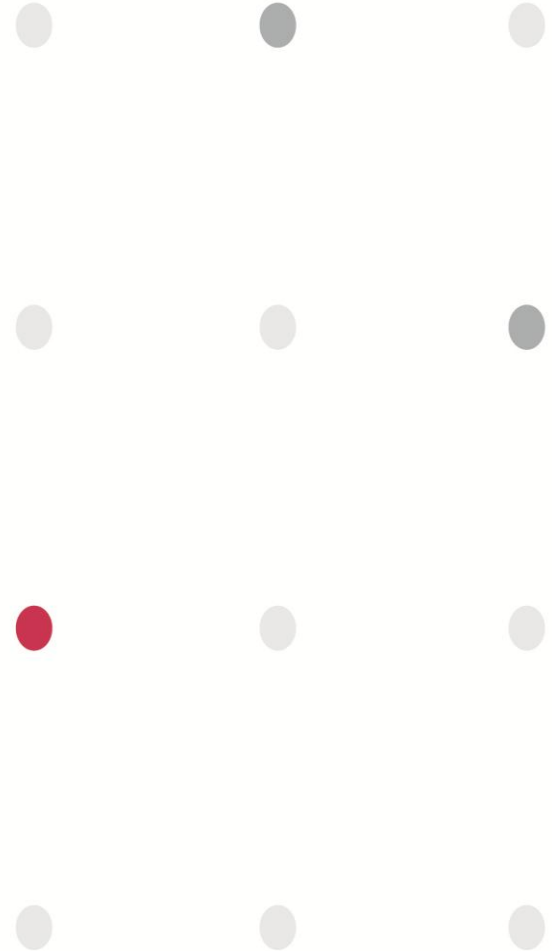


PSA



PASSIVE SYSTEM ALLIANCE  
WALSIN TECHNOLOGY CORPORATION

# 光寶\_RFMTA401017IMIMB301

Presented by

Kerry Wu

Walsin Technology Corporation

2020/ 11/ 12

| <b>Version</b> | <b>Date</b> | <b>Description</b> | <b>Author</b> |
|----------------|-------------|--------------------|---------------|
| V01            | 2020/11/12  | New Release        | Kerry         |
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# OUTLINE

