

# Test Report

Lucid Part No.

- P21-J40000-01
- P21-J40100-01
- P21-J29200-01
- P21-J29300-01

NMB Technologies Corp.  
2024.10.30

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## (1)電磁界遮蔽率(Shielding Capability)

| Item             | Frequency      | Specification  |              |
|------------------|----------------|----------------|--------------|
| Anechoic Chamber | 150kHz ~ 30MHz | Magnetic field | 80dB $\leq$  |
|                  |                | Electric field | 100dB $\leq$ |
|                  | 30MHz ~ 1GHz   |                | 100dB $\leq$ |
|                  | 1GHz ~ 20GHz   |                | 80dB $\leq$  |
| measuring room   | 150kHz ~ 30MHz |                | 80dB $\leq$  |
|                  | 30MHz ~ 1GHz   |                | 80dB $\leq$  |

## (2)電源線遮蔽率 (Power Line Isolation)

| Item             | Frequency      | Specification |
|------------------|----------------|---------------|
| Anechoic Chamber | 150kHz ~ 10GHz | 100dB $\leq$  |
| measuring room   | 150kHz ~ 10MHz | 100dB $\leq$  |

## (3)電解均一特性(Electric Field Uniformity)

( Test Area : on T/T( $\phi$ 2.0m), Height 1.5m)

| Item             | Frequency       | Specification |            |
|------------------|-----------------|---------------|------------|
| Anechoic Chamber | 76MHz ~ 110MHz  | HP            | $\leq$ 4dB |
|                  |                 | VP            | $\leq$ 6dB |
|                  | 110MHz ~ 230MHz | HP            | $\leq$ 4dB |
|                  |                 | VP            | $\leq$ 6dB |
|                  | 230MHz ~ 470MHz | HP            | $\leq$ 5dB |
|                  |                 | VP            | $\leq$ 6dB |
|                  | 470MHz ~ 1GHz   | HP            | $\leq$ 6dB |
|                  |                 | VP            | $\leq$ 6dB |
|                  | 1GHz ~ 3GHz     | HP            | $\leq$ 6dB |
|                  |                 | VP            | $\leq$ 6dB |
|                  | 3GHz ~ 6GHz     | HP            | $\leq$ 4dB |
|                  |                 | VP            | $\leq$ 6dB |

## (4)測定結果

(Performance result of measurement)

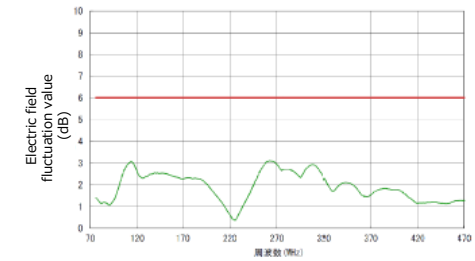
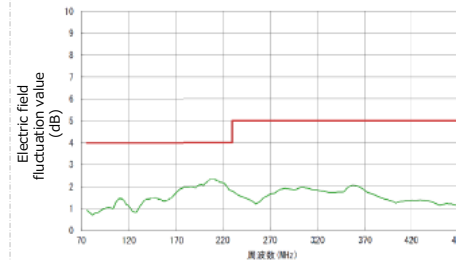
TX Height  
76MHz~1GHz : 2.0m  
1GHz~6GHz : 2.25m

RX Height  
76MHz~6GHz : 1.5m

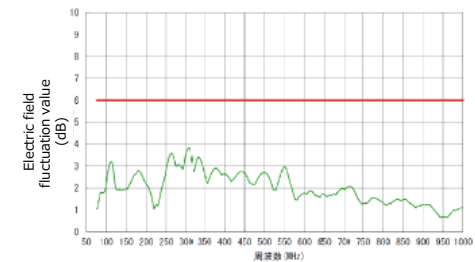
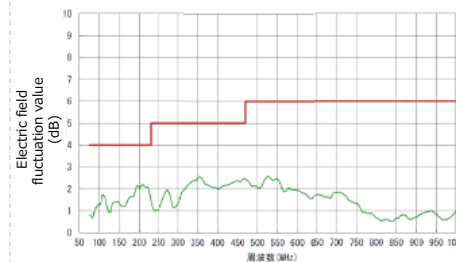
**HP**

