Antenna

awan

The Most Appropriate Antenna for Your Design!

Advanced Wireless & Antenna Inc.

SAMPLE Antenna Test Report

ADVANCED-CONNECTEK INC.

Wireless Communications BU.

2024.05.13

ACON
ACON-HOLDING INC.

Executive Summary

- **Purpose**

  Antenna study for SAMPLE. Result as following.

  Item: AEEEE-100002 - MediaPlayer-ANT165_DBTBDX_HF

- **Agenda**
  - Test Environment and Equipment
  - Antenna Positions and Dimensions
  - Antenna Test Data

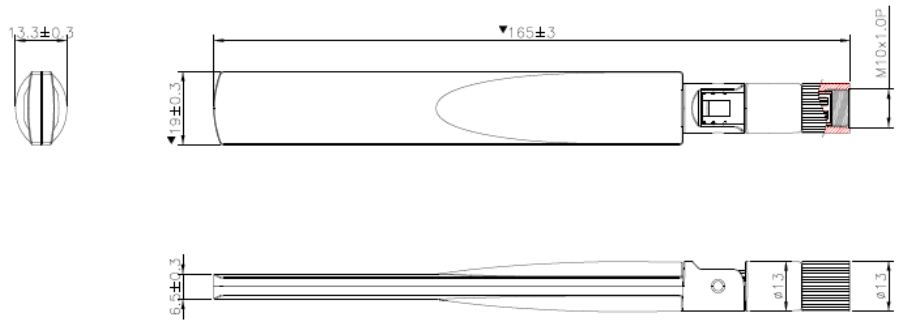
    Test Result : Antenna VSWR & Isolation

    Test Result : Antenna Efficiency & Gain

Drawing

AWAN P/N	AEEEE-100002
Customer P/N	3900900009F0

Rev.	ECR	Description	Drawn/Date	Checked/Date	Approved/Date
X1		NEW RELEASE	Kin 07/22/24	Jason 07/22/24	Jerry 07/22/24



Electrical Properties	
Frequency	WIFI 2400~2500MHz WIFI 5150~5875MHz BT 2400~2500MHz
Impedance	50 Ohm Nominal
VSWR	WIFI 2400~2500MHz @ ≤4.0 WIFI 5150~5875MHz @ ≤2.3 BT 2400~2500MHz @ ≤4.0
Peak Gain	WIFI 2400~2500MHz @ <3.0dBi WIFI 5150~5875MHz @ <5.5dBi BT 2400~2500MHz @ <3.0dBi
Polarization	Linear
Mechanical Properties	
CASE	PC+ABS
CONNECTOR	TWO PIN PLUG
CASE COLOR	Black
Operating Temp	-30 ~ +65 °C
Waterproof level	N/A

HALOGEN FREE

Drawn	Kin	Date	07/22/24
Design	Kin	Date	07/22/24
Checked	Jason	Date	07/22/24
Approved	Jerry	Date	07/22/24
Customer Drawing			

ACON ADVANCED-CONNECTION INC.

