Shenzhen Free Walk Communication Technology Co. LTD

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# APPROVAL SHEET

| | |
|---|---|
| **（Customer）：** | Shenzhen Jackson Technology Co., Ltd.son Technology Co., Ltd. |
| **（Product）：** | 2.4GWIFI antenna (Dual antenna) |
| **（Model）：** | D215W |
| **Part Number:** | Main antenna(Z01-6084-R01)Grey Line L=360mm |
| | Auxiliary antenna(Z08-10088-R01)Black Line L=330mm |
| **Written By ：** | Mr Hu |
| **Issued Date）：** | 2022-12-05 |

## CUSTOMER

| ENGINEER R&D DEPT | QUALITY DEPT | APPROVED |
|---|---|---|
| | | |

Free Walk

| R&D DEPT | ENGINEER R&D DEPT | APPROVED |
|---|---|---|
| | | |

# Document change history

QR-ZYX-084 : A0

Form number: QR-ZYX-084 Version: A0

| Product number | | | | Document change history | | | |
|---|---|---|---|---|---|---|---|
| Serial number | Change type | File Number | Change date | Description of changes | Production/Revision | version | Remarks |
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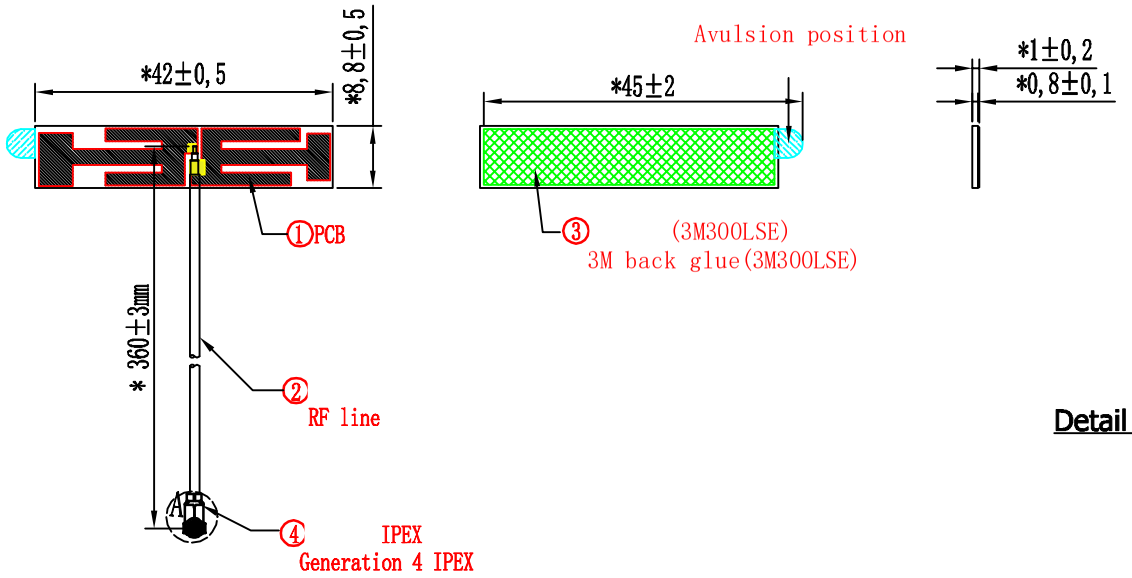
# Index

# The basic parameters

| A. Electrical Characteristics | |
|---|---|
| **Frequency** | **2410 MHz ~2480MHz** |
| **VSWR** | **≤3** |
| **Efficiency** | **>50%** |
| **Impedance** | **50 Ohm** |
| **Polarization** | **Linear** |
| **Gain** | **2dBi** |
| B. Material & Mechanical Characteristics | |
| **Material of Radiator** | |
| **Cable Type** | **Φ1.13 Main antenna Gray**<br>**Φ1.13 Auxiliary antenna Black** |
| **Connector Type** | **Fourth generation IPEX** |
| **Dimension** | |
| C. Environmental | |
| **Operation Temperature** | **- 20 ˚C ~ + 60 ˚C** |
| **Storage Temperature** | **- 40 ˚C ~ + 80 ˚C** |




notes:

