TEST REPORT

Report Number: R15191165-E6

Applicant	:	Garmin International Inc. 1200 East 151st Street Olathe, KS 66062-3426, USA
Model	:	A04413
FCC ID	:	IPH-04413
IC	:	1792A-04413
EUT Description	:	Wearable Smart Watch
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART C ISED RSS-247 ISSUE 3 ISED RSS-GEN ISSUE 5 + A1 + A2

Date Of Issue:
2024-07-03

Prepared by:
UL LLC
12 Laboratory Dr.
Research Triangle Park, NC 27709 U.S.A.
TEL: (919) 549-1400

CERT #0751.06

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2024-05-01	Initial Issue	B. Kiewra
V2	2024-05-06	Revised antenna gain in section 6.3	B. Kiewra
V3	2024-07-03	Revised firmware revision	Charles Moody

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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: Wearable Smart Watch

MODEL: A04413

SERIAL NUMBER: 3467745434, 3467745272

SAMPLE RECEIPT DATE: 2024-03-13

DATE TESTED: 2024-03-20 to 2024-05-01

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C ISED RSS-247 Issue 3 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: 12 Laboratory Dr RTP, NC 27709, U.S.A	US0067	2180C	825374
☒	Building: 2800 Perimeter Park Dr. Suite B 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) 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 a smartwatch with BT, BLE, ANT+, 802.11b/g/n 2.4GHz WLAN, NFC, and Global Navigation Satellite System (GNSS) receiver. This report covers testing on 2.4GHz WLAN radio.

6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2472	802.11b	21.23	132.74
2412 - 2472	802.11g	22.06	160.69
2412 - 2472	802.11n HT20	21.88	154.17

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	2350-2530	-2.63

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was revision 8.00.

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 output power as worst-case scenario.

Band edge and radiated emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the highest power on low, middle and high channels. Radiated emissions were performed on the modes with the highest power and PSD.

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-axis. Therefore, all testing was performed with the EUT in the Y-axis.

Worst-case data rates as provided by the client were:

802.11b mode: 1 Mbps
802.11g mode: 6 Mbps
802.11n HT20mode: MCS0

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6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
USB-A power supply	Bose	S008AHU0500160	072381Z60770055AE	USB-A power supply

I/O CABLES

I/O Cable List						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	Proprietary	1	4 pin Proprietary	Non-Shielded	<3m	Used for charging only

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 R15191165-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 - Wireless Conducted Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
90410	Spectrum Analyzer	Keysight Technologies	N9030A	2023-06-14	2024-06-14
90778	RF Power Meter	Keysight Technologies	N1911A	2023-10-06	2024-10-31
135125	Peak and Avg Power Sensor, 50MHz to 18GHz	Keysight Technologies	N1921A	2023-08-21	2024-08-21
238710	Environmental Meter	Fisher Scientific	15-077-963	2023-06-27	2024-06-27
SOFTEMI	Antenna Port Software	UL	Version 2022.8.16		
Power Software	Boonton Power Analyzer	Boonton	Version 3.0.13.0		
ETSI Power Software	EMPower ETSI Burst Measurement System	ETS-Lindgren	Version 1.0.3.18		
211055	Real-Time Peak Power Sensor 50MHz to 8GHz	Boonton	RTP5000	2023-08-01	2024-08-01

Test Equipment Used - Wireless Conducted Attenuators, Cables, and Couplers

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
Attenuators					
226563	SMA Coaxial 10dB Attenuator 25MHz-18GHz	CentricRF	C18S2-10	2024-02-29	2025-02-29
Cables					
CBL093	Micro-Coax UTiFLEX Cable Assembly, Low Loss,40Ghz	Carlisle Interconnect Technologies	UFA147A-2-0360-200200	2024-03-01	2025-03-01

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

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
18-40 GHz					
204704	Horn Antenna, 18-26.5GHz	Com-Power	AH-826	2023-07-20	2025-07-20
Gain-Loss Chains					
135999	Gain-loss string: 18-40GHz	Various	Various	2023-05-16	2024-05-16
Receiver & Software					
81018	Spectrum Analyzer	Agilent	E4446A	2023-08-01	2024-08-01
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

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

Equipment ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
1-18 GHz					
86408	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2023-06-19	2025-06-19
Gain-Loss Chains					
91977	Gain-loss string: 1-18GHz	Various	Various	2023-06-06	2024-06-06
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

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

Equipment ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
0.009-30MHz					
135144	Active Loop Antenna	ETS-Lindgren	6502	2024-01-24	2025-01-24
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	2023-09-18	2024-09-18
207639	Gain-loss string: 25-1000MHz	Various	Various	2023-09-18	2024-09-18
207640	Gain-loss string: 1-18GHz	Various	Various	2023-05-17	2024-05-17
Receiver & Software					
197955	Spectrum Analyzer	Rohde & Schwarz	ESW44	2023-04-10	2024-04-10
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

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

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
CBL087	Coax cable, RG223, N-male to BNC-male, 20-ft.	Pasternack	PE3W06143-240	2023-04-04	2024-04-04
179892	Environmental Meter	Fisher Scientific	15-077-963	2023-07-26	2024-06-31
80391	LISN, 50-ohm/50-uH, 250uH 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50/250-25-2-01	2023-07-31	2024-07-31
75141	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2023-08-01	2024-08-01
52859	Transient Limiter, 0.009-100MHz	Electro-Metrics	EM-7600	2023-04-04	2024-04-04
PS214	AC Power Source	Elgar	CW2501M	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		

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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, 6.3 to 6.6.

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

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9. ANTENNA PORT TEST RESULTS

Note: To reduce file size of report, only representative plots are included for some conducted test data in section 9.

9.1. ON TIME AND DUTY CYCLE

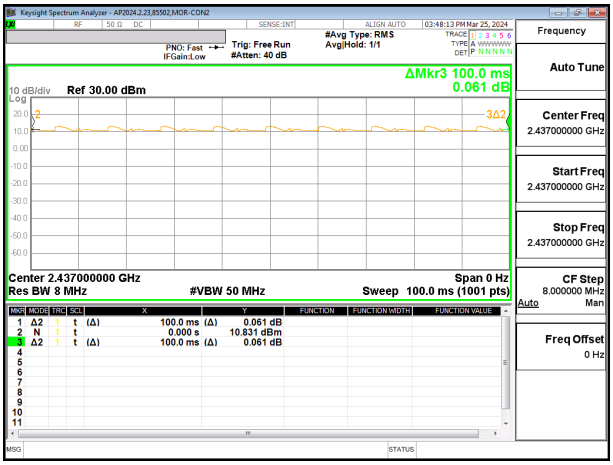
LIMITS

None; for reporting purposes only.

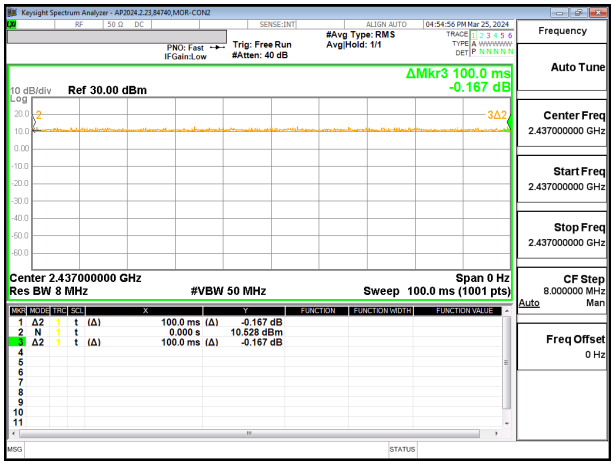
PROCEDURE

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



DUTY CYCLE 802.11b MODE



DUTY CYCLE 802.11g MODE

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DUTY CYCLE 802.11n HT20 MODE

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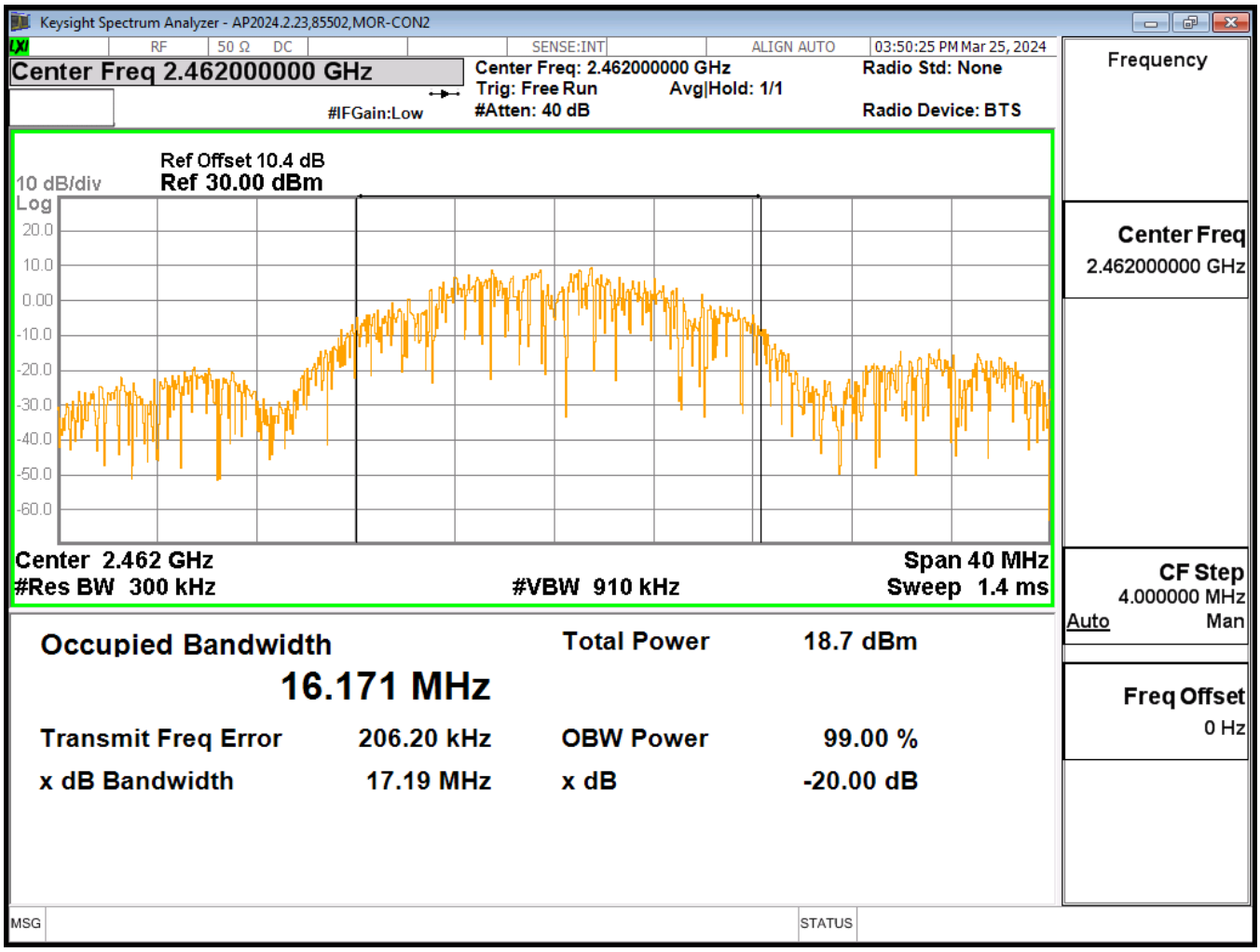
9.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

9.2.1. 802.11b MODE

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)
Low 1	2412	15.927
Mid 6	2437	16.029
High 11	2462	16.171
High 12	2467	15.312
High 13	2472	16.737



HIGH CHANNEL

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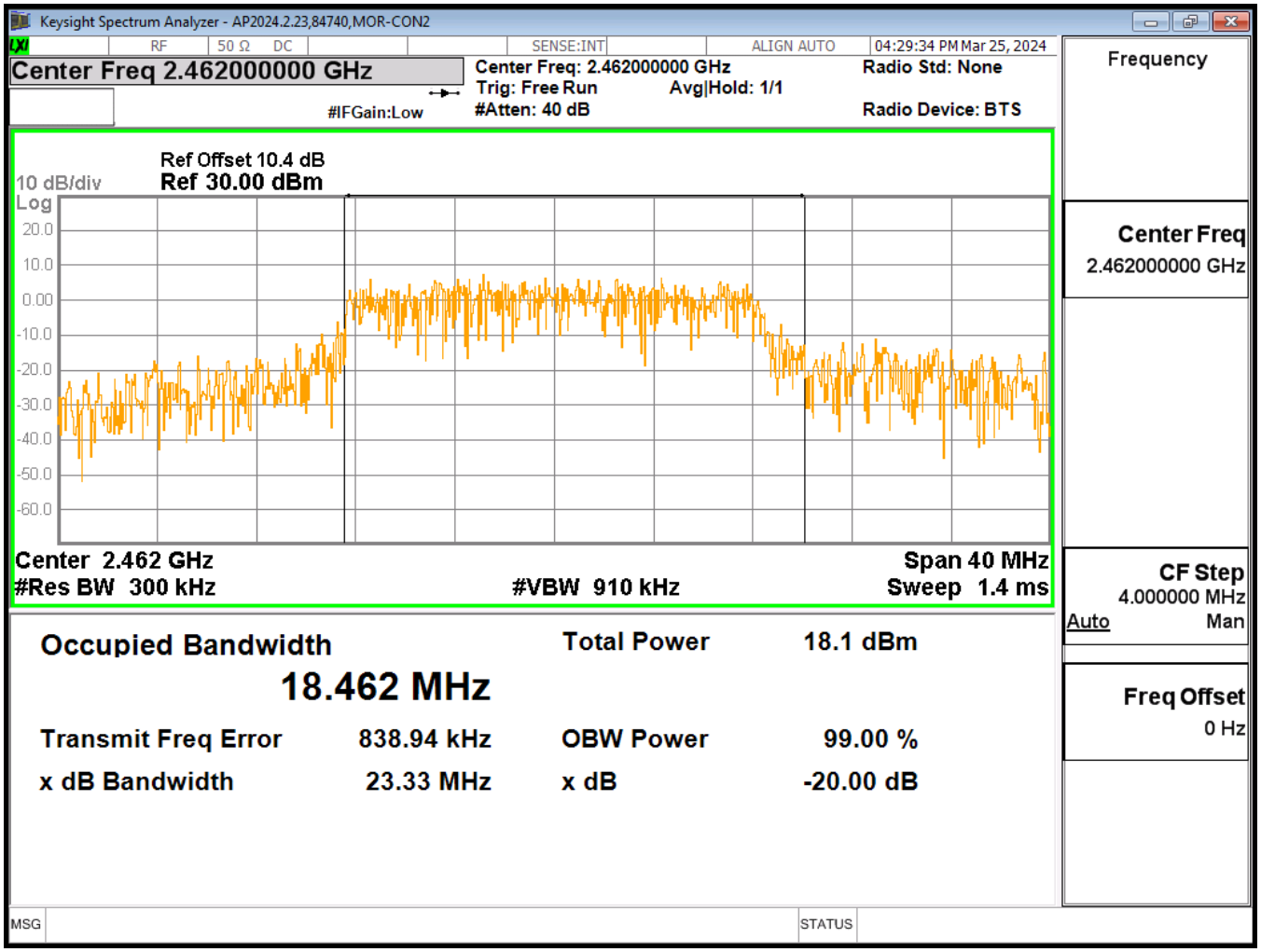
9.2.2. 802.11g MODE

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)
Low 1	2412	16.897
Mid 6	2437	17.101
High 11	2462	18.462
High 12	2467	16.618
High 13	2472	19.134



HIGH CHANNEL

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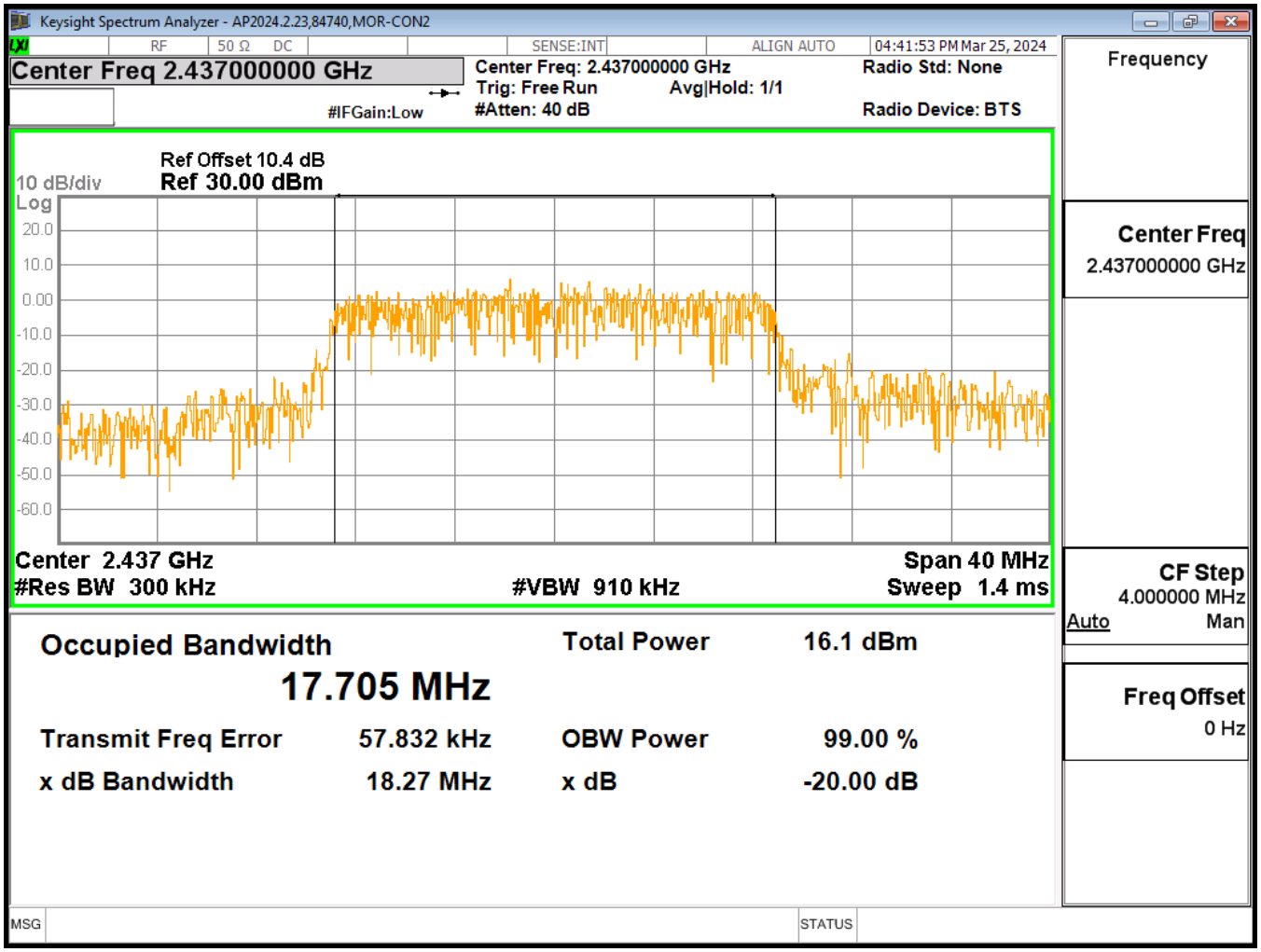
9.2.3. 802.11n HT20 MODE

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)
Low 1	2412	17.598
Mid 6	2437	17.705
High 11	2462	17.580
High 12	2467	17.528
High 13	2472	18.203



MID CHANNEL

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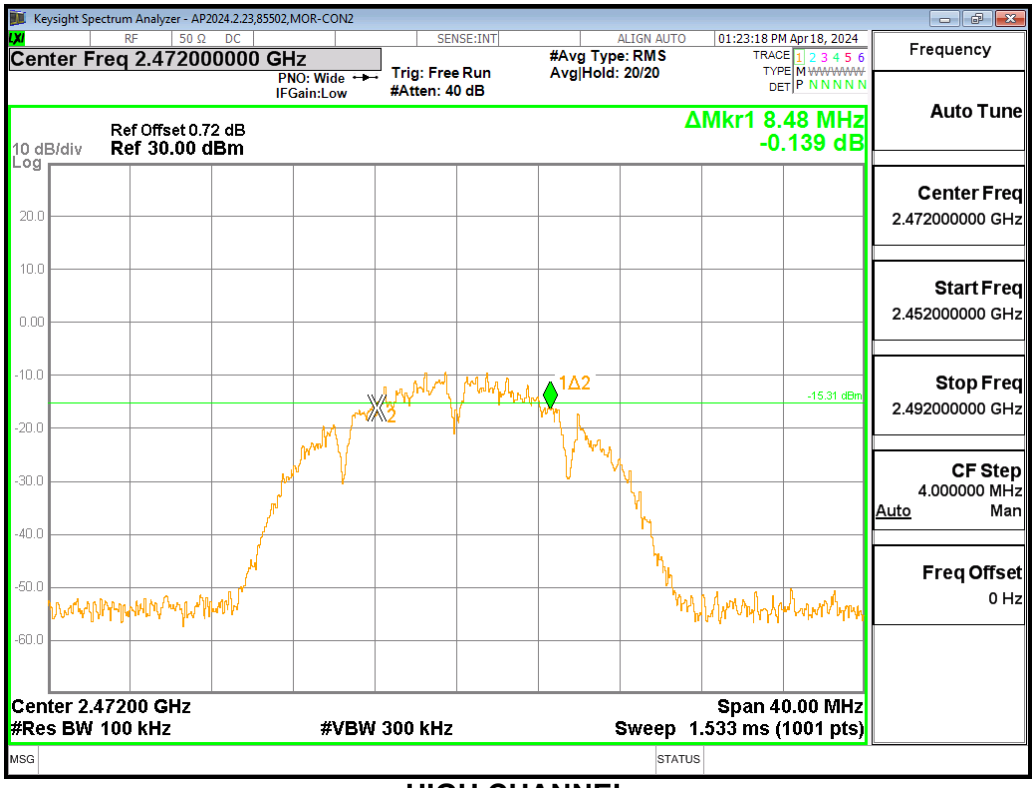
9.3. 6 dB BANDWIDTH

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	9.16	0.5
Mid 6	2437	9.68	0.5
High 11	2462	9.20	0.5
High 12	2467	9.20	0.5
High 13	2472	8.48	0.5



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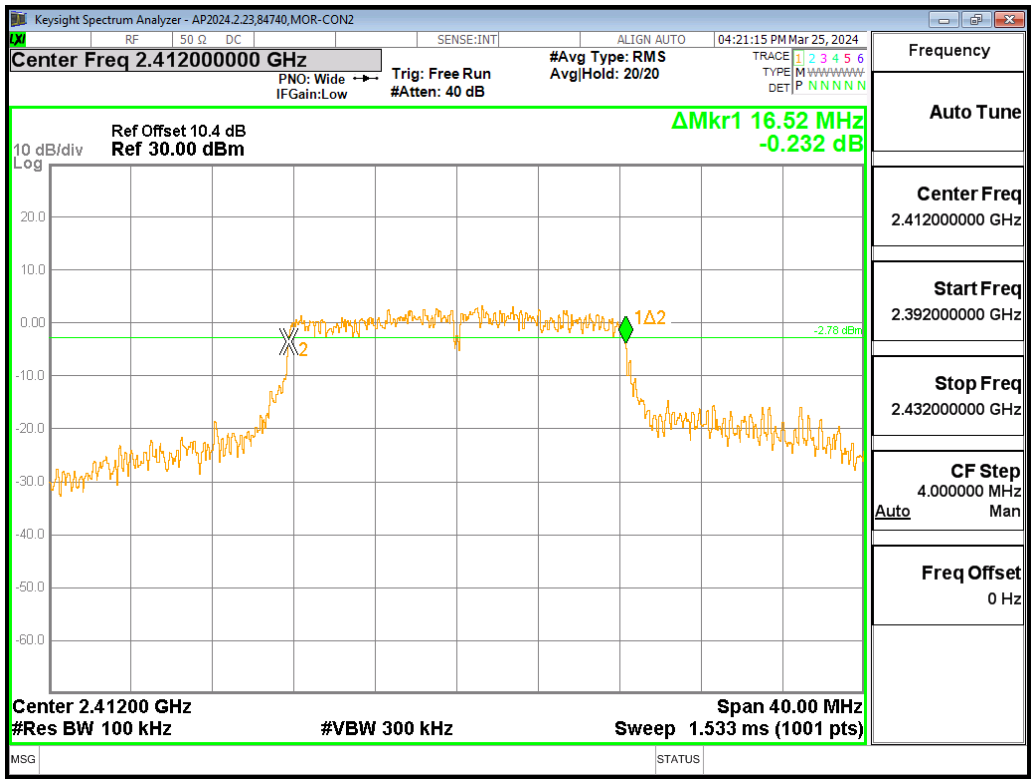
9.3.2. 802.11g MODE

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	Minimum Limit (MHz)
Low 1	2412	16.52	0.5
Mid 6	2437	16.56	0.5
High 11	2462	16.52	0.5
High 12	2467	16.60	0.5
High 13	2472	16.52	0.5



LOW CHANNEL

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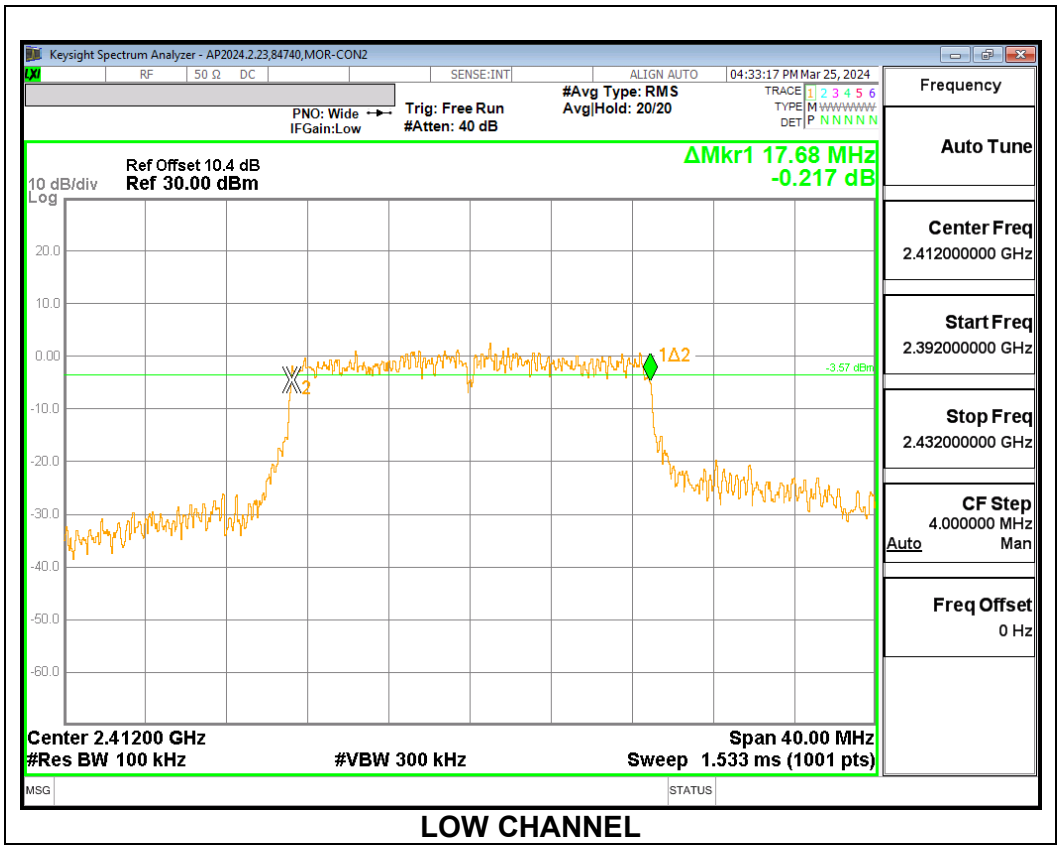
9.3.3. 802.11n HT20 MODE

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	Minimum Limit (MHz)
Low 1	2412	17.68	0.5
Mid 6	2437	17.68	0.5
High 11	2462	17.76	0.5
High 12	2467	17.72	0.5
High 13	2472	17.72	0.5



LOW CHANNEL

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9.4. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)
RSS-247 5.4 (d)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10.40dB (including 9.68 dB pad and 0.72 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. Peak output power was read directly from power meter.

DIRECTIONAL ANTENNA GAIN

For 1Tx, directional gain equals antenna gain.

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RESULTS

9.4.1. 802.11b MODE

Test Engineer:	85502
Test Date:	2024-03-20

Limits:

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	Max Power (dBm)
Low 1	2412	-3.08	30.00	30.00
Mid 6	2437	-3.08	30.00	30.00
High 7	2442	-3.08	30.00	30.00
High 8	2447	-3.08	30.00	30.00
High 9	2452	-3.08	30.00	30.00
High 10	2457	-3.08	30.00	30.00
High 11	2462	-3.08	30.00	30.00
High 12	2467	-3.08	30.00	30.00
High 13	2472	-3.08	30.00	30.00

Results:

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	20.11	30.00	-9.89
Mid 6	2437	20.68	30.00	-9.32
High 7	2442	21.23	30.00	-8.77
High 8	2447	19.52	30.00	-10.48
High 9	2452	21.02	30.00	-8.98
High 10	2457	17.68	30.00	-12.32
High 11	2462	17.66	30.00	-12.34
High 12	2467	16.01	30.00	-13.99
High 13	2472	12.07	30.00	-17.93

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9.4.2. 802.11g MODE

Test Engineer:	85502
Test Date:	2024-03-20

Limits:

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	Max Power (dBm)
Low 1	2412	-3.08	30.00	30.00
Mid 6	2437	-3.08	30.00	30.00
High 7	2442	-3.08	30.00	30.00
High 8	2447	-3.08	30.00	30.00
High 9	2452	-3.08	30.00	30.00
High 10	2457	-3.08	30.00	30.00
High 11	2462	-3.08	30.00	30.00
High 12	2467	-3.08	30.00	30.00
High 13	2472	-3.08	30.00	30.00

Results:

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	21.18	30.00	-8.82
Mid 6	2437	21.56	30.00	-8.44
High 7	2442	22.06	30.00	-7.94
High 8	2447	21.73	30.00	-8.27
High 9	2452	21.63	30.00	-8.37
High 10	2457	20.74	30.00	-9.26
High 11	2462	19.48	30.00	-10.52
High 12	2467	18.98	30.00	-11.02
High 13	2472	16.62	30.00	-13.38

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9.4.3. 802.11n HT20 MODE

Test Engineer:	85502
Test Date:	2024-03-20

Limits:

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	Max Power (dBm)
Low 1	2412	-3.08	30.00	30.00
Low 2	2417	-3.08	30.00	30.00
Mid 6	2437	-3.08	30.00	30.00
High 7	2442	-3.08	30.00	30.00
High 8	2447	-3.08	30.00	30.00
High 9	2452	-3.08	30.00	30.00
High 10	2457	-3.08	30.00	30.00
High 11	2462	-3.08	30.00	30.00
High 12	2462	-3.08	30.00	30.00
High 13	2462	-3.08	30.00	30.00

Results:

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	21.36	30.00	-8.64
Low 2	2417	21.31	30.00	-8.69
Mid 6	2437	21.61	30.00	-8.39
High 7	2442	21.88	30.00	-8.12
High 8	2447	21.85	30.00	-8.15
High 9	2452	21.86	30.00	-8.14
High 10	2457	20.49	30.00	-9.51
High 11	2462	17.76	30.00	-12.24
High 12	2462	18.75	30.00	-11.25
High 13	2462	17.27	30.00	-12.74

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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 10.40dB (including 9.68 dB pad and 0.72 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.

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9.5.1. Results

Test Engineer:	85502
Test Date:	2024-03-20

Mode	Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)
802.11b	Low 1	2412	18.22
	Mid 6	2437	18.84
	High 7	2442	19.23
	High 8	2447	17.36
	High 9	2452	19.01
	High 10	2457	15.50
	High 11	2462	15.49
	High 12	2467	13.63
	High 13	2472	11.96
802.11g	Low 1	2412	16.98
	Mid 6	2437	17.65
	High 7	2442	17.08
	High 8	2447	16.30
	High 9	2452	15.90
	High 10	2457	14.51
	High 11	2462	12.86
	High 12	2467	12.37
	High 13	2472	9.91
802.11nHT20	Low 1	2412	15.31
	Low 2	2417	16.60
	Mid 6	2437	16.91
	High 7	2442	15.79
	High 8	2447	15.78
	High 9	2452	15.81
	High 10	2457	13.97
	High 11	2462	10.32
	High 12	2467	11.47
	High 13	2472	9.71

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9.6. POWER SPECTRAL DENSITY

LIMITS

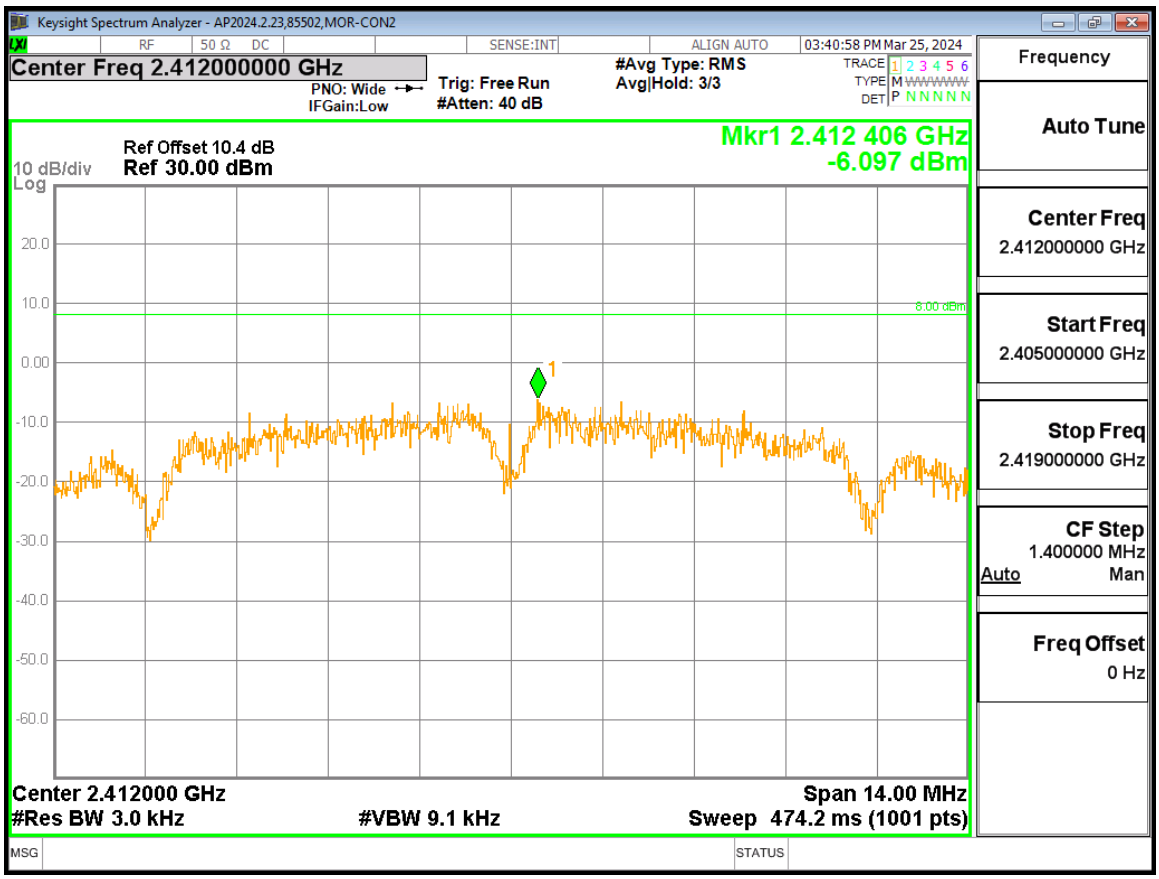
FCC §15.247 (e)
RSS-247 (5.2) (b)

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	-6.10	8.0	-14.1
Mid 6	2437	-6.37	8.0	-14.4
High 11	2462	-6.92	8.0	-14.9
High 12	2467	-7.67	8.0	-15.7
High 13	2472	-11.25	8.0	-19.3



LOW CHANNEL

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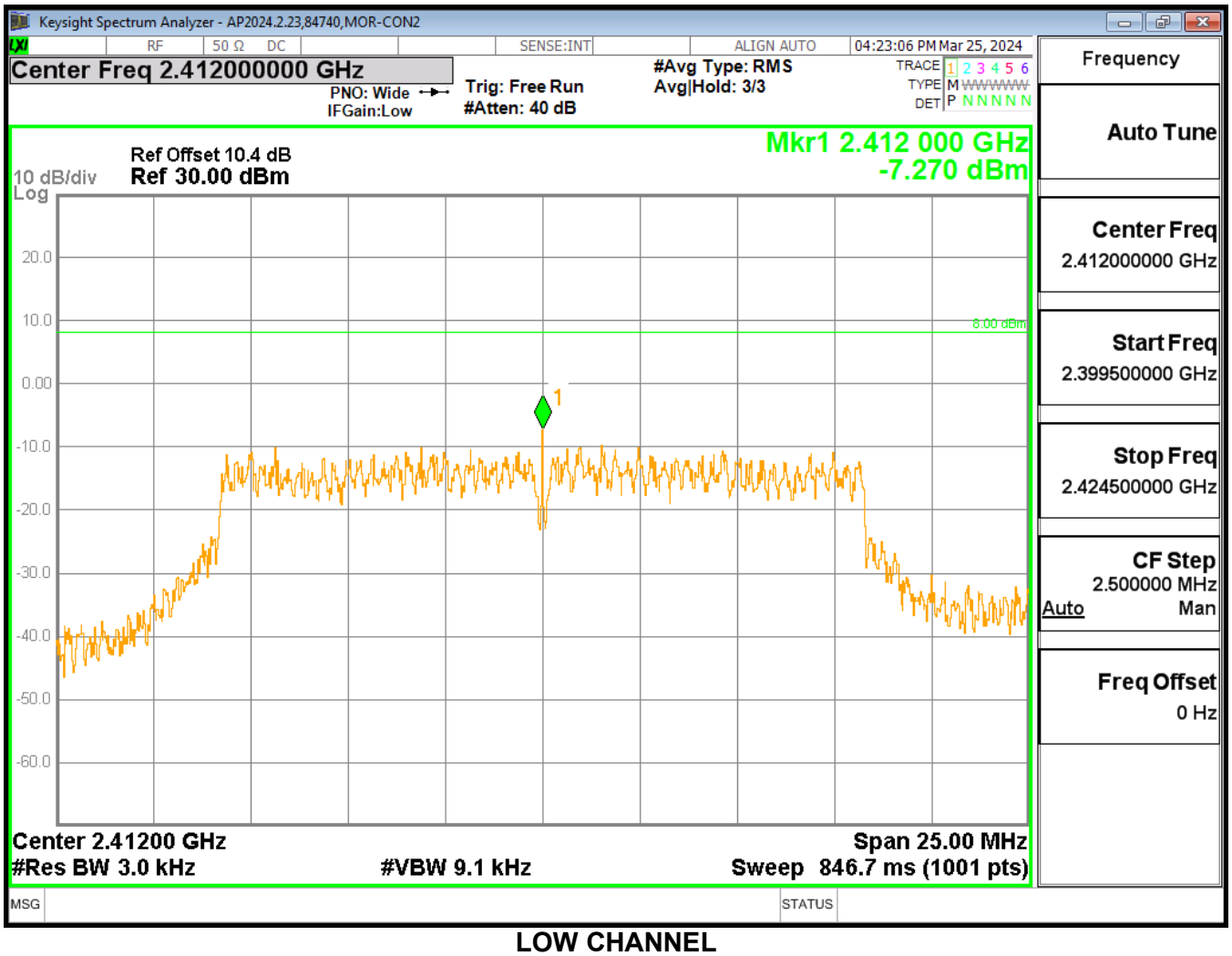
9.6.2. 802.11g MODE

