

Antenna

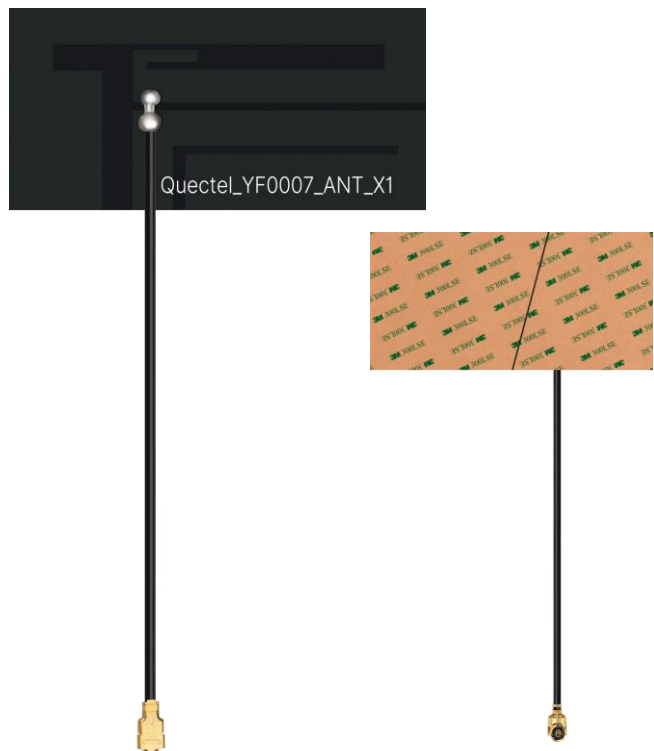
YF0007KA Datasheet

Antenna Services

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About the Document

Revision History

Version	Date	Author	Note
-	2022-07-25	Richard LIU/ Joye WANG	Creation of the document
1.0	2022-07-25	Richard LIU/ Joye WANG	First official release

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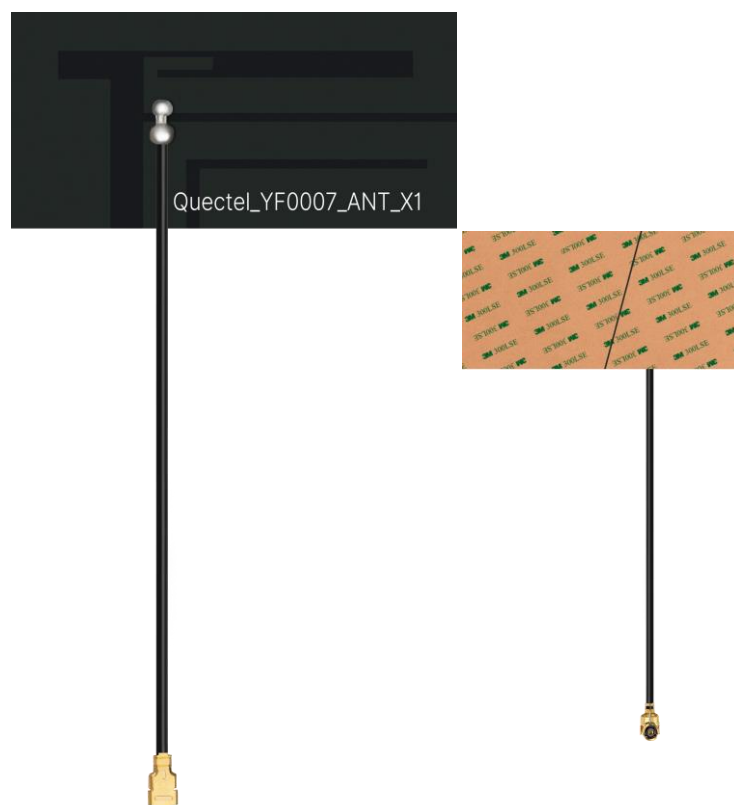
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1 Product Description

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 antenna
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	600–960 MHz; 1427.9–1495.9 MHz 1710–2170 MHz; 2300–2700 MHz
Input Impedence	50 Ω
VSWR	≤ 6.86
Gain	≤ 1.86 dBi
Polarization Type	Linear

Mechanical Specifications

Antenna Size (mm)	50 × 25 × 0.8
Material	PCB
Cable Type & Length	Φ 1.37 Black & 74.5 mm
Connector	IPEX 1
Color	Black
Weight	Typ. 3 g
Mounting Type	Adhesive
Working Temperature	-40 °C to +85 °C

