

# TEST REPORT

**Report Number:** R15607127-E2

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

**Model :** A04907

**FCC ID :** IPH-04907

**IC :** 1792A-04907

**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:**  
2025-03-25

**Prepared by:**  
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## REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
v1	2025-02-13	Initial Issue	Chandler Stanley
V2	2025-03-24	Retook 6dB BW for Some Modes	Chandler Stanley
V3	2025-03-25	Updated Power	Chandler Stanley

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# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** Garmin International Inc.  
1200 East 151<sup>st</sup> Street  
Olathe, KS 66062-3426, USA

**EUT DESCRIPTION:** Extremity Worn Digital Transceiver

**MODEL:** A04907

**SERIAL NUMBER:** 3497652467 / 3497995201 / 3497652312 / 3497652378 /  
3497652376

**SAMPLE RECEIPT DATE:** 2024-12-17

**DATE TESTED:** 2024-12-31 to 2025-03-21

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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Consumer, Medical and IT Segment  
UL LLC

Chandler Stanley  
Engineer  
Consumer, Medical and IT Segment  
UL LLC

## 2. TEST RESULTS SUMMARY

This report contains info provided by the customer which can impact the validity of results. UL LLC is only responsible for the validity of results after the integration of the data provided by the customer.

Below is a list of the data/info provided by the customer:

- 1) Antenna gain and type (see section 6.3)
- 2) Worst-case data rates (see section 6.5)

FCC Clause	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		
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		
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, ANSI C63.10-2020, 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, certification # 0751.06, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
<input type="checkbox"/>	Building: 12 Laboratory Dr RTP, NC 27709, U.S.A	US0067	2180C	825374
<input checked="" type="checkbox"/>	Building: 2800 Perimeter Park Dr. Suite B Morrisville, NC 27560, U.S.A		27265	

## 5. DECISION RULES AND MEASUREMENT UNCERTAINTY

### 5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

### 5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

### 5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Radio Frequency (Spectrum Analyzer)	141.16 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:

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

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

#### **MAINS CONDUCTED EMISSIONS**

Where relevant, the following sample calculation is provided:

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

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

## 6. EQUIPMENT UNDER TEST

### 6.1. EUT DESCRIPTION

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

### 6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2472	802.11b	15.14	32.66
2412 - 2472	802.11g	21.31	135.21
2412 - 2472	802.11n HT20	20.19	104.47
2402 - 2480	ANT/ANT+	4.71	2.96
2402 - 2480	BLE 1Mbps	4.73	2.97
2402 - 2480	BLE 2Mbps	4.75	2.99

### 6.3. DESCRIPTION OF AVAILABLE ANTENNAS

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

The radio utilizes an antenna with the following type and maximum gain:

Type	Frequency Range (MHz)	Maximum Gain (dBi)
Bezel Antenna	2402-2480	-0.2

### 6.4. SOFTWARE AND FIRMWARE

Software Version: 3.95

## 6.5. WORST-CASE CONFIGURATION AND MODE

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

For 2.4 WLAN, PSD was taken at the mid channel power setting (highest) for all channels.

Power is not distributed equally among all channels and therefore radiated spurious emissions between 1GHz and 18GHz were performed on mid channel and the highest power low and high channels. Band edge scans were performed on all inner/outer channels up to mid channel power.

The fundamental of the EUT was investigated in three orthogonal axes, 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

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	Shielded	<3m	Program/Charge EUT

### TEST SETUP

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

### SETUP DIAGRAMS

Please refer to R15607127-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 - Wireless Conducted Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
<b>Common Equipment</b>					
<b>Conducted Room 1</b>					
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
211057	Real-Time Peak Power Sensor 50MHz to 8GHz	Boonton	RTP5000	2024-08-01	2025-08-01
SOFTEMI	Antenna Port Software	UL	Version 2024.2.23	NA	NA
<b>Attenuators</b>					
226562	SMA Coaxial 10dB Attenuator 25MHz-18GHz	CentricRF	C18S2-10	2024-04-11	2025-04-11

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

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
<b>1-18 GHz</b>					
135143	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2024-02-07	2026-02-07
<b>Gain-Loss Chains</b>					
91979	Gain-loss string: 1-18GHz	Various	Various	2024-05-08	2025-05-08
<b>Receiver &amp; Software</b>					
206496	Spectrum Analyzer	Rohde & Schwarz	ESW44	2024-08-29	2025-08-29
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
<b>Additional Equipment used</b>					
241205	Environmental Meter	Fisher Scientific	15-077-963	2023-09-05	2025-09-05

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

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
<b>0.009-30MHz</b>					
135144	Active Loop Antenna	ETS-Lindgren	6502	2024-10-02	2025-10-02
<b>30-1000 MHz</b>					
90628	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2024-01-02	2026-01-02
<b>1-18 GHz</b>					
89509	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2023-05-23	2025-05-23
<b>18-26.5 GHz</b>					
204704	Horn Antenna, 18-26.5GHz	Com-Power	AH-826	2023-07-20	2025-07-20
<b>Gain-Loss Chains</b>					
207638	Gain-loss string: 0.009-30MHz	Various	Various	2024-05-22	2025-05-22
207639	Gain-loss string: 25-1000MHz	Various	Various	2024-05-22	2025-05-22
207640	Gain-loss string: 1-18GHz	Various	Various	2024-05-22	2025-05-22
225795	Gain-loss string: 18-40GHz	Various	Various	2024-05-22	2025-05-22
<b>Receiver &amp; Software</b>					
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)		
<b>Additional Equipment used</b>					
241204	Environmental Meter	Fisher Scientific	15-077-963	2023-09-05	2025-09-05

Test Equipment Used - Line-Conducted Emissions – Voltage (Morrisville – Conducted 1)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
CBL087	Coax cable, RG223, N-male to BNC-male, 20-ft.	Pasternack	PE3W06143-240	2024-04-04	2025-04-04
179892	Environmental Meter	Fisher Scientific	15-077-963	2024-08-12	2025-08-12
80391	LISN, 50-ohm/50-uH, 250uH 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50/250-25-2-01	2024-08-01	2025-08-01
70374	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2024-07-30	2025-07-30
52859	Transient Limiter, 0.009-100MHz	Electro-Metrics	EM-7600	2024-04-04	2025-04-04
PS216	AC Power Source	Elgar	CW2501M	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
84681	ANSI C63.4 1m extension cable.	UL	Per Annex B of ANSI C63.4	2024-04-04	2025-04-04

## 8. MEASUREMENT METHOD

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

6 dB BW: ANSI C63.10-2020 Subclause -11.8.2

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

Output Power: ANSI C63.10-2020 Subclause -11.9.1.2 Method PKPM1 Peak-reading power meter  
ANSI C63.10-2020 Subclause -11.9.2.3.2 Method AVGPM-G (Measurement using a gated RF average-reading power meter)

PSD: ANSI C63.10-2020 Subclause -11.10.2 Method PKPSD (peak PSD)

Conducted emissions non-restricted frequency bands: ANSI C63.10-2020 Subclause -11.11 and 6.10.4

Radiated emissions restricted frequency bands: ANSI C63.10-2020 Subclause -11.12.1 and 6.10.5

General radiated emissions: ANSI C63.10 Subclause - 6.3-6.6

AC Power-line conducted emissions: ANSI C63.10-2020, Section 6.2.

## 9. ANTENNA PORT TEST RESULTS

Note: To reduce file size of report, only representative plots are included for some conducted test data in section 9.

### 9.1. ON TIME AND DUTY CYCLE

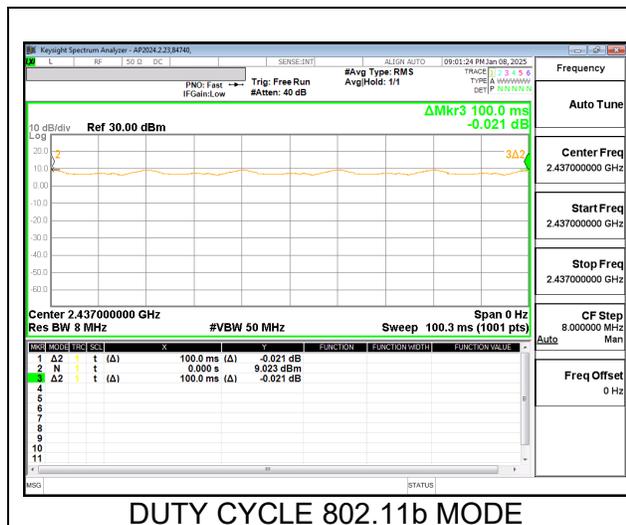
#### LIMITS

None; for reporting purposes only.

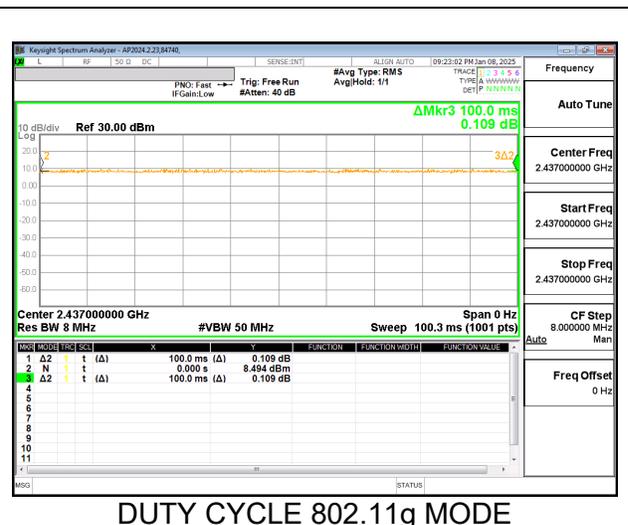
#### PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

Mode	ON Time B (ms)	Period (ms)	Duty Cycle x (linear)	Duty Cycle (%)	Voltage Duty Cycle Correction Factor (dB)	RMS Duty Cycle Correction Factor (dB)
802.11b	100.00	100.00	1.000	100.00	0.00	0.00
802.11g	100.00	100.00	1.000	100.00	0.00	0.00
802.11n HT20	100.00	100.00	1.000	100.00	0.00	0.00
ANT/ANT+	100.00	100.00	1.000	100.00	0.00	0.00
BLE 1Mbps	100.00	100.00	1.000	100.00	0.00	0.00
BLE 2Mbps	100.00	100.00	1.000	100.00	0.00	0.00



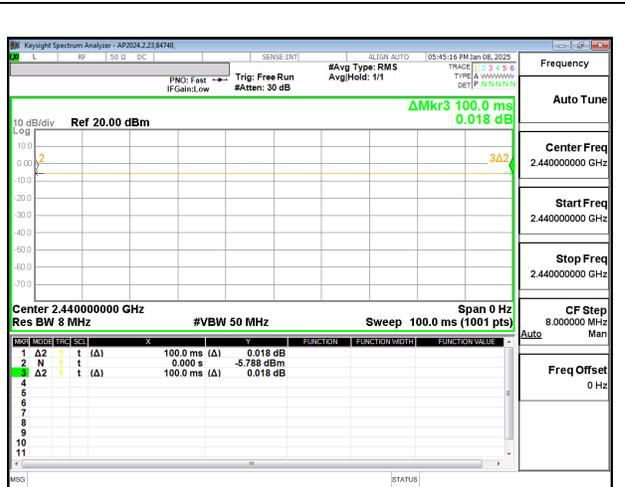
DUTY CYCLE 802.11b MODE



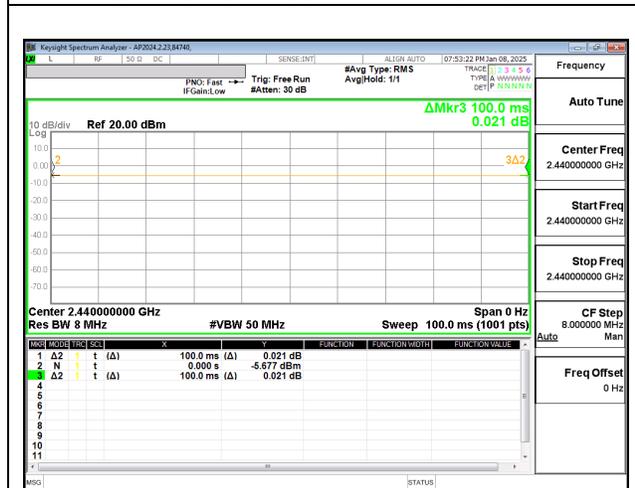
DUTY CYCLE 802.11g MODE



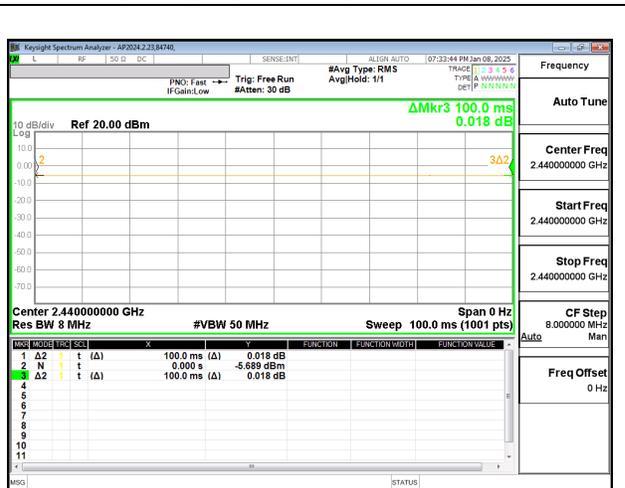
DUTY CYCLE 802.11n HT20 MODE



DUTY CYCLE ANT/ANT+ MODE



DUTY CYCLE BLE 1Mbps



DUTY CYCLE BLE 2Mbps

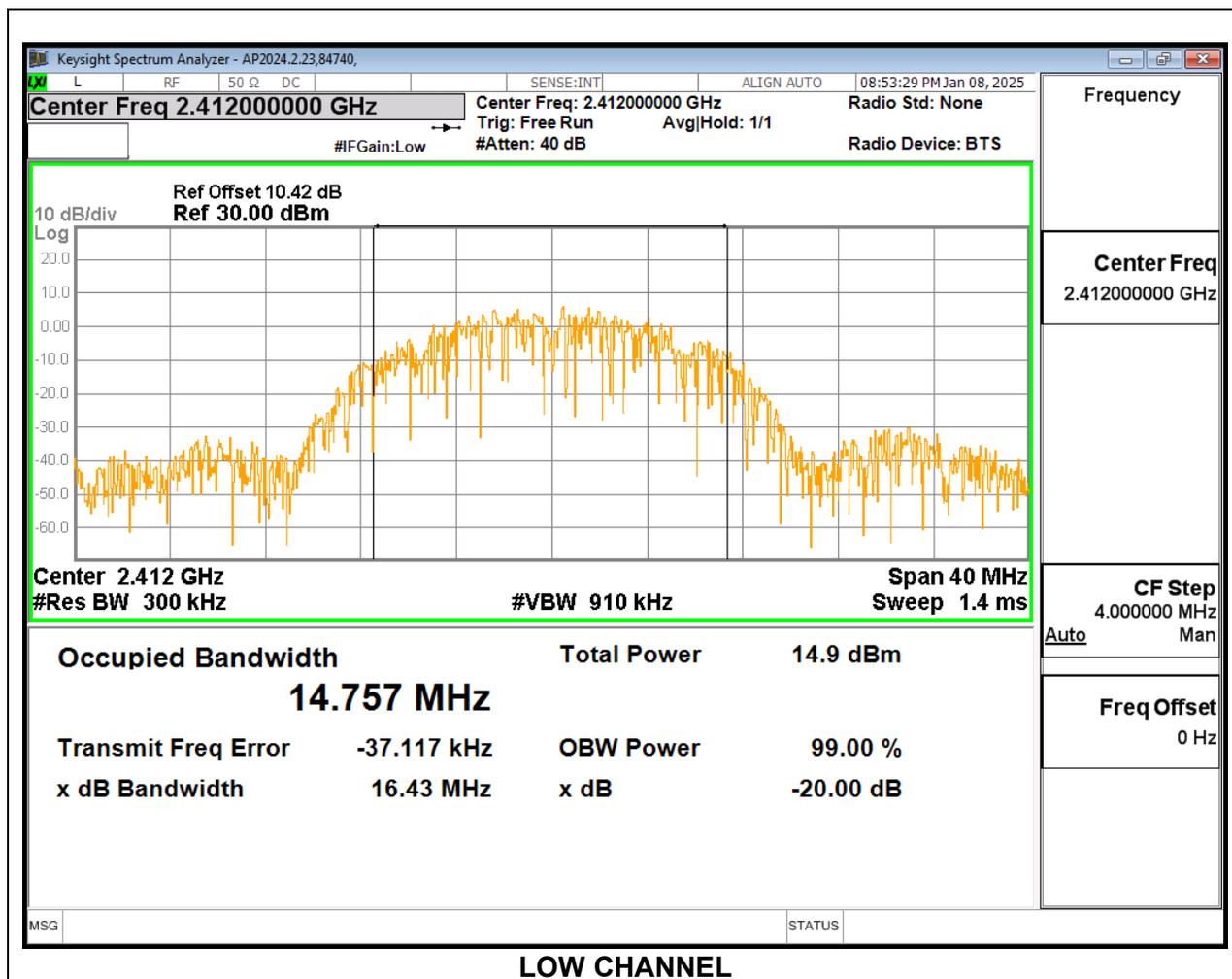
## 9.2. 99% BANDWIDTH

### LIMITS

None; for reporting purposes only.

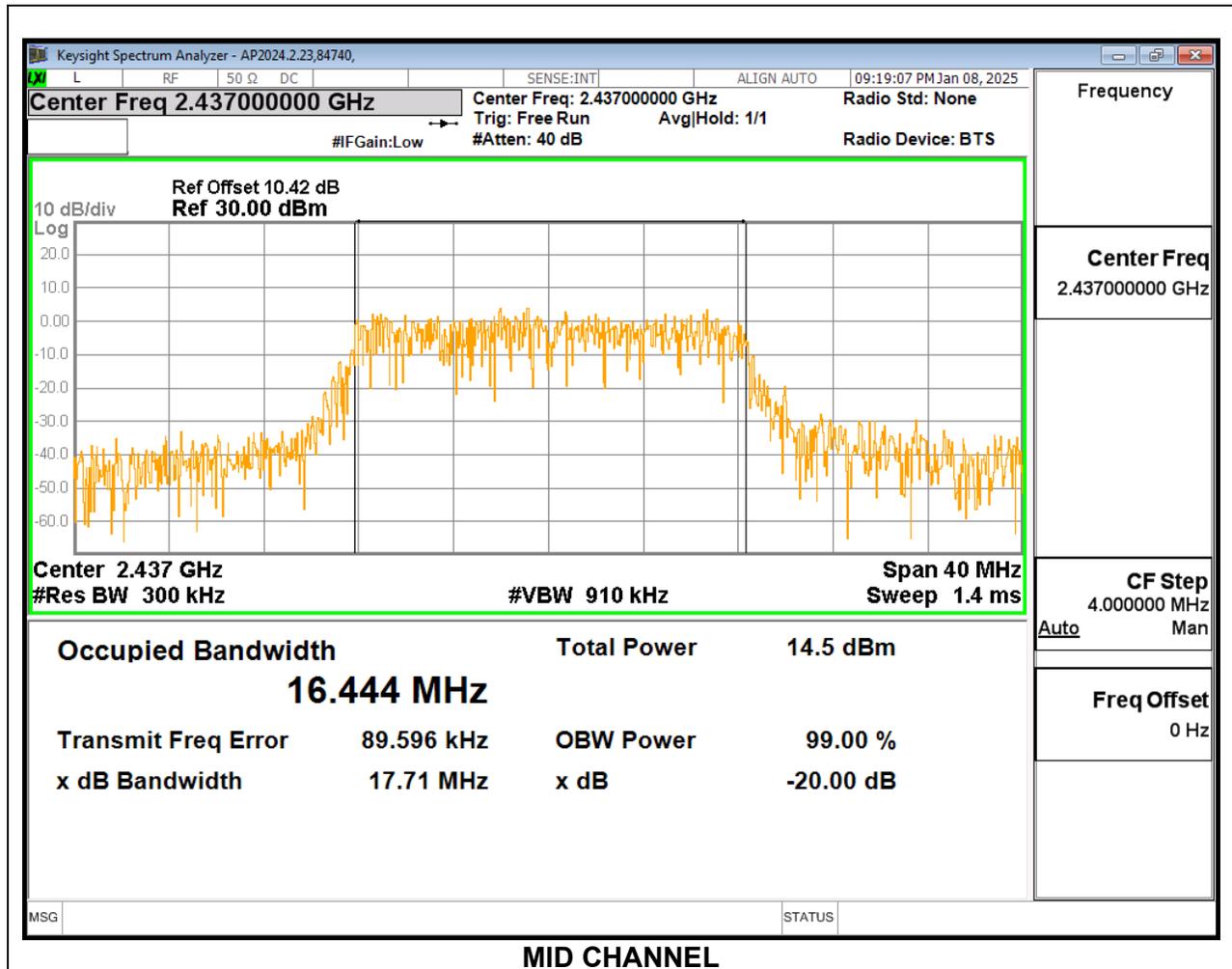
### 9.2.1. 802.11b MODE

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)
Low 1	2412	14.757
Mid 6	2437	14.563
High 13	2472	13.976



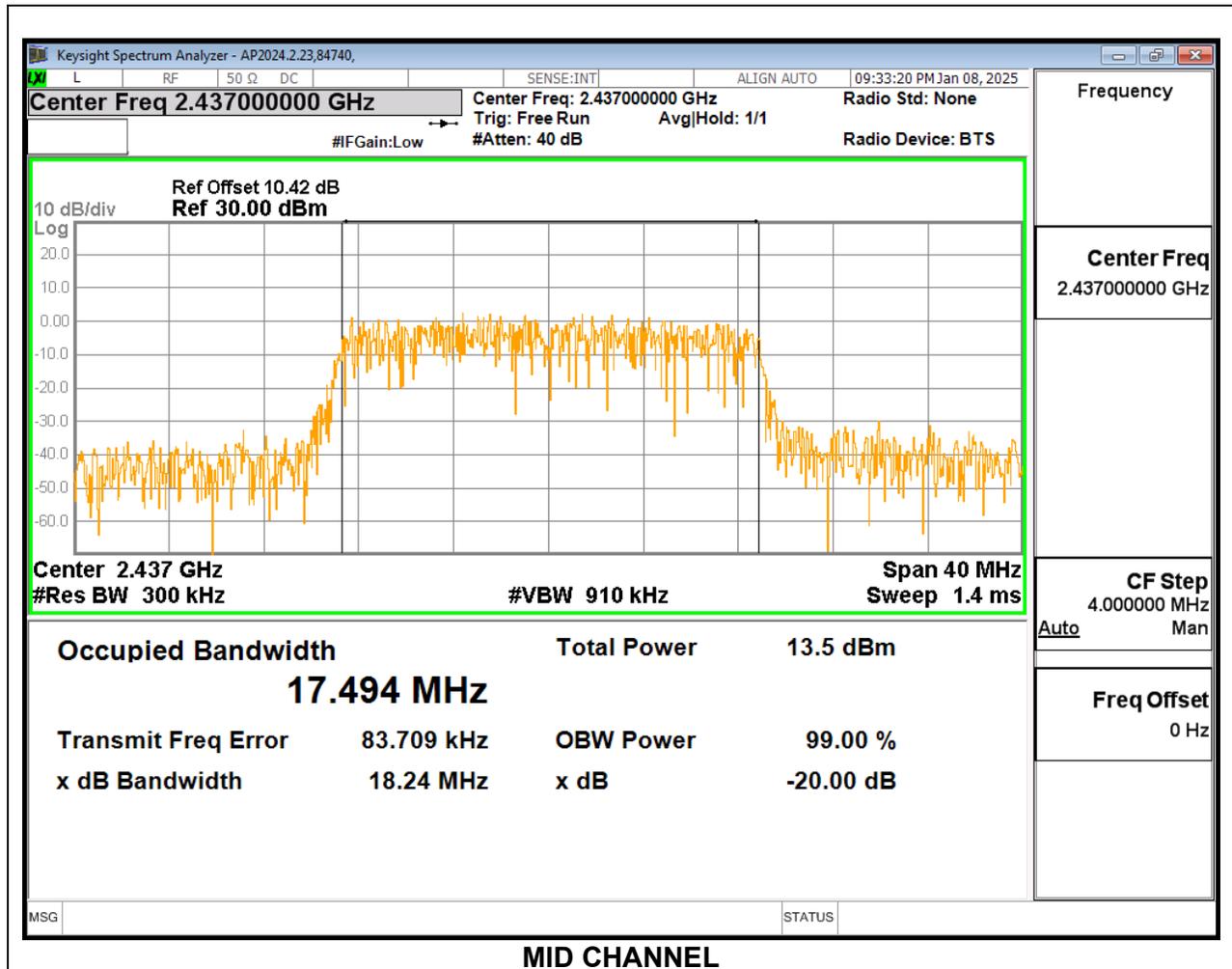
### 9.2.2. 802.11g MODE

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)
Low 1	2412	16.354
Mid 6	2437	16.444
High 13	2472	15.952



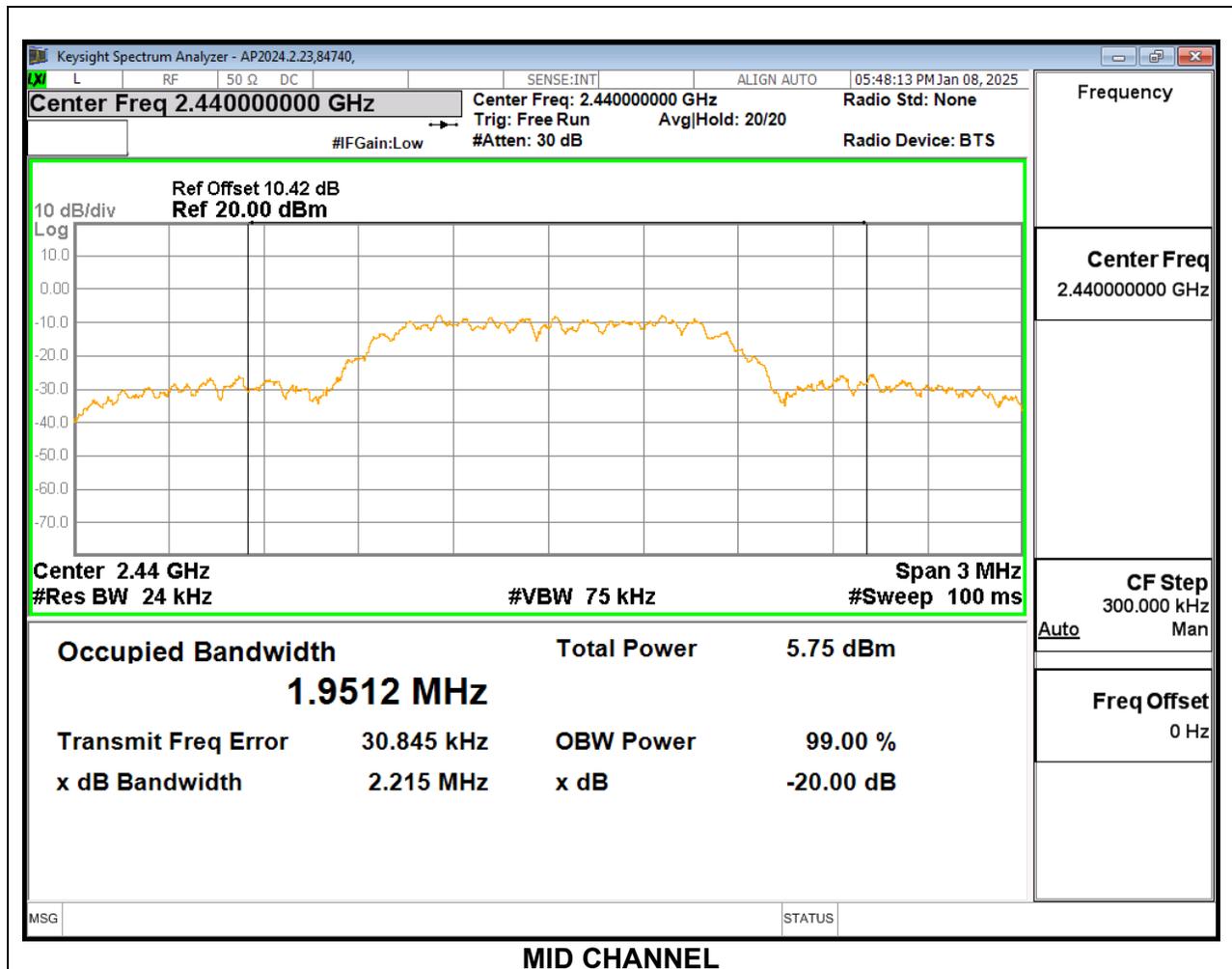
### 9.2.3. 802.11n HT20 MODE

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)
Low 1	2412	17.26
Mid 6	2437	17.494
High 13	2472	16.729