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-7.27	8.0	-15.3
Mid 6	2437	-8.14	8.0	-16.1
High 11	2462	-7.28	8.0	-15.3
High 12	2467	-11.24	8.0	-19.2
High 13	2472	-13.43	8.0	-21.4



LOW CHANNEL

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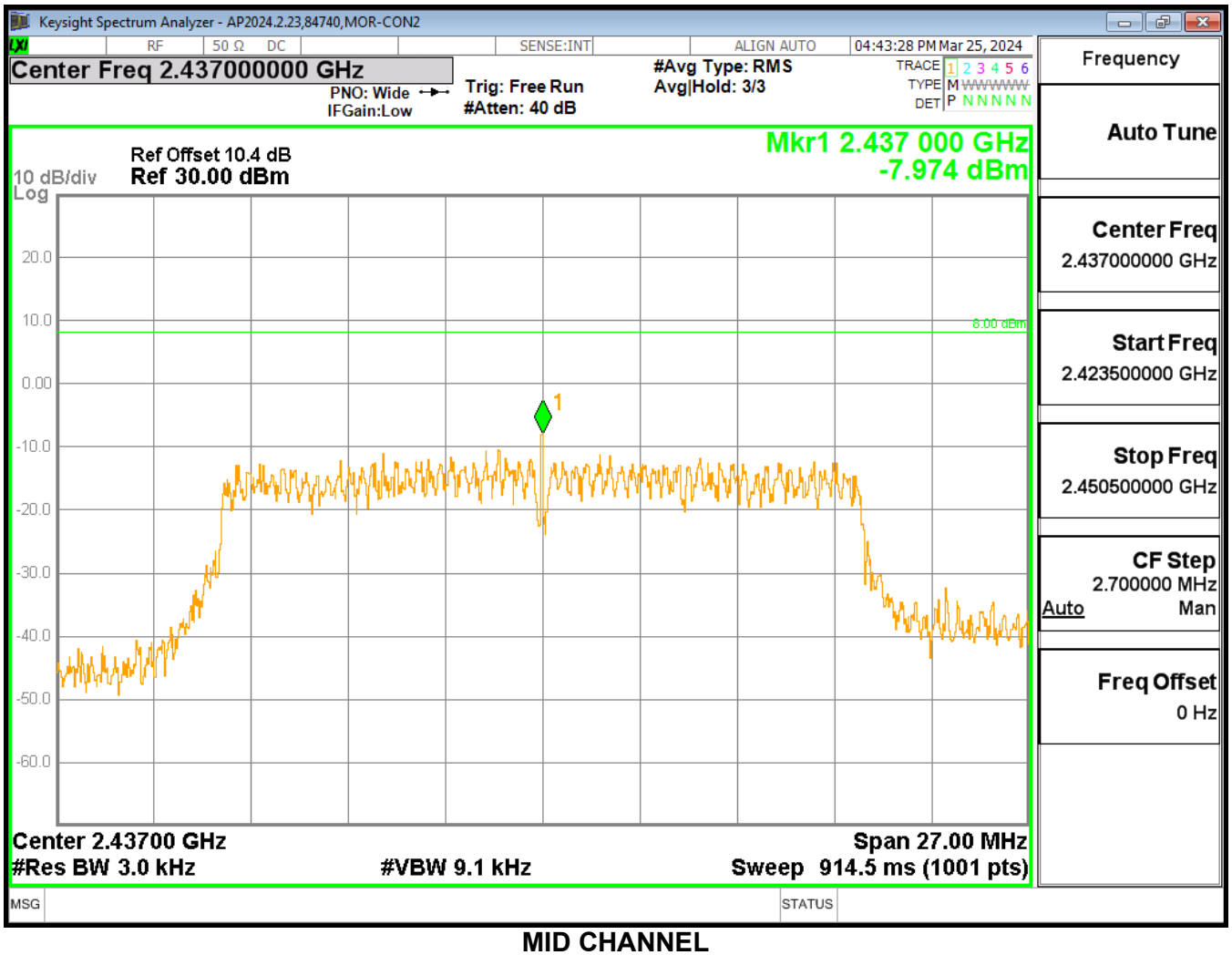
9.6.3. 802.11n HT20 MODE

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-8.14	8.0	-16.1
Mid 6	2437	-7.97	8.0	-16.0
High 11	2462	-11.54	8.0	-19.5
High 12	2467	-14.46	8.0	-22.5
High 13	2472	-13.56	8.0	-21.6



MID CHANNEL

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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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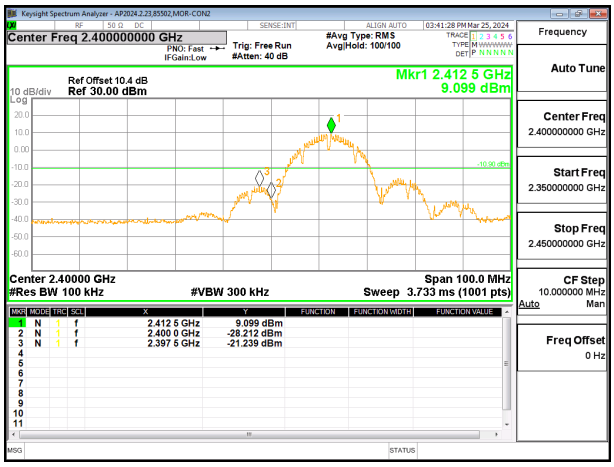
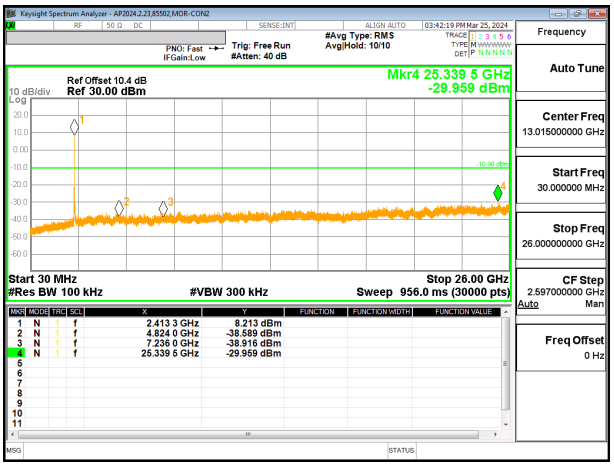
9.7.1. 802.11b MODE



LOW CHANNEL 1



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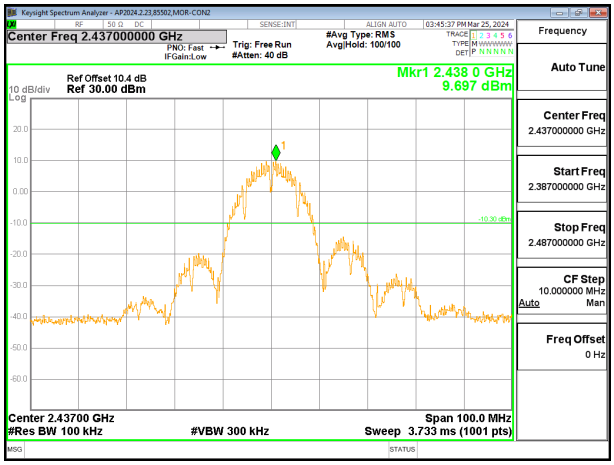

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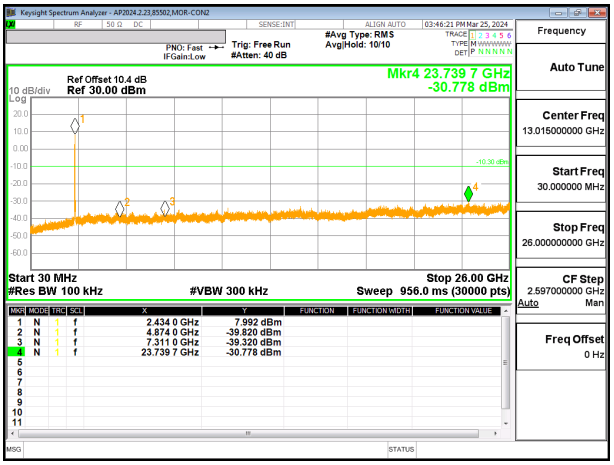

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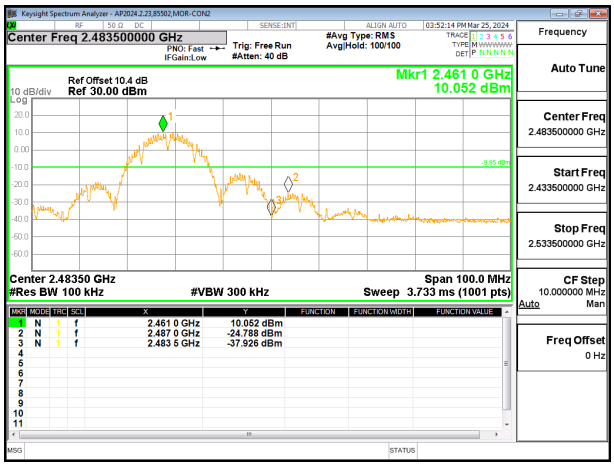

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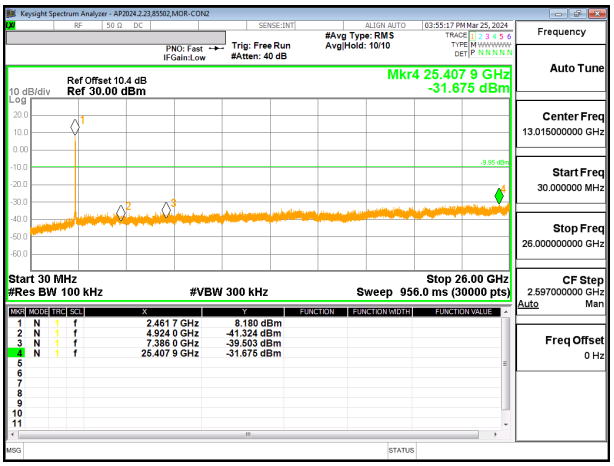

HIGH CHANNEL 11

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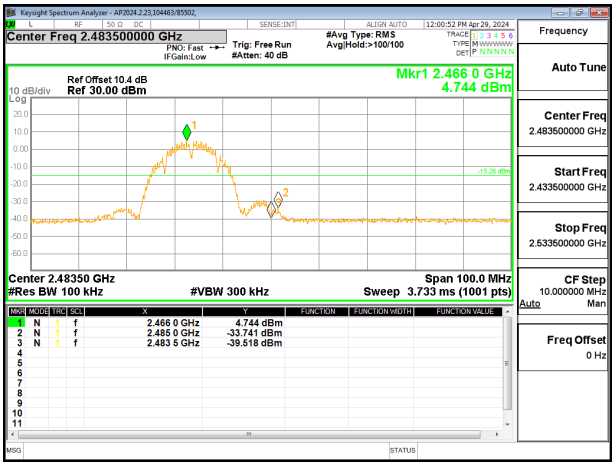

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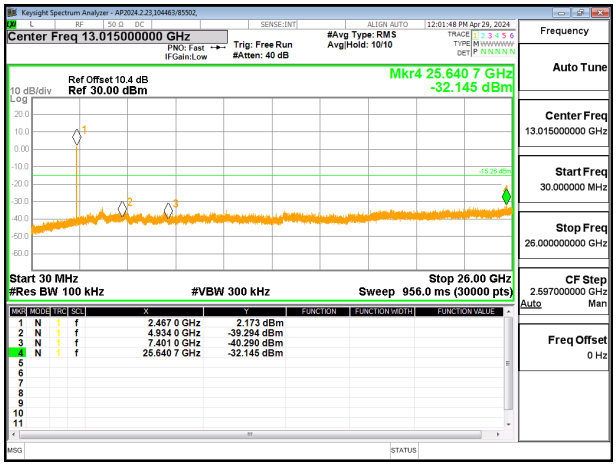

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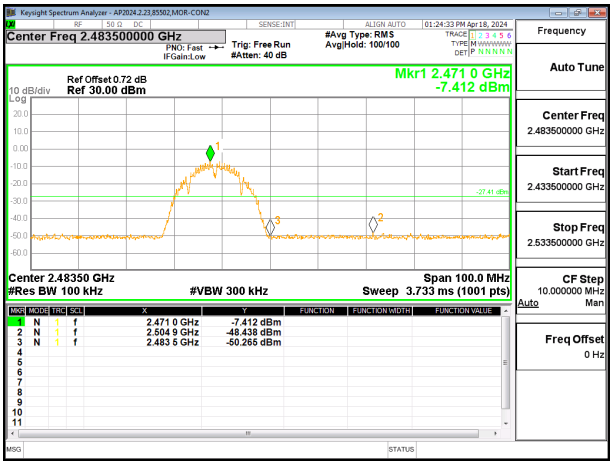

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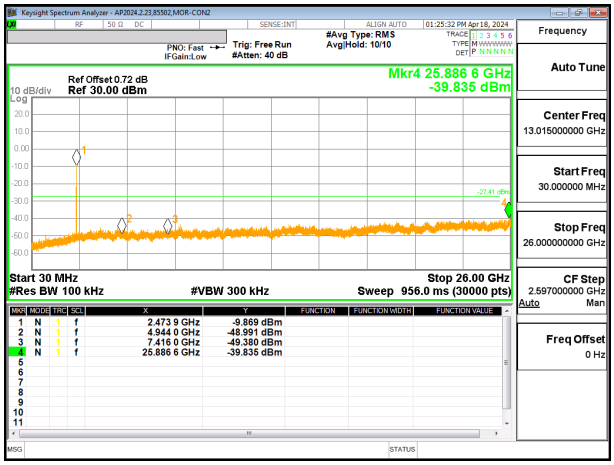

HIGH CHANNEL 13

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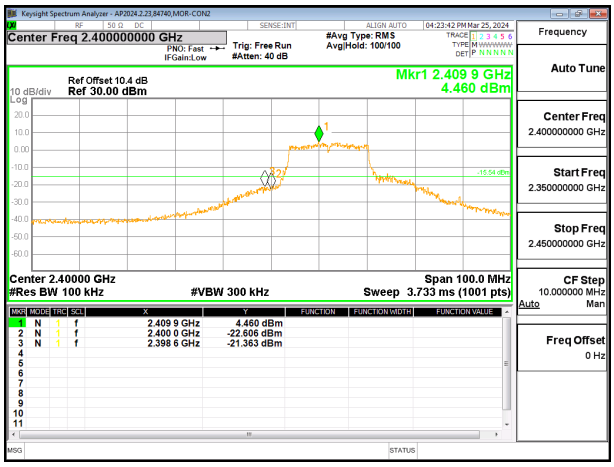
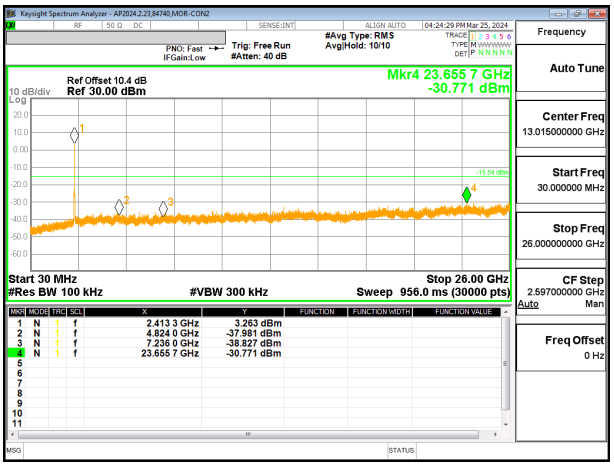
9.7.2. 802.11g MODE



LOW CHANNEL 1



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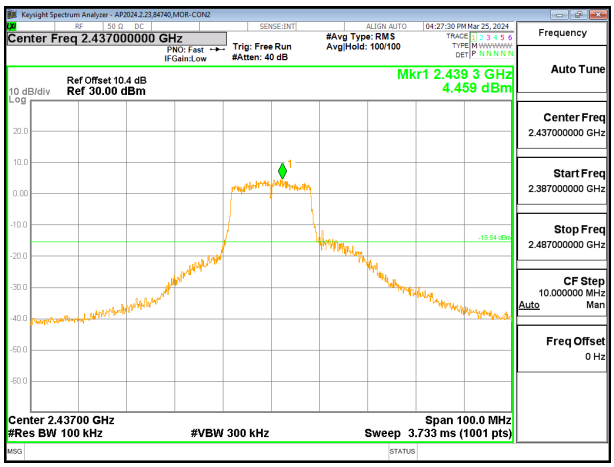

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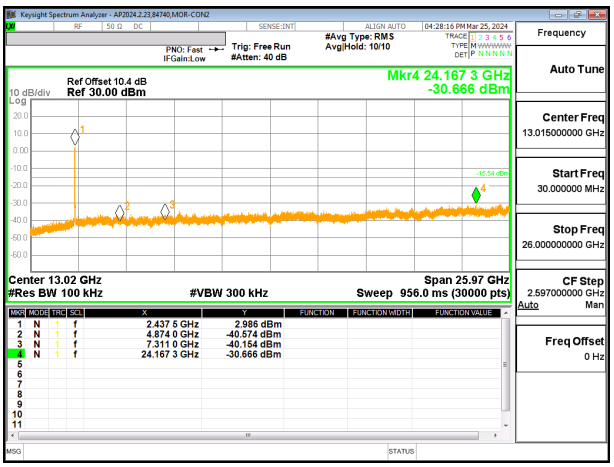

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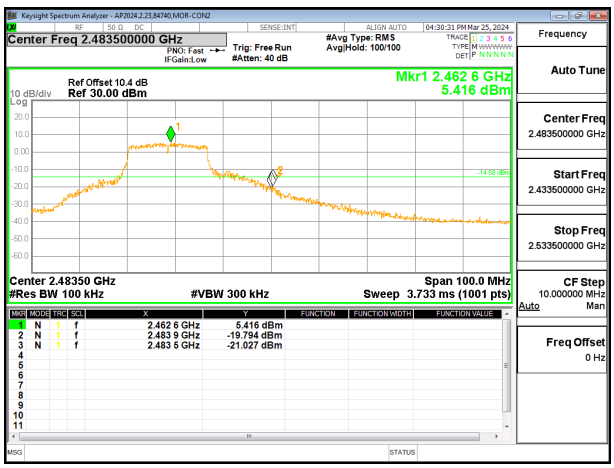

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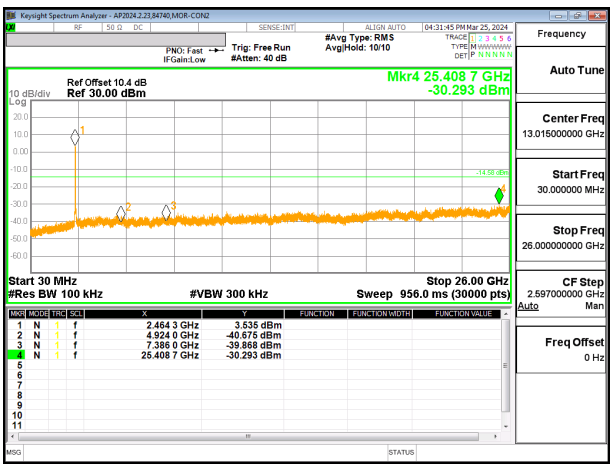

HIGH CHANNEL 11

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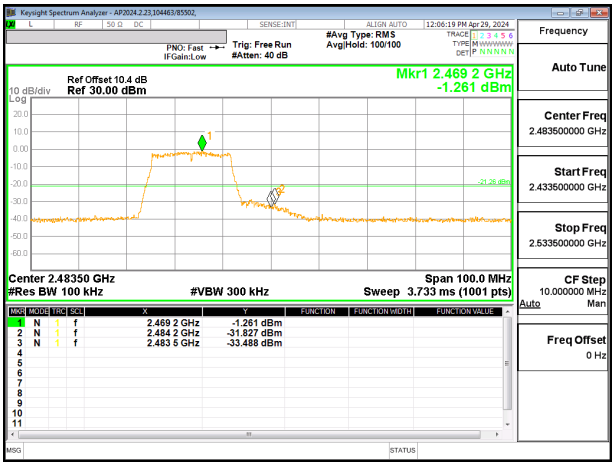

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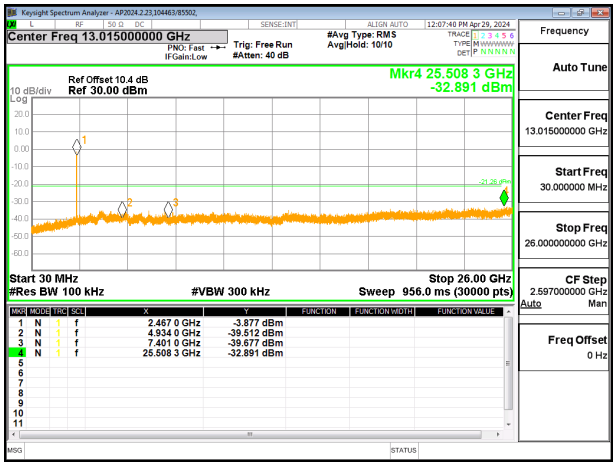

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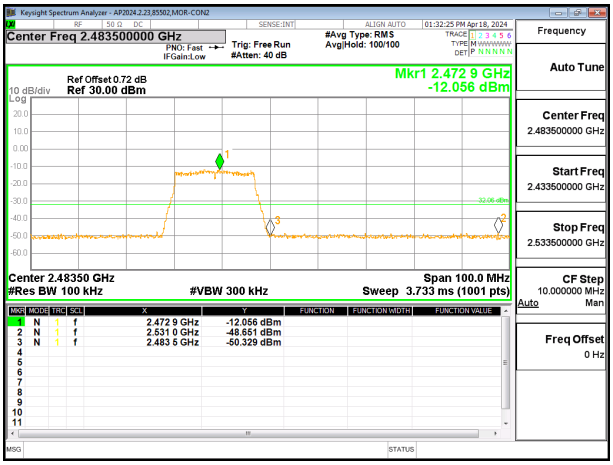

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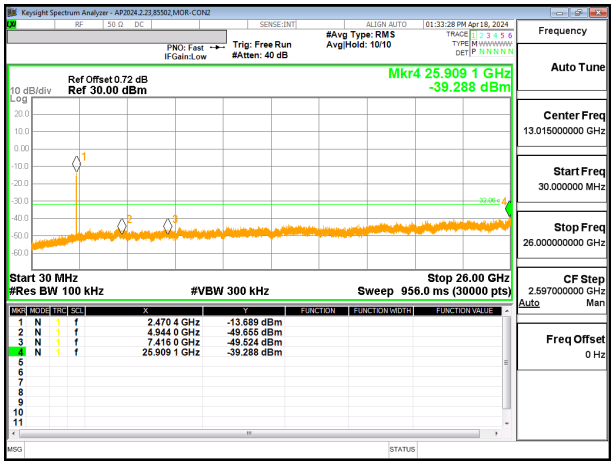

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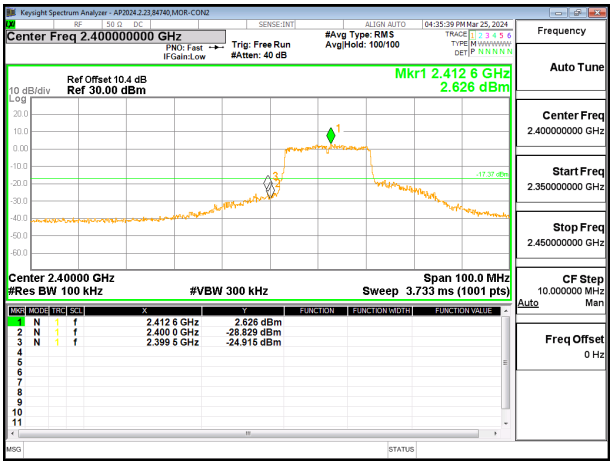
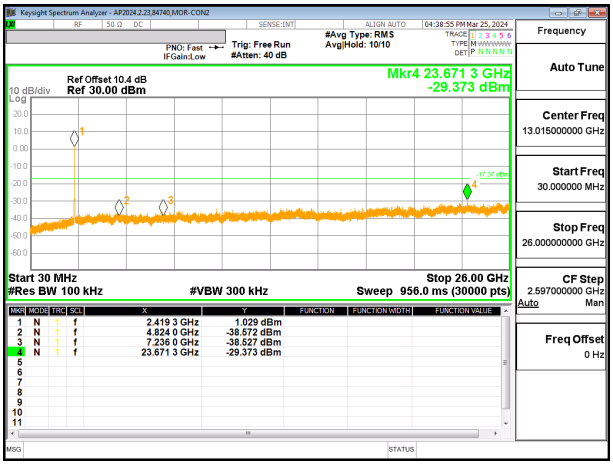
9.7.3. 802.11n HT20 MODE



LOW CHANNEL 1



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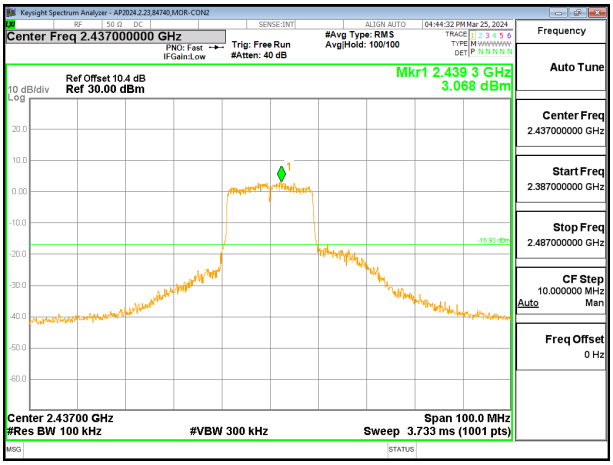

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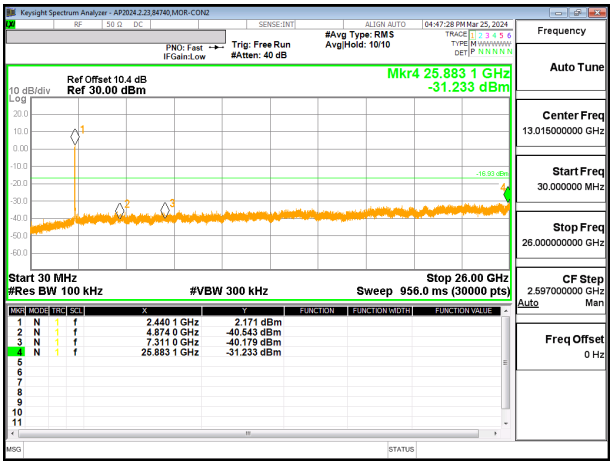

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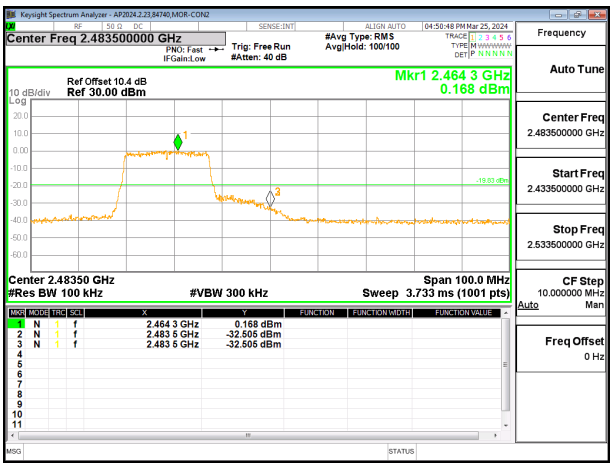

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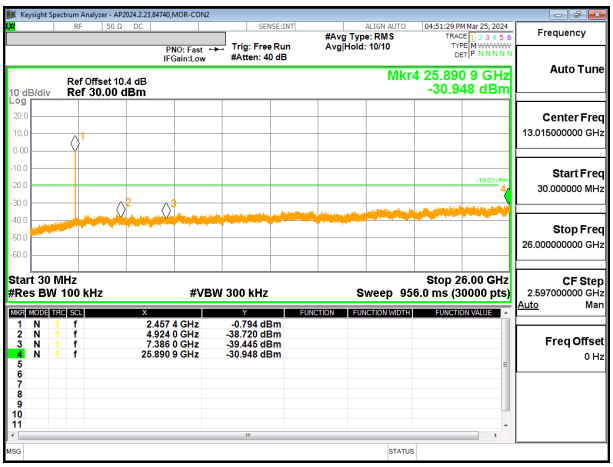

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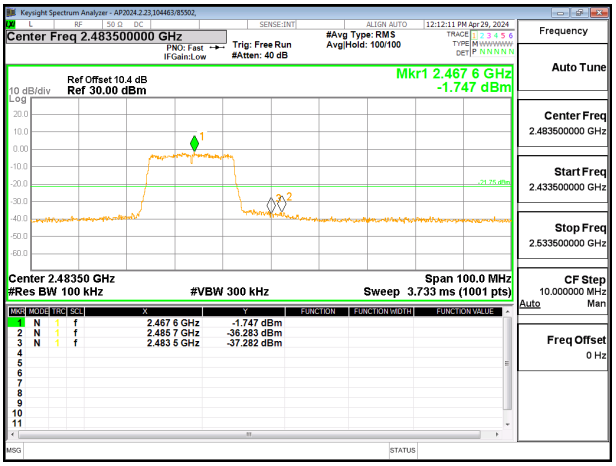

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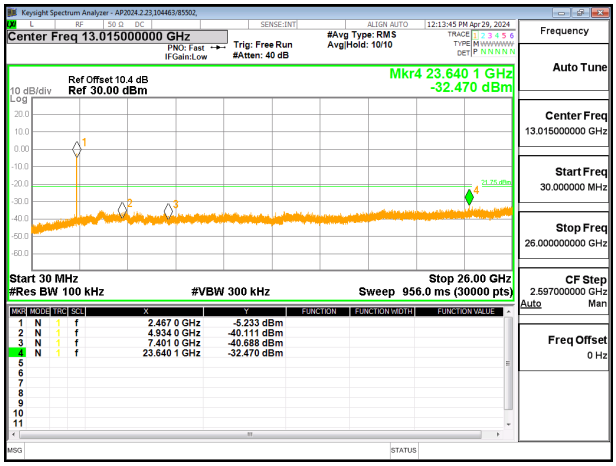

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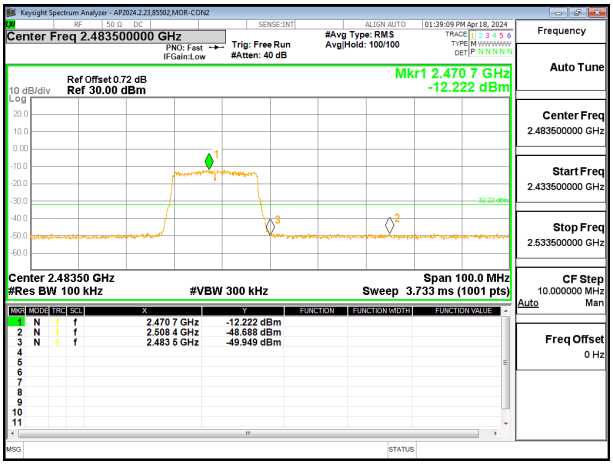

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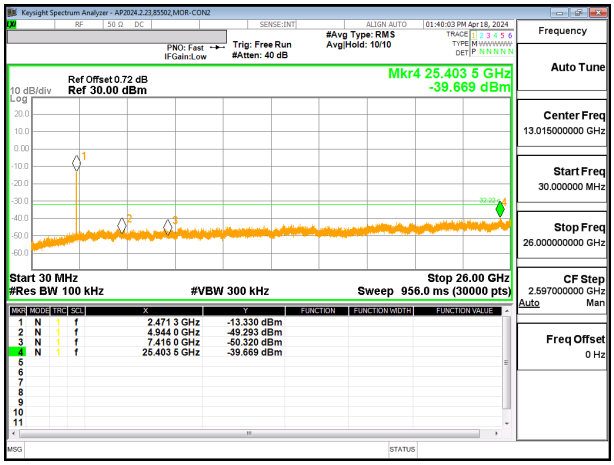

HIGH CHANNEL 13

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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.

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 RMS average measurements.

