

# ANTENNA INFORMATION

|                      |   |
|----------------------|---|
| Antenna manufacturer | Changshu HongBo Telecommunication Technology Co., Ltd.  |
| Address              | No. 8, Liuzhou Road, Lushan Industrial Park, Xinxing Development Zone, Changshu City, Jiangsu Province, China |
| Antenna Part number  | Main/ Aux: 260-25096  |
| Antenna type         | Monopole  |

|                |   |
|----------------|---|
| Test Location  | HongBo Wireless Communication Technology Co., Ltd.                |
| Address        | 4F., No.143, SinHu 1st Rd., Neihu Dist, Taipei City 11494, Taiwan |
| Test Personnel | Jacky Hu  |
| Testing date   | 2024/02/01  |

| Antenna Peak gain w/ cable loss (dBi)* |                           |                        |                        |                        |                        |                        |                        |                        |                        |                         |
|--|---------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-------------------------|
|  | 2.4GHz<br>2400-2483.5 MHz | 5.2GHz<br>5150-5250MHz | 5.3GHz<br>5250-5350MHz | 5.6GHz<br>5470-5725MHz | 5.8GHz<br>5725-5850MHz | 5.9GHz<br>5850-5895MHz | 6.2GHz<br>5925-6425MHz | 6.5GHz<br>6425-6525MHz | 6.7GHz<br>6525-6875MHz | 7.0 GHz<br>6875-7125MHz |
| Main/<br>Aux                           | 3.11                      | 4.88                   | 4.91                   | 4.90                   | 4.90                   | 4.87                   | 4.73                   | 4.29                   | 4.58                   | 4.09                    |

| Cable Assembly Part Number and Information |           |                  |                    |                |                |
|--|-----------|------------------|--------------------|----------------|----------------|
|  | Cable PN  | Cable length(cm) | Cable diameter(mm) | Impedance(ohm) | Connector type |
| Main/<br>Aux                               | SY113L/50 | 300              | 1.13               | 50             | MHF4L          |

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**1. Document Revision History**

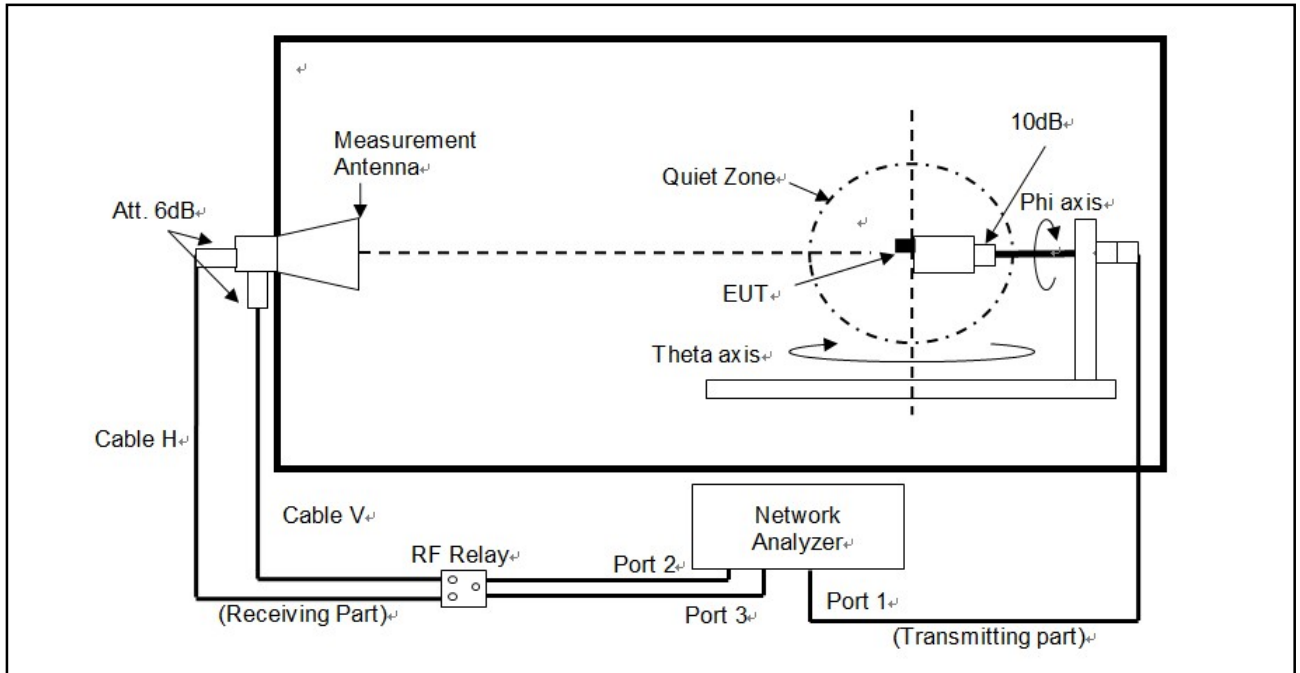
| <b>Revision #</b> | <b>Revision Details</b> | <b>Issued Date</b> |
|-------------------|-------------------------|--------------------|
| Rev.00            | First version           | 2024/02/1          |
|                   |                         |                    |

