



Underside View  
(this side faces the passenger)



Top View  
(this side faces the sky)

## Stingray

**MA206.A.AB.004**

## Specification

<b>Part No.</b>	<b>MA206.A.AB.004</b>
<b>Product Name</b>	<b>Stingray</b> MA.206 Stingray GPS/2.4~2.54GHz Combination Adhesive Antenna
<b>Feature</b>	GPS - High gain LNA up to 32dB 2.4~2.5GHz Height 10.8mm Diameter 55.1mm RoHS Compliant

## 1. Introduction

This is a combination high performance GPS and 2.4~2.5GHz antenna to simplify AVL or Fleet management antenna systems worldwide. Its high quality low profile covert housing can be attached onto the glass or even out of sight under

the dashboard. This combination is ideal for those applications that require durability, small size and covert installation.

The standard version has 3 metres RG174 cable and SMA(M) connector on GPS

and RP-SMA(M) on 2.4~2.5GHz. The cables and connectors are completely customizable according to customer request.

### 1.1 Features

#### GPS

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High LNA Gain up to 32 dB

Antenna Gain  $30 \pm 2$  dB

Miniaturized to 55.15x12mm

Low Noise 1.5 dB max

#### WiFi

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Advanced 2.4~2.5GHz

#### Other

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Water Resistant IP 65

Quality textured covert design. Low profile

UV resistant ABS housing

Comes with high grade 3M double sided tape for quick and easy mounting

Customizable cables and connectors

## 2. Specification

### 2.1 Performance Specifications

Items	GPS Patch Antenna	2.4~2.5GHz
<b>Features</b>	High performance GPS ceramic patch antenna with cutting edge low noise amplifier	2400MHz to 2500MHz
<b>Frequency</b>	1575.42 MHz ± 2MHz	As above
<b>Gain</b>	28dB typ. Gain at Zenith: -1.0 dBi min Axial Ratio :3.0 dB max	
<b>Noise Figure</b>	2dB max.	
<b>Polarization</b>	RHCP	
<b>DC Power Input</b>	2.7~3.3V	
<b>Bandwidth</b>	10 MHz min	
<b>VSWR</b>	<=1.92	<=1.92
<b>Impedance</b>	50Ω	50Ω
<b>Cable / Connector</b>	Standard 1/2/3/5/10m RG-174 Cables and Connectors Fully Customizable	Standard 1/2/3/5/10m RG-174 Cables and Connectors Fully Customizable
<b>Operating Temperature</b>	-40°C ~ +85°C	-40°C ~ +85°C
<b>Storage Temperature</b>	-40°C ~ +95°C	-40°C ~ +95°C
<b>Size</b>	55mm * 10.8mm	
<b>Housing</b>	UV resistant ABS	

**\*Note:** Specifications may be subject to change

### 3. Electrical Characteristic – 2.4~2.5GHz

#### 3.1 Return Loss (2.4~2.5GHz Antenna)

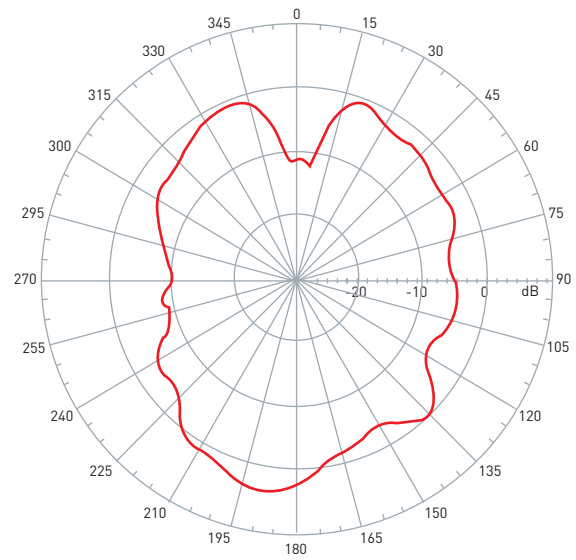
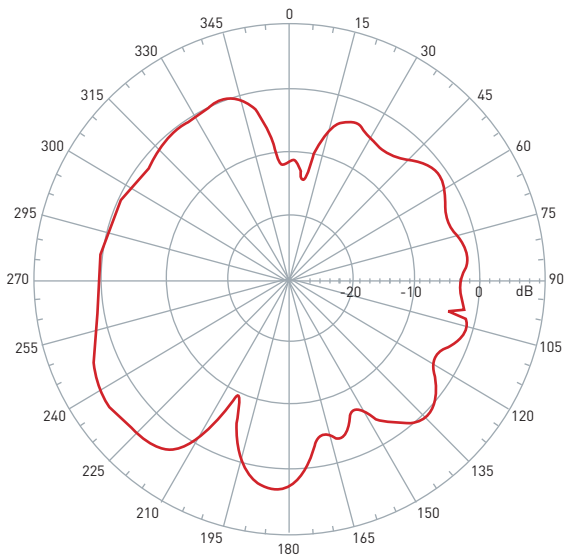


