



CPPB1 WiFi/BT Antennas: Measured Peak Gain and Radiation Patterns

Milan Lukic | February 6, 2024

Outline

- Antenna info
- Measured Peak Gain of antennas
- Standard Spherical Coordinate System Used in Antenna Measurements
- Test Setup in the Anechoic Chamber
- WiFi Antenna Radiation Patterns

Antenna info

Antenna 1&2 manufacture name and address:

GoPro, Inc.
3025 Clearview Way, San Mateo, CA 94402, USA

Antenna 1:

Model#: 425-29920-000
Photos or drawing: See Internal photo exhibit

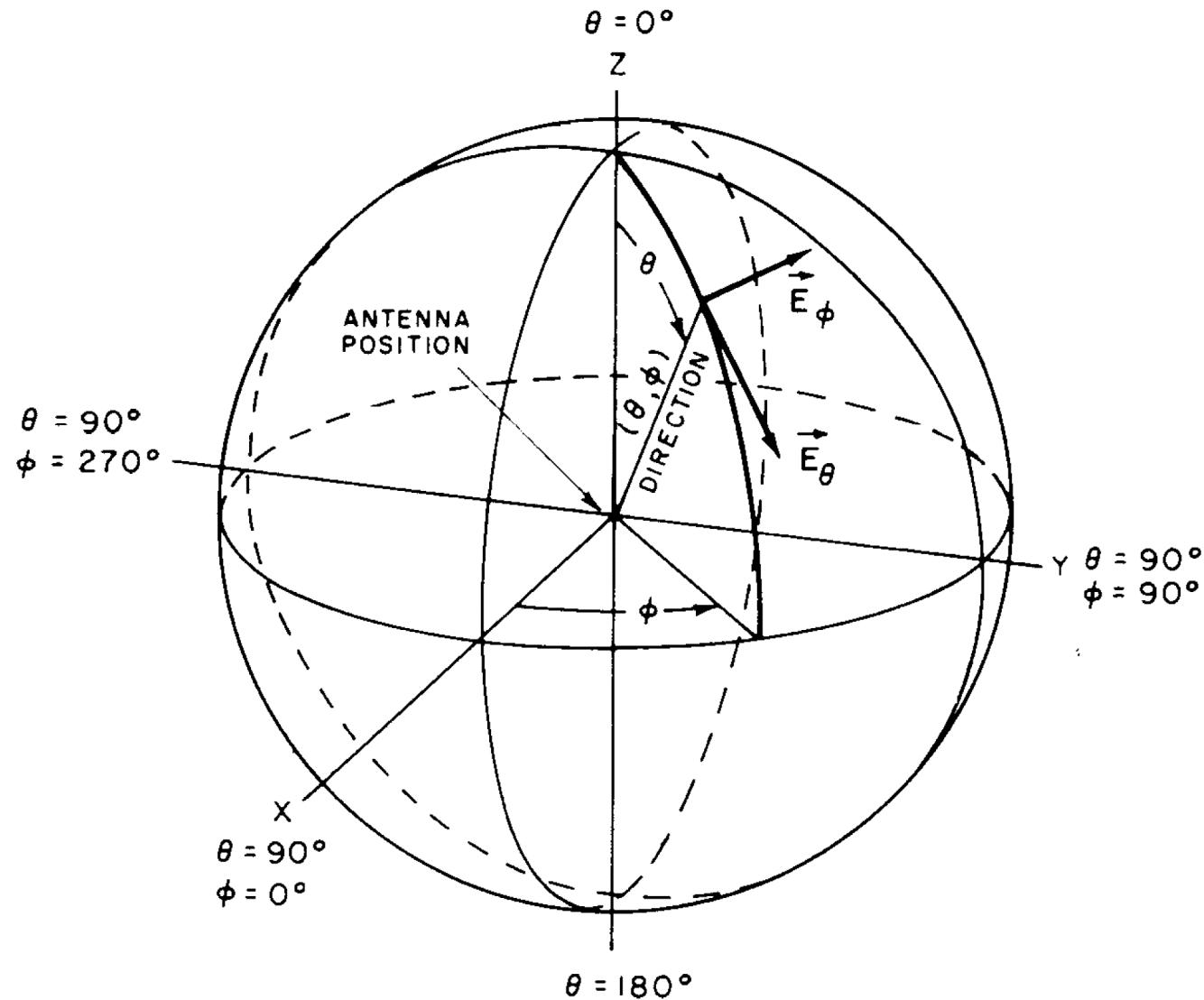
Antenna 2:

Model#: 425-29921-000
Photos or drawing: See Internal photo exhibit

Measured Peak Gain of antennas

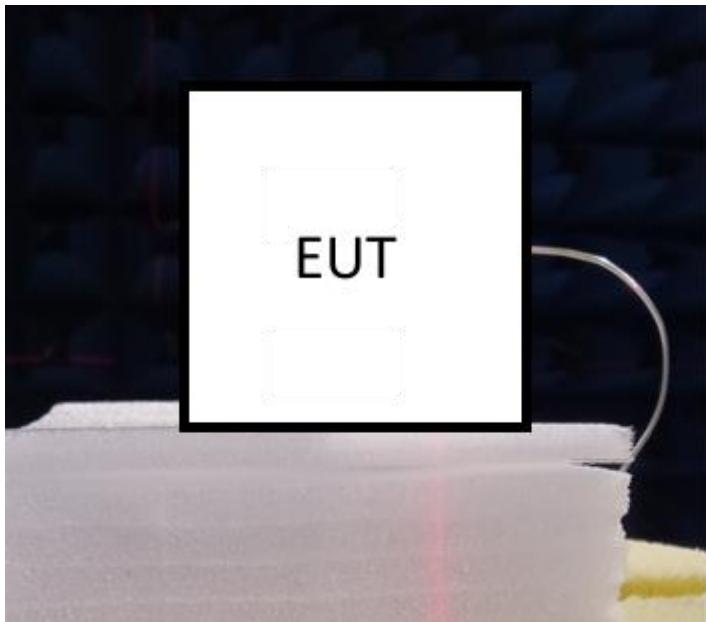
Band [GHz]	Frequency [MHz]	Antenna Peak Gain [dBi]	
		Antenna 1	Antenna 2
2.4	2412	1.50	-0.25
	2442	1.05	-0.57
	2462	0.80	-1.07
5	5200	3.91	-0.25
	5300	4.57	-0.92
	5600	3.87	-3.30
	5785	3.27	-2.26

