

Antenna

YE0029AA Datasheet

Antenna Services

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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 (Chapter 4.3).
1.5	2021-12-01	Aria CHU	Updated the product description in Chapter 1.

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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 Impedence	50 Ω
VSWR	≤ 2.0
Gain	≤ 2
Polarization Type	Linear

Mechanical Specifications

Antenna Size	88 mm \times Φ 30 mm, LMR100, Cable Length = 3000 mm
Casing	ABS
Connector Type	SMA Male (Center Pin)
Working Temperature	-40 $^{\circ}$ C to +85 $^{\circ}$ C
Radome Color	Black
Mounting Type	Magnet

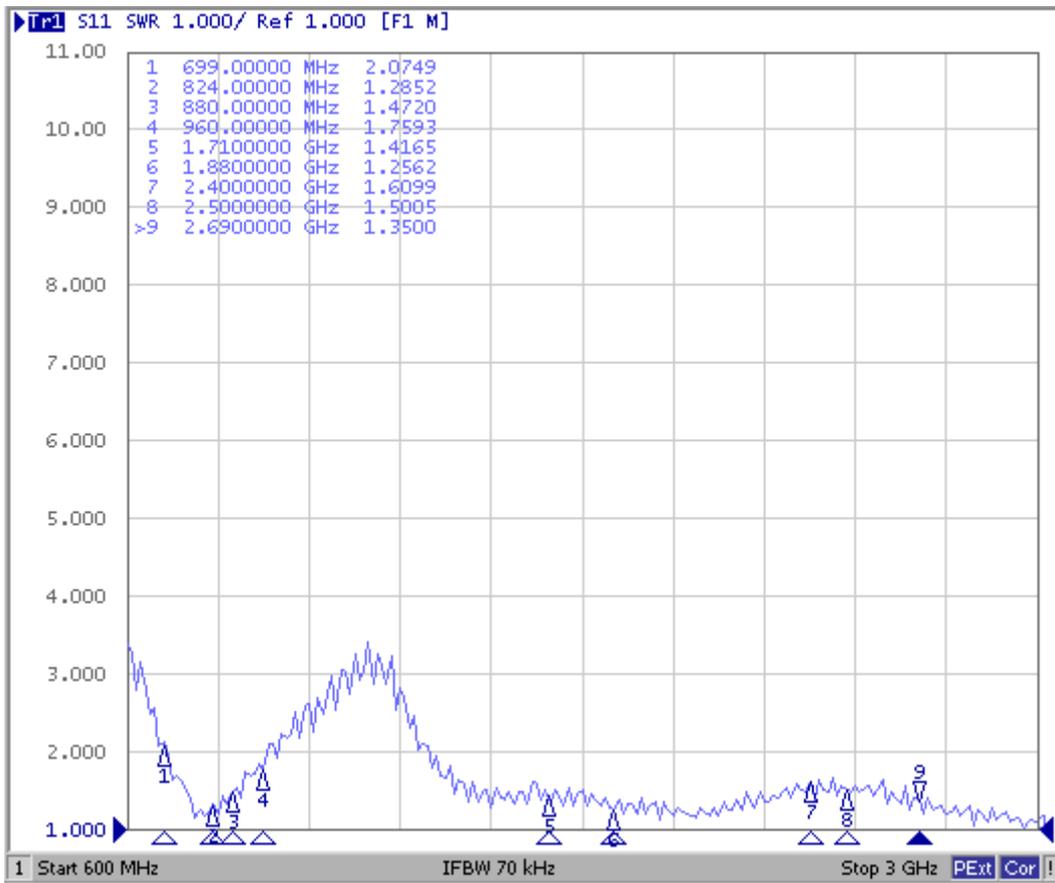
4 Overall Performance

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

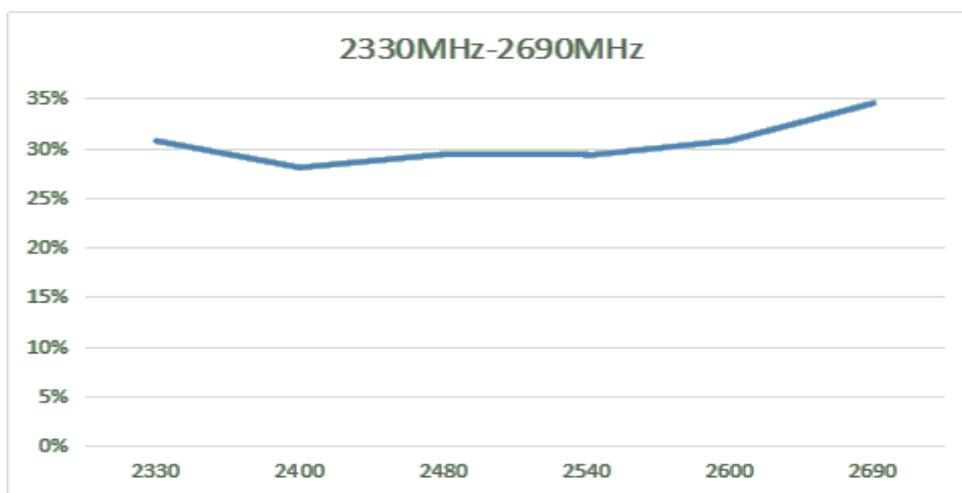
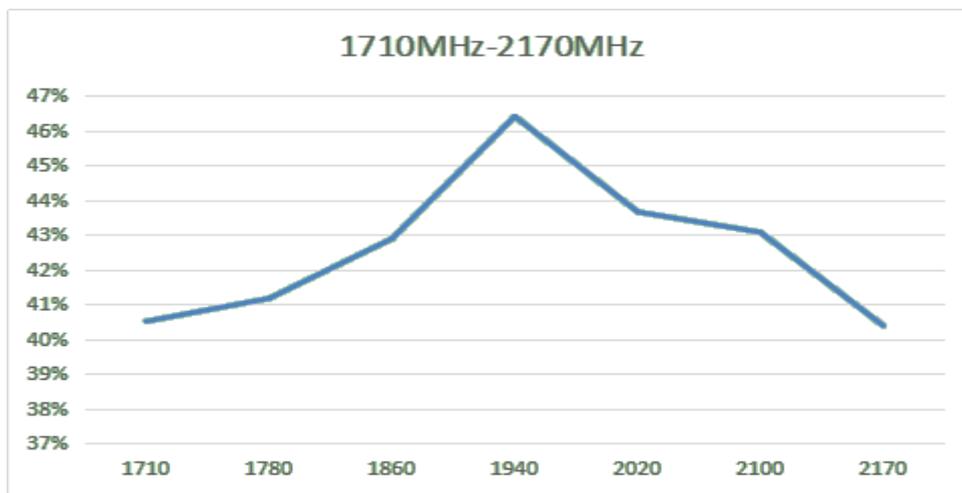
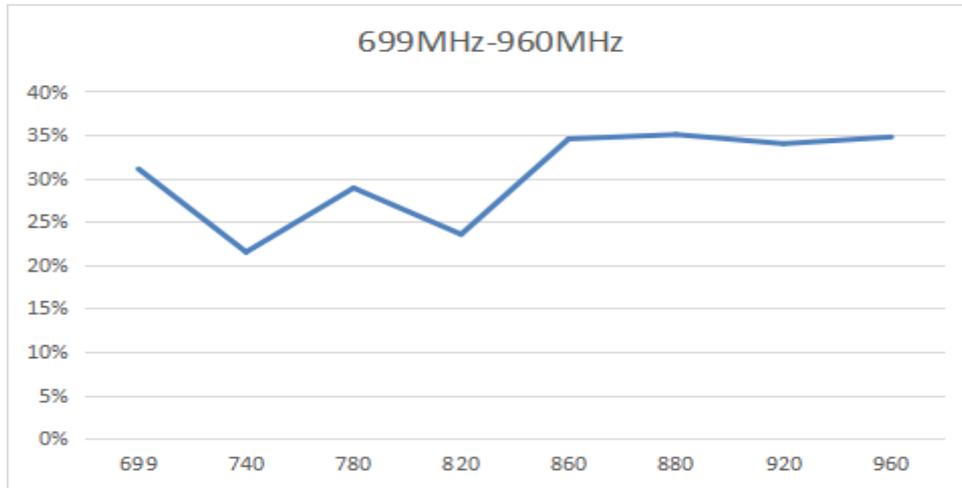


