

Antenna

YE0029FA Datasheet

Antenna Services

Version: 1.0

Date: 2022-06-08

Status: Released



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About the Document

Revision History

Version	Date	Author	Note
-	2022-06-08	Kenny YIN/ Riona HAN	Creation of the document
1.0	2022-06-08	Kenny YIN/ Riona HAN	First official release

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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
VSWR	≤ 5.5
Gain	≤ 4.0 dBi
Polarization Type	Linear

Detailed Passive Electrical Specifications

Frequency Range (MHz)	698–960	1176–1280	1400–1610	1710–2170	2170–2690	3300–4000	4000–5000	5000–6000
VSWR (Max.)	5.4	-	-	1.75	1.80	-	-	-
Average Efficiency (%)	52	-	-	63	62	-	-	-
Max. Peak Gain (dBi)	3.6	-	-	4.0	2.9	-	-	-

Mechanical Specifications

Antenna Size	88 mm x Φ 30 mm,
Cable Type & Length	LMR 100 Black & 1000 mm
Casing	ABS
Connector Type	SMA Male (center pin)
Working Temperature	-40 °C to +85 °C
Weight	-
Radome Color	Black
IP Rating	IP67
Installation Method	Magnet

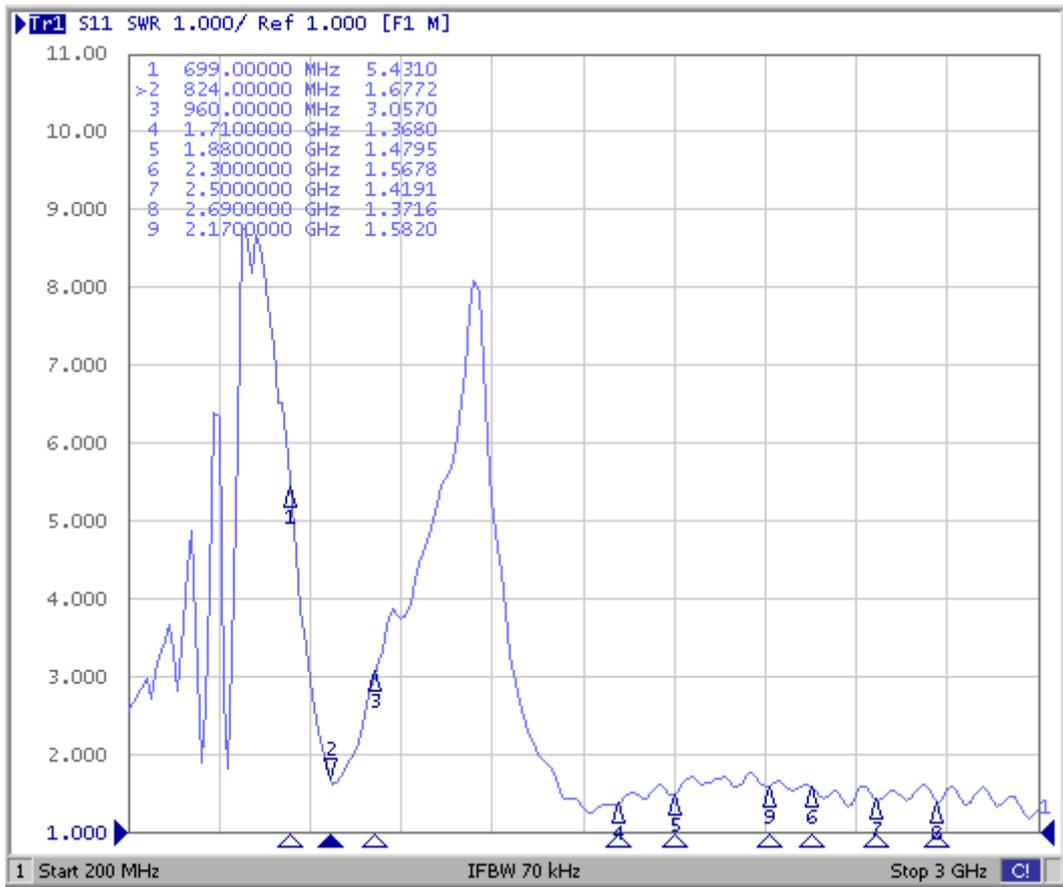
4 Overall Performance

4.1. Test Environment

- KEYSIGHT EN A Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 600 MHz– 8.5 GHz

