



Antenna

F7G280 Datasheet

Antenna Services

Version: 3.1

Date: 2023-03-30

Status: Preliminary

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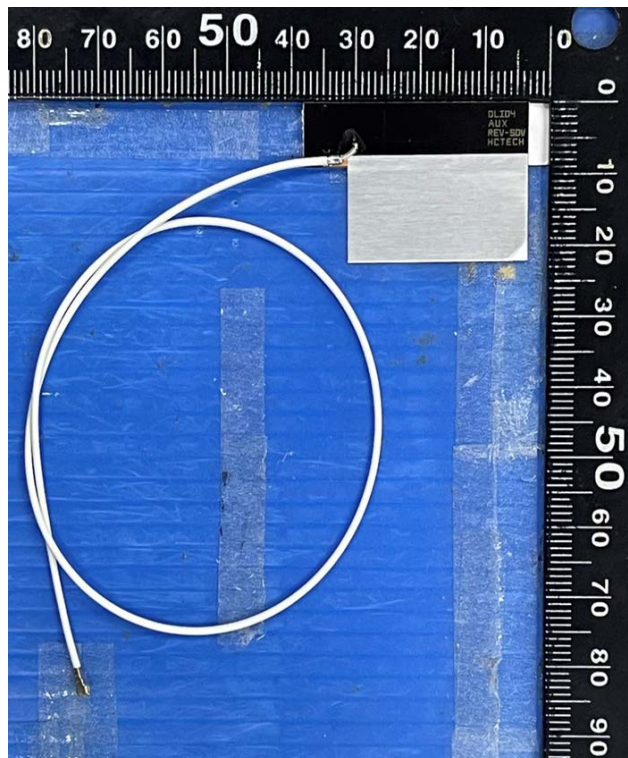
1 Product Description

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

- Wi-Fi
- High efficiency
- Excellent performance



3 Product Specifications

- WIFI

Passive Electrical Specifications

Frequency Range	2.4–2.5 GHz, 5.15–5.85 GHz, 5.925–7.125 GHz
Input Impedence	50 Ω
VSWR	2.4GHz: ≤ 3.0 , 5GHz: ≤ 3.0 6GHz: ≤ 3.0 7GHz: ≤ 3.0
Peak Gain	2.4GHz: $\leq 1.32\text{dBi}$, 5GHz: $\leq 4.24\text{dBi}$ 6GHz: $\leq 5.35\text{dBi}$ 7GHz: $\leq 5.84\text{dBi}$
Antenna Type	PIFA

Mechanical Specifications

Antenna Size	35 mm x 9 mm
Casing	ABS
Connector Type	Caimei NGFF Connector for 1.13 cable
Working Temperature	-40 °C to +85 °C
Radome Color	White
IP Rating	IP55

4 Overall Performance

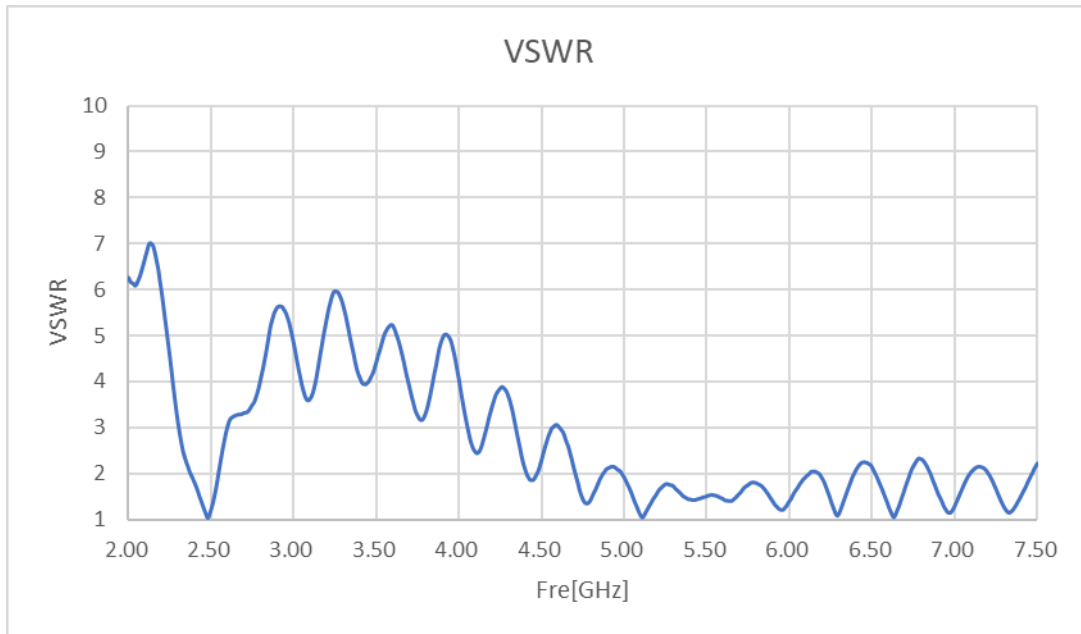
4.1. Test Environment

- E5071C ENA Series Network Analyzer
- ETS-LINDGREN AMS-8500 Chamber
- Quad-Ridged Horn Antenna (EMCO 3164-08)
- Rotational Platform with step motor



