

# Antenna

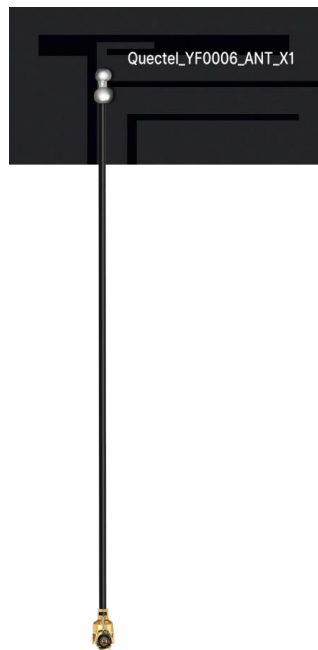
# **YF0006PA** Datasheet

## Antenna Services

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# About the Document

## Revision History

Version	Date	Author	Note
-	2022-07-25	Andy MIAO/ Joye WANG	Creation of the document
1.0	2022-09-08	Andy MIAO/ Joye WANG	First official release
1.1	2023-06-12	David LIU/ Vinnie LIU	Added the packaging information (Chapter 6).
1.2	2024-05-06	David LIU	1. Added the storage temperature (Chapter 3). 2. Updated the packaging (Chapter 6).
1.3	2024-06-07	Joye WANG	Updated the drawing (Chapter 5)

## Contents

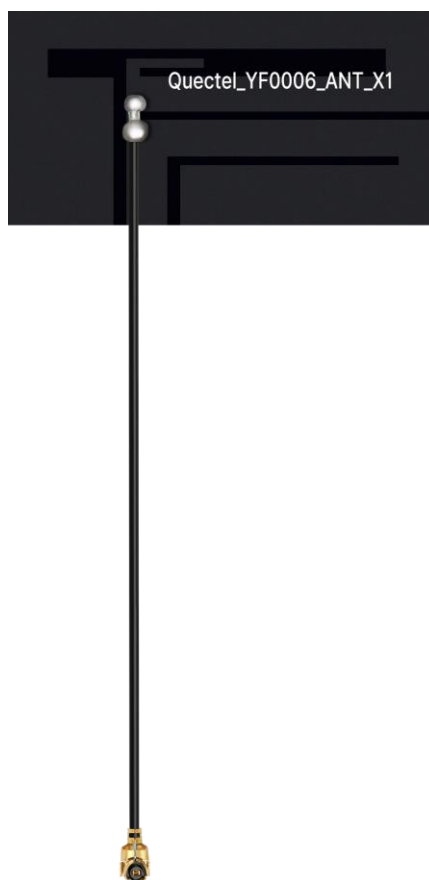
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## 1 Product Description

This Quectel embedded 4G FPC antenna covers main 4G LTE bands and is compatible with 3G/2G/LPWA bands. Featuring high efficiency and gain, it is an ideal antenna for a smooth and stable connection with high-efficiency data transmission even under the influence of the device's internal structure. Ground plane independent, it's designed to be mounted directly to the underside of either a plastic or non-metallic enclosure. Ease of integration with a cable and connector which can be customized to meet your product design and RF module.

## 2 Product Features

- Cellular LTE
- High efficiency
- Excellent performance



### 3 Product Specifications

#### Passive Electrical Specifications

Frequency Range	690–2700 MHz
Input Impedance	50 $\Omega$
VSWR	$\leq 3.0$
Gain	$\leq 3.5$ dBi
Polarization Type	Linear

#### Mechanical Specifications

Antenna Size (mm)	50 × 25
Material	FPC
Cable Type	Φ1.13 Black & 90 mm
Connector	IPEX 1
Color	Black
Mounting Type	Adhesive
Working Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C

