OTA TEST REPORT

Applicant	Tag-N-Trac
Product	FAT100L
Model	FAT100L
Report No.	R2404A0483-T1
Issue Date	August 19, 2024

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **ANSI/IEEE Std 149-2021.** The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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1. Test Laboratory

1.1. Notes of the Test Report

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1.2. Test Facility

A2LA (Certificate Number: 3857.01)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

1.3. Testing Location

Company:	Eurofins TA Technology (Shanghai) Co., Ltd.
Address:	Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China
City:	Shanghai
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1.4. Laboratory Environment

Temperature	15°C ~ 35°C	
Relative humidity	20% ~ 80%	
Shield effect	0.7-6GHz	> 100dB
Ground resistance	<0.5Ω	

2. General Description of Equipment Under Test

2.1. Applicant and Manufacturer Information

Applicant Name	Tag-N-Trac
Applicant address	5015 Shoreham Pl, Ste# 150, San Diego, CA, 92122
Manufacturer Name	Tag-N-Trac
Manufacturer address	5015 Shoreham Pl, Ste# 150, San Diego, CA, 92122

2.2. General Information

EUT Description	
Product Name:	FAT100L
Model:	FAT100L
HW Version:	/
SW Version:	/
Antenna Type:	PCB Antenna
Antenna Manufacturer:	Tag-N-Trac
Antenna Model:	2.4GHz Inverted F Antenna
Test Frequency:	2402MHz ~ 2485MHz
Note: The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant. All indications of Pass/Fail in this report are opinions expressed by Eurofins TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.	

2.3. Test Date

The test is performed from April 29, 2024.

2.4. Received Date

The sample was received on April 29, 2024.

2.5. Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test Method: **ANSI/IEEE Std 149-2021**

3. Test Conditions

3.1. Test Configuration

Great-Circle-Cut method is used to measure the antenna 3D GAIN of EUT in OTA qualified anechoic chamber. Equipment Under Test (EUT) geometry centre vertical projection at the centre of platform, the distance from EUT to measurement antenna is 5m.

3.2. Test Measurement

Spherical coordinate system

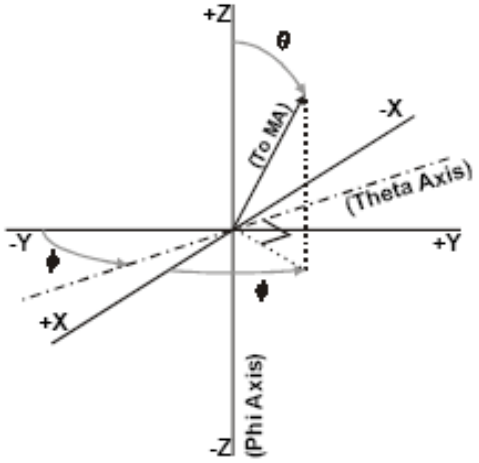
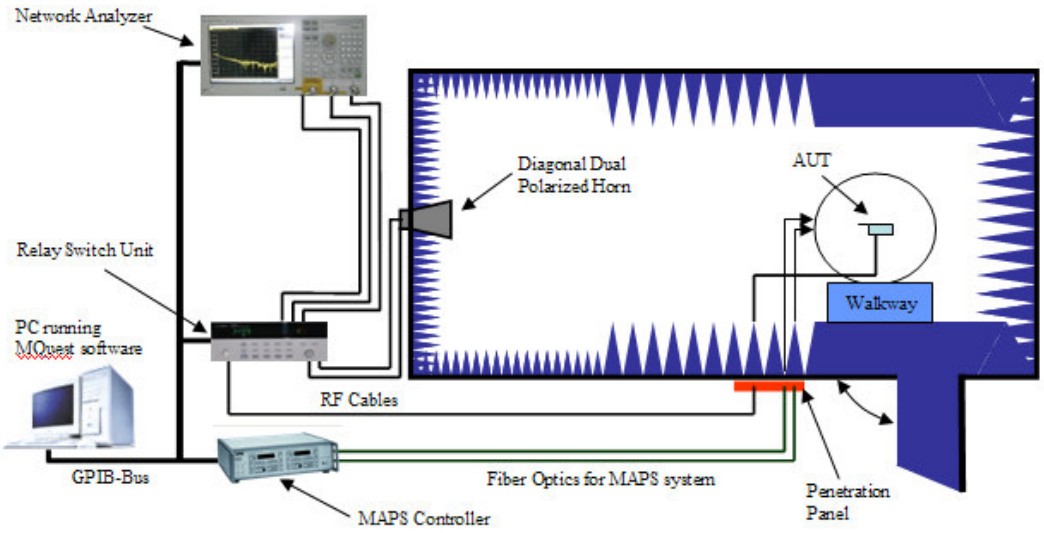


