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IP.1621.25.4.A.02

Specification

Iridium Certified

Part No.	IP.1621.25.4.A.02
Product Name	4mm thick Iridium Patch Antenna, 1621MHz
Feature	25mm*25mm*4mm ROHS Compliant

1. Introduction

This miniaturized ceramic Iridium patch antenna is based on smart ***XtremeGain™*** technology. It is mounted via pin and double-sided adhesive and has been selected as optimal solution for the customer device environment. Iridium certifies the IP.1621.25.4.A.02 for commercial use in connection with the Iridium Communications systems.

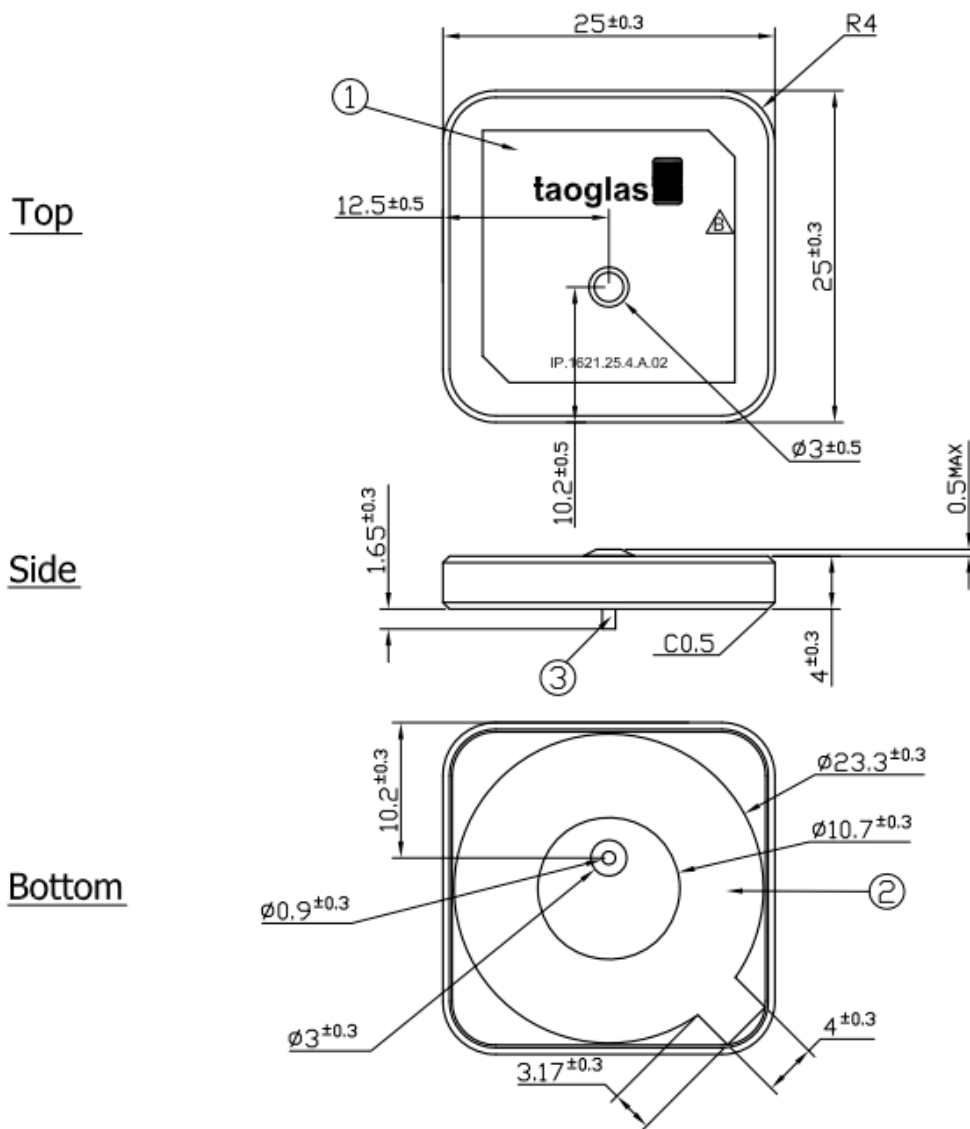
2. Key Antenna Performance Indicators

Original Patch Specification tested on 50*50mm ground plane

Parameter	Specification	Notes
Range of Receiving Frequency	1616~1626.5Mhz	
Center Frequency	1621MHz ±3MHz	with 50*50mm GND Plane
Bandwidth	16MHz	Return Loss ≤-10dB
VSWR	1.5 max	Center Frequency
Gain at Zenith	+2.0dBi typ.	Center Frequency
Gain at 10° Elevation	--	Center Frequency
Axial Ratio	3 dB Max	Center Frequency
Polarization	RHCP	
Impedance	50Ω	
Frequency Temp Coefficient (Tf)	0±20ppm/°C	-40°C to +85°C
Operating Temperature	-40°C to +85°C	
Antenna Weight	10g	

