

September 4, 2025

Trackonomy  
Priyanka Jantre  
214 Devcon Dr.  
San Jose, CA 95112

Dear Priyanka Jantre,

Enclosed is the Electromagnetic Compatibility for the Trackonomy, FBO-3001, tested to the requirements of:

- FCC Part 15 Subpart B (per ANSI C63.4: 2014)
- Innovation, Science, and Economic Development (ISED) Canada ICES-003 Issue 7

Thank you for using the services of Eurofins E&E Testing NA, LLC. Please contact me if you have any questions regarding these results or if Eurofins E&E can be of further service to you.

Sincerely,

*Rheine Nguyen*

Documentation Department  
Eurofins E&E Testing NA, LLC.

Reference: EMCS135654-FCC ICES Rev. 4



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## Report Status Sheet

Revision	Report Date	Reason for Revision
Ø	May 30, 2025	Initial Issue.
1	June 6, 2025	Photos transferred into a Photo File document.
2	June 30, 2025	Company Contact Update.
3	July 1, 2025	Added Configuration Form.
4	September 4, 2025	Change Company Name to Trackonomy.

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## 1.0 Testing Summary

The Trackonomy, FBO-3001 was found to be compliant to the following specification(s).

- FCC Part 15 Subpart B (per ANSI C63.4: 2014)
- Innovation, Science, and Economic Development (ISED) Canada ICES-003 Issue 7



Chin Ming Lui  
Senior Wireless Test Engineer

**Engineering Statement:** The measurements shown in this report were made in accordance with the procedures indicated. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements.



Brandon Quan  
Senior Wireless Test Engineer

## 2.0 Overview

Eurofins E&E Testing NA, LLC. was contracted by Trackonomy to perform testing on the FBO-3001, under purchase order number 2037.

This document describes the test setups, test methods, required test equipment, and the test limit criteria used to perform compliance testing of Trackonomy, FBO-3001.

The results obtained relate only to the item(s) tested.

<b>Model(s) Tested:</b>	FBO-3001
<b>Equipment Emissions Class:</b>	B

Test Standard	Test Description	Compliance
FCC Part 15 Subpart B (per ANSI C63.4: 2014), Innovation, Science, and Economic Development (ISED) Canada ICES-003 Issue 7	CE (Mains), Class B	Not Applicable
	CE (Telecommunication Ports), Class B	Not Applicable
	RE, Class B	Compliant
<b>Note:</b> Not Applicable – Battery powered device		

### 2.1 FCC ID and IC

**FCC ID:** 2AXA8-FBO-3001

**IC:** 27299-FBO3001

### 2.2 Test Site

All testing was performed at Eurofins E&E Testing NA, LLC., 3162 Belick St. Santa Clara, CA 95054. All equipment used in making physical determinations is accurate and bears recent traceability to the National Institute of Standards and Technology. Eurofins E&E Testing NA, LLC. has been accredited by the American Association for Laboratory Accreditation (A2LA) (Certificate #: 0591.02) in accordance with ISO/IEC 17025:2017.

## 2.3 Measurement Uncertainty

Measurement uncertainty calculated as per NIST Technical Note (TN) 1297 and ANSI / NCSL Z540-2, as equivalent to EN 55016-4-2 / IEC CISPR 16-4-2.

Test Method	Typical Expanded Uncertainty (dB)	K	Confidence Level
Radiated Emissions, (30 MHz – 1 GHz)	±3.24	2	95%
Radiated Emissions, (1 GHz – 6 GHz)	±3.92	2	95%
Conducted Emission Voltage	±2.44	2	95%
Conducted Emission Telecom	±3.53	2	95%

