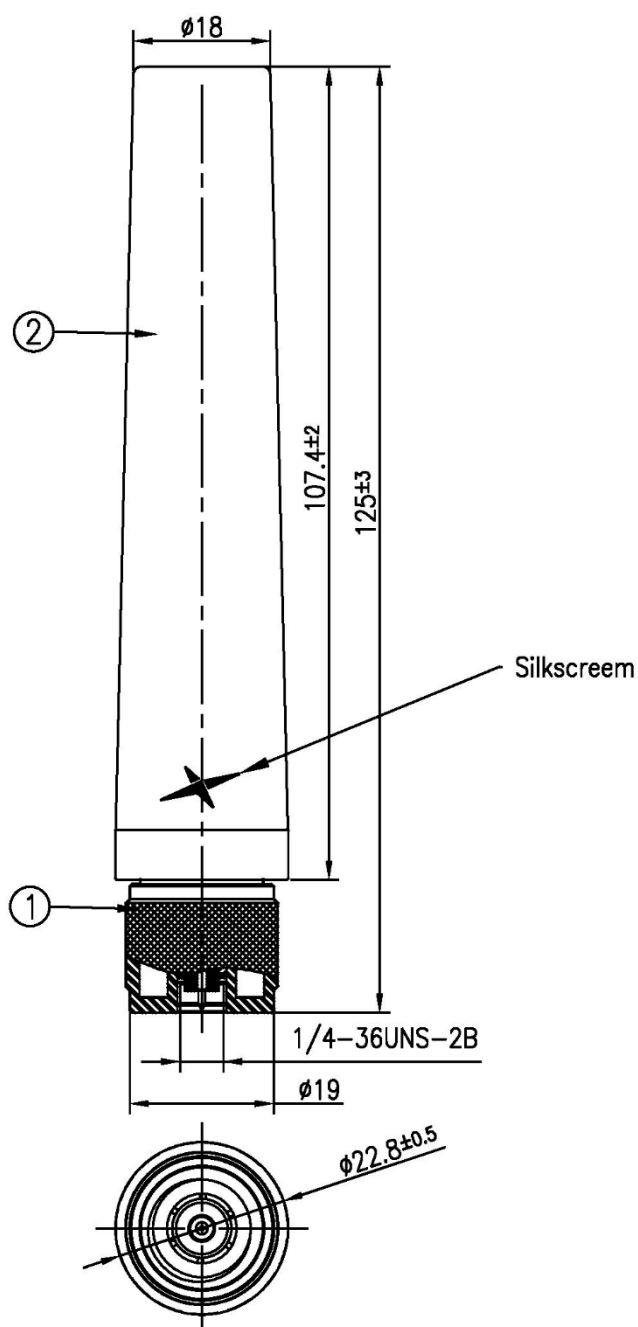
2. Specification

Electrical									
Band	Frequency (MHz)	Measurement	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. input power
5G NR/4G Band 71	617-698	Metal Box_Port1	60.2	-2.20	3.04	50 Ω	Linear	Omni directional	50W
		Metal Box_Port2	54.3	-2.66	2.52				
		Metal Box_Port3	61.4	-2.12	2.46				
4G/3G Band 12,13,14,17,28,29	698-806	Metal Box_Port1	74.5	-1.28	3.60				
		Metal Box_Port2	64.7	-1.89	3.53				
		Metal Box_Port3	78.0	-1.08	4.11				
4G/3G/NB-IoT/Cat M Band 5,8,18,19,20,26,27	824-960	Metal Box_Port1	73.1	-1.36	3.77				
		Metal Box_Port2	61.2	-2.13	3.01				
		Metal Box_Port3	76.0	-1.19	3.84				
5G NR/4G Band 21,32,74,75,76	1427-1518	Metal Box_Port1	26.3	-5.79	0.36				
		Metal Box_Port2	13.7	-8.62	-3.63				
		Metal Box_Port3	31.8	-4.98	0.06				
4G/3G Band 1,2,3,4,9,23,25,35,39,66	1710-2200	Metal Box_Port1	55.2	-2.58	2.18				
		Metal Box_Port2	49.8	-3.02	0.67				
		Metal Box_Port3	63.3	-1.99	2.79				
4G/3G Band 7,30,38,40,41	2300-2690	Metal Box_Port1	47.4	-3.24	2.03				
		Metal Box_Port2	43.6	-3.60	1.49				
		Metal Box_Port3	53.2	-2.74	2.94				
5G NR/4G Band 22,42,48,77,78,79	3300-5000	Metal Box_Port1	43.6	-3.61	3.85				
		Metal Box_Port2	39.7	-4.02	4.16				
		Metal Box_Port3	54.7	-2.62	5.61				
LTE5200/Wi-Fi5800	5150-5925	Metal Box_Port1	42.2	-3.75	4.61				
		Metal Box_Port2	41.9	-3.77	6.49				
		Metal Box_Port3	57.9	-2.38	7.73				
Wi-Fi - 6GHz	5925-7125	Metal Box_Port1	41.4	-3.83	3.67				
		Metal Box_Port2	46.8	-3.30	4.57				
		Metal Box_Port3	59.5	-2.26	6.15				
*Tested through 3 ports on a metal box as seen in the test set-up photos which represents a router. See section 8 for more test scenarios.									

Mechanical	
Dimensions	Length 125 x Ø22.8mm
Weight	55g
Material	ABS
Connector	SMA(M) Plug

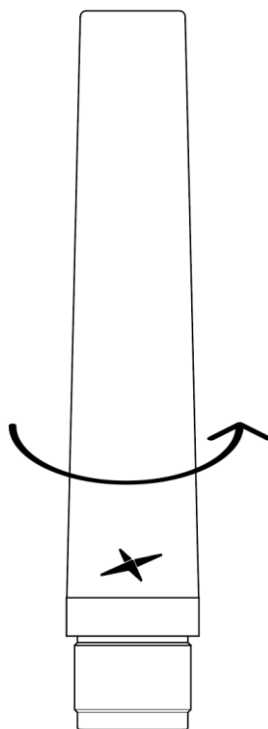
Environmental	
Waterproof Rating	IP67
Operation Temperature	-40°C to 85°C
Storage Temperature	-40°C to 85°C
Relative Humidity	Non-condensing 65°C 95% RH

3. Mechanical Drawing



	Name	Material	Finish	QTY
1	SMA(M) Plug	Brass	NI plated	1
2	TU.60 Housing	ABS+PC	Black	1

4. Installation Recommendation



The recommended mounting torque for the TU.66 is 5 Nm

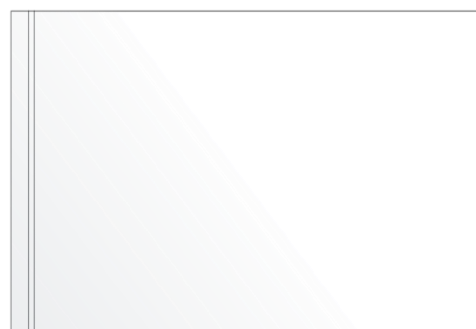
The maximum torque that can be applied is 15 Nm
and anything in excess of this value may cause damage to the product.

5. Packaging

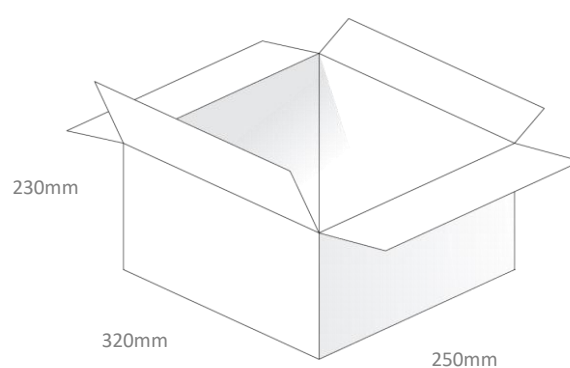
1pc TU.66.3131 per PE Bag
Weight: 55g



50pcs TU.66.3131 per Large PE Bag
Weight: 2.75Kg



200pcs TU.66.3131 per Carton
Dimensions: 320 x 250 x 230mm
Weight: 11Kg

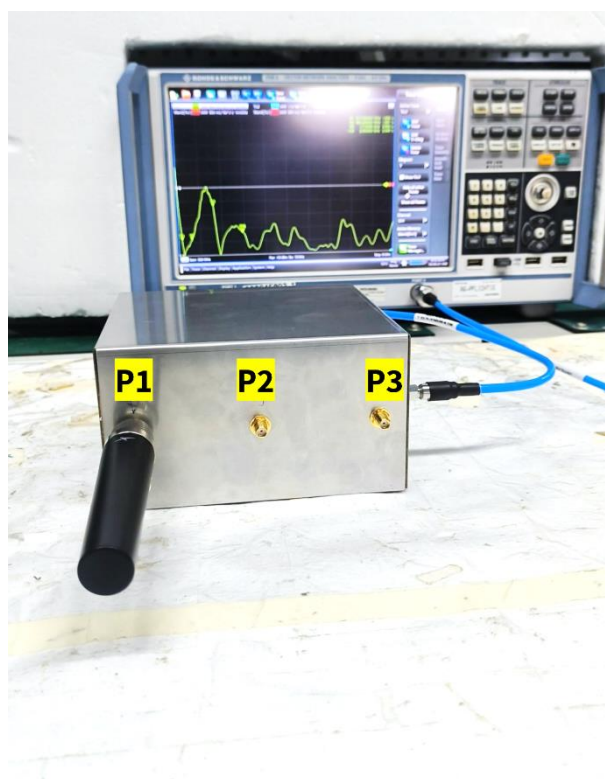


6. Antenna Characteristics

6.1 Test Setup



Vector Network Analyzer



VNA Test Set-up

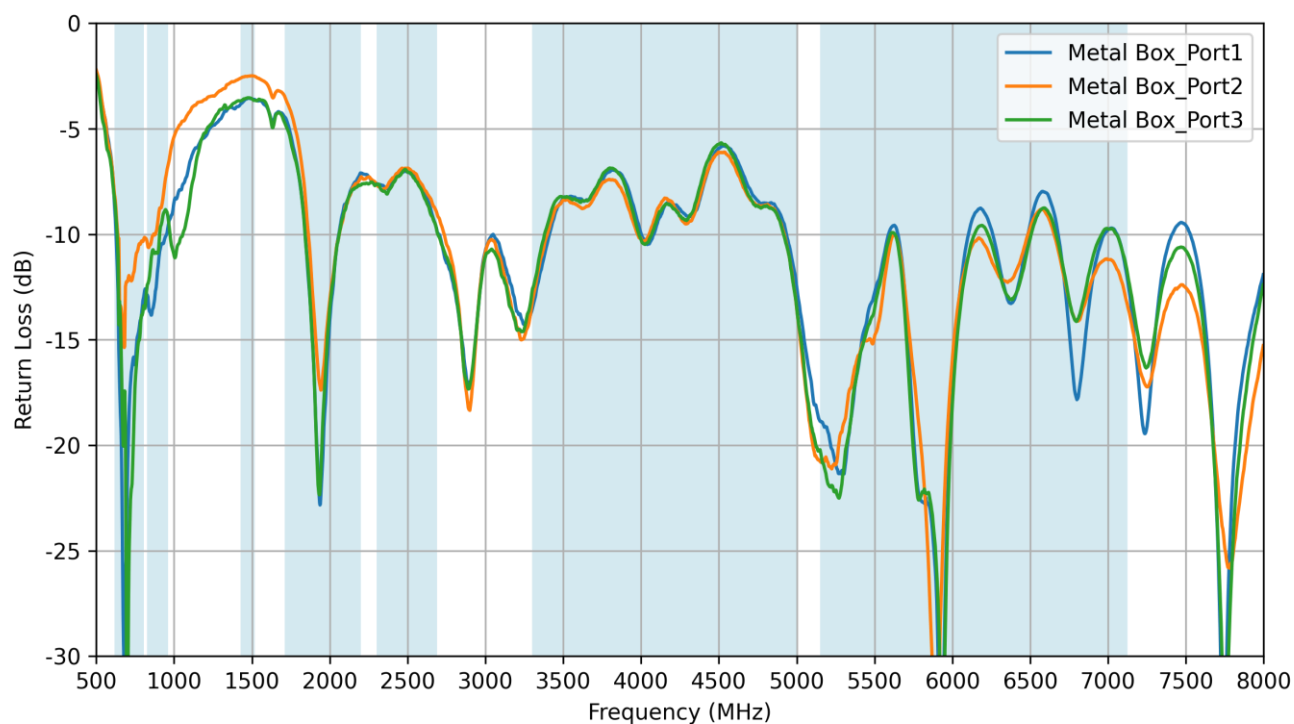
(The Metal box set up above represents a router set up)

