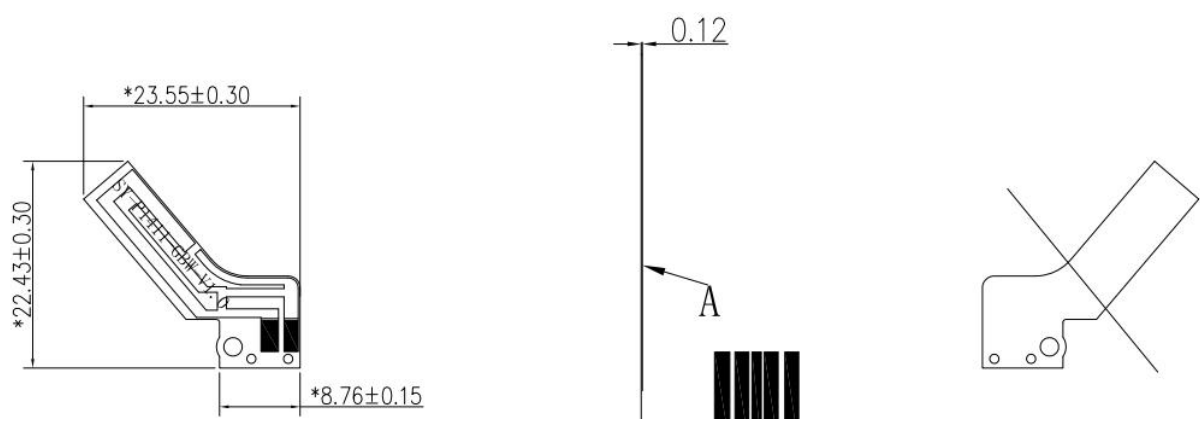


3-in-1 antenna specification

General information

|                |                                                                                       |
|----------------|---------------------------------------------------------------------------------------|
| Manufacturer   | Sunnyway Technology ( China ) Co.,Ltd.                                                |
| Model Name     | P1411-GPS&WIFI&BT ant                                                                 |
| Date           | 2025.4.28                                                                             |
| Version        | 1.0                                                                                   |
| Vendor address | 1F,Building 4,No.99,Lane 215,GaoGuang Road, QingPu District, 201702<br>Shanghai,China |

Antenna Appearance



Technical Specifications

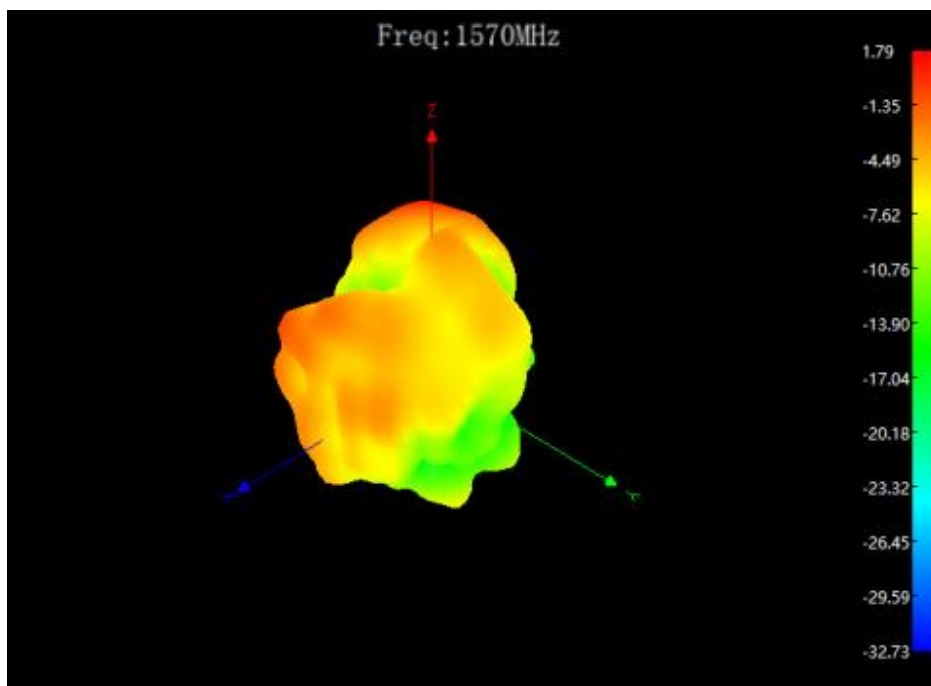
|                 |                                      |
|-----------------|--------------------------------------|
| Frequency Range | 1575.42MHZ+2400-2500MHZ~5150-5850MHZ |
| Antenna Type    | IFA                                  |
| Dimensions      | 33.92*18.85mm                        |
| Impedance       | 50 ohm                               |
| Maximum Gain    | 2.33dBi                              |
| VSWR            | ≤ 3                                  |
| .....           | .....                                |

