

SPECIFICATION

Iridium Certified

Part No. : **IP.1621.25.4.A.02**

Product Name : **4mm thick Iridium Patch Antenna, 1621MHz**

Features : 25.1mm*25.1mm*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.

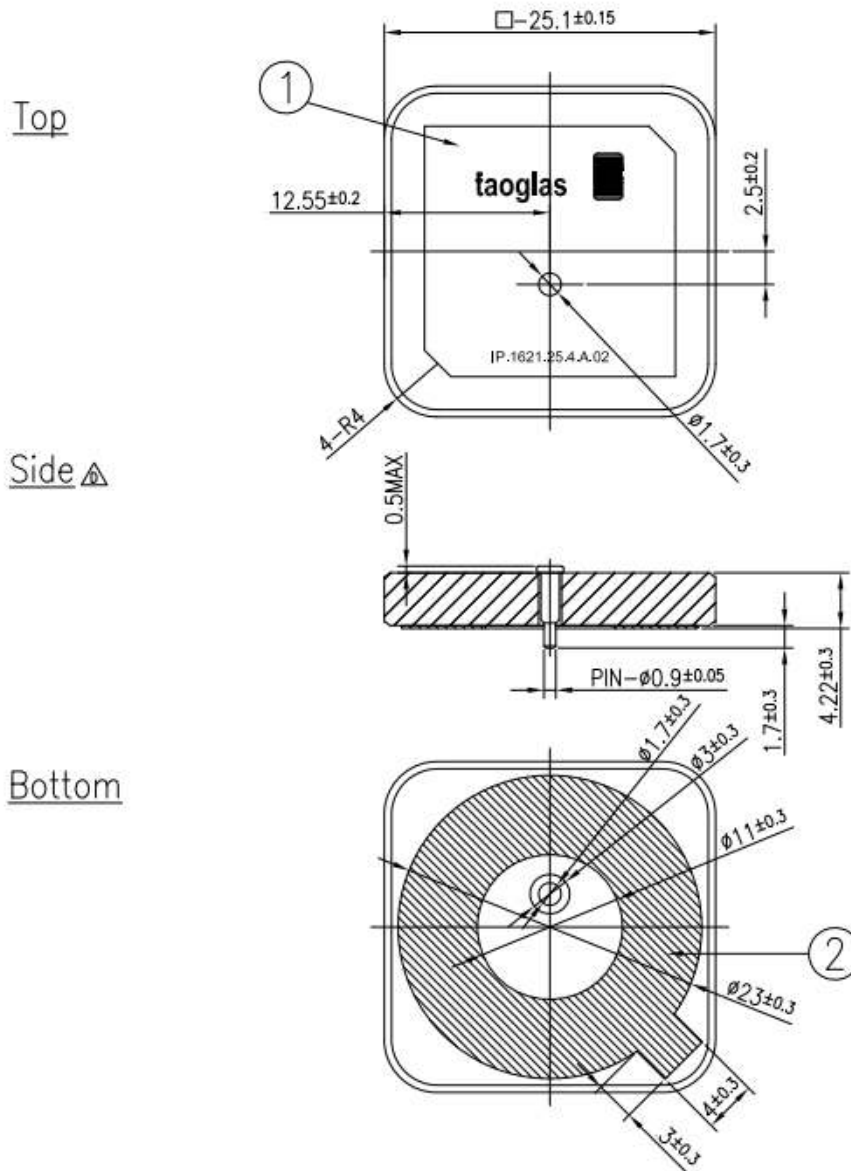
2. Key Antenna Performance Indicators

Original Patch Specification tested on 50*50mm ground plane

| No | Parameter | Specification | Notes |
|----|---------------------------------|----------------|------------------------|
| 1 | Range of Receiving Frequency | 1616~1626.5Mhz | |
| 2 | Center Frequency | 1621MHz ±3MHz | with 50*50mm GND Plane |
| 3 | Bandwidth | 16MHz | Return Loss ≤-10dB |
| 4 | VSWR | 1.5 max | Center Frequency |
| 5 | Gain at Zenith | +2.0dBi typ. | Center Frequency |
| 6 | Gain at 10° Elevation | -- | Center Frequency |
| 7 | Axial Ratio | 3 dB Max | Center Frequency |
| 8 | Polarization | RHCP | |
| 9 | Impedance | 50Ω | |
| 10 | Frequency Temp Coefficient (Tf) | 0±20ppm/°C | -40°C to +85°C |
| 11 | Operating Temperature | -40°C to +85°C | |
| 12 | Antenna Weight | 10g | |

