

Data Sheet

CUSTOMER: ASUS

MODEL NAME: B6602

AWAN P/N: AYF6Y-100199



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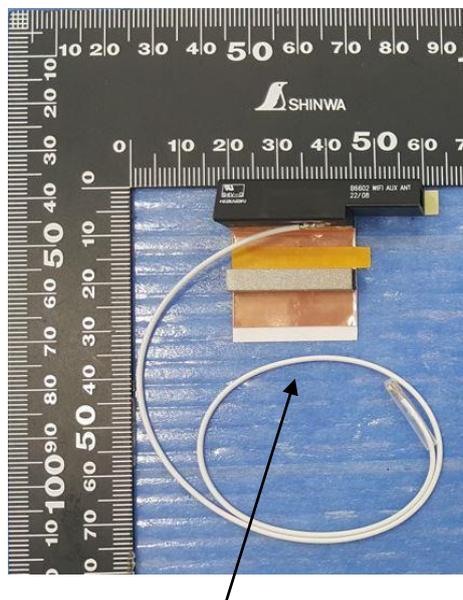
1. Description

1.1 Specifications

| | | |
|-------------------|--|--------------|
| Antennas Type | PIFA Antenna for WLAN WIFI application | |
| Connector Type | IPEX NGFF Connector for 1.13 cable | |
| Cable Type | OD 1.13 RF Normal Cable | |
| Impedance | 50Ω | |
| Polarization | Linear | |
| Radiation pattern | Omni-directional | |
| Frequency | 2.40~2.50 GHz | |
| | 5.15~5.85 GHz | |
| | 5.925~7.125 GHz | |
| VSWR | 2.40~2.50 GHz | 5.0 Max |
| | 5.15~5.85 GHz | |
| | 5.925~7.125 GHz | |
| Cable Loss | 2.40~2.50 GHz | 0.83 dB |
| | 5.15~5.85 GHz | 1.40 dB |
| | 5.925~7.125 GHz | 1.58 dB |
| Cable length | WLAN AUX : (AYF6Y-100199) | 277mm, White |

| Peak gain w/ cable loss (dBi)* | | | | | | | | | |
|--------------------------------|---------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-------------------------|
| | 2.4GHz 2400-2483.5 MHz | 5.2GHz 5150-5250MHz | 5.3GHz 5250-5350MHz | 5.6GHz 5470-5725MHz | 5.8GHz 5725-5850MHz | 6.2GHz 5925-6425MHz | 6.5GHz 6425-6525MHz | 6.7GHz 6525-6875MHz | 7.0 GHz 6875-7125MHz |
| Aux | 0.9 | 3.2 | 3.2 | 3.1 | 3.1 | -0.3 | -0.5 | 0.7 | 2.2 |

1.2 Antenna Picture



WLAN Aux P/N : AYF6Y-100199

2. Electrical Specification

2.1 Test Equipment

- A. VSWR and input impedance: Agilent 8720/8753 Network Analyzer
- B. Antenna gain and efficiency: ETS three-dimensional anechoic chamber

2.2 Test Setup

2.2.1 Frequency Range

- A. 2.40~2.50 GHz
- B. 5.15~5.85 GHz
- C. 5.925~7.125 GHz

2.2.2 VSWR

- Step 1: The antenna is arranged on the customer provided test fixture(see figure. 1).
- Step 2: The VSWR of the antenna is measured via Agilent 8720/8753 Network Analyzer (see figure. 1).



Figure.1

2.2.3 Radiation pattern and Gain

- A. The 3D chamber provides less than -40dB reflectivity from 500MHz to 7.125GHz and a 40cm diameter spherical quiet zone. The measurement results are calibrated using both dipoles and standard gain horns (see figure. 2).
- B. The antenna under tested is arranged in the turned table and a decoupling sleeve is used to reduce feed line radiation (see figure. 3).
- C. The measured results of the radiation patterns and antenna gain are obtained from the control system and showed on the monitor (see figure. 4 and 5).

