

# 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: 260-25106                                                                                          |
| 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 | Louise Tsai                                                       |
| Testing date   | 2024/10/16                                                        |

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

| Cable Assembly Part Number and Information |                 |                         |                           |                       |                       |
|--------------------------------------------|-----------------|-------------------------|---------------------------|-----------------------|-----------------------|
|                                            | <b>Cable PN</b> | <b>Cable length(mm)</b> | <b>Cable diameter(mm)</b> | <b>Impedance(ohm)</b> | <b>Connector type</b> |
| Main/<br>Aux                               | SY113L/50       | 350                     | 1.13                      | 50                    | MHF4L                 |

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## 1. Document Revision History

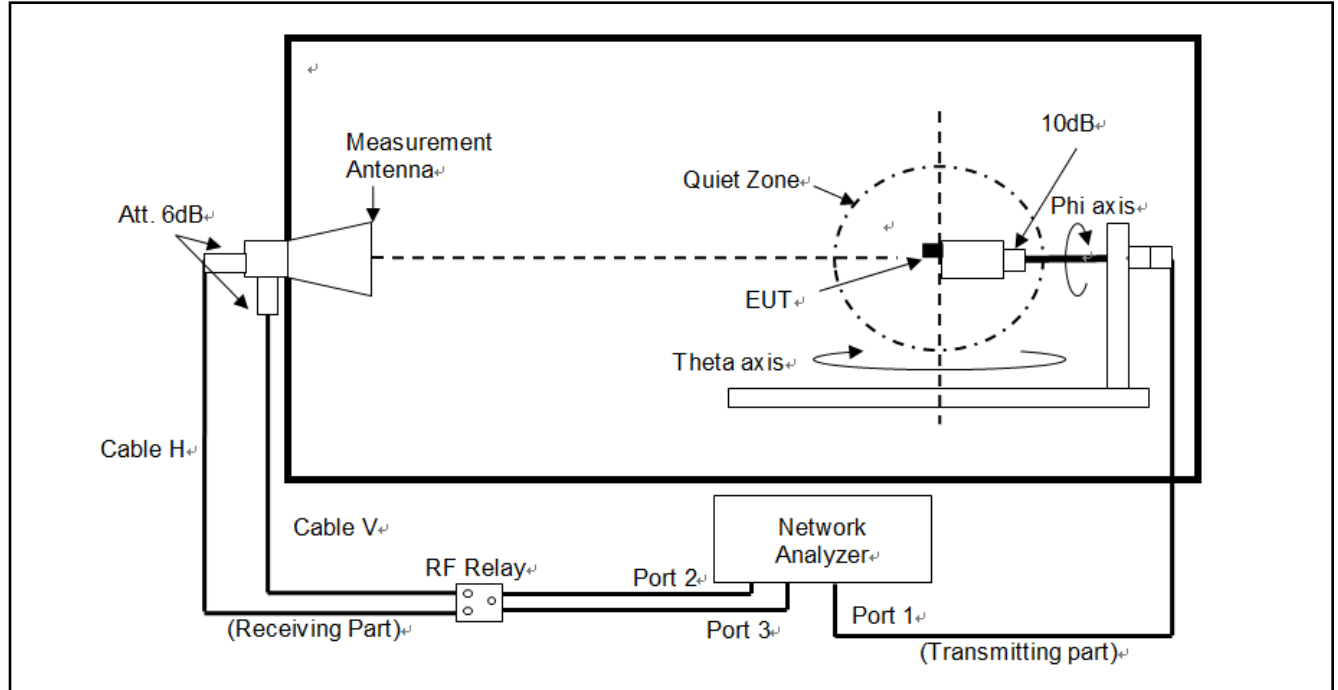
| Revision # | Revision Details | Issued Date |
|------------|------------------|-------------|
| Rev.00     | First version    | 2024/02/1   |
| Rev.01     | Cable lenght     | 2024/10/16  |