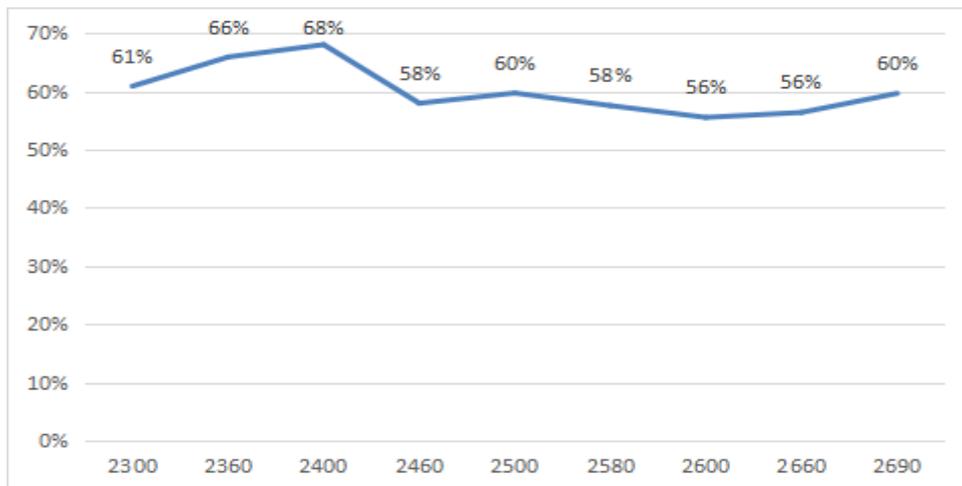
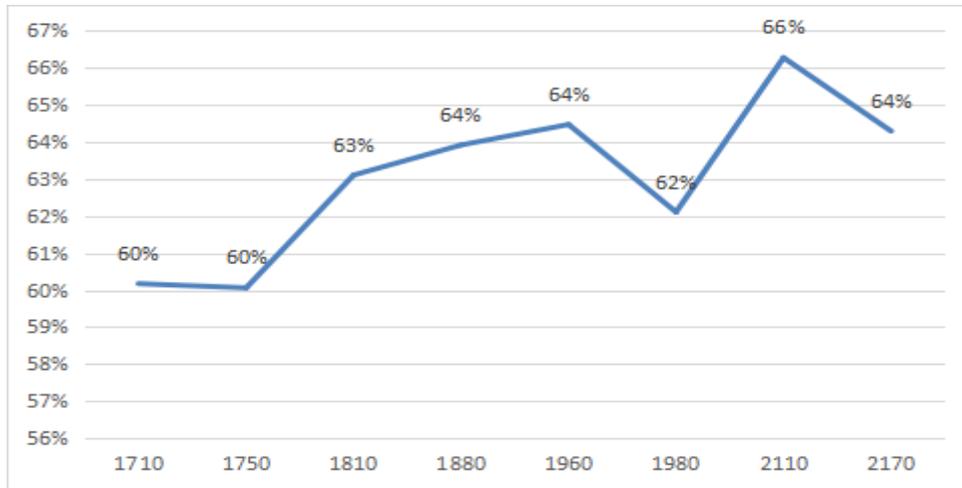
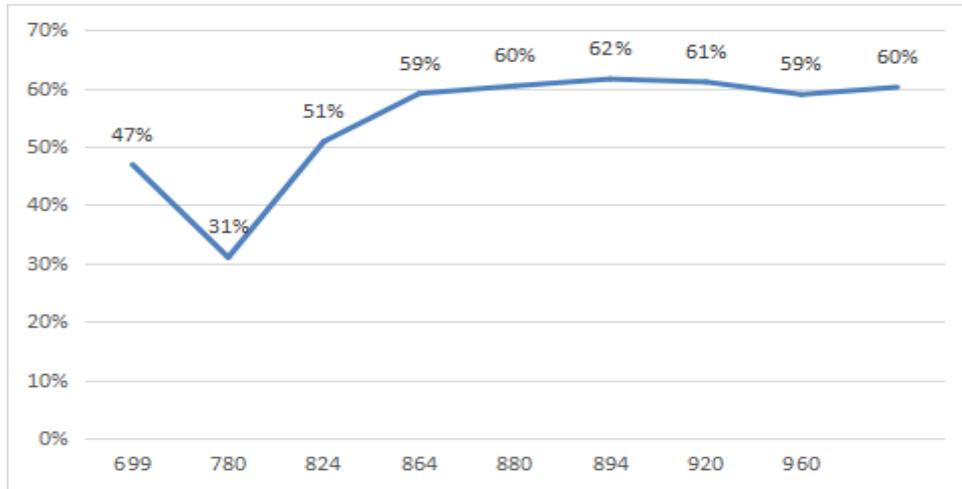


4.2. VSWR



Frequency (MHz)	699	824	960	1710	1880	2500	2690
VSWR	5.4	1.6	3.0	1.3	1.4	1.4	1.3

4.3. Efficiency



Frequency (MHz)	699	824	880	960	1710	1880	2500	2690
Efficiency (%)	47	51	60	59	60	64	60	60

