

Antenna Test Report

apply for WFU032-VZEA

Test Date: 2022/08/05

Issue Date: 2023/3/31

1. Antenna Description

1.1 Antenna List

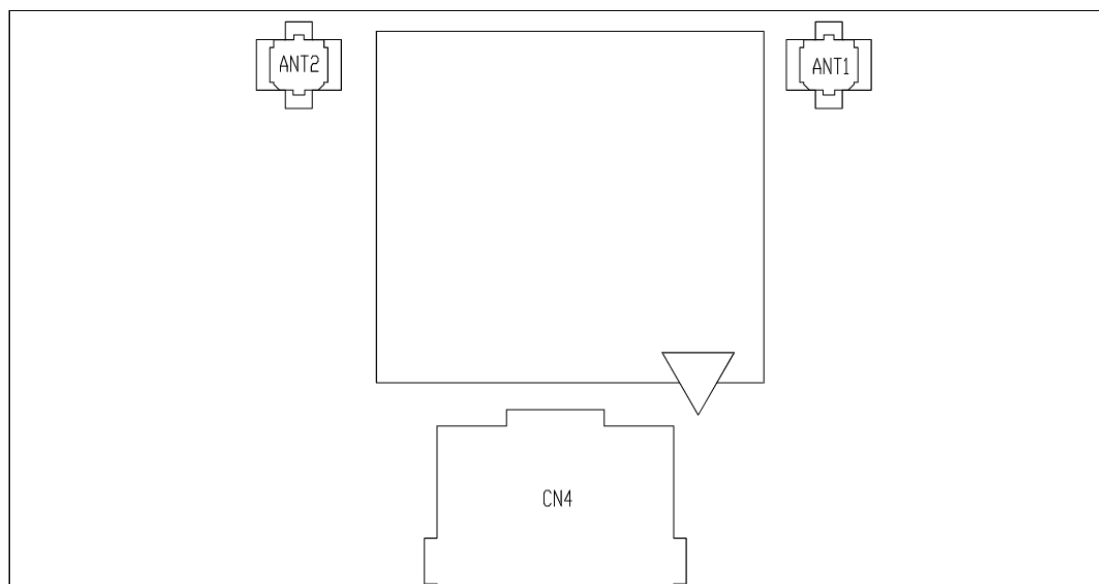
Antenna No.	Brand	Model	Max. Gain(dBi)	Antenna Type	Connector Type	Cable Length
			2400-2483.5MHz			
1	FOXCONN	6903B00014000	1.98	PIFA	I-PEX	190mm
2	FOXCONN	6903B00013000	0.78	PIFA	I-PEX	477mm
3	ZTX	6903B00012000	1.46	PIFA	I-PEX	190mm
4	ZTX	6903B00011000	1.48	PIFA	I-PEX	477mm

Note:

Gain is included Cable Loss

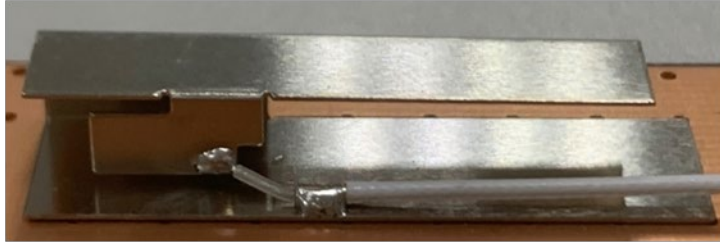
- 190 mm cable loss:0.44dB
- 477 mm cable loss:1.0 dB

