TEST REPORT

Report Number: R15628768-E2

Applicant	:	Garmin International Inc. 1200 East 151st Street Olathe, KS 66062-3426, USA
Model	:	A05201
FCC ID	:	IPH-05201
IC	:	1792A-05201
EUT Description	:	Extremity Worn Digital Transceiver
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART C ISED RSS-247 ISSUE 3 ISED RSS-GEN ISSUE 5 + A1 + A2

Date Of Issue:
2025-08-14

Prepared by:
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CERT #0751.06

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2025-08-14	Initial Issue	Chandler Stanley

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1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: Extremity Worn Digital Transceiver

MODEL: A05201

SERIAL NUMBER: 603037845 / 604021419 / 604021450 / 604021458

SAMPLE RECEIPT DATE: 2025-05-14, 2025-06-02, and 2025-06-20

DATE TESTED: 2025-05-28 and 2025-06-26

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	Complies
ISED RSS-247 Issue 3	Complies
ISED RSS-GEN Issue 5 + A1 + A2	Complies

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 data provided by the customer which can impact the validity of results. UL LLC is only responsible for correctly integrating customer-provided data with measurements performed by UL LLC.
Below is a list of the data provided by the customer:
1) Antenna gain and type (see section 6.3)

FCC Clause	ISED Clause	Requirement	Result	Comment
See Comment		Duty Cycle	Reporting purposes only	Per ANSI C63.10, Section 11.6.
See Comment	RSS-GEN 6.7	20dB BW/99% OBW		ANSI C63.10 Sections 6.9.2 and 6.9.3
15.247 (a)(1)	RSS-247 (5.1) (b)	Hopping Frequency Separation	Compliant	None.
15.247 (a)(1)(iii)	RSS-247 (5.1) (d)	Number of Hopping Channels		
15.247 (a)(1)(iii)	RSS-247 (5.1) (d)	Average Time of Occupancy		
15.247 (b)(1)	RSS-247 (5.4) (b)	Output Power		
See Comment		Average Power	Reporting purposes only	Per ANSI C63.10, Section 11.9.2.3.2.
15.247 (d)	RSS-247 (5.5)	Conducted Spurious Emissions	Compliant	None.
15.209, 15.205	RSS-GEN 8.9, 8.10	Radiated Emissions		
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions		

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024, KDB 558074 D01 15.247 Meas Guidance v05r02, KDB 414788 D01 Radiated Test Site v01r01, RSS-GEN Issue 5 + A1 + A2, and RSS-247 Issue 3.

4. FACILITIES AND ACCREDITATION

UL LLC is accredited by A2LA, Certificate Number #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 Durham, NC 27713, USA	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

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, WWAN (NTN, LTE Cat M1), and Global Navigation Satellite System (GNSS) receiver. This report covers full testing on the BT radio.

6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2402 - 2480	Basic GFSK	11.53	14.22
2402 - 2480	Enhanced DQPSK	10.84	12.13
2402 - 2480	Enhanced 8PSK	10.24	10.57

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The antenna's gain and type, as provided by the manufacturer' are as follows:

The radio utilizes a slot antenna, with a maximum gain of -3.35 dBi.

6.4. SOFTWARE AND FIRMWARE

SW Ver 16.22
HW Rev V1

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

6.6. DESCRIPTION OF TEST SETUP

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC Adaptor	Garmin/Phihong	AQ27A-59CFA	N/A	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. For final emissions testing, the EUT was connected to AC mains.

SETUP DIAGRAMS

Please refer to R15628768-EP1 for setup diagrams

7. MEASUREMENT METHODS

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

Occupied BW (20dB): ANSI C63.10-2020 Section 6.9.2

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

Carrier Frequency Separation: ANSI C63.10-2020 Section 7.8.2

Number of Hopping Frequencies: ANSI C63.10-2020 Section 7.8.3

Time of Occupancy (Dwell Time): ANSI C63.10-2020 Section 7.8.4

Output Power: ANSI C63.10-2020 Section 7.8.5

Conducted Spurious Emissions: ANSI C63.10-2020 Section 7.8.7

Conducted Band-Edge: ANSI C63.10-2020 Section 7.8.7.2 and 6.10.4

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.

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					
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
Pad II	SMA Coaxial 10dB Attenuator 25MHz-18GHz	CentricRF	C18S2-10	2025-05-25	2026-05-25
Pad IV	SMA Coaxial 10dB Attenuator 25MHz-18GHz	CentricRF	C18S2-10	2024-08-17	2025-08-17
SOFTEMI	Antenna Port Software	UL	Version 2022.8.16	NA	NA
211057	Real-Time Peak Power Sensor 50MHz to 8GHz	Boonton	RTP5000	2024-08-01	2025-08-01
Power Software	Boonton Power Analyzer	Boonton	Version 3.0.13.0	NA	NA

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	2025-05-31	2026-05-31
Receiver & Software					
197955	Spectrum Analyzer	Rohde & Schwarz	ESW44	2025-05-12	2026-05-12
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

Note: All equipment was in calibration at the time of testing.

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

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
0.009-30MHz					
135144	Active Loop Antenna	ETS-Lindgren	6502	2024-10-02	2025-10-02
30-1000 MHz					
90628	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2024-01-02	2026-01-02
1-18 GHz					
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
Gain-Loss Chains					
207638	Gain-loss string: 0.009-30MHz	Various	Various	2024-05-22	2025-06-06
207639	Gain-loss string: 25-1000MHz	Various	Various	2024-05-22	2025-06-06
207640	Gain-loss string: 1-18GHz	Various	Various	2024-05-22	2025-06-06
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

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: All equipment was in calibration at the time of testing.

9. ANTENNA PORT TEST RESULTS

9.1. 20 dB AND 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

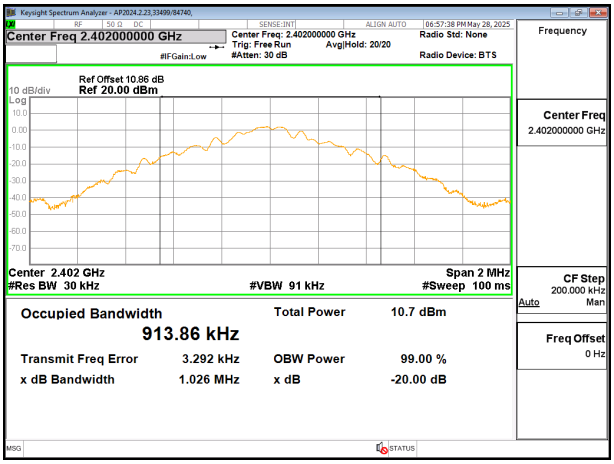
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The RBW is set to ≥ 1% of the 20 dB bandwidth. The VBW is set to ≥ RBW. The sweep time is coupled.

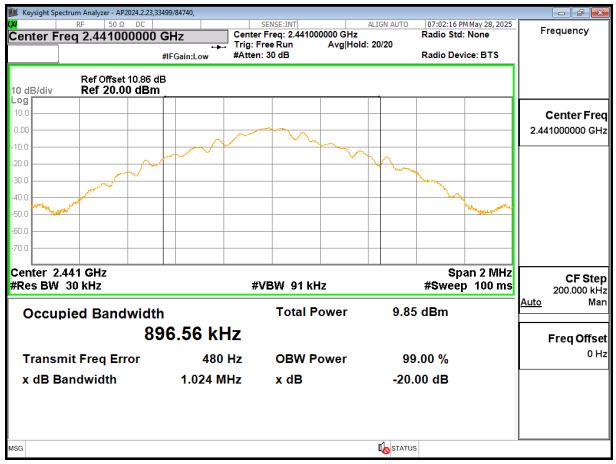
RESULTS

9.1.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION

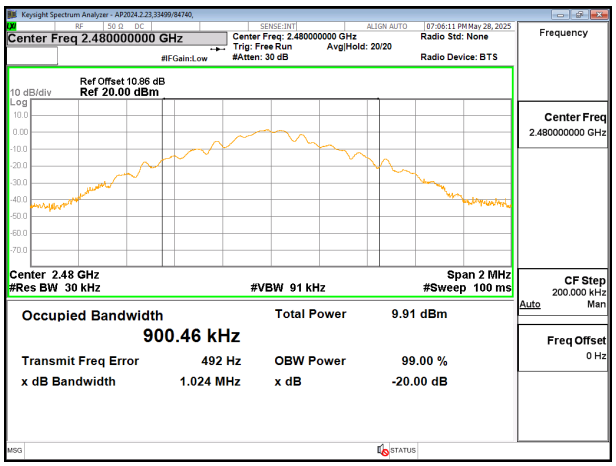
Channel	Frequency (MHz)	20dB Bandwidth (MHz)	99% Bandwidth (kHz)
Low	2402	1.026	913.86
Mid	2441	1.024	896.56
High	2480	1.024	900.46



LOW CHANNEL



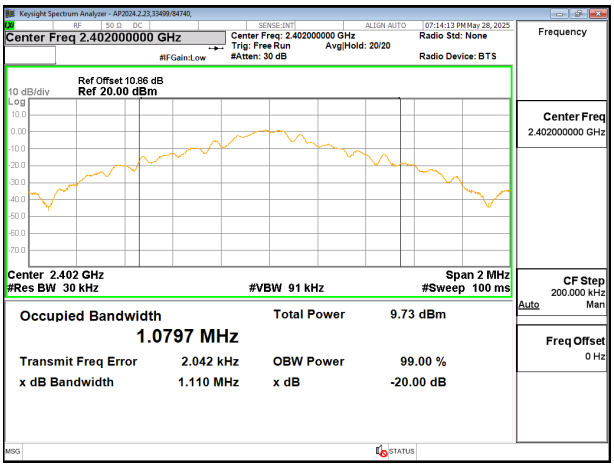
MID CHANNEL



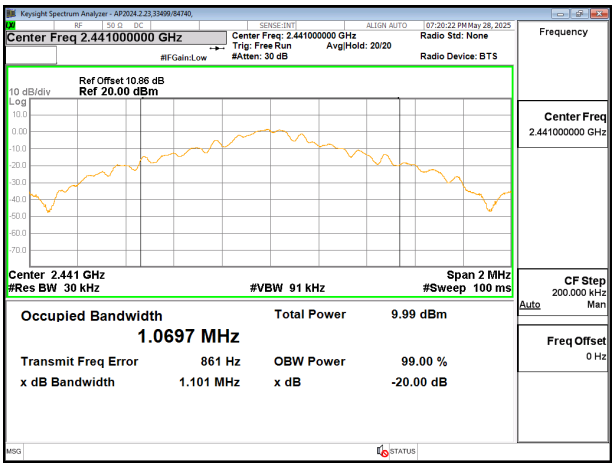
HIGH CHANNEL

9.1.2. BLUETOOTH ENHANCED DATA RATE QPSK MODULATION

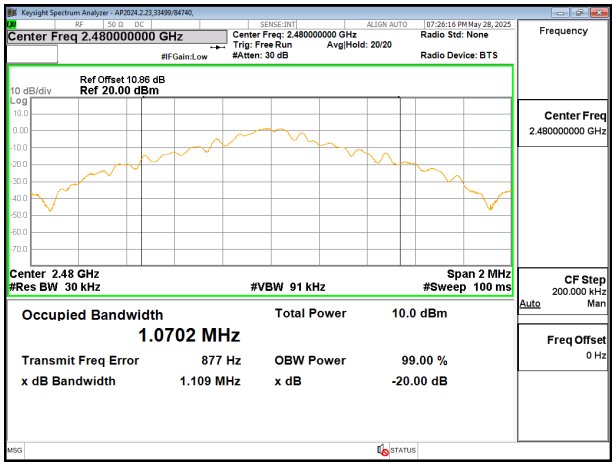
Channel	Frequency (MHz)	20dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	2402	1.110	1.0797
Mid	2441	1.101	1.0697
High	2480	1.109	1.0702



LOW CHANNEL



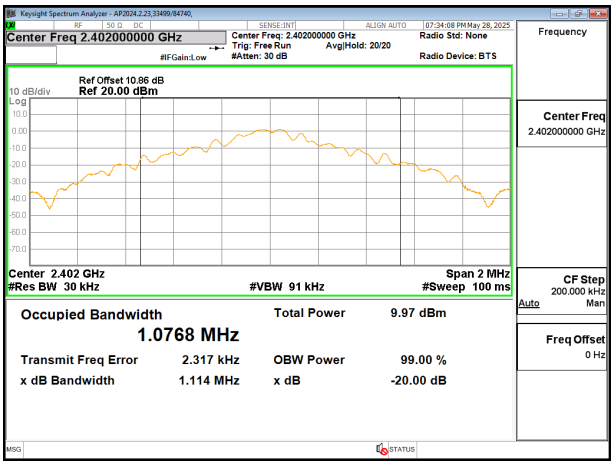
MID CHANNEL



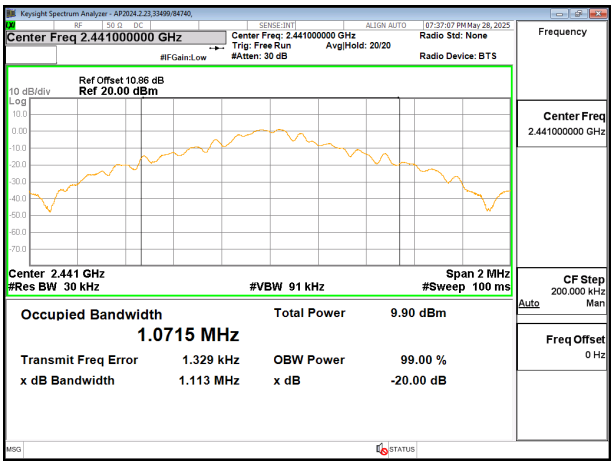
HIGH CHANNEL

9.1.3. BLUETOOTH ENHANCED DATA RATE 8PSK MODULATION

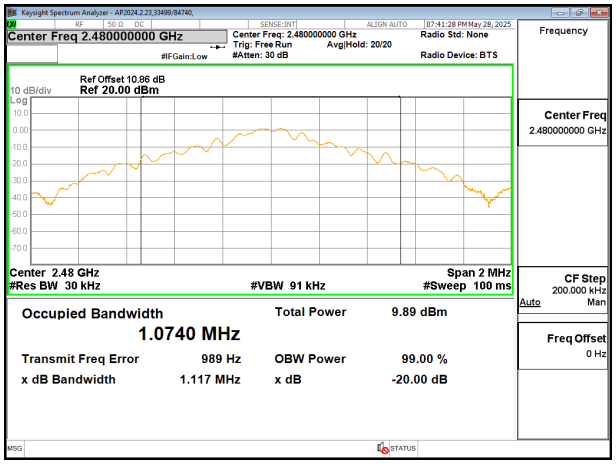
Channel	Frequency (MHz)	20dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	2402	1.114	1.0768
Mid	2441	1.113	1.0715
High	2480	1.117	1.0740



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

9.2. HOPPING FREQUENCY SEPARATION

LIMITS

FCC §15.247 (a) (1)
RSS-247 (5.1) (b)

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

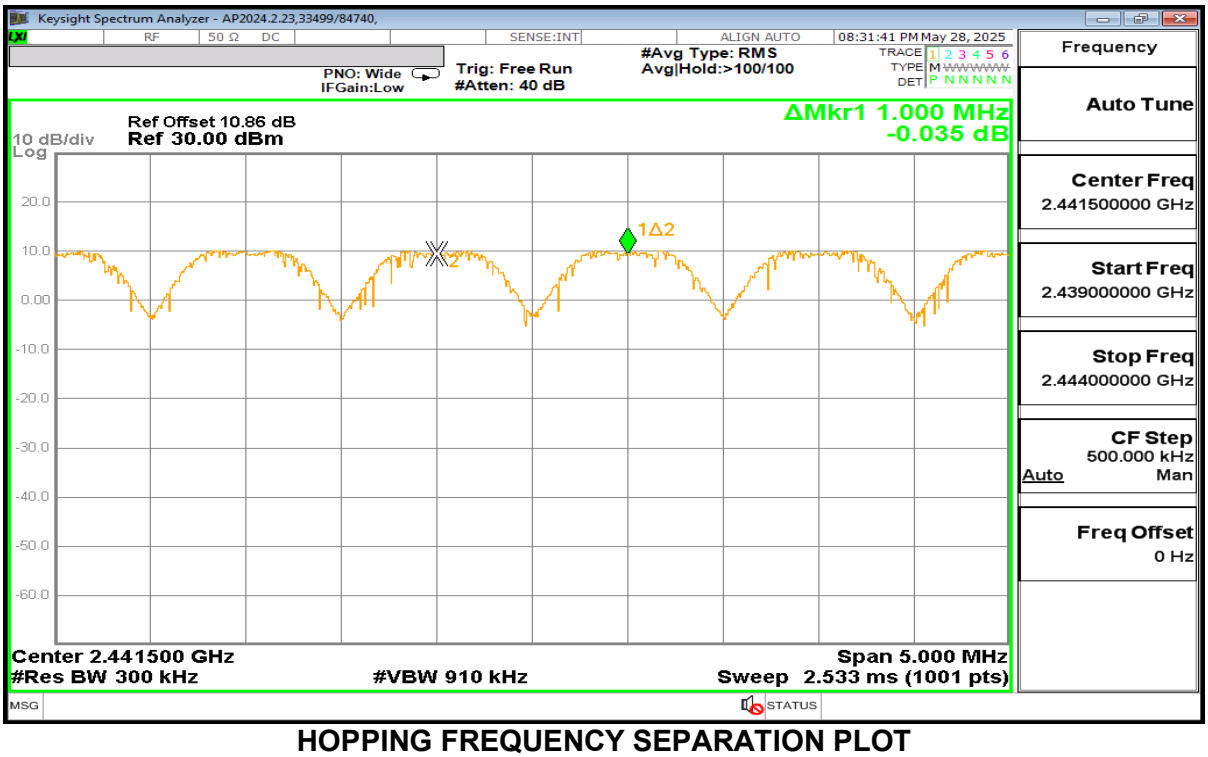
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The RBW is set to 300 kHz and the VBW is set to VBW >= RBW. The sweep time is coupled.

RESULTS

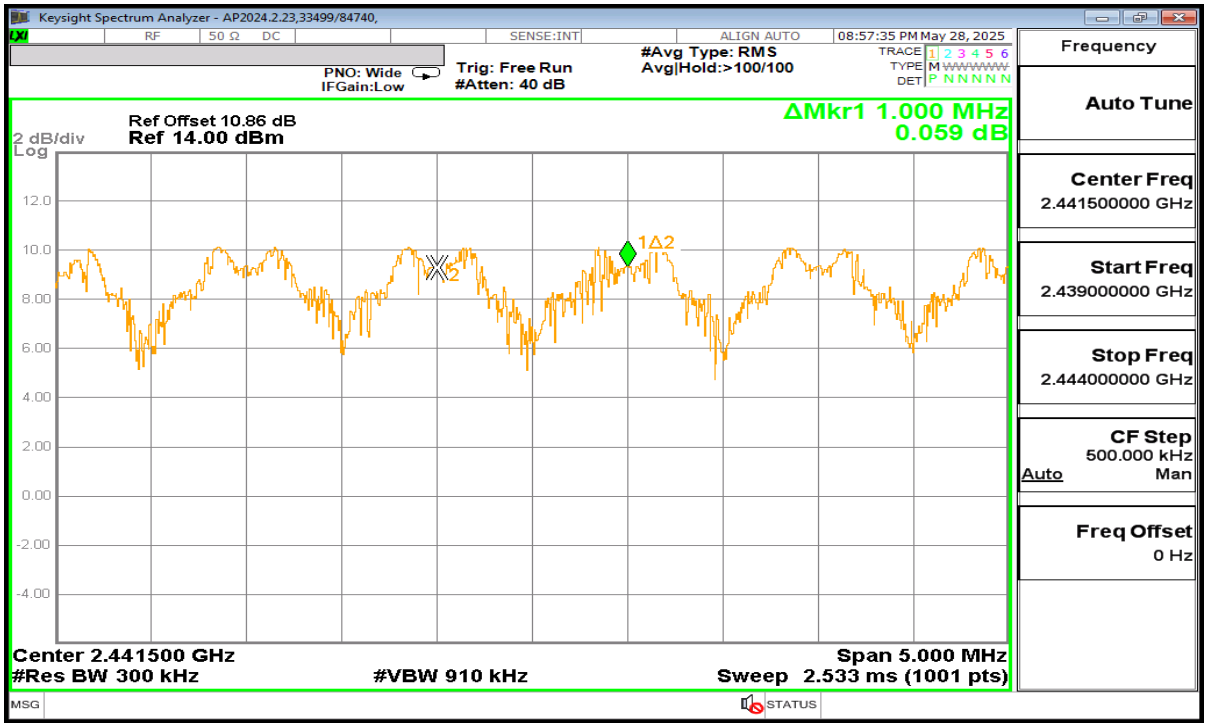
The largest 20 dB BW among all modes was 1.117 MHz.
1.117 MHz x (2/3) = 0.745 MHz
Since the separation of 1.000 MHz is greater than 0.745 MHz, the channel separation is compliant.

9.2.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION



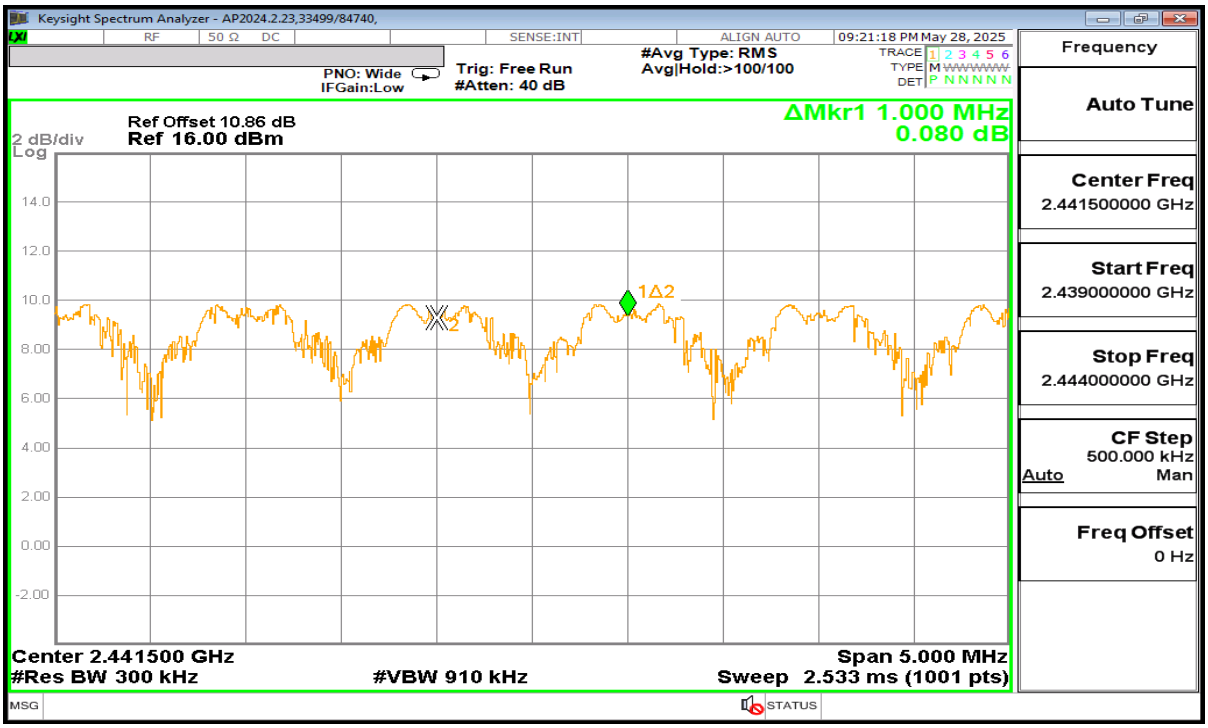
HOPPING FREQUENCY SEPARATION PLOT

9.2.2. BLUETOOTH ENHANCED DATA RATE QPSK MODULATION



HOPPING FREQUENCY SEPARATION PLOT

9.2.1. BLUETOOTH ENHANCED DATA RATE 8PSK MODULATION



HOPPING FREQUENCY SEPARATION PLOT

9.3. NUMBER OF HOPPING CHANNELS

LIMITS

FCC §15.247 (a) (1) (iii)
RSS-247 (5.1) (d)

Frequency hopping systems in the 2400 – 2483.5 MHz band shall use at least 15 non-overlapping channels.

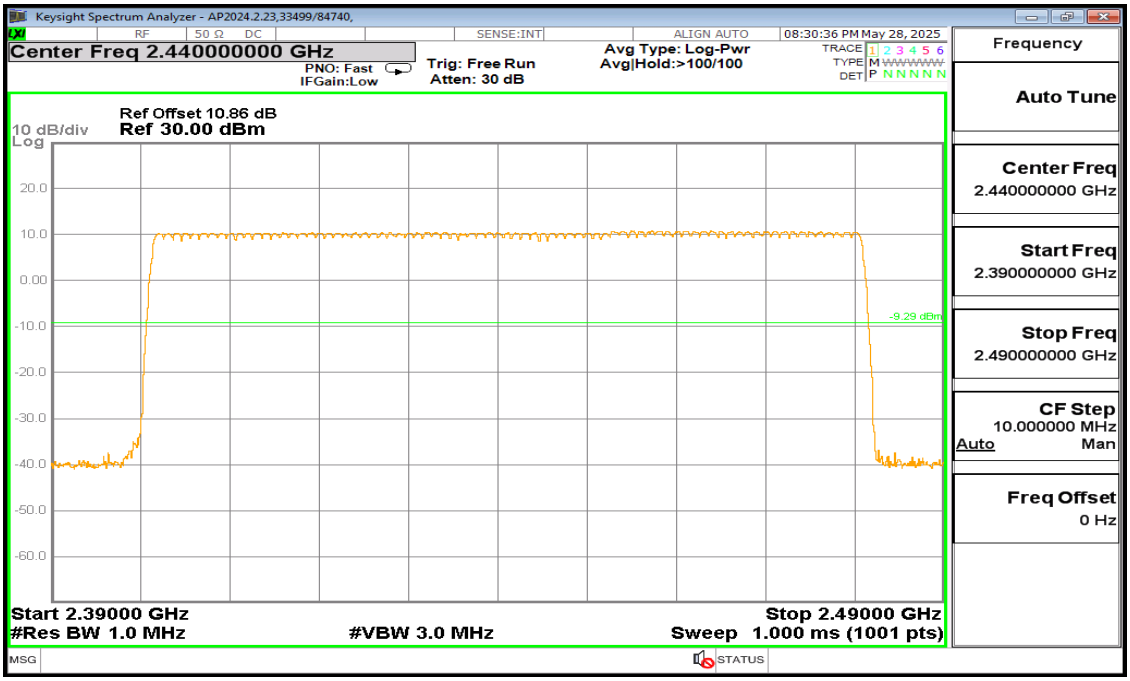
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The span is set to cover the entire authorized band, in either a single sweep or in multiple contiguous sweeps. The RBW is set to a maximum of 1 % of the span. The analyzer is set to Max Hold.

