SONY

FCC Part 15 Antenna Gain Test Report

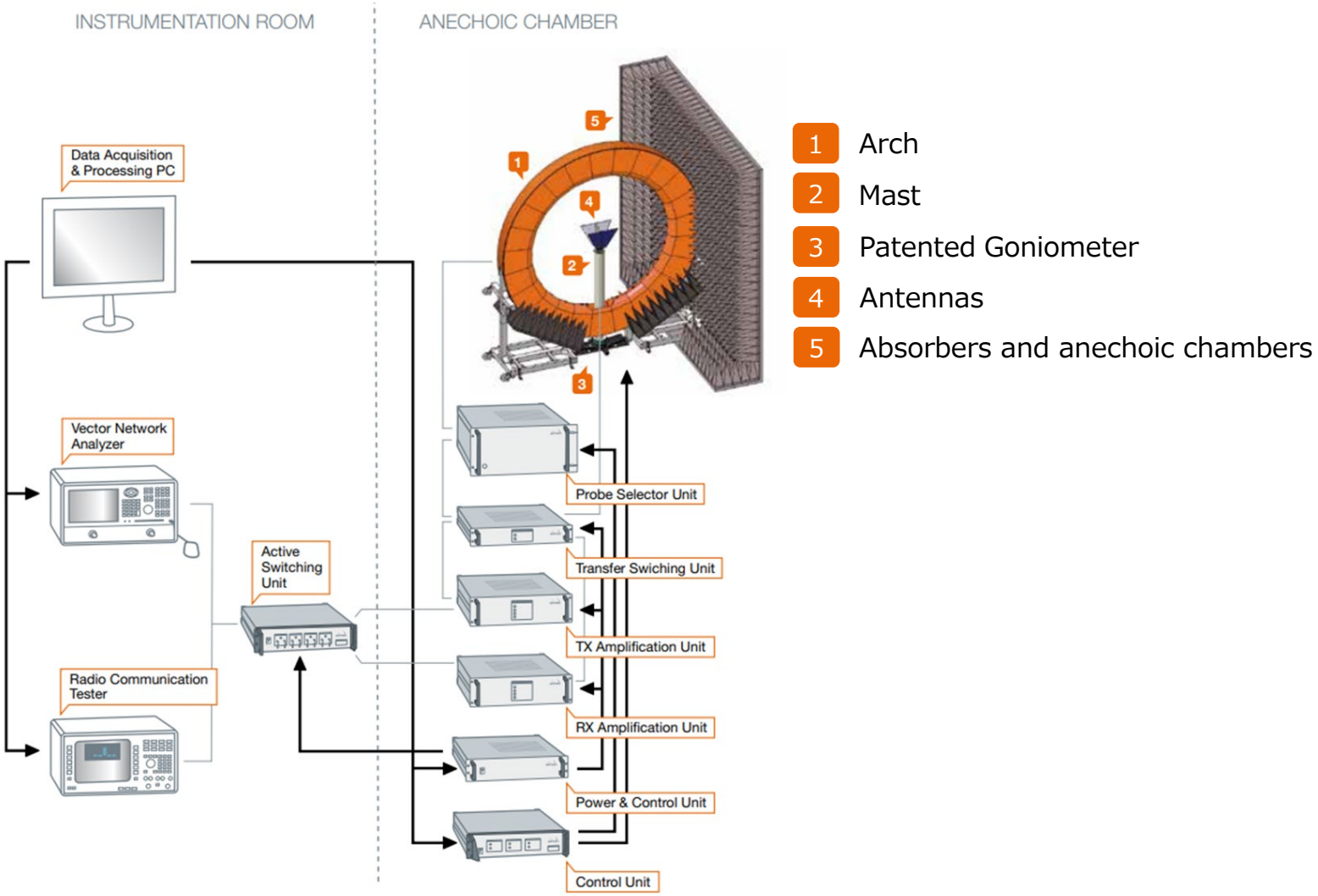
FCC ID:	AK8YY2964
Type of Equipment:	Radio Equipment
Model No.:	YY2964
Similar Model(s) to be covered by this report:	N/A
Test Facility:	Sony Global Manufacturing & Operations Corporation EMC/RF Test Laboratory, Main Lab. 8-4 Shiomi Kisarazu-shi Chiba-ken, 292-0834, Japan
Date of Testing:	November 13, 2023
Date of Issue:	November 14, 2023

Reported by:	Approved Signatory:
Yuki Furuse	Teruya Maeda
Yuki Furuse (Technical Engineer)	Teruya Maeda(Technical Manager)

1. Measurement Procedure

- The antenna gain is measured with StarMIMO multi-probe measurement system.

