



# Antenna

# F7G300 Datasheet

## Antenna Services

Version: 3.1

Date: 2023-03-30

Status: Preliminary

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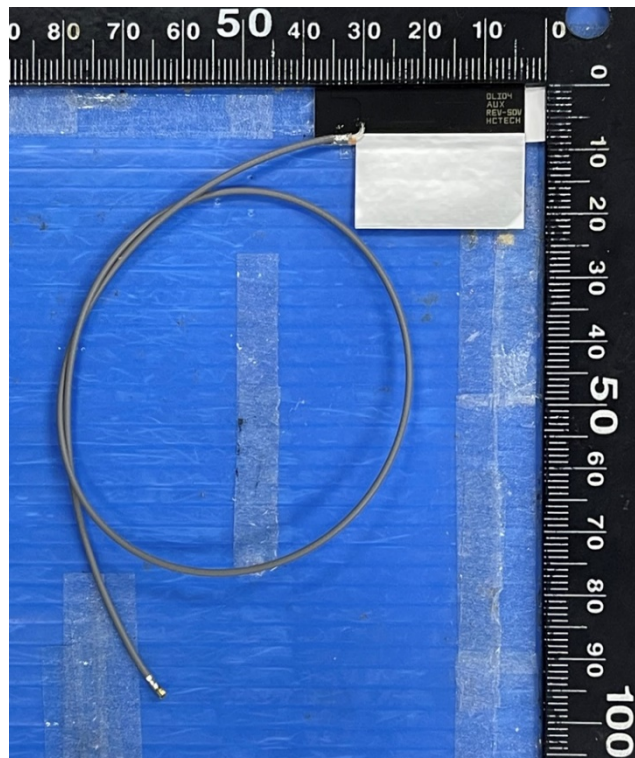
## 1 Product Description

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 $\Omega$   |
| VSWR            | 2.4GHz: $\leq 3.0$ ,<br>5GHz: $\leq 3.0$<br>6GHz: $\leq 3.0$<br>7GHz: $\leq 3.0$                    |
| Peak Gain       | 2.4GHz: $\leq 1.17$ dBi,<br>5GHz: $\leq 3.53$ dBi<br>6GHz: $\leq 4.47$ dBi<br>7GHz: $\leq 4.69$ 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        | Gray                                 |
| IP Rating           | IP55                                 |