## Efficiency and gain

| Frequency (MHz) | Gain (dBi) | Efficiency (%) |
|-----------------|------------|----------------|
| 1540            | 1.09       | 41.33          |
| 1550            | 1.24       | 41.54          |
| 1560            | 1.59       | 42.08          |
| 1570            | 1.79       | 42.49          |
| 1580            | 1.64       | 41.39          |
| 1590            | 1.39       | 41.31          |
| 1600            | 1.21       | 40.71          |

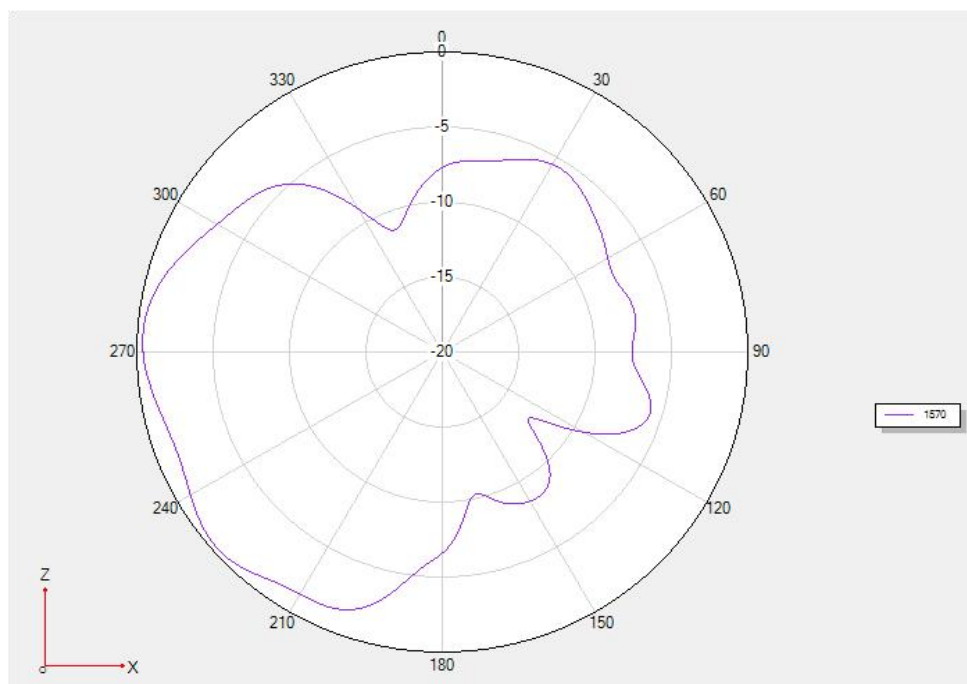
| Frequency (MHz) | Gain (dBi) | Efficiency (%) | Frequency (MHz) | Gain (dBi) | Efficiency (%) |
|-----------------|------------|----------------|-----------------|------------|----------------|
| 2400            | -0.12      | 27.33          | 5100            | 1.22       | 35.24          |
| 2410            | 0.33       | 29.51          | 5200            | 1.34       | 33.33          |
| 2420            | 0.54       | 31.09          | 5300            | 1.44       | 30.69          |
| 2430            | 0.95       | 31.77          | 5400            | 1.46       | 30.2           |
| 2440            | 1.08       | 34.31          | 5500            | 1.56       | 33.92          |
| 2450            | 1.27       | 35.05          | 5600            | 1.6        | 35.46          |
| 2460            | 1.33       | 35.25          | 5700            | 1.43       | 34.68          |
| 2470            | 1.5        | 36.71          | 5800            | 1.36       | 31.87          |
| 2480            | 1.89       | 38.31          | 5900            | 1.39       | 30.81          |
| 2490            | 2.1        | 39.15          |                 |            |                |
| 2500            | 2.33       | 39.54          |                 |            |                |