## 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

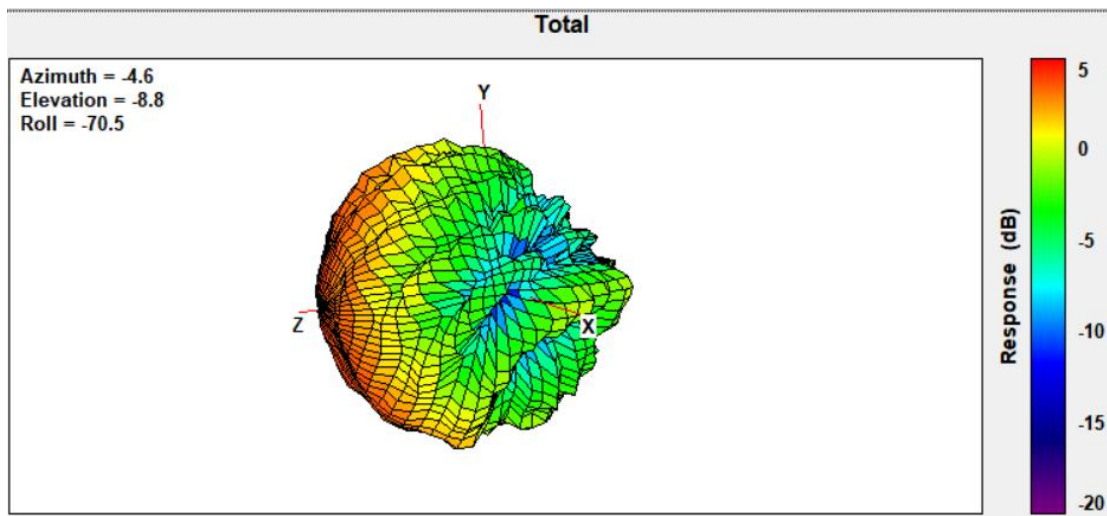
| Name                             | Manufacture  | Type/Model | Serial Number | Cal. Date | Cal. Due Date |
|----------------------------------|--------------|------------|---------------|-----------|---------------|
| ENA Series Network Analyze       | Keysight     | E5071C     | MY46108594    | 2023/8/3  | 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

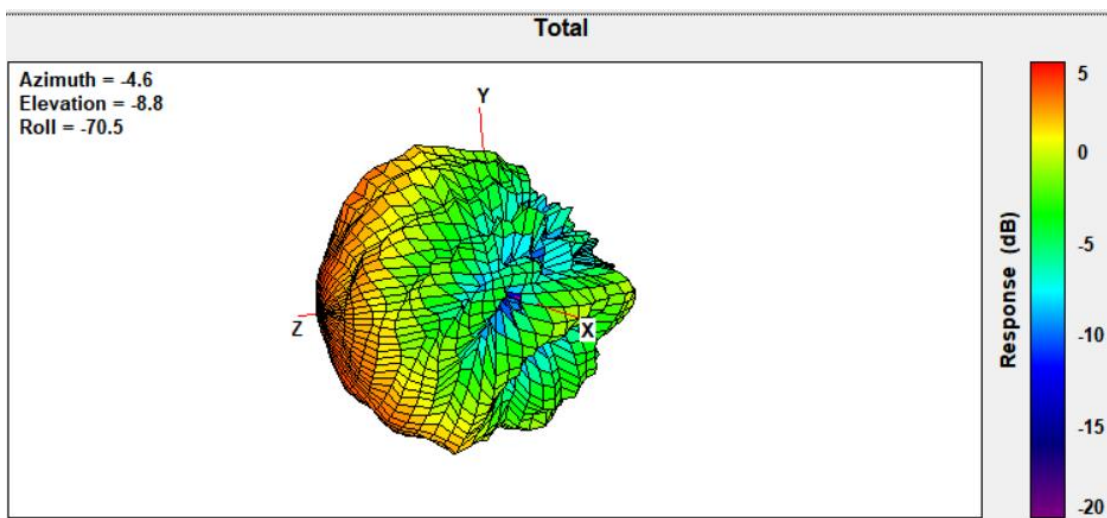
#### Max Antenna 3D Radiation Pattern 5150-5250 MHz