### Measurement Uncertainty

## 2.4 Equipment Overview and Test Configuration

<b>Name of EUT/Model:</b>	FBO-3001
<b>Additional Models Covered, but not tested:</b>	N/A
<b>Description of EUT and Intended Use:</b>	Multifunctional IoT Platform Sensor Device. It uses multi-radio multi-protocol consumer electronics wireless communication for multi-modal situational awareness and end-to-end reporting mechanism. Data is handled through the Trackonomy Ecosystem via multiple data paths including fixed and mobile infrastructure, mesh and cloud integration. The unit is powered by one or two non-rechargeable Lithium-Metal battery(ies) with nominal system voltage of 3.0V. The unit has optional External Temperature Device.
<b>Mode(s) of Operation:</b>	BLE
<b>Rationale for the selection of the Operation Mode(s):</b>	Bluetooth is based upon module capabilities with no modifications to the module
<b>Monitoring Method(s):</b>	There is no physical or electrical indication. Unit is monitored via Data received wirelessly.
<b>Configuration(s):</b>	Test mode
<b>EUT Power Requirement</b>	
<b>Voltage:</b>	3V
<b>AC or DC</b>	DC
<b>Voltage Frequency:</b>	Not Applicable – Battery Operated
<b>Number of Phases:</b>	N/A
<b>Amperage:</b>	N/A
<b>Uses an external AC/DC Adapter:</b>	No
<b>Battery Configuration</b>	Primary battery powered only. Not user replaceable.
<b>Physical Description</b>	
<b>EUT Arrangement:</b>	Secured by adhesive to vertical or horizontal flat surface
<b>System with Multiple Chassis:</b>	No
<b>Size (HxWxD) mm:</b>	140 x 100 x 6
<b>Weight (g):</b>	450
<b>Emissions Class Declaration:</b>	B

Other Info:	
Highest frequency used in device:	2480 MHz (highest channel frequency of BLE radio)
EUT Software (internal to EUT):	Custom firmware by Trackonomy
Support Software (used to exercise EUT):	Trackonomy App by Trackonomy

**Note:** EUT information was provided by Trackonomy.

### Equipment Configuration List

N/A

### Support Equipment List

Ref. ID	Name/Description	Manufacturer	Model Number	*Customer Supplied Calibration Data
1	Trackonomy APK	Trackonomy	N/A	N/A

### Ports and Cabling List

N/A

### Antenna Information

Radio	Antenna Type	Manufacturer	Model No	Frequency Range	Peak Gain
BLE	Inverted F	Trackonomy	FBO-3001-ANT	2.4 – 2.48 GHz	2.07 dBi

**Note:** Antenna information was provided by Trackonomy. Eurofins E&E Testing NA, LLC did not test or verify the accuracy of the antenna information.

### Test Configuration

The BLE radio was configured to low, middle, and high channels as follows:

Channel	Frequency (MHz)	Advertising Power Setting
Low	2402	7
Mid	2440	7
High	2480	7

## 2.5 Modifications to the EUT

No modifications were made to the EUT.

## 2.6 Modifications to the Standard

No modifications were made to the Test Standard.



## **2.7 Disposition of EUT**

The test sample including all support equipment (if any), submitted to the Electromagnetic Compatibility Lab for testing was returned to Trackonomy upon completion of testing.

### 3.0 Electromagnetic Compatibility Emission Criteria

#### 3.1 Radiated Emissions: Electromagnetic Radiation Disturbance

**Test Method:** ANSI C63.4: 2014

**Test Requirement(s):** The following standards specified below are covered in the scope of this section of the test report:

- FCC Part 15 Subpart B (per ANSI C63.4: 2014)
- Innovation, Science, and Economic Development (ISED) Canada ICES-003 Issue 7

**§15.109 (a)** Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Field Strength (dBμV/m)
30 - 88	40
88 - 216	43.5
216 - 960	46
Above 960	54

**ICES-003:** Refer to Section 3.2.2 Radiated emission limits Table 2: radiated emission limits (30 MHz to 1 GHz) and Table 4: Radiated emission limits at 3 m distance (at and above 1 GHz)

