

# Antenna

# **YF0002AA** Datasheet

## Antenna Services

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# About the Document

## Revision History

Version	Date	Author	Note
1.0	2020-06-08	Kenny YIN	First official release
1.1	2020-12-16	Kenny YIN	Updated the antenna image in Chapter 2.
1.2	2021-02-20	Kenny YIN	Changed 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 MAIN
- High efficiency
- Excellent performance



### 3 Product Specifications

#### Electrical Specifications

Frequency Range (MHz)	700–960 MHz, 1710–2700 MHz, 3300–5000 MHz
Input Impedance	50 $\Omega$
VSWR	$\leq 5.0$
Gain	$\leq 3$ dBi
Polarization Type	Linear

#### Mechanical Specifications

Antenna Size	60.1 mm $\times$ 12.25 mm $\times$ 10.1 mm
Casing	ABS
Radiator	Cuprum
Working Temperature	-40 $^{\circ}$ C to +75 $^{\circ}$ C
Radome Color	Black

## 4 Overall Performance

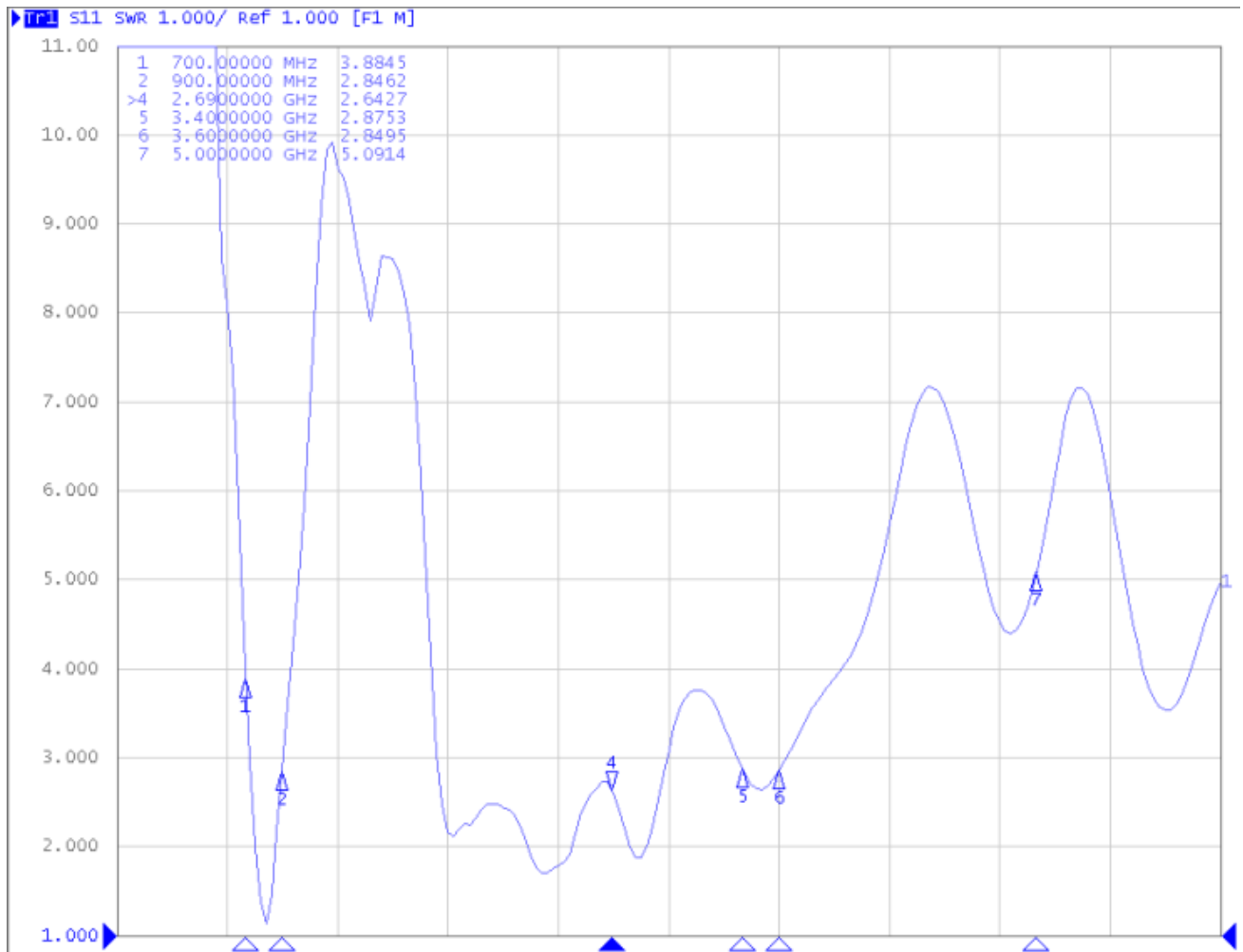
### 4.1. Test Environment

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

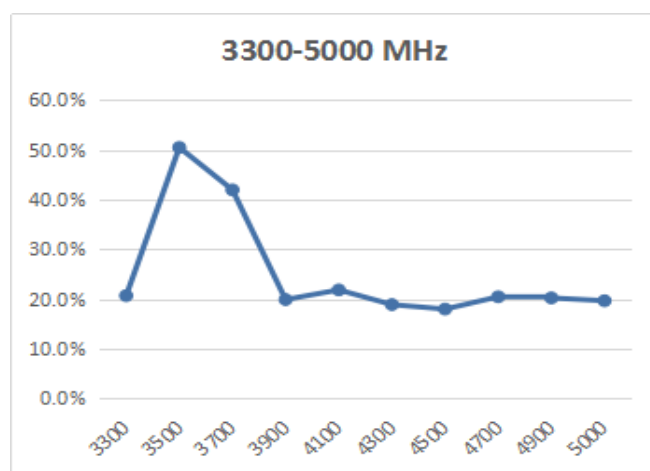
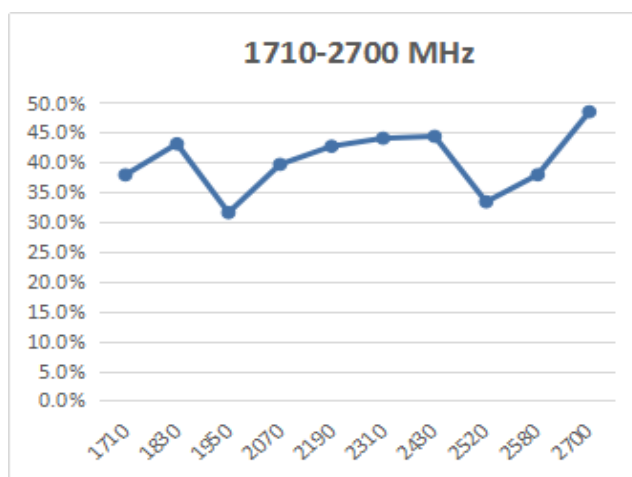
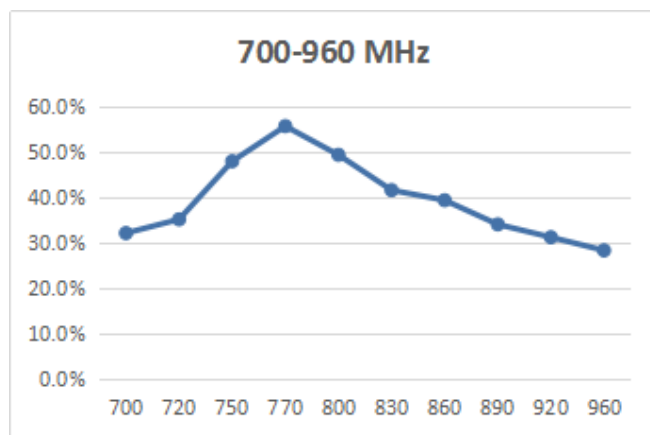