## 2. Test & System Description

### 2.1 Measurement Method and System

Measurement was performed with a Full Anechoic Chamber

### 2.2 Test setup



### 2.3 Equipment list

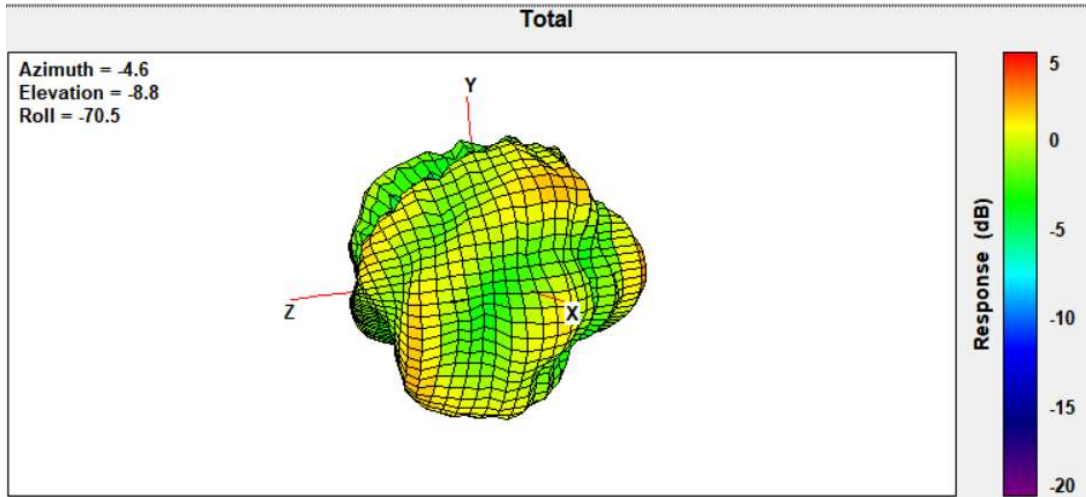
| Name                             | Manufacture  | Type/Model | Serial Number | Cal. Date | Cal. Due Date |
|----------------------------------|--------------|------------|---------------|-----------|---------------|
| ENA Series Network Analyze       | Keysight     | E5071C     | MY46108594    | 2023/8/3  | 2025/8/3      |
| RF Switch                        | Keysight     | 3499A      | MY4200955     | NCR       | NCR           |
| Multi-Axis Positioner Controller | ETS-Lindgren | 2090       | N/A           | NCR       | NCR           |
| Medium-Duty Positioner           | ETS-Lindgren | 2015       | N/A           | NCR       | NCR           |
| Measurement Horn Antenna         | EMCO         | Aug-64     | 86722         | NCR       | NCR           |

