

# Antenna

# YFS001AA Datasheet

## Antenna Services

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# About the Document

## Revision History

Version	Date	Author	Note
1.0	2020-09-03	Kenny YIN	Initial
1.1	2020-09-10	Kenny YIN	Update Radiation Patterns in Chapter 4.5
1.2	2021-01-12	Kenny YIN	Updated the antenna image in Chapter 2.

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## 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 5G & LTE
- High efficiency
- Excellent performance



### 3 Product Specifications

#### Passive Electrical Specifications

Frequency Range	700–960 MHz 1710–2700 MHz 3300–3800 MHz 4400–5000 MHz
Input Impedence	50 Ω
VSWR	700–960 MHz ≤4.5 1710–2700 MHz ≤3.0 3300–5000 MHz ≤3.5
Gain	3 dBi
Polarization Type	Vertical

#### Mechanical Specifications

Antenna Size (mm)	300 × Ø 22.6 mm
Casing	Fiberglass Tube
Radiator	Cuprum
Connect Type	N type (Male pin with internal thread)
Working Temperature	-40 °C to +80 °C
Radome Color	Gray
Waterproof grade	IP67

## 4 Overall Performance

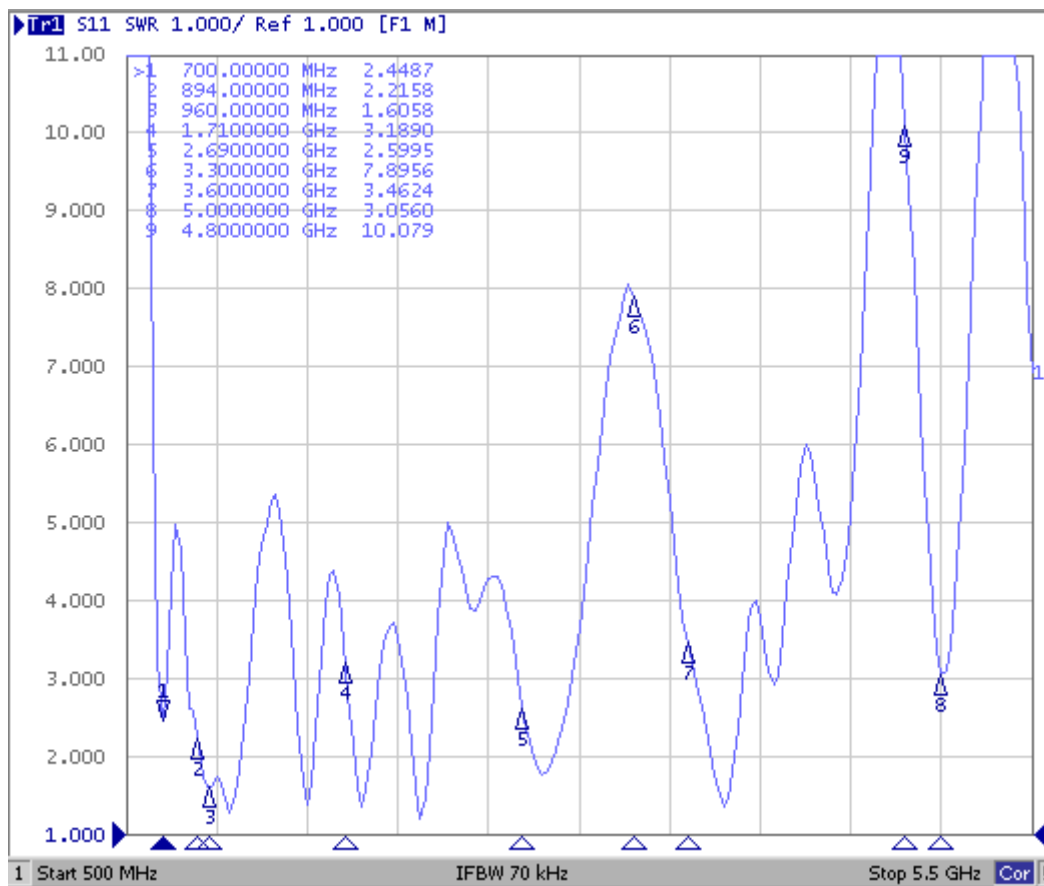
### 4.1. Test Environment

- KEYSIGHT VNA Network Analyzer, E5063A 100 kHz – 6.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 400 MHz – 6.0 GHz.



