

July 25, 2025

Bloodhound Tracking Device  
Marco Maldonado  
309 Henrietta St  
Webster, TX 77598

Dear Marco Maldonado,

Enclosed is the Electromagnetic Compatibility for the Bloodhound Tracking Device, Communication Unit, tested to the requirements of:

- FCC Part 25

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: EMCS135492-FCC Part 25



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### Report Status Sheet

Revision	Report Date	Reason for Revision
Ø	July 25, 2025	Initial Issue.

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## 1.0 Testing Summary

The Bloodhound Tracking Device, Communication Unit was found to be compliant to the following specification(s).

- FCC Part 25



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.

## 2.0 Overview

Eurofins E&E Testing NA, LLC was contracted by Bloodhound Tracking Device to perform testing on the Communication Unit, under purchase order number 0018.

This document describes the test setups, test methods, required test equipment, and the test limit criteria used to perform compliance testing of Bloodhound Tracking Device, Communication Unit.

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

<b>Model(s) Tested:</b>	Communication Unit
<b>Equipment Emissions Class:</b>	B

## 2.1 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.

## 2.2 Equipment Overview and Test Configuration

<b>Name of EUT/Model:</b>	Communication Unit
<b>Additional Models Covered, but not tested:</b>	N/A
<b>Description of EUT and Intended Use:</b>	Container Asset Tracking
<b>Mode(s) of Operation:</b>	Iridium
<b>Other Included radio(s):</b>	LoRa, LTE CAT-M1
<b>Monitoring Method(s):</b>	LED Indicator
<b>Configuration(s):</b>	Test Mode
<b>EUT Power Requirement</b>	
<b>Voltage:</b>	3.2 – 4.2 V
<b>AC or DC</b>	DC
<b>Voltage Frequency:</b>	N/A
<b>Number of Phases:</b>	N/A
<b>Amperage:</b>	N/A
<b>Uses an external AC/DC Adapter:</b>	No
<b>Battery Return Configuration (DC-C, DC-I, or either):</b>	DC-C
<b>Physical Description</b>	
<b>EUT Arrangement:</b>	Mounted
<b>System with Multiple Chassis:</b>	N/A
<b>Size (HxWxD):</b>	281 x 72.6 x 36 mm
<b>Weight:</b>	787 grams

<b>Emissions Class Declaration:</b>		B
<b>Other Info:</b>		
<b>EUT Software (internal to EUT):</b>	Custom firmware by Bloodhound Tracking Device	
<b>Support Software (used by support PC to exercise EUT):</b>	Tera Term	

**Note:** EUT information was provided by Bloodhound Tracking Device

#### Antenna Information

Radio	Antenna Type	Manufacturer	Part No	Frequency Range	Peak Gain
LoRa	Embedded – PCB Mount	PT. HESHENG INDUSTRY ELECTRONIC	BTEE000300	902 – 928 MHz	-1.7 dBi
LTE	Embedded – PCB Mount	PT. HESHENG INDUSTRY ELECTRONIC	BTEE000300	0.617 – 0.96 GHz 1.71 – 2.2 GHz	0.81 dBi 5.48 dBi
Iridium	Patch Antenna	Unictron Technologies Corporation	H2P93APAZ10100	1616 – 1627 MHz	3.4 dBi

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

#### 2.3 Modifications to the EUT

No modifications were made to the EUT.

#### 2.4 Modifications to the Standard

No modifications were made to the Test Standard.

#### 2.5 Disposition of EUT

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

## 3.0 FCC Part 25

### 3.1 Radiated Spurious Emissions

**Test Requirement:** This test was performed in accordance with FCC 47 CFR Part 25, which governs satellite communications. Section 25.202(f) and applicable subsections specify that emissions outside the authorized frequency band shall be sufficient attenuated to avoid harmful interference with other services.

The general requirement is that emissions falling outside the allocated satellite service band must meet the spurious emission limits defined in the applicable rule part and must not exceed the levels specified in FCC Part 25.202(f) or as otherwise required under §25.216 (for mobile terminals) or §25.216 (for ESVs, ESIMs, etc.), depending on the equipment type.

Spurious emissions are measured in the radiated domain using peak and average detectors, and must not exceed the equivalent isotropically radiated power (EIRP) limits defined for emissions into adjacent bands or general out-of-band regions.

**Test Procedure:** Radiated spurious emissions were measured in accordance with ANSI C63.26:2015 and FCC Part 25.202(f) requirements. The EUT was configured to operate in its maximum transmit mode within the assigned satellite uplink frequency band.

