FOXCONN®
HON HAI TECHNOLOGY GROUP

Antenna Test Report

apply for WFU032-VZEA

Test Date: 2022/08/05
Issue Date: 2023/3/31

1. Antenna Description

1.1 Antenna List

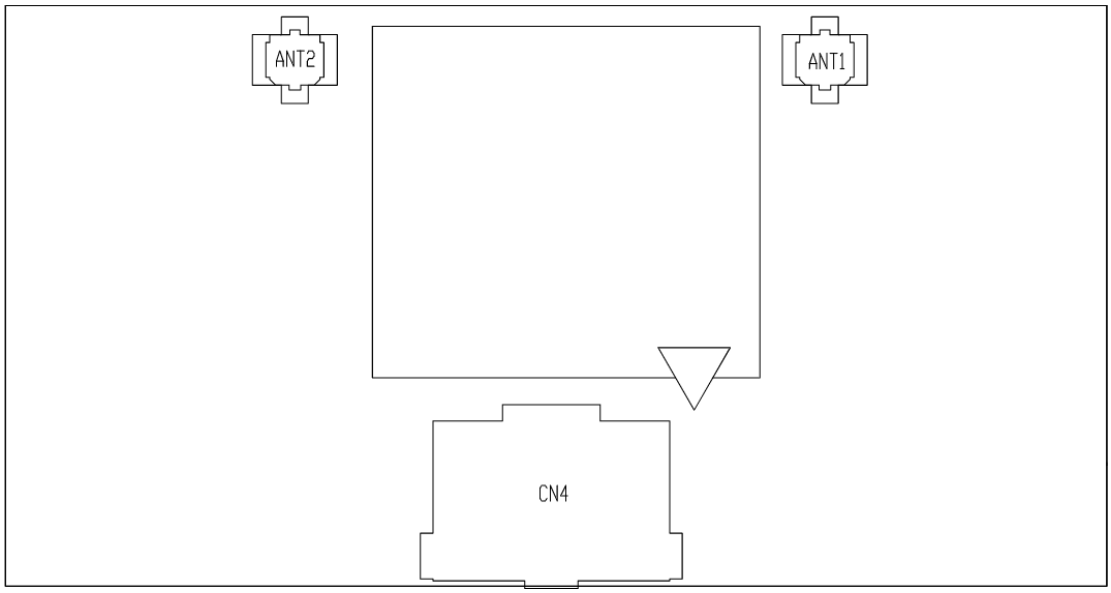
Antenna No.	Brand	Model	Max. Gain(dBi) 2400-2483.5MHz	Antenna Type	Connector Type	Cable Length
1	FOXCONN	6903B00014000	1.98	PIFA	I-PEX	190mm
2	FOXCONN	6903B00013000	0.78	PIFA	I-PEX	477mm
3	ZTX	6903B00012000	1.46	PIFA	I-PEX	190mm
4	ZTX	6903B00011000	1.48	PIFA	I-PEX	477mm

Note:

Gain is included Cable Loss

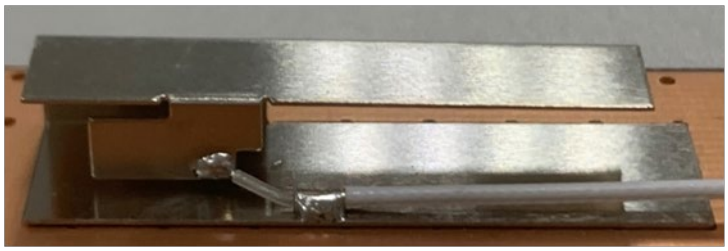
- 190 mm cable loss:0.44dB
- 477 mm cable loss:1.0 dB

