

Antenna

YRM00A2AA Datasheet

Antenna Services

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Status: Preliminary



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About the Document

Revision History

Version	Date	Author	Note
-	2022-07-27	Qinming Peng/ Jason Long	Creation of the document
1.0	2022-07-27	Qinming Peng/ Jason Long	First official release

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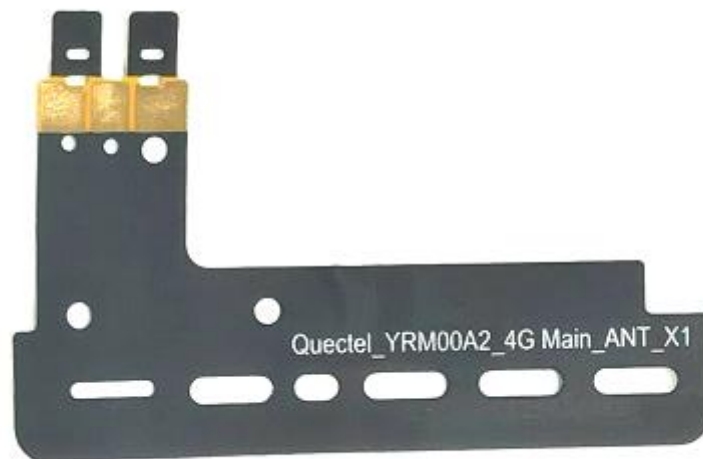
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1 Product Description

This Quectel embedded 4G FPC antenna covers main 4G LTE bands and is compatible with 3G/2G/LPWA bands. Featuring high efficiency and gain, it is an ideal antenna for a smooth and stable connection with high-efficiency data transmission even under the influence of the device's internal structure. Ground plane independent, it's designed to be mounted directly to the underside of either a plastic or non-metallic enclosure. Ease of integration with a cable and connector which can be customized to meet your product design and RF module.

2 Product Features

- Cellular 4G
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	700MHz-900MHz; 1710MHz-2200 MHz
Input Impedence	50 Ω
VSWR	≤ 8.0
Gain	≤ 2 dBi
Polarization Type	Linear

Detailed Passive Electrical Specifications

Frequency Range (MHz)	700-900	1710–2200
VSWR (Max.)	7.98	3.0
Average Efficiency (%)	36.01	45.54
Max. Peak Gain (dBi)	0.37	1.72

Mechanical Specifications

Antenna Size(mm)	55.49×34.27
Material	FPC
Working Temperature	-40 °C to +85 °C
Weight	Typical 0.28g
Color	Black
Mounting Type	Adhesive