Testing was performed inside a semi-anechoic chamber at a measurement distance of 3 meters. The EUT was mounted on a non-conductive platform and oriented to maximize radiated emissions. A broadband receiving antenna was positioned at various heights and polarizations to capture worst-case emission levels.

Measurements were performed across the frequency range from 30 MHz to the 10<sup>th</sup> harmonic of the highest operating frequency, excluding the authorized transmit band. The analyzer was configured with:

- RBW = 100 kHz (for <1 GHz)
- RBW = 1 MHz (for >1 GHz)
- Detector: Peak for pre-scan, RMS for final measurements
- Trace: Max Hold over sufficient dwell time

The measured levels were compared against the applicable FCC Part 25 emission limits. All cable losses, antenna factors, and amplifier gains were included in the final result. Testing was controlled and data acquired using Nexio BAT-EMC software.

**Test Results:**

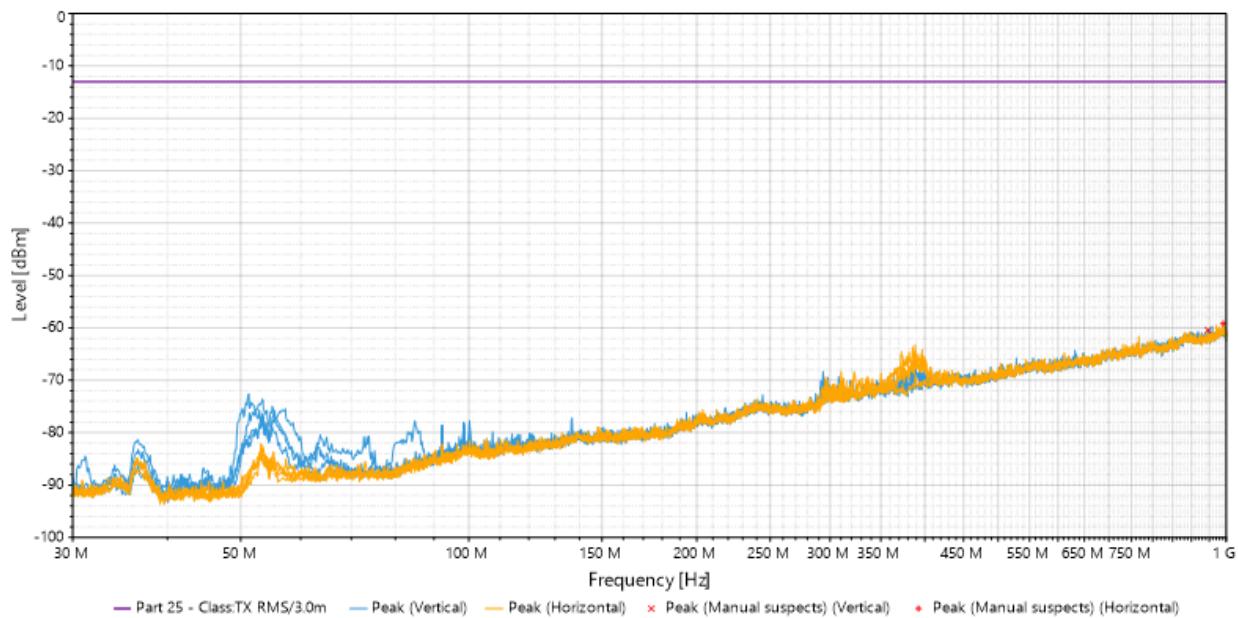
<b>Test Standard:</b>	FCC Part 25 Class B
<b>Test Name</b>	Radiated Spurious Emissions
<b>Test Dates:</b>	07/07/2025
<b>Laboratory</b>	Eurofins E&E Testing NA, LLC
<b>Test Engineer:</b>	Chin Ming Lui
<b>Test Results:</b>	Compliant