### 3.2 Radiation Patterns WiFi Antenna

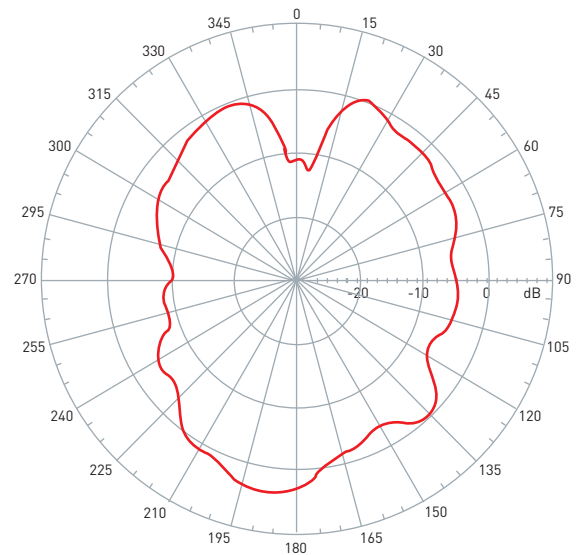
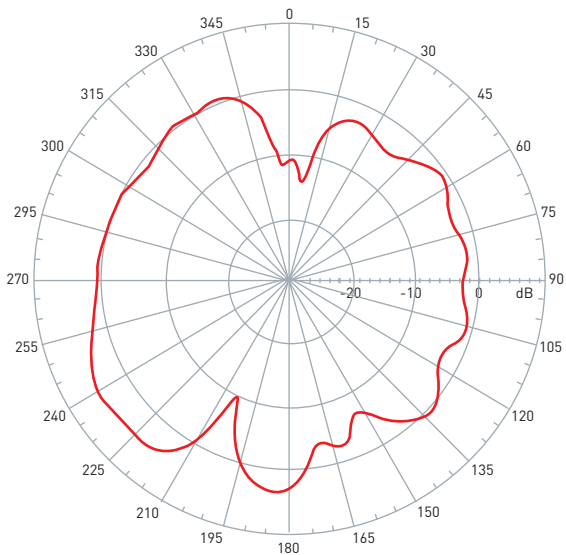
XZ Plane

YZ Plane

2400 MHz



2412 MHz

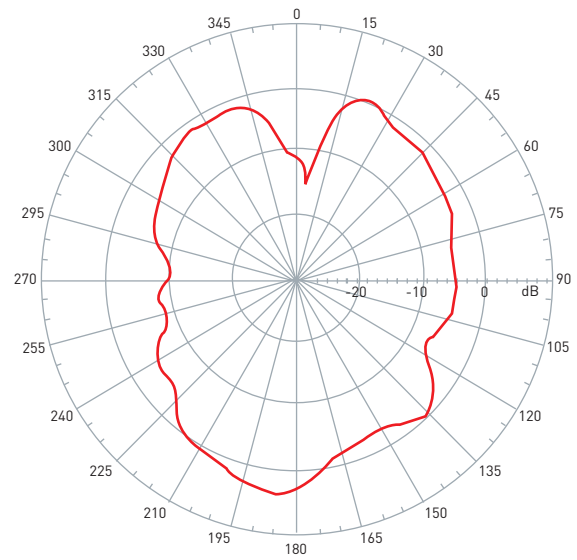
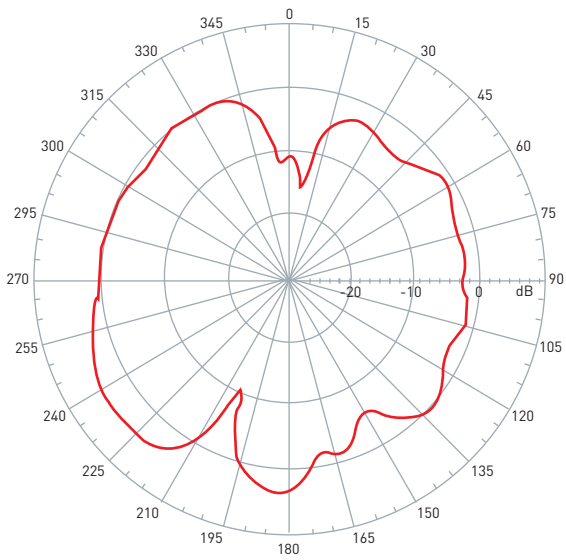


