

# SOL 7 WIFI\_認證報告

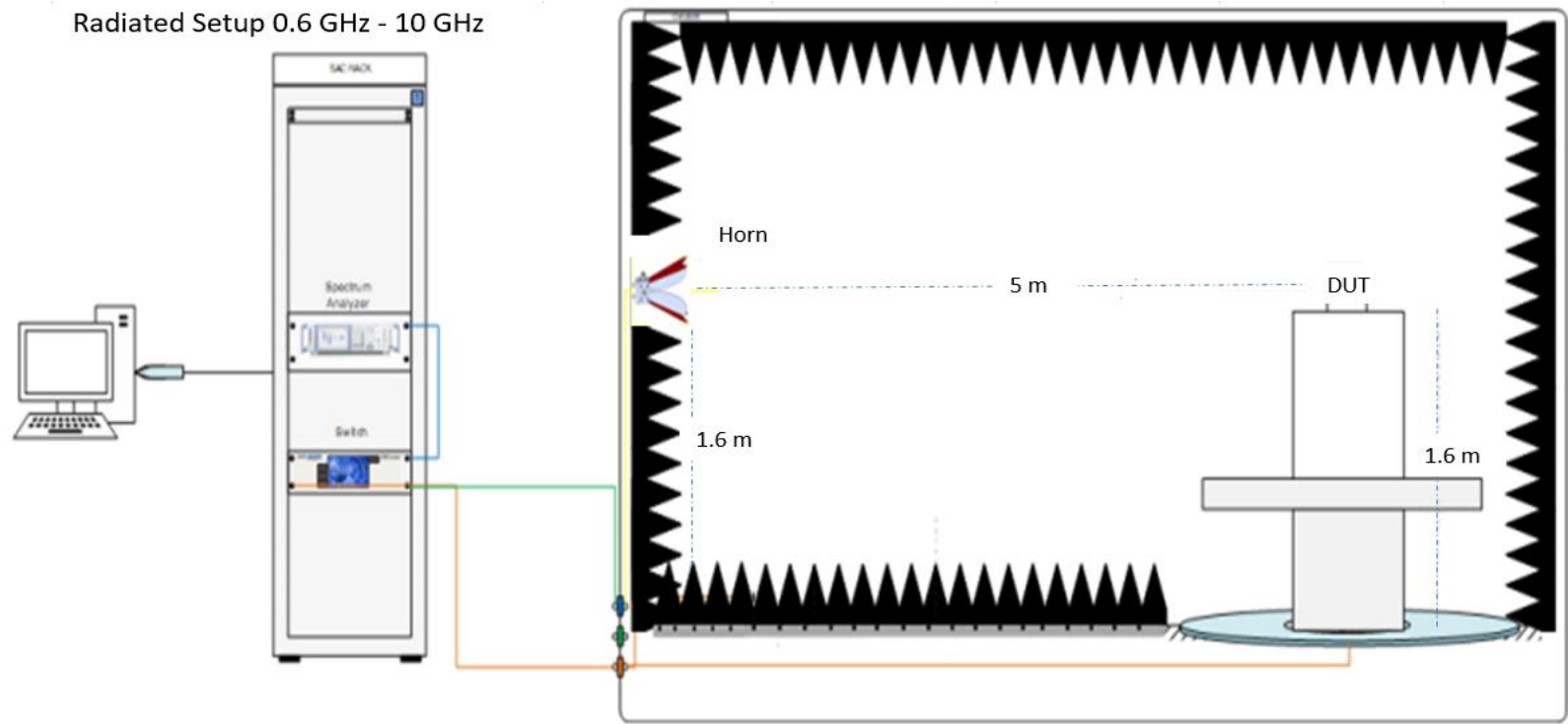
**Model Name : ALL6Y-100021(Main) 、 ALF6Y-100005(Aux)**

---

- **Content**

1. Test System
2. Specification
3. Return Test Data
4. Gain/Efficiency/Test Data
5. Drawing Layout
6. Antenna Assembly Specifications
7. Antenna Photo (Front/Back)
8. Radiation characteristics of antenna loaded in Host Platform

# Aantenna Test System



| Device                  | Type/Module    | Serial#          | Manufacturer | Cal. Date | Cal. Due Date |
|-------------------------|----------------|------------------|--------------|-----------|---------------|
| Anechoic Chamber        | AMS-8500       | 1047             | ETS-Lindgren | 2024/2/21 | 2025/8/21     |
| Turn Table              | ETS            | -                | ETS-Lindgren | N/A       | N/A           |
| Rotate controller       | 2090           | SN 00035073      | ETS-Lindgren | N/A       | N/A           |
| Horn Antenna            | HAD-0710       | 111025-02        | Bwant        | 2025/1/16 | 2027/1/16     |
| Vector Network Analyzer | E5071C         | MY46733781       | Keysight     | 2025/1/21 | 2028/1/21     |
| Cable 40cm 18 GHz       | 201EH012010400 | 201EH012010400#1 | Jmtt         | 2025/1/23 | 2026/1/23     |
| Cable 6m 18 GHz         | 201EH012016000 | 201EH012016000#3 | Jmtt         | 2025/1/22 | 2026/1/22     |
| Cable 6m 18 GHz         | 201EH012016000 | 201EH012016000#5 | Jmtt         | 2025/1/22 | 2026/1/22     |
| Cable 3.5m 18 GHz       | 201EH012013500 | 201EH012013500#3 | Jmtt         | 2025/1/22 | 2026/1/22     |
| Cable 1.5m 18 GHz       | 201EH012011500 | 201EH012011500#2 | Jmtt         | 2025/1/22 | 2026/1/22     |

# Specification

---

- . Product Number : ALL6Y-100021 (Main) 、 ALF6Y-100005 (Aux)
- . Version :

## Electrical Characteristics

- . Frequency (MHz) : 2400-2500MHz, 5150-5850MHz, 5925-7125MHz  
VSWR: < 4 MAX
- . Efficiency : >50%
- . Peak Gain : > 0.10 dBi
- . Impedance : 50  $\Omega$
- . Polarization : Linear
- . Antenna Type : PIFA

## Mechanical Characteristics

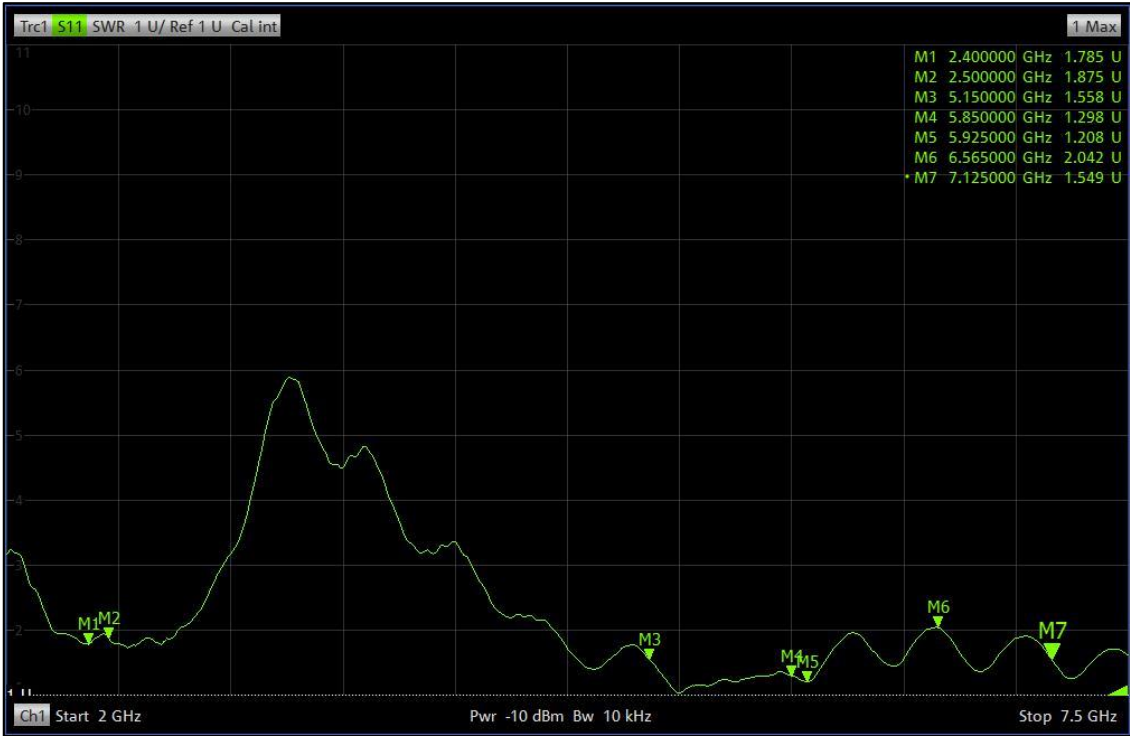
- . Cable / Connector : 1.13mm / IPEX
- . Material : DX11355

## Environmental Condition

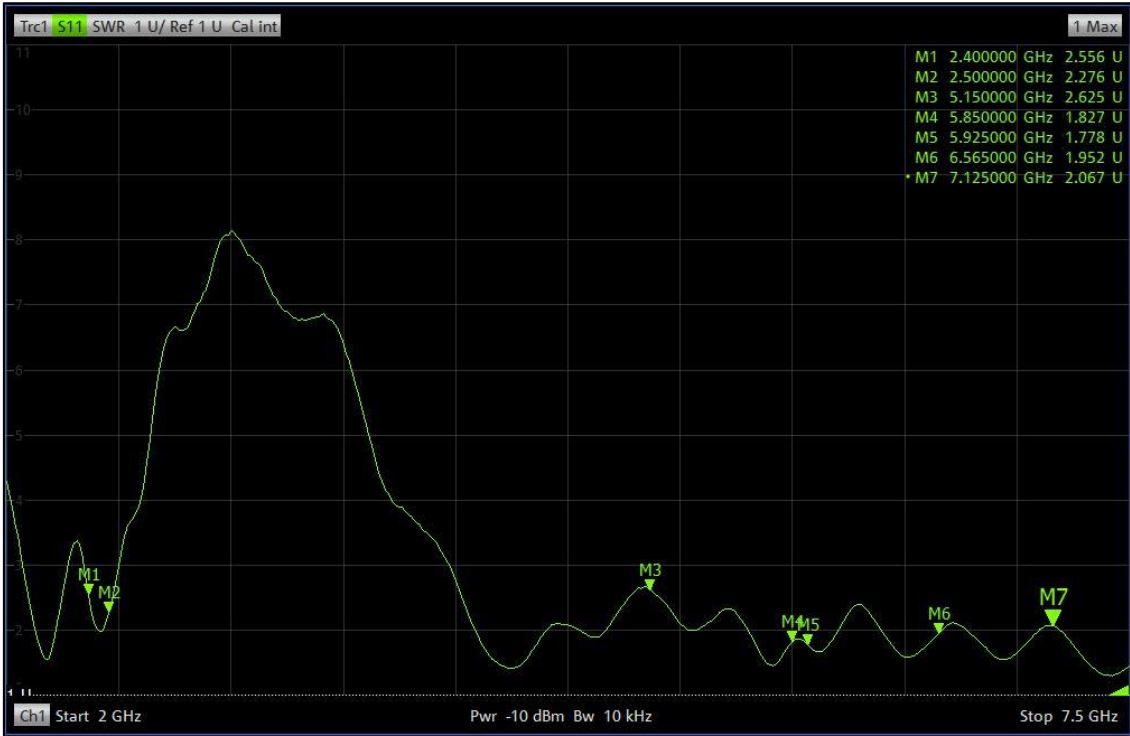
- . Operation Temperature : -30~+65 °C
- . Storage Temperature : -30~+85 °C

# Return Test Data

- ALL6Y-100021(Main)



- ALF6Y-100005(Aux)