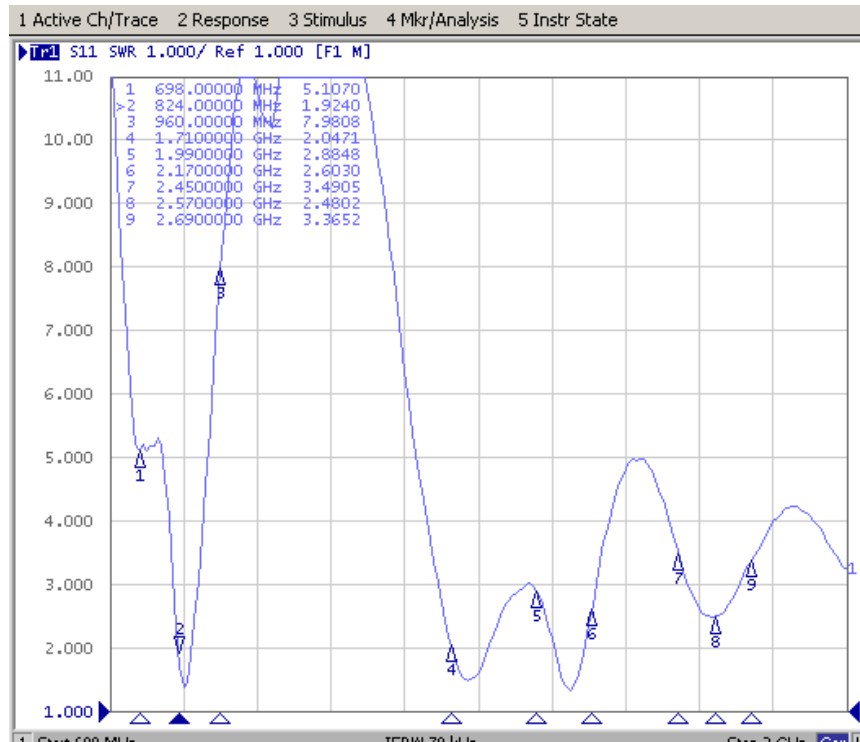
4 Overall Performance

4.1. Test Environment

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

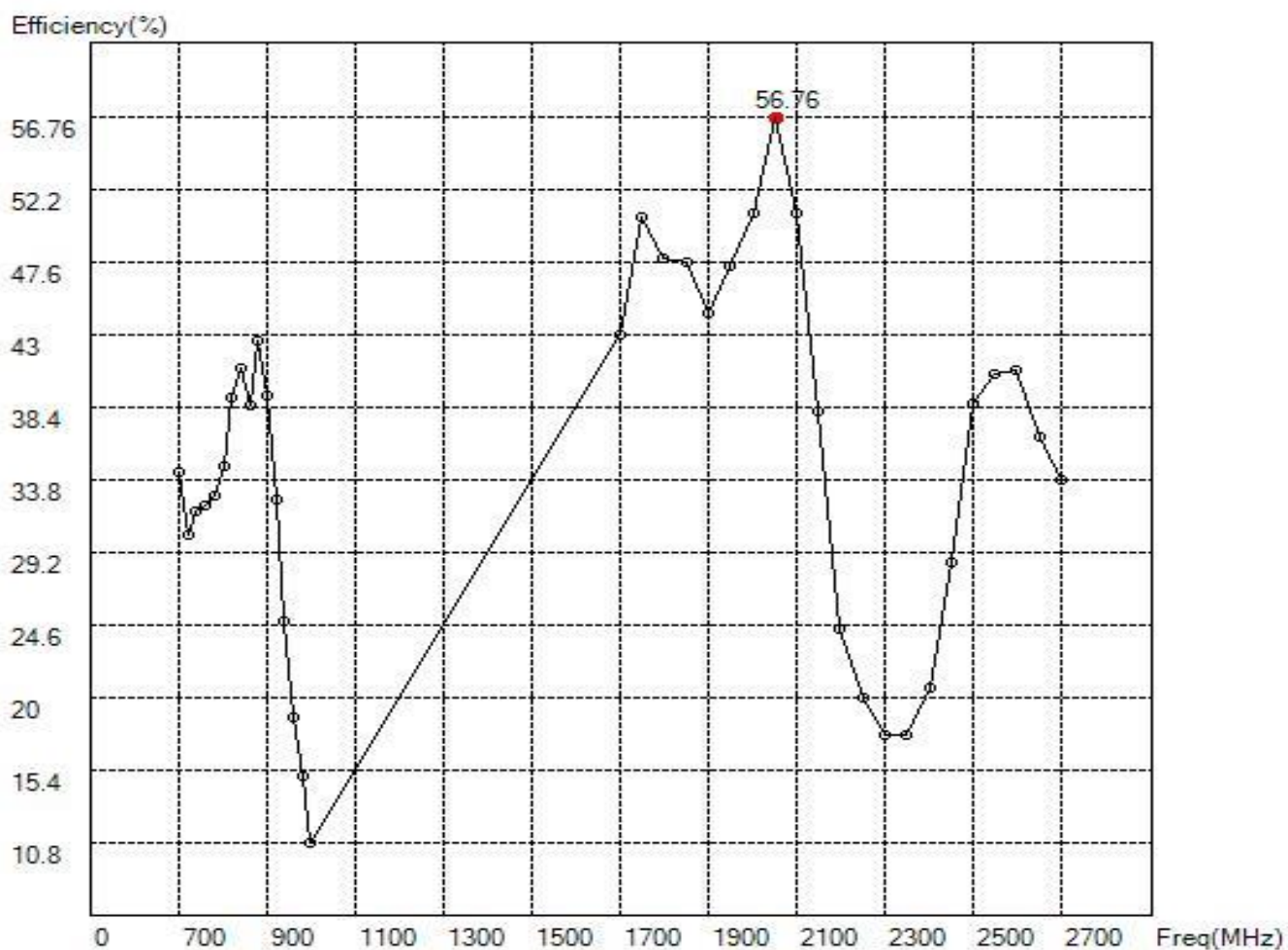


4.2. VSWR



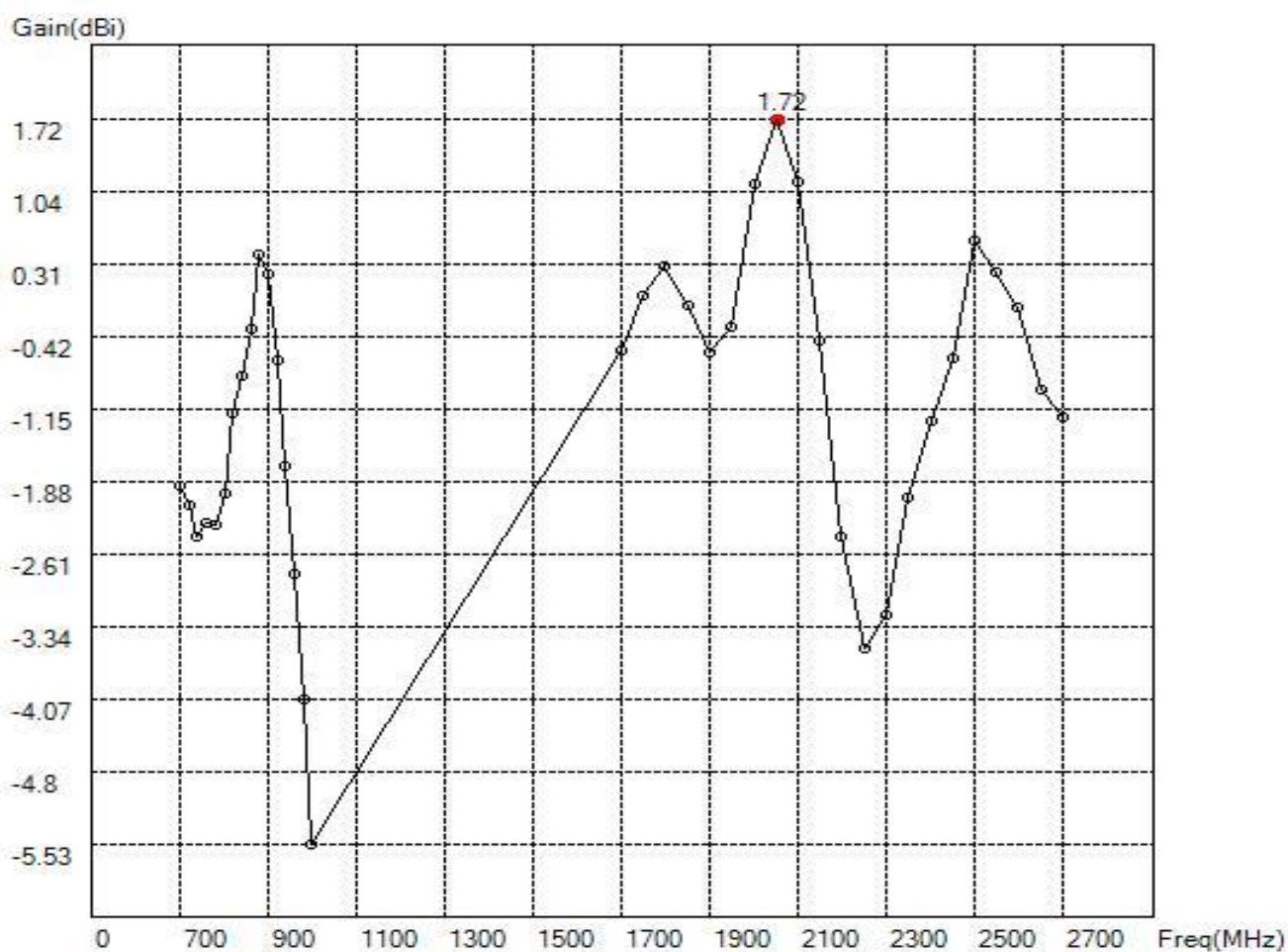
Frequency (MHz)	698	824	960	1710	1990	2170	2450	2570	2690
VSWR	5.1	1.92	7.98	2.04	2.88	2.6	3.49	2.48	3.36

4.3. Efficiency



Frequency (MHz)	700	840	960	1700	1950	2150	2200
Efficiency (%)	34.31	40.86	18.76	43.03	47.27	38.11	24.34

