



TAOGLAS®

Datasheet

Part No:

Black - FW.15.M6.F

White - FW.15.M6.FW

Description

Triband Flexible Whip Antenna (150-174 / 430-520 / 700-900MHz)
with M6(F) Connector

Features:

Flexible Whip Antenna
Compact Size and Wide Band LMR Coverage
Frequency Covering: 150-174MHz, 430-520MHz, 700-900MHz
IP67 Waterproof Rated Enclosure
Dims: Ø15 x 200 mm
Connector: M6 Female
RoHS & Reach Compliant



1.	Introduction	3
2.	Specification	4
3.	Mechanical Drawing	5
4.	Packaging	6
5.	Antenna Characteristics	7
6.	Radiation Patterns	11
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	Changelog	15

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1. Introduction



The Taoglas **FW.15** is a rugged, high-performance Flexible Whip Antenna designed to deliver reliable connectivity across three key frequency bands of LMR application: 150-174 MHz, 430-520 MHz, and 700-900 MHz. Its multi-band capability makes it suitable for a wide range of VHF, UHF, and upper-band communication systems.

Encased in a durable, IP67 rated housing, the FW.15 is built to withstand harsh outdoor and industrial environments. The antenna's flexible whip structure and slim 15 mm diameter makes it resistant to damage from impact or vibration, while the compact 200mm length supports strong radiation performance across all bands.

Equipped with an M6 female connector, the FW.15 integrates easily into handheld, fixed, and mobile communication platforms. Its omnidirectional radiation pattern ensures consistent performance for mission critical applications requiring dependable field operation. It is also suitable with our Patriot and Raptor series of external combination products.

Typical Applications

- VHF/UHF handheld and portable radios
- Industrial communications and telemetry
- Smart city and infrastructure systems
- Public safety, security, and emergency services
- IoT and M2M systems operating in sub-GHz bands

Contact your regional Taoglas customer support team for further information.