System Overview



(References: MVG, StarMIMO multi-probe measurement system datasheet, 2014)

2. Test Equipment and Measurement Software

Test Equipment

Used	Control No.	Equipment Description	Model No.	Serial No.	Manufacturer	Cal. Interval	Last Cal.	Remark
Y	-	Multi-Probe Measurement System	StarMIMO	1101232-1346	MVG	12 months	2023.09.24	
Y	M1062	ENA Network Analyzer	E5071C	MY46101377	Keysight Technologies	12 months	2023.07.07	
Y	A5062	Dual-Ridge Horn Antenna (0.4-6.0 GHz)	SH400-198	33104416	MVG	12 months	2023.05.13	Reference Antenna

- The calibration is valid until the end of the expiration month.

Measurement Software

Used	Control No.	Software Description	Model No.	Version	Manufacturer	Remark
Y	-	Automated Antenna and OTA Measurement Software Suite	MVG WaveStudio	22.1.7	MVG	
Y	-	Near-Field to Far-Field Transformation Software	MV-Sphere	2.3.27	MVG	

3. Antenna Under Test

Antenna 1

Antenna Model Name:	ANTENNA L
Antenna Type:	Monopole
Manufacturer:	Goertek Inc.
Input Impedance:	50 ohm

Antenna 2

Antenna Model Name:	ANTENNA R
Antenna Type:	Monopole
Manufacturer:	Goertek Inc.
Input Impedance:	50 ohm

4. Antenna Gains

Antenna 1

Date of Testing: November 13, 2023

Tested Personnel: Yuki Furuse

Temperature: 22.4 deg.C

Relative Humidity: 57.4 %

Antenna	Frequency (MHz)	Peak Gain (dBi)	Remark
Antenna 1	2400	-6.86	
	2440	-6.64	* 2.4 GHz peak
	2480	-6.68	

