

# Antenna

# YE0029AA Datasheet

**Antenna Services**

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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)

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# About the Document

## Revision History

Version	Date	Author	Note
-	2020-12-15	Kenny YIN	Creation of the document
1.0	2020-12-15	Kenny YIN	First official release
1.1	2020-12-16	Kenny YIN	Updated pictures of the product.
1.2	2021-01-27	Kenny YIN	Added IP rating description and installation method in Chapter 3.
1.3	2021-06-17	Kenny YIN	Updated working temperature in Chapter 3.
1.4	2021-11-15	Aria CHU	Updated the efficiency data in Chapter 4.3.
1.5	2021-12-01	Aria CHU	Updated the product description in Chapter 1.
1.6	2023-06-26	Kenny YIN	Added IP rating and drawing of chapter 3 and 5.
1.7	2023-07-03	Toby WANG	Updated the drawing of the product in Chapter 5.

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## 1 Product Description

This Quectel external 4G antenna covers main 4G LTE bands and is compatible with 3G/2G/LPWA bands as well. The external antenna is barely influenced by the internal environment of devices, giving a much better performance in efficiency, radiation and gain whilst providing an optimized solution for a customer product. Quectel also offers flexible installation with custom cable length and connector options.

## 2 Product Features

- Cellular LTE
- High efficiency
- Excellent performance



### 3 Product Specifications

#### Passive Electrical Specifications

Frequency Range	700–2700 MHz
Input Impedance	50 $\Omega$
VSWR	$\leq 2.0$
Gain	$\leq 2$
Polarization Type	Linear

#### Mechanical Specifications

Antenna Size	88 mm $\times$ $\Phi$ 30 mm, LMR100, Cable Length = 3000 mm
Casing	ABS
Connector Type	SMA Male (Center Pin)
Working Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
Radome Color	Black
Mounting Type	Magnet
IP Rating	IP65

