

TEST REPORT

Report Number: R15626916-E3

Applicant : Garmin International Inc.
1200 East 151st Street
Olathe, KS 66062-3426, USA

Model : A05001

FCC ID : IPH-05001

IC : 1792A-05001

EUT Description : Portable Digital Transceiver

Test Standard(s) : FCC 47 CFR PART 15 SUBPART E
ISED RSS-247 ISSUE 4
ISED RSS-GEN ISSUE 5 + A1 + A2

Date Of Issue:
2025-08-14

Prepared by:
UL LLC
12 Laboratory Dr.
Durham, NC 27713 U.S.A.
TEL: (919) 549-1400



REPORT REVISION HISTORY

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V1	2025-08-14	Initial Issue	Charles Moody

TABLE OF CONTENTS

REPORT REVISION HISTORY	2
TABLE OF CONTENTS	3
1. ATTESTATION OF TEST RESULTS	5
2. TEST RESULT SUMMARY	6
3. TEST METHODOLOGY	6
4. FACILITIES AND ACCREDITATION	6
5. DECISION RULES AND MEASUREMENT UNCERTAINTY	7
5.1. <i>METROLOGICAL TRACEABILITY</i>	7
5.2. <i>DECISION RULES</i>	7
5.3. <i>MEASUREMENT UNCERTAINTY</i>	7
5.4. <i>SAMPLE CALCULATION</i>	7
6. EQUIPMENT UNDER TEST	8
6.1. <i>EUT DESCRIPTION</i>	8
6.2. <i>MAXIMUM OUTPUT POWER</i>	8
6.3. <i>DESCRIPTION OF AVAILABLE ANTENNAS</i>	8
6.4. <i>SOFTWARE AND FIRMWARE</i>	8
6.5. <i>WORST-CASE CONFIGURATION AND MODE</i>	9
6.6. <i>DESCRIPTION OF TEST SETUP</i>	10
7. MEASUREMENT METHOD	11
8. TEST AND MEASUREMENT EQUIPMENT	12
9. ANTENNA PORT TEST RESULTS	15
9.1. <i>ON TIME AND DUTY CYCLE</i>	15
9.2. <i>26 dB BANDWIDTH</i>	16
9.2.1. <i>802.11a MODE IN THE 5.2 GHz BAND</i>	16
9.3. <i>99% BANDWIDTH</i>	17
9.3.1. <i>802.11a MODE IN THE 5.2 GHz BAND</i>	17
9.3.2. <i>802.11a MODE IN THE 5.8 GHz BAND</i>	18
9.4. <i>6 dB BANDWIDTH</i>	19
9.4.1. <i>802.11a MODE IN THE 5.8 GHz BAND</i>	19

9.5. *OUTPUT POWER AND PSD*.....20
 9.5.1. 802.11a MODE IN THE 5.2 GHz BAND.....22
 9.5.2. 802.11a MODE IN THE 5.8 GHz BAND.....24

10. RADIATED TEST RESULTS.....**26**

 10.1. *TRANSMITTER ABOVE 1 GHz*.....28
 10.1.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.2 GHz BAND28
 10.1.2. TX ABOVE 1 GHz 802.11a MODE IN THE 5.8 GHz BAND38
 10.2. *WORST CASE BELOW 30MHZ*.....48
 10.3. *WORST CASE BELOW 1 GHZ*.....50
 10.4. *WORST CASE 18-26 GHZ*.....52
 10.5. *WORST CASE 26-40 GHZ*.....54

11. AC POWER LINE CONDUCTED EMISSIONS.....**56**

 11.1.1. AC Power Line Norm57

12. SETUP PHOTOS.....**59**

1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: Portable Digital Transceiver

MODEL: A05001

SERIAL NUMBER: 3603763011 / 3603759933 / 3603763014

SAMPLE RECEIPT DATE: 2025-05-02, 2025-06-17, and 2025-06-27

DATE TESTED: 2025-05-08 TO 2025-08-14

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart E	
ISED RSS-247 Issue 4	Refer to Section 2
ISED RSS-GEN Issue 5 + A1	

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:

Prepared By:



Michael Antola
Senior Staff Engineer
Consumer, Medical and IT Segment
UL LLC

Charles Moody
Lead Project Engineer
Consumer, Medical and IT Segment
UL LLC

2. TEST RESULT SUMMARY

This report contains data/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	Per ANSI C63.10, Section 12.2.
See Comment	RSS-GEN 6.7	26dB BW/99% OBW	Reporting purposes only	Per ANSI C63.10 Sections 6.9.2 and 6.9.3
15.407 (e)	RSS-247 7.3.4.2	6 dB BW	Compliant	None.
15.407 (a) (1-3), (h) (1)	RSS-247 7.3.1.2, 7.3.4.3	Output Power		
15.407 (a) (1-3, 5)	RSS-247 7.3	PSD		
15.209, 15.205, 15.407 (b)(1-5)	RSS-GEN 8.9, 8.10, RSS-247 7.3	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 CFR 47 Part 2
- FCC CFR 47 Part 15,
- FCC KDB 662911 D01 v02r01,
- FCC KDB 789033 D02 v02r01,
- KDB 414788 D01 Radiated Test Site v01r01
- ANSI C63.10-2020
- RSS-GEN Issue 5 + A1 + A2
- RSS-247 Issue 4

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
<input type="checkbox"/>	Building: 12 Laboratory Dr Durham, NC 27713, U.S.A	US0067	2180C	825374
<input checked="" type="checkbox"/>	Building: 2800 Perimeter Park Dr. Suite B Morrisville, NC 27560, U.S.A		27265	

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	U _{Lab}
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
Mains Conducted Emissions (0.150-30MHz) - LISN	3.40 dB
Temperature	0.57°C
Humidity	3.39%
DC Supply voltages	1.70%

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

5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

$$\text{Field Strength (dBuV/m)} = \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} - \text{Preamp Gain (dB)}$$

$$36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$$

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

$$\text{Final Voltage (dBuV)} = \text{Measured Voltage (dBuV)} + \text{Cable Loss (dB)} + \text{Limiter Factor (dB)} + \text{LISN Insertion Loss.}$$

$$36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$$

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is a portable digital transceiver with BT, BLE, 802.11b/g/n 2.4GHz WLAN, 802.11a 5GHz WLAN, LTE Cat M1, and Global Navigation Satellite System (GNSS) receiver. This report covers testing of the 5 WLAN radio.

6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

5GHz Band

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.2 GHz band, 1TX			
5180-5240	802.11a	18.32	67.92
5.8 GHz band, 1TX			
5745-5825	802.11a	15.64	36.64

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The antenna(s) 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	5150 – 5250	-1.74
	5725 – 5850	-1.66

6.4. SOFTWARE AND FIRMWARE

EUT FW Version: 53.23

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 power spectral density 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 and high channels, as well as the middle channel for radiated spurious emissions.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation.

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

802.11a mode: 6 Mbps

6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adaptor	Garmin/Phihong	AQ27A-59CFA	N/A	N/A
Laptop	Lenovo	T14	PF4FKVY8	N/A

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. A support laptop was connected to configure power settings prior to testing. For final emissions testing, the EUT was connected to AC mains.

SETUP DIAGRAMS

Please refer to R15629616-EP1 for setup diagrams

7. MEASUREMENT METHOD

On Time and Duty Cycle: KDB 789033 D02 v02r01, Section B.

6 dB Emission BW: KDB 789033 D02 v02r01, Section C.2

26 dB Emission BW: KDB 789033 D02 v02r01, Section C.1

99% Occupied BW: KDB 789033 D02 v02r01, Section D.

Conducted Output Power: KDB 789033 D02 v02r01, Section E.3.b (Method PM-G)

Power Spectral Density: KDB 789033 D02 v02r01, Section F

Unwanted emissions in restricted bands: KDB 789033 D02 v02r01, Sections G.3, G.4, G.5, and G.6.

Unwanted emissions in non-restricted bands: KDB 789033 D02 v02r01, Sections G.3, G.4, and G.5.

AC Power Line Conducted Emissions: ANSI C63.10-2020, Section 6.2.

Radiated Spurious Emissions: ANSI C63.10-2020 Section 6.3 to 6.6

8. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment were 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.
Conducted Room 1					
**90411	Spectrum Analyzer	Keysight Technologies	N9030A	2024-08-01	2025-08-01
90416	Spectrum Analyzer	Keysight Technologies	N9030A	2025-7-31	2026-07-31
214284	Spectrum Analyzer	Rohde & Schwarz	FSW50	2025-03-14	2026-03-14
179892	Environmental Meter	Fisher Scientific	15-077-963	2024-08-12	2025-08-31
**211055	Real-Time Peak Power Sensor 50MHz to 8GHz	Boonton	RTP5000	2024-07-31	2025-07-31
SOFTEMI	Antenna Port Software	UL	Version 2022.8.16	NA	NA
Power Software	Boonton Power Analyzer	Boonton	Version 3.0.13.0	NA	NA
226561	SMA Coaxial 10dB Attenuator 25MHz-18GHz	CentricRF	C18S2-10	2025-04-01	2026-04-01

**NOTE: Testing performed on this equipment occurred while still in calibration.

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	2025-04-17	2026-04-17
**179892	Environmental Meter	Fisher Scientific	15-077-963	2024-08-12	2025-08-12
**80391	LISN, 50-ohm/50-uH, 250uH 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50/250-25-2-01	2024-08-01	2025-08-01
**75141	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2024-08-01	2025-08-01
52859	Transient Limiter, 0.009-100MHz	Electro-Metrics	EM-7600	2025-04-17	2026-04-17
236852	AC Power Source	California instruments	NA	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		

**NOTE: Testing performed on this equipment occurred while still in calibration.

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

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
1-18 GHz					
206211	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2024-04-09	2026-04-09
18-40 GHz					
91186	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2024-05-16	2026-05-16
**204705	Horn Antenna, 26-40GHz	Com-Power	AH-640	2023-07-20	2025-07-20
Gain-Loss Chains					
207640	Gain-loss string: 1-18GHz	Various	Various	2025-06-13	2026-06-13
225795	Gain-loss string: 18-40GHz	Various	Various	2025-06-13	2026-06-13
Receiver & Software					
197954	Spectrum Analyzer	Rohde & Schwarz	ESW44	2025-04-21	2026-04-21
**81018	Spectrum Analyzer	Agilent	E4446A	2024-07-31	2025-07-31
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

**NOTE: Testing performed on this equipment occurred while still in calibration.

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

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
0.009-30MHz					
65682	Active Loop Antenna	ETS-Lindgren	6502	2023-10-03	2025-10-03
30-1000 MHz					
90629	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2024-01-30	2026-01-30
Gain-Loss Chains					
91974	Gain-loss string: 0.009-30MHz	Various	Various	2025-05-31	2026-05-31
91976	Gain-loss string: 25- 1000MHz	Various	Various	2025-05-31	2026-05-31
Receiver & Software					
206496	Spectrum Analyzer	Rohde & Schwarz	ESW44	2024-08-29	2025-08-29
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Additional Equipment used					
241205	Environmental Meter	Fisher Scientific	15-077-963	2023-09-05	2025-09-05

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

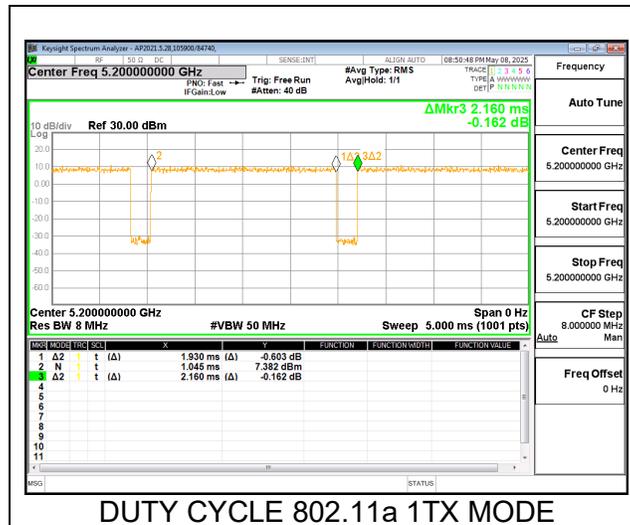
PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	RMS Duty Cycle Correction Factor (dB)	Voltage Average Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
802.11a 1TX	1.930	2.160	0.894	89.35	0.49	0.98	0.518

DUTY CYCLE PLOTS



9.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

9.2.1. 802.11a MODE IN THE 5.2 GHz BAND

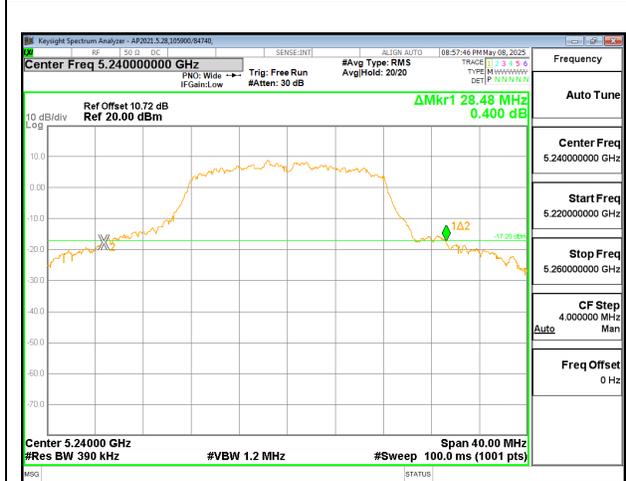
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	28.60
Mid	5200	28.52
High	5240	28.48



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

INTENTIONALLY LEFT BLANK

9.3. 99% BANDWIDTH

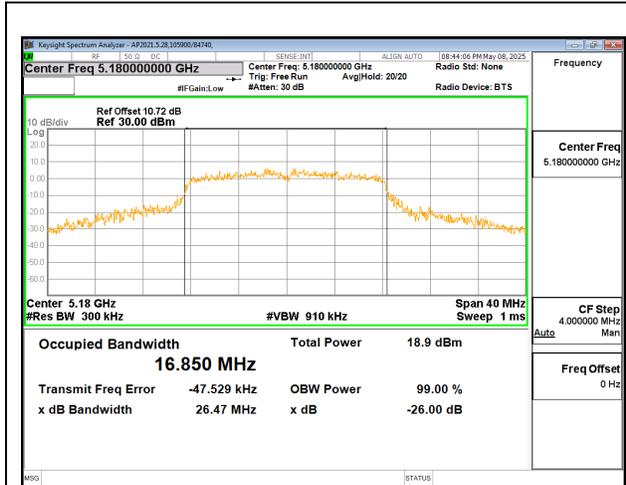
LIMITS

None; for reporting purposes only.