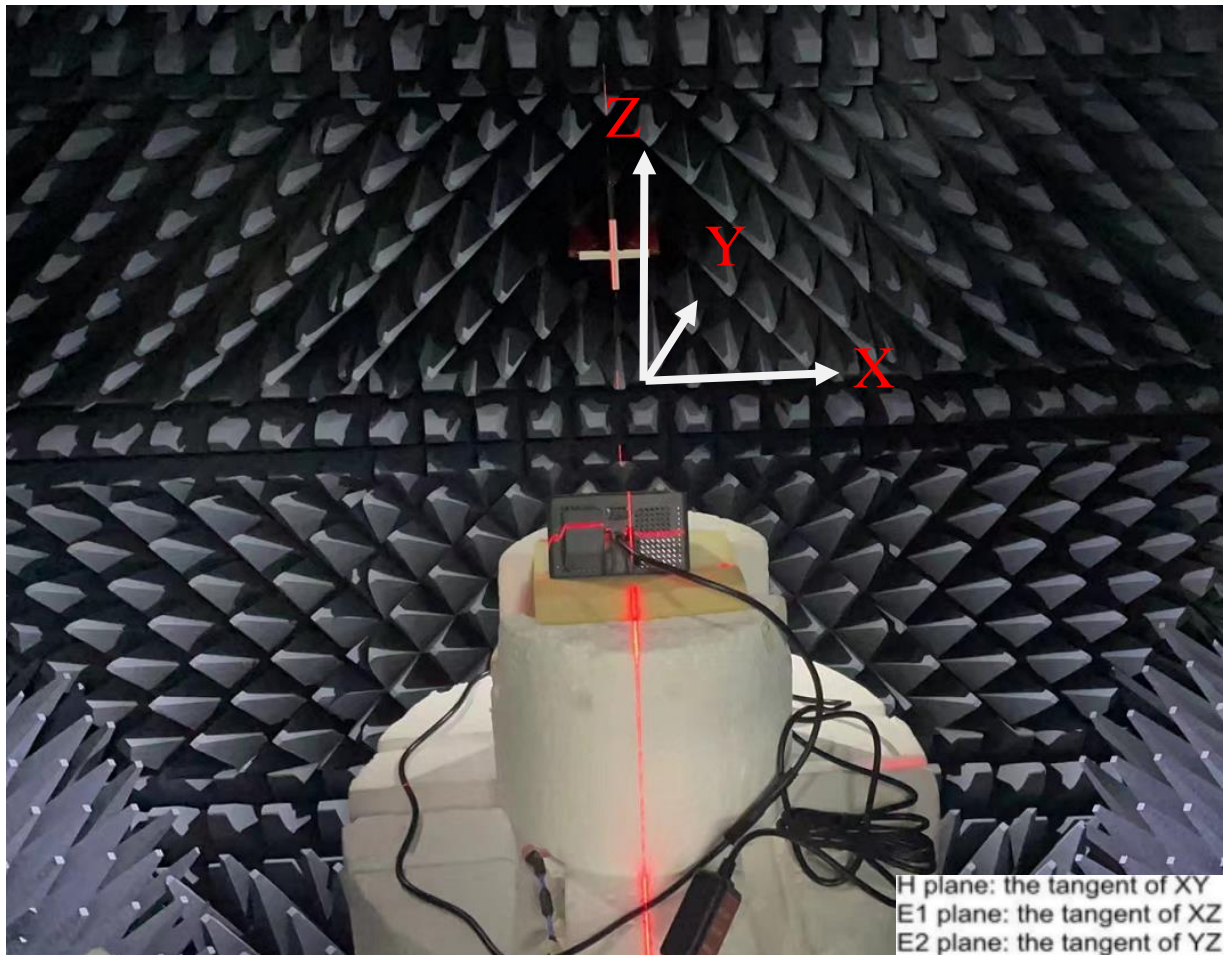
4.4. Gain



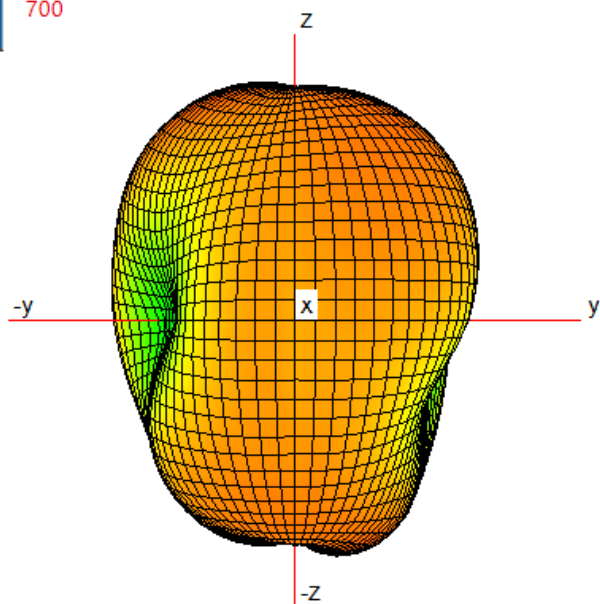
Frequency (MHz)	700	840	960	1700	1950	2150	2200
Gain (dBi)	-1.94	-0.84	-2.83	-0.59	-0.35	-0.50	-2.46