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



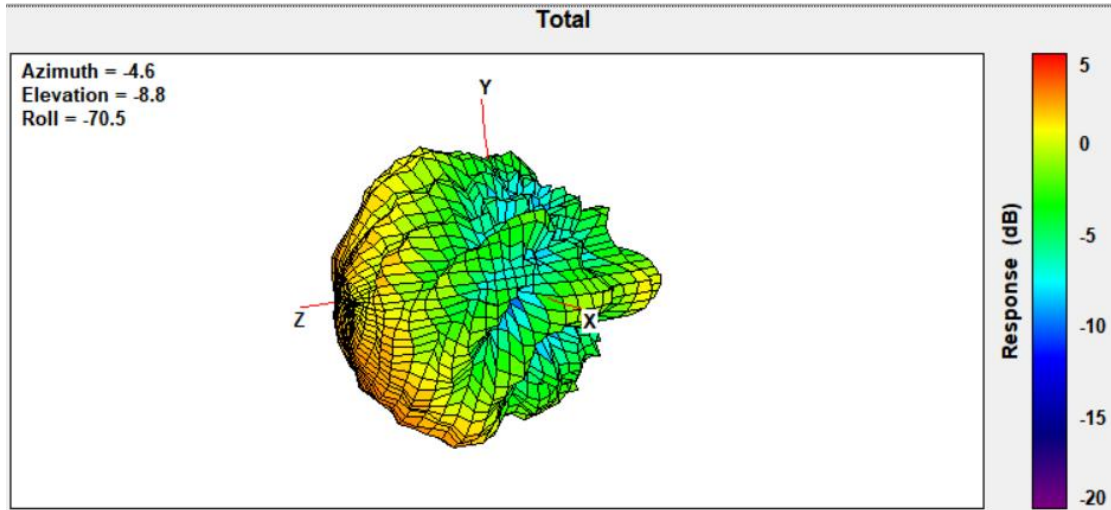
#### Max Antenna 3D Radiation Pattern 5250-5350 MHz

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



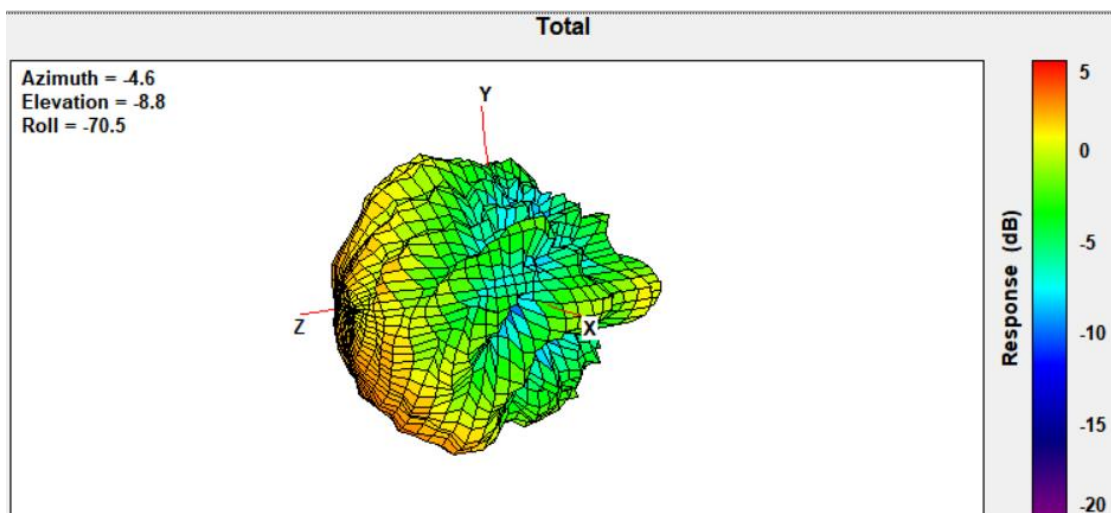
## Max Antenna 3D Radiation Pattern 5470-5725 MHz

