

Antenna

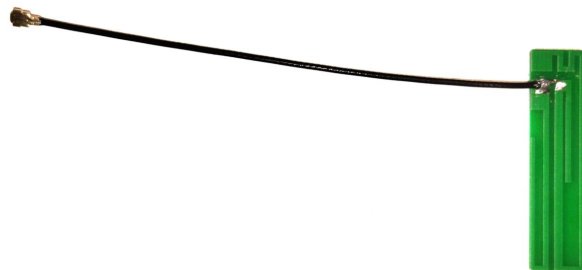
YPCA004AA Datasheet

Antenna Services

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Quectel Wireless Solutions Co., Ltd.

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai 200233, China

Tel: +86 21 5108 6236

Email: info@quectel.com

Or our local offices. For more information, please visit:

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About the Document

Revision History

Version	Date	Author	Note
-	2021-07-05	Jason LONG/ Aria CHU	Creation of the document
1.0	2021-07-05	Jason LONG/ Aria CHU	First official release
1.1	2021-11-27	Jason LONG/ Aria CHU	Updated the product description in Chapter 1
2.0	2022-12-28	Eleven RONG	Updated datasheet data in Chapter 4

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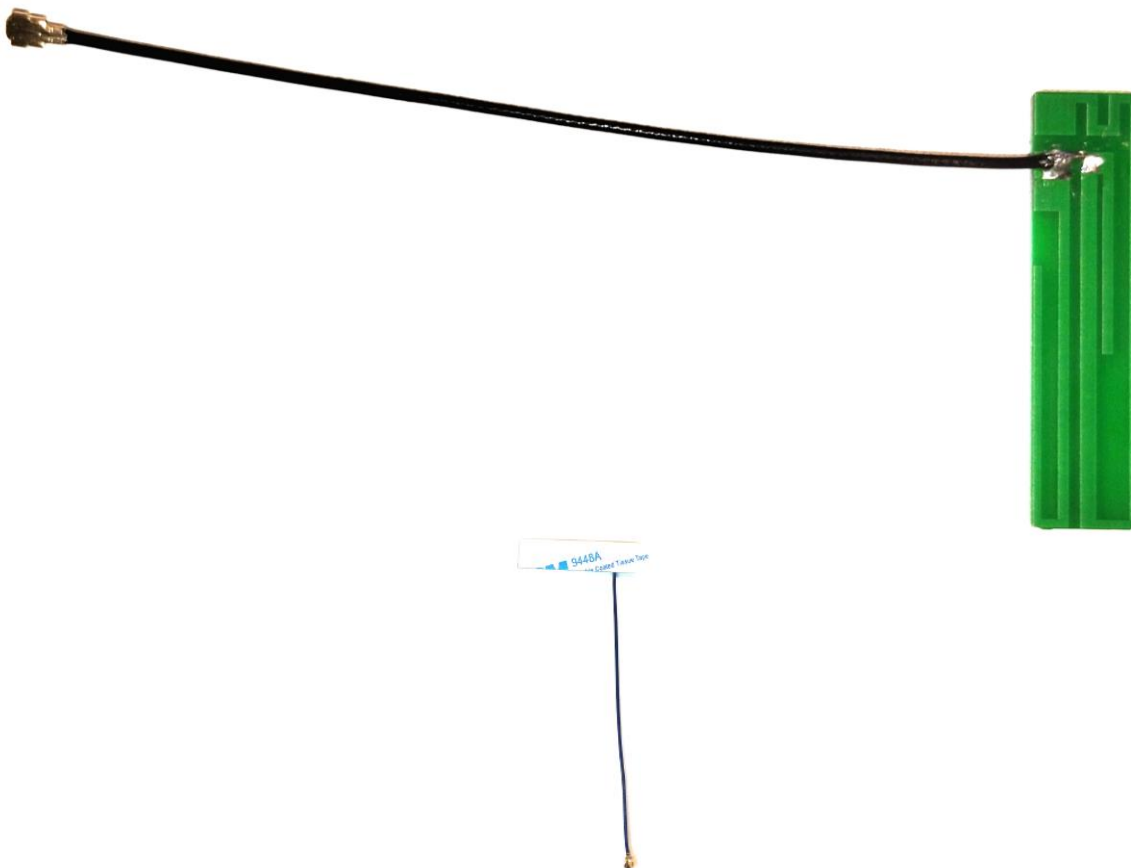
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1 Product Description

This Quectel embedded 4G FPC/PCB 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

