TAOGLAS



Datasheet

Part No:
TI.97.A113

Description

ISM 915MHz IP67 Terminal Mount Antenna with Hinged SMA Plug

Features:

ISM Terminal Mount Antenna
Covering: 915MHz
IP67 Waterproof Enclosure
Dims: Ø12.9 x 203.0 mm
Connector: SMA(M)
RoHS & Reach Compliant

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1. Introduction



The Taoglas **TI.97.A113** is a compact high-performance terminal mount antenna designed for ISM 915MHz applications requiring reliable wireless connectivity in industrial and IoT environments. Optimized for operation in the 902–928 MHz ISM band, the TI.97 delivers efficient omnidirectional performance for LPWAN, remote monitoring, smart metering, and other wireless data communication systems. Its compact form factor makes it ideal for devices where space is limited but dependable RF performance is essential.

Many similar style antennas struggle with weatherproofing the hinged connector design, but the TI.97 antenna features a rugged hinged construction that allows flexible positioning during installation while maintaining an IP67-rated weatherproof enclosure. This ensures reliable operation in harsh indoor and outdoor environments where protection from dust and water ingress is critical. The standard SMA (M) connector and terminal mount design enable straightforward integration into a wide range of wireless devices and enclosures.

Typical Applications

- Smart Metering
- Industrial IoT
- Remote Monitoring Systems
- Agricultural Monitoring
- Asset Tracking
- LPWAN Gateways and Devices

The TI.97 provides stable omnidirectional radiation characteristics across the ISM 915 MHz band, helping to maintain reliable wireless links in challenging deployment environments. The adjustable hinge mechanism allows the antenna to be rotated into the preferred orientation during installation, improving placement flexibility and helping to optimize system performance.

For integration support, testing services, or additional technical assistance, please contact your regional Taoglas customer support team.

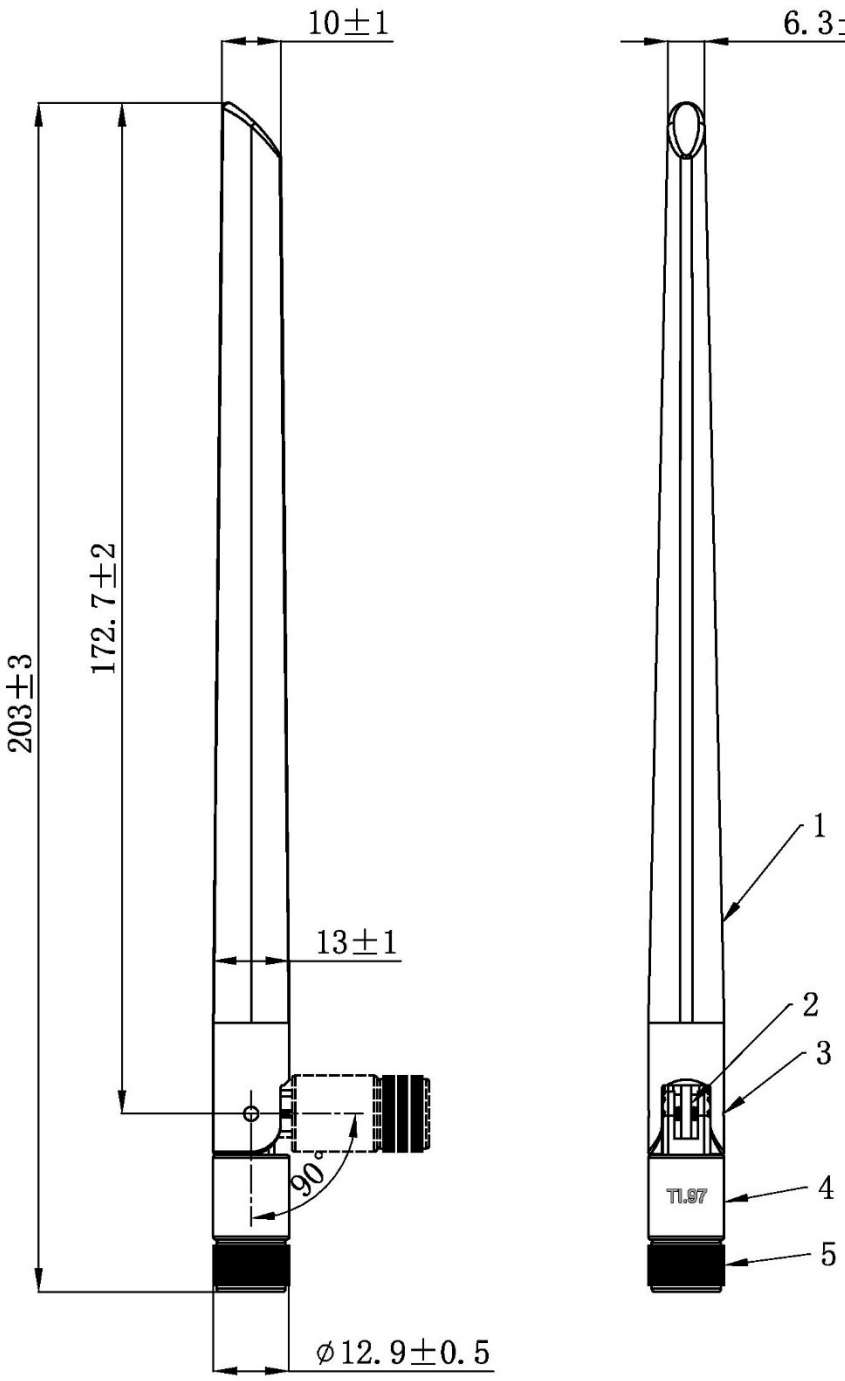
2. Specification

Electrical									
Band	Frequency (MHz)	Measurement	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. input power
915MHz	902-928	15x9cm - Bent	85.8	-0.66	2.37	50 Ω	Linear	Omni directional	10W
		15x9cm - Straight	86.0	-0.65	2.59				
		9x15cm - Bent	86.4	-0.64	2.60				
		9x15cm - Straight	85.5	-0.68	3.51				
		Free Space - Bent	91.9	-0.37	2.67				
		Free Space - Straight	85.6	-0.67	1.96				

Mechanical	
Dimensions	Ø12.9 x 203.0 mm
Weight	21.5g
Material	ASA
Connector	SMA(M)

Environmental	
Waterproof Rating	IP 67
Operation Temperature	-40°C - +85°C
Storage Temperature	-40°C - +85°C
Relative Humidity	Non-condensing 65°C 95% RH

3. Mechanical Drawing



	Name	Material	Number	Finish
5	RP-SMA(M)	Brass	1	Black
4	SMA holder	PC+PBT	1	Black
3	Pin	POM	2	Black
2	Rg178 Cable	FEP	1	Brown
1	Antenna Enclosure	ASA PW-978B	1	Black