## 4.2. VSWR

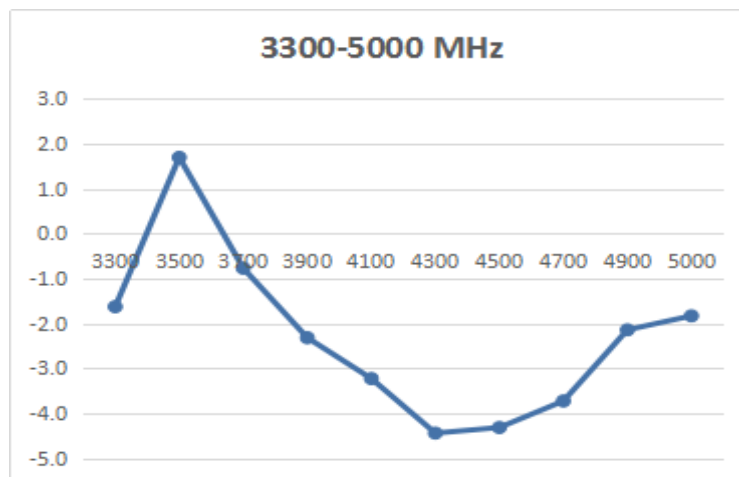
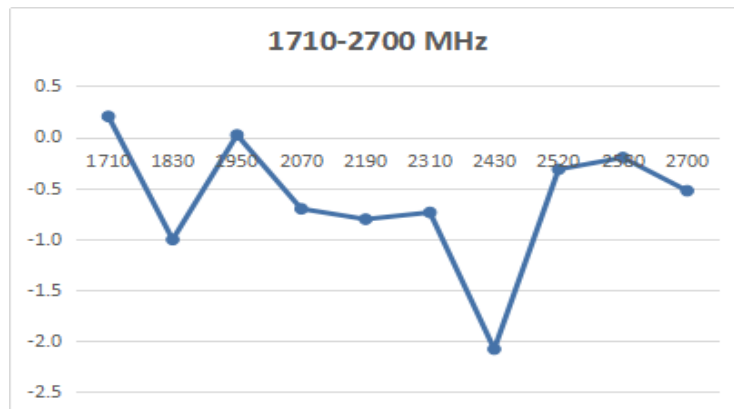
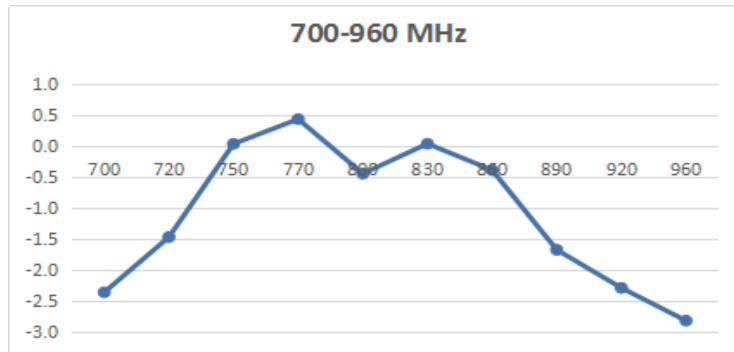


### 4.3. Efficiency



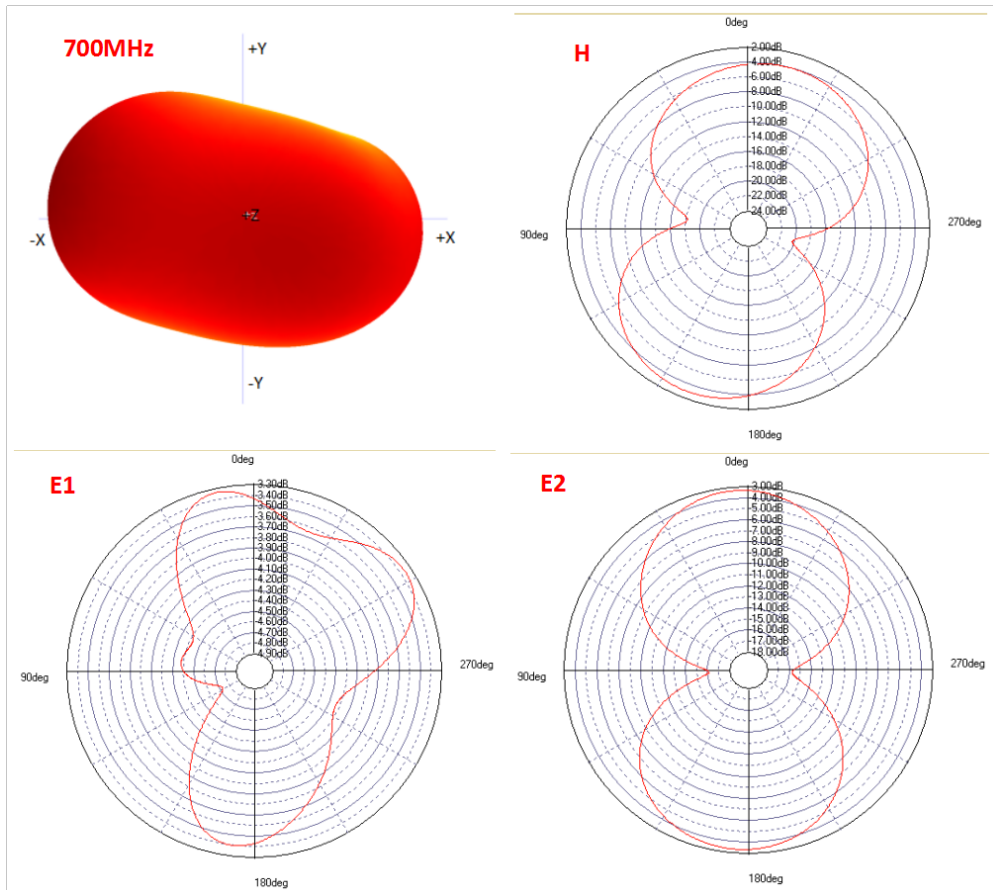
Frequency (MHz)	700	830	960	1710	2190	2700	3300	4100	5000
Efficiency (%)	32.3	41.7	28.4	37.9	42.7	48.5	20.7	21.9	19.7