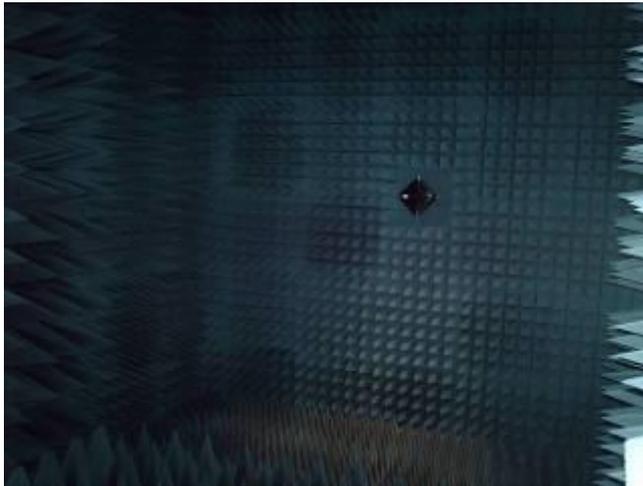


Figure. 2

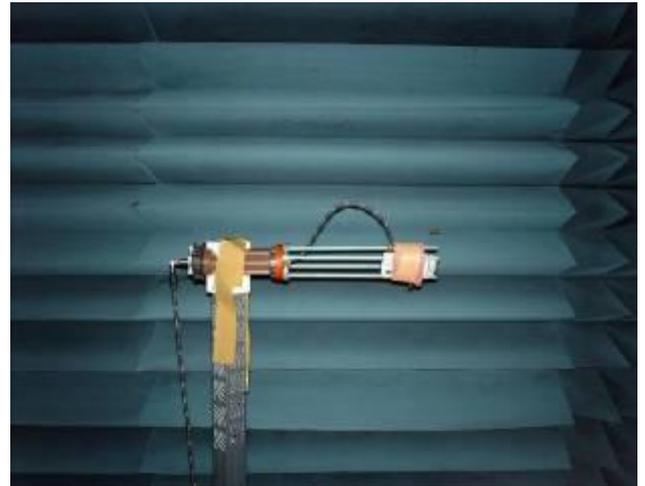


Figure. 3



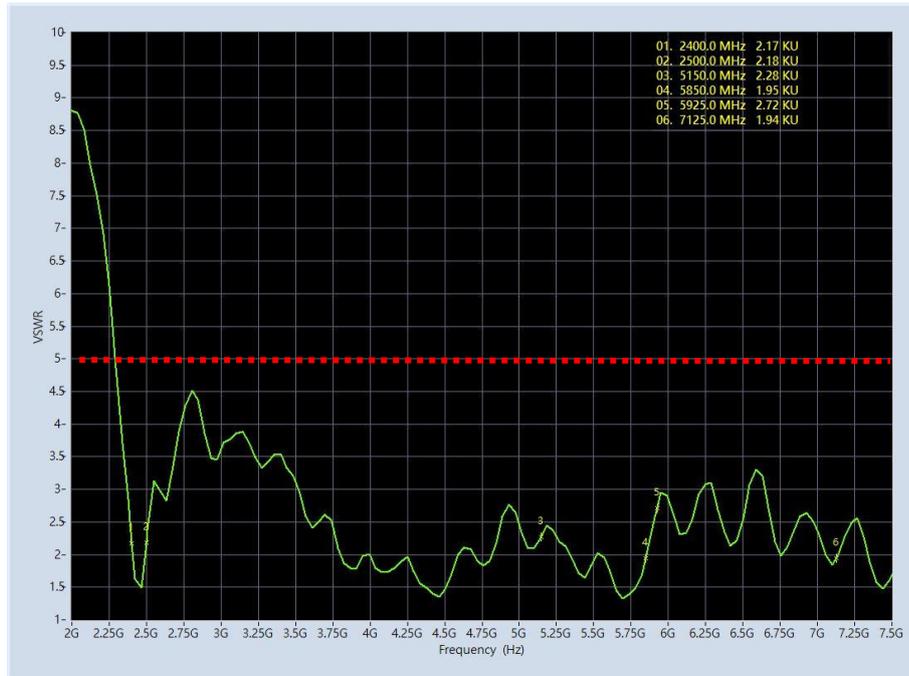
Figure. 4



Figure. 5

3. Performance Data

3.1 VSWR

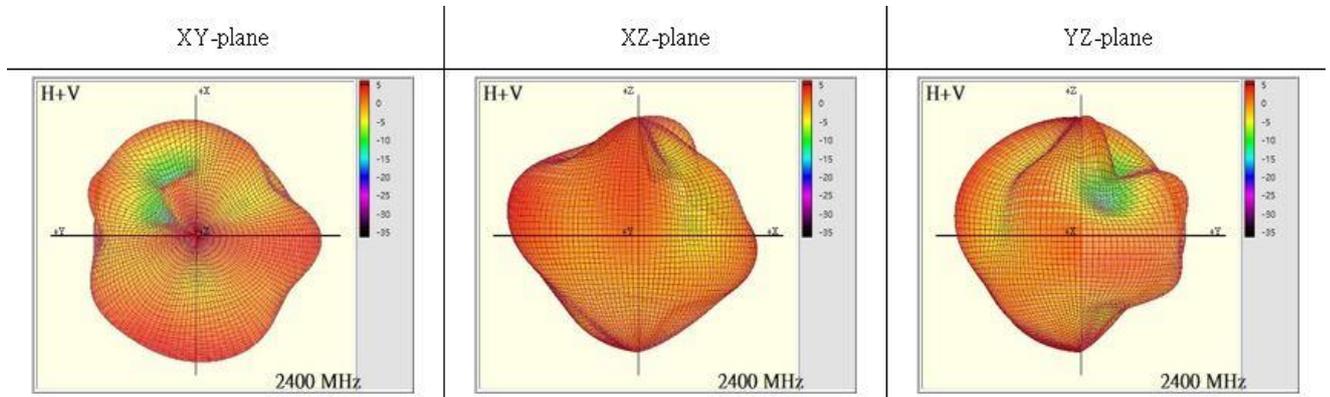


VSWR = 5

WLAN Aux

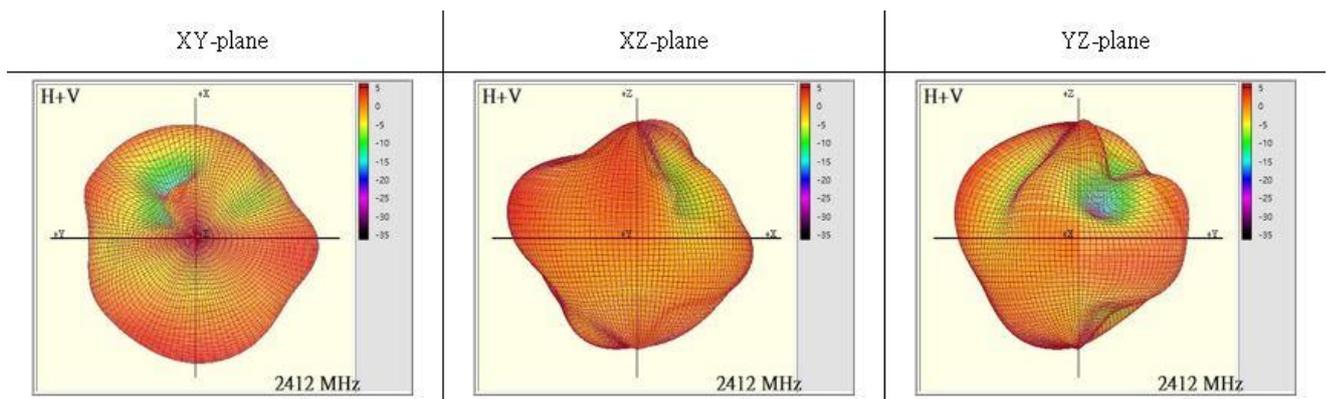
3.2 Radiation pattern & Gain(WLAN Aux Antenna)

Aux antenna: 2400 MHz



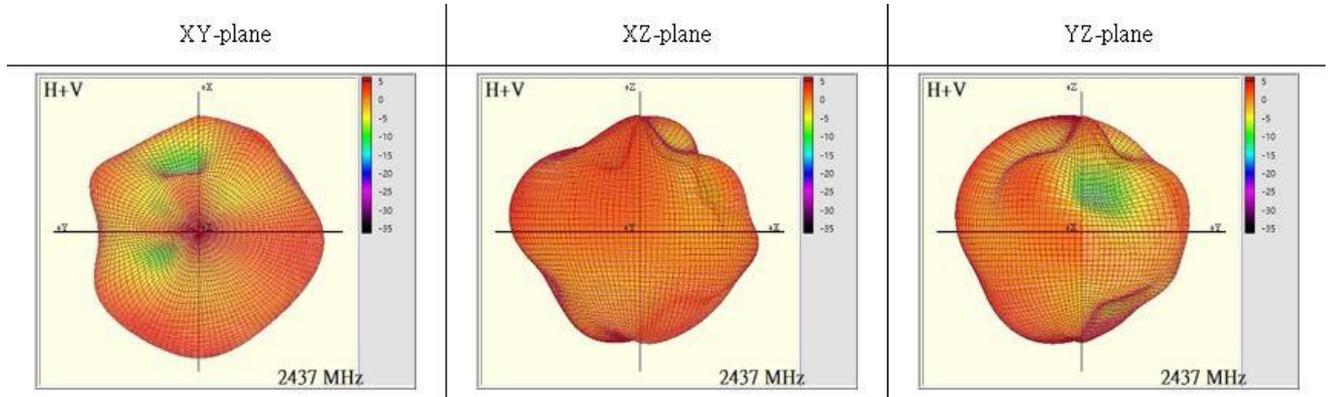
| | |
|------------------------------|-----------------|
| Center Frequency | 2400 MHz |
| Three-dimensional (dBi) peak | 0.4 |

Aux antenna: 2412 MHz



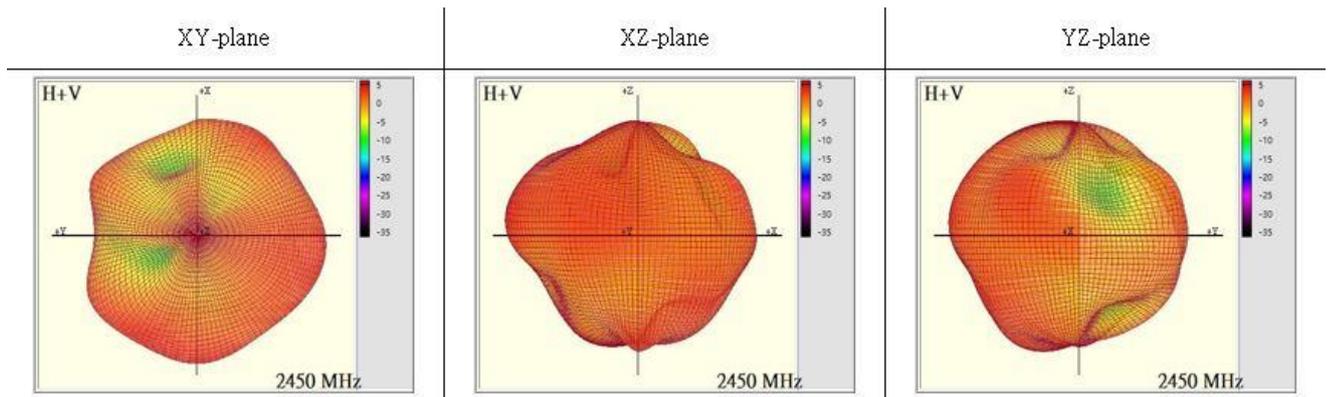
| | |
|------------------------------|-----------------|
| Center Frequency | 2412 MHz |
| Three-dimensional (dBi) peak | 0.9 |