## 4 Overall Performance

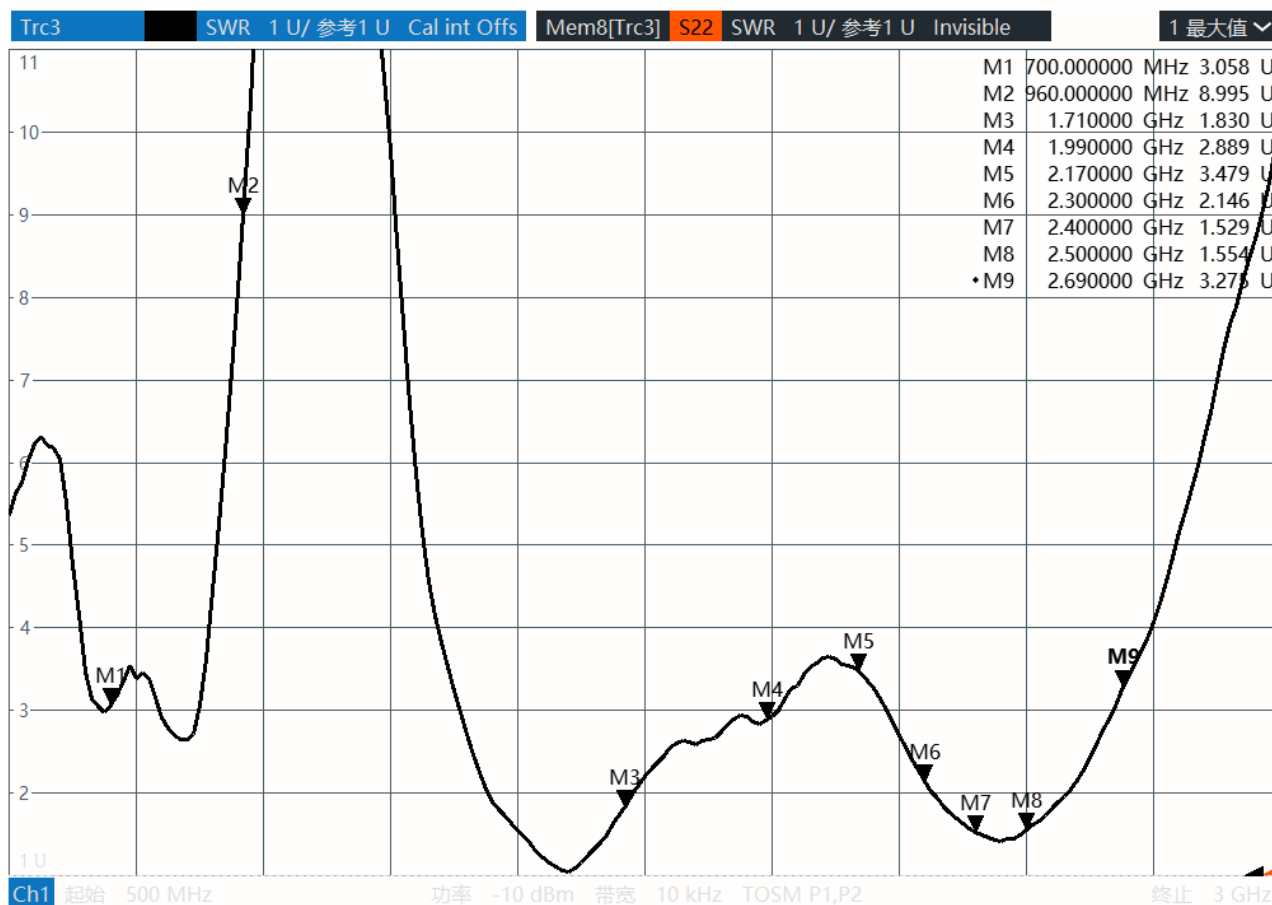
### 4.1. Test Environment

- KEYSIGHT ENA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 600 MHz – 8.5 GHz