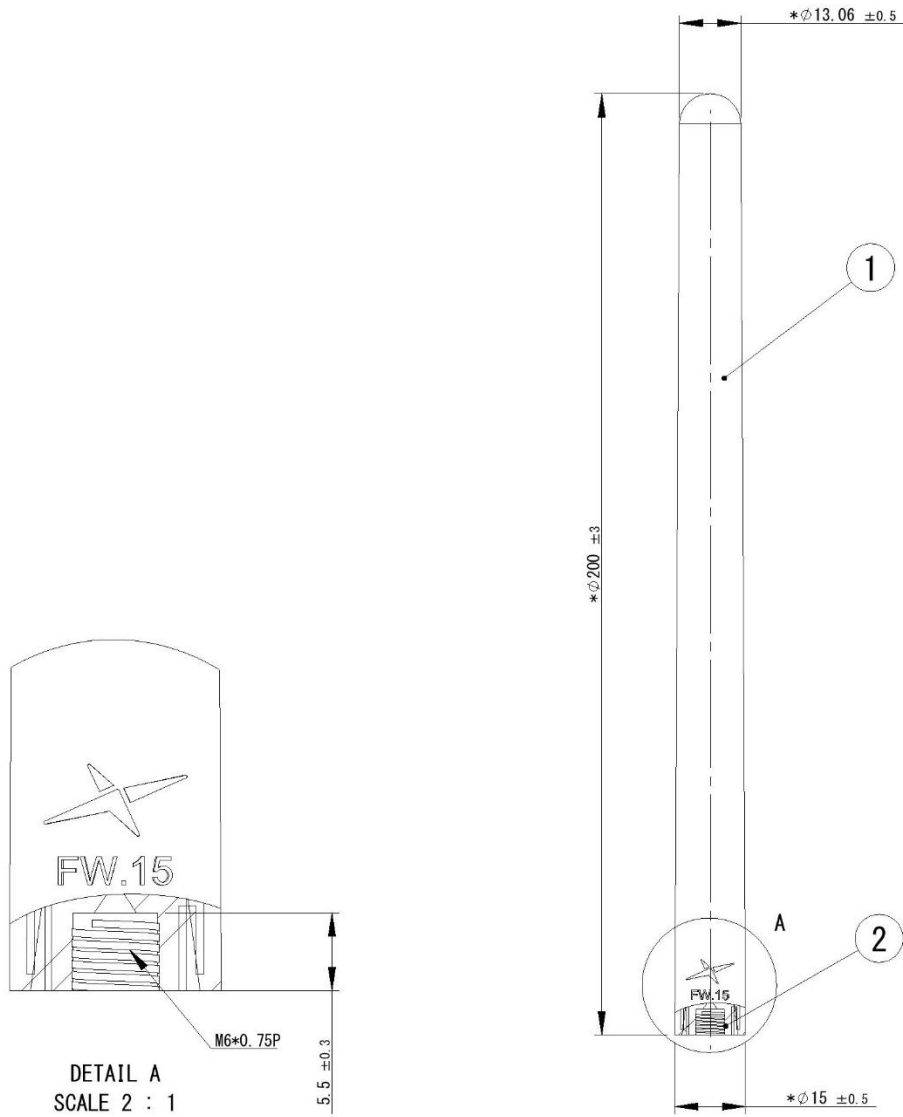
2. Specification

Electrical								
Band	Frequency (MHz)	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. input power
VHF band (Low band)	150-174	28.4	-5.47	-1.77	50 Ω	Linear	Omni directional	15W
UHF Band (Mid Band)	430-520	42.2	-3.74	0.10				
Upper Band (High Band)	700-900	28.3	-5.48	0.80				

Mechanical	
Dimensions	Ø15mm x 200mm
Weight	49g
Material	TPU
Connector	M6 Female

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	Housing	TPU	Black/White	1
2	Connector M6	Brass	Ni Plated	1

4. Packaging



- 1 PCS / Small PE bag
- Small PE bag(mm):70x300 (Ref.)
- Weight (g): 50 ±3%

weight without packaging (g): 49 ±3%



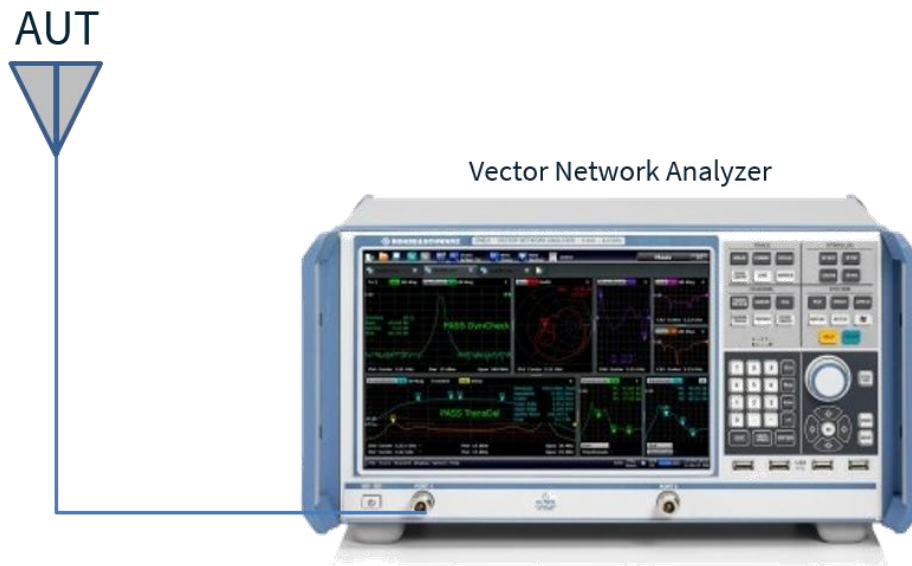
- 25 PCS / PE bag
- PE bag(mm): 270x390 (Ref.)
- Weight (kg): 1.25 ±3%
- SPQ Label



