TEST REPORT

Report Number: R15605213-E6

Applicant	:	Garmin International Inc. 1200 East 151st Street Olathe, KS 66062-3426, USA
Model	:	A04911
FCC ID	:	IPH-04911
EUT Description	:	Extremity Worn Digital Transceiver
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART C

Date Of Issue:
2025-04-09

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

ACCREDITED
CERT #0751.06

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2025-04-09	Initial Issue	Chandler Stanley

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

TABLE OF CONTENTS

Contents

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: Extremity Worn Digital Transceiver

MODEL: A04911

SERIAL NUMBER: 3497995537, 3497995201

SAMPLE RECEIPT DATE: 2024-12-17

DATE TESTED: 2024-12-26 to 2025-01-15

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	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:

Mike Antola
Sr. Staff Engineer
Consumer, Medical and IT Segment
UL LLC

Prepared By:

Chandler Stanley
Engineer
Consumer, Medical and IT Segment
UL LLC

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	Requirement	Result	Comment
See Comment	Duty Cycle	Reporting purposes only	Per ANSI C63.10, Section 11.6.
See Comment	20dB BW/99% OBW	Not Performed	See Note 1
15.247 (a)(1)	Hopping Frequency Separation		
15.247 (a)(1)(iii)	Number of Hopping Channels		
15.247 (a)(1)(iii)	Average Time of Occupancy		
15.247 (b)(1)	Output Power		
See Comment	Average Power		
15.247 (d)	Conducted Spurious Emissions		
15.209, 15.205	Radiated Emissions	Compliant	None
15.207	AC Mains Conducted Emissions		

Note 1: This test report covers radiated testing on a depopulated version of a certified product, resulting in a C2PC. It is the responsibility of the end product manufacturer to provide the certification reports to show full compliance to the FCC requirements.

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, and KDB 414788 D01 Radiated Test Site v01r01.

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	

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

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is an extremity worn digital transceiver with BT, BLE, ANT/ANT+, 802.11b/g/n 2.4GHz WLAN, NFC, and Global Navigation Satellite System (GNSS) receiver. This report covers radiated testing on the BT radio.

6.2. MAXIMUM OUTPUT POWER

This test report covers radiated testing on a depopulated version of a certified product, resulting in a C2PC. It is the responsibility of the end product manufacturer to provide the certification reports to show full compliance to the FCC requirements, including ensuring the EUT power is never higher than what is declared on the original certification grant.

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)
Bezel Antenna	2402-2480	0.84

6.4. SOFTWARE AND FIRMWARE

The software version installed on radiated units during testing was 3.95.

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 and mode with the highest average 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.

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

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

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	PF4FKVYQ	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	USB-C	Shielded	<3m	Program/Charge EUT

TEST SETUP

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

SETUP DIAGRAMS

Please refer to R15605213-EP4 for setup diagrams

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

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.
Common Equipment					
Conducted Room 1					
90416	Spectrum Analyzer	Keysight Technologies	N9030A	2024-09-23	2025-09-23
179892	Environmental Meter	Fisher Scientific	15-077-963	2024-08-12	2025-08-12
SOFTEMI	Antenna Port Software	UL	Version 2022.8.16	NA	NA
Attenuators					
226562	SMA Coaxial 10dB Attenuator 25MHz-18GHz	CentricRF	C18S2-10	2024-04-11	2025-04-11

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

Equip. 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	2024-07-17	2025-07-17
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

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

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
0.009-30MHz					
135144	Active Loop Antenna	ETS-Lindgren	6502	2024-10-02	2025-10-02
30-1000 MHz					
90628	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2024-01-02	2026-01-02
1-18 GHz					
89509	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2023-05-23	2025-05-23
18-26.5 GHz					
204704	Horn Antenna, 18-26.5GHz	Com-Power	AH-826	2023-07-20	2025-07-20
Gain-Loss Chains					
207638	Gain-loss string: 0.009-30MHz	Various	Various	2024-05-22	2025-05-22
207639	Gain-loss string: 25-1000MHz	Various	Various	2024-05-22	2025-05-22
207640	Gain-loss string: 1-18GHz	Various	Various	2024-05-22	2025-05-22
225795	Gain-loss string: 18-40GHz	Various	Various	2024-05-22	2025-05-22
Receiver & Software					
197955	Spectrum Analyzer	Rohde & Schwarz	ESW44	2024-04-16	2025-04-16
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Additional Equipment used					
241204	Environmental Meter	Fisher Scientific	15-077-963	2023-09-05	2025-09-05

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	2024-04-04	2025-04-04
179892	Environmental Meter	Fisher Scientific	15-077-963	2024-08-12	2025-08-12
80391	LISN, 50-ohm/50-uH, 250uH 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50/250-25-2-01	2024-08-01	2025-08-01
70374	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2024-07-30	2025-07-30
52859	Transient Limiter, 0.009-100MHz	Electro-Metrics	EM-7600	2024-04-04	2025-04-04
PS216	AC Power Source	Elgar	CW2501M	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Miscellaneous (if needed)					
84681	ANSI C63.4 1m extension cable.	UL	Per Annex B of ANSI C63.4	2024-04-04	2025-04-04

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

8. MEASUREMENT METHODS

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

Radiated Band-edge: ANSI C63.10-2020 Section 6.10.5

Radiated Spurious Emissions: ANSI C63.10-2020 Sections 6.3 to 6.6 and 7.8.8

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

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

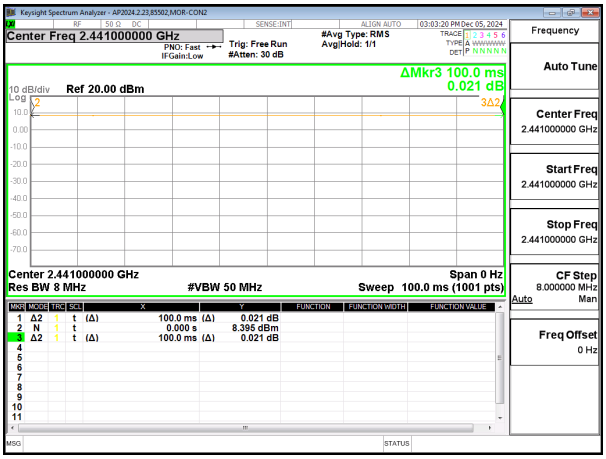
LIMITS

None; for reporting purposes only.

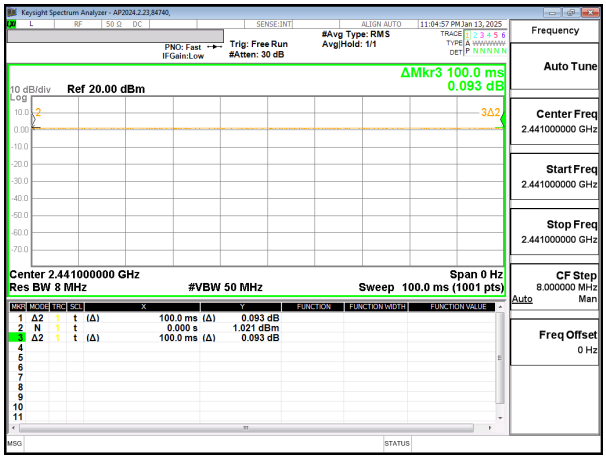
PROCEDURE

ANSI C63.10, Section 11.6: Zero-Span Spectrum Analyzer Method.

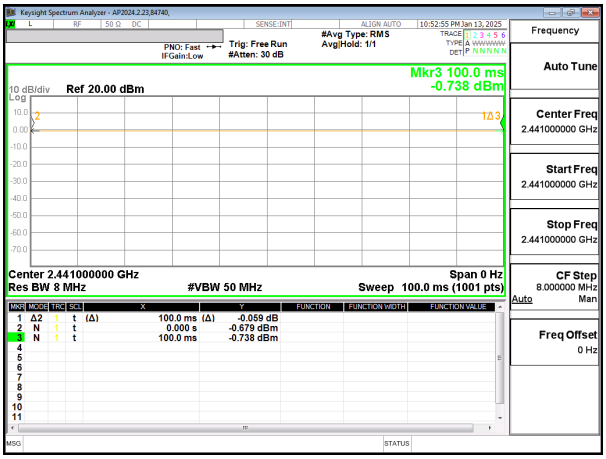
Mode	ON Time B (ms)	Period (ms)	Duty Cycle x (lineari)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
GFSK	100.00	100.00	1.000	100.00	0.00	0.010
QPSK	100.00	100.00	1.000	100.00	0.00	0.010
8PSK	100.00	100.00	1.000	100.00	0.00	0.010



GFSK



QPSK



8PSK

Intentionally Left Blank

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

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. Reduced VBW method of averaging was used of 1/Ton where Ton = on time of the signal. For this testing, the on time was approximately 2.9 ms which yields a minimum VBW of 345 Hz.

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.

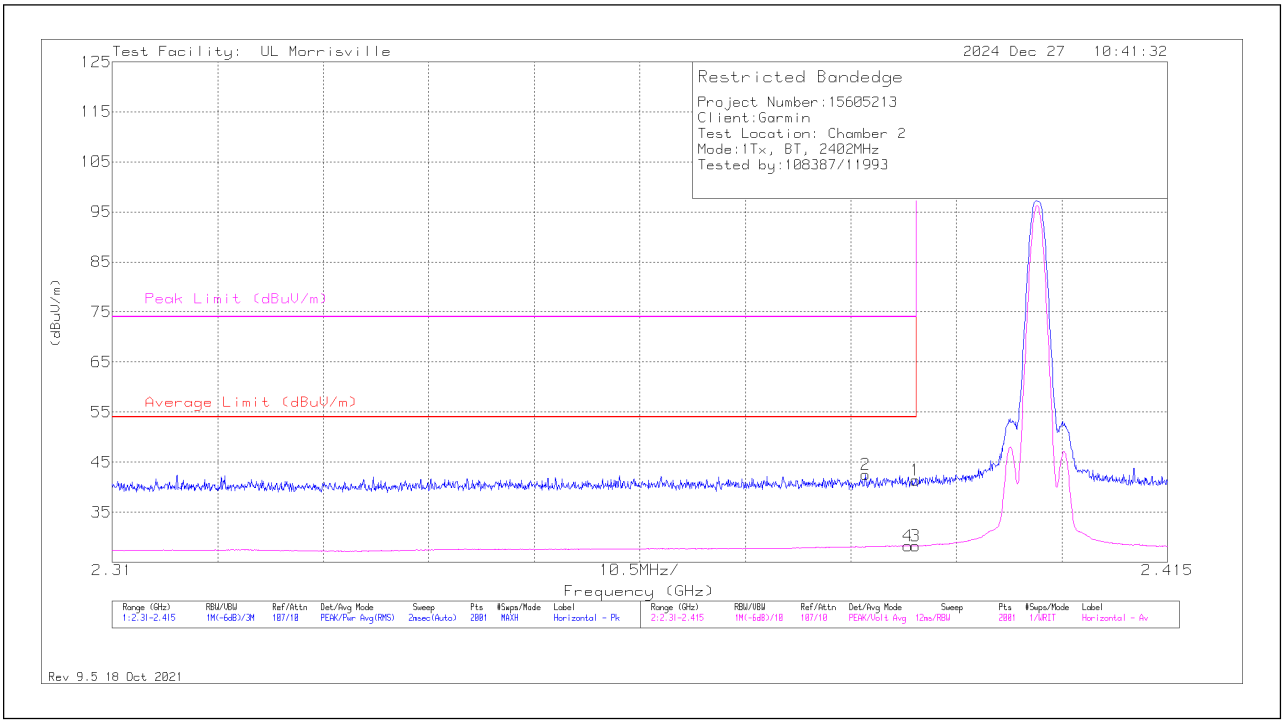
UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

10.1. TRANSMITTER ABOVE 1 GHz

10.1.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION

BANDEDGE (LOW CHANNEL)

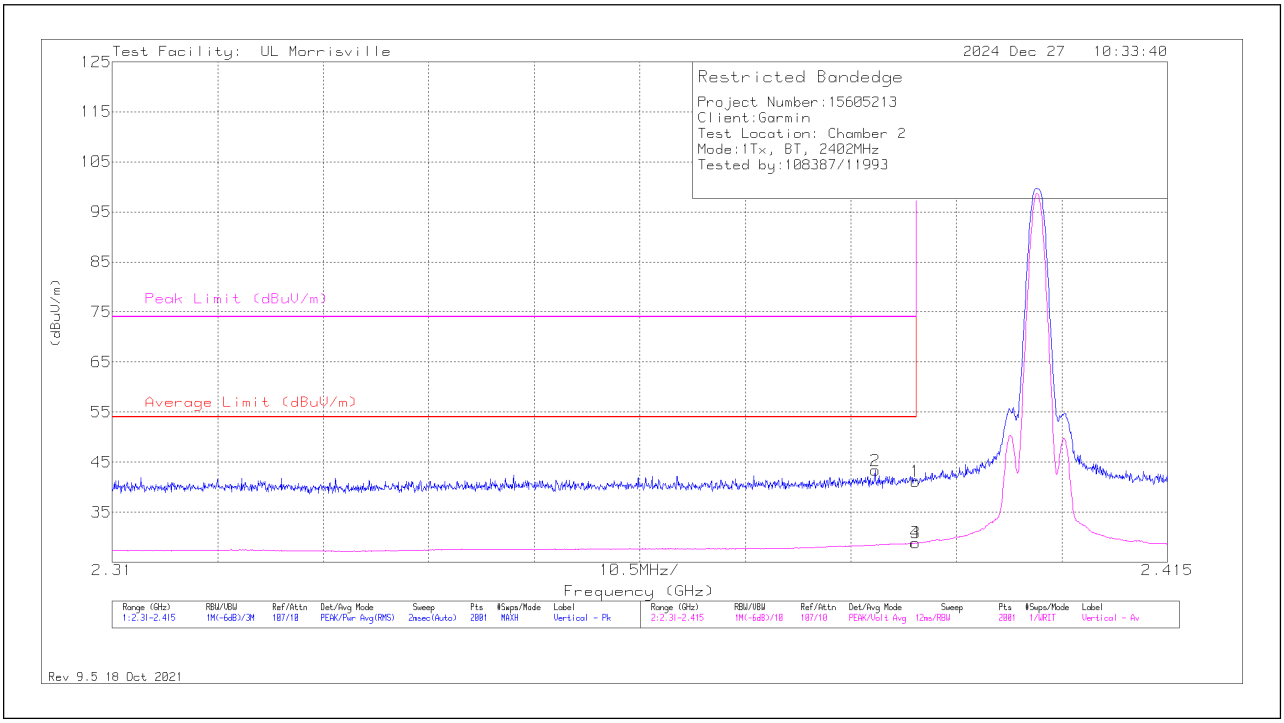
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38996	32.71	Pk	32.3	-23.6	41.41	54	-12.59	74	-32.59	231	103	H
2	* ** 2.38497	33.81	Pk	32.2	-23.5	42.51	54	-11.49	74	-31.49	231	103	H