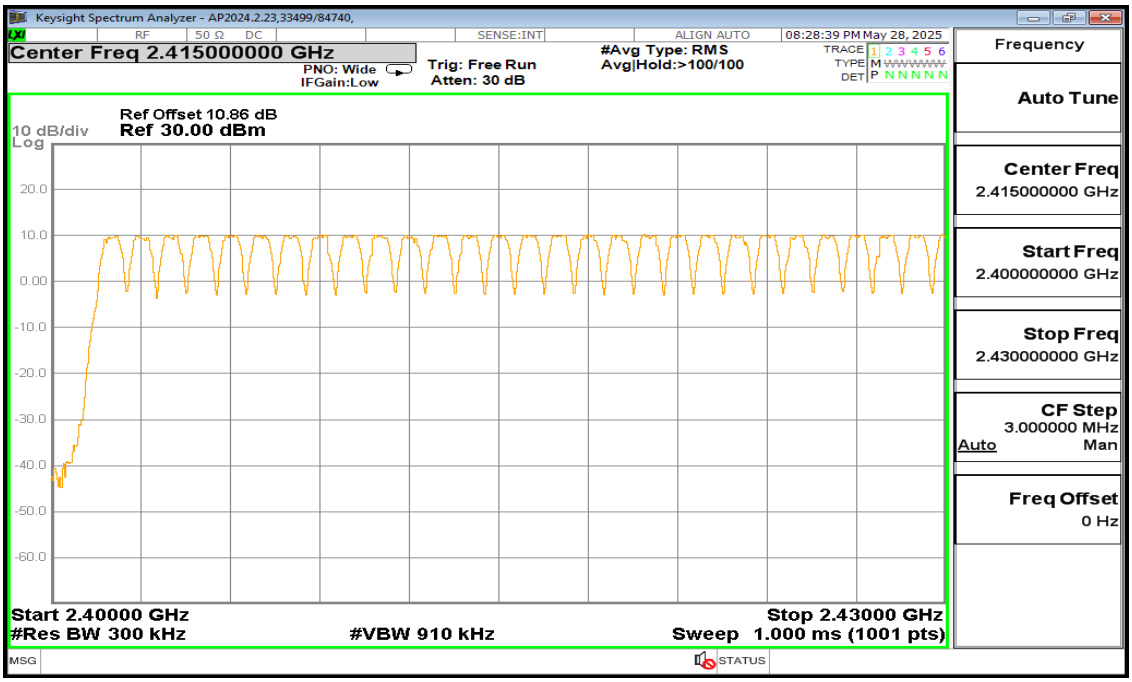
RESULTS

Normal Mode: 79 Channels Observed

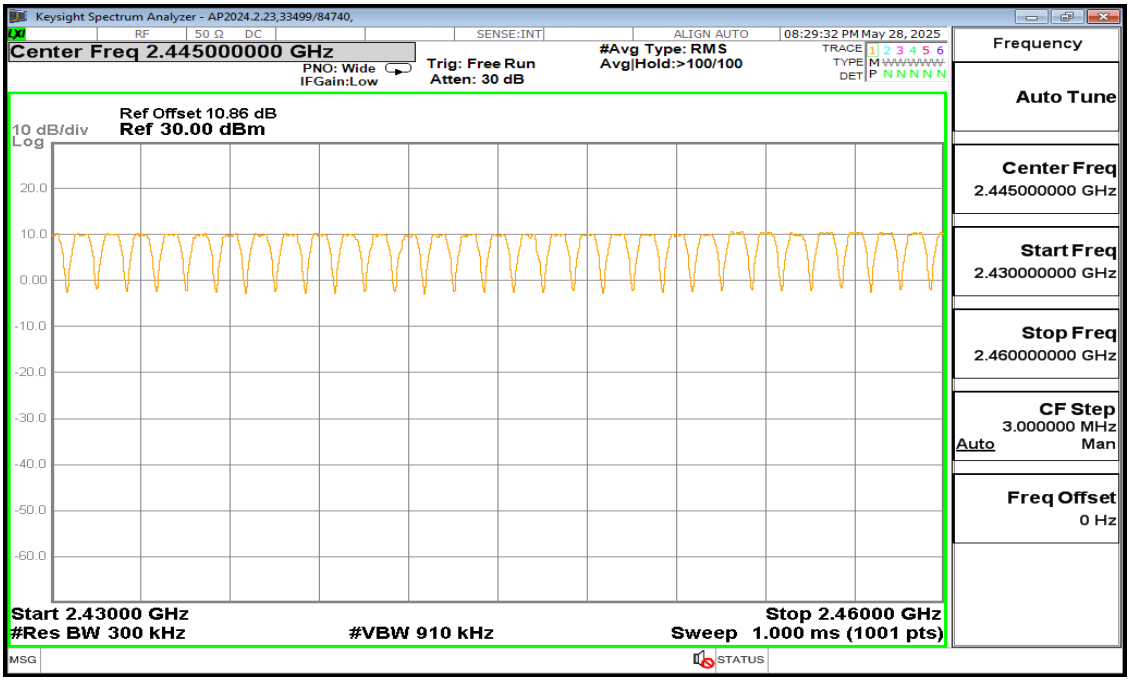
9.3.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION



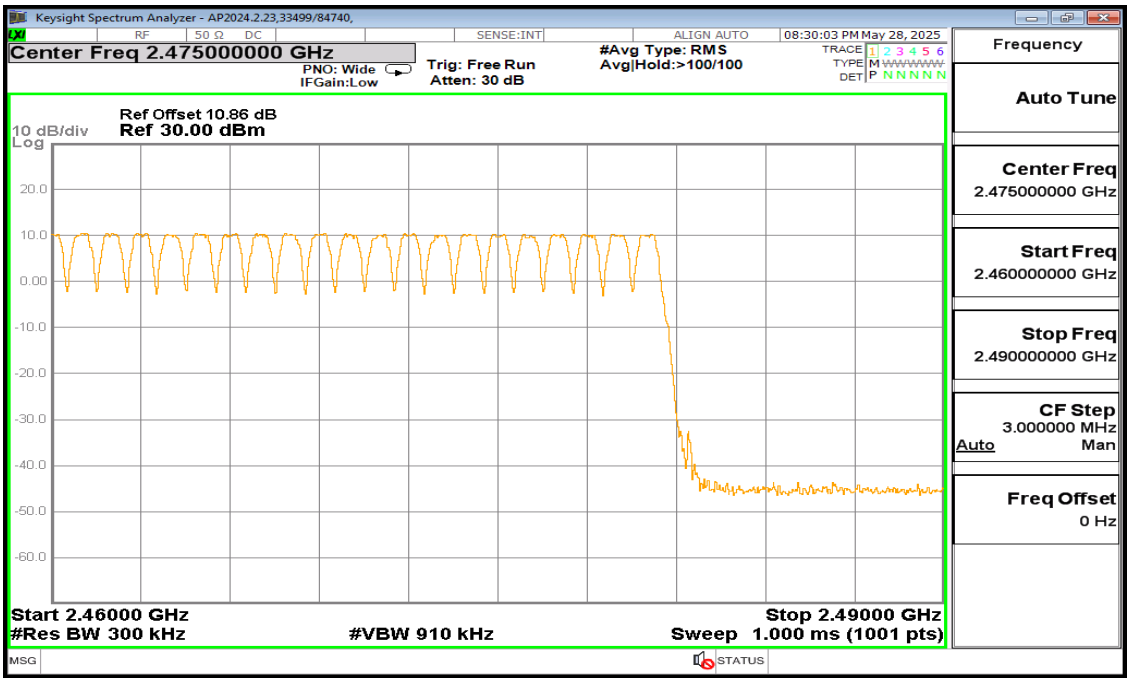
100MHz SPAN



30MHz SPAN, SEGMENT 1 OF 3

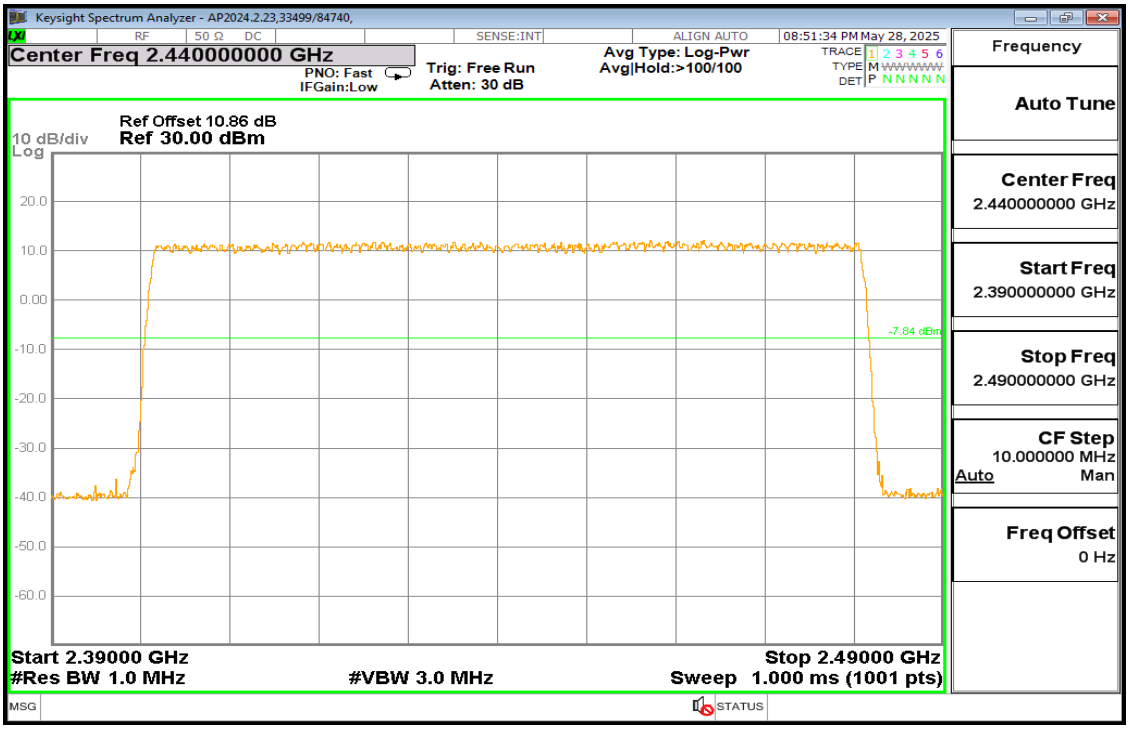


30MHz SPAN, SEGMENT 2 OF 3

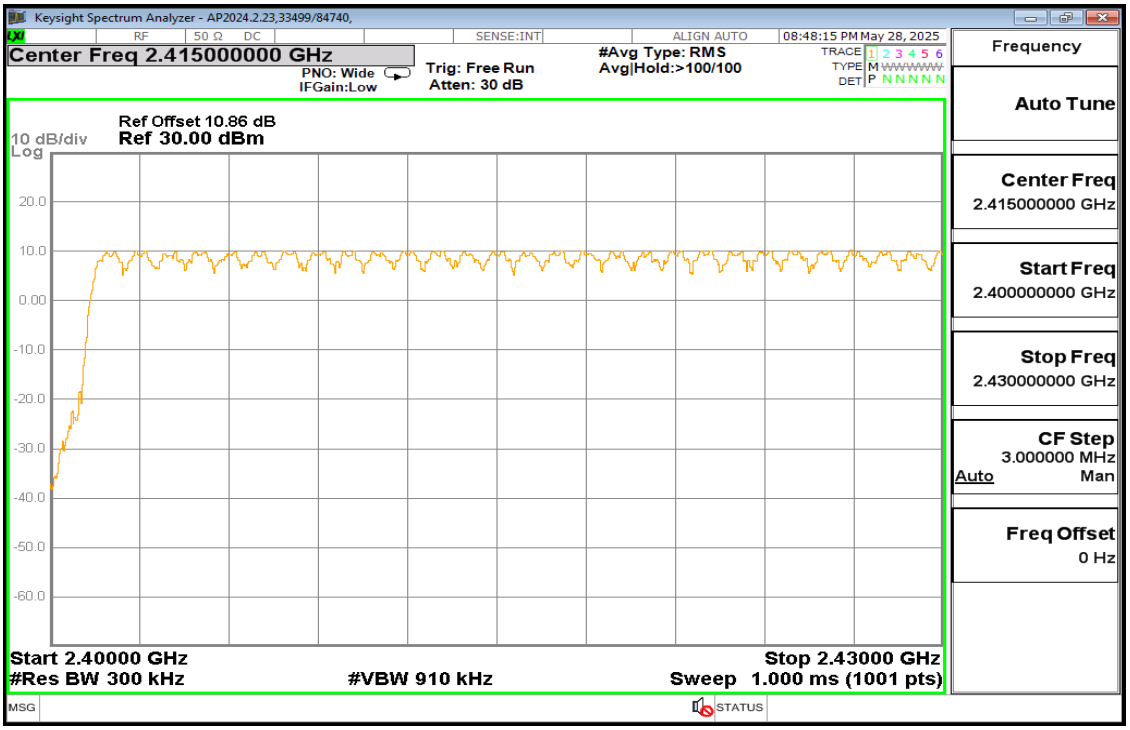


30MHz SPAN, SEGMENT 3 OF 3

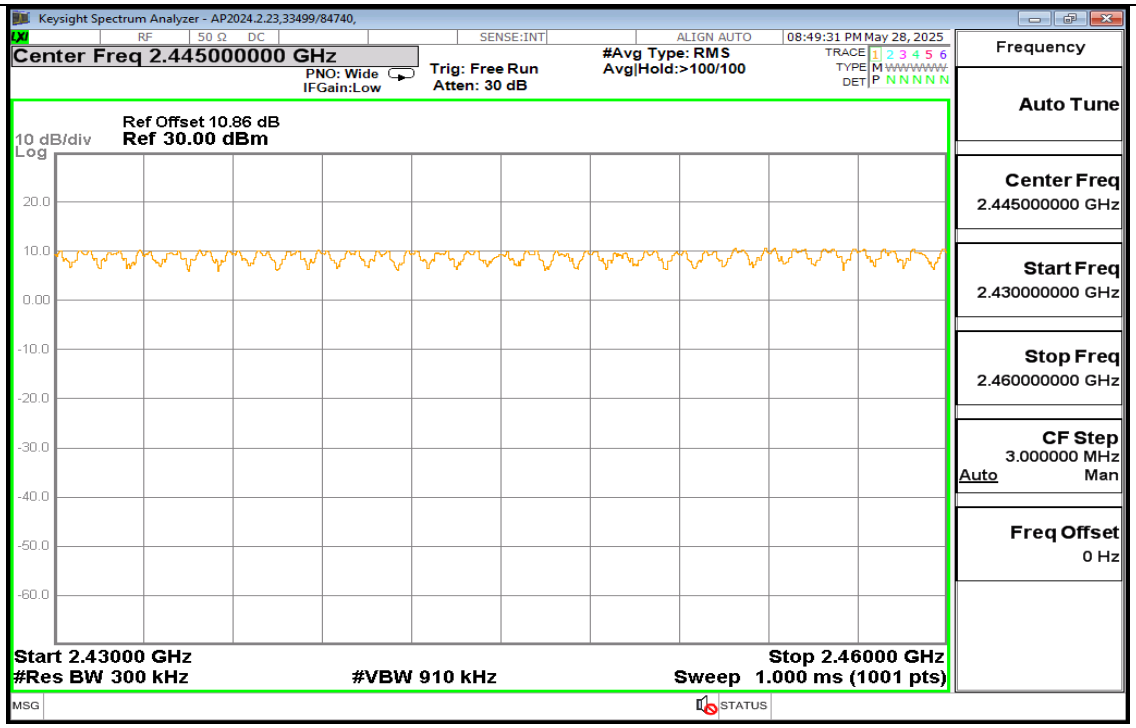
9.3.2. BLUETOOTH ENHANCED DATA RATE QPSK MODULATION



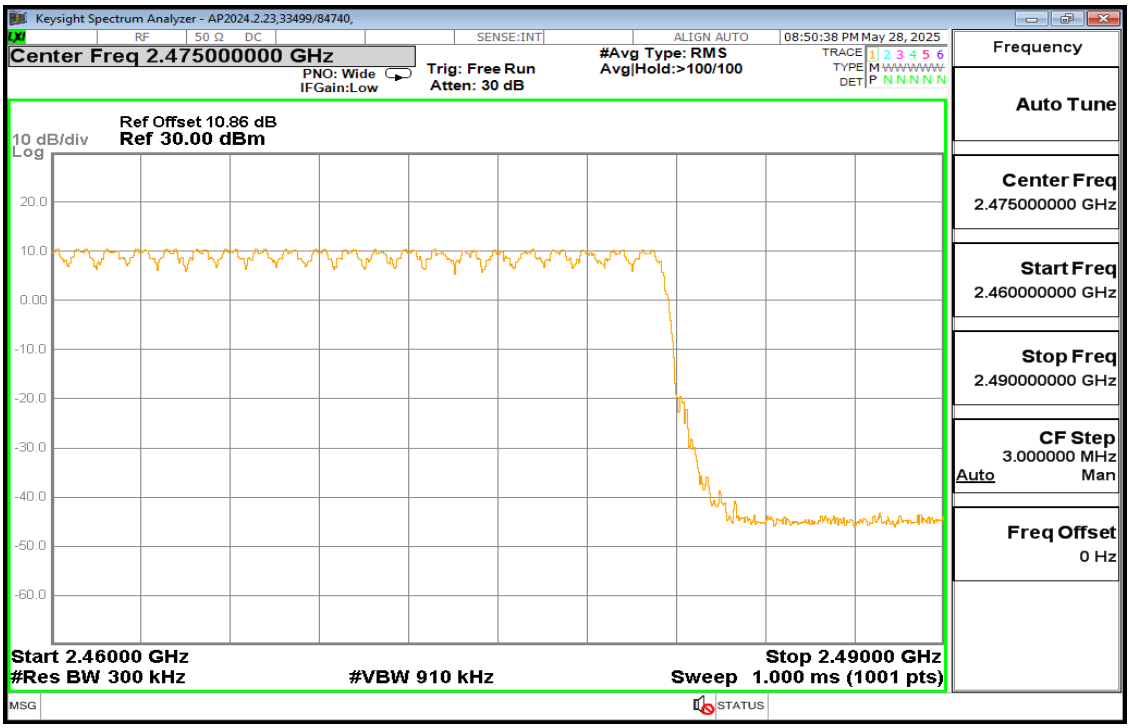
100MHz SPAN



30MHz SPAN, SEGMENT 1 OF 3

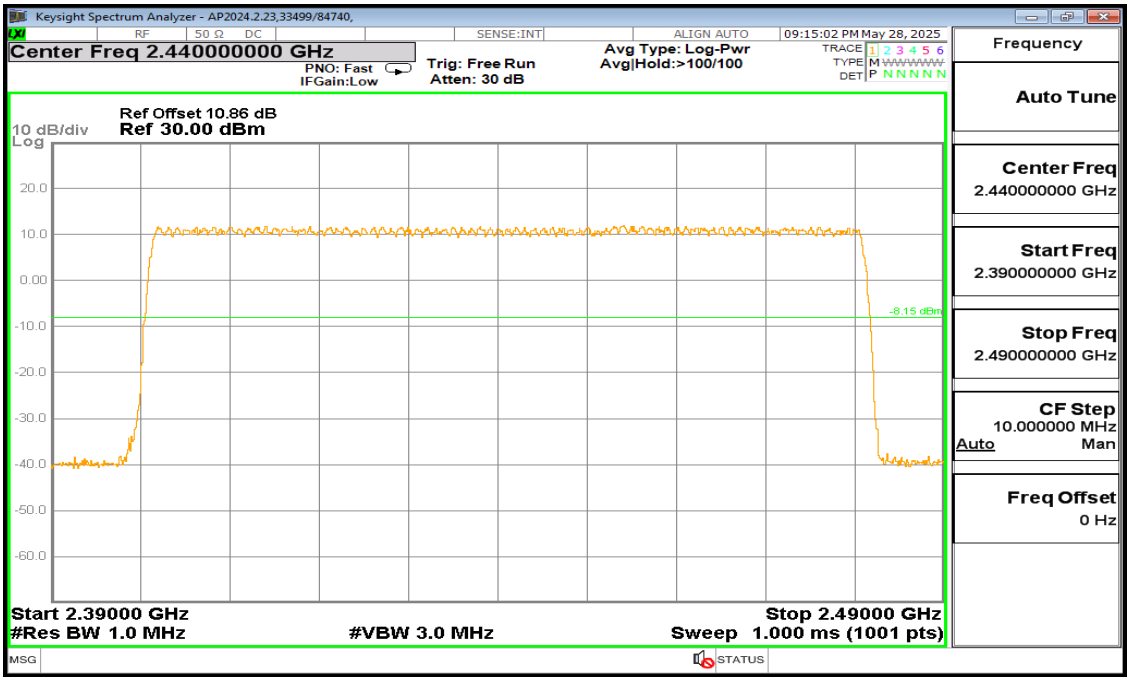


30MHz SPAN, SEGMENT 2 OF 3

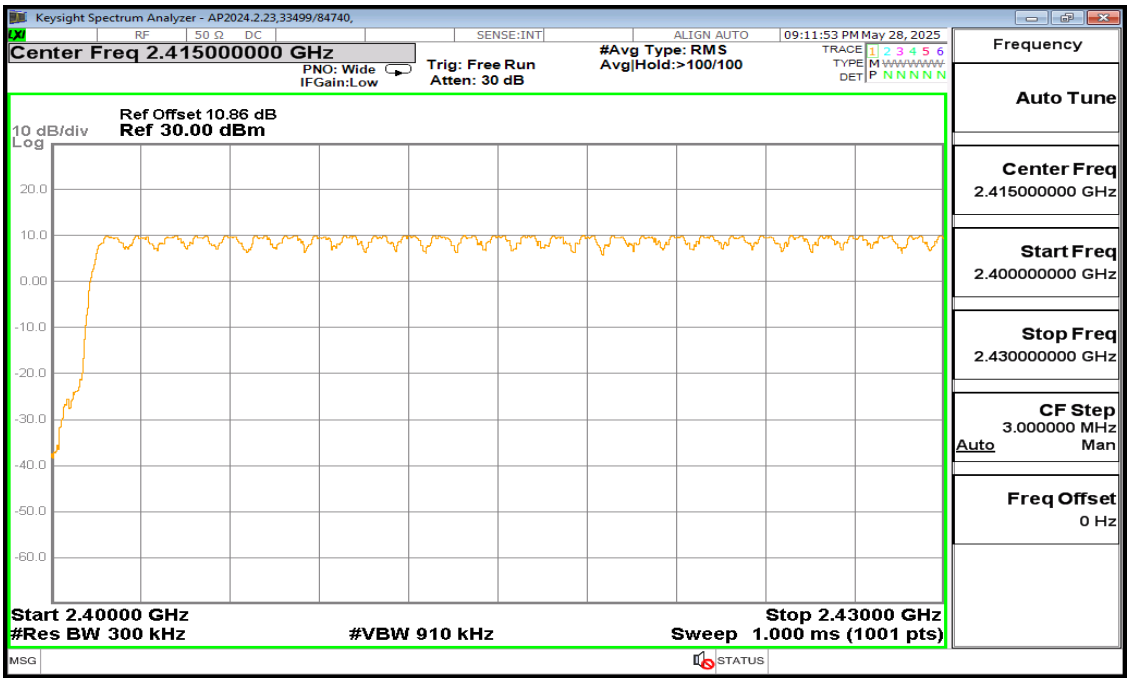


30MHz SPAN, SEGMENT 3 OF 3

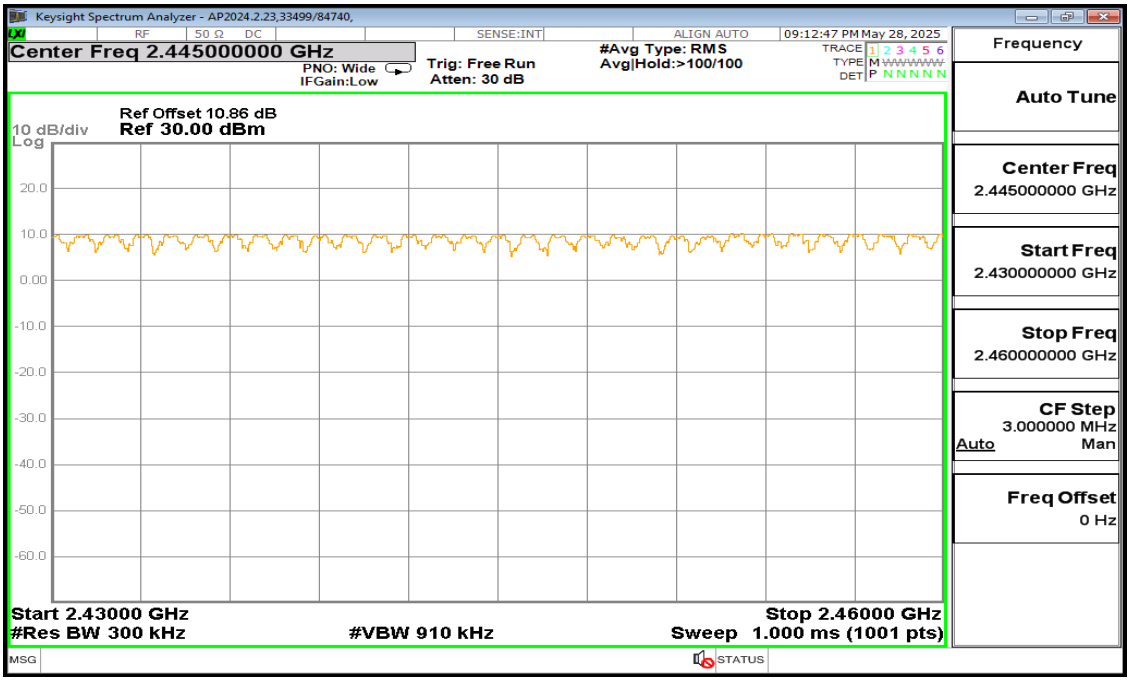
9.3.3. BLUETOOTH ENHANCED DATA RATE 8PSK MODULATION



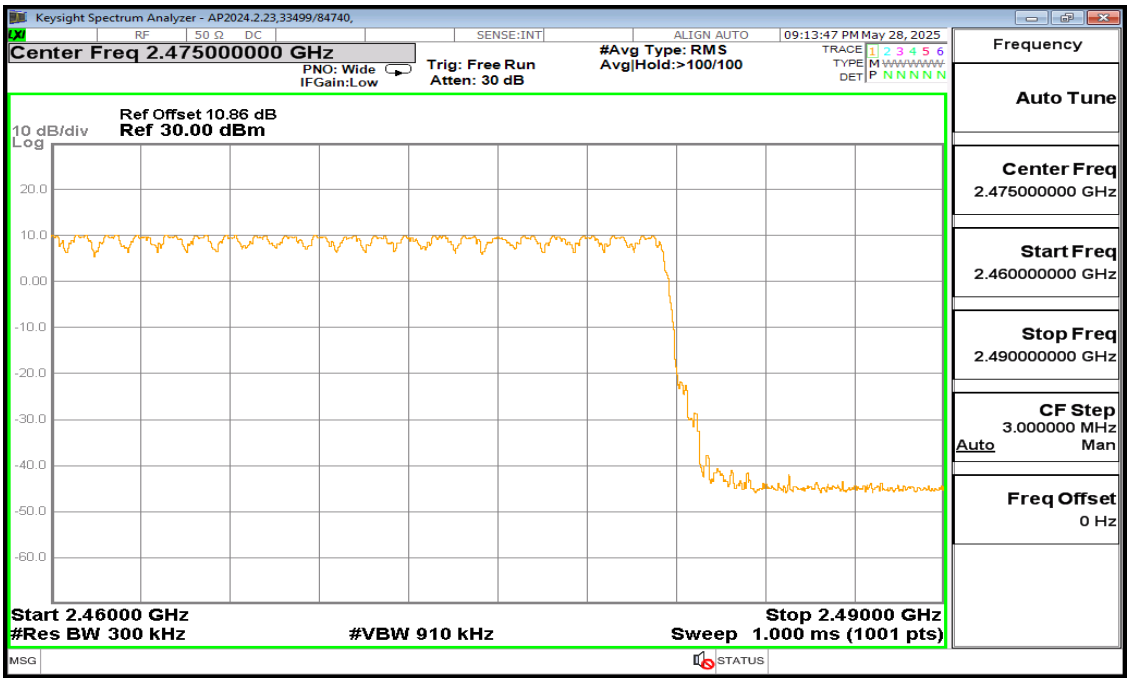
100MHz SPAN



30MHz SPAN, SEGMENT 1 OF 3



30MHz SPAN, SEGMENT 2 OF 3



30MHz SPAN, SEGMENT 3 OF 3

9.4. AVERAGE TIME OF OCCUPANCY

LIMITS

FCC §15.247 (a) (1) (iii)
RSS-247 (5.1) (d)

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The span is set to 0 Hz, centered on a single, selected hopping channel. The width of a single pulse is measured in a fast scan. The number of pulses is measured in a 3.16-second scan, to enable resolution of each occurrence.

