

# Antenna Measurement Report

Model : bt2  
Manufacture :  
Series Number : QTKOTAPR00297  
Antenna Type :  
Date :

Test Laboratory:

Name: Linkou Laboratory

Address: No. 5-22 Rueishu Keng, Rueiping Tsuen, Linkou Shiang, Taipei County  
244, Taiwan, R.O.C.

The test results relate only to the samples tested.

## CONTENT

|             |                                         |           |
|-------------|-----------------------------------------|-----------|
| <b>1.</b>   | <b>GENERAL INFORMATION .....</b>        | <b>3</b>  |
| <b>1.1.</b> | <b>APPLIED REFERENCE DOCUMENTS.....</b> | <b>3</b>  |
| <b>1.2.</b> | <b>LIST OF TEST EQUIPMENTS .....</b>    | <b>3</b>  |
| <b>1.3.</b> | <b>DESCRIPTION.....</b>                 | <b>3</b>  |
| <b>1.4.</b> | <b>TEST SETUP .....</b>                 | <b>3</b>  |
| <b>2.</b>   | <b>SUMMARY .....</b>                    | <b>5</b>  |
| <b>3.</b>   | <b>2D PLOTS .....</b>                   | <b>6</b>  |
| <b>4.</b>   | <b>3D PLOTS .....</b>                   | <b>18</b> |

## 1. General Information

### 1.1. Applied Reference Documents

The Equipment Under Test (EUT) has been tested at <Laboratory Name> according to the leading reference document in below table.

| No. | Identity | Document Title                            | Version/Date |
|-----|----------|-------------------------------------------|--------------|
| 1   | Std 149  | IEEE Standard Test Procedures for Antenna | 1979         |

### 1.2. List of Test Equipments

| Instrument Description          | Calibration Date | Location          |
|---------------------------------|------------------|-------------------|
| Agilent E5071C Network Analyzer | 2010.07.26       | Linkou Laboratory |
| MF Switch Box                   | N/A              | Linkou Laboratory |
| MF Controller                   | N/A              | Linkou Laboratory |
| Reference Horn Antenna          |                  | Linkou Laboratory |

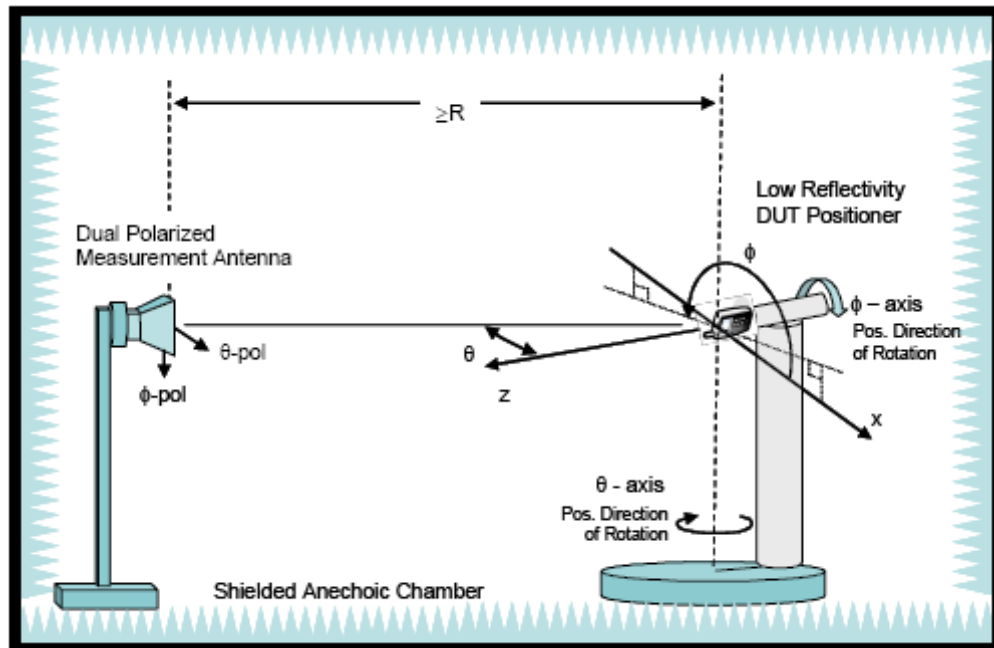
### 1.3. Description

|                              |               |
|------------------------------|---------------|
| Measurement date             |               |
| Measurement software version | 2.00          |
| Model                        | bt2           |
| Manufacture                  |               |
| Antenna Type                 |               |
| EUT Description              | 20120711-1411 |

### 1.4. Test Setup

EUT coordinate systems of the previous sections will apply independent of the physical orientations of the EUT inside the chamber.

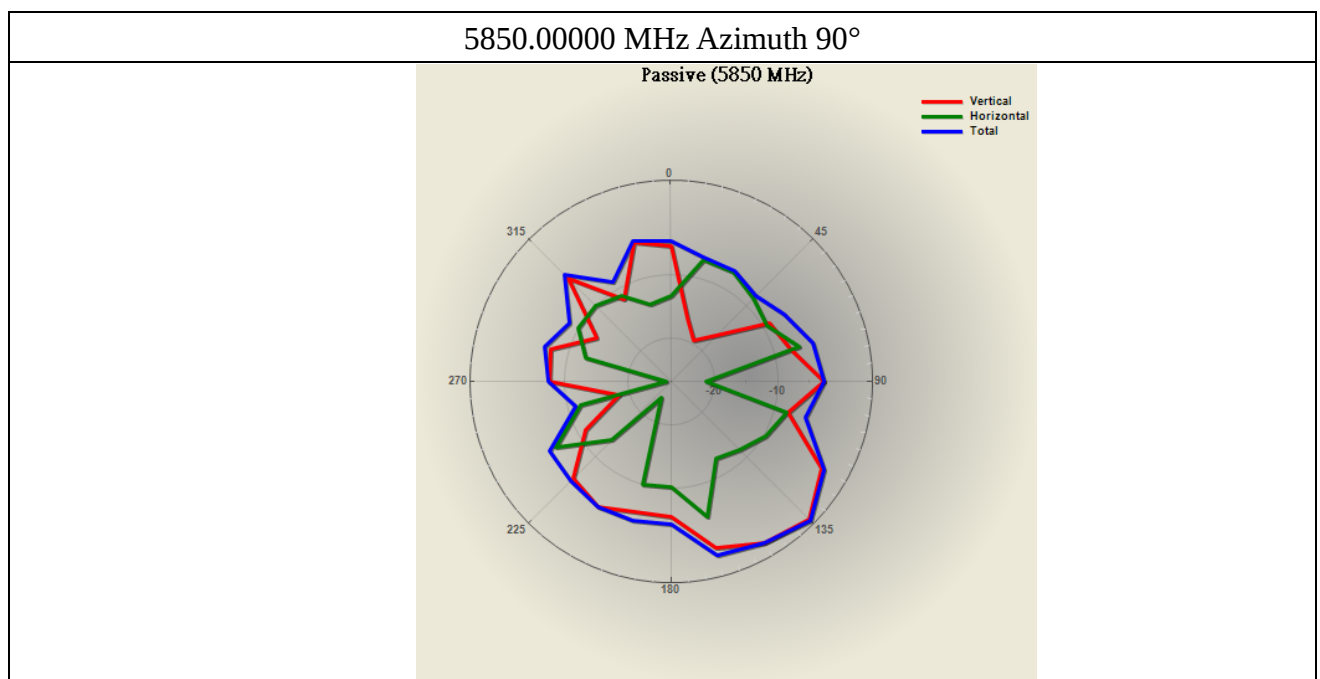
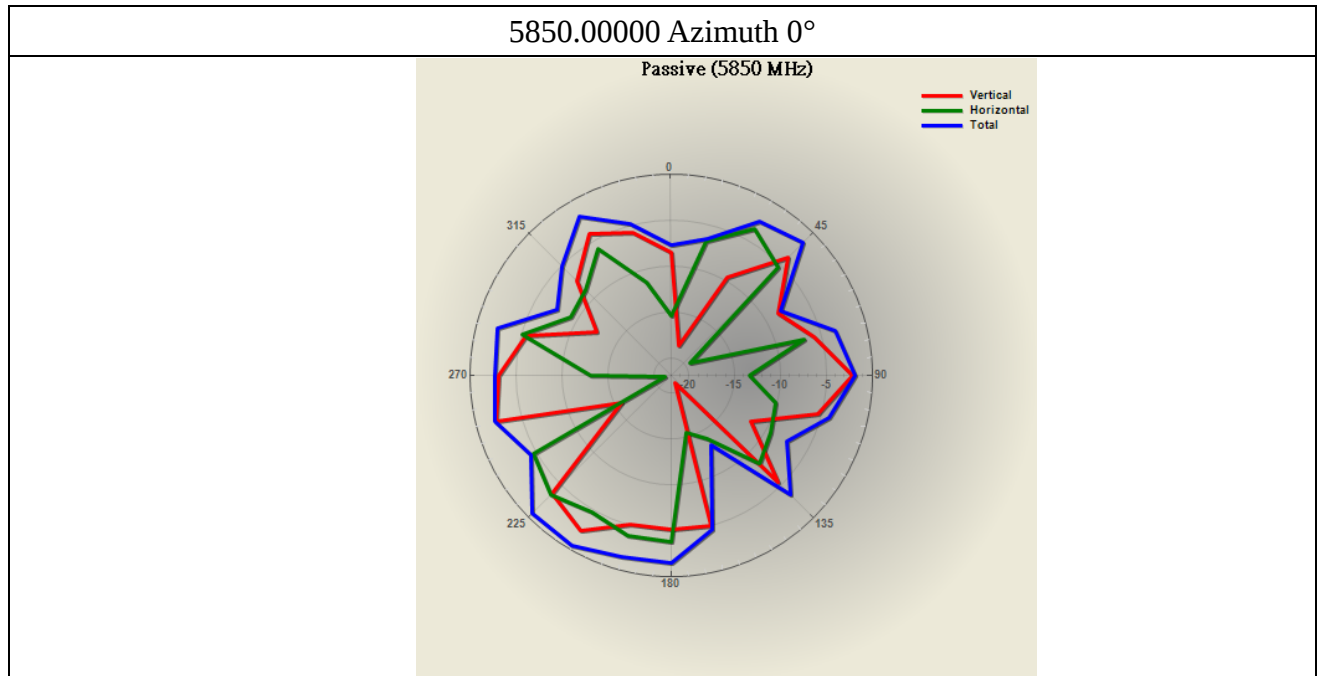
The figure shows the typical setup using a combined axis system. In addition to the pictured Theta axis rotation, the EUT will have to be rotated about the Z-axis (Phi rotation) in order to perform the full spherical scans.

