Specification

Part Number: **IMA.01.105111**

Product Name: External Iridium™ Marine Antenna

Features:

- 1616MHz ~1626.5MHz Iridium antenna
- Antenna Efficiency > 65% with 1.0 meter standard cable
- IP67 waterproof
- Standard 1M CFD-200 coaxial cable
- Bracket Mount Available
- Custom cables and connectors available
- Dims: 108mm Ø90mm
- RoHS Complaint

1. Introduction

The IMA.01 Iridium Marine antenna is a high performance, durable, bracket mount antenna which is designed for applications using the Iridium® Satellite Communication system.

The durable IP67 rated housing makes the IMA.01 the ideal solution for permanent marine installations. The antenna exhibits excellent efficiency, greater than 65% with the standard 1.0 meter CFD-200 coaxial cable.

Iridium® has certified the IMA.01 antenna for commercial use in connection with the Iridium Communications System. Iridium Satellite LLC is the owner of Iridium® and all other Iridium trademarks, service marks, and logos contained herein.

The IMA.01 antenna is designed for free air operation, thus no ground plane is required.

2. Specification

ELECTRICAL		
Band		Iridium
Center Frequency (MHz)		1621.5±5.25MHz
Range of Receiving Frequency (MHz)		1621~1626.5
Impedance (Ohms)		50 Ohms
Polarization		Right Hand Circular
VSWR		
Cable length (meter)	0.5	2.0
	1.0	1.8
	2.0	1.7
	3.0	1.6
	5.0	1.5
Efficiency (%)		
Cable length (meter)	0.5	79.3
	1.0	75.6
	2.0	67.4
	3.0	45.1
	5.0	38.3
Return Loss (dB)		
Cable length (meter)	0.5	-8.9
	1.0	-10.5
	2.0	-11.5
	3.0	-12.7
	5.0	-13.7
Peak Gain (dBi)		
Cable length (meter)	0.5	4.0
	1.0	3.9
	2.0	3.7
	3.0	2.2
	5.0	1.3

MECHANICAL	
Dimensions	Ø90x108mm
Cable	CFD-200 Coaxial , 1 meter length
Connector	SMA (M) 50 Ohms
Termination	Ag (Environmentally-Friendly PB Free)
Protection	IP67
Weight	108 grams

ENVIRONMENTAL	
Temperature Range	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Relative Humidity	40% to 95%
Shock (Drop Test)	1m drop on concrete 6 axes

3. Test Setup

Figure 1. Impedance (left hand),
Efficiency, peak gain, and radiation pattern measurements (right hand).