**VP**

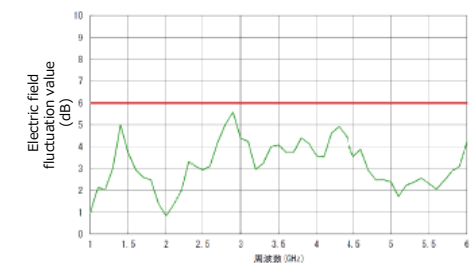
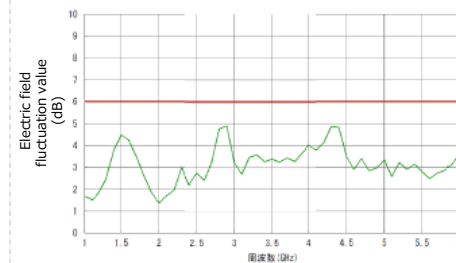
76MHz~470MHz Equivalent to floor ground

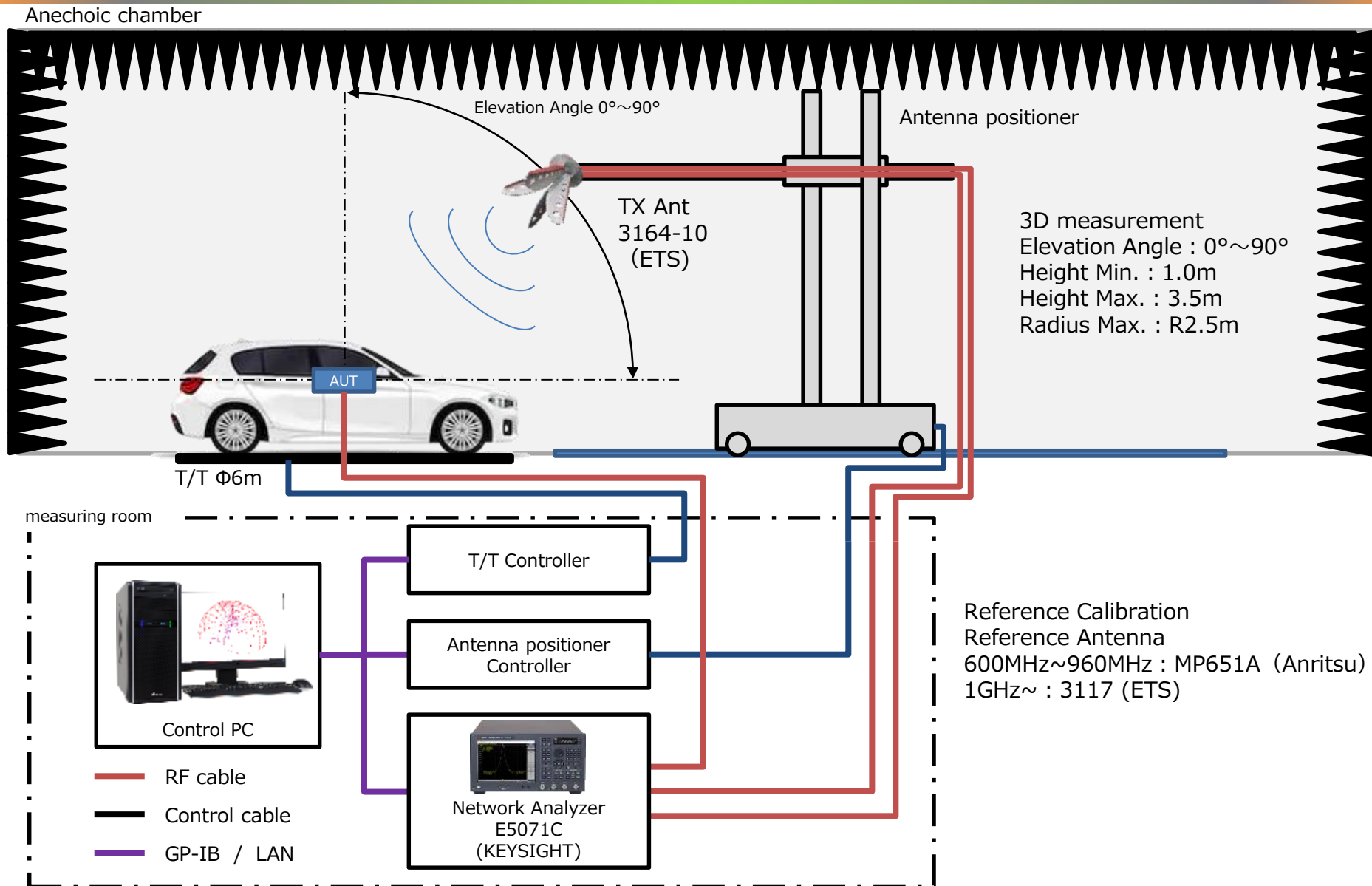


50MHz ~ 1GHz Equivalent to floor ground + IS-060



1GHz ~ 6GHz Equivalent to floor ground + IS-060





# LTE film antenna (Left / Right)

## •OUTLINE

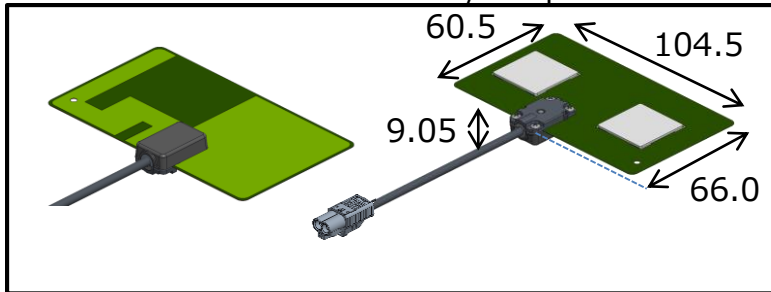
Lucid Part No. P21-J40000-01 / P21-J40100-01

Mitsumi Part No. R16D789 / R16D790

• Size : 104.5 x 60.5 x 9.05 [mm]

Cable : TFC302LL (700mm)