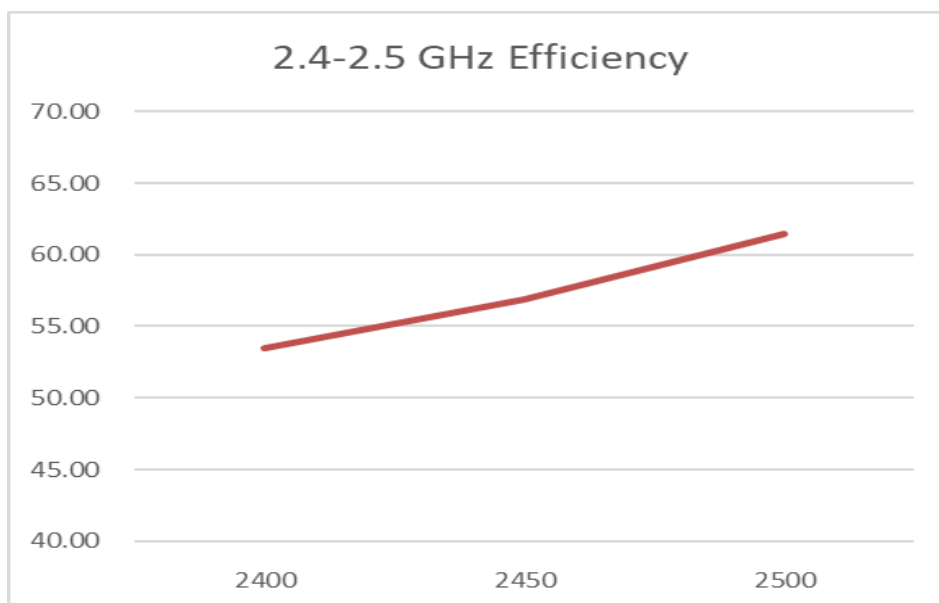
4.2. Data-WIFI

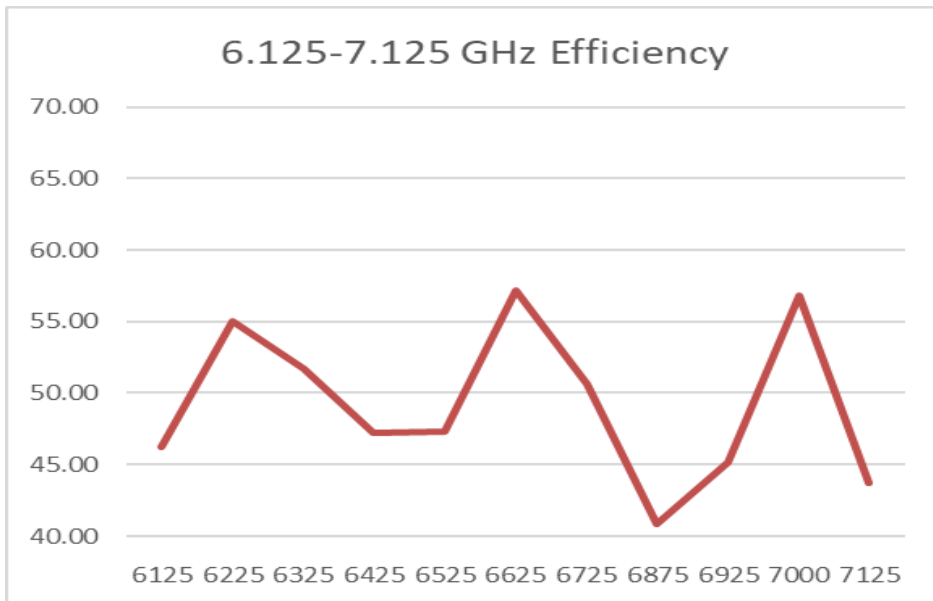
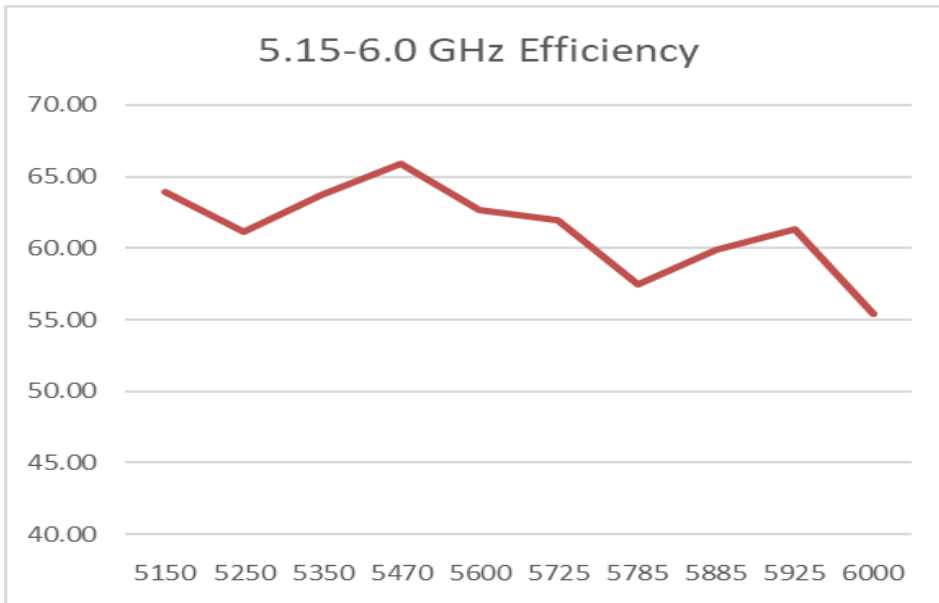
- VSWR



