

TEST REPORT

Report Number: R16213462-E2

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

Model : A05420

FCC ID : IPH-05420

IC : 1792A-05420

EUT Description : Extremity Worn Digital Transceiver

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

Date Of Issue:
2026-07-07

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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2026-06-11	Initial Issue	Lindsay Ryan
V2	2026-06-30	Updated §9.6 and §9.7.	Lindsay Ryan
V3	2026-07-07	Updated Powers	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: A05420

SERIAL NUMBER: 631201031, 631201070, 3532026957

SAMPLE RECEIPT DATE: 2026-04-24

DATE TESTED: 2026-05-06 to 2026-07-06

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	
ISED RSS-247 Issue 4	Refer to section 2
ISED RSS-GEN Issue 5 + A1 + A2	

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. This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, or any agency of the U.S. government.

Approved & Released
For UL LLC By:

Prepared By:



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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)

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	Reporting purposes only	ANSI C63.10 Sections 6.9.2 and 6.9.3
15.247 (a)(1)	RSS-247 (6.2.3.1) (a)	Hopping Frequency Separation	Compliant	None
15.247 (a)(1)(iii)	RSS-247 (6.2.3.1) (b)	Number of Hopping Channels		
15.247 (a)(1)(iii)	RSS-247 (6.2.3.1) (b)	Average Time of Occupancy		
15.247 (b)(1)	RSS-247 (6.2.3.2) (a)	Output Power		
See Comment		Average Power	Reporting purposes only	Per ANSI C63.10, Section 11.9.2.3.2.
15.247 (d)	RSS-247 (6.6)	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 47 CFR Part 2, FCC 47 CFR Part 15, FCC ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024, ISED ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to 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 4.

4. FACILITIES AND ACCREDITATION

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

	Address	ISED CABID	ISED Company Number	FCC Registration
☐	Building: 12 Laboratory Dr Durham, NC 27713, 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)
 $36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.
 $36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is an extremity worn digital transceiver with BT, BLE, ANT, 2.4GHz WLAN, NFC, and Global Navigation Satellite System (GNSS) receiver. This report covers 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	10.41	10.99
2402 - 2480	Enhanced DQPSK	10.03	10.07
2402 - 2480	Enhanced 8PSK	9.74	9.42

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The antenna gain, as provided by the manufacturer, is as follows:

Frequency Range (MHz)	Maximum Gain (dBi)	Type
2402-2480 MHz	-0.23	Slot

6.4. SOFTWARE AND FIRMWARE

SW Version: 4.16, 5.21, and 6.13

6.5. WORST-CASE CONFIGURATION AND MODE

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

All radiated spurious emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the highest power on low, middle and high channels. Bandedge scans were performed only on low and high channels.

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

Worst-case data rates:

GFSK mode: DH5

QPSK mode: 2-DH5

8PSK mode: 3-DH5

Note: Only worst case plots are included to reduce report size.

6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Power Supply	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	Proprietary	Shielded	<3m	Charges to USB C

SETUP DIAGRAMS

Please refer to R16213462-EP2 for setup diagrams

7. 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	2025-07-31	2026-07-31
211055	Real-Time Peak Power Sensor 50MHz to 8GHz	Boonton	RTP5000	2025-07-30	2026-07-30
179892	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2026-08-05
SOFTEMI	Antenna Port Software	UL	Version 2024.2.23	NA	NA
Power Software	Boonton Power Analyzer	Boonton	Version 3.0.13.0	NA	NA
Cables & Attenuators					
CBL093	Micro-Coax UTiFLEX Cable Assembly, Low Loss,40Ghz	Carlisle Interconnect Technologies	UFA147A-2-0360-200200	2025-09-05	2026-09-05
Pad IV	SMA Coaxial 10dB Attenuator	CentricRF	C18S2-10	2025-10-12	2026-10-12

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

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
1-18 GHz					
135143	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2026-03-02	2028-03-02
18-26.5 GHz					
204704	Horn Antenna, 18-26.5GHz	Com Power	AH-826	2025-07-15	2027-07-15
Gain-Loss Chains					
207640	Gain-loss string: 1-18GHz	Various	Various	2025-06-13	2026-06-13
225795	Gain-loss string: 18-40GHz	Various	Various	2025-06-13	2026-06-13
Receiver & Software					
206459	Spectrum Analyzer	Rohde & Schwarz	FSW50	2025-09-15	2026-09-15
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Additional Equipment used					
241204	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2027-08-05

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

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
0.009-30MHz					
65682	Active Loop Antenna	ETS-Lindgren	6502	2025-10-14	2027-10-14
30-1000 MHz					
90629	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2026-03-16	2028-03-16
1-18 GHz					
88761	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2025-11-19	2027-11-19
Gain-Loss Chains					
91974	Gain-loss string: 0.009-30MHz	Various	Various	2025-05-31	2026-05-31
91976	Gain-loss string: 25-1000MHz	Various	Various	2025-05-31	2026-05-31
91979	Gain-loss string: 1-18GHz	Various	Various	2025-05-31	2026-05-31
Receiver & Software					
206496	Spectrum Analyzer	Rohde & Schwarz	ESW44	2025-07-29	2026-07-29
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Additional Equipment used					
241205	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2027-08-05

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

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	2026-05-11	2027-05-11
179892	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2026-08-06
80391	LISN, 50-ohm/50-uH, 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50-25-2-01-550V	2025-08-01	2026-08-01
75141	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2025-07-30	2026-07-30
52859	Transient Limiter, 0.009-100MHz	Electro-Metrics	EM-7600	2026-05-11	2027-05-11
PS214	AC Power Source	Elgar	CW2501M	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
84681	ANSI C63.4 1m extension cable.	UL	Per Annex B of ANSI C63.4	2026-05-11	2027-05-11

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

8. 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.

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

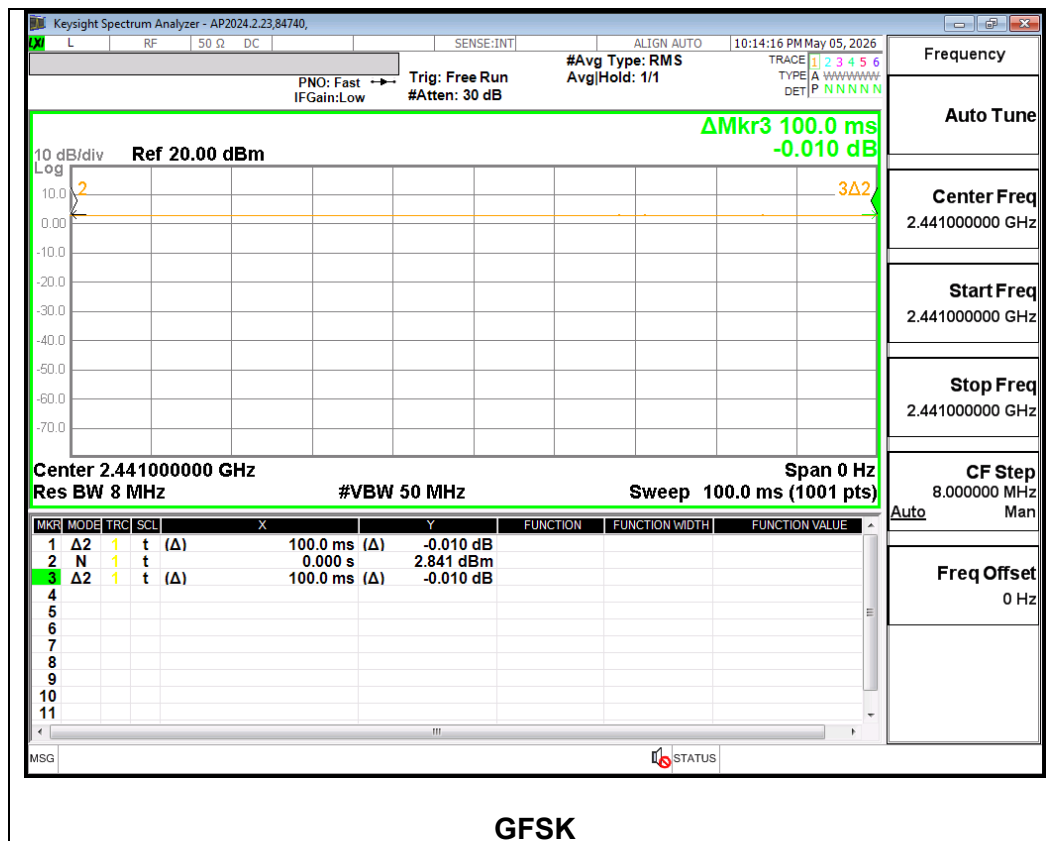
None; for reporting purposes only.

PROCEDURE

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

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 QFSK	100.000	100.000	1.000	100	0.00	0.010
Bluetooth 8PSK	100.000	100.000	1.000	100	0.00	0.010



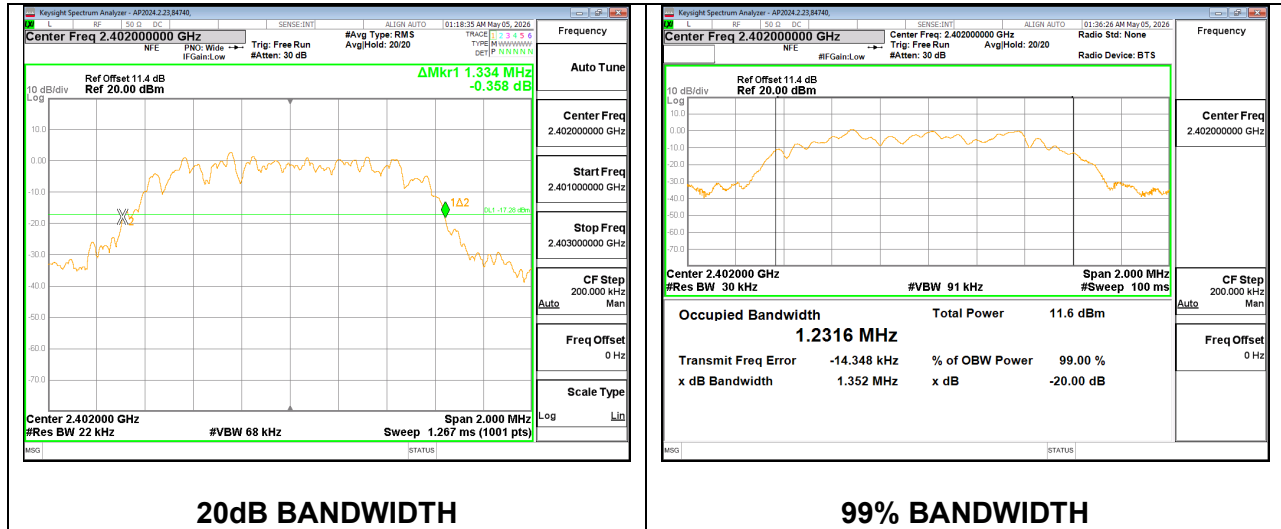
9.2. 20 dB AND 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The RBW is set to 1-5% of the 20 dB bandwidth. The VBW is set to ≥ 3 times RBW. The sweep time is coupled.



Mode	Channel	Frequency (MHz)	20dB Bandwidth (MHz)	99% Bandwidth (MHz)
GFSK	Low	2402	1.030	0.914
	Mid	2441	1.030	0.907
	High	2480	1.028	0.919
8PSK	Low	2402	1.362	1.227
	Mid	2441	1.364	1.229
	High	2480	1.370	1.231
DQPSK	Low	2402	1.328	1.194
	Mid	2441	1.334	1.194
	High	2480	1.332	1.198

9.3. HOPPING FREQUENCY SEPARATION

LIMITS

FCC §15.247 (a) (1)
RSS-247 (6.2.3.1) (a)

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.

