

# Antenna

# YFCA002AA Datasheet

## Antenna Services

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Status: Released



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# About the Document

## Revision History

| Version | Date       | Author    | Note                         |
|---------|------------|-----------|------------------------------|
| -       | 2021-03-22 | Kenny YIN | Creation of the document     |
| 1.0     | 2021-03-22 | Kenny YIN | First official release       |
| 1.1     | 2021-05-27 | Kenny YIN | Updated working temperature. |

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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 LTE
- High efficiency
- Excellent performance



### 3 Product Specifications

#### Passive Electrical Specifications

|                   |                 |
|-------------------|-----------------|
| Frequency Range   | 700–2690 MHz    |
| Input Impedance   | 50 $\Omega$     |
| VSWR              | $\leq 4.0$      |
| Gain              | $\leq 4.47$ dBi |
| Polarization Type | Linear          |

#### Mechanical Specifications

|                     |                                      |
|---------------------|--------------------------------------|
| Antenna Size        | 30 mm $\times$ 20 mm                 |
| Casing              | FPC                                  |
| Connector Type      | RF I Generation                      |
| Working Temperature | -40 $^{\circ}$ C to +85 $^{\circ}$ C |
| Radome Color        | Black                                |

## 4 Overall Performance

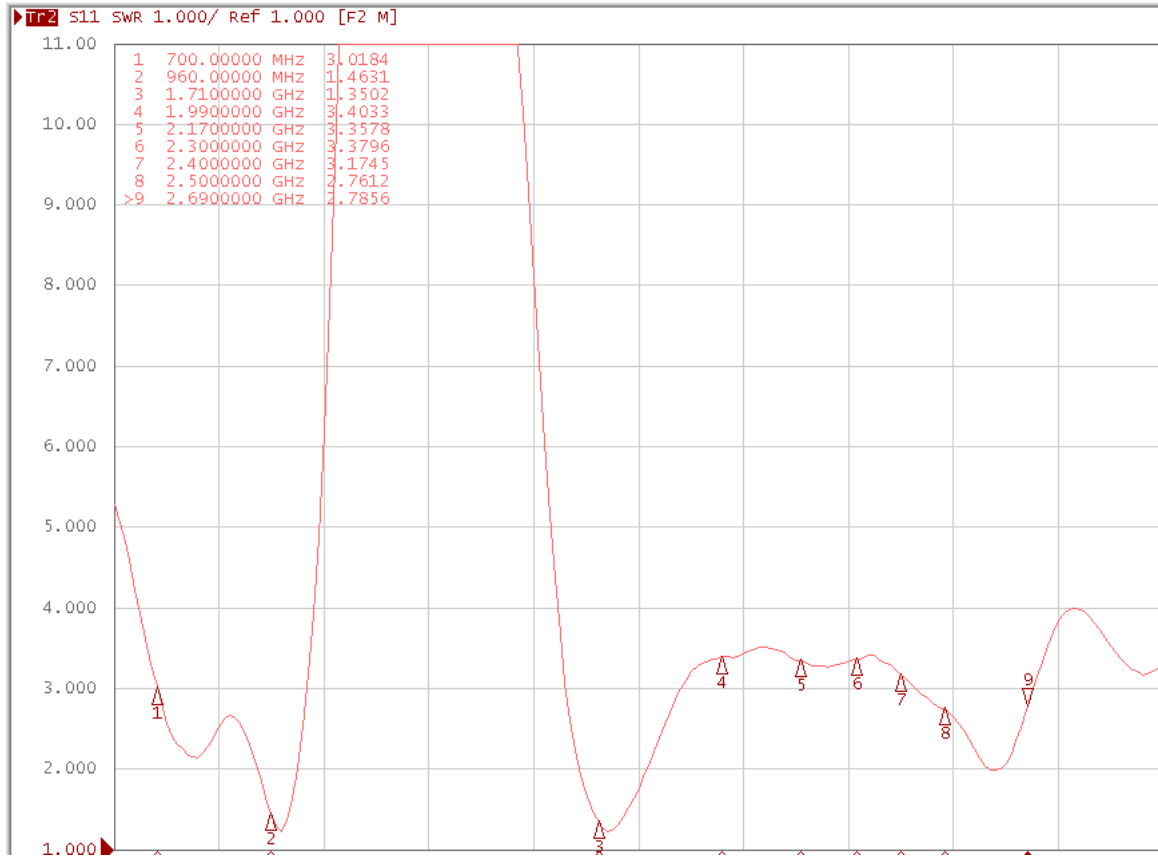
### 4.1. Test Environment

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



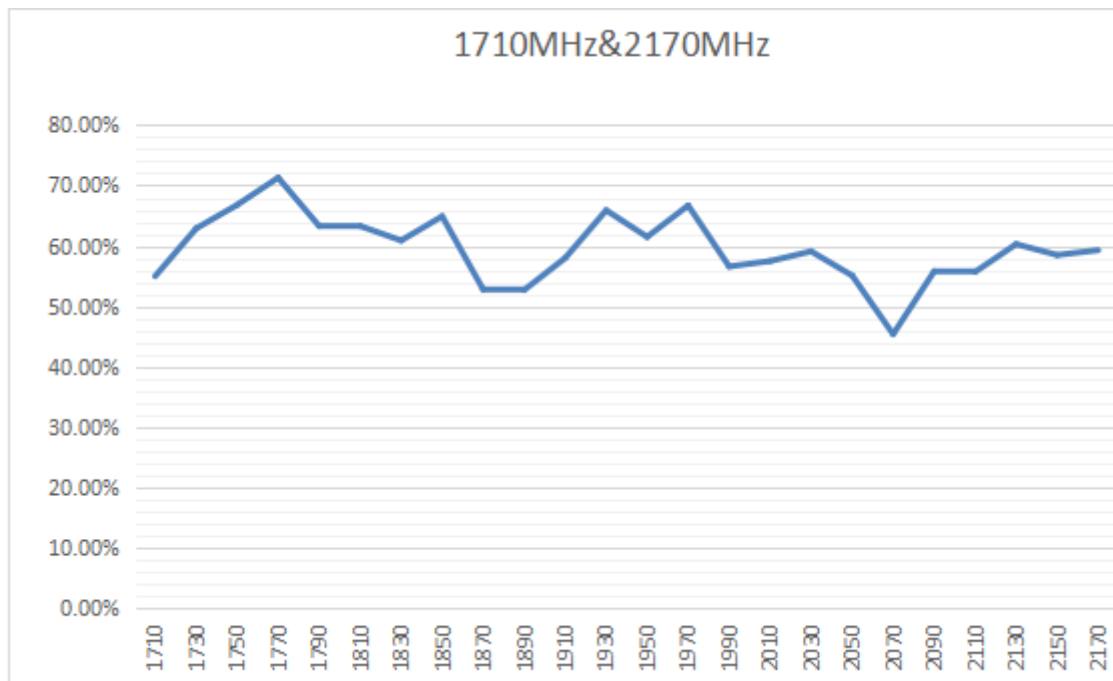
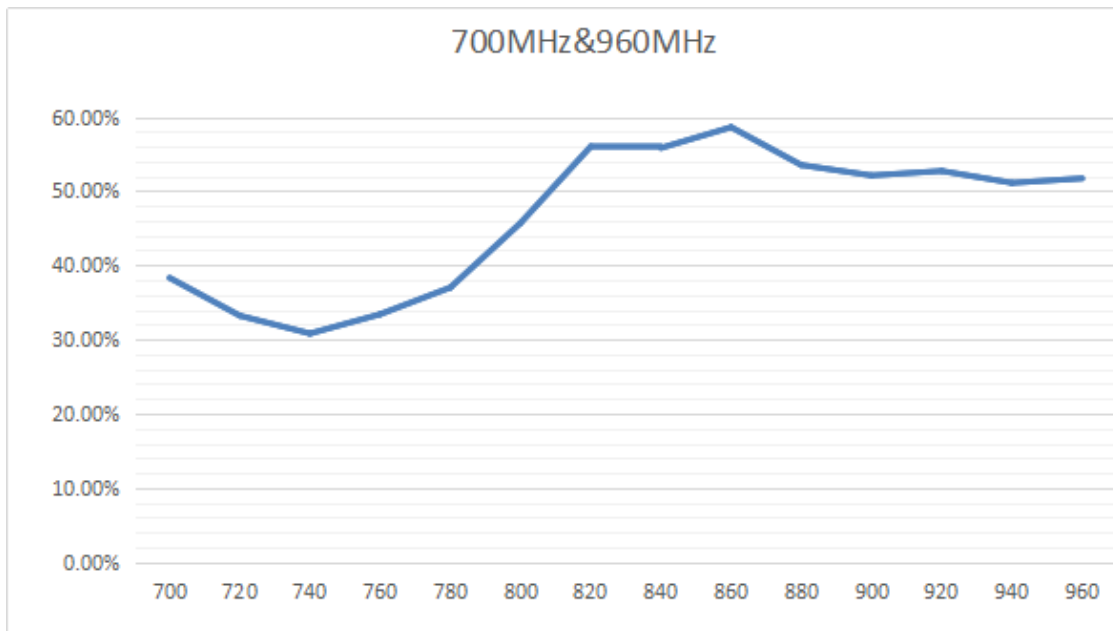