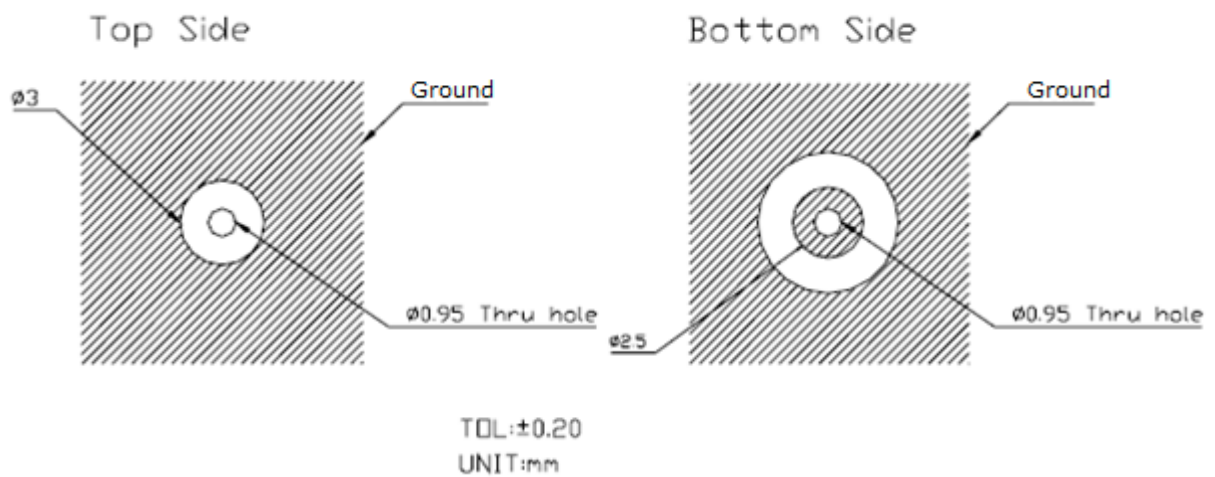
3. Mechanical Specifications

3.1 Shape and Dimension



	Name	Material	Finish	QTY
1	IP.25A Iridium Patch (25x25x4mm)	Ceramic	Clear	1
2	Double Sided Adhesive	NITTO 5015	White Liner	1
3	Pin	Brass	Tin Plated	1