# Gain / Efficiency Test Data

- ALL6Y-100021(Main)

| Frequency (MHz)  | 2400  | 2450  | 2500  | 5150  | 5250  | 5350  | 5470  | 5600  |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Peak Gain (dBi)  | 1.70  | 1.50  | 1.38  | 2.24  | 2.47  | 2.27  | 2.50  | 2.59  |
| Efficiency (dBi) | -2.24 | -2.34 | -2.46 | -3.09 | -3.09 | -2.81 | -3.03 | -2.69 |
| Efficiency (%)   | 59.72 | 58.30 | 56.77 | 49.05 | 49.12 | 52.31 | 49.80 | 53.79 |
| Frequency (MHz)  | 5725  | 5785  | 5850  | 5925  | 6000  | 6125  | 6225  | 6325  |
| Peak Gain (dBi)  | 1.27  | 0.66  | 1.61  | 2.27  | 2.21  | 1.98  | 1.98  | 1.97  |
| Efficiency (dBi) | -3.09 | -3.19 | -3.14 | -2.96 | -2.99 | -2.79 | -2.79 | -3.25 |
| Efficiency (%)   | 49.09 | 47.95 | 48.57 | 50.56 | 50.26 | 52.59 | 52.59 | 47.37 |
| Frequency (MHz)  | 6425  | 6525  | 6625  | 6725  | 6875  | 6925  | 7000  | 7125  |
| Peak Gain (dBi)  | 1.33  | 1.72  | 1.43  | 2.16  | 2.24  | 1.27  | 1.25  | 2.47  |
| Efficiency (dBi) | -3.40 | -3.51 | -3.66 | -3.61 | -3.42 | -3.42 | -3.42 | -3.35 |
| Efficiency (%)   | 45.73 | 44.52 | 43.01 | 43.56 | 45.55 | 45.54 | 45.53 | 46.24 |

# Gain / Efficiency Test Data

- ALF6Y-100005(Aux)

| Frequency (MHz)  | 2400  | 2450  | 2500  | 5150  | 5250  | 5350  | 5470  | 5600  |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Peak Gain (dBi)  | 0.90  | 0.18  | 0.20  | 0.65  | 1.32  | 2.44  | 1.78  | 1.11  |
| Efficiency (dBi) | -3.77 | -3.52 | -3.79 | -4.26 | -3.92 | -3.68 | -3.83 | -3.85 |
| Efficiency (%)   | 42.02 | 44.43 | 41.81 | 37.52 | 40.52 | 42.89 | 41.42 | 41.23 |
| Frequency (MHz)  | 5725  | 5785  | 5850  | 5925  | 6000  | 6125  | 6225  | 6325  |
| Peak Gain (dBi)  | 0.84  | 0.14  | 0.14  | 2.04  | 2.65  | 2.62  | 2.62  | 0.93  |
| Efficiency (dBi) | -3.49 | -3.43 | -3.58 | -3.48 | -3.47 | -3.42 | -3.72 | -3.72 |
| Efficiency (%)   | 44.75 | 45.36 | 43.89 | 44.84 | 44.96 | 45.52 | 42.48 | 42.51 |
| Frequency (MHz)  | 6425  | 6525  | 6625  | 6725  | 6875  | 6925  | 7000  | 7125  |
| Peak Gain (dBi)  | 1.12  | 1.20  | 1.08  | 1.23  | 2.18  | 2.11  | 2.18  | 2.49  |
| Efficiency (dBi) | -3.95 | -4.27 | -4.38 | -4.37 | -4.09 | -4.29 | -4.09 | -4.25 |
| Efficiency (%)   | 40.27 | 37.45 | 36.52 | 36.53 | 39.03 | 37.23 | 39.01 | 37.57 |

- **ALL6Y-100021(Main)**

|                                                                                                                                                                                                                                    |  |                                                                                     |  |                                                                                       |  |                                                                                       |  |                                                                                                                         |  |                                                                                       |  |                                                                                       |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|--|
| HALOGEN FREE                                                                                                                                                                                                                       |  |  |  |  |  |  |  |                                    |  |  |  |  |  |
| This document and information contained herein are the property of AWAN, copies are issued in strict confidence and shall not be reproduced or copied, or used as the basis of manufacture or sale of apparatus without permission |  |                                                                                     |  | HSF 符合RoHS指令及REACH指令要求<br><HSF 均為物質成分化案例圖示>                                           |  |                                                                                       |  | 符合AWAN環境管理物質技術標準<br>All materials meet the AWAN's spec. Environment - related substances management technical standard. |  |                                                                                       |  | Customer Drawing<br>Rev. No. C-AUL67-01-00                                            |  |

- **ALF6Y-100005(Aux)**



# Antenna Assembly Specifications

| Antenna Part Number                                                      | Manufacturer | Antenna Type | Cable Assembly Part Number and Information          | Freq Range MHz | Peak Gain W/ Cable loss (dBi) | Peak Gain w/o Cable Loss (dBi) | Max VSWR | Cable Loss (dB) |
|--------------------------------------------------------------------------|--------------|--------------|-----------------------------------------------------|----------------|-------------------------------|--------------------------------|----------|-----------------|
| P/N:<br>21U700106-001<br><br>Vender P/N:<br>ALL6Y-100021<br>Main Antenna | AWAN         | PIFA         | I-pex:四代頭<br>Coaxial length:390mm<br>Diameter: 1.13 | 2400-2500MHz   | 1.70                          | 2.26                           | 4        | 0.56            |
|                                                                          |              |              |                                                     | 5150-5250MHz   | 2.47                          | 3.39                           | 4        | 0.92            |
|                                                                          |              |              |                                                     | 5250-5350MHz   | 2.47                          | 3.39                           | 4        | 0.92            |
|                                                                          |              |              |                                                     | 5470-5725MHz   | 2.59                          | 3.52                           | 4        | 0.93            |
|                                                                          |              |              |                                                     | 5725-5850MHz   | 1.61                          | 2.56                           | 4        | 0.95            |
|                                                                          |              |              |                                                     | 5925-6425MHz   | 2.27                          | 3.23                           | 4        | 0.96            |
|                                                                          |              |              |                                                     | 6425-6525MHz   | 1.72                          | 2.68                           | 4        | 0.96            |
|                                                                          |              |              |                                                     | 6525-6875MHz   | 2.24                          | 3.20                           | 4        | 0.96            |
|                                                                          |              |              |                                                     | 6875-7125MHz   | 2.47                          | 3.54                           | 4        | 1.07            |

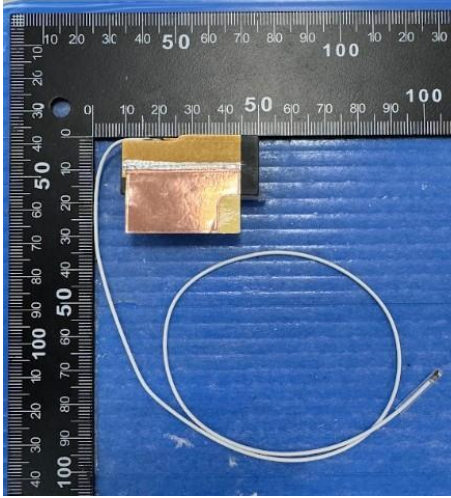
# Antenna Assembly Specifications

| Antenna Part Number                                                     | Manufacturer | Antenna Type | Cable Assembly Part Number and Information           | Freq Range MHz | Peak Gain W/ Cable loss (dBi) | Peak Gain w/o Cable Loss (dBi) | Max VSWR | Cable Loss (dB) |
|-------------------------------------------------------------------------|--------------|--------------|------------------------------------------------------|----------------|-------------------------------|--------------------------------|----------|-----------------|
| P/N:<br>21U700107-001<br><br>Vender P/N:<br>ALF6Y-100005<br>Aux Antenna | AWAN         | PIFA         | I-pex:四代頭<br>Coaxial length: 210mm<br>Diameter: 1.13 | 2400-2500MHz   | 0.90                          | 1.43                           | 4        | 0.53            |
|                                                                         |              |              |                                                      | 5150-5250MHz   | 1.32                          | 2.19                           | 4        | 0.87            |
|                                                                         |              |              |                                                      | 5250-5350MHz   | 2.44                          | 3.31                           | 4        | 0.87            |
|                                                                         |              |              |                                                      | 5470-5725MHz   | 1.78                          | 2.66                           | 4        | 0.88            |
|                                                                         |              |              |                                                      | 5725-5850MHz   | 0.84                          | 1.73                           | 4        | 0.89            |
|                                                                         |              |              |                                                      | 5925-6425MHz   | 2.65                          | 3.55                           | 4        | 0.90            |
|                                                                         |              |              |                                                      | 6425-6525MHz   | 1.20                          | 2.10                           | 4        | 0.90            |
|                                                                         |              |              |                                                      | 6525-6875MHz   | 2.18                          | 3.08                           | 4        | 0.90            |
|                                                                         |              |              |                                                      | 6875-7125MHz   | 2.49                          | 3.50                           | 4        | 1.01            |

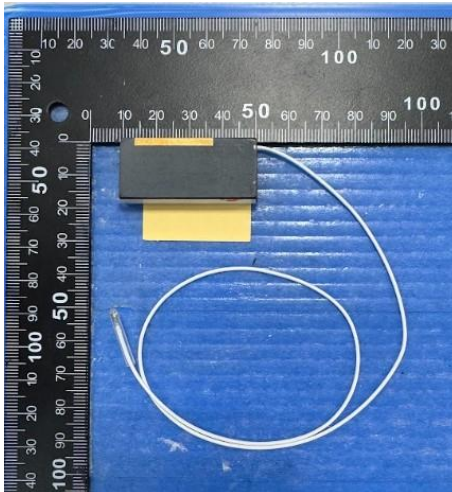
# Antenna Photo (Front/Back):

- ALL6Y-100021(Main)

- Front

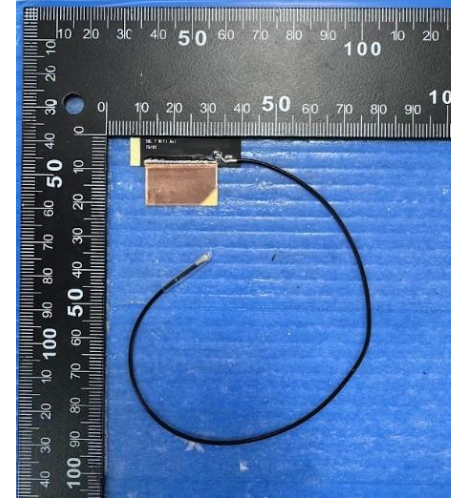


- Back

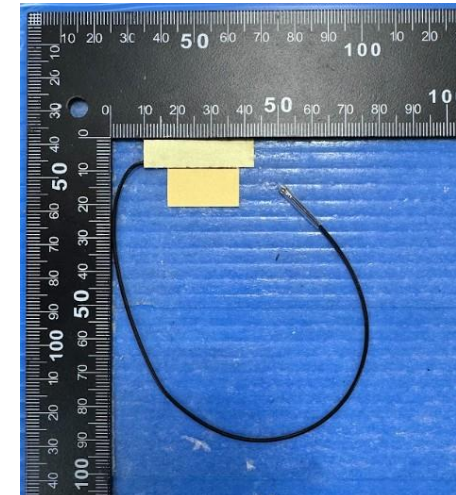


- ALF6Y-100005Aux)

