Antenna

FCMA62N Datasheet

Antenna Services

Version: 1.0

Date: 2024-05-30

Status: Preliminary

Damon Zhang

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About the Document

Revision History

Version	Date	Author	Note
-	2024-05-30	Damon Zhang	Creation of the document
1.0	2024-05-30	Damon Zhang	First official release

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1 Product Description

The antenna is designed for superior performance, and can be widely used for wireless applications.

We provide comprehensive antenna design support such as simulation, testing and manufacturing for
custom antenna solutions to meet your specific application needs.

2 Product Features

- BT
- High efficiency
- Excellent performance

3 Product Specifications

Passive Electrical Specifications	
Frequency Range	2400–2500 MHz；5150-5850MHz
Input Impedance	50 Ω
VSWR	≤ 6
Gain	≤ 1.56 dBi
Polarization Type	Linear
Antenna type	PCB Antenna
Mechanical Specifications	
Antenna Size(mm)	14.7 × 6.37
Material	FR4
Color	Green
Working Temperature	-40 °C to +105 °C

Band / Specification	Band	Wi-Fi 2G	Wi-Fi 5G			
	Freq. (MHz)	2400 - 2500	5150 - 5250	5250 - 5350	5470 - 5725	5725 - 5850
Max. VSWR		2.6	6.0	5.5	3.9	3.5
Max. Return Loss (dB)		-6.9	-2.9	-3.2	-4.5	-5.0
AVG Eff. (%)		32.5	16.3	23.0	27.0	24.2
AVG Gain (dB)		-4.8	-7.9	-6.4	-5.6	-6.1
Max. Peak Gain (dBi)		-1.2	-0.35	1.14	1.03	-0.29
VSWR		≤ 6.0				
Return Loss		≤ -2.9 dB				
Peak Gain		≤ 1.14 dBi				

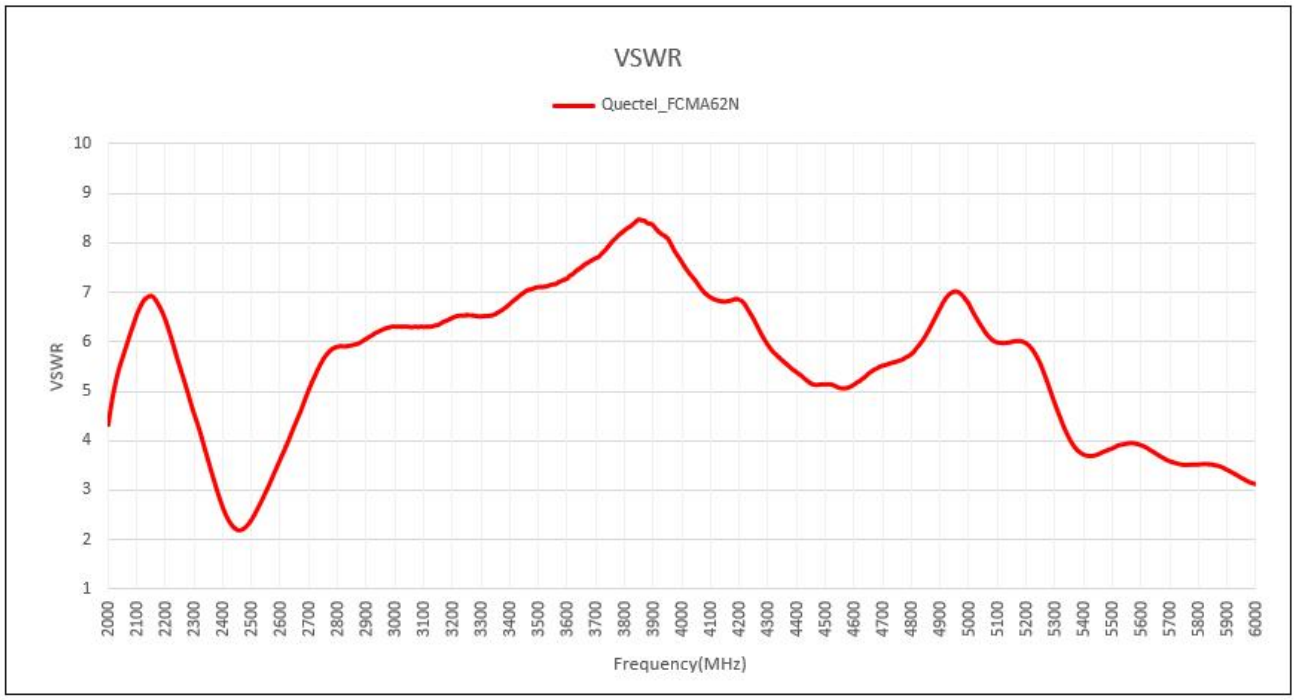
4 Overall Performance

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
- Calibration date 2024/03/08
- Due date 2025/03/08

