

# Antenna

# YB0032AA Datasheet

## Antenna Services

Version: 1.0

Date: 2021-07-05

Status: Released



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**Quectel Wireless Solutions Co., Ltd.**

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai 200233, China

Tel: +86 21 5108 6236

Email: [info@quectel.com](mailto:info@quectel.com)

**Or our local office. For more information, please visit:**

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# About the Document

## Revision History

Version	Date	Author	Note
-	2021-07-05	Kenny YIN	Creation of the document
1.0	2021-07-05	Kenny YIN	First official release

## Contents

About the Document.....	3
Contents.....	4
<b>1 Product Description.....</b>	<b>5</b>
<b>2 Product Features .....</b>	<b>5</b>
<b>3 Product Specifications.....</b>	<b>6</b>
<b>4 Overall Performance.....</b>	<b>7</b>
4.1. Test Environment .....	7
4.2. VSWR.....	8
4.2.1. LTE MIMO 1 .....	8
4.2.2. LTE MIMO 2 .....	9
4.3. Efficiency.....	10
4.3.1. LTE MIMO 1 .....	10
4.3.2. LTE MIMO 2 .....	11
4.4. Gain.....	12
4.4.1. LTE MIMO 1 .....	12
4.4.2. LTE MIMO 2 .....	13
4.5. Radiation Pattern .....	14
4.5.1. LTE MIMO 1 .....	14
4.5.2. LTE MIMO 2 .....	16
4.6. Insulation.....	18
<b>5 Product Size .....</b>	<b>19</b>
<b>6 Connect Description.....</b>	<b>19</b>
<b>7 Installation .....</b>	<b>20</b>

## 1 Product Description

The antenna is designed for superior performance, and can be widely used for wireless applications.

We provide comprehensive antenna design support such as simulation, testing and manufacturing for custom antenna solutions to meet your specific application needs.

## 2 Product Features

- Cellular LTE
- High efficiency
- Excellent performance

### 3 Product Specifications

#### LTE Electrical Specifications

Frequency Range	700–2700 MHz
Input Impedance	50 $\Omega$
VSWR	$\leq 3$
Gain	$\leq 3.0$ dBi
Polarization Type	Linear

#### Mechanical Specifications

Antenna Box Size	$\Phi$ 120 mm $\times$ 43 mm
Casing	KIBILAC® ASA
Connector Type	SMA Male (Center Pin)
Working Temperature	-20 °C to +85 °C
Radome Color	Black
IP Rating	IP67
Mounting Type	Screw

## 4 Overall Performance

### 4.1. Test Environment

- KEYSIGHT VNA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 400 MHz – 8.0 GHz

