

Antenna

YF0002BA Datasheet

Antenna Services

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About the Document

Revision History

Version	Date	Author	Note
1.0	2020-06-08	Kenny YIN	First official release
1.1	2021-03-12	Kenny YIN	1. Added the installation method (Chapter 3); 2. Updated the drawing (Chapter 5).
1.2	2021-07-25	Kenny YIN	Updated working temperature (Chapter 3).
1.3	2021-10-09	Vinnie LIU	Updated the drawing (Chapter 5).
1.4	2021-12-06	Vinnie LIU	Updated the product description in Chapter 1.

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1 Product Description

This Quectel embedded 5G FPC antenna covers 5G NR Sub-6 GHz frequency bands and is compatible with 4G/3G/2G/LPWA bands. 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. Used with other 5G antennas, it can achieve MIMO (multiple input, multiple output) antenna technology for wireless communications in which multiple antennas are used at both the source (transmitter) and the destination (receiver).

2 Product Features

- Cellular 5G MIMO
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	1710–2700 MHz, 3300–5000 MHz
Input Impedance	50 Ω
VSWR	≤ 5.0
Gain	≤ 1.6 dBi
Polarization Type	Linear

Mechanical Specifications

Antenna Size	41.25 mm \times 10.1 mm \times 10.1 mm
Casing	PC
Working Temperature	-40 $^{\circ}$ C to +85 $^{\circ}$ C
Radome Color	Black
Mounting Type	M1.6 Screw

