# TEST REPORT

## Report Number: R15699305-E2

| | | |
|---|---|---|
| **Applicant** | : | Garmin International Inc.<br>1200 East 151st Street<br>Olathe, KS 66062-3426, USA |
| **Model** | : | A04702 |
| **FCC ID** | : | IPH-04702 |
| **IC** | : | 1792A-04702 |
| **EUT Description** | : | Portable Digital Transceiver |
| **Test Standard(s)** | : | FCC 47 CFR PART 15 SUBPART C<br>ISED RSS-247 ISSUE 3<br>ISED RSS-GEN ISSUE 5 + A1 + A2 |

**Date Of Issue:**
2025-04-16

**Prepared by:**
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CERT #0751.06

# REPORT REVISION HISTORY

| Rev. | Issue Date | Revisions | Revised By |
|---|---|---|---|
| V1 | 2025-04-14 | Initial Issue | Manish Baral |
| V1 | 2025-04-16 | Separated report into sections | Manish Baral |


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# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** Garmin International Inc.
1200 East 151St Street
Olathe, KS 66062-3426, USA

**EUT DESCRIPTION:** Portable Digital Transceiver

**MODEL:** A04702

**SERIAL NUMBER:** 497855098, 497854737

**SAMPLE RECEIPT DATE:** 2025-03-04

**DATE TESTED:** 2025-01-13 to 2025-04-10

| APPLICABLE STANDARDS | |
|---|---|
| **STANDARD** | **TEST RESULTS** |
| CFR 47 Part 15 Subpart C<br>ISED RSS-247 Issue 3<br>ISED RSS-GEN Issue 5 + A1 + A2 | Refer to Section 2 |

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document.

Approved & Released
For UL LLC By:

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# 2. TEST RESULTS SUMMARY

This report contains info provided by the customer which can impact the validity of results. UL LLC is only responsible for the validity of results after the integration of the data provided by the customer.
Below is a list of the data/info provided by the customer:

1) Antenna gain and type (see section 6.3)
2) Worst-case data rates (see section 6.5)

| FCC Clause | ISED Clause | Requirement | Result | Comment |
|---|---|---|---|---|
| See Comment | | Duty Cycle | Reporting purposes only | ANSI C63.10 Section 11.6. |
| - | RSS-GEN 6.7 | 99% OBW | Reporting purposes only | ANSI C63.10 Section 6.9.3. |
| 15.247 (a) (2) | RSS-247 5.2 (a) | 6dB BW | Compliant | None |
| 15.247 (b) (3) | RSS-247 5.4 (d) | Output Power | | |
| See Comment | | Average power | Reporting purposes only | Per ANSI C63.10, Section 11.9.2.3.2. |
| 15.247 (e) | RSS-247 5.2 (b) | PSD | Compliant | None |
| 15.247 (d) | RSS-247 5.5 | Conducted Spurious Emissions | | |
| 15.209, 15.205 | RSS-GEN 8.9, 8.10 | Radiated Emissions | | |
| 15.207 | RSS-Gen 8.8 | AC Mains Conducted Emissions | | |

# 3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC 47 CFR Part 2, FCC 47 CFR Part 15, ANSI C63.10-2020, KDB 558074 D01 15.247 Meas Guidance v05r02, KDB 414788 D01 Radiated Test Site v01r01, RSS-GEN Issue 5 + A1 + A2, and RSS-247 Issue 3.

# 4. FACILITIES AND ACCREDITATION

UL LLC is accredited by A2LA, certification # 0751.06, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

| | Address | ISED CABID | ISED Company Number | FCC Registration |
|---|---|---|---|---|
| ☐ | Building:<br>12 Laboratory Dr<br>RTP, NC 27709, U.S.A | US0067 | 2180C | 825374 |
| ☒ | Building:<br>2800 Perimeter Park Dr. Suite B<br>Morrisville, NC 27560, U.S.A | | 27265 | |


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# 5. DECISION RULES AND MEASUREMENT UNCERTAINTY

## 5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

## 5.2. DECISION RULES

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

## 5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

| PARAMETER | UNCERTAINTY |
|---|---|
| Radio Frequency (Spectrum Analyzer) | 141.2 Hz |
| Occupied Channel Bandwidth | 1.22% |
| RF output power, conducted | 1.3 dB (PK)<br>0.45 dB (AV) |
| Power Spectral Density, conducted | 2.47 dB |
| Unwanted Emissions, conducted | 1.94 dB |
| All emissions, radiated | 6.01 dB |
| Conducted Emissions (0.150-30MHz) - LISN | 3.40 dB |
| Temperature | 0.57°C |
| Humidity | 3.39% |
| DC Supply voltages | 1.70% |
| Time | 3.39% |

Uncertainty figures are valid to a confidence level of 95%.

## 5.4. SAMPLE CALCULATION

**RADIATED EMISSIONS**
Where relevant, the following sample calculation is provided:
Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

**MAINS CONDUCTED EMISSIONS**
Where relevant, the following sample calculation is provided:
Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.
36.5 dBuV + 0 dB +10.1 dB+ 0 dB = 46.6 dBuV


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# 6. EQUIPMENT UNDER TEST

## 6.1. EUT DESCRIPTION

The EUT is an Portable Digital Transceiver with BT, BLE, ANT/ANT+, 802.11b/g/n 2.4GHz WLAN, and NFC. This report covers testing on the ANT/ANT+, BLE, and 2.4GHz WLAN radios.

## 6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

| Frequency Range (MHz) | Mode | Output Power (dBm) |
|---|---|---|
| 2412 - 2472 | 802.11b | 21.37 |
| 2412 - 2472 | 802.11g | 23.82 |
| 2412 - 2472 | 802.11n HT20 | 24.18 |
| 2402 - 2480 | ANT/ANT+ | 4.07 |
| 2402 - 2480 | BLE 1Mbps | 3.97 |
| 2402 - 2480 | BLE 2Mbps | 3.50 |

## 6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The antenna(s) gain and type, as provided by the manufacturer' are as follows:
The radio utilizes an antenna with the following type and maximum gain:

| Type | Frequency Range (MHz) | Maximum Gain (dBi) |
|---|---|---|
| Inverted F | 2402-2480 | -4.47 |

## 6.4. SOFTWARE AND FIRMWARE

The software version installed during testing was 8.09.


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## 6.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 1GHz, above 18GHz, and power line conducted emission were performed with the EUT set to transmit at the channel with highest PSD as worst-case scenario.

For BLE, ANT, and 2.4 WLAN, PSD was taken at the mid channel power setting (highest) for all channels.

Worst case modes were determined by highest power and psd. For BLE only 1 and 2 Mbps are supported. For ANT, only one data rate (1Mbps) is supported. For 2.4 WLAN the lowest data rate was selected for testing.

Power is not distributed equally among all channels and therefore radiated spurious emissions between 1GHz and 18GHz were performed on mid channel and the highest power low and high channels. Band edge scans were performed on all inner/outer channels up to mid channel power. For 2.4 WLAN Radiated Spourious Emissions testing was preformed at the highest power setting.

The fundamental of the EUT was investigated in three orthogonal axes, X, Y, and Z. The worst-case orientation was determined to be the Y orientation. Therefore, all testing was performed with the EUT in the Y orientation.

Conducted Testing (excluding power) for 2.4 WLAN WIFI was performed at the lowest, middle and highest channels while transmitting at mid channel power as worst-case

Conducted testing of the BLE and ANT radios (excluding power) were tested at the middle and outer most channels that had mid channel power


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## 6.6. DESCRIPTION OF TEST SETUP

**SUPPORT EQUIPMENT**

| Support Equipment List | | | | |
|---|---|---|---|---|
| **Description** | **Manufacturer** | **Model** | **Serial Number** | **FCC ID** |
| AC Adaptor | Sony | XQZ-UC11-010-236-21 | 32223W09205418 | N/A |
| AC Adaptor | PHIHONG/Garmin | AQ27A-59CFA | N/A | N/A |
| Laptop | Lenovo | T14 | PF4FKVWW | N/A |
| Laptop Charger | Lenovo | ADLX65YDC2D | 8SSA10R16970D1SG35A139F | N/A |

**I/O CABLES**

| I/O Cable List | | | | | | |
|---|---|---|---|---|---|---|
| **Cable No.** | **Port** | **# of Identical Ports** | **Connector Type** | **Cable Type** | **Cable Length (m)** | **Remarks** |
| 1 | USB | 1 | USB-C | Shielded | <3m | Program/Charge EUT |

**TEST SETUP**

EUT was configured using its own built-in push buttons prior to testing. For final emissions testing, the EUT was connected to AC mains.

**SETUP DIAGRAMS**

Please refer to R15699305-EP1 for setup diagrams


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# 7. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 1)

| Equip. ID | Description | Manufacturer | Model Number | Last Cal. | Next Cal. |
|---|---|---|---|---|---|
| **1-18 GHz** | | | | | |
| 135143 | Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz | ETS Lindgren | 3117 | 2024-02-07 | 2026-02-07 |
| **18-40 GHz** | | | | | |
| 204704 | Horn Antenna, 18-26.5GHz | Com-Power | AH-826 | 2023-07-20 | 2025-07-20 |
| **Gain-Loss Chains** | | | | | |
| 91979 | Gain-loss string: 1-18GHz | Various | Various | 2024-05-08 | 2025-05-08 |
| 204704 | Horn Antenna, 18-26.5GHz | Com-Power | AH-826 | 2023-07-20 | 2025-07-20 |
| **Receiver & Software** | | | | | |
| 206496 | Spectrum Analyzer | Rohde & Schwarz | ESW44 | 2024-08-29 | 2025-08-29 |
| SOFTEMI | EMI Software | UL | Version 9.5 (18 Oct 2021) | | |
| **Additional Equipment used** | | | | | |
| 241205 | Environmental Meter | Fisher Scientific | 15-077-963 | 2023-09-05 | 2025-09-05 |


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Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 4)

| Equip. ID | Description | Manufacturer/Brand | Model Number | Last Cal. | Next Cal. |
|---|---|---|---|---|---|
| **0.009-30MHz** | | | | | |
| 135144 | Active Loop Antenna | ETS-Lindgren | 6502 | 2024-10-02 | 2025-10-02 |
| **30-1000 MHz** | | | | | |
| 90628 | Hybrid Broadband Antenna | Sunol Sciences Corp. | JB3 | 2024-01-02 | 2026-01-02 |
| **1-18 GHz** | | | | | |
| 89509 | Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz | ETS Lindgren | 3117 | 2023-05-23 | 2025-05-23 |
| **Gain-Loss Chains** | | | | | |
| 207638 | Gain-loss string: 0.009-30MHz | Various | Various | 2024-05-22 | 2025-05-22 |
| 207639 | Gain-loss string: 25-1000MHz | Various | Various | 2024-05-22 | 2025-05-22 |
| 207640 | Gain-loss string: 1-18GHz | Various | Various | 2024-05-22 | 2025-05-22 |
| **Receiver & Software** | | | | | |
| 197955 | Spectrum Analyzer | Rohde & Schwarz | ESW44 | 2024-04-16 | 2025-04-16 |
| SOFTEMI | EMI Software | UL | Version 9.5 (18 Oct 2021) | | |
| **Additional Equipment used** | | | | | |
| 241204 | Environmental Meter | Fisher Scientific | 15-077-963 | 2023-09-05 | 2025-09-05 |


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Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 2)

| Equip. ID | Description | Manufacturer/Brand | Model Number | Last Cal. | Next Cal. |
|---|---|---|---|---|---|
| **0.009-30MHz** | | | | | |
| 135144 | Active Loop Antenna | ETS-Lindgren | 6502 | 2024-10-02 | 2025-10-02 |
| **30-1000 MHz** | | | | | |
| 159203 | Hybrid Broadband Antenna | Sunol Sciences Corp. | JB3 | 2024-03-05 | 2026-03-05 |
| **1-18 GHz** | | | | | |
| 86408 | Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz | ETS Lindgren | 3117 | 2023-06-19 | 2025-06-19 |
| **18-40 GHz** | | | | | |
| 204704 | Horn Antenna, 18-26.5GHz | Com-Power | AH-826 | 2023-07-20 | 2025-07-20 |
| **Gain-Loss Chains** | | | | | |
| | Gain-loss string: 0.009-30MHz | Various | Various | | |
| 91978 | Gain-loss string: 25-1000MHz | Various | Various | 2024-05-10 | 2025-05-10 |
| 91977 | Gain-loss string: 1-18GHz | Various | Various | 2024-07-17 | 2025-07-17 |
| 136042 | Gain-loss string: 18-40GHz | Various | Various | 2024-05-10 | 2025-05-10 |
| **Receiver & Software** | | | | | |
| 197954 | Spectrum Analyzer | Rohde & Schwarz | ESW44 | 2024-03-05 | 2025-03-05 |
| SOFTEMI | EMI Software | UL | Version 9.5 (18 Oct 2021) | | |
| **Additional Equipment used** | | | | | |
| 200540 | Environmental Meter | Fisher Scientific | 15-077-963 | 2023-07-19 | 2025-07-19 |
| 236853 | AC Power Source | California Instruments | AST3001 | NA | NA |


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Test Equipment Used – Conducted Emissions Test Equipment – Morrisville (COND2)

| Equip. ID | Description | Manufacturer/Brand | Model Number | Last Cal. | Next Cal. |
|---|---|---|---|---|---|
| 90410 | Spectrum Analyzer | Keysight Technologies | N9030A | 2024-06-14 | 2025-06-14 |
| Power Software | Boonton Power Analyzer | Boonton | Version 3.0.13.0 | NA | NA |
| SOFTEMI | Antenna Port Software | UL | Version 2024.2.23 | NA | NA |
| 211057 | Real-Time Peak Power Sensor 50MHz to 8GHz | Boonton | RTP5000 | 2024-08-01 | 2025-08-01 |
| CBL091 | Micro-Coax UTiFLEX Cable Assembly, Low Loss,40Ghz | Carlisle Interconnect Technologies | UFA147A-2-0360-200200 | 2024-03-01 | 2025-03-31 |
| 211056 | Real-Time Peak Power Sensor 50MHz to 8GHz | Boonton | RTP5000 | 2024-08-01 | 2025-08-01 |
| 226562 | SMA Coaxial 10dB Attenuator 25MHz-18GHz | CentricRF | C18S2-10 | 2024-04-11 | 2025-04-11 |
| 248881 | Environmental Meter | Control Company | 06-662-4 | 2024-04-10 | 2026-04-10 |

Note – All equipment was within calibration at time of test

Test Equipment Used - Line-Conducted Emissions – Voltage (Morrisville – Conducted 1)

| Equipment ID | Description | Manufacturer | Model Number | Last Cal. | Next Cal. |
|---|---|---|---|---|---|
| 70374 | EMI Test Receiver | ROHDE & SCHWARZ | ESCI7 | 2024-07-30 | 2025-07-30 |
| CBL087 | Coax cable, RG223, N-male to BNC-male, 20-ft. | Pasternack | PE3W06143-240 | 2024-04-04 | 2025-04-04 |
| 179892 | Environmental Meter | Fisher Scientific | 15-077-963 | 2024-08-12 | 2025-08-12 |
| 80391 | LISN, 50-ohm/50-uH, 250uH 2-conductor, 25A | Fischer Custom Com. | FCC-LISN-50/250-25-2-01 | 2024-08-01 | 2025-08-01 |
| 52859 | Transient Limiter, 0.009-100MHz | Electro-Metrics | EM-7600 | 2024-04-04 | 2025-04-04 |
| 236852 | CW-AC Power Source | Ametek | CW2501 | NA | NA |
| SOFTEMI | EMI Software | UL | Version 9.5 (18 Oct 2021) | | |

Note – All equipment was within calibration at time of test


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# 8. MEASUREMENT METHOD

On Time and Duty Cycle: ANSI C63.10-2020 Section 11.6

6 dB BW: ANSI C63.10-2020 Subclause -11.8.2

Occupied BW (99%): ANSI C63.10-2020 Section 6.9.3

Output Power: ANSI C63.10-2020 Subclause -11.9.1.2 Method PKPM1 Peak-reading power meter
ANSI C63.10-2020 Subclause -11.9.2.3.2 Method AVGPM-G (Measurement using a gated RF average-reading power meter)

PSD: ANSI C63.10-2020 Subclause -11.10.2 Method PKPSD (peak PSD)

Conducted emissions non-restricted frequency bands: ANSI C63.10-2020 Subclause -11.11 and 6.10.4

Radiated emissions restricted frequency bands: ANSI C63.10-2020 Subclause -11.12.1 and 6.10.5

General radiated emissions: ANSI C63.10 Subclause - 6.3-6.6

AC Power-line conducted emissions: ANSI C63.10-2020, Section 6.2.


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# 9. ANTENNA PORT TEST RESULTS

## 9.1. ON TIME AND DUTY CYCLE

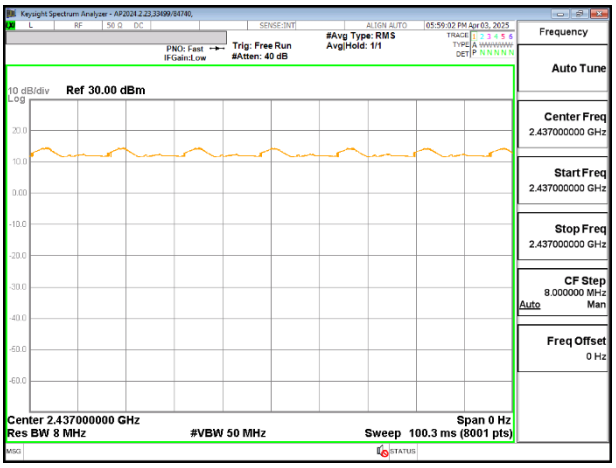
**LIMITS**

None; for reporting purposes only.

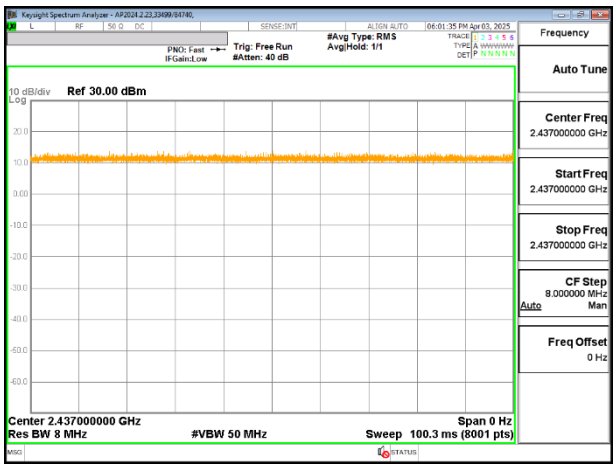
**PROCEDURE**

KDB 558074 Zero-Span Spectrum Analyzer Method.

| Mode | ON Time B (ms) | Period (ms) | Duty Cycle x (linear) | Duty Cycle (%) | Voltage Duty Cycle Correction Factor (dB) | RMS Duty Cycle Correction Factor (dB) |
|---|---|---|---|---|---|---|
| 802.11b | 100.00 | 100.00 | 1.000 | 100.00 | 0.00 | 0.00 |
| 802.11g | 100.00 | 100.00 | 1.000 | 100.00 | 0.00 | 0.00 |
| 802.11n HT20 | 100.00 | 100.00 | 1.000 | 100.00 | 0.00 | 0.00 |
| ANT/ANT+ | 100.00 | 100.00 | 1.000 | 100.00 | 0.00 | 0.00 |
| BLE 1Mbps | 100.00 | 100.00 | 1.000 | 100.00 | 0.00 | 0.00 |
| BLE 2Mbps | 100.00 | 100.00 | 1.000 | 100.00 | 0.00 | 0.00 |




DUTY CYCLE 802.11b MODE




DUTY CYCLE 802.11g MODE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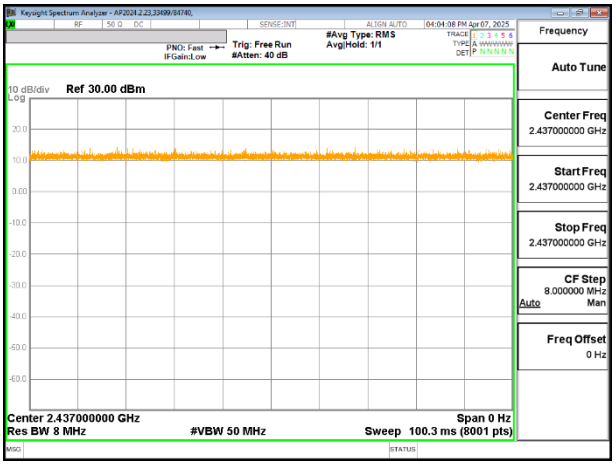
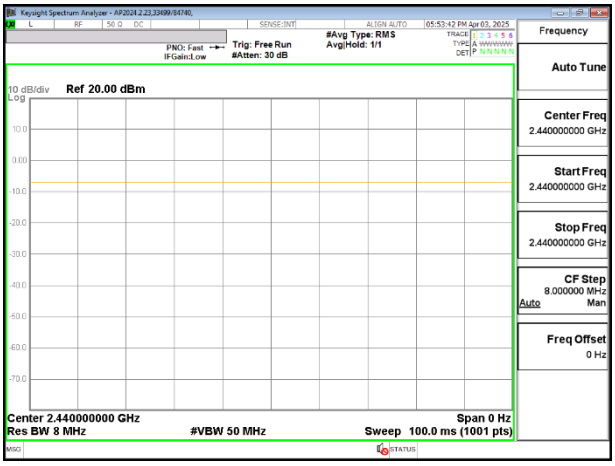
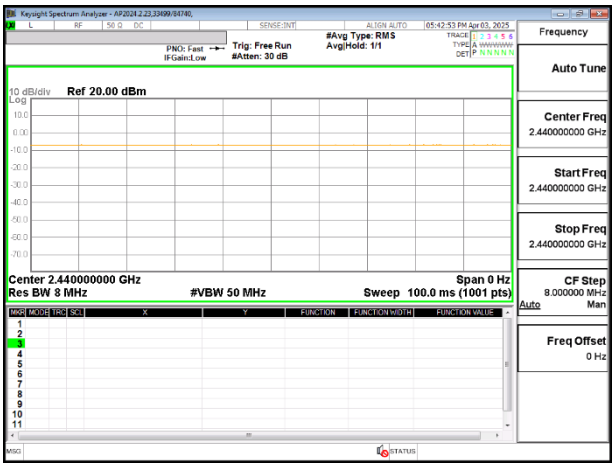


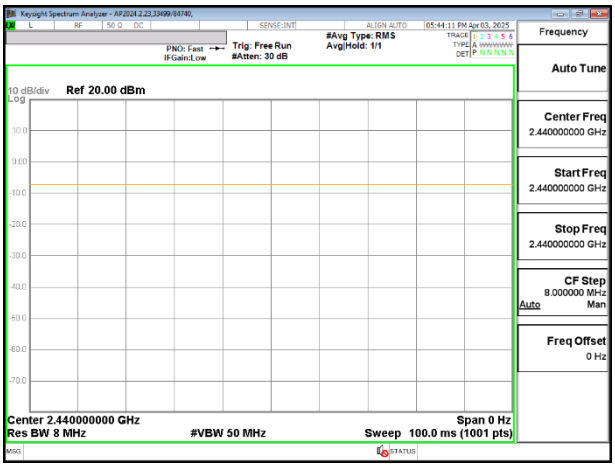

DUTY CYCLE 802.11n HT20 MODE




DUTY CYCLE ANT/ANT+ MODE




DUTY CYCLE BLE 1Mbps




DUTY CYCLE BLE 2Mbps



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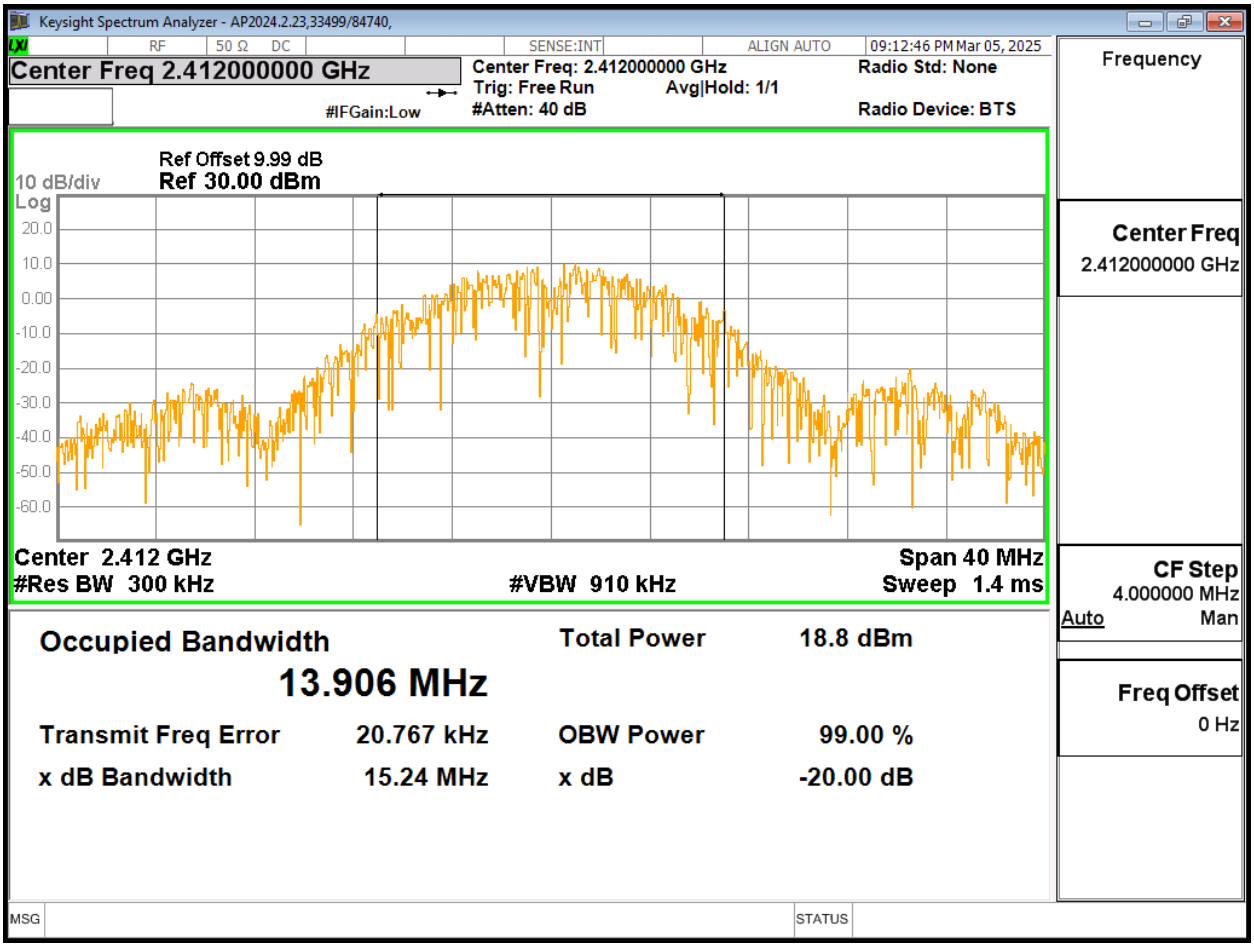
## 9.2. 99% BANDWIDTH

**LIMITS**

None; for reporting purposes only.

### 9.2.1. 802.11b MODE

| Channel | Frequency (MHz) | 99% Bandwidth Chain 0 (MHz) |
|---|---|---|
| Low 1 | 2412 | 13.906 |
| Mid 6 | 2437 | 14.652 |
| High 13 | 2472 | 14.032 |

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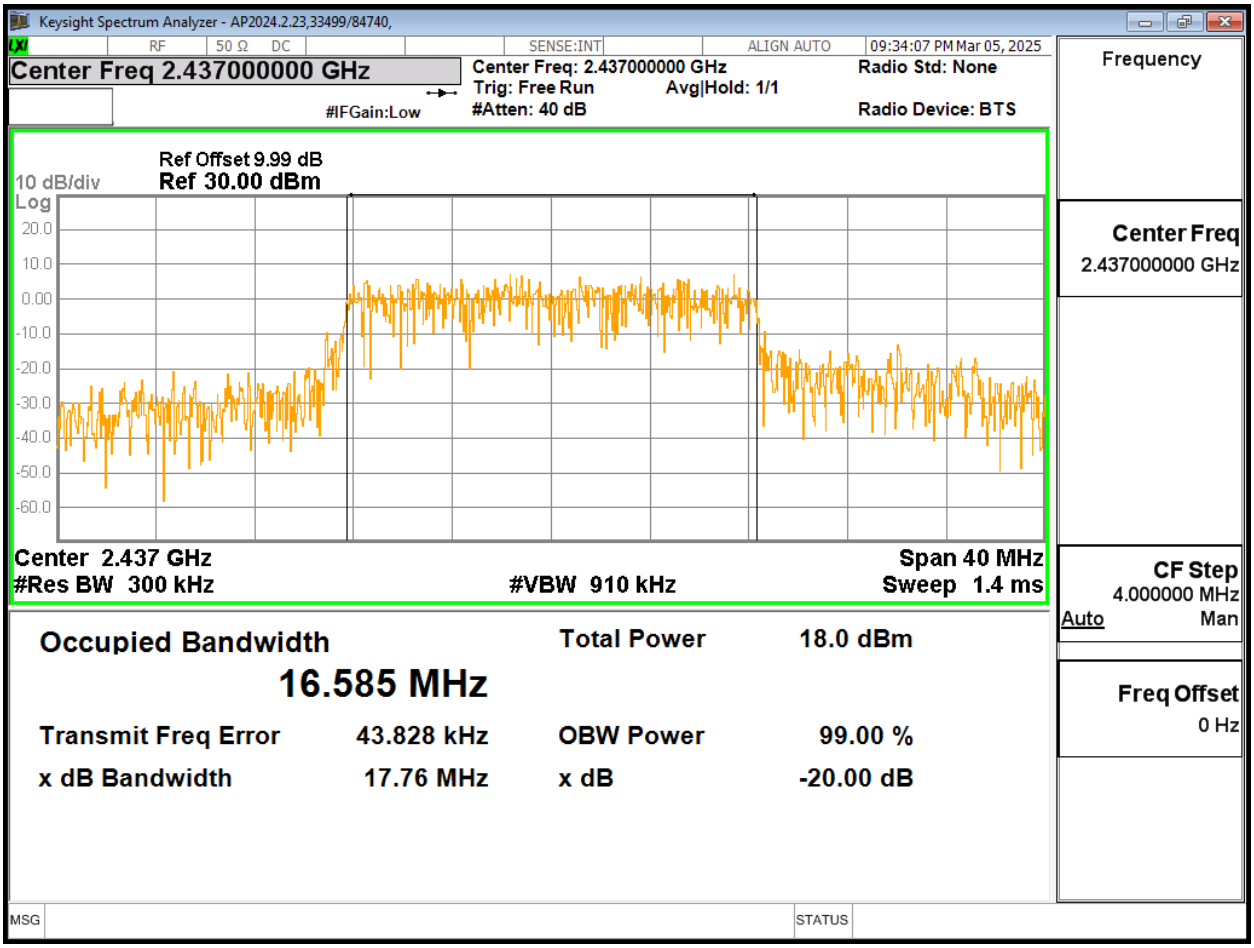
### 9.2.2. 802.11g MODE

| Channel | Frequency (MHz) | 99% Bandwidth Chain 0 (MHz) |
|---|---|---|
| Low 1 | 2412 | 16.13 |
| Mid 6 | 2437 | 16.585 |
| High 13 | 2472 | 16.295 |




**MID CHANNEL**



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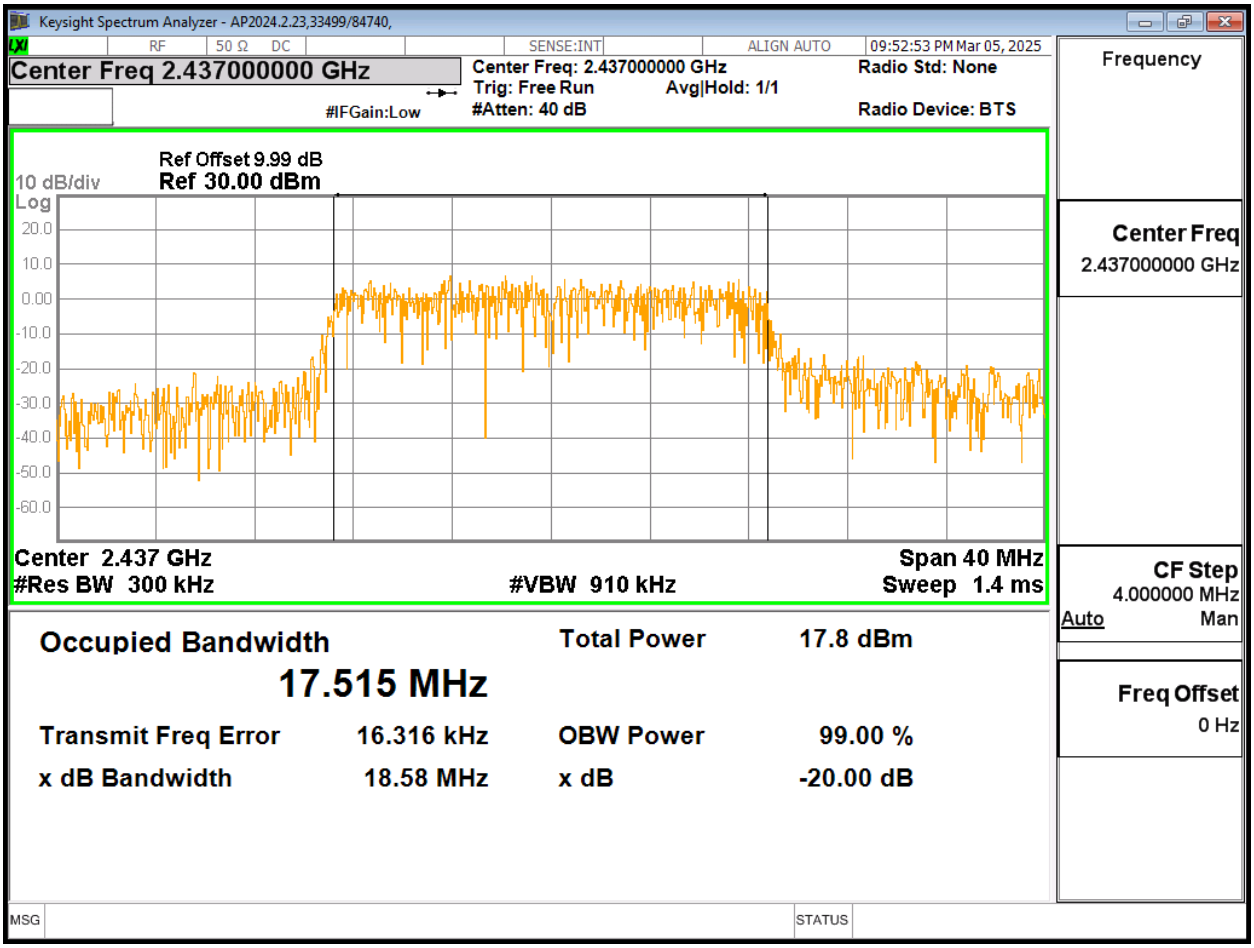
### 9.2.3. 802.11n HT20 MODE

| Channel | Frequency (MHz) | 99% Bandwidth Chain 0 (MHz) |
|---|---|---|
| Low 1 | 2412 | 16.961 |
| Mid 6 | 2437 | 17.515 |
| High 13 | 2472 | 17.052 |

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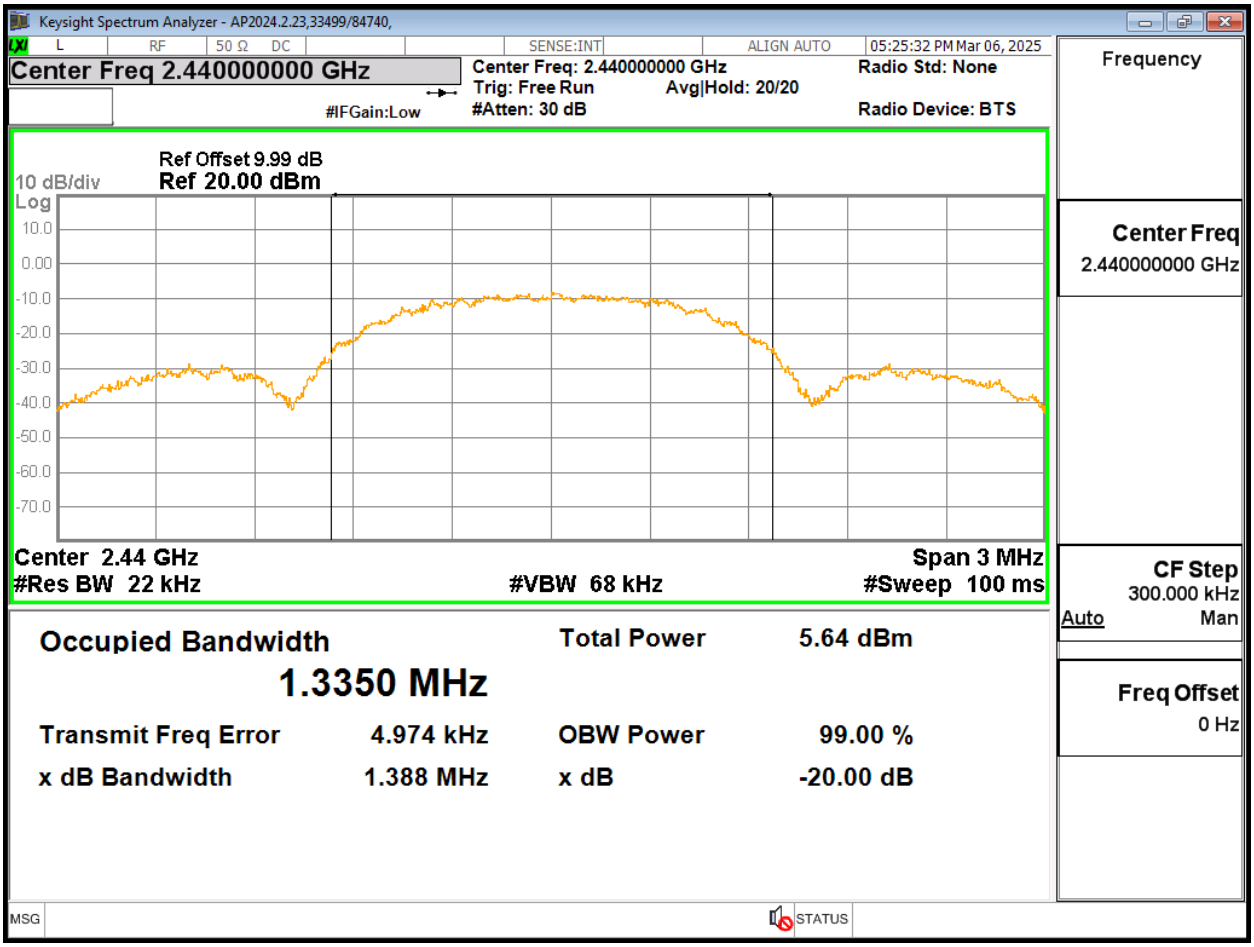
### 9.2.4. ANT/ANT+ MODE

| Frequency (MHz) | 99% Bandwidth Chain 0 (MHz) |
|---|---|
| 2402 | 1.3178 |
| 2404 | 1.2911 |
| 2440 | 1.3350 |
| 2478 | 1.3369 |
| 2480 | 1.5835 |