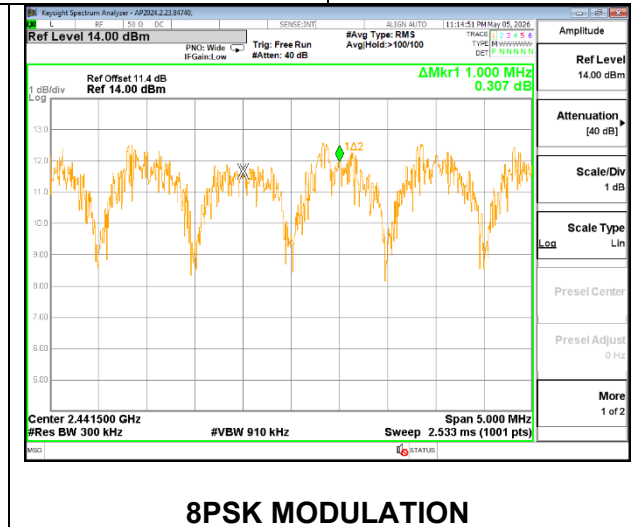
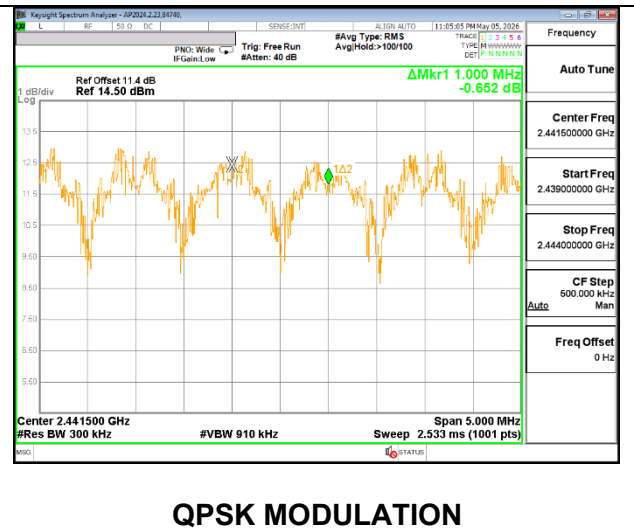
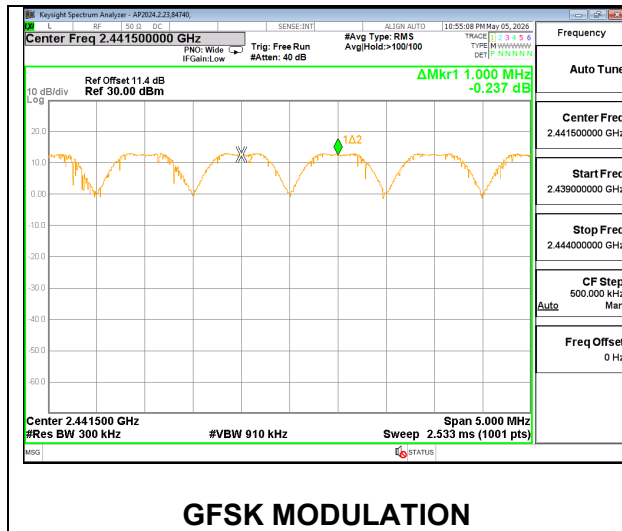
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The RBW is set to 300 kHz and the VBW is set to $VBW \geq 3$ times RBW. The sweep time is coupled.

RESULTS

The largest 20 dB BW among all modes was 1.370 MHz and highest power (DQPSK/8PSK) was 15.36 dBm. Two-thirds of the highest BW is $1.370 \text{ MHz} \times (2/3) = 0.913 \text{ MHz}$. Since power < 21 dBm and the separation of 1.000 MHz > 0.913 MHz, the channel separation is compliant.

9.3.1. 1TX



9.4. NUMBER OF HOPPING CHANNELS

LIMITS

FCC §15.247 (a) (1) (iii)
RSS-247 (6.2.3.1) (b)

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

TEST PROCEDURE

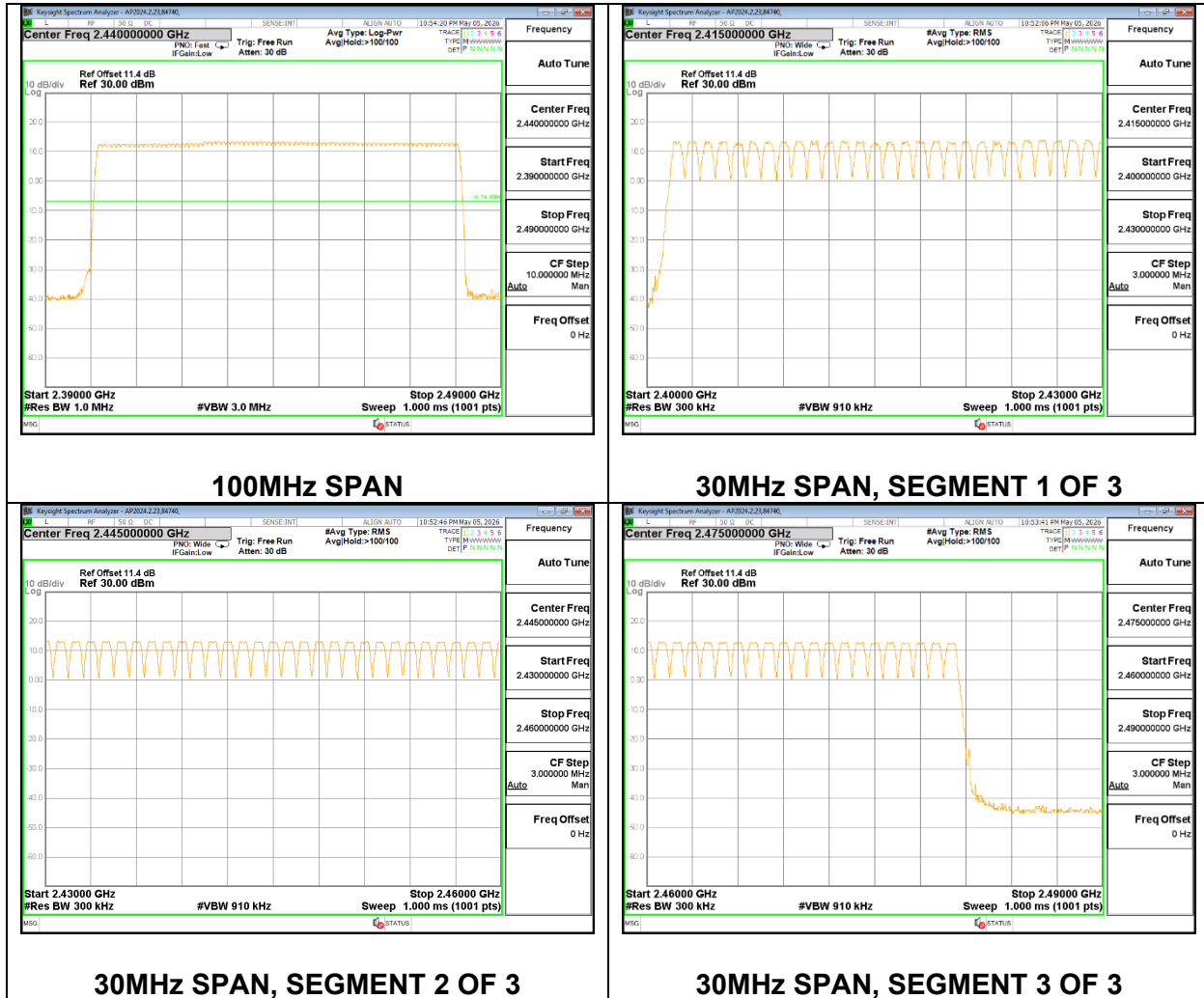
The transmitter output is connected to a spectrum analyzer. The span is set to cover the entire authorized band, in either a single sweep or in multiple contiguous sweeps. The RBW is set to a maximum of 1 % of the span. The analyzer is set to Max Hold.

RESULTS

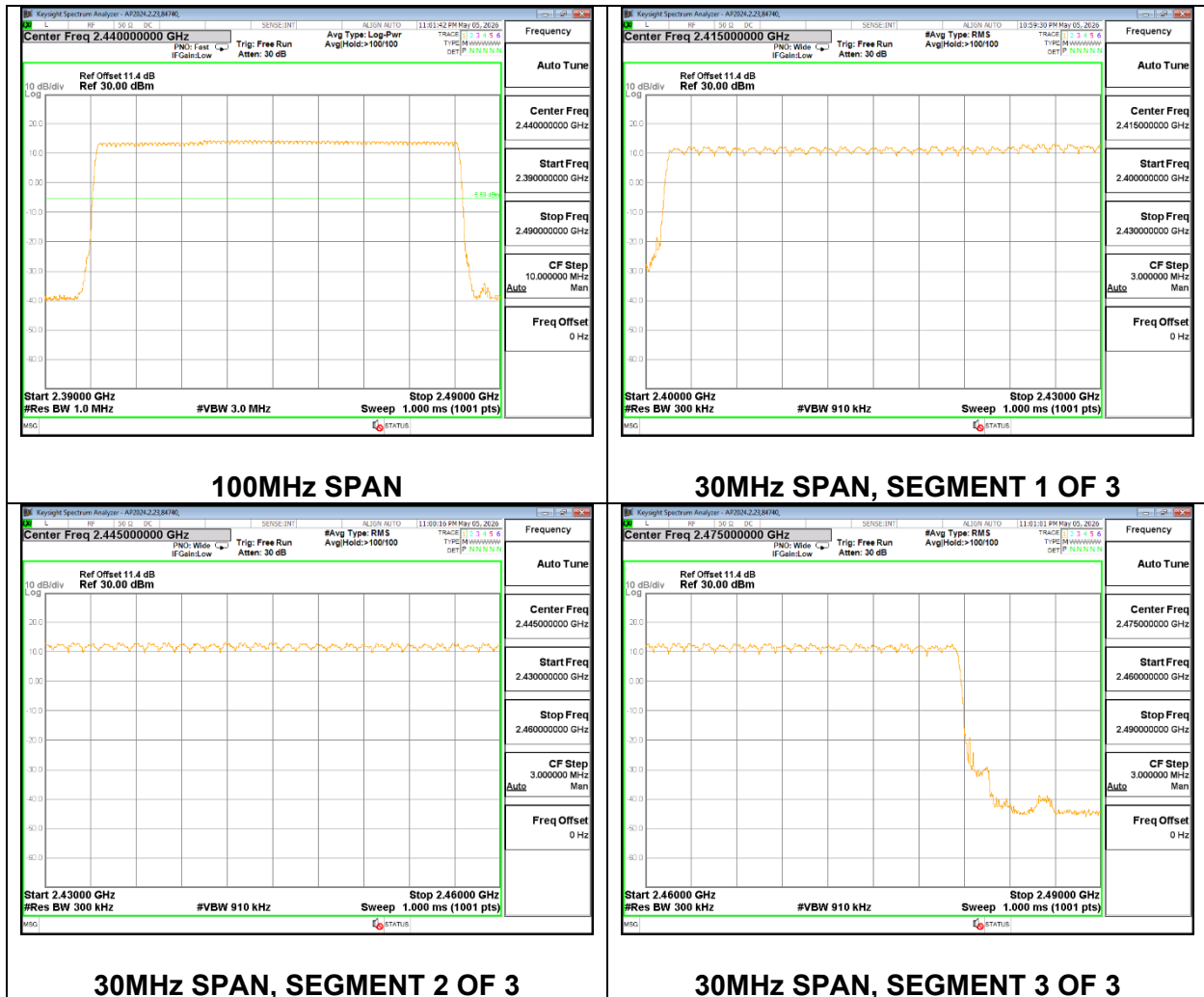
Normal Mode: 79 Channels Observed

9.4.1. 1TX

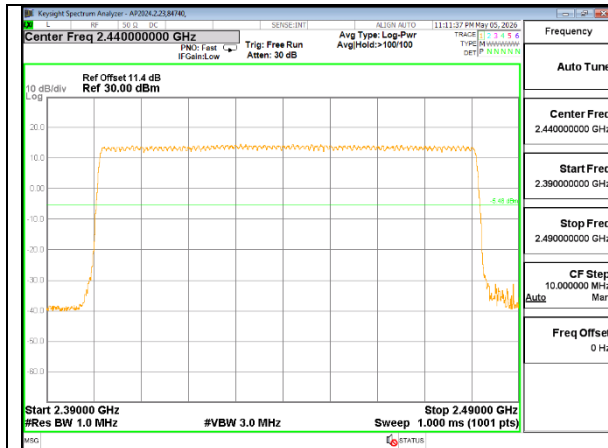
BLUETOOTH BASIC DATA RATE GFSK MODULATION