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

VERTICAL RESULT



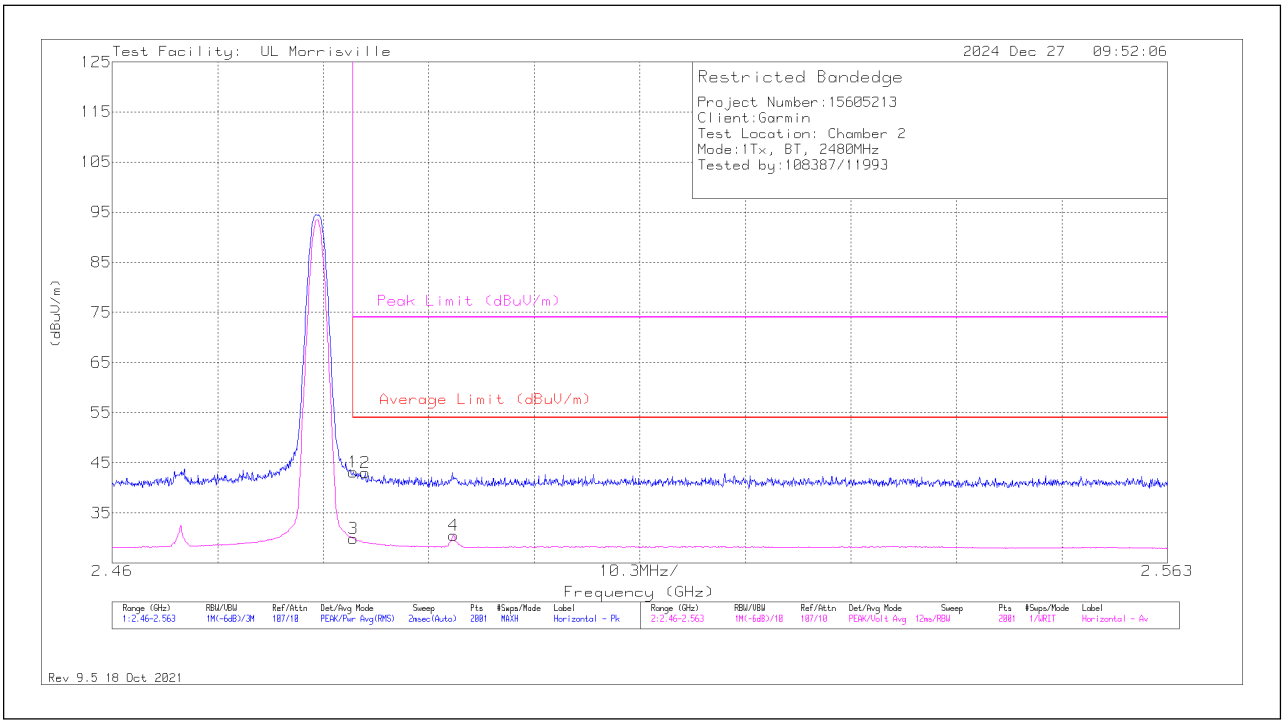
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38996	32.42	Pk	32.3	-23.6	41.12	54	-12.88	74	-32.88	331	134	V
2	* ** 2.38592	34.53	Pk	32.2	-23.4	43.33	54	-10.67	74	-30.67	331	134	V

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

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

BANDEDGE (HIGH CHANNEL)

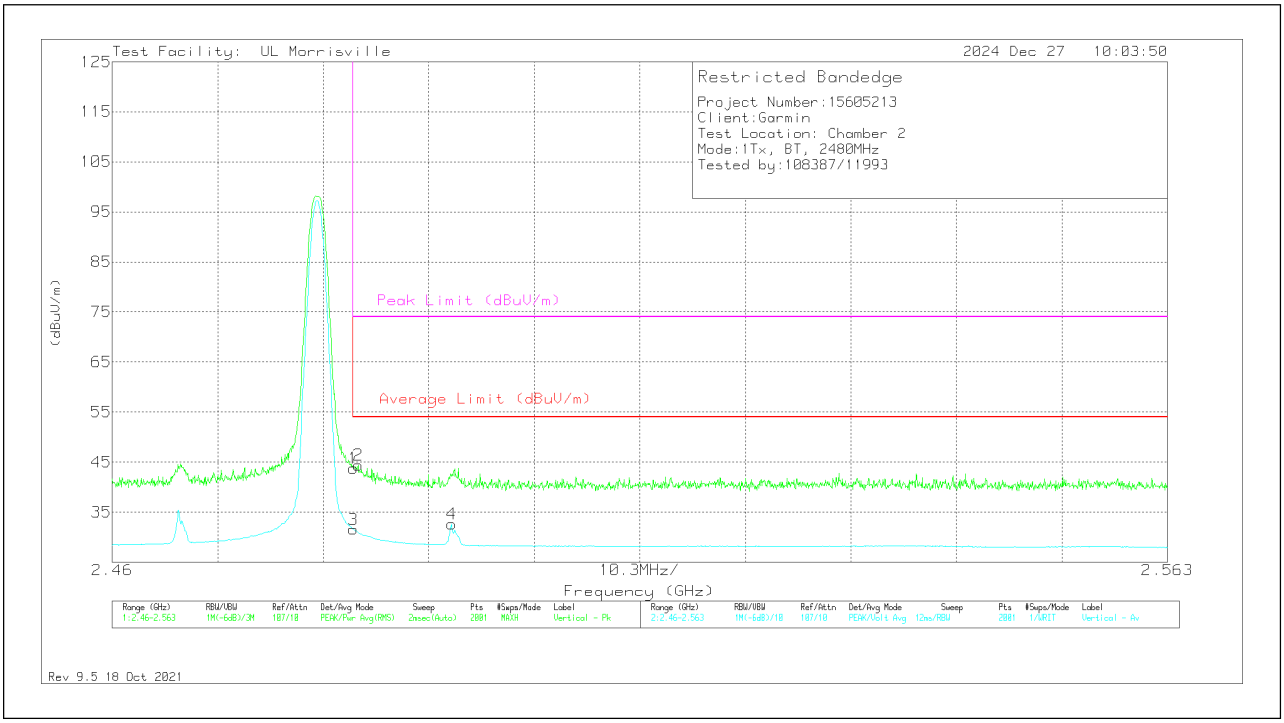
HORIZONTAL RESULT



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	34.73	Pk	32.5	-24.1	43.13	54	-10.87	74	-30.87	238	116	H
2	* ** 2.48472	34.73	Pk	32.5	-24.2	43.03	54	-10.97	74	-30.97	238	116	H

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

VERTICAL RESULT

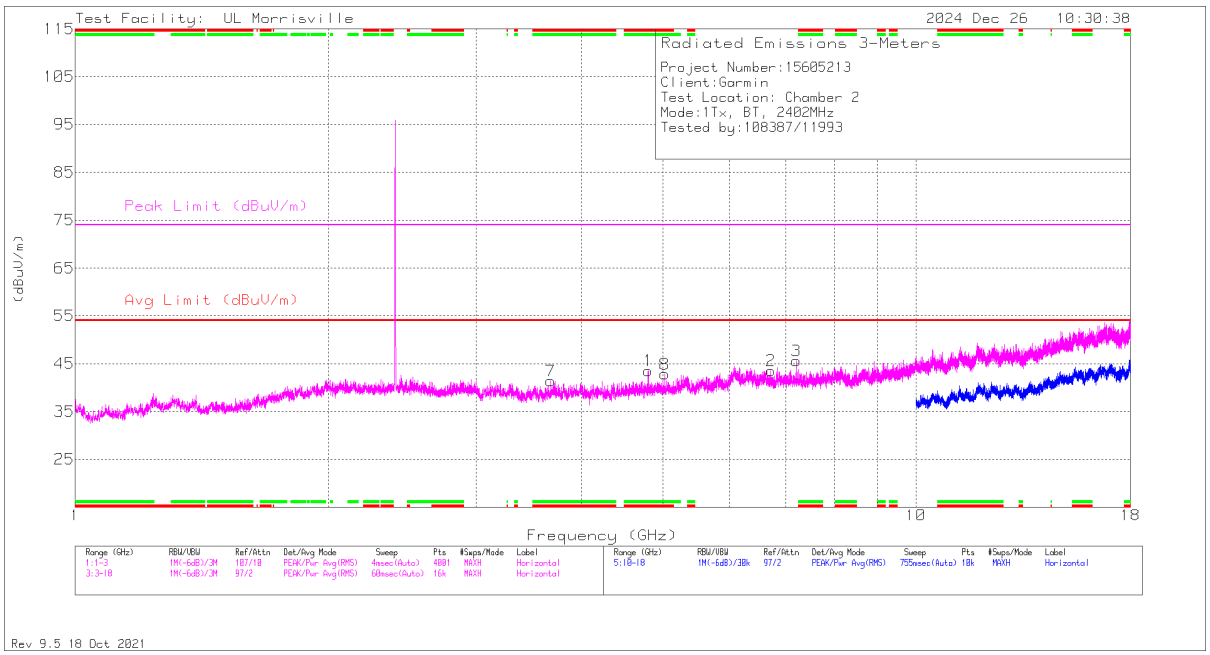


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	35.34	Pk	32.5	-24.1	43.74	54	-10.26	74	-30.26	339	103	V
2	* ** 2.484	36.14	Pk	32.5	-24.2	44.44	54	-9.56	74	-29.56	339	103	V

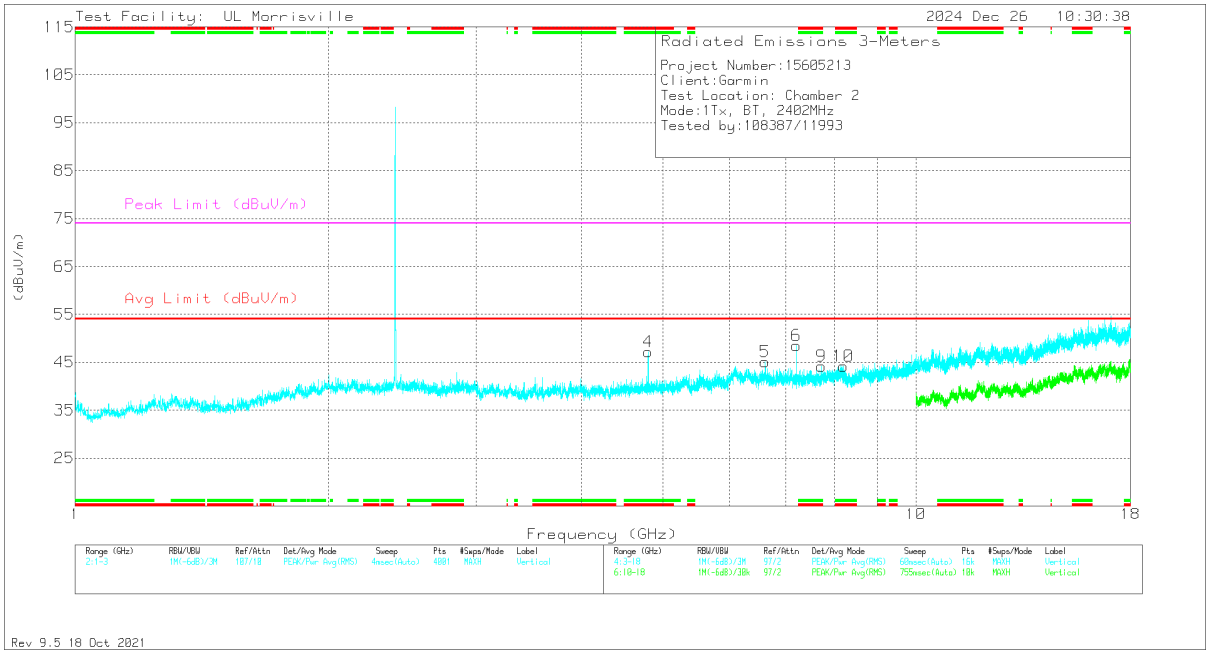
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



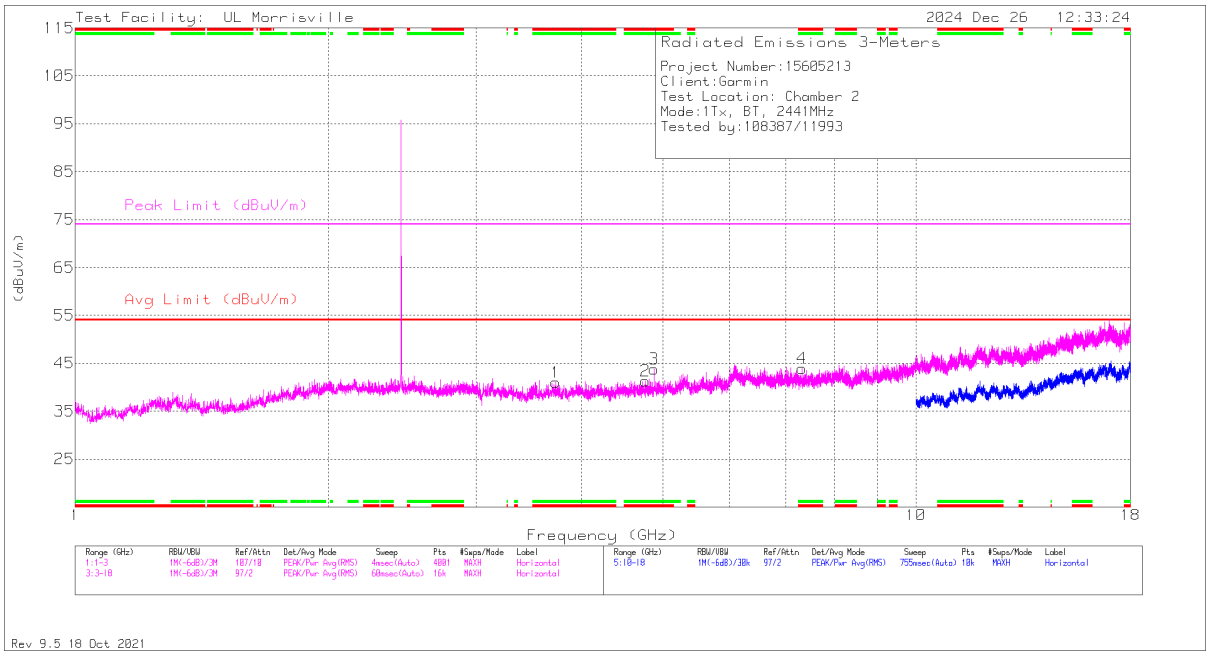
VERTICAL

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.80375	53.25	Pk	34.2	-43.9	43.55	54	-10.45	74	-30.45	0-360	101	H
7	* ** 3.67969	52.78	Pk	33.1	-44.5	41.38	54	-12.62	74	-32.62	0-360	101	H
8	* ** 5.02781	52.11	Pk	34.1	-43.4	42.81	54	-11.19	74	-31.19	0-360	101	H
4	* ** 4.80375	56.92	Pk	34.2	-43.9	47.22	54	-6.78	74	-26.78	0-360	101	V
9	* ** 7.71563	49.42	Pk	35.7	-40.9	44.22	54	-9.78	74	-29.78	0-360	101	V
10	* ** 8.20219	49.27	Pk	35.8	-40.9	44.17	54	-9.83	74	-29.83	0-360	200	V
5	6.61594	50.06	Pk	35.6	-40.6	45.06					0-360	200	V
2	6.72469	49.88	Pk	35.6	-41.9	43.58					0-360	199	H
3	7.20563	51.67	Pk	35.6	-41.7	45.57					0-360	101	H
6	7.20563	54.63	Pk	35.6	-41.7	48.53					0-360	101	V

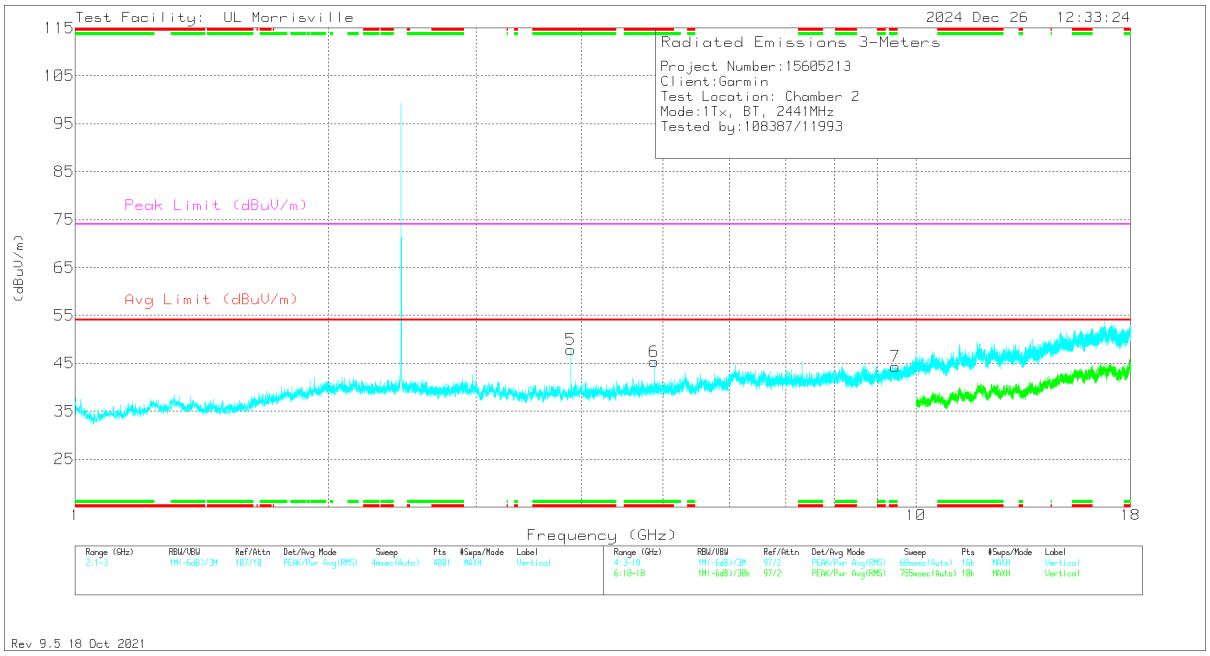
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