Standard Spherical Coordinate System Used in Antenna Measurements

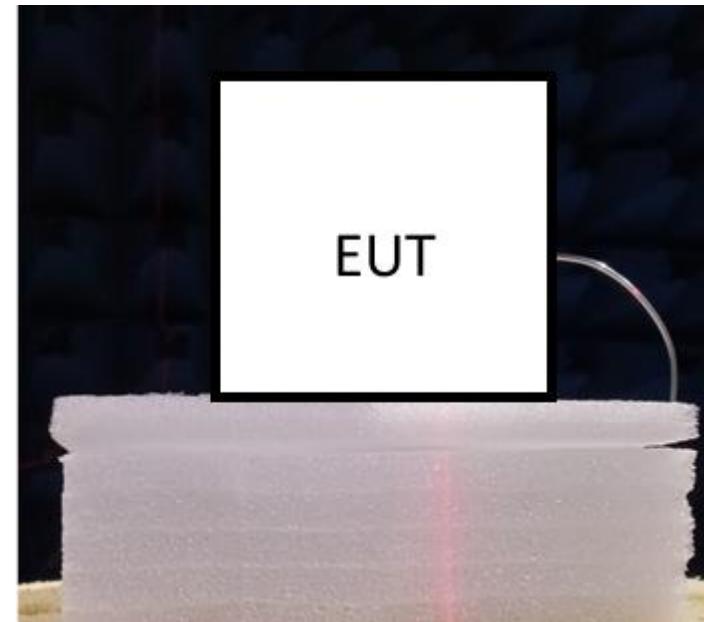


Test Setup in the Anechoic Chamber

Antenna 1