P1: Port 1

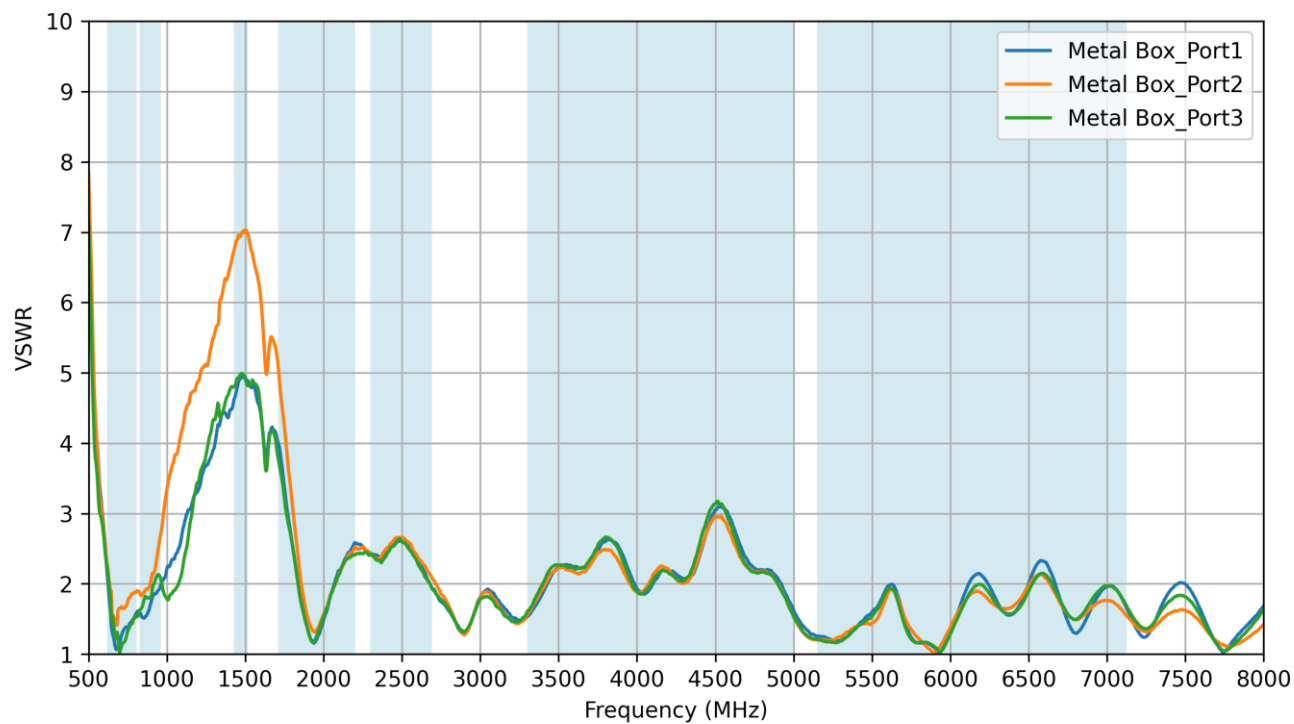
P2: Port 2

P3: Port 3

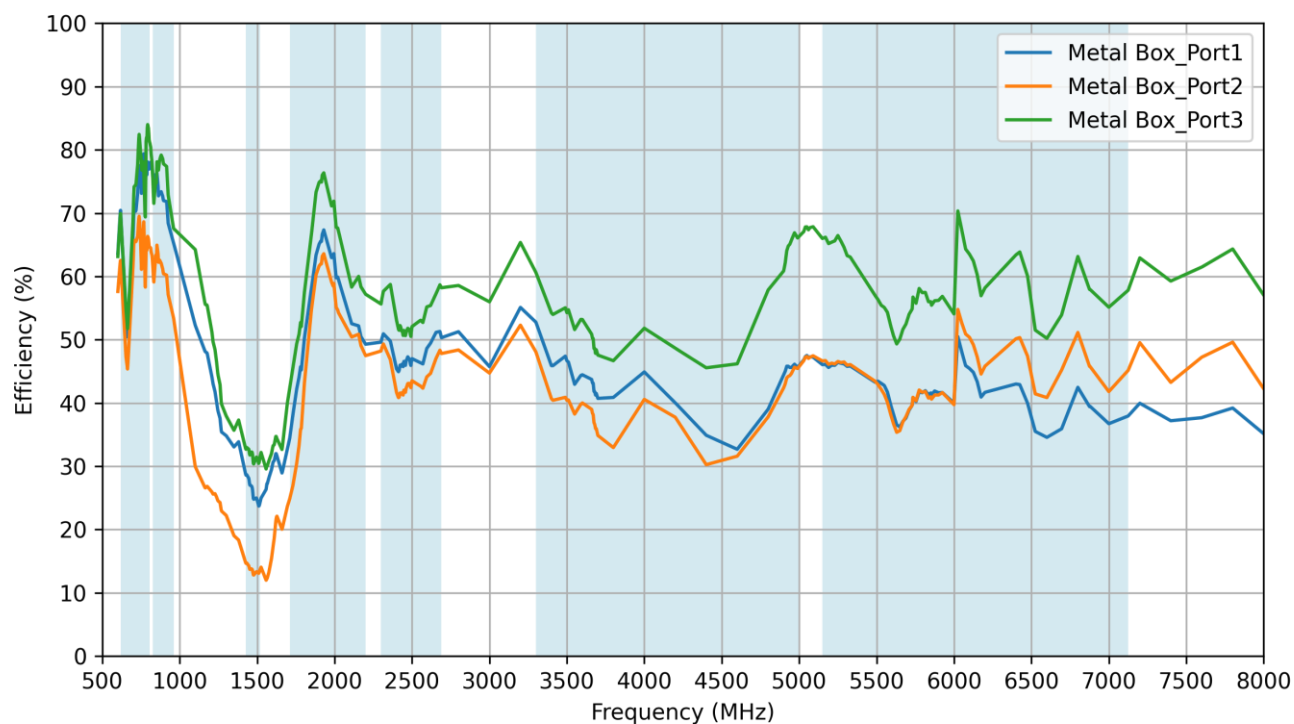
6.2 Return Loss



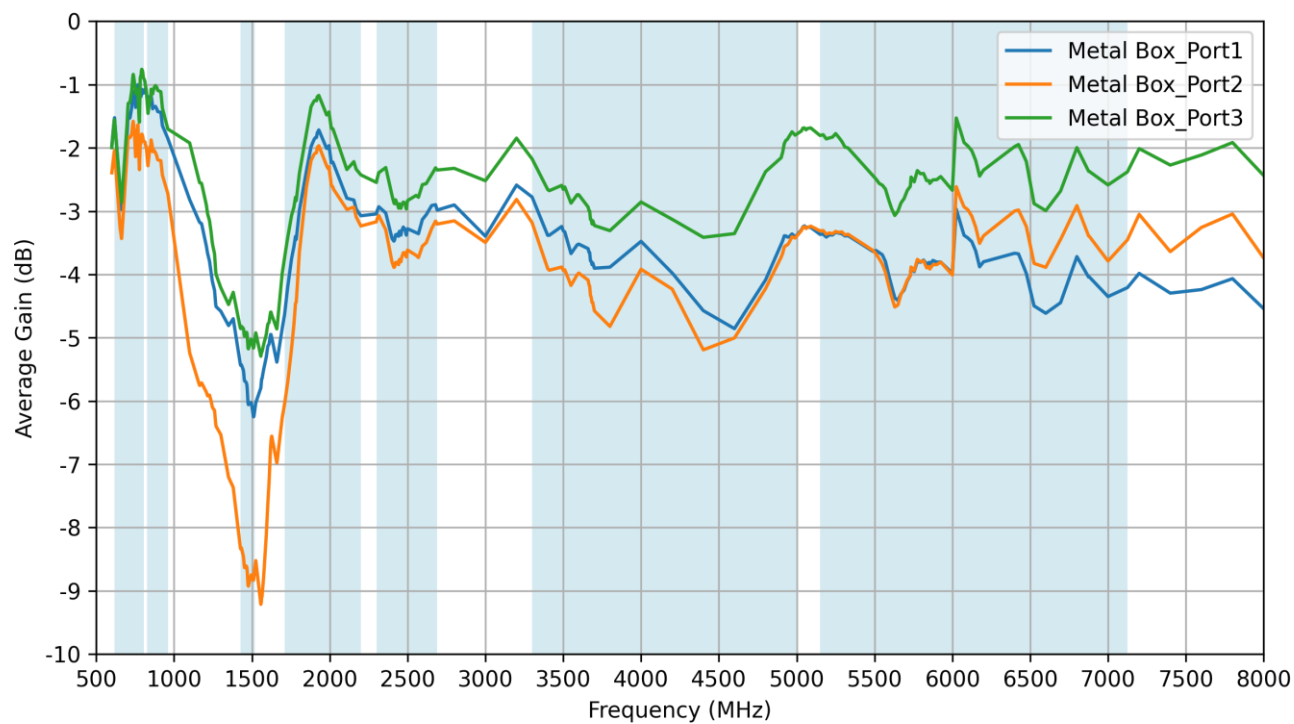
6.3 VSWR



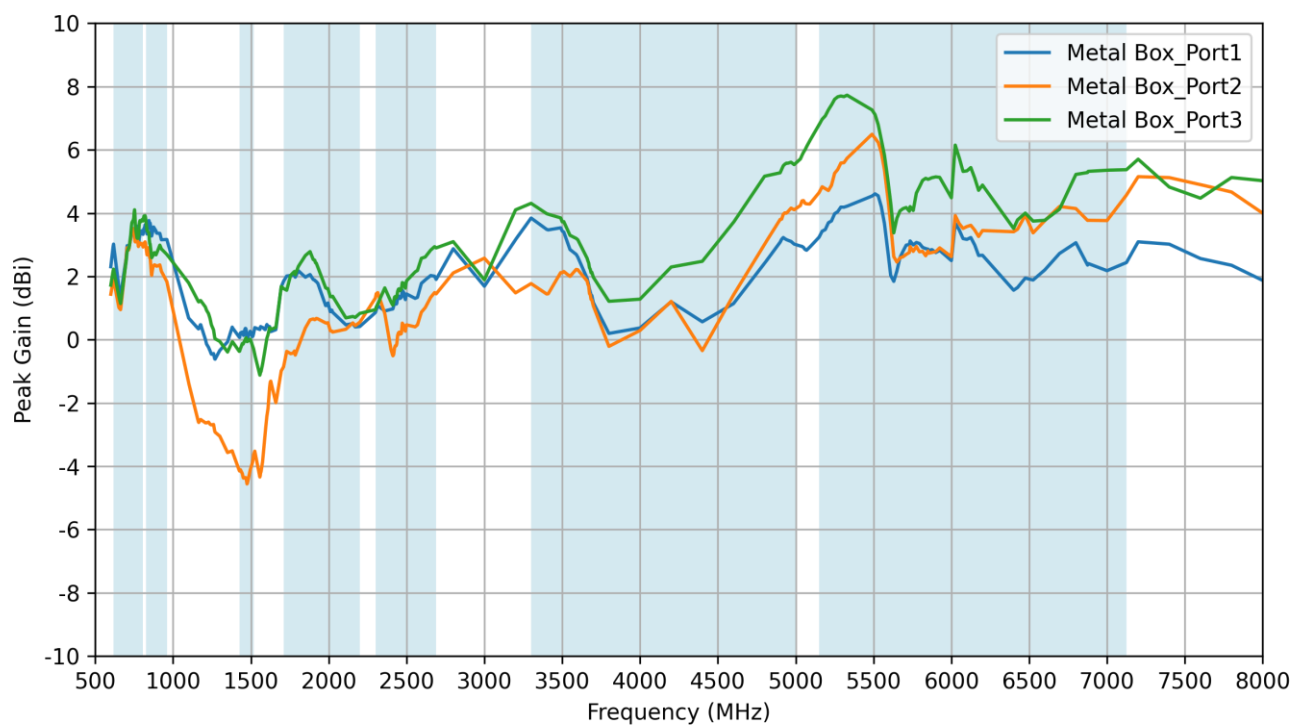
6.4 Efficiency



6.5 Average Gain

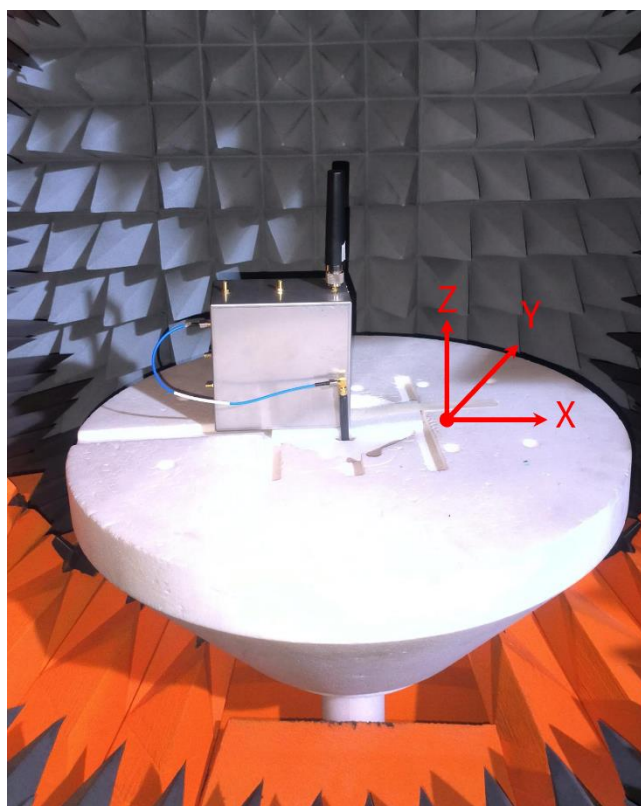
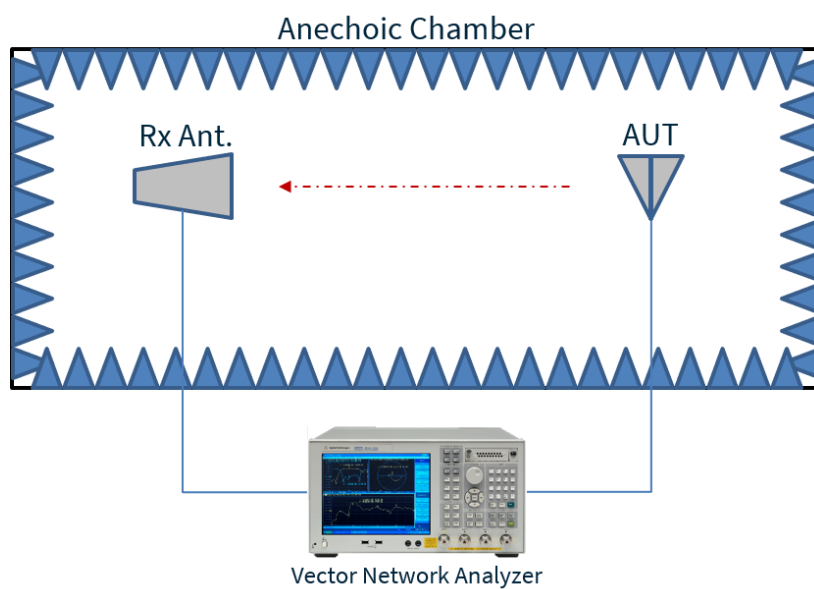