Figure 1 Test coordinate system

Note: Theta is from 0~180 degree. Phi is from 0~360. Rotate the EUT and record the Data, the step of rotation is 15 degree.

Test Setup



4. Test Results

4.1. Gain and Efficiency

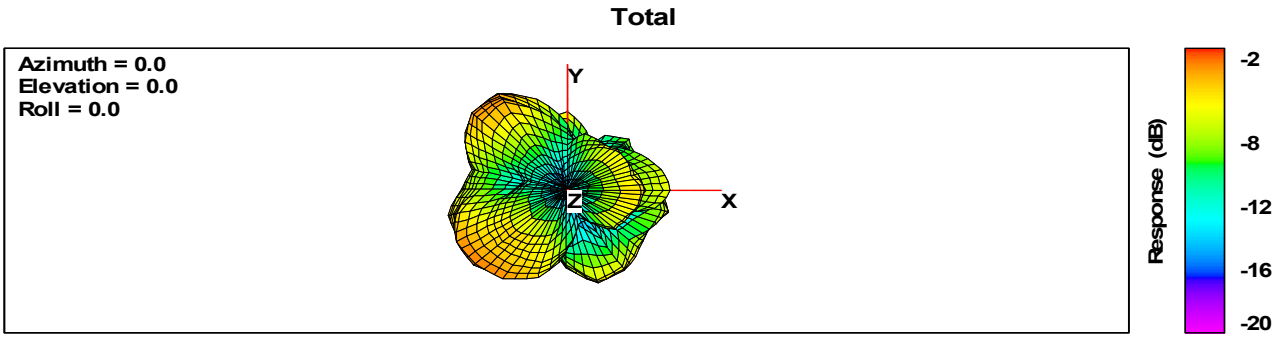
Test State	Frequency (MHz)	Efficiency (%)	Gain (dBi)	Note
Free Space	2402	18.38	-2.36	/
	2407	18.81	-2.19	
	2412	19.90	-1.64	
	2417	20.83	-1.70	
	2422	22.78	-1.24	
	2427	23.53	-1.29	
	2432	23.90	-1.40	
	2437	23.95	-1.35	
	2442	23.43	-1.26	
	2447	22.89	-1.31	
	2452	22.15	-1.76	
	2457	21.76	-1.90	
	2462	21.59	-1.83	
	2467	21.82	-1.73	
	2472	21.60	-1.85	
	2477	21.96	-1.99	
	2482	22.04	-1.58	
	2485	21.97	-1.79	