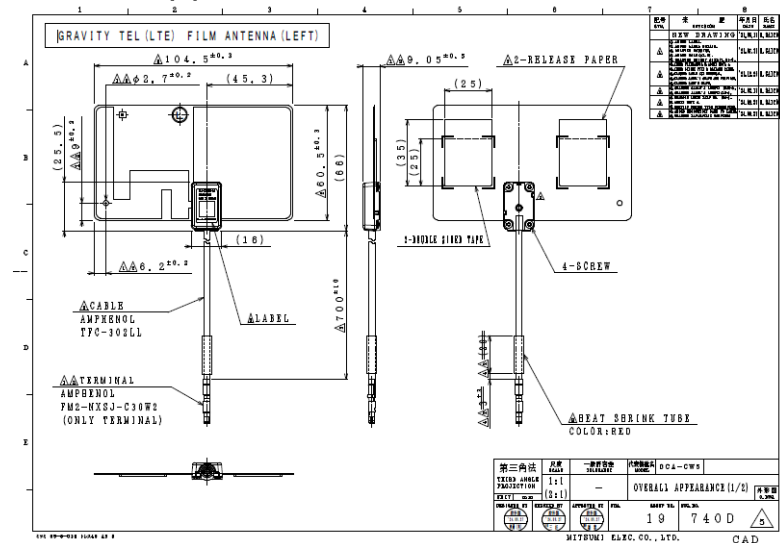
Connector : FAKRA mini / Amphenol



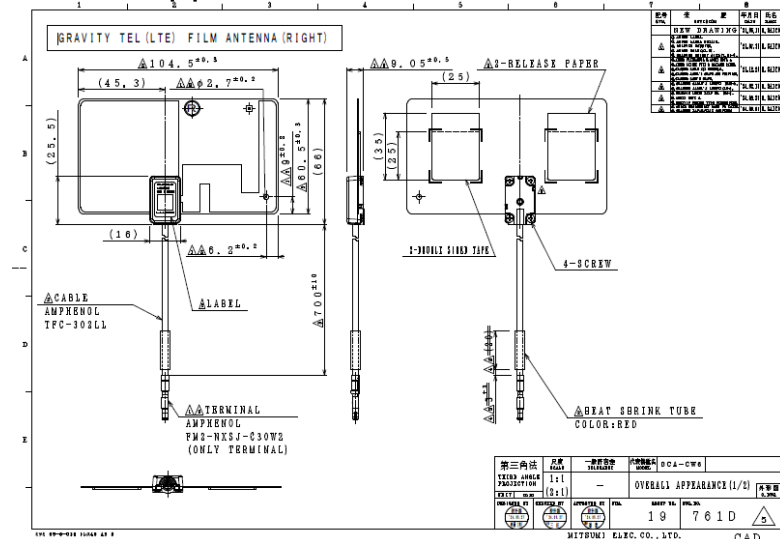
## •SPECIFICATIONS

| Item                | Specifications                                                                     |
|---------------------|------------------------------------------------------------------------------------|
| Frequency [MHz]     | LTE : 698-960, 1700-2700<br>(5G : 617-698, 3100-4100<br>4500-5000, 5900-6000)      |
| Polarization        | Linear polarization<br>Vertical dimension: 104.5mm<br>Horizontal dimension: 66.0mm |
| Antenna Type        | FPC                                                                                |
| VSWR                | 617-960 MHz ≤ 5.0<br>Other Freq. ≤ 3.0                                             |
| Average Gain        | ≥ -4.0 dBi ※Including Cable Loss                                                   |
| Peak Gain           | ≤ 4.0 dBi ※Including Cable Loss                                                    |
| Output Impedance    | 50 Ω                                                                               |
| Diagnostic Resistor | 10kΩ ±10%                                                                          |

