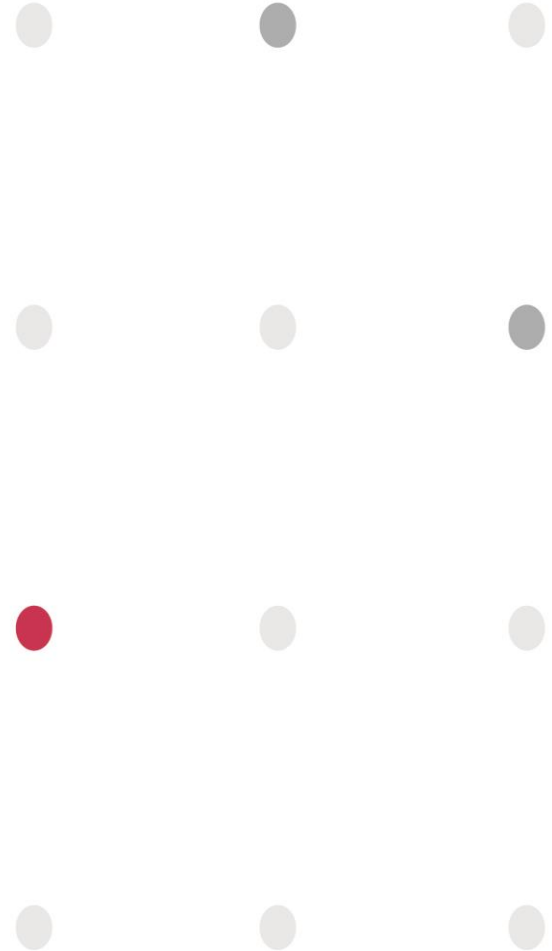


PSA

PASSIVE SYSTEM ALLIANCE
WALSIN TECHNOLOGY CORPORATION



光寶_WP8324

Presented by

Sam

Walsin Technology Corporation

2022/9/29

| Version | Date | Description | Author |
|---------|------------|---|--------|
| V01 | 2022/03/23 | New Release | Sam |
| V02 | 2022/08/29 | 使用DVT1樣機，量測修改後的ANT 1 與 修改板寬後的ANT 3天線特性 | Sam |
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OUTLINE

1. Measurement Information

1.1 Experimental Setup

1.2 Antenna Solution Detail

2. Antenna Characteristics

2.1 Return Loss & Isolation

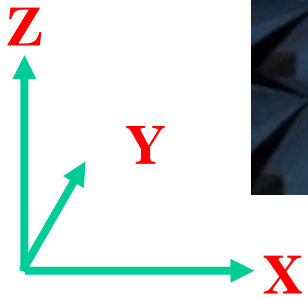
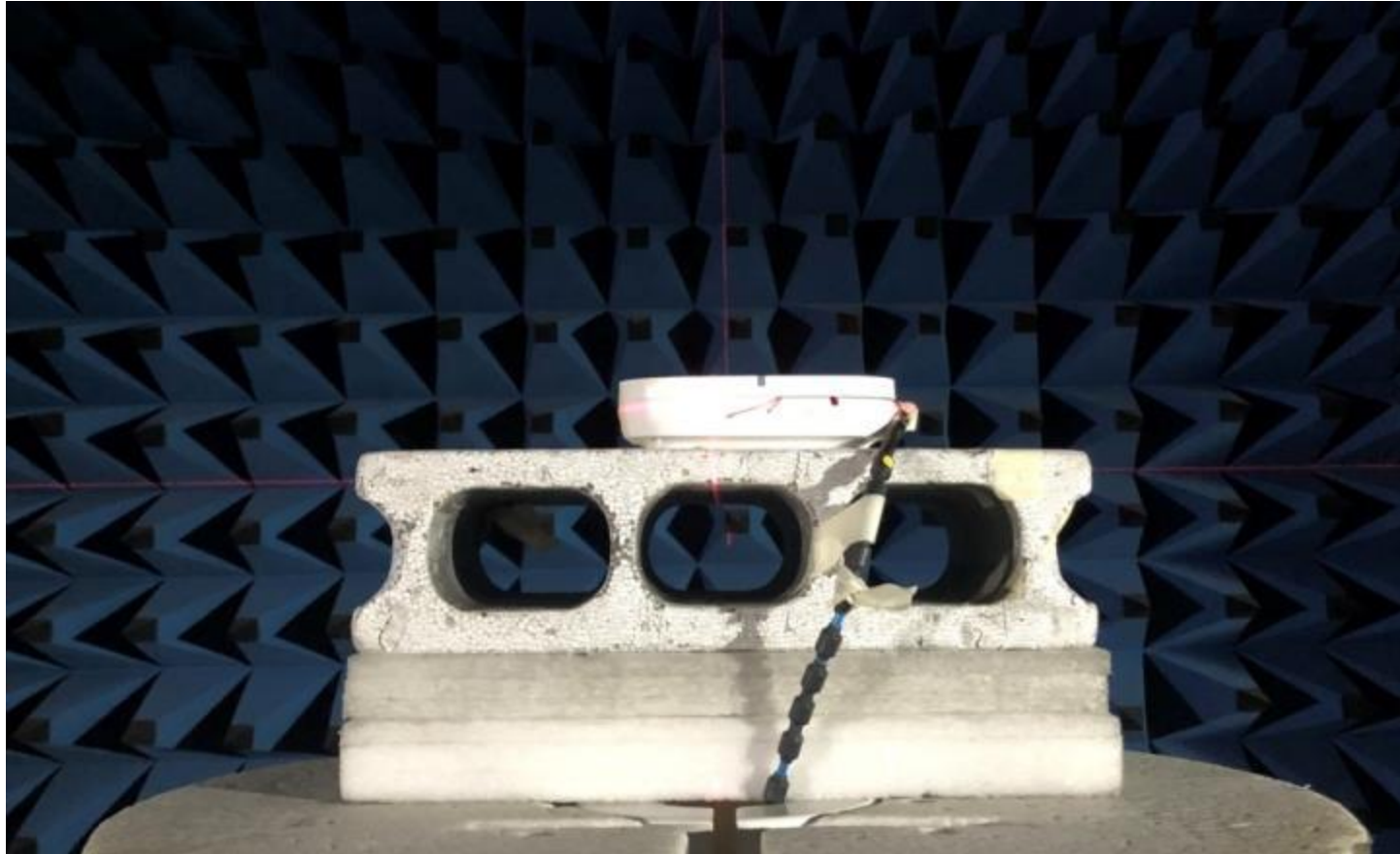
2.2 Antenna Efficiency