4.4. Gain

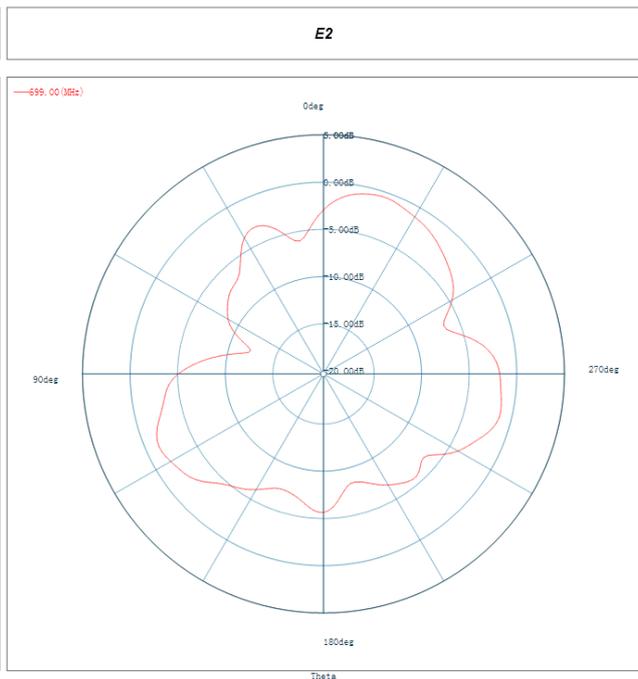
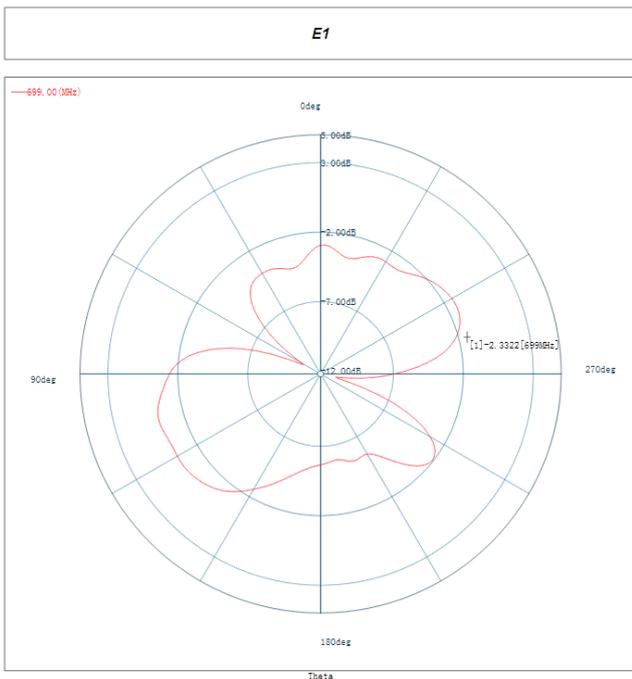
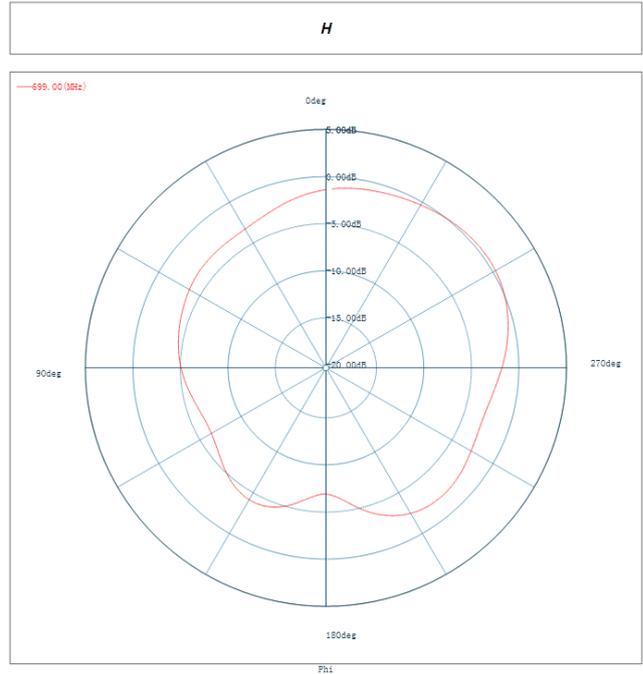
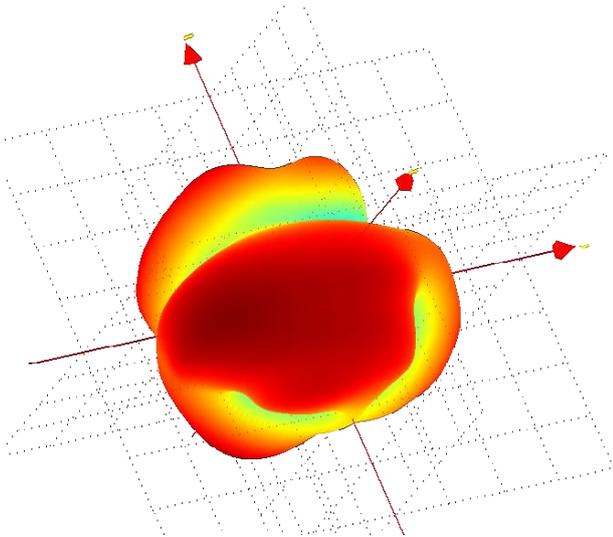


