



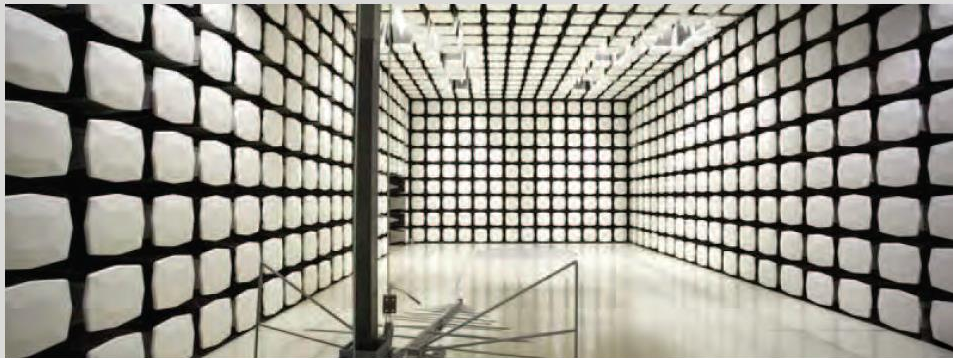
**Agility Robotics, Inc.**

**RM-1700-21N3**

**FCC 15.247:2025**

**Low Power (SRD) DTS Transceiver**

**Report: AGRO0019.1 Rev. 01, Issue Date: August 18, 2025**



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# CERTIFICATE OF TEST



Last Date of Test: June 18, 2025

Agility Robotics, Inc.

EUT: RM-1700-21N3

## Radio Equipment Testing

### Standards

| Specification   | Method           |
|-----------------|------------------|
| FCC 15.247:2025 | ANSI C63.10:2020 |

### Guidance

|                            |
|----------------------------|
| FCC KDB 558074 v05r02:2019 |
|----------------------------|

### Results

| Test Description                            | Result | Specification Section(s)        | Method Section(s)          | Comments  |
|---|--------|---------------------------------|----------------------------|---|
| Powerline Conducted Emissions (Transmitter) | N/A    | 15.207                          | 6.2                        | Not required for a battery powered EUT.   |
| Spurious Radiated Emissions                 | Pass   | 15.247(d), KDB 558074 -8.6, 8.7 | 6.5, 6.6, 11.12.1, 11.13.2 |   |
| Duty Cycle                                  | N/A    | 15.247, KDB 558074 -6.0         | 11.6                       | Not requested.  |
| Output Power                                | Pass   | 15.247(b), KDB 558074 -8.3      | 11.9.1.1                   |   |
| Equivalent Isotropic Radiated Power (EIRP)  | N/A    | 15.247(b), KDB 558074 -8.3      | 11.9.1.1                   | Not required to show compliance of the module in the host.                        |
| Band Edge Compliance                        | Pass   | 15.247(d), KDB 558074 -8.5      | 11.11                      |   |
| DTS Bandwidth (6 dB)                        | N/A    | 15.247(a), KDB 558074 -8.2      | 11.8.2                     | Not required to show compliance of the module in the host.                        |
| Occupied Bandwidth (99%)                    | Pass   | KDB 558074 -2.1                 | 6.9.3                      |   |
| Spurious Conducted Emissions                | N/A    | 15.247(d), KDB 558074 -8.5      | 11.11                      | Not required to show compliance of the module in the host.                        |
| Power Spectral Density                      | N/A    | 15.247(e), KDB 558074 -8.4      | 11.10.2                    | Not required to show compliance of the module in the host.                        |
| Powerline Conducted Emissions (Receiver)    | N/A    | 15.101, 15.107                  | ANSI C63.4 - 12.2.4        | Not included per FCC 15.101 as this will be covered under SDoC rules for the FCC. |
| Radiated Emissions for Receiver             | N/A    | 15.101, 15.109                  | ANSI C63.4 - 12.2.5        | Not included per FCC 15.101 as this will be covered under SDoC rules for the FCC. |

### Deviations From Test Standards

None

### Approved By:

Cole Ghizzone, Operations Manager  
Signed for and on behalf of Element

*Product compliance is the responsibility of the client; therefore, the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test. This report reflects only those tests from the referenced standards shown in the certificate of test. It does not include inspection or verification of labels, identification, marking or user information. As indicated in the Statement of Work sent with the quotation, Element's standard process is to always use the latest published version of the test methods even when earlier versions are cited in the test specification. Issuance of a purchase order was de facto acceptance of this approach. Otherwise, the client would have advised Element in writing of the specific version of the test methods they wanted applied to the subject testing.*

Report No. AGRO0019.1 Rev. 01

# REVISION HISTORY

| Revision Number | Description   | Date<br>(yyyy-mm-dd) | Page Number          |
|-----------------|---|----------------------|----------------------|
| 01              | Updated functional description if the EUT                                     | 2025-08-18           | 11                   |
|                 | Updated EUT name  |                      | 1, 3, 11, 17, 20, 26 |
|                 | Updated EUT serial number   |                      | 17, 20, 26           |
|                 | Updated configurations  |                      | 13, 14               |
|                 | Corrected the last date of test   |                      | 3                    |
|                 | Added line entry for Spurious Radiated Emissions – Simultaneous Transmissions |                      | 15                   |

# ACCREDITATIONS AND AUTHORIZATIONS



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## United States

**FCC** - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

**A2LA** - Each laboratory is accredited by A2LA to ISO / IEC 17025, and as a product certifier to ISO / IEC 17065 which allows Element to certify transmitters to FCC and IC specifications.

**FDA** - Recognized by the FDA as an Accreditation Scheme for Conformity Assessment (ASCA)-accredited testing laboratory for basic safety and essential performance.

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## Canada

**ISED** - Recognized by Innovation, Science and Economic Development Canada as a Certification Body (CB) and as a CAB for the acceptance of test data.

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## European Union

**European Commission** – Recognized as an EU Notified Body validated for the EMCD and RED Directives.

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## United Kingdom

**BEIS** – Recognized by the UK as an Approved Body under the UK Radio Equipment and UK EMC Regulations.

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## Australia/New Zealand

**ACMA** - Recognized by ACMA as a CAB for the acceptance of test data.

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## Korea

**MSIT / RRA** - Recognized by KCC's RRA as a CAB for the acceptance of test data.

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## Japan

**VCCI** - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

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## Taiwan

**BSMI** – Recognized by BSMI as a CAB for the acceptance of test data.

**NCC** - Recognized by NCC as a CAB for the acceptance of test data.

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## Singapore

**IDA** – Recognized by IDA as a CAB for the acceptance of test data.

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## Israel

**MOC** – Recognized by MOC as a CAB for the acceptance of test data.

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## Hong Kong

**OFCA** – Recognized by OFCA as a CAB for the acceptance of test data.

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## SCOPE

For details on the Scopes of our Accreditations, please visit:

[California](#)

[Minnesota](#)

[Oregon](#)

[Washington](#)

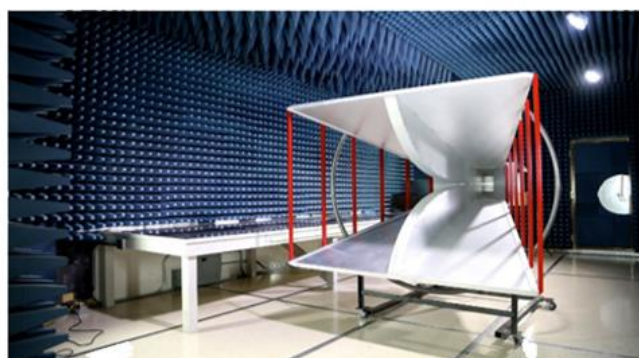
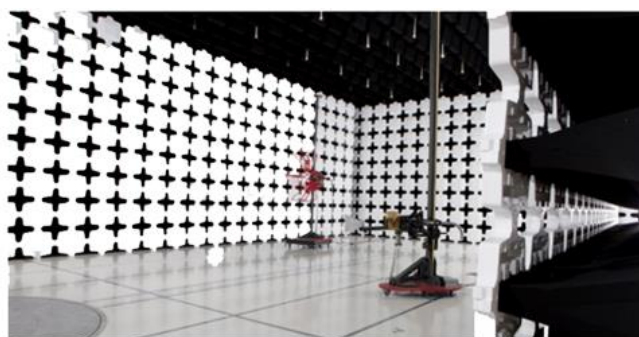
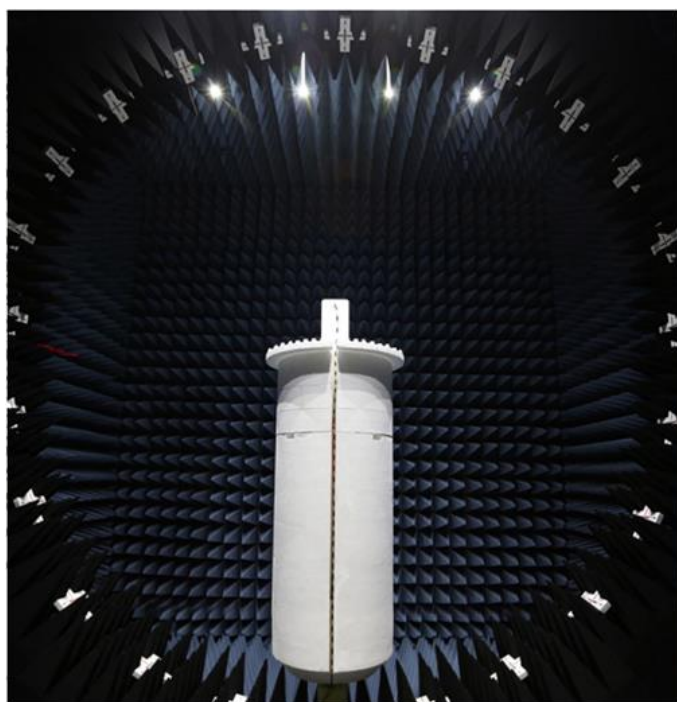
# FACILITIES

Testing was performed at the following location(s)

|                                     | Location   | Labs <sup>(1)</sup> | Address  | A2LA <sup>(2)</sup> | ISED <sup>(3)</sup> | BSMI <sup>(4)</sup> | VCCI <sup>(5)</sup> | CAB <sup>(6)</sup> | FDA <sup>(7)</sup> |
|-------------------------------------|------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|
| <input type="checkbox"/>            | California | OC01-17             | 41 Tesla<br>Irvine, CA 92618<br>(949) 861-8918                       | 3310.04             | 2834B               | SL2-IN-E-1154R      | A-0029              | US0158             | TL-55              |
| <input type="checkbox"/>            | Minnesota  | MN01-11             | 9349 W Broadway Ave.<br>Brooklyn Park, MN 55445<br>(612) 638-5136    | 3310.05             | 2834E               | SL2-IN-E-1152R      | A-0109              | US0175             | TL-57              |
| <input checked="" type="checkbox"/> | Oregon     | EV01-12             | 6775 NE Evergreen Pkwy #400<br>Hillsboro, OR 97124<br>(503) 844-4066 | 3310.02             | 2834D               | SL2-IN-E-1017       | A-0108              | US0017             | TL-56              |
| <input type="checkbox"/>            | Washington | NC01-05             | 19201 120th Ave NE<br>Bothell, WA 98011<br>(425) 984-6600            | 3310.06             | 2834F               | SL2-IN-E-1153R      | A-0110              | US0157             | TL-67              |
| <input type="checkbox"/>            | Offsite    | N/A                 | See Product Description  | N/A                 | N/A                 | N/A                 | N/A                 | N/A                | N/A                |

See data sheets for specific labs

- (1) The lab designations denote individual rooms within each location. (OC01, OC02, OC03, etc.)
- (2) A2LA Certificate No.
- (3) ISED Company No.
- (4) BSMI No.
- (5) VCCI Site Filing No.
- (6) CAB Identifier. Recognized Phase I CAB for ISED, ACMA, BSMI, IDA, KCC/RRR, MOC, NCC, OFCA
- (7) FDA ASCA No.



# MEASUREMENT UNCERTAINTY

## Measurement Uncertainty

When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

A measurement uncertainty estimation reported is based on statistical analysis that was performed by the laboratory. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty ( $k=2$ ) can be found in the table below. A lab specific value may also be found in the applicable test description section. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-2 as applicable) and are available upon request.