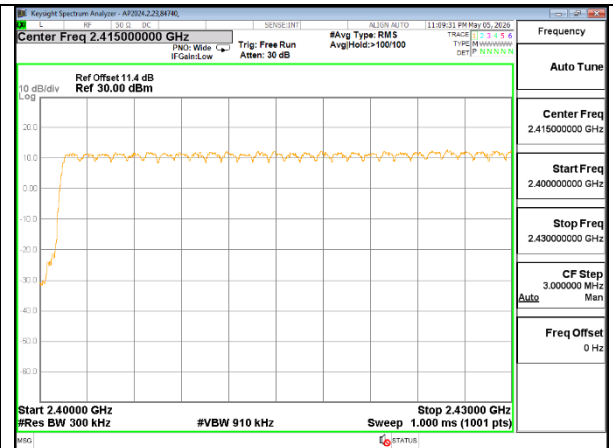
BLUETOOTH BASIC DATA RATE QPSK MODULATION



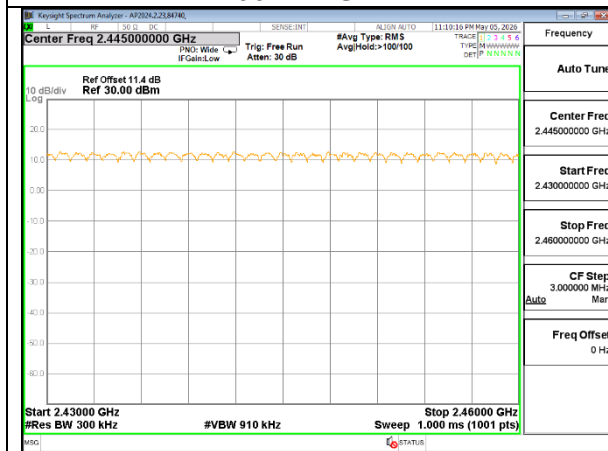
BLUETOOTH ENHANCED DATA RATE 8PSK MODULATION



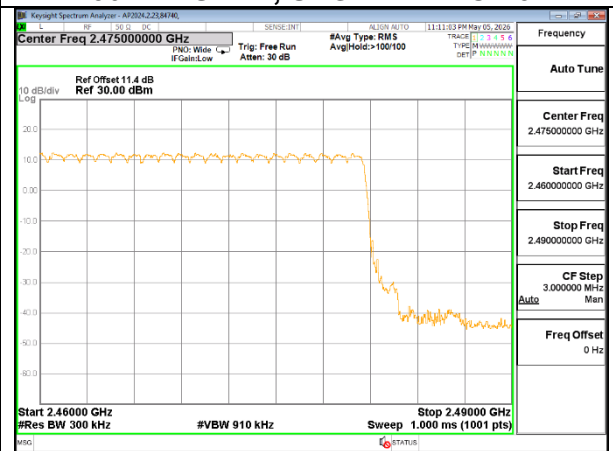
100MHz SPAN



30MHz SPAN, SEGMENT 1 OF 3



30MHz SPAN, SEGMENT 2 OF 3



30MHz SPAN, SEGMENT 3 OF 3

9.5. AVERAGE TIME OF OCCUPANCY

LIMITS

FCC §15.247 (a) (1) (iii)
RSS-247 (6.2.3.1) (b)

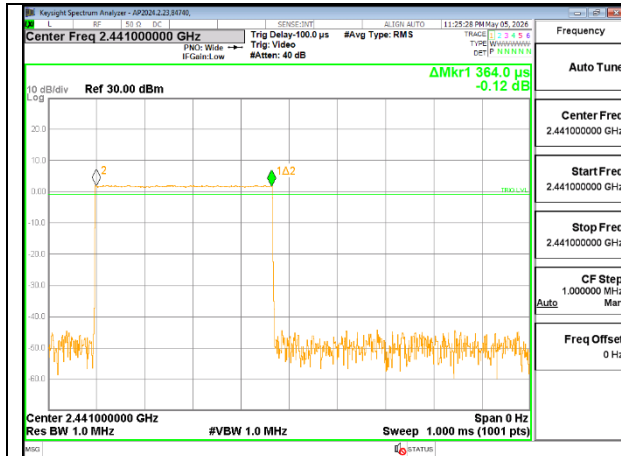
The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

TEST PROCEDURE

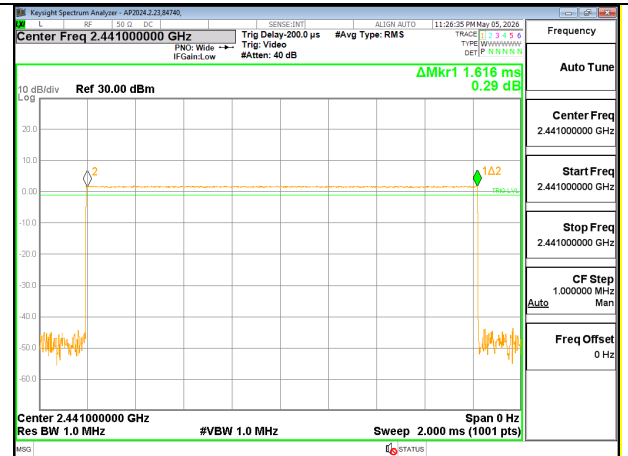
The transmitter output is connected to a spectrum analyzer. The span is set to 0 Hz, centered on a single, selected hopping channel. The width of a single pulse is measured in a fast scan. The number of pulses is measured in a 3.16-second window, to enable resolution of each occurrence.

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

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



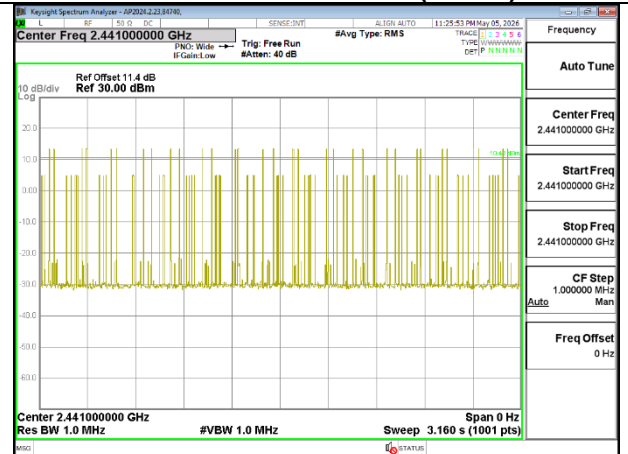
PULSE WIDTH – DH1 (GFSK)



PULSE WIDTH – DH3 (GFSK)



PULSE WIDTH – DH5 (GFSK)



NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD – DH1 (GFSK)



NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD – DH3 (GFSK)



NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD – DH5 (GFSK)

9.5.1. 1TX

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	31	0.1128	0.4	-0.2872
DH3	1.616	17	0.2747	0.4	-0.1253
DH5	2.860	9	0.2574	0.4	-0.1426
QPSK Normal Mode					
2DH1	0.373	30	0.1119	0.4	-0.2881
2DH3	1.622	16	0.25952	0.4	-0.14048
2DH5	2.864	6	0.17184	0.4	-0.22816
8PSK Normal Mode					
3DH1	0.373	29	0.10817	0.4	-0.29183
3DH3	1.620	17	0.2754	0.4	-0.1246
3DH5	2.864	12	0.3437	0.4	-0.0563
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	7.75	0.02821	0.4	-0.3718
DH3	1.616	5	0.08080	0.4	-0.3192
DH5	2.860	3	0.08580	0.4	-0.3142

Note: for AFH(8PSK/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.

9.6. OUTPUT POWER

LIMITS

§15.247 (b) (1)
RSS-247 (6.2.3.2) (a)

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

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.40 dB (including 10.09 dB pad and 1.31 dB cable) was entered as an offset in the power meter.

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

Tested By:	105900/84740
Test Date:	2026-07-06

9.6.1. 1 TX

Mode	Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
GFSK	Low	2402	9.95	21	-11.05
	Middle	2441	10.41	21	-10.59
	High	2480	10.14	21	-10.86
8PSK	Low	2402	9.74	21	-10.99
	Middle	2441	9.34	21	-11.67
	High	2480	9.70	21	-10.97
DQPSK	Low	2402	10.01	21	-11.26
	Middle	2441	9.33	21	-11.66
	High	2480	10.03	21	-11.30

9.7. AVERAGE POWER

LIMITS

None; for reporting purposes only

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.40 dB (including 10.09 dB pad and 1.31 dB cable) was entered as an offset in the power meter.

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

Tested By:	105900/84740
Test Date:	2026-07-06

9.7.1. 1 TX

Mode	Channel	Frequency (MHz)	Average Power (dBm)
GFSK	Low	2402	8.96
	Middle	2441	9.42
	High	2480	9.18
8PSK	Low	2402	9.13
	Middle	2441	8.68
	High	2480	9.05
DQPSK	Low	2402	9.00
	Middle	2441	8.30
	High	2480	9.03

9.8. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)
RSS-247 6.6

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

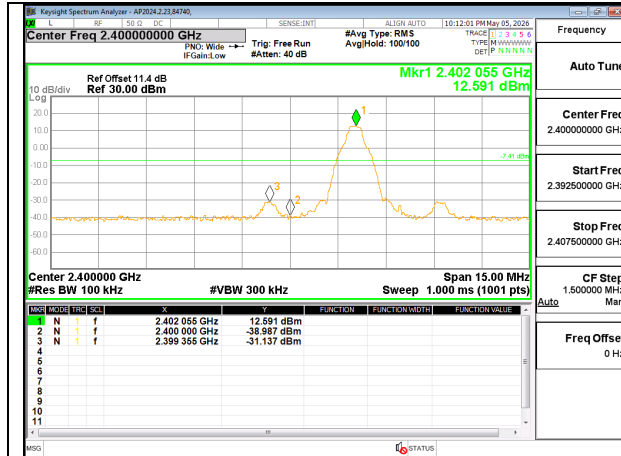
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