4.2. VSWR



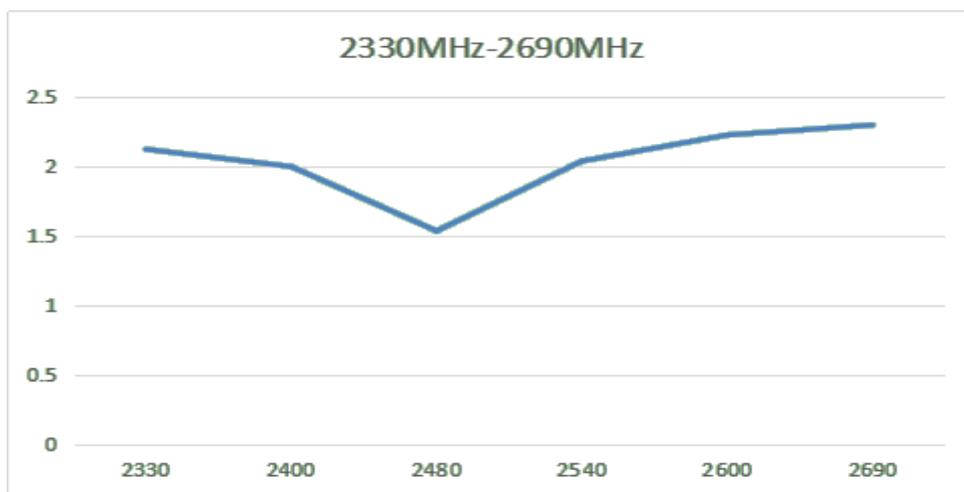
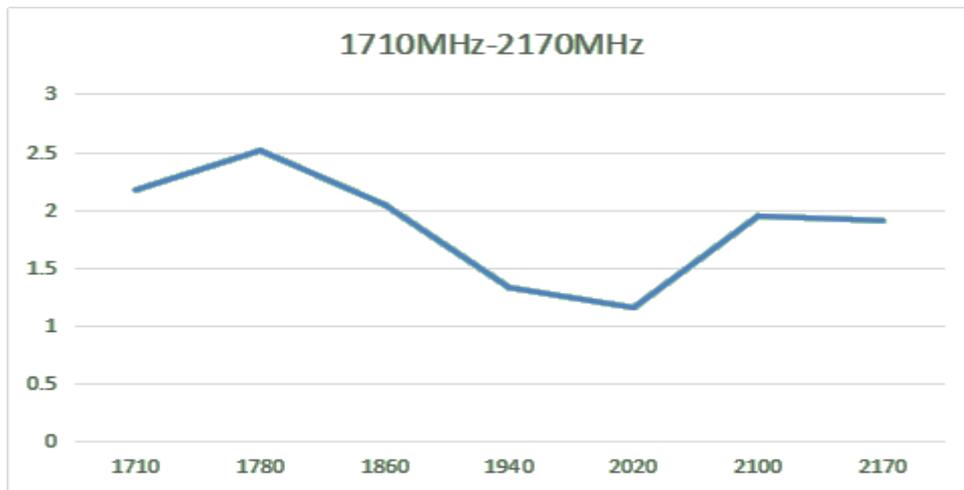
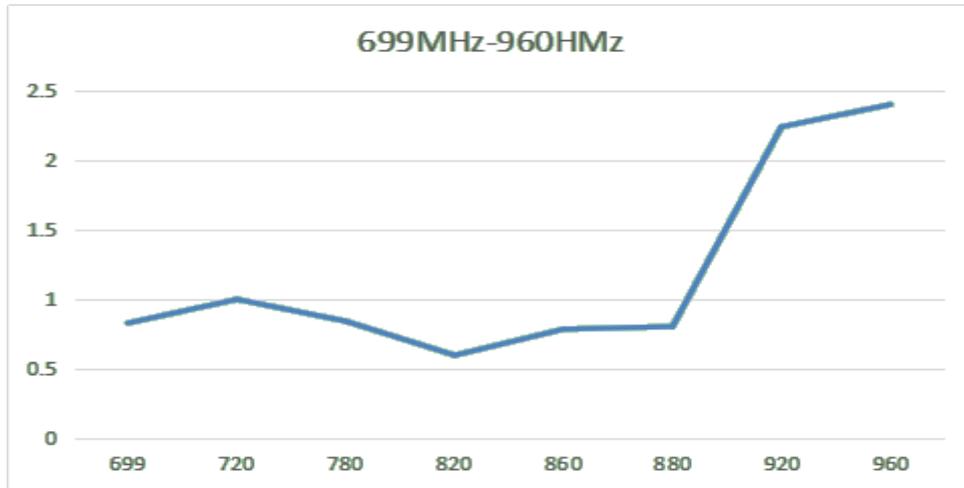
Frequency (MHz)	699	824	880	960	1710	1880	2500	2690
VSWR	2.0	1.2	1.4	1.7	1.4	1.2	1.5	1.3

4.3. Efficiency



Frequency (MHz)	699	824	880	960	1710	1880	2500	2690
Efficiency (%)	24	47	47	36	41	43	29	35