- Front



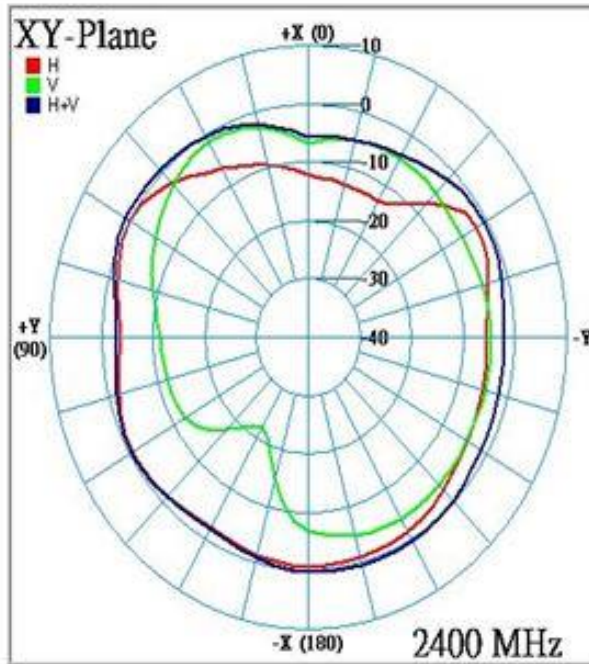
- Back



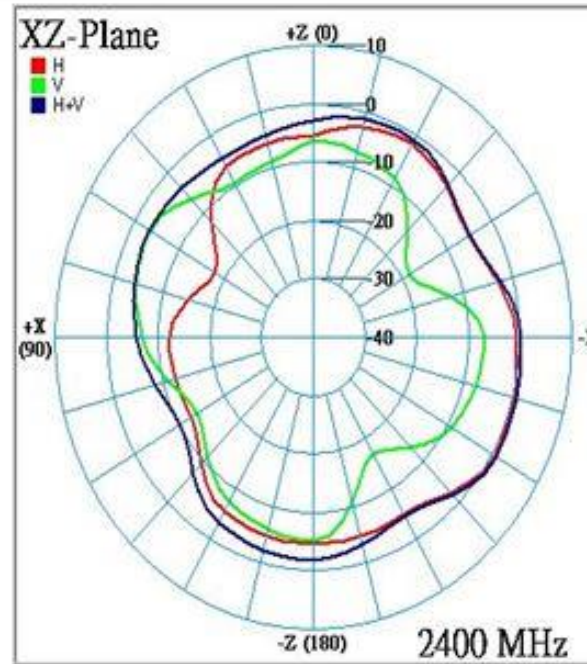
# Radiation characteristics of antenna loaded in Host Platform @ 2400MHz:

- ALL6Y-100021(Main)

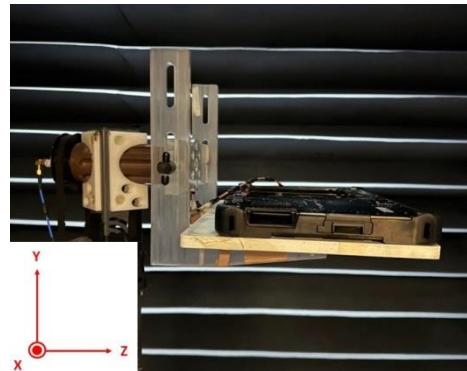
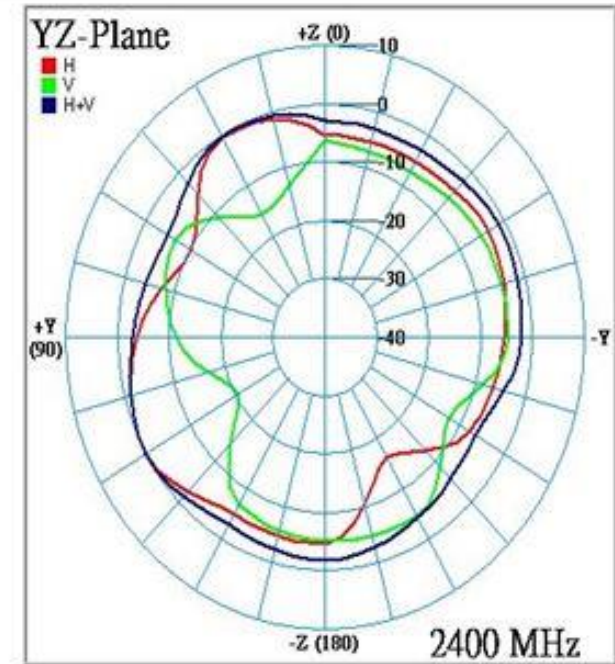
XY-plane



XZ-plane



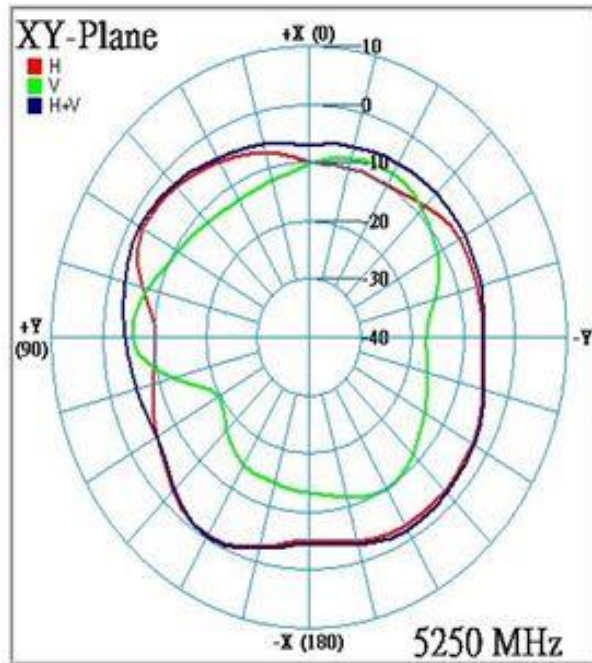
YZ-plane



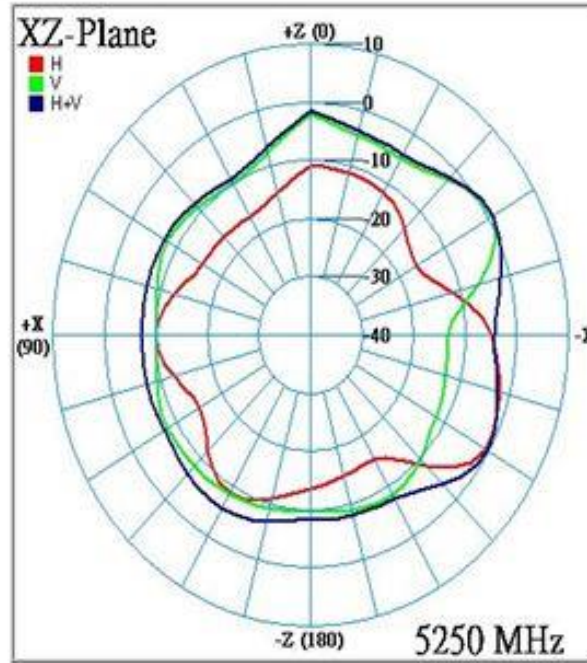
# Radiation characteristics of antenna loaded in Host Platform @ 5250MHz:

- ALL6Y-100021(Main)

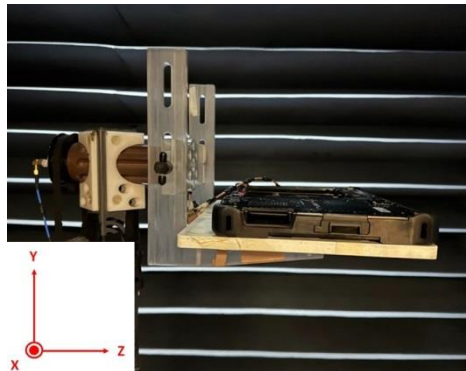
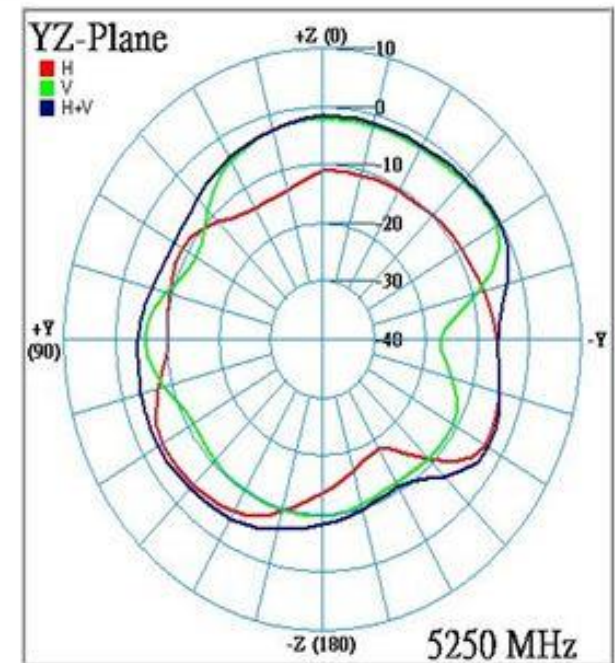
XY-plane



XZ-plane



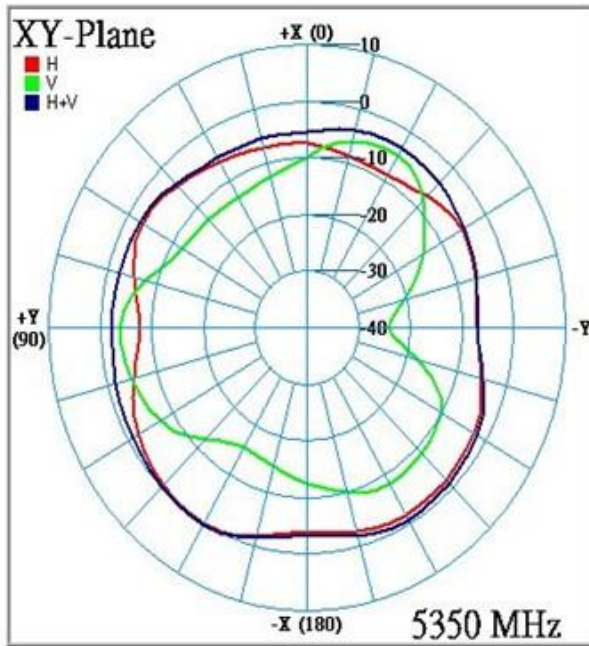
YZ-plane



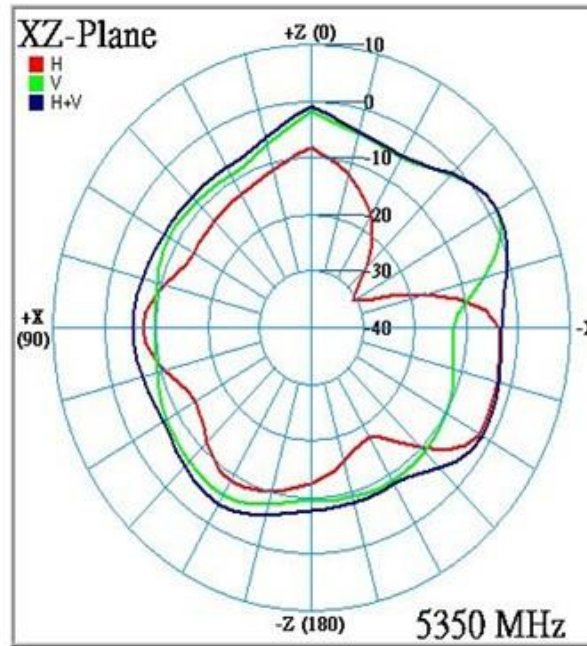
# Radiation characteristics of antenna loaded in Host Platform @ 5350MHz:

- ALL6Y-100021(Main)

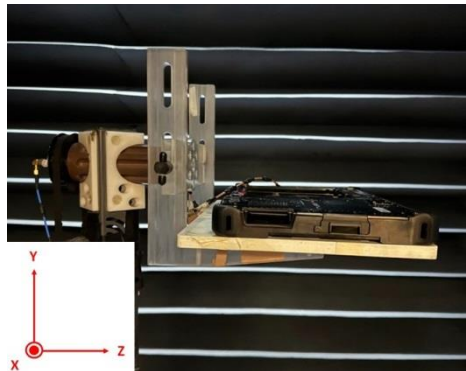
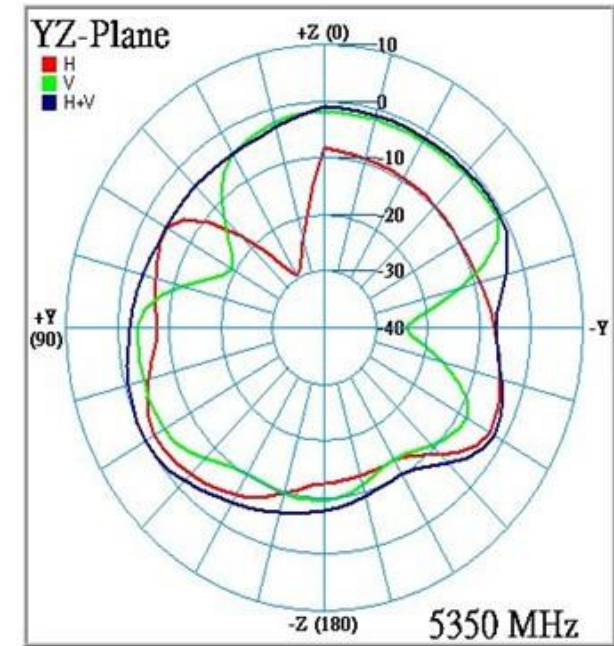
XY-plane



