

TEST REPORT

Report Number: R15560124-E1

Applicant : Garmin International Inc
1200 East 151st Street
Olathe, KS 66062-3462, USA

Model : A04626

FCC ID : IPH-04626

IC : 1792A-04626

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:

2025-04-11

Prepared by:

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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
1	2025-03-03	Initial Issue	Noah Bennett
2	2025-03-25	Removed Power settings from section 6.5.	Noah Bennett
3	2025-04-04	Updated ANSI references and added new 99% band width plots	Chandler Stanley
4	2025-04-11	Removed redundant information	Chandler Stanley

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Garmin International Inc
1200 East 151st Street
Olathe, KS 66062-3462, USA

EUT DESCRIPTION: Extremity Worn Digital Transceiver

MODEL: A04626

SERIAL NUMBER: 8P1000047, 8NW000007, 8NY000127

SAMPLE RECEIPT DATE: 2025-01-02 & 2025-01-16

DATE TESTED: 2025-01-16 THRU 2025-04-04

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	
ISED RSS-247 Issue 3	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.

Approved & Released
For UL LLC By:

Prepared By:



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Project Engineer
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UL LLC

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Engineer Project Associate
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 information provided by the customer:

1. EUT supported channels, modes, data-rates, and power settings. (Section 6.1; 6.5)
2. Antenna Gain and Type. (Section 6.3)
3. Firmware and Hardware Version of EUT. (Section 6.4)

FCC Clause	ISED Clause	Requirement	Result	Comment
See Comment		Duty Cycle	Reporting purposes only	ANSI C63.10 Section 11.6.
-	RSS-GEN 6.7	99% OBW	Reporting purposes only	ANSI C63.10 Section 6.9.3.
15.247 (a) (2)	RSS-247 5.2 (a)	6dB BW	Compliant.	None.
15.247 (b) (3)	RSS-247 5.4 (d)	Output Power	Compliant.	None.
See Comment		Average power	Reporting purposes only	Per ANSI C63.10, Section 11.9.2.3.2.
15.247 (e)	RSS-247 5.2 (b)	PSD	Compliant.	None.
15.247 (d)	RSS-247 5.5	Conducted Spurious Emissions	Compliant.	None.
15.209, 15.205	RSS-GEN 8.9, 8.10	Radiated Emissions	Compliant.	None.
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions	N/A.	EUT is Battery powered only.

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,
- KDB 558074 D01 15.247 Meas Guidance v05,
- 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
<input checked="" type="checkbox"/>	Building 2800 Suite Perimeter Park Dr. Suite B Morrisville, NC 27560, U.S.A	US0067	27265	825374

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	ULab
Radio Frequency (Spectrum Analyzer)	141.16 Hz
Occupied Bandwidth	1.22%
Power Spectral Density	2.47 dB
RF Power Measurement Direct Method Using Power Meter	1.3 dB (PK) / 0.45 dB (AV)
Unwanted Emissions, Conducted	1.94 dB
Worst Case Radiated Disturbance, 9kHz to 40 GHz	6.01 dB
Time Domain Measurements	3.39%
Temperature	0.57°C
Humidity	3.39%
DC Supply Voltages	0.57%

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)

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

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is an Extremity Worn Digital Transceiver.

The EUT supports the following wireless technologies and modes of operation:

Wireless technologies	Frequency Band(s)	Operating mode(s)	Additional Config
Bluetooth	2.4 GHz	LE (125Kbps & 1Mbps)	-

Notes:

- 1) The EUT operated in a 1x1 SISO mode.

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)
1Tx			
2402 - 2480	BLE 125Kbps	8.68	7.38
2402 - 2480	BLE 1Mbps	8.64	7.31

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Designation in Documentation	Frequency Range (MHz)	Maximum 3D Gain (dBi)
1	A04626-A1 (Inverted-F)	2402 – 2480	-2.5

6.4. SOFTWARE AND FIRMWARE

EUT FW Version: V1.2
 EUT HW Version: V05
 EUT Control SW Version: dtm_tool_0.1.1.exe

6.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 1GHz, and above 18GHz were performed with the EUT set to transmit at the channel with highest PSD as worst-case scenario.

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

The client has confirmed that the EUT is a battery powered only device (CR2032) and cannot be recharged. Therefore, AC Mains testing was not performed.

The following modes were tested as worst-case for Antenna Port, and Radiated Emissions.

Technology	Test Type	Mode/Data-Rate	Channel
BLE	Radiated Emissions	125Kbps ¹	2402 2440 ² 2480
	Antenna Port Conducted	125Kbps & 1Mbps	2402 2440 2480

Notes:

- 1) For Radiated Emissions, 125Kbps was tested as worst-case since both data-rates have the same output power, and 125Kbps has the highest measured PSD.
- 2) 2440MHz was not tested for band edge.

6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Lenovo	Lenovo T14 Gen3	PF4FKSQT	N/A
Laptop DC PSU	Lenovo	ADLX65YLC2D	SA10R16873	N/A
Programming board	Garmin	Ver 1	105-00829-12	N/A

I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Ribbon	1	Ribbon	Unshielded	<1m	EUT to programming board.
2	USB	1	USB A	shielded	<3m	Laptop to programming board
3	USB-C	2	USB-C	Shielded	<3m	Connects Support laptop to AC Mains.

TEST SETUP

The EUT was programmed via support laptop to transmit at max power for the entire test(s). The support laptop was left connected to the EUT for testing.

SETUP DIAGRAMS

Please refer to R15560124-EP1 for setup diagrams

7. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

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				
89509	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2023-05-23	2025-05-23
	Gain-Loss Chains				
207640	Gain-loss string: 1-18GHz	Various	Various	2024-05-22	2025-05-22
	Receiver & Software				
197955	Spectrum Analyzer	Rohde & Schwarz	ESW44	2024-04-16	2025-04-16
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 - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 1)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
0.009-30MHz					
135144	Active Loop Antenna	ETS-Lindgren	6502	2024-10-02	2025-10-02
30-1000 MHz					
90629	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2024-01-30	2026-01-30
18-40 GHz					
204704	Horn Antenna, 18-26.5GHz	Com-Power	AH-826	2023-07-20	2025-07-20
Gain-Loss Chains					
91974	Gain-loss string: 0.009-30MHz	Various	Various	2024-05-08	2025-05-08
91976	Gain-loss string: 25-1000MHz	Various	Various	2024-05-08	2025-05-08
135999	Gain-loss string: 18-40GHz	Various	Various	2024-05-08	2025-05-08
Receiver & Software					
206496	Spectrum Analyzer	Rohde & Schwarz	ESW44	2024-08-29	2025-08-29
81018	Spectrum Analyzer	Agilent	E4446A	2024-07-31	2025-07-31
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Additional Equipment used					
241205	Environmental Meter	Fisher Scientific	15-077-963	2023-09-05	2025-09-05

Wireless Antenna Port Meas Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
Attenuators					
226563	SMA Coaxial 10dB Attenuator 25MHz-18GHz	CentricRF	C18S2-10	2024-02-29	2025-02-28
Cables					
CBL010	SMA Cable	Sucoflex	104PEA	2024-03-01	2025-03-01
Conducted Room 1					
90416	Spectrum Analyzer	Keysight Technologies	N9030A	2024-09-23	2025-09-23
135122	RF Power Meter	Keysight Technologies	N1911A	2024-08-02	2025-08-02
135125	Peak and Avg Power Sensor, 50MHz to 18GHz	Keysight Technologies	N1921A	2024-08-16	2025-08-16
179892	Environmental Meter	Fisher Scientific	15-077-963	2024-08-12	2025-08-12
76022	DC Regulated Power Supply	CircuitSpecialists.Com	CSI3005X5	NA	NA
SOFTEMI	Antenna Port Software	UL	Version 2024.2.23	NA	NA
ETSI Power Software	EMPower ETSI Burst Measurement System	ETS-Lindgren	Version 1.0.3.18	NA	NA
Power Software	Boonton Power Analyzer	Boonton	Version 3.0.13.0	NA	NA

8. ANTENNA PORT TEST RESULTS

8.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

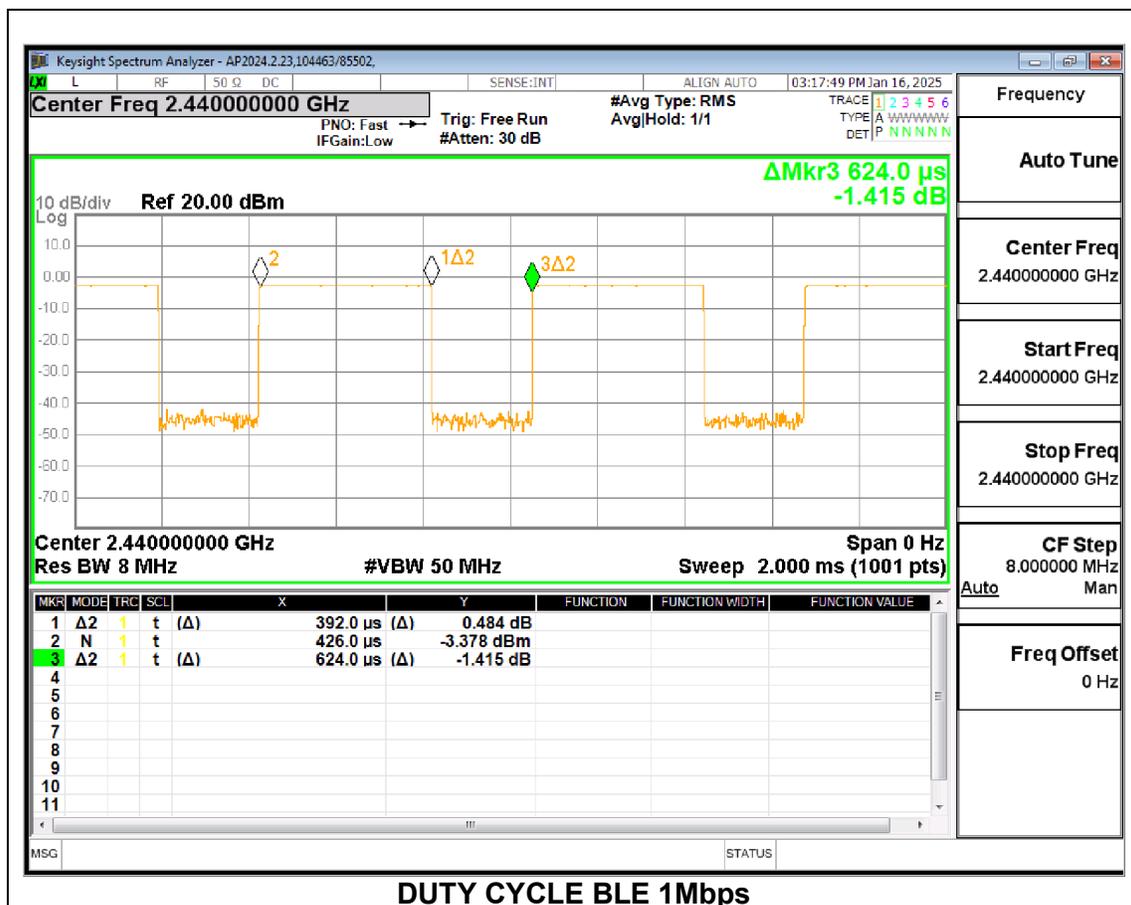
PROCEDURE

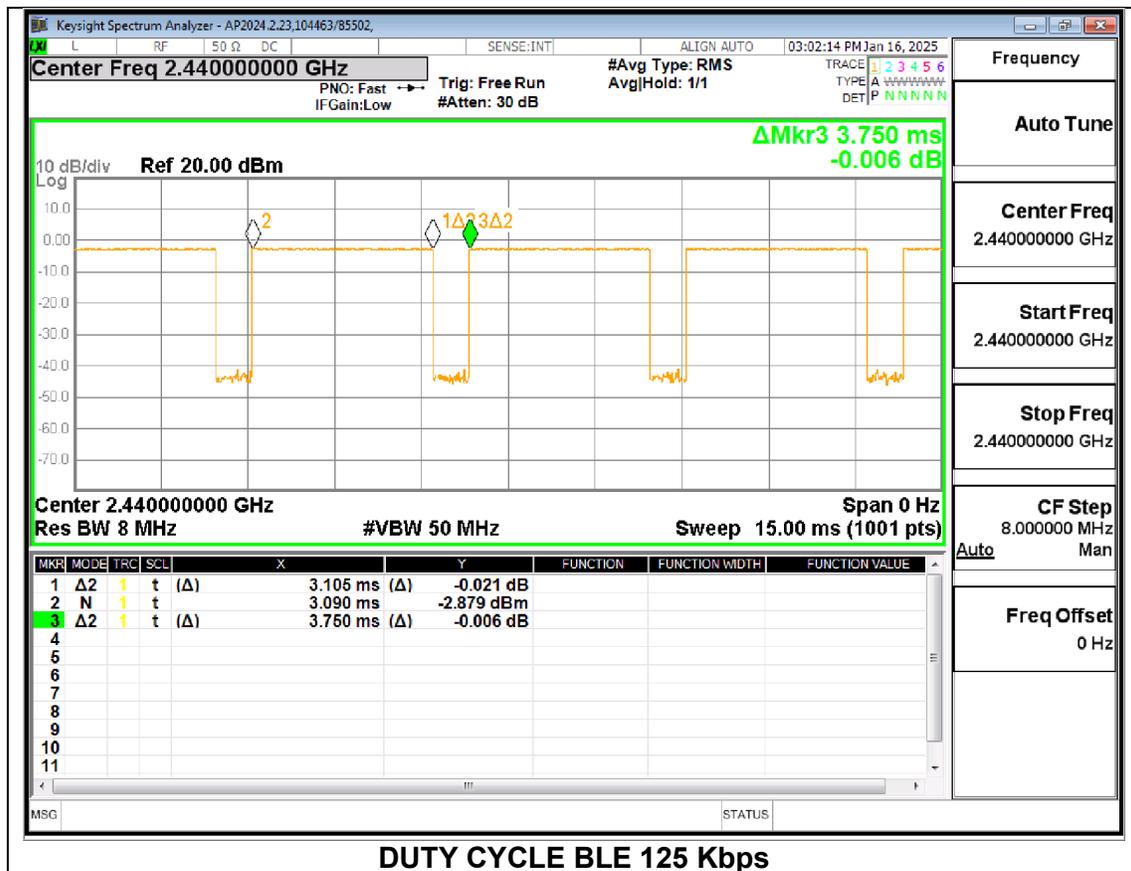
KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	20 Log Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
2.4GHz Band						
BLE 125Kbps	3.105	3.750	0.828	82.80%	1.64	0.322
BLE 1Mbps	0.392	0.624	0.628	62.82	4.04	2.551