Mediapolyer-ANT165_DBTBDX_HF

AEEEE Series A3 X1

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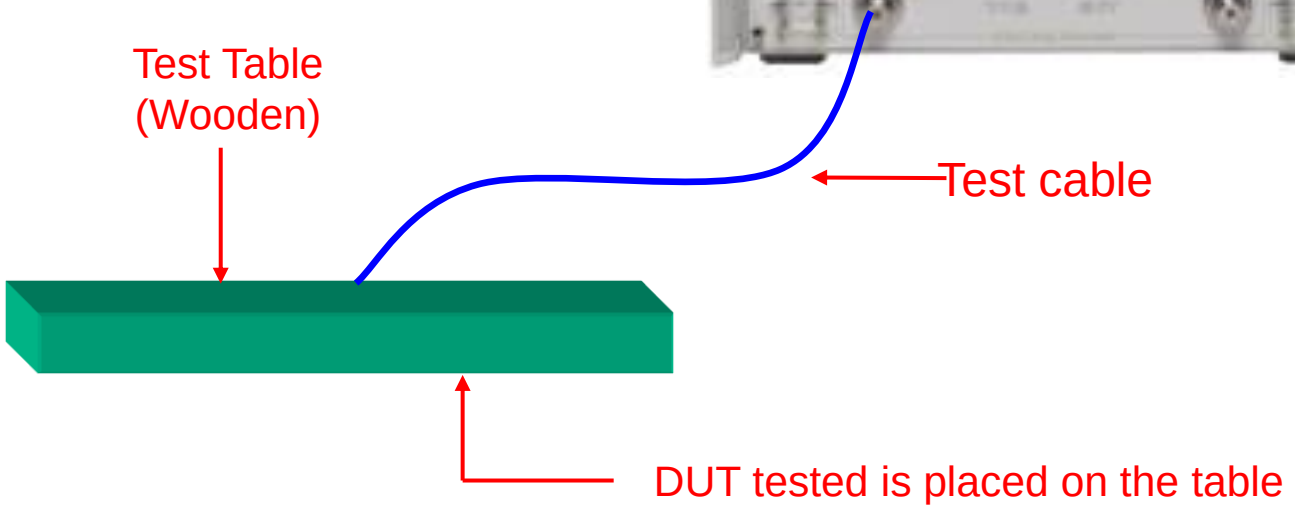
H&F related homogeneous split and test point selection reference
<H&F homogeneous substance split operation diagram>

All materials meet the AWAN's spec. Environment - related substances management technical standard.

Test Environment and Equipments

S-Parameter test

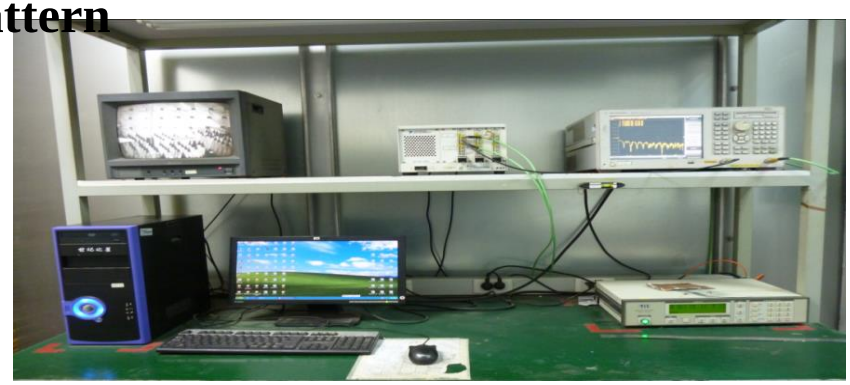
- Network Analyzer(Agilent-E5071C)
- Testing range from 9KHz to 8.5GHz