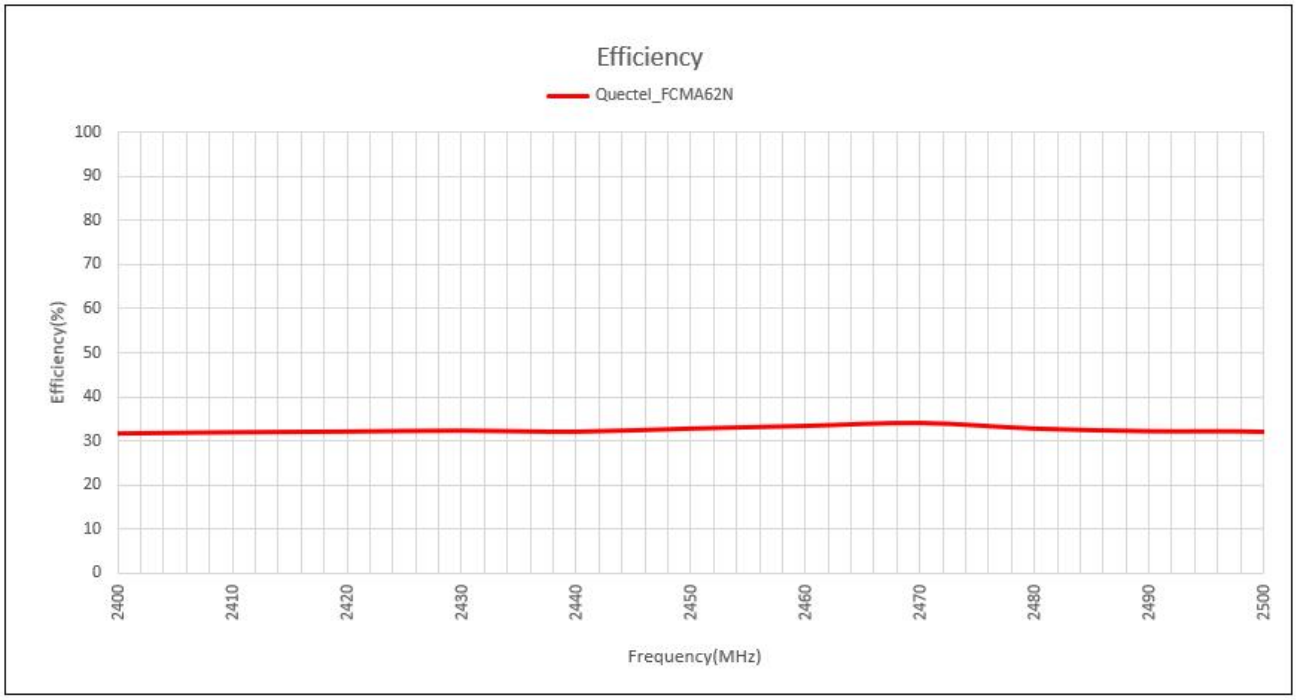
- Test the software：Libra

4.2. VSWR

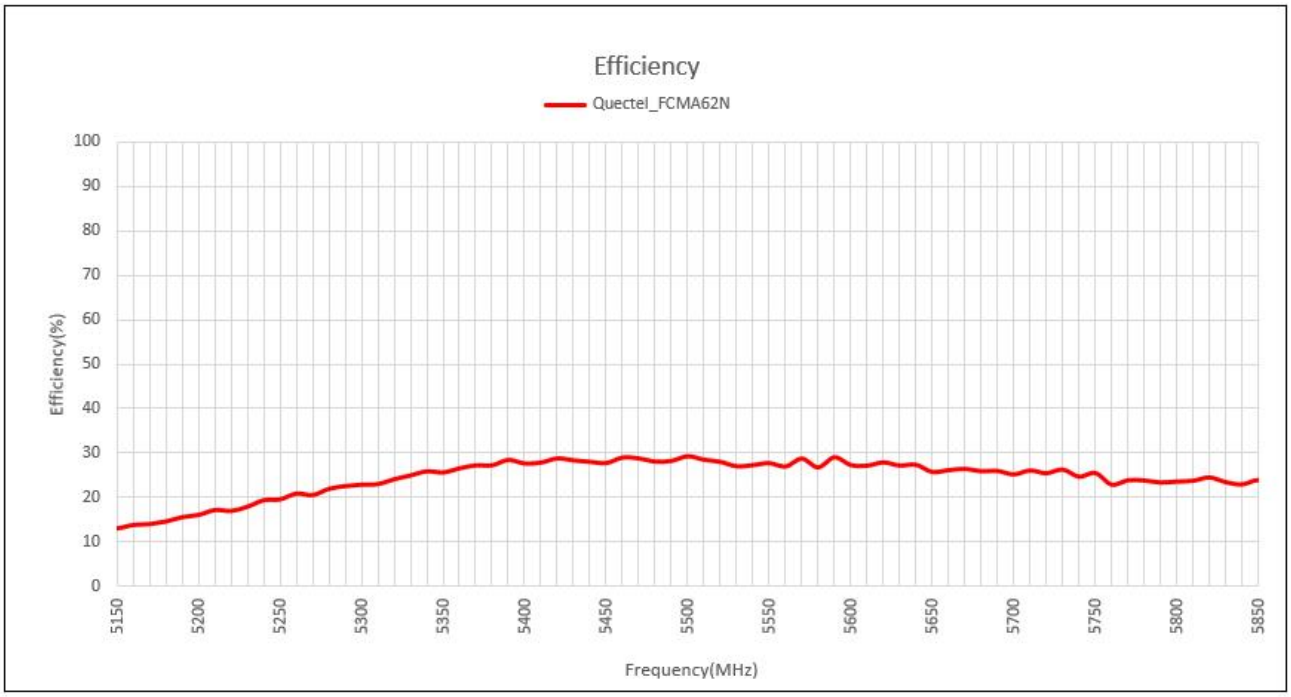