Antenna 2

Date of Testing: November 13, 2023

Tested Personnel: Yuki Furuse

Temperature: 22.4 deg.C

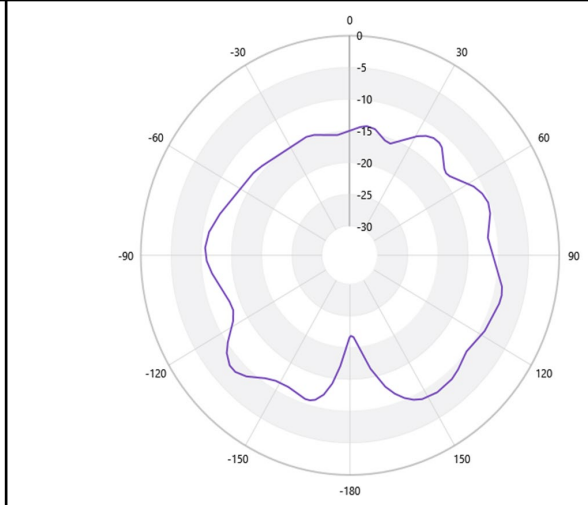
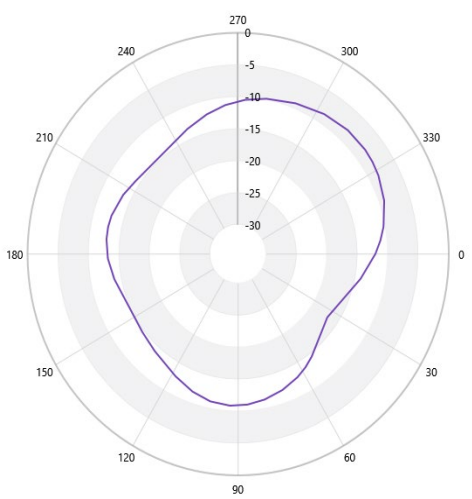
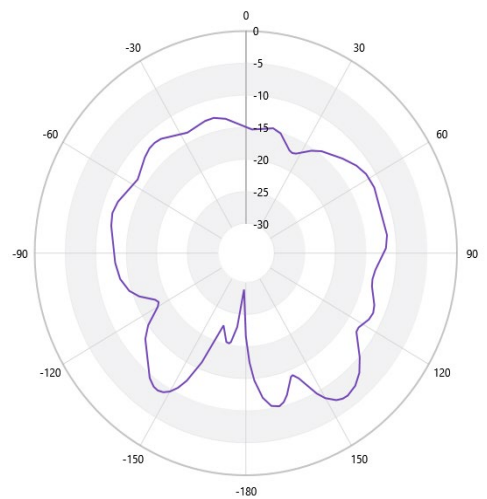
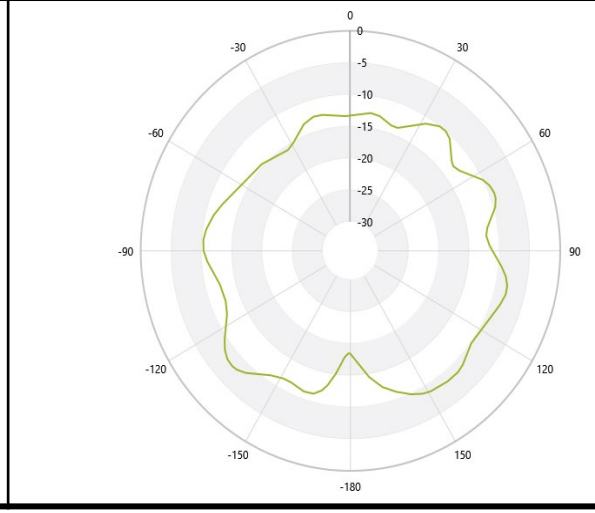
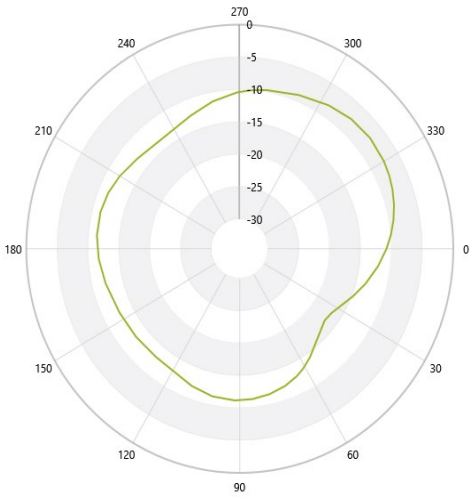
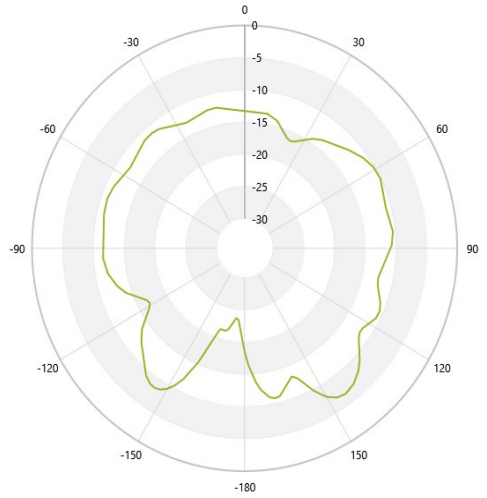
Relative Humidity: 57.4 %

Antenna	Frequency (MHz)	Peak Gain (dBi)	Remark
Antenna 2	2400	-7.20	
	2440	-6.74	* 2.4 GHz peak
	2480	-7.34	

Considering variation, Antenna gain specification is -4.5dBi.

