

FCC Part 15 Antenna Gain Test Report

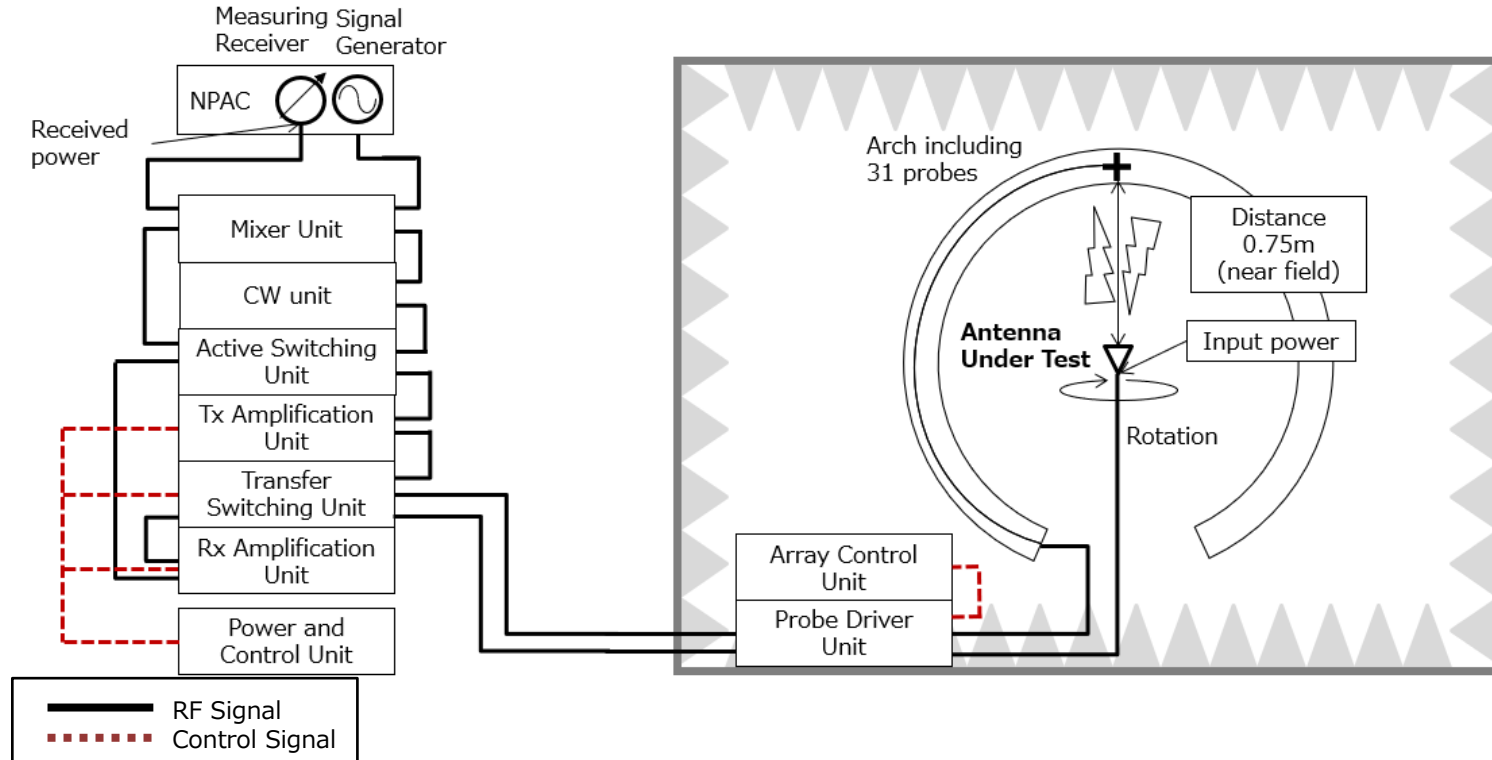
FCC ID:	VPYLB1VY
Client:	Murata Manufacturing Co., Ltd.
Type of Equipment:	Communication Module
Model No.:	Type1VY (* installed in Host Device 1VY011)
Date of Testing:	April 18 - 23, 2025
Date of Issue:	April 28, 2025