Frequency (MHz)	2400	2500	5150	5885	6125	7125
VSWR	1.79	1.21	1.29	1.42	2.03	2.21

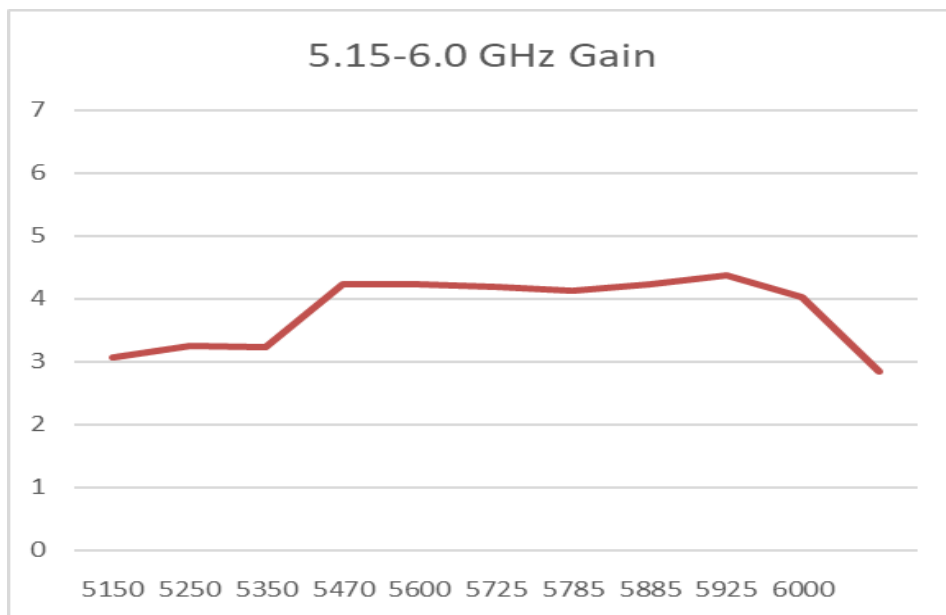
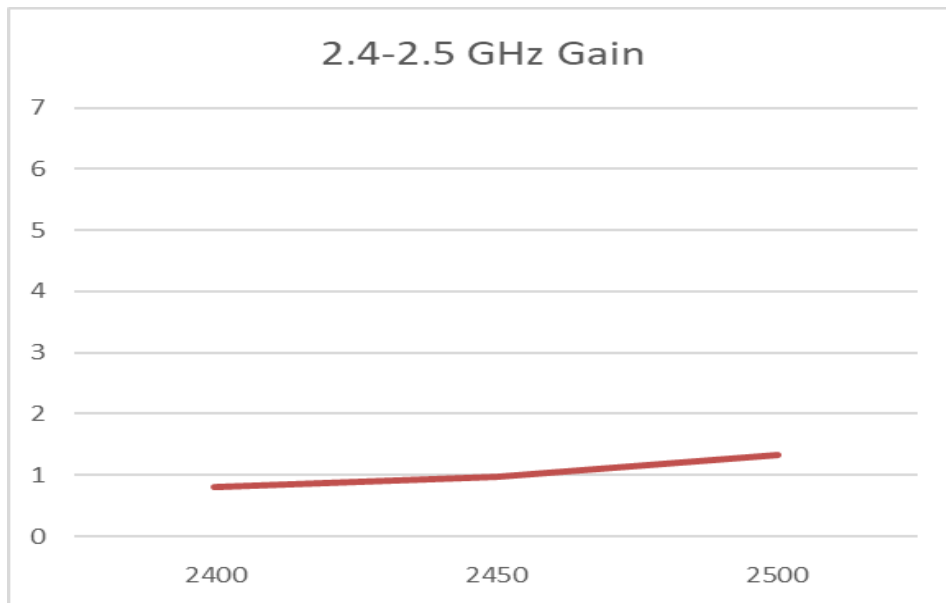
- Efficiency

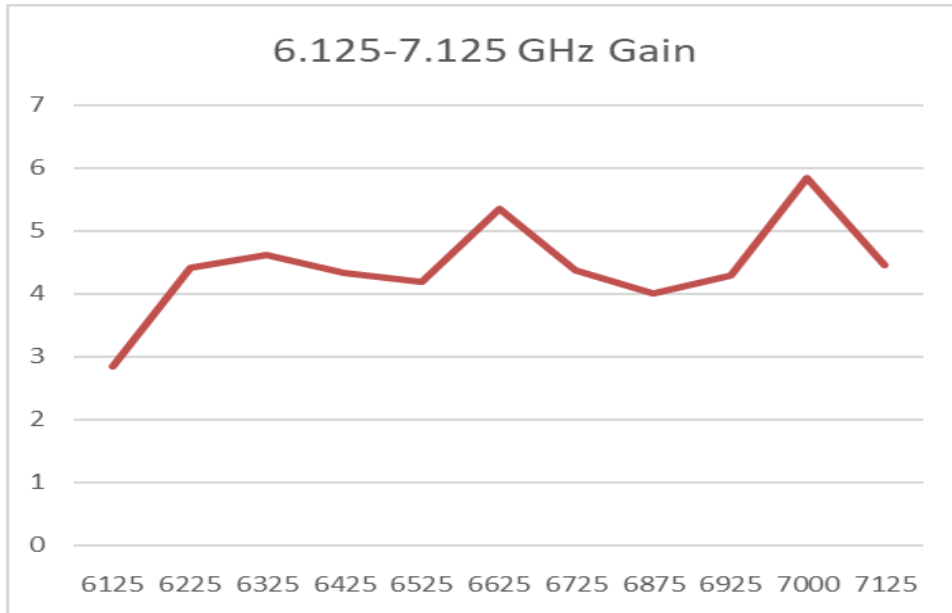




Frequency (MHz)	2400	2500	5150	5885	6125	7125
Efficiency (%)	53.44	61.42	63.92	59.88	46.27	43.67

