

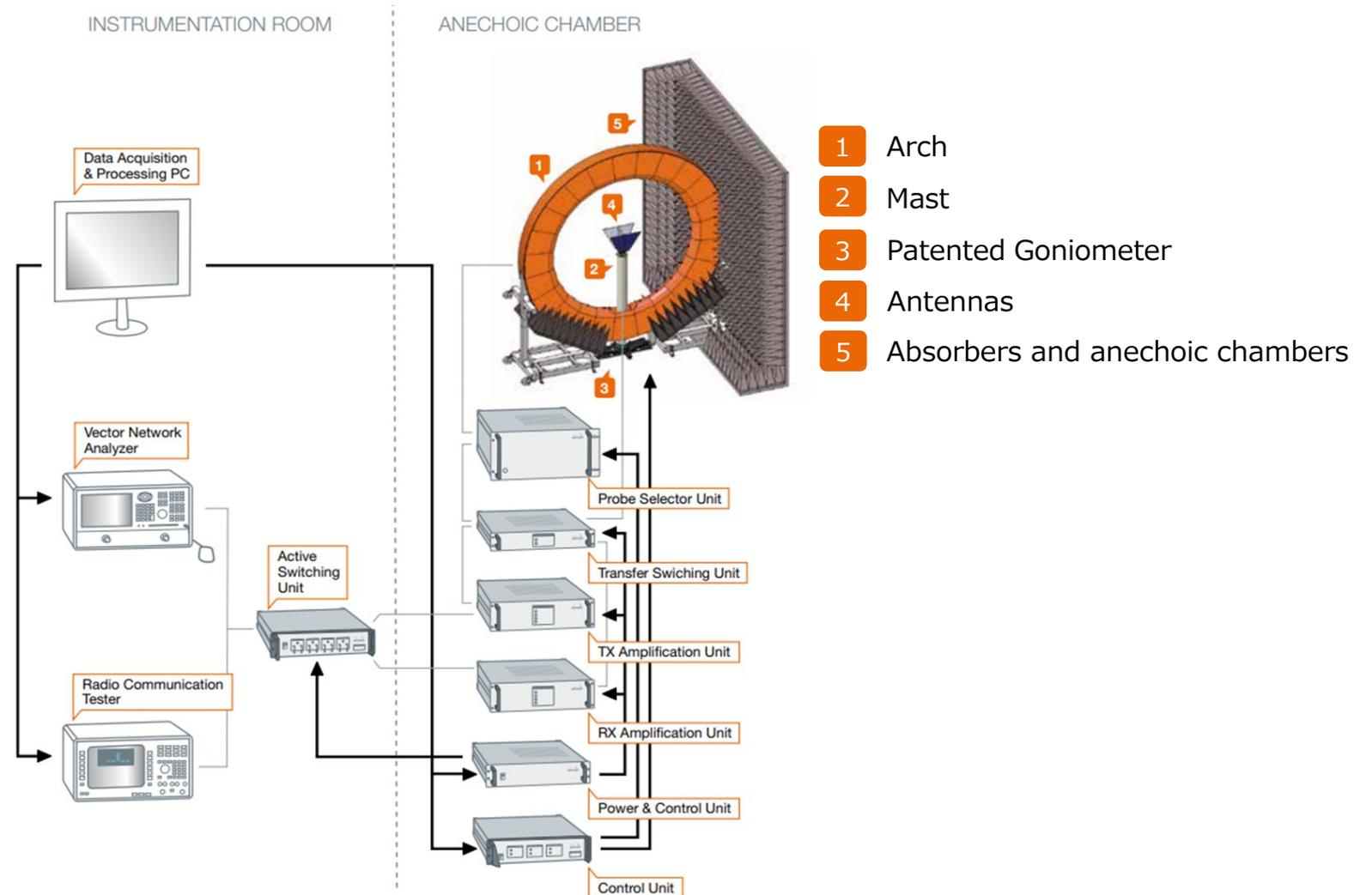
FCC Part 15 Antenna Gain Test Report

FCC ID:	AK8DWM30
Type of Equipment:	Wireless Microphone
Model No.:	DWM-30
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:	July 11, 2024
Date of Issue:	Sep. 3, 2024
Reporter	Daisuke Kihara

1. Measurement Procedure

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

System Overview



(References: MVG, StarMIMO multi-probe measurement system datasheet, 2021)

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	2024.08.01	
Y	A5062	Dual-Ridge Horn Antenna (0.4-6.0 GHz)	SH400-198	33104416	MVG	12 months	2024.05.10	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: DWM-30/L