**Sample Calculation for Distance Correction factor (DCF) measurement:**

$$F_d = 20 \cdot \log_{10} (D_m/D_s)$$

where:

$F_d$  = Distance Factor in dB

$D_m$  = Measurement Distance in meters

$D_s$  = Specification Distance in meters

**Sample formula for calculating the Corrected Data for the Radiated Emissions Measurements:**

Frequency (MHz)	Antenna Polarity	EUT Azimuth (Degrees)	Antenna Height (cm)	Uncorrected Amplitude (dBμV)	ACF (dB/m) (+)	Pre Amp Gain (dB)(-)	CBL (dB) (+)	DCF (dB) (+)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
249.99	V	359.9	240.7	55.46	11.4	28.335	0	0	<b>38.505</b>	47	-8.495

$$\begin{aligned} \text{Corrected Amplitude (dBμV/m)} &= \text{Uncorrected Amplitude (dBμV)} + \text{ACF (dB/m)} - \text{Preamp Gain (dB)} + \text{CBL (dB)} + \text{DCF (dB)} \\ &= 55.46 + 11.4 - 28.335 + 0 + 0 = \mathbf{38.505} \end{aligned}$$

**Test Procedure:**

The EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber. The method of testing, test conditions, and test procedures of ANSI C63.4: 2014 were used. Any measured frequency that exhibits a margin of compliance that is less than 3 dB below the specification limit is marked. Eurofins E&E recommends that every emission measured, has at least a 3 dB margin to allow for deviations in the emission characteristics that may occur during the production process.

For emissions between 30 MHz and 1000 MHz, a biconilog antenna was located 3m from the EUT on an adjustable mast. A pre-scan was first performed in order to find prominent radiated emissions. For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1 m and 4 m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. Unless otherwise specified, measurements were made using a quasi-peak detector with a 120 kHz resolution bandwidth.

For emission between 1 GHz and 18 GHz, a double ridged guide horn was located 3 m from the EUT on an adjustable mast. A pre-scan was performed and used to find prominent radiated emissions. For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied depending on the geometry of the EUT. In order to ensure maximized emissions, the horn antenna was positioned both vertically and laterally. Measurements in both horizontal and vertical polarities were made and the data was recorded. Unless otherwise specified, measurements were made using a peak and average detector with a 1 MHz resolution bandwidth.

**Test Software Used:**

Nexio BAT-EMC was used to perform this test.