2.3 3 views of antenna & 2D Radiation Patterns

3. Summary

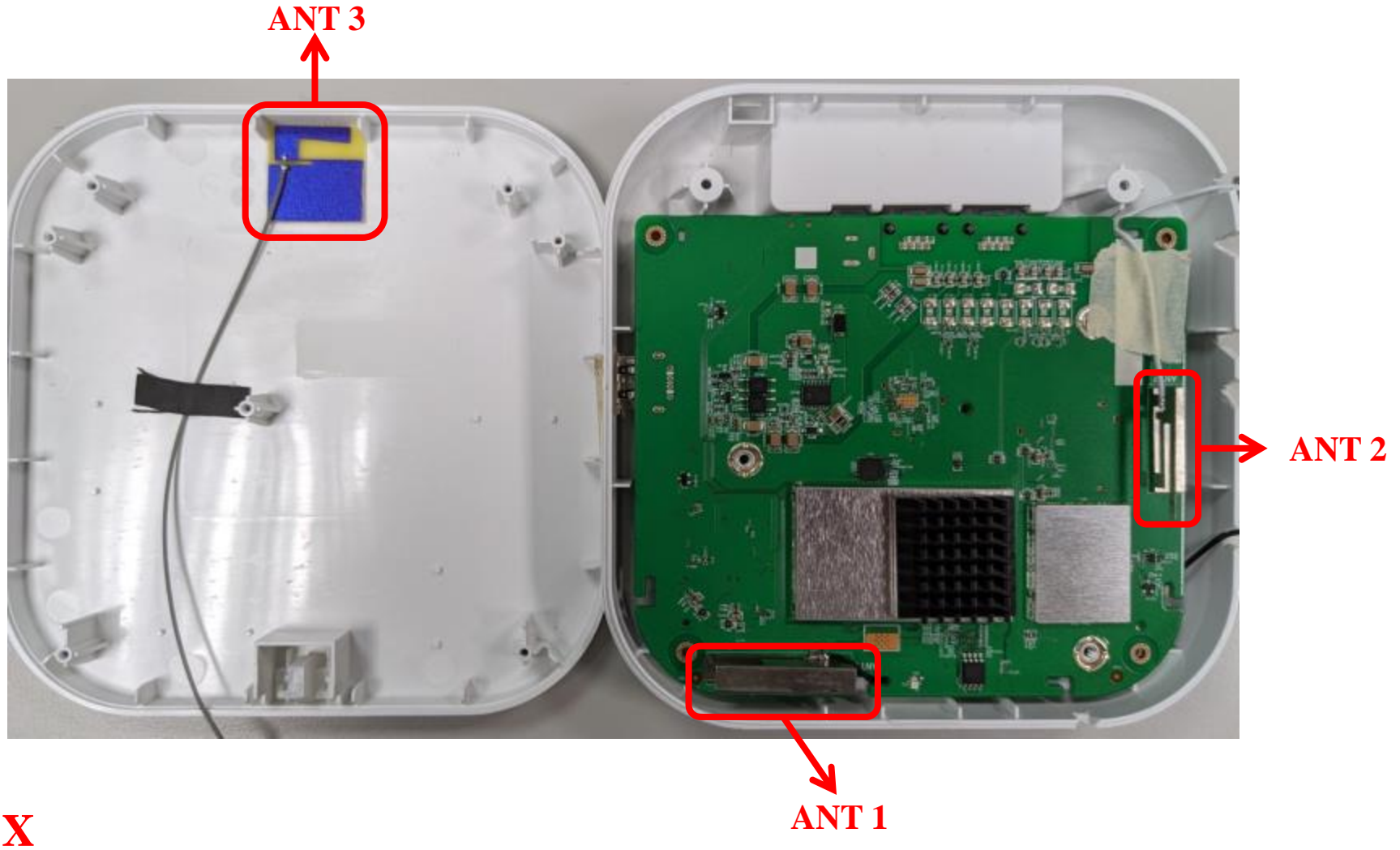
1. Measurement Information

1.1 Experimental Setup



1. Measurement Information

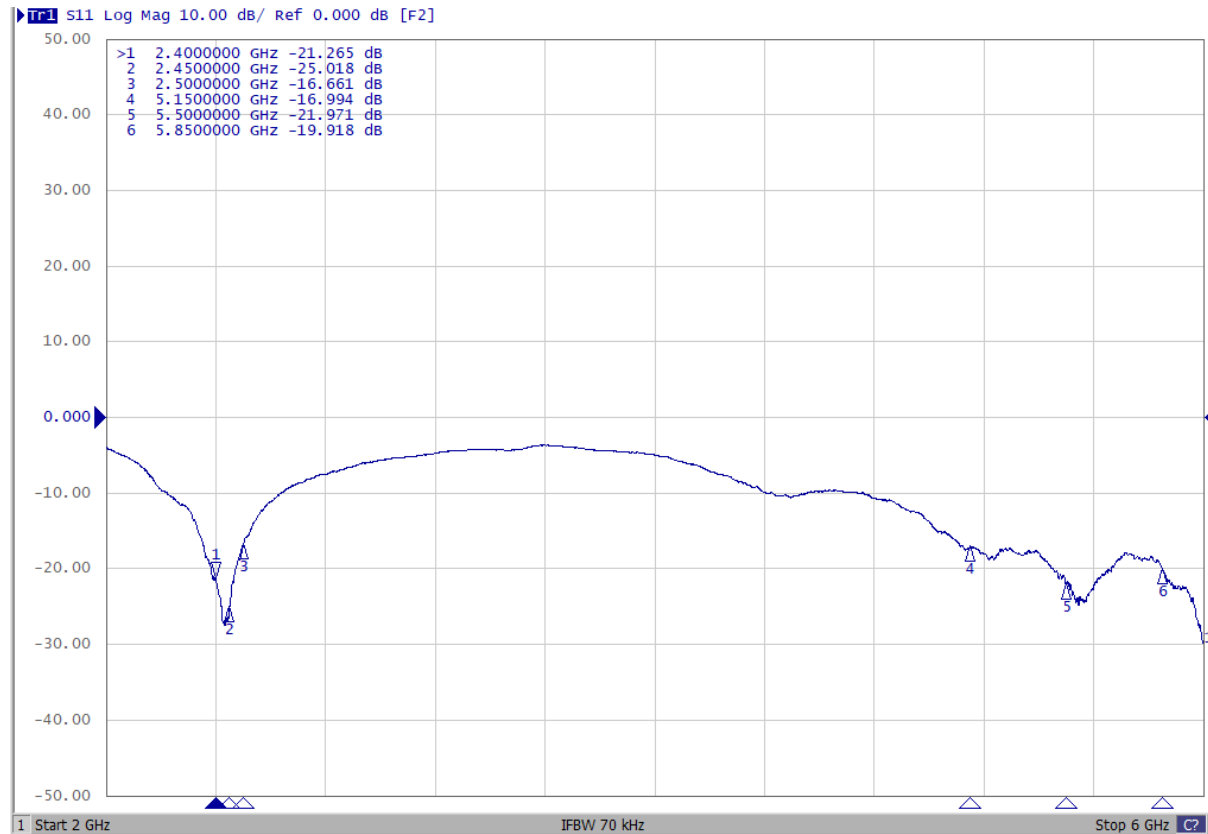
1.2 Antenna Solution Detail



2. Antenna Characteristics

2.1 Return Loss

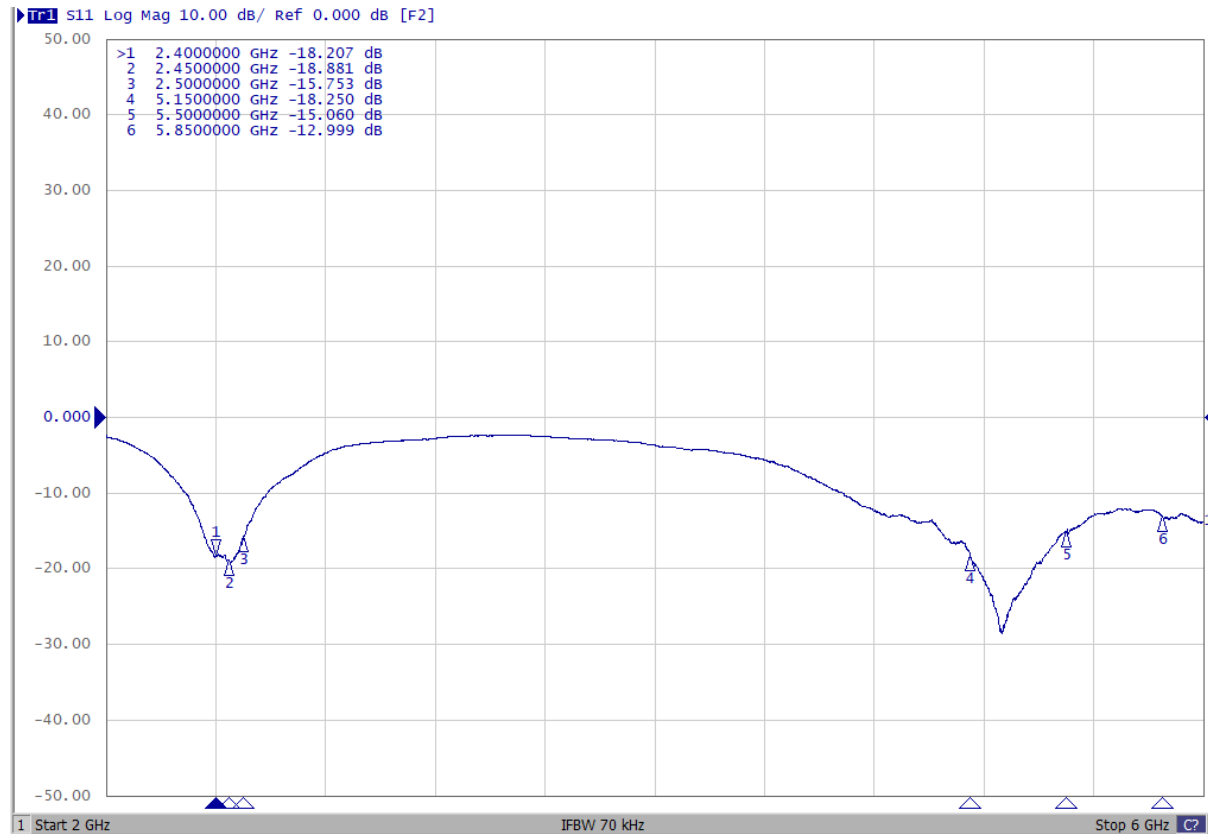
ANT1



2. Antenna Characteristics

2.1 Return Loss

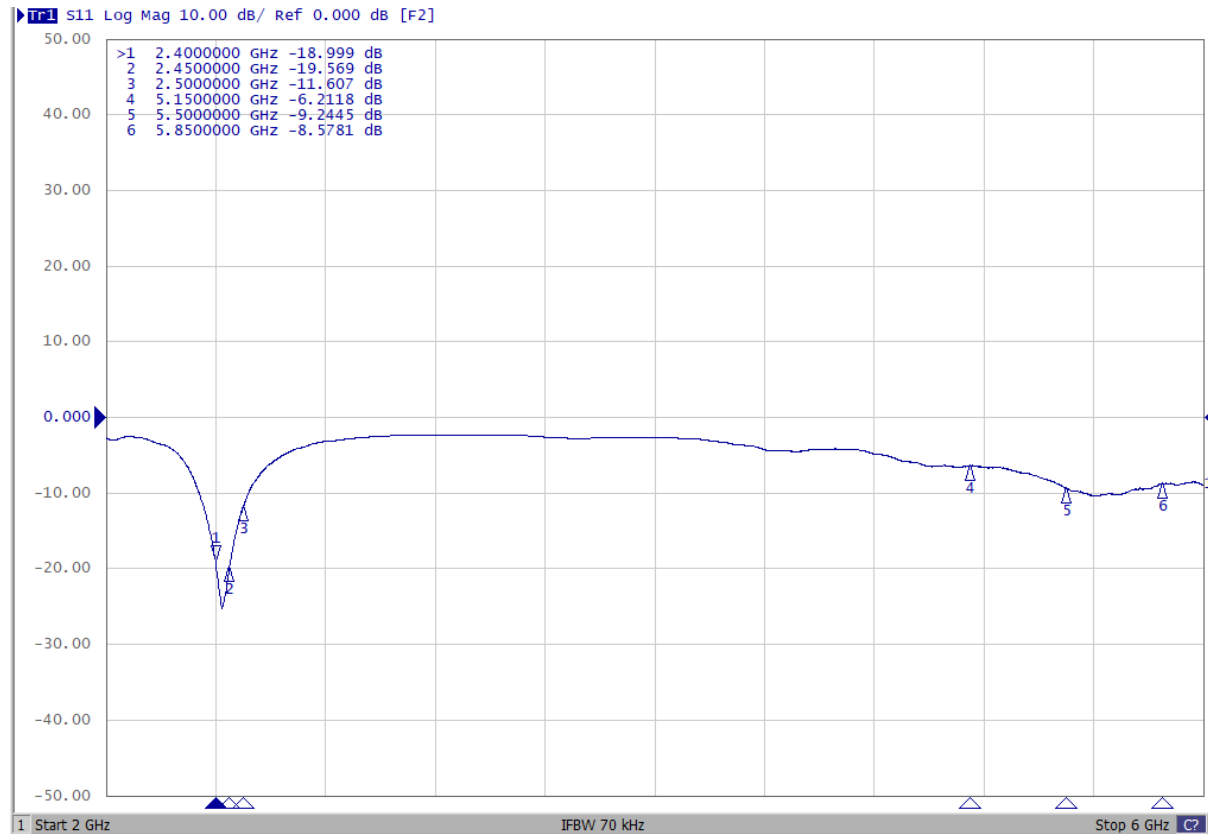
ANT2