## Overall appearance : P21-J40000-01

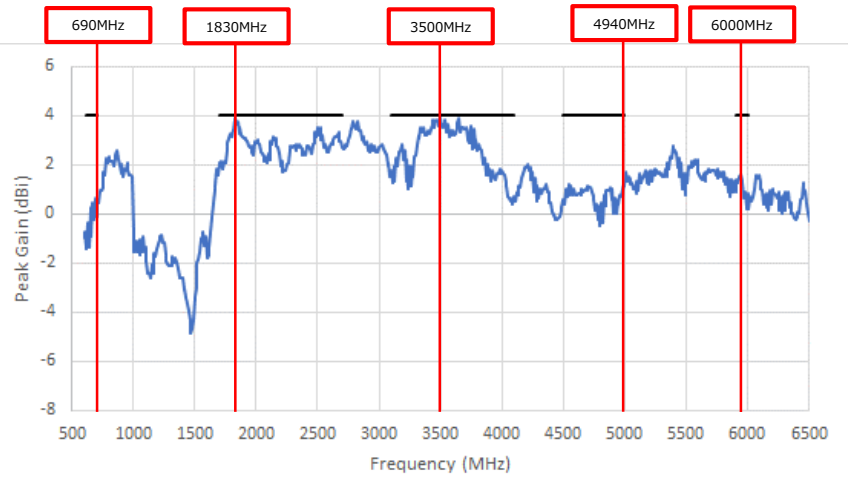


## Overall appearance : P21-J40100-01

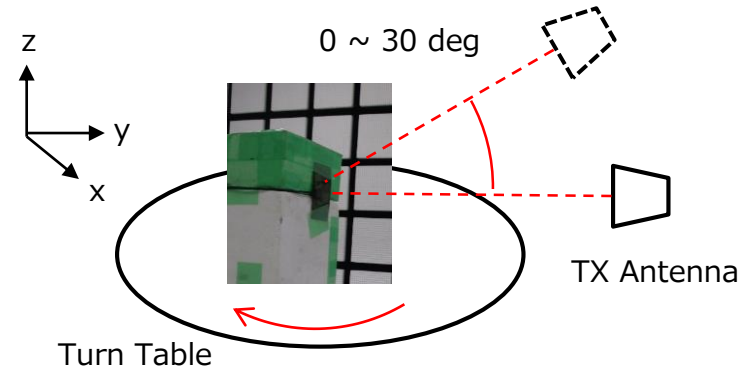


# LTE film antenna (Left / Right)

## ◆ Peak Gain

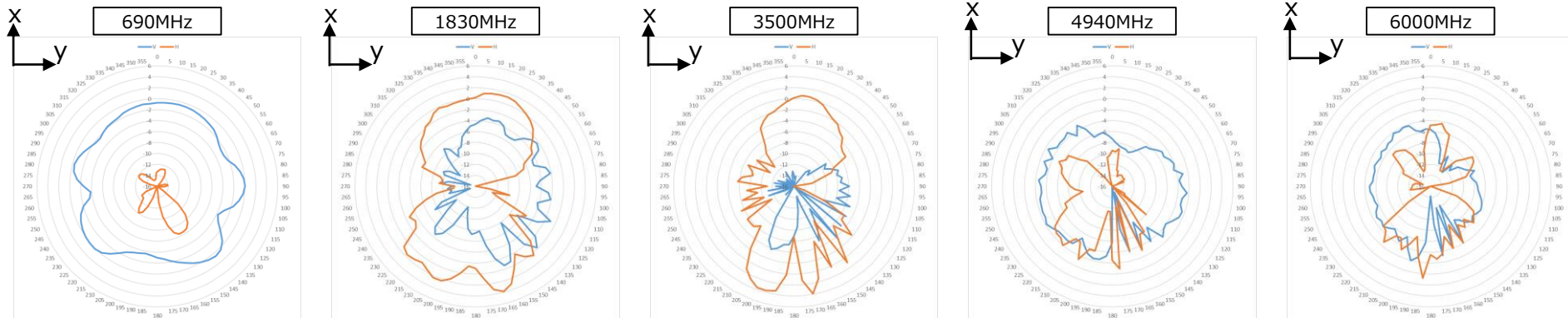


## Peak Gain Measurement



| Freq.(MHz)     | 617-960       | 1700-2700      | 3100-4100      | 4500-5000      | 5900-6000      |
|----------------|---------------|----------------|----------------|----------------|----------------|