MID CHANNEL RESULTS



HORIZONTAL



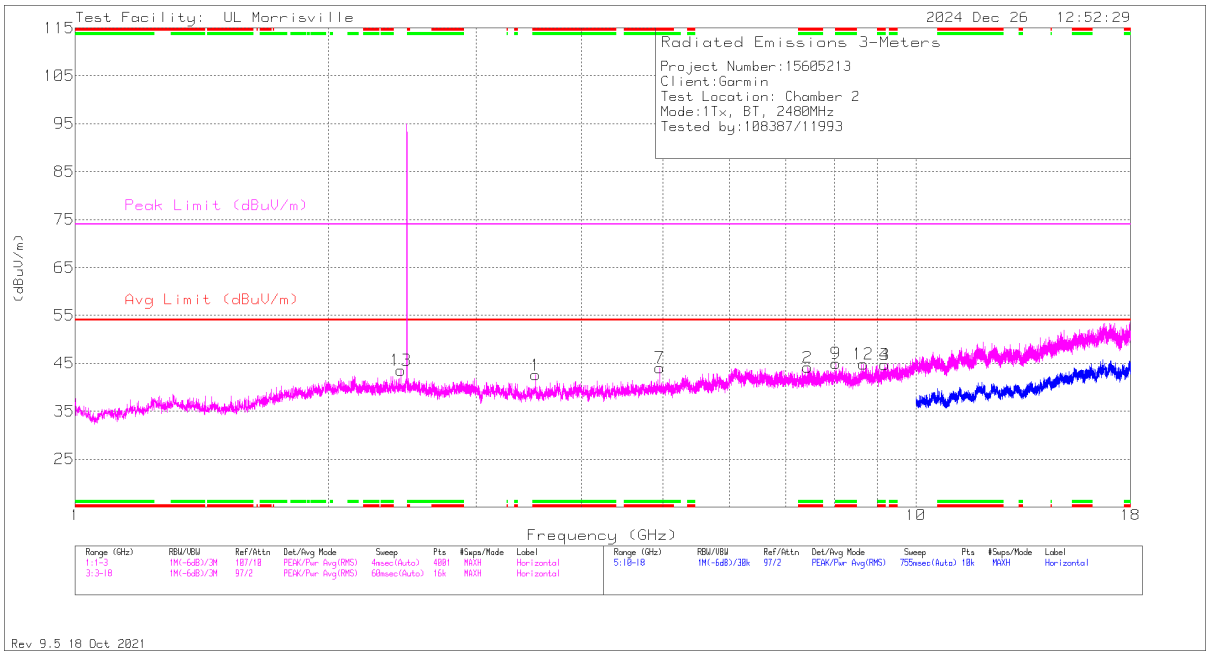
VERTICAL

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.73125	52.18	Pk	33.2	-44.4	40.98	54	-13.02	74	-33.02	0-360	200	H
2	* ** 4.76719	51.06	Pk	34.2	-44	41.26	54	-12.74	74	-32.74	0-360	101	H
3	* ** 4.8825	53.38	Pk	34.1	-43.7	43.78	54	-10.22	74	-30.22	0-360	101	H
4	* ** 7.32375	50.11	Pk	35.6	-41.8	43.91	54	-10.09	74	-30.09	0-360	101	H
5	* ** 3.88406	58.95	Pk	33.4	-44.5	47.85	54	-6.15	74	-26.15	0-360	101	V
6	* ** 4.8825	54.91	Pk	34.1	-43.7	45.31	54	-8.69	74	-28.69	0-360	101	V
7	* ** 9.45563	48.37	Pk	36.3	-40.3	44.37	54	-9.63	74	-29.63	0-360	101	V

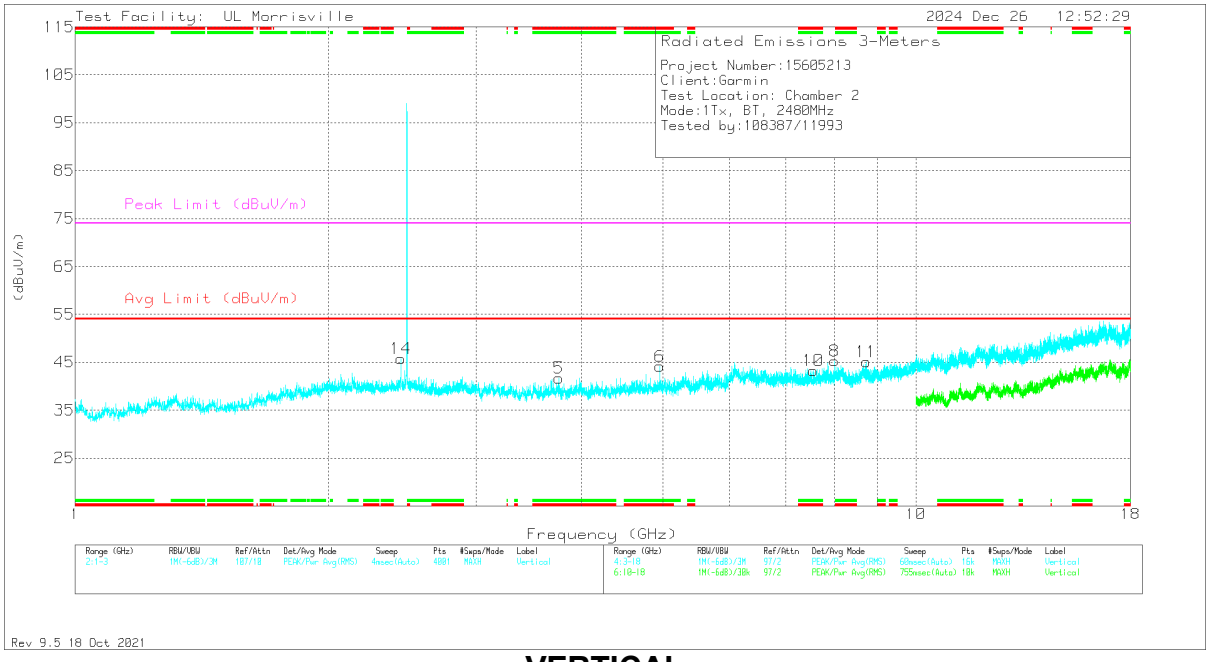
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
PK2 - Maximum Peak

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

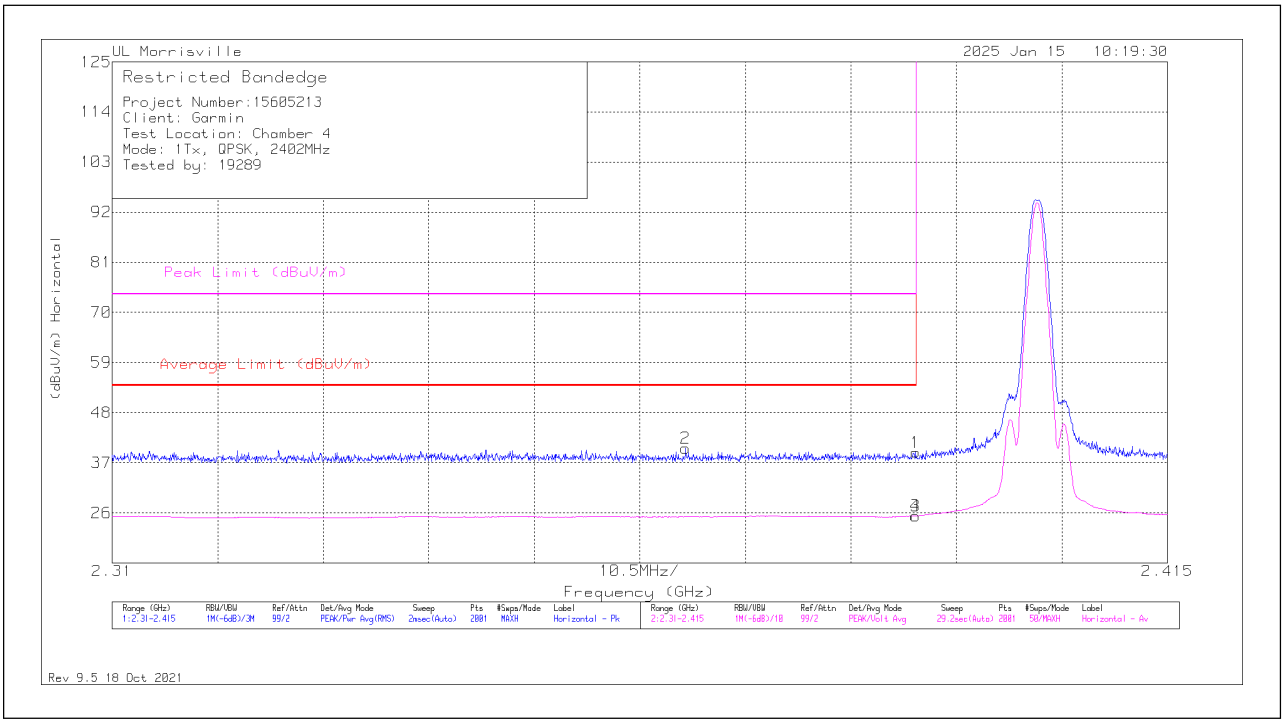
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.52875	53.75	Pk	32.8	-44	42.55	54	-11.45	74	-31.45	0-360	200	H
2	* ** 7.44094	49.63	Pk	35.6	-41.1	44.13	54	-9.87	74	-29.87	0-360	200	H
3	* ** 9.17625	48.24	Pk	36	-39.5	44.74	54	-9.26	74	-29.26	0-360	200	H
4	* ** 9.17625	48.24	Pk	36	-39.5	44.74	54	-9.26	74	-29.26	0-360	200	H
7	* ** 4.96031	53.86	Pk	34	-43.8	44.06	54	-9.94	74	-29.94	0-360	101	H
9	* ** 8.03344	49.96	Pk	35.8	-40.8	44.96	54	-9.04	74	-29.04	0-360	101	H
5	* ** 3.76219	52.45	Pk	33.2	-44	41.65	54	-12.35	74	-32.35	0-360	200	V
6	* ** 4.95938	53.93	Pk	34	-43.8	44.13	54	-9.87	74	-29.87	0-360	200	V
10	* ** 7.55156	49.04	Pk	35.7	-41.5	43.24	54	-10.76	74	-30.76	0-360	200	V
13	2.44	34.71	Pk	32.4	-23.6	-	-	-	-	-30.49	0-360	100	H
14	2.4405	36.99	Pk	32.4	-23.6	-	-	-	-	-28.21	0-360	101	V
8	8.00625	50.09	Pk	35.9	-40.7	-	-	-	-	-28.71	0-360	200	V
12	8.65594	49.32	Pk	35.8	-40.3	-	-	-	-	-29.18	0-360	200	H
11	8.73	49.53	Pk	35.9	-40.3	-	-	-	-	-28.87	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. BLUETOOTH BASIC DATA RATE QPSK MODULATION

BANDEDGE (LOW CHANNEL)

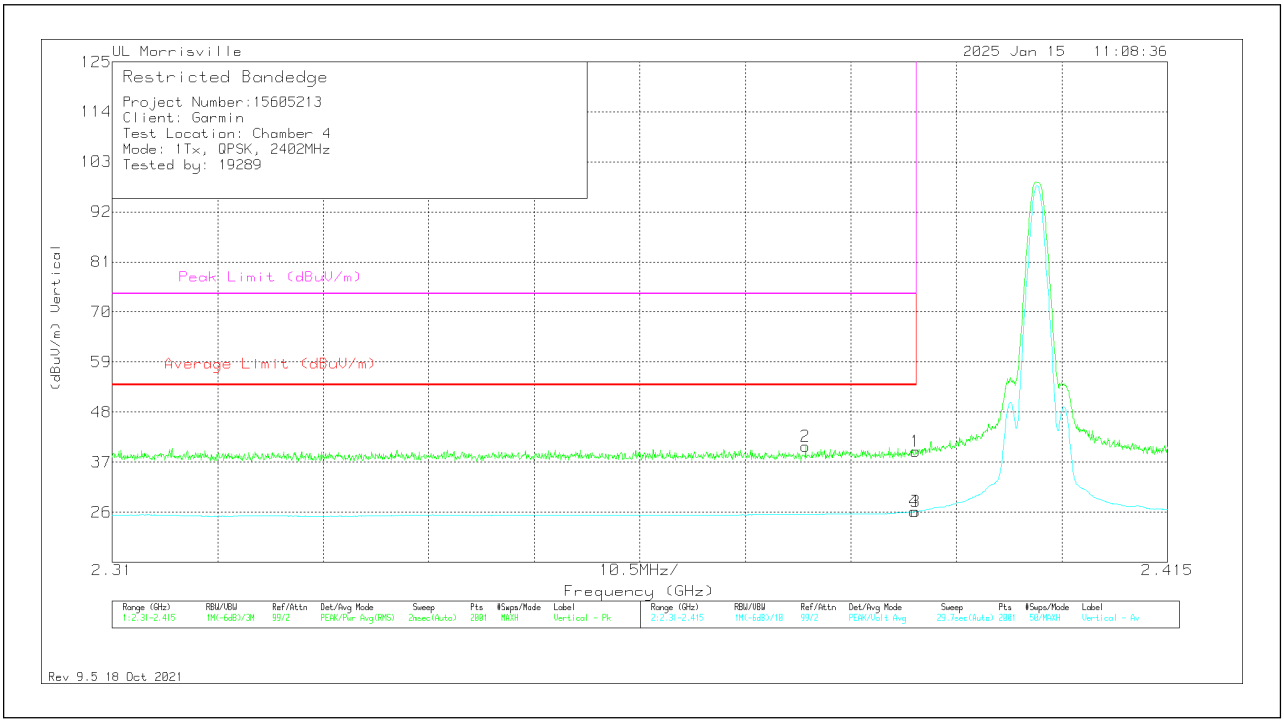
HORIZONTAL RESULT



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	30.49	Pk	32	-23.2	39.29	54	-14.71	74	-34.71	83	113	H
2	* ** 2.36707	31.31	Pk	31.9	-23	40.21	54	-13.79	74	-33.79	83	113	H