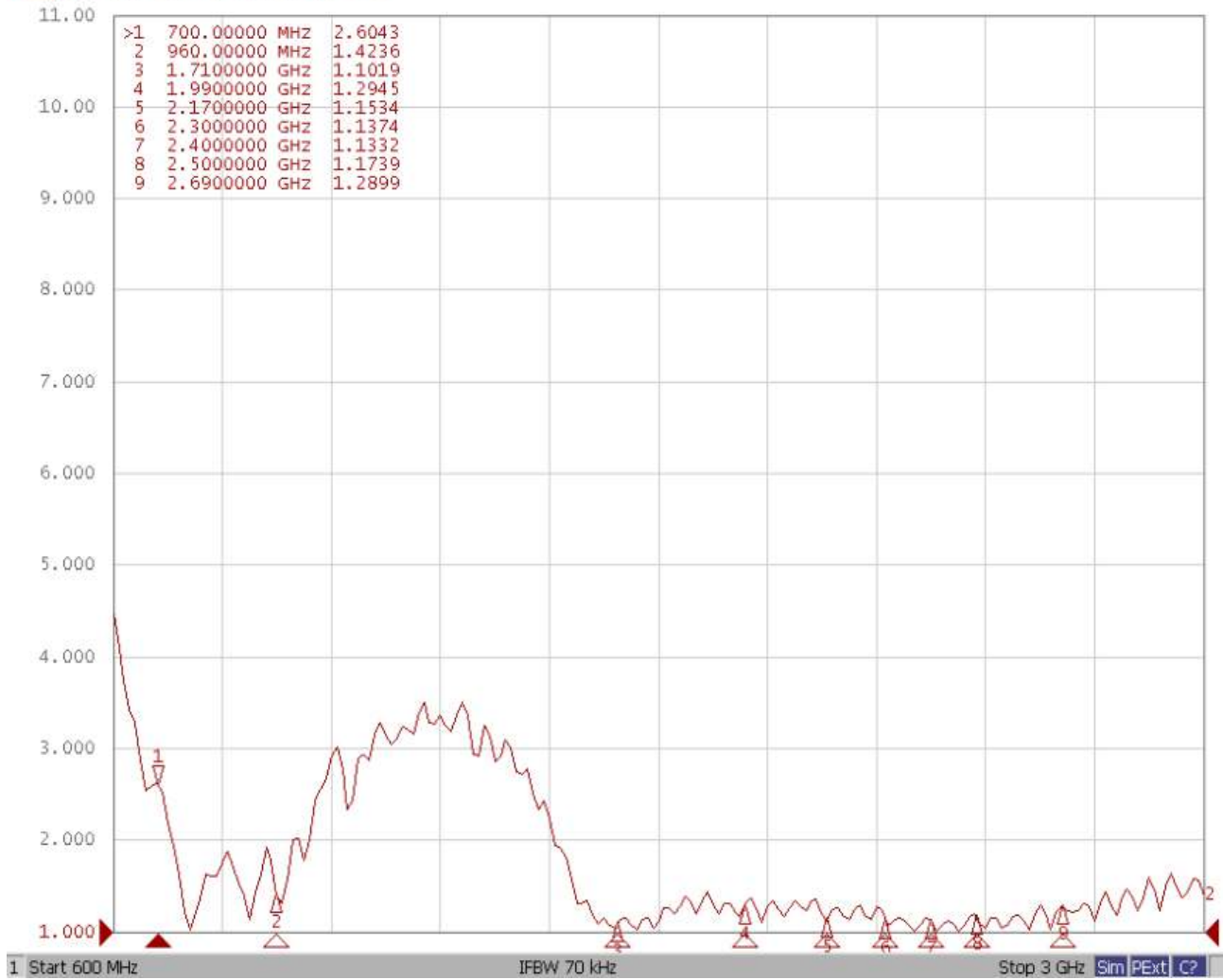




## 4.2. VSWR

### 4.2.1. LTE MIMO 1

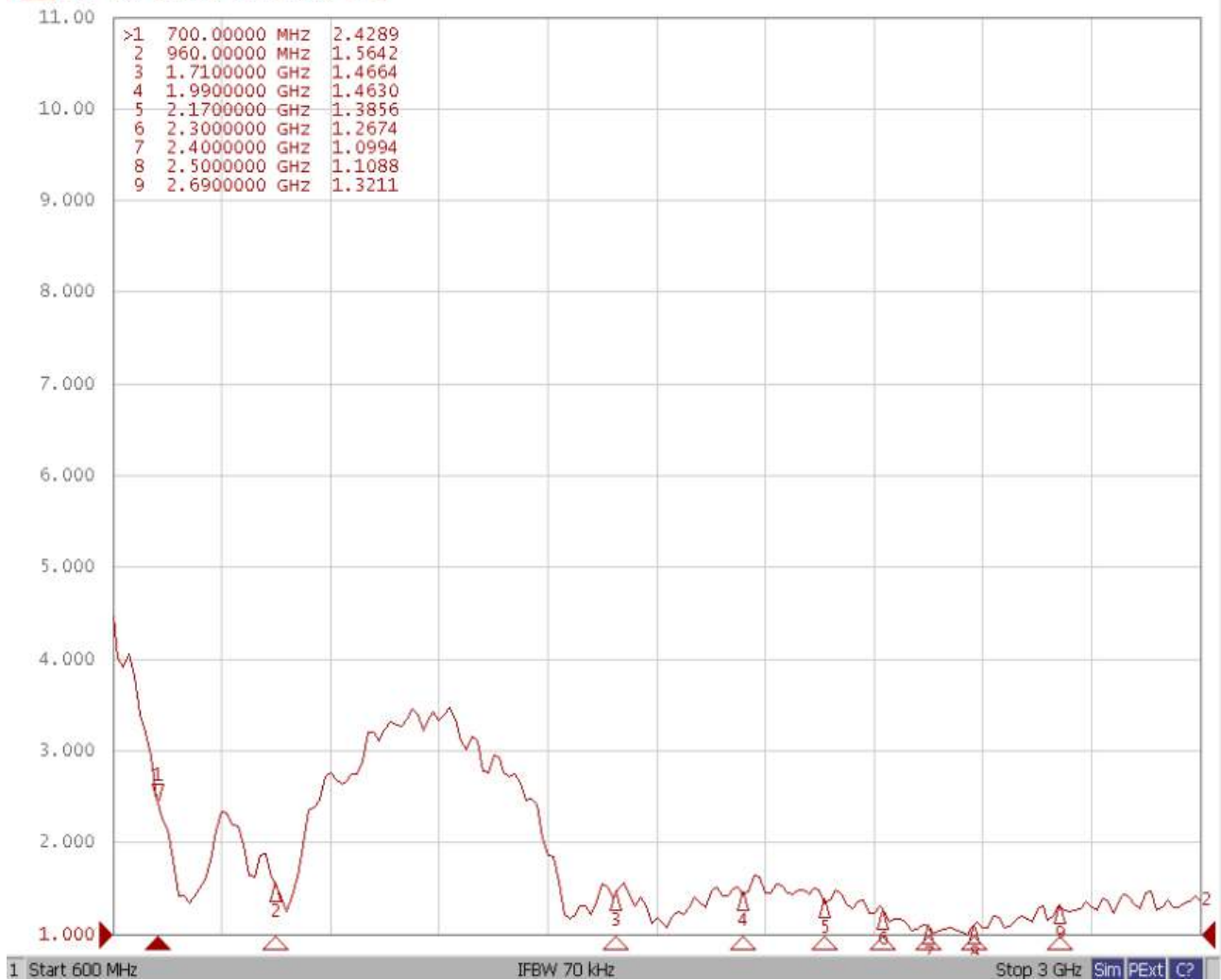
▶ **F2** S22 SWR 1.000/ Ref 1.000 [F2]



Frequency (MHz)	700	960	1710	2170	2300	2400	2500	2690
VSWR	2.60	1.42	1.10	1.15	1.13	1.13	1.17	1.28

**4.2.2. LTE MIMO 2**

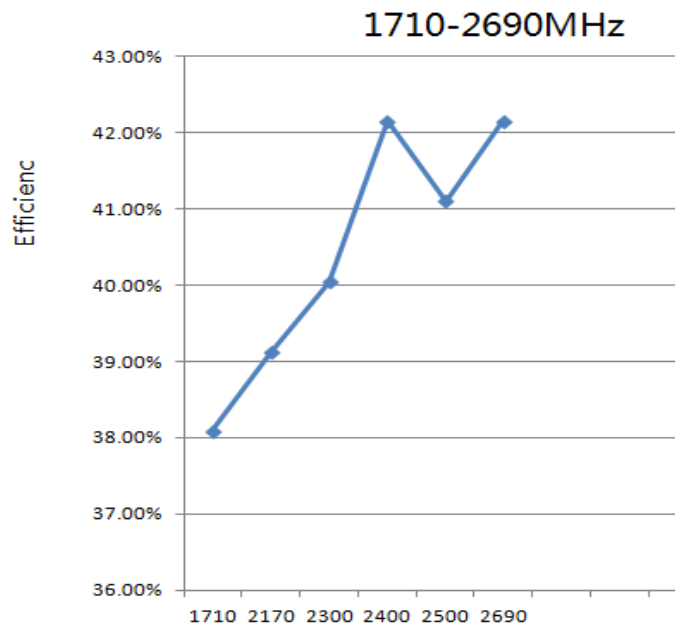
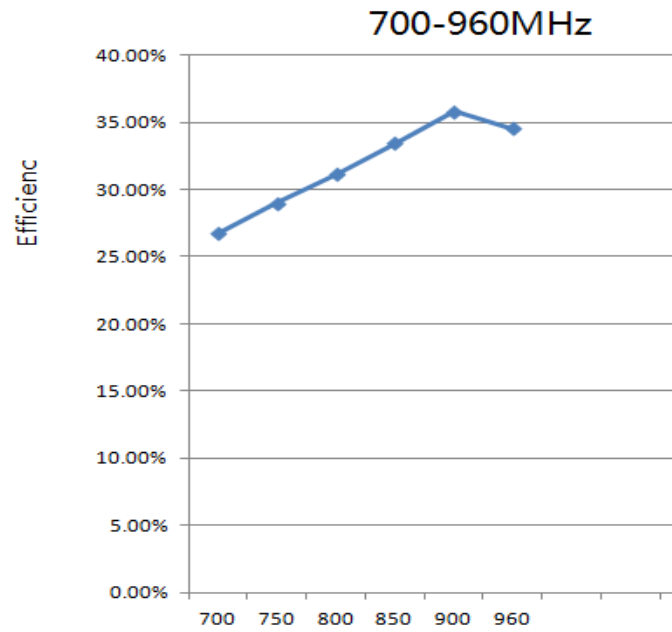
▶ **Tr2** S22 SWR 1.000/ Ref 1.000 [F2]



