

# *DAP-X3060*

## Antenna Test Report



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# Comments

- Revised History
- Specification
- Return Loss Results
- 2D/3D Radiation Pattern Results(Peak Gain)

# Specification

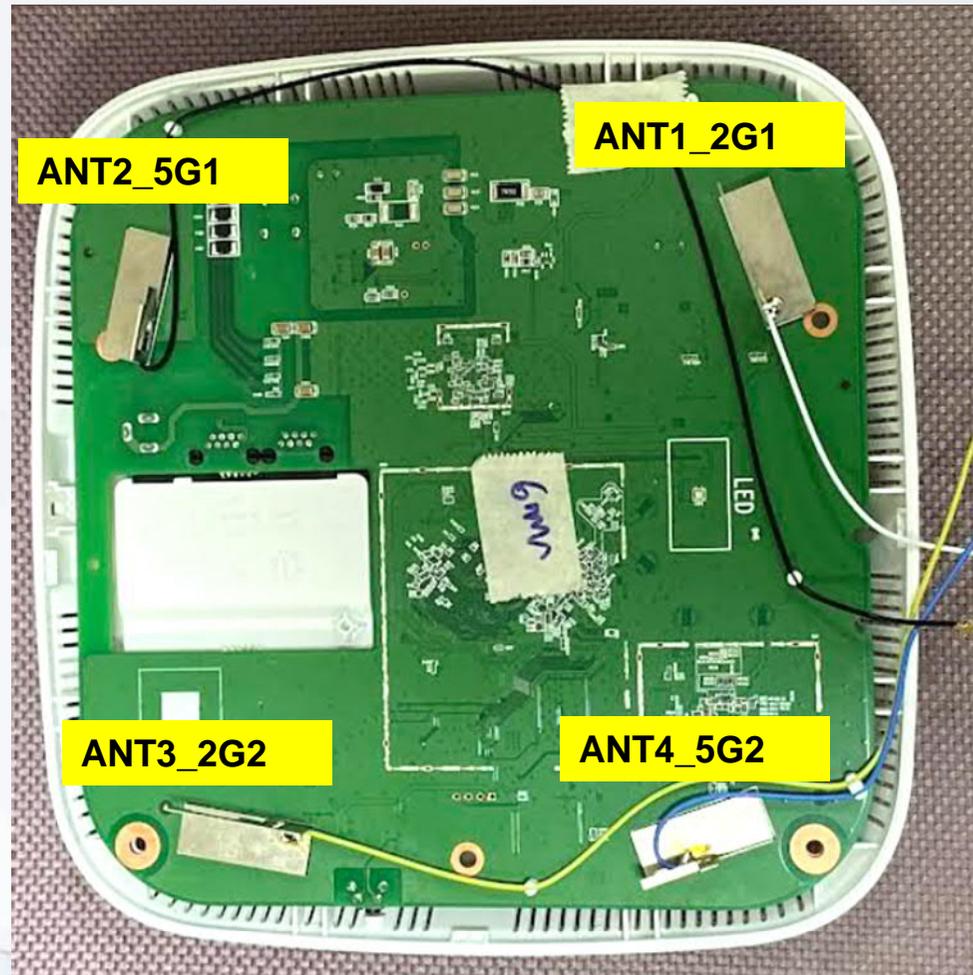
## Requirements of Antenna Design

RF Function	Number of ANT	Frequency Band	Remark
WiFi 2G	1/3	2400-2500 MHz	
WiFi 5G	2/4	4900-5850MHz	

## Requirements of Measurement

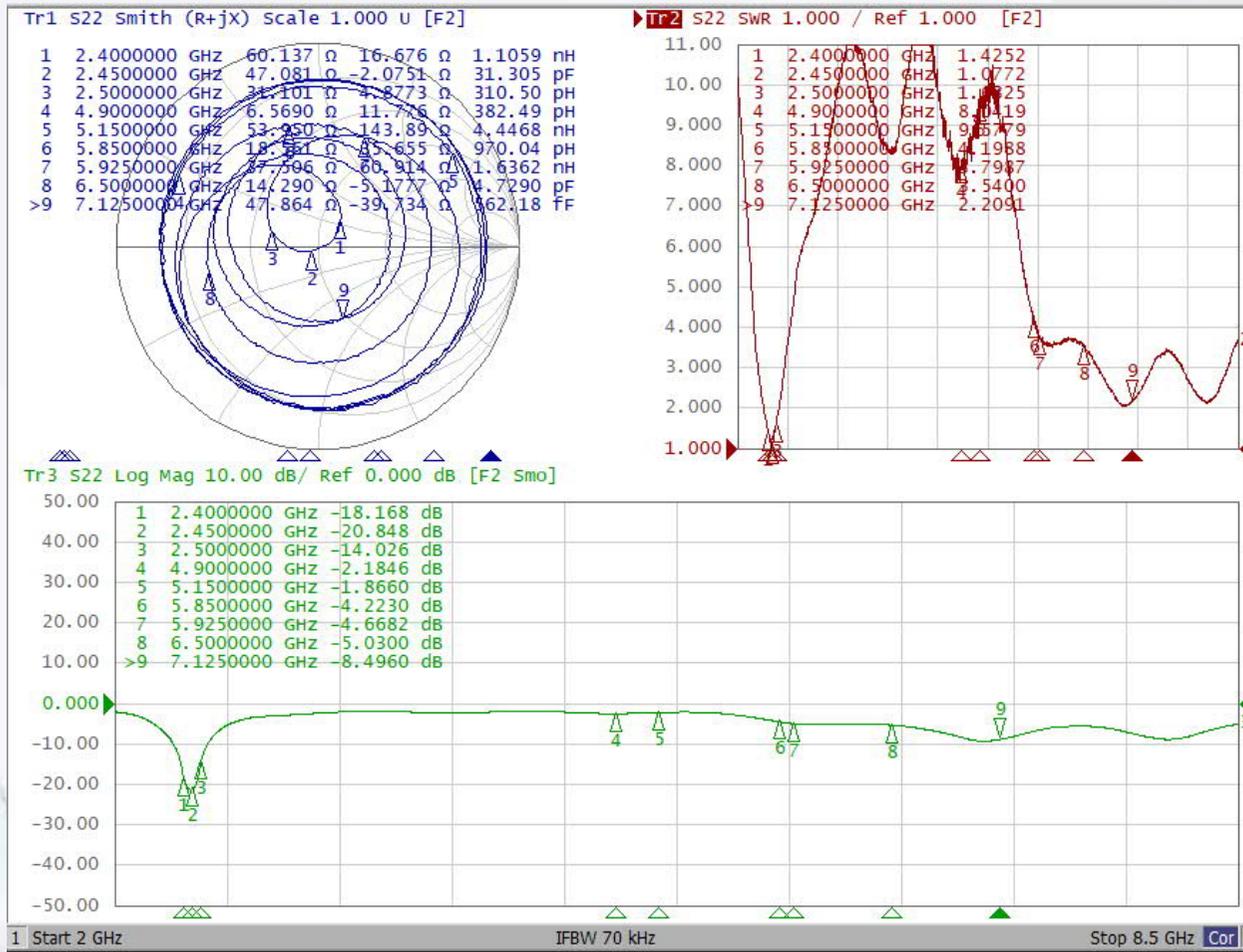
Test Item	Specification	Remark
Return Loss	> 10 dB	
Isolation	> 20 dB	
Peak gain	NA	
Efficiency	NA	
Radiation pattern	Scale: +10 ~ -40dBi, Angle step size: 2 degree	