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The spectrum from 1 GHz to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. Below 1GHz and above 18GHz emissions, the channel with the highest output power 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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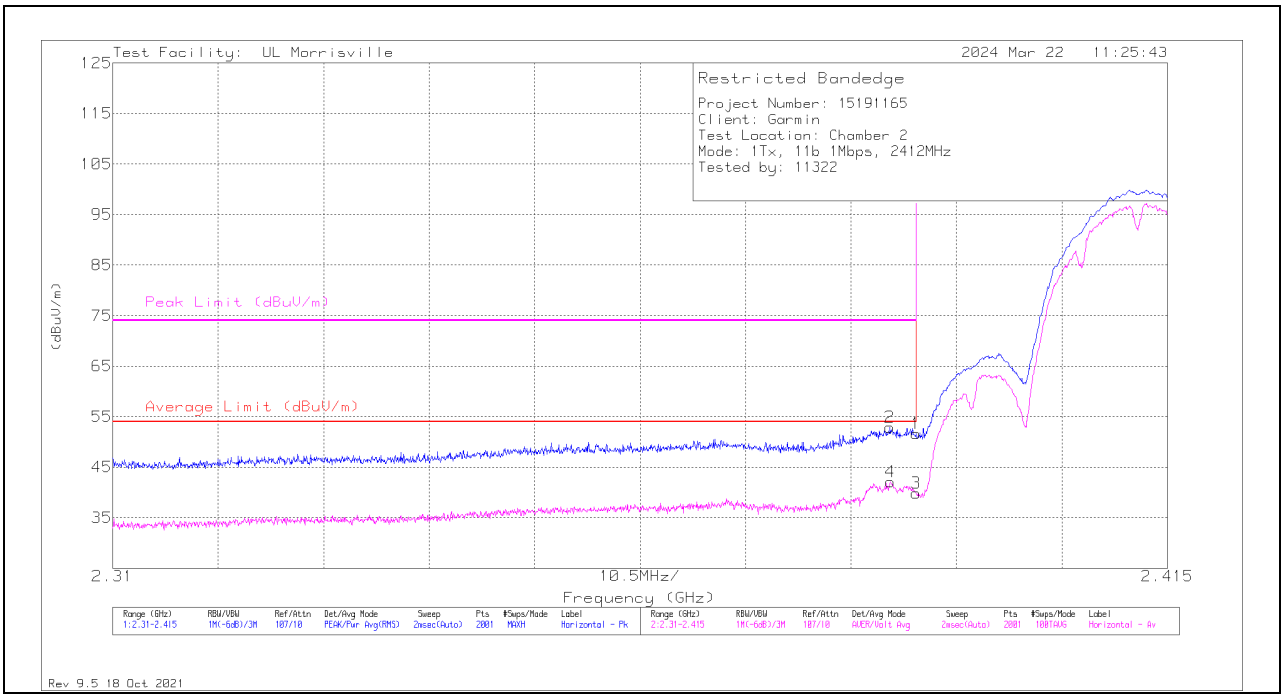
10.1. TRANSMITTER ABOVE 1 GHz

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

BANDEDGE (LOW CHANNEL, CH 1)

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	43.54	Pk	32.3	-24.2	51.64	-	-	74	-22.36	35	134	H
2	* ** 2.38739	44.92	Pk	32.2	-24.2	52.92	-	-	74	-21.08	35	134	H
3	* ** 2.38996	31.81	ADV	32.3	-24.2	39.91	54	-14.09	-	-	35	134	H
4	* ** 2.38744	34.15	ADV	32.2	-24.2	42.15	54	-11.85	-	-	35	134	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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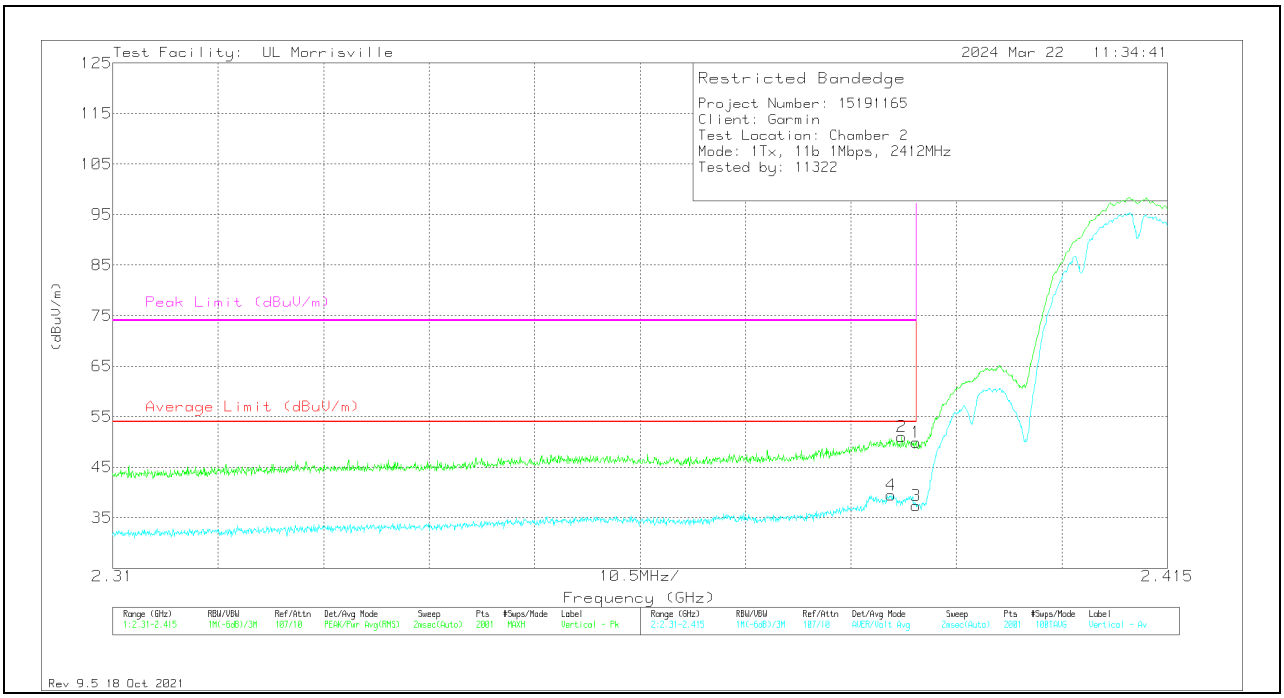
VERTICAL RESULT



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	41.77	Pk	32.3	-24.2	49.87	-	-	74	-24.13	158	158	V
2	* ** 2.38854	42.93	Pk	32.3	-24.2	51.03	-	-	74	-22.97	158	158	V
3	* ** 2.38996	29.26	ADV	32.3	-24.2	37.36	54	-16.64	-	-	158	158	V
4	* ** 2.38749	31.53	ADV	32.2	-24.2	39.53	54	-14.47	-	-	158	158	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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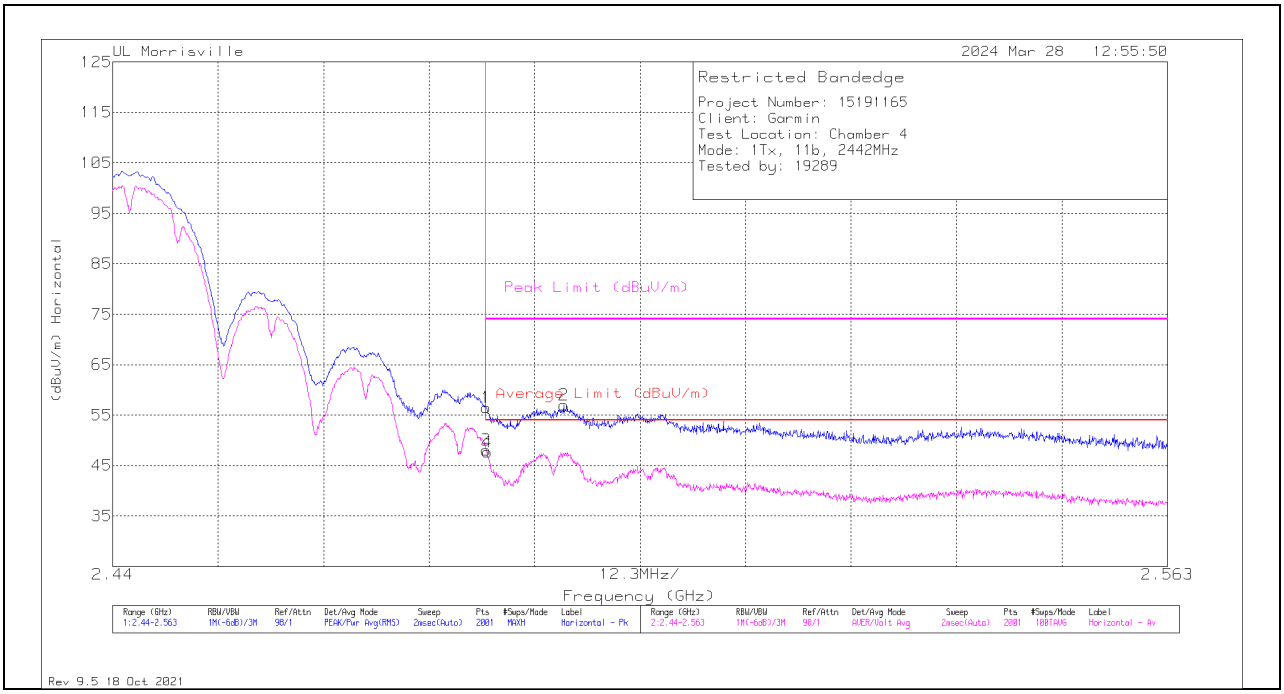
BANDEDGE (HIGH CHANNEL, CH 7)

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	37.14	Pk	32.3	-12.9	56.54	-	-	74	-17.46	49	134	H
2	* ** 2.49258	37.64	Pk	32.3	-13	56.94	-	-	74	-17.06	49	134	H
3	* ** 2.48354	28.69	ADV	32.3	-12.9	48.09	54	-5.91	-	-	49	134	H
4	* ** 2.48367	28.3	ADV	32.3	-12.9	47.7	54	-6.3	-	-	49	134	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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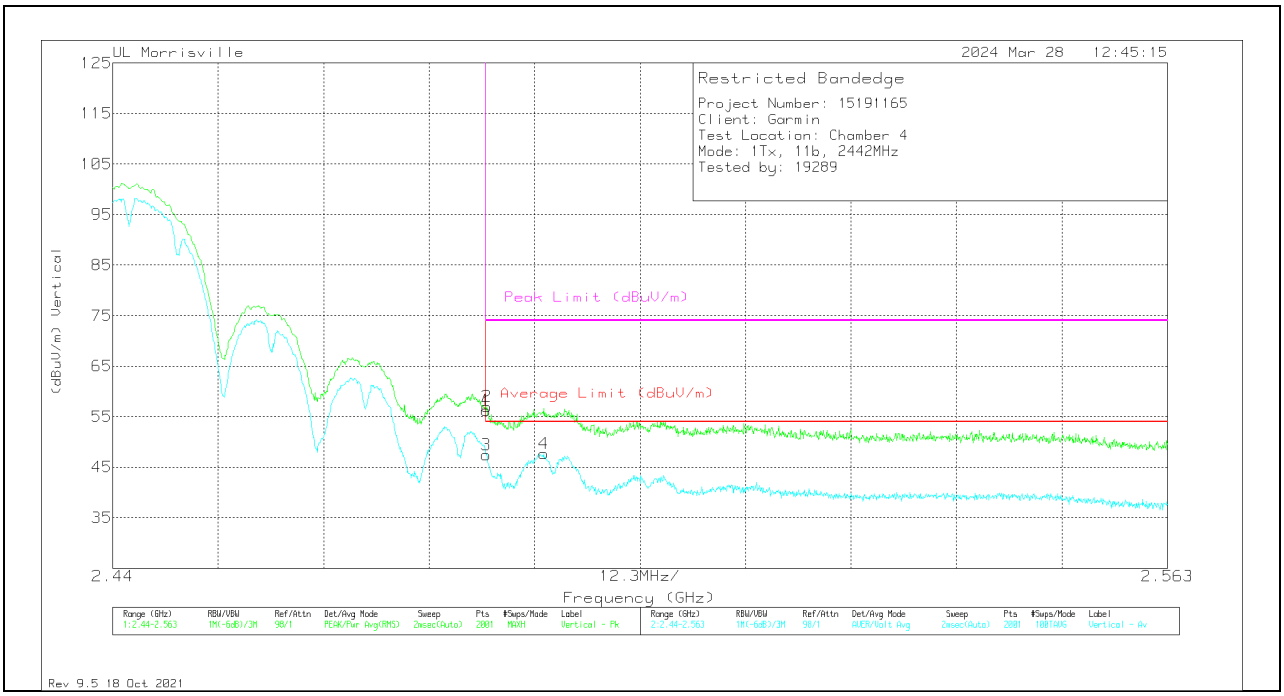
VERTICAL RESULT



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	36.86	Pk	32.3	-12.9	56.26	-	-	74	-17.74	345	117	V
2	* ** 2.4836	37.55	Pk	32.3	-12.9	56.95	-	-	74	-17.05	345	117	V
3	* ** 2.48354	28.09	ADV	32.3	-12.9	47.49	54	-6.51	-	-	345	117	V
4	* ** 2.49025	28.35	ADV	32.3	-13	47.65	54	-6.35	-	-	345	117	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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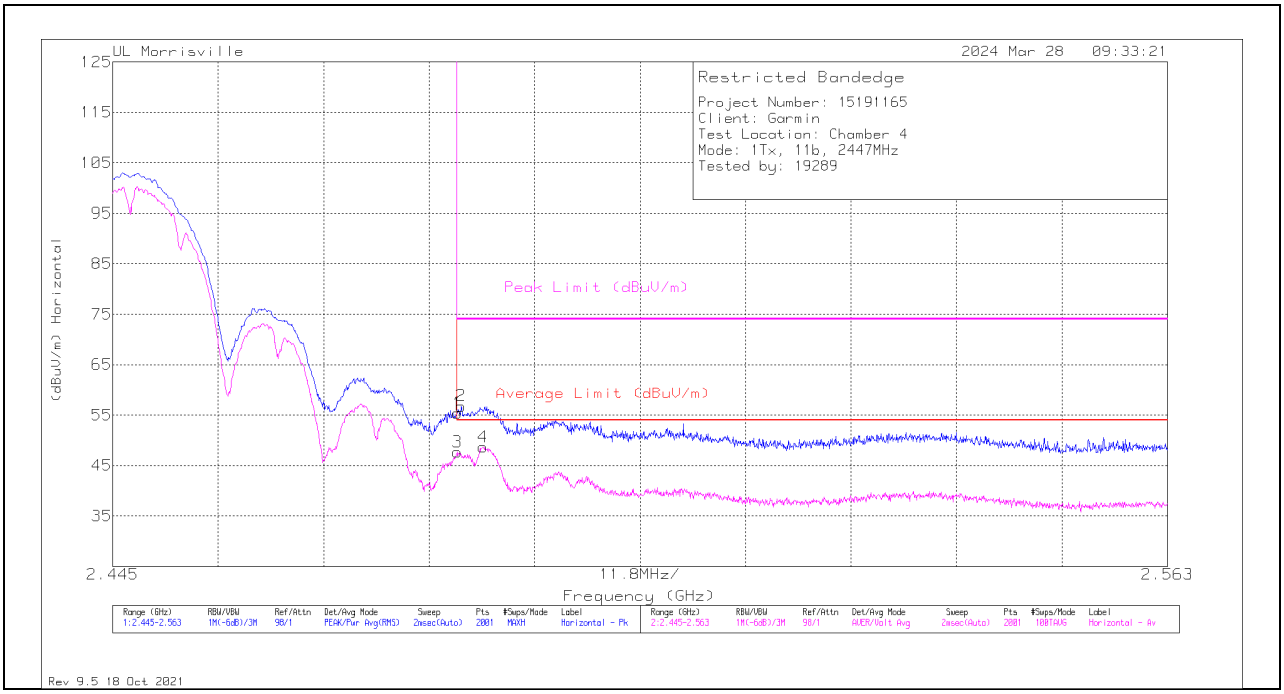
BANDEDGE (HIGH CHANNEL, CH 8)

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	* ** 2.48353	35.93	Pk	32.3	-12.9	55.33	-	-	74	-18.67	40	103	H
2	* ** 2.484	37.41	Pk	32.3	-12.9	56.81	-	-	74	-17.19	40	103	H
3	* ** 2.48353	28.25	ADV	32.3	-12.9	47.65	54	-6.35	-	-	40	103	H
4	* ** 2.48642	29.32	ADV	32.3	-12.9	48.72	54	-5.28	-	-	40	103	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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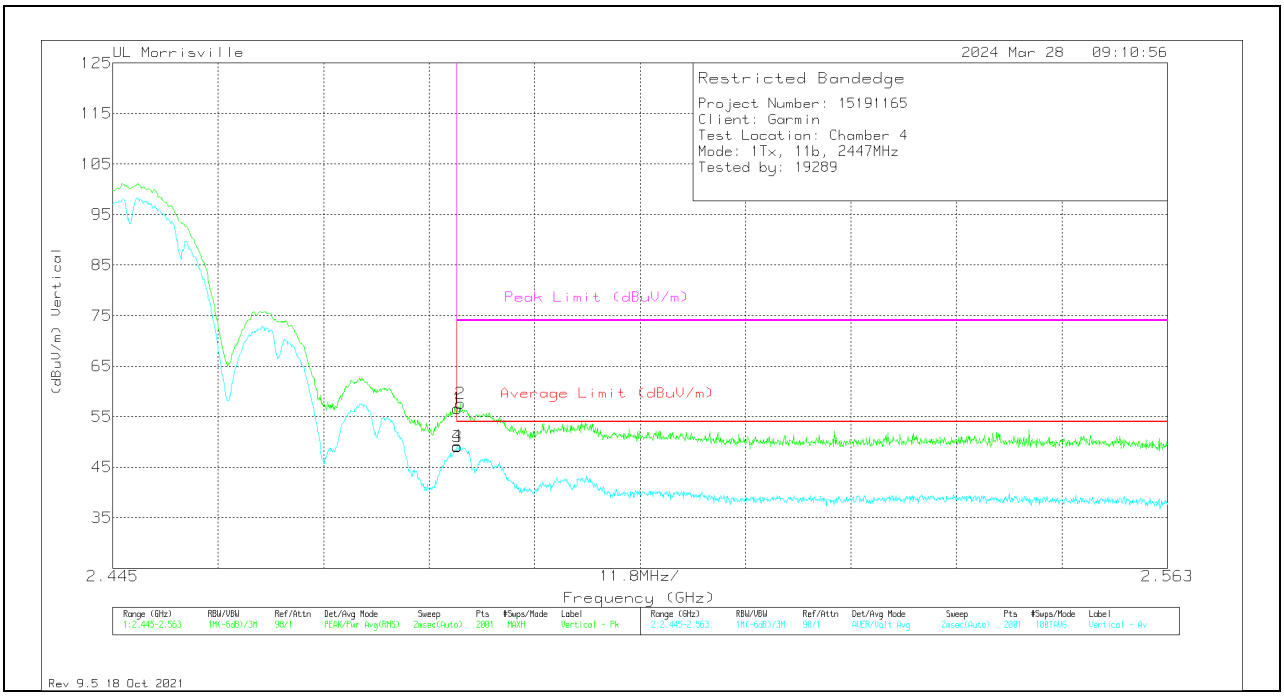
VERTICAL RESULT



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	* ** 2.48353	37.26	Pk	32.3	-12.9	56.66	-	-	74	-17.34	344	100	V
2	* ** 2.48388	38.22	Pk	32.3	-12.9	57.62	-	-	74	-16.38	344	100	V
3	* ** 2.48353	29.68	ADV	32.3	-12.9	49.08	54	-4.92	-	-	344	100	V
4	* ** 2.48359	29.83	ADV	32.3	-12.9	49.23	54	-4.77	-	-	344	100	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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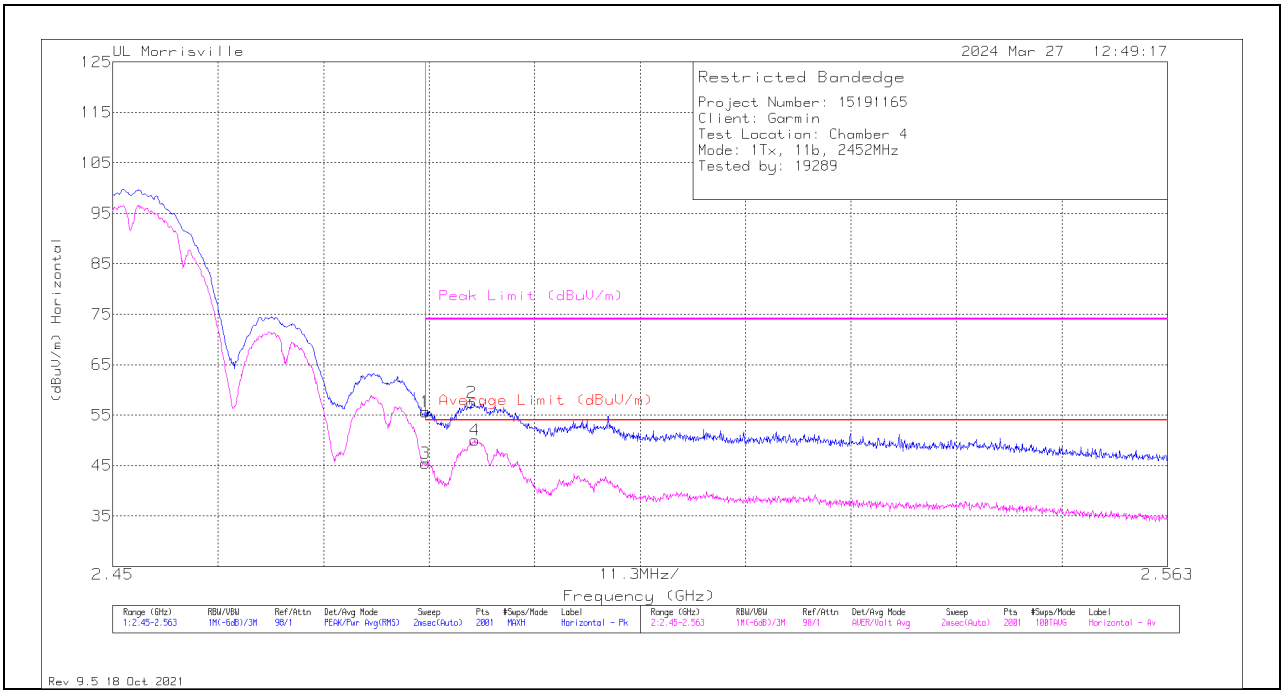
BANDEDGE (HIGH CHANNEL, CH 9)

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	* ** 2.4835	36.19	Pk	32.3	-12.9	55.59	-	-	74	-18.41	173	253	H
2	* ** 2.48848	38.2	Pk	32.3	-13	57.5	-	-	74	-16.5	173	253	H
3	* ** 2.4835	26.08	ADV	32.3	-12.9	45.48	54	-8.52	-	-	173	253	H
4	* ** 2.48882	30.74	ADV	32.3	-13	50.04	54	-3.96	-	-	173	253	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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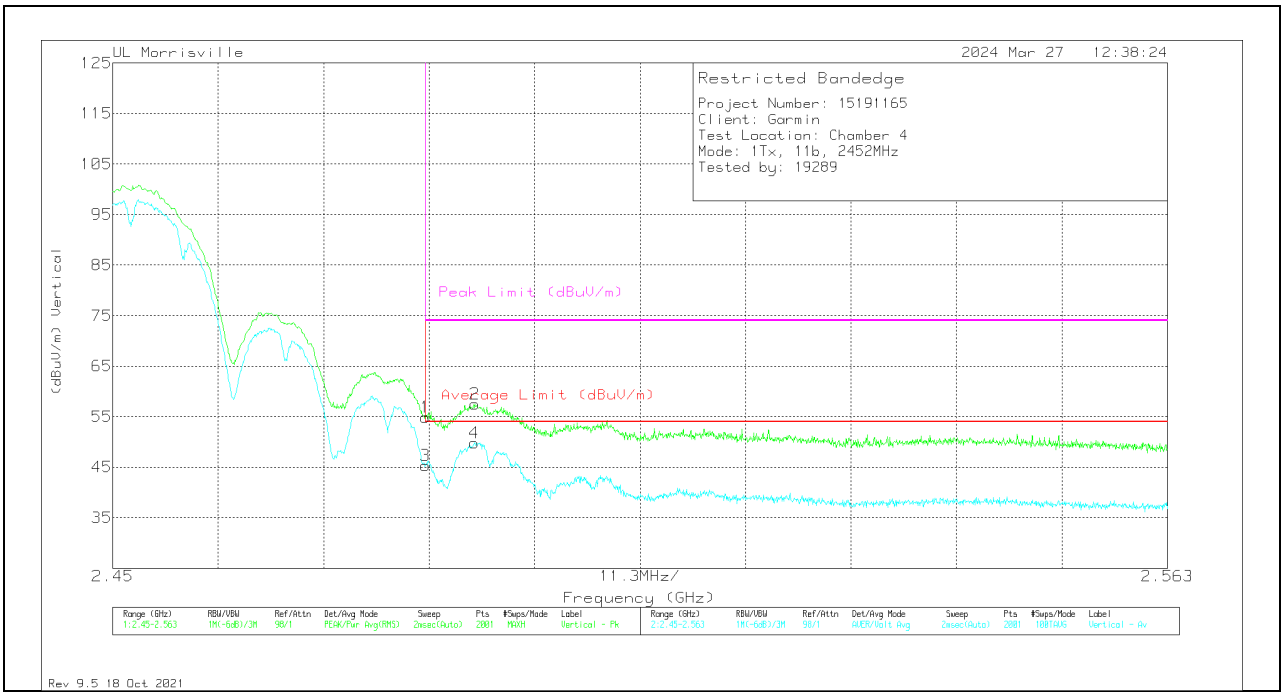
VERTICAL RESULT



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	* ** 2.4835	35.5	Pk	32.3	-12.9	54.9	-	-	74	-19.1	27	100	V
2	* ** 2.48882	38.17	Pk	32.3	-13	57.47	-	-	74	-16.53	27	100	V
3	* ** 2.4835	25.96	ADV	32.3	-12.9	45.36	54	-8.64	-	-	27	100	V
4	* ** 2.48876	30.51	ADV	32.3	-13	49.81	54	-4.19	-	-	27	100	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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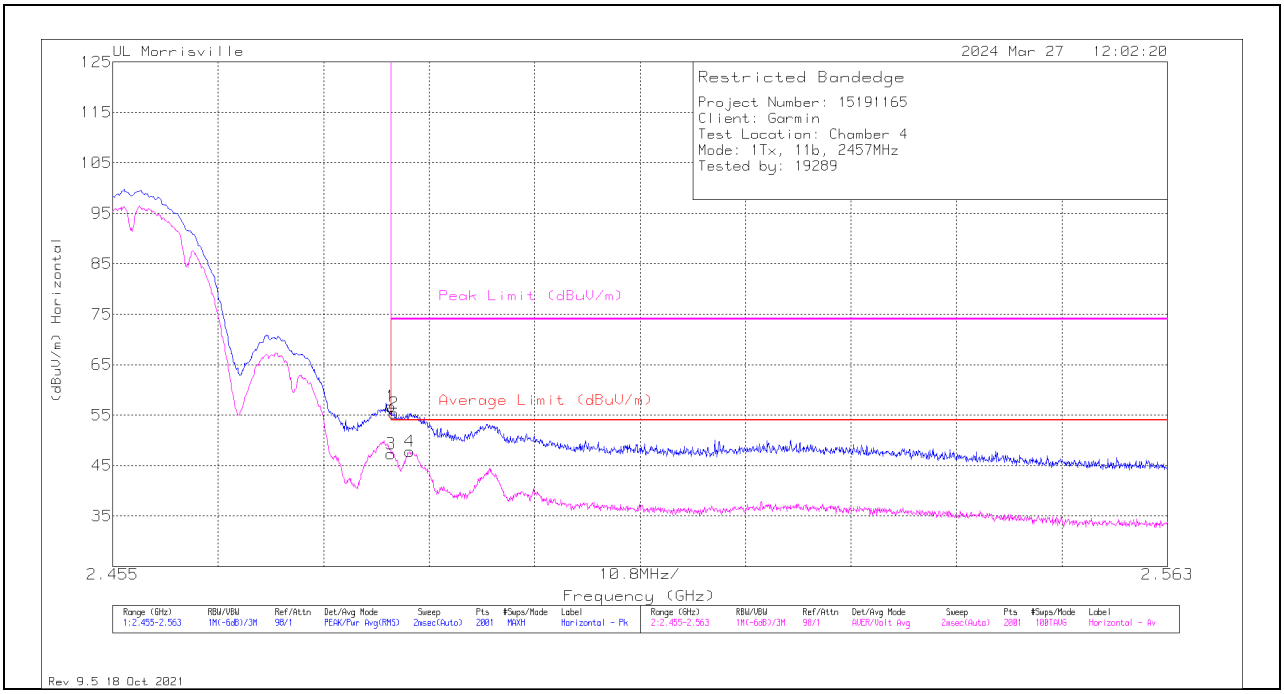
BANDEDGE (HIGH CHANNEL, CH 10)

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	37.3	Pk	32.3	-12.9	56.7	-	-	74	-17.3	172	102	H
2	* ** 2.48384	35.98	Pk	32.3	-12.9	55.38	-	-	74	-18.62	172	102	H
3	* ** 2.48351	27.94	ADV	32.3	-12.9	47.34	54	-6.66	-	-	172	102	H
4	* ** 2.4854	28.38	ADV	32.3	-12.9	47.78	54	-6.22	-	-	172	102	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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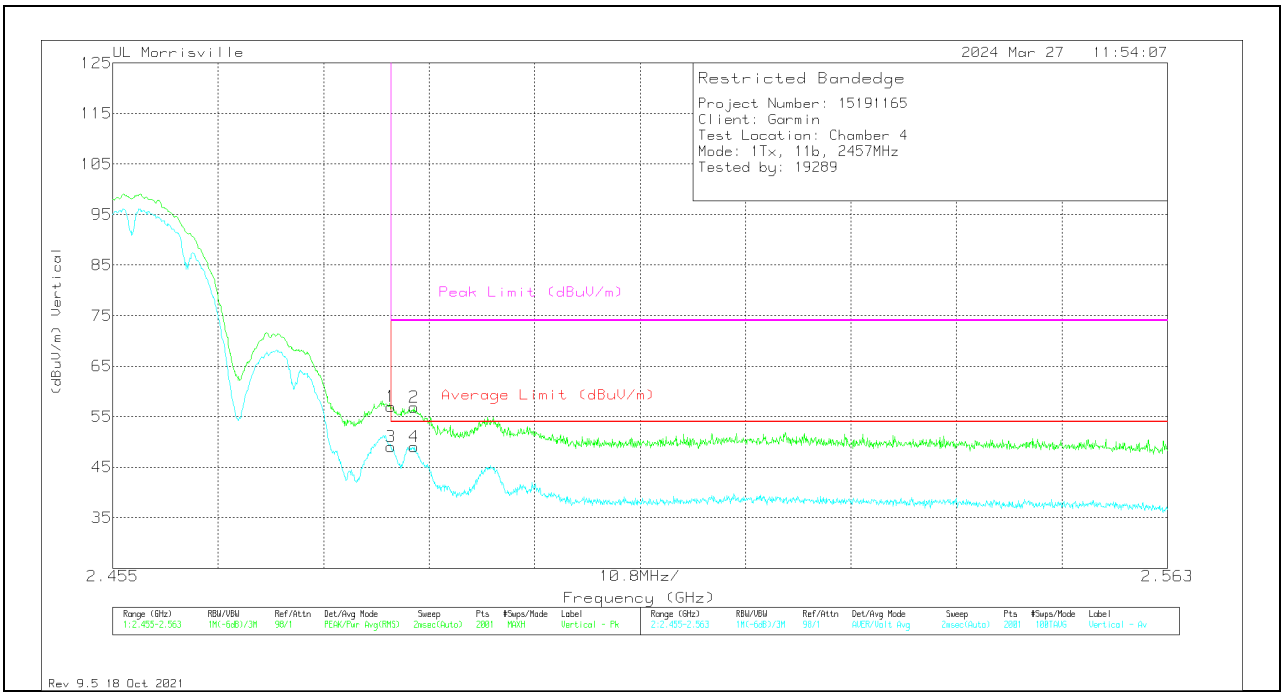
VERTICAL RESULT



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	37.55	Pk	32.3	-12.9	56.95	-	-	74	-17.05	349	106	V
2	* ** 2.48583	37.44	Pk	32.3	-12.9	56.84	-	-	74	-17.16	349	106	V
3	* ** 2.48351	29.65	ADV	32.3	-12.9	49.05	54	-4.95	-	-	349	106	V
4	* ** 2.48583	29.6	ADV	32.3	-12.9	49	54	-5	-	-	349	106	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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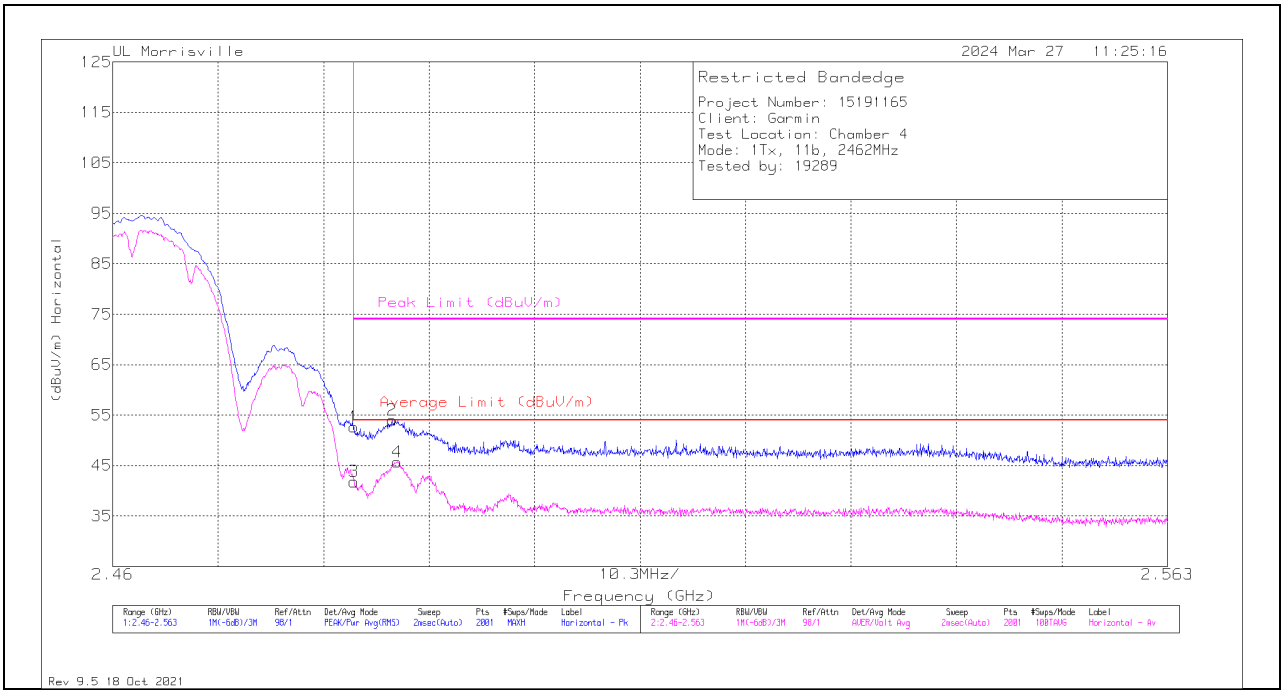
BANDEDGE (HIGH CHANNEL, CH 11)

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	33.3	Pk	32.3	-12.9	52.7	-	-	74	-21.3	317	110	H
2	* ** 2.4873	34.76	Pk	32.3	-13	54.06	-	-	74	-19.94	317	110	H
3	* ** 2.48354	22.39	ADV	32.3	-12.9	41.79	54	-12.21	-	-	317	110	H
4	* ** 2.48776	26.39	ADV	32.3	-13	45.69	54	-8.31	-	-	317	110	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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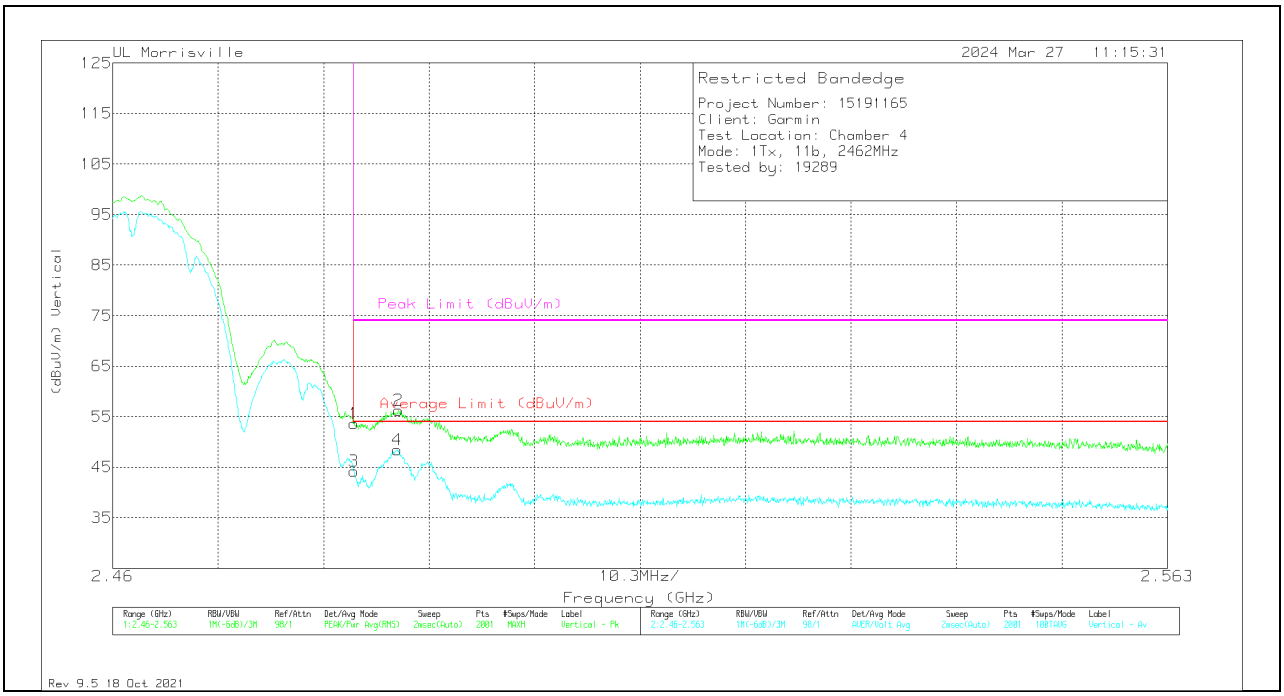
VERTICAL RESULT



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	34.26	Pk	32.3	-12.9	53.66	-	-	74	-20.34	342	105	V
2	* ** 2.48791	36.91	Pk	32.3	-13	56.21	-	-	74	-17.79	342	105	V
3	* ** 2.48354	24.84	ADV	32.3	-12.9	44.24	54	-9.76	-	-	342	105	V
4	* ** 2.48776	29.14	ADV	32.3	-13	48.44	54	-5.56	-	-	342	105	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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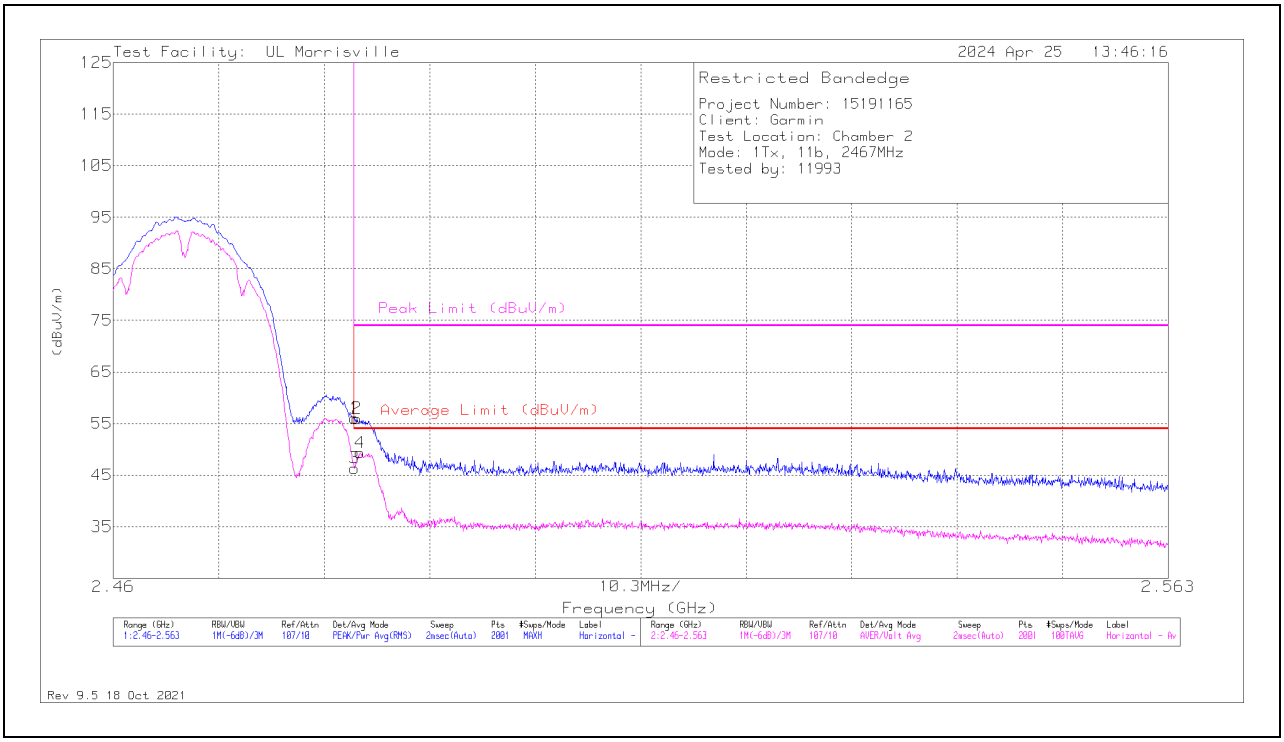
BANDEDGE (HIGH CHANNEL, CH 12)