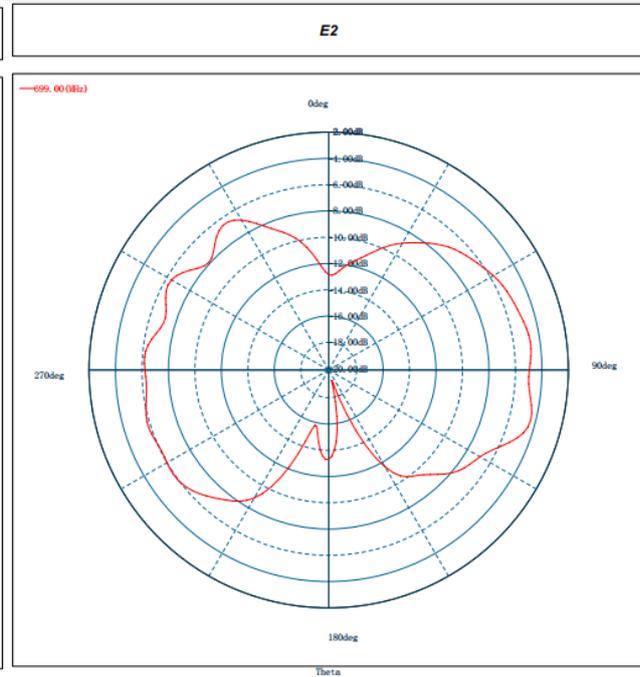
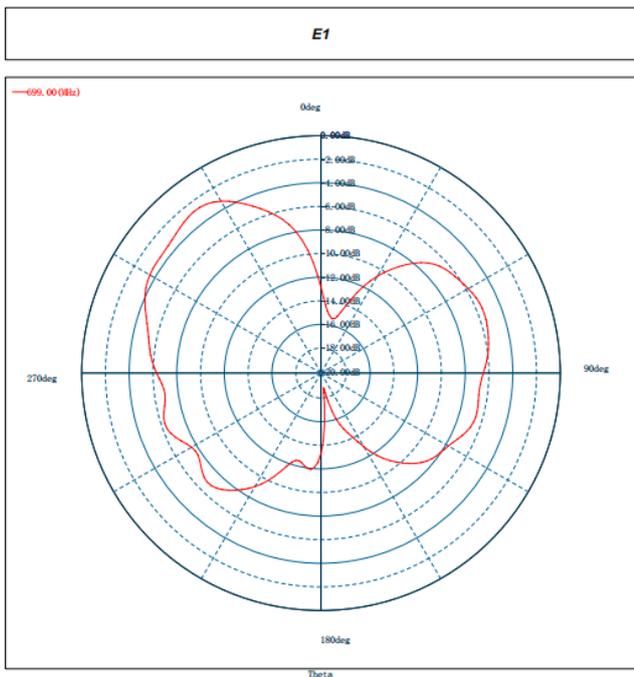
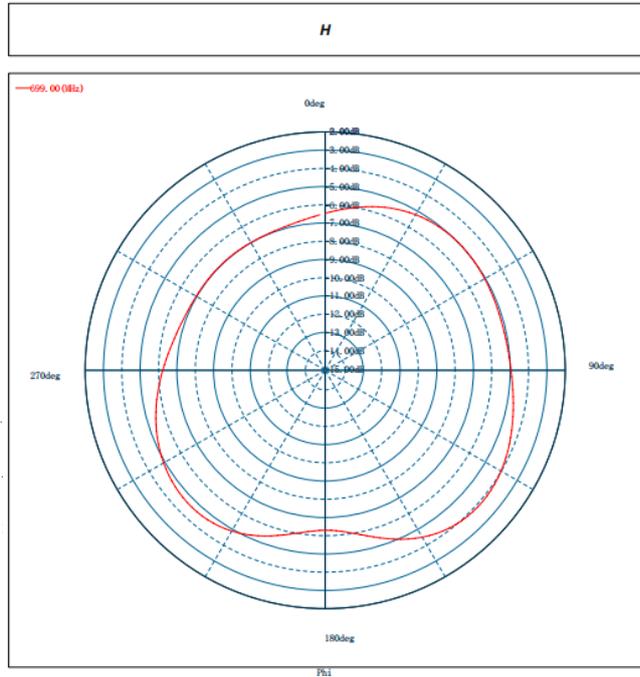
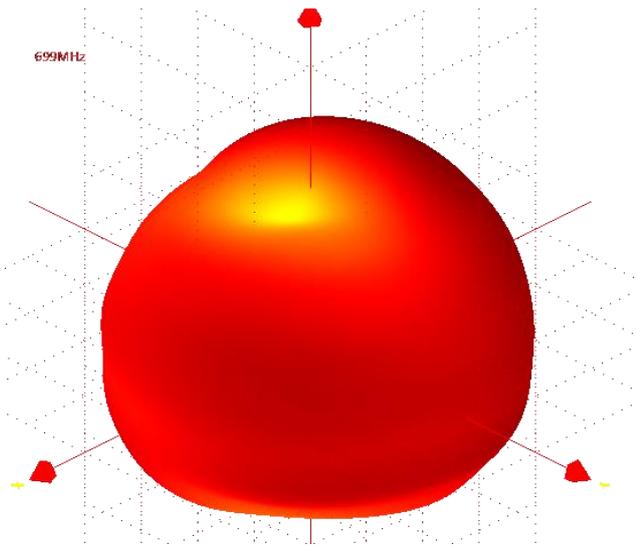
4.4. Gain