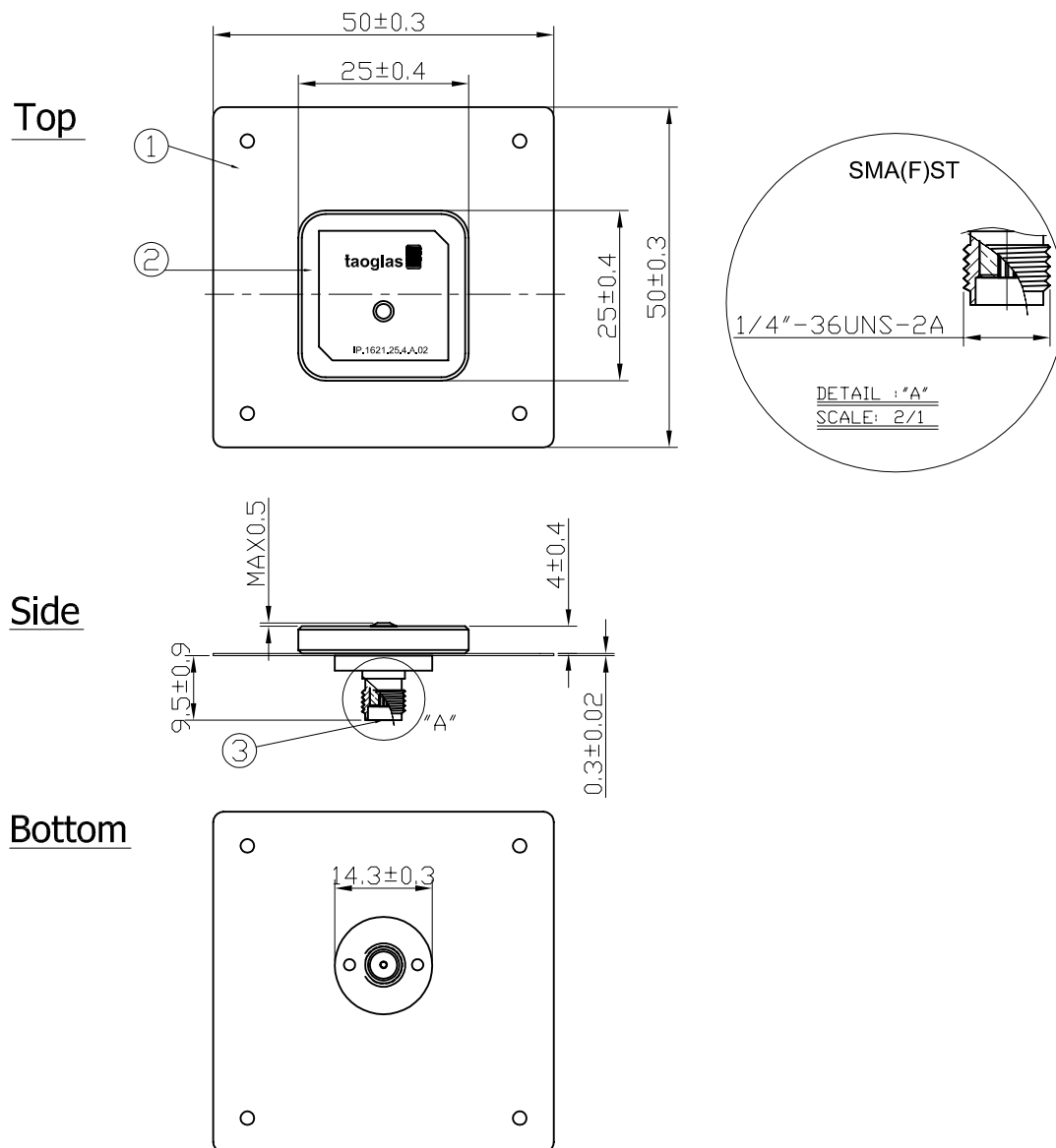
3.2 Layout



3.3 Mark

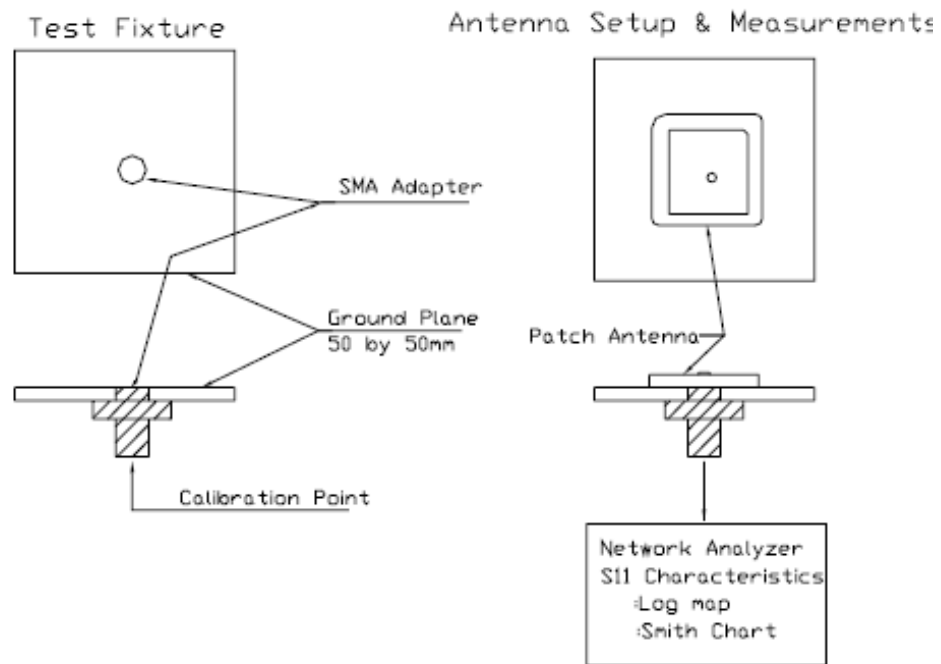


3.4 Evaluation Board (IPD.25A)



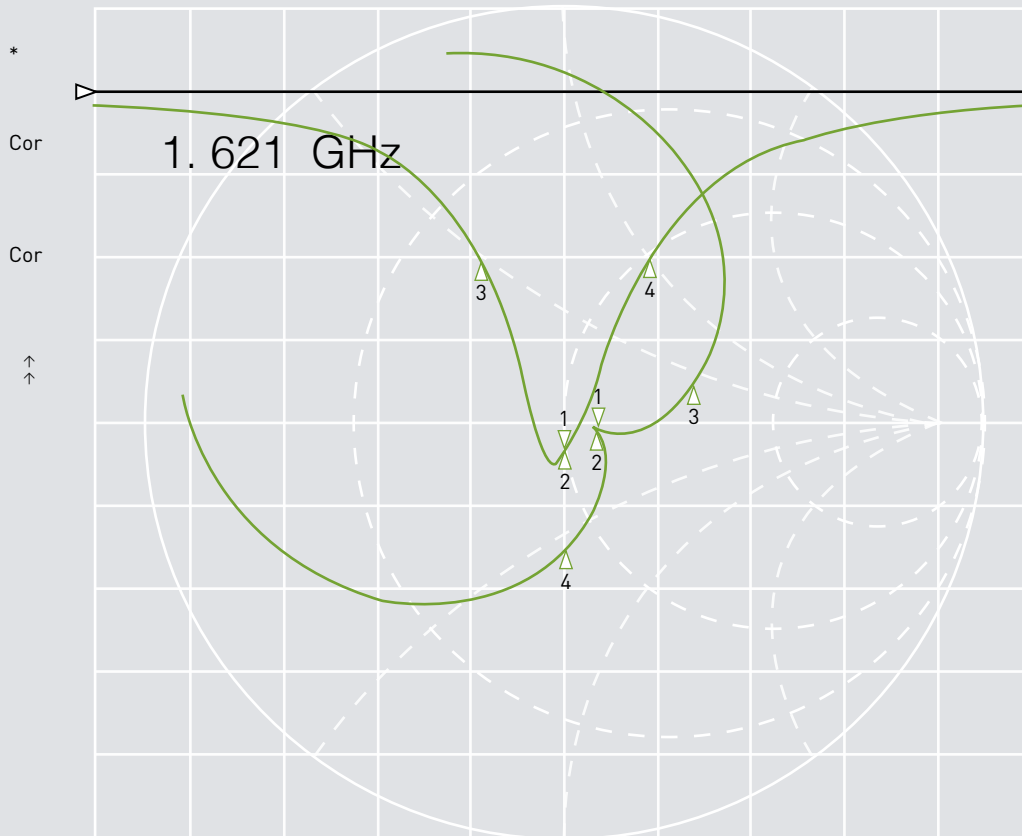
	Name	Material	Finish	QTY
1	IP.25A Iridium Patch (25x25x4mm)	Ceramic	Clear	1