- Gain



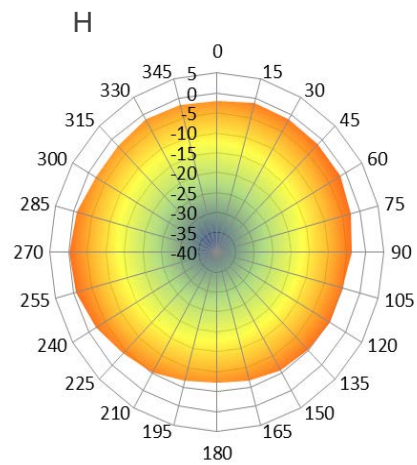
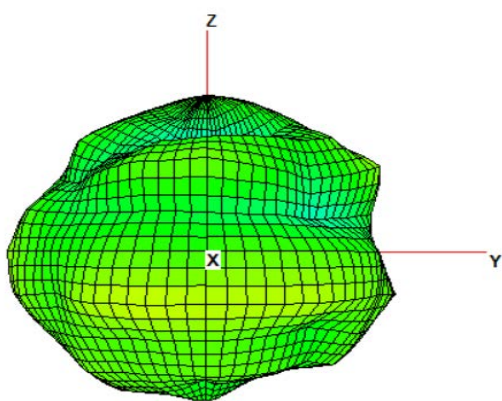


Frequency (MHz)	2400-2483.5	5150-5250	5250-5350	5470-5725	5725-5885	5925-6425	6425-6525	6525-6875	6875-7125
Peak Gain (dBi)	1.32	3.26	3.26	4.24	4.22	4.62	4.32	5.35	5.84

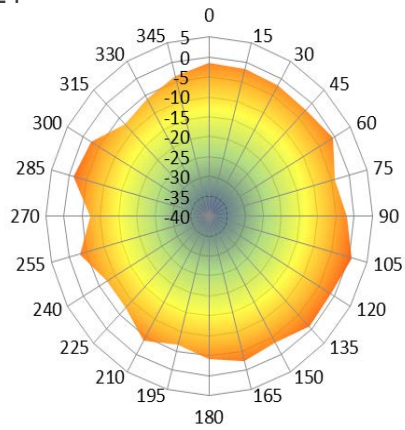
4.3. Radiation Pattern-WIFI



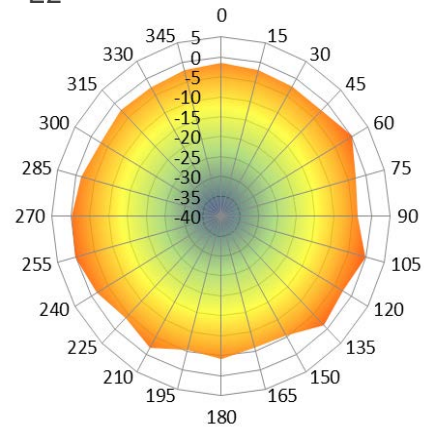
2400 MHz



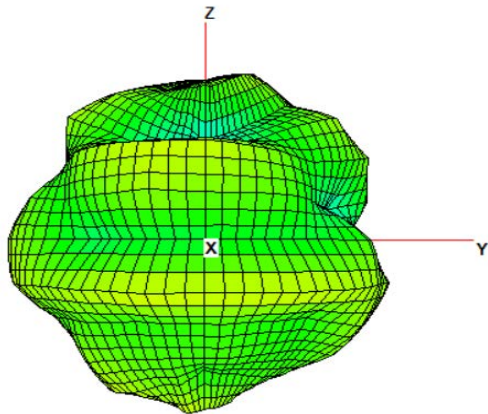
E1



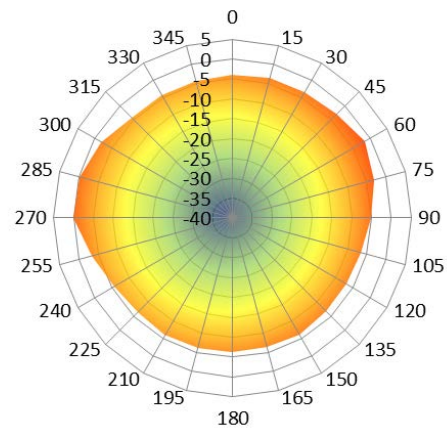
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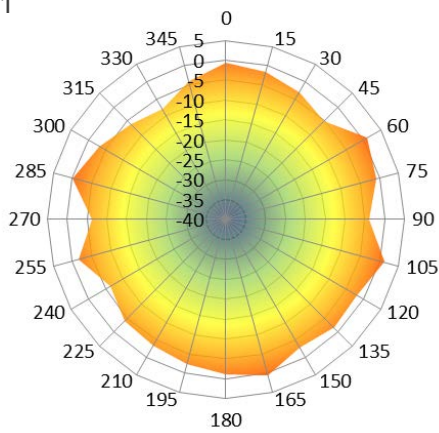
2500 MHz