4.5. Radiation Pattern

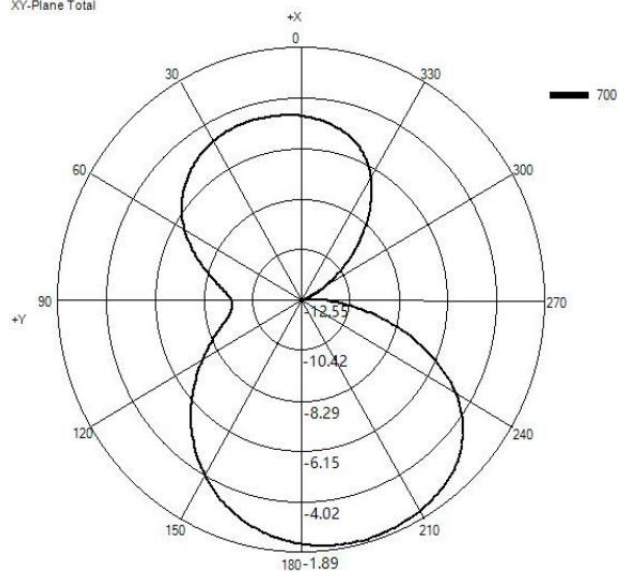
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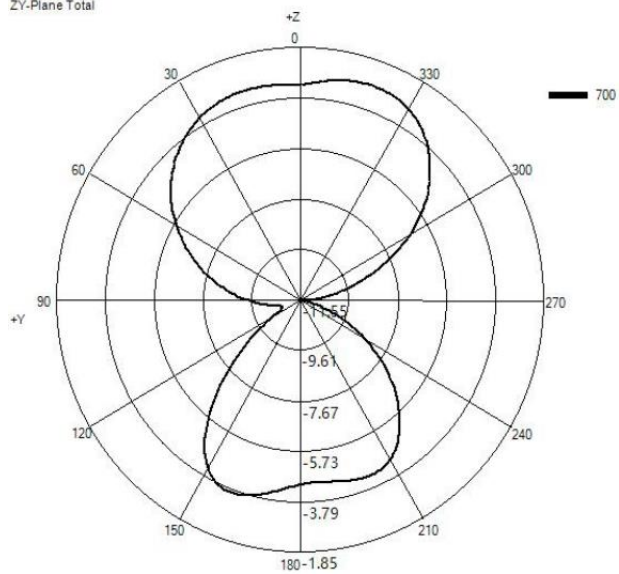
700