Frequency (MHz)	2400	2450	2500	5150	5850	5850
VSWR	2.6	2.4	2.5	6.0	3.8	3.5

4.3. Efficiency

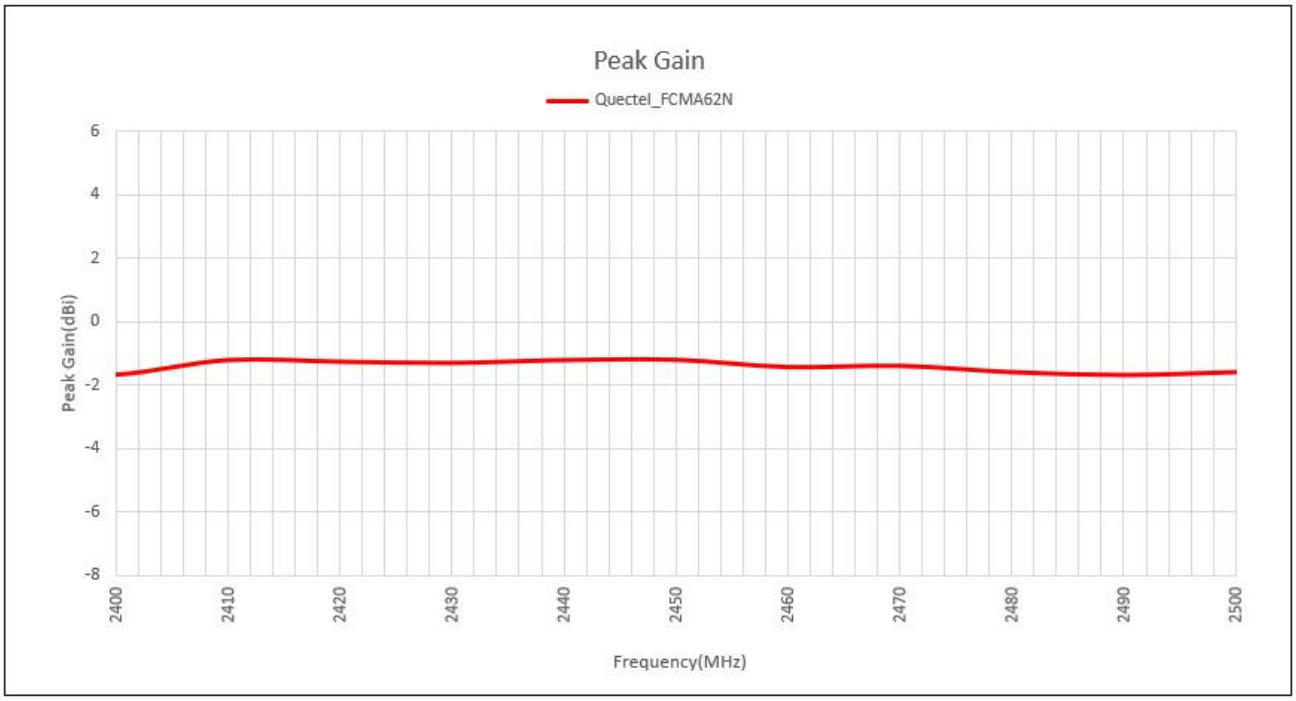