DUTY CYCLE PLOTS





8.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

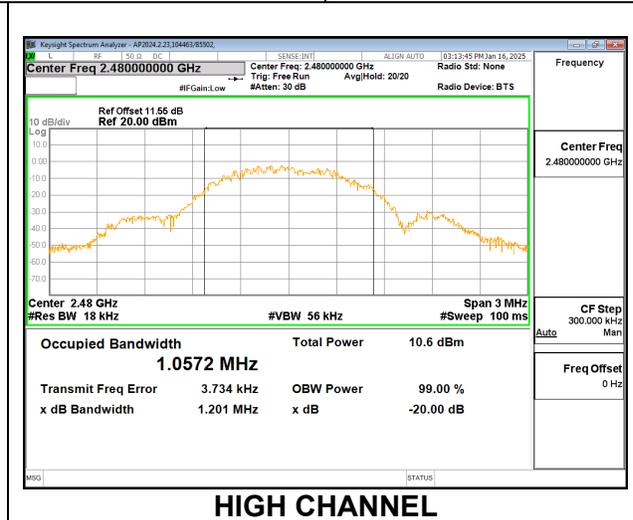
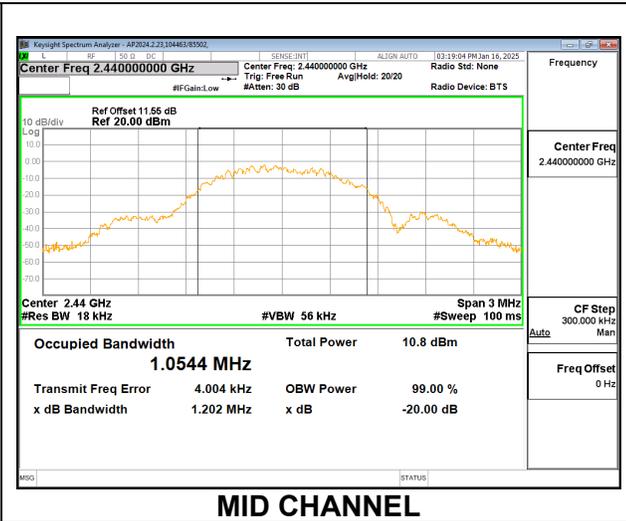
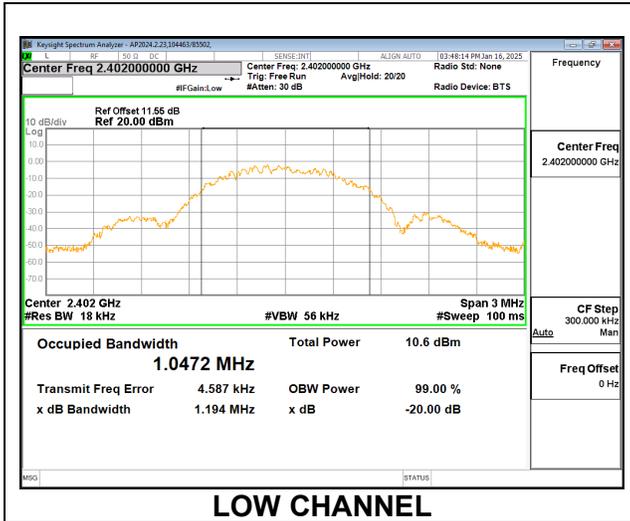
MEASUREMENT METHOD

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

RESULTS

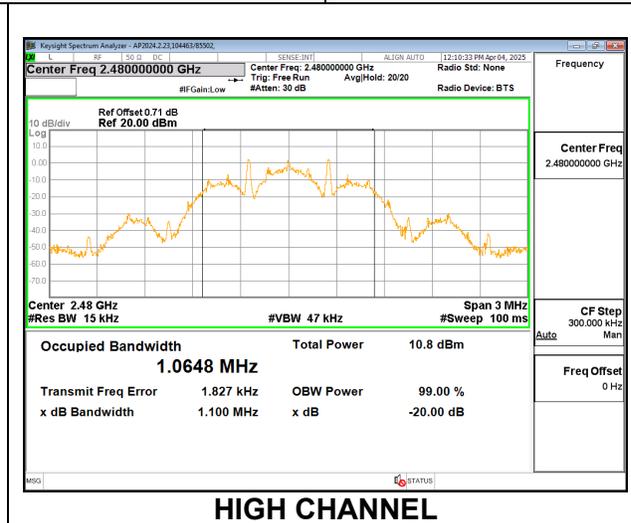
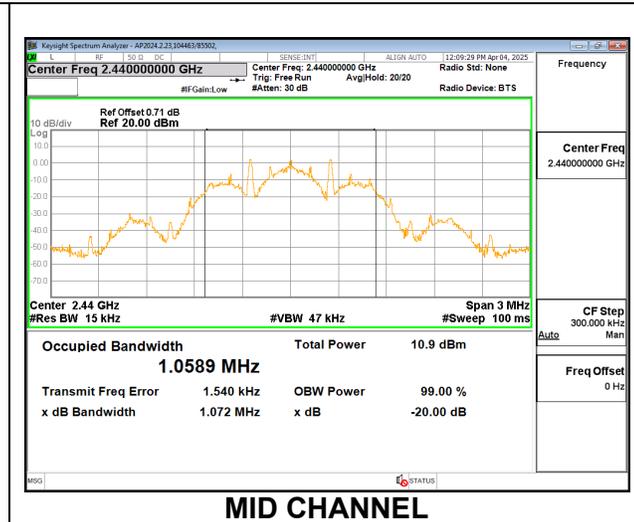
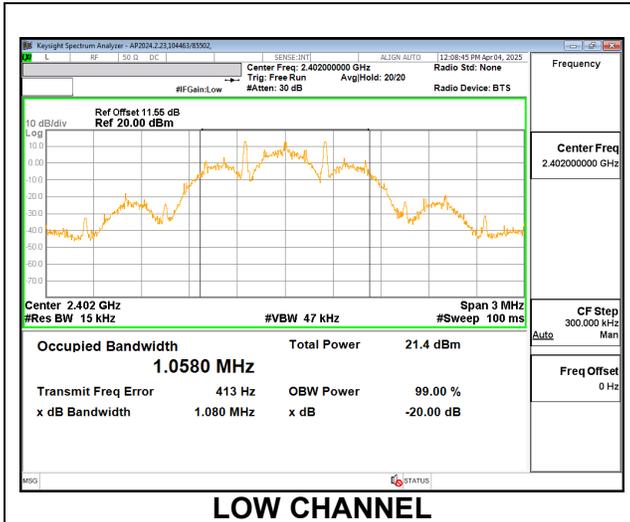
8.2.1. BLE (1Mbps)

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.0472
Middle	2440	1.0544
High	2480	1.0572



8.2.2. BLE (125Kbps)

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.0580
Middle	2440	1.0589
High	2480	1.0648



8.3. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)
RSS-247 5.2 (a)

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

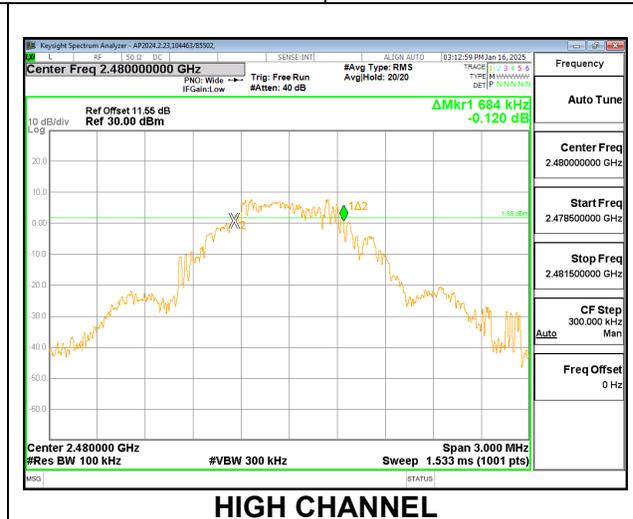
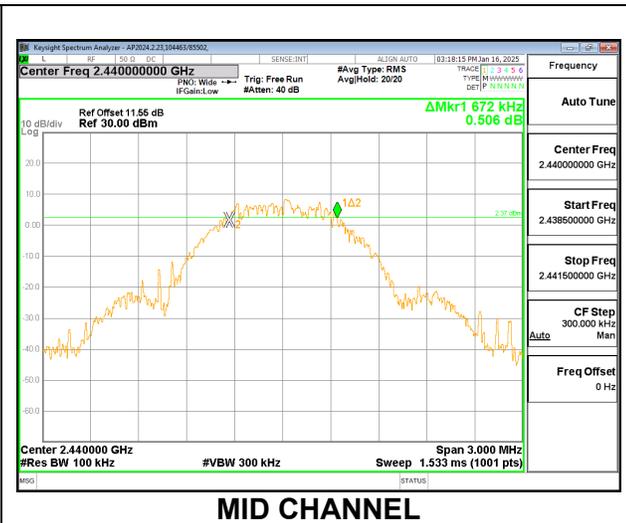
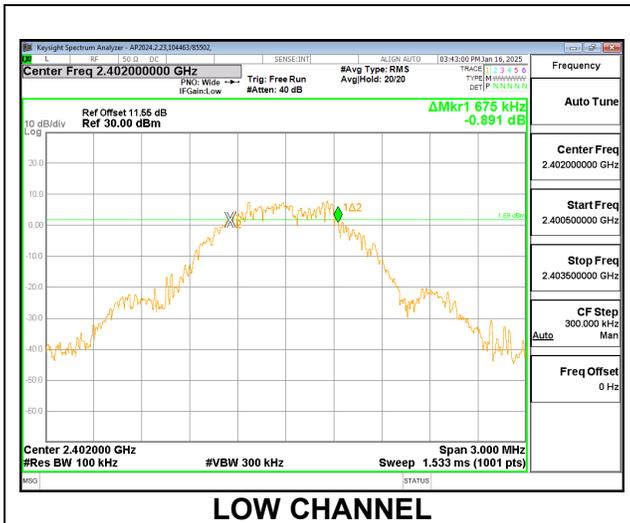
MEASUREMENT METHOD

6 dB BW: ANSI C63.10 Subclause -11.8.2

RESULTS

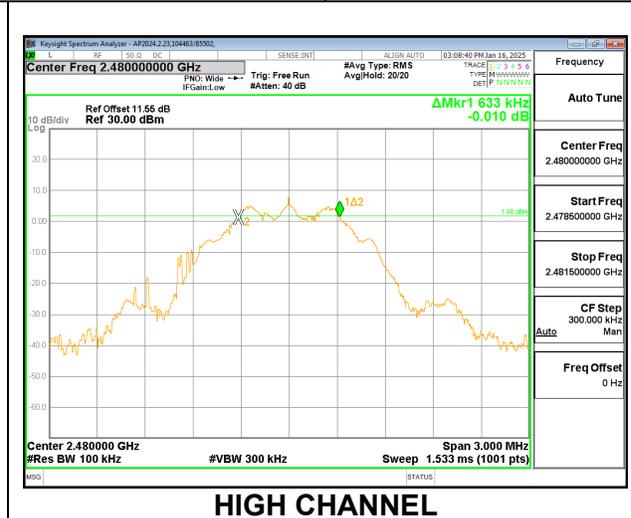
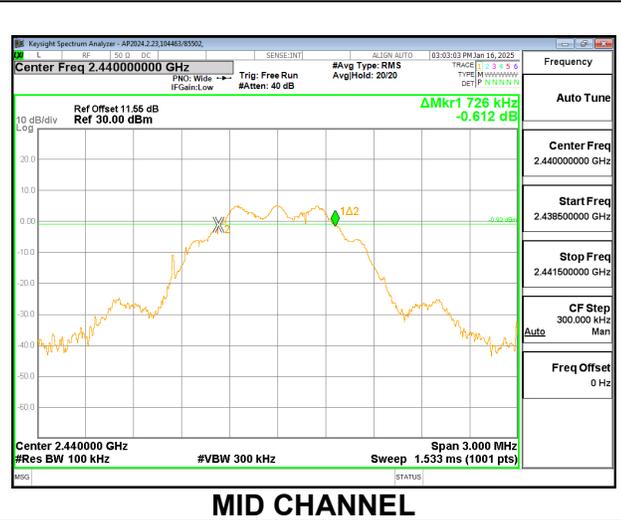
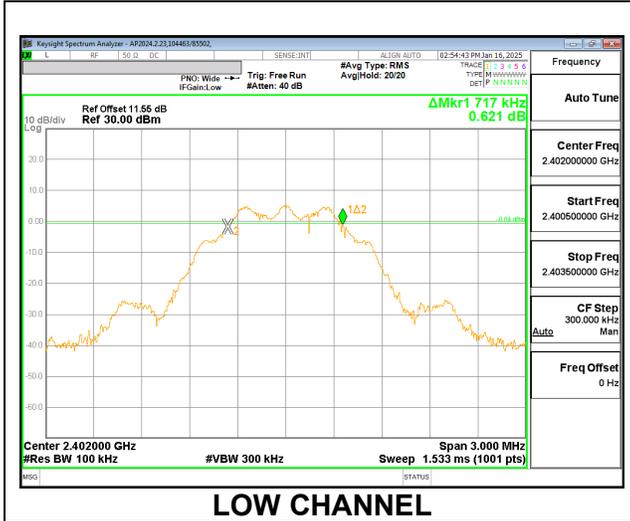
8.3.1. BLE (1Mbps)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2402	0.675	0.5
Middle	2440	0.672	0.5
High	2480	0.684	0.5



8.3.2. BLE (125Kbps)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2402	0.717	0.5
Middle	2440	0.726	0.5
High	2480	0.633	0.5



8.4. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)
RSS-247 5.4 (d)

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

TEST PROCEDURE

Output Power: ANSI C63.10 Subclause -11.9.1.2

The transmitter output is connected to a power meter. The cable assembly insertion loss of 11.55 dB was entered as an offset in the power meter. The power output was measured on the EUT antenna port using SMA cable with 10dB attenuator connected to a power meter via wideband Peak power sensor.