- 100 PCS / Carton
- Carton(mm): 360x310x160
- Weight (Kg): 6 ±3%
- Carton Label

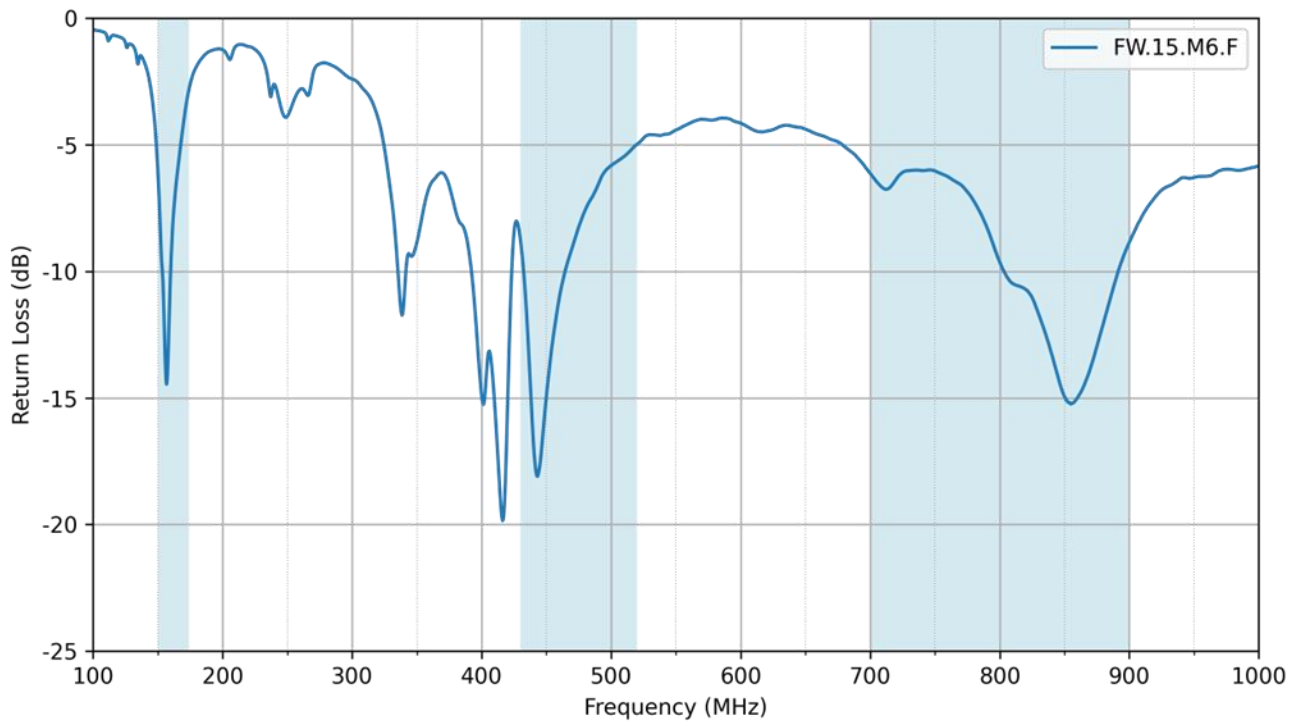
5. Antenna Characteristics