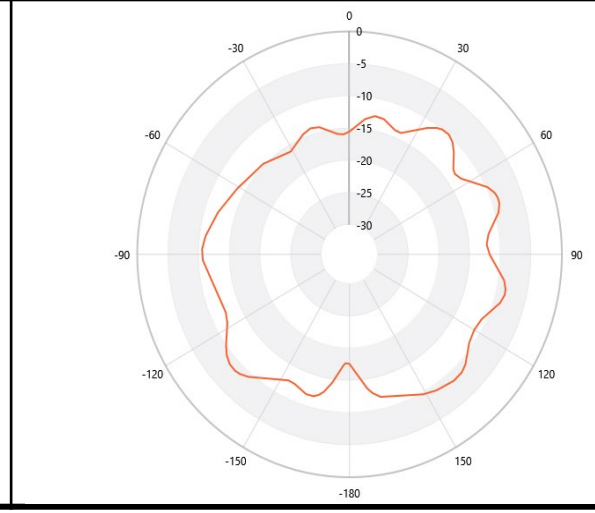
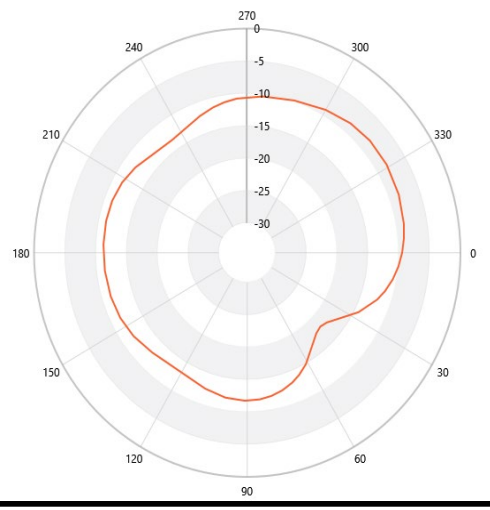
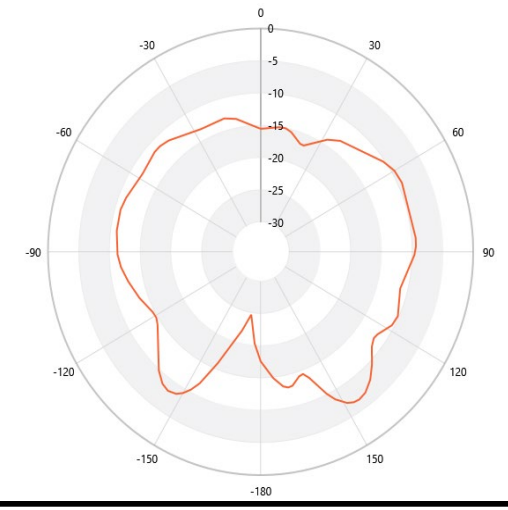
5. Antenna Directivity Plots

Antenna 1 (1/2)