6.6 Peak Gain



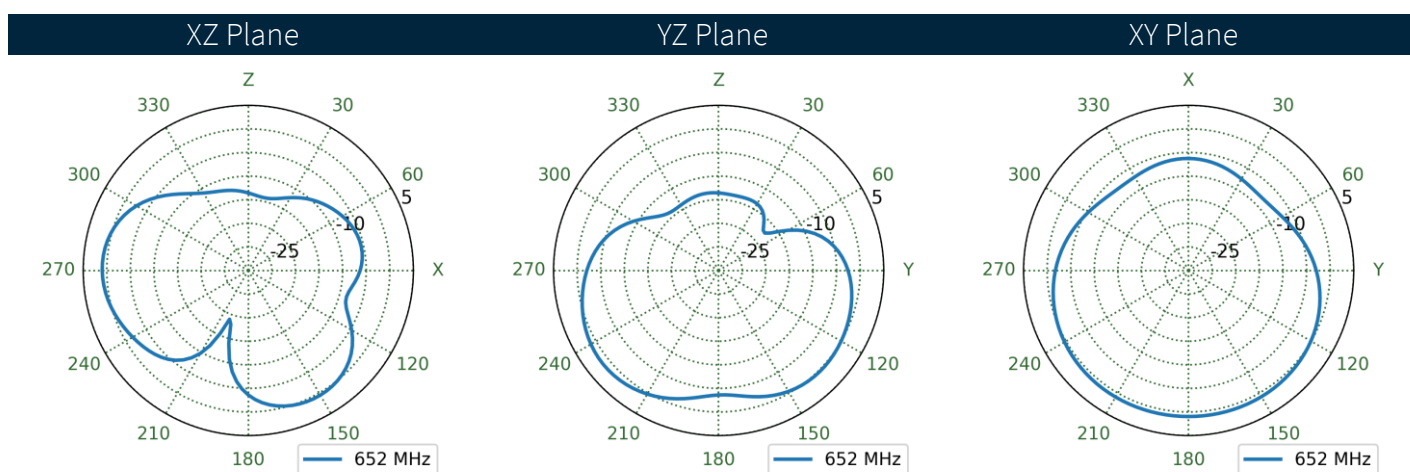
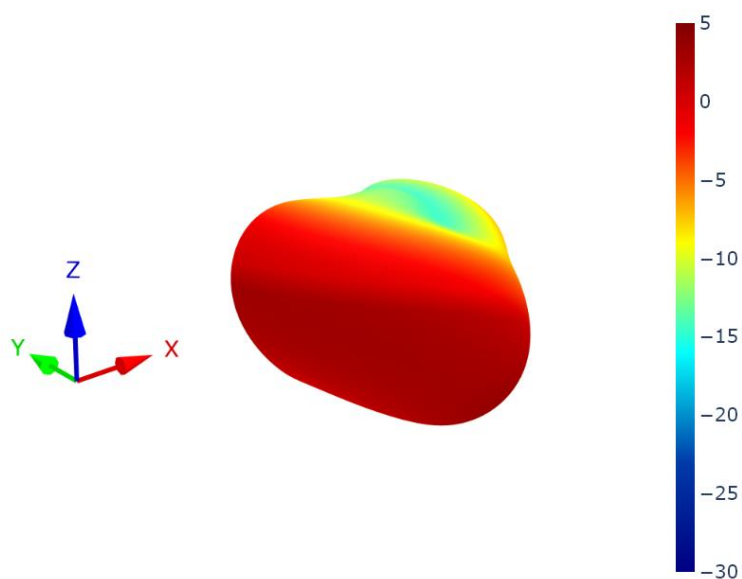
7. Radiation Patterns

7.1 Test Setup

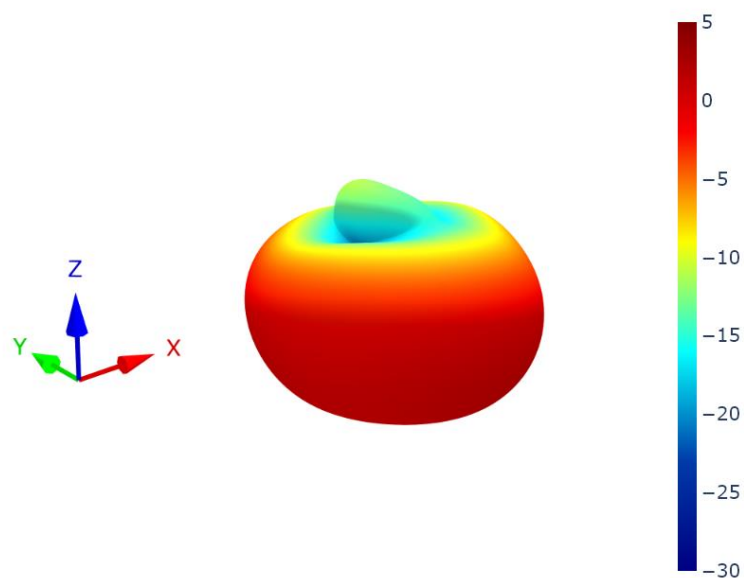


Chamber Test Set-up
(The Metal box set up above represents a router set up)

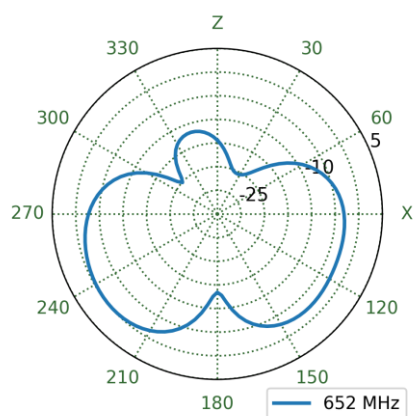
7.2 Metal Box_Port1 Patterns at 652 MHz



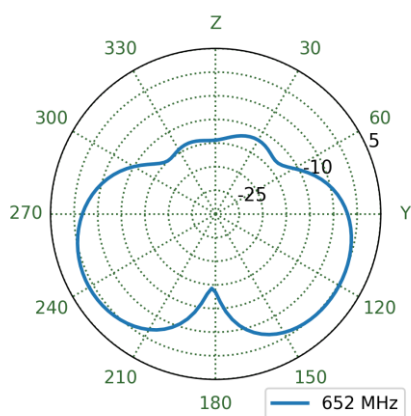
7.3 Metal Box_Port2 Patterns at 652 MHz



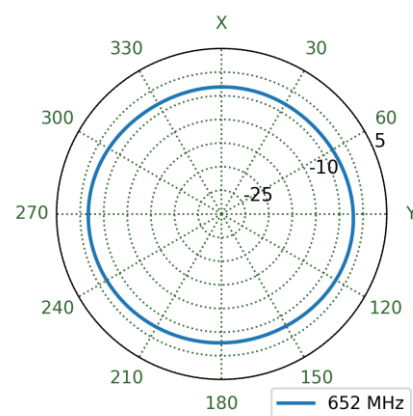
XZ Plane



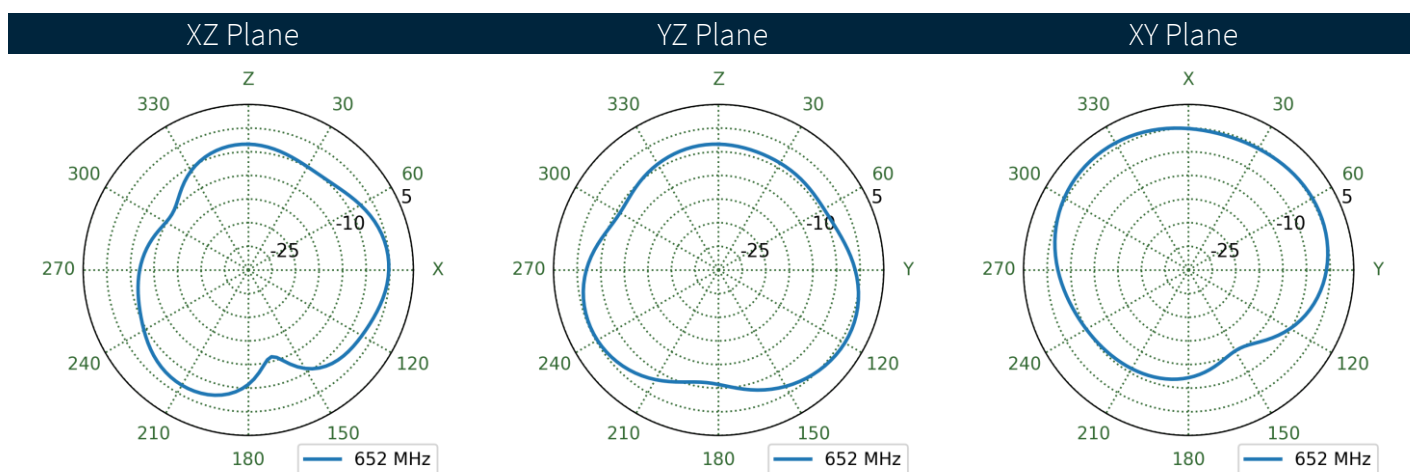
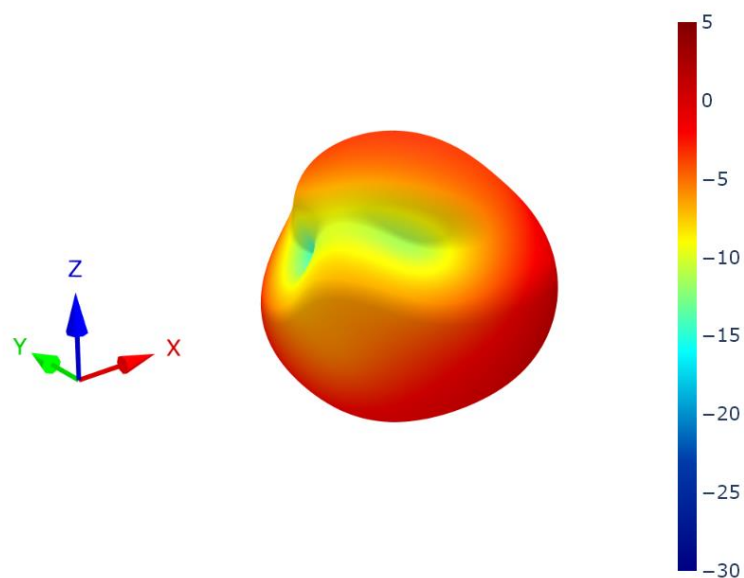
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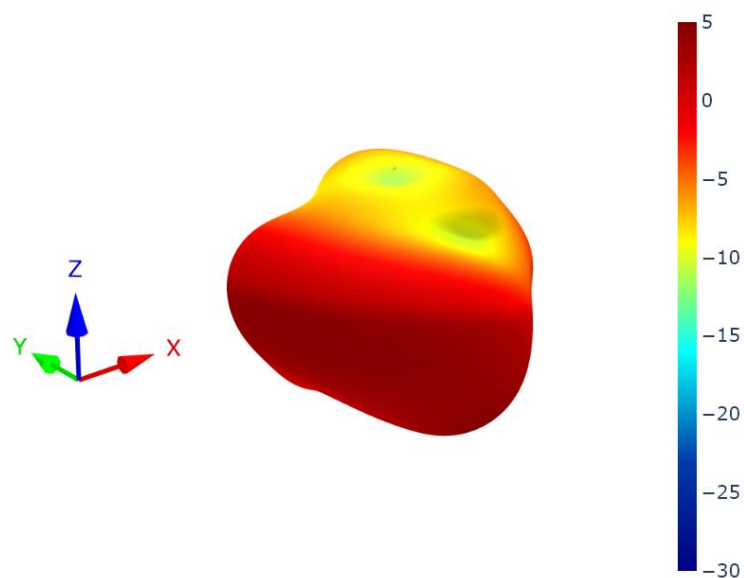
XY Plane



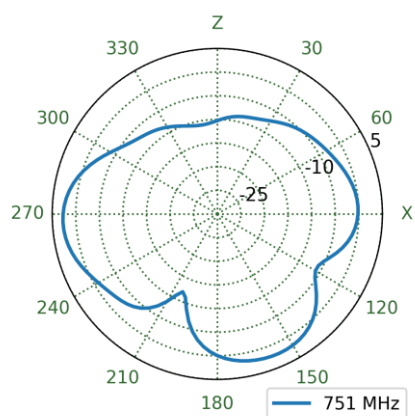
7.4 Metal Box_Port3 Patterns at 652 MHz



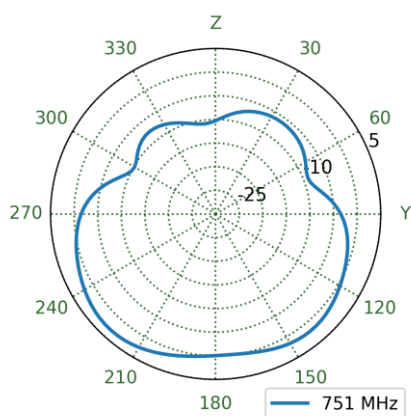
7.5 Metal Box_Port1 Patterns at 751 MHz



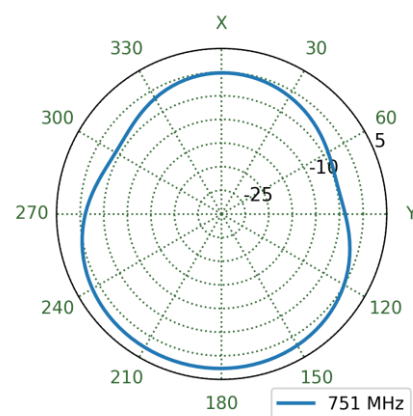
XZ Plane



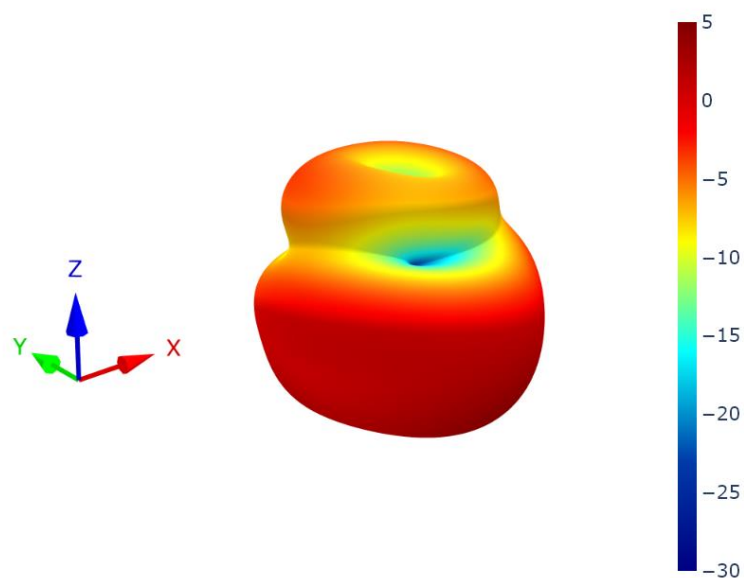
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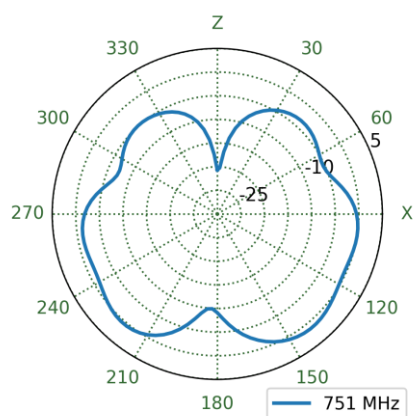
XY Plane