5.1 Test Setup

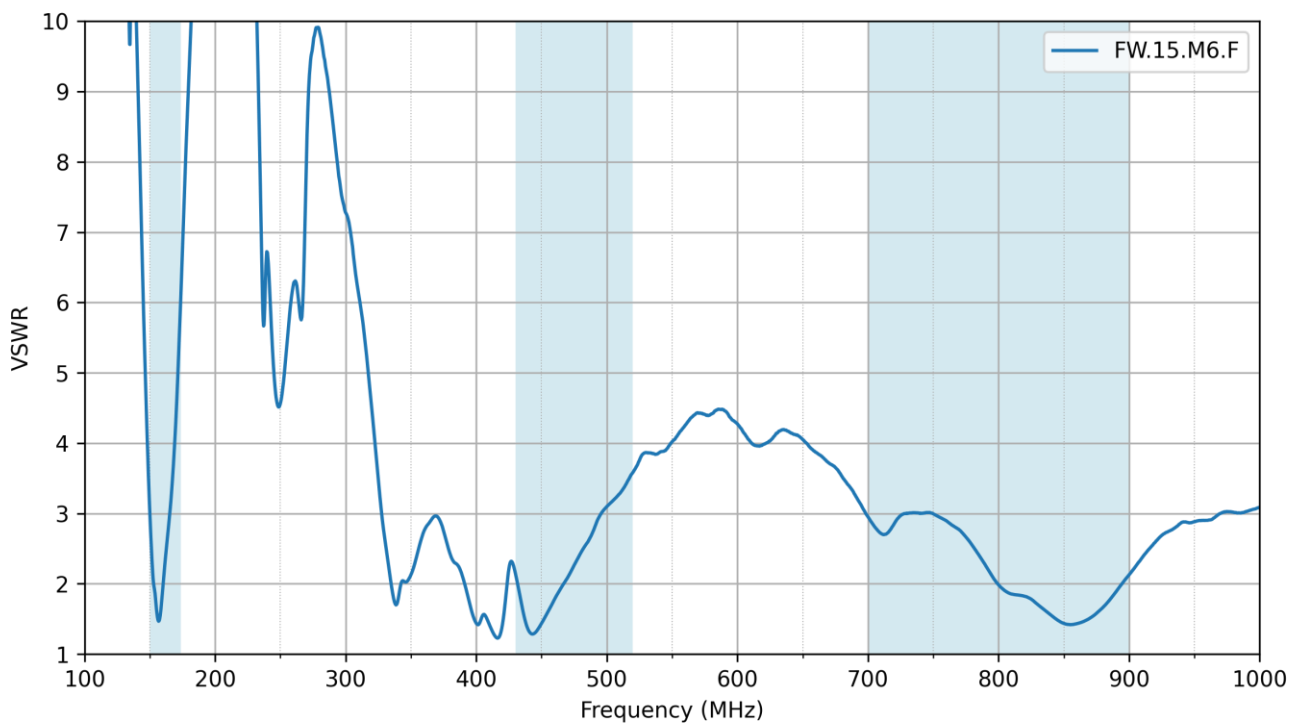


VNA Test Setup – Tested on the Patriot Antenna mounted on a 30x30cm Ground Plane