## 4 Overall Performance

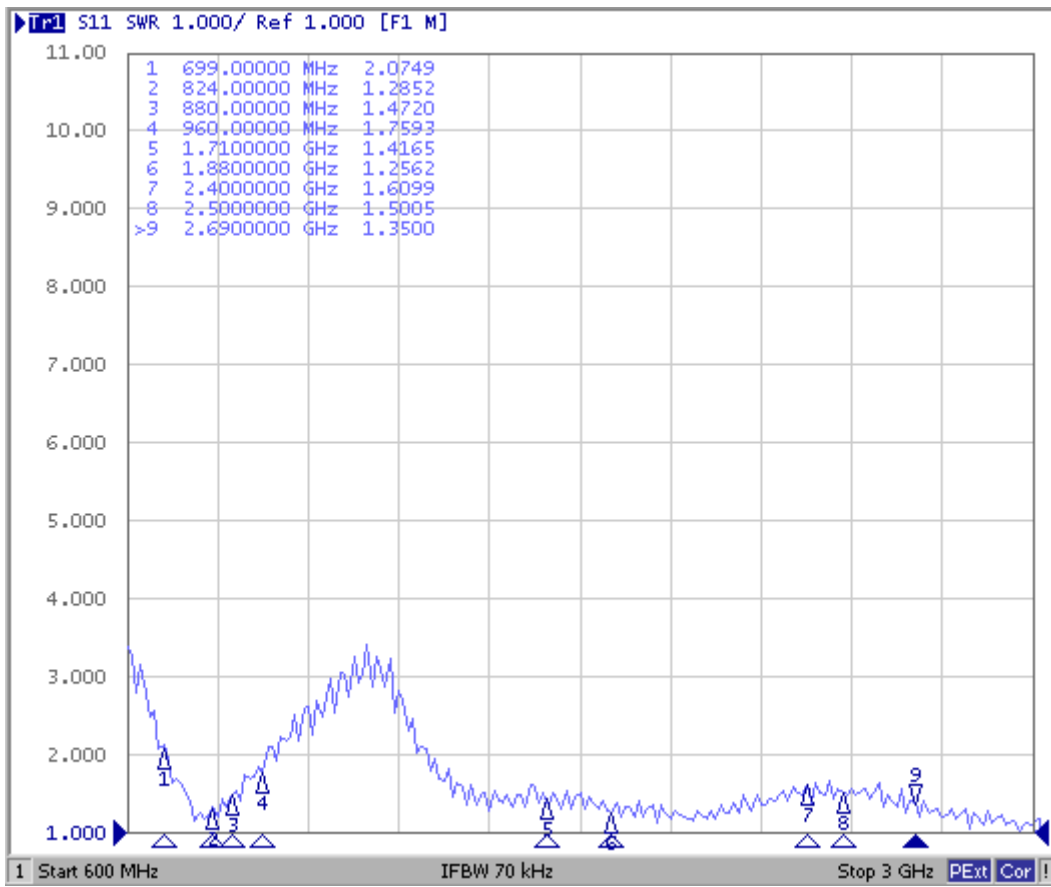
### 4.1. Test Environment

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



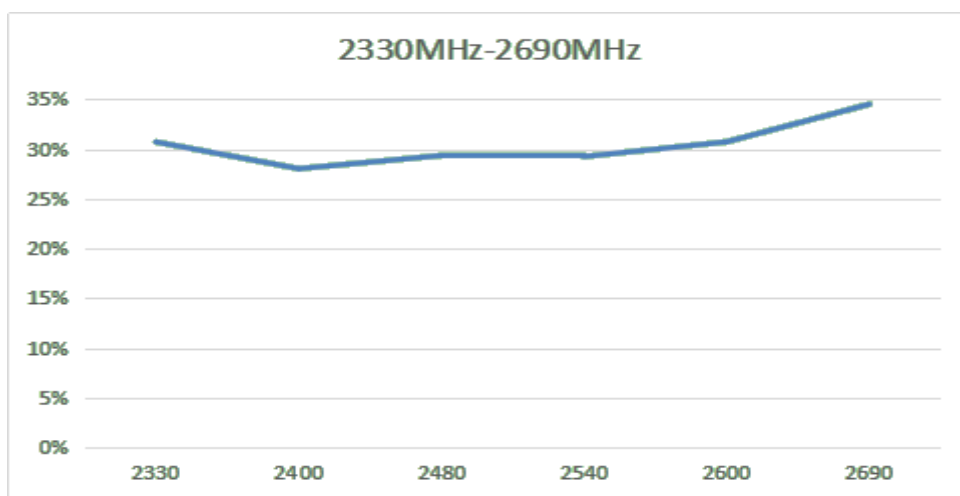
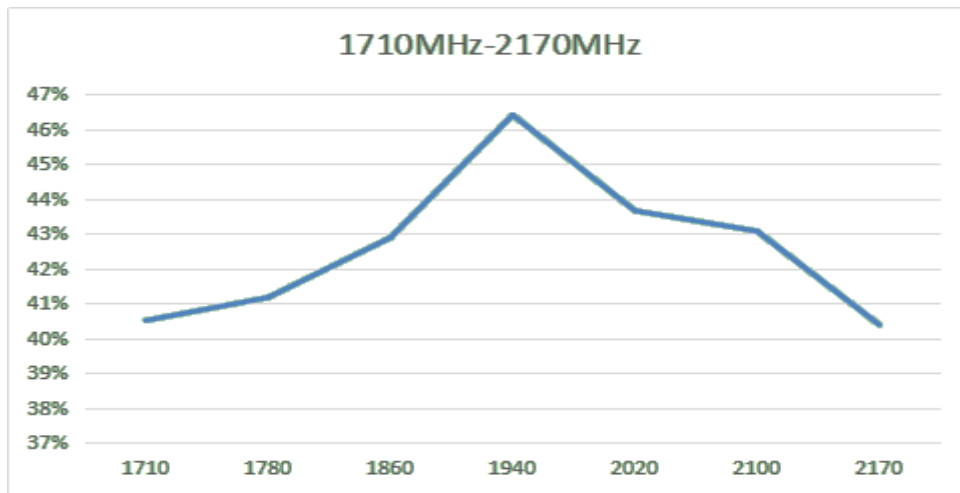
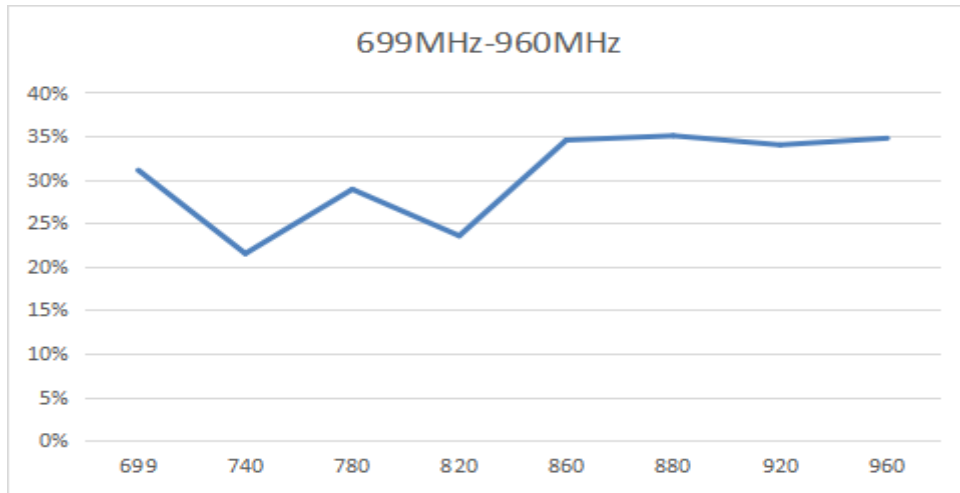