### 3. Radiation characteristics of antenna loaded in Host Platform

#### Main Antenna

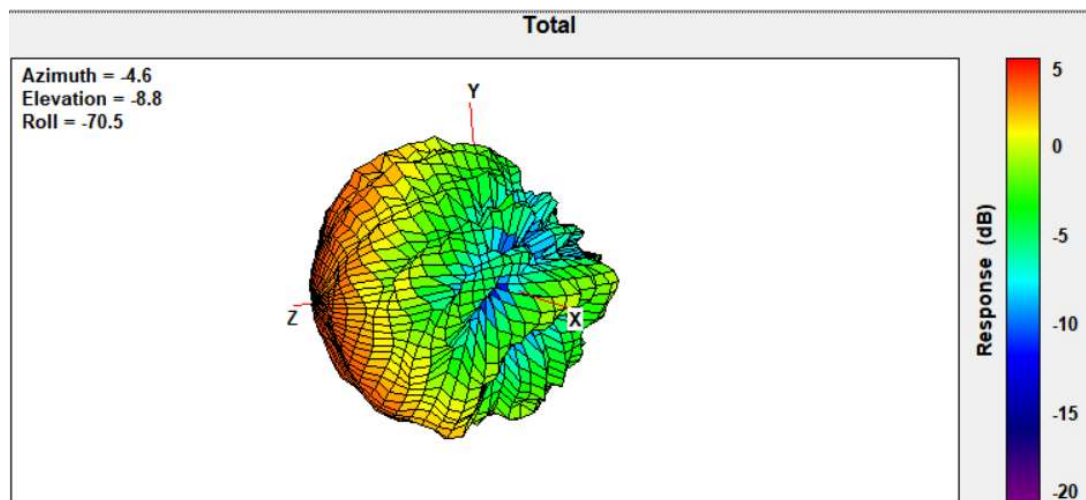
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

| Frequency (MHz) | Peak Gain w/ Cable Loss (dBi) |
|-----------------|-------------------------------|
| 2400-2483.5     | 3.11                          |



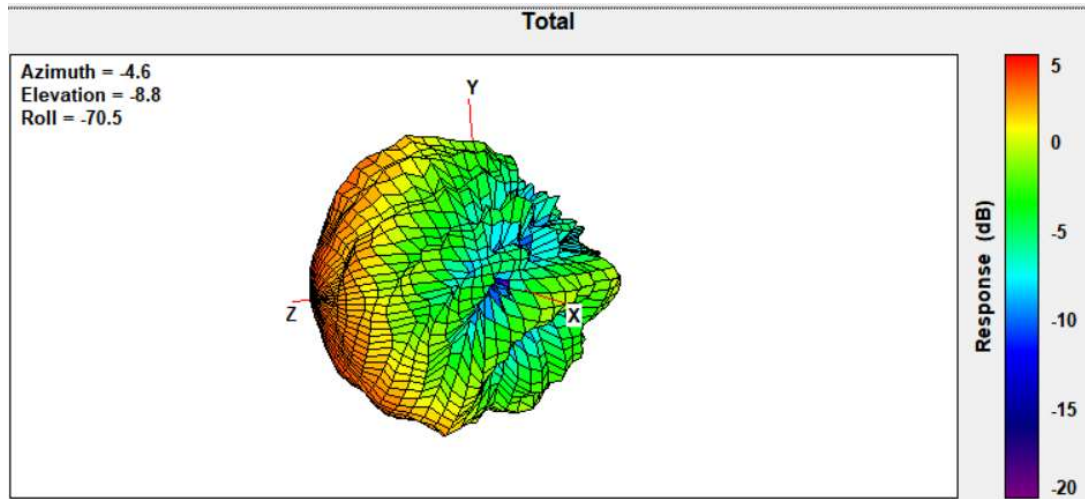
Max Antenna 3D Radiation Pattern 5150-5250 MHz

| Frequency (MHz) | Peak Gain w/ Cable Loss (dBi) |
|-----------------|-------------------------------|
| 5150-5250       | 4.88                          |