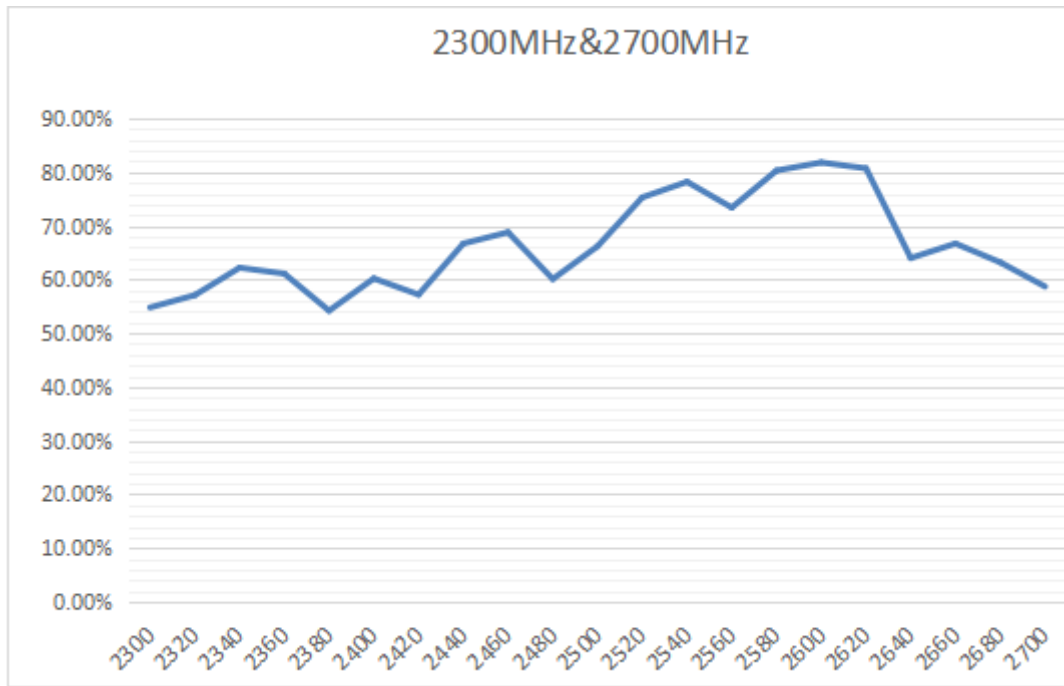
### 4.2. VSWR



|                        |      |      |      |      |      |      |      |      |      |
|------------------------|------|------|------|------|------|------|------|------|------|
| <b>Frequency (MHz)</b> | 700  | 960  | 1710 | 1990 | 2170 | 2300 | 2400 | 2500 | 2690 |
| <b>VSWR</b>            | 3.02 | 1.46 | 1.35 | 3.40 | 3.36 | 3.38 | 3.17 | 2.76 | 2.78 |