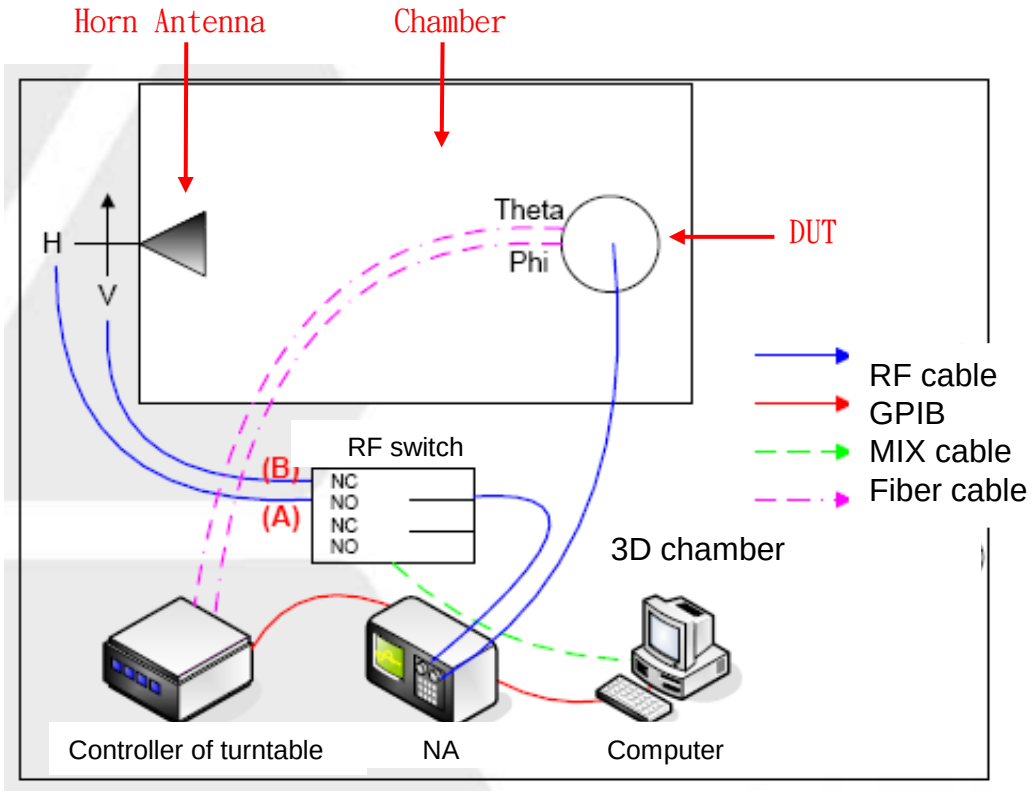


Test Environment and Equipments

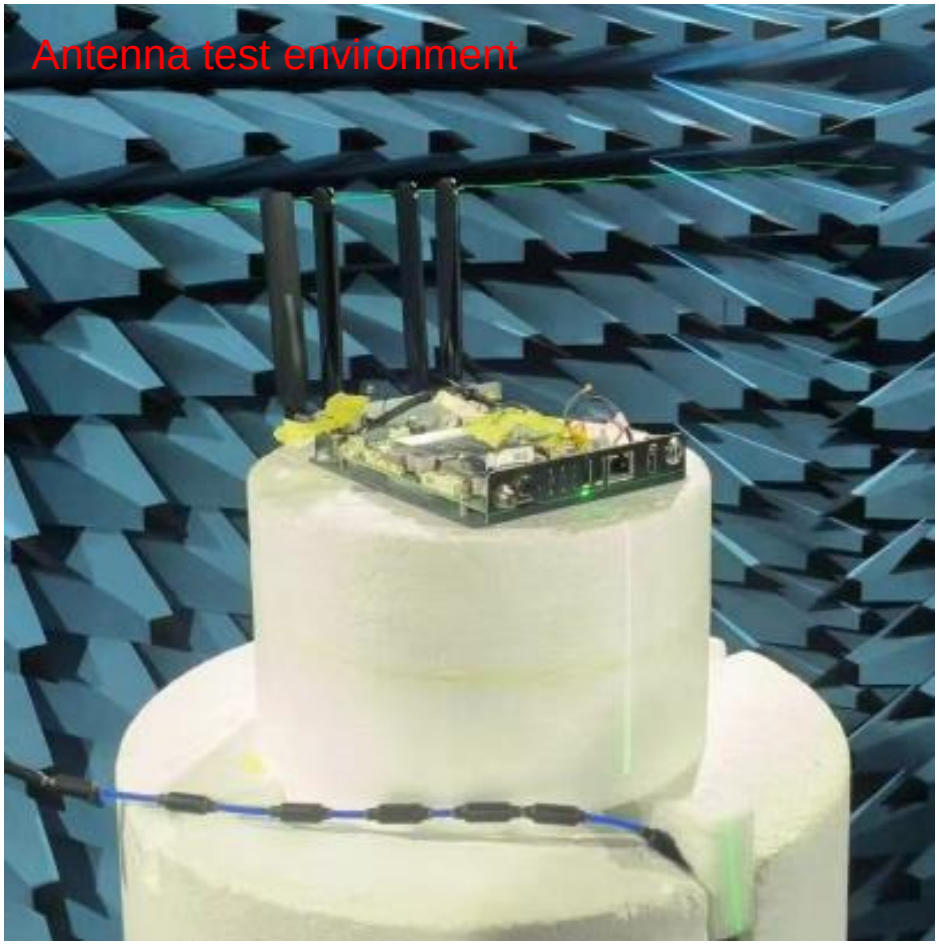
The Gain, Efficiency,Directivity and 2D/3D Pattern