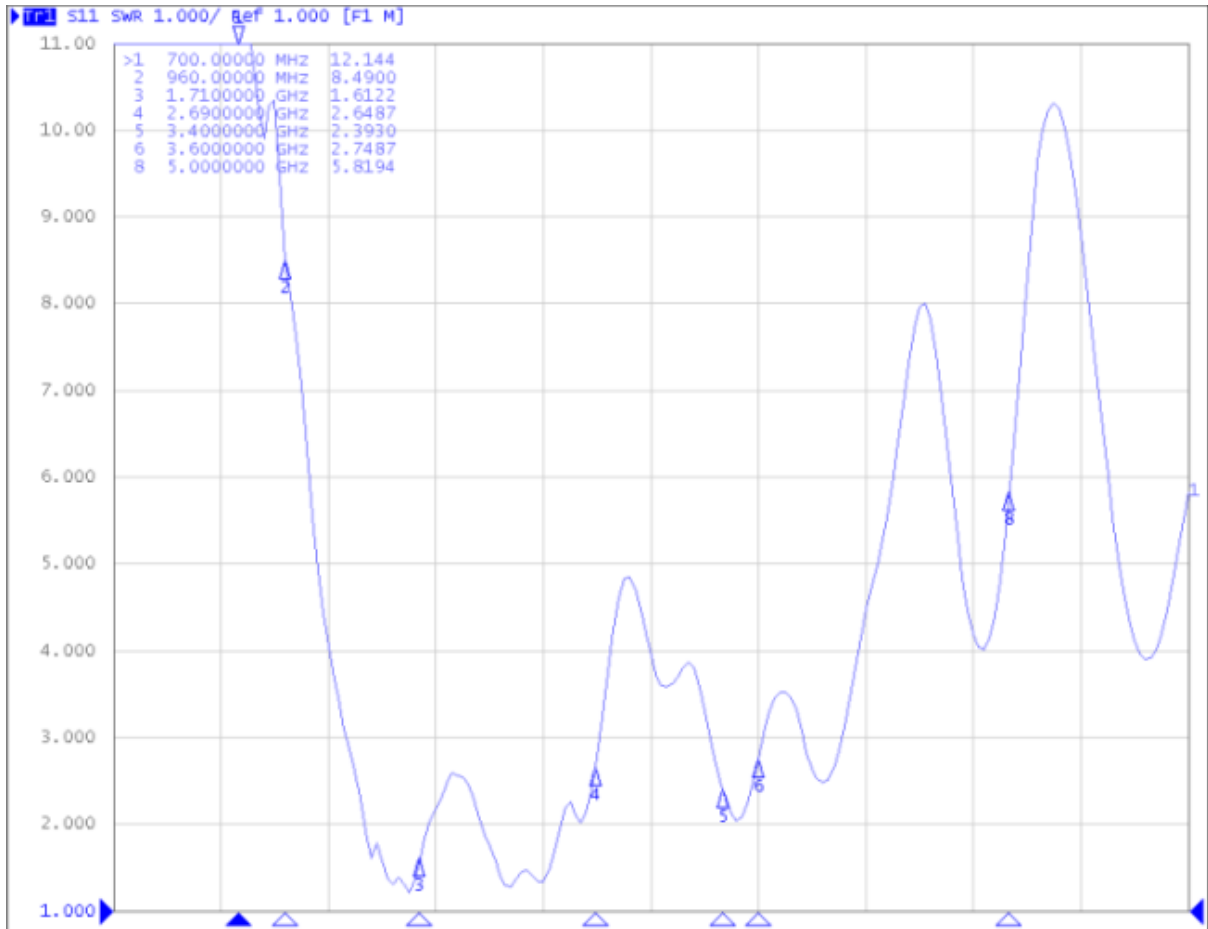
4 Overall Performance

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

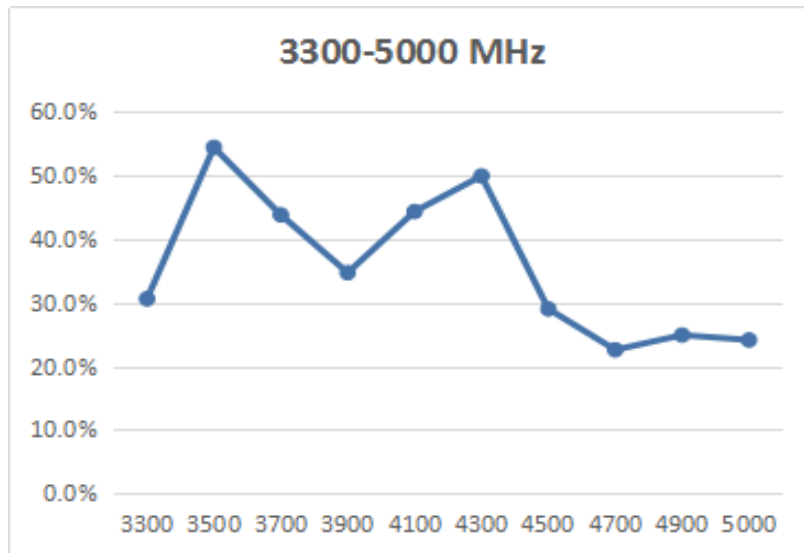
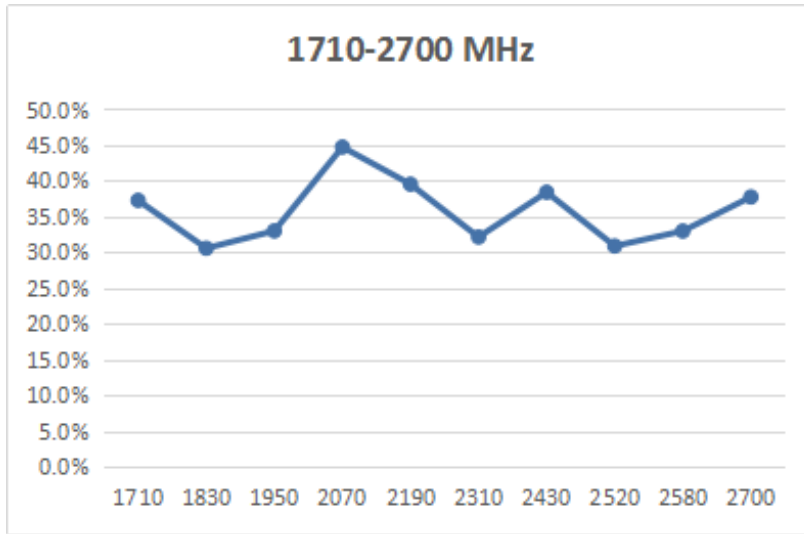