### 3.2 Radiation Patterns WiFi Antenna

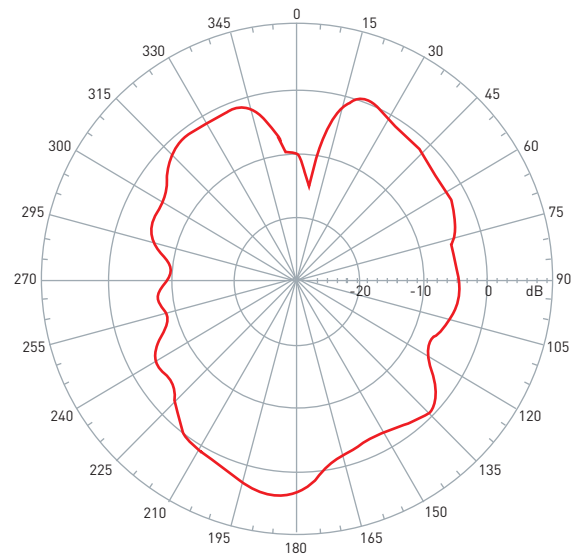
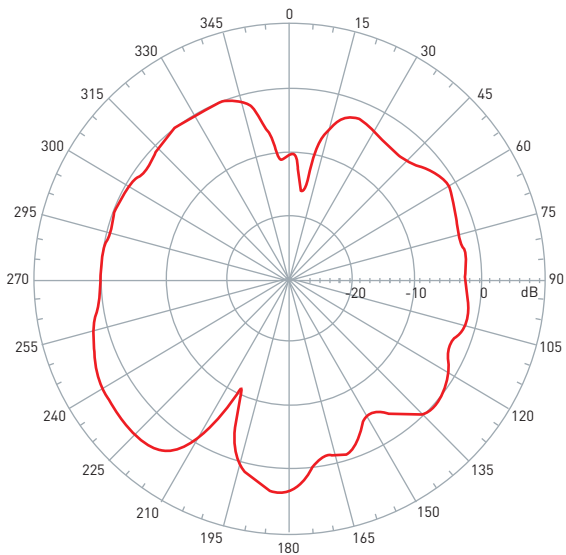
XZ Plane

YZ Plane

2437 MHz



2450 MHz



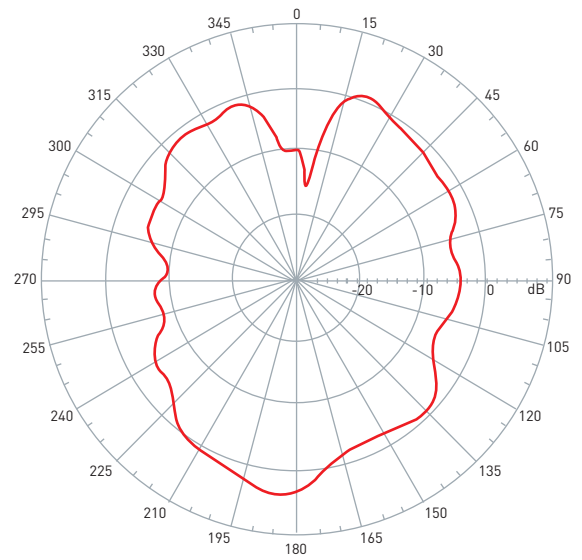
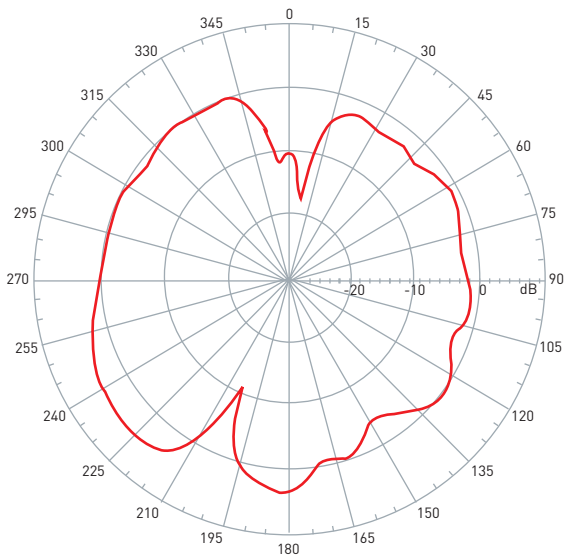
### 3.2 Radiation Patterns WiFi Antenna

XZ Plane

YZ Plane

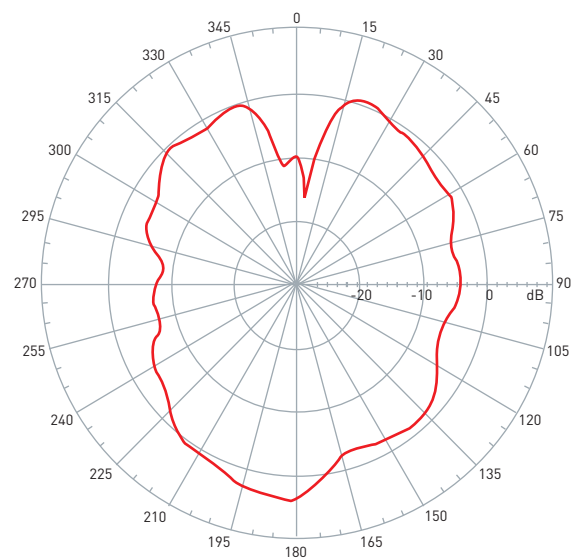
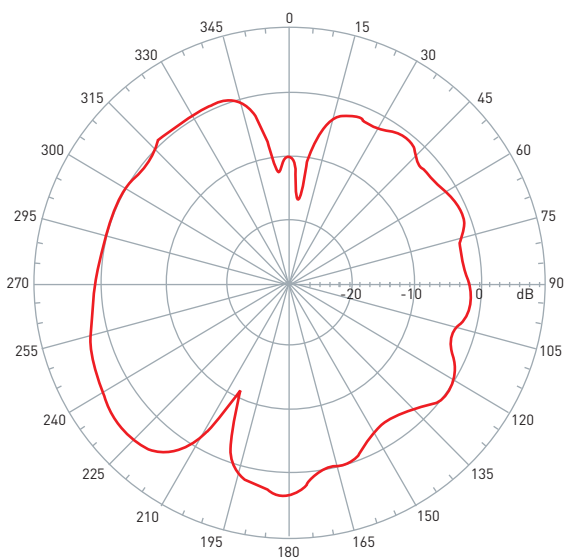
2472 MHz