4. Antenna Parameters

4.1. Return Loss

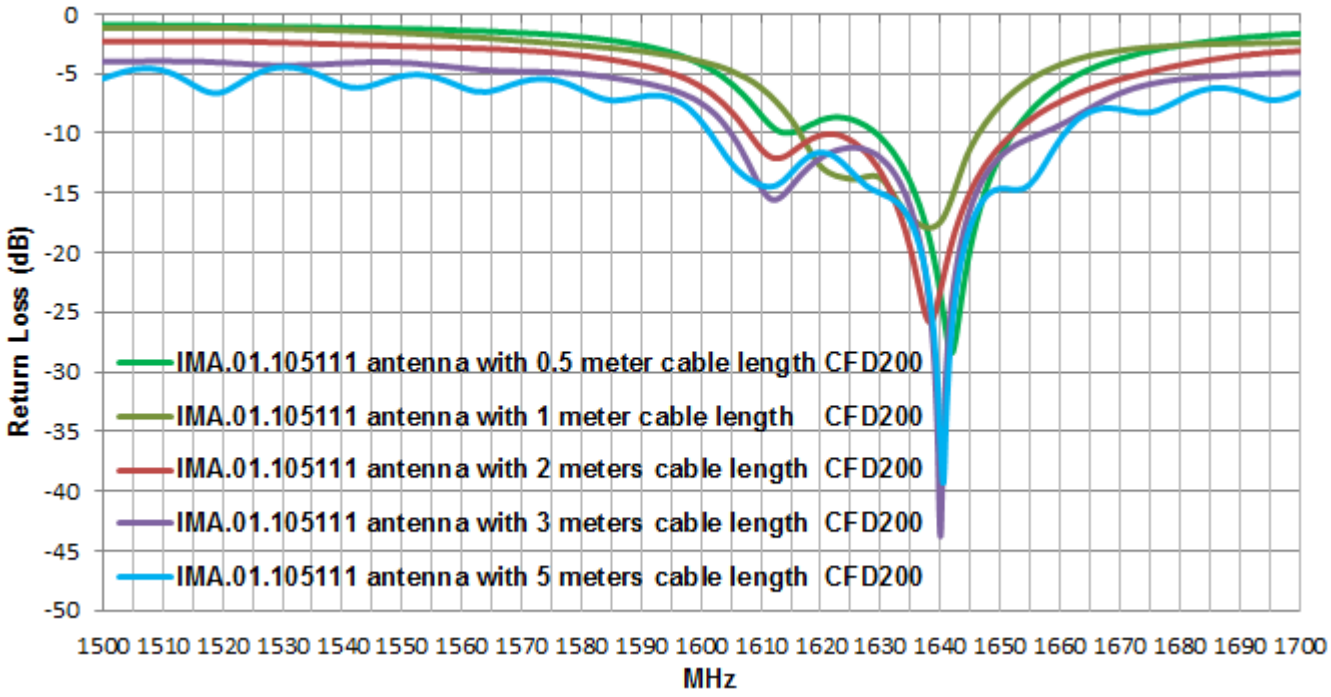


Figure 2. Return Loss of the IMA.01 antenna.

4.2. VSWR

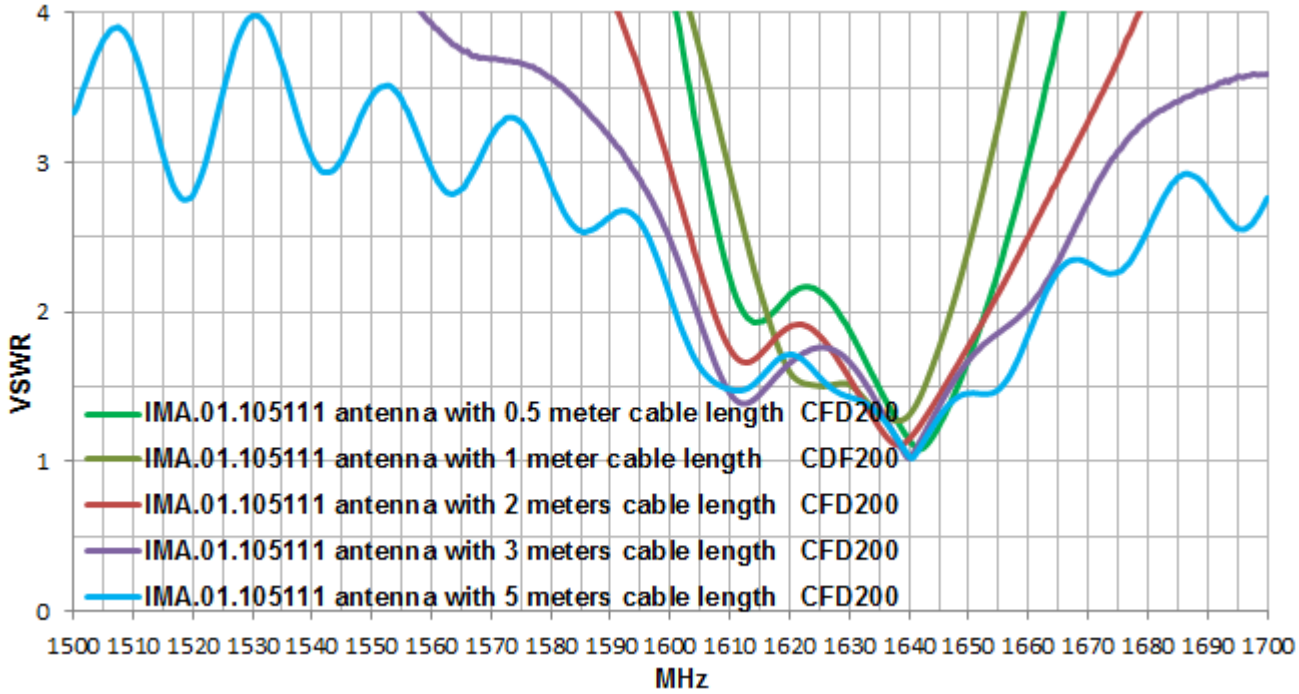


Figure 3. VSWR of the IMA.01 antenna.