Frequency (MHz)	699	824	880	960	1710	1880	2500	2690
Gain (dBi)	0.9	2.3	3.5	2.4	3.8	3.9	2.6	2.6

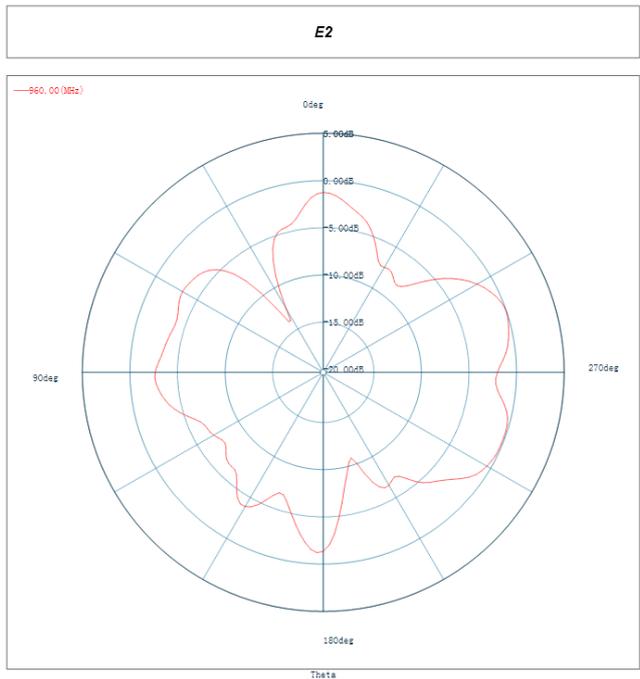
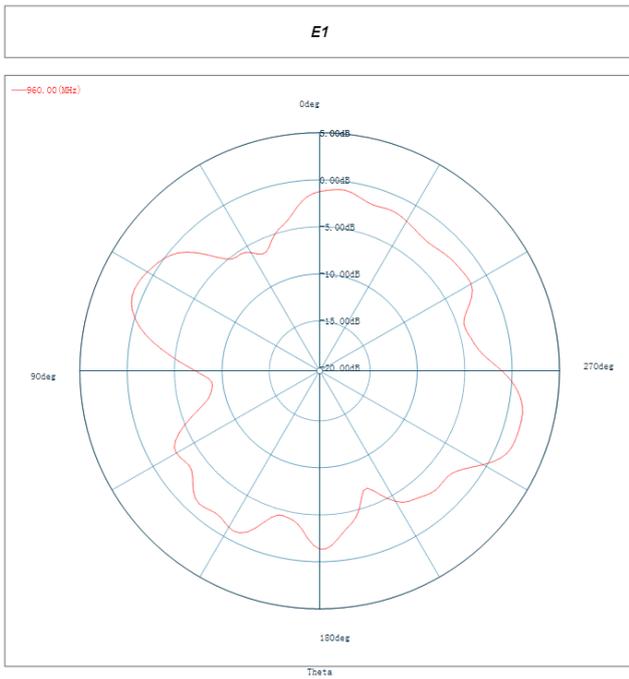
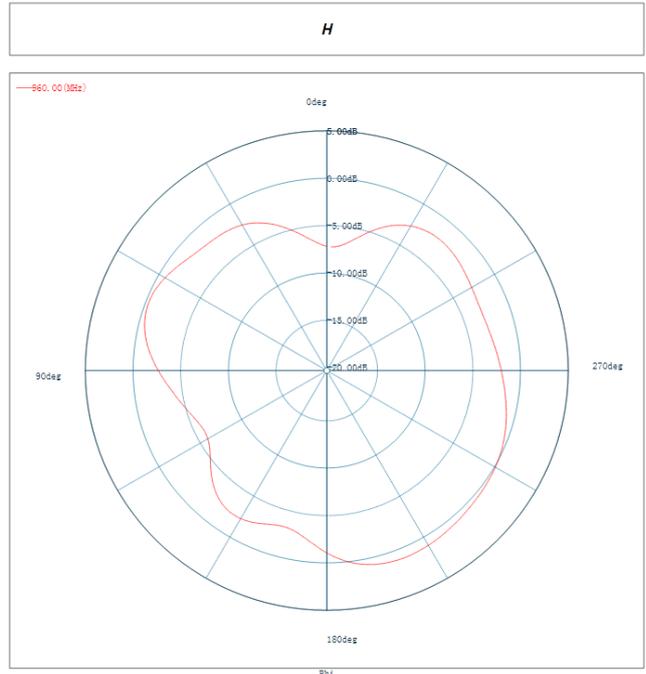
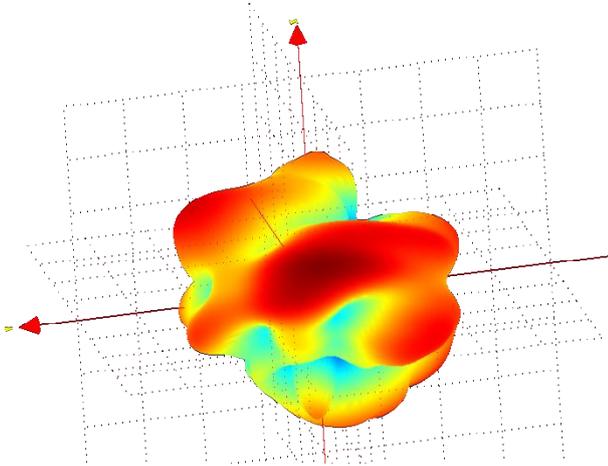
4.5. Radiation Pattern