Antenna Type: $\lambda/4$ monopole

Input Impedance: 50ohm

4. Antenna Gains

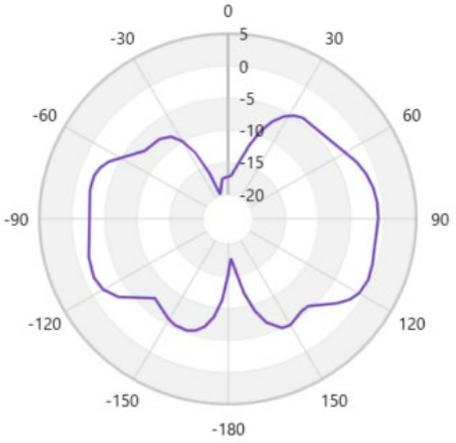
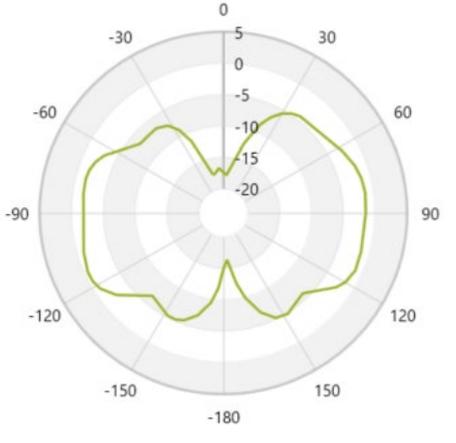
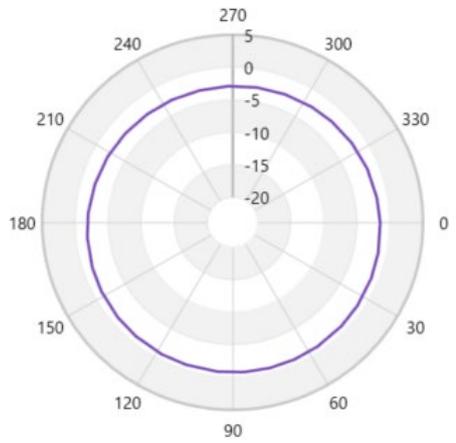
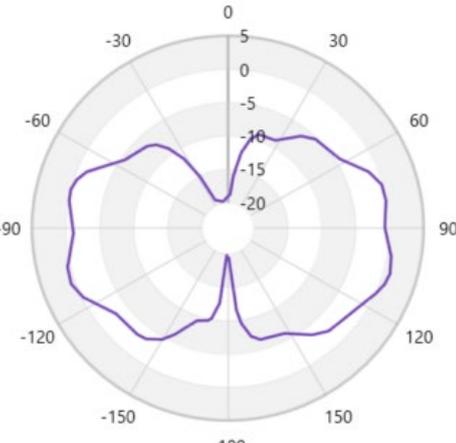
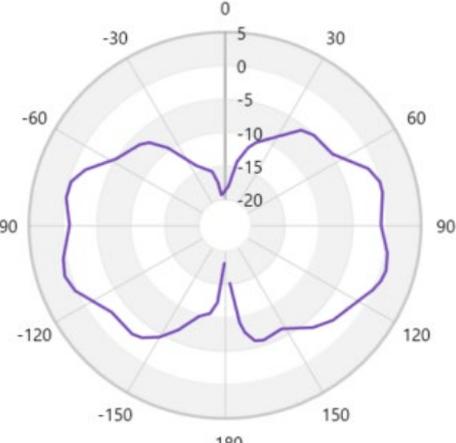
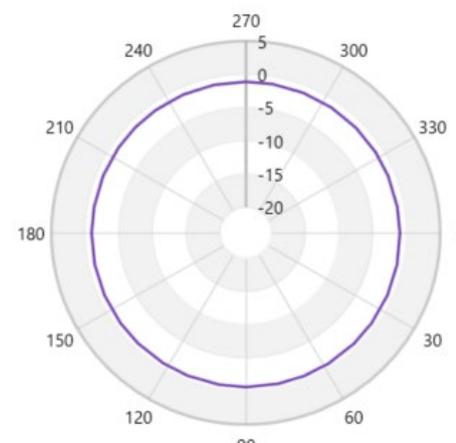
Antenna 1

Date of Testing: July 11, 2024
Tested Personnel: Kumiko Takahashi
Temperature: 22.4 deg.C
Relative Humidity: 57.4 %

Antenna	Frequency (MHz)	Peak Gain (dBi)	Remark
Antenna 1	460	-0.15	
	480	0.07	
	500	0.77	
	520	0.63	
	540	0.99	
	560	1.05	*peak
	580	-0.70	
	600	-0.66	
	620	-1.24	

5. Antenna Directivity Plots

Antenna 1 (1/xx)

Frequency	XZ-cut	YZ-cut	XY-cut
460 MHz	 A polar plot showing the radiation pattern in the XZ-plane at 460 MHz. The plot is circular with concentric rings representing gain levels from 0 to -20 dB. The angular scale ranges from -180 to 180 degrees. The radiation pattern is a four-lobed shape with a central null at 0 degrees and maximum gain at approximately ±90 and ±135 degrees.	 A polar plot showing the radiation pattern in the YZ-plane at 460 MHz. The plot is circular with concentric rings representing gain levels from 0 to -20 dB. The angular scale ranges from -180 to 180 degrees. The radiation pattern is a four-lobed shape with a central null at 0 degrees and maximum gain at approximately ±90 and ±135 degrees.	 A polar plot showing the radiation pattern in the XY-plane at 460 MHz. The plot is circular with concentric rings representing gain levels from 0 to -20 dB. The angular scale ranges from 0 to 360 degrees. The radiation pattern is a nearly circular shape with a slight dip at 0 and 180 degrees, indicating a broad, omnidirectional pattern.
540 MHz	 A polar plot showing the radiation pattern in the XZ-plane at 540 MHz. The plot is circular with concentric rings representing gain levels from 0 to -20 dB. The angular scale ranges from -180 to 180 degrees. The radiation pattern is a four-lobed shape with a central null at 0 degrees and maximum gain at approximately ±90 and ±135 degrees.	 A polar plot showing the radiation pattern in the YZ-plane at 540 MHz. The plot is circular with concentric rings representing gain levels from 0 to -20 dB. The angular scale ranges from -180 to 180 degrees. The radiation pattern is a four-lobed shape with a central null at 0 degrees and maximum gain at approximately ±90 and ±135 degrees.	 A polar plot showing the radiation pattern in the XY-plane at 540 MHz. The plot is circular with concentric rings representing gain levels from 0 to -20 dB. The angular scale ranges from 0 to 360 degrees. The radiation pattern is a nearly circular shape with a slight dip at 0 and 180 degrees, indicating a broad, omnidirectional pattern.

5. Antenna Directivity Plots

Antenna 1

Frequency	XZ-cut	YZ-cut	XY-cut
620 MHz	