4.3 Efficiency

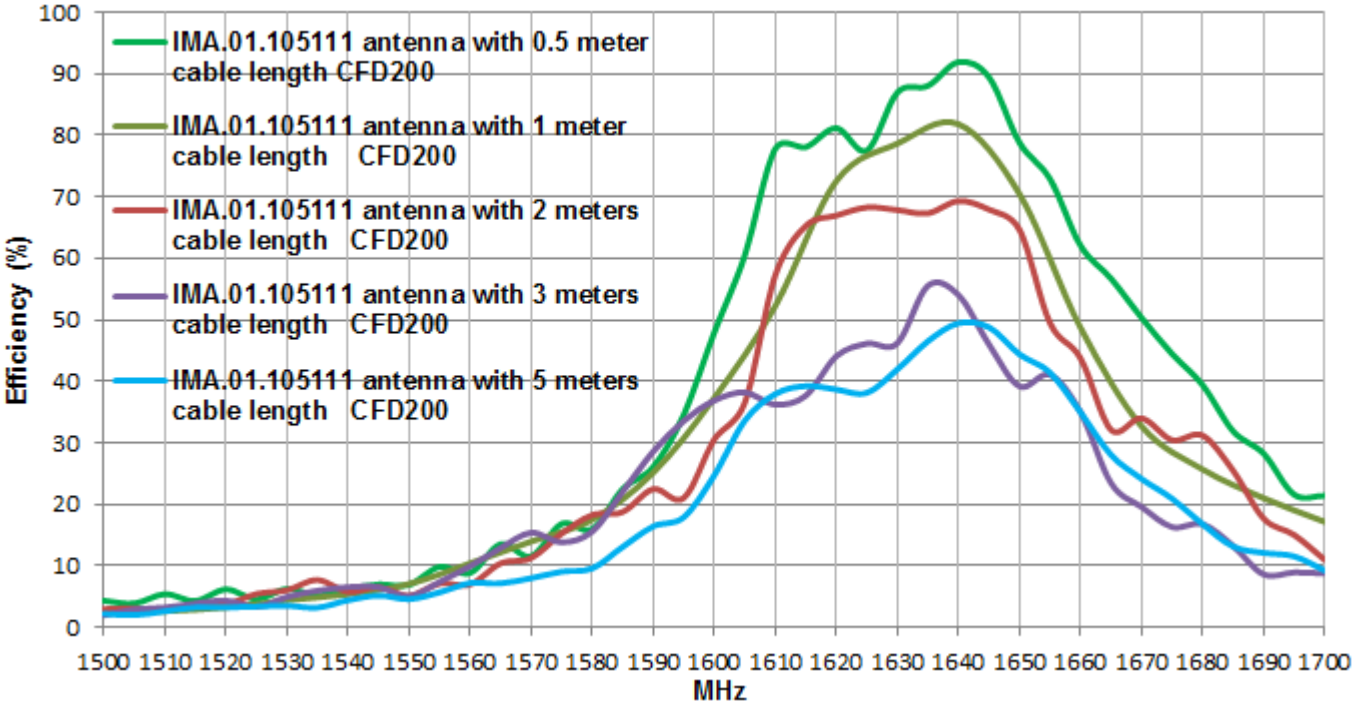


Figure 4. Efficiency of the IMA.01 antenna.

4.4 Peak Gain

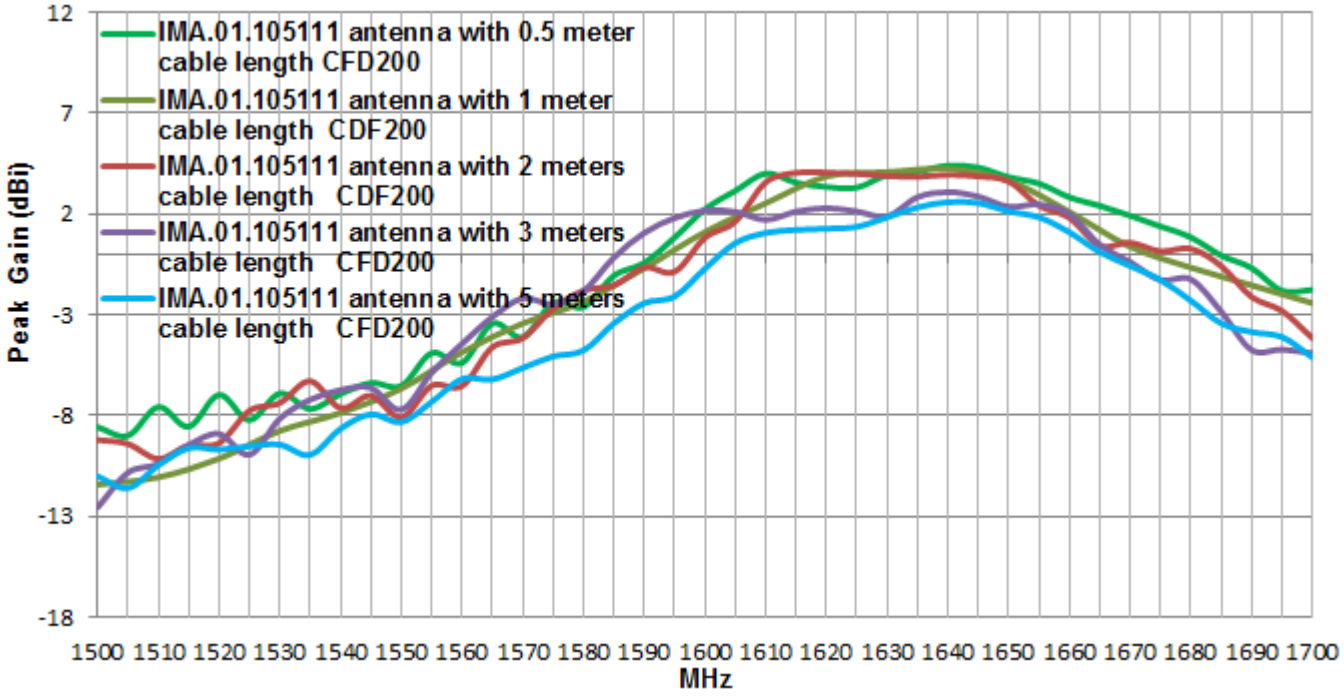


Figure 5. Peak Gain of the IMA.01 antenna.