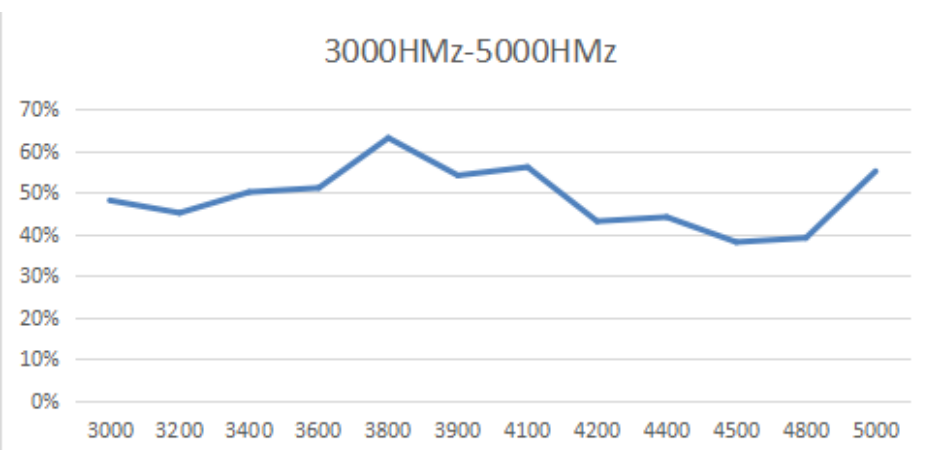
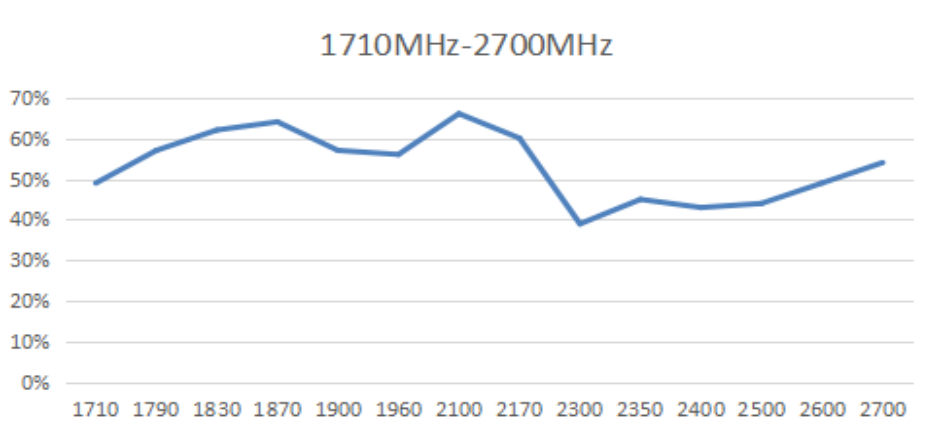
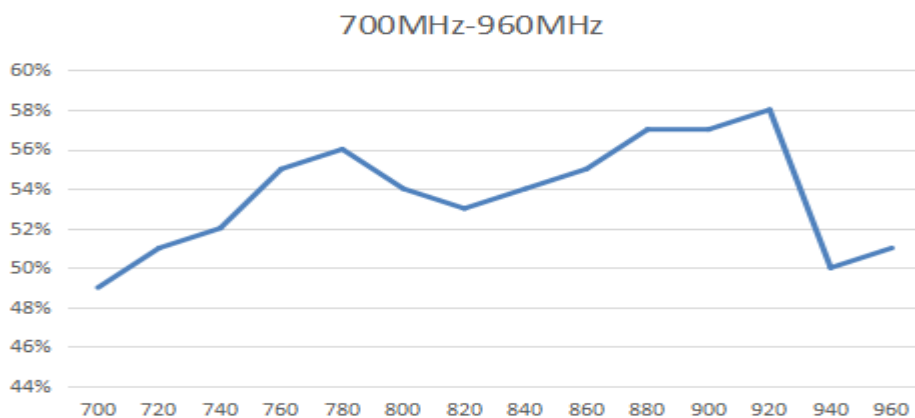


## 4.2. VSWR



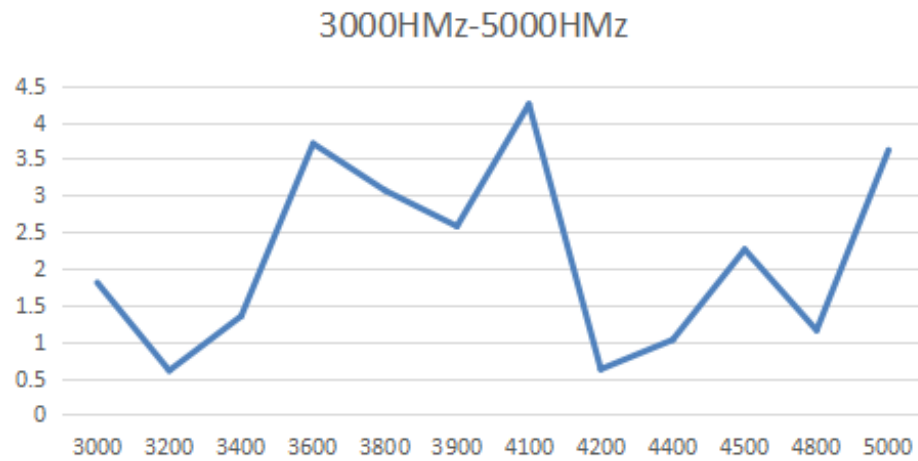
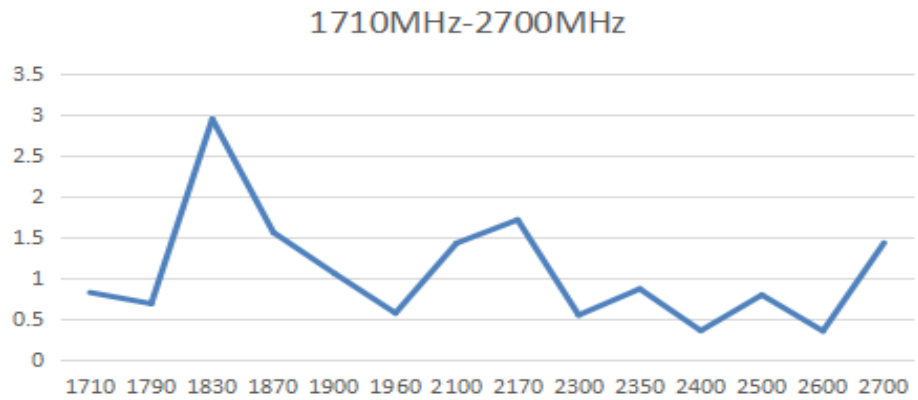
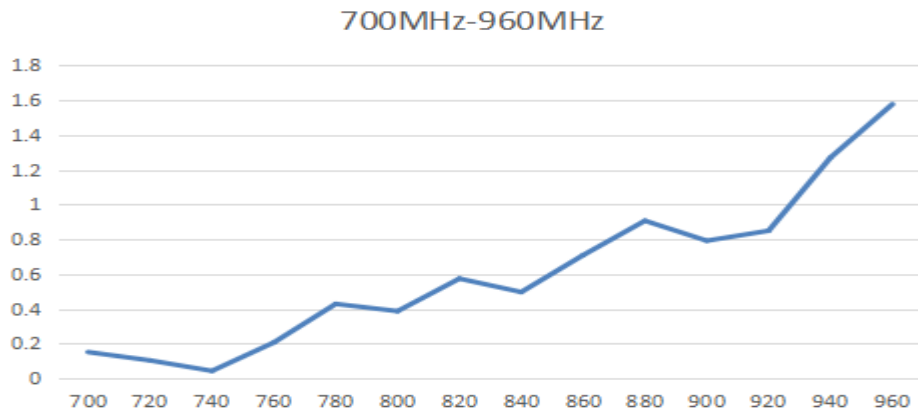
Frequency (MHz)	700	824	960	1710	2690	3300	4800	5000
VSWR	2.3	3.8	2.6	3.2	2.0	4.8	5.9	2.0