Frequency (MHz)	700	960	1710	2170	2300	2400	2500	2690
VSWR	2.42	1.56	1.46	1.38	1.26	1.09	1.10	1.32

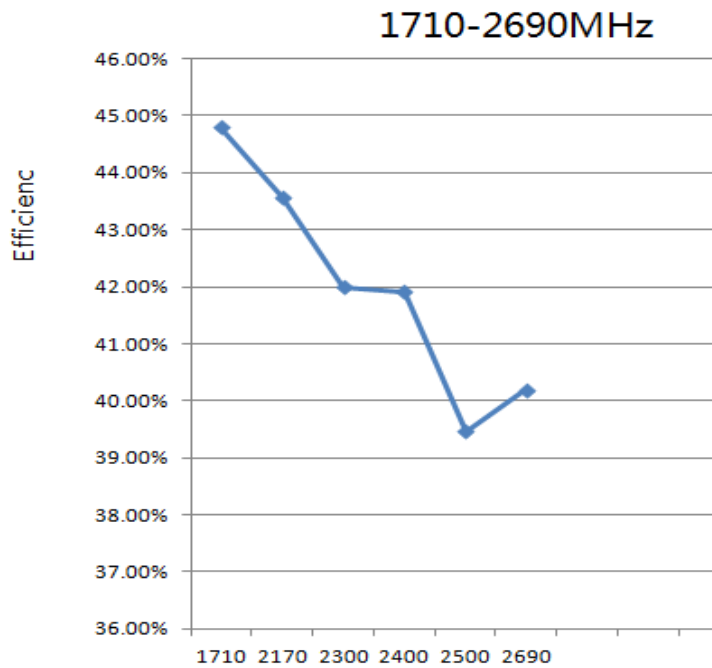
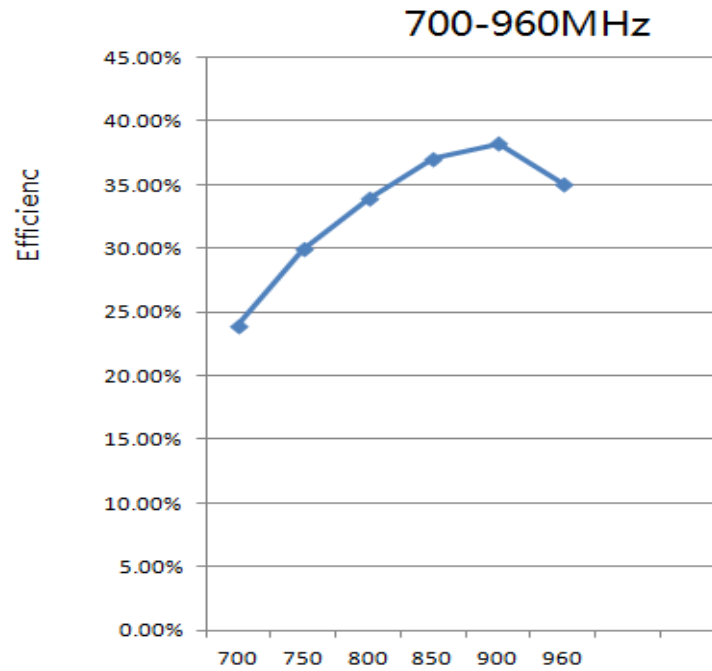
### 4.3. Efficiency

#### 4.3.1. LTE MIMO 1



Frequency (MHz)	700	960	1710	2170	2300	2400	2500	2690
Efficiency (%)	26.73	34.54	38.09	39.12	40.04	42.15	41.10	42.15