## Free space 3D radiation pattern

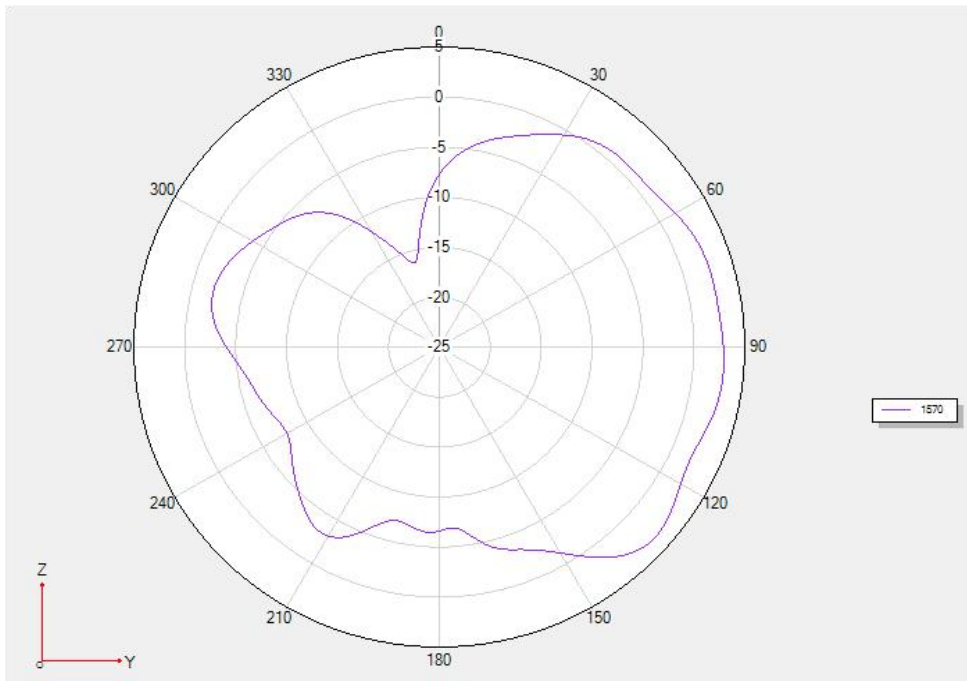


## Free space 2D radiation pattern

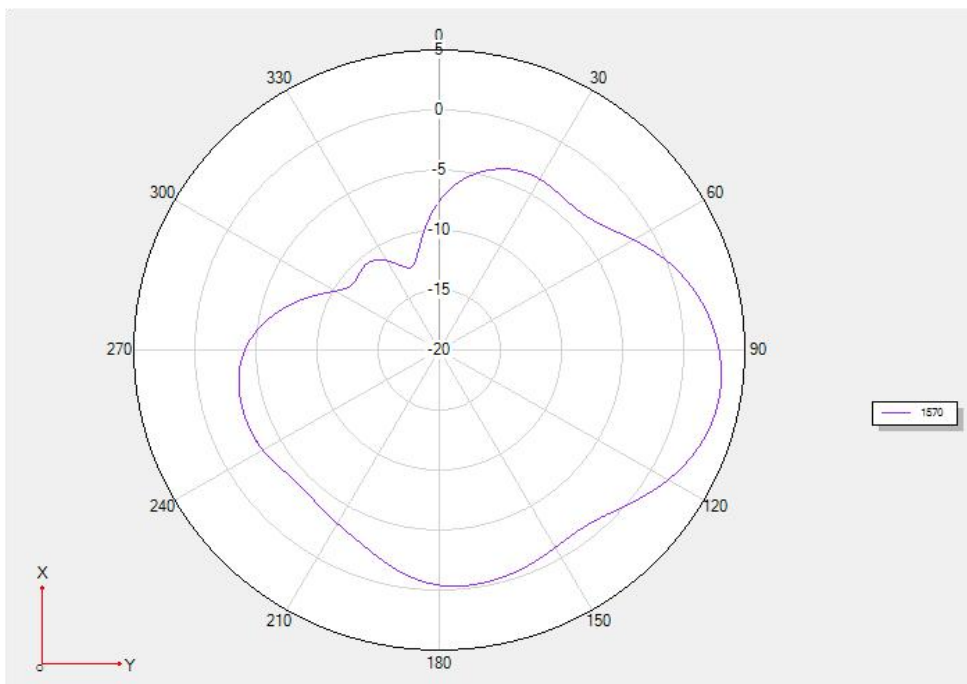
Phi 90



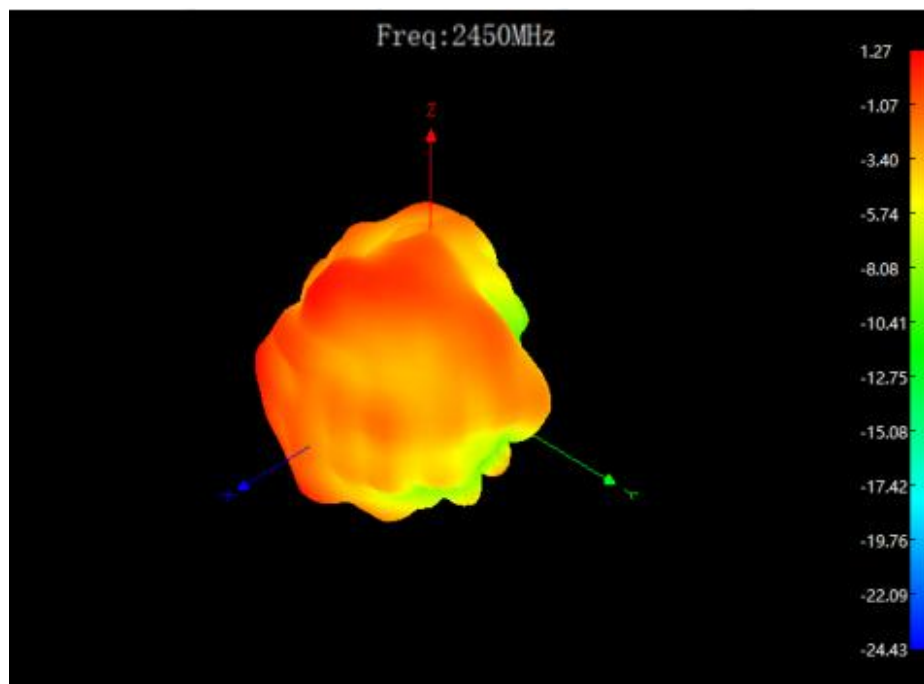