Aux antenna: 2437 MHz



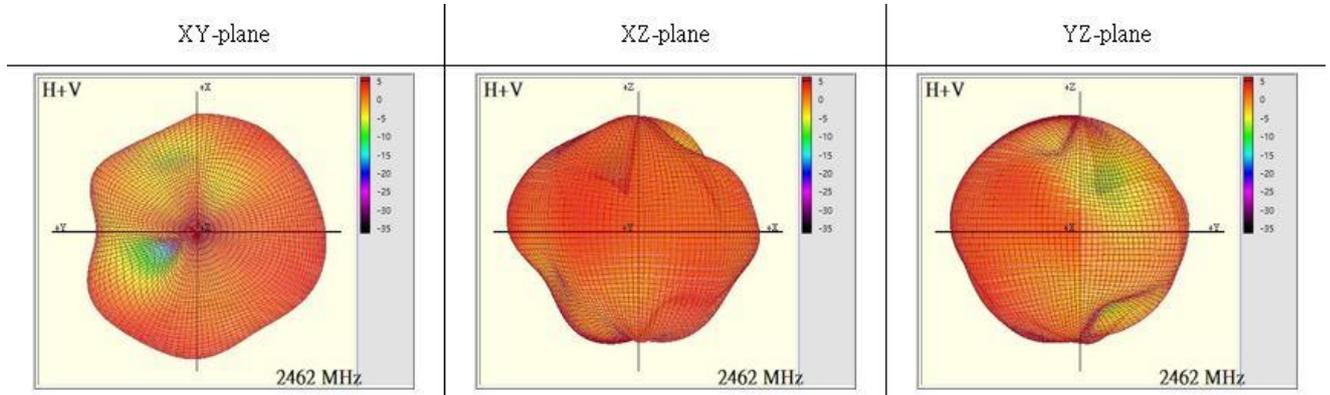
| | |
|------------------------------|-----------------|
| Center Frequency | 2437 MHz |
| Three-dimensional (dBi) peak | 0.9 |

Aux antenna: 2450 MHz



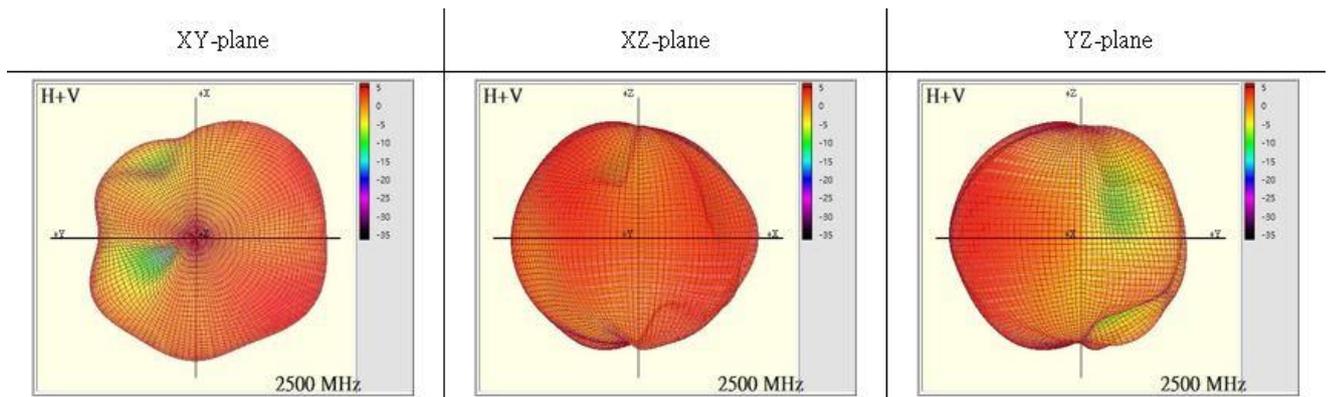
| | |
|------------------------------|-----------------|
| Center Frequency | 2450 MHz |
| Three-dimensional (dBi) peak | 0.8 |

Aux antenna: 2462 MHz



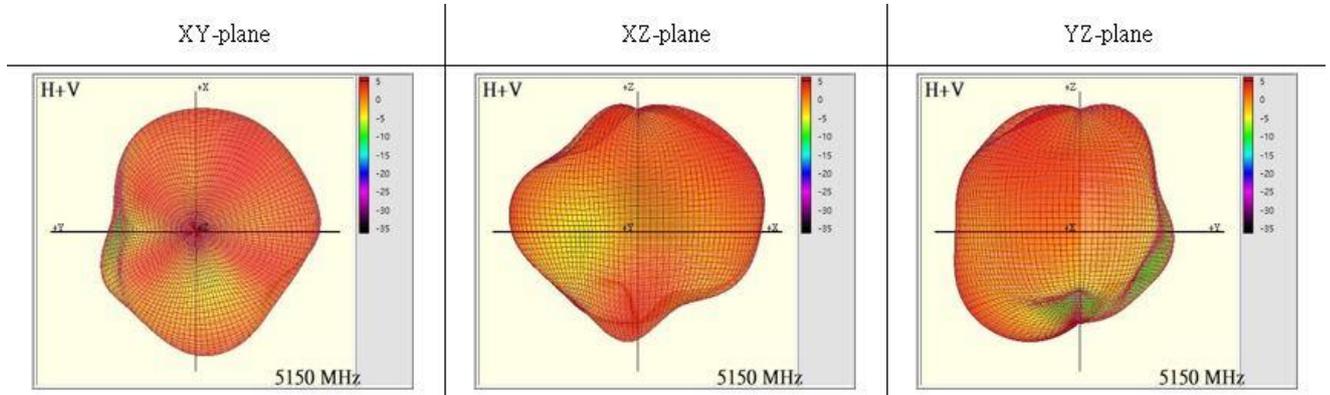
| | |
|------------------------------|-----------------|
| Center Frequency | 2462 MHz |
| Three-dimensional (dBi) peak | 0.7 |

Aux antenna: 2500 MHz



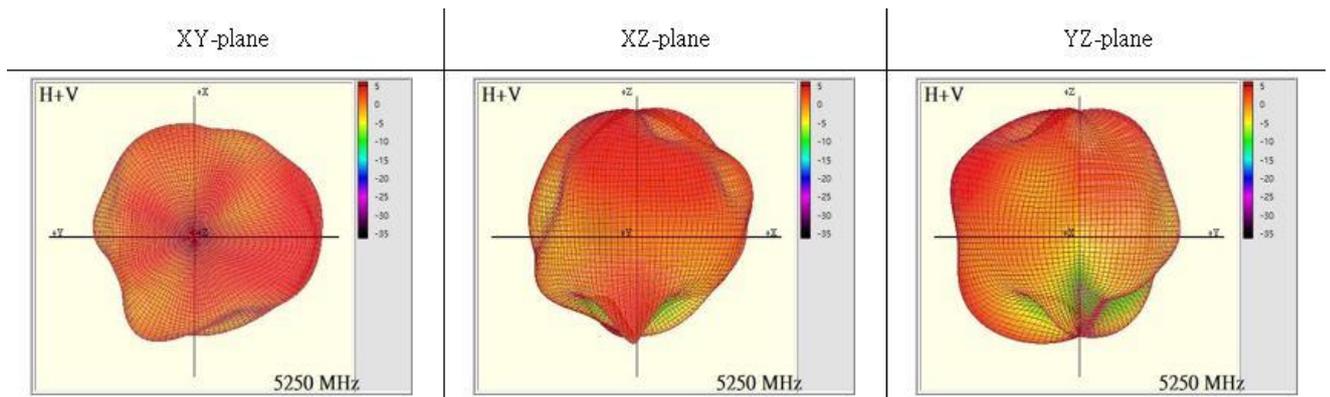
| | |
|------------------------------|-----------------|
| Center Frequency | 2500 MHz |
| Three-dimensional (dBi) peak | -0.4 |

Aux antenna: 5150 MHz



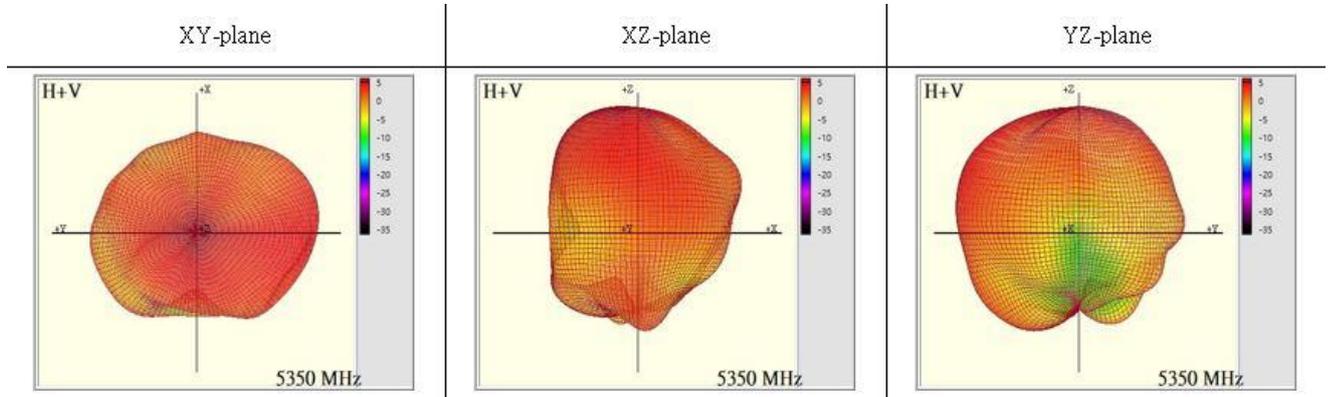
| | |
|------------------------------|-----------------|
| Center Frequency | 5150 MHz |
| Three-dimensional (dBi) peak | 0.8 |

