

Antenna

YE0037AA Datasheet

Antenna Services

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About the Document

Revision History

Version	Date	Author	Note
1.0	2020-11-05	Kenny YIN	Initial
1.1	2020-12-16	Kenny YIN	Updated the antenna image in Chapter 2.
1.2	2021-07-01	Kenny YIN	Added mounting type in Chapter 3 and added test condition in Chapter 4.5.
1.3	2021-11-30	Kenny YIN	Updated the product description in Chapter 1.

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1 Product Description

This Quectel external 5G antenna covers 5G NR Sub-6 GHz frequency bands and is compatible with 4G/3G/2G/LPWA bands. Featuring high efficiency and gain, it is an ideal omni-directional antenna solution to ensure high-speed data transmission, which can be widely used in a diversity of wireless communication devices such as AP, routers, outdoor equipment, real-time monitoring equipment, and many more. The antenna is designed to work with any ground plane size or in free space for ease of integration. Quectel also offers flexible installation with custom cable length and connector options.

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
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	700–5000 MHz
Input Impedance	50
VSWR	≤ 2.5
Gain	≤ 2 dBi
Polarization Type	Linear

Mechanical Specifications

Antenna Size	88 mm × Ø 30 mm LMR100 Cable Length = 1000 mm
Casing	ABS
Connector Type	SMA Male (Center Pin)
Working Temperature	-40 °C to +85 °C
Radome Color	Black
IP Rating	IP67
Mounting Type	Magnet