## 4 Overall Performance

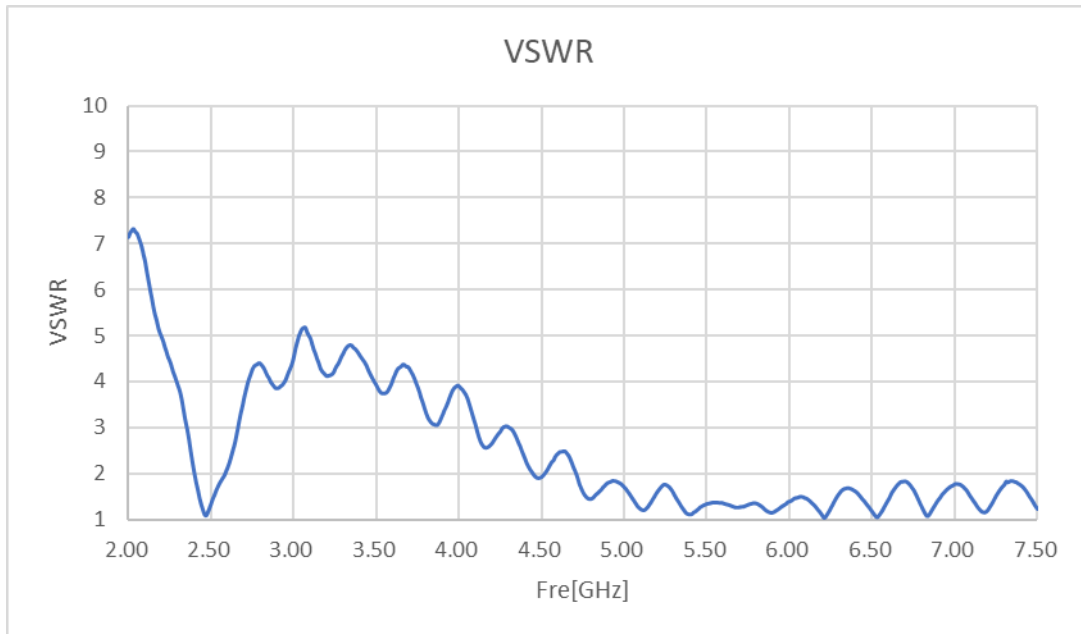
### 4.1. Test Environment

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



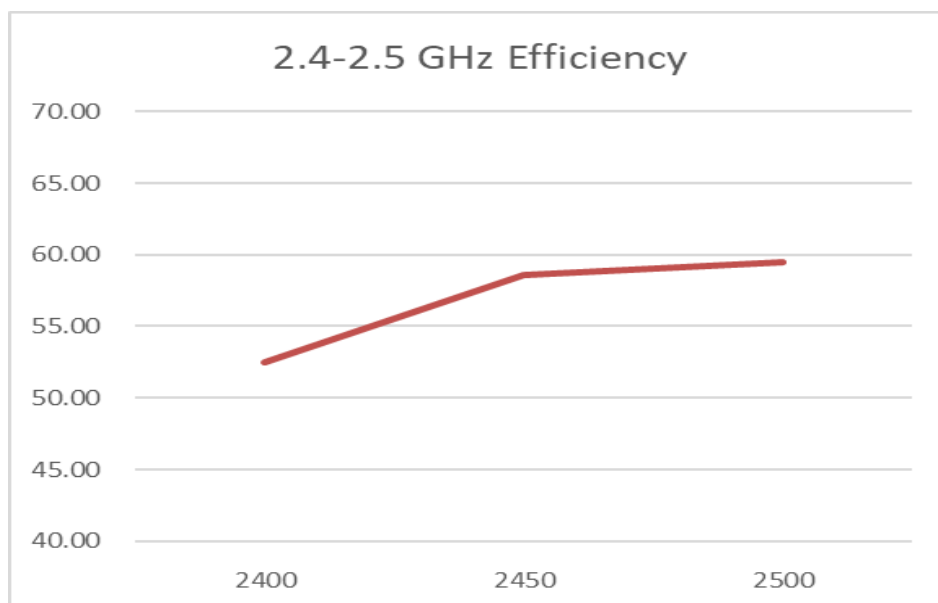
## 4.2. Data-WIFI

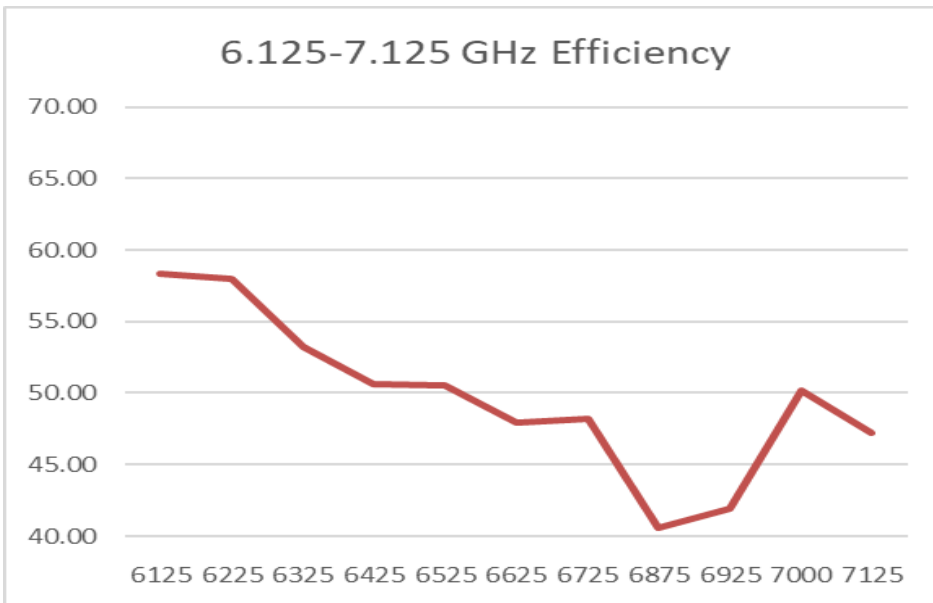
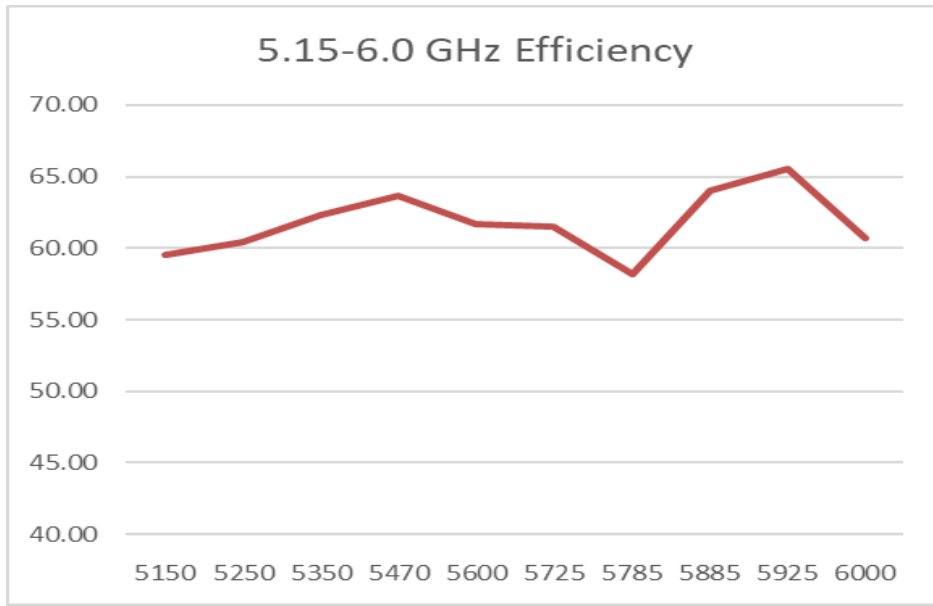
- VSWR



|                 |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|
| Frequency (MHz) | 2400 | 2500 | 5150 | 5885 | 6125 | 7125 |
| VSWR            | 1.97 | 1.34 | 1.31 | 1.13 | 1.36 | 1.22 |