## Test Data

### Low Channel 1616 MHz

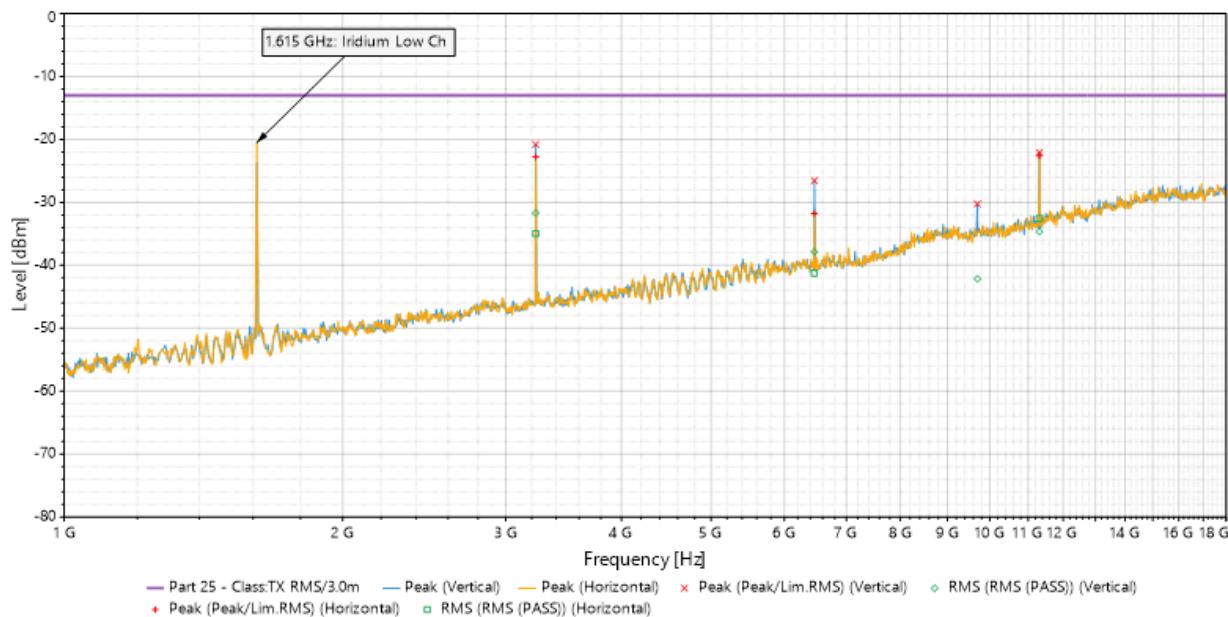
Frequency (MHz)	Source	Peak (dBm)	Lim.RMS (dBm)	Height (m)	Azimuth (°)	Polarization	Correction (dB)
946.068	Manual suspects	-60.423	-13	4.001	64	Vertical	17.442
991.367	Manual suspects	-59.16	-13	3	3	Horizontal	18.81