### 4.3. Efficiency



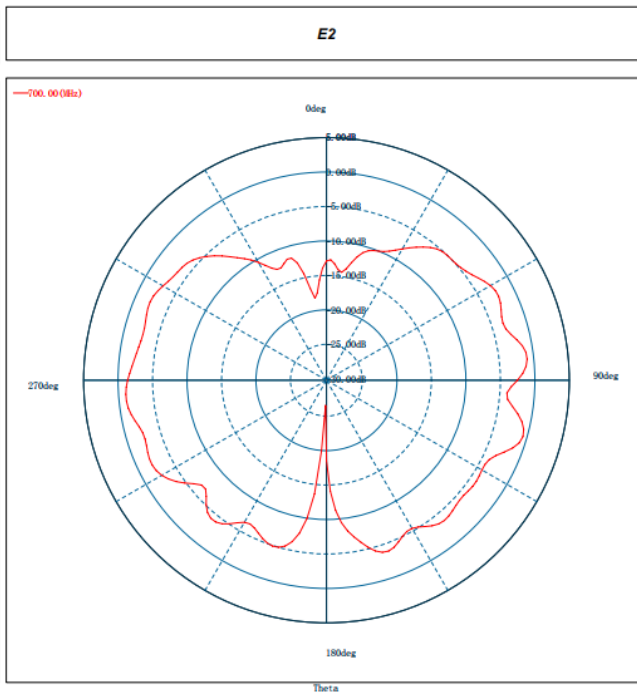
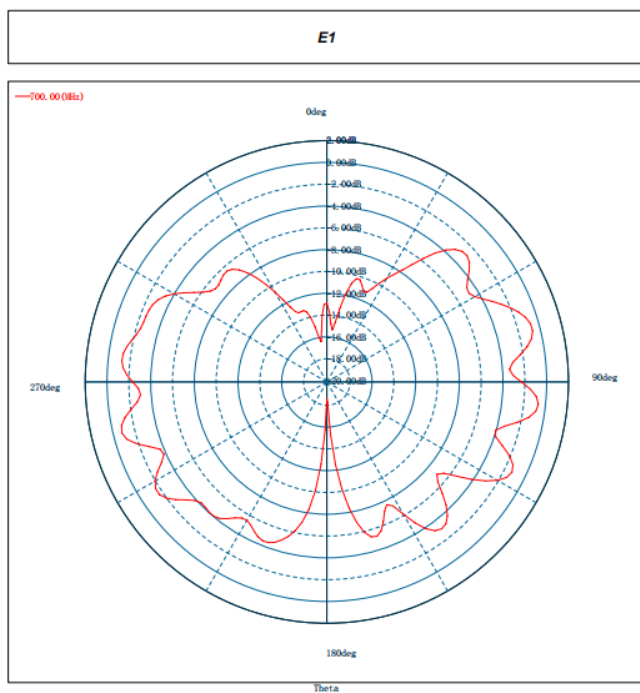
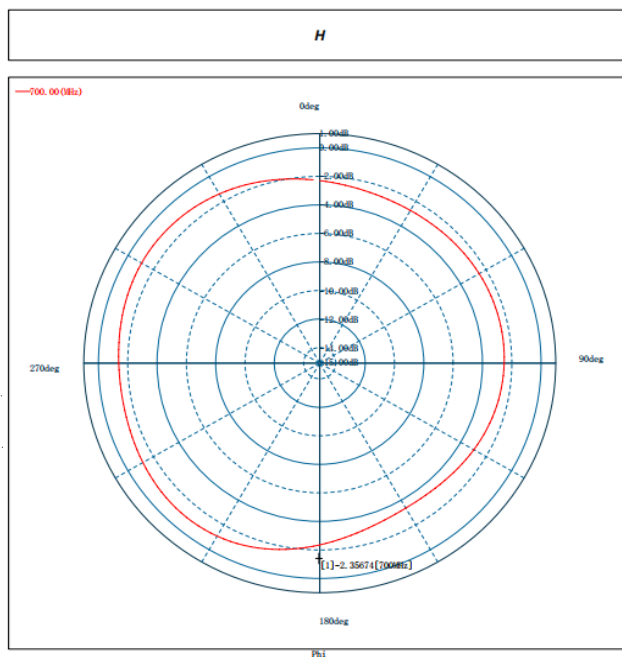
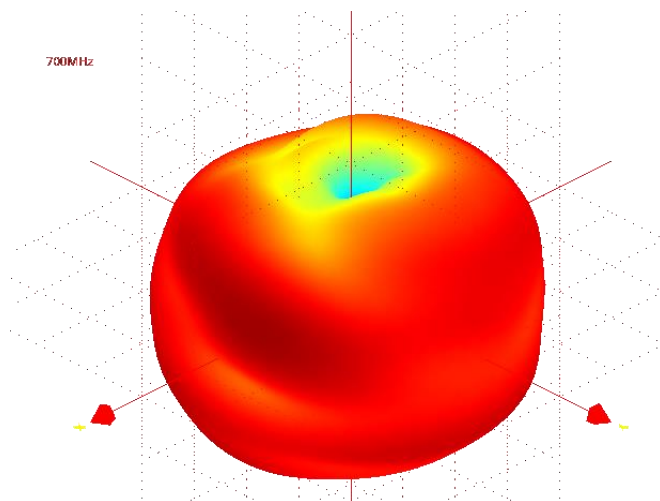
Frequency (MHz)	700	824	960	1710	2690	3300	4800	5000
Efficiency (%)	49	54	51	49	54	46	39	55