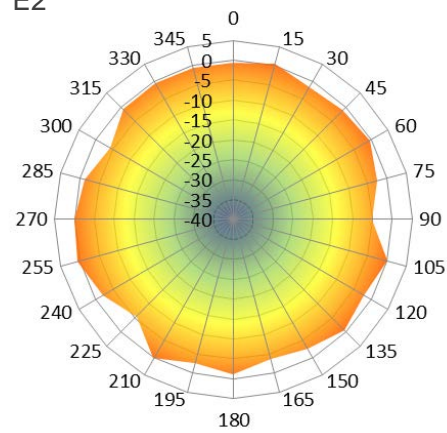
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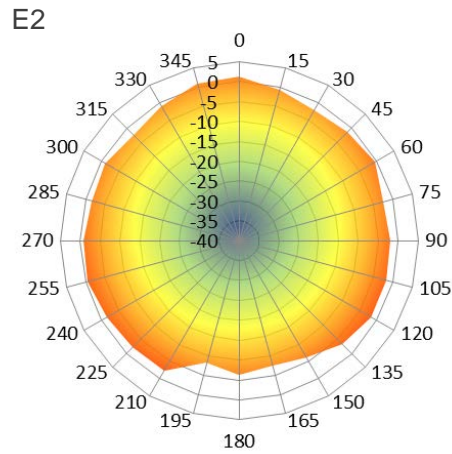
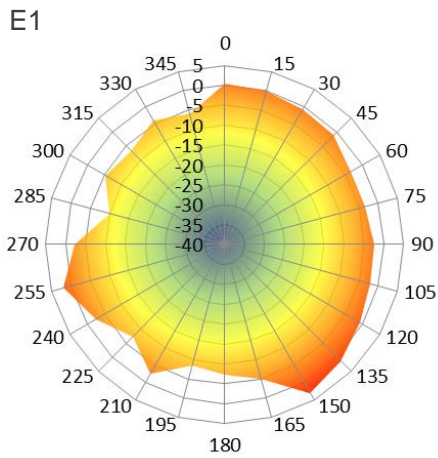
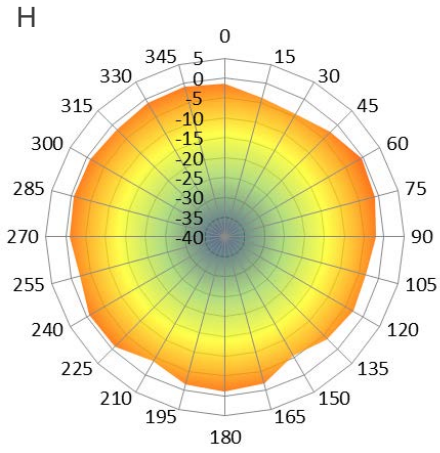
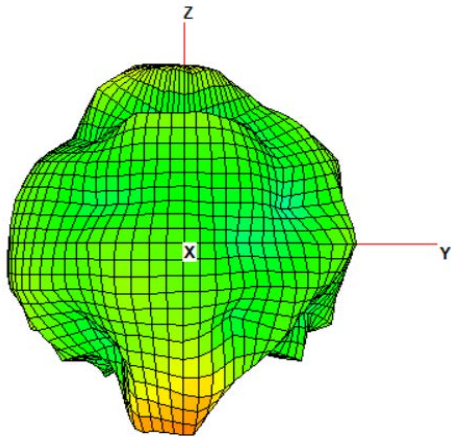
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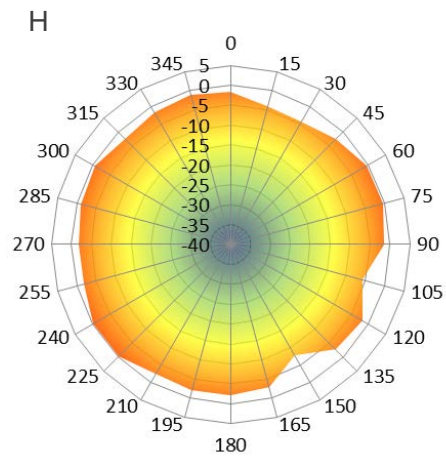
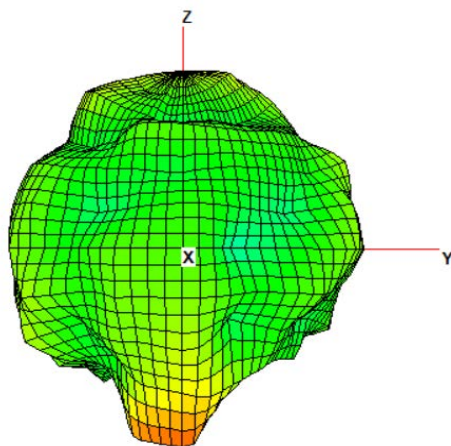
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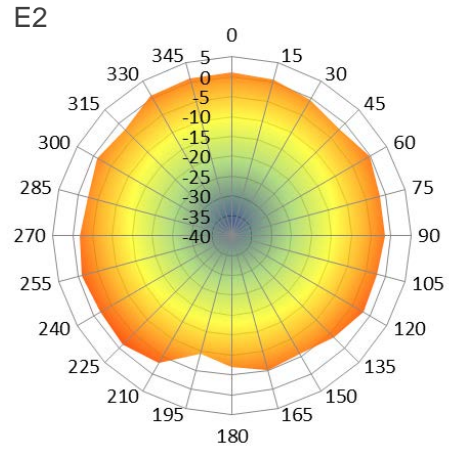
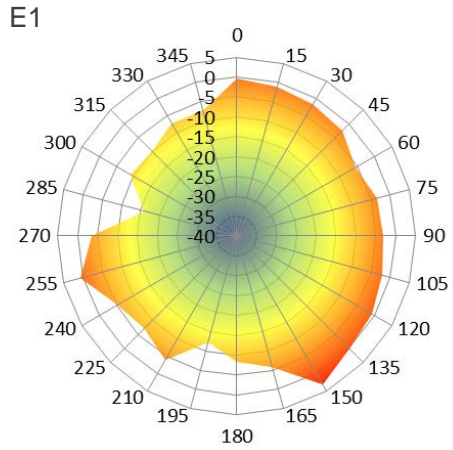