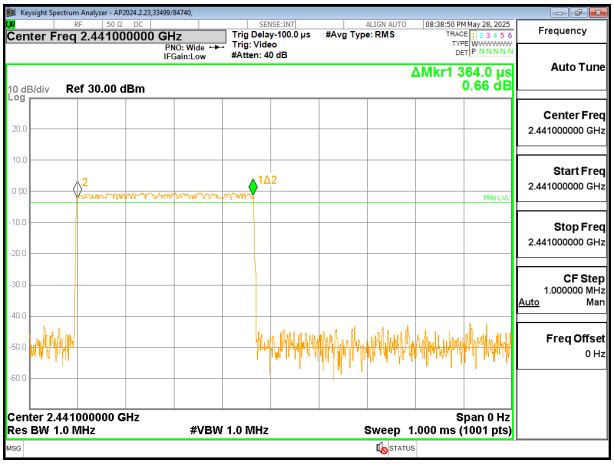
The average time of occupancy in the specified 3.16 second period (79 channels * 0.4 s) is equal to 10 * (# of pulses in 3.16 s) * pulse width.

For AFH mode, the average time of occupancy in the specified 8 second period (20 channels * 0.4 seconds) is equal to 10 * (# of pulses in 0.8 s) * pulse width.

RESULTS

9.4.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION

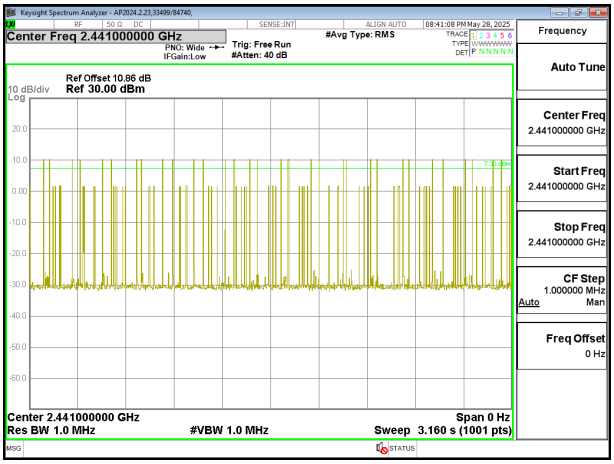
DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
GFSK Normal Mode					
DH1	0.364	32	0.1165	0.4	-0.2835
DH3	1.616	16	0.2586	0.4	-0.1414
DH5	2.860	11	0.3146	0.4	-0.0854
DH Packet	Pulse Width (sec)	Number of Pulses in 0.8 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
GFSK AFH Mode					
DH1	0.364	8	0.02912	0.4	-0.3709
DH3	1.616	4	0.06464	0.4	-0.3354
DH5	2.86	3	0.08580	0.4	-0.3142



PULSE WIDTH – DH1

PULSE WIDTH – DH3

PULSE WIDTH – DH5



NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH1

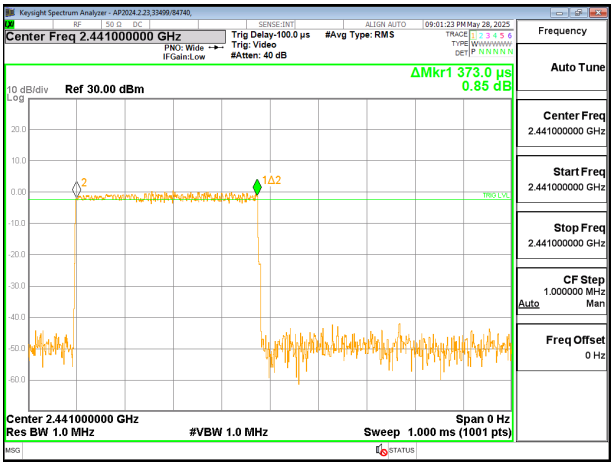
NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH3

NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH5

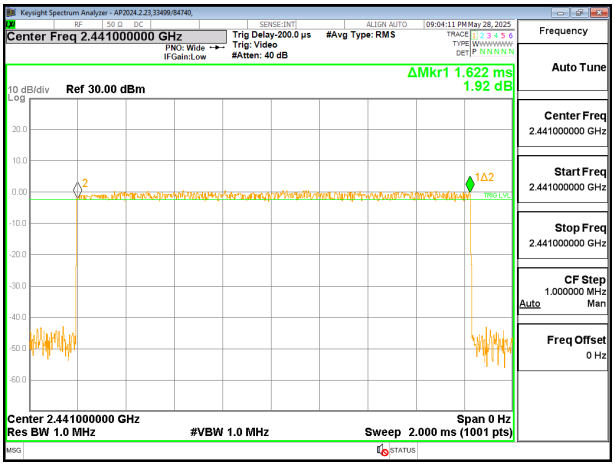
9.4.2. BLUETOOTH BASIC DATA RATE QPSK MODULATION

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
QPSK Normal Mode					
3DH1	0.373	32	0.11936	0.4	-0.28064
3DH3	1.622	17	0.27574	0.4	-0.12426
3DH5	2.864	8	0.22912	0.4	-0.17088

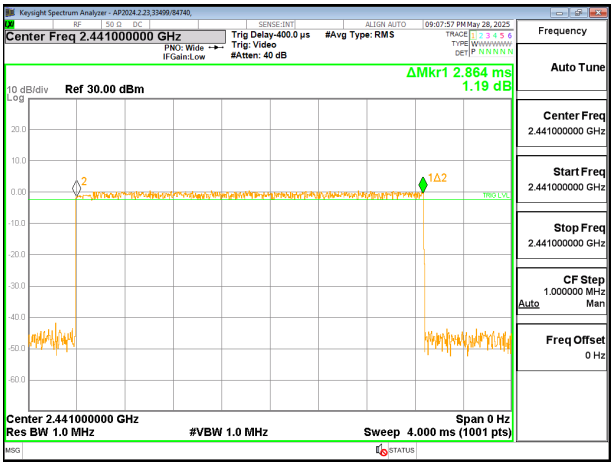
Note: for AFH(QPSK) mode, please refer to the results of AFH(GFSK) mode; the channel selection and hopping rate are the same for both EDR and Basic Rate operation, data for Basic Rate demonstrates compliance with channel occupancy when AFH is employed.



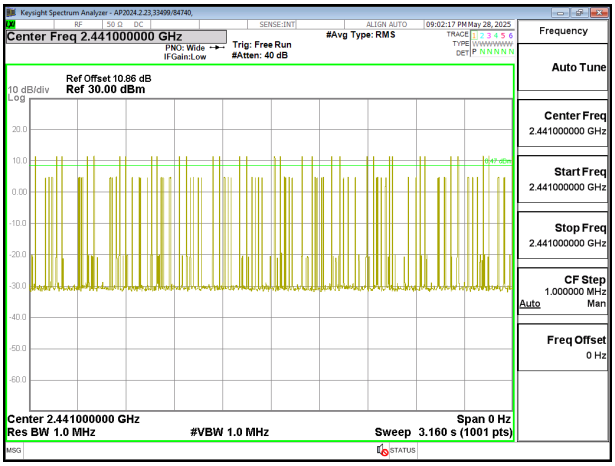
PULSE WIDTH – DH1



PULSE WIDTH – DH3

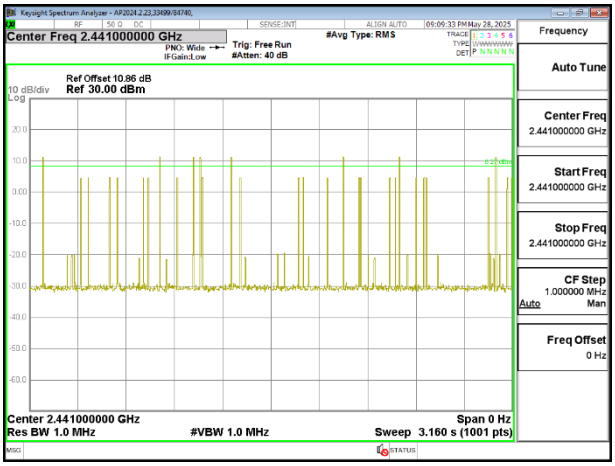


PULSE WIDTH – DH5



NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH1

NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH3

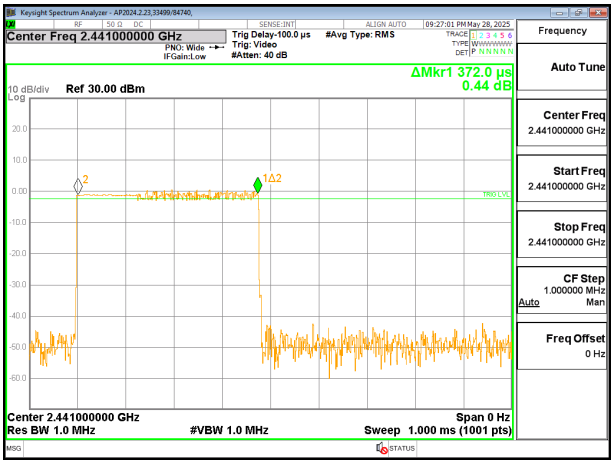


NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH5

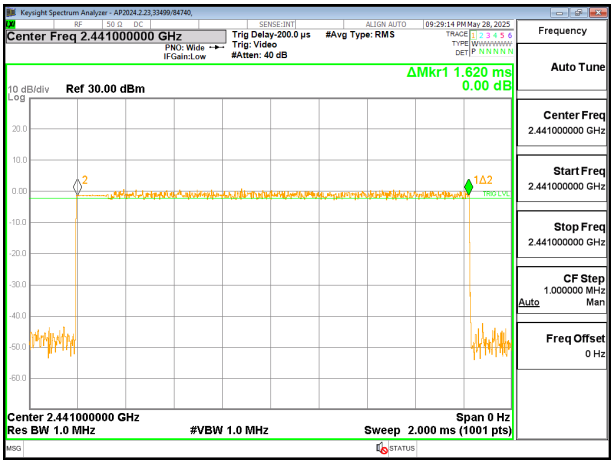
9.4.3. BLUETOOTH ENHANCED DATA RATE 8PSK MODULATION

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
8PSK Normal Mode					
3DH1	0.372	32	0.11904	0.4	-0.28096
3DH3	1.620	13	0.2106	0.4	-0.1894
3DH5	2.864	12	0.34368	0.4	-0.05632

Note: for AFH(8PSK) mode, please refer to the results of AFH(GFSK) mode; the channel selection and hopping rate are the same for both EDR and Basic Rate operation, data for Basic Rate demonstrates compliance with channel occupancy when AFH is employed.

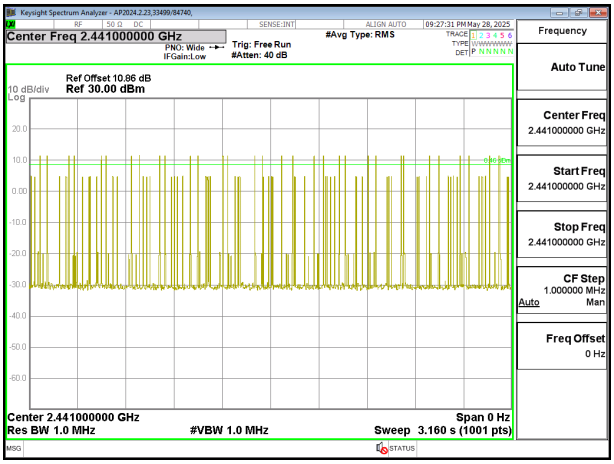


PULSE WIDTH – 3DH1



PULSE WIDTH – 3DH3

PULSE WIDTH – 3DH5



NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – 3DH1

NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – 3DH3

NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – 3DH5

9.5. OUTPUT POWER

LIMITS

§15.247 (b) (1)
RSS-247 (5.4) (b)

The maximum antenna gain is less than 6 dBi, therefore the limit is 30 dBm. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts

TEST PROCEDURE

Measurements performed using a wideband gated RF power meter.

The cable assembly insertion loss of 12.37 dB (including 2.37 dB cable and a 10.00 dB pad) was entered as an offset in the power meter.

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

RESULTS

9.5.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION

Tested By:	104463/85502 And 105900/84740
Date:	2025-06-30

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	11.53	21	-9.47
Middle	2441	10.60	21	-10.40
High	2480	10.81	21	-10.19

9.5.2. BLUETOOTH ENHANCED DATA RATE DQPSK MODULATION

Tested By:	104463/85502 And 105900/84740
Date:	2025-06-30

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	10.46	21	-10.54
Middle	2441	10.54	21	-10.46
High	2480	10.84	21	-10.16

9.5.3. BLUETOOTH ENHANCED DATA RATE 8PSK MODULATION

Tested By:	104463/85502 And 105900/84740
Date:	2025-06-30

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	10.24	21	-10.76
Middle	2441	10.17	21	-10.83
High	2480	10.16	21	-10.84

9.6. AVERAGE POWER

LIMITS

None; for reporting purposes only

TEST PROCEDURE

Measurements are performed using a wideband gated RF power meter.

The cable assembly insertion loss of 12.37 dB (including 2.37 dB cable and a 10.00 dB pad) was entered as an offset in the power meter.

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

RESULTS

9.6.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION

Tested By:	104463/85502 And 105900/84740
Date	2025-06-30

Channel	Frequency (MHz)	Average Power (dBm)
Low	2402	10.481
Middle	2441	9.489
High	2480	9.696

9.6.2. BLUETOOTH ENHANCED DATA RATE QPSK MODULATION

Tested By:	104463/85502 And 105900/84740
Date	2025-06-30

Channel	Frequency (MHz)	Average Power (dBm)
Low	2402	9.297
Middle	2441	9.400
High	2480	9.675

9.6.3. BLUETOOTH ENHANCED DATA RATE 8PSK MODULATION

Tested By:	104463/85502 And 105900/84740
Date	2025-06-30

Channel	Frequency (MHz)	Average Power (dBm)
Low	2402	9.636
Middle	2441	9.547
High	2480	9.551

9.7. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)
RSS-247 5.5

Limit = -20 dBc

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

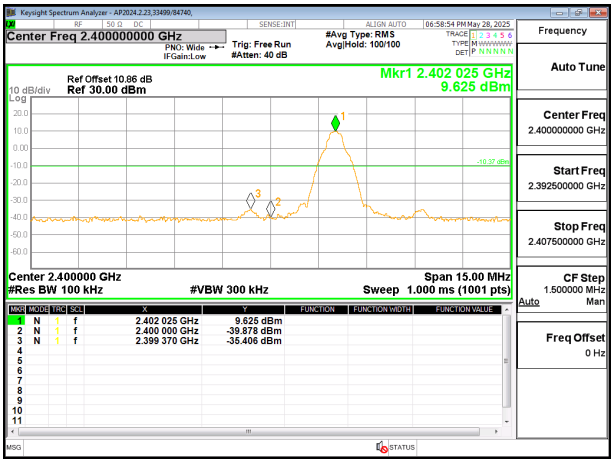
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

The bandedges at 2.4 and 2.4835 GHz are investigated with the transmitter set to the normal hopping mode.

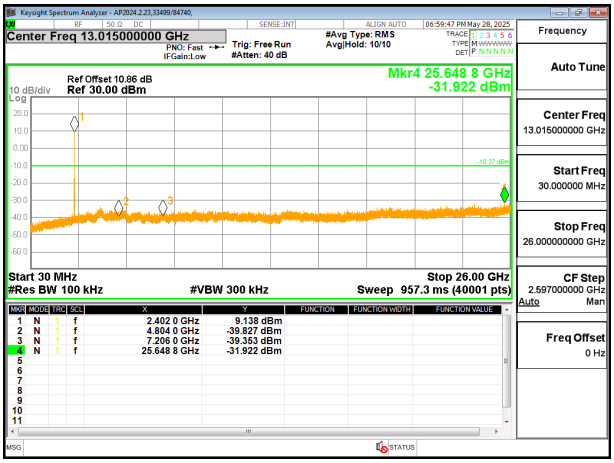
RESULTS

9.7.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION

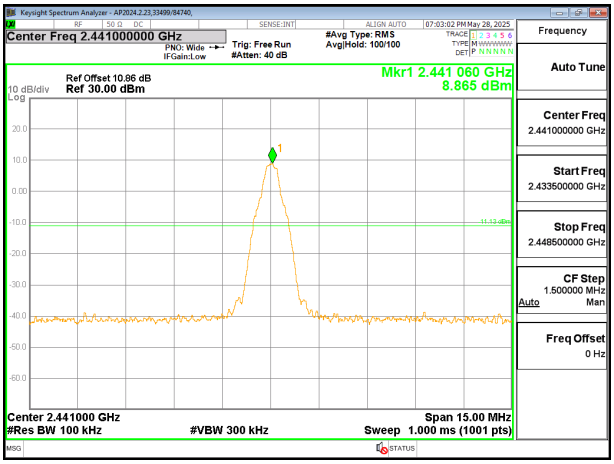
SPURIOUS EMISSIONS, NON-HOPPING



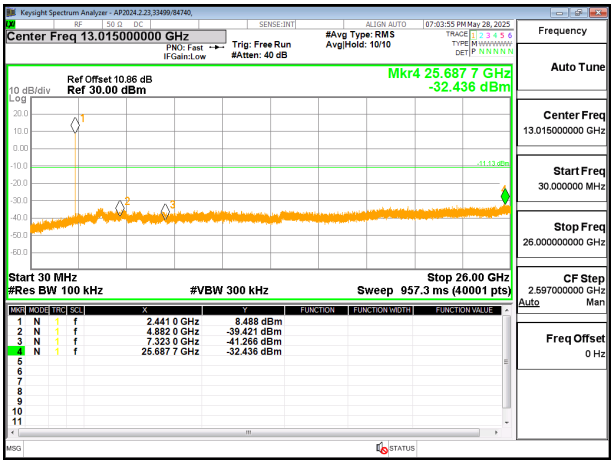
LOW CHANNEL BANDEDGE



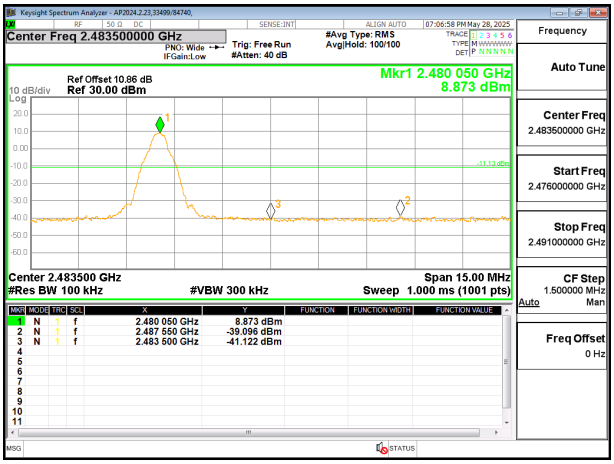
OUT-OF-BAND LOW CHANNEL



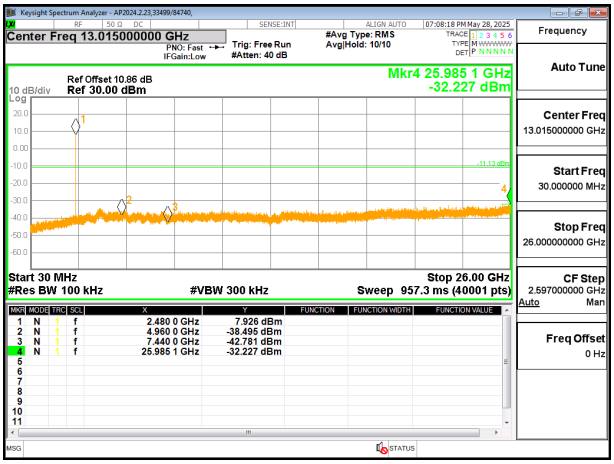
IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL

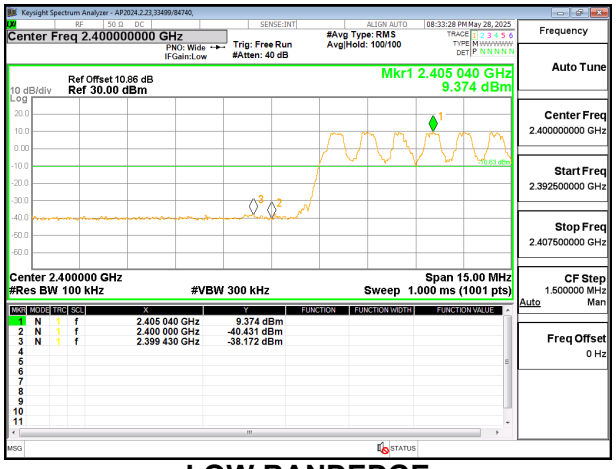


HIGH CHANNEL BANDEDGE

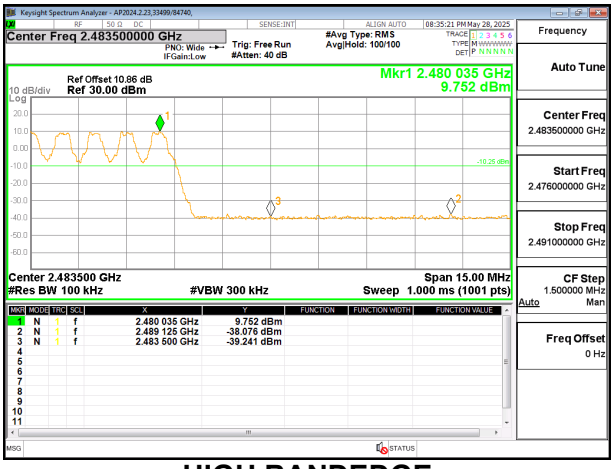


OUT-OF-BAND HIGH CHANNEL

SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON



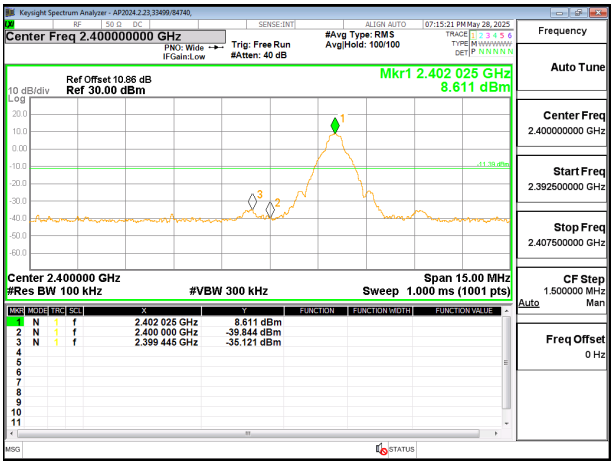
LOW BANDEDGE



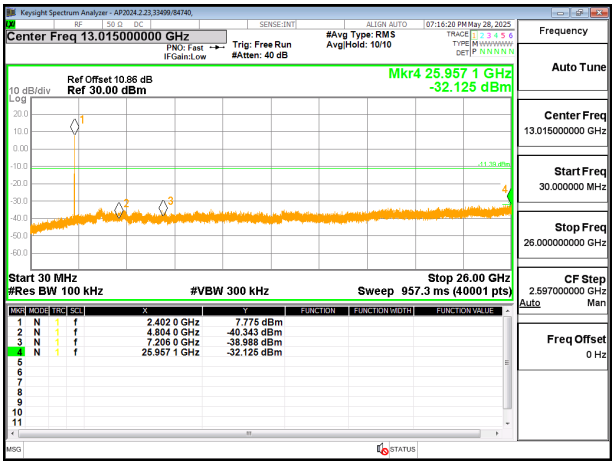
HIGH BANDEDGE

9.7.2. BLUETOOTH ENHANCED DATA RATE QPSK MODULATION

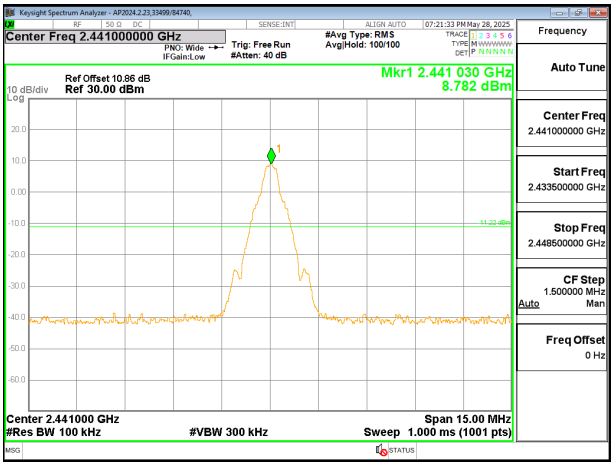
SPURIOUS EMISSIONS, NON-HOPPING



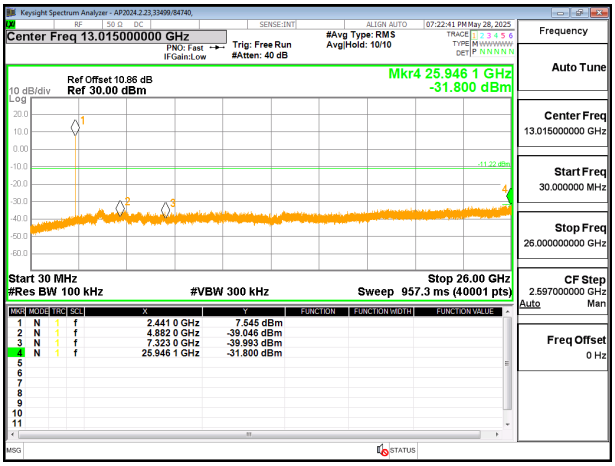
LOW CHANNEL BANDEDGE



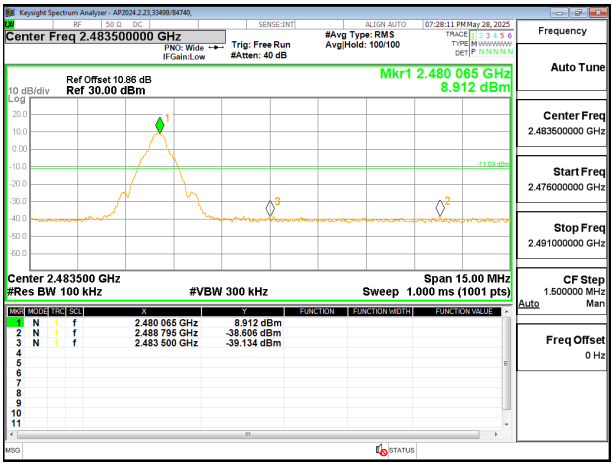
OUT-OF-BAND LOW CHANNEL



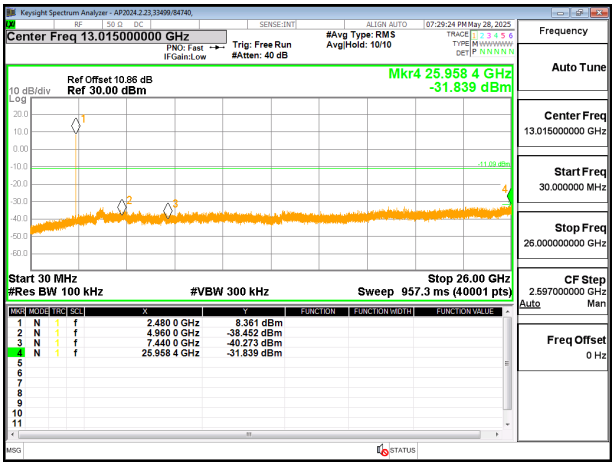
IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL

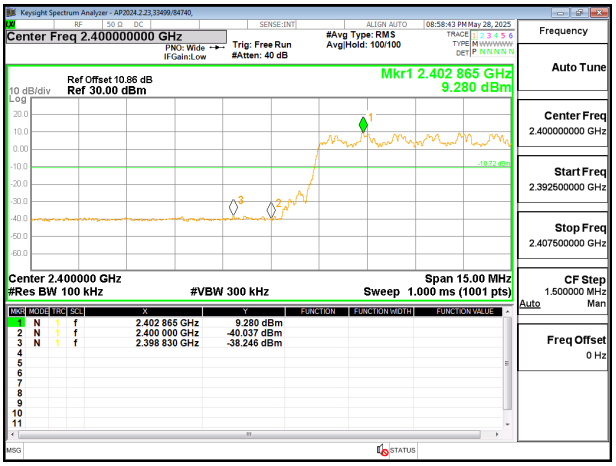


HIGH CHANNEL BANDEDGE

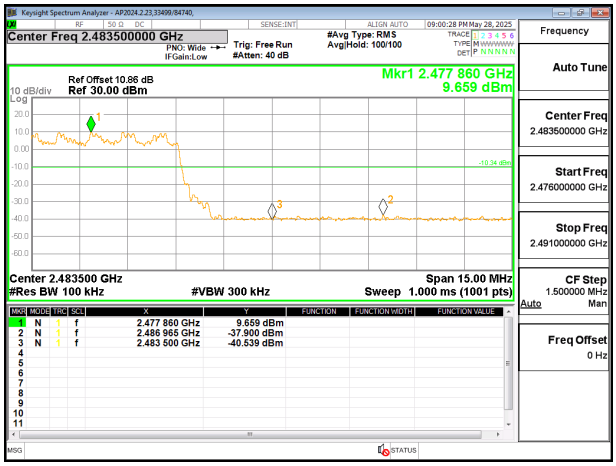


OUT-OF-BAND HIGH CHANNEL

SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON



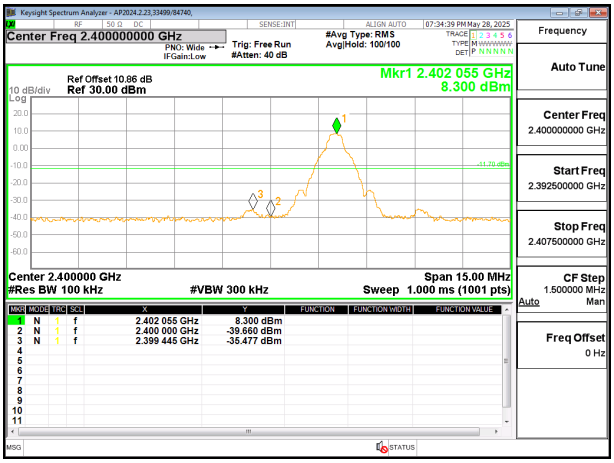
LOW BANDEDGE



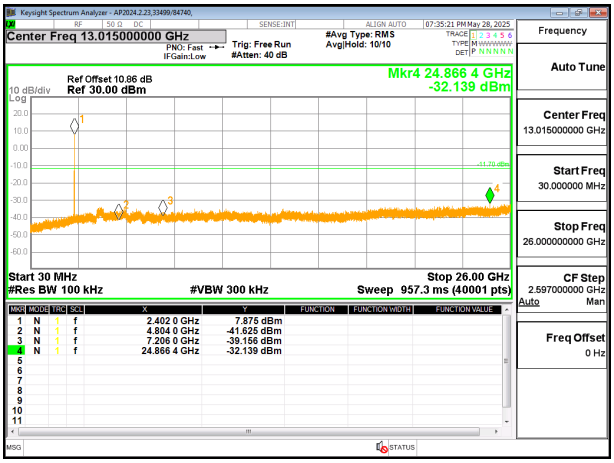
HIGH BANDEDGE

9.7.3. BLUETOOTH ENHANCED DATA RATE 8PSK MODULATION

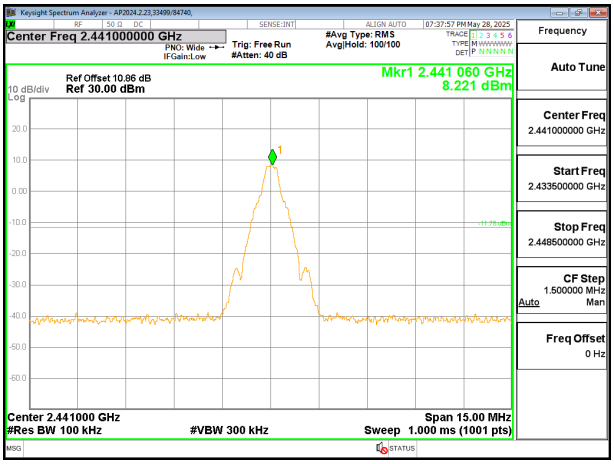
SPURIOUS EMISSIONS, NON-HOPPING



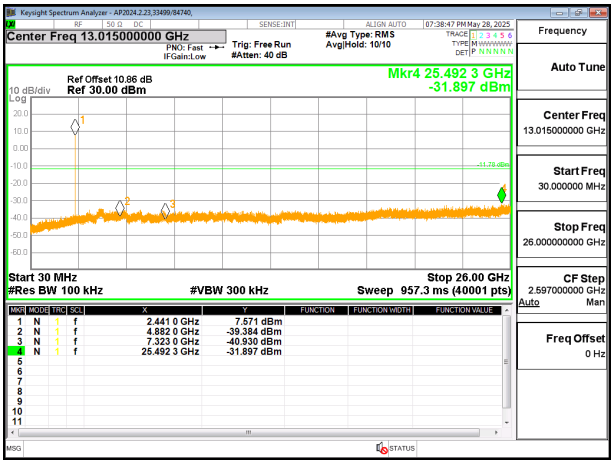
LOW CHANNEL BANDEDGE



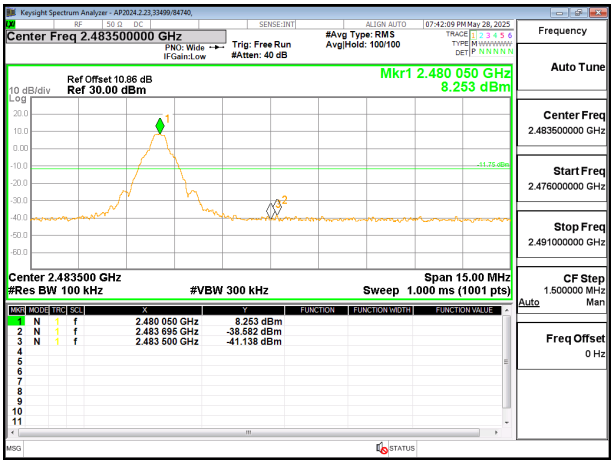
OUT-OF-BAND LOW CHANNEL



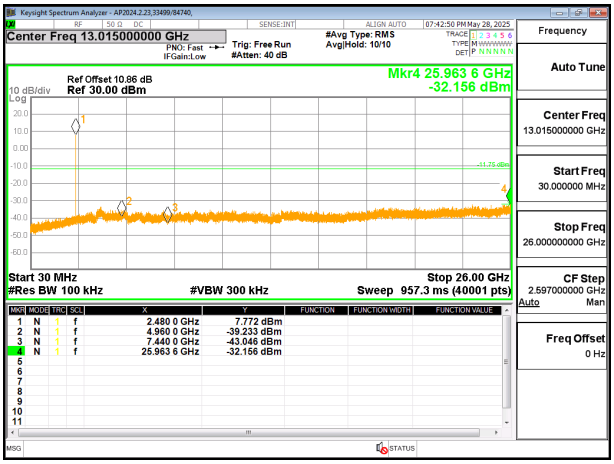
IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL

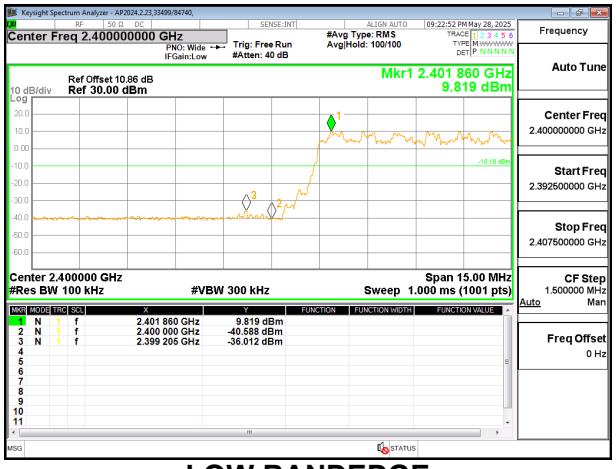


HIGH CHANNEL BANDEDGE

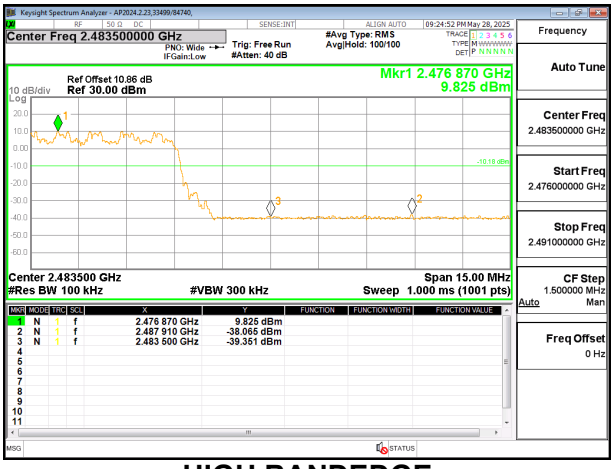


OUT-OF-BAND HIGH CHANNEL

SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON



LOW BANDEDGE



HIGH BANDEDGE

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

RSS-GEN Clause 8.9 and 8.10

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

TEST PROCEDURE

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

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

For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 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 1 GHz to 18 GHz is investigated with the transmitter set to low, middle, and high channels in each applicable band. Below 1GHz and above 18GHz emissions, the channel with the highest PSD was tested.

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

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

Based 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. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

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

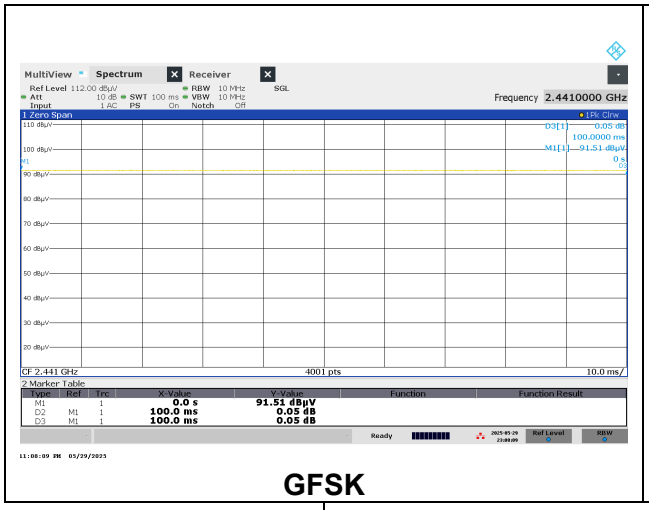
ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
Bluetooth GFSK	100.000	100.000	1.000	100	0.00	0.010
Bluetooth QPSK	100.000	100.000	1.000	100	0.00	0.010
Bluetooth 8PSK	100.000	100.000	1.000	100	0.00	0.010

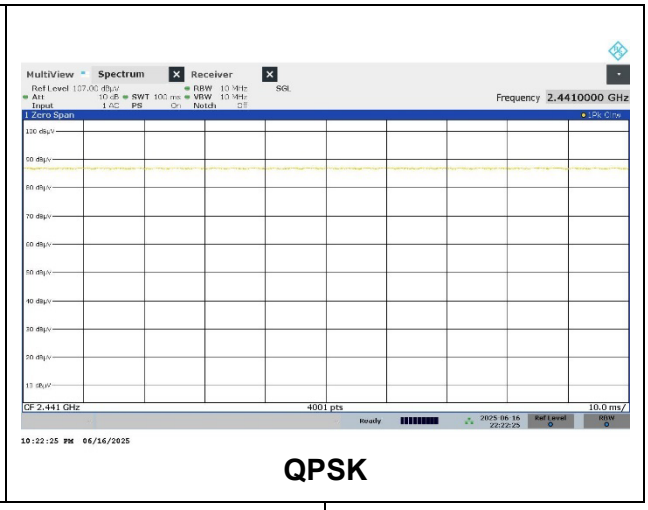
DUTY CYCLE PLOTS

Tested By: 85501

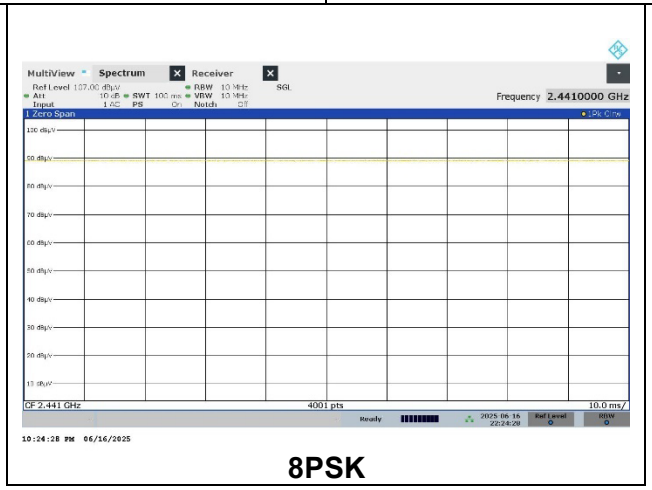
Test Location: Chamber 4



GFSK



QPSK

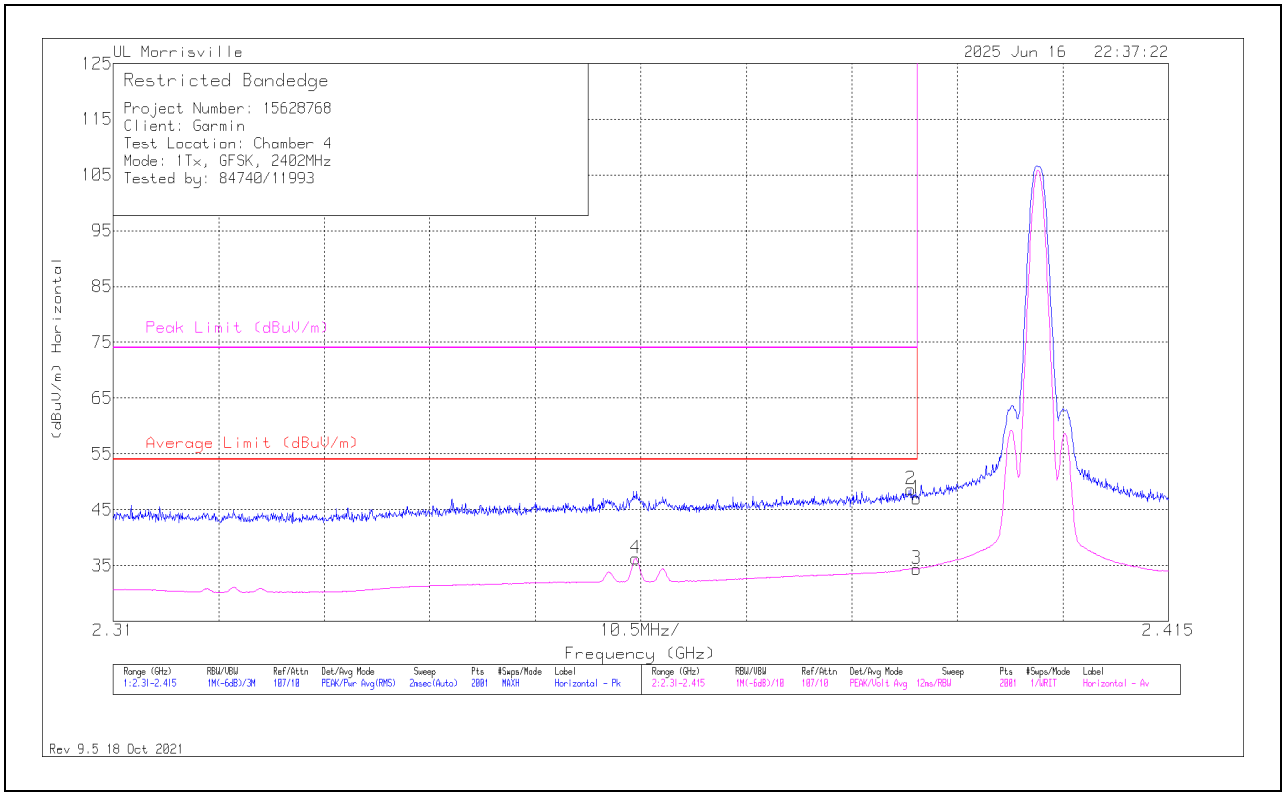


8PSK

10.1.2. BLUETOOTH BASIC DATA RATE GFSK MODULATION

BANDEDGE (LOW CHANNEL)

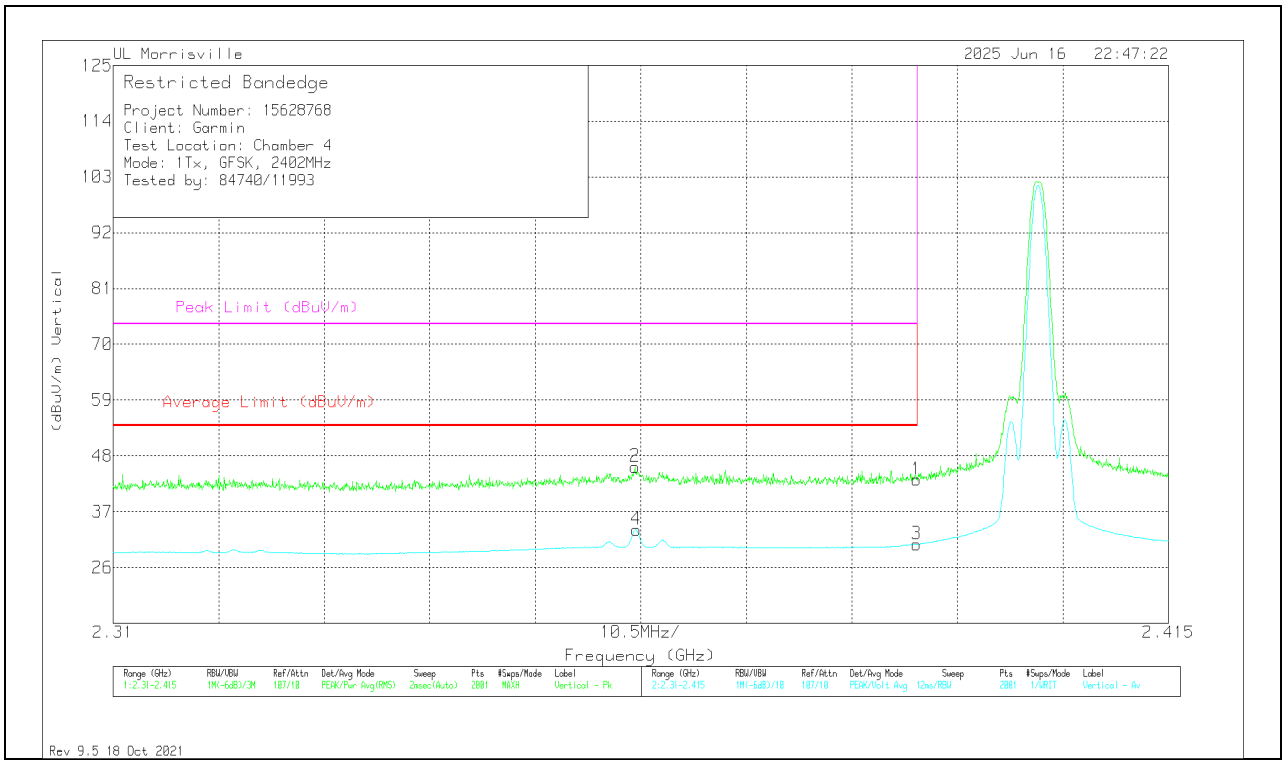
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (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	38.21	Pk	32	-23.2	47.01	-	-	74	-26.99	173	114	H
2	* ** 2.38938	39.9	Pk	32	-23.2	48.7	-	-	74	-25.3	173	114	H
3	* ** 2.38996	25.63	VA1T	32	-23.2	34.43	54	-19.57	-	-	173	114	H
4	* ** 2.36198	27.31	VA1T	31.9	-23	36.21	54	-17.79	-	-	173	114	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
VA1T - Linear Voltage Average VB=1/Ton where: Ton is transmit duration

VERTICAL RESULT

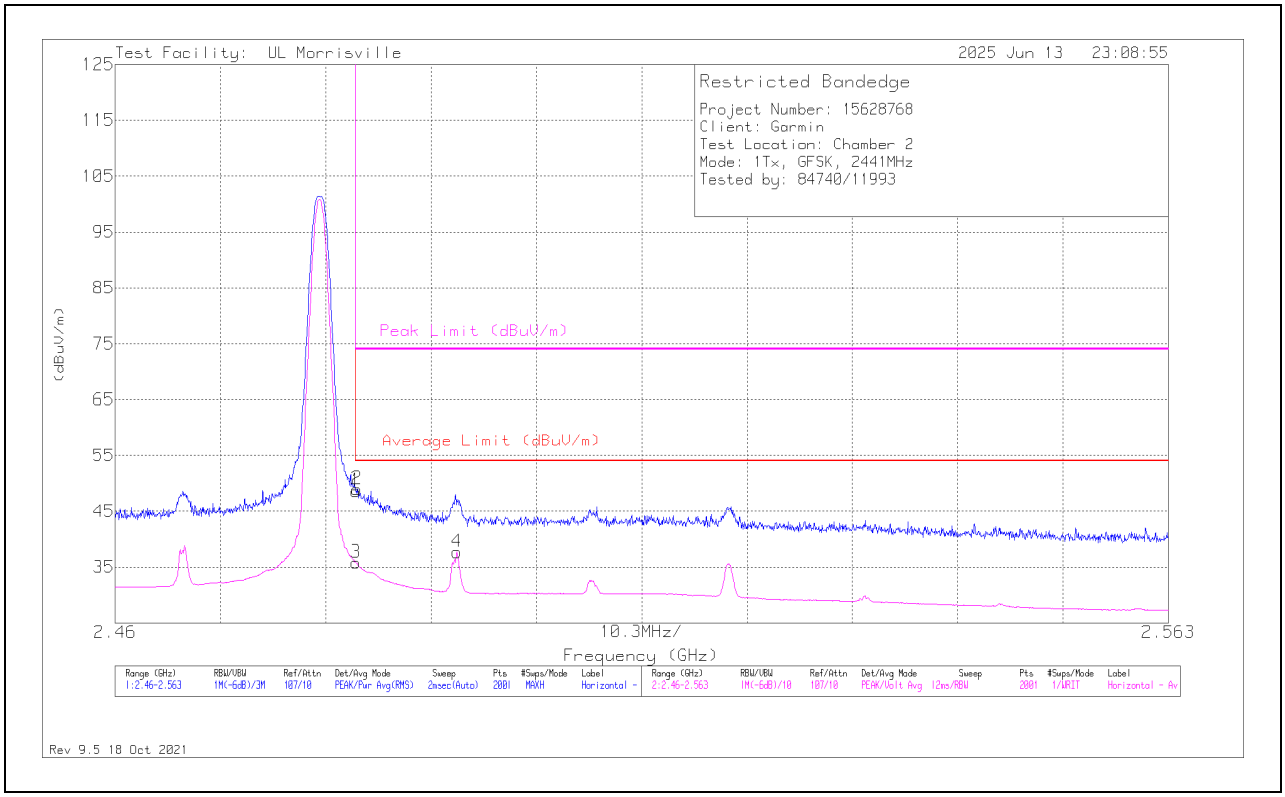


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38996	34.49	Pk	32	-23.2	43.29	-	-	74	-30.71	41	346	V
2	* ** 2.36192	36.91	Pk	31.9	-23	45.81	-	-	74	-28.19	41	346	V
3	* ** 2.38996	21.79	VA1T	32	-23.2	30.59	54	-23.41	-	-	41	346	V
4	* ** 2.36208	24.56	VA1T	31.9	-23	33.46	54	-20.54	-	-	41	346	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
VA1T - Linear Voltage Average VB=1/Ton where: Ton is transmit duration

BANDEDGE (HIGH CHANNEL)

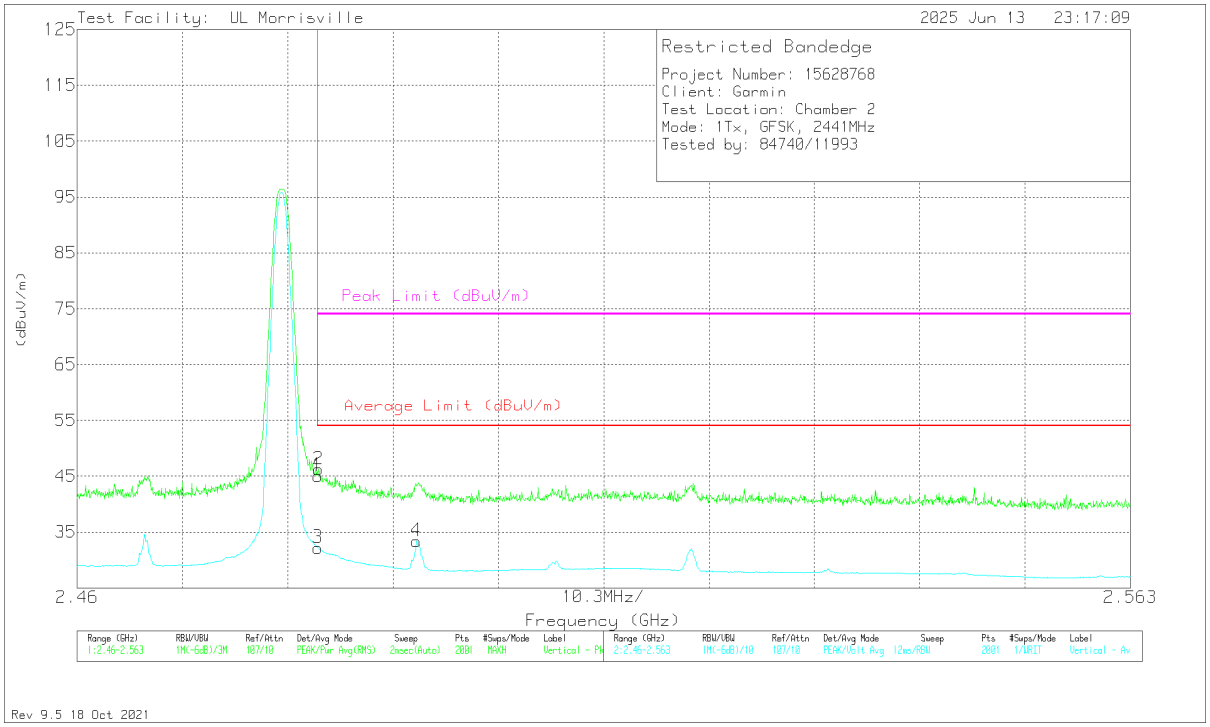
HORIZONTAL RESULT



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	41.62	Pk	32.5	-25.5	48.62	-	-	74	-25.38	169	146	H
2	* ** 2.48364	41.97	Pk	32.5	-25.5	48.97	-	-	74	-25.03	169	146	H
3	* ** 2.48354	28.8	VA1T	32.5	-25.5	35.8	54	-18.2	-	-	169	146	H
4	* ** 2.49342	31.21	VA1T	32.5	-26	37.71	54	-16.29	-	-	169	146	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
VA1T - Linear Voltage Average VB=1/Ton where: Ton is transmit duration