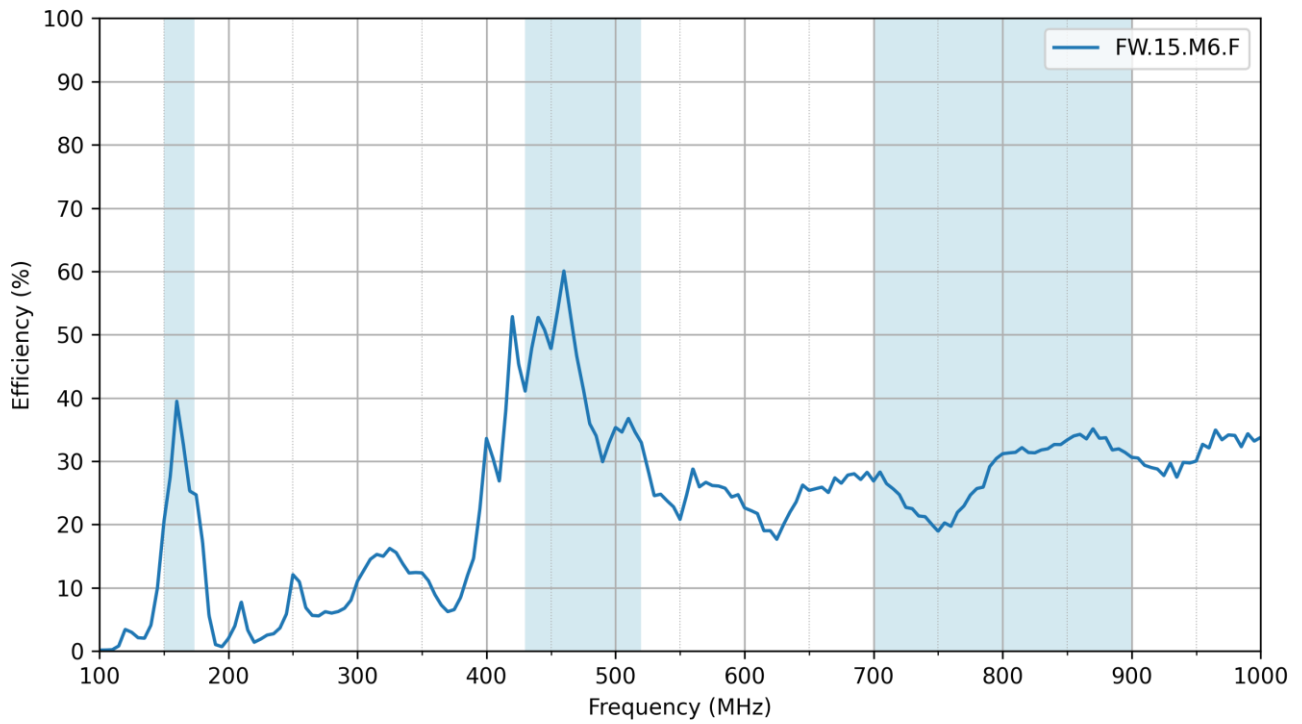
5.2 Return Loss



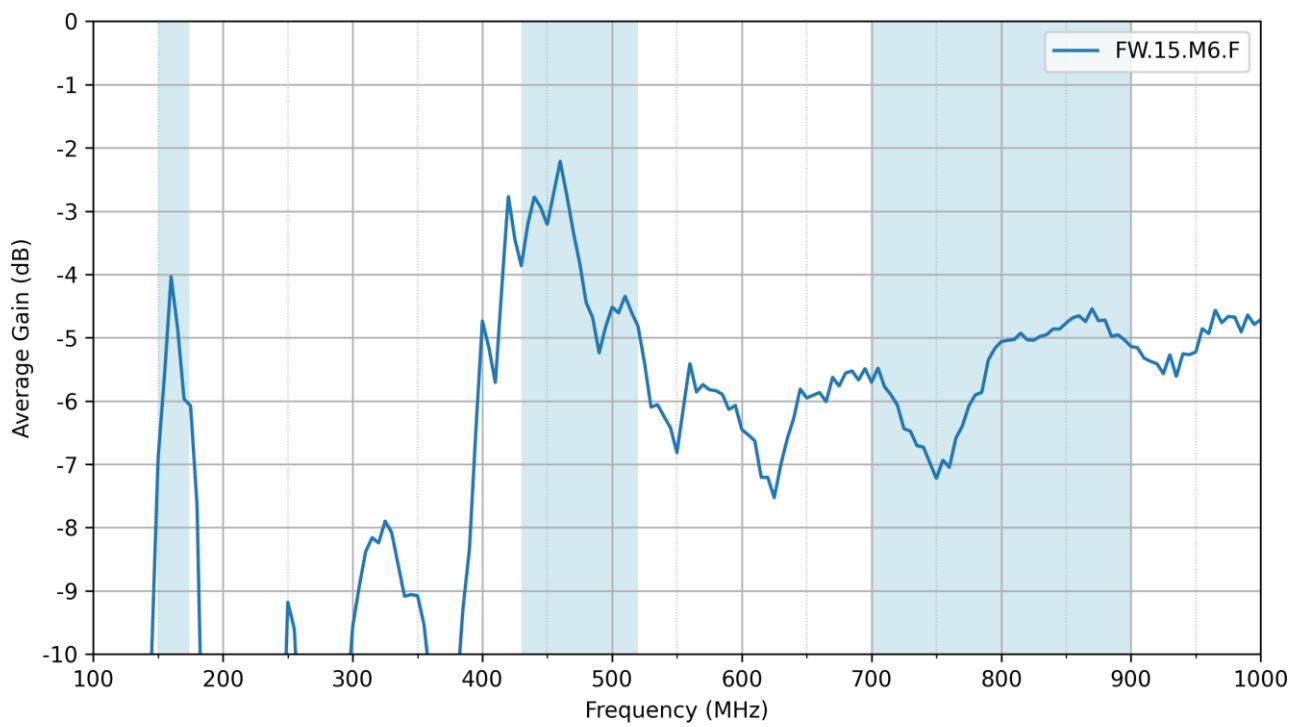
5.3 VSWR