Frequency (MHz)	2400	2450	2500
Efficiency (%)	32	33	32

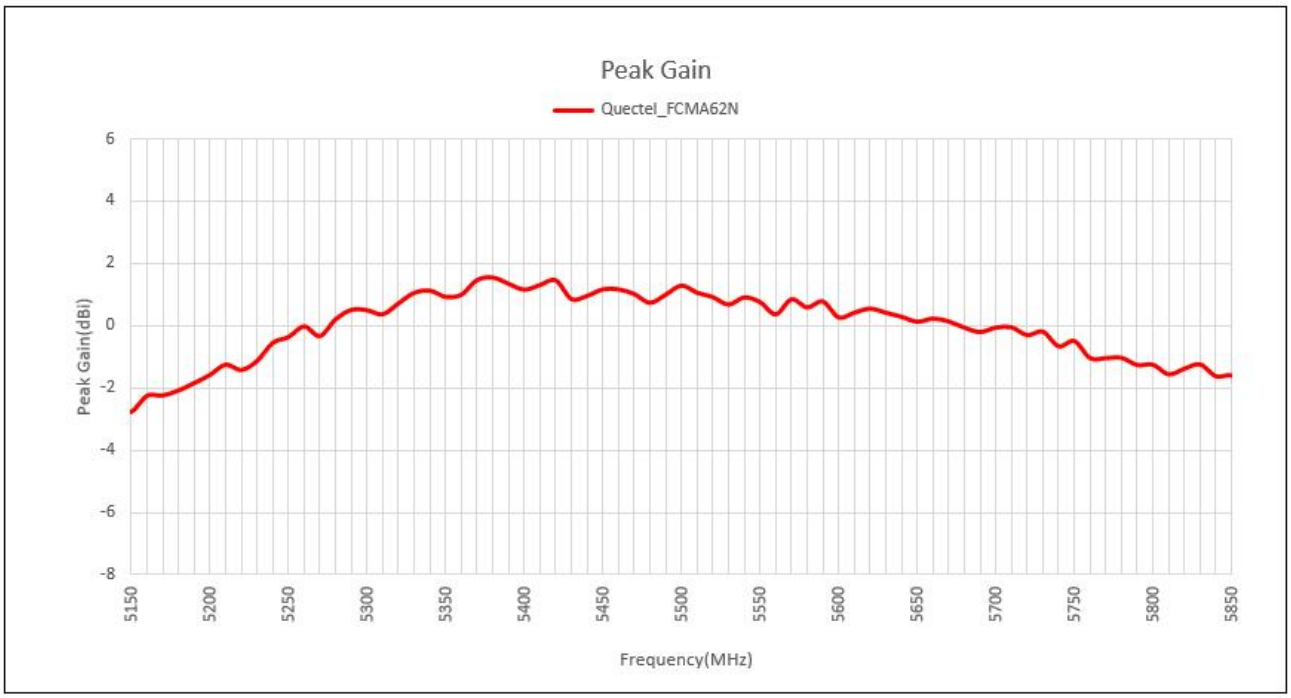


Frequency (MHz)	5150	5850	5850