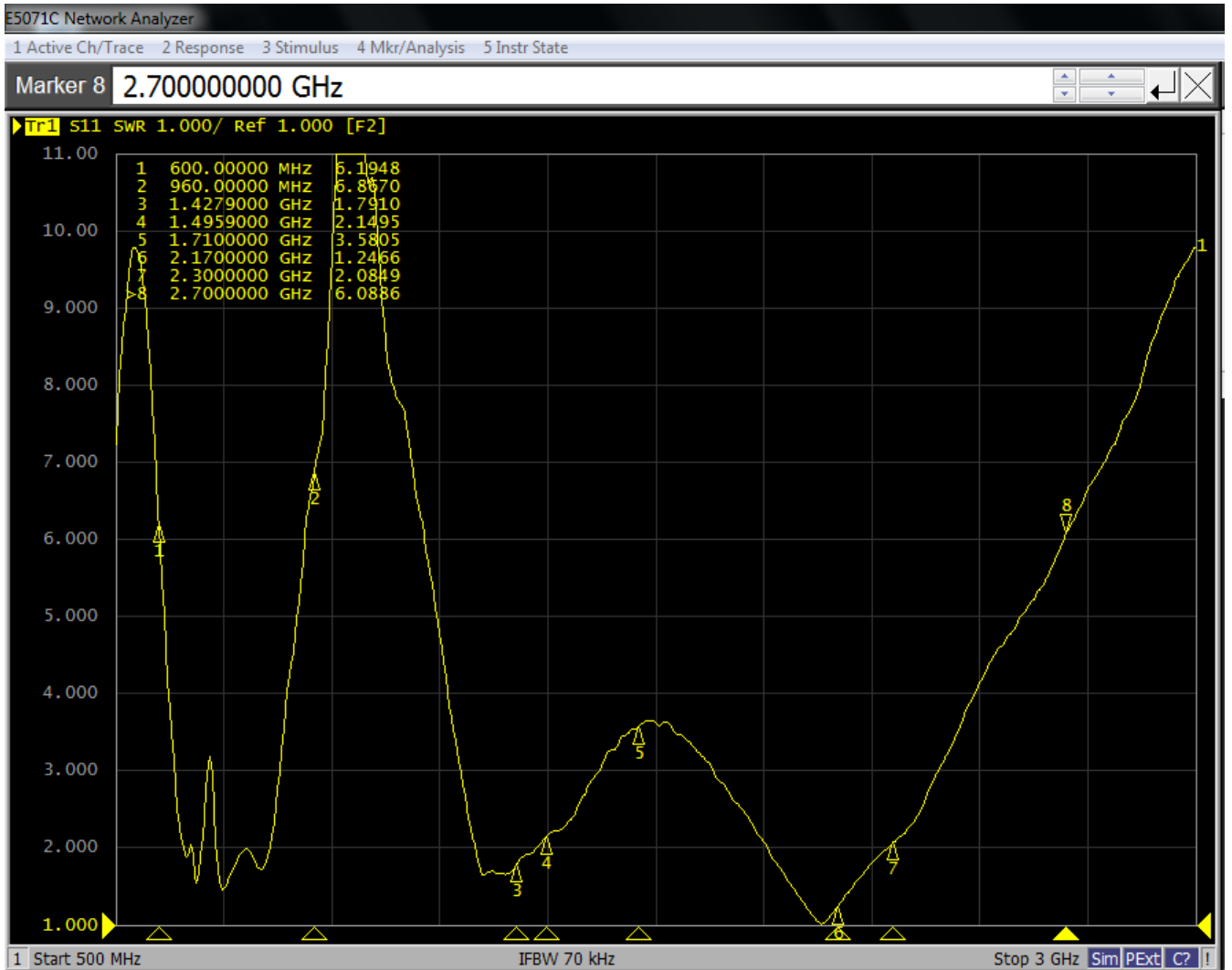
4 Overall Performance

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

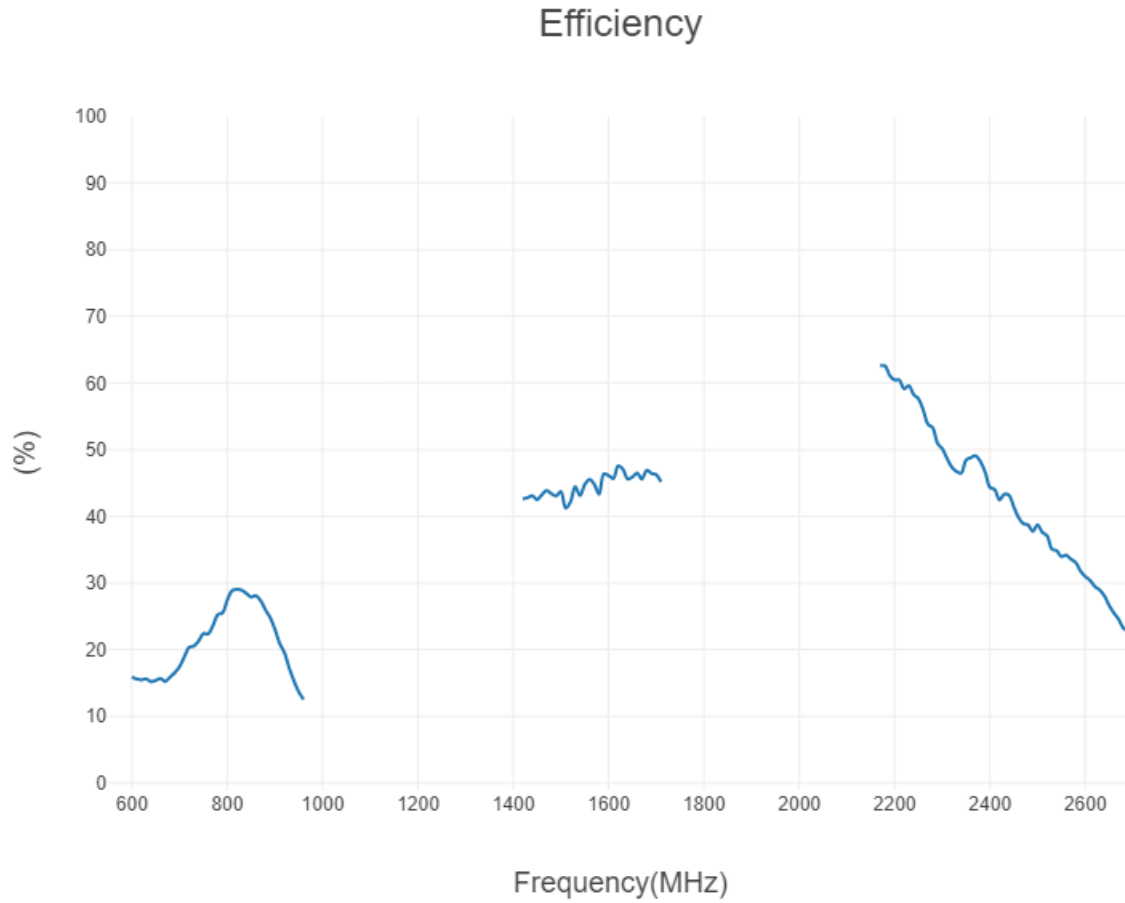