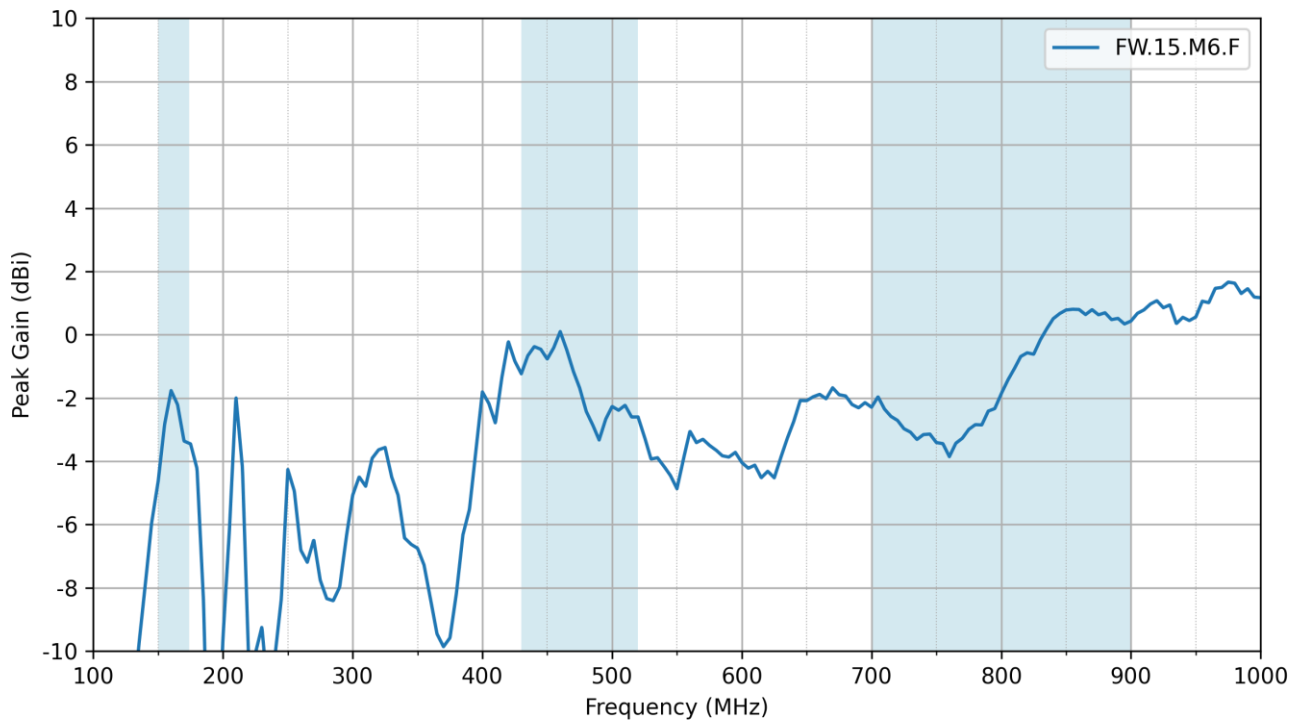
5.4 Efficiency



5.5 Average Gain

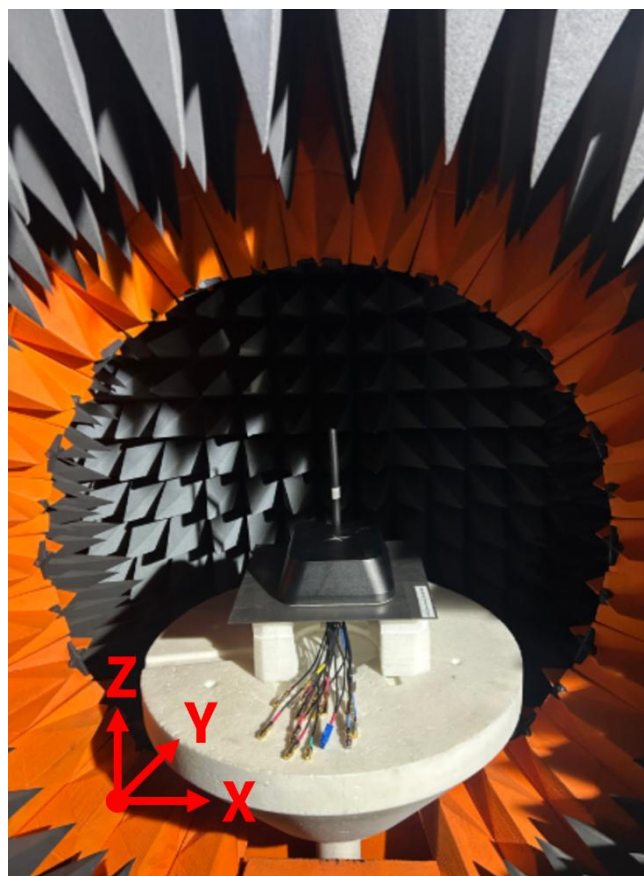
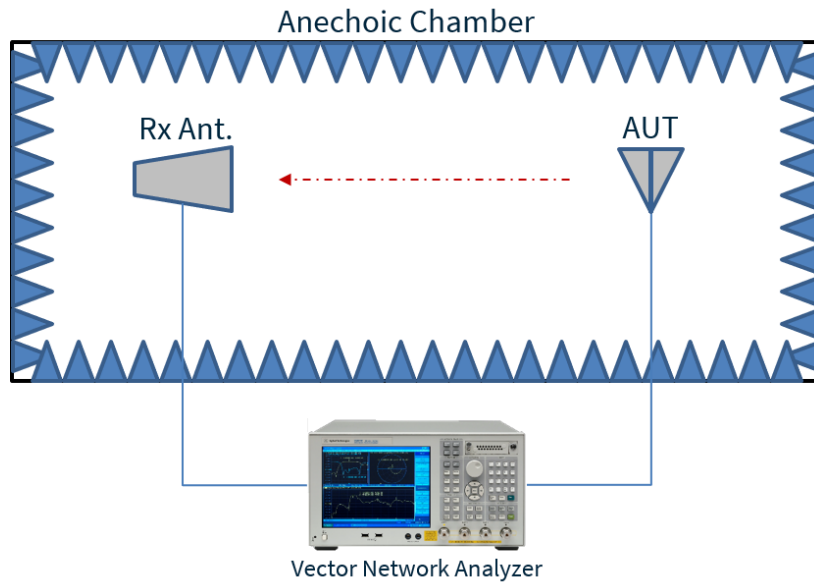