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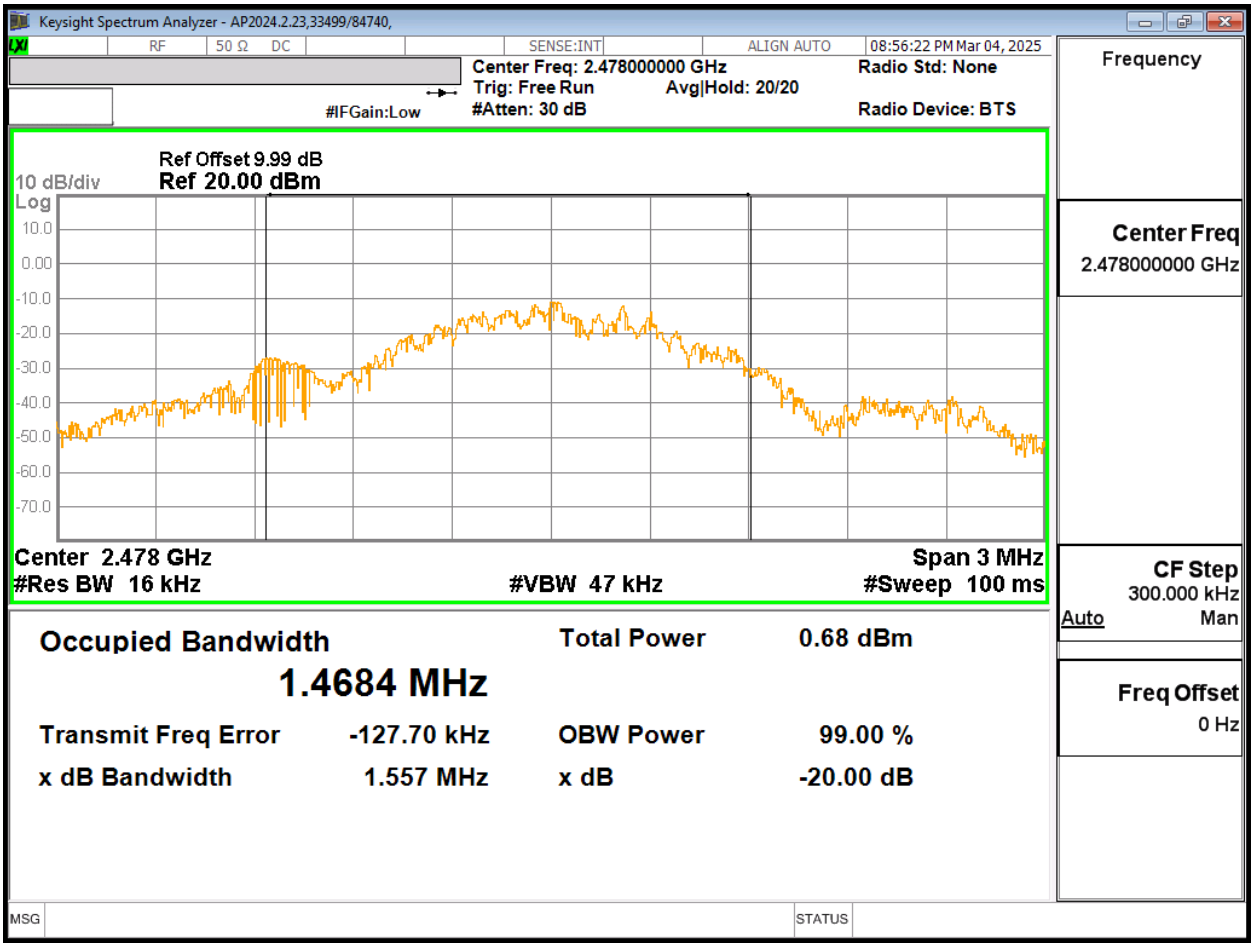
### 9.2.5. BLE 1Mbps MODE

| Channel | Frequency (MHz) | 99% Bandwidth Chain 0 (MHz) |
|---|---|---|
| Low 37 | 2402 | 1.3228 |
| Low 0 | 2404 | 1.4527 |
| Mid 17 | 2440 | 1.2932 |
| High 35 | 2476 | 1.2727 |
| High 36 | 2478 | 1.4684 |
| High 38 | 2480 | 1.5205 |

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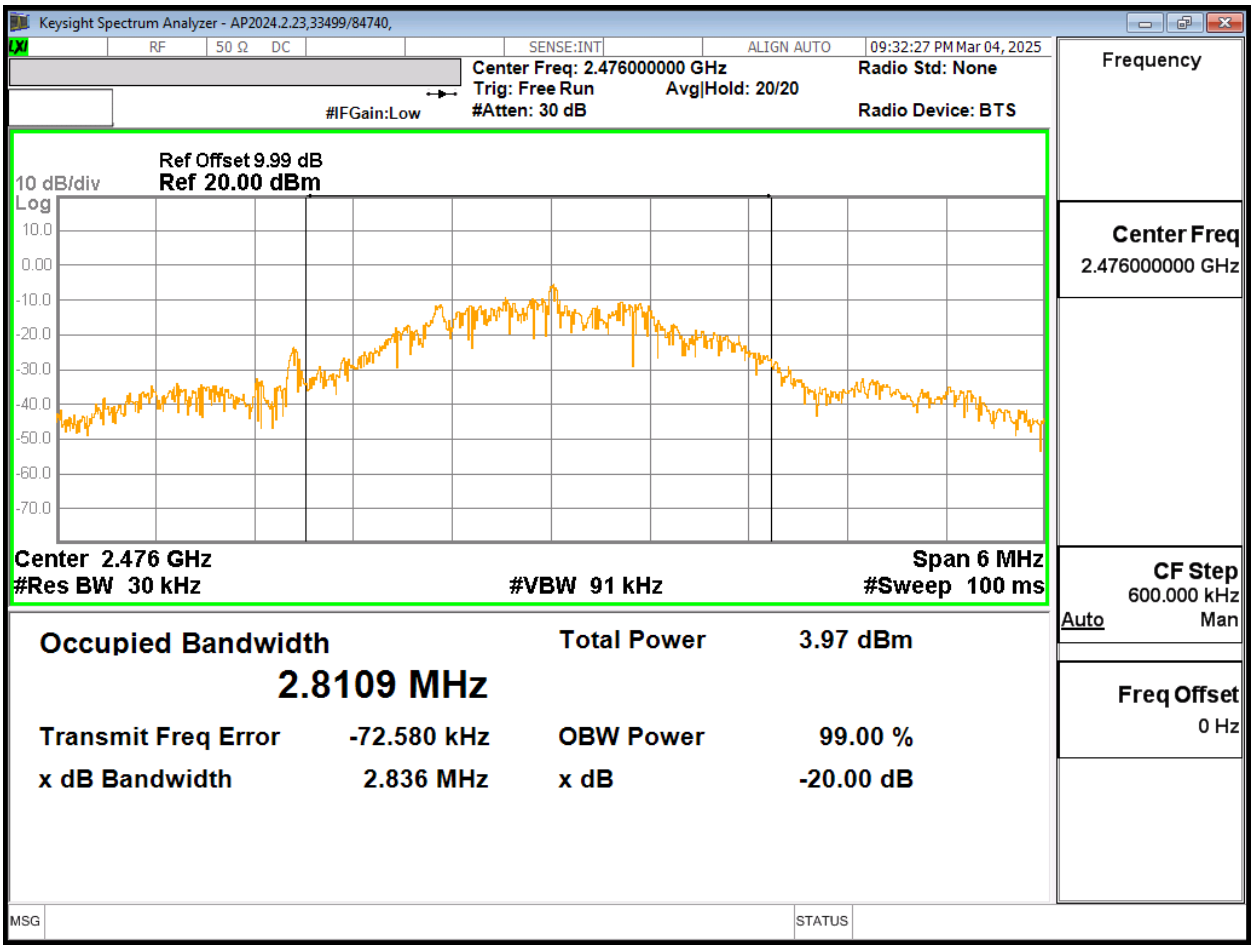
### 9.2.6. BLE 2Mbps MODE

| Channel | Frequency (MHz) | 99% Bandwidth Chain 0 (MHz) |
|---|---|---|
| Low 0 | 2404 | 2.9440 |
| Mid 17 | 2440 | 2.7297 |
| High 35 | 2476 | 2.8109 |
| High 36 | 2478 | 2.5355 |

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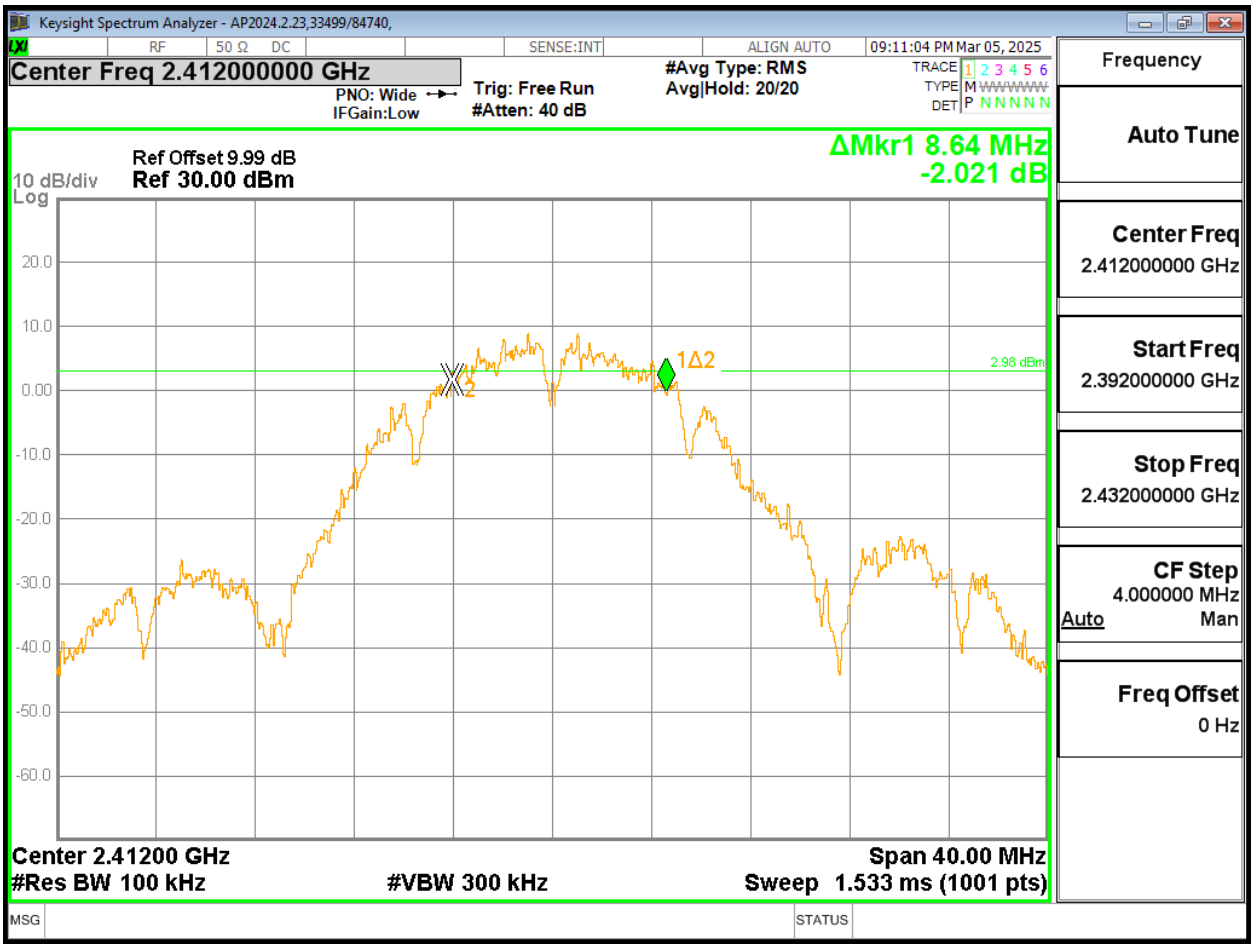
## 9.3. 6 dB BANDWIDTH

**LIMITS**
FCC §15.247 (a) (2)
RSS-247 5.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

### 9.3.1. 802.11b MODE

| Channel | Frequency (MHz) | 6 dB BW Chain 0 (MHz) | Minimum Limit (MHz) |
|---|---|---|---|
| Low 1 | 2412 | 8.64 | 0.5 |
| Mid 6 | 2437 | 6.24 | 0.5 |
| High 13 | 2472 | 8.88 | 0.5 |

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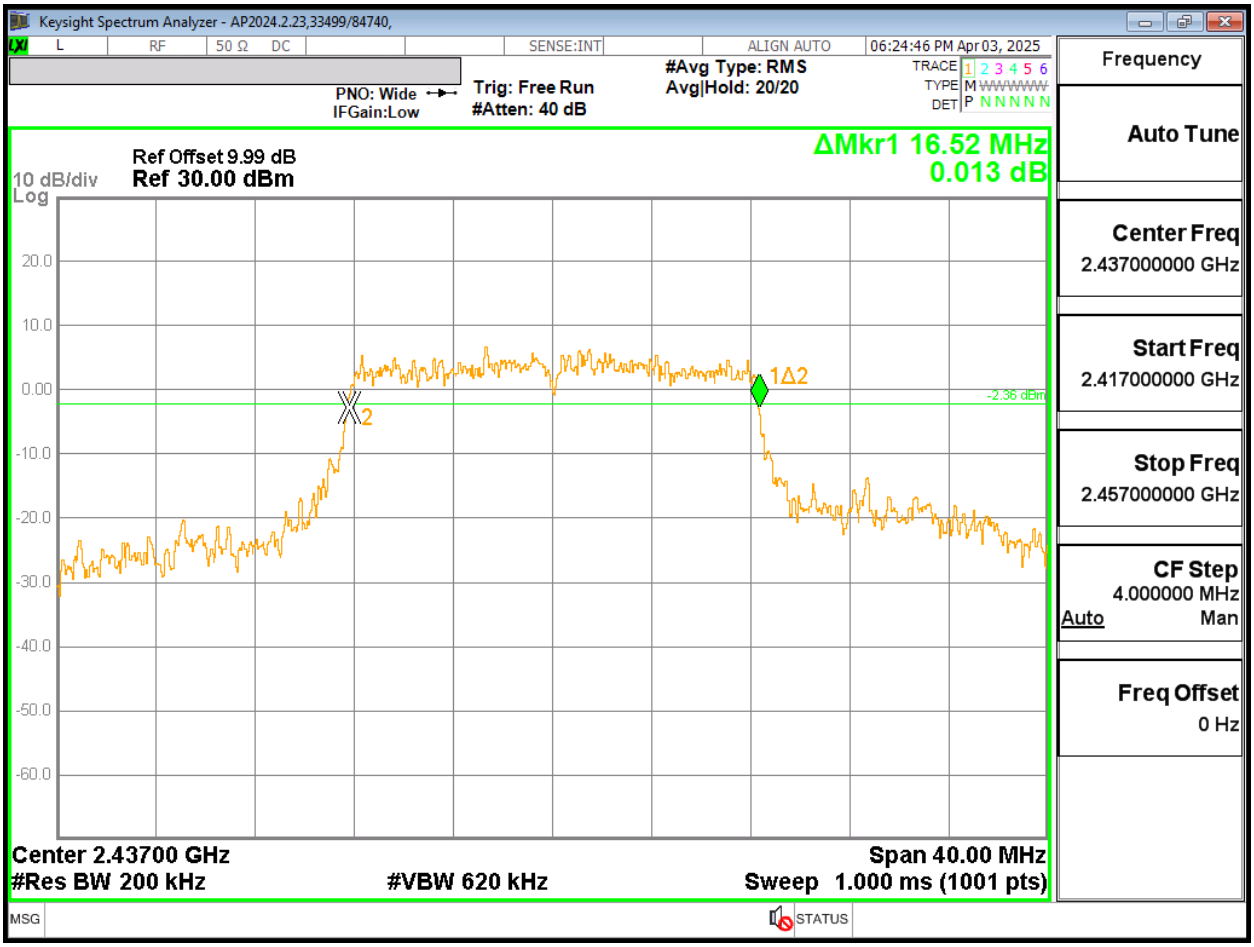
### 9.3.2. 802.11g MODE

| Channel | Frequency (MHz) | 6 dB BW Chain 0 (MHz) | Minimum Limit (MHz) |
|---|---|---|---|
| Low 1 | 2412 | 16.12 | 0.5 |
| Mid 6 | 2437 | 16.52 | 0.5 |
| High 13 | 2472 | 16.28 | 0.5 |

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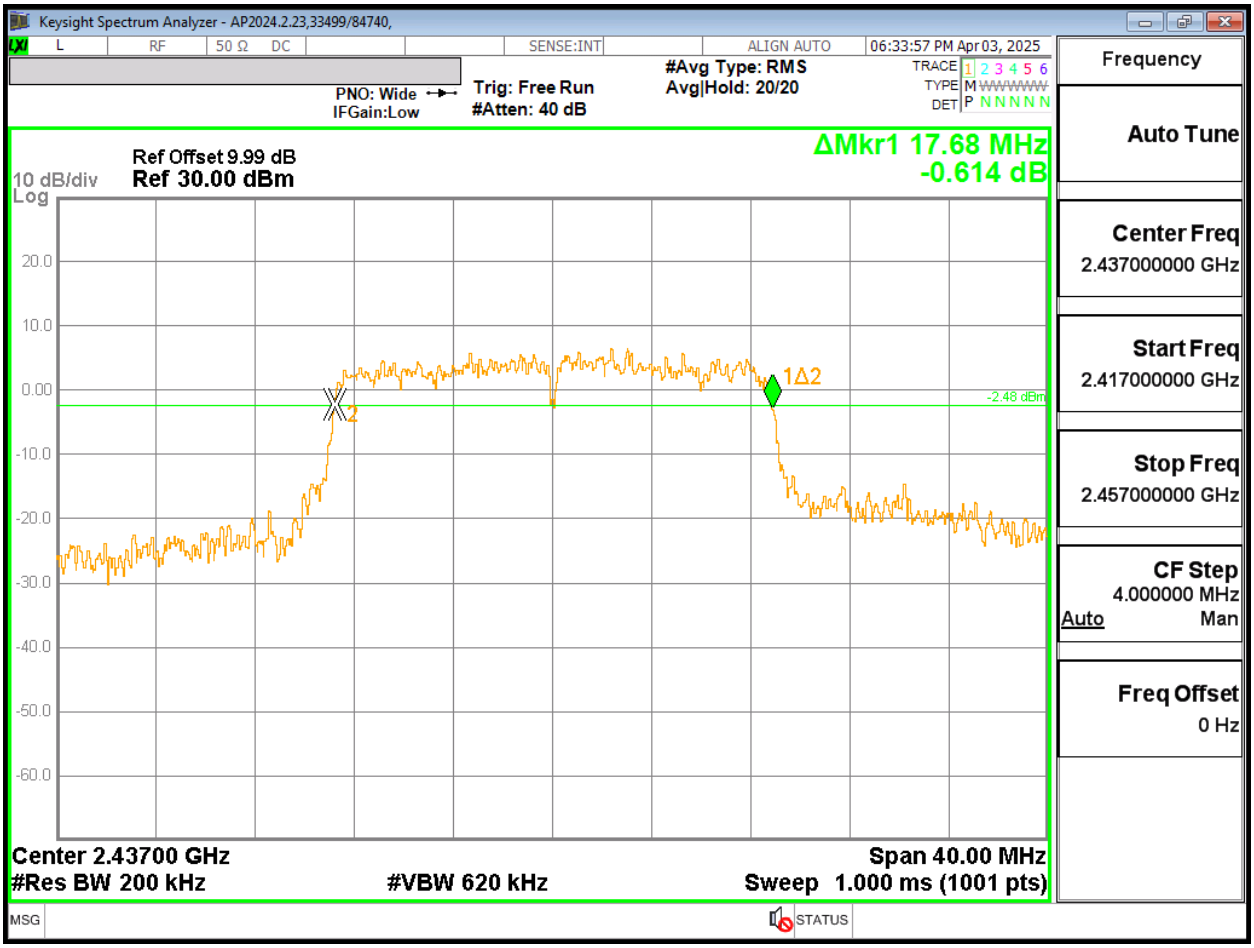
### 9.3.3. 802.11n HT20 MODE

| Channel | Frequency (MHz) | 6 dB BW Chain 0 (MHz) | Minimum Limit (MHz) |
|---|---|---|---|
| Low 1 | 2412 | 16.28 | 0.5 |
| Mid 6 | 2437 | 17.68 | 0.5 |
| High 13 | 2472 | 16.56 | 0.5 |

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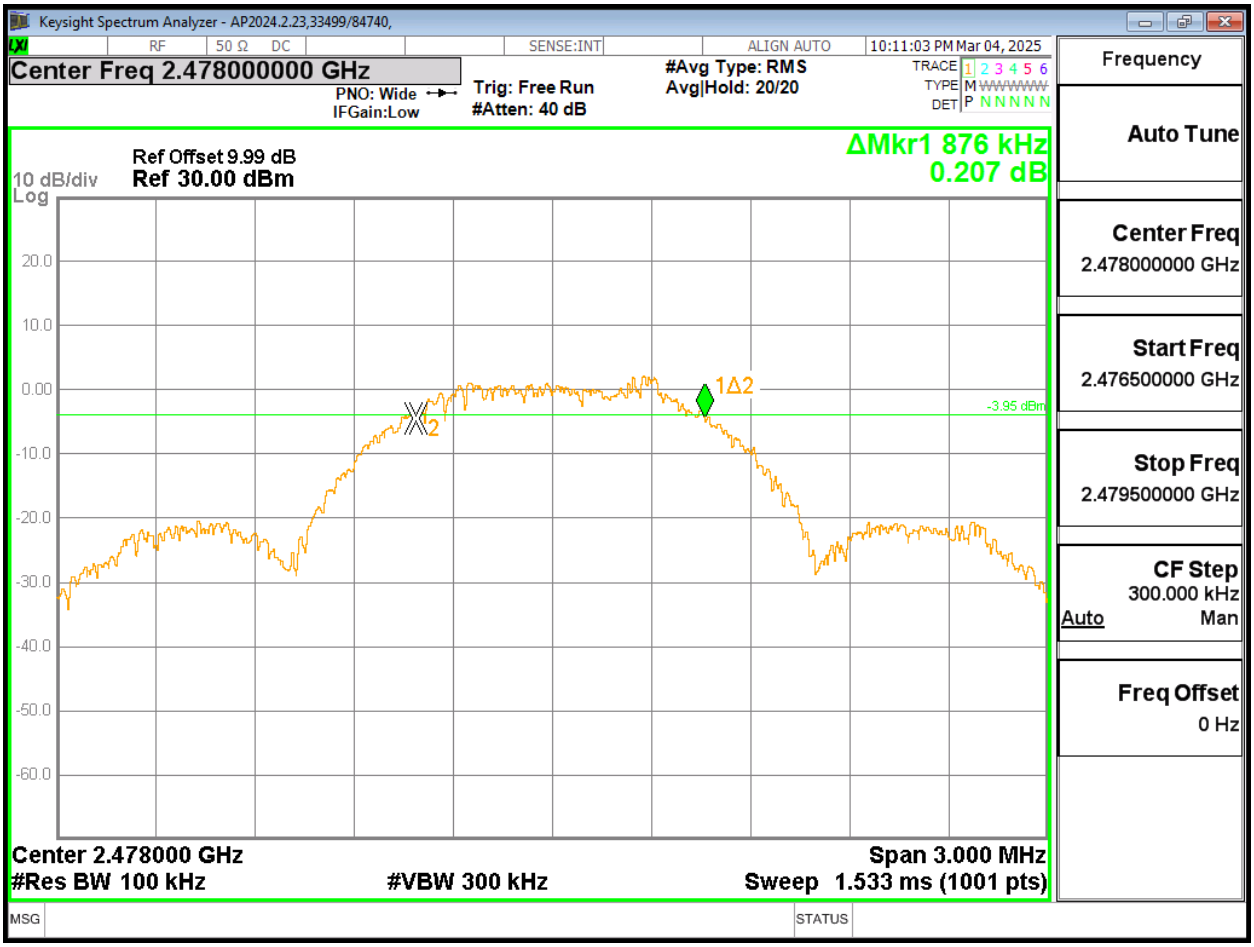
### 9.3.4. ANT/ANT+ MODE

| Frequency (MHz) | 6 dB Bandwidth Chain 0 (MHz) | Minimum Limit (MHz) |
|---|---|---|
| 2402 | 0.885 | 0.5 |
| 2404 | 0.810 | 0.5 |
| 2440 | 0.891 | 0.5 |
| 2478 | 0.876 | 0.5 |
| 2480 | 0.951 | 0.5 |

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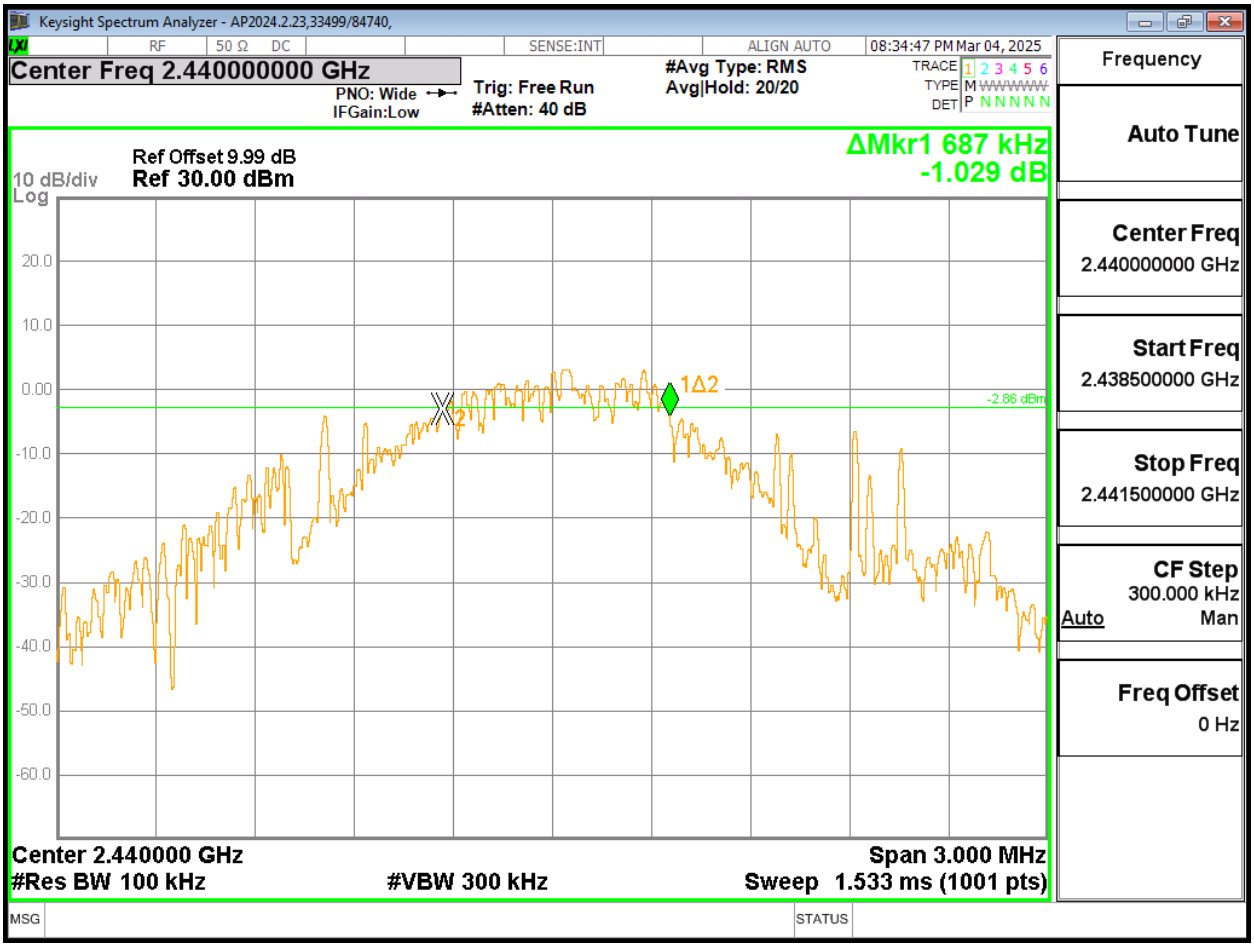
### 9.3.5. BLE 1Mbps MODE

| Channel | Frequency (MHz) | 6 dB Bandwidth Chain 0 (MHz) | Minimum Limit (MHz) |
|---|---|---|---|
| Low 37 | 2402 | 0.681 | 0.5 |
| Low 0 | 2404 | 0.693 | 0.5 |
| Mid 17 | 2440 | 0.687 | 0.5 |
| High 35 | 2476 | 0.675 | 0.5 |
| High 36 | 2478 | 0.660 | 0.5 |
| High 39 | 2480 | 0.696 | 0.5 |




**MID CHANNEL 17**



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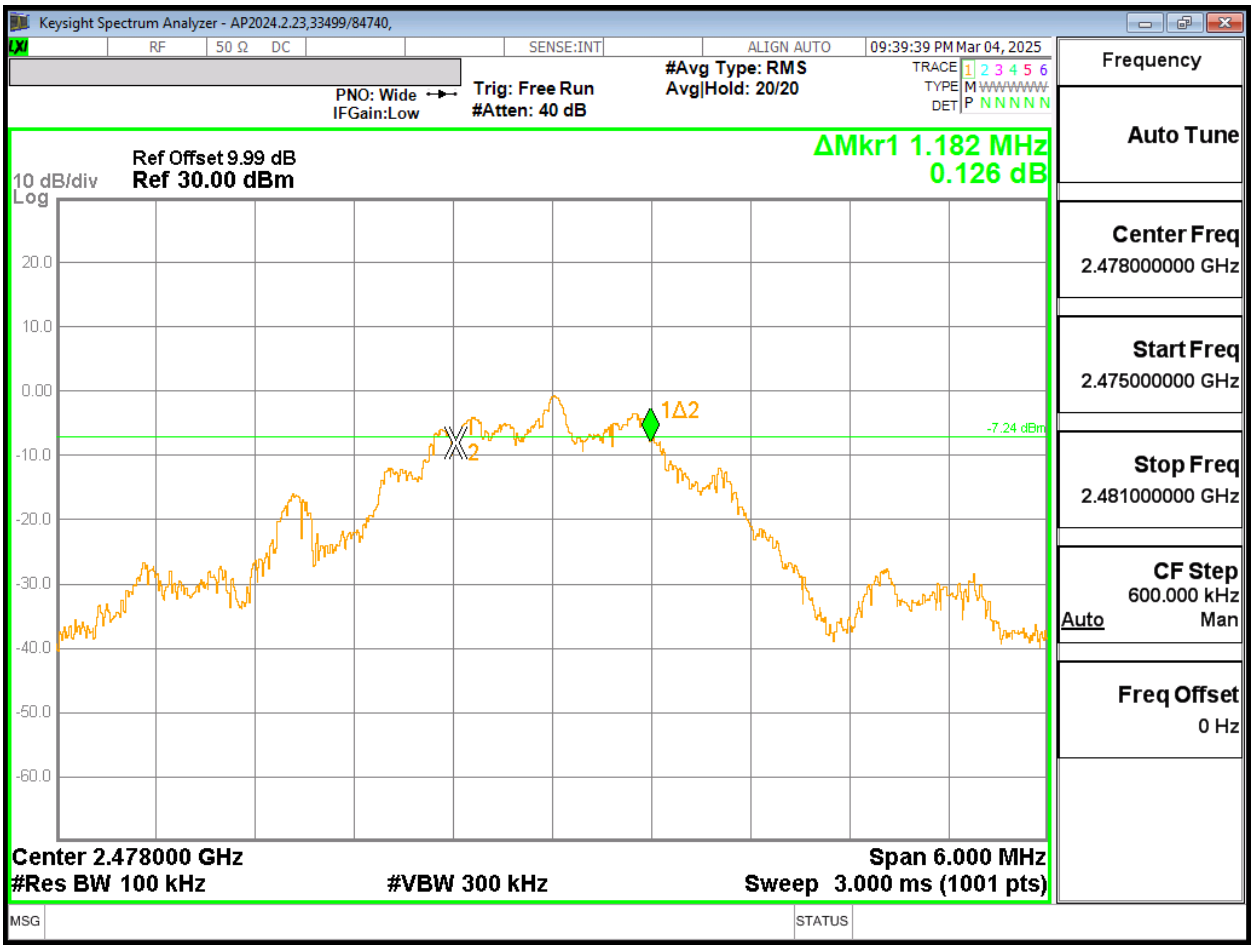
### 9.3.6. BLE 2Mbps MODE

| Channel | Frequency (MHz) | 6 dB Bandwidth Chain 0 (MHz) | Minimum Limit (MHz) |
|---|---|---|---|
| Low 0 | 2404 | 1.272 | 0.5 |
| Mid 17 | 2440 | 1.326 | 0.5 |
| High 35 | 2476 | 1.362 | 0.5 |
| High 36 | 2478 | 1.182 | 0.5 |




**HIGH CHANNEL 36**



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## 9.4. OUTPUT POWER

**LIMITS**

FCC §15.247 (b) (3)
RSS-247 5.4 (d)

**TEST PROCEDURE**

The transmitter output is connected to a power meter.

The cable assembly insertion loss of .68 dB (cable) was entered as an offset in the power meter.

The power output was measured on the EUT antenna port using SMA cable connected to a power meter via wideband power sensor. Peak output power was read directly from power meter.

**RESULTS**

### 9.4.1. 802.11b MODE

| | |
|---|---|
| **Test Engineer:** | 33499 |
| **Test Date:** | 2025-03-04, 2025-03-05, 2025-03-07 |

**Results:**

| Channel | Frequency (MHz) | Chain 0 Meas Power (dBm) | Power Limit (dBm) | Margin (dB) |
|---|---|---|---|---|
| Low 1 | 2412 | 21.50 | 30.00 | -8.5 |
| Mid 6 | 2437 | 21.39 | 30.00 | -8.61 |
| High 12 | 2467 | 21.56 | 30.00 | -8.44 |
| High 13 | 2472 | 19.09 | 30.00 | -10.91 |


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### 9.4.2. 802.11g MODE

| | |
|---|---|
| **Test Engineer:** | 334499 |
| **Test Date:** | 2025-03-04, 2025-03-05, 2025-03-07 |

**Results:**

| Channel | Frequency (MHz) | Chain 0 Meas Power (dBm) | Power Limit (dBm) | Margin (dB) |
|---|---|---|---|---|
| Low 1 | 2412 | 23.78 | 30.00 | -6.22 |
| Mid 6 | 2437 | 23.82 | 30.00 | -6.18 |
| High 11 | 2462 | 23.83 | 30.00 | -6.17 |
| High 12 | 2467 | 22.27 | 30.00 | -7.73 |
| High 13 | 2472 | 21.38 | 30.00 | -8.62 |

### 9.4.3. 802.11n HT20 MODE

| | |
|---|---|
| **Test Engineer:** | 334499 |
| **Test Date:** | 2025-03-04, 2025-03-05, 2025-03-07 |

**Results:**

| Channel | Frequency (MHz) | Chain 0 Meas Power (dBm) | Power Limit (dBm) | Margin (dB) |
|---|---|---|---|---|
| Low 1 | 2412 | 23.54 | 30.00 | -6.46 |
| Mid 6 | 2437 | 24.18 | 30.00 | -5.82 |
| High 10 | 2457 | 24.05 | 30.00 | -5.95 |
| High 11 | 2462 | 22.81 | 30.00 | -7.19 |
| High 12 | 2467 | 22.76 | 30.00 | -7.24 |
| High 13 | 2472 | 22.19 | 30.00 | -7.81 |


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### 9.4.4. ANT/ANT+ MODEI

| | |
|---|---|
| **Test Engineer:** | 334499 |
| **Test Date:** | 2025-03-04, 2025-03-05, 2025-03-07 |

| Frequency (MHz) | Chain 0 Meas Power (dBm) | Power Limit (dBm) | Margin (dB) |
|---|---|---|---|
| 2402 | -0.11 | 30.00 | -30.11 |
| 2404 | 4.03 | 30.00 | -25.97 |
| 2440 | 4.07 | 30.00 | -25.93 |
| 2478 | 4.10 | 30.00 | -25.9 |
| 2480 | 0.04 | 30.00 | -29.96 |

### 9.4.5. BLE 1Mbps MODE

| | |
|---|---|
| **Test Engineer:** | 334499 |
| **Test Date:** | 2025-03-04, 2025-03-05, 2025-03-07 |

| Channel | Frequency (MHz) | Chain 0 Meas Power (dBm) | Power Limit (dBm) | Margin (dB) |
|---|---|---|---|---|
| Low 0 | 2402 | -0.66 | 30.00 | -30.66 |
| Low 1 | 2404 | 3.95 | 30.00 | -26.05 |
| Mid 17 | 2440 | 3.97 | 30.00 | -26.03 |
| High 35 | 2476 | 3.65 | 30.00 | -26.35 |
| High 36 | 2478 | -0.55 | 30.00 | -30.55 |
| High 39 | 2480 | -0.54 | 30.00 | -30.54 |


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### 9.4.6. BLE 2Mbps MODE

| | |
|---|---|
| **Test Engineer:** | 334499 |
| **Test Date:** | 2025-03-04, 2025-03-05, 2025-03-07 |

| Channel | Frequency (MHz) | Chain 0 Meas Power (dBm) | Power Limit (dBm) | Margin (dB) |
|---|---|---|---|---|
| Low 1 | 2404 | 3.93 | 30.00 | -26.07 |
| Mid 17 | 2440 | 3.97 | 30.00 | -26.03 |
| High 35 | 2476 | 4.02 | 30.00 | -25.98 |
| High 36 | 2478 | -0.45 | 30.00 | -30.45 |


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## 9.5. AVERAGE POWER

**LIMITS**

None; for reporting purposes only

**TEST PROCEDURE**

The transmitter output is connected to a power meter.