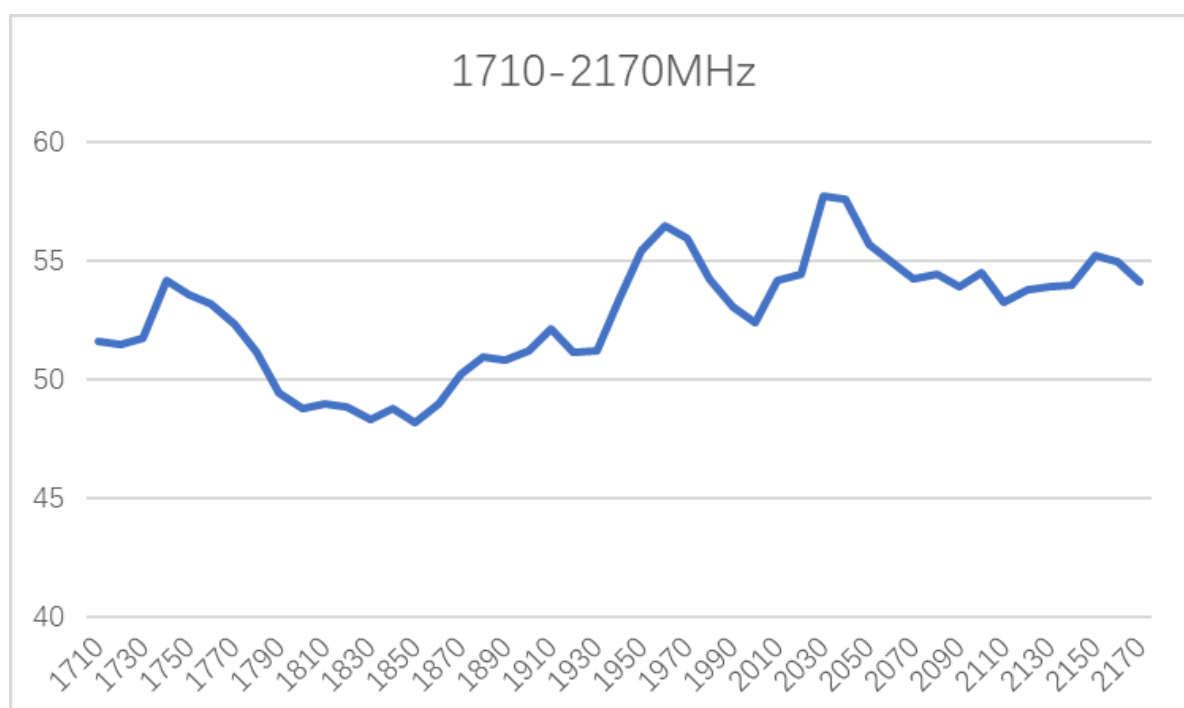
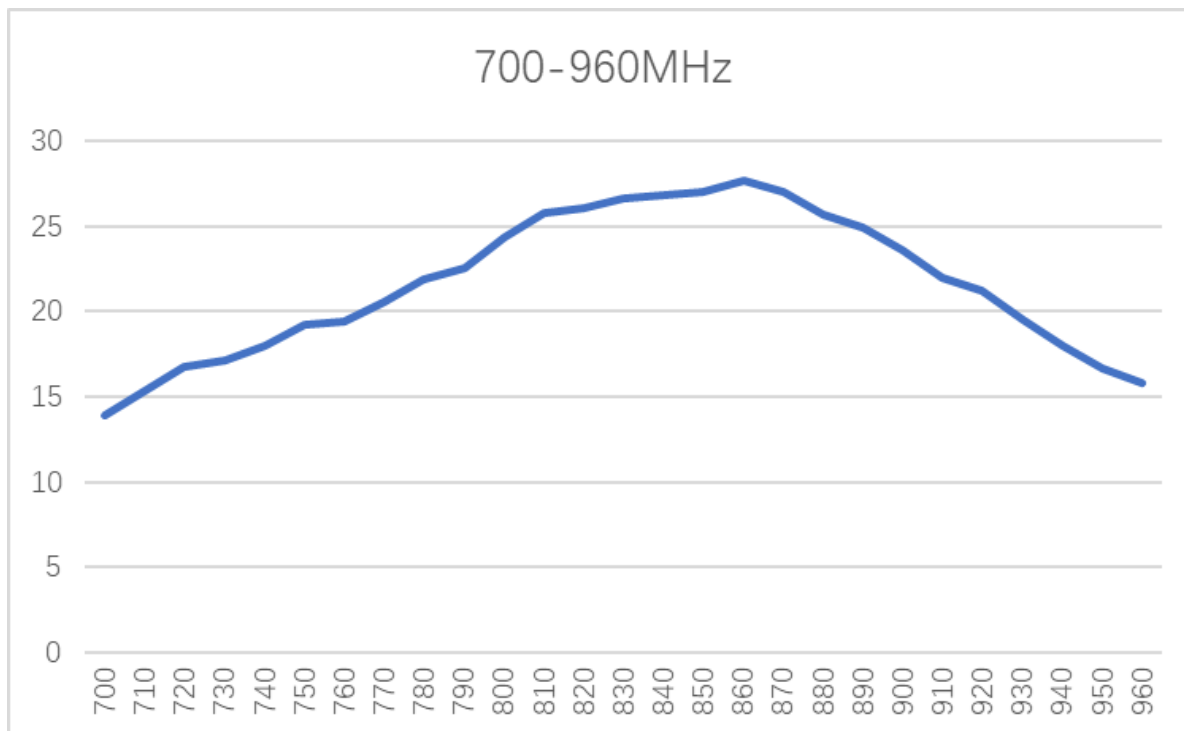