- LTE
- Small and exquisite
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	700–960 MHz, 1710–2690 MHz
Input Impedance	50 Ω
VSWR	≤ 8.0
Gain	≤ 2.3 dBi
Polarization Type	Linear

Mechanical Specifications

Antenna Size (mm)	40 × 10 × 1
Material	PCB
Cable Type	$\Phi 1.13$ Black
Connector	IPEX I
Working Temperature	-40 °C to +85 °C
Color	Green
Mounting Type	Adhesive

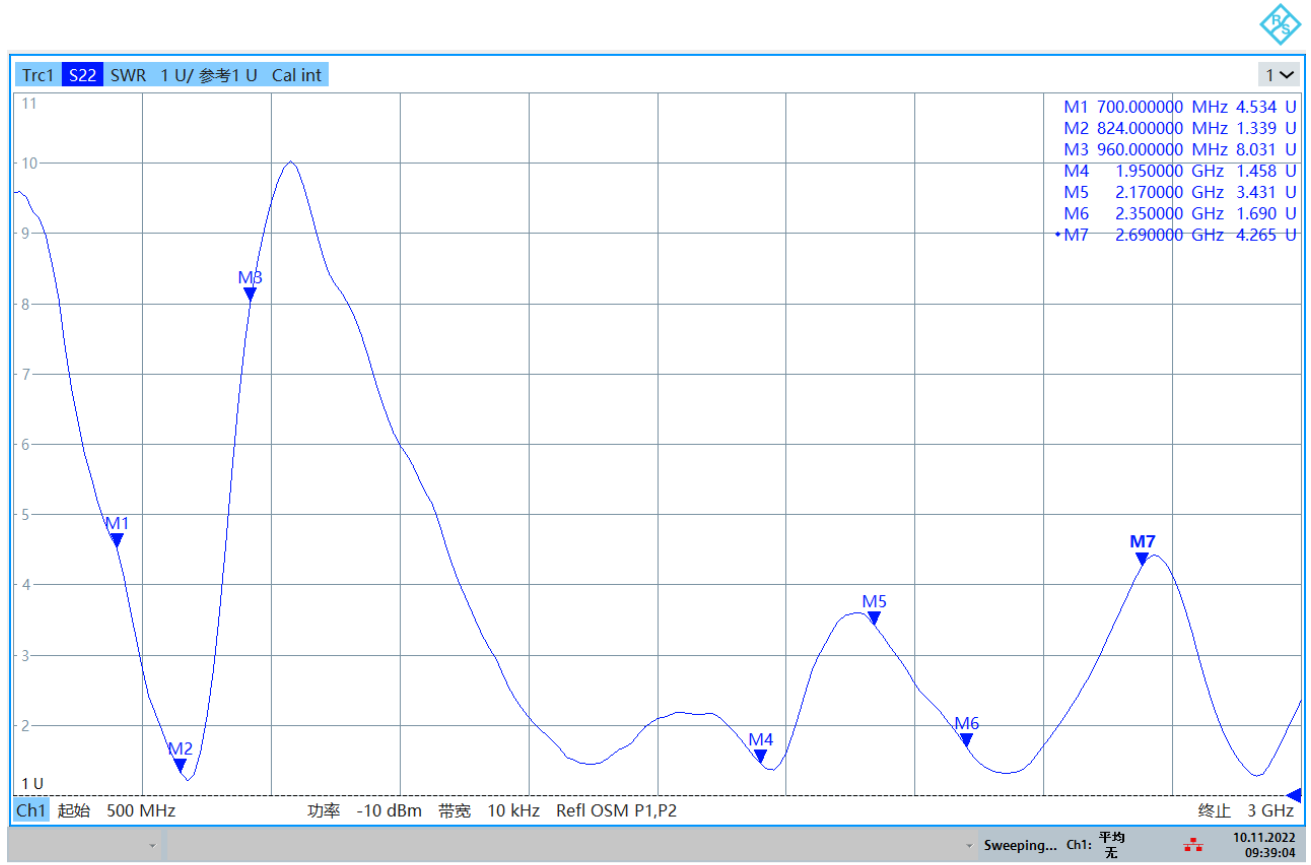
4 Overall Performance

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



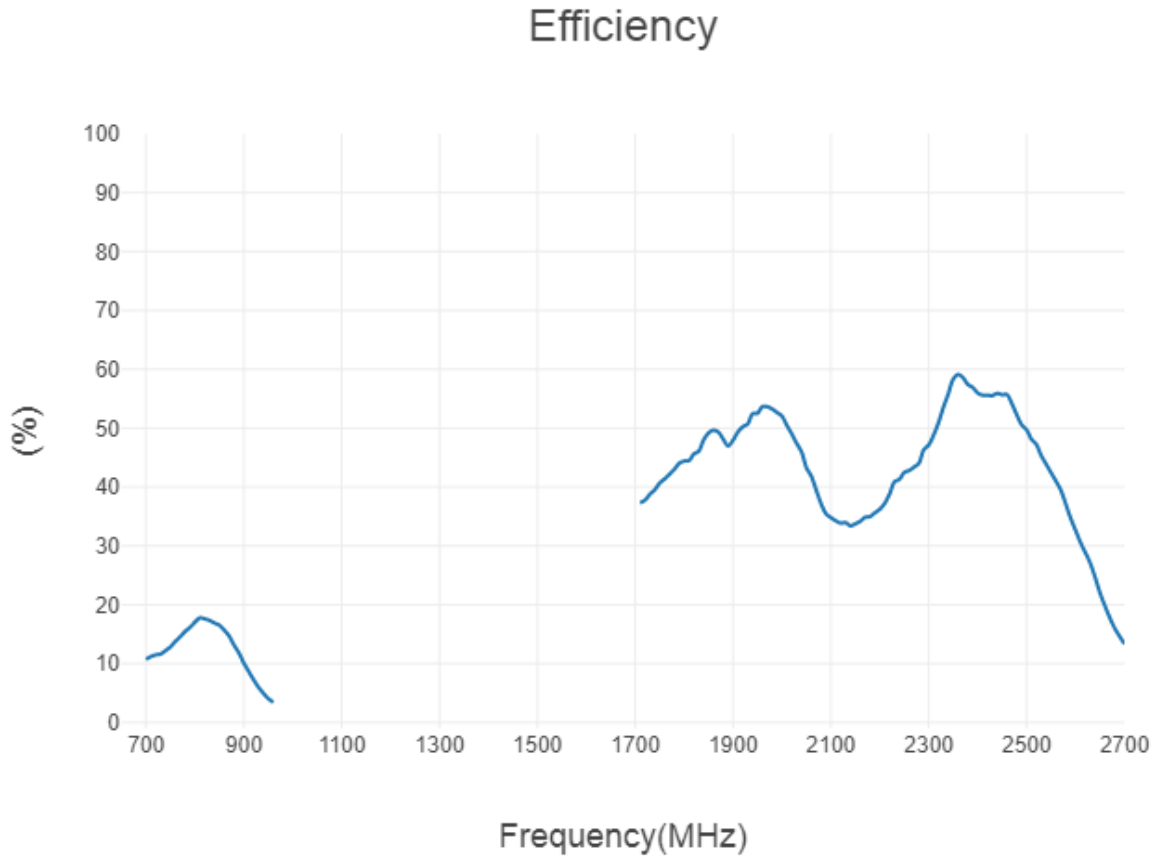
4.2. VSWR



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Frequency (MHz)	700	830	960	1710	1950	2170	2300	2690
VSWR	4.53	1.2	8.03	2.1	1.46	3.43	2.3	4.27