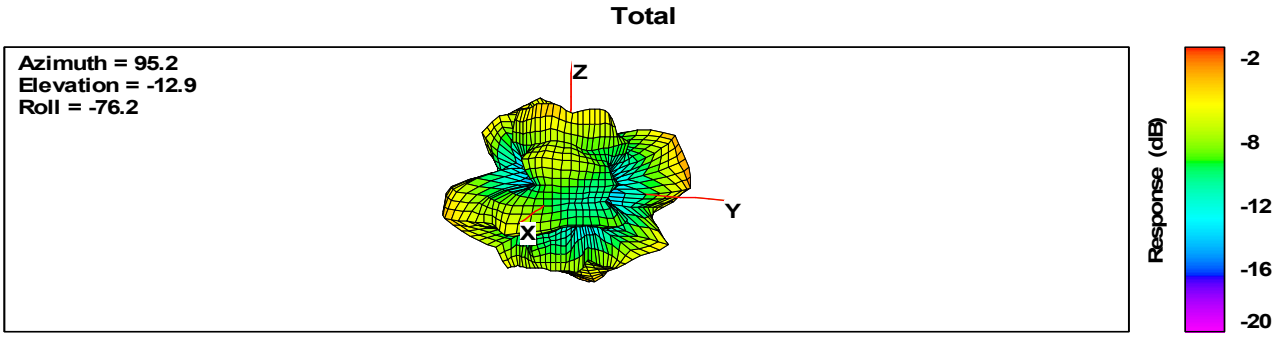
5. Equipment List

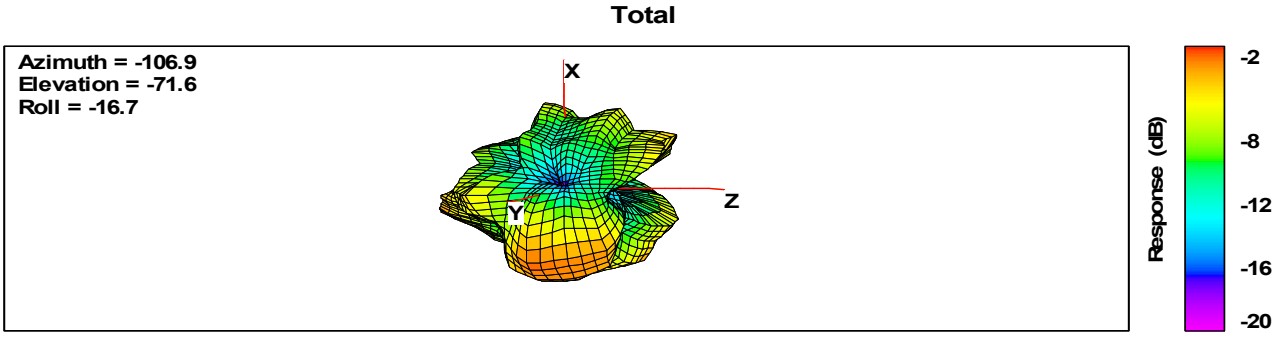
Type of Equipment	Manufacture	Model Number	S/N	Calibration Date	Expiration Time
Anechoic Chamber	ETS	AMS-8500	CT-001157-1219	2020-05-17	2025-05-16
Test Software	ETS	EMQuest™	REV 1.17	/	/
EMCenter_Switch Control System	ETS	7006/7001	00059957/ MY42001152	/	/
Diagonal Dual Polarized Horn	ETS	ETS 3164-04	00062743	2020-04-14	2025-04-13
Network Analyzer	Keysight	E5071B	MY42404014	2023-05-12	2024-05-11