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

VERTICAL RESULT



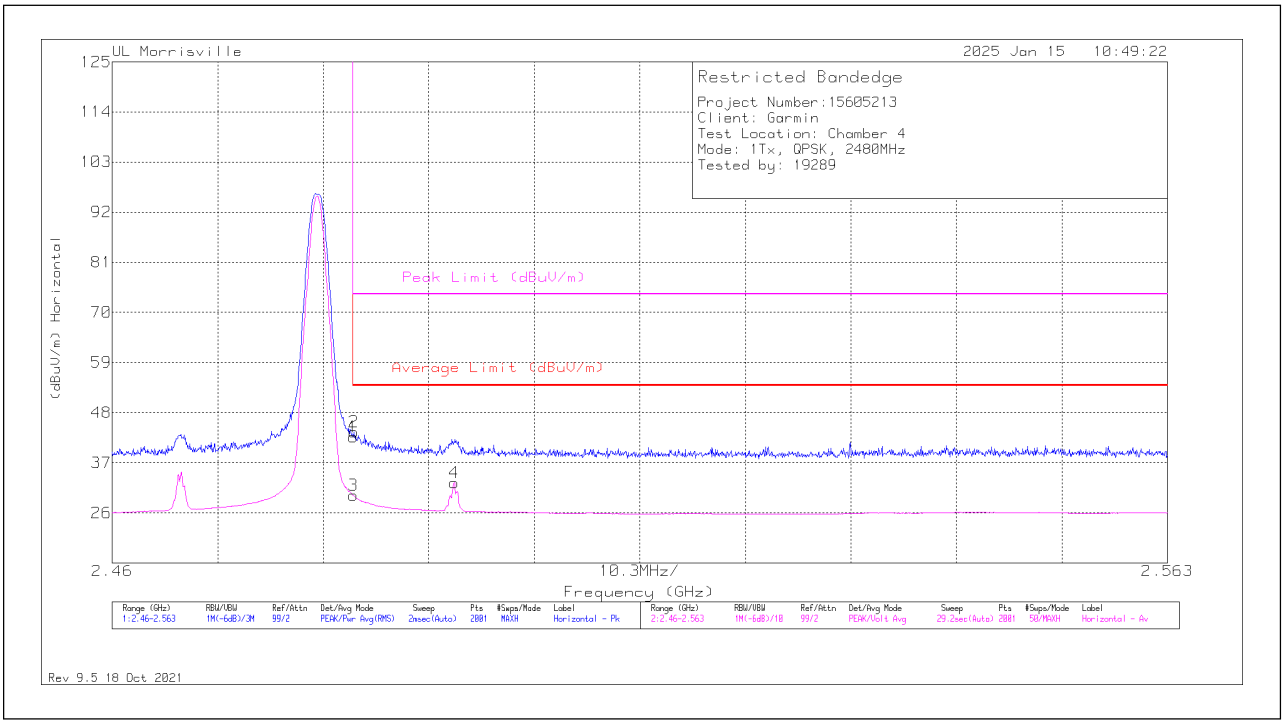
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* *** 2.38996	30.61	Pk	32	-23.2	39.41	54	-14.59	74	-34.59	27	104	V
2	* *** 2.37899	31.52	Pk	32	-23	40.52	54	-13.48	74	-33.48	27	104	V

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

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

BANDEDGE (HIGH CHANNEL)

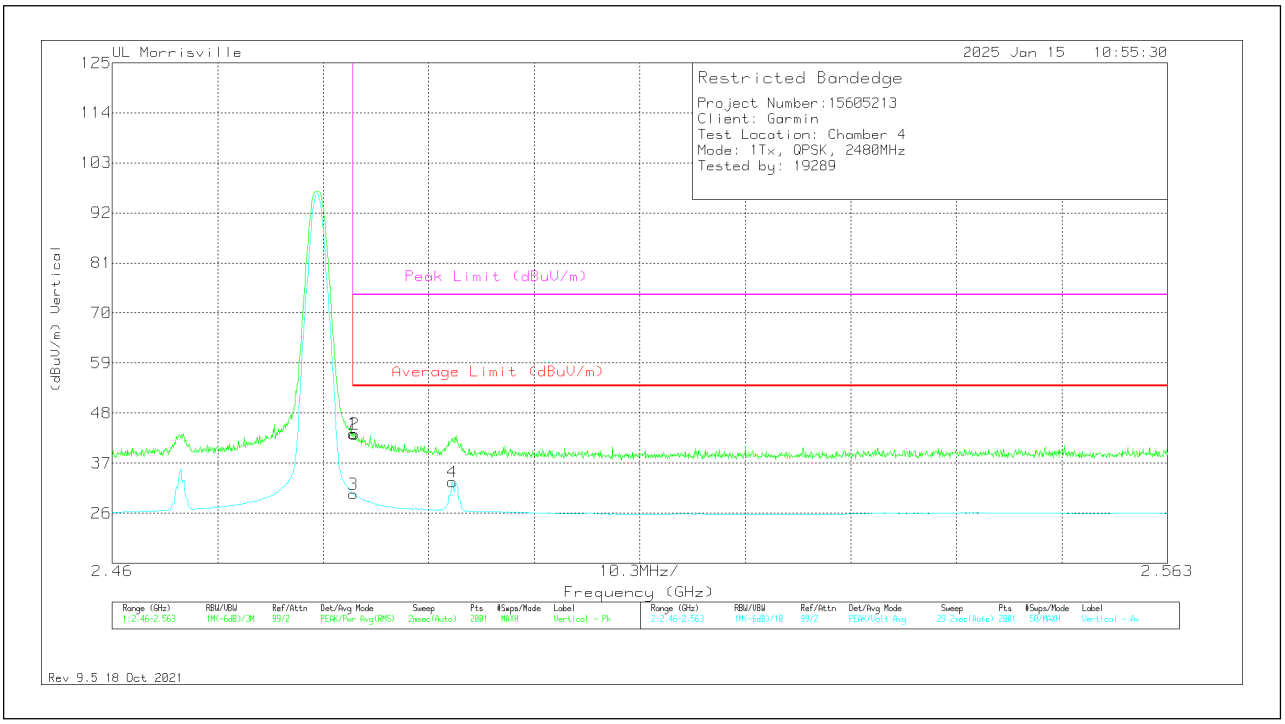
HORIZONTAL RESULT



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	33.2	Pk	32.3	-22.8	42.7	54	-11.3	74	-31.3	87	116	H
2	* ** 2.48359	34.23	Pk	32.3	-22.8	43.73	54	-10.27	74	-30.27	87	116	H

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

VERTICAL RESULT



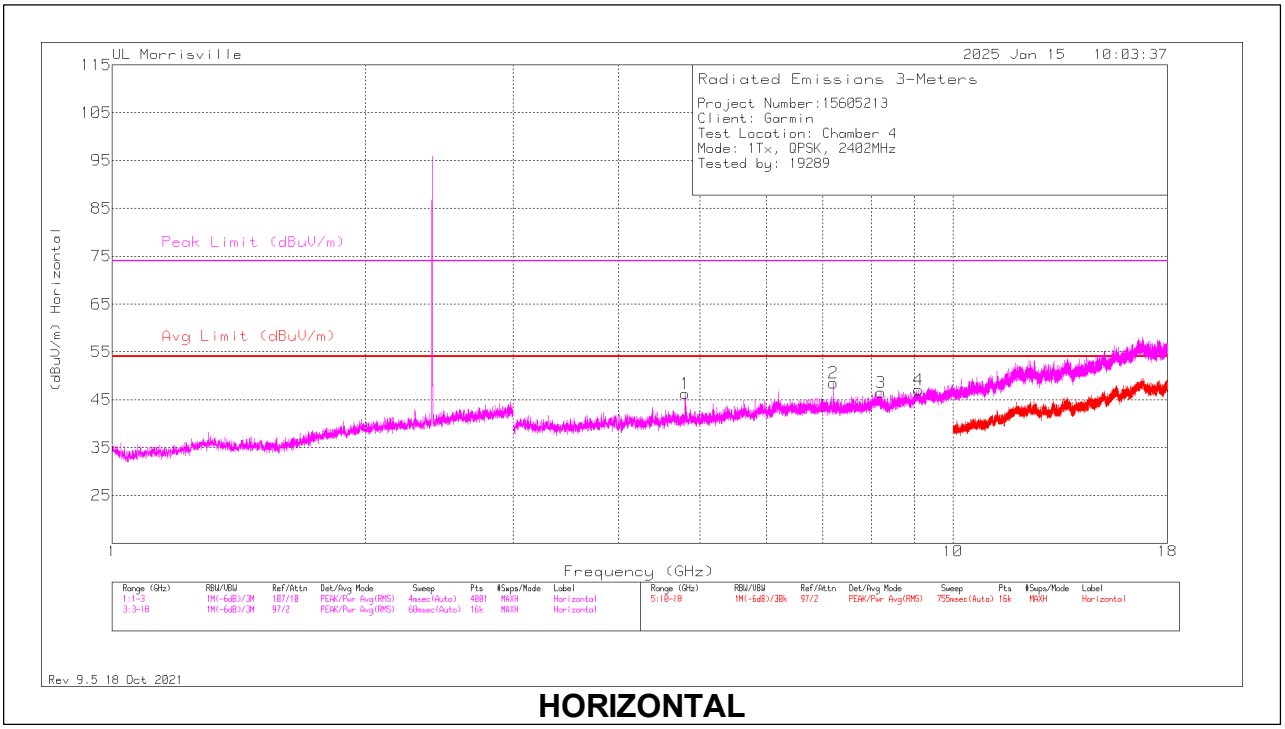
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	34.05	Pk	32.3	-22.8	43.55	54	-10.45	74	-30.45	87	116	V
2	* ** 2.48364	33.84	Pk	32.3	-22.8	43.34	54	-10.66	74	-30.66	87	116	V

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

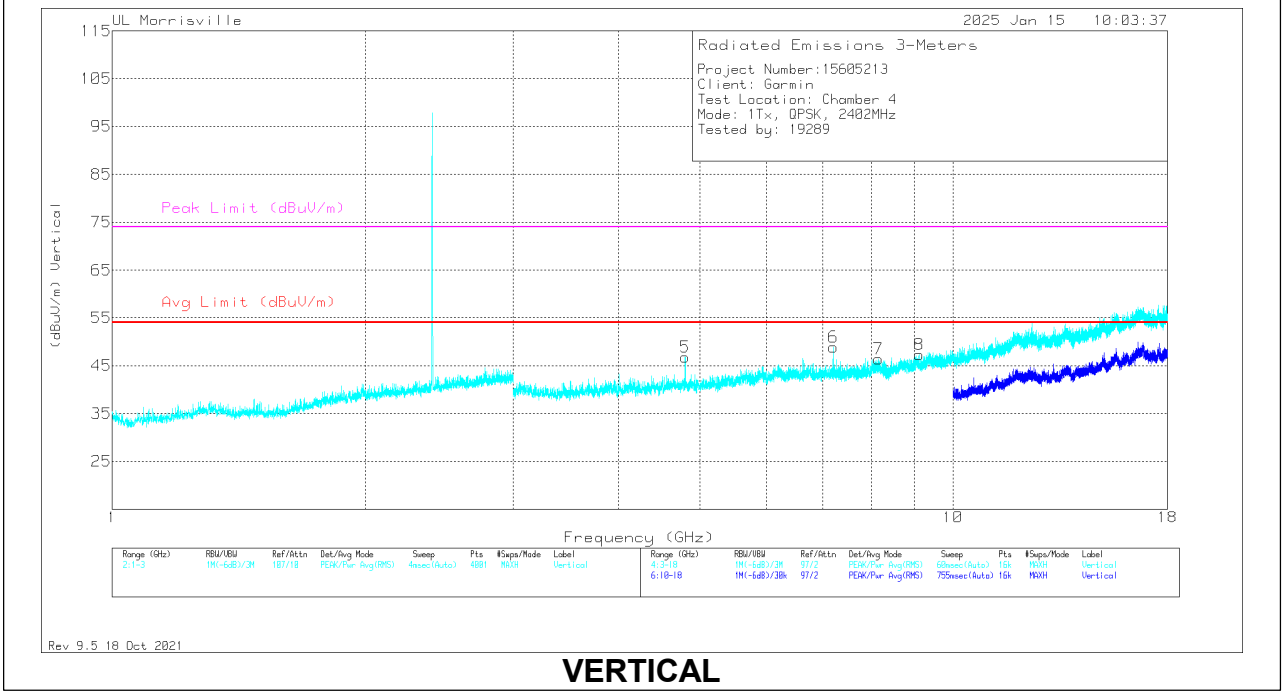
UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



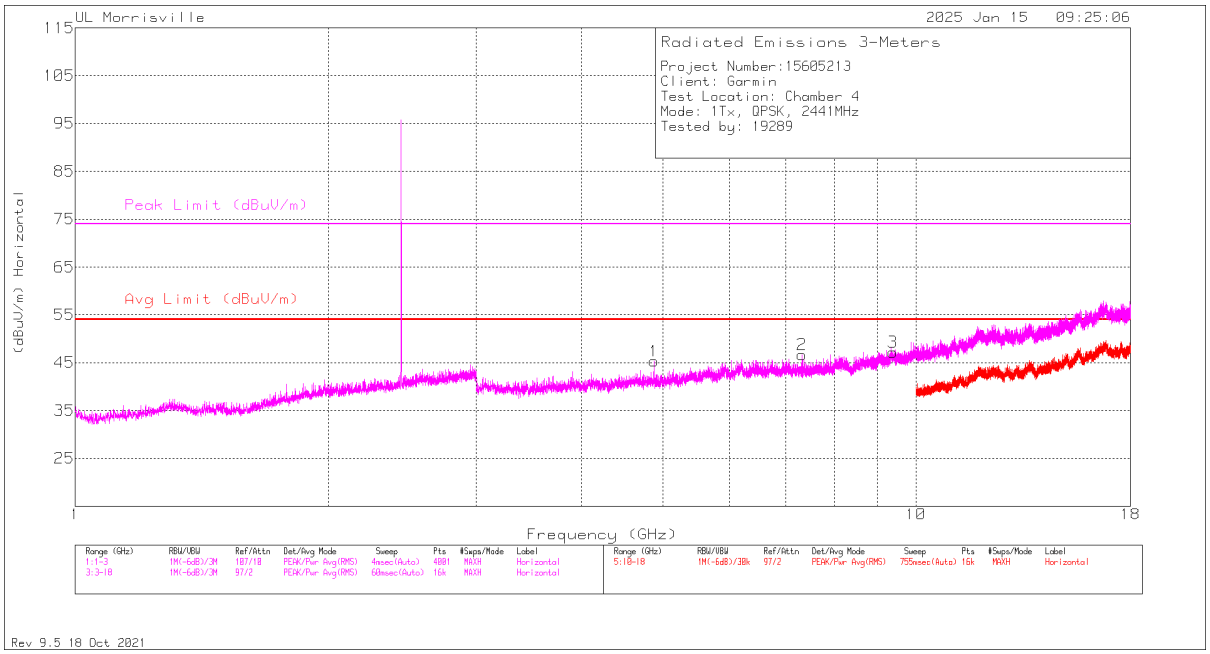
VERTICAL

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.80375	43.58	Pk	34.1	-31.4	46.28	54	-7.72	74	-27.72	0-360	100	H
3	* ** 8.21906	36.98	Pk	35.8	-26.3	46.48	54	-7.52	74	-27.52	0-360	100	H
4	* ** 9.10313	35.29	Pk	36.3	-24.5	47.09	54	-6.91	74	-26.91	0-360	100	H
5	* ** 4.80375	44.08	Pk	34.1	-31.4	46.78	54	-7.22	74	-27.22	0-360	200	V
7	* ** 8.16188	37.23	Pk	35.8	-26.6	46.43	54	-7.57	74	-27.57	0-360	200	V
8	* ** 9.12563	35.77	Pk	36.3	-24.7	47.37	54	-6.63	74	-26.63	0-360	200	V
2	7.20563	40.62	Pk	35.6	-27.7	48.52	-	-	-	-	0-360	100	H
6	7.20563	41.01	Pk	35.6	-27.7	48.91	-	-	-	-	0-360	200	V