Aux antenna: 5250 MHz



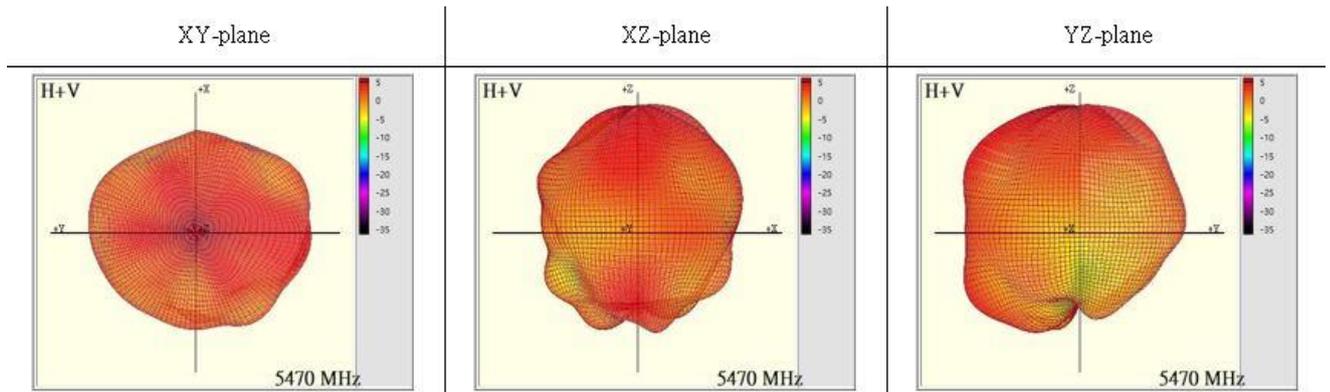
| | |
|------------------------------|-----------------|
| Center Frequency | 5250 MHz |
| Three-dimensional (dBi) peak | 3.2 |

Aux antenna: 5350 MHz



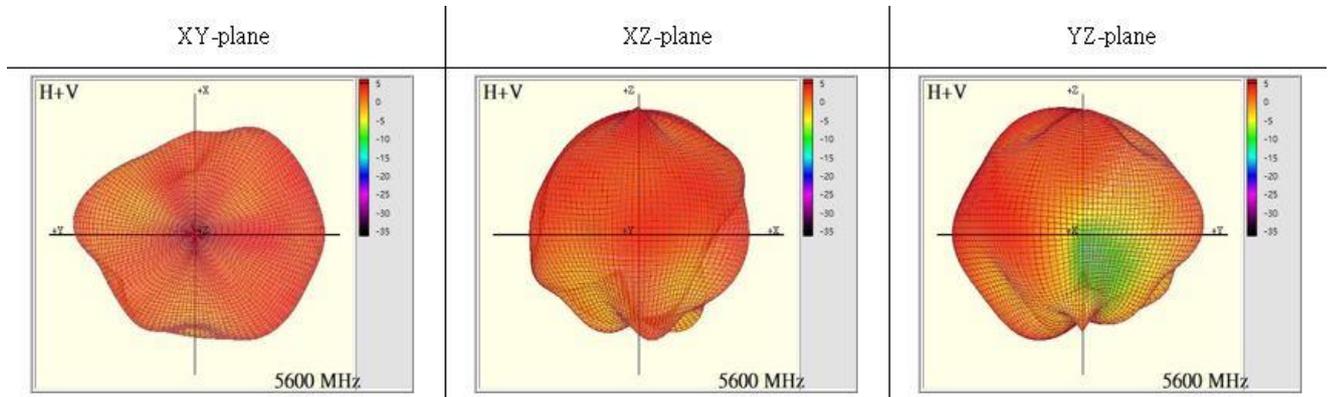
| | |
|------------------------------|-----------------|
| Center Frequency | 5350 MHz |
| Three-dimensional (dBi) peak | 2.8 |

Aux antenna: 5470 MHz



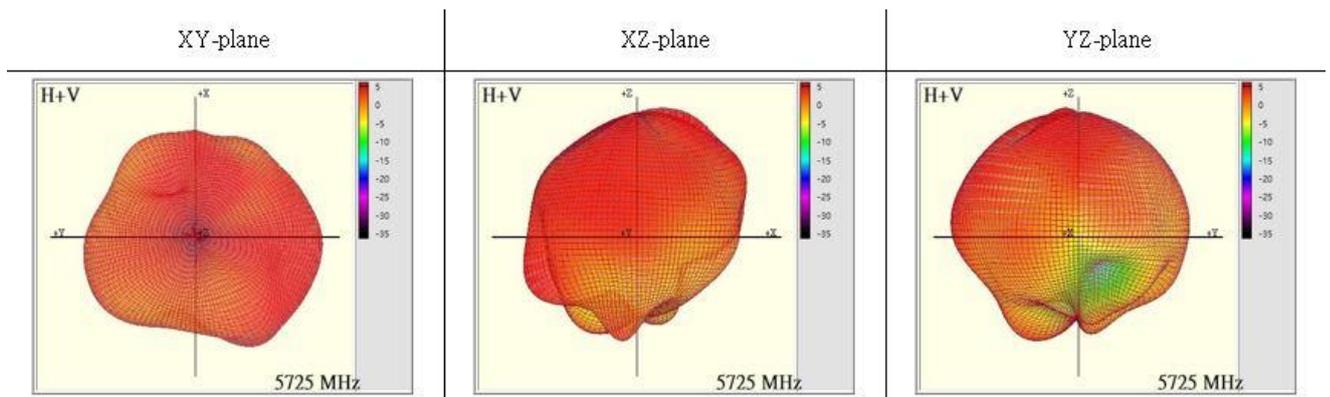
| | |
|------------------------------|-----------------|
| Center Frequency | 5470 MHz |
| Three-dimensional (dBi) peak | 3.0 |

Aux antenna: 5600 MHz



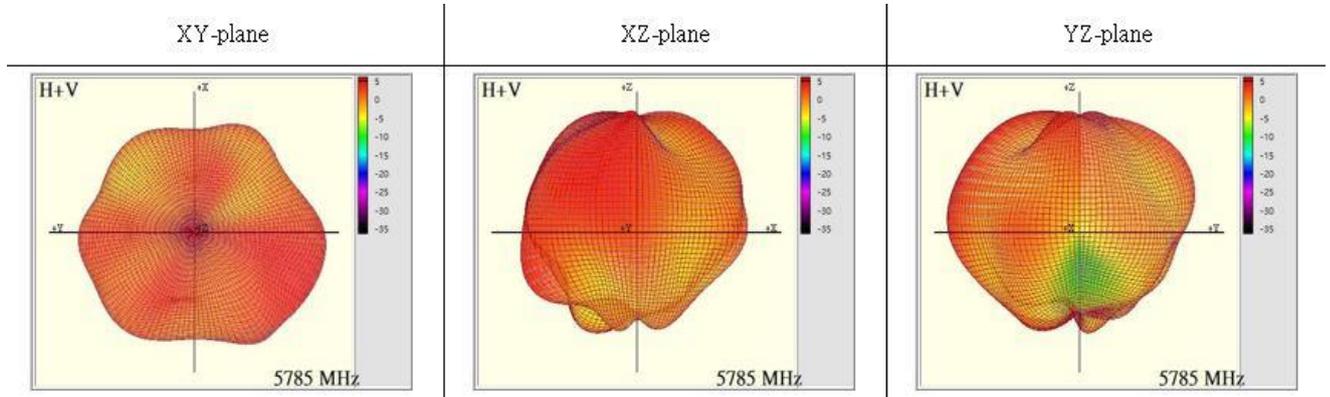
| | |
|------------------------------|-----------------|
| Center Frequency | 5600 MHz |
| Three-dimensional (dBi) peak | 3.1 |