4.2. VSWR



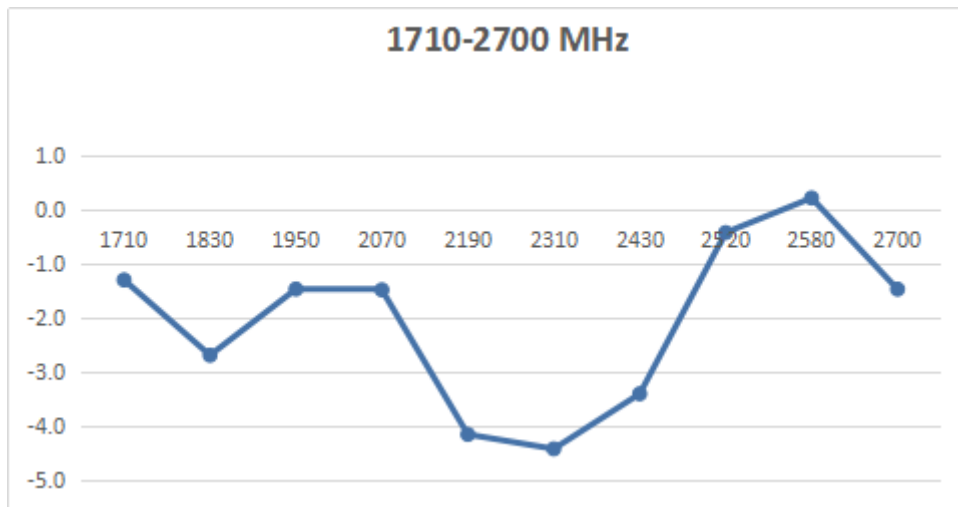
Frequency (MHz)	1710	2690	3400	3600	5000
VSWR	1.61	2.64	2.39	2.74	5.81

4.3. Efficiency