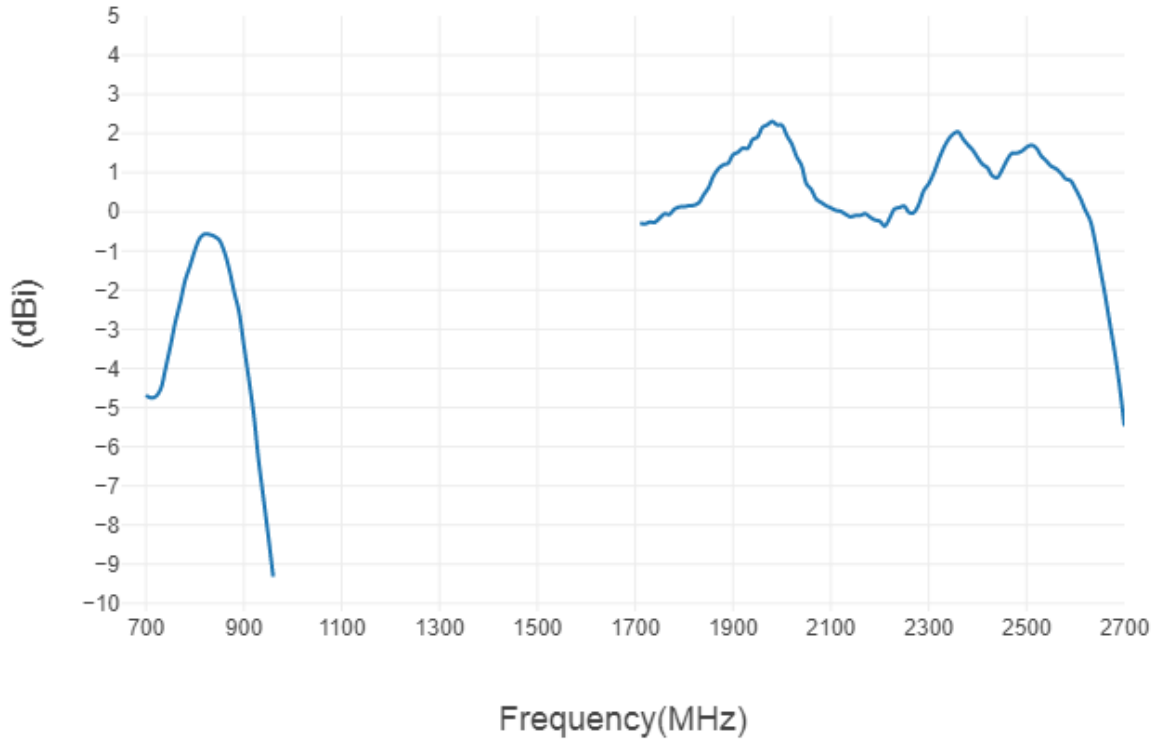
4.3. Efficiency



Frequency (MHz)	700	830	960	1710	1950	2170	2300	2690
Efficiency (%)	10.7	17.3	3.4	37.3	52.5	34.9	47.1	14.7