ANNEX A: 3-D Pattern Plots

2402M 3D Gain

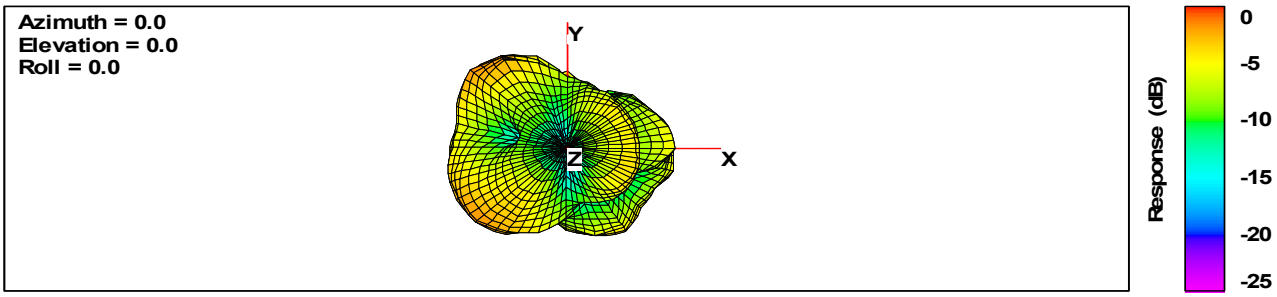






2442M 3D Gain

Total



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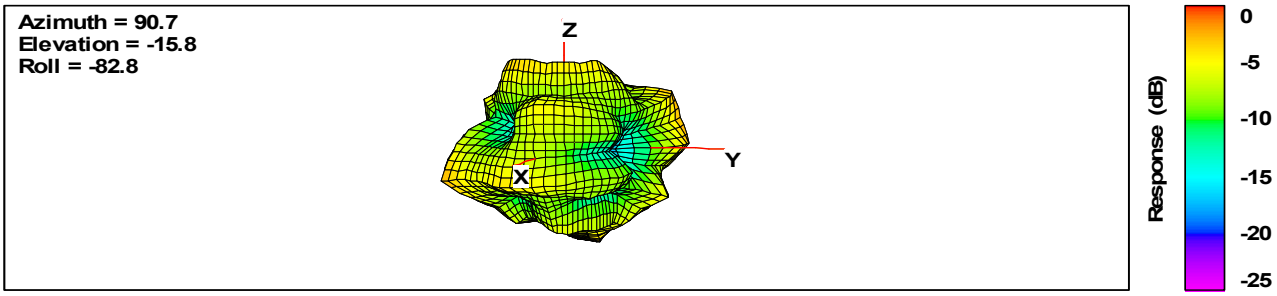

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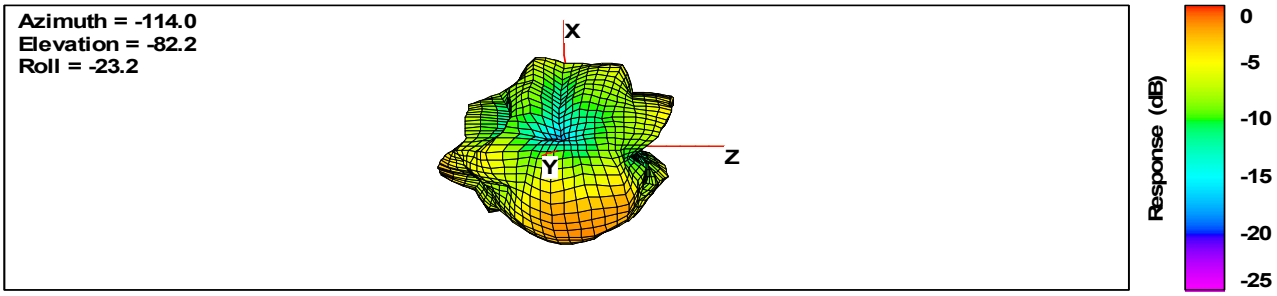
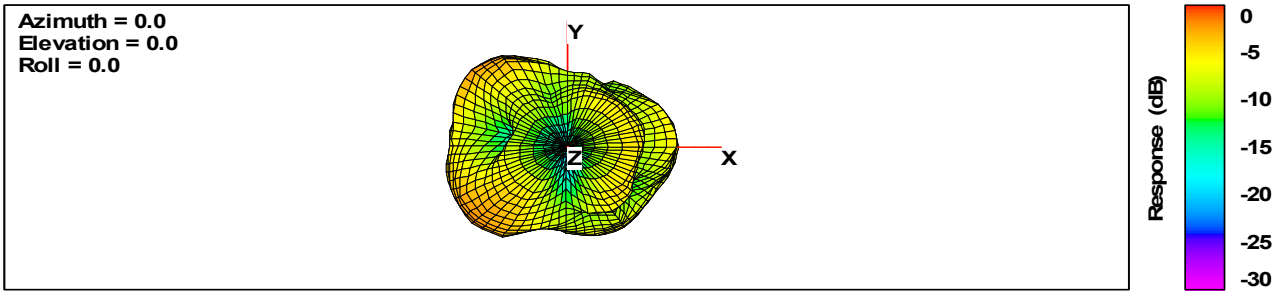