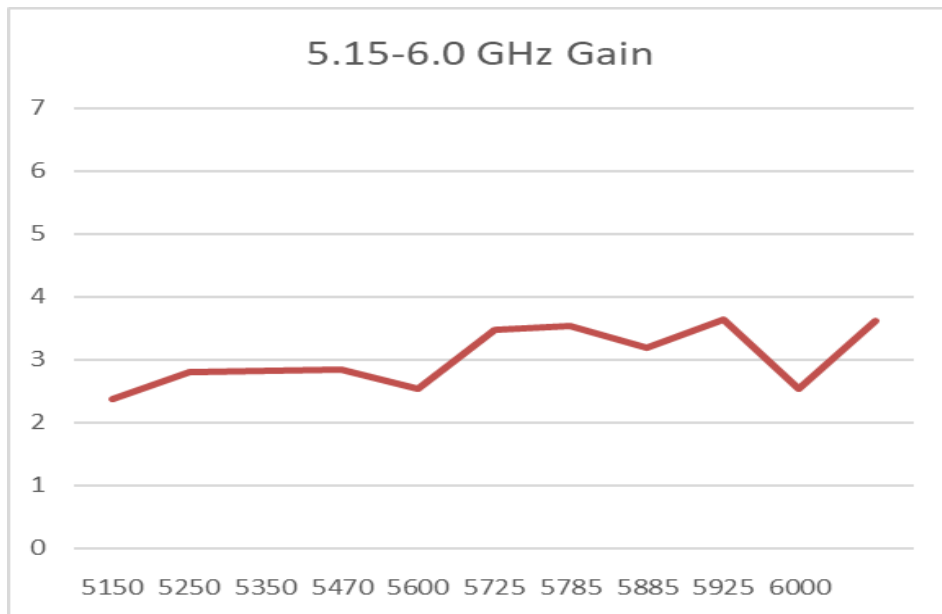
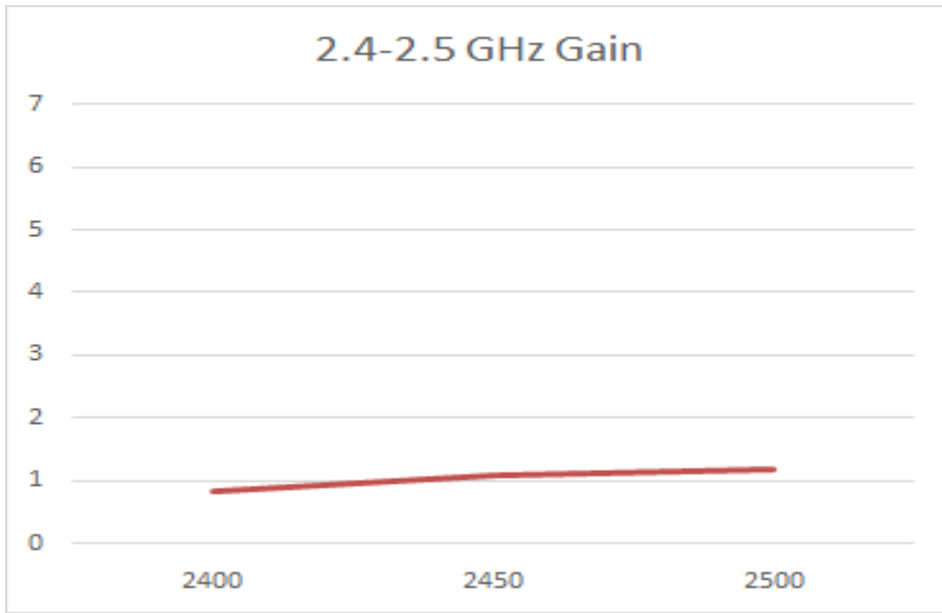
- Efficiency



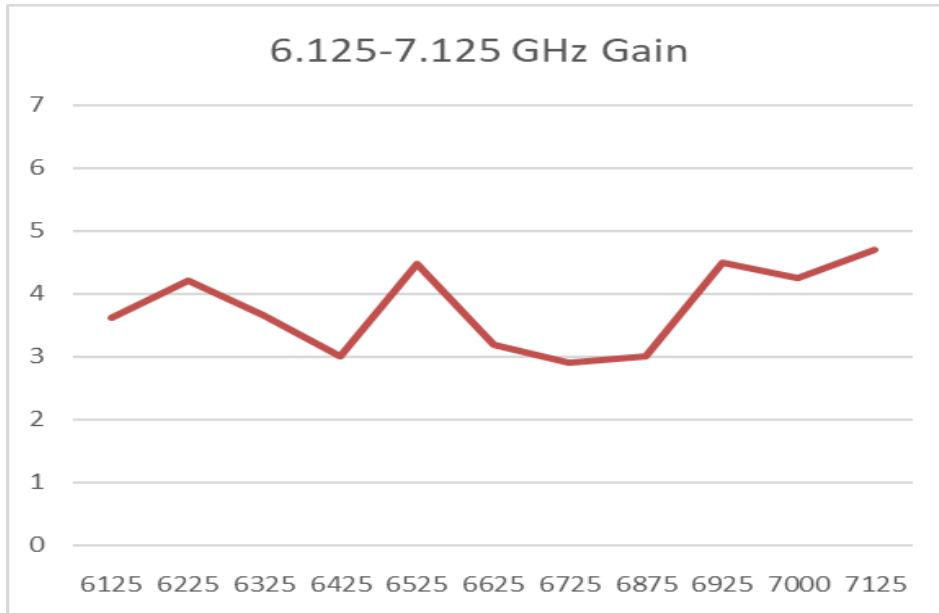


|                        |       |       |       |       |       |       |
|------------------------|-------|-------|-------|-------|-------|-------|
| <b>Frequency (MHz)</b> | 2400  | 2500  | 5150  | 5885  | 6125  | 7125  |
| <b>Efficiency (%)</b>  | 52.48 | 59.48 | 59.52 | 64.03 | 58.38 | 47.25 |

- Gain





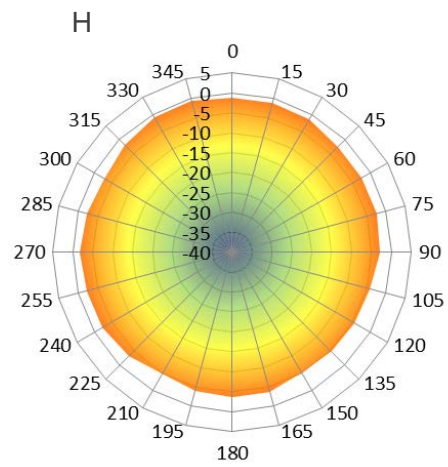
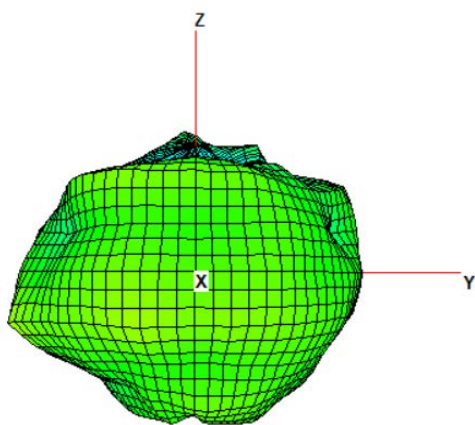