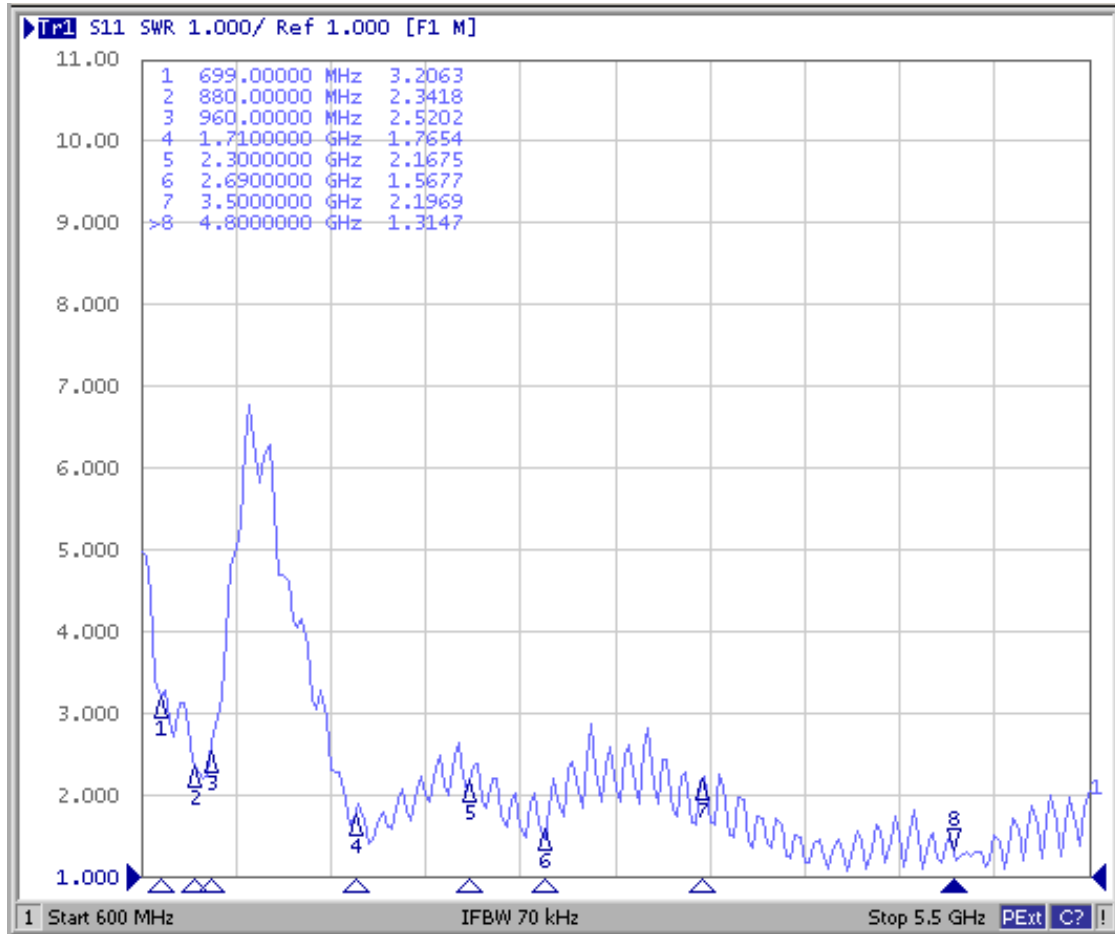
4 Overall Performance

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

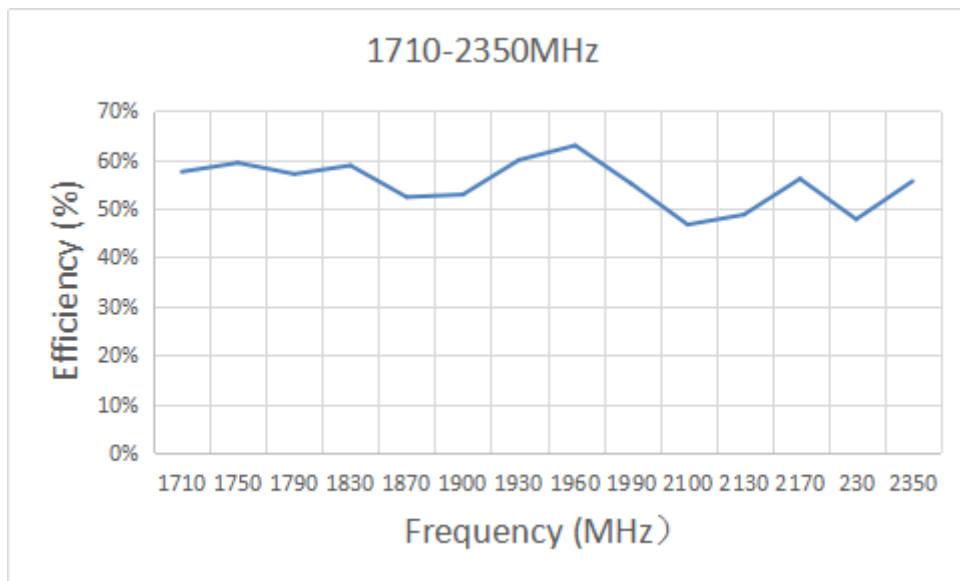
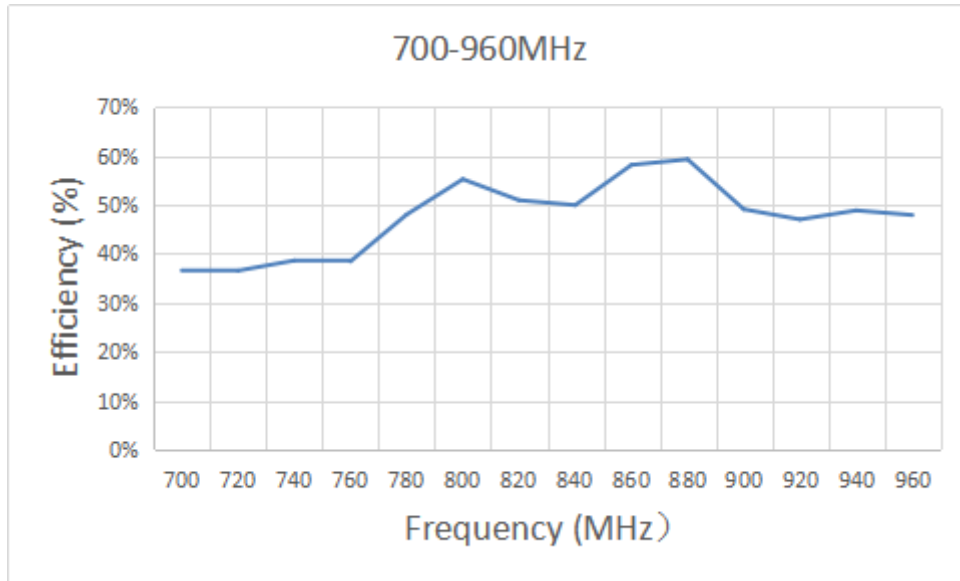


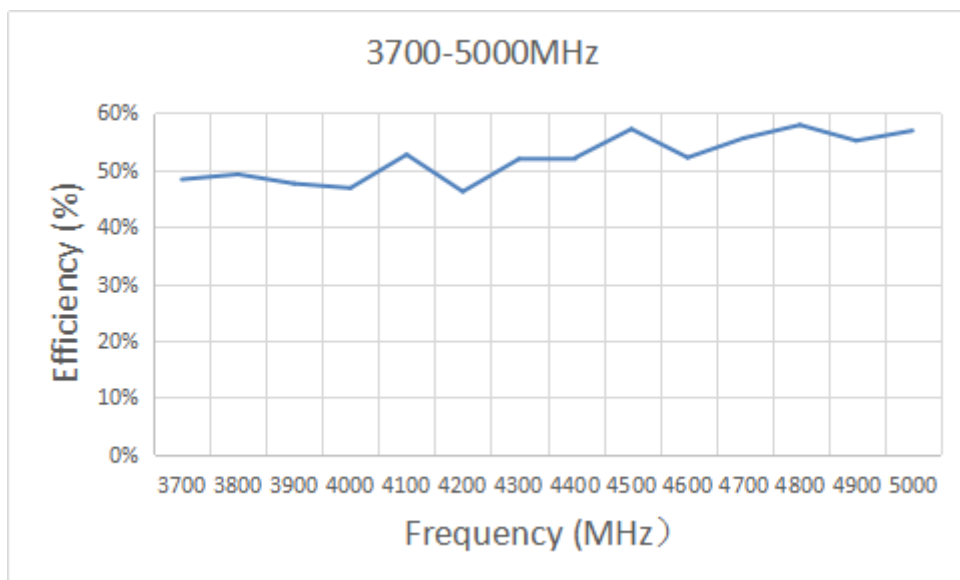
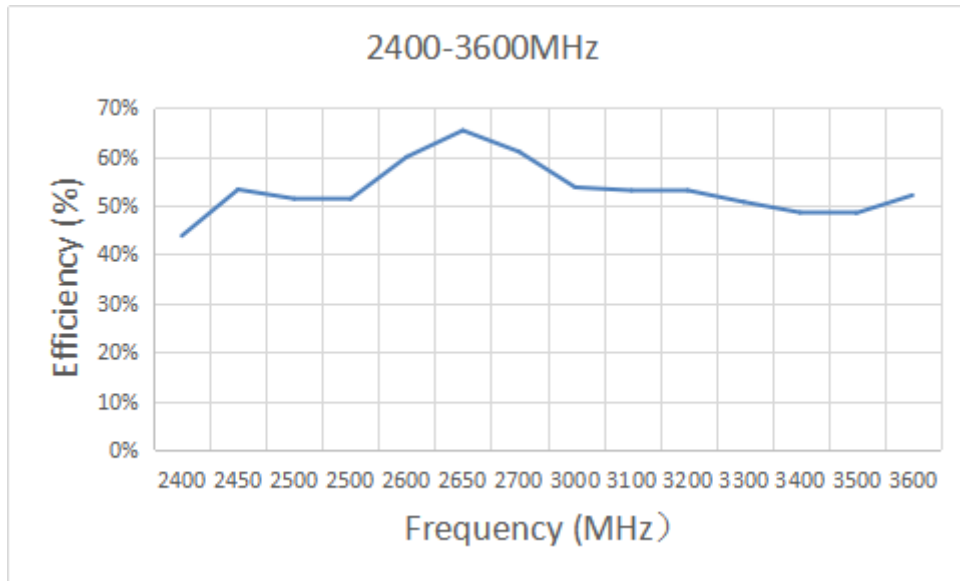
4.2. VSWR



Frequency (MHz)	699	880	960	1710	2300	2690	3500	4800
VSWR	3.2	2.3	2.5	1.7	2.1	1.5	2.1	1.3