XZ-plane



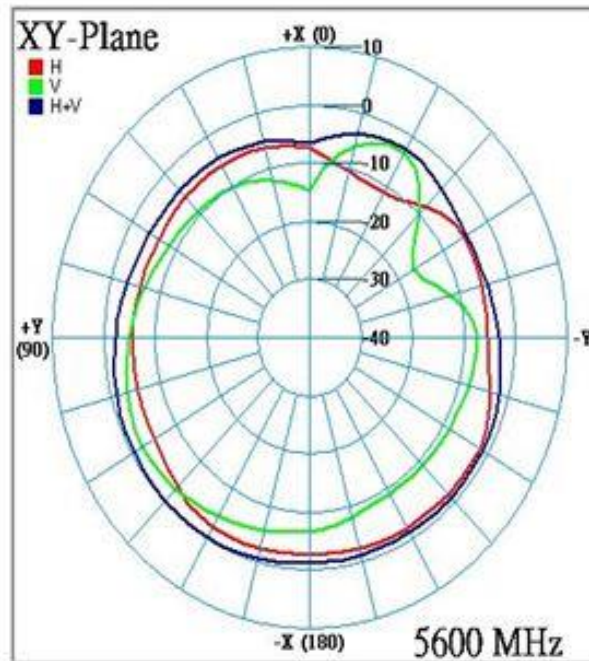
YZ-plane



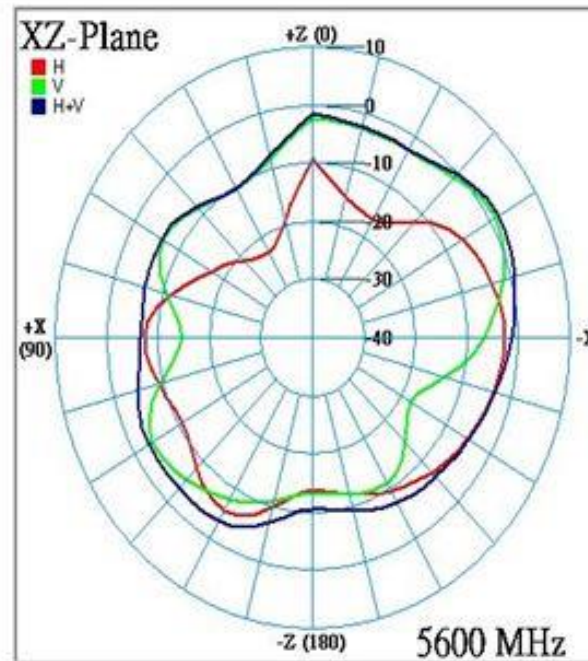
# Radiation characteristics of antenna loaded in Host Platform @ 5600MHz:

- ALL6Y-100021(Main)

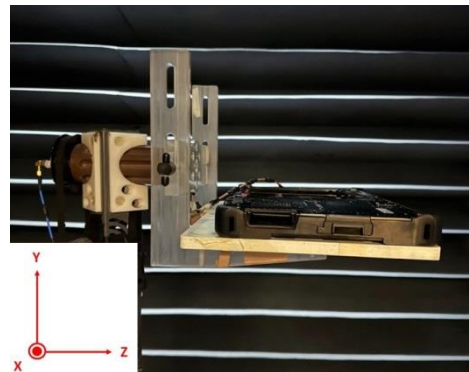
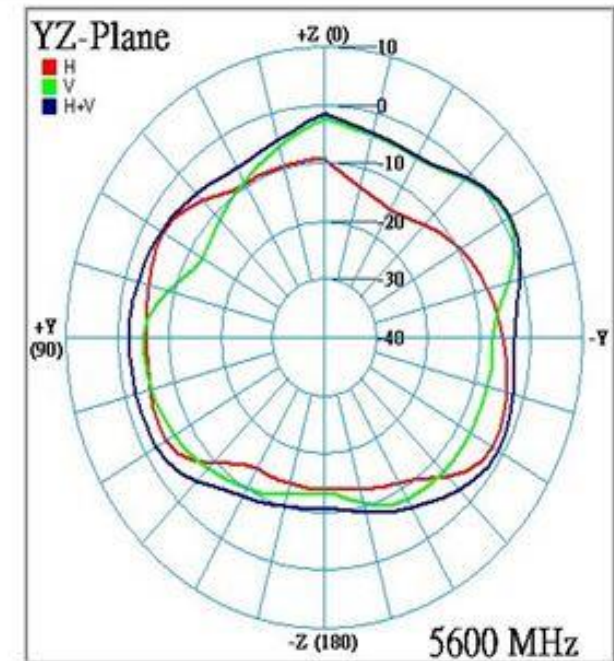
XY-plane



XZ-plane



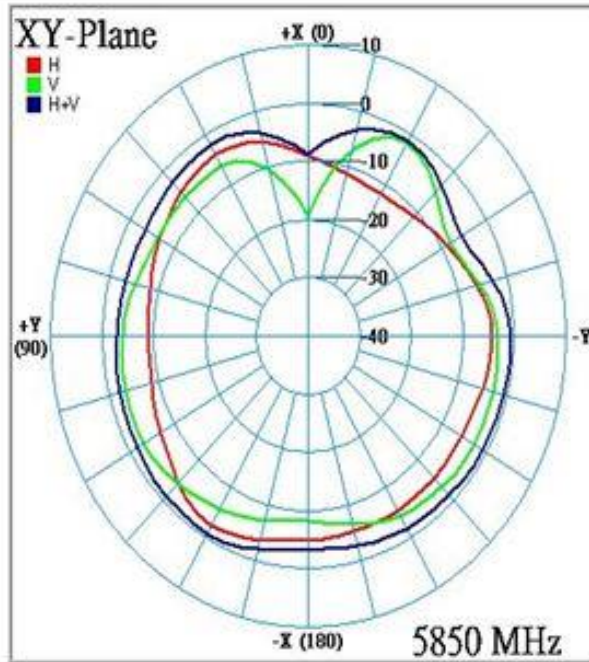
YZ-plane



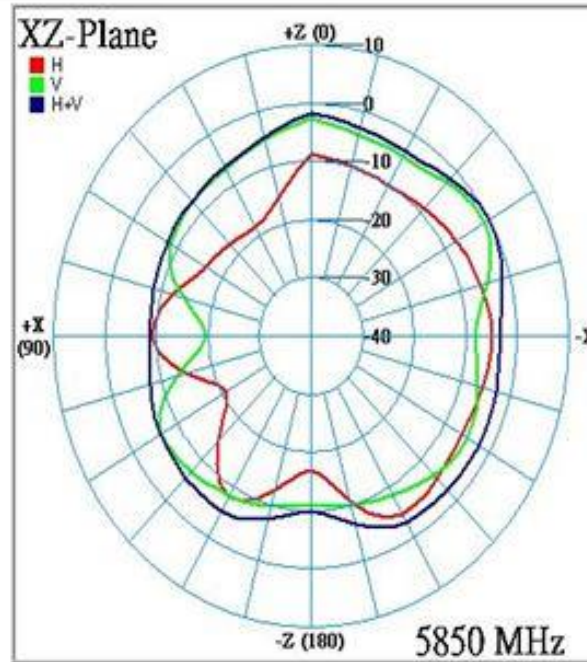
# Radiation characteristics of antenna loaded in Host Platform @ 5850MHz:

- ALL6Y-100021(Main)

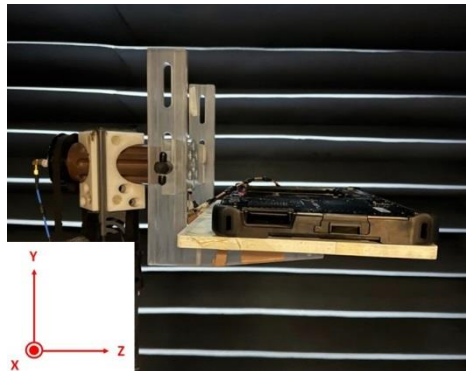
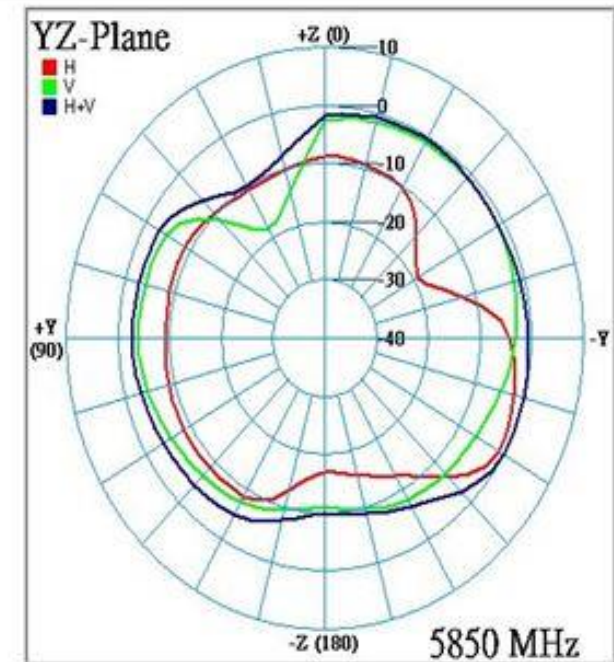
XY-plane



XZ-plane



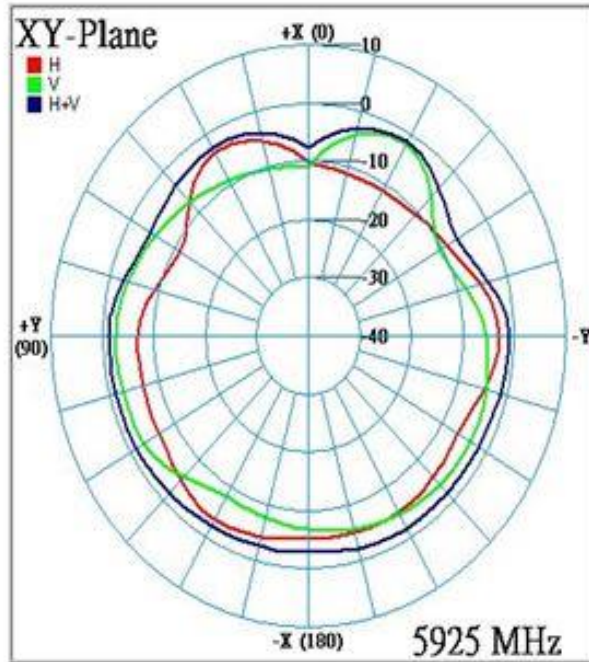
YZ-plane



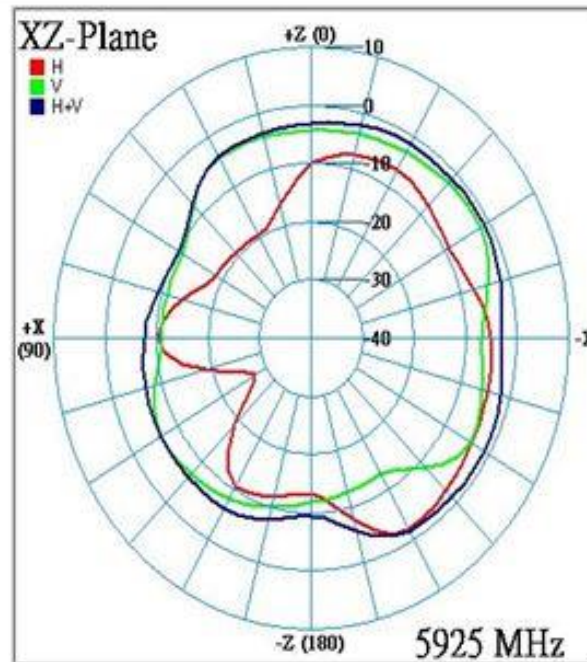
# Radiation characteristics of antenna loaded in Host Platform @ 5925MHz:

- ALL6Y-100021(Main)

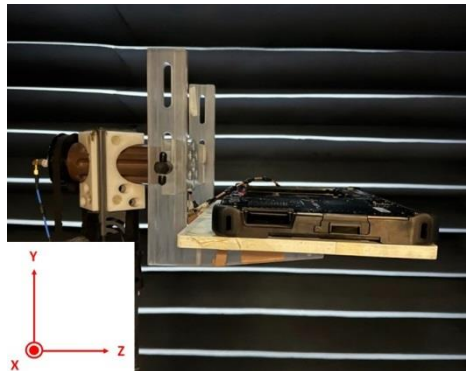
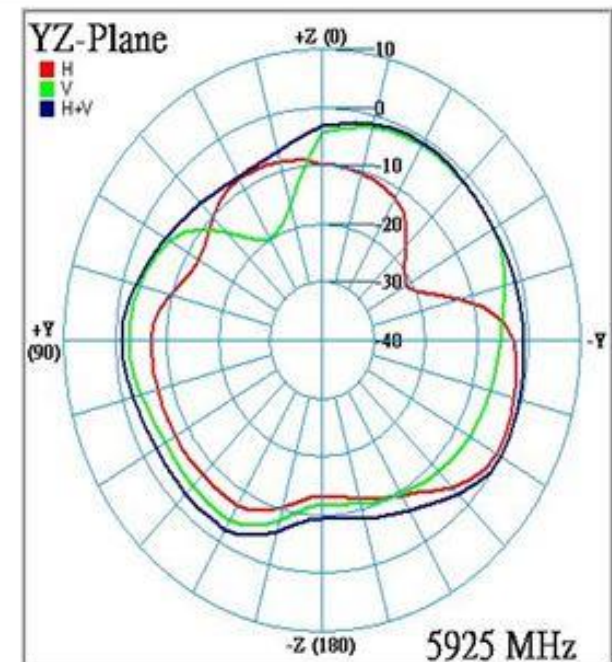
XY-plane



XZ-plane



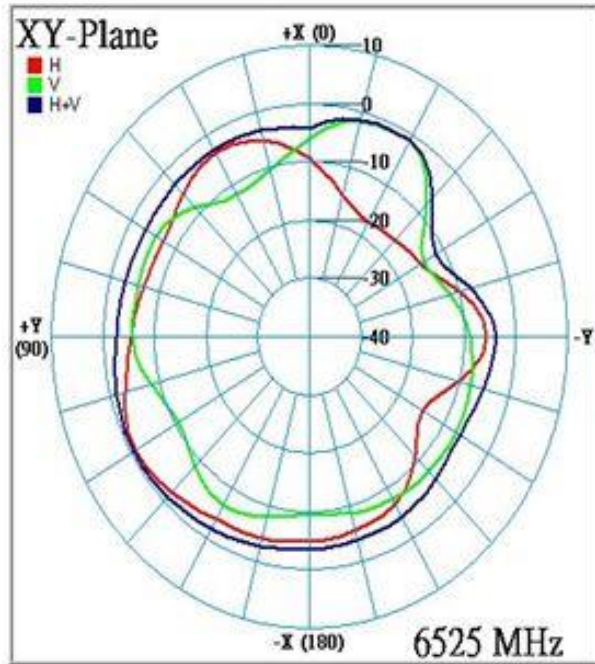
YZ-plane



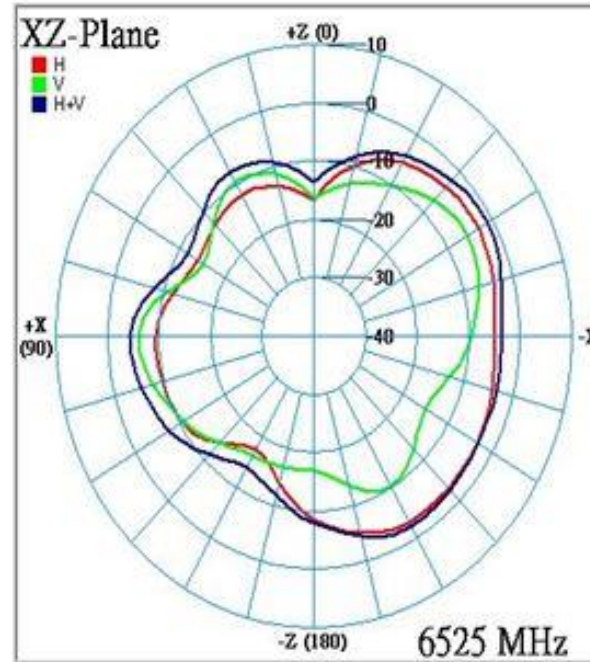
# Radiation characteristics of antenna loaded in Host Platform @ 6525MHz:

- ALL6Y-100021(Main)

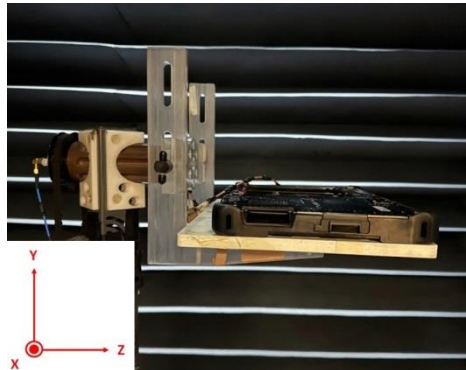
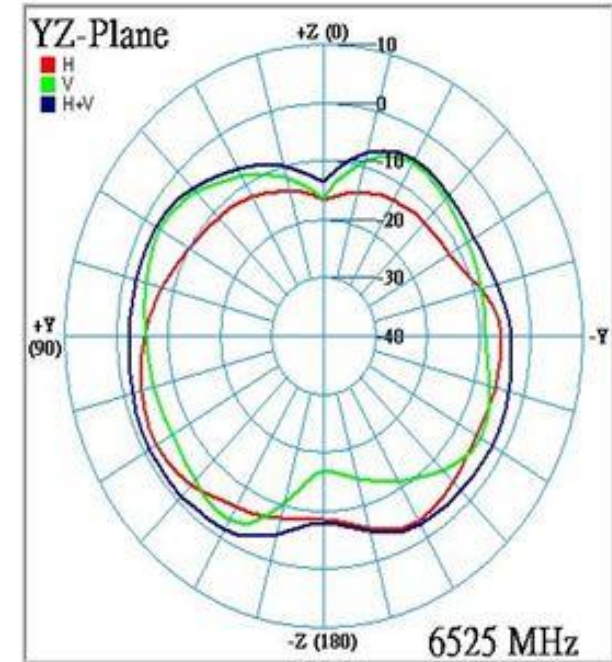
XY-plane



XZ-plane



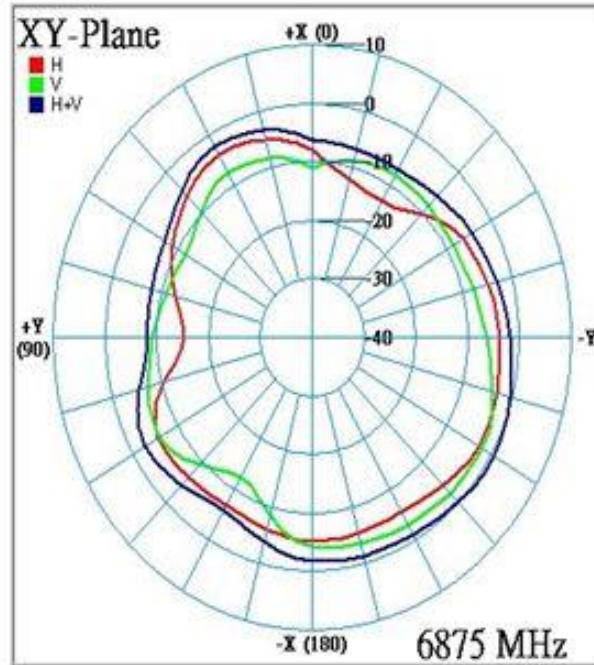
YZ-plane



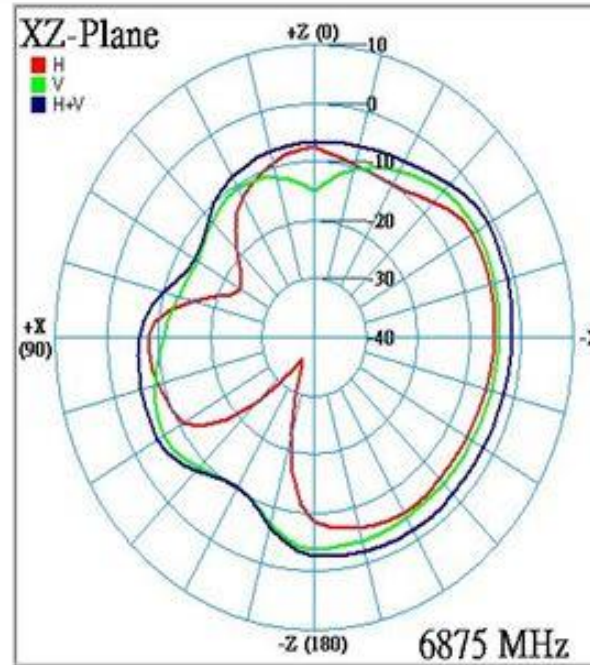
# Radiation characteristics of antenna loaded in Host Platform @ 6875MHz:

- ALL6Y-100021(Main)

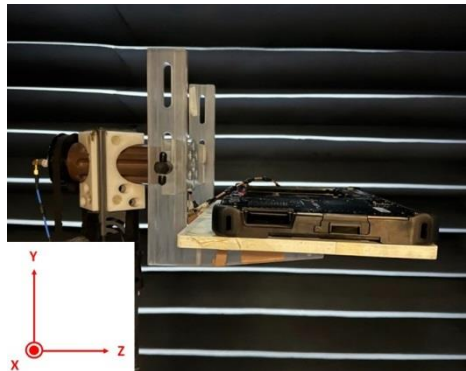
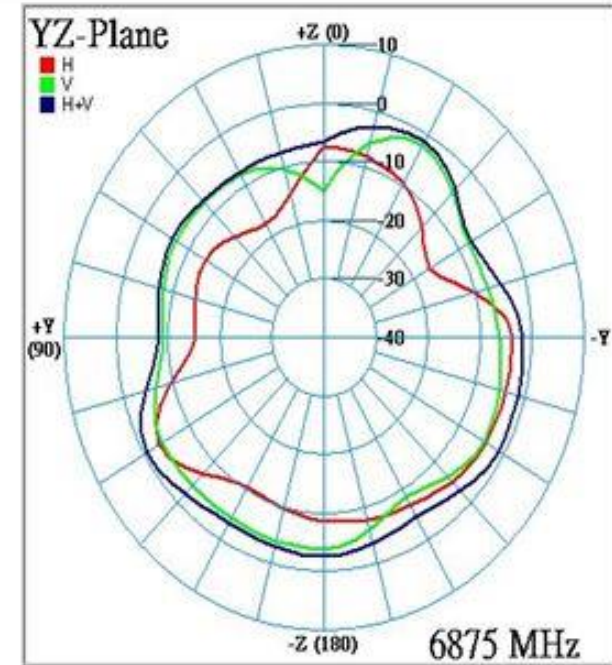
XY-plane