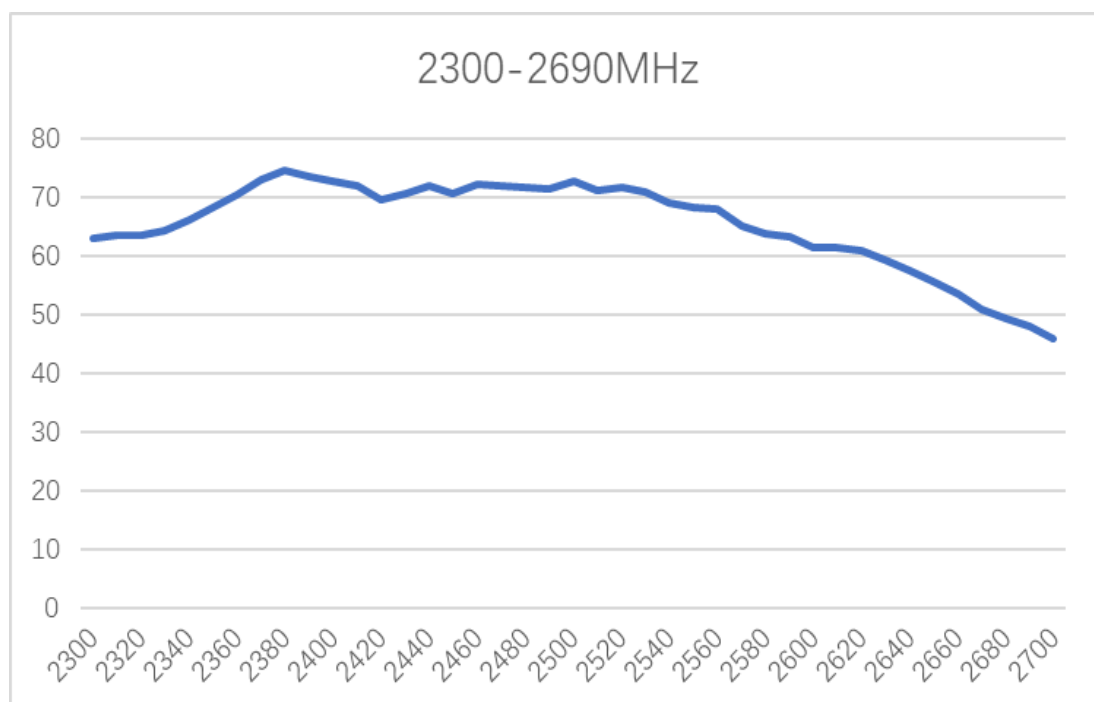
## 4.2. VSWR



Frequency (MHz)	700	960	1710	1990	2170	2300	2400	2500	2690
VSWR	3.06	8.99	1.83	2.88	3.48	2.15	1.53	1.55	3.28