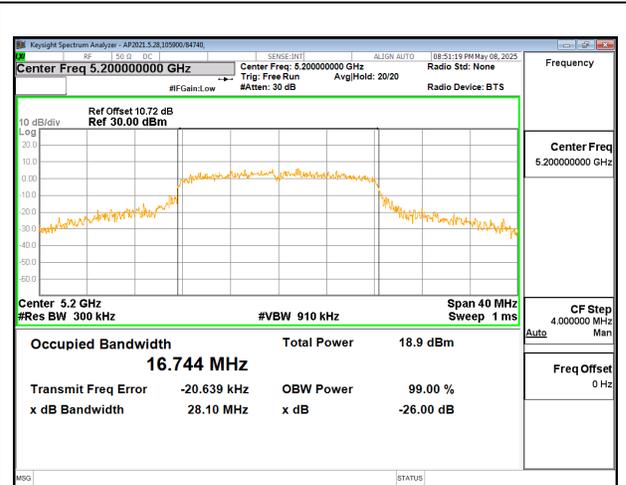
RESULTS

9.3.1. 802.11a MODE IN THE 5.2 GHz BAND

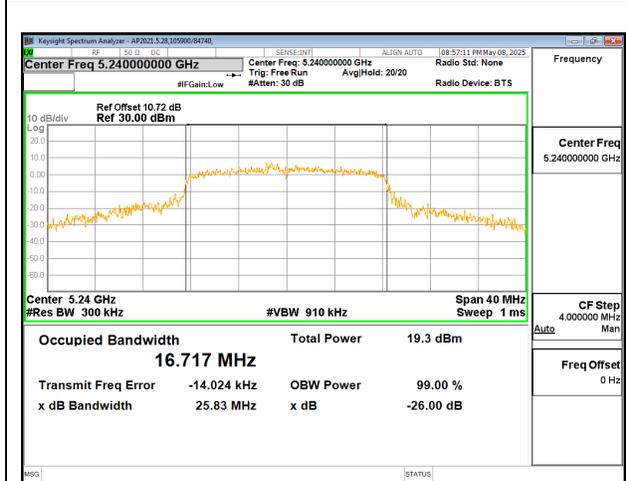
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	16.850
Mid	5200	16.744
High	5240	16.717



LOW CHANNEL



MID CHANNEL

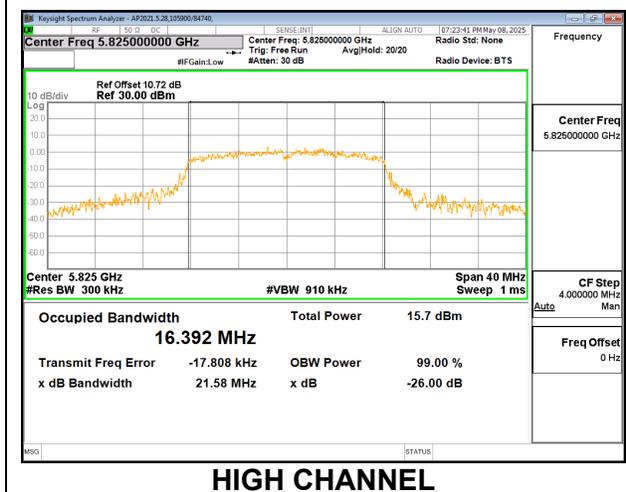
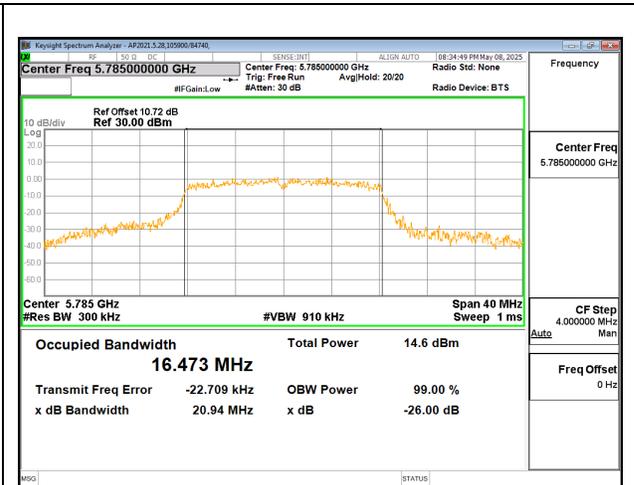
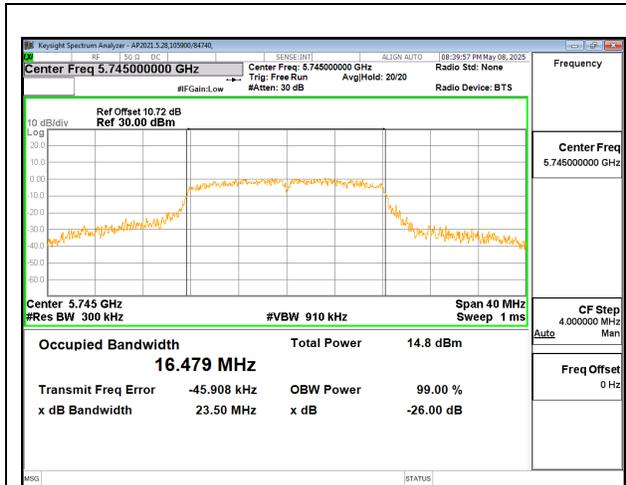


HIGH CHANNEL

INTENTIONALLY LEFT BLANK

9.3.2. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.479
Mid	5785	16.473
High	5825	16.392



INTENTIONALLY LEFT BLANK

9.4. 6 dB BANDWIDTH LIMITS

FCC §15.407 (e)
 RSS-247 7.3.4.2

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

RESULTS

9.4.1. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	16.308	0.5
Mid	5785	16.316	0.5
High	5825	14.196	0.5



9.5. OUTPUT POWER AND PSD

LIMITS

FCC §15.407

Band 5.15–5.25 GHz

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Band 5.725-5.85 GHz

The maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

RSS-247

Band 5.15-5.25 GHz

The maximum e.i.r.p. shall not exceed 200 mW or $10 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

Band 5.725-5.85 GHz

The maximum conducted output power shall not exceed 1 W. The power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications and multiple collocated transmitters transmitting the same information.

TEST PROCEDURE

The measurement method used for output power is KDB 789033 D02 v02r01, Section E.3.b (Method PM-G).

The measurement method used for power spectral density is KDB 789033 D02 v02r01, Section F

The power output was measured on the EUT antenna port using an EUT cable 0.69 dB loss, and with a 10.03 dB attenuator connected to a power meter via wideband average power sensor. Gated average output power was read directly from power meter. EUT was connected to spectrum analyzer for PSD measurements.

DIRECTIONAL ANTENNA GAIN

For 1 TX:

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

9.5.1. 802.11a MODE IN THE 5.2 GHz BAND

1TX Antenna 1 MODE (FCC+IC)

Test Engineer:	105900/84740, 104463/85502
Test Date:	2025-05-08, 2025-05-16, 2025-07-31

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	16.850	-1.74
Mid	5200	16.744	-1.74
High	5240	16.717	-1.74

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED EIRP Limit (dBm)	Max ISED Power (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/1MHz)	ISED eirp PSD Limit (dBm/1MHz)	PSD Limit (dBm/1MHz)
Low	5180	24.00	22.27	24.01	24.00	11.00	10.00	11.00
Mid	5200	24.00	22.24	23.98	23.98	11.00	10.00	11.00
High	5240	24.00	22.23	23.97	23.97	11.00	10.00	11.00

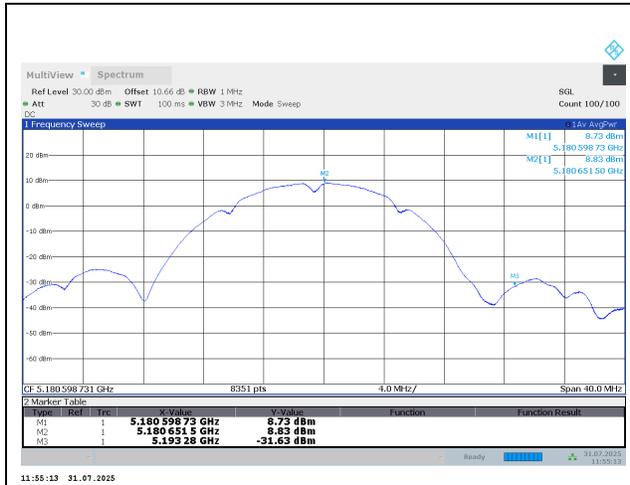
Duty Cycle CF (dB)	0.49	Included in Calculations of Corr'd PSD
---------------------------	------	---

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	18.200	18.20	24.00	-5.80
Mid	5200	18.320	18.32	23.98	-5.66
High	5240	18.020	18.02	23.97	-5.95

PSD Results

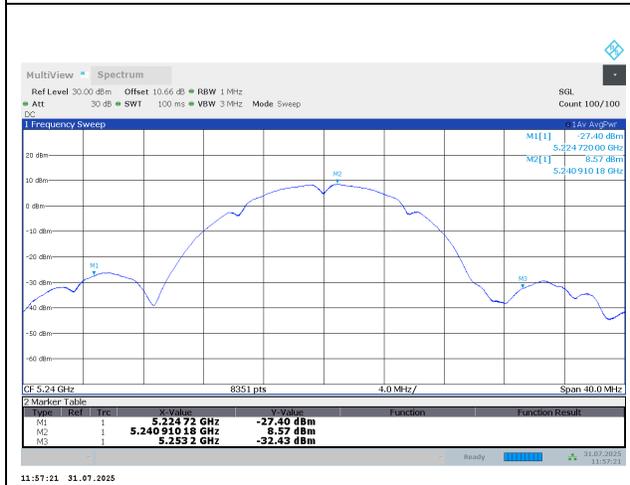
Channel	Frequency (MHz)	Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5180	8.830	9.32	11.00	-1.68
Mid	5200	9.070	9.56	11.00	-1.44
High	5240	8.570	9.06	11.00	-1.94



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

INTENTIONALLY LEFT BLANK

9.5.2. 802.11a MODE IN THE 5.8 GHz BAND

1TX Antenna 1 MODE (FCC+IC)

Test Engineer:	104463/85502, 105900/84740
Test Date:	2025-05-08, 2025-05-16, 2025-07-31

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	FCC/ISED PSD Limit (dBm/ 500KHz)
Low	5745	-1.66	30.00	30.00
Mid	5785	-1.66	30.00	30.00
High	5825	-1.66	30.00	30.00

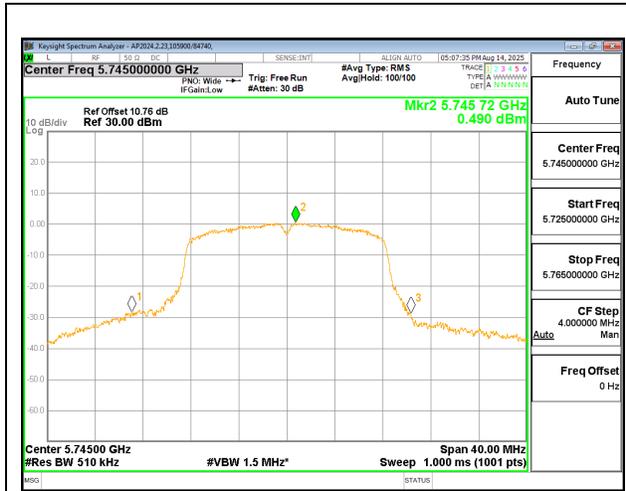
Duty Cycle CF (dB)	0.49	Included in Calculations of Corr'd Power & PSD
---------------------------	------	---

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	15.64	15.64	30.00	-14.36
Mid	5785	15.16	15.16	30.00	-14.84
High	5825	14.93	14.93	30.00	-15.07

PSD Results

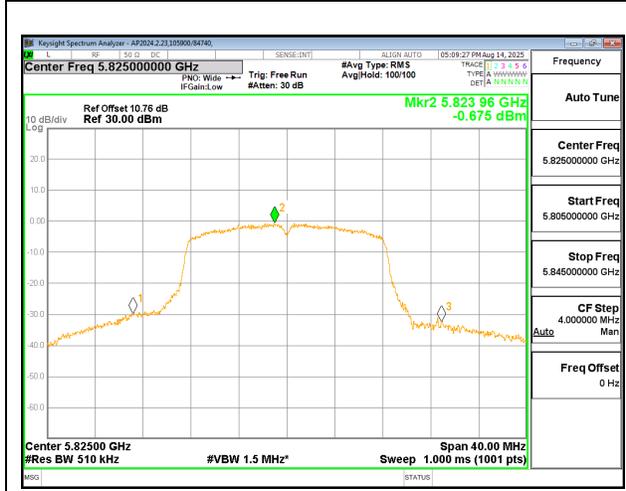
Channel	Frequency (MHz)	Meas PSD (dBm/ 500KHz)	Total Corr'd PSD (dBm/ 500KHz)	PSD Limit (dBm/ 500KHz)	PSD Margin (dB)
Low	5745	0.490	0.980	30.00	-29.02
Mid	5785	-0.232	0.258	30.00	-29.74
High	5825	-0.675	-0.185	30.00	-30.19



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

INTENTIONALLY LEFT BLANK

10. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209 -Restricted bands
FCC §15.407(b)(1-3) -Un-Restricted bands

RSS 247 Issue 3 Sections
7.3.1.3 (for 5150-5250 MHz band)
7.3.4.4 (for 5725-5850 MHz band)

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 3 MHz 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 average measurements.

The spectrum from 30 MHz to 1GHz and 18GHz to 40 GHz is investigated with the transmitter set to transmit at the channel with highest power spectral density as worst-case scenario. 1GHz to 18GHz was set to the lowest, middle, and highest channels in the 5 GHz bands.

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

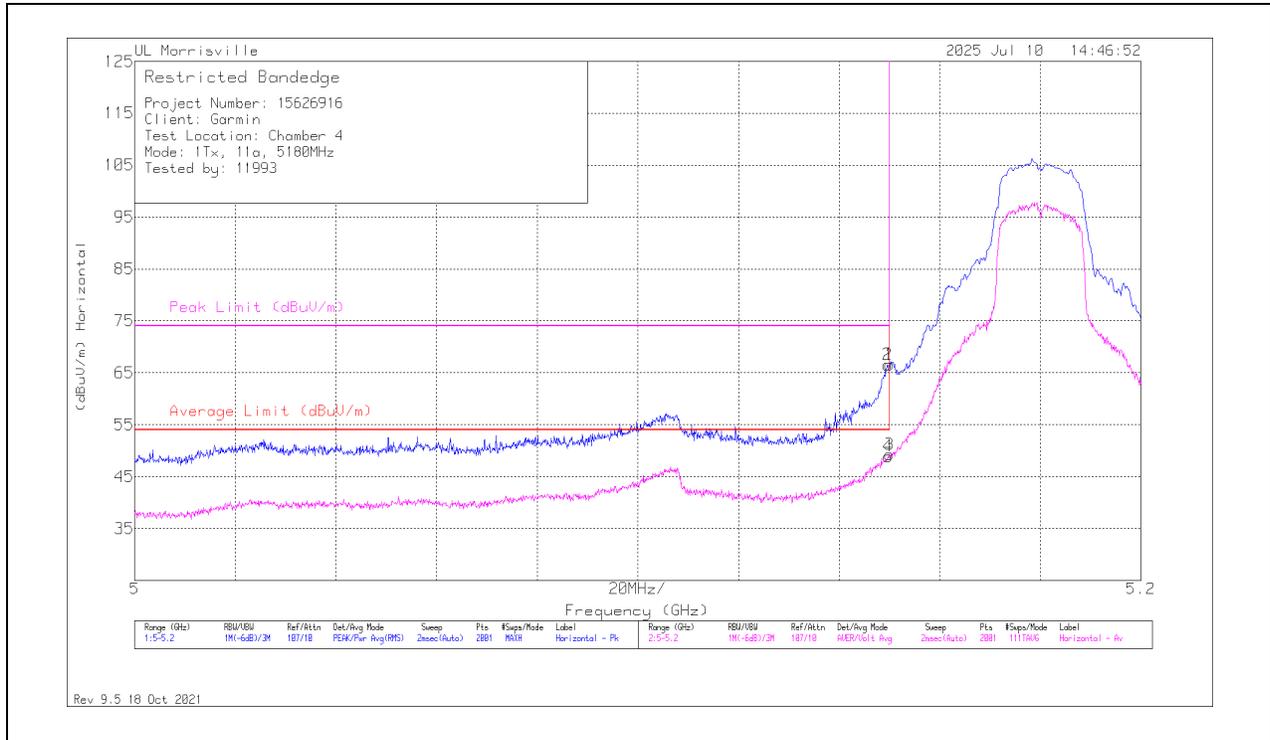
OFS and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

10.1. TRANSMITTER ABOVE 1 GHz

10.1.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.2 GHz BAND

BANDEGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.15	51.72	Pk	34.1	-19.3	0	66.52	-	-	74	-7.48	0	135	H
2	** 5.1496	51.74	Pk	34.1	-19.3	0	66.54	-	-	74	-7.46	0	135	H
3	*** 5.15	33.44	ADV	34.1	-19.3	.98	49.22	54	-4.78	-	-	0	135	H
4	** 5.1497	33.12	ADV	34.1	-19.3	.98	48.9	54	-5.1	-	-	0	135	H

