

# Antenna Test Report

apply for B02/Z02

Test Date: 2024/04/11

Issue Date: 2024/05/28

## 1. Antenna Description

### 1.1 Antenna List

Antenna Name	Brand	Model	Max. Gain(dBi)					Antenna Type
			2400-2483.5MHz	5150-5250MHz	5250-5350MHz	5470-5725MHz	5725-5850MHz	
WLAN	FOXCONN	BZ02	2.49	0.98	1.73	2.82	2.94	Printing
BT	FOXCONN	BZ02		-	-	-	-	Printing

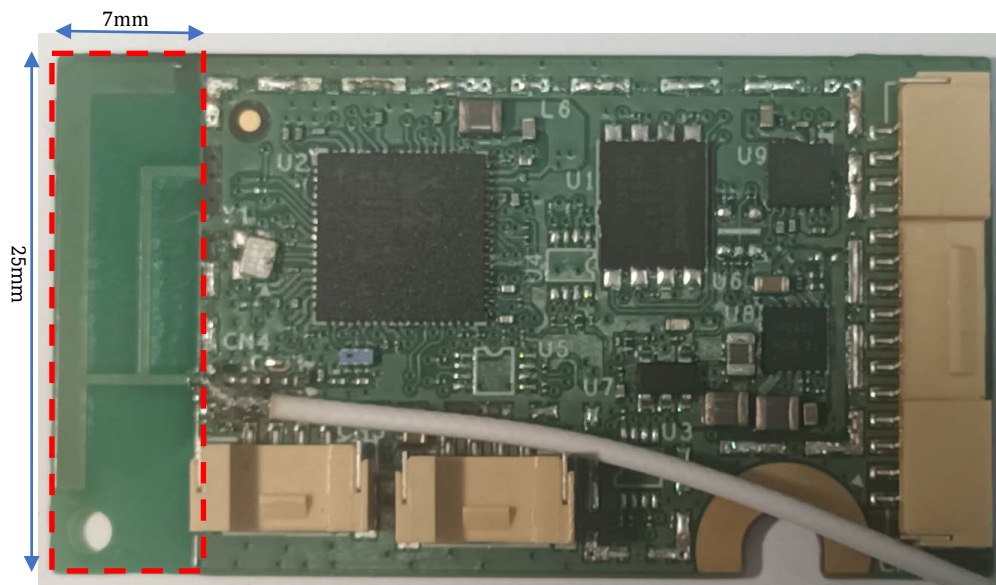
Note:

Gain is included Cable Loss

2GHz=-0.02dB

5GHz=-0.03dB

### 1.2 Antenna Location and Pattern



## 2. Measurement Channel List

### 2.1 BT

Frequency
2402MHz
2441MHz
2480MHz

### 2.2 WLAN

Frequency	Frequency
2412 MHz	5150MHz
2437 MHz	5200MHz
2442MHz	5250MHz
2462 MHz	5300MHz
2472MHz	5350MHz
	5470MHz
	5600MHz
	5725MHz
	5785MHz
	5850MHz