## Phi 90



## Theta 90

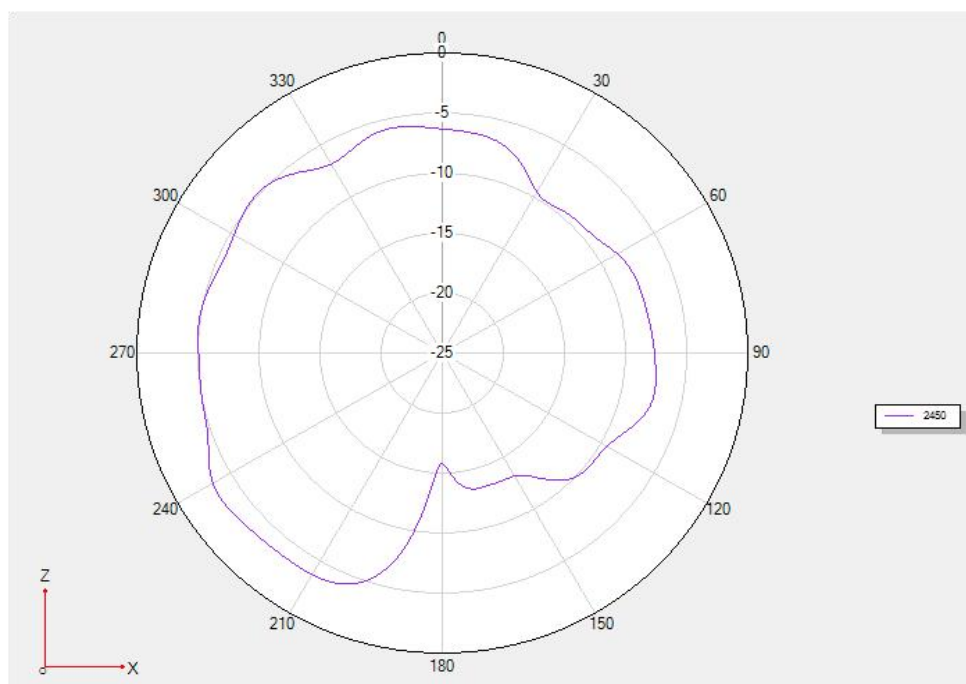


## Free space 3D radiation pattern

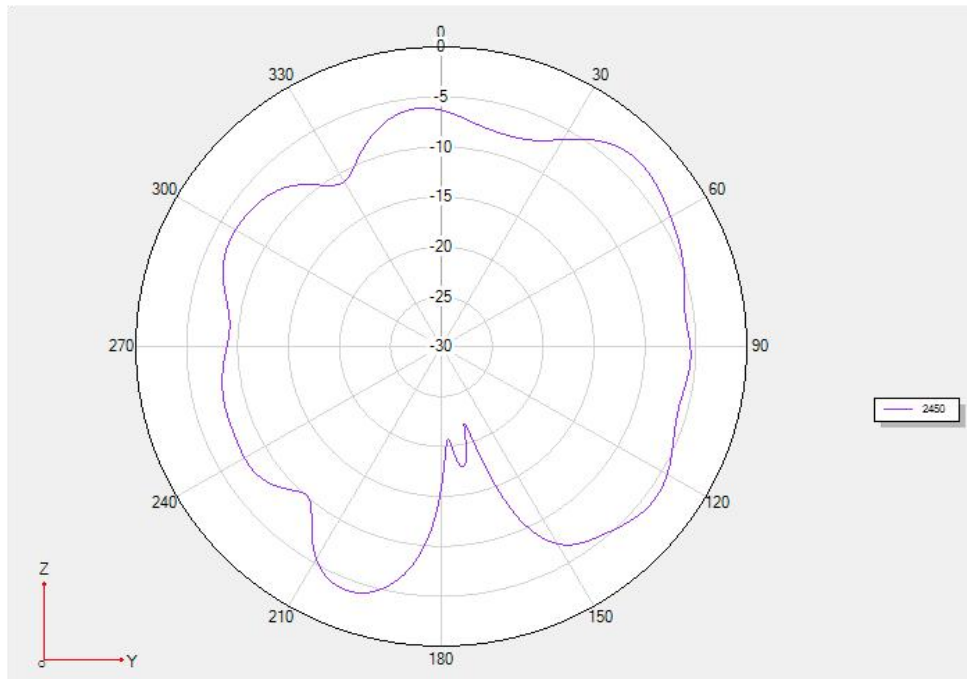


## Free space 2D radiation pattern

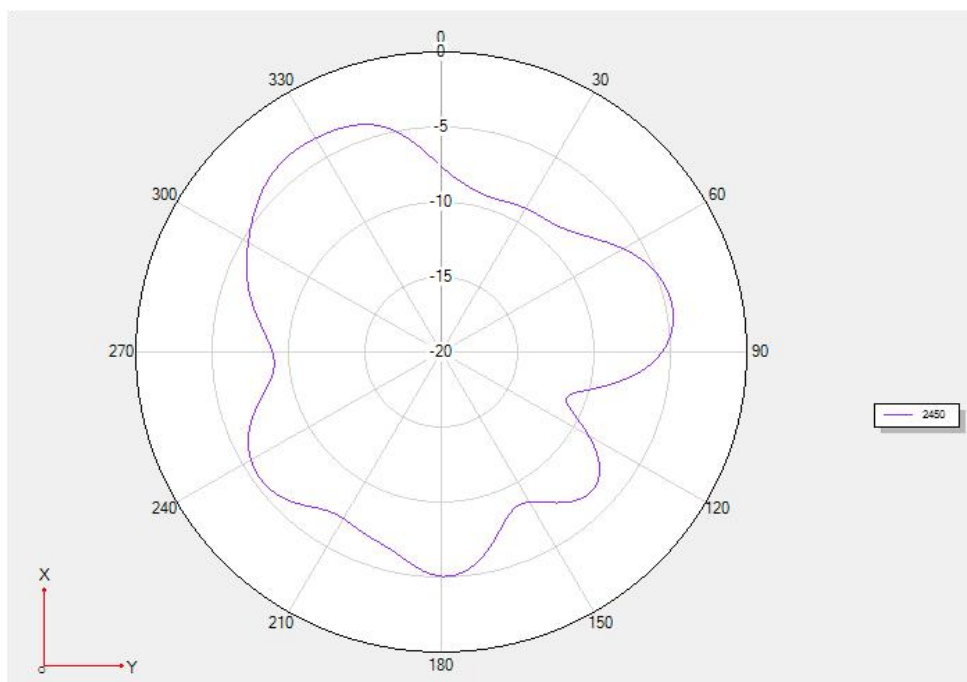
Phi 90