The cable assembly insertion loss of .68 dB (cable) was entered as an offset in the power meter.

The power output was measured on the EUT antenna port using SMA cable with 10dB attenuator connected to a power meter via wideband power sensor. Gated average output power was read directly from power meter.

### 9.5.1. 2.4 WLAN Results

| | |
|---|---|
| **Test Engineer:** | 334499 |
| **Test Date:** | 2025-03-04, 2025-03-05, 2025-03-07 |

| Mode | Channel | Frequency (MHz) | Chain 0 Meas Power (dBm) |
|---|---|---|---|
| 802.11b | Low 1 | 2412 | 19.02 |
| | Mid 6 | 2437 | 18.92 |
| | High 11 | 2462 | 19.86 |
| | High 12 | 2467 | 19.11 |
| | High 13 | 2472 | 16.80 |
| 802.11g | Low 1 | 2412 | 17.74 |
| | Mid 6 | 2437 | 17.93 |
| | High 10 | 2457 | 18.25 |
| | High 11 | 2462 | 18.11 |
| | High 12 | 2467 | 15.72 |
| | High 13 | 2472 | 14.19 |
| 802.11nHT20 | Low 1 | 2412 | 17.24 |
| | Mid 6 | 2437 | 18.31 |
| | High 10 | 2457 | 18.55 |
| | High 11 | 2462 | 16.11 |
| | High 12 | 2467 | 16.07 |
| | High 13 | 2472 | 15.73 |


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### 9.5.2. ANT/ANT+

| | |
|---|---|
| **Test Engineer:** | 334499 |
| **Test Date:** | 2025-03-04, 2025-03-05, 2025-03-07 |

| Frequency (MHz) | Chain 0 Meas Power (dBm) |
|---|---|
| 2402 | -0.37 |
| 2404 | 3.81 |
| 2440 | 3.82 |
| 2478 | 3.89 |
| 2480 | -0.25 |

### 9.5.3. BLE 1Mbps Mode

| | |
|---|---|
| **Test Engineer:** | 334499 |
| **Test Date:** | 2025-03-04, 2025-03-05, 2025-03-07 |

| Channel | Frequency (MHz) | Chain 0 Meas Power (dBm) |
|---|---|---|
| Low 39 | 2402 | -1.18 |
| Low 0 | 2404 | 3.48 |
| Mid 17 | 2440 | 3.49 |
| High 35 | 2476 | 3.19 |
| High 36 | 2478 | -1.08 |
| High 39 | 2480 | -1.23 |


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### 9.5.4. BLE 2Mbps Mode

| | |
|---|---|
| **Test Engineer:** | 334499 |
| **Test Date:** | 2025-03-04, 2025-03-05, 2025-03-07 |

| Channel | Frequency (MHz) | Chain 0 Meas Power (dBm) |
|---|---|---|
| Low 0 | 2404 | 3.42 |
| Mid 17 | 2440 | 3.46 |
| High 35 | 2476 | 3.50 |
| High 36 | 2478 | -1.11 |


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## 9.6. POWER SPECTRAL DENSITY

**LIMITS**

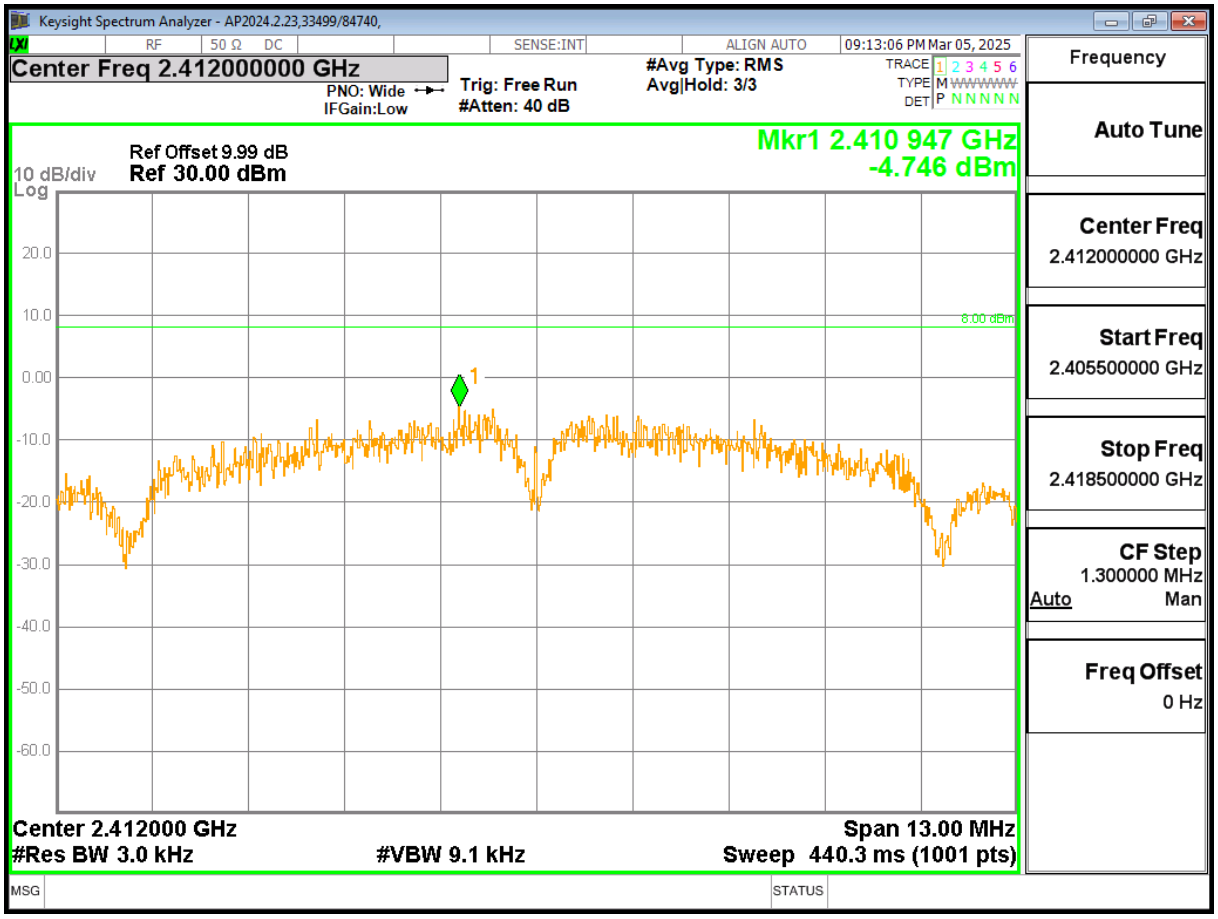
FCC §15.247 (e)
RSS-247 (5.2) (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

### 9.6.1. 802.11b MODE

**PSD Results**

| Channel | Frequency (MHz) | Chain 0 Meas (dBm/ 3kHz) | Limit (dBm/ 3kHz) | Margin (dB) |
|---|---|---|---|---|
| Low 1 | 2412 | -4.75 | 8.0 | -12.7 |
| Mid 6 | 2437 | -4.79 | 8.0 | -12.8 |
| High 13 | 2472 | -2.94 | 8.0 | -10.9 |




**LOW CHANNEL**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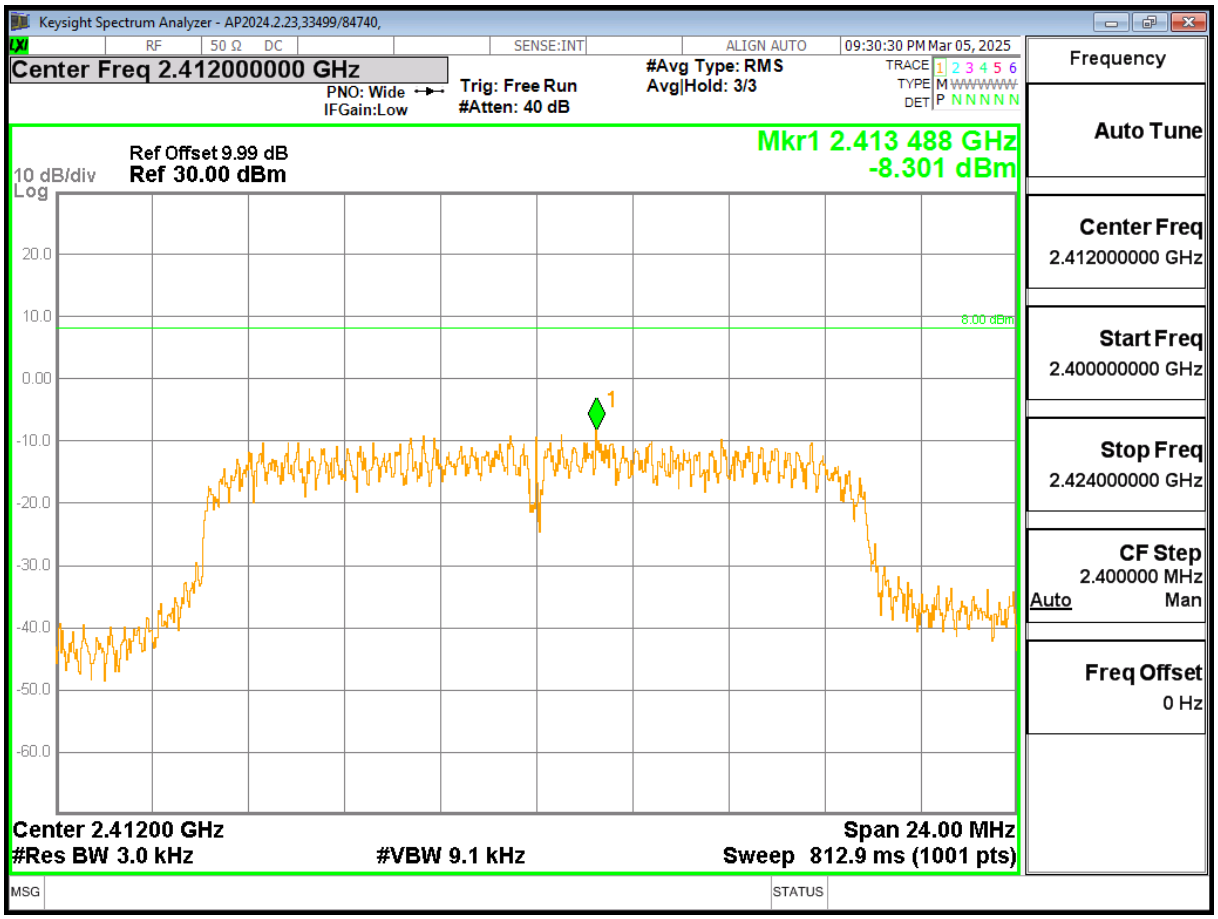
## 9.6.2. 802.11g MODE

**PSD Results**

| Channel | Frequency (MHz) | Chain 0 Meas (dBm/ 3kHz) | Limit (dBm/ 3kHz) | Margin (dB) |
|---|---|---|---|---|
| Low 1 | 2412 | -8.30 | 8.0 | -16.3 |
| Mid 6 | 2437 | -10.50 | 8.0 | -18.5 |
| High 13 | 2472 | -7.40 | 8.0 | -15.4 |




**LOW CHANNEL**



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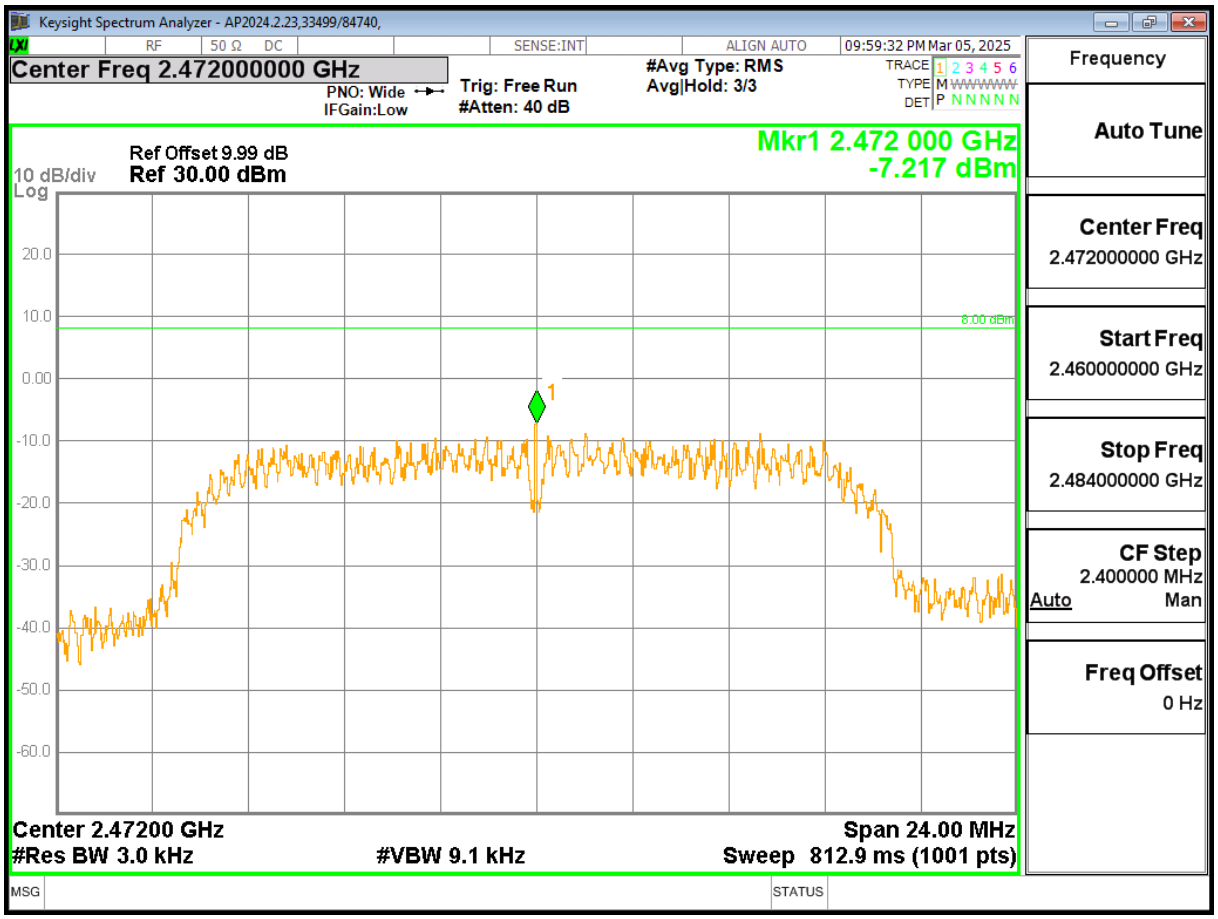
### 9.6.3. 802.11n HT20 MODE

**PSD Results**

| Channel | Frequency (MHz) | Chain 0 Meas (dBm/ 3kHz) | Limit (dBm/ 3kHz) | Margin (dB) |
|---|---|---|---|---|
| Low 1 | 2412 | -8.59 | 8.0 | -16.6 |
| Mid 6 | 2437 | -7.74 | 8.0 | -15.7 |
| High 13 | 2472 | -7.22 | 8.0 | -15.2 |




**HIGH CHANNEL**



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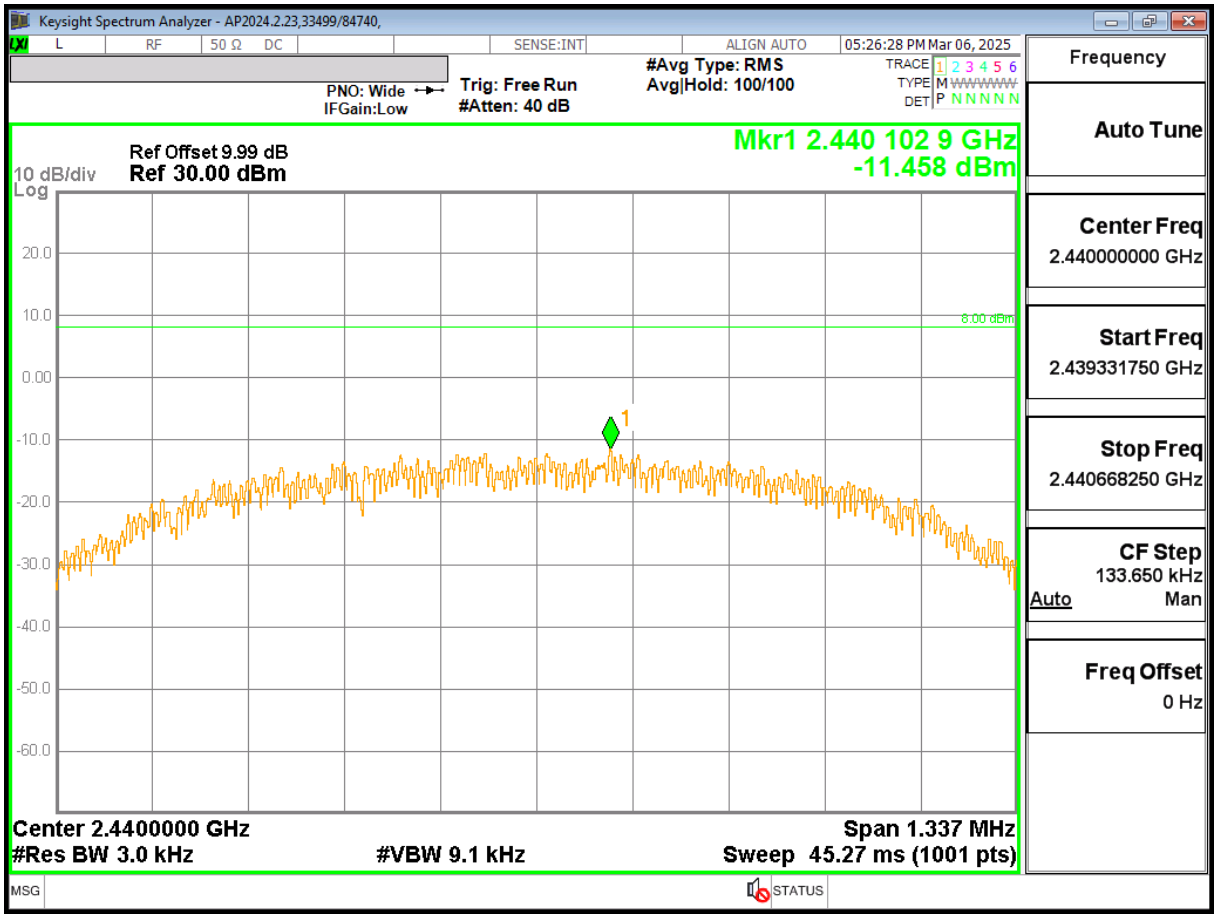
## 9.6.4. ANT/ANT+ MODE

**PSD Results**

| Frequency (MHz) | Chain 0 Meas (dBm/ 3kHz) | Limit (dBm/ 3kHz) | Margin (dB) |
|---|---|---|---|
| 2402 | -17.33 | 8.0 | -25.3 |
| 2404 | -12.00 | 8.0 | -20.0 |
| 2440 | -11.46 | 8.0 | -19.5 |
| 2478 | -11.73 | 8.0 | -19.7 |
| 2480 | -17.68 | 8.0 | -25.7 |




**MID CHANNEL**



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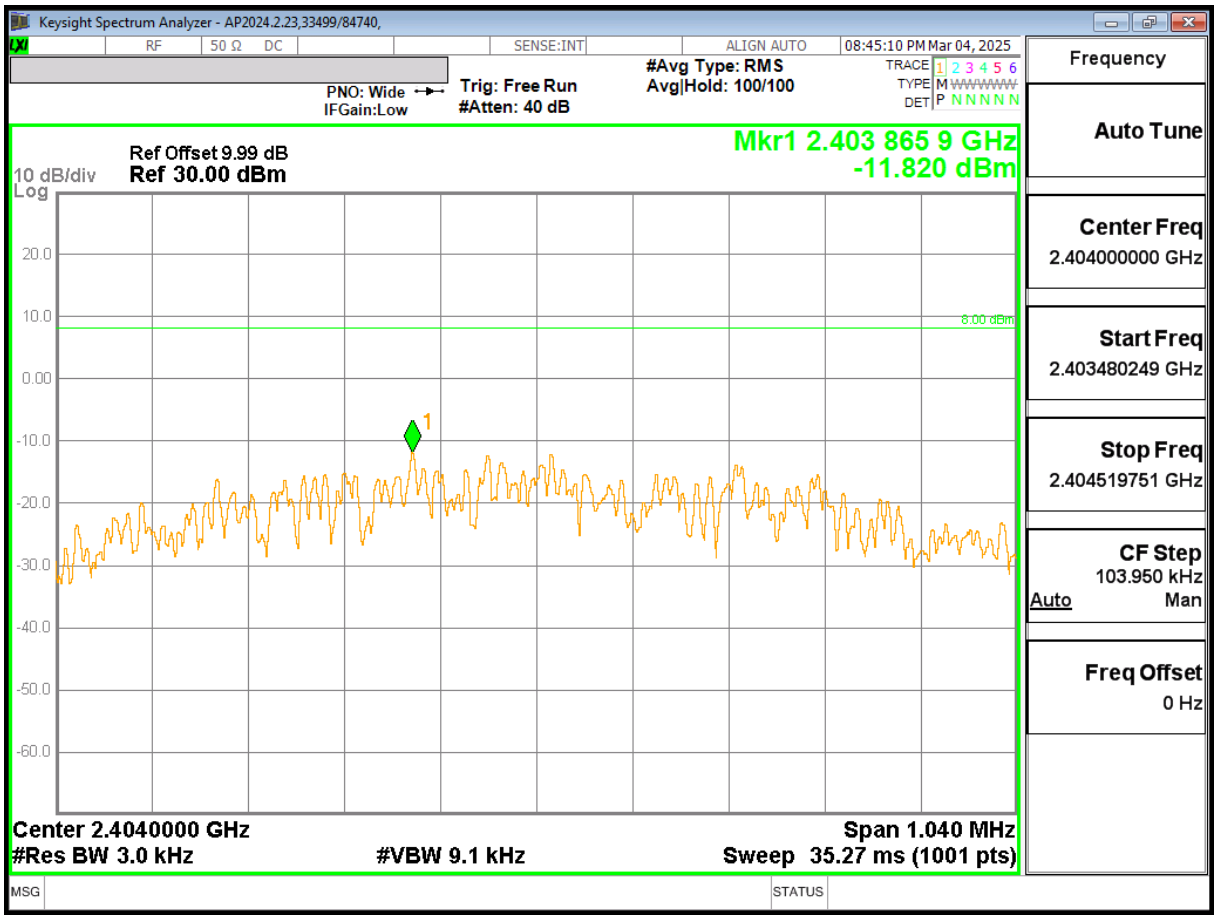
### 9.6.5. BLE 1Mbps MODE

**PSD Results**

| Channel | Frequency (MHz) | Chain 0 Meas (dBm/ 3kHz) | Limit (dBm/ 3kHz) | Margin (dB) |
|---|---|---|---|---|
| Low 37 | 2402 | -16.59 | 8.0 | -24.6 |
| Low 0 | 2404 | -11.82 | 8.0 | -19.8 |
| Mid 17 | 2440 | -11.69 | 8.0 | -19.7 |
| High 35 | 2476 | -12.06 | 8.0 | -20.1 |
| High 36 | 2478 | -18.08 | 8.0 | -26.1 |
| High 39 | 2480 | -16.21 | 8.0 | -24.2 |




**LOW CHANNEL 0**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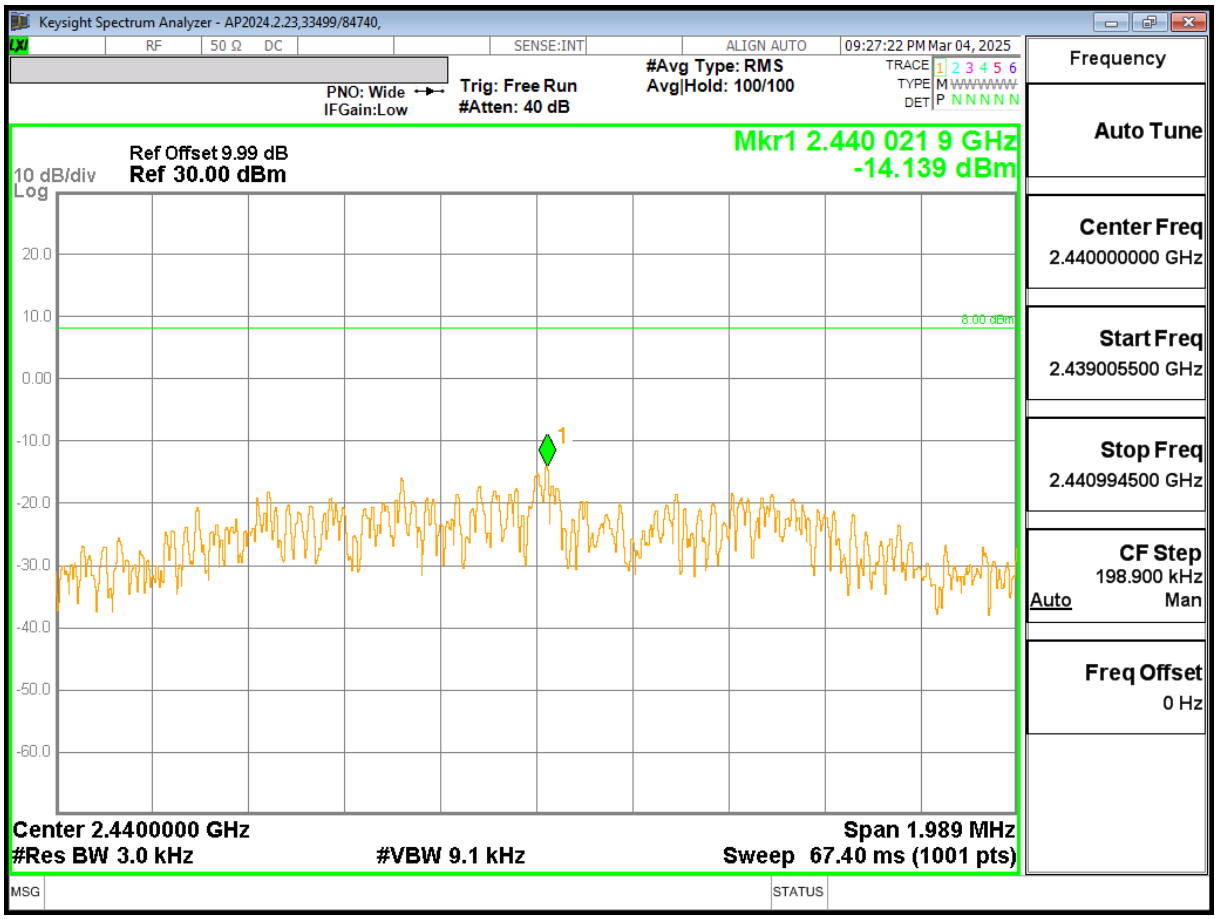
## 9.6.6. BLE 2Mbps MODE

**PSD Results**

| Channel | Frequency (MHz) | Chain 0 Meas (dBm/ 3kHz) | Limit (dBm/ 3kHz) | Margin (dB) |
|---|---|---|---|---|
| Low 0 | 2404 | -13.75 | 8.0 | -21.8 |
| Mid 17 | 2440 | -14.14 | 8.0 | -22.1 |
| High 35 | 2476 | -13.20 | 8.0 | -21.2 |
| High 36 | 2478 | -15.69 | 8.0 | -23.7 |




**MID CHANNEL 17**



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## 9.7. CONDUCTED SPURIOUS EMISSIONS

**LIMITS**

FCC §15.247 (d)
RSS-247 5.5

Output power was measured based on the use of peak measurement, therefore the required attenuation is -20 dBc.

**RESULTS**


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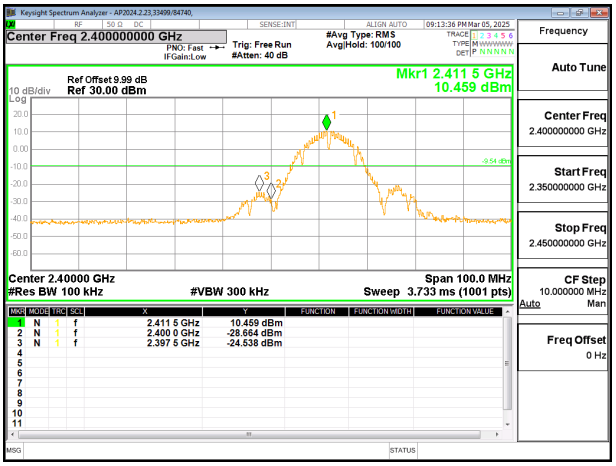
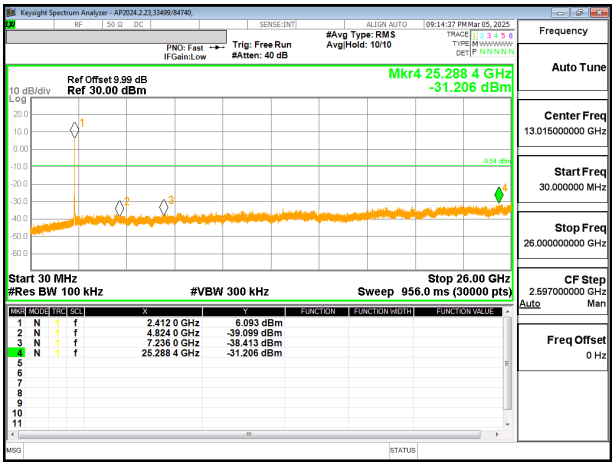
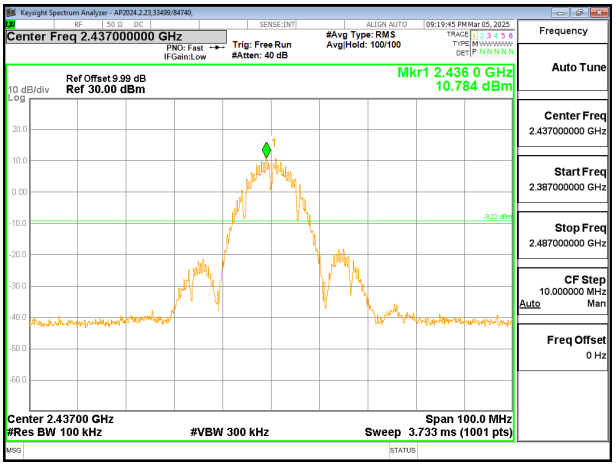
## 9.7.1. 802.11b MODE



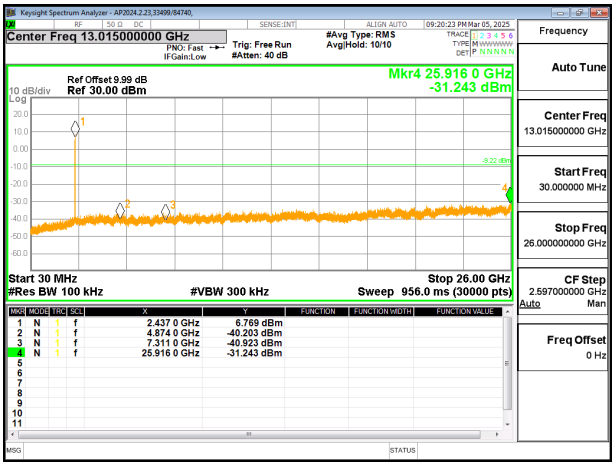

LOW CHANNEL 1



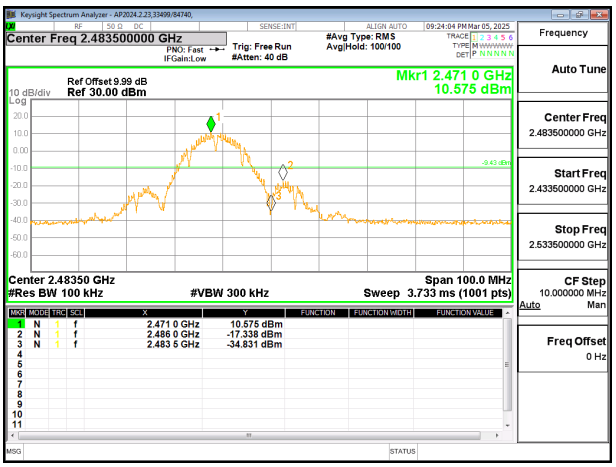

LOW CHANNEL 1



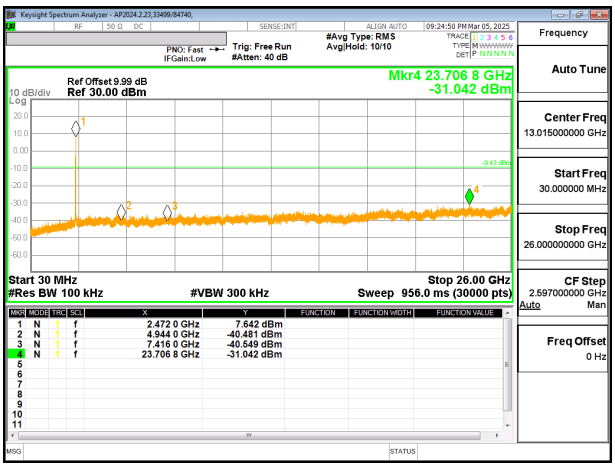

MID CHANNEL 6




MID CHANNEL 6




HIGH CHANNEL13




HIGH CHANNEL 13



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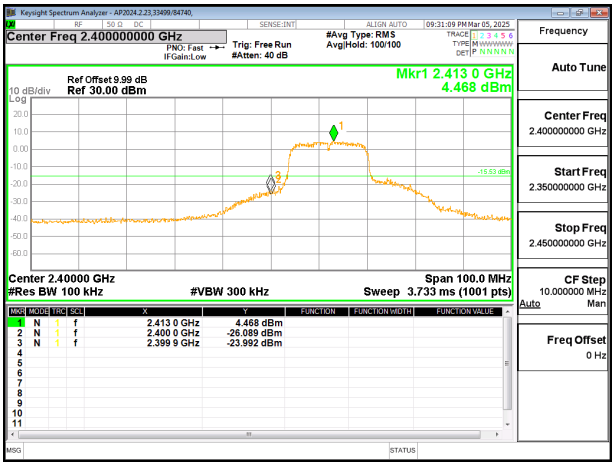
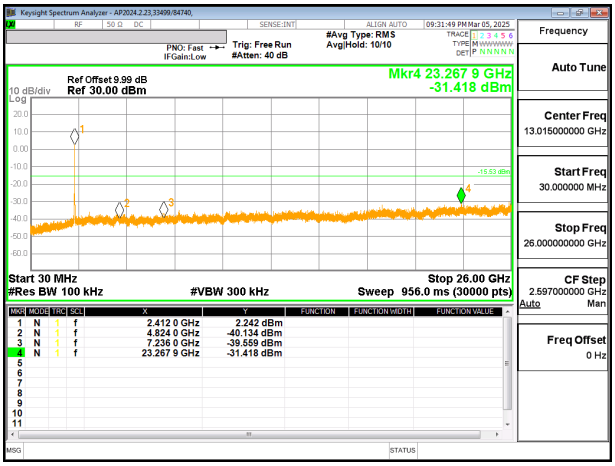
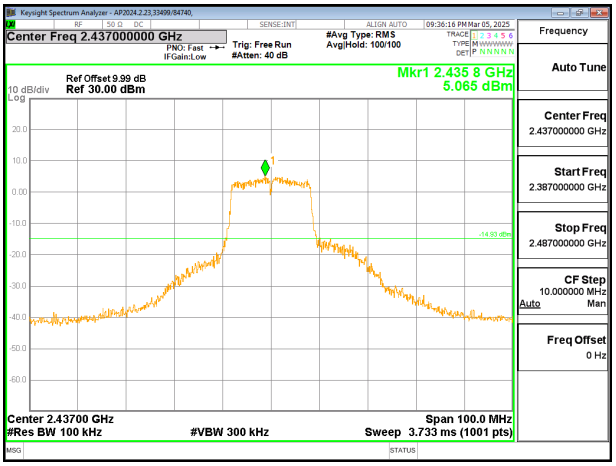
## 9.7.2. 802.11g MODE