## 3. Test Program Used

1. EMQuest 1.08

## 4. Test Instruments

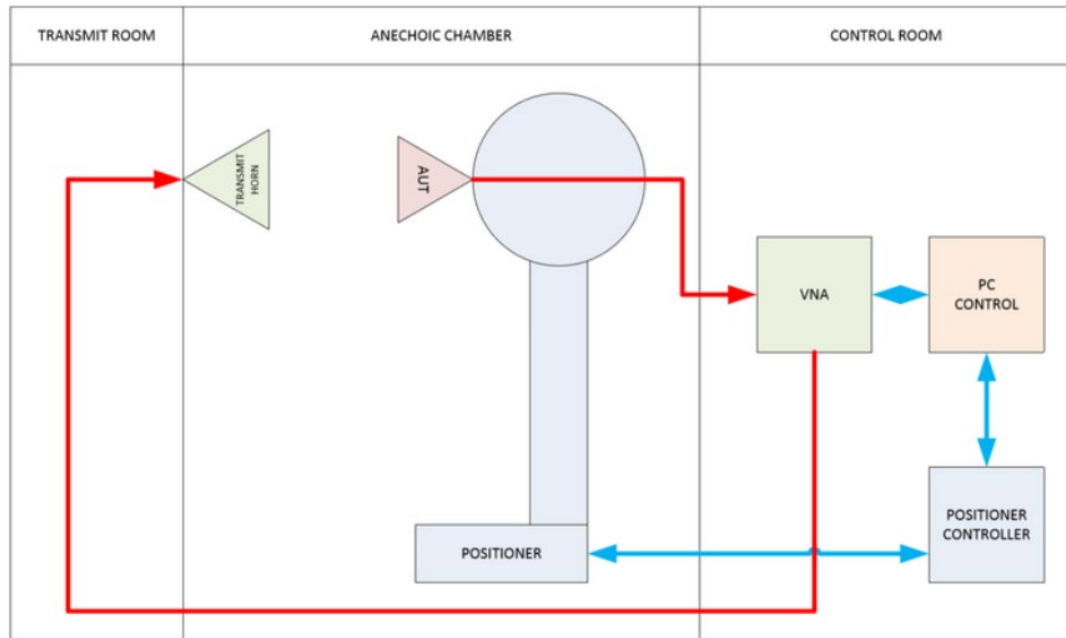
Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
ETS	AMS-8500	N/A	2024/3/17	2025/3/16
Keysight	5071B	N/A	2024/3/15	2025/3/14
Keysight	3499B	N/A	2021/10/30	N/A

Note:

1. The test was performed in AMS-8500 anechoic chamber
2. Tested Date: 2024/04/11

## 5. Test Arrangements

### 5.1 Test setup



### 5.2 Test Procedure

- Setup DUT into the antenna chamber and place the DUT in the center of table, and
- Connect it to the test equipment through the IPEX connector;
- Open the EMQuest software, set the test frequency band, and start the test;
- In EMQuest Perform data post-processing, generate the required data, and export the data.

## 6. Test Results

### 6.1 Antenna Gain Summary Table

#### 6.1.1 WLAN

	XY Plane		ZY Plane		ZX Plane	
Frequency [MHz]	Peak Gain [dBi]	Average Gain [dBi]	Peak Gain [dBi]	Average Gain [dBi]	Peak Gain [dBi]	Average Gain [dBi]
2412	1.31	-0.29	0.57	-2.53	1.57	-2.81
2437	1.82	0.14	0.86	-2.28	1.96	-2.49
2442	1.74	0.17	0.90	-2.25	2.10	-2.45
2462	1.96	0.39	1.07	-2.05	2.49	-2.23
2472	1.88	0.25	0.97	-2.14	2.31	-2.34
5150	-1.75	-6.98	0.74	-3.94	-1.67	-4.57
5200	-1.82	-6.72	0.78	-3.29	-1.72	-4.12
5250	-1.95	-6.46	0.98	-3.16	-0.80	-3.66
5300	-1.96	-6.00	0.82	-3.01	-0.88	-3.61
5350	-1.77	-5.30	1.73	-2.22	-0.01	-2.80
5470	-1.29	-4.71	1.90	-1.67	1.26	-1.99
5600	-0.72	-4.65	2.82	-1.54	0.91	-1.97
5725	-0.76	-4.44	2.54	-1.43	1.33	-1.51
5785	0.03	-4.19	2.94	-1.10	1.34	-1.49
5850	-1.78	-5.28	1.81	-2.45	-0.25	-2.90