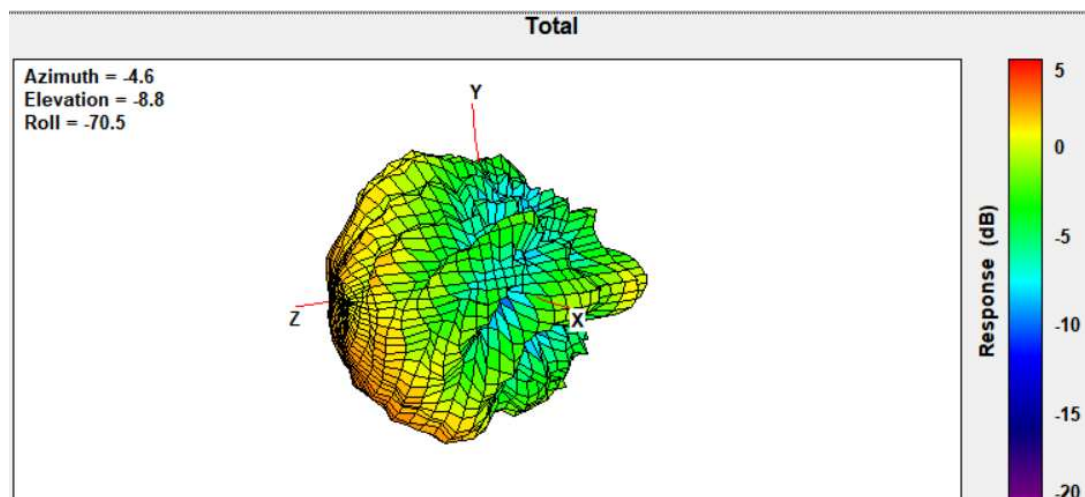
### Max Antenna 3D Radiation Pattern 5250-5350 MHz

| Frequency (MHz) | Peak Gain w/ Cable Loss (dBi) |
|-----------------|-------------------------------|
| 5250-5350       | 4.91                          |



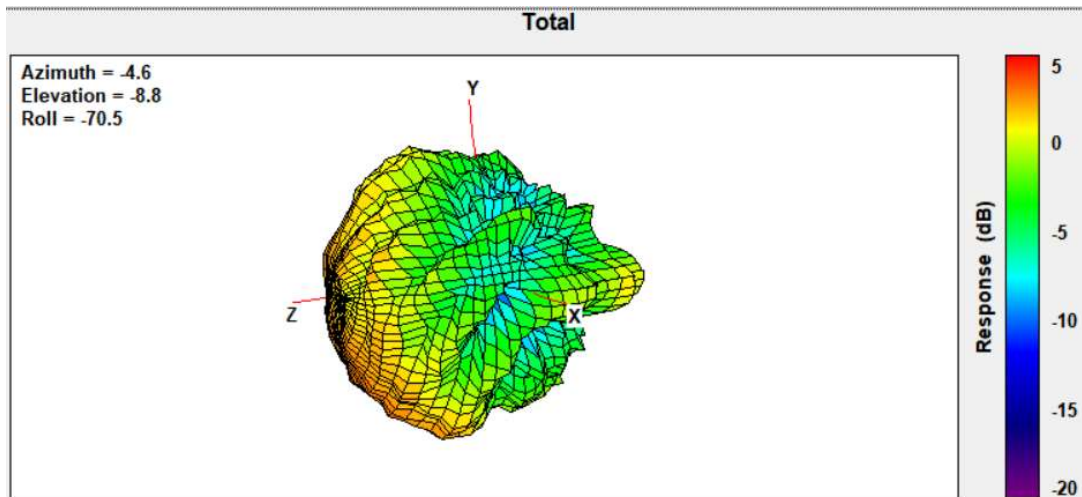
### Max Antenna 3D Radiation Pattern 5470-5725 MHz

| Frequency (MHz) | Peak Gain w/ Cable Loss (dBi) |
|-----------------|-------------------------------|
| 5470-5725       | 4.90                          |