4. Packaging



☑ 10 PCS / Ten-pack bag

☑Ten-pack Bag(mm): 358 x 280

☑ Weight (g): 220 ±3%



☑ 50 PCS /PE Bag

☑ PE Bag(mm): 270 x 390

☑ Weight (Kg): 1.1 ±3%

☑ SPQ Label



☑ 300 PCS / Carton

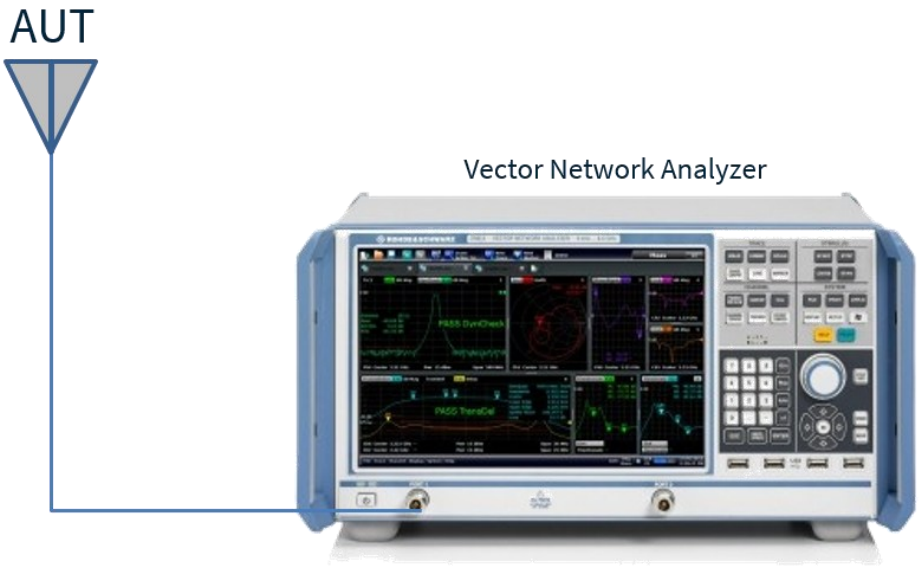
☑ Carton(mm): 320 x 250 x 290

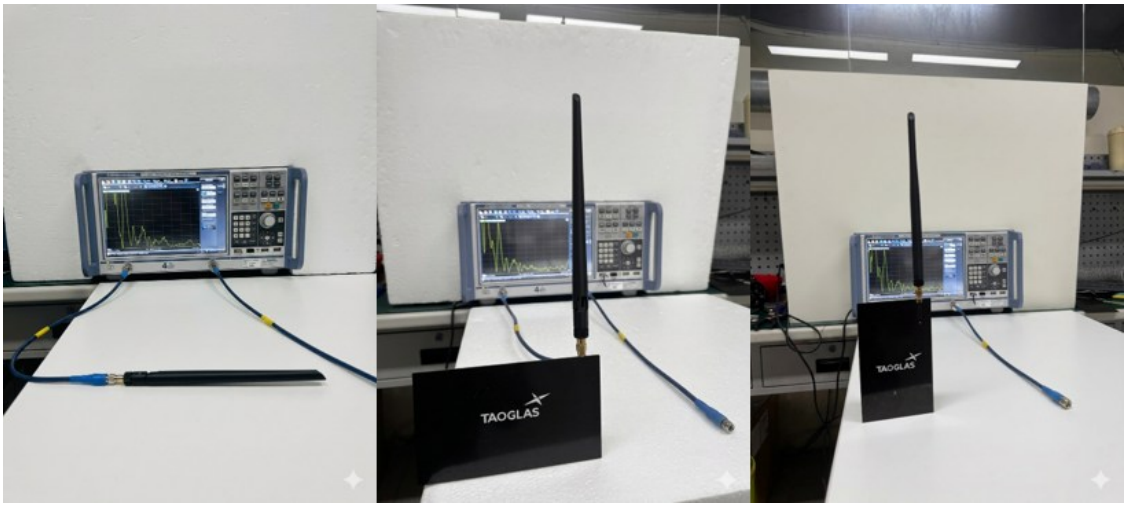