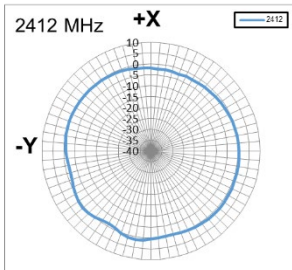
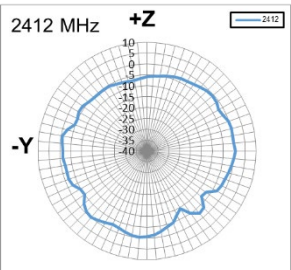
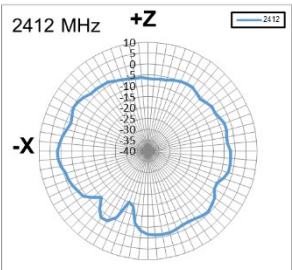
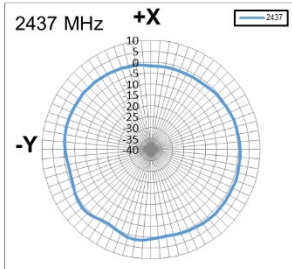
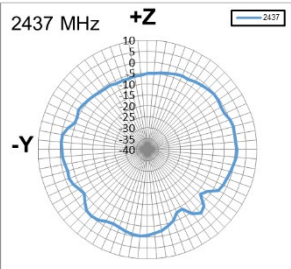
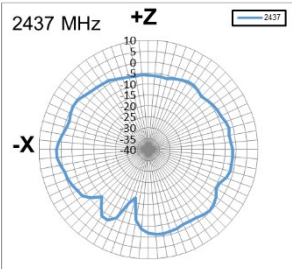
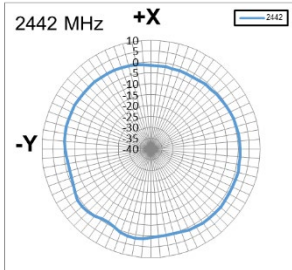
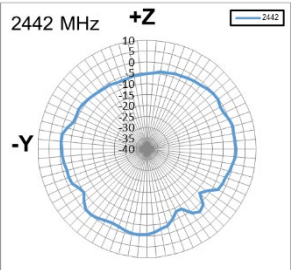
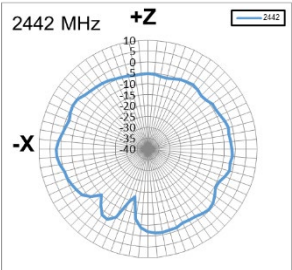
#### 6.1.2 BT

	XY Plane		ZY Plane		ZX Plane	
Frequency [MHz]	Peak Gain [dBi]	Average Gain [dBi]	Peak Gain [dBi]	Average Gain [dBi]	Peak Gain [dBi]	Average Gain [dBi]
2402	1.27	-0.51	0.16	-2.67	1.48	-2.96
2441	1.74	0.14	0.84	-2.28	2.20	-2.45
2480	1.74	0.09	0.83	-2.28	2.11	-2.47

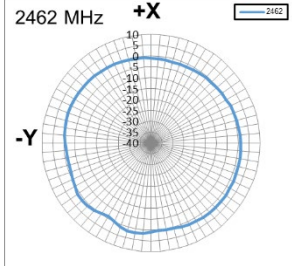
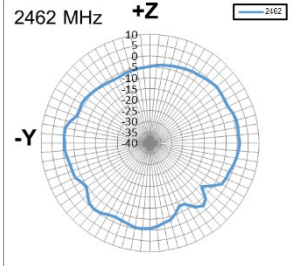
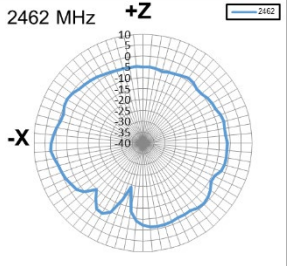
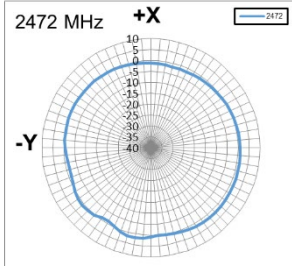
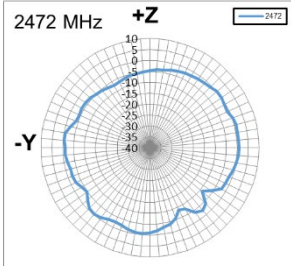
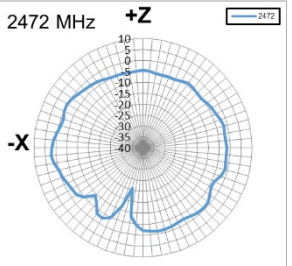
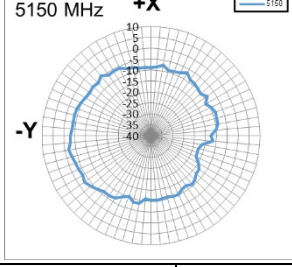
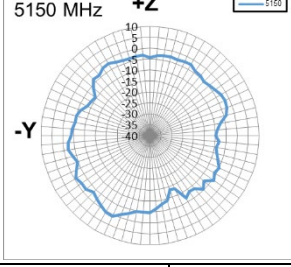
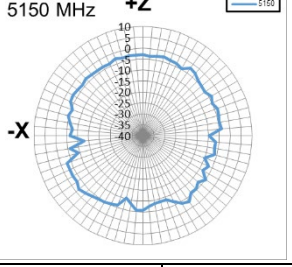
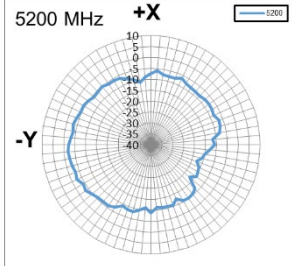
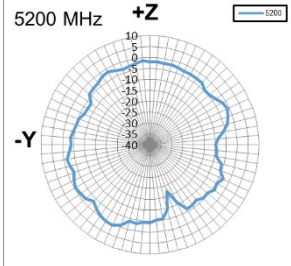
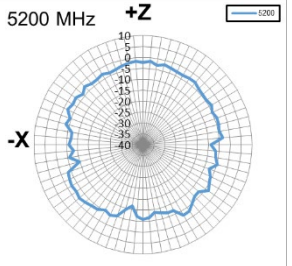
## 6.2 Measurement Pattern