Frequency	XZ-cut	XY-cut	YZ-cut
2400 MHz			
2440 MHz			

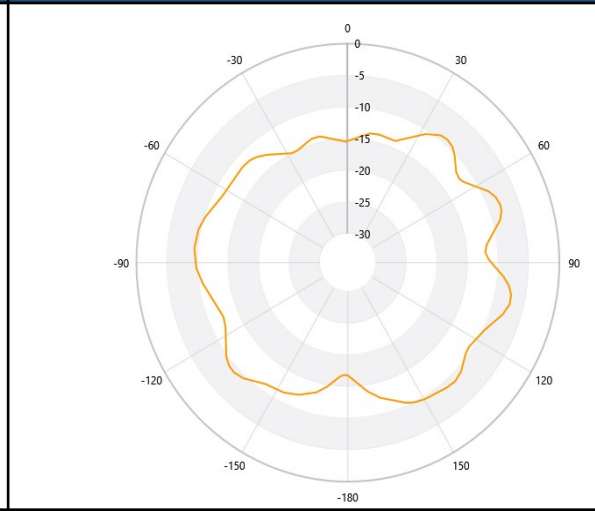
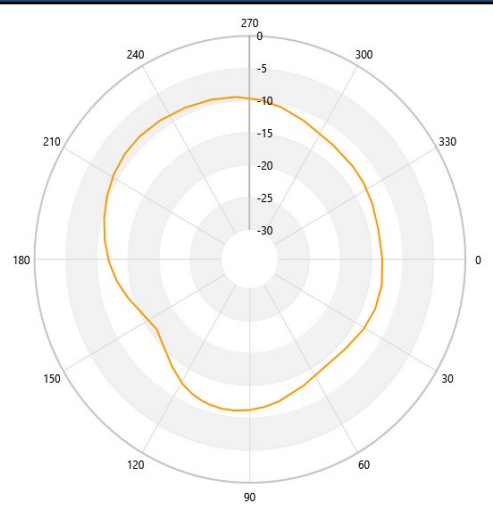
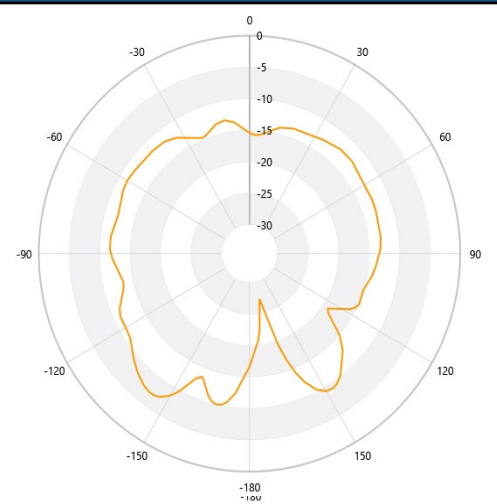
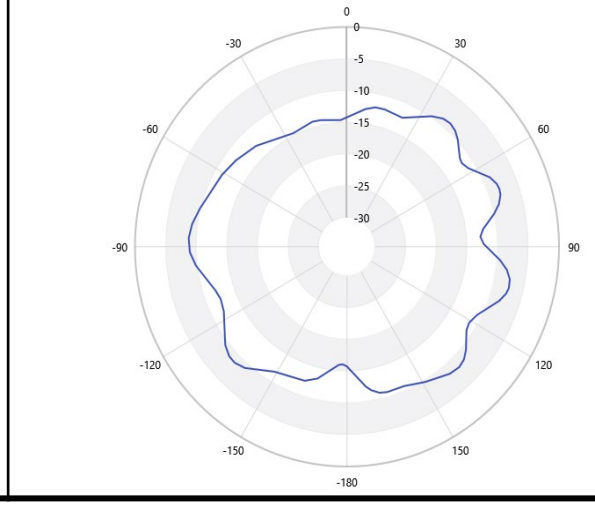
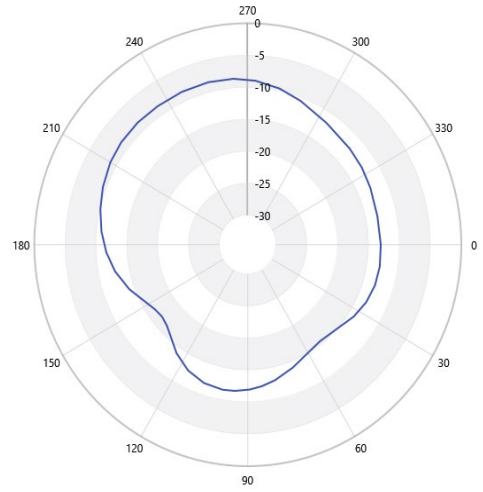
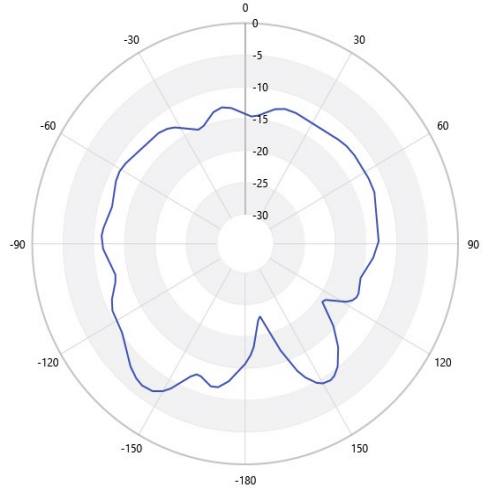
5. Antenna Directivity Plots

Antenna 1 (2/2)