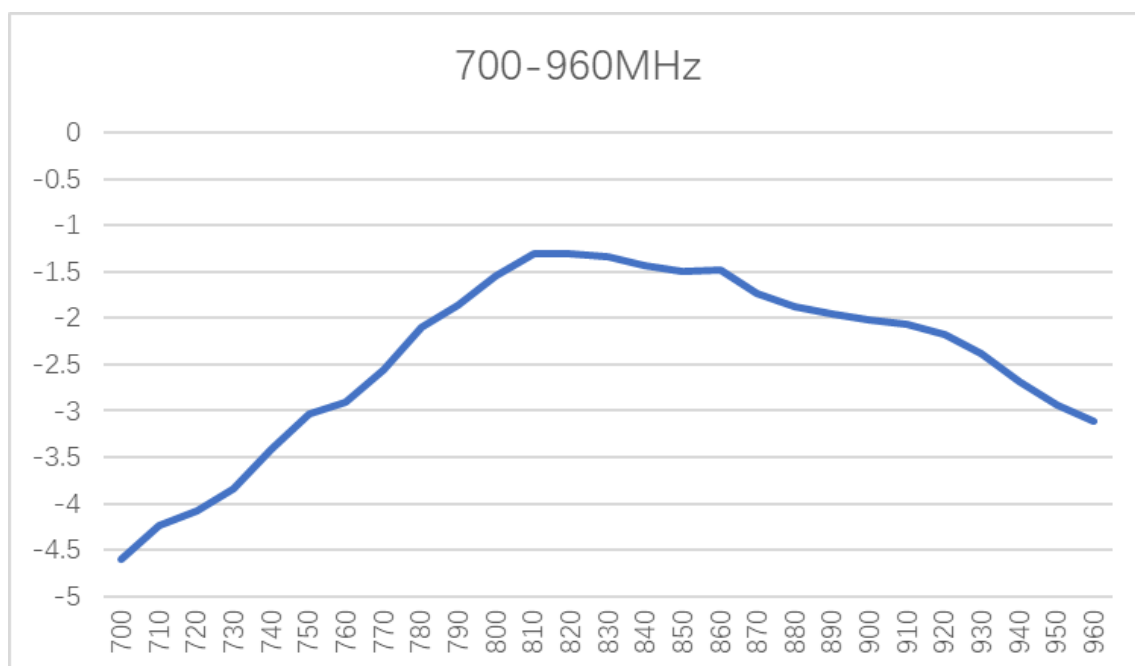
### 4.3. Efficiency