Peak output power was read directly from power meter..

Loss / Offset Info	
EUT Cable Loss:	0.70
Test Cable Loss:	1.18
Attenuation Pad Loss:	9.67
Offset Used:	11.55

RESULTS

8.4.1. BLE (1Mbps)

Tested By:	104463/85502
Date:	1/15/2025

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	8.441	30	-21.559
Middle	2440	8.577	30	-21.423
High	2480	8.639	30	-21.361

8.4.2. BLE (125Kbps)

Tested By:	104463/85502
Date:	1/15/2025

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	8.464	30	-21.536
Middle	2440	8.600	30	-21.400
High	2480	8.677	30	-21.323

8.5. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Output Power: ANSI C63.10 Subclause -11.9.2.3.2 Method AVGPM-G (Measurement using a gated RF average-reading power meter)

The transmitter output is connected to a power meter. The cable assembly insertion loss of 11.55 dB was entered as an offset in the power meter. The power output was measured on the EUT antenna port using SMA cable with 10dB attenuator connected to a power meter via wideband average power sensor.

Gated average output power was read directly from the power meter.

Loss / Offset Info	
EUT Cable Loss:	0.70
Test Cable Loss:	1.18
Attenuation Pad Loss:	9.67
Offset Used:	11.55

RESULTS

8.5.1. BLE (1Mbps)

Tested By:	104463/85502
Date:	1/15/2025

Channel	Frequency (MHz)	AV power (dBm)
Low	2402	8.222
Middle	2440	8.376
High	2480	8.426

8.5.2. BLE (125Kbps)

Tested By:	104463/85502
Date:	1/15/2025

Channel	Frequency (MHz)	AV power (dBm)
Low	2402	8.226
Middle	2440	8.378
High	2480	8.426

8.6. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)
RSS-247 (5.2) (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

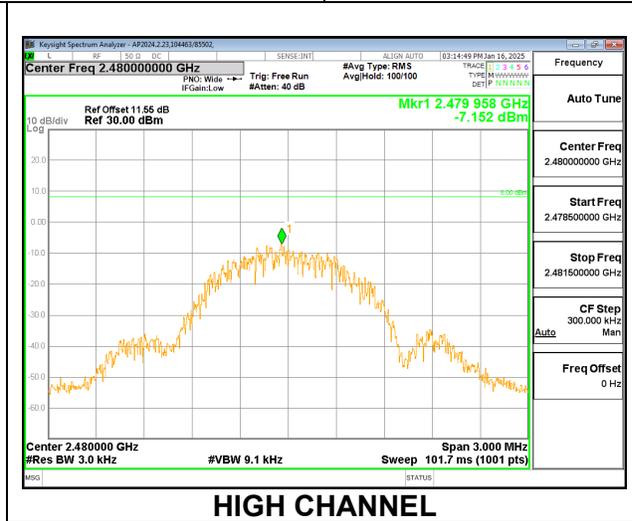
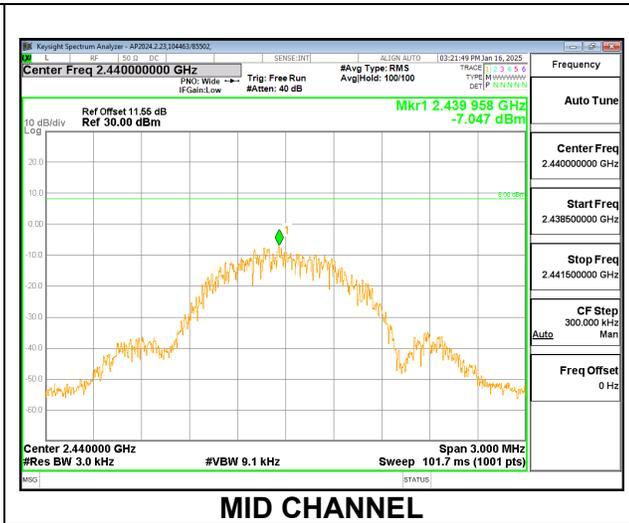
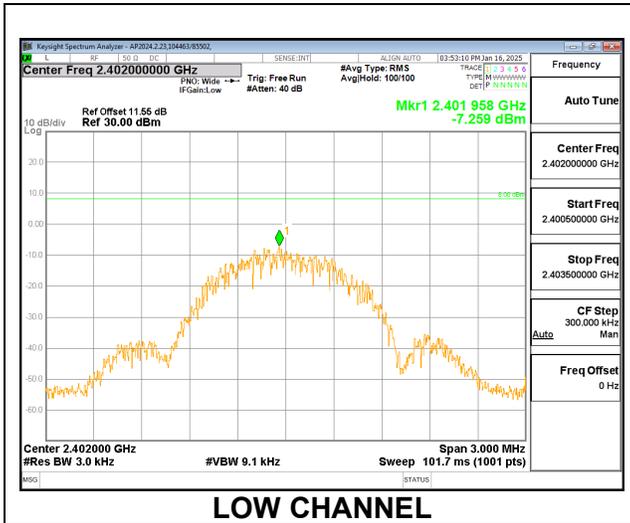
MEASUREMENT METHOD

PSD: ANSI C63.10 Subclause -11.10.2 Method PKPSD (peak PSD)

RESULTS

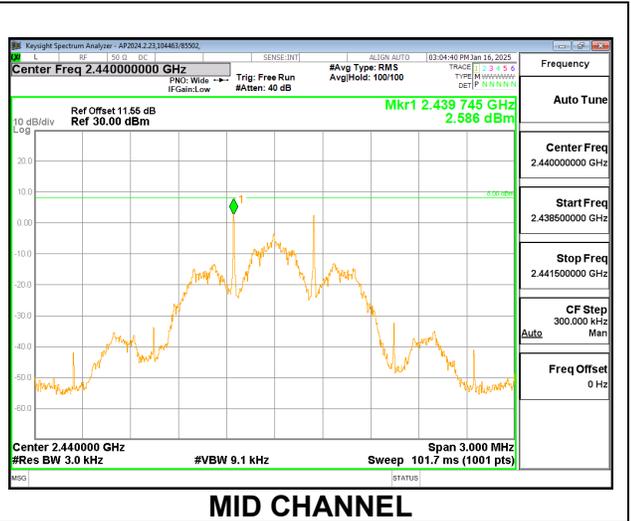
8.6.1. BLE (1Mbps)

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2402	-7.26	8	-15.26
Middle	2440	-7.05	8	-15.05
High	2480	-7.15	8	-15.15



8.6.2. BLE (125Kbps)

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2402	2.36	8	-5.64
Middle	2440	2.59	8	-5.41
High	2480	2.57	8	-5.43



8.7. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)
RSS-247 5.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is:
-20 dBc.

MEASUREMENT METHOD

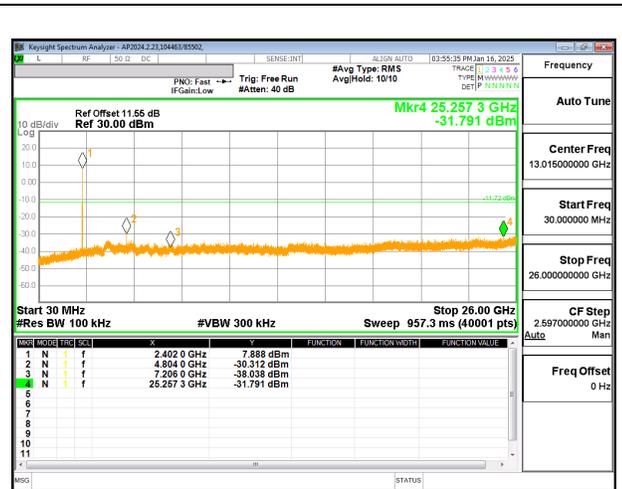
Conducted emissions in non-restricted frequency bands: ANSI C63.10 Subclause -11.11 & 6.10.4

RESULTS

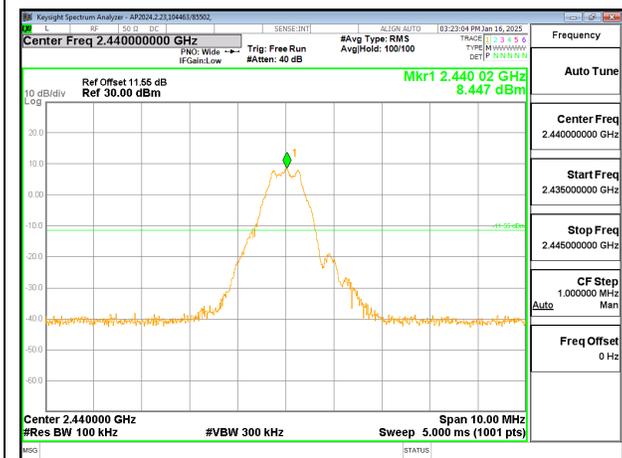
8.7.1. BLE (1Mbps)



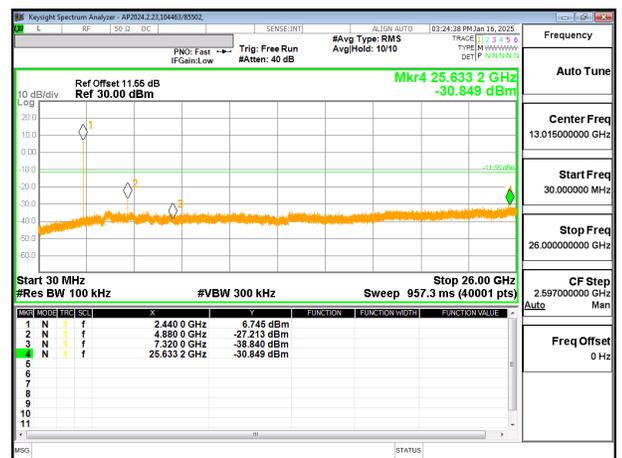
LOW CHANNEL BANDEDGE



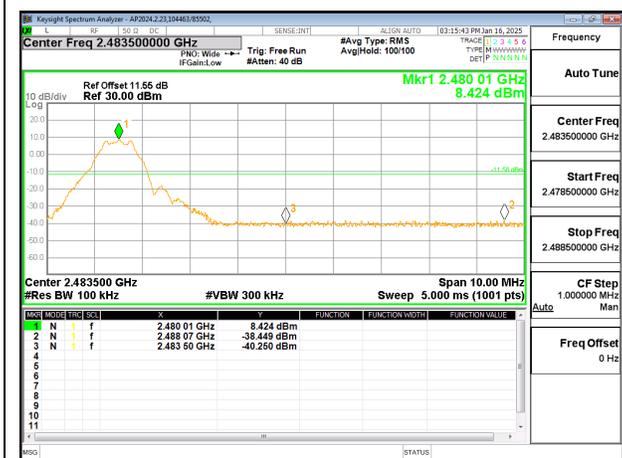
OUT-OF-BAND LOW CHANNEL



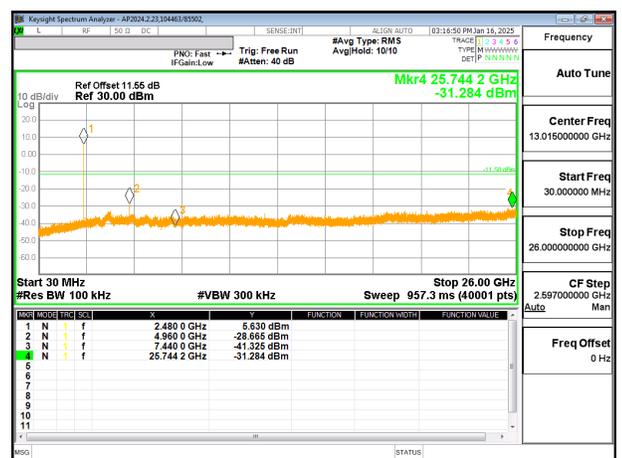
IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL

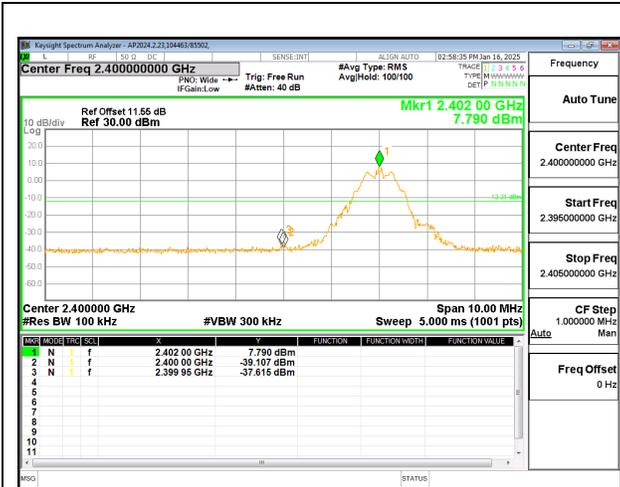


HIGH CHANNEL BANDEDGE

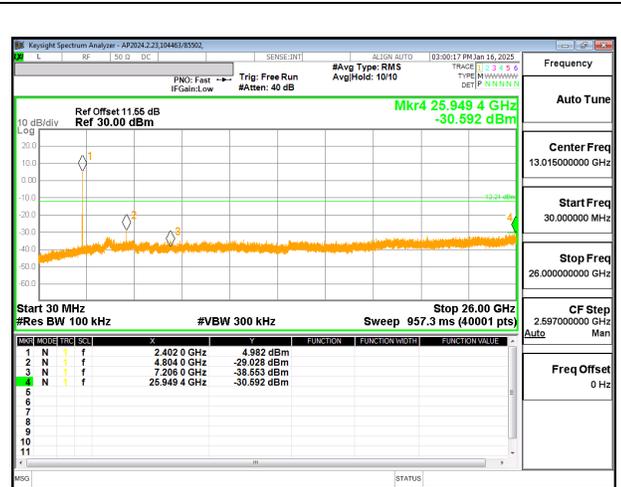


OUT-OF-BAND HIGH CHANNEL

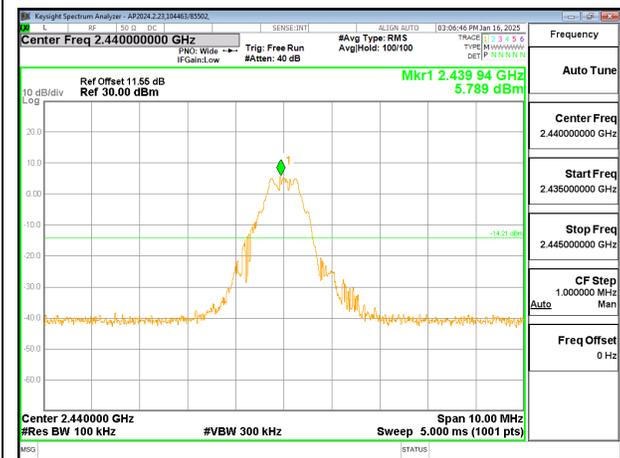
8.7.2. BLE (125Kbps)



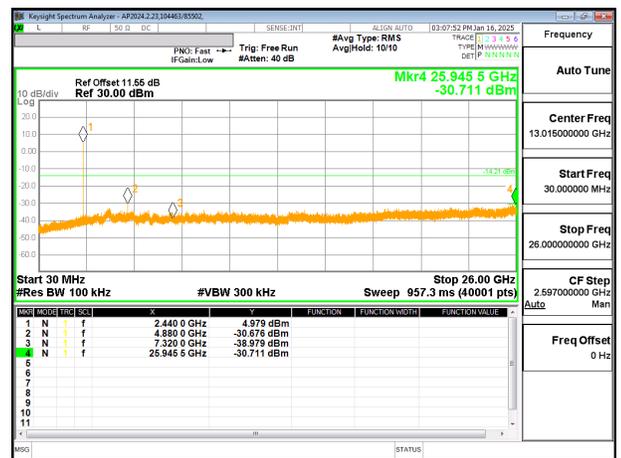
LOW CHANNEL BANDEDGE



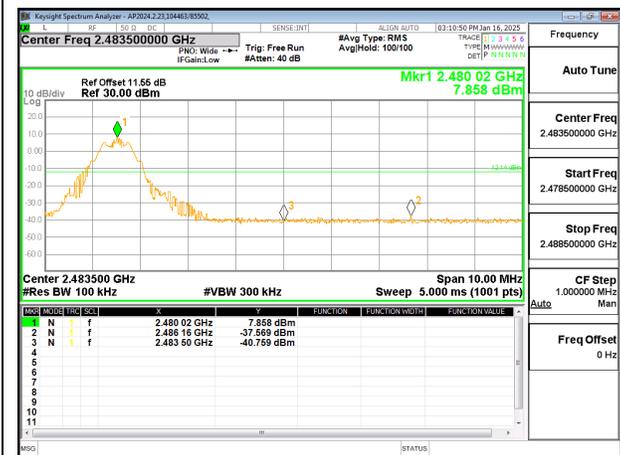
OUT-OF-BAND LOW CHANNEL



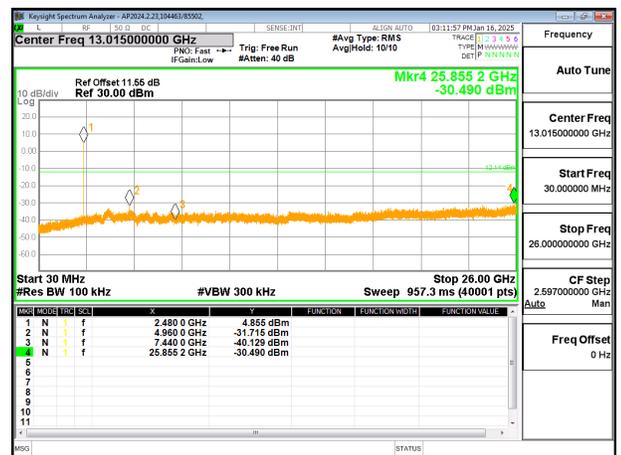
IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL



HIGH CHANNEL BANDEDGE



OUT-OF-BAND HIGH CHANNEL

9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE

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, Section 8.9 and 8.10.

Frequency Range (MHz)	Field Strength Limit (uA/m) at 3 m	Field Strength Limit (dBuA/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

Radiated emissions restricted frequency bands: ANSI C63.10 Subclause -11.12.1 & 6.10.5

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

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. Linear Voltage Averaging was used.

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.

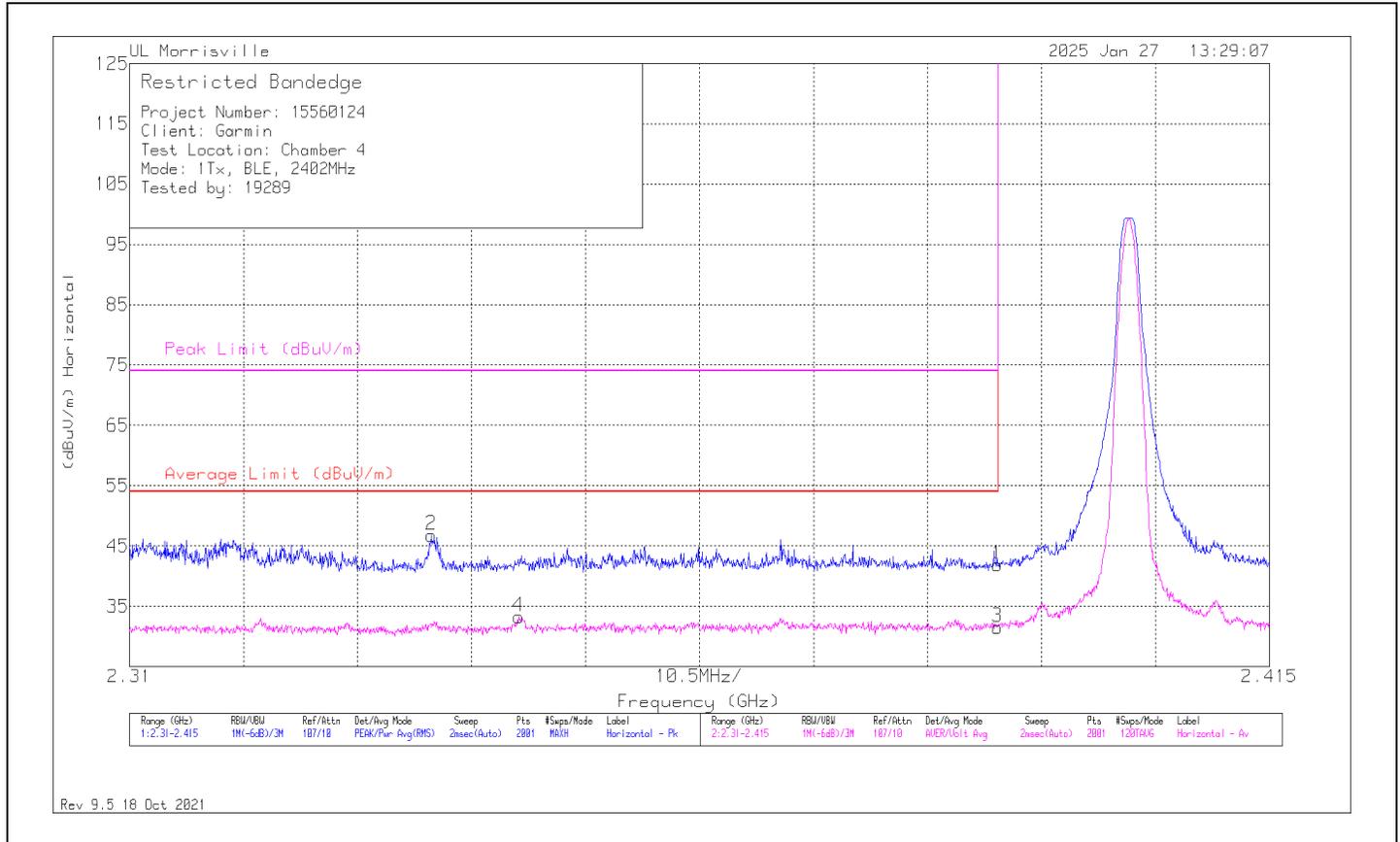
9.2. TRANSMITTER ABOVE 1 GHz

9.2.1. BLE (125Kbps)

Antenna 1

BANDEDGE (LOW CHANNEL)

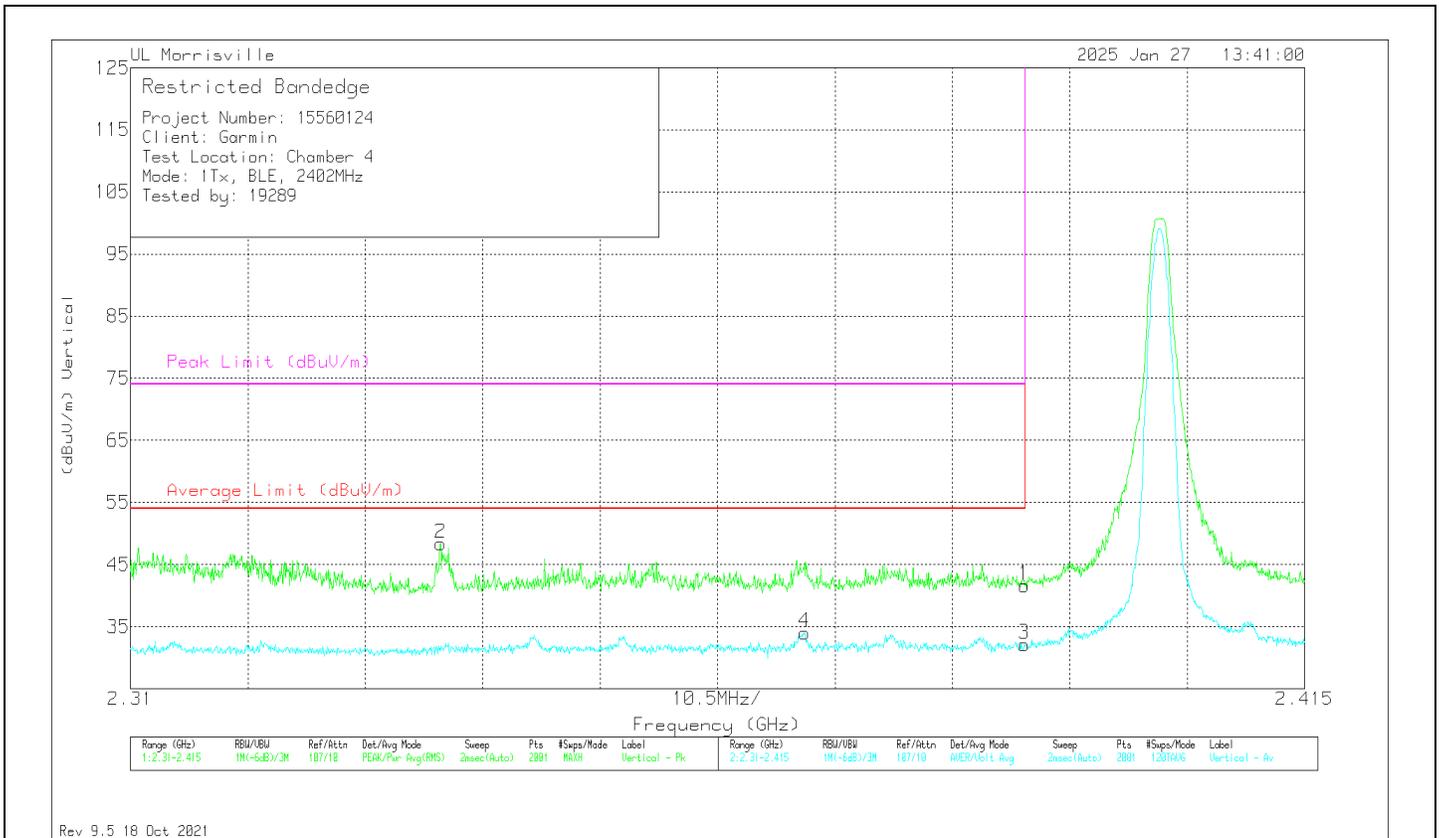
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.38996	33.05	Pk	32	-23.2	0	41.85	-	-	74	-32.15	200	103	H
2	*** 2.33783	37.94	Pk	31.9	-23.1	0	46.74	-	-	74	-27.26	200	103	H
3	*** 2.38996	21.11	ADV	32	-23.2	1.64	31.55	54	-22.45	-	-	200	103	H
4	*** 2.34586	22.72	ADV	31.8	-22.9	1.64	33.26	54	-20.74	-	-	200	103	H