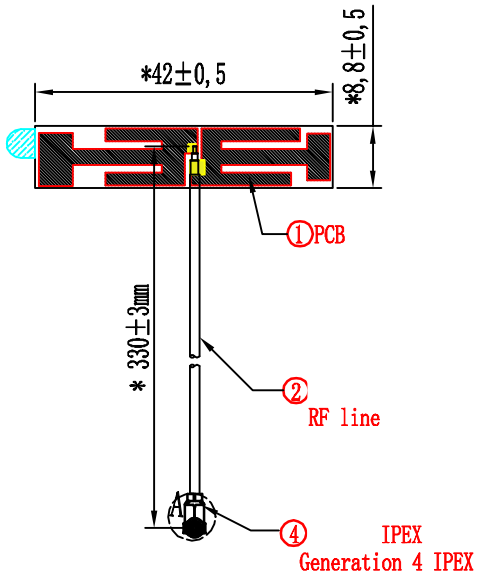
1、Standard * is the key dimension,Dimensions not marked with tolerance shall be tested according to ± 0.15

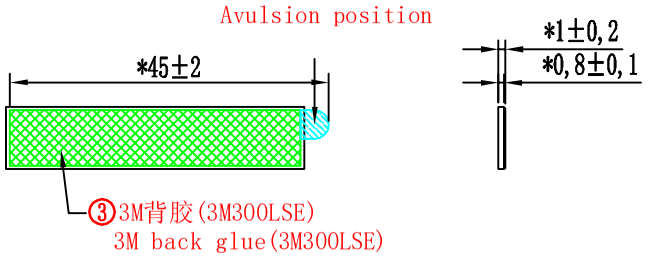
2、Refer to drawing without dimension; Other dimensions are subject to actual matching;

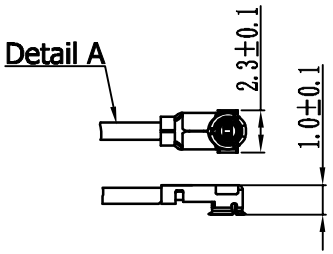
3、The Routing area, The gold-plating, The 3M300LSE gum

4、The product shall be free of oil, dust, burr, etc;

5、accord with ROHS

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4、The product shall be free of oil, dust, burr, etc;

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# Test Equipment & Conditions

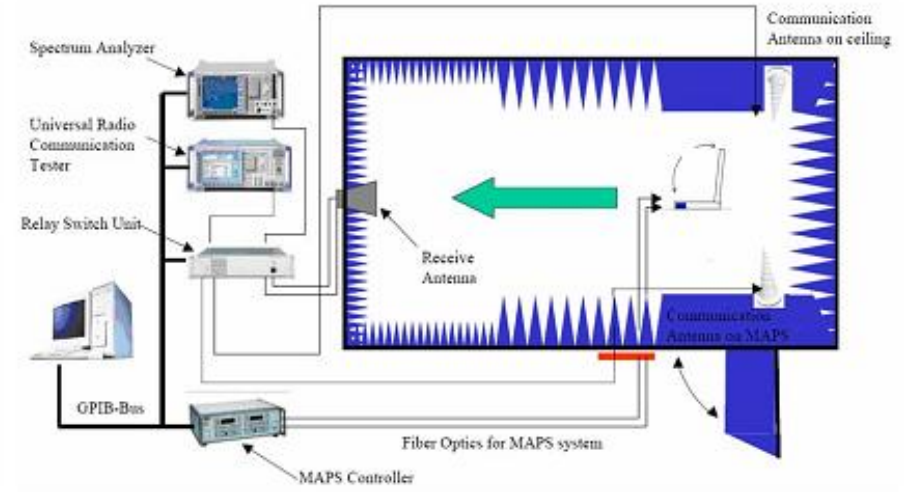
## 1. Network Analyzers :

Agilent 8753D 5071B

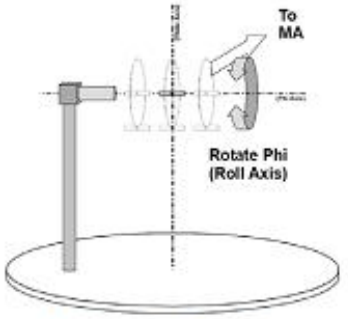
## 2. Communications Test Set:

Agilent 8960

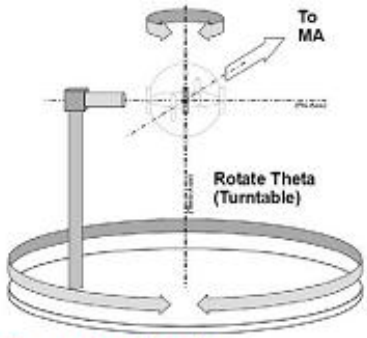
## 3. 3D Chamber Test System




(Testing by 3D anechoic chamber)