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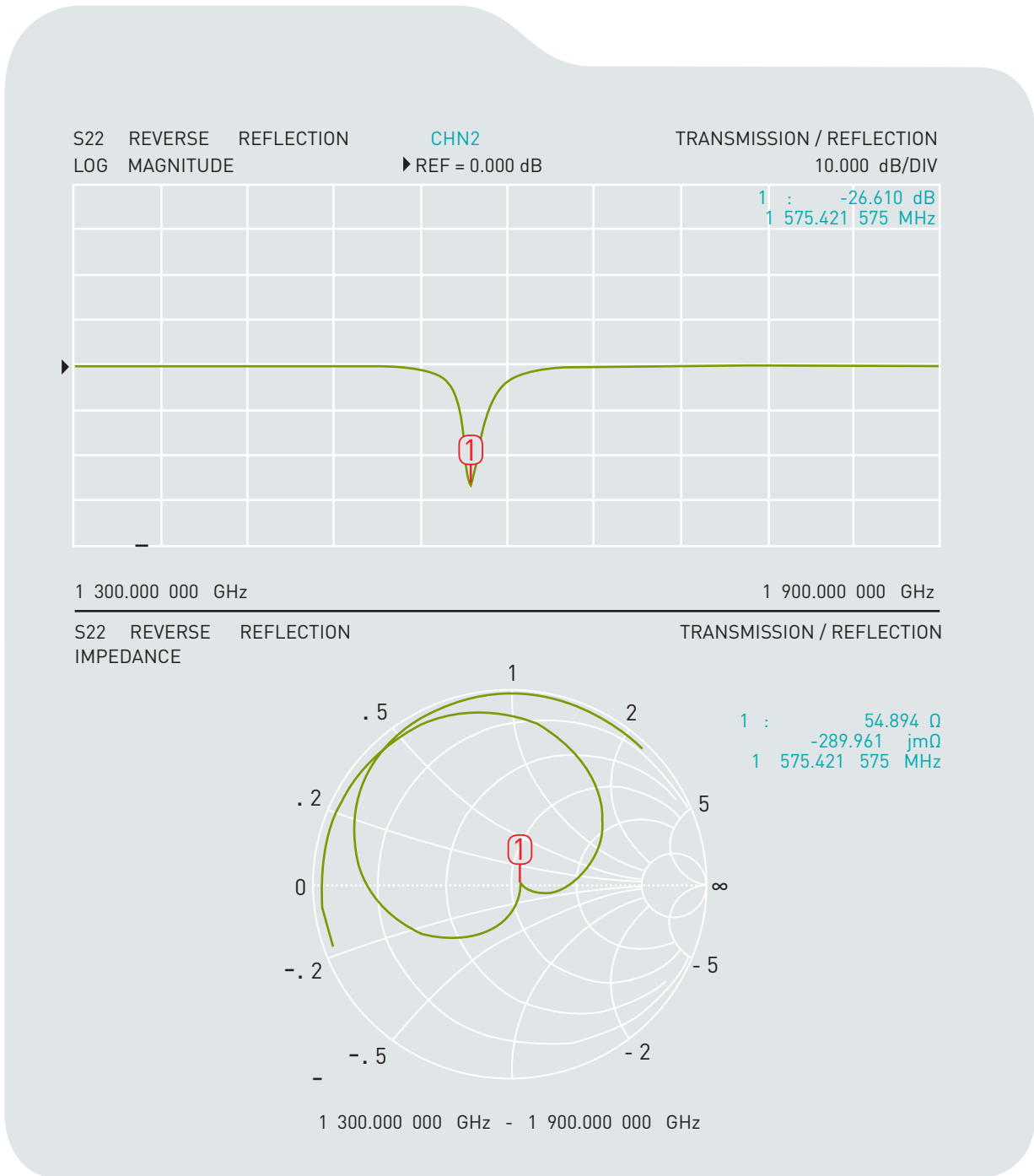
2500 MHz

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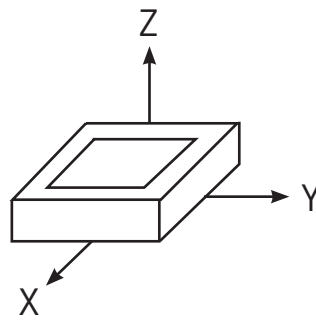
## 4. Electrical Characteristic - GPS