Sony Corporation

5-1-1 Minatomirai Nishi-ku Yokohama-shi Kanagawa, 220-8750, Japan

1. Measurement Procedure

- The antenna gain is measured in a fully anechoic chamber



2. Test Equipment and Measurement Software

Used	Equipment Description	Model No.	Serial No.	Manufacturer	Cal. Interval	Last Cal.	Remark
Y	Absorber Chamber	B83117-A1421-T161	21061	Albatross Projects	N/A	N/A	
Y	Multi-Probe Measurement System	SG32	1102611-0001	MVG	12 months	2024.08.05	
N	Dual-Ridge Horn Antenna (0.6-6.0 GHz)	SH600	30	MVG	N/A	N/A	Reference Antenna
N	Sleeve-Dipole Antenna (0.69-0.8 GHz)	SD740	32	MVG	N/A	N/A	Reference Antenna
N	Sleeve-Dipole Antenna (0.865-0.93 GHz)	SD900	153	MVG	N/A	N/A	Reference Antenna
N	Radio Communication Tester	MT8821A	6261711661	ANRITSU	12 months	2022.06.20	For OTA
• The calibration is valid until the end of the expiration month.							

Measurement Software

Used	Software Description	Model No.	Version	Manufacturer	Remark
Y	Automated Antenna and OTA Measurement Software Suite	MVG WaveStudio	24.2.6	MVG	
Y	Near-Field to Far-Field Transformation Software	MV-Sphere	3.4.4	MVG	

3. Antenna Under Test

Antenna 1

Antenna Model Name: WF-12
Antenna Type: Monopole
Input Impedance: 50 ohm

Antenna 2

Antenna Model Name: WF-1008
Antenna Type: Monopole
Input Impedance: 50 ohm

4. Antenna Gains

Antenna 1

Date of Testing: April 23, 2025

Tested Personnel: Kenji Suzuki

Antenna	Frequency (MHz)	Peak Gain (dBi)	Remark
Antenna 1	2460	-3.94	* 2.4 GHz peak
	5200	-1.48	
	5300	-1.80	
	5700	-0.89	* 5 GHz peak
	5800	-1.18	