- Test condition: 300 mm x 300mm metal plane.

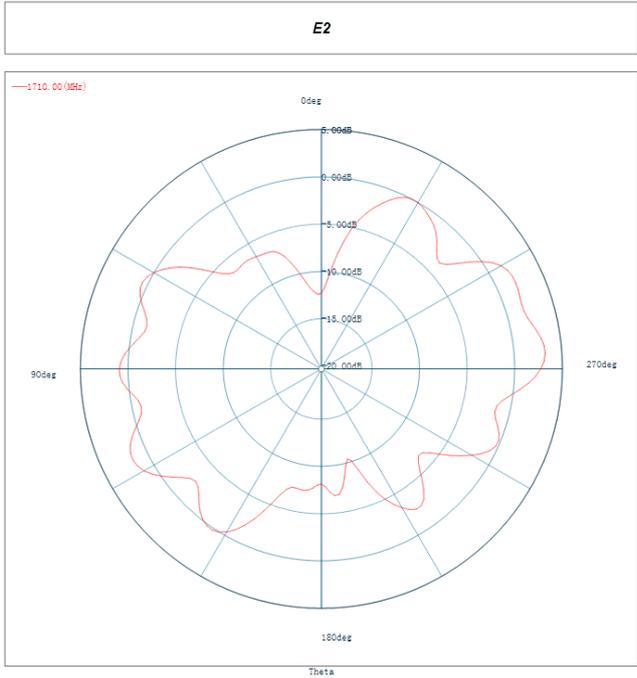
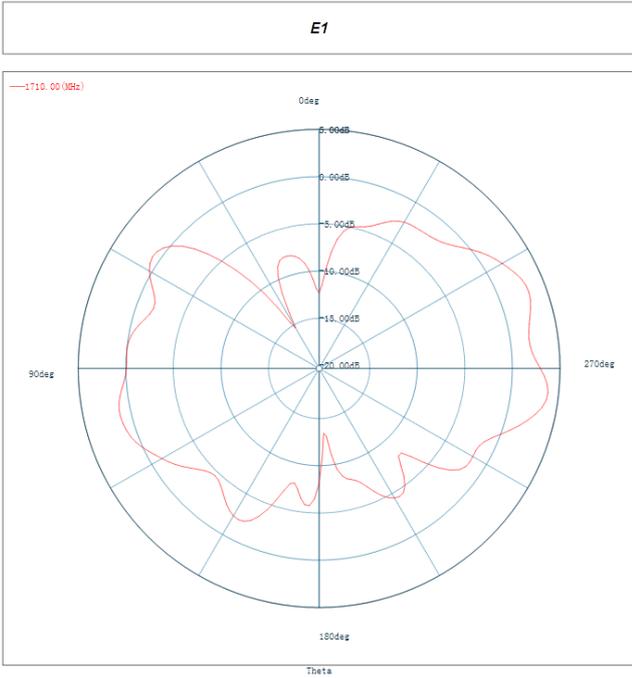
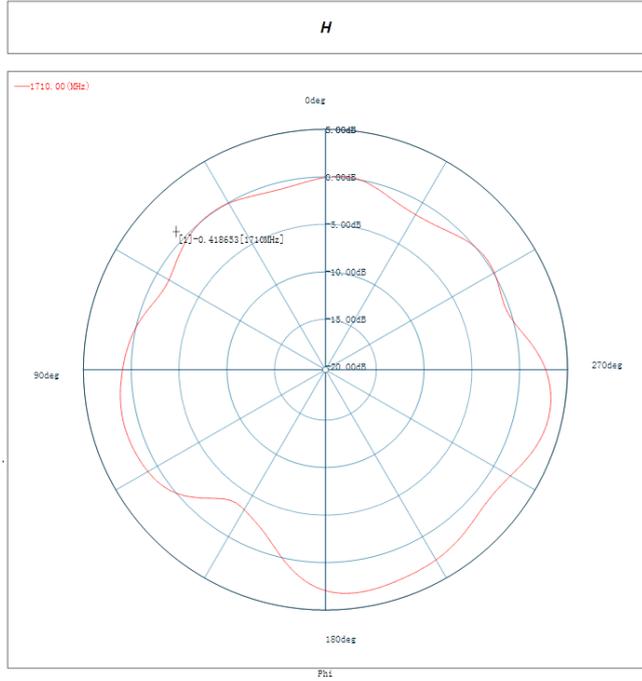
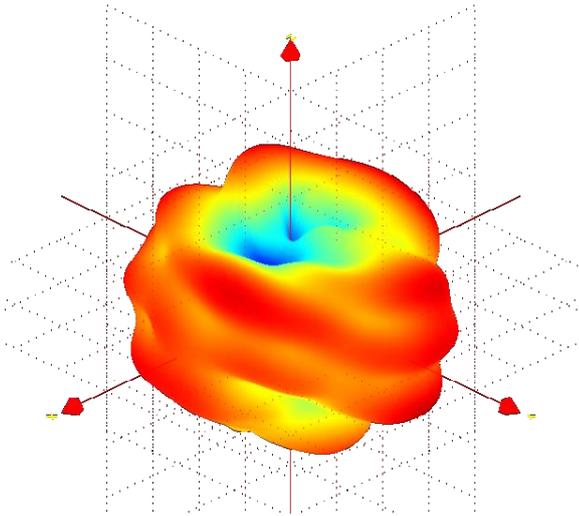
699 MHz