**Table 1. Radiated Spurious Emissions, Iridium Low Channel 1616 MHz (30 MHz – 1 GHz) Test Results**



**Figure 1. Radiated Spurious Emissions, Iridium Low Channel 1616 MHz (30 MHz – 1 GHz) Plot**

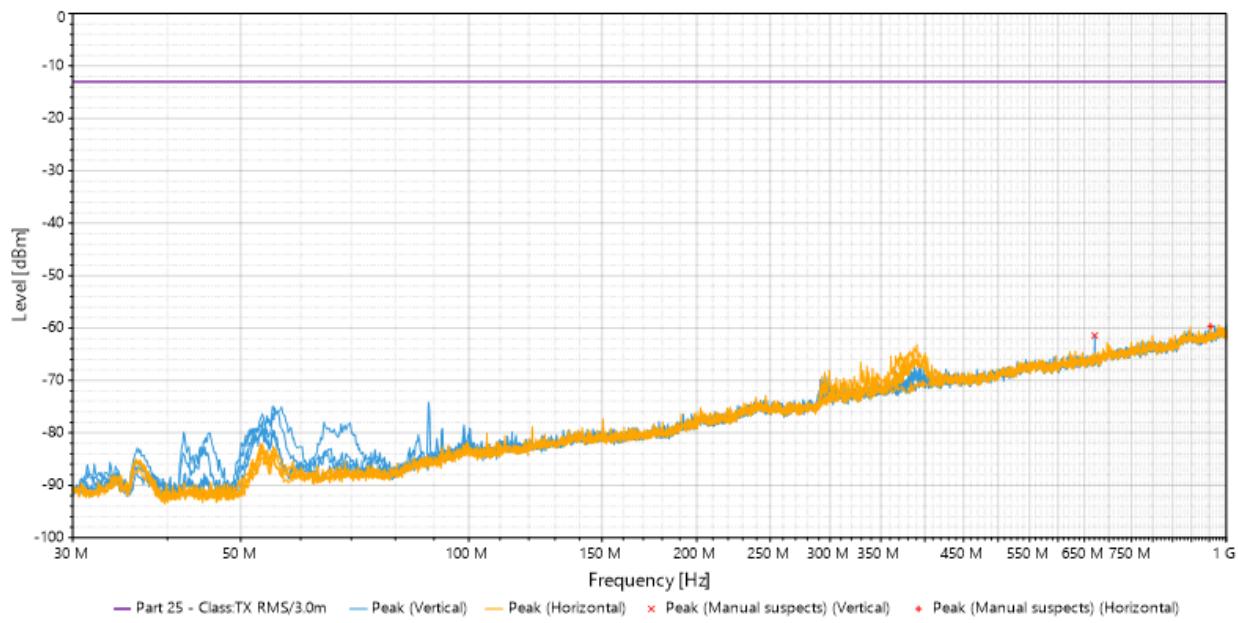
Frequency (MHz)	Source	RMS (dBm)	RMS Limit (dBm)	Margin (dB)	Height (m)	Azimuth (°)	Pol.	RBW (Hz)	Meas. Time (s)	Correction (dB)
3232	RMS (PASS)	-31.694	-13	-18.694	1.24	211	Vertical	1000000	0.1	20.349
3232.1	RMS (PASS)	-34.981	-13	-21.981	1.47	128	Horizontal	1000000	0.1	20.349
6464.1	RMS (PASS)	-37.875	-13	-24.875	1.241	203	Vertical	1000000	0.1	27.286
6464.1	RMS (PASS)	-41.262	-13	-28.262	2.146	225	Horizontal	1000000	0.1	27.286
9696	RMS (PASS)	-42.157	-13	-29.157	1	214	Vertical	1000000	0.1	29.854
11312	RMS (PASS)	-32.571	-13	-19.571	2.388	214	Horizontal	1000000	0.1	30.778
11312.2	RMS (PASS)	-34.646	-13	-21.646	1.474	304	Vertical	1000000	0.1	30.778

**Table 2. Radiated Spurious Emissions, Iridium Low Channel 1616 MHz (1 – 18 GHz) Test Results**

**Figure 2. Radiated Spurious Emissions, Iridium Low Channel 1616 MHz (1 – 18 GHz) Plot**

### Mid Channel 1621 MHz

Frequency (MHz)	Source	Peak (dBm)	Lim.RMS (dBm)	Height (m)	Azimuth (°)	Polarization	Correction (dB)
670.879	Manual suspects	-61.432	-13	2	321	Vertical	12.986
953.537	Manual suspects	-59.639	-13	1	87	Horizontal	17.666

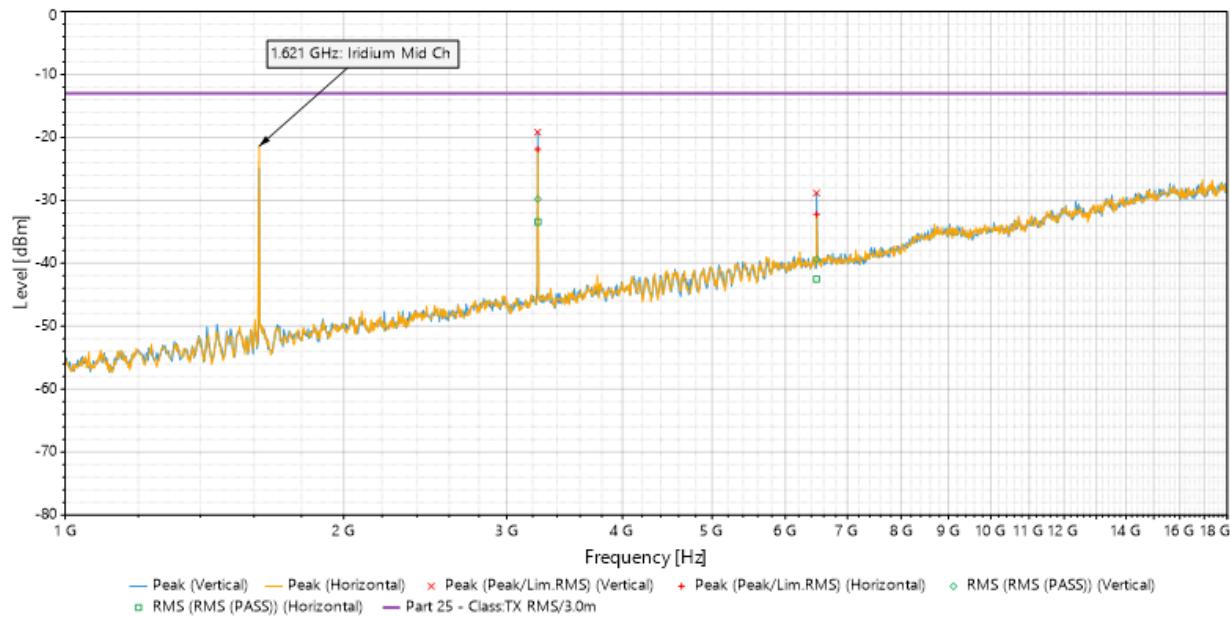
**Table 3. Radiated Spurious Emissions, Iridium Mid Channel 1621 MHz (30 MHz – 1 GHz) Test Results**