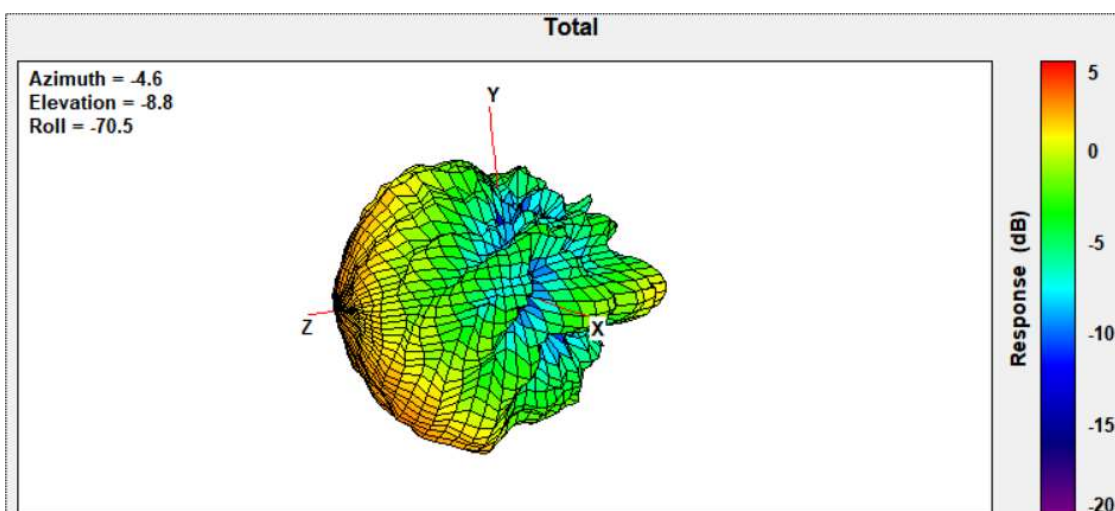
Max Antenna 3D Radiation Pattern 5725-5850 MHz

| Frequency (MHz) | Peak Gain w/ Cable Loss (dBi) |
|-----------------|-------------------------------|
| 5725-5850       | 4.90                          |



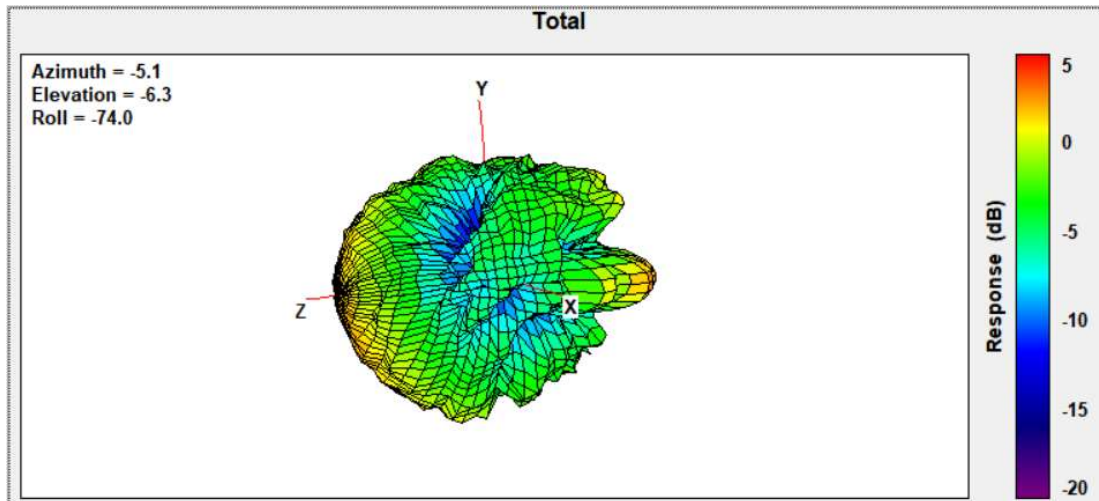
Max Antenna 3D Radiation Pattern 5850-5895 MHz

| Frequency (MHz) | Peak Gain w/ Cable Loss (dBi) |
|-----------------|-------------------------------|
| 5850-5895       | 4.87                          |