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

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.38996	32.88	Pk	32	-23.2	0	41.68	-	-	74	-32.32	313	107	V
2	*** 2.33772	39.55	Pk	31.9	-23.1	0	48.35	-	-	74	-25.65	313	107	V
3	*** 2.38996	21.71	ADV	32	-23.2	1.64	32.15	54	-21.85	-	-	313	107	V
4	*** 2.37027	23.49	ADV	31.9	-23	1.64	34.03	54	-19.97	-	-	313	107	V

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

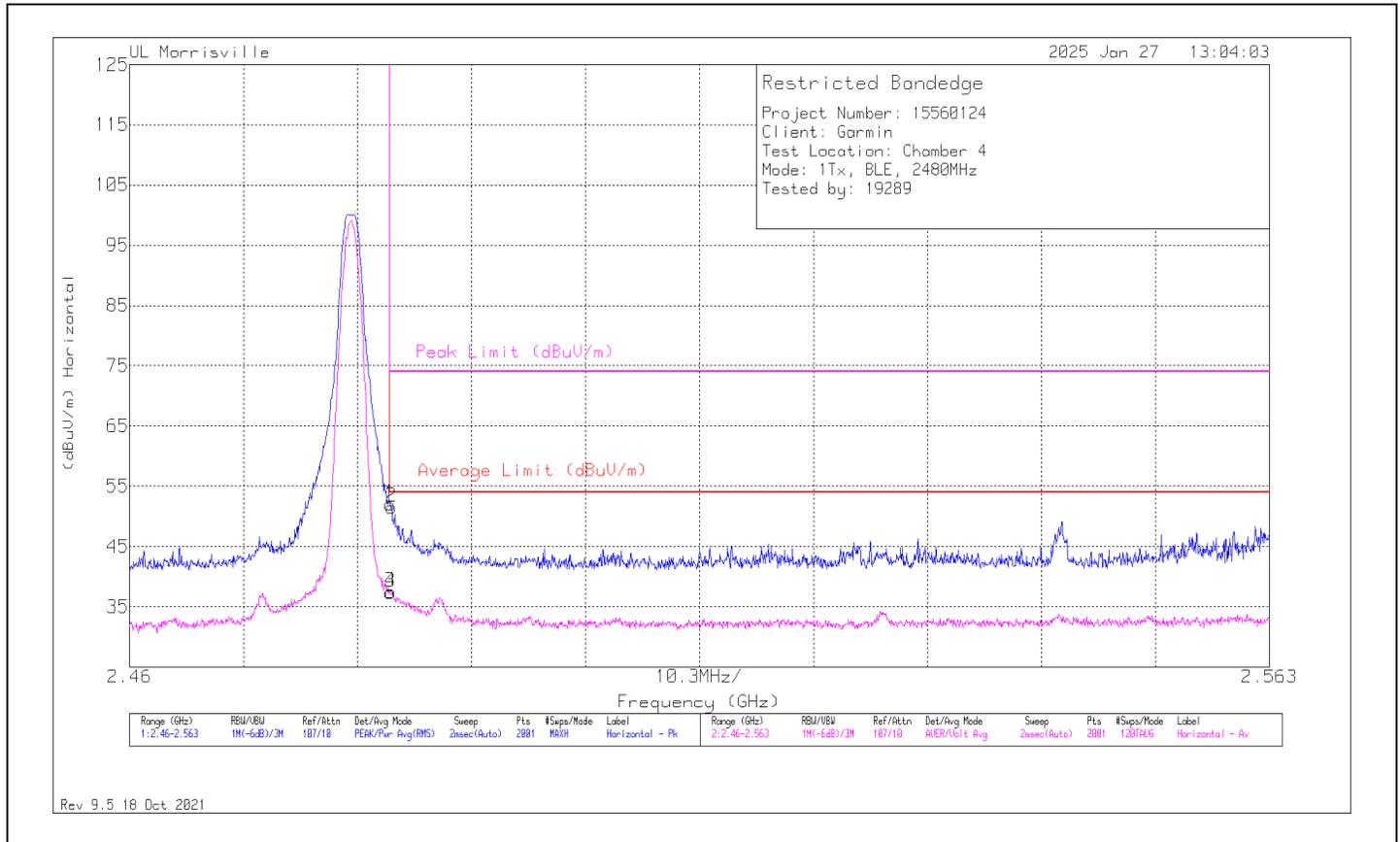
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.48354	42.51	Pk	32.3	-22.8	0	52.01	-	-	74	-21.99	204	116	H
2	** 2.48364	41.99	Pk	32.3	-22.8	0	51.49	-	-	74	-22.51	204	116	H
3	*** 2.48354	26.27	ADV	32.3	-22.8	1.64	37.41	54	-16.59	-	-	204	116	H
4	*** 2.48359	26.31	ADV	32.3	-22.8	1.64	37.45	54	-16.55	-	-	204	116	H

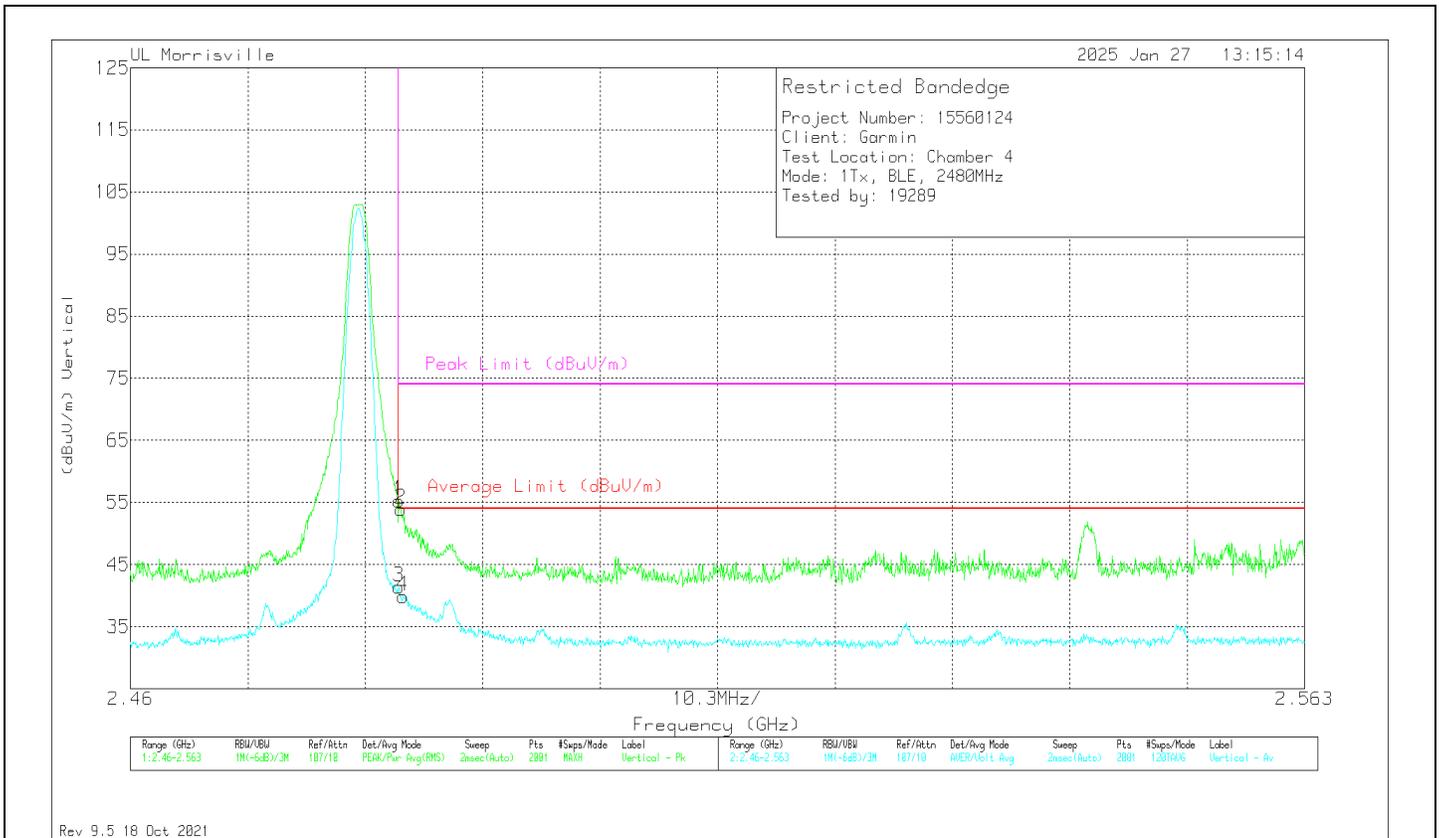
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.48354	45.76	Pk	32.3	-22.8	0	55.26	-	-	74	-18.74	313	121	V
2	*** 2.48374	44.43	Pk	32.3	-22.8	0	53.93	-	-	74	-20.07	313	121	V
3	*** 2.48354	30.26	ADV	32.3	-22.8	1.64	41.4	54	-12.6	-	-	313	121	V
4	*** 2.4839	28.77	ADV	32.3	-22.8	1.64	39.91	54	-14.09	-	-	313	121	V