The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

### Various Measurements

| Test                                   | All Labs<br>(+/-) |
|--|-------------------|
| Frequency Accuracy (%)                 | 0.0007            |
| Amplitude Accuracy (dB)                | 1.2               |
| Conducted Power (dB)                   | 1.2               |
| Radiated Power via Substitution (dB)   | 0.7               |
| Temperature (degrees C)                | 0.7               |
| Humidity (% RH)                        | 2.5               |
| Voltage (AC) (%)                       | 1                 |
| Voltage (DC) (%)                       | 0.7               |
| Near-field Measurement of E-Field (dB) | 1.89              |
| Near-field Measurement of H-Field (dB) | 2.65              |

### Field Strength Measurements (dB)

| Range         | EV01<br>(+/-) |
|---------------|---------------|
| 10kHz-30MHz   | 1.8           |
| 30MHz-1GHz 3m | 4.6           |
| 1GHz-6GHz     | 5.1           |
| 6GHz-40GHz    | 5.2           |



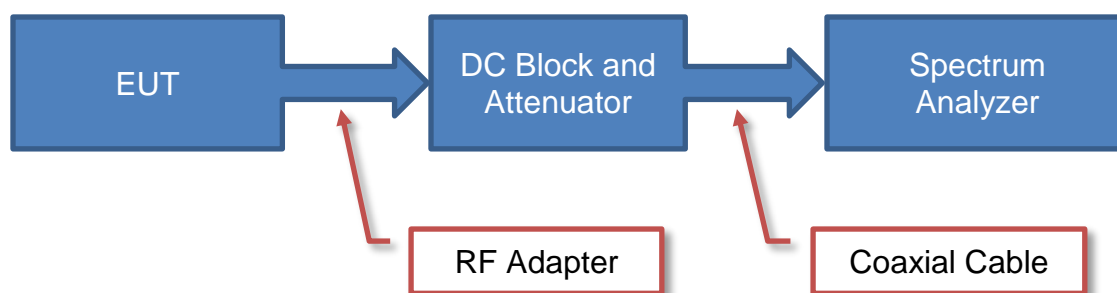
# TEST SETUP BLOCK DIAGRAMS

## Measurement Bandwidths

| Frequency Range (MHz) | Peak Data (kHz) | Quasi-Peak Data (kHz) | Average Data (kHz) |
|-----------------------|-----------------|-----------------------|--------------------|
| 0.01 - 0.15           | 1.0             | 0.2                   | 0.2                |
| 0.15 - 30.0           | 10.0            | 9.0                   | 9.0                |
| 30.0 - 1000           | 100.0           | 120.0                 | 120.0              |
| Above 1000            | 1000.0          | N/A                   | 1000.0             |

Unless otherwise stated, measurements were made using the bandwidths and detectors specified. No video filter was used.

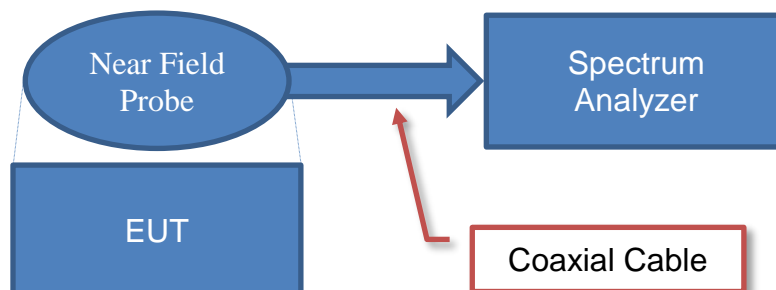
## Antenna Port Conducted Measurements



## Sample Calculation (logarithmic units)

|                |   |                |   |                        |
|----------------|---|----------------|---|------------------------|
| Measured Value | = | Measured Level | + | Reference Level Offset |
| 71.2           |   | 42.6           |   | 28.6                   |

## Near Field Test Fixture Measurements



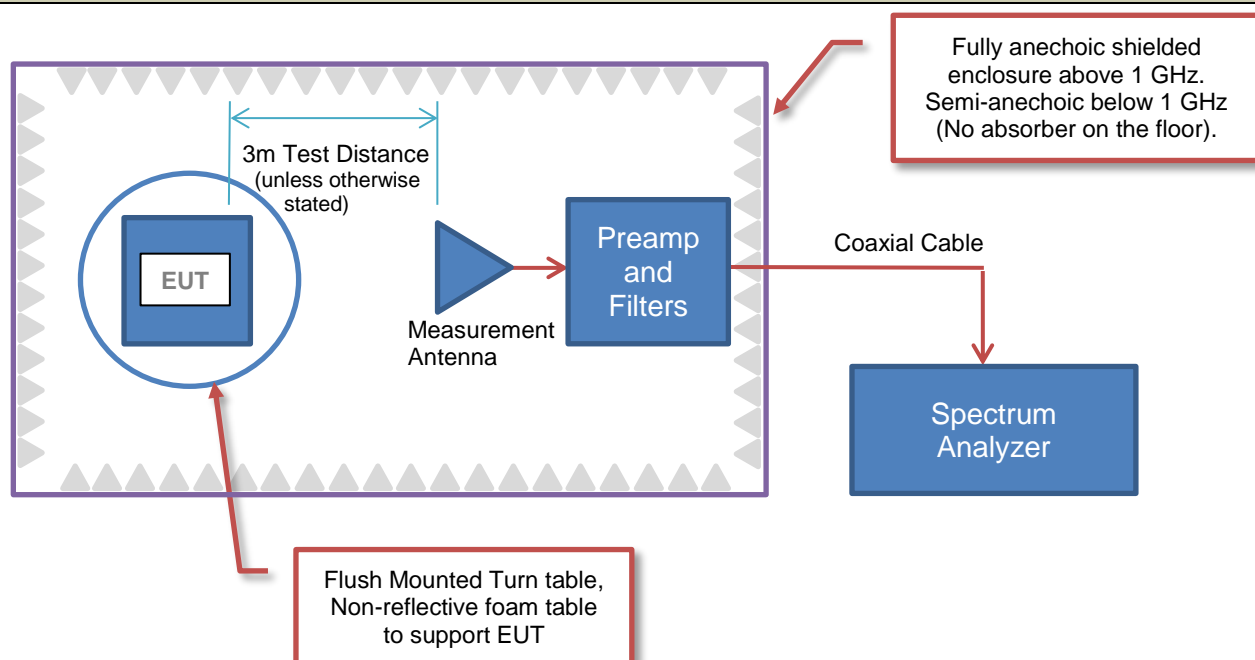
## Sample Calculation (logarithmic units)

|                |   |                |   |                        |
|----------------|---|----------------|---|------------------------|
| Measured Value | = | Measured Level | + | Reference Level Offset |
| 71.2           |   | 42.6           |   | 28.6                   |



# TEST SETUP BLOCK DIAGRAMS

## Emissions Measurements



## Sample Calculation (logarithmic units)

### Radiated Emissions:

| Measured Level (Amplitude) | Factor         |              |                | Distance Adjustment Factor | External Attenuation | Field Strength |
|----------------------------|----------------|--------------|----------------|----------------------------|----------------------|----------------|
|                            | Antenna Factor | Cable Factor | Amplifier Gain |                            |                      |                |
| 42.6                       | 28.6           | 3.1          | 40.8           | 0.0                        | 0.0                  | 33.5           |

### Conducted Emissions:

| Measured Level (Amplitude) | Factor            |              | External Attenuation | Adjusted Level |
|----------------------------|-------------------|--------------|----------------------|----------------|
|                            | Transducer Factor | Cable Factor |                      |                |
| 26.7                       | 0.3               | 0.1          | 20.0                 | 47.1           |

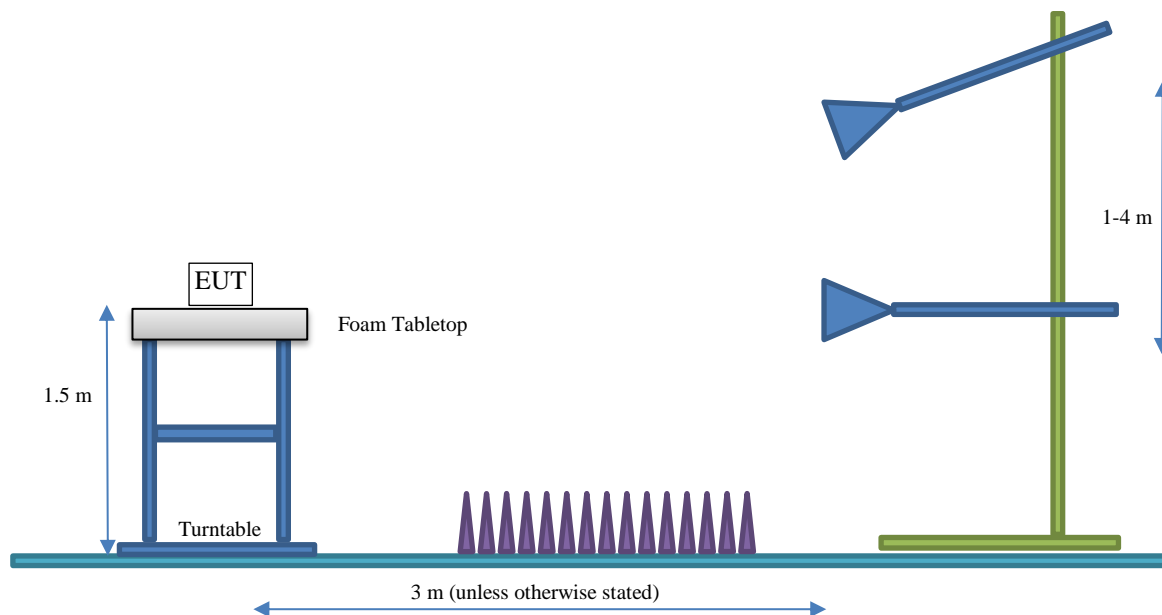
### Radiated Power (ERP/EIRP) – Substitution Method:

| Measured Level into Substitution Antenna (Amplitude dBm) | Substitution Antenna Factor (dBi) | EIRP to ERP (if applicable) | Measured power (dBm ERP/EIRP) |
|--|-----------------------------------|-----------------------------|-------------------------------|
| 10.0   | 6.0                               | 2.15                        | 13.9/16.0                     |

# TEST SETUP BLOCK DIAGRAMS

## Bore Sighting (>1GHz)

The diameter of the illumination area is the dimension of the line tangent to the EUT formed by 3 dB beamwidth of the measurement antenna at the measurement distance. At a 3 meter test distance, the diameter of the illumination area was 3.8 meters at 1 GHz and greater than 2.1 meters up to 6 GHz. Above 1 GHz, when required by the measurement standard, the antenna is pointed for both azimuth and elevation to maintain the receive antenna within the cone of radiation from the EUT. The specified measurement detectors were used for comparison of the emissions to the peak and average specification limits.



# PRODUCT DESCRIPTION



## Client and Equipment under Test (EUT) Information

|                          |                        |
|--------------------------|------------------------|
| Company Name:            | Agility Robotics, Inc. |
| Address:                 | 4698 Truax Dr. SE      |
| City, State, Zip:        | Salem, OR 97317        |
| Test Requested By:       | Anish Mathew           |
| EUT:                     | RM-1700-21N3           |
| First Date of Test:      | June 11, 2025          |
| Last Date of Test:       | June 18, 2025          |
| Receipt Date of Samples: | June 11, 2025          |
| Equipment Design Stage:  | Production             |
| Equipment Condition:     | No Damage              |
| Purchase Authorization:  | Verified               |

## Information Provided by the Party Requesting the Test

### Functional Description of the EUT:

Low Power (SRD) radio module RM-1700-21N3, FCC ID: 2BKMIDIGITV4 with a new antenna which is integrated into the Digit V4 EVT host.

### Testing Objective:

Seeking to demonstrate compliance of the Low Power (SRD) radio operation under FCC 15.247:2025

# POWER SETTINGS AND ANTENNAS



The power settings, antenna gain value(s) and cable loss (if applicable) used for the testing contained in this report were provided by the customer and will affect the validity of the results. Element assumes no responsibility for the accuracy of this information. The power settings below reflect the maximum power that the EUT is allowed to transmit during normal operation.

## ANTENNA GAIN (dBi)

| Type  | Provided by: | Frequency Range (MHz) | Gain (dBi) |
|-------|--------------|-----------------------|------------|
| Patch | Field Theory | 902 – 928             | 2.6        |

The EUT was tested using the power settings provided by the manufacturer which were based upon:

- ☒ Test software settings      Software / firmware used for testing: 2024-10.4 R11306-C4A6851C72  
☐ Rated power settings

## SETTINGS FOR ALL TESTS IN THIS REPORT

| Modulation type | Data Rate | Bandwidth (MHz) | Channel No. | Freq (MHz) | Power Setting (dBm) |
|-----------------|-----------|-----------------|-------------|------------|---------------------|
| OFDM            | 6 Mbps    | 5               | 1 (Low)     | 907        | 20                  |
|                 |           |                 | 11 (Mid)    | 915        |                     |
|                 |           |                 | 21 (High)   | 923        |                     |
| ODFM            | 6 Mbps    | 10              | 1 (Low)     | 909        | 20                  |
|                 |           |                 | 11 (Mid)    | 915        |                     |
|                 |           |                 | 21 (High)   | 921        |                     |

# CONFIGURATIONS

## Configuration AGRO0019-1

| Software/Firmware Running During Test |                             |
|---------------------------------------|-----------------------------|
| Description                           | Version                     |
| Mesh Rider firmware (Doodle Labs)     | 2024-10.4 R11306-C4A6851C72 |

| EUT                    |              |                   |               |
|------------------------|--------------|-------------------|---------------|
| Description            | Manufacturer | Model/Part Number | Serial Number |
| Dual-Band Radio Module | Doodle Labs  | RM-1700-21N3      | G88V3M86W7    |

| Peripherals in Test Setup Boundary |                        |                   |               |
|------------------------------------|------------------------|-------------------|---------------|
| Description                        | Manufacturer           | Model/Part Number | Serial Number |
| Robot                              | Agility Robotics, Inc. | Digit V4 EVT      | 14            |

| Remote Equipment Outside of Test Setup Boundary |              |                   |               |
|---|--------------|-------------------|---------------|
| Description                                     | Manufacturer | Model/Part Number | Serial Number |
| Laptop  | Dell         | XPS 15 9520       | 3PFQKN3       |

| Cables         |        |            |         |              |              |
|----------------|--------|------------|---------|--------------|--------------|
| Cable Type     | Shield | Length (m) | Ferrite | Connection 1 | Connection 2 |
| Cat 5 Ethernet | No     | 4.5        | No      | Robot        | Laptop       |

