

ISED CABid: ES1909  
Lab. Company Number: 4621A

Test Report No:  
80540RRF.002

**Partial Test Report**  
**USA FCC Part 24**  
**CANADA RSS-133**

|                                           |                                                                                                                                                                            |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (*) Identification of item tested         | Cat1 bis data only module                                                                                                                                                  |
| (*) Trademark                             | u-blox                                                                                                                                                                     |
| (*) Model and /or type reference          | LEXI-R10401D                                                                                                                                                               |
| Other identification of the product       | FCC ID: XPYUBX23AD01<br>IC: 8595A-UBX23AD01                                                                                                                                |
| (*) Features                              | LTE Cat1 bis, Wi-fi Scan / Locate<br>HW version: UBX-437C01<br>SW version: 01.06.A01.00                                                                                    |
| Applicant                                 | u-blox AG<br>Zürcherstrasse 68, CH-8800 Thalwil, Switzerland                                                                                                               |
| Test method requested, standard           | USA FCC Part 24 (10-1-23 Edition).<br>CANADA RSS-133 Issue 7, July 2024.<br>ANSI C63.26-2015.<br>KDB 971168 D01 Power Meas License Digital Systems<br>v03r01, April. 2018. |
| Approved by (name / position & signature) | José Manuel Gómez Galván<br>EMC Consumer & RF<br>Lab. Manager                                                                                                              |
| Date of issue                             | 2025-01-14                                                                                                                                                                 |
| Report template No.                       | FDT08_25<br>(*) "Data provided by the client"                                                                                                                              |

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## Competences and guarantees

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## General conditions

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1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
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## Uncertainty

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Uncertainty (factor  $k=2$ ) was calculated according to the DEKRA Testing and Certification S.A.U. internal document PODT000.

## Data provided by the client

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The following data has been provided by the client:

1. Information relating to the description of the sample ("Identification of the item tested", "Trademark", "Model and/or type reference tested").
2. The sample model LEXI-R10401D is a Cat1 bis data only module for industrial IoT applications.

DEKRA Testing and Certification S.A.U. declines any responsibility with respect to the information provided by the client and that may affect the validity of results. The laboratory is not responsible for such information and it is not covered by accreditation.

## Usage of samples

Samples undergoing test have been selected by: The client.

| Id   | Control Number | Description               | Model        | Serial N° | Date Reception | of | Application        |
|------|----------------|---------------------------|--------------|-----------|----------------|----|--------------------|
| S/01 | 80540_33.1     | Cat1 bis data only module | LEXI-R10401D | -         | 2024-11-05     |    | Element Under Test |
| S/01 | 80540_34.1     | Antenna                   | -            | -         | 2024-11-05     |    | Auxiliary Element  |
| S/01 | 80540_35.1     | Antenna GPS               | -            | -         | 2024-11-05     |    | Auxiliary Element  |
| S/01 | 80540_36.1     | AC/DC                     | -            | -         | 2024-11-05     |    | Auxiliary Element  |
| S/01 | 80540_37.1     | USB Cable                 | -            | -         | 2024-11-05     |    | Auxiliary Element  |
| S/01 | 80540_49.1     | USB Cable                 | -            | -         | 2024-11-05     |    | Auxiliary Element  |

Notes referenced to samples during the project:

| Id   | Type                              |
|------|-----------------------------------|
| S/01 | Samples used for conducted tests. |