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



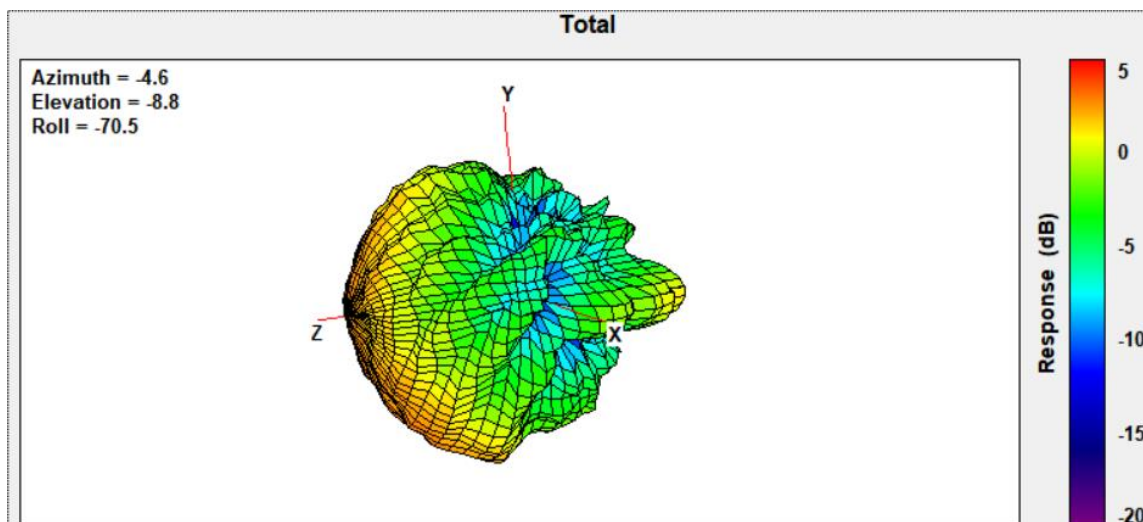
## Max Antenna 3D Radiation Pattern 5725-5850 MHz

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



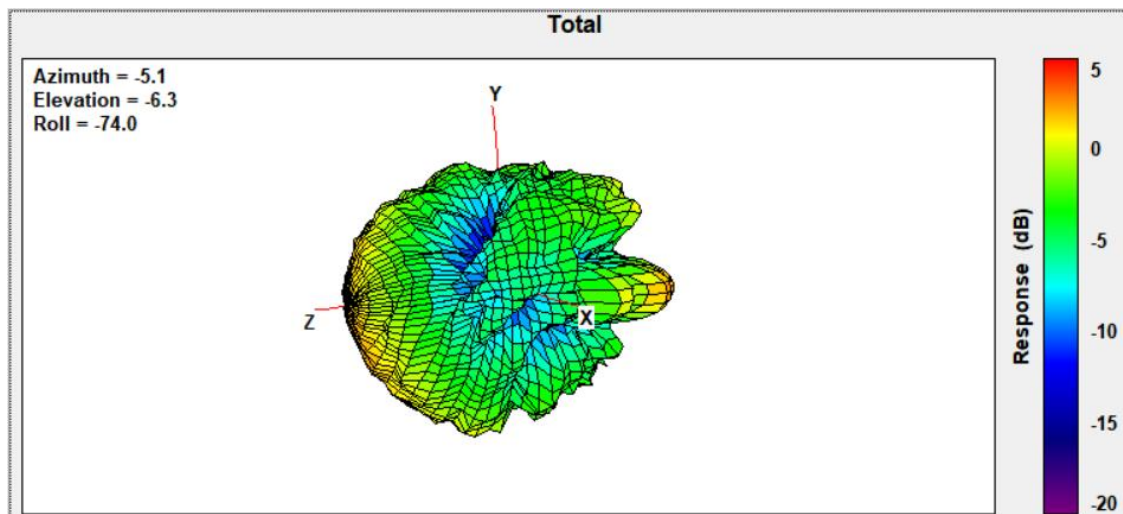
## Max Antenna 3D Radiation Pattern 5850-5895 MHz