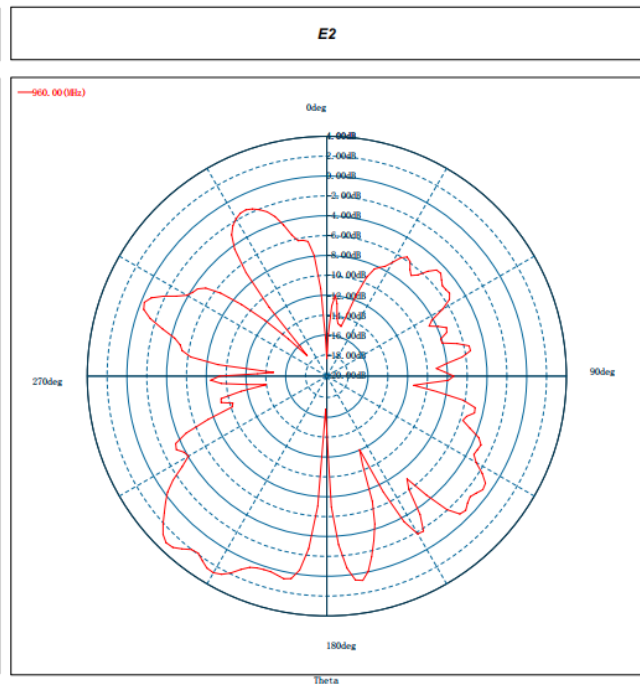
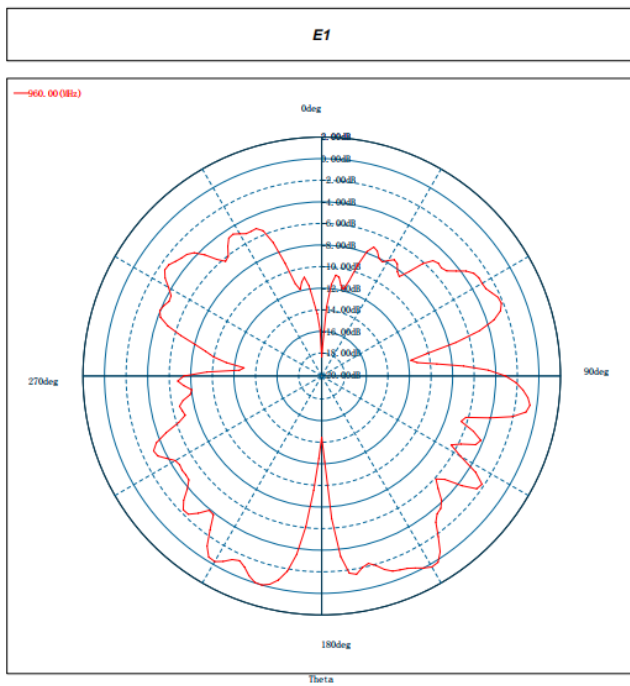
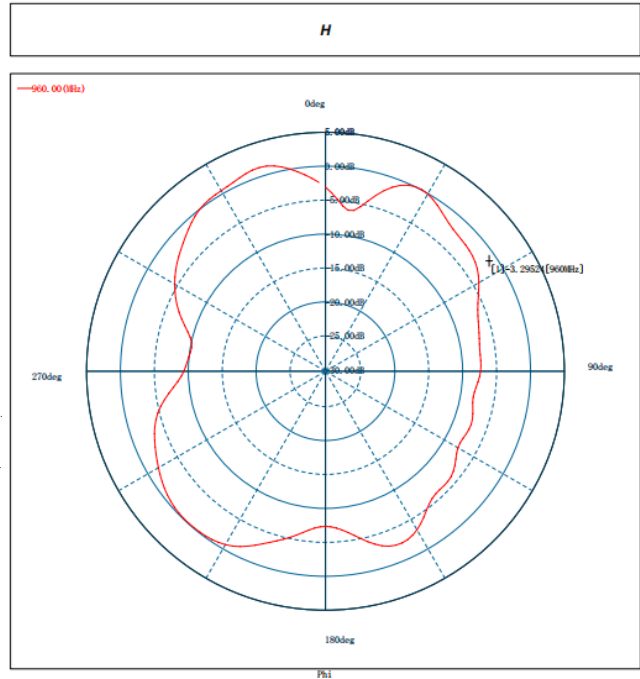
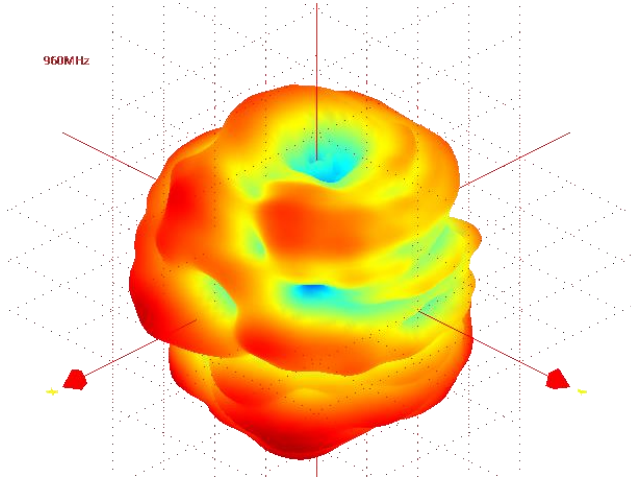
## 4.4. Gain