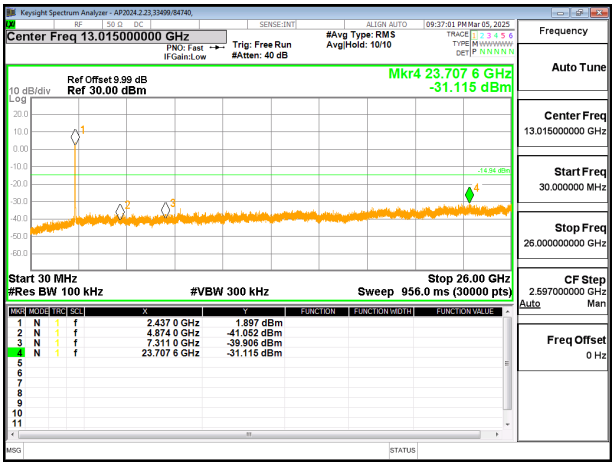

LOW CHANNEL 1



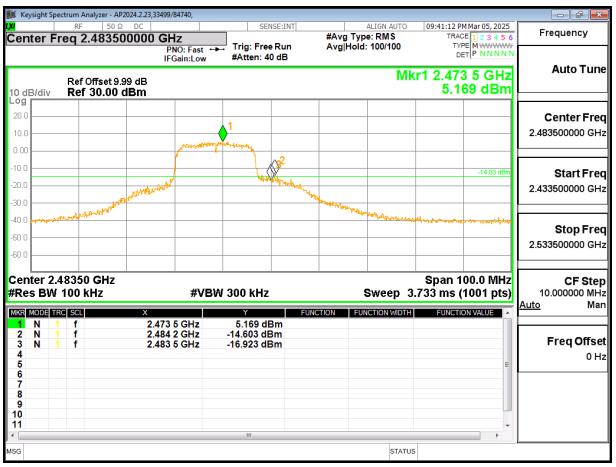

LOW CHANNEL 1



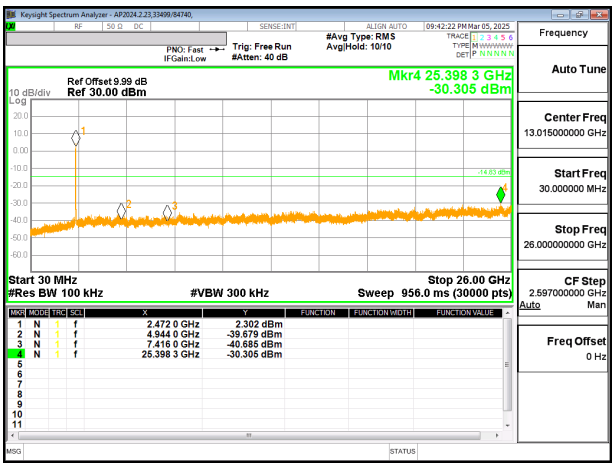

MID CHANNEL 6




MID CHANNEL 6




HIGH CHANNEL 13

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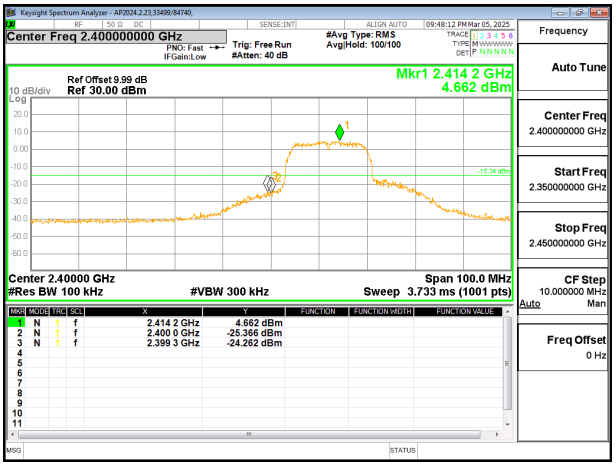
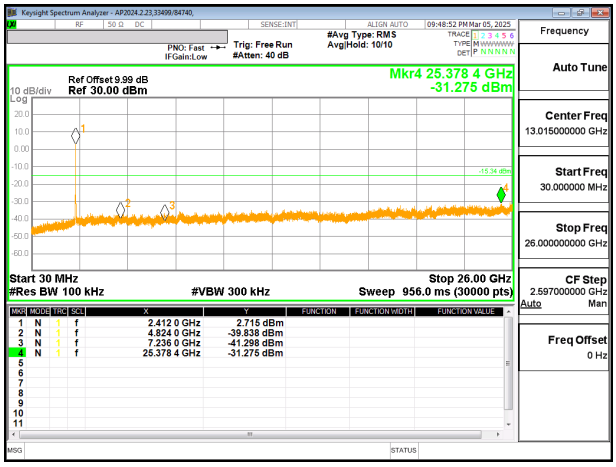
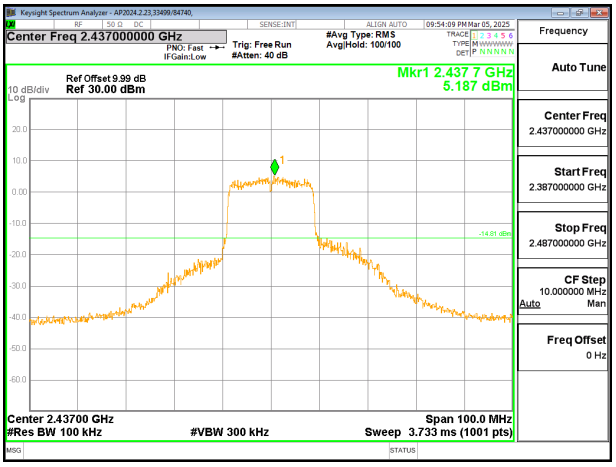
### 9.7.3. 802.11n HT20 MODE



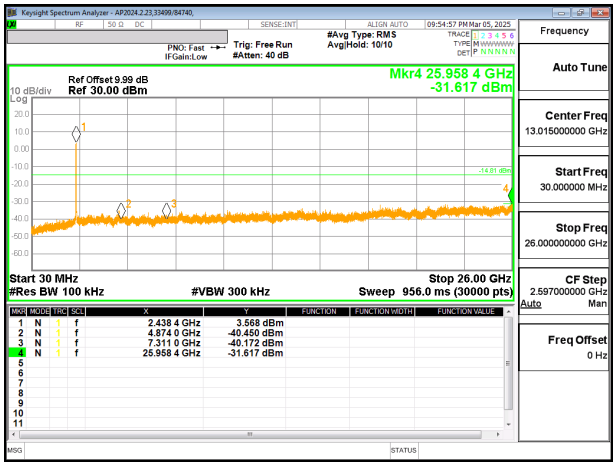

LOW CHANNEL 1



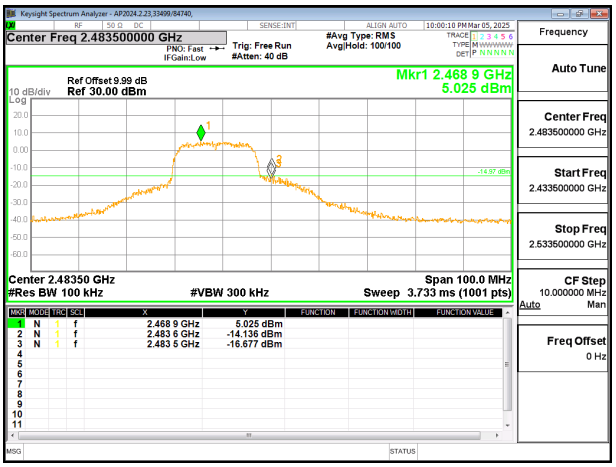

LOW CHANNEL 1



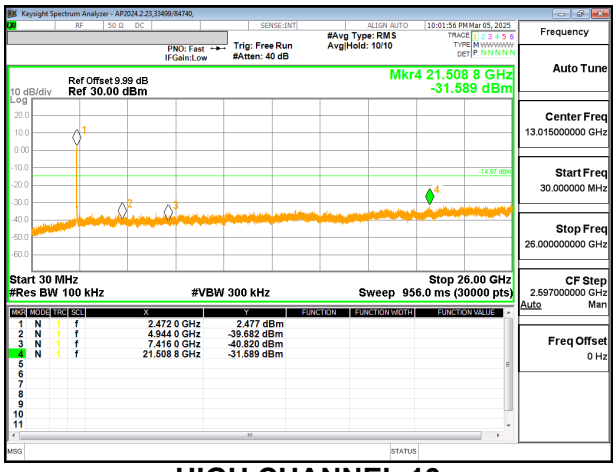

MID CHANNEL 6




MID CHANNEL 6




HIGH CHANNEL 13

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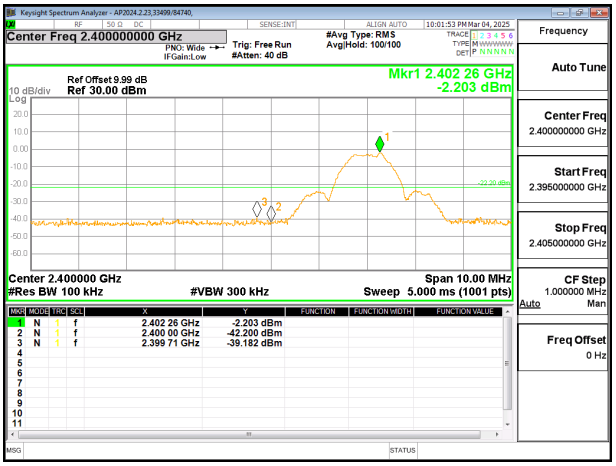
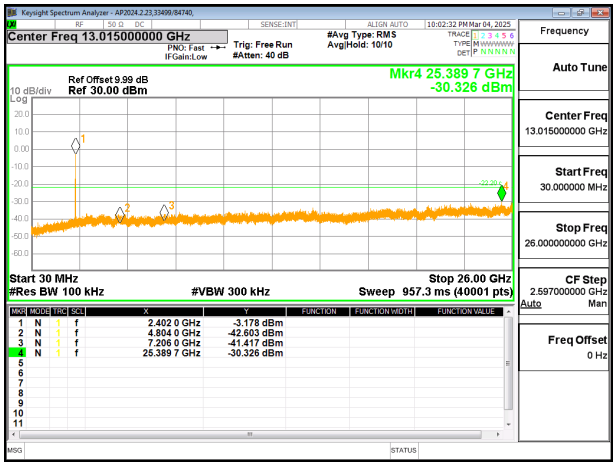
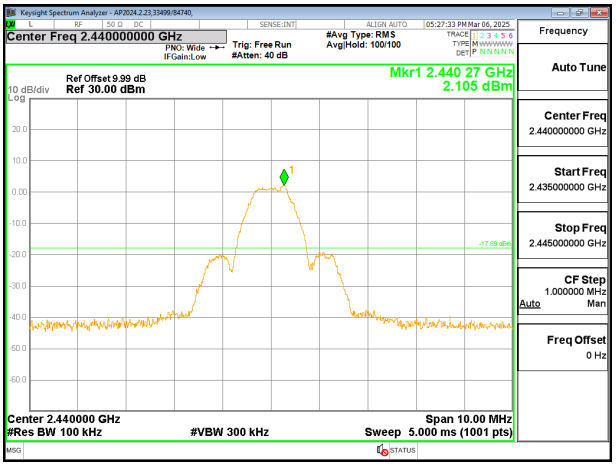
## 9.7.4. ANT/ANT+ MODE



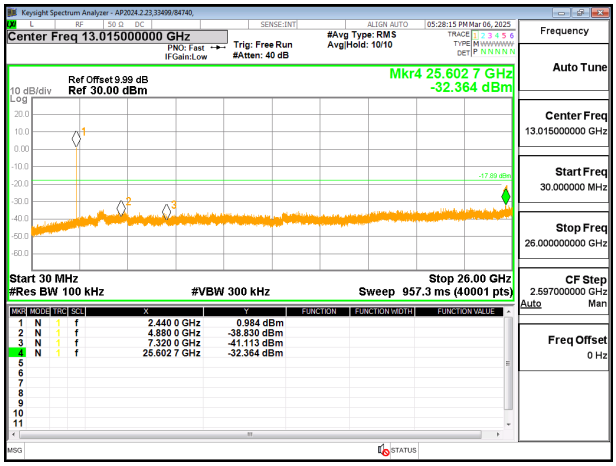

LOW CHANNEL



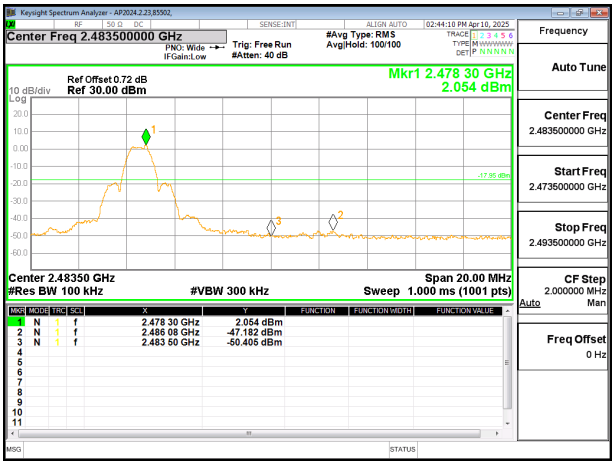

LOW CHANNEL



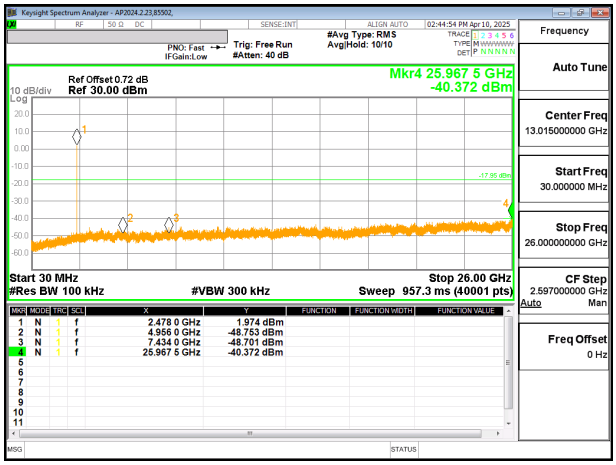

MID CHANNEL




MID CHANNEL




HIGH CHANNEL

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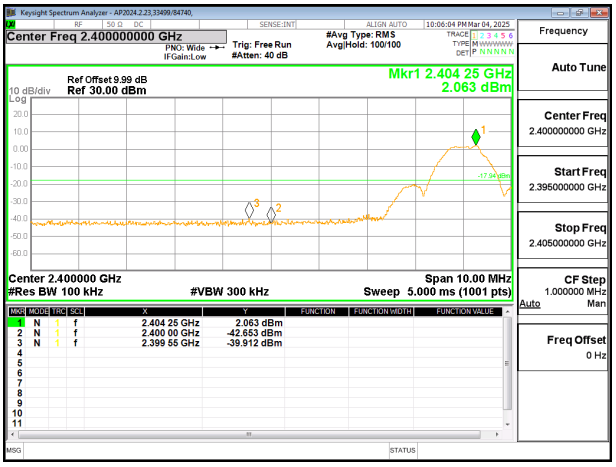
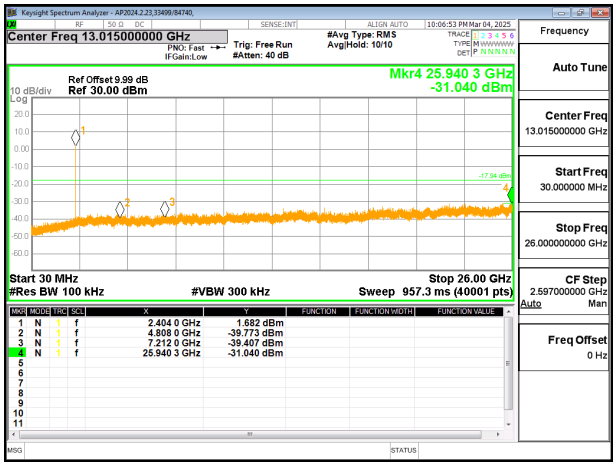
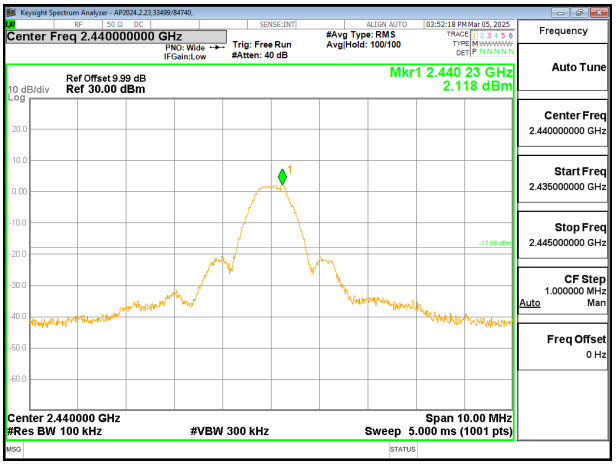
## 9.7.5. BLE 1Mbps MODE



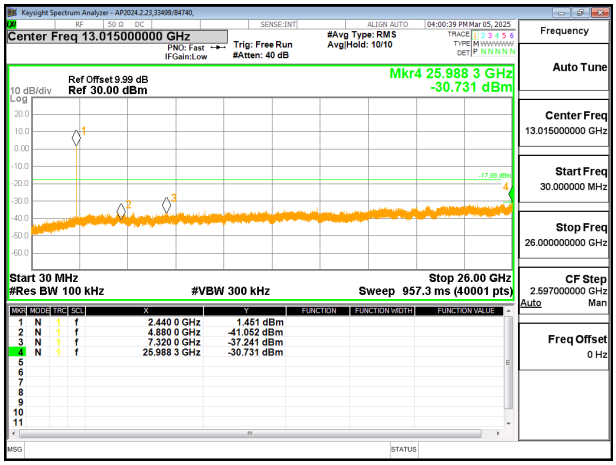

**LOW CHANNEL 0**



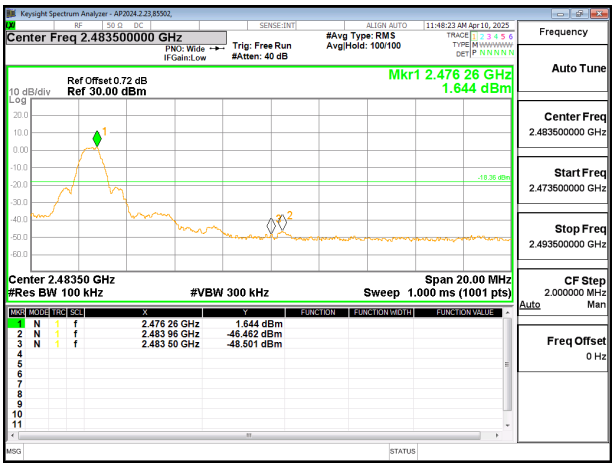

**LOW CHANNEL 0**



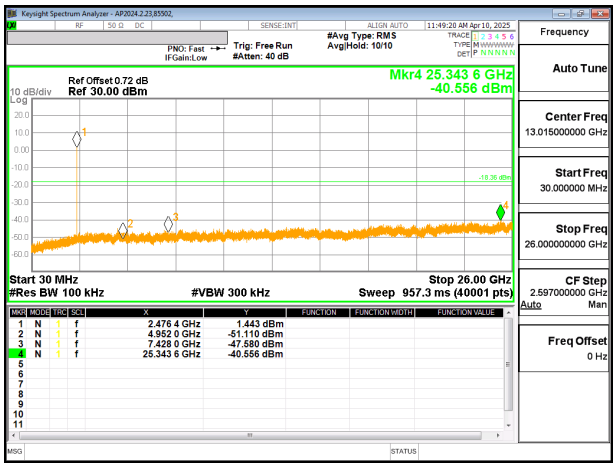

**MID CHANNEL 17**




**MID CHANNEL 17**




**HIGH CHANNEL 37**




**HIGH CHANNEL 37**



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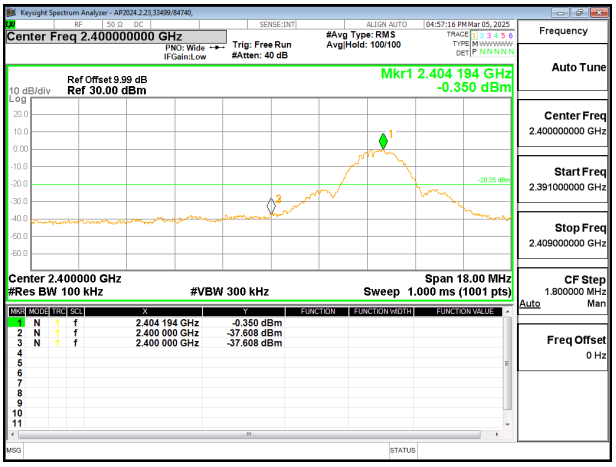
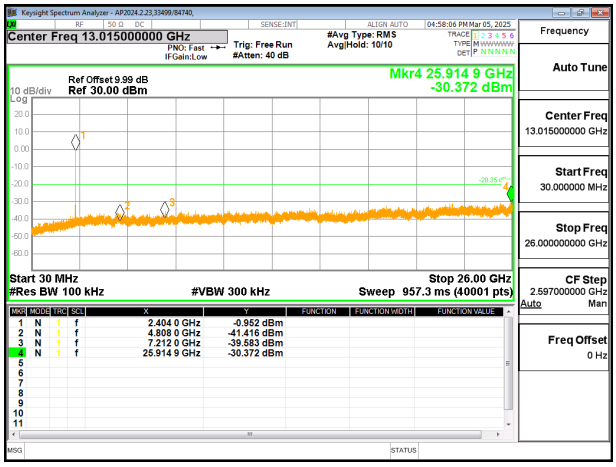
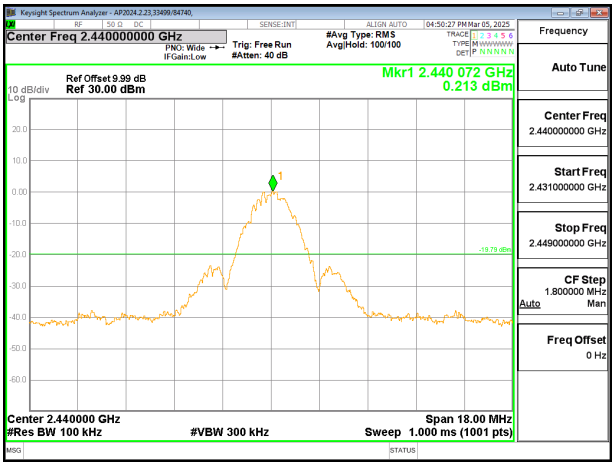
## 9.7.6. BLE 2Mbps MODE



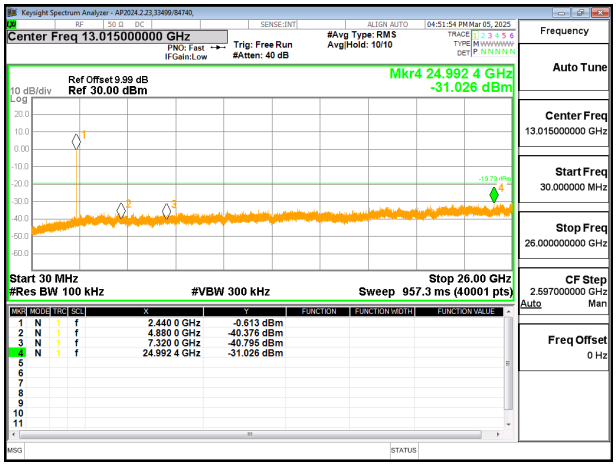

**LOW CHANNEL 0**



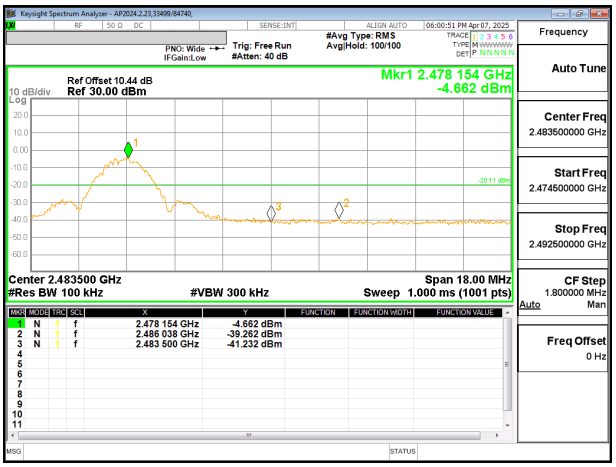

**LOW CHANNEL 0**



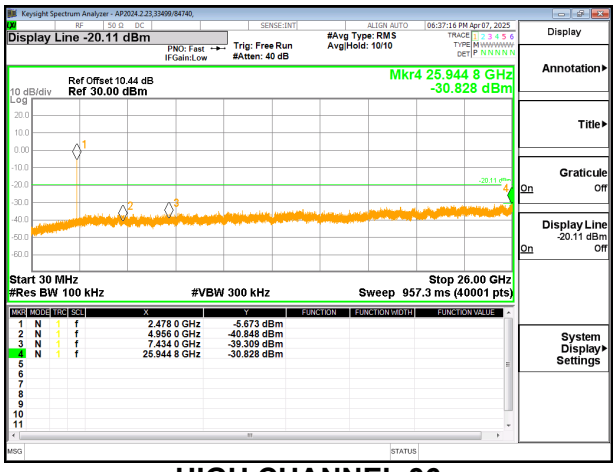

**MID CHANNEL 17**




**MID CHANNEL 17**




**HIGH CHANNEL 36**




**HIGH CHANNEL 36**



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# 10. RADIATED TEST RESULTS

**LIMITS**

FCC §15.205 and §15.209

| Frequency Range (MHz) | Field Strength Limit (uV/m) at 3 m | Field Strength Limit (dBuV/m) at 3 m |
|---|---|---|
| 0.009-0.490 | 2400/F(kHz) @ 300 m | - |
| 0.490-1.705 | 24000/F(kHz) @ 30 m | - |
| 1.705 - 30 | 30 @ 30m | - |
| 30 - 88 | 100 | 40 |
| 88 - 216 | 150 | 43.5 |
| 216 - 960 | 200 | 46 |
| Above 960 | 500 | 54 |

IC RSS-GEN Clause 8.9 and 8.10

| Frequency Range (kHz) | Field Strength Limit (uA/m) at 3 m | Field Strength Limit (dBuV/m) at 3 m |
|---|---|---|
| 0.009-0.490 | 6.37/F(kHz) @ 300 m | - |
| 0.490-1.705 | 63.7/F(kHz) @ 30 m | - |
| 1.705 - 30 | 0.08 @ 30m | - |
| **Frequency Range (MHz)** | **Field Strength Limit (uV/m) at 3 m** | **Field Strength Limit (dBuV/m) at 3 m** |
| 30 - 88 | 100 | 40 |
| 88 - 216 | 150 | 43.5 |
| 216 - 960 | 200 | 46 |
| Above 960 | 500 | 54 |

**TEST PROCEDURE**

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements in the 30-1000MHz range, 9kHz for peak and/or quasi-peak detection measurements in the 0.15-30MHz range and 200Hz for peak and/or quasi-peak detection measurements in the 9 to 150kHz range. Peak detection is used unless otherwise noted as quasi-peak or average (9-90kHz and 110-490kHz).

For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3MHz for peak measurements.


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For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for linear voltage average measurements. For ANT, FAQ#3a from the KDB 558074 was used to determine the linear voltage average emissions.

The spectrum from 1 GHz to 18 GHz is investigated with the transmitter set to low, middle, and high channels in each applicable band. Below 1GHz and above 18GHz emissions, the channel with the highest PSD was tested.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

3D antenna use - For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel).

Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

**KDB 414788 Open Field Site (OFS) and Chamber Correlation Justification**

OFS and chamber correlation testing had been performed and chamber measured test result is the worst-case test result.


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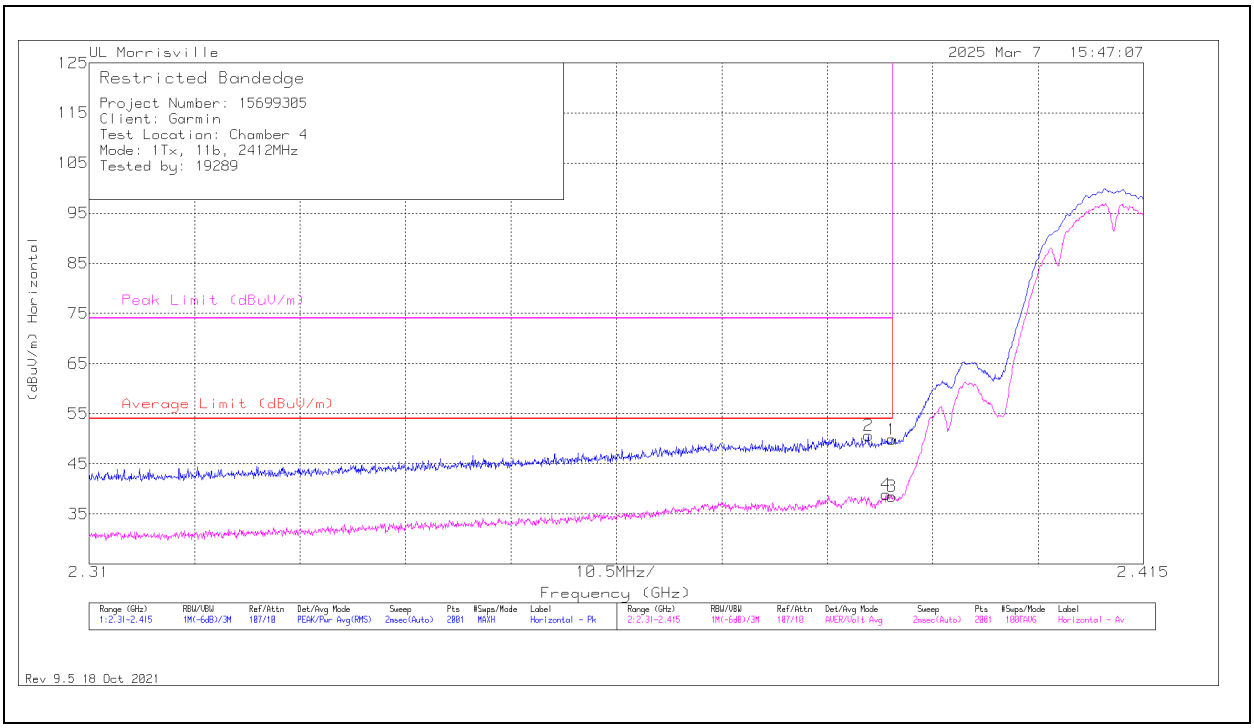
## 10.1. TRANSMITTER ABOVE 1 GHz

### 10.1.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND

**BANDEDGE (LOW CHANNEL, 2412MHz)**

**HORIZONTAL RESULT**




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.38996 | 41.05 | Pk | 32 | -23.2 | 49.85 | - | - | 74 | -24.15 | 60 | 273 | H |
| 2 | * ** 2.3876 | 41.99 | Pk | 32 | -23.3 | 50.69 | - | - | 74 | -23.31 | 60 | 273 | H |
| 3 | * ** 2.38996 | 29.69 | ADV | 32 | -23.2 | 38.49 | 54 | -15.51 | - | - | 60 | 273 | H |
| 4 | * ** 2.38938 | 30.07 | ADV | 32 | -23.2 | 38.87 | 54 | -15.13 | - | - | 60 | 273 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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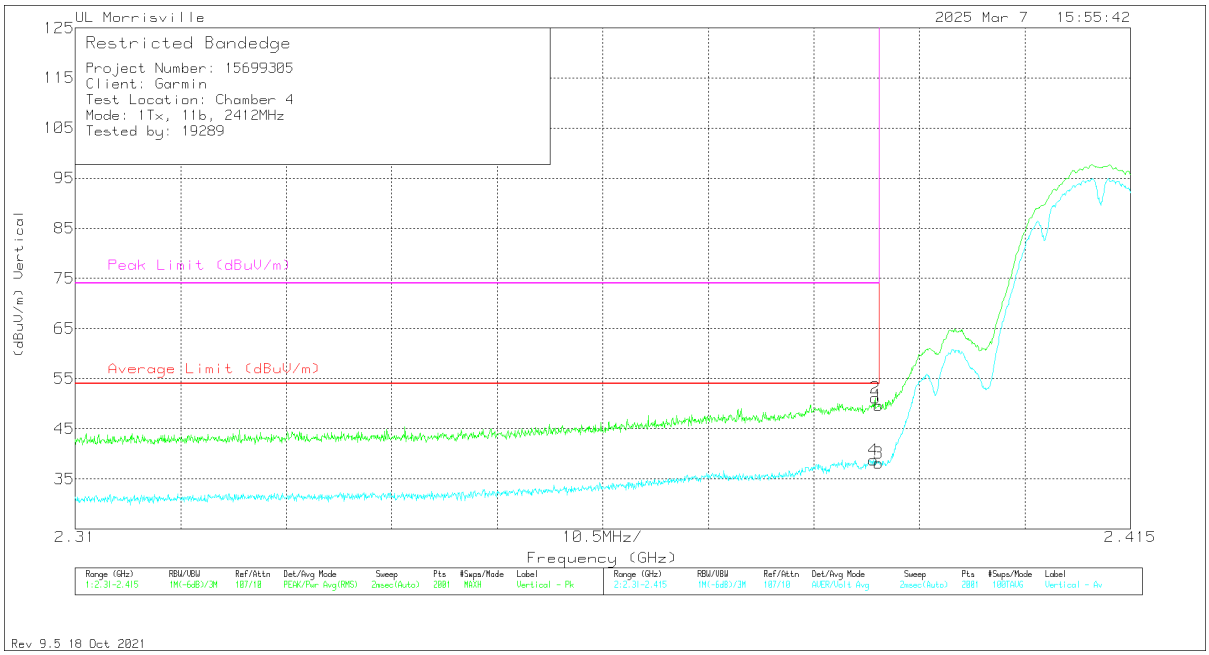
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.38996 | 40.83 | Pk | 32 | -23.2 | 49.63 | - | - | 74 | -24.37 | 185 | 270 | V |
| 2 | * ** 2.38959 | 42.33 | Pk | 32 | -23.2 | 51.13 | - | - | 74 | -22.87 | 185 | 270 | V |
| 3 | * ** 2.38996 | 29.3 | ADV | 32 | -23.2 | 38.1 | 54 | -15.9 | - | - | 185 | 270 | V |
| 4 | * ** 2.38943 | 30.01 | ADV | 32 | -23.2 | 38.81 | 54 | -15.19 | - | - | 185 | 270 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average



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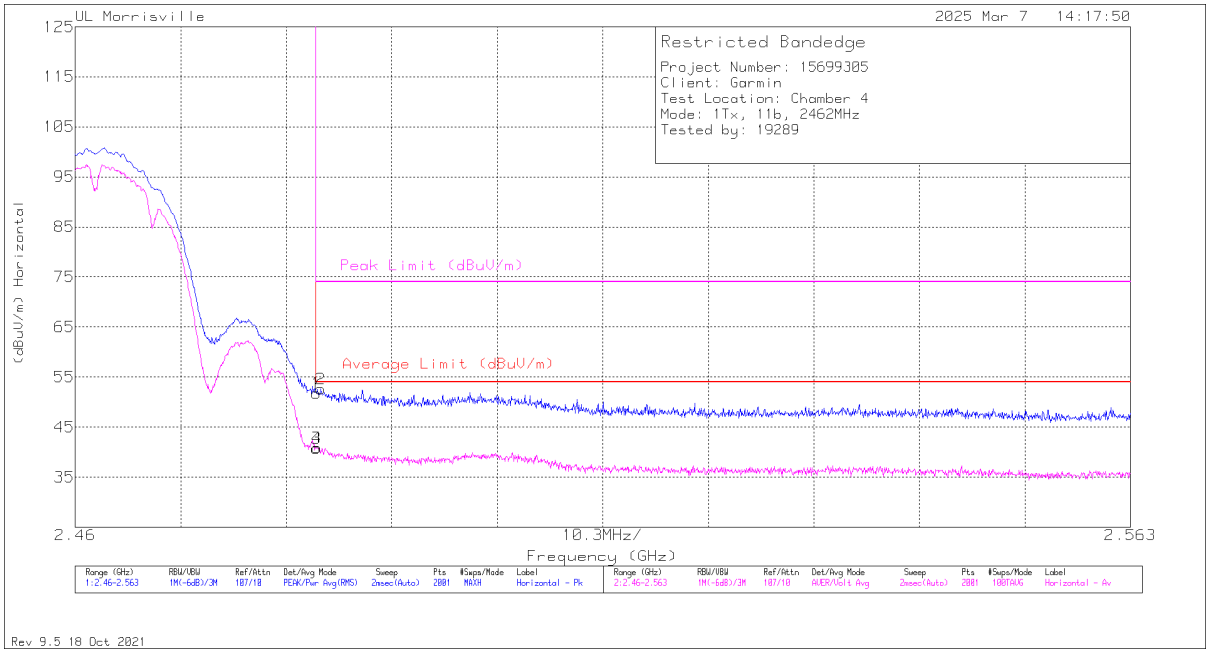
## BANDEDGE (HIGH CHANNEL, 2462MHz)

### HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 42.32 | Pk | 32.3 | -22.8 | 51.82 | - | - | 74 | -22.18 | 54 | 136 | H |
| 2 | * ** 2.48395 | 43.1 | Pk | 32.3 | -22.8 | 52.6 | - | - | 74 | -21.4 | 54 | 136 | H |
| 3 | * ** 2.48354 | 31.23 | ADV | 32.3 | -22.8 | 40.73 | 54 | -13.27 | - | - | 54 | 136 | H |
| 4 | * ** 2.48359 | 31.33 | ADV | 32.3 | -22.8 | 40.83 | 54 | -13.17 | - | - | 54 | 136 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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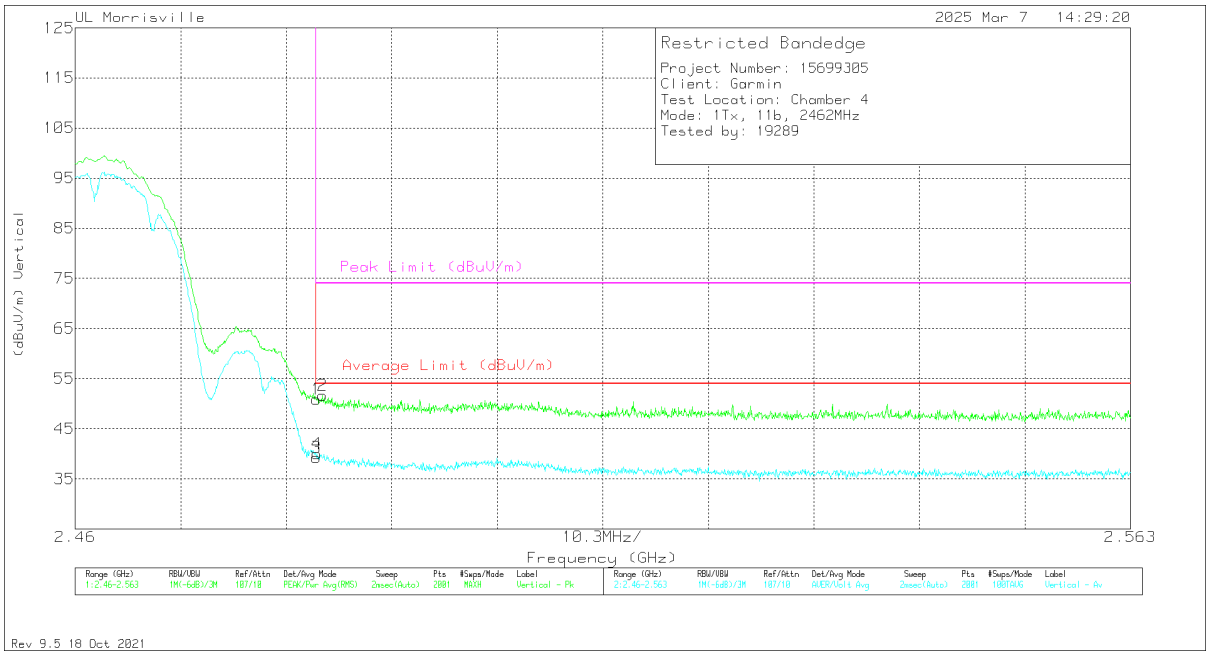
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 41.4 | Pk | 32.3 | -22.8 | 50.9 | - | - | 74 | -23.1 | 18 | 122 | V |
| 2 | * ** 2.48415 | 42.2 | Pk | 32.3 | -22.8 | 51.7 | - | - | 74 | -22.3 | 18 | 122 | V |
| 3 | * ** 2.48354 | 29.8 | ADV | 32.3 | -22.8 | 39.3 | 54 | -14.7 | - | - | 18 | 122 | V |
| 4 | * ** 2.48359 | 30.53 | ADV | 32.3 | -22.8 | 40.03 | 54 | -13.97 | - | - | 18 | 122 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average