1.2 Antenna Location

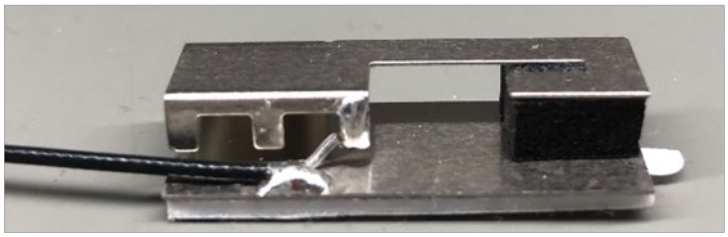


1.3 Antenna Design Pattern

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

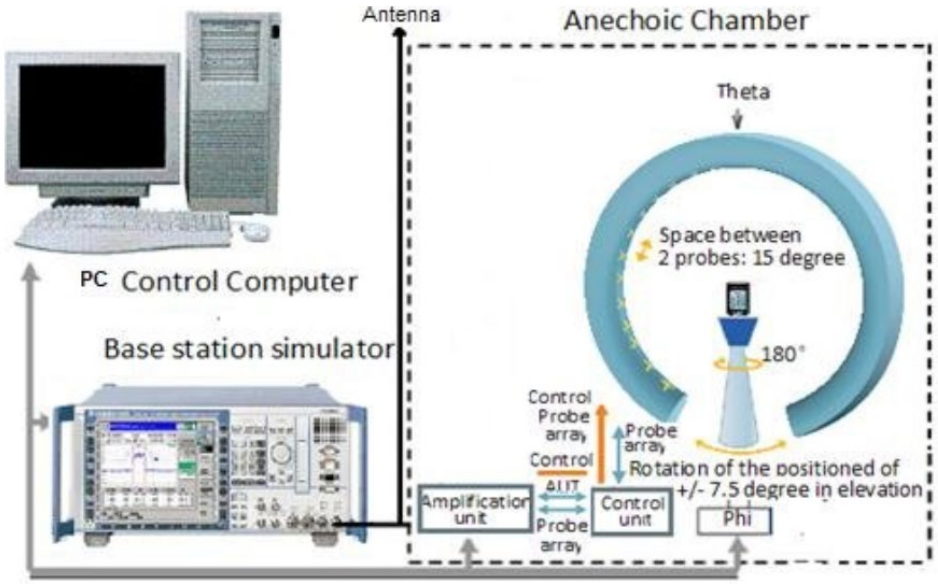
Manufacturer	Model No.	Calibrated Date	Calibrated Until
MVG	SG24 chamber	2022/4/27	2023/4/26
Keysight	5071C	2022/3/21	2023/3/21
Keysight	3499B	2021/10/30	N/A

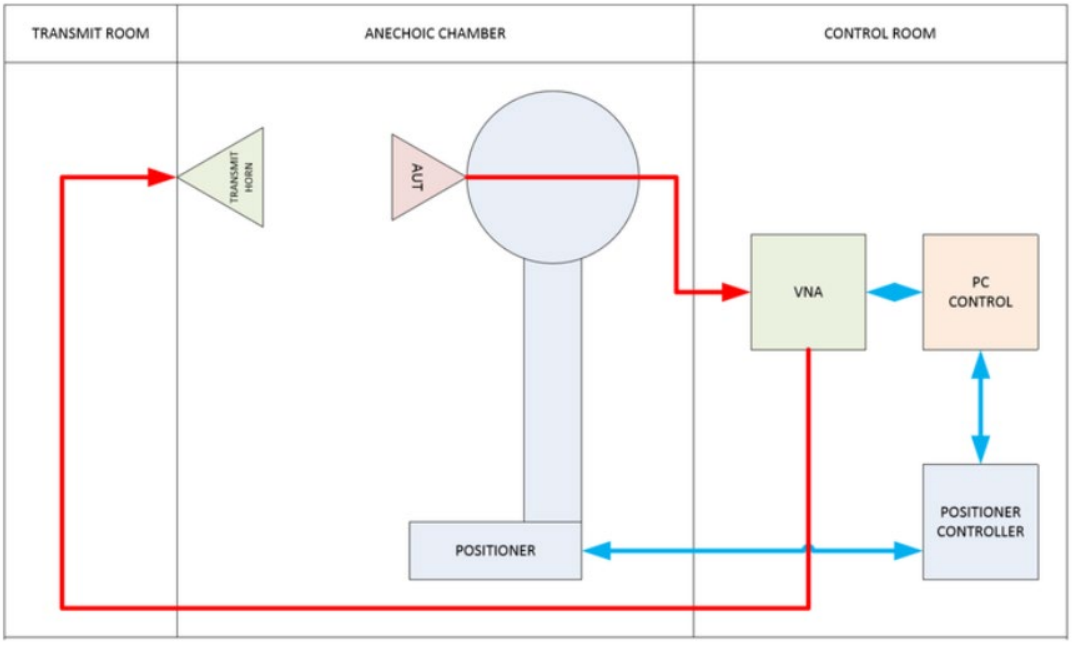
Note:

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

a. Setup DUT into the antenna chamber and place the DUT in the center of table, and
b. Connect it to the test equipment through the IPEX connector;
c. Open the Satimo.Spm software, set the test frequency band, and start the test;
d. 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

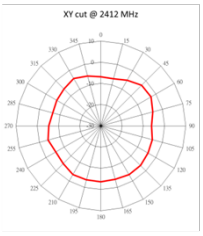
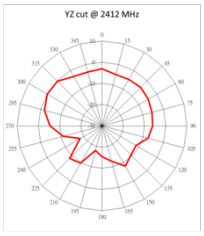
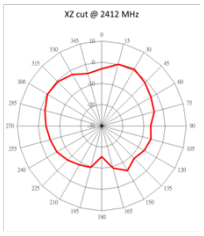
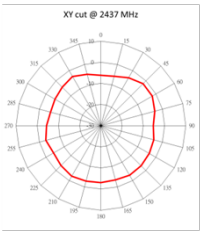
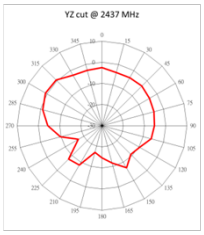
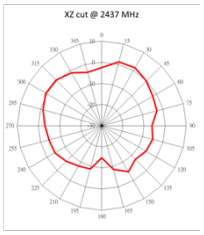
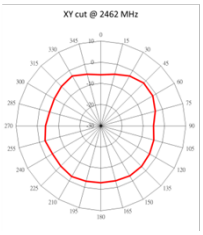
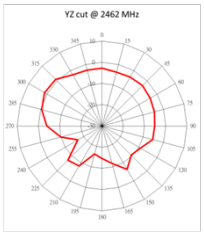
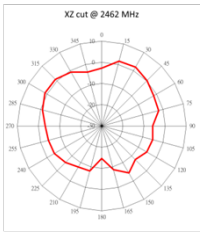
Environmental Conditions:	23 °C, 60%RH	Brand/ Model	**FOXCONN/ 6903B00014000**	Tested By:	**Mark Hung**

	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

	XY	ZY	ZX
2412 MHz			
2437 MHz			
2462 MHz			

Environmental Conditions:	23 °C, 60%RH	Brand/ Model	**FOXCONN 6903B00013000**	Tested By:	**Mark Hung**