## 4.2. VSWR



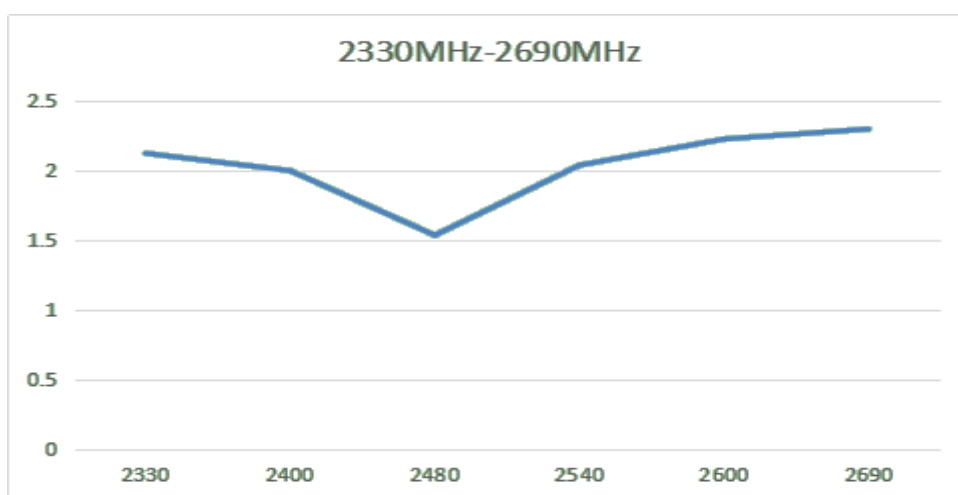
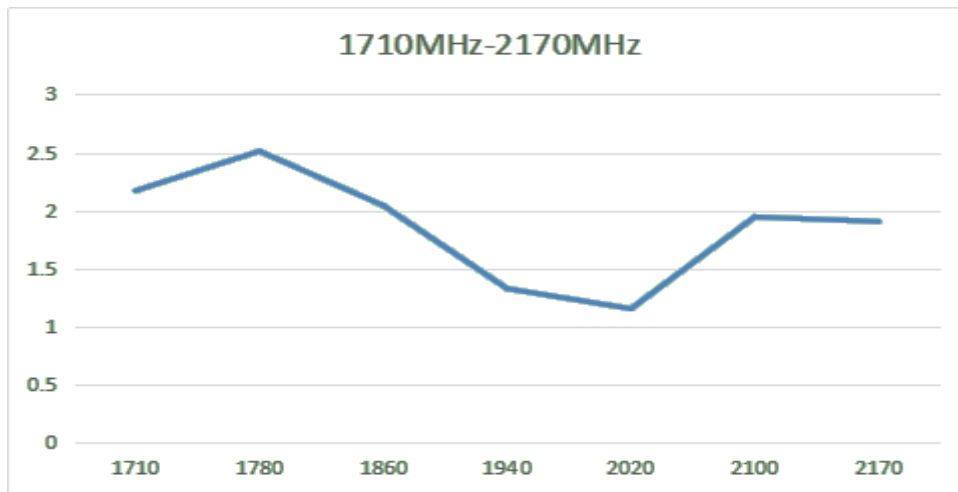
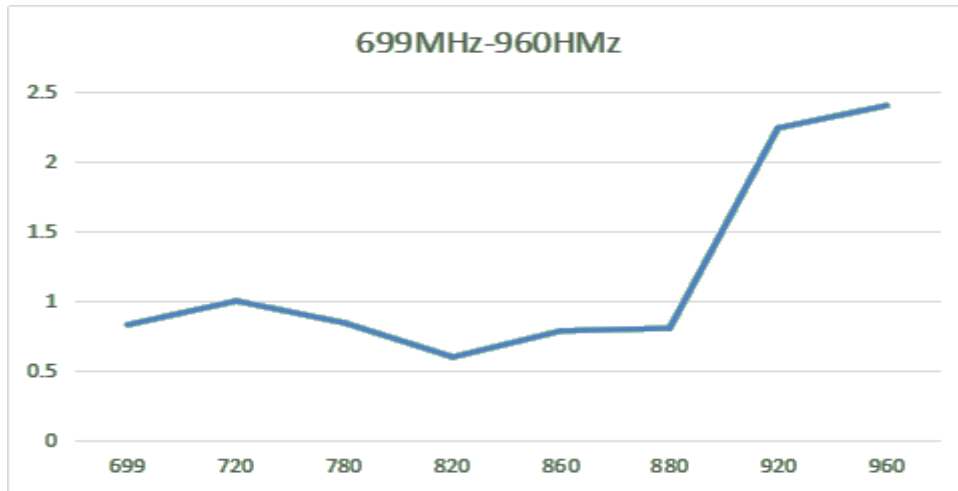
<b>Frequency (MHz)</b>	699	824	880	960	1710	1880	2500	2690
<b>VSWR</b>	2.0	1.2	1.4	1.7	1.4	1.2	1.5	1.3

### 4.3. Efficiency



Frequency (MHz)	699	824	880	960	1710	1880	2500	2690
Efficiency (%)	32	24	35	35	41	43	29	35