VERTICAL RESULT

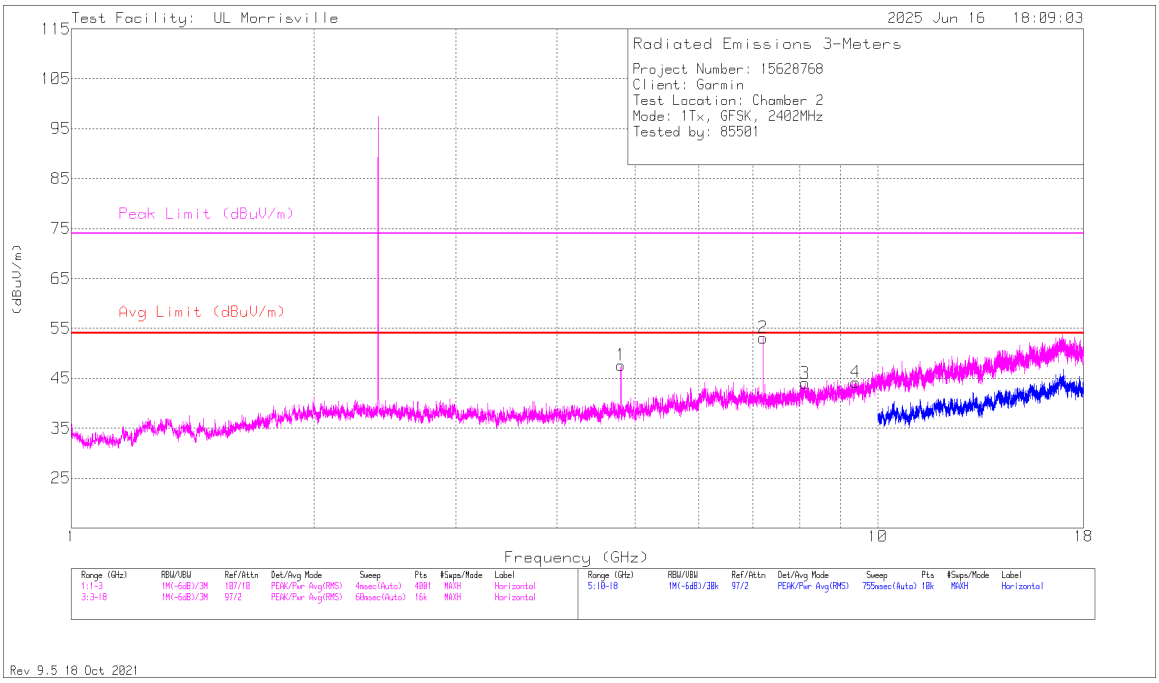


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	38.09	Pk	32.5	-25.5	45.09	-	-	74	-28.91	147	104	V
2	* ** 2.48359	39.24	Pk	32.5	-25.5	46.24	-	-	74	-27.76	147	104	V
3	* ** 2.48354	25.16	VA1T	32.5	-25.5	32.16	54	-21.84	-	-	147	104	V
4	* ** 2.49317	26.89	VA1T	32.5	-26	33.39	54	-20.61	-	-	147	104	V

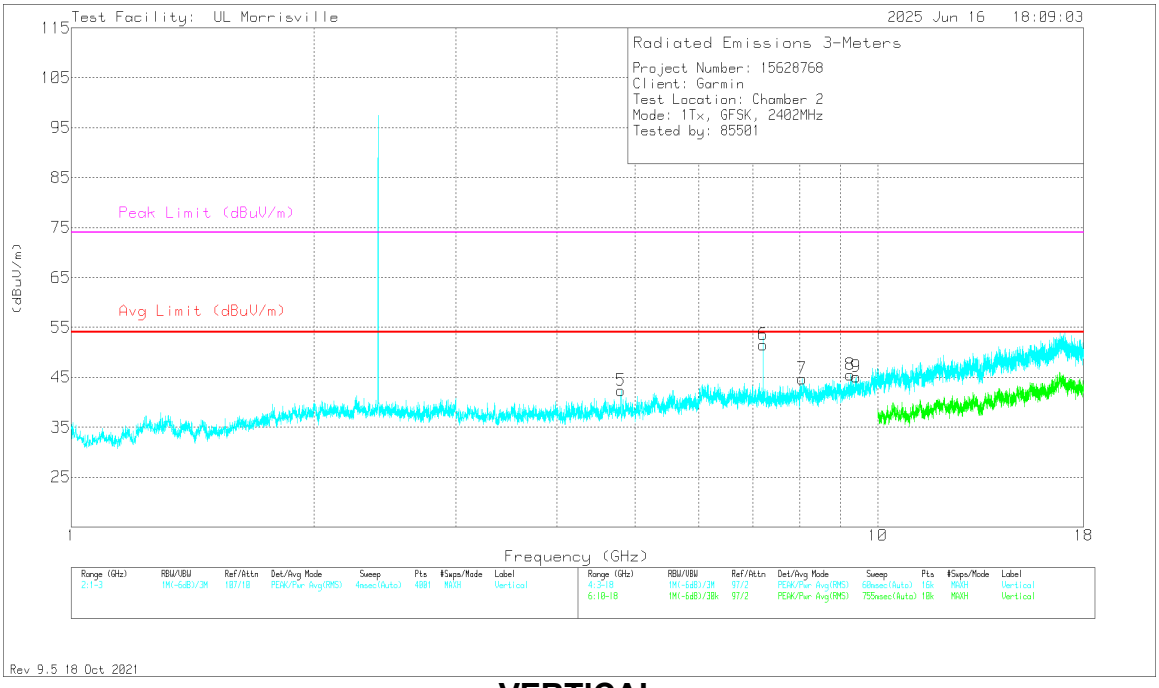
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
VA1T - Linear Voltage Average VB=1/Ton where: Ton is transmit duration

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



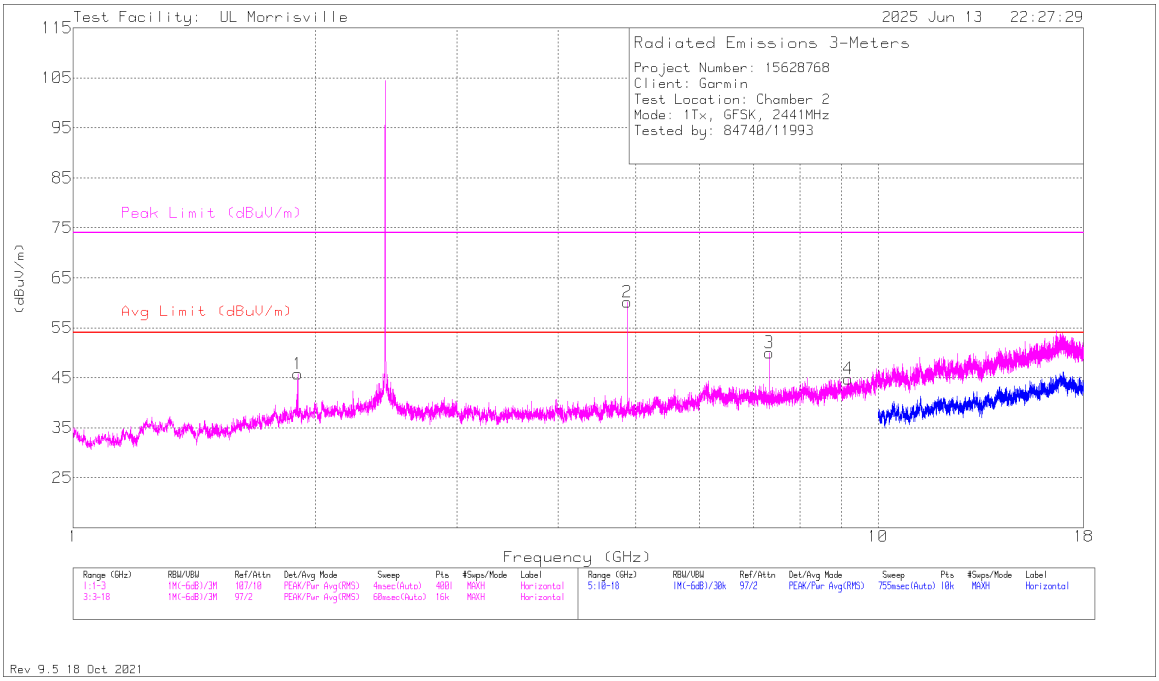
VERTICAL

RADIATED EMISSIONS

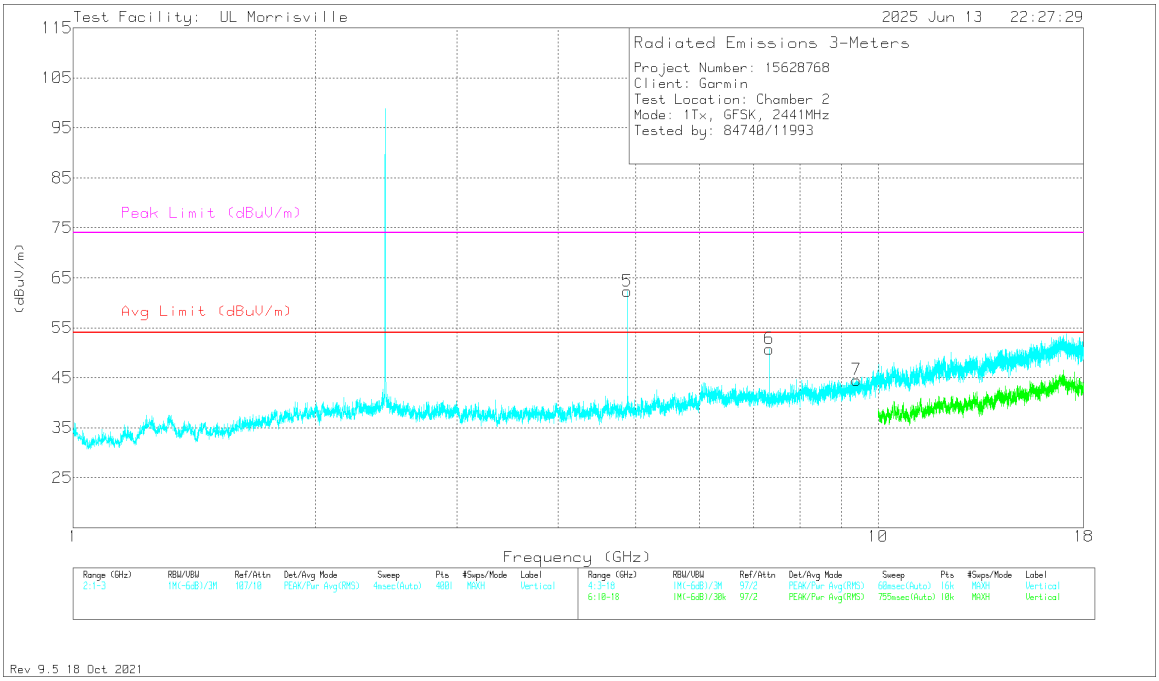
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.80375	58.59	Pk	34.2	-45.2	47.59	54	-6.41	74	-26.41	0-360	101	H
3	* ** 8.13094	50.19	Pk	35.8	-42	43.99	54	-10.01	74	-30.01	0-360	199	H
4	* ** 9.38625	49.41	Pk	36.2	-41.4	44.21	54	-9.79	74	-29.79	0-360	101	H
5	* ** 4.80375	53.35	Pk	34.2	-45.2	42.35	54	-11.65	74	-31.65	0-360	101	V
7	* ** 8.05688	50.26	Pk	35.8	-41.4	44.66	54	-9.34	74	-29.34	0-360	199	V
9	* ** 9.40125	49.81	Pk	36.2	-40.9	45.11	54	-8.89	74	-28.89	0-360	101	V
6	7.20469	58.57	Pk	35.6	-42.6	51.57	-	-	74	-22.43	0-360	199	V
2	7.20563	60.06	Pk	35.6	-42.6	53.06	-	-	74	-20.94	0-360	199	H
8	9.24375	50.76	Pk	36	-41.3	45.46	-	-	74	-28.54	0-360	199	V

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

MID CHANNEL RESULTS



HORIZONTAL



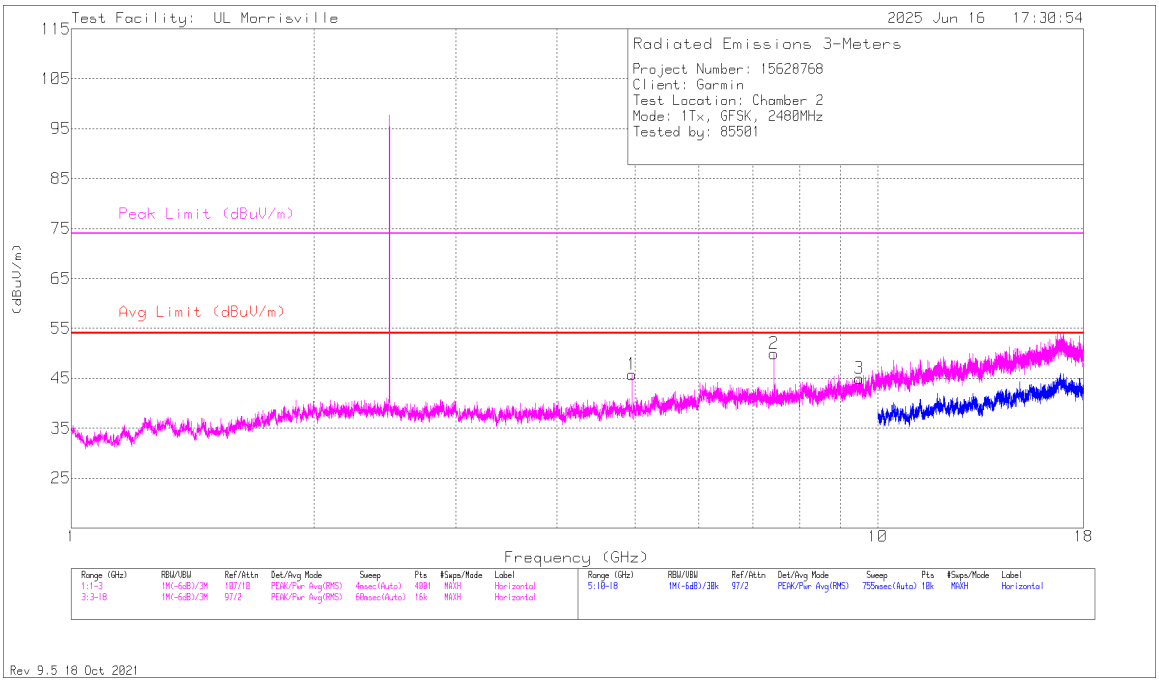
VERTICAL

RADIATED EMISSIONS

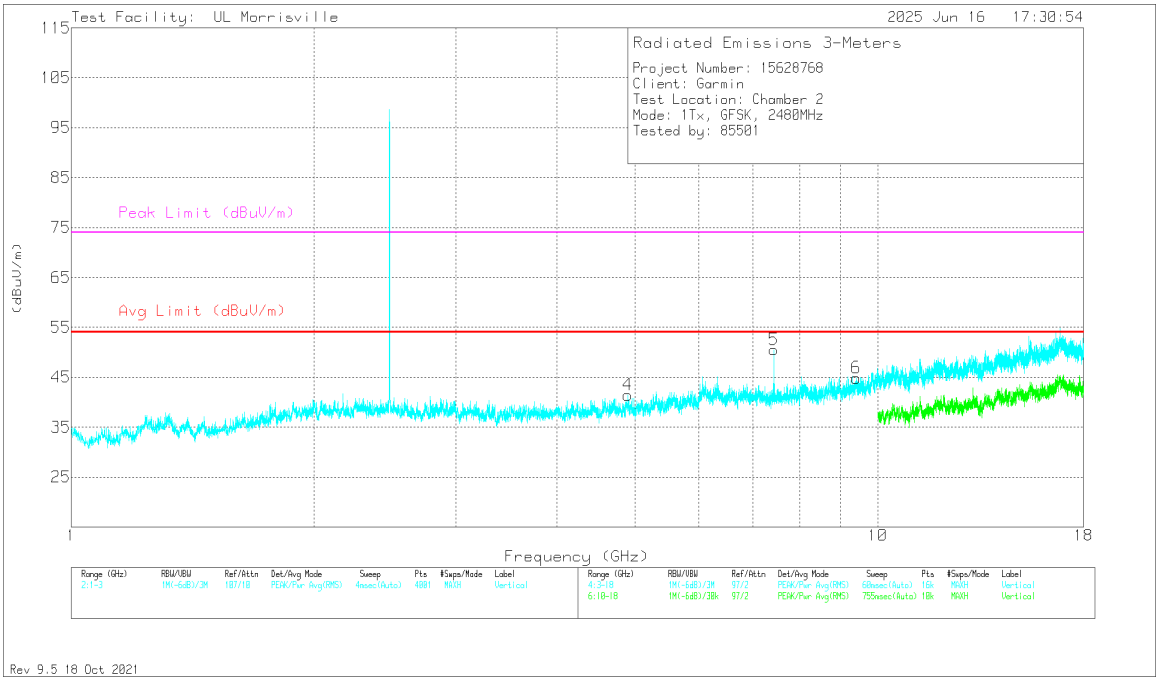
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* ** 4.88166	73.43	PK2	34.1	-44.5	63.03	-	-	74	-10.97	96	110	H
	* ** 4.88199	60.58	V1TV	34.1	-44.5	50.18	54	-3.82	-	-	96	110	H
3	* ** 7.32274	59.21	PK2	35.6	-43.5	51.31	-	-	74	-22.69	103	373	H
	* ** 7.32301	50.33	V1TV	35.6	-43.5	42.43	54	-11.57	-	-	103	373	H
4	* ** 9.18094	49.35	Pk	36	-40.6	44.75	54	-9.25	74	-29.25	0-360	101	H
5	* ** 4.88223	74.37	PK2	34.1	-44.5	63.97	-	-	74	-10.03	288	102	V
	* ** 4.882	60.66	V1TV	34.1	-44.5	50.26	54	-3.74	-	-	288	102	V
6	* ** 7.32345	61.59	PK2	35.6	-43.5	53.69	-	-	74	-20.31	108	103	V
	* ** 7.32299	52.97	V1TV	35.6	-43.5	45.07	54	-8.93	-	-	108	103	V
7	* ** 9.40688	48.75	Pk	36.2	-40.4	44.55	54	-9.45	74	-29.45	0-360	200	V
1	1.9015	38.64	Pk	31	-23.9	45.74	54	-8.26	74	-28.26	0-360	200	H

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

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

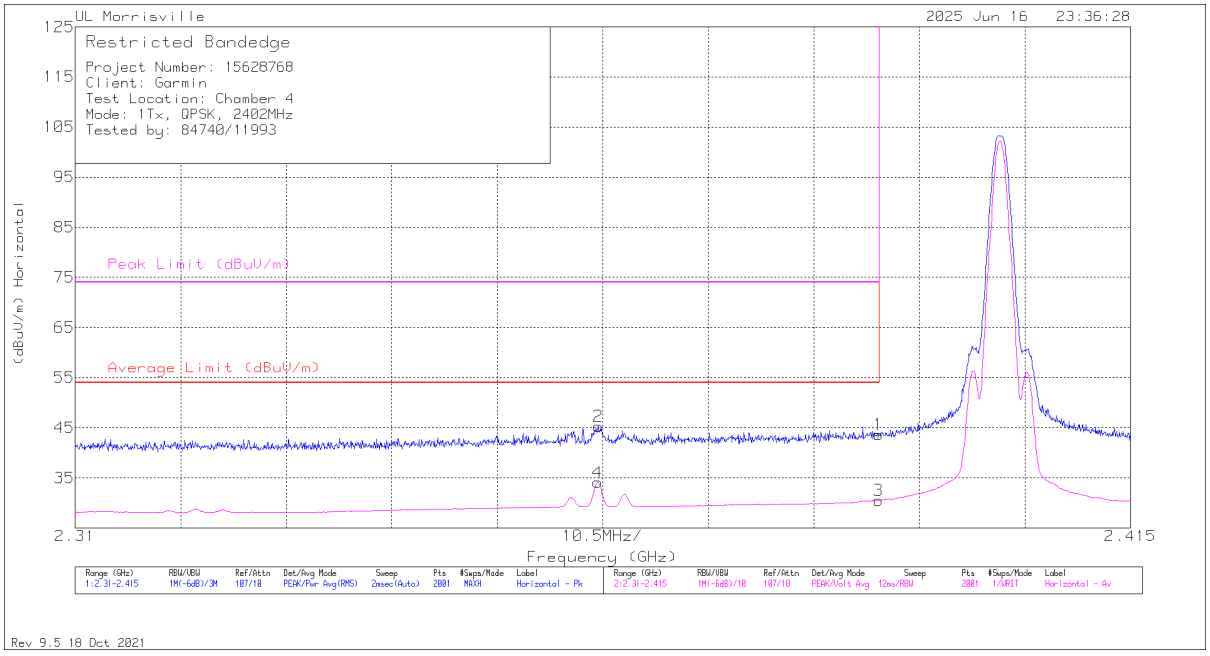
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.95938	57.03	Pk	34	-45.3	45.73	54	-8.27	74	-28.27	0-360	200	H
2	* ** 7.44036	60.23	PK2	35.6	-42.6	53.23	-	-	74	-20.77	327	202	H
	* ** 7.43986	43.32	V1TV	35.6	-42.6	36.32	54	-17.68	-	-	327	202	H
3	* ** 9.48	49.96	Pk	36.4	-41.4	44.96	54	-9.04	74	-29.04	0-360	200	H
4	* ** 4.90125	52.25	Pk	34.1	-44.9	41.45	54	-12.55	74	-32.55	0-360	101	V
5	* ** 7.4394	60.33	PK2	35.6	-42.5	53.43	-	-	74	-20.57	150	198	V
	* ** 7.43986	43.23	V1TV	35.6	-42.6	36.23	54	-17.77	-	-	150	198	V
6	* ** 9.40969	49.28	Pk	36.2	-40.6	44.88	54	-9.12	74	-29.12	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

10.1.3. BLUETOOTH ENHANCED DATA RATE QPSK MODULATION

BANDEDGE (LOW CHANNEL)

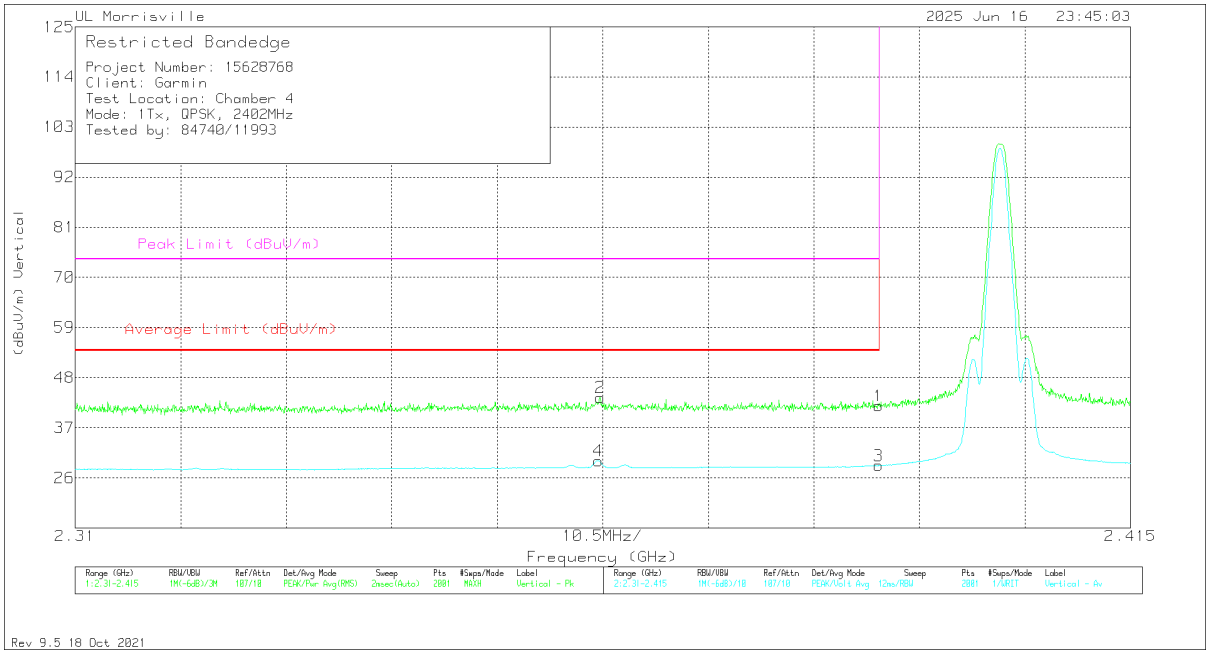
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (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	34.88	Pk	32	-23.2	43.68	-	-	74	-30.32	200	277	H
2	* ** 2.36203	36.34	Pk	31.9	-23	45.24	-	-	74	-28.76	200	277	H
3	* ** 2.38996	21.72	VA1T	32	-23.2	30.52	54	-23.48	-	-	200	277	H
4	* ** 2.36198	25.18	VA1T	31.9	-23	34.08	54	-19.92	-	-	200	277	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
VA1T - Linear Voltage Average VB=1/Ton where: Ton is transmit duration

VERTICAL RESULT

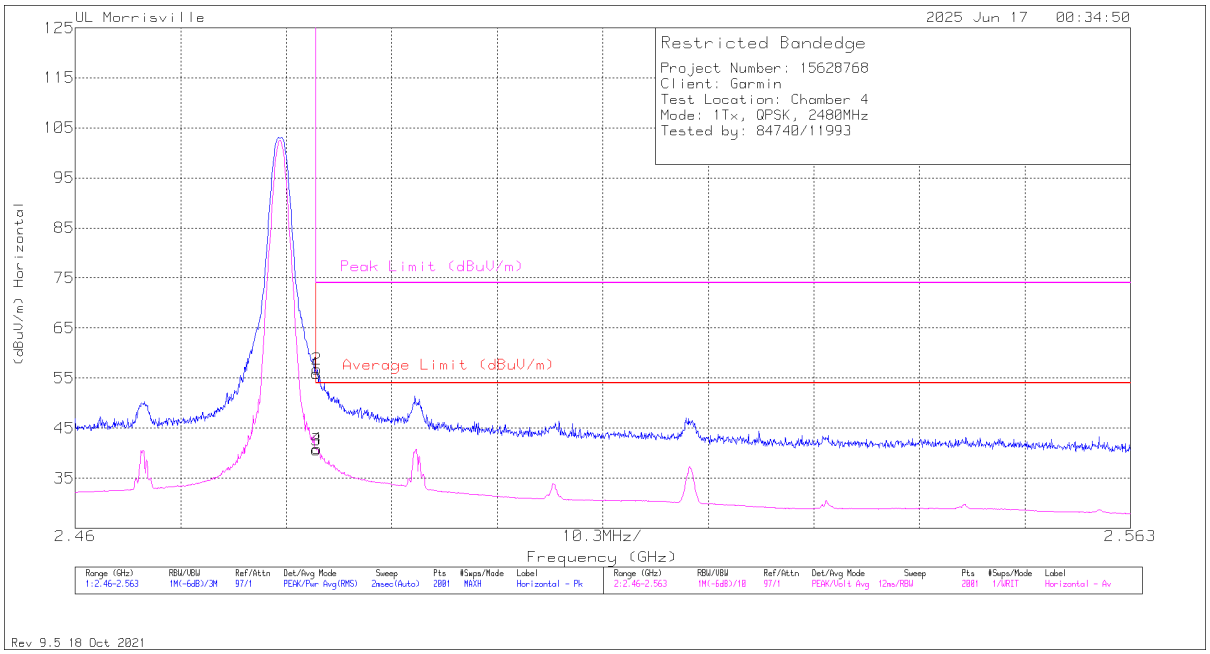


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38996	32.98	Pk	32	-23.2	41.78	-	-	74	-32.22	212	272	V
2	* ** 2.36224	34.76	Pk	31.9	-23	43.66	-	-	74	-30.34	212	272	V
3	* ** 2.38996	19.89	VA1T	32	-23.2	28.69	54	-25.31	-	-	212	272	V
4	* ** 2.36203	20.81	VA1T	31.9	-23	29.71	54	-24.29	-	-	212	272	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
VA1T - Linear Voltage Average VB=1/Ton where: Ton is transmit duration

BANDEDGE (HIGH CHANNEL)