4.5. 3D Radiation Pattern

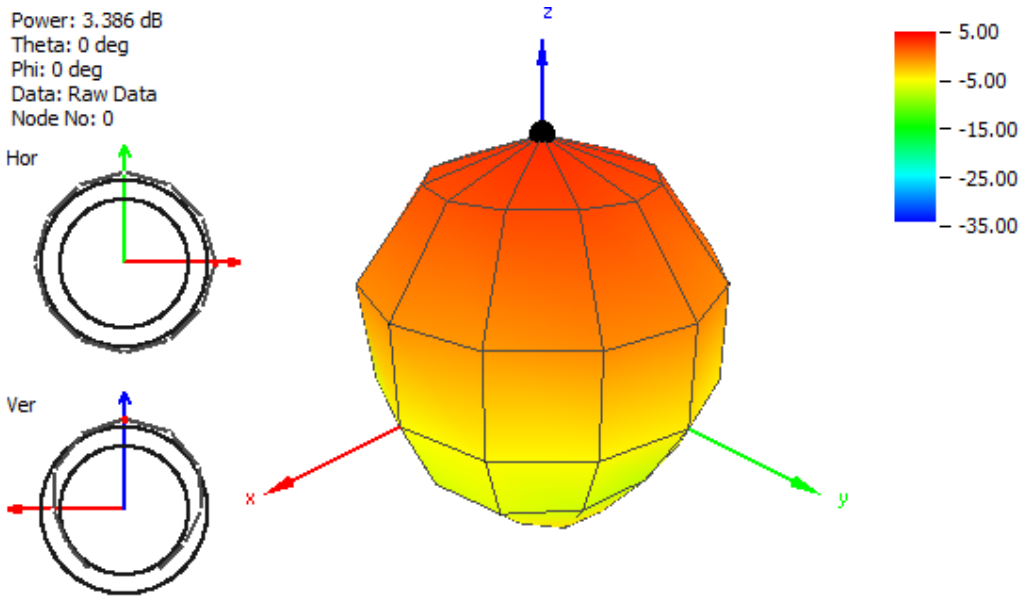


Figure 6. Radiation pattern of the antenna IMA.01 at 1616 MHz with 1 meter cable length.

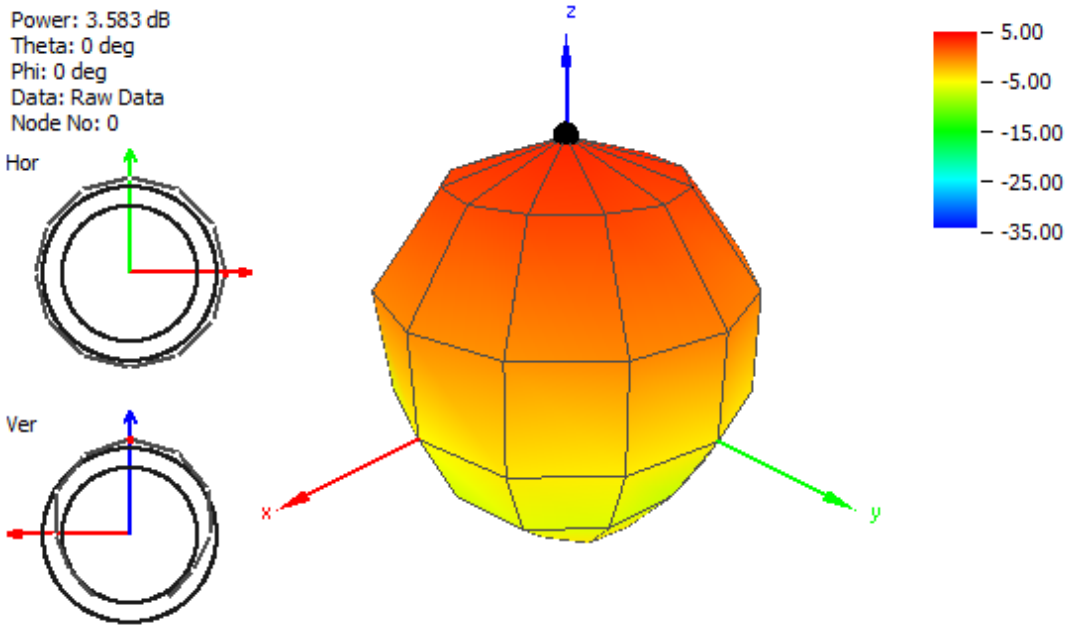


Figure 7. Radiation pattern of the antenna IMA.01 at 1621 MHz with 1 meter cable length.