4.2. VSWR



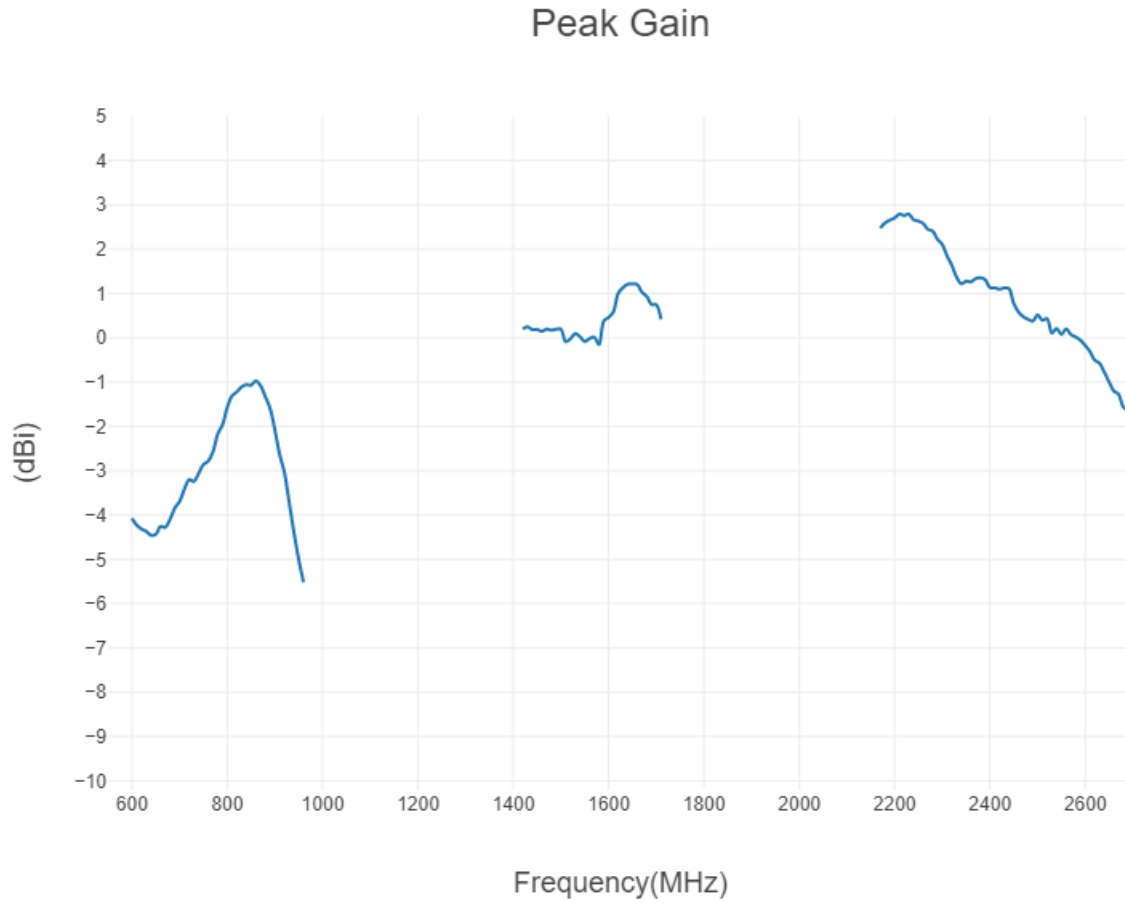
Frequency (MHz)	600	960	1427.9	1495.9	1710	2170	2300	2700
VSWR	6.19	6.86	1.79	2.15	3.58	1.25	2.08	6.09