Frequency	XZ-cut	XY-cut	YZ-cut
2480 MHz			

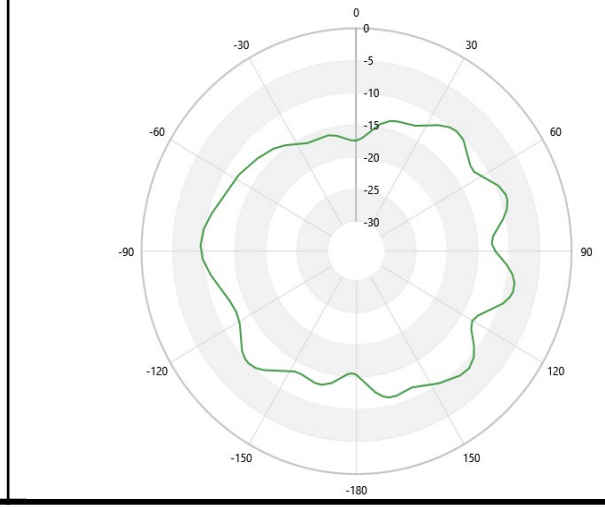
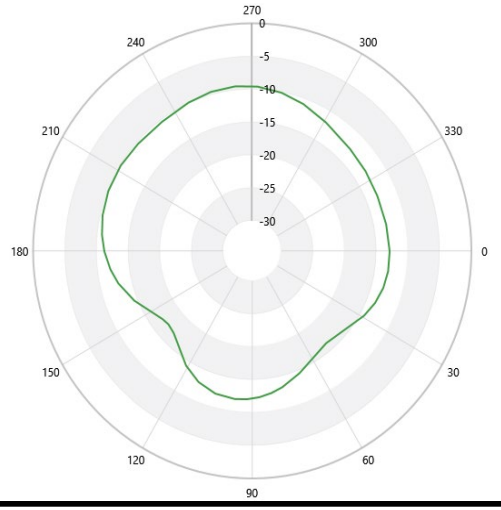
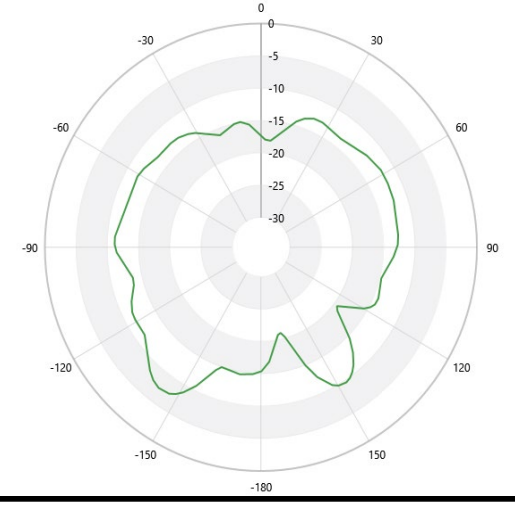
5. Antenna Directivity Plots

Antenna 2 (1/2)

Frequency	XZ-cut	XY-cut	YZ-cut
2400 MHz			
2440 MHz			

5. Antenna Directivity Plots

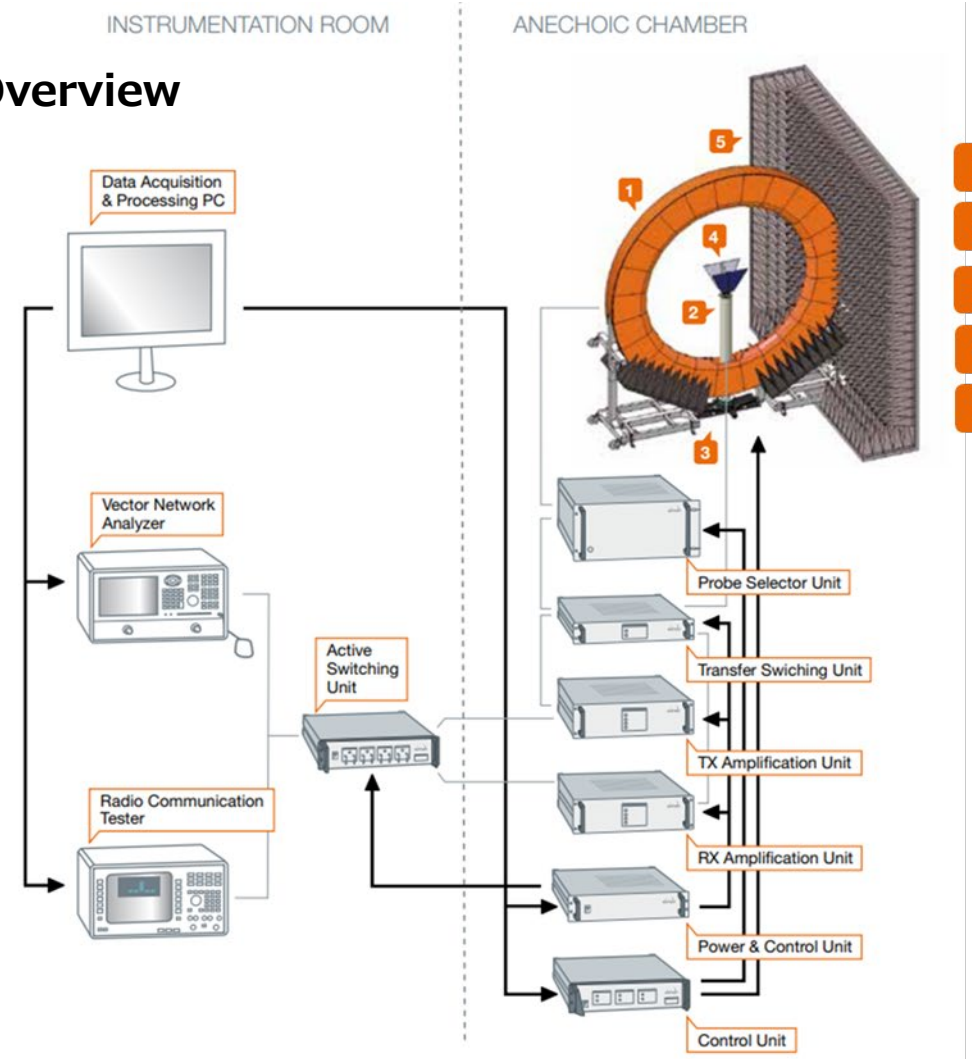
Antenna 2 (2/2)