## 1. Measurement Information

### 1.1 Experimental Setup

## 2. Antenna Characteristics

### 2.1 Return Loss

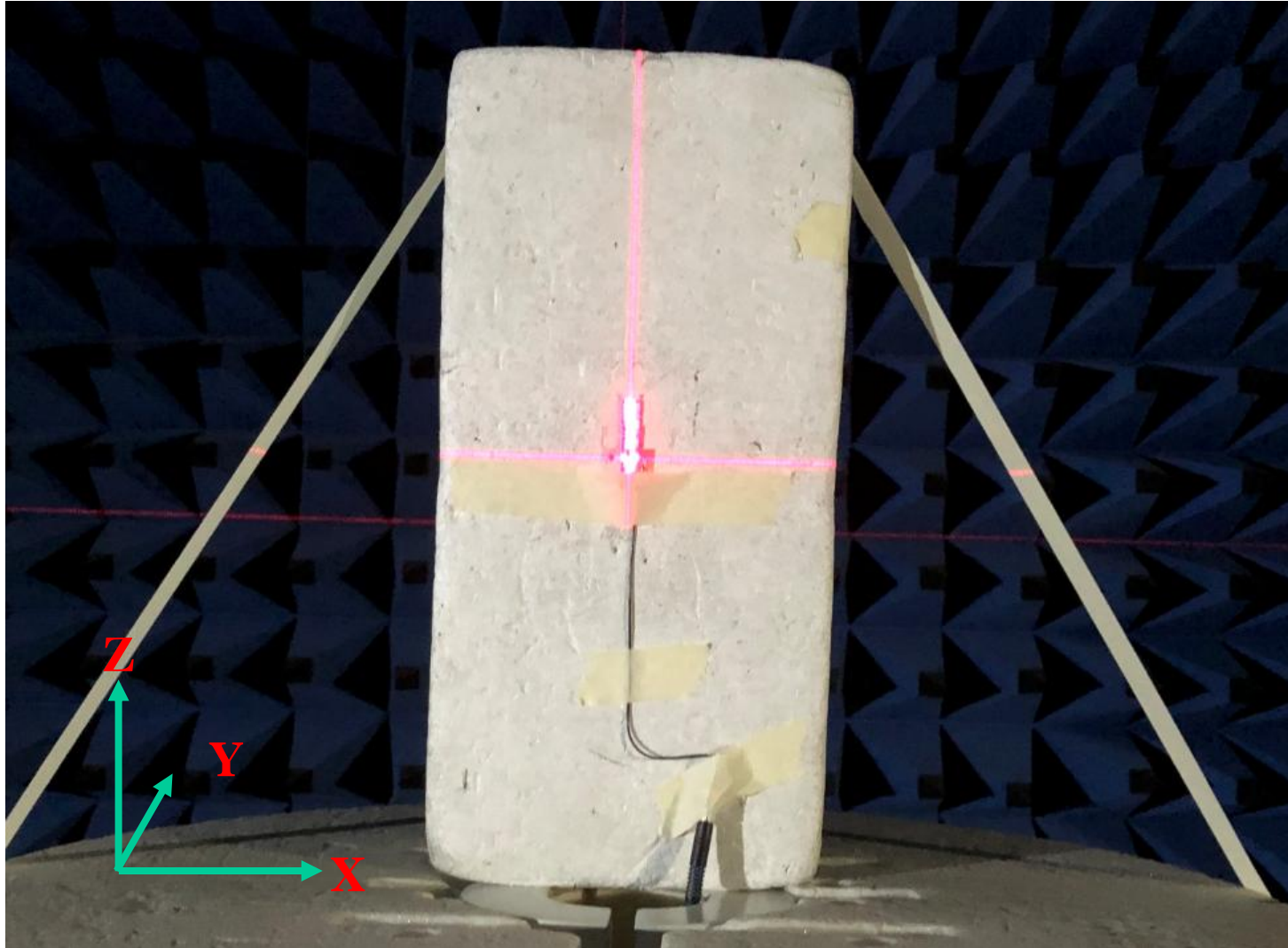
### 2.2 Antenna Efficiency and Peak Gain