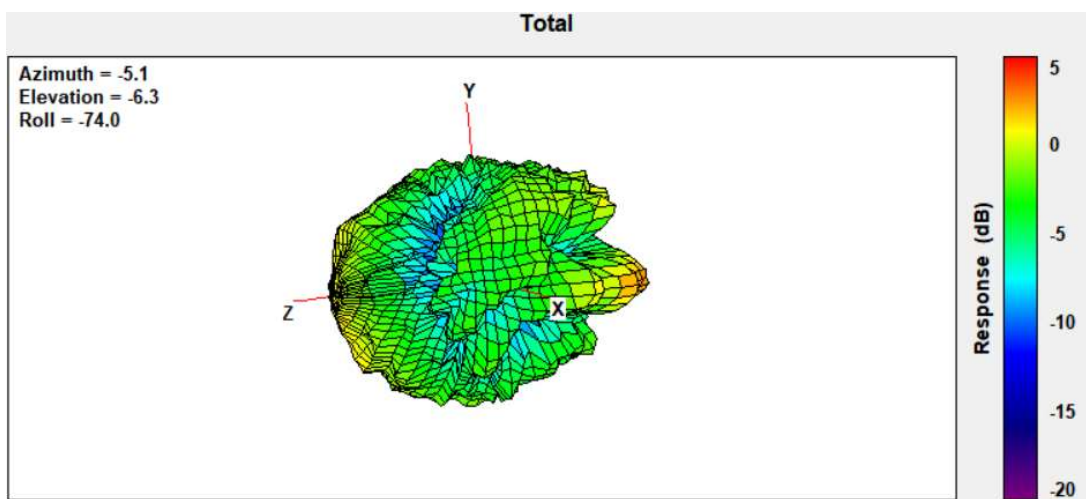
Max Antenna 3D Radiation Pattern 5925-6425 MHz

| Frequency (MHz) | Peak Gain w/ Cable Loss (dBi) |
|-----------------|-------------------------------|
| 5925-6425       | 4.73                          |



Max Antenna 3D Radiation Pattern 6425-6525 MHz

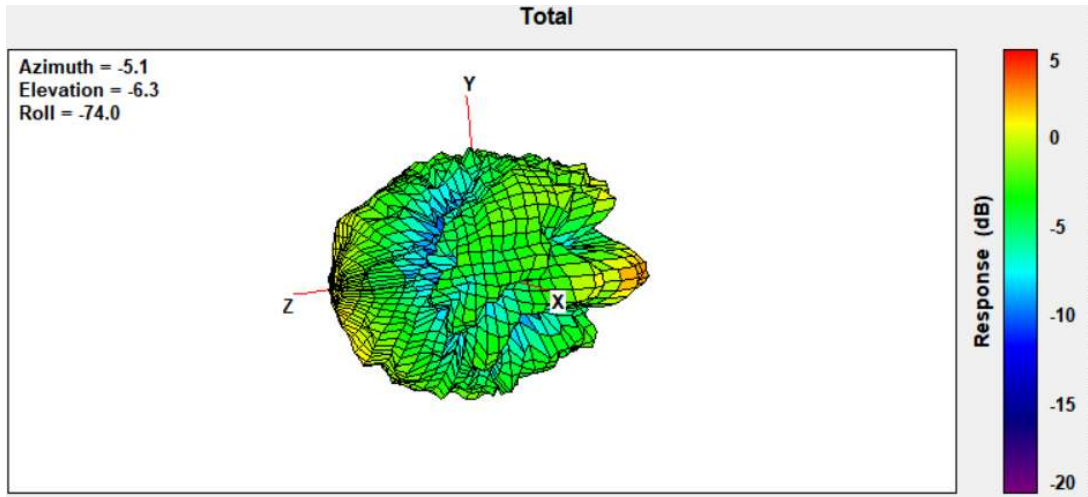
| Frequency (MHz) | Peak Gain w/ Cable Loss (dBi) |
|-----------------|-------------------------------|
| 6425-6525       | 4.29                          |