Antenna 2

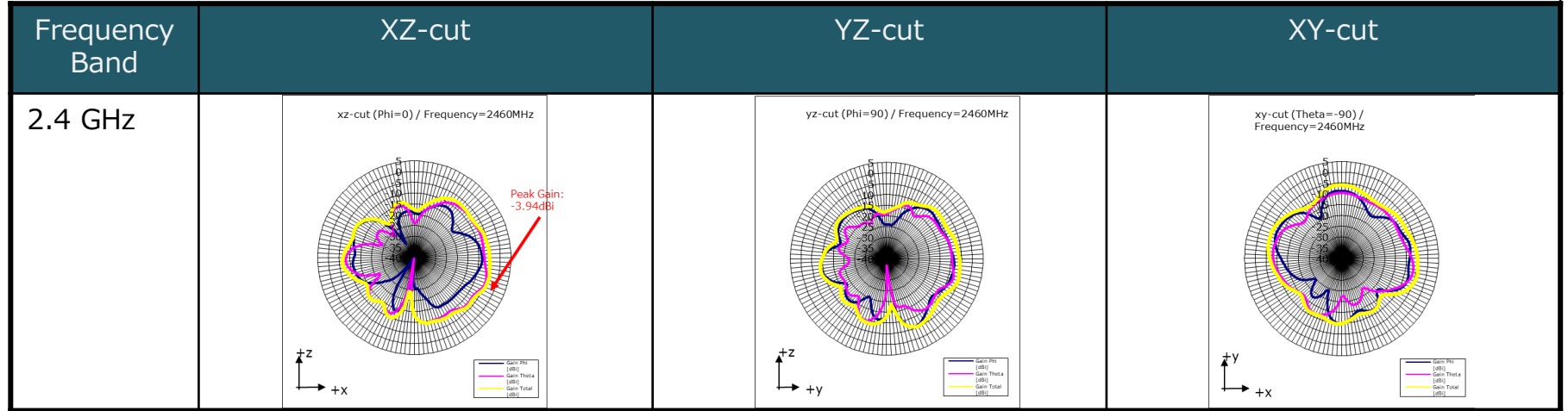
Date of Testing: April 18, 2025

Tested Personnel: Kenji Suzuki

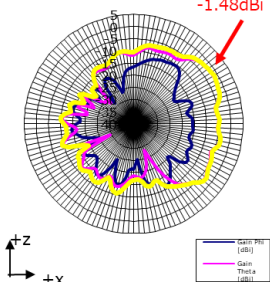
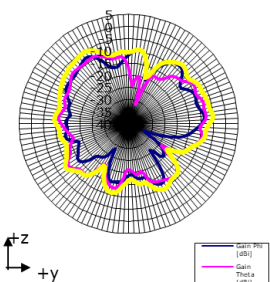
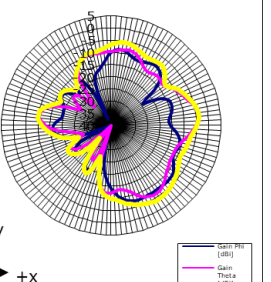
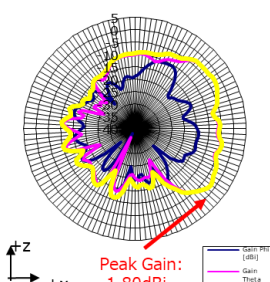
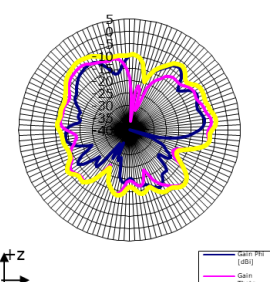
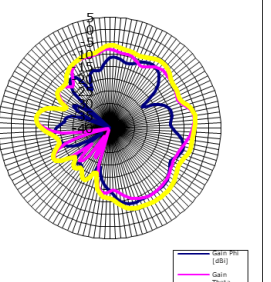
Antenna	Frequency (MHz)	Peak Gain (dBi)	Remark
Antenna 2	2420	-4.50	* 2.4 GHz peak
	5200	-1.52	
	5300	-1.89	
	5600	-1.11	* 5 GHz peak
	5800	-1.80	

5. Antenna Directivity Plots

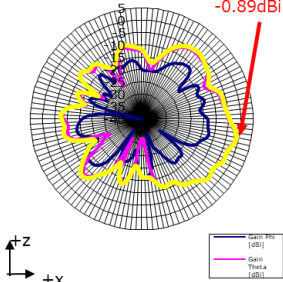
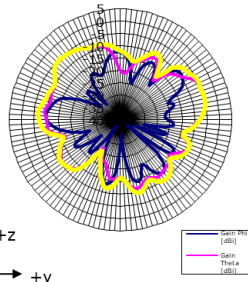
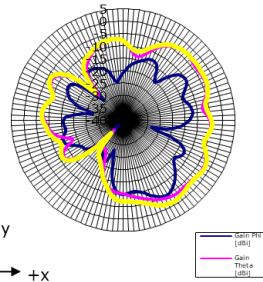
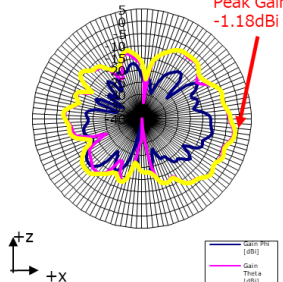
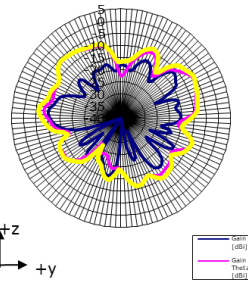
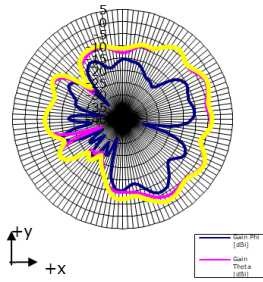
Antenna 1 (1/3)