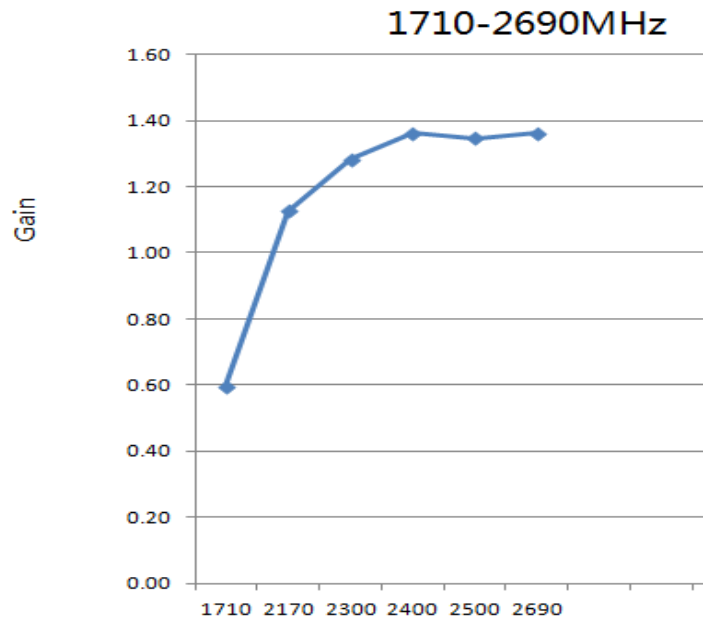
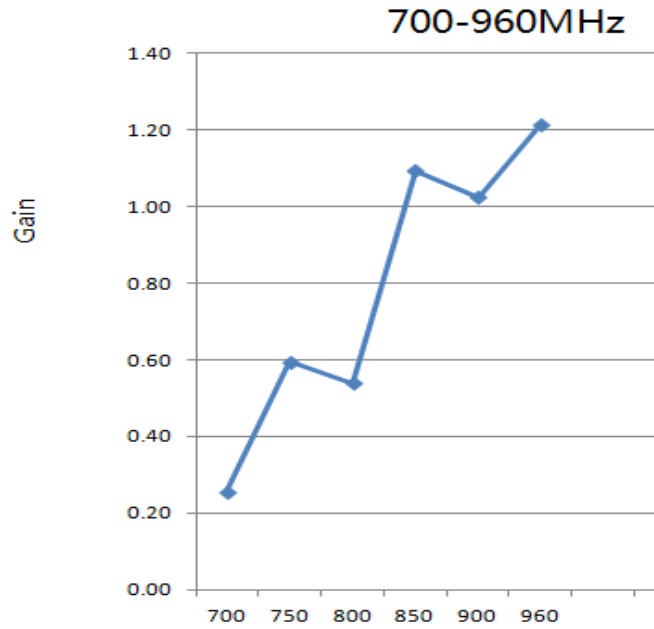
4.3.2. LTE MIMO 2



Frequency (MHz)	700	960	1710	2170	2300	2400	2500	2690
Efficiency (%)	24.32	35.12	44.79	43.57	41.99	41.91	39.46	40.19

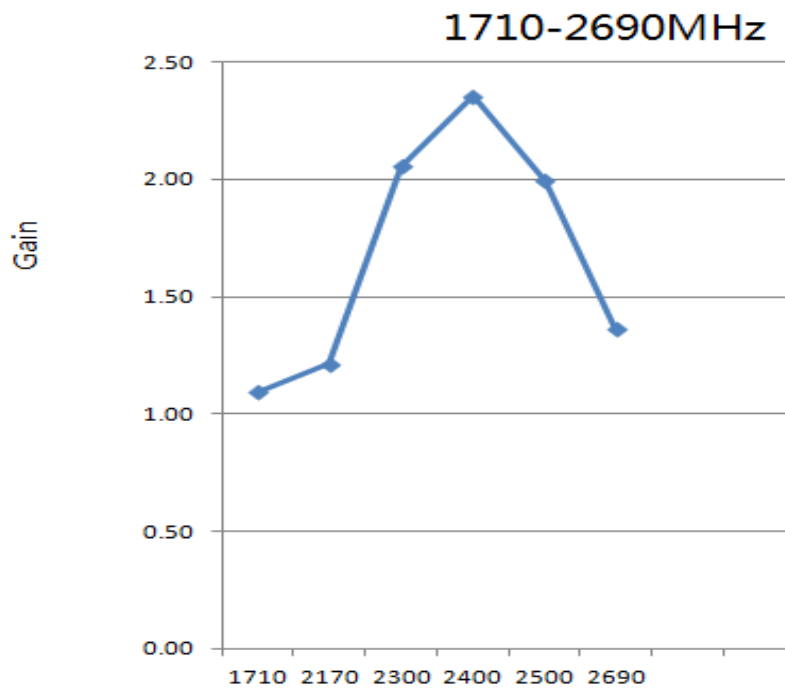
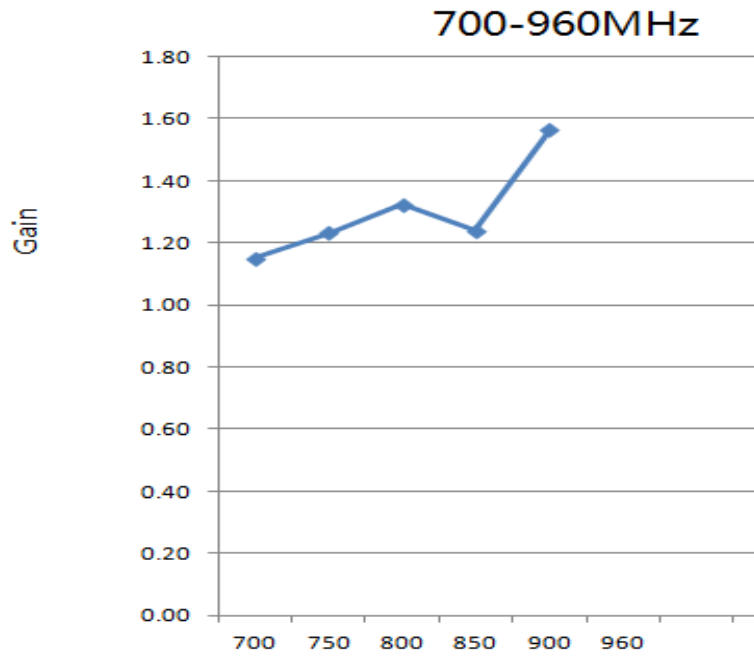
## 4.4. Gain

### 4.4.1. LTE MIMO 1



Frequency (MHz)	700	960	1710	2170	2300	2400	2500	2690
Gain (dBi)	0.26	1.21	0.60	1.13	1.28	1.36	1.35	1.36