### 6.2.1 WLAN

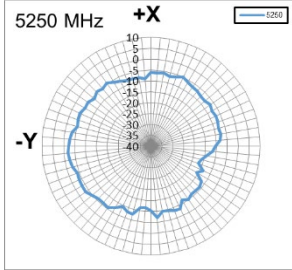
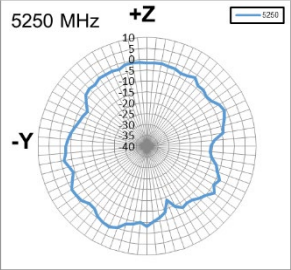
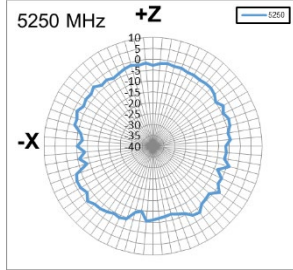
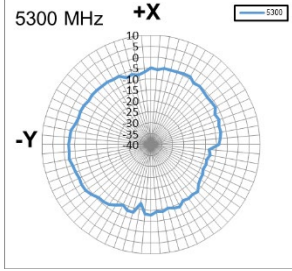
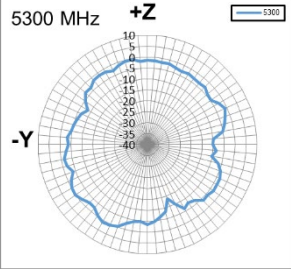
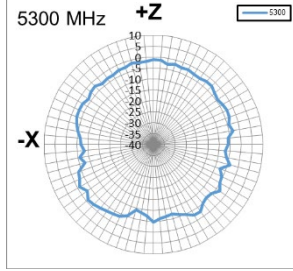
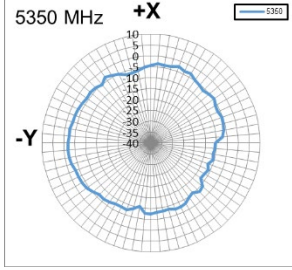
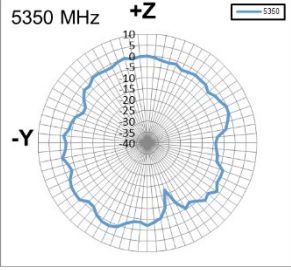
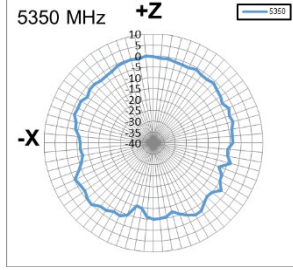
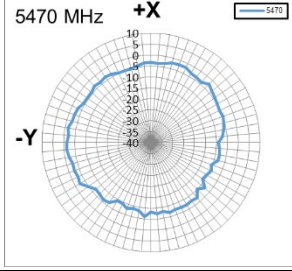
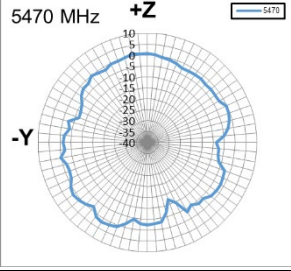
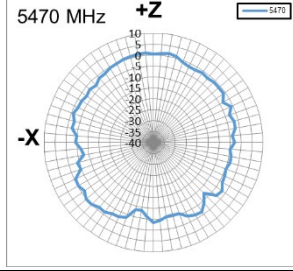
Environmental Conditions:	23 °C, 55%RH	Brand/Model	FOXCONN/BZ02	Tested By:	YYT
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Plane	XY	Plane	ZY	Plane	ZX
Frequency	2412MHz	Frequency	2412MHz	Frequency	2412MHz
Peak Gain(dBi)	1.31	Peak Gain(dBi)	0.57	Peak Gain(dBi)	1.57
					