## Test sample description

|                                               |                                     |                                      |                                     |              |                                     |     |     |
|-----------------------------------------------|-------------------------------------|--------------------------------------|-------------------------------------|--------------|-------------------------------------|-----|-----|
| Ports..... :                                  | Port name and description           | Cable                                |                                     |              |                                     |     |     |
|                                               |                                     | Specified max length [m]             | Attached during test                |              | Shielded                            |     |     |
|                                               | USB                                 | 2                                    | <input checked="" type="checkbox"/> |              | <input checked="" type="checkbox"/> |     |     |
|                                               | -                                   |                                      | [ ]                                 |              | [ ]                                 |     |     |
| Supplementary information to the ports..... : | -                                   |                                      |                                     |              |                                     |     |     |
| Rated power supply .....                      | Voltage and Frequency               |                                      | Reference poles                     |              |                                     |     |     |
|                                               | [ ]                                 | AC: .....                            | [ ]                                 | [ ]          | [ ]                                 | [ ] | [ ] |
|                                               | [X]                                 | DC: Min: 3.3, Typical: 3.8, Max: 4.5 |                                     |              |                                     |     |     |
| Rated Power..... :                            | -                                   |                                      |                                     |              |                                     |     |     |
| Clock frequencies..... :                      | 26 MHz                              |                                      |                                     |              |                                     |     |     |
| Other parameters .....                        | -                                   |                                      |                                     |              |                                     |     |     |
| Software version..... :                       | 01.06.A01.00                        |                                      |                                     |              |                                     |     |     |
| Hardware version .....                        | UBX-437C01                          |                                      |                                     |              |                                     |     |     |
| Dimensions in cm (W x H x D) ... :            | 1.6 x 0.2 x 1.6                     |                                      |                                     |              |                                     |     |     |
| Mounting position .....                       | <input type="checkbox"/>            | Table top equipment                  |                                     |              |                                     |     |     |
|                                               | <input type="checkbox"/>            | Wall/Ceiling mounted equipment       |                                     |              |                                     |     |     |
|                                               | <input type="checkbox"/>            | Floor standing equipment             |                                     |              |                                     |     |     |
|                                               | <input type="checkbox"/>            | Hand-held equipment                  |                                     |              |                                     |     |     |
|                                               | <input checked="" type="checkbox"/> | Other: Industrial modem component    |                                     |              |                                     |     |     |
| Modules/parts..... :                          | Module/parts of test item           |                                      | Type                                | Manufacturer |                                     |     |     |
|                                               | -                                   |                                      | -                                   | -            |                                     |     |     |
| Accessories (not part of the test item) ..... | Description                         |                                      | Type                                | Manufacturer |                                     |     |     |
|                                               | Power supply unit                   |                                      | UUX324-1215                         | Unifive      |                                     |     |     |
|                                               | Antenna LTE                         |                                      | GSA.8835                            | Taoglass     |                                     |     |     |
| Documents as provided by the applicant .....  | Description                         |                                      | File name                           | Issue date   |                                     |     |     |
|                                               | -                                   |                                      | -                                   | -            |                                     |     |     |

## Identification of the client

u-blox AG  
Zürcherstrasse 68, CH-8800 Thalwil, Switzerland

## Testing period and place

|               |                                        |
|---------------|----------------------------------------|
| Test Location | DEKRA Testing and Certification S.A.U. |
| Date (start)  | 2024-11-05                             |
| Date (finish) | 2024-11-05                             |

## Document history

| Report number | Date       | Description    |
|---------------|------------|----------------|
| 80540RRF.002  | 2025-01-14 | First release. |

## Environmental conditions

In the chamber for conducted measurements, the following limits were not exceeded during the test:

|                   |                              |
|-------------------|------------------------------|
| Temperature       | Min. = 15 °C<br>Max. = 35 °C |
| Relative humidity | Min. = 20 %<br>Max. = 75 %   |

## Remarks and comments

The tests have been performed by the technical personnel: Rafael Fernández.

Used instrumentation:

| Control No. | Equipment                                   | Model   | Manufacturer      | Next Calibration |
|-------------|---------------------------------------------|---------|-------------------|------------------|
| 6165        | EMI TEST RECEIVER 9 kHz-7 GHz               | ESR7    | ROHDE AND SCHWARZ | 2025-12-27       |
| 7692        | ATTENUATOR 3 dB, 2 W, DC, 18 GHz            | TWTS2G  | TECHNIWAVE        | 2025-01-29       |
| 6157        | SIGNAL AND SPECTRUM ANALYZER 10 Hz - 40 GHz | FSV40   | ROHDE AND SCHWARZ | 2025-01-18       |
| 9555        | TWO CHANNEL POWER SUPPLY, 32V, 10/5A, 188W  | HMP2020 | ROHDE AND SCHWARZ | N/A              |
| 7794        | SIGNAL AND SPECTRUM ANALYZER 10 Hz - 40 GHz | FSV40   | ROHDE AND SCHWARZ | 2025-04-21       |
| 8912        | WIDEBAND RADIO COMMUNICATION TESTER         | CMW500  | ROHDE AND SCHWARZ | 2025-10-05       |
| 6792        | SHIELDED ROOM                               | S101    | ETS LINDGREN      | N/A              |

## Testing verdicts

|                 |     |
|-----------------|-----|
| Not applicable: | N/A |
| Pass:           | P   |
| Fail:           | F   |
| Not measured:   | N/M |