# Antenna Placement & Solution



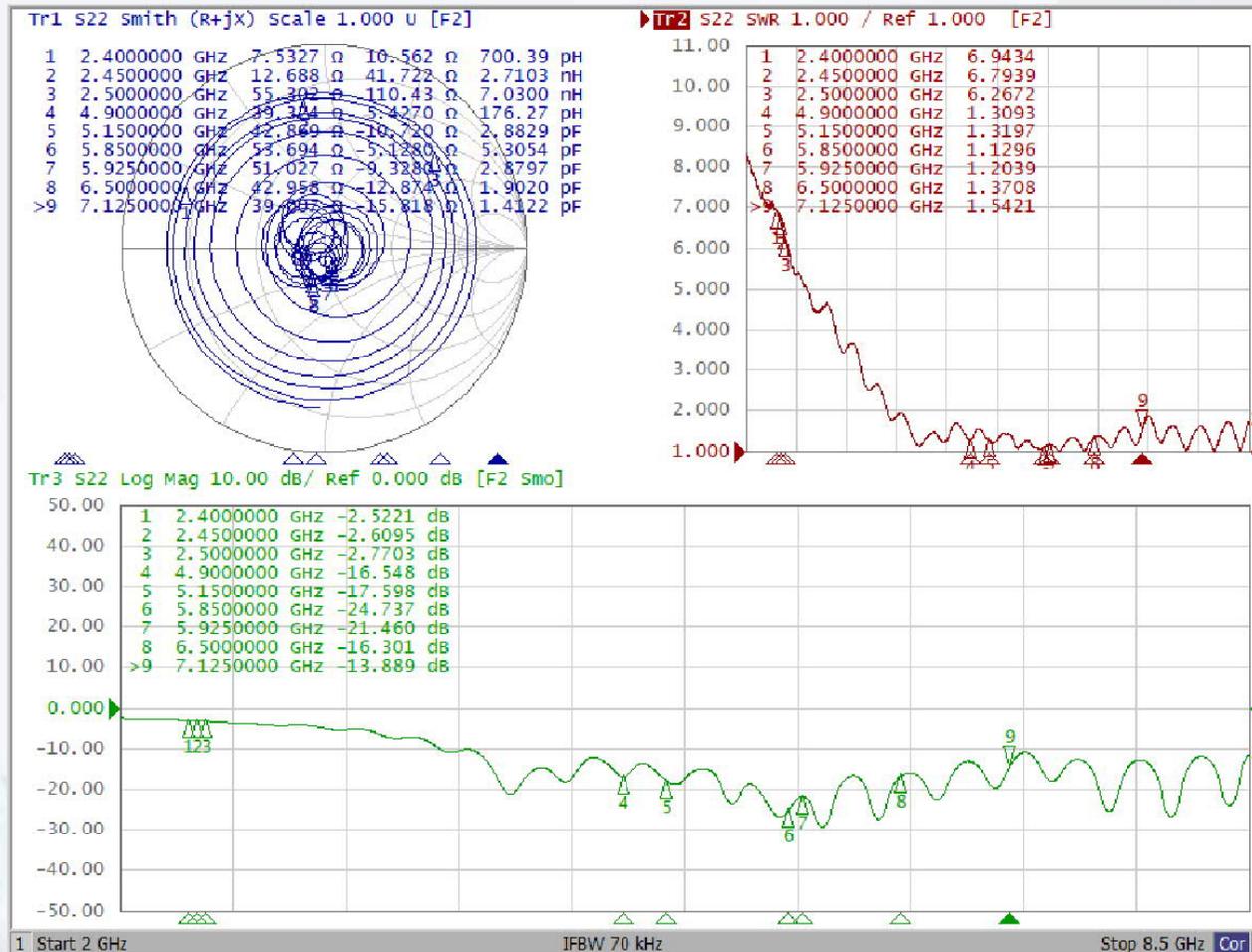
# Return Loss Results

A1\_2G1



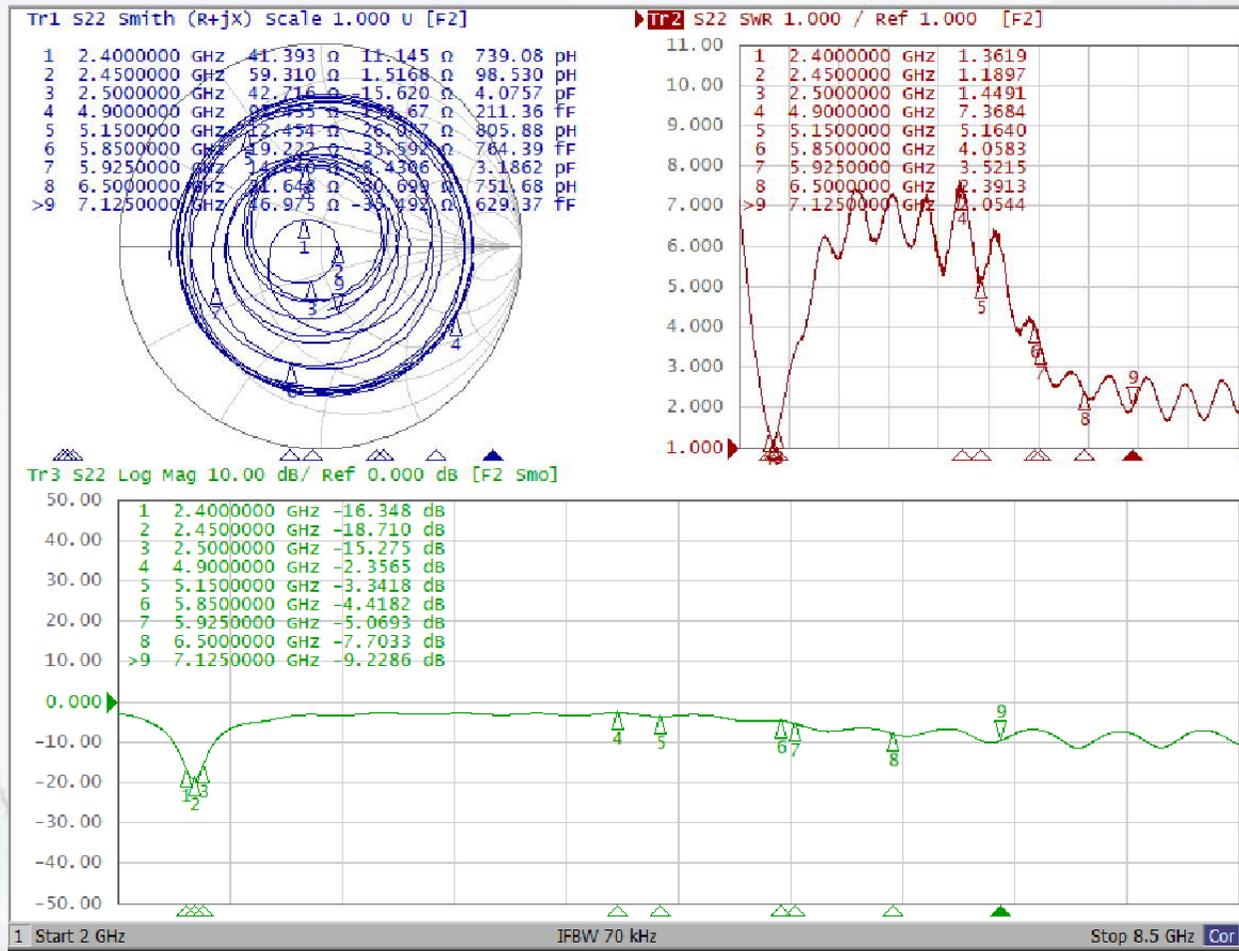
# Return Loss Results

A2\_5G6G1



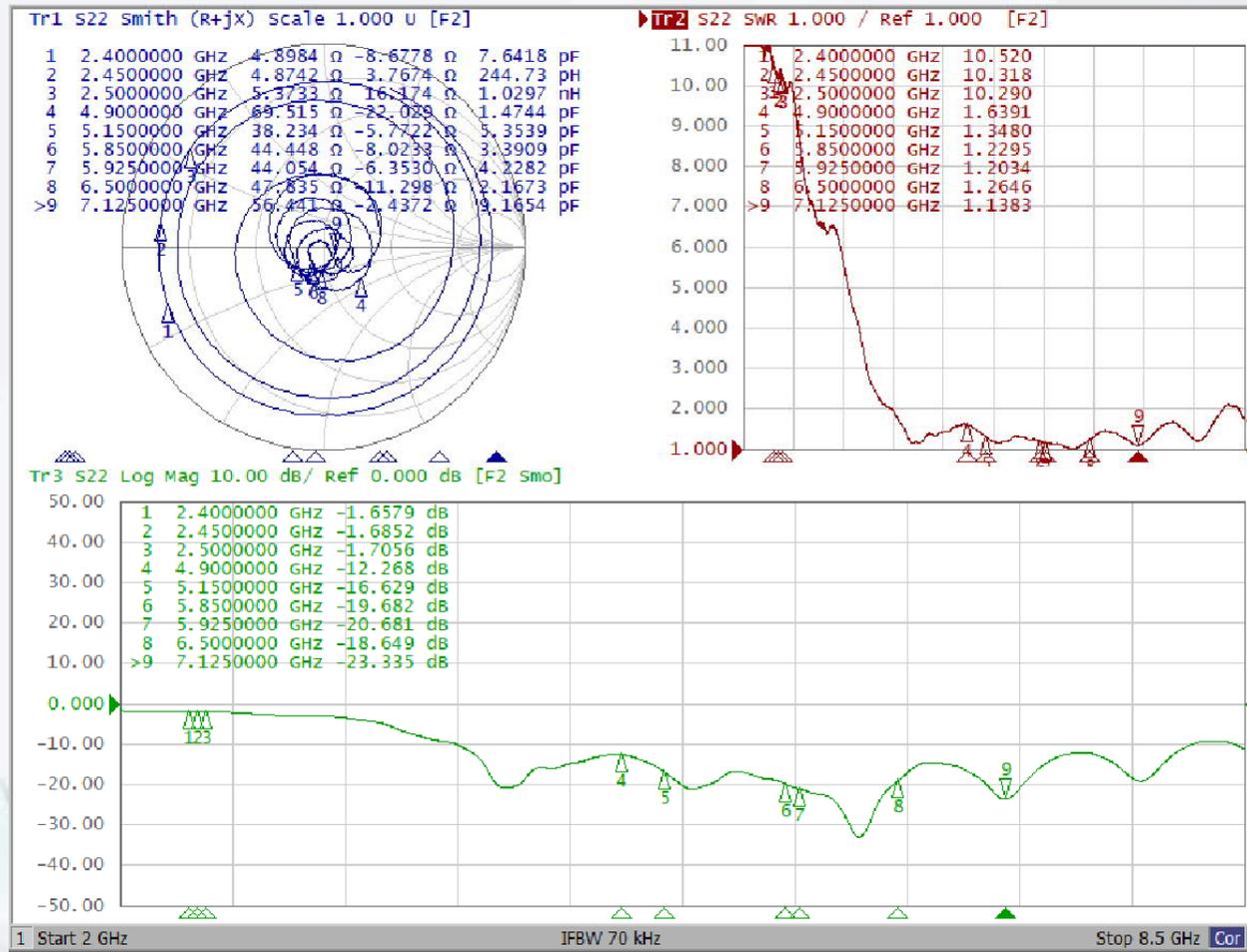
# Return Loss Results

A3\_2G2