4.3. Efficiency



Frequency (MHz)	600	960	1427.9	1495.9	1710	2170	2300	2700
Efficiency (%)	14.3	12.6	40.87	39.7	44.0	64.0	53.6	22.8

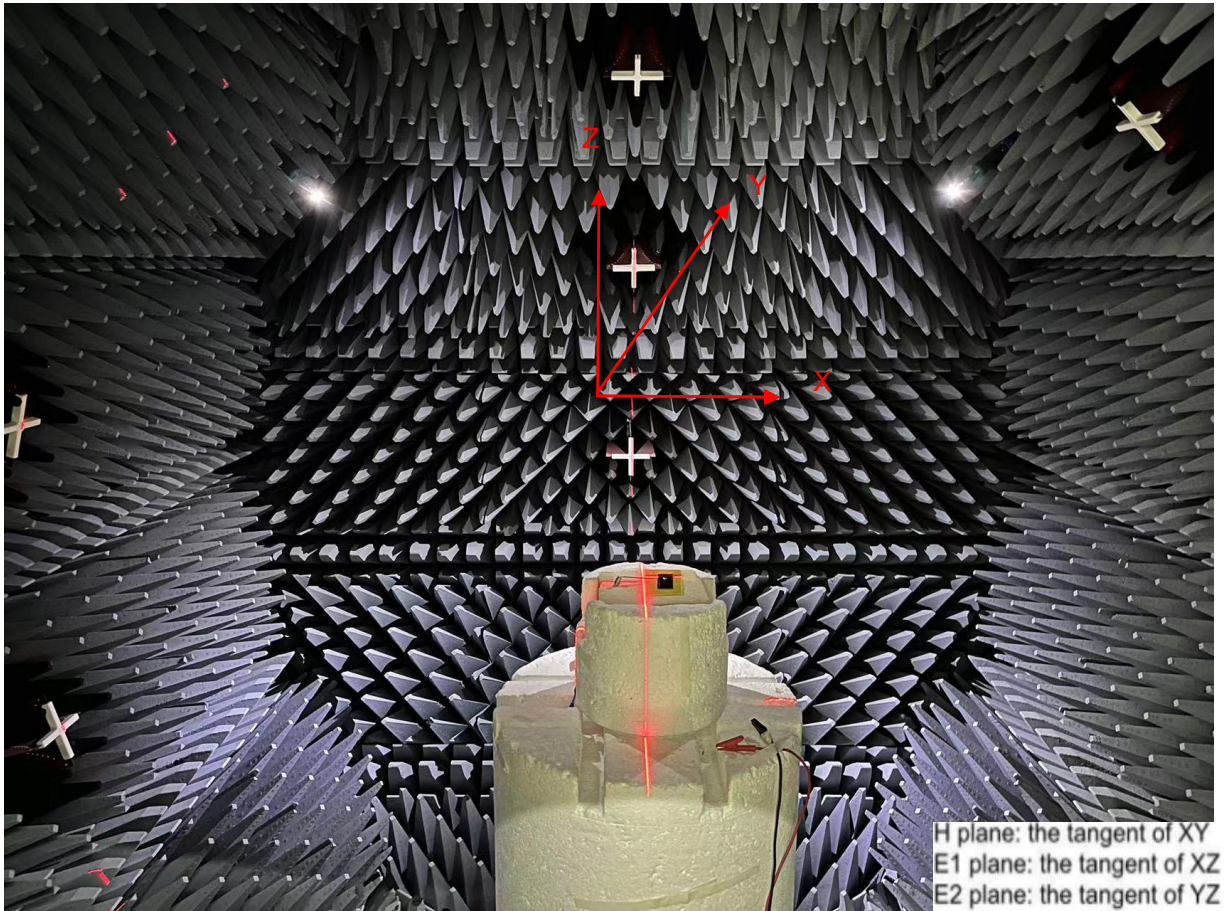
4.4. Peak Gain

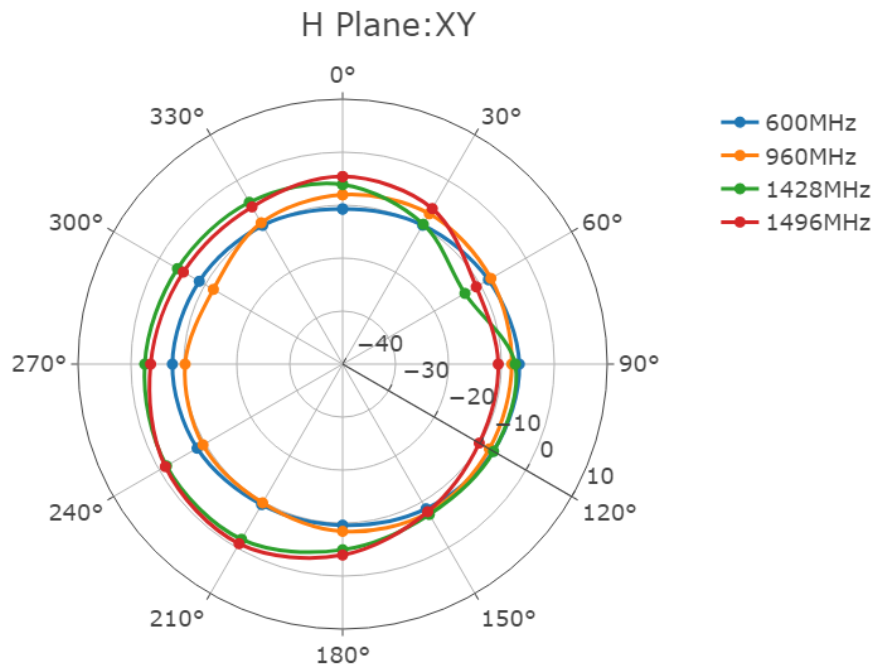
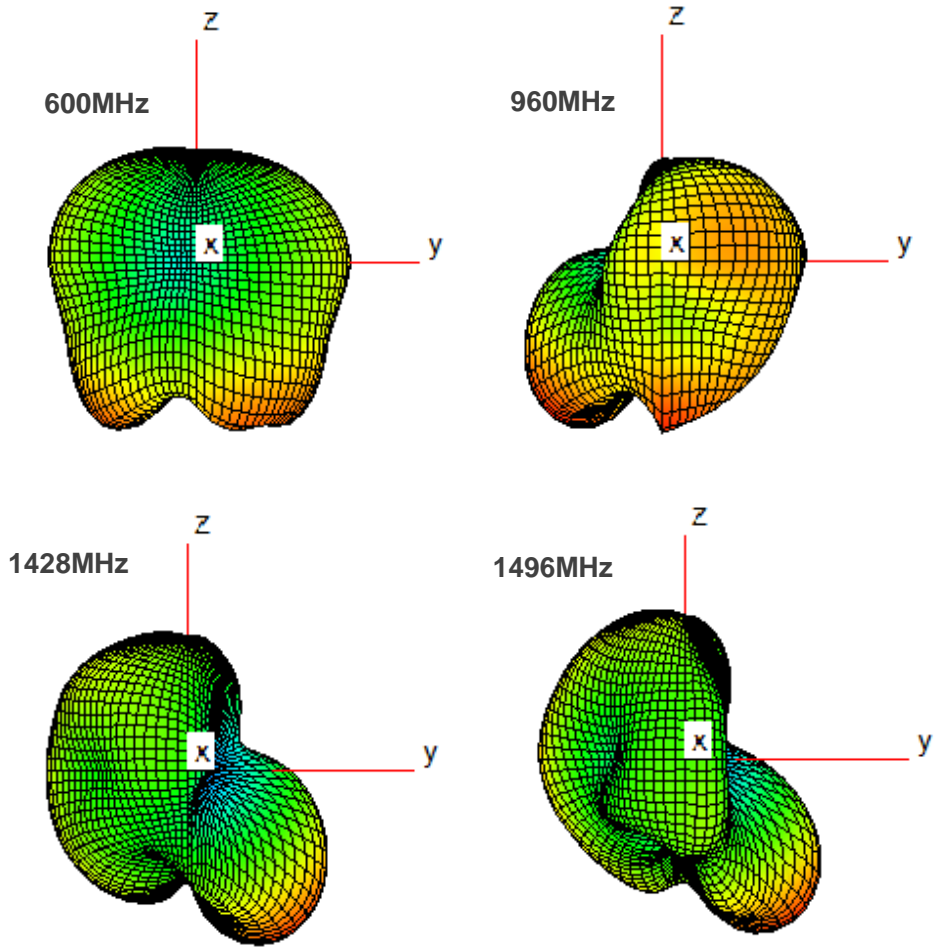