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



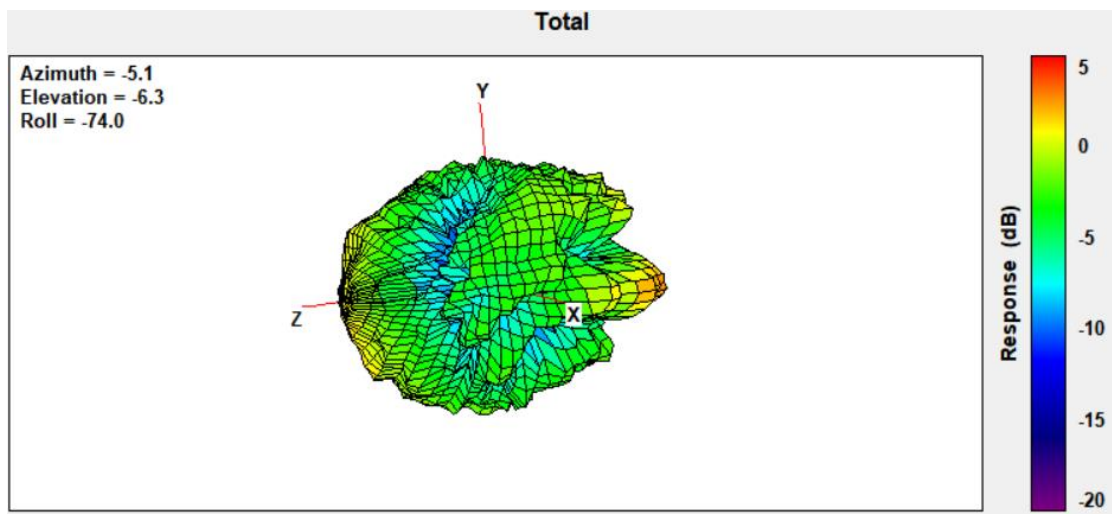
## Max Antenna 3D Radiation Pattern 5925-6425 MHz

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



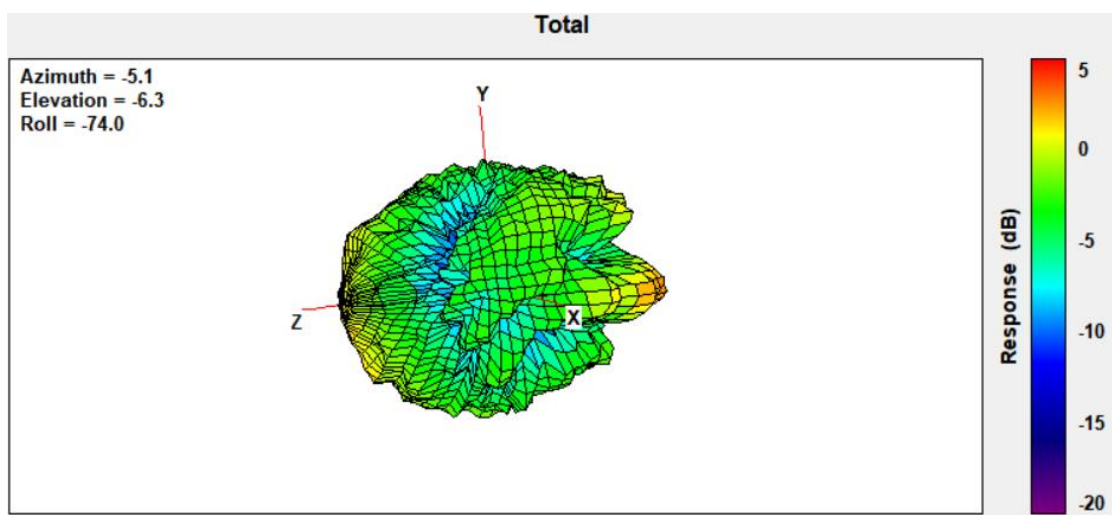
## Max Antenna 3D Radiation Pattern 6425-6525 MHz