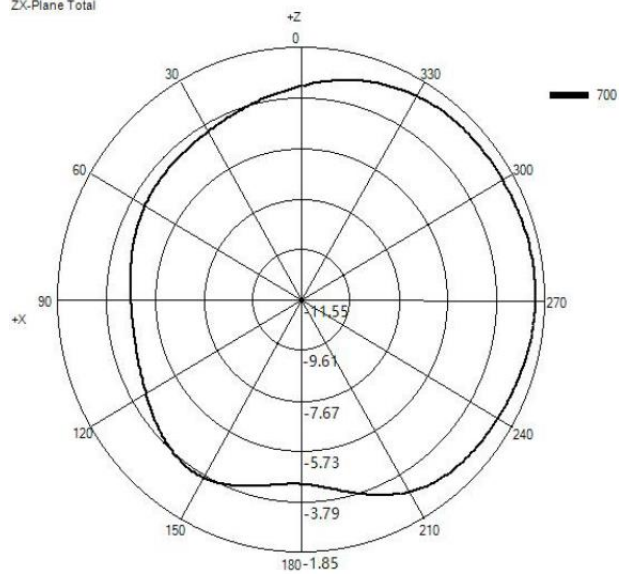
XY-Plane Total



ZY-Plane Total

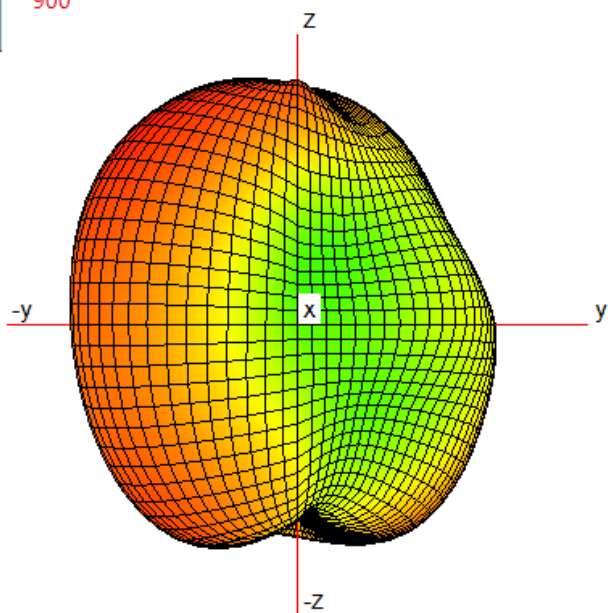


ZX-Plane Total

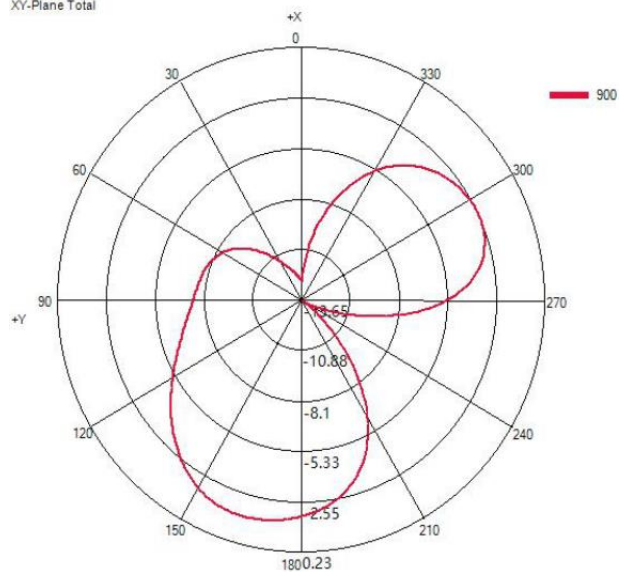




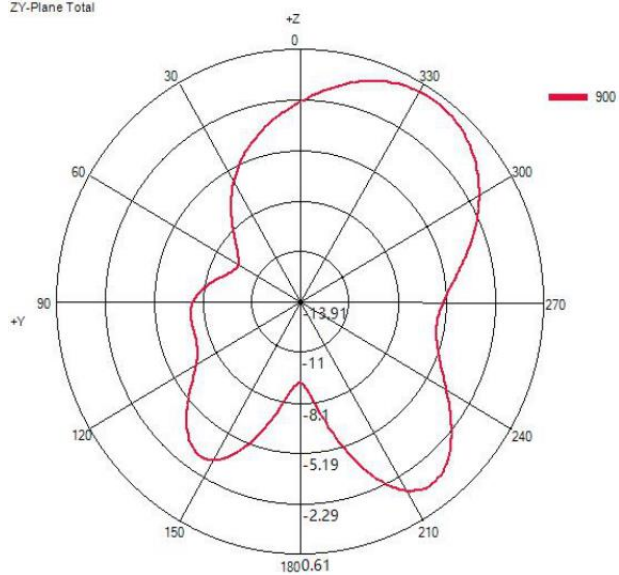
900



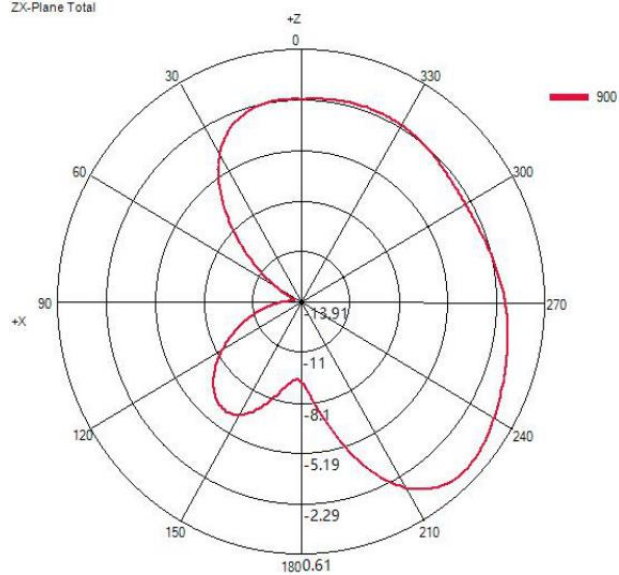
XY-Plane Total



ZY-Plane Total

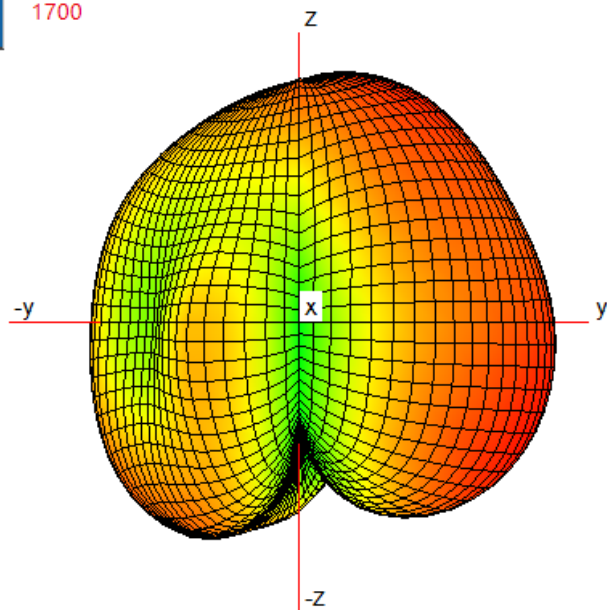


ZX-Plane Total

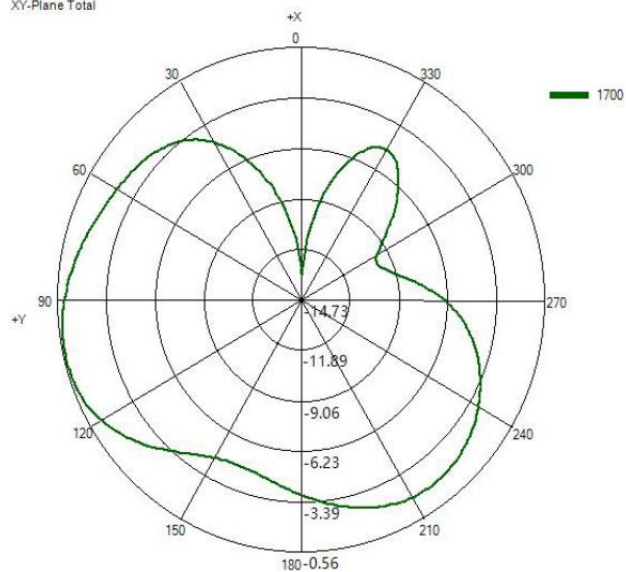