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	48.05	Pk	32.5	-24.5	56.05	-	-	74	-17.95	201	153	H
2	* ** 2.48379	47.97	Pk	32.5	-24.5	55.97	-	-	74	-18.03	201	153	H
3	* ** 2.48354	38.36	ADV	32.5	-24.5	46.36	54	-7.64	-	-	201	153	H
4	* ** 2.4841	41.32	ADV	32.5	-24.5	49.32	54	-4.68	-	-	201	153	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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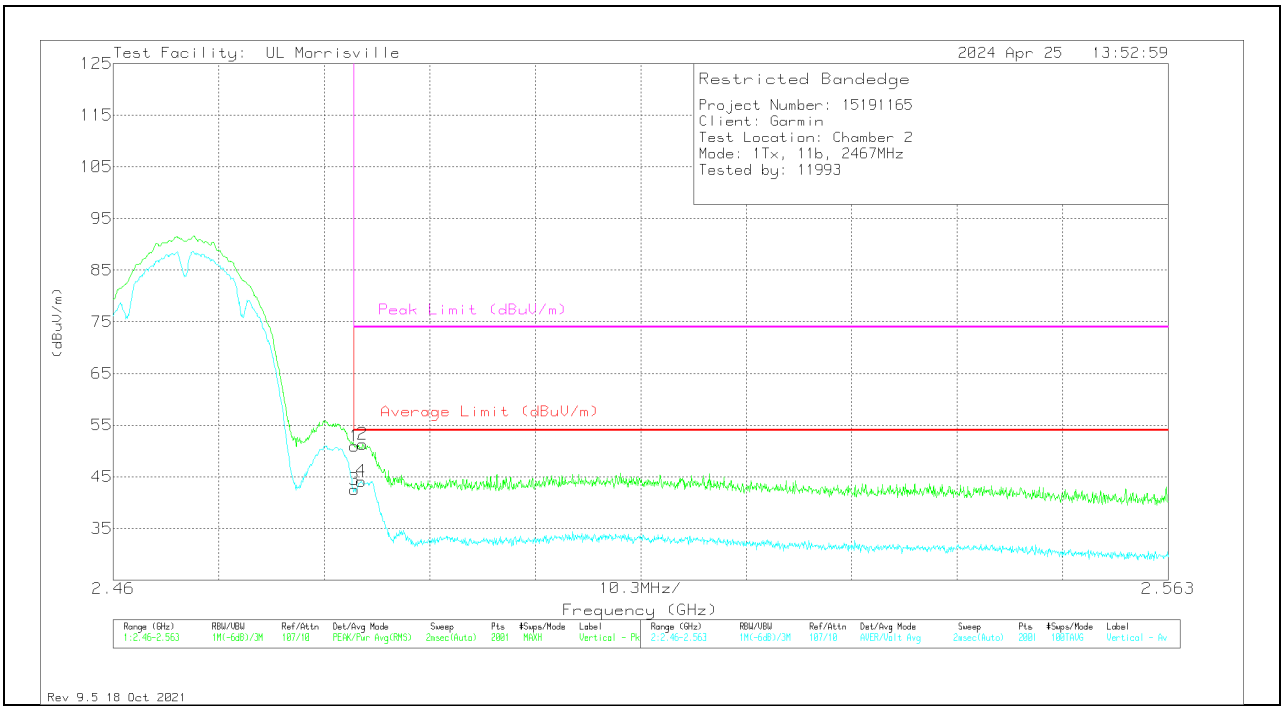

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	42.92	Pk	32.5	-24.5	50.92	-	-	74	-23.08	154	285	V
2	* ** 2.48436	43.33	Pk	32.5	-24.5	51.33	-	-	74	-22.67	154	285	V
3	* ** 2.48354	34.53	ADV	32.5	-24.5	42.53	54	-11.47	-	-	154	285	V
4	* ** 2.48421	36.15	ADV	32.5	-24.5	44.15	54	-9.85	-	-	154	285	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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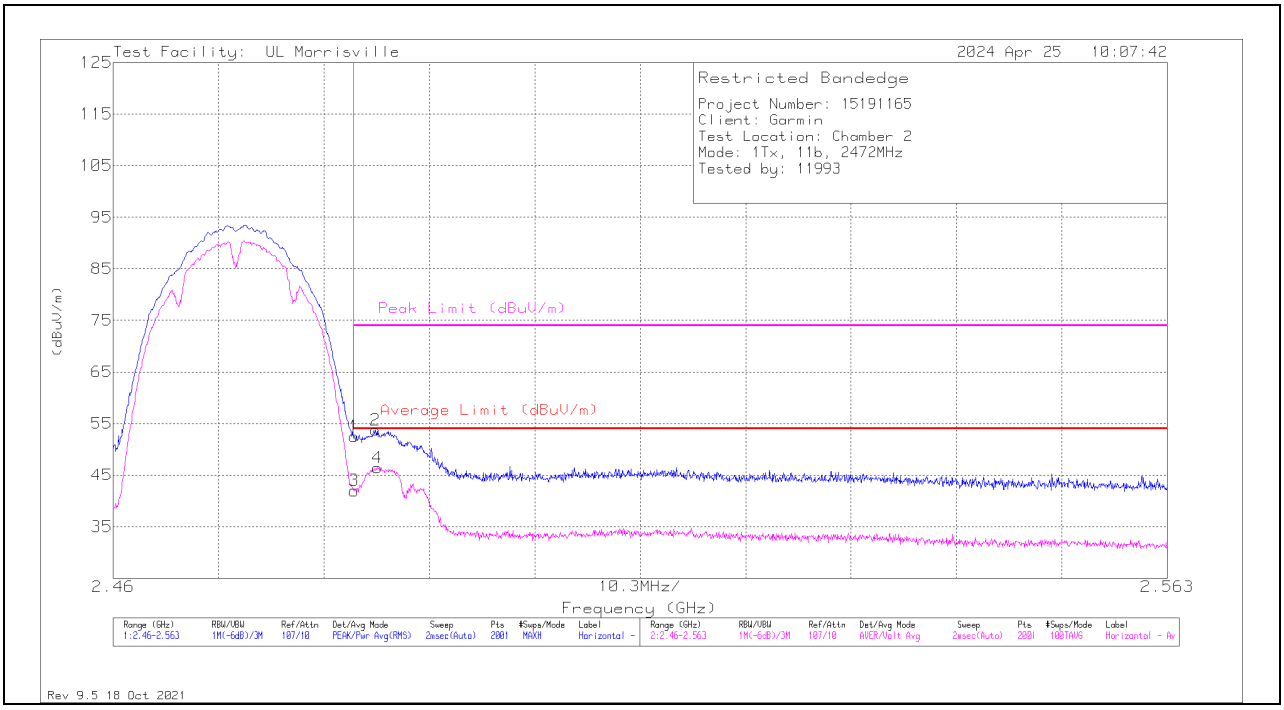
BANDEDGE (HIGH CHANNEL, CH 13)

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	44.51	Pk	32.5	-24.5	52.51	-	-	74	-21.49	35	159	H
2	* ** 2.48565	45.8	Pk	32.5	-24.6	53.7	-	-	74	-20.3	35	159	H
3	* ** 2.48354	33.98	ADV	32.5	-24.5	41.98	54	-12.02	-	-	35	159	H
4	* ** 2.4858	38.52	ADV	32.5	-24.6	46.42	54	-7.58	-	-	35	159	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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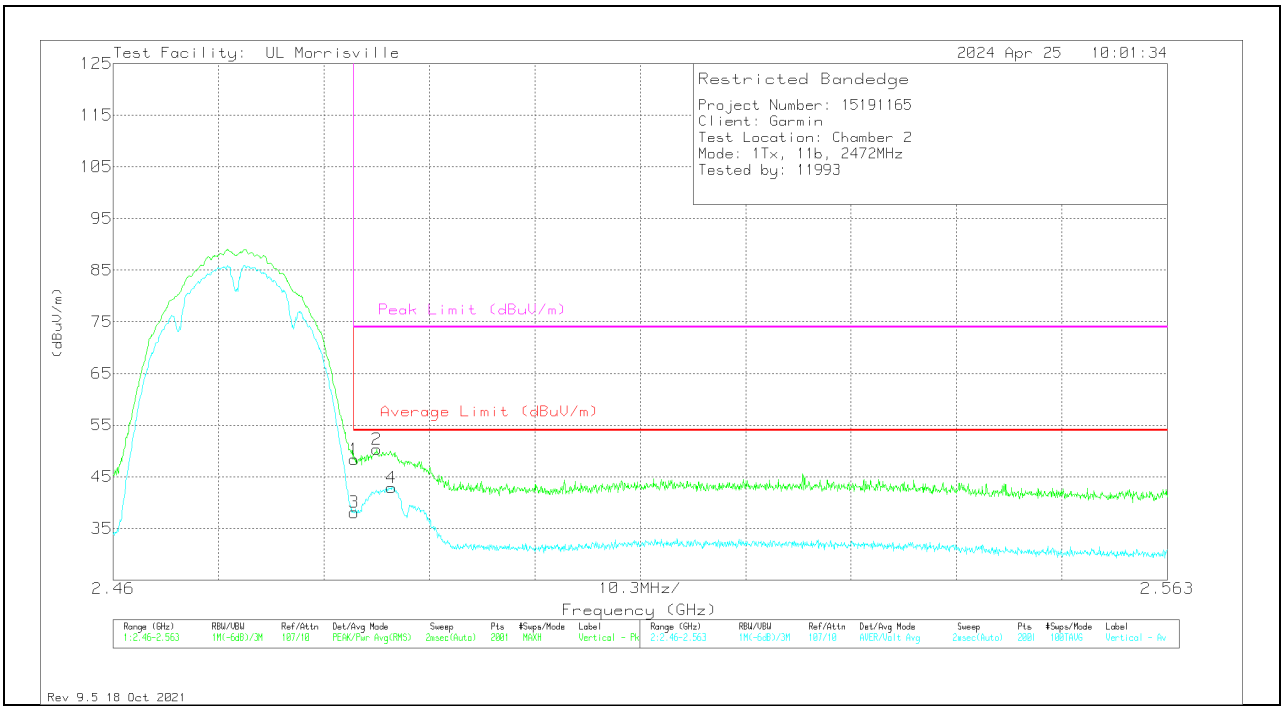
VERTICAL RESULT



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	40.37	Pk	32.5	-24.5	48.37	-	-	74	-25.63	25	139	V
2	* ** 2.48575	42.42	Pk	32.5	-24.6	50.32	-	-	74	-23.68	25	139	V
3	* ** 2.48354	30.09	ADV	32.5	-24.5	38.09	54	-15.91	-	-	25	139	V
4	* ** 2.48719	34.98	ADV	32.5	-24.6	42.88	54	-11.12	-	-	25	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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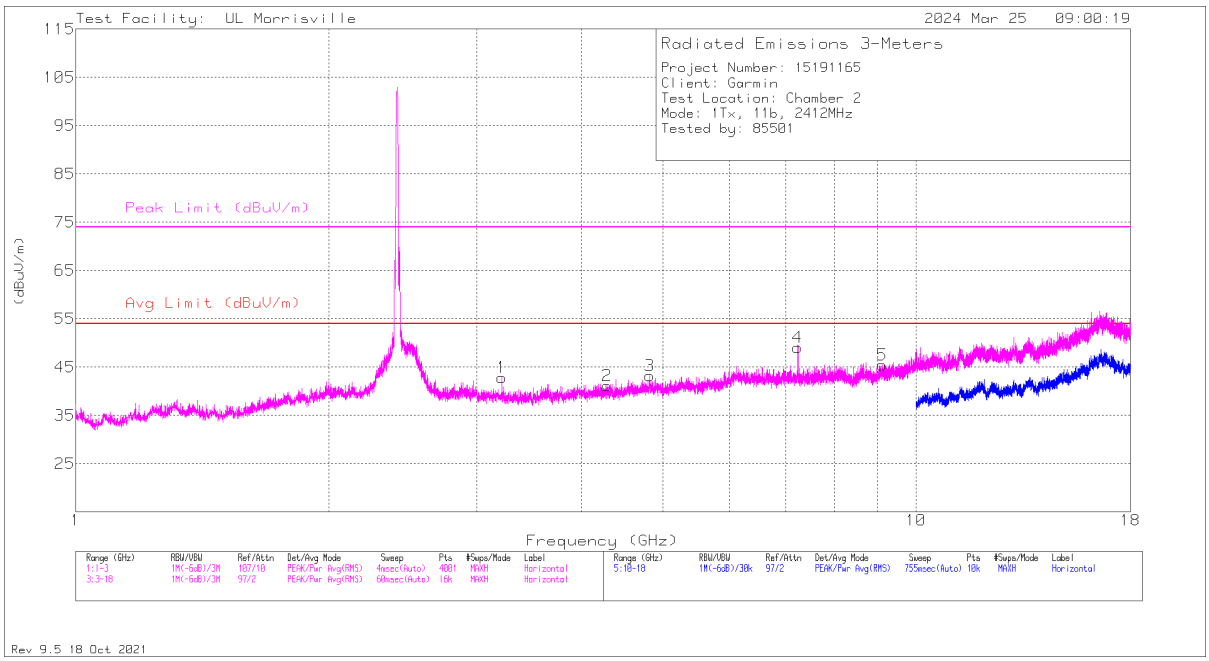
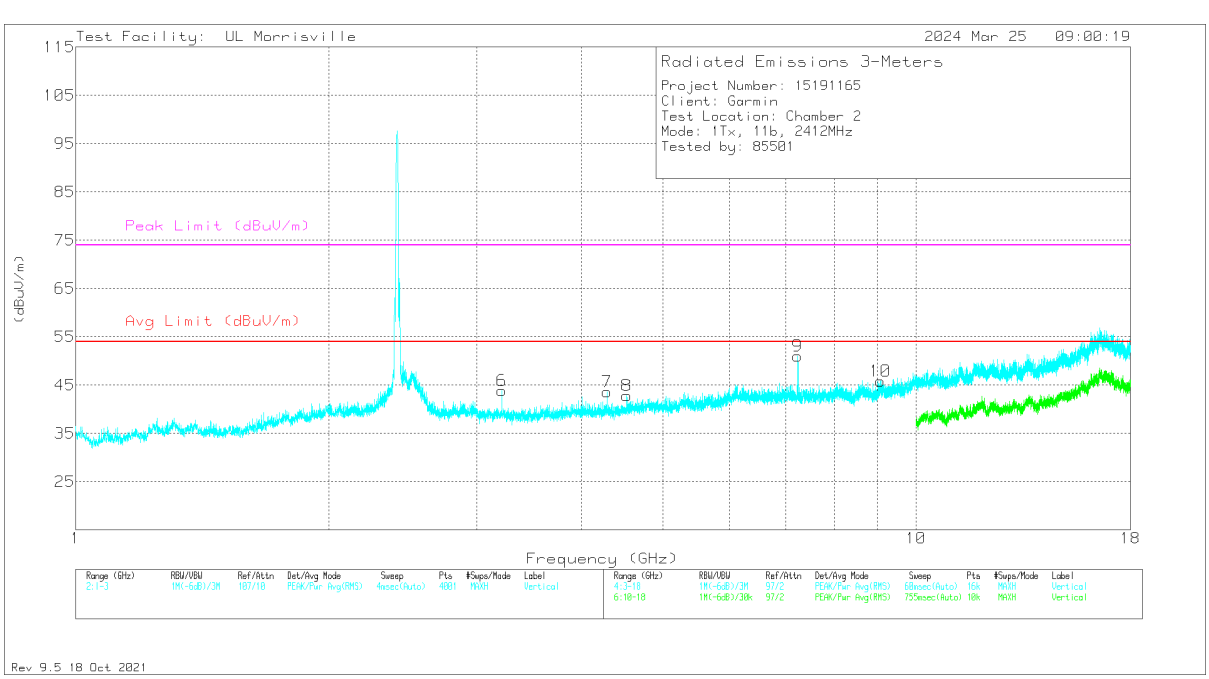
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



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
2	* ** 4.28906	38.5	Pk	33.5	-30.9	41.1	54	-12.9	74	-32.9	0-360	101	H
3	* ** 4.82344	39.26	Pk	34.2	-30.2	43.26	54	-10.74	74	-30.74	0-360	200	H
5	* ** 9.12469	34.61	Pk	35.9	-25.1	45.41	54	-8.59	74	-28.59	0-360	101	H
7	* ** 4.28906	40.99	Pk	33.5	-30.9	43.59	54	-10.41	74	-30.41	0-360	200	V
8	* ** 4.52813	39.64	Pk	34	-30.8	42.84	54	-11.16	74	-31.16	0-360	101	V
10	* ** 9.06938	35.08	Pk	35.9	-25.2	45.78	54	-8.22	74	-28.22	0-360	200	V
1	3.21563	42.33	Pk	33.1	-32.6	42.83	-	-	74	-31.17	0-360	101	H
6	3.21563	43.42	Pk	33.1	-32.6	43.92	-	-	74	-30.08	0-360	200	V
4	7.23563	40.42	Pk	35.6	-26.9	49.12	-	-	74	-24.88	0-360	101	H
9	7.23563	42.36	Pk	35.6	-26.9	51.06	-	-	74	-22.94	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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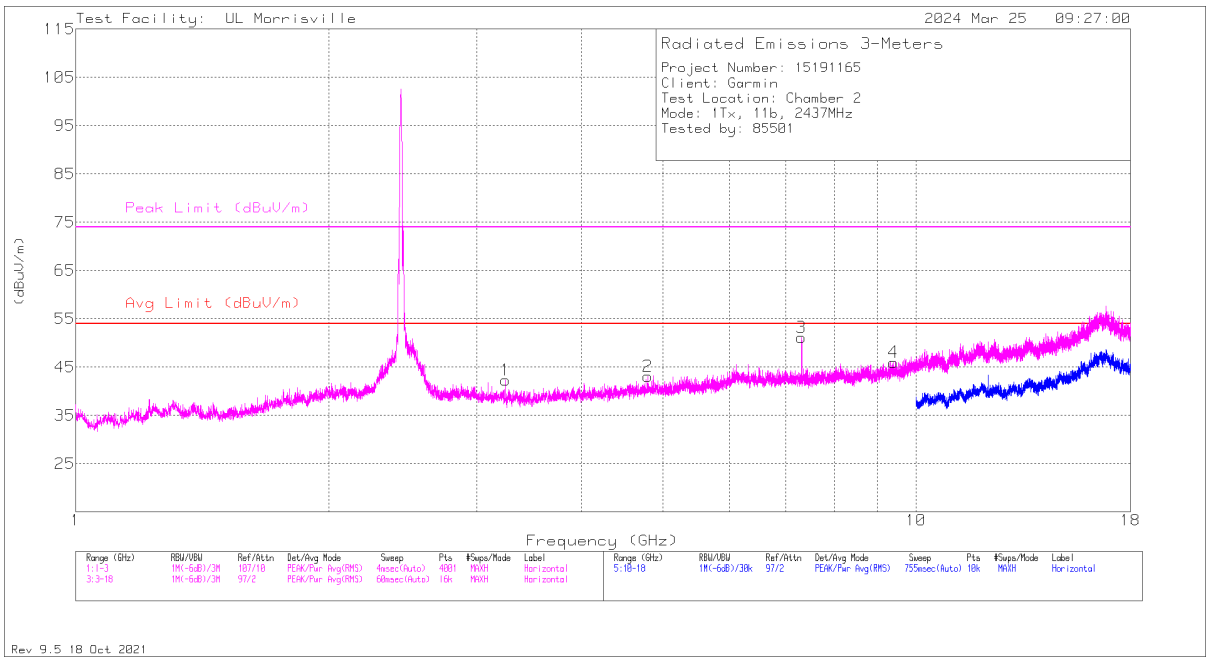
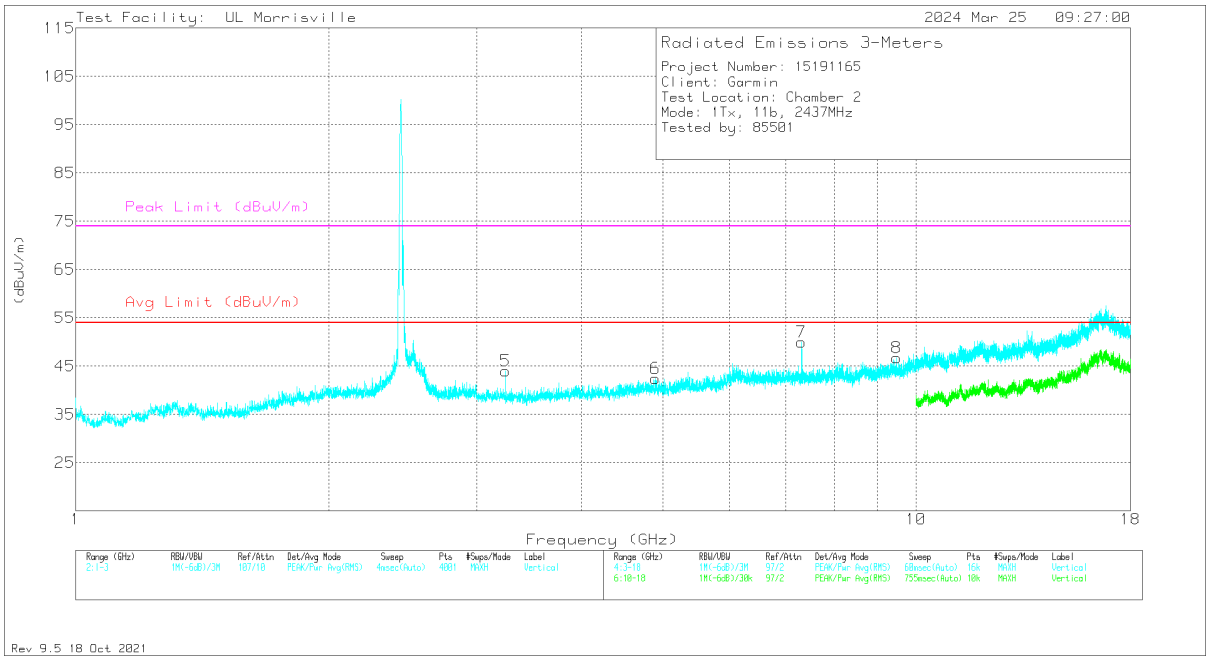
MID CHANNEL, CH 6 RESULTS



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
2	* ** 4.7925	39.29	Pk	34.2	-30.4	43.09	54	-10.91	74	-30.91	0-360	101	H
3	* ** 7.31064	44.36	PK2	35.6	-26.6	53.36	-	-	74	-20.64	223	103	H
	* ** 7.31005	38.04	ADV	35.6	-26.6	47.04	54	-6.96	-	-	223	103	H
4	* ** 9.40781	35.02	Pk	36.2	-25.2	46.02	54	-7.98	74	-27.98	0-360	101	H
6	* ** 4.89375	38.45	Pk	34.1	-30.1	42.45	54	-11.55	74	-31.55	0-360	200	V
7	* ** 7.31192	41.41	PK2	35.6	-26.6	50.41	-	-	74	-23.59	336	105	V
	* ** 7.31009	34.33	ADV	35.6	-26.6	43.33	54	-10.67	-	-	336	105	V
8	* ** 9.4875	35.6	Pk	36.4	-25.3	46.7	54	-7.3	74	-27.3	0-360	200	V
1	3.24938	42.19	Pk	33	-32.9	42.29	54	-11.71	74	-31.71	0-360	200	H
5	3.24938	43.91	Pk	33	-32.9	44.01	54	-9.99	74	-29.99	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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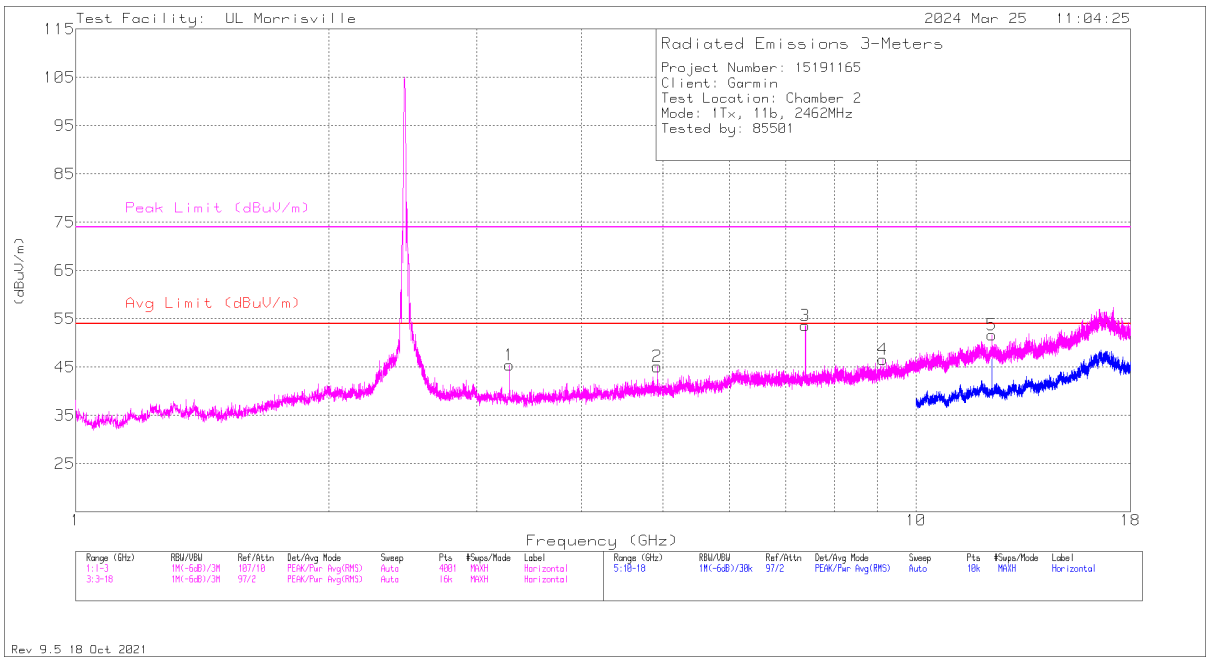
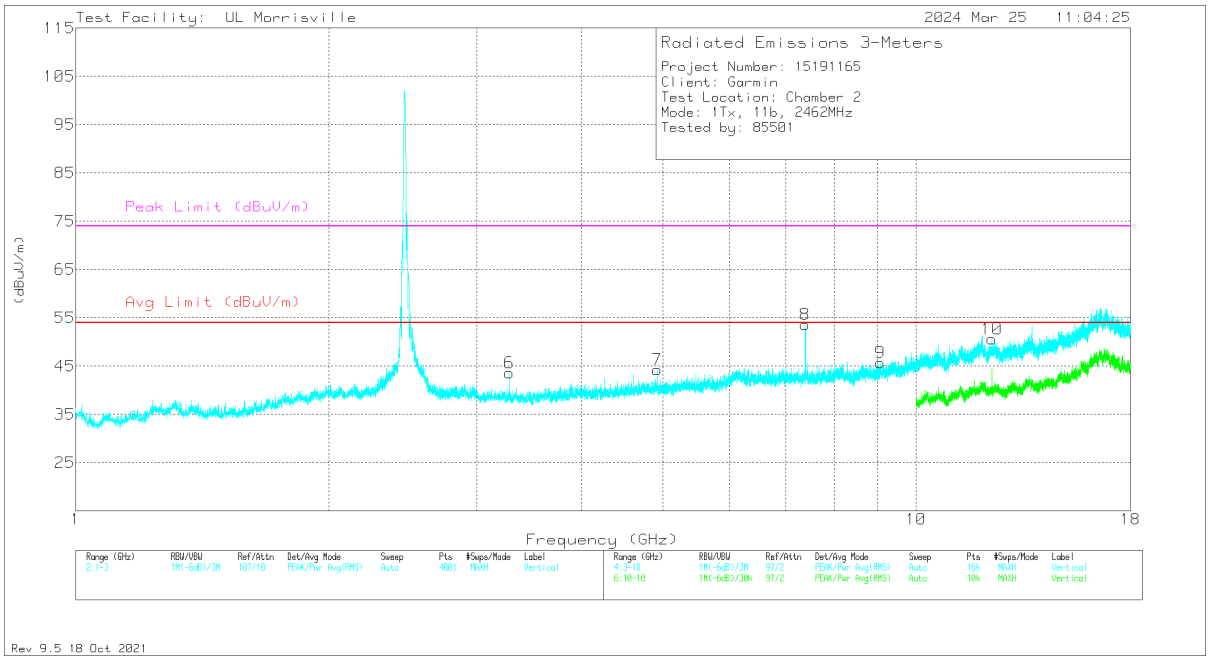
HIGH CHANNEL, CH 11 RESULTS



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
2	* ** 4.92375	41.42	Pk	34.1	-30.4	45.12	54	-8.88	74	-28.88	0-360	199	H
3	* ** 7.38675	46.57	PK2	35.6	-26.6	55.57	-	-	74	-18.43	237	324	H
	* ** 7.38677	37.46	ADV	35.6	-26.6	46.46	54	-7.54	-	-	237	324	H
4	* ** 9.135	35.51	Pk	35.9	-24.8	46.61	54	-7.39	74	-27.39	0-360	199	H
5	* ** 12.3103	37.42	PK2	38.8	-23.1	53.12	-	-	74	-20.88	175	230	H
	* ** 12.31092	27.46	ADV	38.8	-23.1	43.16	54	-10.84	-	-	175	230	H
7	* ** 4.92375	40.59	Pk	34.1	-30.4	44.29	54	-9.71	74	-29.71	0-360	199	V
8	* ** 7.38541	45.21	PK2	35.6	-26.6	54.21	-	-	74	-19.79	243	195	V
	* ** 7.38675	36.5	ADV	35.6	-26.6	45.5	54	-8.5	-	-	243	195	V
9	* ** 9.06469	35.05	Pk	35.9	-25.2	45.75	54	-8.25	74	-28.25	0-360	101	V
10	* ** 12.31028	36.61	PK2	38.8	-23.1	52.31	-	-	74	-21.69	164	193	V
	* ** 12.30843	25.85	ADV	38.8	-23	41.65	54	-12.35	-	-	164	193	V
1	3.28219	45.24	Pk	32.9	-32.7	45.44	54	-8.56	74	-28.56	0-360	101	H
6	3.28219	43.44	Pk	32.9	-32.7	43.64	54	-10.36	74	-30.36	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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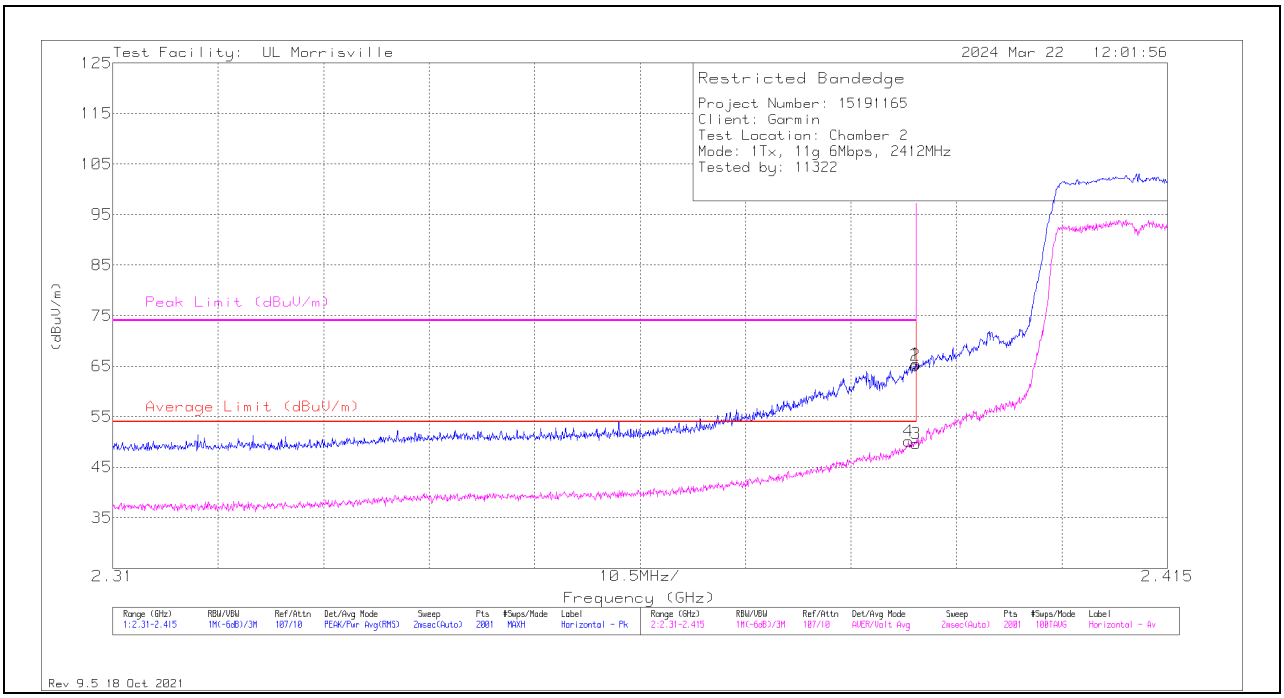
10.1.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND

BANDEDGE (LOW CHANNEL, CH 1)

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	57.35	Pk	32.3	-24.2	65.45	-	-	74	-8.55	40	230	H
2	* ** 2.38991	57.12	Pk	32.3	-24.2	65.22	-	-	74	-8.78	40	230	H
3	* ** 2.38996	41.54	ADV	32.3	-24.2	49.64	54	-4.36	-	-	40	230	H
4	* ** 2.38922	42.08	ADV	32.3	-24.2	50.18	54	-3.82	-	-	40	230	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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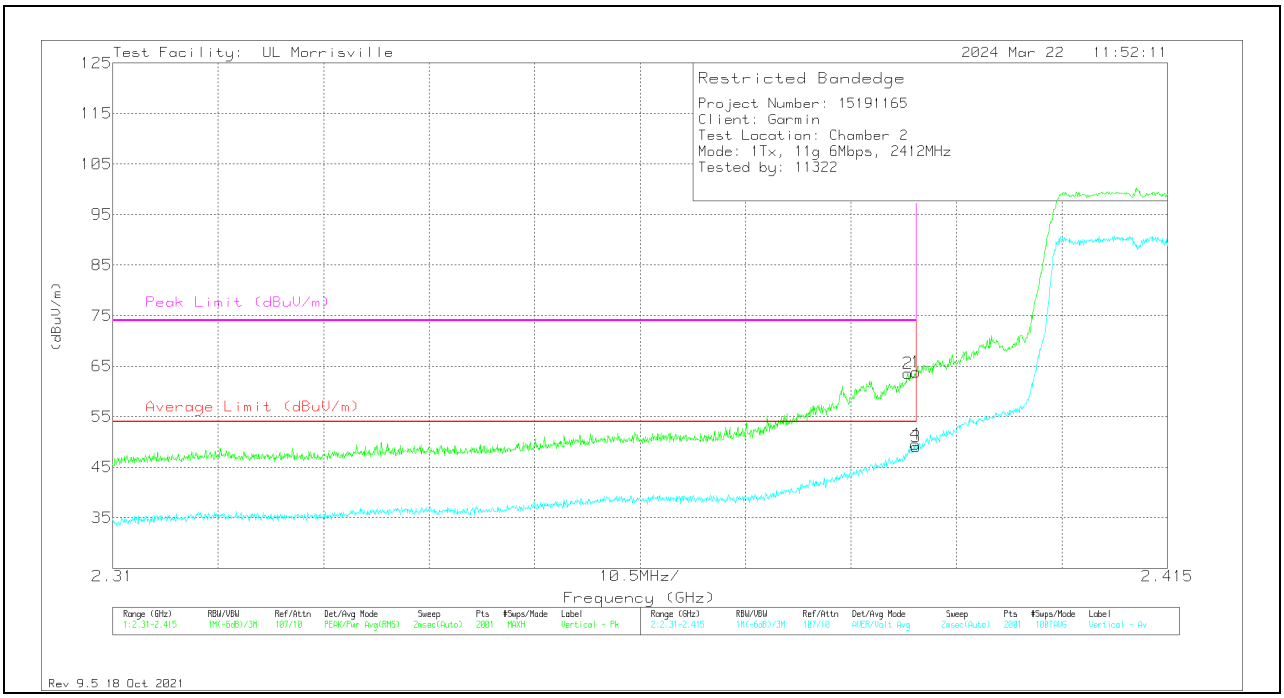
VERTICAL RESULT



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	55.72	Pk	32.3	-24.2	63.82	-	-	74	-10.18	150	102	V
2	* ** 2.38917	55.49	Pk	32.3	-24.2	63.59	-	-	74	-10.41	150	102	V
3	* ** 2.38996	40.9	ADV	32.3	-24.2	49	54	-5	-	-	150	102	V
4	* ** 2.38991	41.42	ADV	32.3	-24.2	49.52	54	-4.48	-	-	150	102	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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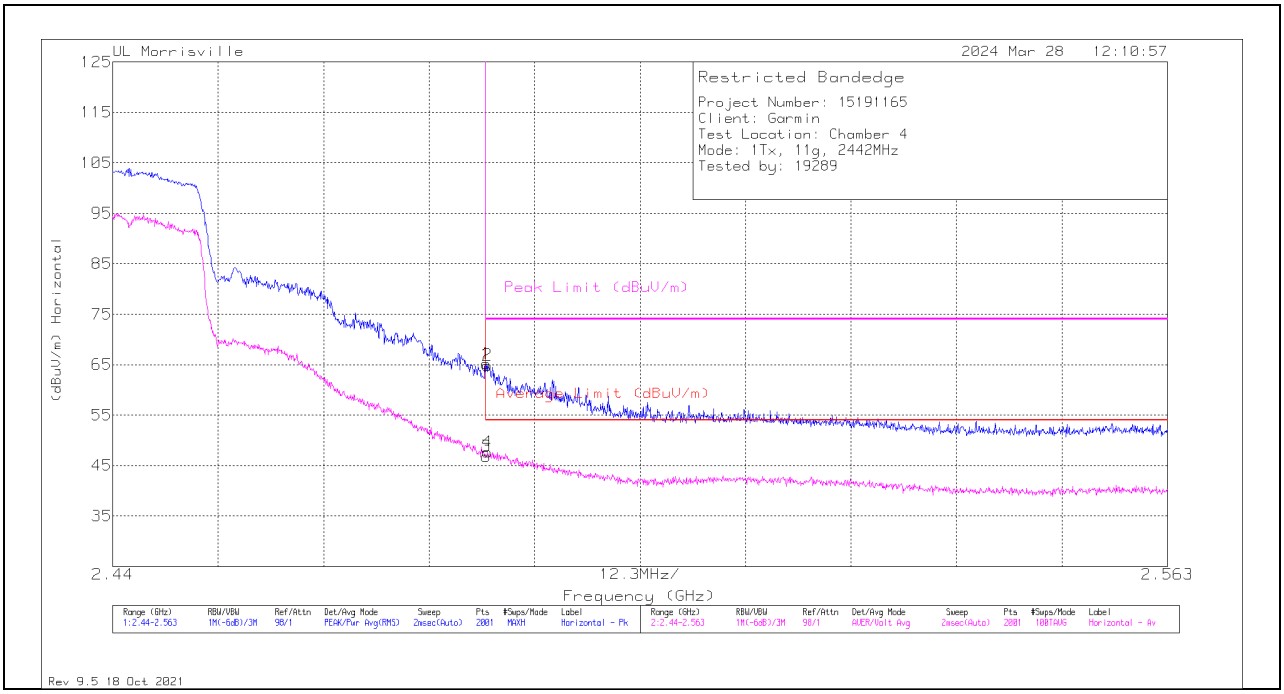
BANDEDGE (HIGH CHANNEL, CH 7)