Phi axis test




Theta axis test

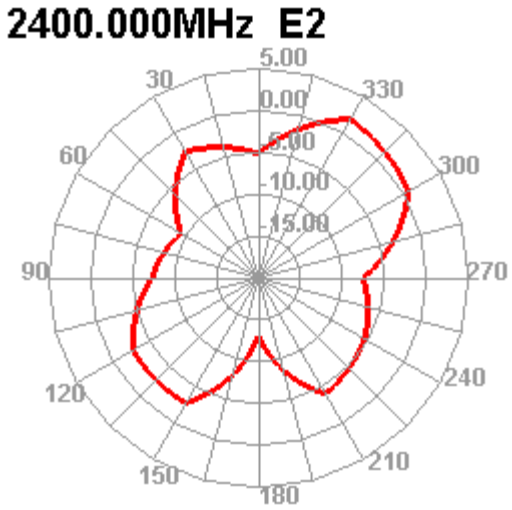
## Main antenna

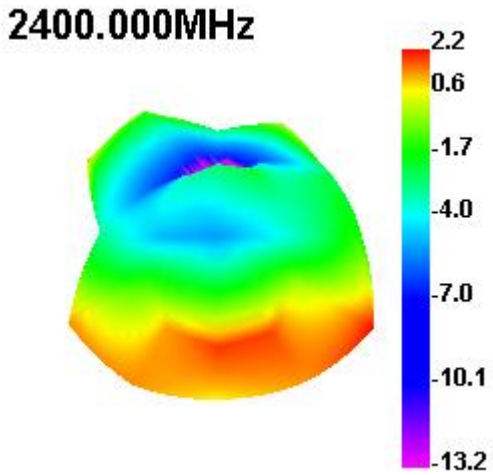
# 2.4GHz Efficency&Gain

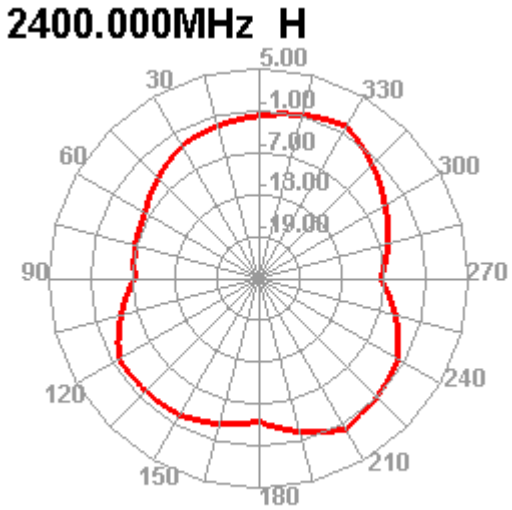
| Freq (MHz) | Effi (%) | Gain (dBi) |
|---|---|---|
| 2400 | 64.25 | 2.16 |
| 2410 | 63.96 | 2.02 |
| 2420 | 60.83 | 2.01 |
| 2430 | 61.45 | 2.1 |
| 2440 | 60.65 | 2.41 |
| 2450 | 59.63 | 2.26 |
| 2460 | 61.67 | 2.55 |
| 2470 | 64.23 | 2.67 |
| 2480 | 64.5 | 2.65 |
| 2490 | 63.23 | 2.32 |
| 2500 | 62.72 | 2.28 |