## Summary

### LTE Cat 1bis Band 2:

| FCC 24 / RSS-133                                                                 |         |        |
|----------------------------------------------------------------------------------|---------|--------|
| Requirement – Test case                                                          | Verdict | Remark |
| FCC 24.232 / RSS-133 5.5: RF Output Power                                        | P       |        |
| FCC 2.1047 / RSS-133 5.3: Modulation characteristics                             | N/M     | (1)    |
| FCC 24.235 / RSS-133 5.4: Frequency stability                                    | N/M     | (1)    |
| FCC 2.1049: Occupied Bandwidth                                                   | N/M     | (1)    |
| FCC 24.238 / RSS-133 5.6: Spurious emissions at antenna terminals                | N/M     | (1)    |
| FCC 24.238 / RSS-133 5.6: Spurious emissions at antenna terminals at Block Edges | N/M     | (1)    |
| FCC 24.238 / RSS-133 5.6: Radiated Emissions                                     | N/M     | (1)    |
| <u>Supplementary information and remarks:</u><br>(1) Test not requested.         |         |        |



## Appendix A: Test results for FCC 24 / RSS-133

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TEST CONDITIONS

(\*): Declared by the Applicant.

POWER SUPPLY (\*):

Vnominal: 3.8 Vdc  
Vminimum: 3.23 Vdc  
Vmaximum: 4.5 Vdc  
Type of Power Supply: DC External (USB).

ANTENNA (\*):

| MIDDLE BAND         |          | ANTENNA TYPE                                                                |
|---------------------|----------|-----------------------------------------------------------------------------|
| LTE Cat 1bis Band 2 | 4.12 dBi | External (Taoglass GSA_8835 (standard reference antenna provided with EVK)) |

TEST FREQUENCIES:

LTE Cat 1bis Band 2. QPSK and 16QAM:

|        | Channel per BW=(Frequency, MHz) |                   |                   |                 |                   |                 |
|--------|---------------------------------|-------------------|-------------------|-----------------|-------------------|-----------------|
|        | BW=1.4 MHz                      | BW=3 MHz          | BW=5 MHz          | BW=10 MHz       | BW=15 MHz         | BW=20 MHz       |
| Low    | 18607<br>(1850.7)               | 18615<br>(1851.5) | 18625<br>(1852.5) | 18650<br>(1855) | 18675<br>(1857.5) | 18700<br>(1860) |
| Middle | 18900<br>(1880)                 | 18900<br>(1880)   | 18900<br>(1880)   | 18900<br>(1880) | 18900<br>(1880)   | 18900<br>(1880) |
| High   | 19193<br>(1909.3)               | 19185<br>(1908.5) | 19175<br>(1907.5) | 19150<br>(1905) | 19125<br>(1902.5) | 19100<br>(1900) |

## RF Output Power

### Limits

\* FCC § 2.1046 and § 24.232:

Mobile/portable stations are limited to 2 Watts (33 dBm) Effective Isotropic Radiated Power (E.I.R.P.).

\* RSS-133 Clause 5.5:

Mobile stations and hand-held portables are limited to 2 watts maximum e.i.r.p.

### Method

The conducted RF output power measurements were made at the RF output terminals of the EUT using the power meter of the Universal Radio Communication tester CMW500, selecting maximum transmission power of the EUT and different modes of modulation.

The maximum equivalent isotropically radiated power (e.i.r.p.) is calculated by adding the declared maximum antenna gain (dBi).

The maximum effective radiated power e.r.p. is calculated from the maximum equivalent isotropically radiated power (e.i.r.p.) by subtracting 2.15 dB:

$$\text{E.R.P.} = \text{E.I.R.P.} - 2.15 \text{ dB}$$

### Test Setup

CONDUCTED AVERAGE POWER:



Results

| BANDWIDTH<br>(MHz) | CHANNEL         | FREQUENCY<br>(MHz) | MODULATION | RB SIZE | RB<br>OFFSET | AVERAGE<br>POWER<br>(dBm) |
|--------------------|-----------------|--------------------|------------|---------|--------------|---------------------------|
| 1.4                | Low<br>18607    | 1850.7             | QPSK       | 1       | 0            | 22.4                      |
| 1.4                |                 |                    | QPSK       | 1       | 2            | 22.42                     |
| 1.4                |                 |                    | QPSK       | 1       | 5            | 22.43                     |
| 1.4                |                 |                    | QPSK       | 3       | 0            | 22.41                     |
| 1.4                |                 |                    | QPSK       | 3       | 1            | 22.39                     |
| 1.4                |                 |                    | QPSK       | 3       | 2            | 22.37                     |
| 1.4                |                 |                    | QPSK       | 6       | 0            | 21.54                     |
| 1.4                |                 |                    | 16-QAM     | 1       | 0            | 21.5                      |
| 1.4                |                 |                    | 16-QAM     | 1       | 2            | 21.54                     |
| 1.4                |                 |                    | 16-QAM     | 1       | 5            | 21.48                     |
| 1.4                |                 |                    | 16-QAM     | 3       | 0            | 21.56                     |
| 1.4                |                 |                    | 16-QAM     | 3       | 1            | 21.55                     |
| 1.4                |                 |                    | 16-QAM     | 3       | 2            | 21.52                     |
| 1.4                |                 |                    | 16-QAM     | 6       | 0            | 20.65                     |
| 1.4                | Middle<br>18900 | 1880               | QPSK       | 1       | 0            | 22.69                     |
| 1.4                |                 |                    | QPSK       | 1       | 2            | 22.65                     |
| 1.4                |                 |                    | QPSK       | 1       | 5            | 22.59                     |
| 1.4                |                 |                    | QPSK       | 3       | 0            | 22.54                     |
| 1.4                |                 |                    | QPSK       | 3       | 1            | 22.55                     |
| 1.4                |                 |                    | QPSK       | 3       | 2            | 22.53                     |
| 1.4                |                 |                    | QPSK       | 6       | 0            | 21.7                      |
| 1.4                |                 |                    | 16-QAM     | 1       | 0            | 21.98                     |
| 1.4                |                 |                    | 16-QAM     | 1       | 2            | 22                        |
| 1.4                |                 |                    | 16-QAM     | 1       | 5            | 21.91                     |
| 1.4                |                 |                    | 16-QAM     | 3       | 0            | 21.78                     |
| 1.4                |                 |                    | 16-QAM     | 3       | 1            | 21.8                      |
| 1.4                |                 |                    | 16-QAM     | 3       | 2            | 21.75                     |
| 1.4                |                 |                    | 16-QAM     | 6       | 0            | 20.83                     |
| 1.4                | High<br>19193   | 1909.3             | QPSK       | 1       | 0            | 22.6                      |
| 1.4                |                 |                    | QPSK       | 1       | 2            | 22.57                     |
| 1.4                |                 |                    | QPSK       | 1       | 5            | 22.4                      |
| 1.4                |                 |                    | QPSK       | 3       | 0            | 22.55                     |
| 1.4                |                 |                    | QPSK       | 3       | 1            | 22.48                     |
| 1.4                |                 |                    | QPSK       | 3       | 2            | 22.45                     |
| 1.4                |                 |                    | QPSK       | 6       | 0            | 21.53                     |
| 1.4                |                 |                    | 16-QAM     | 1       | 0            | 21.45                     |
| 1.4                |                 |                    | 16-QAM     | 1       | 2            | 21.33                     |
| 1.4                |                 |                    | 16-QAM     | 1       | 5            | 21.25                     |
| 1.4                |                 |                    | 16-QAM     | 3       | 0            | 21.62                     |
| 1.4                |                 |                    | 16-QAM     | 3       | 1            | 21.54                     |
| 1.4                |                 |                    | 16-QAM     | 3       | 2            | 21.51                     |
| 1.4                |                 |                    | 16-QAM     | 6       | 0            | 20.79                     |

