

Antenna Report

FCC-ID: 2A4DH-3284

IC: 24273-3284

Product Model Number: CL32P4

Date: 11/29/2023

Entity / Grantee Name: Amazon.com Services LLC

Antenna Specification

Operating Frequency Range:

WiFi-0 2G Antenna: 2412 MHz to 2472 MHz

WiFi-1 2G Antenna: 2412 MHz to 2472 MHz

WiFi-0 5G Antenna: 5180 MHz to 5850 MHz

WiFi-1 5G Antenna: 5180 MHz to 5850 MHz

WiFi-0 BT/BLE Antenna: 2402 MHz to 2480 MHz

Antenna Type:

WiFi-0_2.4G and BT/BLE, WiFi-1_2G Antenna: Printed PCB Slot Antenna

WiFi-0_5G, WiFi-1_5G Antenna: Printed PCB Loop Antenna

Peak Antenna Gain (dBi):

Frequency Band (FS)	WiFi Ant 0	WiFi Ant 1	BT/BLE Ant 0
2.4 GHz			
WiFi 2412 MHz - 2484 MHz	1.5	1.5	
BT/BLE 2402 MHz - 2480 MHz			1.5
5 GHz			
UNII 1 5150 MHz -5250 MHz	2	2.5	
UNII 2a 5250 MHz -5350 MHz	2	2.8	
UNII 2c 5470 MHz -5725 MHz	2	3.5	
UNII 3 5725 MHz -5850 MHz	1.5	3.5	

Antenna Gain Measurement

Measurement Test Method:

Solder pigtails on feeding point of antennas and measure passive antenna performance by VNA and OTA chamber system. And the measurement was done in devices level.

Measurement Standards:

Foxconn CNT chamber in Hsinchu Company

Test Equipment Used:

1. VNA: KEYGIGHT_E5071C
2. OTA Chamber: ETS_AMS-8923-142-G Antenna Measurement System

Antenna / Equipment Calibration:

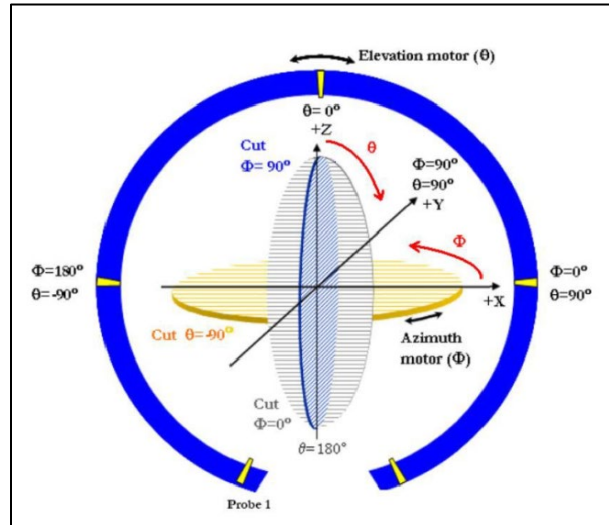
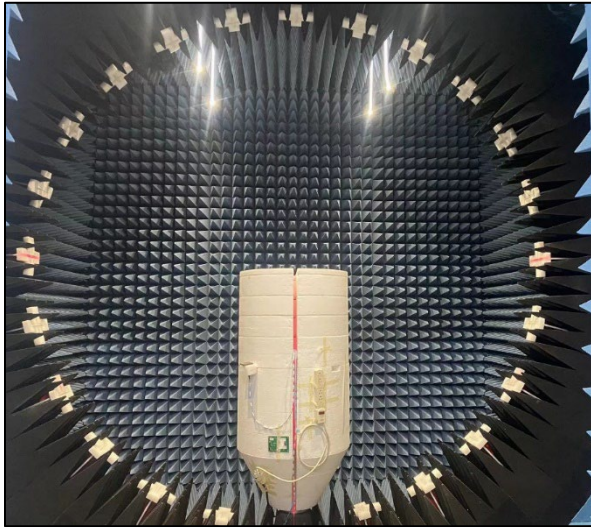
Calibration date: 2023/09/30

Next calibration date: 2023/12/31

Measurement Environment:

Use Chamber : ETS LINDGREN, AMS-8923-142-G

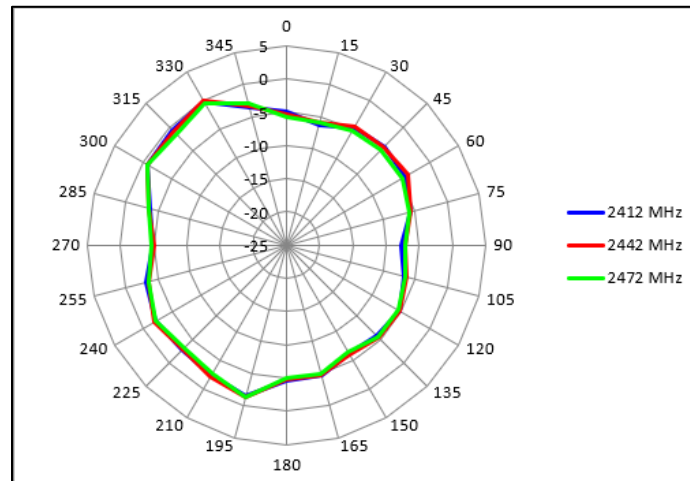
Test Engineer : Bryan, Chan



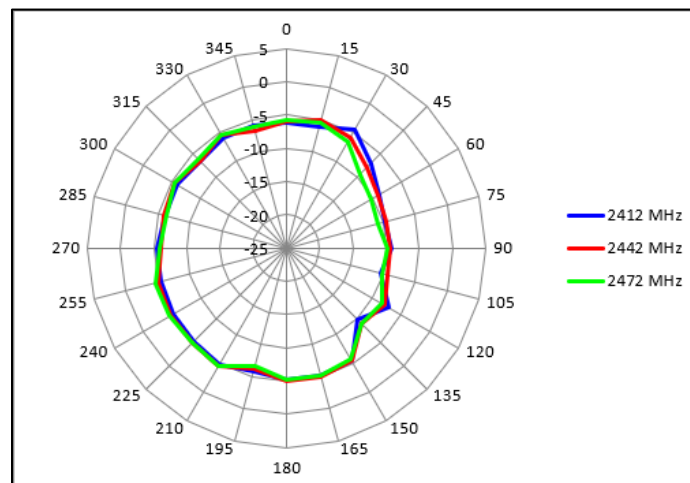
Antenna Radiation Patterns:

2G WiFi-0/BT Antenna

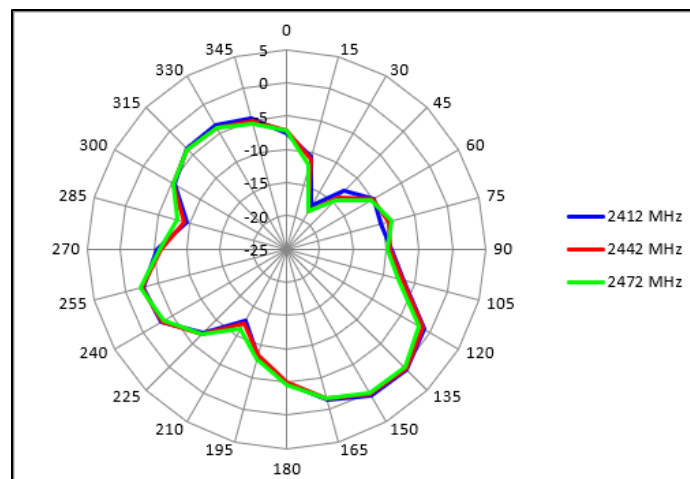
Phi 0° (YZ Plane)



Phi 90° (XZ Plane)

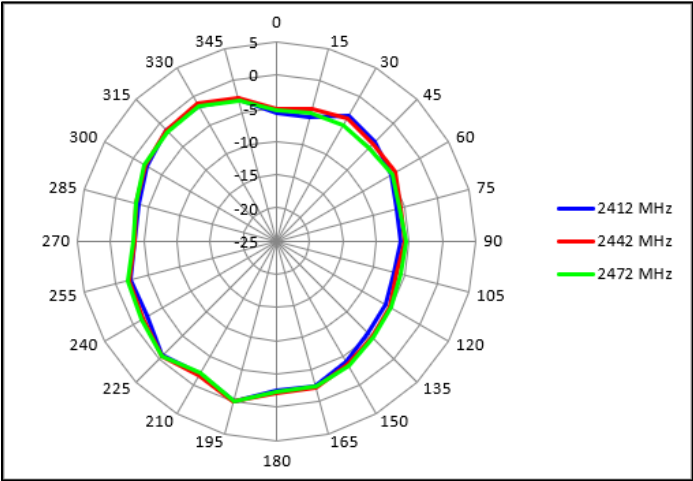


Theta 90° (XY Plane)