2. Antenna Characteristics

2.1 Return Loss

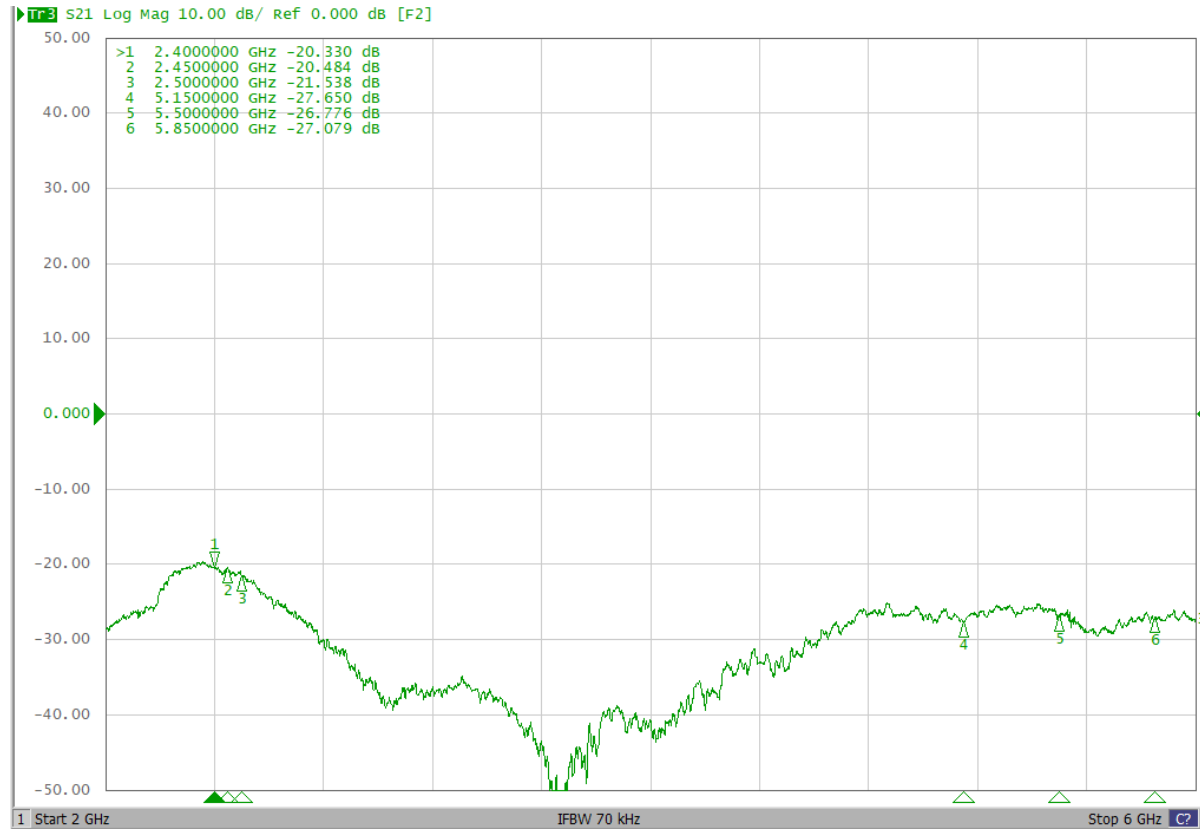
ANT3



2. Antenna Characteristics

2.1 Isolation

ANT1-ANT2



2. Antenna Characteristics

2.1 Isolation

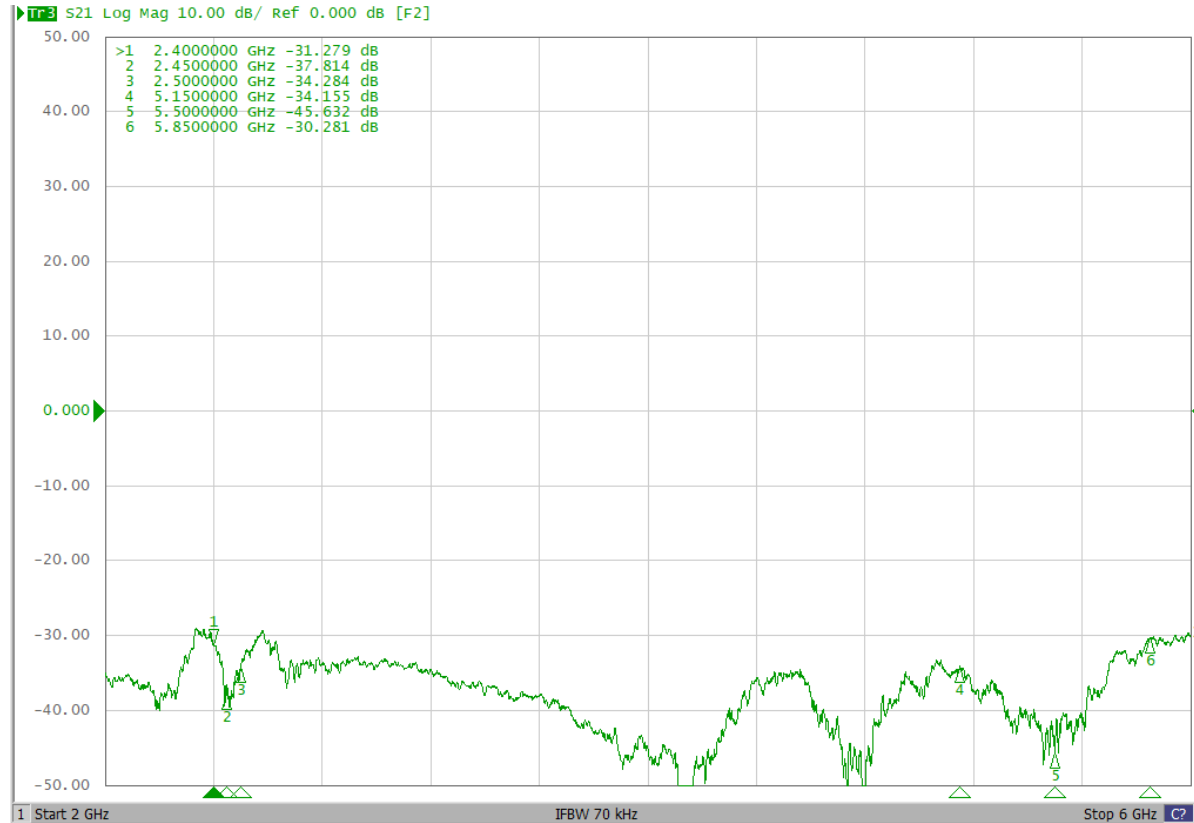
ANT1-ANT3



2. Antenna Characteristics

2.1 Isolation

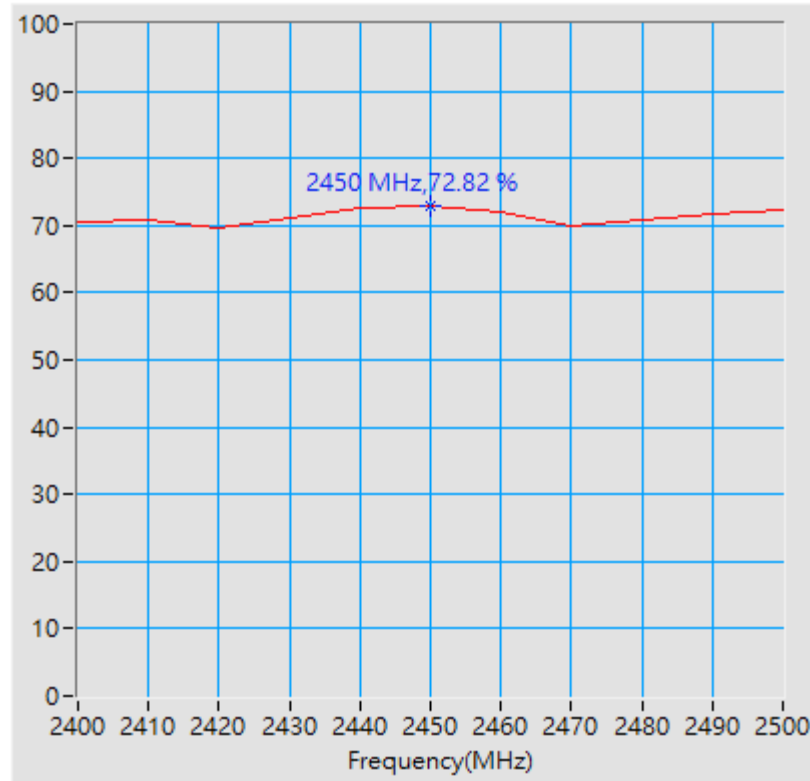
ANT2-ANT3



2. Antenna Characteristics

2.2 Antenna Efficiency

ANT1_2G

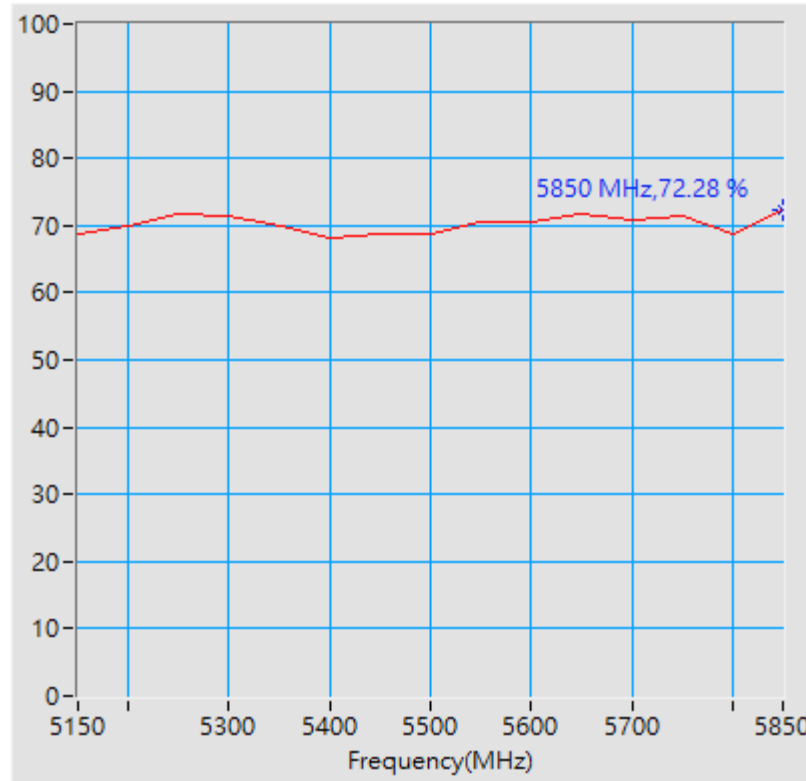