Aux antenna: 5725 MHz



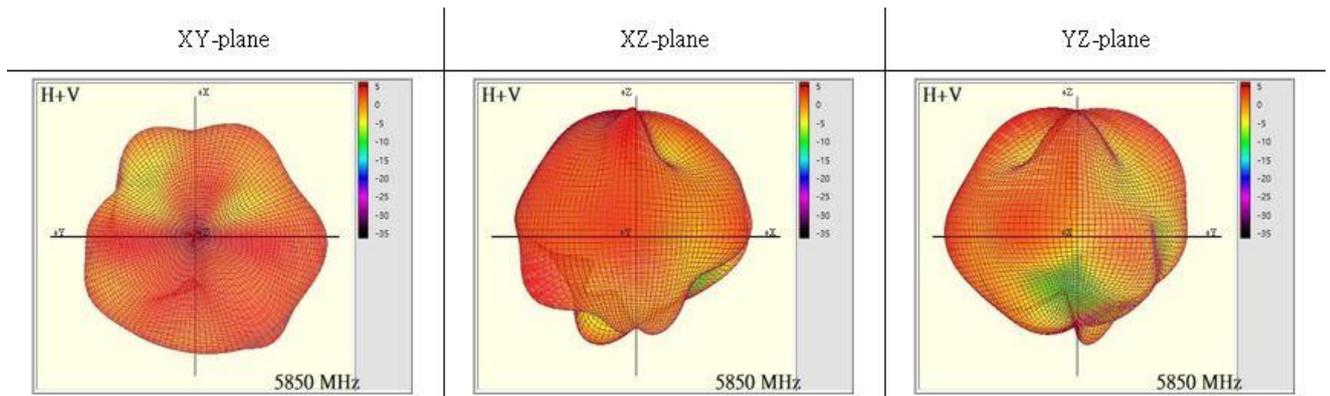
| | |
|------------------------------|-----------------|
| Center Frequency | 5725 MHz |
| Three-dimensional (dBi) peak | 3.1 |

Aux antenna: 5785 MHz



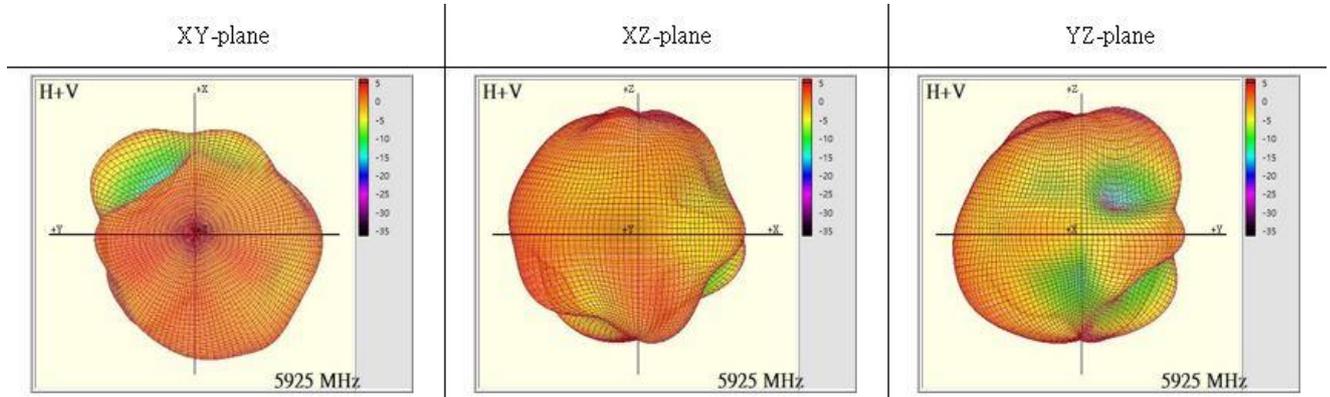
| | |
|------------------------------|-----------------|
| Center Frequency | 5785 MHz |
| Three-dimensional (dBi) peak | 1.0 |

Aux antenna: 5850 MHz



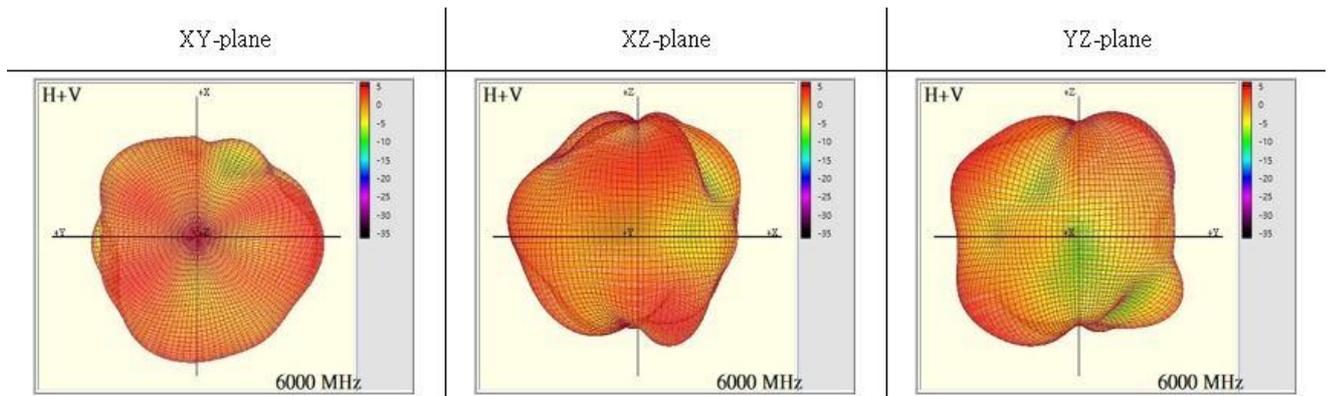
| | |
|------------------------------|-----------------|
| Center Frequency | 5850 MHz |
| Three-dimensional (dBi) peak | -0.3 |

Aux antenna: 5925 MHz



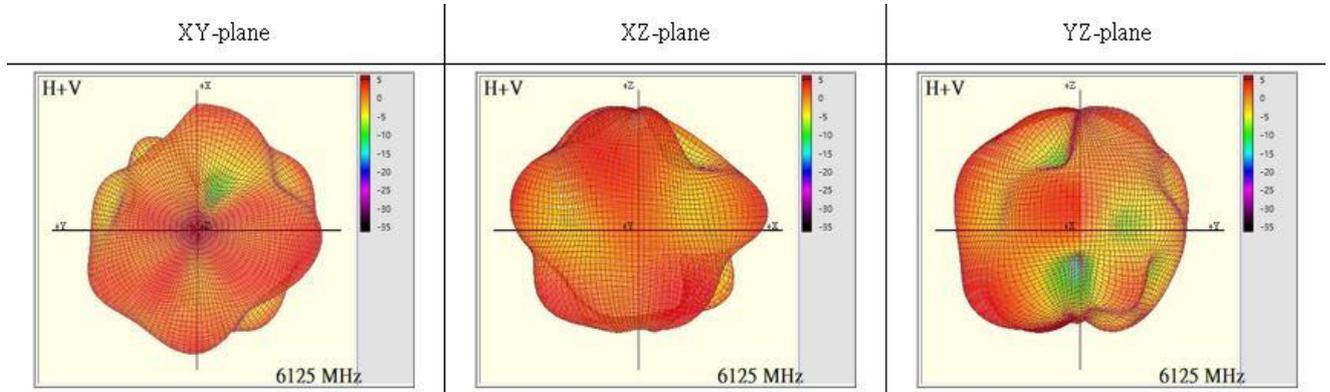
| | |
|------------------------------|-----------------|
| Center Frequency | 5925 MHz |
| Three-dimensional (dBi) peak | -1.7 |