Frequency (MHz)	600	960	1427.9	1495.9	1710	2170	2300	2700
Peak Gain (dBi)	-4.90	-5.64	1.63	0.79	0.19	1.68	1.34	-2.37

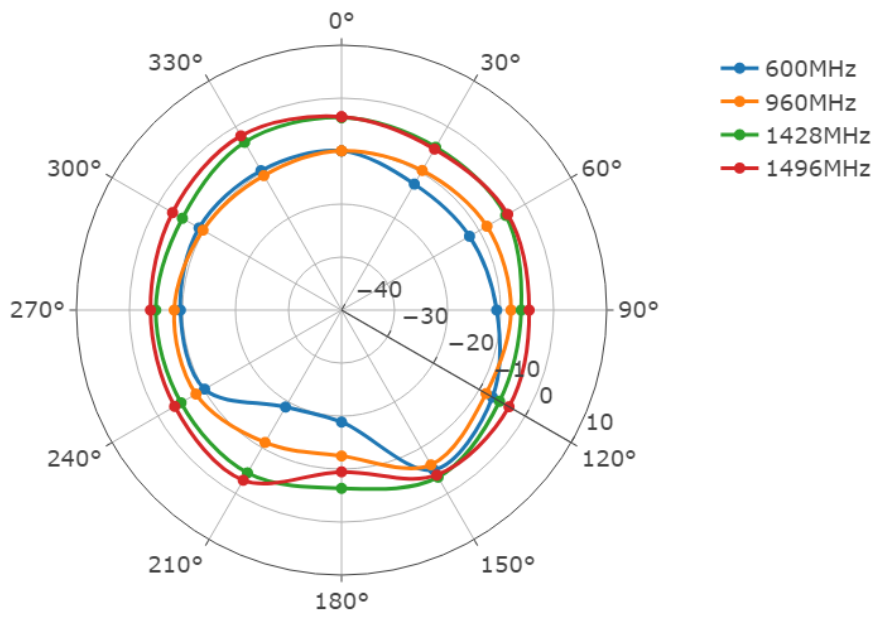
4.5. Radiation Pattern

- Test condition: stick on 1 mm thick FR4 board.