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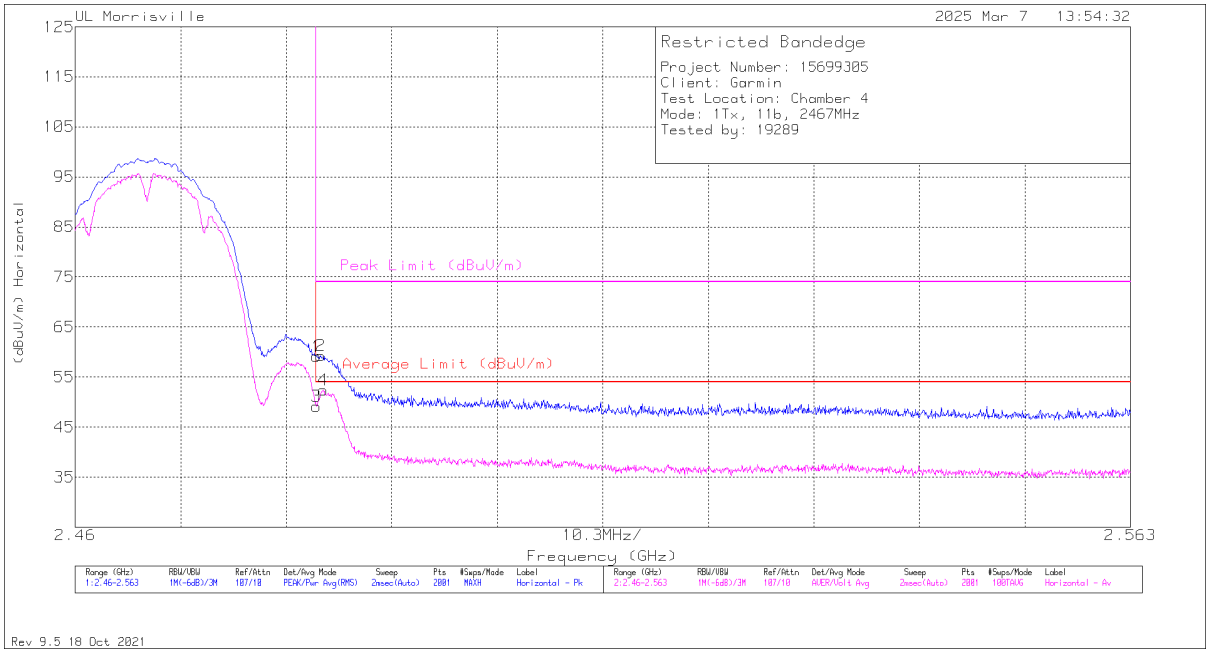
## BANDEDGE (HIGH CHANNEL, 2467MHz)

### HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 49.6 | Pk | 32.3 | -22.8 | 59.1 | - | - | 74 | -14.9 | 49 | 140 | H |
| 2 | * ** 2.48395 | 49.8 | Pk | 32.3 | -22.8 | 59.3 | - | - | 74 | -14.7 | 49 | 140 | H |
| 3 | * ** 2.48354 | 39.66 | ADV | 32.3 | -22.8 | 49.16 | 54 | -4.84 | - | - | 49 | 140 | H |
| 4 | * ** 2.48421 | 42.94 | ADV | 32.3 | -22.8 | 52.44 | 54 | -1.56 | - | - | 49 | 140 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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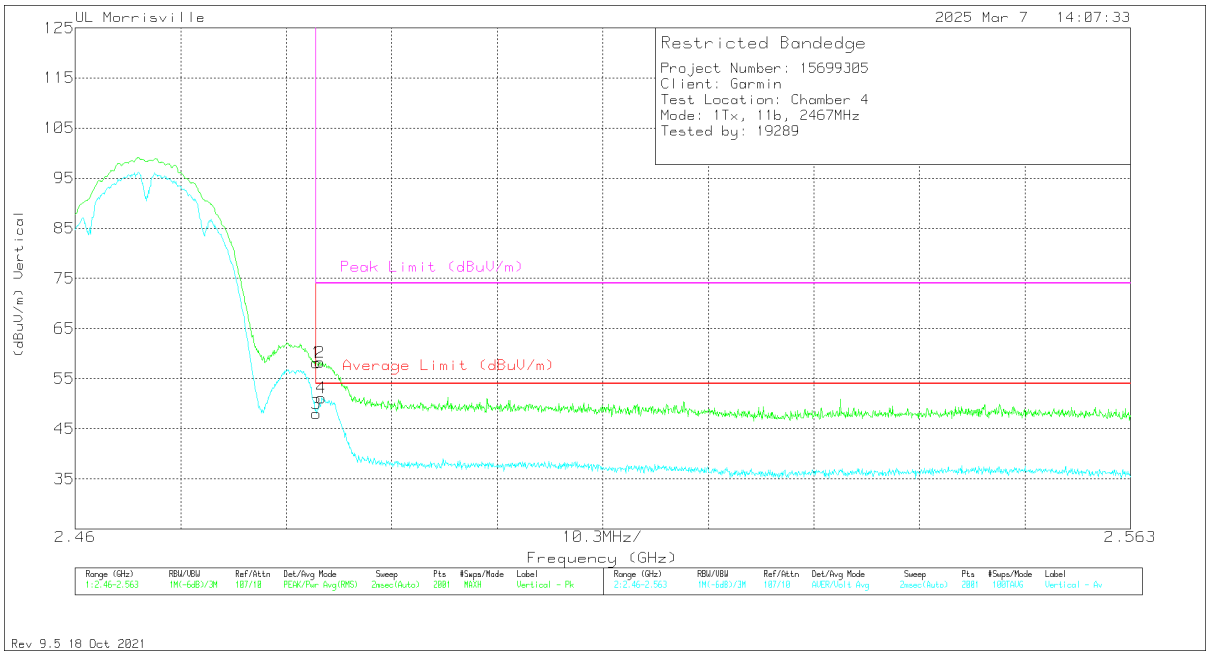
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 48.67 | Pk | 32.3 | -22.8 | 58.17 | - | - | 74 | -15.83 | 9 | 145 | V |
| 2 | * ** 2.4839 | 48.73 | Pk | 32.3 | -22.8 | 58.23 | - | - | 74 | -15.77 | 9 | 145 | V |
| 3 | * ** 2.48354 | 38.53 | ADV | 32.3 | -22.8 | 48.03 | 54 | -5.97 | - | - | 9 | 145 | V |
| 4 | * ** 2.48405 | 41.68 | ADV | 32.3 | -22.8 | 51.18 | 54 | -2.82 | - | - | 9 | 145 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average



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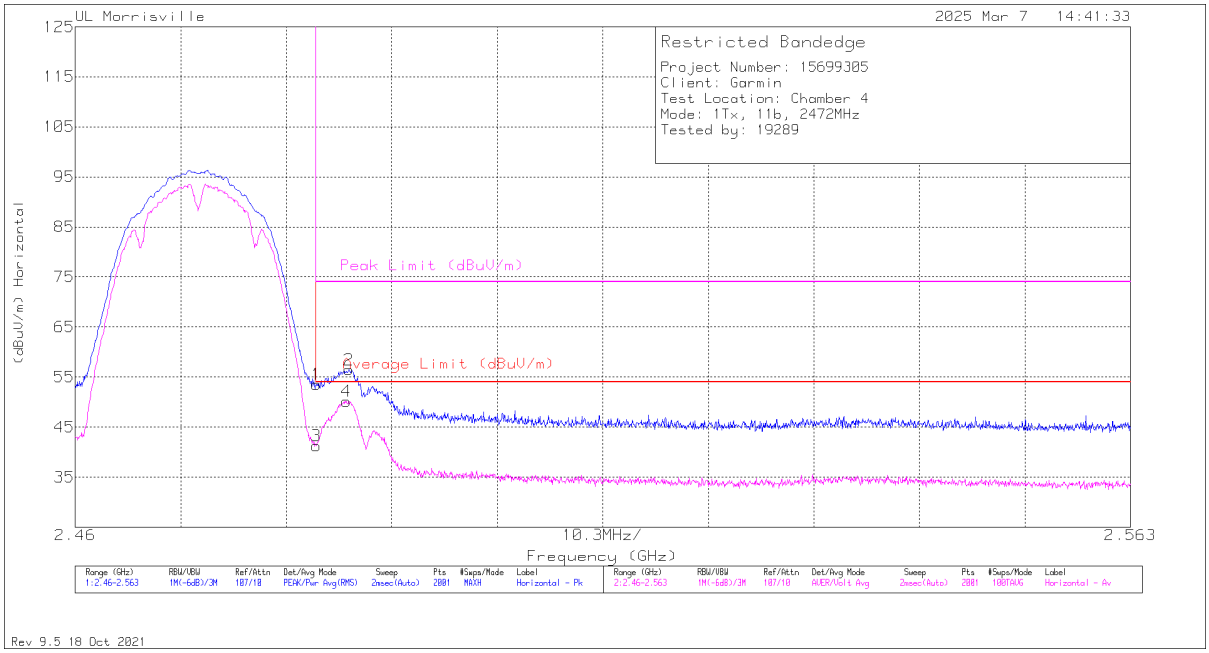
## BANDEDGE (HIGH CHANNEL, 2472MHz)

### HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 44.04 | Pk | 32.3 | -22.8 | 53.54 | - | - | 74 | -20.46 | 58 | 118 | H |
| 2 | * ** 2.48673 | 46.97 | Pk | 32.3 | -22.8 | 56.47 | - | - | 74 | -17.53 | 58 | 118 | H |
| 3 | * ** 2.48354 | 31.77 | ADV | 32.3 | -22.8 | 41.27 | 54 | -12.73 | - | - | 58 | 118 | H |
| 4 | * ** 2.48647 | 40.68 | ADV | 32.3 | -22.8 | 50.18 | 54 | -3.82 | - | - | 58 | 118 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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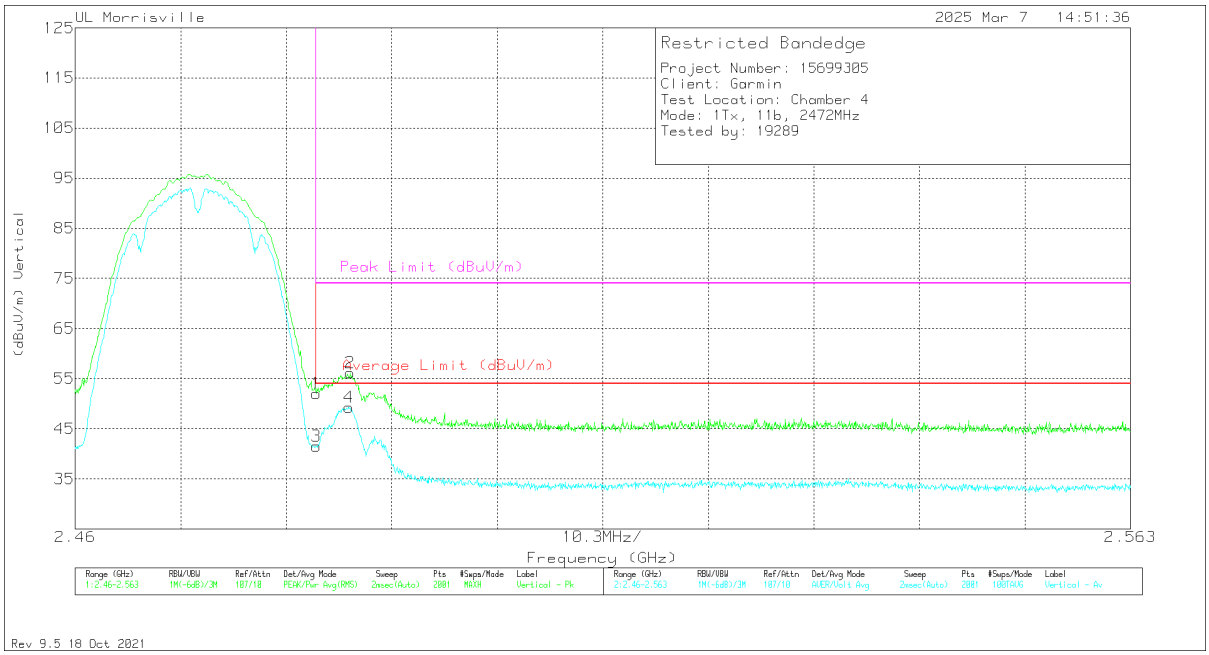
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 42.56 | Pk | 32.3 | -22.8 | 52.06 | - | - | 74 | -21.94 | 3 | 124 | V |
| 2 | * ** 2.48683 | 46.71 | Pk | 32.3 | -22.8 | 56.21 | - | - | 74 | -17.79 | 3 | 124 | V |
| 3 | * ** 2.48354 | 32.06 | ADV | 32.3 | -22.8 | 41.56 | 54 | -12.44 | - | - | 3 | 124 | V |
| 4 | * ** 2.48673 | 39.81 | ADV | 32.3 | -22.8 | 49.31 | 54 | -4.69 | - | - | 3 | 124 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average



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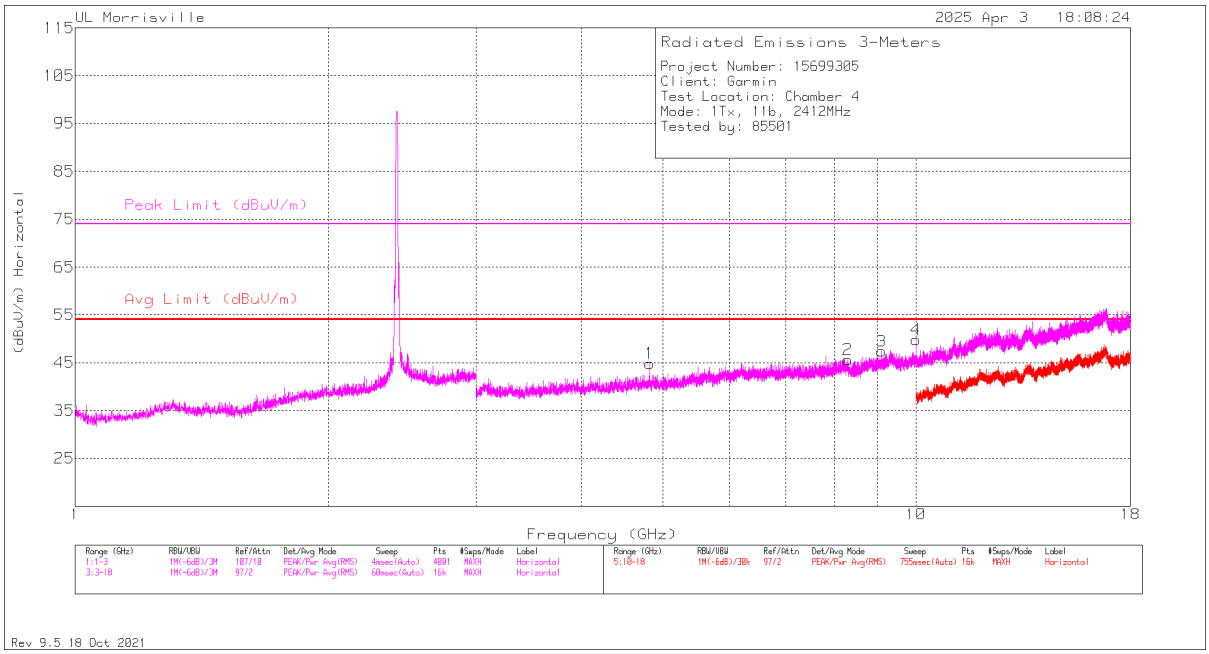
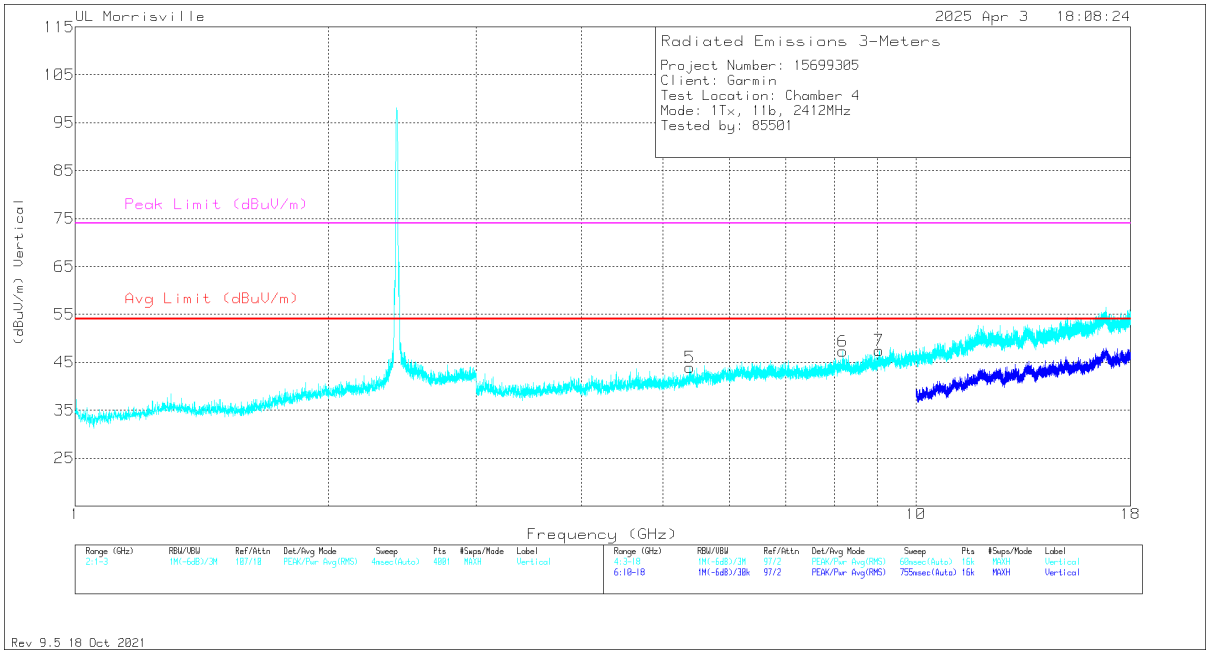
## HARMONICS AND SPURIOUS EMISSIONS

### LOW CHANNEL




**HORIZONTAL**




**VERTICAL**



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| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 4.82344 | 41.86 | Pk | 34.1 | -31.1 | 44.86 | 54 | -9.14 | 74 | -29.14 | 0-360 | 100 | H |
| 2 | * ** 8.30344 | 36.3 | Pk | 35.8 | -26.5 | 45.6 | 54 | -8.4 | 74 | -28.4 | 0-360 | 100 | H |
| 3 | * ** 9.10406 | 35.6 | Pk | 36.3 | -24.5 | 47.4 | 54 | -6.6 | 74 | -26.6 | 0-360 | 100 | H |
| 5 | * ** 5.38031 | 39.3 | Pk | 34.5 | -29.9 | 43.9 | 54 | -10.1 | 74 | -30.1 | 0-360 | 200 | V |
| 6 | * ** 8.19188 | 37.67 | Pk | 35.8 | -26.2 | 47.27 | 54 | -6.73 | 74 | -26.73 | 0-360 | 200 | V |
| 7 | * ** 9.04031 | 35.34 | Pk | 36.2 | -24.1 | 47.44 | 54 | -6.56 | 74 | -26.56 | 0-360 | 200 | V |
| 4 | 10.00219 | 37.61 | Pk | 37.2 | -25 | 49.81 | - | - | - | - | 0-360 | 100 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector


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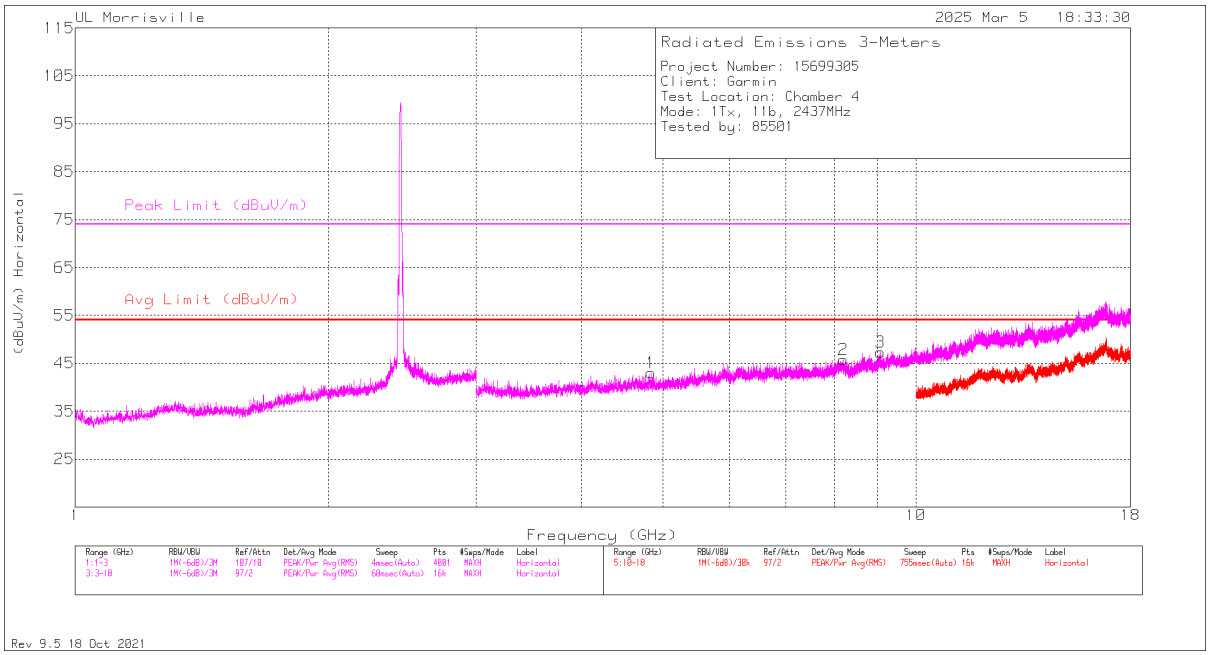
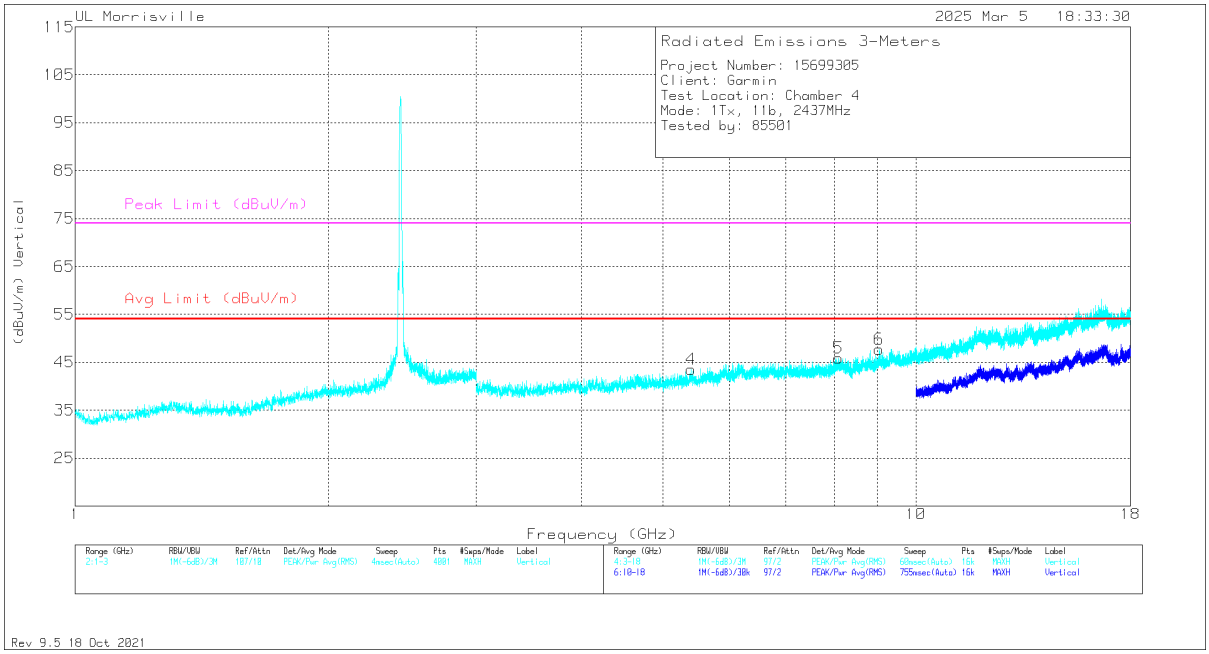
## MID CHANNEL




## HORIZONTAL




## VERTICAL



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| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 4.84219 | 40.16 | Pk | 34.1 | -31.2 | 43.06 | 54 | -10.94 | 74 | -30.94 | 0-360 | 100 | H |
| 2 | * ** 8.19469 | 36.25 | Pk | 35.8 | -26.3 | 45.75 | 54 | -8.25 | 74 | -28.25 | 0-360 | 100 | H |
| 3 | * ** 9.07406 | 35.52 | Pk | 36.2 | -24.4 | 47.32 | 54 | -6.68 | 74 | -26.68 | 0-360 | 100 | H |
| 4 | * ** 5.40563 | 38.59 | Pk | 34.6 | -29.7 | 43.49 | 54 | -10.51 | 74 | -30.51 | 0-360 | 200 | V |
| 5 | * ** 8.08594 | 37.23 | Pk | 35.8 | -27.1 | 45.93 | 54 | -8.07 | 74 | -28.07 | 0-360 | 200 | V |
| 6 | * ** 9.04406 | 35.56 | Pk | 36.2 | -24 | 47.76 | 54 | -6.24 | 74 | -26.24 | 0-360 | 200 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector


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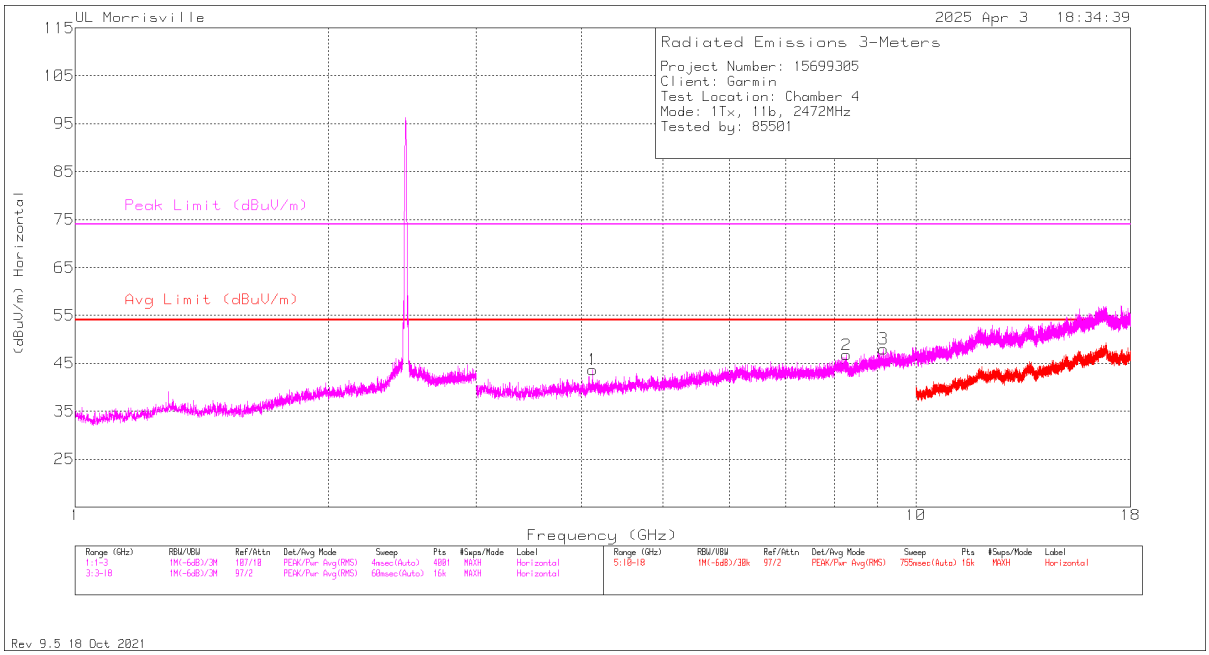
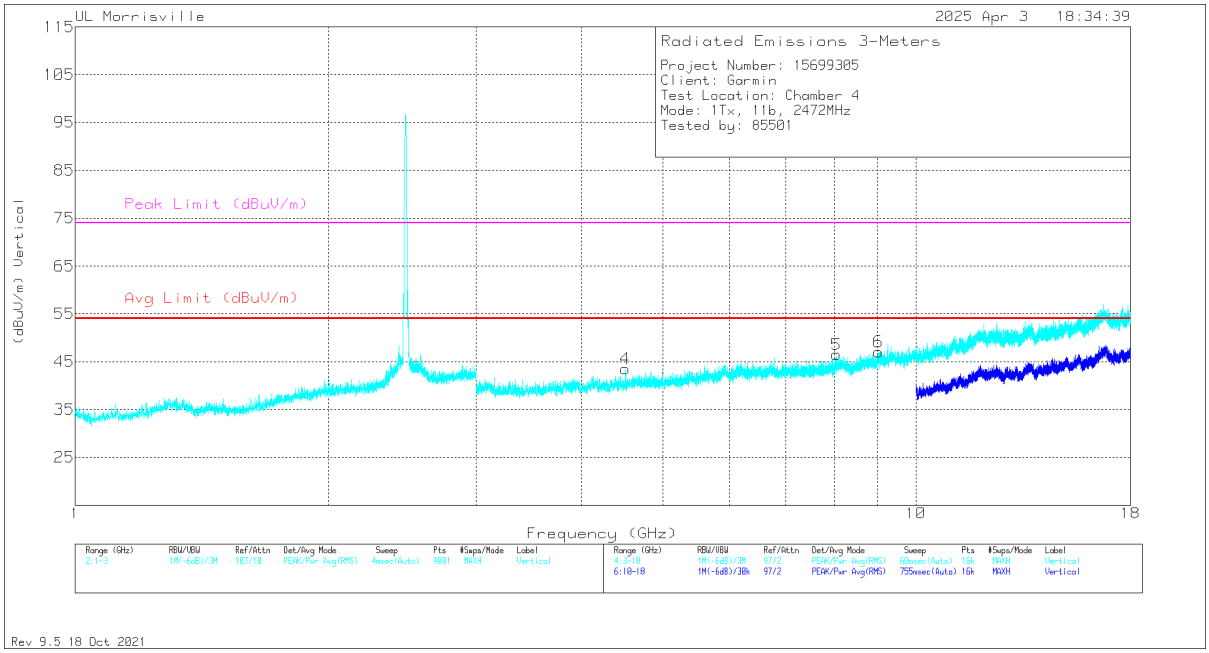
## HIGH CHANNEL




## HORIZONTAL




## VERTICAL



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| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 4.12875 | 41.9 | Pk | 33.5 | -31.7 | 43.7 | 54 | -10.3 | 74 | -30.3 | 0-360 | 100 | H |
| 2 | * ** 8.27531 | 37.34 | Pk | 35.8 | -26.4 | 46.74 | 54 | -7.26 | 74 | -27.26 | 0-360 | 100 | H |
| 3 | * ** 9.15009 | 22.09 | PK2 | 36.3 | -24.9 | 33.49 | - | - | 74 | -40.51 | 83 | 260 | H |
| | * ** 9.15086 | 24.3 | ADV | 36.3 | -24.9 | 35.7 | 54 | -18.3 | - | - | 83 | 260 | H |
| 4 | * ** 4.515 | 40.82 | Pk | 33.8 | -31.1 | 43.52 | 54 | -10.48 | 74 | -30.48 | 0-360 | 200 | V |
| 5 | * ** 8.05031 | 37.78 | Pk | 35.8 | -27.1 | 46.48 | 54 | -7.52 | 74 | -27.52 | 0-360 | 200 | V |
| 6 | * ** 9.02438 | 35.04 | Pk | 36.2 | -24.2 | 47.04 | 54 | -6.96 | 74 | -26.96 | 0-360 | 200 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
PK2 - Maximum Peak
ADV -,Linear Voltage Average


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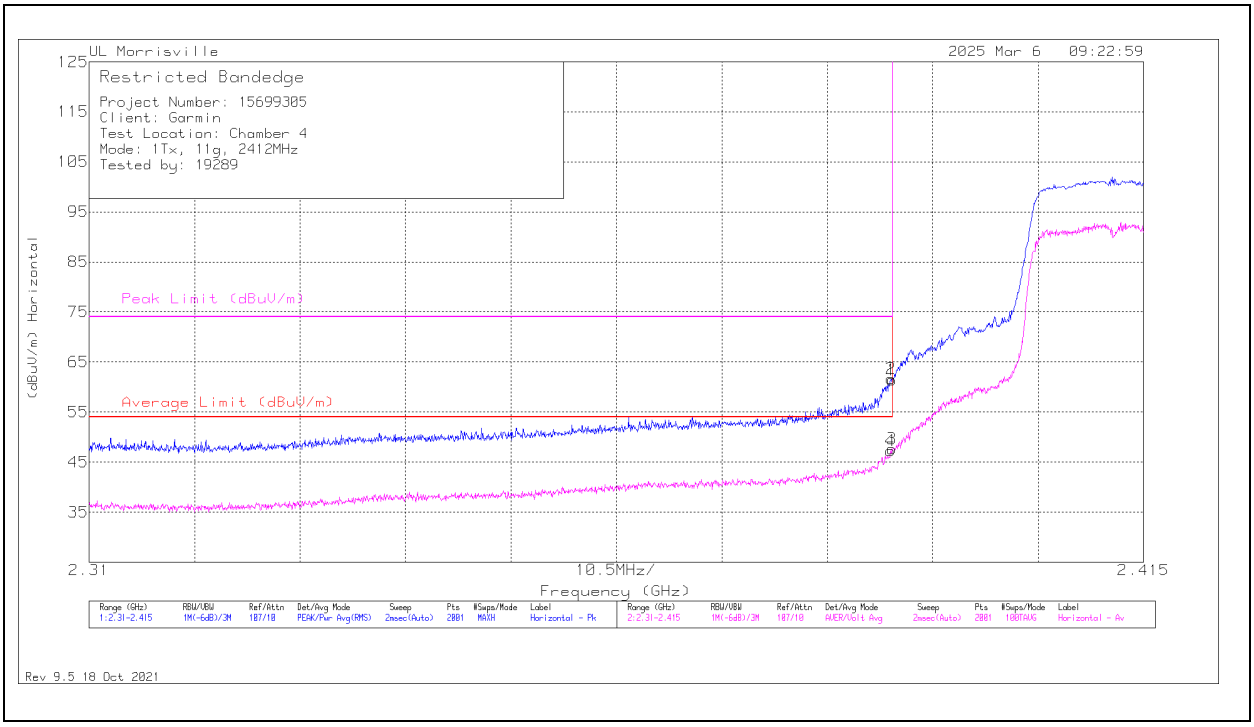
### 10.1.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND

## BANDEDGE (LOW CHANNEL, 2412MHz)

## HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.38996 | 52.65 | Pk | 32 | -23.2 | 61.45 | - | - | 74 | -12.55 | 51 | 148 | H |
| 2 | * ** 2.38985 | 52.83 | Pk | 32 | -23.2 | 61.63 | - | - | 74 | -12.37 | 51 | 148 | H |
| 3 | * ** 2.38996 | 38.88 | ADV | 32 | -23.2 | 47.68 | 54 | -6.32 | - | - | 51 | 148 | H |
| 4 | * ** 2.3898 | 38.43 | ADV | 32 | -23.2 | 47.23 | 54 | -6.77 | - | - | 51 | 148 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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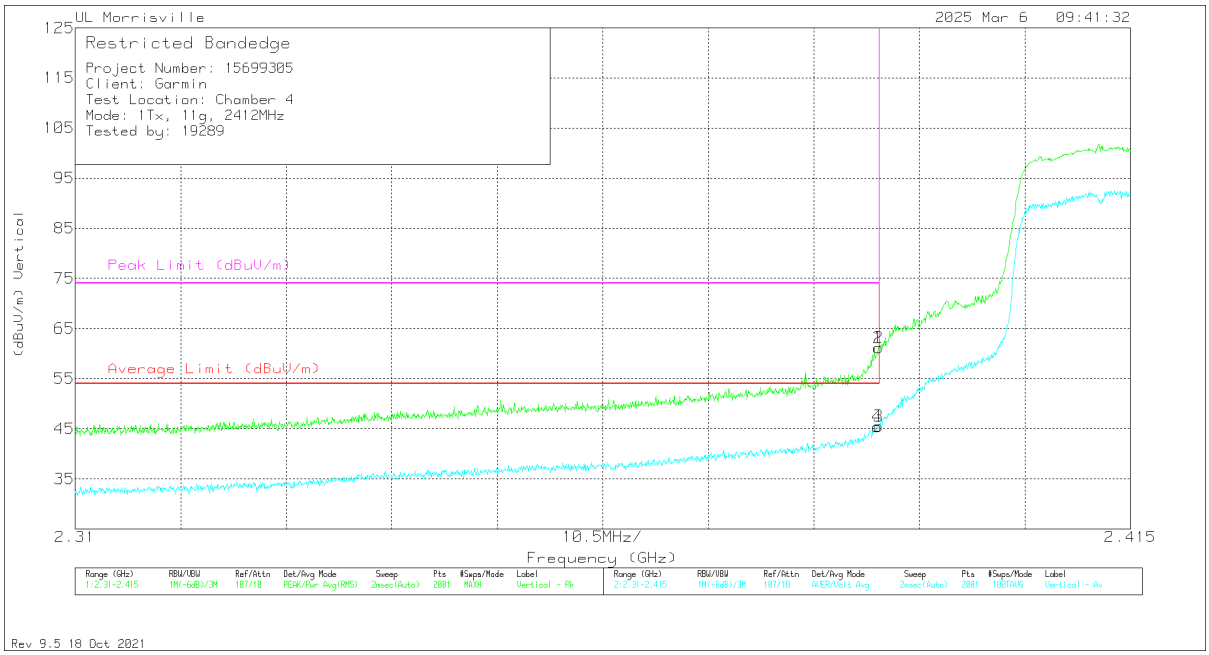
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.38996 | 52.33 | Pk | 32 | -23.2 | 61.13 | - | - | 74 | -12.87 | 18 | 127 | V |
| 2 | * ** 2.38991 | 52.39 | Pk | 32 | -23.2 | 61.19 | - | - | 74 | -12.81 | 18 | 127 | V |
| 3 | * ** 2.38996 | 36.75 | ADV | 32 | -23.2 | 45.55 | 54 | -8.45 | - | - | 18 | 127 | V |
| 4 | * ** 2.3898 | 36.64 | ADV | 32 | -23.2 | 45.44 | 54 | -8.56 | - | - | 18 | 127 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
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ADV - Linear Voltage Average