Aux antenna: 6000 MHz



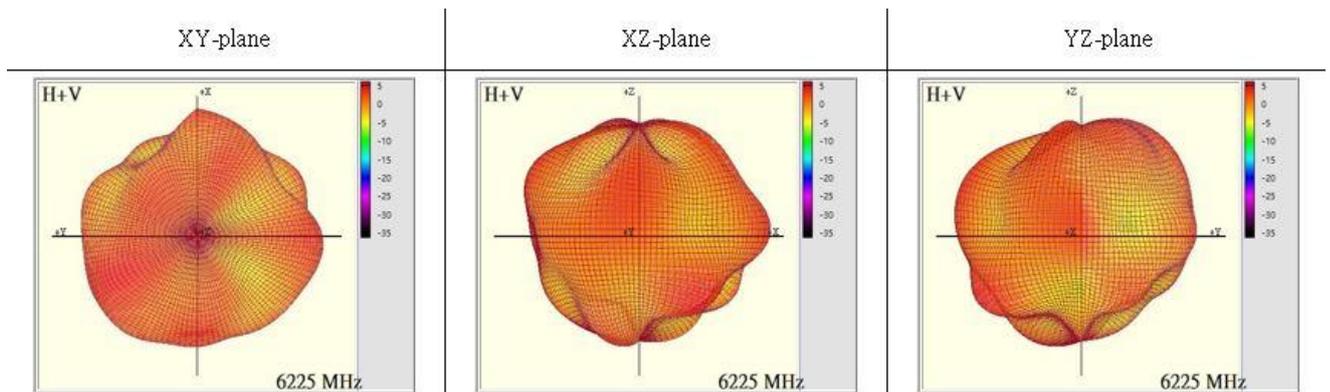
| | |
|------------------------------|-----------------|
| Center Frequency | 6000 MHz |
| Three-dimensional (dBi) peak | -0.3 |

Aux antenna: 6125 MHz



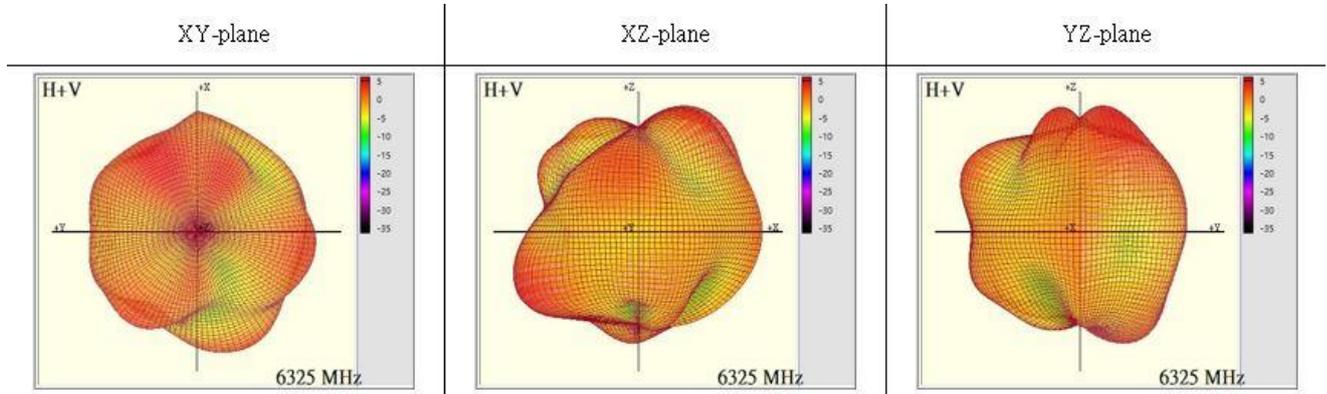
| | |
|------------------------------|-----------------|
| Center Frequency | 6125 MHz |
| Three-dimensional (dBi) peak | -0.8 |

Aux antenna: 6225 MHz



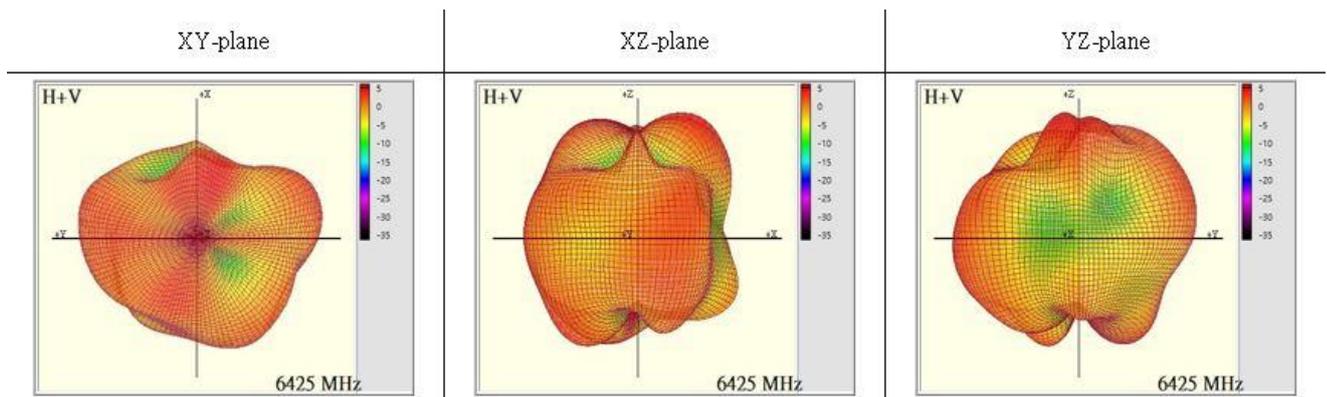
| | |
|------------------------------|-----------------|
| Center Frequency | 6225 MHz |
| Three-dimensional (dBi) peak | -0.9 |

Aux antenna: 6325 MHz



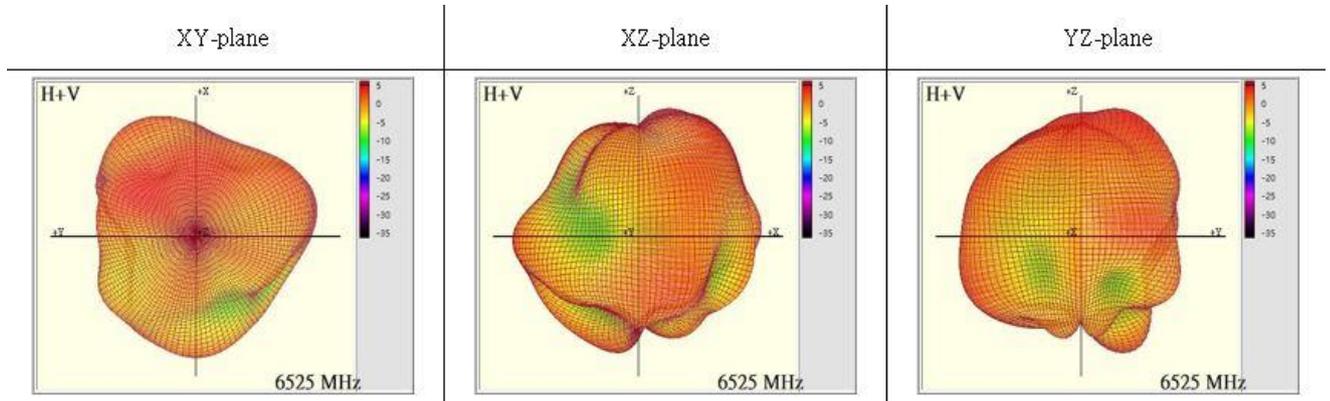
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|------------------------------|-----------------|
| Center Frequency | 6325 MHz |
| Three-dimensional (dBi) peak | -1.2 |

Aux antenna: 6425 MHz



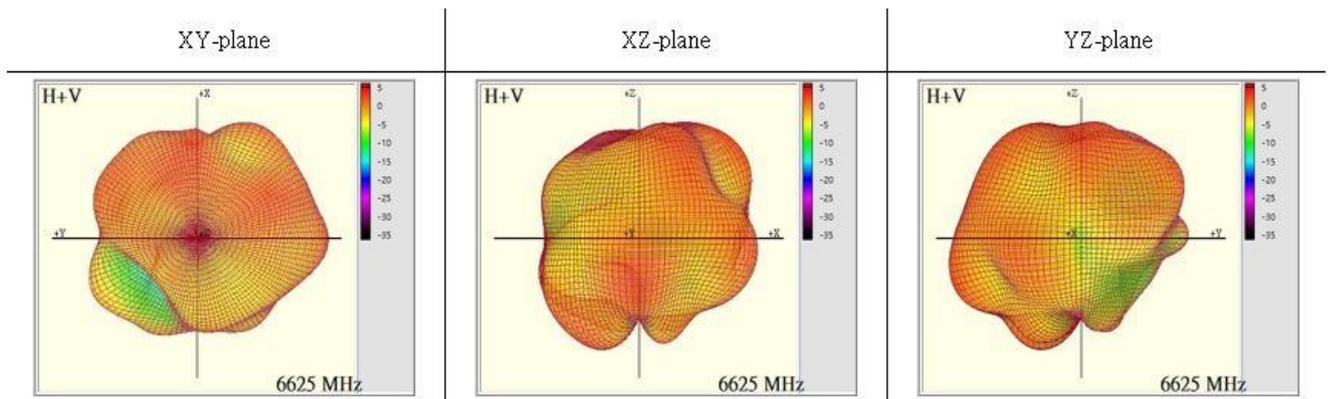
| | |
|------------------------------|-----------------|
| Center Frequency | 6425 MHz |
| Three-dimensional (dBi) peak | -0.8 |