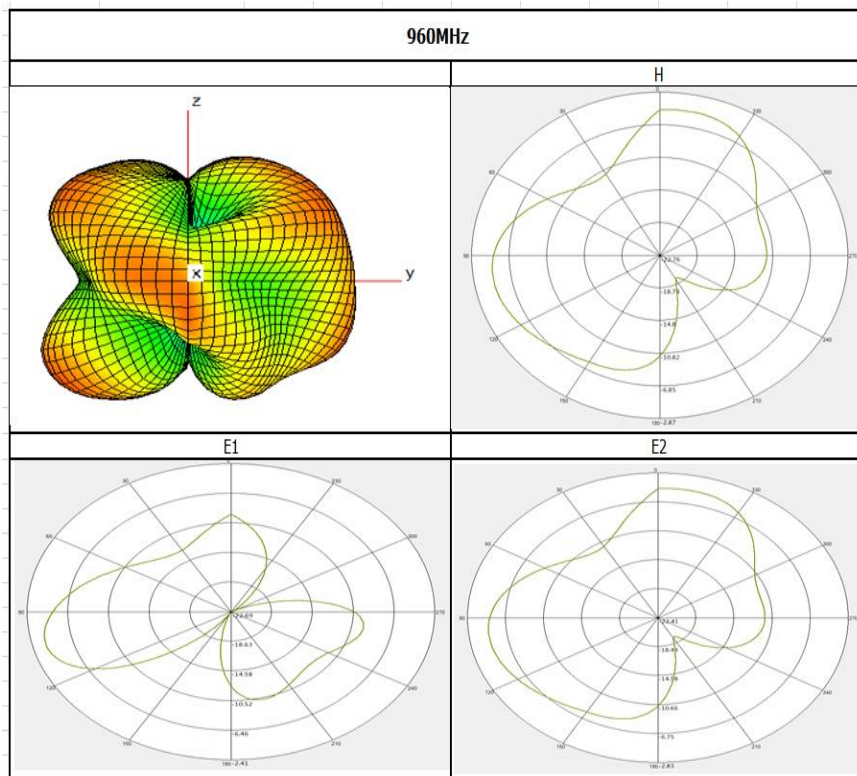
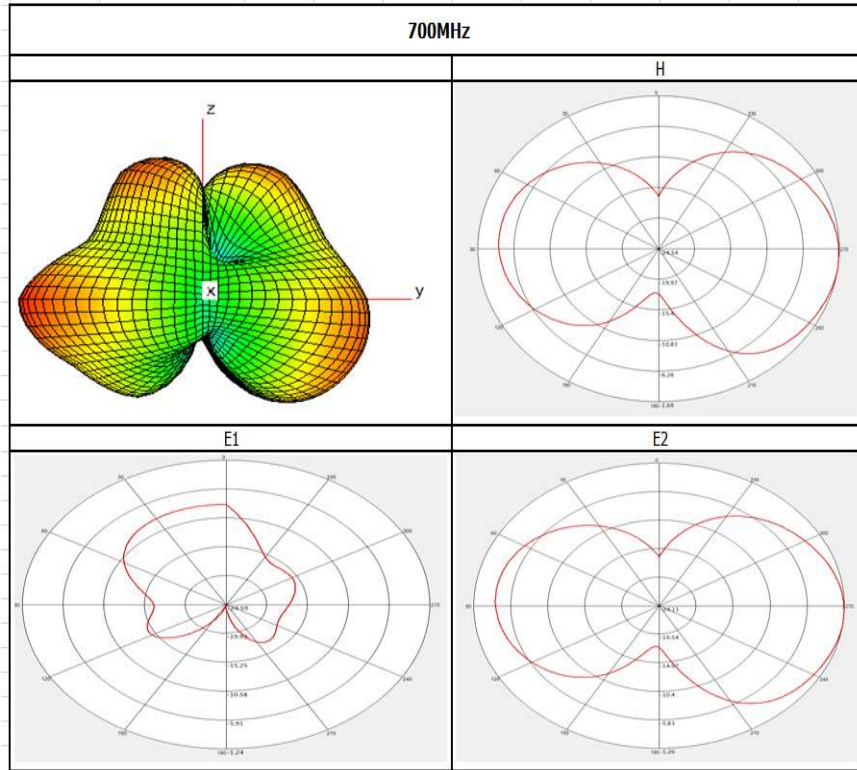
4.4.2. LTE MIMO 2