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

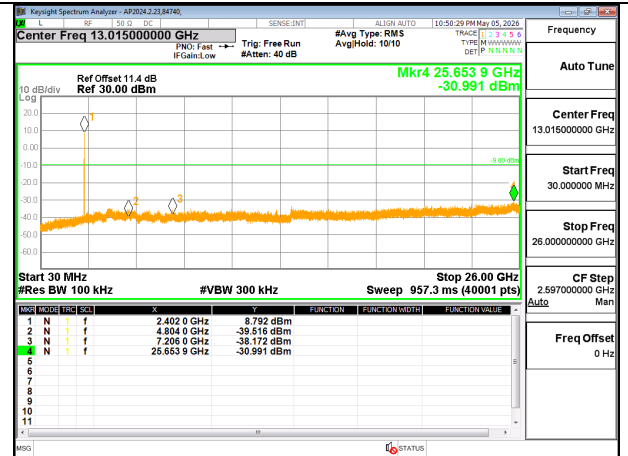
9.8.1. 1TX

BLUETOOTH BASIC DATA RATE GFSK MODULATION

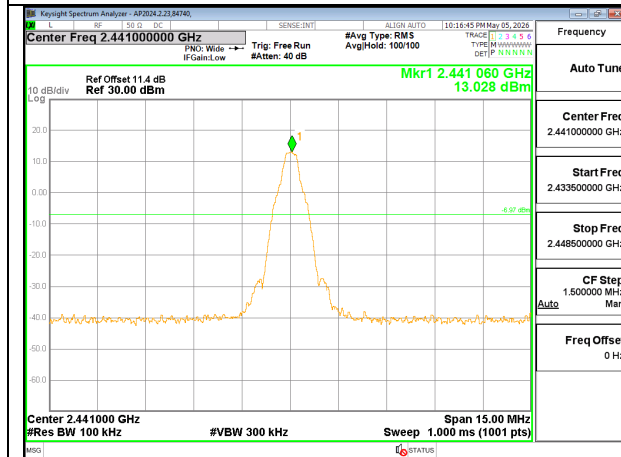
SPURIOUS EMISSIONS, NON-HOPPING



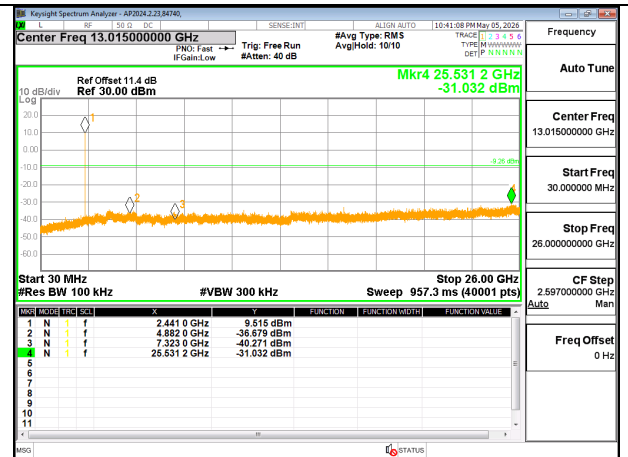
LOW CHANNEL BANDEDGE



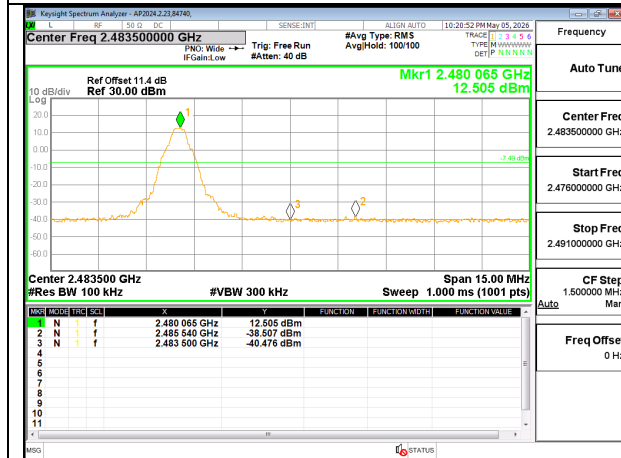
OUT-OF-BAND LOW CHANNEL



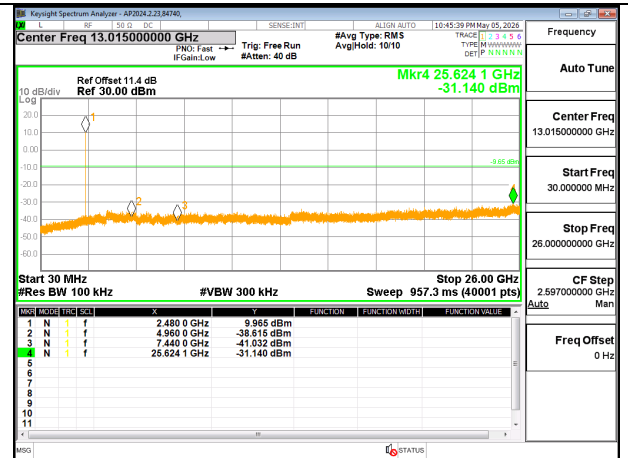
IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL

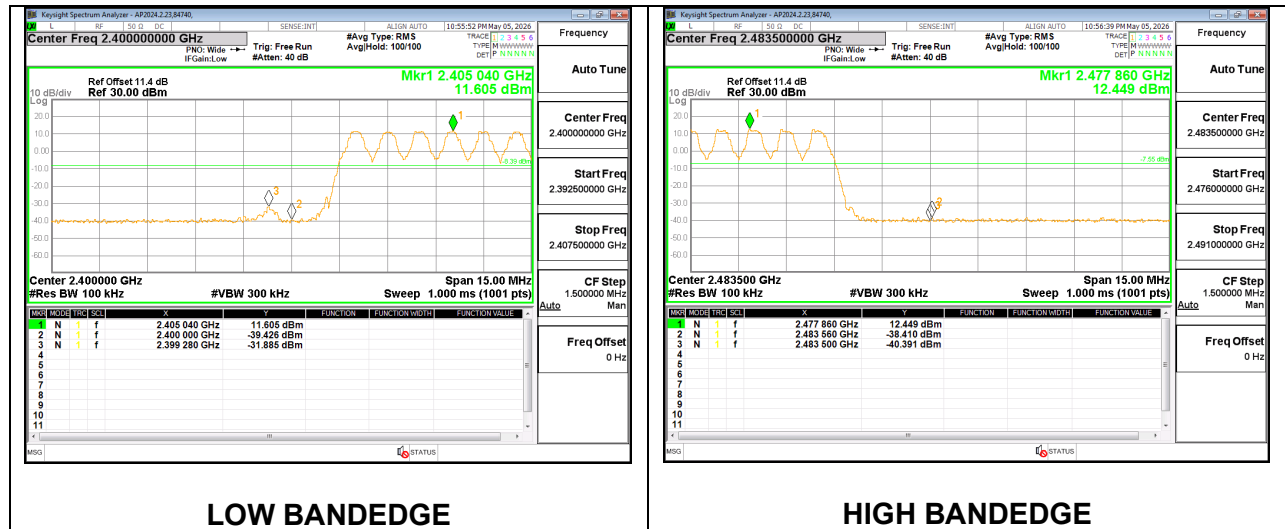


HIGH CHANNEL BANDEDGE



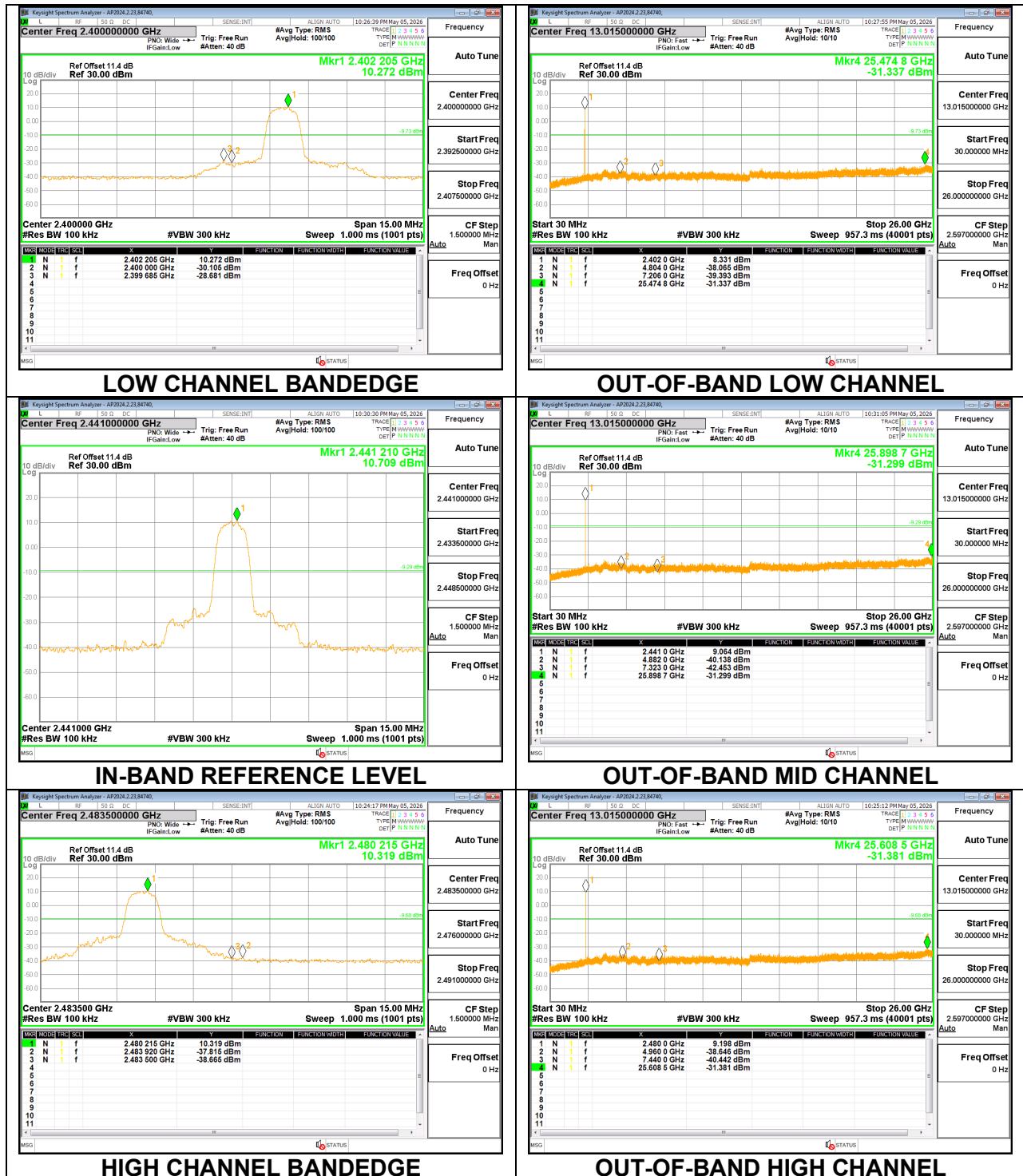
OUT-OF-BAND HIGH CHANNEL

SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON

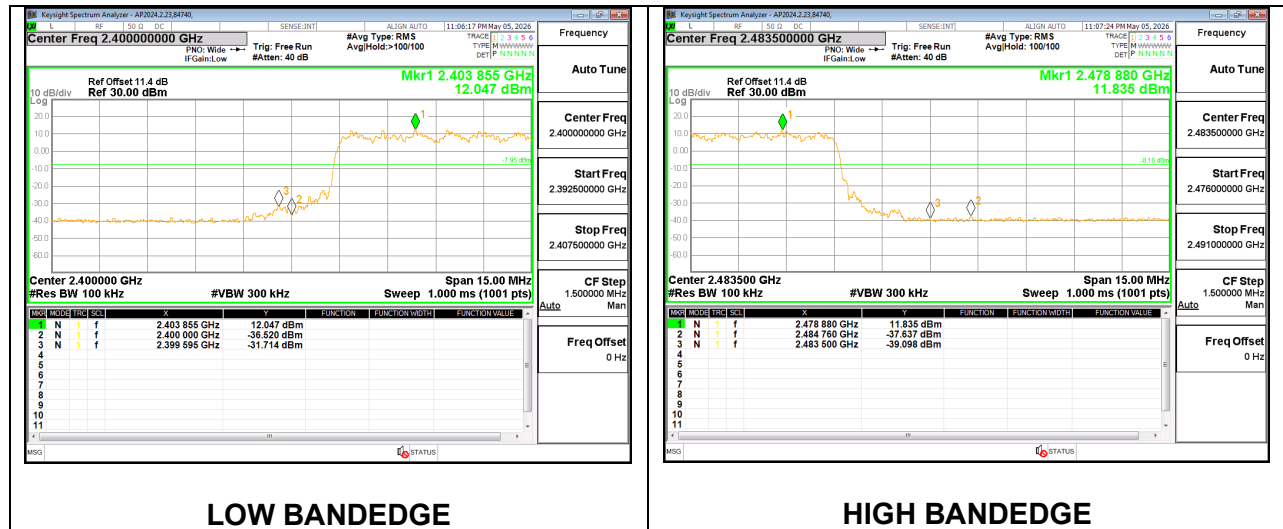


BLUETOOTH BASIC DATA RATE QPSK MODULATION

SPURIOUS EMISSIONS, NON-HOPPING

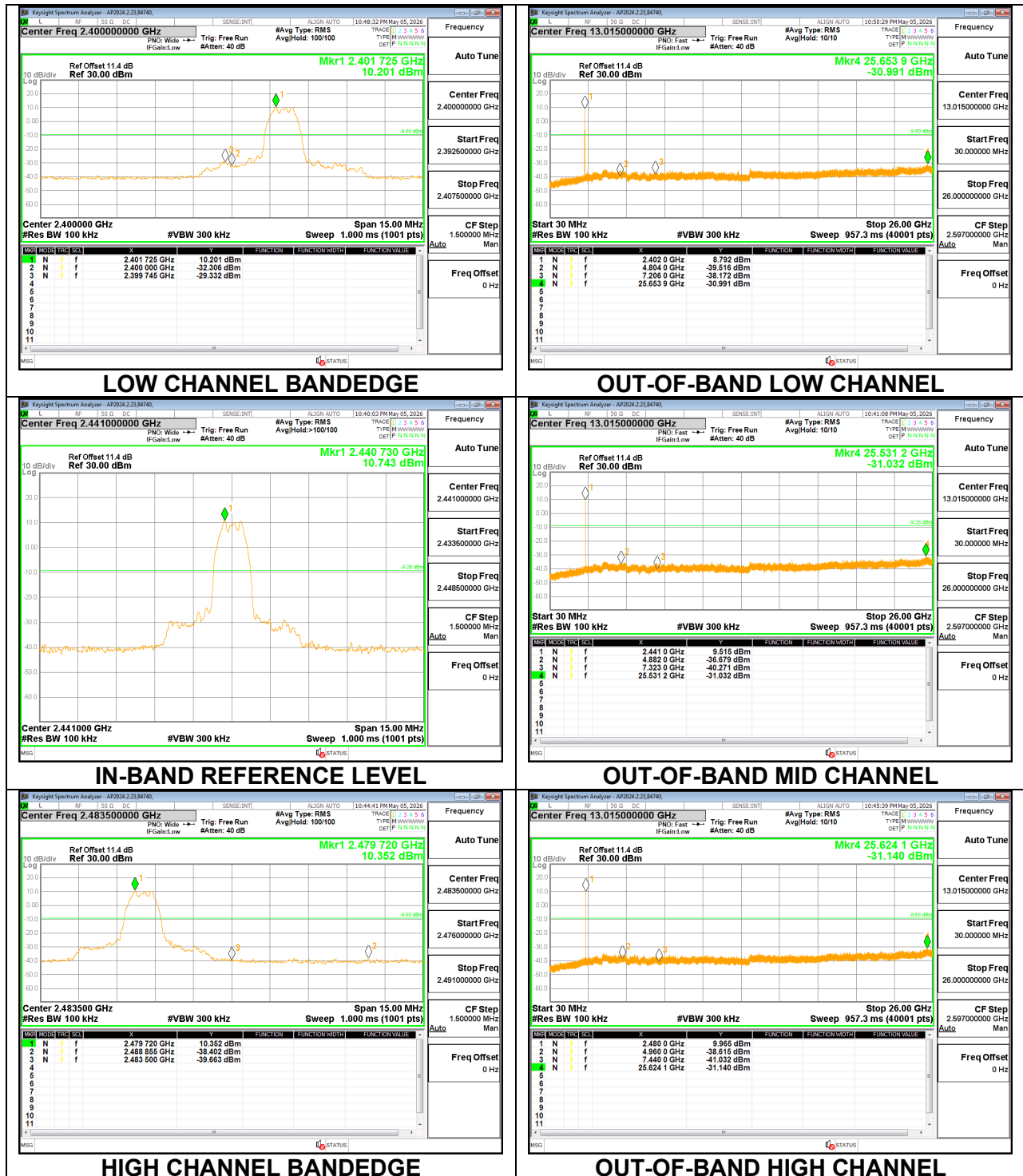


SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON

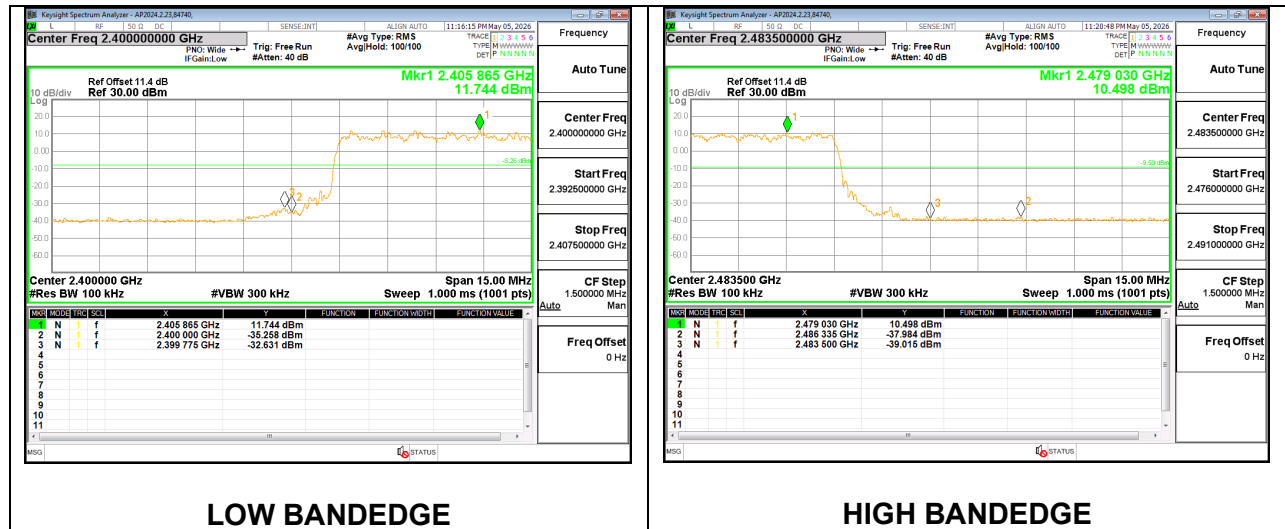


BLUETOOTH ENHANCED DATA RATE 8PSK MODULATION

SPURIOUS EMISSIONS, NON-HOPPING



SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON



10. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209

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

IC RSS-GEN Clause 8.9 and 8.10

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

TEST PROCEDURE

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

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

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

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements. Average measurements are taken using VBW=1/Ton for SISO mode.

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).

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.

KDB 558074 D01 15.247 Meas Guidance v05r02

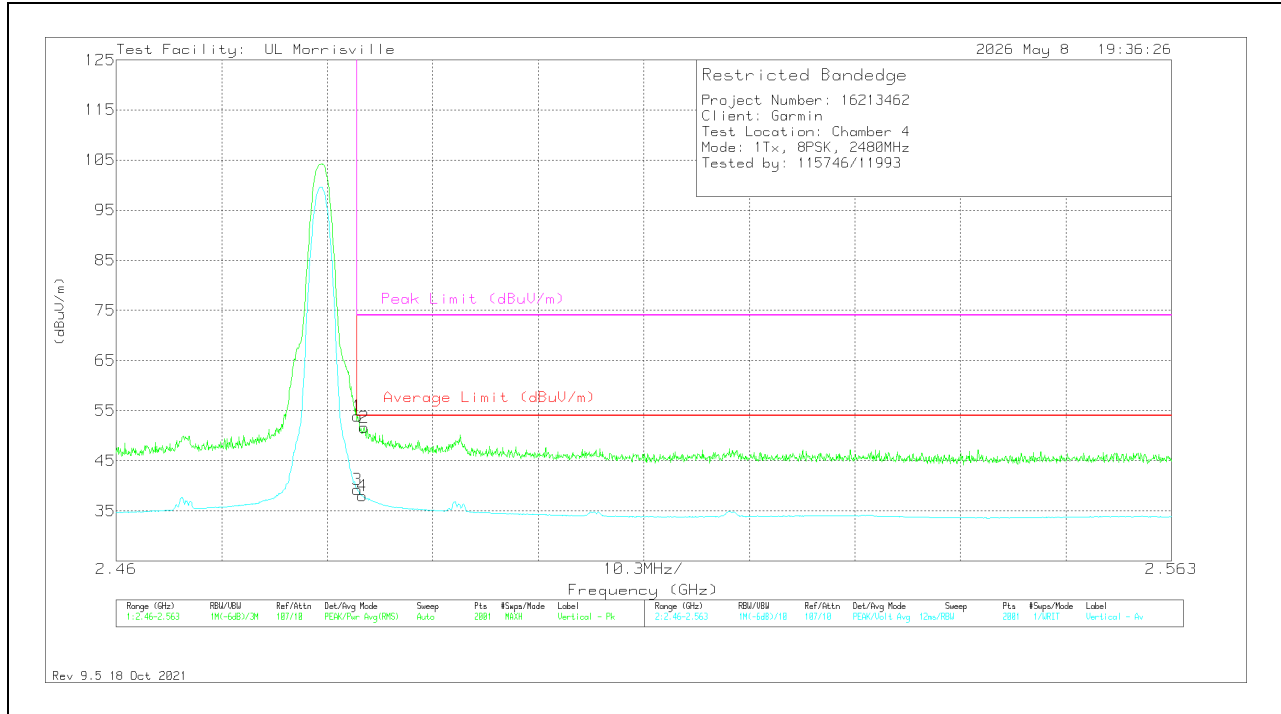
Use of a duty cycle correction factor (DCCF) is permitted for calculating average radiated field strength emission levels for an FHSS device in 15.247. This DCCF can be applied when the field strength limit (e.g., within a Government Restricted band) and the conditions specified in Section 15.35(c) can be satisfied. The average radiated field strength is calculated by subtracting the DCCF from the maximum radiated field strength level as determined through measurement. The maximum radiated field strength level represents the worst-case (maximum amplitude) RMS measurement of the emission(s) during continuous transmission (i.e., not including any time intervals during which the transmitter is off or is transmitting at a reduced power level). It is also acceptable to apply the DCCF to a measurement performed with a peak detector instead of the specified RMS power averaging detector.

Note that Section 15.35(c) specifies that the DCCF shall represent the worst case (greatest duty cycle) over any 100 msec transmission period.

10.1. TRANSMITTER ABOVE 1 GHz

10.1.1. BANDEDGE (WORST-CASE: 8PSK)

HORIZONTAL RESULT



BANDEDGE TEST DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 ACF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	43.85	Pk	32.4	-22.3	53.95	-	-	74	-20.05	70	103	V
2	* ** 2.48421	41.54	Pk	32.4	-22.3	51.64	-	-	74	-22.36	70	103	V
3	* ** 2.48354	29.19	VA1T	32.4	-22.3	39.29	54	-14.71	-	-	70	103	V
4	* ** 2.484	27.96	VA1T	32.4	-22.3	38.06	54	-15.94	-	-	70	103	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