## Configuration AGRO0019-2

| Software/Firmware Running During Test |                             |
|---------------------------------------|-----------------------------|
| Description                           | Version                     |
| Mesh Rider firmware (Doodle Labs)     | 2024-10.4 R11306-C4A6851C72 |

| EUT                    |              |                   |               |
|------------------------|--------------|-------------------|---------------|
| Description            | Manufacturer | Model/Part Number | Serial Number |
| Dual-Band Radio Module | Doodle Labs  | RM-1700-21N3      | 00301A3AF371  |

| Peripherals in Test Setup Boundary |              |                   |                  |
|------------------------------------|--------------|-------------------|------------------|
| Description                        | Manufacturer | Model/Part Number | Serial Number    |
| AC/DC Adapter                      | MX           | MX15X1-0502500UU  | None             |
| USB-C to Ethernet Adapter          | ANKER        | A8341             | ACDS2K0C11102121 |

| Remote Equipment Outside of Test Setup Boundary |              |                   |               |
|---|--------------|-------------------|---------------|
| Description                                     | Manufacturer | Model/Part Number | Serial Number |
| Laptop  | Dell         | XPS 15 9520       | 3PFQKN3       |

# CONFIGURATIONS



| Cables     |        |            |         |                           |                        |
|------------|--------|------------|---------|---------------------------|------------------------|
| Cable Type | Shield | Length (m) | Ferrite | Connection 1              | Connection 2           |
| DC Power   | No     | 1.7        | Yes     | AC/DC Adapter             | Dual-Band Radio Module |
| Ethernet   | No     | 0.3        | No      | USB-C to Ethernet Adapter | Dual-Band Radio Module |

## Configuration AGRO0019-3

| Software/Firmware Running During Test |                             |
|---------------------------------------|-----------------------------|
| Description                           | Version                     |
| Mesh Rider firmware (Doodle Labs)     | 2024-10.4 R11306-C4A6851C72 |
| DTRU (Intel Radio Control Software)   | DTRU_06642_23.60.0          |

| EUT                    |              |                   |               |
|------------------------|--------------|-------------------|---------------|
| Description            | Manufacturer | Model/Part Number | Serial Number |
| Dual-Band Radio Module | Doodle Labs  | RM-1700-21N3      | G88V3M86W7    |

| Peripherals in Test Setup Boundary |                        |                   |               |
|------------------------------------|------------------------|-------------------|---------------|
| Description                        | Manufacturer           | Model/Part Number | Serial Number |
| Robot                              | Agility Robotics, Inc. | Digit V4 EVT      | 14            |

| Remote Equipment Outside of Test Setup Boundary |              |                   |               |
|---|--------------|-------------------|---------------|
| Description                                     | Manufacturer | Model/Part Number | Serial Number |
| Laptop  | Dell         | XPS 15 9520       | 3PFQKN3       |

| Cables         |        |            |         |              |              |
|----------------|--------|------------|---------|--------------|--------------|
| Cable Type     | Shield | Length (m) | Ferrite | Connection 1 | Connection 2 |
| Cat 5 Ethernet | No     | 4.5        | No      | Robot        | Laptop       |

# MODIFICATIONS



## Equipment Modifications

| Item | Date       | Test   | Modification                         | Note  | Disposition of EUT                          |
|------|------------|--|--------------------------------------|---|---|
| 1    | 2025-06-13 | Spurious Radiated Emissions                              | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at Element following the test. |
| 2    | 2025-06-17 | Band Edge Compliance                                     | Tested as delivered to test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at Element following the test. |
| 3    | 2025-06-17 | Occupied Bandwidth (99%)                                 | Tested as delivered to test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at Element following the test. |
| 4    | 2025-06-17 | Output Power   | Tested as delivered to test Station. | No EMI suppression devices were added or modified during this test. | Scheduled testing was completed.            |
| 5    | 2025-06-18 | Spurious Radiated Emissions – Simultaneous Transmissions | Tested as delivered to test Station. | No EMI suppression devices were added or modified during this test. | Scheduled testing was completed.            |



# SPURIOUS RADIATED EMISSIONS

## TEST DESCRIPTION

The highest gain antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies and the modes as shown in the data sheets.

For each configuration, the spectrum was scanned throughout the specified range as part of the exploratory investigation of the emissions. A reference preview scan (pre-scan) is included in the report. Final measurements on individual emissions were then made and included in this test report.

The individual emissions from the EUT were maximized by rotating the EUT on a turntable and adjusting the measurement antenna height and polarization (per ANSI C63.10).

Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

QP = Quasi-Peak Detector  
PK = Peak Detector  
AV = RMS Detector

Measurements were made to satisfy the specific requirements of the test specification for out-of-band emissions as well as the restricted band requirements.

If there are no detectable emissions above the noise floor, the data included may show noise floor measurements for reference only.

## TEST EQUIPMENT

| Description                  | Manufacturer    | Model                     | ID  | Last Cal.  | Cal. Due   |
|------------------------------|-----------------|---------------------------|-----|------------|------------|
| Analyzer - Spectrum Analyzer | Keysight        | N9010A                    | AFO | 2024-11-25 | 2025-11-25 |
| Antenna - Loop               | EMCO            | 6502                      | AOA | 2024-10-23 | 2026-10-23 |
| Antenna - Biconilog          | Teseq           | CBL 6141B                 | AXR | 2025-04-15 | 2027-04-15 |
| Antenna - Double Ridge       | ETS Lindgren    | 3115                      | AIZ | 2024-03-08 | 2026-03-08 |
| Antenna - Standard Gain      | ETS Lindgren    | 3160-07                   | AHU | 2025-01-23 | 2026-01-23 |
| Amplifier - Pre-Amplifier    | Miteq           | AM-1616-1000              | AOL | 2024-10-28 | 2025-10-28 |
| Amplifier - Pre-Amplifier    | Miteq           | AMF-3D-00100800-32-13P    | PAG | 2024-10-28 | 2025-10-28 |
| Amplifier - Pre-Amplifier    | L-3 Narda-MITEQ | AMF-6F-08001200-30-10P    | PAO | 2024-10-28 | 2025-10-28 |
| Cable                        | N/A             | Bilog Cables              | EVA | 2024-10-29 | 2025-10-29 |
| Cable                        | N/A             | Double Ridge Horn Cables  | EVB | 2025-05-02 | 2026-05-02 |
| Cable                        | None            | Standard Gain Horn Cables | EVF | 2024-10-28 | 2025-10-28 |
| Attenuator                   | Coaxicom        | 3910-10                   | AWX | 2024-10-28 | 2025-10-28 |
| Filter - Low Pass            | Micro-Tronics   | LPM50004                  | LFD | 2024-10-28 | 2025-10-28 |
| Filter - High Pass           | Micro-Tronics   | HPM50108                  | HFV | 2024-10-28 | 2025-10-28 |

## FREQUENCY RANGE INVESTIGATED

9 kHz TO 12.4 GHz

## POWER INVESTIGATED

Battery

## CONFIGURATIONS INVESTIGATED

AGRO0019-1

## MODES INVESTIGATED

Tx, Low Ch. = 907 MHz, Mid Ch. = 915 MHz, High Ch. = 923 MHz, 5 MHz BW

Tx, Low Ch. = 909 MHz, Mid Ch. = 915 MHz, High Ch. = 921 MHz, 10 MHz BW

# SPURIOUS RADIATED EMISSIONS

|                   |                        |                       |            |
|-------------------|------------------------|-----------------------|------------|
| EUT:              | RM-1700-21N3           | Work Order:           | AGRO0019   |
| Serial Number:    | G88V3M86W7             | Date:                 | 2025-06-11 |
| Customer:         | Agility Robotics, Inc. | Temperature:          | 22.3°C     |
| Attendees:        | Kohl Kennedy           | Relative Humidity:    | 42.6%      |
| Customer Project: | None                   | Bar. Pressure (PMSL): | 1015 mb    |
| Tested By:        | Jeff Alcoke            | Job Site:             | EV01       |
| Power:            | Battery                | Configuration:        | AGRO0019-1 |

## TEST PARAMETERS

|        |   |                    |   |                     |           |
|--------|---|--------------------|---|---------------------|-----------|
| Run #: | 6 | Test Distance (m): | 3 | Ant. Height(s) (m): | 1 to 4(m) |
|--------|---|--------------------|---|---------------------|-----------|

## COMMENTS

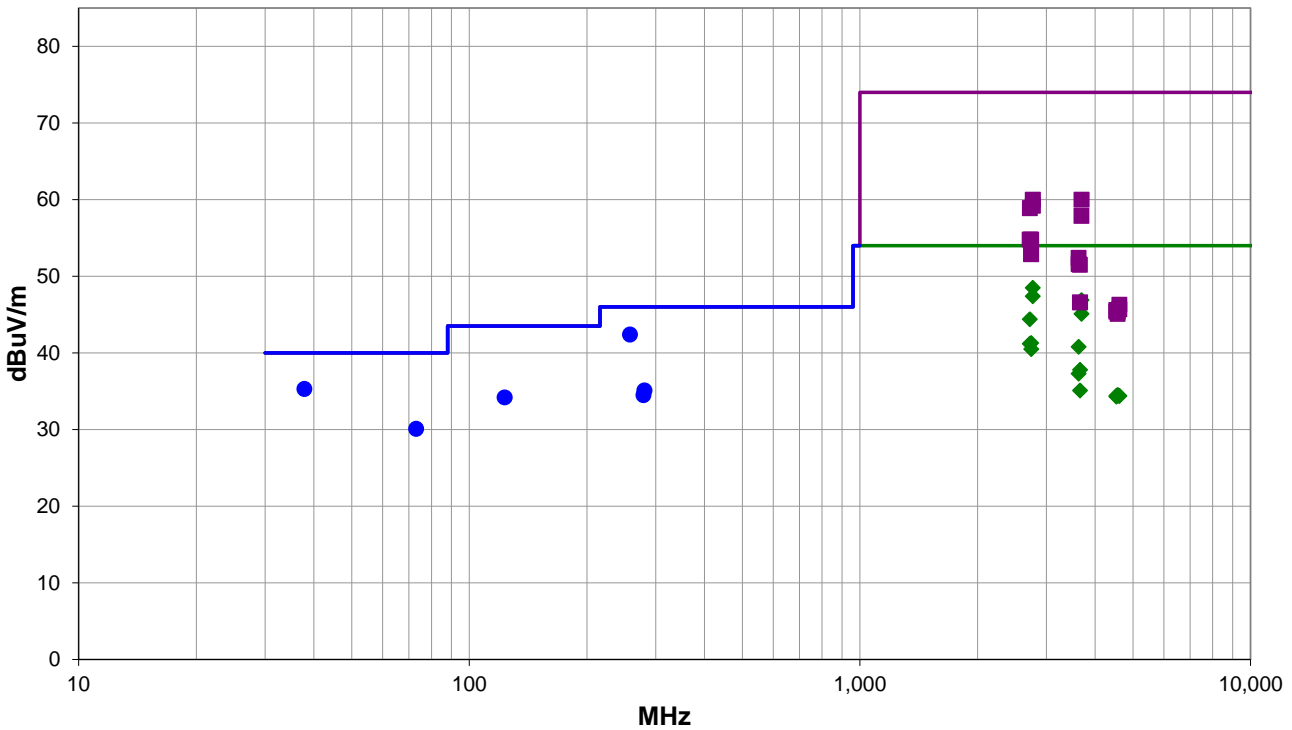
Please reference data comments below for channel

## EUT OPERATING MODES

Tx, Low Ch. = 907 MHz, Mid Ch. = 915 MHz, High Ch. = 923 MHz, 5 MHz BW, Power = 20 dBm