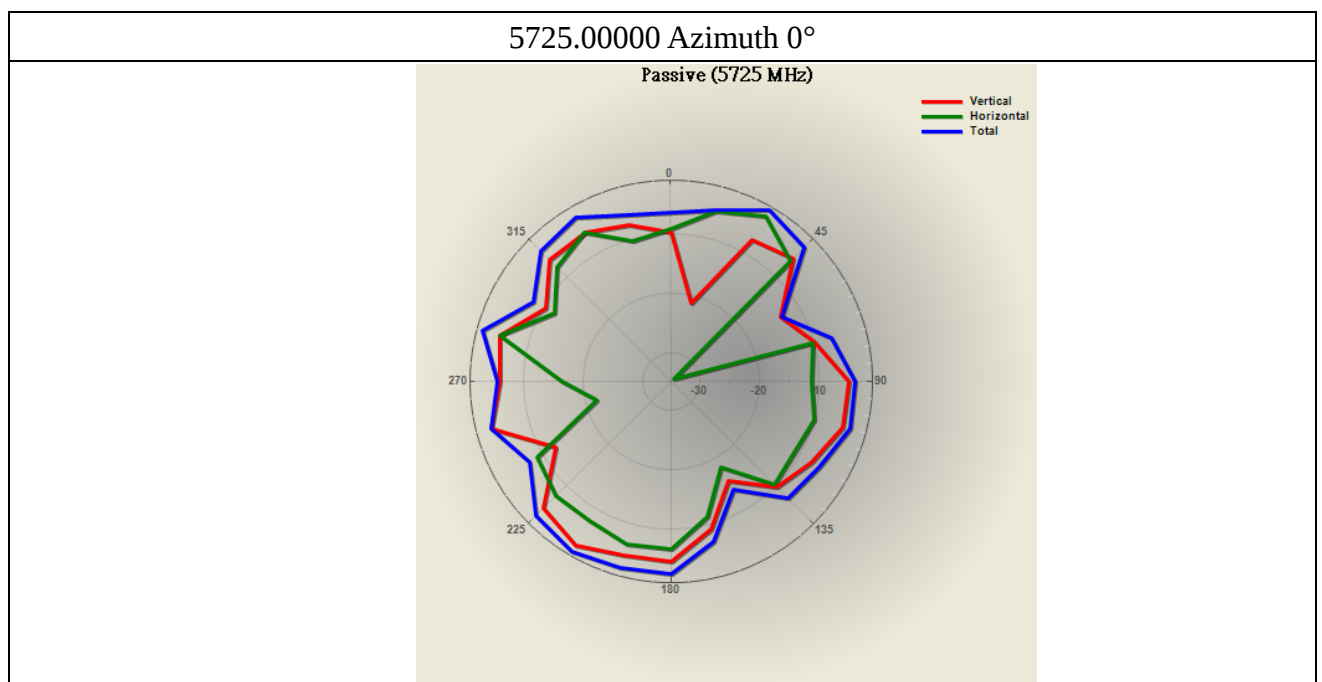
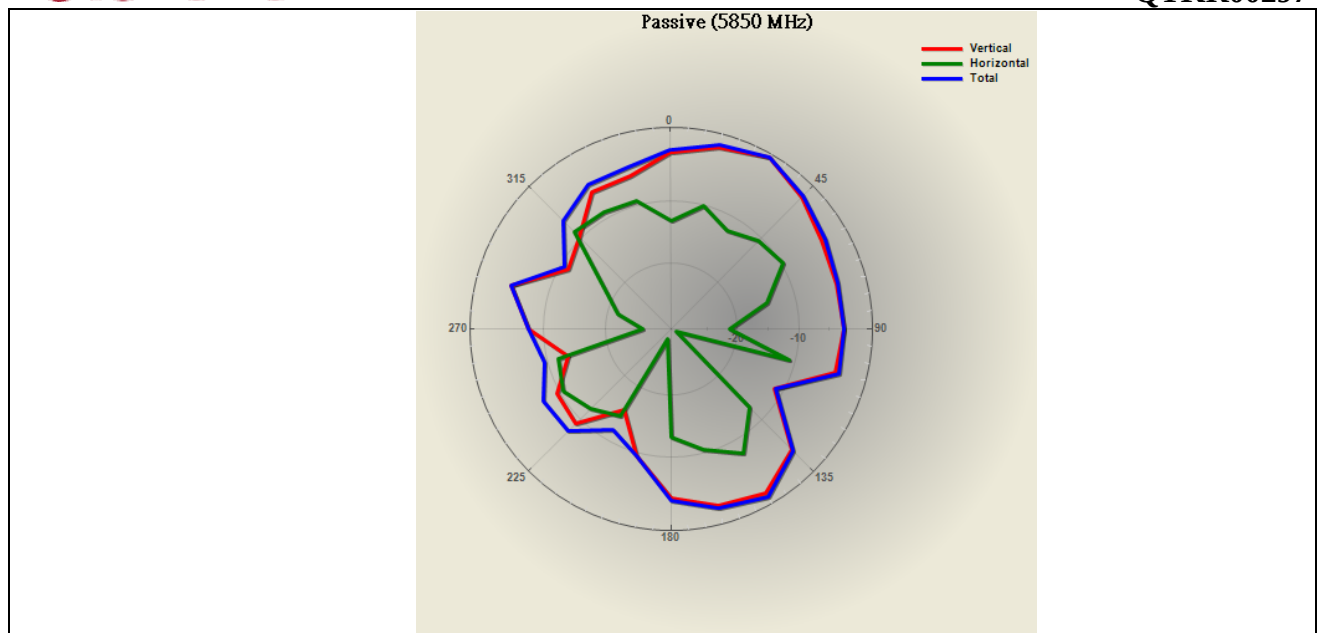


## 2. Summary

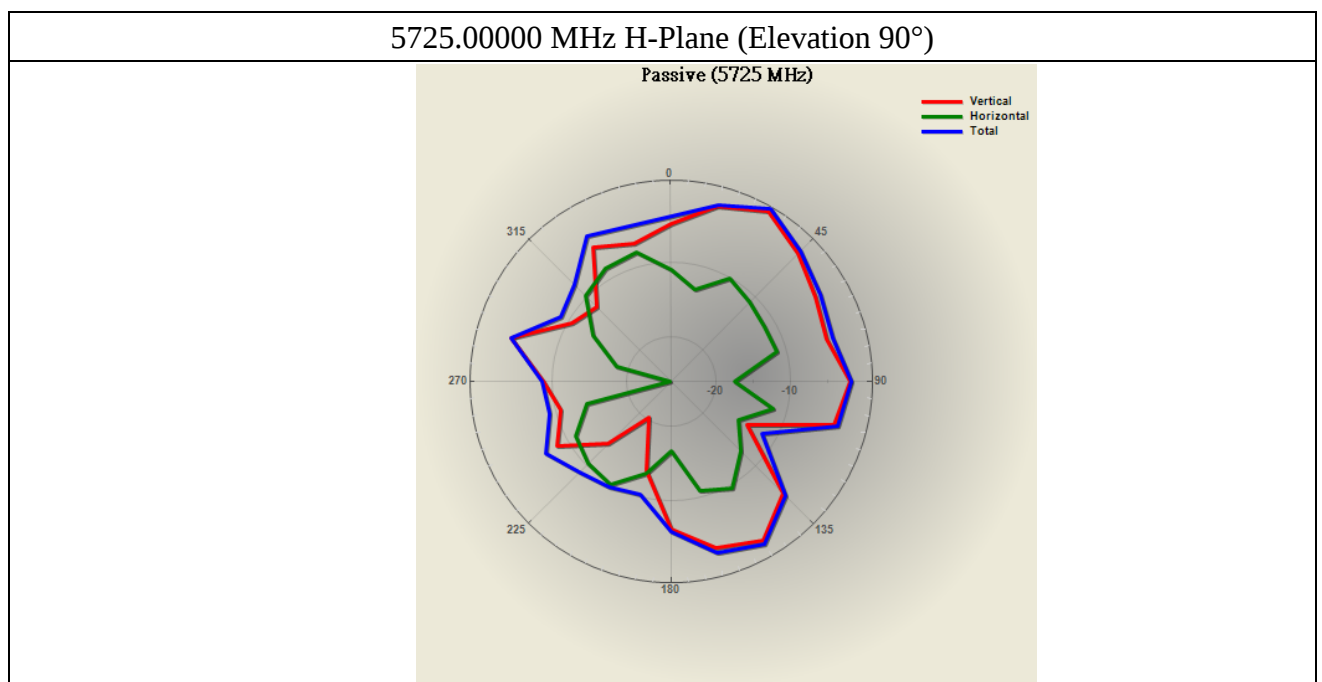
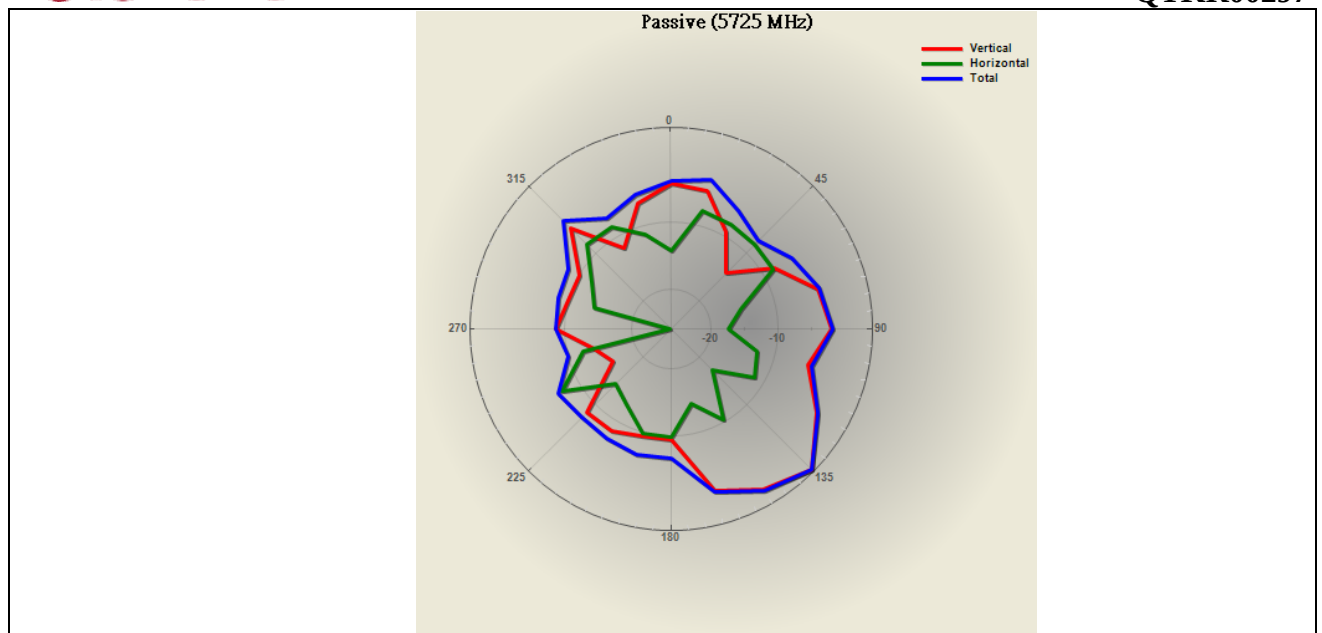
| Frequency<br>(MHz) | Max<br>power<br>(dBm) | Min.<br>power<br>(dBm) | Total<br>Radiated<br>Power<br>(dBm) | NHPRP<br>+/-45<br>(dBm) | NHPRP<br>+/-30<br>(dBm) | Directivity<br>(dBi) | Efficiency<br>(dB) | Efficiency<br>(%) | Gain<br>(dBi) |
|--------------------|-----------------------|------------------------|-------------------------------------|-------------------------|-------------------------|----------------------|--------------------|-------------------|---------------|
| 2402               | 2.75                  | -32.05                 | -4.13                               | -4.91                   | -6.47                   | 6.88                 | -4.13              | 38.59             | 2.75          |
| 2442               | 0.86                  | -38.46                 | -4.69                               | -5.41                   | -6.62                   | 5.55                 | -4.69              | 33.95             | 0.86          |
| 2483               | -0.87                 | -34.47                 | -5.12                               | -5.84                   | -6.98                   | 4.25                 | -5.12              | 30.75             | -0.87         |
| 5150               | -2.08                 | -33.58                 | -7.06                               | -7.84                   | -8.74                   | 4.98                 | -7.06              | 19.69             | -2.08         |
| 5350               | 0.67                  | -35.77                 | -5.95                               | -7.03                   | -8.22                   | 6.61                 | -5.95              | 25.42             | 0.67          |
| 5470               | 1.32                  | -33.05                 | -6.58                               | -7.86                   | -9.12                   | 7.90                 | -6.58              | 21.96             | 1.32          |
| 5725               | 4.57                  | -34.35                 | -4.07                               | -5.72                   | -7.29                   | 8.63                 | -4.07              | 39.18             | 4.57          |
| 5850               | 5.57                  | -30.05                 | -2.97                               | -4.58                   | -6.26                   | 8.54                 | -2.97              | 50.49             | 5.57          |