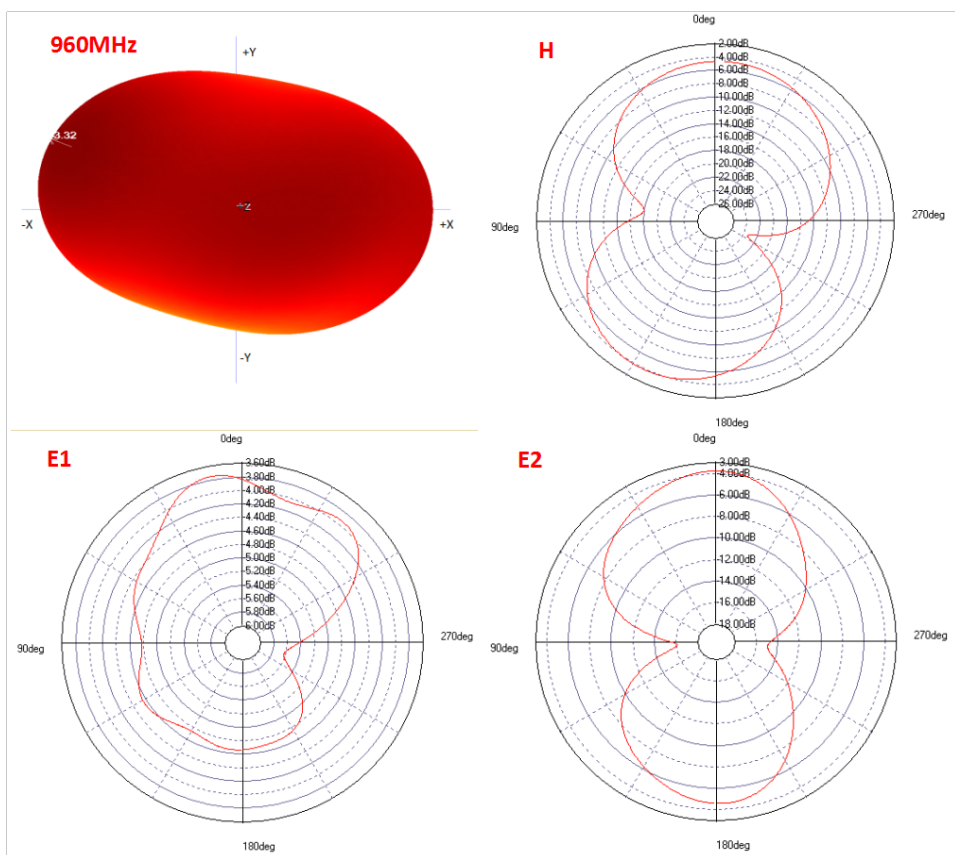
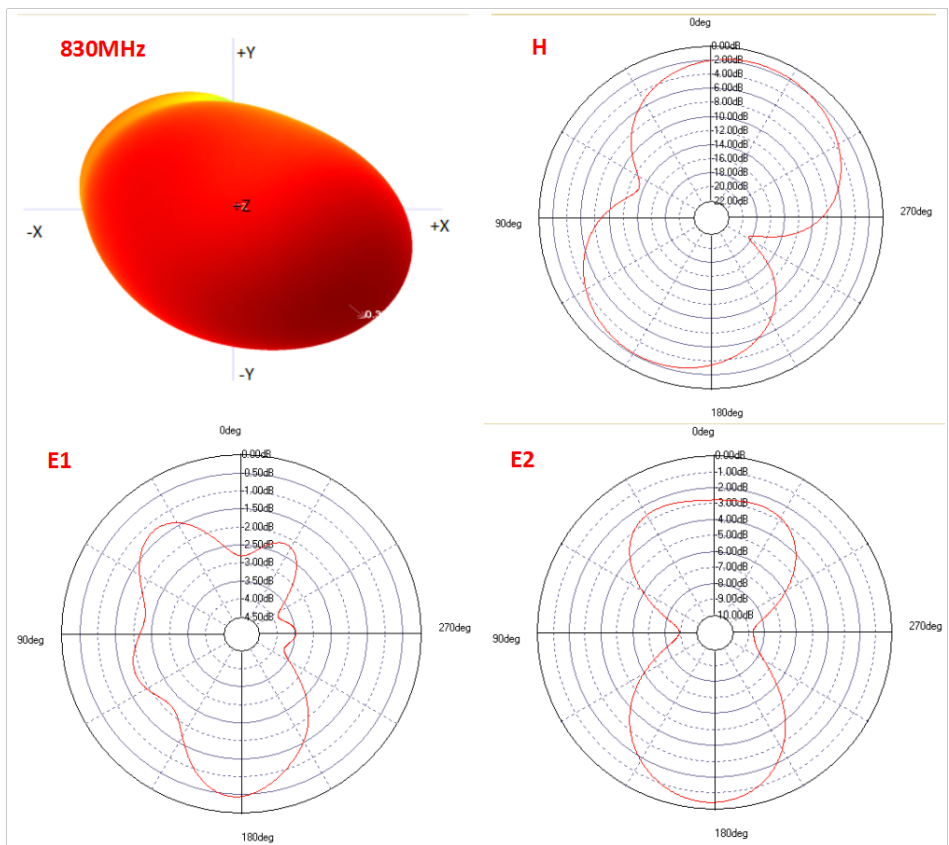
#### 4.4. Gain