BANDEDGE TEST DATA

Mode	Frequency (MHz)	Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 ACF (dB)	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
8PSK	2402	1	* ** 2.38996	36.81	Pk	31.9	-22.4	46.31	-	-	74	-27.69	214	113	H
		2	* ** 2.3699	37.86	Pk	31.9	-22.5	47.26	-	-	74	-26.74	214	113	H
		3	* ** 2.38996	23.26	VA1T	31.9	-22.4	32.76	54	-21.24	-	-	214	113	H
		4	* ** 2.36198	23.41	VA1T	31.9	-22.4	32.91	54	-21.09	-	-	214	113	H
		1	* ** 2.38996	38.04	Pk	31.9	-22.4	47.54	-	-	74	-26.46	70	103	V
		2	* ** 2.38093	38.68	Pk	32	-22.5	48.18	-	-	74	-25.82	70	103	V
		3	* ** 2.38996	24.31	VA1T	31.9	-22.4	33.81	54	-20.19	-	-	70	103	V
		4	* ** 2.38964	24.38	VA1T	31.9	-22.4	33.88	54	-20.12	-	-	70	103	V
	2480	1	* ** 2.48354	40.56	Pk	32.4	-22.3	50.66	-	-	74	-23.34	188	123	H
		2	* ** 2.48364	39.31	Pk	32.4	-22.3	49.41	-	-	74	-24.59	188	123	H
		3	* ** 2.48354	26.35	VA1T	32.4	-22.3	36.45	54	-17.55	-	-	188	123	H
		4	* ** 2.48421	25.38	VA1T	32.4	-22.3	35.48	54	-18.52	-	-	188	123	H
		1	* ** 2.48354	43.85	Pk	32.4	-22.3	53.95	-	-	74	-20.05	70	103	V
		2	* ** 2.48421	41.54	Pk	32.4	-22.3	51.64	-	-	74	-22.36	70	103	V
		3	* ** 2.48354	29.19	VA1T	32.4	-22.3	39.29	54	-14.71	-	-	70	103	V
		4	* ** 2.484	27.96	VA1T	32.4	-22.3	38.06	54	-15.94	-	-	70	103	V
GFSK	2402	1	* ** 2.38996	35.61	Pk	31.9	-22.4	45.11	-	-	74	-28.89	204	231	H
		2	* ** 2.3856	37.12	Pk	31.9	-22.4	46.62	-	-	74	-27.38	204	231	H
		3	* ** 2.38996	23.66	VA1T	31.9	-22.4	33.16	54	-20.84	-	-	204	231	H
		4	* ** 2.36203	23.8	VA1T	31.9	-22.4	33.3	54	-20.7	-	-	204	231	H
		1	* ** 2.38996	36.88	Pk	31.9	-22.4	46.38	-	-	74	-27.62	82	103	V
		2	* ** 2.38313	38.85	Pk	32	-22.5	48.35	-	-	74	-25.65	82	103	V
		3	* ** 2.38996	24.44	VA1T	31.9	-22.4	33.94	54	-20.06	-	-	82	103	V
		4	* ** 2.36208	24.84	VA1T	31.9	-22.4	34.34	54	-19.66	-	-	82	103	V
	2480	1	* ** 2.48354	37.37	Pk	32.4	-22.3	47.47	-	-	74	-26.53	184	337	H
		2	* ** 2.48384	38.6	Pk	32.4	-22.3	48.7	-	-	74	-25.3	184	337	H
		3	* ** 2.48354	25.62	VA1T	32.4	-22.3	35.72	54	-18.28	-	-	184	337	H
		4	* ** 2.49301	25.63	VA1T	32.4	-22.3	35.73	54	-18.27	-	-	184	337	H
		1	* ** 2.48354	38.69	Pk	32.4	-22.3	48.79	-	-	74	-25.21	245	100	V
		2	* ** 2.48457	39.25	Pk	32.4	-22.3	49.35	-	-	74	-24.65	245	100	V
		3	* ** 2.48354	26.06	VA1T	32.4	-22.3	36.16	54	-17.84	-	-	245	100	V
		4	* ** 2.48364	26.07	VA1T	32.4	-22.3	36.17	54	-17.83	-	-	245	100	V

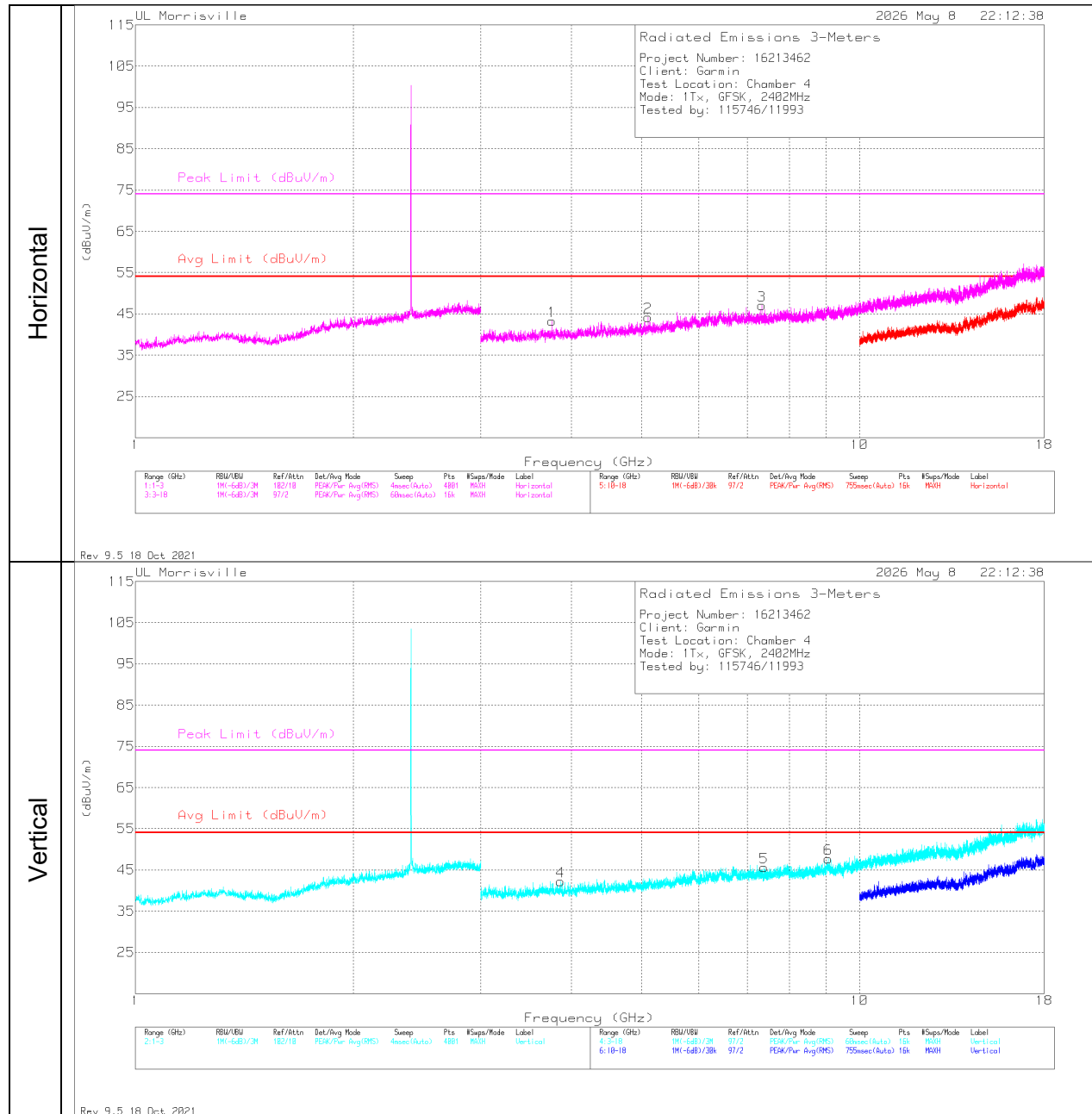
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

10.1.2. HARMONICS AND SPURIOUS (WORST-CASE: GFSK)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 ACF (dB)	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	*** 3.75938	41.64	Pk	33.2	-31.6	43.24	54	-10.76	74	-30.76	0-360	100	H
2	*** 5.10563	40.85	Pk	34.3	-31	44.15	54	-9.85	74	-29.85	0-360	100	H
3	*** 7.335	38.21	Pk	35.6	-26.8	47.01	54	-6.99	74	-26.99	0-360	100	H
4	*** 3.86625	41.37	Pk	33.1	-32.2	42.27	54	-11.73	74	-31.73	0-360	200	V
5	*** 7.38375	37.23	Pk	35.5	-27.1	45.63	54	-8.37	74	-28.37	0-360	200	V
6	*** 9.06094	34.88	Pk	36.2	-23.4	47.68	54	-6.32	74	-26.32	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

HARMONICS AND SPURIOUS TEST DATA

Mode	Frequency (MHz)	Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 ACF (dB)	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
GFSK	2402	1	*** 3.75938	41.64	Pk	33.2	-31.6	43.24	54	-10.76	74	-30.76	0-360	100	H
		2	*** 5.10563	40.85	Pk	34.3	-31	44.15	54	-9.85	74	-29.85	0-360	100	H
		3	*** 7.335	38.21	Pk	35.6	-26.8	47.01	54	-6.99	74	-26.99	0-360	100	H
		4	*** 3.86625	41.37	Pk	33.1	-32.2	42.27	54	-11.73	74	-31.73	0-360	200	V
		5	*** 7.38375	37.23	Pk	35.5	-27.1	45.63	54	-8.37	74	-28.37	0-360	200	V
		6	*** 9.06094	34.88	Pk	36.2	-23.4	47.68	54	-6.32	74	-26.32	0-360	200	V
	2441	1	*** 4.36688	40.6	Pk	33.7	-31.3	43	54	-11	74	-31	0-360	100	H
		2	*** 5.42906	39.21	Pk	34.5	-29.2	44.51	54	-9.49	74	-29.49	0-360	100	H
		3	*** 8.42063	36	Pk	35.8	-25.4	46.4	54	-7.6	74	-27.6	0-360	100	H
		4	*** 5.0925	40.34	Pk	34.3	-31	43.64	54	-10.36	74	-30.36	0-360	200	V
		5	*** 7.665	37.92	Pk	35.6	-26.6	46.92	54	-7.08	74	-27.08	0-360	200	V
		6	*** 9.17344	34.99	Pk	36.3	-24.7	46.59	54	-7.41	74	-27.41	0-360	200	V
	2480	1	*** 3.81563	41.69	Pk	33.2	-32.5	42.39	54	-11.61	74	-31.61	0-360	100	H
		2	*** 5.14125	39.68	Pk	34.3	-30.3	43.68	54	-10.32	74	-30.32	0-360	100	H
		3	*** 8.12531	36.46	Pk	35.8	-26.2	46.06	54	-7.94	74	-27.94	0-360	100	H
		4	*** 4.34156	40.45	Pk	33.7	-31.2	42.95	54	-11.05	74	-31.05	0-360	200	V
		5	*** 7.35469	37.6	Pk	35.6	-27	46.2	54	-7.8	74	-27.8	0-360	200	V
		6	*** 9.05625	33.95	Pk	36.2	-23.2	46.95	54	-7.05	74	-27.05	0-360	200	V
8PSK	2402	1	*** 5.1225	40.21	Pk	34.3	-30.1	44.41	54	-9.59	74	-29.59	0-360	100	H
		2	*** 7.56844	37.88	Pk	35.6	-26.9	46.58	54	-7.42	74	-27.42	0-360	100	H
		3	*** 9.495	35.5	Pk	36.5	-25.1	46.9	54	-7.1	74	-27.1	0-360	100	H
		4	*** 4.80375	40.22	Pk	33.8	-30.8	43.22	54	-10.78	74	-30.78	0-360	200	V
		5	*** 8.25375	36.14	Pk	35.8	-25.6	46.34	54	-7.66	74	-27.66	0-360	200	V
		6	*** 9.0675	34.7	Pk	36.2	-23.5	47.4	54	-6.6	74	-26.6	0-360	200	V
	2441	1	*** 3.88125	41.91	Pk	33	-32.2	42.71	54	-11.29	74	-31.29	0-360	100	H
		2	*** 4.81031	40.32	Pk	33.8	-30.7	43.42	54	-10.58	74	-30.58	0-360	100	H
		3	*** 7.51594	37.35	Pk	35.7	-27.1	45.95	54	-8.05	74	-28.05	0-360	100	H
		4	*** 4.57031	40.48	Pk	33.9	-30.9	43.48	54	-10.52	74	-30.52	0-360	200	V
		5	*** 8.14031	37.41	Pk	35.8	-26	47.21	54	-6.79	74	-26.79	0-360	200	V
		6	*** 9.06844	34.94	Pk	36.2	-23.5	47.64	54	-6.36	74	-26.36	0-360	200	V
	2480	1	*** 4.55344	40.74	Pk	33.9	-30.9	43.74	54	-10.26	74	-30.26	0-360	100	H
		2	*** 8.17781	36.13	Pk	35.8	-26	45.93	54	-8.07	74	-28.07	0-360	100	H
		3	*** 9.36844	35.03	Pk	36.4	-23.9	47.53	54	-6.47	74	-26.47	0-360	100	H
		4	*** 4.95938	39.78	Pk	34	-30.5	43.28	54	-10.72	74	-30.72	0-360	200	V
		5	*** 8.26969	36.33	Pk	35.8	-25.6	46.53	54	-7.47	74	-27.47	0-360	200	V
		6	*** 9.39281	34.59	Pk	36.4	-24.3	46.69	54	-7.31	74	-27.31	0-360	200	V