4.4. Gain

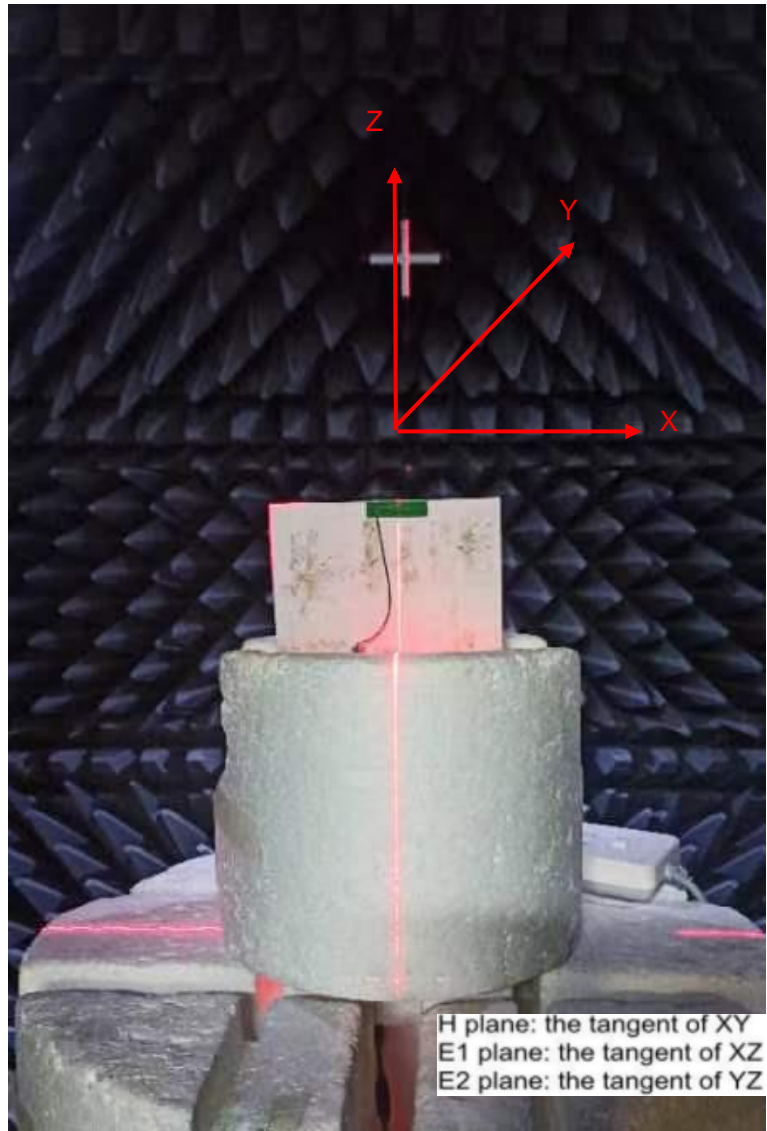
Peak Gain



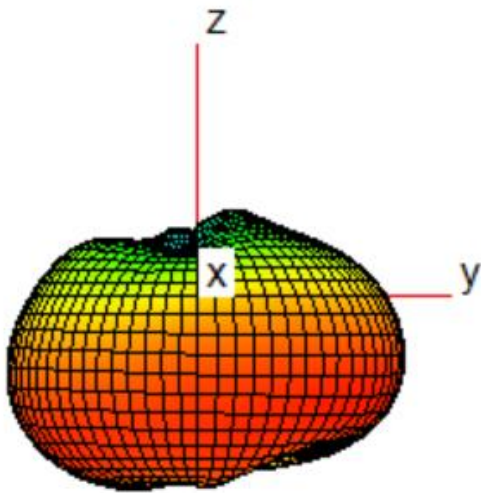
Frequency (MHz)	700	830	960	1710	1950	2170	2300	2690
Gain (dBi)	-4.75	-0.58	-9.31	-0.29	1.91	-0.05	0.71	-4.43

4.5. Radiation Pattern

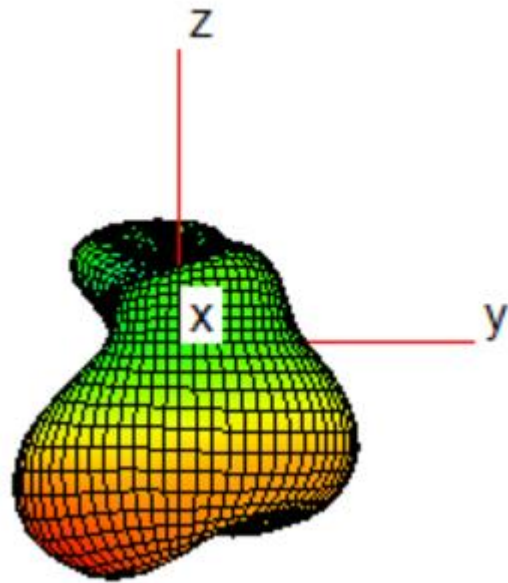
- Test condition: free space.