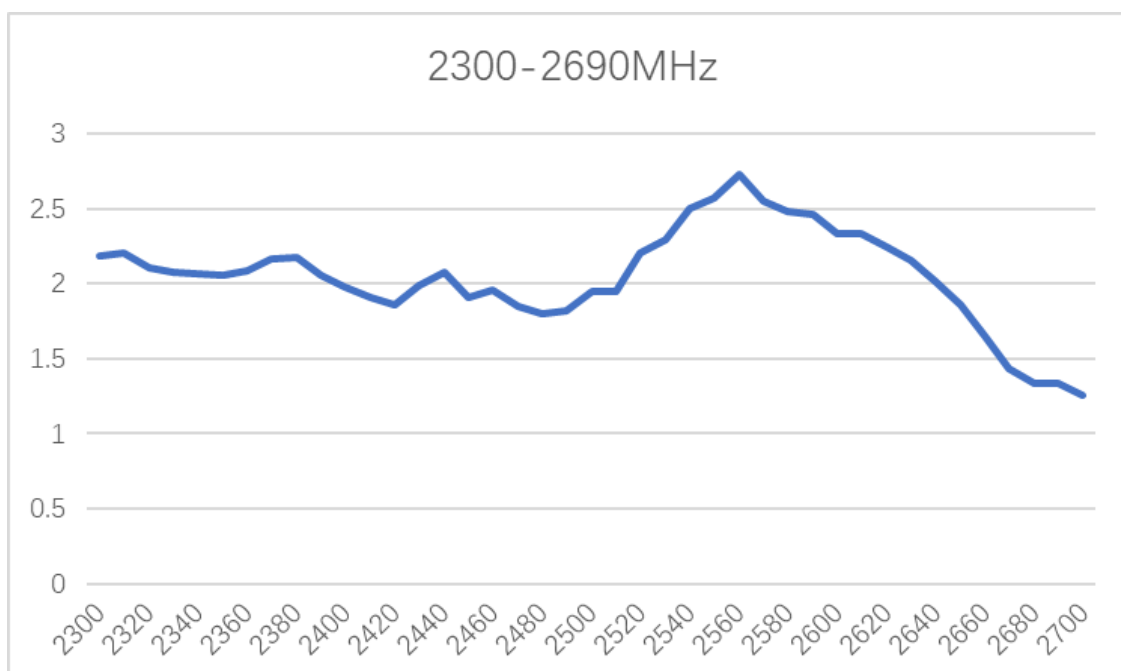
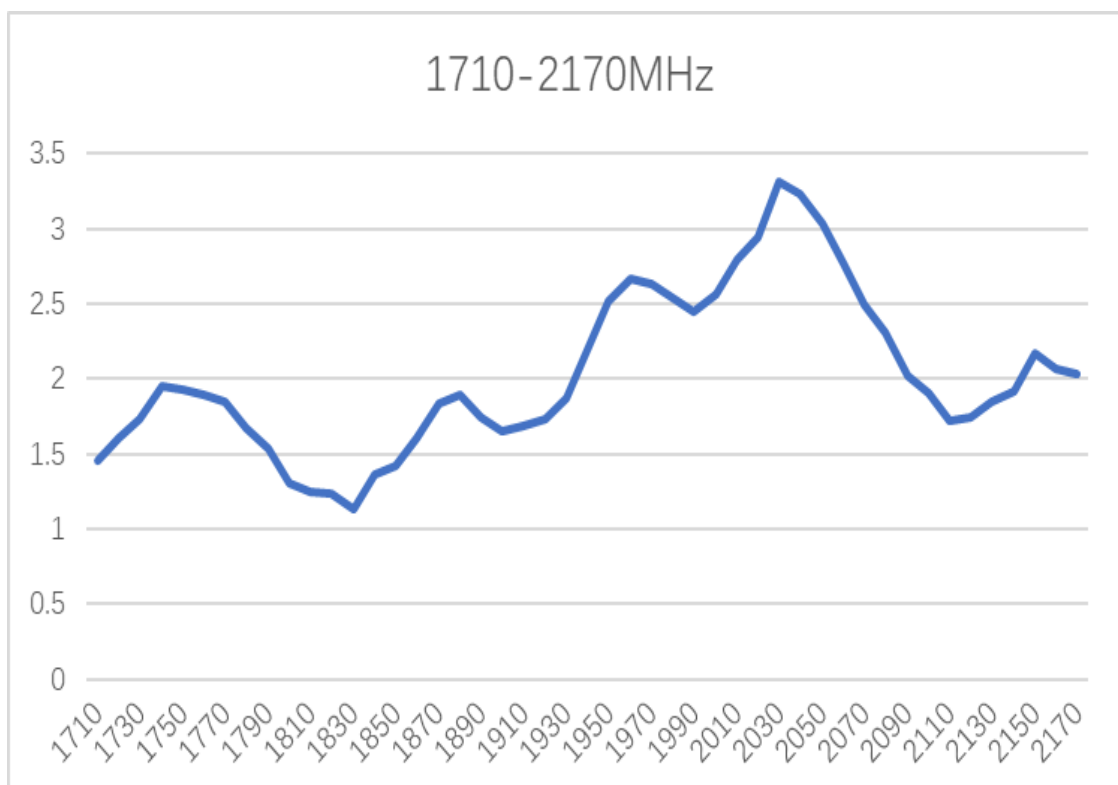