1.2 Antenna Location

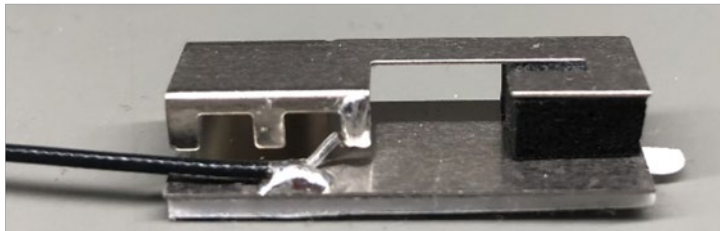


1.3 Antenna Design Pattern

A. FOXCONN/6903B00014000 、 6903B00013000



B. ZTX/6903B00012000 、 6903B00011000



2. Measurement Channel List

Channel	Frequency
1	2412 MHz
6	2437 MHz
11	2462 MHz

3. Test Program Used

1. Satimo.Spm 1.2.0
2. SatEnv 2.0

4. Test Instruments

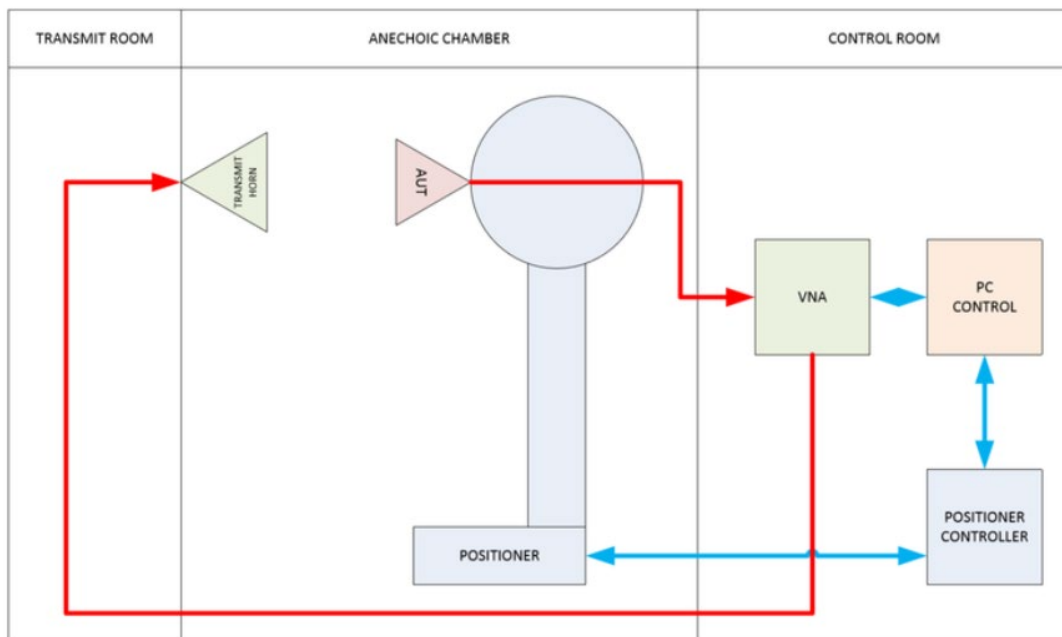
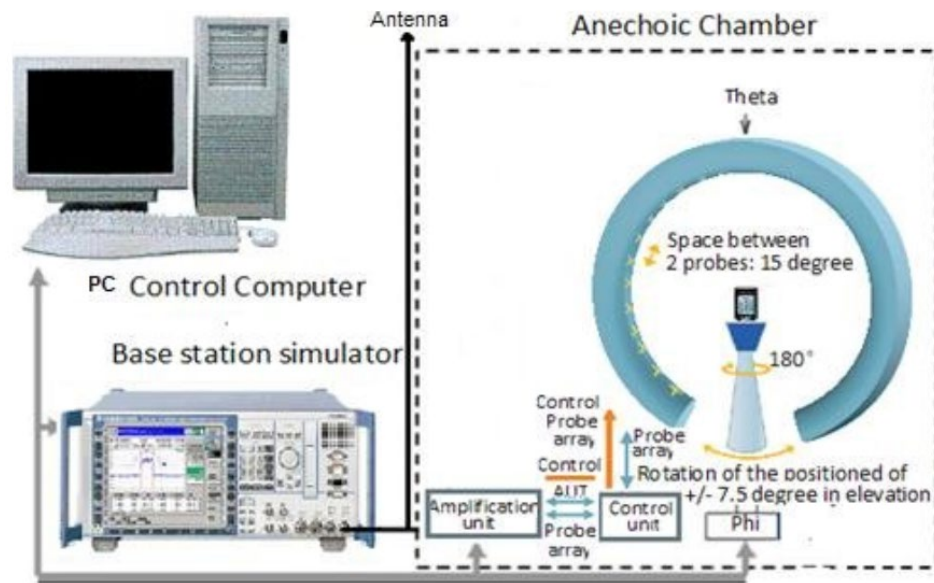
Manufacturer	Model No.	Calibrated Date	Calibrated Until
MVG	SG24 chamber	2022/4/27	2023/4/26
Keysight	5071C	2022/3/21	2023/3/21
Keysight	3499B	2021/10/30	N/A