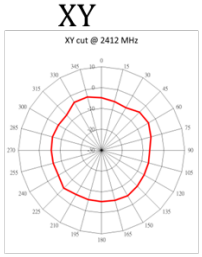
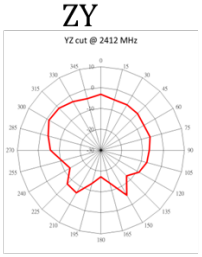
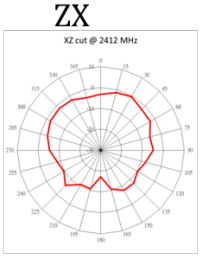
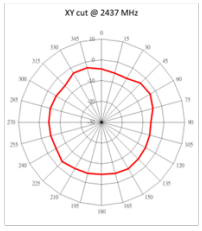
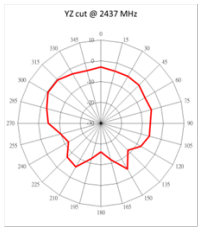
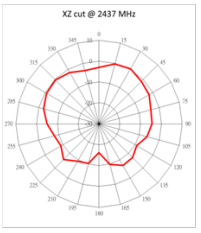
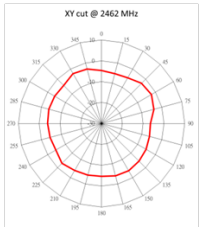
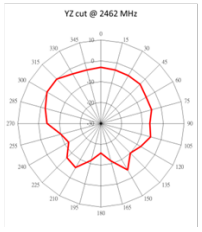
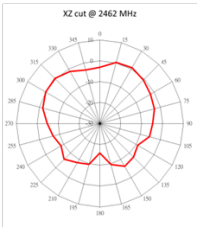
	XY plane		ZY plane		ZX plane	
Frequency [MHz]	**Peak Gain [dBi]**	**Average Gain [dBi]**	**Peak Gain [dBi]**	**Average Gain [dBi]**	**Peak Gain [dBi]**	**Average Gain [dBi]**
2412	**-3.56**	**-5.38**	**-1.24**	**-7.19**	**-0.43**	**-6.10**
2437	**-2.78**	**-4.55**	**-0.52**	**-6.34**	**0.32**	**-5.27**
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

	XY	ZY	ZX
2412 MHz			
2437 MHz			
2462 MHz			

Environmental Conditions:	23°C, 60%RH	Brand/ Model	**ZTX 6903B00012000**	Tested By:	**Mark Hung**

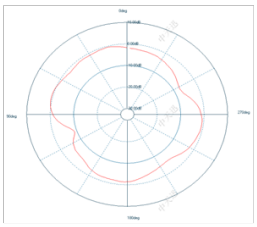
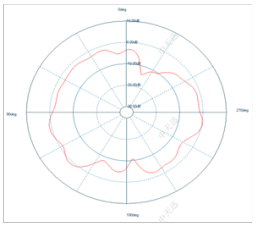
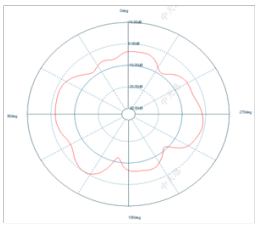
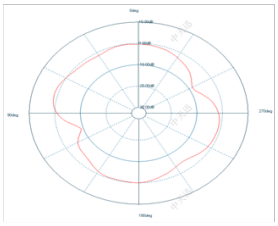
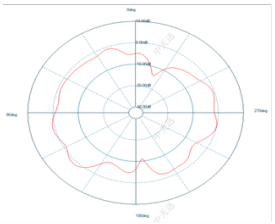
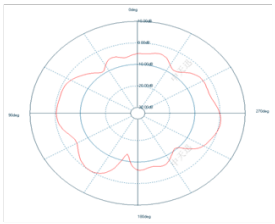
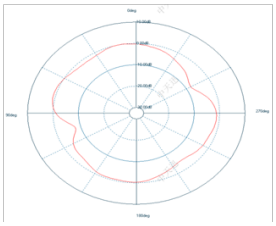
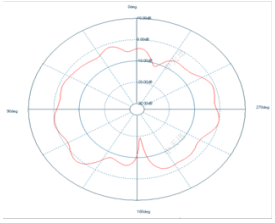
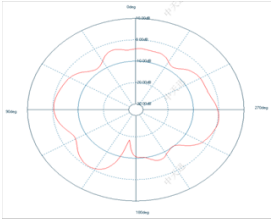
	XY plane		ZY plane		ZX plane	
Frequency [MHz]	Peak Gain [dBi]	Average Gain [dBi]	Peak Gain [dBi]	Average Gain [dBi]	Peak Gain [dBi]	Average Gain [dBi]
2412	0.42	-2.75	1.18	-3.14	-0.17	-4.24
2437	1.24	-2.09	1.46	-2.83	0.46	-3.87
2462	0.87	-2.24	1.29	-3.18	0.27	-4.12