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

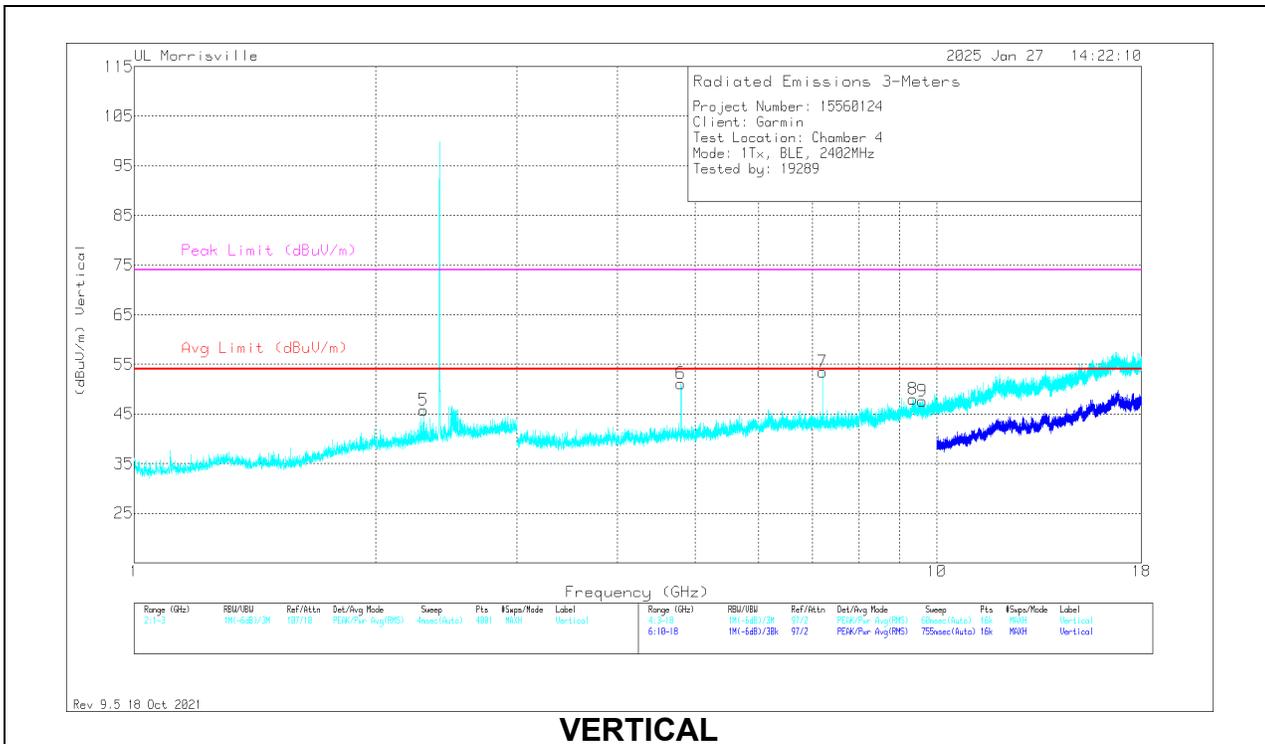
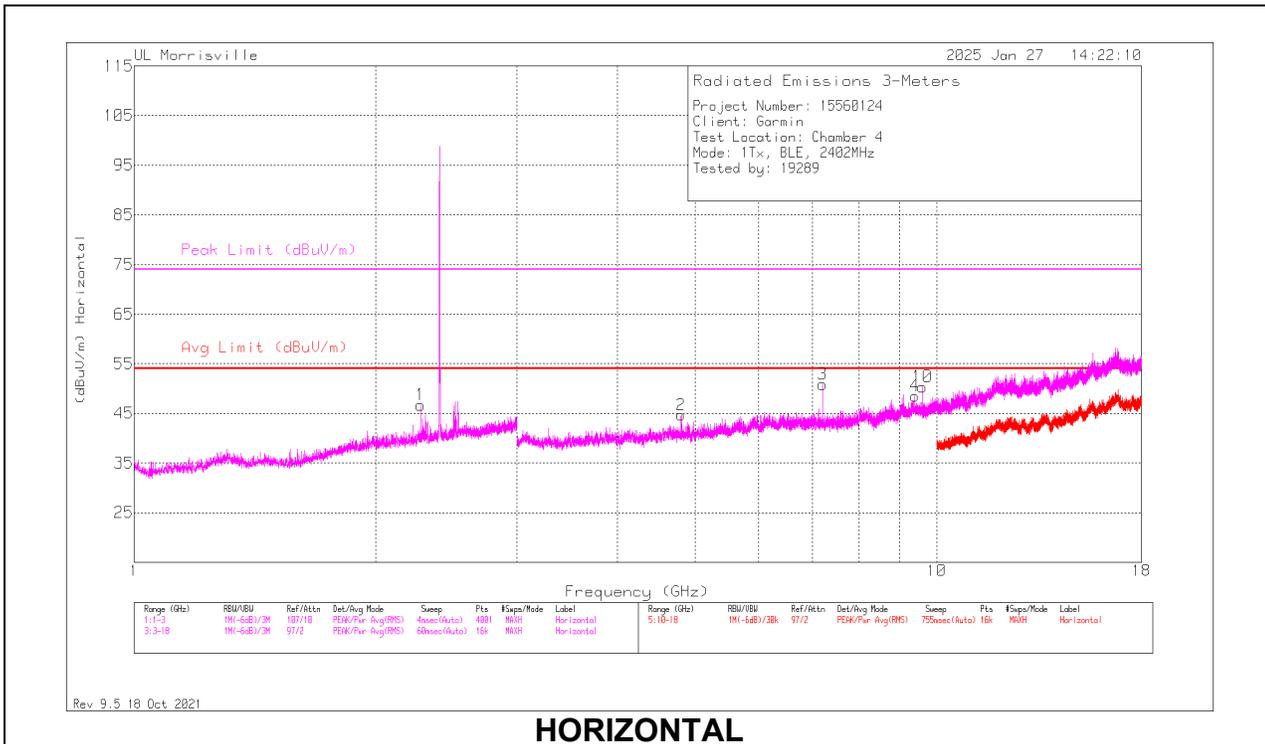
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV -Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.2745	38.11	Pk	31.9	-23.3	0	46.71	54	-7.29	74	-27.29	0-360	100	H
5	*** 2.29325	36.65	Pk	32	-22.9	0	45.75	54	-8.25	74	-28.25	0-360	200	V
2	*** 4.80375	41.95	Pk	34.1	-31.4	0	44.65	54	-9.35	74	-29.35	0-360	100	H
4	*** 9.40028	37.19	PK2	36.6	-25	0	48.79	-	-	74	-25.21	12	314	H
	*** 9.39954	24.47	ADV	36.6	-25	1.64	37.71	54	-16.29	-	-	12	314	H
6	*** 4.80441	47.83	PK2	34.1	-31.4	0	50.53	-	-	74	-23.47	154	128	V
	*** 4.80362	39.79	ADV	34.1	-31.4	1.64	44.13	54	-9.87	-	-	154	128	V
8	*** 9.33928	36.19	PK2	36.5	-24.2	0	48.49	-	-	74	-25.51	212	361	V
	*** 9.33745	23.92	ADV	36.5	-24.2	1.64	37.86	54	-16.14	-	-	212	361	V
3	7.20563	43.01	Pk	35.6	-27.7	0	50.91	-	-	-	-	0-360	100	H
7	7.20656	45.71	Pk	35.6	-27.8	0	53.51	-	-	-	-	0-360	200	V
10	9.60938	38.59	Pk	36.8	-25	0	50.39	-	-	-	-	0-360	100	H
9	9.60938	35.84	Pk	36.8	-25	0	47.64	-	-	-	-	0-360	200	V

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

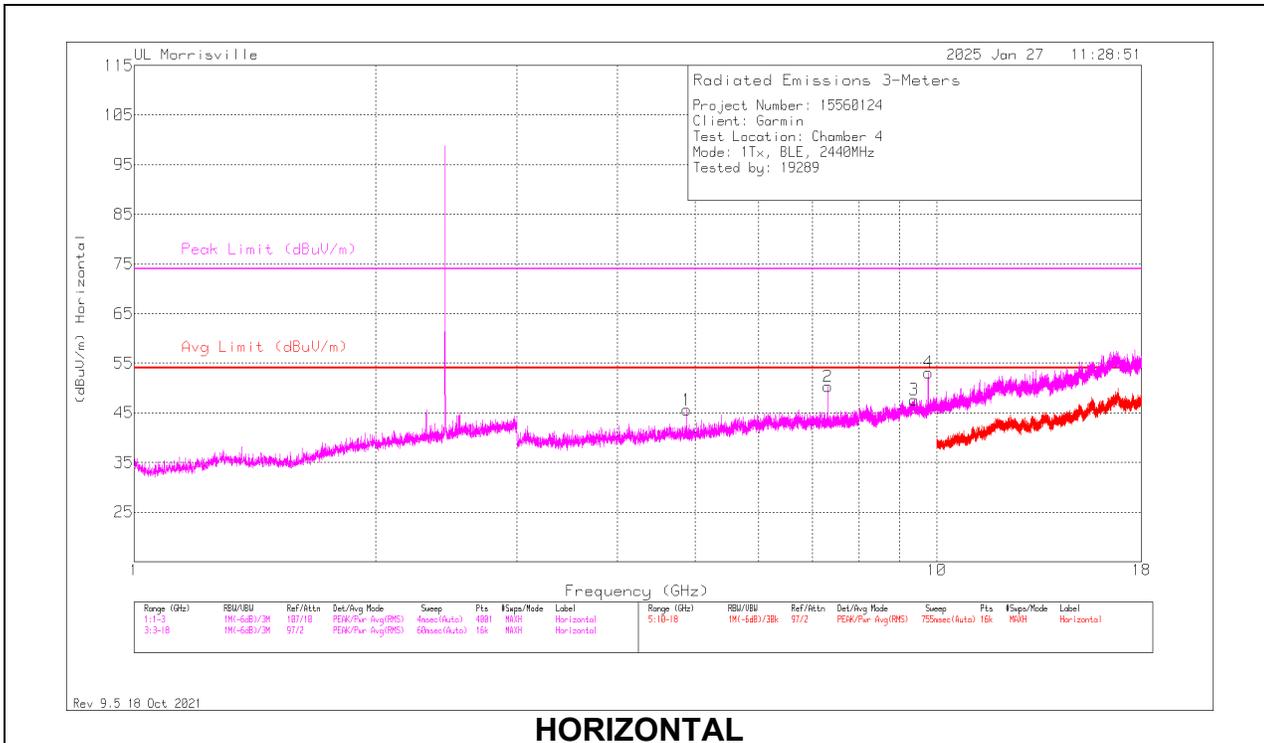
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

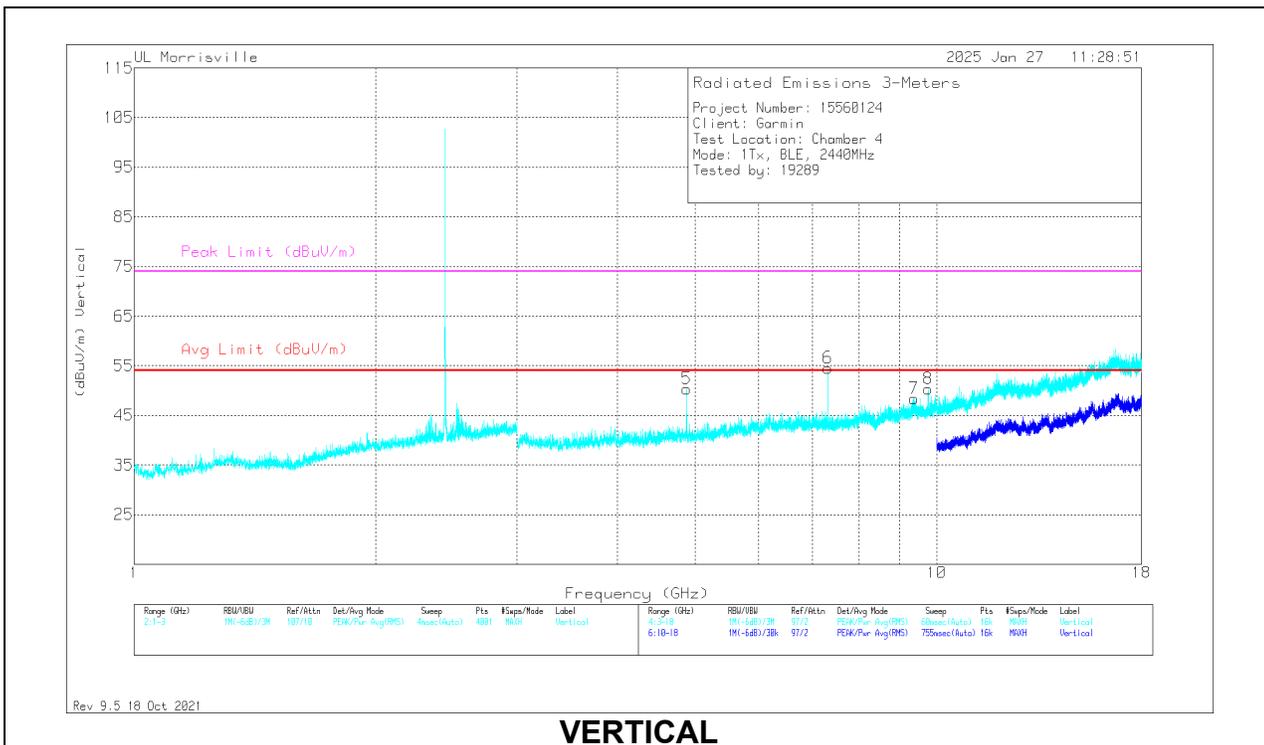
PK2 - Maximum Peak

ADV - Linear Voltage Average

MID CHANNEL RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 4.87969	42.56	Pk	34	-31	0	45.56	54	-8.44	74	-28.44	0-360	100	H
2	*** 7.3208	45.96	PK2	35.6	-27.7	0	53.86	-	-	74	-20.14	106	307	H
	*** 7.31933	37.98	ADV	35.6	-27.7	1.64	47.52	54	-6.48	-	-	106	307	H
3	*** 9.37688	35.74	Pk	36.6	-24.8	0	47.54	54	-6.46	74	-26.46	0-360	100	H
5	*** 4.87962	46.87	PK2	34	-31	0	49.87	-	-	74	-24.13	168	102	V
	*** 4.87977	38.67	ADV	34	-31	1.64	43.31	54	-10.69	-	-	168	102	V
6	*** 7.3207	48	PK2	35.6	-27.7	0	55.9	-	-	74	-18.1	170	196	V
	*** 7.31933	40.04	ADV	35.6	-27.7	1.64	49.58	54	-4.42	-	-	170	196	V
7	*** 9.38041	36.9	PK2	36.6	-24.9	0	48.6	-	-	74	-25.4	114	259	V
	*** 9.37984	24.66	ADV	36.6	-24.9	1.64	38	54	-16	-	-	114	259	V
8	9.76031	38.61	Pk	36.9	-25.2	0	50.31	-	-	-	-	0-360	200	V
4	9.76125	41.41	Pk	36.9	-25.2	0	53.11	-	-	-	-	0-360	100	H