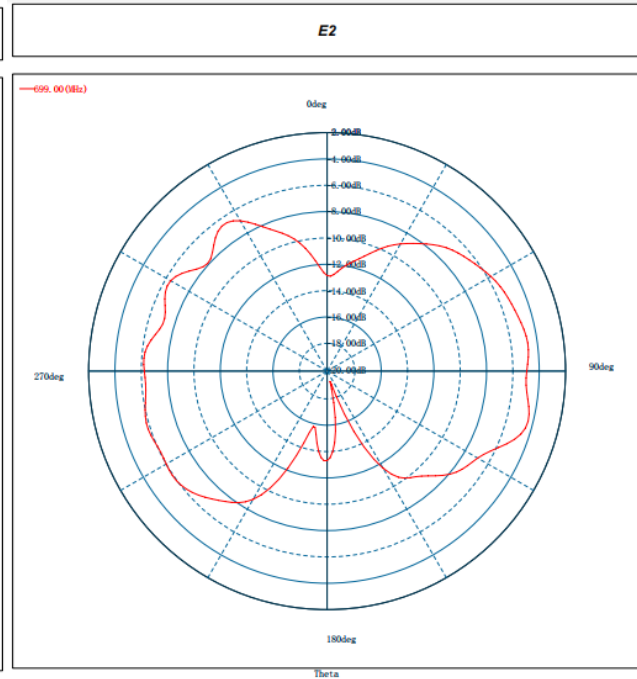
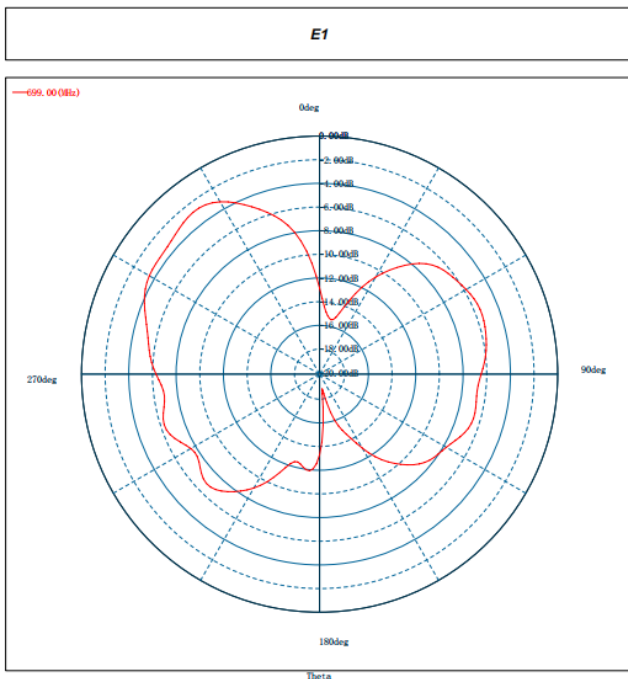
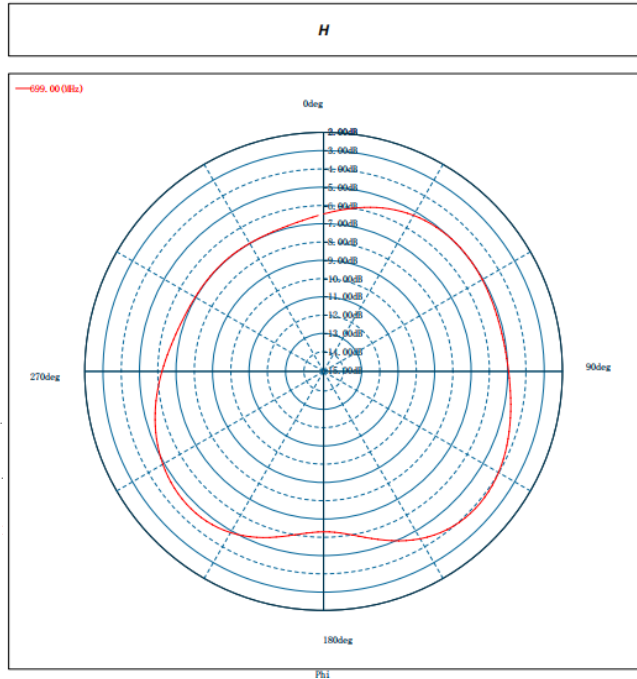
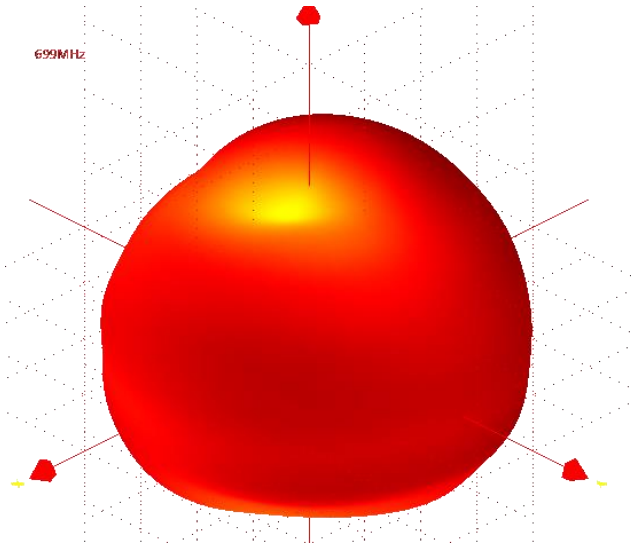
### 4.4. Gain