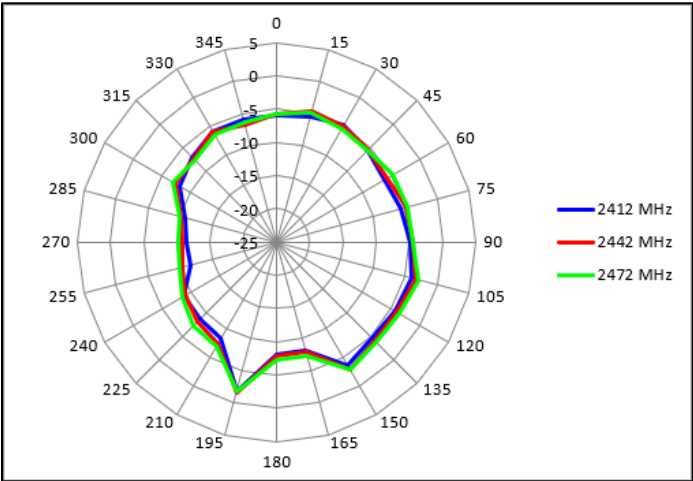


2G WiFi-1 Antenna

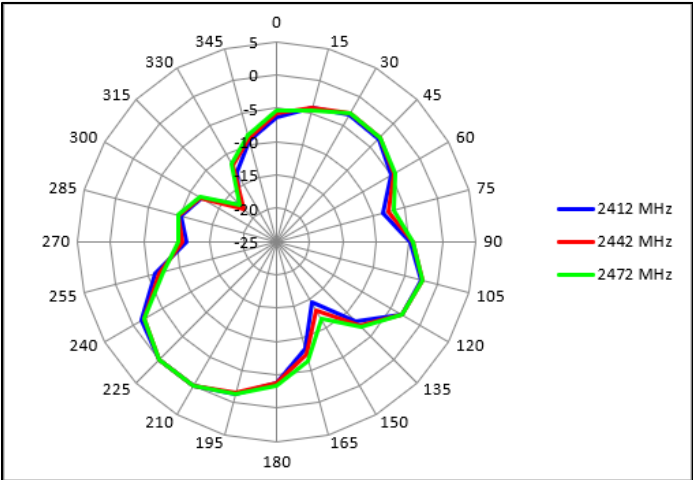
Phi 0° (YZ Plane)



Phi 90° (XZ Plane)

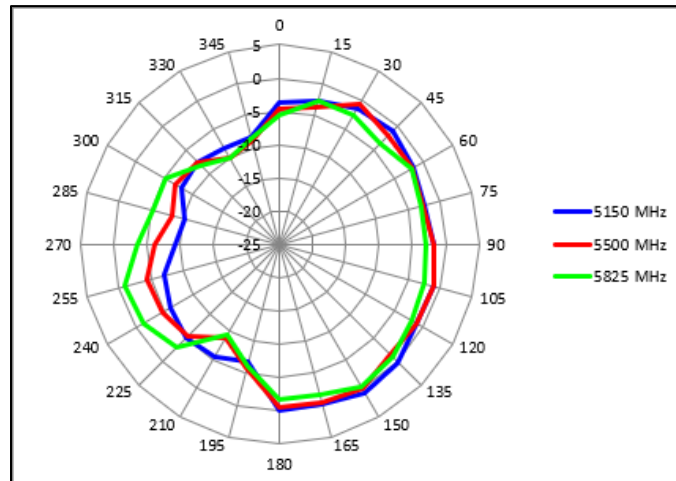


Theta 90° (XY Plane)