### 4.1 Return Loss



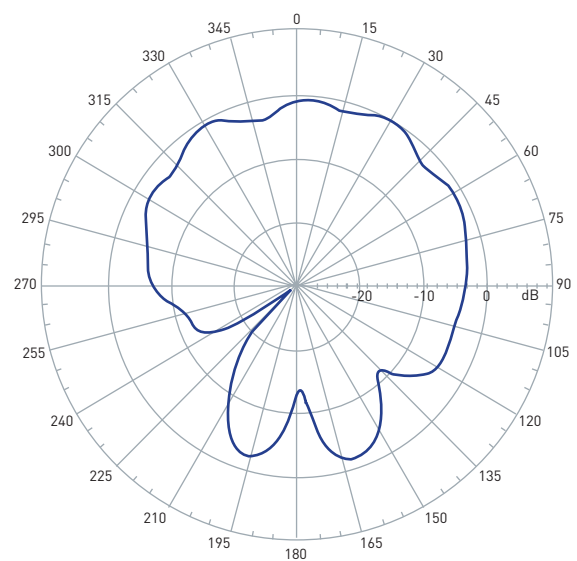
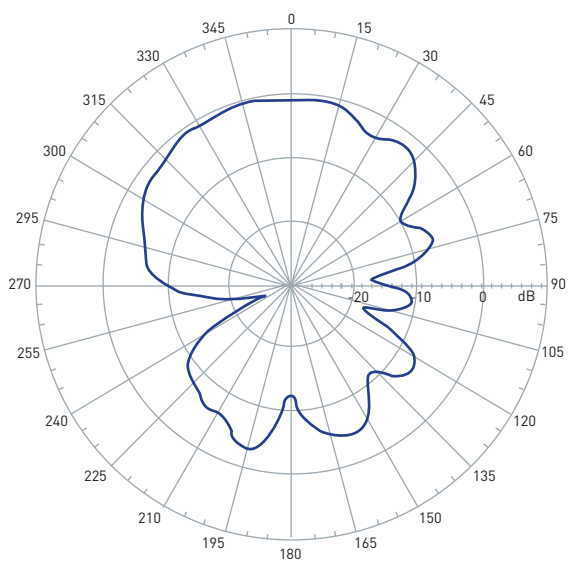