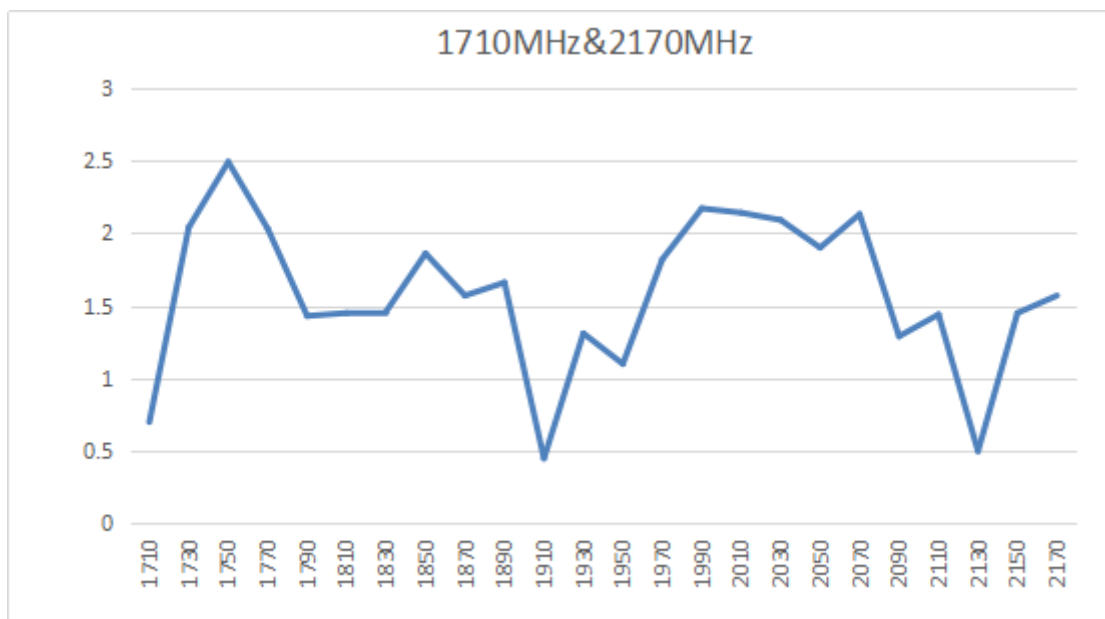
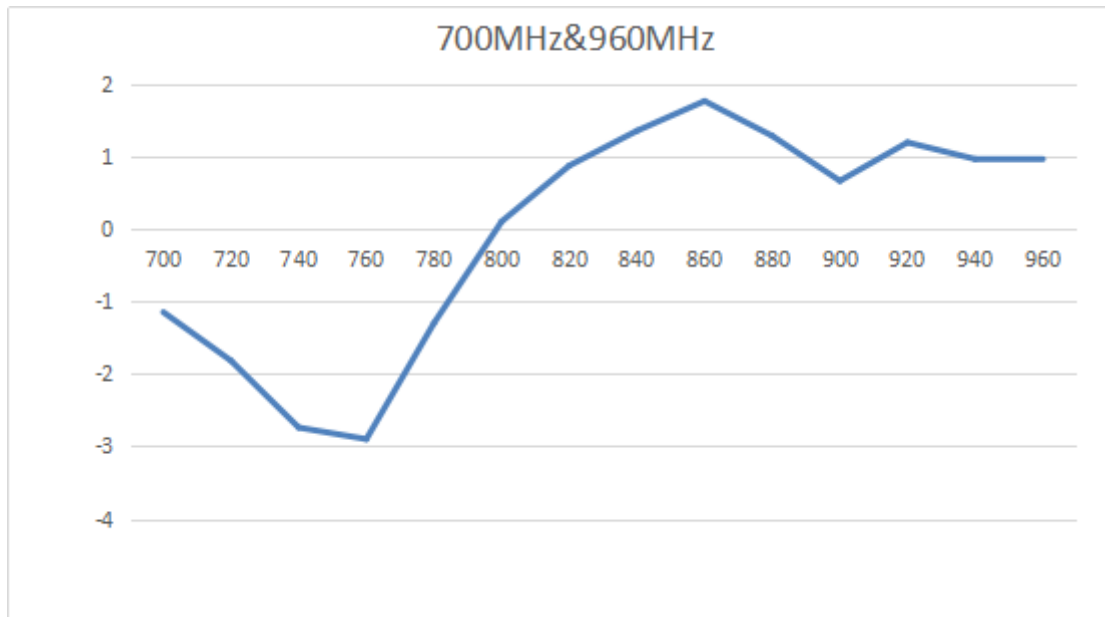
