



RF Co-location Report

FCC ID: 2ATHQZL2
Application: Zoleo Incorporated
Product: ZOLEO Satellite Communicator
Model No.: ZL1500
Brand Name: ZOLEO
FCC Rule Part(s): Part 25
Part 15 Subpart C (Section 15.247)
Result: Complies
Received Date: 2026-03-31
Test Date: 2026-05-19 ~ 2026-05-20

Reviewed By:

Denise Zhou

Denise Zhou

Approved By:

Robin Wu

Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report. Testing was performed in accordance with the applicable measurement procedures. The test results reported herein apply only to the specific item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
R26S1064035-U203	V01	Initial Report	2026-05-29	Valid

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1.1. Applicant

7A Taymall Avenue, Toronto, Ontario M8Z 3Y8, Canada

Zoleo Incorporated

7A Taymall Avenue, Toronto, Ontario M8Z 3Y8, Canada

☒	Test Site - MRT Suzhou Laboratory	
	Laboratory Location (Suzhou - Wuzhong)	
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China	
	Laboratory Location (Suzhou - SIP)	
	4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China	
	Laboratory Location (Suzhou - Wujiang)	
	Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People's Republic of China	
☐	Laboratory Accreditations	
	A2LA: 3628.01	CNAS: L10551
	FCC: CN1166	ISED: CN0001
☐	Test Site - MRT Shenzhen Laboratory	
	Laboratory Location (Shenzhen)	
	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China	
	Laboratory Accreditations	
	A2LA: 3628.02	
	FCC: CN1284	ISED: CN0105
☐	Test Site - MRT Taiwan Laboratory	
	Laboratory Location (Taiwan)	
	No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)	
	Laboratory Accreditations	
	TAF: 3261	
	FCC: 291082, TW3261	ISED: TW3261

1.4. Product Information

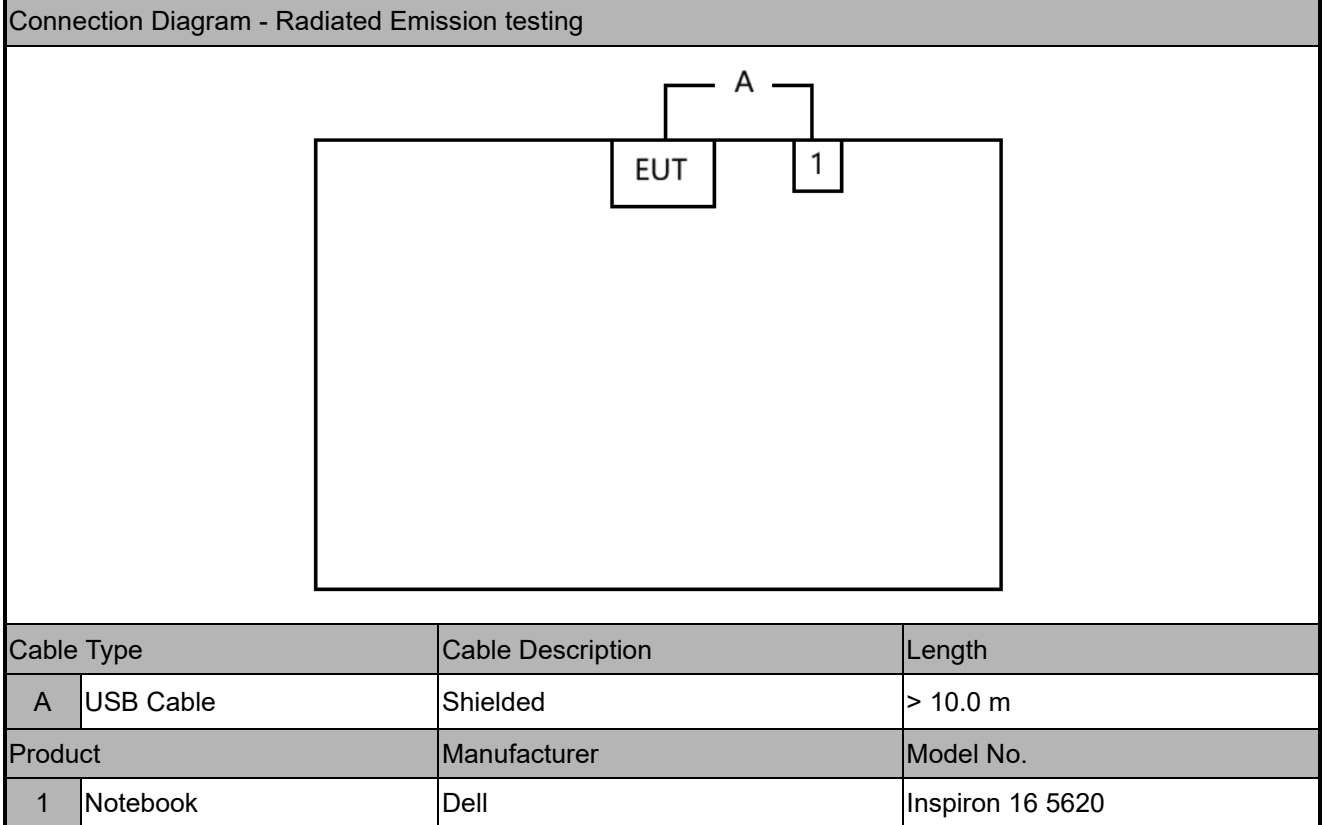
Product Name	ZOLEO Satellite Communicator
Model No.	ZL1500
S/N	CFDZL1CE9
Bluetooth Specification	BT Single Mode, BLE Only
GNSS Specification	GPS, Galileo
Satellite Specification	1616 ~ 1626.5 MHz
Operating Temperature	-20 ~ 55 °C
Power Type	By Rechargeable Lithium Battery
Accessory(ies)	
Rechargeable Lithium Battery	3.7 V, 1.48 Ah, 5.4 Wh
Remark: The information of the EUT (Equipment Under Test) was provided by the manufacturer. The accuracy, completeness, and validity of the information are solely the responsibility of the manufacturer.	