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

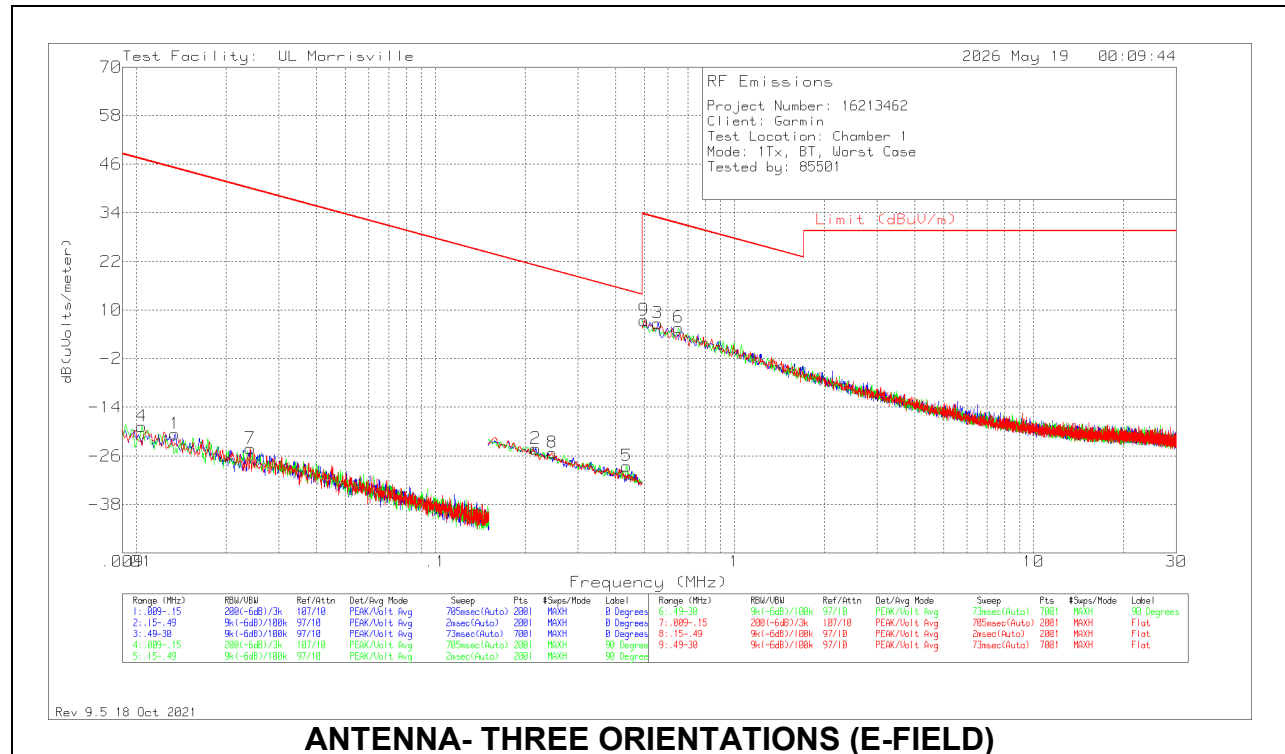
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

10.1. WORST CASE SPURIOUS BELOW 30MHZ (WORST-CASE: GFSK)

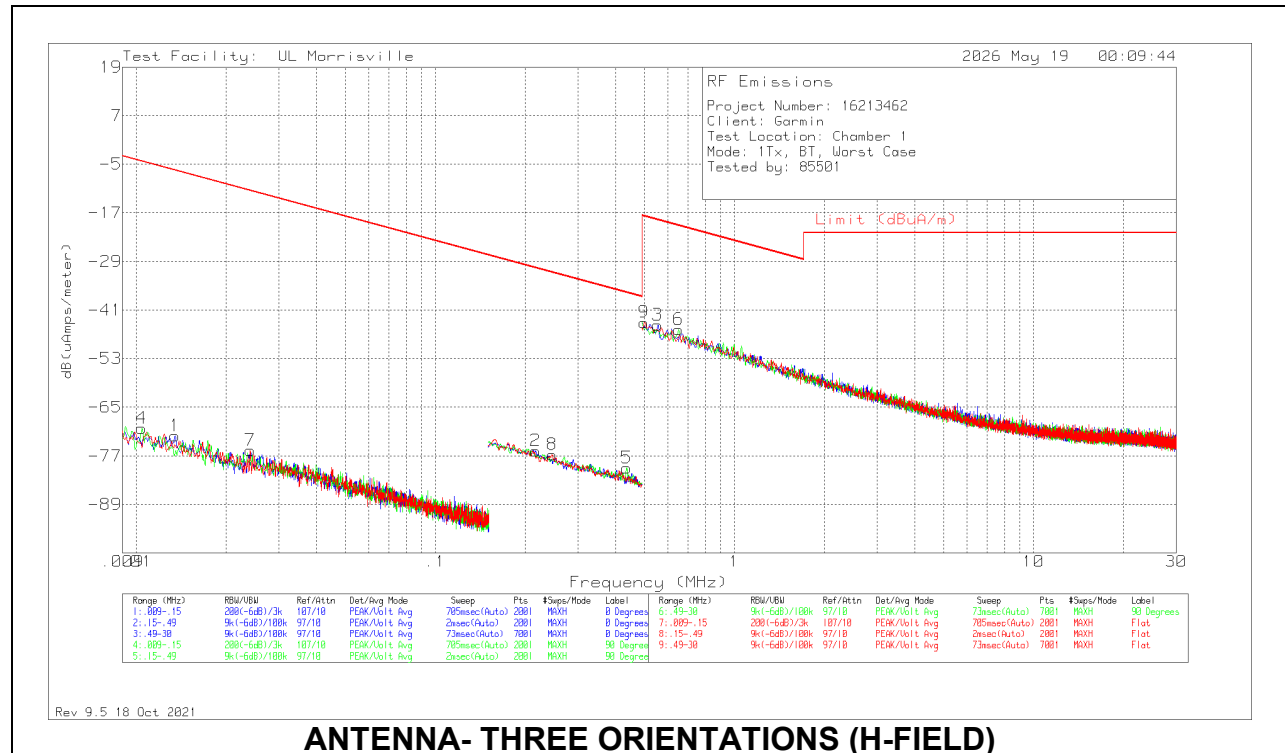
Note: All measurements were made at a test distance of 3 m. The measured data was extrapolated from the test distance (3m) to the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz – 30 MHz) to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance 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	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
4	.01042	42.48	Pk	18.7	.1	-80	-18.72	47.25	67.25	-65.97	0-360	90 degs
1	.01347	42.13	Pk	17.2	.1	-80	-20.57	45.02	65.02	-65.59	0-360	0 degs
7	.02405	42.14	Pk	13.6	.1	-80	-24.16	39.98	59.98	-64.14	0-360	Flat
2	.21622	44.74	Pk	10.9	.1	-80	-24.26	20.91	40.91	-45.17	0-360	0 degs
8	.24563	43.78	Pk	10.9	.1	-80	-25.22	19.80	39.80	-45.02	0-360	Flat
5	.43645	40.40	Pk	11	.1	-80	-28.5	14.81	34.81	-43.31	0-360	90 degs
9	.49843	36.34	Pk	11	.1	-40	7.44	33.65	-	-26.21	0-360	Flat
3	.55324	35.68	Pk	11	.1	-40	6.78	32.75	-	-25.97	0-360	0 degs
6	.65021	34.59	Pk	11	.1	-40	5.69	31.34	-	-25.65	0-360	90 degs

Pk - Peak detector



ANTENNA- THREE ORIENTATIONS (H-FIELD)

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	ANT (dB/m)	Gain/Loss (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uAmps/meter)	Limit (dBuA/m)	PK Limit (dBuA/m)	Margin (dB)	Azimuth (Degs)	Loop Angle
4	.01042	42.48	Pk	-32.8	.1	-80	-70.22	-4.25	15.75	-65.97	0-360	90 degs
1	.01347	42.13	Pk	-34.3	.1	-80	-72.07	-6.48	14.52	-65.59	0-360	0 degs
7	.02405	42.14	Pk	-37.9	.1	-80	-75.66	-11.52	8.48	-64.14	0-360	Flat
2	.21622	44.74	Pk	-40.6	.1	-80	-75.76	-30.59	-10.59	-45.17	0-360	0 degs
8	.24563	43.78	Pk	-40.6	.1	-80	-76.72	-31.7	-11.7	-45.02	0-360	Flat
5	.43645	40.4	Pk	-40.5	.1	-80	-80	-36.69	-16.69	-43.31	0-360	90 degs
9	.49843	36.34	Pk	-40.5	.1	-40	-44.06	-17.85	-	-26.21	0-360	Flat
3	.55324	35.68	Pk	-40.5	.1	-40	-44.72	-18.75	-	-25.97	0-360	0 degs
6	.65021	34.59	Pk	-40.5	.1	-40	-45.81	-20.16	-	-25.65	0-360	90 degs

Pk - Peak detector

Horizontal

Test Facility: UL Morrisville

Radiated Emissions - 3 Meters

Project Number: 16213462
 Client: Garmin
 Test Location: Chamber 2
 Mode: ITx, BT, Worst Case
 Tested by: 85501

Y-axis: CdBUU/m (30 to 95)

X-axis: Frequency (MHz) (30 to 1000)

Red Line: OPR Limit (CdBUU/m)

Blue Trace: Radiated Emissions

Points marked: 1, 2, 3

Range (MHz)	RBU/UBW	Ref/Attn	Det. Avg Mode	Sweep	Pls	#Seps/Mode	Label
1:30-1000	120k(-6dB)/1M	97/10	PERK -	14sec(Auto)	10k	NR01	Horizontal

Rev 9.5 18 Jan 2022

Vertical

Test Facility: UL Morrisville

Radiated Emissions - 3 Meters

Project Number: 16213462
 Client: Garmin
 Test Location: Chamber 2
 Mode: ITx, BT, Worst Case
 Tested by: 85501

Y-axis: CdBUU/m (30 to 95)

X-axis: Frequency (MHz) (30 to 1000)

Red Line: OPR Limit (CdBUU/m)

Green Trace: Radiated Emissions

Points marked: 4, 5, 6, 7

Range (MHz)	RBU/UBW	Ref/Attn	Det. Avg Mode	Sweep	Pls	#Seps/Mode	Label
2:30-1000	120k(-6dB)/1M	97/10	PERK -	14sec(Auto)	10k	NR01	Vertical