Frequency (MHz)	690	820	960	1710	1990	2170	2300	2500	2690
Efficiency (%)	13.9	26.0	15.8	51.59	53.0	54.1	63.0	71.2	48.0

#### 4.4. Gain

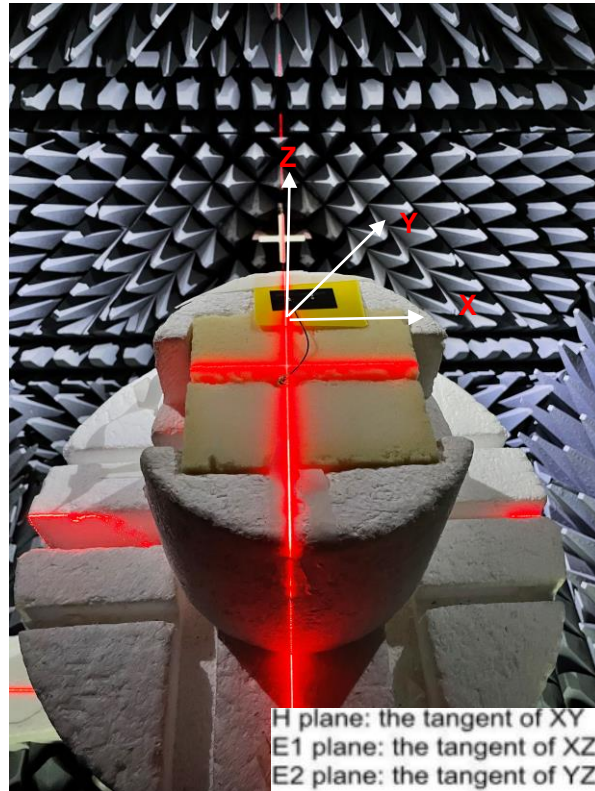




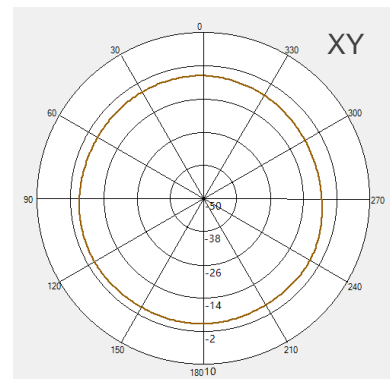
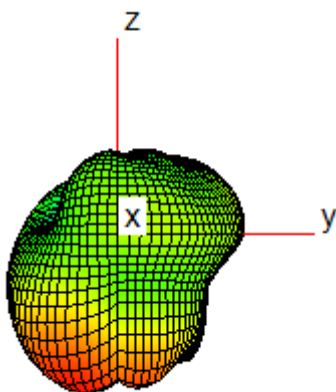
Frequency (MHz)	690	820	960	1710	1990	2170	2300	2500	2690
Gain (dBi)	-4.60	-1.31	-3.11	1.46	2.45	2.03	2.19	1.95	1.34

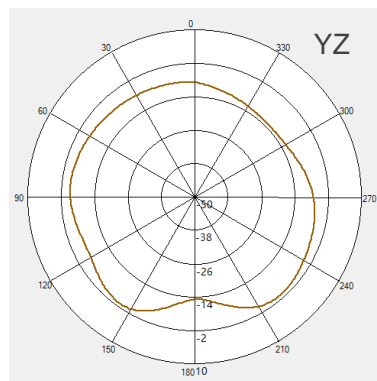
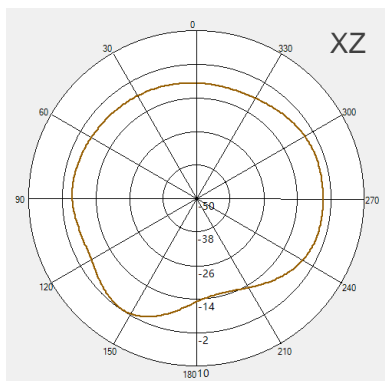
## 4.5. Radiation Pattern

- Test condition: free space

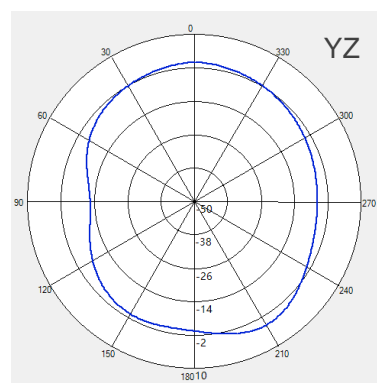
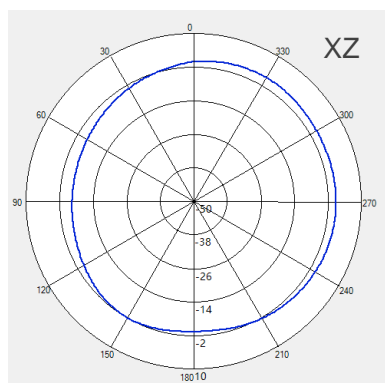
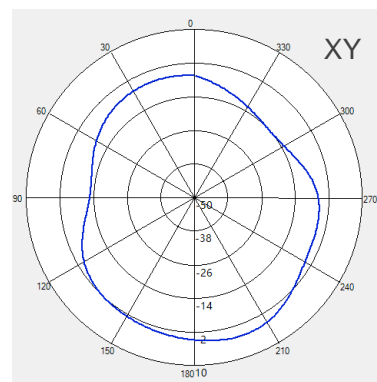
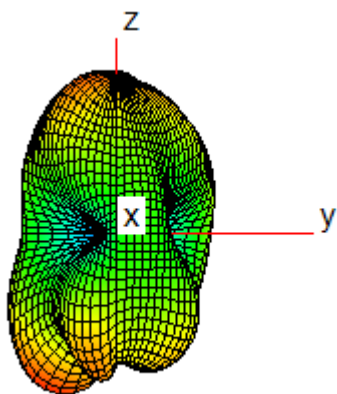