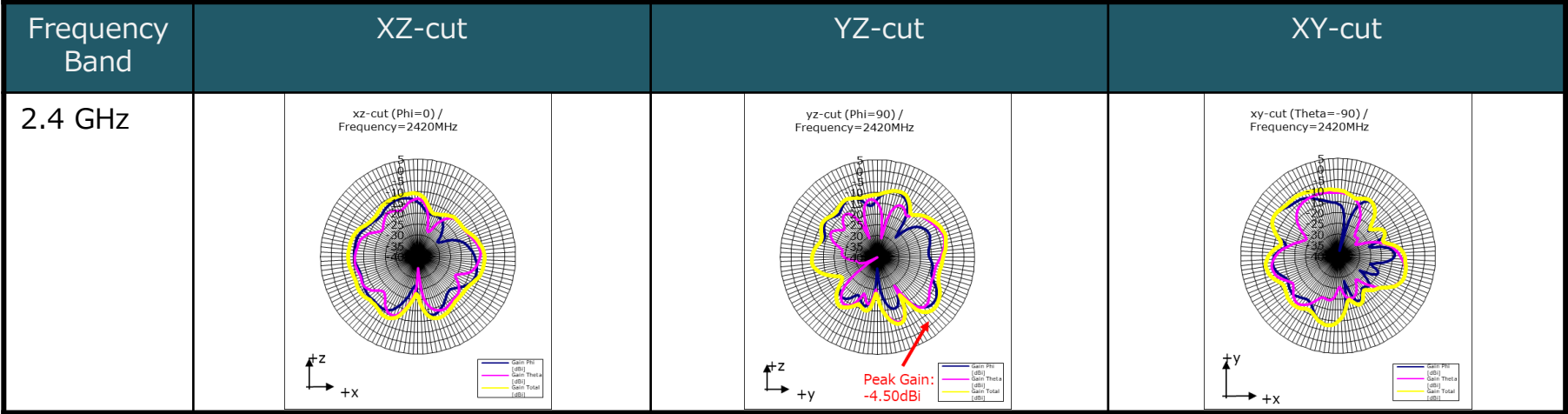
Antenna 1 (2/3)

Frequency Band	XZ-cut		YZ-cut		XY-cut	
W52 (5.2 GHz)		xz-cut (Phi=0) / Frequency=5200MHz Peak Gain: -1.48dBi 		yz-cut (Phi=90) / Frequency=5200MHz 		xy-cut (Theta=-90) / Frequency=5200MHz 
W53 (5.3 GHz)		xz-cut (Phi=0) / Frequency=5300MHz Peak Gain: -1.80dBi 		yz-cut (Phi=90) / Frequency=5300MHz 		xy-cut (Theta=-90) / Frequency=5300MHz 

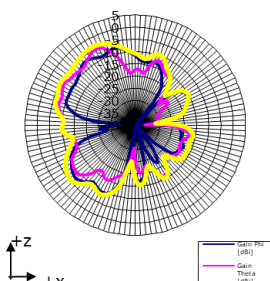
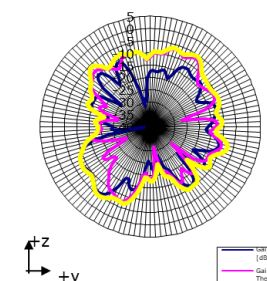
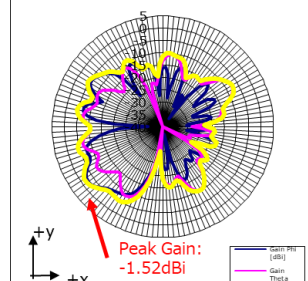
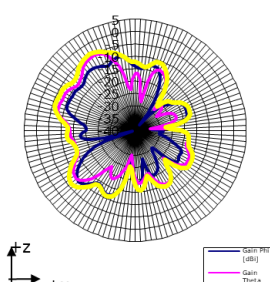
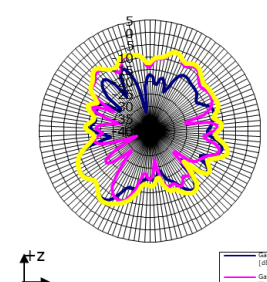
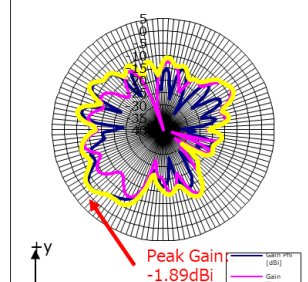
Antenna 1 (3/3)