2	Ground-Plane(50x50x0.3mm)	Brass	Silver	1
3	SMA(F) ST	Brass	Gold	1

3.5 Test Fixture Antenna Setup and Measurements



4. Performance testing and results

CH1 RFL LOG 5 dB/REF .3 dB 1: -21.527 dB 1 621.000 000 MHz
 CH3 RFL 1 U FS 1: 58.865 Ω -2.1875 Ω 44.884 pF



CH1 Markers
 BW: 17.896549 MHz
 cent: 1621.131270 MHz
 Q: 90.583
 1 loss: -21.527 dB

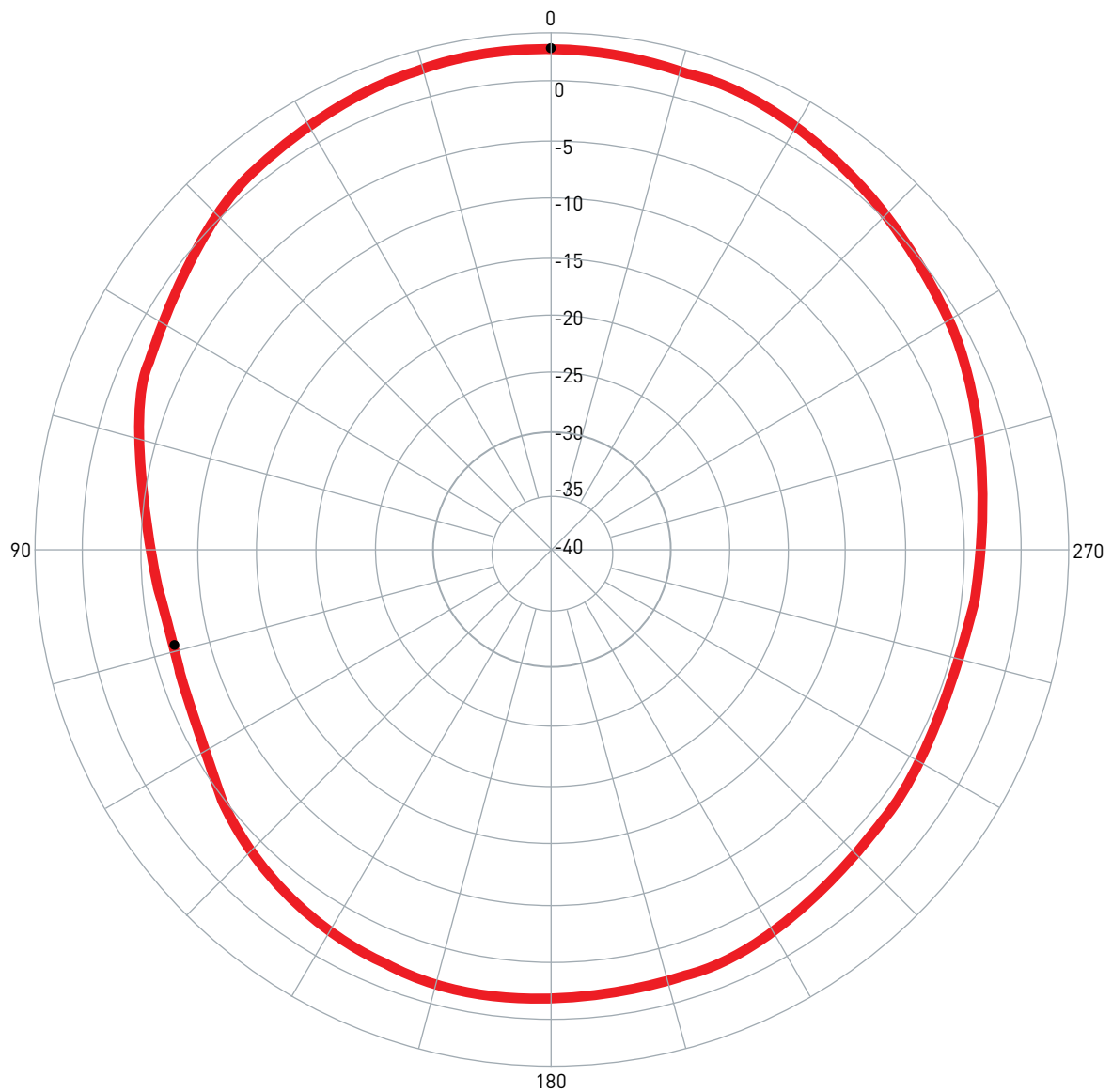
CH3 Markers
 2: 58.969 Ω
 -2.3008 m Ω
 1.62113 GHz
 3: 92.266 Ω
 16.277 Ω
 1.61218 GHz
 4: 41.121 Ω
 -28.895 Ω
 1.63007 GHz