5150 MHz

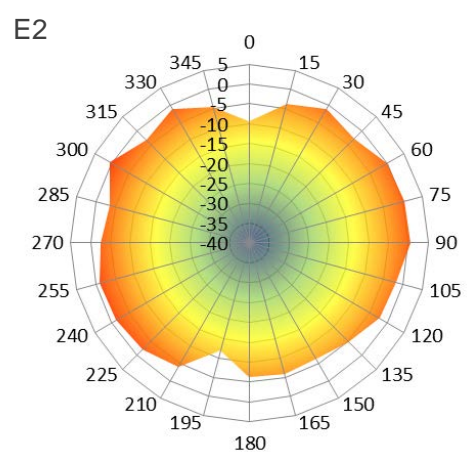
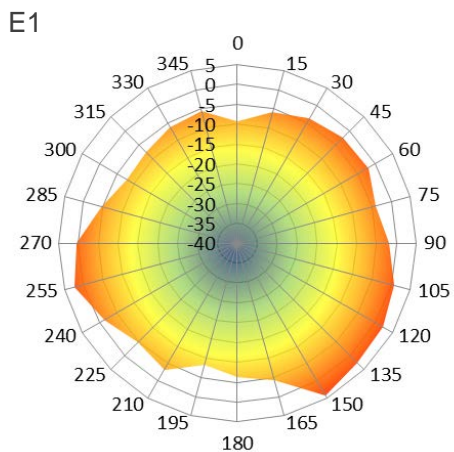
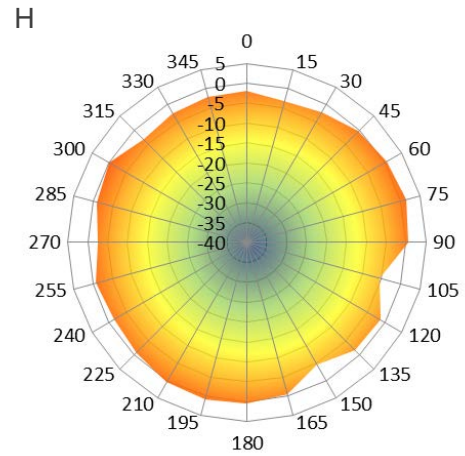
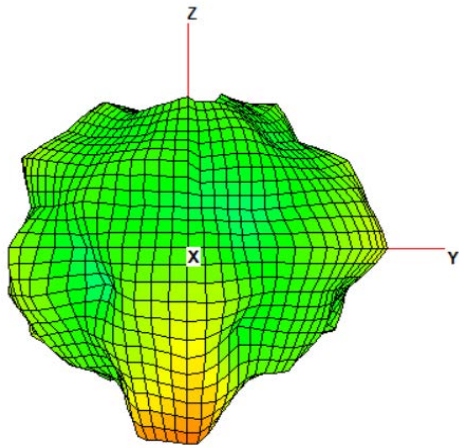