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

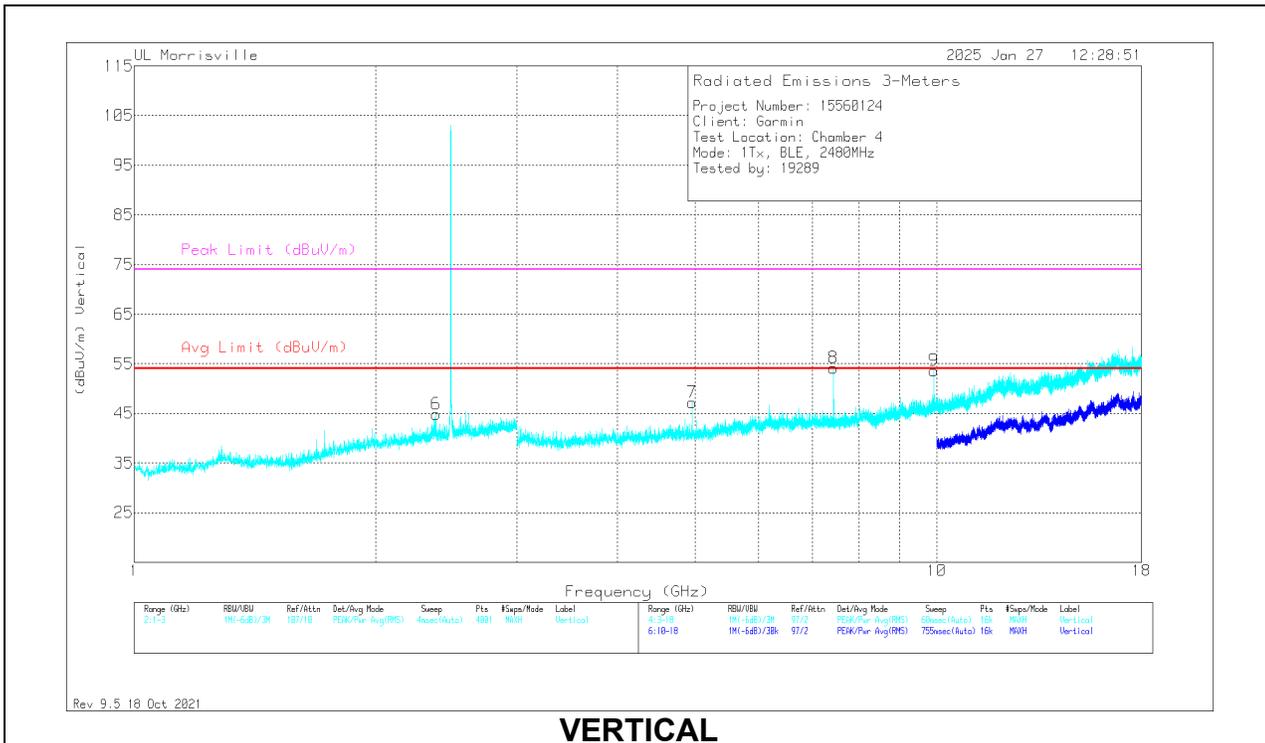
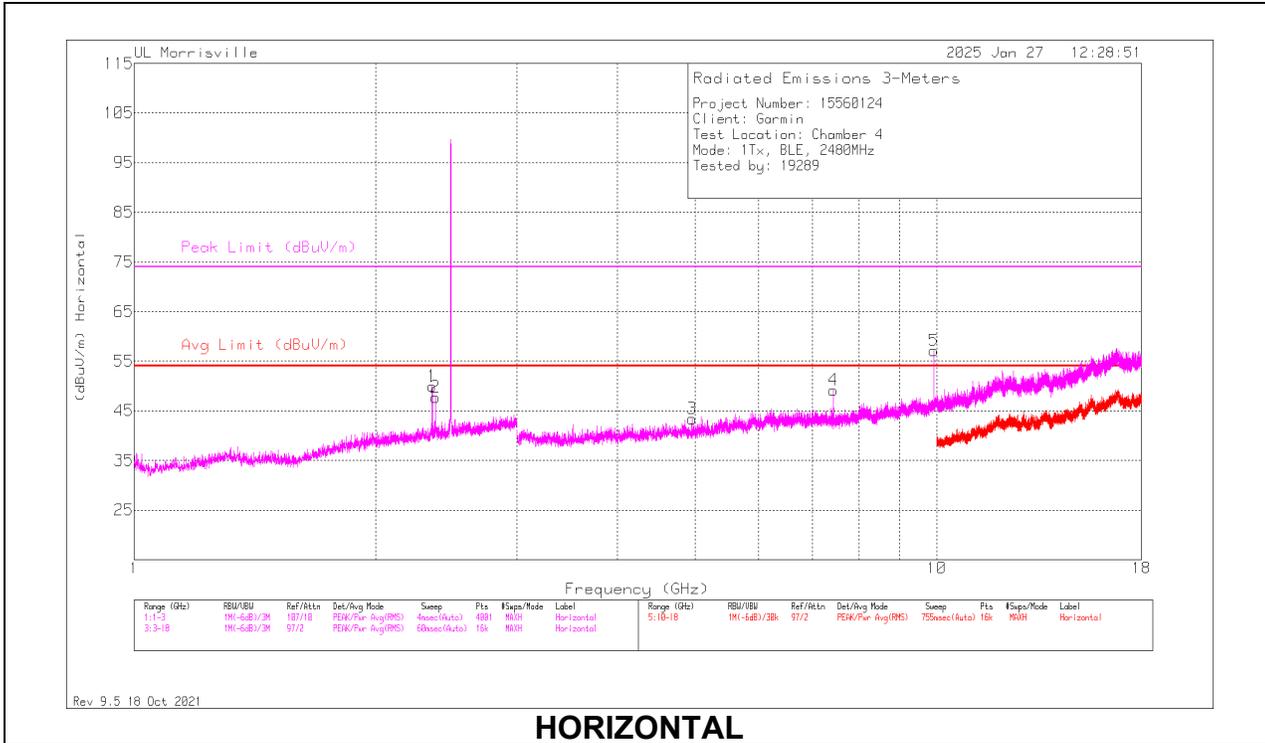
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

ADV - Linear Voltage Average

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.35185	39.4	PK2	31.8	-23	0	48.2	-	-	74	-25.8	262	134	H
	*** 2.35202	22.95	ADV	31.8	-23	1.64	33.39	54	-20.61	-	-	262	134	H
2	*** 2.375	38.61	Pk	32	-22.9	0	47.71	54	-6.29	74	-26.29	0-360	100	H
6	*** 2.3785	35.85	Pk	32	-23	0	44.85	54	-9.15	74	-29.15	0-360	200	V
3	*** 4.96031	40.34	Pk	33.9	-30.8	0	43.44	54	-10.56	74	-30.56	0-360	100	H
4	*** 7.4406	42.93	PK2	35.7	-27.9	0	50.73	-	-	74	-23.27	219	328	H
	*** 7.43945	32.92	ADV	35.7	-27.9	1.64	42.36	54	-11.64	-	-	219	328	H
7	*** 4.96031	44.11	Pk	33.9	-30.8	0	47.21	54	-6.79	74	-26.79	0-360	200	V
8	*** 7.43929	47.24	PK2	35.7	-27.9	0	55.04	-	-	74	-18.96	181	176	V
	*** 7.43944	39.07	ADV	35.7	-27.9	1.64	48.51	54	-5.49	-	-	181	176	V
5	9.91875	45.49	Pk	37	-25.4	0	57.09	-	-	-	-	0-360	100	H
9	9.91969	42.04	Pk	37	-25.4	0	53.64	-	-	-	-	0-360	200	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

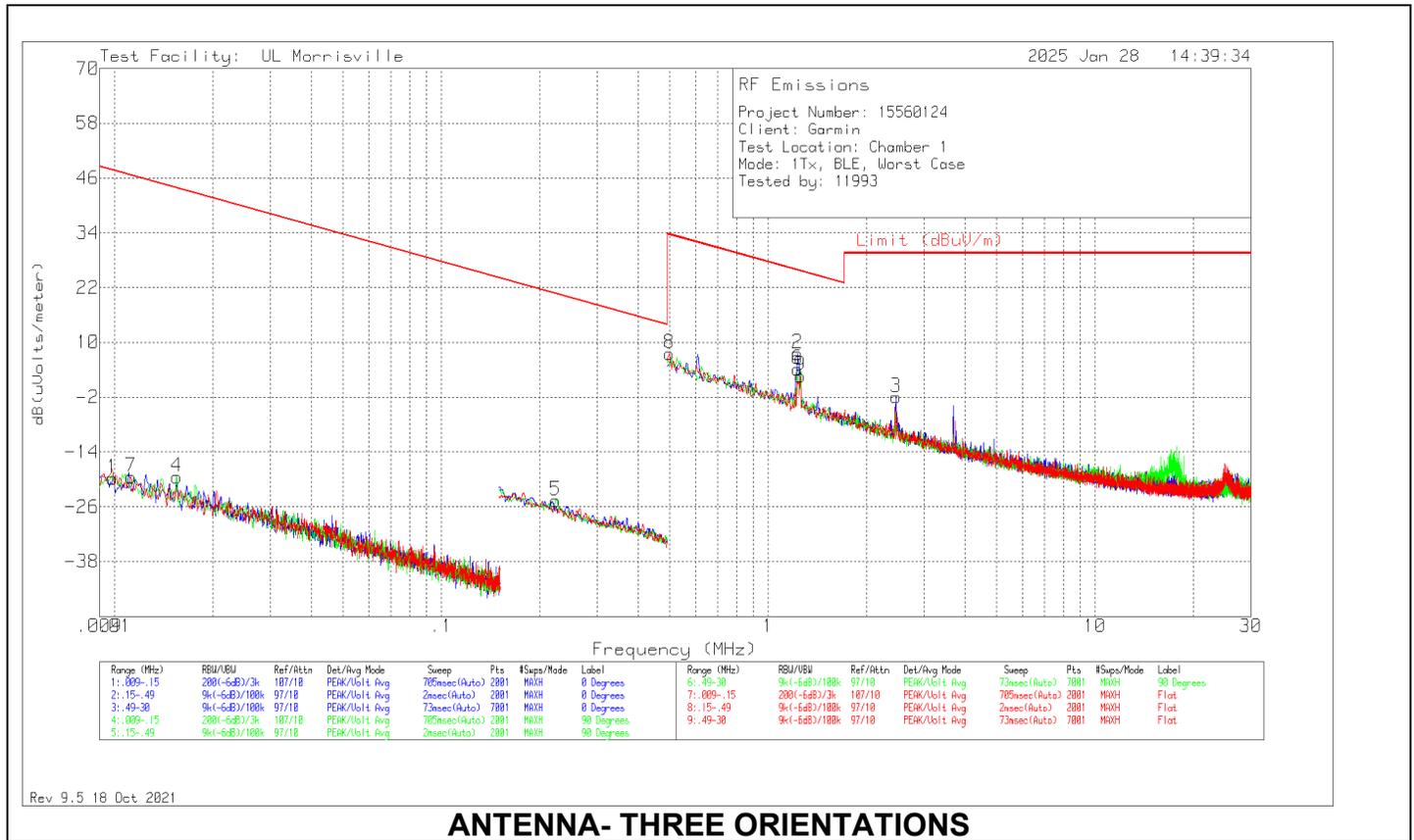
Pk - Peak detector

PK2 - Maximum Peak

ADV - Linear Voltage Average

9.3. WORST CASE BELOW 30MHZ

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)



Below 30MHz Data – E-FIELD

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	135144 (dB/m)	Gain/Loss (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	QP/AV Limit (dBuV/m)	PK LIMIT (dBuV/m)	Margin (dB)	Azimuth (Degs)	Loop Angle
1	.00985	41.8	Pk	18.3	.1	-80	-19.8	47.73	67.73	-67.53	0-360	0 degs
7	.0112	42.71	Pk	17.7	.1	-80	-19.49	46.62	66.62	-66.11	0-360	Flat
4	.01546	44.51	Pk	15.9	.1	-80	-19.49	43.82	63.82	-63.31	0-360	90 degs
5	.22327	44.29	Pk	10.9	.1	-80	-24.71	20.63	40.63	-45.34	0-360	90 degs
8	.49843	36.5	Pk	11	.1	-40	7.6	33.65	-	-26.05	0-360	Flat
6	1.2278	32.98	Pk	11	.2	-40	4.18	25.82	-	-21.64	0-360	90 degs
2	1.23202	36.4	Pk	11	.2	-40	7.6	25.79	-	-18.19	0-360	0 degs
9	1.2531	31.52	Pk	11	.2	-40	2.72	25.64	-	-22.92	0-360	Flat
3	2.45887	26.72	Pk	11.1	.2	-40	-1.98	29.54	-	-31.52	0-360	0 degs