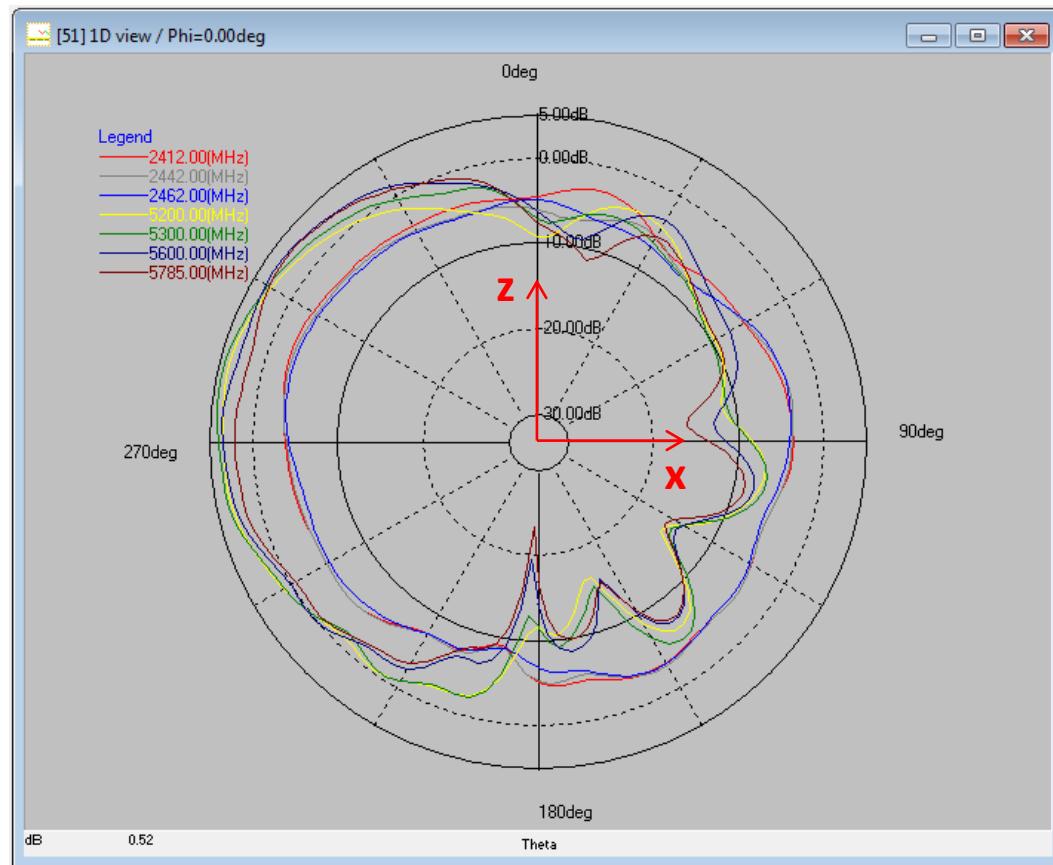


Antenna 2

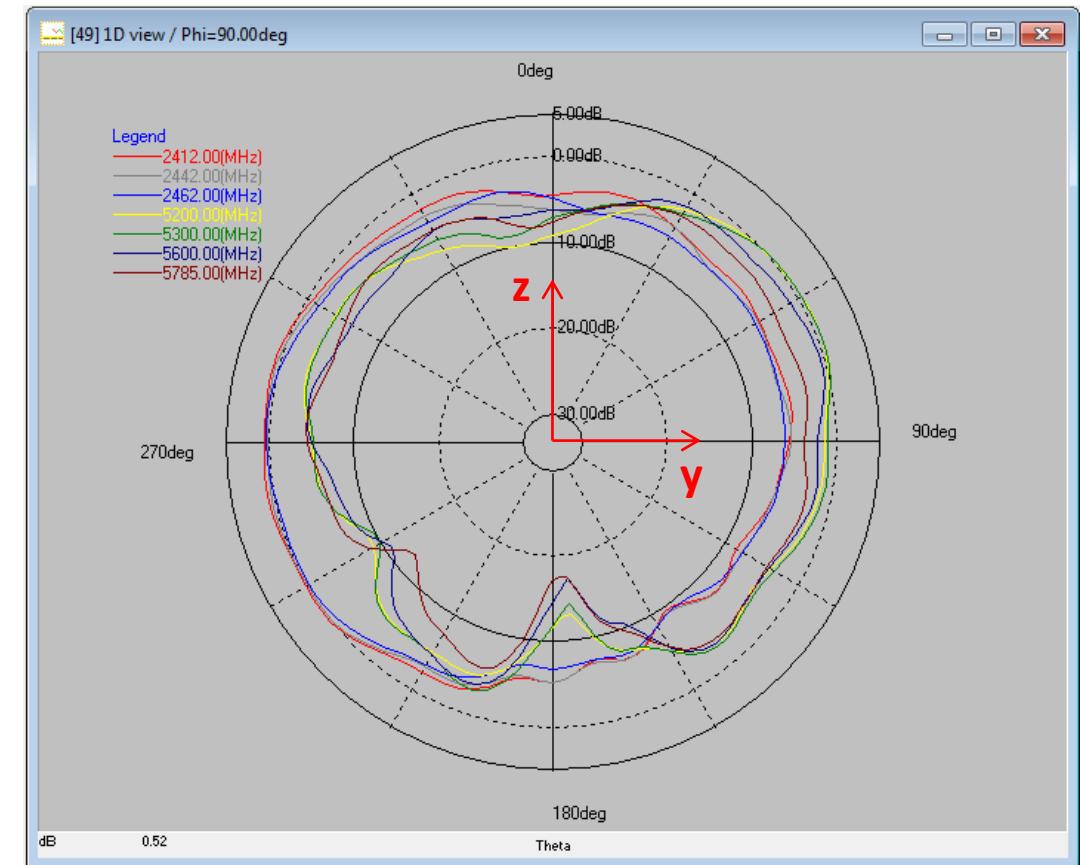


WiFi/BT Antenna 1 Radiation Patterns in the Vertical Planes

XZ plane ($\phi=0^\circ$)