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	45.77	Pk	32.3	-12.9	65.17	-	-	74	-8.83	15	126	H
2	* ** 2.48367	45.48	Pk	32.3	-12.9	64.88	-	-	74	-9.12	15	126	H
3	* ** 2.48354	27.42	ADV	32.3	-12.9	46.82	54	-7.18	-	-	15	126	H
4	* ** 2.48373	28.25	ADV	32.3	-12.9	47.65	54	-6.35	-	-	15	126	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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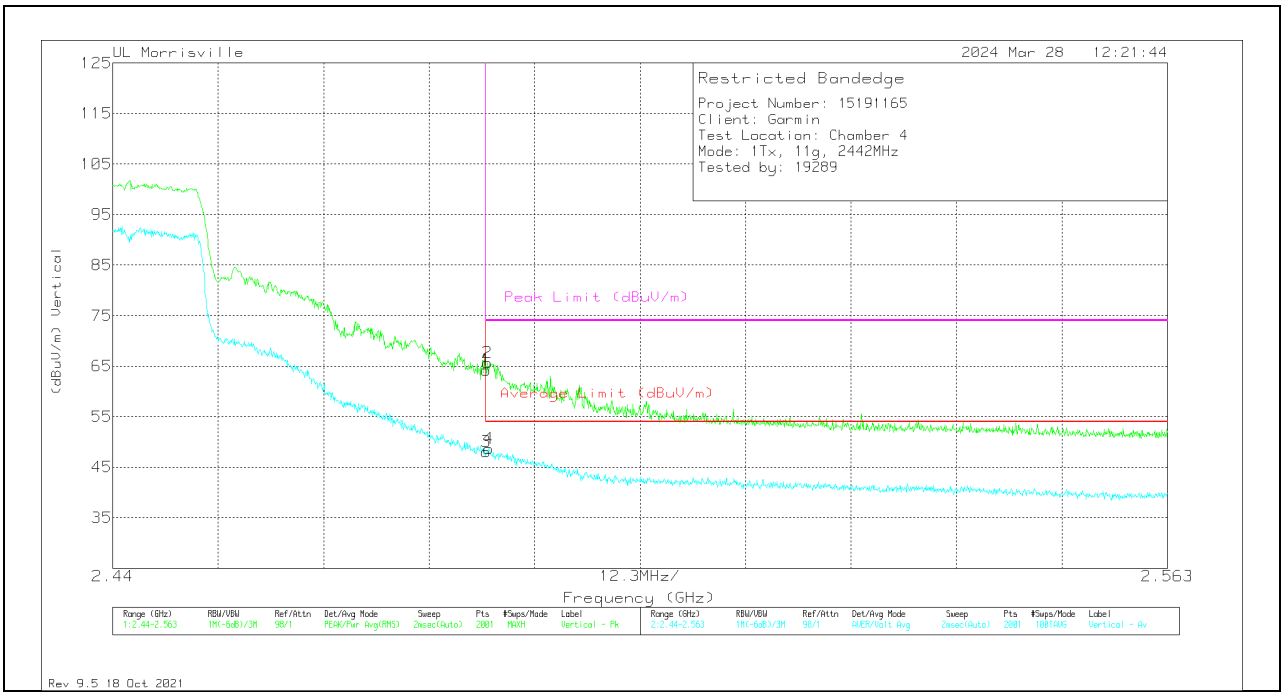
VERTICAL RESULT



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	44.83	Pk	32.3	-12.9	64.23	-	-	74	-9.77	22	120	V
2	* ** 2.48367	46.31	Pk	32.3	-12.9	65.71	-	-	74	-8.29	22	120	V
3	* ** 2.48354	28.71	ADV	32.3	-12.9	48.11	54	-5.89	-	-	22	120	V
4	* ** 2.48385	29.3	ADV	32.3	-12.9	48.7	54	-5.3	-	-	22	120	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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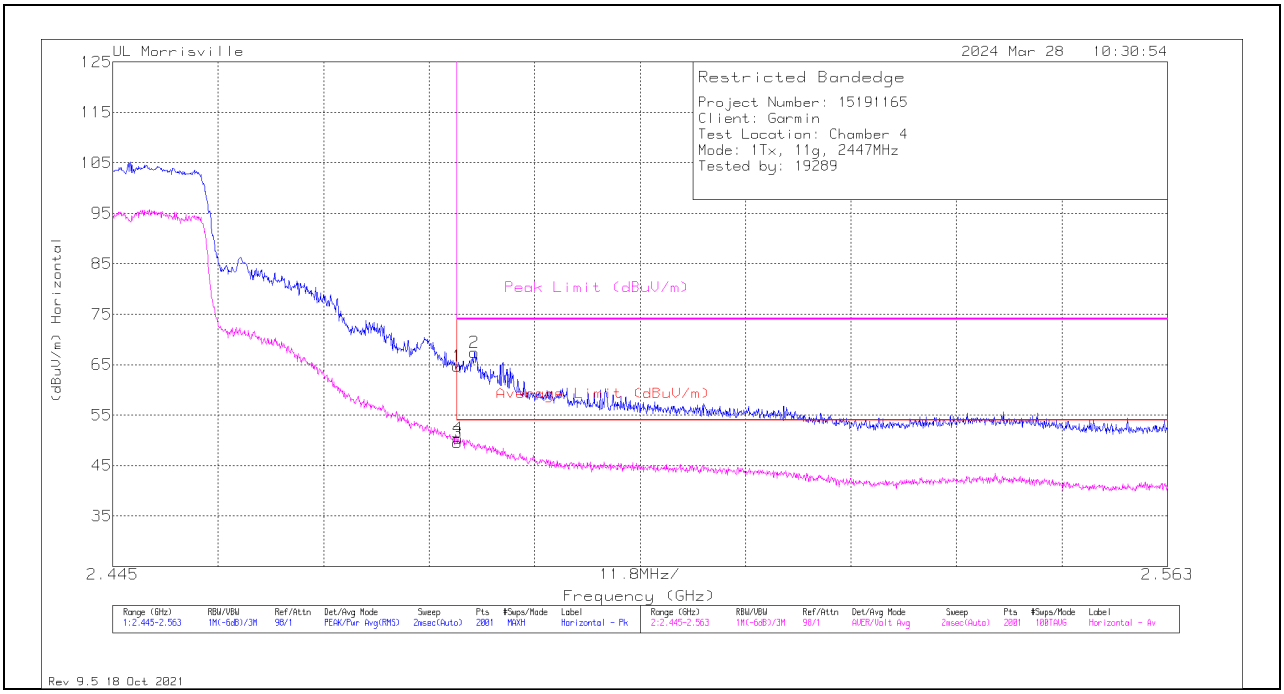
BANDEDGE (HIGH CHANNEL, CH 8)

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	* ** 2.48353	45.31	Pk	32.3	-12.9	64.71	-	-	74	-9.29	56	110	H
2	* ** 2.48547	48.07	Pk	32.3	-12.9	67.47	-	-	74	-6.53	56	110	H
3	* ** 2.48353	30.09	ADV	32.3	-12.9	49.49	54	-4.51	-	-	56	110	H
4	* ** 2.48365	31.02	ADV	32.3	-12.9	50.42	54	-3.58	-	-	56	110	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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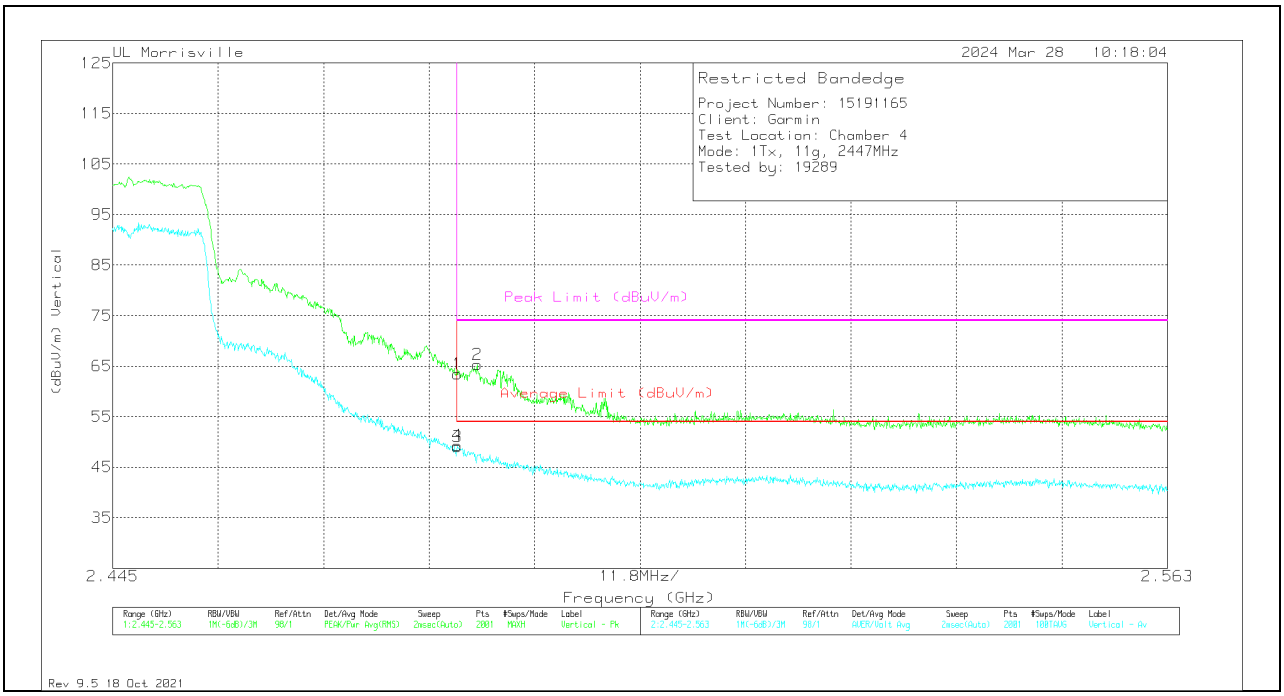
VERTICAL RESULT



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	* ** 2.48353	44.08	Pk	32.3	-12.9	63.48	-	-	74	-10.52	24	103	V
2	* ** 2.48577	45.92	Pk	32.3	-12.9	65.32	-	-	74	-8.68	24	103	V
3	* ** 2.48353	29.61	ADV	32.3	-12.9	49.01	54	-4.99	-	-	24	103	V
4	* ** 2.48359	29.95	ADV	32.3	-12.9	49.35	54	-4.65	-	-	24	103	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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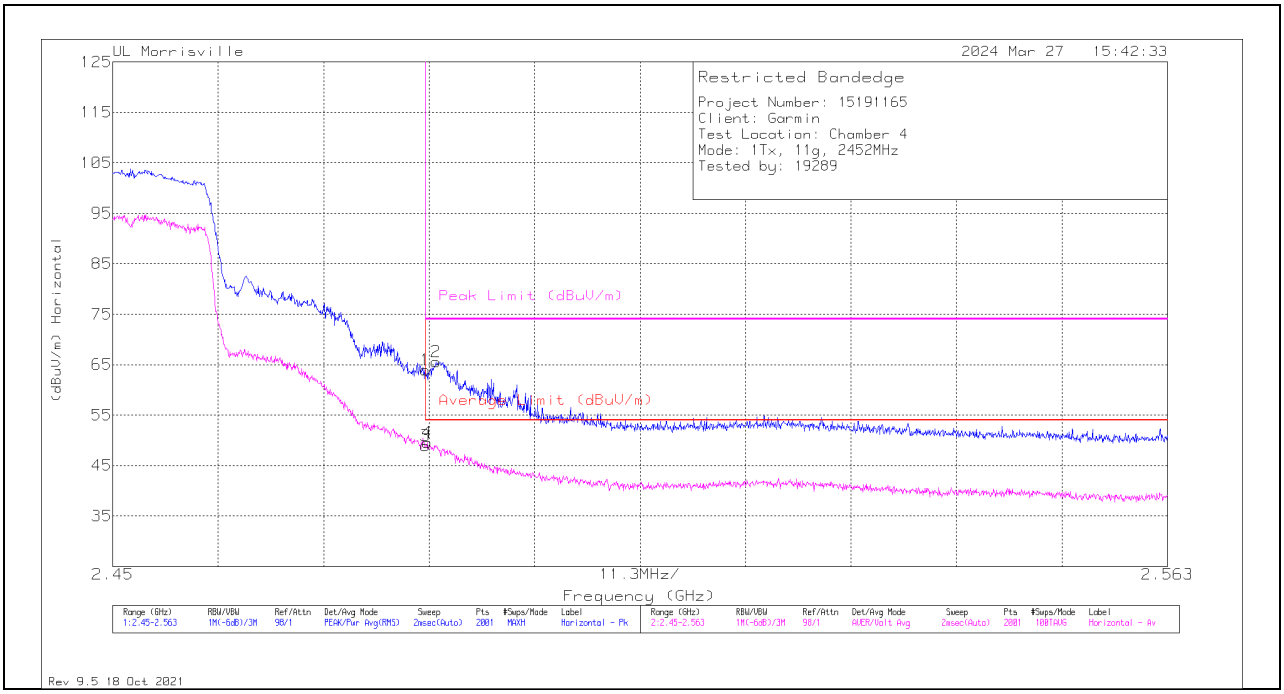
BANDEDGE (HIGH CHANNEL, CH 9)

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	* ** 2.4835	44.57	Pk	32.3	-12.9	63.97	-	-	74	-10.03	28	114	H
2	* ** 2.48463	46.18	Pk	32.3	-12.9	65.58	-	-	74	-8.42	28	114	H
3	* ** 2.4835	29.58	ADV	32.3	-12.9	48.98	54	-5.02	-	-	28	114	H
4	* ** 2.48367	30.2	ADV	32.3	-12.9	49.6	54	-4.4	-	-	28	114	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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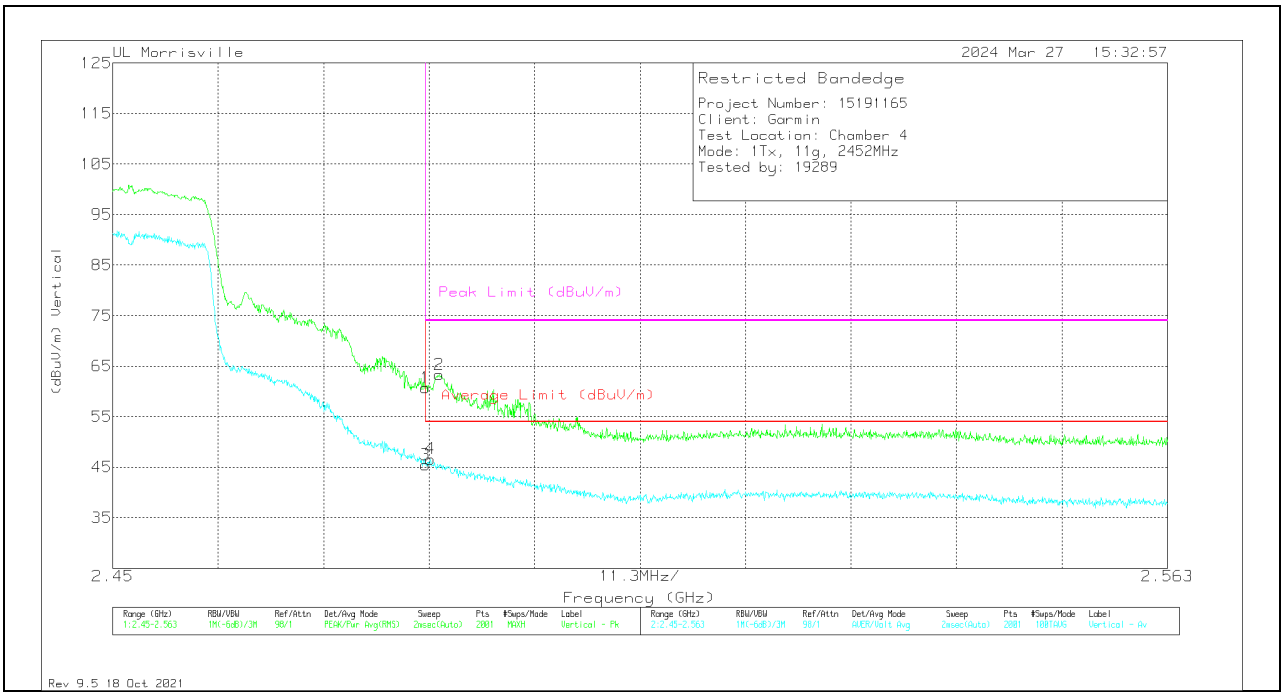
VERTICAL RESULT



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	* ** 2.4835	41.29	Pk	32.3	-12.9	60.69	-	-	74	-13.31	353	107	V
2	* ** 2.48497	43.98	Pk	32.3	-12.9	63.38	-	-	74	-10.62	353	107	V
3	* ** 2.4835	26.01	ADV	32.3	-12.9	45.41	54	-8.59	-	-	353	107	V
4	* ** 2.48401	27.23	ADV	32.3	-12.9	46.63	54	-7.37	-	-	353	107	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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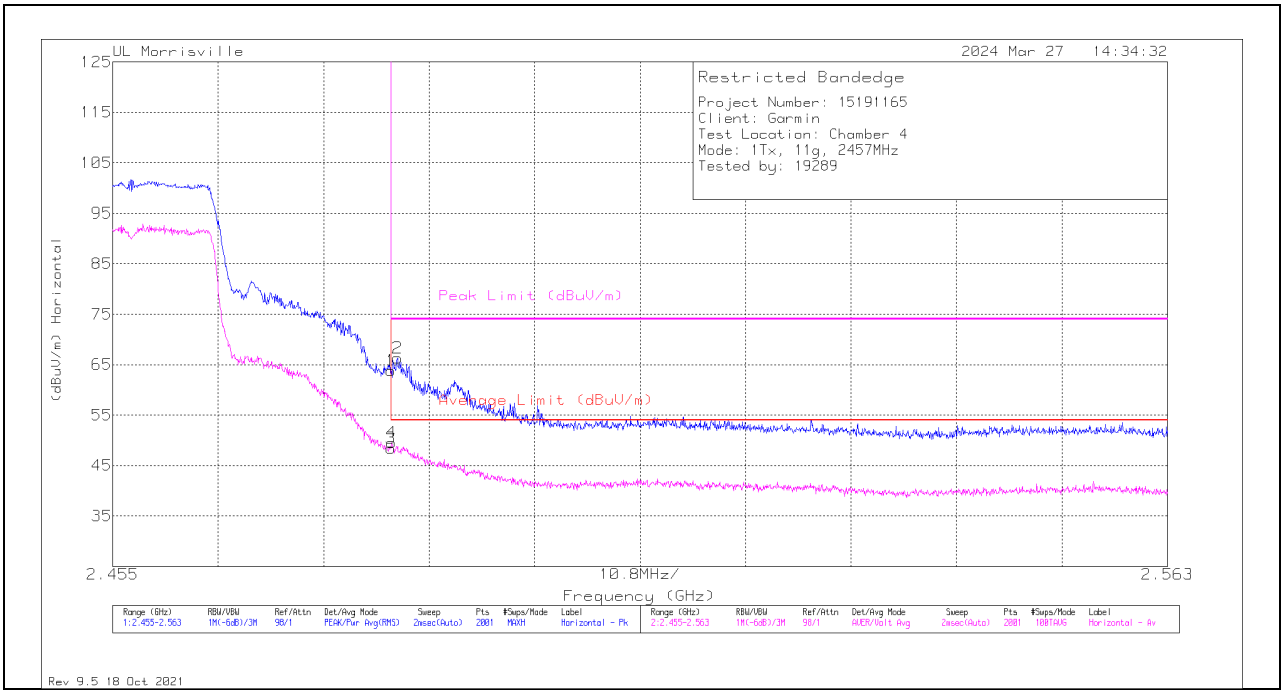
BANDEDGE (HIGH CHANNEL, CH 10)

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	44.42	Pk	32.3	-12.9	63.82	-	-	74	-10.18	59	124	H
2	* ** 2.48416	46.93	Pk	32.3	-12.9	66.33	-	-	74	-7.67	59	124	H
3	* ** 2.48351	28.99	ADV	32.3	-12.9	48.39	54	-5.61	-	-	59	124	H
4	* ** 2.48357	30.14	ADV	32.3	-12.9	49.54	54	-4.46	-	-	59	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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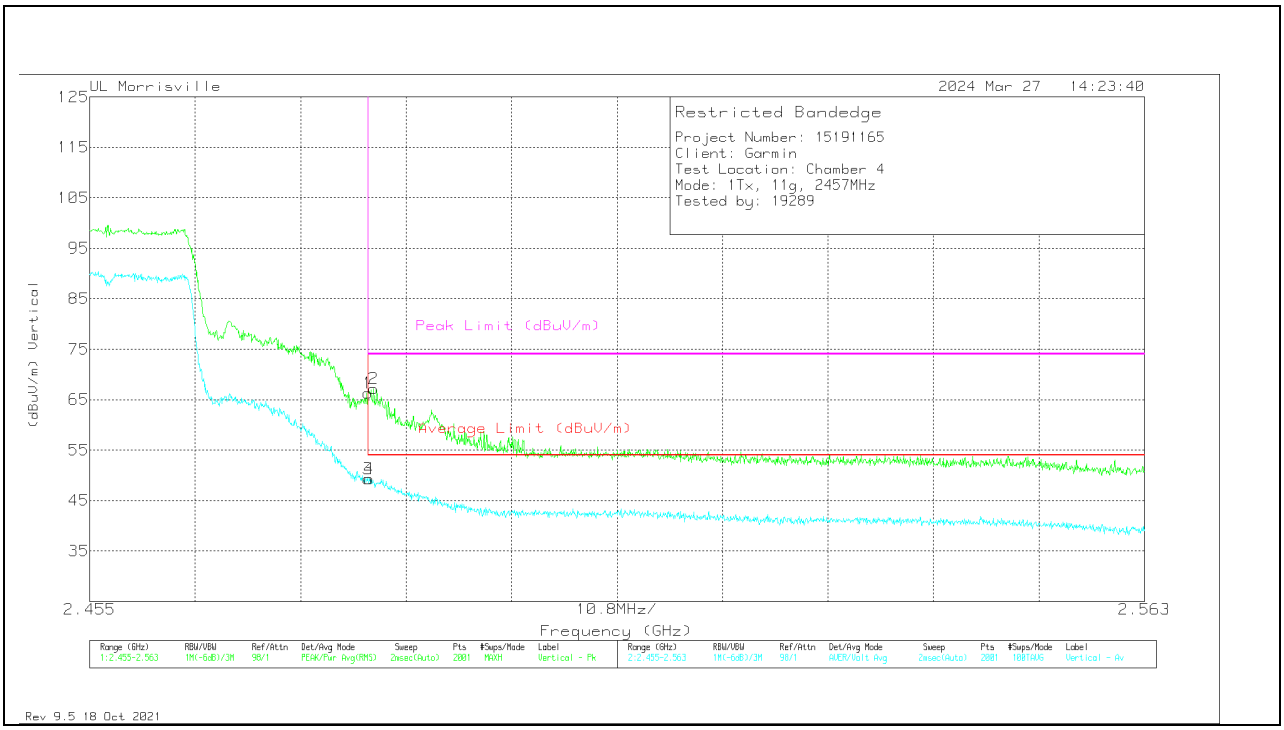
VERTICAL RESULT



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	* ** 2.48351	46.96	Pk	32.3	-12.9	66.36	-	-	74	-7.64	341	117	V
2	* ** 2.48405	47.81	Pk	32.3	-12.9	67.21	-	-	74	-6.79	341	117	V
3	* ** 2.48351	29.91	ADV	32.3	-12.9	49.31	54	-4.69	-	-	341	117	V
4	* ** 2.48362	29.85	ADV	32.3	-12.9	49.25	54	-4.75	-	-	341	117	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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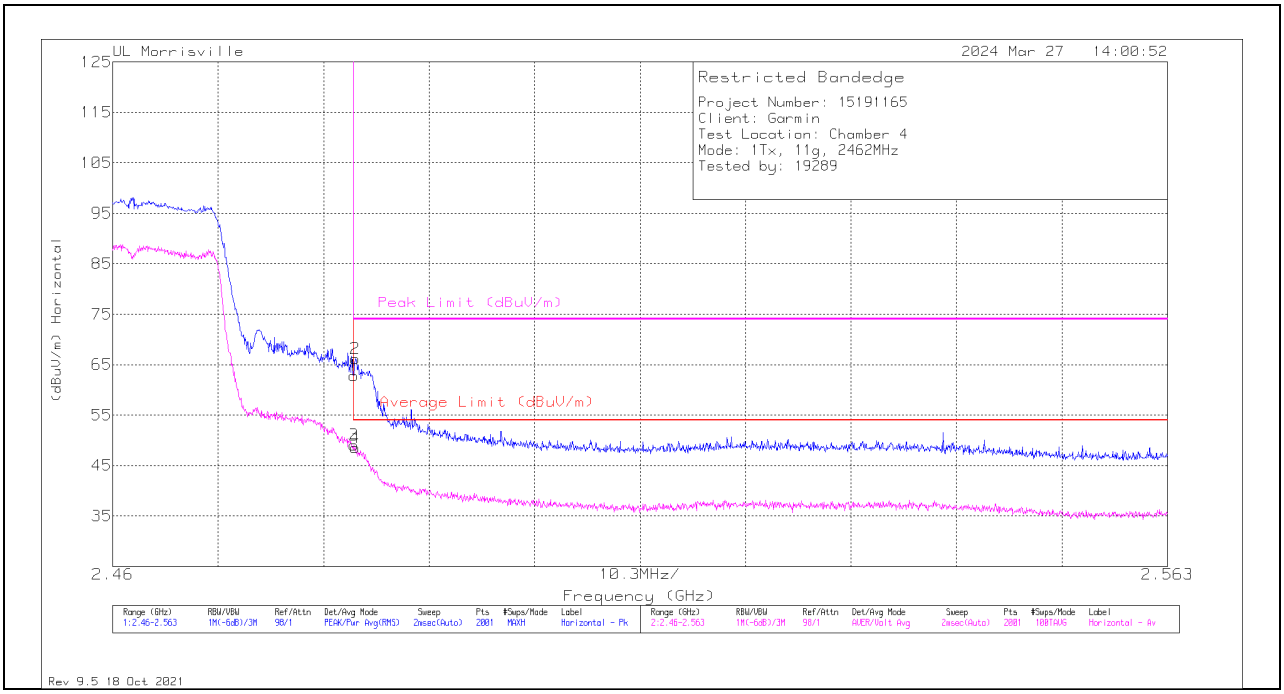
BANDEDGE (HIGH CHANNEL, CH 11)

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	43.47	Pk	32.3	-12.9	62.87	-	-	74	-11.13	0	116	H
2	* ** 2.48369	46.76	Pk	32.3	-12.9	66.16	-	-	74	-7.84	0	116	H
3	* ** 2.48354	29.65	ADV	32.3	-12.9	49.05	54	-4.95	-	-	0	116	H
4	* ** 2.48369	29.18	ADV	32.3	-12.9	48.58	54	-5.42	-	-	0	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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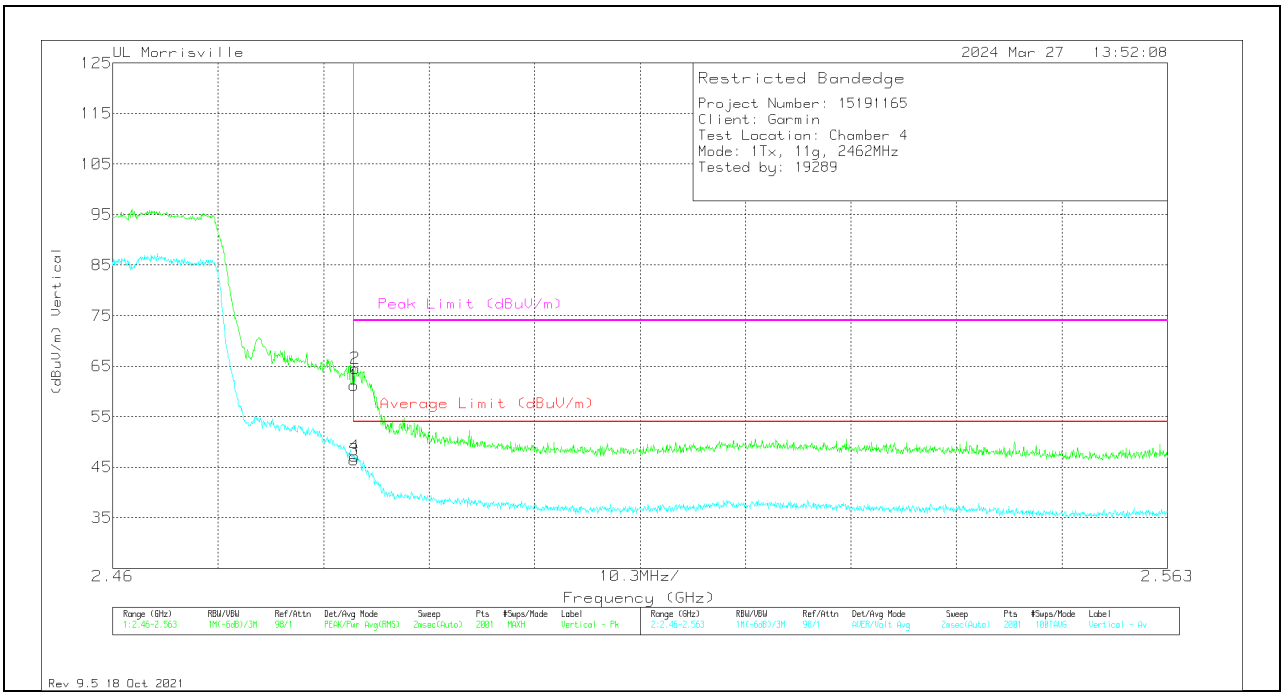
VERTICAL RESULT



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	41.86	Pk	32.3	-12.9	61.26	-	-	74	-12.74	317	151	V
2	* ** 2.48369	45.19	Pk	32.3	-12.9	64.59	-	-	74	-9.41	317	151	V
3	* ** 2.48354	27.01	ADV	32.3	-12.9	46.41	54	-7.59	-	-	317	151	V
4	* ** 2.48364	27.79	ADV	32.3	-12.9	47.19	54	-6.81	-	-	317	151	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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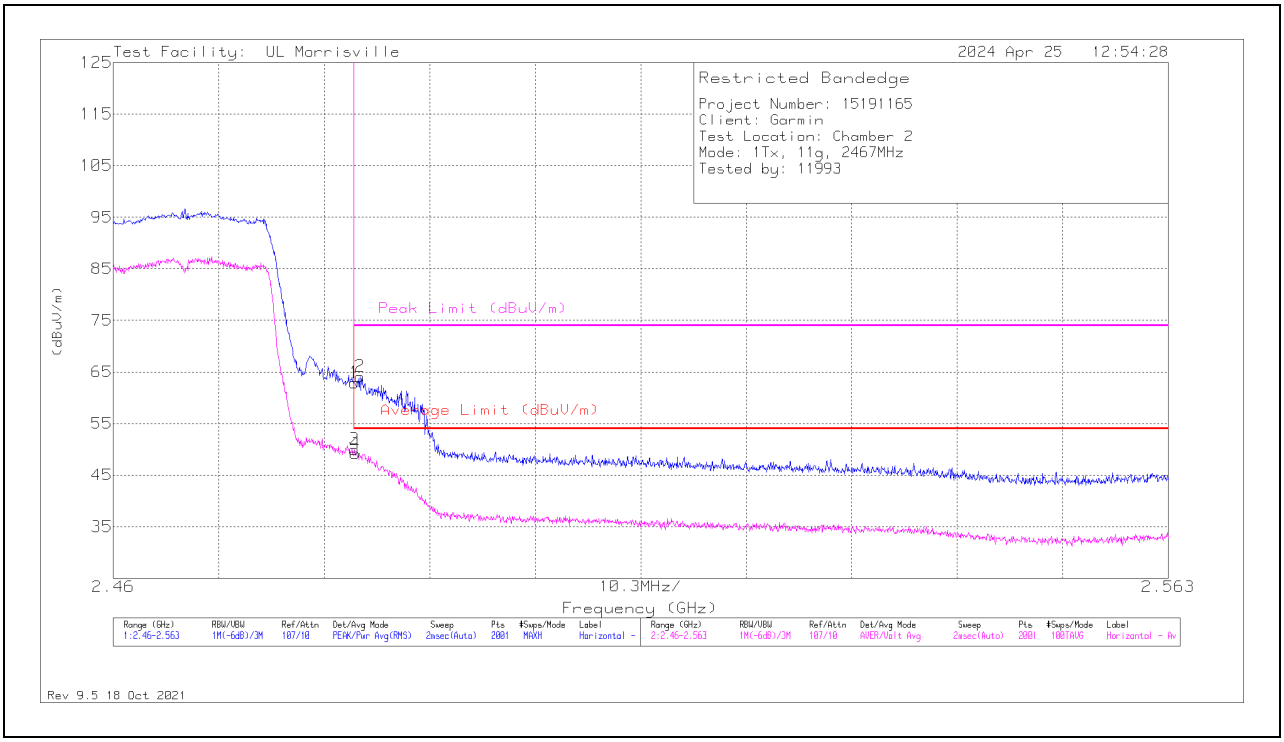
BANDEDGE (HIGH CHANNEL, CH 12)

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	54.91	Pk	32.5	-24.5	62.91	-	-	74	-11.09	196	327	H
2	* ** 2.4841	56.13	Pk	32.5	-24.5	64.13	-	-	74	-9.87	196	327	H
3	* ** 2.48354	42.01	ADV	32.5	-24.5	50.01	54	-3.99	-	-	196	327	H
4	* ** 2.48364	41.24	ADV	32.5	-24.5	49.24	54	-4.76	-	-	196	327	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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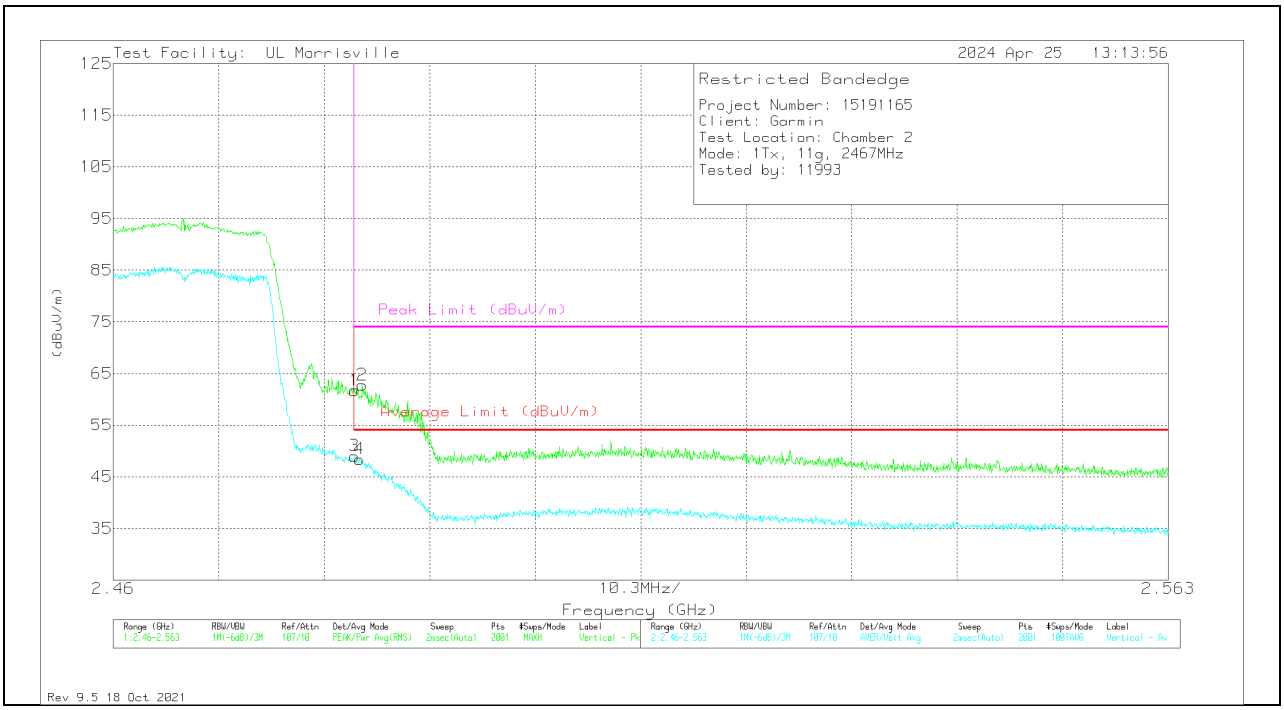
VERTICAL RESULT