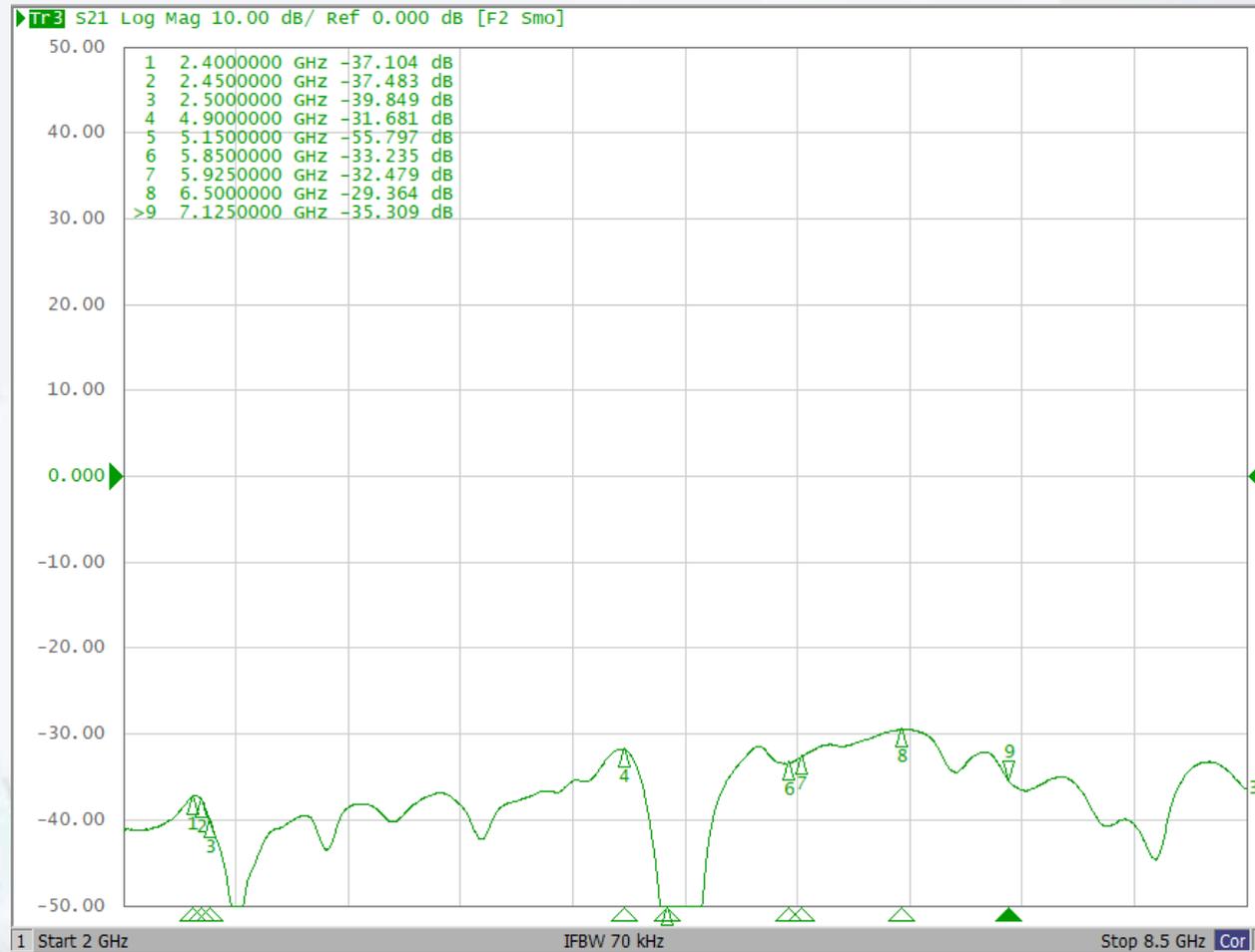
# Return Loss Results

A4\_5G6G2



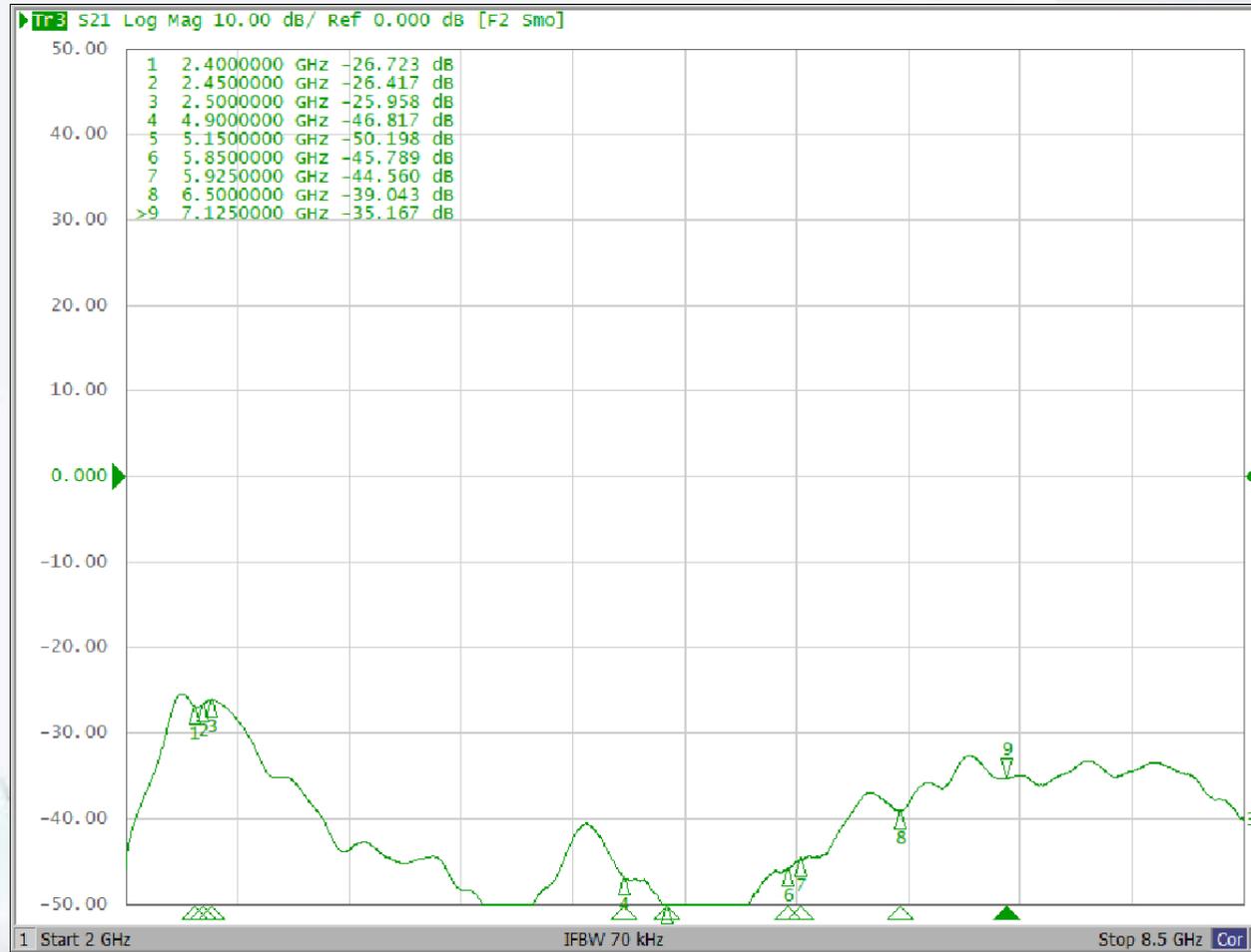
# Isolation Results

## ANT 1&2



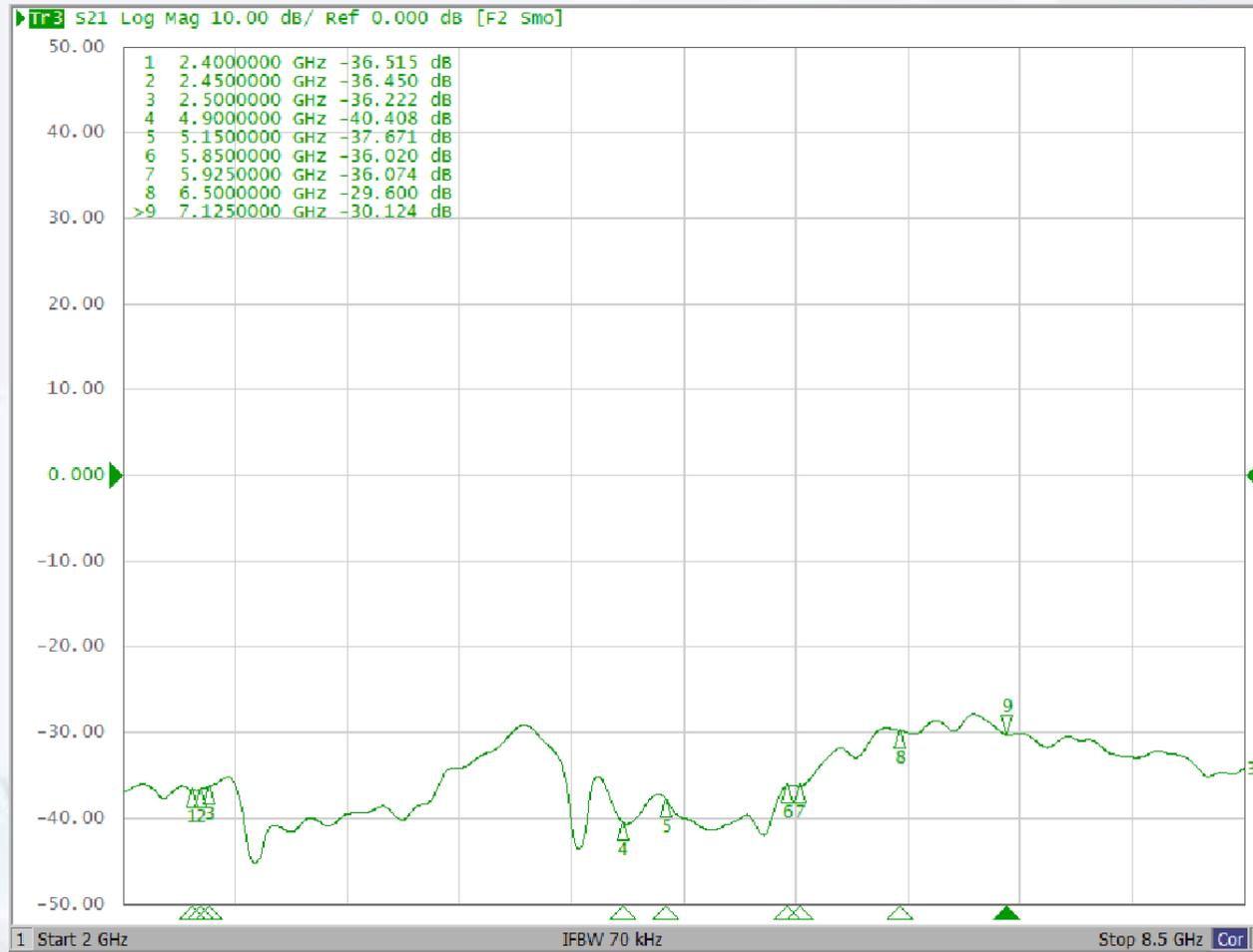
# Isolation Results

## ANT 1&3



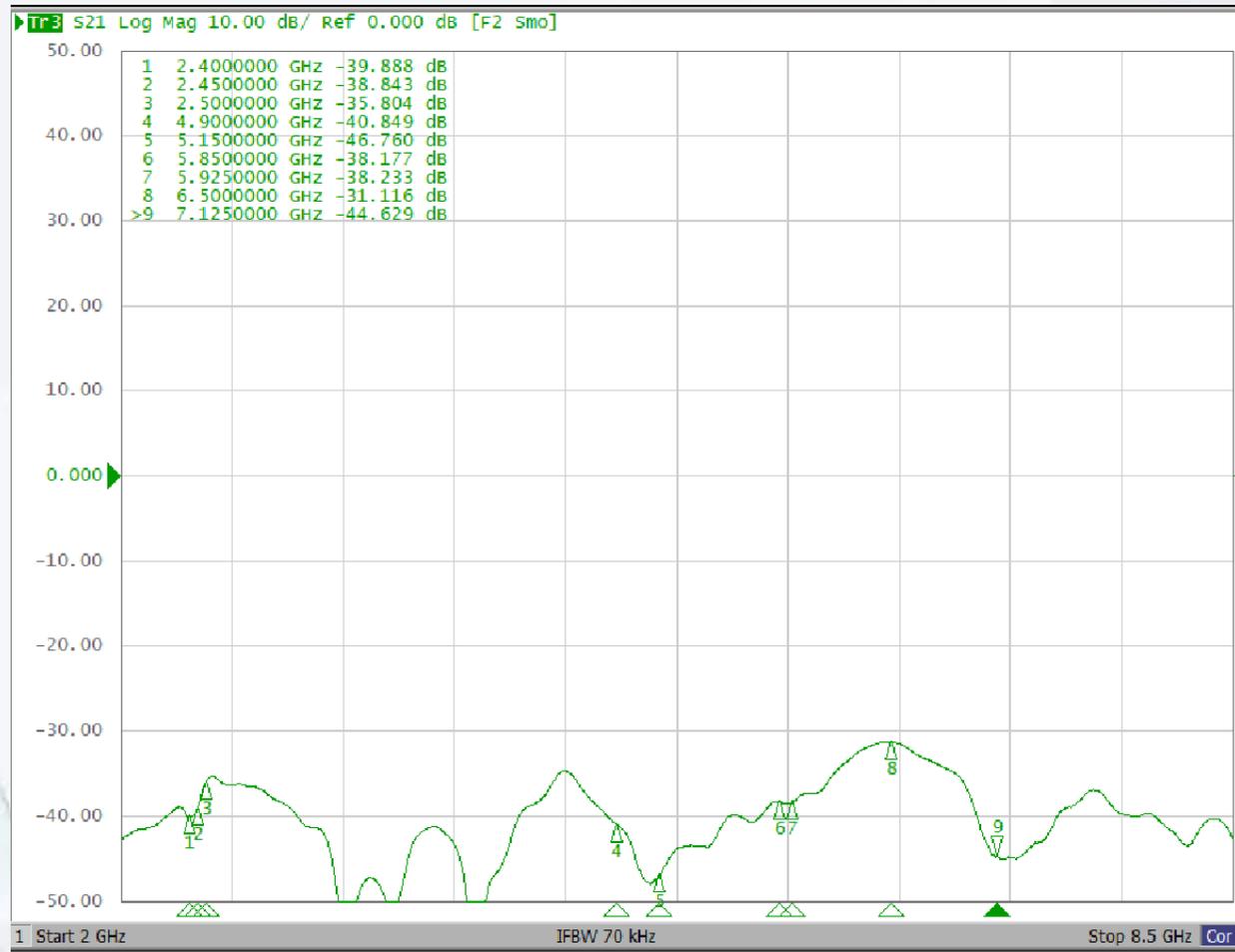