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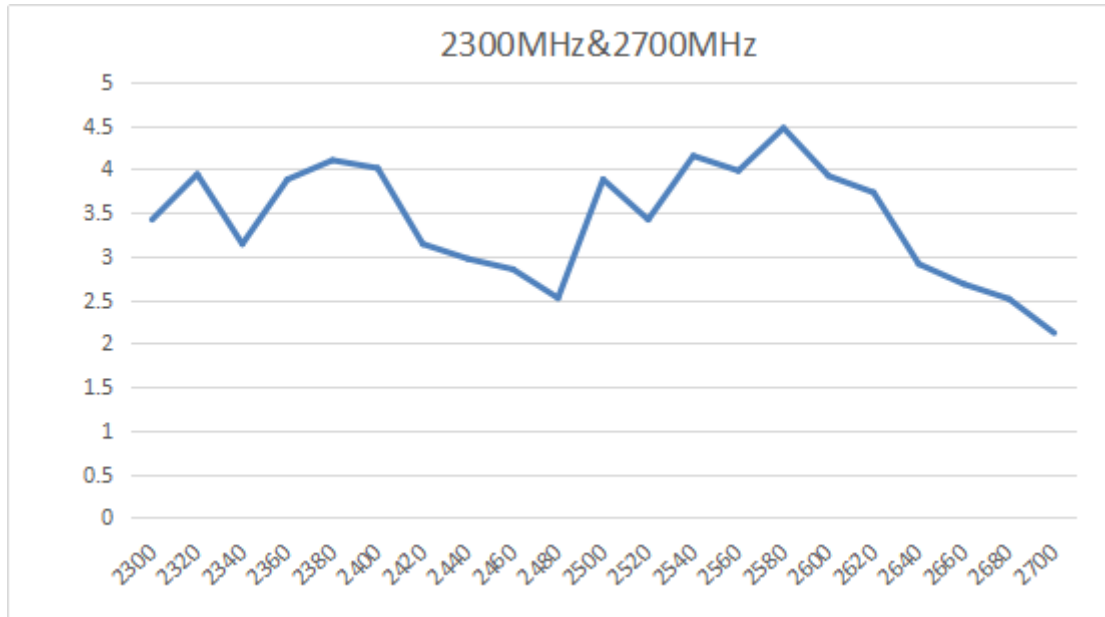