## 3. 2D Plots

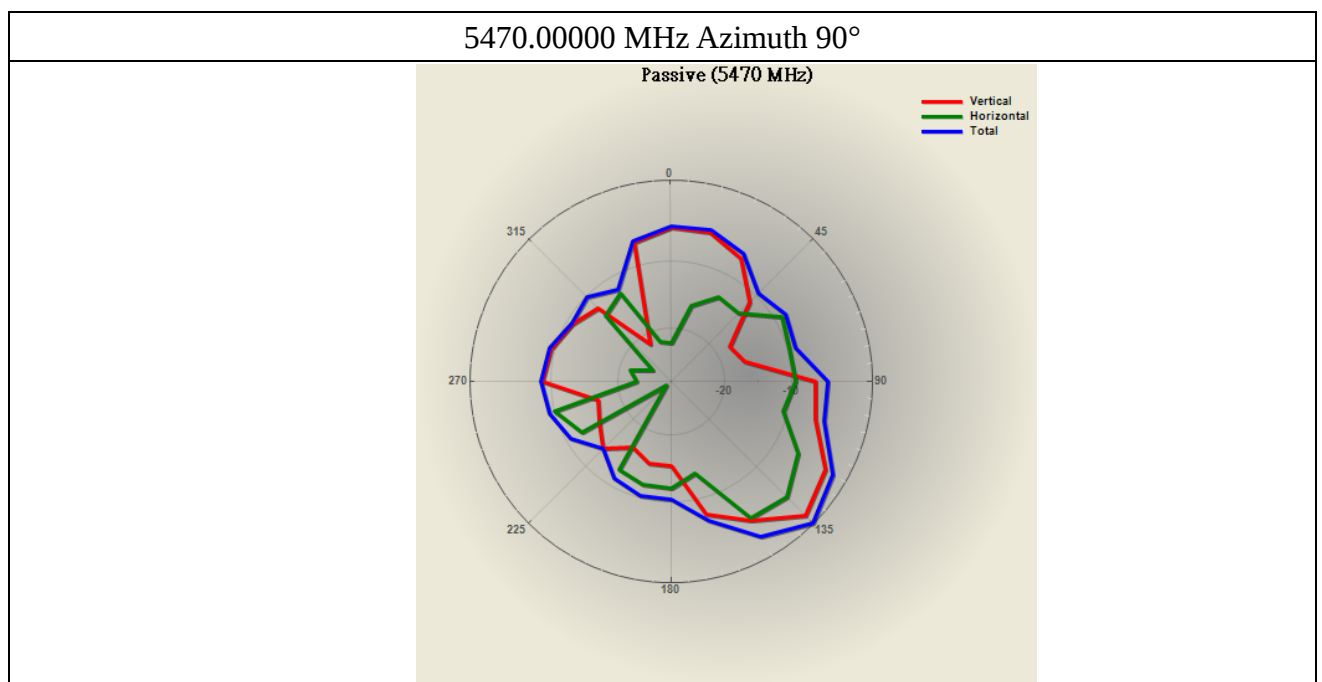
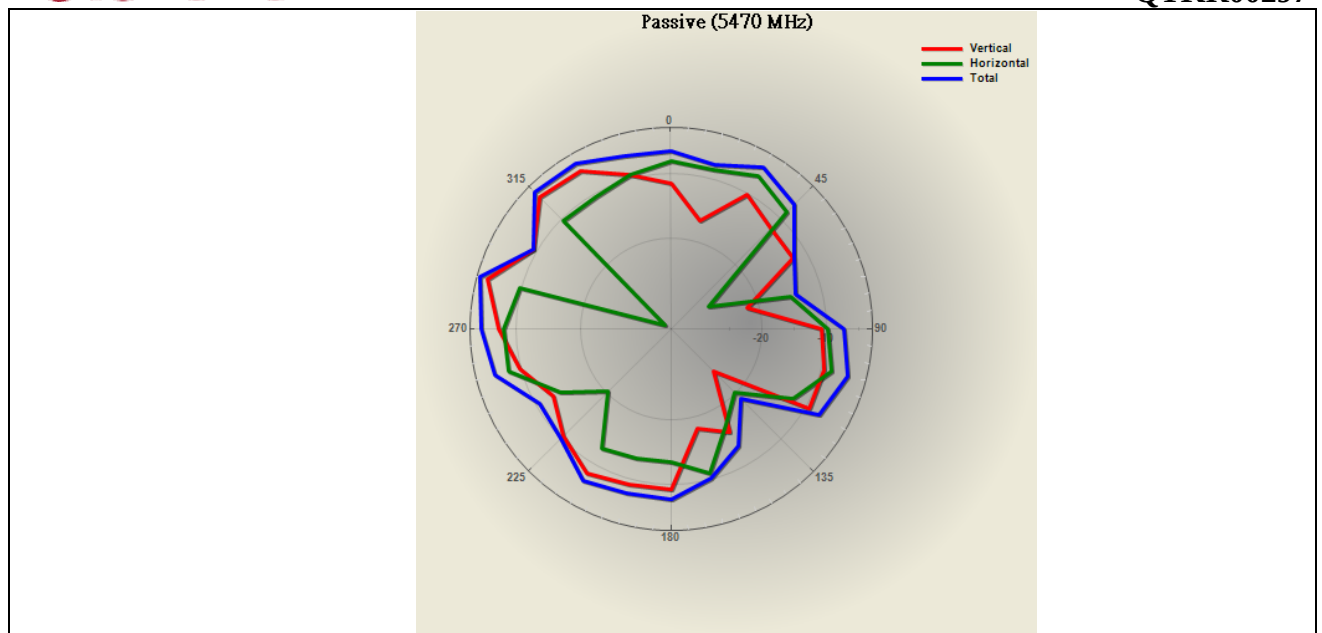




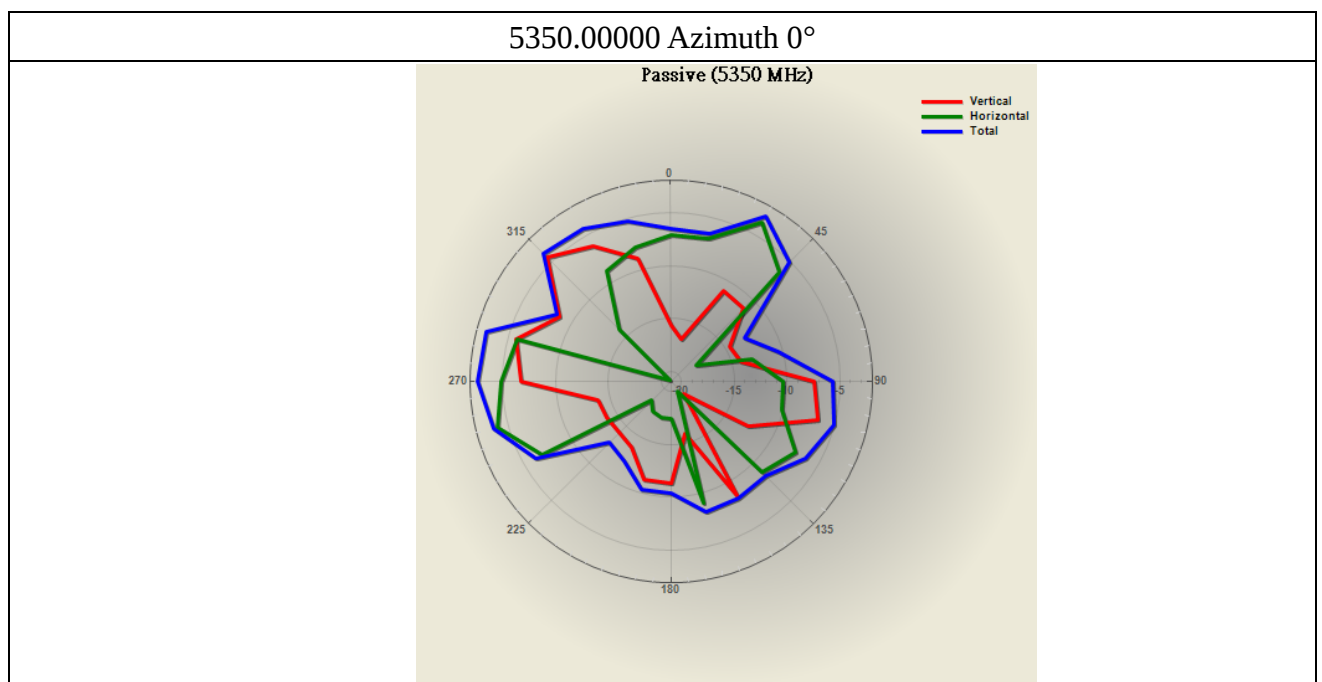
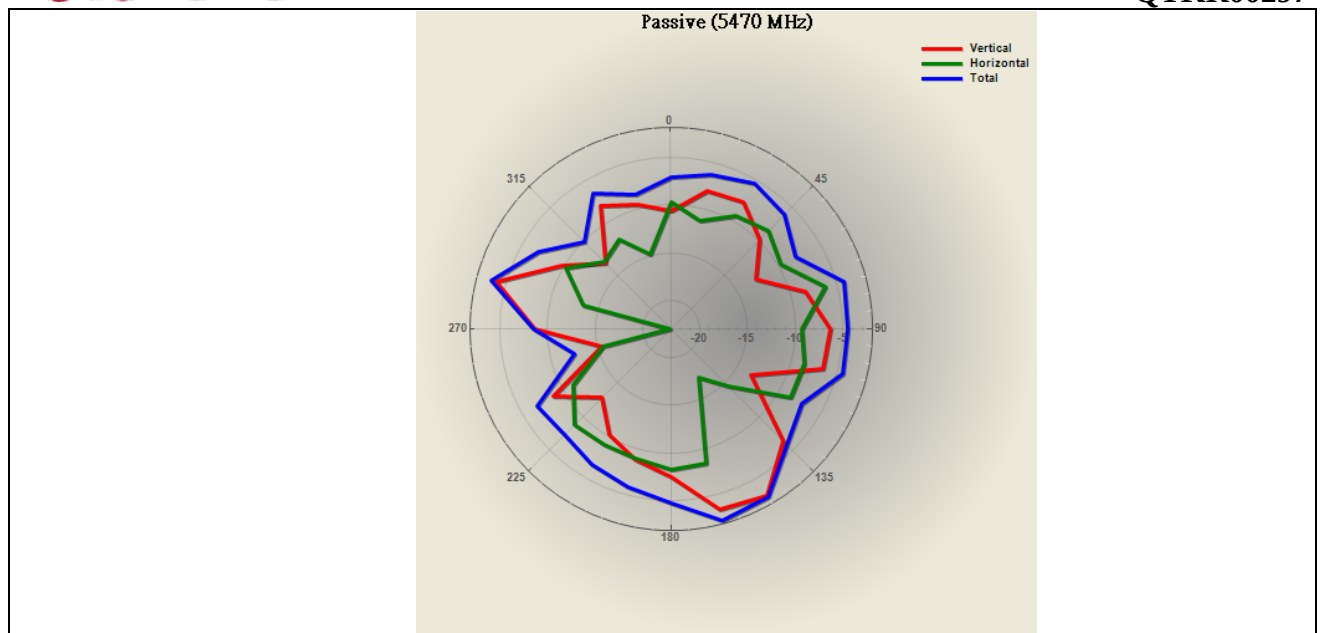
5725.00000 MHz Azimuth 90°