☑ Weight (Kg): 7.2 ±3%

☑ Carton Label

5. Antenna Characteristics

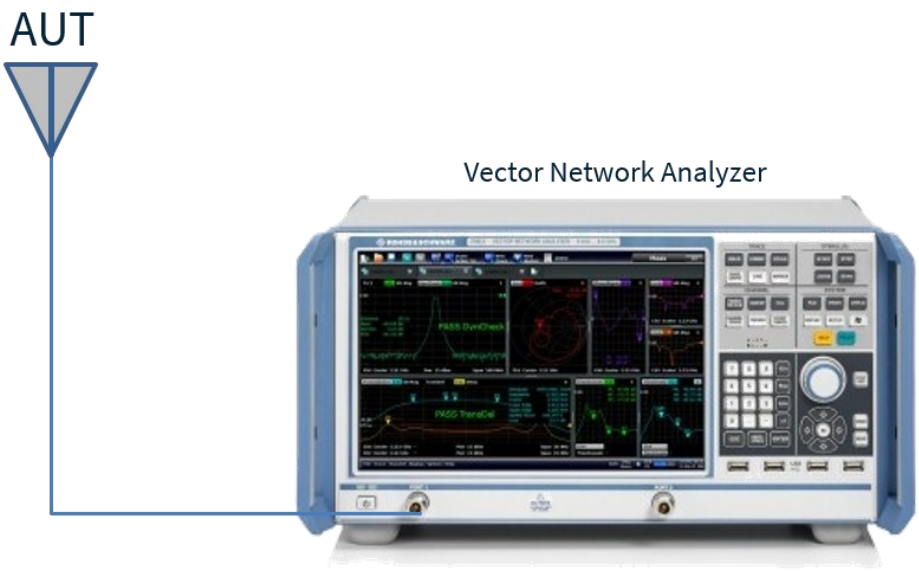
5.1 Test Setup - Straight

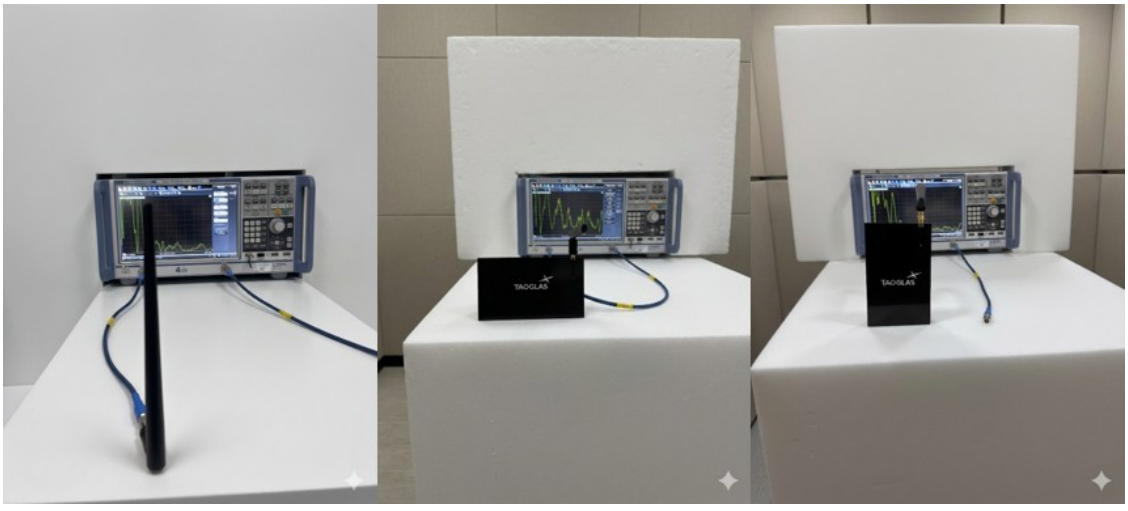




Free Space | 15x9cm Ground Plane | 9x15cm Ground Plane

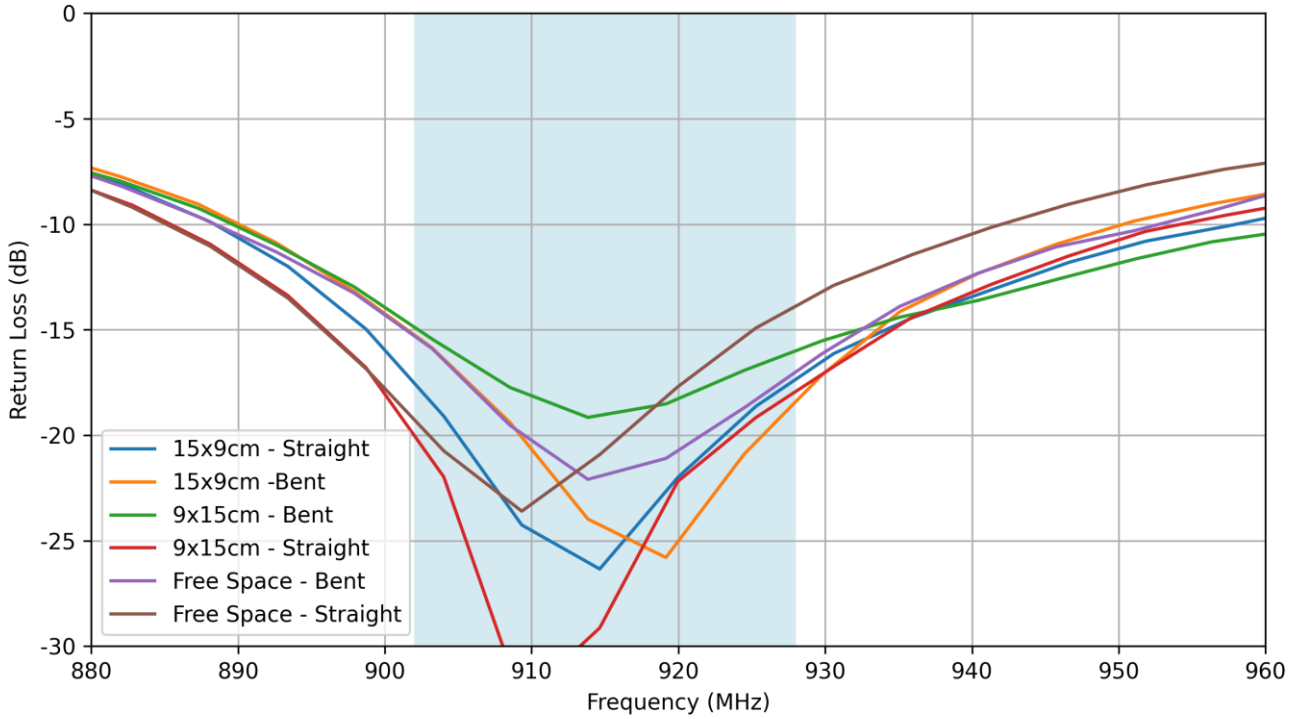