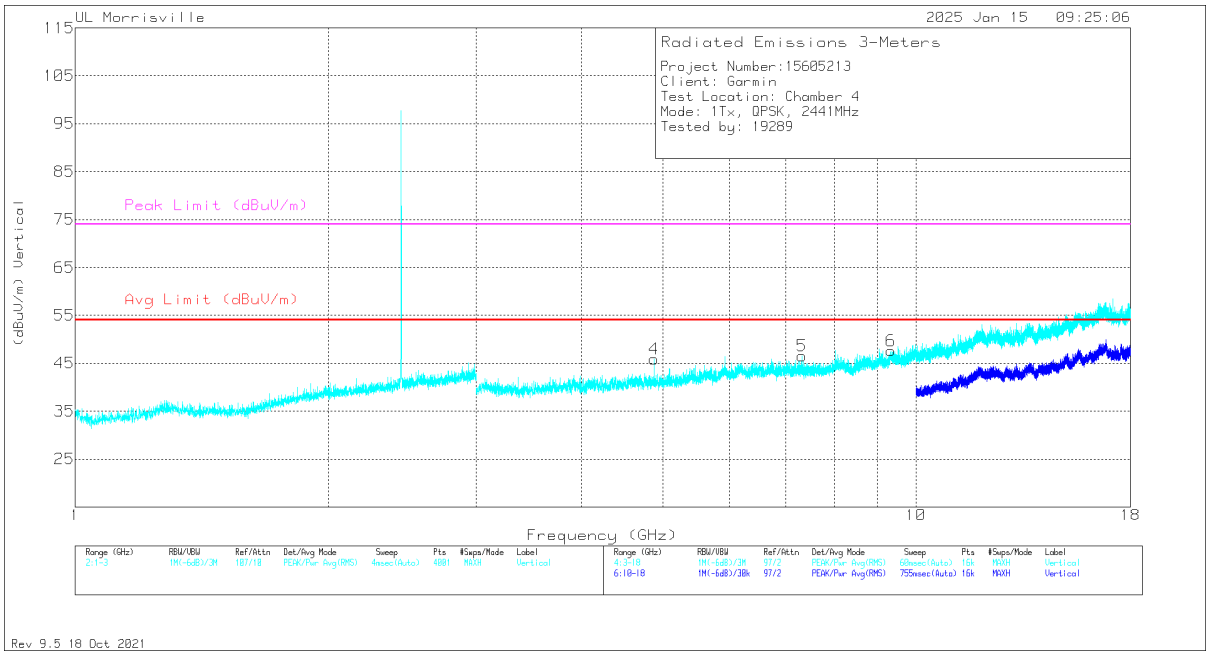
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

MID CHANNEL RESULTS



HORIZONTAL



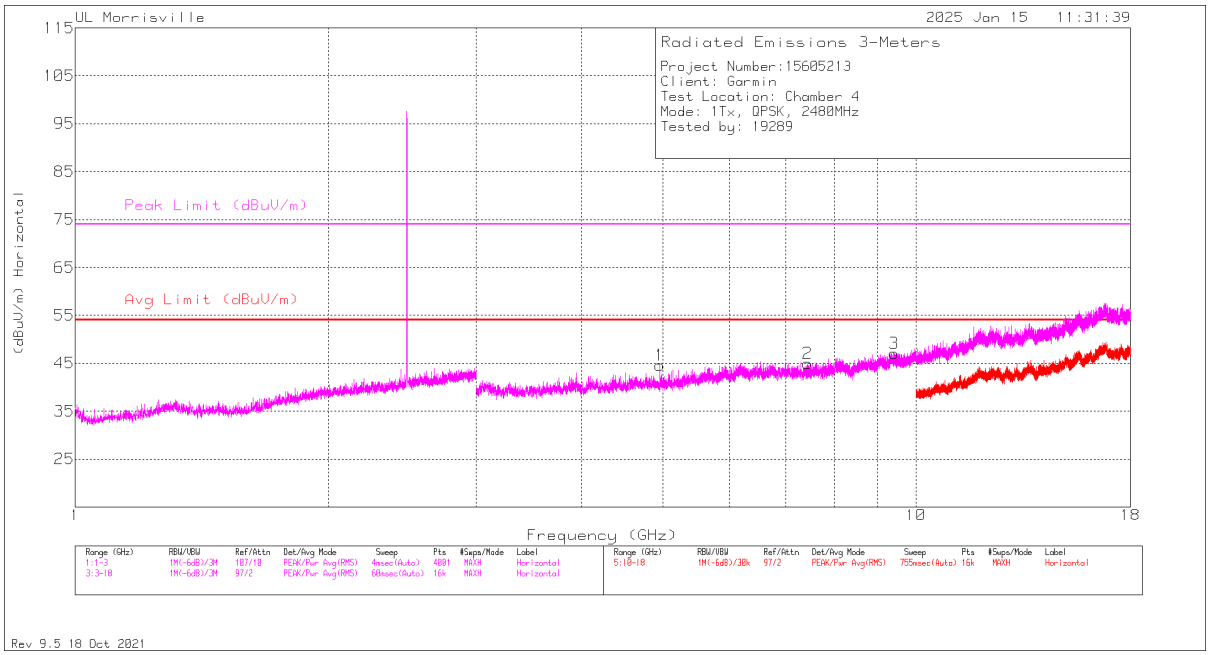
VERTICAL

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.88156	42.3	Pk	34	-31	45.3	54	-8.7	74	-28.7	0-360	100	H
2	* ** 7.32281	38.82	Pk	35.6	-27.7	46.72	54	-7.28	74	-27.28	0-360	100	H
3	* ** 9.39	35.43	Pk	36.6	-24.8	47.23	54	-6.77	74	-26.77	0-360	100	H
4	* ** 4.88156	42.92	Pk	34	-31	45.92	54	-8.08	74	-28.08	0-360	200	V
5	* ** 7.32281	38.67	Pk	35.6	-27.7	46.57	54	-7.43	74	-27.43	0-360	200	V
6	* ** 9.34781	35.45	Pk	36.5	-24.3	47.65	54	-6.35	74	-26.35	0-360	200	V

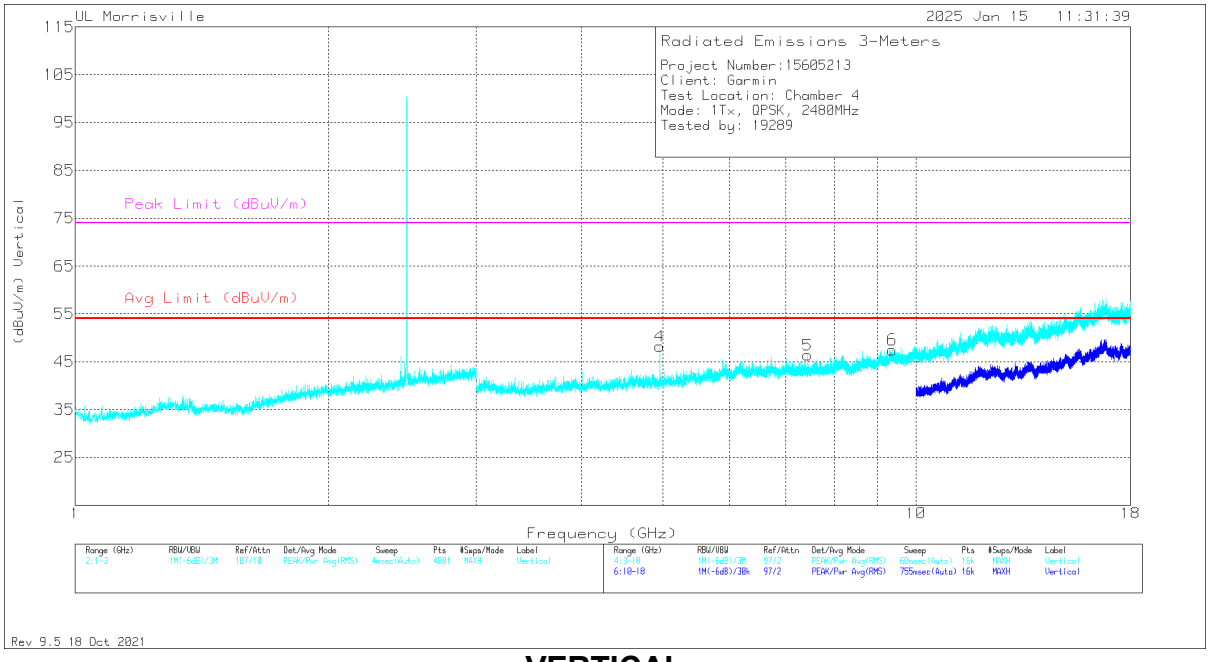
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.96031	41.52	Pk	33.9	-30.8	44.62	54	-9.38	74	-29.38	0-360	100	H
2	* ** 7.44094	37.14	Pk	35.7	-27.9	44.94	54	-9.06	74	-29.06	0-360	100	H
3	* ** 9.4275	35.36	Pk	36.7	-25	47.06	54	-6.94	74	-26.94	0-360	100	H
4	* ** 4.95965	47.23	PK2	33.9	-30.8	50.33	-	-	74	-23.67	171	152	V
	* ** 4.96001	38.05	V1TV	33.9	-30.8	41.15	54	-12.85	-	-	171	152	V
5	* ** 7.44	38.55	Pk	35.7	-27.9	46.35	54	-7.65	74	-27.65	0-360	200	V
6	* ** 9.37313	35.61	Pk	36.5	-24.7	47.41	54	-6.59	74	-26.59	0-360	200	V

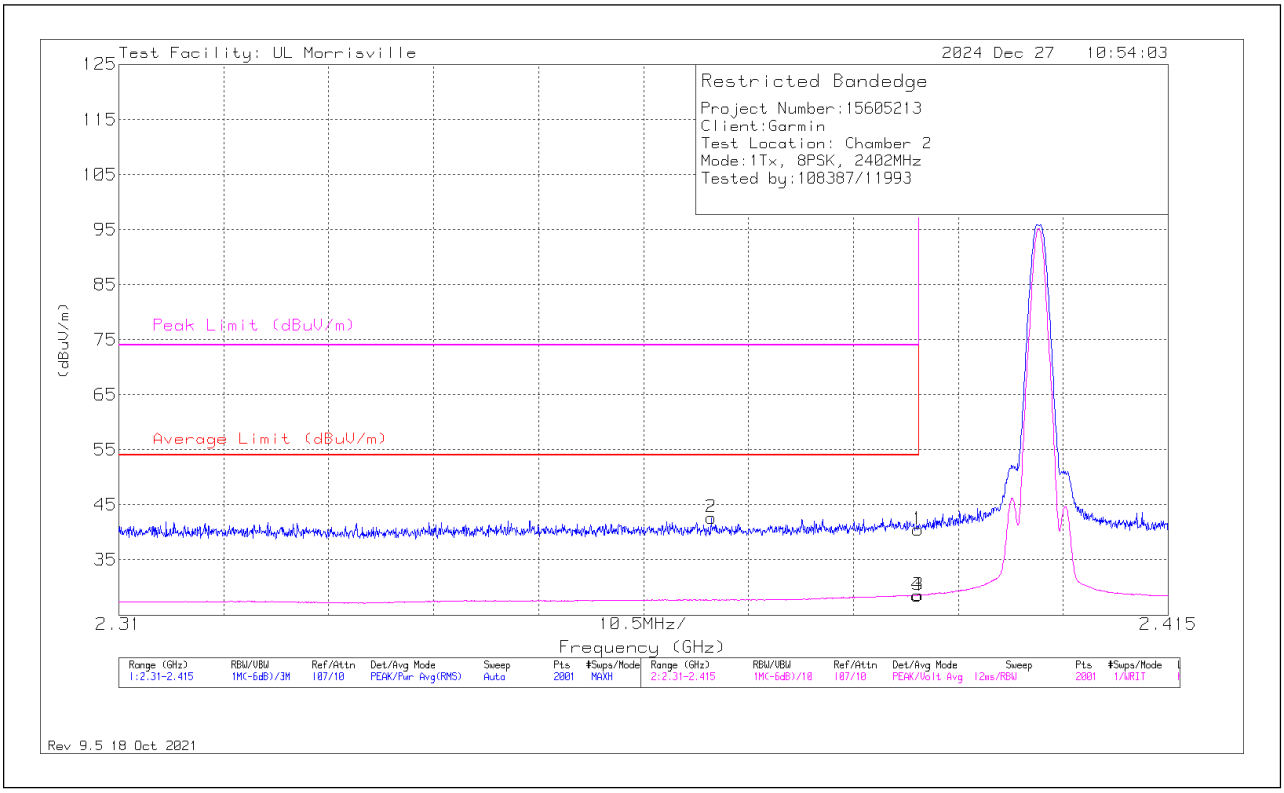
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
PK2 - Maximum Peak
V1TV - VB=1/Ton, Linear Voltage Average where: Ton is packet duration

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

10.1.3. BLUETOOTH ENHANCED DATA RATE 8PSK MODULATION

BANDEDGE (LOW CHANNEL)

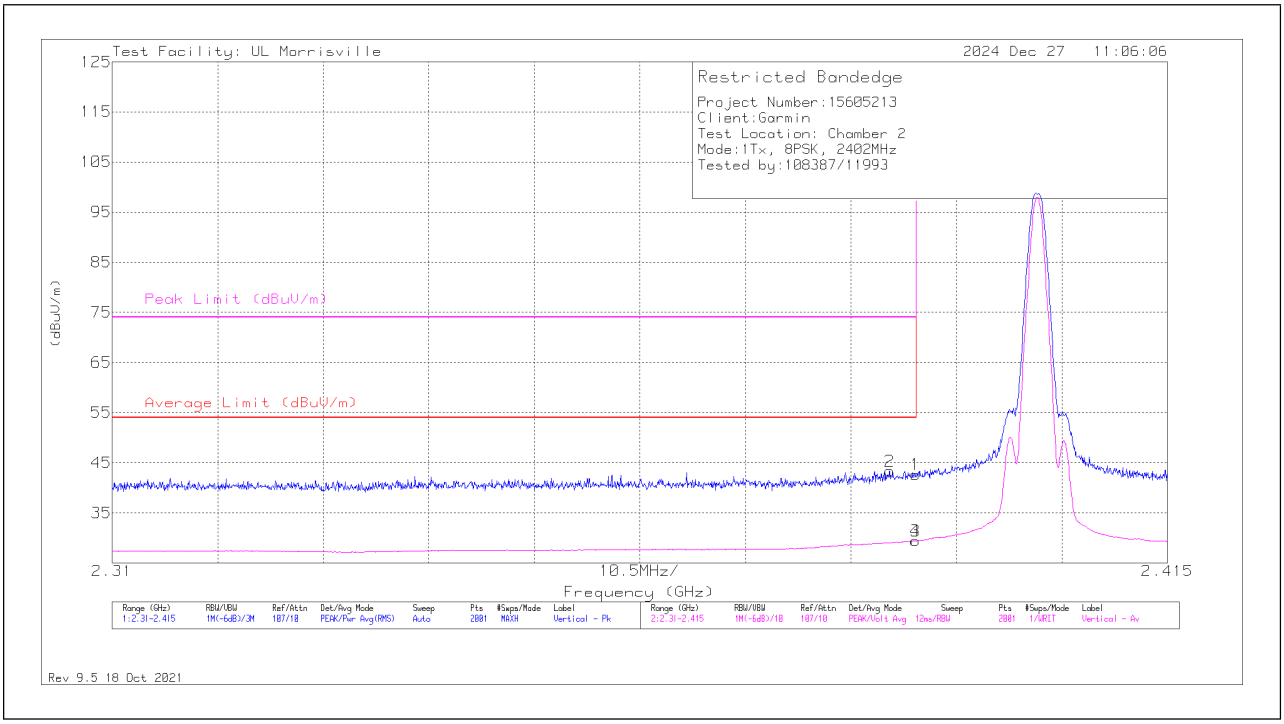
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38996	31.83	Pk	32.3	-23.6	40.53	54	-13.47	74	-33.47	234	102	H
2	* ** 2.36927	34.1	Pk	32.2	-23.6	42.7	54	-11.30	74	-31.3	234	102	H