PK – Peak Detector

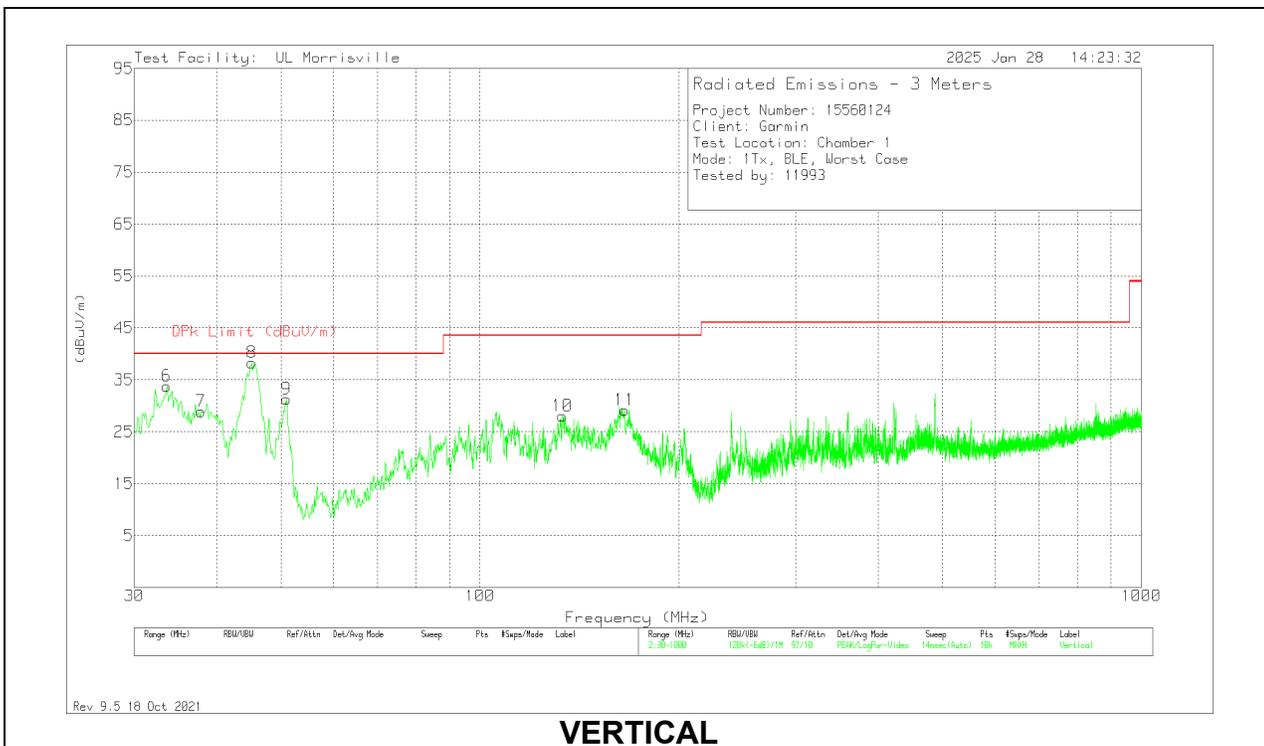
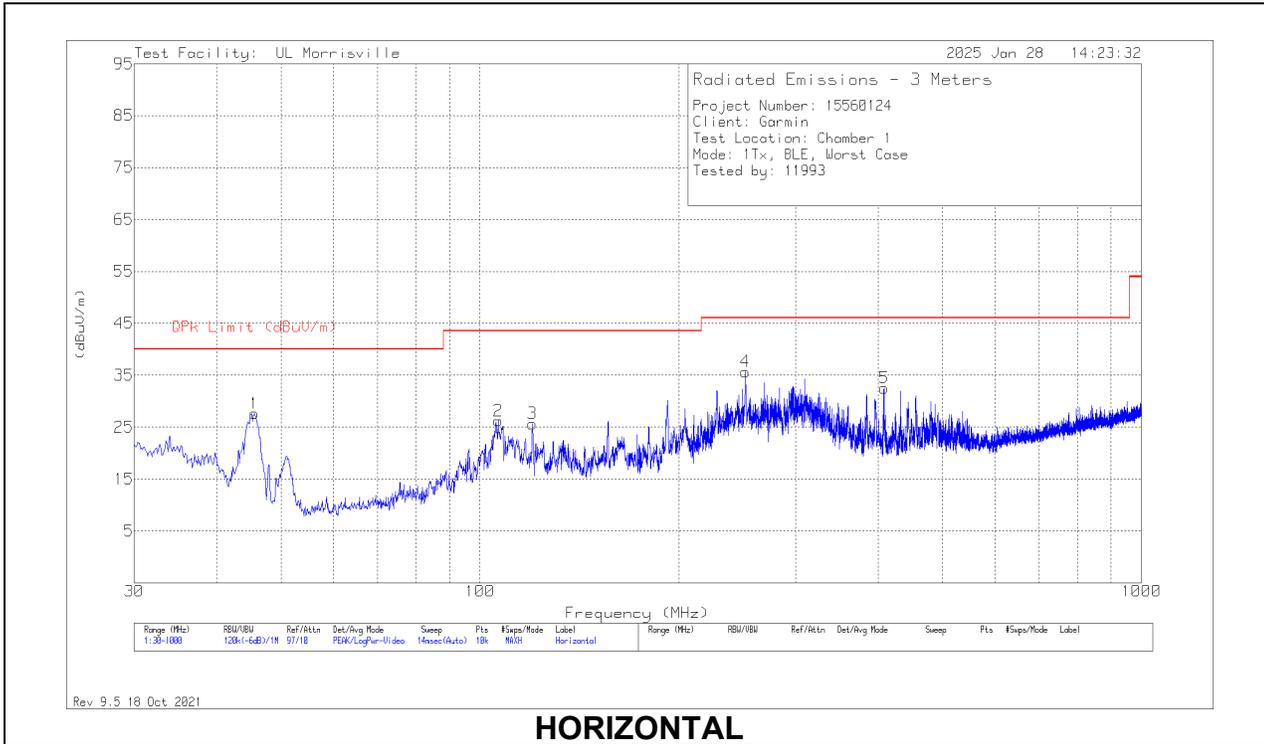
Below 30MHz Data – H-FIELD

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	135144 (dB/m)	Gain/Loss (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uAmps/meter)	QP/AV Limit (dBuA/m)	PK Limit (dBuA/m)	Margin (dB)	Azimuth (Degs)	Loop Angle
1	.00985	41.8	Pk	-33.2	.1	-80	-71.3	-3.77	16.23	-67.53	0-360	0 degs
7	.0112	42.71	Pk	-33.8	.1	-80	-70.99	-4.88	15.12	-66.11	0-360	Flat
4	.01546	44.51	Pk	-35.6	.1	-80	-70.99	-7.68	12.32	-63.31	0-360	90 degs
5	.22327	44.29	Pk	-40.6	.1	-80	-76.21	-30.87	-10.87	-45.34	0-360	90 degs
8	.49843	36.5	Pk	-40.5	.1	-40	-43.9	-17.85	-	-26.05	0-360	Flat
6	1.2278	32.98	Pk	-40.5	.2	-40	-47.32	-25.68	-	-21.64	0-360	90 degs
2	1.23202	36.4	Pk	-40.5	.2	-40	-43.9	-25.71	-	-18.19	0-360	0 degs
9	1.2531	31.52	Pk	-40.5	.2	-40	-48.78	-25.86	-	-22.92	0-360	Flat
3	2.45887	26.72	Pk	-40.4	.2	-40	-53.48	-21.96	-	-31.52	0-360	0 degs

PK – Peak Detector

9.4. WORST CASE BELOW 1 GHZ

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



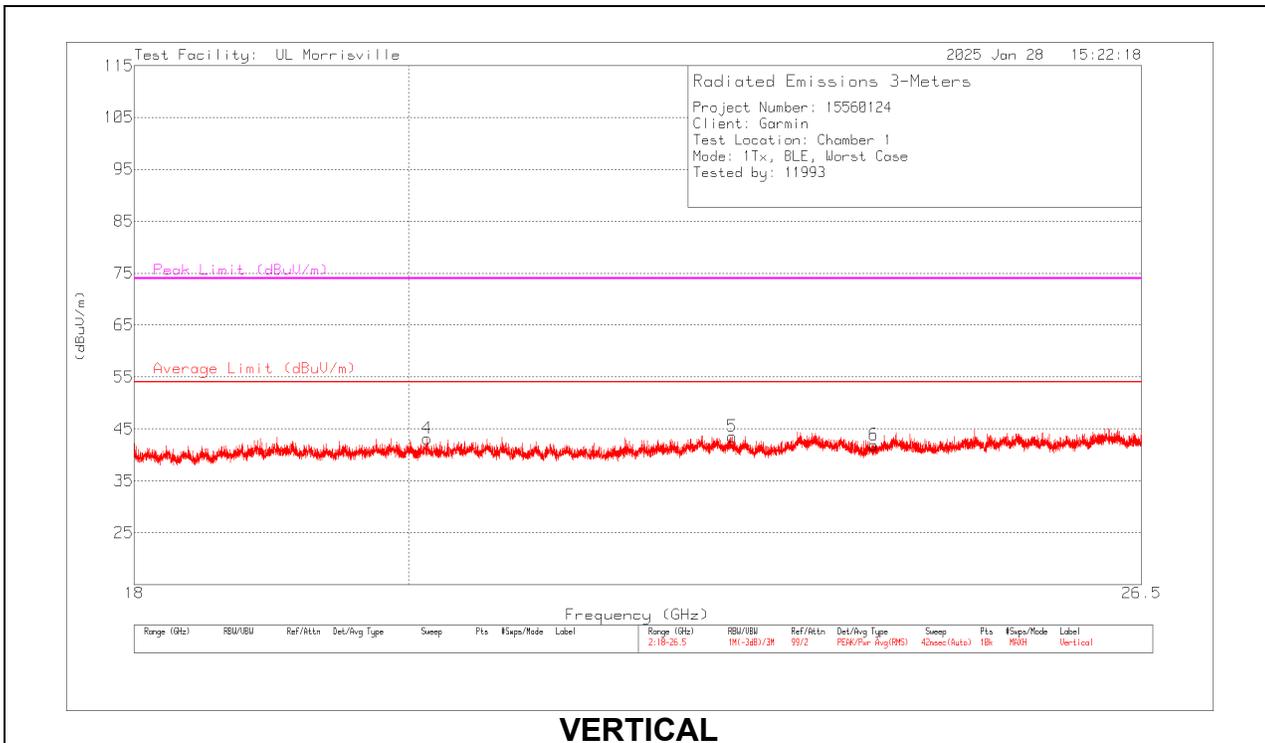
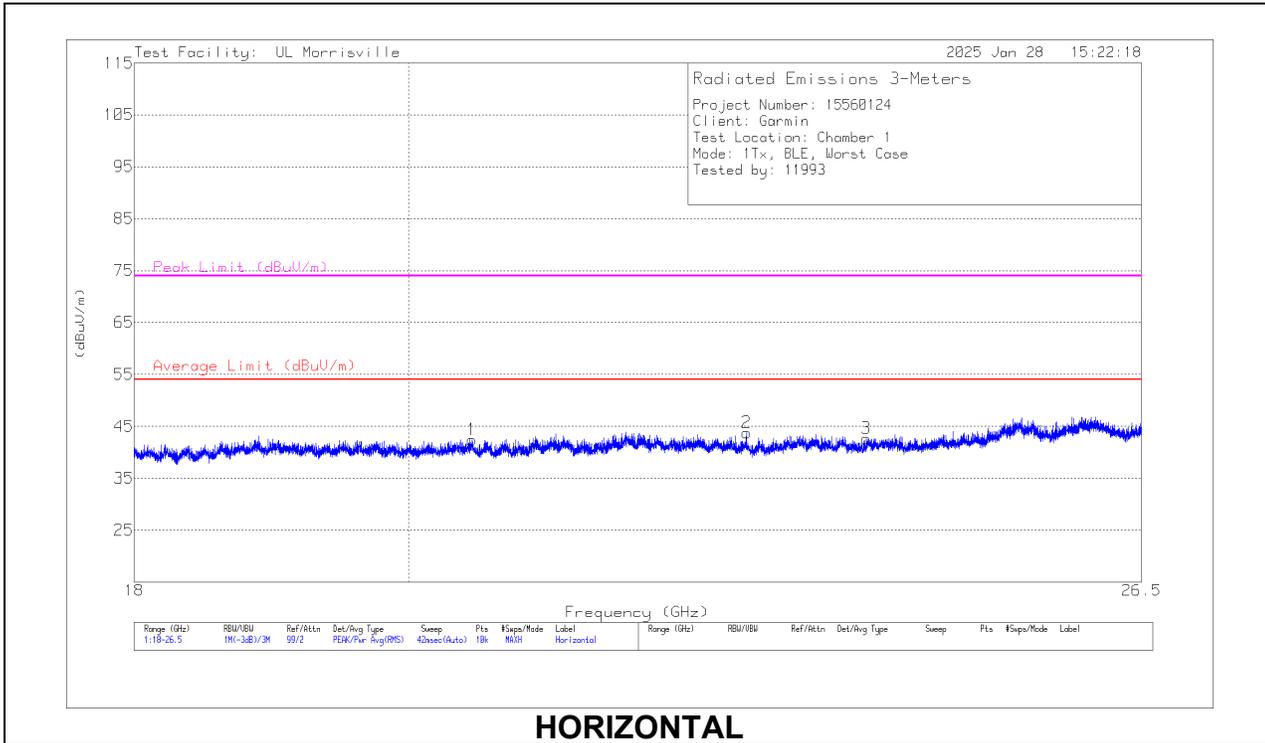
Below 1GHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90629 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* ** 120.016	36.34	Pk	19.9	-30.6	25.64	43.52	-17.88	0-360	200	H
4	* ** 251.936	48.13	Pk	17.6	-30.1	35.63	46.02	-10.39	0-360	100	H
5	* ** 408.009	39.69	Pk	21.7	-28.9	32.49	46.02	-13.53	0-360	200	H
7	* ** 37.857	39.42	Pk	21.3	-31.8	28.92	40	-11.08	0-360	100	V
10	* ** 133.208	38.49	Pk	19.9	-30.4	27.99	43.52	-15.53	0-360	100	V
11	* ** 165.412	41.59	Pk	18.3	-30.7	29.19	43.52	-14.33	0-360	100	V
6	33.589	41.18	Pk	24.4	-31.8	33.78	-	-	0-360	100	V
8	45.229	54.33	Pk	16	-32	38.33	-	-	0-360	100	V
1	45.617	43.51	Pk	15.9	-31.8	27.61	-	-	0-360	300	H
9	50.952	49.1	Pk	13.8	-31.6	31.3	-	-	0-360	100	V
2	106.533	38.32	Pk	18.3	-30.4	26.22	-	-	0-360	300	H

PK – Peak Detector

9.5. WORST CASE 18-26 GHZ

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



18 – 26GHz Data

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	204704 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 20.49535	48.83	Pk	33.7	-40.1	42.43	54	-11.57	74	-31.57	0-360	200	H
2	*** 22.77312	49.91	Pk	34.1	-40.2	43.81	54	-10.19	74	-30.19	0-360	299	H
3	*** 23.84317	48.19	Pk	34.4	-39.9	42.69	54	-11.31	74	-31.31	0-360	101	H
4	*** 20.14519	49.85	Pk	33.5	-40.2	43.15	54	-10.85	74	-30.85	0-360	250	V
5	*** 22.64564	49.49	Pk	34.2	-40.2	43.49	54	-10.51	74	-30.51	0-360	300	V
6	*** 23.91116	47.44	Pk	34.4	-39.9	41.94	54	-12.06	74	-32.06	0-360	250	V

PK – Peak Detector

10. SETUP PHOTOS

Please refer to R15560124-EP1 for setup diagrams

END OF TEST REPORT