2. Test Configuration

2.1. Test Mode

Test Mode 1: BLE Transmit + Satellite Transmit

2.2. Test System Connection Diagram



2.3. Applied Standards

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

- FCC CFR 47 Part 15 Subpart C §15.247
- FCC CFR 47 Part 25
- ANSI C63.10-2020
- ANSI C63.10-2020/Cor1-2023
- ANSI C63.10a-2024
- ANSI C63.26-2015

2.4. Test Environment Condition

Ambient Temperature	15 ~ 35 °C
Relative Humidity	20 ~ 75%RH

3. Measuring Instrument

Instrument Name	Manufacturer	Model No.	Asset No.	Cali. Interval	Cal. Due Date	Test Site
EMI Test Receiver	R&S	ESR3	MRTSUE07111	1 year	2027-03-05	WJ-AC2
EXA Signal Analyzer	Keysight	N9010B	MRTSUE07147	1 year	2026-09-28	WJ-AC2
Active Loop Antenna	Schwarzbeck	FMZB 1519-60 D	MRTSUE07076	1 year	2026-11-18	WJ-AC2
TRILOG Broad Band Antenna	Schwarzbeck	VULB 9163	MRTSUE07097	1 year	2027-04-14	WJ-AC2
Horn Antenna	RFSPIN	DRH18-E	MRTSUE07105	1 year	2027-05-11	WJ-AC2
Preamplifier	EMCI	EMC118A45SE	MRTSUE07102	1 year	2027-04-08	WJ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11315	1 year	2026-06-16	WJ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11332	1 year	2026-06-05	WJ-AC2
Anechoic Chamber	TDK	WJ-AC2	MRTSUE07117	1 year	2027-05-10	WJ-AC2
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06599	1 year	2026-08-18	WJ-AC2
Preamplifier	EMCI	EMC184045SE	MRTSUE07103	1 year	2027-04-08	WJ-AC2

Software	Version	Function
e3	230711	RE & CE
CONTROLLER CO3000	V 1.03.02	RE Antenna & Turntable

4. Decision Rules and Measurement Uncertainty

4.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2.
(Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

4.2. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Radiated Spurious Emissions
The maximum measurement uncertainty is evaluated as: Horizontal: 1 GHz ~ 30 GHz: 5.01 dB Vertical: 1 GHz ~ 30 GHz: 4.85 dB

5. Radiated Spurious Emissions Measurement (Co-location)

5.1. Test Limit

For 15.247(b) requirement:

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [$\mu\text{V/m}$]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

For 25.202 (f) requirement:

In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: An amount equal to 43 dB plus 10 times the logarithm (to the base 10) of the transmitter power in watts.

For Out-Of-Band Emission, The emission limit equal to 82.3 dB $\mu\text{V/m}$.