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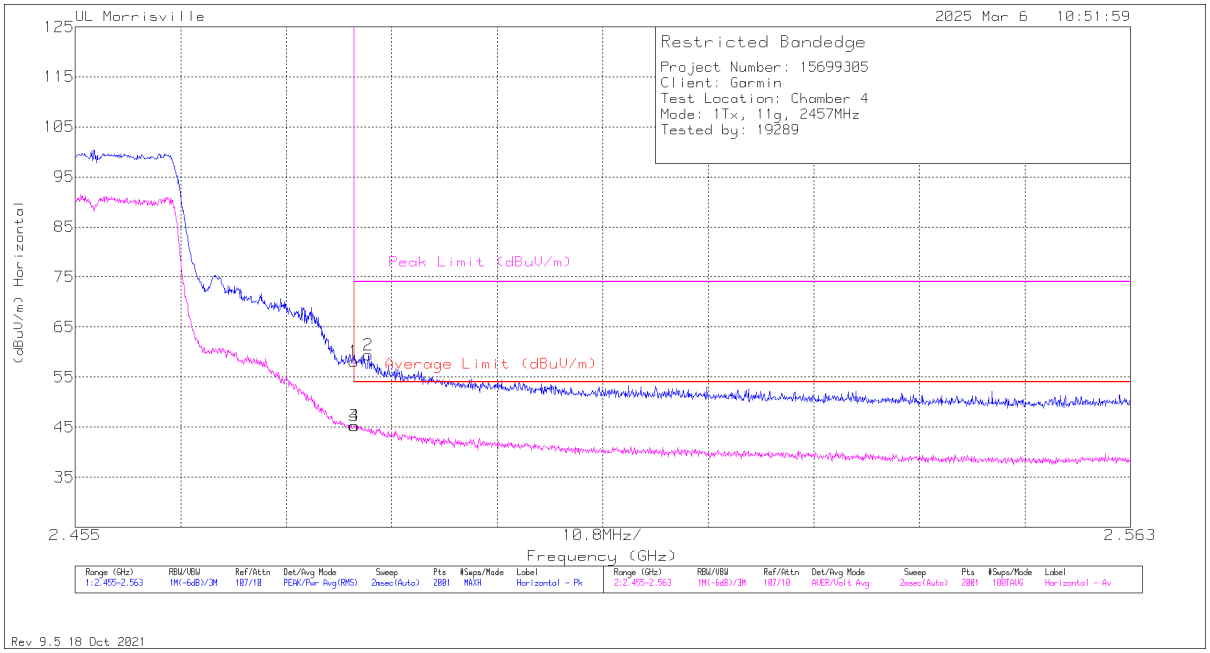
## BANDEDGE (HIGH CHANNEL, 2457MHz)

### HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48351 | 48.65 | Pk | 32.3 | -22.8 | 58.15 | - | - | 74 | -15.85 | 54 | 156 | H |
| 2 | * ** 2.48502 | 49.96 | Pk | 32.3 | -22.8 | 59.46 | - | - | 74 | -14.54 | 54 | 156 | H |
| 3 | * ** 2.48351 | 35.79 | ADV | 32.3 | -22.8 | 45.29 | 54 | -8.71 | - | - | 54 | 156 | H |
| 4 | * ** 2.48362 | 35.77 | ADV | 32.3 | -22.8 | 45.27 | 54 | -8.73 | - | - | 54 | 156 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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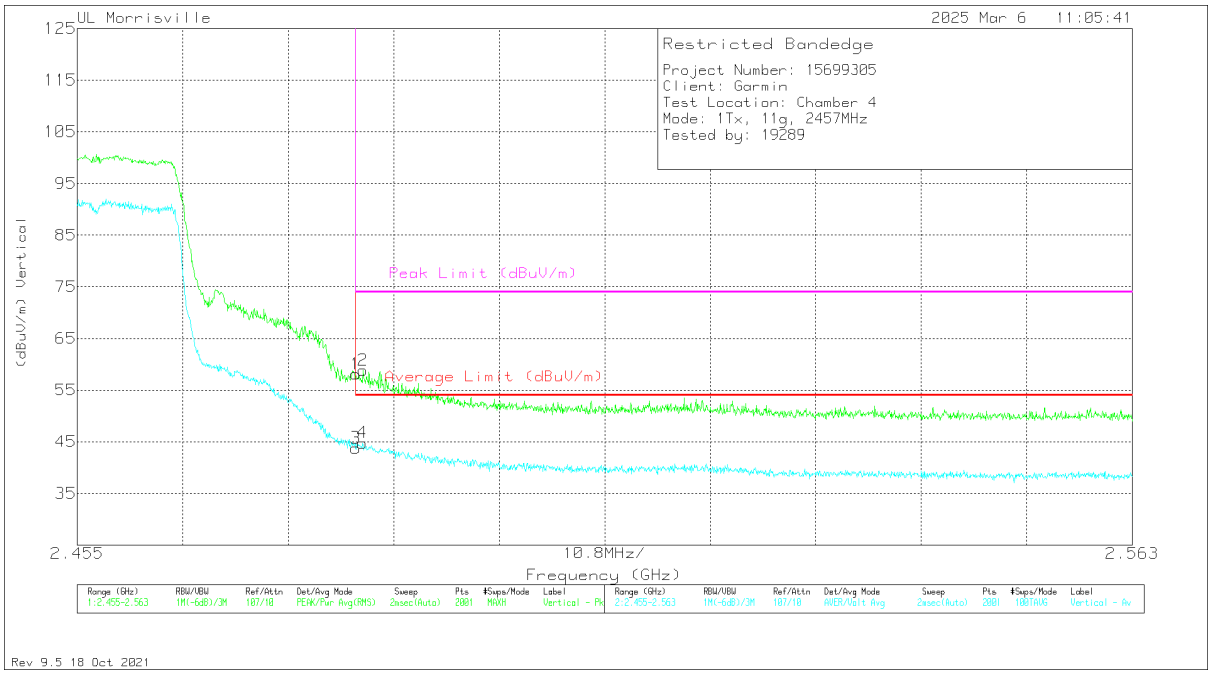
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48351 | 48.61 | Pk | 32.3 | -22.8 | 58.11 | - | - | 74 | -15.89 | 24 | 124 | V |
| 2 | * ** 2.48427 | 49.34 | Pk | 32.3 | -22.8 | 58.84 | - | - | 74 | -15.16 | 24 | 124 | V |
| 3 | * ** 2.48351 | 34.26 | ADV | 32.3 | -22.8 | 43.76 | 54 | -10.24 | - | - | 24 | 124 | V |
| 4 | * ** 2.48421 | 35.28 | ADV | 32.3 | -22.8 | 44.78 | 54 | -9.22 | - | - | 24 | 124 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average



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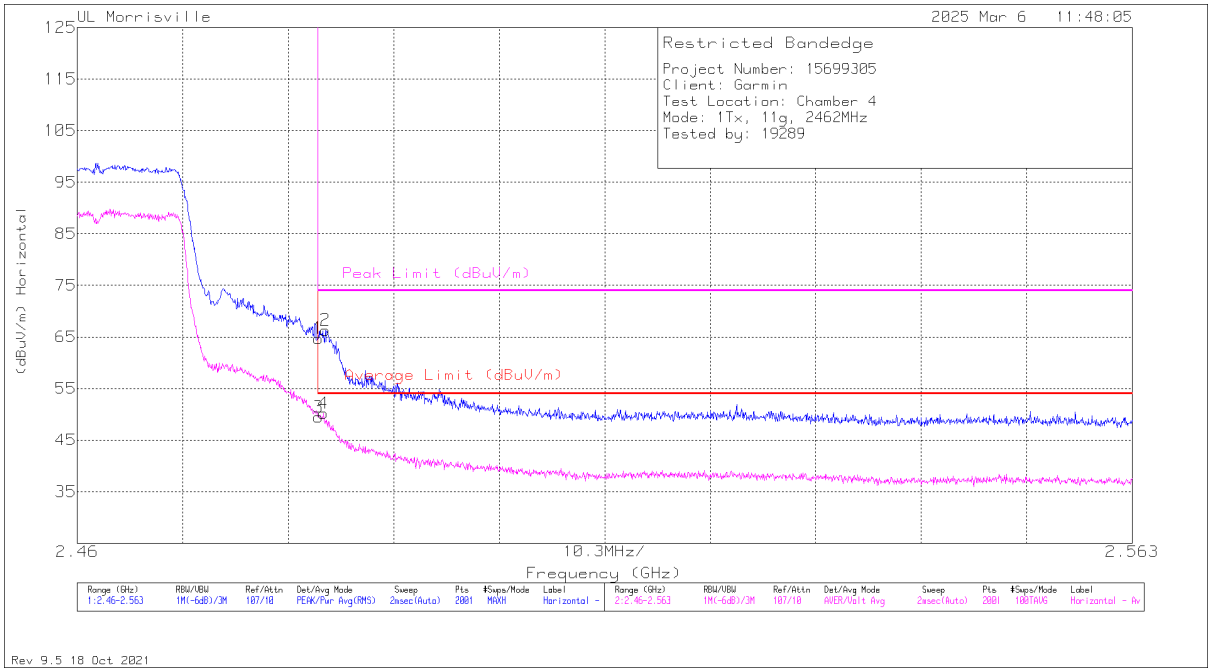
## BANDEDGE (HIGH CHANNEL, 2462MHz)

### HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 55.24 | Pk | 32.3 | -22.8 | 64.74 | - | - | 74 | -9.26 | 62 | 116 | H |
| 2 | * ** 2.48421 | 56.81 | Pk | 32.3 | -22.8 | 66.31 | - | - | 74 | -7.69 | 62 | 116 | H |
| 3 | * ** 2.48354 | 39.94 | ADV | 32.3 | -22.8 | 49.44 | 54 | -4.56 | - | - | 62 | 116 | H |
| 4 | * ** 2.48405 | 40.68 | ADV | 32.3 | -22.8 | 50.18 | 54 | -3.82 | - | - | 62 | 116 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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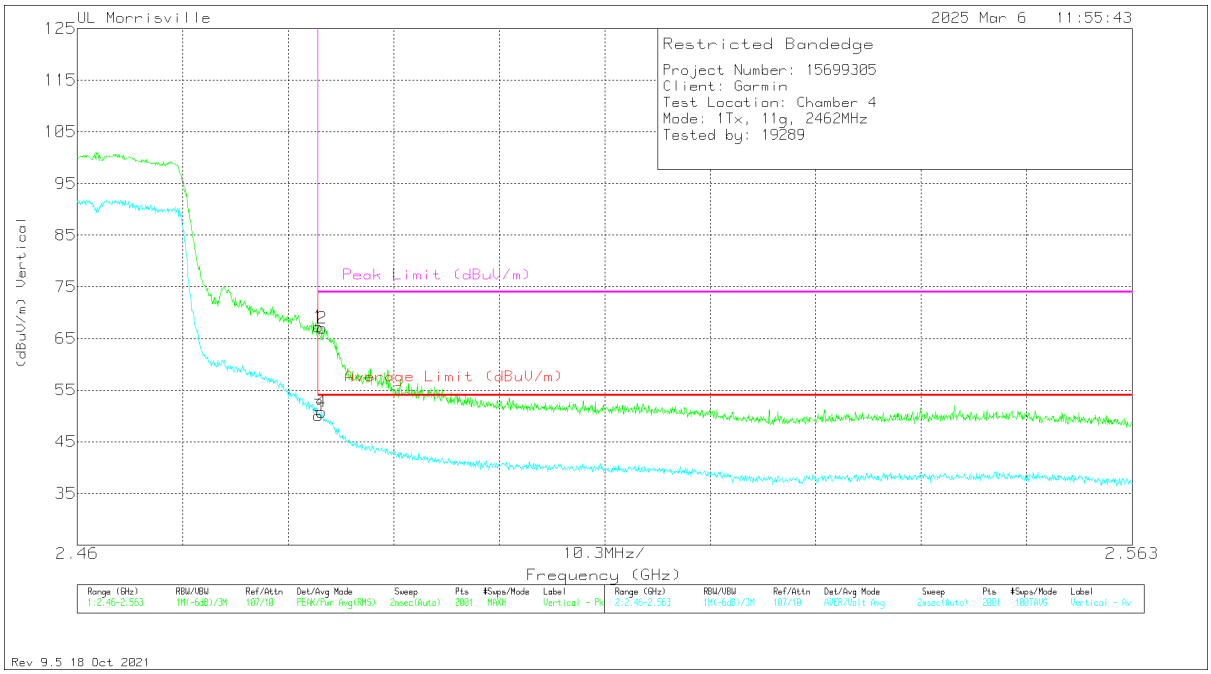
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 57.76 | Pk | 32.3 | -22.8 | 67.26 | - | - | 74 | -6.74 | 7 | 146 | V |
| 2 | * ** 2.4839 | 57.51 | Pk | 32.3 | -22.8 | 67.01 | - | - | 74 | -6.99 | 7 | 146 | V |
| 3 | * ** 2.48354 | 40.57 | ADV | 32.3 | -22.8 | 50.07 | 54 | -3.93 | - | - | 7 | 146 | V |
| 4 | * ** 2.48384 | 41.27 | ADV | 32.3 | -22.8 | 50.77 | 54 | -3.23 | - | - | 7 | 146 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average



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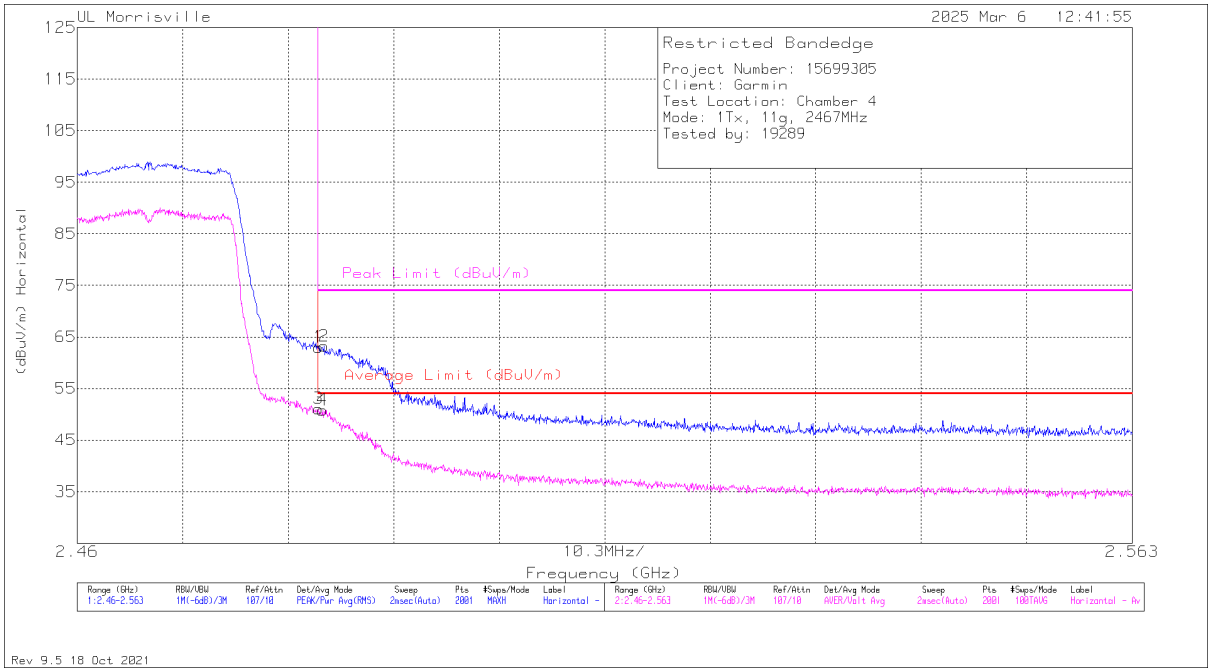
## BANDEDGE (HIGH CHANNEL, 2467MHz)

### HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 53.53 | Pk | 32.3 | -22.8 | 63.03 | - | - | 74 | -10.97 | 29 | 157 | H |
| 2 | * ** 2.4841 | 53.72 | Pk | 32.3 | -22.8 | 63.22 | - | - | 74 | -10.78 | 29 | 157 | H |
| 3 | * ** 2.48354 | 41.6 | ADV | 32.3 | -22.8 | 51.1 | 54 | -2.9 | - | - | 29 | 157 | H |
| 4 | * ** 2.48395 | 41.35 | ADV | 32.3 | -22.8 | 50.85 | 54 | -3.15 | - | - | 29 | 157 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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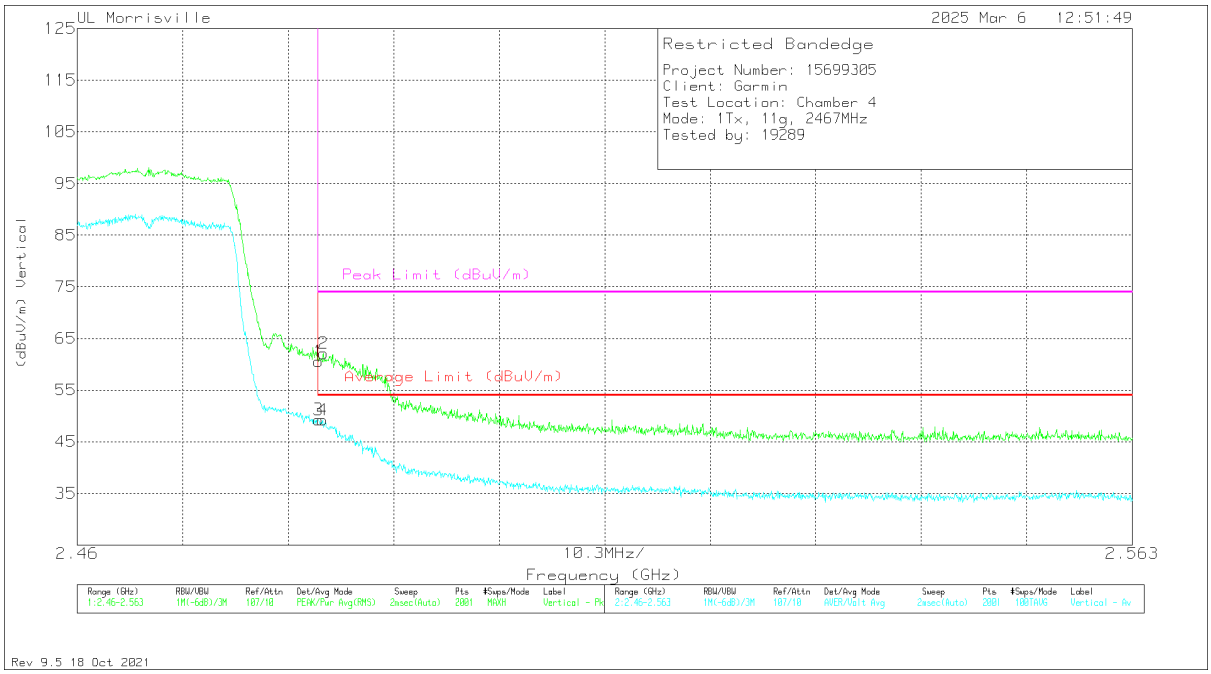
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 51.02 | Pk | 32.3 | -22.8 | 60.52 | - | - | 74 | -13.48 | 35 | 145 | V |
| 2 | * ** 2.48405 | 52.6 | Pk | 32.3 | -22.8 | 62.1 | - | - | 74 | -11.9 | 35 | 145 | V |
| 3 | * ** 2.48354 | 39.73 | ADV | 32.3 | -22.8 | 49.23 | 54 | -4.77 | - | - | 35 | 145 | V |
| 4 | * ** 2.48395 | 39.7 | ADV | 32.3 | -22.8 | 49.2 | 54 | -4.8 | - | - | 35 | 145 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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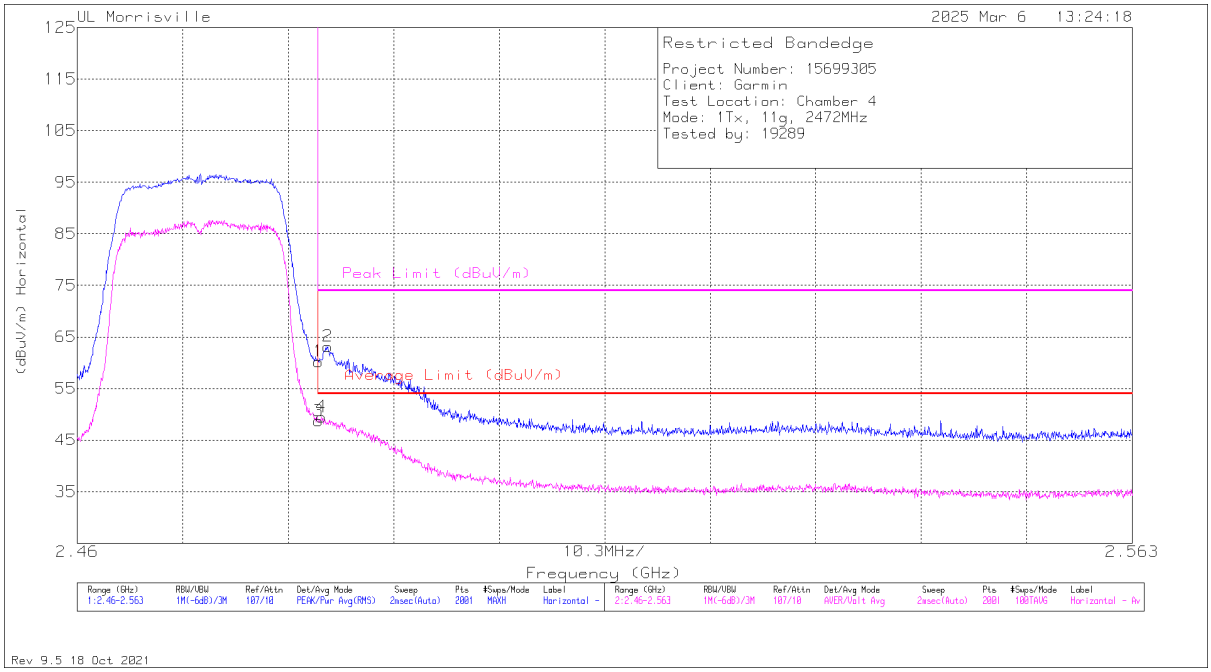
## BANDEDGE (HIGH CHANNEL, 2472MHz)

### HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 50.74 | Pk | 32.3 | -22.8 | 60.24 | - | - | 74 | -13.76 | 51 | 143 | H |
| 2 | * ** 2.48446 | 53.67 | Pk | 32.3 | -22.8 | 63.17 | - | - | 74 | -10.83 | 51 | 143 | H |
| 3 | * ** 2.48354 | 39.23 | ADV | 32.3 | -22.8 | 48.73 | 54 | -5.27 | - | - | 51 | 143 | H |
| 4 | * ** 2.48384 | 40.01 | ADV | 32.3 | -22.8 | 49.51 | 54 | -4.49 | - | - | 51 | 143 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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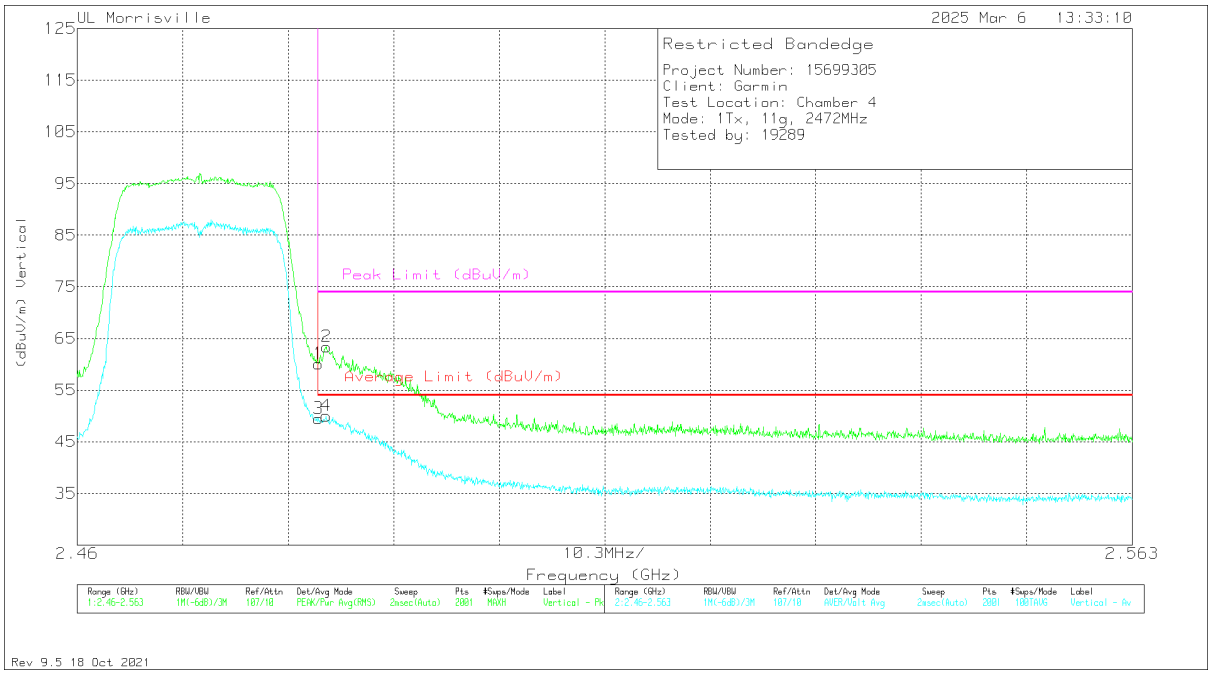
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 50.59 | Pk | 32.3 | -22.8 | 60.09 | - | - | 74 | -13.91 | 6 | 118 | V |
| 2 | * ** 2.48436 | 53.91 | Pk | 32.3 | -22.8 | 63.41 | - | - | 74 | -10.59 | 6 | 118 | V |
| 3 | * ** 2.48354 | 39.98 | ADV | 32.3 | -22.8 | 49.48 | 54 | -4.52 | - | - | 6 | 118 | V |
| 4 | * ** 2.48431 | 40.52 | ADV | 32.3 | -22.8 | 50.02 | 54 | -3.98 | - | - | 6 | 118 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average



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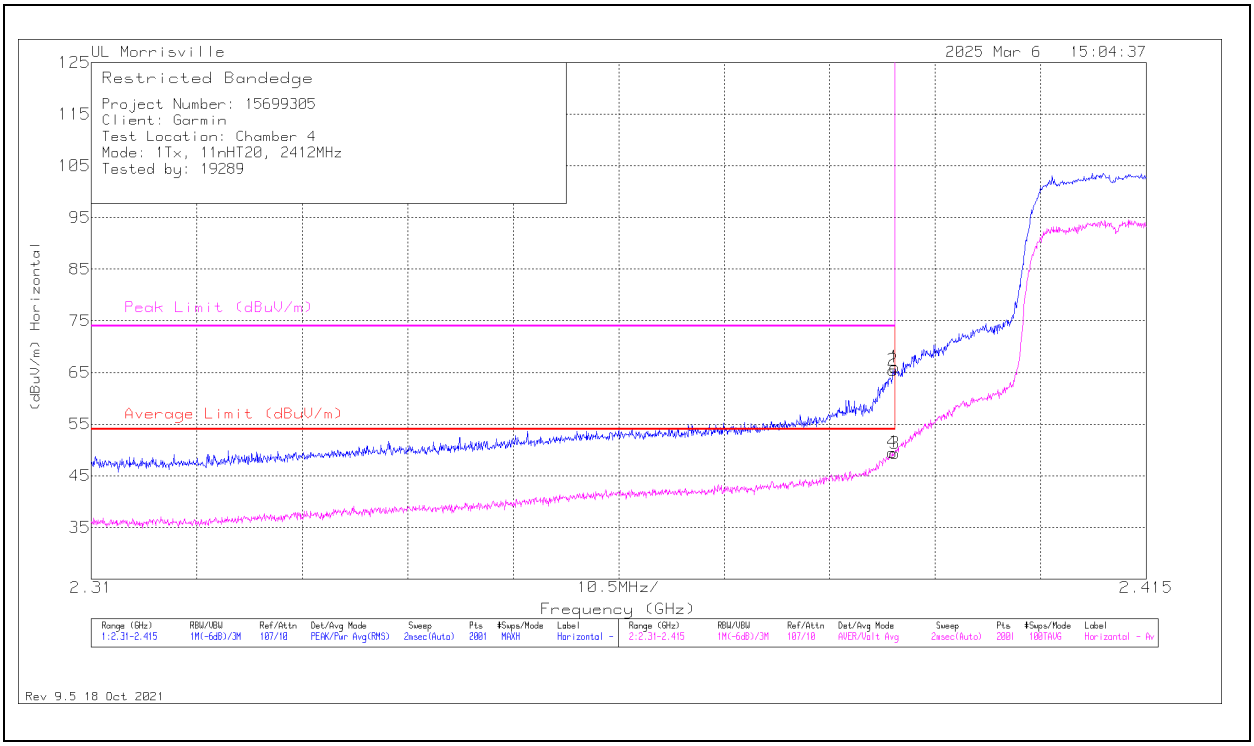
### 10.1.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

## BANDEDGE (LOW CHANNEL, 2412MHz)

## HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.38996 | 57.28 | Pk | 32 | -23.2 | 66.08 | - | - | 74 | -7.92 | 53 | 143 | H |
| 2 | * ** 2.3898 | 56.67 | Pk | 32 | -23.2 | 65.47 | - | - | 74 | -8.53 | 53 | 143 | H |
| 3 | * ** 2.38996 | 40.56 | ADV | 32 | -23.2 | 49.36 | 54 | -4.64 | - | - | 53 | 143 | H |
| 4 | * ** 2.38975 | 40.73 | ADV | 32 | -23.2 | 49.53 | 54 | -4.47 | - | - | 53 | 143 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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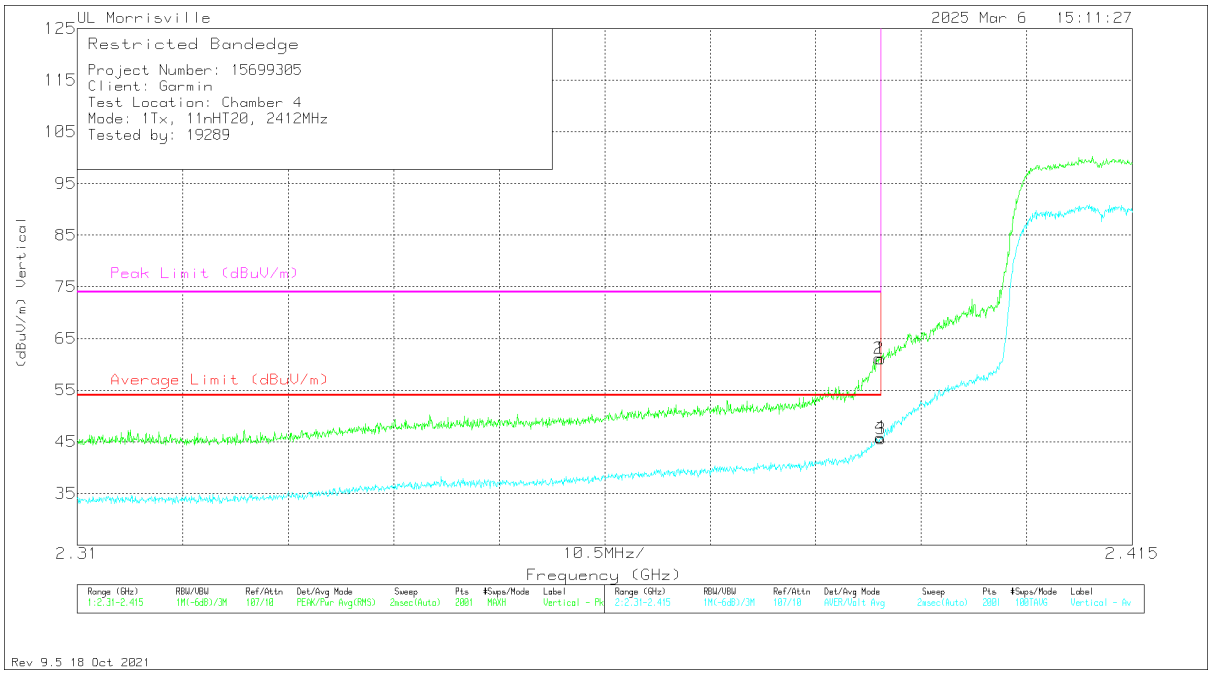
# VERTICAL RESULTS




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.38996 | 52.3 | Pk | 32 | -23.2 | 61.1 | - | - | 74 | -12.9 | 26 | 139 | V |
| 2 | * ** 2.3898 | 52.31 | Pk | 32 | -23.2 | 61.11 | - | - | 74 | -12.89 | 26 | 139 | V |
| 3 | * ** 2.38996 | 36.75 | ADV | 32 | -23.2 | 45.55 | 54 | -8.45 | - | - | 26 | 139 | V |
| 4 | * ** 2.38991 | 37.06 | ADV | 32 | -23.2 | 45.86 | 54 | -8.14 | - | - | 26 | 139 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average



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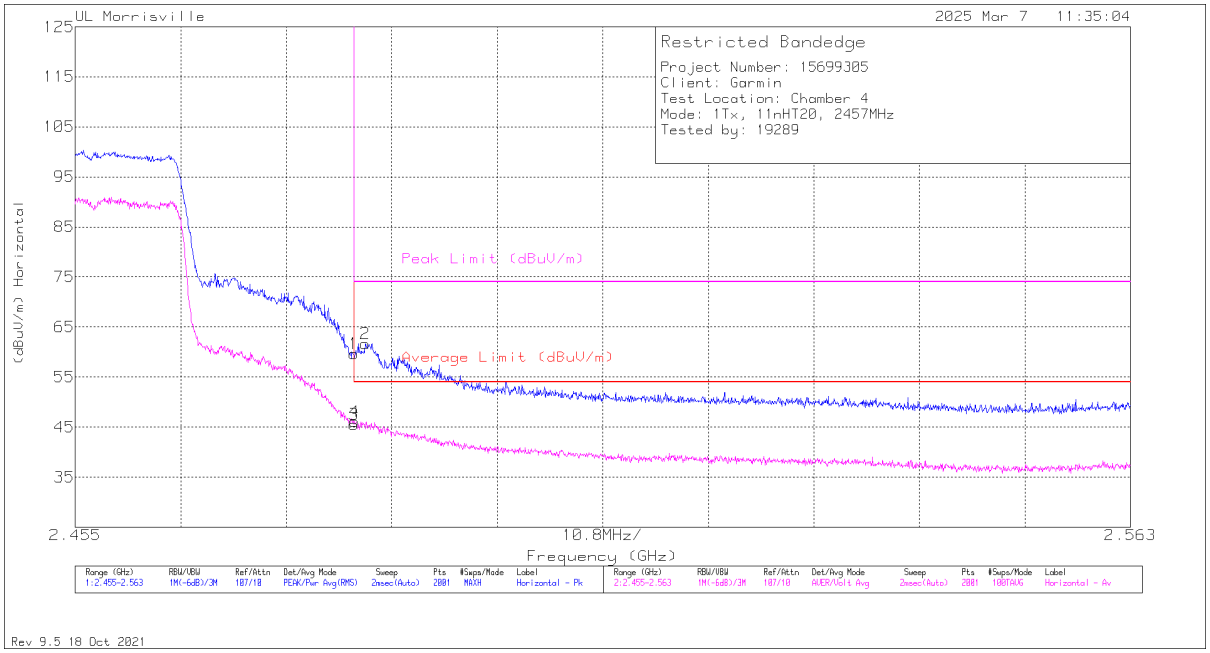
## BANDEDGE (HIGH CHANNEL, 2457MHz)

### HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48351 | 50.14 | Pk | 32.3 | -22.8 | 59.64 | - | - | 74 | -14.36 | 29 | 139 | H |
| 2 | * ** 2.4847 | 52.18 | Pk | 32.3 | -22.8 | 61.68 | - | - | 74 | -12.32 | 29 | 139 | H |
| 3 | * ** 2.48351 | 36 | ADV | 32.3 | -22.8 | 45.5 | 54 | -8.5 | - | - | 29 | 139 | H |
| 4 | * ** 2.48362 | 36.59 | ADV | 32.3 | -22.8 | 46.09 | 54 | -7.91 | - | - | 29 | 139 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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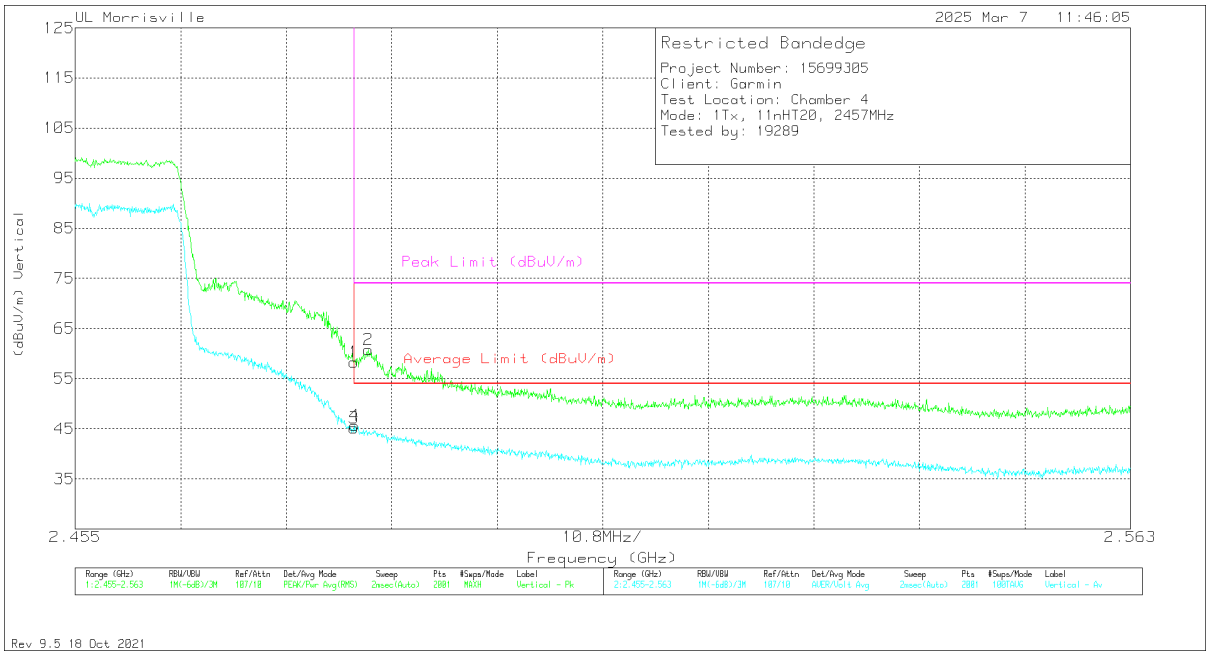
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48351 | 48.81 | Pk | 32.3 | -22.8 | 58.31 | - | - | 74 | -15.69 | 74 | 119 | V |
| 2 | * ** 2.48502 | 51.29 | Pk | 32.3 | -22.8 | 60.79 | - | - | 74 | -13.21 | 74 | 119 | V |
| 3 | * ** 2.48351 | 35.66 | ADV | 32.3 | -22.8 | 45.16 | 54 | -8.84 | - | - | 74 | 119 | V |
| 4 | * ** 2.48357 | 36.15 | ADV | 32.3 | -22.8 | 45.65 | 54 | -8.35 | - | - | 74 | 119 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average



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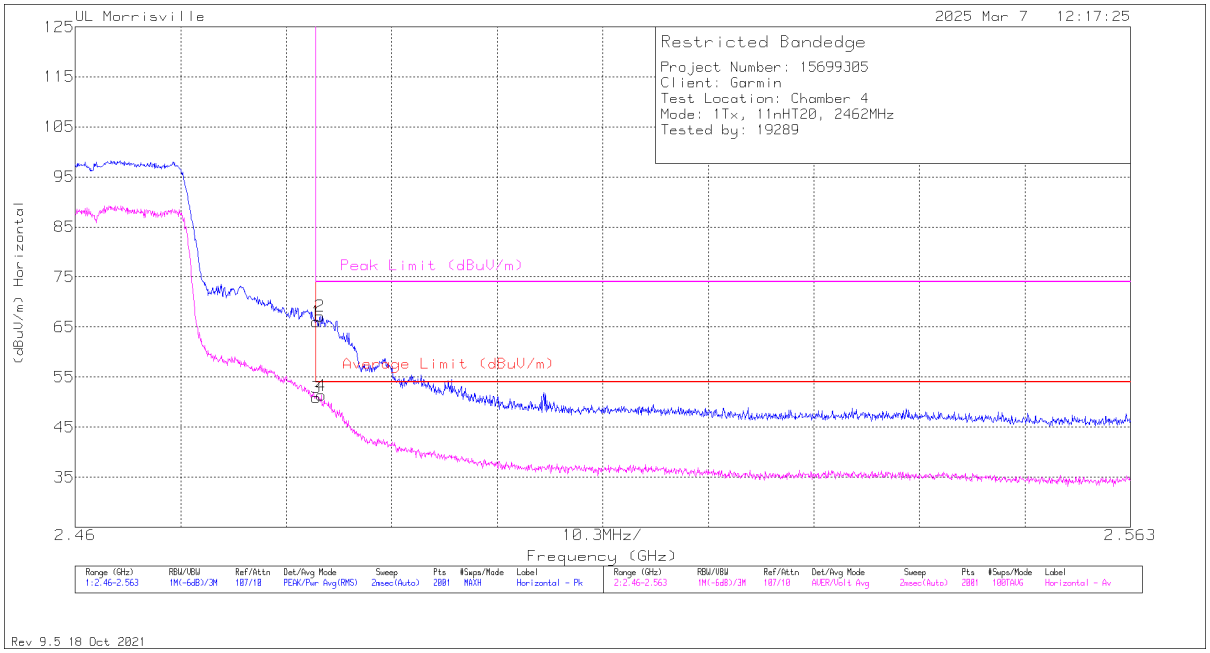
## BANDEDGE (HIGH CHANNEL, 2462MHz)

### HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 56.58 | Pk | 32.3 | -22.8 | 66.08 | - | - | 74 | -7.92 | 54 | 124 | H |
| 2 | * ** 2.4839 | 57.63 | Pk | 32.3 | -22.8 | 67.13 | - | - | 74 | -6.87 | 54 | 124 | H |
| 3 | * ** 2.48354 | 41.39 | ADV | 32.3 | -22.8 | 50.89 | 54 | -3.11 | - | - | 54 | 124 | H |
| 4 | * ** 2.484 | 41.84 | ADV | 32.3 | -22.8 | 51.34 | 54 | -2.66 | - | - | 54 | 124 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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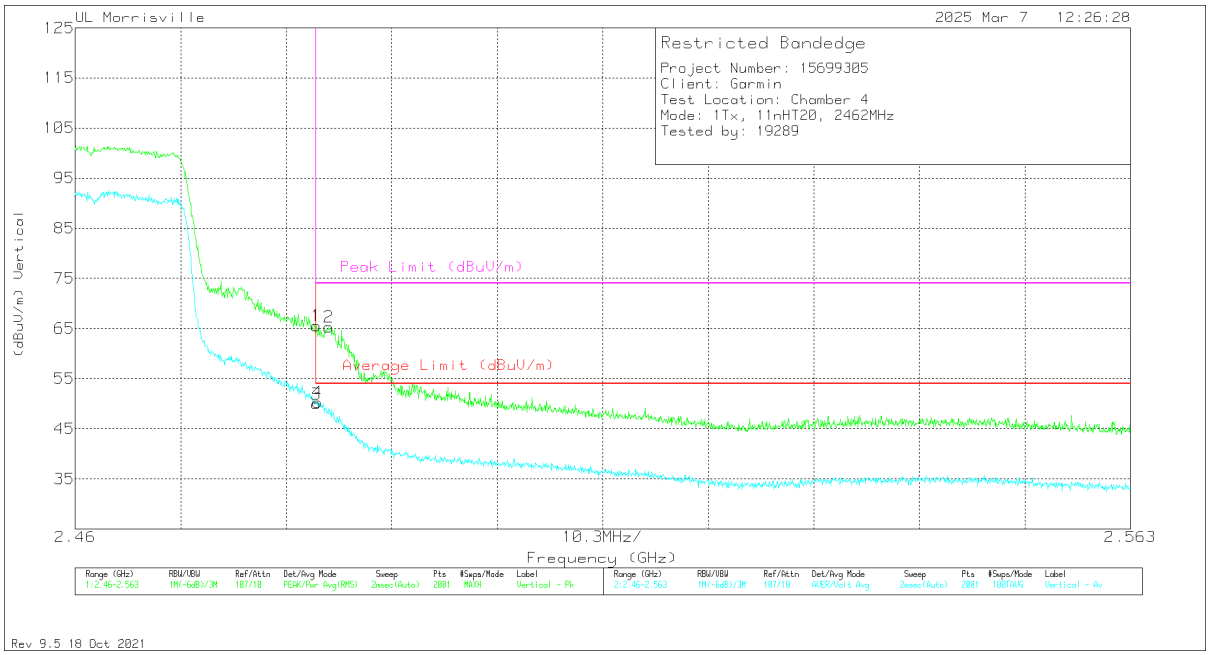
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 56.08 | Pk | 32.3 | -22.8 | 65.58 | - | - | 74 | -8.42 | 20 | 349 | V |
| 2 | * ** 2.48477 | 55.78 | Pk | 32.3 | -22.8 | 65.28 | - | - | 74 | -8.72 | 20 | 349 | V |
| 3 | * ** 2.48354 | 40.46 | ADV | 32.3 | -22.8 | 49.96 | 54 | -4.04 | - | - | 20 | 349 | V |
| 4 | * ** 2.48364 | 40.81 | ADV | 32.3 | -22.8 | 50.31 | 54 | -3.69 | - | - | 20 | 349 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average



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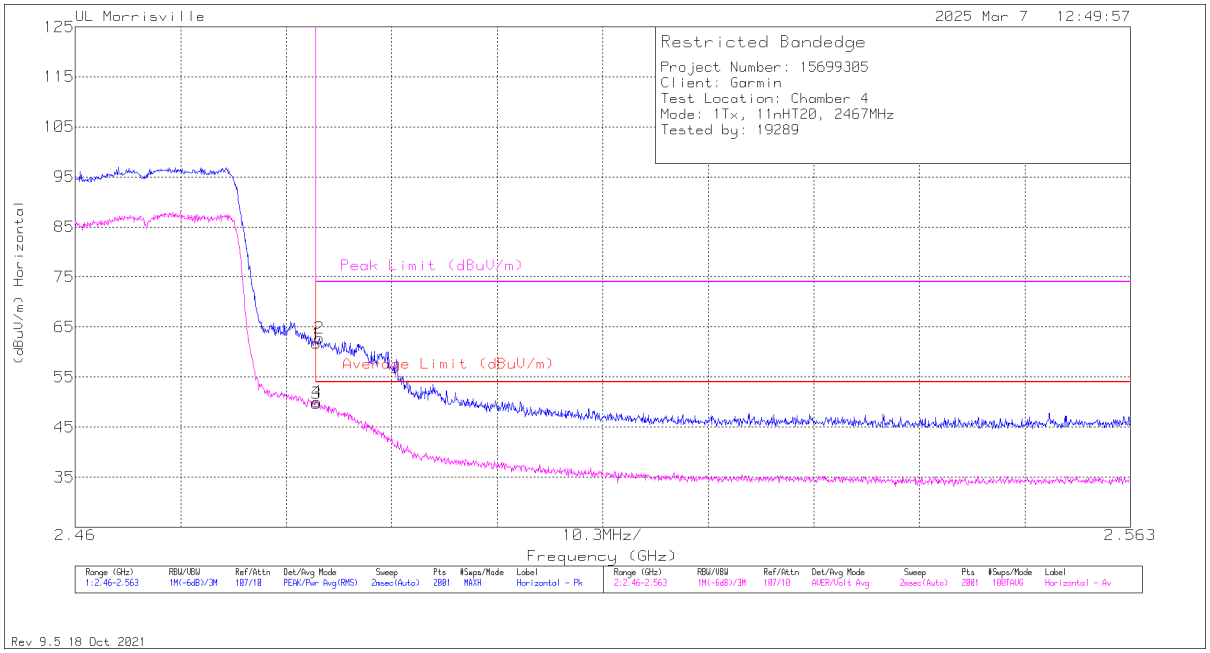
## BANDEDGE (HIGH CHANNEL, 2467MHz)

### HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 52.23 | Pk | 32.3 | -22.8 | 61.73 | - | - | 74 | -12.27 | 45 | 140 | H |
| 2 | * ** 2.48384 | 53.34 | Pk | 32.3 | -22.8 | 62.84 | - | - | 74 | -11.16 | 45 | 140 | H |
| 3 | * ** 2.48354 | 40.31 | ADV | 32.3 | -22.8 | 49.81 | 54 | -4.19 | - | - | 45 | 140 | H |
| 4 | * ** 2.48359 | 40.52 | ADV | 32.3 | -22.8 | 50.02 | 54 | -3.98 | - | - | 45 | 140 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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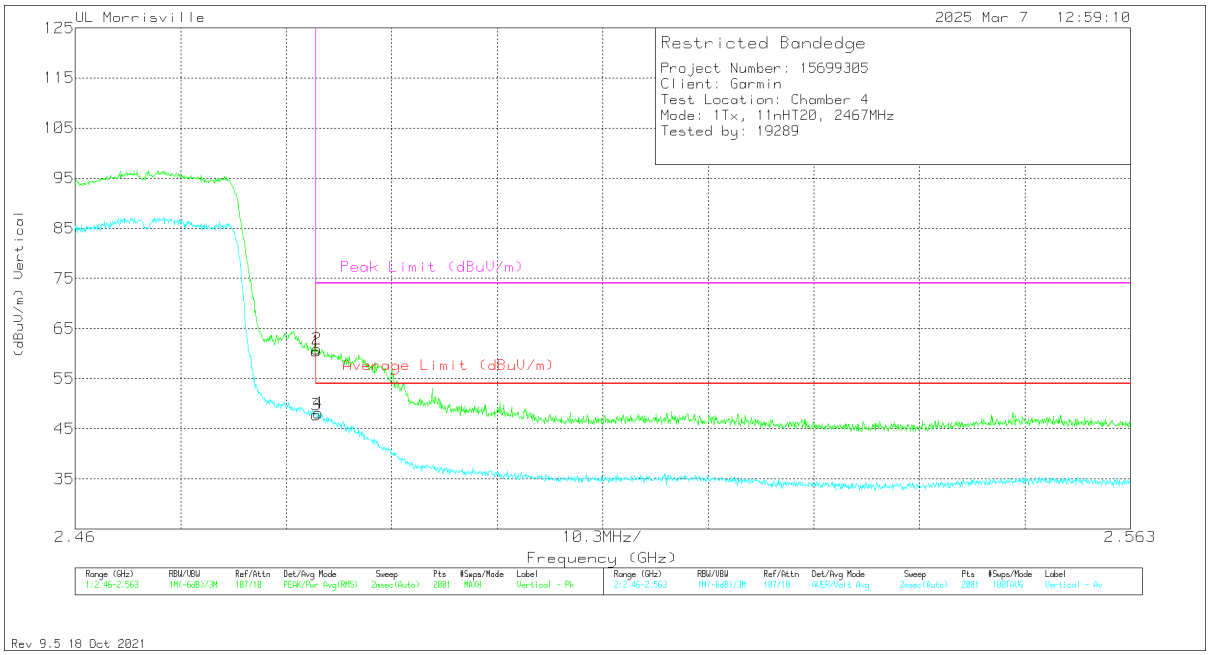
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 50.97 | Pk | 32.3 | -22.8 | 60.47 | - | - | 74 | -13.53 | 5 | 130 | V |
| 2 | * ** 2.48359 | 51.47 | Pk | 32.3 | -22.8 | 60.97 | - | - | 74 | -13.03 | 5 | 130 | V |
| 3 | * ** 2.48354 | 38.23 | ADV | 32.3 | -22.8 | 47.73 | 54 | -6.27 | - | - | 5 | 130 | V |
| 4 | * ** 2.48374 | 38.62 | ADV | 32.3 | -22.8 | 48.12 | 54 | -5.88 | - | - | 5 | 130 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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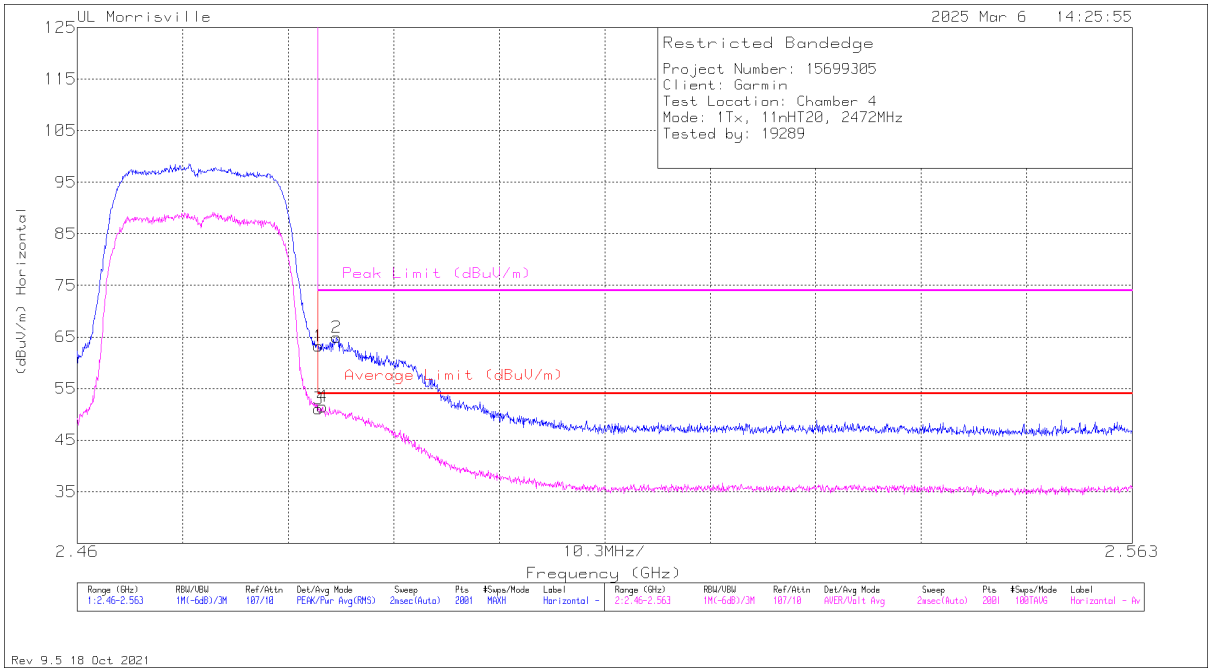
## BANDEDGE (HIGH CHANNEL, 2472MHz)

### HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 53.73 | Pk | 32.3 | -22.8 | 63.23 | - | - | 74 | -10.77 | 54 | 300 | H |
| 2 | * ** 2.48534 | 55.43 | Pk | 32.3 | -22.8 | 64.93 | - | - | 74 | -9.07 | 54 | 300 | H |
| 3 | * ** 2.48354 | 41.56 | ADV | 32.3 | -22.8 | 51.06 | 54 | -2.94 | - | - | 54 | 300 | H |
| 4 | * ** 2.48395 | 41.98 | ADV | 32.3 | -22.8 | 51.48 | 54 | -2.52 | - | - | 54 | 300 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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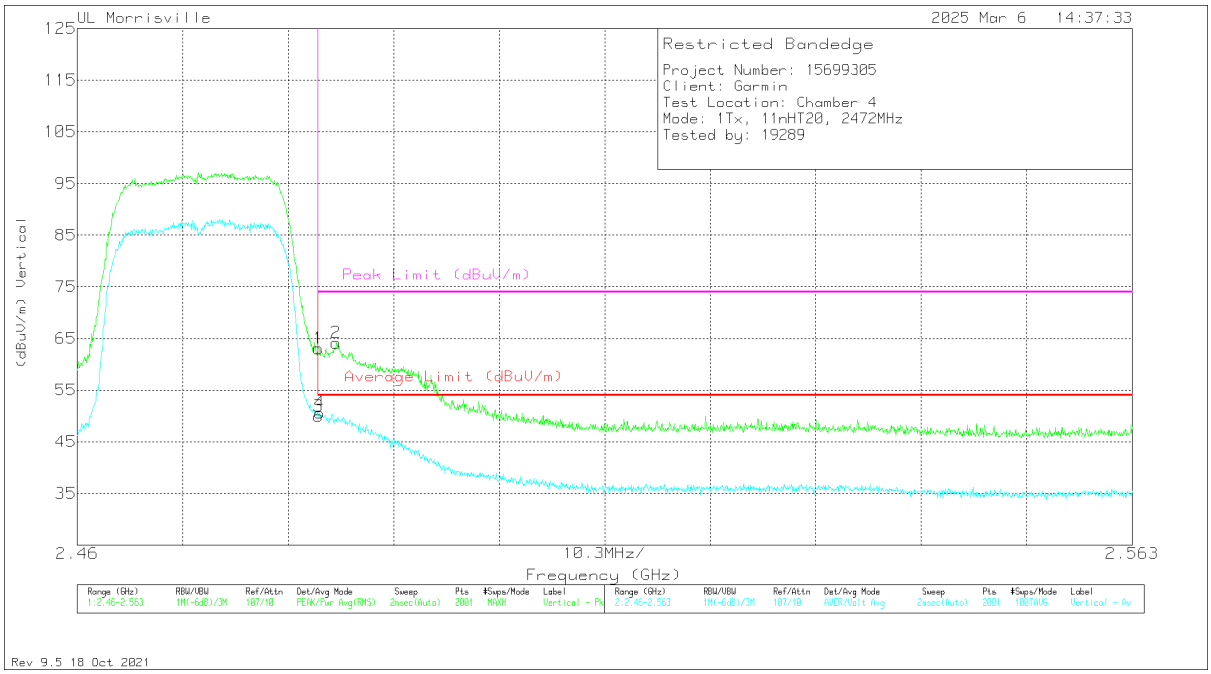
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 89509 ACF (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 53.57 | Pk | 32.3 | -22.8 | 63.07 | - | - | 74 | -10.93 | 22 | 109 | V |
| 2 | * ** 2.48529 | 54.66 | Pk | 32.3 | -22.8 | 64.16 | - | - | 74 | -9.84 | 22 | 109 | V |
| 3 | * ** 2.48354 | 40.45 | ADV | 32.3 | -22.8 | 49.95 | 54 | -4.05 | - | - | 22 | 109 | V |
| 4 | * ** 2.48369 | 41.07 | ADV | 32.3 | -22.8 | 50.57 | 54 | -3.43 | - | - | 22 | 109 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average



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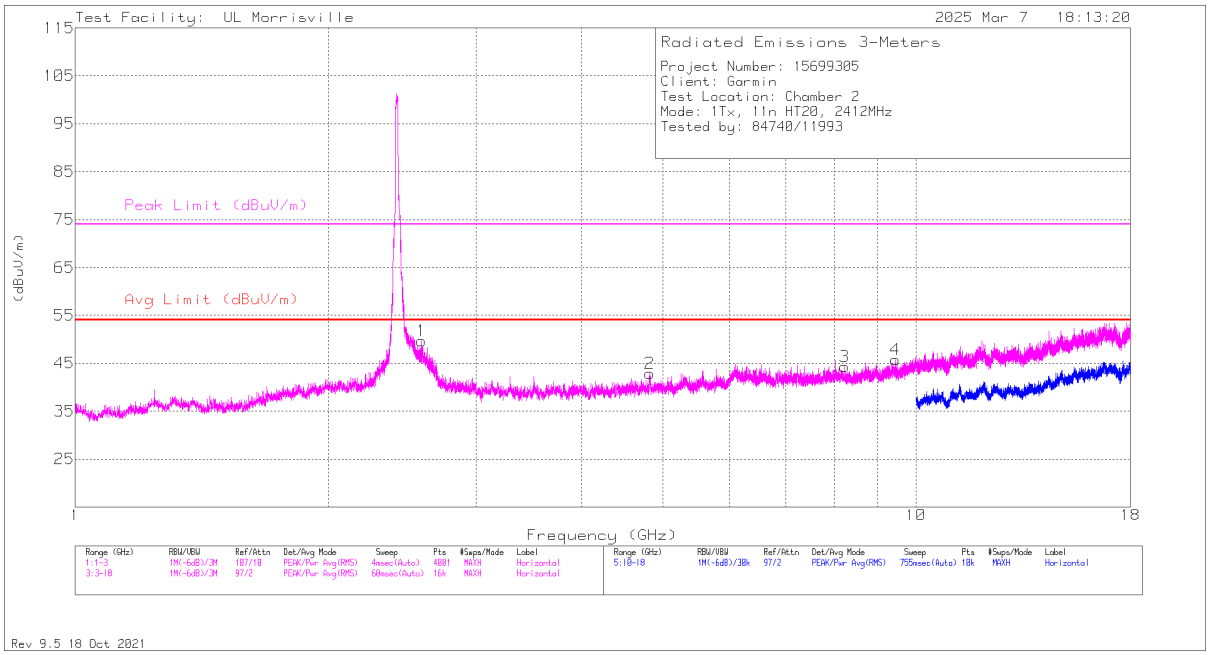
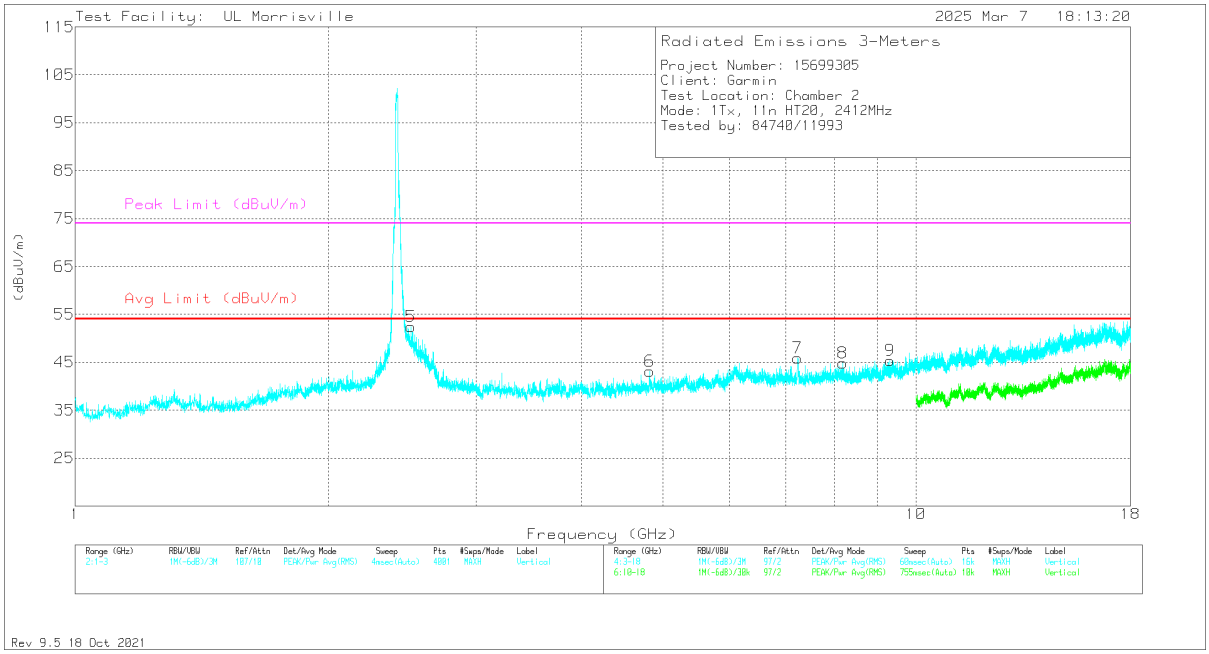
## HARMONICS AND SPURIOUS EMISSIONS

### LOW CHANNEL




**HORIZONTAL**




**VERTICAL**



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| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 86408 (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ** 2.58287 | 43.73 | PK2 | 32.4 | -24.7 | 51.43 | - | - | 74 | -22.57 | 267 | 122 | H |
| | ** 2.58221 | 31 | ADV | 32.4 | -24.7 | 38.7 | 54 | -15.3 | - | - | 267 | 122 | H |
| 5 | ** 2.5076 | 46.32 | PK2 | 32.5 | -24.4 | 54.42 | - | - | 74 | -19.58 | 41 | 111 | V |
| | ** 2.50744 | 34.15 | ADV | 32.5 | -24.4 | 42.25 | 54 | -11.75 | - | - | 41 | 111 | V |
| 2 | * ** 4.82719 | 52.72 | Pk | 34.1 | -43.9 | 42.92 | 54 | -11.08 | 74 | -31.08 | 0-360 | 101 | H |
| 3 | * ** 8.22938 | 49.01 | Pk | 35.8 | -40.5 | 44.31 | 54 | -9.69 | 74 | -29.69 | 0-360 | 200 | H |
| 4 | * ** 9.45 | 49.87 | Pk | 36.3 | -40.4 | 45.77 | 54 | -8.23 | 74 | -28.23 | 0-360 | 101 | H |
| 6 | * ** 4.82625 | 52.8 | Pk | 34.1 | -43.8 | 43.1 | 54 | -10.9 | 74 | -30.9 | 0-360 | 101 | V |
| 8 | * ** 8.18438 | 49.69 | Pk | 35.8 | -40.6 | 44.89 | 54 | -9.11 | 74 | -29.11 | 0-360 | 199 | V |
| 9 | * ** 9.31781 | 49.25 | Pk | 36.1 | -40 | 45.35 | 54 | -8.65 | 74 | -28.65 | 0-360 | 101 | V |
| 7 | 7.23469 | 51.45 | Pk | 35.6 | -41.2 | 45.85 | 54 | -8.15 | 74 | -28.15 | 0-360 | 101 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
PK2 - Maximum Peak
ADV - Linear Voltage Average


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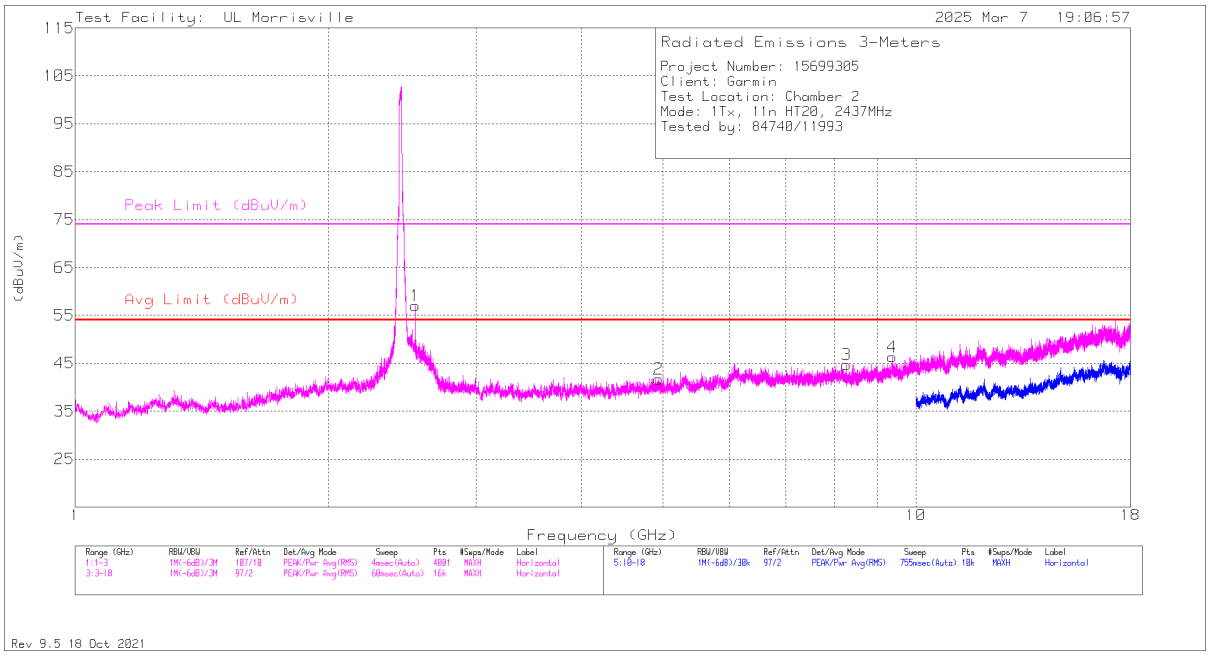
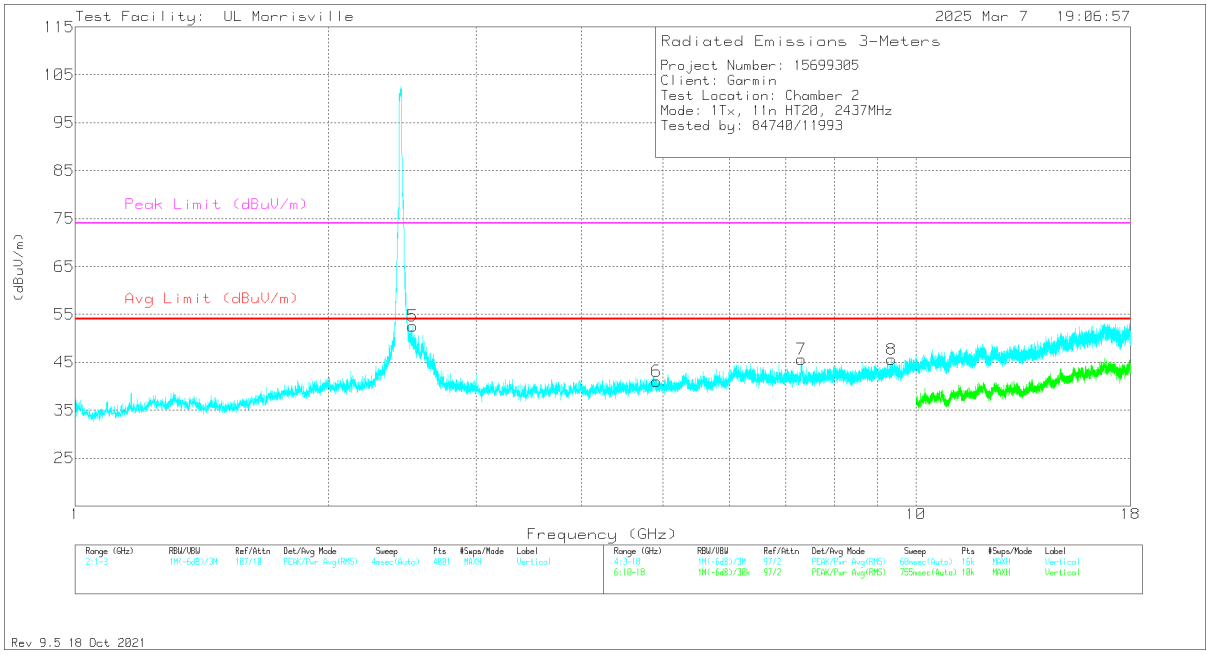
## MID CHANNEL




## HORIZONTAL




## VERTICAL



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| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 86408 (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ** 2.53928 | 43.91 | PK2 | 32.5 | -24.6 | 51.81 | - | - | 74 | -22.19 | 258 | 213 | H |
| | ** 2.53849 | 31.77 | ADV | 32.5 | -24.6 | 39.67 | 54 | -14.33 | - | - | 258 | 213 | H |
| 5 | ** 2.52145 | 46.23 | PK2 | 32.5 | -24.6 | 54.13 | - | - | 74 | -19.87 | 40 | 121 | V |
| | ** 2.52055 | 33.94 | ADV | 32.5 | -24.6 | 41.84 | 54 | -12.16 | - | - | 40 | 121 | V |
| 2 | * ** 4.94531 | 51.25 | Pk | 34 | -43.6 | 41.65 | 54 | -12.35 | 74 | -32.35 | 0-360 | 101 | H |
| 3 | * ** 8.27438 | 49.43 | Pk | 35.8 | -40.5 | 44.73 | 54 | -9.27 | 74 | -29.27 | 0-360 | 101 | H |
| 4 | * ** 9.37313 | 50.14 | Pk | 36.1 | -39.9 | 46.34 | 54 | -7.66 | 74 | -27.66 | 0-360 | 199 | H |
| 6 | * ** 4.91719 | 50.84 | Pk | 34.1 | -43.9 | 41.04 | 54 | -12.96 | 74 | -32.96 | 0-360 | 101 | V |
| 7 | * ** 7.30594 | 51.79 | Pk | 35.6 | -41.8 | 45.59 | 54 | -8.41 | 74 | -28.41 | 0-360 | 101 | V |
| 8 | * ** 9.36469 | 49.07 | Pk | 36.1 | -39.6 | 45.57 | 54 | -8.43 | 74 | -28.43 | 0-360 | 101 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
PK2 - Maximum Peak
ADV - Linear Voltage Average