5.2 Test Setup - Bent



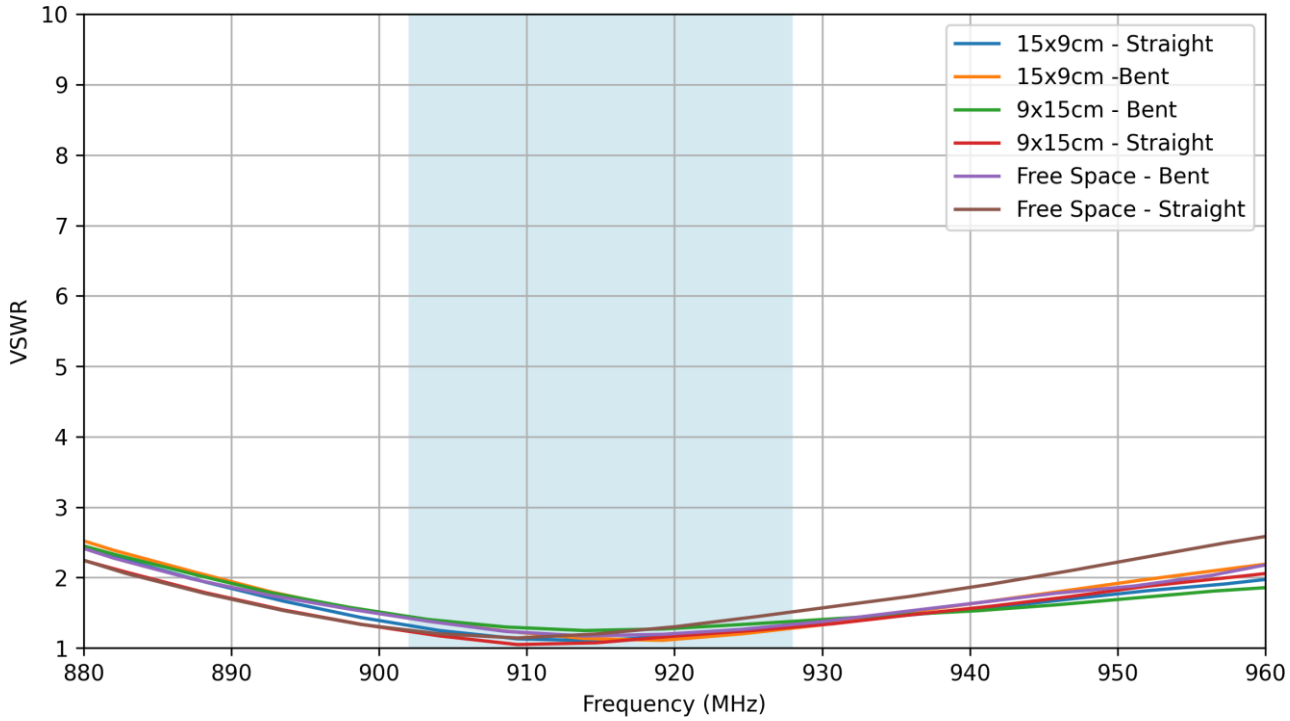


Free Space | 15x9cm Ground Plane | 9x15cm Ground Plane

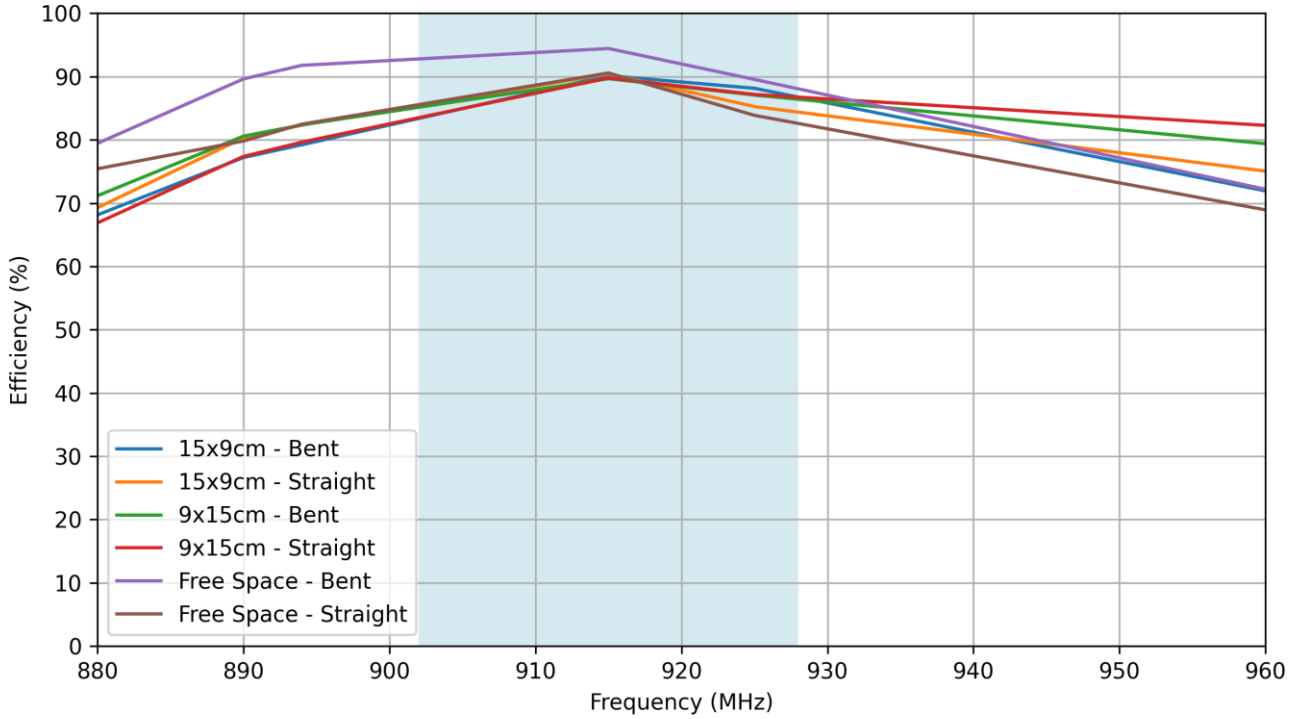
5.3 Return Loss



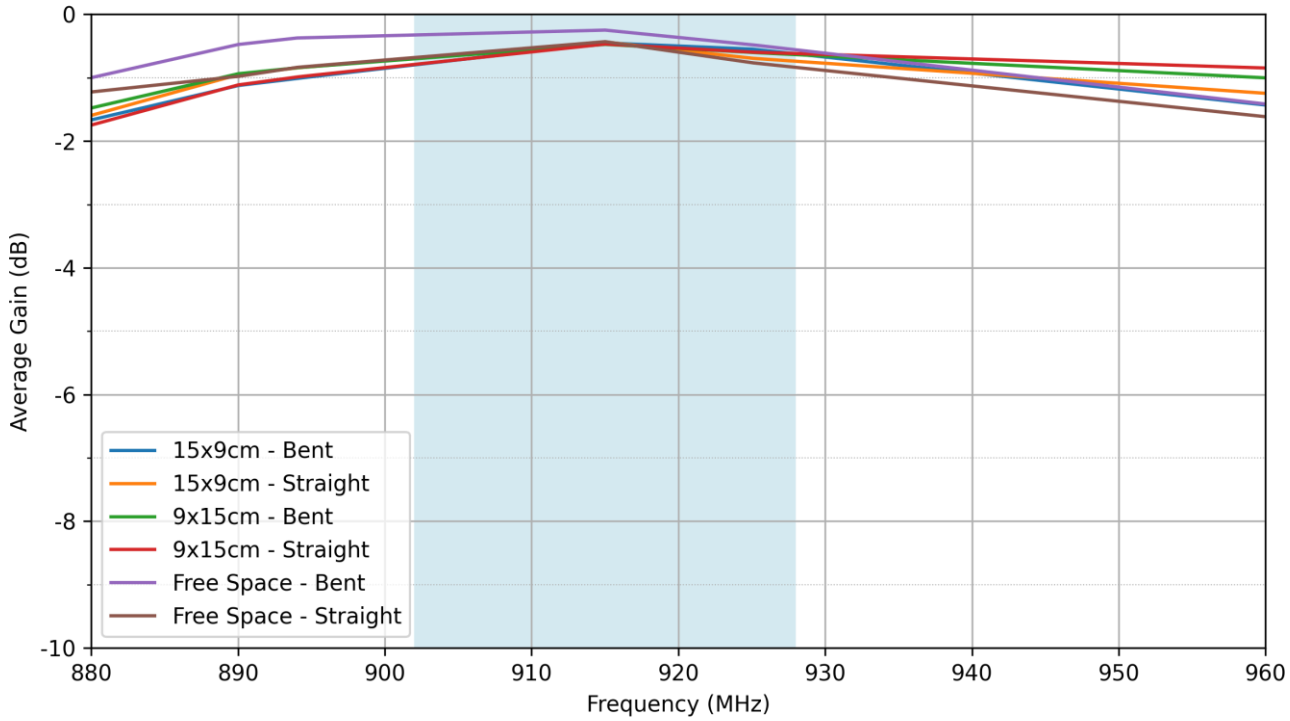
5.4 VSWR



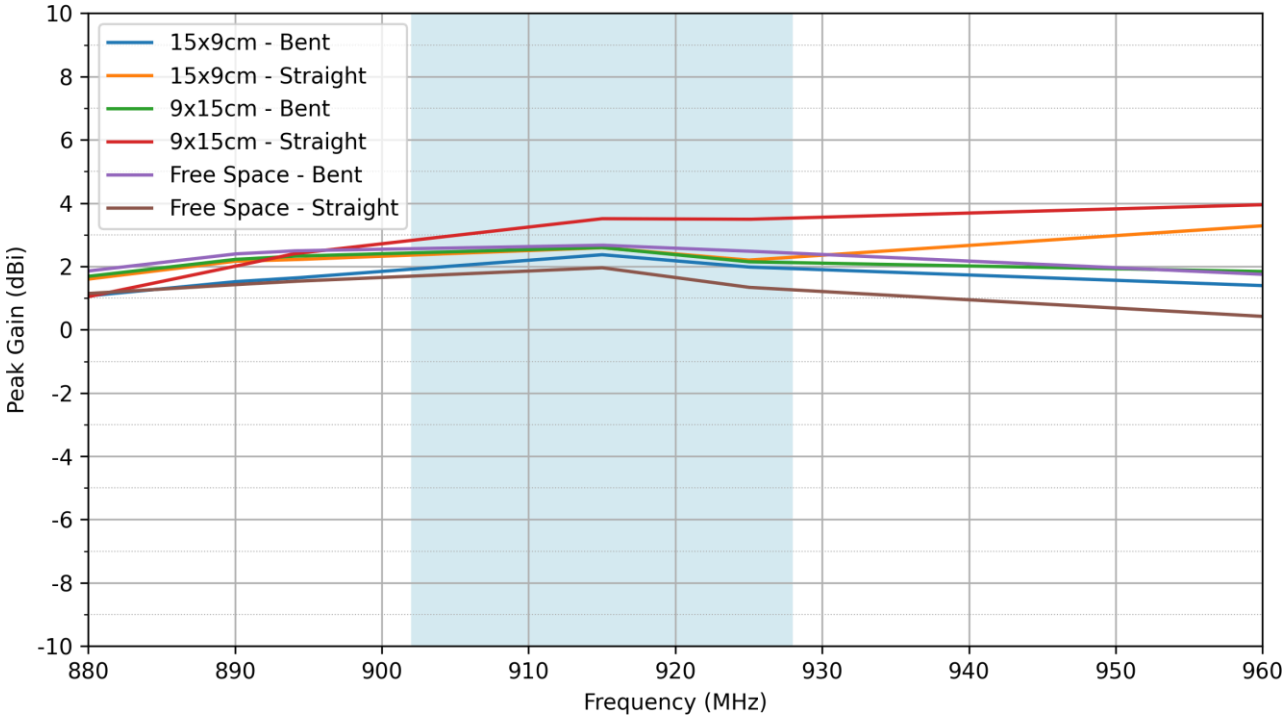