Note:

1. The test was performed in SG24 anechoic chamber.
2. Tested Date: 2022/08/05

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 Satimo.Spm software, set the test frequency band, and start the test;
- Open satenv, import the Satimo.Spm test file into satenv, in satenv Perform data post-processing, generate the required data, and export the data.

6. Test Results

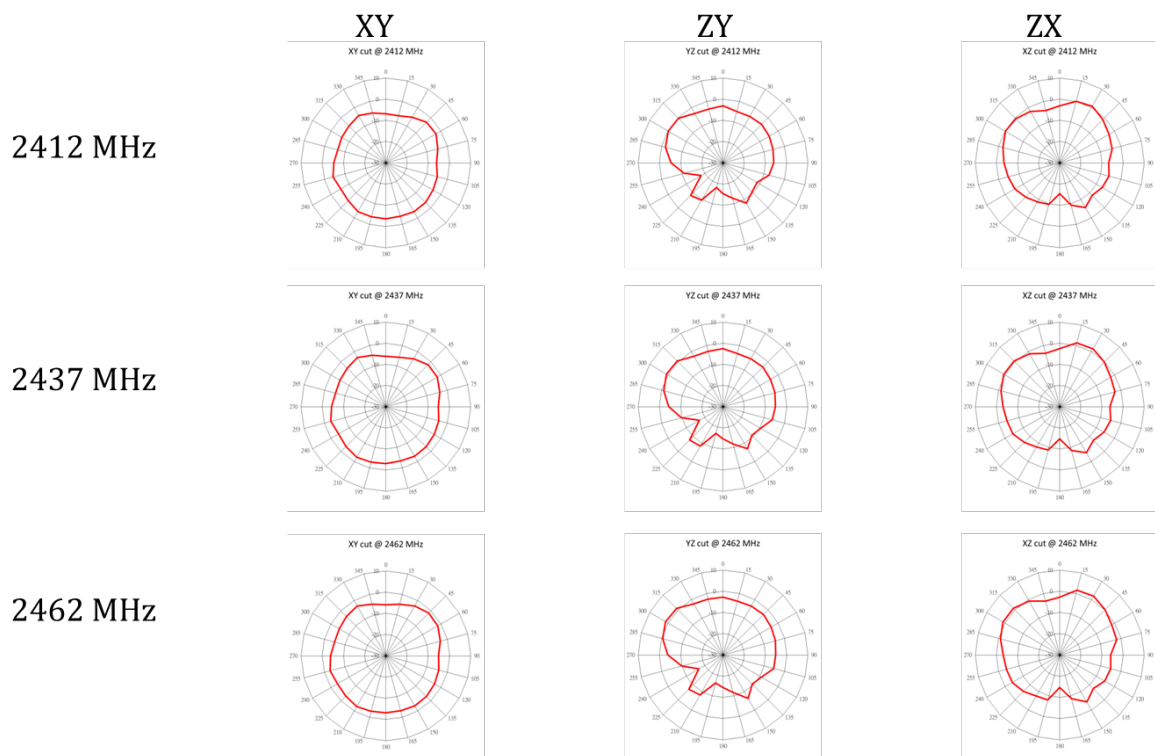
Environmental Conditions:	23 °C, 60%RH	Brand/Model	FOXCONN/6903B00014000	Tested By:	Mark Hung
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	XY plane		ZY plane		ZX plane	
Frequency [MHz]	Peak Gain [dBi]	Average Gain [dBi]	Peak Gain [dBi]	Average Gain [dBi]	Peak Gain [dBi]	Average Gain [dBi]
2412	-2.69	-4.75	-0.07	-7.46	0.77	-4.90
2437	-1.94	-3.83	0.78	-6.52	1.56	-4.05
2462	-1.48	-3.53	1.31	-6.23	1.98	-3.75