CENTER 1 621.000 000 MHz

SPAN 100.000 000 MHz

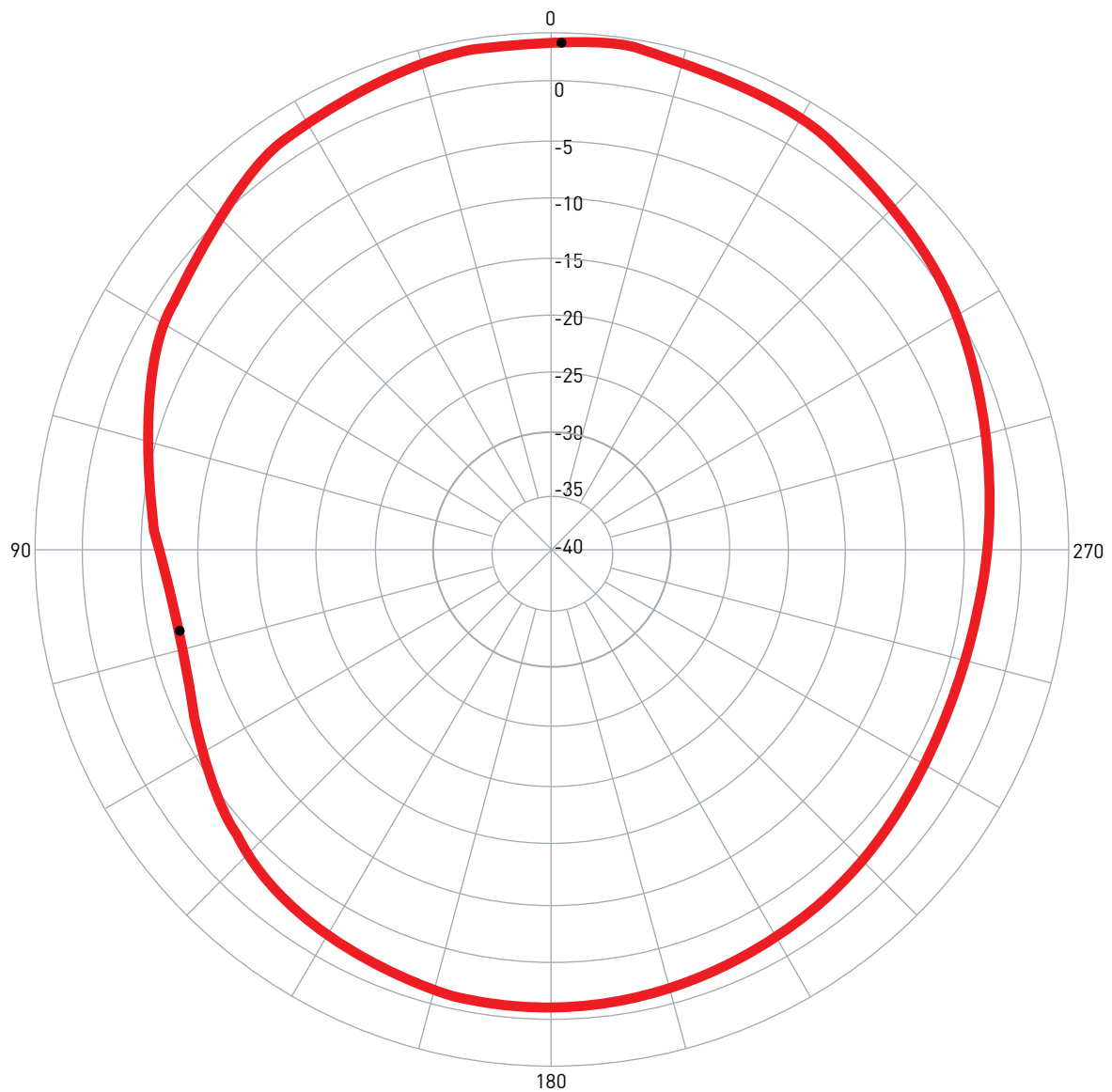
4.1 Antenna Gain Chart

4.1.1 XZ Plane



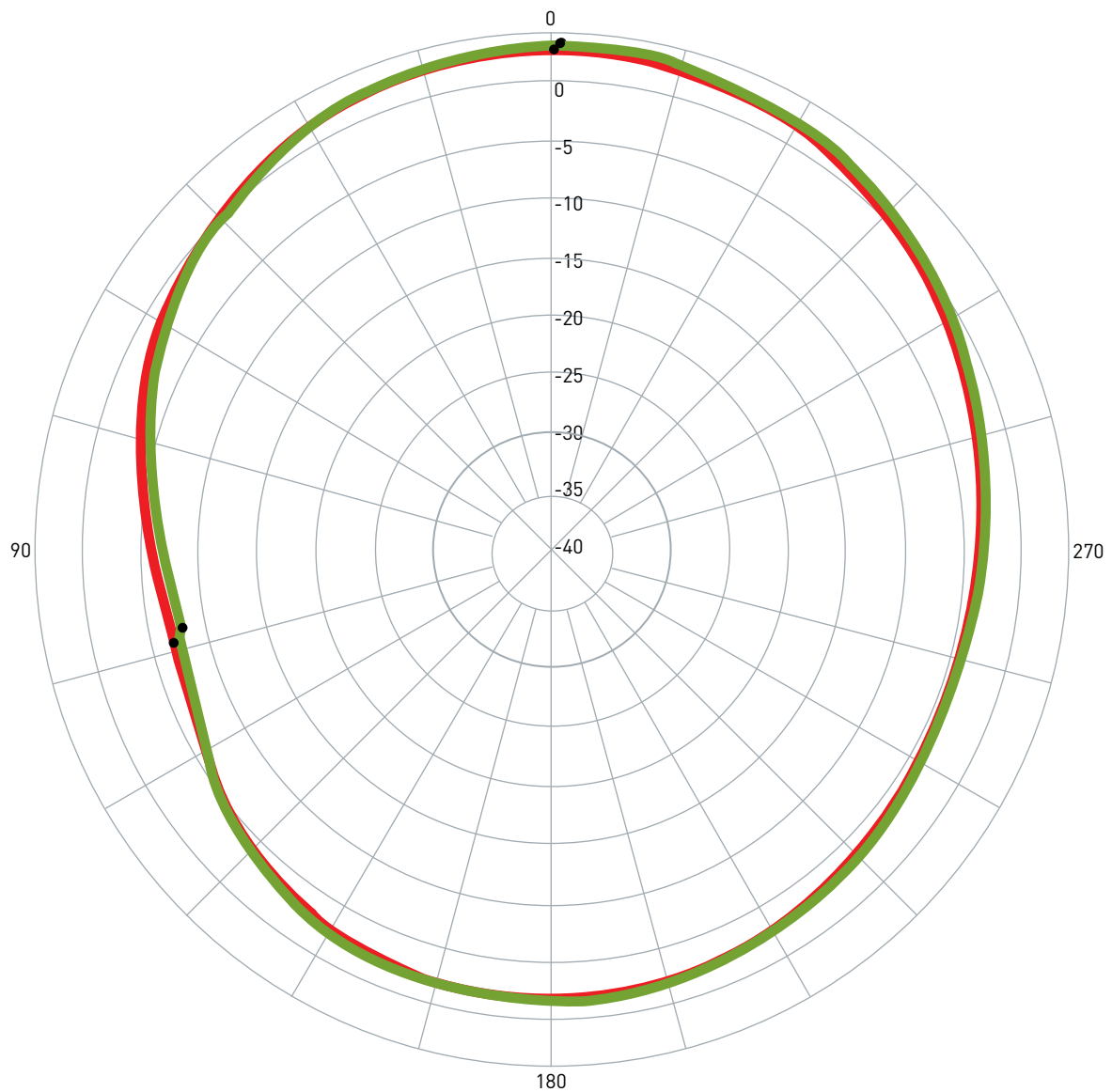
Pattern	Model No.	Test Mode	Freq (MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.
1 	IP.1621.25.4.A.02	XZ	1621.00	2.72 / 0.00	-6.84 / 104.00	-1.05	V+H