5.6 Peak Gain



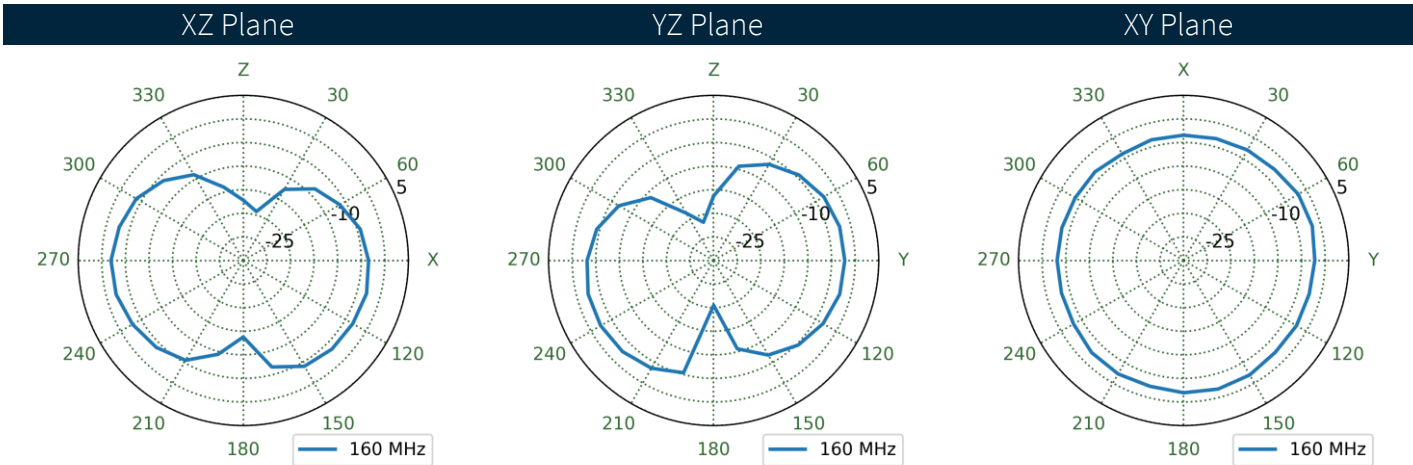
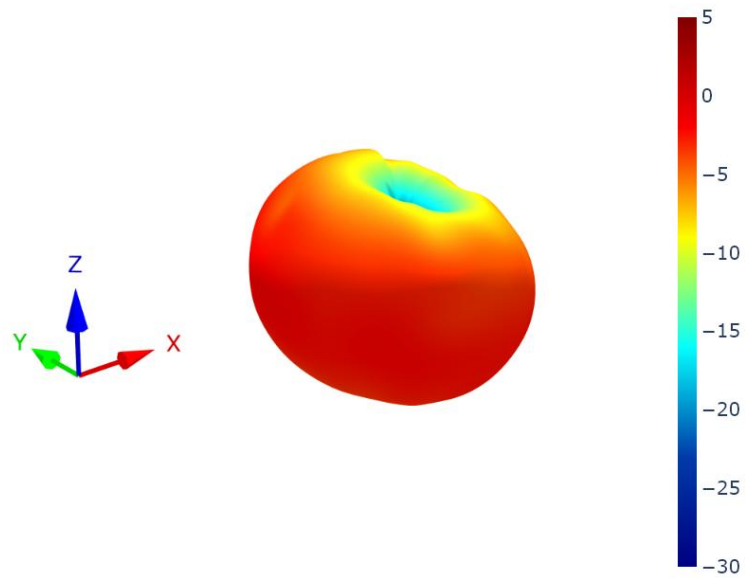
6. Radiation Patterns

6.1 Test Setup

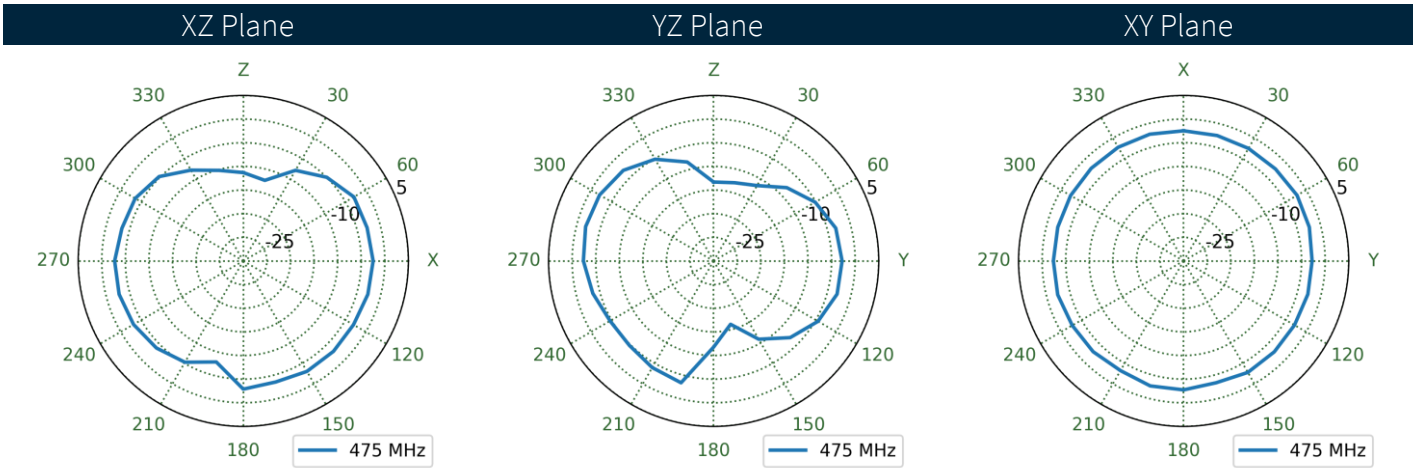
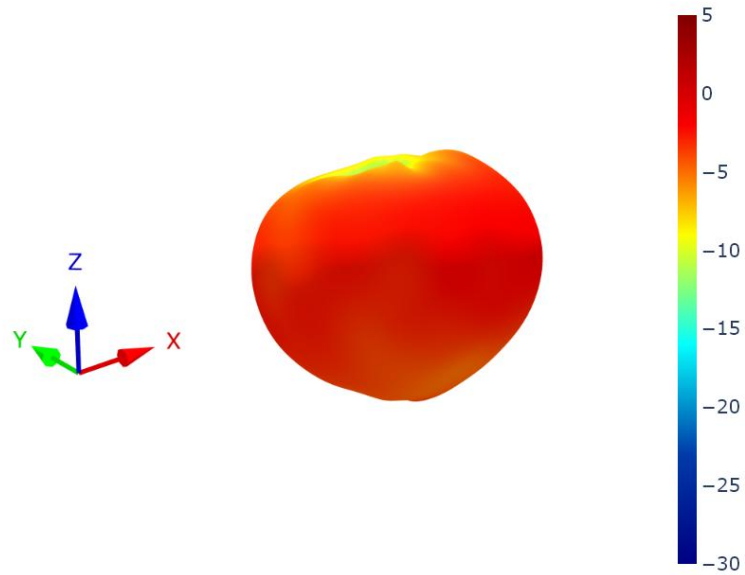