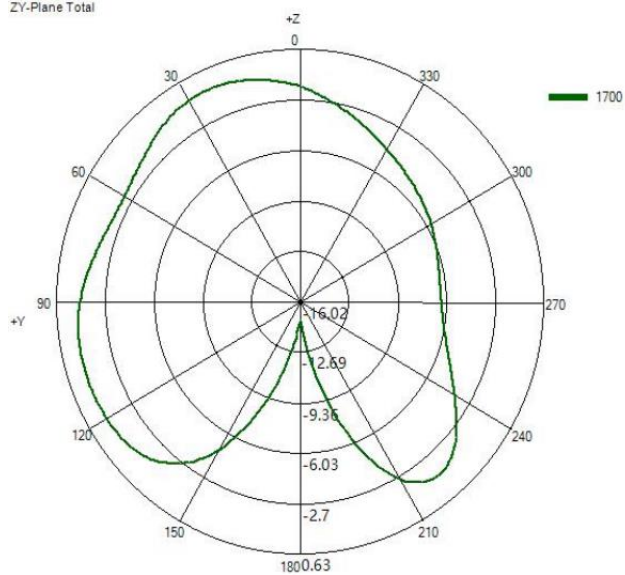
1700



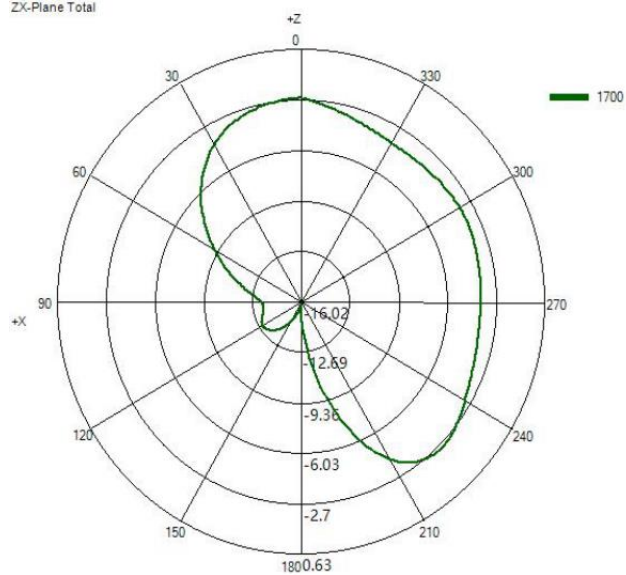
XY-Plane Total



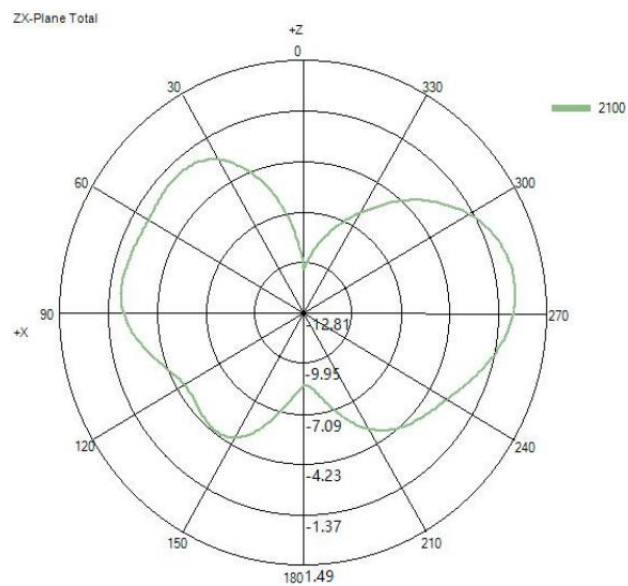
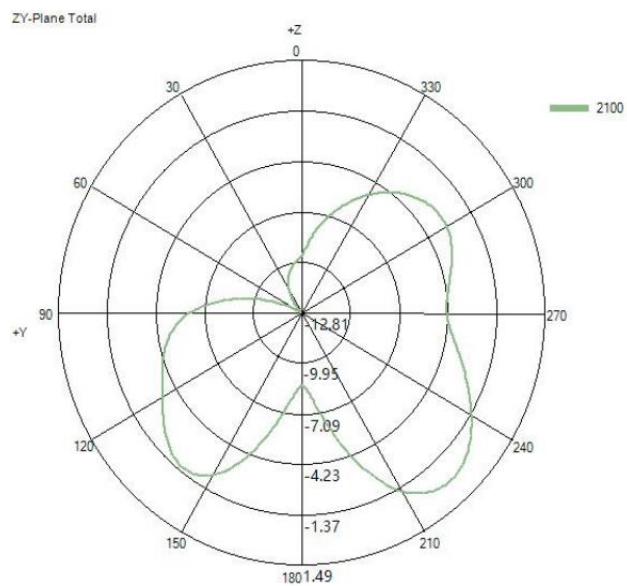
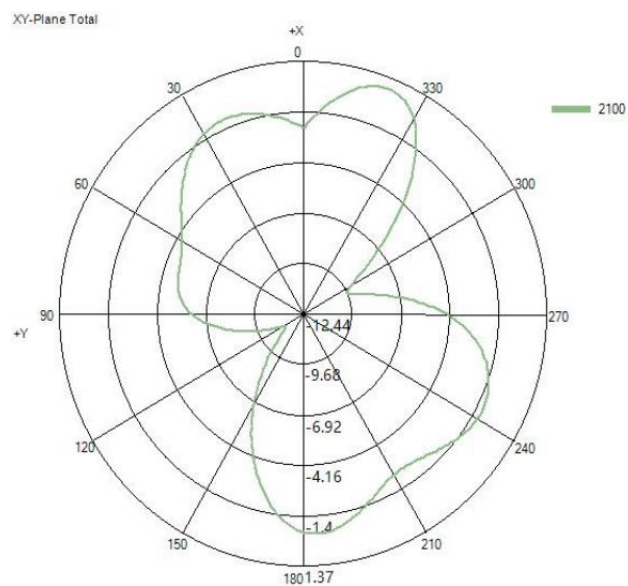
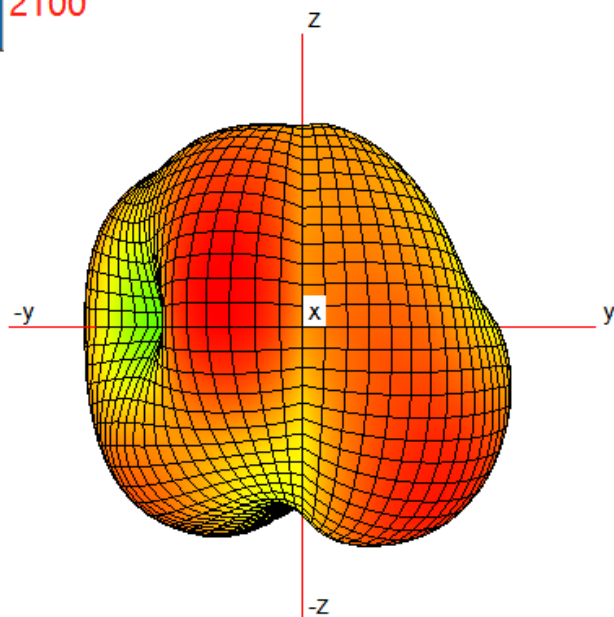
ZY-Plane Total



ZX-Plane Total



2100



4.6. Activedata

开关匹配为: RF1/3/4 为 0 欧姆下地, RF2 为 9.1nh 下地

模块编号 (EC25-AF)	B2(10M)			B4(10M)			B5(10M)			B12(10M)		
	20.66	21.73	20.47	21.88	22.64	22.66	21.9	20.8	21.66	19.1	19.52	20.72
	-95.22	-95.38	-95.38	-94.71	-95.25	-94.98	-91.31	-91.81	-91.16	-97.02	-96.96	-96.36

模块编号 (EC25-AF)	B13(10M)	B14(10M)	B66 (10M)			B71(10M)		
	21.31	22.19	20.42	21.29	21.31	17.63	16.83	17.92
	-93.63	-92.09	-95.67	-96.83	-94.57	-91.17	-92.05	-91.05

5 Product Size

