

SPECIFICATION

Part No. : **GP.1575.12.4.A.02**

Product Name : 4mm thick GPS/GALILEO Patch Antenna, 1575MHz

Features : 12mm*12mm*4mm

Halogen Free

RoHS Compliant

:





1. Introduction

This miniaturized ceramic GPS/GALILEO patch antenna is based on smart $\textbf{XtremeGain}^{\intercal}$ technology. It is mounted via pin and double-sided adhesive and has been selected as optimal solution for the customer device environment.

2. Specification Table

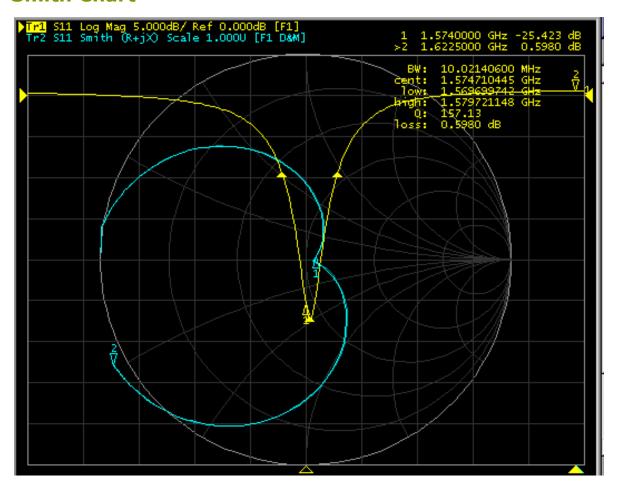
Original Patch Specification tested on 50*50mm ground plane

| No | Parameter | Specification | | | | |
|----|-----------------------|----------------------------------|------------------|--|--|--|
| 1 | Center Frequency | 1575MHz +/- 3MHz | | | | |
| 2 | Impedance | 50Ω | | | | |
| 3 | Bandwidth | 8MHz min Return Loss <-10dB | | | | |
| 4 | VSWR | 1.5 max | | | | |
| 5 | Gain toward Zenith | -0.5 dBic | | | | |
| 3 | | typ. | Center Frequency | | | |
| 6 | Gain at 10°Elevation | | | | | |
| 7 | Axial Ratio | 4dB Max. | | | | |
| 8 | Polarization | Right Hand Circular Polarization | | | | |
| 9 | Frequency Temperature | 0 ± 20ppm/9C | | | | |
| | Coefficient (Tf) | 0 ± 20ppm/°C | | | | |
| 10 | Operating Temperature | -40°C to +85°C | | | | |