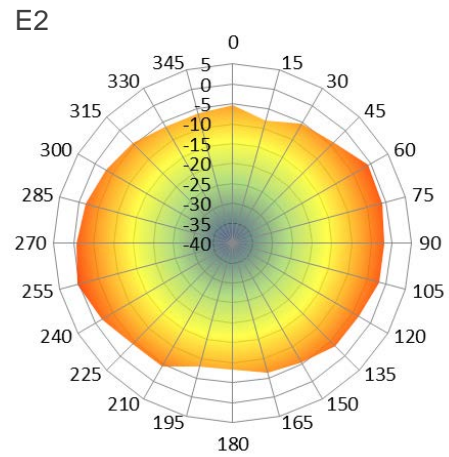
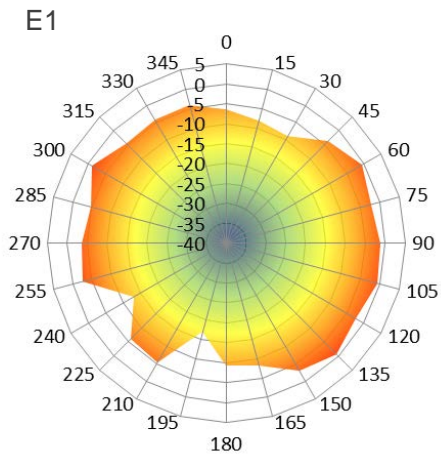
| Frequency (MHz) | 2400-2483.5 | 5150-5250 | 5250-5350 | 5470-5725 | 5725-5885 | 5925-6425 | 6425-6525 | 6525-6875 | 6875-7125 |
|-----------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Peak Gain (dBi) | 1.17        | 2.79      | 2.83      | 3.48      | 3.53      | 4.20      | 4.47      | 4.47      | 4.69      |

### 4.3. Radiation Pattern-WIFI

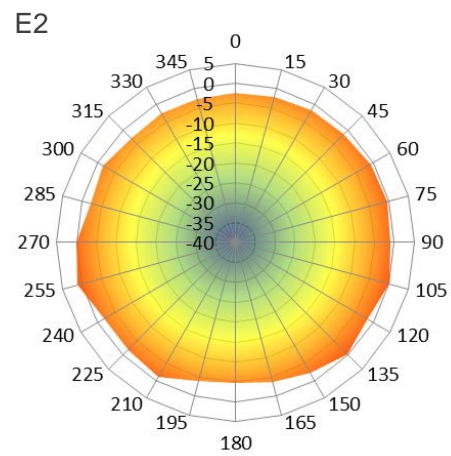
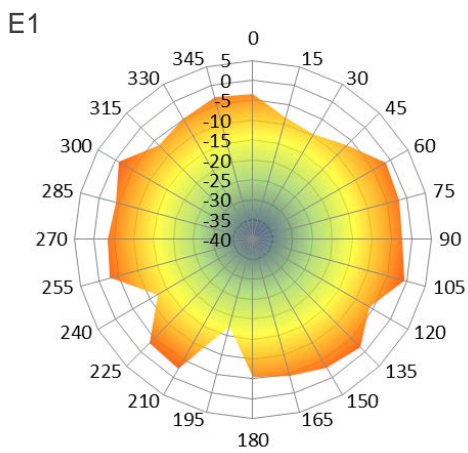
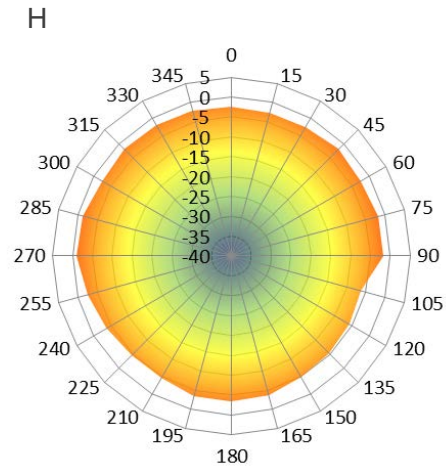
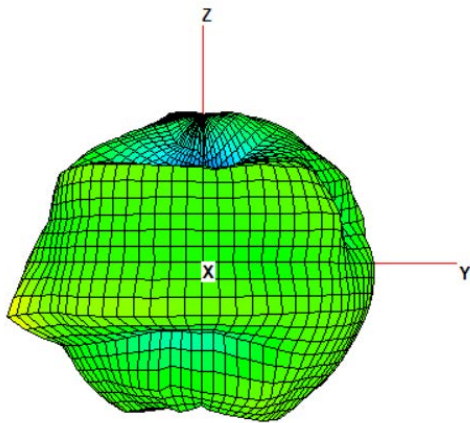