## DEVIATIONS FROM TEST STANDARD

None



Run #: 6

PK AV QP

# SPURIOUS RADIATED EMISSIONS

## RESULTS - Run #6

| Freq (MHz) | Amplitude (dBuV) | Factor (dB/m) | Antenna Height (meters) | Azimuth (degrees) | Test Distance (meters) | External Attenuation (dB) | Polarity/ Transducer Type | Detector | Distance Adjustment (dB) | Adjusted (dBuV/m) | Spec. Limit (dBuV/m) | Compared to Spec. (dB) | Comments     |
|------------|------------------|---------------|-------------------------|-------------------|------------------------|---------------------------|---------------------------|----------|--------------------------|-------------------|----------------------|------------------------|--------------|
| 257.823    | 44.1             | -1.7          | 1.0                     | 91.0              | 3.0                    | 0.0                       | Vert                      | QP       | 0.0                      | 42.4              | 46.0                 | -3.6                   | Mid Channel  |
| 37.826     | 32.5             | 2.8           | 1.0                     | 233.0             | 3.0                    | 0.0                       | Vert                      | QP       | 0.0                      | 35.3              | 40.0                 | -4.7                   | Mid Channel  |
| 2770.017   | 51.5             | -3.0          | 2.4                     | 171.0             | 3.0                    | 0.0                       | Horz                      | AV       | 0.0                      | 48.5              | 54.0                 | -5.5                   | High Channel |
| 2769.858   | 50.4             | -3.0          | 1.0                     | 258.0             | 3.0                    | 0.0                       | Vert                      | AV       | 0.0                      | 47.4              | 54.0                 | -6.6                   | High Channel |
| 3691.958   | 43.8             | 3.1           | 1.5                     | 181.0             | 3.0                    | 0.0                       | Horz                      | AV       | 0.0                      | 46.9              | 54.0                 | -7.1                   | High Channel |
| 3692.083   | 42.0             | 3.1           | 1.2                     | 170.0             | 3.0                    | 0.0                       | Vert                      | AV       | 0.0                      | 45.1              | 54.0                 | -8.9                   | High Channel |
| 123.100    | 37.6             | -3.4          | 1.8                     | 260.0             | 3.0                    | 0.0                       | Horz                      | QP       | 0.0                      | 34.2              | 43.5                 | -9.3                   | Mid Channel  |
| 2722.350   | 47.7             | -3.3          | 3.2                     | 111.0             | 3.0                    | 0.0                       | Horz                      | AV       | 0.0                      | 44.4              | 54.0                 | -9.6                   | Low Channel  |
| 73.103     | 38.6             | -8.5          | 2.5                     | 104.0             | 3.0                    | 0.0                       | Vert                      | QP       | 0.0                      | 30.1              | 40.0                 | -9.9                   | Mid Channel  |
| 280.785    | 36.7             | -1.6          | 1.0                     | 89.0              | 3.0                    | 0.0                       | Vert                      | QP       | 0.0                      | 35.1              | 46.0                 | -10.9                  | Mid Channel  |
| 279.021    | 36.1             | -1.6          | 2.4                     | 296.0             | 3.0                    | 0.0                       | Horz                      | QP       | 0.0                      | 34.5              | 46.0                 | -11.5                  | Mid Channel  |
| 2743.833   | 44.5             | -3.2          | 3.7                     | 86.0              | 3.0                    | 0.0                       | Horz                      | AV       | 0.0                      | 41.3              | 54.0                 | -12.7                  | Mid Channel  |
| 2721.750   | 44.5             | -3.3          | 1.5                     | 211.0             | 3.0                    | 0.0                       | Vert                      | AV       | 0.0                      | 41.2              | 54.0                 | -12.8                  | Low Channel  |
| 3629.967   | 38.3             | 2.5           | 1.5                     | 183.0             | 3.0                    | 0.0                       | Horz                      | AV       | 0.0                      | 40.8              | 54.0                 | -13.2                  | Low Channel  |
| 2745.292   | 43.7             | -3.2          | 1.0                     | 215.0             | 3.0                    | 0.0                       | Vert                      | AV       | 0.0                      | 40.5              | 54.0                 | -13.5                  | Mid Channel  |
| 2771.467   | 63.0             | -3.0          | 2.4                     | 171.0             | 3.0                    | 0.0                       | Horz                      | PK       | 0.0                      | 60.0              | 74.0                 | -14.0                  | High Channel |
| 3692.225   | 56.9             | 3.1           | 1.5                     | 181.0             | 3.0                    | 0.0                       | Horz                      | PK       | 0.0                      | 60.0              | 74.0                 | -14.0                  | High Channel |
| 2771.492   | 62.2             | -3.0          | 1.0                     | 258.0             | 3.0                    | 0.0                       | Vert                      | PK       | 0.0                      | 59.2              | 74.0                 | -14.8                  | High Channel |
| 2722.875   | 62.2             | -3.3          | 3.2                     | 111.0             | 3.0                    | 0.0                       | Horz                      | PK       | 0.0                      | 58.9              | 74.0                 | -15.1                  | Low Channel  |
| 3690.058   | 54.8             | 3.1           | 1.2                     | 170.0             | 3.0                    | 0.0                       | Vert                      | PK       | 0.0                      | 57.9              | 74.0                 | -16.1                  | High Channel |
| 3660.542   | 34.9             | 2.9           | 1.5                     | 127.0             | 3.0                    | 0.0                       | Horz                      | AV       | 0.0                      | 37.8              | 54.0                 | -16.2                  | Mid Channel  |
| 3629.742   | 34.8             | 2.5           | 1.1                     | 100.0             | 3.0                    | 0.0                       | Vert                      | AV       | 0.0                      | 37.3              | 54.0                 | -16.7                  | Low Channel  |
| 3659.958   | 32.2             | 2.9           | 1.5                     | 89.0              | 3.0                    | 0.0                       | Vert                      | AV       | 0.0                      | 35.1              | 54.0                 | -18.9                  | Mid Channel  |
| 2743.667   | 58.0             | -3.2          | 3.7                     | 86.0              | 3.0                    | 0.0                       | Horz                      | PK       | 0.0                      | 54.8              | 74.0                 | -19.2                  | Mid Channel  |
| 2721.158   | 58.1             | -3.3          | 1.5                     | 211.0             | 3.0                    | 0.0                       | Vert                      | PK       | 0.0                      | 54.8              | 74.0                 | -19.2                  | Low Channel  |
| 4569.292   | 28.6             | 5.9           | 1.5                     | 275.0             | 3.0                    | 0.0                       | Horz                      | AV       | 0.0                      | 34.5              | 54.0                 | -19.5                  | Mid Channel  |
| 4567.292   | 28.6             | 5.9           | 2.0                     | 247.0             | 3.0                    | 0.0                       | Vert                      | AV       | 0.0                      | 34.5              | 54.0                 | -19.5                  | Mid Channel  |
| 4535.758   | 28.6             | 5.8           | 1.5                     | 171.0             | 3.0                    | 0.0                       | Horz                      | AV       | 0.0                      | 34.4              | 54.0                 | -19.6                  | Low Channel  |
| 4613.242   | 28.4             | 6.0           | 1.5                     | 97.0              | 3.0                    | 0.0                       | Horz                      | AV       | 0.0                      | 34.4              | 54.0                 | -19.6                  | High Channel |
| 4612.758   | 28.4             | 6.0           | 2.5                     | 45.0              | 3.0                    | 0.0                       | Vert                      | AV       | 0.0                      | 34.4              | 54.0                 | -19.6                  | High Channel |
| 4535.150   | 28.5             | 5.8           | 1.5                     | 31.0              | 3.0                    | 0.0                       | Vert                      | AV       | 0.0                      | 34.3              | 54.0                 | -19.7                  | Low Channel  |
| 2743.417   | 56.1             | -3.2          | 1.0                     | 215.0             | 3.0                    | 0.0                       | Vert                      | PK       | 0.0                      | 52.9              | 74.0                 | -21.1                  | Mid Channel  |
| 3629.367   | 49.9             | 2.5           | 1.5                     | 183.0             | 3.0                    | 0.0                       | Horz                      | PK       | 0.0                      | 52.4              | 74.0                 | -21.6                  | Low Channel  |
| 3629.925   | 49.1             | 2.5           | 1.1                     | 100.0             | 3.0                    | 0.0                       | Vert                      | PK       | 0.0                      | 51.6              | 74.0                 | -22.4                  | Low Channel  |
| 3657.958   | 48.7             | 2.8           | 1.5                     | 127.0             | 3.0                    | 0.0                       | Horz                      | PK       | 0.0                      | 51.5              | 74.0                 | -22.5                  | Mid Channel  |
| 3660.542   | 43.7             | 2.9           | 1.5                     | 89.0              | 3.0                    | 0.0                       | Vert                      | PK       | 0.0                      | 46.6              | 74.0                 | -27.4                  | Mid Channel  |
| 4615.692   | 40.3             | 6.0           | 2.5                     | 45.0              | 3.0                    | 0.0                       | Vert                      | PK       | 0.0                      | 46.3              | 74.0                 | -27.7                  | High Channel |
| 4613.467   | 39.7             | 6.0           | 1.5                     | 97.0              | 3.0                    | 0.0                       | Horz                      | PK       | 0.0                      | 45.7              | 74.0                 | -28.3                  | High Channel |
| 4532.525   | 39.8             | 5.8           | 1.5                     | 171.0             | 3.0                    | 0.0                       | Horz                      | PK       | 0.0                      | 45.6              | 74.0                 | -28.4                  | Low Channel  |
| 4570.750   | 39.5             | 5.9           | 2.0                     | 247.0             | 3.0                    | 0.0                       | Vert                      | PK       | 0.0                      | 45.4              | 74.0                 | -28.6                  | Mid Channel  |

# SPURIOUS RADIATED EMISSIONS

| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB/m) | Antenna Height<br>(meters) | Azimuth<br>(degrees) | Test Distance<br>(meters) | External<br>Attenuation<br>(dB) | Polarity/<br>Transducer Type | Detector | Distance<br>Adjustment<br>(dB) | Adjusted<br>(dBuV/m) | Spec. Limit<br>(dBuV/m) | Compared to<br>Spec.<br>(dB) | Comments    |
|---------------|---------------------|------------------|----------------------------|----------------------|---------------------------|---------------------------------|------------------------------|----------|--------------------------------|----------------------|-------------------------|------------------------------|-------------|
| 4535.067      | 39.6                | 5.8              | 1.5                        | 31.0                 | 3.0                       | 0.0                             | Vert                         | PK       | 0.0                            | 45.4                 | 74.0                    | -28.6                        | Low Channel |
| 4566.583      | 39.2                | 5.9              | 1.5                        | 275.0                | 3.0                       | 0.0                             | Horz                         | PK       | 0.0                            | 45.1                 | 74.0                    | -28.9                        | Mid Channel |

## CONCLUSION

Pass



Tested By

# SPURIOUS RADIATED EMISSIONS

|                   |                        |                       |            |
|-------------------|------------------------|-----------------------|------------|
| EUT:              | RM-1700-21N3           | Work Order:           | AGRO0019   |
| Serial Number:    | G88V3M86W7             | Date:                 | 2025-06-11 |
| Customer:         | Agility Robotics, Inc. | Temperature:          | 22.3°C     |
| Attendees:        | Kohl Kennedy           | Relative Humidity:    | 42.6%      |
| Customer Project: | None                   | Bar. Pressure (PMSL): | 1015 mb    |
| Tested By:        | Jeff Alcock            | Job Site:             | EV01       |
| Power:            | Battery                | Configuration:        | AGRO0019-1 |

## TEST PARAMETERS

|        |   |                    |   |                     |           |
|--------|---|--------------------|---|---------------------|-----------|
| Run #: | 7 | Test Distance (m): | 3 | Ant. Height(s) (m): | 1 to 4(m) |
|--------|---|--------------------|---|---------------------|-----------|

## COMMENTS

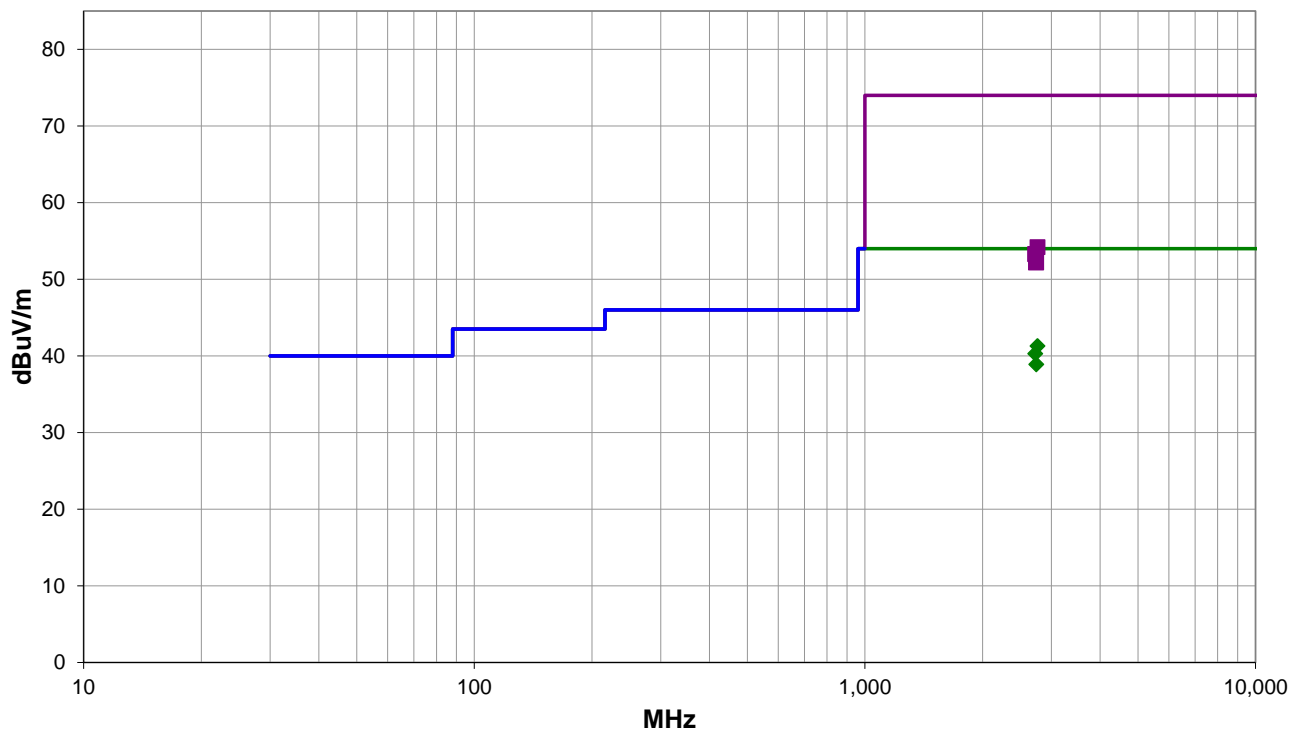
Measuring worst case harmonic

## EUT OPERATING MODES

Tx, Low Ch. = 909 MHz, Mid Ch. = 915 MHz, High Ch. = 921 MHz, 10 MHz BW, Power = 20 dBm