Note:

Gain is included Cable Loss
- 190 mm cable loss:0.44dB

2D Radiation Pattern



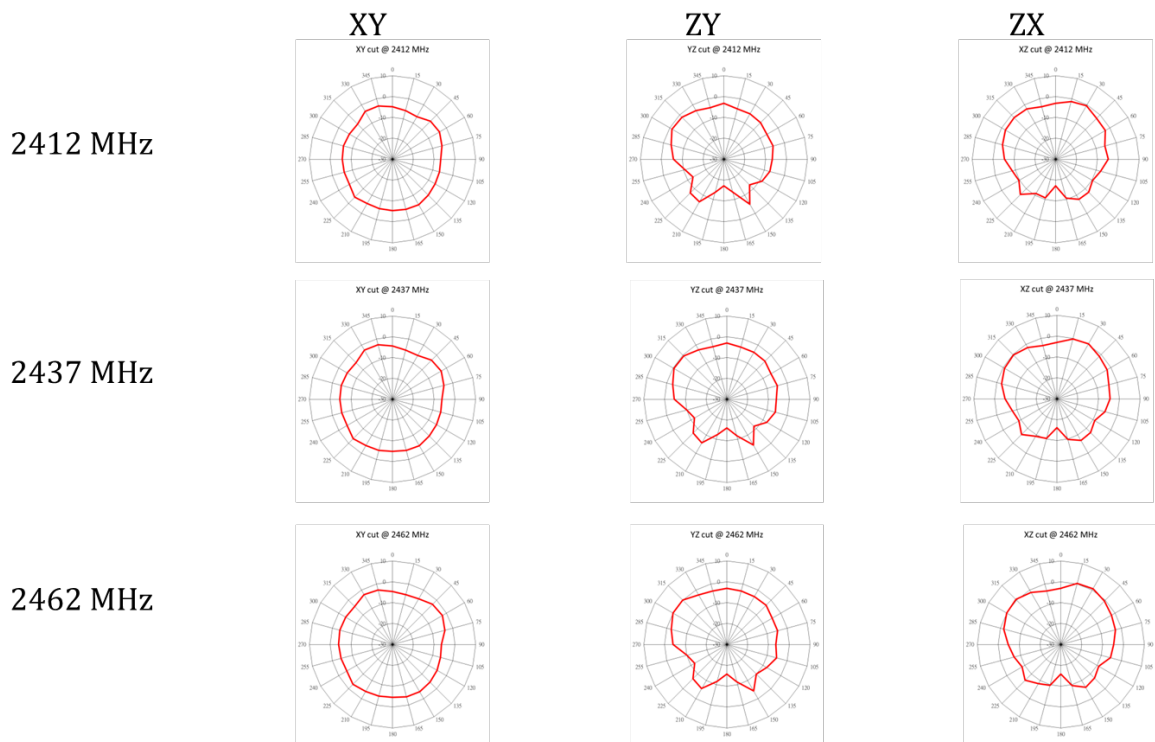
Environmental Conditions:	23 °C, 60%RH	Brand/ Model	FOXCONN 6903B00013000	Tested By:	Mark Hung
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	XY plane		ZY plane		ZX plane	
Frequency [MHz]	Peak Gain [dBi]	Average Gain [dBi]	Peak Gain [dBi]	Average Gain [dBi]	Peak Gain [dBi]	Average Gain [dBi]
2412	-3.56	-5.38	-1.24	-7.19	-0.43	-6.10
2437	-2.78	-4.55	-0.52	-6.34	0.32	-5.27
2462	-2.24	-4.17	-0.09	-5.94	0.78	-4.81