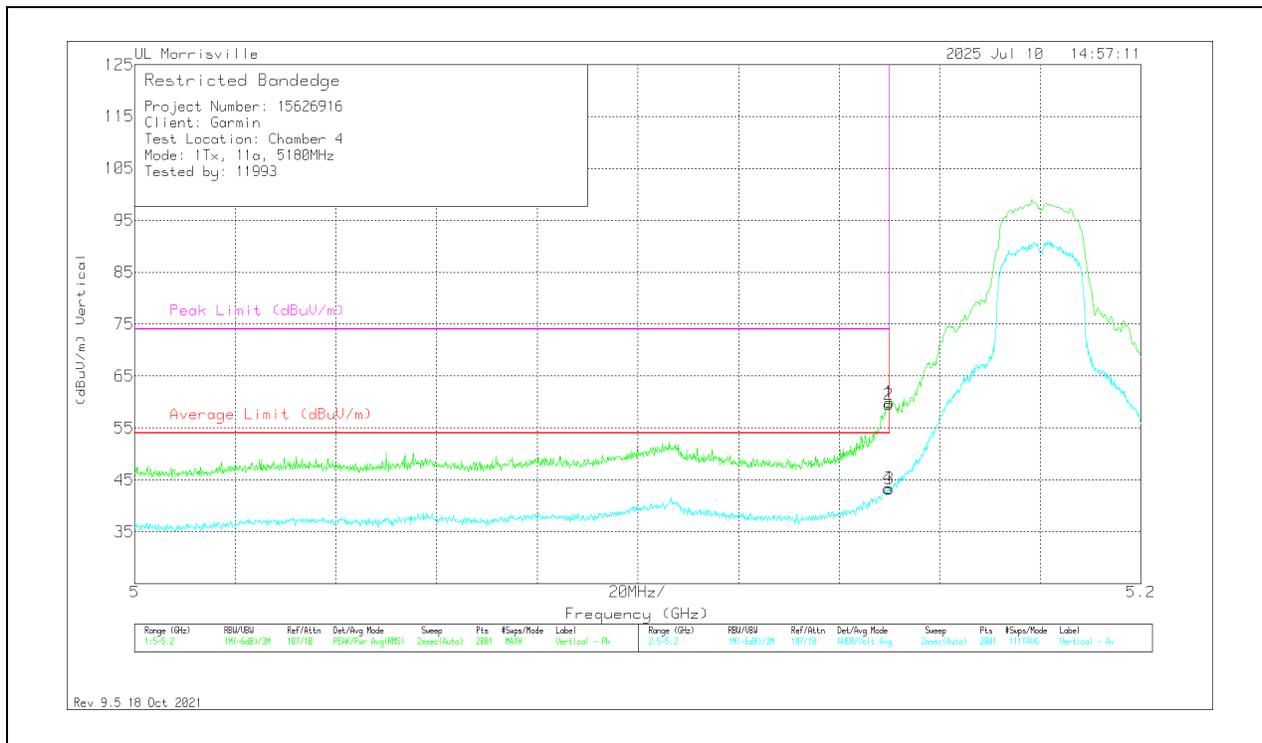
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.15	45.1	Pk	34.1	-19.3	0	59.9	-	-	74	-14.1	110	118	V
2	** 5.1499	44.68	Pk	34.1	-19.3	0	59.48	-	-	74	-14.52	110	118	V
3	*** 5.15	27.51	ADV	34.1	-19.3	.98	43.29	54	-10.71	-	-	110	118	V
4	** 5.1498	27.65	ADV	34.1	-19.3	.98	43.43	54	-10.57	-	-	110	118	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

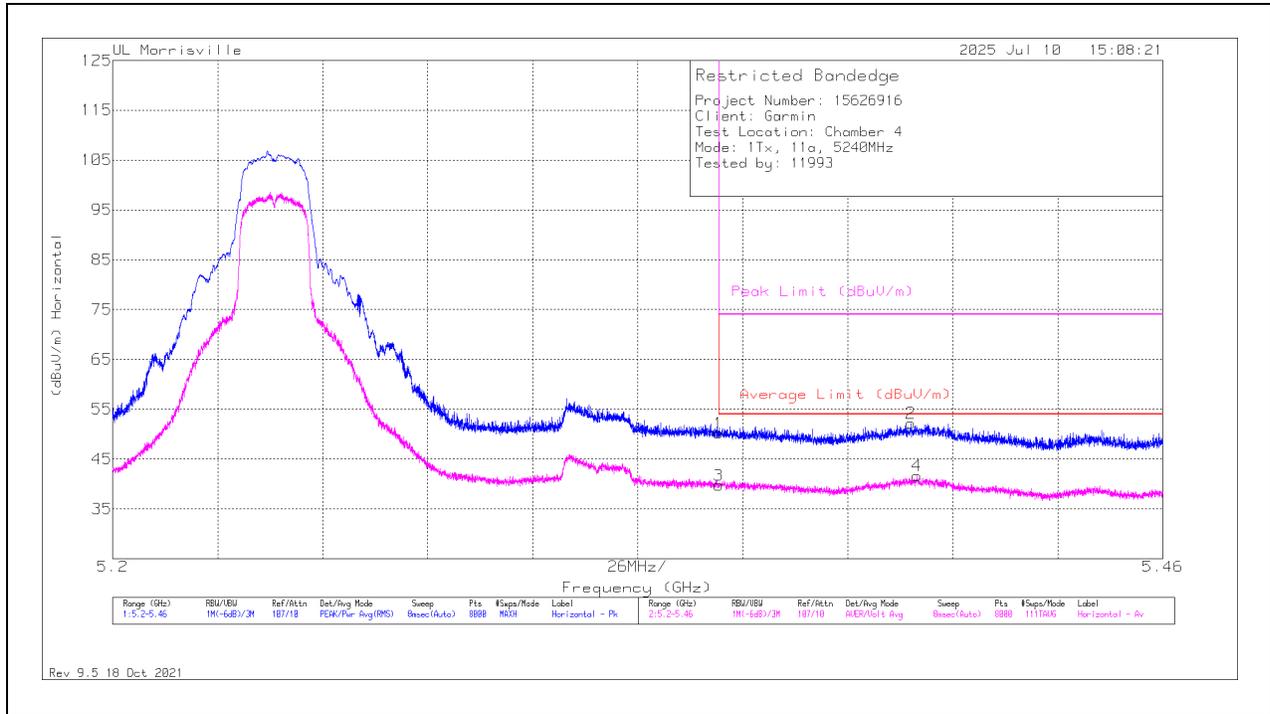
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.35001	35.22	Pk	34.4	-19.4	0	50.22	-	-	74	-23.78	22	112	H
2	*** 5.39762	36.91	Pk	34.4	-19.2	0	52.11	-	-	74	-21.89	22	112	H
3	*** 5.35001	23.73	ADV	34.4	-19.4	.98	39.71	54	-14.29	-	-	22	112	H
4	*** 5.39918	25.44	ADV	34.4	-19.2	.98	41.62	54	-12.38	-	-	22	112	H

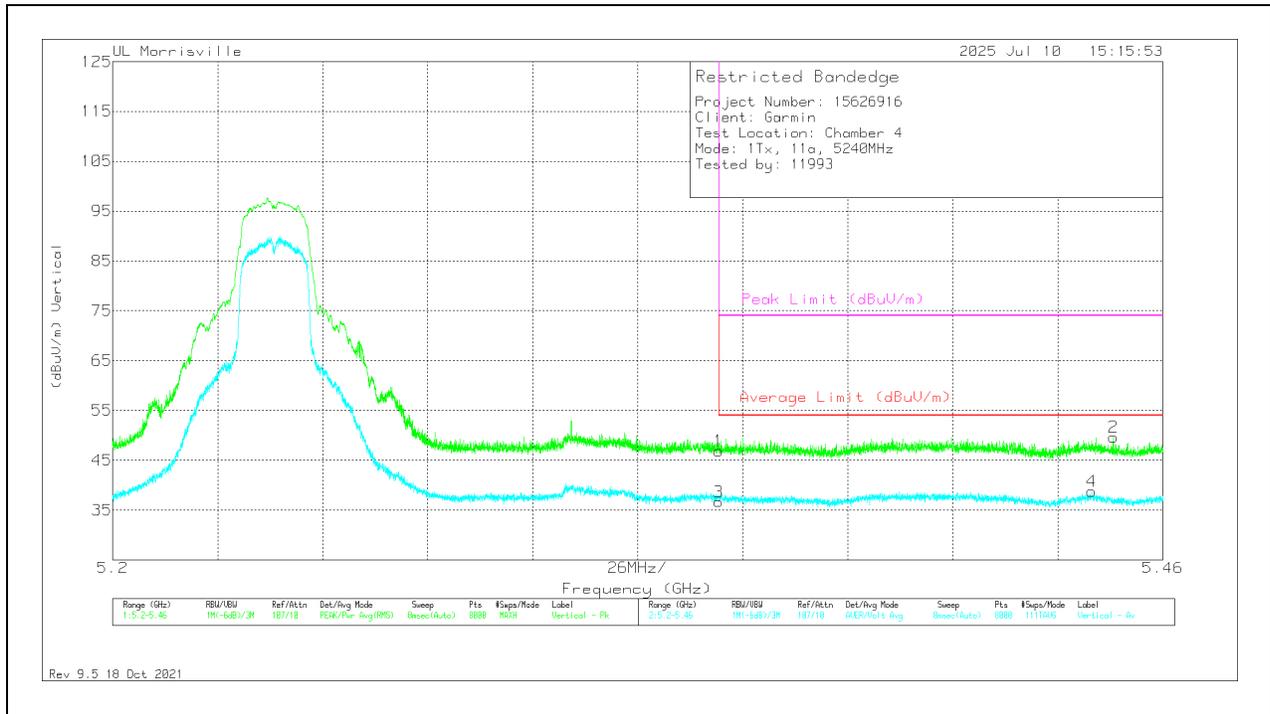
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.35001	31.93	Pk	34.4	-19.4	0	46.93	-	-	74	-27.07	108	130	V
2	* ** 5.44775	34.28	Pk	34.4	-19	0	49.68	-	-	74	-24.32	108	130	V
3	* ** 5.35001	20.71	ADV	34.4	-19.4	.98	36.69	54	-17.31	-	-	108	130	V
4	* ** 5.44235	21.87	ADV	34.4	-18.5	.98	38.75	54	-15.25	-	-	108	130	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

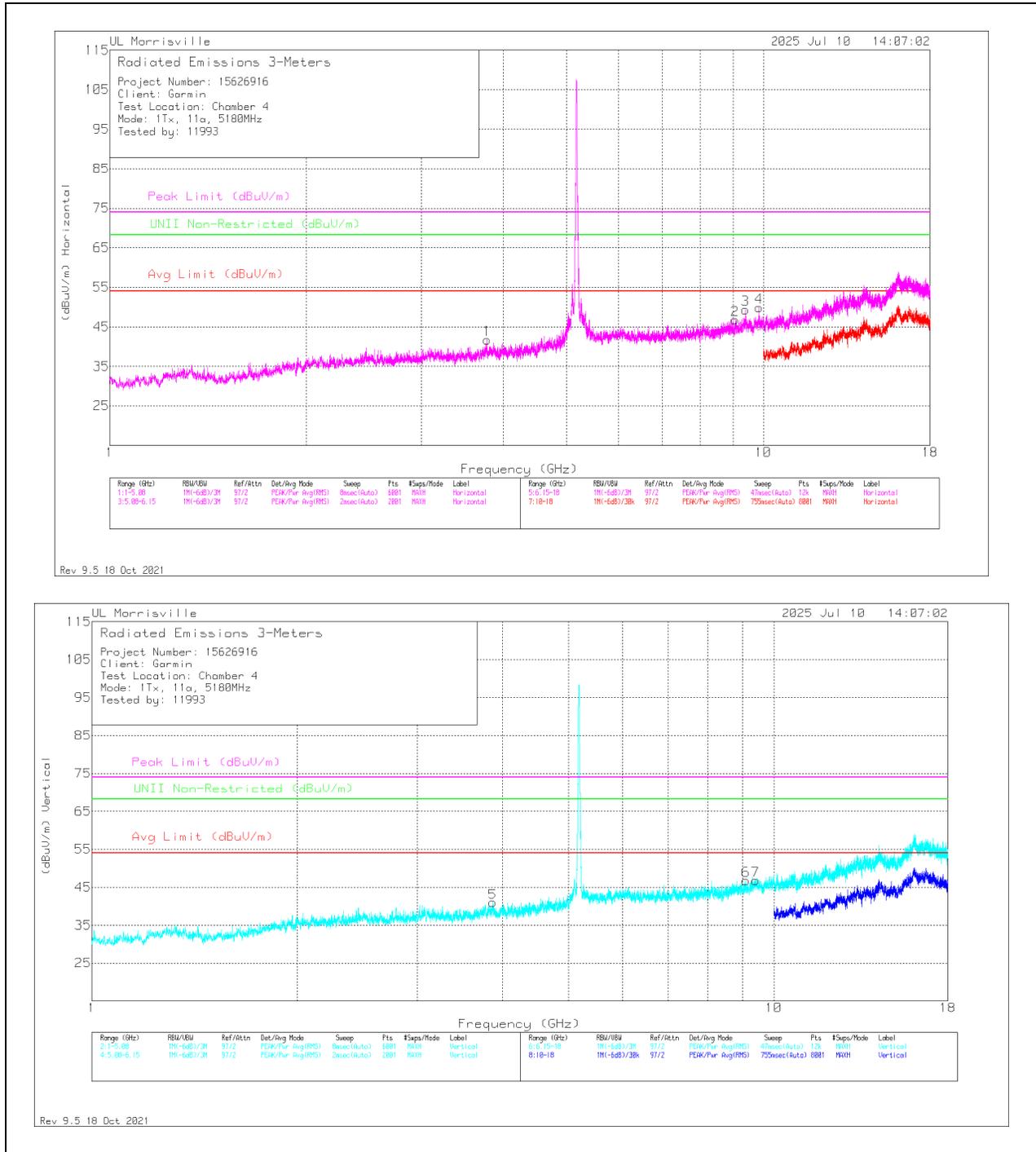
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 3.77916	42.12	Pk	33.3	-33.7	0	41.72	54	-12.28	74	-32.28	-	-	0-360	100	H
5	*** 3.87164	39.69	Pk	33.5	-32.2	0	40.99	54	-13.01	74	-33.01	-	-	0-360	200	V
2	*** 9.05621	34.95	Pk	36	-24.2	0	46.75	54	-7.25	74	-27.25	-	-	0-360	100	H
3	*** 9.39343	36.54	PK-U	36.5	-24.5	0	48.54	-	-	74	-25.46	-	-	62	163	H
	*** 9.39118	24.24	ADV	36.5	-24.8	.98	36.92	54	-17.08	-	-	-	-	62	163	H
6	*** 9.10954	35.04	Pk	36	-24.2	0	46.84	54	-7.16	74	-27.16	-	-	0-360	200	V
7	*** 9.40974	34.46	Pk	36.5	-24.1	0	46.86	54	-7.14	74	-27.14	-	-	0-360	200	V
4	9.85806	37.01	Pk	36.8	-23.9	0	49.91	-	-	-	-	68.2	-18.29	0-360	100	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