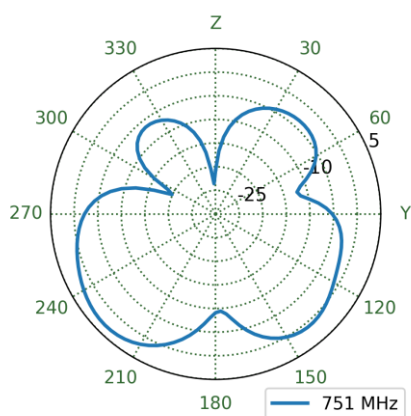
7.6 Metal Box_Port2 Patterns at 751 MHz



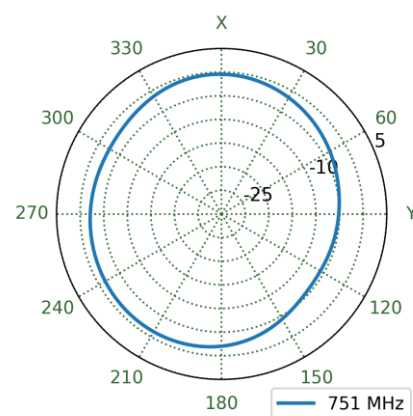
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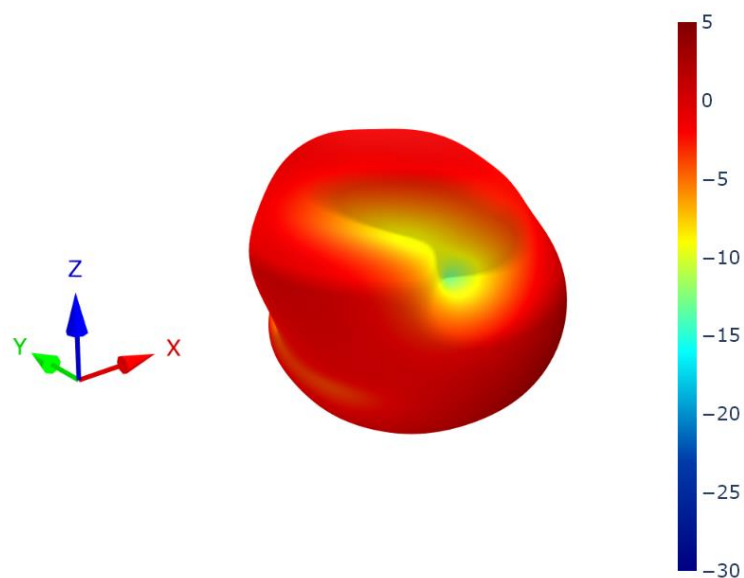
YZ Plane



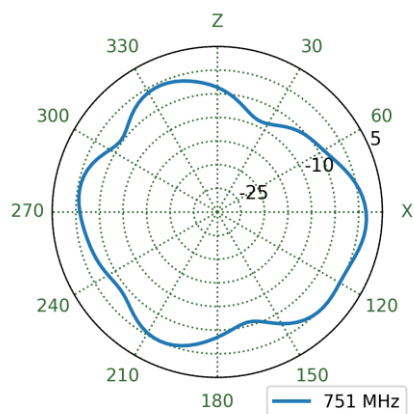
XY Plane



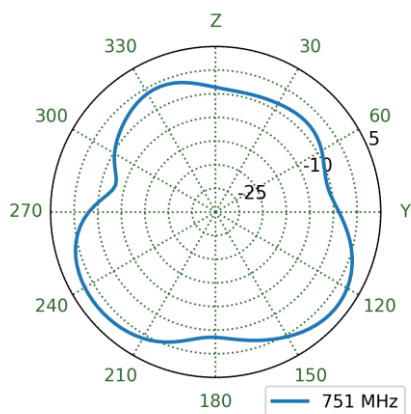
7.7 Metal Box_Port3 Patterns at 751 MHz



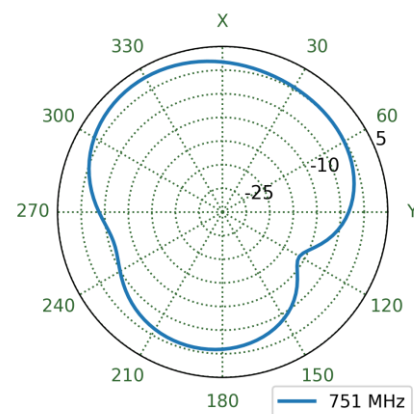
XZ Plane



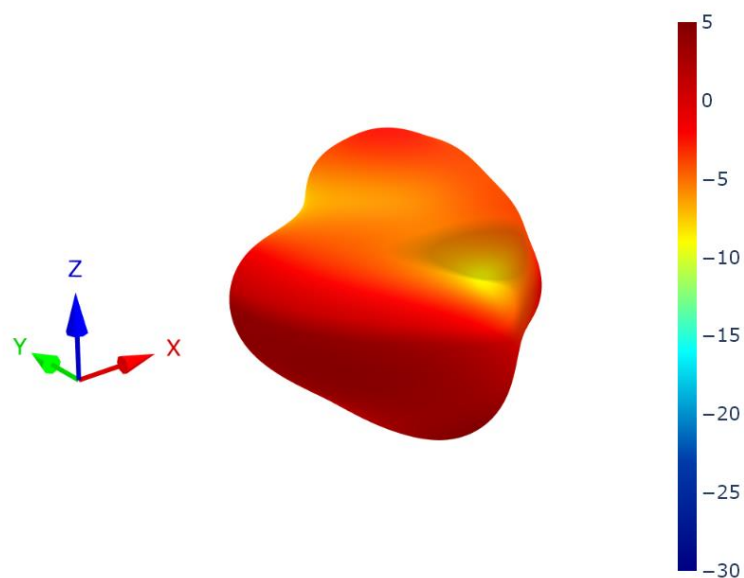
YZ Plane



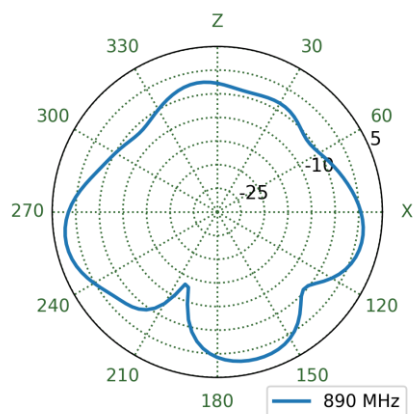
XY Plane



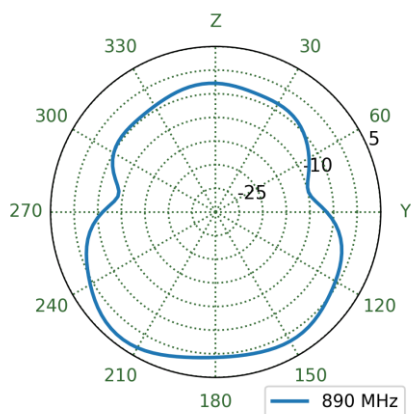
7.8 Metal Box_Port1 Patterns at 890 MHz



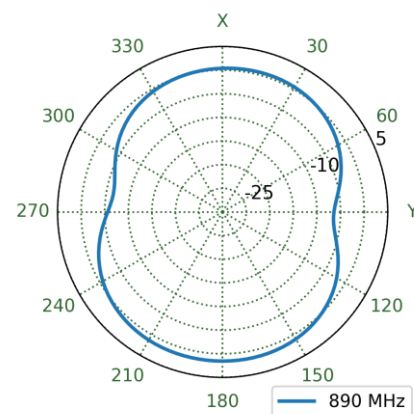
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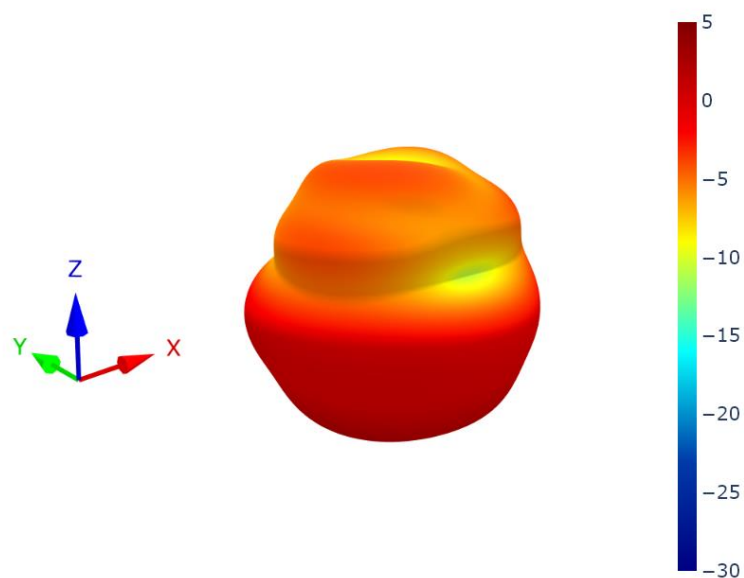
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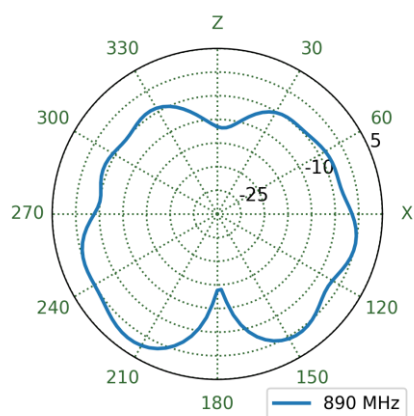
XY Plane



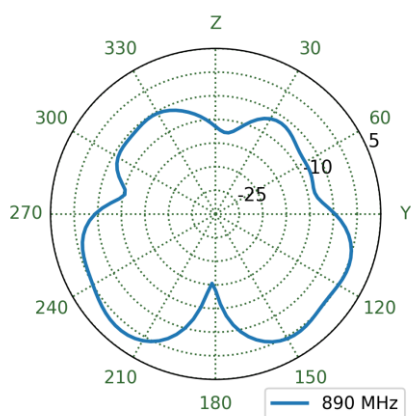
7.9 Metal Box_Port2 Patterns at 890 MHz



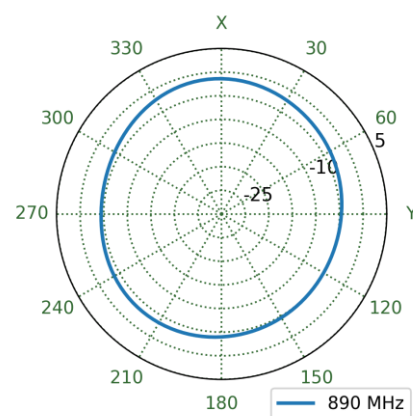
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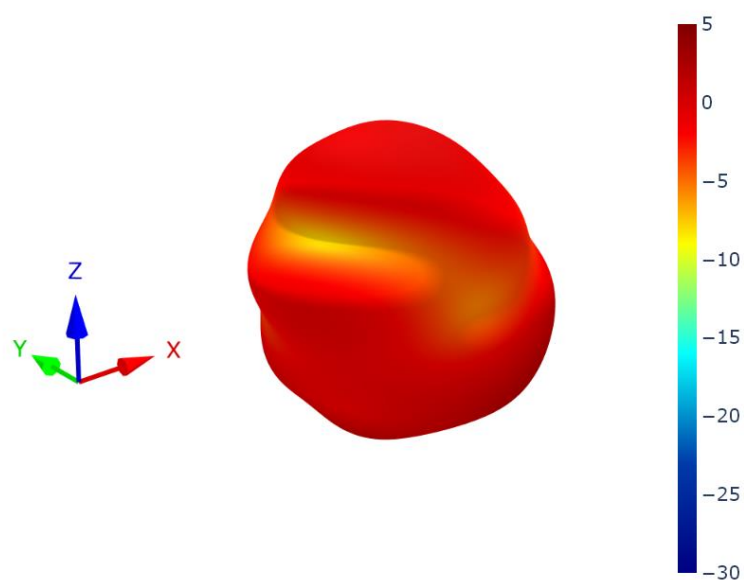
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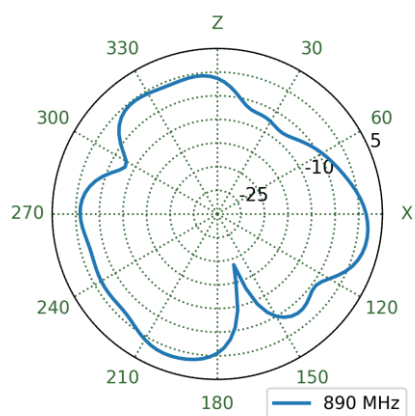
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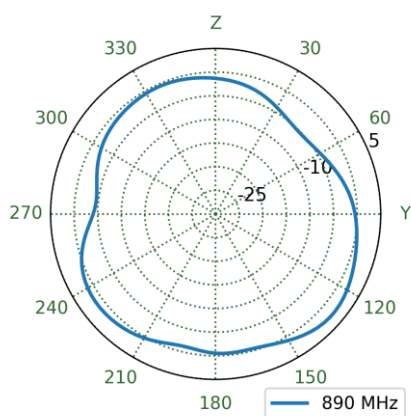
7.10 Metal Box_Port3 Patterns at 890 MHz