### 2.3 3 views of antenna & 2D Radiation Patterns

## 3. Summary

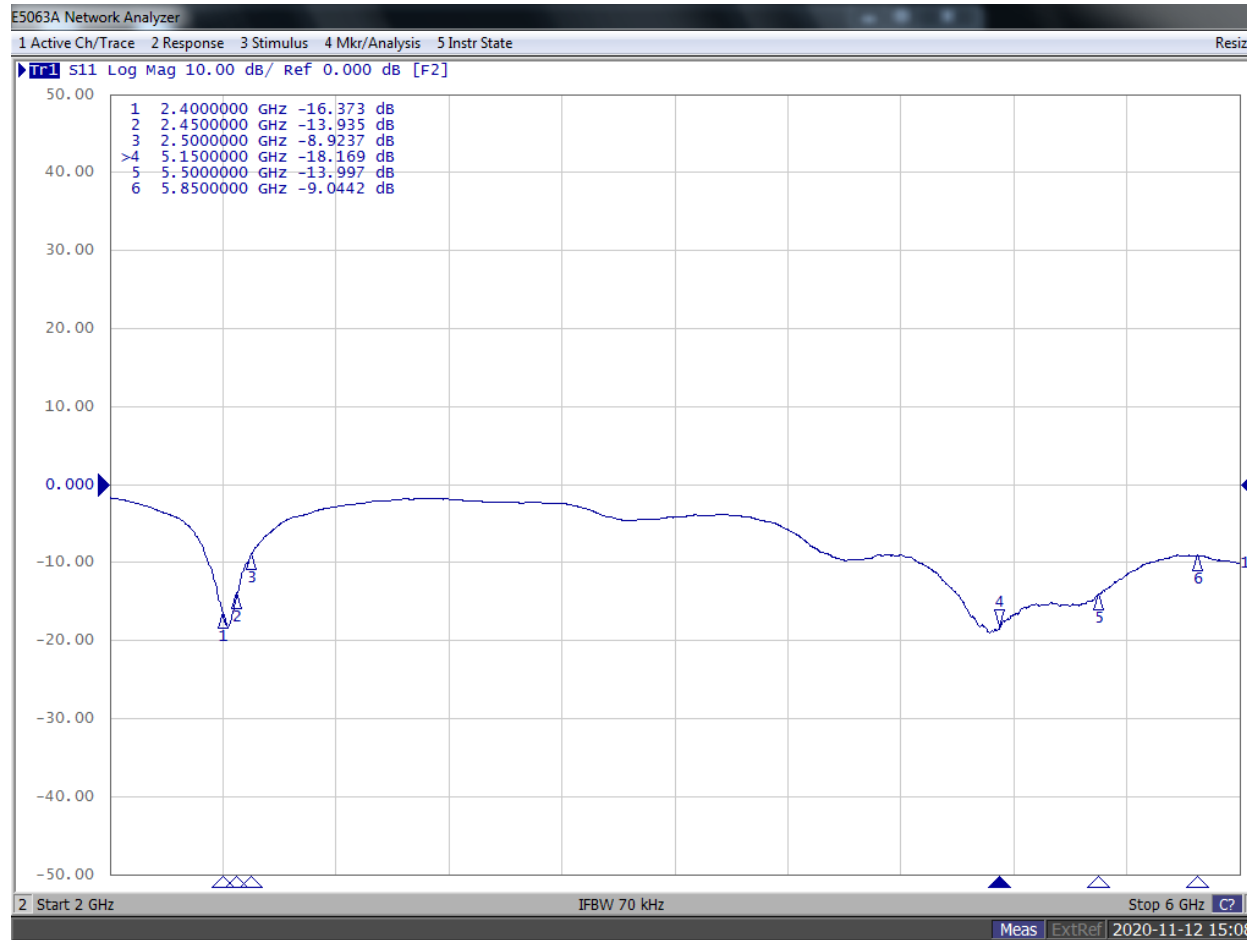
# 1. Measurement Information

## 1.1 Experimental Setup



## 2. Antenna Characteristics

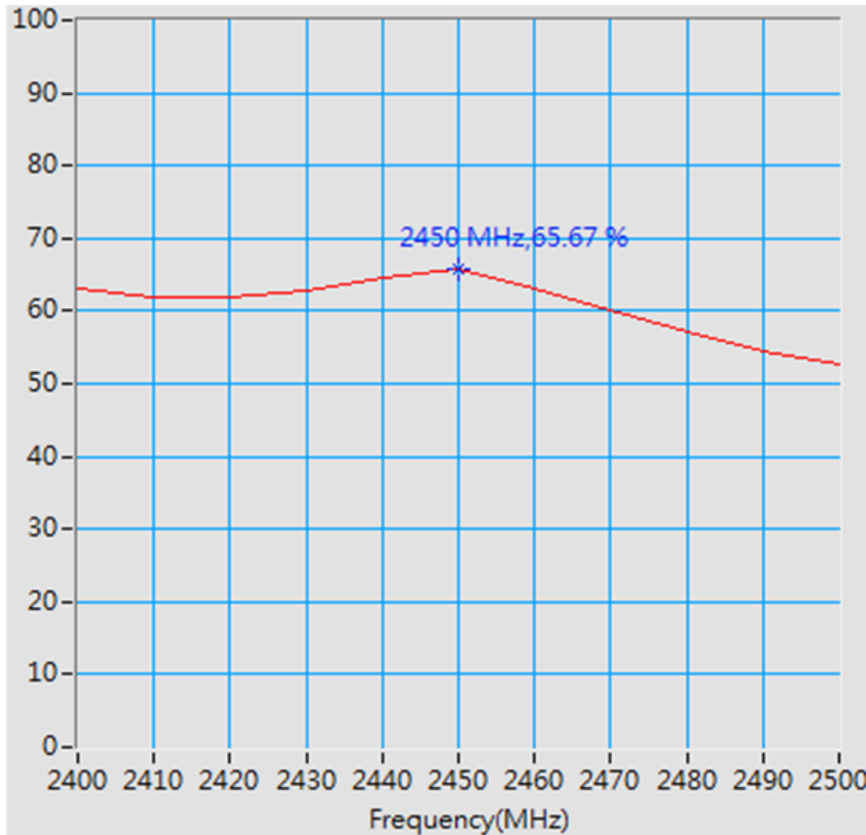
### 2.1 Return Loss



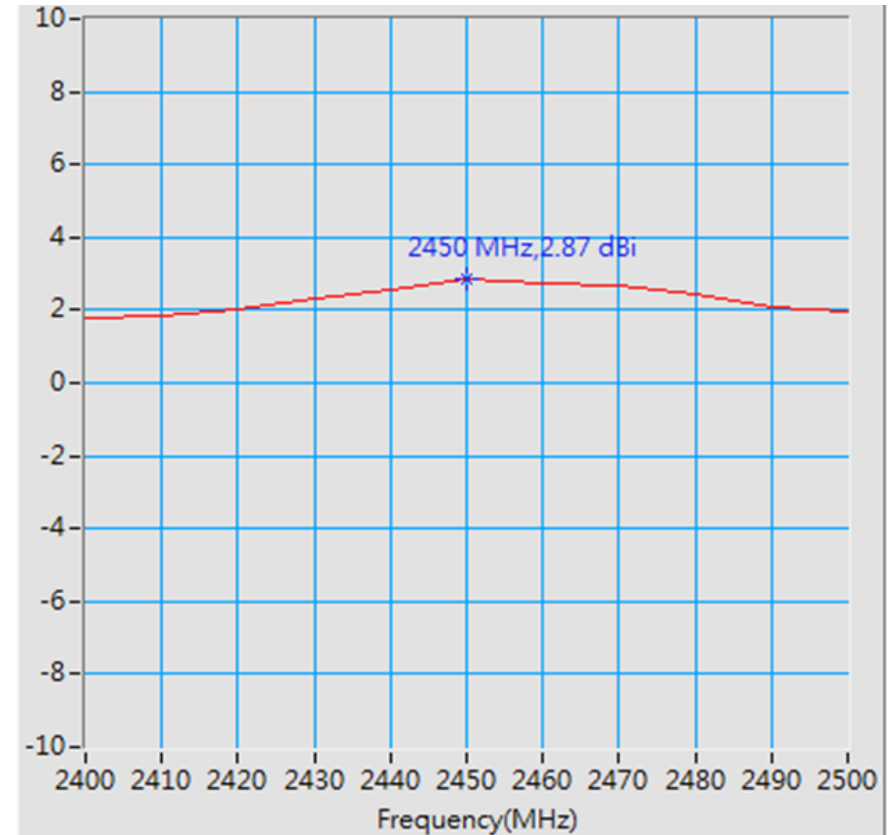
## 2. Antenna Characteristics

2G