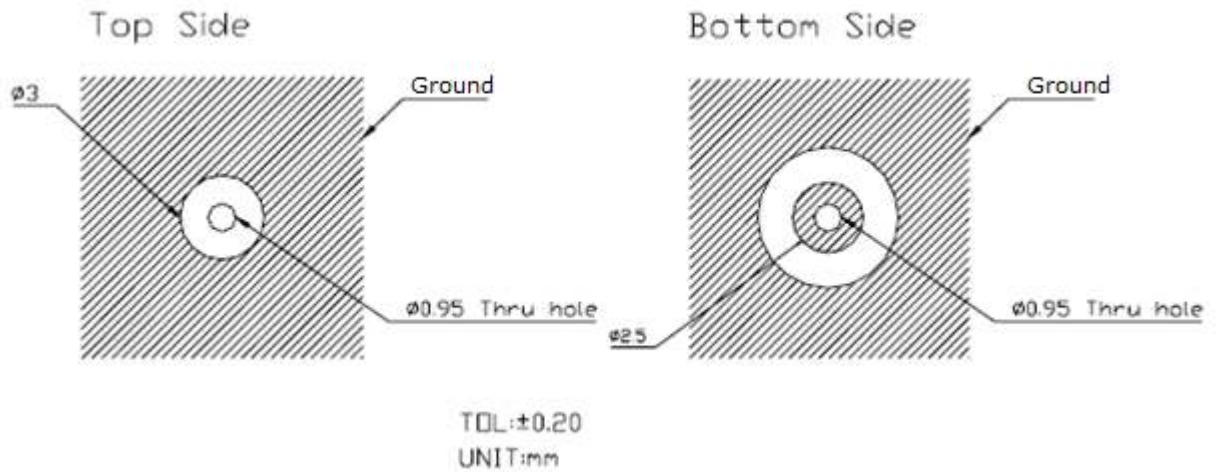
3. Mechanical Drawing

3.1 Shape and Dimension

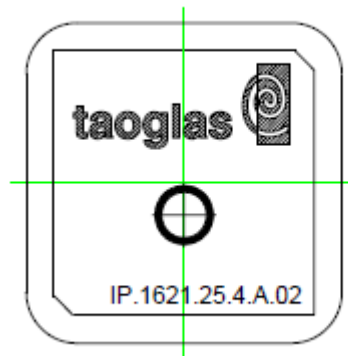


| | Name | P/N | Material | Finish | QTY |
|---|-------------------------------------|----------------|------------|-------------|-----|
| 1 | IP.25A Iridium Patch(25.1x25.1x4mm) | 001514C000007A | Ceramic | Clear | 1 |
| 2 | Double sided Adhesive | 001013C180007A | NITTO 5015 | White Liner | 1 |