**Figure 3. Radiated Spurious Emissions, Iridium Mid Channel 1621 MHz (30 MHz – 1 GHz) Plot**

Frequency (MHz)	Source	RMS (dBm)	RMS Limit (dBm)	Margin (dB)	Height (m)	Azimuth (°)	Pol.	RBW (Hz)	Meas. Time (s)	Correction (dB)
3241.4	RMS (PASS)	-29.801	-13	-16.801	1.131	95	Vertical	1000000	0.1	20.386
3241.4	RMS (PASS)	-33.417	-13	-20.417	1.355	116	Horizontal	1000000	0.1	20.386
6482.7	RMS (PASS)	-39.37	-13	-26.37	1.246	25	Vertical	1000000	0.1	27.315
6482.8	RMS (PASS)	-42.505	-13	-29.505	2.814	341	Horizontal	1000000	0.1	27.315

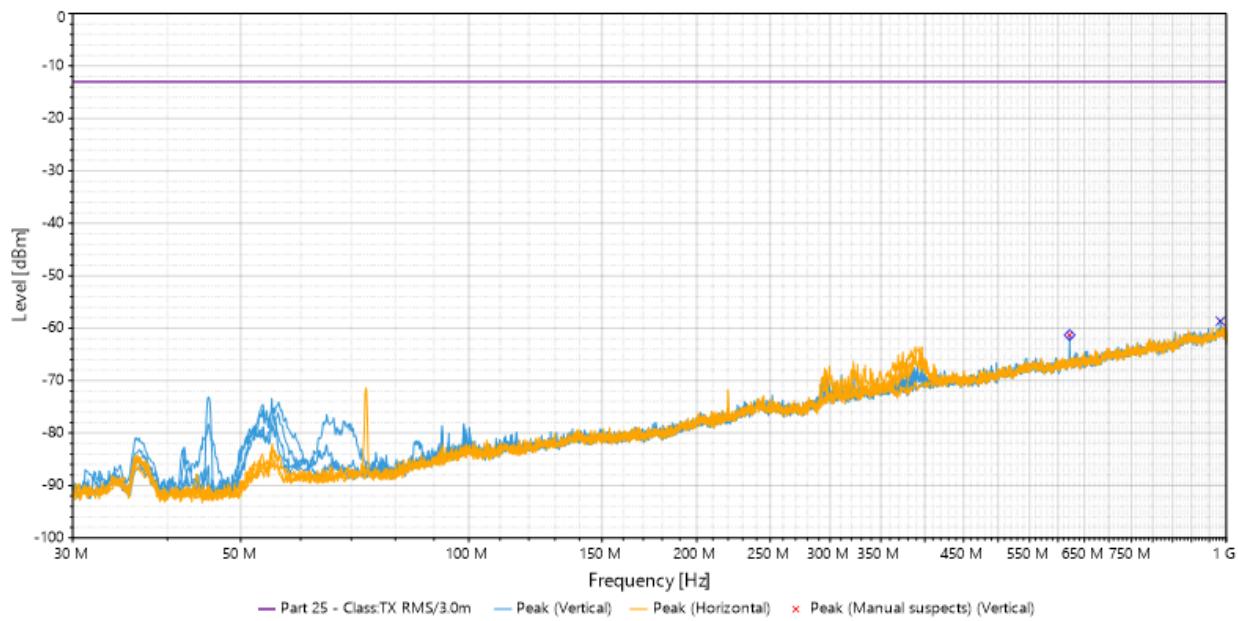
**Table 4. Radiated Spurious Emissions, Iridium Mid Channel 1621 MHz (1 – 18 GHz) Test Results**