2400 MHz

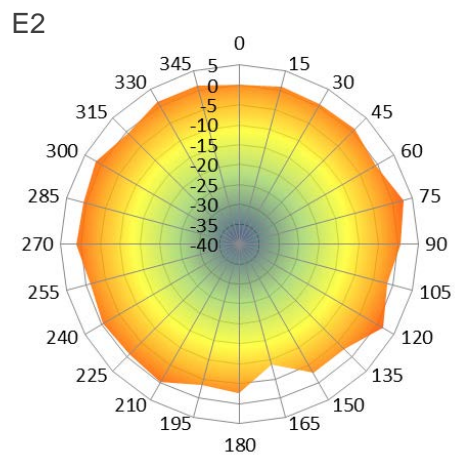
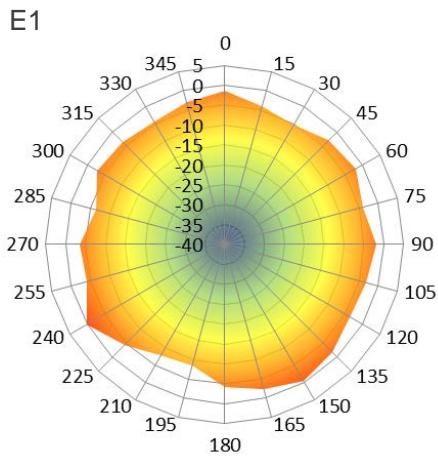
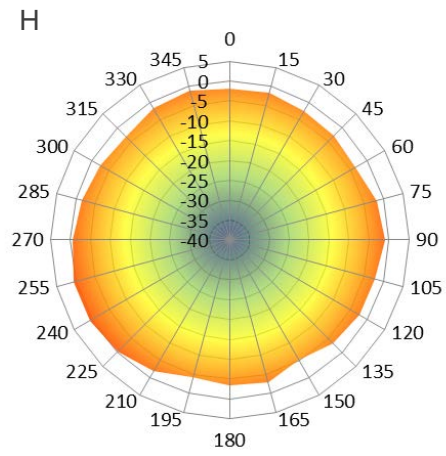
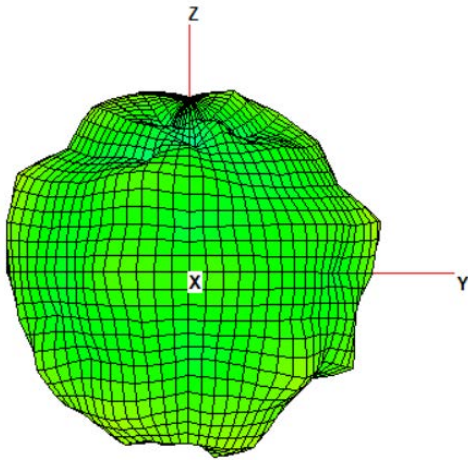




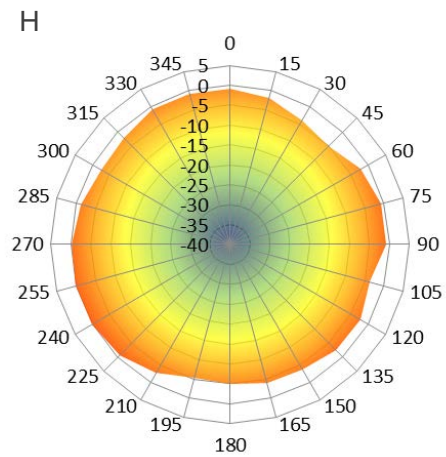
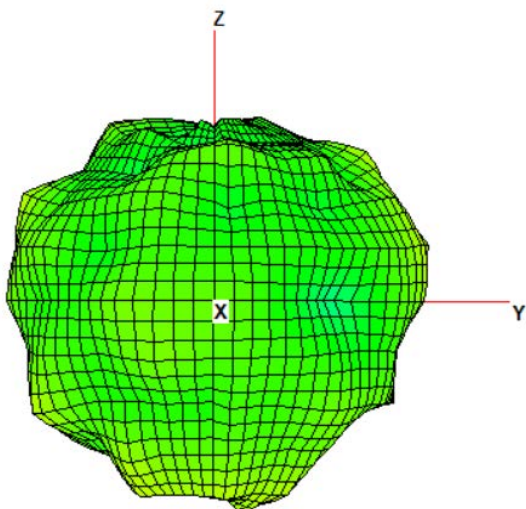
2500 MHz

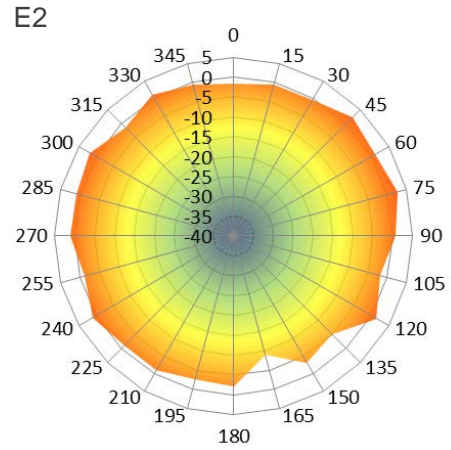
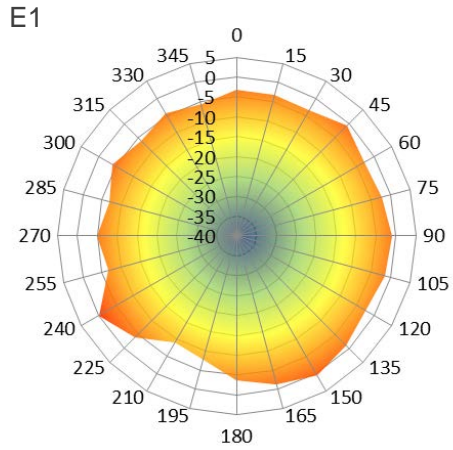