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



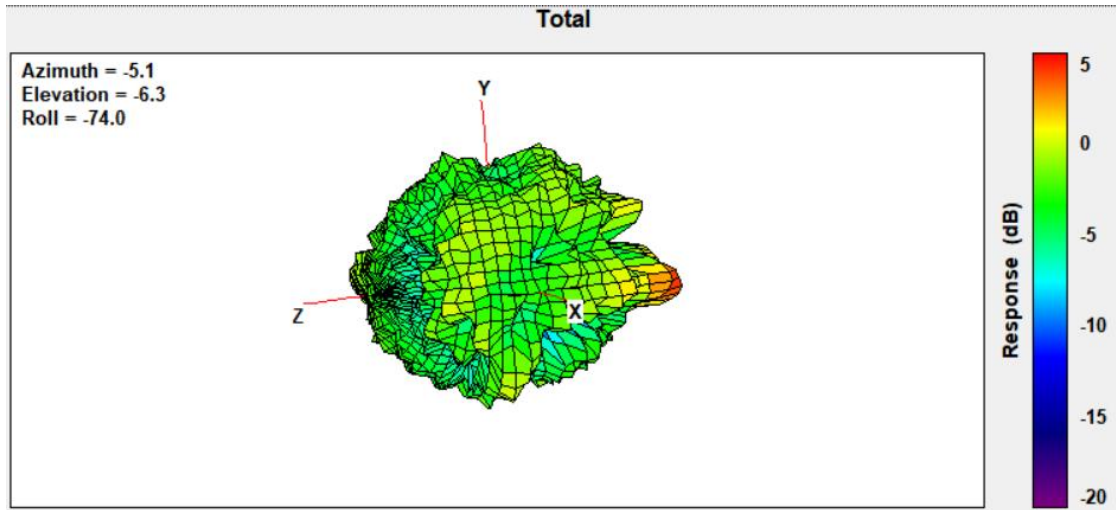
## Max Antenna 3D Radiation Pattern 6525-6875 MHz

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



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

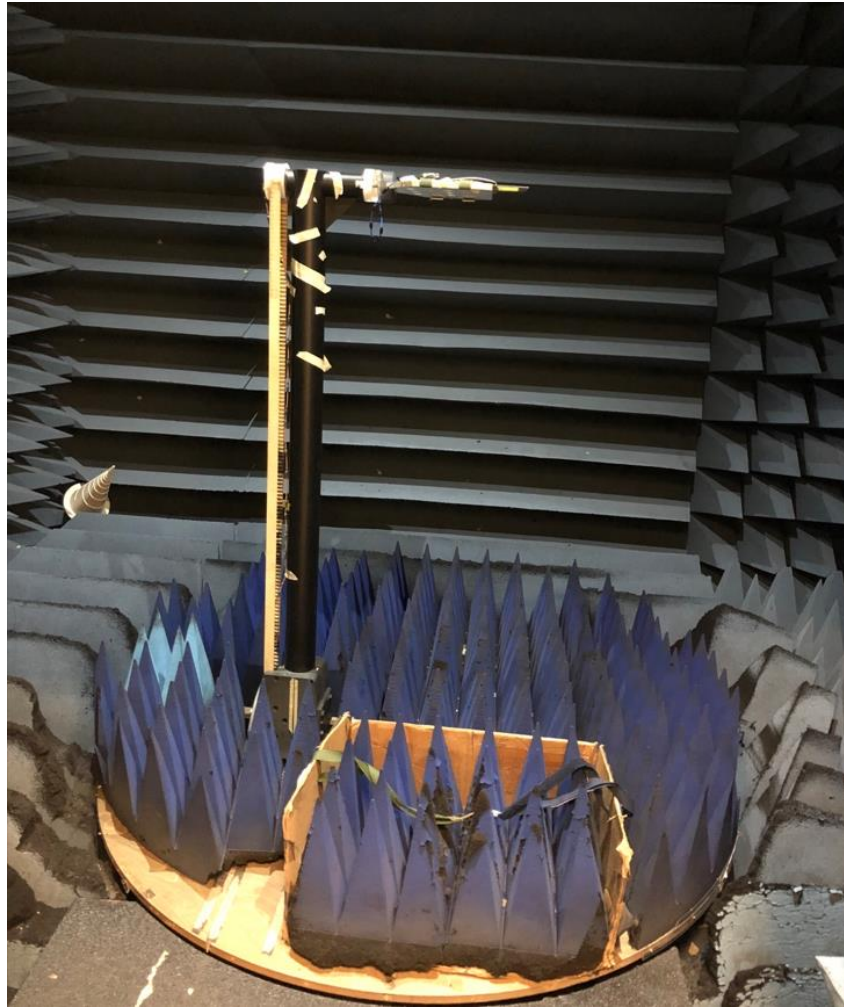
| Frequency<br>(MHz) | Peak Gain w/ Cable Loss<br>(dBi) |
|--------------------|----------------------------------|
| 6875-7125          | 4.09                             |