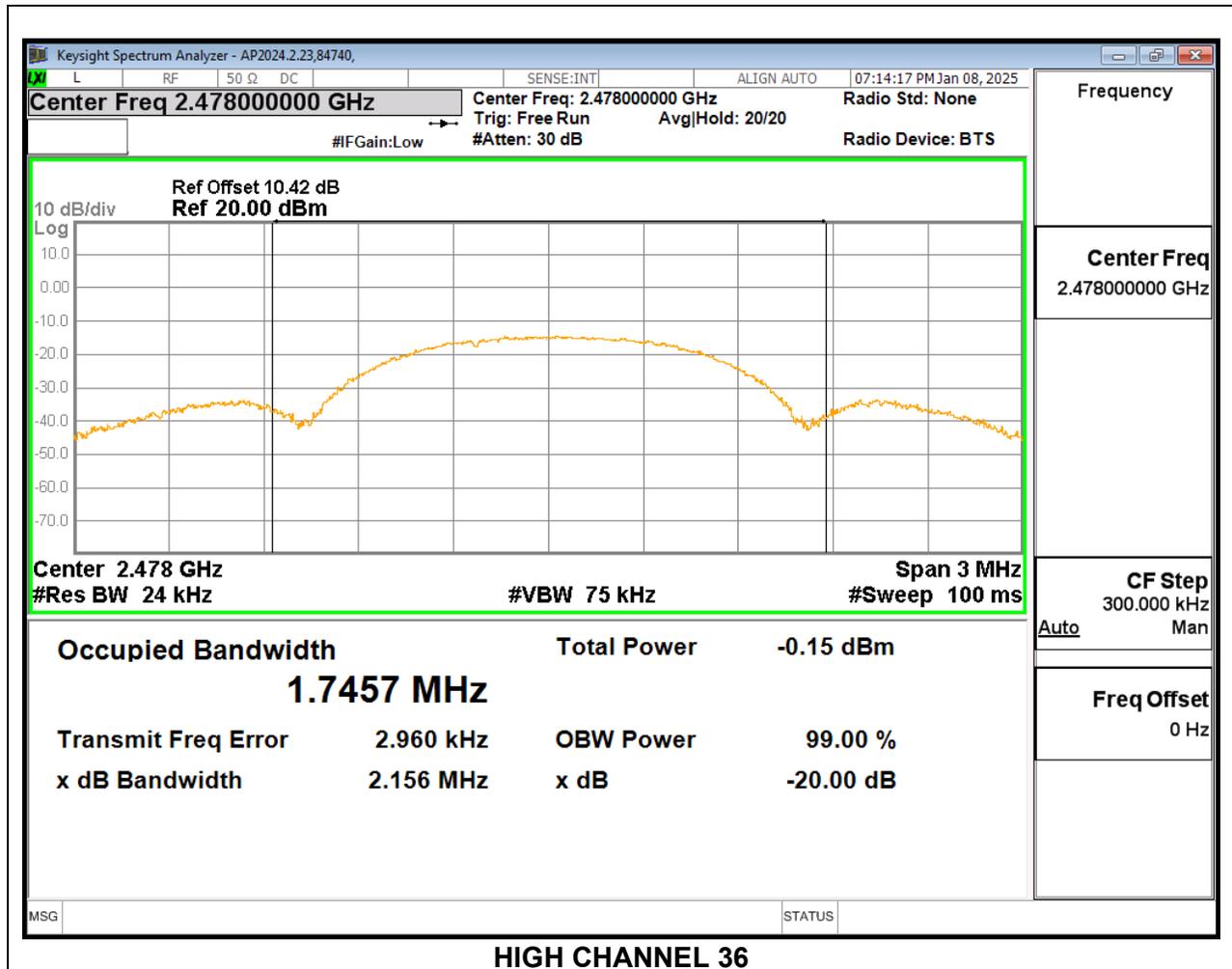
### 9.2.4. ANT/ANT+ MODE

Frequency (MHz)	99% Bandwidth Chain 0 (MHz)
2402	1.3583
2404	1.3037
2440	1.9512
2476	1.3729
2478	1.9347
2480	1.9023



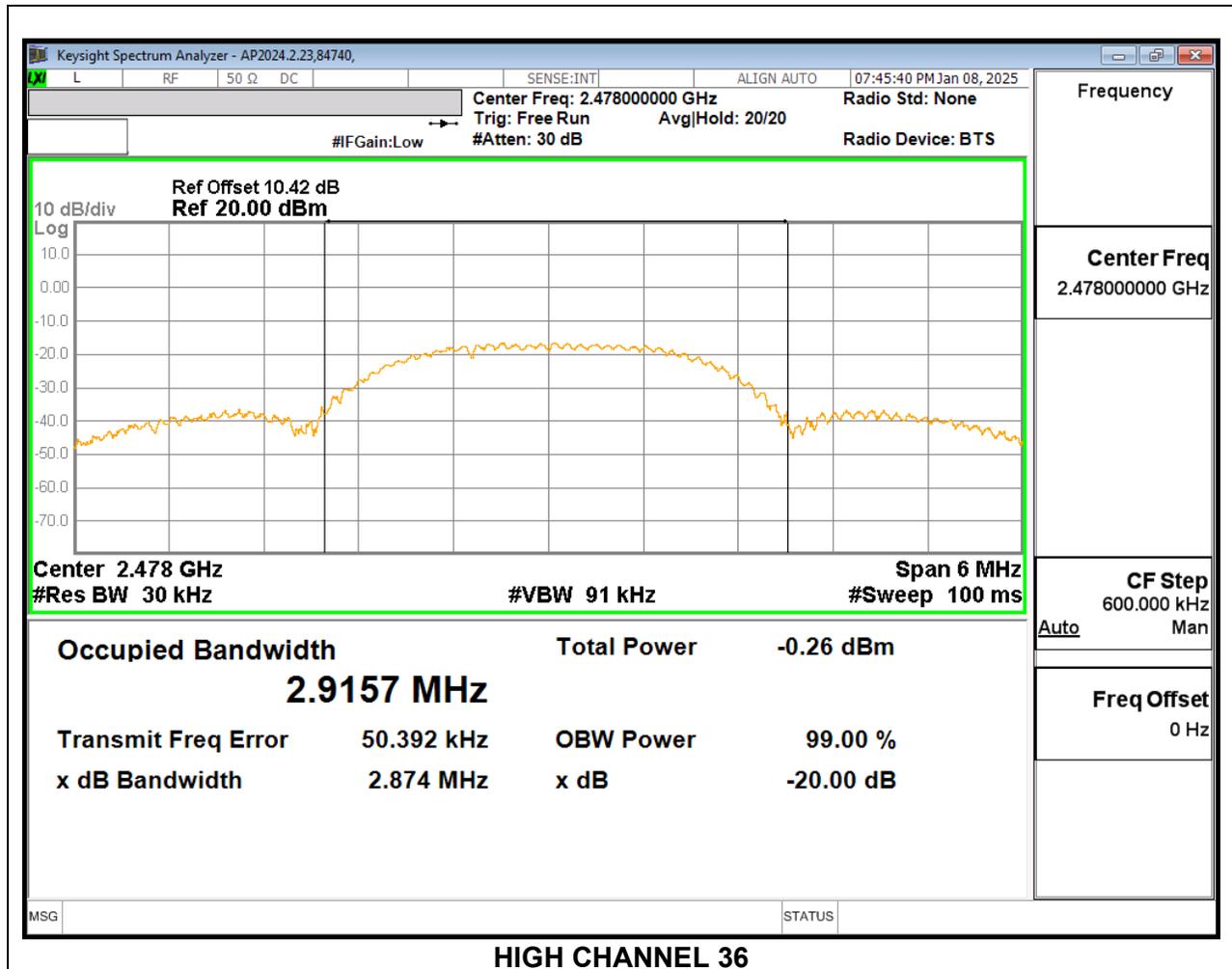
### 9.2.5. BLE 1Mbps MODE

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)
Low 37	2402	1.3208
Low 0	2404	1.3455
Mid 17	2440	1.4636
High 35	2476	1.2738
High 36	2478	1.7457
High 39	2480	1.3046



### 9.2.6. BLE 2Mbps MODE

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)
Low 37	2402	2.5316
Low 0	2404	2.6352
Mid 17	2440	2.7809
High 35	2476	2.5658
High 36	2478	2.9157
High 39	2480	2.8239



### 9.3. 6 dB BANDWIDTH

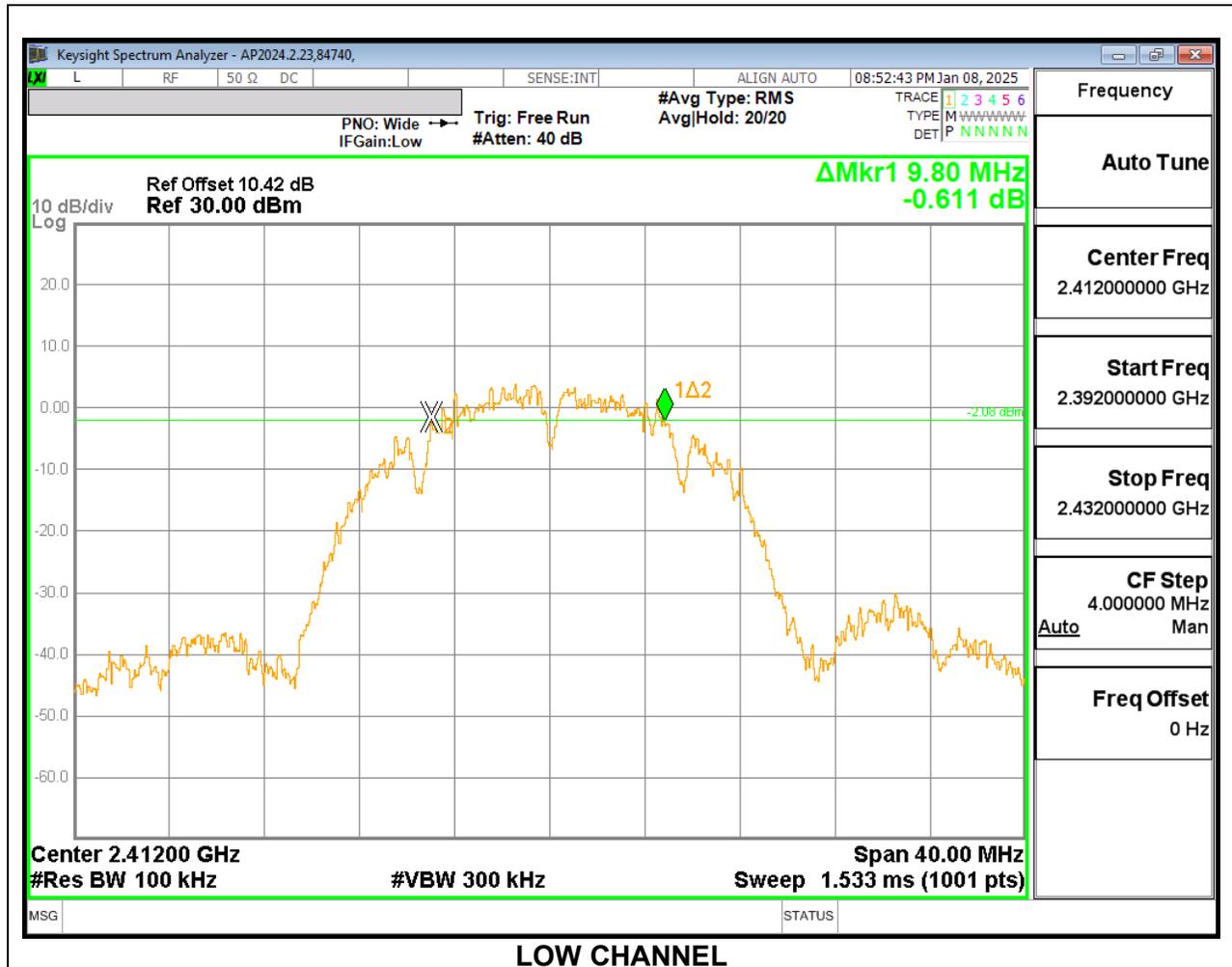
**LIMITS**

FCC §15.247 (a) (2)  
 RSS-247 5.2 (a)

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

#### 9.3.1. 802.11b MODE

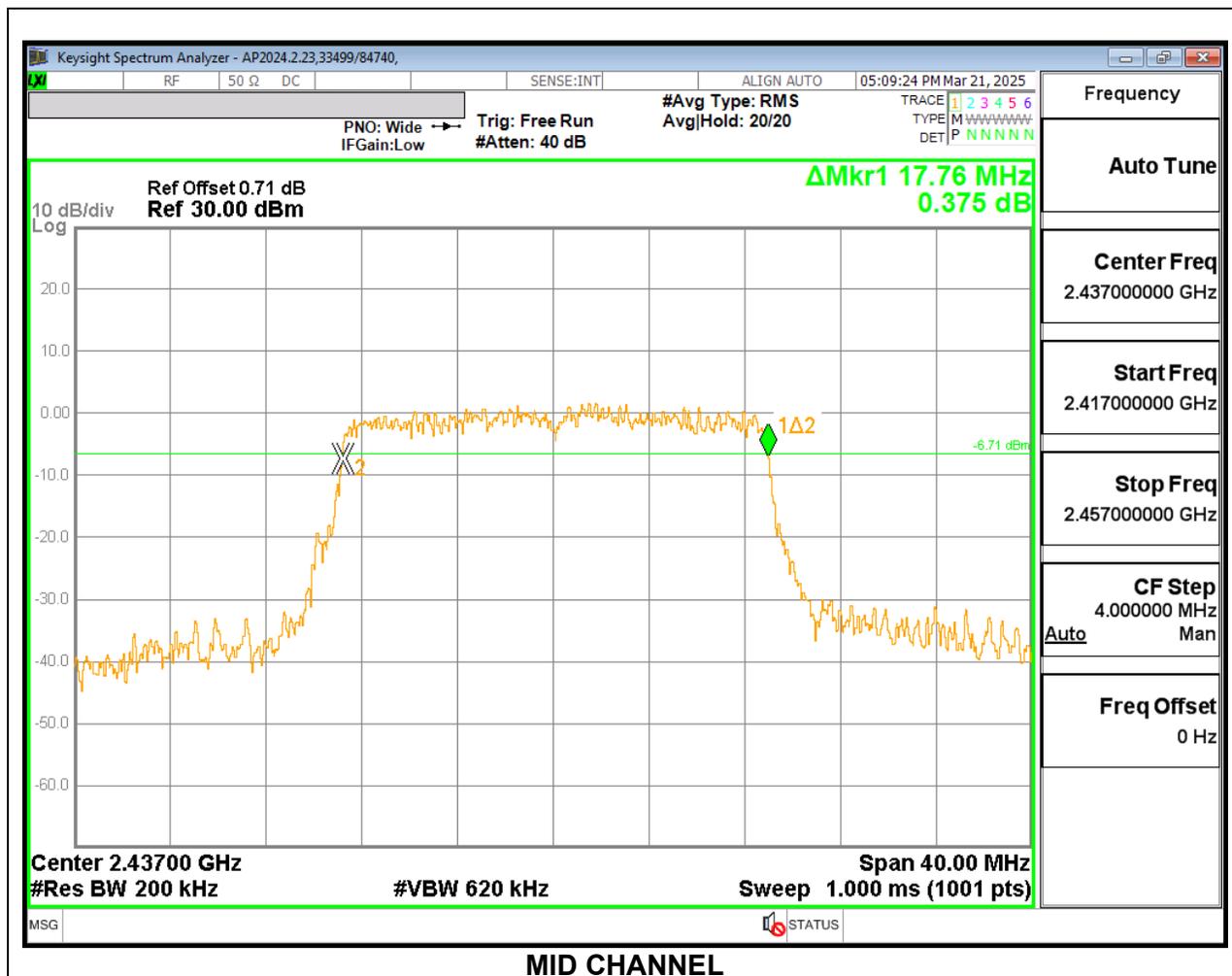
Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	Minimum Limit (MHz)
Low 1	2412	9.8	0.5
Mid 6	2437	8.52	0.5
High 13	2472	9.12	0.5





### 9.3.3. 802.11n HT20 MODE

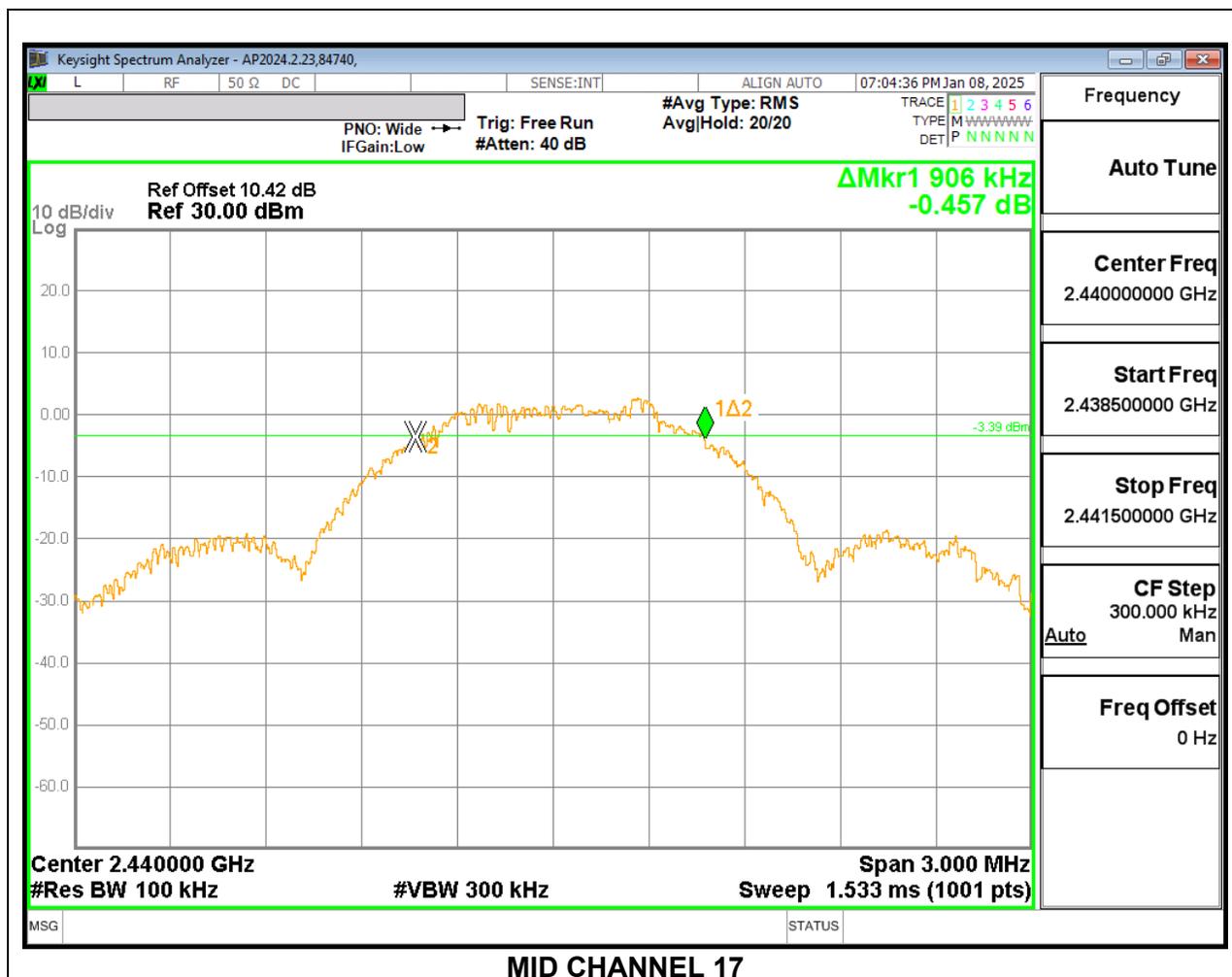
Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	Minimum Limit (MHz)
Low 1	2412	16.84	0.5
Mid 6	2437	17.76	0.5
High 13	2472	16.92	0.5





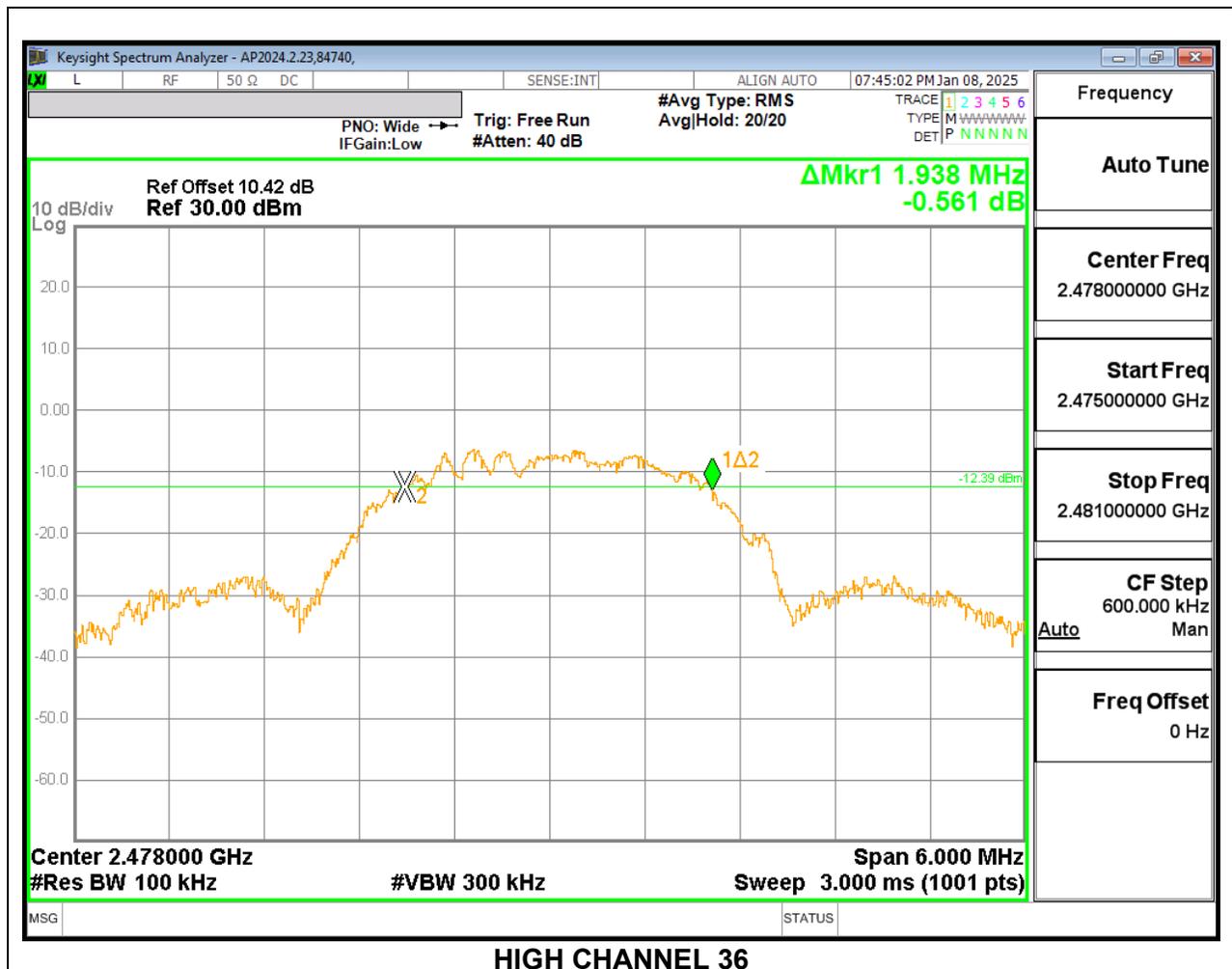
### 9.3.5. BLE 1Mbps MODE

Channel	Frequency (MHz)	6 dB Bandwidth Chain 0 (MHz)	Minimum Limit (MHz)
Low 37	2402	0.786	0.5
Low 0	2404	0.816	0.5
Mid 17	2440	0.906	0.5
High 35	2476	0.786	0.5
High 36	2478	0.906	0.5
High 39	2480	0.828	0.5



### 9.3.6. BLE 2Mbps MODE

Channel	Frequency (MHz)	6 dB Bandwidth Chain 0 (MHz)	Minimum Limit (MHz)
Low 37	2402	1.440	0.5
Low 0	2404	1.728	0.5
Mid 17	2440	1.890	0.5
High 35	2476	1.596	0.5
High 36	2478	1.938	0.5
High 39	2480	1.860	0.5



## 9.4. OUTPUT POWER

### LIMITS

FCC §15.247 (b) (3)  
RSS-247 5.4 (d)

### TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of .68 dB (cable) was entered as an offset in the power meter.

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

**RESULTS**

**9.4.1. 802.11b MODE**

<b>Test Engineer:</b>	84740
<b>Test Date:</b>	2025-01-13

**Results:**

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>Chain 0 Meas Power (dBm)</b>	<b>Power Limit (dBm)</b>	<b>Margin (dB)</b>
Low 1	2412	15.14	30.00	-14.86
Mid 6	2437	15.05	30.00	-14.95
High 13	2472	14.58	30.00	-15.42

**9.4.2. 802.11g MODE**

<b>Test Engineer:</b>	84740
<b>Test Date:</b>	2025-01-13

**Results:**

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	21.01	30.00	-8.99
Mid 6	2437	21.31	30.00	-8.69
High 11	2462	20.78	30.00	-9.22
High 12	2467	19.20	30.00	-10.80
High 13	2472	16.82	30.00	-13.18

**9.4.3. 802.11n HT20 MODE**

<b>Test Engineer:</b>	84740
<b>Test Date:</b>	2025-01-13

**Results:**

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	20.19	30.00	-9.81
Mid 6	2437	20.06	30.00	-9.94
High 12	2467	20.15	30.00	-9.85
High 13	2472	17.16	30.00	-12.84

### 9.4.4. ANT/ANT+ MODE

<b>Test Engineer:</b>	84740
<b>Test Date:</b>	2025-01-13

<b>Frequency (MHz)</b>	<b>Chain 0 Meas Power (dBm)</b>	<b>Power Limit (dBm)</b>	<b>Margin (dB)</b>
2402	-0.02	30.00	-30.02
2404	4.08	30.00	-25.92
2440	4.71	30.00	-25.29
2478	3.62	30.00	-26.38
2480	-0.49	30.00	-30.49

### 9.4.5. BLE 1Mbps MODE

<b>Test Engineer:</b>	84740
<b>Test Date:</b>	2025-01-13

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 37	2402	-0.10	30.00	-30.10
Low 0	2404	4.10	30.00	-25.90
Mid 17	2440	4.73	30.00	-25.27
High 35	2476	3.60	30.00	-26.40
High 36	2478	-0.93	30.00	-30.93
High 39	2480	-1.01	30.00	-31.01

### 9.4.6. BLE 2Mbps MODE

<b>Test Engineer:</b>	84740
<b>Test Date:</b>	2025-01-13

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>Chain 0 Meas Power (dBm)</b>	<b>Power Limit (dBm)</b>	<b>Margin (dB)</b>
Low 37	2402	-0.43	30.00	-30.43
Low 0	2404	4.11	30.00	-25.89
Mid 17	2440	4.75	30.00	-25.25
High 35	2476	3.60	30.00	-26.40
High 36	2478	-0.93	30.00	-30.93
High 39	2480	-0.46	30.00	-30.46

## 9.5. 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 .68 dB (cable) 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 power sensor. Gated average output power was read directly from power meter.