Aux antenna: 6525 MHz



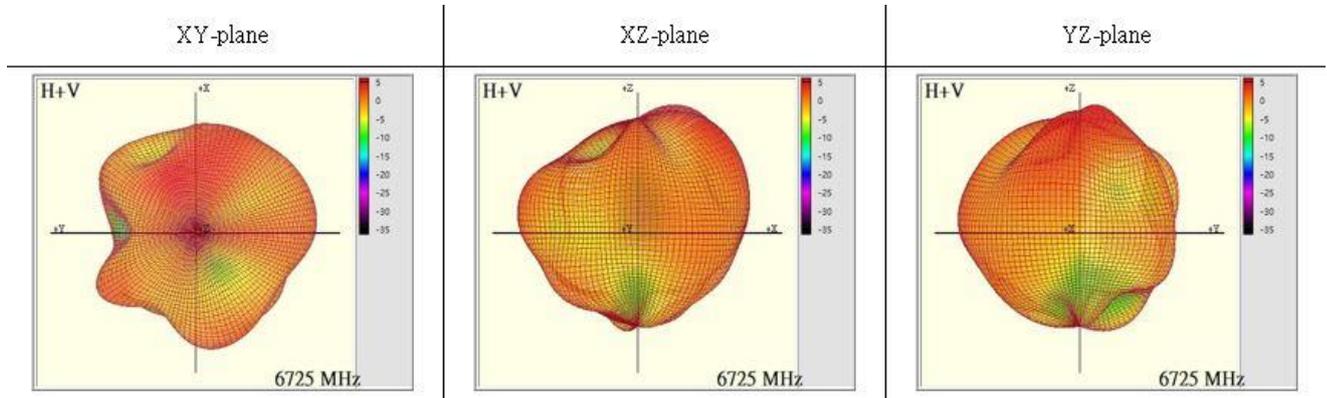
| | |
|------------------------------|-----------------|
| Center Frequency | 6525 MHz |
| Three-dimensional (dBi) peak | -0.5 |

Aux antenna: 6625 MHz



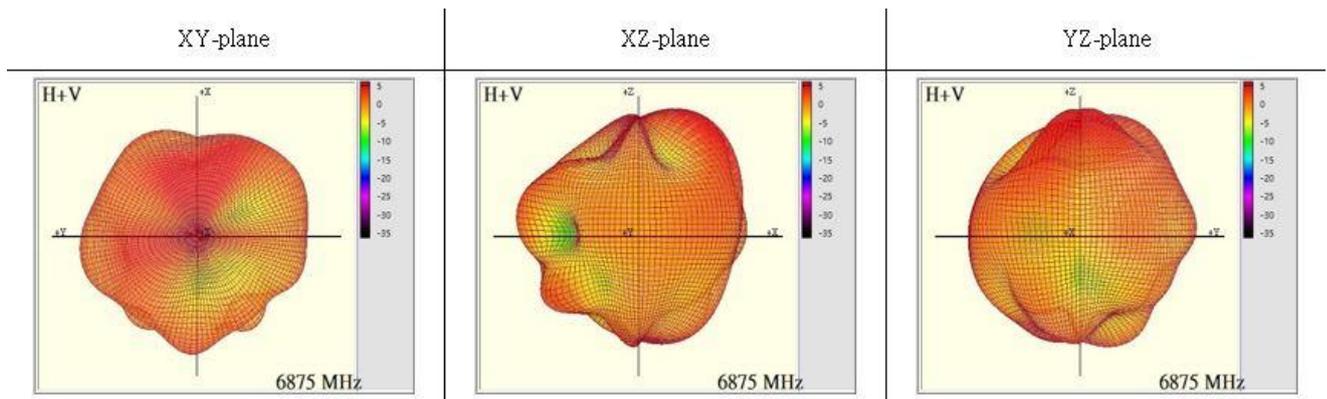
| | |
|------------------------------|-----------------|
| Center Frequency | 6625 MHz |
| Three-dimensional (dBi) peak | -0.6 |

Aux antenna: 6725 MHz



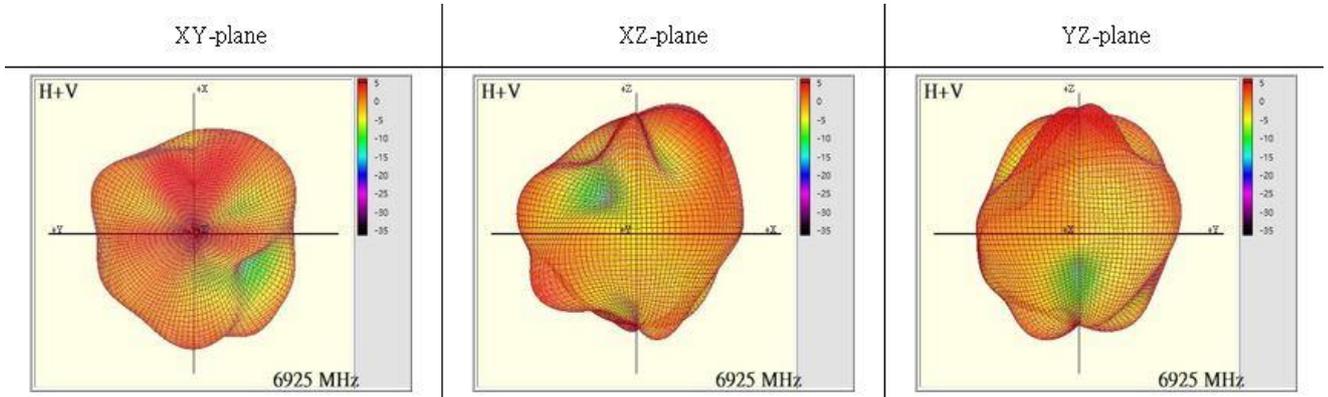
| | |
|------------------------------|-----------------|
| Center Frequency | 6725 MHz |
| Three-dimensional (dBi) peak | 0.7 |

Aux antenna: 6875 MHz



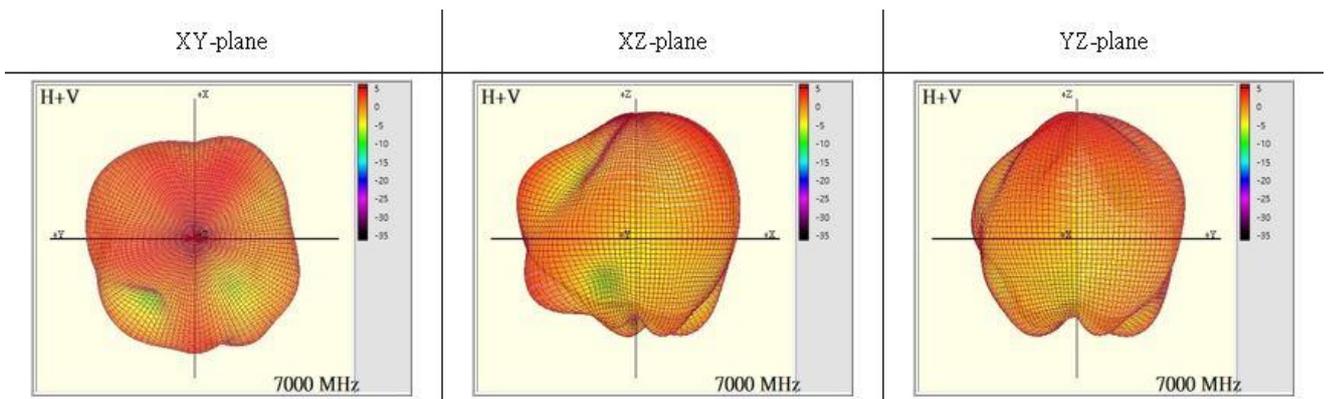
| | |
|------------------------------|-----------------|
| Center Frequency | 6875 MHz |
| Three-dimensional (dBi) peak | 0.7 |