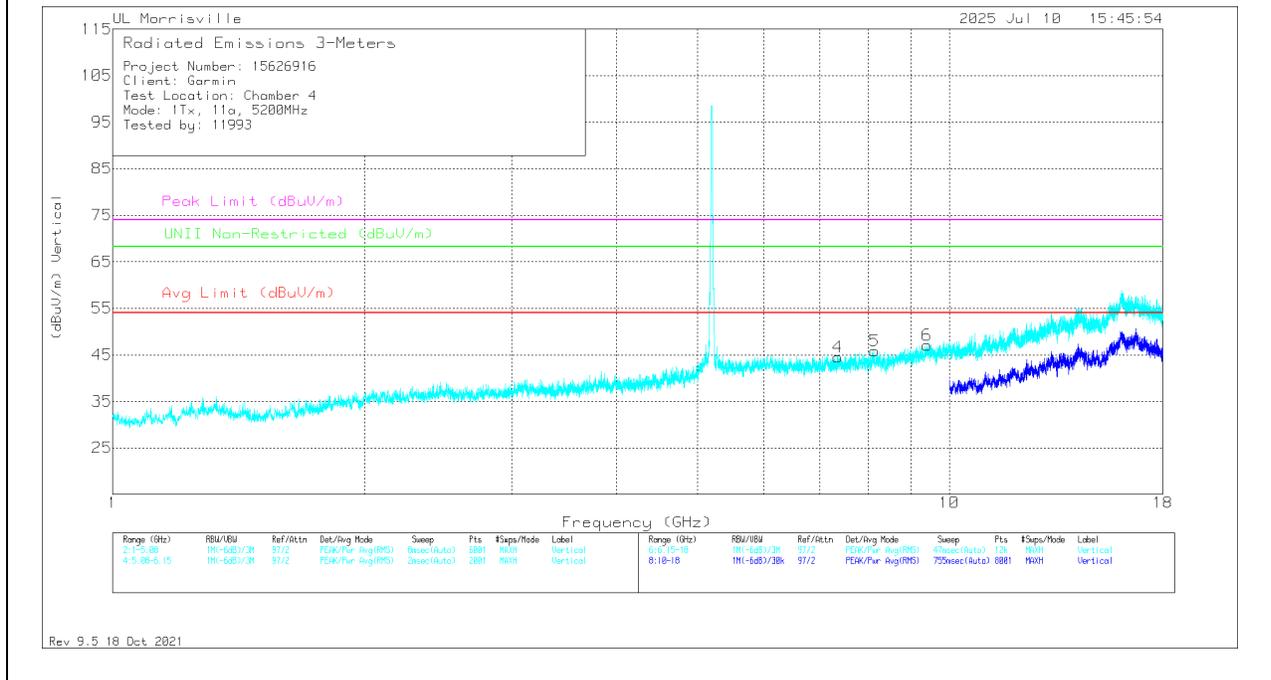
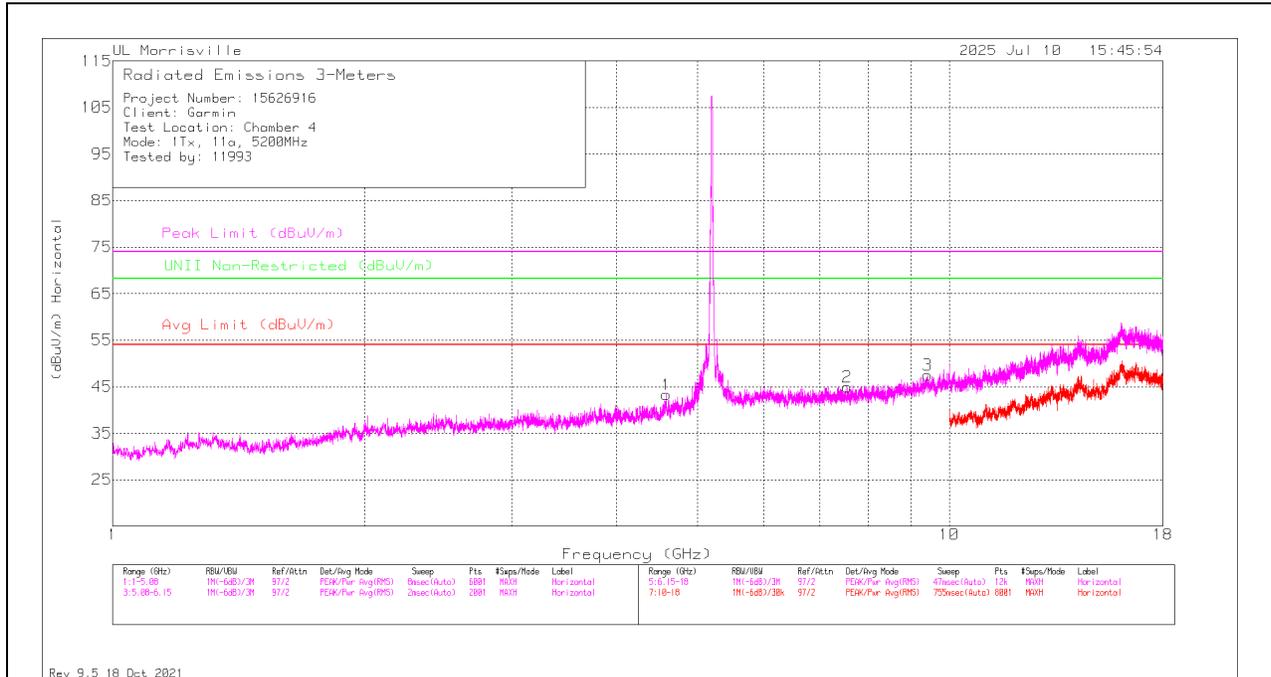
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

PK-U - Maximum Peak

ADV - Linear Voltage Average

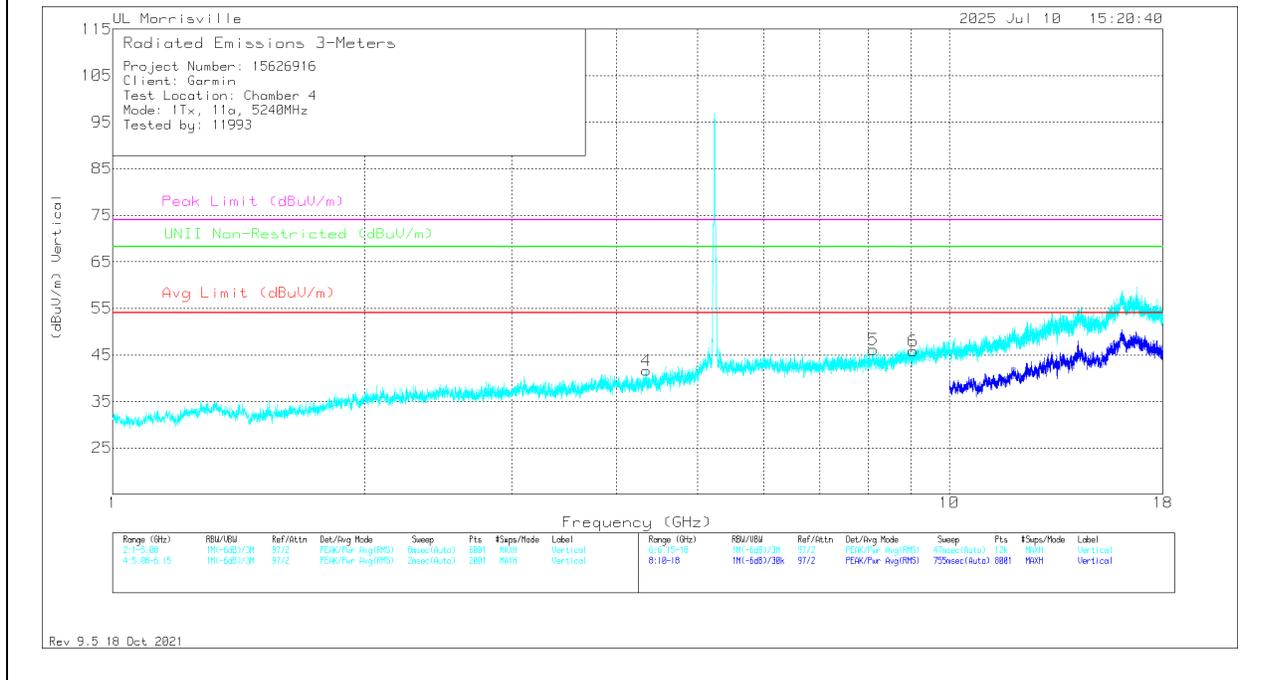
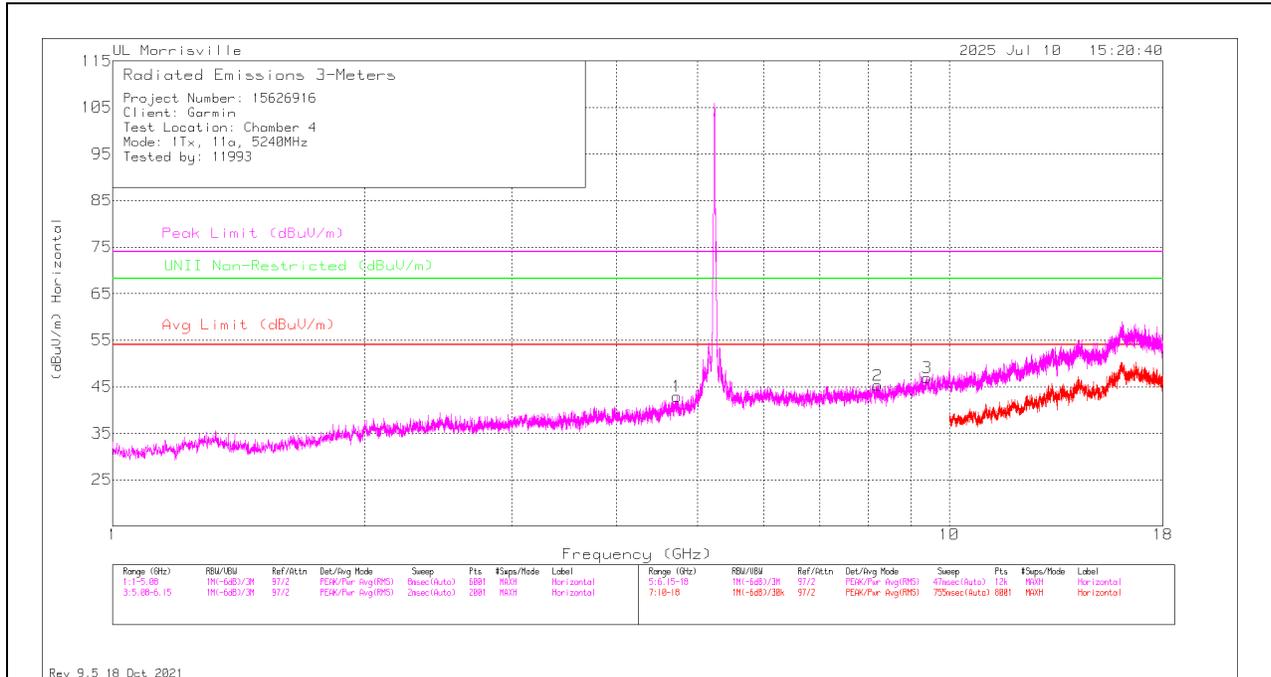
MID CHANNEL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 4.587	40.07	Pk	34.1	-30.9	43.27	54	-10.73	74	-30.73	-	-	0-360	100	H
2	*** 7.5562	36.96	Pk	35.5	-27.5	44.96	54	-9.04	74	-29.04	-	-	0-360	100	H
3	*** 9.42258	35.74	Pk	36.5	-24.7	47.54	54	-6.46	74	-26.46	-	-	0-360	100	H
4	*** 7.35969	36.19	Pk	35.5	-27.1	44.59	54	-9.41	74	-29.41	-	-	0-360	200	V
5	*** 8.14278	37.17	Pk	35.6	-26.9	45.87	54	-8.13	74	-28.13	-	-	0-360	200	V
6	*** 9.41073	34.76	Pk	36.5	-24.2	47.06	54	-6.94	74	-26.94	-	-	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

HIGH CHANNEL RESULTS



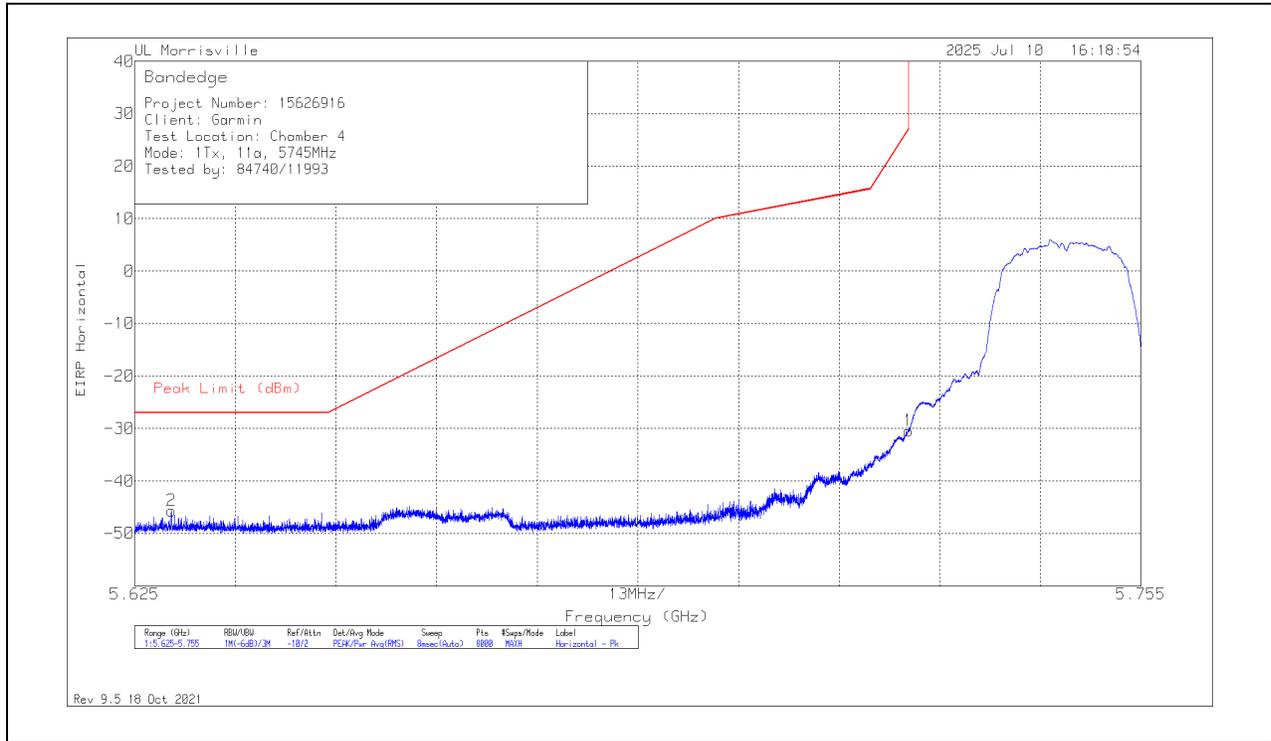
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 4.72436	40.62	Pk	34	-31.7	42.92	54	-11.08	74	-31.08	-	-	0-360	100	H
4	*** 4.34356	39.65	Pk	33.5	-31.5	41.65	54	-12.35	74	-32.35	-	-	0-360	200	V
2	*** 8.21684	36.18	Pk	35.7	-26.6	45.28	54	-8.72	74	-28.72	-	-	0-360	100	H
3	*** 9.41073	34.69	Pk	36.5	-24.2	46.99	54	-7.01	74	-27.01	-	-	0-360	100	H
5	*** 8.11019	36.99	Pk	35.6	-26.4	46.19	54	-7.81	74	-27.81	-	-	0-360	200	V
6	*** 9.05918	34.42	Pk	36	-24.5	45.92	54	-8.08	74	-28.08	-	-	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

10.1.2. TX ABOVE 1 GHz 802.11a MODE IN THE 5.8 GHz BAND

BANDEDGE (LOW CHANNEL)

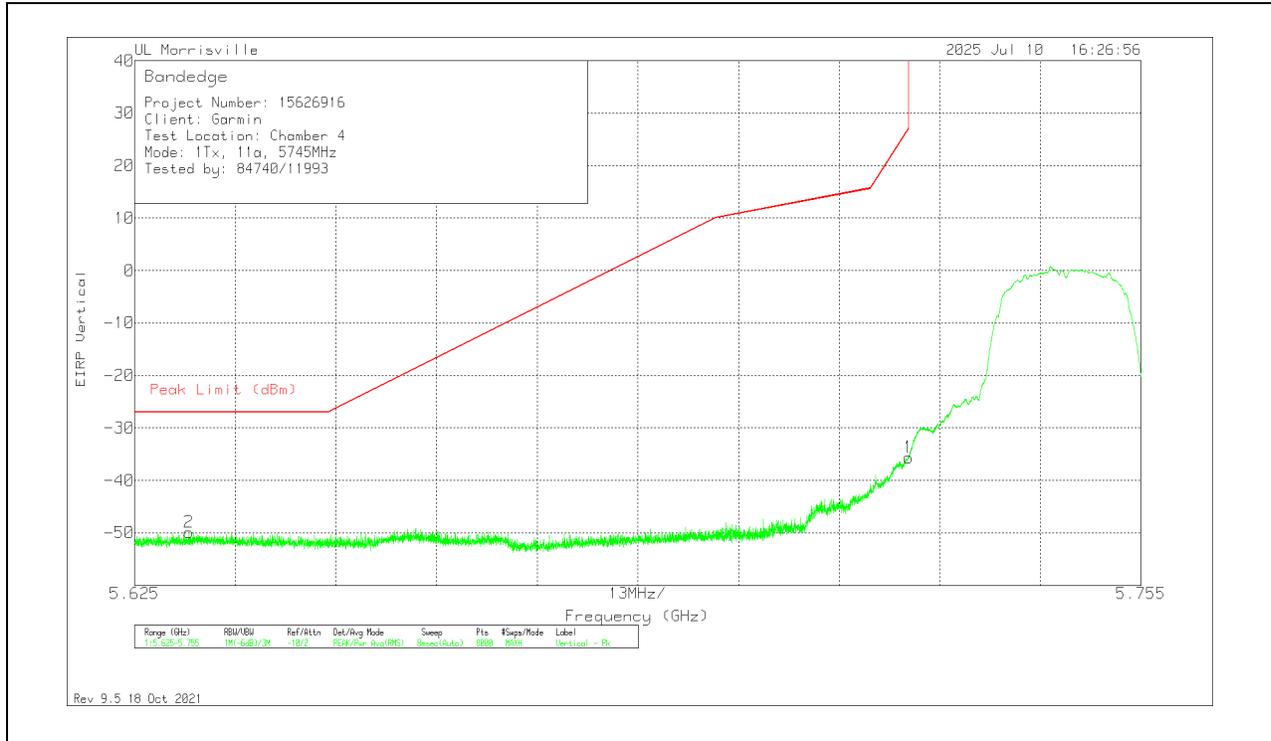
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206211 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.62975	-73.24	Pk	34.4	-18.6	11.8	-45.64	-27	-18.64	24	102	H
1	5.725	-58.41	Pk	34.5	-18.3	11.8	-30.41	27	-57.41	24	102	H