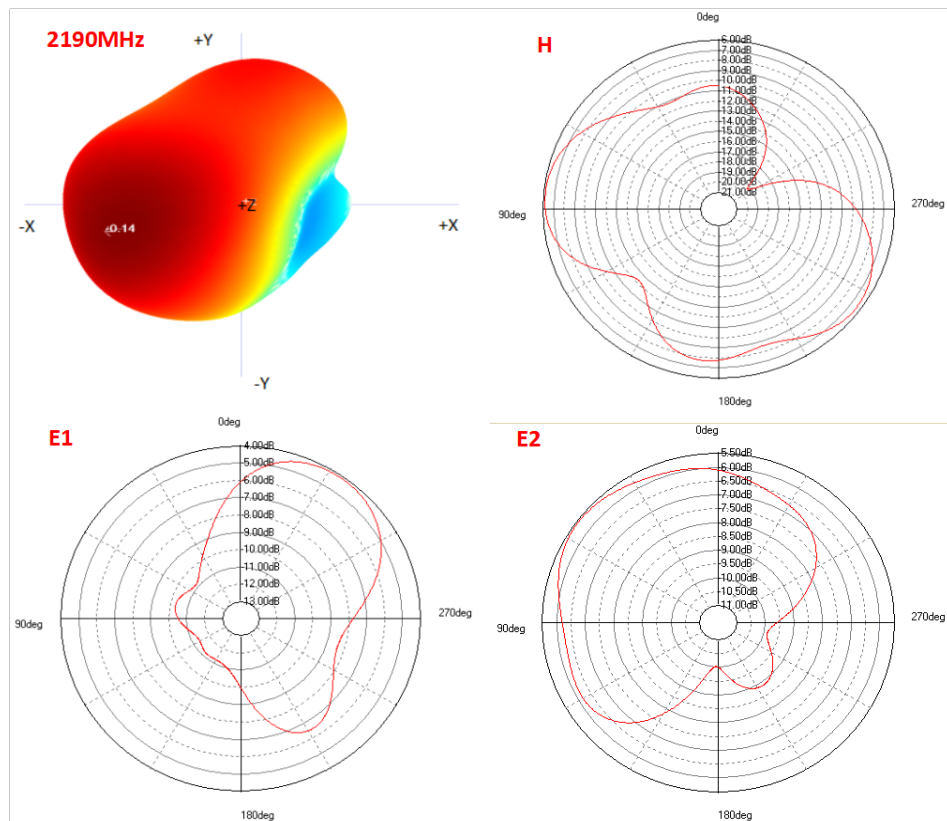
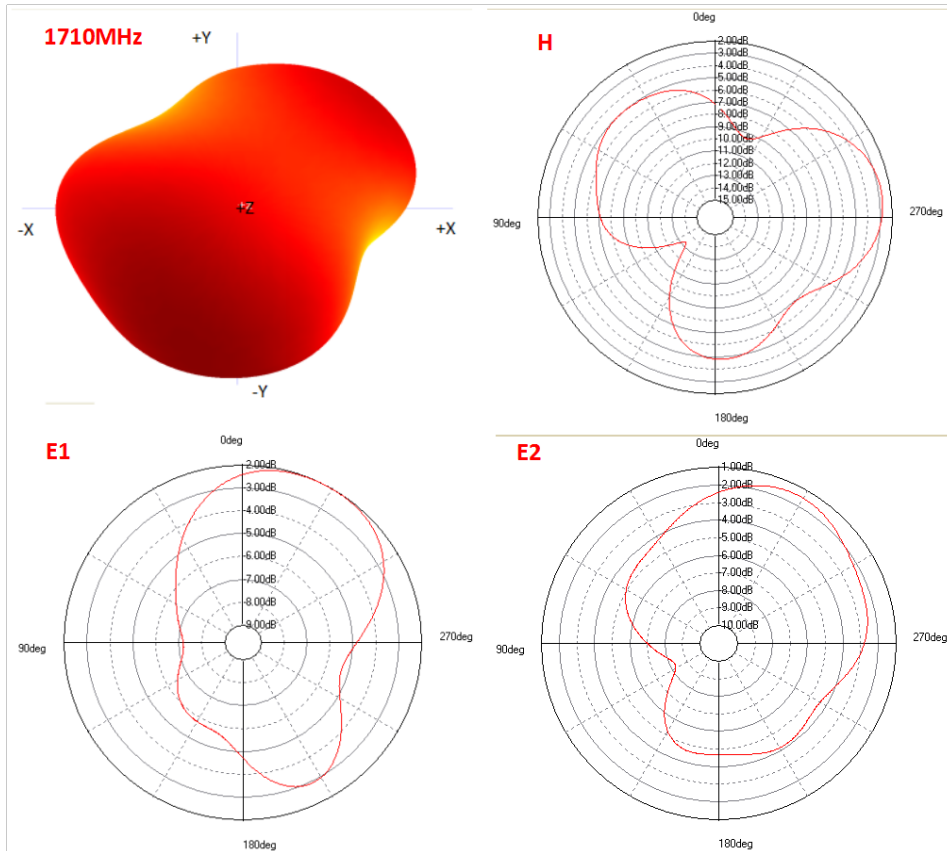
Frequency (MHz)	1710	2190	2700	3300	4100	5000
Efficiency (%)	37.3	39.5	37.7	30.6	44.4	24.1