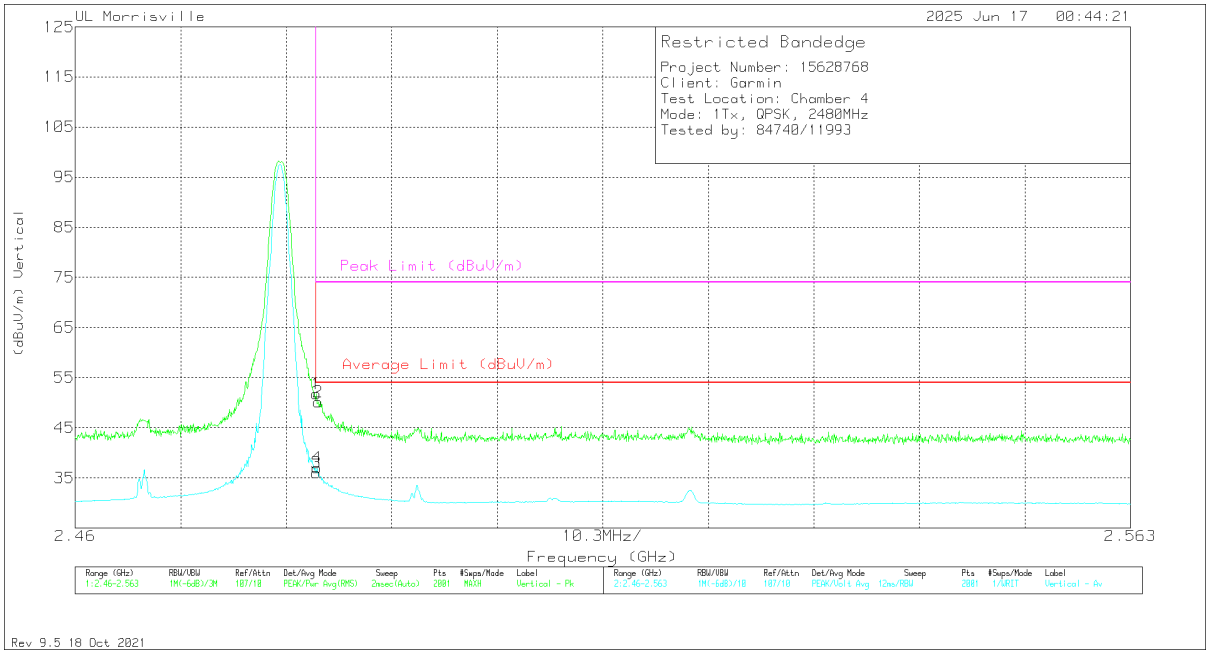
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (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	46.46	Pk	32.3	-22.8	55.96	-	-	74	-18.04	171	140	H
2	* ** 2.48359	47.25	Pk	32.3	-22.8	56.75	-	-	74	-17.25	171	140	H
3	* ** 2.48354	31.18	VA1T	32.3	-22.8	40.68	54	-13.32	-	-	171	140	H
4	* ** 2.48359	31.37	VA1T	32.3	-22.8	40.87	54	-13.13	-	-	171	140	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
VA1T - Linear Voltage Average VB=1/Ton where: Ton is transmit duration

VERTICAL RESULT

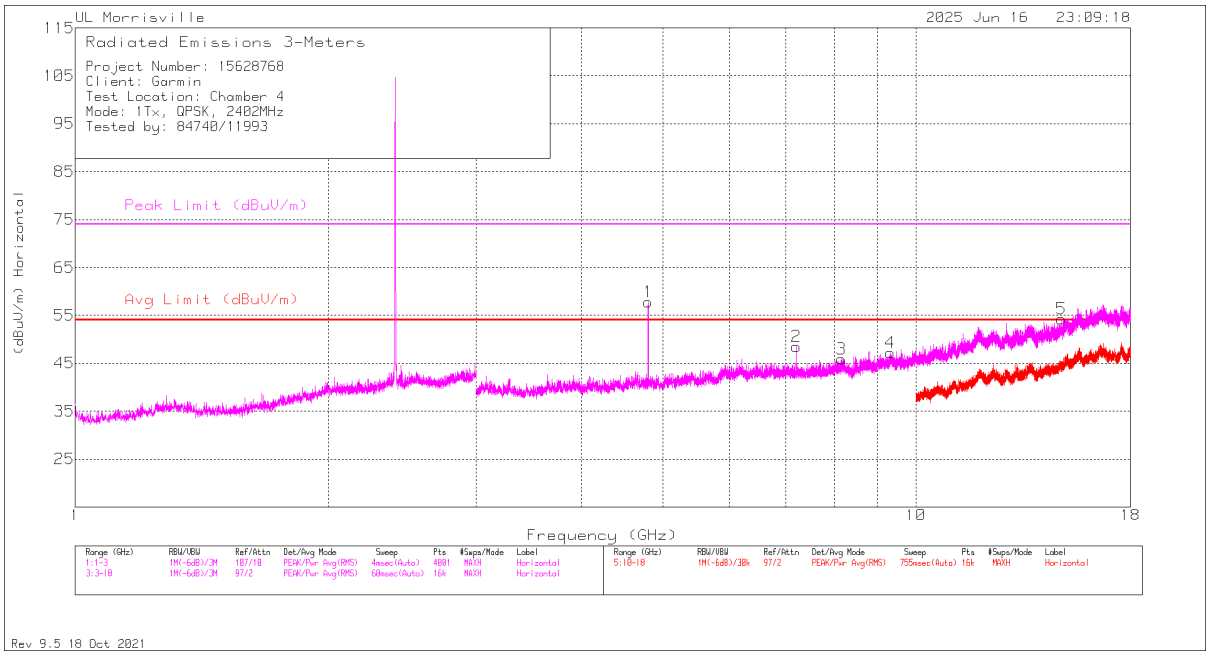


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	42.27	Pk	32.3	-22.8	51.77	-	-	74	-22.23	156	144	V
2	* ** 2.48374	40.67	Pk	32.3	-22.8	50.17	-	-	74	-23.83	156	144	V
3	* ** 2.48354	26.49	VA1T	32.3	-22.8	35.99	54	-18.01	-	-	156	144	V
4	* ** 2.48359	27.51	VA1T	32.3	-22.8	37.01	54	-16.99	-	-	156	144	V

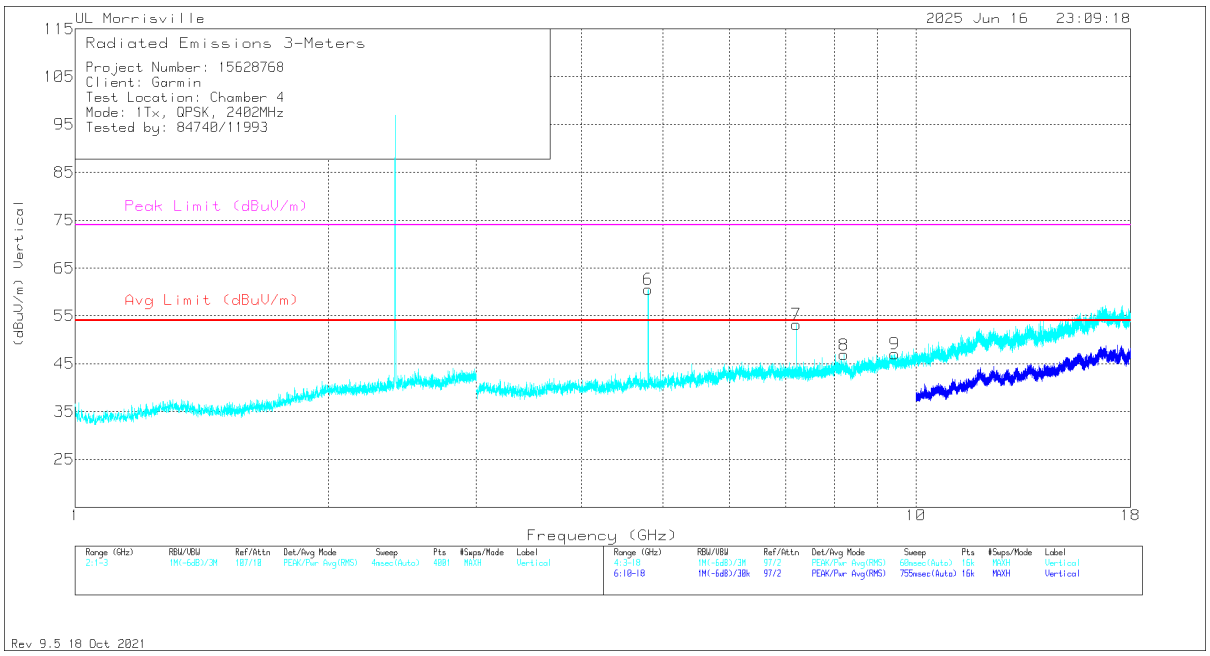
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
VA1T - Linear Voltage Average VB=1/Ton where: Ton is transmit duration

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



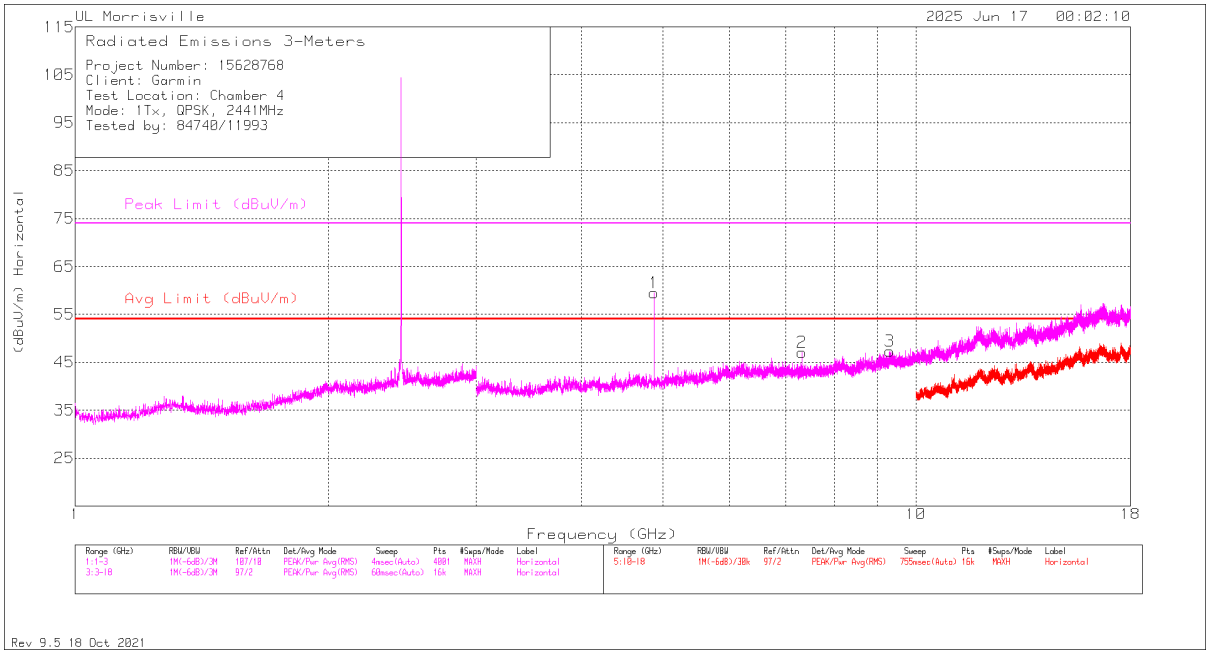
VERTICAL

RADIATED EMISSIONS

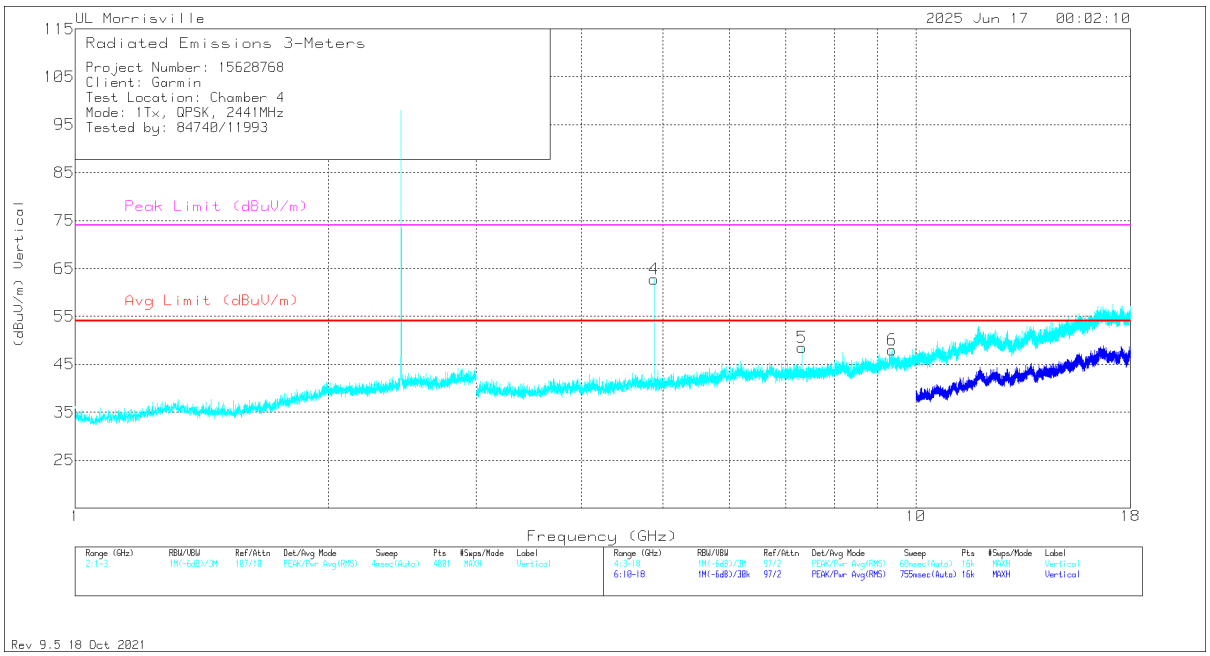
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.80379	36.36	PK2	33.9	-31.4	38.86	-	-	74	-35.14	108	112	H
	* ** 4.80398	44.79	V1TV	33.9	-31.4	47.29	54	-6.71	-	-	108	112	H
3	* ** 8.15719	37.04	Pk	35.6	-26.7	45.94	54	-8.06	74	-28.06	0-360	100	H
4	* ** 9.33281	34.9	Pk	36.4	-24.1	47.2	54	-6.8	74	-26.8	0-360	100	H
6	* ** 4.8043	55.48	PK2	33.9	-31.4	57.98	-	-	74	-16.02	173	378	V
	* ** 4.80399	41.18	V1TV	33.9	-31.4	43.68	54	-10.32	-	-	173	378	V
8	* ** 8.21156	37.47	Pk	35.7	-26.3	46.87	54	-7.13	74	-27.13	0-360	200	V
9	* ** 9.43875	35.64	Pk	36.5	-25.1	47.04	54	-6.96	74	-26.96	0-360	200	V
2	7.20563	40.7	Pk	35.5	-27.7	48.5	-	-	-	-	0-360	100	H
7	7.20563	45.4	Pk	35.5	-27.7	53.2	-	-	-	-	0-360	200	V
5	14.91	33.79	Pk	39.5	-19	54.29	-	-	-	-	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
PK2 - Maximum Peak
V1TV - VB=1/Ton, Linear Voltage Average where: Ton is packet duration

MID CHANNEL RESULTS



HORIZONTAL



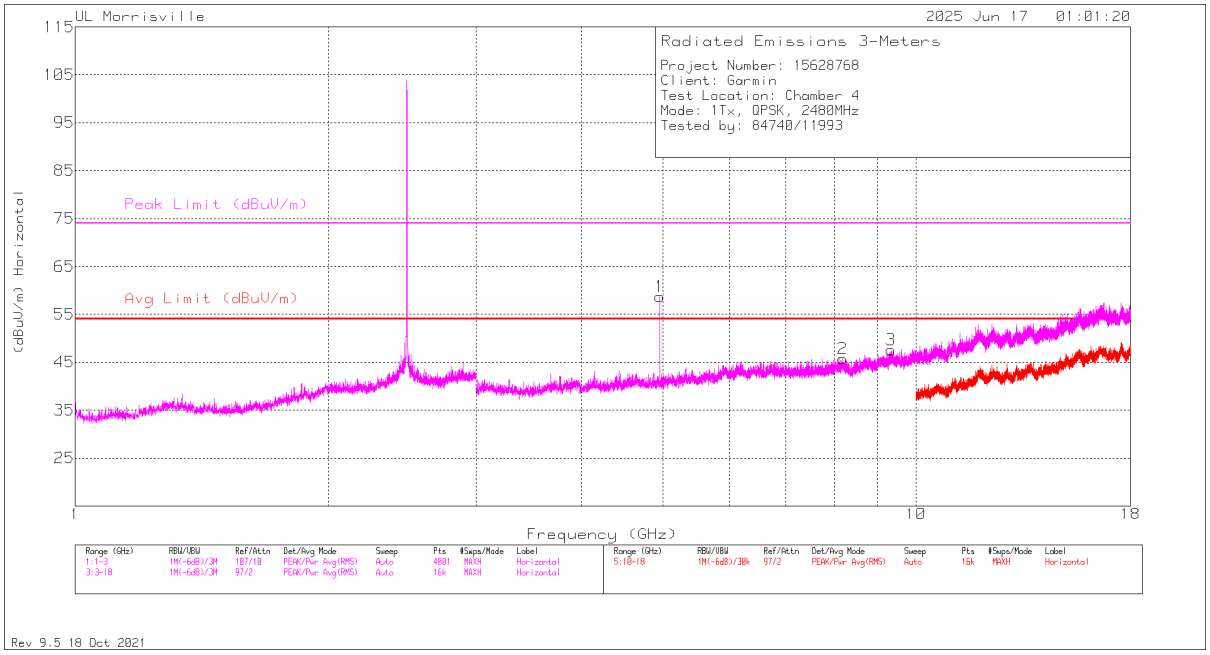
VERTICAL

RADIATED EMISSIONS

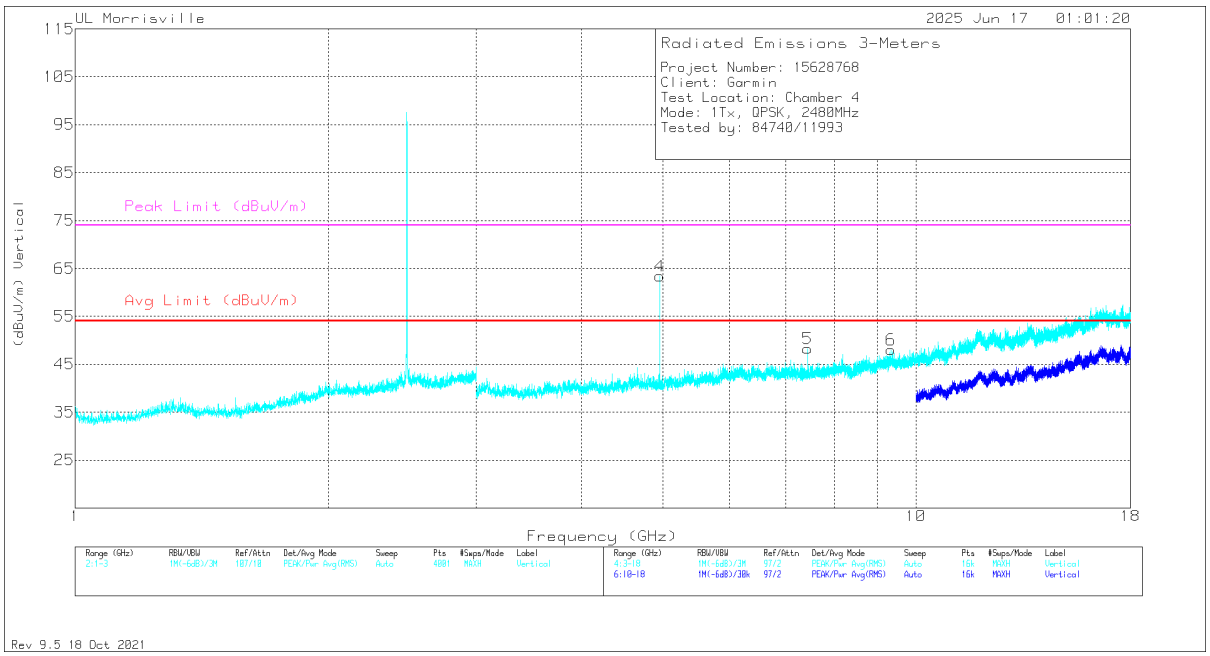
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.88154	38.01	PK2	33.9	-31	40.91	-	-	74	-33.09	93	101	H
	* ** 4.88198	45.03	V1TV	33.9	-31	47.93	54	-6.07	-	-	93	101	H
2	* ** 7.32281	39.31	Pk	35.5	-27.7	47.11	54	-6.89	74	-26.89	0-360	100	H
3	* ** 9.31406	35.59	Pk	36.3	-24.6	47.29	54	-6.71	74	-26.71	0-360	100	H
4	* ** 4.88169	62.22	PK2	33.9	-31	65.12	-	-	74	-8.88	268	102	V
	* ** 4.88198	47.8	V1TV	33.9	-31	50.7	54	-3.3	-	-	268	102	V
5	* ** 7.32352	46.47	PK2	35.5	-27.7	54.27	-	-	74	-19.73	97	115	V
	* ** 7.32299	34.17	V1TV	35.5	-27.7	41.97	54	-12.03	-	-	97	115	V
6	* ** 9.36656	36.18	Pk	36.4	-24.6	47.98	54	-6.02	74	-26.02	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

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

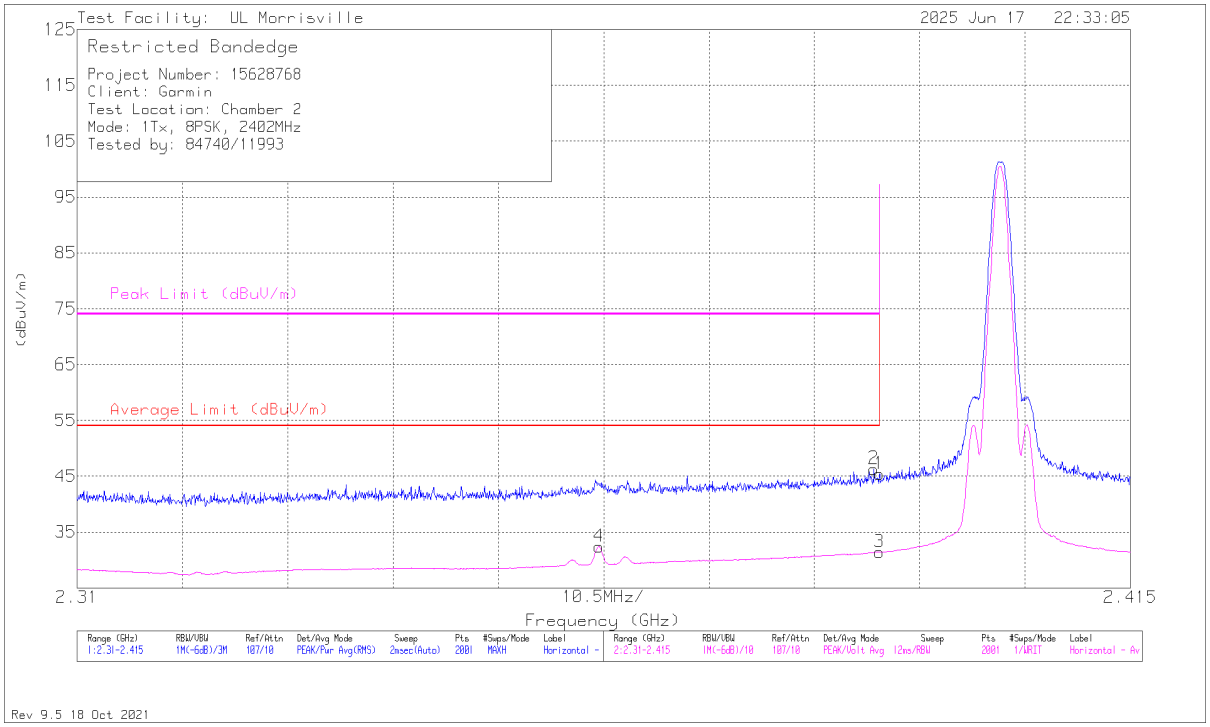
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.95968	58.99	PK2	33.8	-30.8	61.99	-	-	74	-12.01	83	115	H
	* ** 4.95999	45.54	V1TV	33.8	-30.8	48.54	54	-5.46	-	-	83	115	H
2	* ** 8.18906	36.25	Pk	35.7	-26.2	45.75	54	-8.25	74	-28.25	0-360	100	H
3	* ** 9.33469	35.39	Pk	36.4	-24.2	47.59	54	-6.41	74	-26.41	0-360	100	H
4	* ** 4.95971	61.3	PK2	33.8	-30.8	64.3	-	-	74	-9.7	278	105	V
	* ** 4.96001	47.1	V1TV	33.8	-30.8	50.1	54	-3.9	-	-	278	105	V
5	* ** 7.44042	44.95	PK2	35.6	-27.9	52.65	-	-	74	-21.35	97	121	V
	* ** 7.43999	33.01	V1TV	35.6	-27.9	40.71	54	-13.29	-	-	97	121	V
6	* ** 9.33979	36.18	PK2	36.4	-24.2	48.38	-	-	74	-25.62	98	161	V
	* ** 9.33869	21.48	V1TV	36.4	-24.2	33.68	54	-20.32	-	-	98	161	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

10.1.4. BLUETOOTH ENHANCED DATA RATE 8PSK MODULATION

BANDEDGE (LOW CHANNEL)

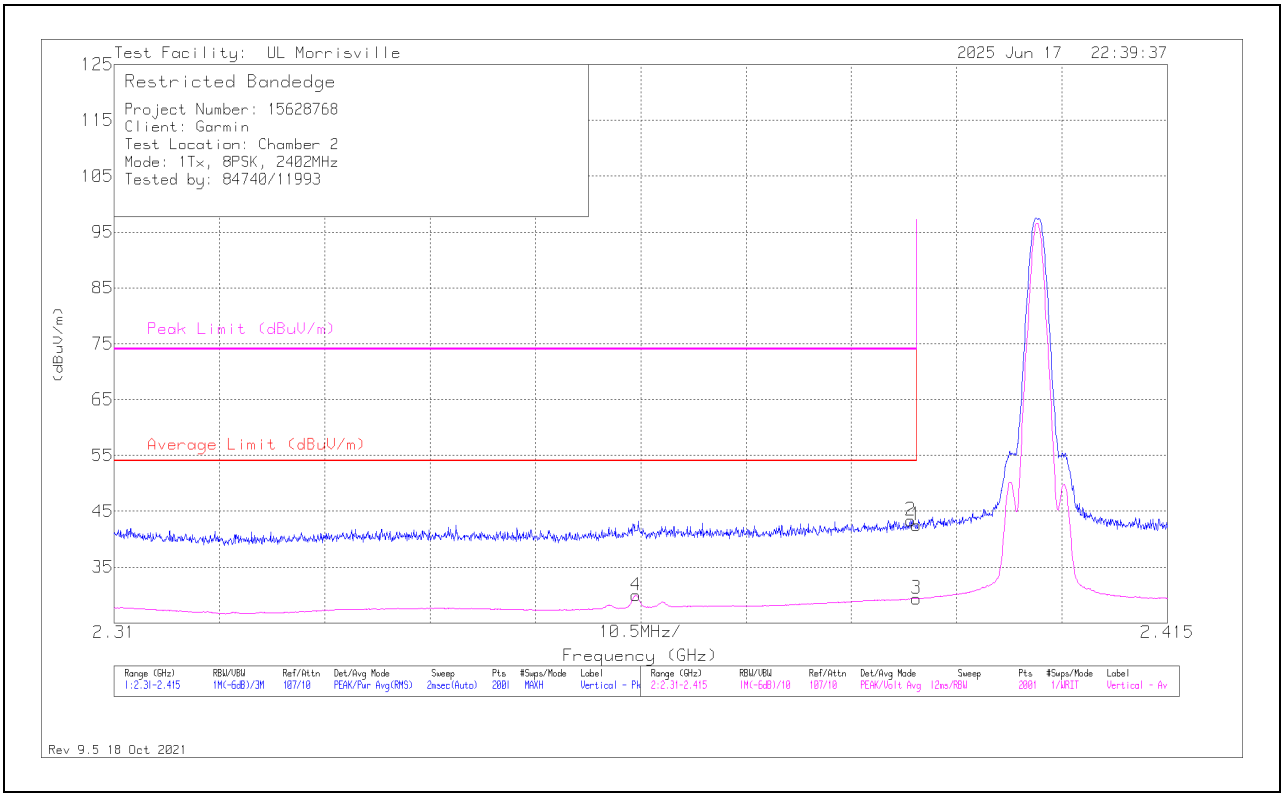
HORIZONTAL RESULT



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	38.2	Pk	32.3	-25.1	45.4	-	-	74	-28.6	231	289	H
2	* ** 2.38943	38.99	Pk	32.3	-25	46.29	-	-	74	-27.71	231	289	H
3	* ** 2.38996	24.19	VA1T	32.3	-25.1	31.39	54	-22.61	-	-	231	289	H
4	* ** 2.36203	25.78	VA1T	32.1	-25.5	32.38	54	-21.62	-	-	231	289	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
VA1T - Linear Voltage Average VB=1/Ton where: Ton is transmit duration