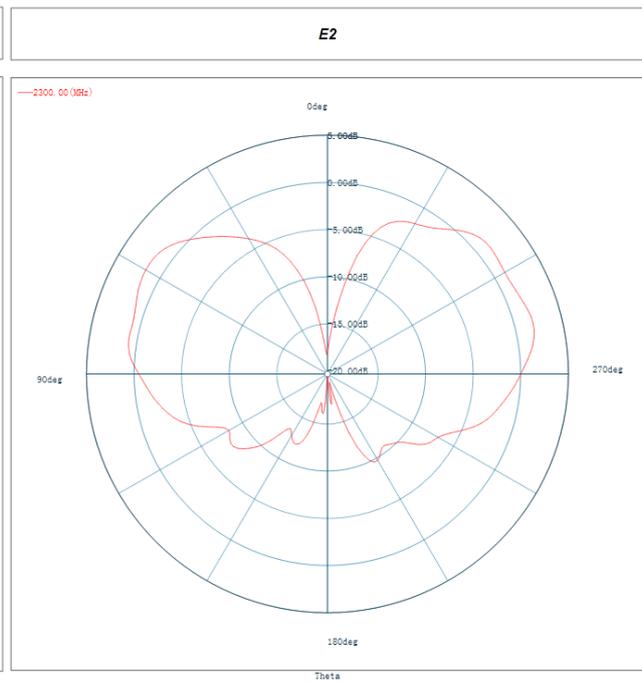
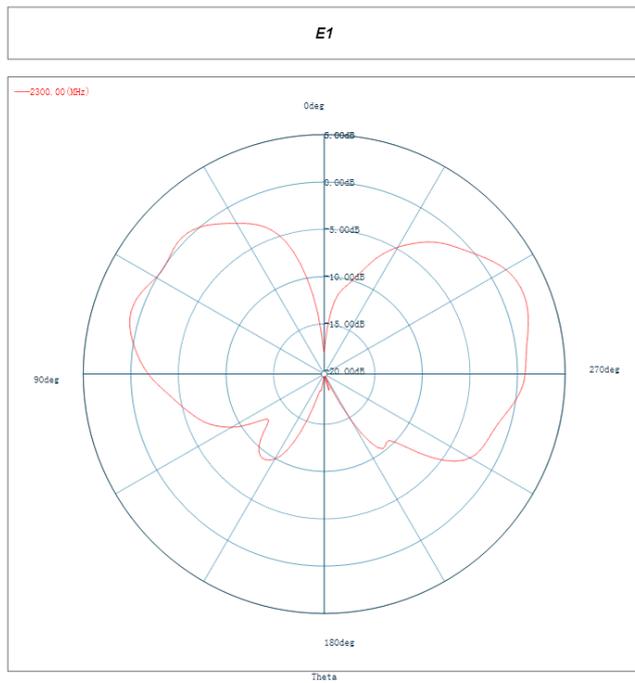
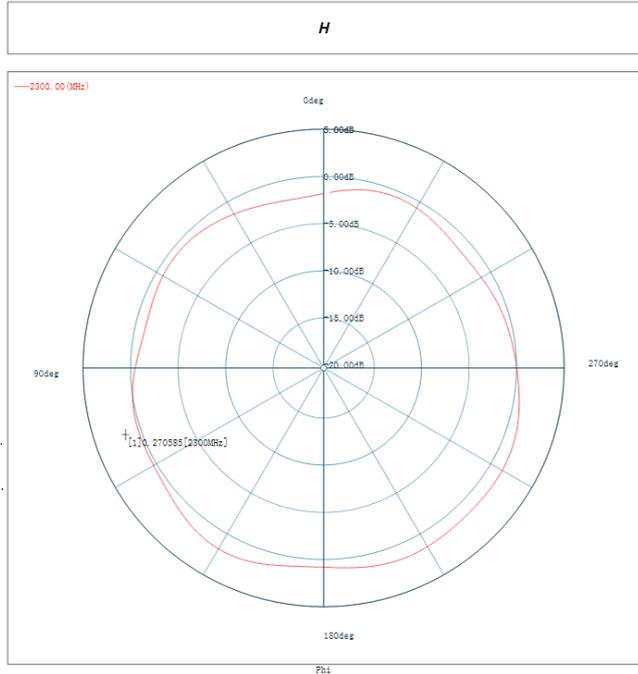
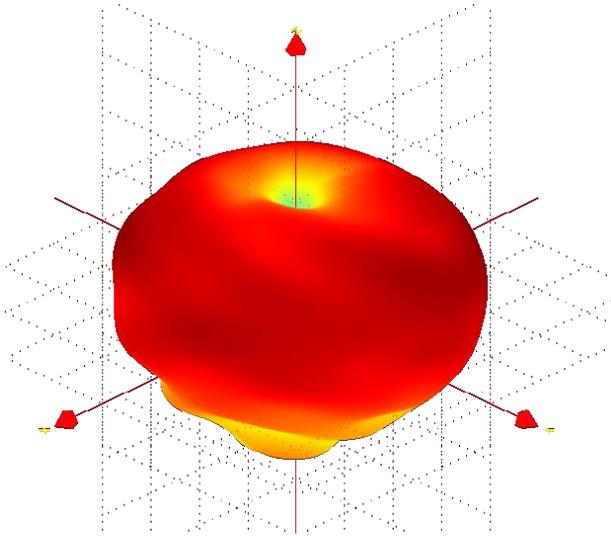
960 MHz