4.1.2 YZ Plane Radiation



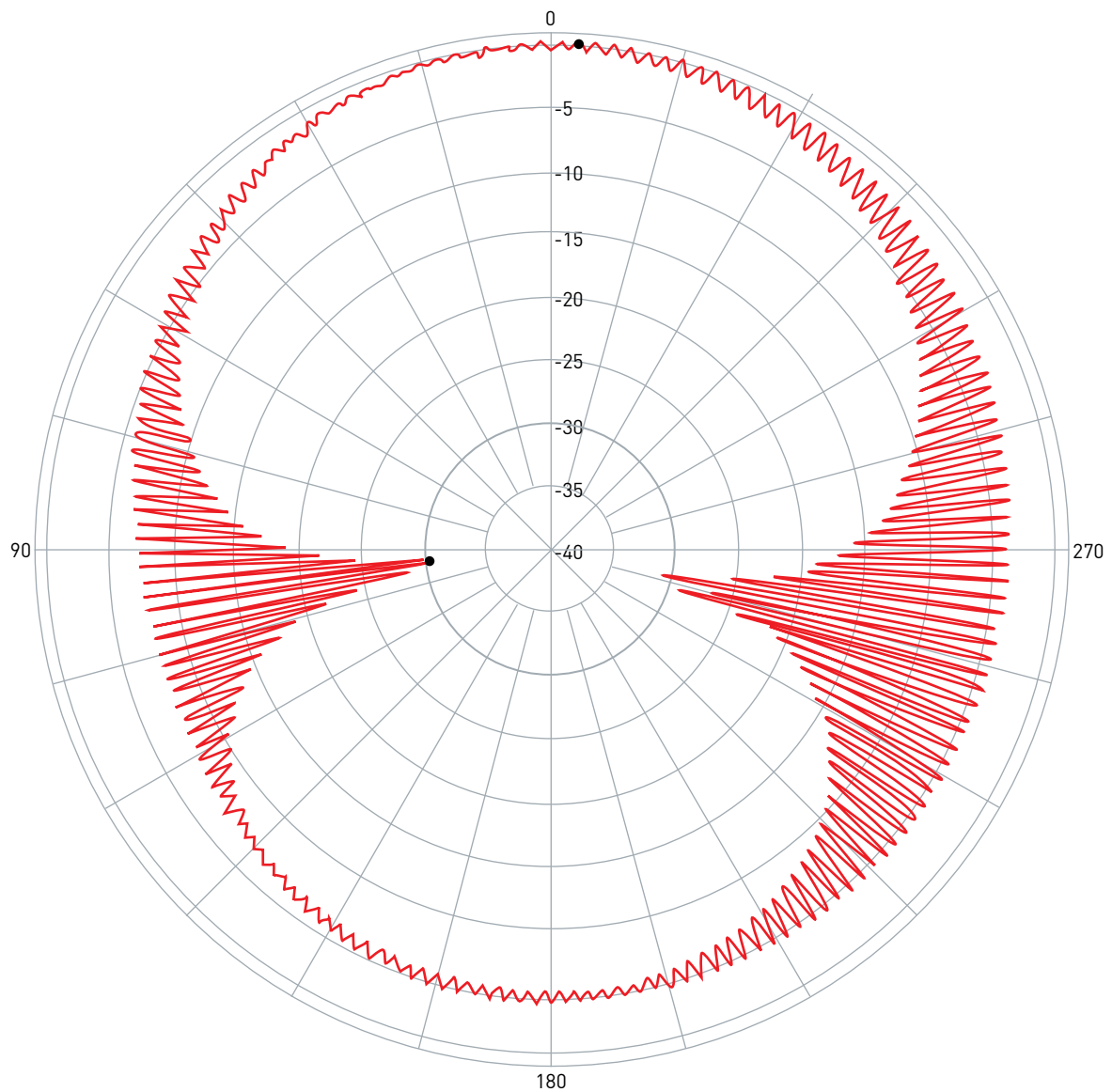
Pattern	Model No.	Test Mode	Freq (MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.
1 	IP.1621.25.4.A.02	YZ	1621.00	3.00 / 358.99	-7.57 / 101.85	-0.86	V+H

4.1.3 XZ + YZ Plane Radiation



Pattern	Model No.	Test Mode	Freq (MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.
1	IP.1621.25.4.A.02	XZ	1621.00	2.72 / 1.00	-6.84 / 104	-1.05	V+H
2	IP.1621.25.4.A.02	YZ	1621.00	3.00 / 358.99	-7.57 / 101.85	-0.86	V+H