|                        |      |      |      |      |      |      |      |      |      |
|------------------------|------|------|------|------|------|------|------|------|------|
| <b>Frequency (MHz)</b> | 700  | 960  | 1710 | 1990 | 2170 | 2300 | 2400 | 2500 | 2680 |
| <b>Efficiency (%)</b>  | 38.3 | 51.7 | 55   | 56.6 | 59.3 | 54.8 | 60.2 | 66.2 | 63.2 |

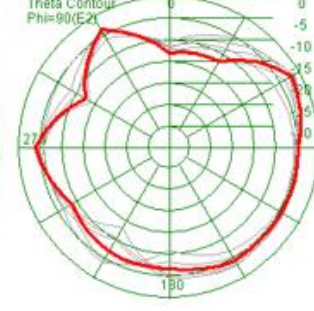
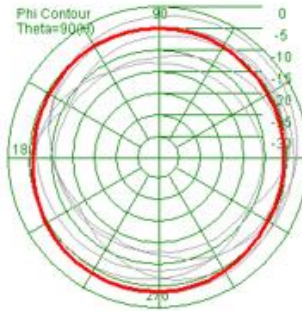
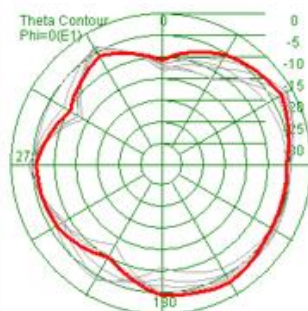
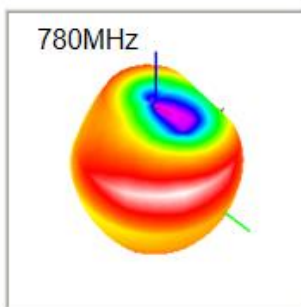
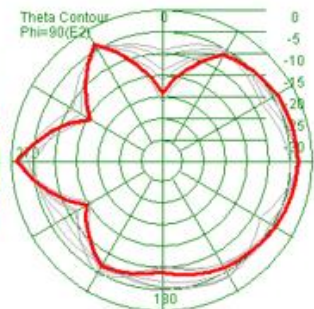
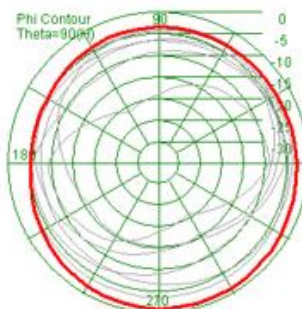
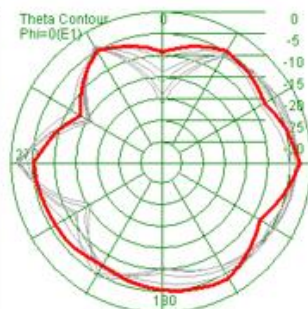
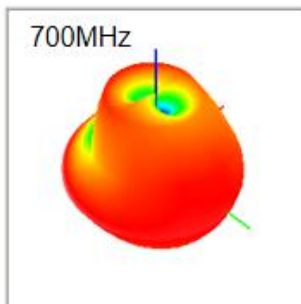
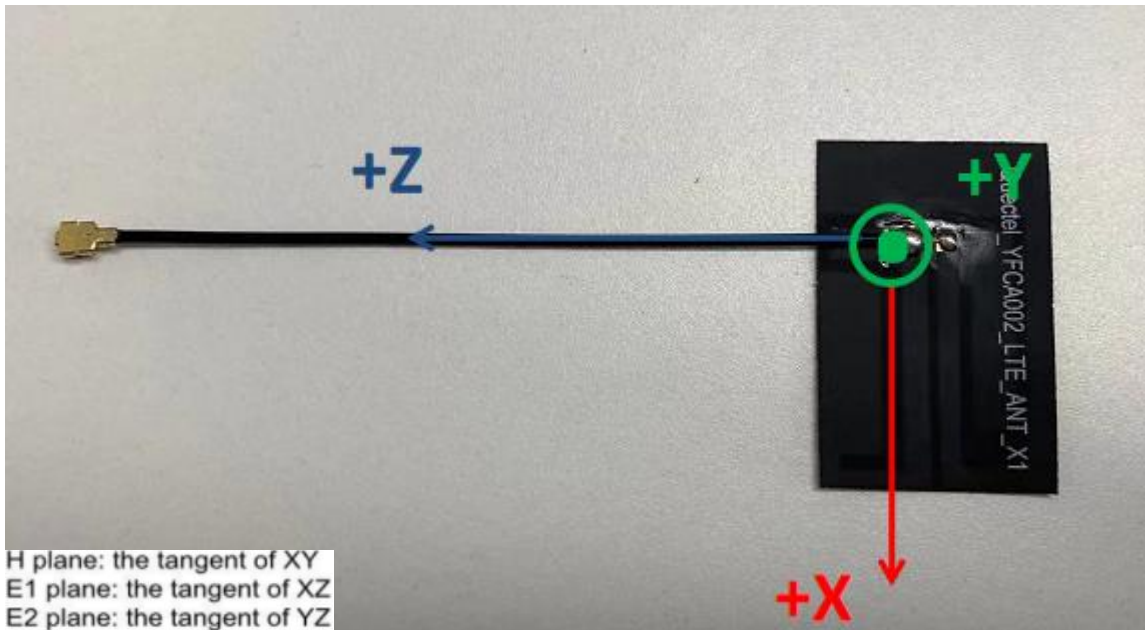
### 4.4. Gain