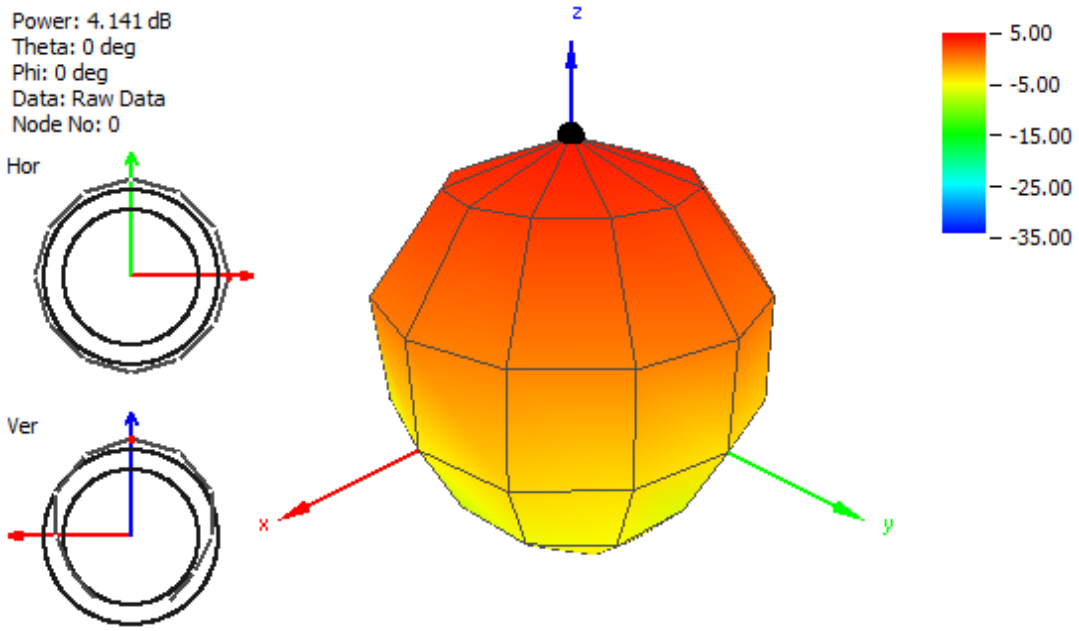


Figure 8. Radiation pattern of the antenna IMA.01 at 1626 MHz with 1 meter cable length.

4.6. 2D Radiation Pattern

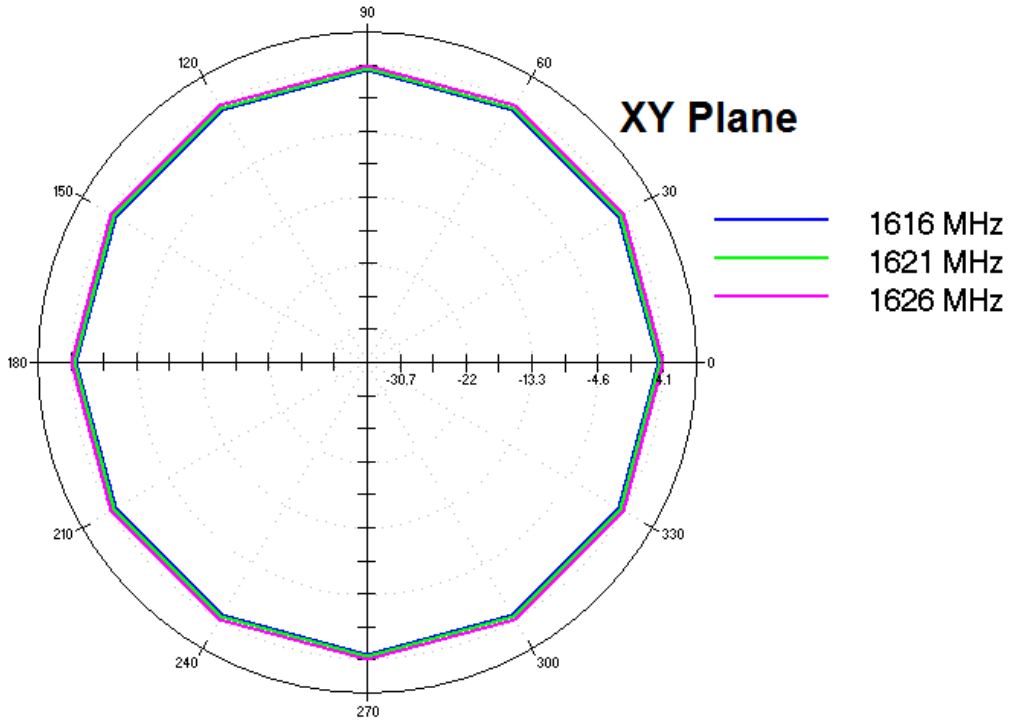


Figure 9. XY Plane Radiation Pattern of the antenna IMA.01 with 1 meter cable length.