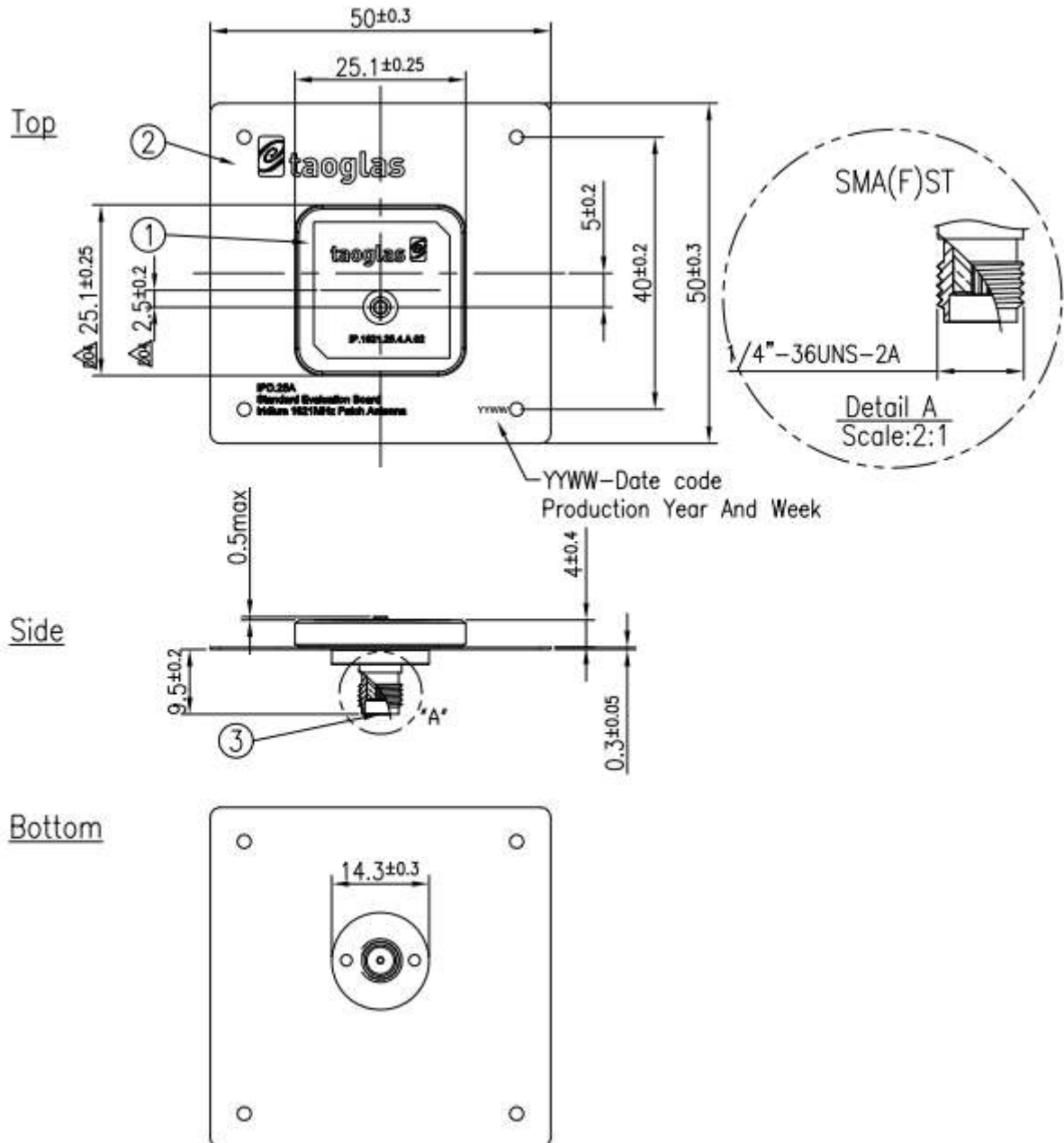
3.2 Layout



3.3 Mark

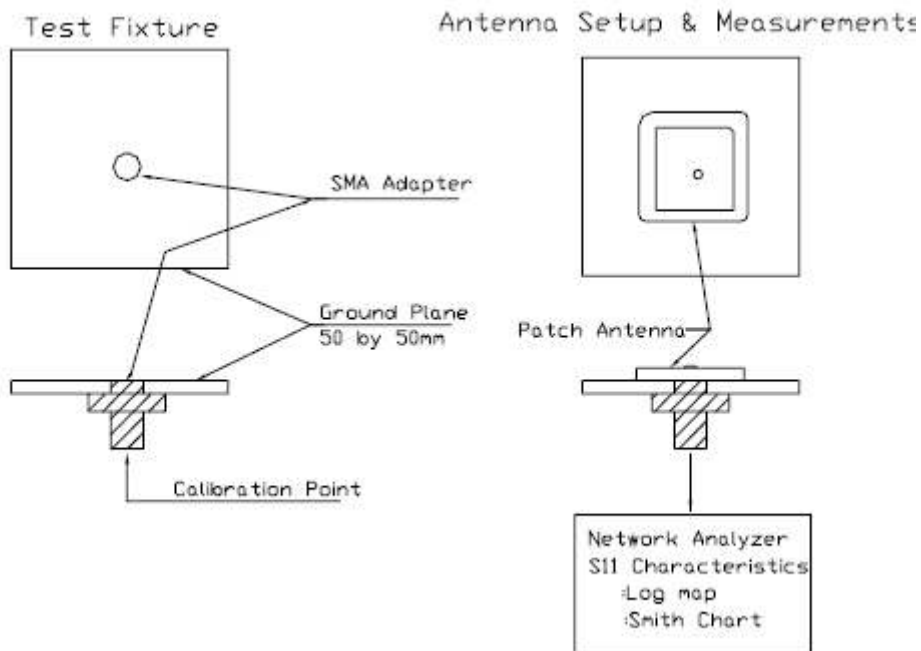


3.4 Evaluation Board (IPD.25A)

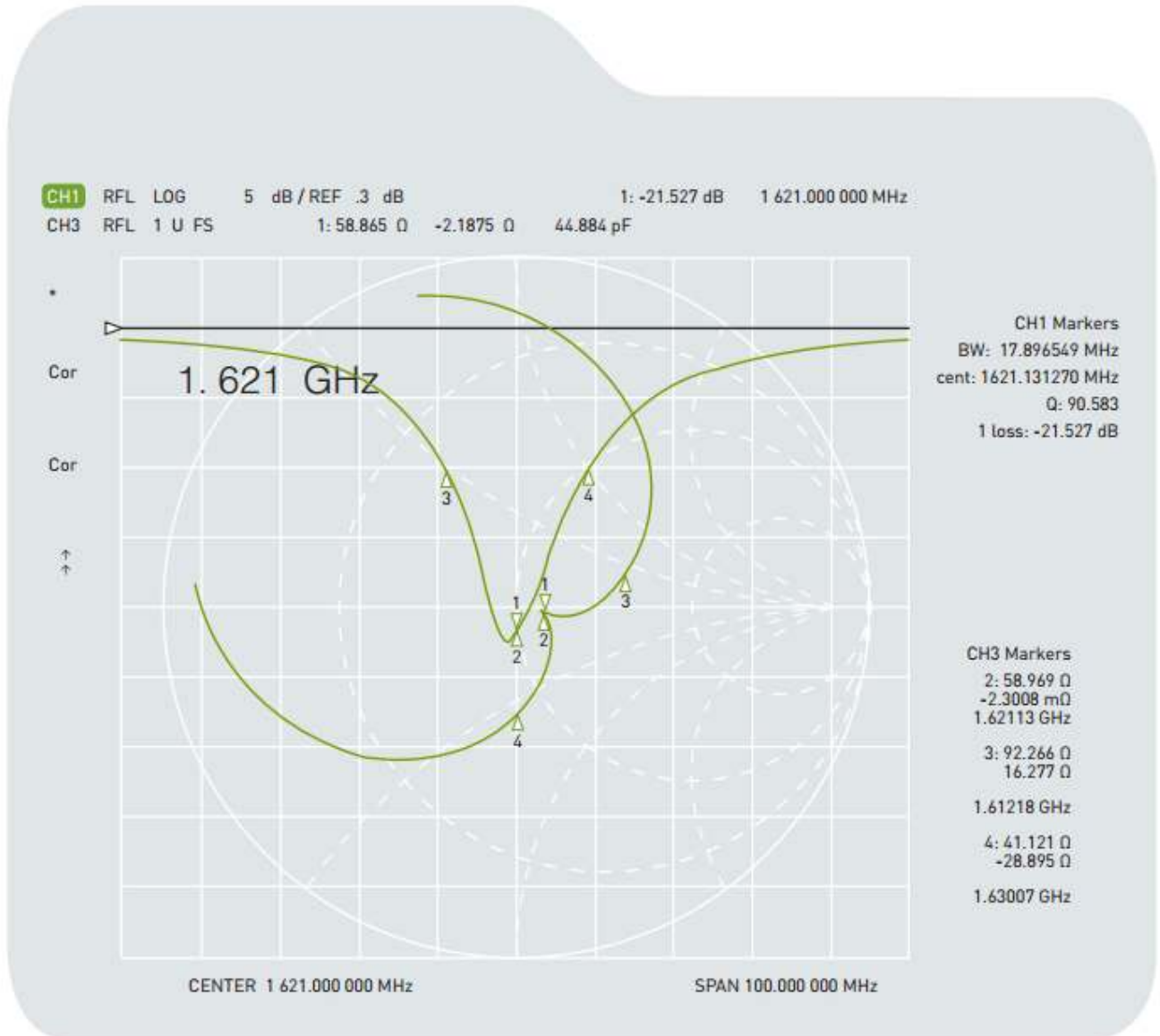


| | Name | P/N | Material | Finish | QTY |
|---|-------------------------------------|----------------|----------|-----------|-----|
| 1 | IP.25A Iridium Patch(25.1x25.1x4mm) | 001514C000007A | Ceramic | Clear | 1 |
| 2 | Ground-Plane(50x50x0.3mm) | 000514C000007A | Brass | Silver | 1 |
| 3 | SMA(F) ST | 200413L000007A | Brass | Au Plated | 1 |