# Isolation Results

## ANT 1&4



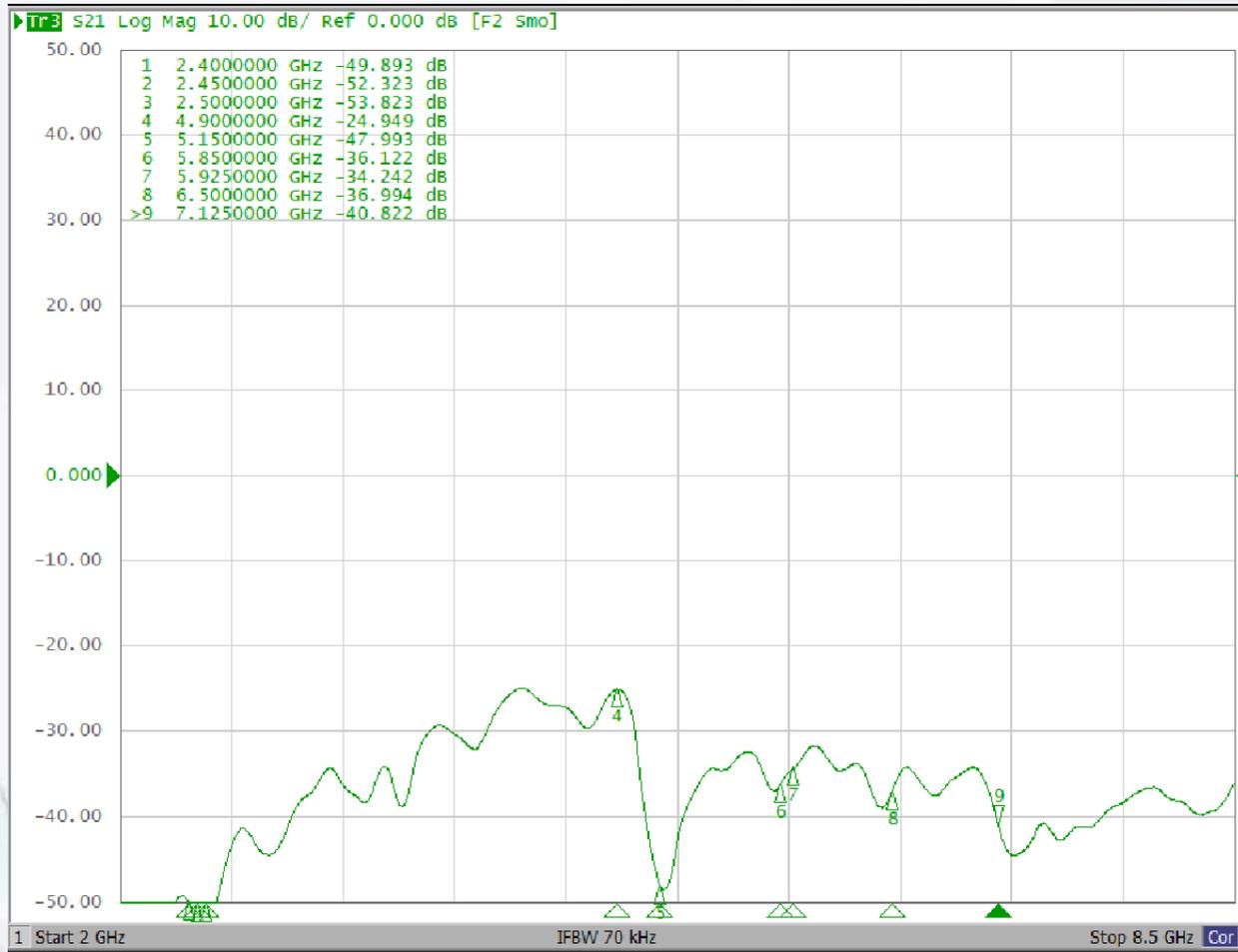
# Isolation Results

## ANT 2&3



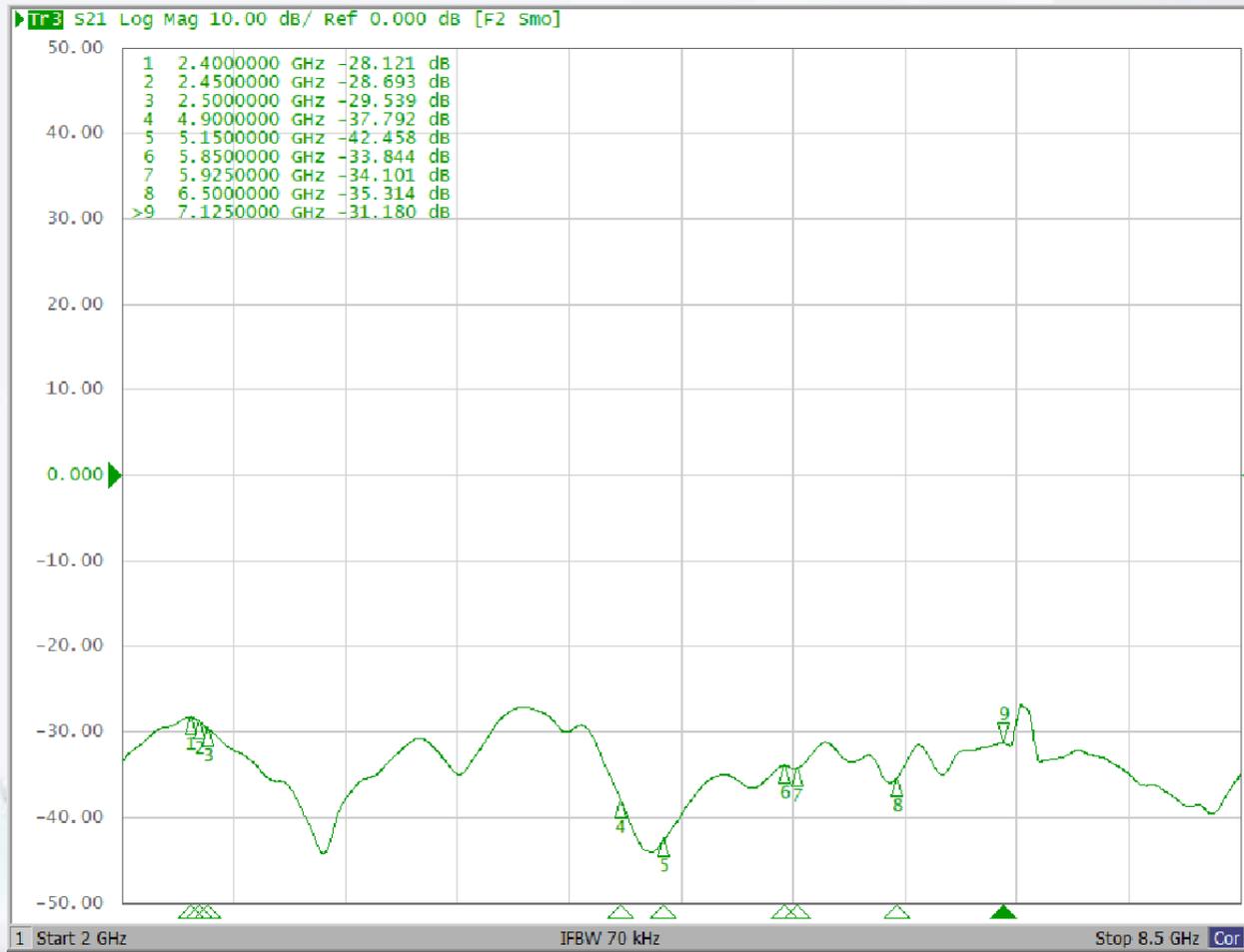
# Isolation Results

## ANT 2&4



# Isolation Results

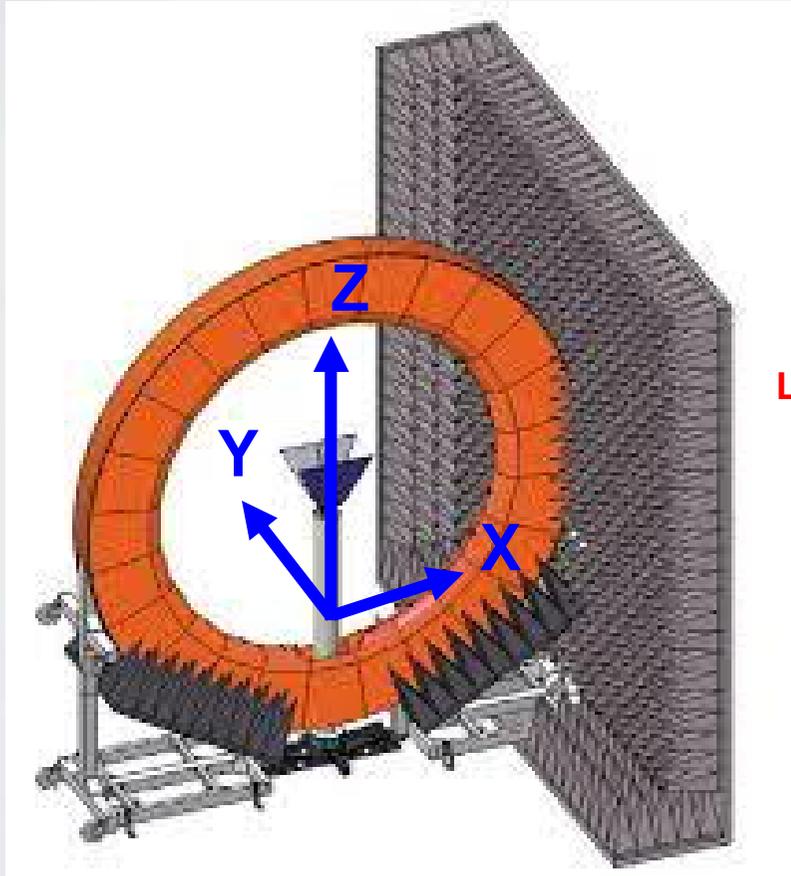