Chamber Test Setup – Tested on the Patriot Antenna mounted on a 30x30cm Ground Plane

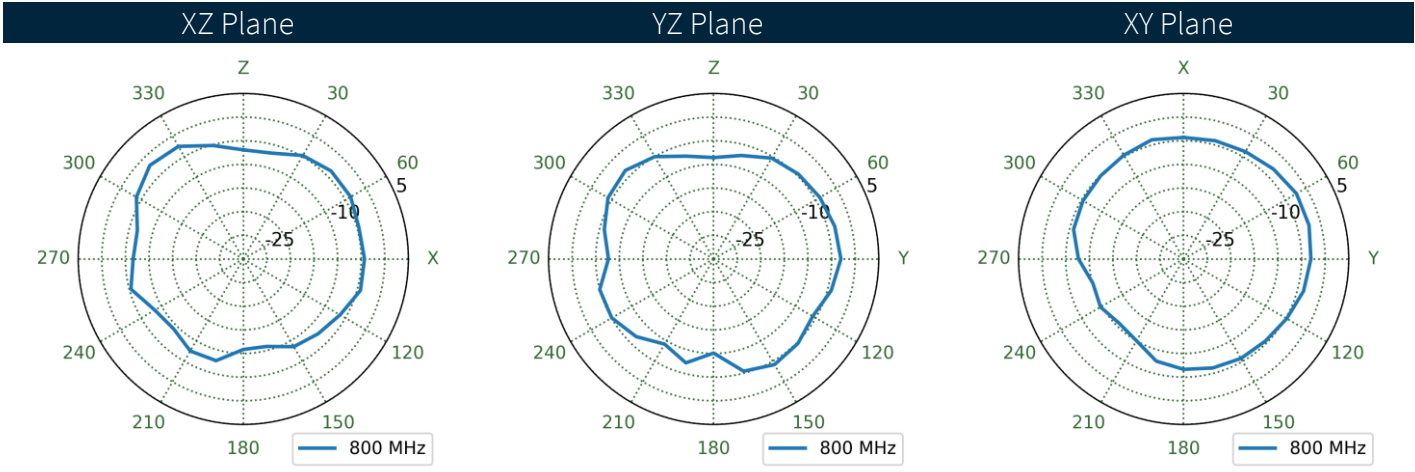
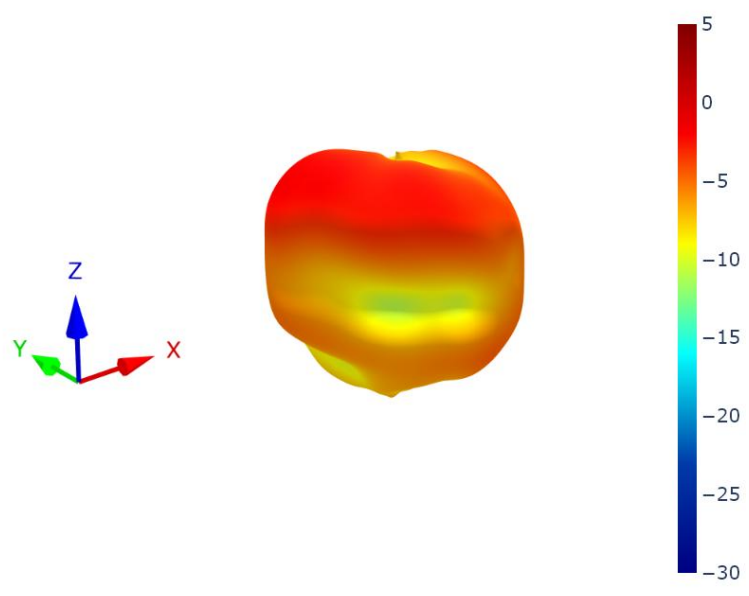
6.2 Patterns at 160 MHz



6.3 Patterns at 475 MHz



6.4 Patterns at 800 MHz





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