Frequency Band	XZ-cut		YZ-cut		XY-cut	
W56 (5.7 GHz)	xz-cut (Phi=0) / Frequency=5700MHz Peak Gain: -0.89dBi 		yz-cut (Phi=90) / Frequency=5700MHz 		xy-cut (Theta=-90) / Frequency=5700MHz 	
W58 (5.8 GHz)	xz-cut (Phi=0) / Frequency=5800MHz Peak Gain: -1.18dBi 		yz-cut (Phi=90) / Frequency=5800MHz 		xy-cut (Theta=-90) / Frequency=5800MHz 	

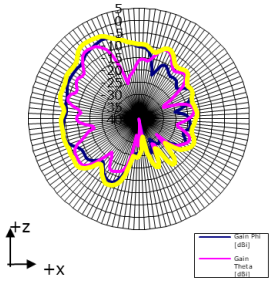
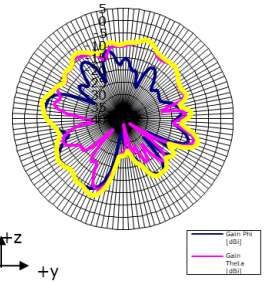
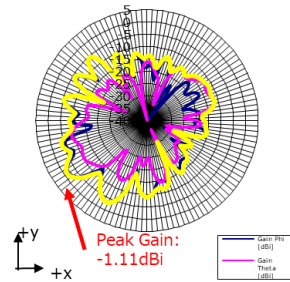
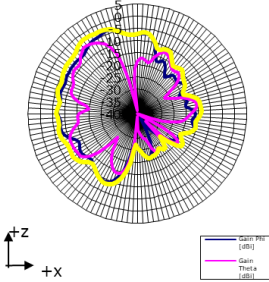
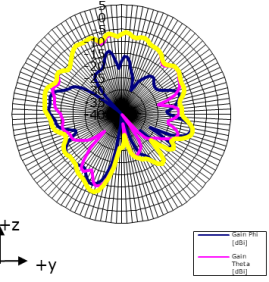
Antenna 2 (1/3)



Antenna 2 (2/3)

Frequency Band	XZ-cut		YZ-cut		XY-cut	
W52 (5.2 GHz)	xz-cut (Phi=0) / Frequency=5200MHz 	yz-cut (Phi=90) / Frequency=5200MHz 	xy-cut (Theta=-90) / Frequency=5200MHz  Peak Gain: -1.52dBi			
W53 (5.3 GHz)	xz-cut (Phi=0) / Frequency=5300MHz 	yz-cut (Phi=90) / Frequency=5300MHz 	xy-cut (Theta=-90) / Frequency=5300MHz  Peak Gain: -1.89dBi			

Antenna 2 (3/3)

Frequency Band	XZ-cut		YZ-cut		XY-cut	
W56 (5.6 GHz)		xz-cut (Phi=0) / Frequency=5600MHz 		yz-cut (Phi=90) / Frequency=5600MHz 		xy-cut (Theta=-90) / Frequency=5600MHz 
W58 (5.8 GHz)		xz-cut (Phi=0) / Frequency=5800MHz 		yz-cut (Phi=90) / Frequency=5800MHz 		xy-cut (Theta=-90) / Frequency=5800MHz 