| Peak Gain(dBi) | 0.62<br>(690) | 3.85<br>(1830) | 3.90<br>(3500) | 1.21<br>(4990) | 1.56<br>(5940) |

## Horizontal radiation pattern Elevation Angle 0deg



# LTE film antenna (Left / Right)

690MHz

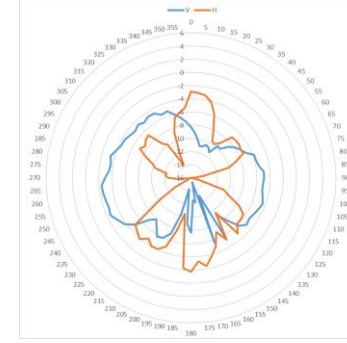
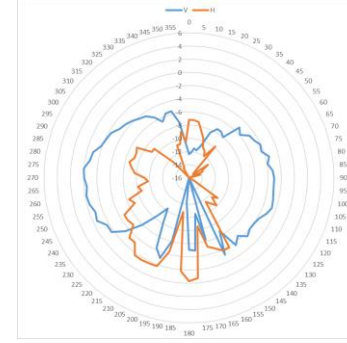
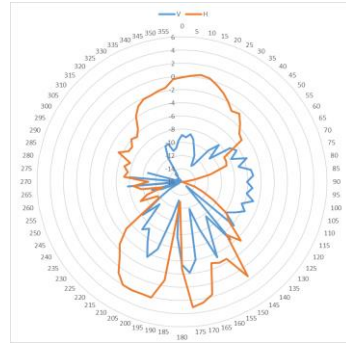
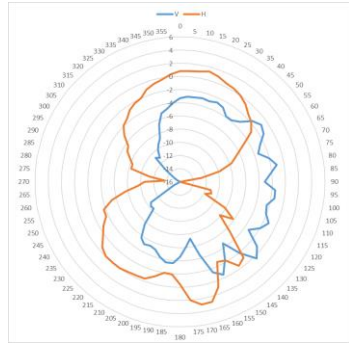
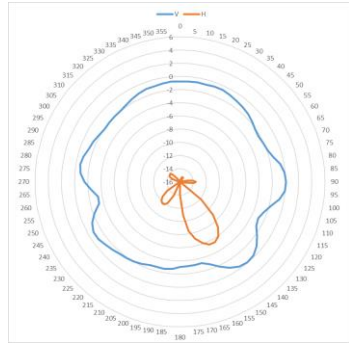
1830MHz