XZ-plane

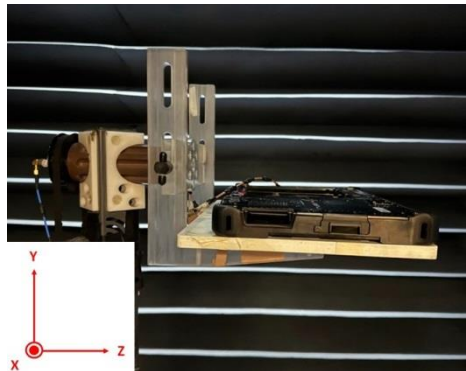
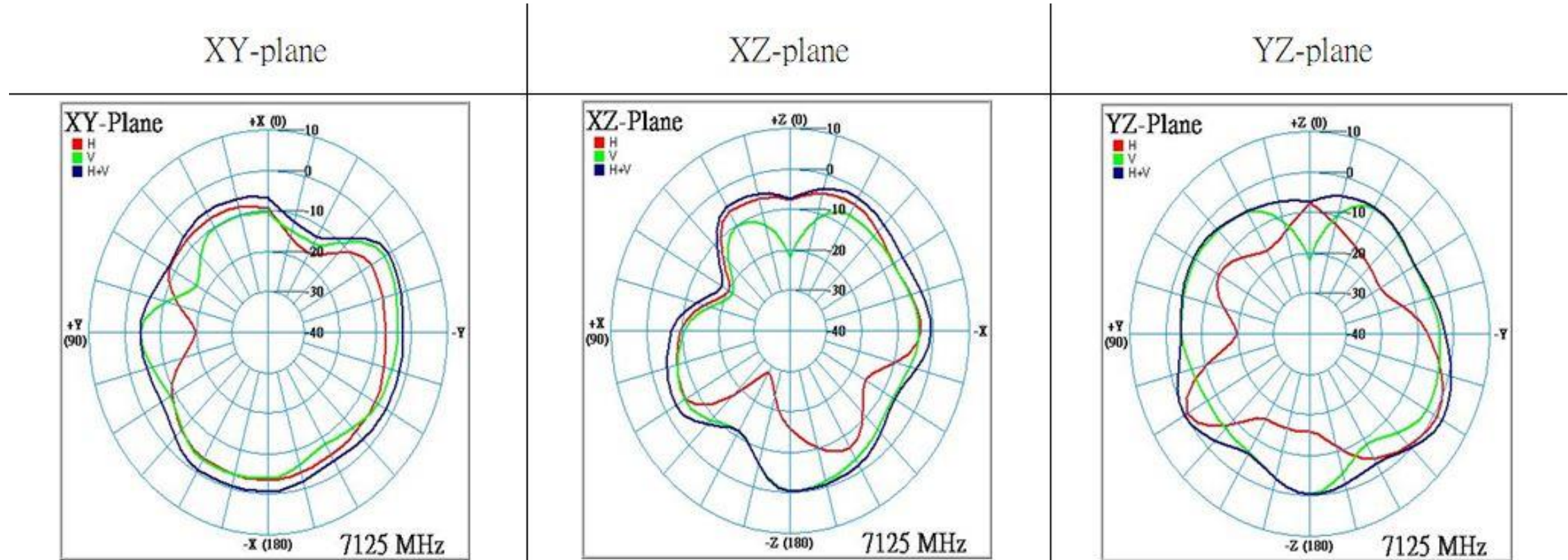


YZ-plane



# Radiation characteristics of antenna loaded in Host Platform @ 7125MHz:

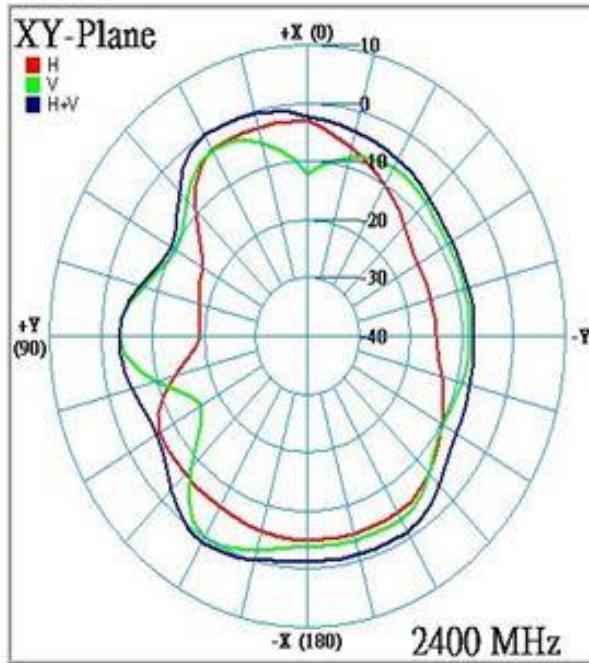
- ALL6Y-100021(Main)



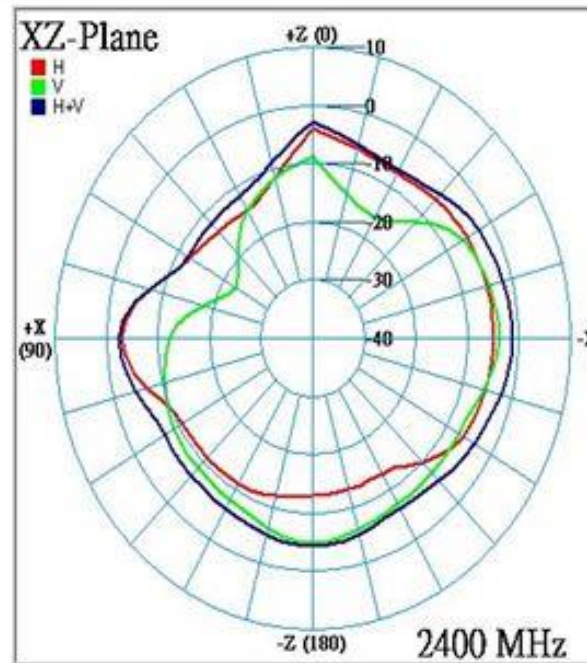
# Radiation characteristics of antenna loaded in Host Platform @ 2400MHz:

- ALF6Y-100005(Aux)

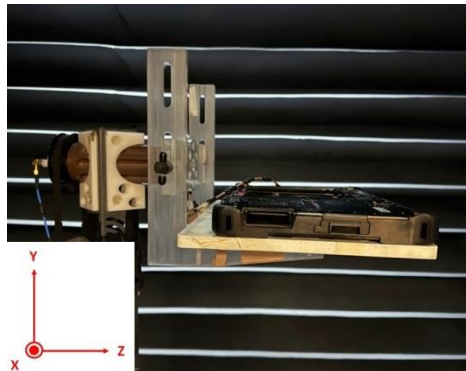
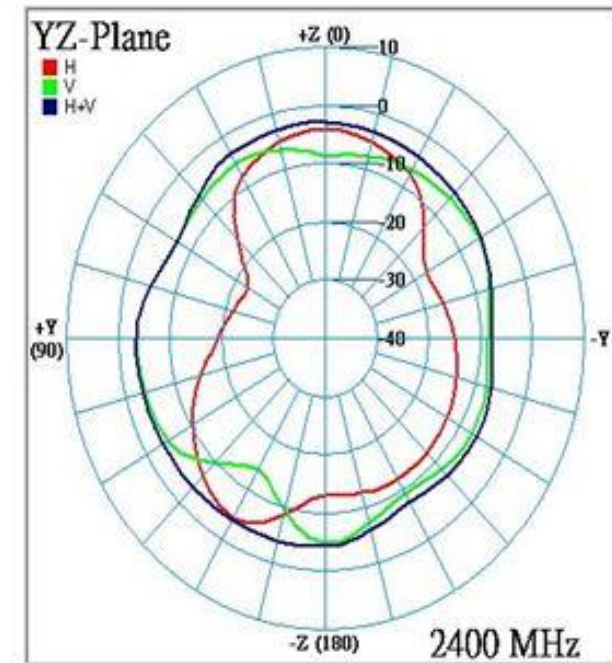
XY-plane



XZ-plane

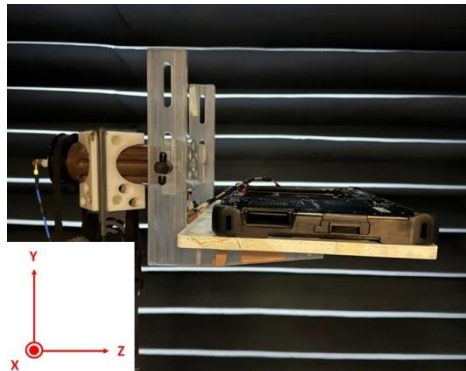
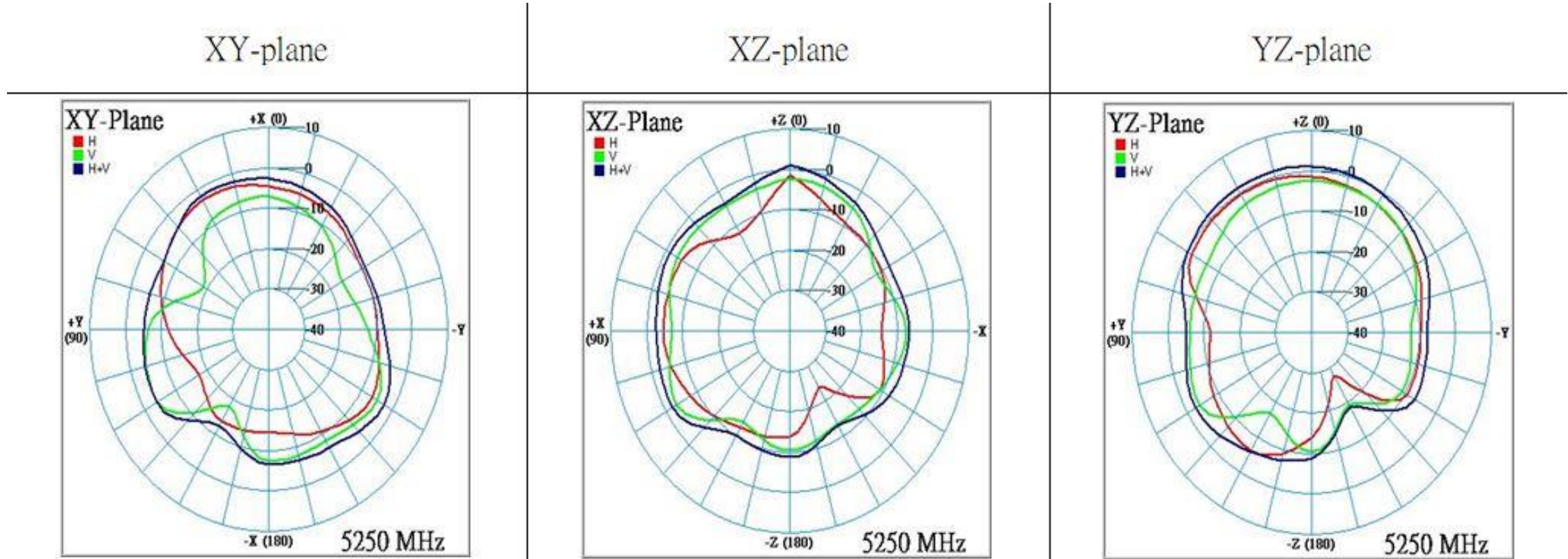


YZ-plane



# Radiation characteristics of antenna loaded in Host Platform @ 5250MHz:

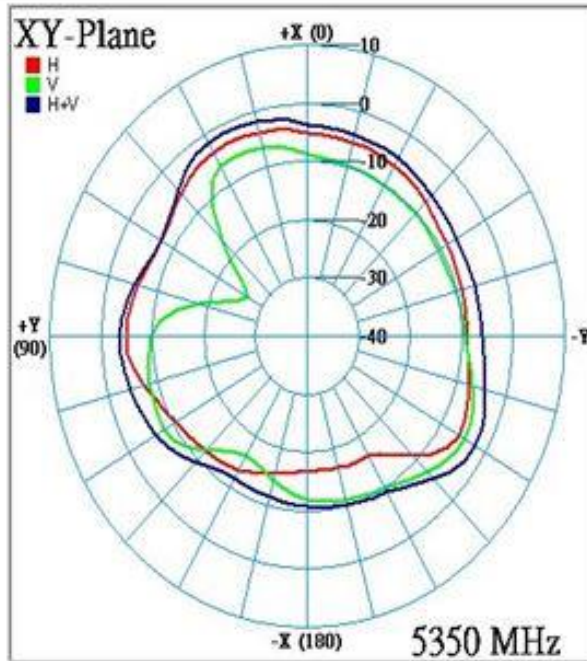
- ALF6Y-100005(Aux)