3.5 Test Fixture Antenna Setup and Measurements

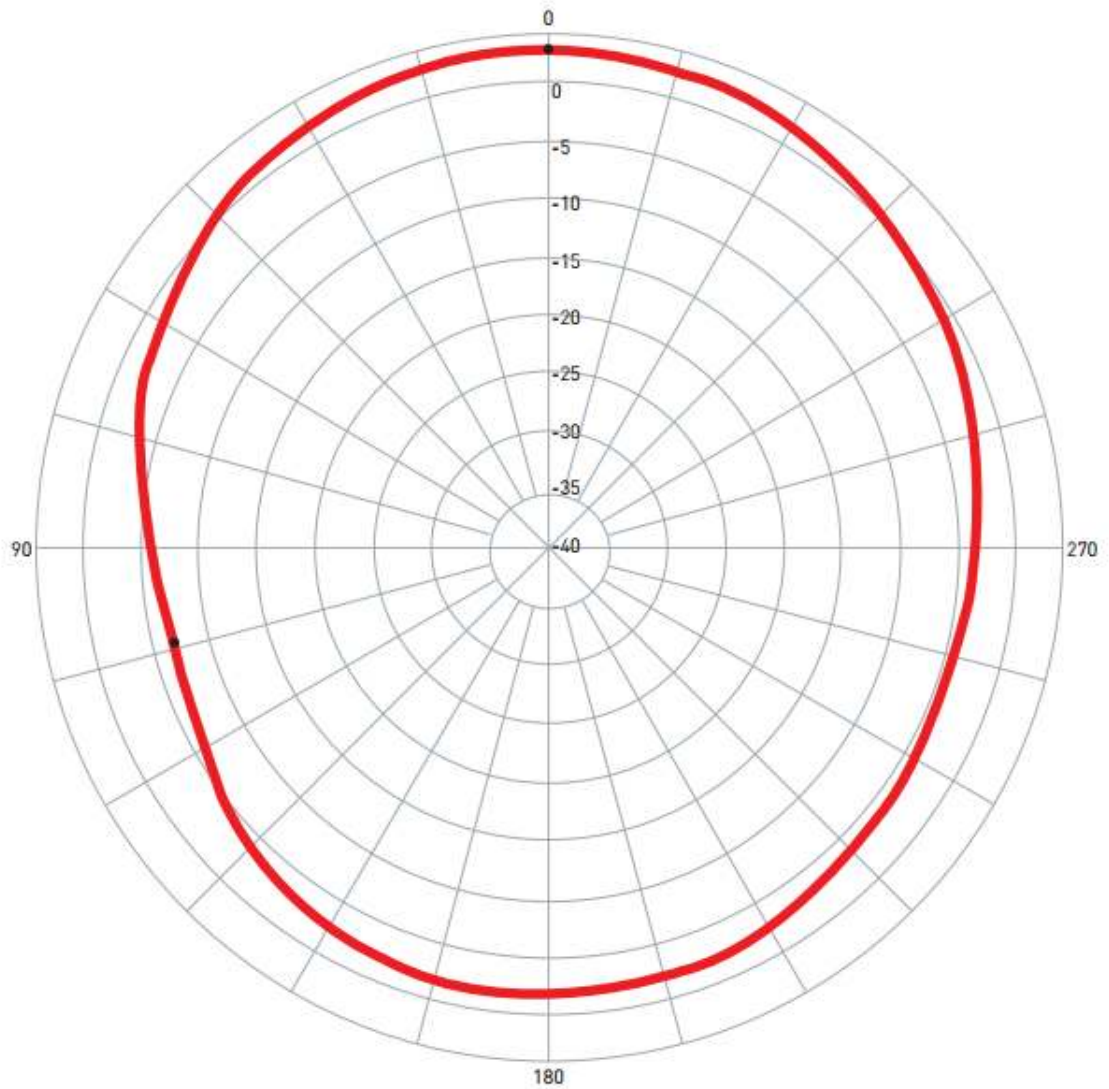


4. Performance testing and results



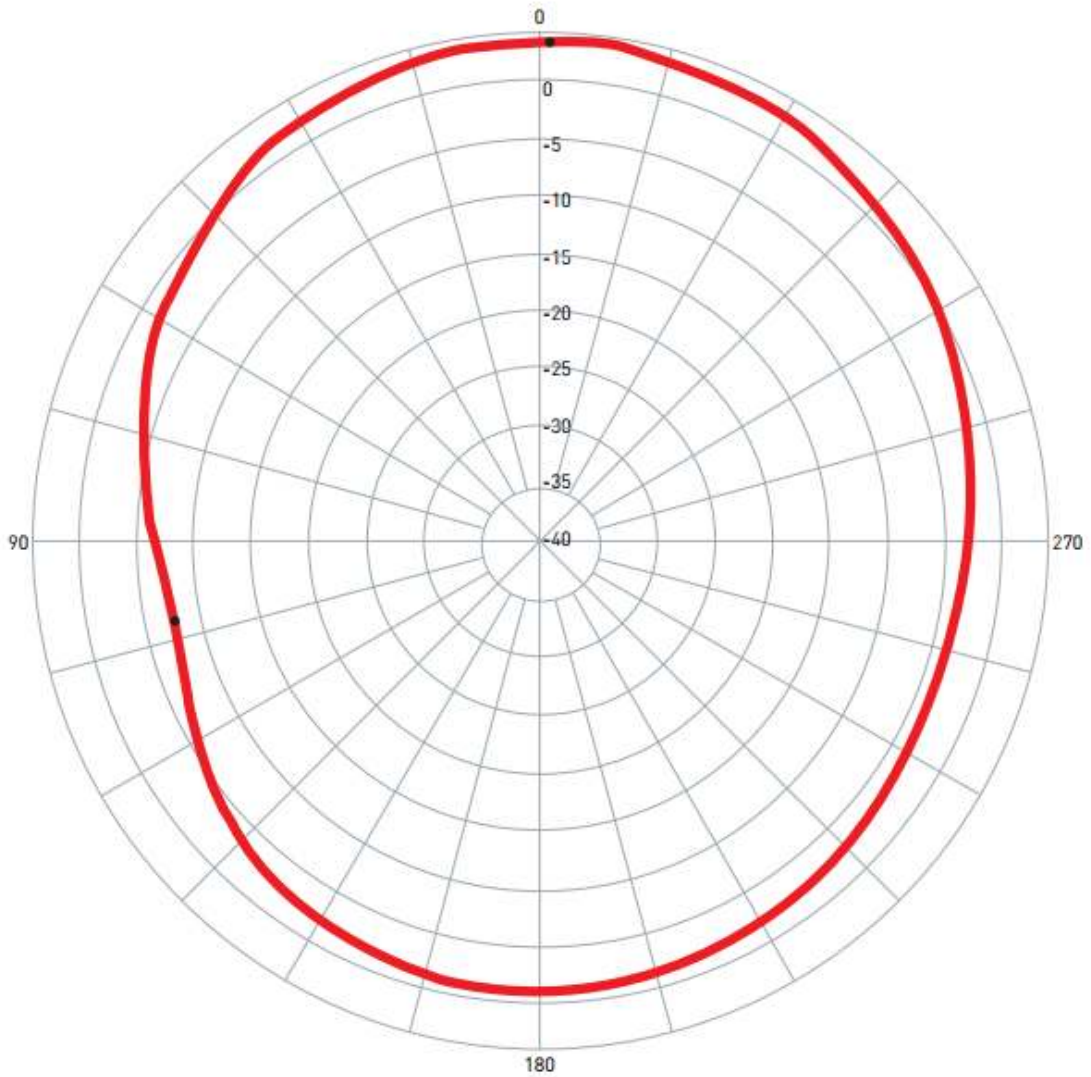
4.1 Antenna Gain Chart

4.1.1 XZ Plane



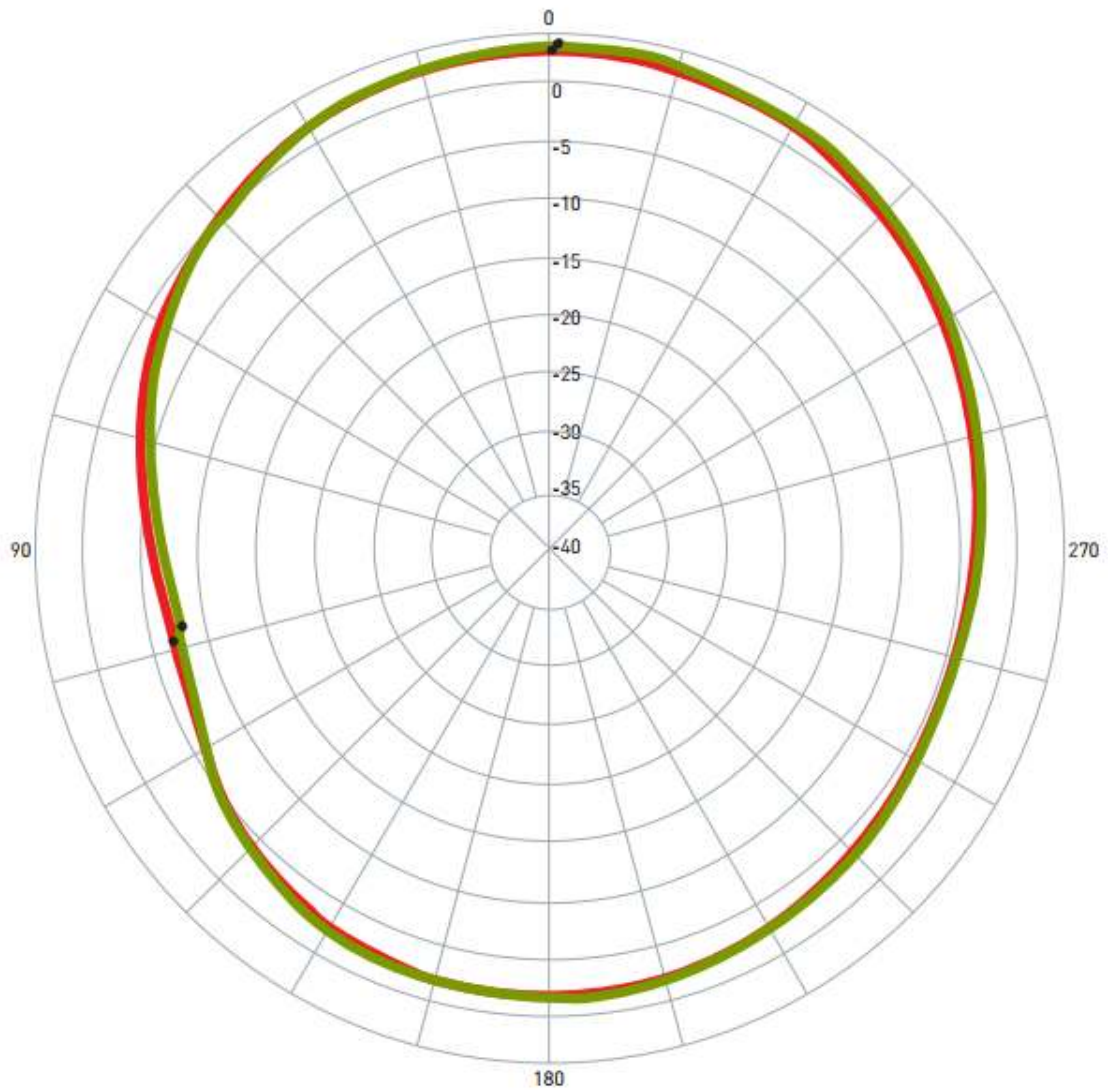
| Pattern | Model No. | Test Mode | Freq (MHz) | Max Gain(dBi) | Min Gain(dBi) | Avg. Gain(dBi) | Source Polar. |
|---------------------------------------------------------------------------------------|-------------------|-----------|------------|---------------|----------------|----------------|---------------|
| 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