## 4.2 Radiation Patterns

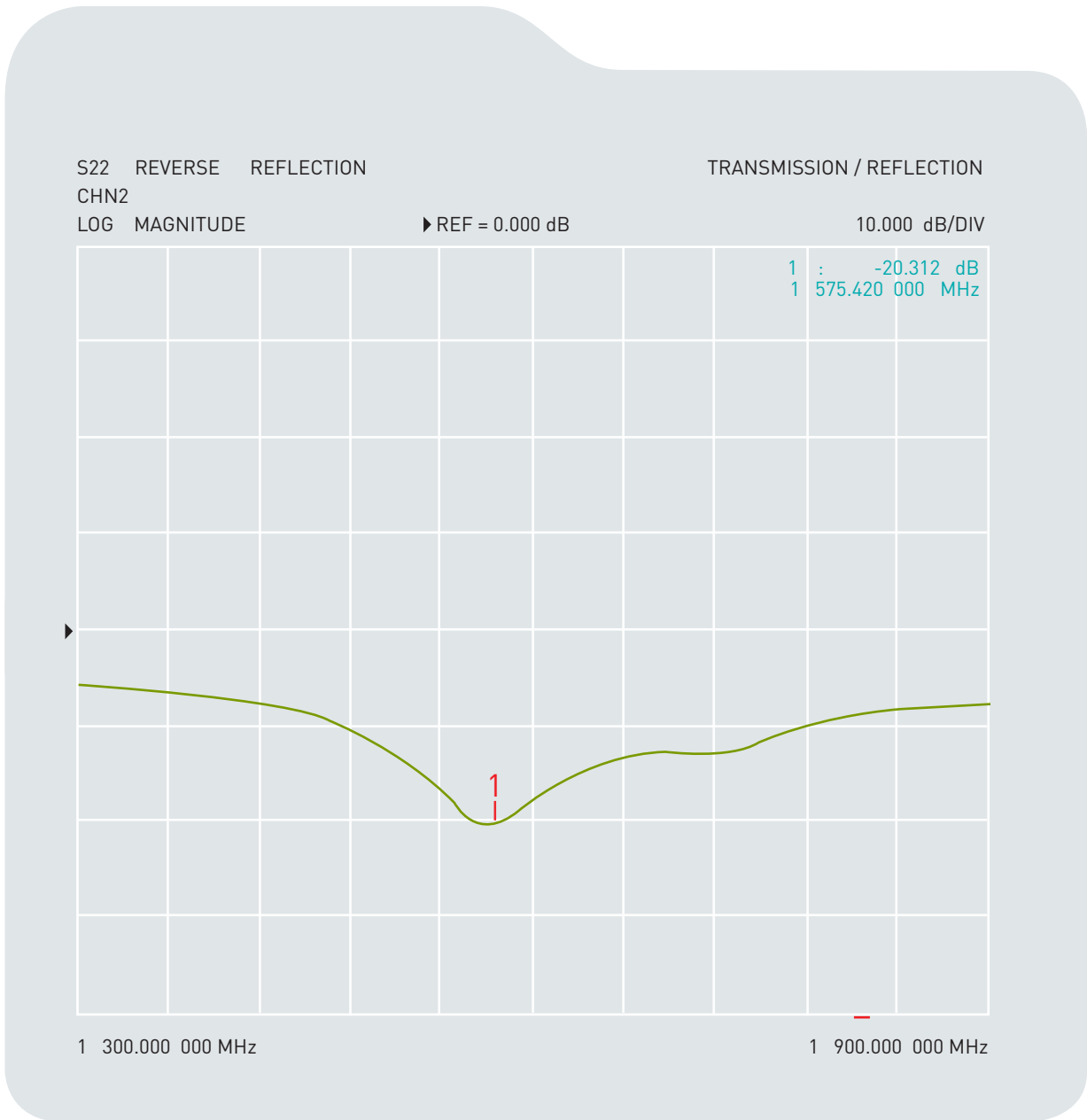


XZ Plane

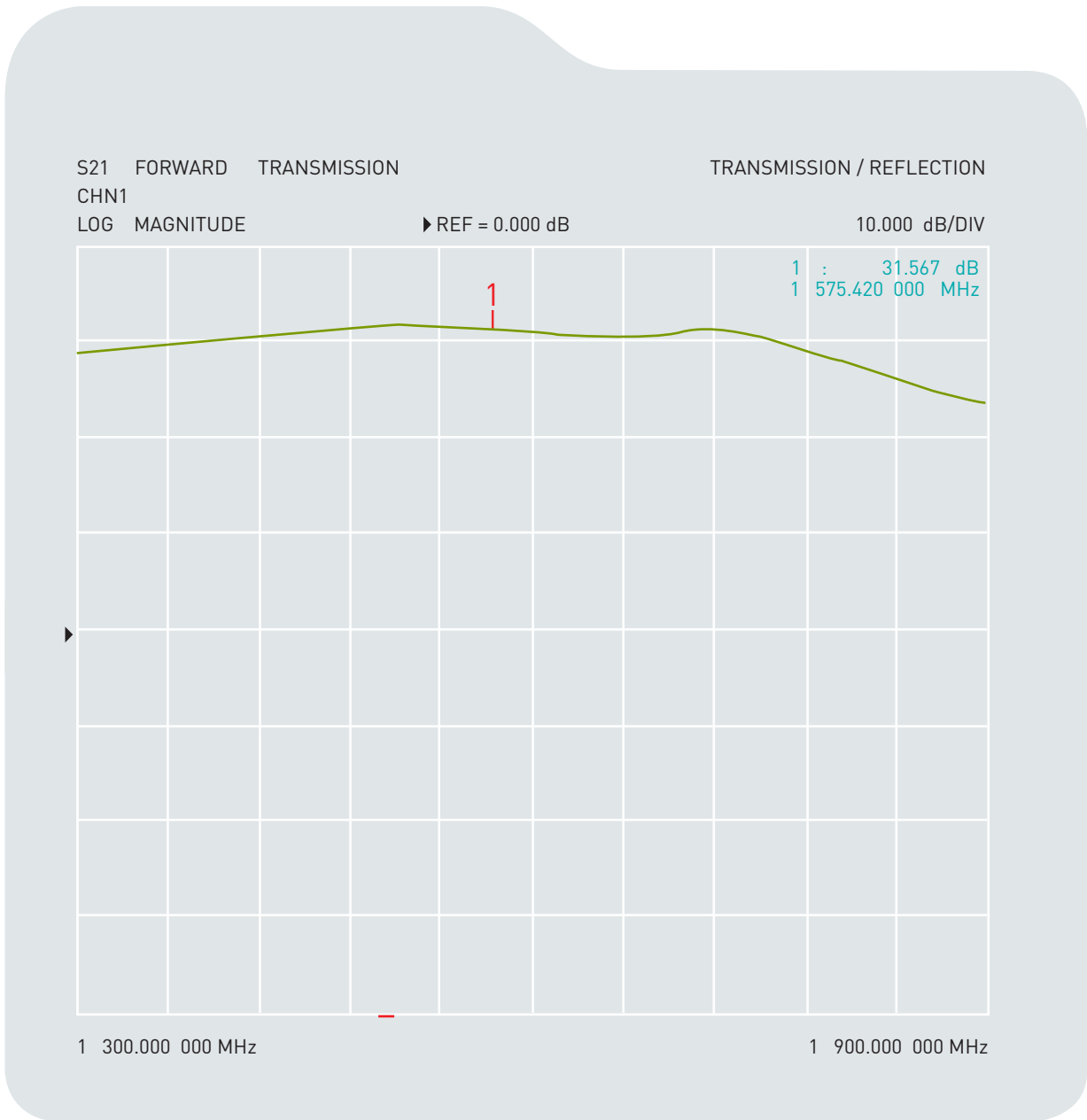
YZ Plane



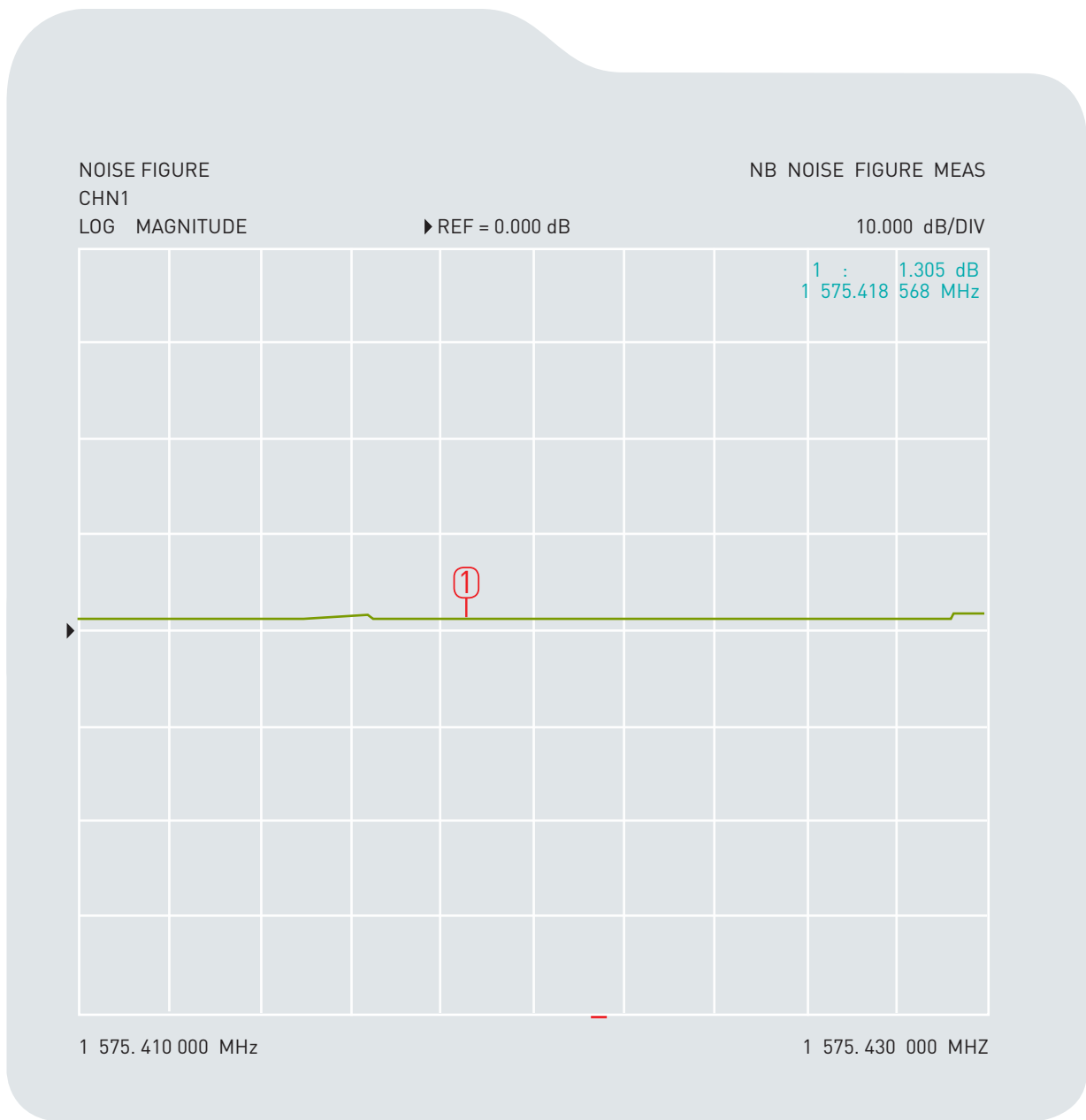