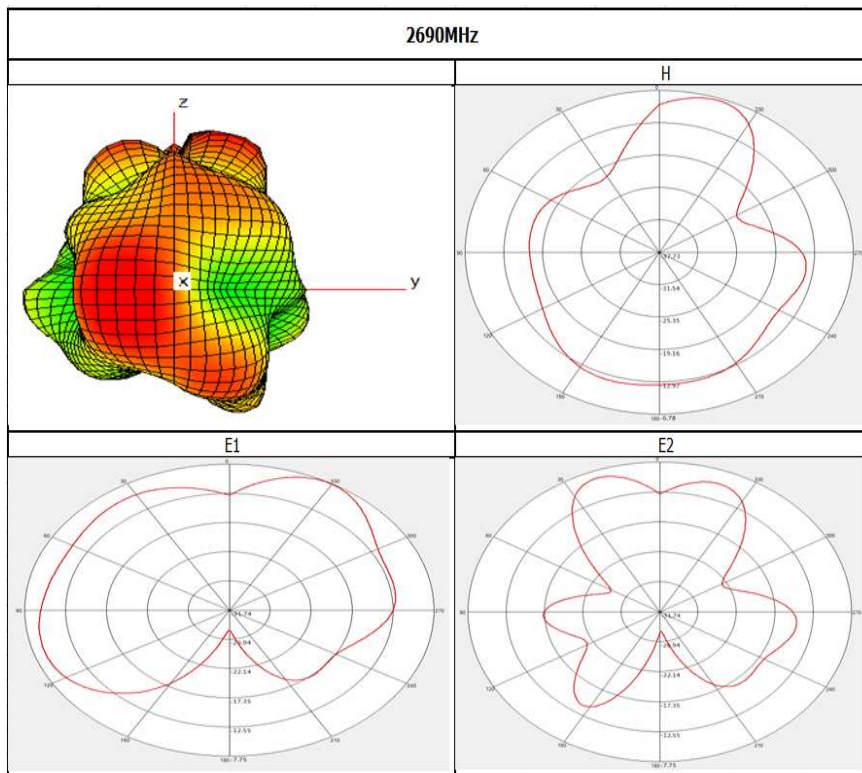
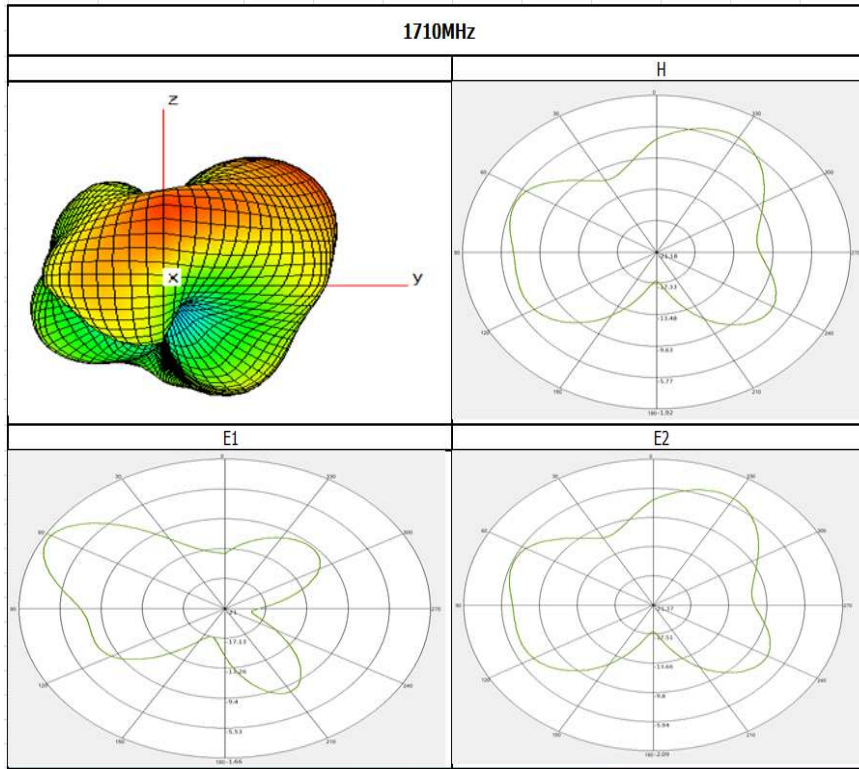


Frequency (MHz)	700	960	1710	2170	2300	2400	2500	2690
Gain (dBi)	0.82	1.56	1.09	1.21	2.05	2.36	1.99	1.36

## 4.5. Radiation Pattern

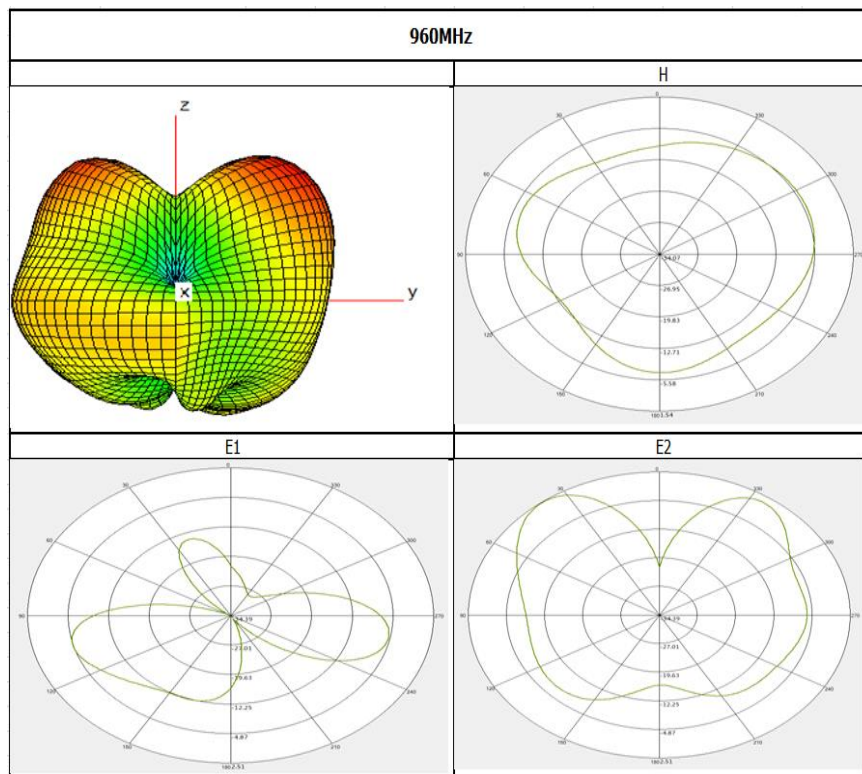
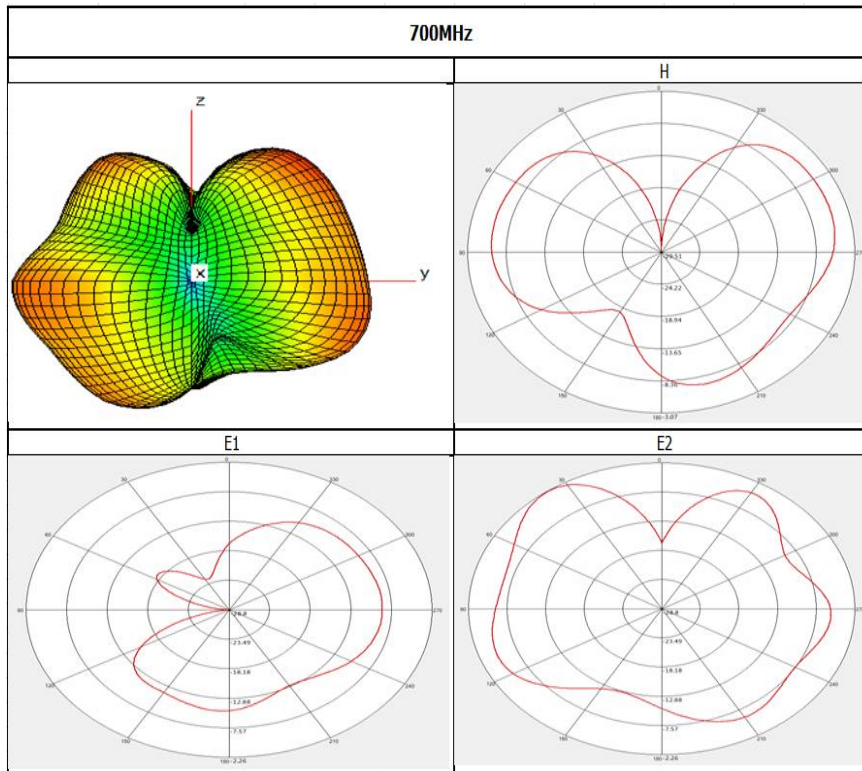
### 4.5.1. LTE MIMO 1