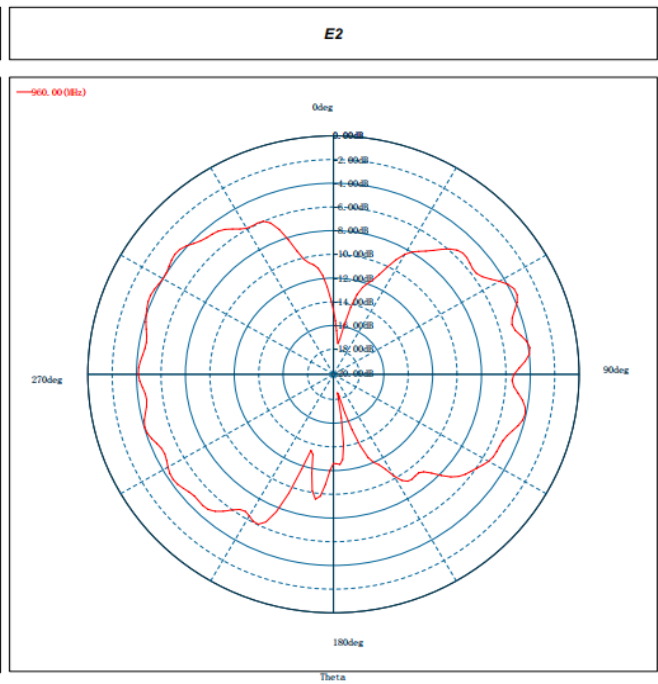
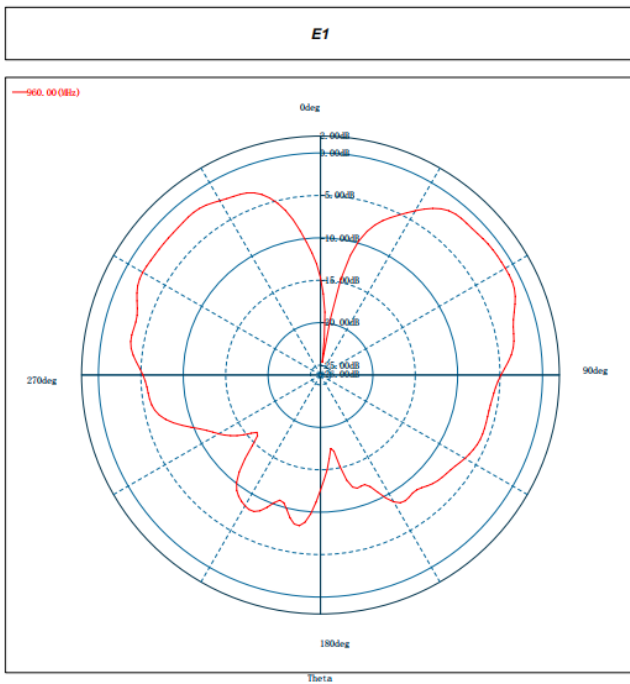
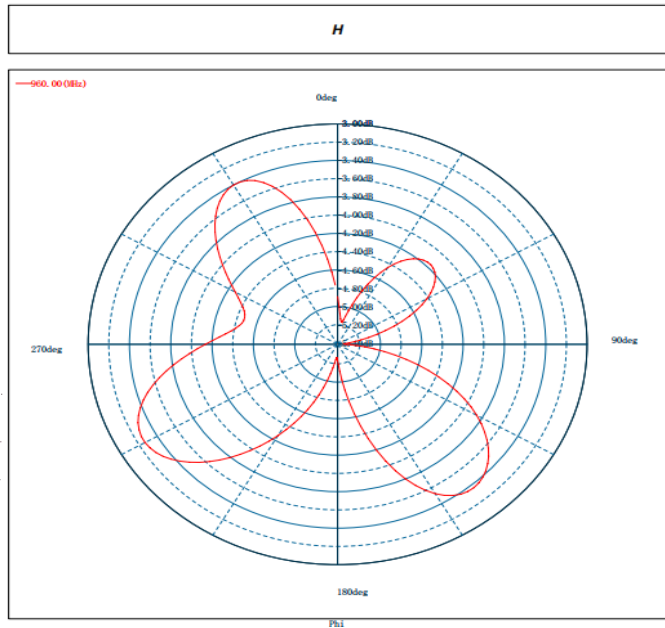
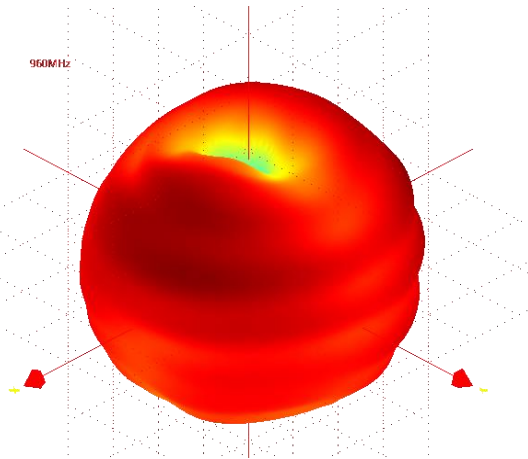
Frequency (MHz)	699	824	880	960	1710	1880	2500	2690
Gain (dBi)	0.8	0.5	0.8	2.4	2.1	2.0	1.5	2.3