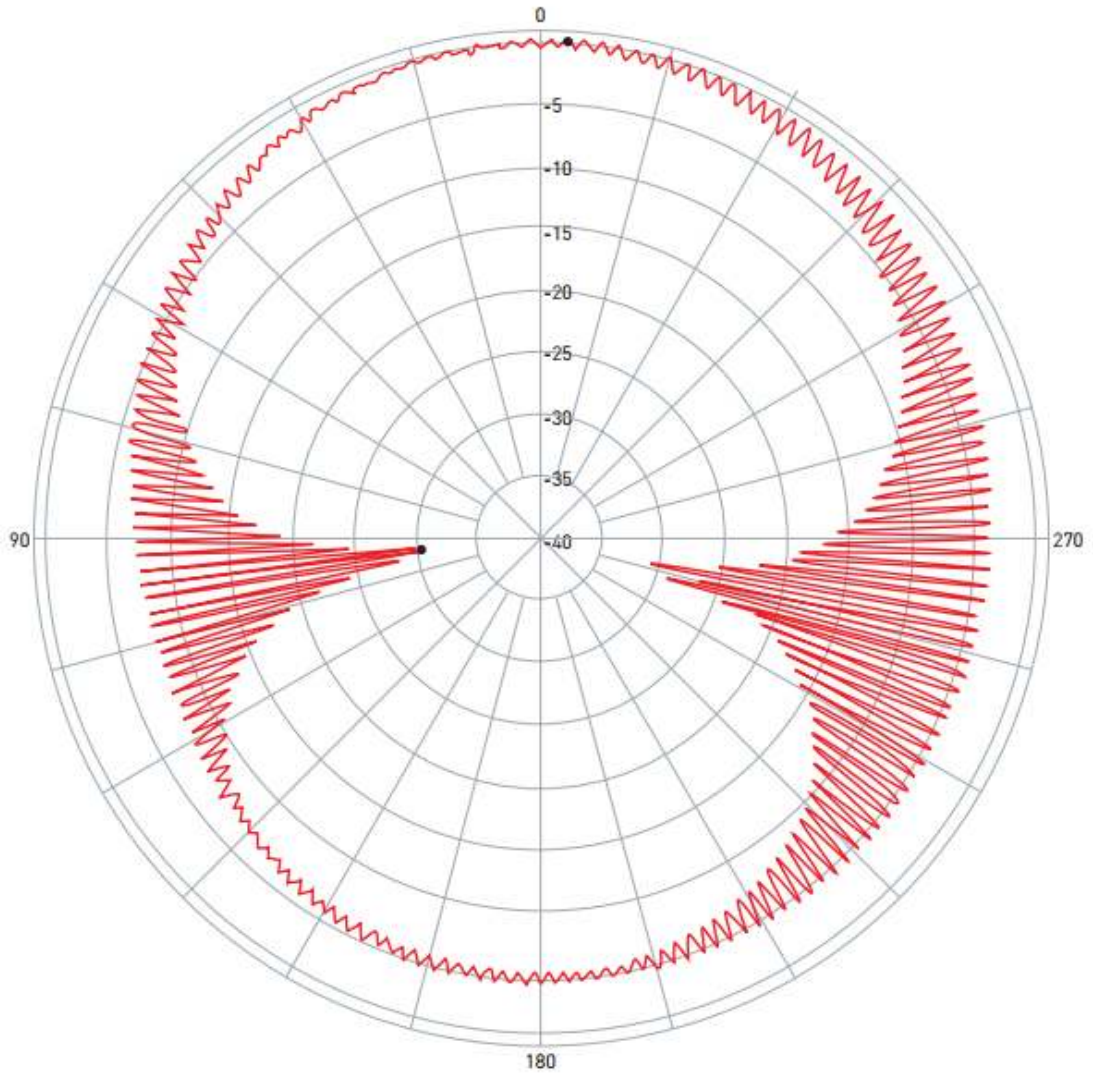
| Pattern | Model No. | Test Mode | Freq (MHz) | Max Gain(dBi) | Min Gain(dBi) | Avg. Gain(dBi) | Source Polar. |
|---------------------------------------------------------------------------------------|-------------------|-----------|------------|---------------|----------------|----------------|---------------|
| 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



| 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



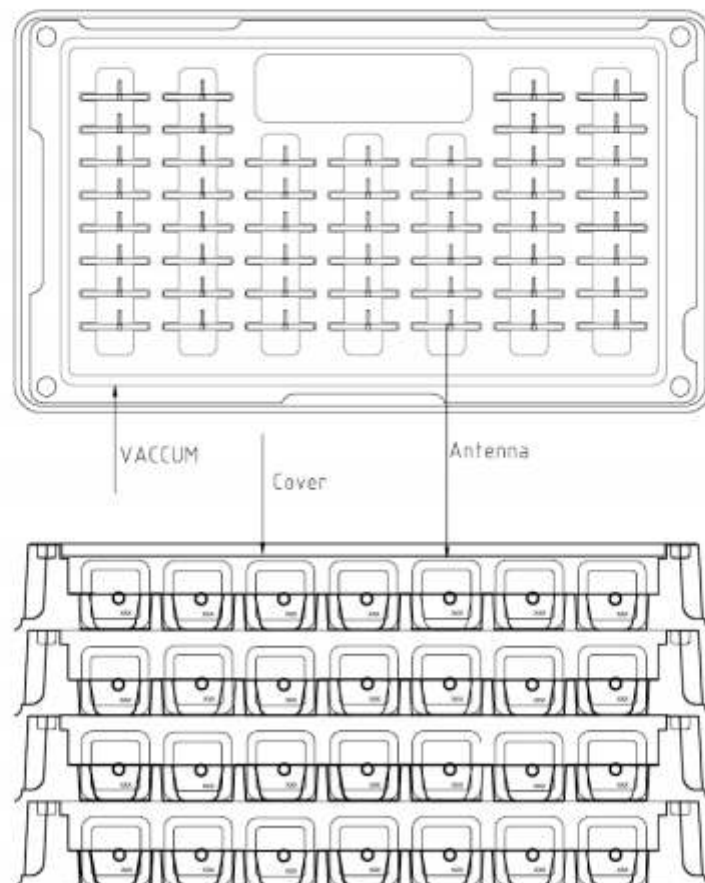
| Pattern | Model No. | Test Mode | Freq (MHz) | Max Gain(dBi) | Min Gain(dBi) | Avg. Gain(dBi) | Source Polar. |
|---------|-------------------|-------------|------------|---------------|----------------|----------------|---------------|
| 1 | IP.1621.25.4.A.02 | Axial Ratio | 1621.00 | 0.13 / 356.87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