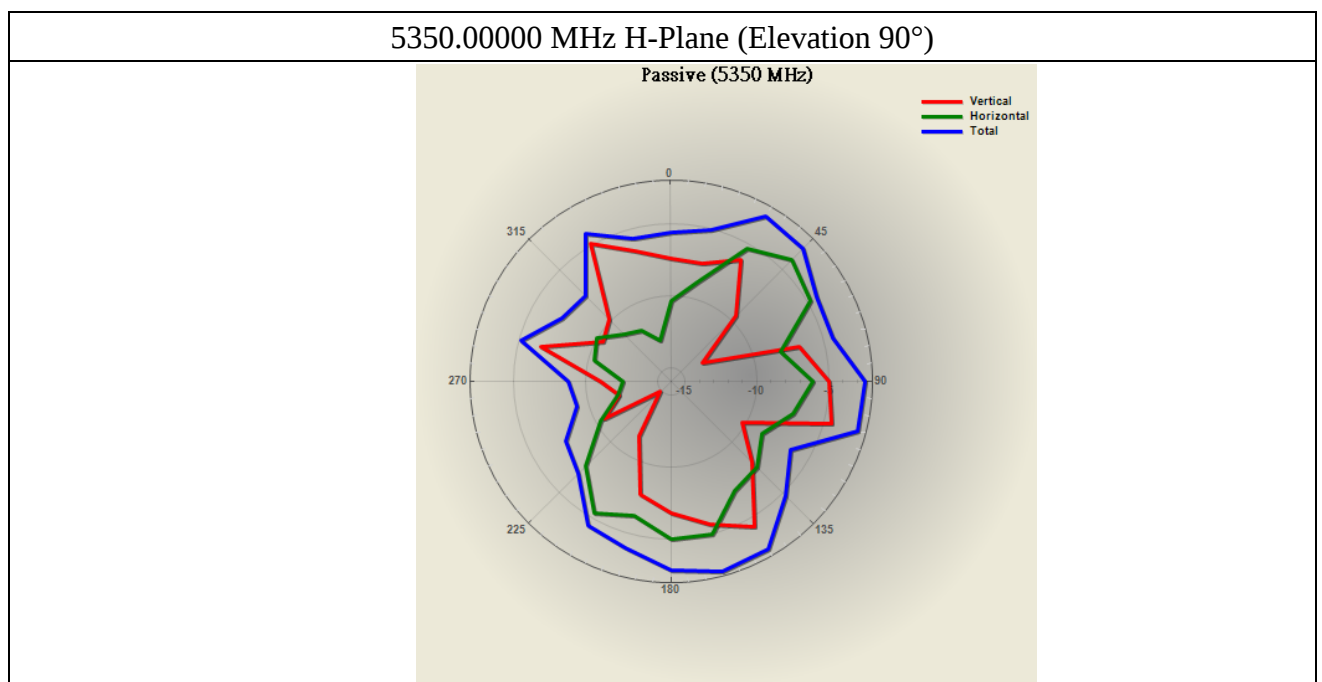
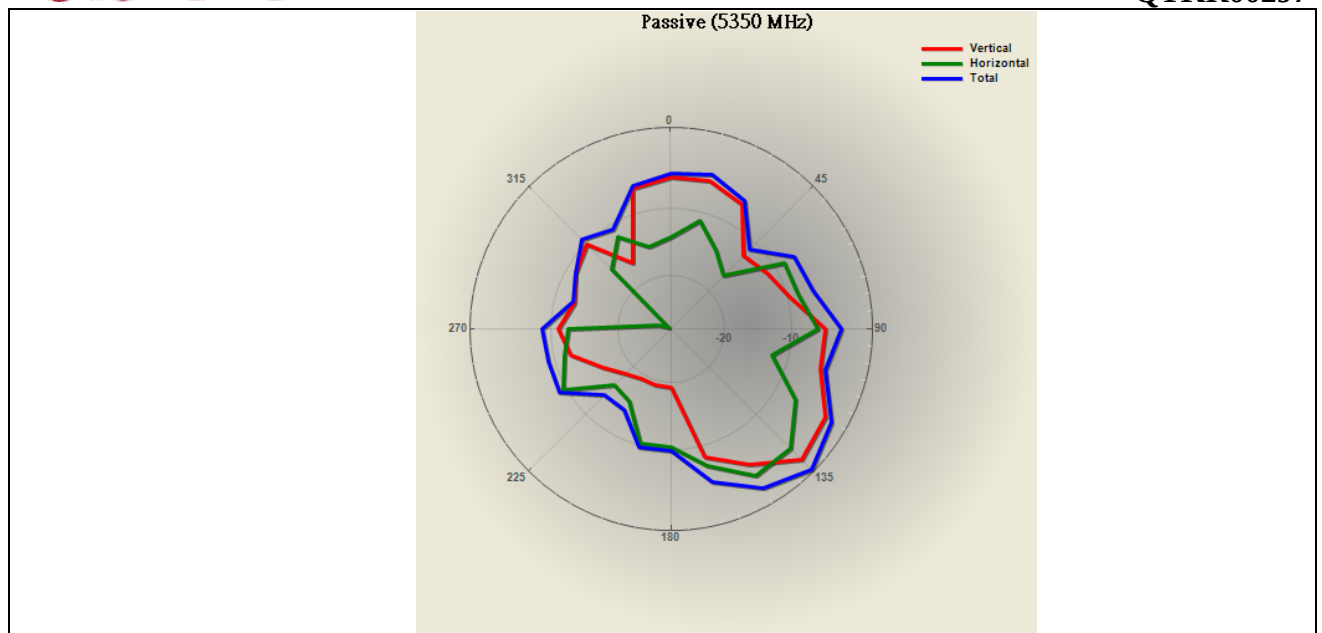
5470.00000 Azimuth 0°



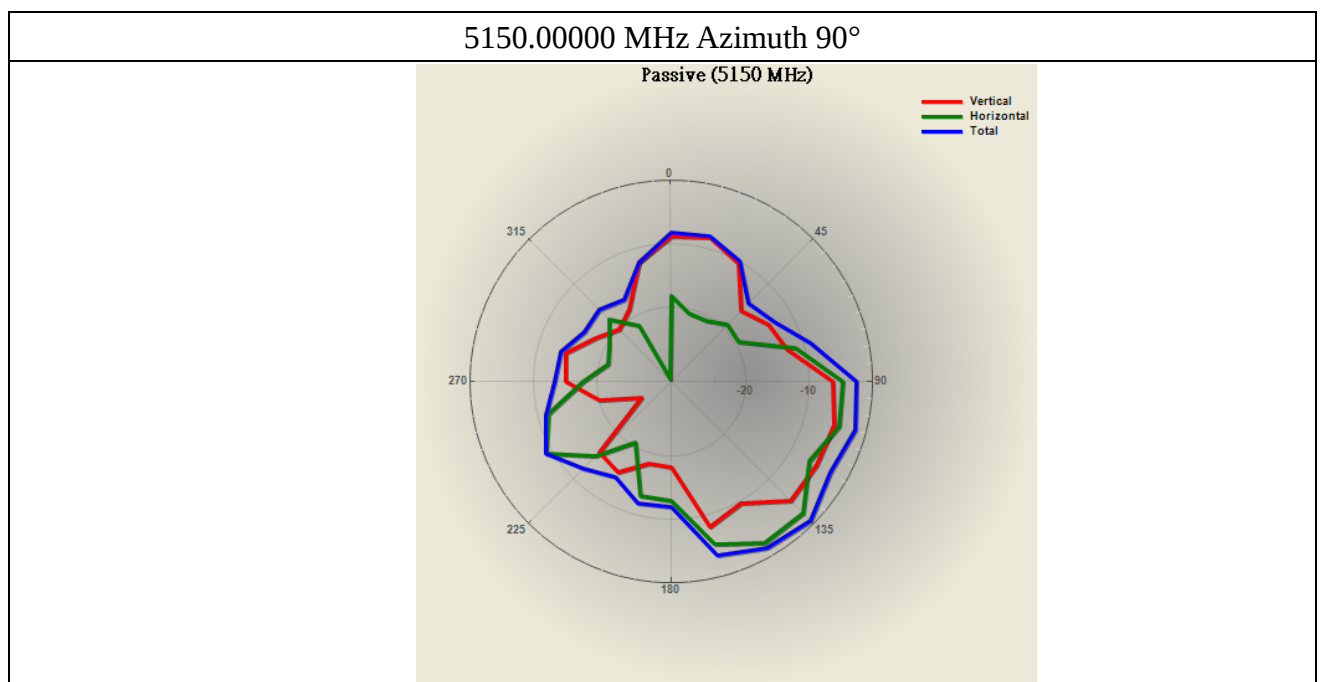
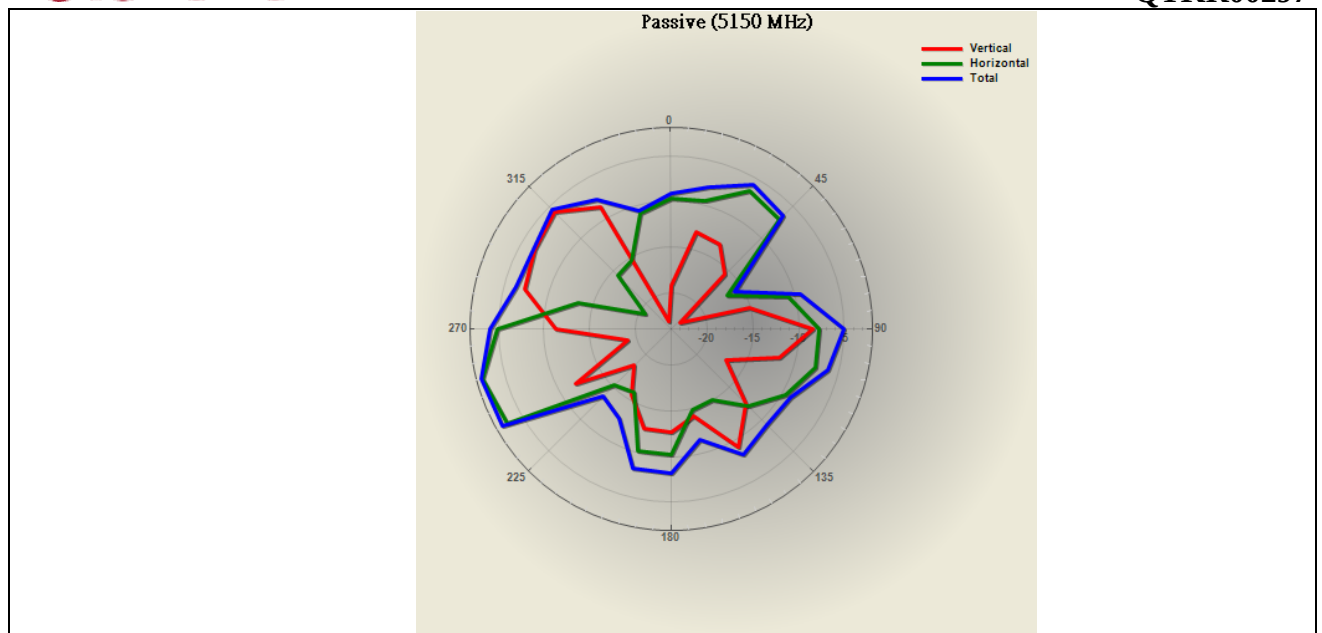
5470.00000 MHz H-Plane (Elevation 90°)