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	53.72	Pk	32.5	-24.5	61.72	-	-	74	-12.28	131	354	V
2	* ** 2.48431	54.75	Pk	32.5	-24.5	62.75	-	-	74	-11.25	131	354	V
3	* ** 2.48354	41.03	ADV	32.5	-24.5	49.03	54	-4.97	-	-	131	354	V
4	* ** 2.48405	40.42	ADV	32.5	-24.5	48.42	54	-5.58	-	-	131	354	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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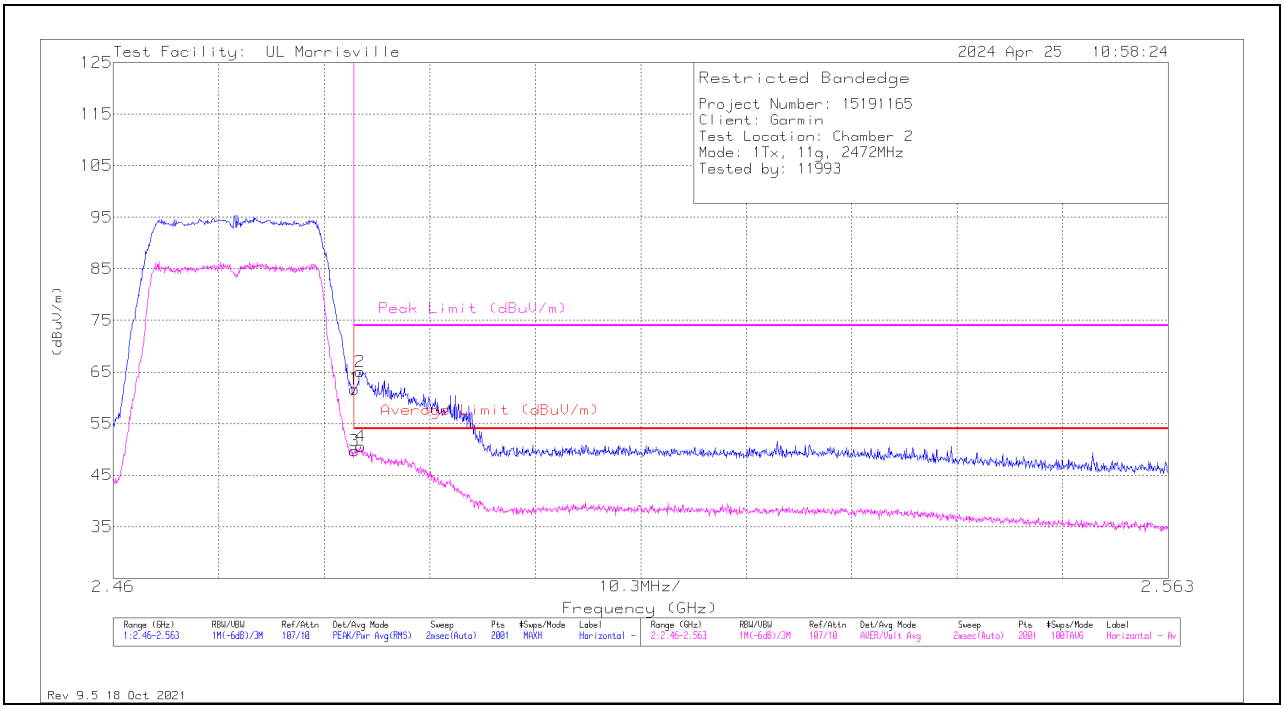
BANDEDGE (HIGH CHANNEL, CH 13)

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	53.68	Pk	32.5	-24.5	61.68	-	-	74	-12.32	34	101	H
2	* ** 2.4841	57.06	Pk	32.5	-24.5	65.06	-	-	74	-8.94	34	101	H
3	* ** 2.48354	41.68	ADV	32.5	-24.5	49.68	54	-4.32	-	-	34	101	H
4	* ** 2.48415	42.55	ADV	32.5	-24.5	50.55	54	-3.45	-	-	34	101	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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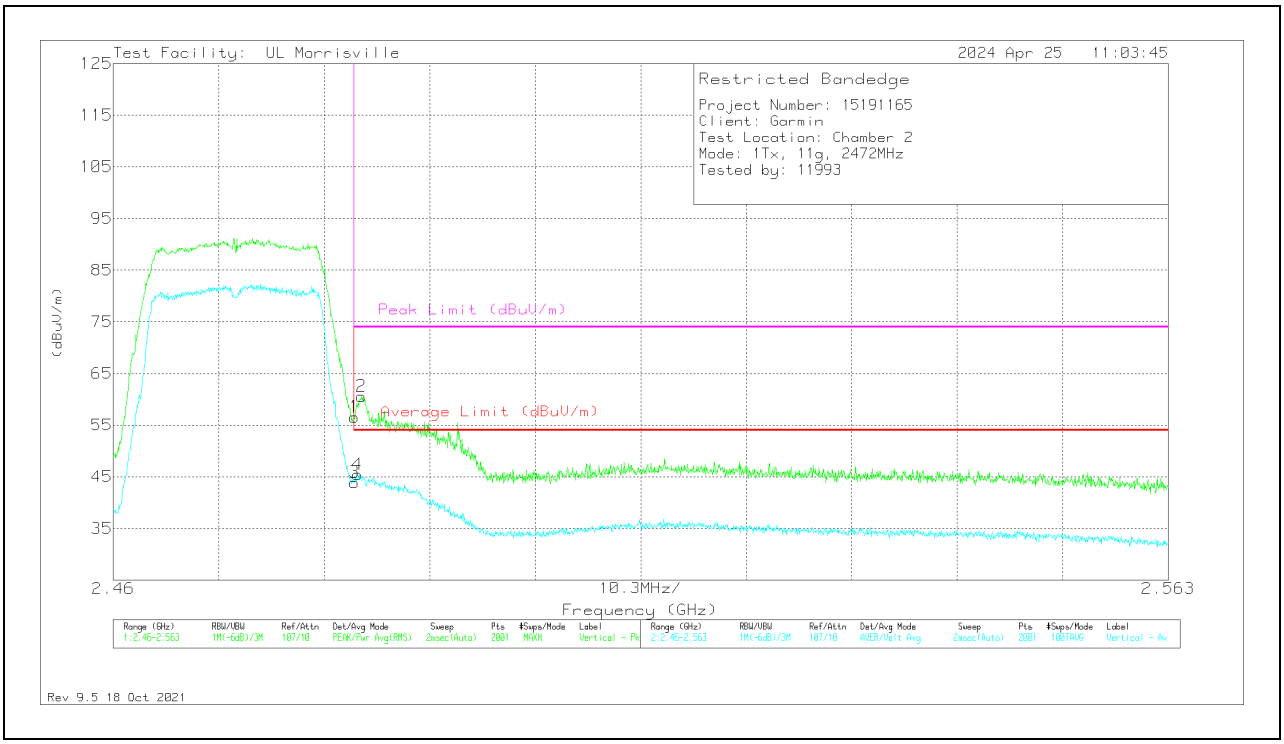
VERTICAL RESULT



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	48.58	Pk	32.5	-24.5	56.58	-	-	74	-17.42	258	105	V
2	* ** 2.48421	52.56	Pk	32.5	-24.5	60.56	-	-	74	-13.44	258	105	V
3	* ** 2.48354	35.91	ADV	32.5	-24.5	43.91	54	-10.09	-	-	258	105	V
4	* ** 2.48384	37.44	ADV	32.5	-24.5	45.44	54	-8.56	-	-	258	105	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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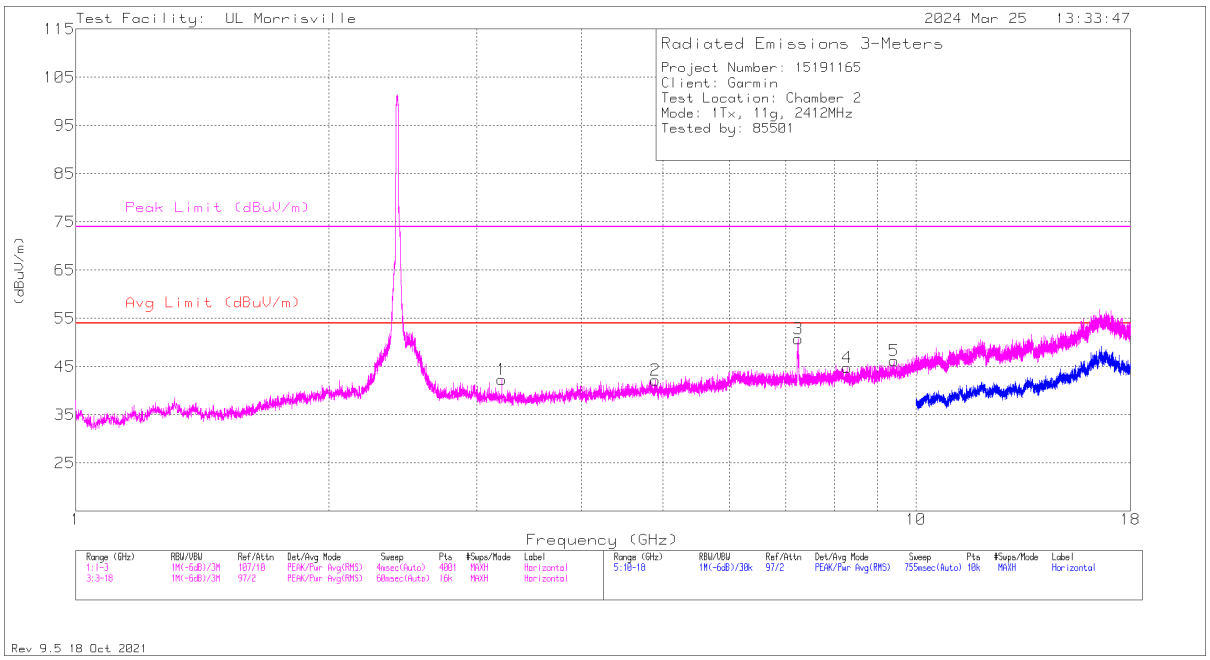
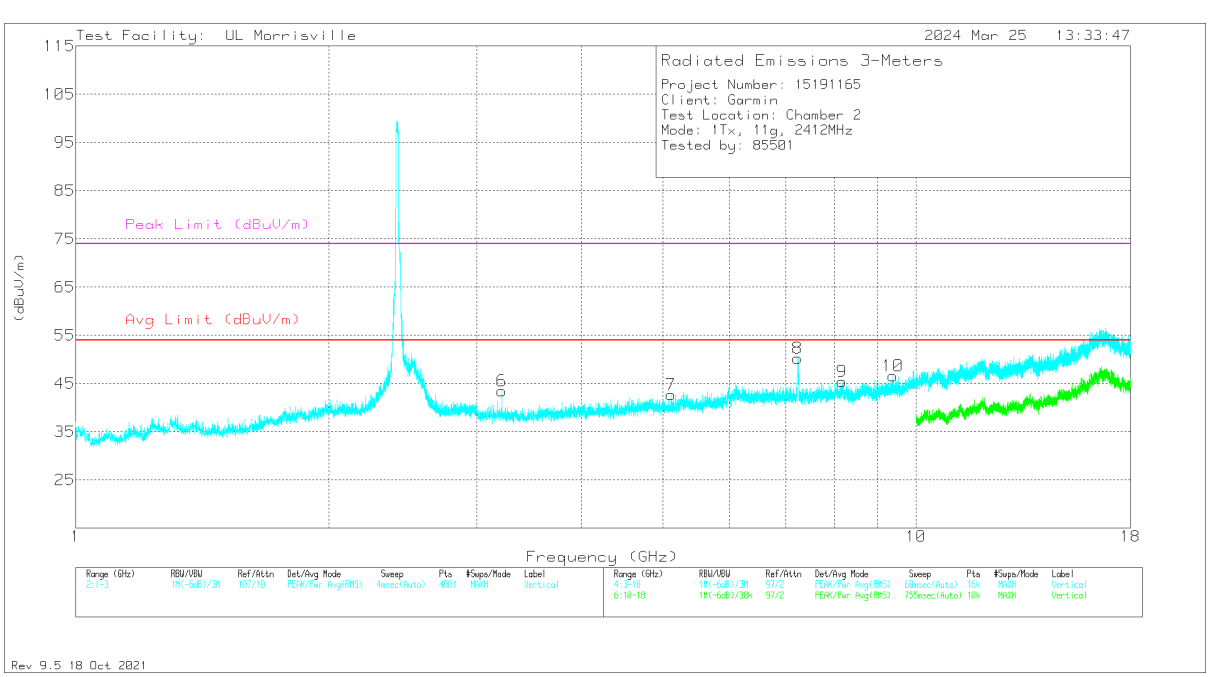
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



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
2	* ** 4.89281	38.24	Pk	34.1	-30.1	42.24	54	-11.76	74	-31.76	0-360	101	H
4	* ** 8.28656	35.73	Pk	35.8	-26.7	44.83	54	-9.17	74	-29.17	0-360	101	H
5	* ** 9.42	35.37	Pk	36.2	-25.4	46.17	54	-7.83	74	-27.83	0-360	200	H
7	* ** 5.11406	39.18	Pk	34.1	-30.6	42.68	54	-11.32	74	-31.32	0-360	200	V
9	* ** 8.175	36.13	Pk	35.8	-26.5	45.43	54	-8.57	74	-28.57	0-360	101	V
10	* ** 9.38156	35.96	Pk	36.2	-25.6	46.56	54	-7.44	74	-27.44	0-360	200	V
1	3.21563	41.82	Pk	33.1	-32.6	42.32	-	-	74	-31.68	0-360	200	H
6	3.21563	42.99	Pk	33.1	-32.6	43.49	-	-	74	-30.51	0-360	200	V
8	7.23375	41.63	Pk	35.6	-27	50.23	-	-	74	-23.77	0-360	101	V
3	7.24219	41.72	Pk	35.6	-26.6	50.72	-	-	74	-23.28	0-360	200	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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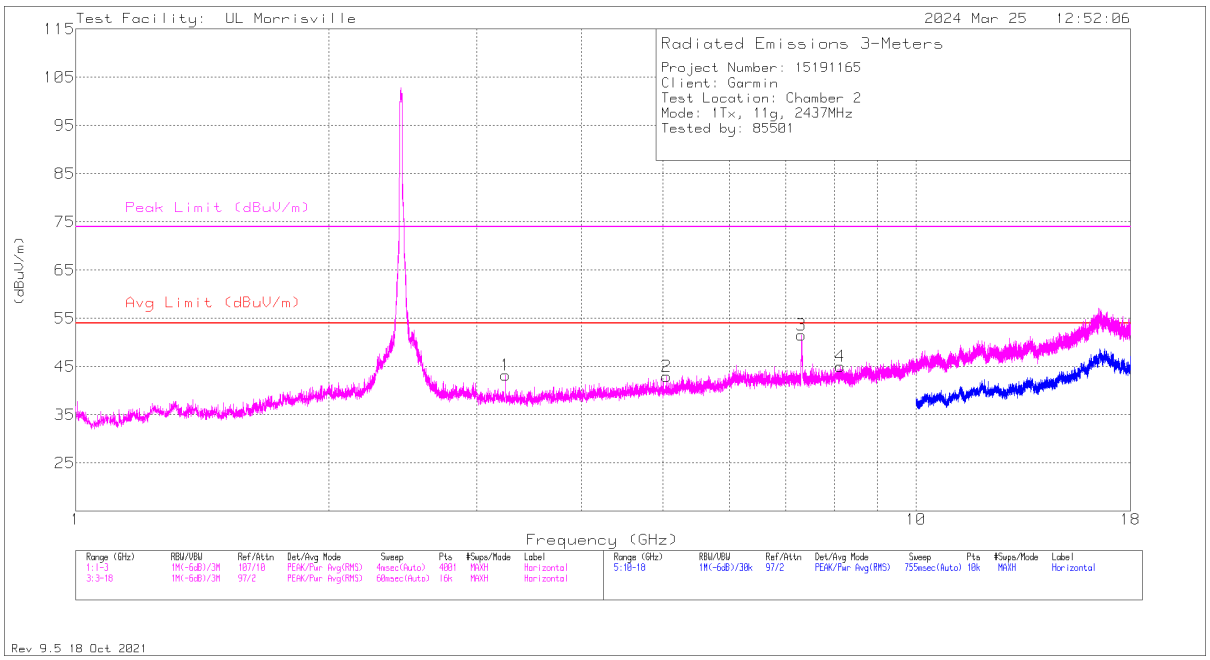
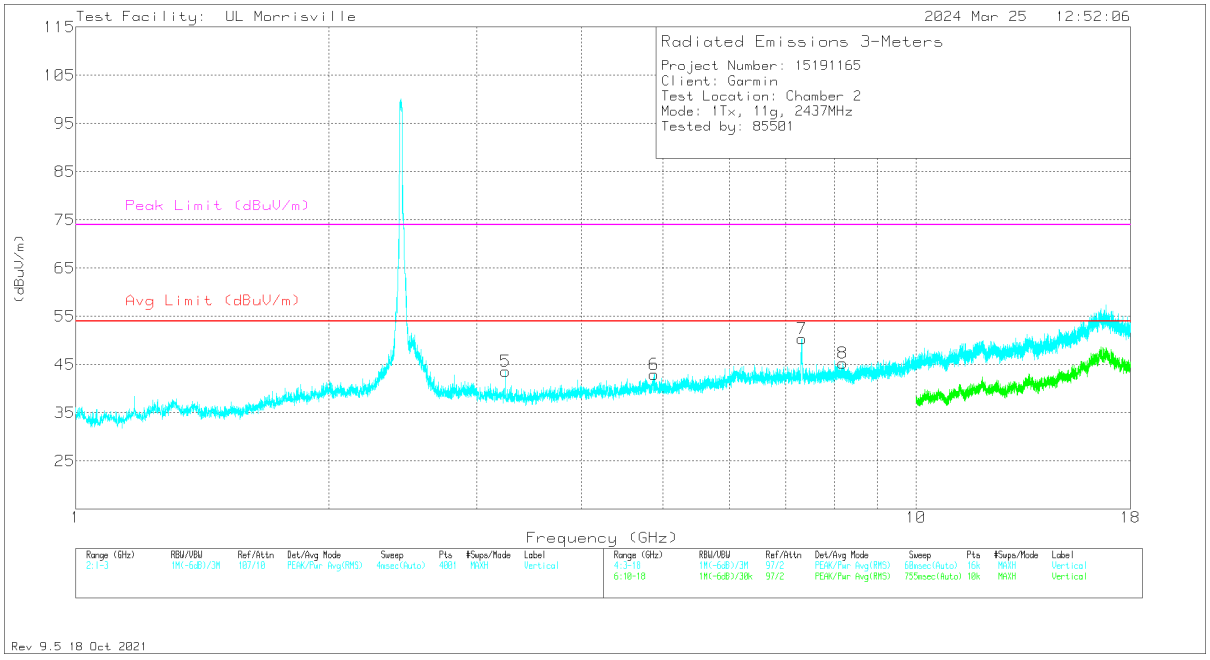
MID CHANNEL, CH 6 RESULTS



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
2	* ** 5.0475	39.72	Pk	34.1	-30.9	42.92	54	-11.08	74	-31.08	0-360	199	H
3	* ** 7.31013	45.33	PK2	35.6	-26.6	54.33	-	-	74	-19.67	227	109	H
	* ** 7.31063	31.77	ADV	35.6	-26.6	40.77	54	-13.23	-	-	227	109	H
4	* ** 8.12156	35.9	Pk	35.8	-26.6	45.1	54	-8.9	74	-28.9	0-360	199	H
6	* ** 4.88344	39.21	Pk	34.1	-30.3	43.01	54	-10.99	74	-30.99	0-360	199	V
7	* ** 7.31227	44.71	PK2	35.6	-26.6	53.71	-	-	74	-20.29	318	111	V
	* ** 7.31232	31.18	ADV	35.6	-26.6	40.18	54	-13.82	-	-	318	111	V
8	* ** 8.17969	35.79	Pk	35.8	-26.3	45.29	54	-8.71	74	-28.71	0-360	199	V
1	3.24844	43.15	Pk	33	-32.9	43.25	54	-10.75	74	-30.75	0-360	101	H
5	3.24938	43.53	Pk	33	-32.9	43.63	54	-10.37	74	-30.37	0-360	199	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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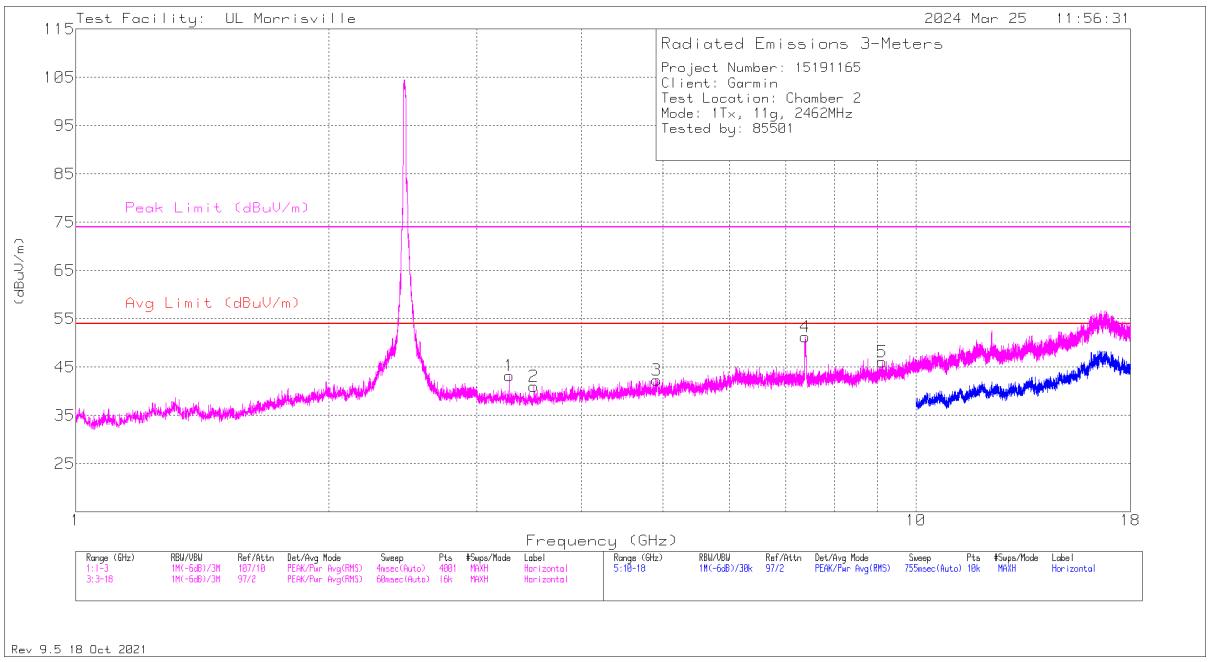
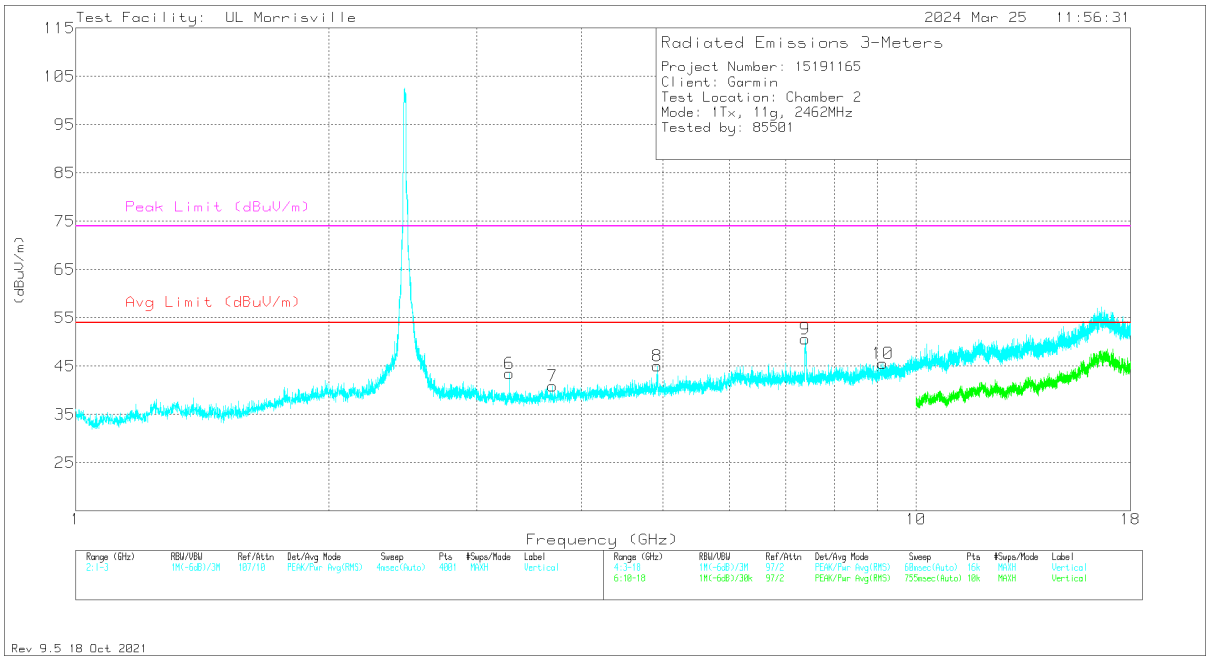
HIGH CHANNEL, CH 11 RESULTS



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
2	* ** 3.50719	40.84	Pk	32.7	-32.5	41.04	54	-12.96	74	-32.96	0-360	200	H
3	* ** 4.91625	38.38	Pk	34.1	-30.1	42.38	54	-11.62	74	-31.62	0-360	101	H
4	* ** 7.38468	46.47	PK2	35.6	-26.6	55.47	-	-	74	-18.53	276	127	H
	* ** 7.38511	33.2	ADV	35.6	-26.6	42.2	54	-11.8	-	-	276	127	H
5	* ** 9.11813	35.48	Pk	35.9	-25.3	46.08	54	-7.92	74	-27.92	0-360	200	H
7	* ** 3.69281	39.93	Pk	33.1	-32.1	40.93	54	-13.07	74	-33.07	0-360	101	V
8	* ** 4.91906	41.11	Pk	34.1	-30.2	45.01	54	-8.99	74	-28.99	0-360	200	V
9	* ** 7.38067	47.82	PK2	35.6	-26.6	56.82	-	-	74	-17.18	313	130	V
	* ** 7.3823	31.96	ADV	35.6	-26.6	40.96	54	-13.04	-	-	313	130	V
10	* ** 9.13031	34.69	Pk	35.9	-25	45.59	54	-8.41	74	-28.41	0-360	200	V
1	3.28219	43.07	Pk	32.9	-32.7	43.27	54	-10.73	74	-30.73	0-360	200	H
6	3.28219	43.28	Pk	32.9	-32.7	43.48	54	-10.52	74	-30.52	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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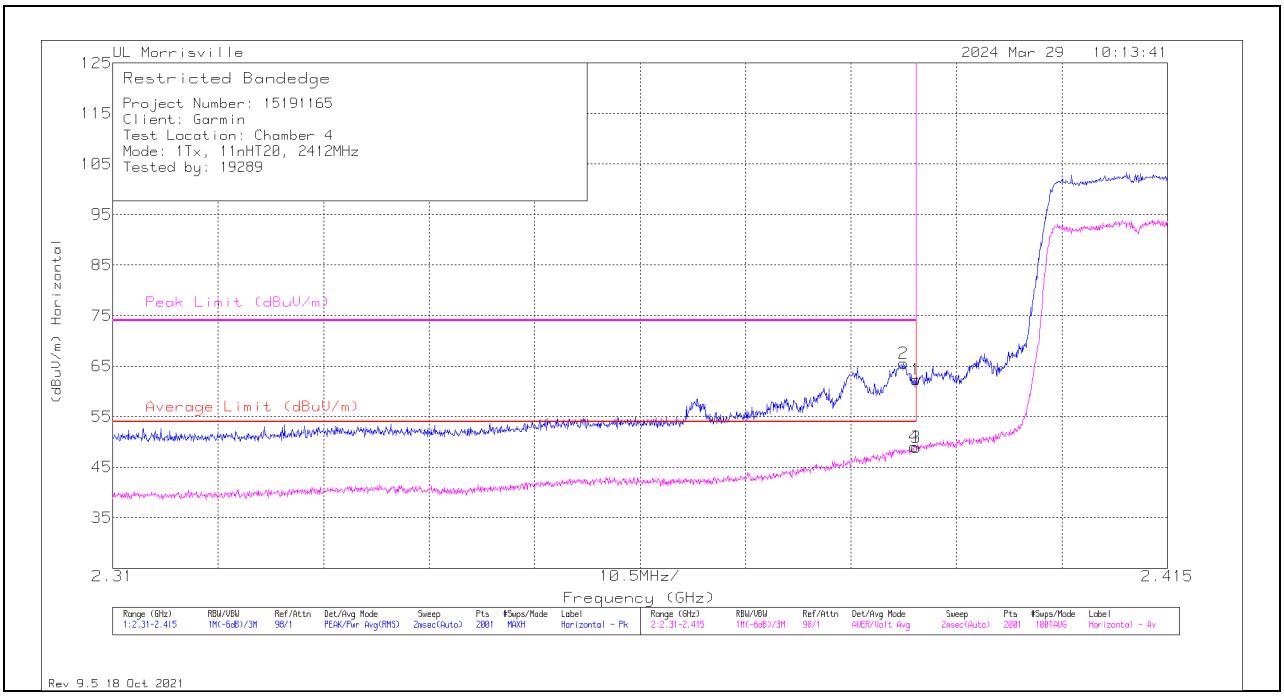
10.1.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

BANDEDGE (LOW CHANNEL, CH 1)

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	43.55	Pk	32	-13.2	62.35	-	-	74	-11.65	25	112	H
2	* ** 2.38875	46.74	Pk	32	-13.2	65.54	-	-	74	-8.46	25	112	H
3	* ** 2.38996	30.08	ADV	32	-13.2	48.88	54	-5.12	-	-	25	112	H
4	* ** 2.3898	30.21	ADV	32	-13.2	49.01	54	-4.99	-	-	25	112	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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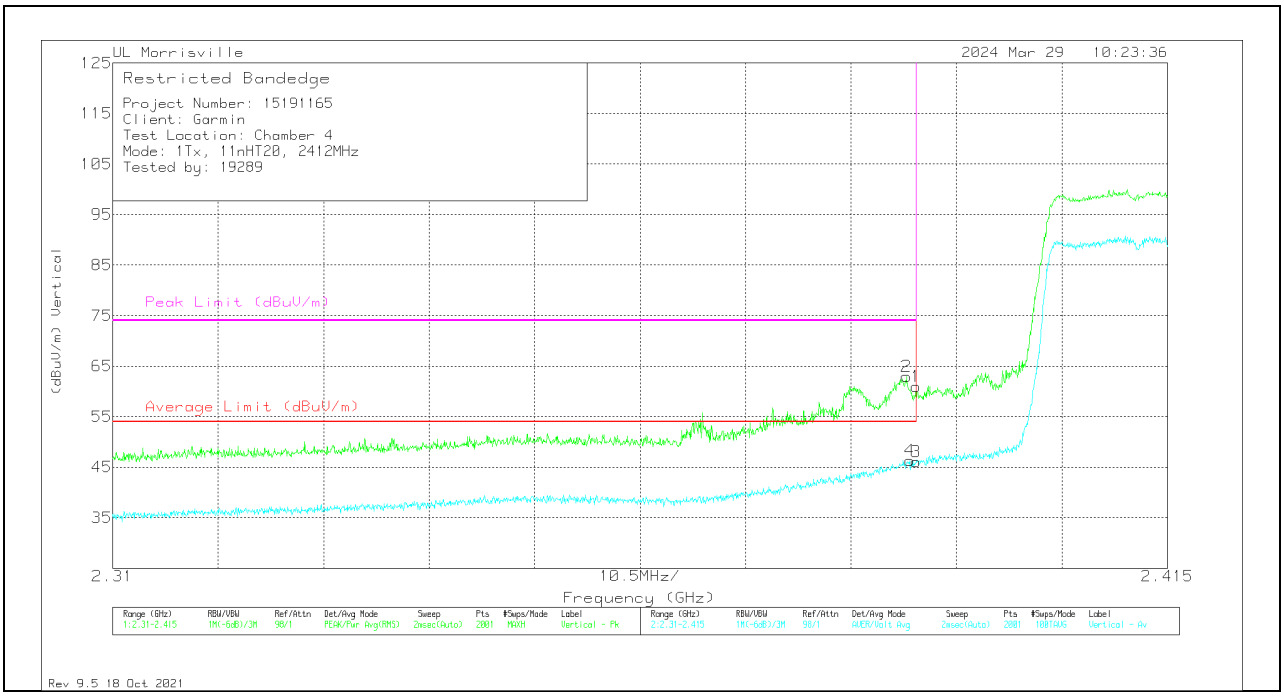
VERTICAL RESULT



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	42.19	Pk	32	-13.2	60.99	-	-	74	-13.01	349	103	V
2	* ** 2.38901	44.11	Pk	32	-13.2	62.91	-	-	74	-11.09	349	103	V
3	* ** 2.38996	27.24	ADV	32	-13.2	46.04	54	-7.96	-	-	349	103	V
4	* ** 2.38933	27.57	ADV	32	-13.2	46.37	54	-7.63	-	-	349	103	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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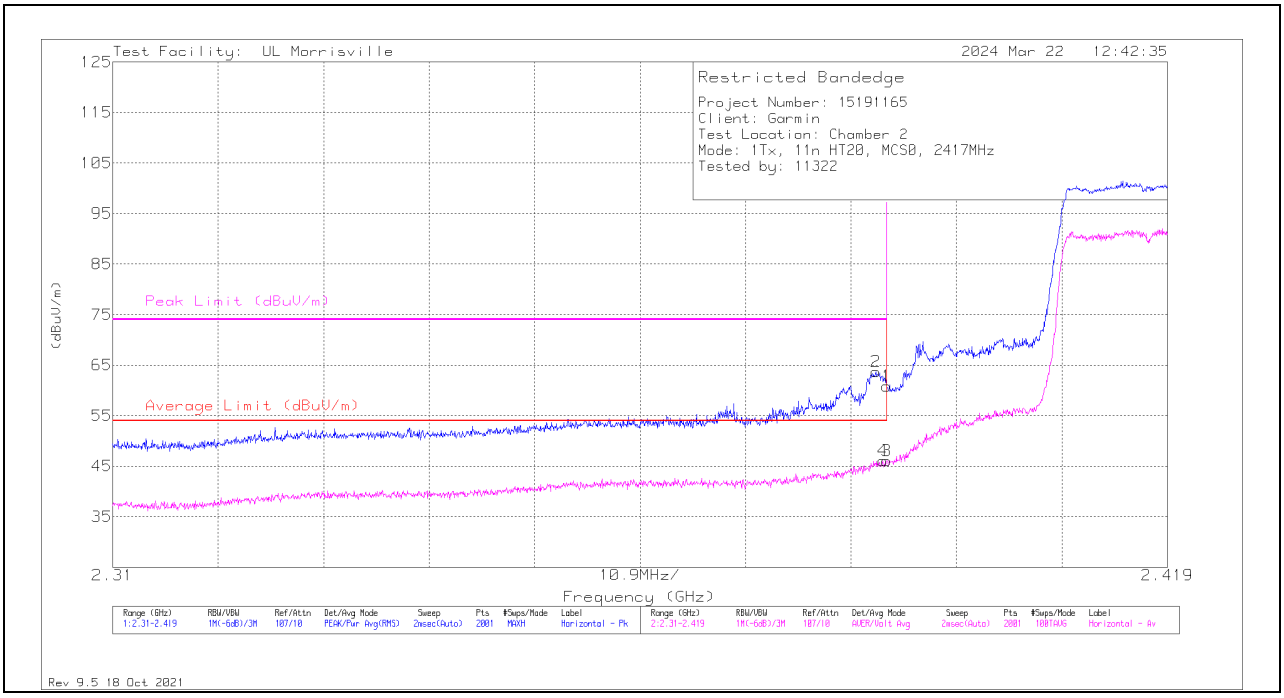
BANDEDGE (LOW CHANNEL, CH 2)

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	* ** 2.38995	52.75	Pk	32.3	-24.2	60.85	-	-	74	-13.15	37	159	H
2	* ** 2.38886	55.56	Pk	32.3	-24.2	63.66	-	-	74	-10.34	37	159	H
3	* ** 2.38995	37.93	ADV	32.3	-24.2	46.03	54	-7.97	-	-	37	159	H
4	* ** 2.38957	37.95	ADV	32.3	-24.2	46.05	54	-7.95	-	-	37	159	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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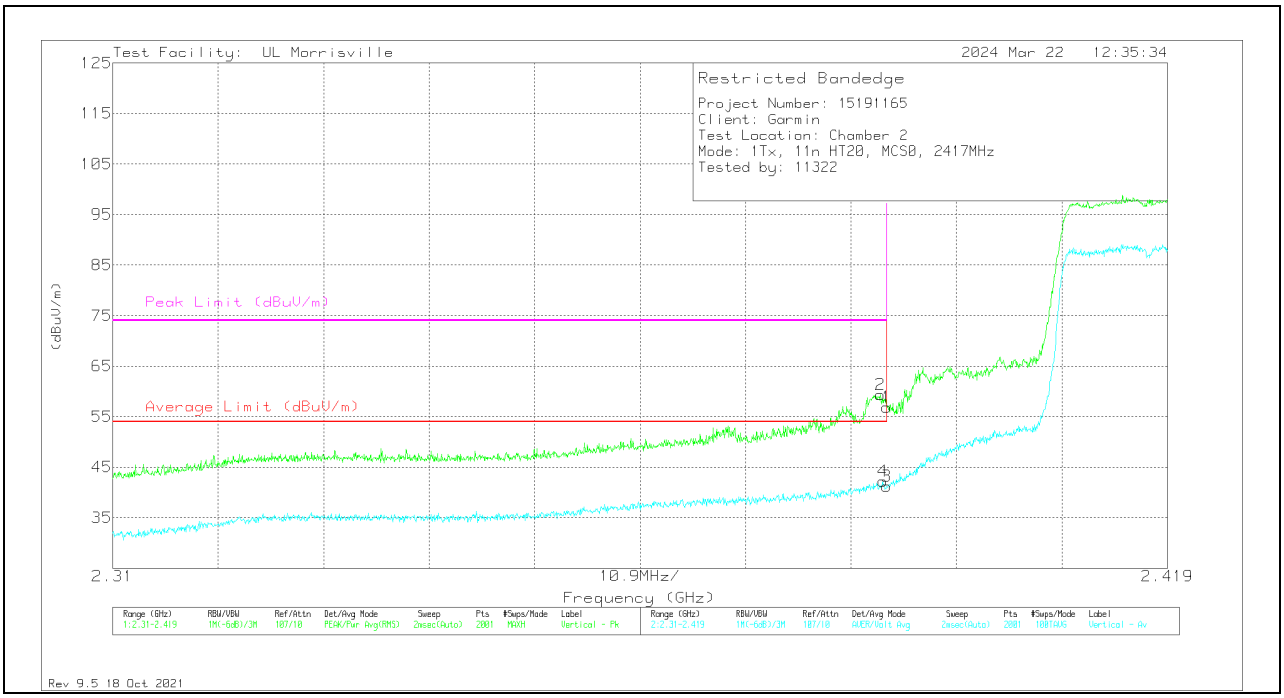
VERTICAL RESULT