Efficiency (%)	13	29	24

4.4. Gain



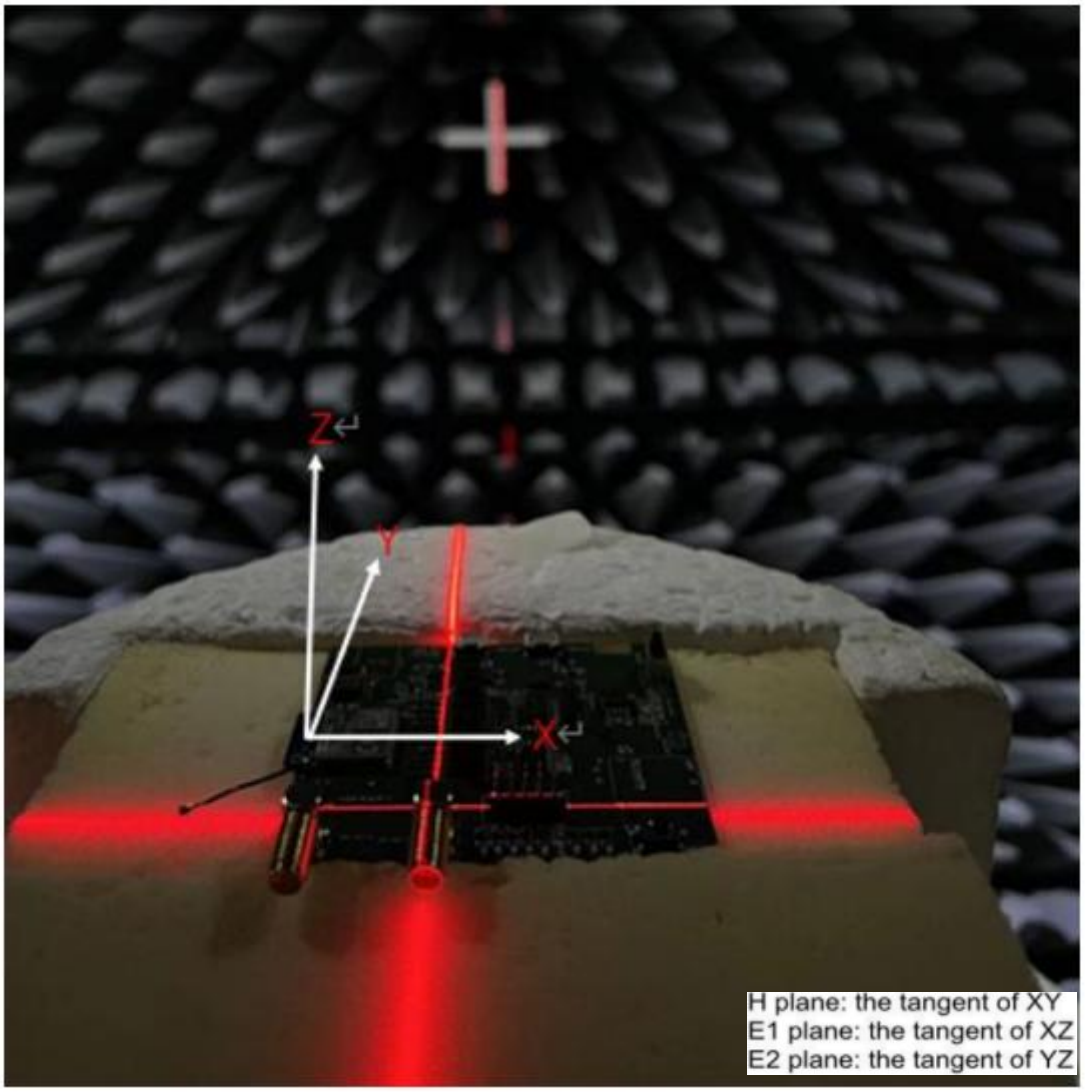
Frequency (MHz)	2400	2450	2500
Gain (dBi)	-1.7	-1.2	-1.6