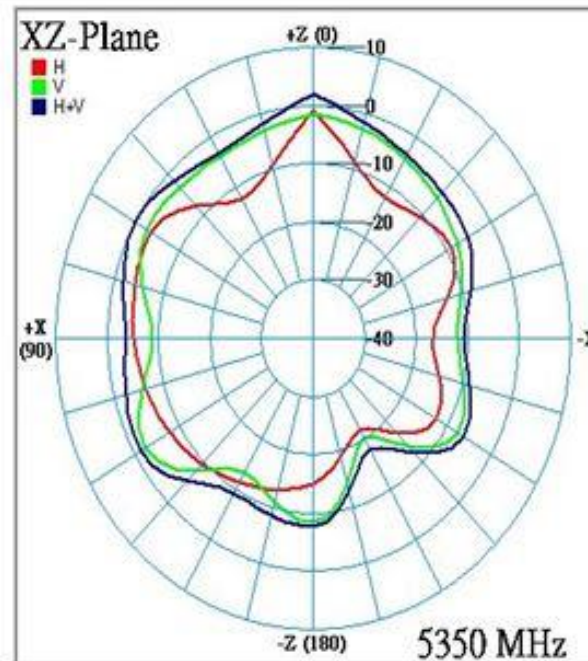
# Radiation characteristics of antenna loaded in Host Platform @ 5350MHz:

- ALF6Y-100005(Aux)

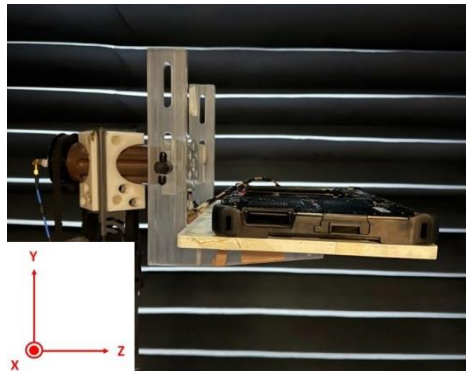
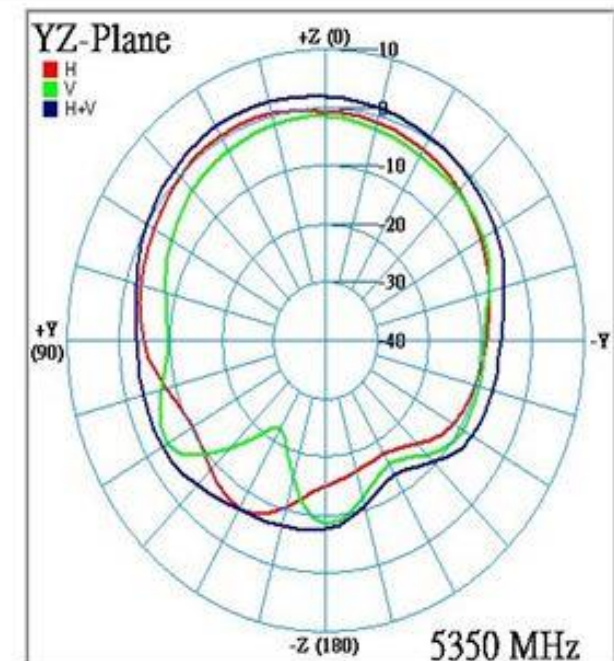
XY-plane



XZ-plane



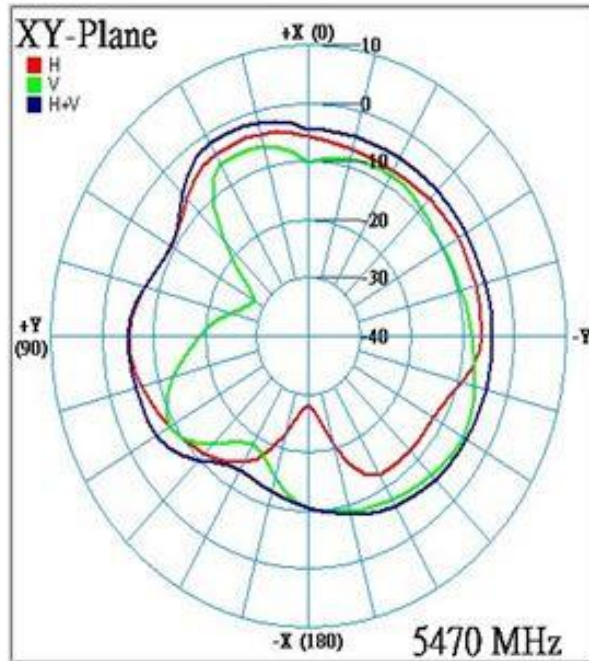
YZ-plane



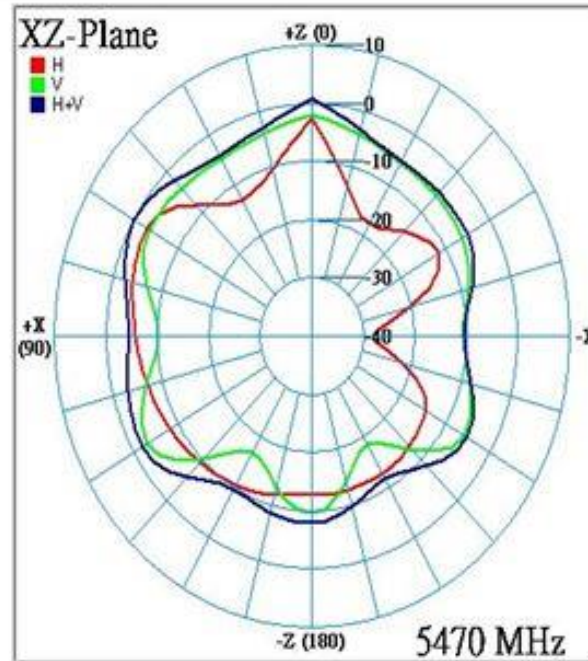
# Radiation characteristics of antenna loaded in Host Platform @ 5470MHz:

- ALF6Y-100005(Aux)

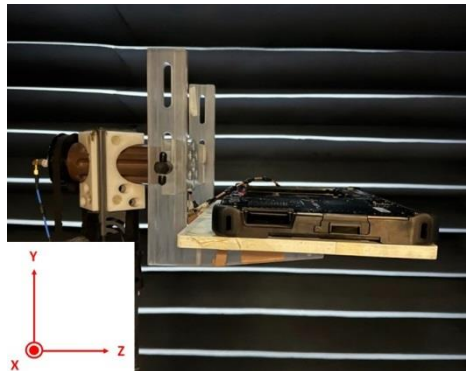
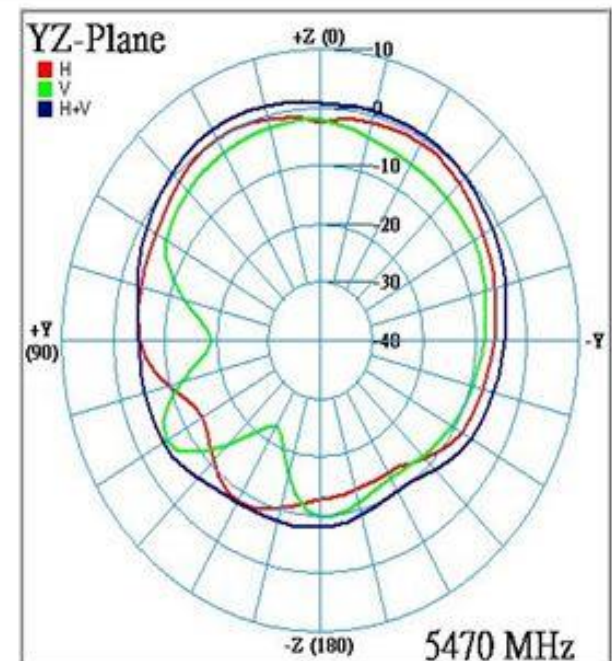
XY-plane



XZ-plane

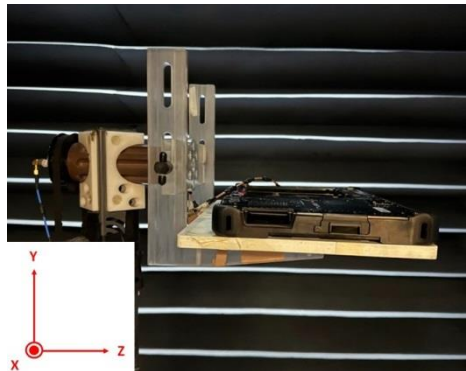
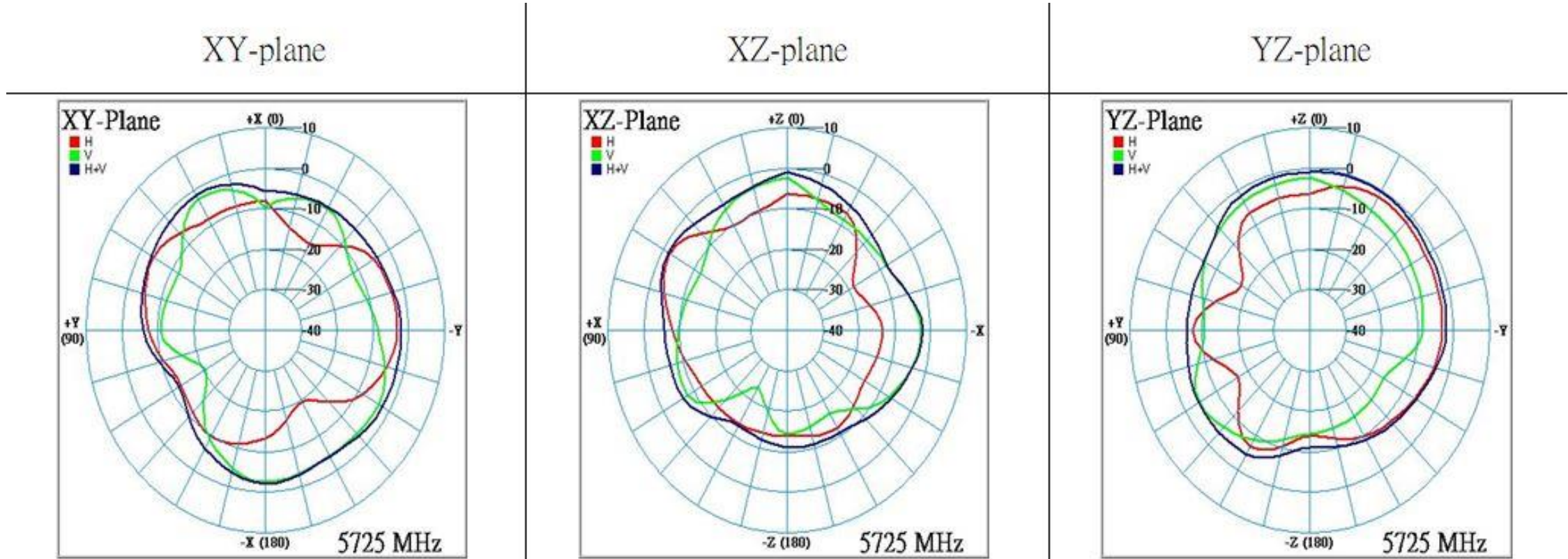