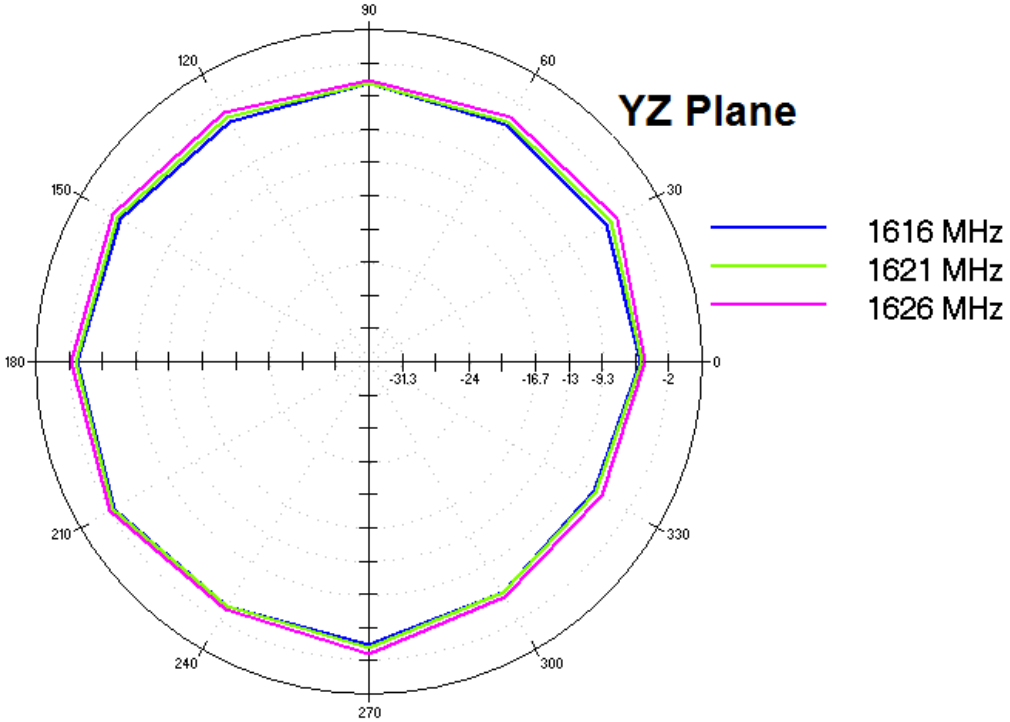
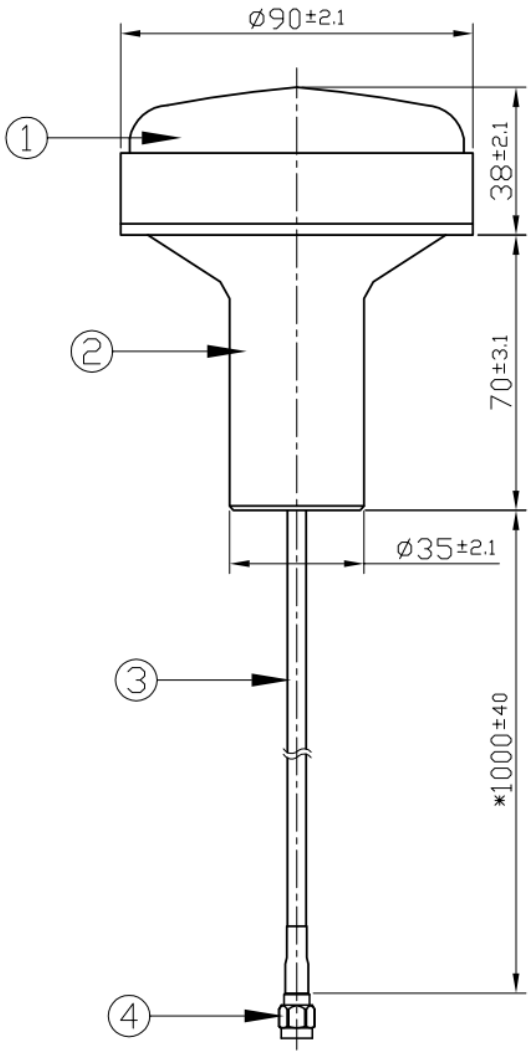
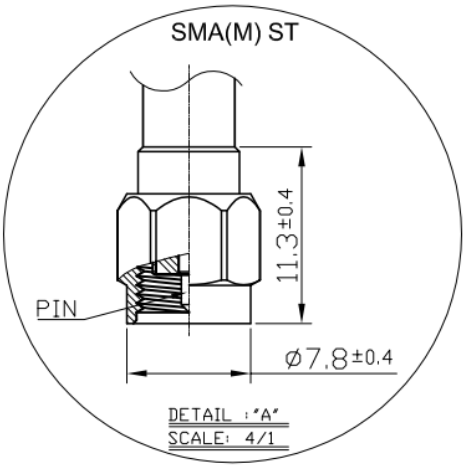


Figure 10. YZ Plane Radiation Pattern of the antenna IMA.01 with 1 meter cable length.