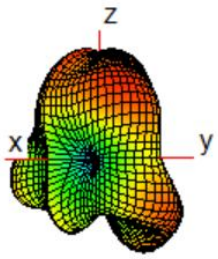
Frequency (MHz)	5150	5850	5850

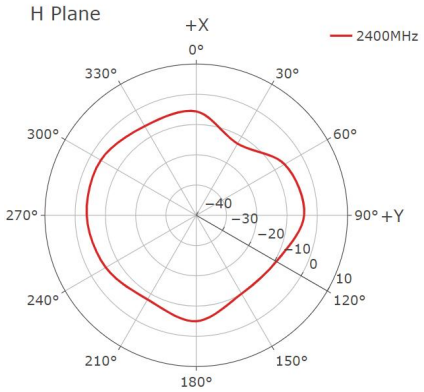
Gain (dBi)	-2.7	1.0	-1.6

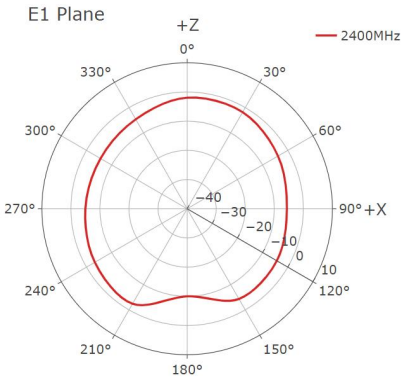
4.5. Radiation Pattern

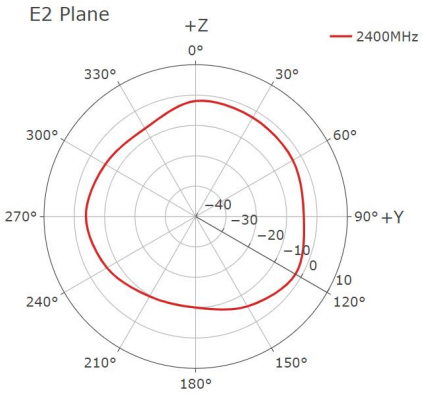


2400MHz

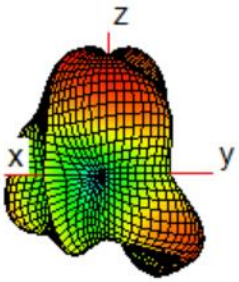


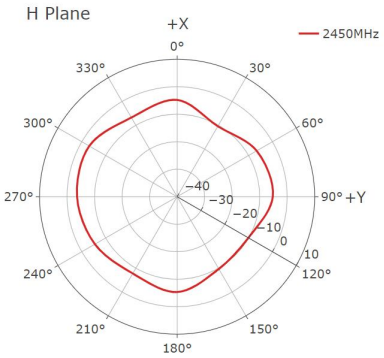


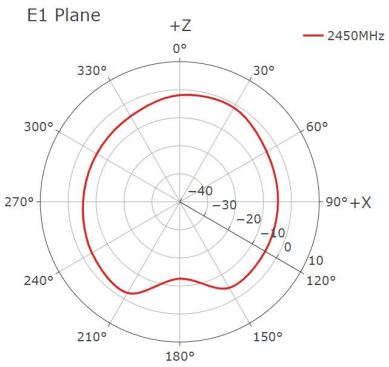


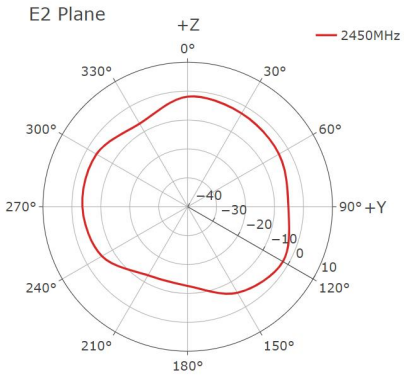