### 4.5. Radiation Pattern

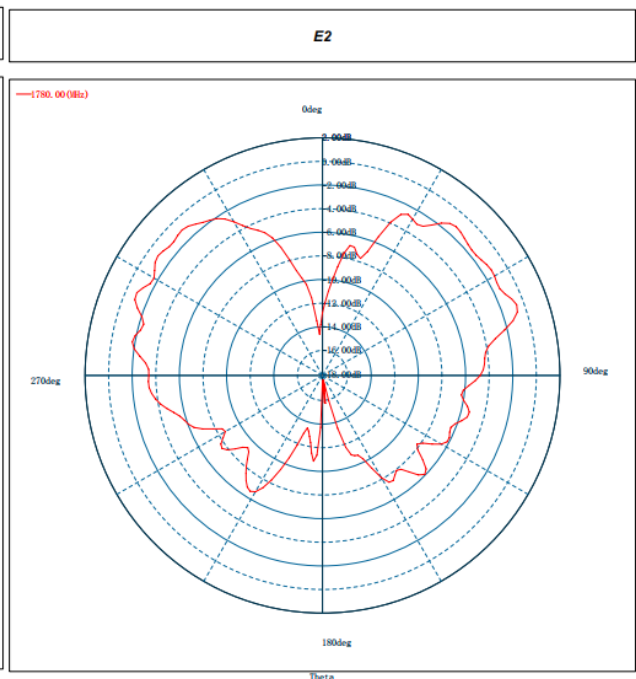
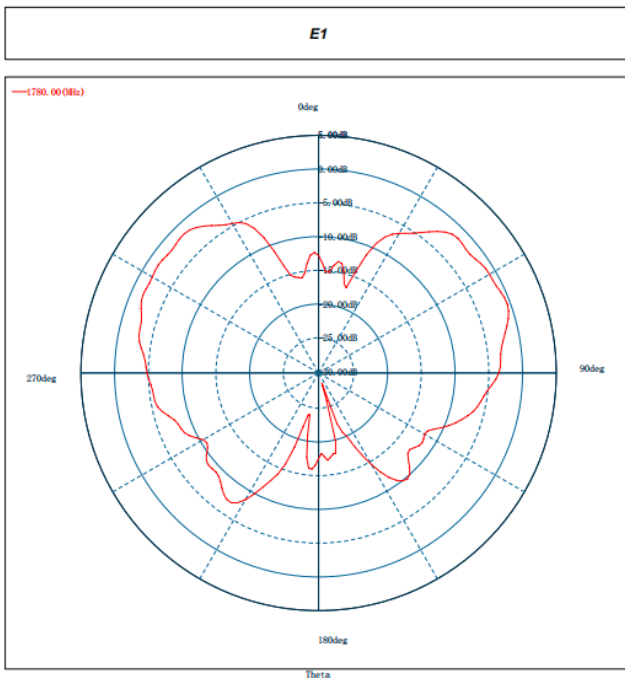
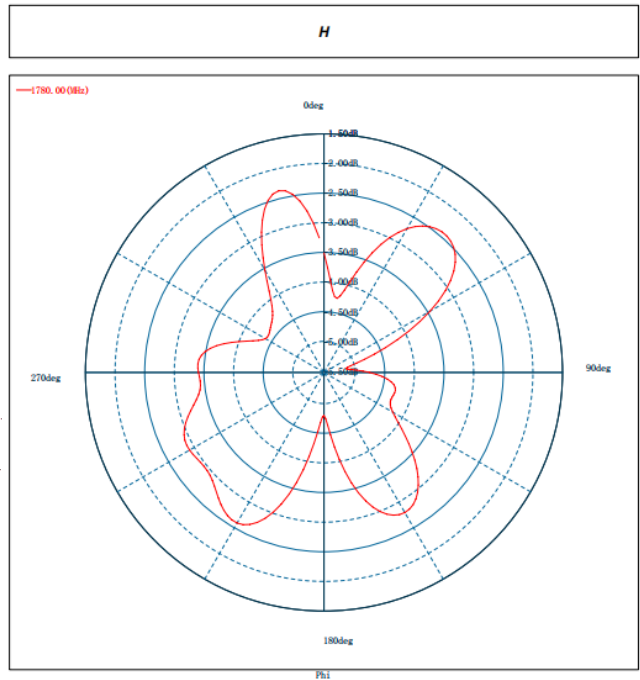
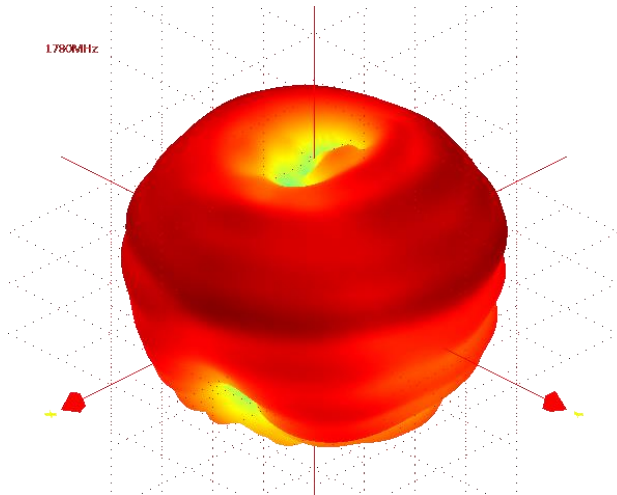
#### 4.5.1. 699 MHz