**9.5.1. 2.4 WLAN Results**

<b>Test Engineer:</b>	84740
<b>Test Date:</b>	2025-01-13

Mode	Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)
<b>802.11b</b>	Low 1	2412	12.80
	Mid 6	2437	13.50
	High 13	2472	12.60
<b>802.11g</b>	Low 1	2412	15.00
	Mid 6	2437	15.11
	High 11	2462	14.80
	High 12	2467	12.94
	High 13	2472	10.49
<b>802.11nHT20</b>	Low 1	2412	13.81
	Mid 6	2437	13.71
	High 12	2467	13.30
	High 13	2472	10.65

**9.5.2. ANT/ANT+**

<b>Test Engineer:</b>	84740
<b>Test Date:</b>	2025-01-13

Frequency (MHz)	Chain 0 Meas Power (dBm)
2402	-0.28
2404	3.872
2440	4.486
2478	3.414
2480	-0.749

### 9.5.3. BLE 1Mbps Mode

<b>Test Engineer:</b>	84740
<b>Test Date:</b>	2025-01-13

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)
Low 37	2402	-0.74
Low 0	2404	3.448
Mid 17	2440	4.321
High 35	2476	3.303
High 36	2478	-1.3
High 39	2480	-1.38

### 9.5.4. BLE 2Mbps Mode

<b>Test Engineer:</b>	84740
<b>Test Date:</b>	2025-01-13

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)
Low 37	2402	-0.729
Low 0	2404	3.521
Mid 17	2440	4.15
High 35	2476	3.002
High 36	2478	-1.45
High 39	2480	-0.781

## 9.6. POWER SPECTRAL DENSITY

### LIMITS

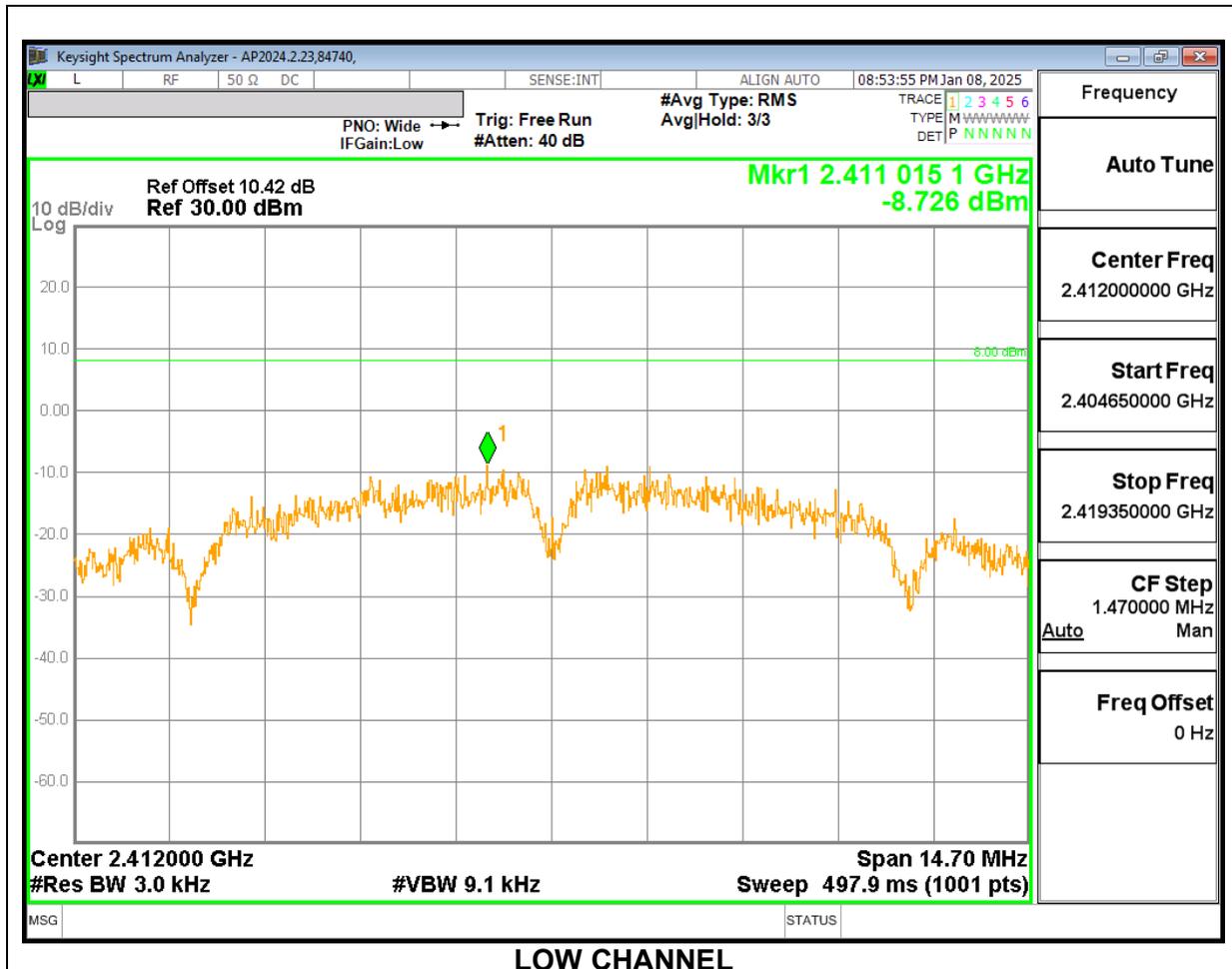
FCC §15.247 (e)  
 RSS-247 (5.2) (b)

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.

### 9.6.1. 802.11b MODE

#### PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-8.73	8.0	-16.7
Mid 6	2437	-10.64	8.0	-18.6
High 13	2472	-10.69	8.0	-18.7

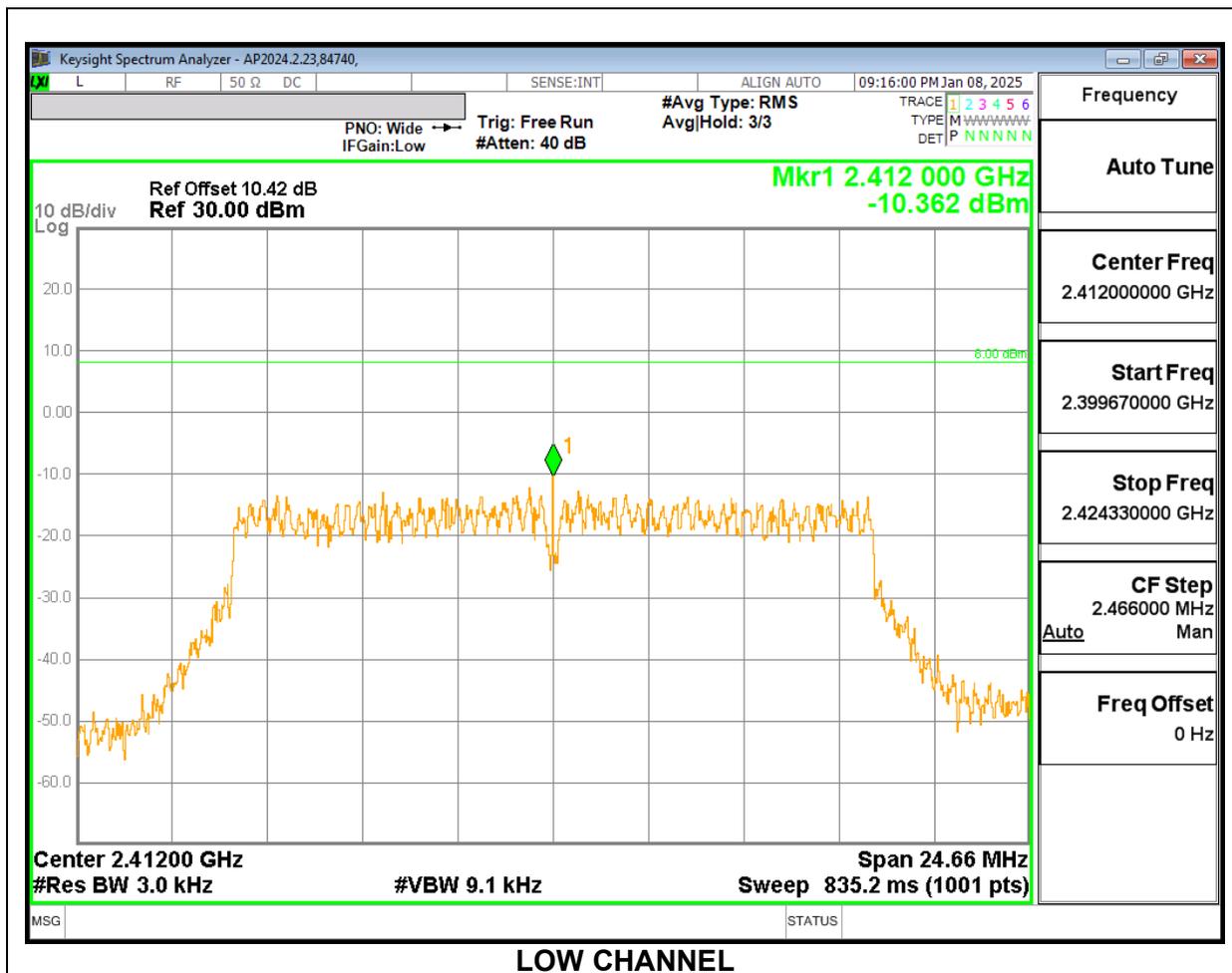


LOW CHANNEL

### 9.6.2. 802.11g MODE

#### PSD Results

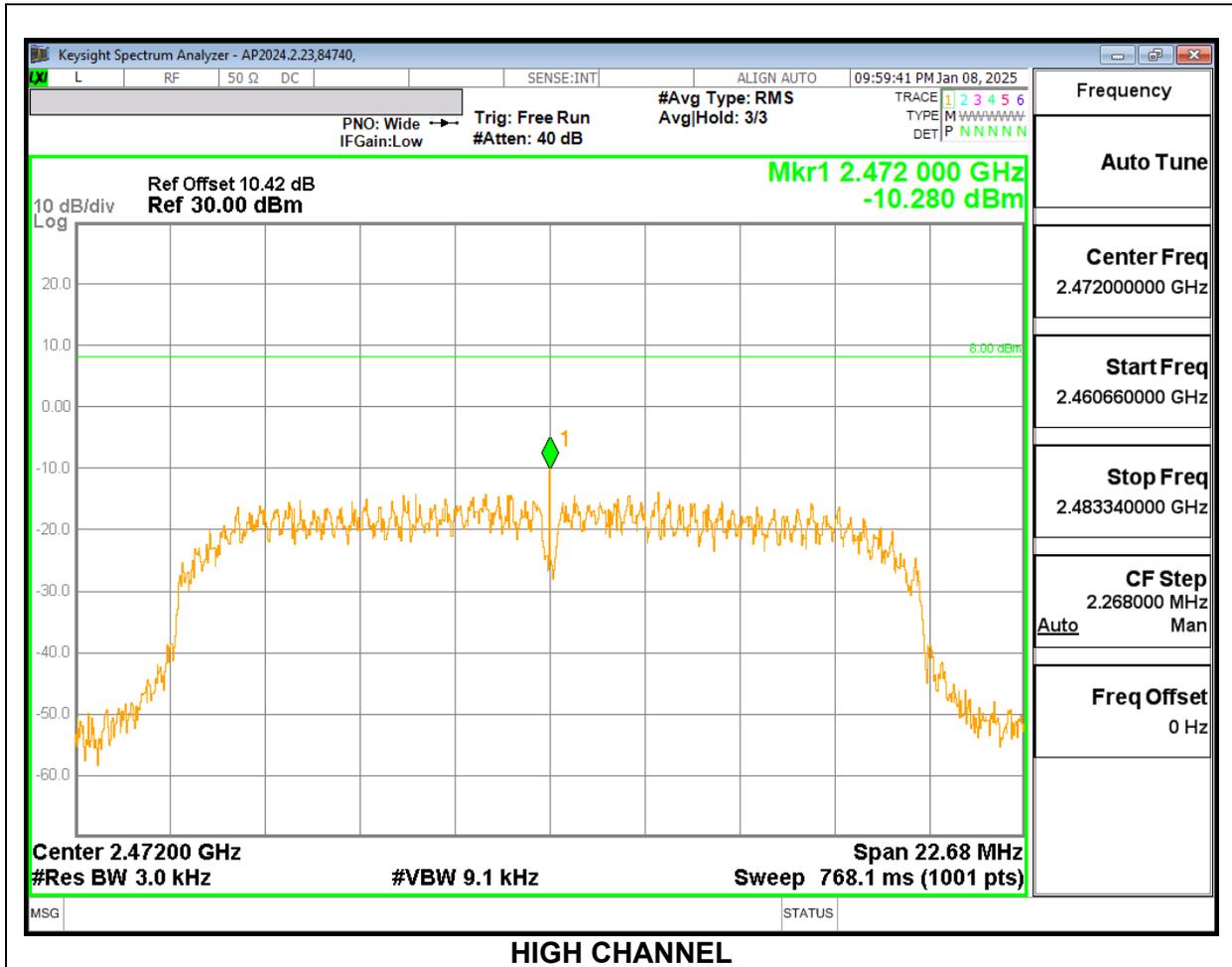
Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-10.36	8.0	-18.4
Mid 6	2437	-10.50	8.0	-18.5
High 13	2472	-11.10	8.0	-19.1



### 9.6.3. 802.11n HT20 MODE

#### PSD Results

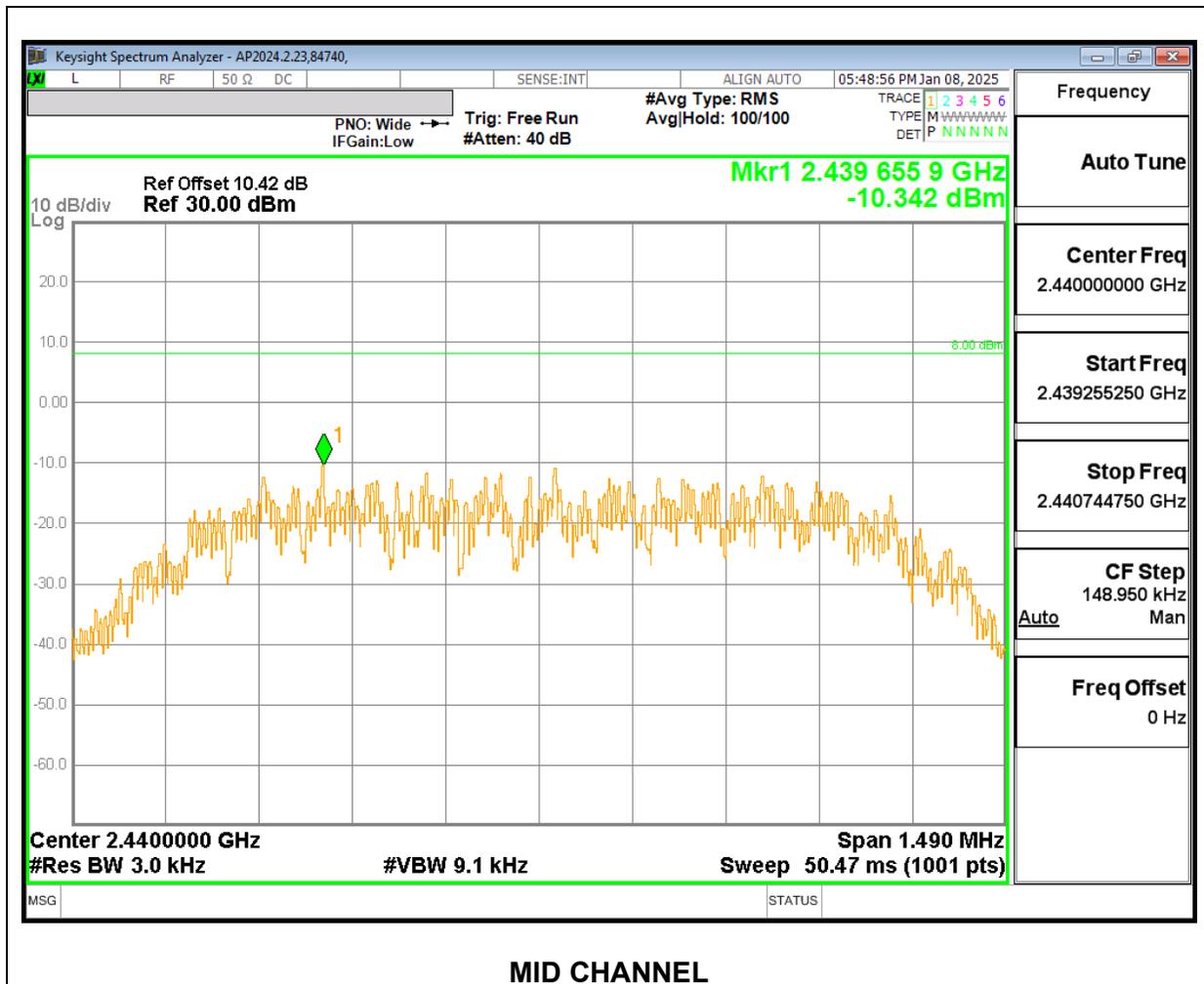
Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-11.71	8.0	-19.7
Mid 6	2437	-11.23	8.0	-19.2
High 13	2472	-10.28	8.0	-18.3



### 9.6.4. ANT/ANT+ MODE

#### PSD Results

Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
2402	-17.63	8.0	-25.6
2404	-12.87	8.0	-20.9
2440	-10.34	8.0	-18.3
2476	-12.62	8.0	-20.6
2478	-11.38	8.0	-19.4
2480	-17.68	8.0	-25.7

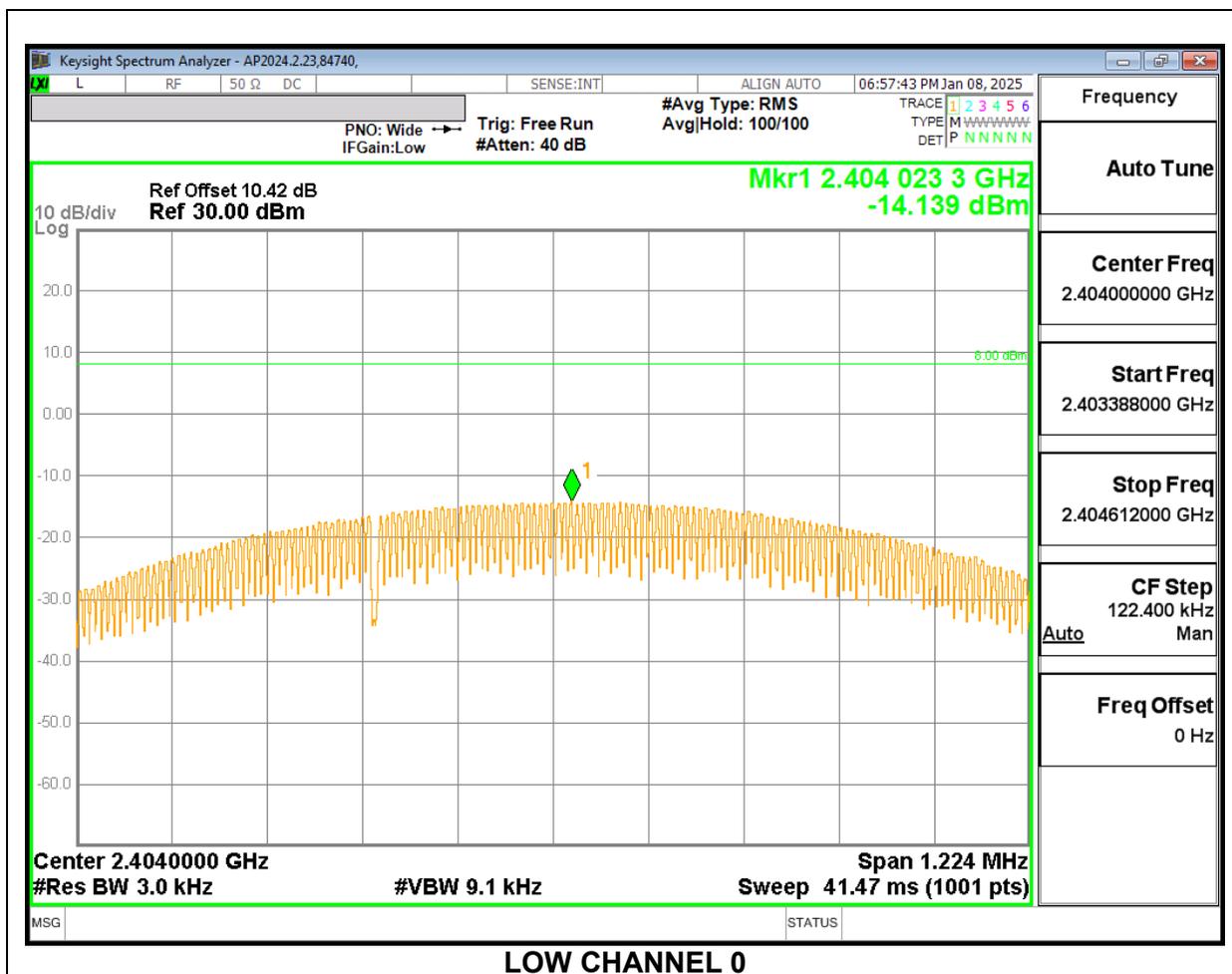


MID CHANNEL

### 9.6.5. BLE 1Mbps MODE

#### PSD Results

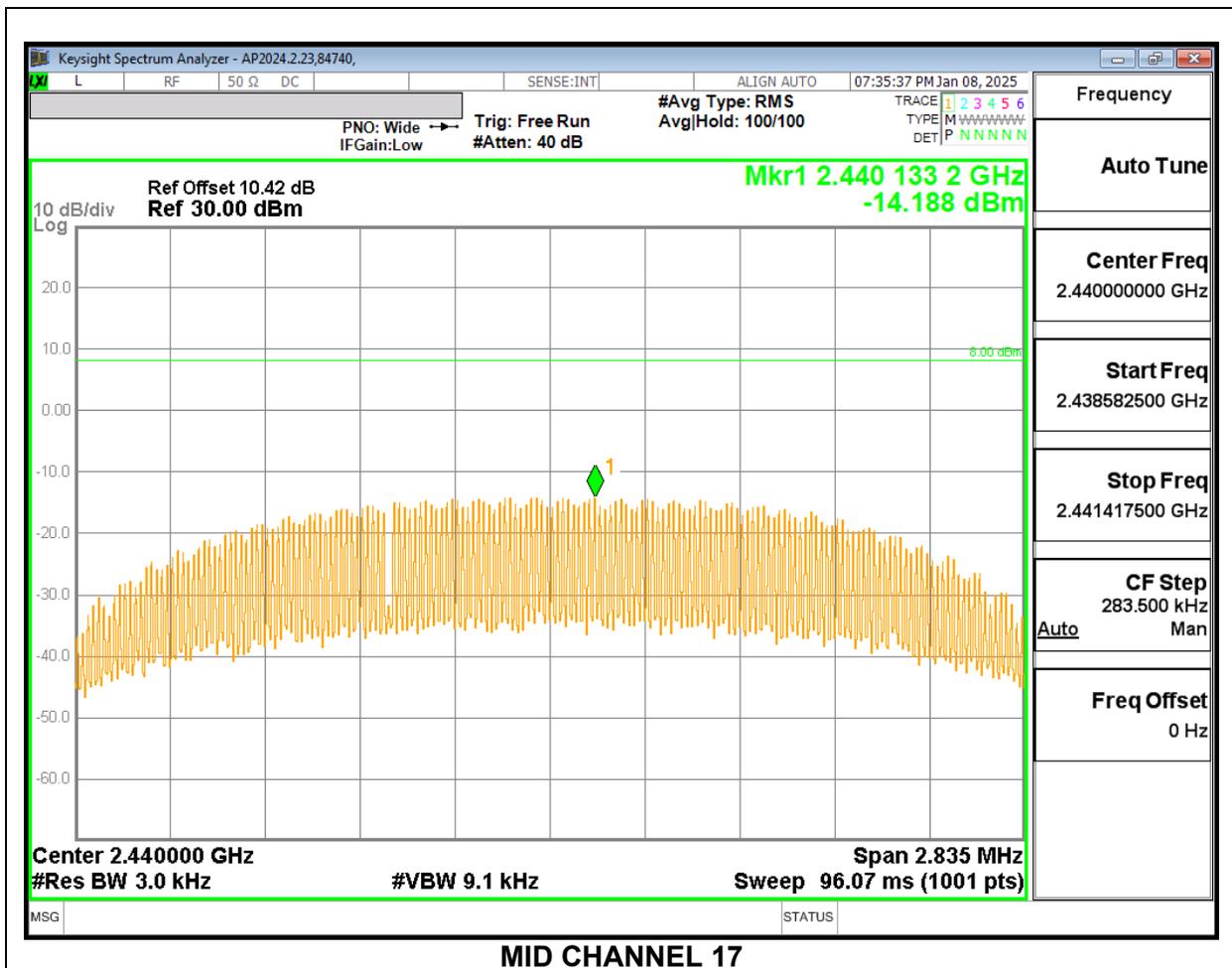
Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 37	2402	-18.61	8.0	-26.6
Low 0	2404	-14.14	8.0	-22.1
Mid 17	2440	-14.19	8.0	-22.2
High 35	2476	-14.28	8.0	-22.3
High 36	2478	-20.05	8.0	-28.1
High 39	2480	-19.21	8.0	-27.2



### 9.6.6. BLE 2Mbps MODE

#### PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 37	2402	-18.63	8.0	-26.6
Low 0	2404	-14.41	8.0	-22.4
Mid 17	2440	-14.19	8.0	-22.2
High 35	2476	-14.82	8.0	-22.8
High 36	2478	-19.93	8.0	-27.9
High 39	2480	-19.76	8.0	-27.8



## 9.7. CONDUCTED SPURIOUS EMISSIONS

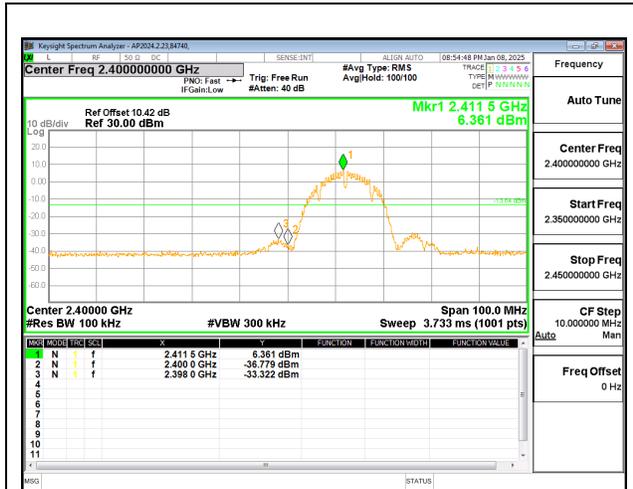
### LIMITS

FCC §15.247 (d)  
RSS-247 5.5

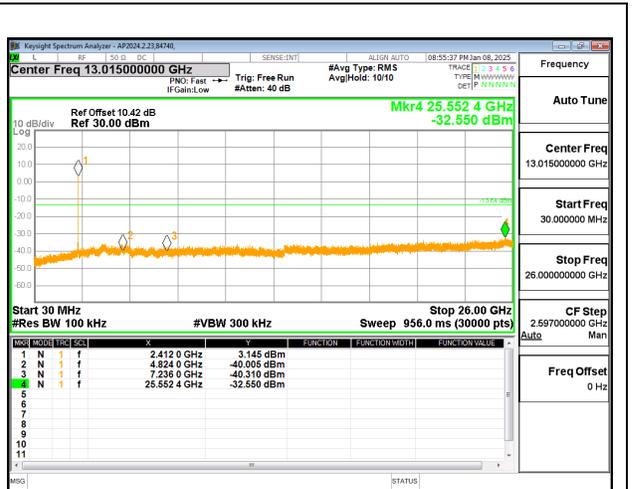
Output power was measured based on the use of peak measurement, therefore the required attenuation is -20 dBc.