5.5 Efficiency



5.6 Average Gain

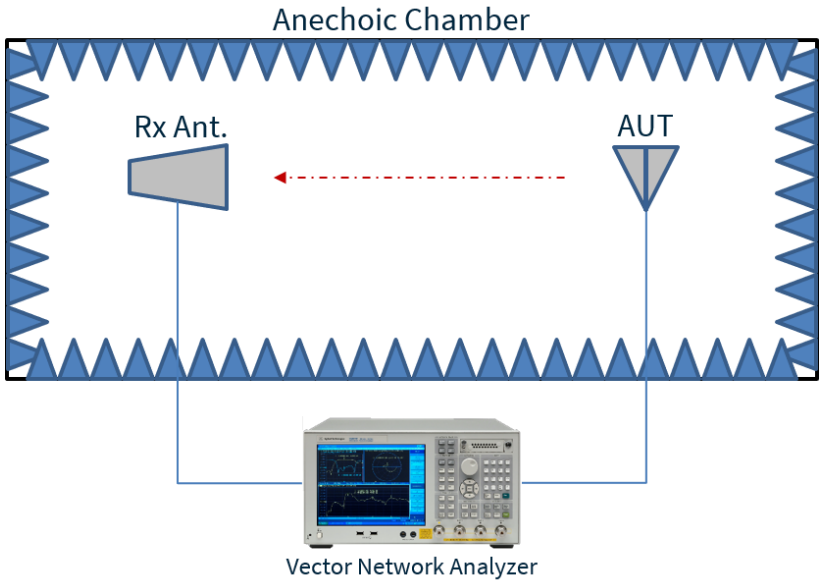


5.7 Peak Gain


15x9cm - Bent
15x9cm - Straight
9x15cm - Bent
9x15cm - Straight
Free Space - Bent
Free Space - Straight
Peak Gain (dBi)
Frequency (MHz)
10
8
6
4
2
0
-2
-4
-6
-8
-10
880
890
900
910
920
930
940
950
960