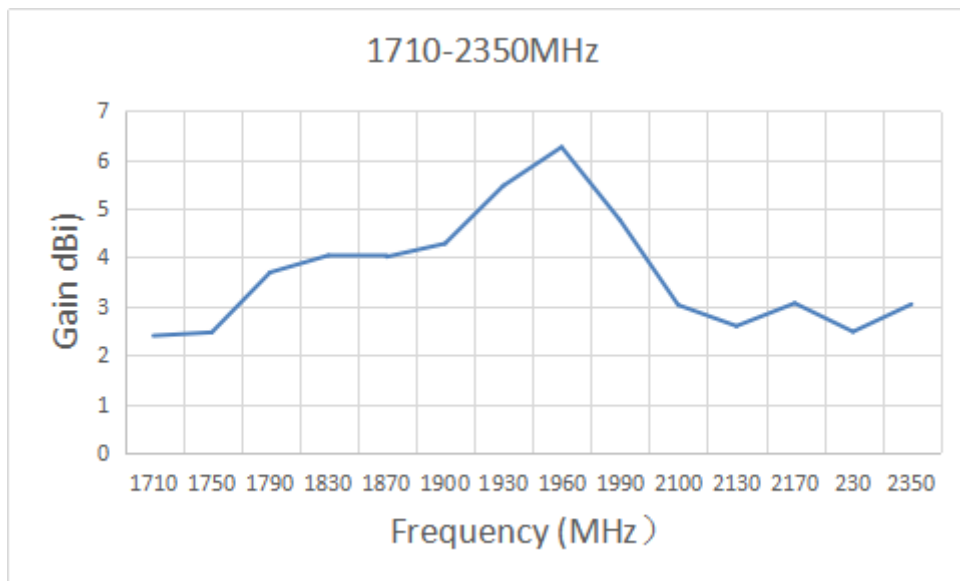
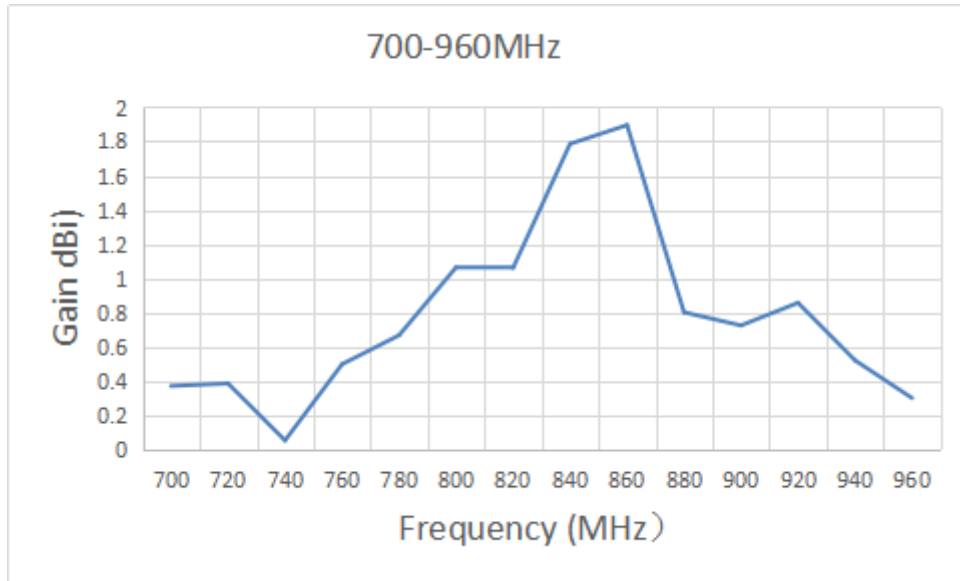
4.3. Efficiency

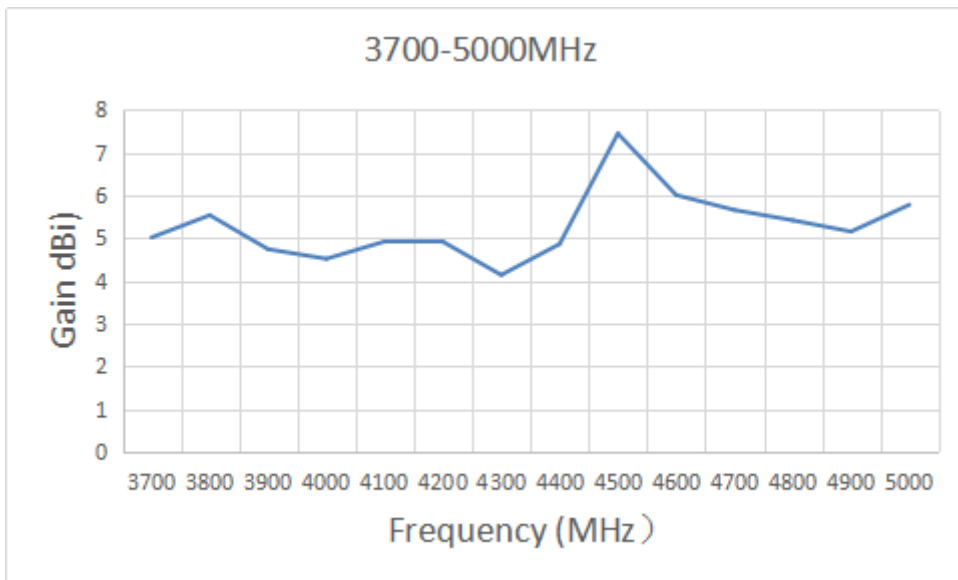
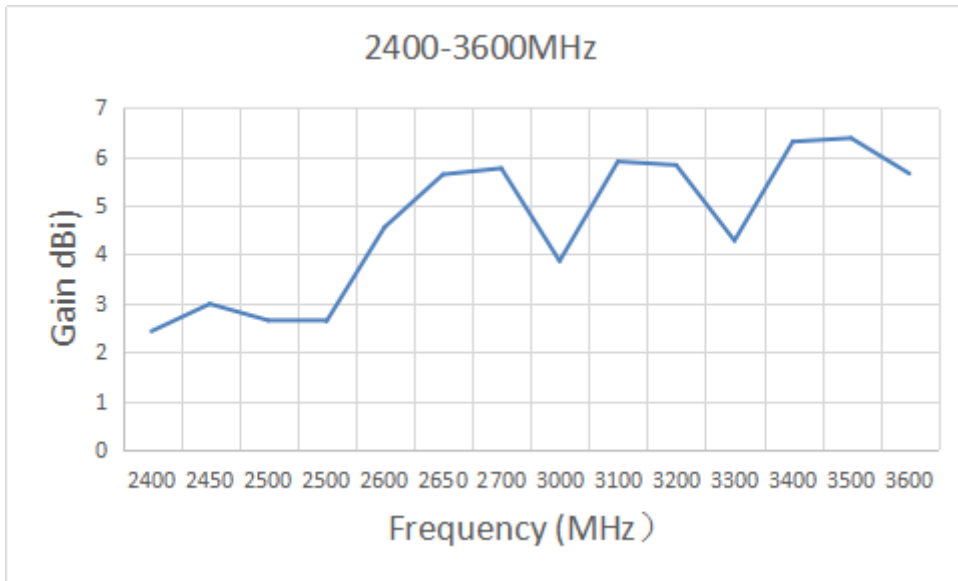




Frequency (MHz)	700	880	960	1710	2650	3300	4800
Efficiency (%)	37	59	48	58	65	51	58