| BANDWIDTH<br>(MHz) | CHANNEL         | FREQUENCY<br>(MHz) | MODULATION | RB SIZE | RB<br>OFFSET | AVERAGE<br>POWER<br>(dBm) |
|--------------------|-----------------|--------------------|------------|---------|--------------|---------------------------|
| 3                  | Low<br>18615    | 1851.5             | QPSK       | 1       | 0            | 22.33                     |
| 3                  |                 |                    | QPSK       | 1       | 7            | 22.37                     |
| 3                  |                 |                    | QPSK       | 1       | 14           | 22.13                     |
| 3                  |                 |                    | QPSK       | 8       | 0            | 21.43                     |
| 3                  |                 |                    | QPSK       | 8       | 4            | 21.45                     |
| 3                  |                 |                    | QPSK       | 8       | 7            | 21.38                     |
| 3                  |                 |                    | QPSK       | 15      | 0            | 21.39                     |
| 3                  |                 |                    | 16-QAM     | 1       | 0            | 21.33                     |
| 3                  |                 |                    | 16-QAM     | 1       | 7            | 21.44                     |
| 3                  |                 |                    | 16-QAM     | 1       | 14           | 21.22                     |
| 3                  |                 |                    | 16-QAM     | 8       | 0            | 20.78                     |
| 3                  |                 |                    | 16-QAM     | 8       | 4            | 20.78                     |
| 3                  |                 |                    | 16-QAM     | 8       | 7            | 20.74                     |
| 3                  |                 |                    | 16-QAM     | 15      | 0            | 20.54                     |
| 3                  | Middle<br>18900 | 1880               | QPSK       | 1       | 0            | 22.6                      |
| 3                  |                 |                    | QPSK       | 1       | 7            | 22.6                      |
| 3                  |                 |                    | QPSK       | 1       | 14           | 22.33                     |
| 3                  |                 |                    | QPSK       | 8       | 0            | 21.8                      |
| 3                  |                 |                    | QPSK       | 8       | 4            | 21.8                      |
| 3                  |                 |                    | QPSK       | 8       | 7            | 21.73                     |
| 3                  |                 |                    | QPSK       | 15      | 0            | 21.79                     |
| 3                  |                 |                    | 16-QAM     | 1       | 0            | 21.49                     |
| 3                  |                 |                    | 16-QAM     | 1       | 7            | 21.51                     |
| 3                  |                 |                    | 16-QAM     | 1       | 14           | 21.24                     |
| 3                  |                 |                    | 16-QAM     | 8       | 0            | 20.93                     |
| 3                  |                 |                    | 16-QAM     | 8       | 4            | 20.93                     |
| 3                  |                 |                    | 16-QAM     | 8       | 7            | 20.85                     |
| 3                  |                 |                    | 16-QAM     | 15      | 0            | 20.81                     |
| 3                  | High<br>19185   | 1908.5             | QPSK       | 1       | 0            | 22.95                     |
| 3                  |                 |                    | QPSK       | 1       | 7            | 22.72                     |
| 3                  |                 |                    | QPSK       | 1       | 14           | 22.23                     |
| 3                  |                 |                    | QPSK       | 8       | 0            | 21.78                     |
| 3                  |                 |                    | QPSK       | 8       | 4            | 21.66                     |
| 3                  |                 |                    | QPSK       | 8       | 7            | 21.46                     |
| 3                  |                 |                    | QPSK       | 15      | 0            | 21.65                     |
| 3                  |                 |                    | 16-QAM     | 1       | 0            | 21.84                     |
| 3                  |                 |                    | 16-QAM     | 1       | 7            | 21.69                     |
| 3                  |                 |                    | 16-QAM     | 1       | 14           | 21.21                     |
| 3                  |                 |                    | 16-QAM     | 8       | 0            | 21.03                     |
| 3                  |                 |                    | 16-QAM     | 8       | 4            | 20.91                     |
| 3                  |                 |                    | 16-QAM     | 8       | 7            | 20.74                     |
| 3                  |                 |                    | 16-QAM     | 15      | 0            | 20.86                     |

| BANDWIDTH (MHz) | CHANNEL         | FREQUENCY (MHz) | MODULATION | RB SIZE | RB OFFSET | AVERAGE POWER (dBm) |
|-----------------|-----------------|-----------------|------------|---------|-----------|---------------------|
| 5               | Low<br>18625    | 1852.5          | QPSK       | 1       | 0         | 22.52               |
| 5               |                 |                 | QPSK       | 1       | 12        | 22.27               |
| 5               |                 |                 | QPSK       | 1       | 24        | 22.4                |
| 5               |                 |                 | QPSK       | 12      | 0         | 21.53               |
| 5               |                 |                 | QPSK       | 12      | 6         | 21.5                |
| 5               |                 |                 | QPSK       | 12      | 11        | 21.5                |
| 5               |                 |                 | QPSK       | 25      | 0         | 21.54               |
| 5               |                 |                 | 16-QAM     | 1       | 0         | 21.82               |
| 5               |                 |                 | 16-QAM     | 1       | 12        | 21.66               |
| 5               |                 |                 | 16-QAM     | 1       | 24        | 21.8                |
| 5               |                 |                 | 16-QAM     | 12      | 0         | 20.74               |
| 5               |                 |                 | 16-QAM     | 12      | 6         | 20.71               |
| 5               |                 |                 | 16-QAM     | 12      | 11        | 20.73               |
| 5               |                 |                 | 16-QAM     | 25      | 0         | 20.75               |
| 5               | Middle<br>18900 | 1880            | QPSK       | 1       | 0         | 22.93               |
| 5               |                 |                 | QPSK       | 1       | 12        | 22.6                |
| 5               |                 |                 | QPSK       | 1       | 24        | 22.56               |
| 5               |                 |                 | QPSK       | 12      | 0         | 21.93               |
| 5               |                 |                 | QPSK       | 12      | 6         | 21.83               |
| 5               |                 |                 | QPSK       | 12      | 11        | 21.73               |
| 5               |                 |                 | QPSK       | 25      | 0         | 21.85               |
| 5               |                 |                 | 16-QAM     | 1       | 0         | 22.13               |
| 5               |                 |                 | 16-QAM     | 1       | 12        | 21.78               |
| 5               |                 |                 | 16-QAM     | 1       | 24        | 21.72               |
| 5               |                 |                 | 16-QAM     | 12      | 0         | 21.16               |
| 5               |                 |                 | 16-QAM     | 12      | 6         | 20.96               |
| 5               |                 |                 | 16-QAM     | 12      | 11        | 20.86               |
| 5               |                 |                 | 16-QAM     | 25      | 0         | 20.91               |
| 5               | High<br>19175   | 1907.5          | QPSK       | 1       | 0         | 23.07               |
| 5               |                 |                 | QPSK       | 1       | 12        | 22.88               |
| 5               |                 |                 | QPSK       | 1       | 24        | 22.44               |
| 5               |                 |                 | QPSK       | 12      | 0         | 22.14               |
| 5               |                 |                 | QPSK       | 12      | 6         | 22.04               |
| 5               |                 |                 | QPSK       | 12      | 11        | 21.84               |
| 5               |                 |                 | QPSK       | 25      | 0         | 21.95               |
| 5               |                 |                 | 16-QAM     | 1       | 0         | 22.1                |
| 5               |                 |                 | 16-QAM     | 1       | 12        | 22.03               |
| 5               |                 |                 | 16-QAM     | 1       | 24        | 21.6                |
| 5               |                 |                 | 16-QAM     | 12      | 0         | 21.18               |
| 5               |                 |                 | 16-QAM     | 12      | 6         | 21.11               |
| 5               |                 |                 | 16-QAM     | 12      | 11        | 20.93               |
| 5               |                 |                 | 16-QAM     | 25      | 0         | 21.01               |