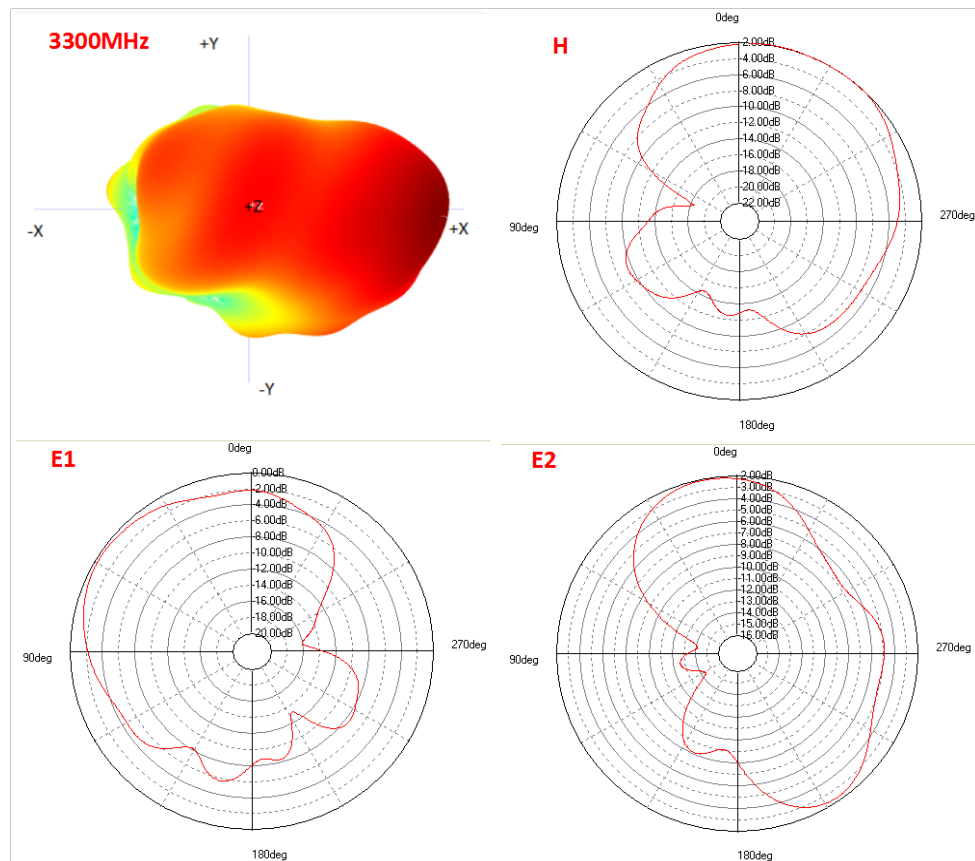
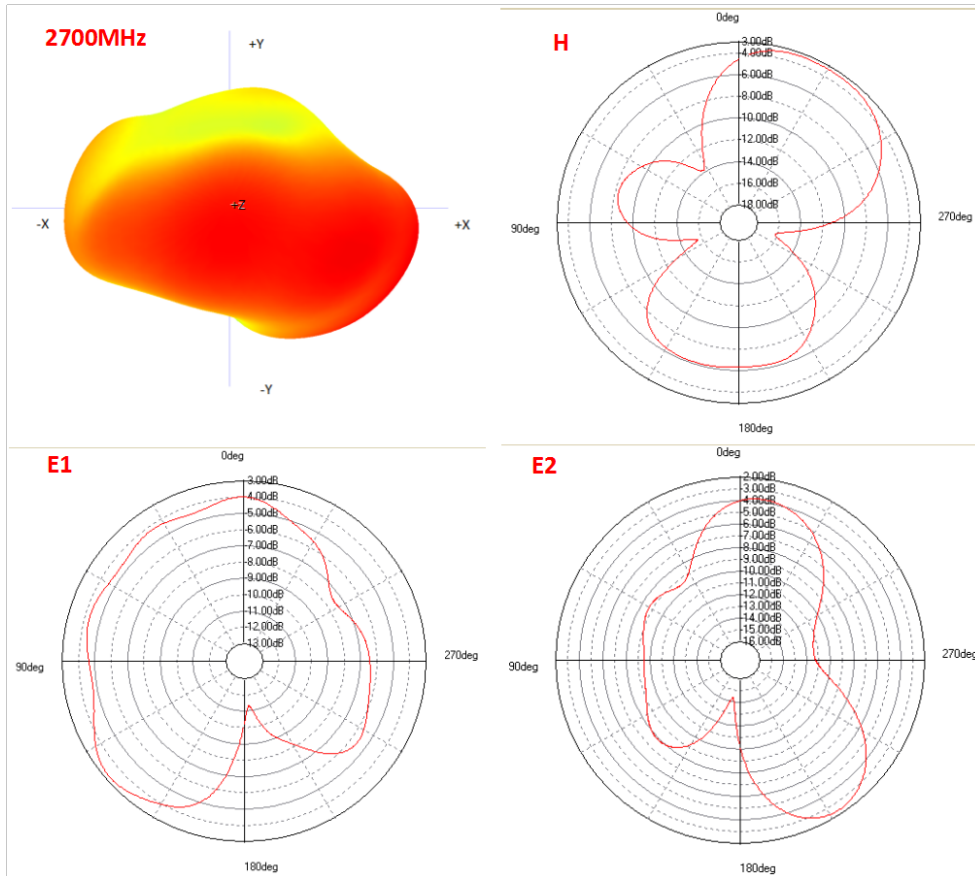
4.4. Gain