### RESULTS

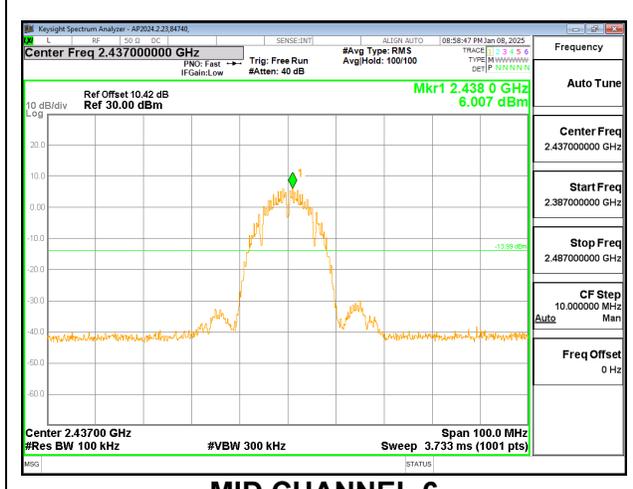
### 9.7.1. 802.11b MODE



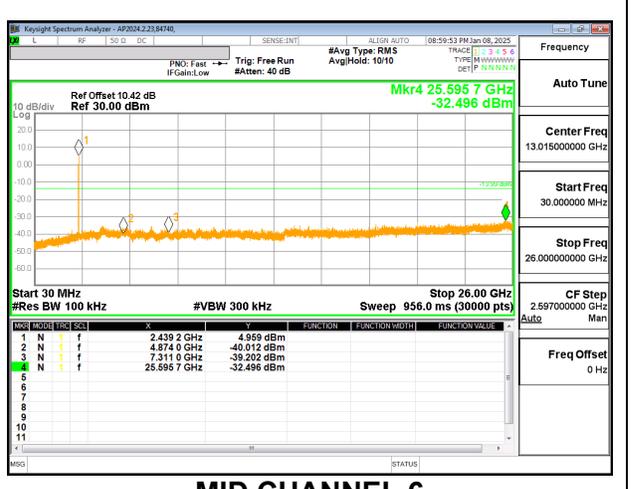
**LOW CHANNEL 1**



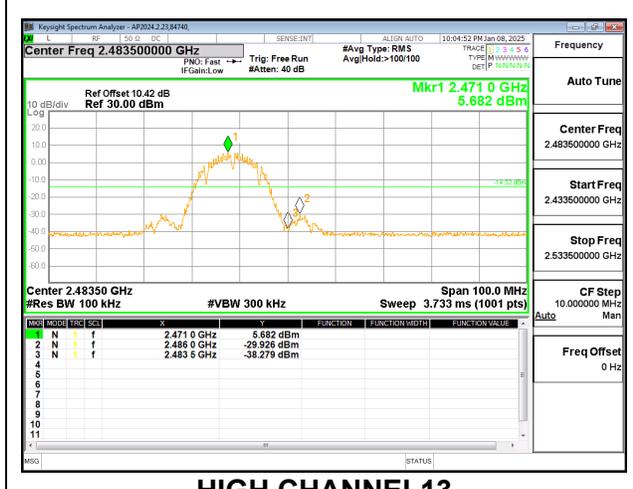
**LOW CHANNEL 1**



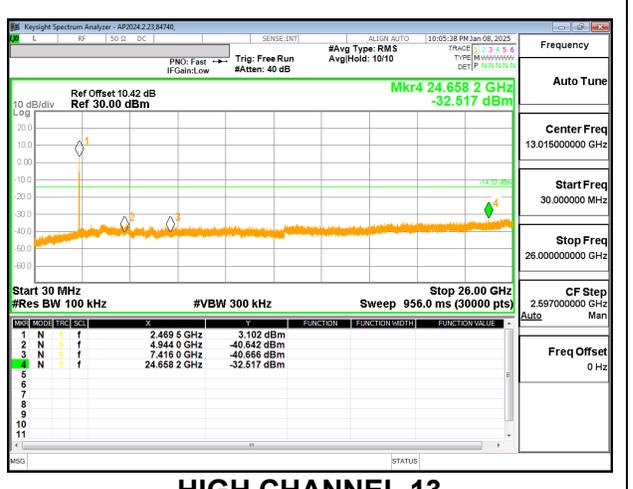
**MID CHANNEL 6**



**MID CHANNEL 6**

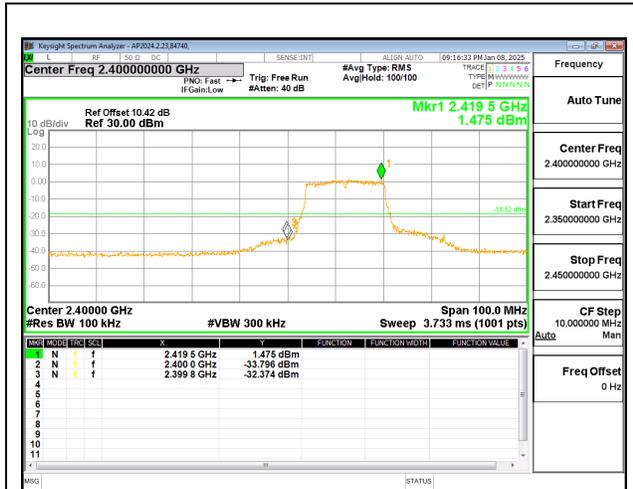


**HIGH CHANNEL 13**

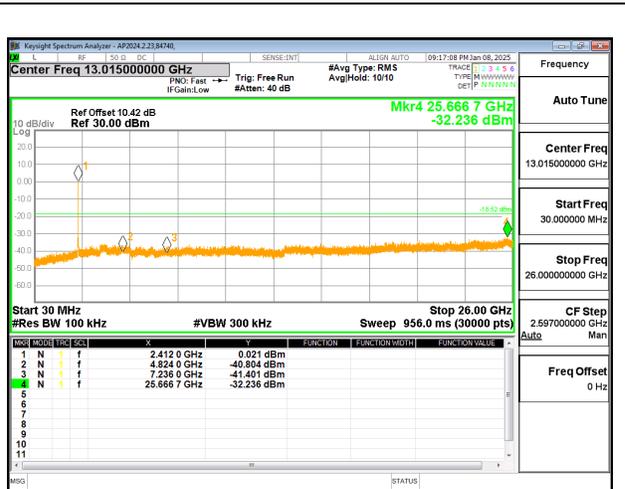


**HIGH CHANNEL 13**

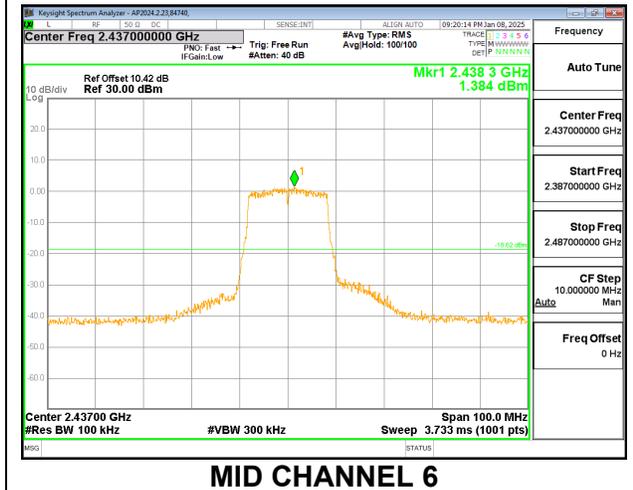
### 9.7.2. 802.11g MODE



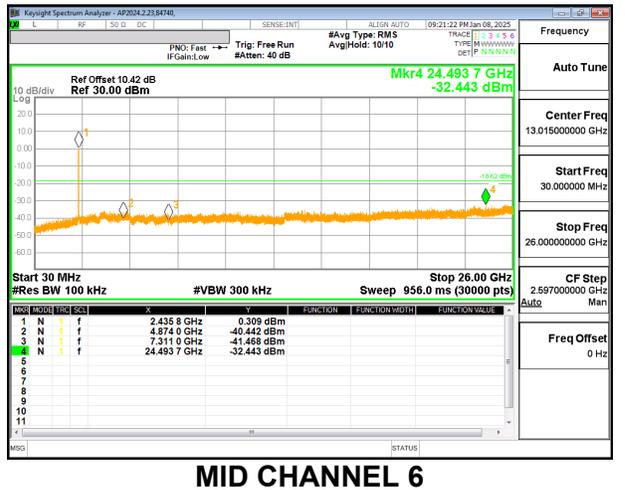
LOW CHANNEL 1



LOW CHANNEL 1



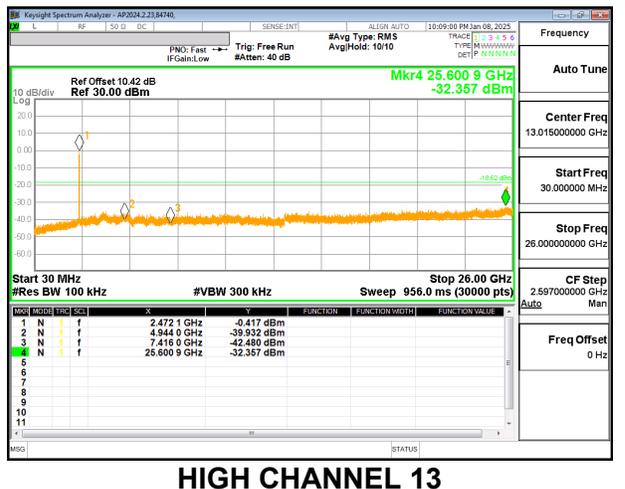
MID CHANNEL 6



MID CHANNEL 6

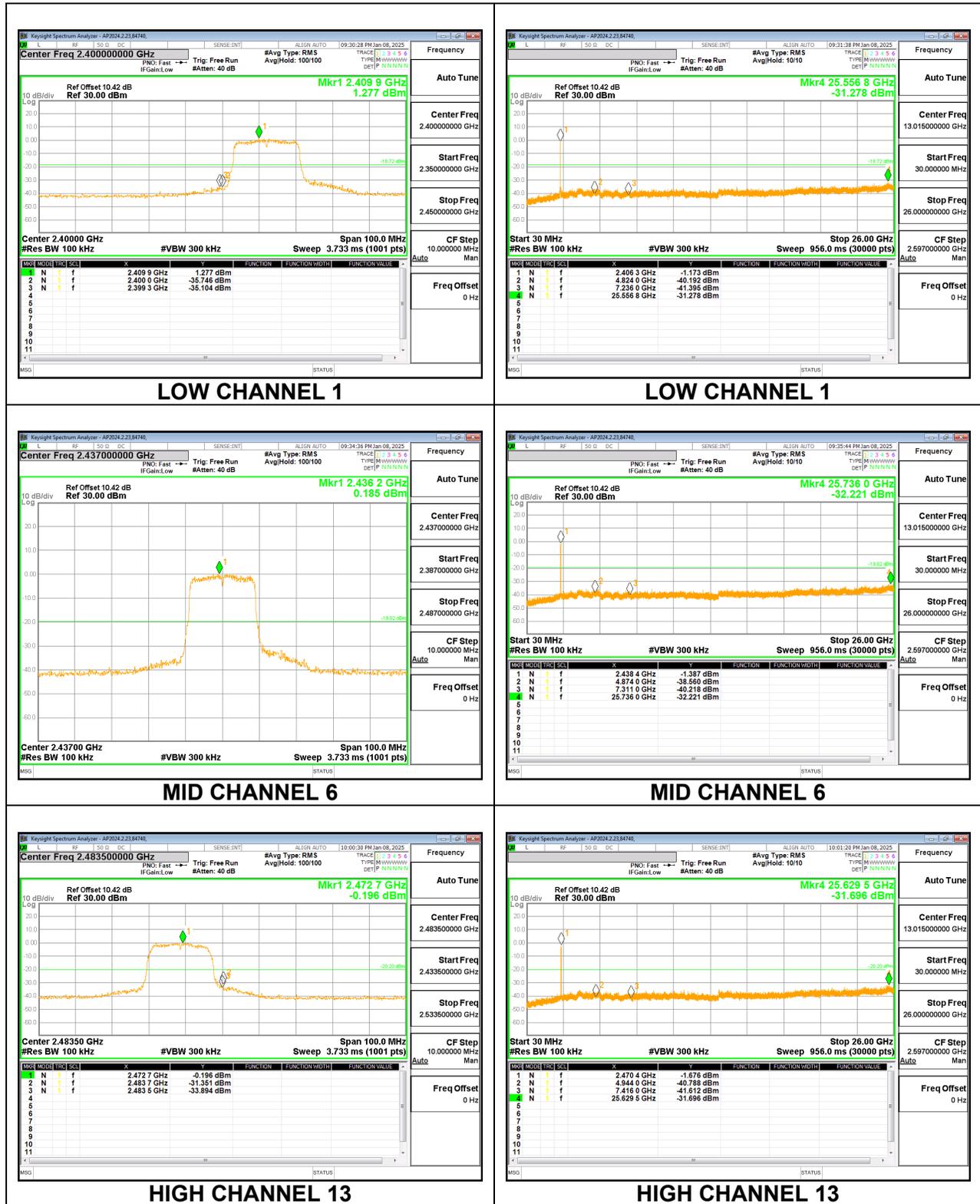


HIGH CHANNEL 13

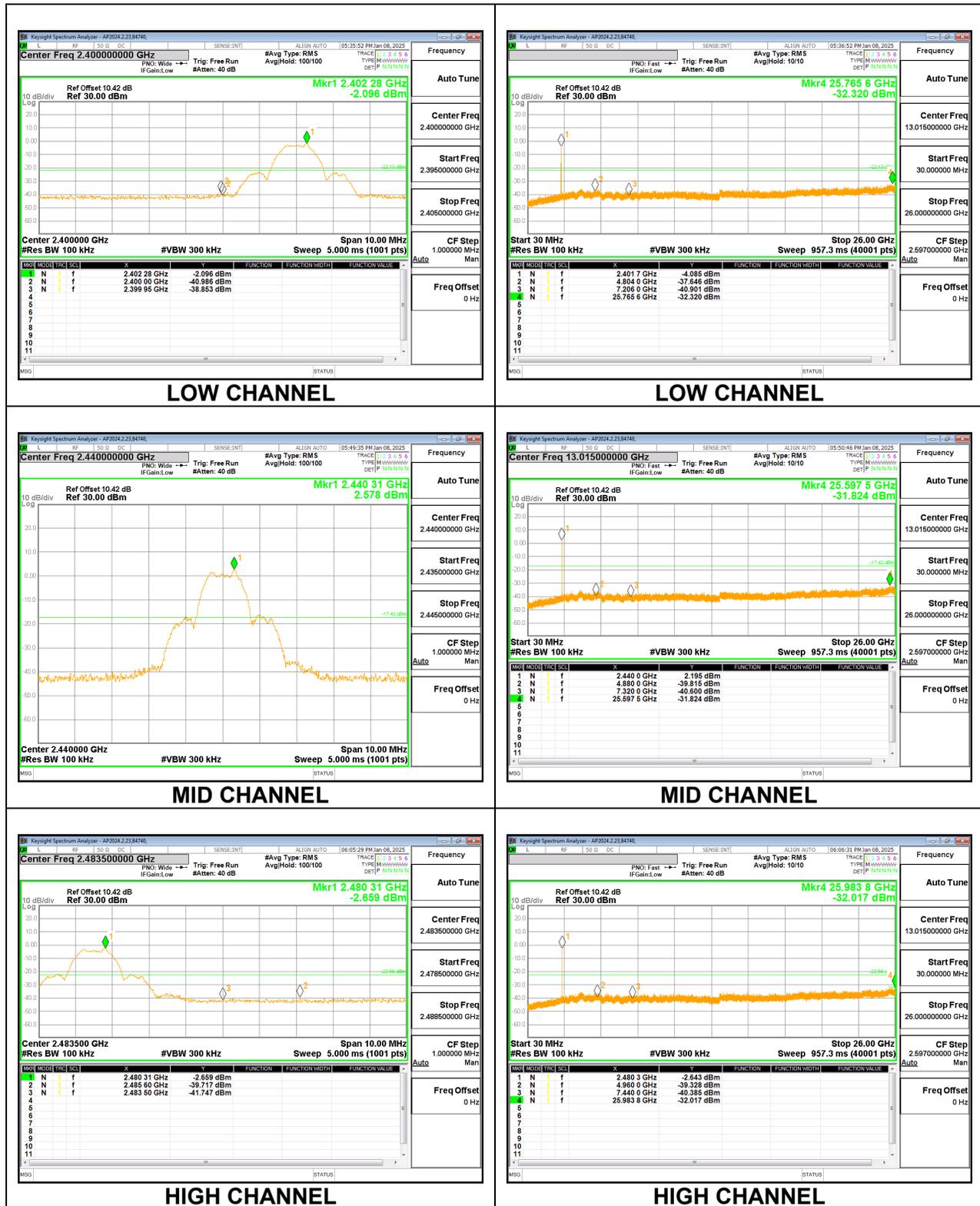


HIGH CHANNEL 13

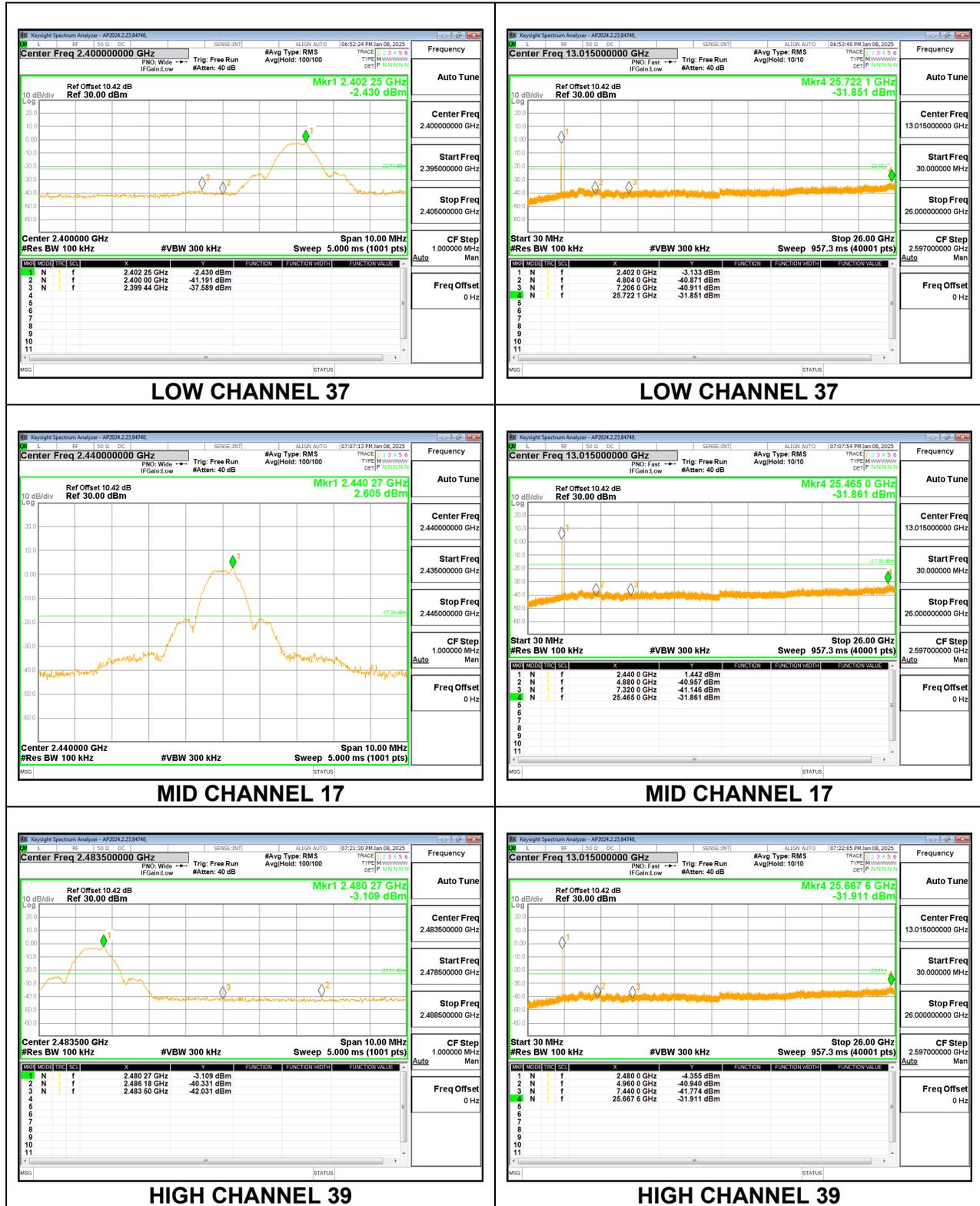
### 9.7.3. 802.11n HT20 MODE



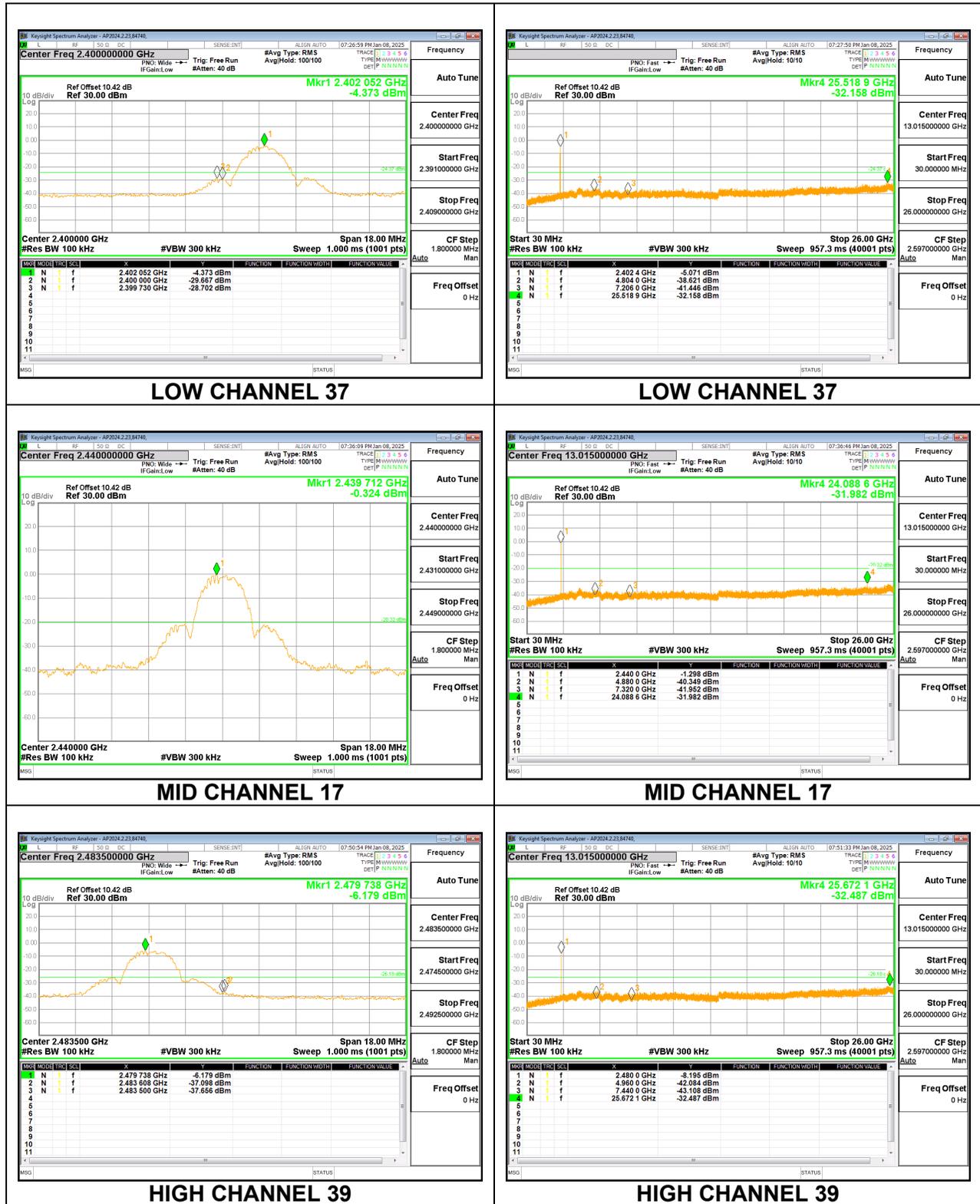
### 9.7.4. ANT/ANT+ MODE



### 9.7.5. BLE 1Mbps MODE



### 9.7.6. BLE 2Mbps MODE



## 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 and as applicable for linear voltage 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).

Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

#### **KDB 414788 Open Field Site (OFS) and Chamber Correlation Justification**

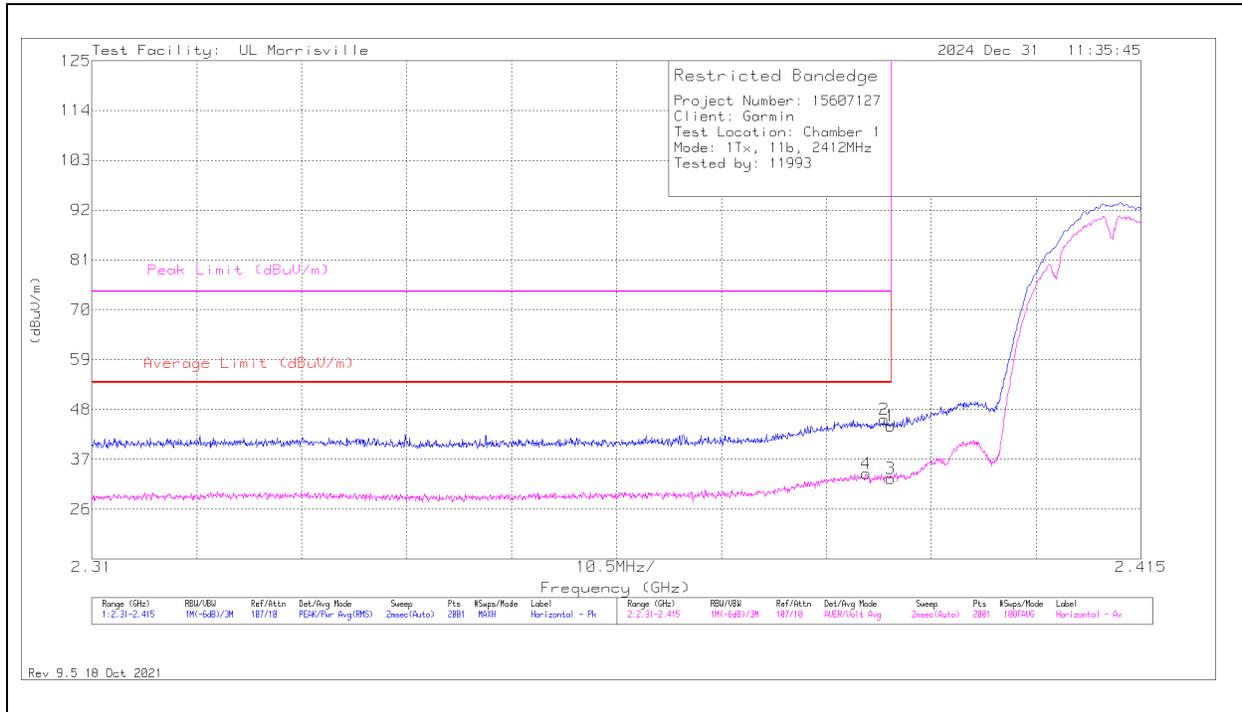
OFS and chamber correlation testing had been performed and chamber measured test result is the worst-case test result.