3500MHz

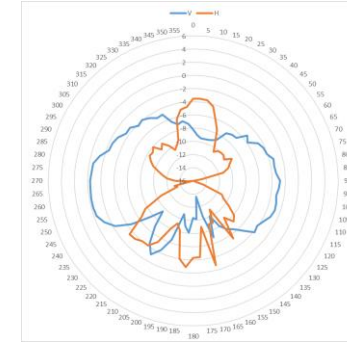
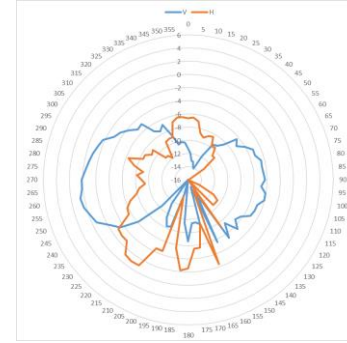
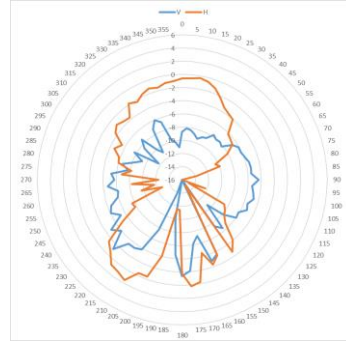
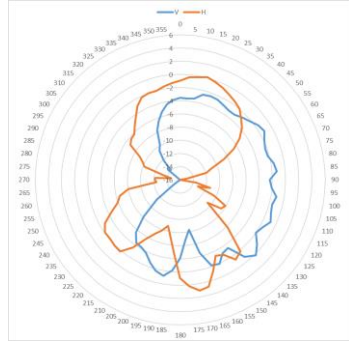
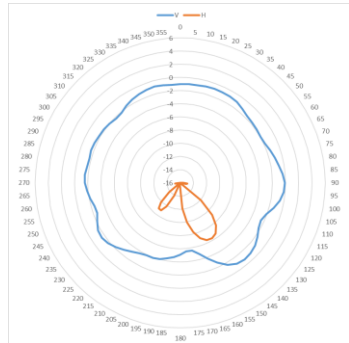
4940MHz

6000MHz

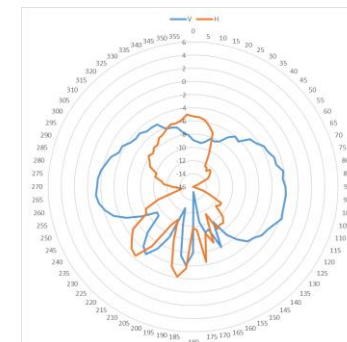
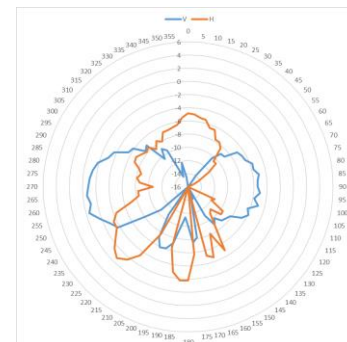
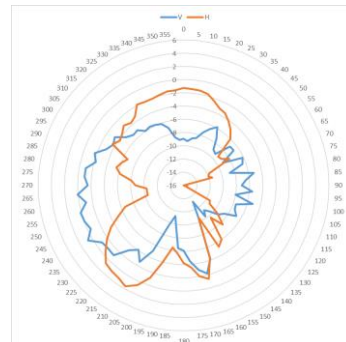
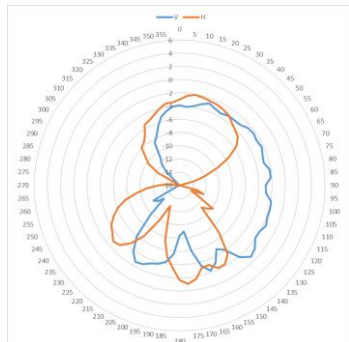
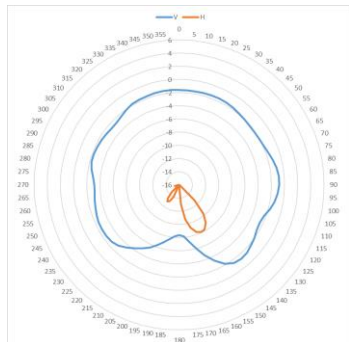
Elevation Angle 10deg