- ACON 3D Anechoic Chamber
- Chamber Room Size: L*W*H=9*4.7*4.7 M

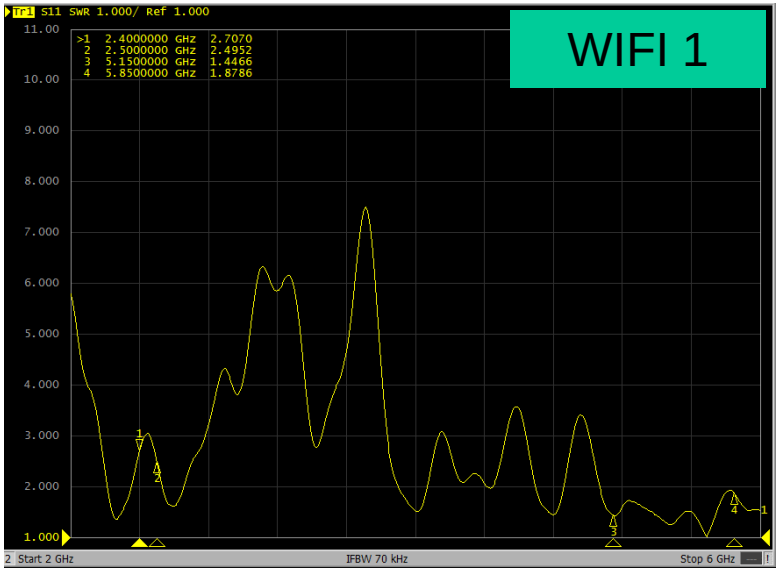




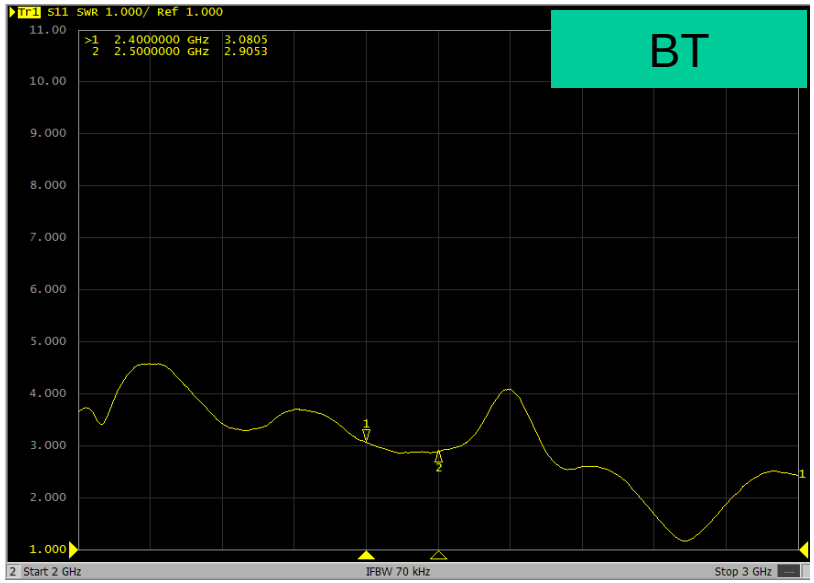
Antenna Test environment



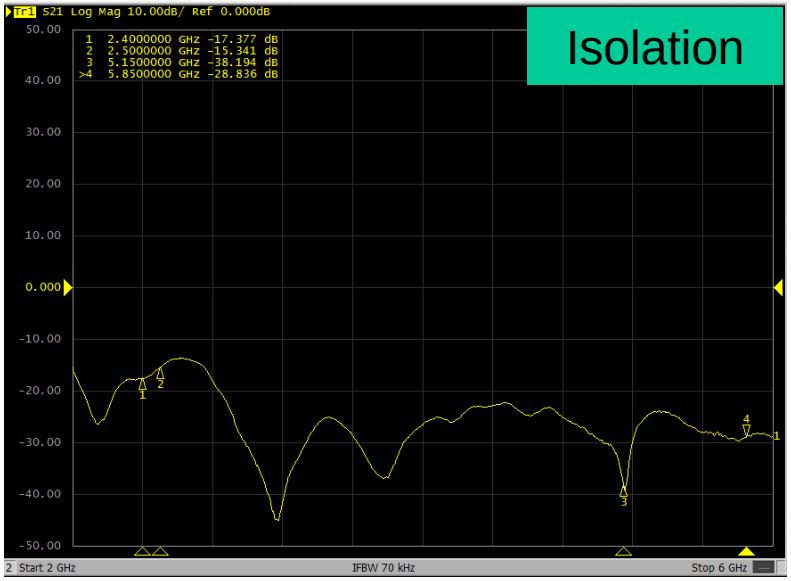
Test Result:Antenna VSWR & Isolation



WIFI 1



BT



Isolation

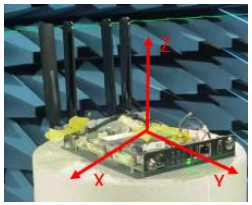
Test Result:Antenna Efficiency

Frequency (MHz)	WIFI-1	
	Efficiency(dB)	Gain(dBi)