## ANT 3&4



# Test Setup for Radiation Pattern Measurement

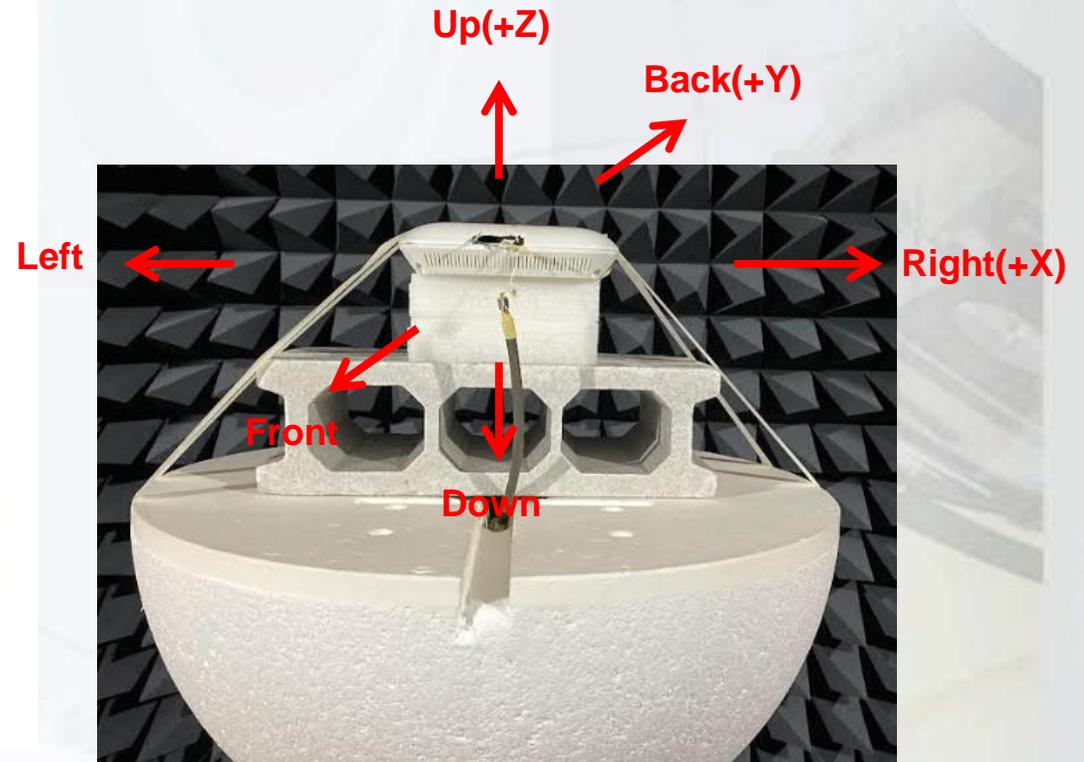
## Measurement

### Chamber Information



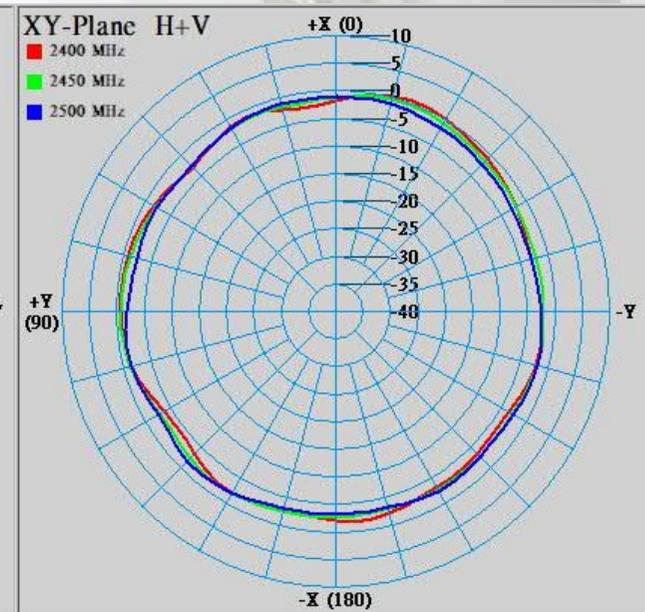
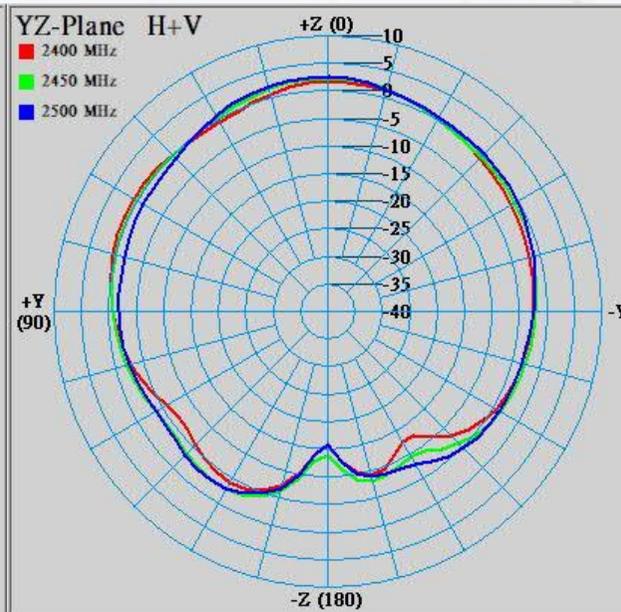