Maximum Efficiency at 2450 MHz : 72.82 %

2. Antenna Characteristics

2.2 Antenna Efficiency

ANT1_5G

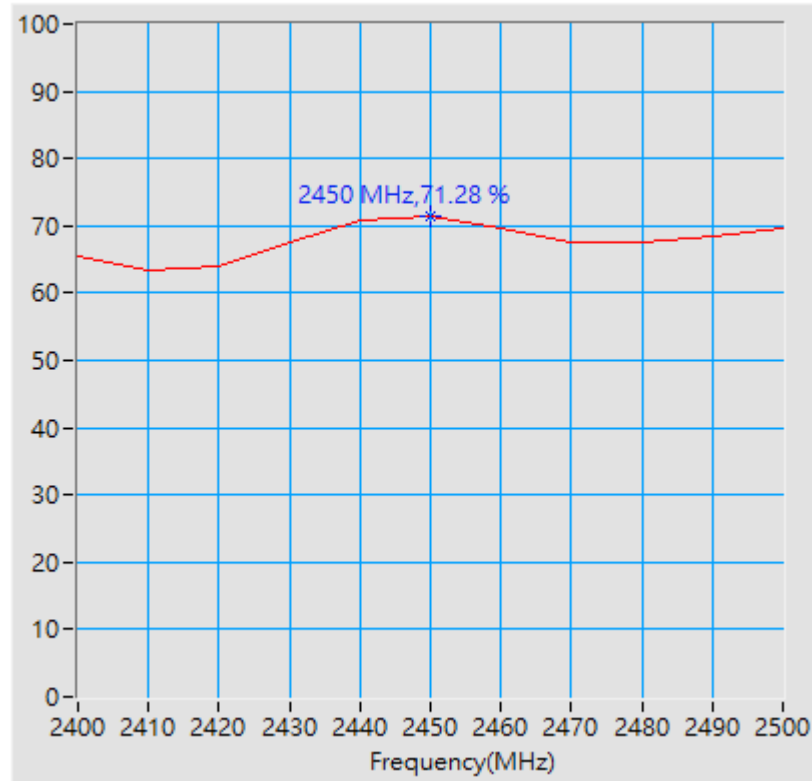


Maximum Efficiency at 5850 MHz : 72.28 %

2. Antenna Characteristics

2.2 Antenna Efficiency

ANT2_2G

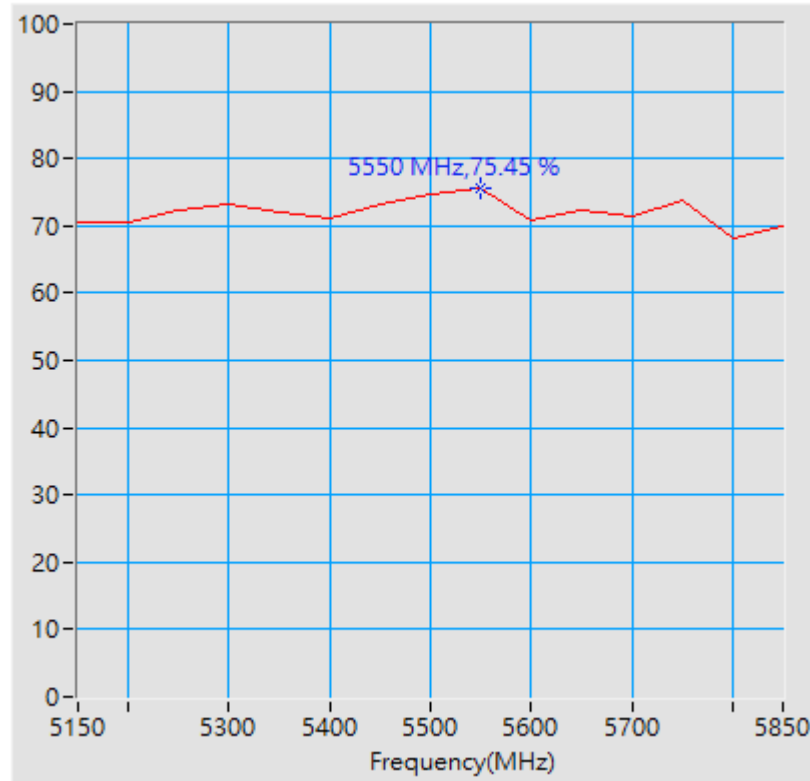


Maximum Efficiency at 2450 MHz : 71.28 %

2. Antenna Characteristics

2.2 Antenna Efficiency

ANT2_5G

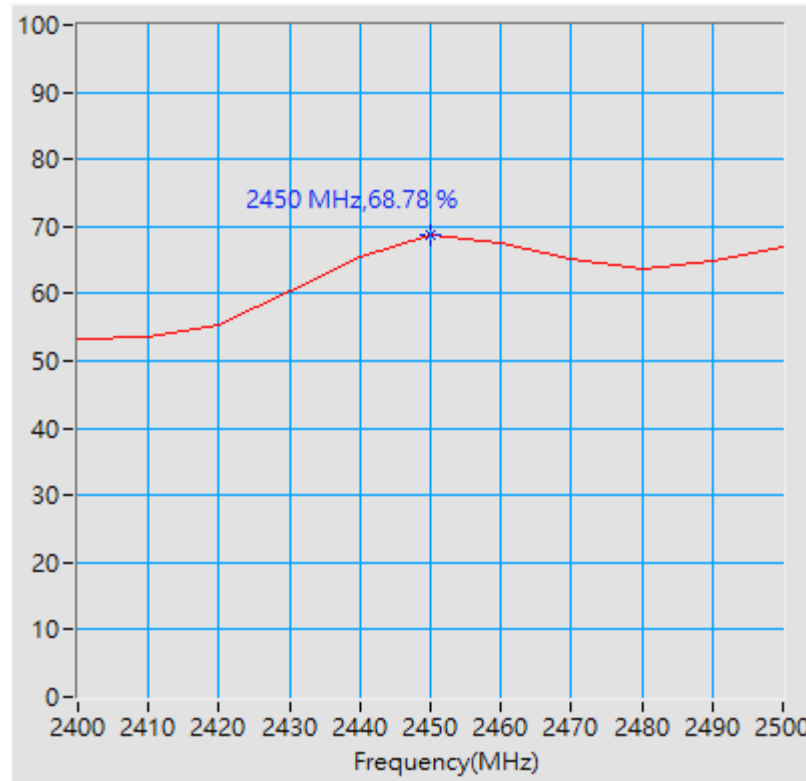


Maximum Efficiency at 5550 MHz : 75.45 %