## DEVIATIONS FROM TEST STANDARD

None



Run #: 7

■ PK ◆ AV ● QP

# SPURIOUS RADIATED EMISSIONS

## RESULTS - Run #7

| Freq (MHz) | Amplitude (dBuV) | Factor (dB/m) | Antenna Height (meters) | Azimuth (degrees) | Test Distance (meters) | External Attenuation (dB) | Polarity/ Transducer Type | Detector | Distance Adjustment (dB) | Adjusted (dBuV/m) | Spec. Limit (dBuV/m) | Compared to Spec. (dB) | Comments     |
|------------|------------------|---------------|-------------------------|-------------------|------------------------|---------------------------|---------------------------|----------|--------------------------|-------------------|----------------------|------------------------|--------------|
| 2765.500   | 44.3             | -3.0          | 2.1                     | 187.0             | 3.0                    | 0.0                       | Horz                      | AV       | 0.0                      | 41.3              | 54.0                 | -12.7                  | High Channel |
| 2728.792   | 43.6             | -3.3          | 1.5                     | 184.0             | 3.0                    | 0.0                       | Horz                      | AV       | 0.0                      | 40.3              | 54.0                 | -13.7                  | Low Channel  |
| 2745.917   | 42.0             | -3.1          | 3.7                     | 133.0             | 3.0                    | 0.0                       | Horz                      | AV       | 0.0                      | 38.9              | 54.0                 | -15.1                  | Mid Channel  |
| 2765.583   | 57.2             | -3.0          | 2.1                     | 187.0             | 3.0                    | 0.0                       | Horz                      | PK       | 0.0                      | 54.2              | 74.0                 | -19.8                  | High Channel |
| 2729.458   | 56.6             | -3.3          | 1.5                     | 184.0             | 3.0                    | 0.0                       | Horz                      | PK       | 0.0                      | 53.3              | 74.0                 | -20.7                  | Low Channel  |
| 2741.750   | 55.5             | -3.3          | 3.7                     | 133.0             | 3.0                    | 0.0                       | Horz                      | PK       | 0.0                      | 52.2              | 74.0                 | -21.8                  | Mid Channel  |

## CONCLUSION

Pass

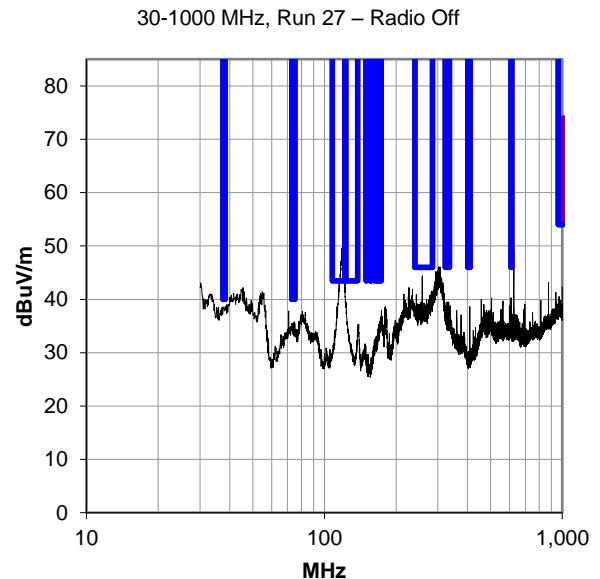
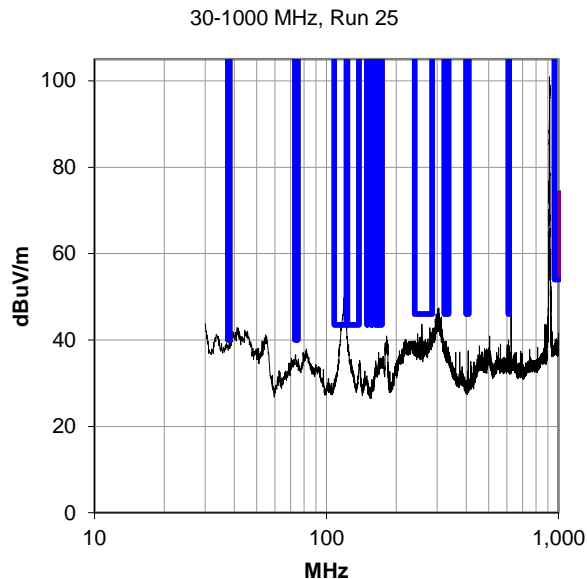
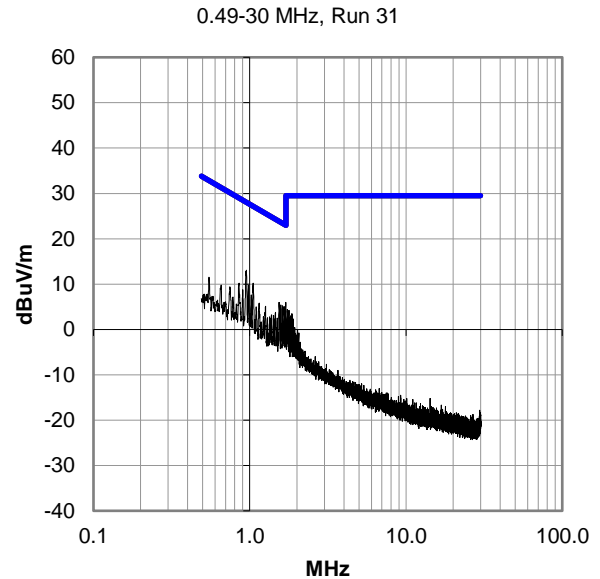
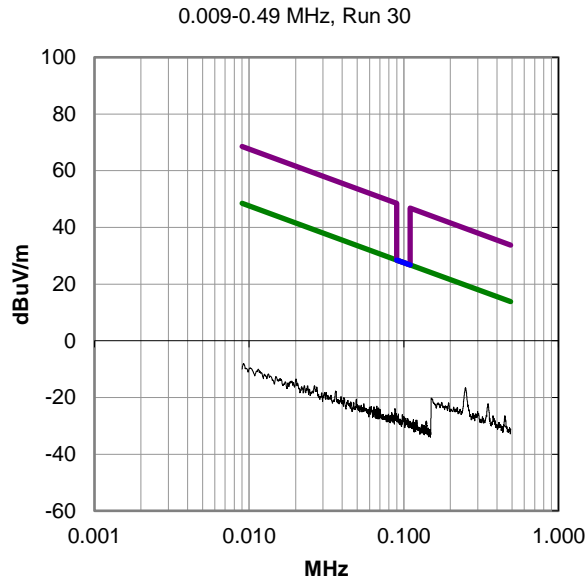


Tested By

# SPURIOUS RADIATED EMISSIONS

## PRESCAN DATA

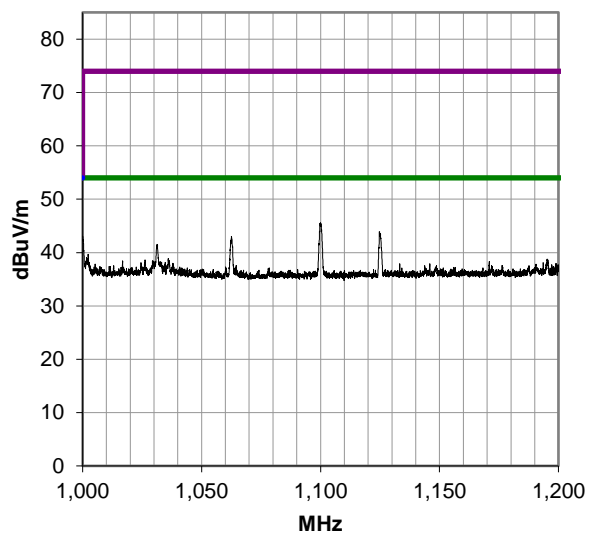
Radiated spurious emissions from the EUT are initially reviewed with Pre-scans (Preview scans). Pre-scans are performed, with the EUT transmitting on the lowest applicable data rate, for both vertical and horizontal polarizations. The Pre-scan plots below are shown with a peak detector and RBW for the following frequency ranges: 9 kHz RBW (< 30 MHz); 120 kHz RBW (30 - 1000 MHz); 1 MHz RBW (> 1 GHz). In the case where unintentional emissions are observed, an ambient or idle pre-scan with the radio off, will be shown for comparison.



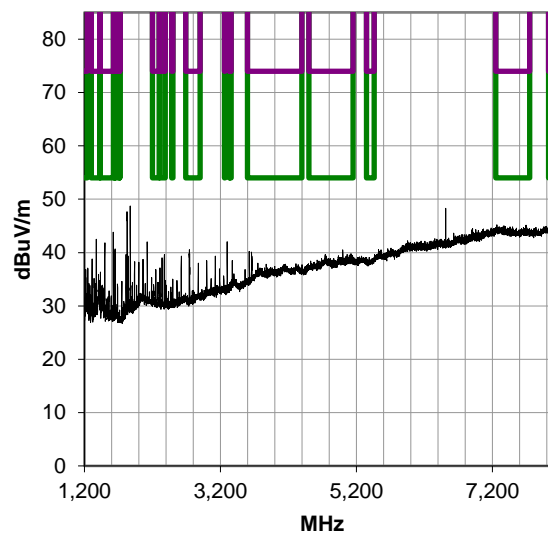


# SPURIOUS RADIATED EMISSIONS

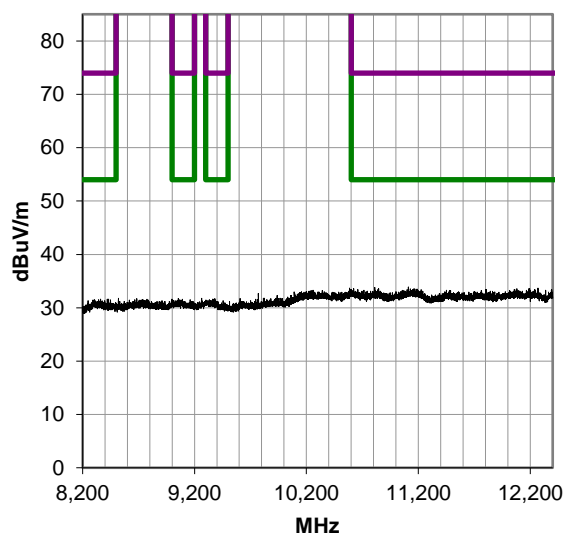
1000-1200 MHz, Run 37



1200-8200 MHz, Run 3



8200-12400 MHz, Run 4



# SPURIOUS RADIATED EMISSIONS – SIMULTANEOUS TRANSMISSIONS

## TEST DESCRIPTION

A comparison of the transmit frequencies and harmonics of the radios in the EUT that could simultaneously transmit was performed. The comparison identified any frequencies or harmonics that overlap. Those modes were investigated for any non-compliance due to frequency mixing.

For each mode, the spectrum was investigated throughout the specified range as part of the exploratory investigation of the emissions. A reference preview scan (pre-scan) is included in the report. Final measurements on any individual emissions from frequency mixing found in the preview scans were collected and included in this test report.

The individual emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and adjusting the measurement antenna height and polarization (per ANSI C63.10). A preamp and high pass filter were used to provide sufficient measurement sensitivity.

Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

PK = Peak Detector  
AV = RMS Detector

## TEST EQUIPMENT

| Description                  | Manufacturer    | Model                     | ID  | Last Cal.  | Cal. Due   |
|------------------------------|-----------------|---------------------------|-----|------------|------------|
| Analyzer - Spectrum Analyzer | Keysight        | N9010A                    | AFO | 2024-11-25 | 2025-11-25 |
| Antenna - Double Ridge       | ETS Lindgren    | 3115                      | AIZ | 2024-03-08 | 2026-03-08 |
| Antenna - Standard Gain      | ETS Lindgren    | 3160-07                   | AHU | 2025-01-23 | 2026-01-23 |
| Antenna - Standard Gain      | ETS Lindgren    | 3160-08                   | AHV | 2025-01-23 | 2026-01-23 |
| Antenna - Standard Gain      | ETS Lindgren    | 3160-09                   | AIV | 2025-01-23 | 2026-01-23 |
| Antenna - Standard Gain      | ETS Lindgren    | 3160-10                   | AIW | 2025-01-23 | 2026-01-23 |
| Amplifier - Pre-Amplifier    | Miteq           | AMF-3D-00100800-32-13P    | PAG | 2024-10-28 | 2025-10-28 |
| Amplifier - Pre-Amplifier    | L-3 Narda-MITEQ | AMF-6F-08001200-30-10P    | PAO | 2024-10-28 | 2025-10-28 |
| Amplifier - Pre-Amplifier    | Miteq           | AMF-6F-12001800-30-10P    | AVD | 2024-10-28 | 2025-10-28 |
| Amplifier - Pre-Amplifier    | Miteq           | AMF-6F-18002650-25-10P    | AVU | 2025-04-27 | 2026-04-27 |
| Amplifier - Pre-Amplifier    | Miteq           | JSW45-26004000-40-5P      | PAE | 2025-04-25 | 2026-04-25 |
| Cable                        | N/A             | Double Ridge Horn Cables  | EVB | 2025-05-02 | 2026-05-02 |
| Cable                        | None            | Standard Gain Horn Cables | EVF | 2024-10-28 | 2025-10-28 |
| Cable                        | ESM Cable Corp. | TTBJ141-KMKM-72           | EVY | 2025-04-27 | 2026-04-27 |
| Cable                        | ESM Cable Corp. | KNKN-72 SMA Cable         | EVZ | 2025-04-25 | 2026-04-25 |
| Filter - High Pass           | Micro-Tronics   | HPM50111                  | HFO | 2024-10-28 | 2025-10-28 |
| Filter - High Pass           | Micro-Tronics   | HPM50108                  | HFV | 2024-10-28 | 2025-10-28 |