6. Radiation Patterns

6.1 Test Setup - Straight





Free Space

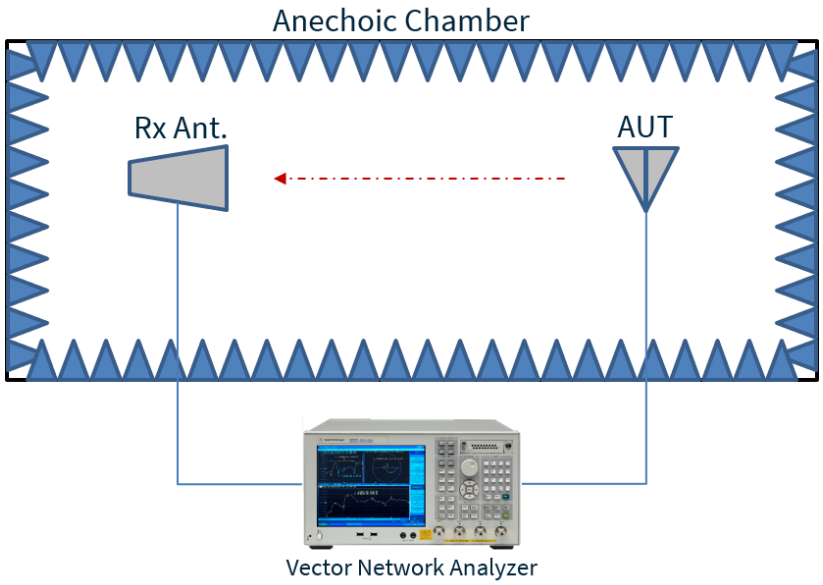


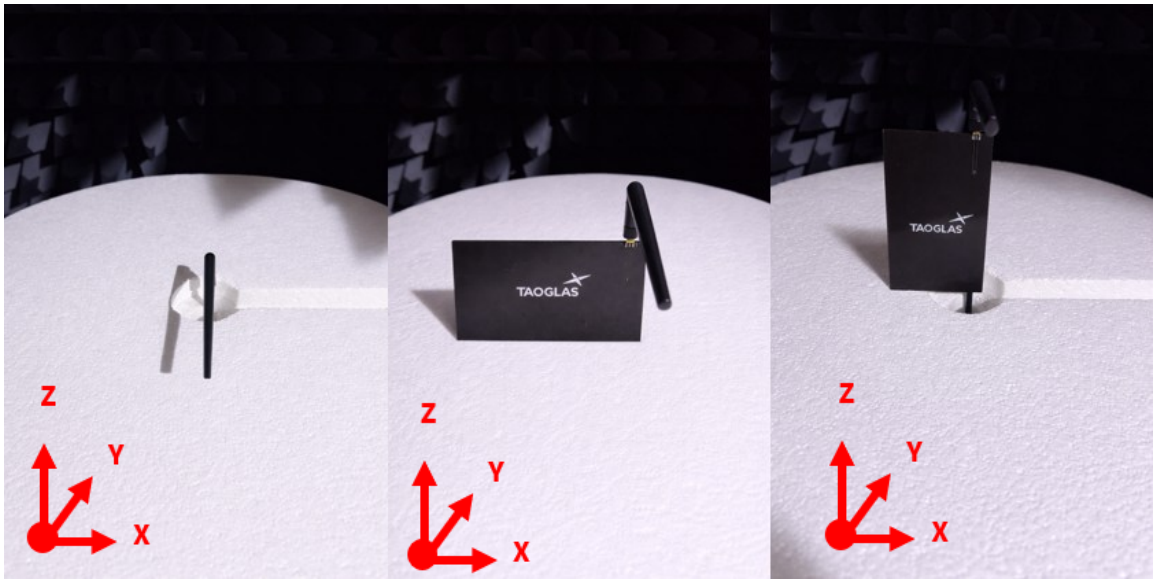
15x9cm Ground Plane



9x15cm Ground Plane

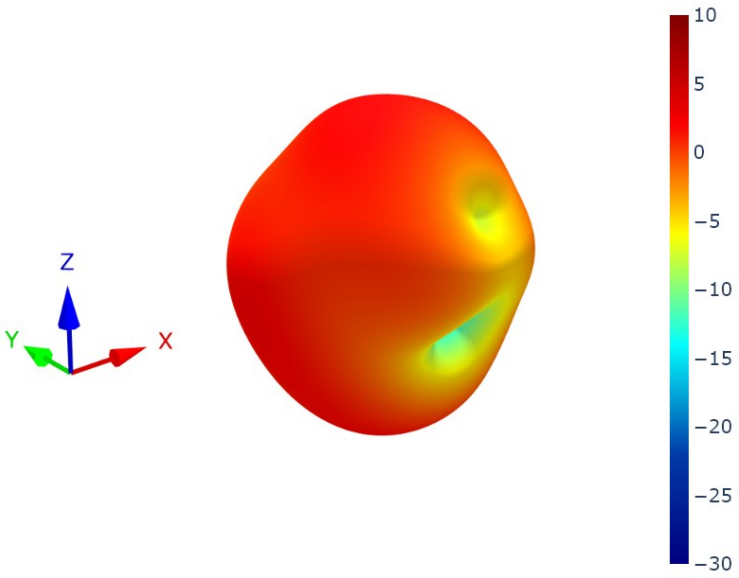
6.2 Test Setup - Bent

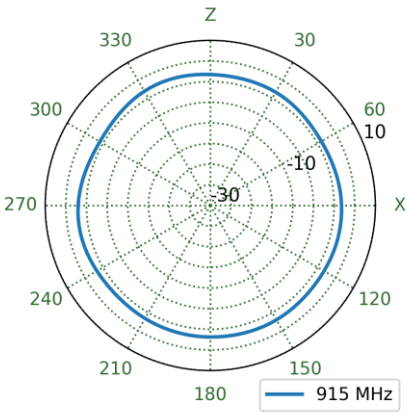
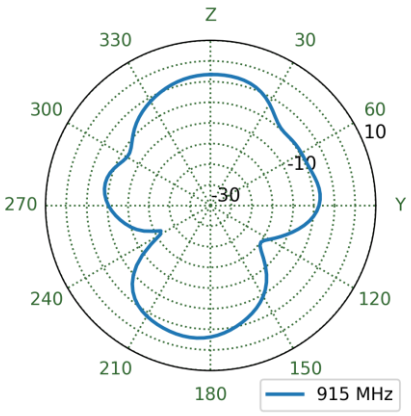
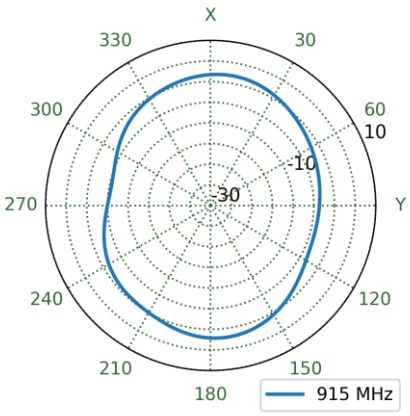




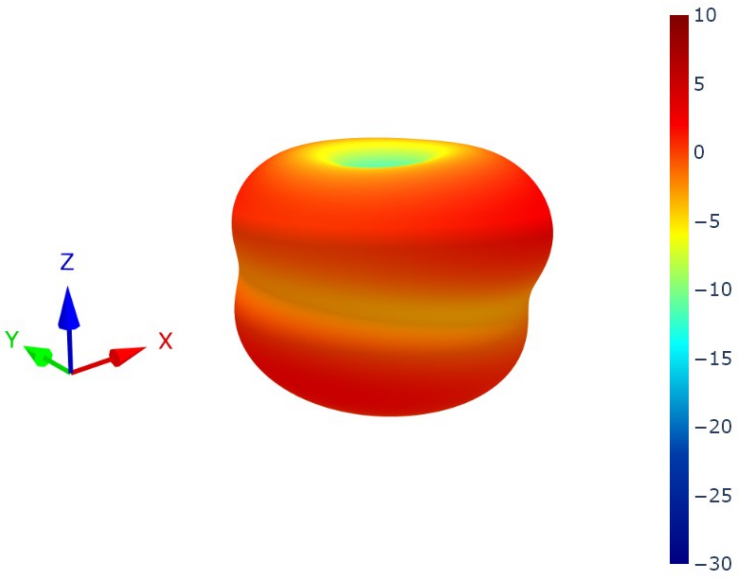
Free Space | 15x9cm Ground Plane | 9x15cm Ground Plane

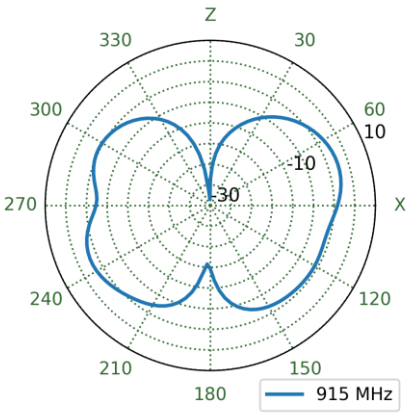
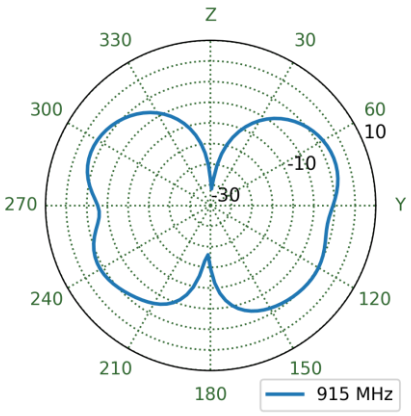
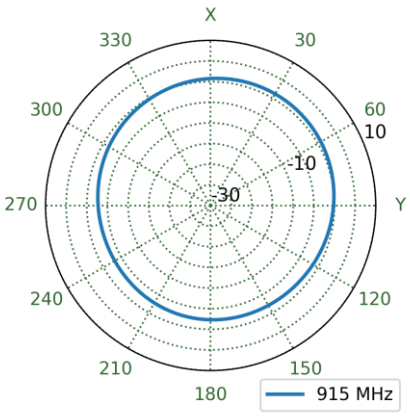
6.3 15x9cm - Bent Patterns at 915 MHz