| BANDWIDTH<br>(MHz) | CHANNEL         | FREQUENCY<br>(MHz) | MODULATION | RB SIZE | RB<br>OFFSET | AVERAGE<br>POWER<br>(dBm) |
|--------------------|-----------------|--------------------|------------|---------|--------------|---------------------------|
| 10                 | Low<br>18650    | 1855               | QPSK       | 1       | 0            | 22.54                     |
| 10                 |                 |                    | QPSK       | 1       | 24           | 22.56                     |
| 10                 |                 |                    | QPSK       | 1       | 49           | 22.88                     |
| 10                 |                 |                    | QPSK       | 25      | 0            | 21.6                      |
| 10                 |                 |                    | QPSK       | 25      | 12           | 21.66                     |
| 10                 |                 |                    | QPSK       | 25      | 24           | 21.78                     |
| 10                 |                 |                    | QPSK       | 50      | 0            | 21.7                      |
| 10                 |                 |                    | 16-QAM     | 1       | 0            | 21.6                      |
| 10                 |                 |                    | 16-QAM     | 1       | 24           | 21.58                     |
| 10                 |                 |                    | 16-QAM     | 1       | 49           | 21.79                     |
| 10                 |                 |                    | 16-QAM     | 25      | 0            | 20.74                     |
| 10                 |                 |                    | 16-QAM     | 25      | 12           | 20.81                     |
| 10                 |                 |                    | 16-QAM     | 25      | 24           | 20.92                     |
| 10                 |                 |                    | 16-QAM     | 50      | 0            | N/A                       |
| 10                 | Middle<br>18900 | 1880               | QPSK       | 1       | 0            | 23.11                     |
| 10                 |                 |                    | QPSK       | 1       | 24           | 22.69                     |
| 10                 |                 |                    | QPSK       | 1       | 49           | 22.53                     |
| 10                 |                 |                    | QPSK       | 25      | 0            | 22.11                     |
| 10                 |                 |                    | QPSK       | 25      | 12           | 21.9                      |
| 10                 |                 |                    | QPSK       | 25      | 24           | 21.76                     |
| 10                 |                 |                    | QPSK       | 50      | 0            | 21.97                     |
| 10                 |                 |                    | 16-QAM     | 1       | 0            | 22.06                     |
| 10                 |                 |                    | 16-QAM     | 1       | 24           | 21.66                     |
| 10                 |                 |                    | 16-QAM     | 1       | 49           | 21.52                     |
| 10                 |                 |                    | 16-QAM     | 25      | 0            | 21.3                      |
| 10                 |                 |                    | 16-QAM     | 25      | 12           | 21.01                     |
| 10                 |                 |                    | 16-QAM     | 25      | 24           | 20.9                      |
| 10                 |                 |                    | 16-QAM     | 50      | 0            | N/A                       |
| 10                 | High<br>19150   | 1905               | QPSK       | 1       | 0            | 22.94                     |
| 10                 |                 |                    | QPSK       | 1       | 24           | 22.93                     |
| 10                 |                 |                    | QPSK       | 1       | 49           | 22.56                     |
| 10                 |                 |                    | QPSK       | 25      | 0            | 21.94                     |
| 10                 |                 |                    | QPSK       | 25      | 12           | 22.02                     |
| 10                 |                 |                    | QPSK       | 25      | 24           | 21.98                     |
| 10                 |                 |                    | QPSK       | 50      | 0            | 21.96                     |
| 10                 |                 |                    | 16-QAM     | 1       | 0            | 21.98                     |
| 10                 |                 |                    | 16-QAM     | 1       | 24           | 21.93                     |
| 10                 |                 |                    | 16-QAM     | 1       | 49           | 21.53                     |
| 10                 |                 |                    | 16-QAM     | 25      | 0            | 20.91                     |
| 10                 |                 |                    | 16-QAM     | 25      | 12           | 21.09                     |
| 10                 |                 |                    | 16-QAM     | 25      | 24           | 21.12                     |
| 10                 |                 |                    | 16-QAM     | 50      | 0            | N/A                       |