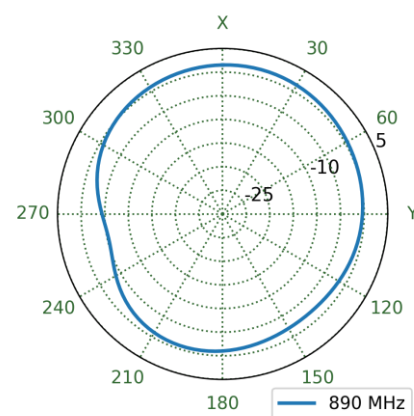
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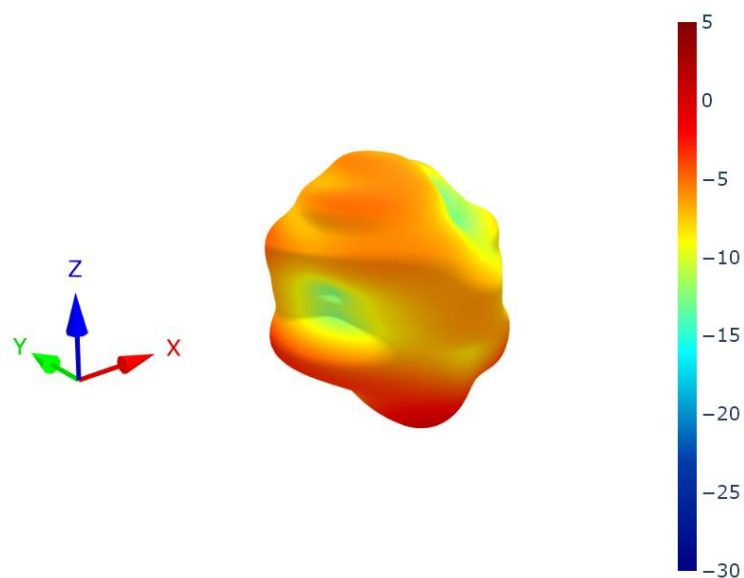
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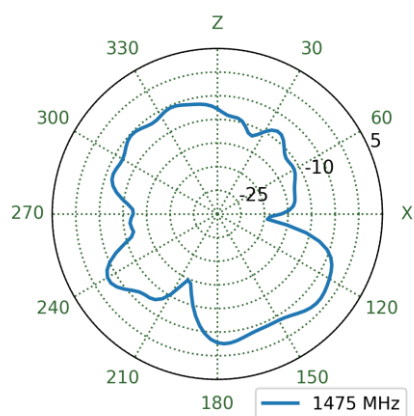
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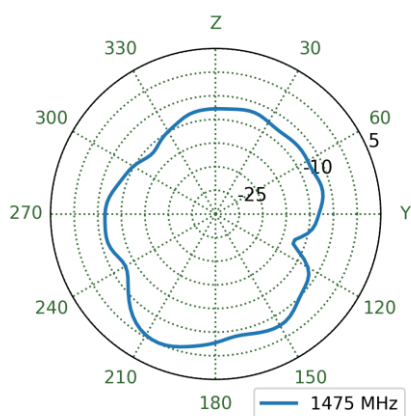
7.11 Metal Box_Port1 Patterns at 1475 MHz



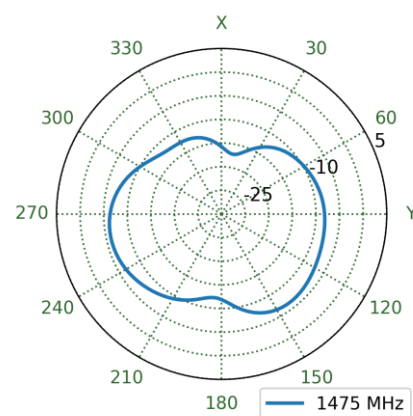
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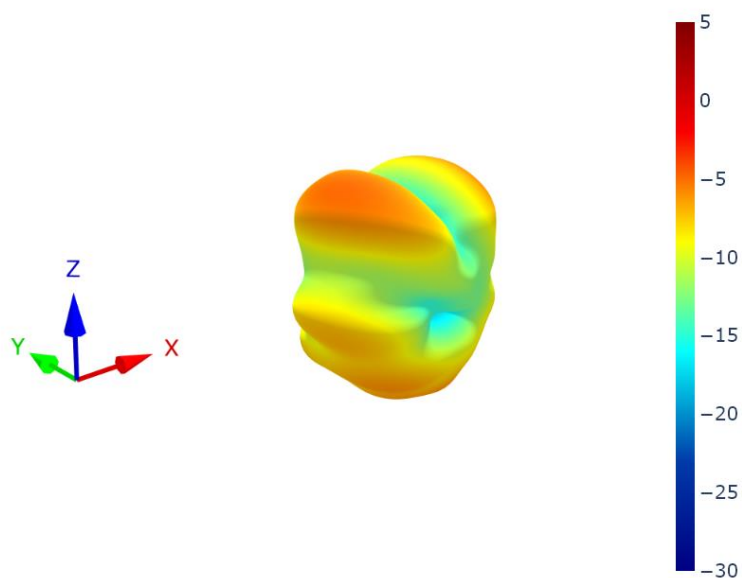
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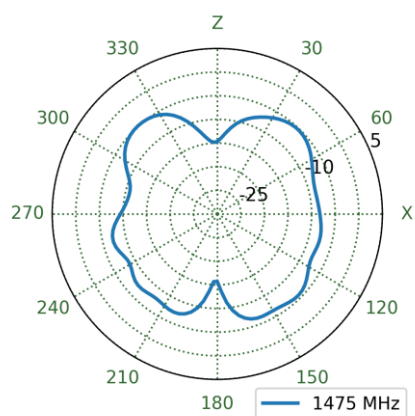
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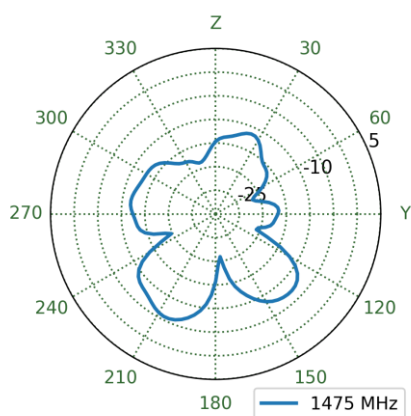
7.12 Metal Box_Port2 Patterns at 1475 MHz



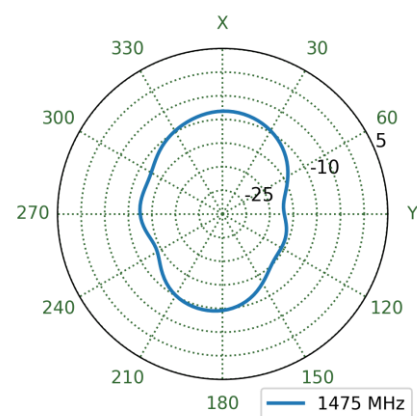
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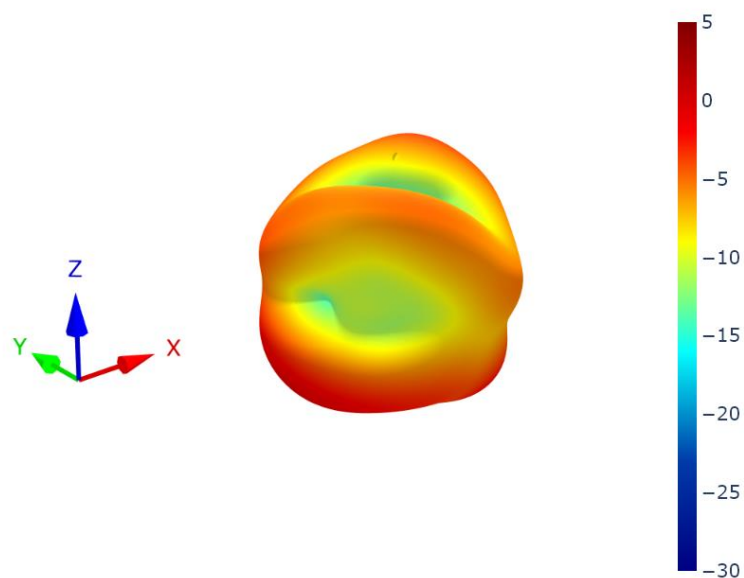
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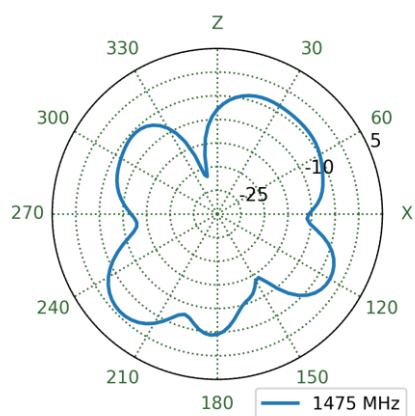
XY Plane



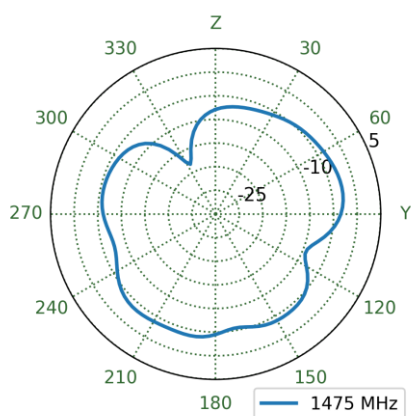
7.13 Metal Box_Port3 Patterns at 1475 MHz



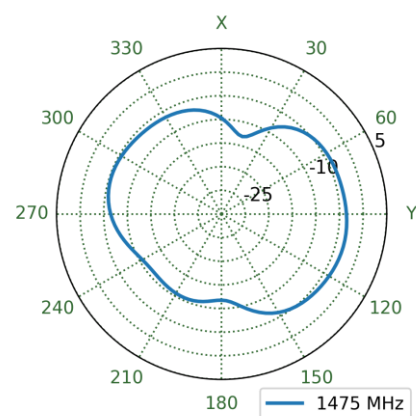
XZ Plane



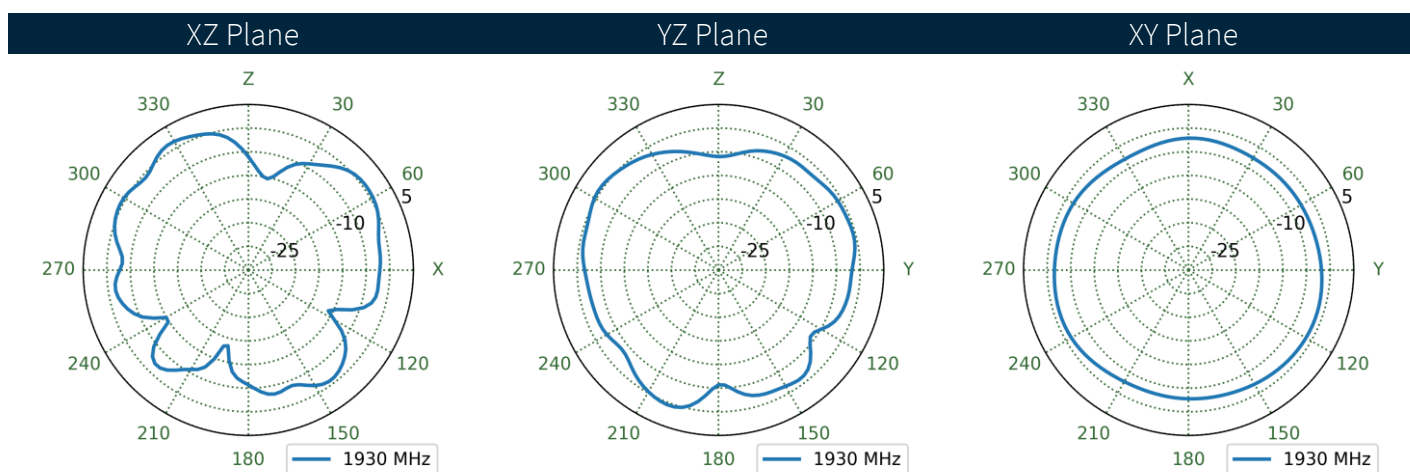
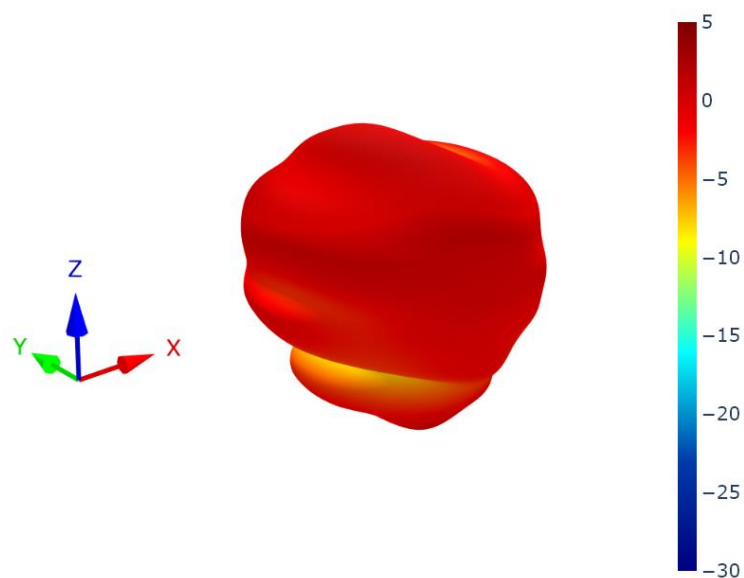
YZ Plane



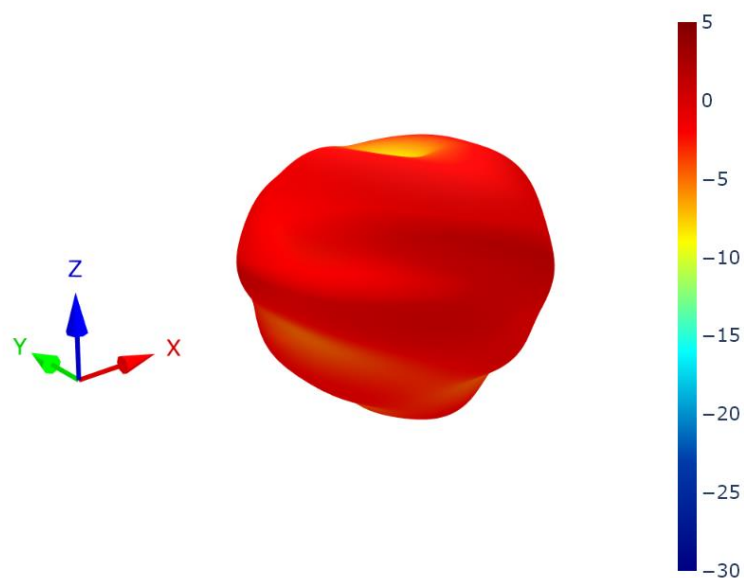
XY Plane



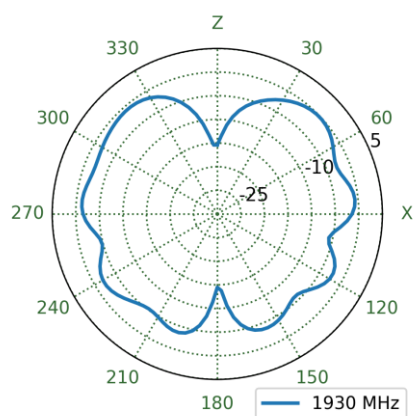
7.14 Metal Box_Port1 Patterns at 1930 MHz