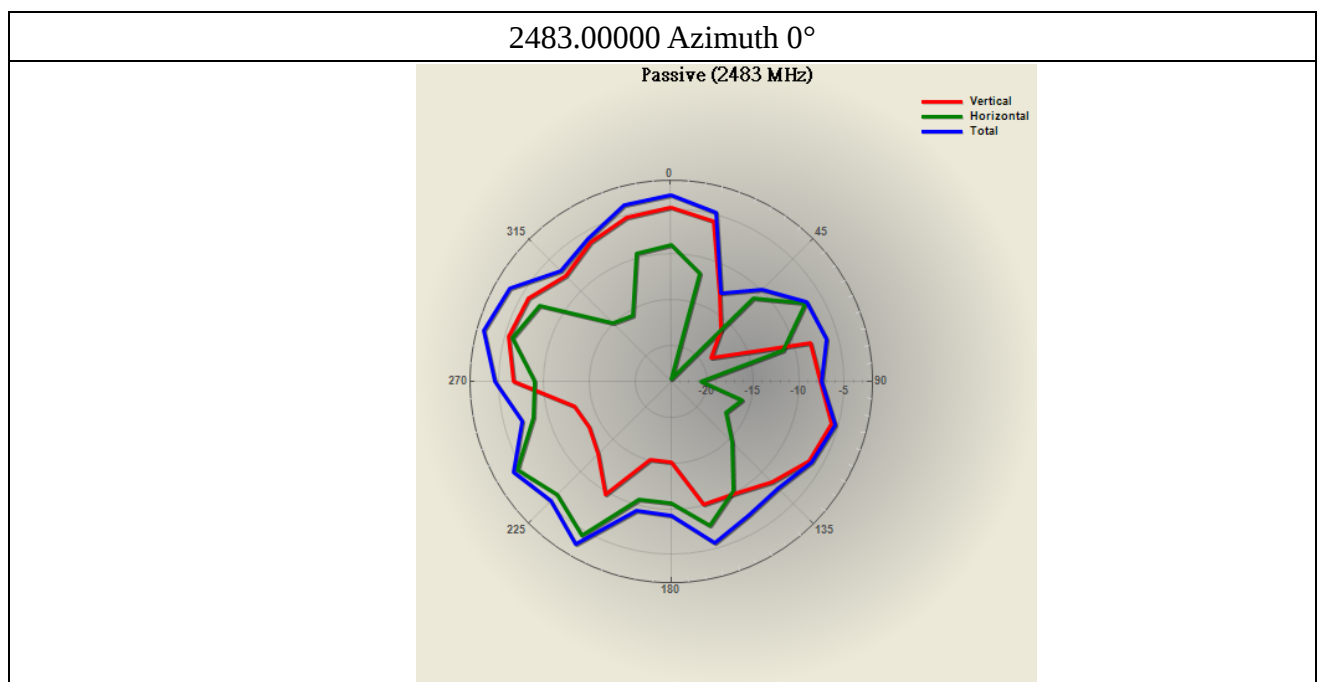
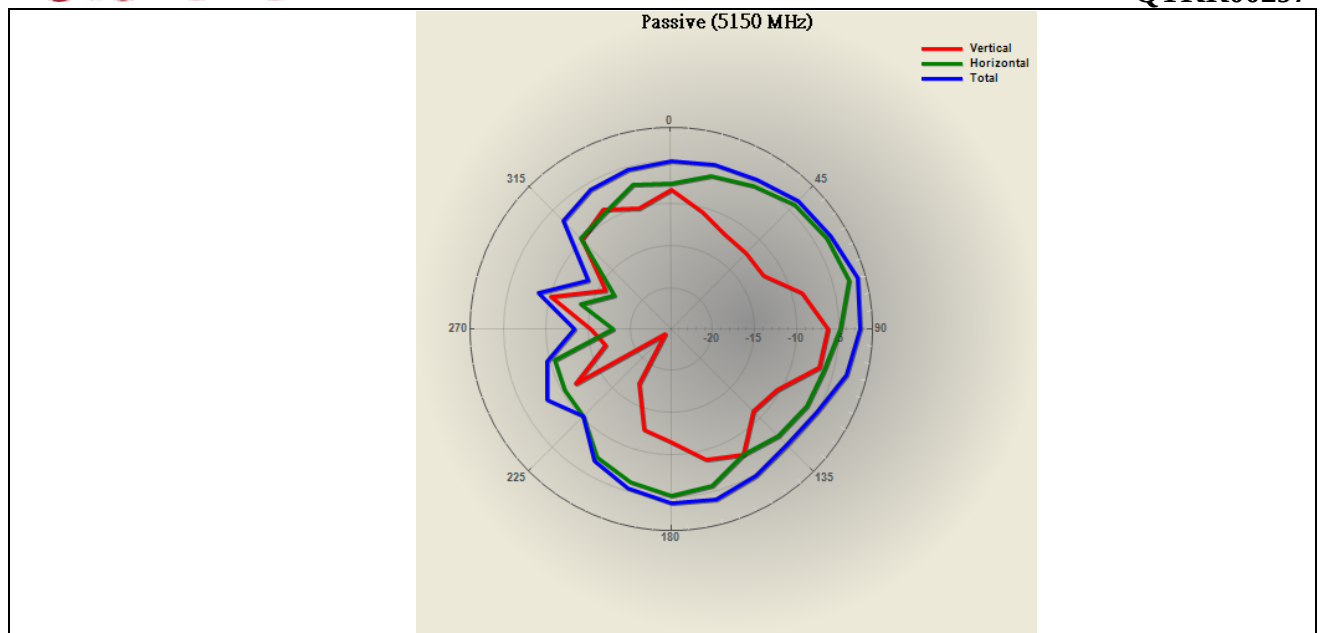
5350.00000 MHz Azimuth 90°



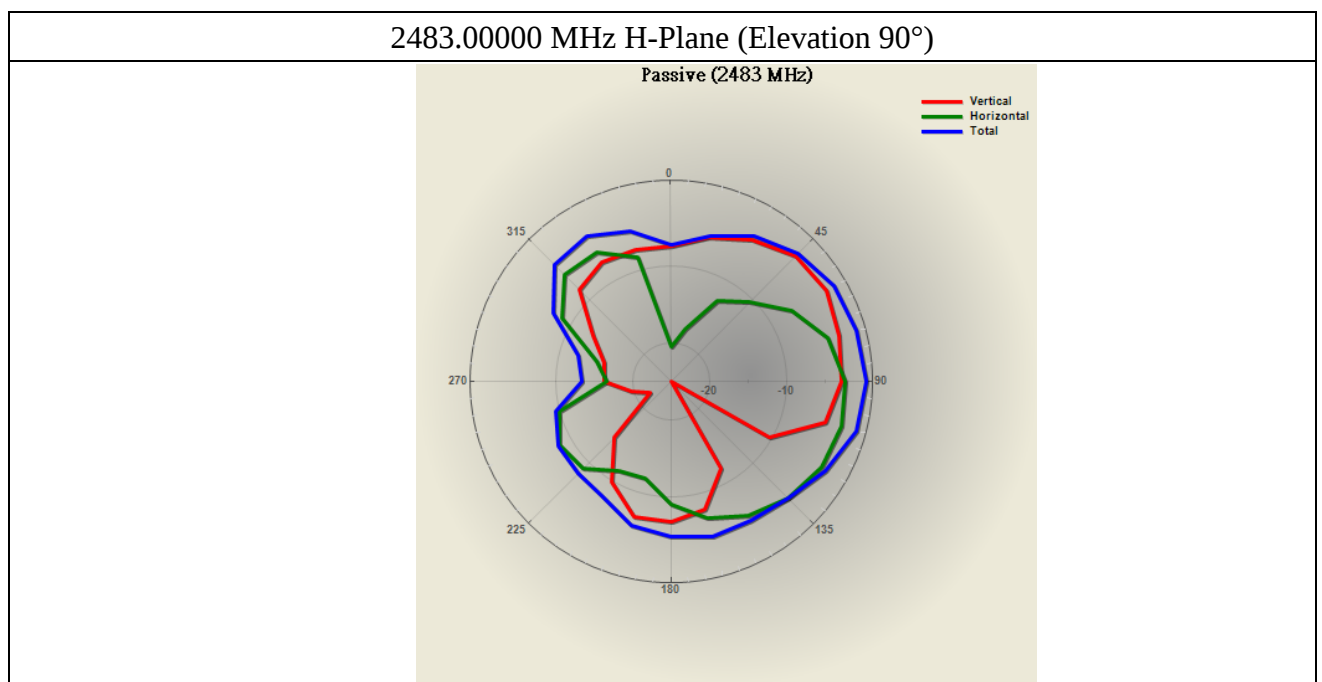
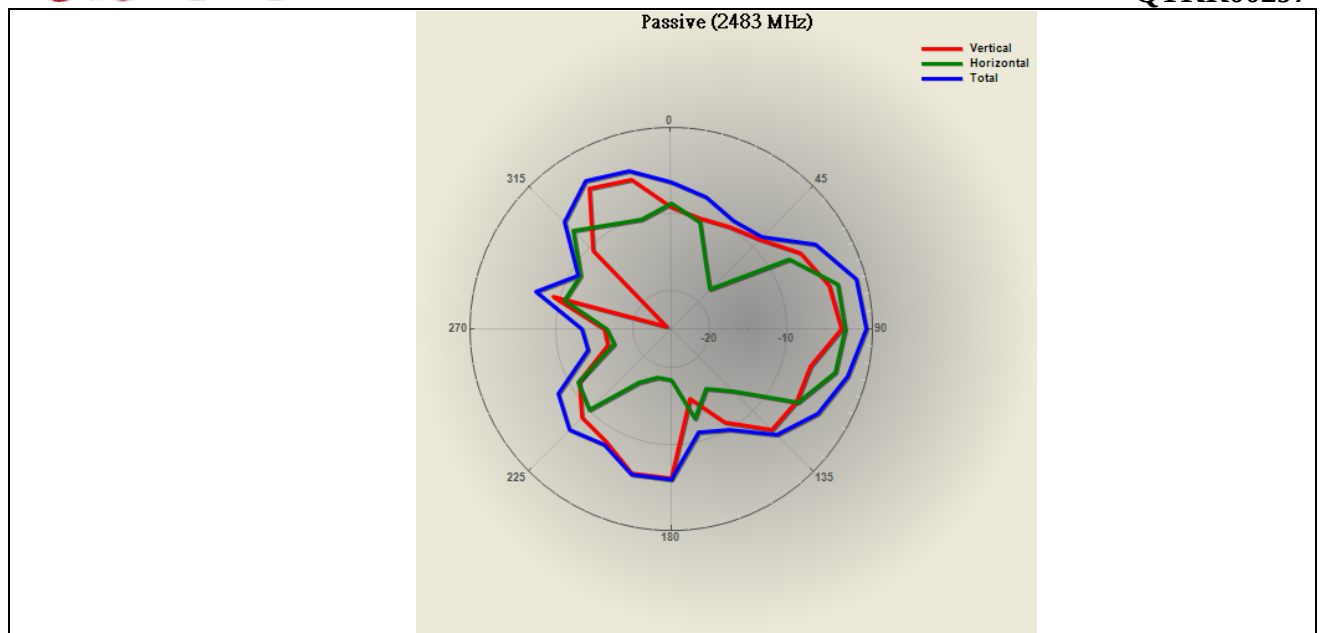
5150.00000 Azimuth 0°