2. Antenna Characteristics

2.2 Antenna Efficiency

ANT3

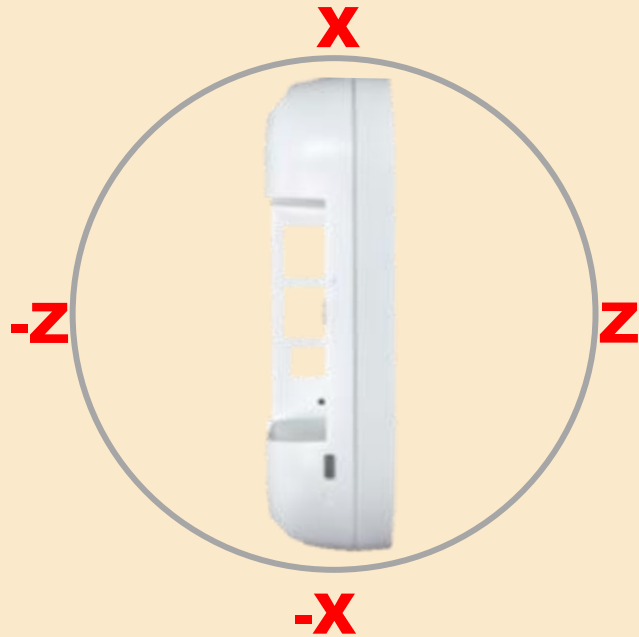


Maximum Efficiency at 2450 MHz : 68.78 %

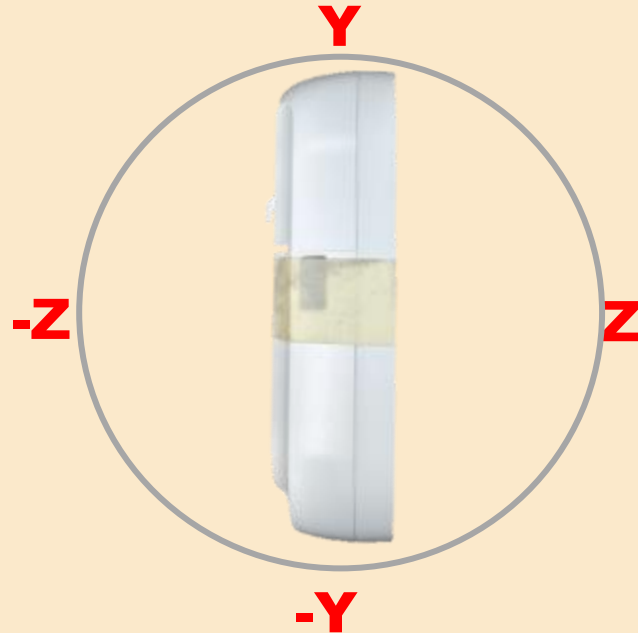
2. Antenna Characteristics

2.3 3 views of antenna

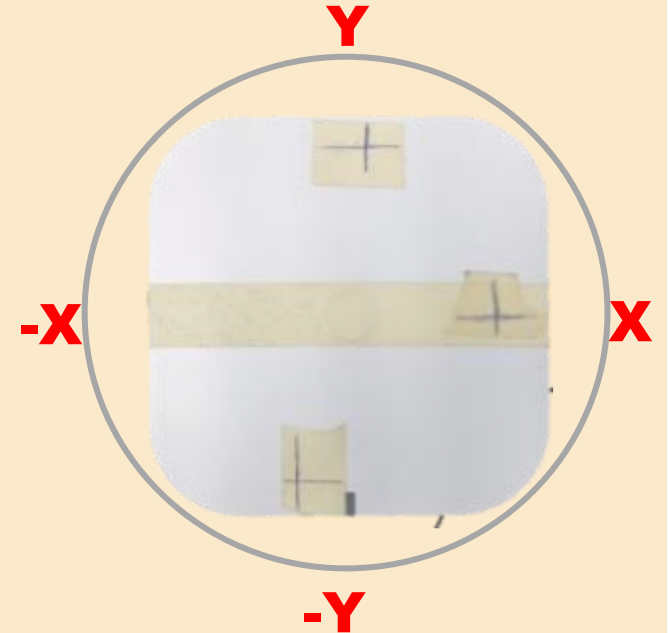
X-Z plane



Y-Z plane



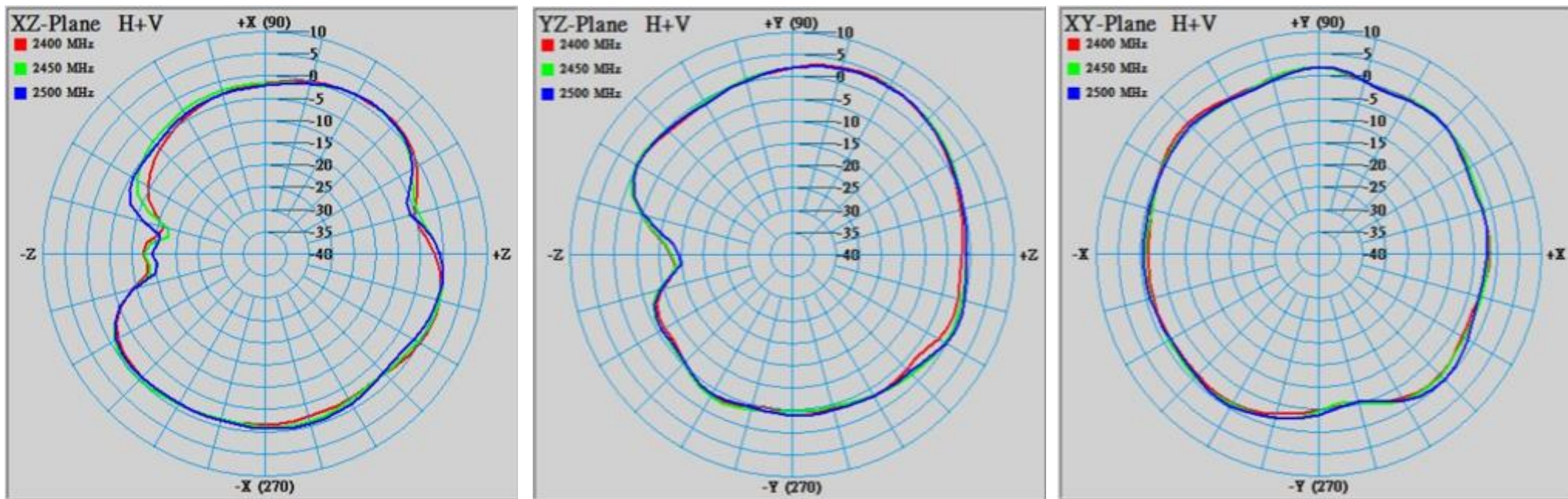
X-Y plane



2. Antenna Characteristics

ANT1_2G

2.3 2D Radiation Patterns

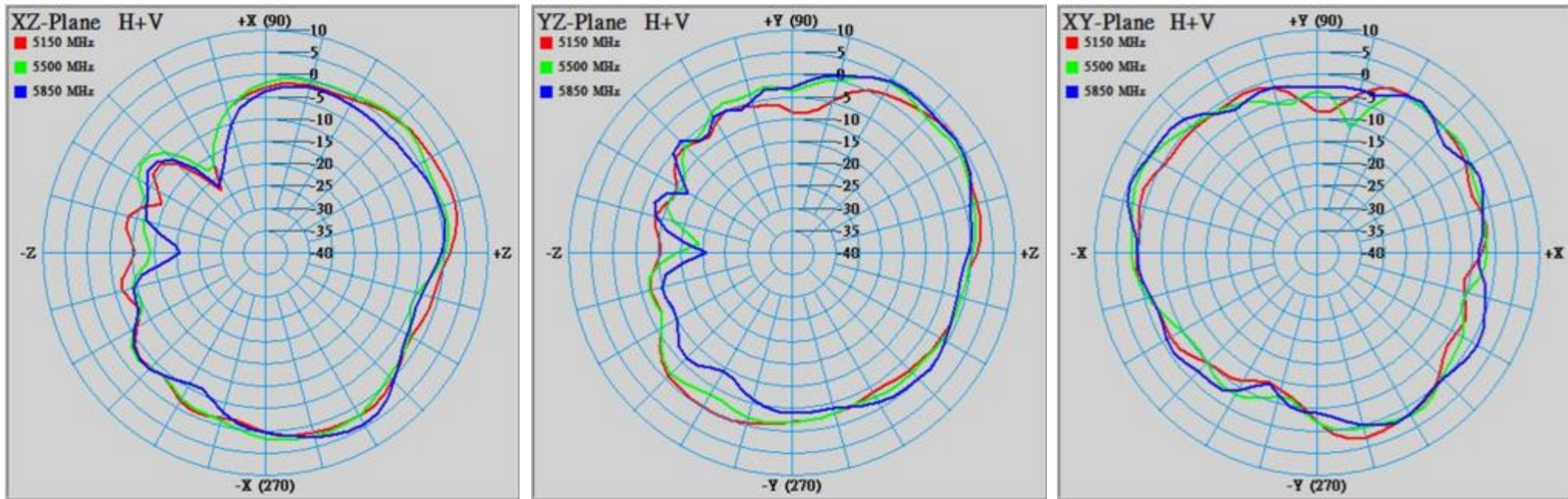