2400	-3.88	1.91
2450	-4.15	2.11
2500	-3.57	1.41
5150	-3.47	3.28
5250	-3.85	2.33
5350	-3.84	3.27
5470	-3.74	2.97
5600	-3.73	3.45
5725	-3.77	2.35
5785	-3.95	3.08
5800	-3.95	5.06
5850	-3.93	5.09

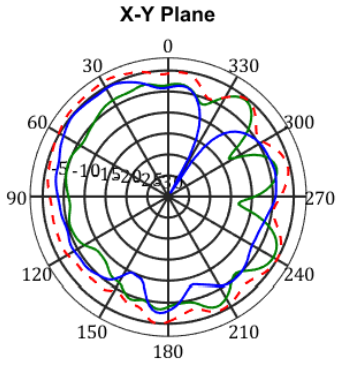
Test Result:Antenna Efficiency

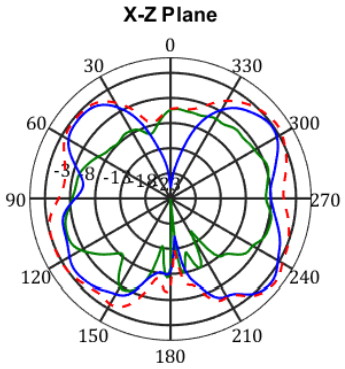
Frequency (MHz)	BT	
	Efficiency(dB)	Gain(dBi)
2400	-4.28	1.51
2450	-3.84	1.54
2500	-3.57	1.36