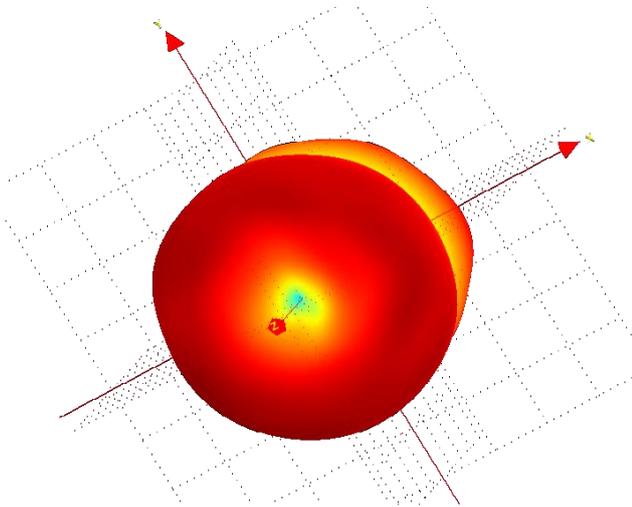
1710 MHz



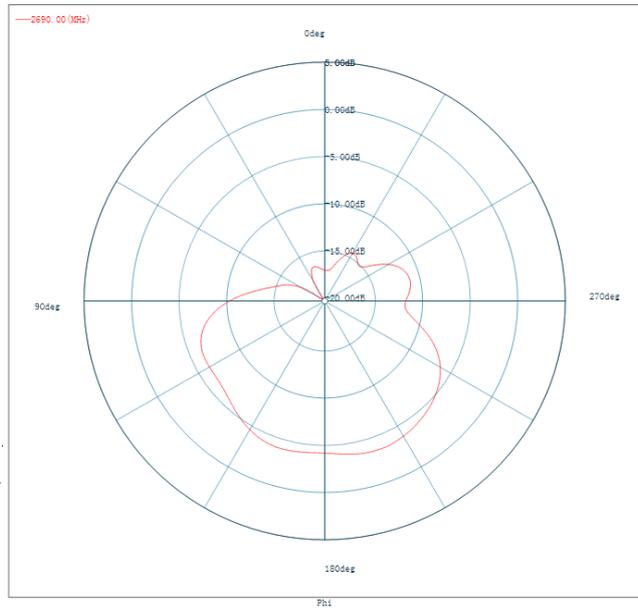
2300 MHz



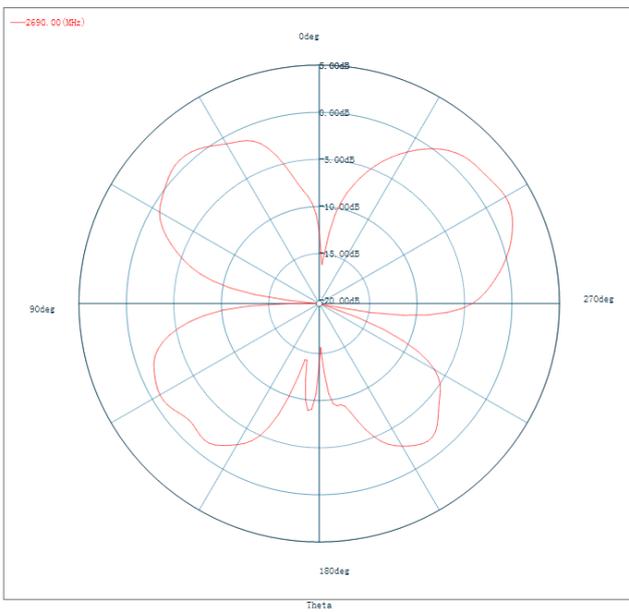
2690 MHz