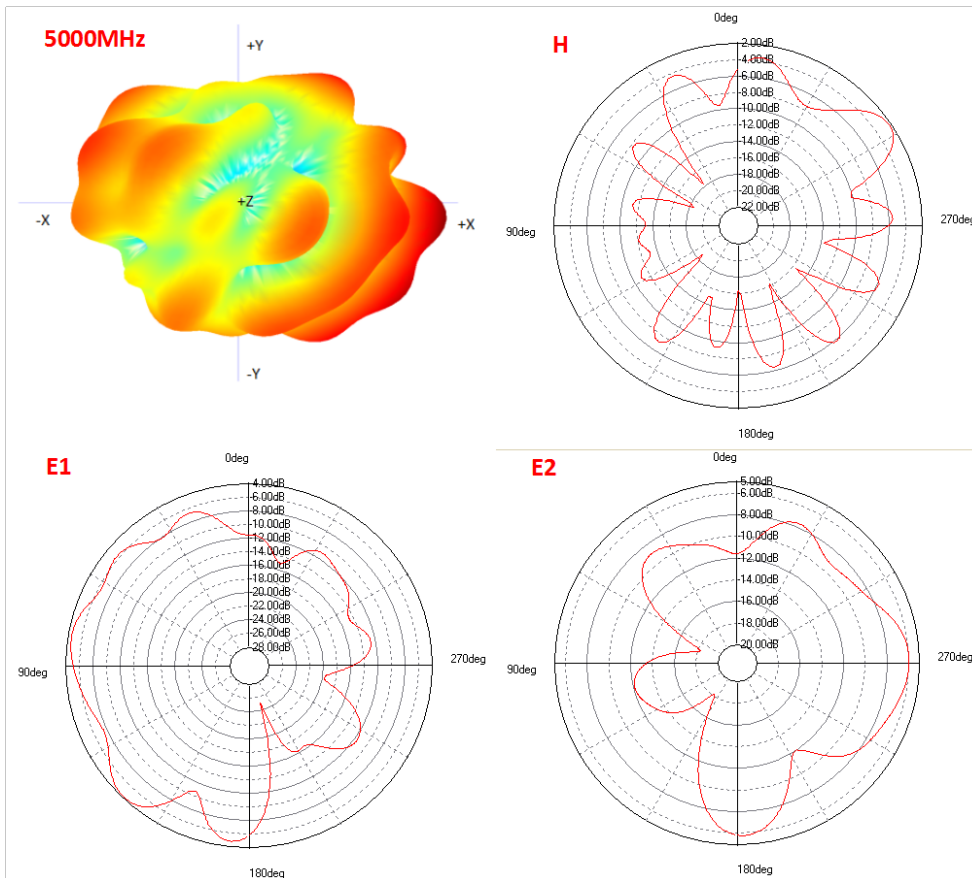
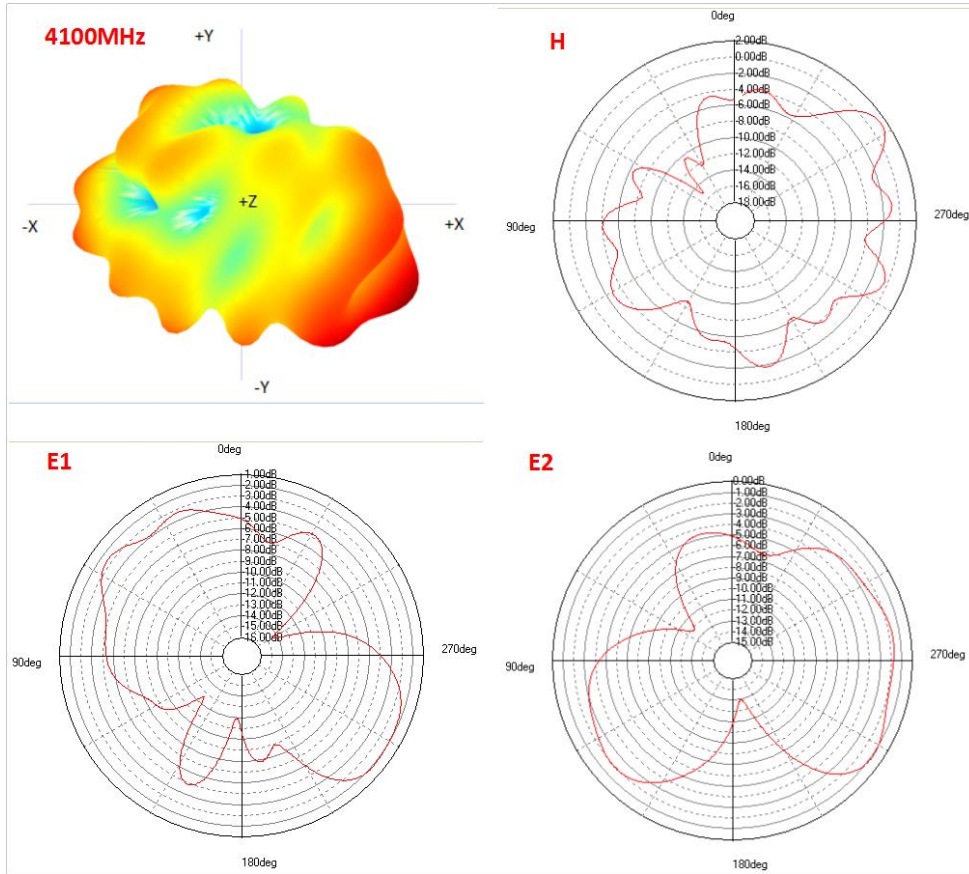


Frequency (MHz)	1710	2190	2700	3300	4100	5000
Gain (dBi)	-1.3	-4.2	-1.5	-0.4	1.5	-1.4

4.5. Radiation Pattern







5 Product Size