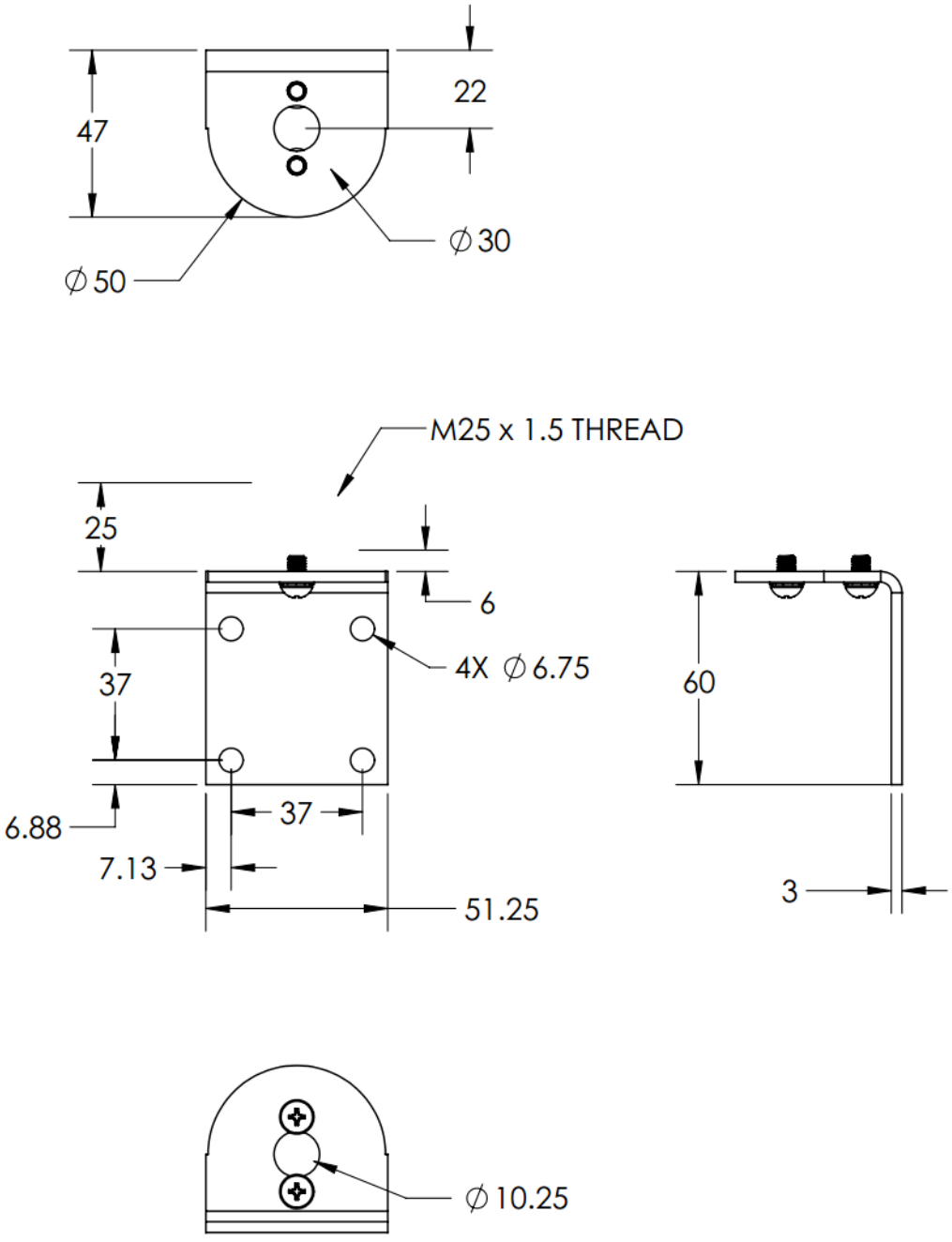
5. Mechanical Drawing (Unit: mm)