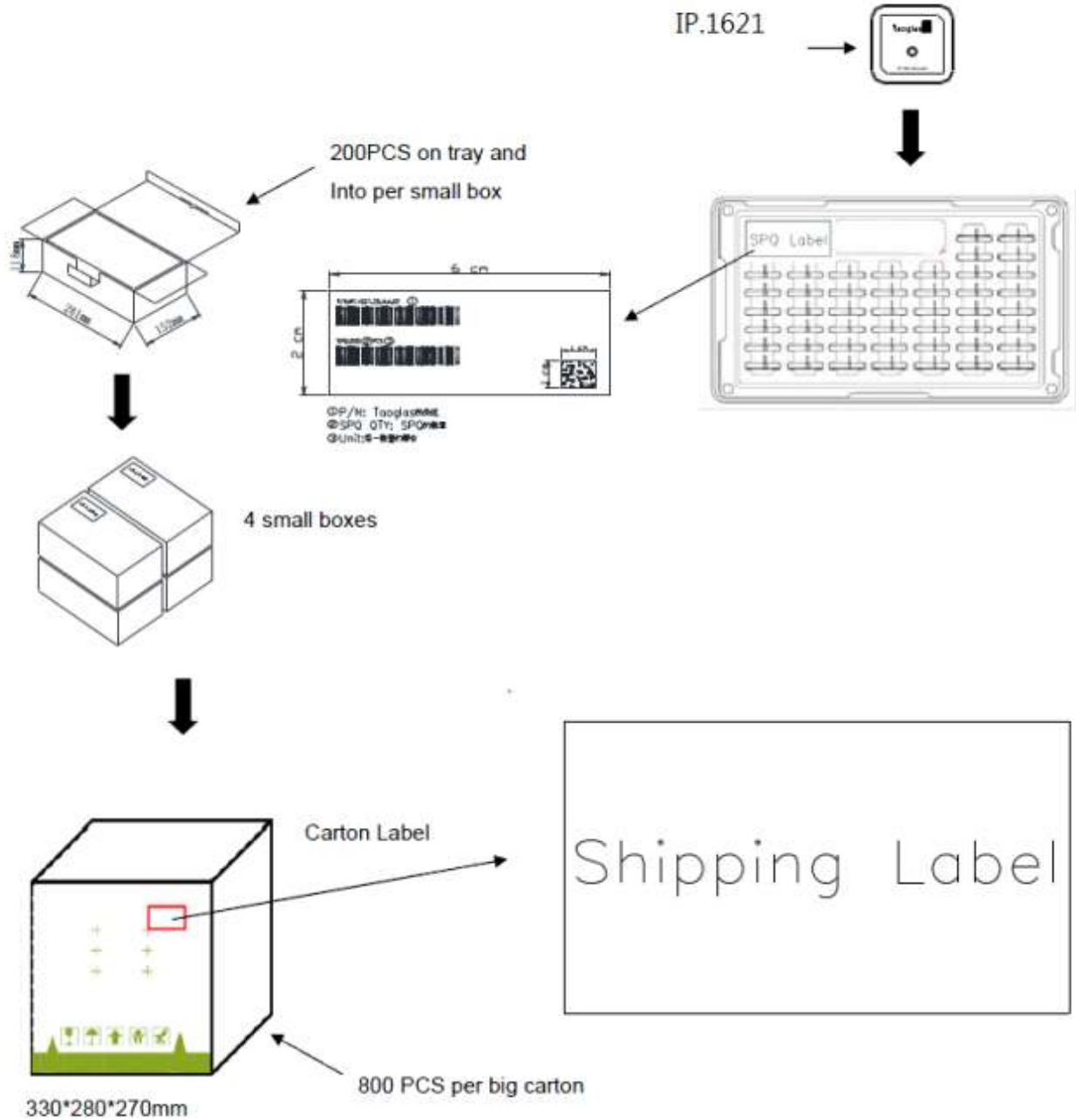
5. Packaging

Per Tray: 50 pieces

Per Carton (Inside Box) - 4 Trays = 200 pieces

Outer Carton (Outside Box) - 4 Cartons = 800 pieces





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