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

VERTICAL RESULT



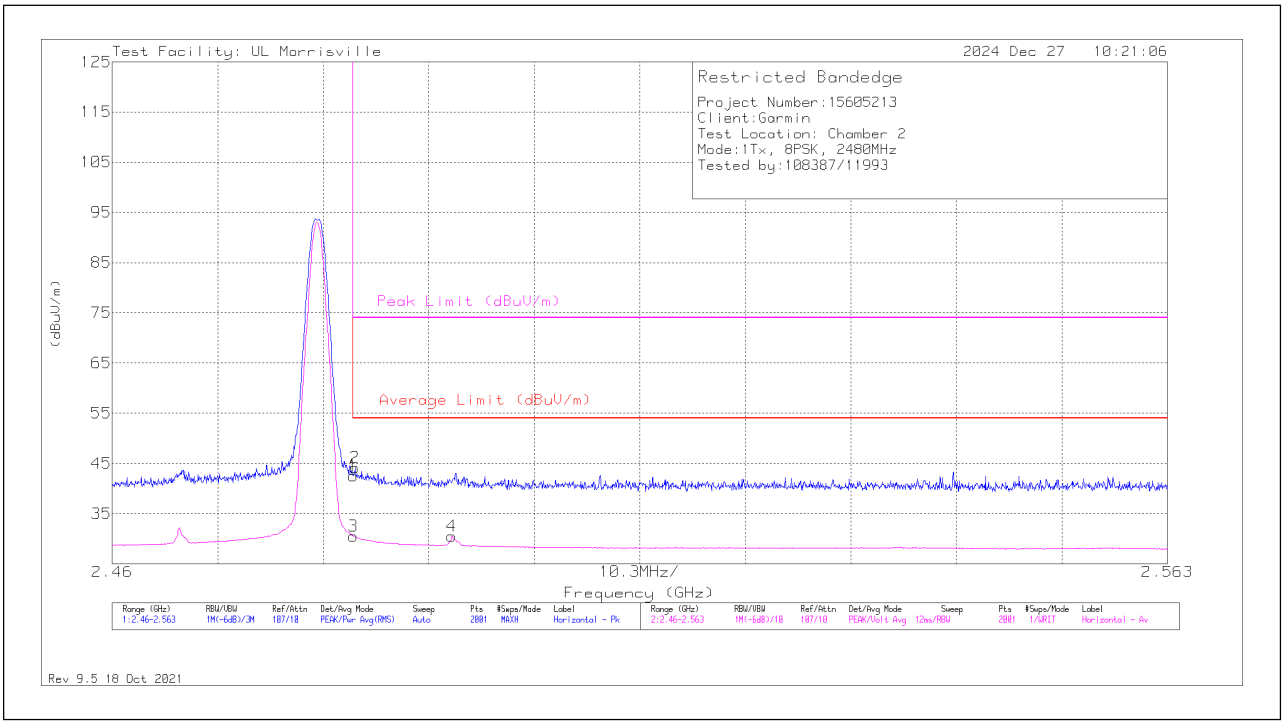
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38996	33.92	Pk	32.3	-23.6	42.62	54	-11.38	74	-31.38	340	132	V
2	* ** 2.38739	34.53	Pk	32.2	-23.4	43.33	54	-10.67	74	-30.67	340	132	V

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

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

BANDEDGE (HIGH CHANNEL)

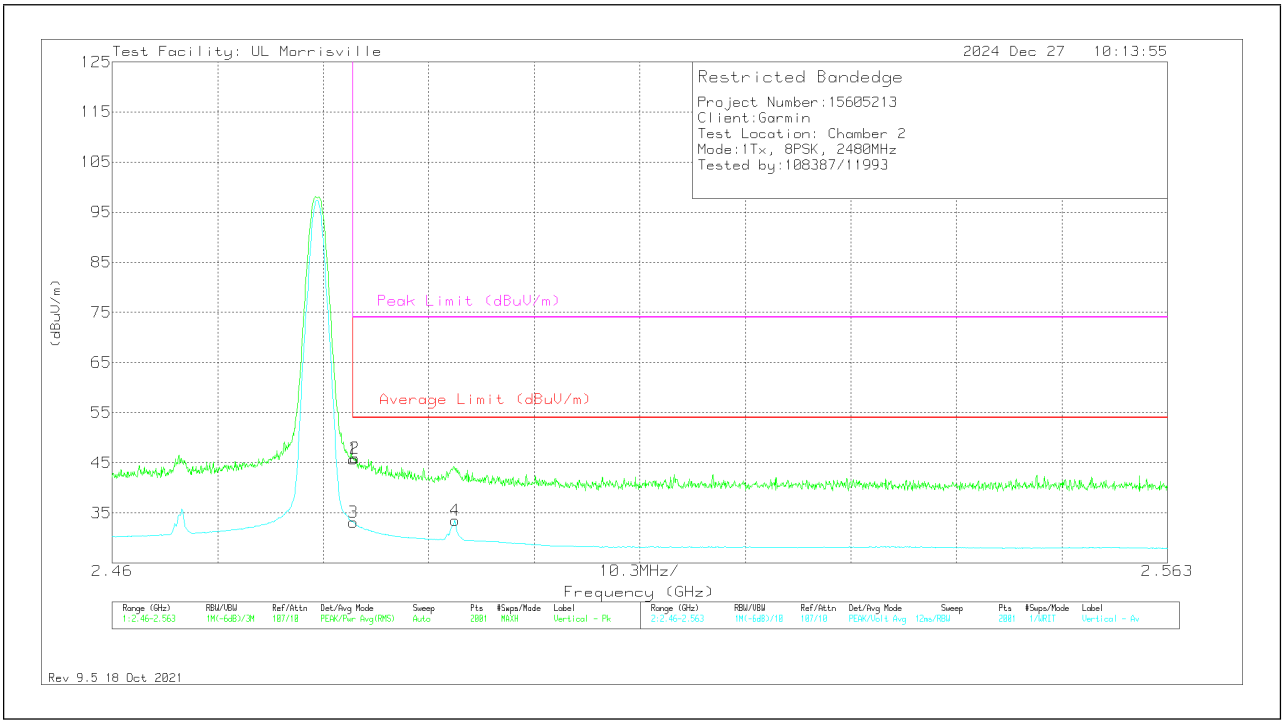
HORIZONTAL RESULT



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	34.15	Pk	32.5	-24.1	42.55	54	-11.45	74	-31.45	236	117	H
2	* ** 2.48369	35.79	Pk	32.5	-24.1	44.19	54	-9.81	74	-29.81	236	117	H

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

VERTICAL RESULT



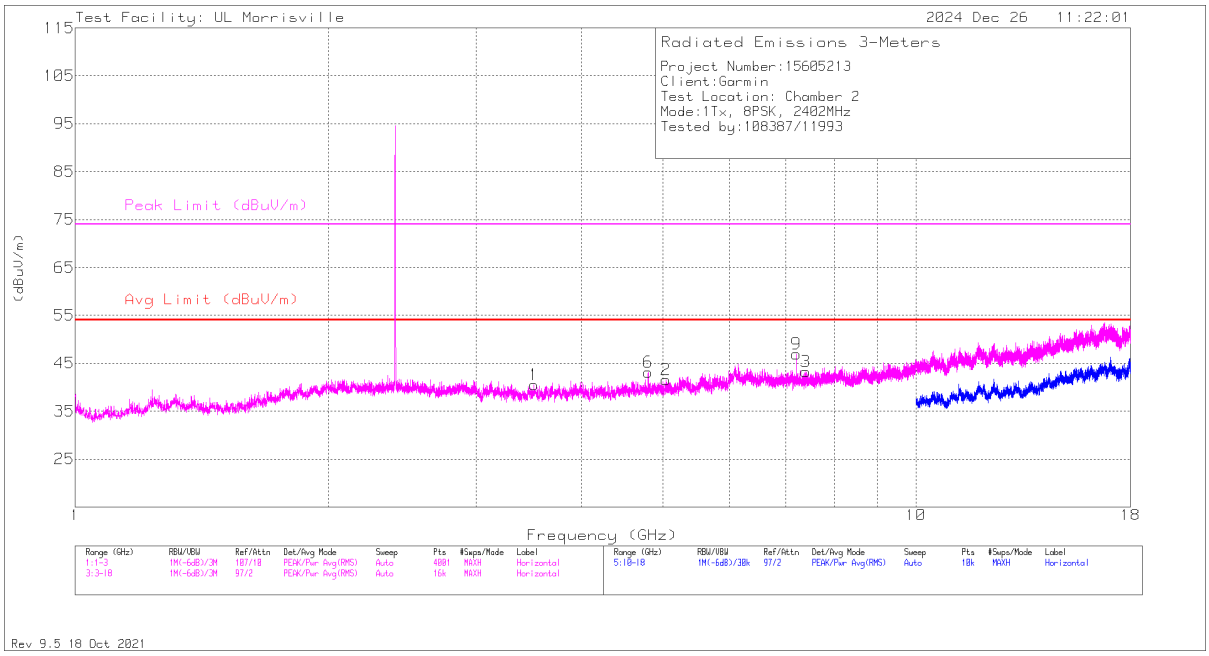
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/ Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	37.3	Pk	32.5	-24.1	45.7	54	-8.3	74	-28.3	346	102	V
2	* ** 2.48369	37.55	Pk	32.5	-24.1	45.95	54	-8.05	74	-28.05	346	102	V

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

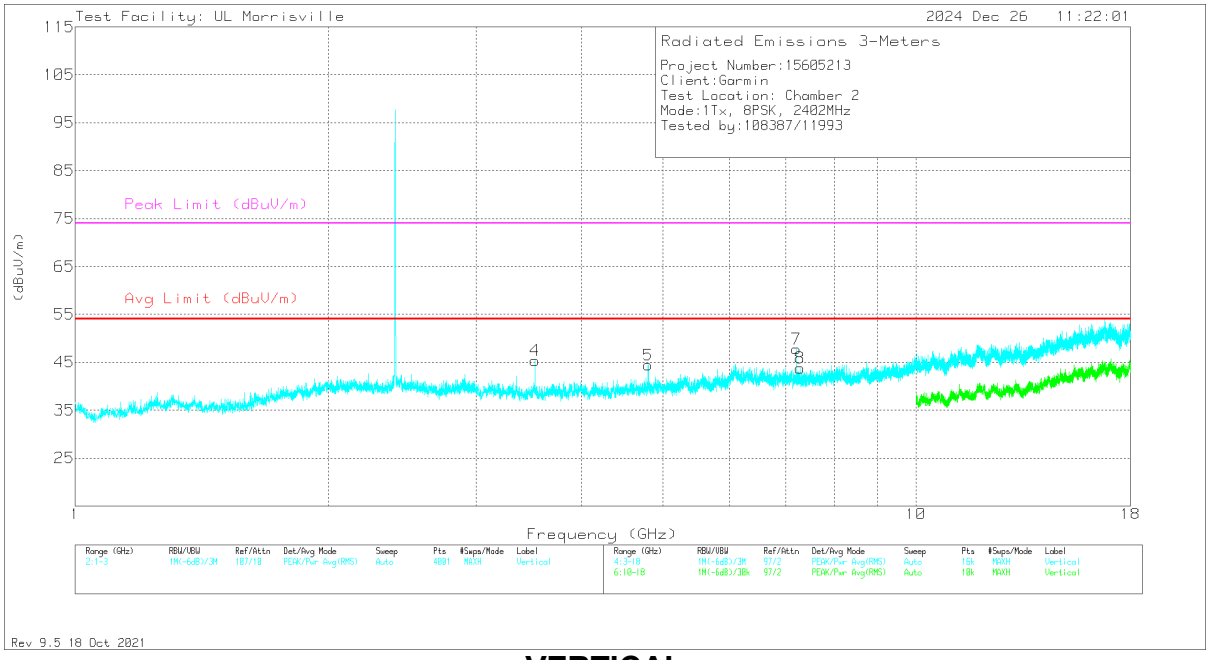
UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



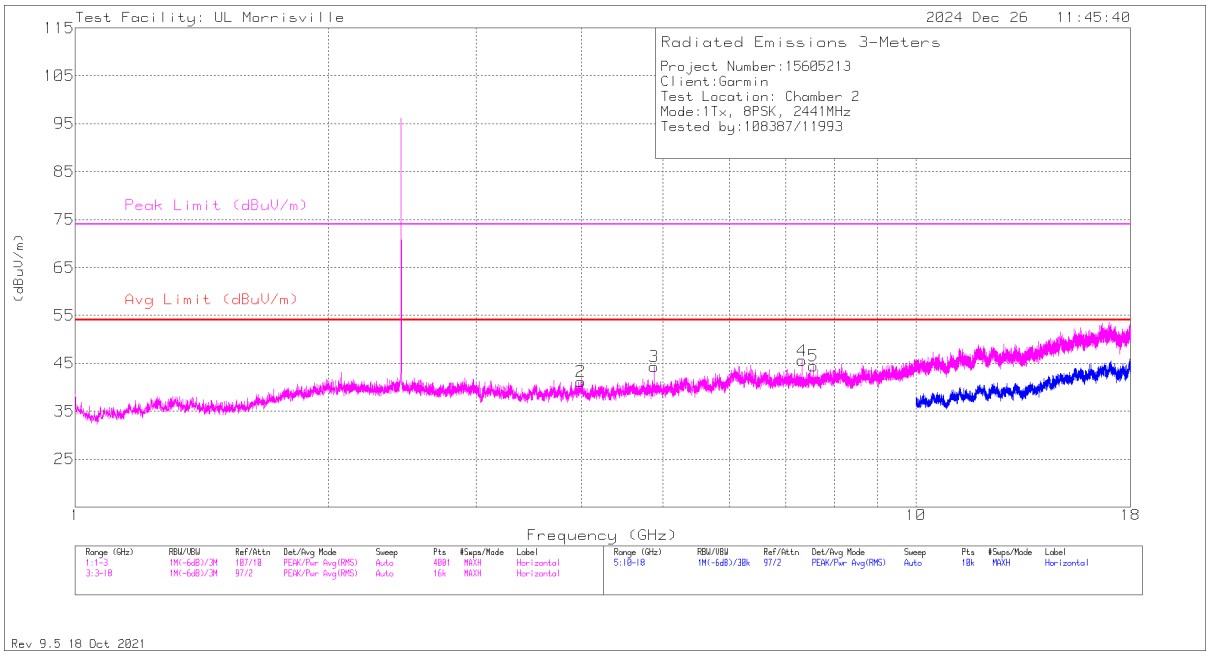
VERTICAL

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.51469	52.01	Pk	32.7	-44.2	40.51	54	-13.49	74	-33.49	0-360	200	H
2	* ** 5.04844	51.25	Pk	34.1	-43.8	41.55	54	-12.45	74	-32.45	0-360	101	H
3	* ** 7.39125	48.89	Pk	35.6	-41.2	43.29	54	-10.71	74	-30.71	0-360	101	H
6	* ** 4.80375	52.84	Pk	34.2	-43.9	43.14	54	-10.86	74	-30.86	0-360	200	H
4	* ** 3.525	56.61	Pk	32.8	-44	45.41	54	-8.59	74	-28.59	0-360	200	V
5	* ** 4.80375	54.09	Pk	34.2	-43.9	44.39	54	-9.61	74	-29.61	0-360	101	V
8	* ** 7.28625	49.61	Pk	35.6	-41.4	43.81	54	-10.19	74	-30.19	0-360	200	V
9	7.20563	53.06	Pk	35.6	-41.7	46.96	-	-	-	-	0-360	101	H
7	7.20656	53.88	Pk	35.6	-41.7	47.78	-	-	-	-	0-360	200	V

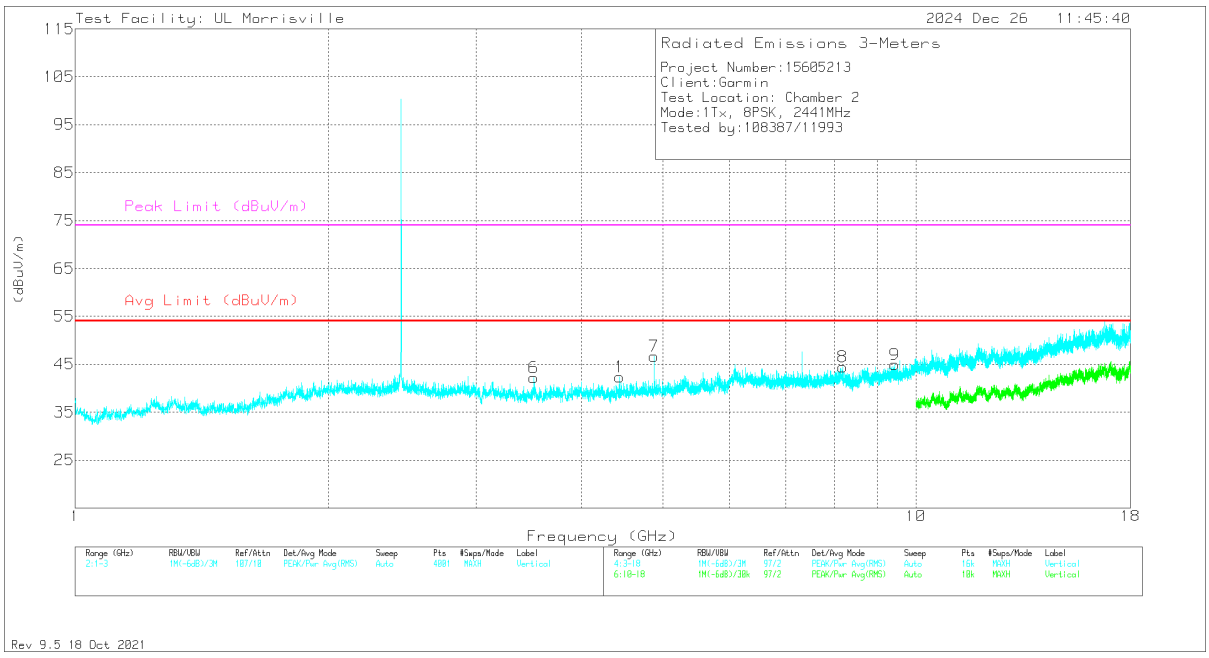
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