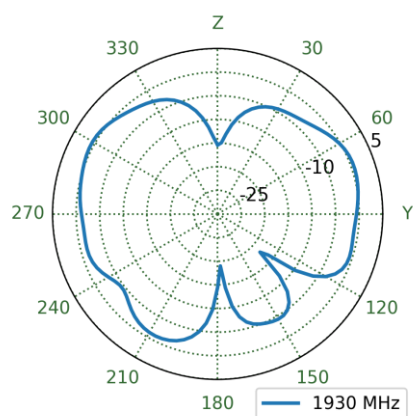
7.15 Metal Box_Port2 Patterns at 1930 MHz



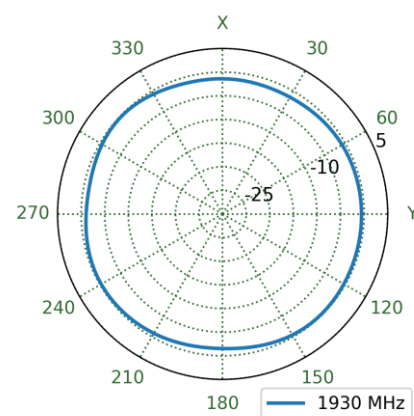
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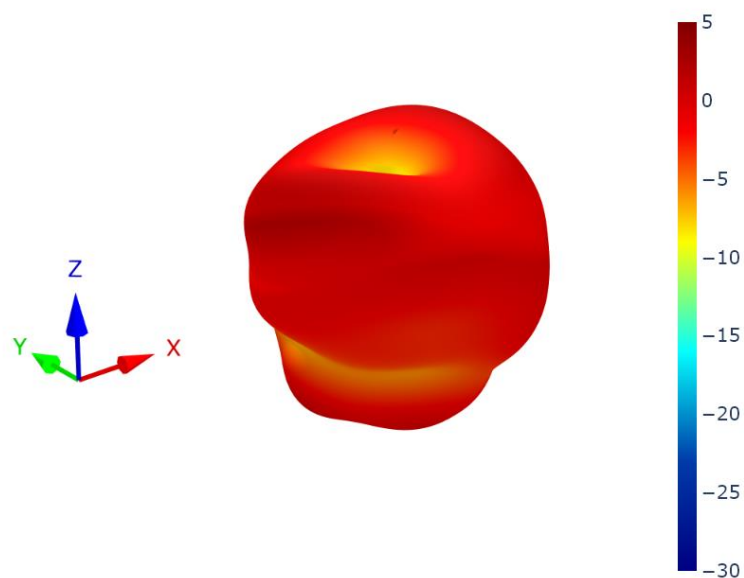
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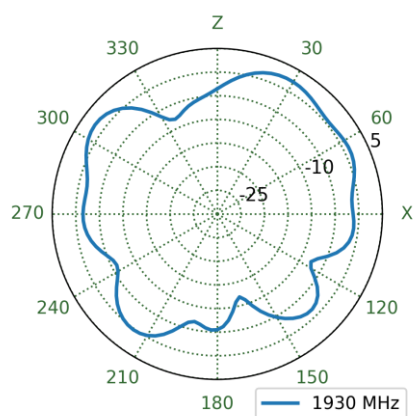
XY Plane



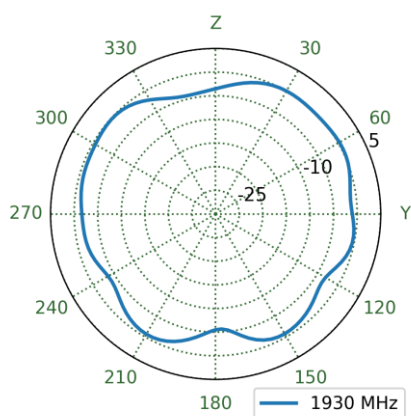
7.16 Metal Box_Port3 Patterns at 1930 MHz



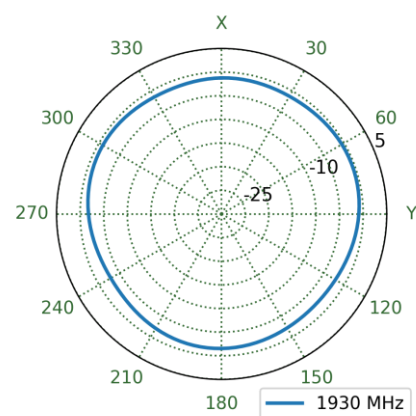
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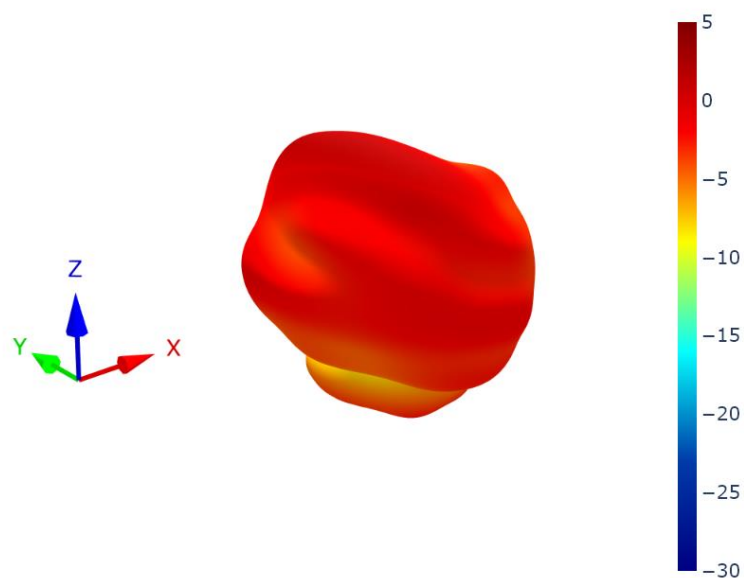
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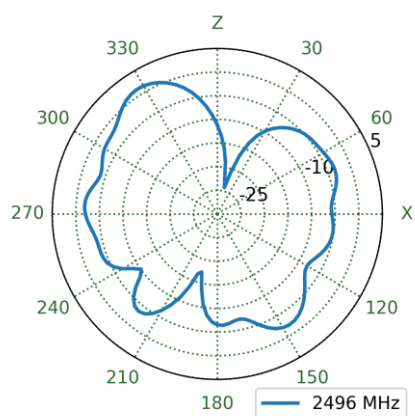
XY Plane



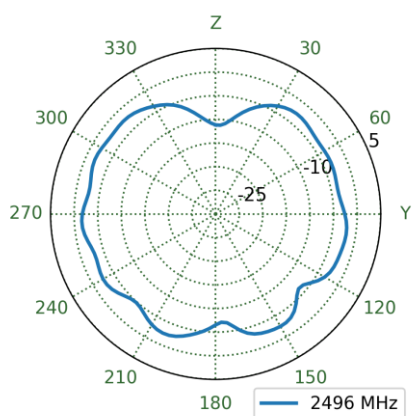
7.17 Metal Box_Port1 Patterns at 2496 MHz



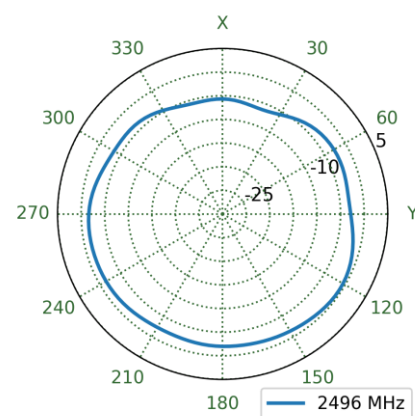
XZ Plane



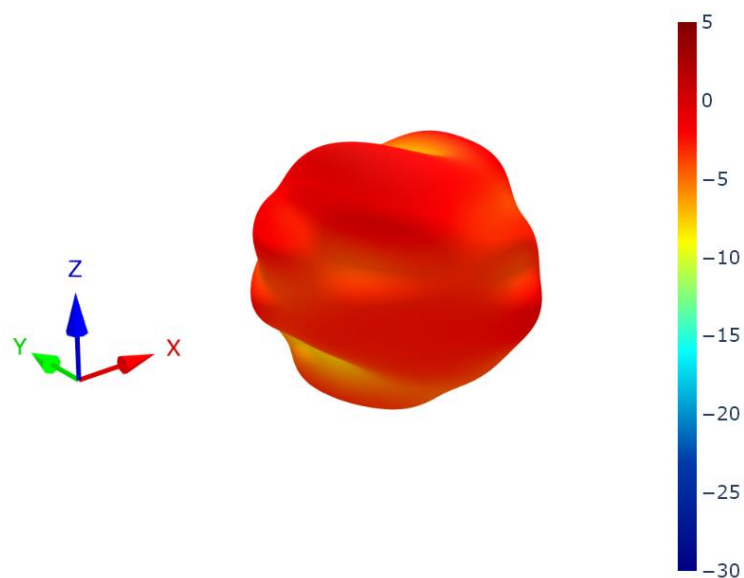
YZ Plane



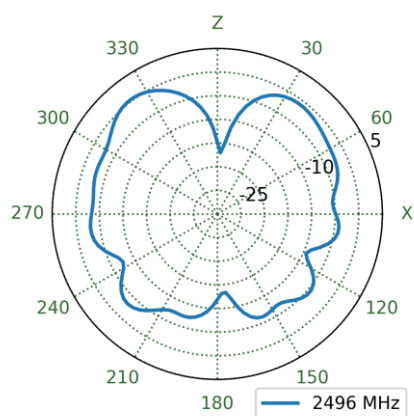
XY Plane



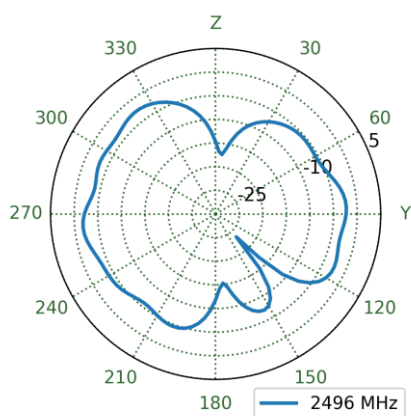
7.18 Metal Box_Port2 Patterns at 2496 MHz



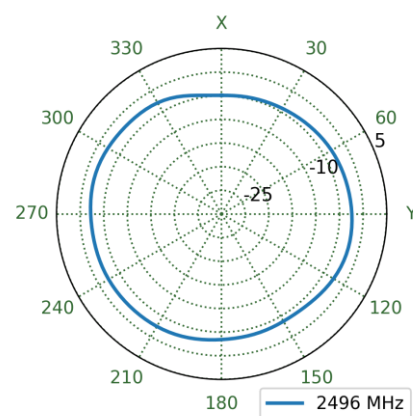
XZ Plane



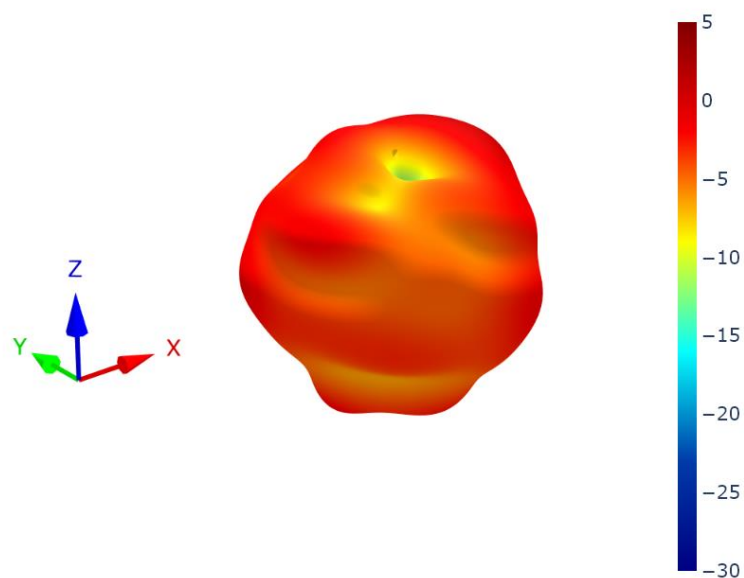
YZ Plane



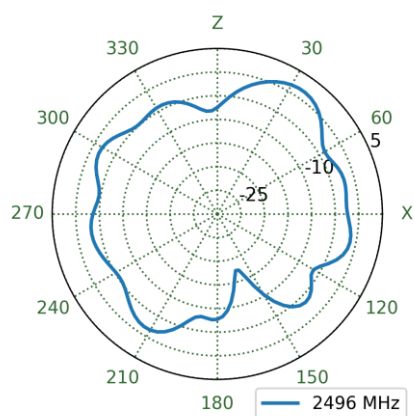
XY Plane



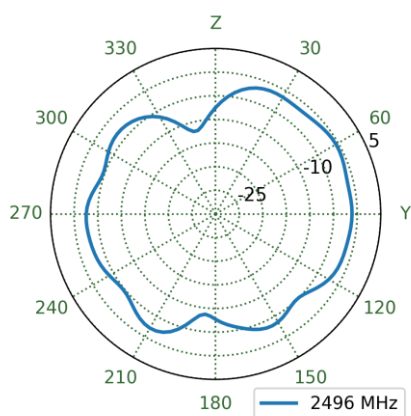
7.19 Metal Box_Port3 Patterns at 2496 MHz