### 2.2 Antenna Efficiency and Peak Gain



Maximum Efficiency at 2450MHz : 65.67%

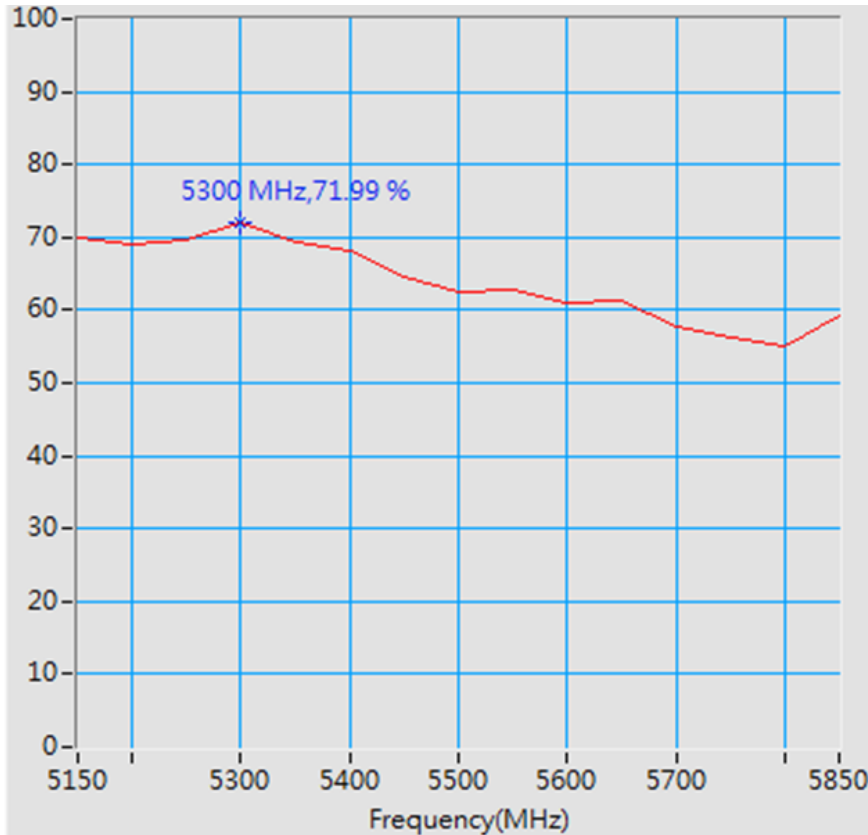


Maximum Peak Gain at 2450MHz : 2.87dBi

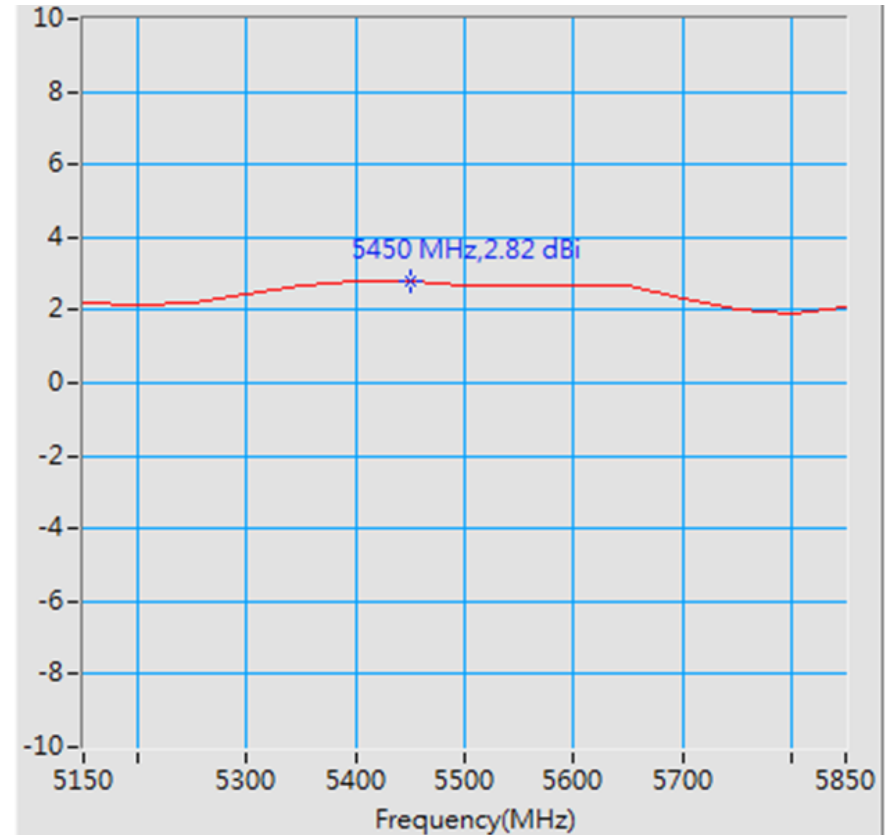
## 2. Antenna Characteristics

5G

### 2.2 Antenna Efficiency and Peak Gain



Maximum Efficiency at 5300MHz : 71.99%



Maximum Peak Gain at 5450MHz : 2.82dBi