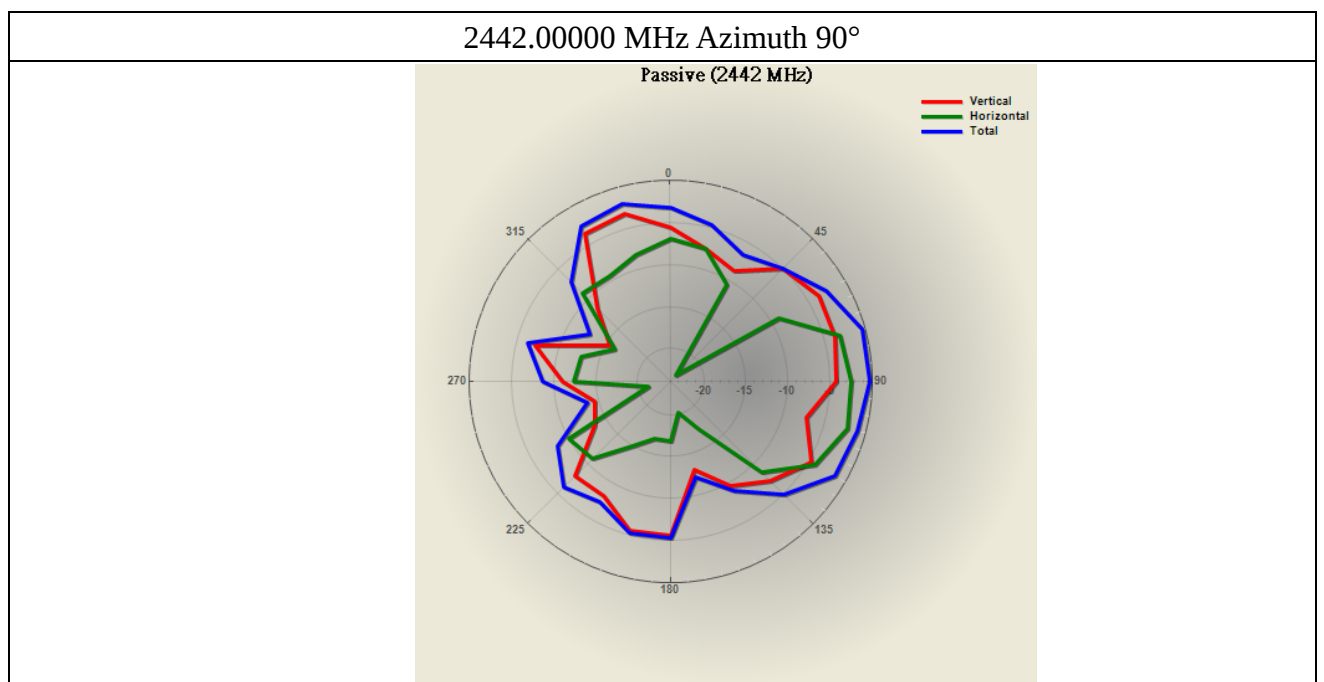
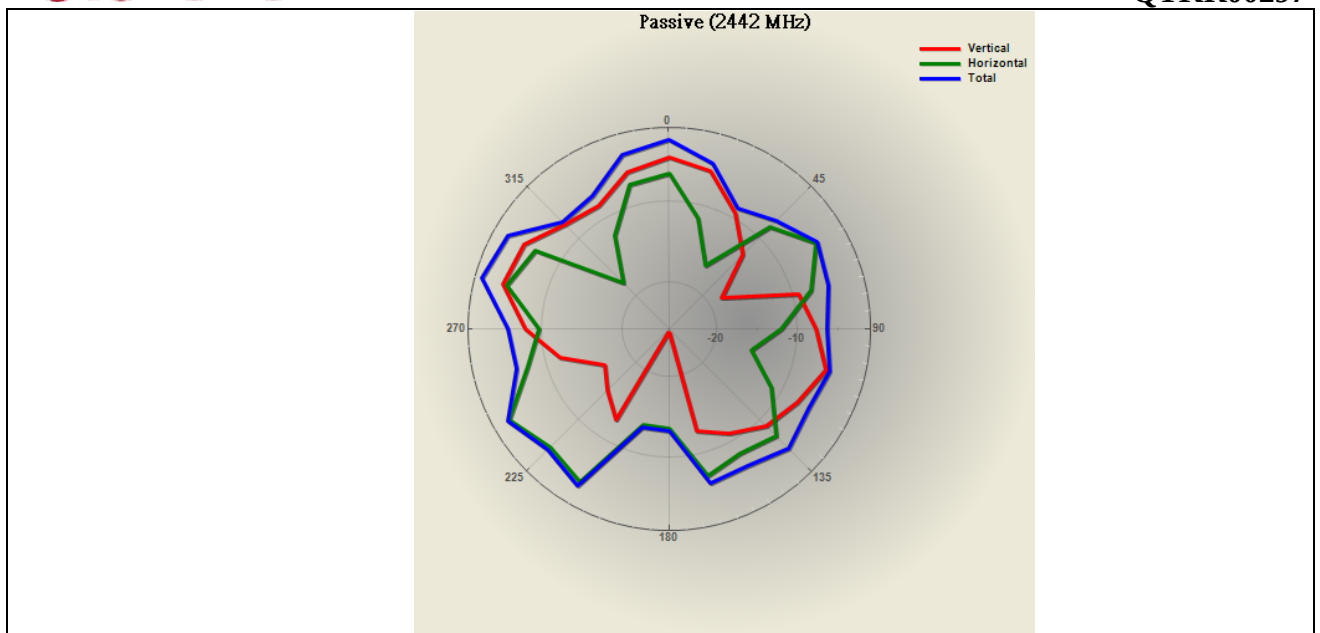
5150.00000 MHz H-Plane (Elevation 90°)



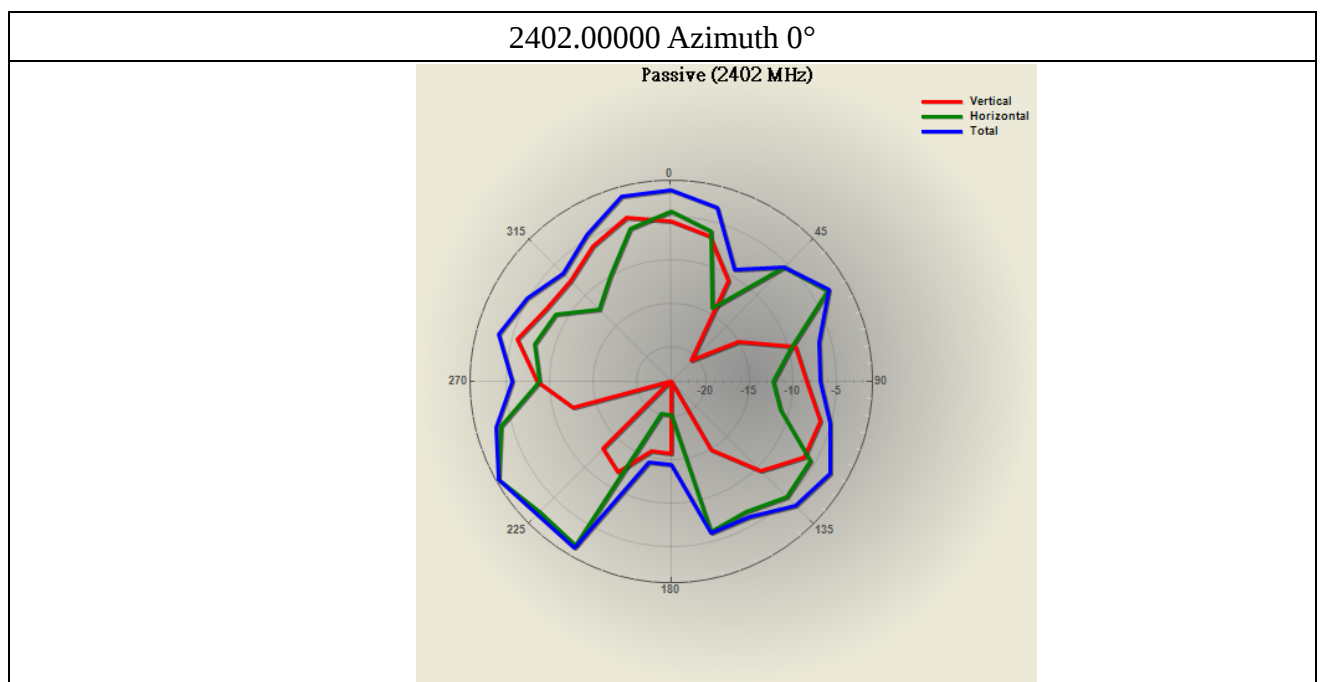
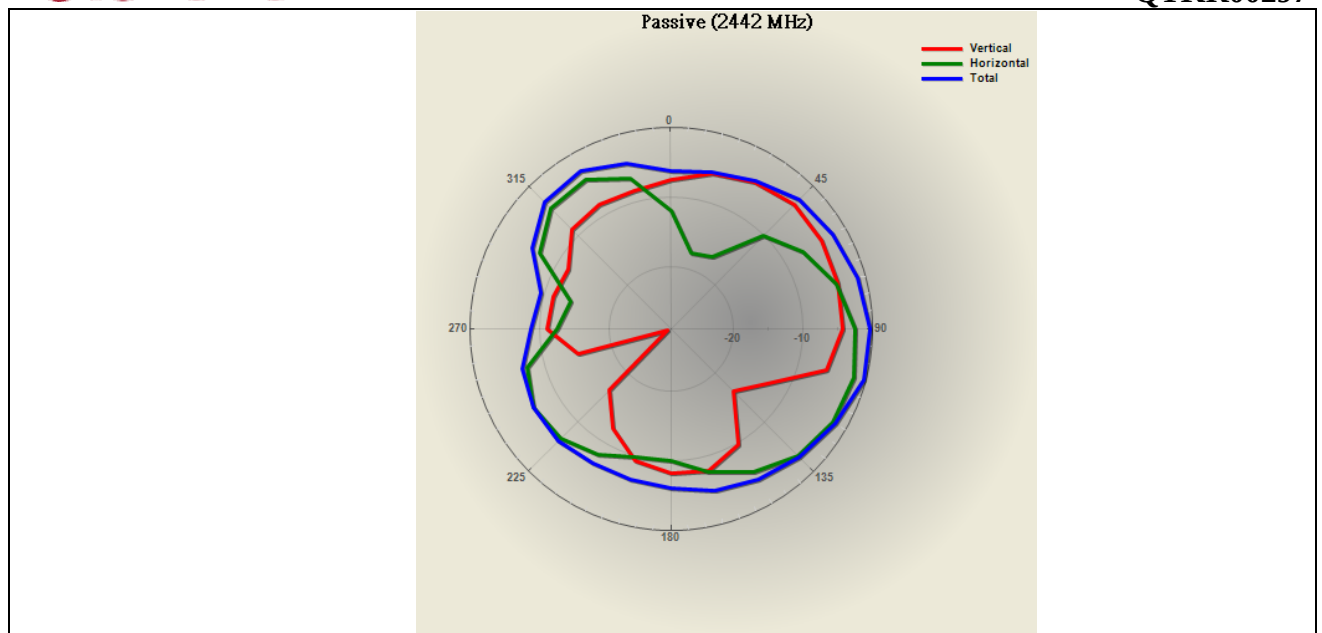
2483.00000 MHz Azimuth 90°