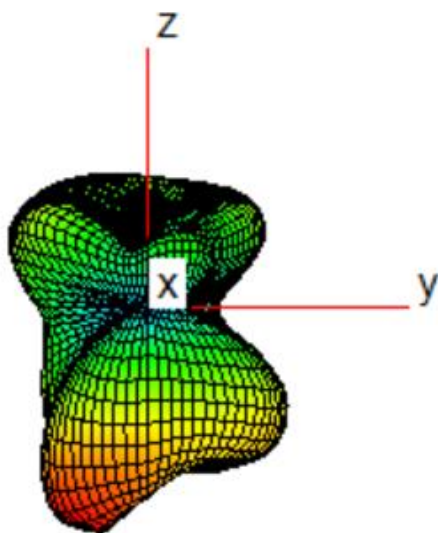
700 MHz



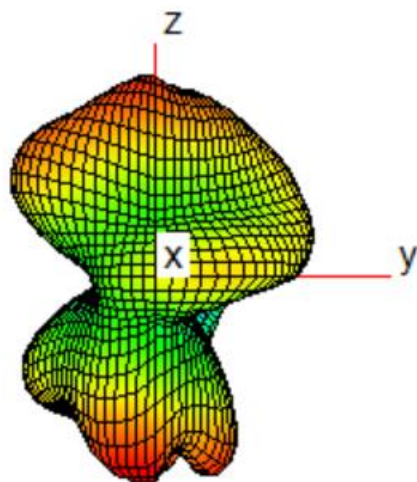
830 MHz



960 MHz

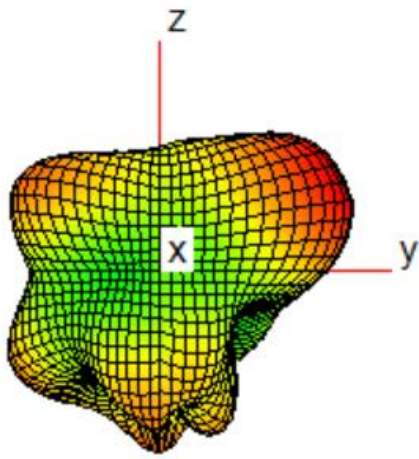


1710 MHz

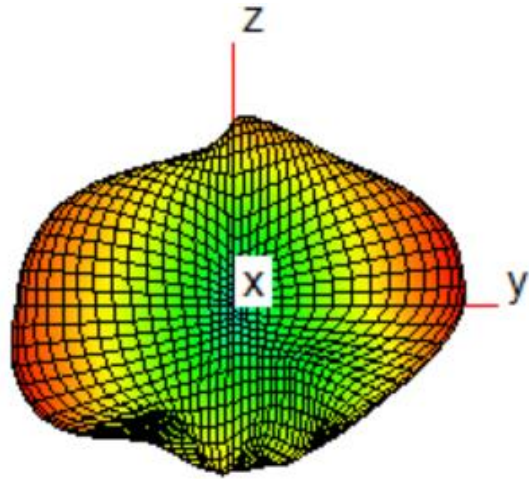


1950 MHz

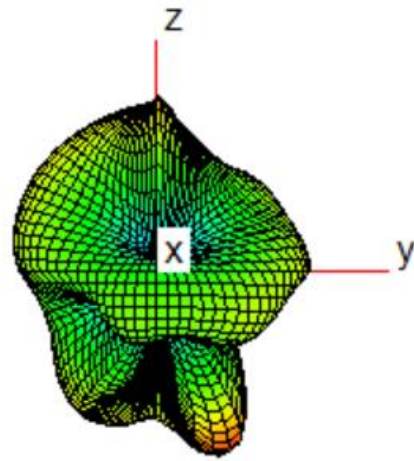
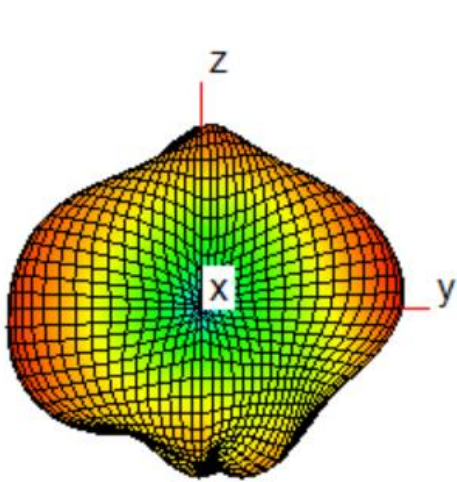
2170 MHz