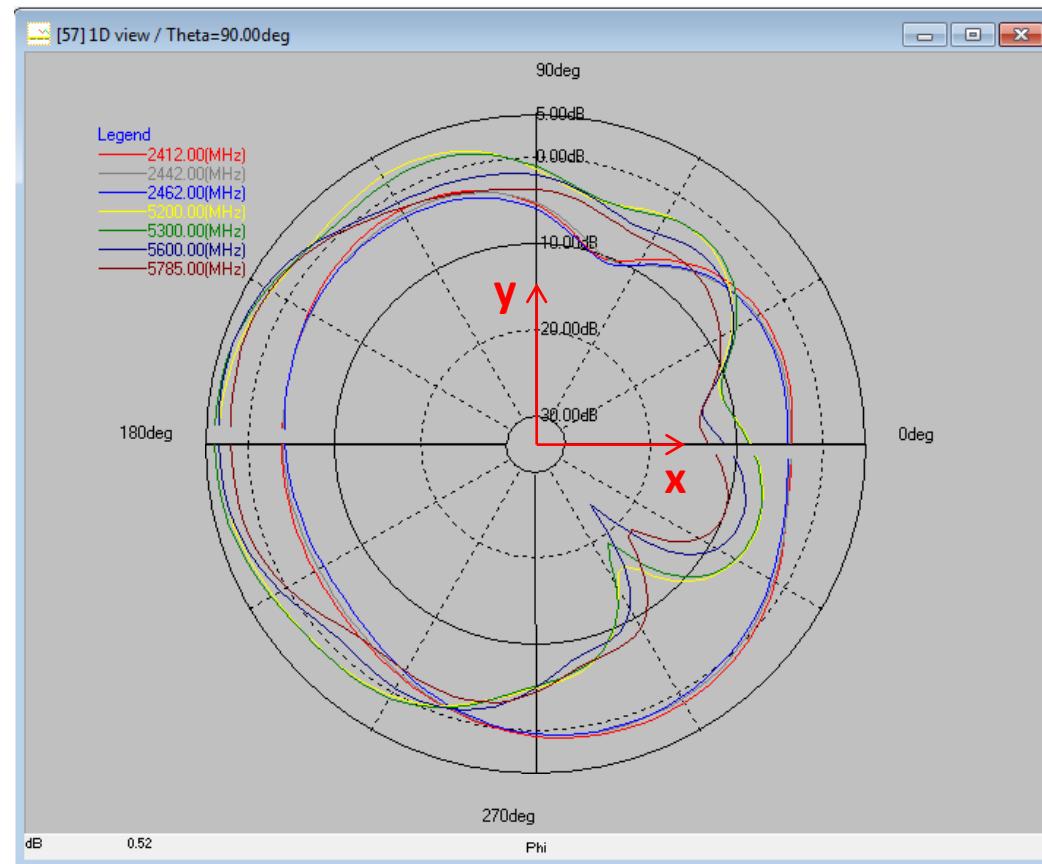


YZ plane ($\phi=90^\circ$)



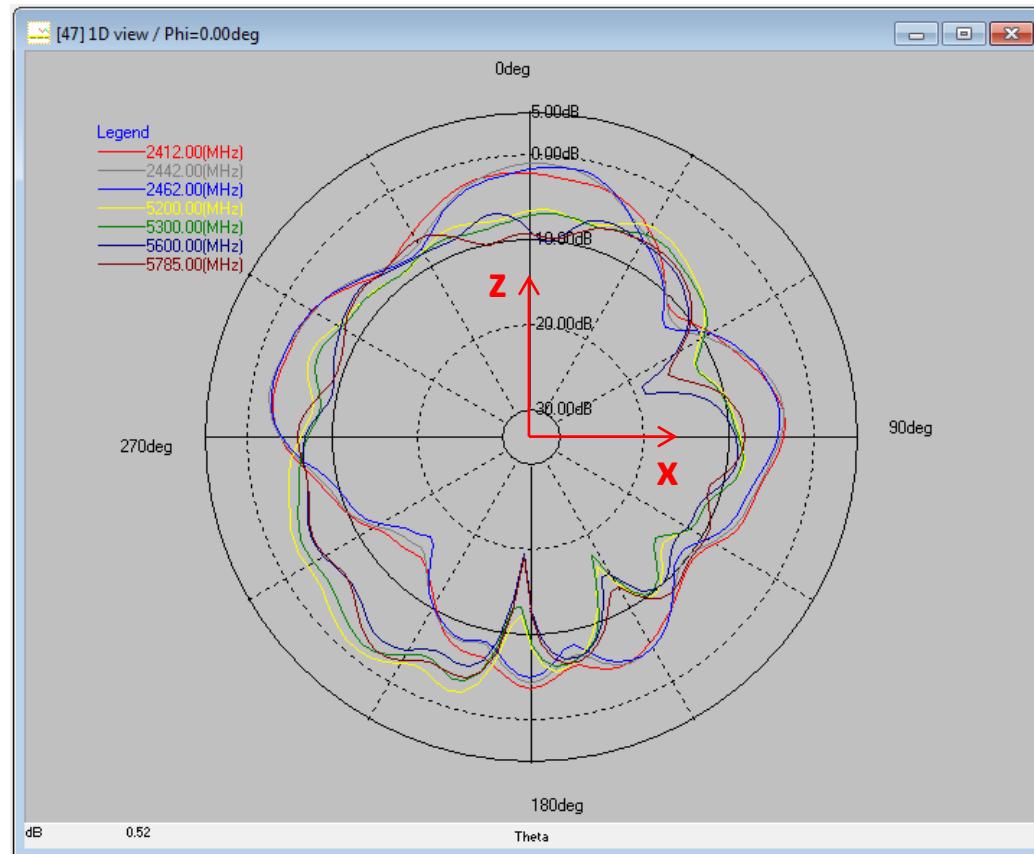
WiFi/BT Antenna 1 Radiation Patterns in the Horizontal Plane