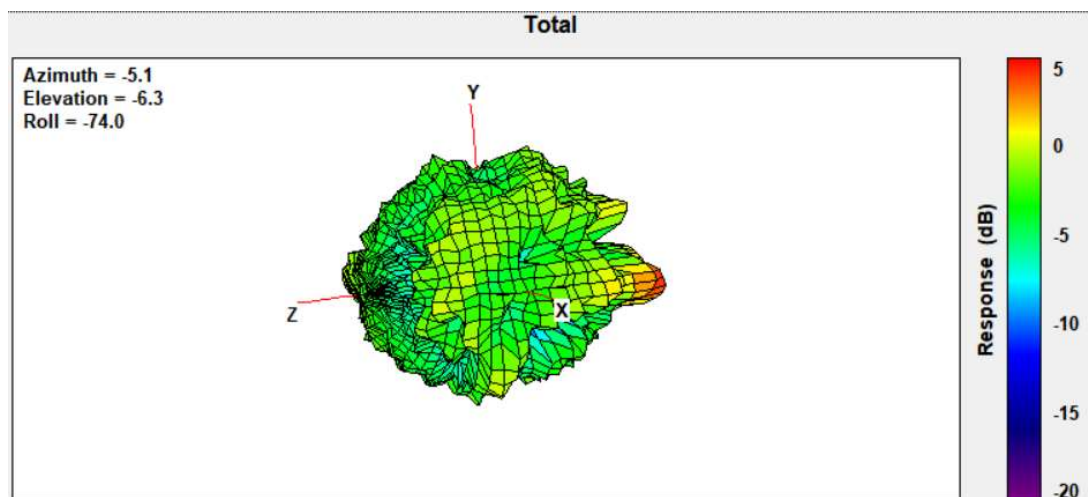
### Max Antenna 3D Radiation Pattern 6525-6875 MHz

| Frequency (MHz) | Peak Gain w/ Cable Loss (dBi) |
|-----------------|-------------------------------|
| 6525-6875       | 4.58                          |



### Max Antenna 3D Radiation Pattern 6875-7125 MHz

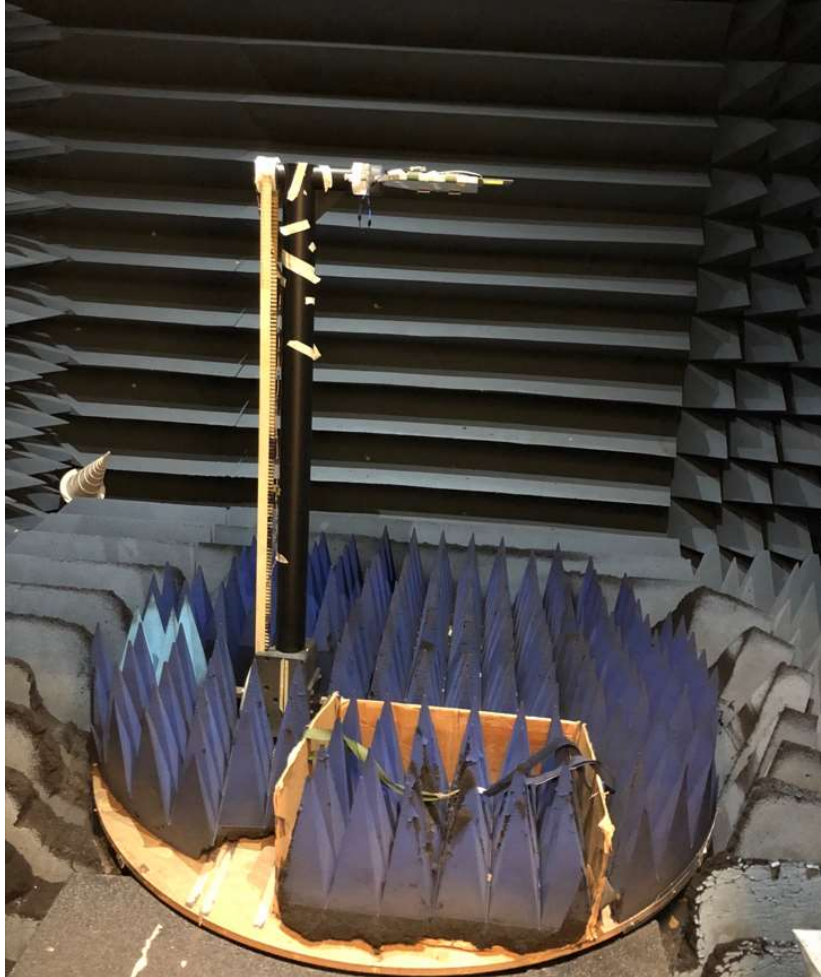
| Frequency (MHz) | Peak Gain w/ Cable Loss (dBi) |
|-----------------|-------------------------------|
| 6875-7125       | 4.09                          |