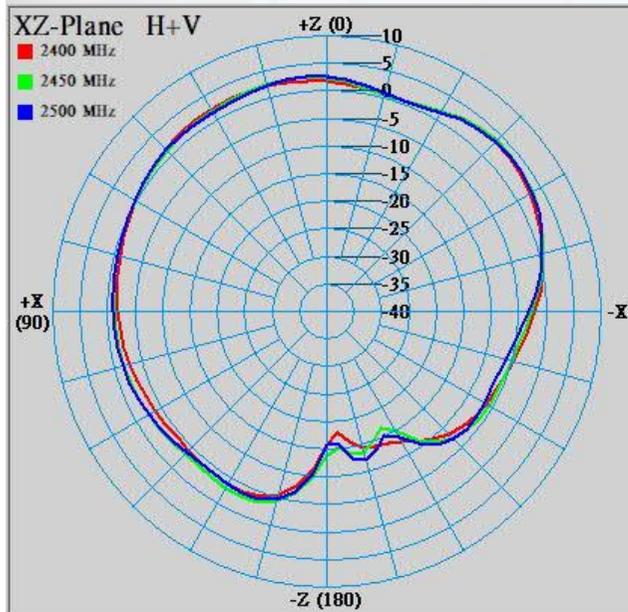
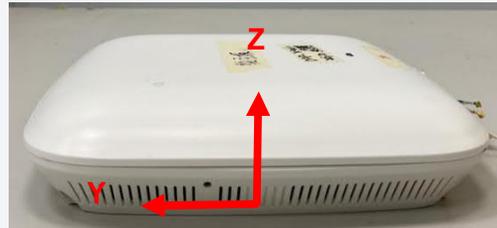
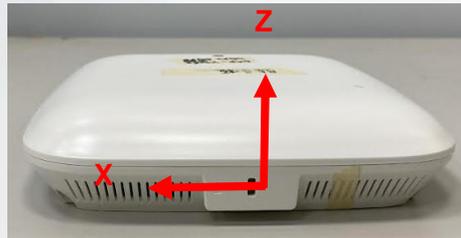
- **SATIMO SG-24L Multi-Probe Antenna Measurement System**

- Angle between probes: 15°
- Frequency range: 400 MHz – 9 GHz
- Chamber Room Size: 5m L x 5m W x 5m H