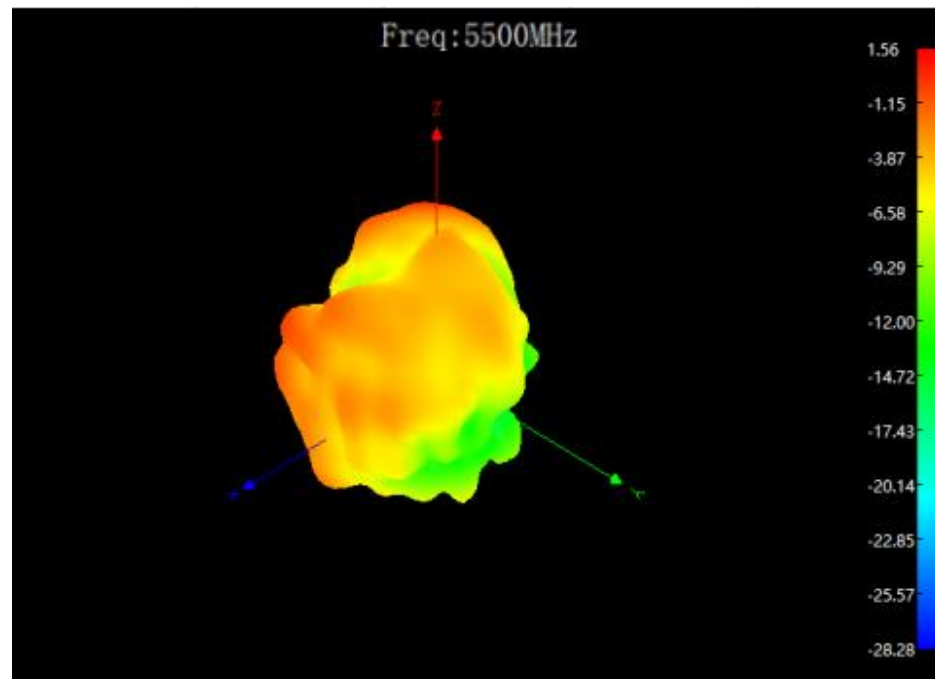
## Phi 90



## Theta 90

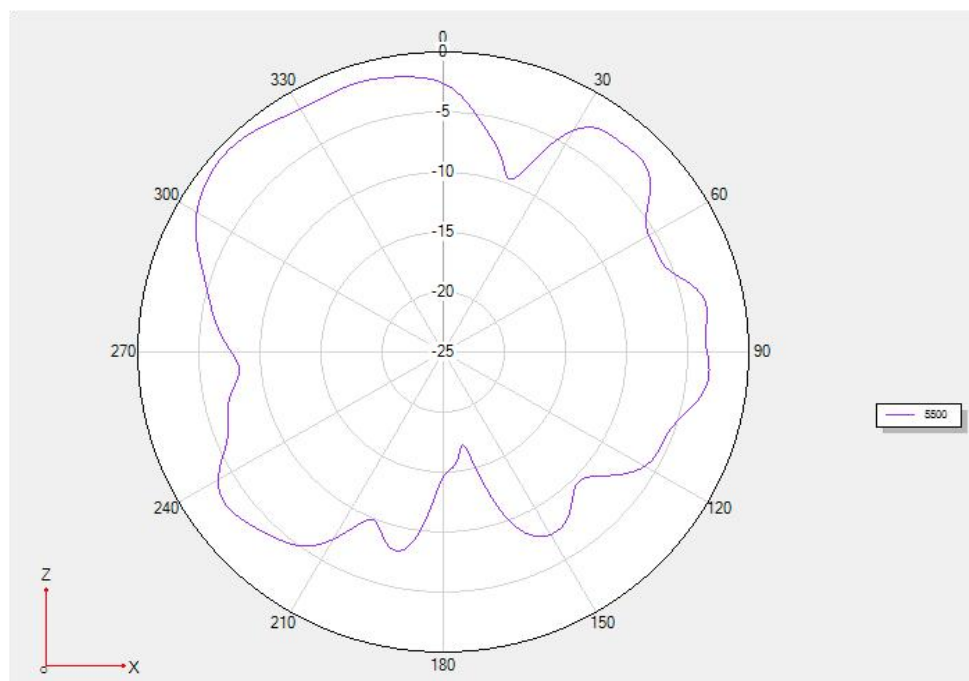


## Free space 3D radiation pattern

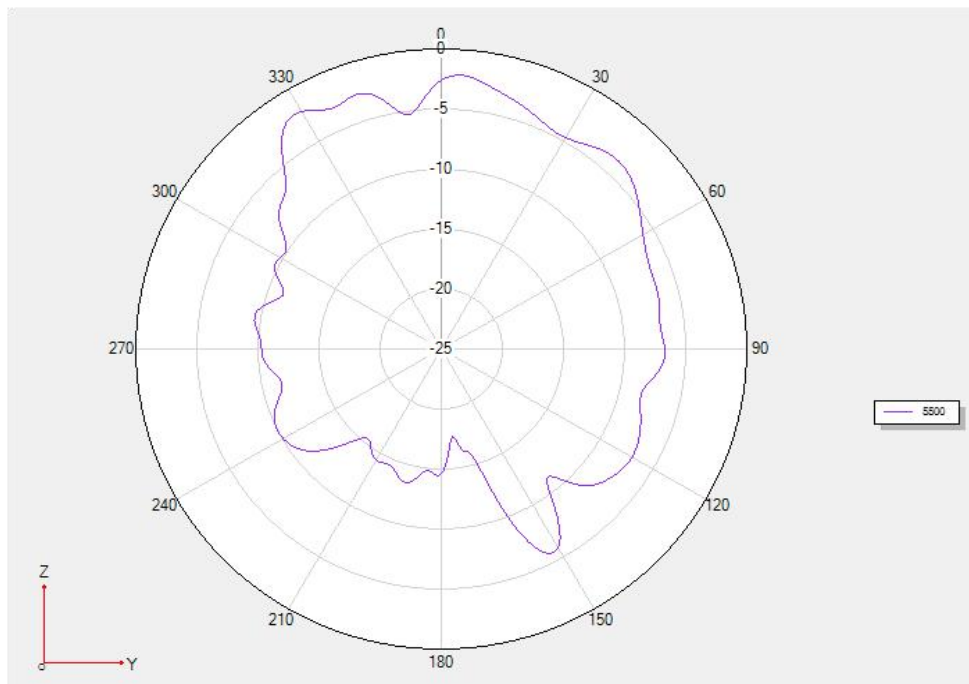