Plane	XY	Plane	ZY	Plane	ZX
Frequency	2437MHz	Frequency	2437MHz	Frequency	2437MHz
Peak Gain(dBi)	1.82	Peak Gain(dBi)	0.86	Peak Gain(dBi)	1.96
					
Plane	XY	Plane	ZY	Plane	ZX
Frequency	2442MHz	Frequency	2442MHz	Frequency	2442MHz
Peak Gain(dBi)	1.74	Peak Gain(dBi)	0.9	Peak Gain(dBi)	2.1

Environmental Conditions:	23 °C, 55%RH	Brand/ Model	FOXCONN/ BZ02	Tested By:	YYT
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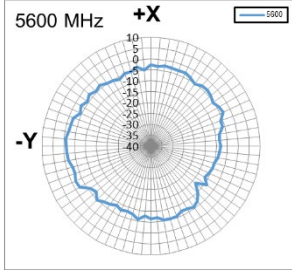
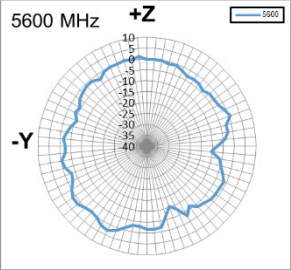
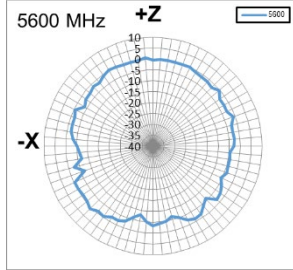
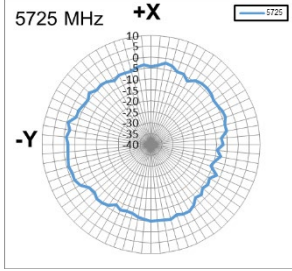
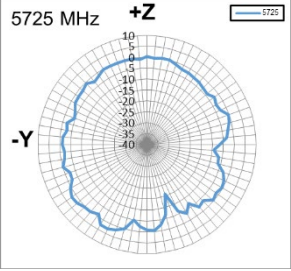
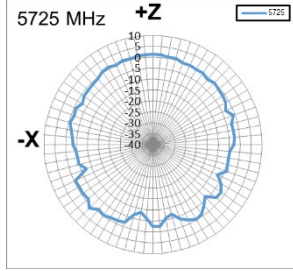
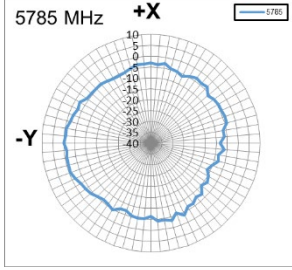
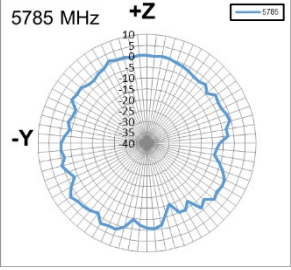
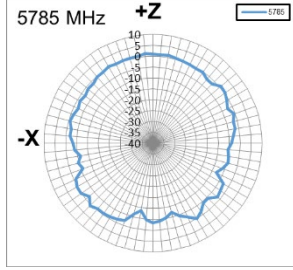
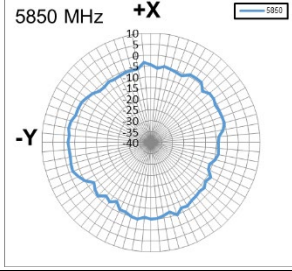
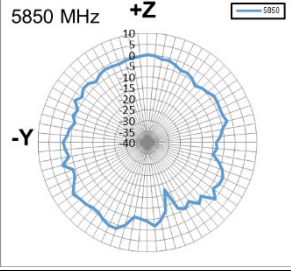
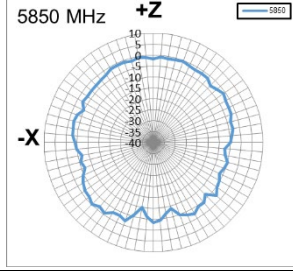
					