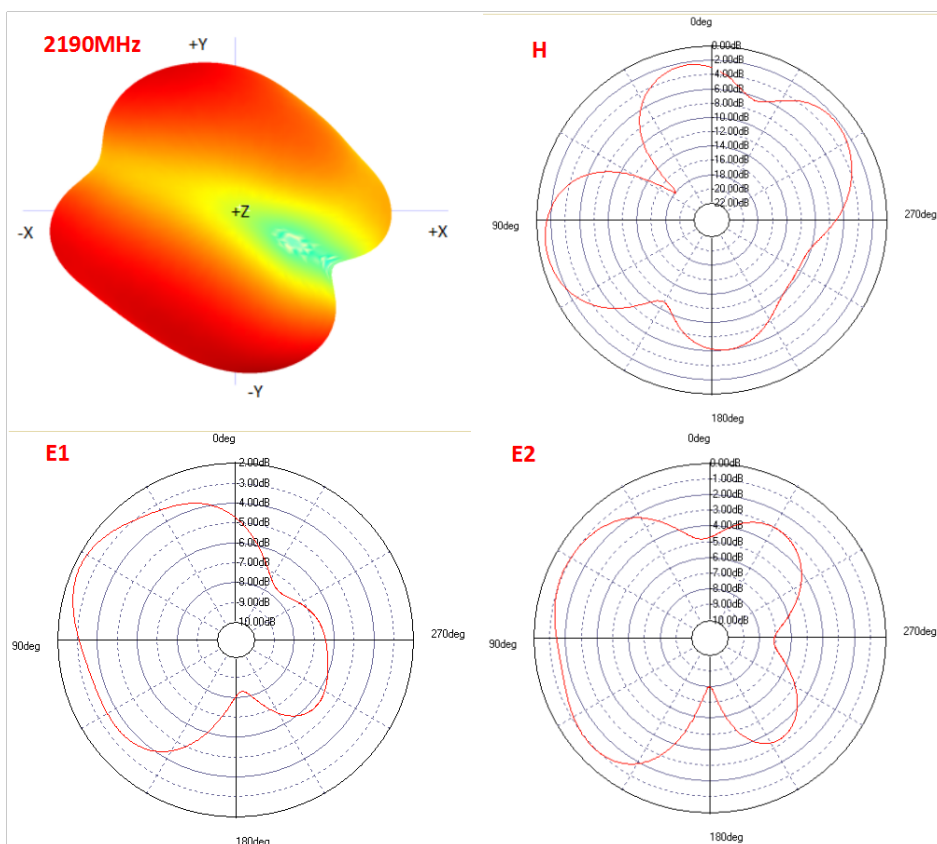
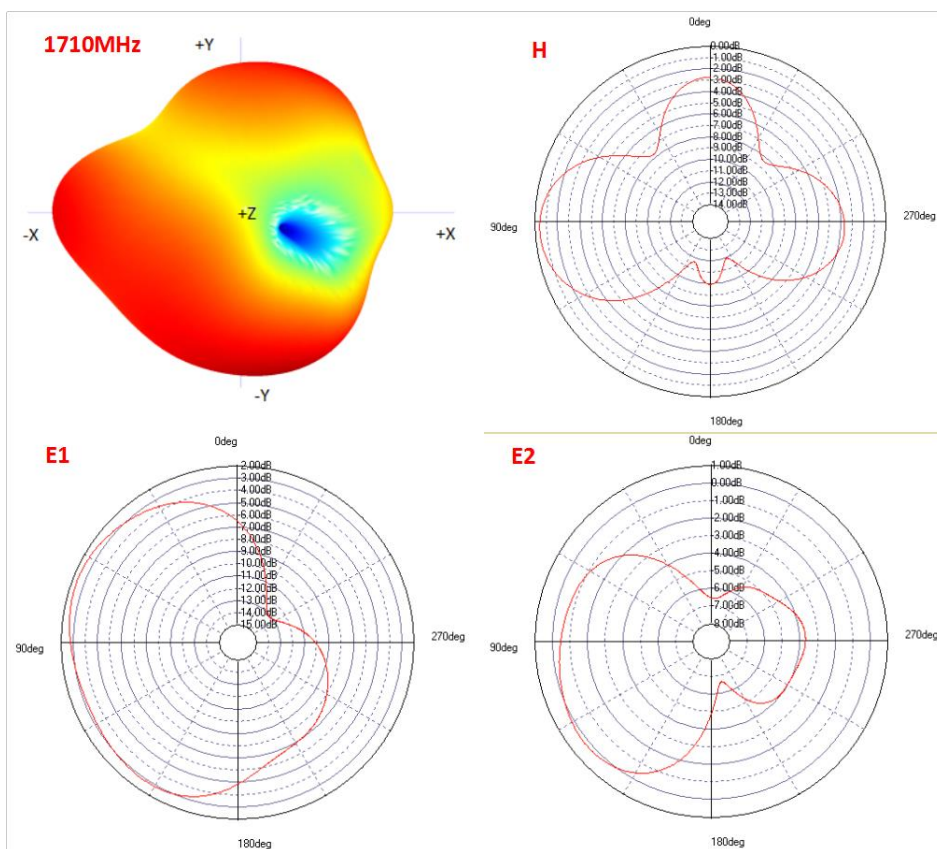