2485M 3D Gain

Total



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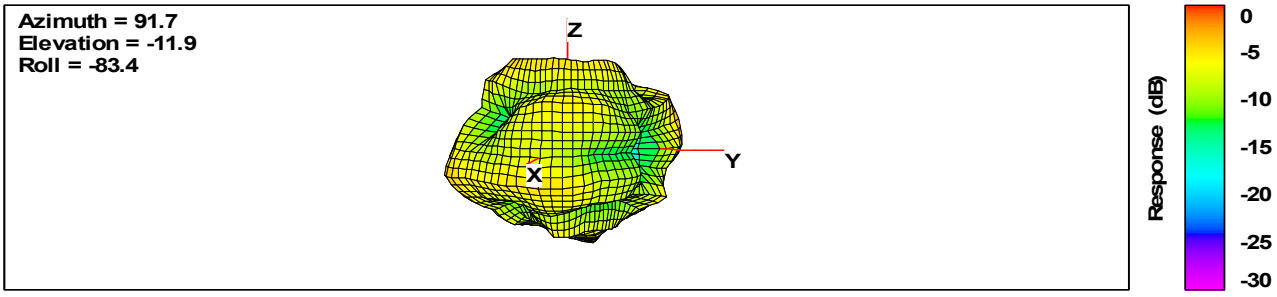

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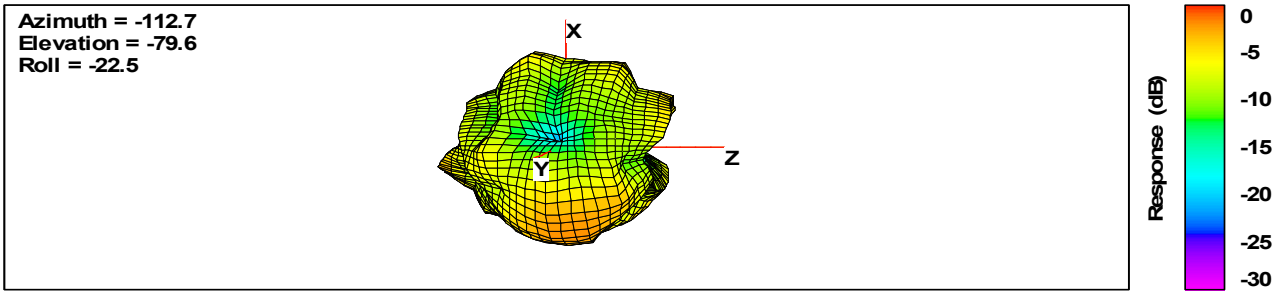
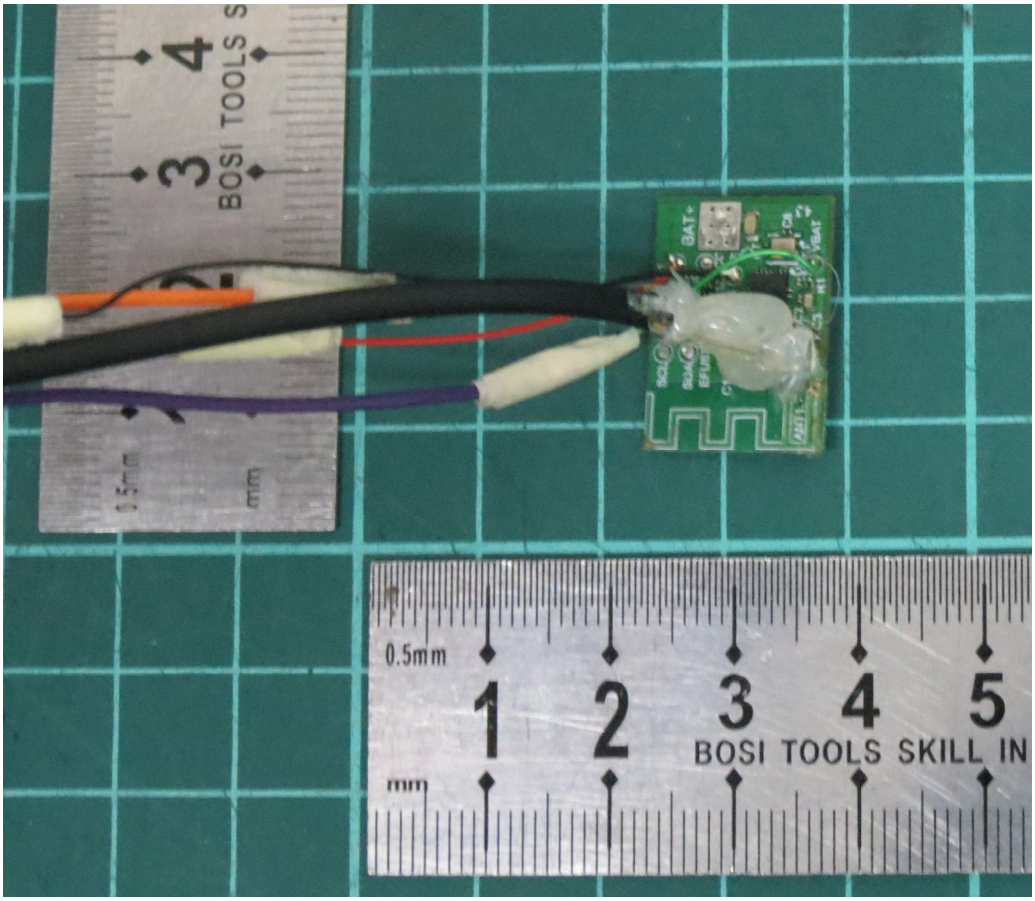