$E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20 \log D + 104.8$; where D is the measurement distance in meters.

Note:

Spurious emissions shall comply with the FCC rule part applicable to the device responsible for generating the emission. If the spurious emission is caused by the simultaneous operation of both devices, the limit is the highest level allowed by either rule part.

5.2. Test Procedure

- ANSI C63.10-2020 - Section 11.11 & 11.12
- ANSI C63.10-2020 - Section 6.3 (General Requirements)
- ANSI C63.10-2020 - Section 6.6 (Standard test method above 1 GHz)
- ANSI C63.26 - 2015 - Section 5.2.7 & 5.5

5.3. Test Setting

Peak Measurements above 1 GHz

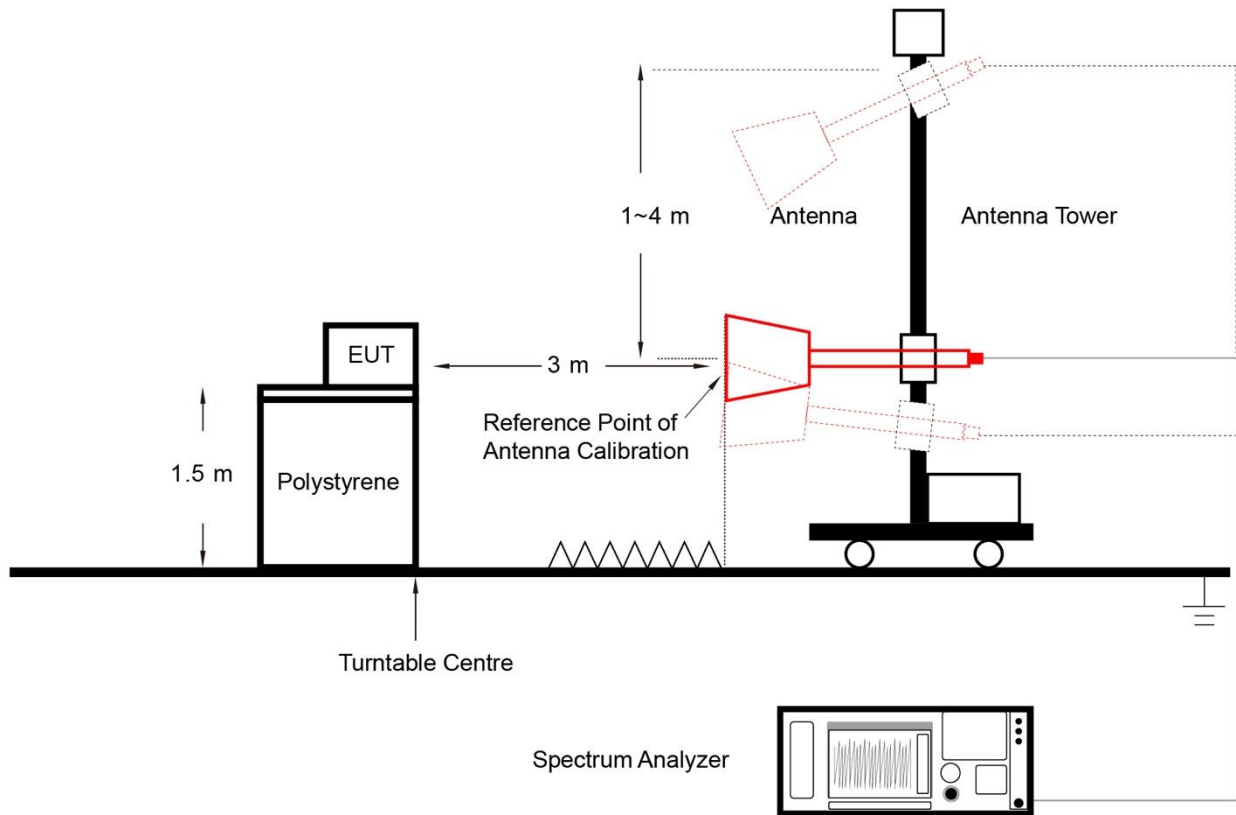
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1 MHz
3. VBW = 3 MHz
4. Detector = Peak
5. Sweep time = Auto couple
6. Trace mode = Max hold
7. Trace was allowed to stabilize

Average Measurements above 1 GHz (Method VB)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1 MHz
3. VBW; if the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz
If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = Auto
7. Trace mode = Max hold
8. Trace was allowed to stabilize