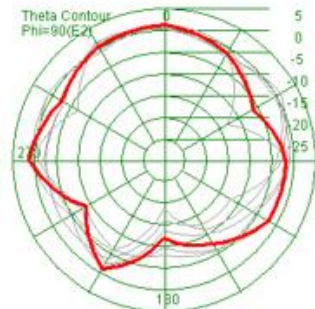
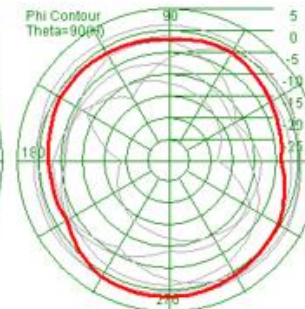
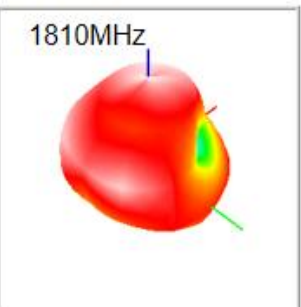
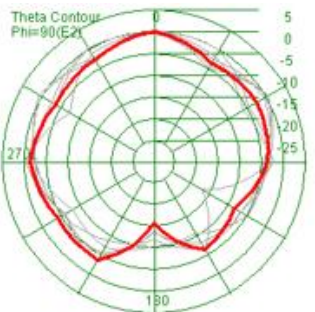
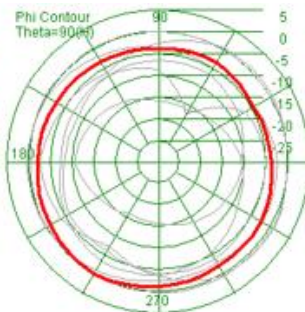
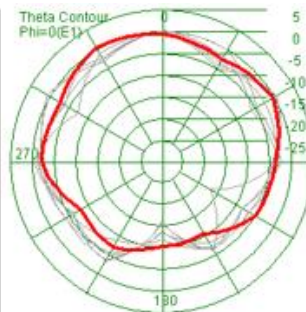
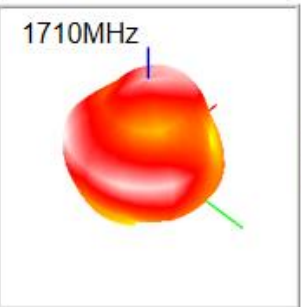
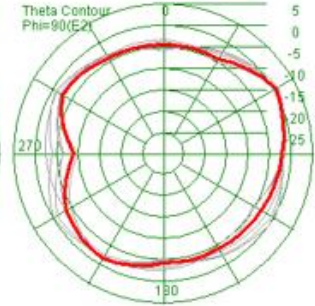
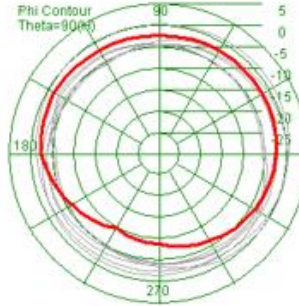
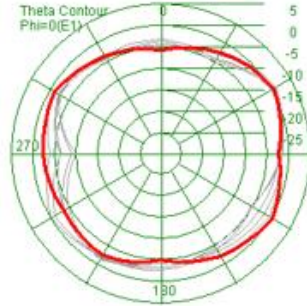
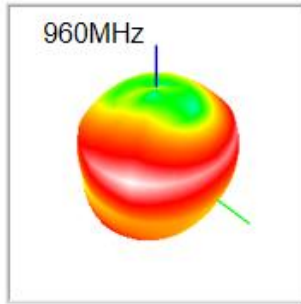
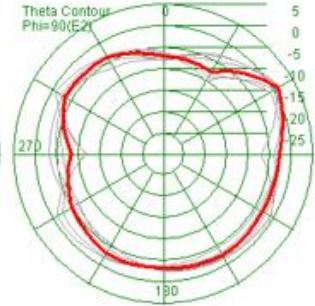
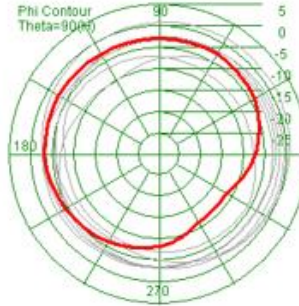
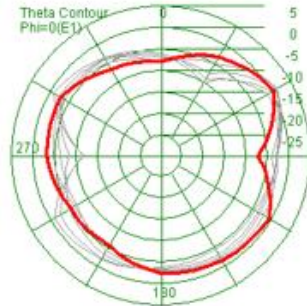
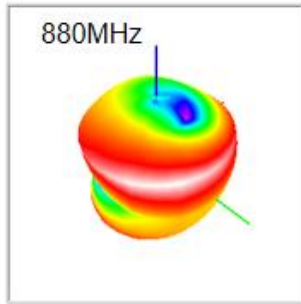