Pk - Peak detector

VERTICAL RESULT

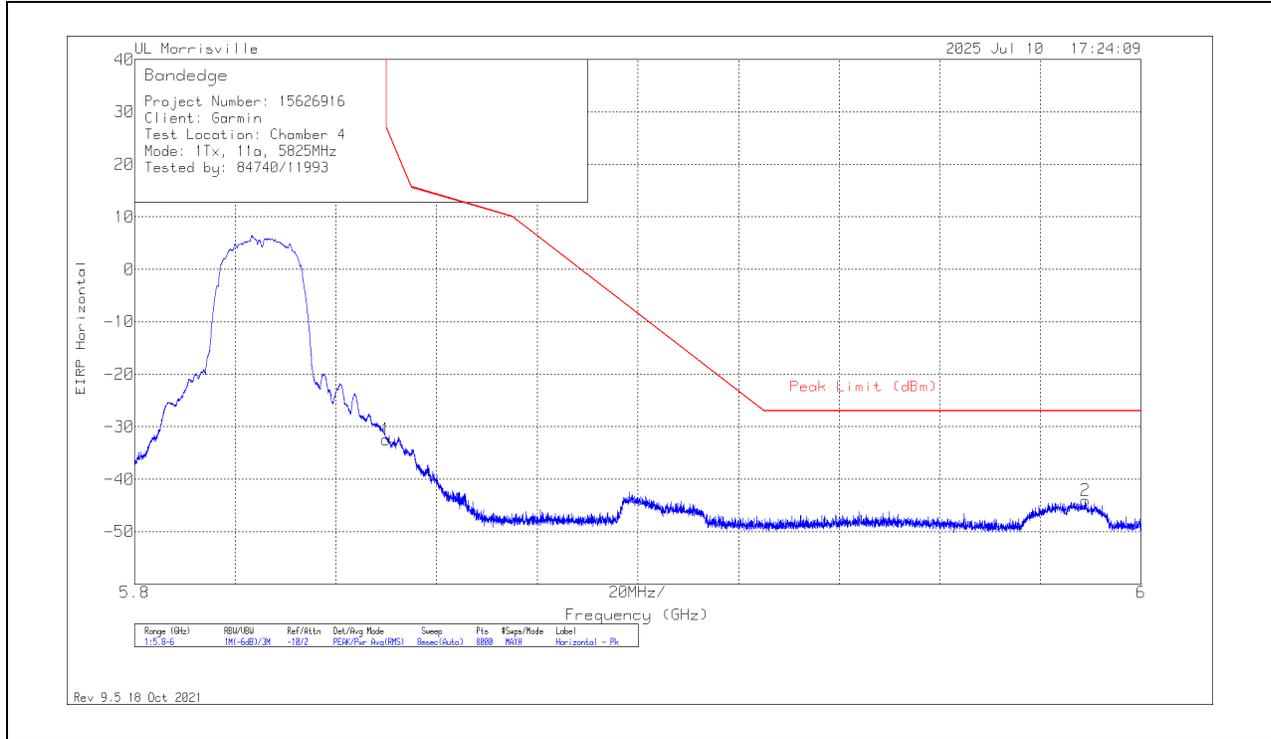


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206211 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.63202	-77.47	Pk	34.4	-18.6	11.8	-49.87	-27	-22.87	146	395	V
1	5.725	-63.61	Pk	34.5	-18.3	11.8	-35.61	27	-62.61	146	395	V

Pk - Peak detector

BANDEDGE (HIGH CHANNEL)

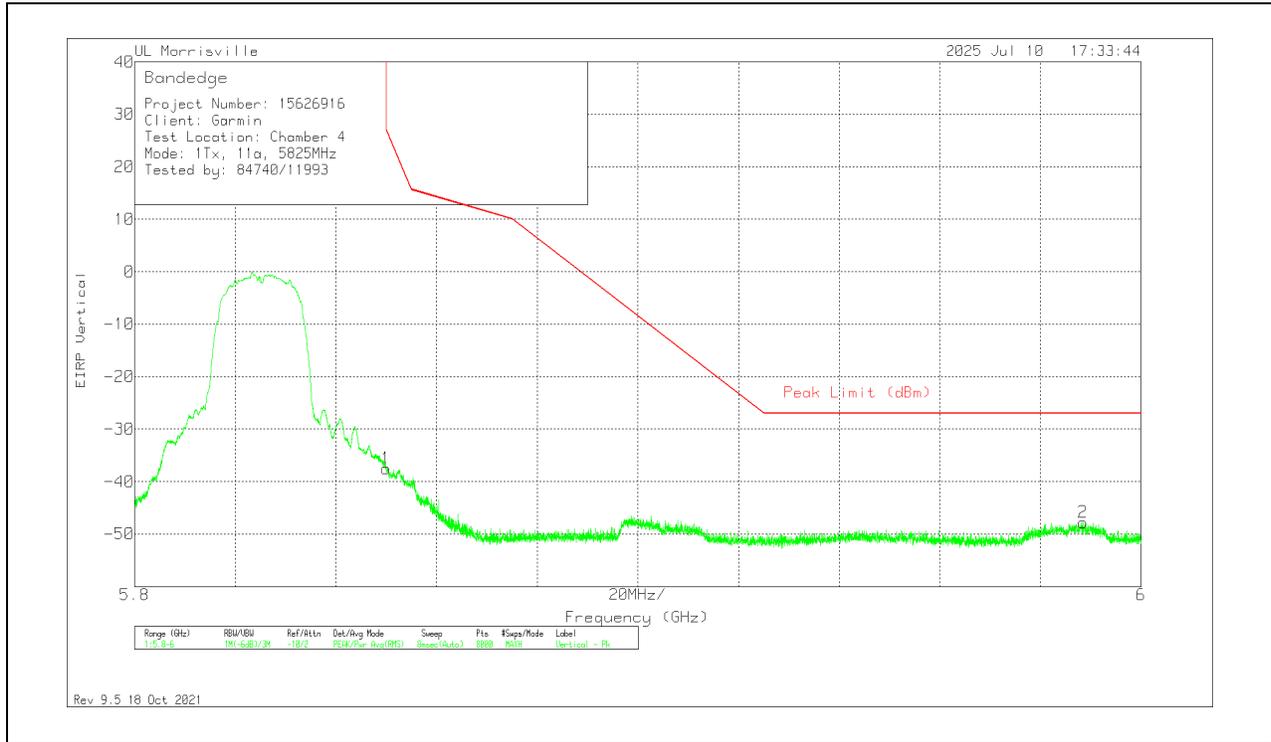
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206211 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85001	-60.28	Pk	34.8	-18.7	11.8	-32.38	26.99	-59.37	29	127	H
2	5.989	-72.31	Pk	35.2	-18.8	11.8	-44.11	-27	-17.11	29	127	H

Pk - Peak detector

VERTICAL RESULT

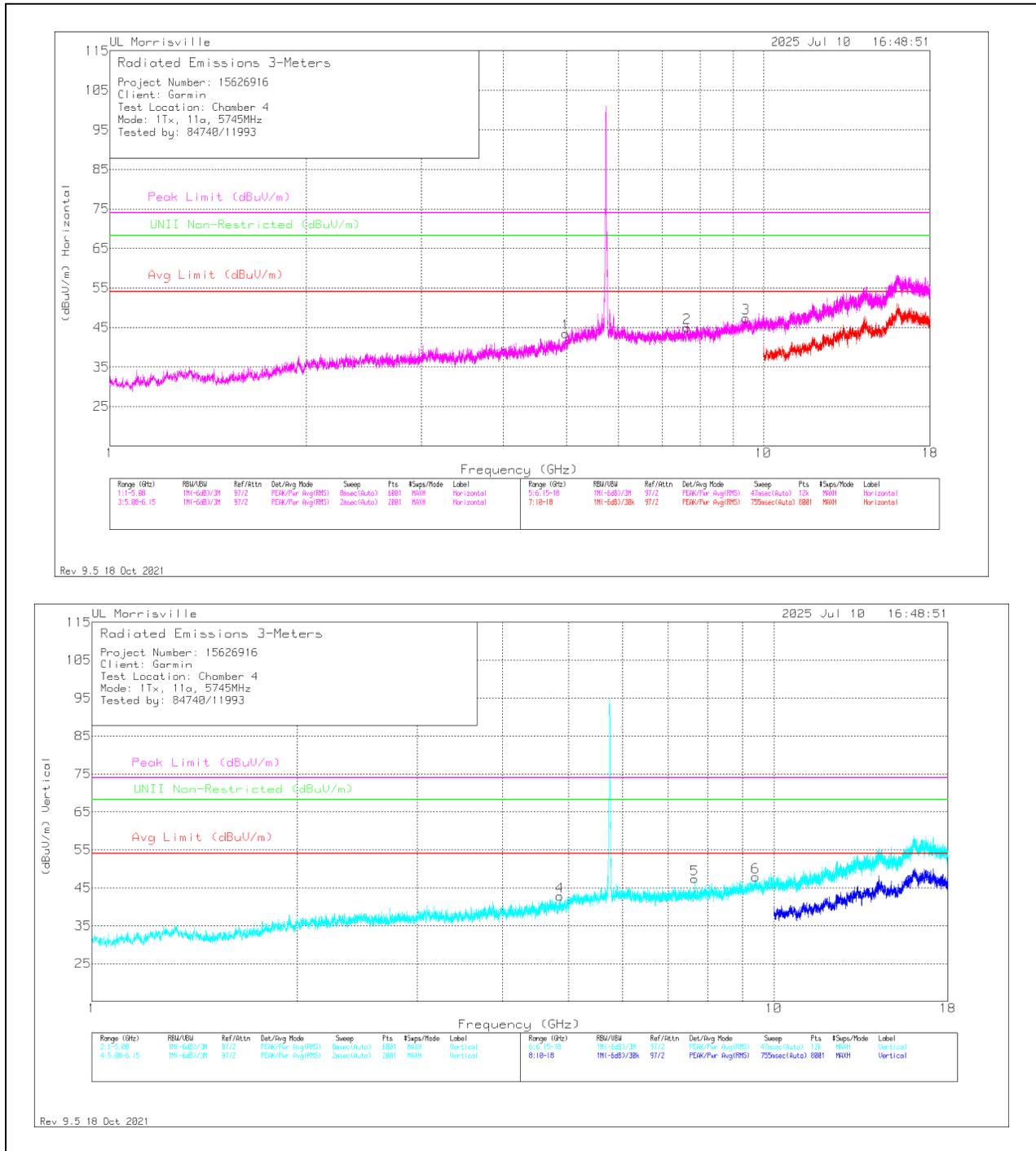


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206211 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85001	-65.45	Pk	34.8	-18.7	11.8	-37.55	26.99	-64.54	26	115	V
2	5.98847	-75.96	Pk	35.2	-18.8	11.8	-47.76	-27	-20.76	26	115	V

Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



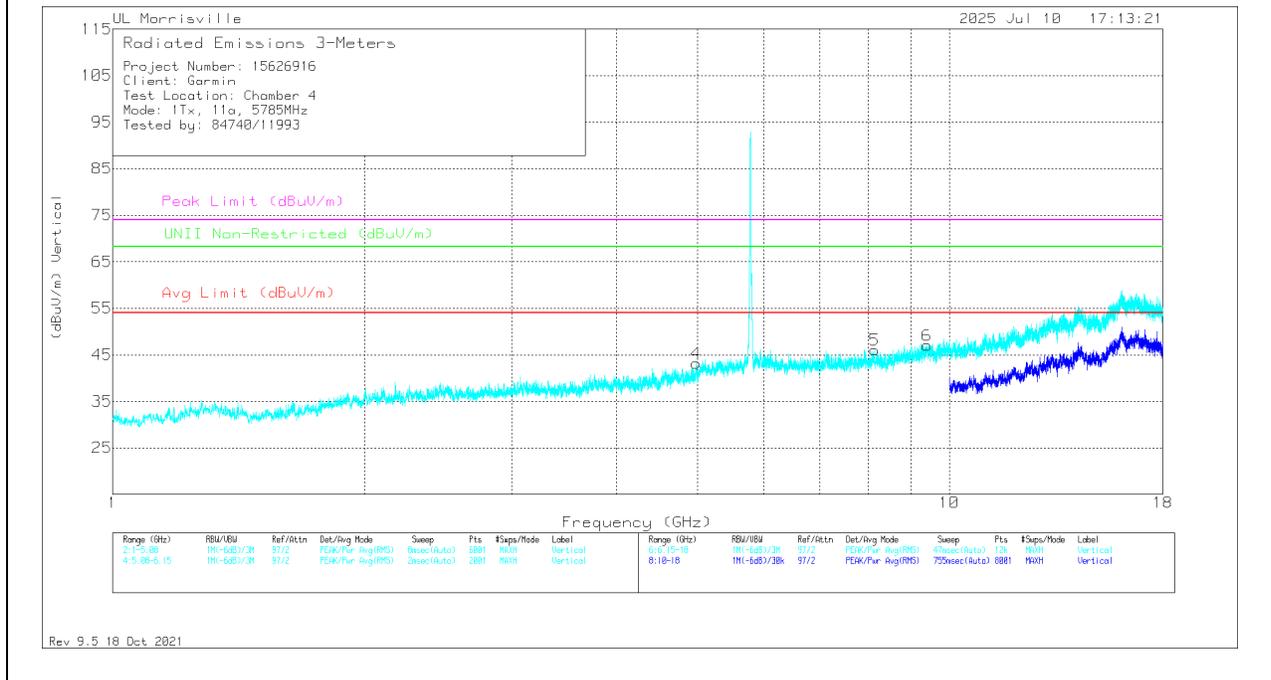
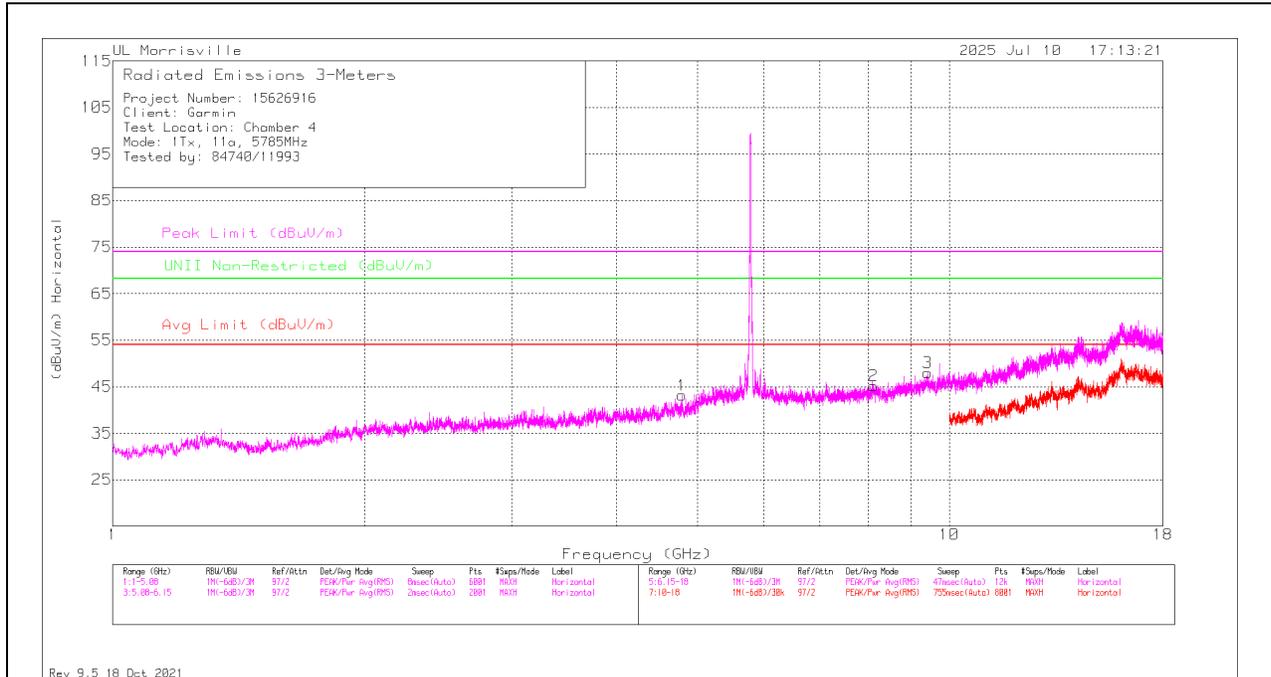
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 4.98276	39.45	Pk	33.9	-29.9	43.45	54	-10.55	74	-30.55	-	-	0-360	100	H
4	*** 4.85356	40.49	Pk	34	-31.7	42.79	54	-11.21	74	-31.21	-	-	0-360	200	V
2	*** 7.64409	35.95	Pk	35.6	-26.6	44.95	54	-9.05	74	-29.05	-	-	0-360	100	H
3	*** 9.40381	34.72	Pk	36.5	-23.9	47.32	54	-6.68	74	-26.68	-	-	0-360	100	H
5	*** 7.65989	38.71	Pk	35.6	-26.9	47.41	54	-6.59	74	-26.59	-	-	0-360	200	V
6	*** 9.4048	35.33	Pk	36.5	-23.9	47.93	54	-6.07	74	-26.07	-	-	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