5.4. Test Setup

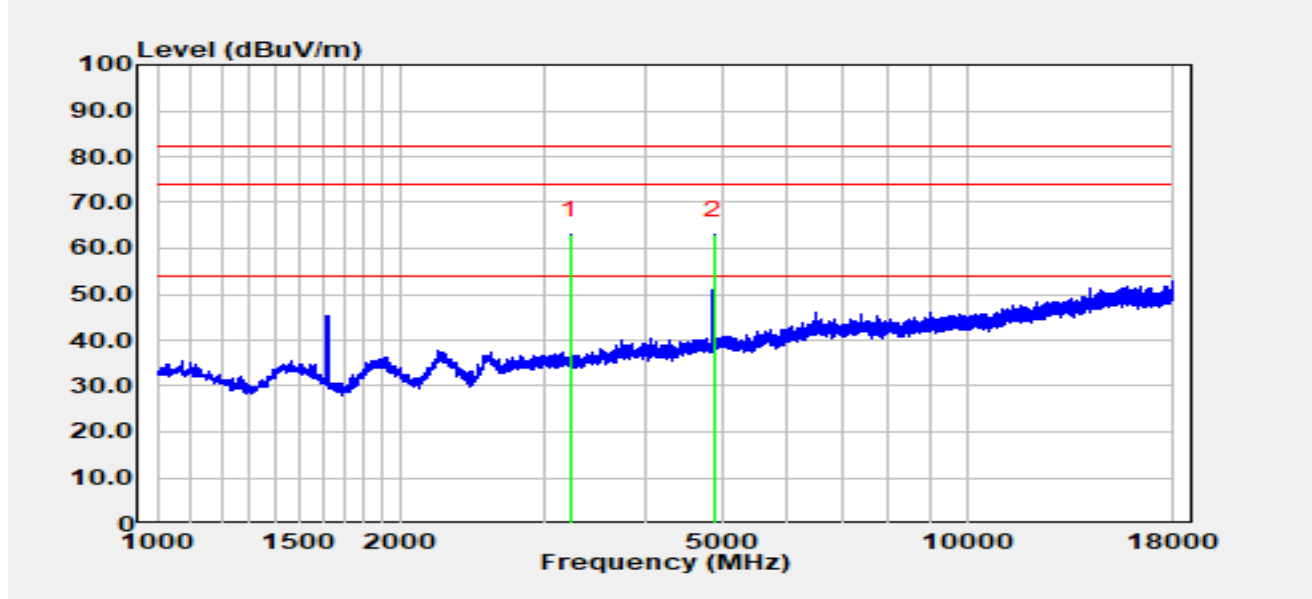
Above 1 GHz Test Setup:



5.5. Test Result

The Result of Radiated Emission for 1 GHz ~ 18 GHz:

Site	WJ-AC2	Test Date	2026-05-19
Temperature	24.1 °C	Humidity	51.9%
Limit	FCC_Part 25.202_RSE (3m) FCC_Part 15.209_RSE (3m)	Test Engineer	Bob Zhang
Test Voltage	By Battery	Polarity	Horizontal
Test Mode	Mode 1		