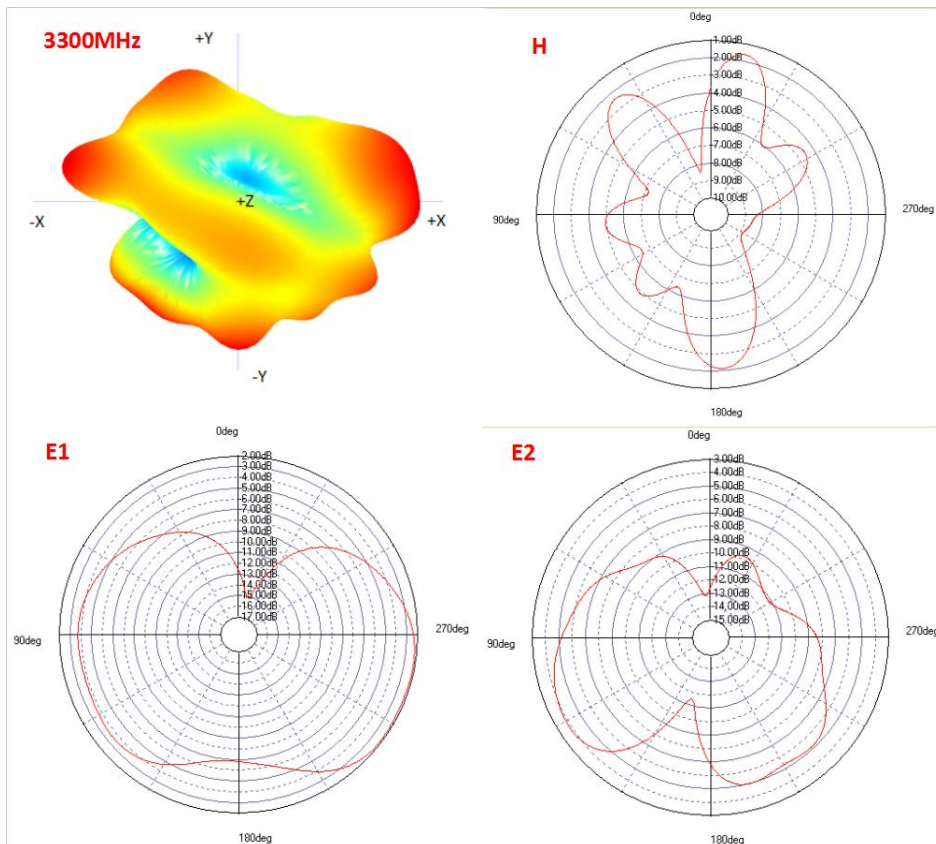
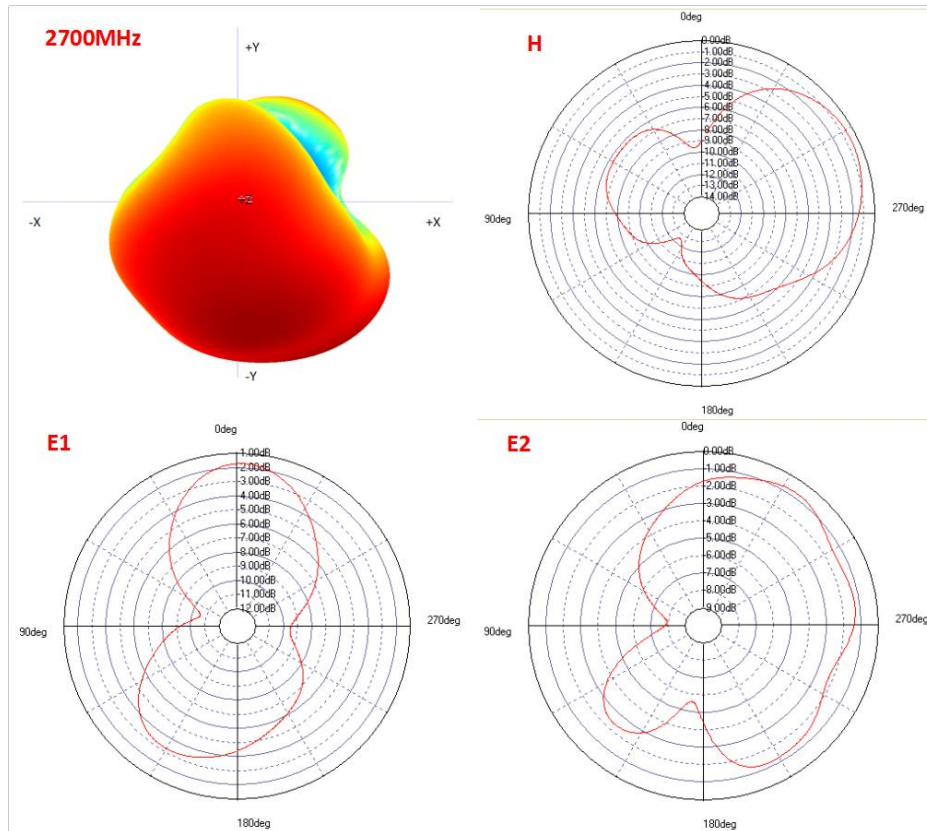
Frequency (MHz)	700	830	960	1710	2190	2700	3300	4100	5000
Gain (dB)	-2.4	0.0	-2.8	0.2	-0.8	-0.5	-1.6	-3.2	-1.8