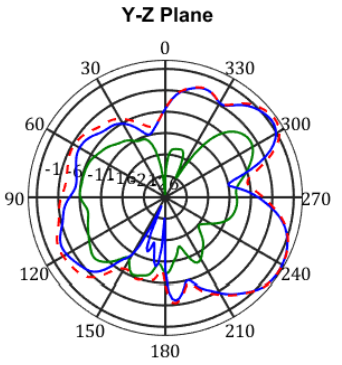
Test Result:Antenna BT 2D



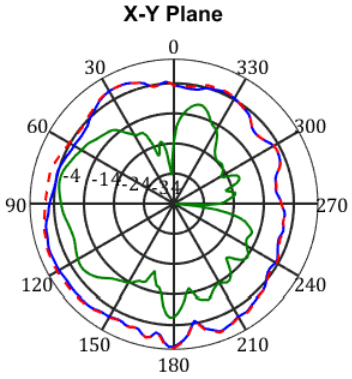
2400MHz

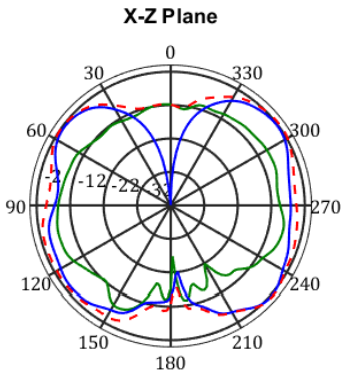


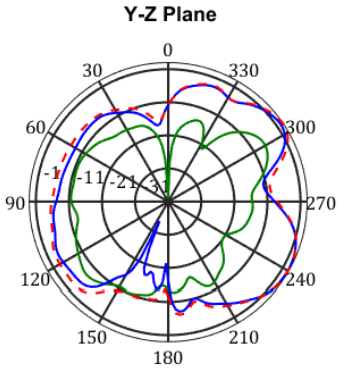




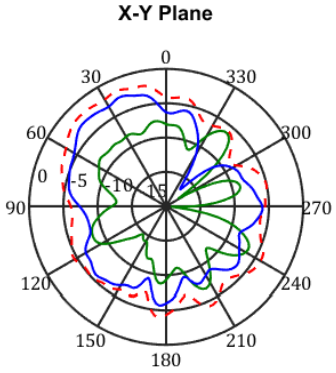
2450MHz

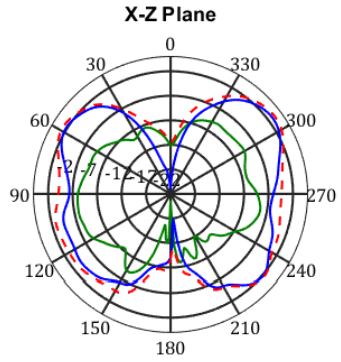


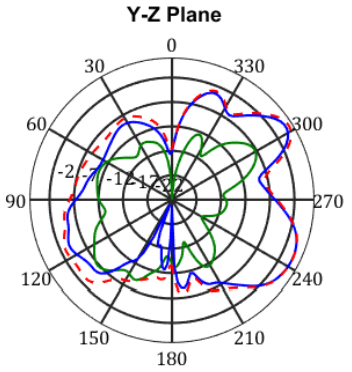


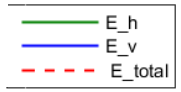


2500MHz









Test Result:Antenna WIFI-1 2D

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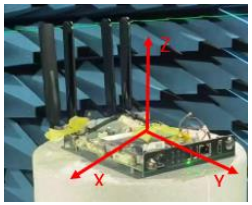
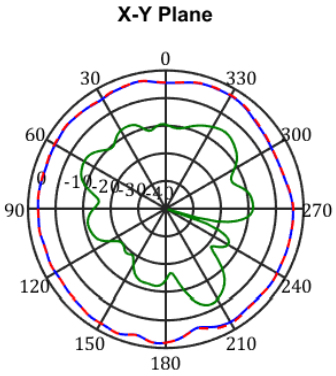
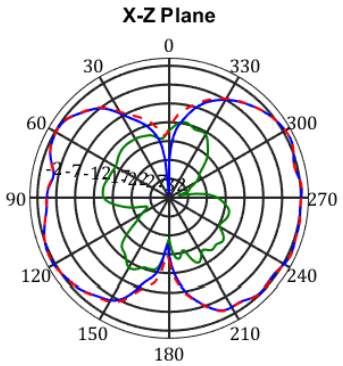
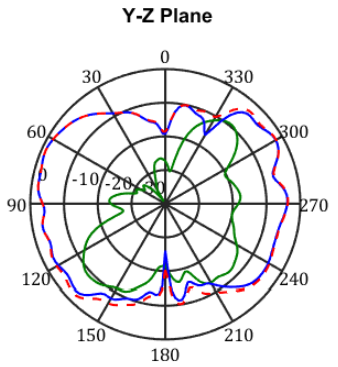