4.4. Gain



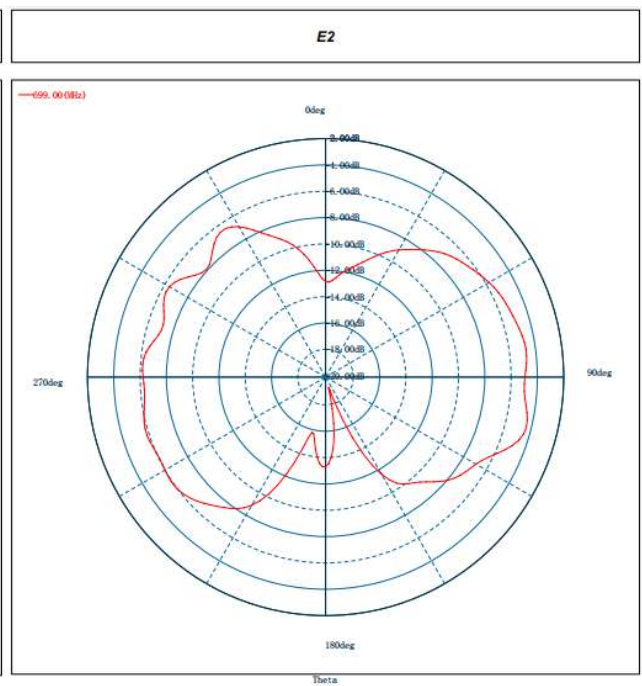
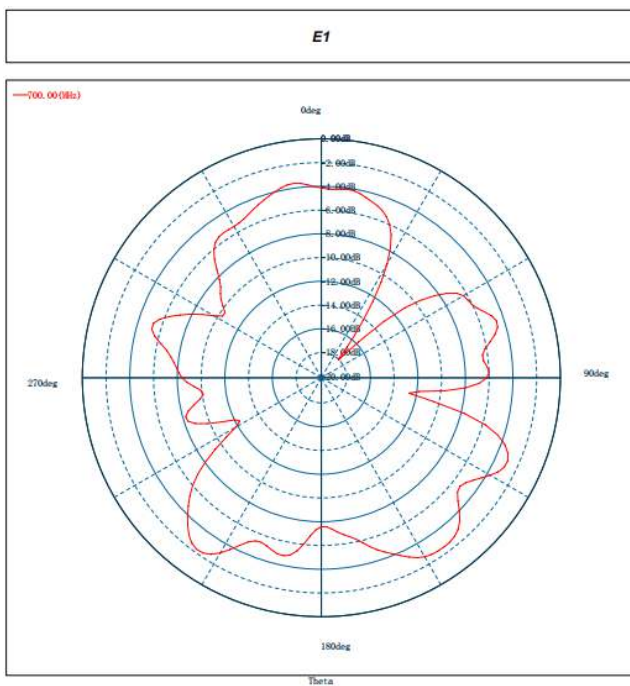
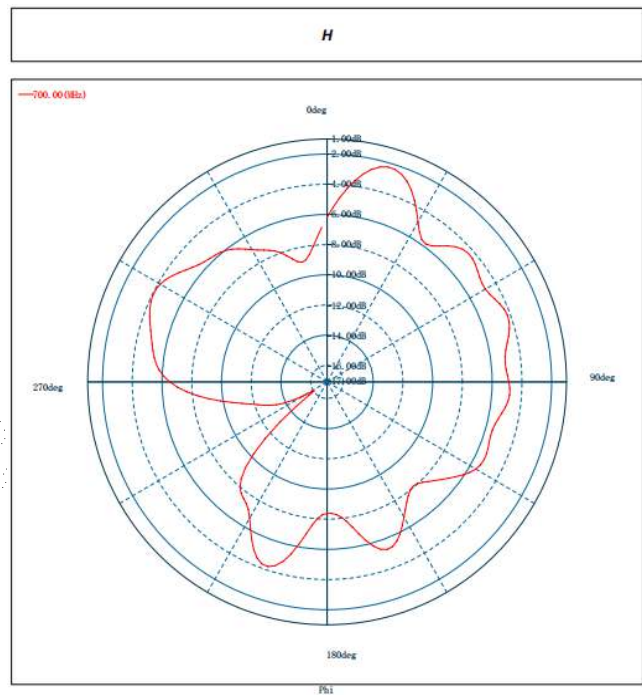
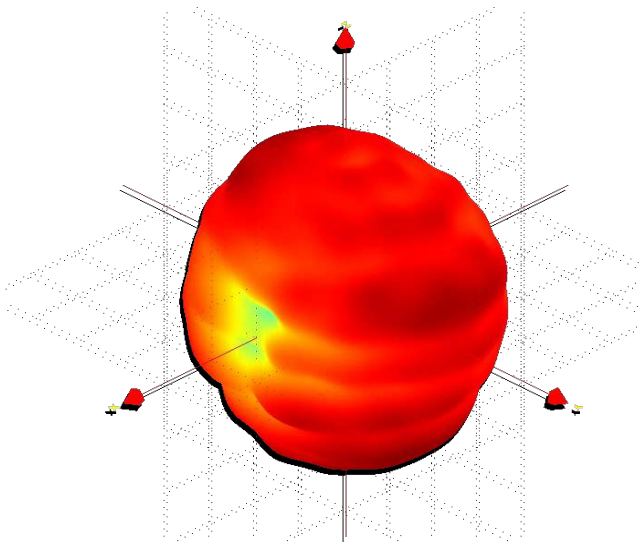


Frequency (MHz)	700	880	960	1710	2650	3300	4800
Gain (dBi)	0.37	0.8	0.8	2.3	5.6	4.2	5.4