### 4.3 LNA S22



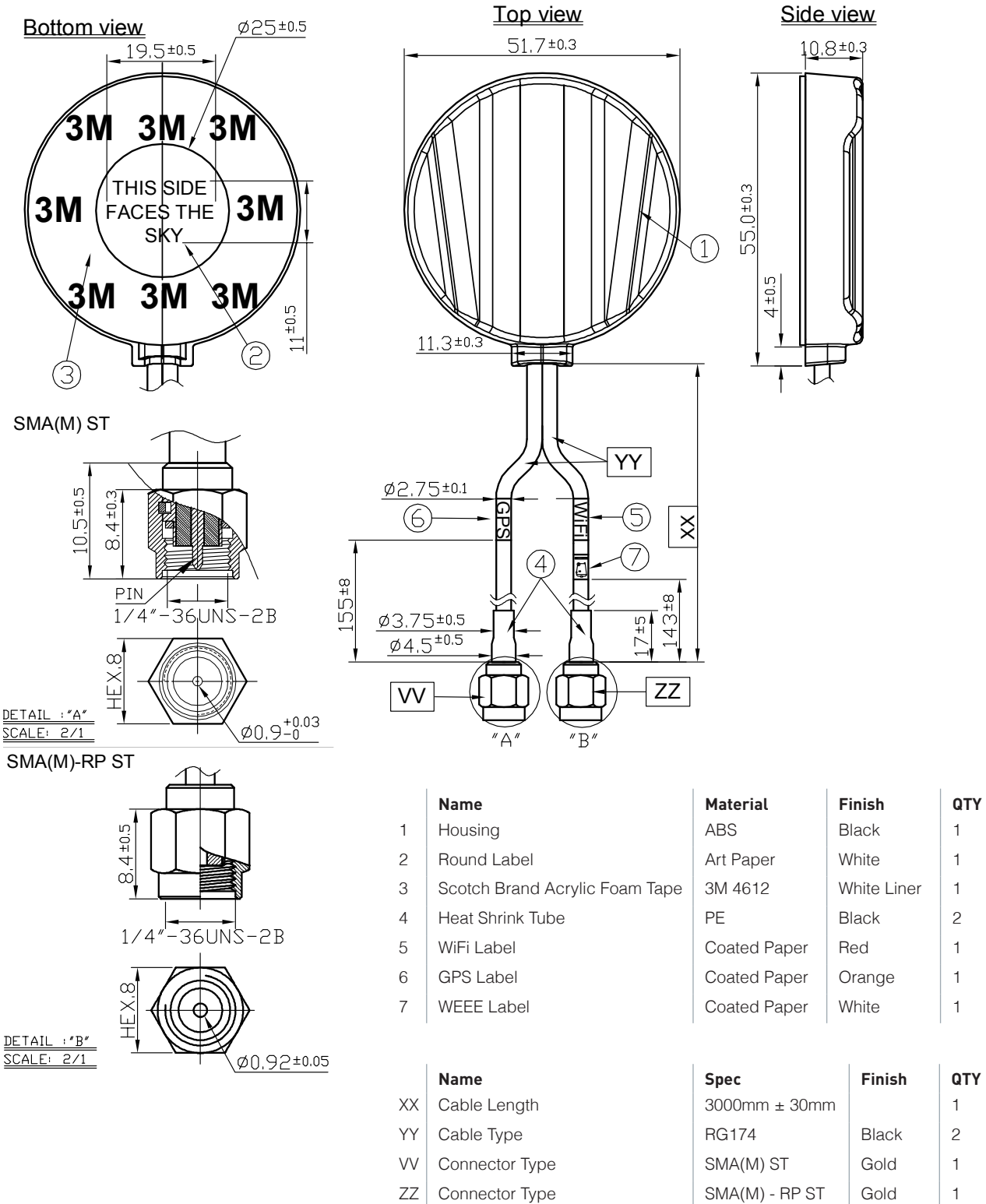
### 4.3 LNA S21



## 4.4 Noise Figure



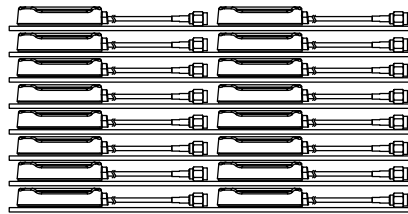
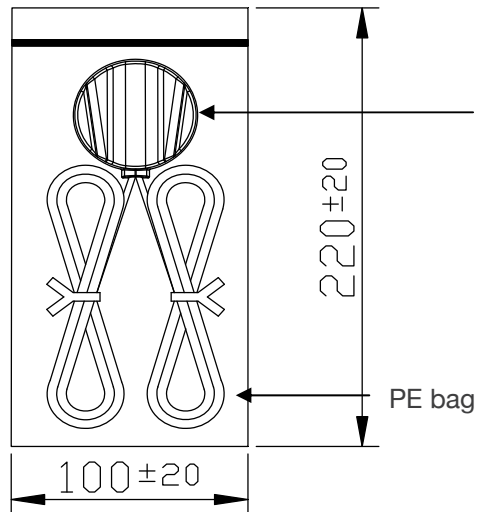
## 5. Drawings



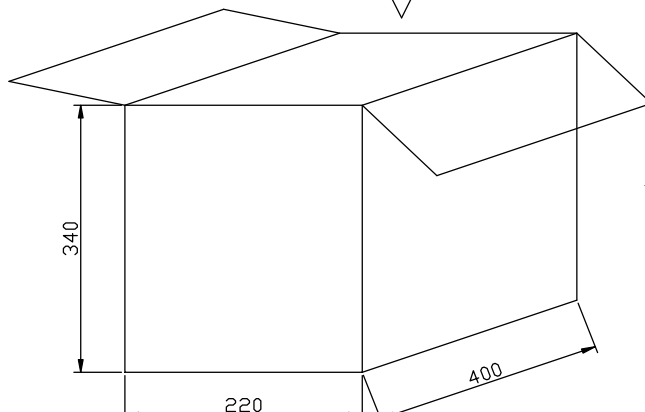
## 6. Packaging

1 pcs antenna per small PE bag

80 small PE bag per box



← 10 pcs/pad



← 80 pcs per carton

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