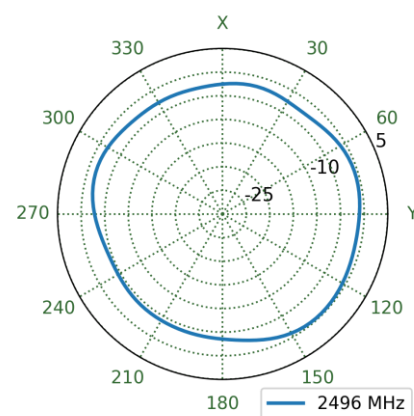
XZ Plane



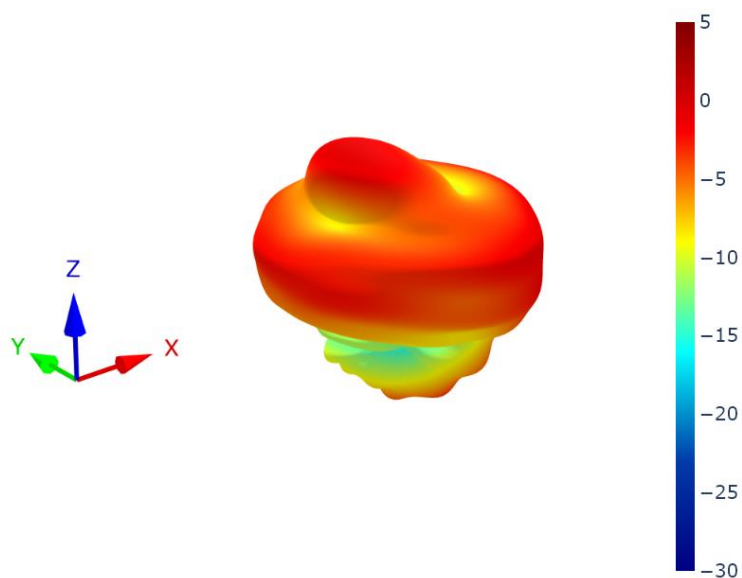
YZ Plane



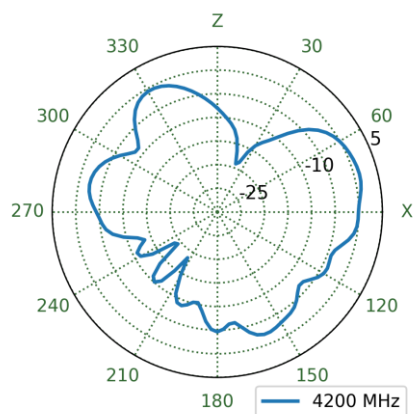
XY Plane



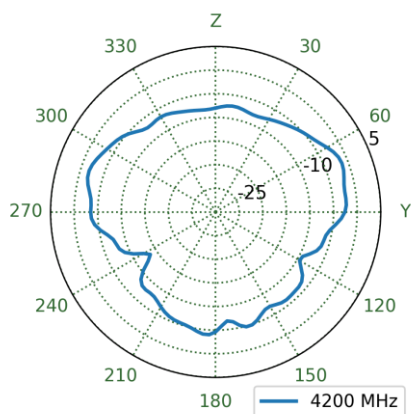
7.20 Metal Box_Port1 Patterns at 4200 MHz



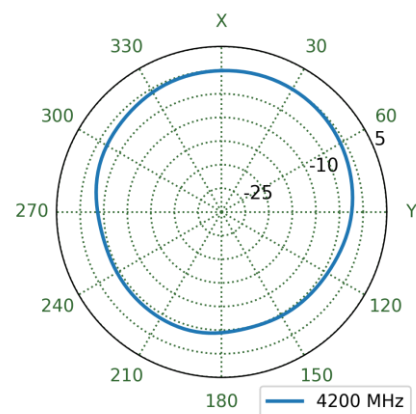
XZ Plane



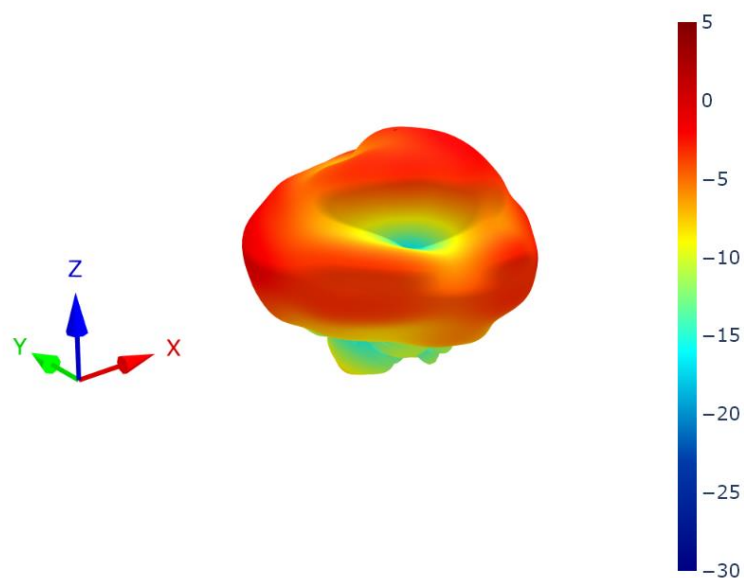
YZ Plane



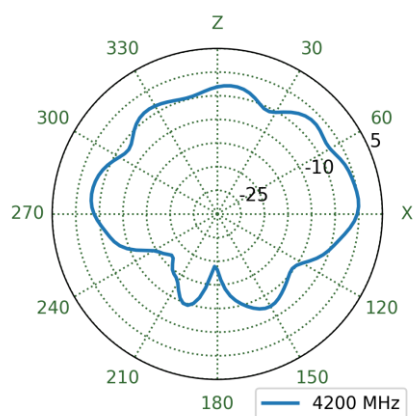
XY Plane



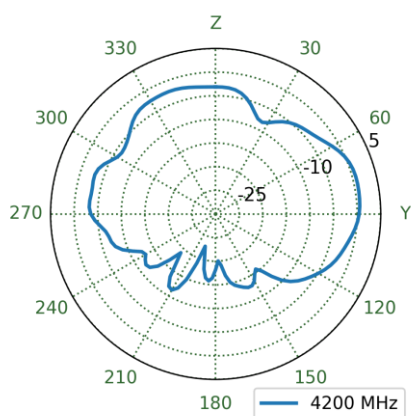
7.21 Metal Box_Port2 Patterns at 4200 MHz



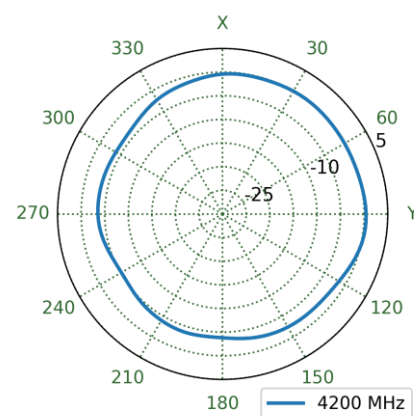
XZ Plane



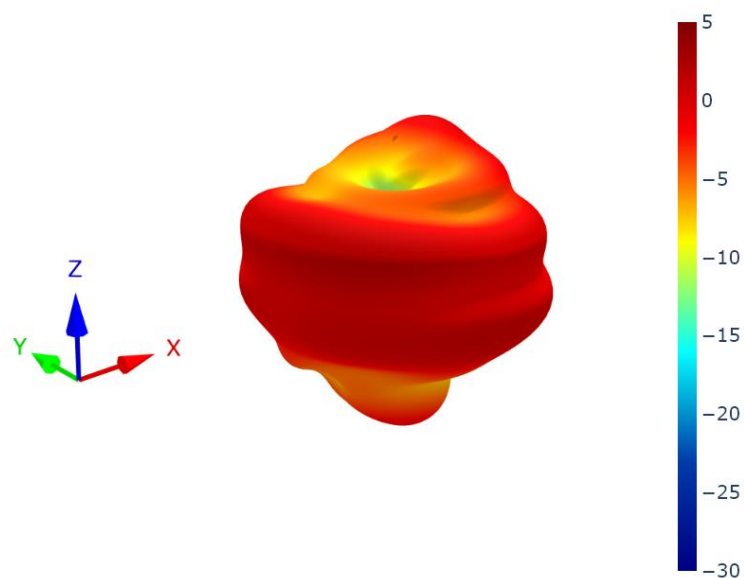
YZ Plane



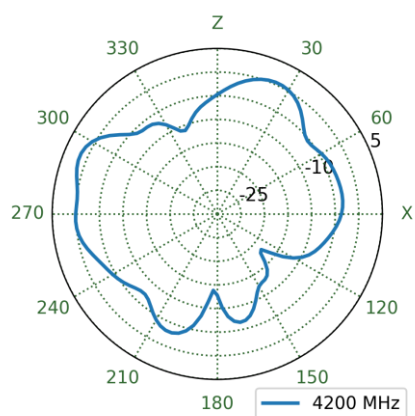
XY Plane



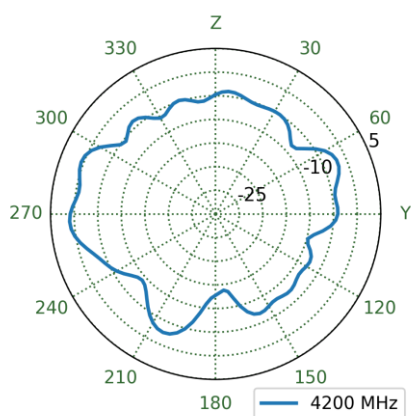
7.22 Metal_Box_Port3 Patterns at 4200 MHz



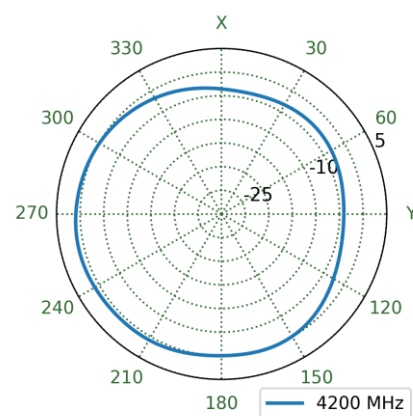
XZ Plane



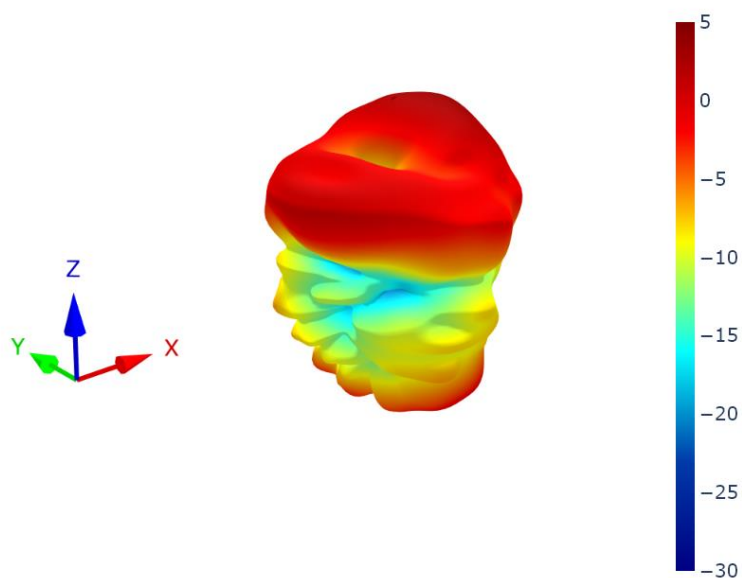
YZ Plane



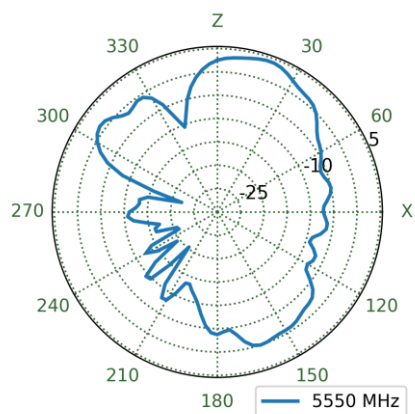
XY Plane



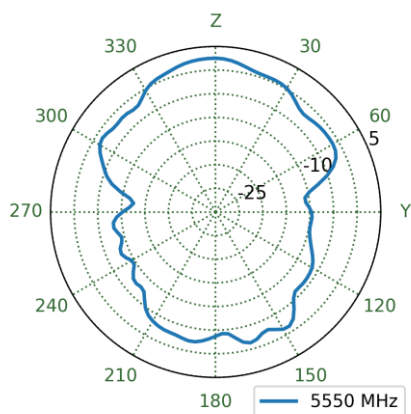
7.23 Metal Box_Port1 Patterns at 5550 MHz



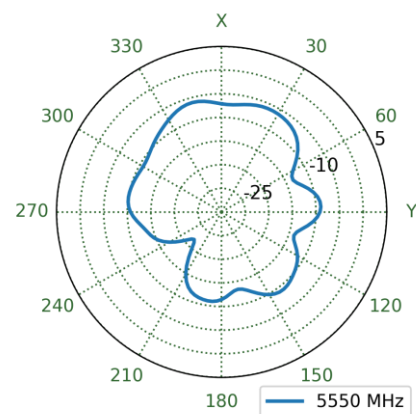
XZ Plane



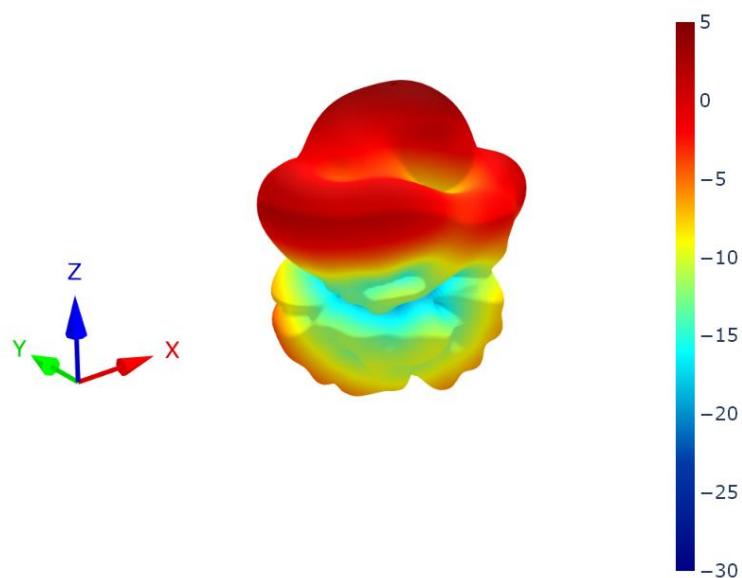
YZ Plane



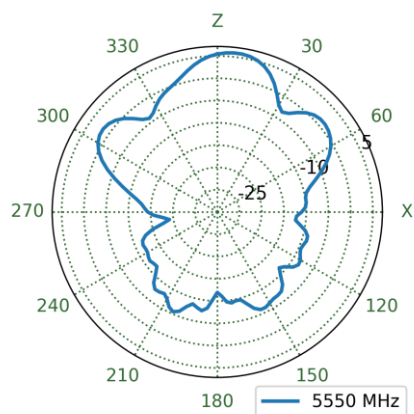
XY Plane



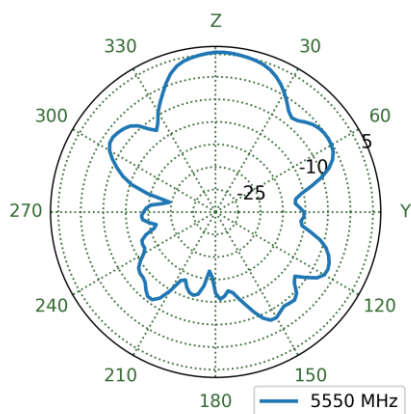
7.24 Metal Box_Port2 Patterns at 5550 MHz