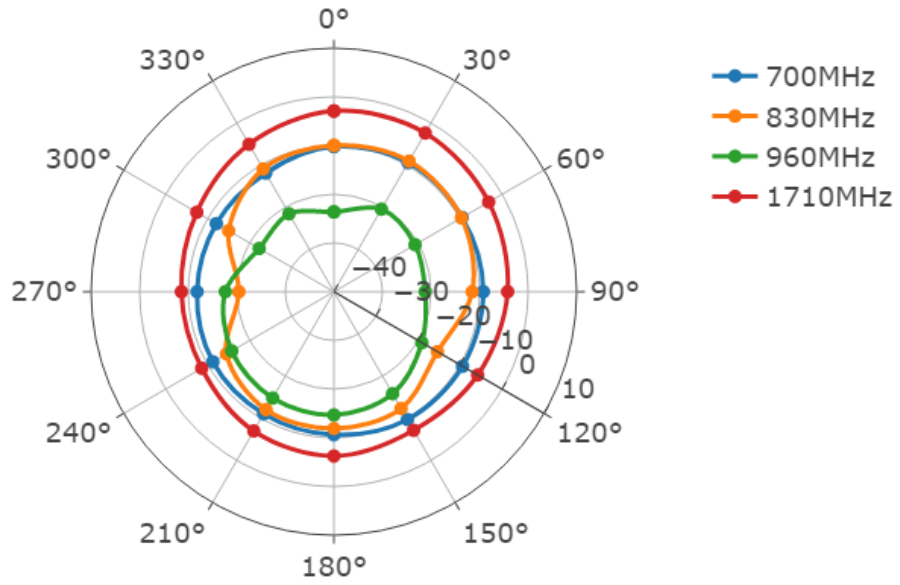
2300 MHz



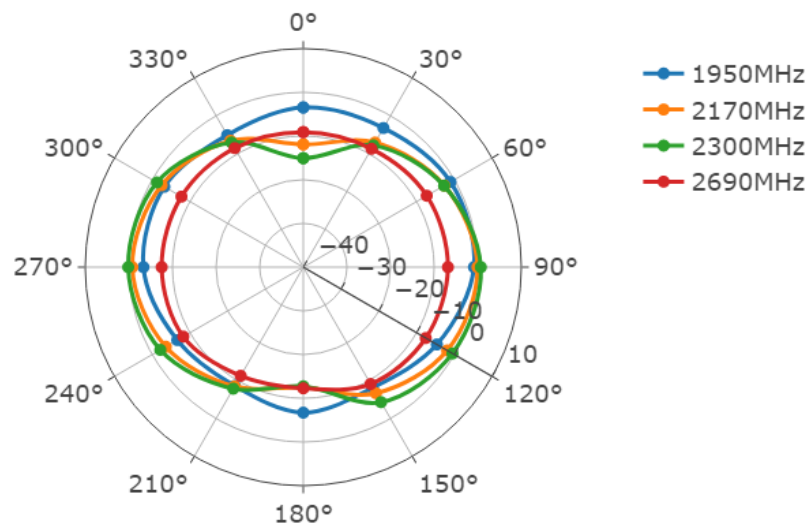
2690 MHz



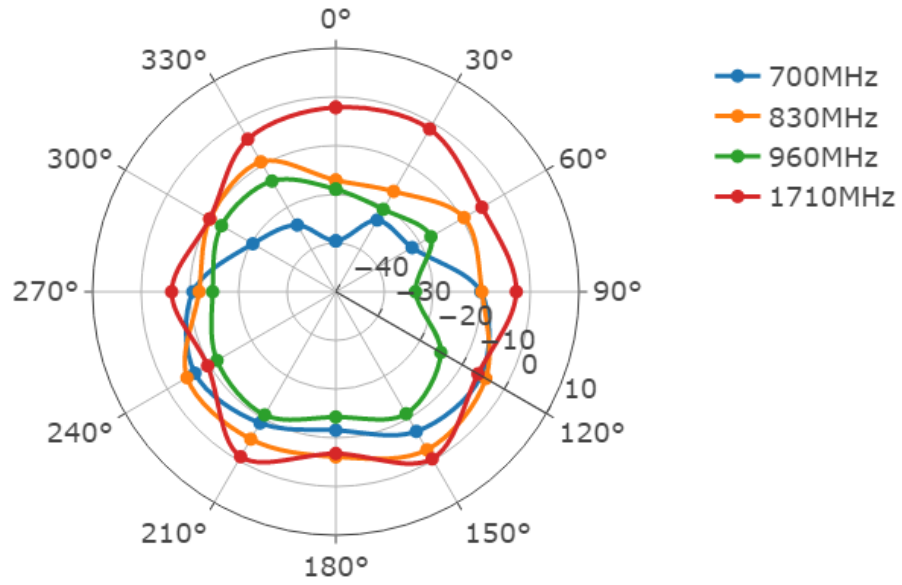
H Plane:XY



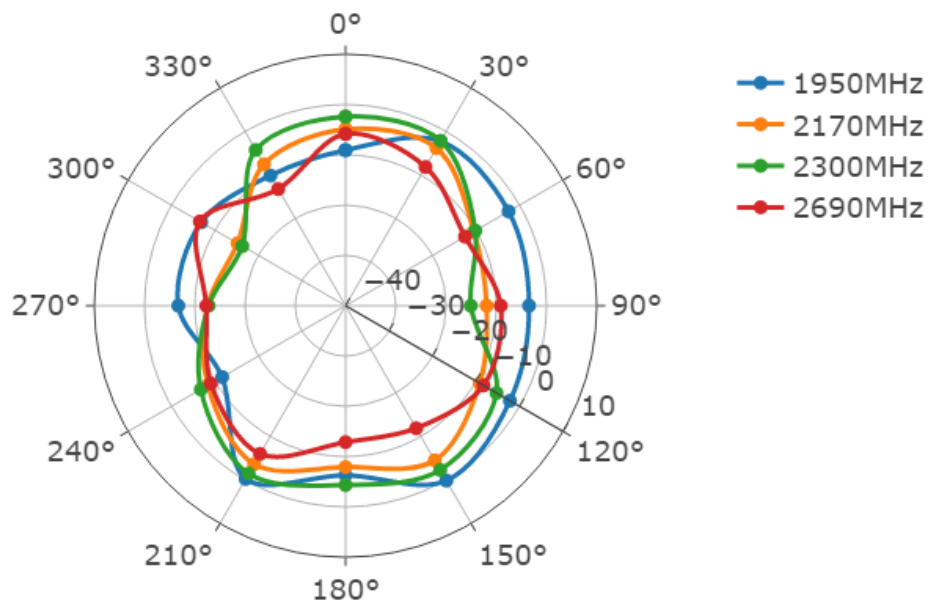