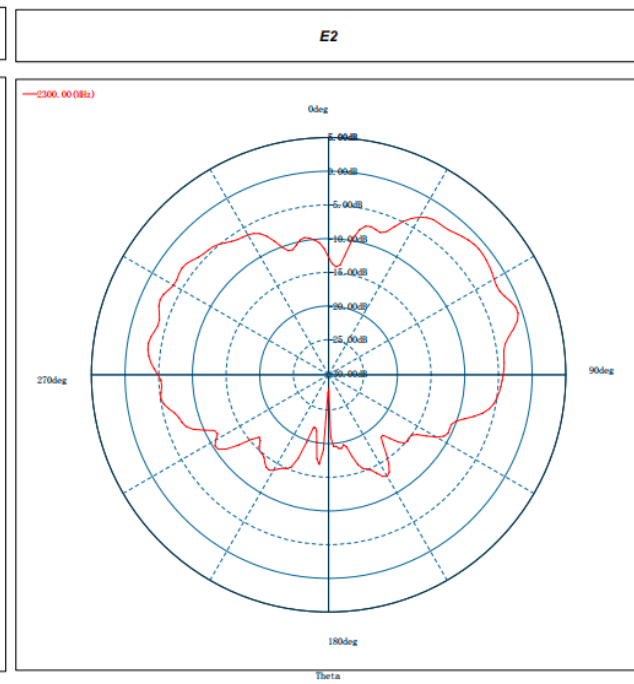
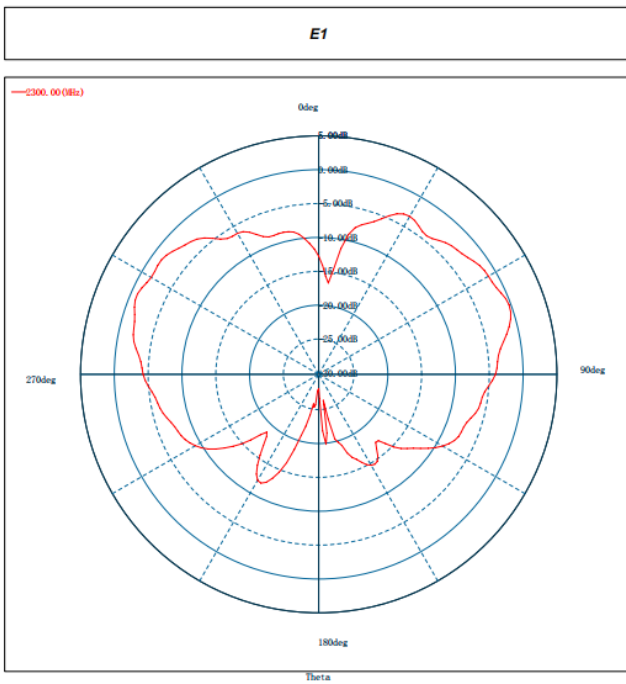
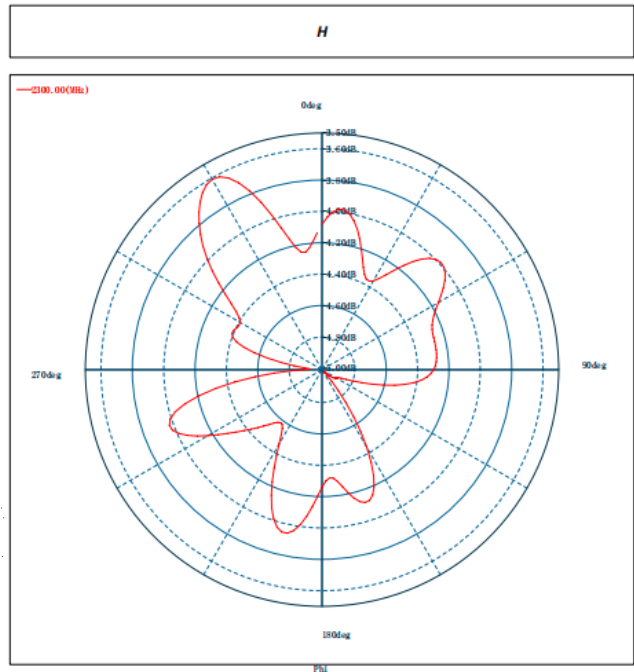
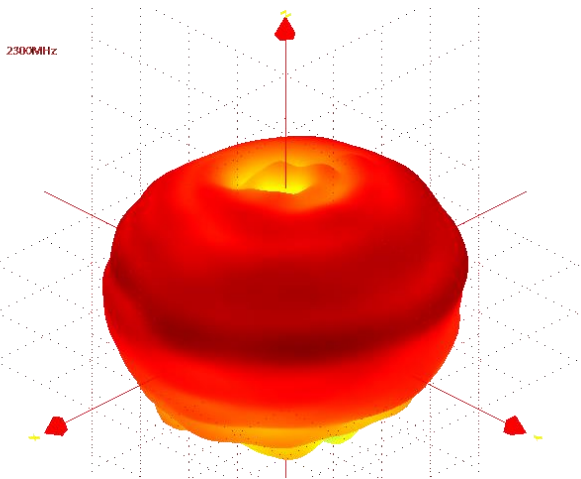
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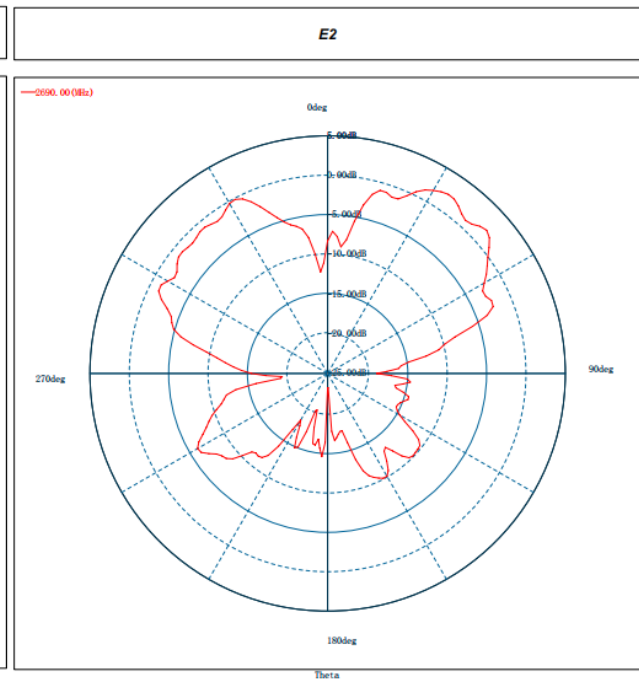