## FREQUENCY RANGE INVESTIGATED: 900 MHz SRD and 2.4 GHz Wi-Fi

2.8 GHz TO 26.5 GHz

## FREQUENCY RANGE INVESTIGATED: 900 MHz SRD and 6 GHz Wi-Fi

1.2 GHz TO 40 GHz

## POWER INVESTIGATED

Battery

## CONFIGURATIONS INVESTIGATED

AGRO0019-3

# SPURIOUS RADIATED EMISSIONS – SIMULTANIOUS TRANSMISSIONS

## **MODES INVESTIGATED: 900 MHz SRD and 2.4 GHz WiFi**

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Tx, High Ch. = 923 MHz, 5 MHz BW, Power = 20dBm and 802.11g, Chain A, High Ch. = 2462 MHz, 6 Mbps, PWR = 16.5 dBm  
Tx, High Ch. = 923 MHz, 5 MHz BW, Power = 20dBm and 802.11g, Chain B, High Ch. = 2462 MHz, 6 Mbps, PWR = 16.5 dBm  
Tx, Low Ch. = 907 MHz, 5 MHz BW, Power = 20dBm and 802.11g, Chain A, Low Ch. = 2412 MHz, 6 Mbps, PWR = 16.5 dBm  
Tx, Low Ch. = 907 MHz, 5 MHz BW, Power = 20dBm and 802.11g, Chain B, Low Ch. = 2412 MHz, 6 Mbps, PWR = 16.5 dBm  
Tx, Mid Ch. = 915 MHz, 5 MHz BW, Power = 20dBm and 802.11g, Chain A, Mid Ch. = 2437 MHz, 6 Mbps, PWR = 20 dBm  
Tx, Mid Ch. = 915 MHz, 5 MHz BW, Power = 20dBm and 802.11g, Chain B, Mid Ch. = 2437 MHz, 6 Mbps, PWR = 20 dBm  
Tx, Mid Ch. = 915 MHz, 5 MHz BW, Power = 20dBm, 2.4 GHz WiFi = idle  
900 MHz SRD idle and 802.11g, Chain A, Mid Ch. = 2437 MHz, 6 Mbps, Power = 20 dBm

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## **\*MODES INVESTIGATED: 900 MHz SRD and 6 GHz WiFi**

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Tx, High Ch. = 923 MHz, 5 MHz BW, Power = 20dBm and 802.11ax, Chain A, Ch. 9 = 5995 MHz, 6 Mbps, PWR = 4.5 dBm  
Tx, High Ch. = 923 MHz, 5 MHz BW, Power = 20dBm and 802.11ax, Chain B, Ch. 9 = 5995 MHz, 6 Mbps, PWR = 4.5 dBm  
Tx, Low Ch. = 907 MHz, 5 MHz BW, Power = 20dBm and 802.11ax, Chain A, Ch. 81 = 6335 MHz, 6 Mbps, PWR = 4.5 dBm  
Tx, Low Ch. = 907 MHz, 5 MHz BW, Power = 20dBm and 802.11ax, Chain B, Ch. 81 = 6355 MHz, 6 Mbps, PWR = 4.5 dBm  
Tx, Mid Ch. = 915 MHz, 5 MHz BW, Power = 20dBm and 802.11ax, Chain A, Ch. 181 = 6855 MHz, 6 Mbps, PWR = 3.75 dBm  
Tx, Mid Ch. = 915 MHz, 5 MHz BW, Power = 20dBm and 802.11ax, Chain B, Ch. 181 = 6855 MHz, 6 Mbps, PWR = 3.75 dBm

---

\*No emissions were noted.

# SPURIOUS RADIATED EMISSIONS – SIMULTANIOUS TRANSMISSIONS



|                   |                        |                       |            |
|-------------------|------------------------|-----------------------|------------|
| EUT:              | RM-1700-21N3           | Work Order:           | AGRO0019   |
| Serial Number:    | G88V3M86W7             | Date:                 | 2025-06-18 |
| Customer:         | Agility Robotics, Inc. | Temperature:          | 22.7°C     |
| Attendees:        | Kohl Kennedy           | Relative Humidity:    | 43.4%      |
| Customer Project: | None                   | Bar. Pressure (PMSL): | 1018 mb    |
| Tested By:        | Jeff Alcock            | Job Site:             | EV01       |
| Power:            | Battery                | Configuration:        | AGRO0019-3 |

## TEST PARAMETERS

|        |    |                    |   |                     |           |
|--------|----|--------------------|---|---------------------|-----------|
| Run #: | 79 | Test Distance (m): | 3 | Ant. Height(s) (m): | 1 to 4(m) |
|--------|----|--------------------|---|---------------------|-----------|

## COMMENTS

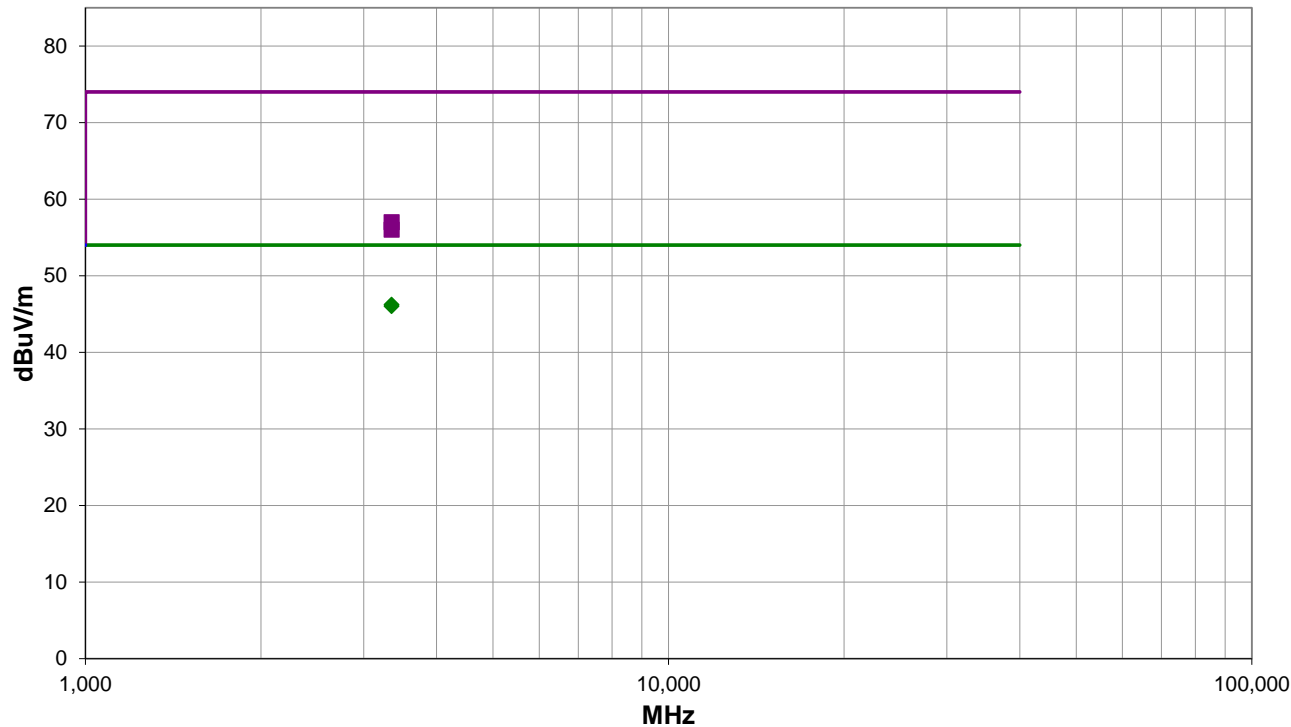
|      |
|------|
| None |
|------|

## EUT OPERATING MODES

|   |
|---|
| Tx, Mid Ch. = 915 MHz, 5 MHz BW, Power = 20dBm and 802.11g, Chain A, Mid Ch. = 2437 MHz, 6 Mbps, Power = 20 dBm |
|---|

## DEVIATIONS FROM TEST STANDARD

|      |
|------|
| None |
|------|



Run #: 79

■ PK    ◆ AV    ● QP

# SPURIOUS RADIATED EMISSIONS – SIMULTANIOUS TRANSMISSIONS

RESULTS - Run #79

| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB/m) | Antenna Height<br>(meters) | Azimuth<br>(degrees) | Test Distance<br>(meters) | External<br>Attenuation<br>(dB) | Polarity/<br>Transducer Type | Detector | Distance<br>Adjustment<br>(dB) | Adjusted<br>(dBuV/m) | Spec. Limit<br>(dBuV/m) | Compared to<br>Spec.<br>(dB) |
|---------------|---------------------|------------------|----------------------------|----------------------|---------------------------|---------------------------------|------------------------------|----------|--------------------------------|----------------------|-------------------------|------------------------------|
| 3351.300      | 45.3                | 0.9              | 1.5                        | 190.0                | 3.0                       | 0.0                             | Horz                         | AV       | 0.0                            | 46.2                 | 54.0                    | -7.8                         |
| 3350.500      | 45.1                | 0.9              | 1.5                        | 256.0                | 3.0                       | 0.0                             | Vert                         | AV       | 0.0                            | 46.0                 | 54.0                    | -8.0                         |
| 3350.875      | 56.1                | 0.9              | 1.5                        | 256.0                | 3.0                       | 0.0                             | Vert                         | PK       | 0.0                            | 57.0                 | 74.0                    | -17.0                        |
| 3351.700      | 55.1                | 0.9              | 1.5                        | 190.0                | 3.0                       | 0.0                             | Horz                         | PK       | 0.0                            | 56.0                 | 74.0                    | -18.0                        |

CONCLUSION

Pass

  
Tested By

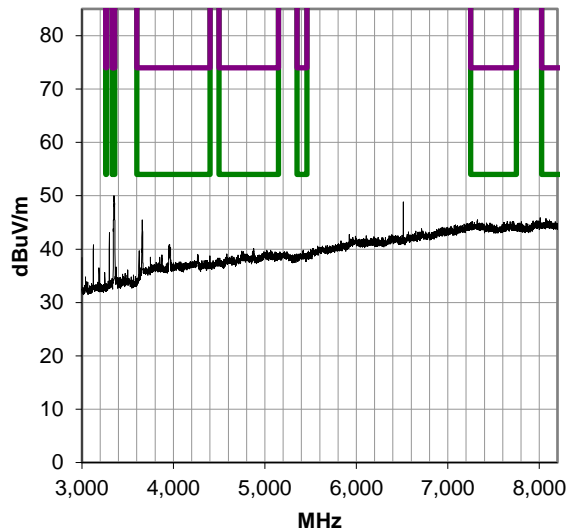
# SPURIOUS RADIATED EMISSIONS – SIMULTANEOUS TRANSMISSIONS

## PRESCAN DATA:

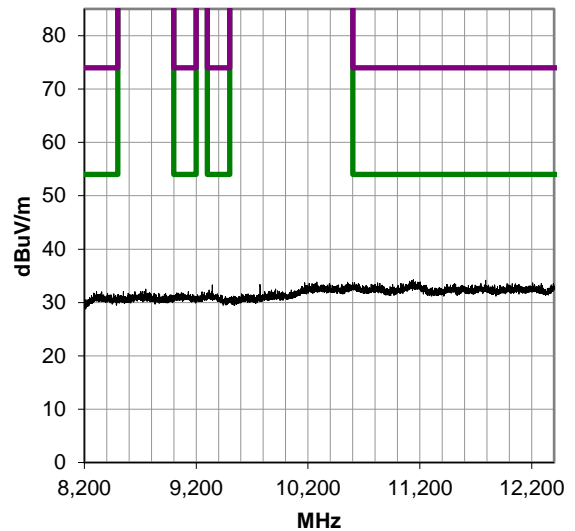
Tx, Mid Ch. = 915 MHz, 5 MHz BW, Power = 20dBm and 802.11g, Chain A, Mid Ch. = 2437 MHz, 6 Mbps, Power = 20 dBm

Radiated spurious emissions from the EUT are initially reviewed with Pre-scans (Preview scans). Pre-scans are performed, with the EUT transmitting on the lowest applicable data rate, for both vertical and horizontal polarizations. The Pre-scan plots below are shown with a peak detector and RBW for the following frequency ranges: 9 kHz RBW (< 30 MHz); 120 kHz RBW (30 - 1000 MHz); 1 MHz RBW (> 1 GHz). In the case where unintentional emissions are observed, an ambient or idle pre-scan with the radio off, will be shown for comparison.