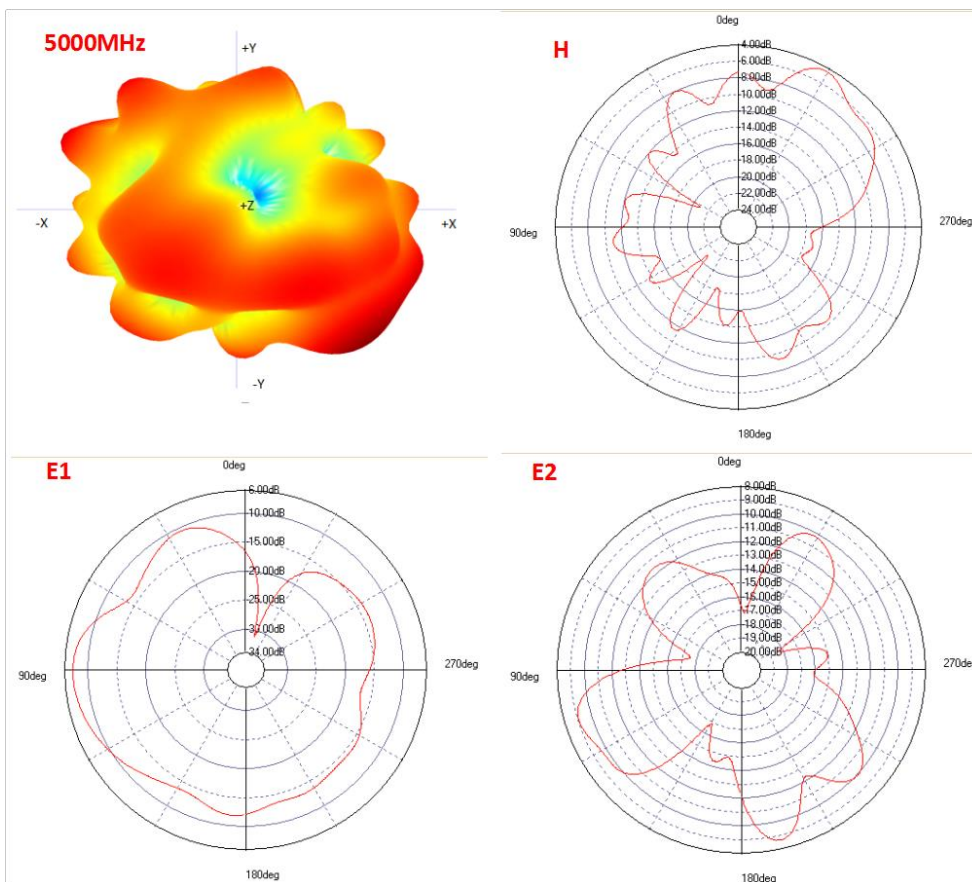
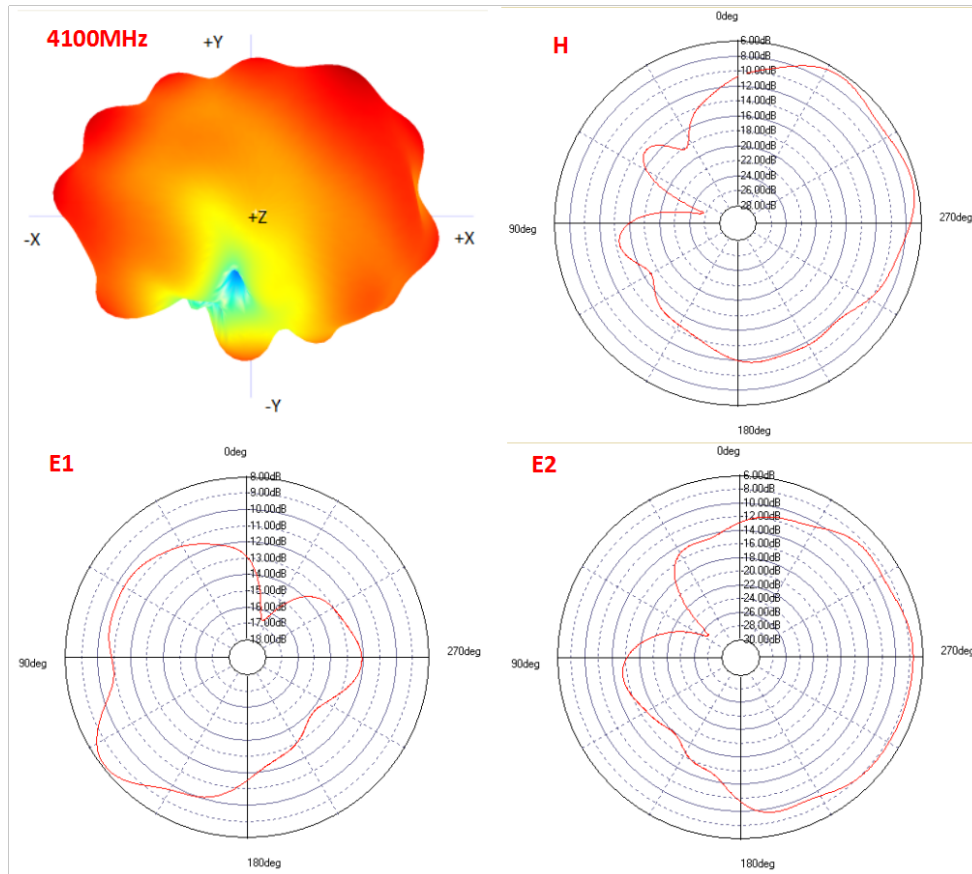
### 4.5. Radiation Patterns













## 4.6. OTA

Band	Channel	TRP (dBm)	TIS (dBm)	Band	Fre	TRP (dBm)	TIS (dBm)
	18050	20.1			23780	17.46	
LTE 1	18300	20.71		LTE 17	23790	18.12	
	18550	20.27	-98.58		23800	17.33	-87.37
	19250	19.66			24200	20.74	
L;TE 3	19575	20.18		LTE 20	24300	20.62	
	19900	19.39	-97.48		24400	19.82	-88.41
	20450	20.76			37850	20.16	
LTE 5	20525	19.65		LTE 38	37800	19.75	
	20600	18.49	-88.26		38150	19.24	-93.12
	20800	21			38350	19.56	
LTE 7	21100	20.74		LTE 39	38450	19.26	
	21400	20.02	-96.03		38550	19.38	-95
		17.91			38750	20.05	
LTE 8	21500	17.44		LTE 40	39150	20.23	
	21625	17.24	-88.99		38550	18.59	-94.15
	21750						
					40240	20.07	
				LTE 41	40640	20.64	
					41140	19.97	-92.83

## 5 Product Size