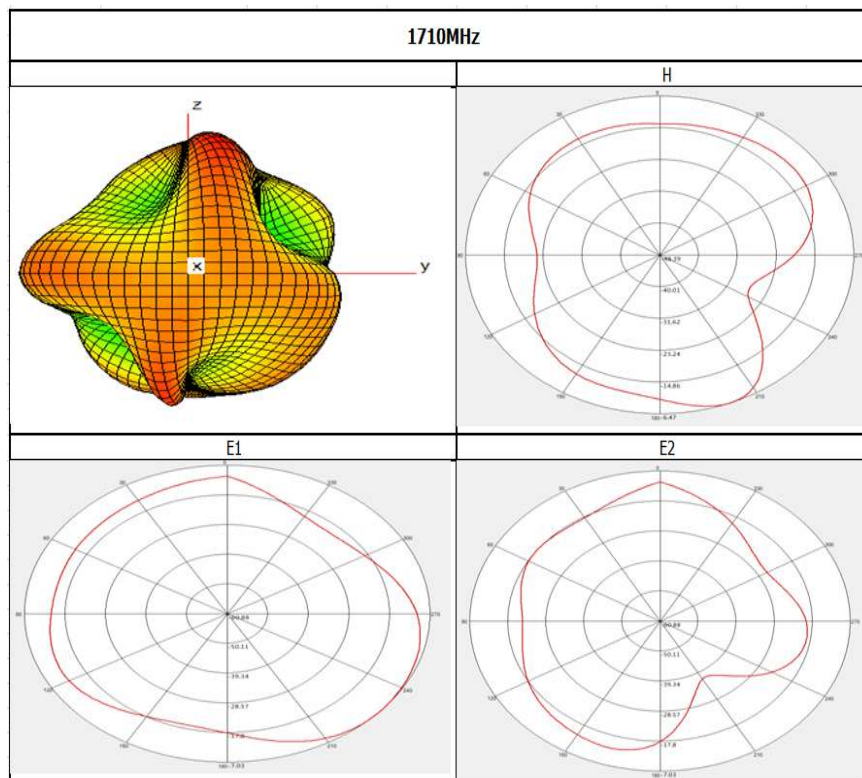
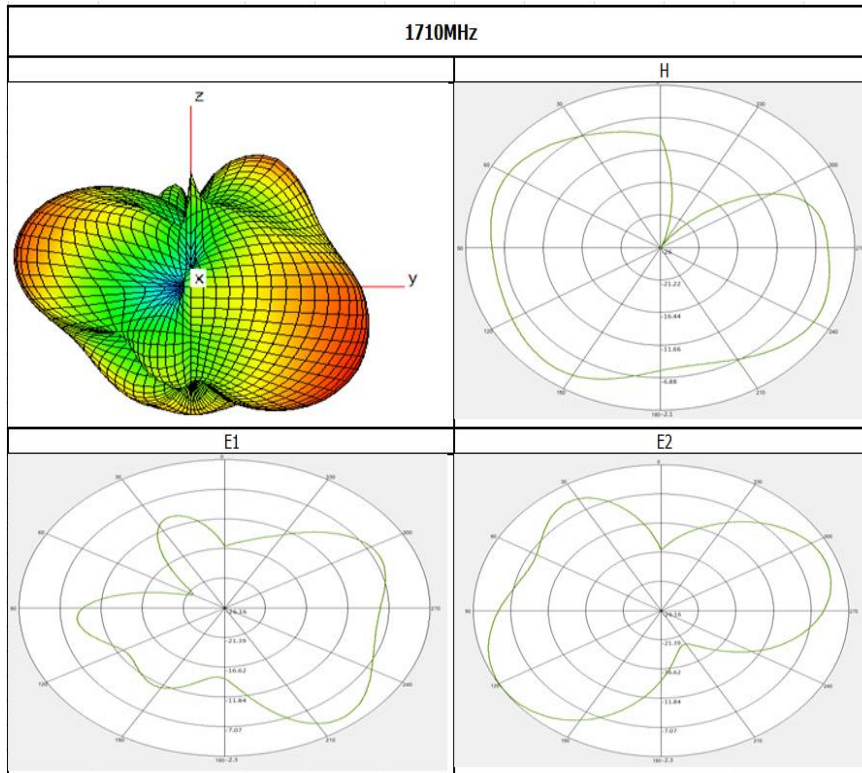