## 10.1. TRANSMITTER ABOVE 1 GHz

### 10.1.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND

#### BANDEDGE (LOW CHANNEL, 2412MHz)

#### HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	36.41	Pk	31.9	-24	44.31	-	-	74	-29.69	308	115	H
2	* ** 2.38928	37.94	Pk	31.9	-24	45.84	-	-	74	-28.16	308	115	H
3	* ** 2.38996	24.88	ADV	31.9	-24	32.78	54	-21.22	-	-	308	115	H
4	* ** 2.38749	25.82	ADV	31.9	-23.9	33.82	54	-20.18	-	-	308	115	H

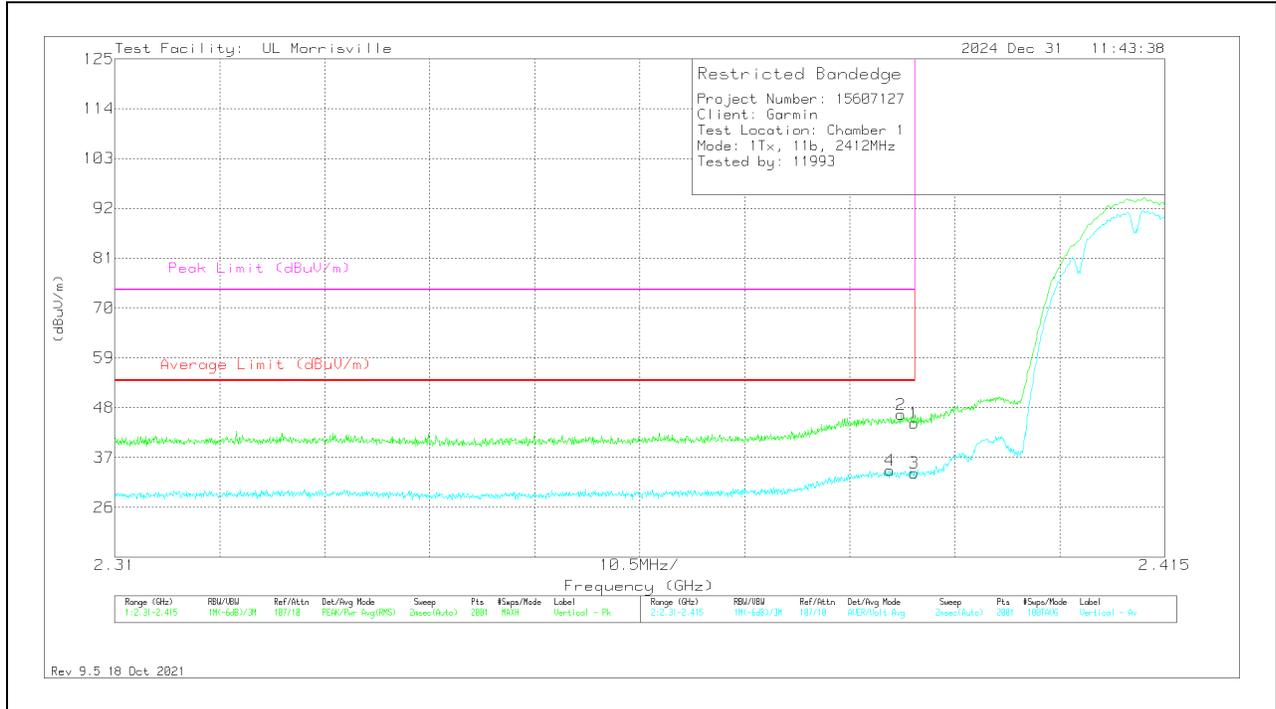
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

### VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	36.7	Pk	31.9	-24	44.6	-	-	74	-29.4	153	146	V
2	*** 2.38865	38.56	Pk	31.9	-24	46.46	-	-	74	-27.54	153	146	V
3	*** 2.38996	25.72	ADV	31.9	-24	33.62	54	-20.38	-	-	153	146	V
4	*** 2.38749	26.1	ADV	31.9	-23.9	34.1	54	-19.9	-	-	153	146	V

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

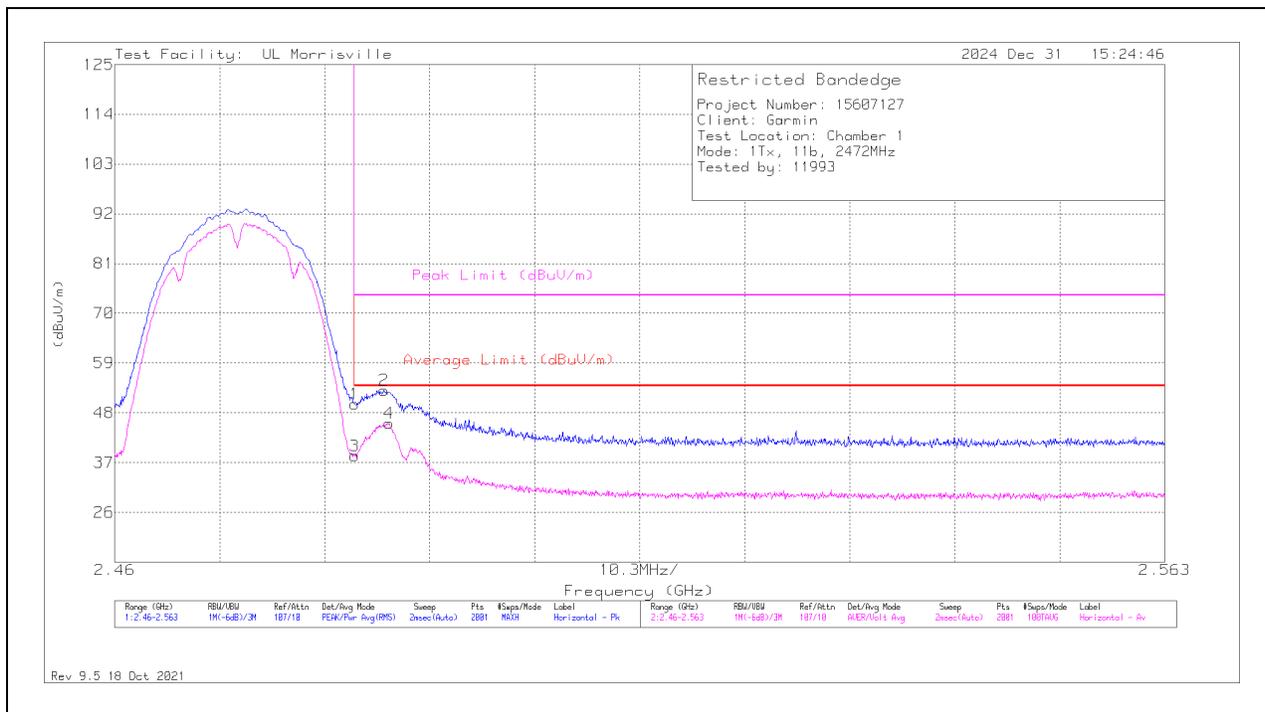
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

**BANDEDGE (HIGH CHANNEL, 2472MHz)**

**HORIZONTAL RESULT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	41.45	Pk	32.2	-23.7	49.95	-	-	74	-24.05	296	157	H
2	* ** 2.48642	44.69	Pk	32.2	-23.9	52.99	-	-	74	-21.01	296	157	H
3	* ** 2.48354	29.98	ADV	32.2	-23.7	38.48	54	-15.52	-	-	296	157	H
4	* ** 2.48688	37.47	ADV	32.2	-24	45.67	54	-8.33	-	-	296	157	H

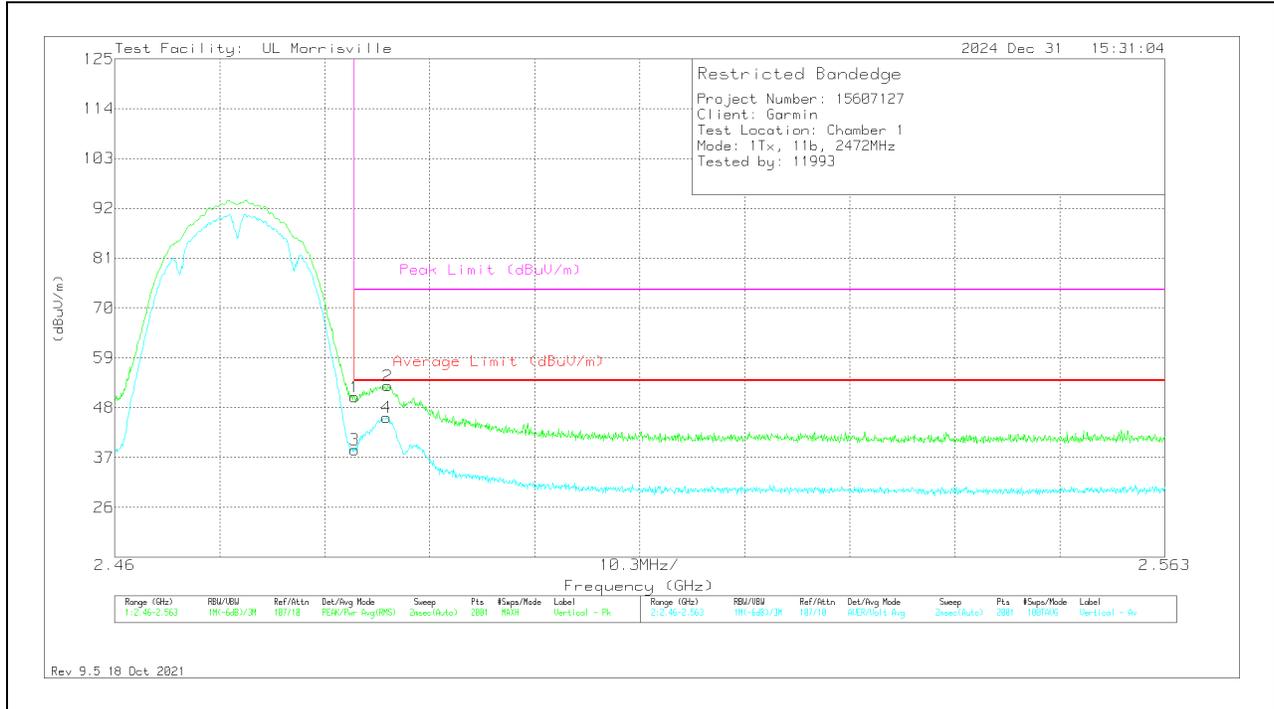
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

### VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	41.82	Pk	32.2	-23.7	50.32	-	-	74	-23.68	137	140	V
2	* ** 2.48678	44.49	Pk	32.2	-23.9	52.79	-	-	74	-21.21	137	140	V
3	* ** 2.48354	30.13	ADV	32.2	-23.7	38.63	54	-15.37	-	-	137	140	V
4	* ** 2.48668	37.58	ADV	32.2	-23.9	45.88	54	-8.12	-	-	137	140	V

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

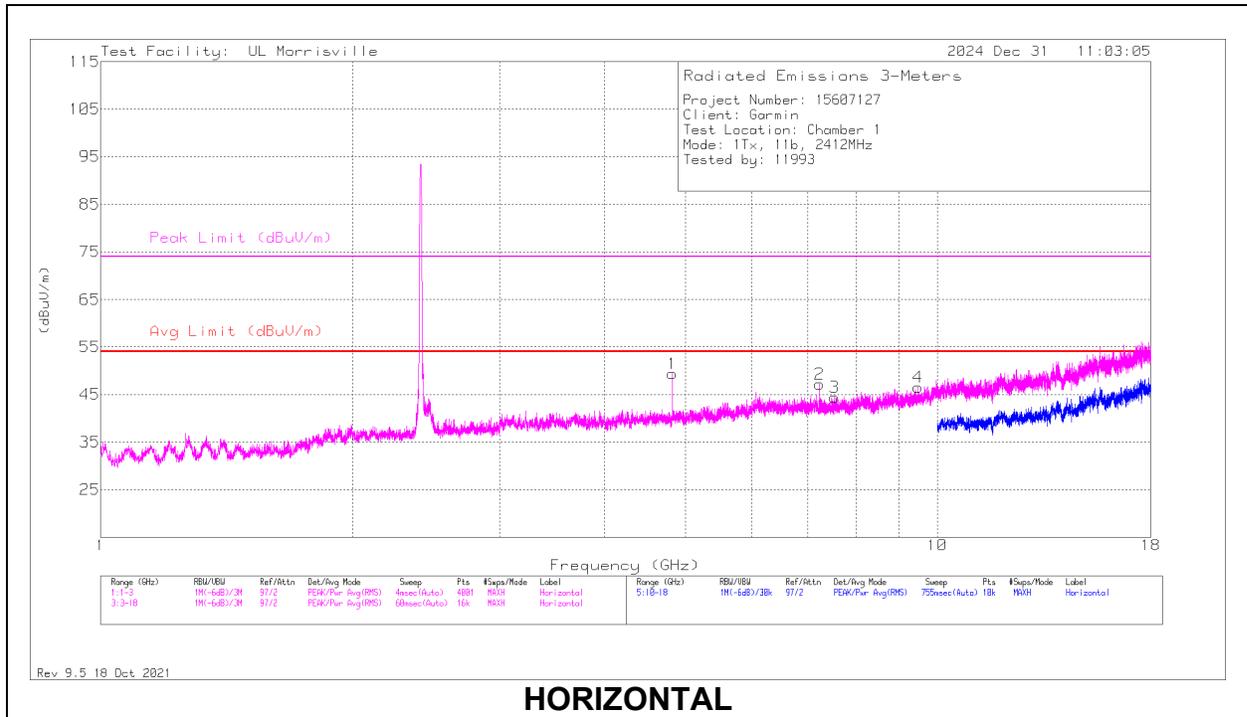
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

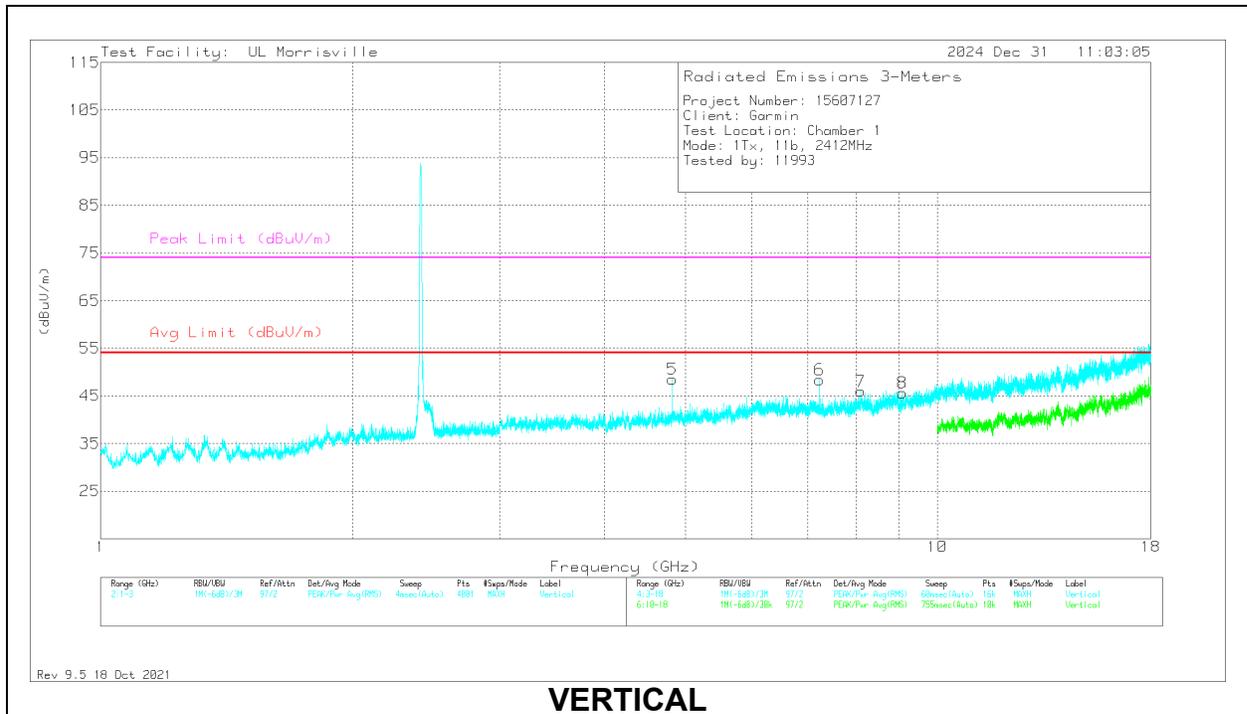
ADV - Linear Voltage Average

# HARMONICS AND SPURIOUS EMISSIONS

## LOW CHANNEL



## HORIZONTAL



## VERTICAL

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	* ** 4.82399	63.99	PK2	33.9	-45.3	52.59	-	-	74	-21.41	168	173	H
	* ** 4.82402	56.7	ADV	33.9	-45.3	45.3	54	-8.7	-	-	168	173	H
3	* ** 7.54219	49.64	Pk	35.5	-40.7	44.44	54	-9.56	74	-29.56	0-360	101	H
4	* ** 9.49031	50.52	Pk	36.4	-40.4	46.52	54	-7.48	74	-27.48	0-360	101	H
5	* ** 4.82403	62.36	PK2	33.9	-45.3	50.96	-	-	74	-23.04	134	112	V
	* ** 4.82397	58.59	ADV	33.9	-45.3	47.19	54	-6.81	-	-	134	112	V
7	* ** 8.09813	51.55	Pk	35.9	-41.5	45.95	54	-8.05	74	-28.05	0-360	101	V
8	* ** 9.09469	49.91	Pk	35.9	-40.2	45.61	54	-8.39	74	-28.39	0-360	200	V
2	7.23563	54.34	Pk	35.4	-42.5	47.24	-	-	-	-	0-360	200	H
6	7.23563	55.49	Pk	35.4	-42.5	48.39	-	-	-	-	0-360	200	V

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

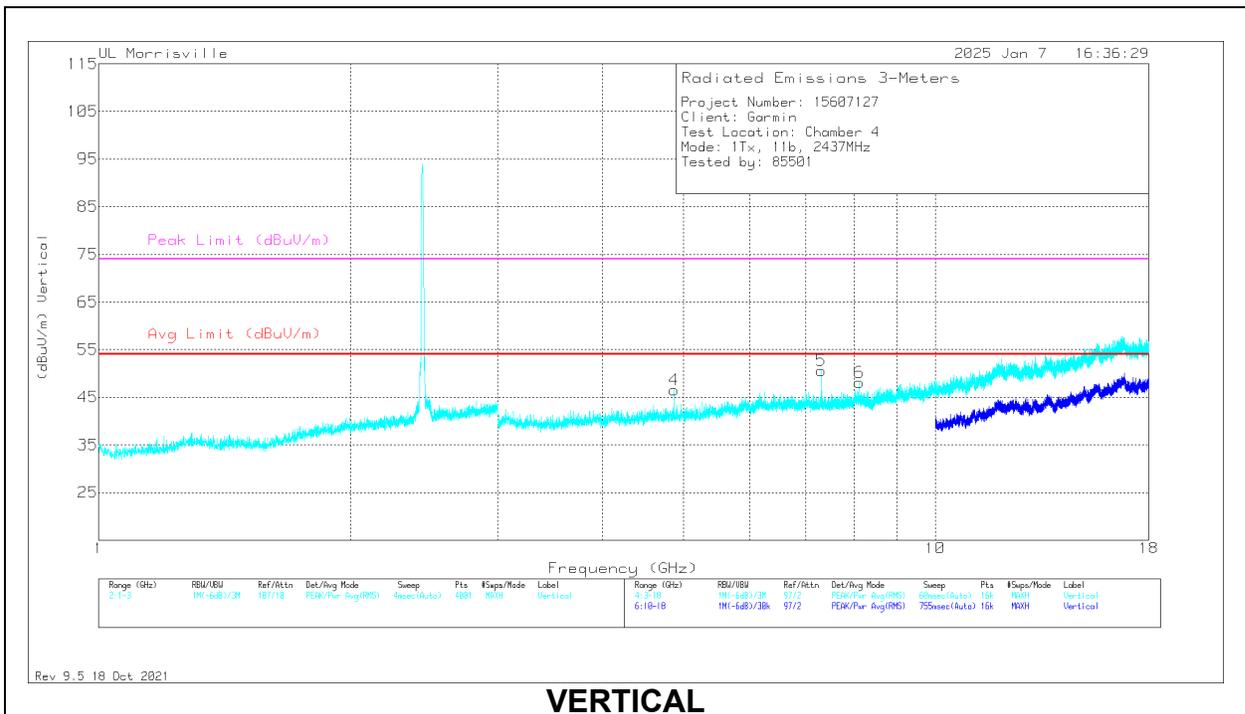
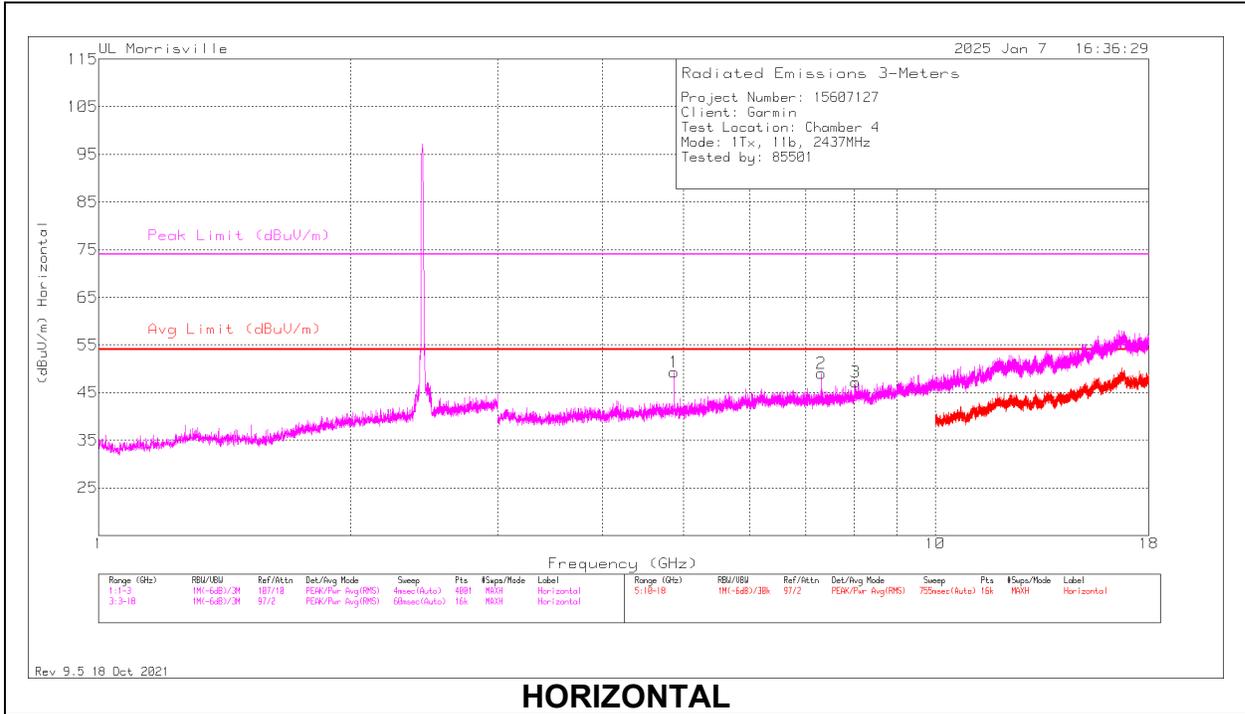
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

ADV - Linear Voltage Average

### MID CHANNEL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 4.87397	49.2	PK2	34.1	-31.2	52.1	-	-	74	-21.9	209	191	H
	*** 4.87404	38.54	ADV	34.1	-31.2	41.44	54	-12.56	-	-	209	191	H
2	*** 7.31122	42.18	PK2	35.7	-27.5	50.38	-	-	74	-23.62	256	242	H
	*** 7.31012	33.76	ADV	35.7	-27.5	41.96	54	-12.04	-	-	256	242	H
3	*** 8.02875	38.52	Pk	35.8	-27.1	47.22	54	-6.78	74	-26.78	0-360	100	H
4	*** 4.87406	43.65	Pk	34.1	-31.2	46.55	54	-7.45	74	-27.45	0-360	200	V
5	*** 7.31162	46.46	PK2	35.7	-27.5	54.66	-	-	74	-19.34	348	124	V
	*** 7.3102	40.51	ADV	35.7	-27.5	48.71	54	-5.29	-	-	348	124	V
6	*** 8.12122	38.59	PK2	35.8	-26.7	47.69	-	-	74	-26.31	296	161	V
	*** 8.11848	26.23	ADV	35.8	-26.7	35.33	54	-18.67	-	-	296	161	V