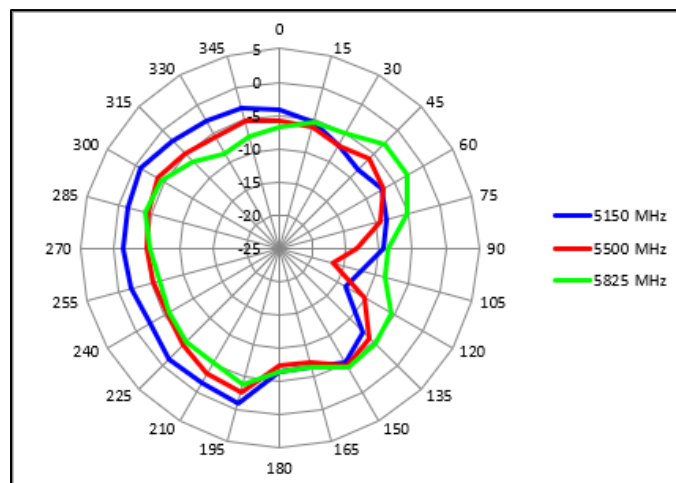


5G WiFi-0 Antenna

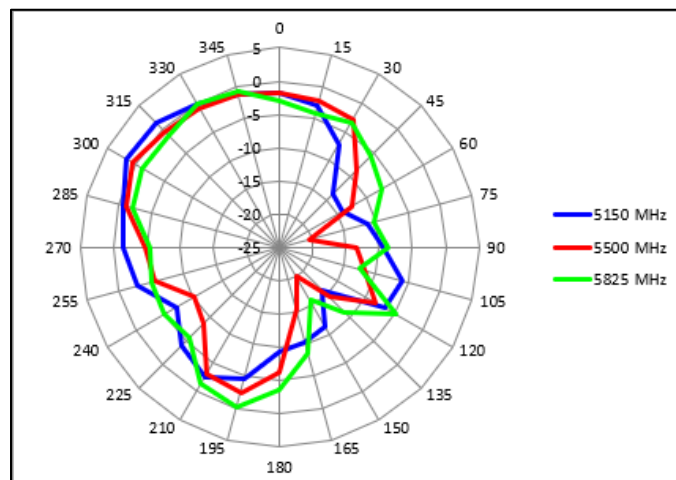
Phi 0° (YZ Plane)



Phi 90° (XZ Plane)

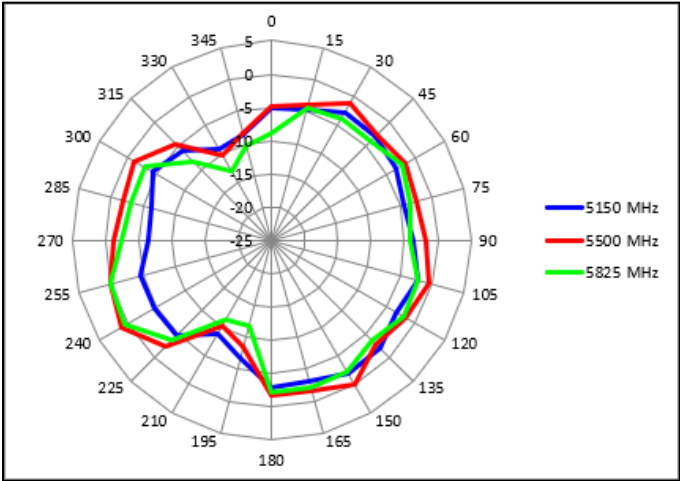


Theta 90° (XY Plane)

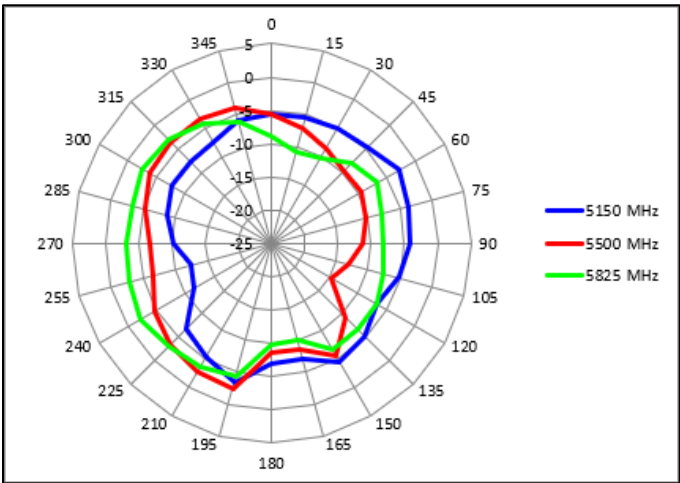


5G WiFi-1 Antenna

Phi 0° (YZ Plane)



Phi 90° (XZ Plane)



Theta 90° (XY Plane)