### 4.5.1. 820 MHz

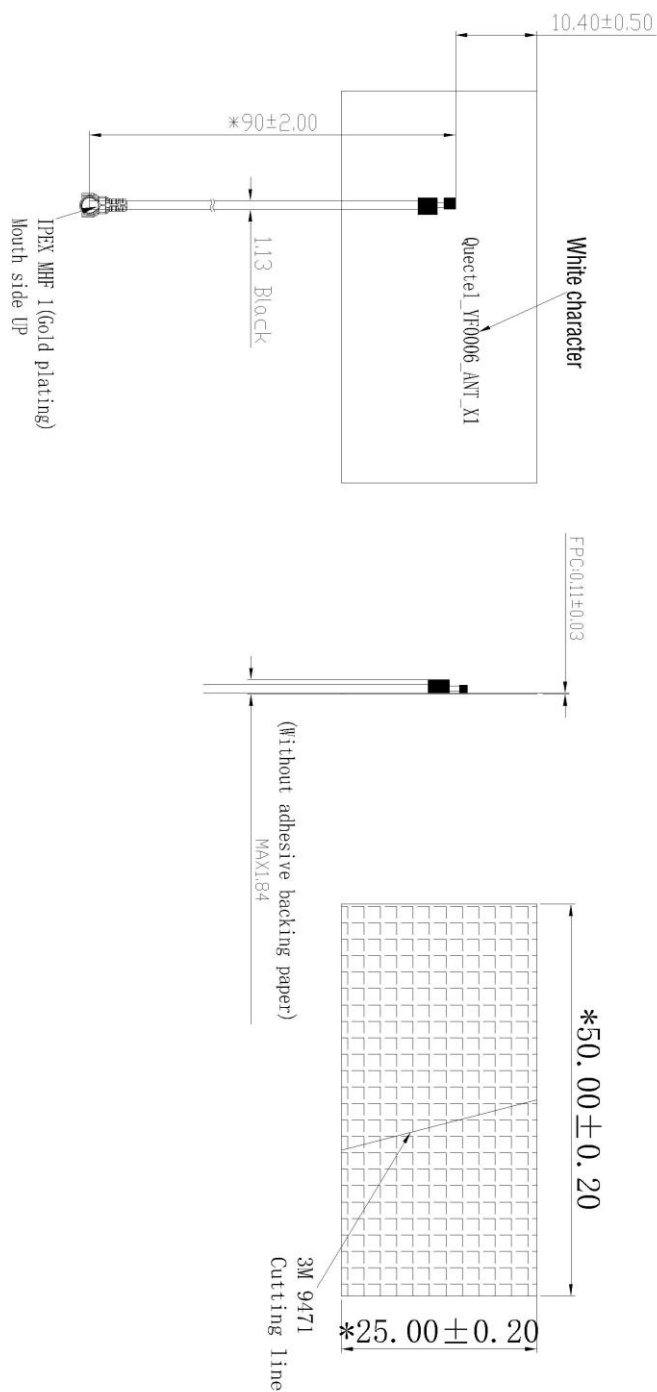




#### 4.5.2. 2200 MHz



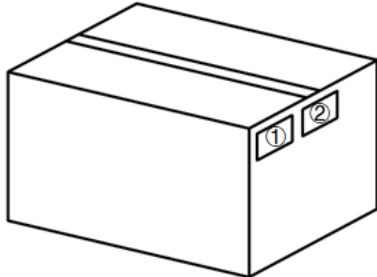
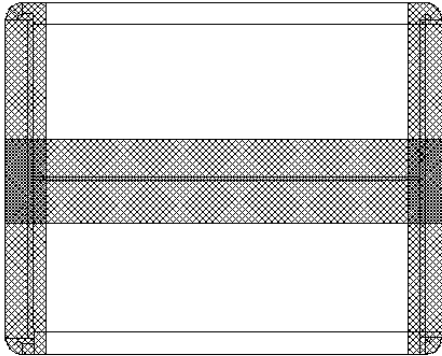
## 5 Product Size



## 6 Packaging

Step	Packaging picture / 2D picture	Description
1		The product terminal is wrapped with EPE foam. (20 PCS / Tie)
2		200 pcs antenna products in a PE bag. (200 PCS / PE Bag)
3		(32 PE Bags / Carton Box) (6400 PCS Antennas / Carton Box)  <u>Carton Size:</u> <u>L x W x H = 405 x 293 x 185 mm</u>



4		<p><b>Position for Attaching Labels</b></p> <p>① Carton Label</p> <p>② Quality Label</p>
5		<p><b>Sealing Cartons</b></p> <p>“I” type sealing cartons</p>