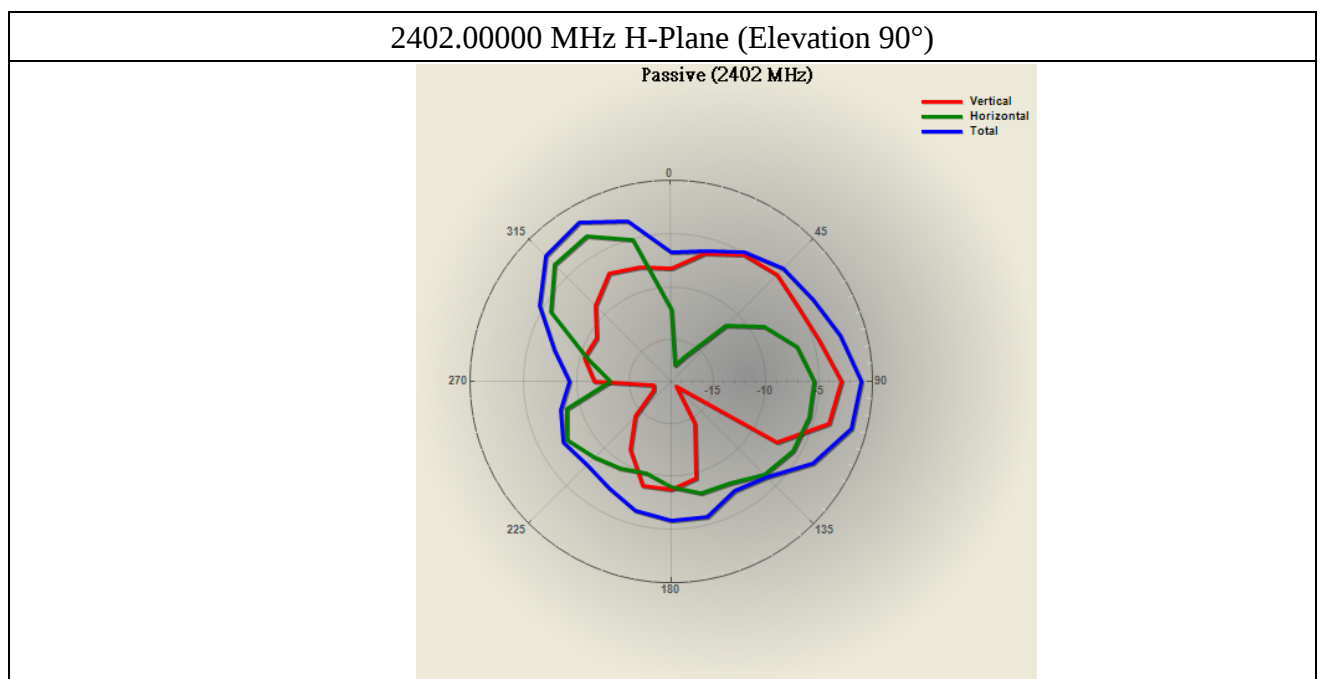
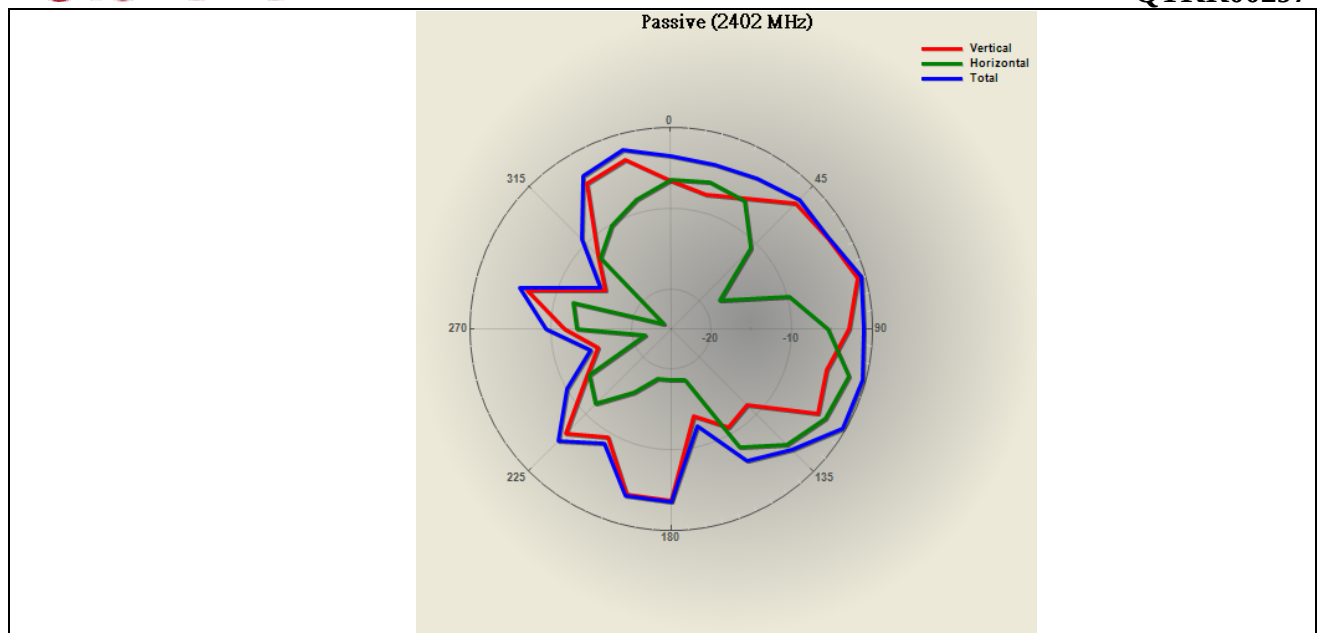
2442.00000 Azimuth 0°



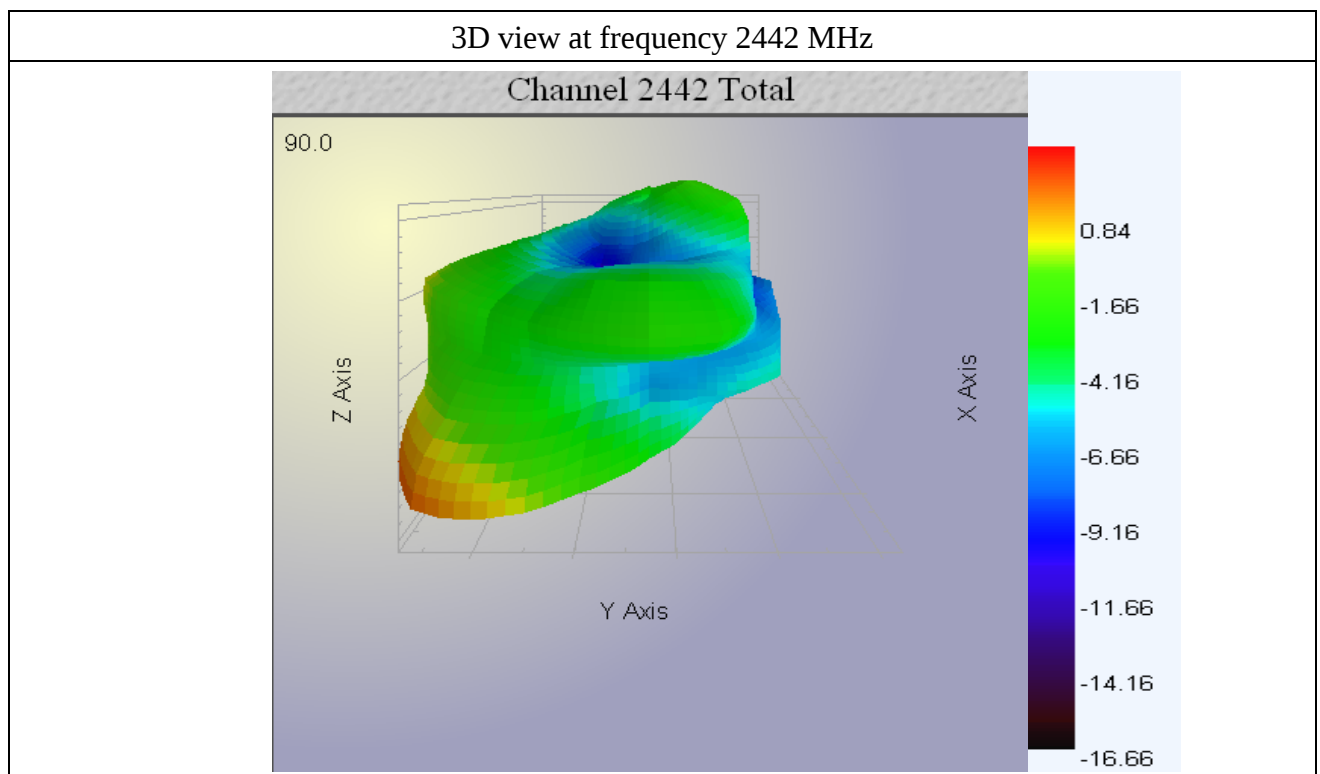
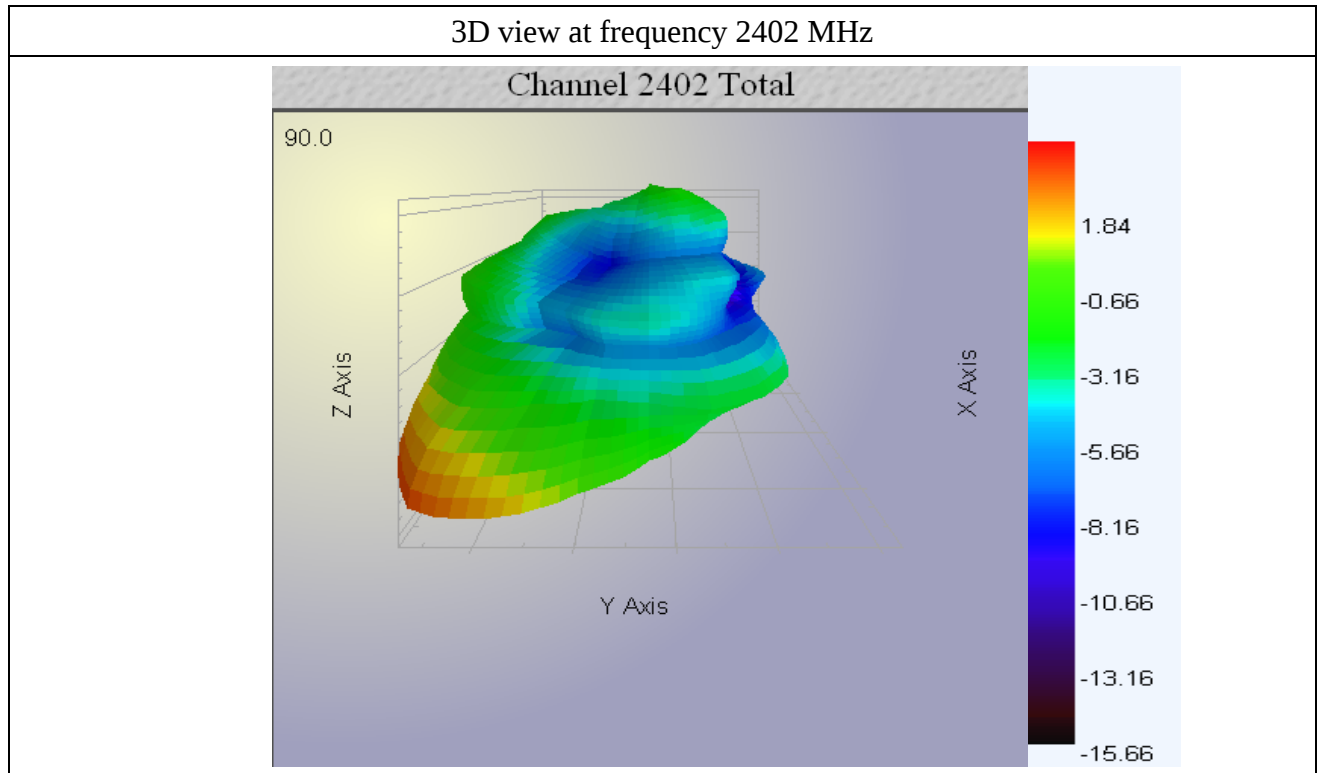
2442.00000 MHz H-Plane (Elevation 90°)