5250 MHz

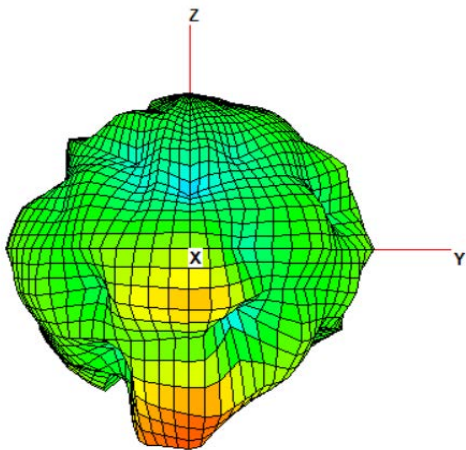




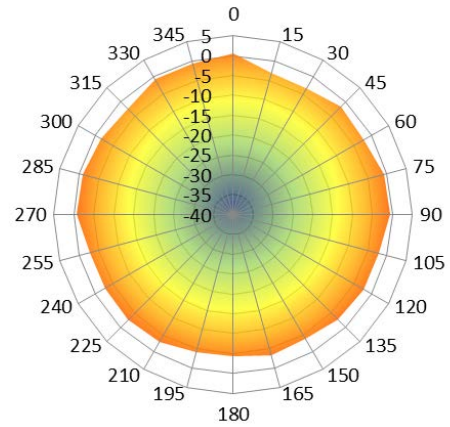
5470 MHz



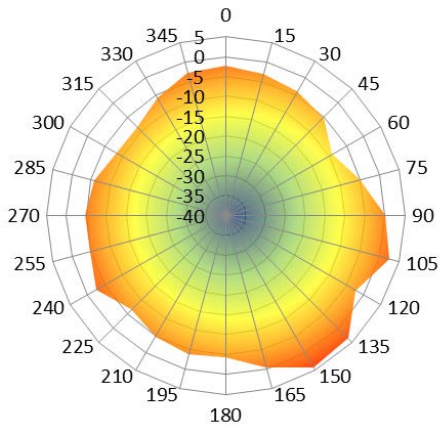
5850 MHz



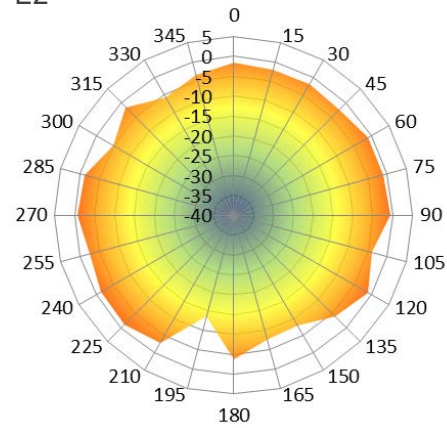
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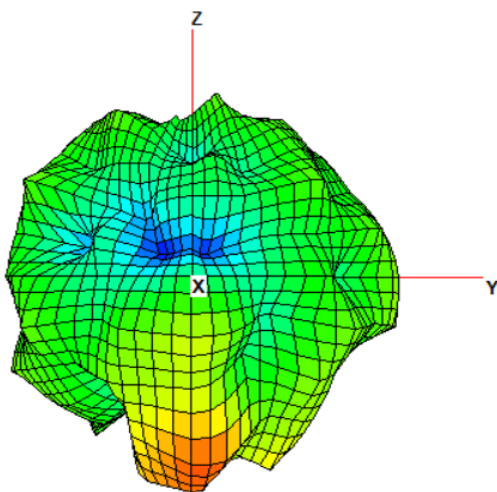
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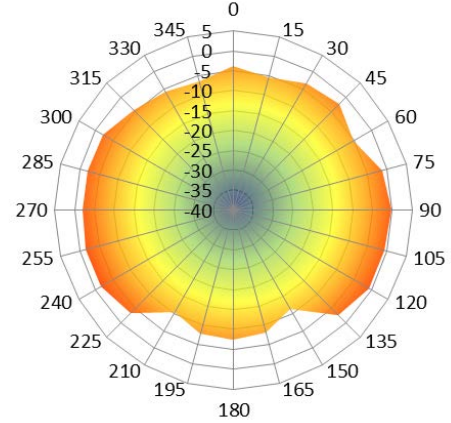
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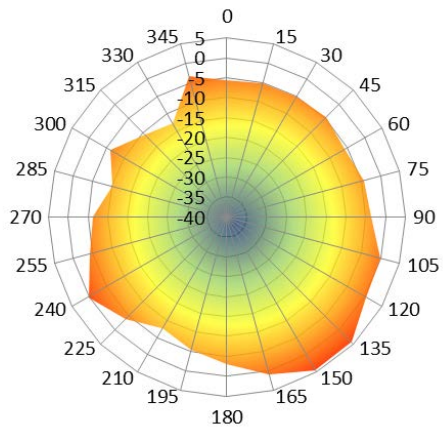
6325MHz



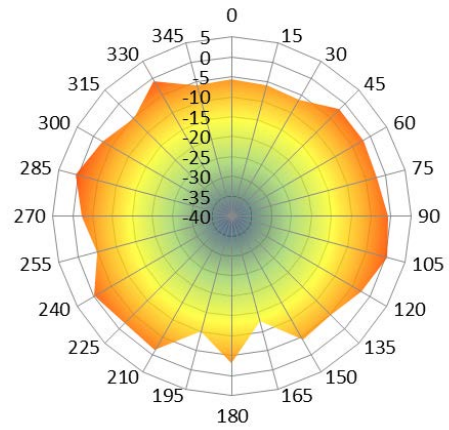
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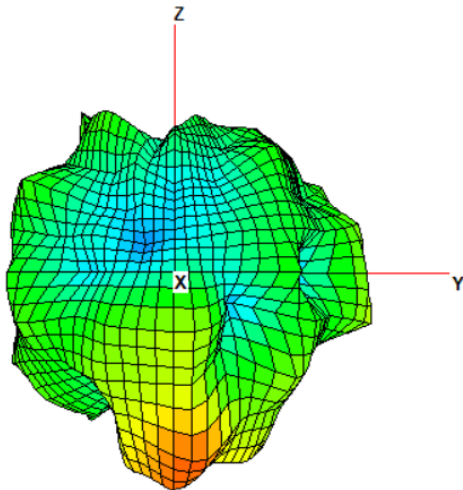
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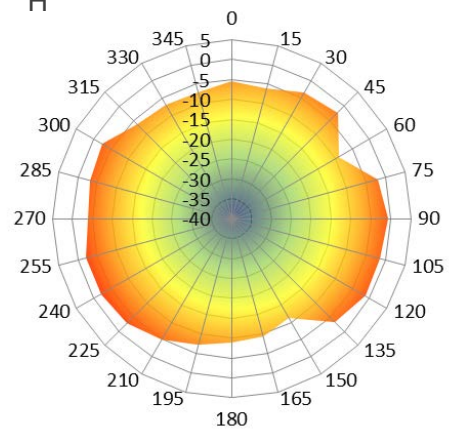
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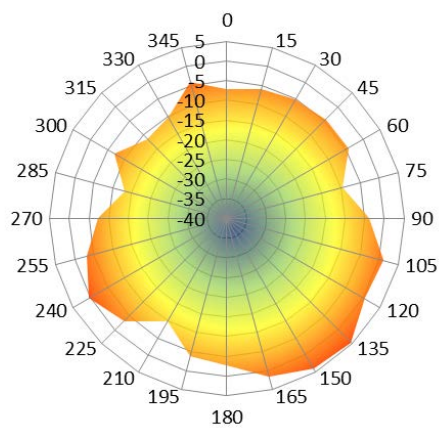
6425MHz