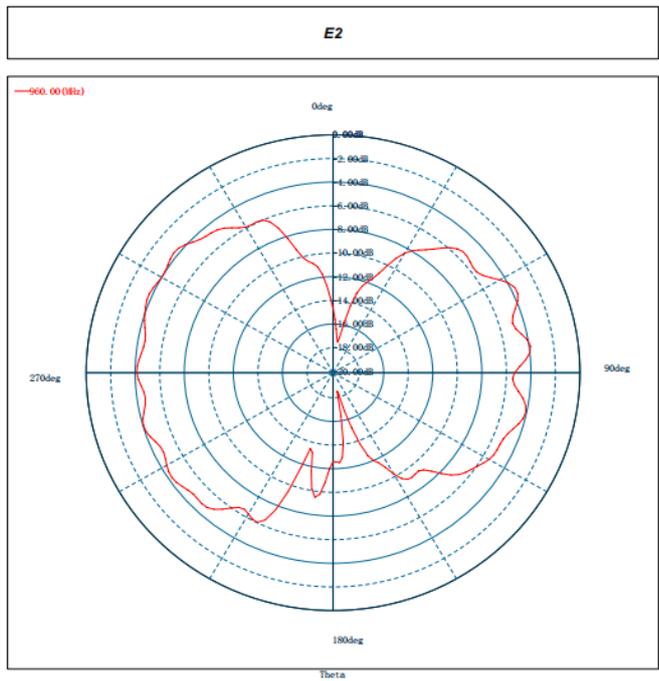
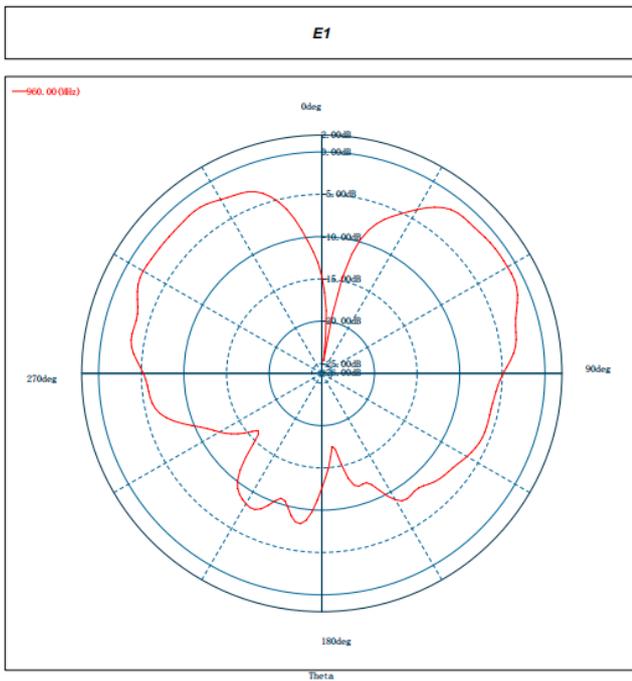
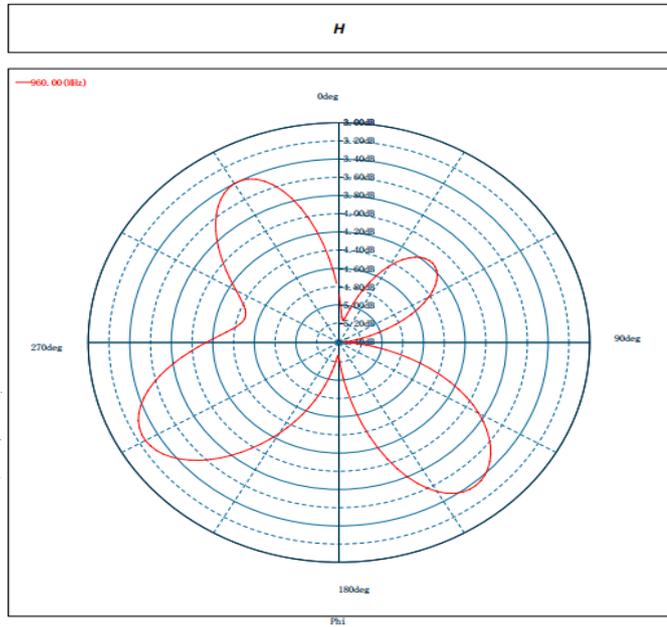
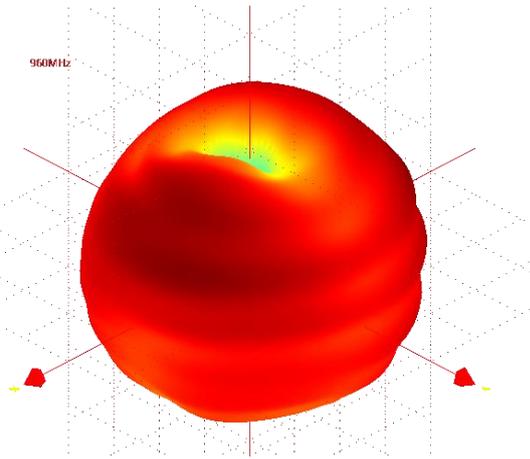
Frequency (MHz)	699	824	880	960	1710	1880	2500	2690
Gain (dBi)	0.8	0.5	0.8	2.4	2.1	2.0	1.5	2.3