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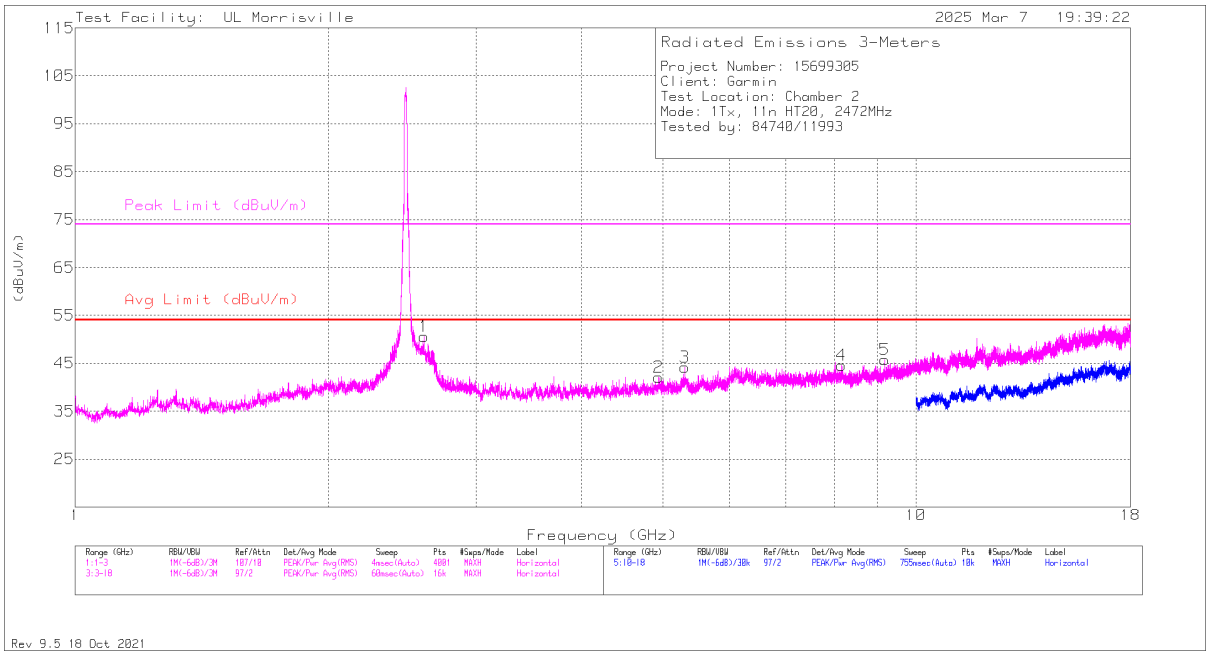
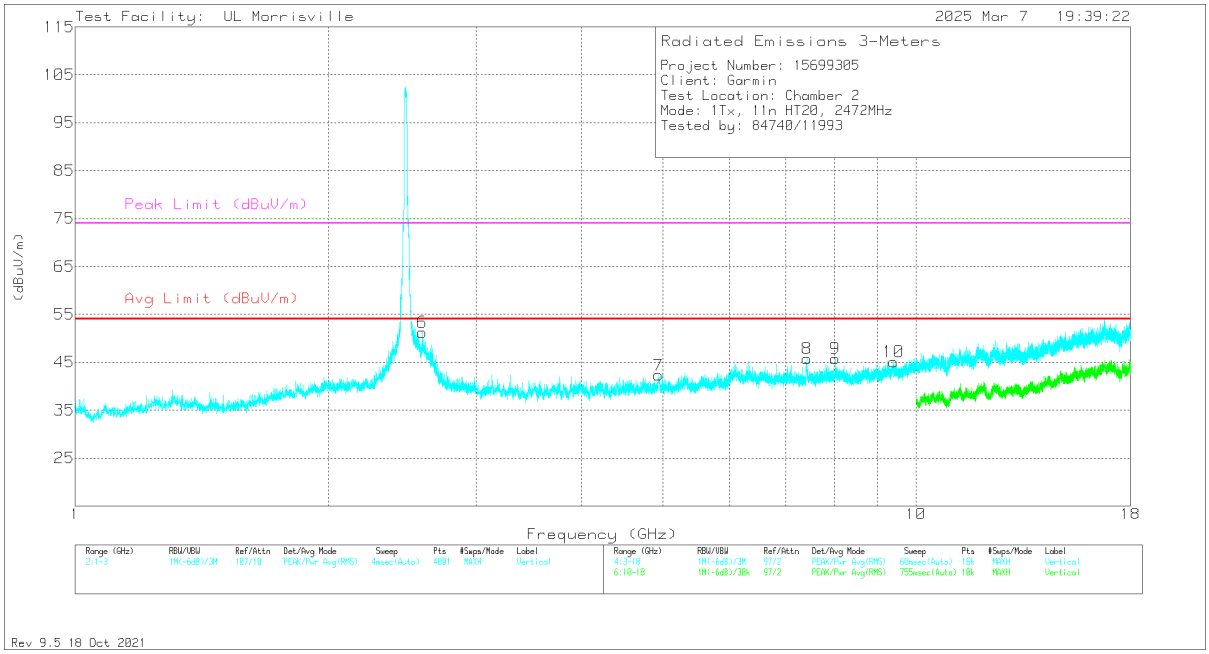
## HIGH CHANNEL




## HORIZONTAL




## VERTICAL



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| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 86408 (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ** 2.59806 | 43.09 | PK2 | 32.4 | -25 | 50.49 | - | - | 74 | -23.51 | 266 | 215 | H |
| | ** 2.60045 | 30.55 | ADV | 32.4 | -25.1 | 37.85 | 54 | -16.15 | - | - | 266 | 215 | H |
| 6 | ** 2.58647 | 41.78 | PK2 | 32.4 | -24.6 | 49.58 | - | - | 74 | -24.42 | 340 | 205 | V |
| | ** 2.58823 | 28.16 | ADV | 32.4 | -24.6 | 35.96 | 54 | -18.04 | - | - | 340 | 205 | V |
| 2 | * ** 4.94344 | 51.57 | Pk | 34 | -43.5 | 42.07 | 54 | -11.93 | 74 | -31.93 | 0-360 | 101 | H |
| 4 | * ** 8.15344 | 49.53 | Pk | 35.8 | -40.7 | 44.63 | 54 | -9.37 | 74 | -29.37 | 0-360 | 200 | H |
| 5 | * ** 9.18563 | 49.42 | Pk | 36 | -39.7 | 45.72 | 54 | -8.28 | 74 | -28.28 | 0-360 | 200 | H |
| 7 | * ** 4.94063 | 51.89 | Pk | 34 | -43.6 | 42.29 | 54 | -11.71 | 74 | -31.71 | 0-360 | 101 | V |
| 8 | * ** 7.41656 | 51.26 | Pk | 35.6 | -41.1 | 45.76 | 54 | -8.24 | 74 | -28.24 | 0-360 | 200 | V |
| 10 | * ** 9.40875 | 48.98 | Pk | 36.2 | -40.1 | 45.08 | 54 | -8.92 | 74 | -28.92 | 0-360 | 101 | V |
| 3 | 5.31469 | 52.64 | Pk | 34.3 | -42.7 | 44.24 | - | - | - | - | 0-360 | 101 | H |
| 9 | 8.02219 | 50.54 | Pk | 35.9 | -40.7 | 45.74 | - | - | - | - | 0-360 | 200 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
PK2 - Maximum Peak
ADV - Linear Voltage Average


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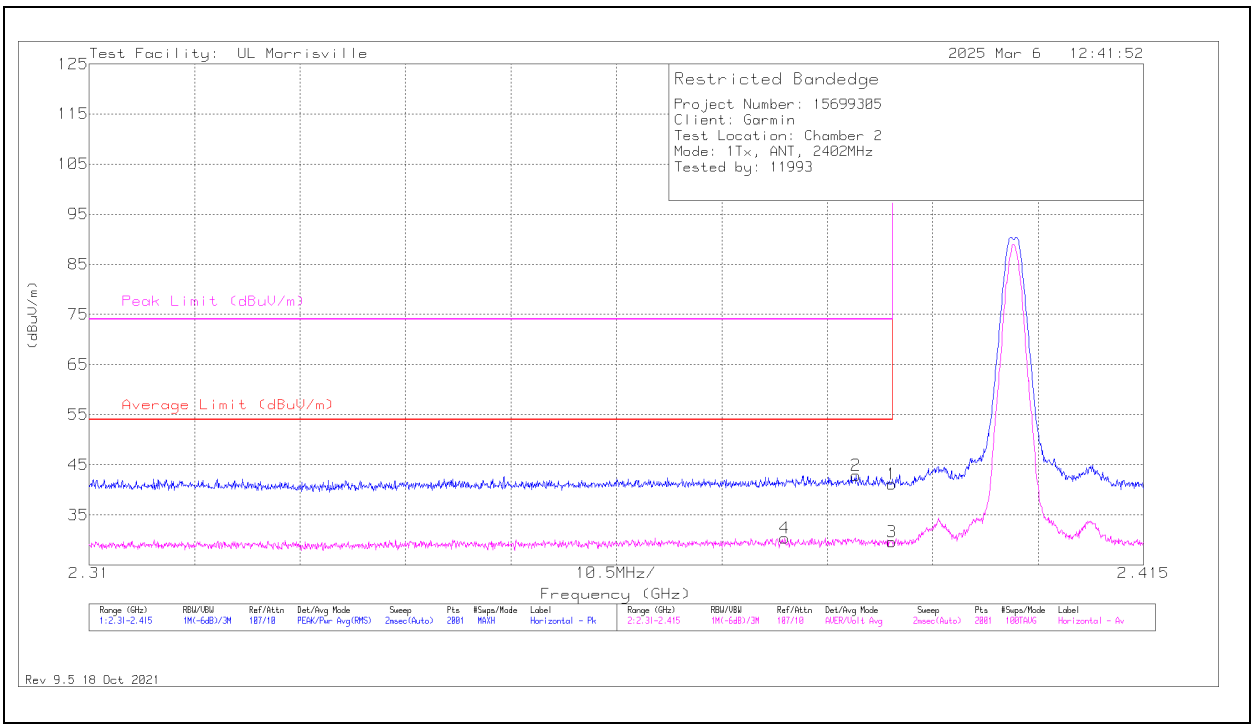
## 10.1.4. TX ABOVE 1 GHz ANT/ANT+ MODE IN THE 2.4 GHz BAND

### BANDEDGE (LOW CHANNEL, 2402MHz)

### HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 86408 (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.38996 | 32.47 | Pk | 32.3 | -23.6 | 41.17 | - | - | 74 | -32.83 | 21 | 267 | H |
| 2 | * ** 2.38639 | 34.11 | Pk | 32.2 | -23.4 | 42.91 | - | - | 74 | -31.09 | 21 | 267 | H |
| 3 | * ** 2.38996 | 20.92 | ADV | 32.3 | -23.6 | 29.62 | 54 | -24.38 | - | - | 21 | 267 | H |
| 4 | * ** 2.37925 | 21.76 | ADV | 32.2 | -23.6 | 30.36 | 54 | -23.64 | - | - | 21 | 267 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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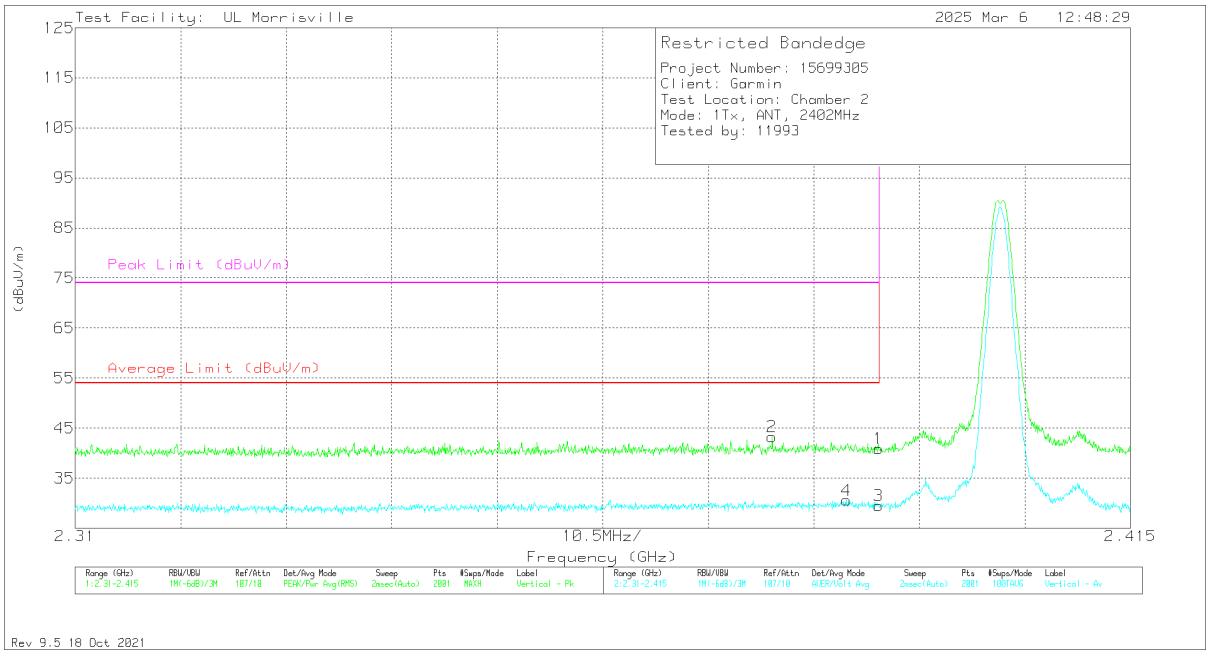
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 86408 (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.38996 | 32.19 | Pk | 32.3 | -23.6 | 40.89 | - | - | 74 | -33.11 | 240 | 230 | V |
| 2 | * ** 2.37935 | 34.72 | Pk | 32.2 | -23.6 | 43.32 | - | - | 74 | -30.68 | 240 | 230 | V |
| 3 | * ** 2.38996 | 20.85 | ADV | 32.3 | -23.6 | 29.55 | 54 | -24.45 | - | - | 240 | 230 | V |
| 4 | * ** 2.38676 | 21.76 | ADV | 32.2 | -23.4 | 30.56 | 54 | -23.44 | - | - | 240 | 230 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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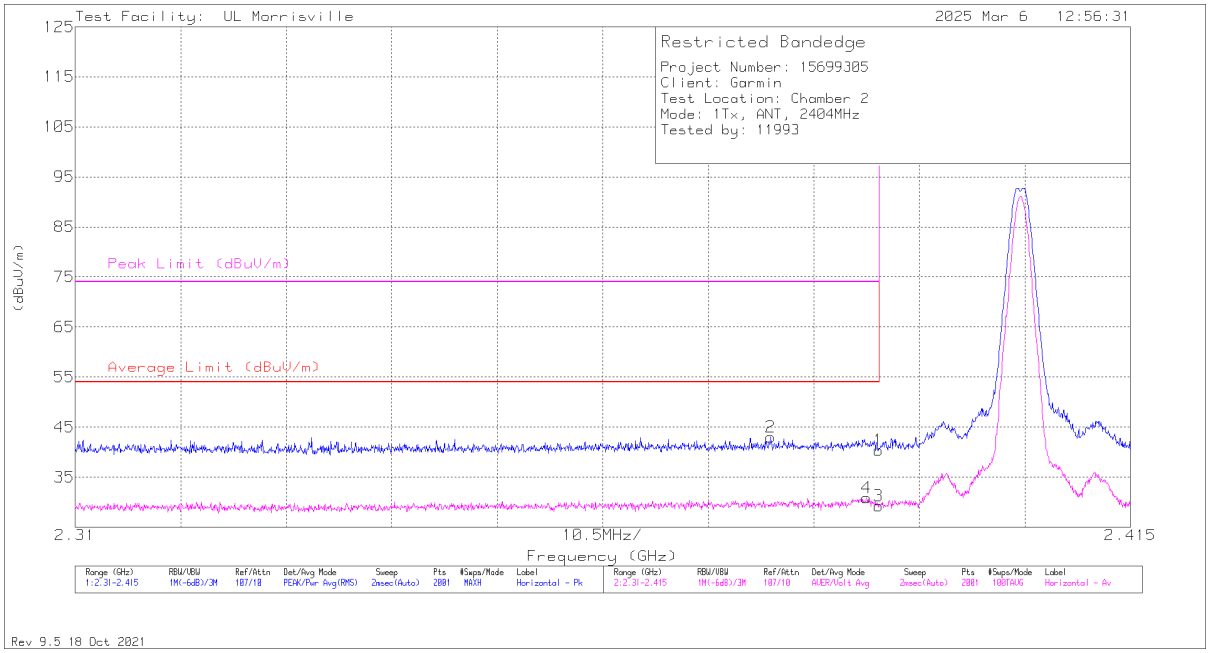
## BANDEDGE (LOW CHANNEL, 2404MHz)

### HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 86408 (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.38996 | 31.66 | Pk | 32.3 | -23.6 | 40.36 | - | - | 74 | -33.64 | 342 | 200 | H |
| 2 | * ** 2.3792 | 34.45 | Pk | 32.2 | -23.6 | 43.05 | - | - | 74 | -30.95 | 342 | 200 | H |
| 3 | * ** 2.38996 | 20.56 | ADV | 32.3 | -23.6 | 29.26 | 54 | -24.74 | - | - | 342 | 199 | H |
| 4 | * ** 2.38875 | 22.08 | ADV | 32.3 | -23.5 | 30.88 | 54 | -23.12 | - | - | 342 | 199 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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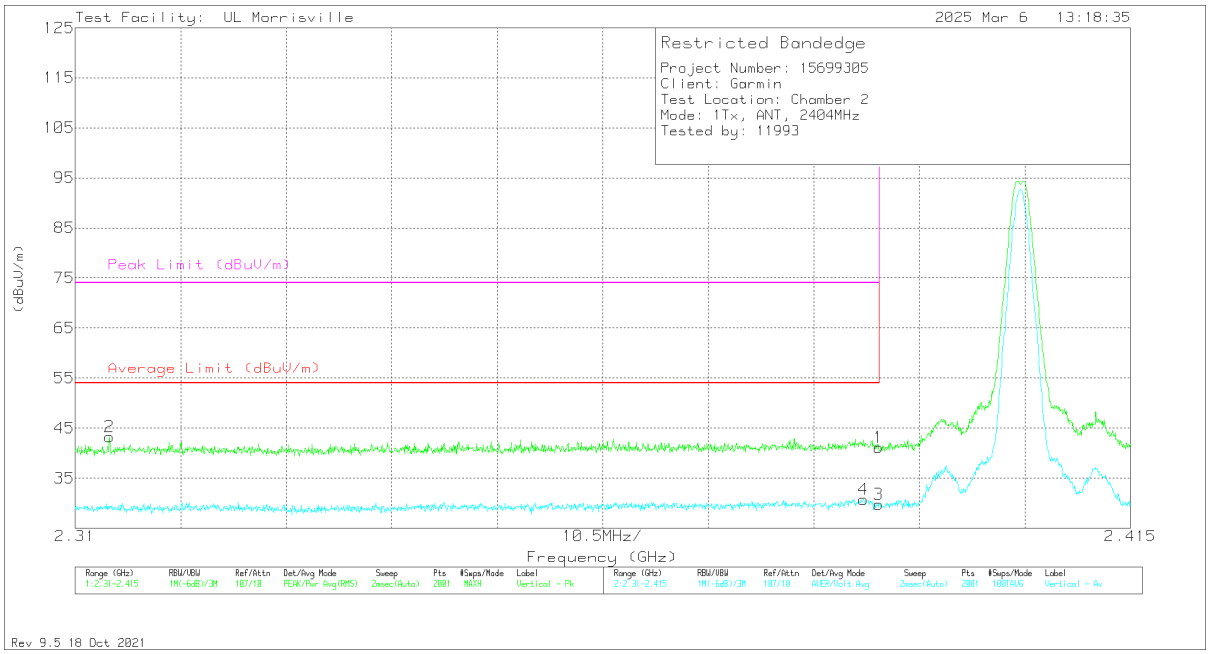
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 86408 (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.38996 | 32.42 | Pk | 32.3 | -23.6 | 41.12 | - | - | 74 | -32.88 | 243 | 230 | V |
| 2 | * ** 2.31341 | 34.66 | Pk | 32.1 | -23.5 | 43.26 | - | - | 74 | -30.74 | 243 | 230 | V |
| 3 | * ** 2.38996 | 21.01 | ADV | 32.3 | -23.6 | 29.71 | 54 | -24.29 | - | - | 243 | 230 | V |
| 4 | * ** 2.38844 | 21.99 | ADV | 32.3 | -23.5 | 30.79 | 54 | -23.21 | - | - | 243 | 230 | V |

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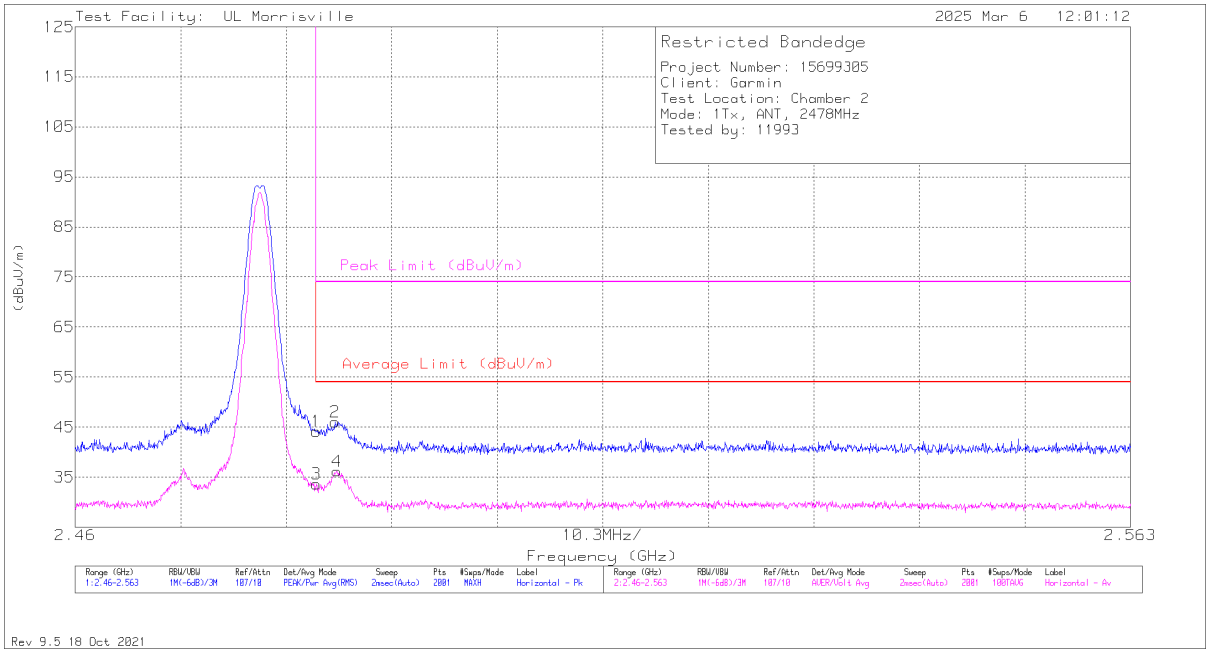
## BANDEDGE (HIGH CHANNEL, 2478MHz)

### HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 86408 (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 35.7 | Pk | 32.5 | -24.1 | 44.1 | - | - | 74 | -29.9 | 244 | 250 | H |
| 2 | * ** 2.48539 | 37.68 | Pk | 32.5 | -24.2 | 45.98 | - | - | 74 | -28.02 | 244 | 250 | H |
| 3 | * ** 2.48354 | 25.2 | ADV | 32.5 | -24.1 | 33.6 | 54 | -20.4 | - | - | 244 | 250 | H |
| 4 | * ** 2.48554 | 27.89 | ADV | 32.5 | -24.2 | 36.19 | 54 | -17.81 | - | - | 244 | 250 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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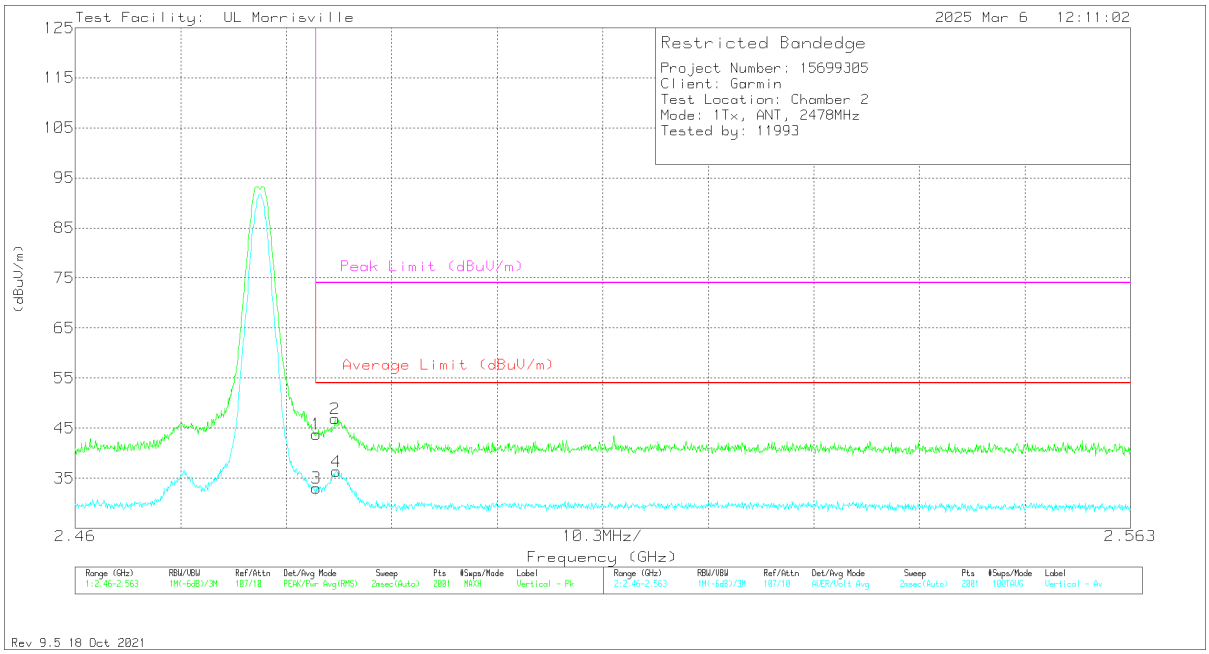
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 86408 (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 35.33 | Pk | 32.5 | -24.1 | 43.73 | - | - | 74 | -30.27 | 334 | 245 | V |
| 2 | * ** 2.48539 | 38.54 | Pk | 32.5 | -24.2 | 46.84 | - | - | 74 | -27.16 | 334 | 245 | V |
| 3 | * ** 2.48354 | 24.62 | ADV | 32.5 | -24.1 | 33.02 | 54 | -20.98 | - | - | 334 | 245 | V |
| 4 | * ** 2.48549 | 28.02 | ADV | 32.5 | -24.2 | 36.32 | 54 | -17.68 | - | - | 334 | 245 | V |

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Pk - Peak detector
ADV - Linear Voltage Average



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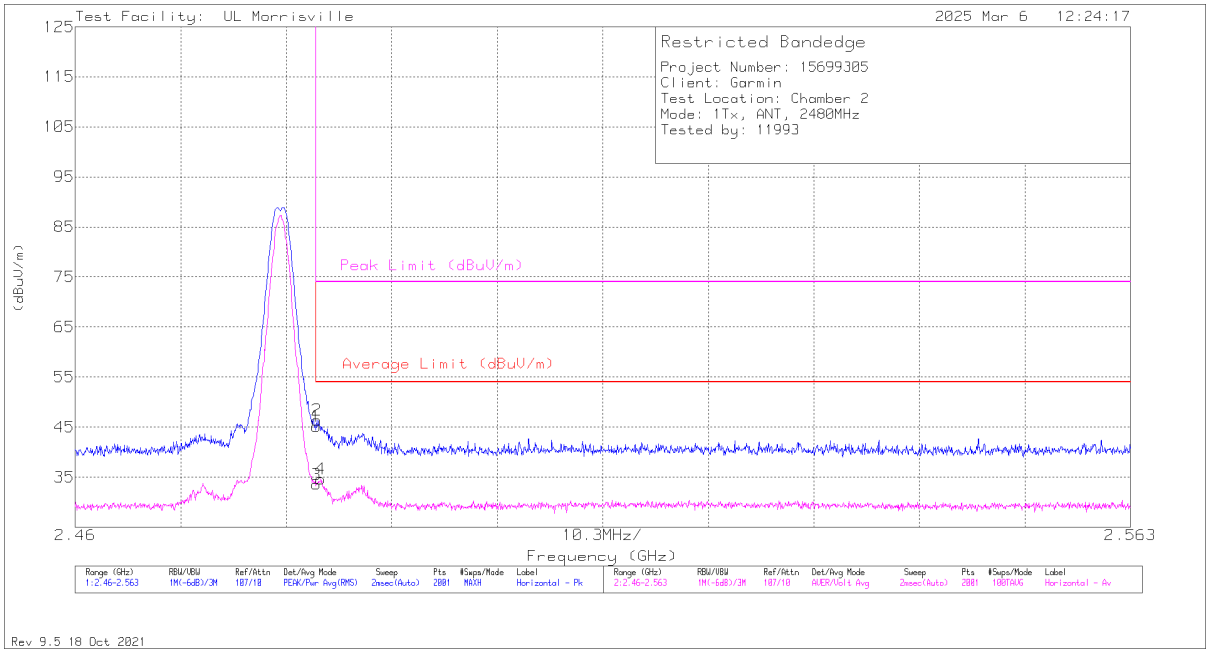
## BANDEDGE (HIGH CHANNEL, 2480MHz)

### HORIZONTAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 86408 (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 36.75 | Pk | 32.5 | -24.1 | 45.15 | - | - | 74 | -28.85 | 236 | 245 | H |
| 2 | * ** 2.48359 | 38.01 | Pk | 32.5 | -24.1 | 46.41 | - | - | 74 | -27.59 | 236 | 245 | H |
| 3 | * ** 2.48354 | 25.16 | ADV | 32.5 | -24.1 | 33.56 | 54 | -20.44 | - | - | 236 | 245 | H |
| 4 | * ** 2.48395 | 26.32 | ADV | 32.5 | -24.2 | 34.62 | 54 | -19.38 | - | - | 236 | 245 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average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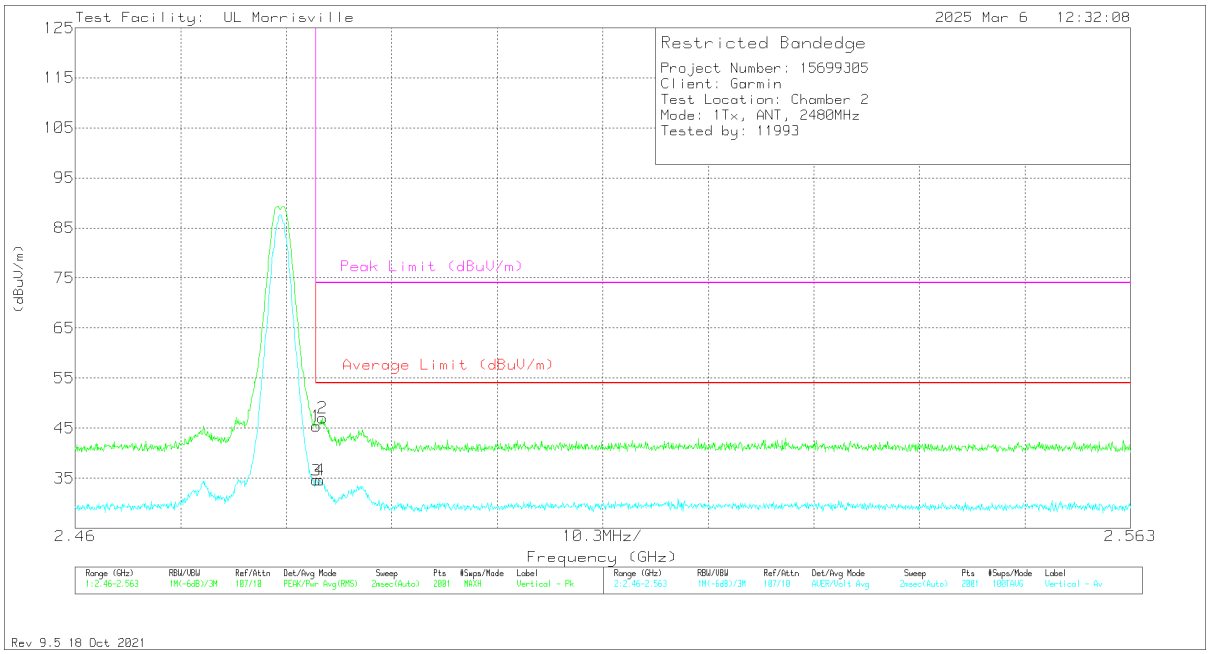
# VERTICAL RESULT




| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 86408 (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 2.48354 | 36.96 | Pk | 32.5 | -24.1 | 45.36 | - | - | 74 | -28.64 | 327 | 243 | V |
| 2 | * ** 2.48415 | 38.68 | Pk | 32.5 | -24.2 | 46.98 | - | - | 74 | -27.02 | 327 | 243 | V |
| 3 | * ** 2.48354 | 26.17 | ADV | 32.5 | -24.1 | 34.57 | 54 | -19.43 | - | - | 327 | 243 | V |
| 4 | * ** 2.4839 | 26.3 | ADV | 32.5 | -24.2 | 34.6 | 54 | -19.4 | - | - | 327 | 243 | V |

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** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average



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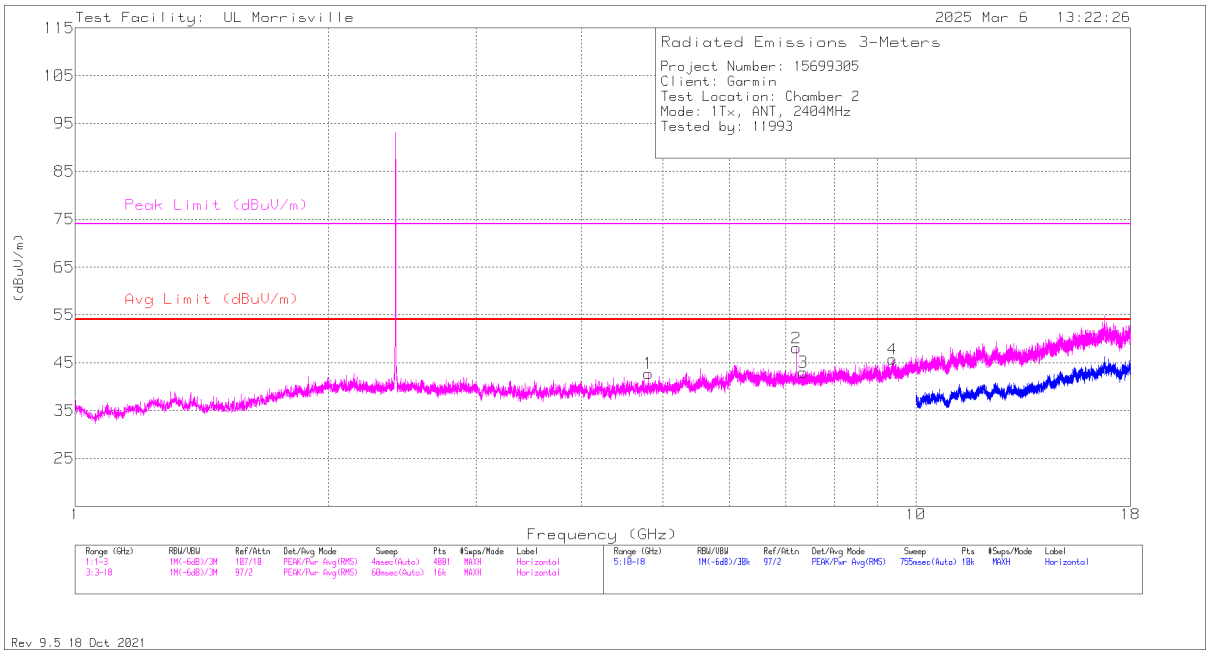
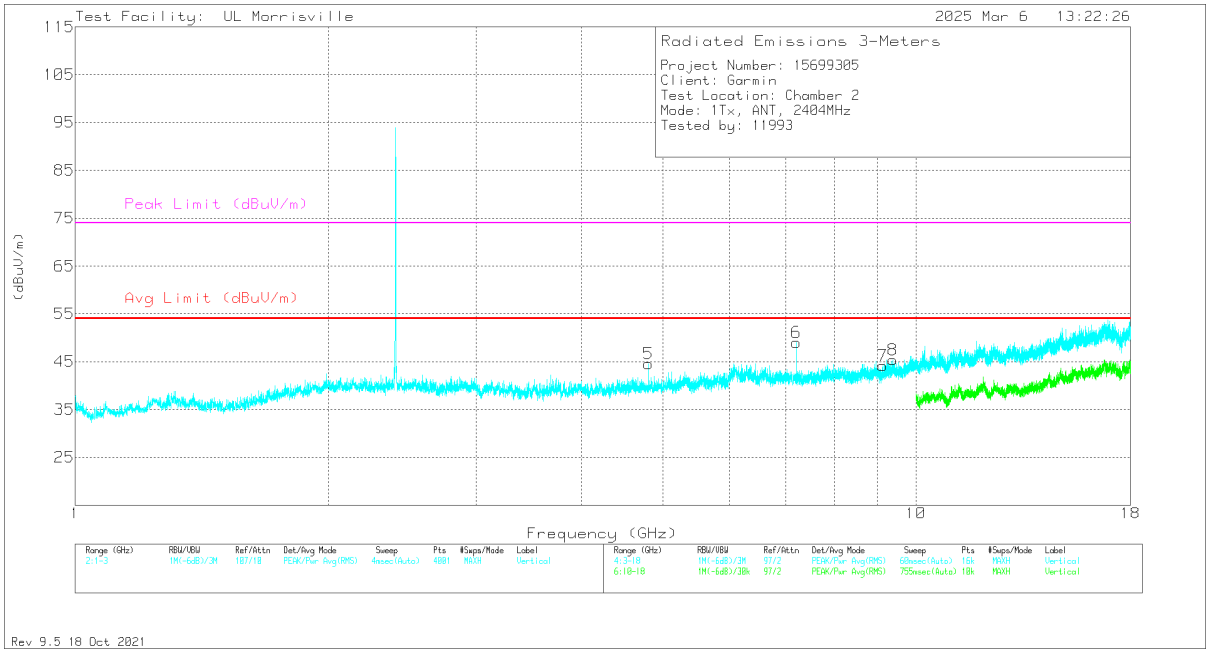
## HARMONICS AND SPURIOUS EMISSIONS

### LOW CHANNEL




**HORIZONTAL**




**VERTICAL**



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| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | 86408 (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * ** 4.80844 | 52.33 | Pk | 34.2 | -43.8 | 42.73 | 54 | -11.27 | 74 | -31.27 | 0-360 | 101 | H |
| 3 | * ** 7.34438 | 48.82 | Pk | 35.6 | -41.4 | 43.02 | 54 | -10.98 | 74 | -30.98 | 0-360 | 199 | H |
| 4 | * ** 9.3825 | 49.5 | Pk | 36.2 | -40 | 45.7 | 54 | -8.3 | 74 | -28.3 | 0-360 | 199 | H |
| 5 | * ** 4.80844 | 54.17 | Pk | 34.2 | -43.8 | 44.57 | 54 | -9.43 | 74 | -29.43 | 0-360 | 101 | V |
| 7 | * ** 9.13125 | 47.77 | Pk | 35.9 | -39.5 | 44.17 | 54 | -9.83 | 74 | -29.83 | 0-360 | 200 | V |
| 8 | * ** 9.38625 | 49.12 | Pk | 36.2 | -39.9 | 45.42 | 54 | -8.58 | 74 | -28.58 | 0-360 | 101 | V |
| 2 | 7.21125 | 54.25 | Pk | 35.6 | -41.8 | 48.05 | - | - | - | - | 0-360 | 199 | H |
| 6 | 7.21313 | 55.2 | Pk | 35.6 | -41.8 | 49 | - | - | - | - | 0-360 | 200 | V |

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Pk - Peak detector


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