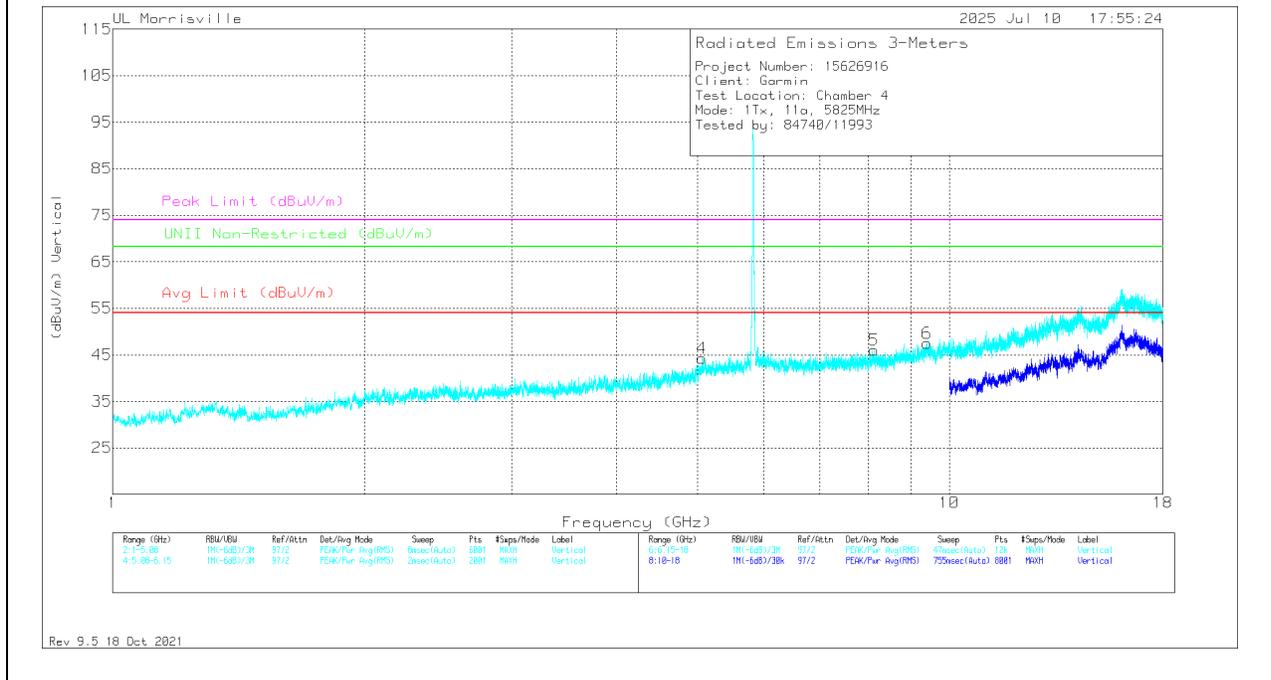
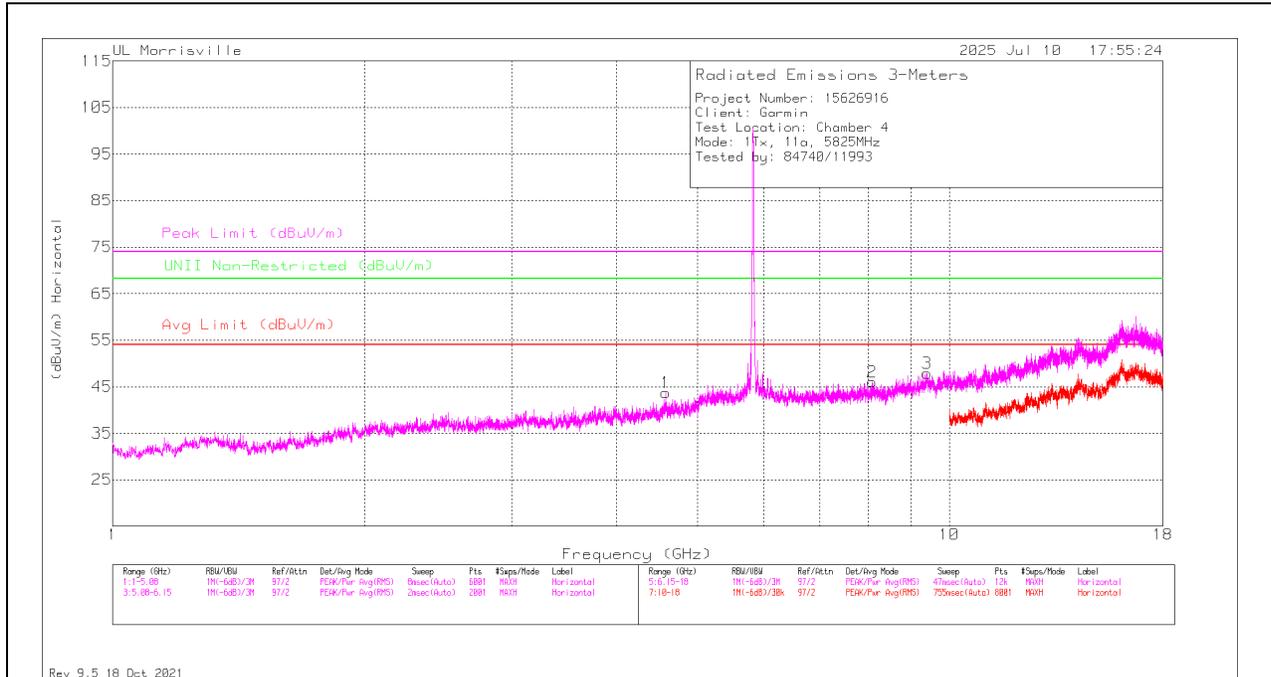
MID CHANNEL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.7876	39.84	Pk	33.9	-30.6	43.14	54	-10.86	74	-30.86	-	-	0-360	100	H
4	* ** 4.98344	39.16	Pk	33.9	-29.9	43.16	54	-10.84	74	-30.84	-	-	0-360	200	V
2	* ** 8.11019	35.99	Pk	35.6	-26.4	45.19	54	-8.81	74	-28.81	-	-	0-360	100	H
3	* ** 9.42554	36.19	Pk	36.5	-24.7	47.99	54	-6.01	74	-26.01	-	-	0-360	100	H
5	* ** 8.1487	37.57	Pk	35.6	-27.1	46.07	54	-7.93	74	-27.93	-	-	0-360	200	V
6	* ** 9.40776	34.42	Pk	36.5	-23.9	47.02	54	-6.98	74	-26.98	-	-	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

HIGH CHANNEL RESULTS



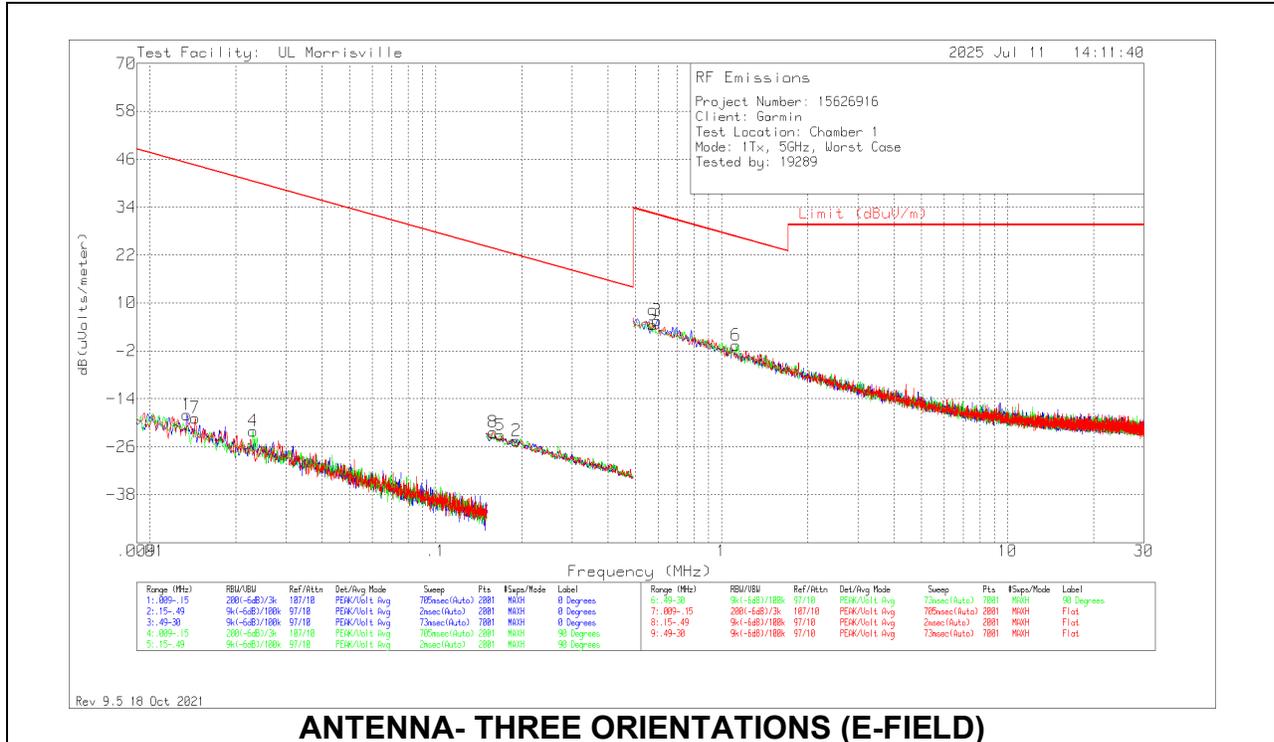
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 4.58292	40.58	Pk	34.1	-31	43.68	54	-10.32	74	-30.32	-	-	0-360	100	H
4	*** 5.05824	39.68	Pk	34.1	-29.5	44.28	54	-9.72	74	-29.72	-	-	0-360	200	V
2	*** 8.08945	36.97	Pk	35.6	-26.5	46.07	54	-7.93	74	-27.93	-	-	0-360	100	H
3	*** 9.40974	35.44	Pk	36.5	-24.1	47.84	54	-6.16	74	-26.16	-	-	0-360	100	H
5	*** 8.12303	36.99	Pk	35.6	-26.6	45.99	54	-8.01	74	-28.01	-	-	0-360	200	V
6	*** 9.4048	34.91	Pk	36.5	-23.9	47.51	54	-6.49	74	-26.49	-	-	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

10.2. WORST CASE 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).

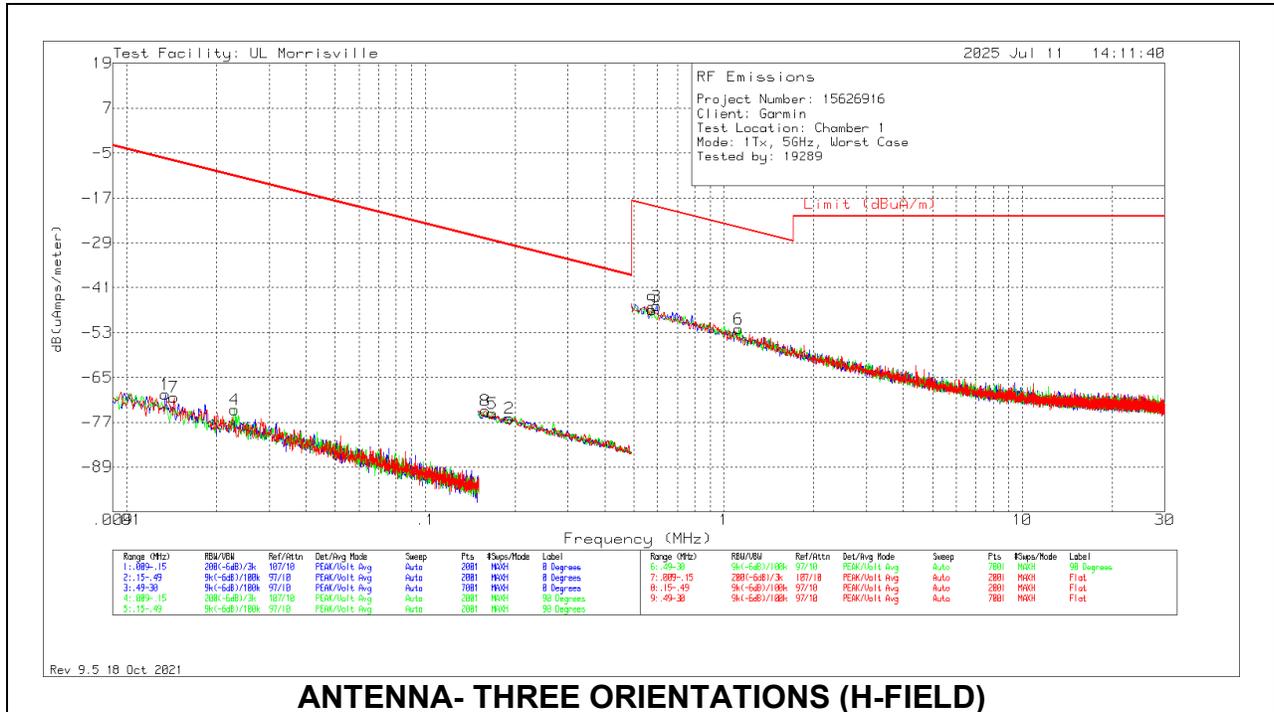
SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)



ANTENNA- THREE ORIENTATIONS (E-FIELD)

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	ANT (dB/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
1	.01347	44.66	Pk	17.2	.1	-80	-18.04	45.02	65.02	-63.06	0-360	0 degs
7	.0144	44.26	Pk	16.8	.1	-80	-18.84	44.44	64.44	-63.28	0-360	Flat
4	.02299	44.08	Pk	13.7	.1	-80	-22.12	40.37	60.37	-62.49	0-360	90 degs
8	.15893	46.5	Pk	11	.1	-80	-22.4	23.58	43.58	-45.98	0-360	Flat
5	.16794	45.78	Pk	11	.1	-80	-23.12	23.1	43.1	-46.22	0-360	90 degs
2	.19165	44.4	Pk	11	.1	-80	-24.5	21.95	41.95	-46.45	0-360	0 degs
9	.57432	33.42	Pk	11	.1	-40	4.52	32.42	-	-27.9	0-360	Flat
3	.5954	34.45	Pk	11	.1	-40	5.55	32.11	-	-26.56	0-360	0 degs
6	1.1224	28.27	Pk	11	.2	-40	-.53	26.6	-	-27.13	0-360	90 degs