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

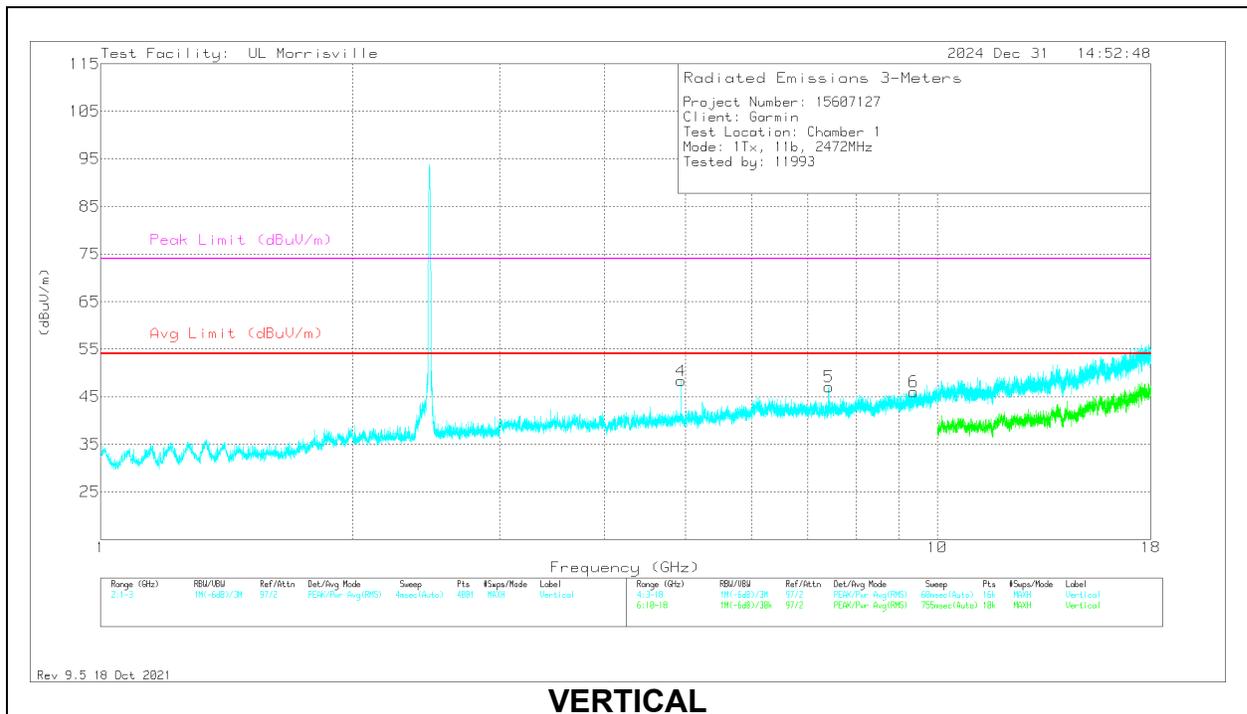
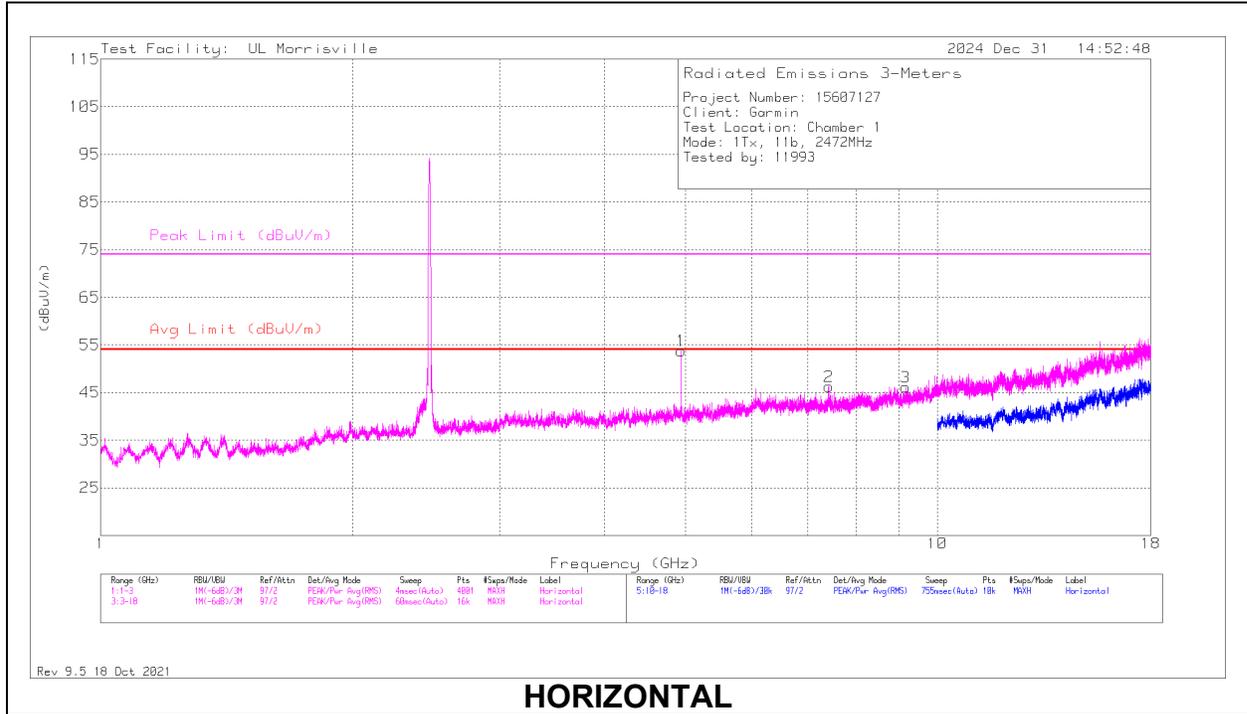
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

ADV - Linear Voltage Average

### HIGH CHANNEL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	* ** 4.94398	65.78	PK2	34.1	-44.4	55.48	-	-	74	-18.52	154	133	H
	* ** 4.94395	60.51	ADV	34.1	-44.4	50.21	54	-3.79	-	-	154	133	H
2	* ** 7.41656	52.02	Pk	35.4	-41.2	46.22	54	-7.78	74	-27.78	0-360	200	H
3	* ** 9.17438	50.19	Pk	36	-40.1	46.09	54	-7.91	74	-27.91	0-360	200	H
4	* ** 4.94397	60.86	PK2	34.1	-44.4	50.56	-	-	74	-23.44	136	106	V
	* ** 4.94405	56	ADV	34.1	-44.4	45.7	54	-8.3	-	-	136	106	V
5	* ** 7.41656	52.85	Pk	35.4	-41.2	47.05	54	-6.95	74	-26.95	0-360	101	V
6	* ** 9.375	50.09	Pk	36.2	-40.3	45.99	54	-8.01	74	-28.01	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

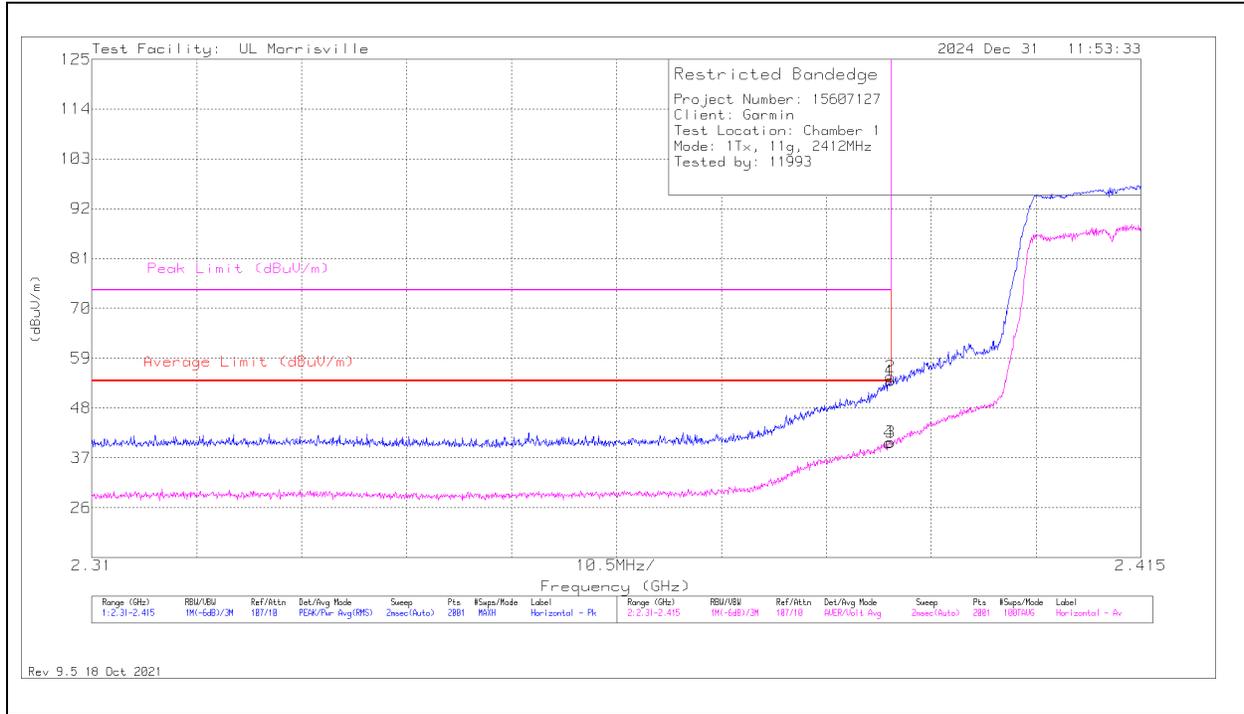
PK2 - Maximum Peak

ADV - Linear Voltage Average

### 10.1.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND

#### BANDEDGE (LOW CHANNEL, 2412MHz)

#### HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	46.14	Pk	31.9	-24	54.04	-	-	74	-19.96	264	167	H
2	* ** 2.38991	47.07	Pk	31.9	-24	54.97	-	-	74	-19.03	264	167	H
3	* ** 2.38996	32.6	ADV	31.9	-24	40.5	54	-13.5	-	-	264	167	H
4	* ** 2.3898	32.46	ADV	31.9	-24	40.36	54	-13.64	-	-	264	167	H

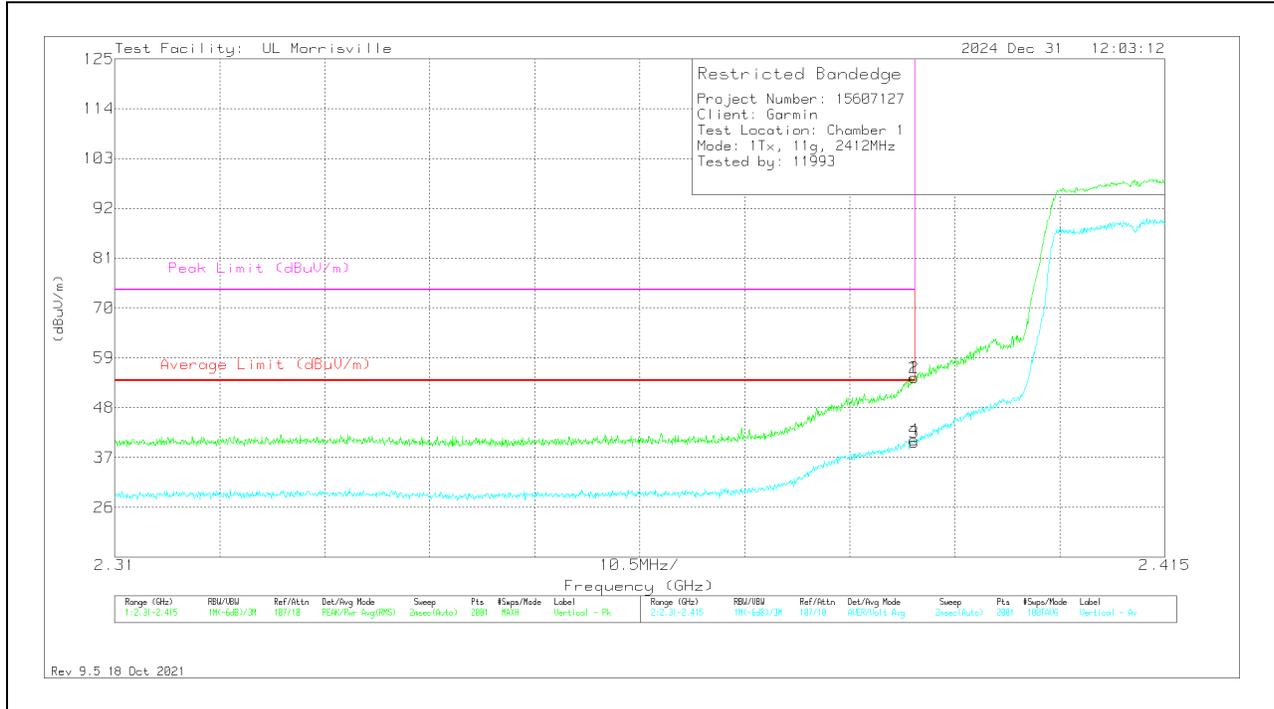
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

### VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	46.75	Pk	31.9	-24	54.65	-	-	74	-19.35	150	191	V
2	* ** 2.38991	46.69	Pk	31.9	-24	54.59	-	-	74	-19.41	150	191	V
3	* ** 2.38996	32.38	ADV	31.9	-24	40.28	54	-13.72	-	-	150	191	V
4	* ** 2.38991	32.97	ADV	31.9	-24	40.87	54	-13.13	-	-	150	191	V

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

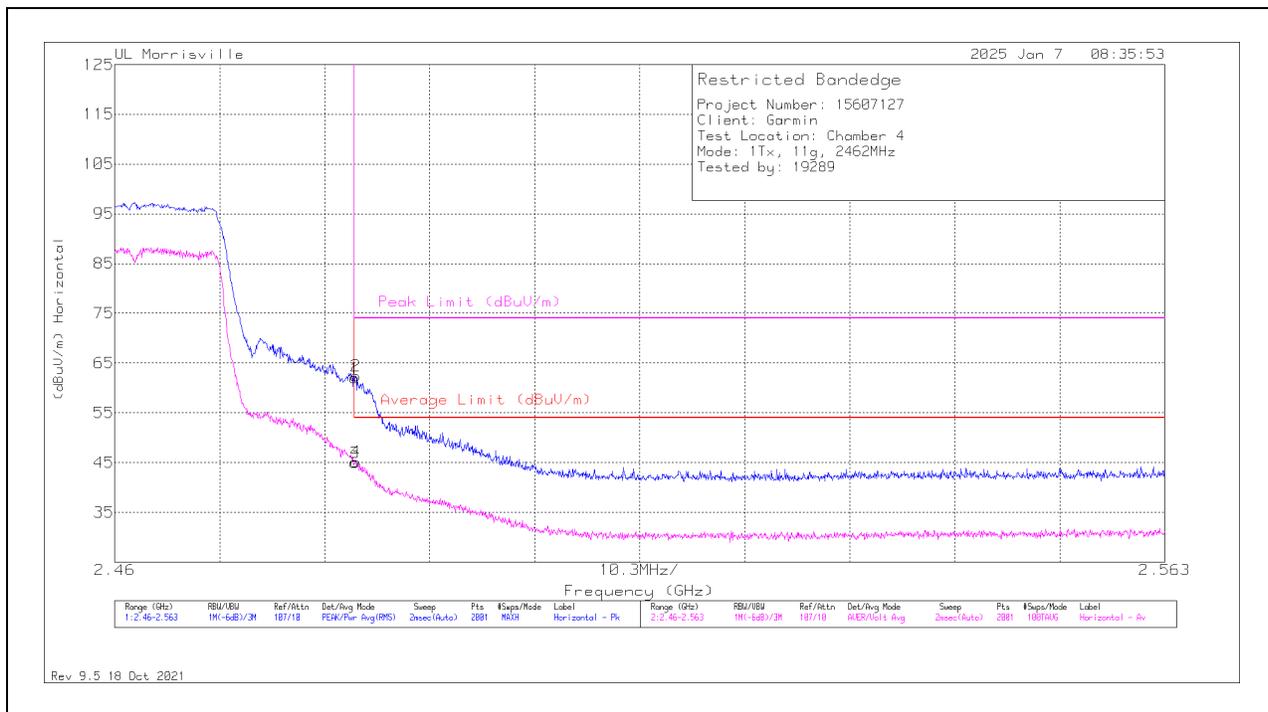
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

**BANDEDGE (HIGH CHANNEL, 2462MHz)**

**HORIZONTAL RESULT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.48354	52.48	Pk	32.3	-22.8	61.98	-	-	74	-12.02	17	160	H
2	*** 2.48364	52.9	Pk	32.3	-22.8	62.4	-	-	74	-11.6	17	160	H
3	*** 2.48354	35.47	ADV	32.3	-22.8	44.97	54	-9.03	-	-	17	160	H
4	*** 2.48364	35.68	ADV	32.3	-22.8	45.18	54	-8.82	-	-	17	160	H

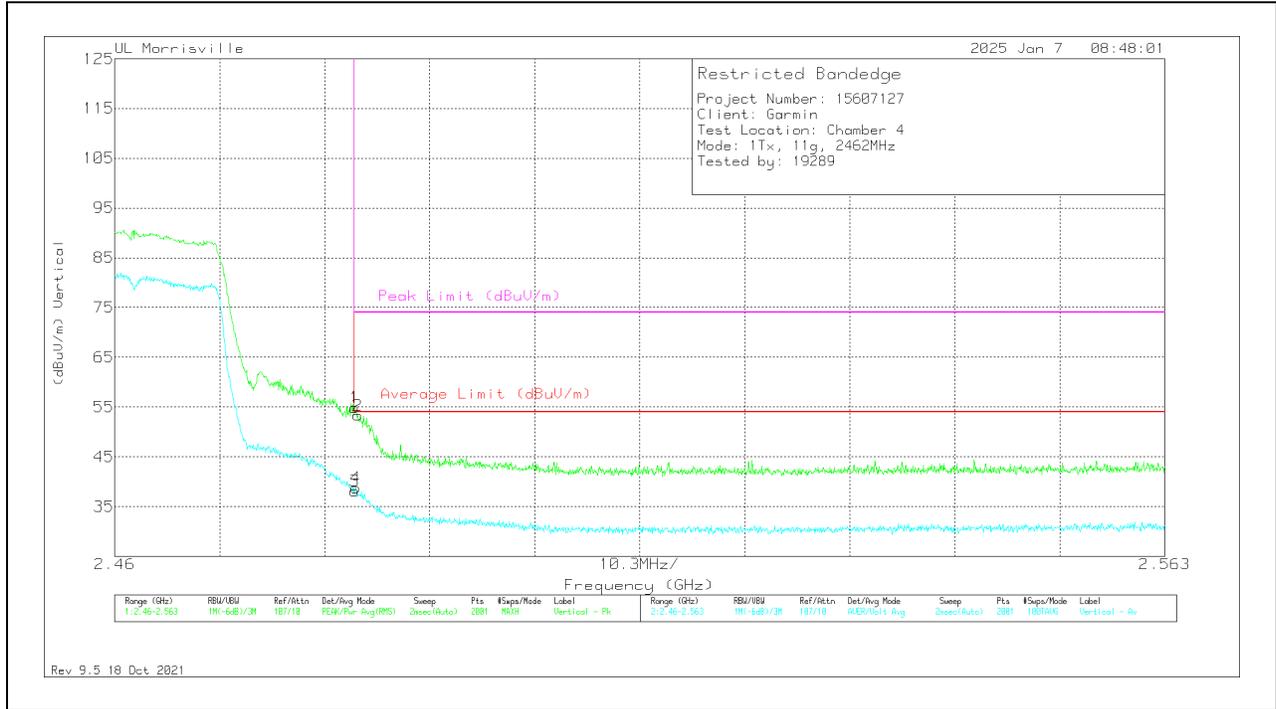
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - 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)	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	45.37	Pk	32.3	-22.8	54.87	-	-	74	-19.13	17	160	V
2	*** 2.48384	43.84	Pk	32.3	-22.8	53.34	-	-	74	-20.66	17	160	V
3	*** 2.48354	28.64	ADV	32.3	-22.8	38.14	54	-15.86	-	-	17	160	V
4	*** 2.48364	29.23	ADV	32.3	-22.8	38.73	54	-15.27	-	-	17	160	V

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

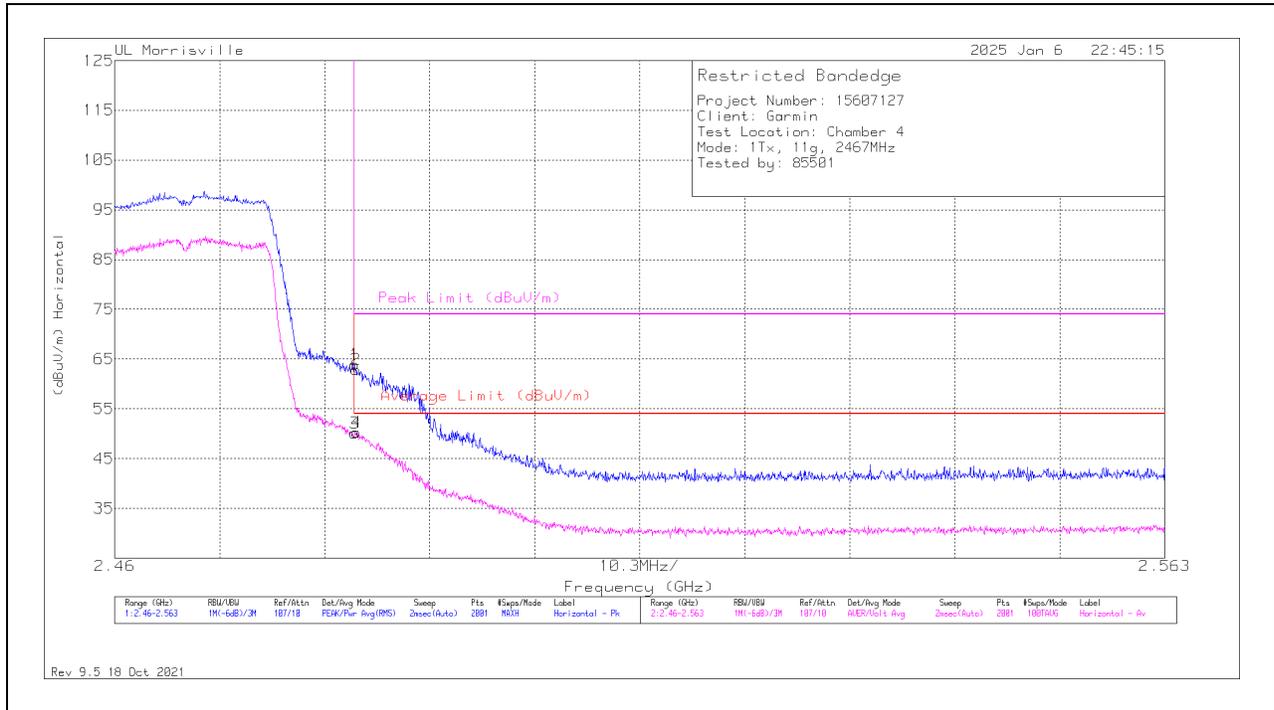
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

**BANDEDGE (HIGH CHANNEL, 2467MHz)**

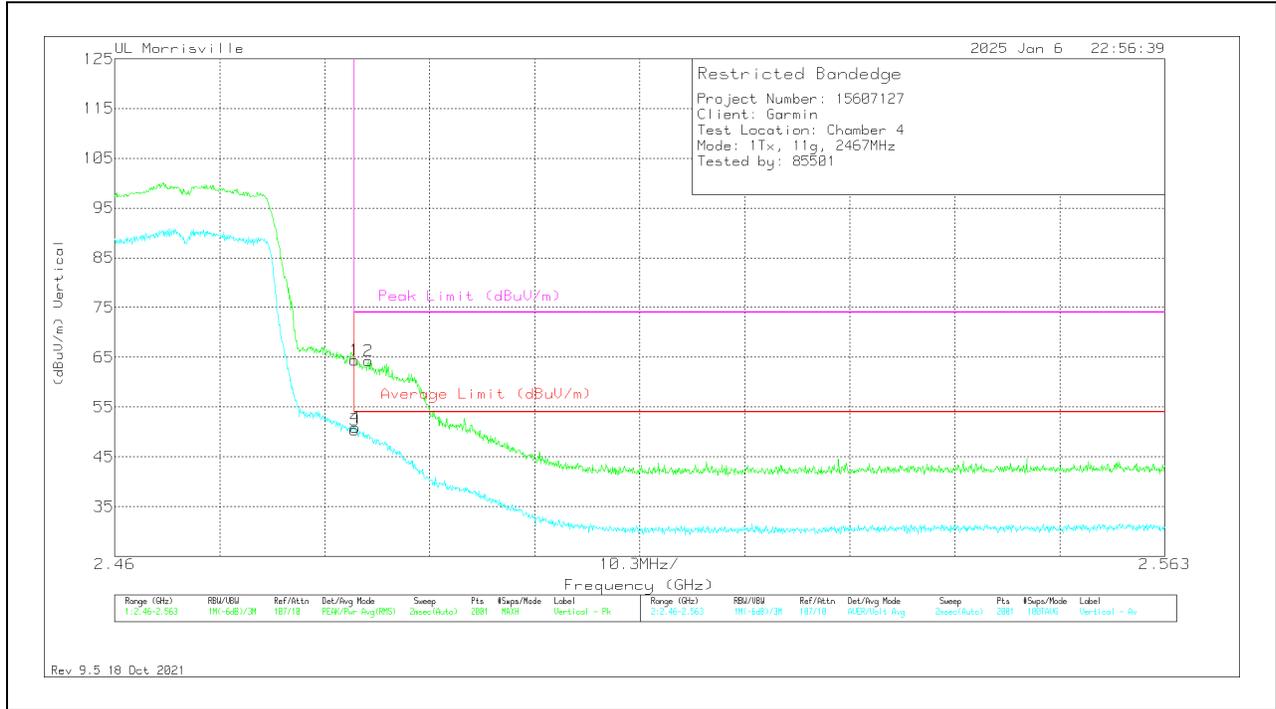
**HORIZONTAL RESULT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	54.42	Pk	32.3	-22.8	63.92	-	-	74	-10.08	350	119	H
2	* ** 2.48364	53.44	Pk	32.3	-22.8	62.94	-	-	74	-11.06	350	119	H
3	* ** 2.48354	40.61	ADV	32.3	-22.8	50.11	54	-3.89	-	-	350	119	H
4	* ** 2.48369	40.73	ADV	32.3	-22.8	50.23	54	-3.77	-	-	350	119	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)	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	54.96	Pk	32.3	-22.8	64.46	-	-	74	-9.54	26	102	V
2	*** 2.48487	54.81	Pk	32.3	-22.8	64.31	-	-	74	-9.69	26	102	V
3	*** 2.48354	40.86	ADV	32.3	-22.8	50.36	54	-3.64	-	-	26	102	V
4	*** 2.48359	41.37	ADV	32.3	-22.8	50.87	54	-3.13	-	-	26	102	V

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

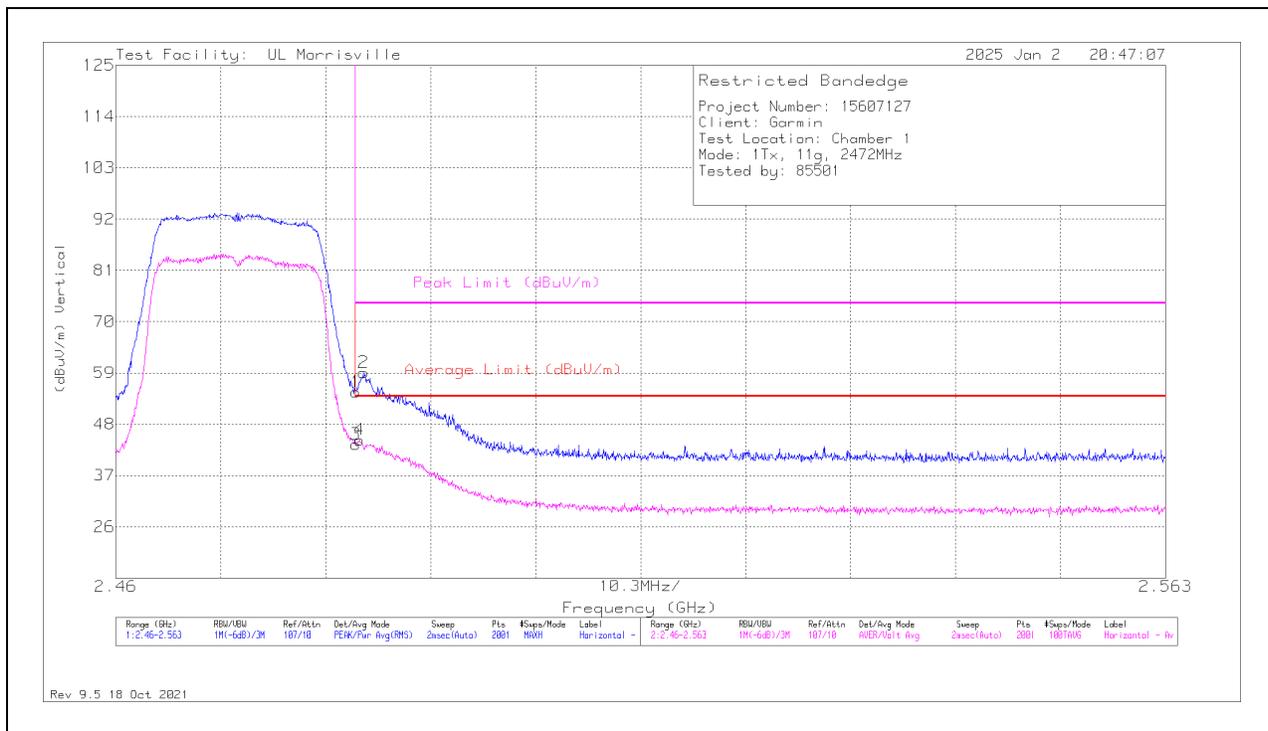
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