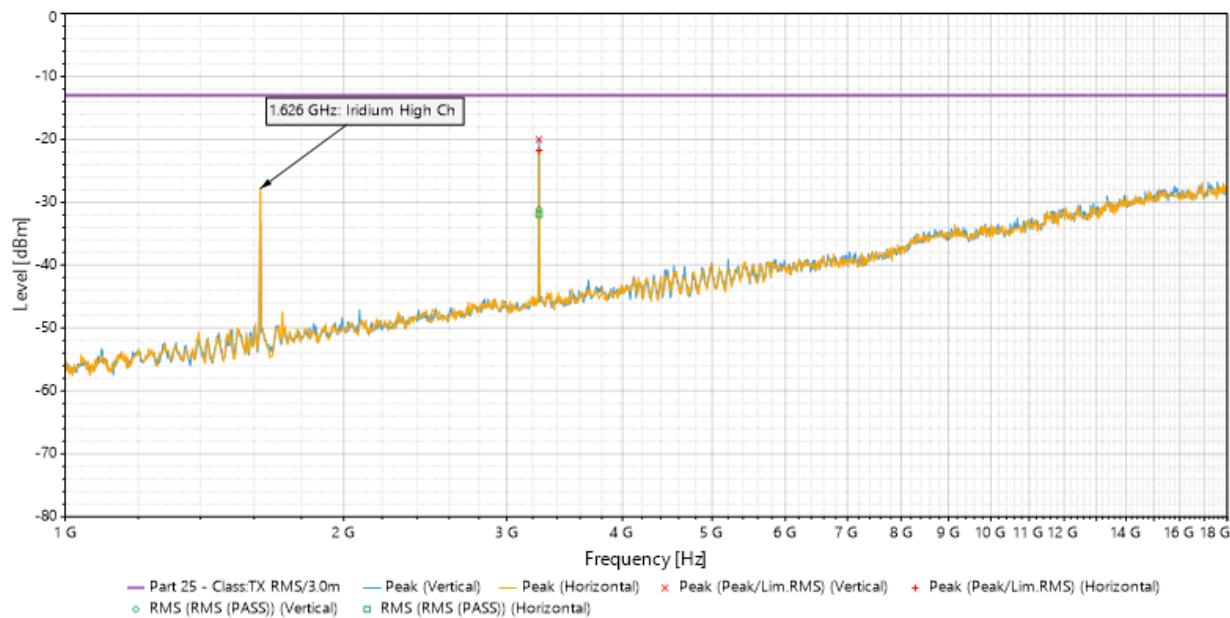
**Figure 4. Radiated Spurious Emissions, Iridium Mid Channel 1621 MHz (1 – 18 GHz) Plot**

**High Channel 1626 MHz**

Frequency (MHz)	Source	Peak (dBm)	Lim.RMS (dBm)	Height (m)	Azimuth (°)	Polarization	Correction (dB)
621.409	Manual suspects	-61.316	-13	2	283	Vertical	12.395
982.637	Manual suspects	-58.668	-13	4	88	Vertical	18.679

**Table 5. Radiated Spurious Emissions, Iridium High Channel 1626 MHz (30 MHz – 1 GHz) Test Results**

**Figure 5. Radiated Spurious Emissions, Iridium High Channel 1626 MHz (30 MHz – 1 GHz) Plot**

Frequency (MHz)	Source	RMS (dBm)	RMS Limit (dBm)	Margin (dB)	Height (m)	Azimuth (°)	Pol.	RBW (Hz)	Meas. Time (s)	Correction (dB)
3251.4	RMS (PASS)	-31.111	-13	-18.111	1.351	188	Vertical	1000000	0.1	20.424
3251.4	RMS (PASS)	-31.941	-13	-18.941	1.355	298	Horizontal	1000000	0.1	20.424

**Table 6. Radiated Spurious Emissions, Iridium High Channel 1626 MHz (1 – 18 GHz) Test Results**

**Figure 6. Radiated Spurious Emissions, Iridium High Channel 1626 MHz (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: KDB 996369 D04 RSE			Test Date(s): 07/07/2025		
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	
1S4852	Radio Communicator Analyzer	Anritsu	MT8821C	N/A	
1S4804	EMI Test Receiver	Rohde & Schwarz	ESW44	08/07/2024	08/07/2025
1S2485	Bilog Antenna	Teseq	CBL6112D	11/27/2024	11/27/2026
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 7. Radiated Spurious Emissions, Test Equipment**

## END OF REPORT