

Antenna Report

FCC ID: A4RG3MP5

04/03/2023

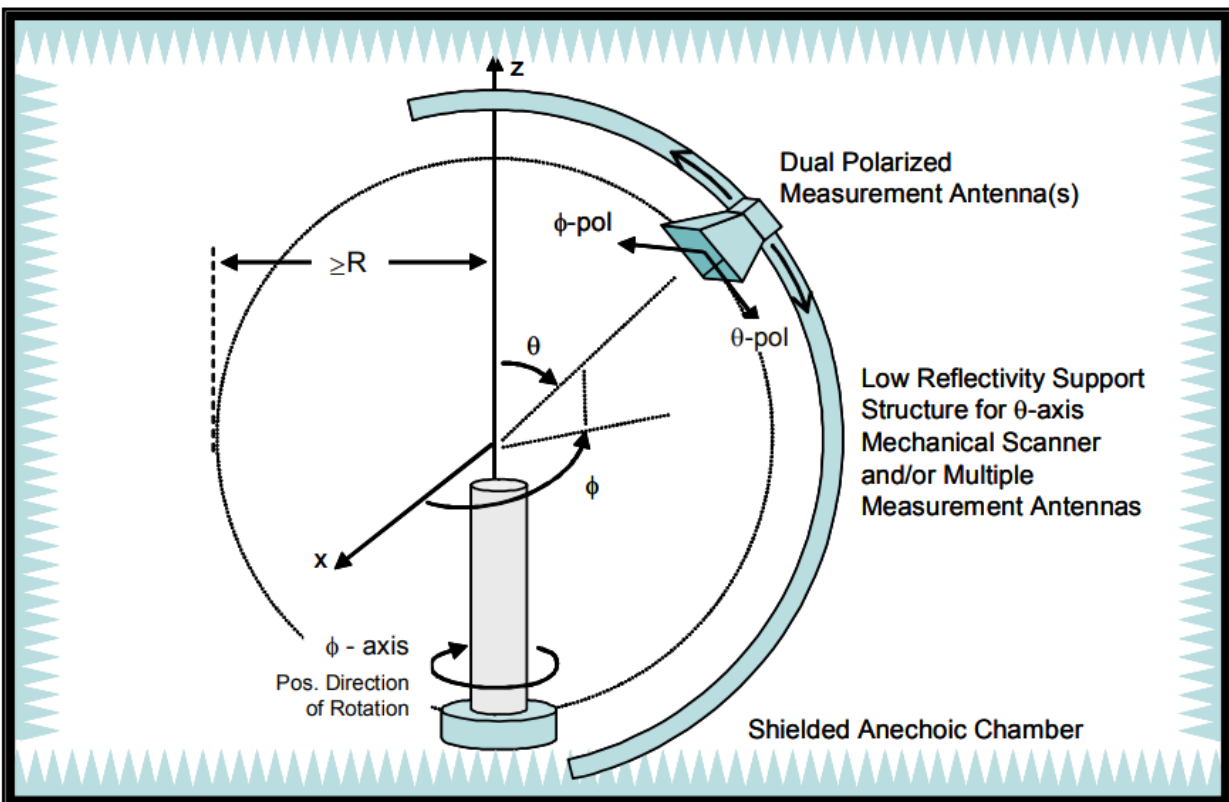
Google LLC

1. Test Method

The antenna gains are obtained through measurements in a fully anechoic OTA chamber with a 3D positioner.

Measurements are taken in discrete steps in theta and phi direction, data is being recorded using the spectrum analyzer (active) or network analyzer (passive) for both theta and phi polarizations at each position resulting in a 3D gain pattern. Step size is <30 deg along both axes.

Gain is derived directly through spatial averaging of VNA S21 measurements (passive measurement).



2. Test Equipment

Site Description	Chamber Manufacturer	Type
Satimo Stargate 64	MVG	Fully Anechoic
Software Version	Wave Studio 22.3.1	
Site location:	16618 W Bernardo Dr, San Diego, CA 92127	
Test Engineer	Ritu Verma	
Date	March 29, 2023	

Description	Manufacturer	Model	Calibration Date	Due Date
Network Analyzer	Rohde & Schwarz	ZNB20	May 16, 2022	May 16, 2023

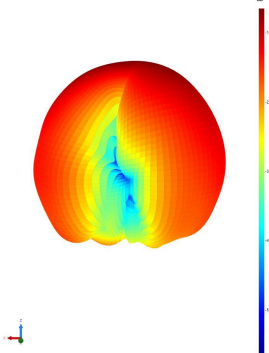
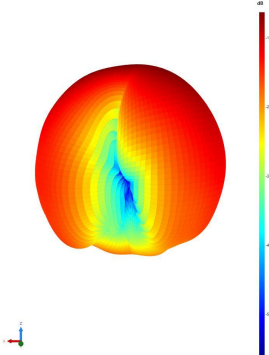
3. Antenna Type

Antenna	Type
BT	Slot Antenna

4. WLAN/BT Antenna Test Data

Frequency (MHz)	Peak Gain (dBi)
2400	-6.2
2440	-5.7
2480	-5.8

5. Radiation Plots for Max Gain Plane

Antenna	Frequency (MHz)	Radiation Pattern
BT	2400	
BT	2440	
BT	2480	