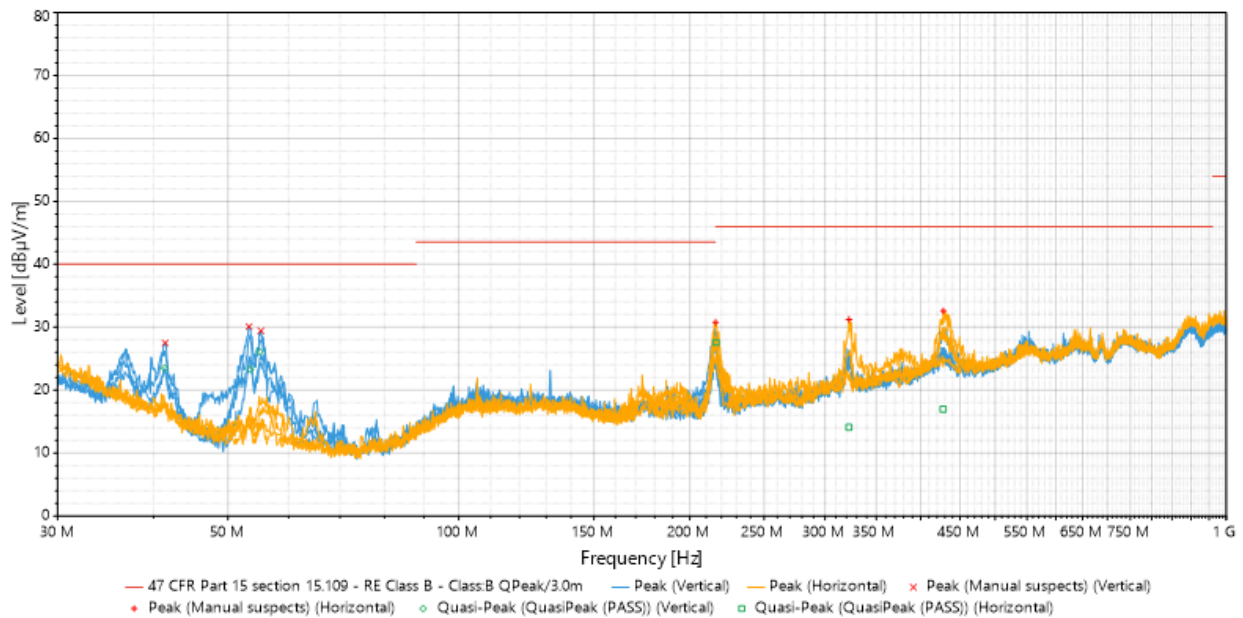
**Test Results:**

<b>Test Standard:</b>	FCC Part 15 Subpart B (per ANSI C63.4: 2014), Innovation, Science, and Economic Development (ISED) Canada ICES-003 Issue 7  Class B
<b>Test Name</b>	Radiated Emissions
<b>Test Dates:</b>	04/10/2025 – 04/11/2025
<b>Laboratory</b>	Eurofins E&E Testing NA, LLC.
<b>Test Engineer:</b>	Chin Ming Lui
<b>Test Results:</b>	Compliant
<b>Ambient Temperature (°C):</b>	23.1
<b>Relative Humidity (%):</b>	42
<b>Atmospheric Pressure (kPa):</b>	101.3

## Test Data

Frequency (MHz)	Source	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (m)	Azimuth (°)	Pol.	RBW (Hz)	Meas. Time (s)	Correction (dB)
41.356	QuasiPeak (PASS)	23.49	40	-16.51	1.467	303	Vertical	120000	0.1	-13.297
53.514	QuasiPeak (PASS)	23.297	40	-16.703	3.48	87	Vertical	120000	0.1	-16.832
55.016	QuasiPeak (PASS)	26.106	40	-13.894	1.578	63	Vertical	120000	0.1	-16.76
216.328	QuasiPeak (PASS)	27.574	46	-18.426	1.241	226	Horizontal	120000	0.1	-11.683
322.293	QuasiPeak (PASS)	14.078	46	-31.922	2.938	268	Horizontal	120000	0.1	-7.39
427.709	QuasiPeak (PASS)	16.965	46	-29.035	1.691	305	Horizontal	120000	0.1	-4.46