# Annex A. Photographs

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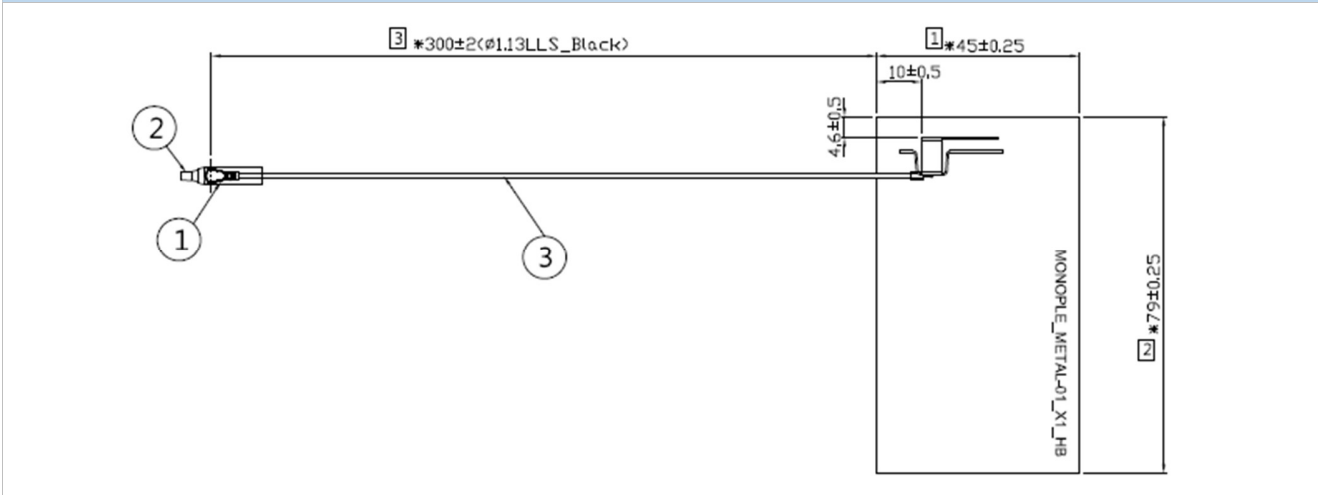
## A.1 Setup Photo



## A.2 Test sample

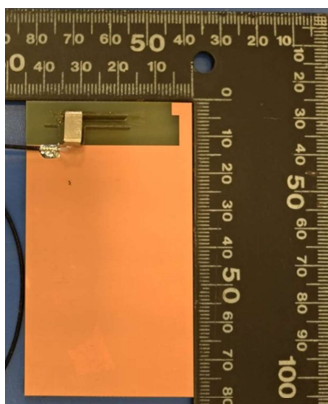
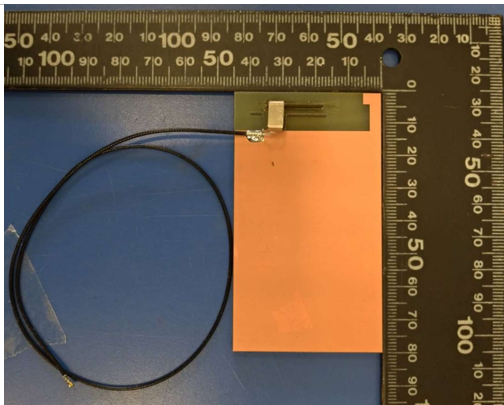
### Main Antenna

#### Antenna Drawing



#### Antenna Photo

##### Front



##### Back