Elevation Angle 20deg



Elevation Angle 30deg



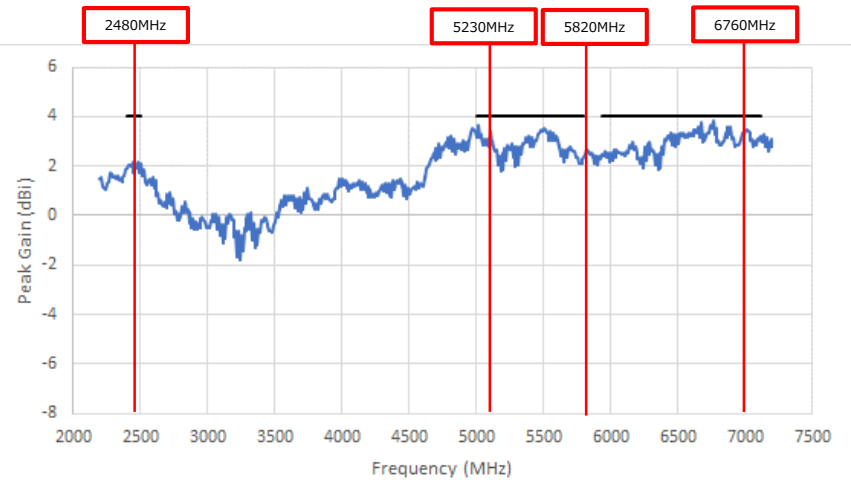




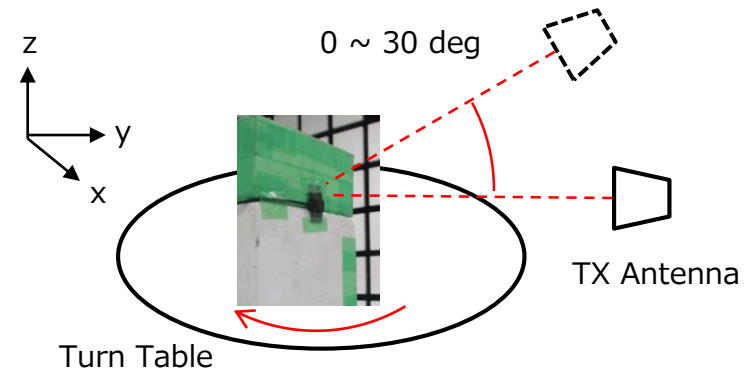


# External Wi-Fi Film Antenna (Left / Right)

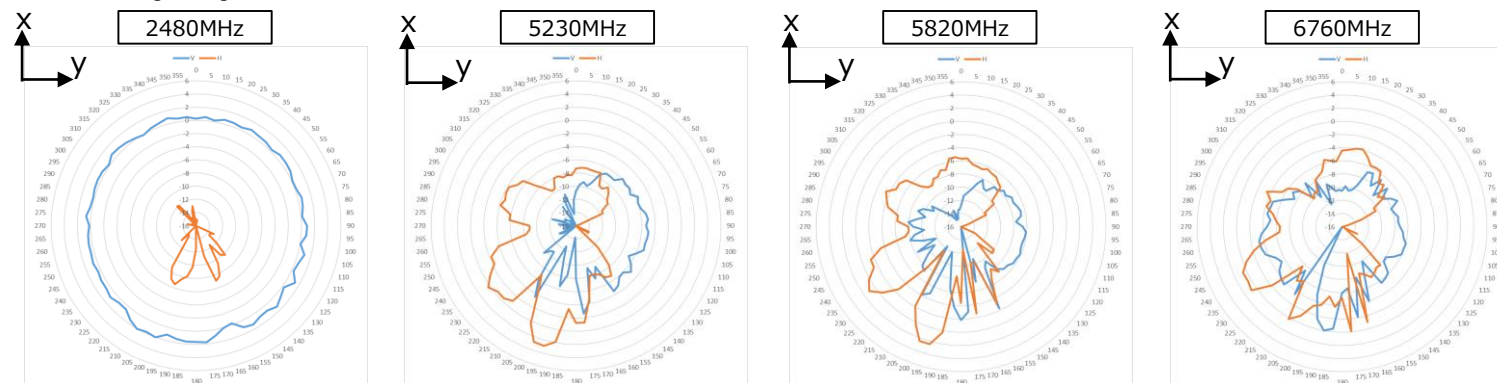
## ◆Peak Gain



## Peak Gain Measurement



## Horizontal radiation pattern Elevation Angle 0deg



# External Wi-Fi Film Antenna (Left / Right)

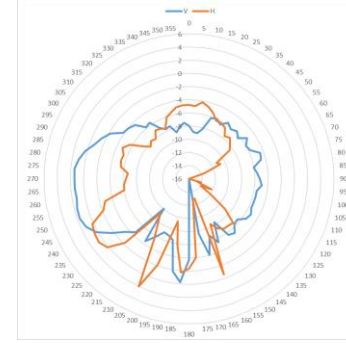