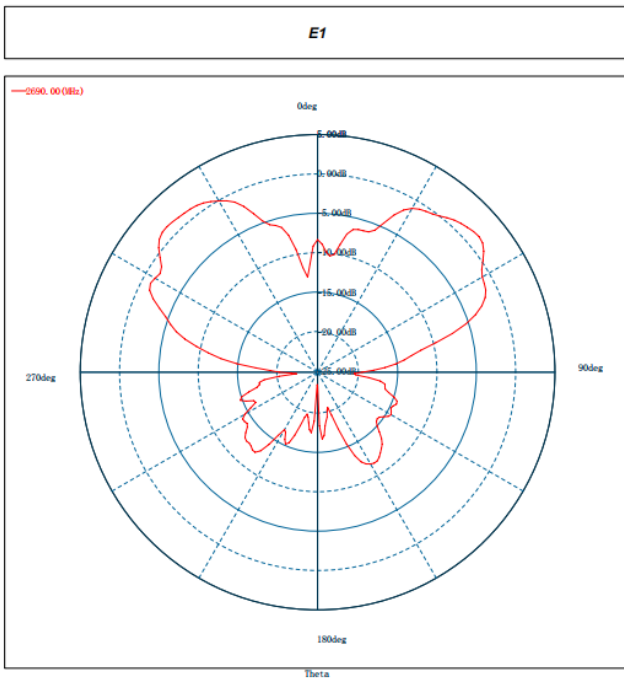
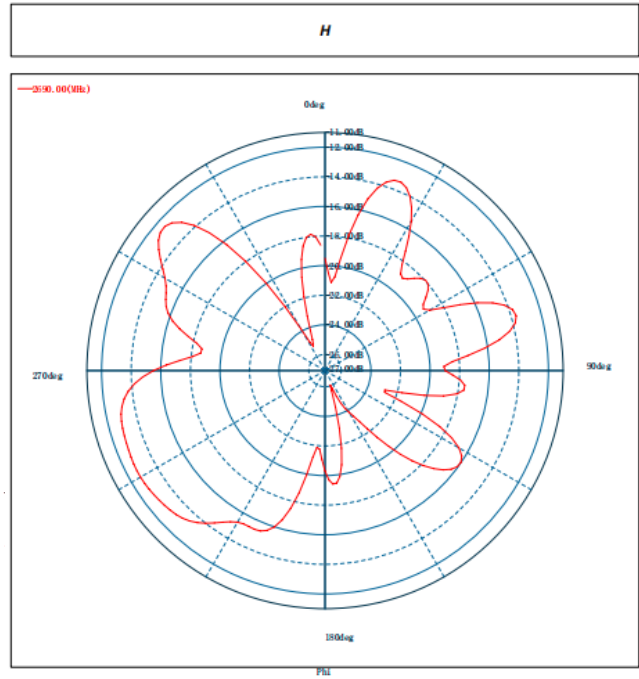
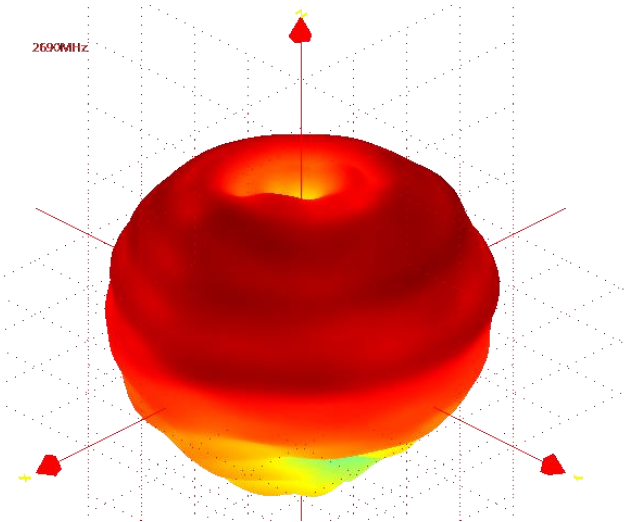
4.5.3. 1780 MHz



4.5.4. 2300 MHz



4.5.5. 2690 MHz





## 5 Product Size