| BANDWIDTH<br>(MHz) | CHANNEL         | FREQUENCY<br>(MHz) | MODULATION | RB SIZE | RB<br>OFFSET | AVERAGE<br>POWER<br>(dBm) |
|--------------------|-----------------|--------------------|------------|---------|--------------|---------------------------|
| 15                 | Low<br>18675    | 1857.5             | QPSK       | 1       | 0            | 22.56                     |
| 15                 |                 |                    | QPSK       | 1       | 37           | 22.7                      |
| 15                 |                 |                    | QPSK       | 1       | 74           | 22.87                     |
| 15                 |                 |                    | QPSK       | 36      | 0            | 21.73                     |
| 15                 |                 |                    | QPSK       | 36      | 18           | 21.86                     |
| 15                 |                 |                    | QPSK       | 36      | 37           | 22.02                     |
| 15                 |                 |                    | QPSK       | 75      | 0            | 21.9                      |
| 15                 |                 |                    | 16-QAM     | 1       | 0            | 21.68                     |
| 15                 |                 |                    | 16-QAM     | 1       | 37           | 21.8                      |
| 15                 |                 |                    | 16-QAM     | 1       | 74           | 21.99                     |
| 15                 |                 |                    | 16-QAM     | 25      | 0            | 20.77                     |
| 15                 |                 |                    | 16-QAM     | 25      | 18           | 20.96                     |
| 15                 |                 |                    | 16-QAM     | 25      | 37           | 21.18                     |
| 15                 |                 |                    | 16-QAM     | 75      | 0            | N/A                       |
| 15                 | Middle<br>18900 | 1880               | QPSK       | 1       | 0            | 23.15                     |
| 15                 |                 |                    | QPSK       | 1       | 37           | 22.66                     |
| 15                 |                 |                    | QPSK       | 1       | 74           | 22.81                     |
| 15                 |                 |                    | QPSK       | 36      | 0            | 22.15                     |
| 15                 |                 |                    | QPSK       | 36      | 18           | 21.94                     |
| 15                 |                 |                    | QPSK       | 36      | 37           | 21.74                     |
| 15                 |                 |                    | QPSK       | 75      | 0            | 22.02                     |
| 15                 |                 |                    | 16-QAM     | 1       | 0            | 22.1                      |
| 15                 |                 |                    | 16-QAM     | 1       | 37           | 21.65                     |
| 15                 |                 |                    | 16-QAM     | 1       | 74           | 21.72                     |
| 15                 |                 |                    | 16-QAM     | 25      | 0            | 21.45                     |
| 15                 |                 |                    | 16-QAM     | 25      | 18           | 21.07                     |
| 15                 |                 |                    | 16-QAM     | 25      | 37           | 20.95                     |
| 15                 |                 |                    | 16-QAM     | 75      | 0            | N/A                       |
| 15                 | High<br>19125   | 1902.5             | QPSK       | 1       | 0            | 23.22                     |
| 15                 |                 |                    | QPSK       | 1       | 37           | 23.01                     |
| 15                 |                 |                    | QPSK       | 1       | 74           | 22.71                     |
| 15                 |                 |                    | QPSK       | 36      | 0            | 22.15                     |
| 15                 |                 |                    | QPSK       | 36      | 18           | 22.1                      |
| 15                 |                 |                    | QPSK       | 36      | 37           | 22.12                     |
| 15                 |                 |                    | QPSK       | 75      | 0            | 22.14                     |
| 15                 |                 |                    | 16-QAM     | 1       | 0            | 22.43                     |
| 15                 |                 |                    | 16-QAM     | 1       | 37           | 22.22                     |
| 15                 |                 |                    | 16-QAM     | 1       | 74           | 22                        |
| 15                 |                 |                    | 16-QAM     | 25      | 0            | 21.27                     |
| 15                 |                 |                    | 16-QAM     | 25      | 18           | 21.22                     |
| 15                 |                 |                    | 16-QAM     | 25      | 37           | 21.34                     |
| 15                 |                 |                    | 16-QAM     | 75      | 0            | N/A                       |