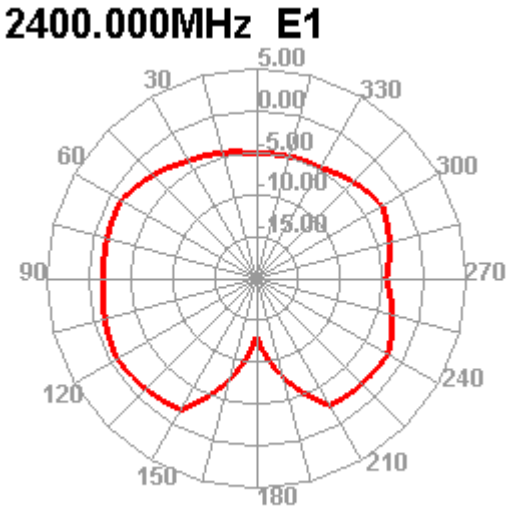
# Directional map

## 2400MHZ(Main antenna)

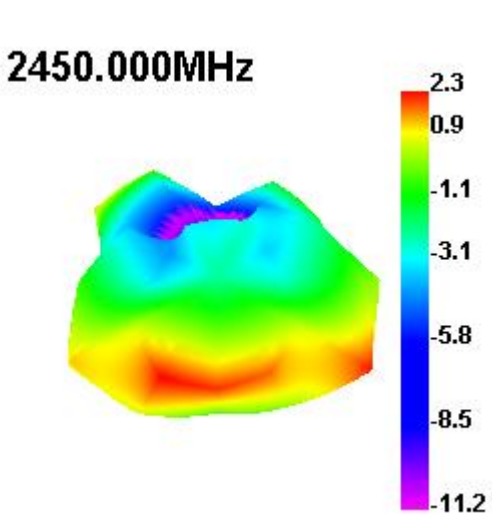


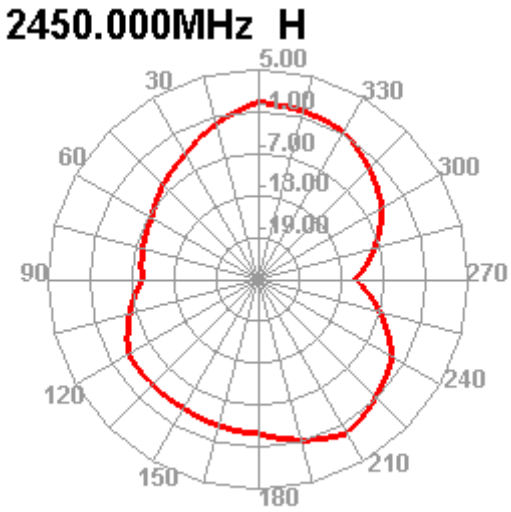



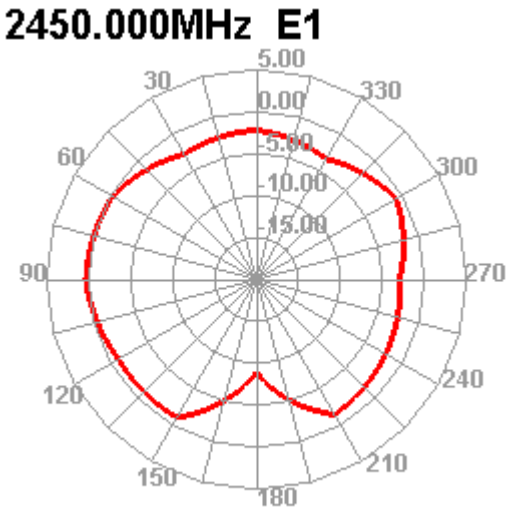



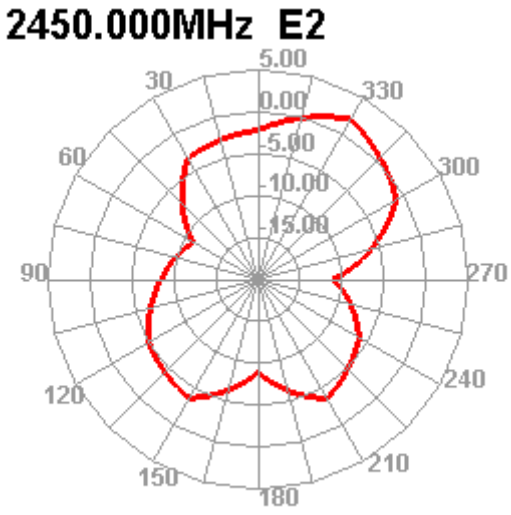



# 2450MHz（Main antenna）

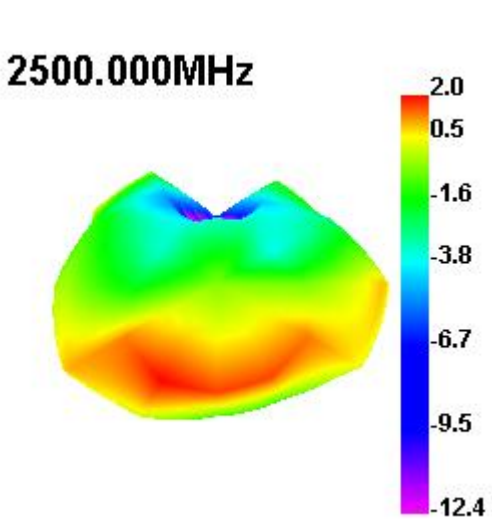


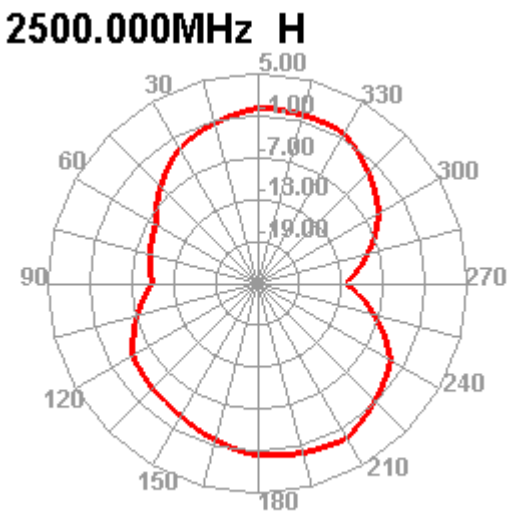