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	* ** 2.38995	48.79	Pk	32.3	-24.2	56.89	-	-	74	-17.11	358	160	V
2	* ** 2.38935	51.31	Pk	32.3	-24.2	59.41	-	-	74	-14.59	358	160	V
3	* ** 2.38995	33.14	ADV	32.3	-24.2	41.24	54	-12.76	-	-	359	160	V
4	* ** 2.38957	34.07	ADV	32.3	-24.2	42.17	54	-11.83	-	-	359	160	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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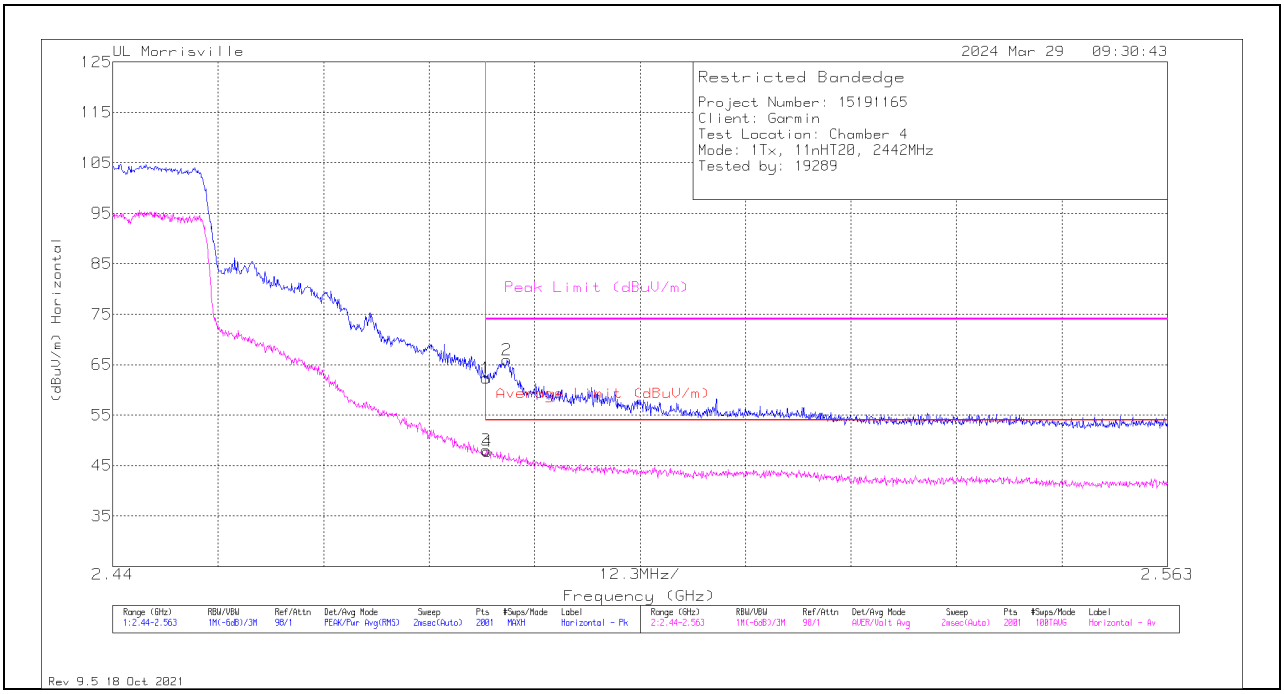
BANDEDGE (HIGH CHANNEL, CH 7)

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	42.97	Pk	32.3	-12.9	62.37	-	-	74	-11.63	51	112	H
2	* ** 2.48594	46.54	Pk	32.3	-12.9	65.94	-	-	74	-8.06	51	112	H
3	* ** 2.48354	28.69	ADV	32.3	-12.9	48.09	54	-5.91	-	-	51	112	H
4	* ** 2.48373	28.4	ADV	32.3	-12.9	47.8	54	-6.2	-	-	51	112	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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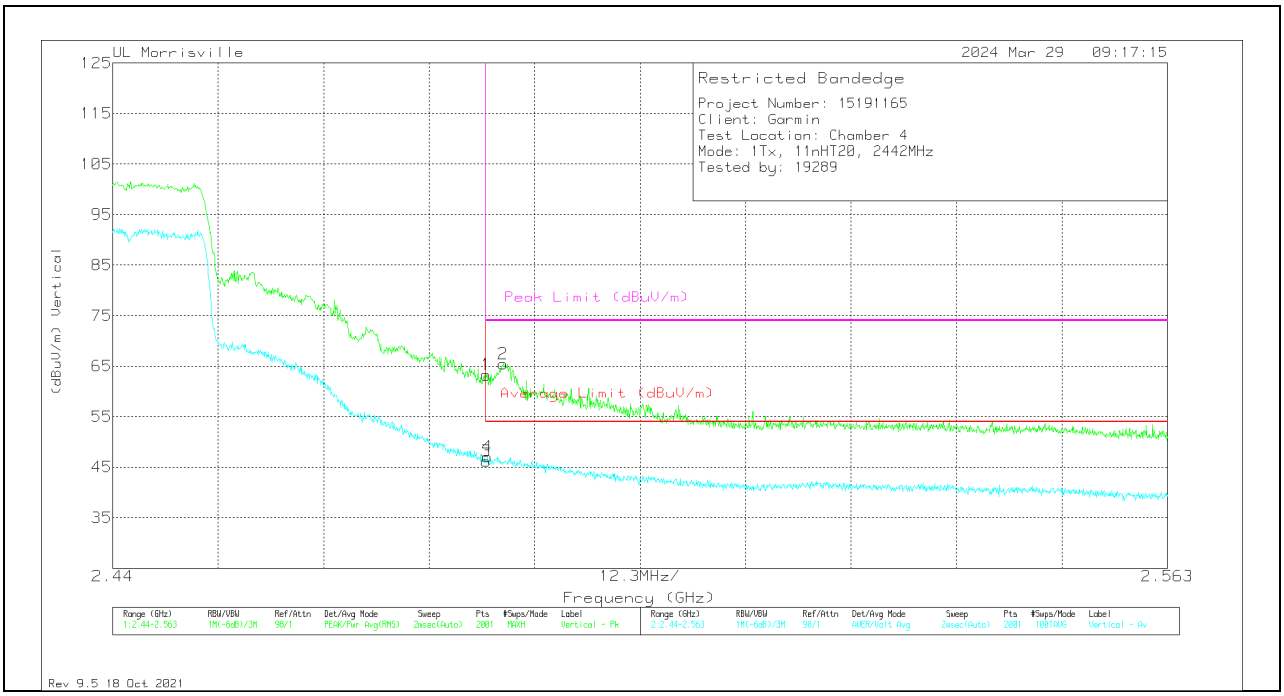
VERTICAL RESULT



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	43.87	Pk	32.3	-12.9	63.27	-	-	74	-10.73	312	122	V
2	* ** 2.48551	46.09	Pk	32.3	-12.9	65.49	-	-	74	-8.51	312	122	V
3	* ** 2.48354	26.8	ADV	32.3	-12.9	46.2	54	-7.8	-	-	312	122	V
4	* ** 2.48373	27.65	ADV	32.3	-12.9	47.05	54	-6.95	-	-	312	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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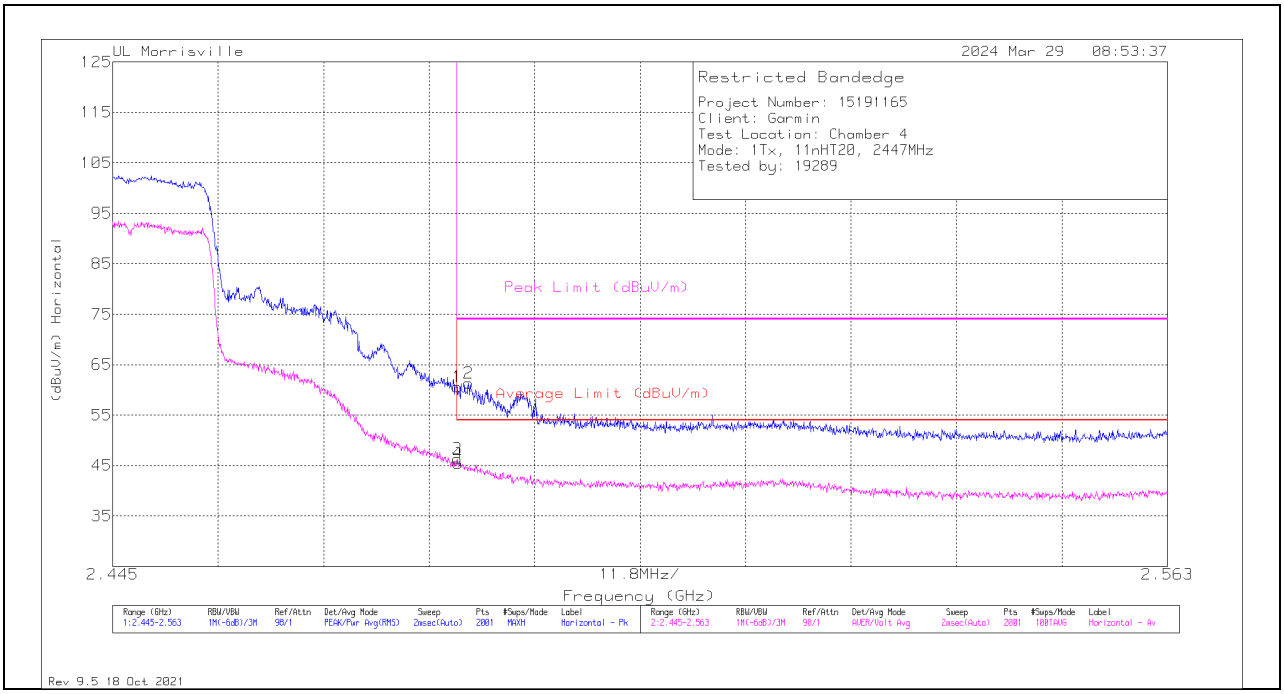
BANDEDGE (HIGH CHANNEL, CH 8)

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	* ** 2.48353	41.15	Pk	32.3	-12.9	60.55	-	-	74	-13.45	43	114	H
2	* ** 2.48483	41.92	Pk	32.3	-12.9	61.32	-	-	74	-12.68	43	114	H
3	* ** 2.48353	26.87	ADV	32.3	-12.9	46.27	54	-7.73	-	-	43	114	H
4	* ** 2.48365	26.08	ADV	32.3	-12.9	45.48	54	-8.52	-	-	43	114	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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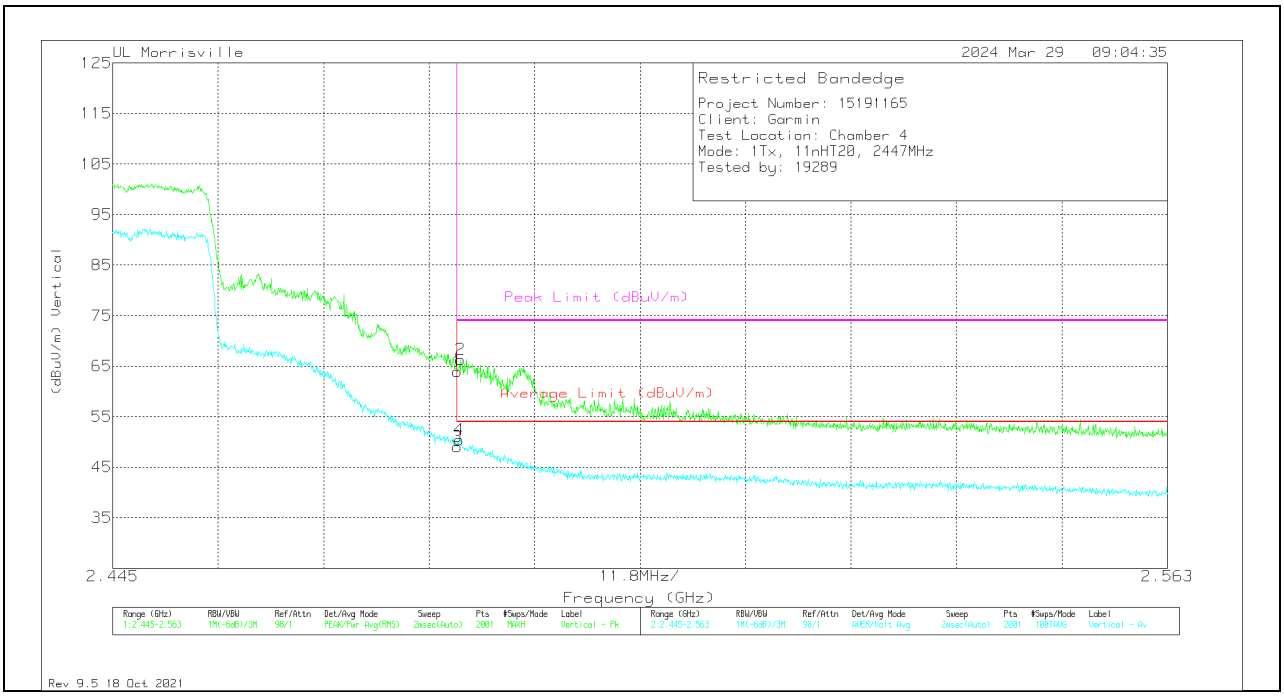
VERTICAL RESULT



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	* ** 2.48353	44.54	Pk	32.3	-12.9	63.94	-	-	74	-10.06	357	120	V
2	* ** 2.48394	46.96	Pk	32.3	-12.9	66.36	-	-	74	-7.64	357	120	V
3	* ** 2.48353	29.67	ADV	32.3	-12.9	49.07	54	-4.93	-	-	357	120	V
4	* ** 2.48376	30.98	ADV	32.3	-12.9	50.38	54	-3.62	-	-	357	120	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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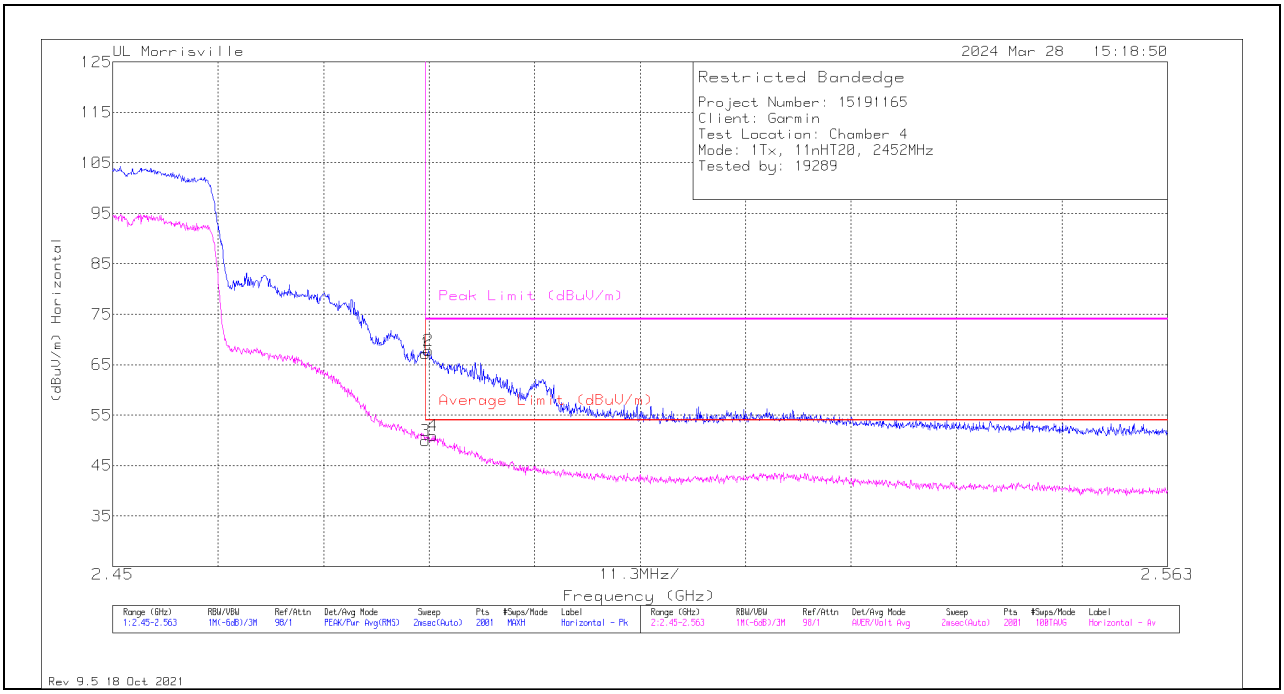
BANDEDGE (HIGH CHANNEL, CH 9)

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	* ** 2.4835	47.84	Pk	32.3	-12.9	67.24	-	-	74	-6.76	50	114	H
2	* ** 2.48384	48.38	Pk	32.3	-12.9	67.78	-	-	74	-6.22	50	114	H
3	* ** 2.4835	30.51	ADV	32.3	-12.9	49.91	54	-4.09	-	-	50	114	H
4	* ** 2.4843	31.52	ADV	32.3	-12.9	50.92	54	-3.08	-	-	50	114	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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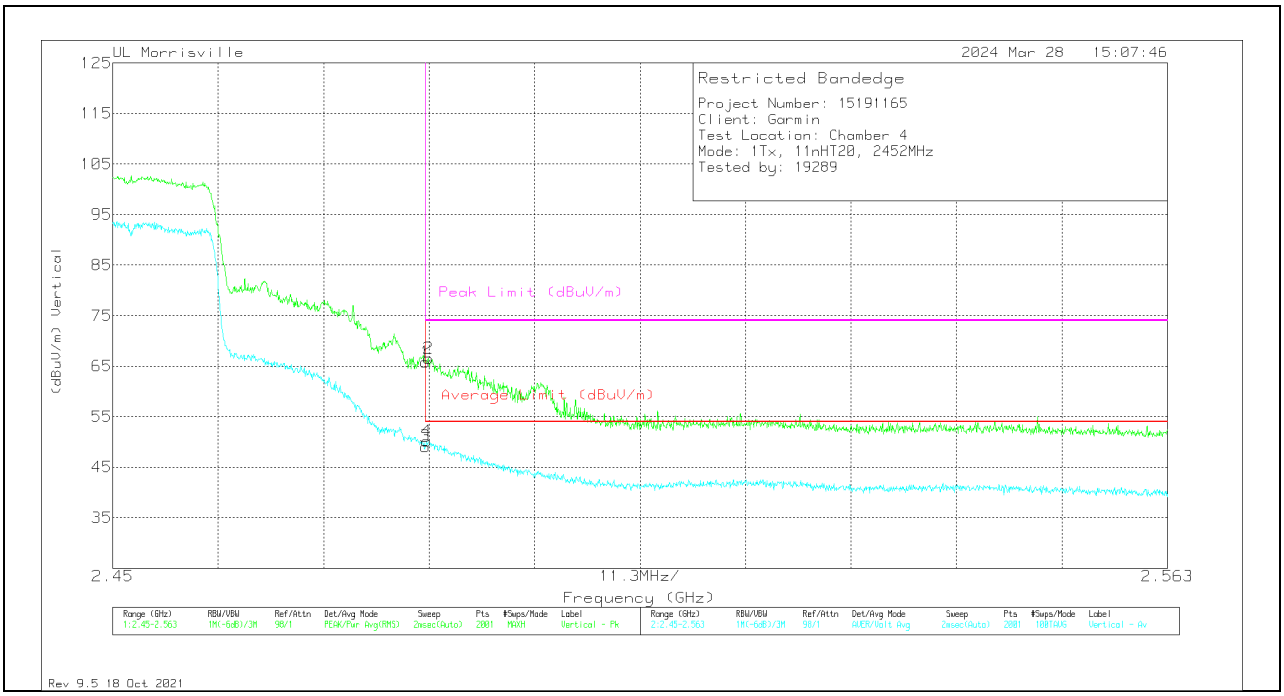

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	46.39	Pk	32.3	-12.9	65.79	-	-	74	-8.21	27	102	V
2	* ** 2.48384	47.12	Pk	32.3	-12.9	66.52	-	-	74	-7.48	27	102	V
3	* ** 2.4835	29.71	ADV	32.3	-12.9	49.11	54	-4.89	-	-	27	102	V
4	* ** 2.48362	30.72	ADV	32.3	-12.9	50.12	54	-3.88	-	-	27	102	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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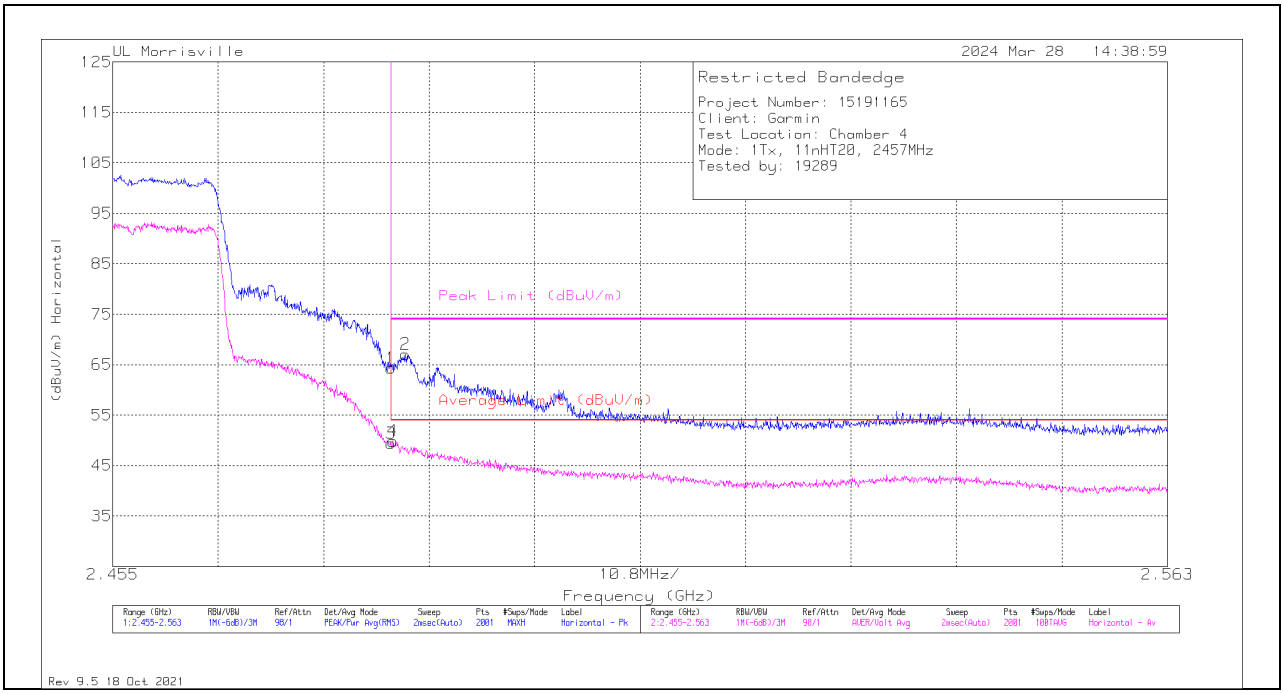
BANDEDGE (HIGH CHANNEL, CH 10)

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	44.92	Pk	32.3	-12.9	64.32	-	-	74	-9.68	26	105	H
2	* ** 2.48497	47.71	Pk	32.3	-12.9	67.11	-	-	74	-6.89	26	105	H
3	* ** 2.48351	30.05	ADV	32.3	-12.9	49.45	54	-4.55	-	-	26	105	H
4	* ** 2.48367	30.46	ADV	32.3	-12.9	49.86	54	-4.14	-	-	26	105	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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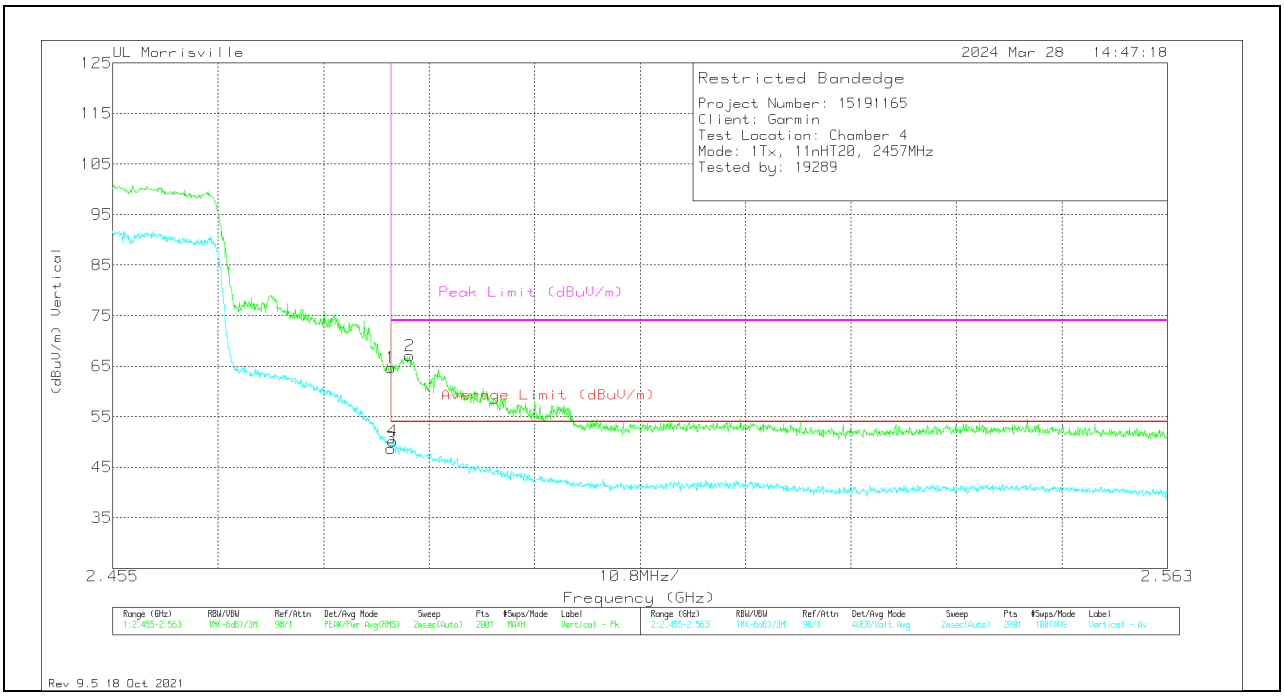
VERTICAL RESULT



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	45.35	Pk	32.3	-12.9	64.75	-	-	74	-9.25	27	102	V
2	* ** 2.4854	47.7	Pk	32.3	-12.9	67.1	-	-	74	-6.9	27	102	V
3	* ** 2.48351	29.34	ADV	32.3	-12.9	48.74	54	-5.26	-	-	27	102	V
4	* ** 2.48367	30.78	ADV	32.3	-12.9	50.18	54	-3.82	-	-	27	102	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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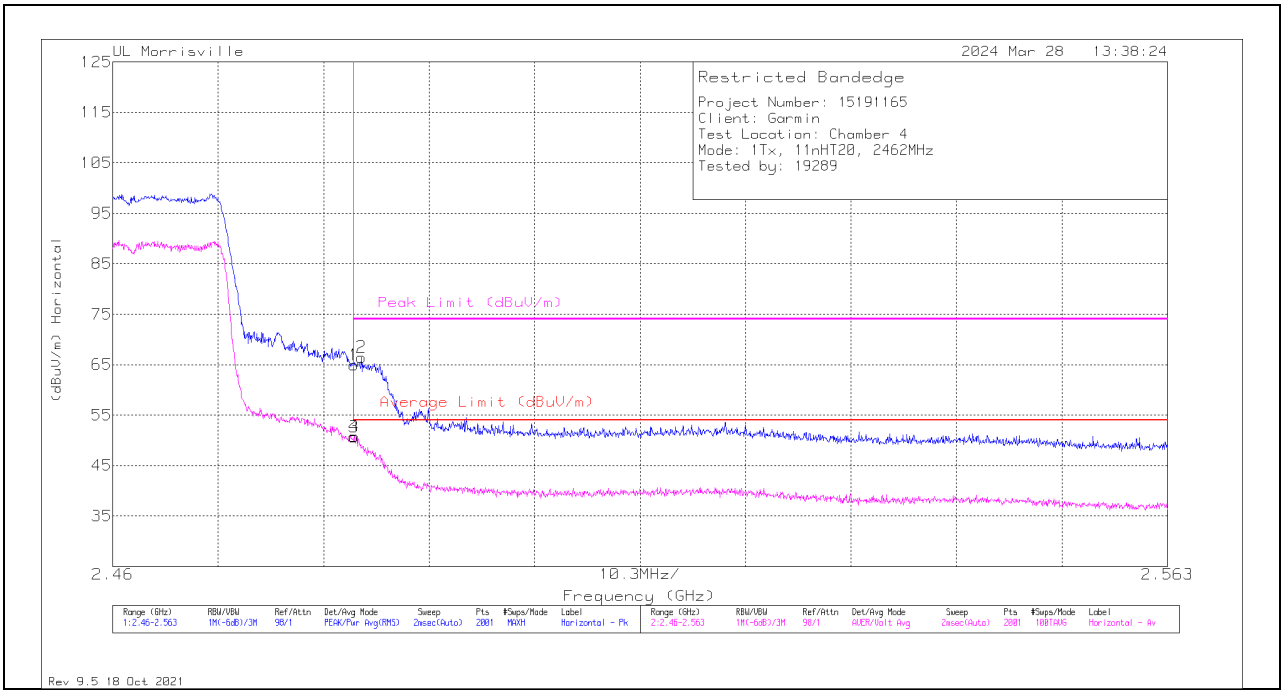
BANDEDGE (HIGH CHANNEL, CH 11)

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	45.59	Pk	32.3	-12.9	64.99	-	-	74	-9.01	27	112	H
2	* ** 2.48431	47.09	Pk	32.3	-12.9	66.49	-	-	74	-7.51	27	112	H
3	* ** 2.48354	31.25	ADV	32.3	-12.9	50.65	54	-3.35	-	-	27	112	H
4	* ** 2.48359	31.34	ADV	32.3	-12.9	50.74	54	-3.26	-	-	27	112	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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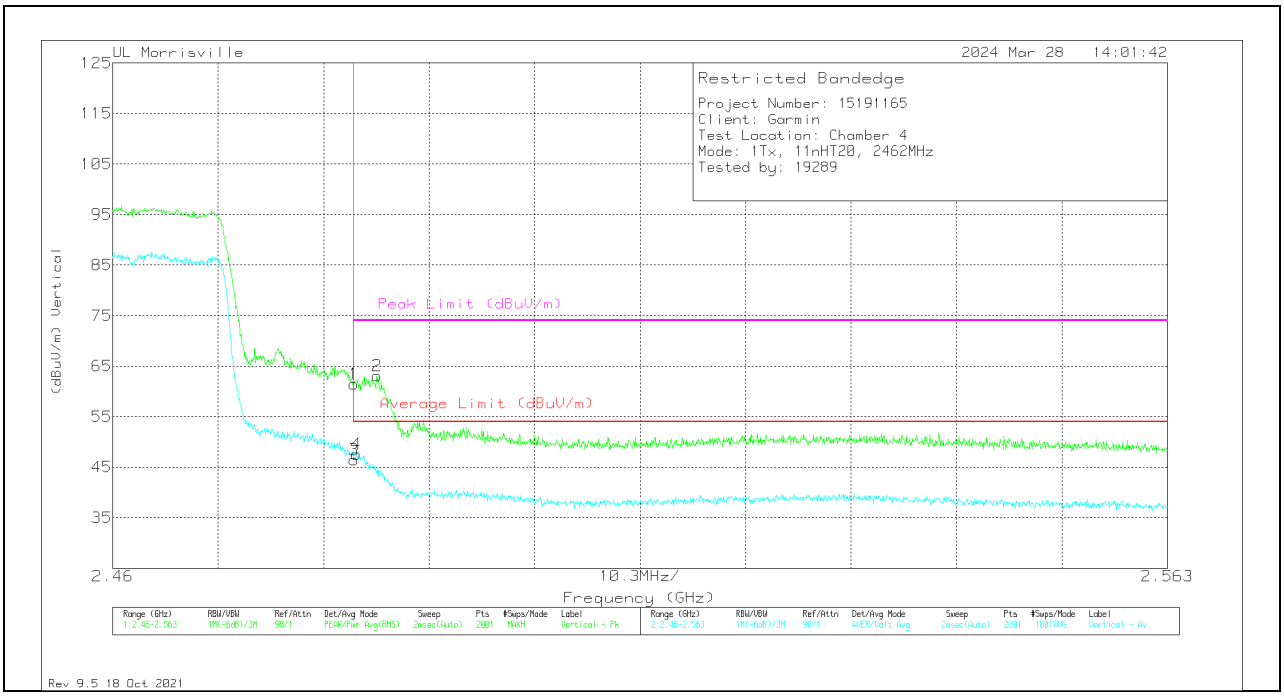

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	42.06	Pk	32.3	-12.9	61.46	-	-	74	-12.54	344	107	V
2	* ** 2.4858	43.64	Pk	32.3	-12.9	63.04	-	-	74	-10.96	344	107	V
3	* ** 2.48354	27.02	ADV	32.3	-12.9	46.42	54	-7.58	-	-	344	107	V
4	* ** 2.48379	28.18	ADV	32.3	-12.9	47.58	54	-6.42	-	-	344	107	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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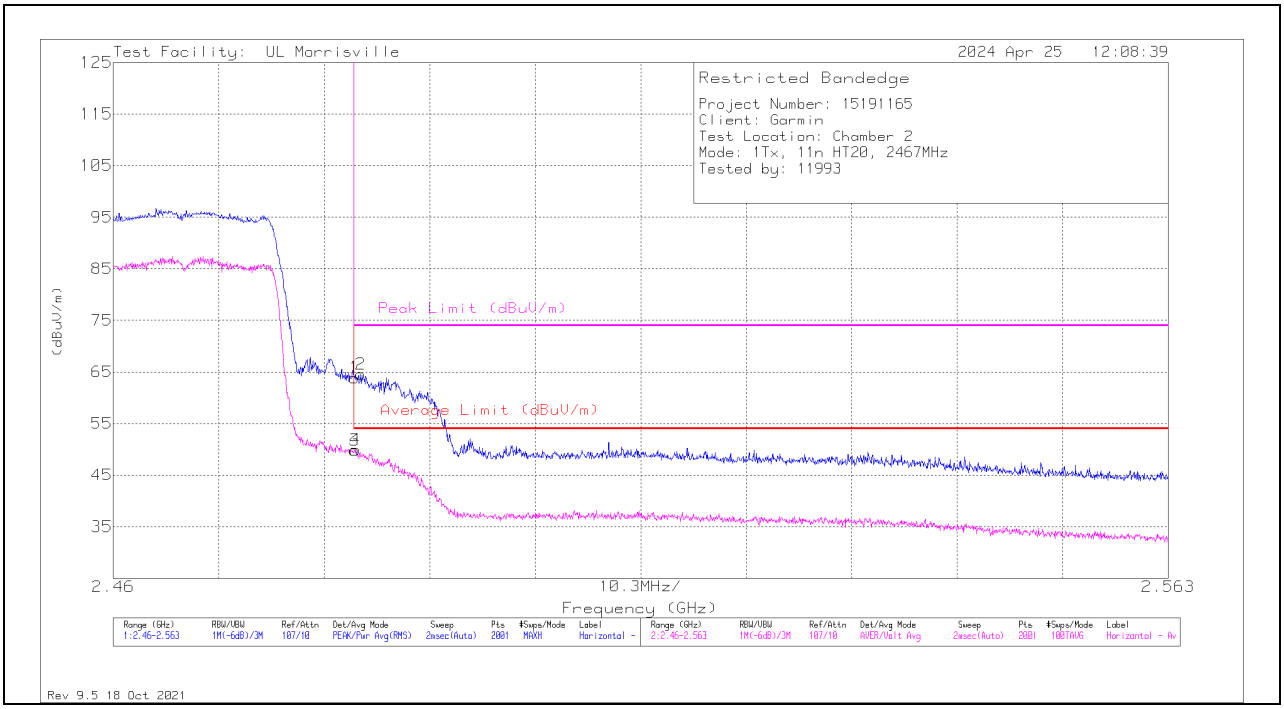
BANDEDGE (HIGH CHANNEL, CH 12)