2450MHz

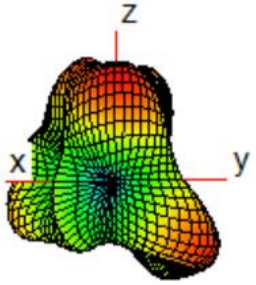


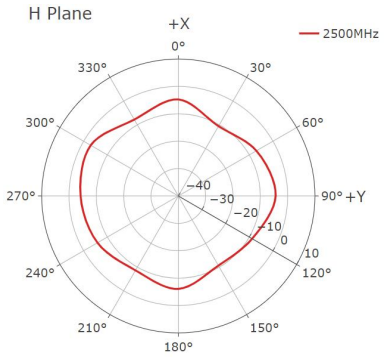


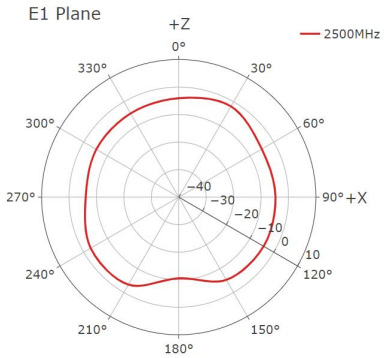


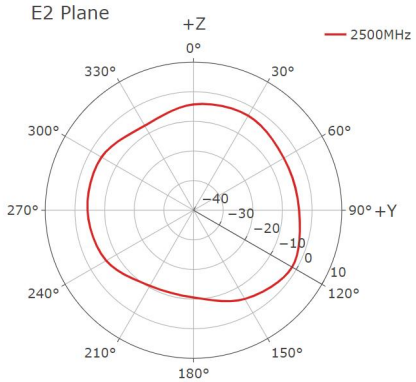


2500MHz

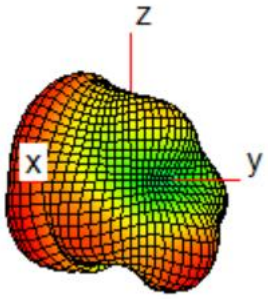


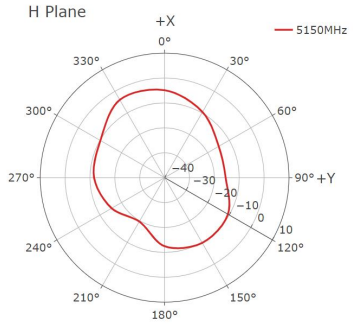


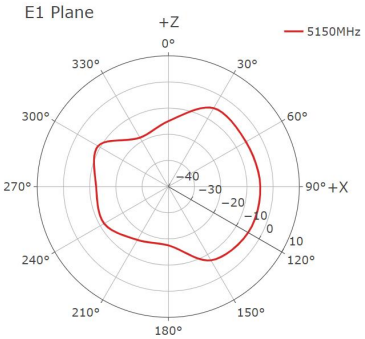


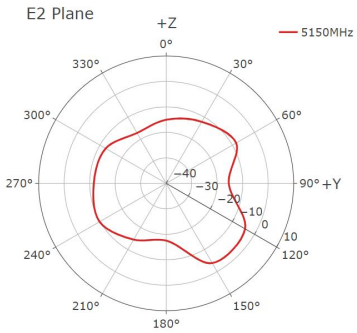


5150MHz