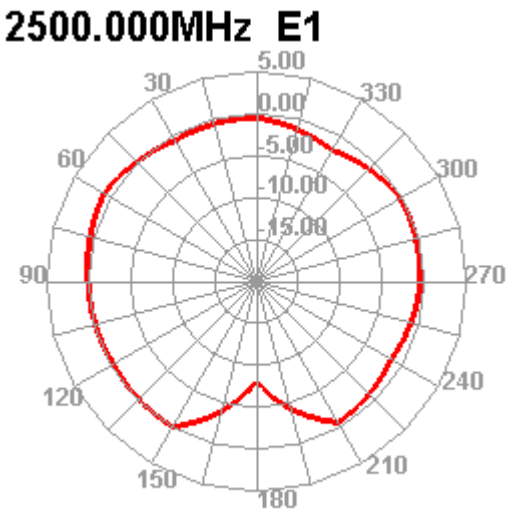



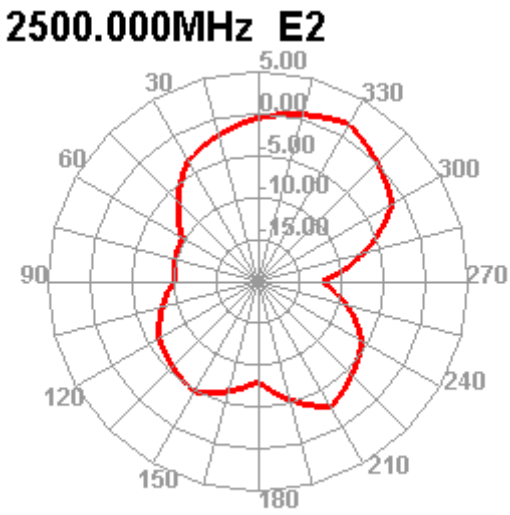



# 2500MHz（Main antenna）



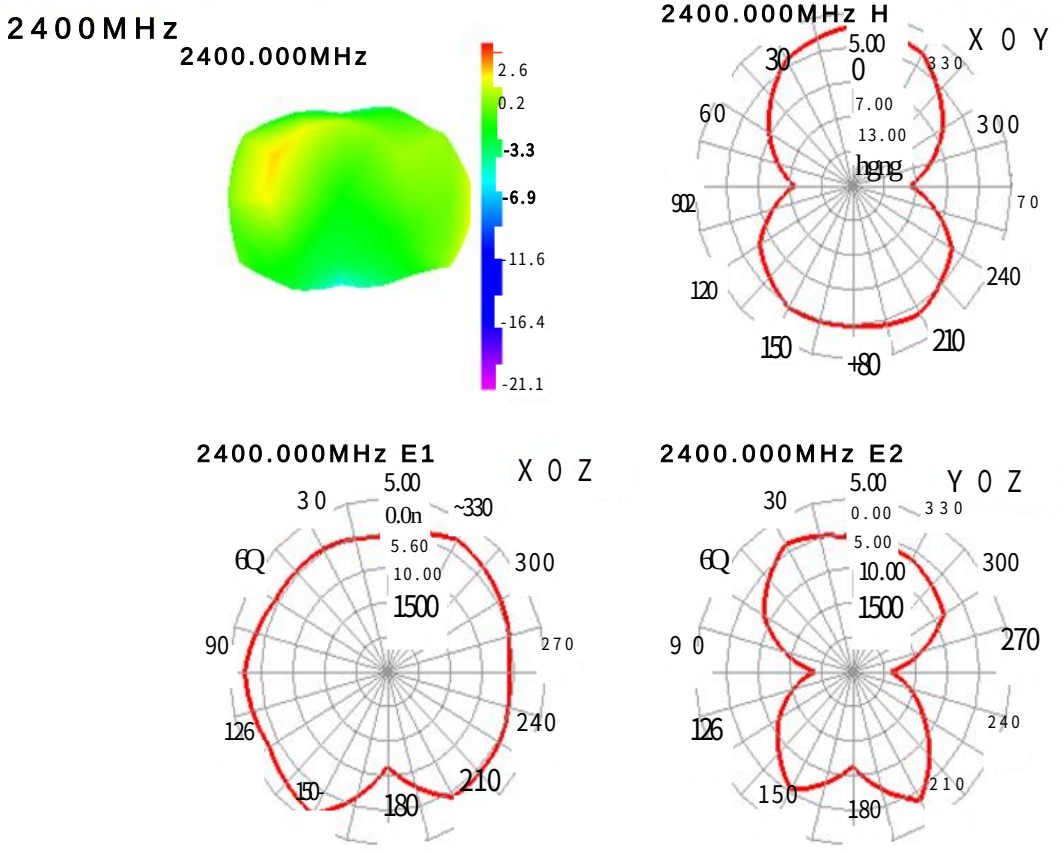
## Efficency&Gain:Auxiliary anten

2.4GHz

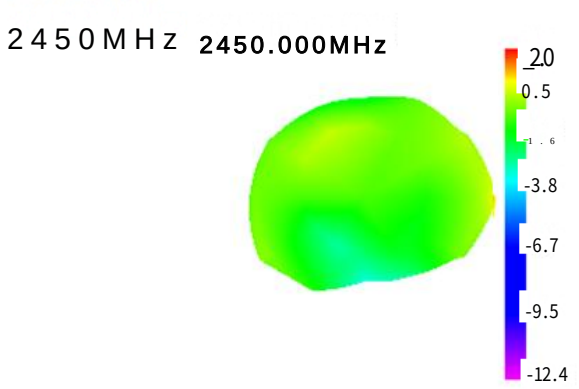
| Freq (MHz) | Effi (%) | Gain (dBi) |
|---|---|---|
| 2400 | 64.11 | 2.56 |
| 2410 | 60.24 | 2.14 |
| 2420 | 61.67 | 2.18 |
| 2430 | 58.25 | 2.01 |
| 2440 | 62.2 | 2.12 |