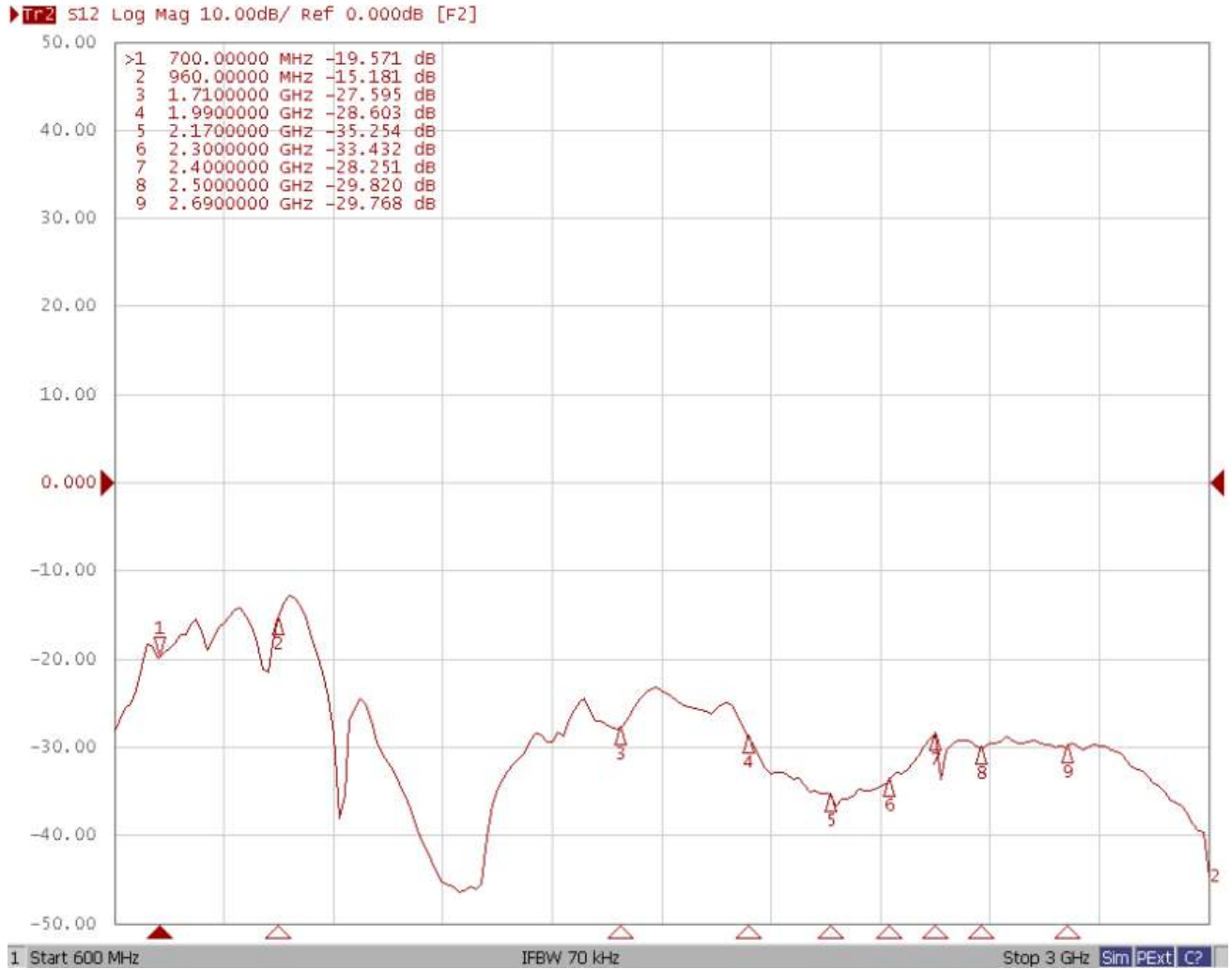
4.5.2. LTE MIMO 2



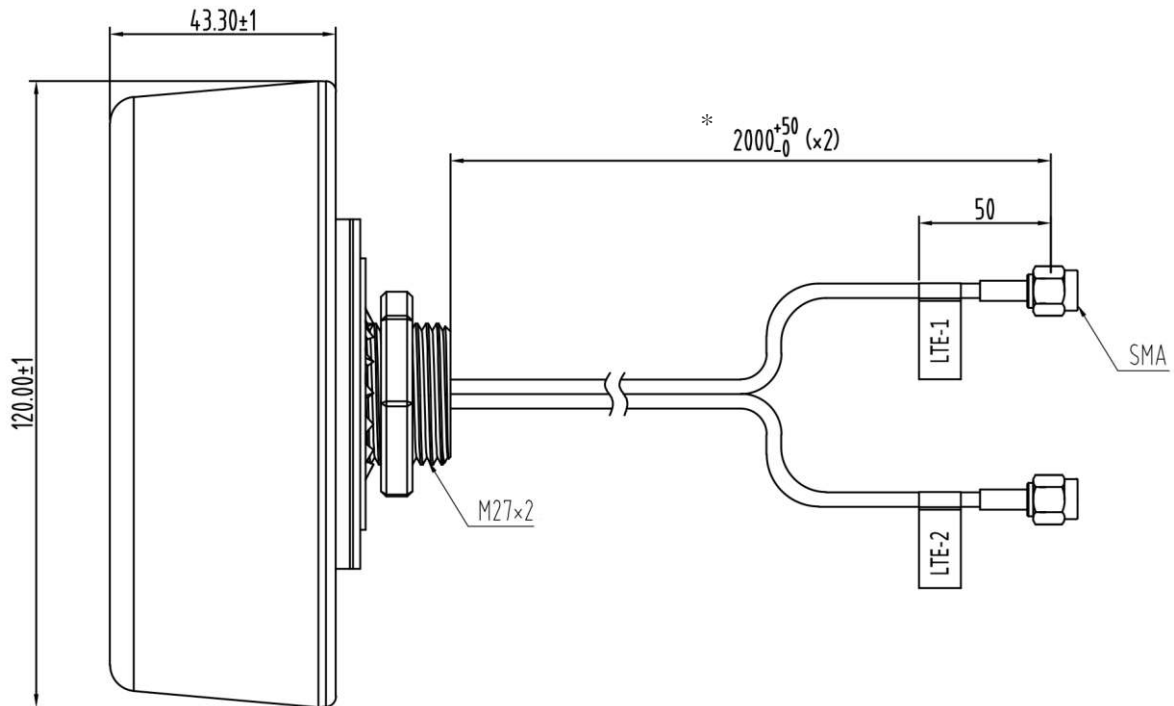


## 4.6. Insulation

- LTE MIMO 1 & LTE MIMO 2



## 5 Product Size



## 6 Connect Description

As follows, the default SMA male (center pin) is usually the setting that most users probably choose.



## 7 Installation

- Recommended hole size:  $\Phi 28.0 \pm 0.5$  mm;
- Recommended wall thickness size:  $3.0 \pm 1.0$  mm.