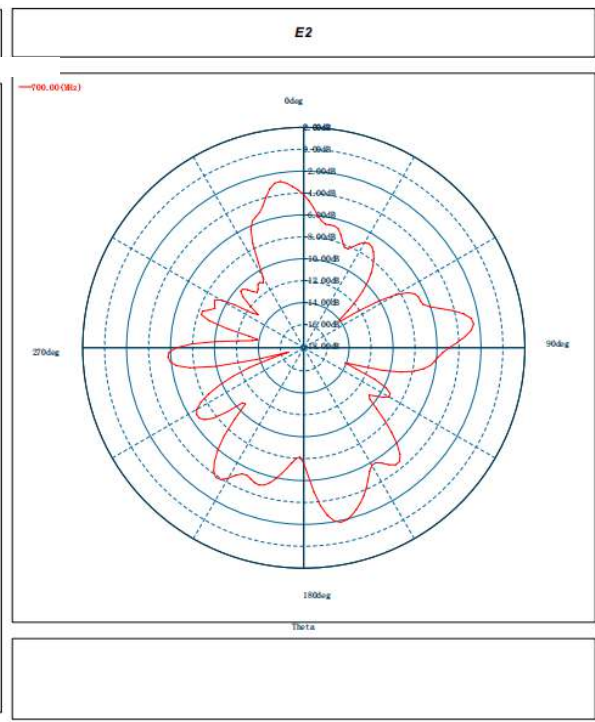
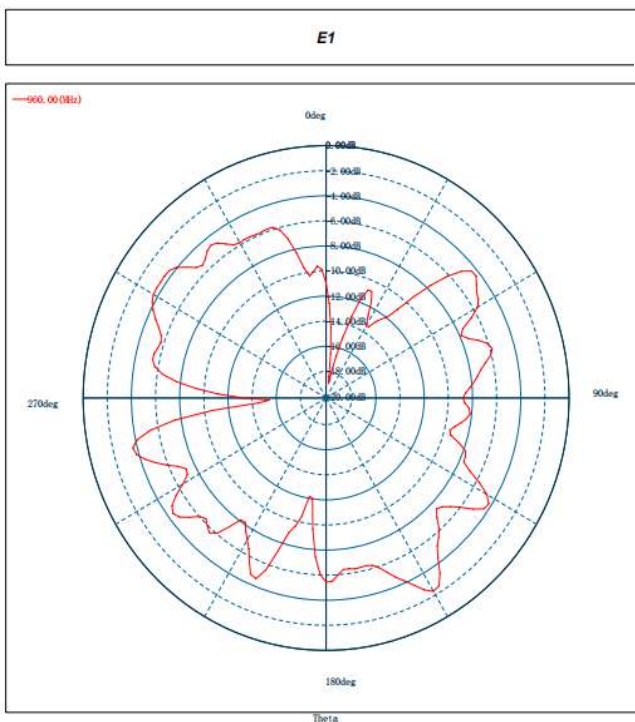
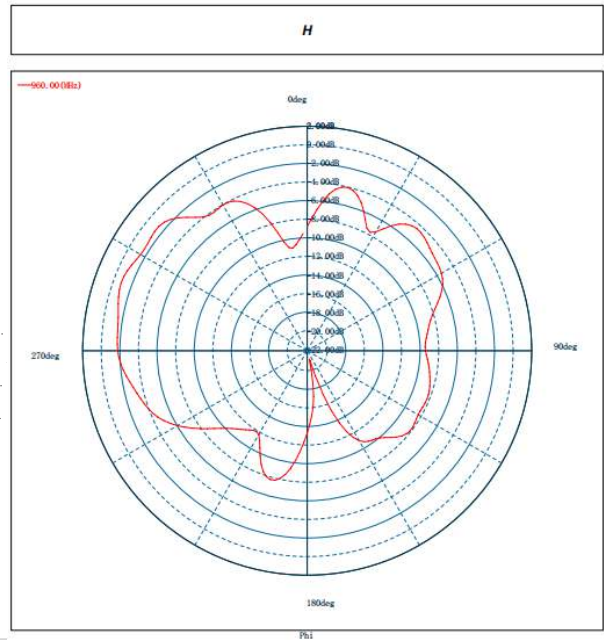
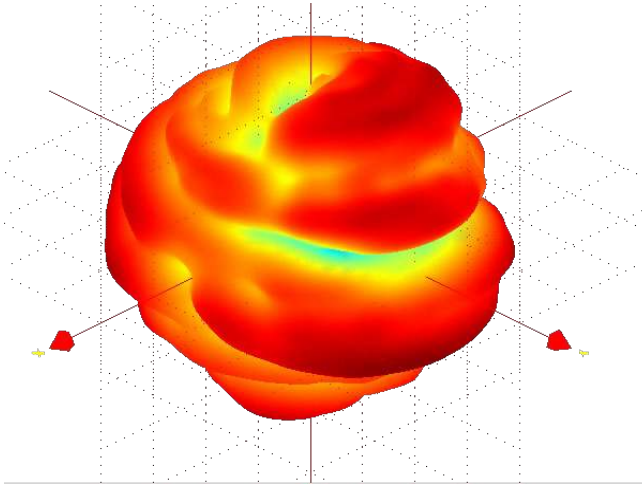
4.5. Radiation Pattern

- Test condition: free space status.