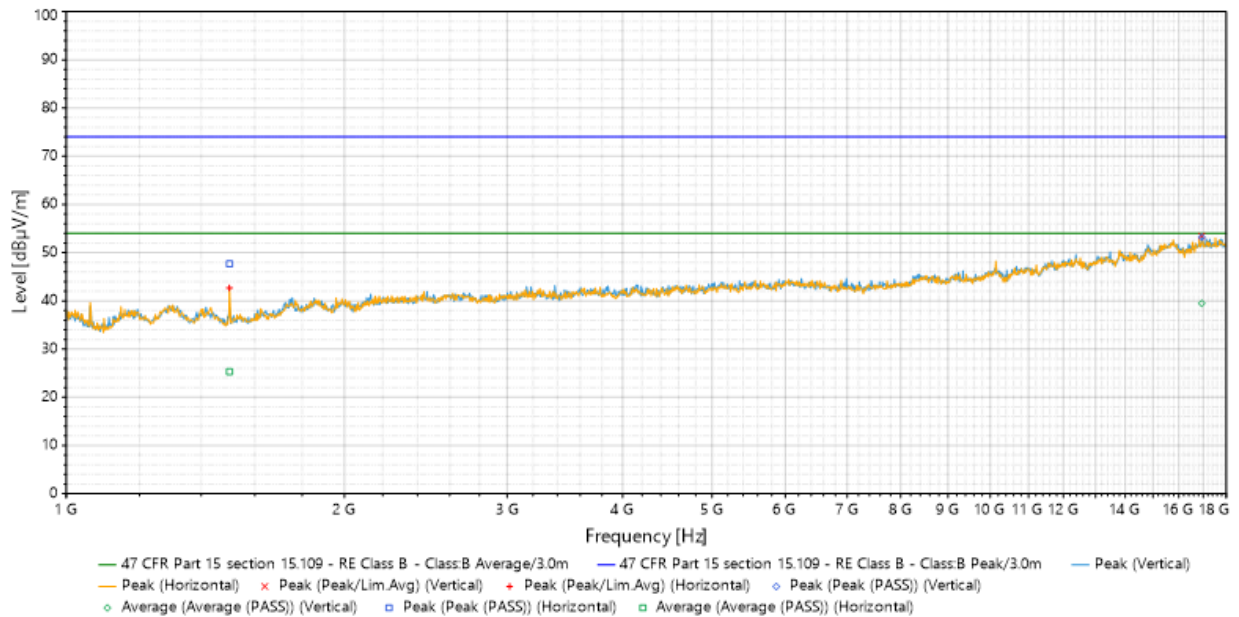
**Table 1. Radiated Emissions, Idle Mode RSE – (30 MHz – 1 GHz) Test Results**



**Figure 1. Radiated Emissions, Idle Mode RSE – (30 MHz – 1 GHz) Plot**

Frequency (MHz)	Source	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (m)	Azimuth (°)	Pol.	RBW (Hz)	Meas. Time (s)	Correction (dB)
1502	Peak (PASS)	47.675	74	-26.325	2.363	284	Horizontal	1000000	0.1	-5.153
1502	Average (PASS)	25.323	54	-28.677	2.363	284	Horizontal	1000000	0.1	-5.153
16938.6	Peak (PASS)	53.218	74	-20.782	3.41	123	Vertical	1000000	0.1	5.604
16938.6	Average (PASS)	39.475	54	-14.525	3.41	123	Vertical	1000000	0.1	5.604

**Table 2. Radiated Emissions, Idle Mode RSE – (1 – 18 GHz) Test Results**



**Figure 2. Radiated Emissions, Idle Mode RSE – (1 – 18 GHz) Plot**

Calibrated test equipment utilized during testing was maintained in a current state of calibration per the requirements of ISO/IEC 17025:2017.

Test Name: FCC 15B & ICES-003			Test Date(s): 04/10/2025 – 04/11/2025		
MET Asset #	Equipment	Manufacturer	Model	Last Cal Date	Cal Due Date
1S2399	Turntable Controller	Sunol Sciences	SC99V	See Note 1	
1S4856	Antenna Positioning Tower	ETS-Lindgren	2171B	See Note 1	
1S2482	5 Meter Chamber	Panashield - ETS	5 Meter Semi-Anechoic Chamber	See Note 2	
1S4804	EMI Test Receiver	Rohde & Schwarz	ESW44	08/07/2024	08/07/2025
1S2600	Bilog Antenna	Teseq	CBL6112D	04/19/2023	04/19/2025
1S2435	Horn Antenna	ETS-Lindgren	3117	03/17/2025	03/17/2027
1S2668	Pre-Amplifier	Sonoma Instruments	310 N	03/18/2025	03/18/2027
1S4802	Pre-Amplifier	EMC Instruments Corporation	EMC118A45SE	See Note 1	
Note 1: Functionally tested equipment is verified using calibrated instrumentation at the time of testing.					
Note 2: Latest NSA and VSWR data available upon request.					

**Table 3. Radiated Emissions, Test Equipment**

**END OF REPORT**