MID CHANNEL RESULTS



HORIZONTAL

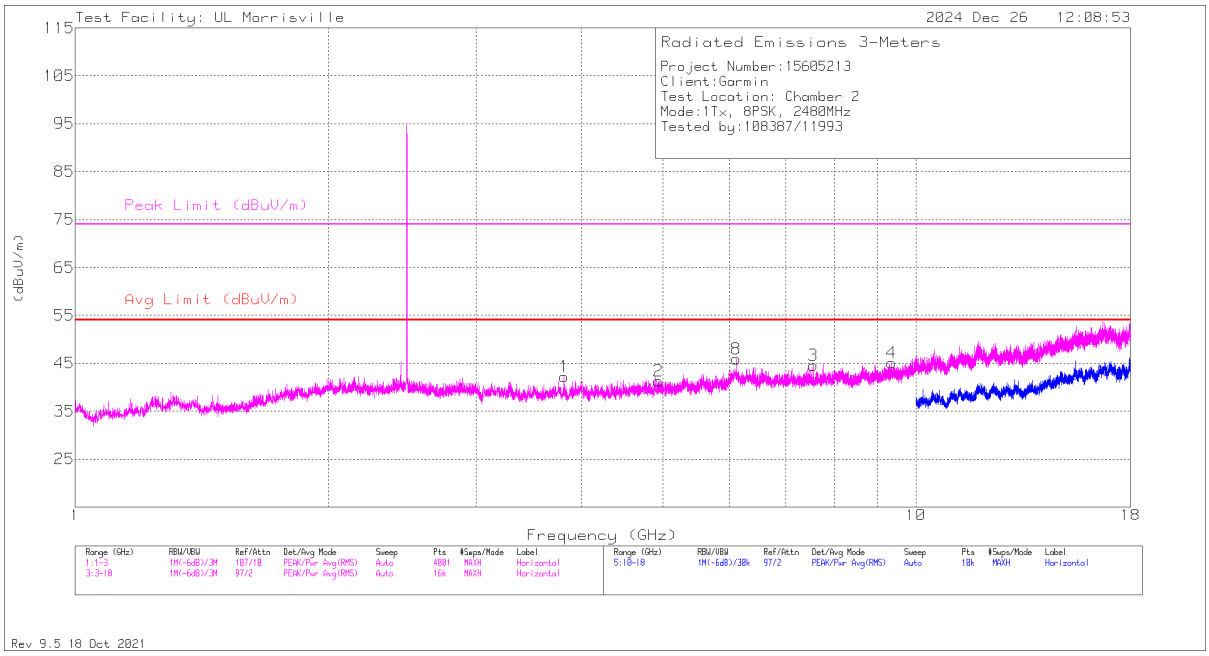


VERTICAL

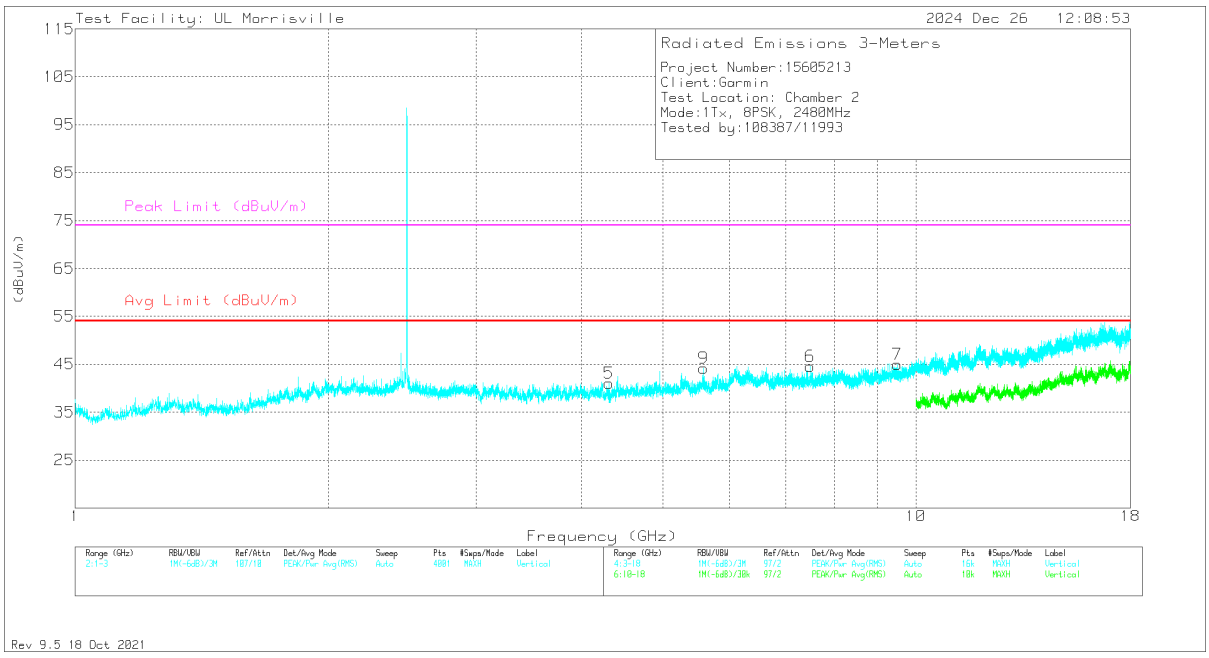
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* ** 3.99375	52.17	Pk	33.4	-44.4	41.17	54	-12.83	74	-32.83	0-360	200	H
3	* ** 4.8825	53.93	Pk	34.1	-43.7	44.33	54	-9.67	74	-29.67	0-360	101	H
4	* ** 7.32281	51.76	Pk	35.6	-41.8	45.56	54	-8.44	74	-28.44	0-360	101	H
5	* ** 7.55438	50.24	Pk	35.7	-41.5	44.44	54	-9.56	74	-29.56	0-360	101	H
6	* ** 3.51375	53.69	Pk	32.7	-44.2	42.19	54	-11.81	74	-31.81	0-360	200	V
7	* ** 4.8825	56.26	Pk	34.1	-43.7	46.66	54	-7.34	74	-27.34	0-360	101	V
8	* ** 8.18531	49.23	Pk	35.8	-40.6	44.43	54	-9.57	74	-29.57	0-360	101	V
9	* ** 9.43688	48.91	Pk	36.3	-40.3	44.91	54	-9.09	74	-29.09	0-360	200	V
1	4.44563	53.04	Pk	33.8	-44.5	42.34	-	-	-	-	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



HORIZONTAL



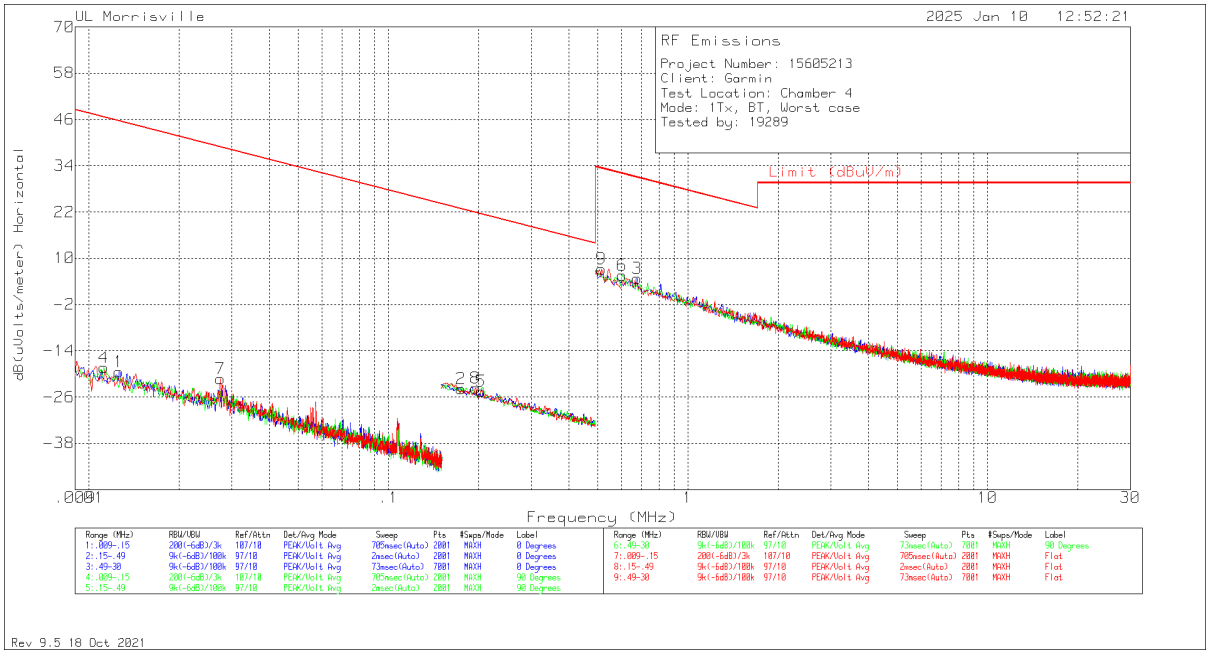
VERTICAL

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.81656	52.48	Pk	33.3	-43.6	42.18	54	-11.82	74	-31.82	0-360	199	H
2	* ** 4.94531	50.92	Pk	34	-43.6	41.32	54	-12.68	74	-32.68	0-360	101	H
3	* ** 7.5525	50.35	Pk	35.7	-41.5	44.55	54	-9.45	74	-29.45	0-360	199	H
4	* ** 9.36188	48.6	Pk	36.1	-39.6	45.1	54	-8.9	74	-28.9	0-360	101	H
5	* ** 4.31344	52.18	Pk	33.5	-44.6	41.08	54	-12.92	74	-32.92	0-360	200	V
6	* ** 7.48125	49.91	Pk	35.7	-41	44.61	54	-9.39	74	-29.39	0-360	200	V
9	5.59219	52.29	Pk	34.6	-42.7	44.19	-	-	-	-	0-360	200	V
8	6.11156	51.64	Pk	35.5	-41.3	45.84	-	-	-	-	0-360	101	H
7	9.50063	48.24	Pk	36.4	-39.7	44.94	-	-	-	-	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

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).

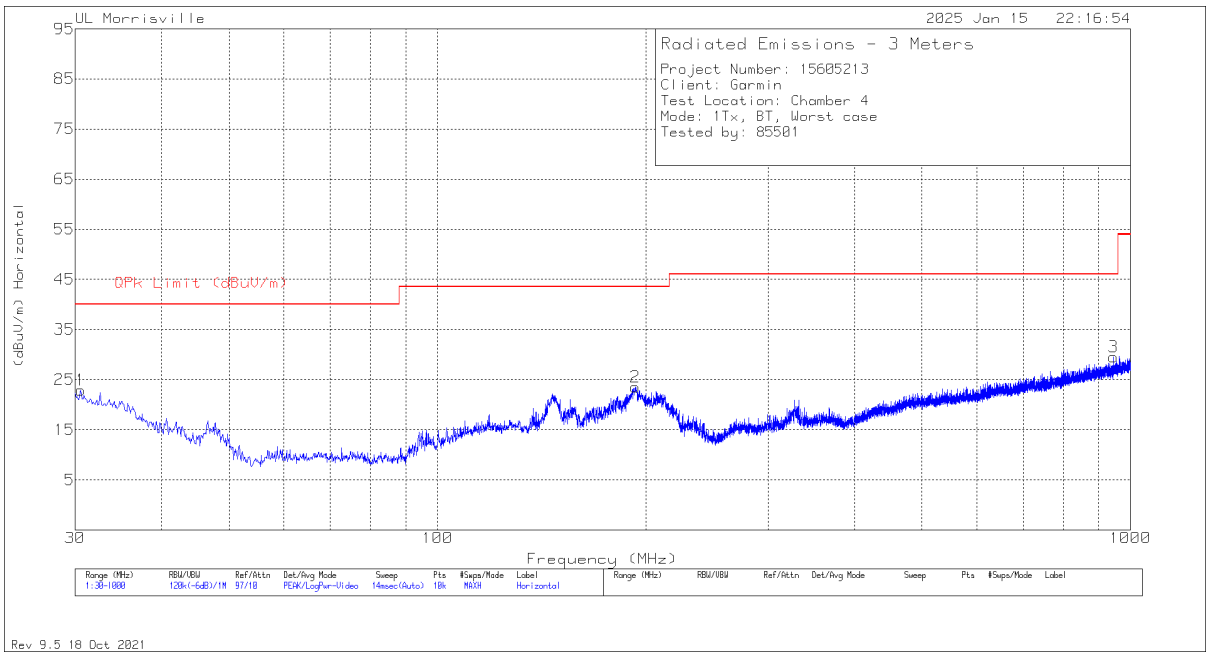


ANTENNA- THREE ORIENTATIONS (E-FIELD)

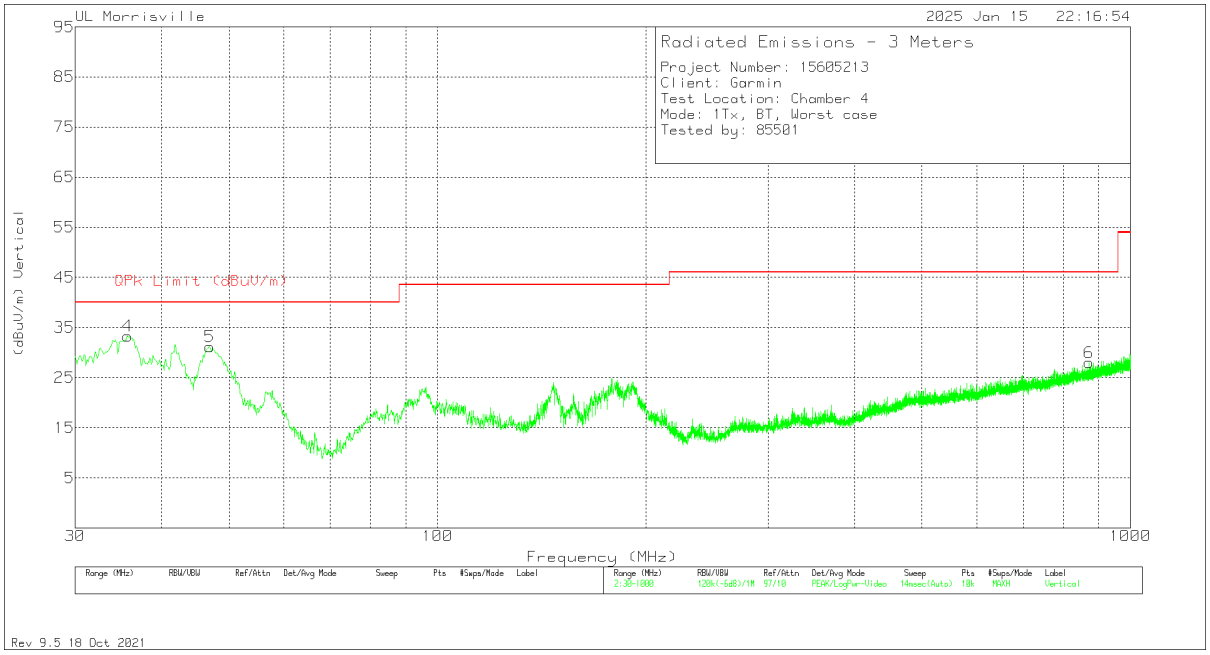
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	135144 (dB/m)	Gain/Loss (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Loop Angle
4	.0112	43.81	Pk	17.7	.1	-80	-18.39	46.62	-65.01	0-360	90 degs
1	.01262	43.34	Pk	17.1	.1	-80	-19.46	45.58	-65.04	0-360	0 degs
7	.02746	45.3	Pk	13.3	.1	-80	-21.3	38.83	-60.13	0-360	Flat
2	.1744	45.1	Pk	11	.1	-80	-23.8	22.77	-46.57	0-360	0 degs
8	.19531	45.2	Pk	11	.1	-80	-23.7	21.79	-45.49	0-360	Flat
5	.20355	44.47	Pk	10.9	.1	-80	-24.53	21.43	-45.96	0-360	90 degs
9	.5153	36.07	Pk	11	.1	-40	7.17	33.36	-26.19	0-360	Flat
6	.60383	34.53	Pk	11	.1	-40	5.63	31.99	-26.36	0-360	90 degs
3	.6755	33.54	Pk	11	.2	-40	4.74	31.01	-26.27	0-360	0 degs