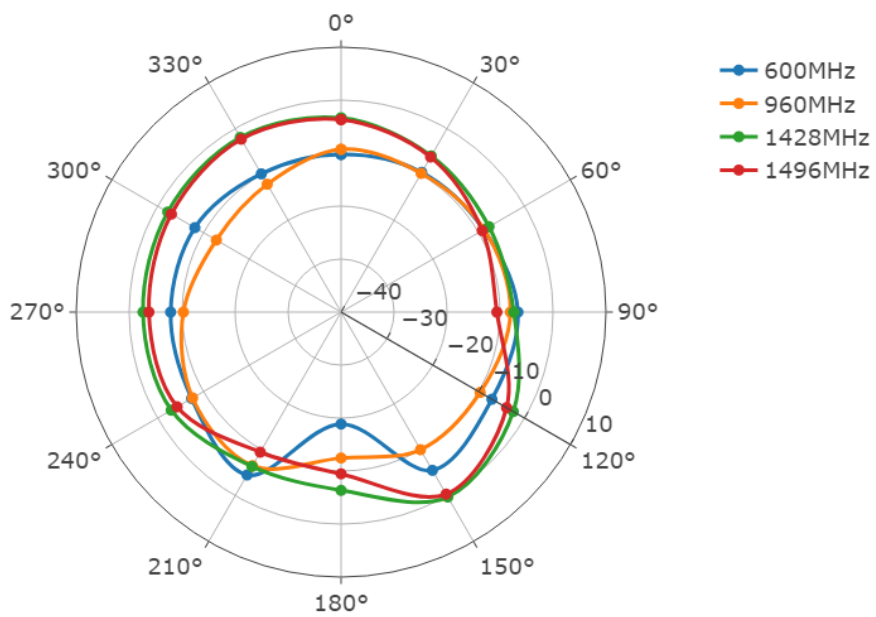


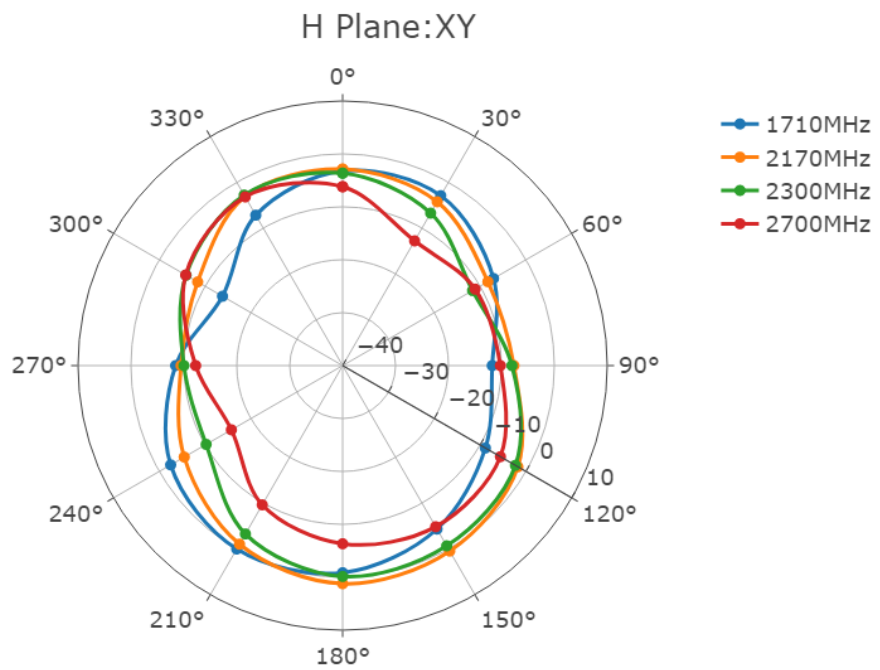
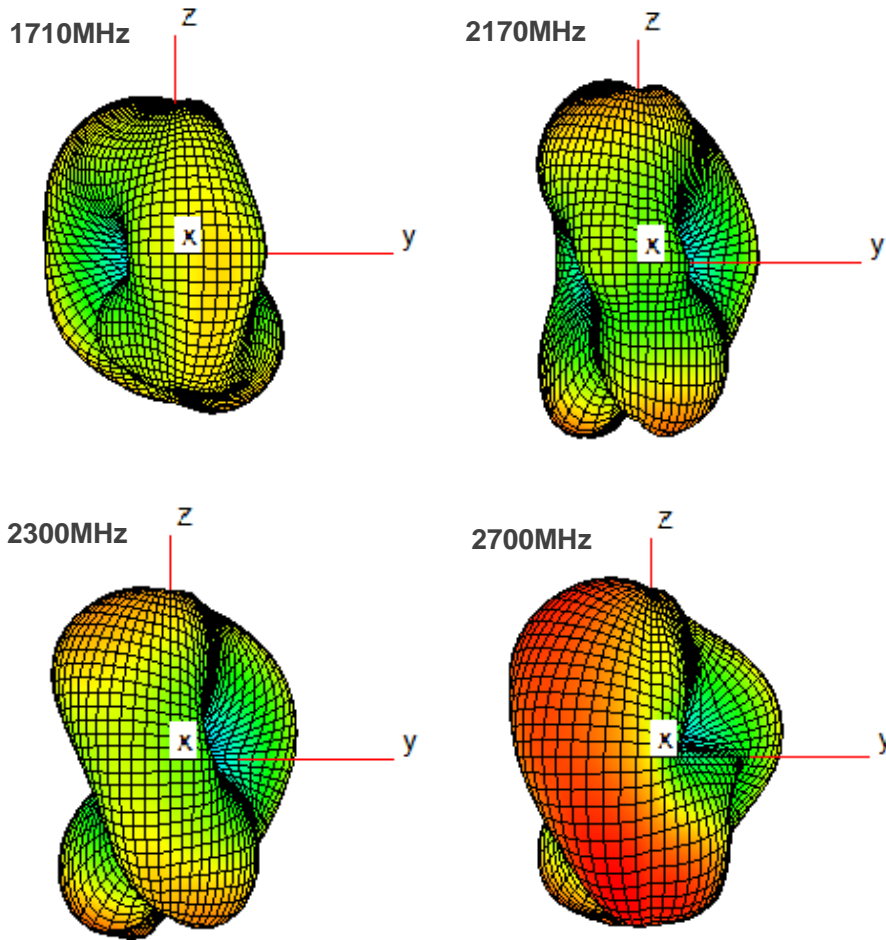