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	55.9	Pk	32.5	-24.5	63.9	-	-	74	-10.1	22	278	H
3	* ** 2.48354	41.8	ADV	32.5	-24.5	49.8	54	-4.2	-	-	22	277	H
4	* ** 2.48364	41.92	ADV	32.5	-24.5	49.92	54	-4.08	-	-	22	277	H
2	* ** 2.48415	56.54	Pk	32.5	-24.5	64.54	-	-	74	-9.46	22	278	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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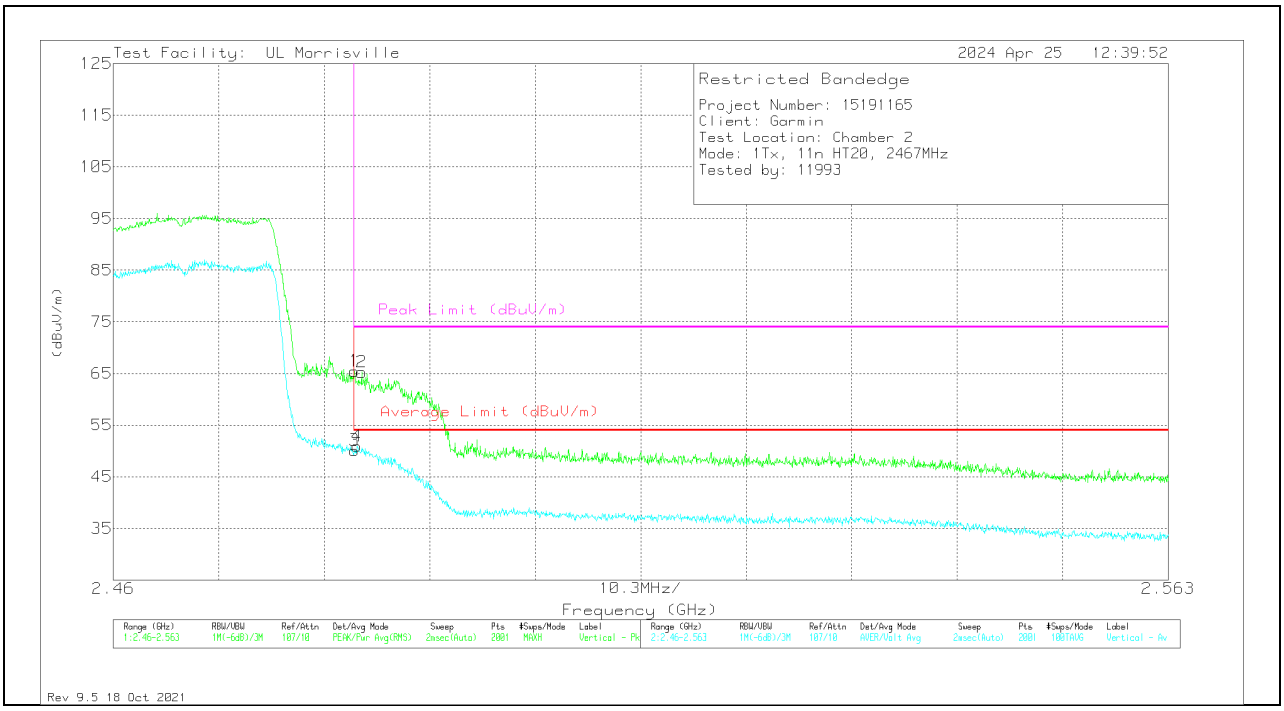

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	57.44	Pk	32.5	-24.5	65.44	-	-	74	-8.56	64	269	V
2	* ** 2.48426	57.25	Pk	32.5	-24.5	65.25	-	-	74	-8.75	64	269	V
3	* ** 2.48354	42.08	ADV	32.5	-24.5	50.08	54	-3.92	-	-	64	269	V
4	* ** 2.48379	42.92	ADV	32.5	-24.5	50.92	54	-3.08	-	-	64	269	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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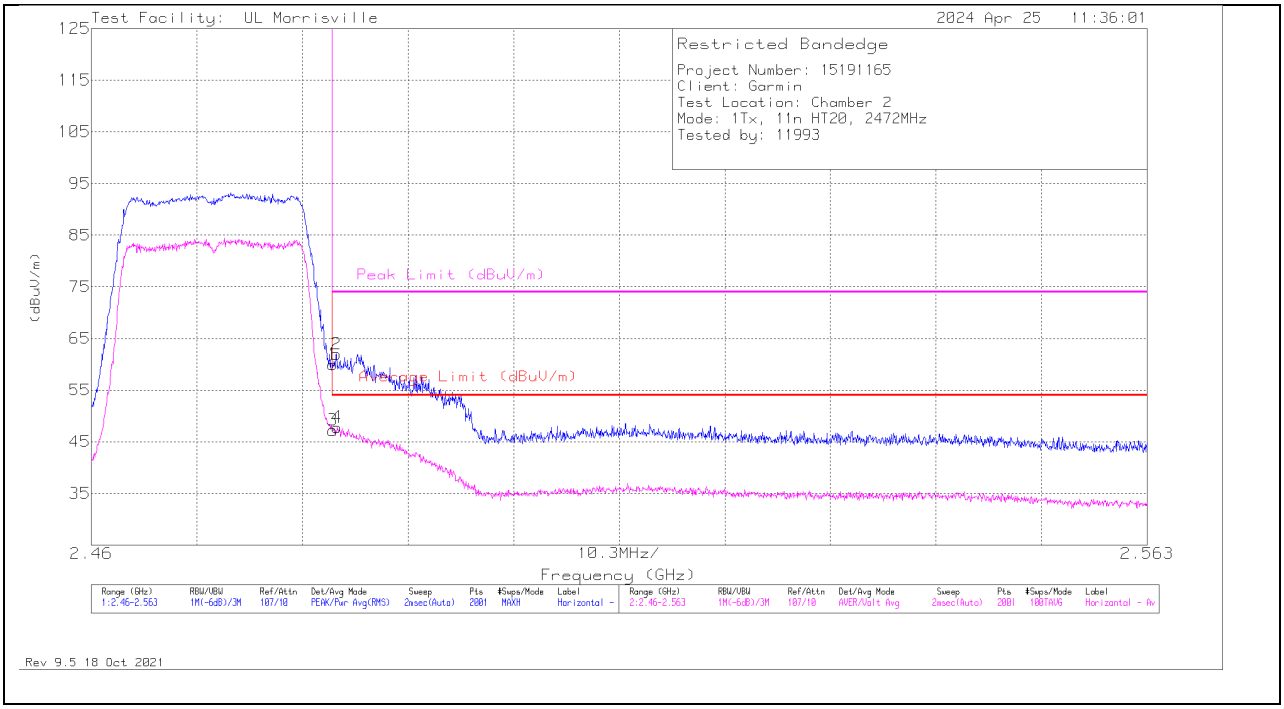
BANDEDGE (HIGH CHANNEL, CH 13)

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	51.99	Pk	32.5	-24.5	59.99	-	-	74	-14.01	43	247	H
2	* ** 2.4839	53.98	Pk	32.5	-24.5	61.98	-	-	74	-12.02	43	247	H
3	* ** 2.48354	39.22	ADV	32.5	-24.5	47.22	54	-6.78	-	-	43	246	H
4	* ** 2.484	39.79	ADV	32.5	-24.5	47.79	54	-6.21	-	-	43	246	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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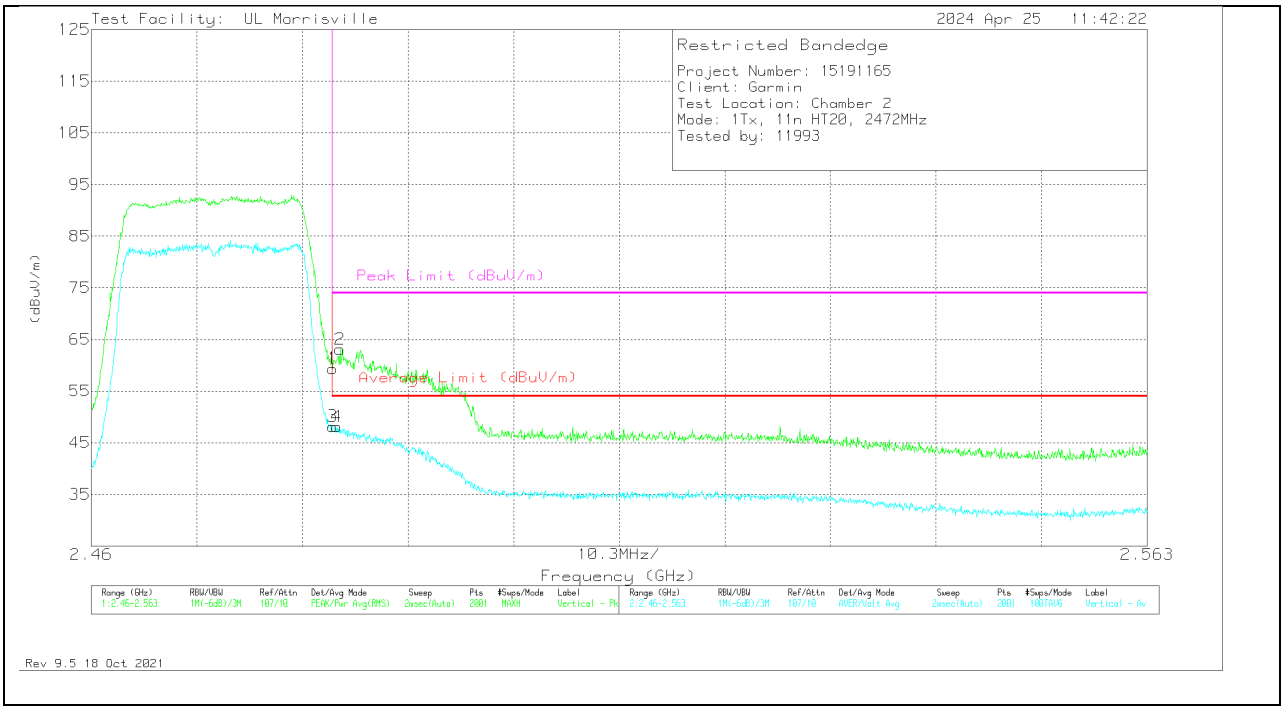
VERTICAL RESULT



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	51.38	Pk	32.5	-24.5	59.38	-	-	74	-14.62	107	326	V
2	* ** 2.48426	55.09	Pk	32.5	-24.5	63.09	-	-	74	-10.91	107	326	V
3	* ** 2.48354	40.17	ADV	32.5	-24.5	48.17	54	-5.83	-	-	107	326	V
4	* ** 2.48395	40.1	ADV	32.5	-24.5	48.1	54	-5.9	-	-	107	326	V

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

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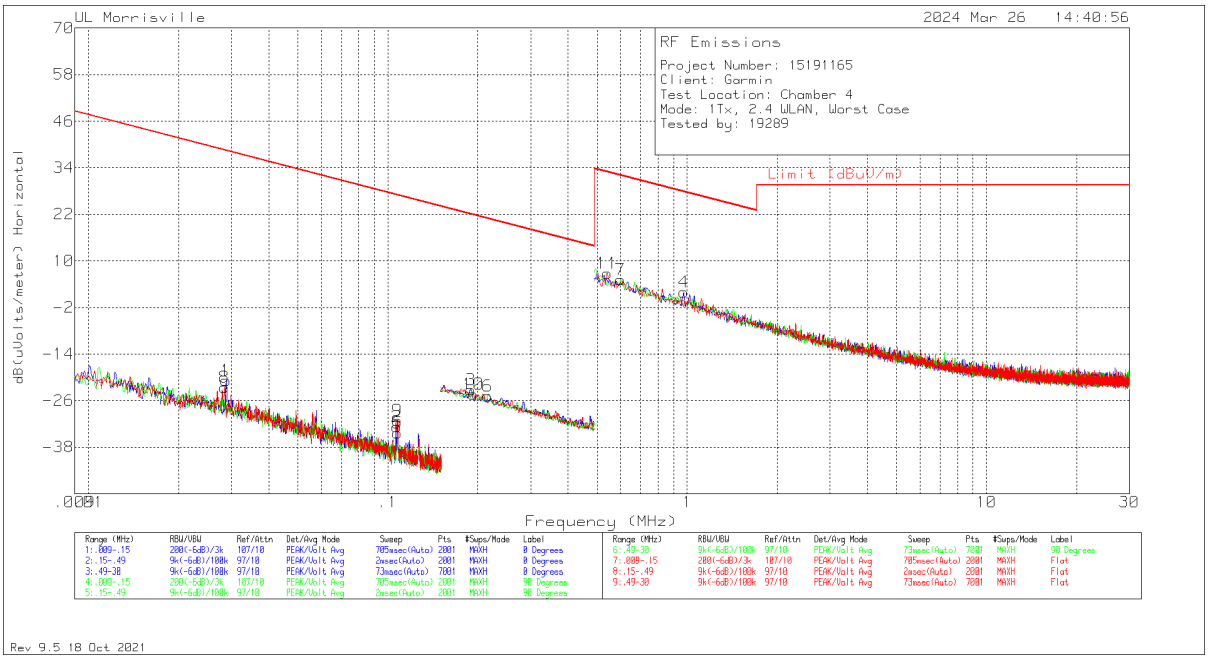
10.2. WORST CASE SPURIOUS BELOW 30MHZ

Note: All measurements were made at a test distance of 3 m. The measured data was extrapolated from the test distance (3m) to the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz – 30 MHz) to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were 40*Log (test distance / specification distance).



ANTENNA- THREE ORIENTATIONS (E-FIELD)

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	135144 (dBuV/m)	Gain/Loss (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	QP/AV Limit (dBuV/m)	PK Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Loop Angle
8	.02853	43.83	Pk	13.6	0	-80	-22.57	38.5	58.5	-61.07	0-360	Flat
1	.02881	45.59	Pk	13.6	0	-80	-20.81	38.41	58.41	-59.22	0-360	0 degs
2	.10719	36.2	Pk	11.1	0	-80	-32.7	27	-	-59.7	0-360	0 degs
5	.10762	34.55	Pk	11.1	0	-80	-34.35	26.97	-	-61.32	0-360	90 degs
9	.10783	37.79	Pk	11.1	0	-80	-31.11	26.95	-	-58.06	0-360	Flat
3	.18927	45.75	Pk	11.1	0	-80	-23.15	22.06	42.06	-45.21	0-360	0 degs
10	.19267	44.55	Pk	11.1	0	-80	-24.35	21.91	41.91	-46.26	0-360	Flat
6	.21579	44.04	Pk	11.1	.1	-80	-24.76	20.92	40.92	-45.68	0-360	90 degs
11	.54059	35.65	Pk	11.1	.1	-40	6.85	32.95	-	-26.1	0-360	Flat
7	.59962	33.82	Pk	11.2	.1	-40	5.12	32.05	-	-26.93	0-360	90 degs
4	.97484	30.61	Pk	11.3	.1	-40	2.01	27.83	-	-25.82	0-360	0 degs

Pk - Peak detector

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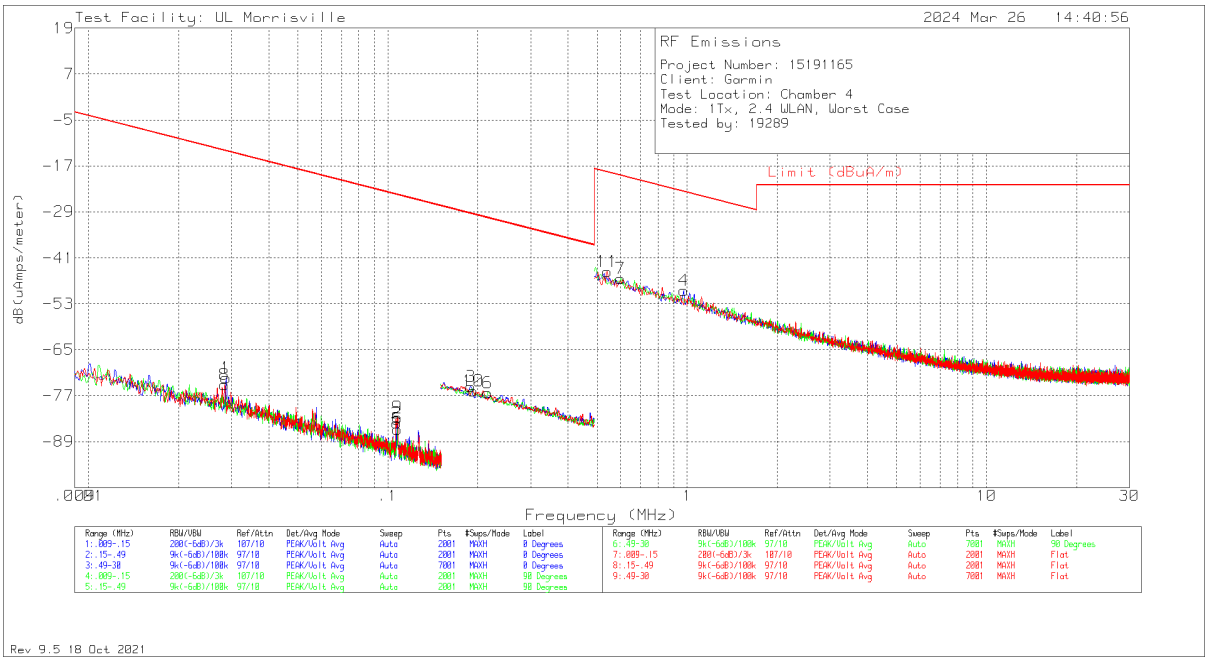

ANTENNA- THREE ORIENTATIONS (H-FIELD)

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	135144 (dBuV/m)	Gain/Loss (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uAmps/meter)	QP/AV Limit (dBuA/m)	PK Limit (dBuA/m)	Margin (dB)	Azimuth (Degs)	Loop Angle
8	.02853	43.83	Pk	-37.9	0	-80	-74.07	-13	7	-61.07	0-360	Flat
1	.02881	45.59	Pk	-37.9	0	-80	-72.31	-13.09	6.91	-59.22	0-360	0 degs
2	.10719	36.2	Pk	-40.4	0	-80	-84.2	-24.5	-	-59.7	0-360	0 degs
5	.10762	34.55	Pk	-40.4	0	-80	-85.85	-24.53	-	-61.32	0-360	90 degs
9	.10783	37.79	Pk	-40.4	0	-80	-82.61	-24.55	-	-58.06	0-360	Flat
3	.18927	45.75	Pk	-40.4	0	-80	-74.65	-29.44	-9.44	-45.21	0-360	0 degs
10	.19267	44.55	Pk	-40.4	0	-80	-75.85	-29.59	-9.59	-46.26	0-360	Flat
6	.21579	44.04	Pk	-40.4	.1	-80	-76.26	-30.58	-10.58	-45.68	0-360	90 degs
11	.54059	35.65	Pk	-40.4	.1	-40	-44.65	-18.55	-	-26.1	0-360	Flat
7	.59962	33.82	Pk	-40.3	.1	-40	-46.38	-19.45	-	-26.93	0-360	90 degs
4	.97484	30.61	Pk	-40.2	.1	-40	-49.49	-23.67	-	-25.82	0-360	0 degs

Pk - Peak detector

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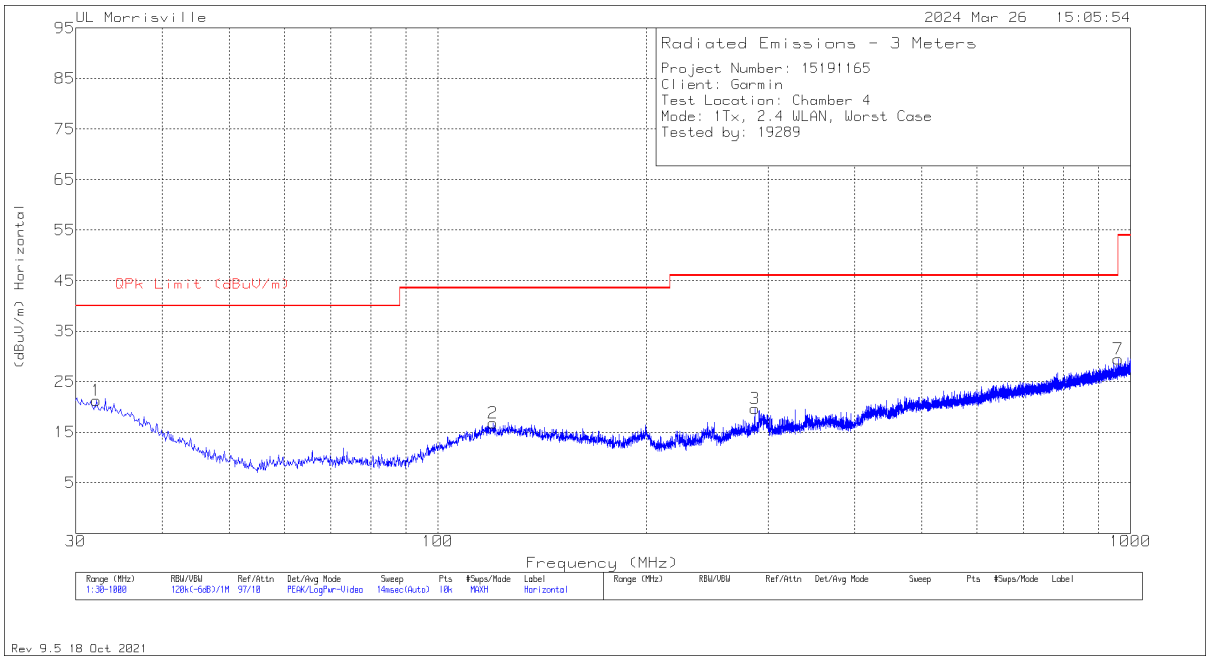
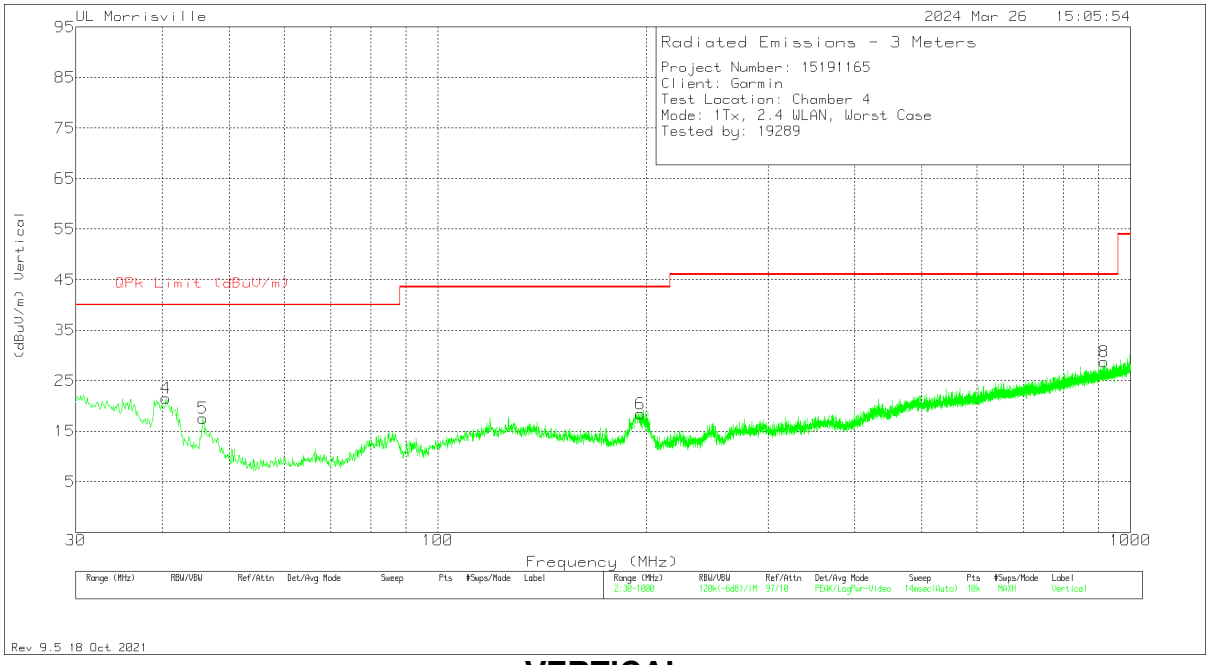
10.3. WORST CASE SPURIOUS BELOW 1 GHZ



HORIZONTAL



VERTICAL

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Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90628 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	32.134	27.94	Pk	25.4	-32.1	21.24	40	-18.76	0-360	300	H
4	40.476	33.88	Pk	19.6	-32	21.48	40	-18.52	0-360	100	V
5	45.811	33.58	Pk	16	-32	17.58	40	-22.42	0-360	100	V
2	120.113	28.16	Pk	20	-31.3	16.86	43.52	-26.66	0-360	100	H
6	195.87	31	Pk	18.2	-30.8	18.4	43.52	-25.12	0-360	100	V
3	287.147	30.71	Pk	19.4	-30.4	19.71	46.02	-26.31	0-360	100	H
8	916.774	27.51	Pk	28.4	-27.2	28.71	46.02	-17.31	0-360	100	V
7	960.133	27.19	Pk	28.9	-26.6	29.49	53.97	-24.48	0-360	200	H

Pk - Peak detector

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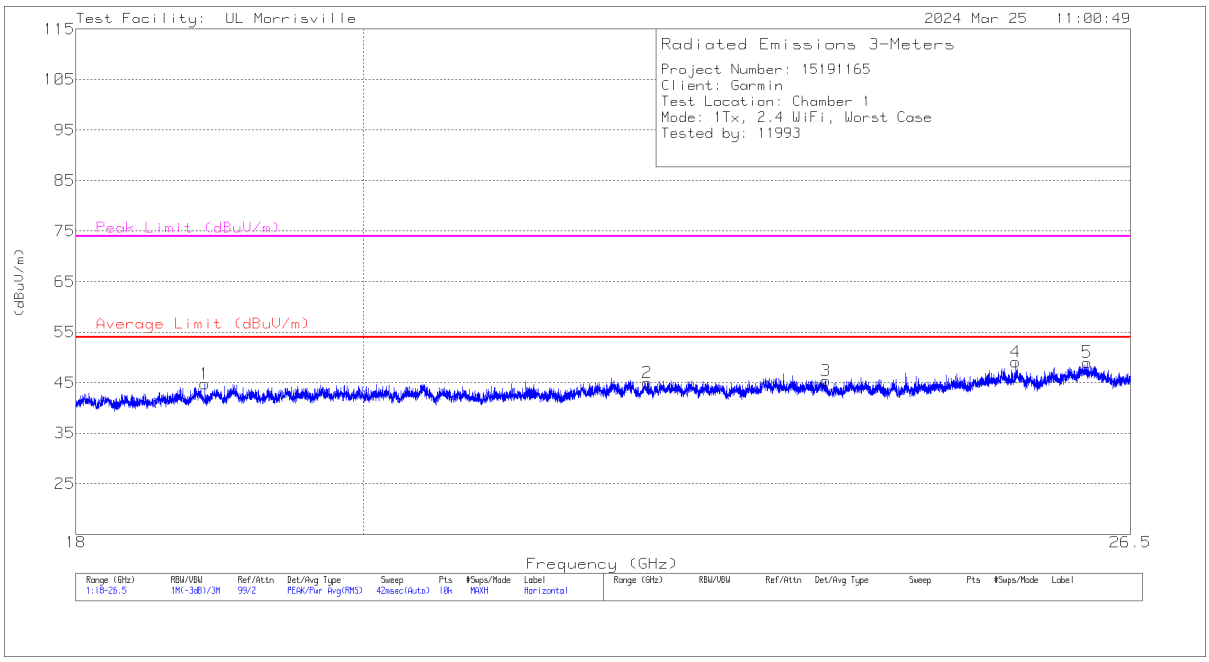
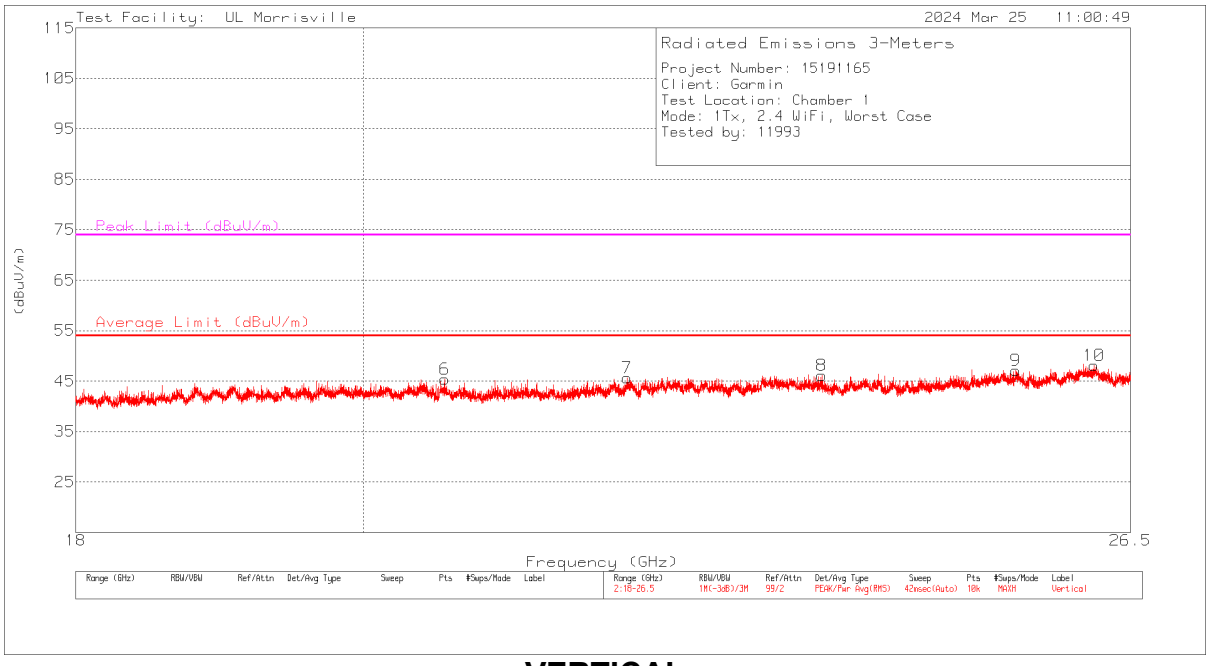
10.4. WORST CASE SPURIOUS 18-26 GHZ



HORIZONTAL



VERTICAL

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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	204704 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 18.87116	49.96	Pk	33.5	-38.7	44.76	54	-9.24	74	-29.24	0-360	149	H
2	* ** 22.19858	48.74	Pk	34.3	-38	45.04	54	-8.96	74	-28.96	0-360	200	H
3	* ** 23.69783	48.19	Pk	34.5	-37.3	45.39	54	-8.61	74	-28.61	0-360	250	H
6	* ** 20.60669	49.48	Pk	33.7	-37.8	45.38	54	-8.62	74	-28.62	0-360	151	V
7	* ** 22.03285	49.12	Pk	34.2	-37.7	45.62	54	-8.38	74	-28.38	0-360	299	V
8	* ** 23.66383	48.67	Pk	34.5	-37.1	46.07	54	-7.93	74	-27.93	0-360	299	V
9	25.40956	47.69	Pk	35.6	-36.2	47.09	-	-	-	-	0-360	299	V
4	25.41041	49.65	Pk	35.6	-36.1	49.15	-	-	-	-	0-360	101	H
5	26.08354	49.84	Pk	35.2	-36	49.04	-	-	-	-	0-360	101	H
10	26.14983	49.1	Pk	35.2	-36.2	48.1	-	-	-	-	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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11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)
RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both lines.

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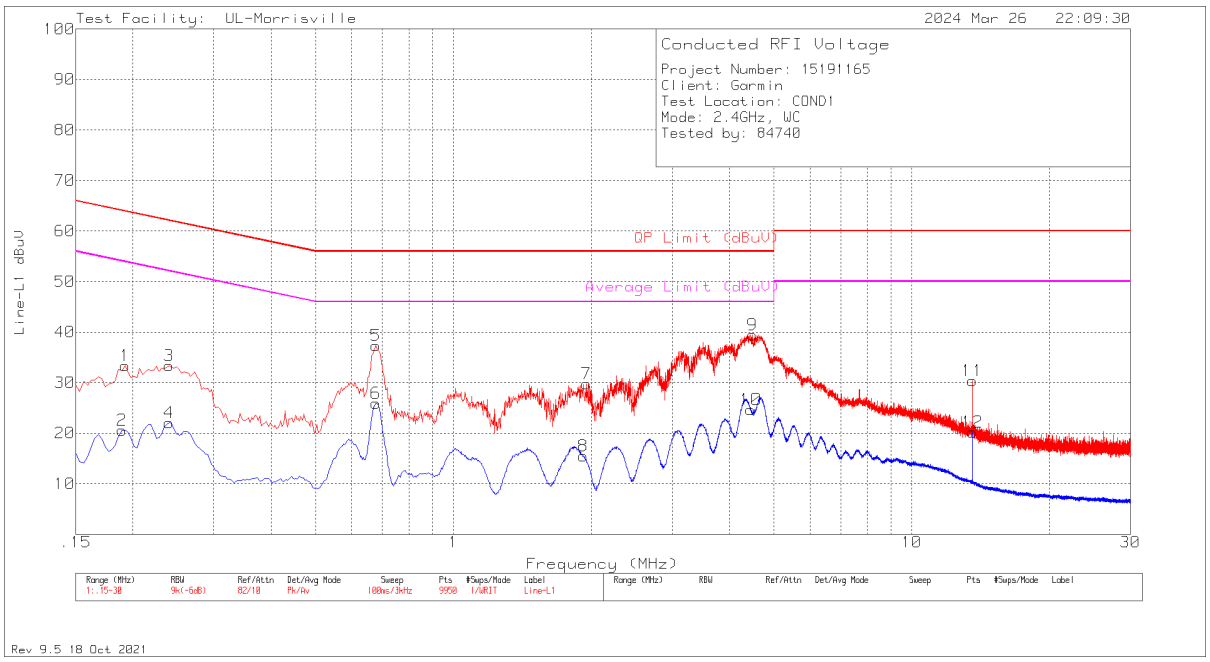
11.1. AC POWER LINE

LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VDF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
1	.192	23.38	Pk	.2	9.8	33.38	63.95	-30.57	-	-
2	.189	10.57	Av	.2	9.8	20.57	-	-	54.08	-33.51
3	.24	23.32	Pk	.2	9.8	33.32	62.1	-28.78	-	-
4	.24	12.02	Av	.2	9.8	22.02	-	-	52.1	-30.08
5	.678	27.41	Pk	.1	9.8	37.31	56	-18.69	-	-
6	.678	15.98	Av	.1	9.8	25.88	-	-	46	-20.12
7	1.953	19.9	Pk	.1	9.8	29.8	56	-26.2	-	-
8	1.923	5.62	Av	.1	9.8	15.52	-	-	46	-30.48
9	4.491	29.48	Pk	.1	9.9	39.48	56	-16.52	-	-
10	4.458	14.65	Av	.1	9.9	24.65	-	-	46	-21.35
11	13.563	20.2	Pk	.2	10	30.4	60	-29.6	-	-
12	13.56	10.05	Av	.2	10	20.25	-	-	50	-29.75

Pk - Peak detector
Av - Average detection

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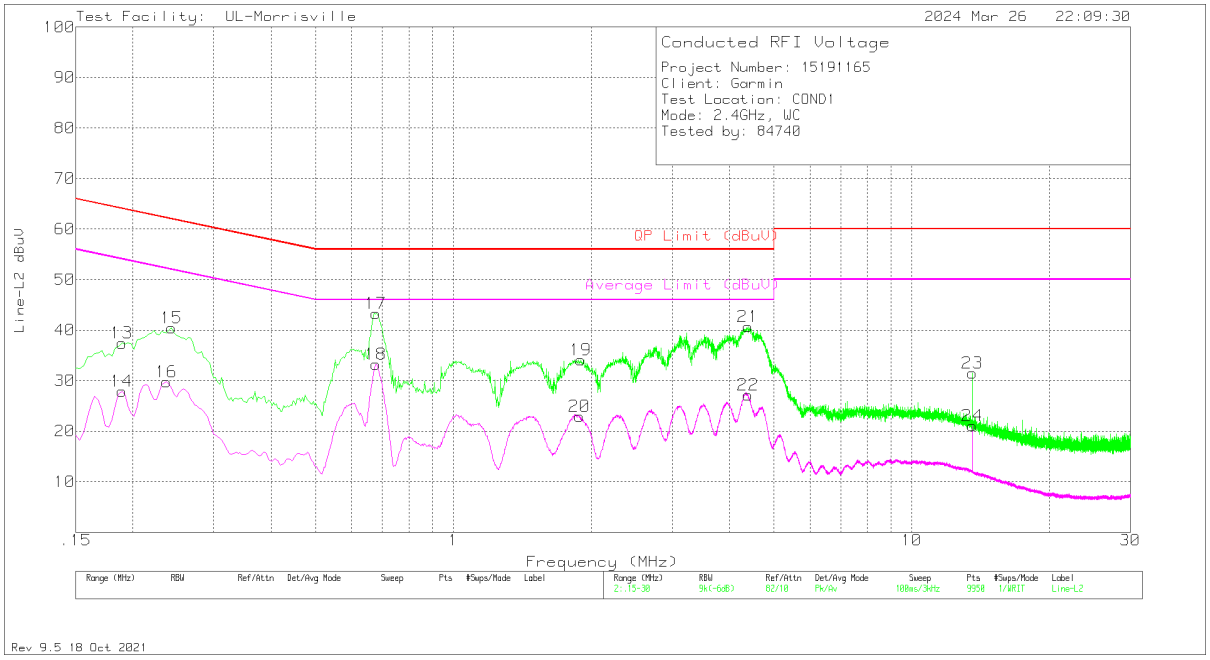
LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VDF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
13	.189	27.4	Pk	.2	9.8	37.4	64.08	-26.68	-	-
14	.189	17.94	Av	.2	9.8	27.94	-	-	54.08	-26.14
15	.243	30.45	Pk	.2	9.8	40.45	61.99	-21.54	-	-
16	.237	19.73	Av	.2	9.8	29.73	-	-	52.2	-22.47
17	.678	33.43	Pk	.1	9.8	43.33	56	-12.67	-	-
18	.678	23.38	Av	.1	9.8	33.28	-	-	46	-12.72
19	1.899	24.21	Pk	.1	9.8	34.11	56	-21.89	-	-
20	1.887	13.04	Av	.1	9.8	22.94	-	-	46	-23.06
21	4.401	30.73	Pk	.1	9.9	40.73	56	-15.27	-	-
22	4.395	17.2	Av	.1	9.9	27.2	-	-	46	-18.8
23	13.56	21.32	Pk	.2	10	31.52	60	-28.48	-	-
24	13.56	10.85	Av	.2	10	21.05	-	-	50	-28.95

Pk - Peak detector
Av - Average detection

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12. SETUP PHOTOS

Please refer to R15191165-EP1 for setup photos

END OF TEST REPORT

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