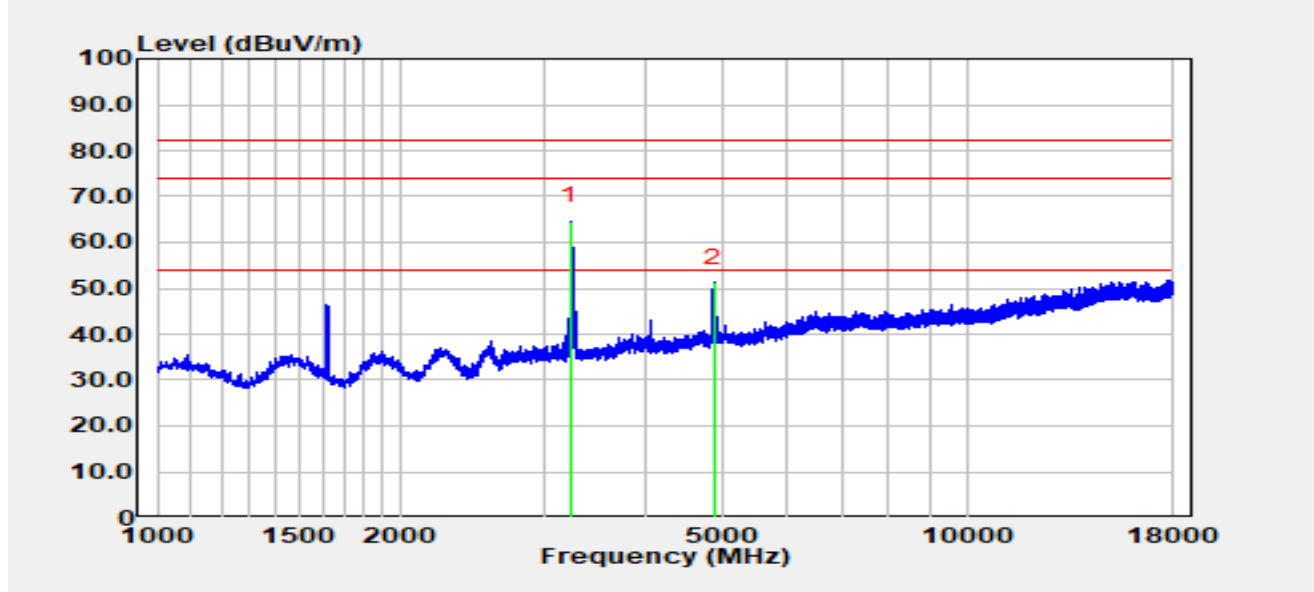


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	3242.30	66.40	-3.39	63.01	-19.29	82.30	Peak
2		4864.10	63.11	-0.13	62.98	-19.32	82.30	Peak

Notes:

- "*" indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - AMP (dB).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).
- Points (1) and (2) are the harmonic frequencies of the satellite, which must comply with the FCC Part 25.202 limit.

Site	WJ-AC2	Test Date	2026-05-19
Temperature	24.1 °C	Humidity	51.9%
Limit	FCC_Part 25.202_RSE (3m) FCC_Part 15.209_RSE (3m)	Test Engineer	Bob Zhang
Test Voltage	By Battery	Polarity	Vertical
Test Mode	Mode 1		



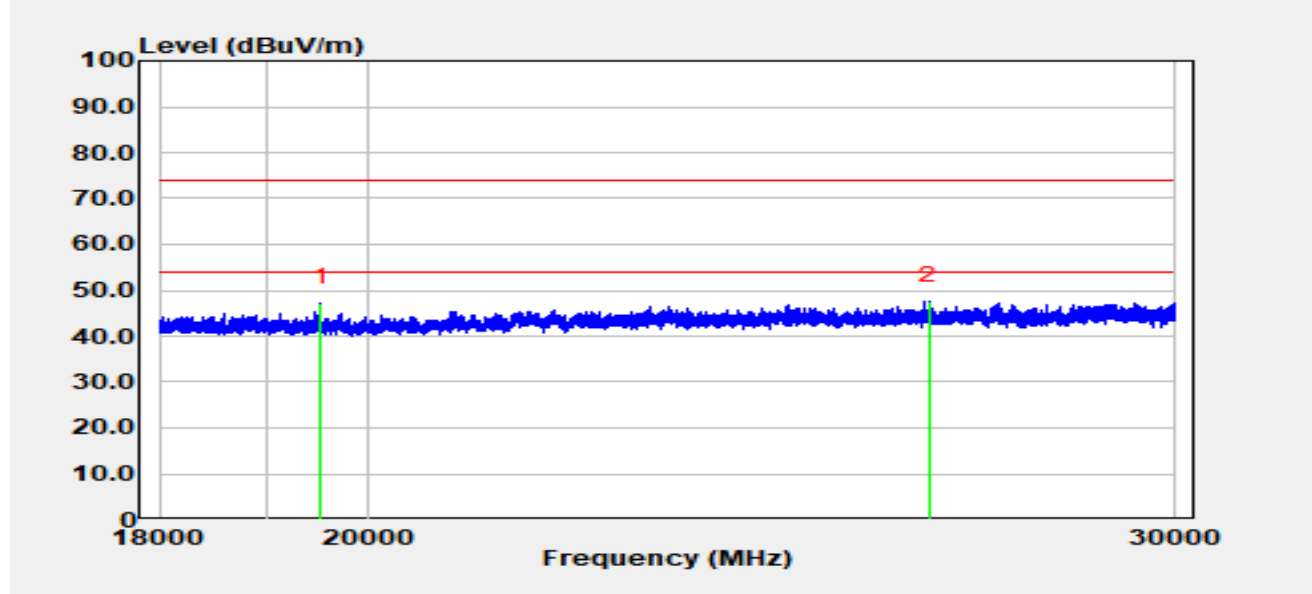
No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	3242.30	67.94	-3.39	64.55	-17.75	82.30	Peak
2		4864.10	51.40	-0.13	51.26	-31.04	82.30	Peak

Notes:

- "*" indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - AMP (dB).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).
- Points (1) and (2) are the harmonic frequencies of the satellite, which must comply with the FCC Part 25.202 limit.