Plane	XY	Plane	ZY	Plane	ZX
Frequency	2462MHz	Frequency	2462MHz	Frequency	2462MHz
Peak Gain(dBi)	1.96	Peak Gain(dBi)	1.07	Peak Gain(dBi)	2.49
					
Plane	XY	Plane	ZY	Plane	ZX
Frequency	2472MHz	Frequency	2472MHz	Frequency	2472MHz
Peak Gain(dBi)	1.88	Peak Gain(dBi)	0.97	Peak Gain(dBi)	2.31
					
Plane	XY	Plane	ZY	Plane	ZX
Frequency	5150MHz	Frequency	5150MHz	Frequency	5150MHz
Peak Gain(dBi)	-1.75	Peak Gain(dBi)	0.74	Peak Gain(dBi)	-1.67
					
Plane	XY	Plane	ZY	Plane	ZX
Frequency	5200MHz	Frequency	5200MHz	Frequency	5200MHz
Peak Gain(dBi)	-1.82	Peak Gain(dBi)	0.78	Peak Gain(dBi)	-1.72

Environmental Conditions:	23 °C, 55%RH	Brand/Model	FOXCONN/ BZ02	Tested By:	YYT
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Plane	XY	Plane	ZY	Plane	ZX
Frequency	5250MHz	Frequency	5250MHz	Frequency	5250MHz
Peak Gain(dBi)	-1.95	Peak Gain(dBi)	0.98	Peak Gain(dBi)	-0.8
					
Plane	XY	Plane	ZY	Plane	ZX
Frequency	5300MHz	Frequency	5300MHz	Frequency	5300MHz
Peak Gain(dBi)	-1.96	Peak Gain(dBi)	0.82	Peak Gain(dBi)	-0.88
					
Plane	XY	Plane	ZY	Plane	ZX
Frequency	5350MHz	Frequency	5350MHz	Frequency	5350MHz
Peak Gain(dBi)	-1.77	Peak Gain(dBi)	1.73	Peak Gain(dBi)	-0.01
					
Plane	XY	Plane	ZY	Plane	ZX
Frequency	5470MHz	Frequency	5470MHz	Frequency	5470MHz
Peak Gain(dBi)	-1.29	Peak Gain(dBi)	1.9	Peak Gain(dBi)	1.26