**BANDEDGE (HIGH CHANNEL, 2472MHz)**

**HORIZONTAL RESULT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	46.42	Pk	32.2	-23.7	54.92	-	-	74	-19.08	270	178	H
2	* ** 2.48431	50.7	Pk	32.2	-23.8	59.1	-	-	74	-14.9	270	178	H
3	* ** 2.48354	35.2	ADV	32.2	-23.7	43.7	54	-10.3	-	-	270	178	H
4	* ** 2.4839	36.15	ADV	32.2	-23.7	44.65	54	-9.35	-	-	270	178	H

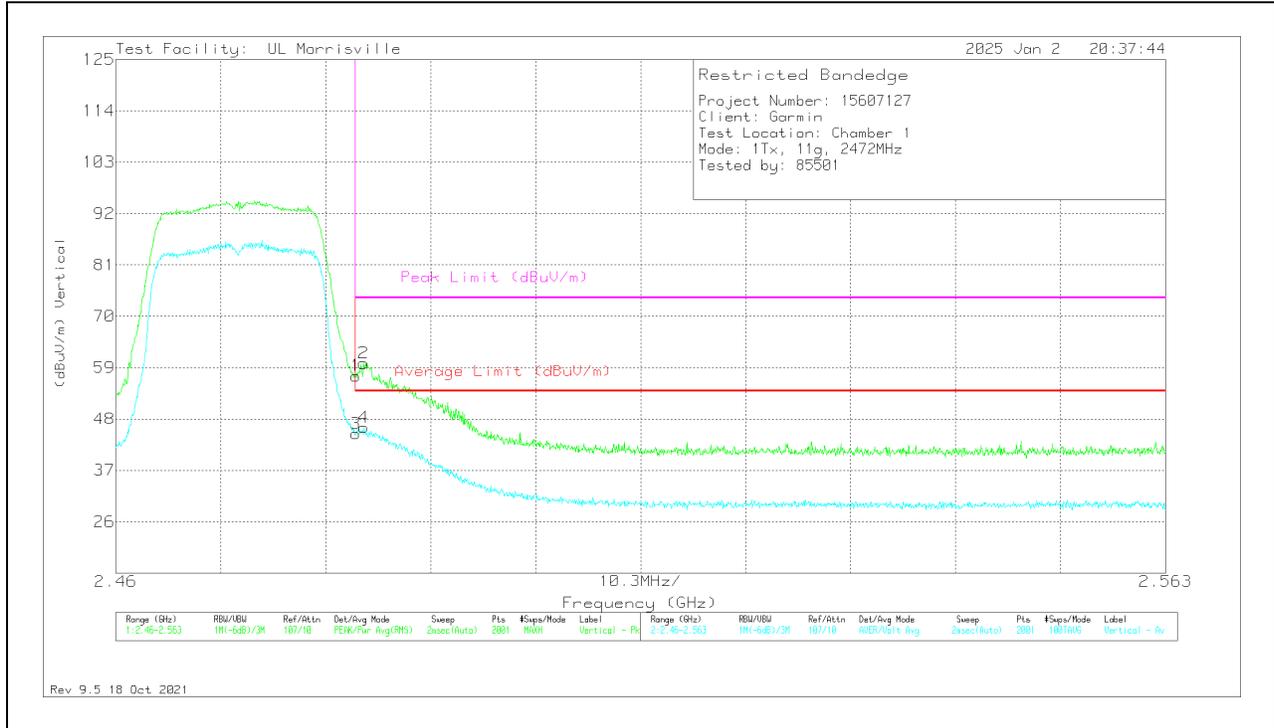
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

### VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	48.75	Pk	32.2	-23.7	57.25	-	-	74	-16.75	143	126	V
2	* ** 2.48431	51.55	Pk	32.2	-23.8	59.95	-	-	74	-14.05	143	126	V
3	* ** 2.48354	36.36	ADV	32.2	-23.7	44.86	54	-9.14	-	-	143	126	V
4	* ** 2.48436	37.8	ADV	32.2	-23.8	46.2	54	-7.8	-	-	143	126	V

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

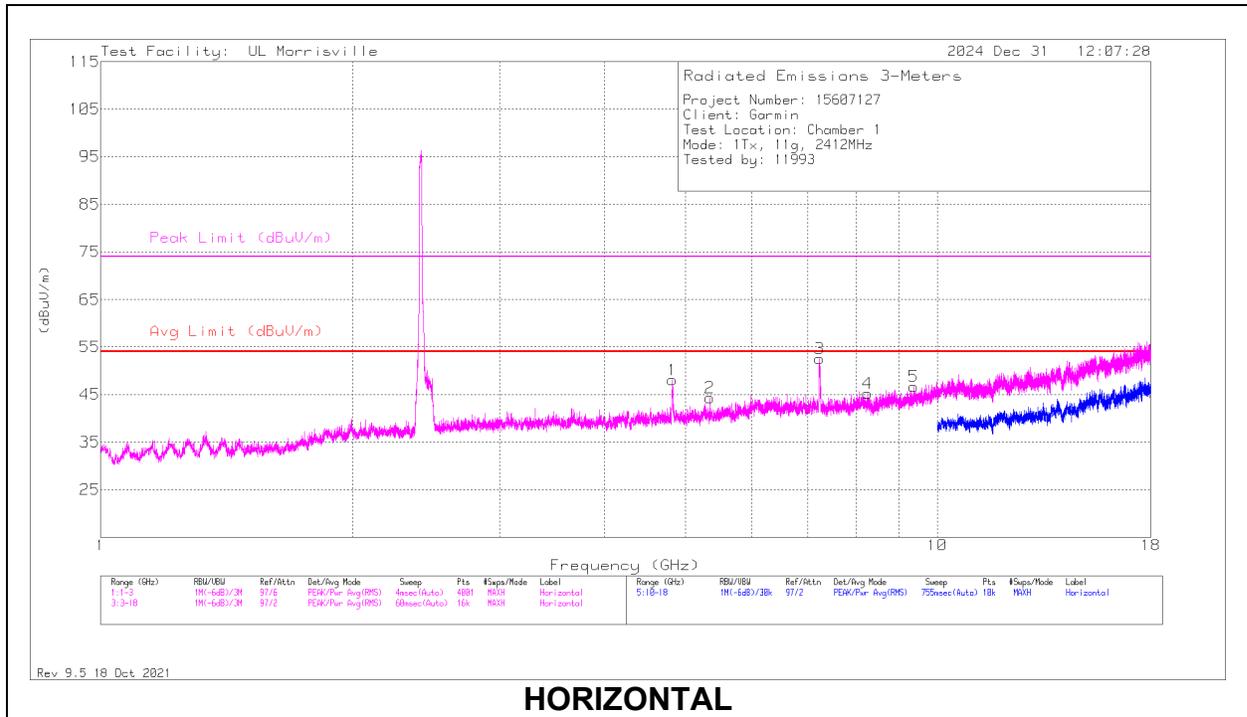
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

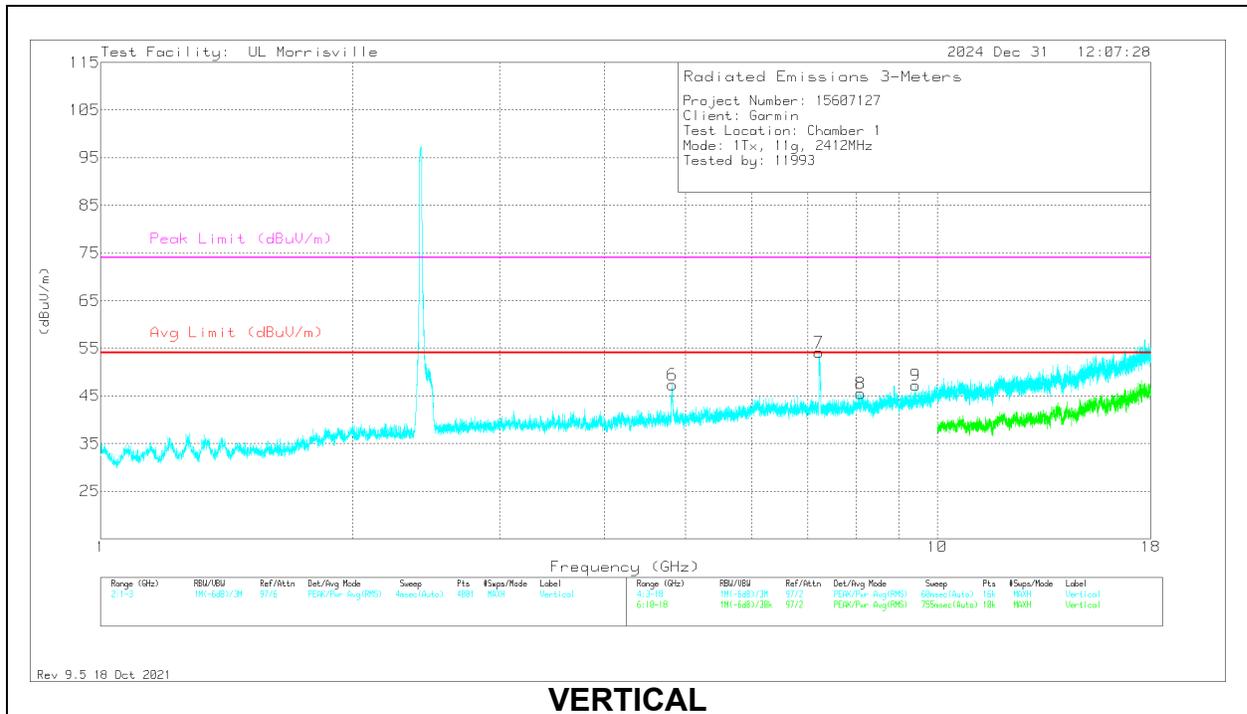
ADV - Linear Voltage Average

# HARMONICS AND SPURIOUS EMISSIONS

## LOW CHANNEL



## HORIZONTAL



## VERTICAL

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	* ** 4.82459	63.47	PK2	33.9	-45.3	52.07	-	-	74	-21.93	156	151	H
	* ** 4.82569	50.07	ADV	33.9	-45.3	38.67	54	-15.33	-	-	156	151	H
4	* ** 8.2575	50.1	Pk	35.9	-40.8	45.2	54	-8.8	74	-28.8	0-360	101	H
5	* ** 9.37875	50.82	Pk	36.2	-40.3	46.72	54	-7.28	74	-27.28	0-360	101	H
6	* ** 4.82625	58.6	Pk	33.9	-45.2	47.3	54	-6.7	74	-26.7	0-360	200	V
8	* ** 8.10563	50.45	Pk	35.9	-40.9	45.45	54	-8.55	74	-28.55	0-360	101	V
9	* ** 9.42469	51.3	Pk	36.3	-40.4	47.2	54	-6.8	74	-26.8	0-360	200	V
2	5.3475	53.06	Pk	34.3	-43	44.36	-	-	-	-	0-360	101	H
7	7.22625	60.75	Pk	35.4	-42	54.15	-	-	-	-	0-360	101	V
3	7.23938	59.51	Pk	35.4	-42.3	52.61	-	-	-	-	0-360	199	H

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

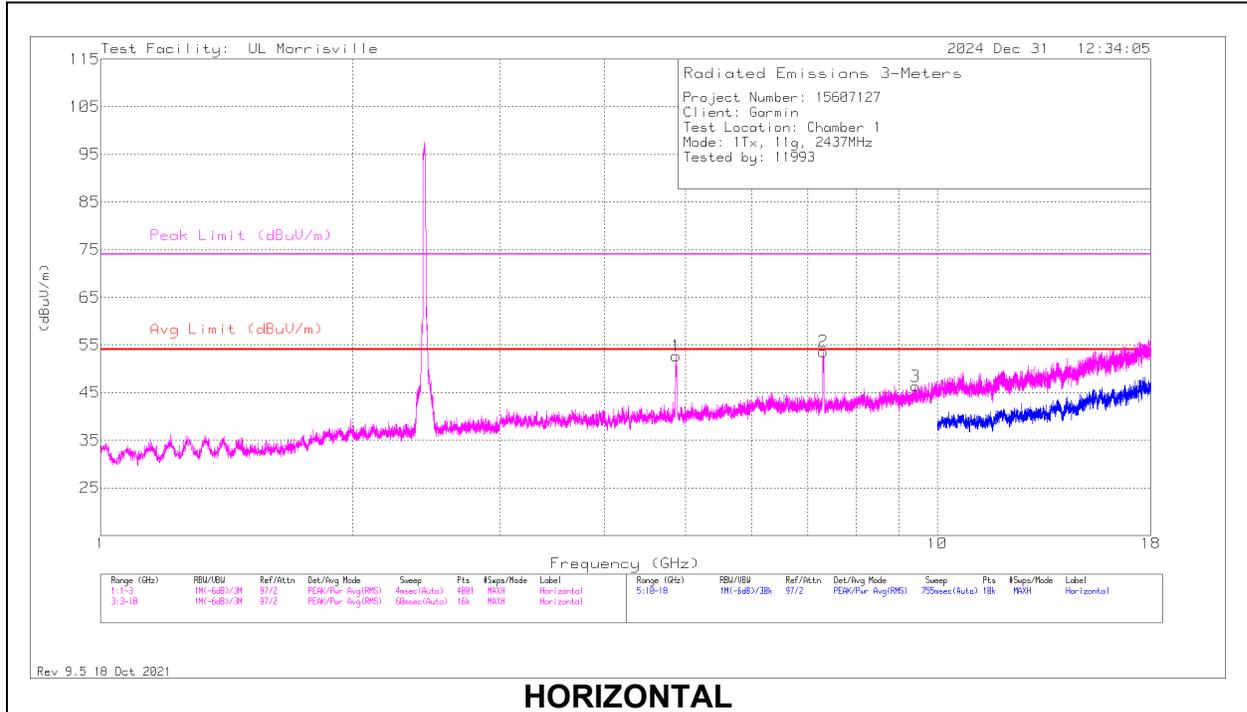
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

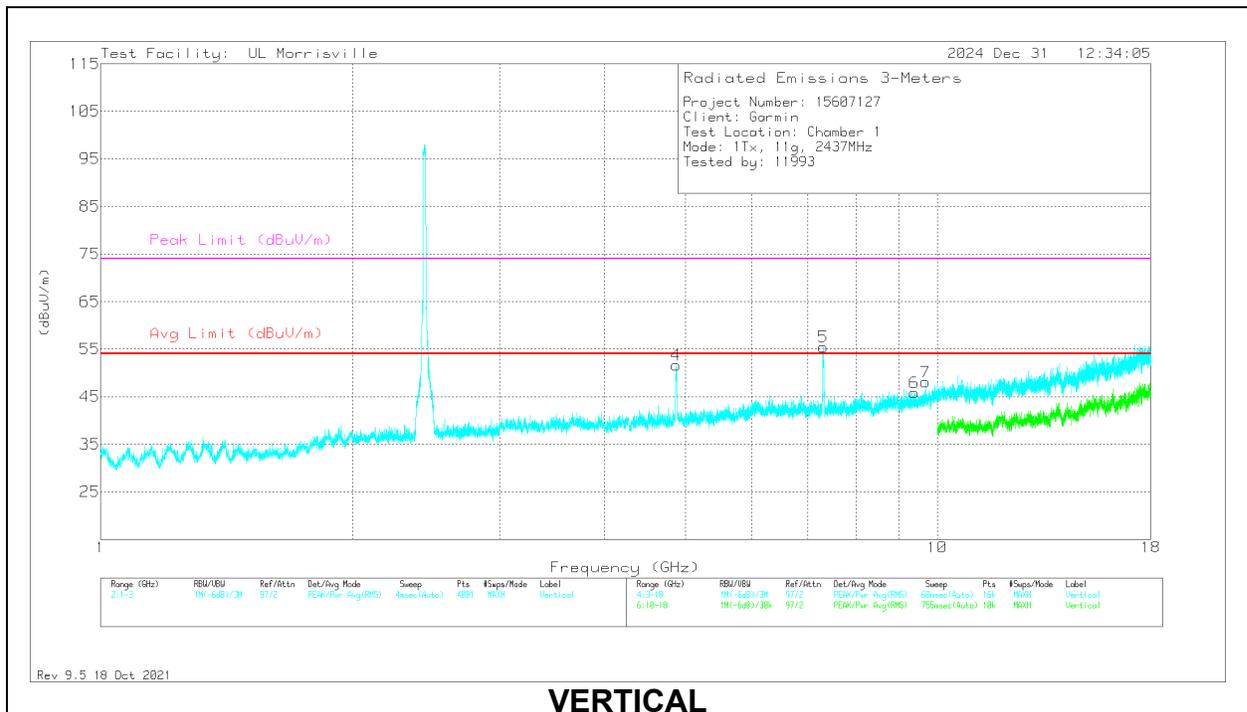
PK2 - Maximum Peak

ADV - Linear Voltage Average

### MID CHANNEL



### HORIZONTAL



### VERTICAL

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	* ** 4.87464	65.89	PK2	34	-44.8	55.09	-	-	74	-18.91	153	115	H
	* ** 4.87384	53.36	ADV	34	-44.8	42.56	54	-11.44	-	-	153	115	H
2	* ** 7.30206	65.3	PK2	35.4	-41.9	58.8	-	-	74	-15.2	181	189	H
	* ** 7.3081	51.52	ADV	35.4	-41.7	45.22	54	-8.78	-	-	181	189	H
3	* ** 9.41813	49.84	Pk	36.3	-39.8	46.34	54	-7.66	74	-27.66	0-360	101	H
4	* ** 4.87776	64.97	PK2	34	-44.7	54.27	-	-	74	-19.73	121	108	V
	* ** 4.87776	52.45	ADV	34	-44.7	41.75	54	-12.25	-	-	121	108	V
5	* ** 7.31405	64.45	PK2	35.4	-41.6	58.25	-	-	74	-15.75	180	143	V
	* ** 7.31055	51.04	ADV	35.4	-41.7	44.74	54	-9.26	-	-	180	143	V
6	* ** 9.39375	49.53	Pk	36.3	-40	45.83	54	-8.17	74	-28.17	0-360	101	V
7	9.68156	50.96	Pk	36.8	-39.7	48.06	-	-	-	-	0-360	101	V

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

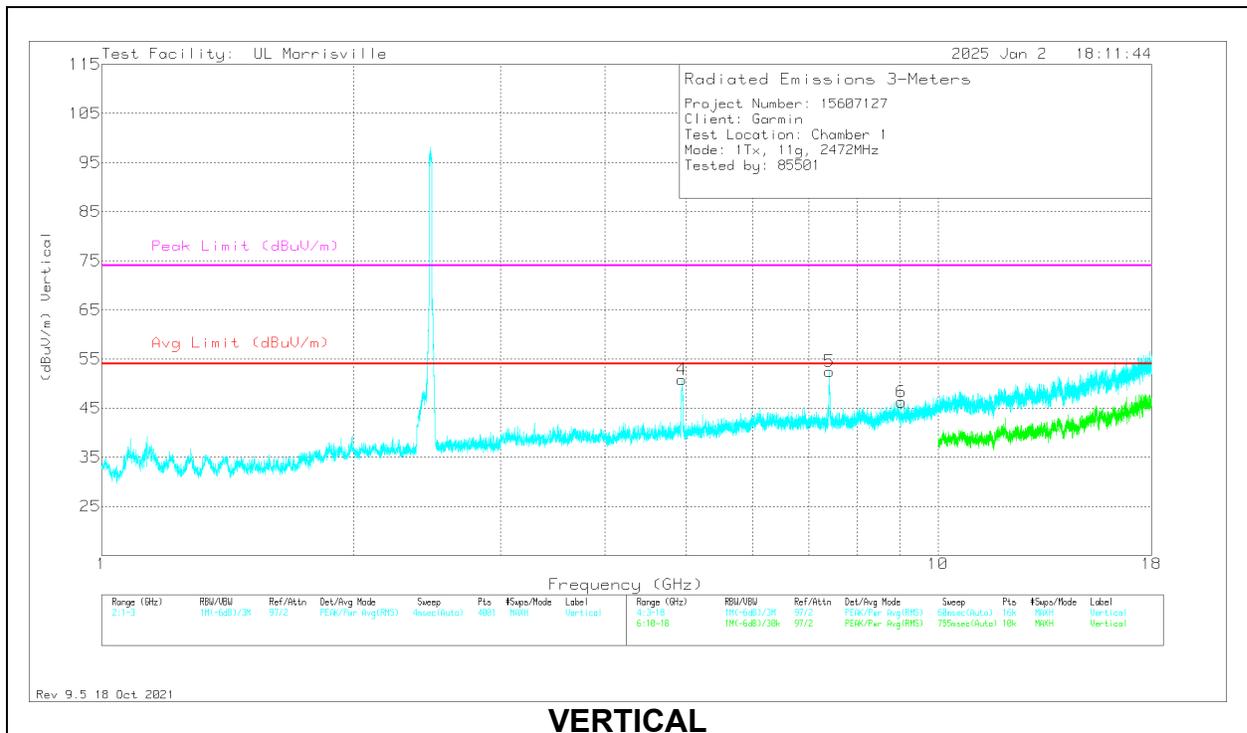
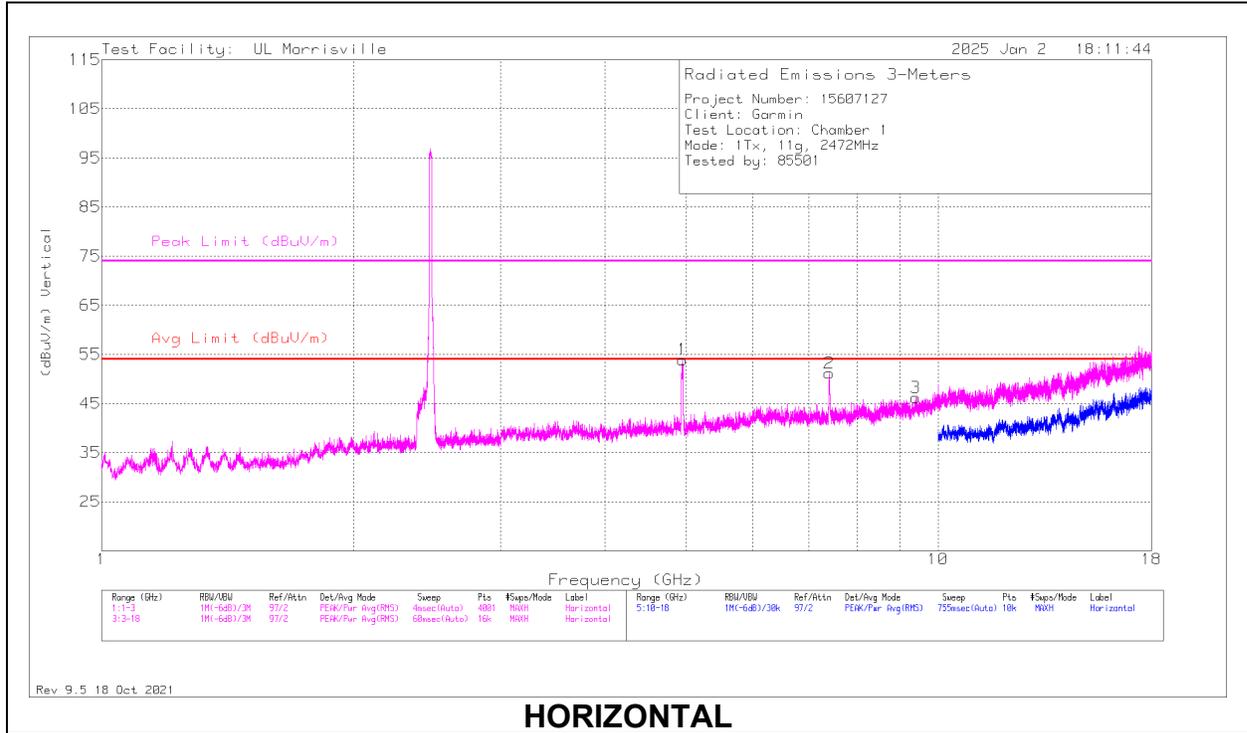
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

ADV - Linear Voltage Average

### HIGH CHANNEL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	* ** 4.94789	66.73	PK2	34.2	-44.5	56.43	-	-	74	-17.57	167	138	H
	* ** 4.94806	52.37	ADV	34.2	-44.5	42.07	54	-11.93	-	-	167	138	H
2	* ** 7.41012	61.31	PK2	35.4	-41.3	55.41	-	-	74	-18.59	178	158	H
	* ** 7.41127	47.82	ADV	35.4	-41.3	41.92	54	-12.08	-	-	178	158	H
3	* ** 9.40125	50.5	Pk	36.3	-40.6	46.2	54	-7.8	74	-27.8	0-360	101	H
4	* ** 4.93825	64.69	PK2	34.1	-44.2	54.59	-	-	74	-19.41	145	119	V
	* ** 4.94039	52.25	ADV	34.1	-44.3	42.05	54	-11.95	-	-	145	119	V
5	* ** 7.41457	61.89	PK2	35.4	-41.2	56.09	-	-	74	-17.91	179	130	V
	* ** 7.41282	48.55	ADV	35.4	-41.2	42.75	54	-11.25	-	-	179	130	V
6	* ** 9.03469	49.98	Pk	35.8	-39.5	46.28	54	-7.72	74	-27.72	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

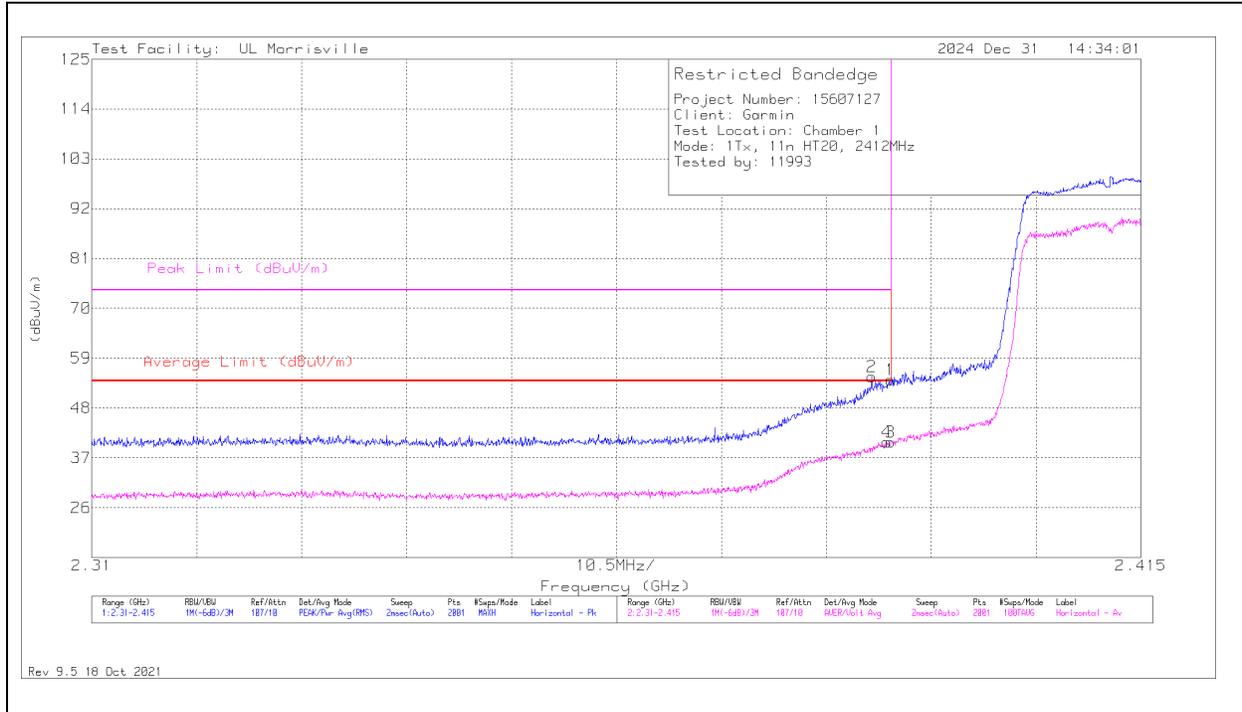
PK2 - Maximum Peak

ADV - Linear Voltage Average

### 10.1.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

#### BANDEDGE (LOW CHANNEL, 2412MHz)

#### HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	46.33	Pk	31.9	-24	54.23	-	-	74	-19.77	280	118	H
2	* ** 2.38807	46.95	Pk	31.9	-23.9	54.95	-	-	74	-19.05	280	118	H
3	* ** 2.38996	32.56	ADV	31.9	-24	40.46	54	-13.54	-	-	280	118	H
4	* ** 2.38954	32.58	ADV	31.9	-24	40.48	54	-13.52	-	-	280	118	H