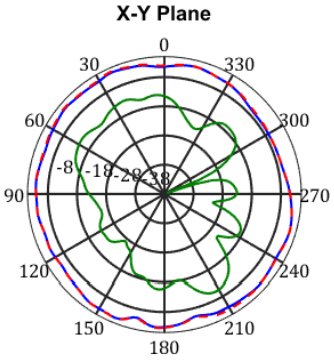
2400MHz

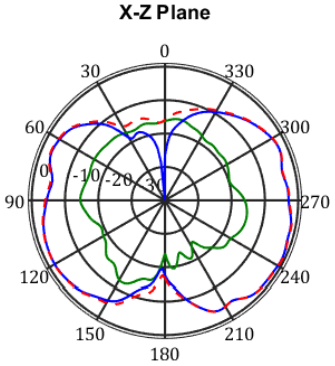


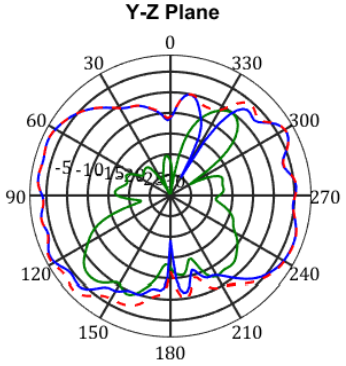




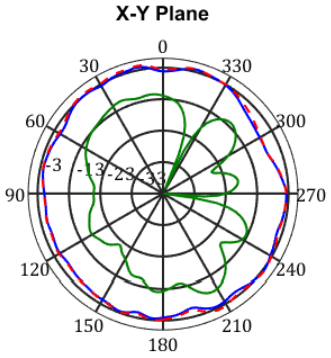
2450MHz

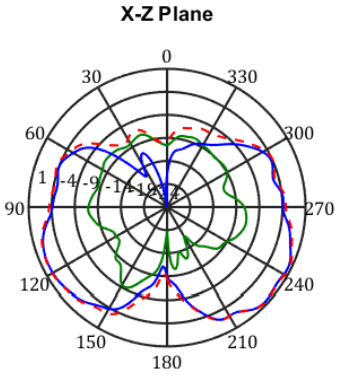


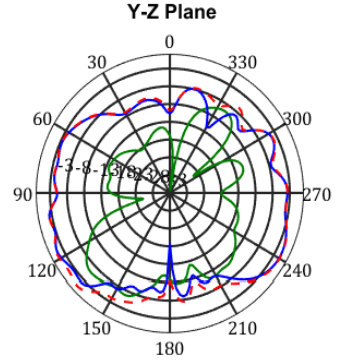




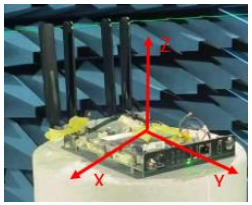
2500MHz



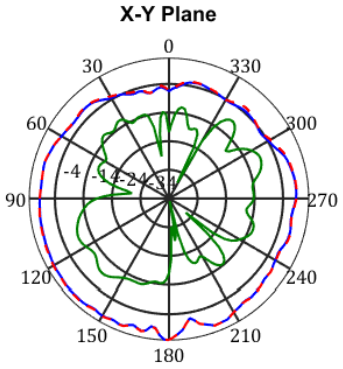


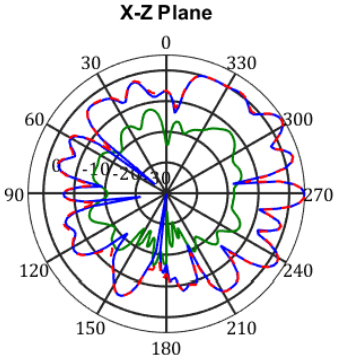