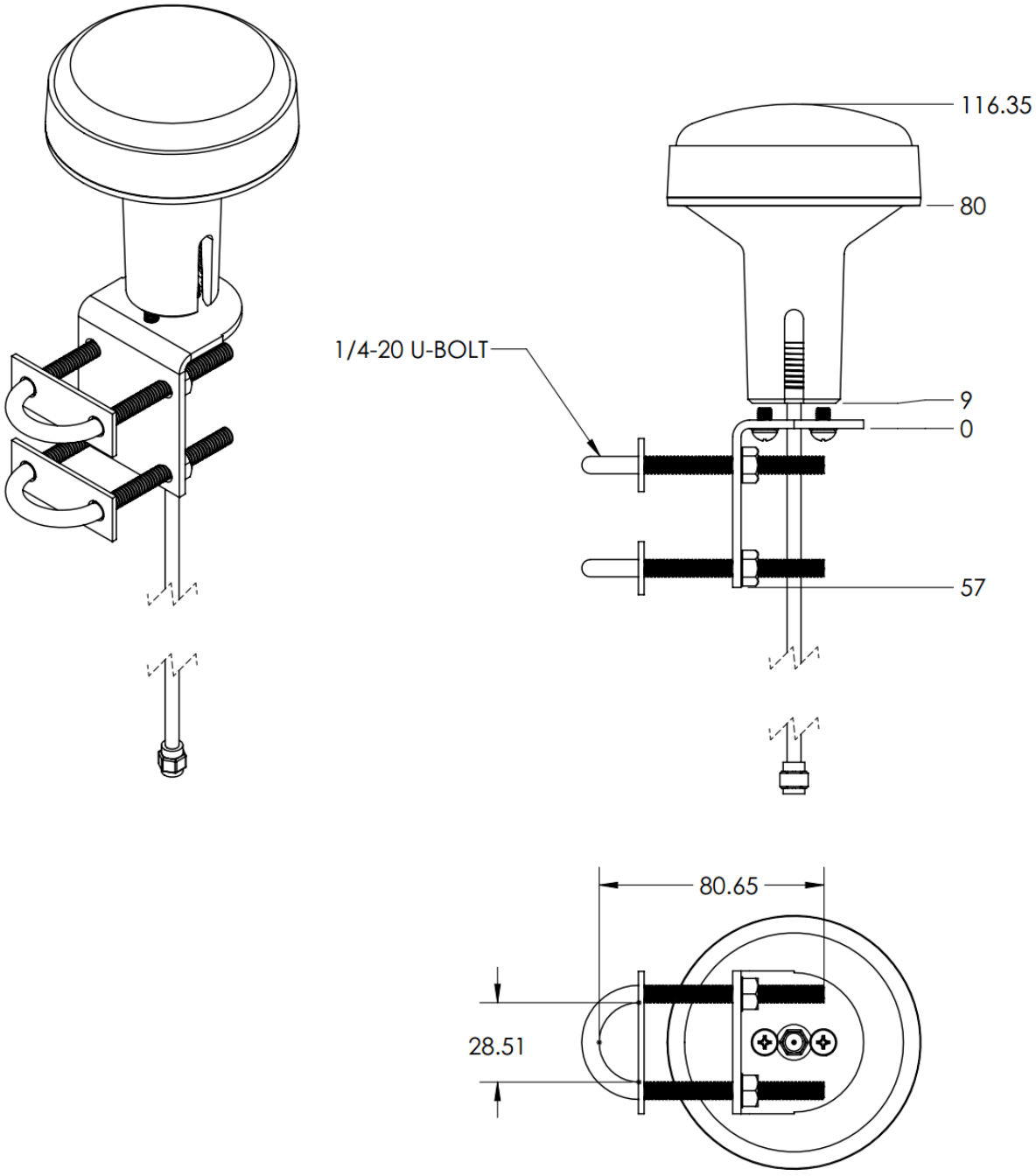
	Name	Material	Finish	QTY
1	Housing_Top	ABS	N/A	1
2	Housing_Bottom	ABS	N/A	1
3	CFD200	PVC	Black	1
3	SMA(M) ST	Brass	Gold	1

5.1 Bracket



* See P/N - **IMA.01.105111.wm** if bracket is needed for further implement.

5.2 U-Bolt



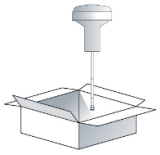
* See P/N - **IMA.01.105111.wm** if bracket is needed for further implement.

6. Packaging

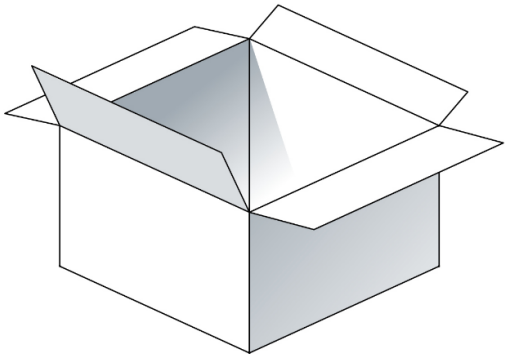
IMA.01.105111

Packaging Specifications

1pc IMA.01.105111 per small box
Box Dimensions - 100*140*128mm
Weight - 550g



30 small boxes in one carton
Carton Dimensions - 300*410*525mm
Weight - 16Kg



Pallet Dimensions 1100*1100*1725mm
18 Cartons per Pallet
6 Cartons per layer
3 Layers