Frequency	XZ-cut	XY-cut	YZ-cut
2480 MHz			

Appendix. 1. Measurement Procedure

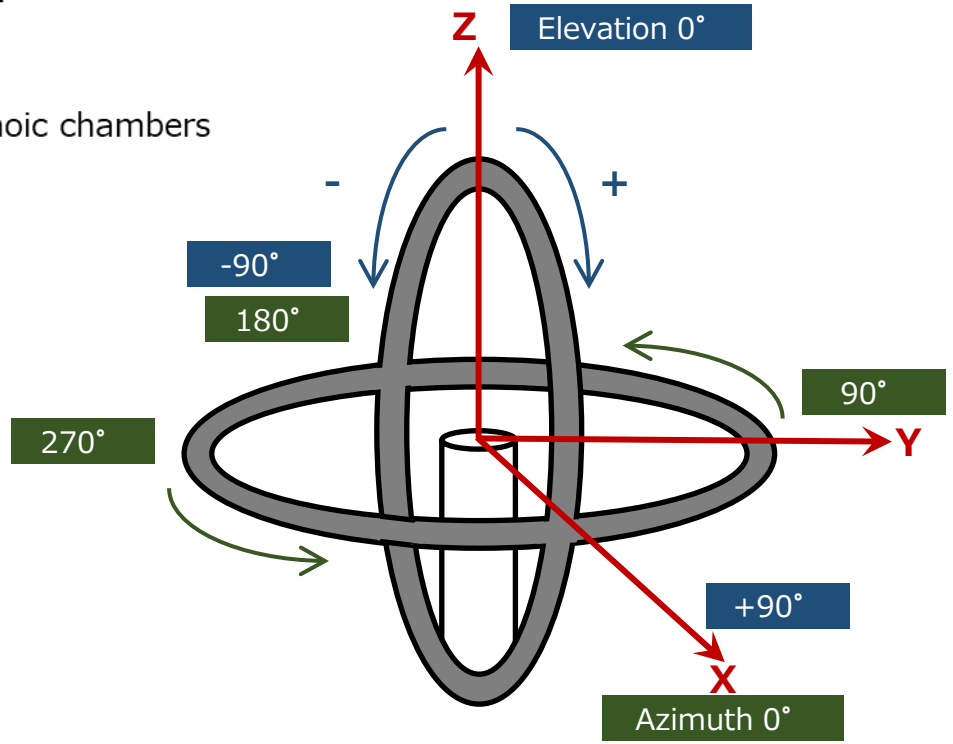
The antenna gain is measured with StarMIMO multi-probe measurement system.

System Overview



1. Arch
2. Mast
3. Patented Goniometer
4. Antennas
5. Absorbers and anechoic chambers

Measurement Axis



(References: MVG, StarMIMO multi-probe measurement system datasheet, 2014)