4.5. Radiation Pattern

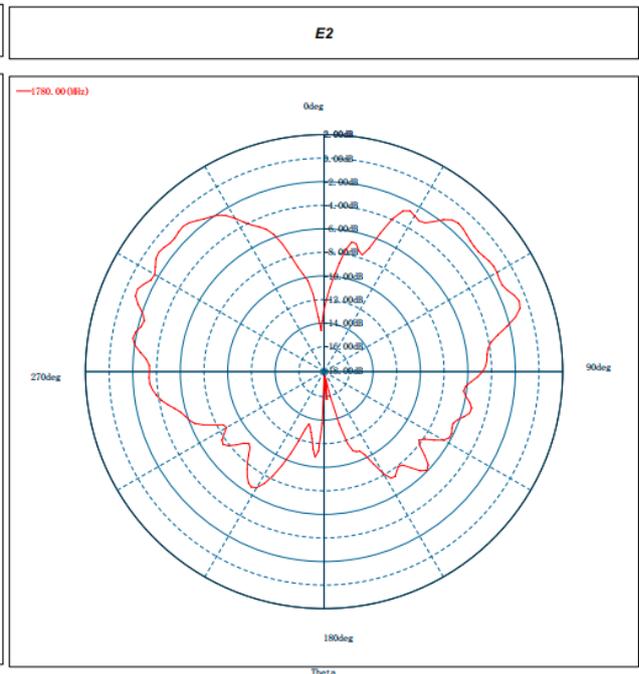
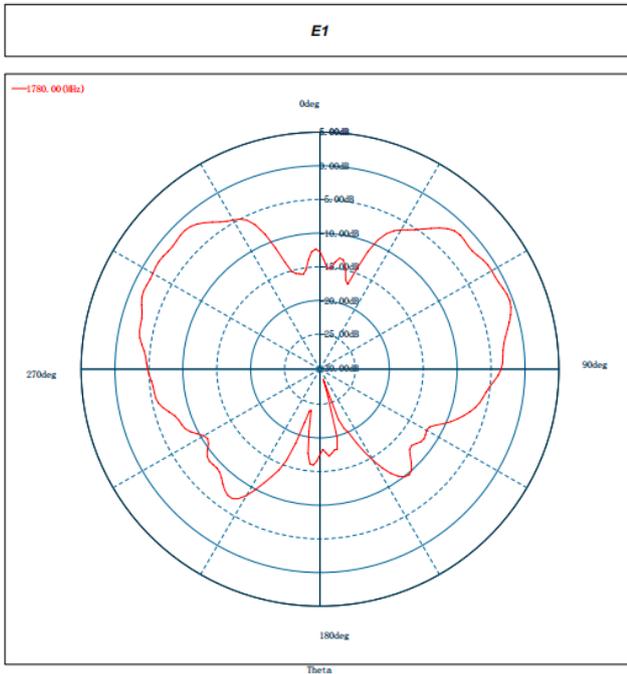
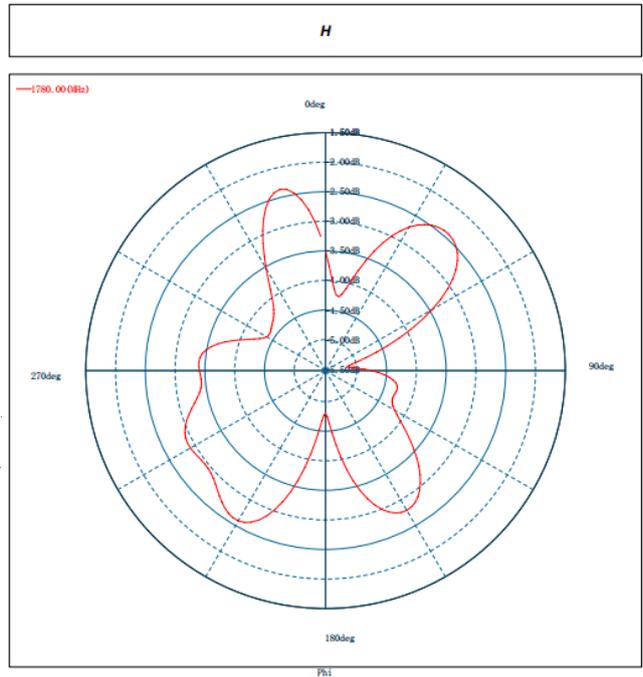
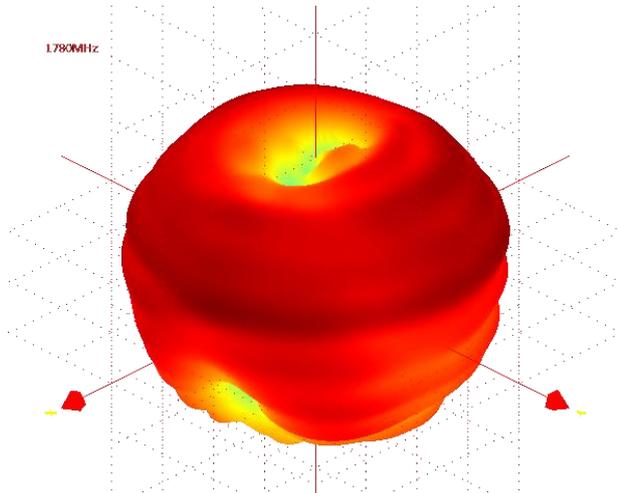
4.5.1. 699 MHz