Note:

Gain is included Cable Loss
- 477 mm cable loss:1.0 dB

2D Radiation Pattern



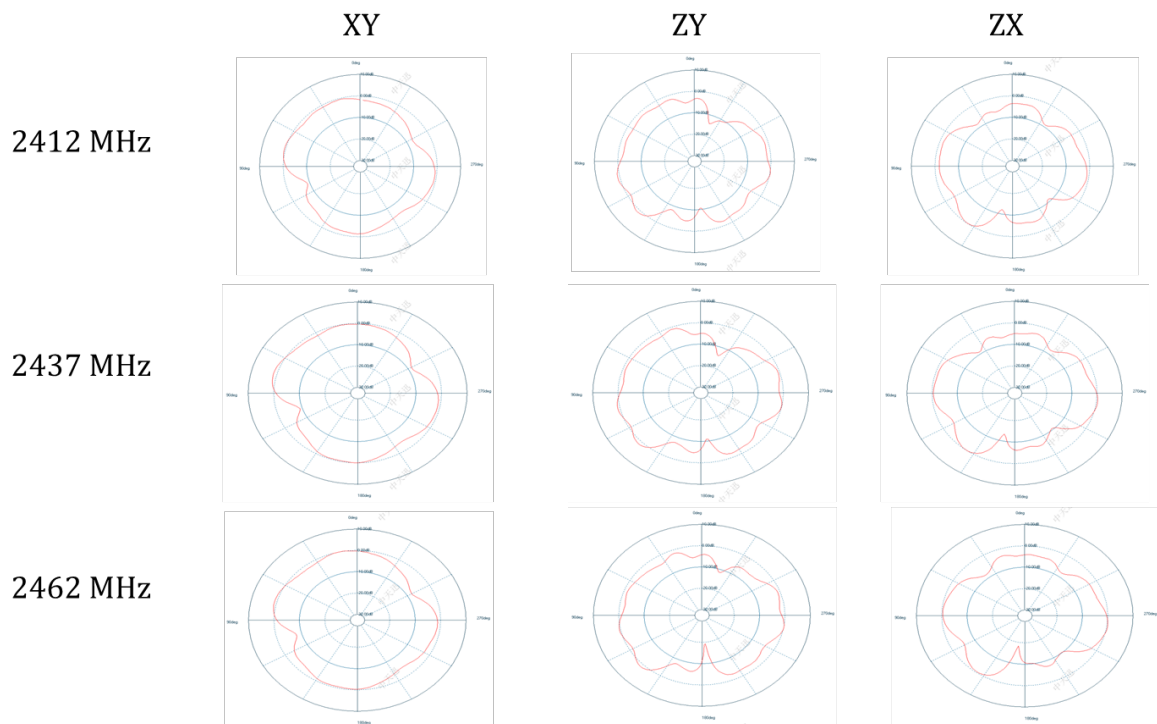
Environmental Conditions:	23°C, 60%RH	Brand/Model	ZTX 6903B00012000	Tested By:	Mark Hung
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	XY plane		ZY plane		ZX plane	
Frequency [MHz]	Peak Gain [dBi]	Average Gain [dBi]	Peak Gain [dBi]	Average Gain [dBi]	Peak Gain [dBi]	Average Gain [dBi]
2412	0.42	-2.75	1.18	-3.14	-0.17	-4.24
2437	1.24	-2.09	1.46	-2.83	0.46	-3.87
2462	0.87	-2.24	1.29	-3.18	0.27	-4.12