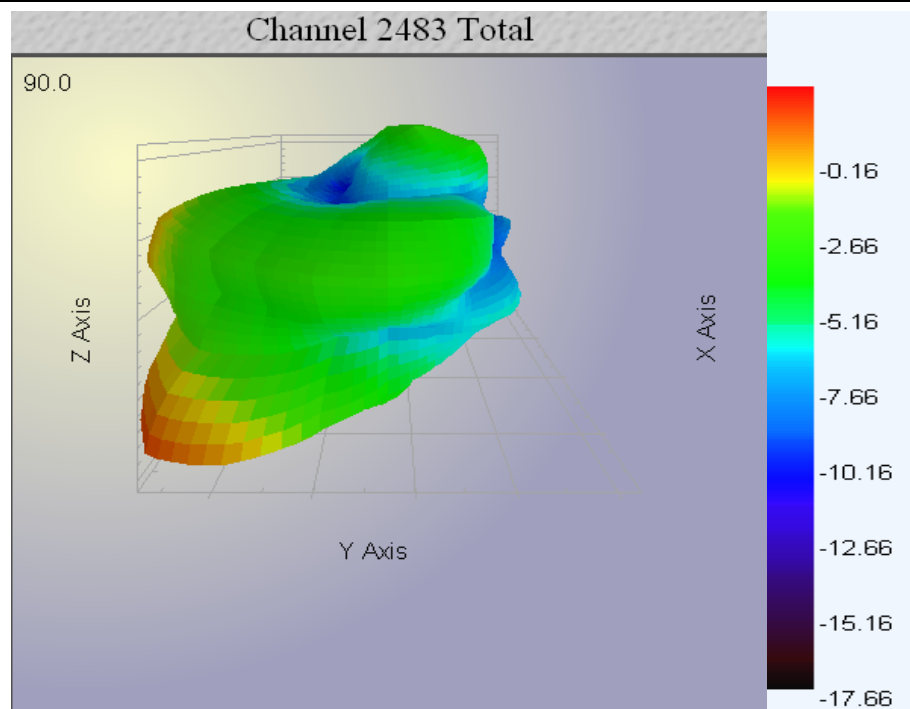
2402.00000 MHz Azimuth 90°



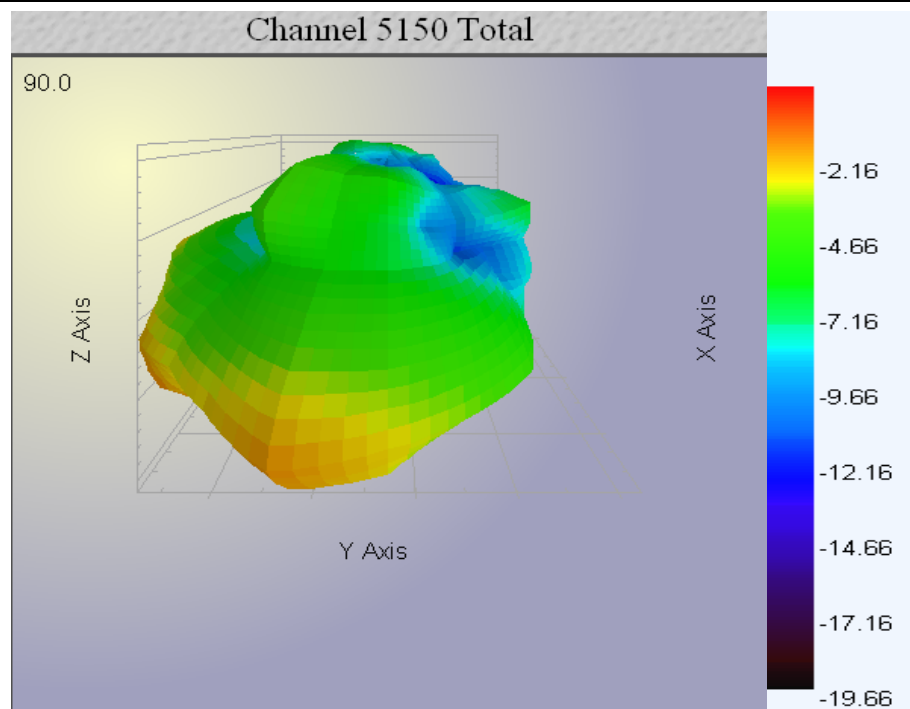
## 4. 3D Plots



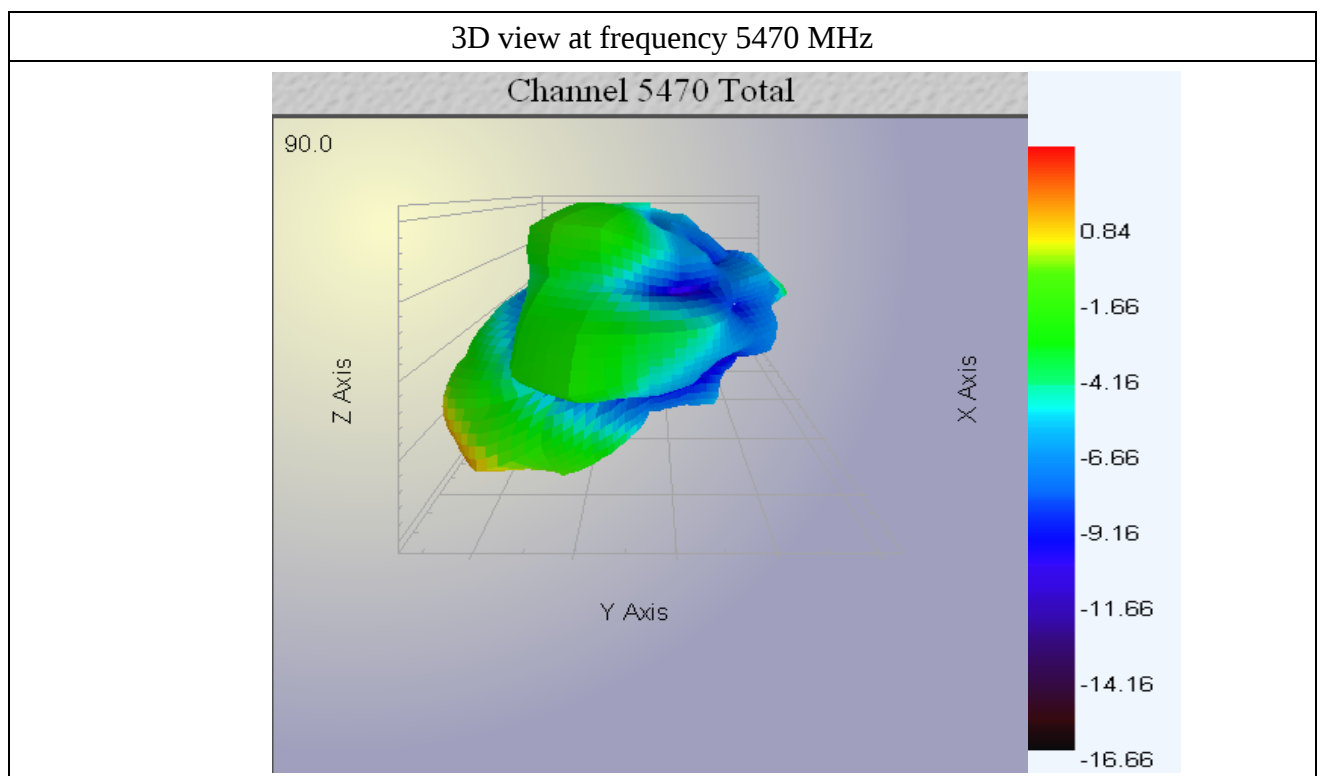
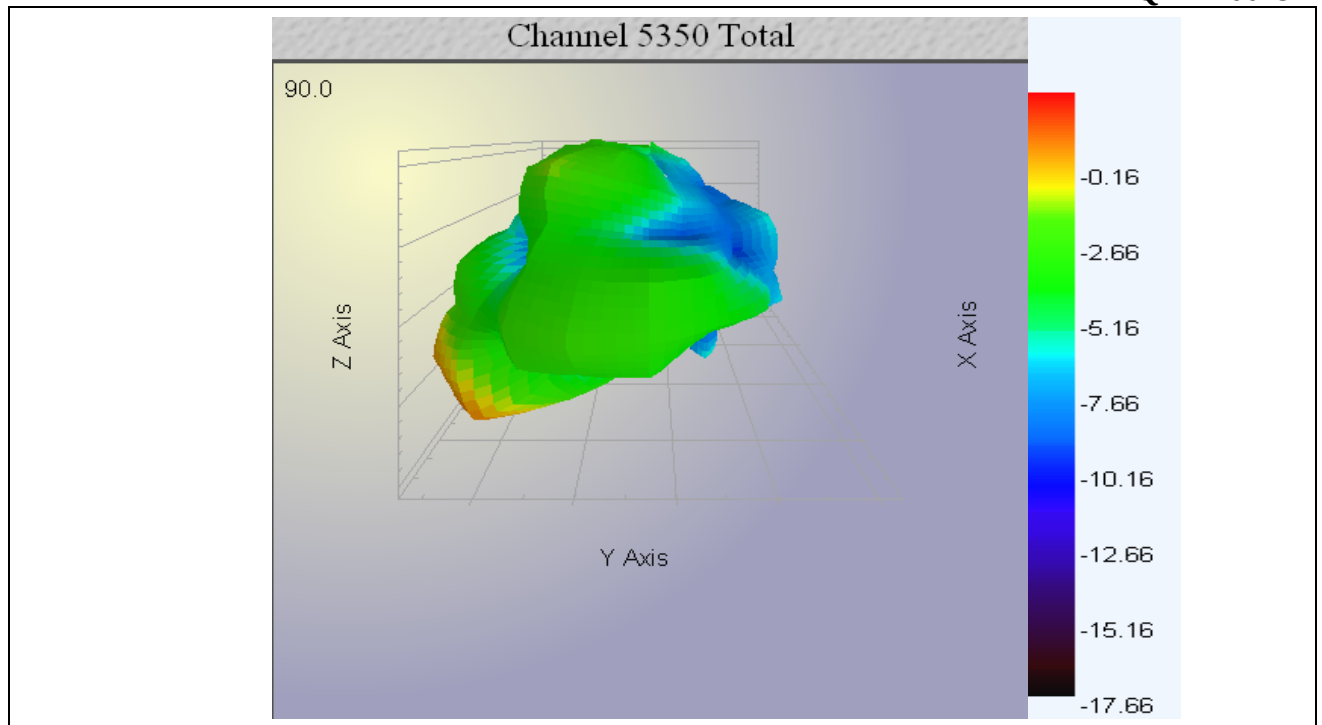
3D view at frequency 2483 MHz



3D view at frequency 5150 MHz



3D view at frequency 5350 MHz



3D view at frequency 5725 MHz