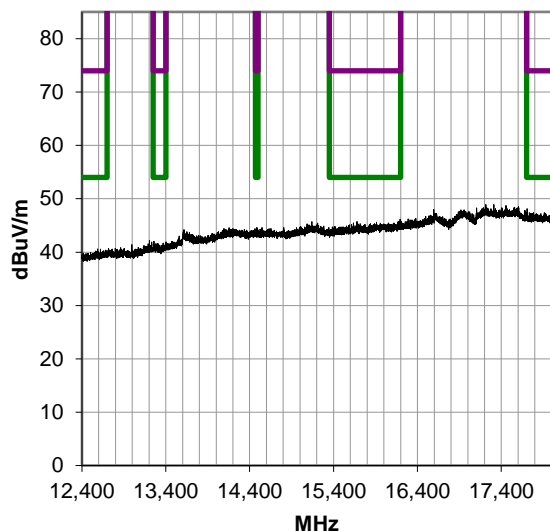
3000-8200 MHz, Run 65



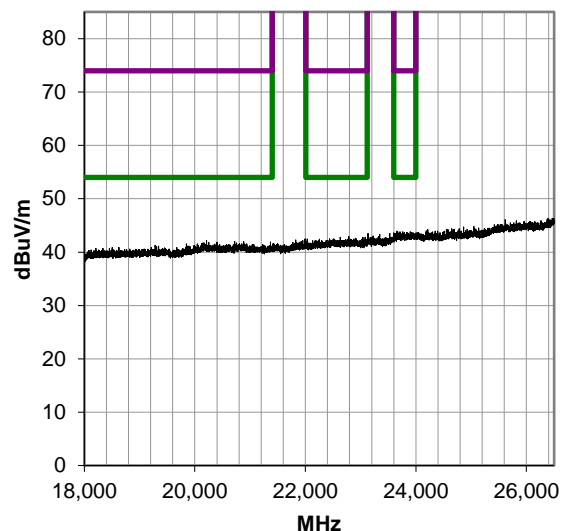
8200-12400 MHz, Run 66



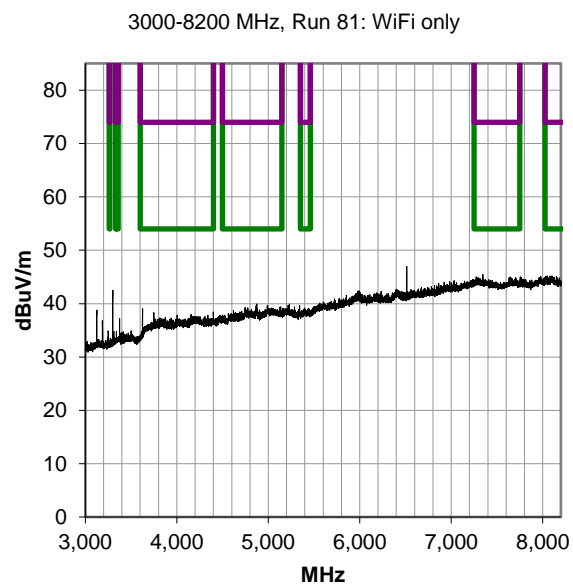
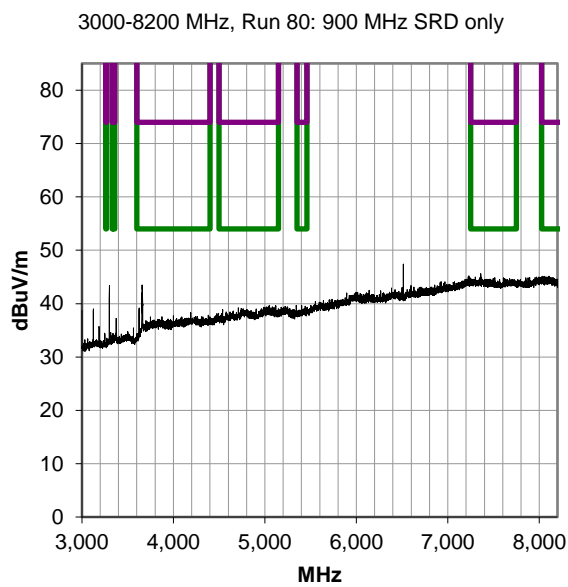
12400-18000 MHz, Run 67



18000-26500 MHz, Run 113



# SPURIOUS RADIATED EMISSIONS – SIMULTANIOUS TRANSMISSIONS





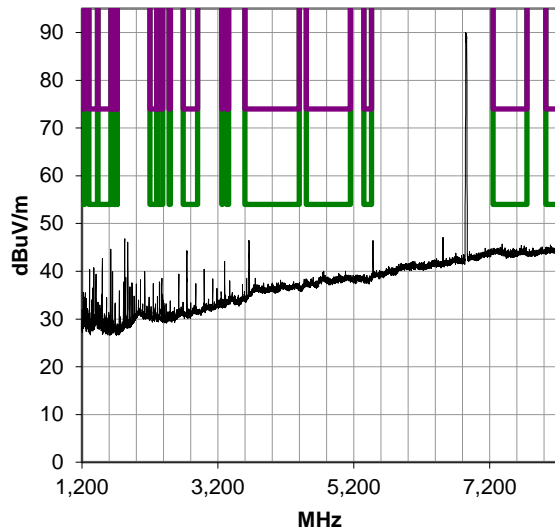
# SPURIOUS RADIATED EMISSIONS – SIMULTANEOUS TRANSMISSIONS

## PRESCAN DATA:

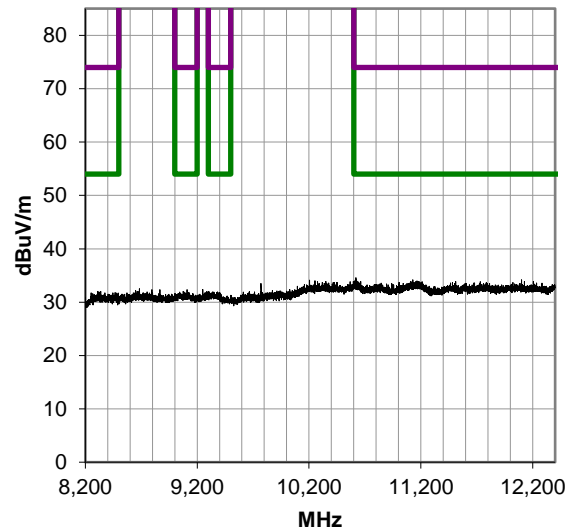
Tx, Mid Ch. = 915 MHz, 5 MHz BW, Power = 20dBm and 802.11ax, Chain A, Ch. 181 = 6855 MHz, 6 Mbps, PWR = 3.75 dBm

Radiated spurious emissions from the EUT are initially reviewed with Pre-scans (Preview scans). Pre-scans are performed, with the EUT transmitting on the lowest applicable data rate, for both vertical and horizontal polarizations. The Pre-scan plots below are shown with a peak detector and RBW for the following frequency ranges: 9 kHz RBW (< 30 MHz); 120 kHz RBW (30 - 1000 MHz); 1 MHz RBW (> 1 GHz). In the case where unintentional emissions are observed, an ambient or idle pre-scan with the radio off, will be shown for comparison.

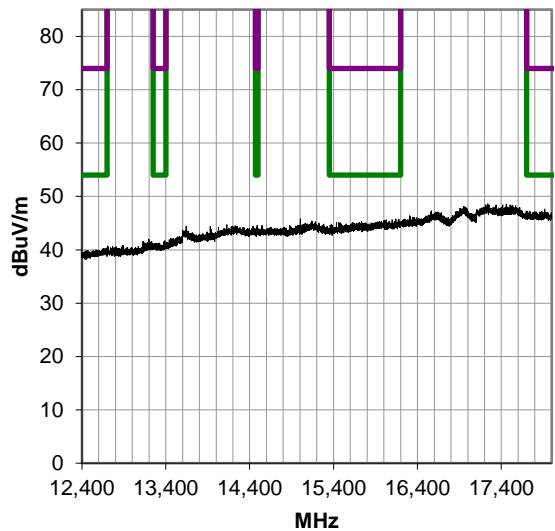
1200-8200 MHz, Run 89



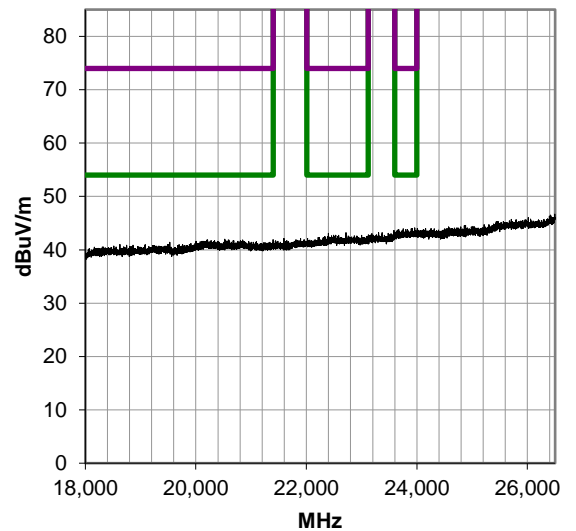
8200-12400 MHz, Run 90



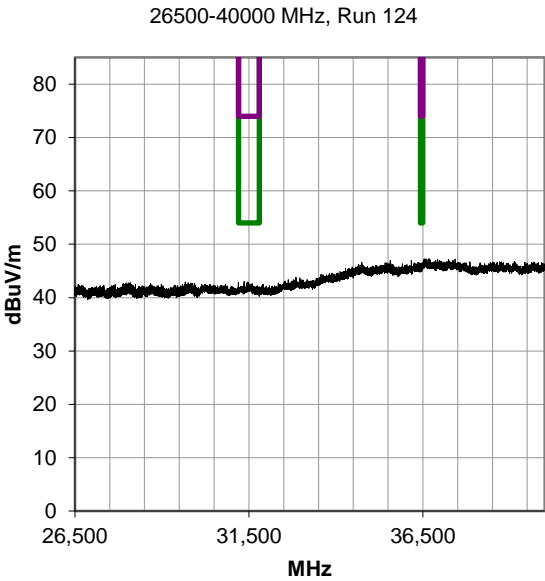
12400-18000 MHz, Run 91



18000-26500 MHz, Run 106



# SPURIOUS RADIATED EMISSIONS – SIMULTANIOUS TRANSMISSIONS



# OUTPUT POWER

## TEST DESCRIPTION

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

Per ANSI C63.10:2020, Clause 11.9.2.3.2 Method AVGPM-G: The measurement was made using a direct connection between the RF output of the EUT and a RF Power Sensor capable of 1 million samples per second, which only measures across the high time of the burst of the carrier. The measured level was offset by the cable loss, attenuator, and DC block that was used between the power sensor and EUT. This offset was determined prior to testing using a signal generator and spectrum analyzer.

The duty cycle was also measured and reported.

## TEST EQUIPMENT

| Description                  | Manufacturer       | Model                 | ID  | Last Cal.  | Cal. Due   |
|------------------------------|--------------------|-----------------------|-----|------------|------------|
| Analyzer - Spectrum Analyzer | Keysight           | N9010A                | AFO | 2024-11-25 | 2025-11-25 |
| Generator - Signal           | Agilent            | N5181A                | TIG | 2023-04-18 | 2026-04-18 |
| Attenuator                   | S.M. Electronics   | SA26B-20              | AUY | 2025-03-21 | 2026-03-21 |
| Block - DC                   | Fairview Microwave | SD3379                | AMU | 2025-05-09 | 2026-05-09 |
| Cable                        | Micro-Coax         | UFD150A-1-0720-200200 | EVK | 2025-03-21 | 2026-03-21 |
| Meter - Power                | ETS Lindgren       | 7002-006              | SRF | 2024-12-19 | 2025-12-19 |

# OUTPUT POWER

|                   |                        |                       |            |
|-------------------|------------------------|-----------------------|------------|
| EUT:              | RM-1700-21N3           | Work Order:           | AGRO0019   |
| Serial Number:    | 00301A3AF371           | Date:                 | 2025-06-17 |
| Customer:         | Agility Robotics, Inc. | Temperature:          | 22.9°C     |
| Attendees:        | Kohl Kennedy           | Relative Humidity:    | 37.4%      |
| Customer Project: | None                   | Bar. Pressure (PMSL): | 1017 mbar  |
| Tested By:        | Jeff Alcock            | Job Site:             | EV06       |
| Power:            | Battery                | Configuration:        | AGRO0019-2 |

## COMMENTS

For ease of access to the antenna port, the radio module was removed from the host product and tested on the bench.

## DEVIATIONS FROM TEST STANDARD

None

## CONCLUSION

Pass

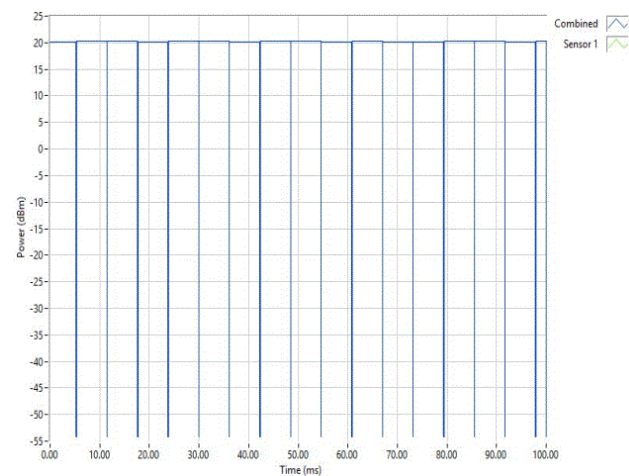


Tested By

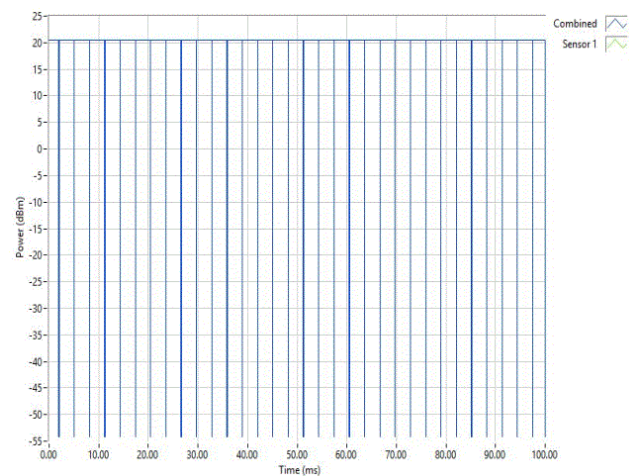
## TEST RESULTS

|           |                       |  |  |  | Avg Cond Pwr<br>(dBm) | Duty Cycle<br>(%) | Cond. Limit<br>(dBm) | Result |
|-----------|-----------------------|--|--|--|-----------------------|-------------------|----------------------|--------|
| 5 MHz BW  |                       |  |  |  |                       |                   |                      |        |
|           | Low Channel, 907 MHz  |  |  |  | 20.26                 | 98.702            | 30                   | Pass   |
|           | Mid Channel, 915 MHz  |  |  |  | 19.21                 | 98.702            | 30                   | Pass   |
|           | High Channel, 923 MHz |  |  |  | 19.017                | 98.701            | 30                   | Pass   |
| 10 MHz BW |                       |  |  |  |                       |                   |                      |        |
|           | Low Channel, 909 MHz  |  |  |  | 20.55                 | 98.859            | 30                   | Pass   |
|           | Mid Channel, 915 MHz  |  |  |  | 19.07                 | 98.858            | 30                   | Pass   |
|           | High Channel, 921 MHz |  |  |  | 18.105                | 98.854            | 30                   | Pass   |

# OUTPUT POWER



**5 MHz BW**  
**Low Channel, 907 MHz**



**10 MHz BW**  
**Low Channel, 909 MHz**

# BAND EDGE COMPLIANCE

## TEST DESCRIPTION

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in each available band. The channels closest to the band edges were selected. The EUT was transmitting at the data rate(s) listed in the datasheet.