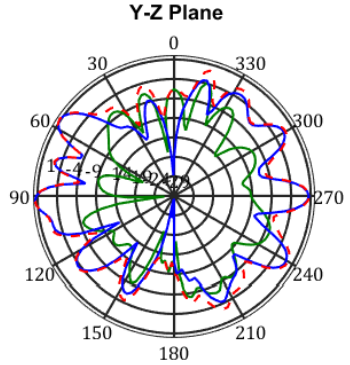
Test Result:Antenna WIFI-1 2D



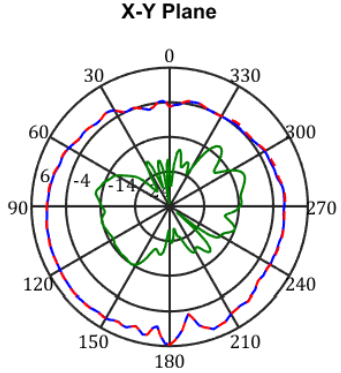
5150MHz

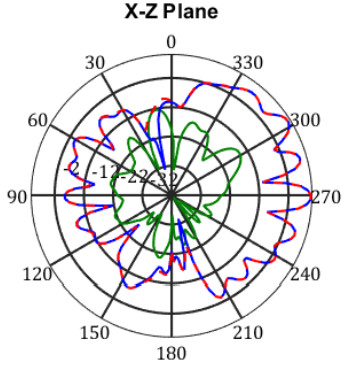


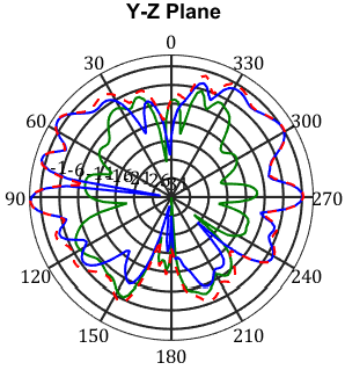




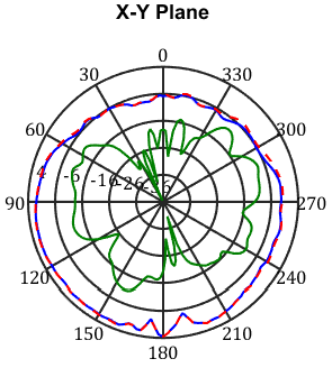
5470MHz

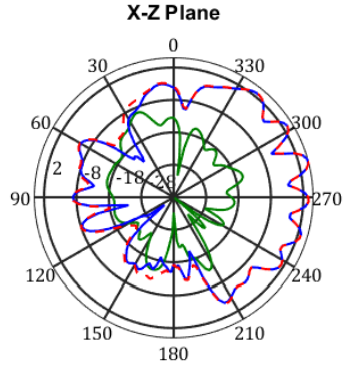


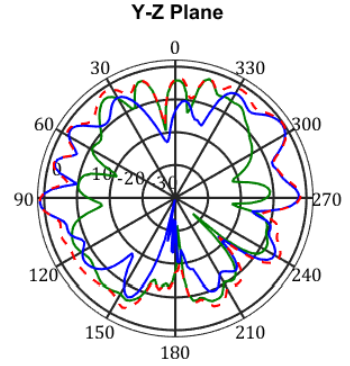


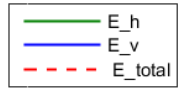


5850MHz









Thank you!