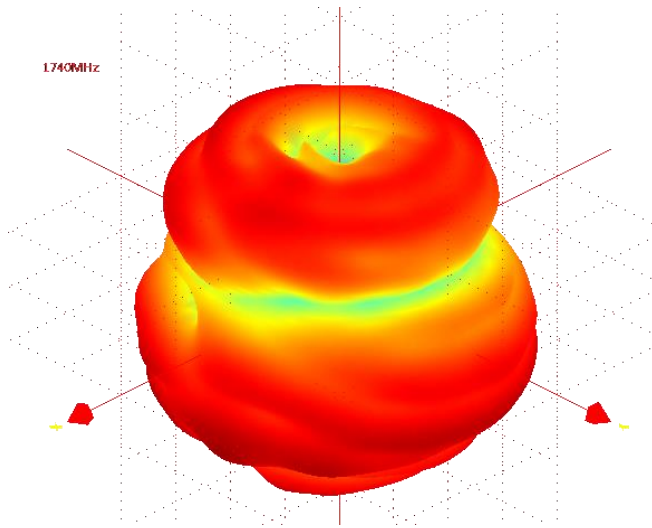


Frequency (MHz)	700	824	960	1710	2690	3300	4800	5000
Gain (dBi)	0.15	0.49	1.5	0.8	1.4	0.8	1.1	3.6