E1 Plane:XZ

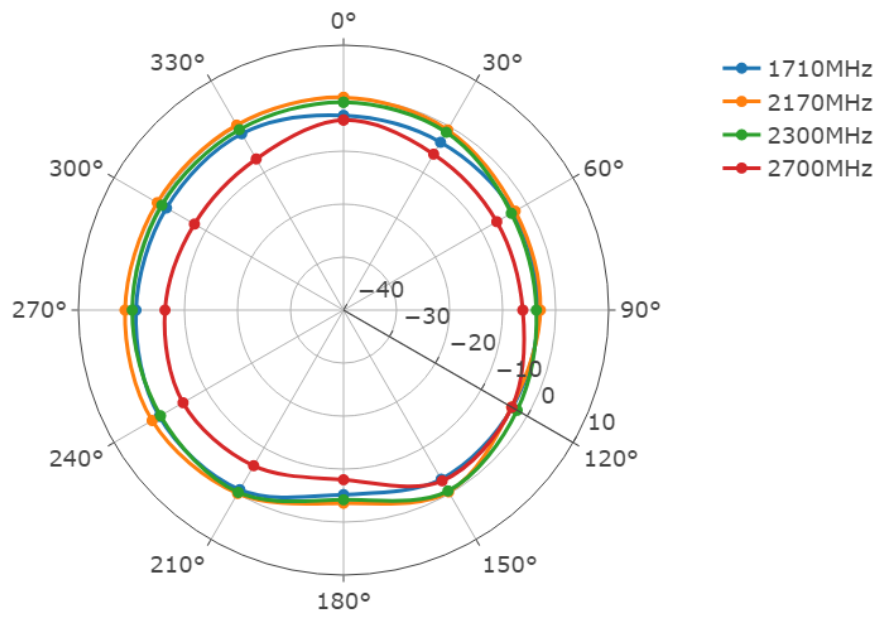


E2 Plane:YZ

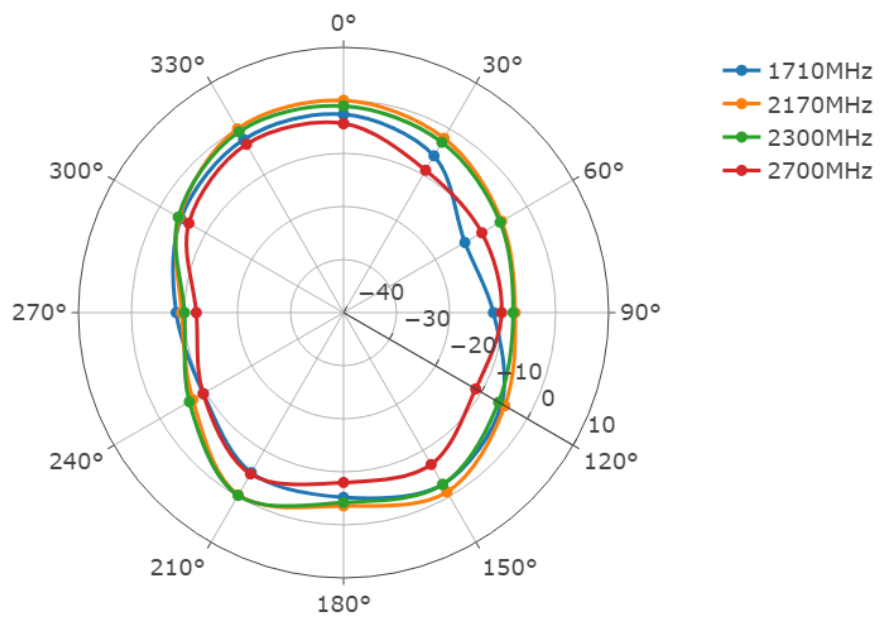




E1 Plane:XZ



E2 Plane:YZ



5 Product Size

ROHS