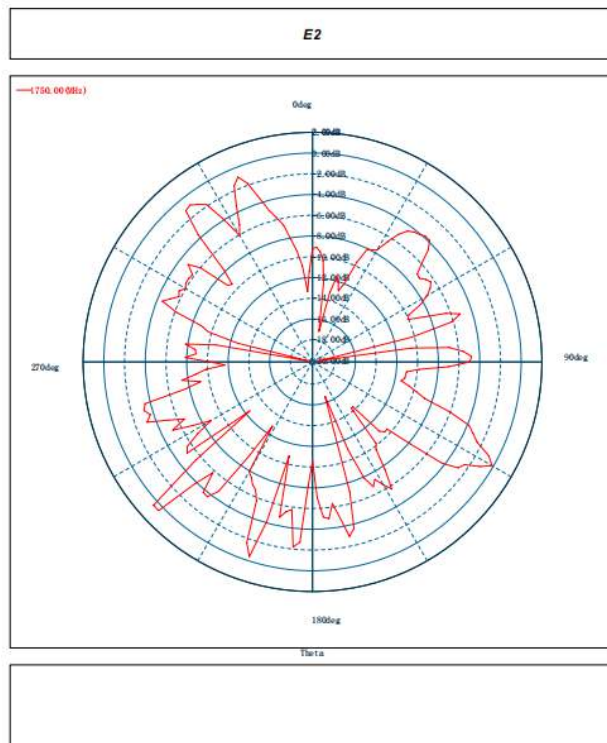
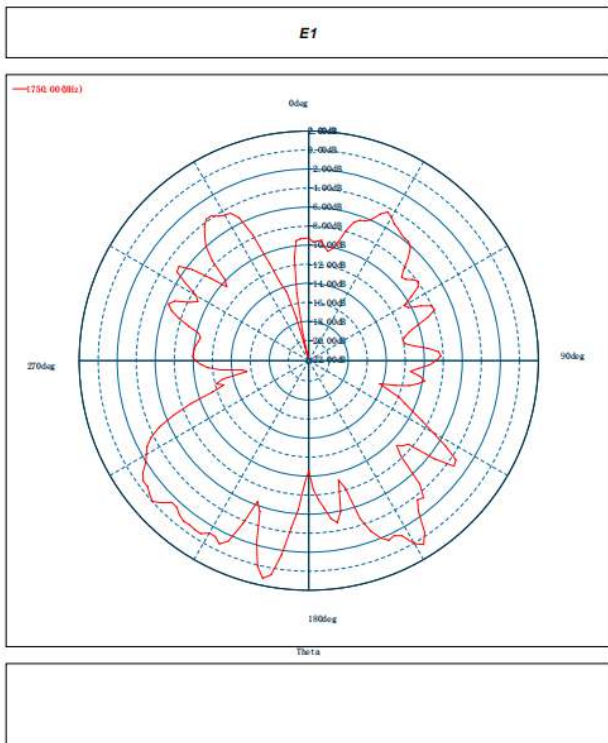
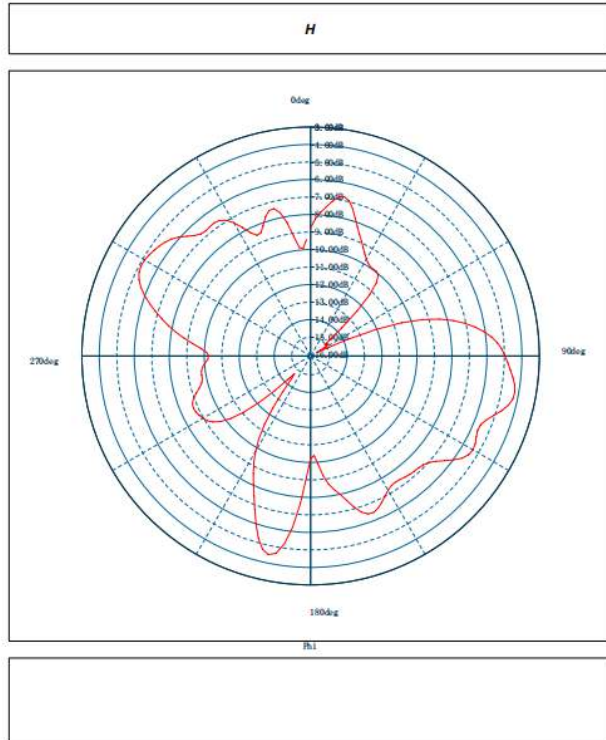
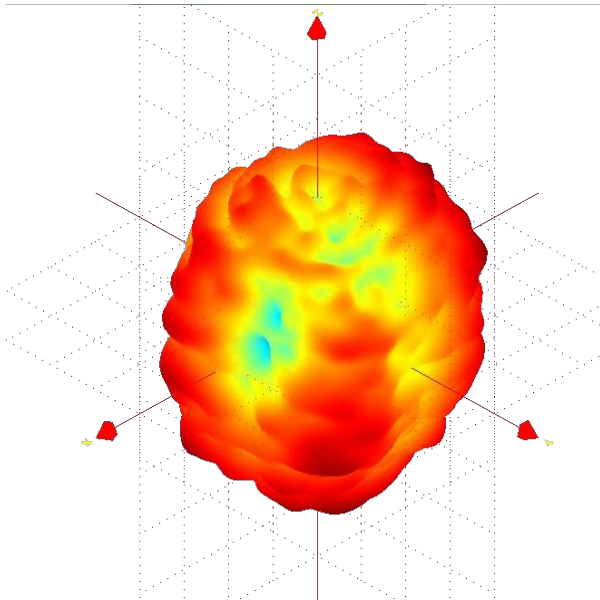
4.5.1. 700 MHz