## Free space 2D radiation pattern

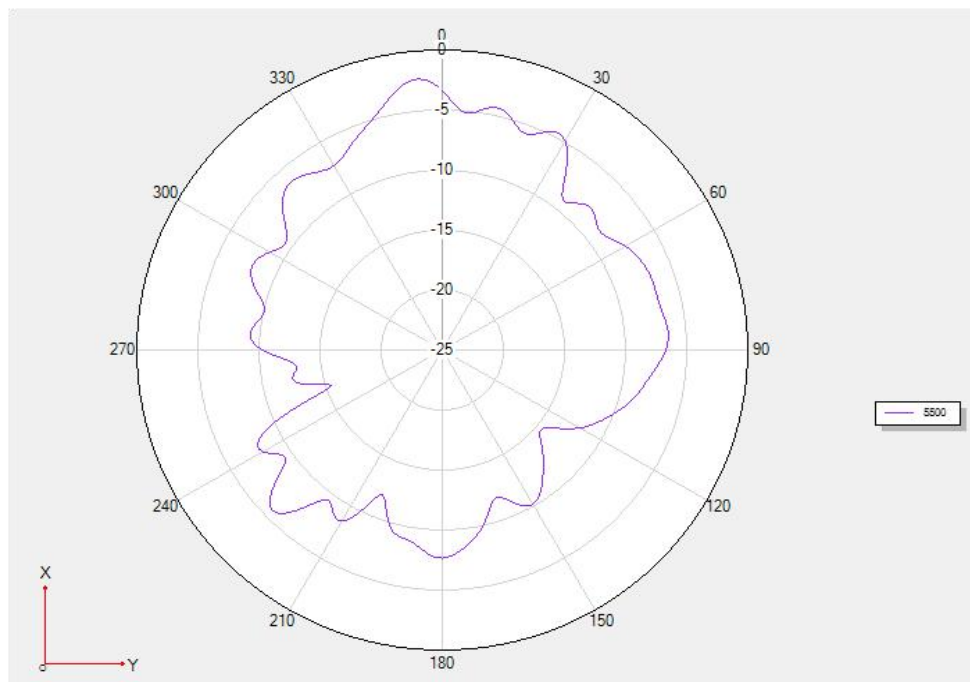
Phi 90



## Phi 90



## Theta 90





OTA（TRP TIS）

| WIFI OTA       |  | WIFI OTA test |          |           |
|----------------|--|---------------|----------|-----------|
| Test frequency |  | Channel       | TRP(dBm) | TIS (dBm) |
| WIFI 11a (54M) |  | 36            | 10.23    |           |
|                |  | 149           | 10.51    |           |
|                |  | 165           | 10.39    | -71.28    |
| WIFI 11b (11M) |  | 1             | 13.46    |           |
|                |  | 7             | 13.49    |           |
|                |  | 13            | 13.24    | -83.03    |