Aux antenna: 6925 MHz



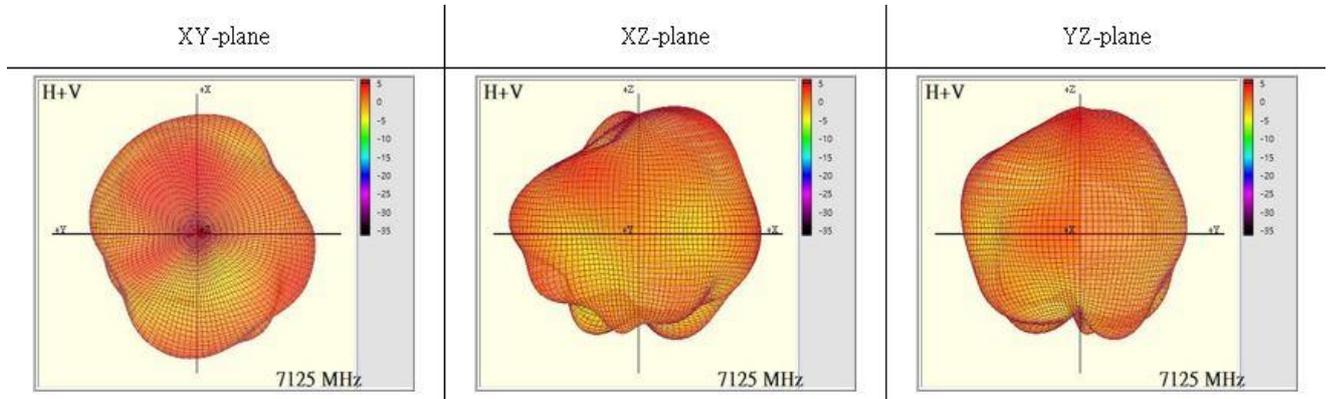
| | |
|------------------------------|-----------------|
| Center Frequency | 6925 MHz |
| Three-dimensional (dBi) peak | 1.2 |

Aux antenna: 7000 MHz



| | |
|------------------------------|-----------------|
| Center Frequency | 7000 MHz |
| Three-dimensional (dBi) peak | 2.1 |

Aux antenna: 7125 MHz



| | |
|------------------------------|-----------------|
| Center Frequency | 7125 MHz |
| Three-dimensional (dBi) peak | 2.2 |

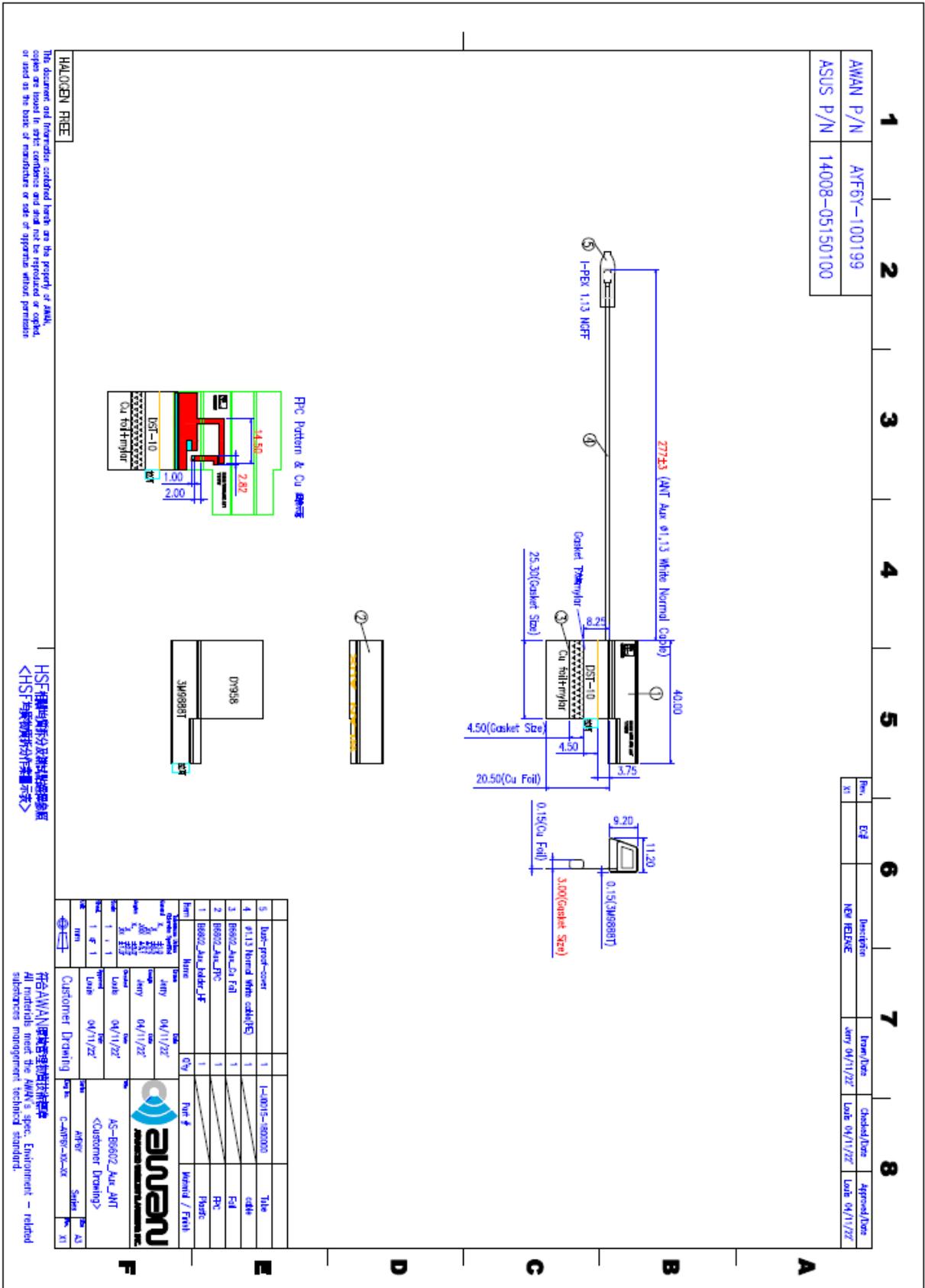
3.3 Gain

Antenna Gain Table:

| WLAN AUX Antenna Gain | | |
|-----------------------|--------------|--------------|
| Frequency | 3D Peak Gain | 3D Gain |
| | Total(dBi) | Efficiency % |
| 2400(MHz) | 0.4 | 22 |
| 2412(MHz) | 0.9 | 25 |
| 2437(MHz) | 0.9 | 29 |
| 2450(MHz) | 0.8 | 30 |
| 2462(MHz) | 0.7 | 28 |
| 2500(MHz) | -0.4 | 26 |
| 5150(MHz) | 0.8 | 23 |
| 5250(MHz) | 3.2 | 29 |
| 5350(MHz) | 2.8 | 28 |
| 5470(MHz) | 3.0 | 29 |
| 5600(MHz) | 3.1 | 29 |
| 5725(MHz) | 3.1 | 28 |
| 5785(MHz) | 1.0 | 23 |
| 5850(MHz) | -0.3 | 18 |
| 5925(MHz) | -1.7 | 14 |
| 6000(MHz) | -0.3 | 17 |
| 6125(MHz) | -0.8 | 17 |
| 6225(MHz) | -0.9 | 15 |
| 6325(MHz) | -1.2 | 13 |
| 6425(MHz) | -0.8 | 10 |
| 6525(MHz) | -0.5 | 11 |
| 6625(MHz) | -0.6 | 12 |
| 6725(MHz) | 0.7 | 13 |
| 6875(MHz) | 0.7 | 16 |
| 6925(MHz) | 1.2 | 15 |
| 7000(MHz) | 2.1 | 16 |
| 7125(MHz) | 2.2 | 16 |

4. Mechanical Specification

4.1 Dimension Drawing (WLAN Aux Antenna)



Revision

| Revision | Date | Change Notification | Notes |
|----------|------------|---------------------|-------|
| Rev.0 | 2022-04-19 | --- | |