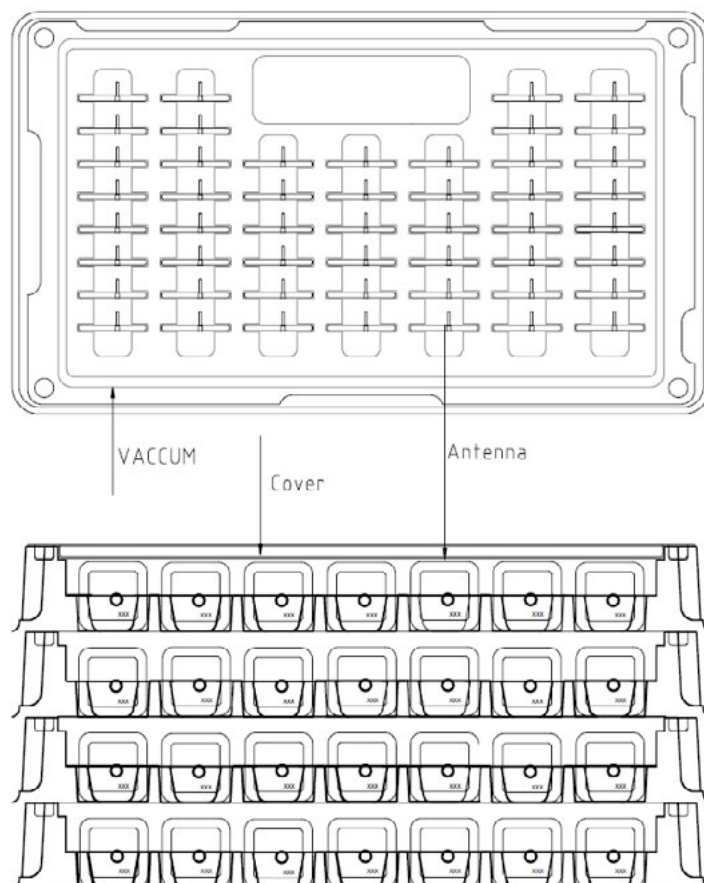
4.2 Axial Ratio



Pattern	Model No.	Test Mode	Freq (MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.
1	IP.1621.25.4.A.02	Axial Ratio	1621.00	0.13 / 356.87	-30.61 / 95.76	-4.00	CP

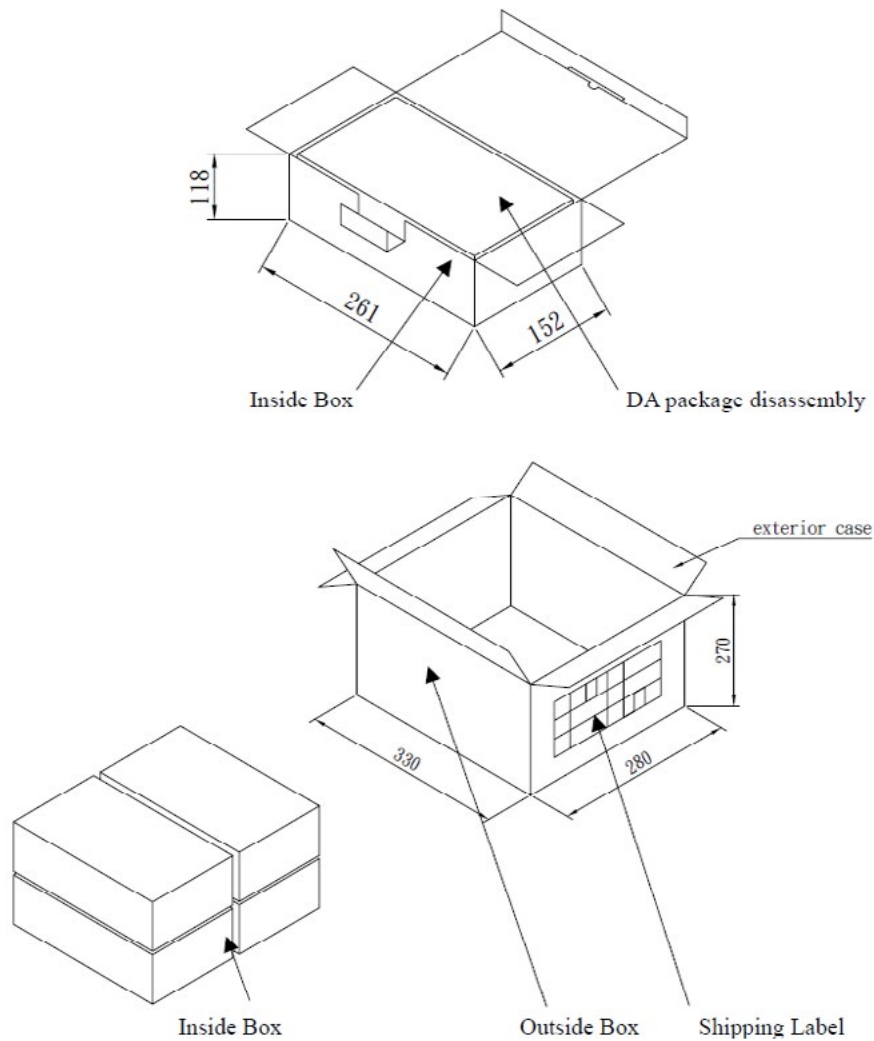
9. Packaging

50 pcs IP1621 per tray
4 Trays per Inside Box = 200 pcs



4 Trays per Inside Box = 200 pcs
Box Dimensions - 118*261*152mm

4 boxes in Outer box = 800 pcs
Box Dimensions - 270*330*280mm



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