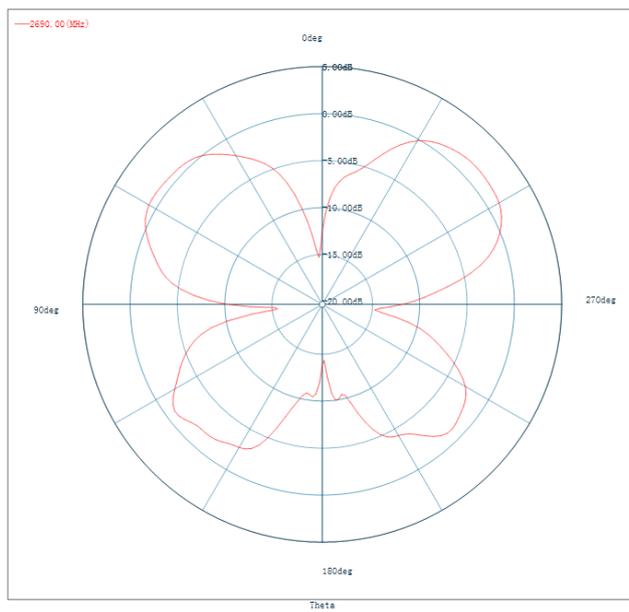
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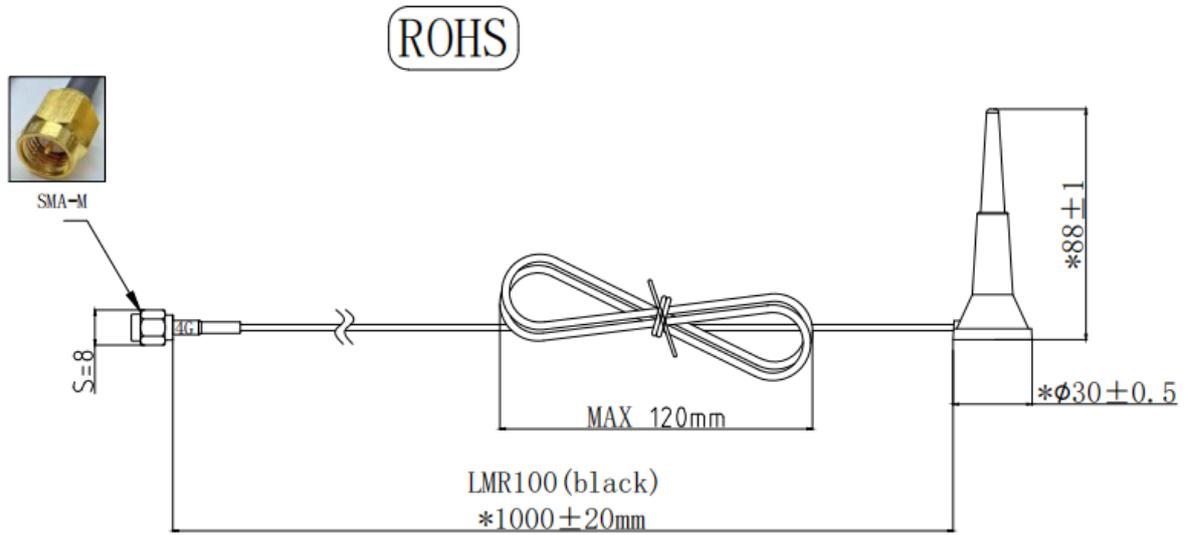
E1



E2



5 Product Size



Unit: mm