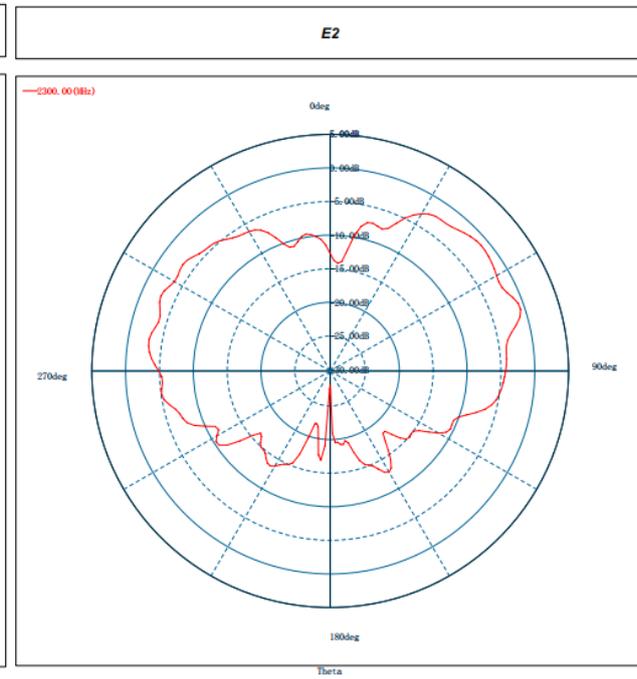
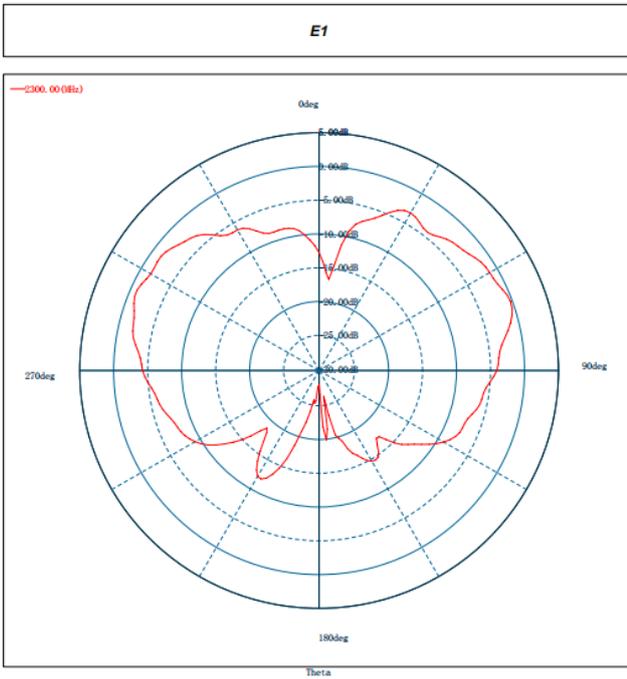
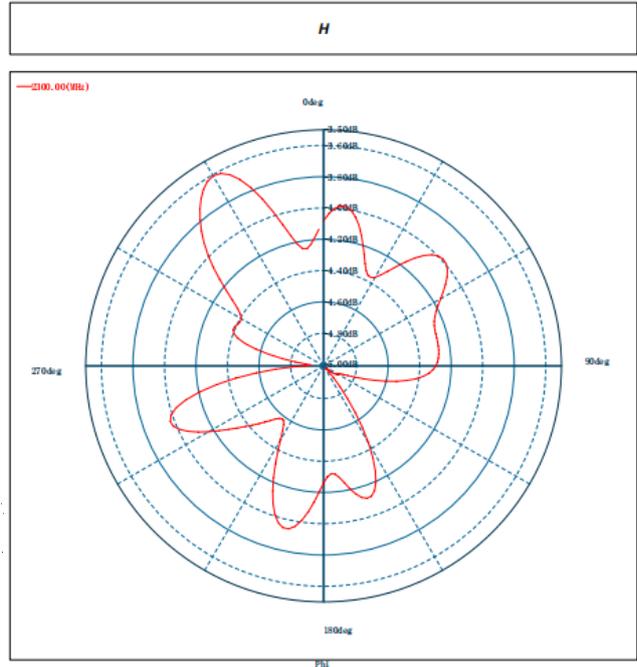
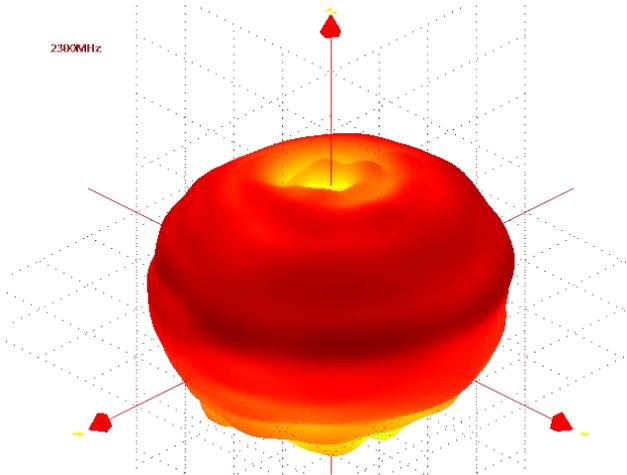
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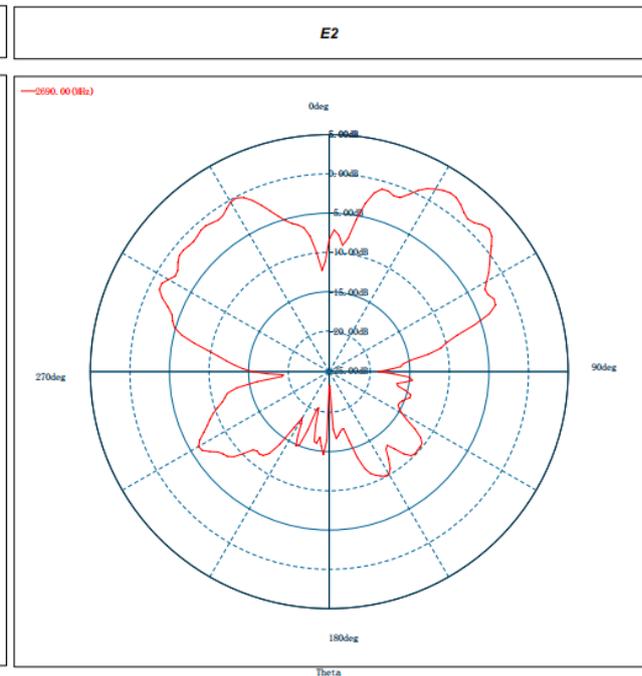