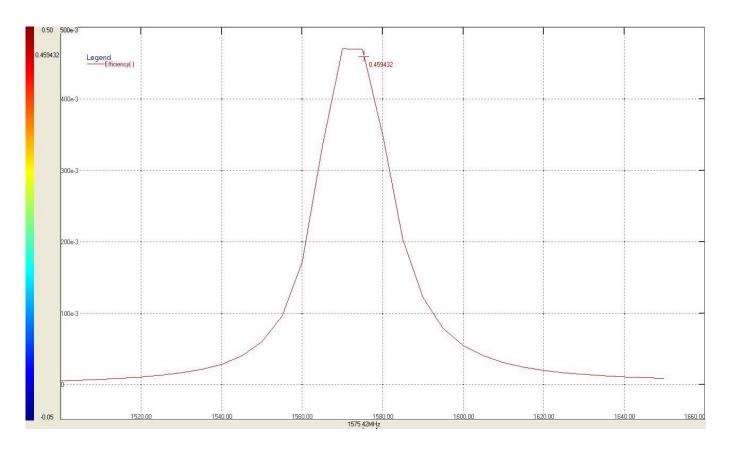
3. Electrical Specifications

3.1 Smith Chart





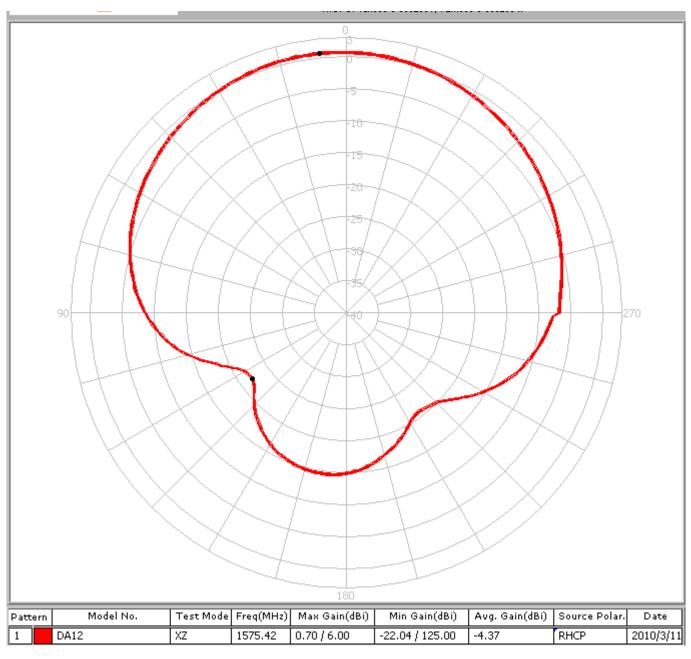
3.2 Efficiency





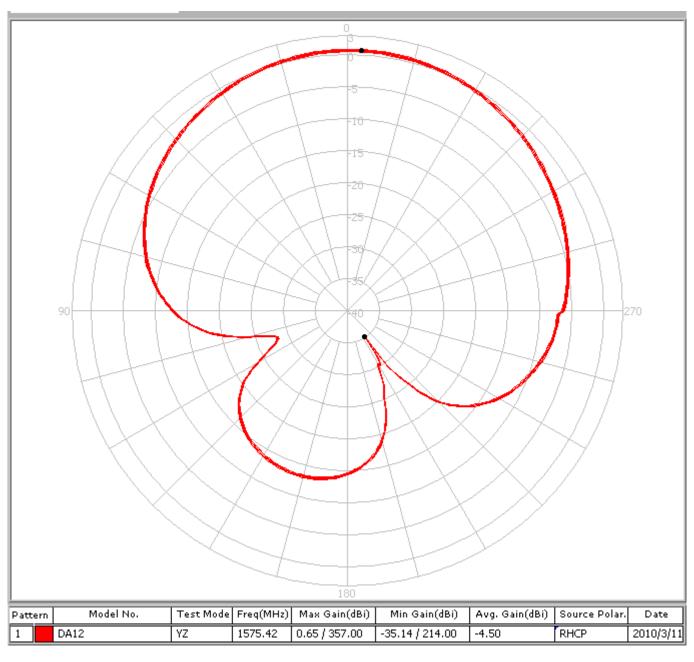
4. 2D Radiation Patterns

4.1 XZ Plane Radiation



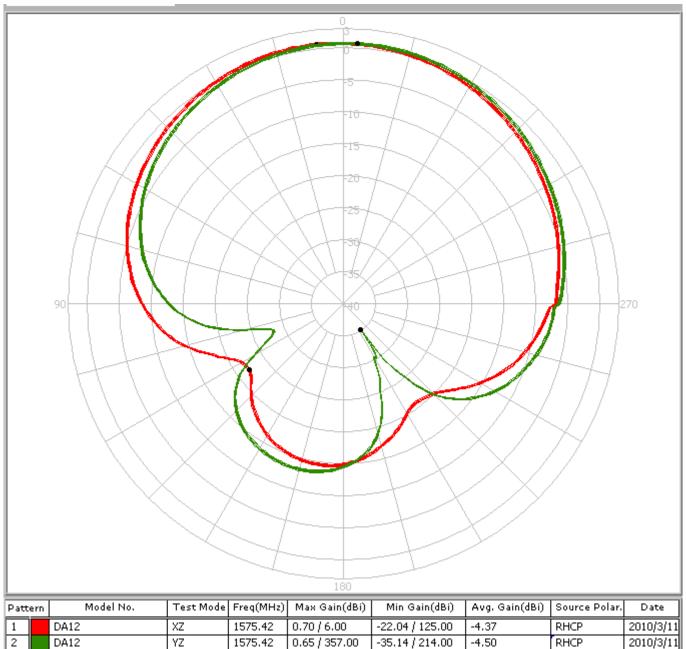


4.2 YZ Plane Radiation





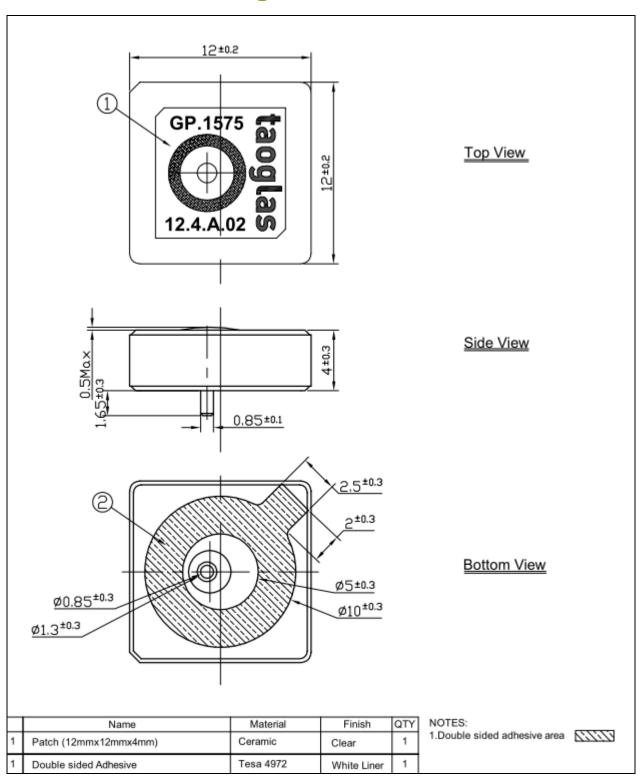
4.3 XY Plane Radiation



| Pat | tern | Model No. | Test Mode | Freq(MHz) | Max Gain(dBi) | Min Gain(dBi) | Avg. Gain(dBi) | Source Polar. | Date |
|-----|------|-----------|-----------|-----------|---------------|-----------------|----------------|---------------|-----------|
| 1 | | DA12 | XZ | 1575.42 | 0.70 / 6.00 | -22.04 / 125.00 | -4.37 | RHCP | 2010/3/11 |
| 2 | | DA12 | YZ | 1575.42 | 0.65 / 357.00 | -35.14 / 214.00 | -4.50 | RHCP | 2010/3/11 |