The spectrum was scanned below the lower band edge and above the higher band edge. The analyzer screen captures for this test show an example of the emission mask for the test mode also used during the radiated spurious emissions at the restricted band edges test.

## TEST EQUIPMENT

| Description                  | Manufacturer       | Model                 | ID  | Last Cal.  | Cal. Due   |
|------------------------------|--------------------|-----------------------|-----|------------|------------|
| Analyzer - Spectrum Analyzer | Keysight           | N9010A                | AFO | 2024-11-25 | 2025-11-25 |
| Attenuator                   | S.M. Electronics   | SA26B-20              | AUY | 2025-03-21 | 2026-03-21 |
| Block - DC                   | Fairview Microwave | SD3379                | AMU | 2025-05-09 | 2026-05-09 |
| Cable                        | Micro-Coax         | UFD150A-1-0720-200200 | EVK | 2025-03-21 | 2026-03-21 |
| Generator - Signal           | Agilent            | N5181A                | TIG | 2023-04-18 | 2026-04-18 |

# BAND EDGE COMPLIANCE



|                   |                        |                       |            |
|-------------------|------------------------|-----------------------|------------|
| EUT:              | RM-1700-21N3           | Work Order:           | AGRO0019   |
| Serial Number:    | 00301A3AF371           | Date:                 | 2025-06-17 |
| Customer:         | Agility Robotics, Inc. | Temperature:          | 23°C       |
| Attendees:        | Kohl Kennedy           | Relative Humidity:    | 37.7%      |
| Customer Project: | None                   | Bar. Pressure (PMSL): | 1017 mbar  |
| Tested By:        | Jeff Alcock            | Job Site:             | EV06       |
| Power:            | Battery                | Configuration:        | AGRO0019-2 |

## COMMENTS

For ease of access to the antenna port, the radio module was removed from the host product and tested on the bench.

## DEVIATIONS FROM TEST STANDARD

None

## CONCLUSION

Pass

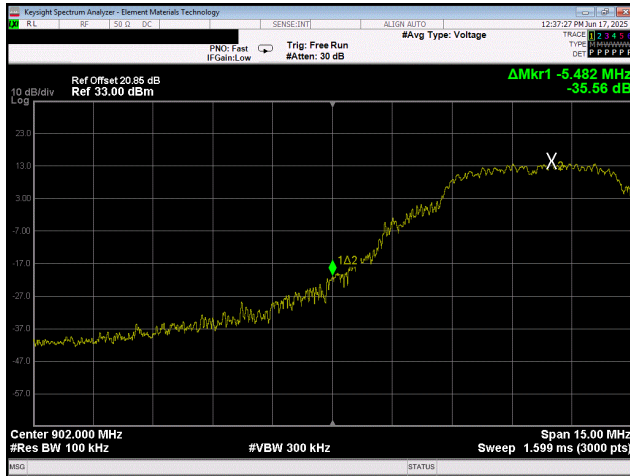
Tested By

## TEST RESULTS

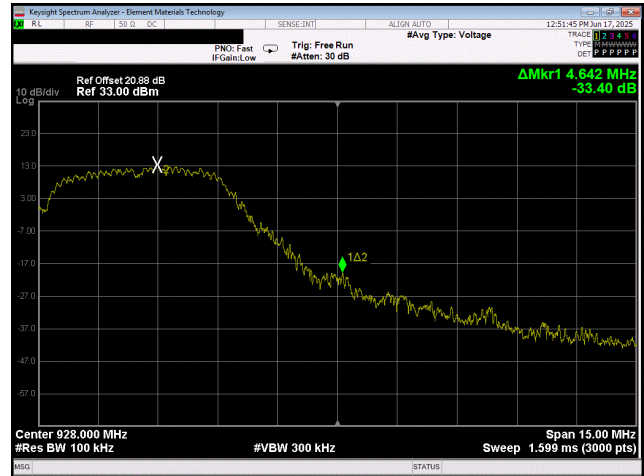
|           |                       | Value<br>(dBc) | Limit<br>≤ (dBc) | Result |
|-----------|-----------------------|----------------|------------------|--------|
| 5 MHz BW  |                       |                |                  |        |
|           | Low Channel, 907 MHz  | -35.56         | -30              | Pass   |
|           | High Channel, 923 MHz | -33.4          | -30              | Pass   |
| 10 MHz BW |                       |                |                  |        |
|           | Low Channel, 909 MHz  | -35.44         | -30              | Pass   |
|           | High Channel, 921 MHz | -36.28         | -30              | Pass   |



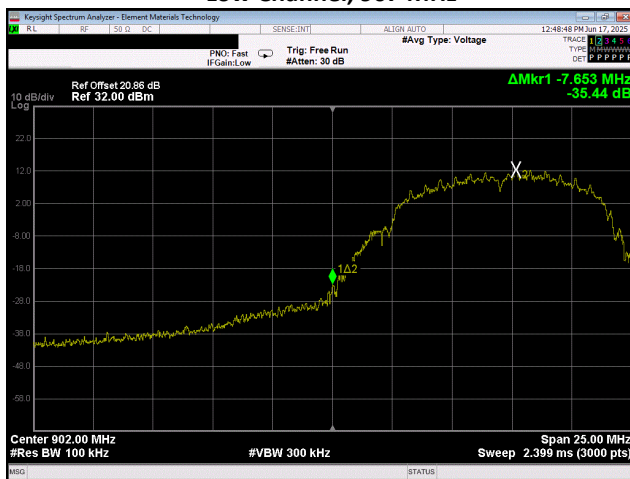
# BAND EDGE COMPLIANCE



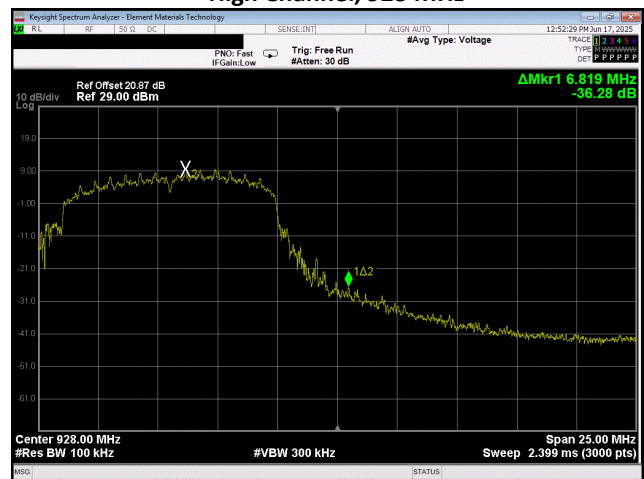
5 MHz BW  
Low Channel, 907 MHz



5 MHz BW  
High Channel, 923 MHz



10 MHz BW  
Low Channel, 909 MHz



10 MHz BW  
High Channel, 921 MHz

# OCCUPIED BANDWIDTH

## TEST DESCRIPTION

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The 99% occupied bandwidth was measured with the EUT configured for continuous modulated operation.

Per ANSI C63.10:2020, 6.9.3, the spectrum analyzer was configured as follows:

Sweep time: Auto  
Resolution Bandwidth: 1% to 5% of the OBW  
Video Bandwidth:  $\geq 3 * RBW$   
Trace: Max Hold  
Span: Large enough to capture all products of the modulation process, including the emission skirts.

A sample detector was used unless the device was not able to be operated in a continuous transmit mode, in which case a peak detector was used.

The spectrum analyzer occupied bandwidth measurement function was used to sum the power of the transmission in linear terms to obtain the 99% bandwidth.

## TEST EQUIPMENT

| Description                  | Manufacturer       | Model                 | ID  | Last Cal.  | Cal. Due   |
|------------------------------|--------------------|-----------------------|-----|------------|------------|
| Analyzer - Spectrum Analyzer | Keysight           | N9010A                | AFO | 2024-11-25 | 2025-11-25 |
| Generator - Signal           | Agilent            | N5181A                | TIG | 2023-04-18 | 2026-04-18 |
| Attenuator                   | S.M. Electronics   | SA26B-20              | AUY | 2025-03-21 | 2026-03-21 |
| Block - DC                   | Fairview Microwave | SD3379                | AMU | 2025-05-09 | 2026-05-09 |
| Cable                        | Micro-Coax         | UFD150A-1-0720-200200 | EVK | 2025-03-21 | 2026-03-21 |

# OCCUPIED BANDWIDTH

|                   |                        |                       |            |
|-------------------|------------------------|-----------------------|------------|
| EUT:              | RM-1700-21N3           | Work Order:           | AGRO0019   |
| Serial Number:    | 00301A3AF371           | Date:                 | 2025-06-17 |
| Customer:         | Agility Robotics, Inc. | Temperature:          | 23°C       |
| Attendees:        | Kohl Kennedy           | Relative Humidity:    | 37.6%      |
| Customer Project: | None                   | Bar. Pressure (PMSL): | 1017 mbar  |
| Tested By:        | Jeff Alcock            | Job Site:             | EV06       |
| Power:            | Battery                | Configuration:        | AGRO0019-2 |

## COMMENTS

For ease of access to the antenna port, the radio module was removed from the host product and tested on the bench.

## DEVIATIONS FROM TEST STANDARD

None

## CONCLUSION

N/A

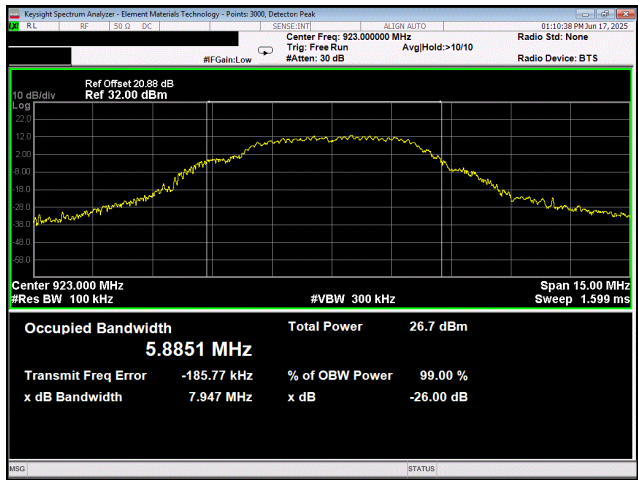


Tested By

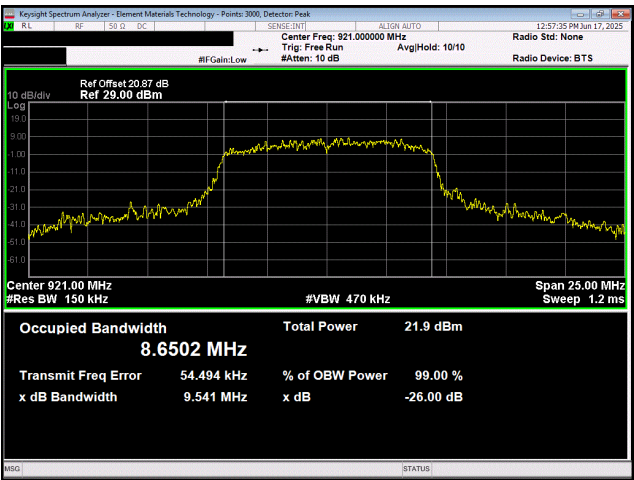
## TEST RESULTS

|           |                       | Value     | Limit | Result |
|-----------|-----------------------|-----------|-------|--------|
| 5 MHz BW  |                       |           |       |        |
|           | Low Channel, 907 MHz  | 5.811 MHz | N/A   | N/A    |
|           | Mid Channel, 915 MHz  | 5.868 MHz | N/A   | N/A    |
|           | High Channel, 923 MHz | 5.876 MHz | N/A   | N/A    |
| 10 MHz BW |                       |           |       |        |
|           | Low Channel, 909 MHz  | 8.582 MHz | N/A   | N/A    |
|           | Mid Channel, 915 MHz  | 8.619 MHz | N/A   | N/A    |
|           | High Channel, 921 MHz | 8.65 MHz  | N/A   | N/A    |

# OCCUPIED BANDWIDTH



5 MHz BW  
High Channel, 923 MHz



10 MHz BW  
High Channel, 921 MHz

End of Test Report