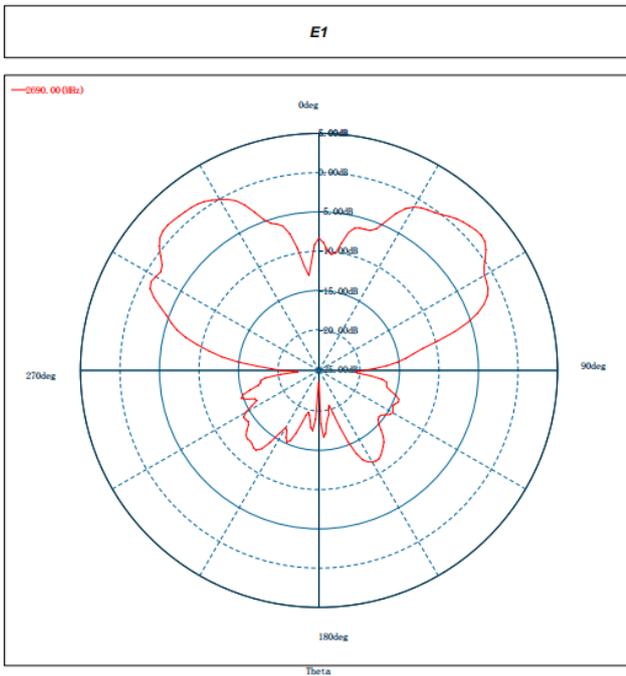
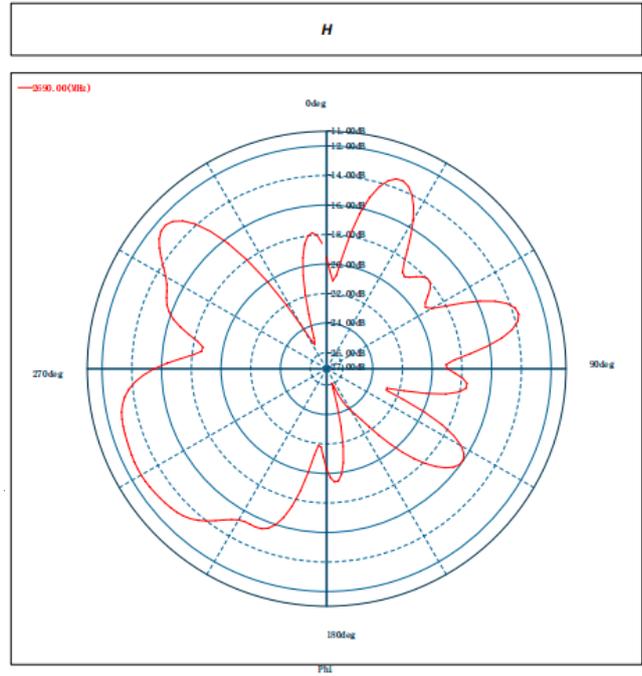
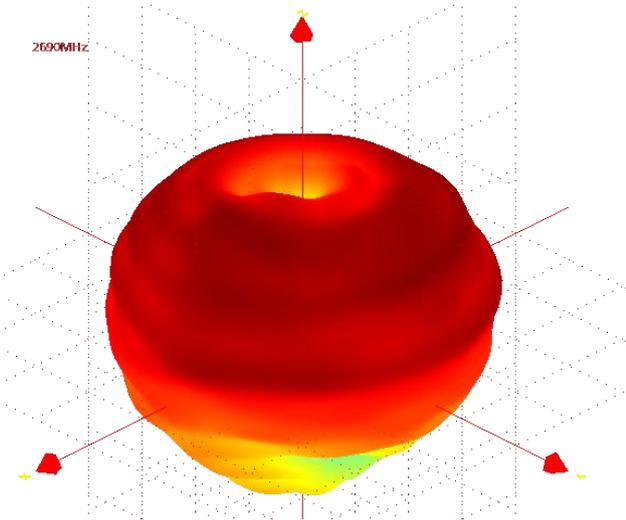
4.5.3. 1780 MHz



4.5.4. 2300 MHz



4.5.5. 2690 MHz



5 Product Size