VERTICAL RESULT

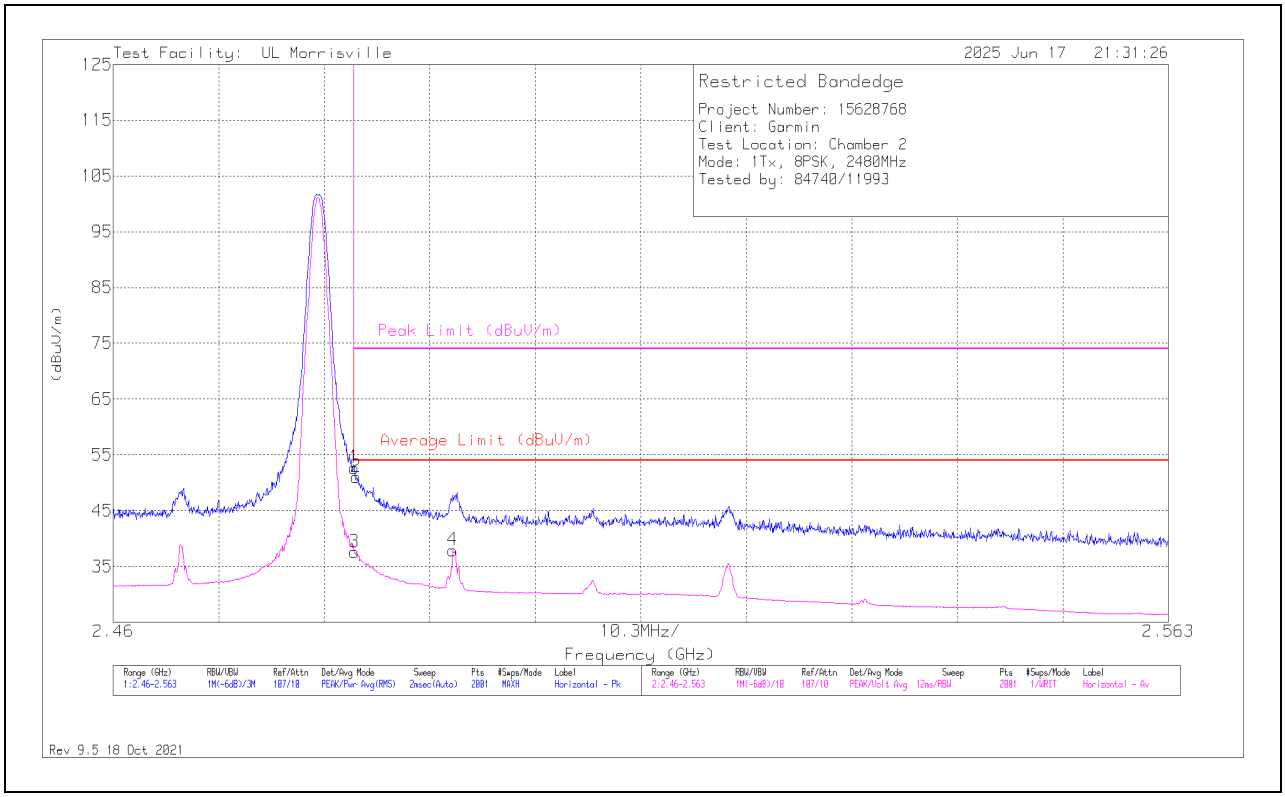


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38996	35.33	Pk	32.3	-25.1	42.53	-	-	74	-31.47	304	183	V
2	* ** 2.38943	36.05	Pk	32.3	-25	43.35	-	-	74	-30.65	304	183	V
3	* ** 2.38996	22.17	VA1T	32.3	-25.1	29.37	54	-24.63	-	-	304	183	V
4	* ** 2.36203	23.34	VA1T	32.1	-25.5	29.94	54	-24.06	-	-	304	183	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
VA1T - Linear Voltage Average VB=1/Ton where: Ton is transmit duration

BANDEDGE (HIGH CHANNEL)

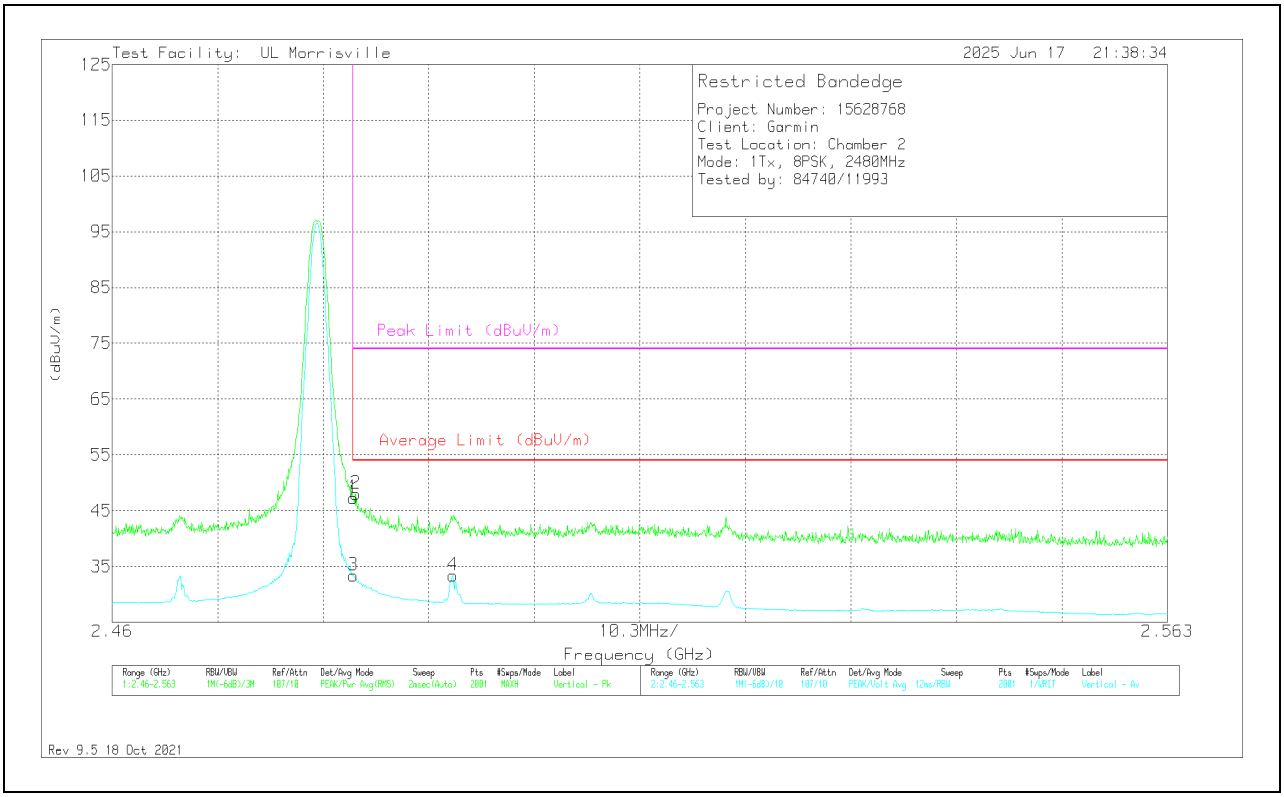
HORIZONTAL RESULT



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	45.64	Pk	32.5	-25.5	52.64	-	-	74	-21.36	235	244	H
2	* ** 2.48374	44.08	Pk	32.5	-25.5	51.08	-	-	74	-22.92	235	244	H
3	* ** 2.48354	30.57	VA1T	32.5	-25.5	37.57	54	-16.43	-	-	235	244	H
4	* ** 2.49317	31.35	VA1T	32.5	-26	37.85	54	-16.15	-	-	235	244	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
VA1T - Linear Voltage Average VB=1/Ton where: Ton is transmit duration

VERTICAL RESULT

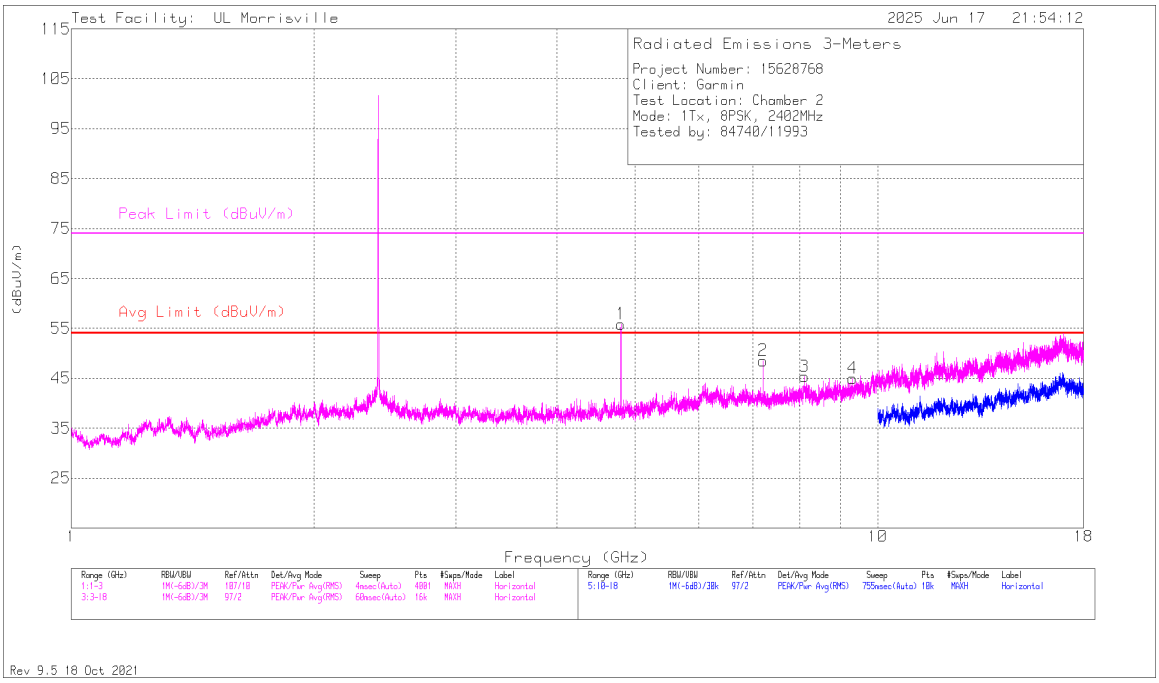


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	40.26	Pk	32.5	-25.5	47.26	-	-	74	-26.74	292	307	V
2	* ** 2.48379	41.06	Pk	32.5	-25.5	48.06	-	-	74	-25.94	292	307	V
3	* ** 2.48354	26.36	VA1T	32.5	-25.5	33.36	54	-20.64	-	-	292	307	V
4	* ** 2.49327	26.88	VA1T	32.5	-26	33.38	54	-20.62	-	-	292	307	V

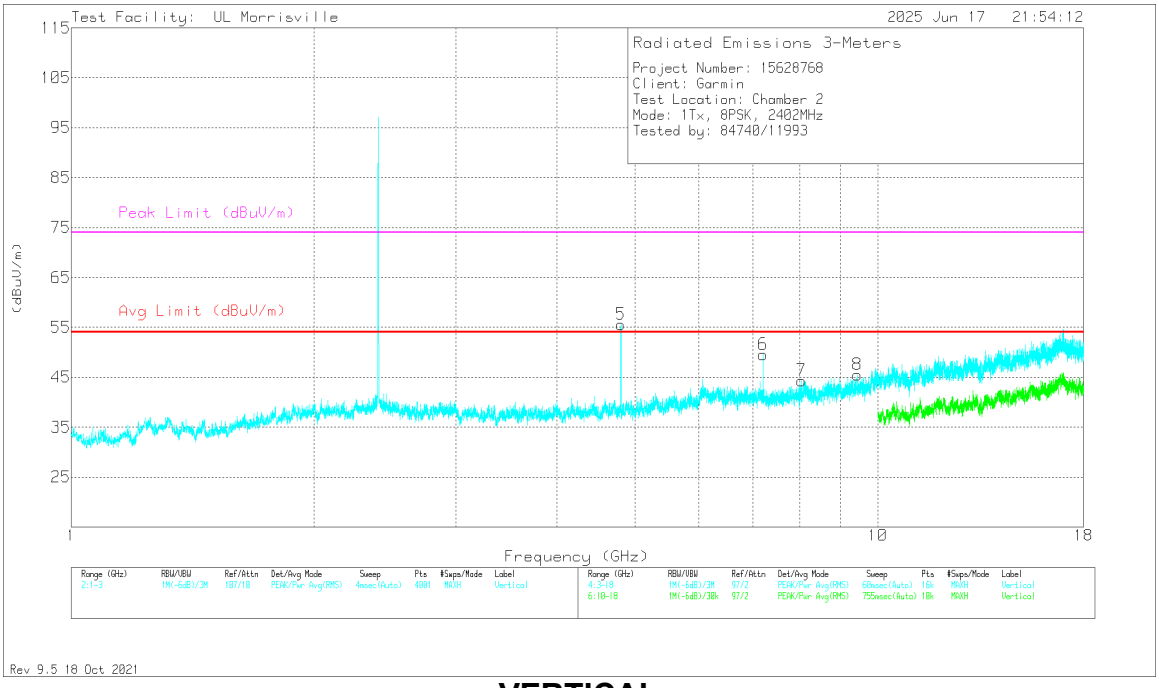
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
VA1T - Linear Voltage Average VB=1/Ton where: Ton is transmit duration

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



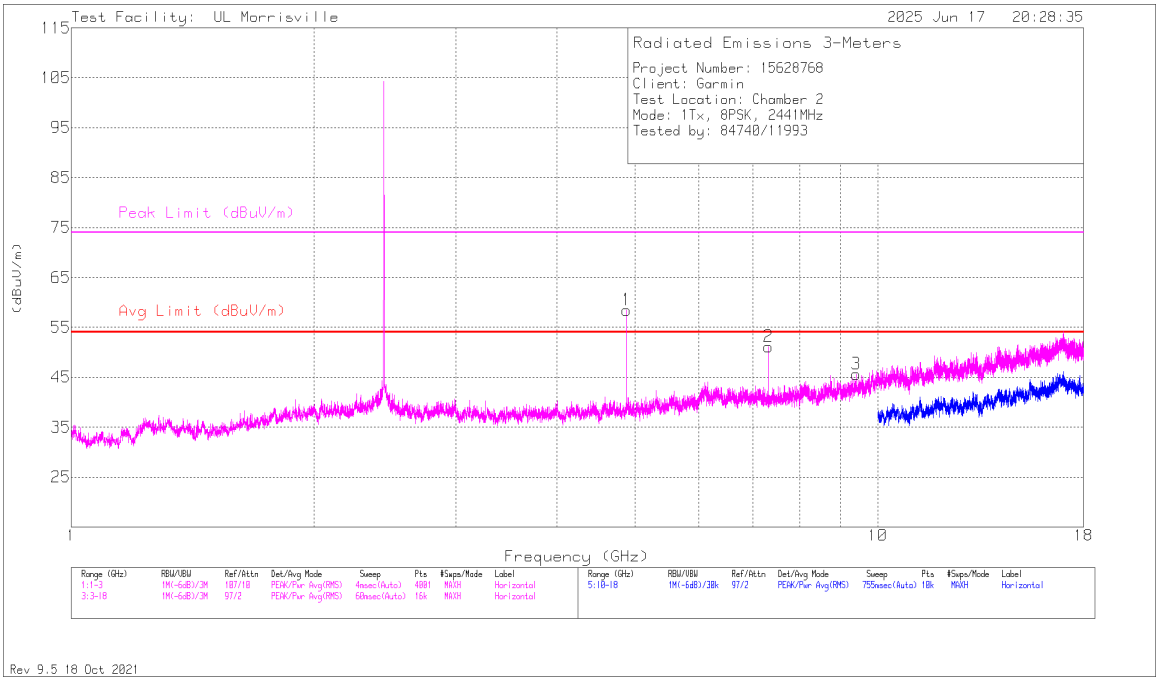
VERTICAL

RADIATED EMISSIONS

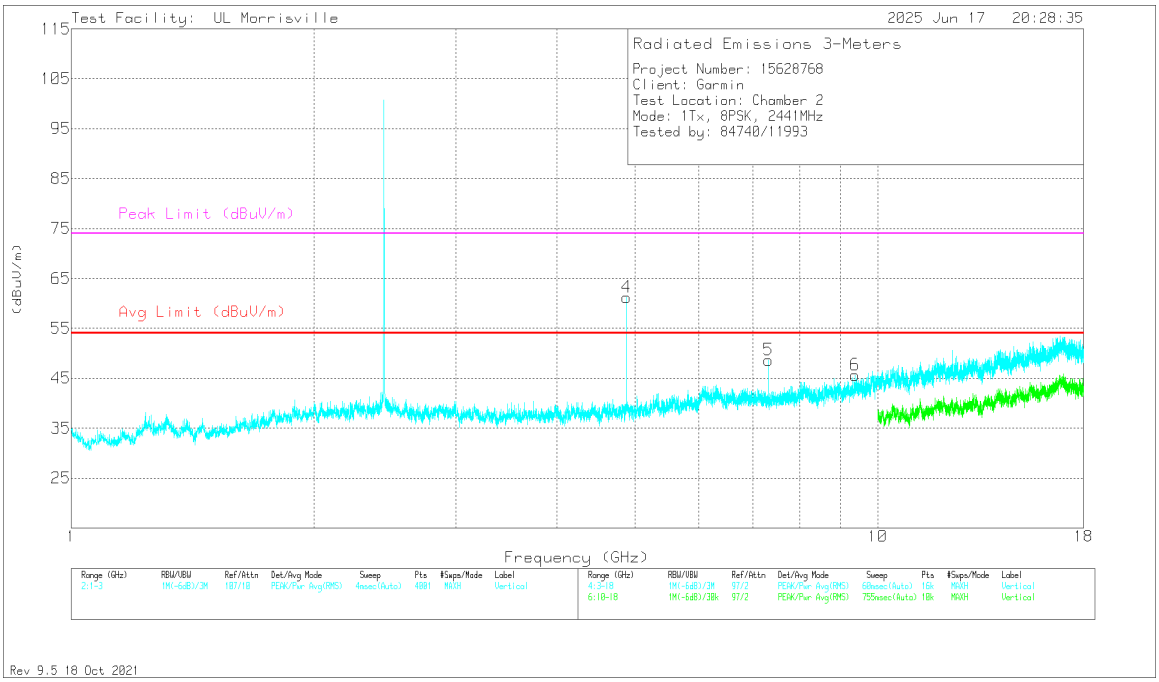
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.80352	67.73	PK2	34.2	-45.2	56.73	-	-	74	-17.27	335	110	H
	* ** 4.80399	58.06	V1TV	34.2	-45.2	47.06	54	-6.94	-	-	335	110	H
3	* ** 8.11313	50.61	Pk	35.8	-41.1	45.31	54	-8.69	74	-28.69	0-360	199	H
4	* ** 9.30469	49.52	Pk	36.1	-40.7	44.92	54	-9.08	74	-29.08	0-360	199	H
5	* ** 4.80374	70.86	PK2	34.2	-45.2	59.86	-	-	74	-14.14	169	260	V
	* ** 4.80401	57.45	V1TV	34.2	-45.2	46.45	54	-7.55	-	-	169	260	V
7	* ** 8.04938	49.75	Pk	35.8	-41.2	44.35	54	-9.65	74	-29.65	0-360	199	V
8	* ** 9.43406	50.76	Pk	36.3	-41.6	45.46	54	-8.54	74	-28.54	0-360	101	V
2	7.20563	55.51	Pk	35.6	-42.6	48.51	-	-	-	-	0-360	101	H
6	7.20563	56.53	Pk	35.6	-42.6	49.53	-	-	-	-	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
PK2 - Maximum Peak
V1TV - VB=1/Ton, Linear Voltage Average where: Ton is packet duration

MID CHANNEL RESULTS



HORIZONTAL



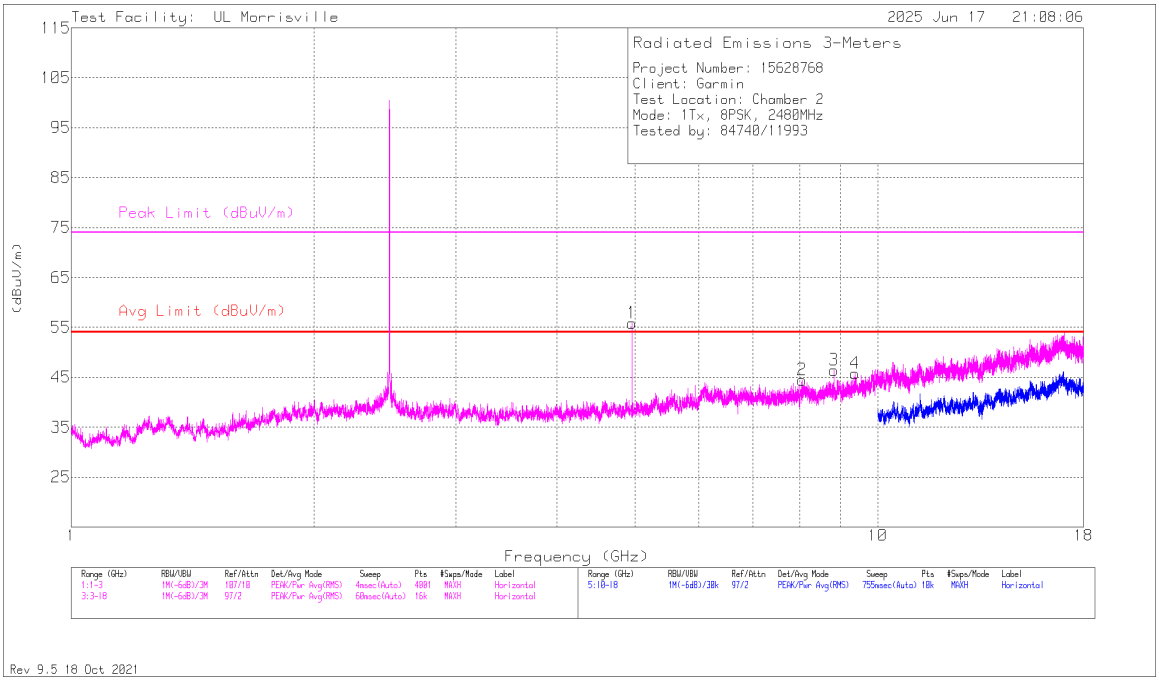
VERTICAL

RADIATED EMISSIONS

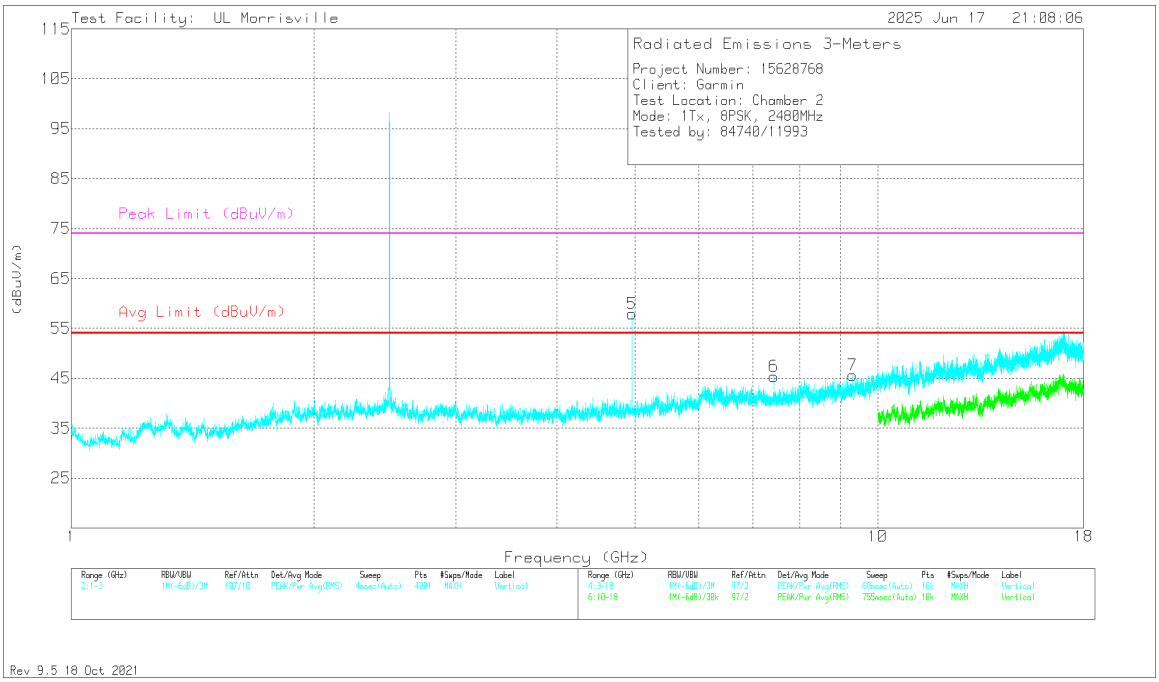
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.88241	73.32	PK2	34.1	-44.6	62.82	-	-	74	-11.18	282	147	H
	* ** 4.88198	54.61	V1TV	34.1	-44.5	44.21	54	-9.79	-	-	282	147	H
2	* ** 7.32316	63.15	PK2	35.6	-43.5	55.25	-	-	74	-18.75	118	115	H
	* ** 7.32307	48.71	V1TV	35.6	-43.5	40.81	54	-13.19	-	-	118	115	H
3	* ** 9.40688	49.79	Pk	36.2	-40.4	45.59	54	-8.41	74	-28.41	0-360	200	H
4	* ** 4.88224	76.99	PK2	34.1	-44.5	66.59	-	-	74	-7.41	146	244	V
	* ** 4.88199	58.18	V1TV	34.1	-44.5	47.78	54	-6.22	-	-	146	244	V
5	* ** 7.32341	62.74	PK2	35.6	-43.5	54.84	-	-	74	-19.16	319	120	V
	* ** 7.32301	48.64	V1TV	35.6	-43.5	40.74	54	-13.26	-	-	319	120	V
6	* ** 9.37313	50.36	Pk	36.1	-40.8	45.66	54	-8.34	74	-28.34	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
PK2 - Maximum Peak
V1TV - VB=1/Ton, Linear Voltage Average where: Ton is packet duration

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

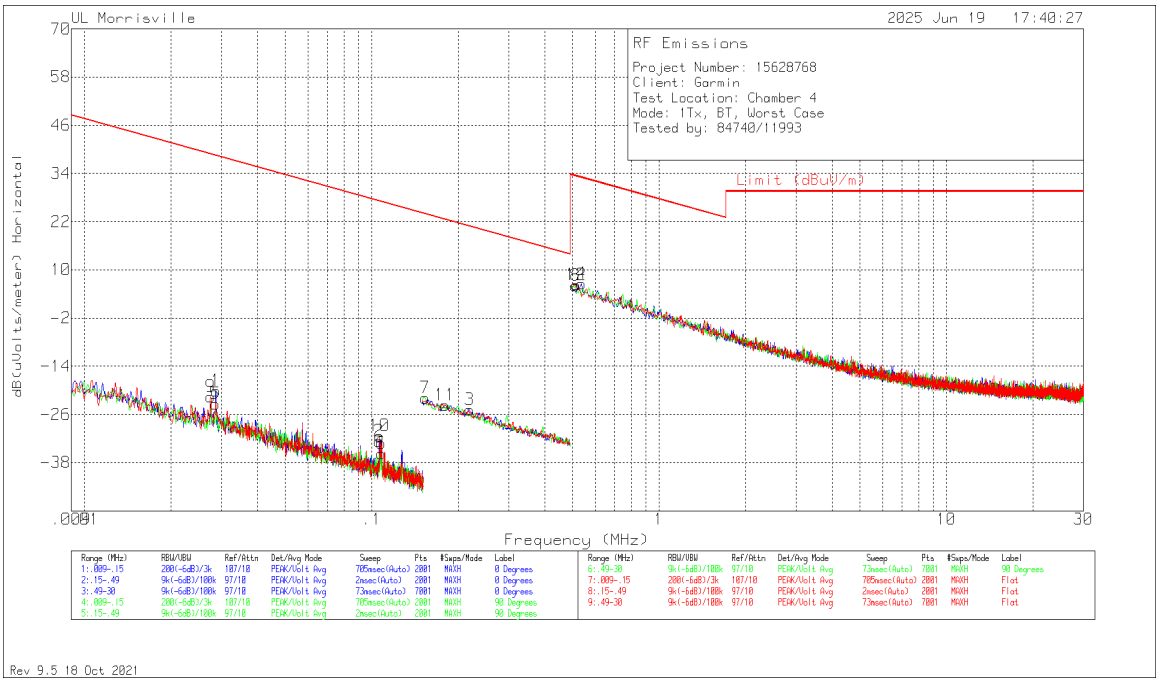
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	86408 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.95973	70.34	PK2	34	-45.3	59.04	-	-	74	-14.96	290	121	H
	* ** 4.95997	57.13	V1TV	34	-45.3	45.83	54	-8.17	-	-	290	121	H
2	* ** 8.055	49.95	Pk	35.8	-41.3	44.45	54	-9.55	74	-29.55	0-360	101	H
4	* ** 9.37594	50.18	Pk	36.2	-40.6	45.78	54	-8.22	74	-28.22	0-360	199	H
5	* ** 4.95965	72.54	PK2	34	-45.3	61.24	-	-	74	-12.76	153	248	V
	* ** 4.96001	59.18	V1TV	34	-45.3	47.88	54	-6.12	-	-	153	248	V
6	* ** 7.43906	52.21	Pk	35.6	-42.5	45.31	54	-8.69	74	-28.69	0-360	199	V
7	* ** 9.31125	50.17	Pk	36.1	-40.7	45.57	54	-8.43	74	-28.43	0-360	101	V
3	8.83219	50.16	Pk	35.9	-39.6	46.46	-	-	-	-	0-360	199	H