## 2. Antenna Characteristics

### 2.2 Antenna Efficiency and Peak Gain

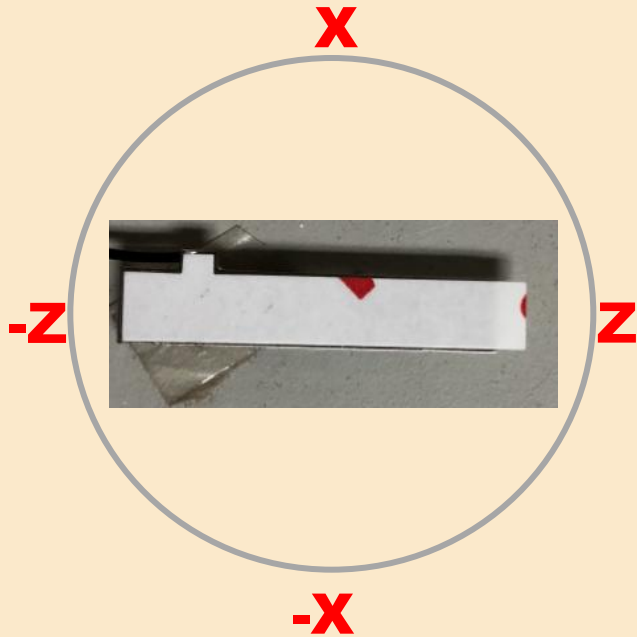
|                 | 2G             |                 |
|-----------------|----------------|-----------------|
| Frequency (GHz) | Efficiency (%) | Peak gain (dBi) |
| 2.4             | 63.18          | 1.79            |
| 2.45            | 65.67          | 2.87            |
| 2.5             | 52.74          | 1.97            |

|                 | 5G             |                 |
|-----------------|----------------|-----------------|
| Frequency (GHz) | Efficiency (%) | Peak gain (dBi) |
| 5.15            | 69.90          | 2.18            |
| 5.5             | 62.41          | 2.69            |
| 5.85            | 59.25          | 2.06            |