Pk - Peak detector

10.3. WORST CASE SPURIOUS 30-1000MHZ



HORIZONTAL

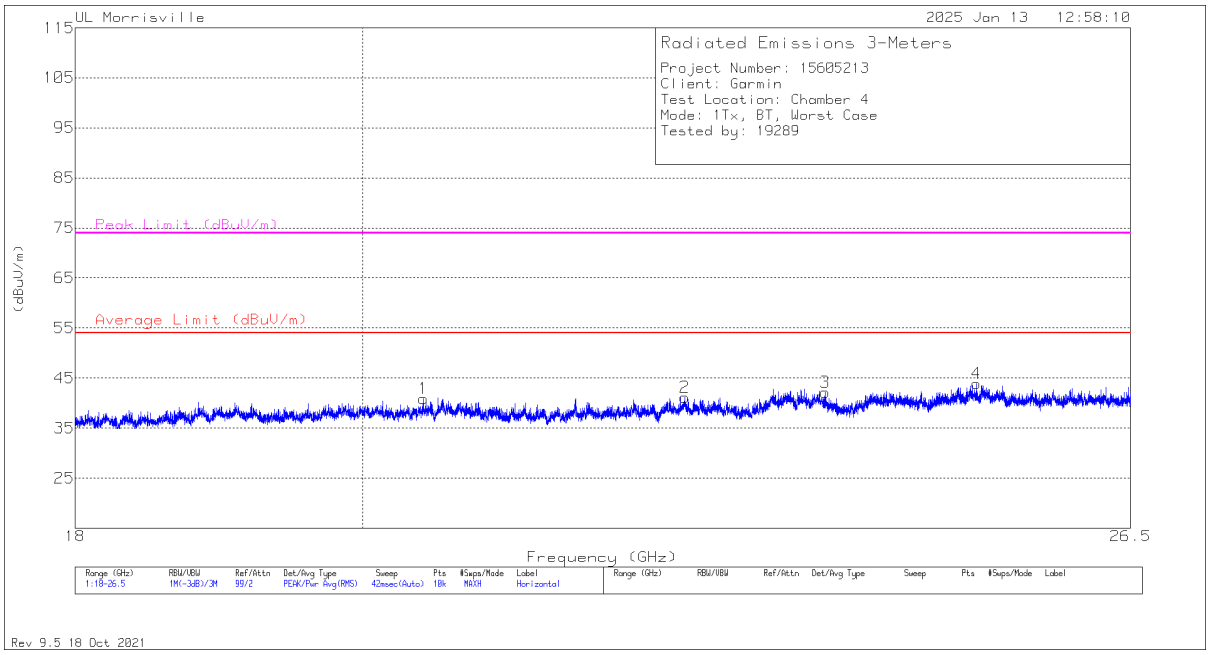


VERTICAL

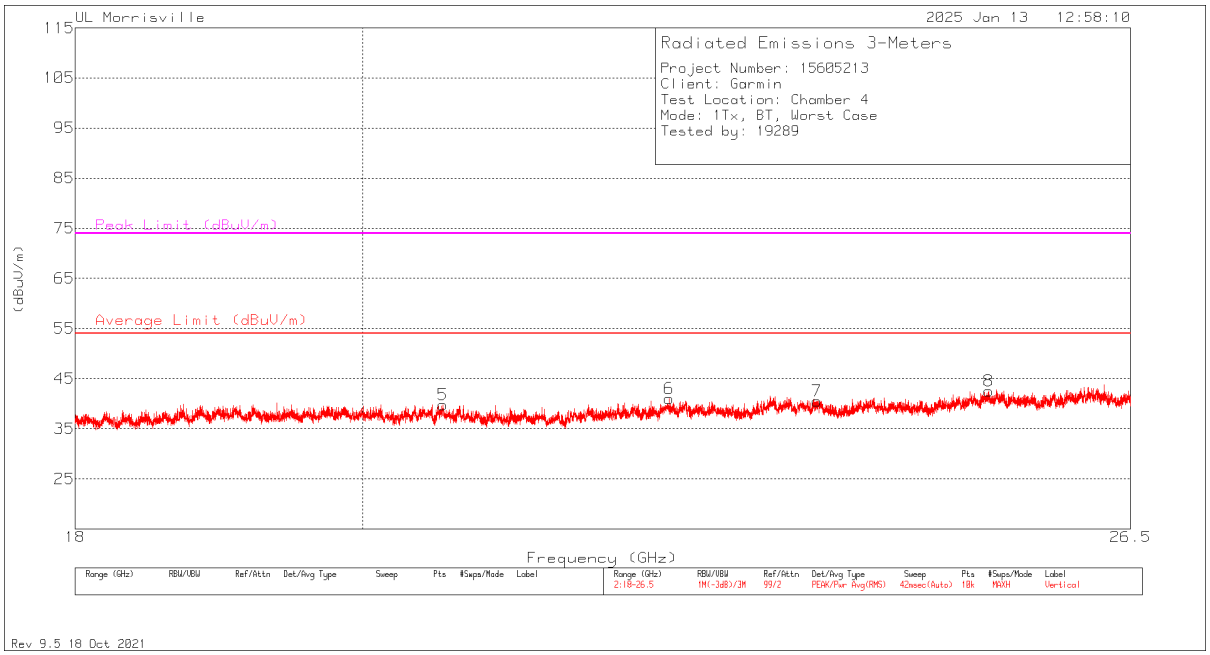
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90628 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	30.582	28.54	Pk	26.5	-32.1	22.94	40	-17.06	0-360	200	H
4	35.723	42.29	Pk	23.1	-32.1	33.29	40	-6.71	0-360	100	V
5	46.878	47.78	Pk	15.4	-32	31.18	40	-8.82	0-360	100	V
2	192.8145	36.61	Pk	17.7	-30.8	23.51	43.52	-20.01	0-360	100	H
6	871.669	27.58	Pk	28	-27.6	27.98	46.02	-18.04	0-360	100	V
3	945.486	27.61	Pk	28.6	-26.7	29.51	46.02	-16.51	0-360	300	H

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

10.4. WORST CASE SPURIOUS 18-26GHz



HORIZONTAL



VERTICAL

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	* ** 20.44946	47.85	Pk	33.6	-40.5	40.95	54	-13.05	74	-33.05	0-360	100	H
2	* ** 22.5071	46.37	Pk	34.2	-39.4	41.17	54	-12.83	74	-32.83	0-360	150	H
3	* ** 23.69698	46.09	Pk	34.5	-38.4	42.19	54	-11.81	74	-31.81	0-360	100	H
5	* ** 20.59734	46.29	Pk	33.7	-40.2	39.79	54	-14.21	74	-34.21	0-360	300	V
6	* ** 22.37876	47.18	Pk	34.1	-40.2	41.08	54	-12.92	74	-32.92	0-360	150	V
7	* ** 23.62559	44.35	Pk	34.6	-38.4	40.55	54	-13.45	74	-33.45	0-360	200	V
4	25.04665	45.14	Pk	35.4	-36.6	43.94	-	-	-	--	0-360	100	H
8	25.16138	43.4	Pk	35.6	-36.5	42.5	-	-	-	-	0-360	250	V

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

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

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.

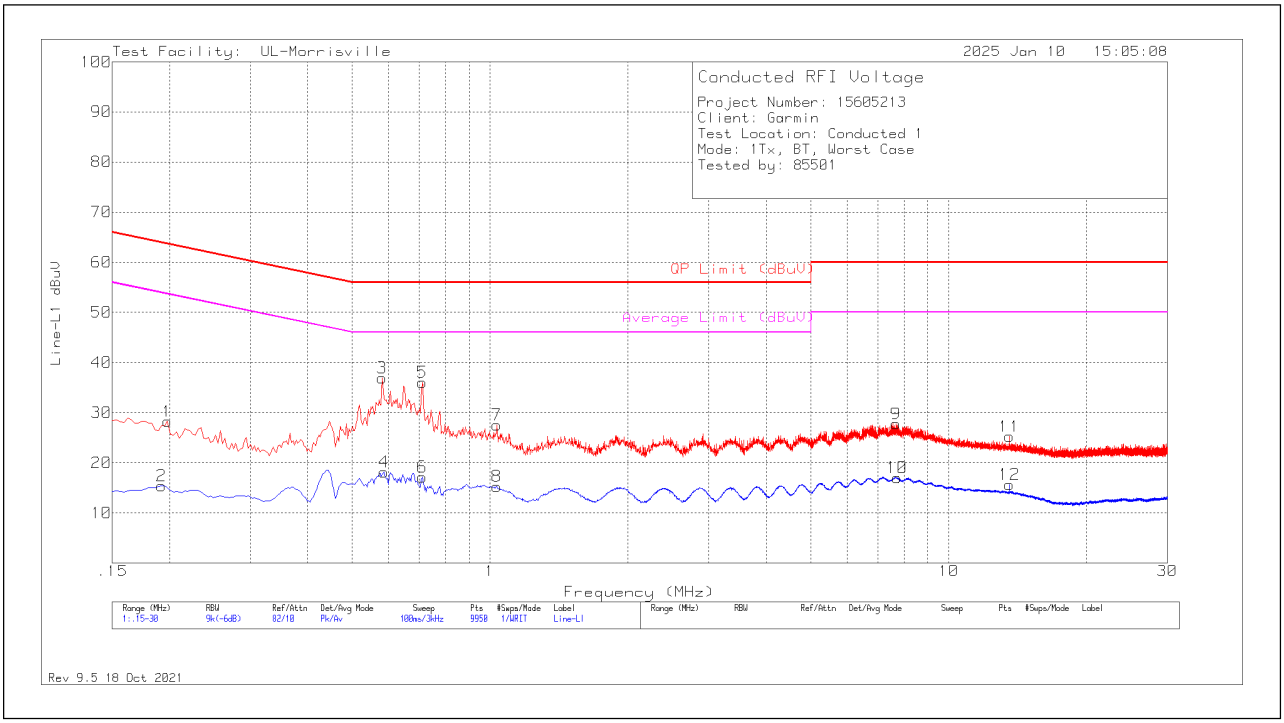
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both lines.

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400

11.1. AC POWER LINE

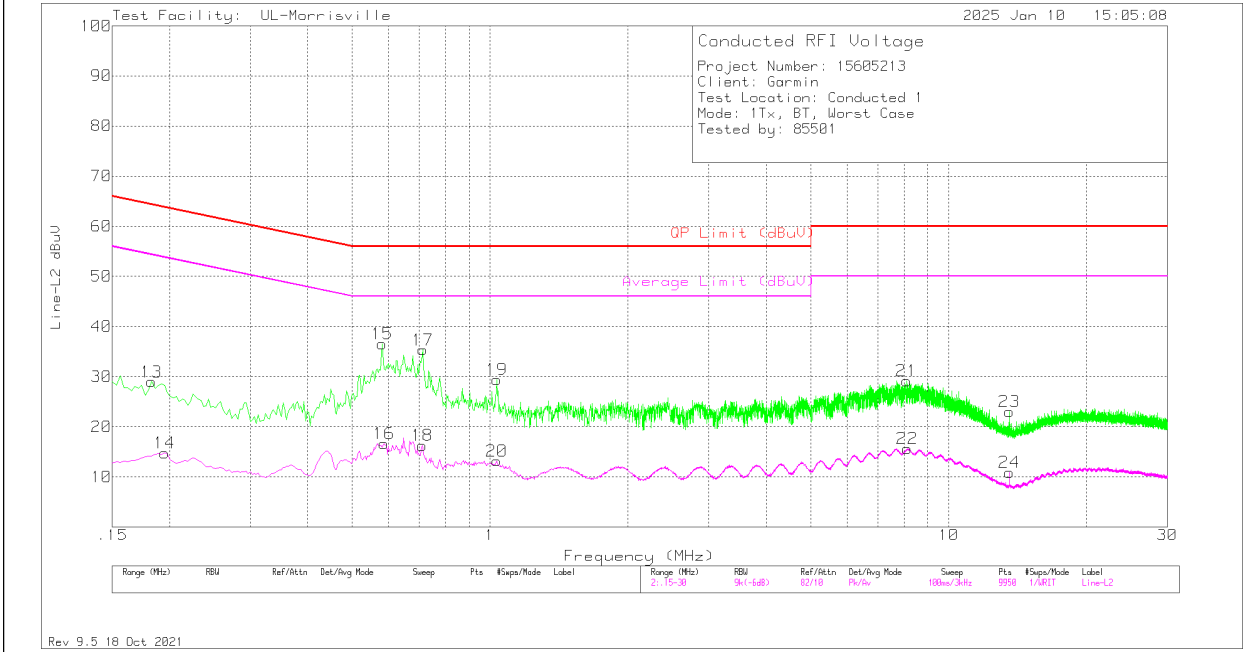
LINE 1 RESULTS



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)
2	.192	5.43	Av	.2	9.8	15.43	-	-	53.95	-38.52
1	.198	18.22	Pk	.2	9.8	28.22	63.69	-35.47	-	-
3	.582	27.16	Pk	0	9.8	36.96	56	-19.04	-	-
4	.588	8.36	Av	0	9.8	18.16	-	-	46	-27.84
5	.711	26.29	Pk	0	9.8	36.09	56	-19.91	-	-
6	.711	7.35	Av	0	9.8	17.15	-	-	46	-28.85
7	1.035	17.75	Pk	0	9.8	27.55	56	-28.45	-	-
8	1.035	5.51	Av	0	9.8	15.31	-	-	46	-30.69
9	7.686	17.63	Pk	.1	10	27.73	60	-32.27	-	-
10	7.716	6.9	Av	.1	10	17	-	-	50	-33
11	13.56	15.12	Pk	.1	10	25.22	60	-34.78	-	-
12	13.56	5.54	Av	.1	10	15.64	-	-	50	-34.36

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	.183	18.97	Pk	.2	9.8	28.97	64.35	-35.38	-	-
14	.195	4.73	Av	.2	9.8	14.73	-	-	53.82	-39.09
15	.582	26.73	Pk	0	9.8	36.53	56	-19.47	-	-
16	.588	6.86	Av	0	9.8	16.66	-	-	46	-29.34
18	.711	6.44	Av	0	9.8	16.24	-	-	46	-29.76
17	.714	25.55	Pk	0	9.8	35.35	56	-20.65	-	-
19	1.035	19.57	Pk	0	9.8	29.37	56	-26.63	-	-
20	1.035	3.39	Av	0	9.8	13.19	-	-	46	-32.81
21	8.106	19.02	Pk	.1	10	29.12	60	-30.88	-	-
22	8.133	5.53	Av	.1	10	15.63	-	-	50	-34.37
23	13.56	12.96	Pk	.1	10	23.06	60	-36.94	-	-
24	13.563	.79	Av	.1	10	10.89	-	-	50	-39.11

Pk - Peak detector
Av - Average detection

12. SETUP PHOTOS

Please refer to R15605213-EP4 for setup photos.

END OF TEST REPORT

UL LLC
12 Laboratory Drive, Research Triangle Park, NC 27709; USA TEL:(919)549-1400