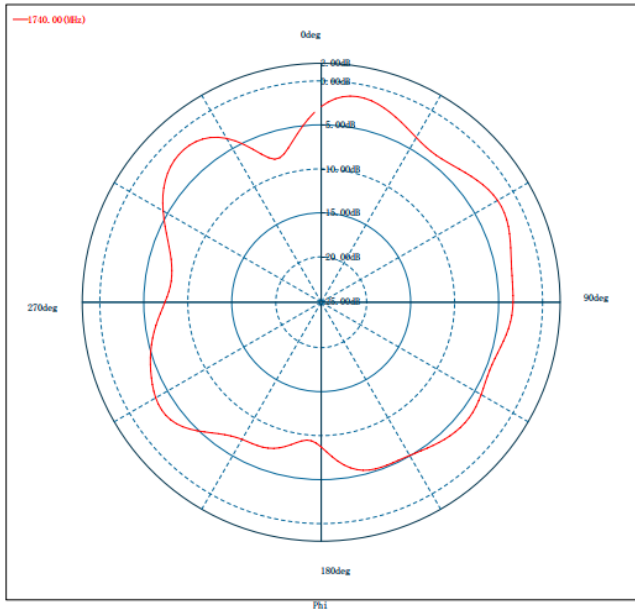
### 4.5. Radiation Patterns



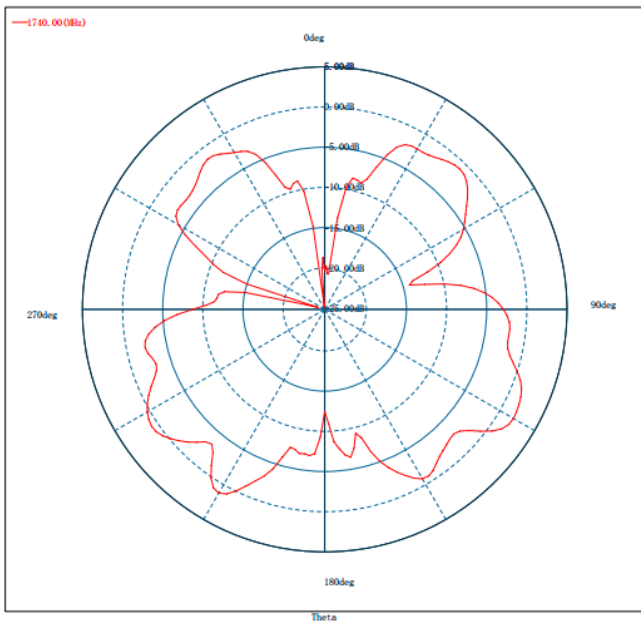




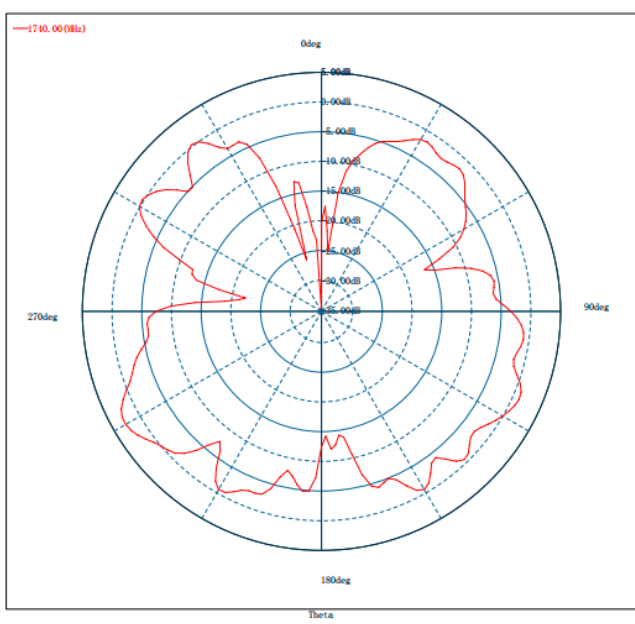
**H**

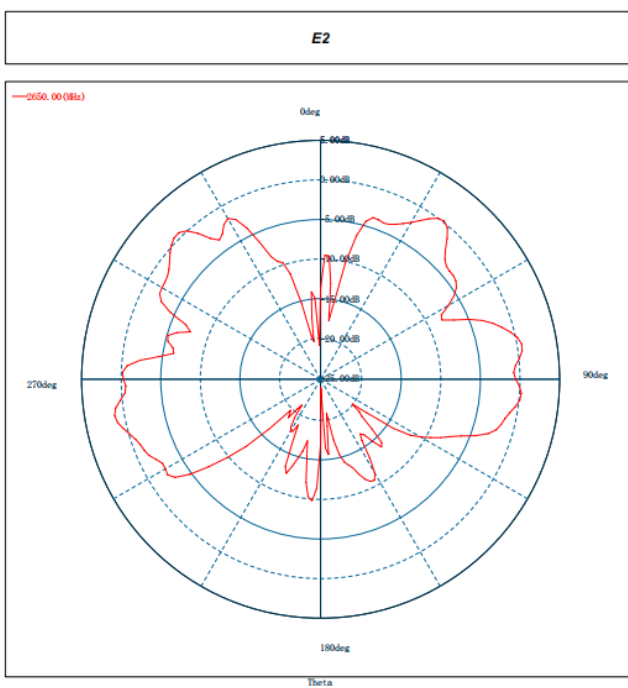
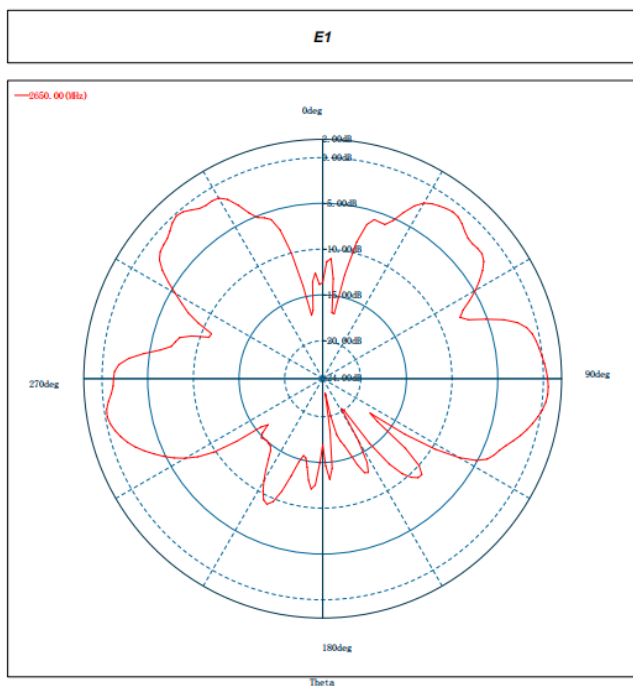
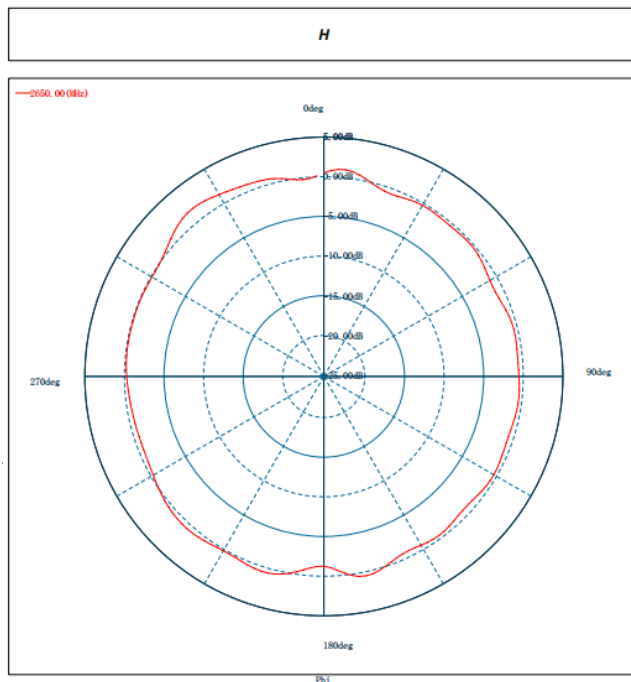
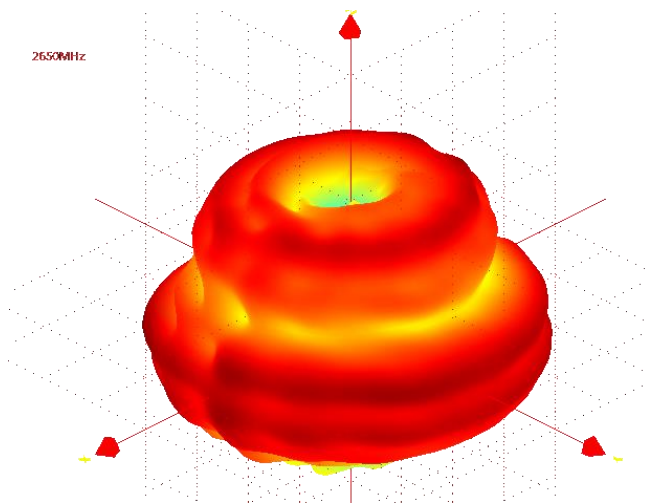