Note:

Gain is included Cable Loss

- 190 mm cable loss:0.44dB

2D Radiation Pattern

	XY	ZY	ZX
2412 MHz			
2437 MHz			
2462 MHz			

Environmental Conditions:	23 °C, 60%RH	Brand/ Model	**ZTX 6903B00011000**	Tested By:	**Mark Hung**

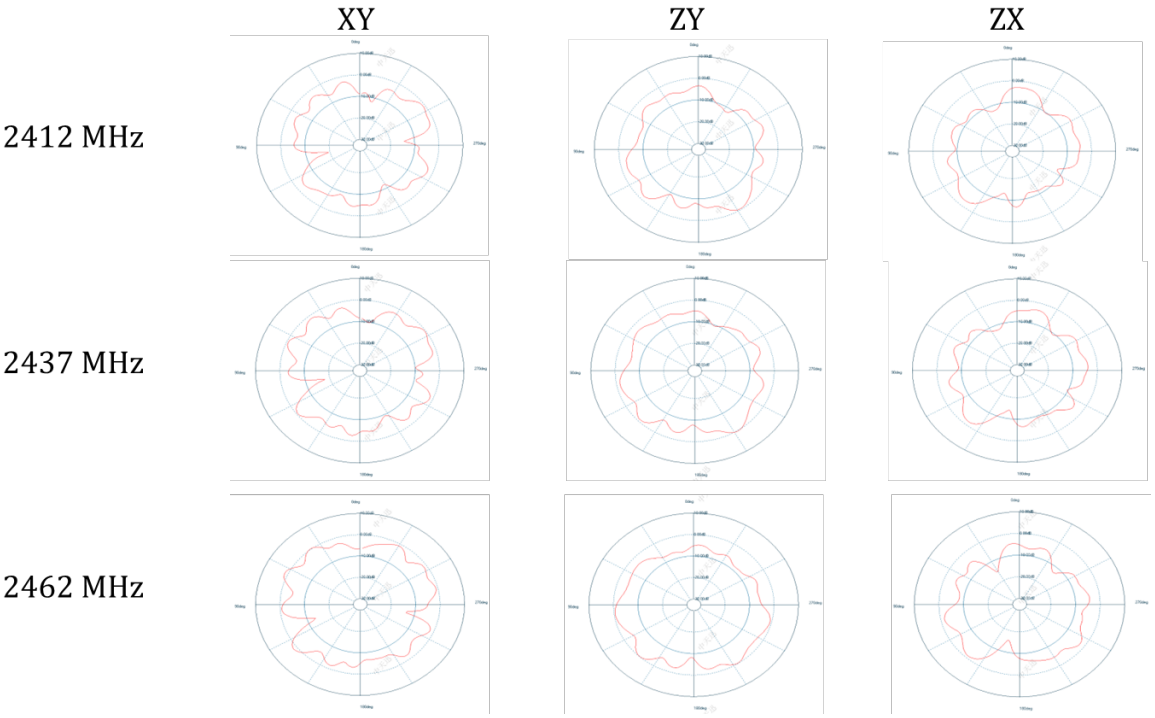
	XY plane		ZY plane		ZX plane	
Frequency [MHz]	**Peak Gain [dBi]**	**Average Gain [dBi]**	**Peak Gain [dBi]**	**Average Gain [dBi]**	**Peak Gain [dBi]**	**Average Gain [dBi]**
2412	**-0.86**	**-5.61**	**-0.49**	**-5.44**	**-2.83**	**-7.25**
2437	**-0.45**	**-4.35**	**0.20**	**-4.57**	**-1.80**	**-6.67**
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