| BANDWIDTH<br>(MHz) | CHANNEL         | FREQUENCY<br>(MHz) | MODULATION | RB SIZE | RB<br>OFFSET | AVERAGE<br>POWER<br>(dBm) |
|--------------------|-----------------|--------------------|------------|---------|--------------|---------------------------|
| 20                 | Low<br>18700    | 1860               | QPSK       | 1       | 0            | 22.65                     |
| 20                 |                 |                    | QPSK       | 1       | 49           | 22.89                     |
| 20                 |                 |                    | QPSK       | 1       | 99           | 23.28                     |
| 20                 |                 |                    | QPSK       | 50      | 0            | 21.83                     |
| 20                 |                 |                    | QPSK       | 50      | 24           | 22.02                     |
| 20                 |                 |                    | QPSK       | 50      | 49           | 22.25                     |
| 20                 |                 |                    | QPSK       | 100     | 0            | 22.1                      |
| 20                 |                 |                    | 16-QAM     | 1       | 0            | 21.8                      |
| 20                 |                 |                    | 16-QAM     | 1       | 49           | 22.08                     |
| 20                 |                 |                    | 16-QAM     | 1       | 99           | 22.39                     |
| 20                 |                 |                    | 16-QAM     | 25      | 0            | 20.81                     |
| 20                 |                 |                    | 16-QAM     | 25      | 24           | 21.09                     |
| 20                 |                 |                    | 16-QAM     | 25      | 49           | 21.39                     |
| 20                 |                 |                    | 16-QAM     | 100     | 0            | N/A                       |
| 20                 | Middle<br>18900 | 1880               | QPSK       | 1       | 0            | 22.93                     |
| 20                 |                 |                    | QPSK       | 1       | 49           | 22.63                     |
| 20                 |                 |                    | QPSK       | 1       | 99           | 22.94                     |
| 20                 |                 |                    | QPSK       | 50      | 0            | 22.21                     |
| 20                 |                 |                    | QPSK       | 50      | 24           | 22                        |
| 20                 |                 |                    | QPSK       | 50      | 49           | 21.83                     |
| 20                 |                 |                    | QPSK       | 100     | 0            | 22.14                     |
| 20                 |                 |                    | 16-QAM     | 1       | 0            | 21.94                     |
| 20                 |                 |                    | 16-QAM     | 1       | 49           | 21.69                     |
| 20                 |                 |                    | 16-QAM     | 1       | 99           | 21.88                     |
| 20                 |                 |                    | 16-QAM     | 25      | 0            | 21.46                     |
| 20                 |                 |                    | 16-QAM     | 25      | 24           | 21.13                     |
| 20                 |                 |                    | 16-QAM     | 25      | 49           | 21.23                     |
| 20                 |                 |                    | 16-QAM     | 100     | 0            | N/A                       |
| 20                 | High<br>19100   | 1900               | QPSK       | 1       | 0            | 22.98                     |
| 20                 |                 |                    | QPSK       | 1       | 49           | 23.05                     |
| 20                 |                 |                    | QPSK       | 1       | 99           | 22.7                      |
| 20                 |                 |                    | QPSK       | 50      | 0            | 22.11                     |
| 20                 |                 |                    | QPSK       | 50      | 24           | 22.13                     |
| 20                 |                 |                    | QPSK       | 50      | 49           | 22.14                     |
| 20                 |                 |                    | QPSK       | 100     | 0            | 22.14                     |
| 20                 |                 |                    | 16-QAM     | 1       | 0            | 22.03                     |
| 20                 |                 |                    | 16-QAM     | 1       | 49           | 22.06                     |
| 20                 |                 |                    | 16-QAM     | 1       | 99           | 21.83                     |
| 20                 |                 |                    | 16-QAM     | 25      | 0            | 21.01                     |
| 20                 |                 |                    | 16-QAM     | 25      | 24           | 21.09                     |
| 20                 |                 |                    | 16-QAM     | 25      | 49           | 21.16                     |
| 20                 |                 |                    | 16-QAM     | 100     | 0            | N/A                       |

Verdict

Pass