H Plane:XY



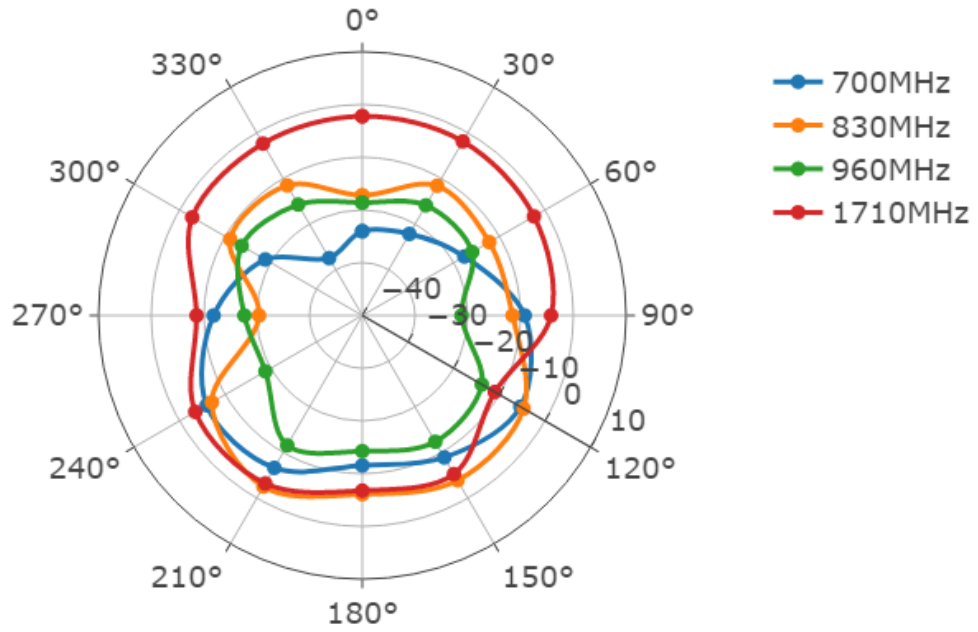
E1 Plane:XZ



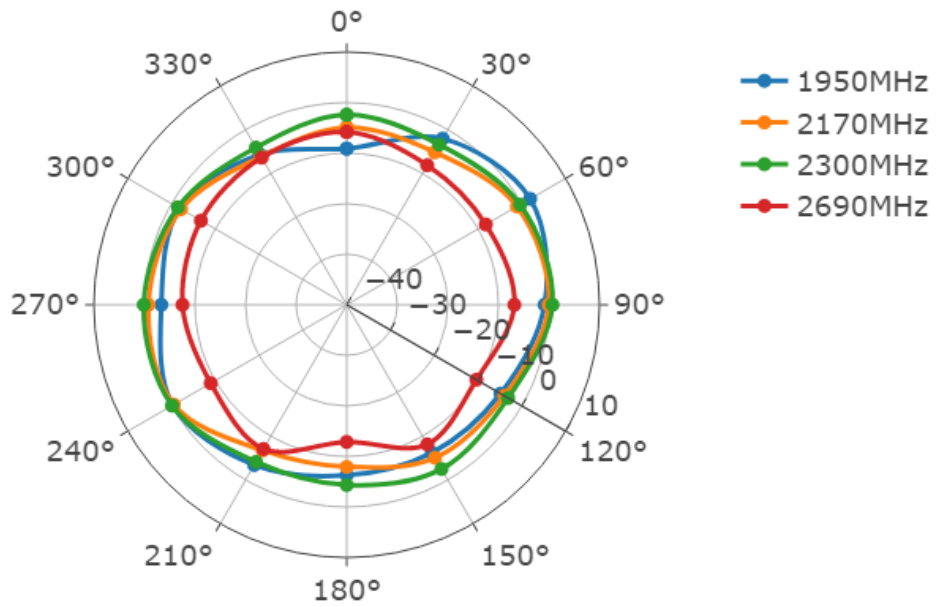
E1 Plane:XZ



E2 Plane:YZ



E2 Plane:YZ



5 Product Size