The Result of Radiated Emission for 18 GHz ~ 30 GHz:

Site	WJ-AC2	Test Date	2026-05-20
Temperature	25.1 °C	Humidity	51.4%
Limit	FCC_Part 15.209_RSE (3m)	Test Engineer	Bob Zhang
Test Voltage	By Battery	Polarity	Horizontal
Test Mode	Mode 1		

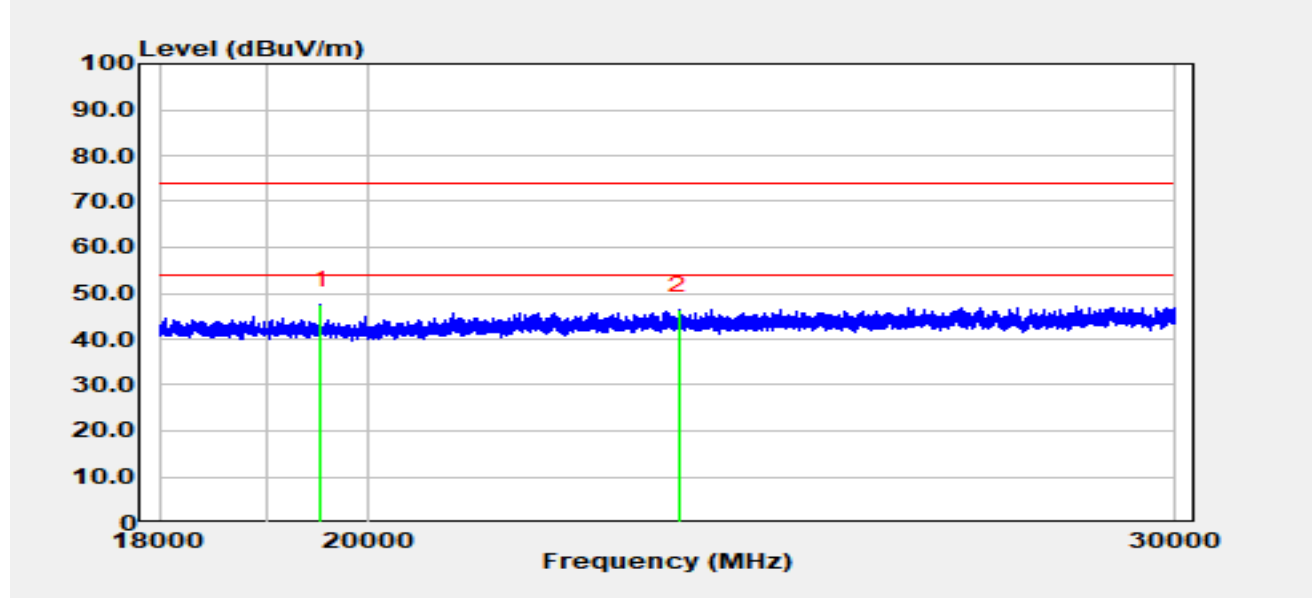


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		19518.00	55.76	-8.56	47.20	-26.80	74.00	Peak
2	*	26498.40	51.23	-3.65	47.58	-26.42	74.00	Peak

Notes:

- " * " indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - AMP (dB).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2026-05-20
Temperature	25.1 °C	Humidity	51.4%
Limit	FCC_Part 15.209_RSE (3m)	Test Engineer	Bob Zhang
Test Voltage	By Battery	Polarity	Vertical
Test Mode	Mode 1		



No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	19521.60	56.07	-8.59	47.47	-26.53	74.00	Peak
2		23373.60	51.06	-4.66	46.40	-27.60	74.00	Peak

Notes:

- "*" indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - AMP (dB).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Appendix A - Test Setup Photograph

Refer to “R26S1064035-UT” file.

Appendix B - EUT Photograph

Refer to "R26S1064035-UE" file.

The End