Pk - Peak detector



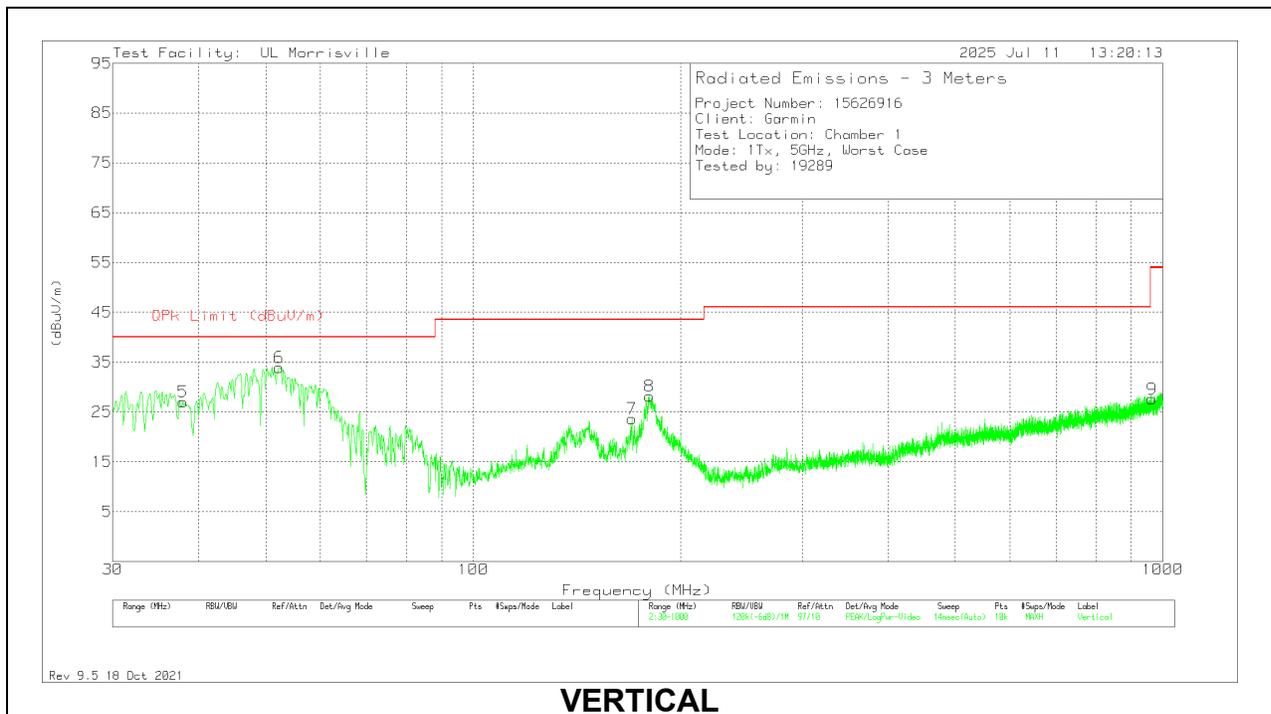
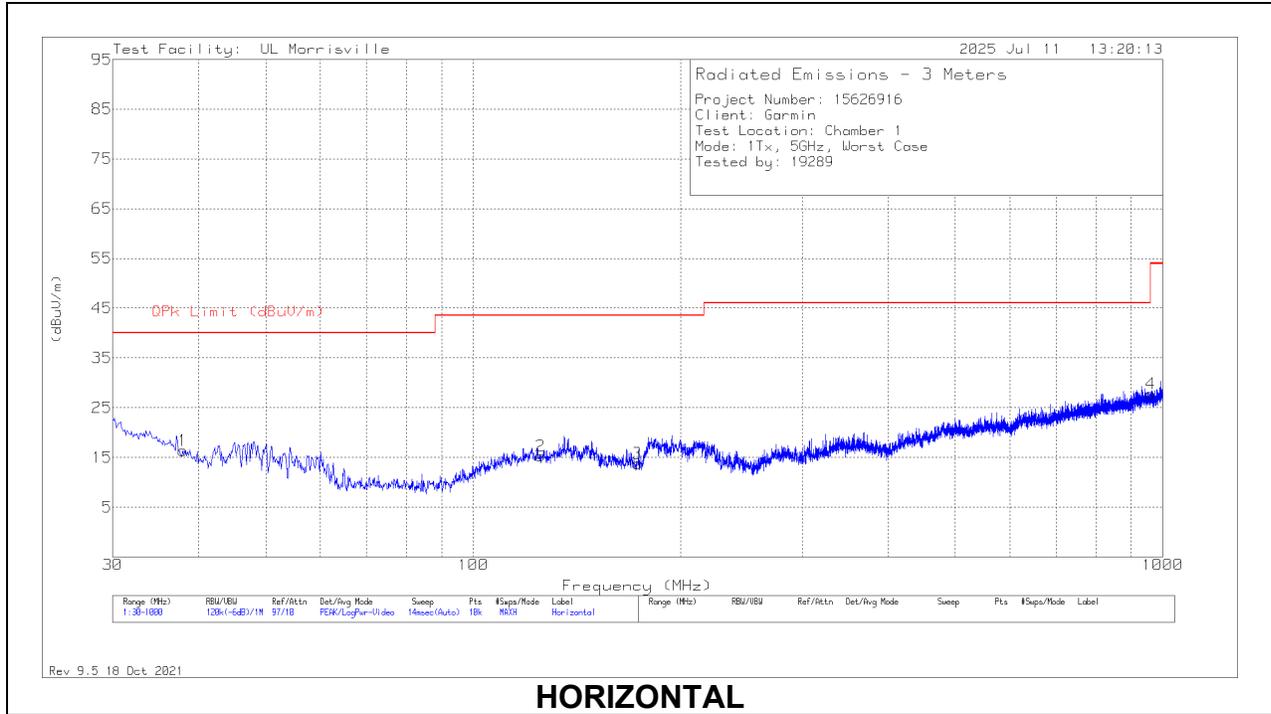
ANTENNA- THREE ORIENTATIONS (H-FIELD)

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	ANT (dB/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
1	.01347	44.66	Pk	-34.3	.1	-80	-69.54	-6.48	13.52	-63.06	0-360	0 degs
7	.0144	44.26	Pk	-34.7	.1	-80	-70.34	-7.06	12.98	-63.28	0-360	Flat
4	.02299	44.08	Pk	-37.8	.1	-80	-73.62	-11.13	9.87	-62.49	0-360	90 degs
8	.15893	46.5	Pk	-40.5	.1	-80	-73.9	-27.92	-7.92	-45.98	0-360	Flat
5	.16794	45.78	Pk	-40.5	.1	-80	-74.62	-28.4	-8.4	-46.22	0-360	90 degs
2	.19165	44.4	Pk	-40.5	.1	-80	-76	-29.55	-9.55	-46.45	0-360	0 degs
9	.57432	33.42	Pk	-40.5	.1	-40	-46.98	-19.08	-	-27.9	0-360	Flat
3	.5954	34.45	Pk	-40.5	.1	-40	-45.95	-19.39	-	-26.56	0-360	0 degs
6	1.1224	28.27	Pk	-40.5	.2	-40	-52.03	-24.9	-	-27.13	0-360	90 degs

Pk - Peak detector

10.3. WORST CASE BELOW 1 GHZ

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)

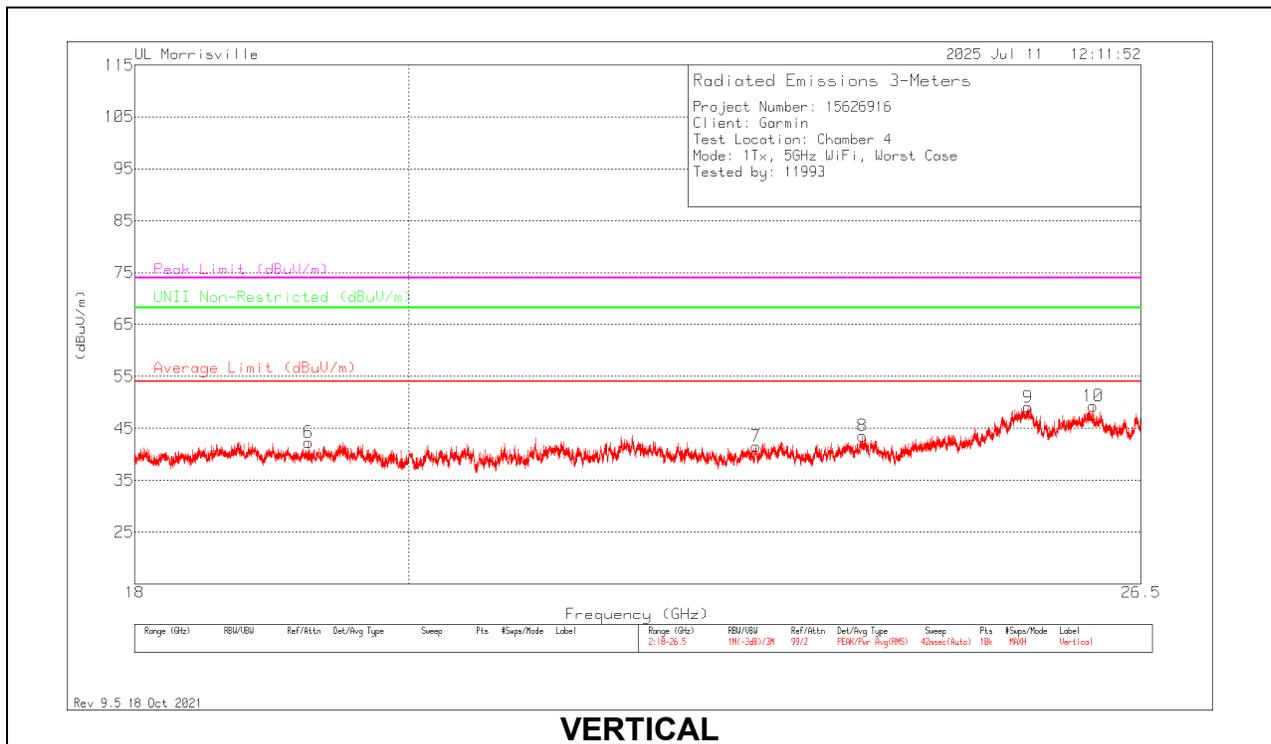
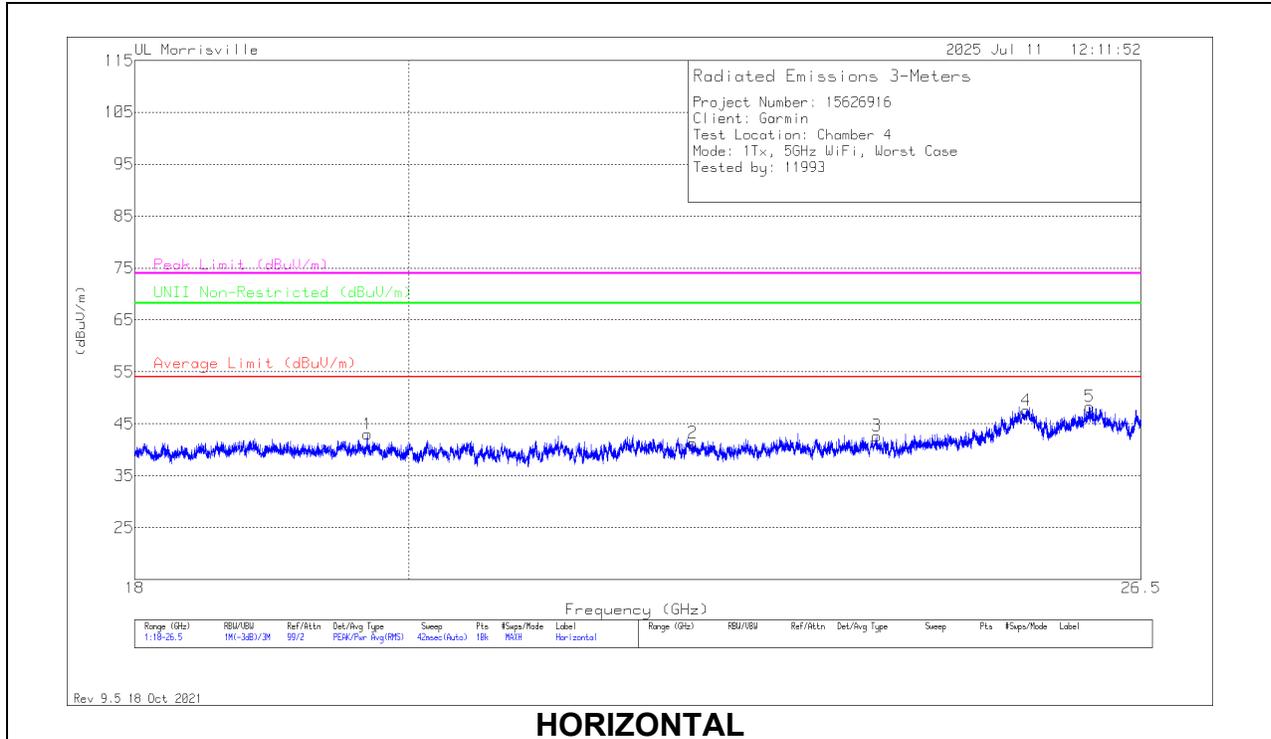


Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90629 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	37.954	26.99	Pk	21.2	-31.8	16.39	40	-23.61	0-360	199	H
2	125.254	25.99	Pk	20.1	-30.8	15.29	43.52	-28.23	0-360	299	H
3	172.978	25.98	Pk	17.9	-30.1	13.78	43.52	-29.74	0-360	199	H
4	960.521	24.95	Pk	29	-26.2	27.75	53.97	-26.22	0-360	199	H
5	37.954	37.62	Pk	21.2	-31.8	27.02	40	-12.98	0-360	100	V
7	169.971	35.52	Pk	18.1	-30	23.62	43.52	-19.9	0-360	100	V
9	964.886	24.6	Pk	29	-26	27.6	53.97	-26.37	0-360	100	V
6	52.31	51.29	Pk	13.7	-31.1	33.89	40	-6.11	0-360	100	V
8	180.059	40.43	Pk	17.5	-29.8	28.13	43.52	-15.39	0-360	100	V

Pk - Peak detector

10.4. WORST CASE 18-26 GHZ

SPURIOUS EMISSIONS 18-26 GHz (WORST-CASE CONFIGURATION)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	91186 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 19.68538	49.87	Pk	32.6	-39.5	42.97	54	-11.03	74	-31.03	-	-	0-360	100	H
2	*** 22.30822	47.64	Pk	33.3	-39.7	41.24	54	-12.76	74	-32.76	-	-	0-360	100	H
3	*** 23.94261	46.72	Pk	33.8	-37.9	42.62	54	-11.38	74	-31.38	-	-	0-360	200	H
6	*** 19.24258	49.63	Pk	32.6	-39.9	42.33	54	-11.67	74	-31.67	-	-	0-360	200	V
7	*** 22.85641	46.46	Pk	33.5	-38.4	41.56	54	-12.44	74	-32.44	-	-	0-360	250	V
8	*** 23.80747	47.48	Pk	34	-37.9	43.58	54	-10.42	74	-30.42	-	-	0-360	150	V
4	25.35389	45.67	Pk	34.1	-32.2	47.57	-	-	-	-	68.2	-20.63	0-360	250	H
9	25.37556	46.8	Pk	34.1	-31.8	49.1	-	-	-	-	68.2	-19.1	0-360	200	V
5	25.9807	47.21	Pk	34.6	-33.5	48.31	-	-	-	-	68.2	-19.89	0-360	250	H
10	26.01895	48.8	Pk	34.7	-34.2	49.3	-	-	-	-	68.2	-18.9	0-360	300	V