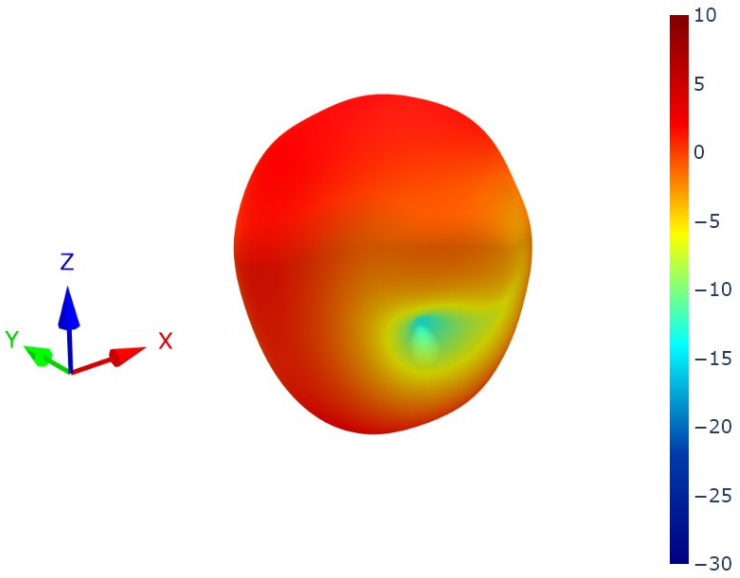
XZ Plane	YZ Plane	XY Plane
		

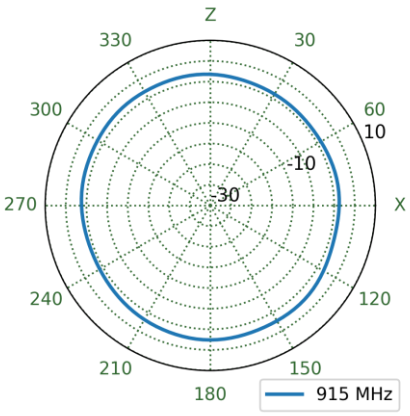
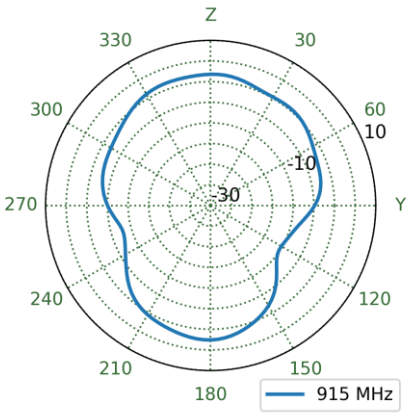
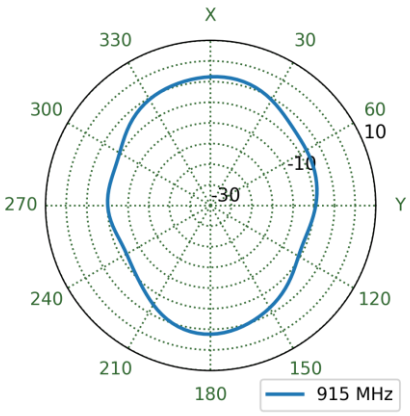
6.4 15x9cm - Straight Patterns at 915 MHz



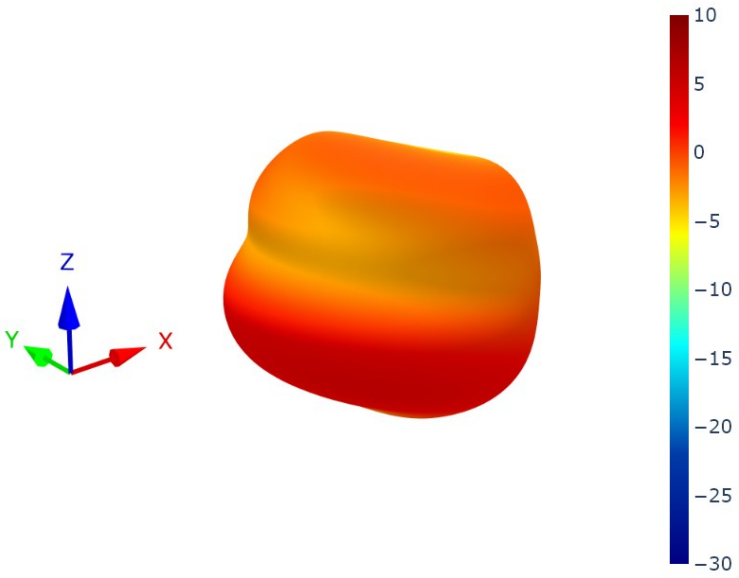
XZ Plane	YZ Plane	XY Plane
		

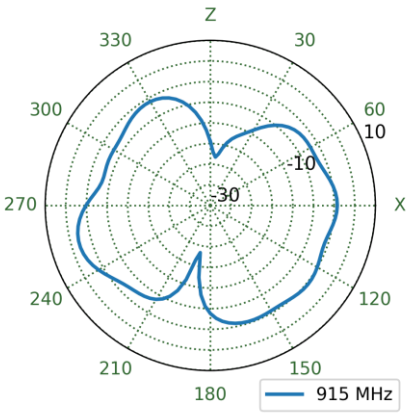
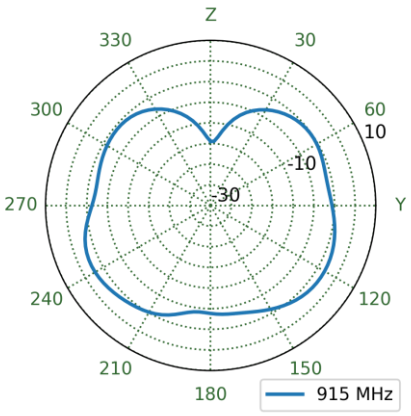
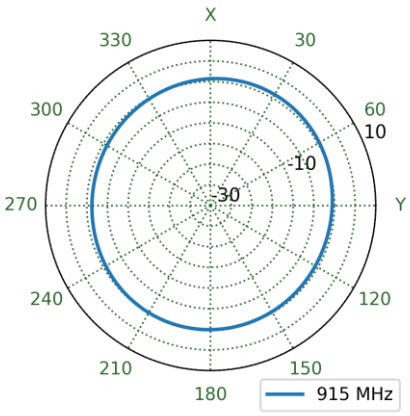
6.5 9x15cm - Bent Patterns at 915 MHz