5250 MHz

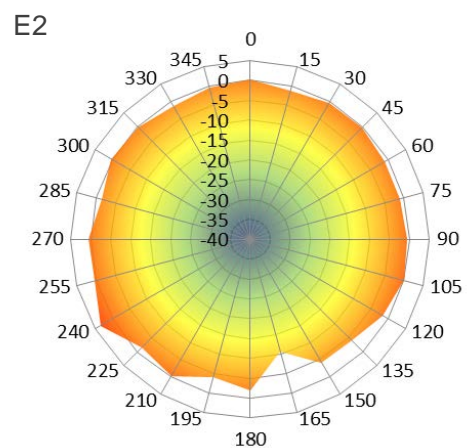
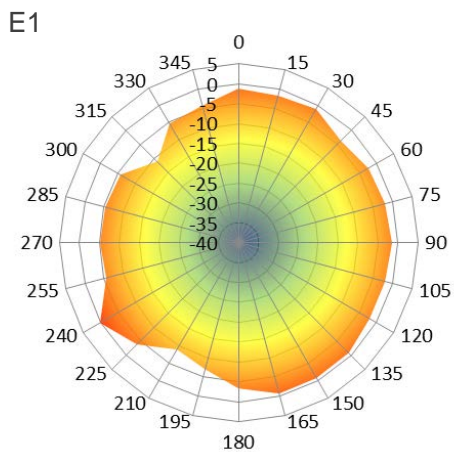
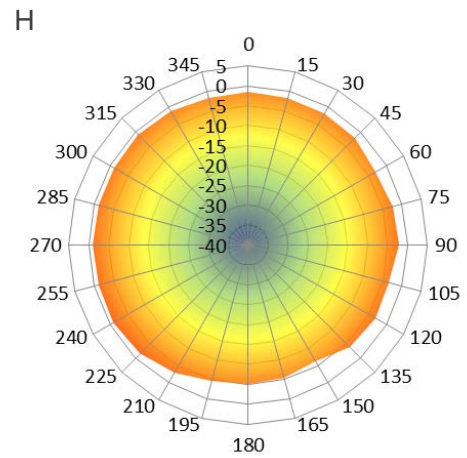
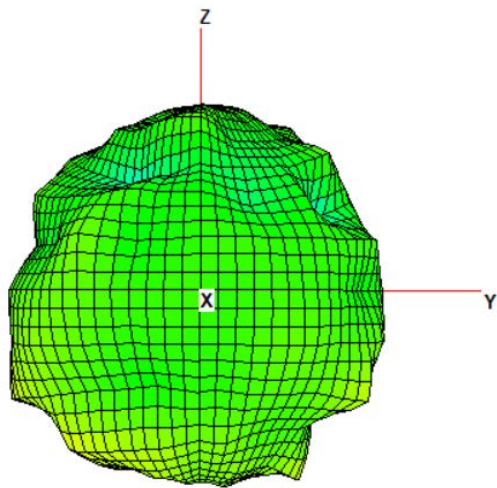