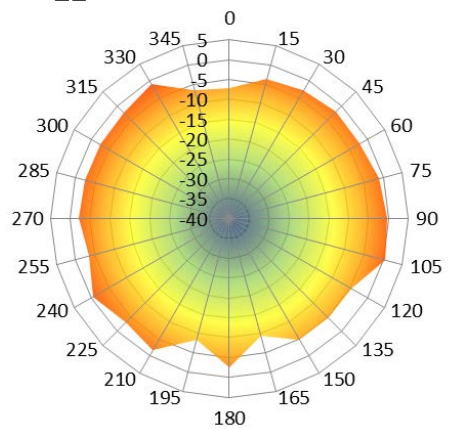
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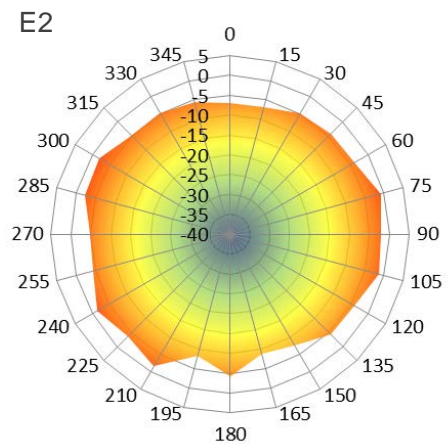
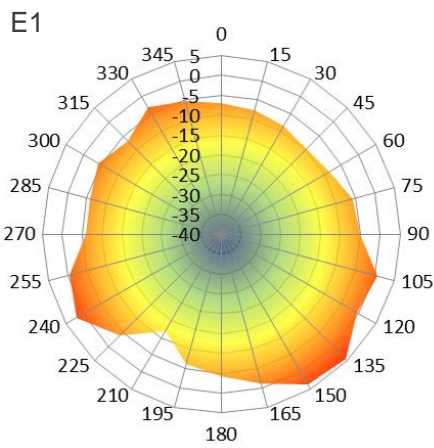
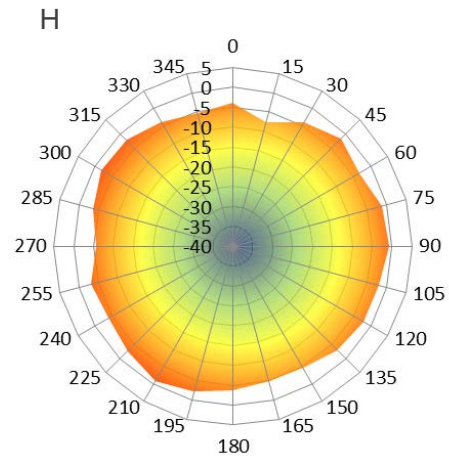
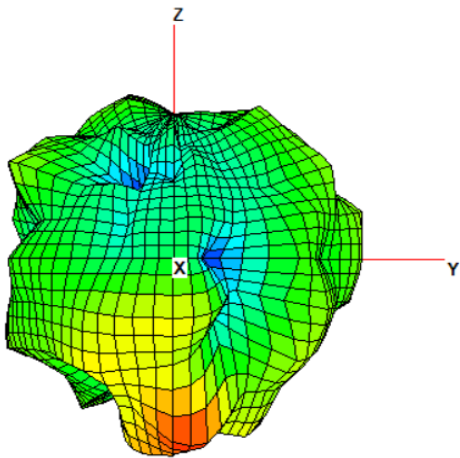
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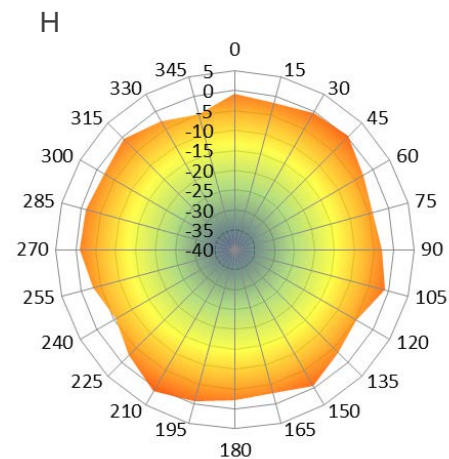
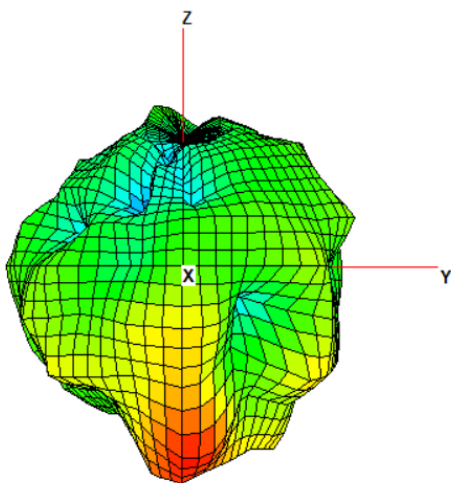
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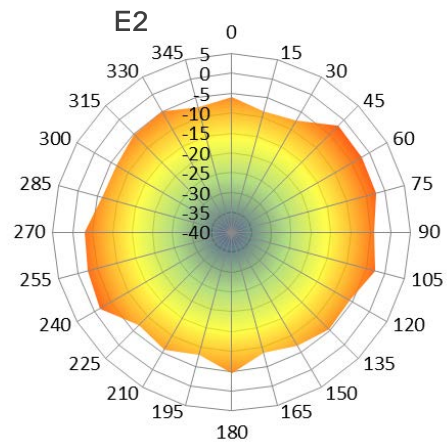
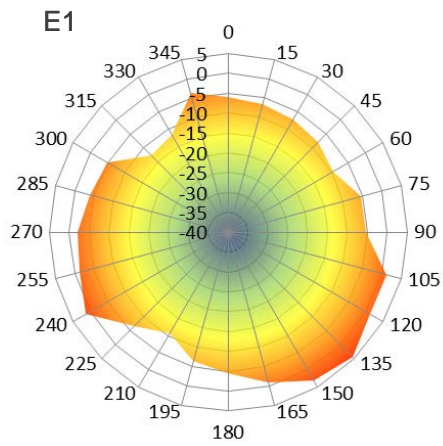


6625MHz



7000MHz





5 Product Size