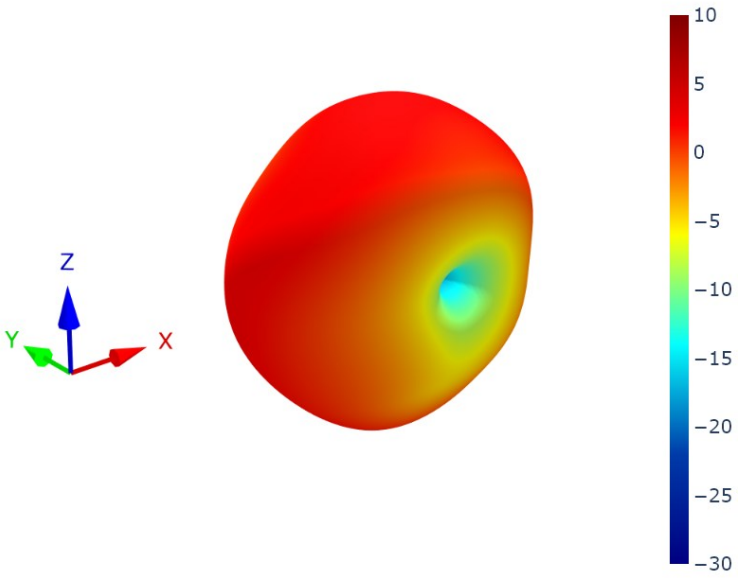
XZ Plane	YZ Plane	XY Plane
		

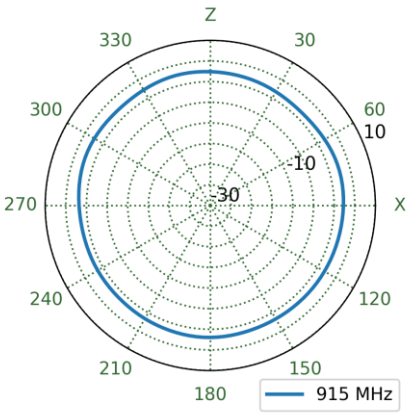
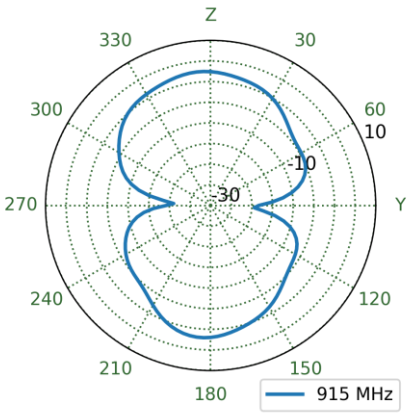
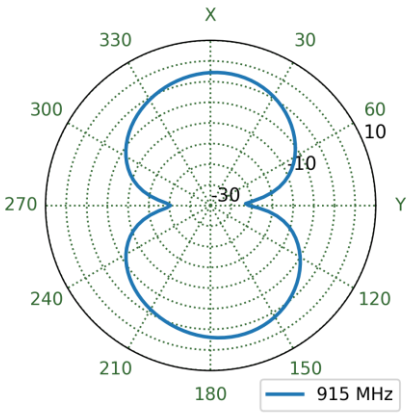
6.6 9x15cm - Straight Patterns at 915 MHz



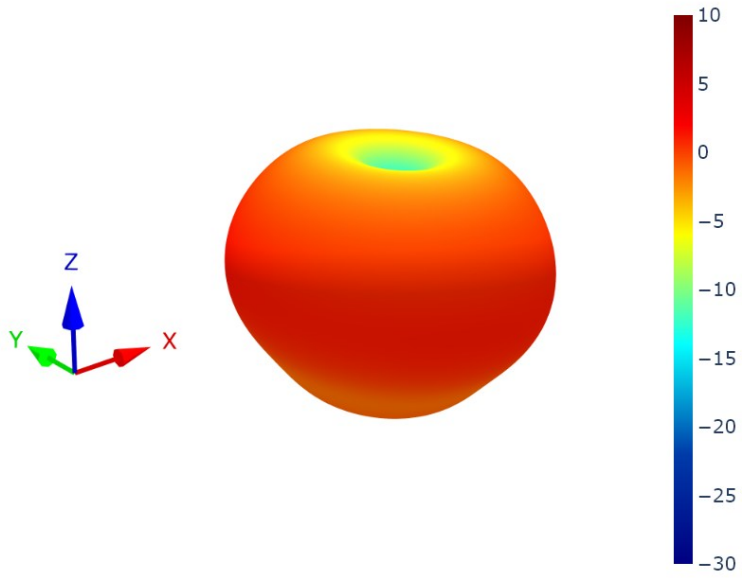
XZ Plane	YZ Plane	XY Plane
		

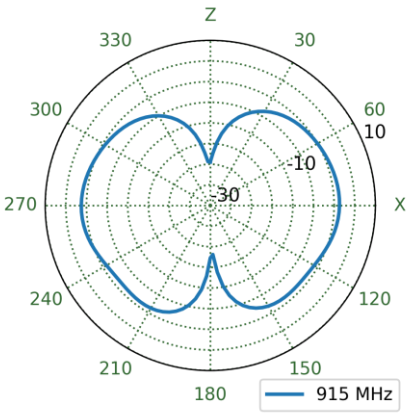
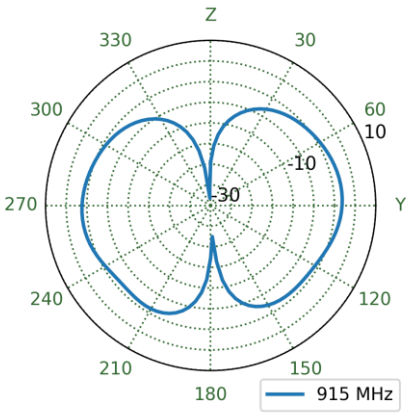
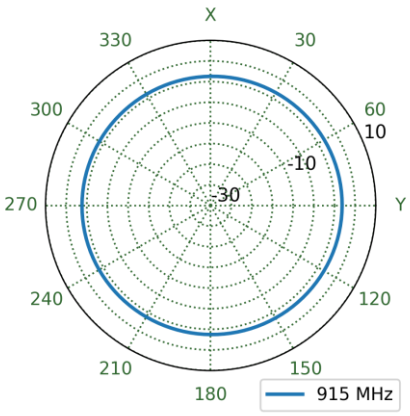
6.7 Free Space - Bent Patterns at 915 MHz



XZ Plane	YZ Plane	XY Plane
		

6.8 Free Space - Straight Patterns at 915 MHz



XZ Plane	YZ Plane	XY Plane
		

Changelog for the datasheet

SPE-26-8-138– TI.97.A113

Revision: A (Original First Release)	
Date:	2026-07-17
Notes:	Initial Release
Author:	Gary West

Previous Revisions

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