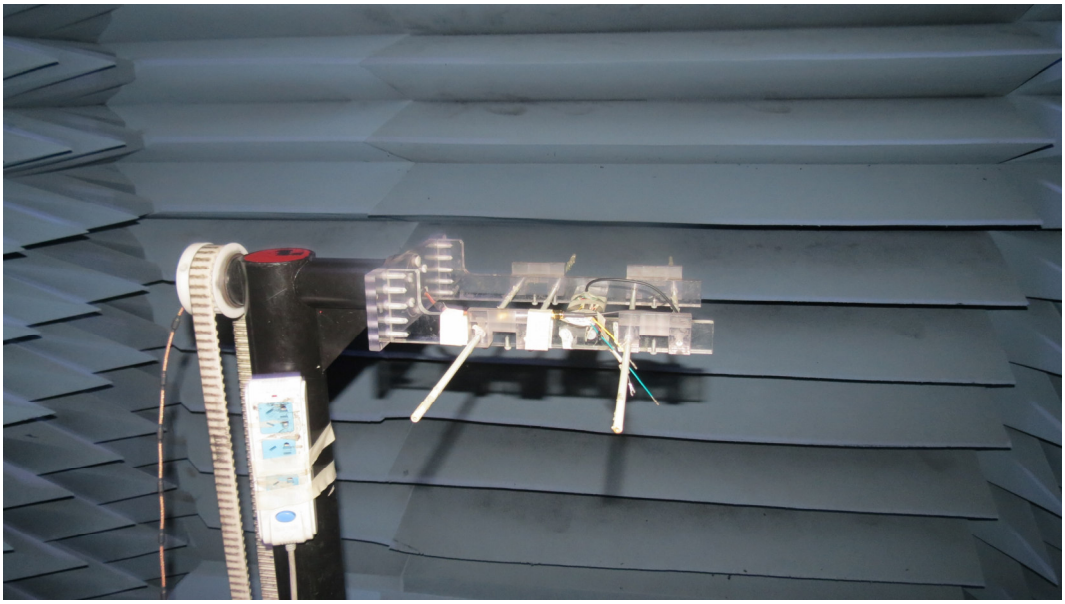
ANNEX B: THE EUT APPEARANCE AND TEST CONFIGURATION

B.1 EUT Appearance



Picture 1 Constituents of EUT

B.2 Test Configuration



Picture 2 Test Setup

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