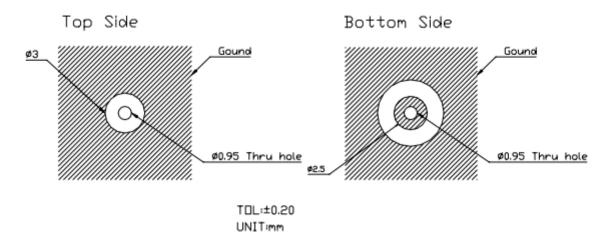


5. Mechanical Drawing



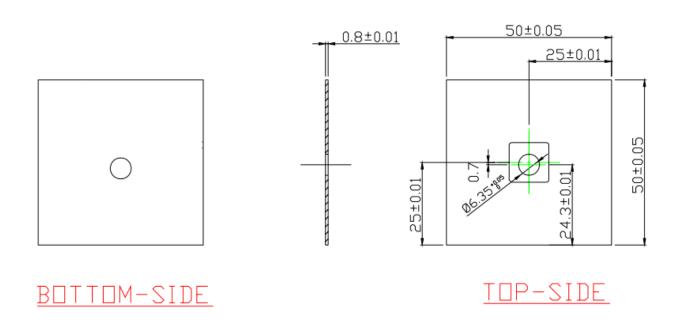


5.1 Layout Dimension



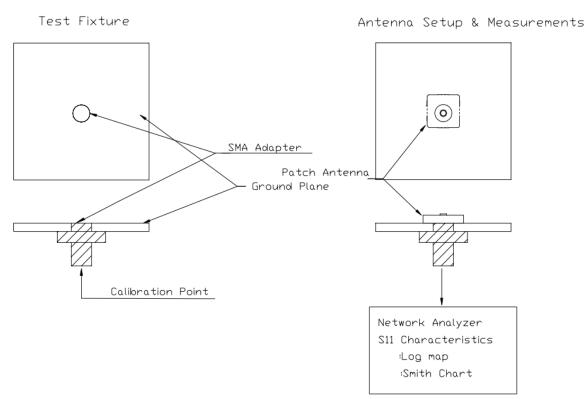
*Note Layout Dimensions may be affected by the thickness of the PCB

6. Test Jig and Dimension





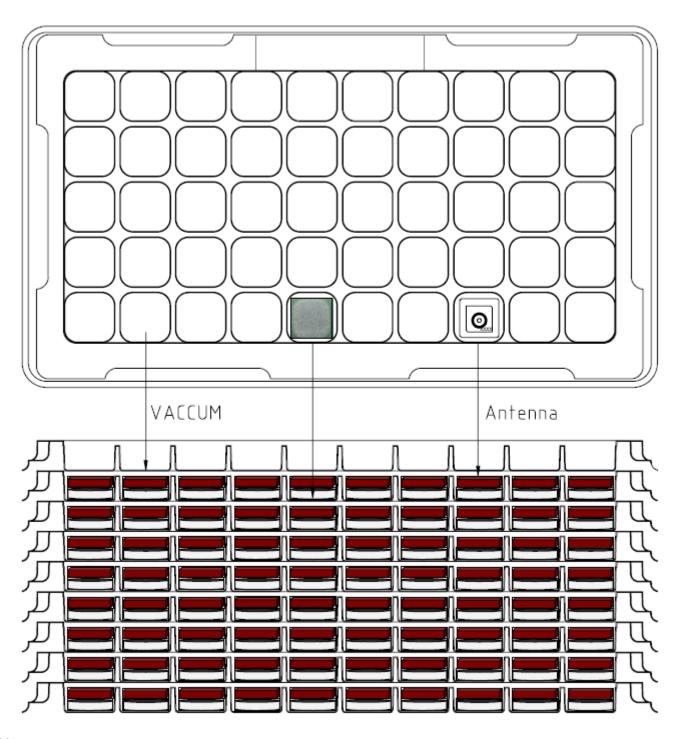
6.1 Test Fixture Antenna Setup and Measurements





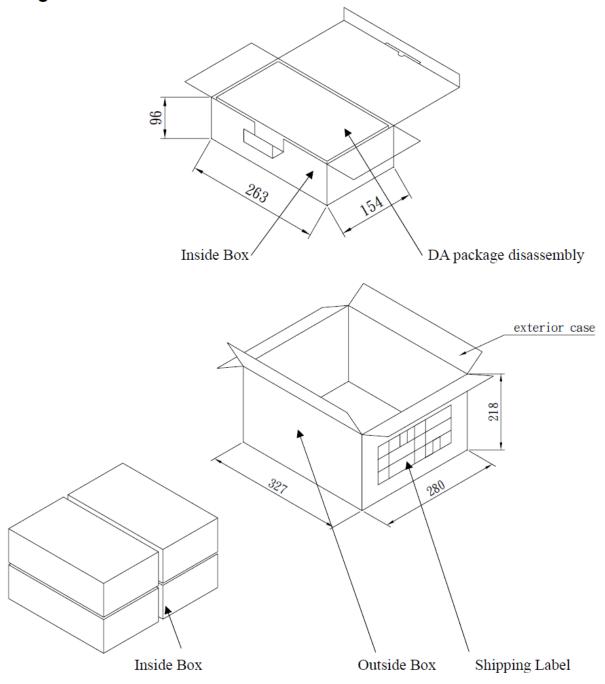
7. Packaging

Pieces per Inner Carton: 400





Packing



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