Note:

Gain is included Cable Loss
- 190 mm cable loss:0.44dB

2D Radiation Pattern



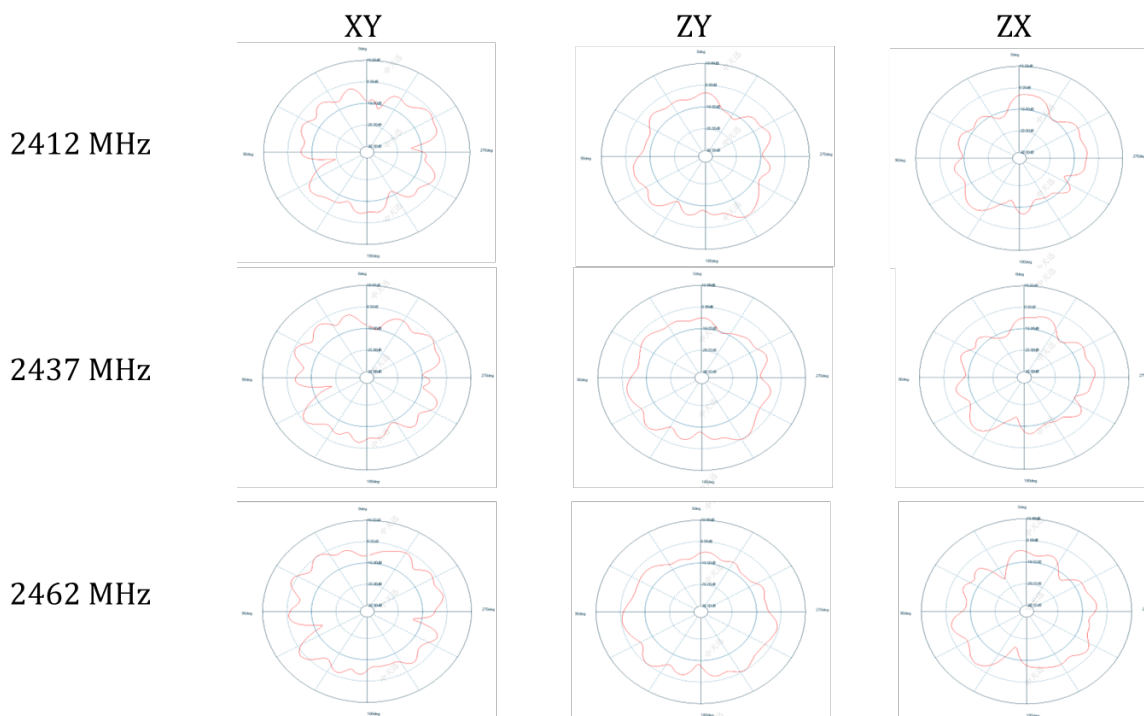
Environmental Conditions:	23 °C, 60%RH	Brand/ Model	ZTX 6903B00011000	Tested By:	Mark Hung
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	XY plane		ZY plane		ZX plane	
Frequency [MHz]	Peak Gain [dBi]	Average Gain [dBi]	Peak Gain [dBi]	Average Gain [dBi]	Peak Gain [dBi]	Average Gain [dBi]
2412	-0.86	-5.61	-0.49	-5.44	-2.83	-7.25
2437	-0.45	-4.35	0.20	-4.57	-1.80	-6.67
2462	1.48	-3.19	-0.17	-3.90	-1.16	-6.00

Note:

Gain is included Cable Loss
- 477 mm cable loss:1.0 dB

2D Radiation Pattern



7. Test Setup Photo