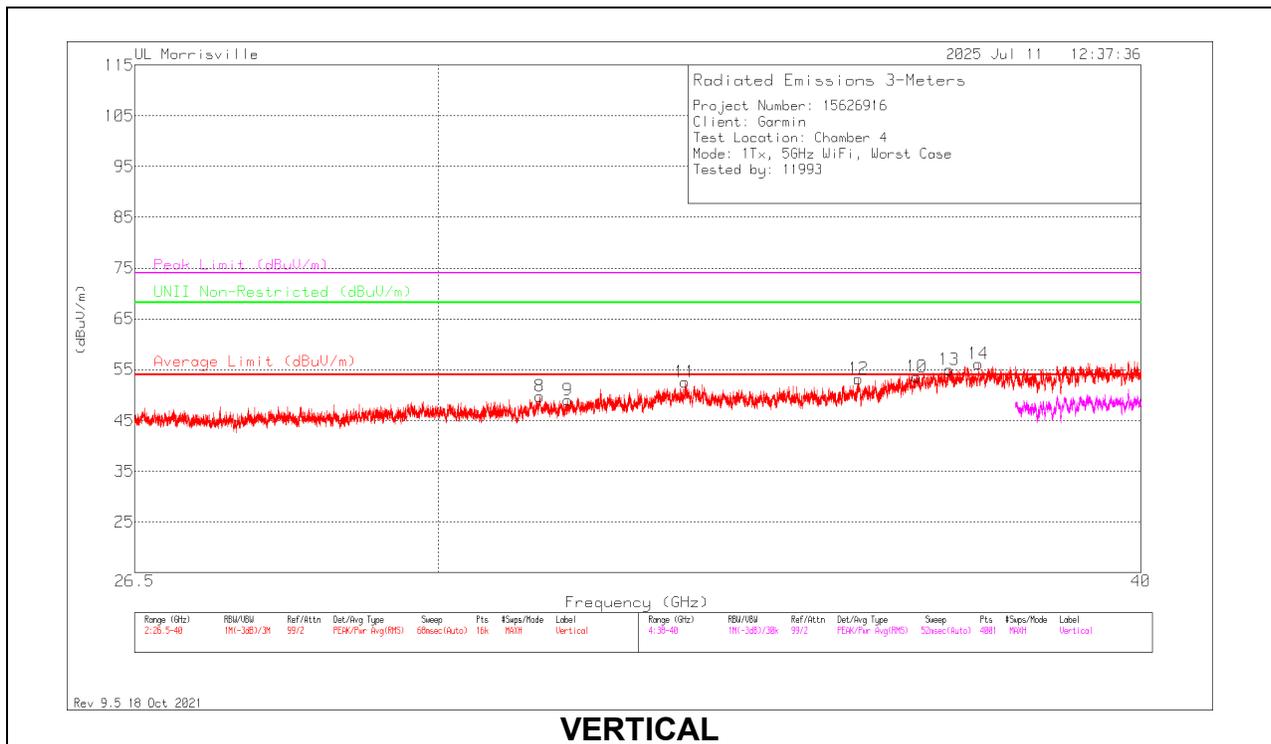
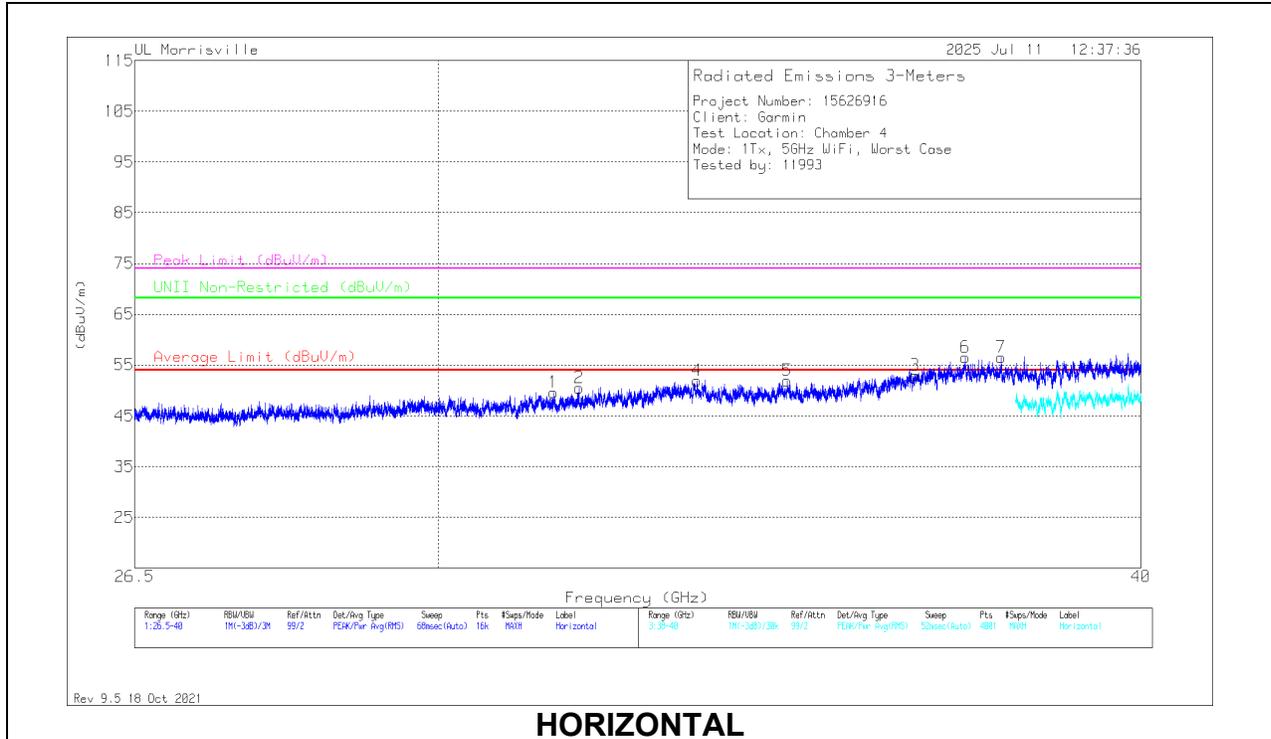
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

10.5. WORST CASE 26-40 GHZ

SPURIOUS EMISSIONS 26-40 GHz (WORST-CASE CONFIGURATION)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	204705 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 31.45293	44.13	PK-U	36.7	-31.1	0	49.73	-	-	74	-24.27	-	-	27	221	H
	*** 31.45058	31	ADV	36.7	-31.3	.98	37.38	54	-16.62	74	-36.62	-	-	27	221	H
2	*** 31.78249	44.89	PK-U	37.1	-31.2	0	50.79	-	-	74	-23.21	-	-	58	267	H
	*** 31.7853	31.31	ADV	37.1	-31.5	.98	37.89	54	-16.11	74	-36.11	-	-	58	267	H
3	*** 36.46382	48.97	PK-U	37.9	-32.8	0	54.07	-	-	74	-19.93	-	-	56	395	H
	*** 36.46553	35.84	ADV	37.9	-32.7	.98	42.02	54	-11.98	74	-31.98	-	-	56	395	H
8	*** 31.27689	45.16	PK-U	37	-31	0	51.16	-	-	74	-22.84	-	-	0	141	V
	*** 31.27741	31.61	ADV	37	-31	.98	38.59	54	-15.41	74	-35.41	-	-	0	141	V
9	*** 31.63995	44.21	PK-U	36.9	-30.8	0	50.31	-	-	74	-23.69	-	-	284	326	V
	*** 31.64168	31.03	ADV	36.9	-30.9	.98	38.01	54	-15.99	74	-35.99	-	-	284	326	V
10	*** 36.46458	49.08	PK-U	37.9	-32.7	0	54.28	-	-	74	-19.72	-	-	289	174	V
	*** 36.49888	36.02	ADV	37.9	-32.5	.98	42.4	54	-11.6	74	-31.6	-	-	289	174	V
11	33.19305	45.81	Pk	37	-30.3	0	52.51	-	-	-	-	68.2	-15.69	0-360	300	V
4	33.35335	45.18	Pk	37.1	-30.4	0	51.88	-	-	-	-	68.2	-16.32	0-360	200	H
5	34.6113	44.56	Pk	37.7	-30.3	0	51.96	-	-	-	-	68.2	-16.24	0-360	250	H
12	35.63471	47	Pk	37.7	-31.5	0	53.2	-	-	-	-	68.2	-15	0-360	150	V
13	36.98378	49.12	Pk	38	-32.1	0	55.02	-	-	-	-	68.2	-13.18	0-360	250	V
6	37.22255	49.33	Pk	37.9	-30.7	0	56.53	-	-	-	-	68.2	-11.67	0-360	250	H
14	37.42335	49.74	Pk	37.9	-31.5	0	56.14	-	-	-	-	68.2	-12.06	0-360	150	V
7	37.77264	49.01	Pk	38	-30.5	0	56.51	-	-	-	-	68.2	-11.69	0-360	250	H

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

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.

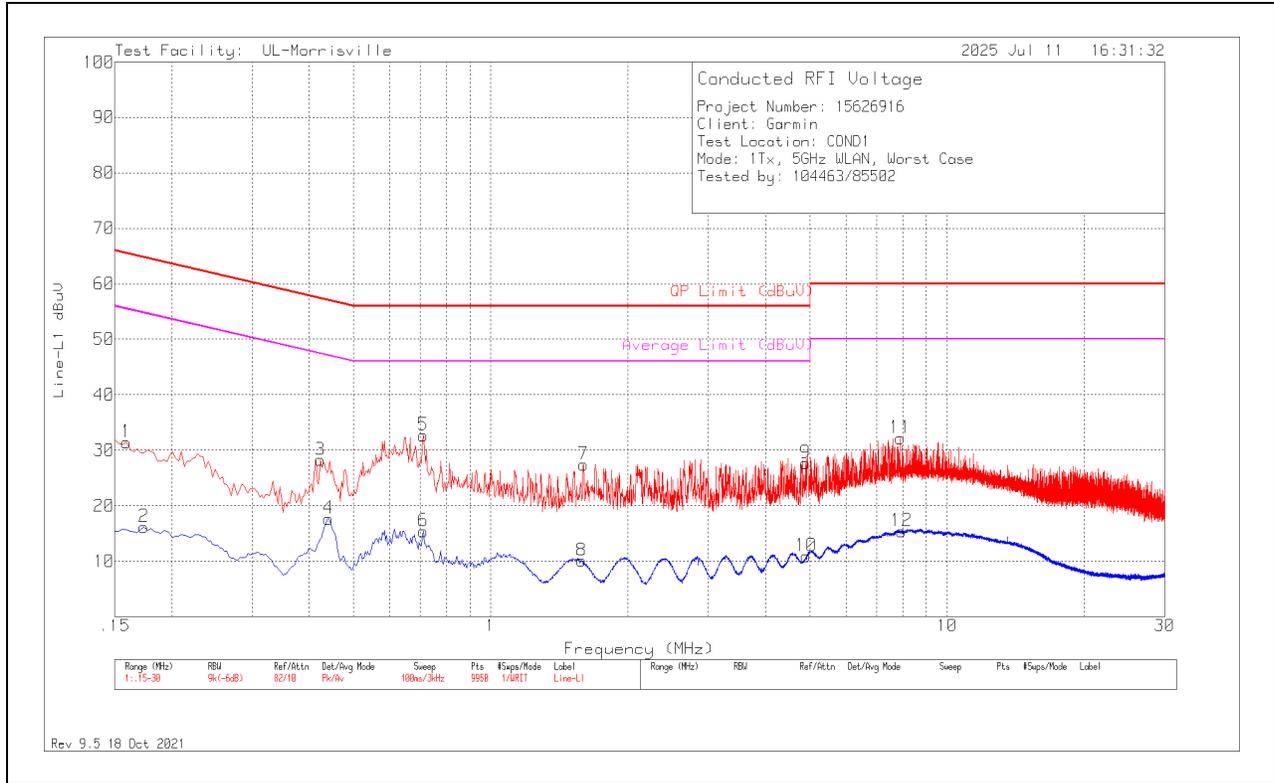
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both lines.

RESULTS

11.1.1. AC Power Line Norm

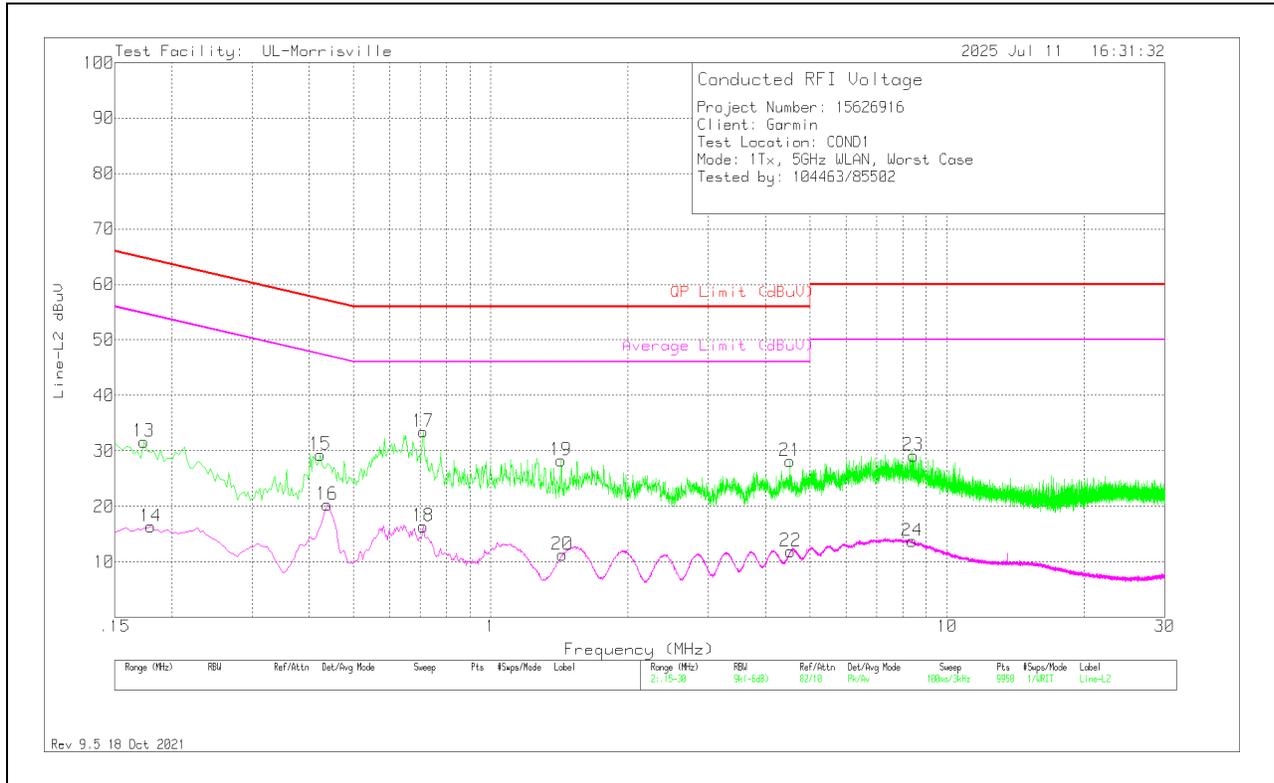
LINE 1 RESULTS



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	.159	21.49	Pk	.2	9.7	31.39	65.52	-34.13	-	-
2	.174	6.24	Av	.2	9.7	16.14	-	-	54.77	-38.63
3	.423	18.42	Pk	.1	9.7	28.22	57.39	-29.17	-	-
4	.441	7.88	Av	.1	9.7	17.68	-	-	47.04	-29.36
5	.711	22.99	Pk	0	9.7	32.69	56	-23.31	-	-
6	.711	5.65	Av	0	9.7	15.35	-	-	46	-30.65
7	1.599	17.74	Pk	0	9.7	27.44	56	-28.56	-	-
8	1.5825	.37	Av	0	9.7	10.07	-	-	46	-35.93
9	4.899	17.88	Pk	.1	9.7	27.68	56	-28.32	-	-
10	4.917	1.1	Av	.1	9.7	10.9	-	-	46	-35.1
11	7.902	22.34	Pk	.1	9.7	32.14	60	-27.86	-	-
12	7.956	5.63	Av	.1	9.7	15.43	-	-	50	-34.57

Pk - Peak detector
 Av - Average detection

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	.174	21.75	Pk	.2	9.7	31.65	64.77	-33.12	-	-
14	.18	6.43	Av	.2	9.7	16.33	-	-	54.49	-38.16
15	.423	19.49	Pk	.1	9.7	29.29	57.39	-28.1	-	-
16	.438	10.45	Av	.1	9.7	20.25	-	-	47.1	-26.85
17	.711	23.77	Pk	0	9.7	33.47	56	-22.53	-	-
18	.711	6.7	Av	0	9.7	16.4	-	-	46	-29.6
19	1.428	18.56	Pk	0	9.7	28.26	56	-27.74	-	-
20	1.437	1.6	Av	0	9.7	11.3	-	-	46	-34.7
21	4.521	18.36	Pk	.1	9.7	28.16	56	-27.84	-	-
22	4.539	2.08	Av	.1	9.7	11.88	-	-	46	-34.12
23	8.427	19.4	Pk	.1	9.7	29.2	60	-30.8	-	-
24	8.397	3.91	Av	.1	9.7	13.71	-	-	50	-36.29

Pk - Peak detector
 Av - Average detection

12. SETUP PHOTOS

Please refer to R15626916-EP1 for setup photos

END OF TEST REPORT