# Annex A. Photographs

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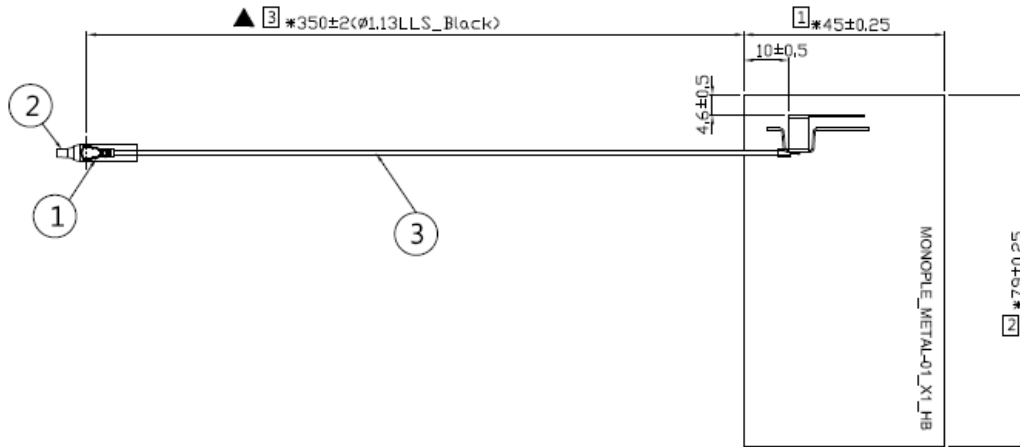
## A.1 Setup Photo



## A.2 Test sample

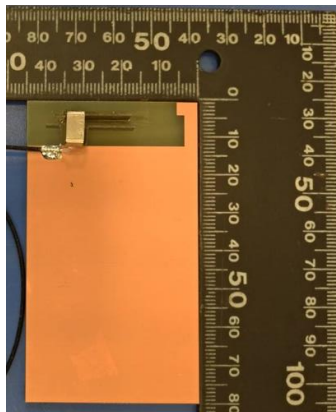
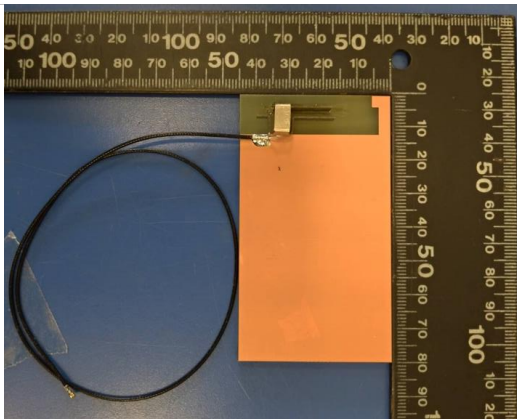
### Main Antenna

#### Antenna Drawing



#### Antenna Photo

##### Front



##### Back