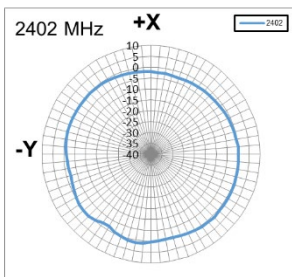
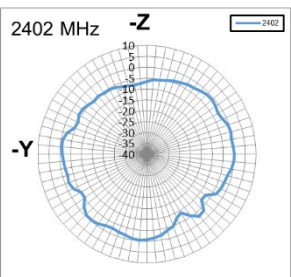
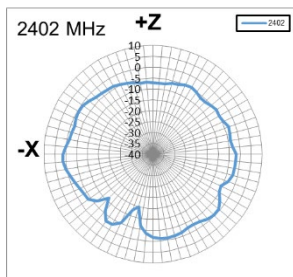
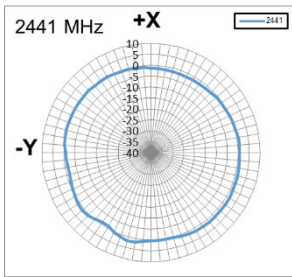
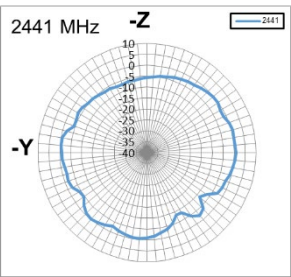
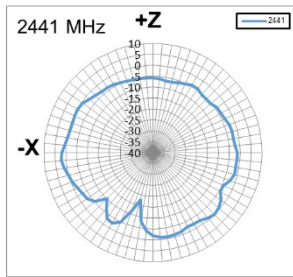
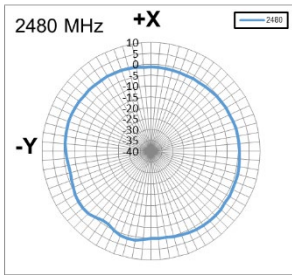
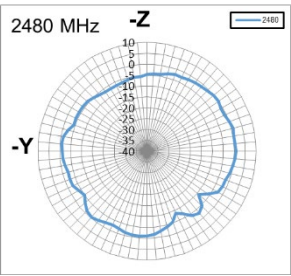
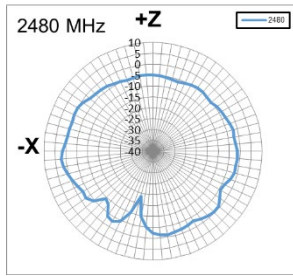


Environmental Conditions:	23 °C, 55%RH	Brand/Model	FOXCONN/ BZ02	Tested By:	YYT
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Plane	XY	Plane	ZY	Plane	ZX
Frequency	5600MHz	Frequency	5600MHz	Frequency	5600MHz
Peak Gain(dBi)	-0.72	Peak Gain(dBi)	2.82	Peak Gain(dBi)	0.91
					
Plane	XY	Plane	ZY	Plane	ZX
Frequency	5725MHz	Frequency	5725MHz	Frequency	5725MHz
Peak Gain(dBi)	-0.76	Peak Gain(dBi)	2.54	Peak Gain(dBi)	1.33
					
Plane	XY	Plane	ZY	Plane	ZX
Frequency	5785MHz	Frequency	5785MHz	Frequency	5785MHz
Peak Gain(dBi)	0.03	Peak Gain(dBi)	2.94	Peak Gain(dBi)	1.34
					
Plane	XY	Plane	ZY	Plane	ZX
Frequency	5850MHz	Frequency	5850MHz	Frequency	5850MHz
Peak Gain(dBi)	-1.78	Peak Gain(dBi)	1.81	Peak Gain(dBi)	-0.25

## 6.2.2 BT

Environmental Conditions:	23 °C, 55%RH	Brand/Model	FOXCONN/ BZ02	Tested By:	YYT
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Plane	XY	Plane	ZY	Plane	ZX
Frequency	2402MHz	Frequency	2402MHz	Frequency	2402MHz
Peak Gain(dBi)	1.27	Peak Gain(dBi)	0.16	Peak Gain(dBi)	1.48
					
Plane	XY	Plane	ZY	Plane	ZX
Frequency	2441MHz	Frequency	2441MHz	Frequency	2441MHz
Peak Gain(dBi)	1.74	Peak Gain(dBi)	0.84	Peak Gain(dBi)	2.2
					
Plane	XY	Plane	ZY	Plane	ZX
Frequency	2480MHz	Frequency	2480MHz	Frequency	2480MHz
Peak Gain(dBi)	1.74	Peak Gain(dBi)	0.83	Peak Gain(dBi)	2.11

## 7. Test Setup Photo