| Frequency [MHz] | ZX plane | | ZY plane | | XY plane | |
|-----------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|
| | Max Value [dBi] | Average [dBi] | Max Value [dBi] | Average [dBi] | Max Value [dBi] | Average [dBi] |
| 2400 | 1.48 | -1.90 | 3.96 | -0.91 | 2.06 | -0.85 |
| 2450 | 1.46 | -1.71 | 3.71 | -0.54 | 2.14 | -0.79 |
| 2500 | 1.54 | -1.84 | 3.57 | -0.66 | 2.06 | -0.79 |

2. Antenna Characteristics

ANT1_5G

2.3 2D Radiation Patterns

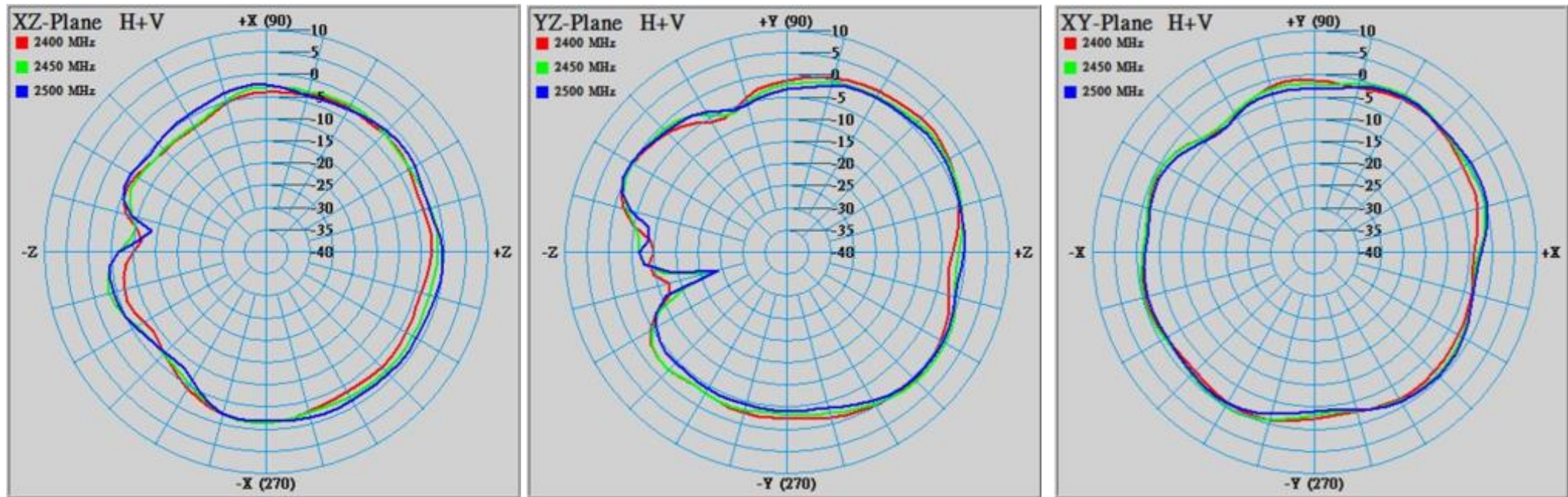


| Frequency [MHz] | ZX plane | | ZY plane | | XY plane | |
|-----------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|
| | Max Value [dBi] | Average [dBi] | Max Value [dBi] | Average [dBi] | Max Value [dBi] | Average [dBi] |
| 5150 | 4.03 | -0.90 | 4.76 | -1.22 | 2.94 | -1.20 |
| 5500 | 2.70 | -1.29 | 4.10 | -1.12 | 3.68 | -0.86 |
| 5850 | 4.44 | -1.96 | 4.73 | -1.14 | 4.63 | -0.22 |