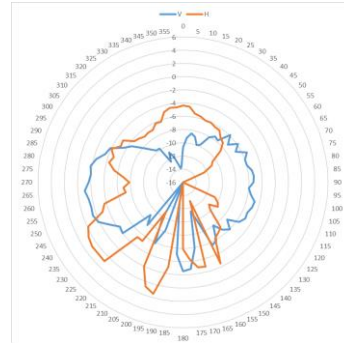
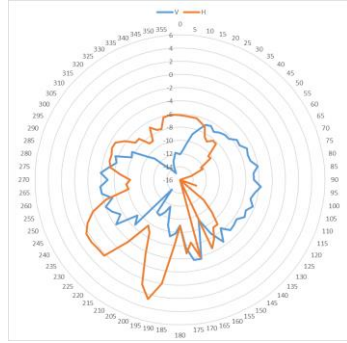
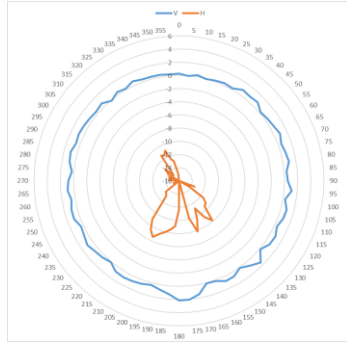
2480MHz

5230MHz

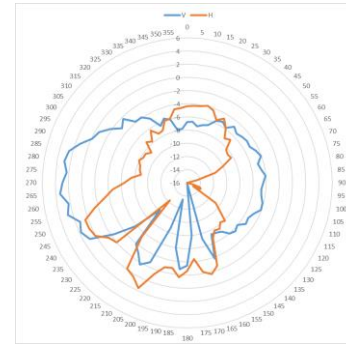
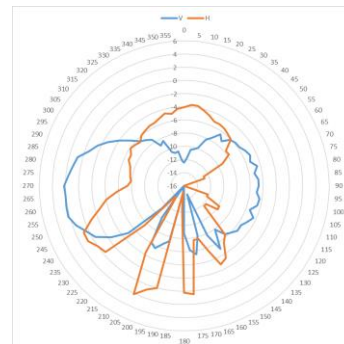
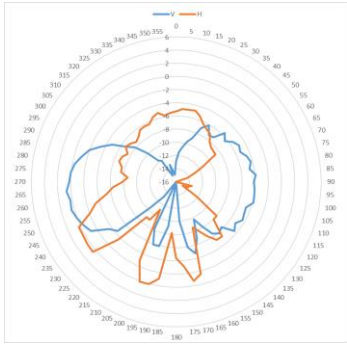
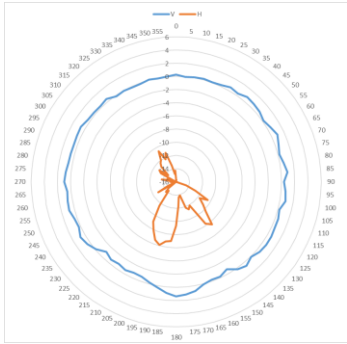
5820MHz

6760MHz

Elevation Angle 10deg



Elevation Angle 20deg



Elevation Angle 30deg