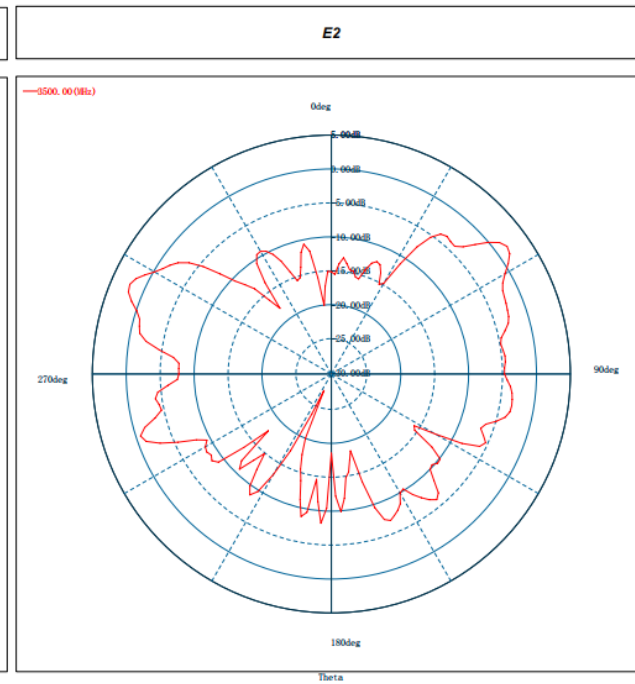
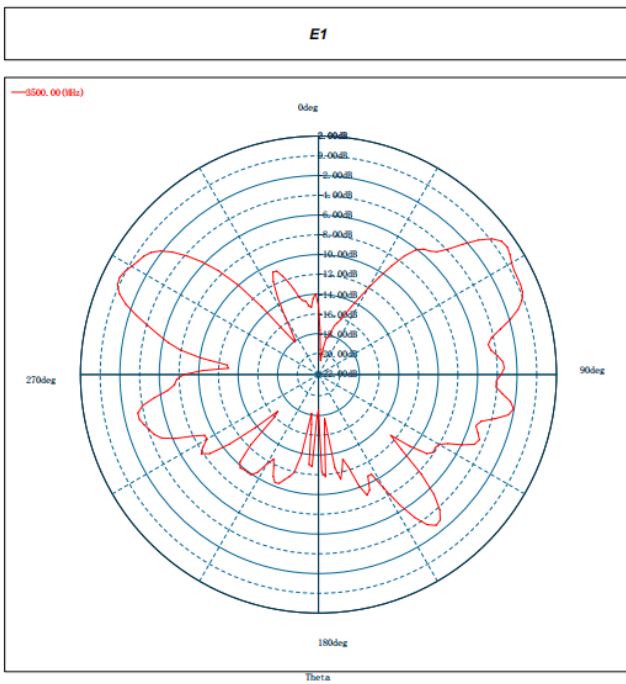
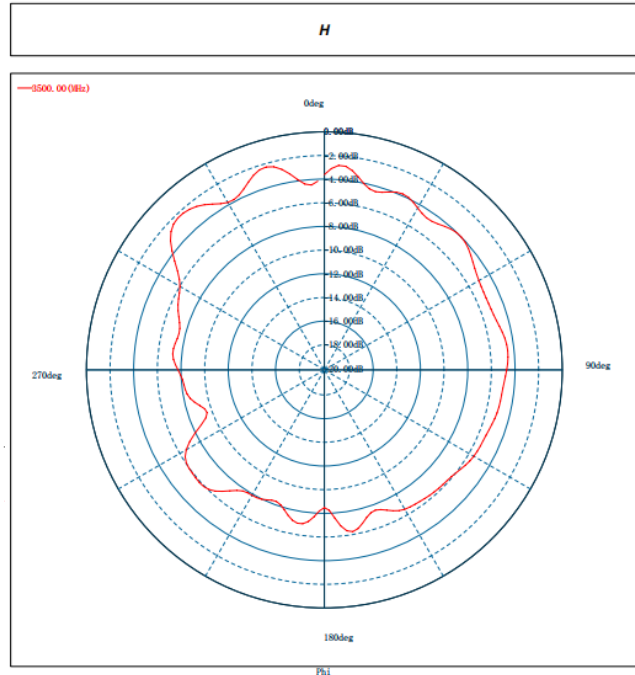
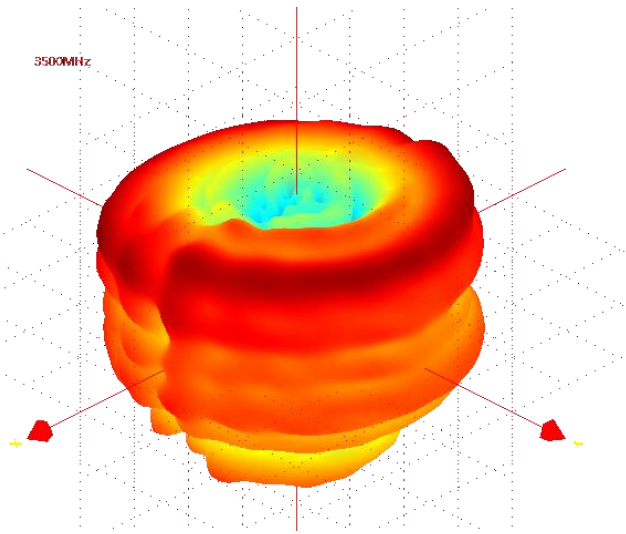
**E1**