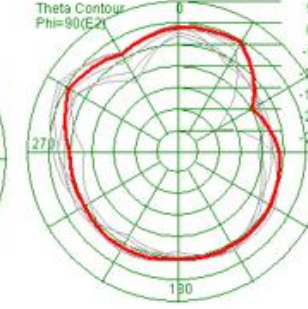
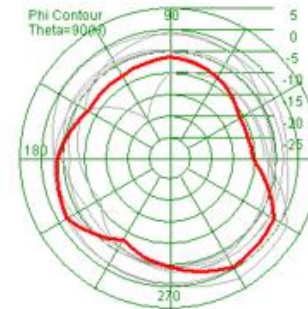
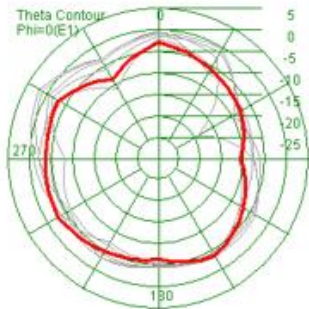
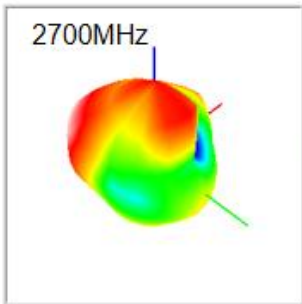
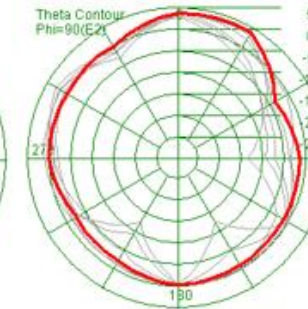
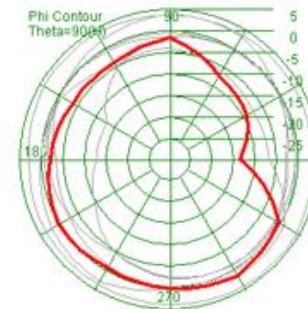
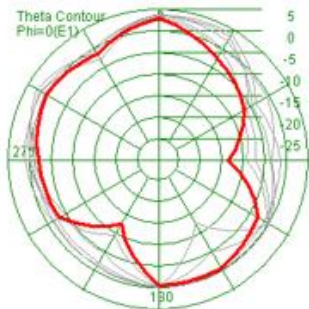
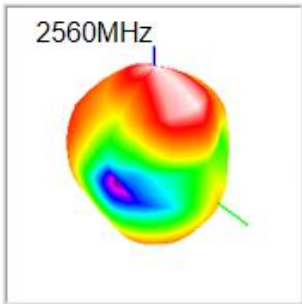
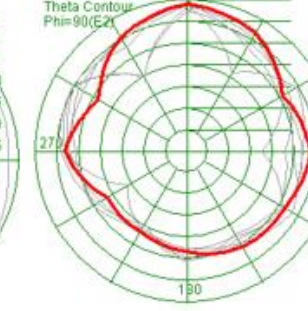
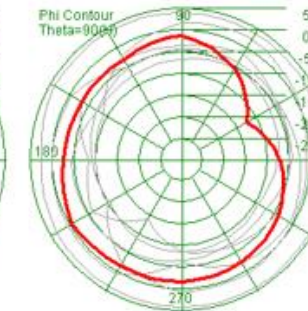
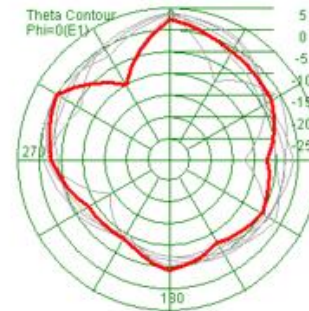
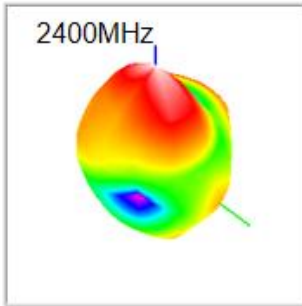
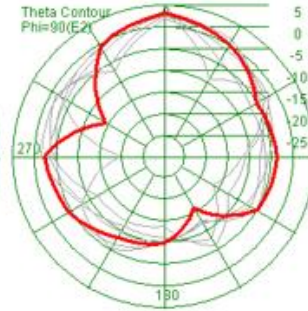
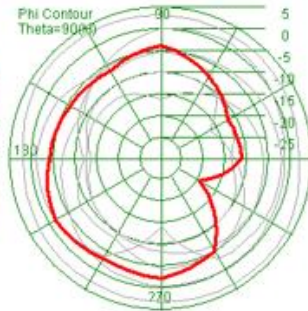
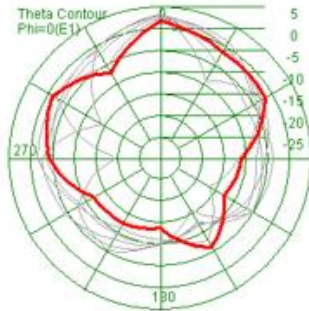
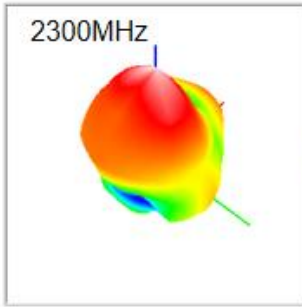


|                        |       |      |      |      |      |      |      |      |      |
|------------------------|-------|------|------|------|------|------|------|------|------|
| <b>Frequency (MHz)</b> | 700   | 960  | 1710 | 1990 | 2170 | 2300 | 2400 | 2500 | 2680 |
| <b>Gain (dBi)</b>      | -1.15 | 0.97 | 0.7  | 2.17 | 1.57 | 3.42 | 4.01 | 3.88 | 2.51 |

### 4.5. Radiation Patterns









### 5 Product Size

ROHS