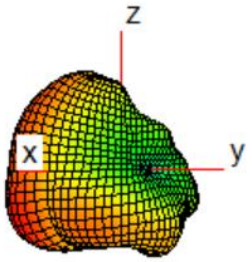


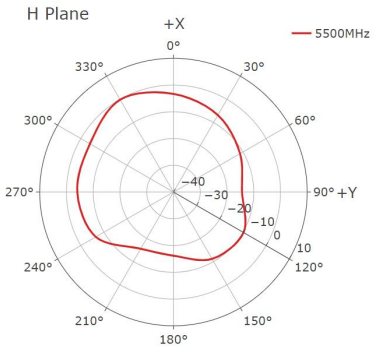


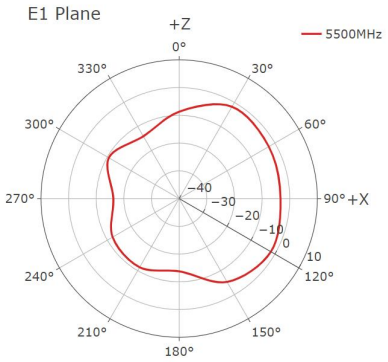


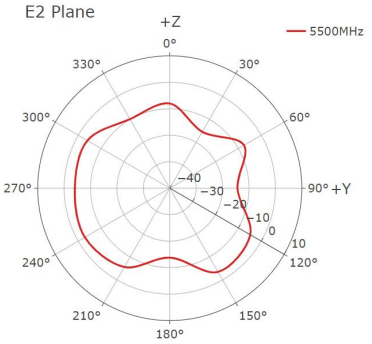


5500MHz

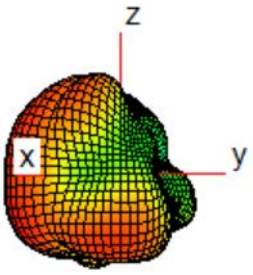


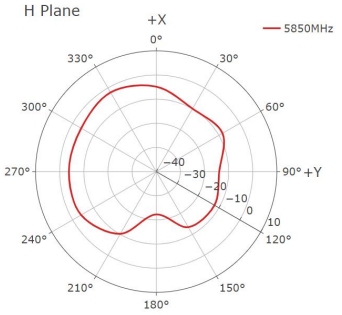


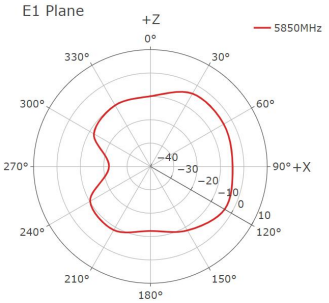


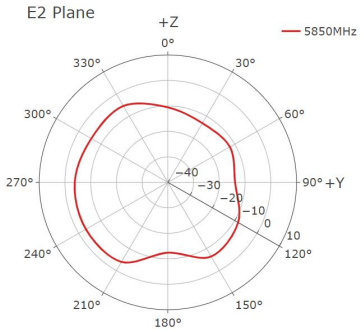
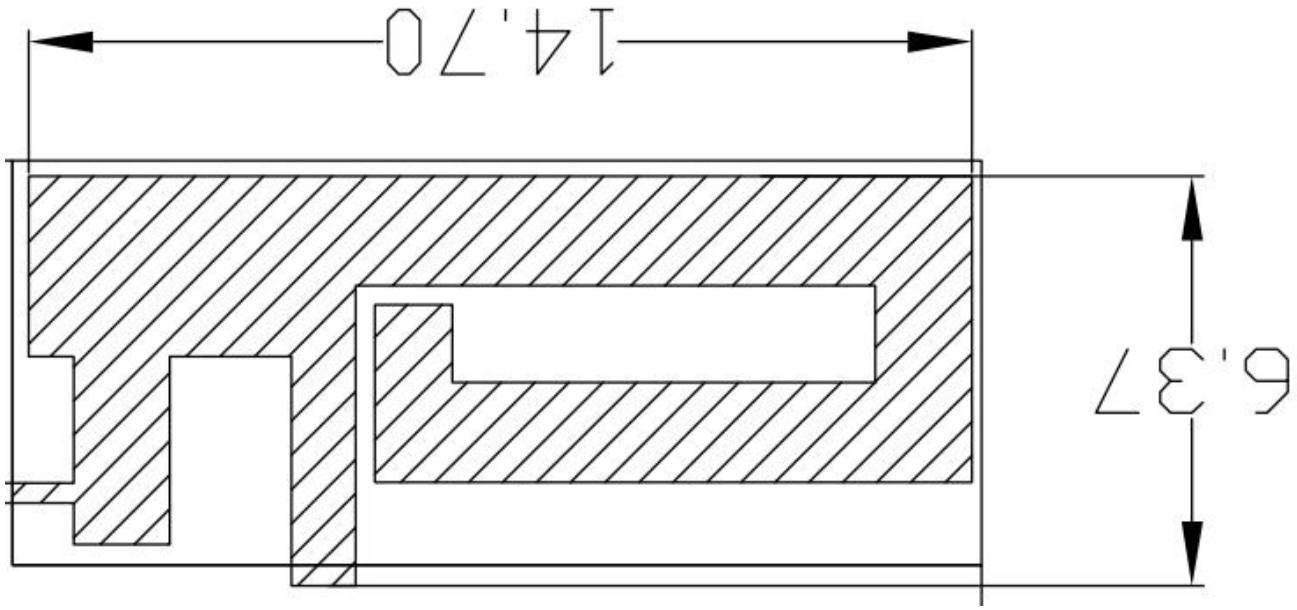


5850MHz









5 Product Size（mm）