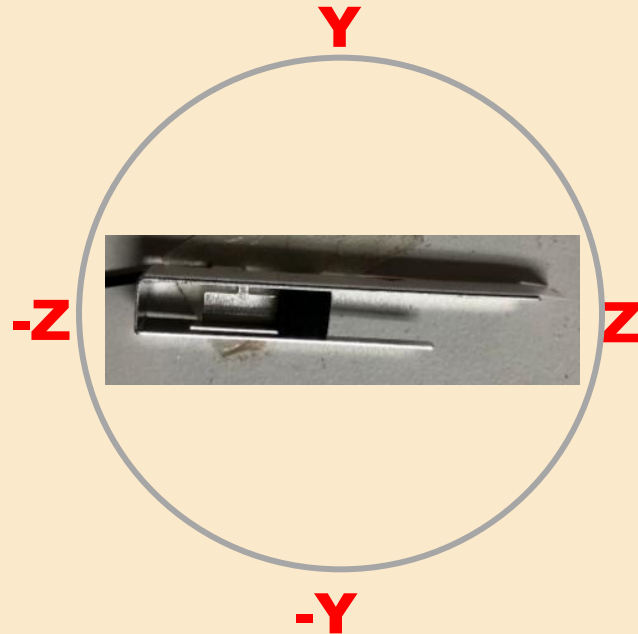
## 2. Antenna Characteristics

### 2.3 3 views of antenna

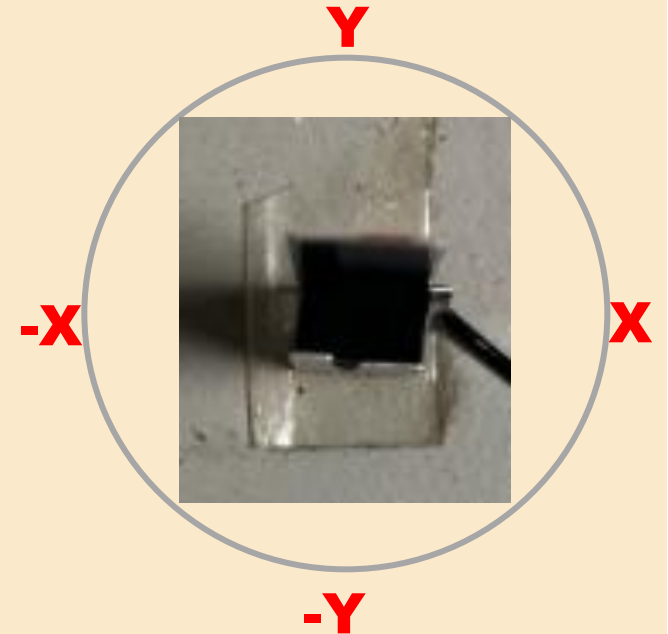
X-Z plane



Y-Z plane



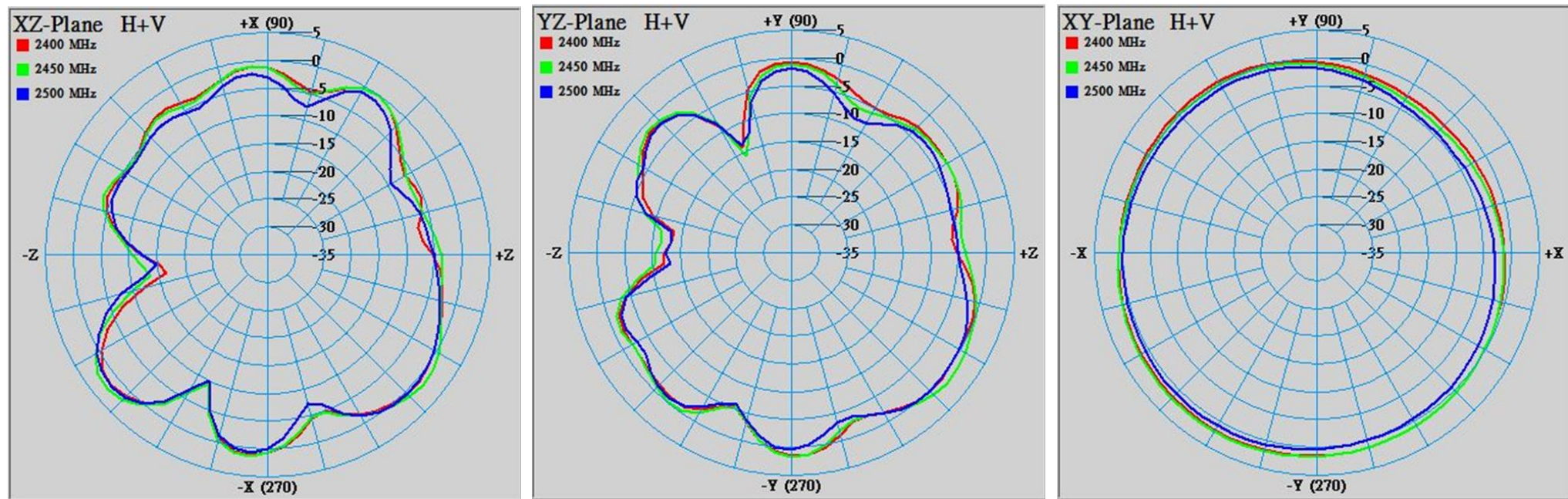
X-Y plane



## 2. Antenna Characteristics

2G

### 2.3 2D Radiation Patterns

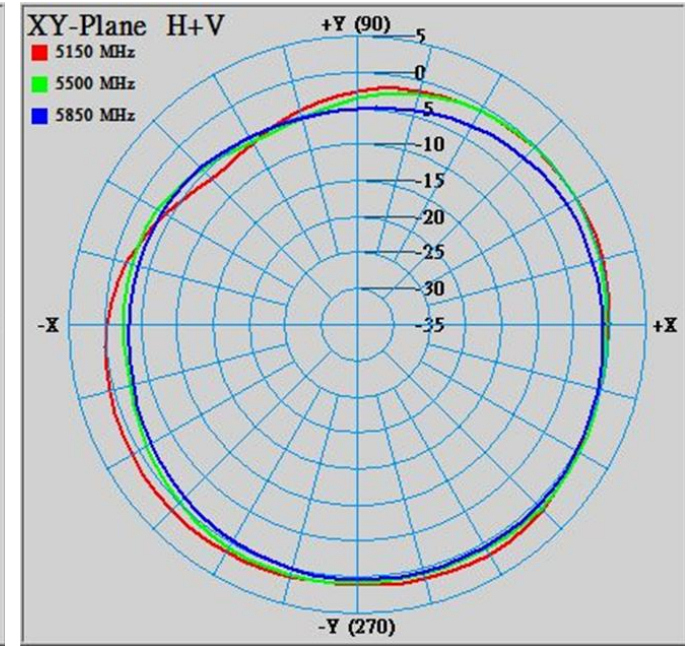
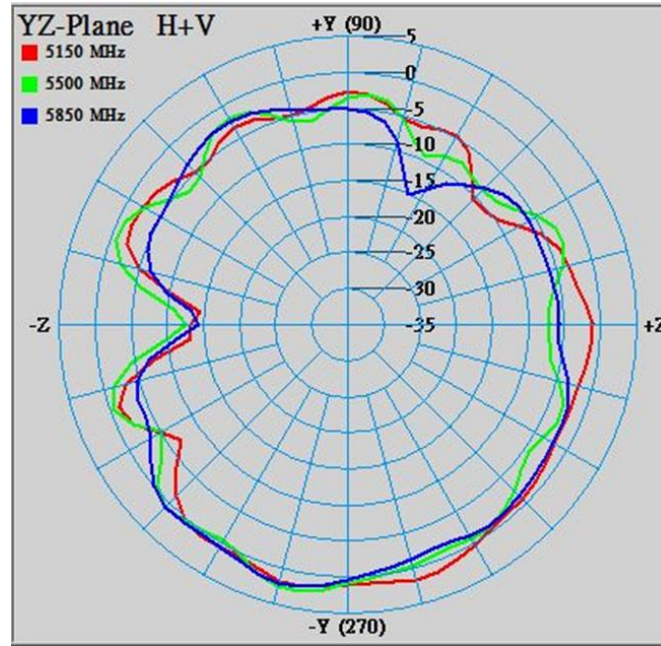
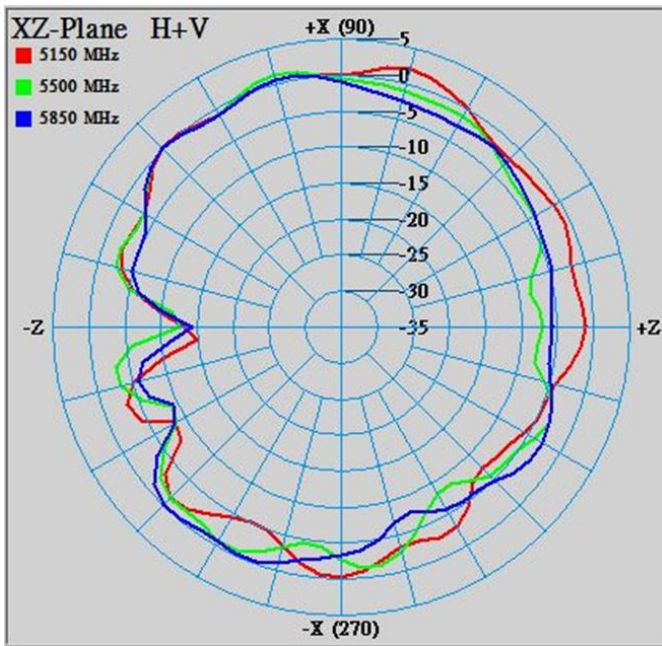


| Frequency [MHz] | ZX plane       |              | ZY plane       |              | XY plane       |              |
|-----------------|----------------|--------------|----------------|--------------|----------------|--------------|
|                 | Max Value [dB] | Average [dB] | Max Value [dB] | Average [dB] | Max Value [dB] | Average [dB] |
| 2400            | 1.67           | -2.50        | 1.57           | -2.48        | 1.79           | 0.23         |
| 2450            | 2.71           | -2.13        | 1.60           | -2.24        | 2.05           | 0.12         |
| 2500            | 1.86           | -3.00        | 0.32           | -3.26        | 0.84           | -0.98        |

## 2. Antenna Characteristics

5G

### 2.3 2D Radiation Patterns



| Frequency [MHz] | ZX plane       |              | ZY plane       |              | XY plane       |              |
|-----------------|----------------|--------------|----------------|--------------|----------------|--------------|
|                 | Max Value [dB] | Average [dB] | Max Value [dB] | Average [dB] | Max Value [dB] | Average [dB] |
| 5150            | 2.15           | -2.01        | 1.88           | -2.14        | 1.72           | -0.22        |
| 5500            | 1.25           | -2.82        | 2.68           | -2.55        | 0.93           | -0.82        |
| 5850            | 0.59           | -2.93        | 2.06           | -2.91        | 0.54           | -1.61        |

### 3. Summary

- The performance of antennas is shown in table

|                        | 2G    | 5G    |
|------------------------|-------|-------|
| Maximum Efficiency (%) | 65.67 | 71.99 |
| Maximum Gain (dBi)     | 2.87  | 2.82  |

# Thank you

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