5350 MHz

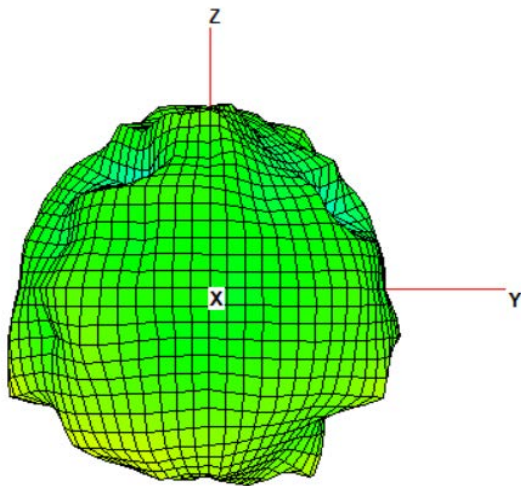




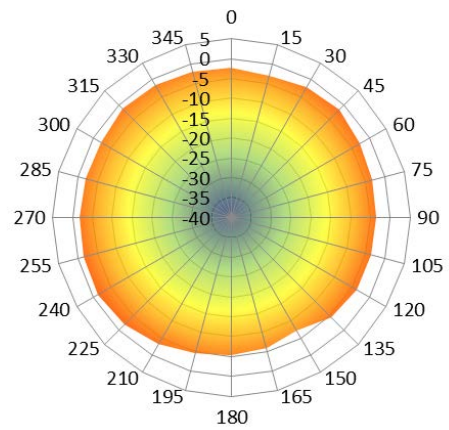
5725 MHz



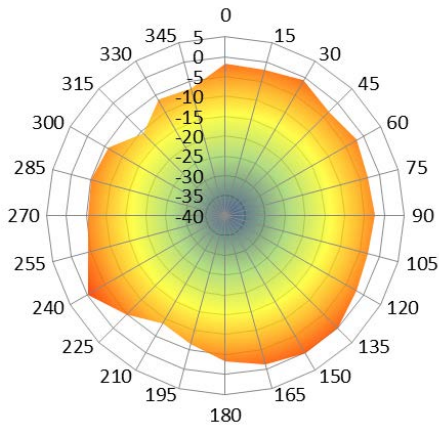
5785 MHz



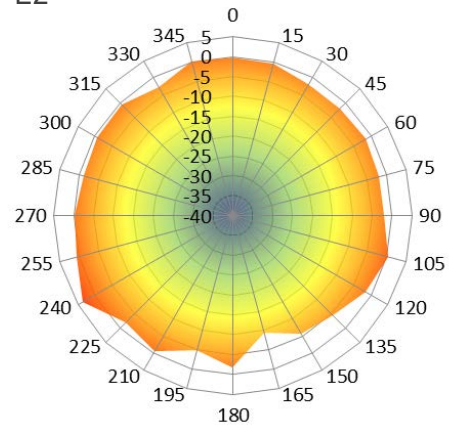
H



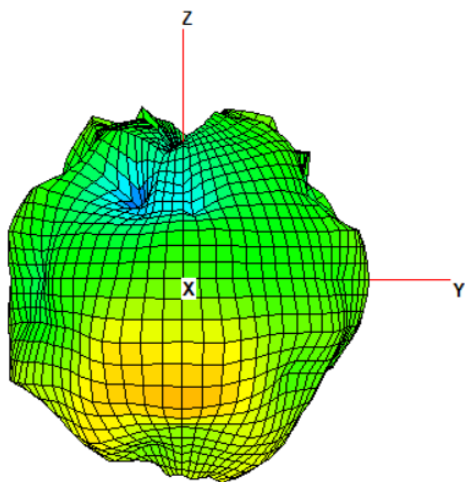
E1



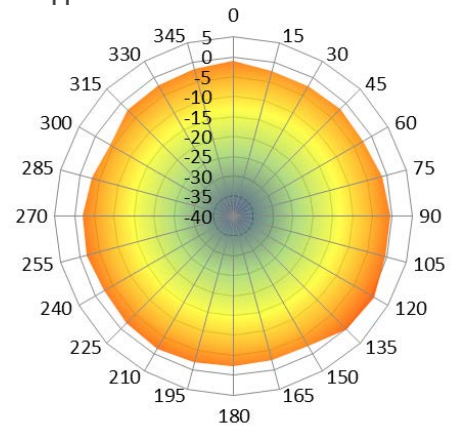
E2



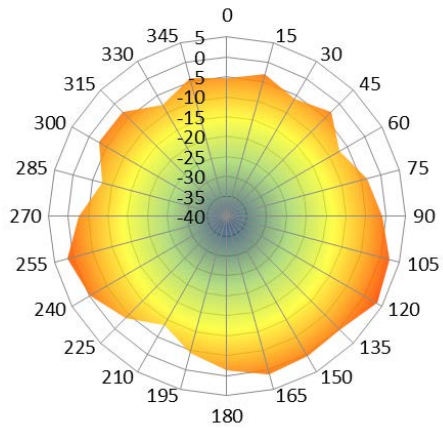
6225MHz



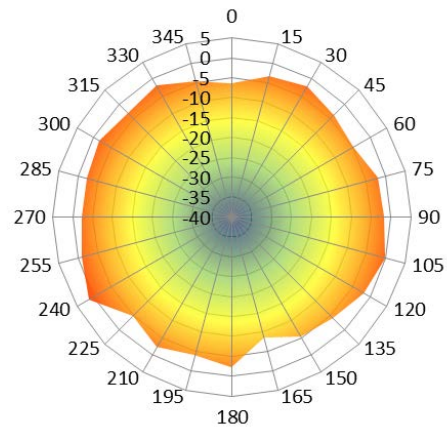
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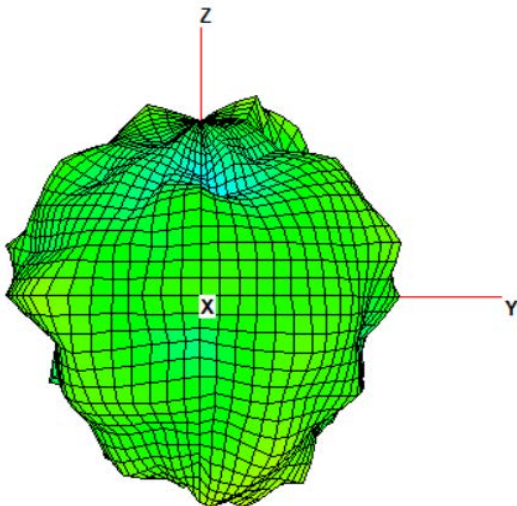
E1



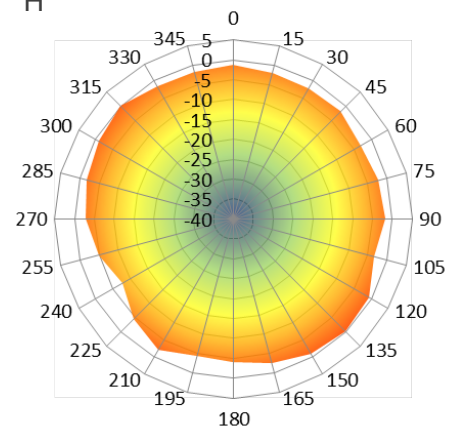
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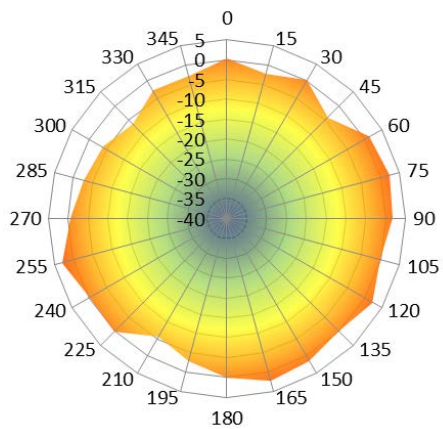
6525MHz