* - 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

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)



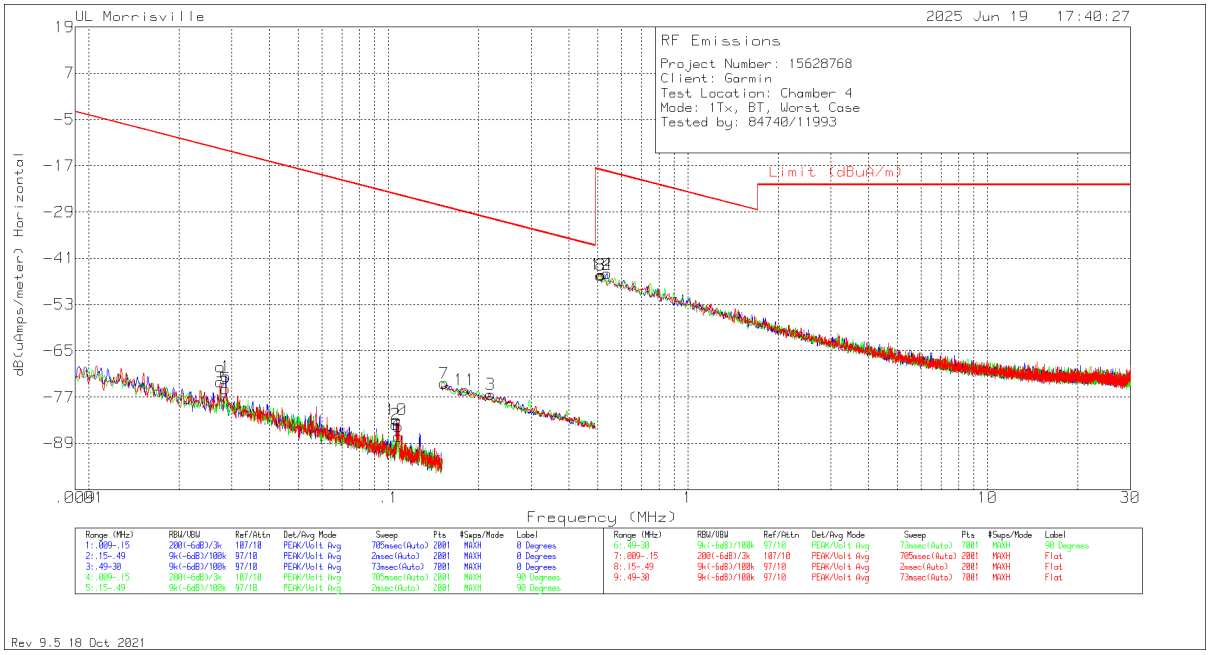
ANTENNA – THREE ORIENTATIONS (E-FIELD)

Below 30MHz Data

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
9	.02753	45.11	Pk	13.3	0	-80	-21.59	38.81	58.81	-60.4	0-360	Flat
5	.0286	43.49	Pk	13.2	0	-80	-23.31	38.48	58.48	-61.79	0-360	90 degs
1	.02867	46.63	Pk	13.2	0	-80	-20.17	38.46	58.46	-58.63	0-360	0 degs
2	.10584	36.26	Pk	11.1	0	-80	-32.64	27.11	-	-59.75	0-360	0 degs
10	.10648	37.5	Pk	11.1	0	-80	-31.4	27.06	-	-58.46	0-360	Flat
6	.10812	33.17	Pk	11.1	0	-80	-35.73	26.93	-	-62.66	0-360	90 degs
7	.1534	47.04	Pk	11	0	-80	-21.96	23.89	43.89	-45.85	0-360	90 degs
11	.17992	45.32	Pk	11	0	-80	-23.68	22.5	42.5	-46.18	0-360	Flat
3	.21885	44.23	Pk	10.9	.1	-80	-24.77	20.8	40.8	-45.57	0-360	0 degs
8	.51108	35.04	Pk	11	.1	-40	6.14	33.43	-	-27.29	0-360	90 degs
12	.5153	35.21	Pk	11	.1	-40	6.31	33.36	-	-27.05	0-360	Flat
4	.53638	35.4	Pk	11	.1	-40	6.5	33.01	-	-26.51	0-360	0 degs

Pk - Peak detector

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)



ANTENNA – THREE ORIENTATIONS (H-FIELD)

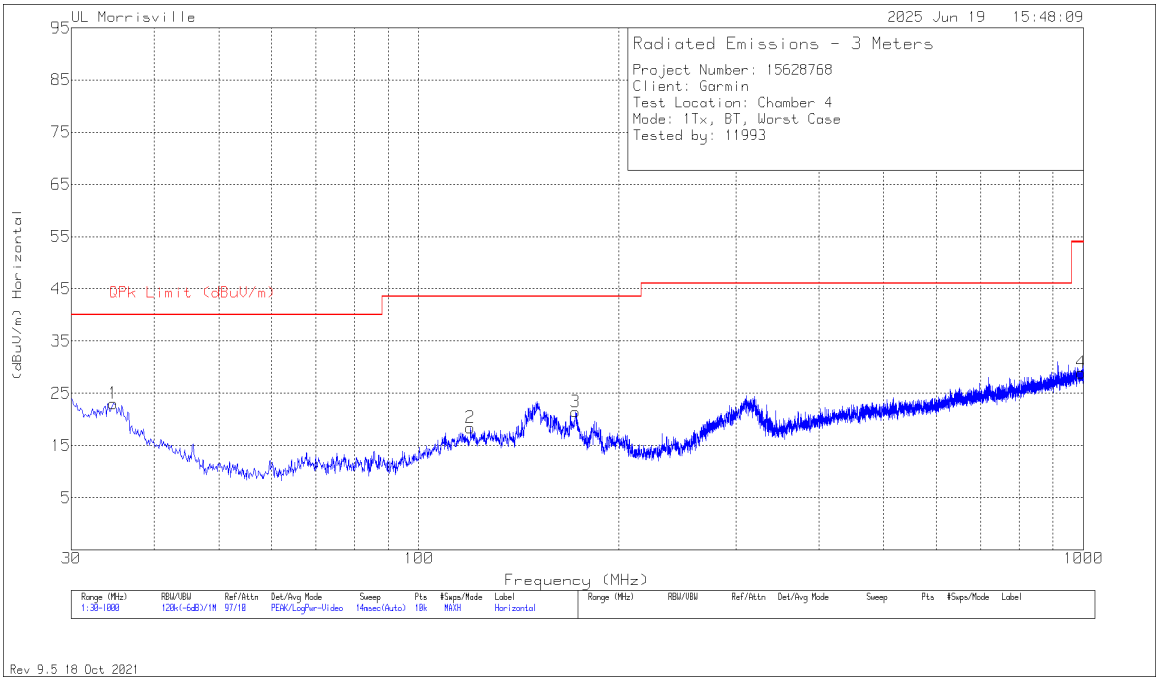
Below 30MHz Data

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)	QP/AV Limit (dBuA/m)	Margin (dB)	Azimuth (Degs)	Loop Angle
9	.02753	45.11	Pk	-38.2	0	-80	-73.09	-12.69	7.31	-60.4	0-360	Flat
5	.0286	43.49	Pk	-38.3	0	-80	-74.81	-13.02	6.98	-61.79	0-360	90 degs
1	.02867	46.63	Pk	-38.3	0	-80	-71.67	-13.04	6.96	-58.63	0-360	0 degs
2	.10584	36.26	Pk	-40.4	0	-80	-84.14	-24.39	-	-59.75	0-360	0 degs
10	.10648	37.5	Pk	-40.4	0	-80	-82.9	-24.44	-	-58.46	0-360	Flat
6	.10812	33.17	Pk	-40.4	0	-80	-87.23	-24.57	-	-62.66	0-360	90 degs
7	.1534	47.04	Pk	-40.5	0	-80	-73.46	-27.61	-7.61	-45.85	0-360	90 degs
11	.17992	45.32	Pk	-40.5	0	-80	-75.18	-29	-9	-46.18	0-360	Flat
3	.21885	44.23	Pk	-40.6	.1	-80	-76.27	-30.7	-10.7	-45.57	0-360	0 degs
8	.51108	35.04	Pk	-40.5	.1	-40	-45.36	-18.07	-	-27.29	0-360	90 degs
12	.5153	35.21	Pk	-40.5	.1	-40	-45.19	-18.14	-	-27.05	0-360	Flat
4	.53638	35.4	Pk	-40.5	.1	-40	-45	-18.49	-	-26.51	0-360	0 degs

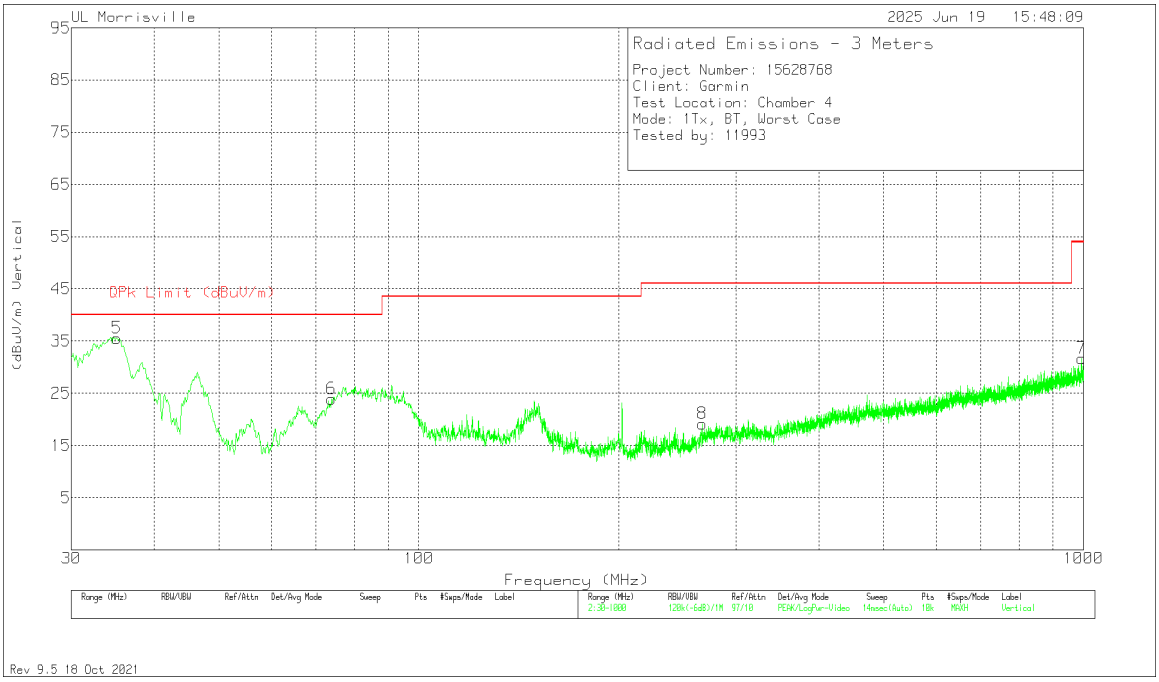
Pk - Peak detector

10.3. WORST CASE BELOW 1 GHZ

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



HORIZONTAL



VERTICAL

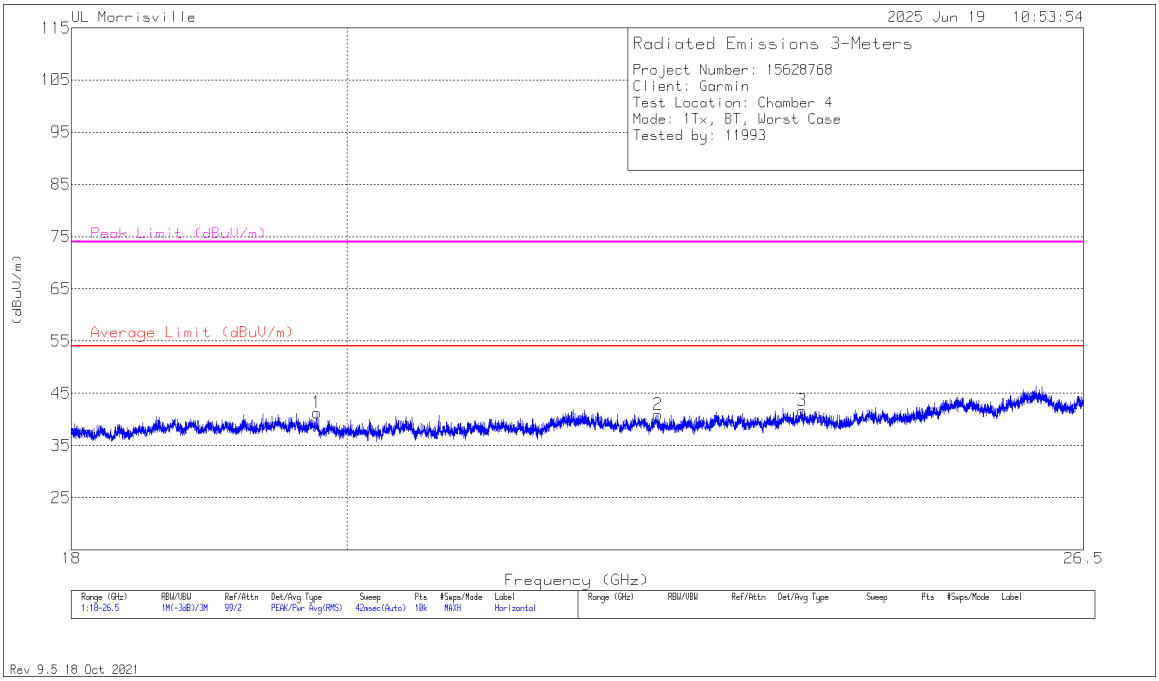
Below 1GHz Data

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
2	* ** 119.628	28.96	Pk	20	-30.6	18.36	43.52	-25.16	0-360	300	H
3	* ** 172.105	33.46	Pk	17.8	-29.8	21.46	43.52	-22.06	0-360	100	H
4	* ** 991.561	25.15	Pk	29.2	-25.4	28.95	53.97	-25.02	0-360	100	H
6	* ** 73.941	40.92	Pk	14.2	-31.2	23.92	40	-16.08	0-360	100	V
7	* ** 992.725	27.72	Pk	29.2	-25.2	31.72	53.97	-22.25	0-360	100	V
8	* ** 267.068	30.06	Pk	19.2	-30.1	19.16	46.02	-26.86	0-360	200	V
1	34.656	30.95	Pk	23.8	-31.7	23.05	-	-	0-360	200	H
5	35.141	43.8	Pk	23.5	-31.7	35.6	-	-	0-360	100	V

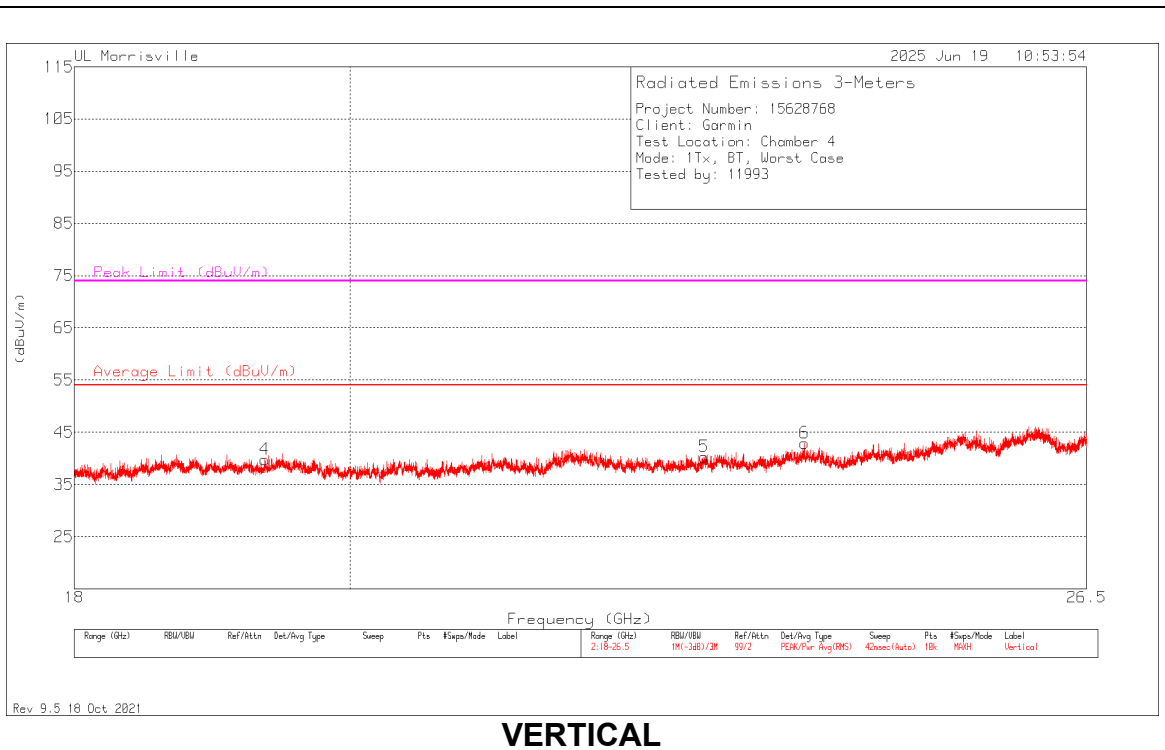
Pk - Peak detector

10.4. WORST CASE 18-26 GHZ

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



HORIZONTAL



VERTICAL

18 – 26GHz Data

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)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 19.77037	49.56	Pk	32.5	-40.8	41.26	54	-12.74	74	-32.74	0-360	100	H
2	* ** 22.5207	47.58	Pk	33.4	-40.1	40.88	54	-13.12	74	-33.12	0-360	250	H
3	* ** 23.79642	46.22	Pk	34	-38.6	41.62	54	-12.38	74	-32.38	0-360	100	H
4	* ** 19.35986	48.25	Pk	32.6	-41.1	39.75	54	-14.25	74	-34.25	0-360	300	V
5	* ** 22.89721	46.66	Pk	33.5	-39.9	40.26	54	-13.74	74	-33.74	0-360	250	V
6	* ** 23.79387	47.34	Pk	34	-38.4	42.94	54	-11.06	74	-31.06	0-360	200	V

Pk - Peak detector

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.

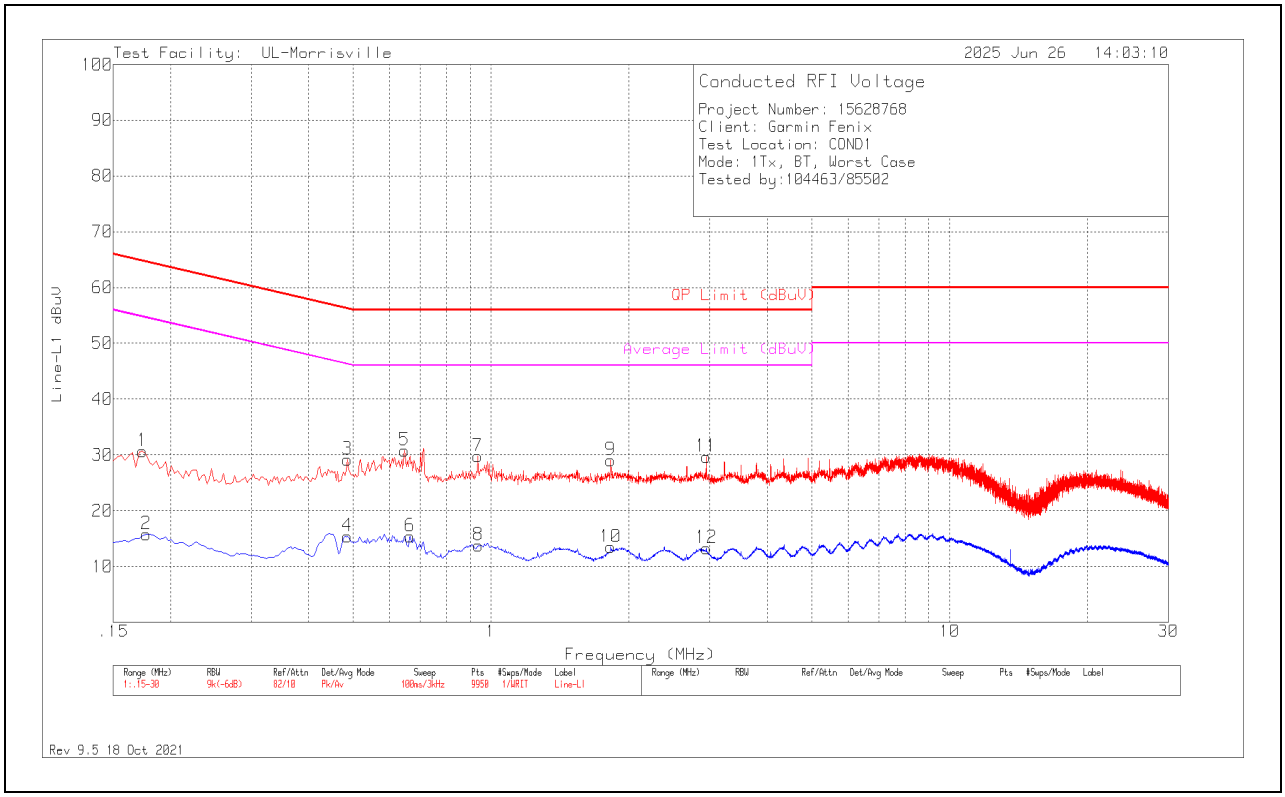
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

11.1.1. AC Power Line Norm

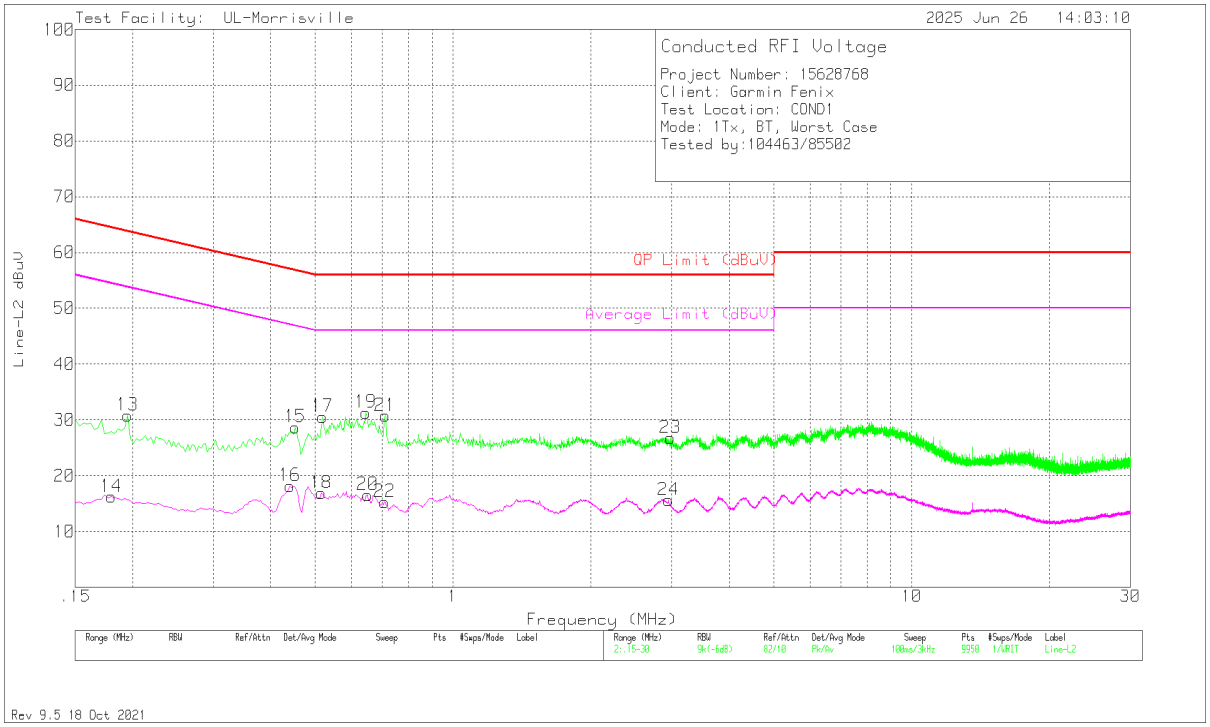
LINE 1 RESULTS



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	.174	20.74	Pk	.2	9.7	30.64	64.77	-34.13	-	-
2	.177	5.83	Av	.2	9.7	15.73	-	-	54.63	-38.9
3	.486	19.47	Pk	0	9.7	29.17	56.24	-27.07	-	-
4	.486	5.65	Av	0	9.7	15.35	-	-	46.24	-30.89
5	.648	21.08	Pk	0	9.7	30.78	56	-25.22	-	-
6	.666	5.7	Av	0	9.7	15.4	-	-	46	-30.6
7	.936	20.03	Pk	0	9.7	29.73	56	-26.27	-	-
8	.939	4.09	Av	0	9.7	13.79	-	-	46	-32.21
9	1.824	19.31	Pk	0	9.7	29.01	56	-26.99	-	-
10	1.824	3.75	Av	0	9.7	13.45	-	-	46	-32.55
11	2.946	19.98	Pk	0	9.7	29.68	56	-26.32	-	-
12	2.949	3.52	Av	0	9.7	13.22	-	-	46	-32.78

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)
14	.18	6.3	Av	.2	9.7	16.2	-	-	54.49	-38.29
13	.195	20.9	Pk	.2	9.7	30.8	63.82	-33.02	-	-
16	.441	8.34	Av	.1	9.7	18.14	-	-	47.04	-28.9
15	.453	18.81	Pk	.1	9.7	28.61	56.82	-28.21	-	-
18	.516	7.13	Av	0	9.7	16.83	-	-	46	-29.17
17	.519	20.88	Pk	0	9.7	30.58	56	-25.42	-	-
19	.645	21.57	Pk	0	9.7	31.27	56	-24.73	-	-
20	.651	6.77	Av	0	9.7	16.47	-	-	46	-29.53
22	.7095	5.58	Av	0	9.7	15.28	-	-	46	-30.72
21	.711	21.02	Pk	0	9.7	30.72	56	-25.28	-	-
24	2.949	5.88	Av	0	9.7	15.58	-	-	46	-30.42
23	2.976	17.02	Pk	0	9.7	26.72	56	-29.28	-	-

Pk - Peak detector
Av - Average detection

12. SETUP PHOTOS

Please refer to R15628768-EP1 for setup photos

END OF TEST REPORT