XY plane ($\theta=90^\circ$)

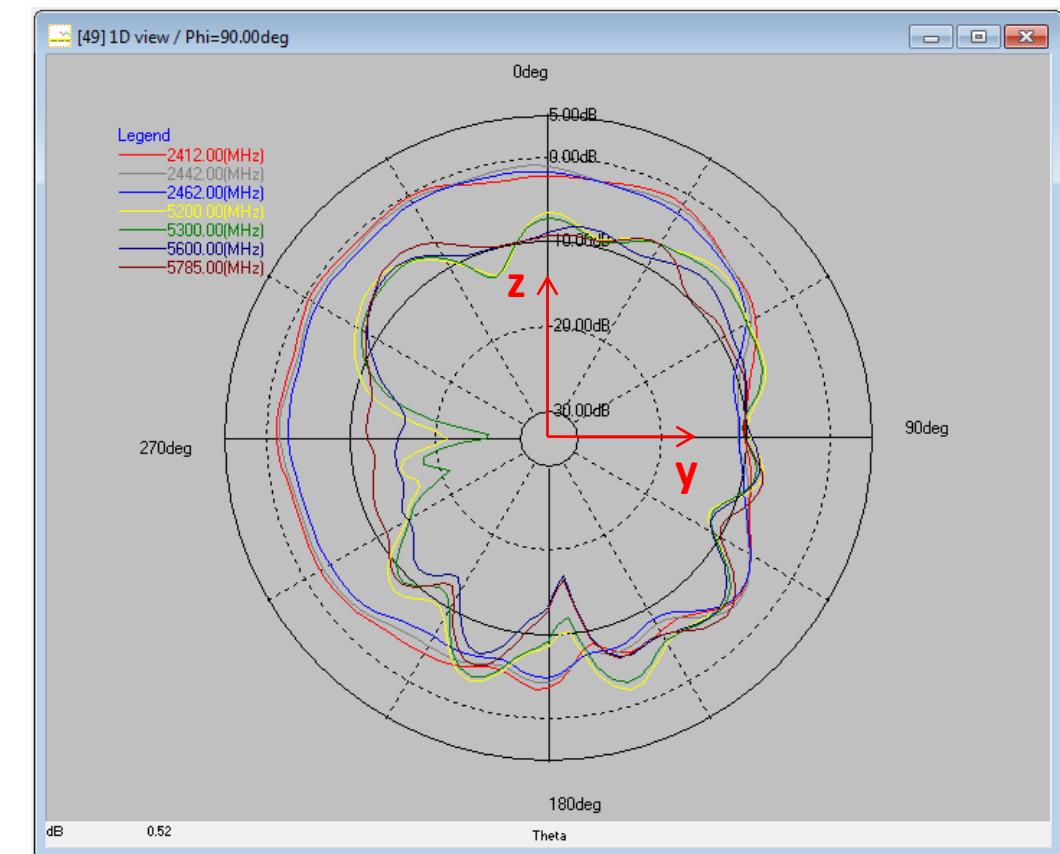


WiFi Antenna 2 Radiation Patterns in the Vertical Planes

XZ plane ($\phi=0^\circ$)



YZ plane ($\phi=90^\circ$)



WiFi Antenna 2 Radiation Patterns in the Horizontal Plane

XY plane ($\theta=90^\circ$)