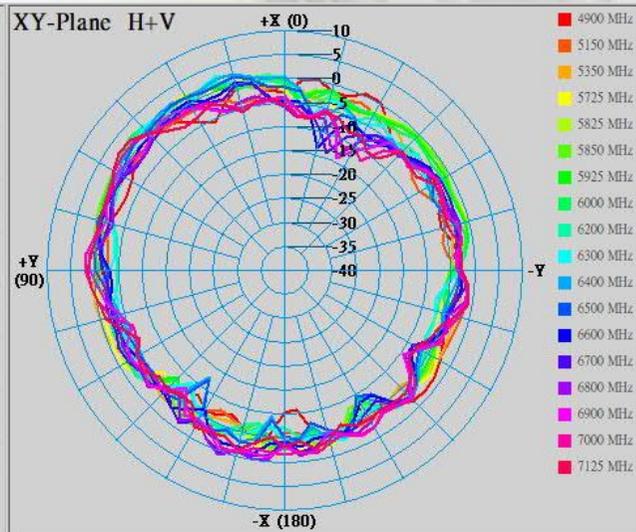
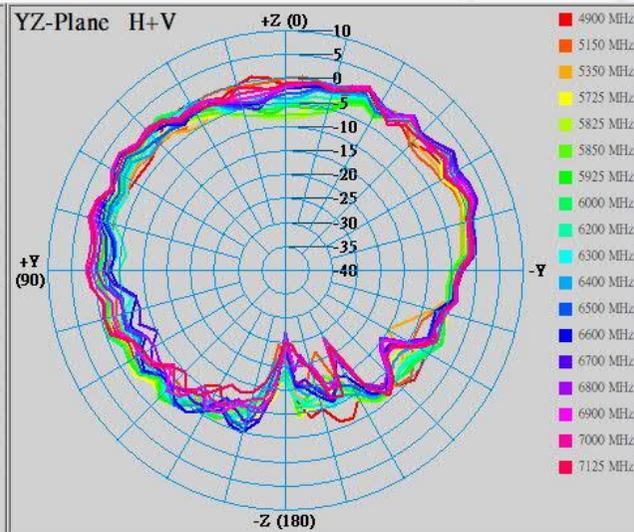
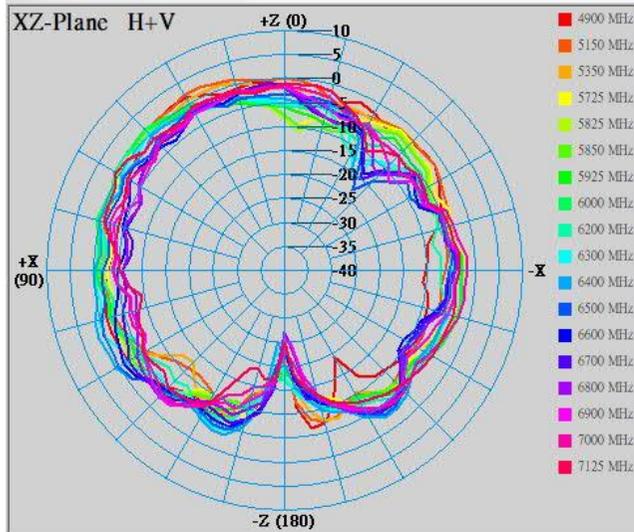
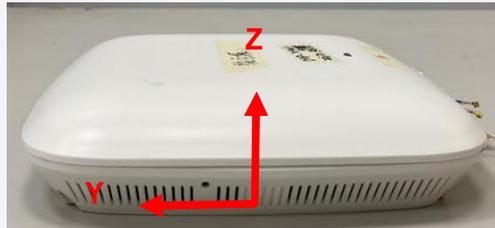
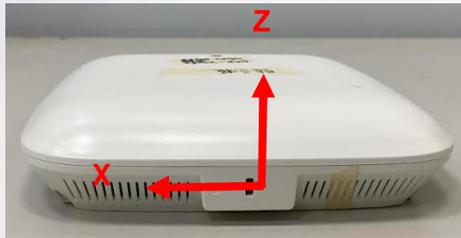
# 2D Radiation Pattern Results