YZ-plane



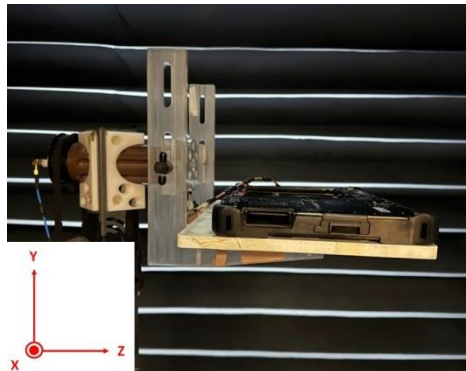
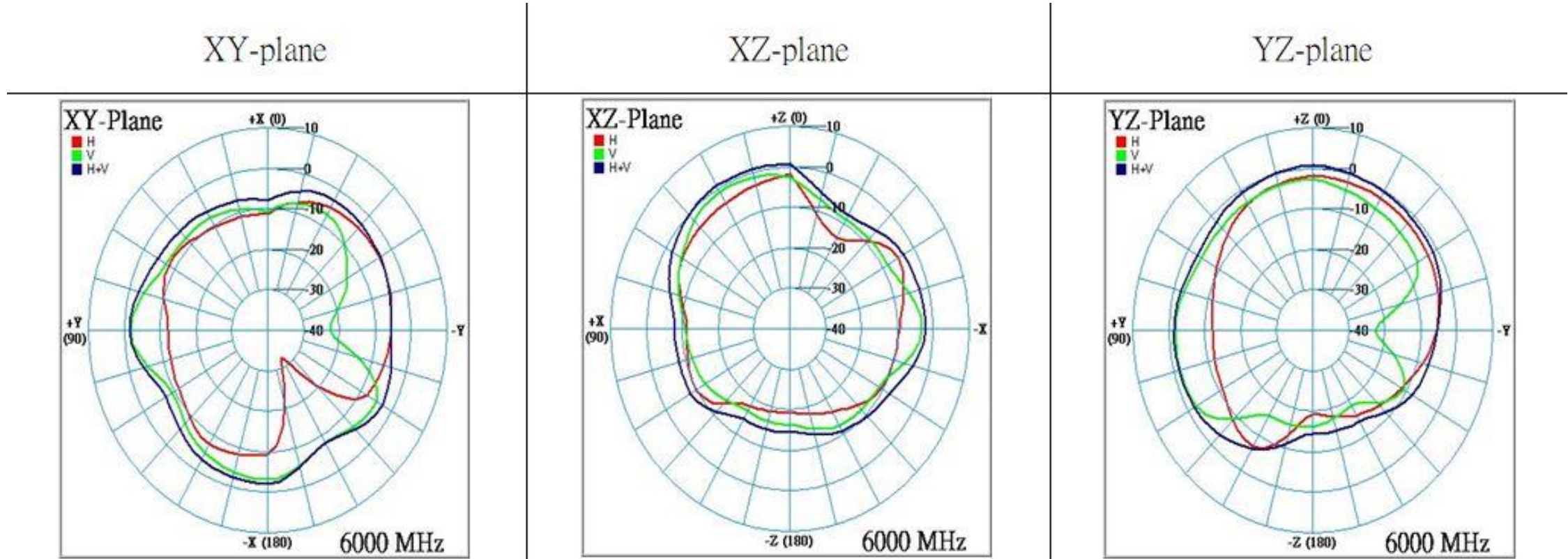
# Radiation characteristics of antenna loaded in Host Platform @ 5725MHz:

- ALF6Y-100005(Aux)



# Radiation characteristics of antenna loaded in Host Platform @ 6000MHz:

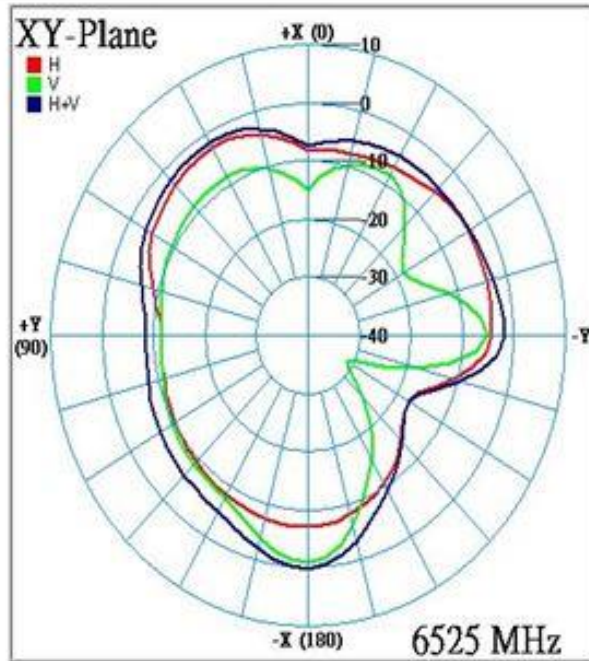
- ALF6Y-100005(Aux)



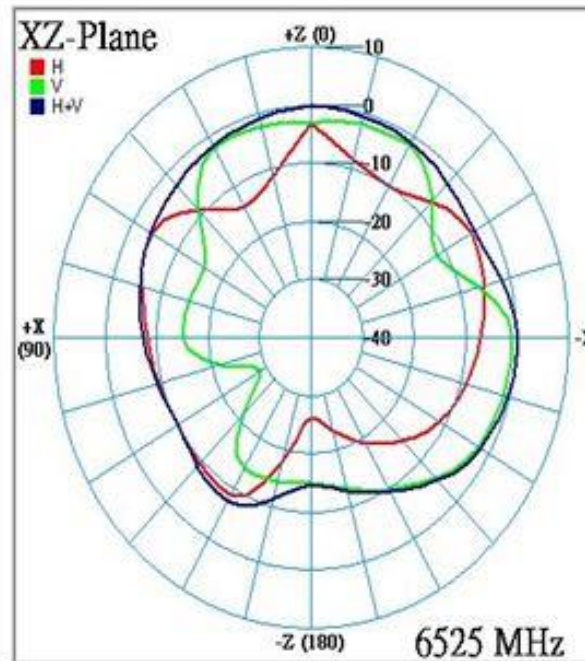
# Radiation characteristics of antenna loaded in Host Platform @ 6525MHz:

- ALF6Y-100005(Aux)

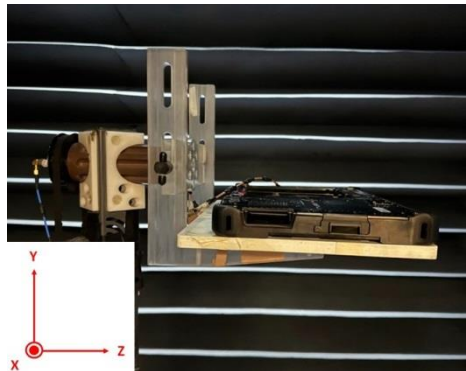
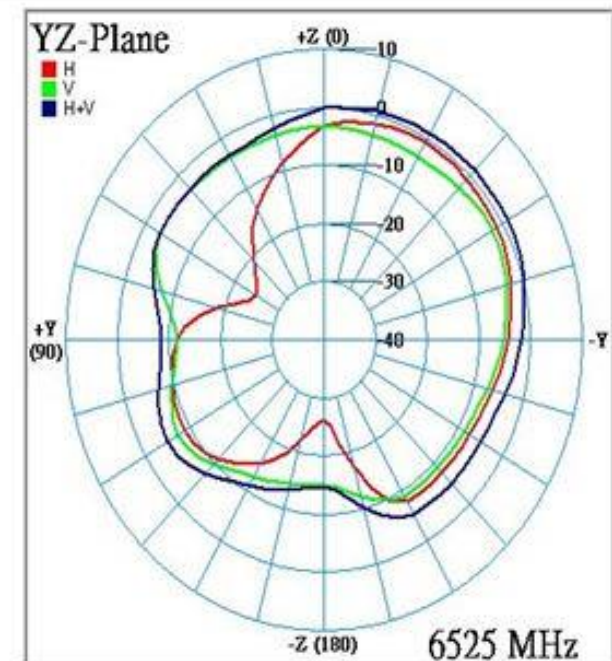
XY-plane



XZ-plane



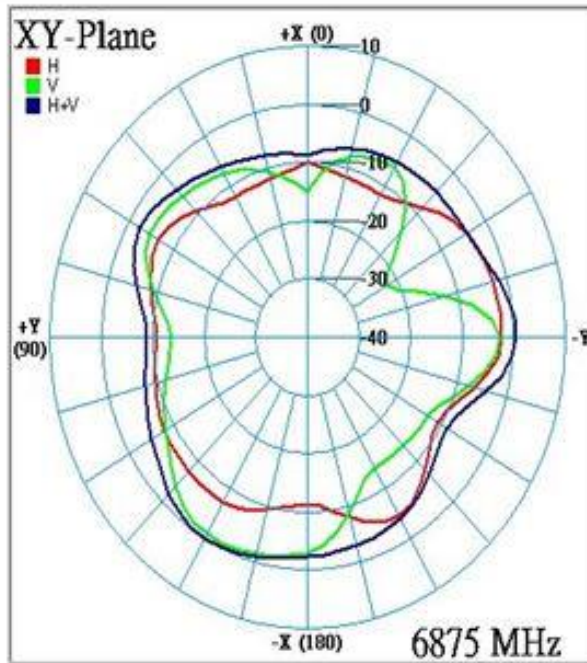
YZ-plane



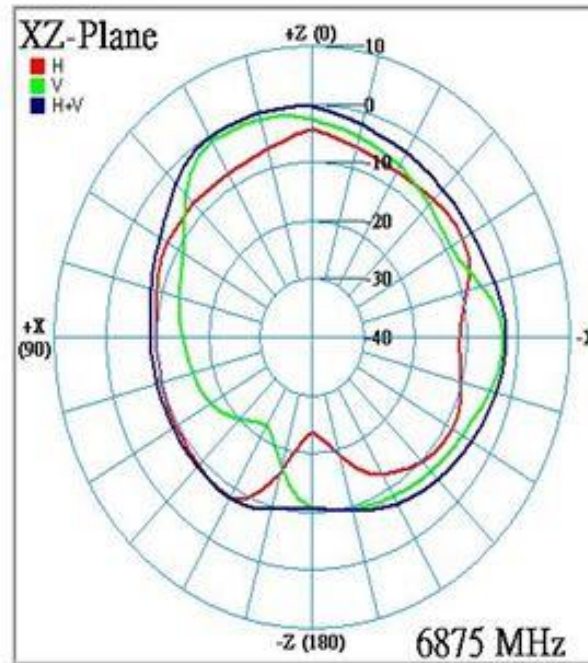
# Radiation characteristics of antenna loaded in Host Platform @ 6875MHz:

- ALF6Y-100005(Aux)

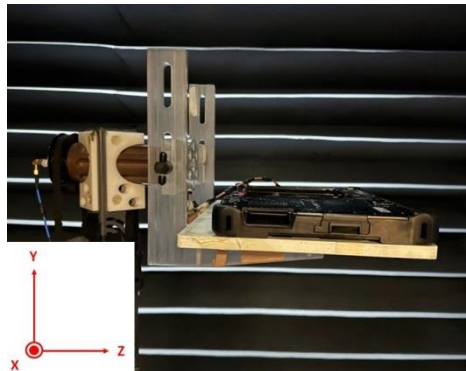
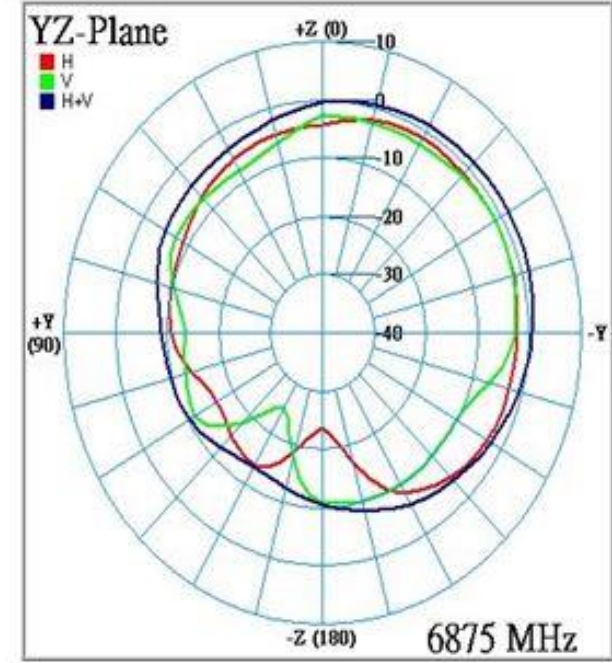
XY-plane



XZ-plane



YZ-plane



# Radiation characteristics of antenna loaded in Host Platform @ 7125MHz:

- ALF6Y-100005(Aux)