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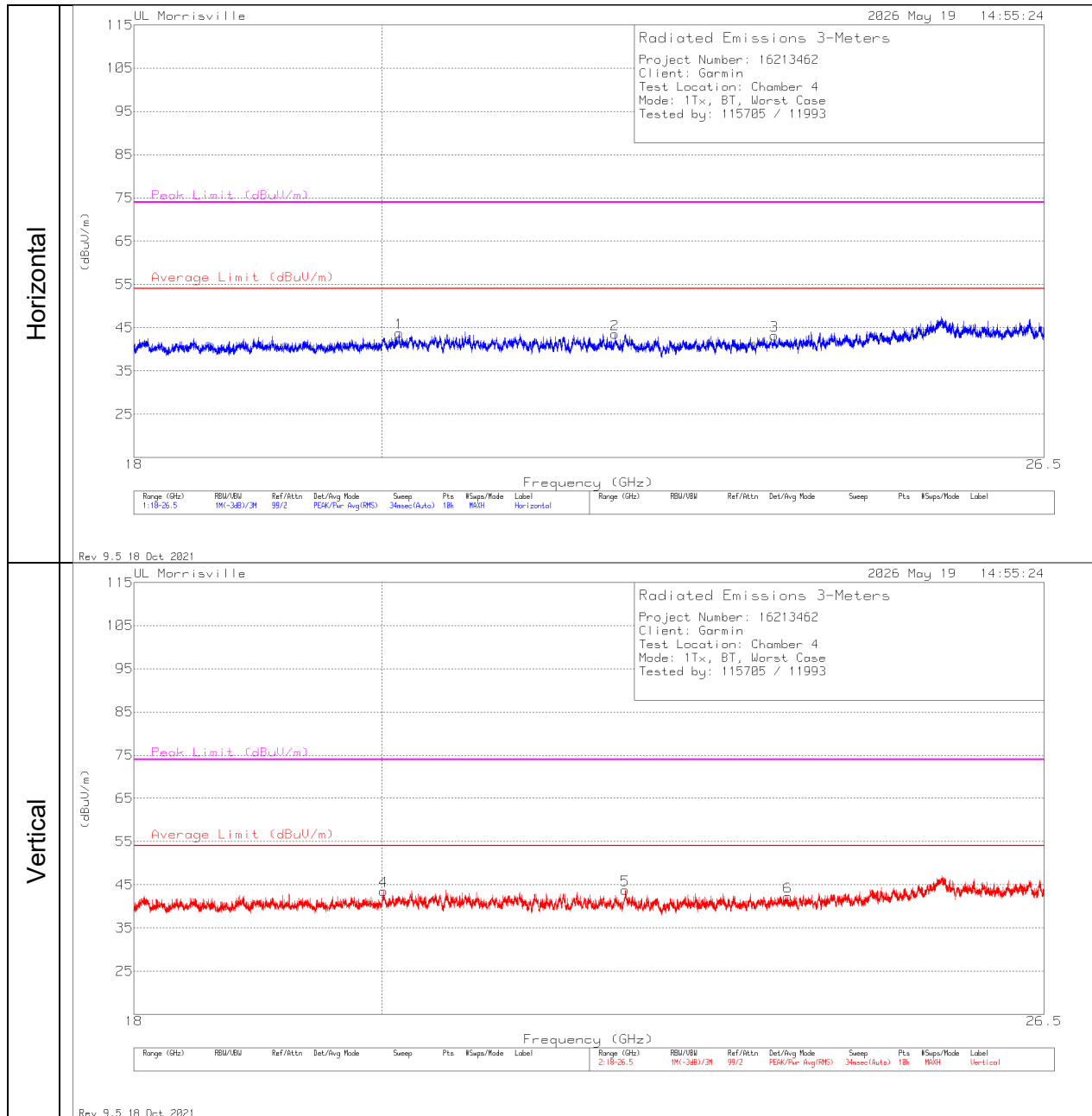
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	159203 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 38.148	27.67	Pk	21.4	-31.6	17.47	40	-22.53	0-360	299	H
2	* ** 125.254	28.87	Pk	20	-30.9	17.97	43.52	-25.55	0-360	199	H
3	* ** 276.865	29.6	Pk	19.4	-29.6	19.4	46.02	-26.62	0-360	101	H
6	** 74.62	44.73	Pk	14.1	-31.1	27.73	40	-12.27	0-360	101	V
7	* ** 163.569	33.7	Pk	18.1	-30	21.8	43.52	-21.72	0-360	101	V
4	38.342	37.39	Pk	21.2	-31.5	27.09	40	-12.91	0-360	101	V
5	65.696	49.24	Pk	14.1	-31	32.34	40	-7.66	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

10.3. WORST CASE SPURIOUS BELOW 18–26 GHz (WORST-CASE: GFSK)



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	204704 ACF (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	* ** 20.14646	48.94	Pk	33.3	-38.5	43.74	54	-10.26	74	-30.26	0-360	100	H
2	* ** 22.08296	48.48	Pk	33.8	-38.8	43.48	54	-10.52	74	-30.52	0-360	100	H
3	* ** 23.62841	47.16	Pk	34.3	-38.3	43.16	54	-10.84	74	-30.84	0-360	100	H
4	* ** 20.0147	48.67	Pk	33.2	-38.3	43.57	54	-10.43	74	-30.43	0-360	300	V
5	* ** 22.17902	47.56	Pk	33.9	-37.7	43.76	54	-10.24	74	-30.24	0-360	300	V
6	* ** 23.76783	46.22	Pk	34.3	-38.3	42.22	54	-11.78	74	-31.78	0-360	300	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

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.

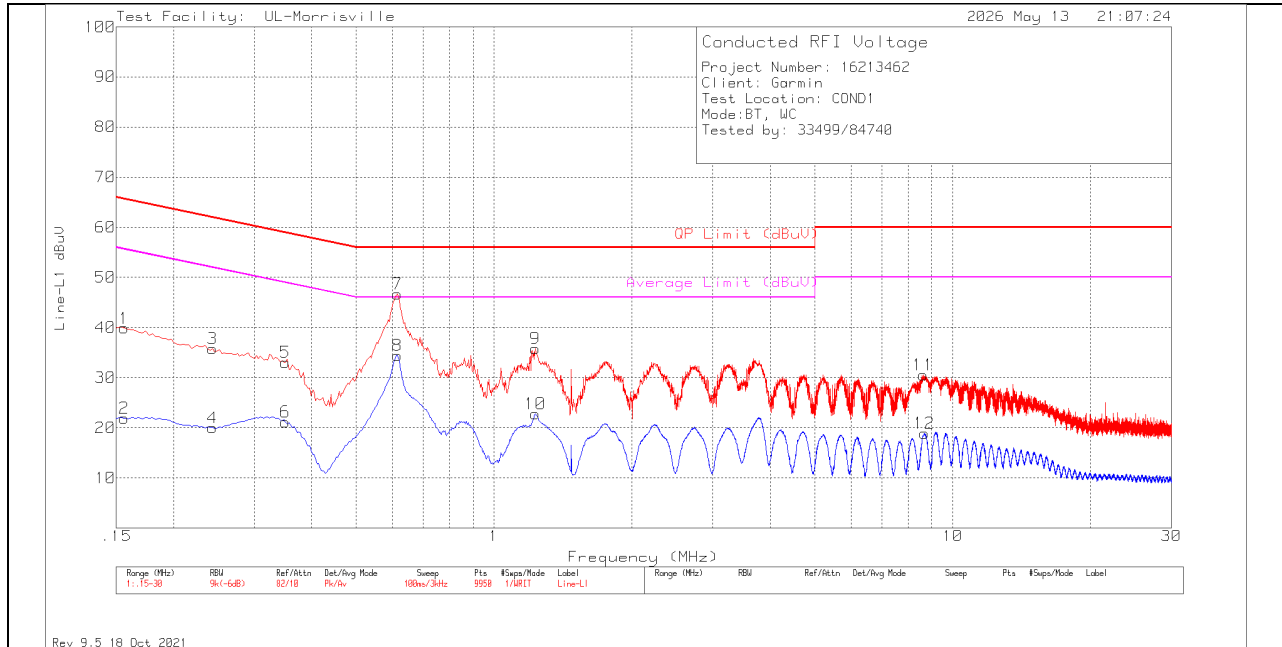
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

11.1. AC POWER LINE

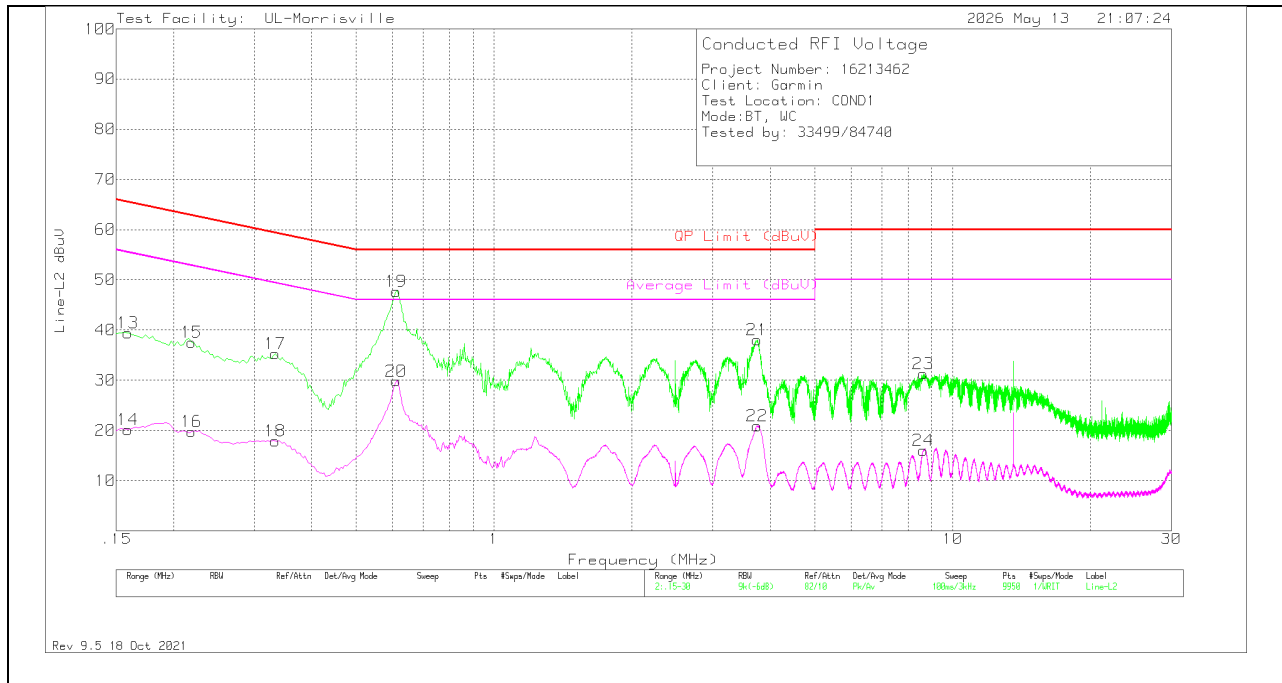
LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VDF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
1	.156	29.86	Pk	.2	9.8	39.86	65.67	-25.81	-	-
2	.156	11.9	Av	.2	9.8	21.9	-	-	55.67	-33.77
3	.243	25.86	Pk	.1	9.8	35.76	61.99	-26.23	-	-
4	.243	10.06	Av	.1	9.8	19.96	-	-	51.99	-32.03
5	.351	23.15	Pk	.1	9.8	33.05	58.94	-25.89	-	-
6	.351	11.28	Av	.1	9.8	21.18	-	-	48.94	-27.76
7	.615	36.86	Pk	0	9.8	46.66	56	-9.34	-	-
8	.615	24.6	Av	0	9.8	34.4	-	-	46	-11.6
9	1.23	25.95	Pk	0	9.8	35.75	56	-20.25	-	-
10	1.23	12.95	Av	0	9.8	22.75	-	-	46	-23.25
11	8.637	20.41	Pk	.1	10	30.51	60	-29.49	-	-
12	8.67	8.78	Av	.1	10	18.88	-	-	50	-31.12

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	.159	29.4	Pk	.2	9.8	39.4	65.52	-26.12	-	-
14	.159	10.15	Av	.2	9.8	20.15	-	-	55.52	-35.37
15	.219	27.64	Pk	.1	9.8	37.54	62.86	-25.32	-	-
16	.219	9.84	Av	.1	9.8	19.74	-	-	52.86	-33.12
17	.333	25.4	Pk	.1	9.8	35.3	59.38	-24.08	-	-
18	.333	8.04	Av	.1	9.8	17.94	-	-	49.38	-31.44
19	.612	37.84	Pk	0	9.8	47.64	56	-8.36	-	-
20	.612	20.04	Av	0	9.8	29.84	-	-	46	-16.16
21	3.75	28.17	Pk	0	9.9	38.07	56	-17.93	-	-
22	3.75	10.99	Av	0	9.9	20.89	-	-	46	-25.11
23	8.628	21.18	Pk	.1	10	31.28	60	-28.72	-	-
24	8.634	5.89	Av	.1	10	15.99	-	-	50	-34.01

Pk - Peak detector

Av - Average detection

12. SETUP PHOTOS

Please refer to R16213462-EP2 for setup photos

END OF TEST REPORT