## Ant1-2G1



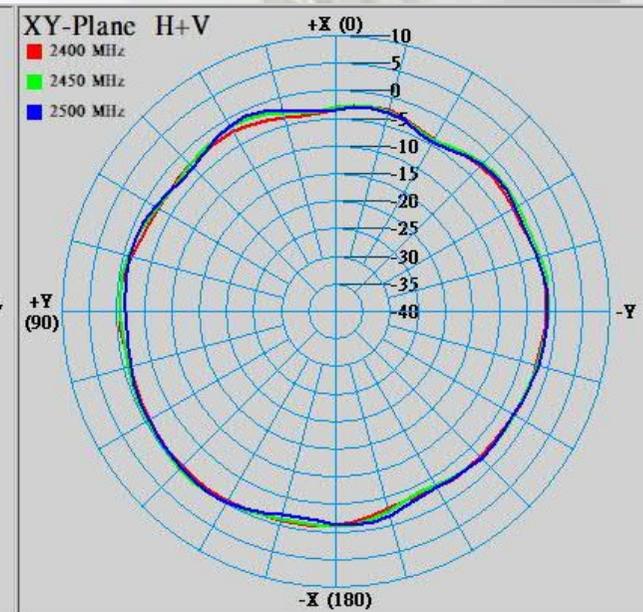
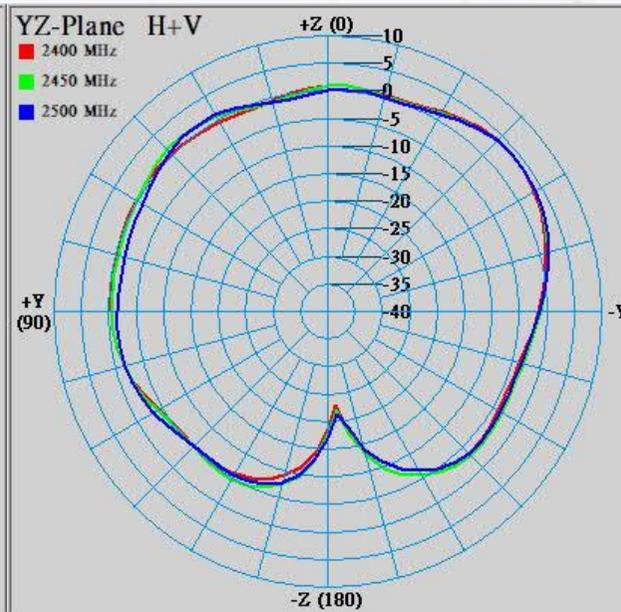
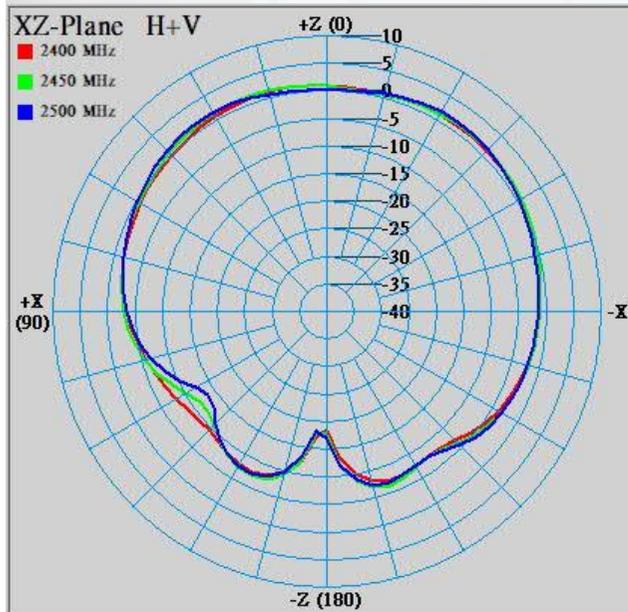
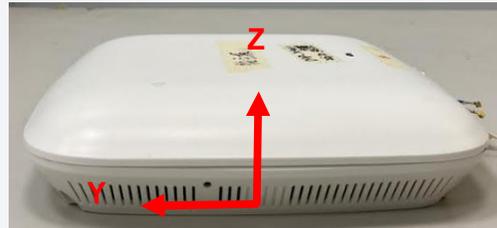
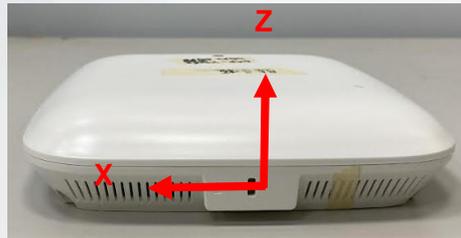
# 2D Radiation Pattern Results

## Ant2-5G1



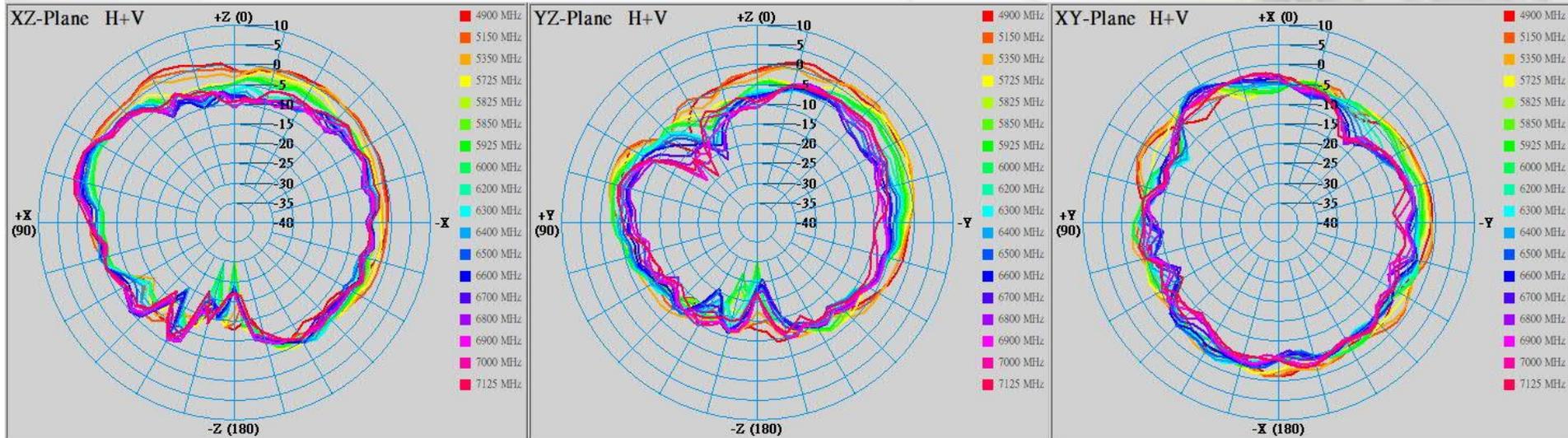
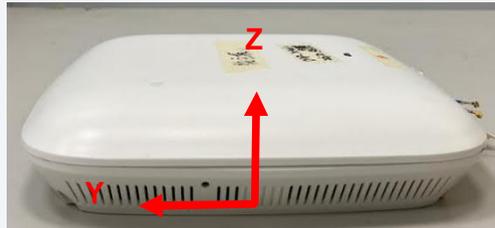
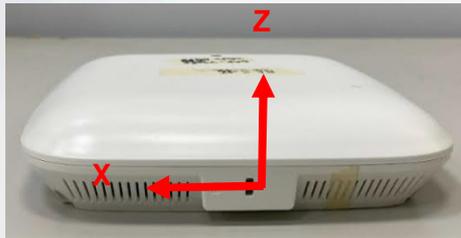
# 2D Radiation Pattern Results

## Ant3-2G2



# 2D Radiation Pattern Results

## Ant4-5G2



# Results Summary

## Return Loss

Frequency (MHz)	ANT1 (dB)	ANT2 (dB)	ANT3 (dB)	ANT4 (dB)
2400	18	NA	16	NA
2450	20	NA	18	NA
2500	14	NA	15	NA
4900	NA	16	NA	12
5150	NA	17	NA	16
5850	NA	24	NA	19

# Results Summary

## Isolation

Frequency (MHz)	2G1 Ant1 & 5/6G1 Ant2 (dB)	2G1 Ant1 & 2G2 Ant3 (dB)	2G1 Ant1 & 5/6G2 Ant4 (dB)	5G/6G1 Ant2 & 2G2 Ant3 (dB)	5G/6G1 Ant2 & 5G/6G2 Ant4 (dB)	2G2 Ant3 & 5G/6G2 Ant4 (dB)
2400	37	26	36	39	49	28
2450	37	26	36	38	52	28
2500	39	25	36	35	53	29
4900	31	46	40	40	24	37
5150	55	50	37	46	47	42
5850	33	45	36	38	36	33

# Results Summary

## Peak gain & Efficiency – ANT1

Frequency (MHz)	Peak Gain (dBi)	Efficiency
2400	3.43	71.46
2450	3.21	76.43
2500	3.46	73.44

# Results Summary

## Peak gain & Efficiency – ANT2

Frequency (MHz)	Peak Gain (dBi)	Efficiency
4900	3.07	61.16
5150	2.51	64.06
5350	2.70	63.26
5725	3.03	67.26
5825	2.68	69.40
5850	2.57	61.27

# Results Summary

## Peak gain & Efficiency – ANT3

Frequency (MHz)	Peak Gain (dBi)	Efficiency
2400	3.13	71.23
2450	3.11	74.55
2500	3.09	70.97

# Results Summary

## Peak gain & Efficiency – ANT4

Frequency (MHz)	Peak Gain (dBi)	Efficiency
4900	3.31	67.64
5150	3.15	74.87
5350	3.37	77.71
5725	3.17	77.91
5825	3.27	78.31
5850	3.37	78.19