2. Antenna Characteristics

ANT2_2G

2.3 2D Radiation Patterns

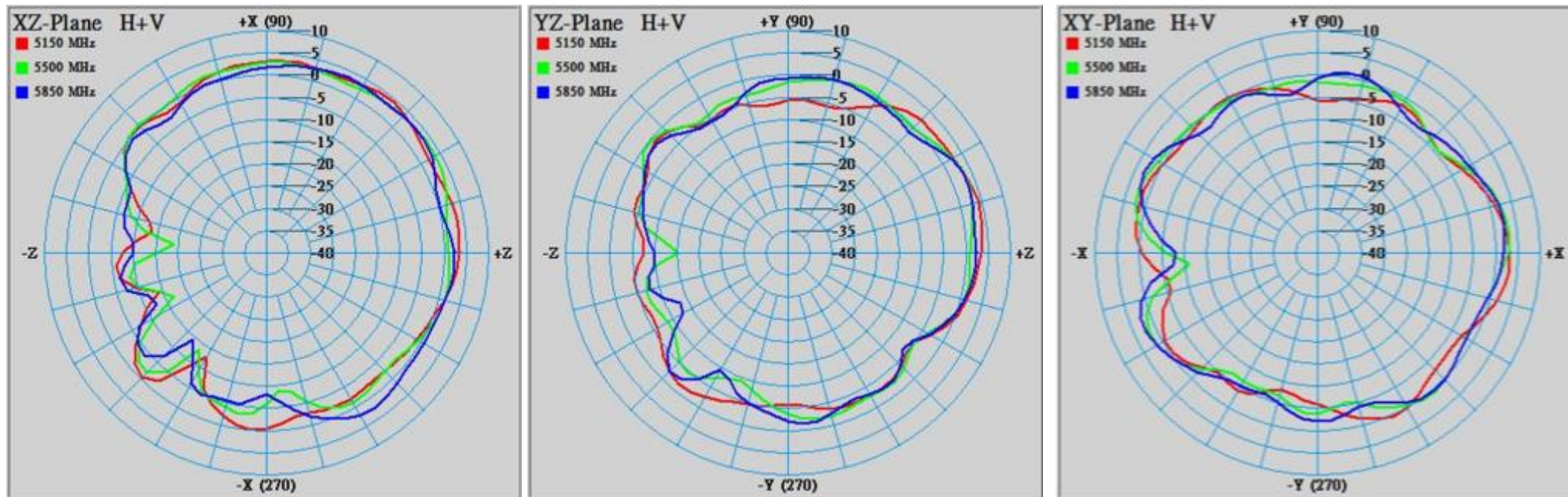


| Frequency [MHz] | ZX plane | | ZY plane | | XY plane | |
|-----------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|
| | Max Value [dBi] | Average [dBi] | Max Value [dBi] | Average [dBi] | Max Value [dBi] | Average [dBi] |
| 2400 | -1.42 | -4.15 | 3.52 | -1.09 | 0.05 | -1.66 |
| 2450 | -1.14 | -3.32 | 2.00 | -1.23 | 0.88 | -1.23 |
| 2500 | 0.06 | -2.81 | 1.33 | -1.71 | 0.78 | -1.52 |

2. Antenna Characteristics

ANT2_5G

2.3 2D Radiation Patterns

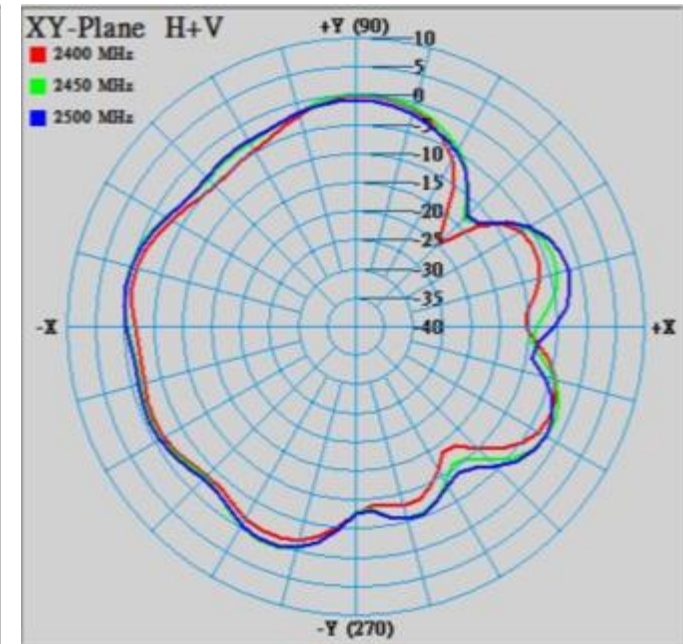
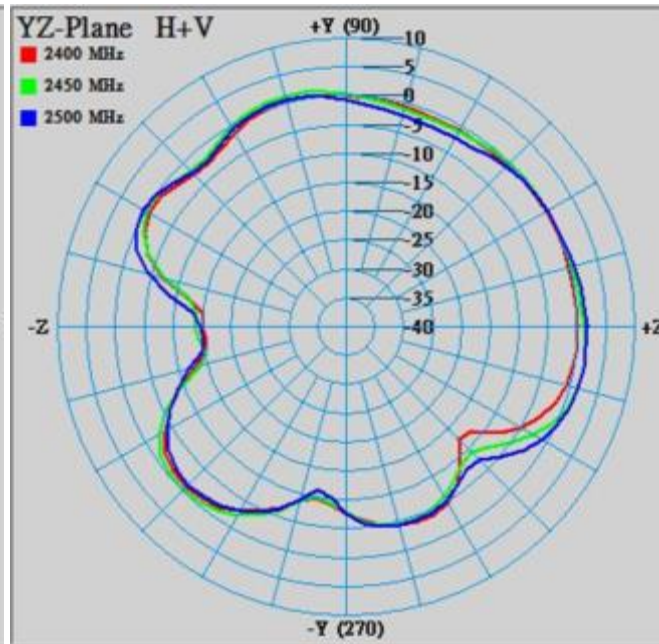
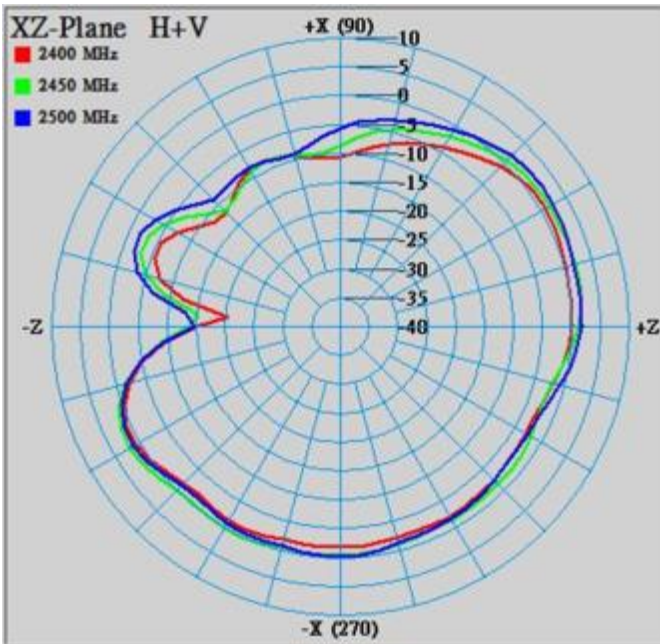


| Frequency [MHz] | ZX plane | | ZY plane | | XY plane | |
|-----------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|
| | Max Value [dBi] | Average [dBi] | Max Value [dBi] | Average [dBi] | Max Value [dBi] | Average [dBi] |
| 5150 | 4.37 | 0.30 | 4.27 | -1.37 | 3.24 | -1.17 |
| 5500 | 3.94 | -0.14 | 3.43 | -1.73 | 3.22 | -0.67 |
| 5850 | 3.72 | -0.06 | 3.29 | -1.75 | 3.02 | -0.67 |

2. Antenna Characteristics

ANT3

2.3 2D Radiation Patterns



| Frequency [MHz] | ZX plane | | ZY plane | | XY plane | |
|-----------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|
| | Max Value [dBi] | Average [dBi] | Max Value [dBi] | Average [dBi] | Max Value [dBi] | Average [dBi] |
| 2400 | 1.03 | -2.62 | 0.54 | -2.28 | 0.15 | -3.75 |
| 2450 | 2.20 | -1.35 | 1.78 | -1.60 | 0.62 | -2.62 |
| 2500 | 2.55 | -1.19 | 1.80 | -1.81 | 0.42 | -2.66 |

3. Summary

※ The performance of antennas is shown in table

| | ANT 1 | | ANT 2 | | ANT 3 |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|
| | 2G | 5G | 2G | 5G | |
| Maximum Peak gain(dBi) | 3.96 | 4.76 | 3.52 | 4.37 | 2.55 |
| Maximum Efficiency(%) | 72.82 | 72.28 | 71.28 | 75.45 | 68.78 |

Thank you

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