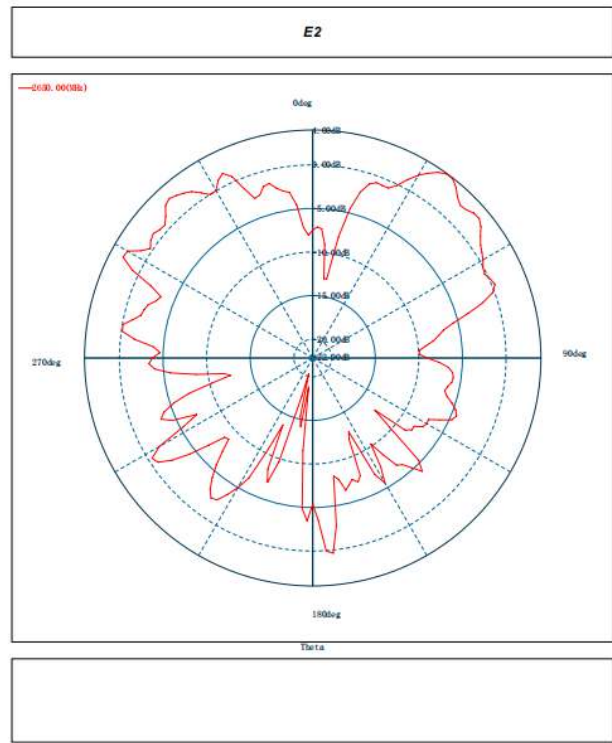
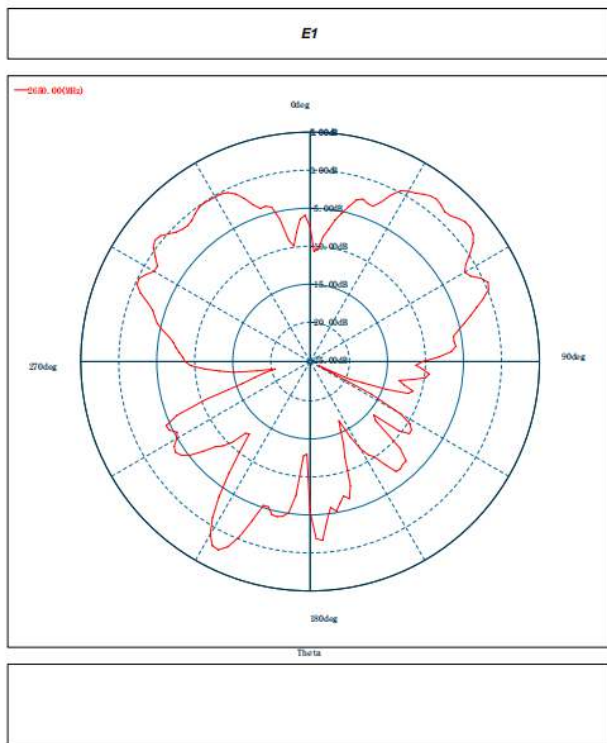
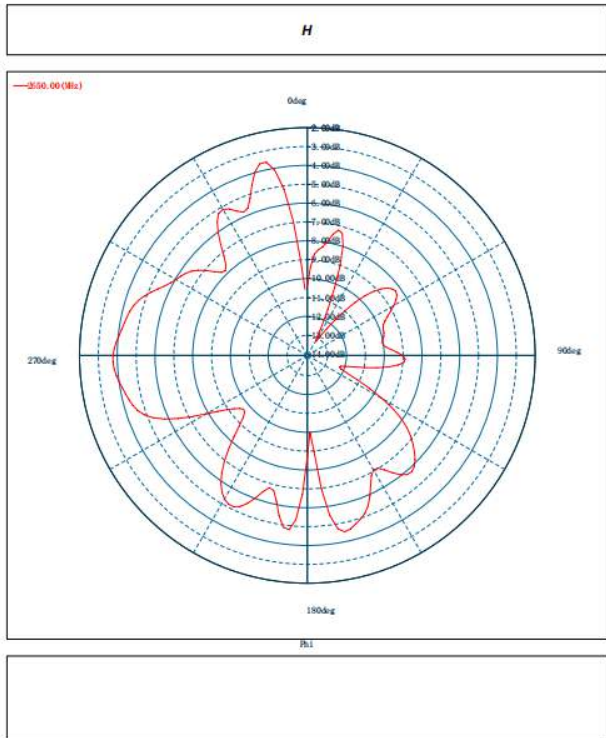
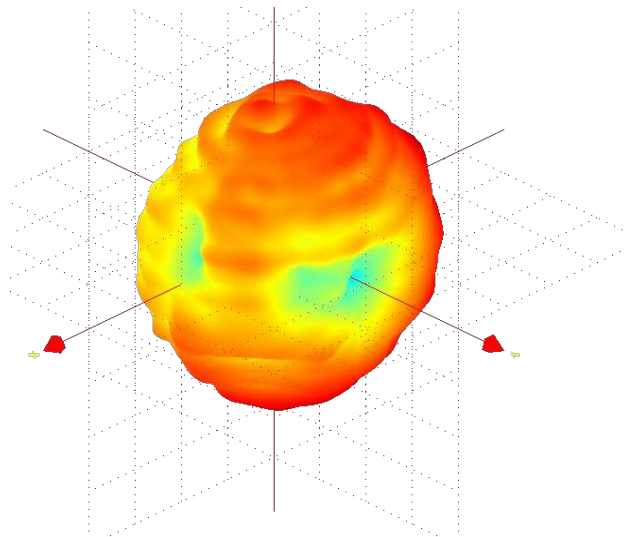
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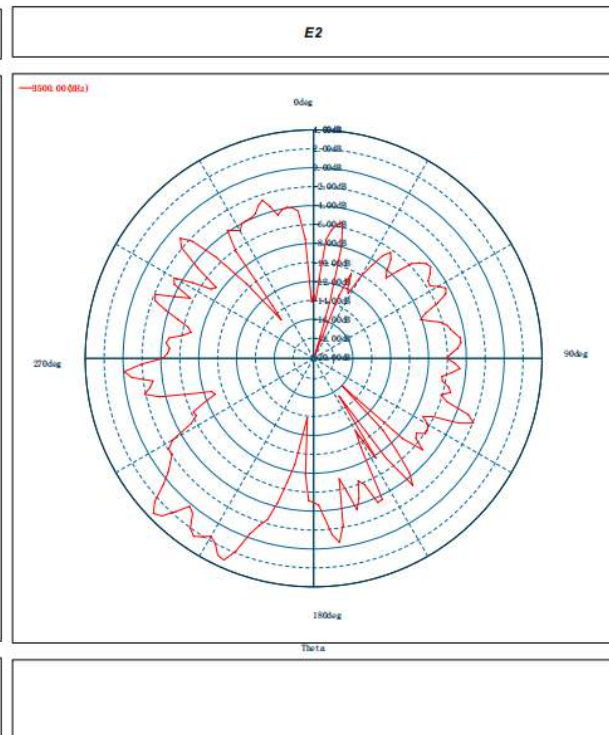
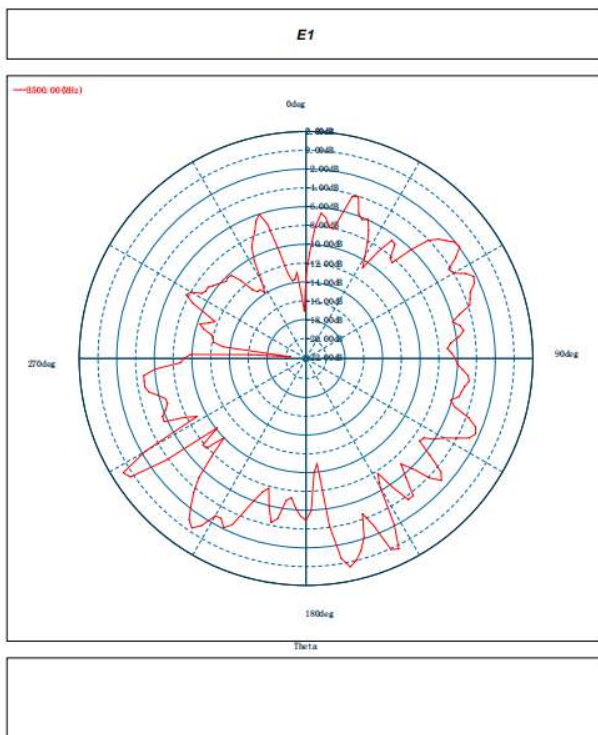
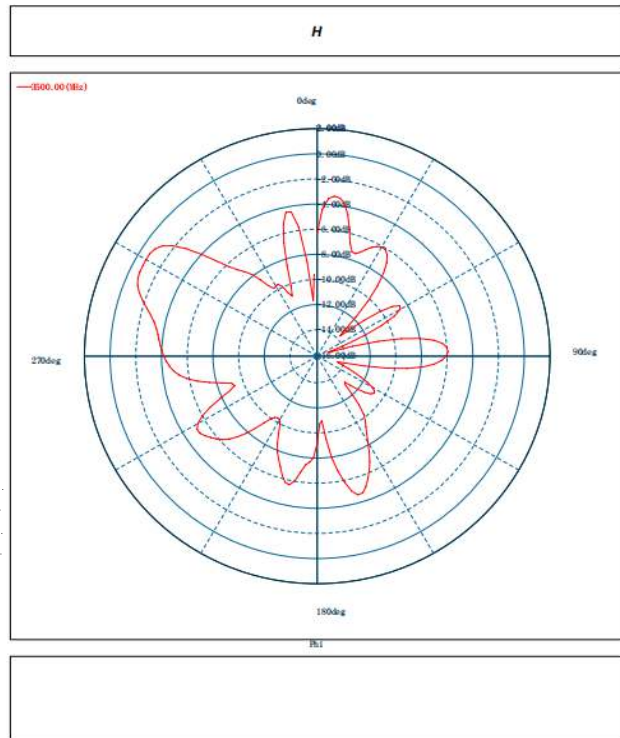
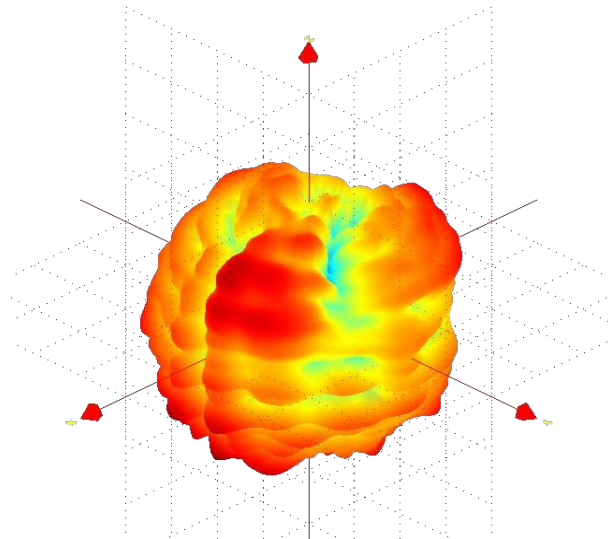
4.5.3. 1750 MHz