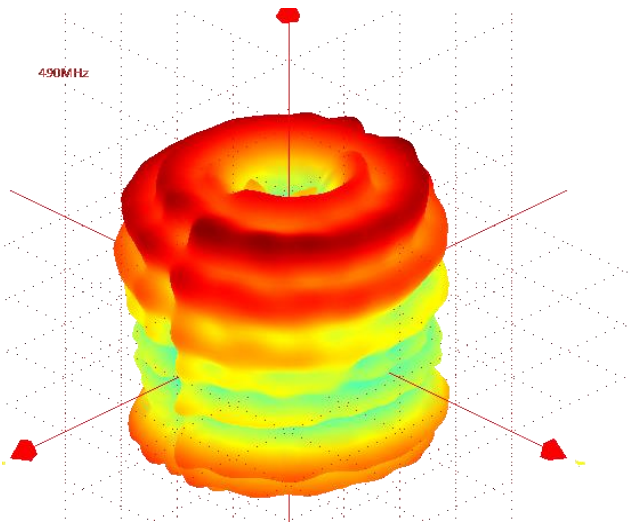
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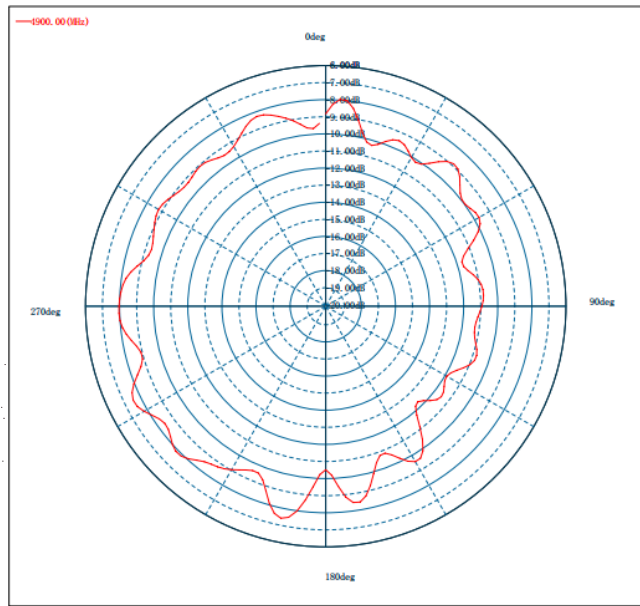




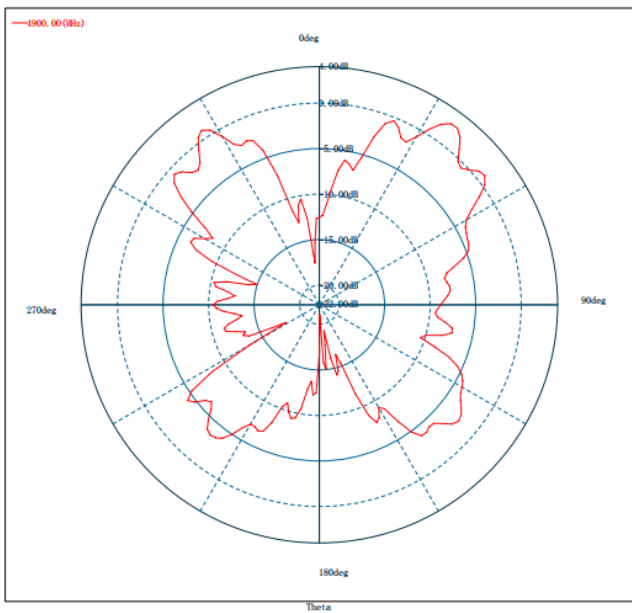




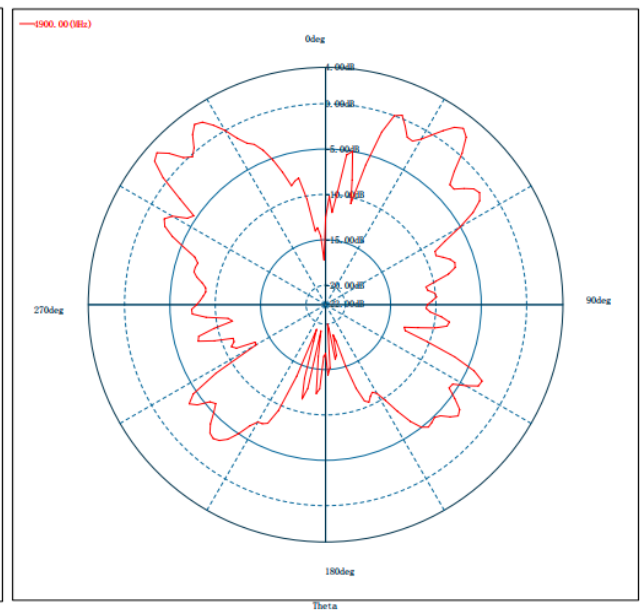
**H**



**E1**



**E2**



## 5 Product Size