| 2450 | 58.82 | 2.01 |
| 2460 | 65.89 | 2.54 |
| 2470 | 64.3 | 2.52 |
| 2480 | 65.83 | 2.65 |
| 2490 | 61.96 | 2.37 |
| 2500 | 59.07 | 2.16 |

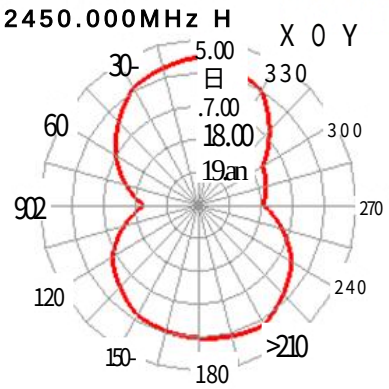
# Directional map

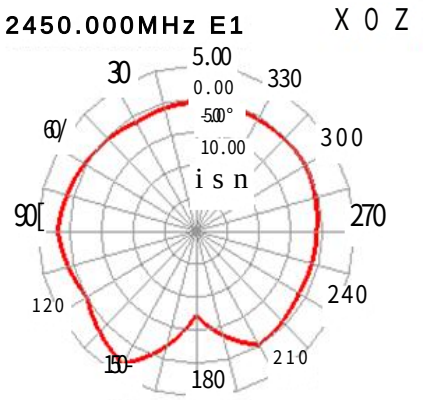
## 2400MHZ(Auxiliary antei

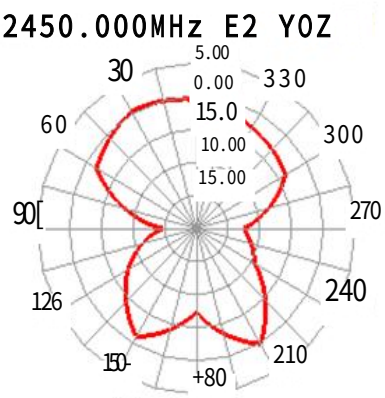


# 2450MHz（Auxiliary antenna）



# 2500MHZ (Auxiliary antenna)

2500MHz