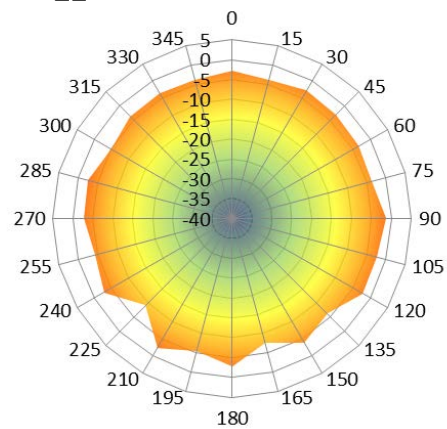
H



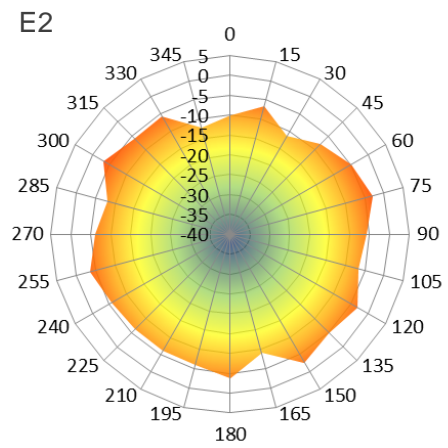
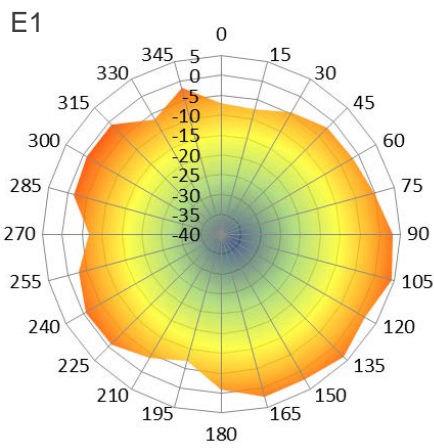
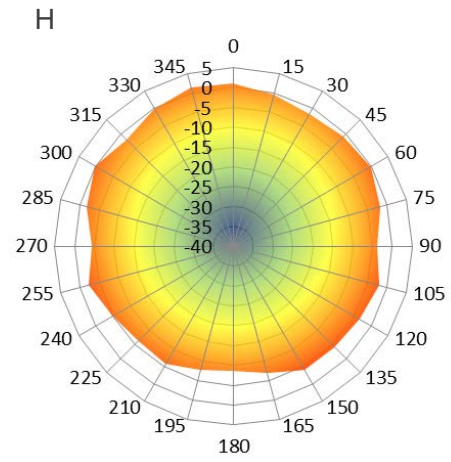
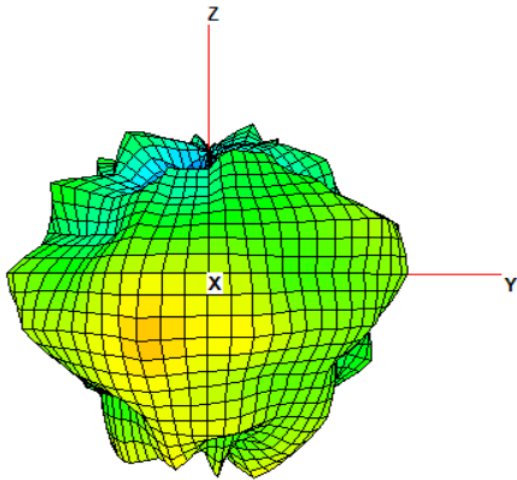
E1



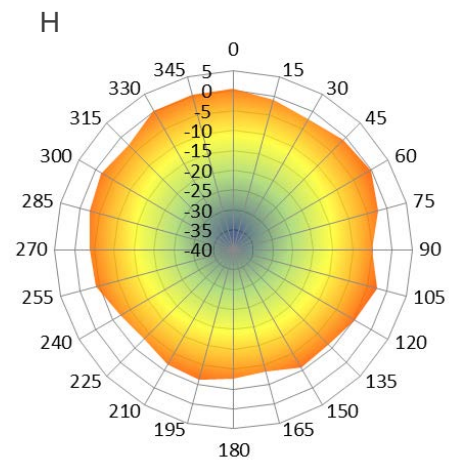
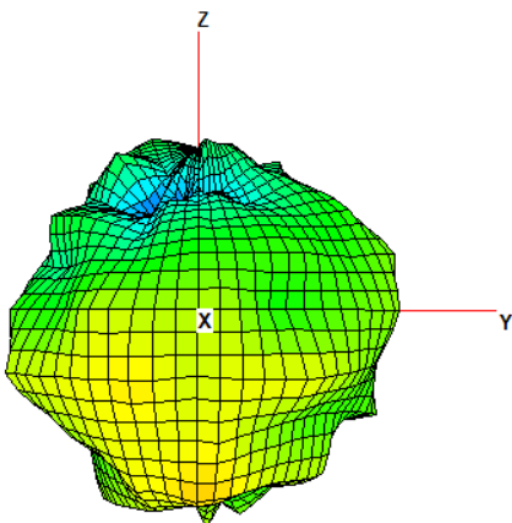
E2



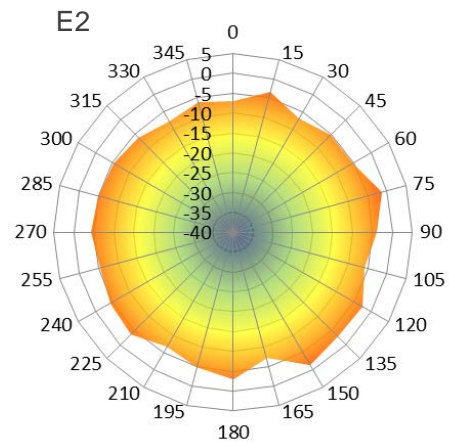
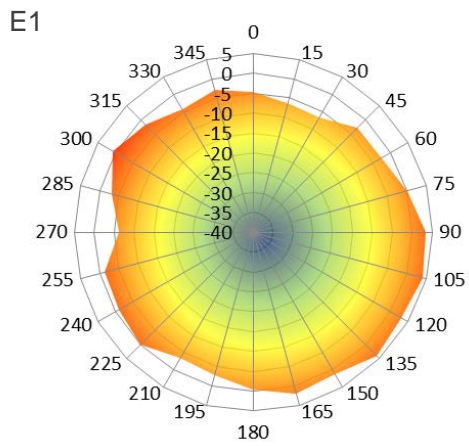
7000MHz



7125MHz







## 5 Product Size

RoHS