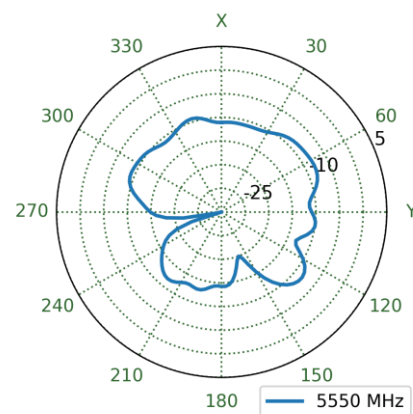
XZ Plane



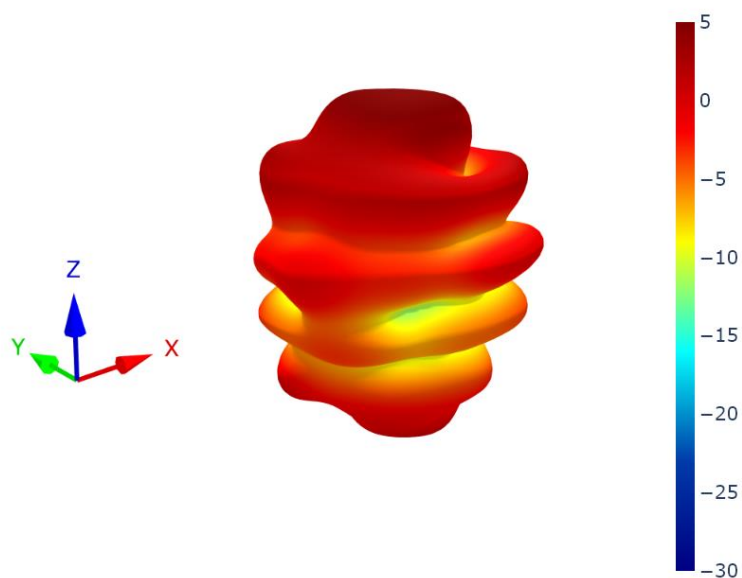
YZ Plane



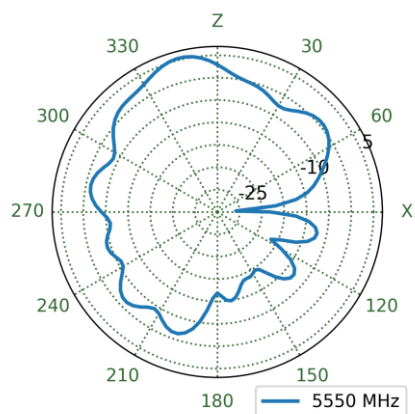
XY Plane



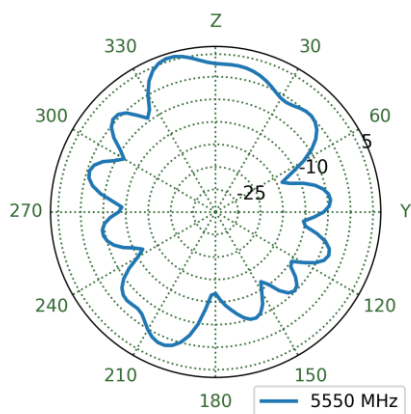
7.25 Metal Box_Port3 Patterns at 5550 MHz



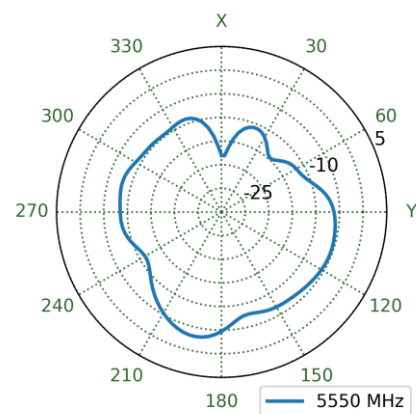
XZ Plane



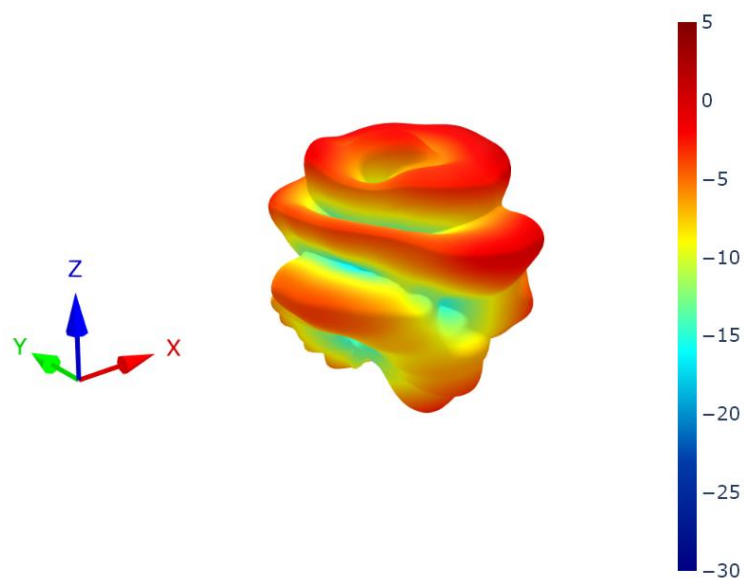
YZ Plane



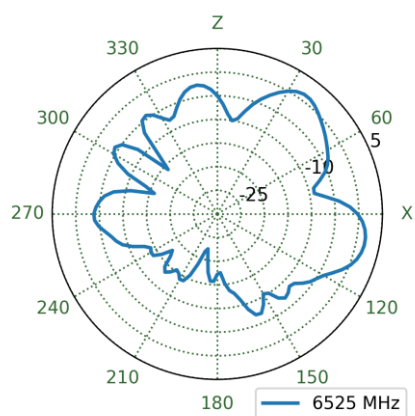
XY Plane



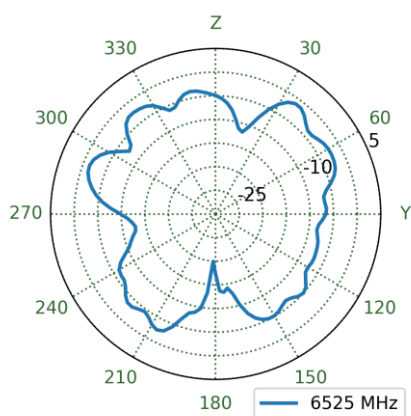
7.26 Metal Box_Port1 Patterns at 6525 MHz



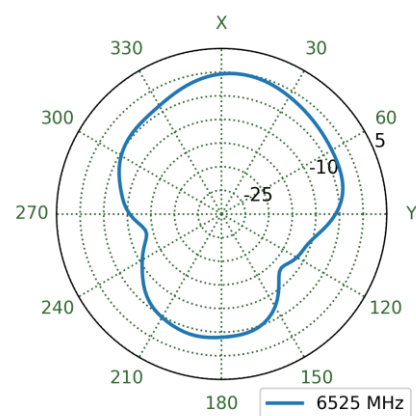
XZ Plane



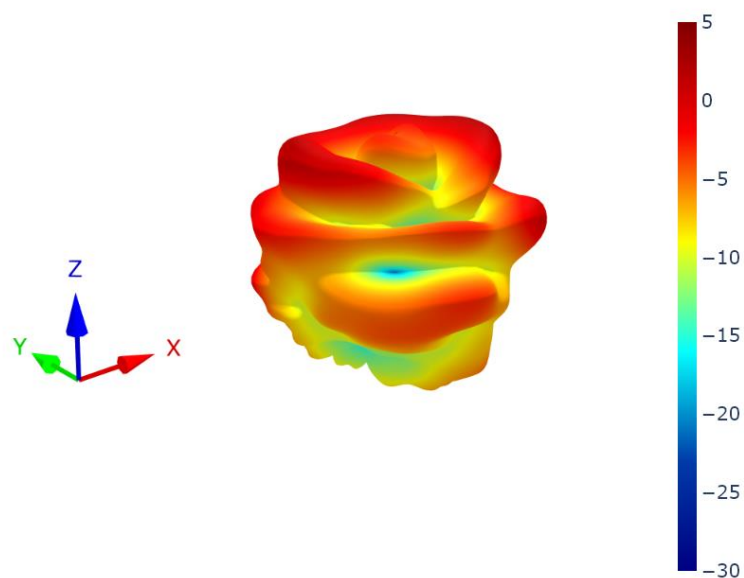
YZ Plane



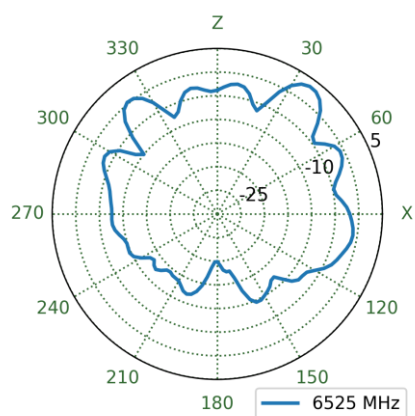
XY Plane



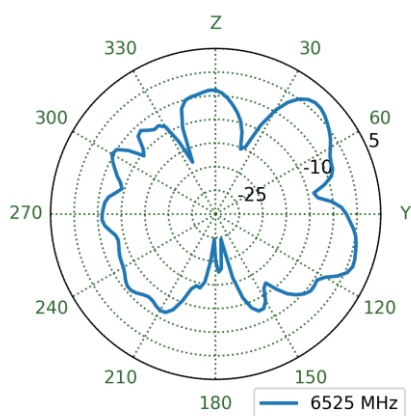
7.27 Metal Box_Port2 Patterns at 6525 MHz



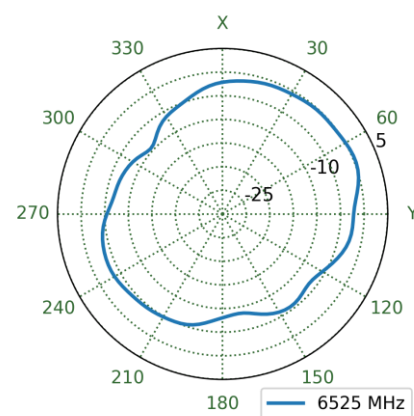
XZ Plane



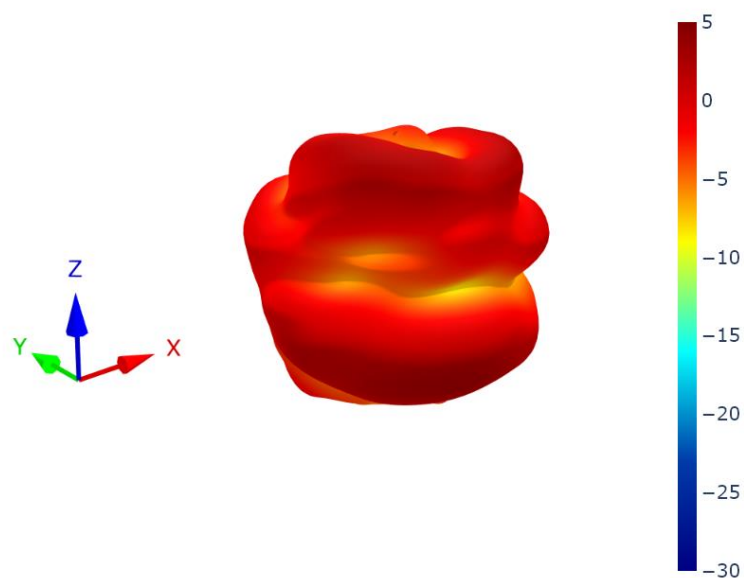
YZ Plane



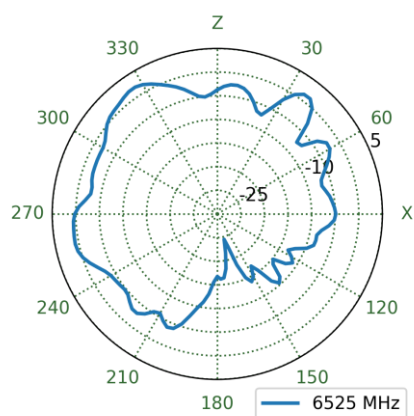
XY Plane



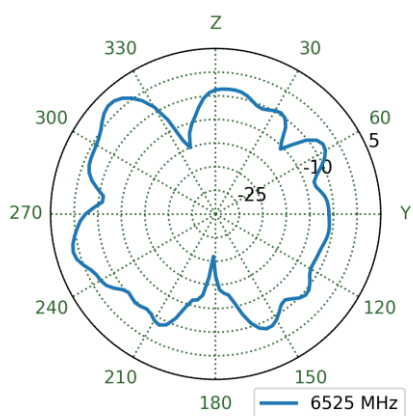
7.28 Metal Box_Port3 Patterns at 6525 MHz



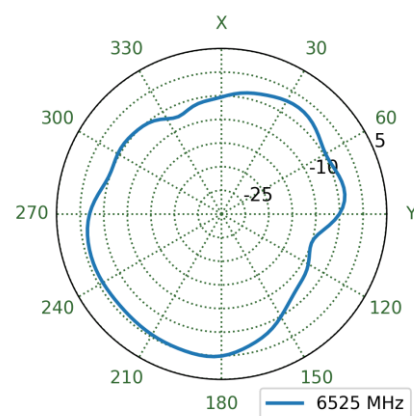
XZ Plane



YZ Plane



XY Plane



Changelog for the datasheet

SPE-25-8-184 – TU.66.3131

Revision: A (Initial Release)

Date:	2025-07-04
Notes:	Initial Datasheet Release
Author:	Gary West

Previous Revisions



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