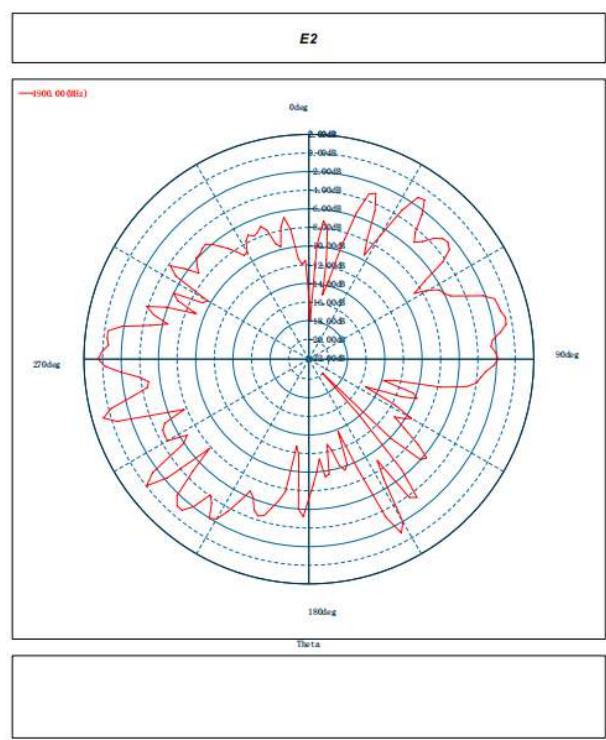
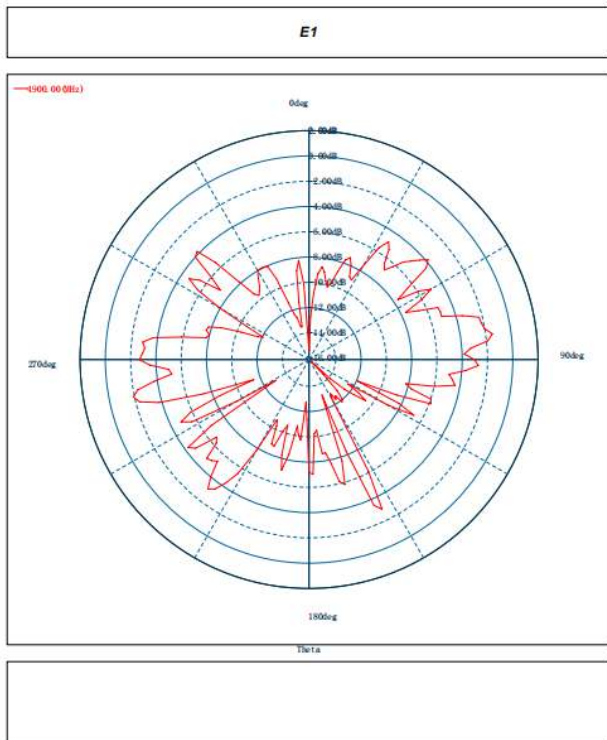
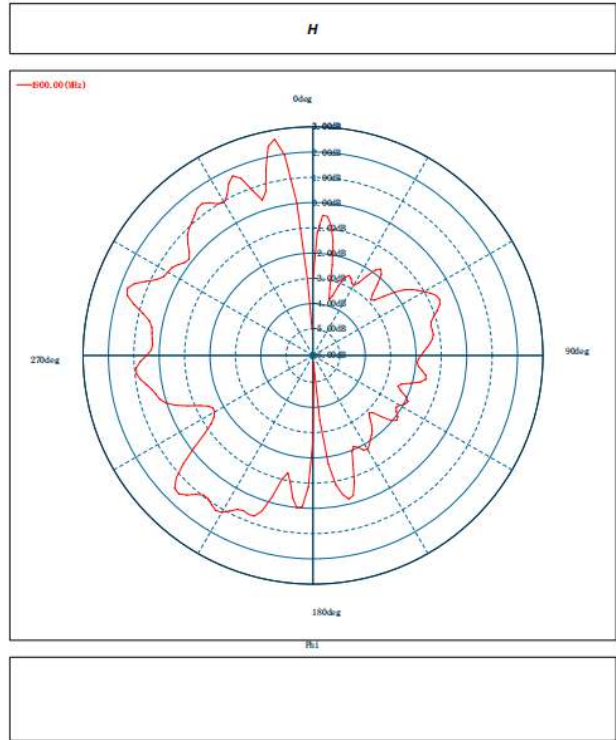
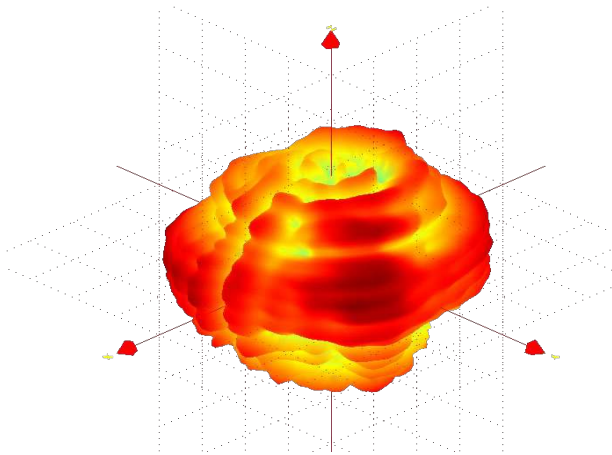
4.5.4. 2690 MHz



4.5.5. 3500 MHz



4.5.6. 4900 MHz



5 Product Size