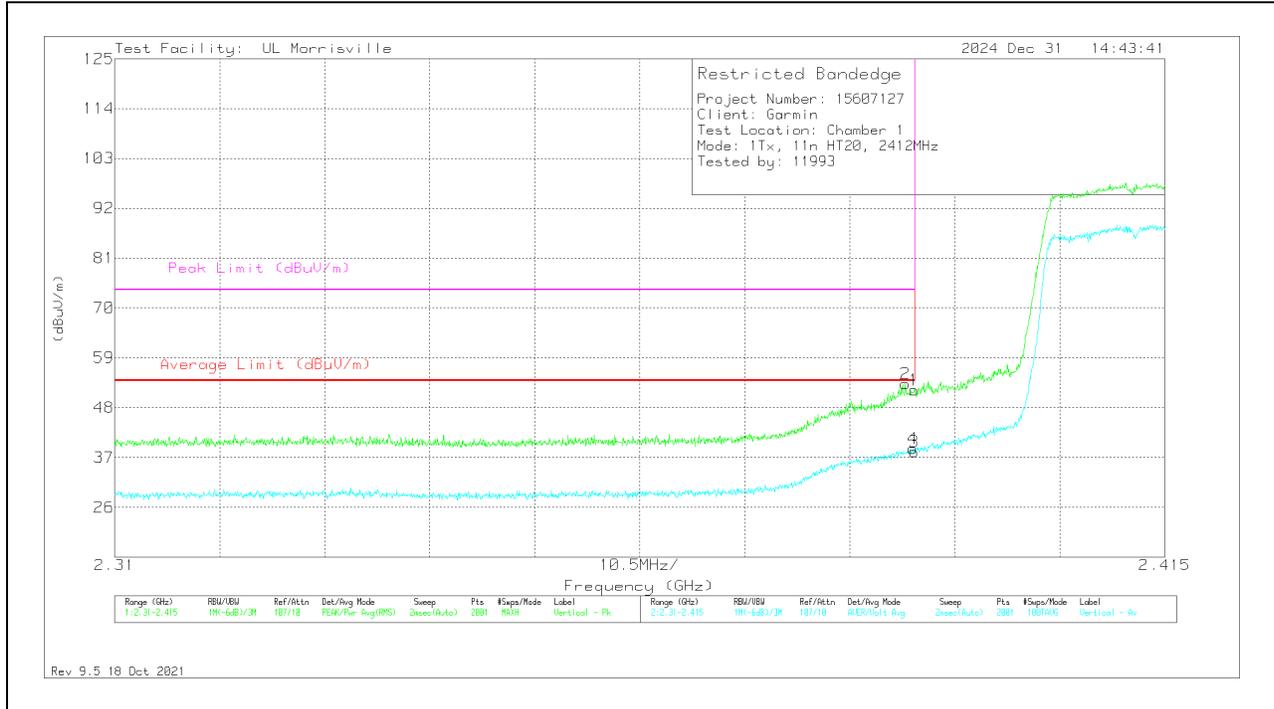
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

### VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	44	Pk	31.9	-24	51.9	-	-	74	-22.1	127	177	V
2	*** 2.38907	45.32	Pk	31.9	-24	53.22	-	-	74	-20.78	127	177	V
3	*** 2.38996	30.34	ADV	31.9	-24	38.24	54	-15.76	-	-	127	177	V
4	*** 2.3898	31.04	ADV	31.9	-24	38.94	54	-15.06	-	-	127	177	V

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

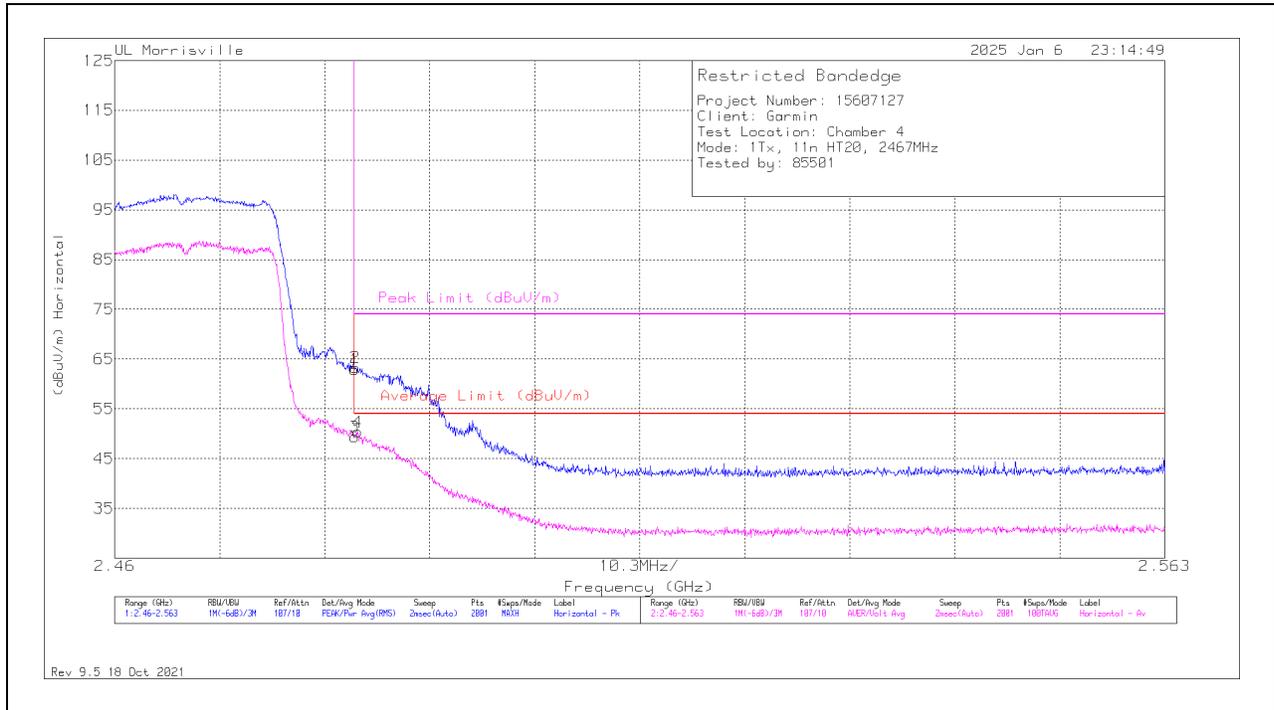
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

**BANDEDGE (HIGH CHANNEL, 2467MHz)**

**HORIZONTAL RESULT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.48354	53.47	Pk	32.3	-22.8	62.97	-	-	74	-11.03	4	102	H
2	*** 2.48359	53.77	Pk	32.3	-22.8	63.27	-	-	74	-10.73	4	102	H
3	*** 2.48354	39.85	ADV	32.3	-22.8	49.35	54	-4.65	-	-	4	102	H
4	*** 2.48384	40.84	ADV	32.3	-22.8	50.34	54	-3.66	-	-	4	102	H

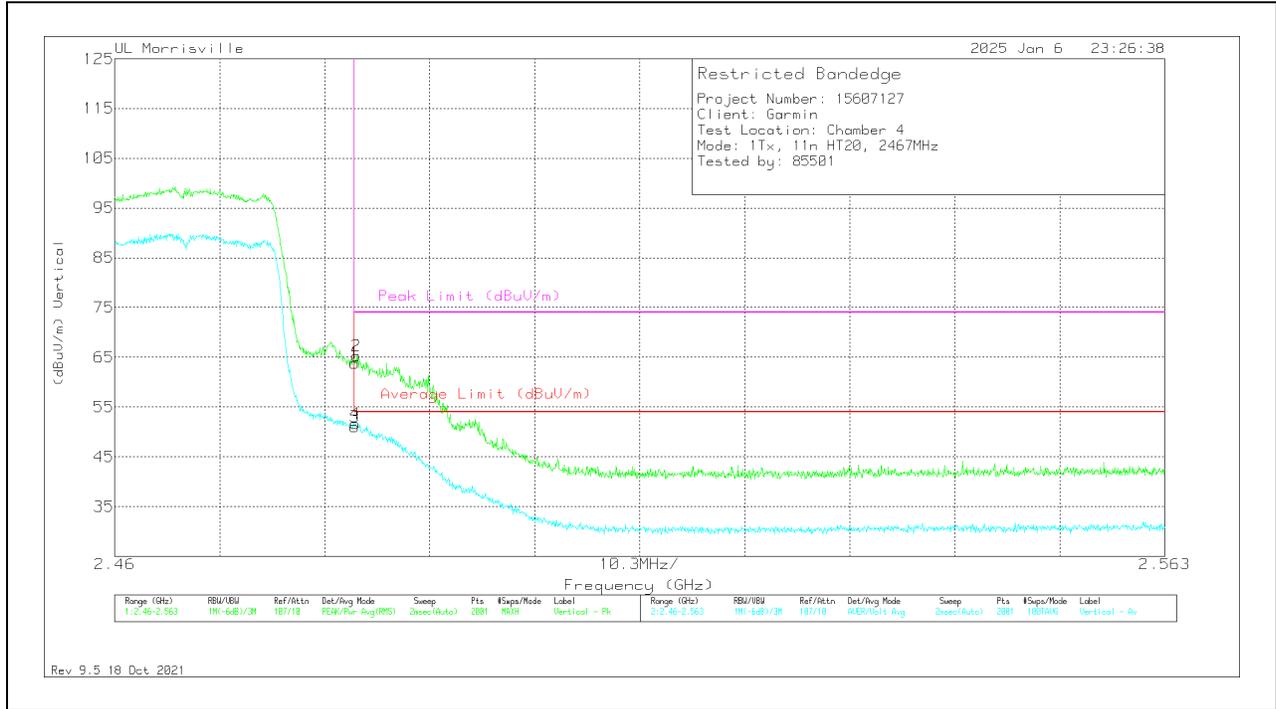
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - 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)	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	54.32	Pk	32.3	-22.8	63.82	-	-	74	-10.18	25	101	V
2	*** 2.48369	55.84	Pk	32.3	-22.8	65.34	-	-	74	-8.66	25	101	V
3	*** 2.48354	41.56	ADV	32.3	-22.8	51.06	54	-2.94	-	-	25	100	V
4	*** 2.48359	42.11	ADV	32.3	-22.8	51.61	54	-2.39	-	-	25	100	V

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

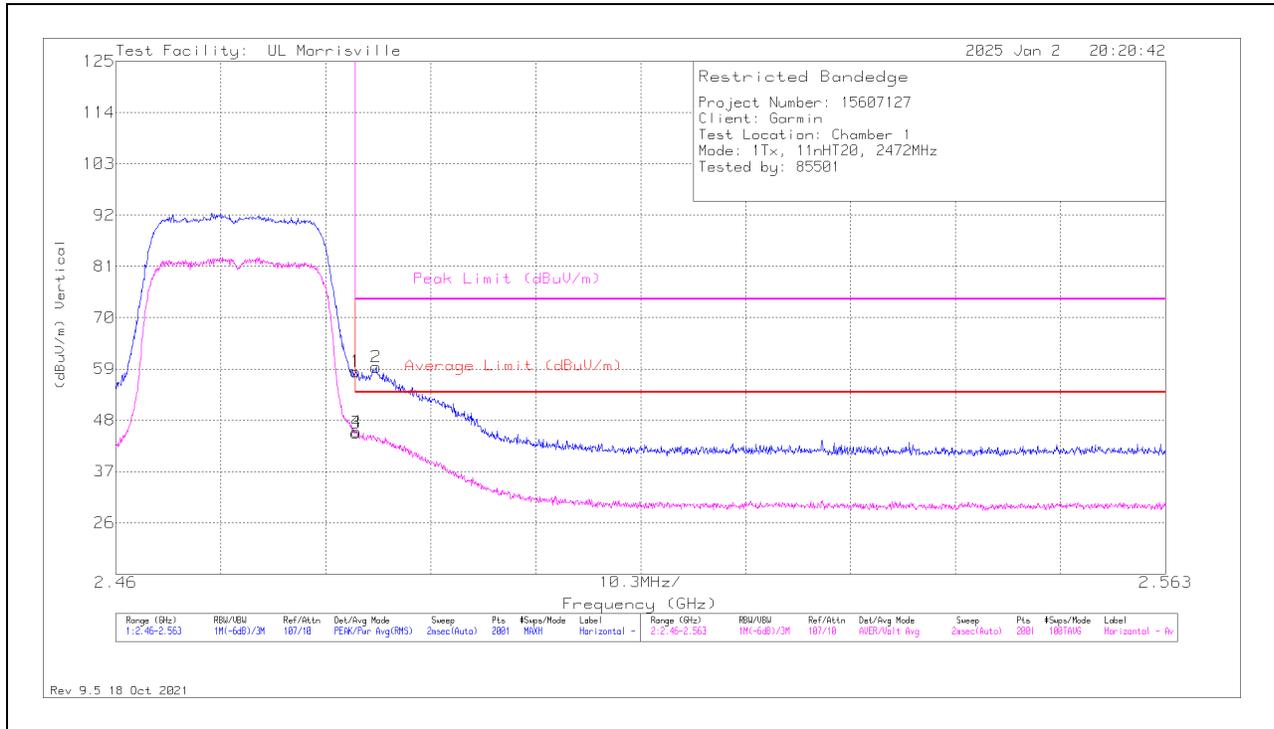
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

**BANDEDGE (HIGH CHANNEL, 2472MHz)**

**HORIZONTAL RESULT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	49.94	Pk	32.2	-23.7	58.44	-	-	74	-15.56	260	137	H
2	*** 2.48554	51.11	Pk	32.2	-23.9	59.41	-	-	74	-14.59	260	137	H
3	*** 2.48354	36.79	ADV	32.2	-23.7	45.29	54	-8.71	-	-	260	137	H
4	*** 2.48359	37.02	ADV	32.2	-23.7	45.52	54	-8.48	-	-	260	137	H

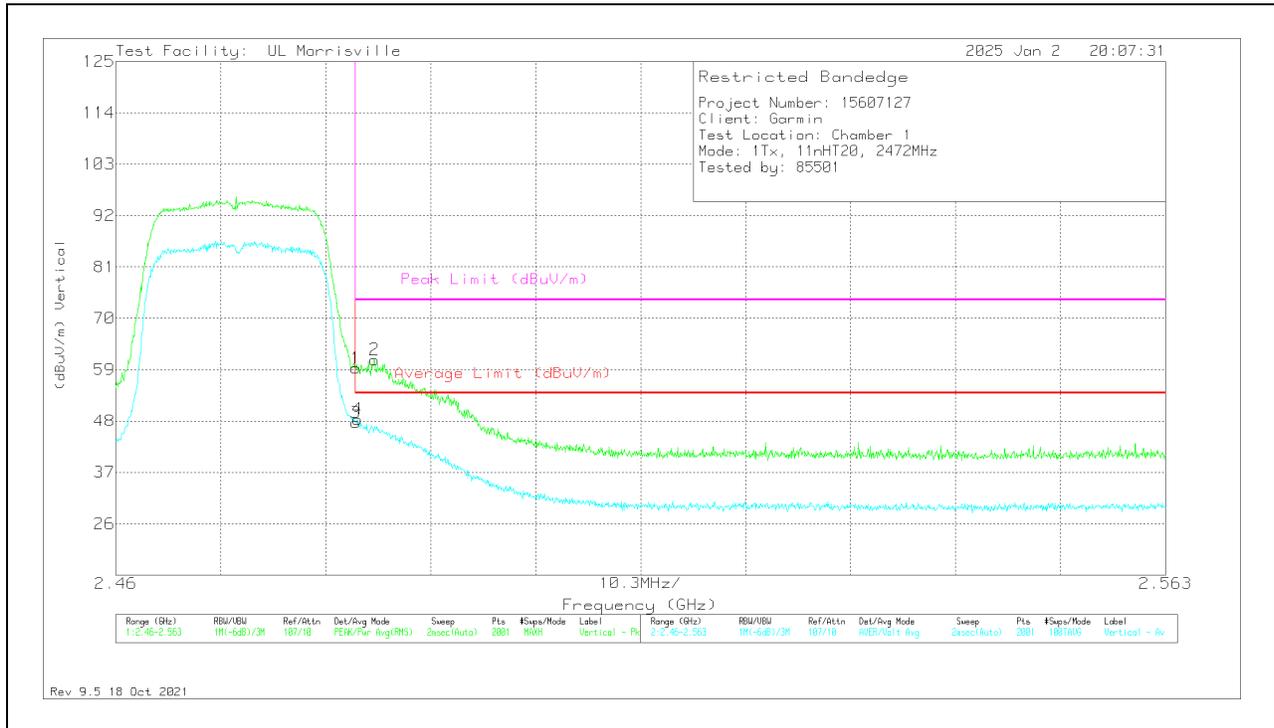
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

### VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	50.82	Pk	32.2	-23.7	59.32	-	-	74	-14.68	140	144	V
2	*** 2.48539	52.7	Pk	32.2	-23.8	61.1	-	-	74	-12.9	140	144	V
3	*** 2.48354	39.17	ADV	32.2	-23.7	47.67	54	-6.33	-	-	140	144	V
4	*** 2.48374	39.9	ADV	32.2	-23.7	48.4	54	-5.6	-	-	140	144	V

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

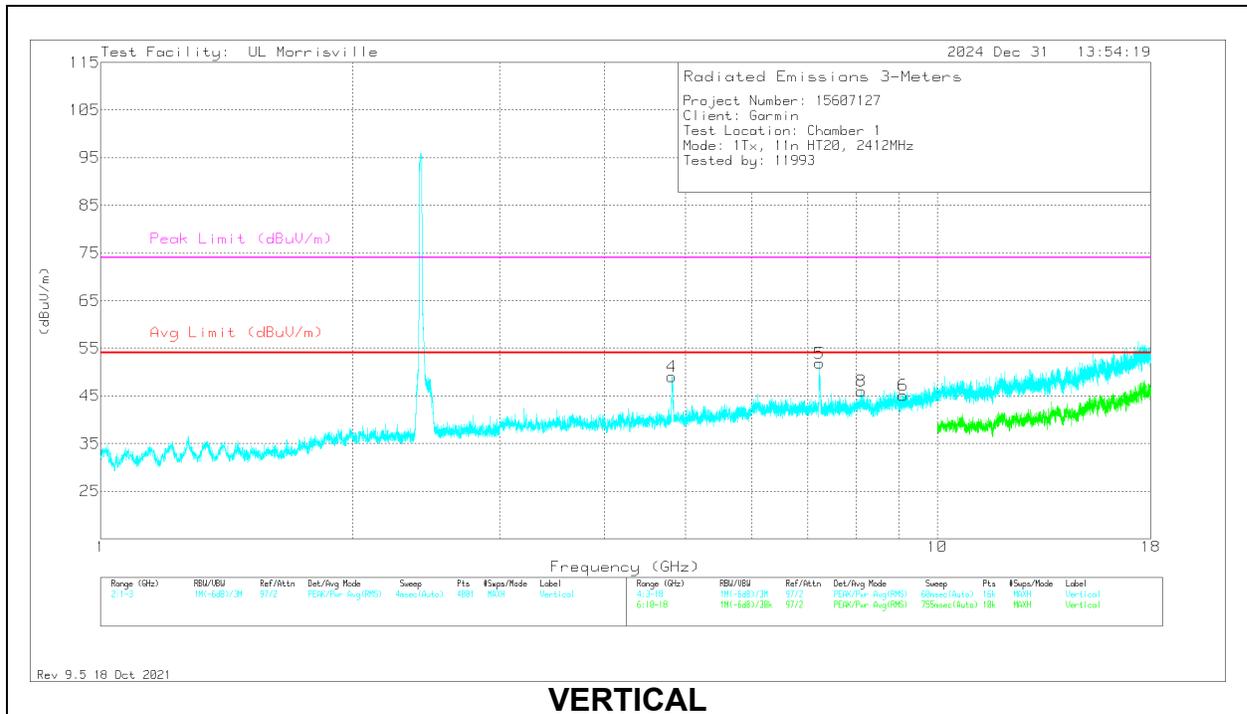
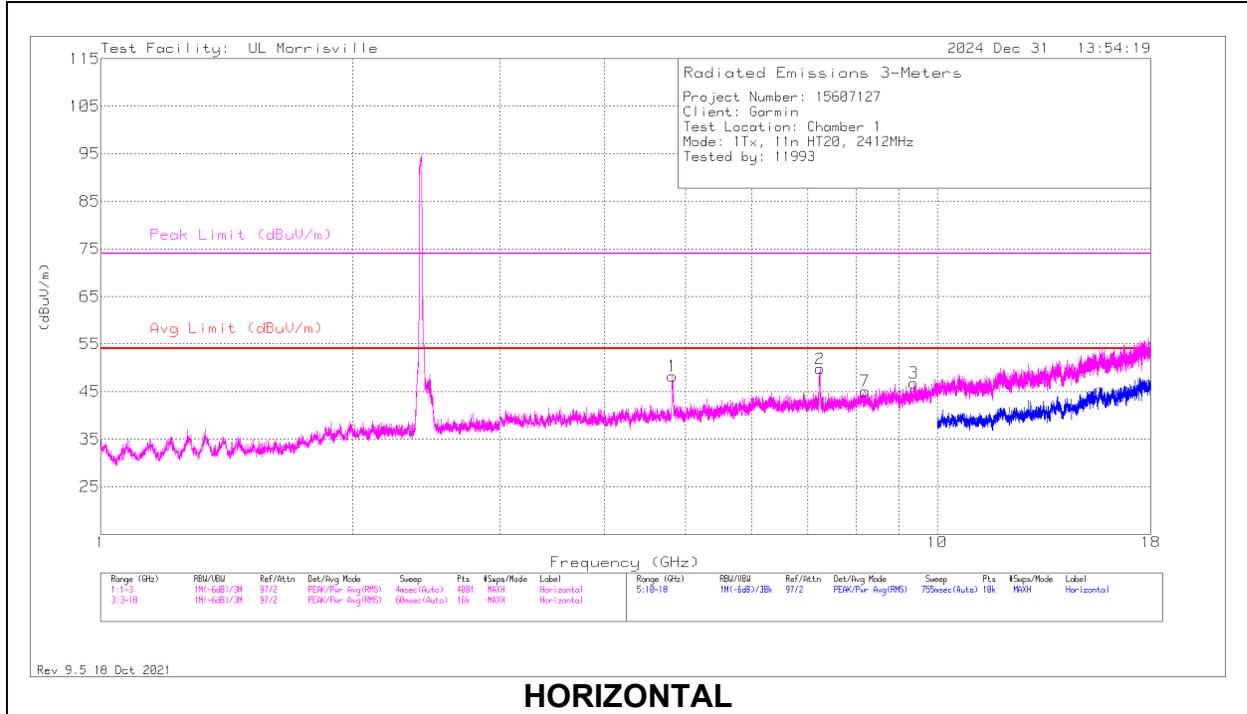
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

# HARMONICS AND SPURIOUS EMISSIONS

## LOW CHANNEL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	* ** 4.82668	66.04	PK2	33.9	-45.2	54.74	-	-	74	-19.26	162	181	H
	* ** 4.82748	51.32	ADV	33.9	-45.2	40.02	54	-13.98	-	-	162	181	H
3	* ** 9.37219	50.95	Pk	36.2	-40.3	46.85	54	-7.15	74	-27.15	0-360	199	H
7	* ** 8.20313	50.22	Pk	35.9	-41	45.12	54	-8.88	74	-28.88	0-360	199	H
4	* ** 4.82653	64.09	PK2	33.9	-45.2	52.79	-	-	74	-21.21	178	118	V
	* ** 4.82301	50.95	ADV	33.9	-45.4	39.45	54	-14.55	-	-	178	118	V
6	* ** 9.10875	49.42	Pk	35.9	-40.2	45.12	54	-8.88	74	-28.88	0-360	101	V
8	* ** 8.10938	51.15	Pk	35.9	-41	46.05	54	-7.95	74	-27.95	0-360	101	V
5	7.23844	58.74	Pk	35.4	-42.3	51.84	-	-	-	-	0-360	200	V
2	7.24031	56.56	Pk	35.4	-42.2	49.76	-	-	-	-	0-360	199	H

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

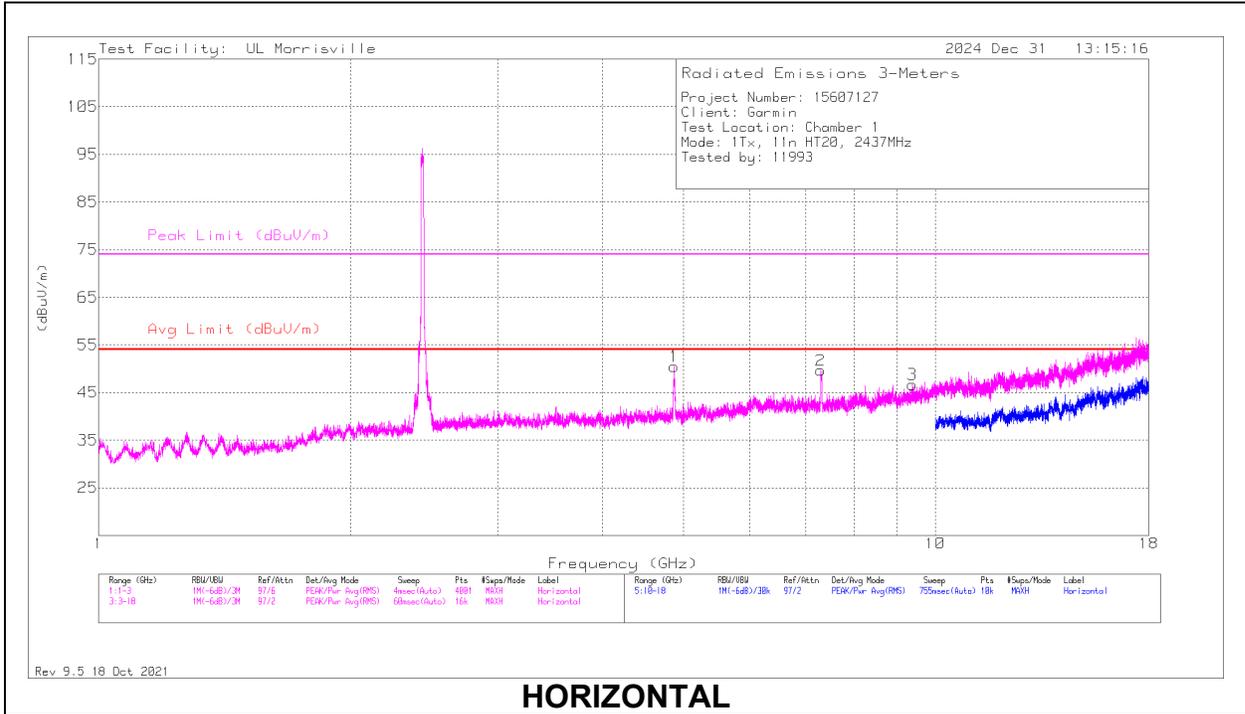
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

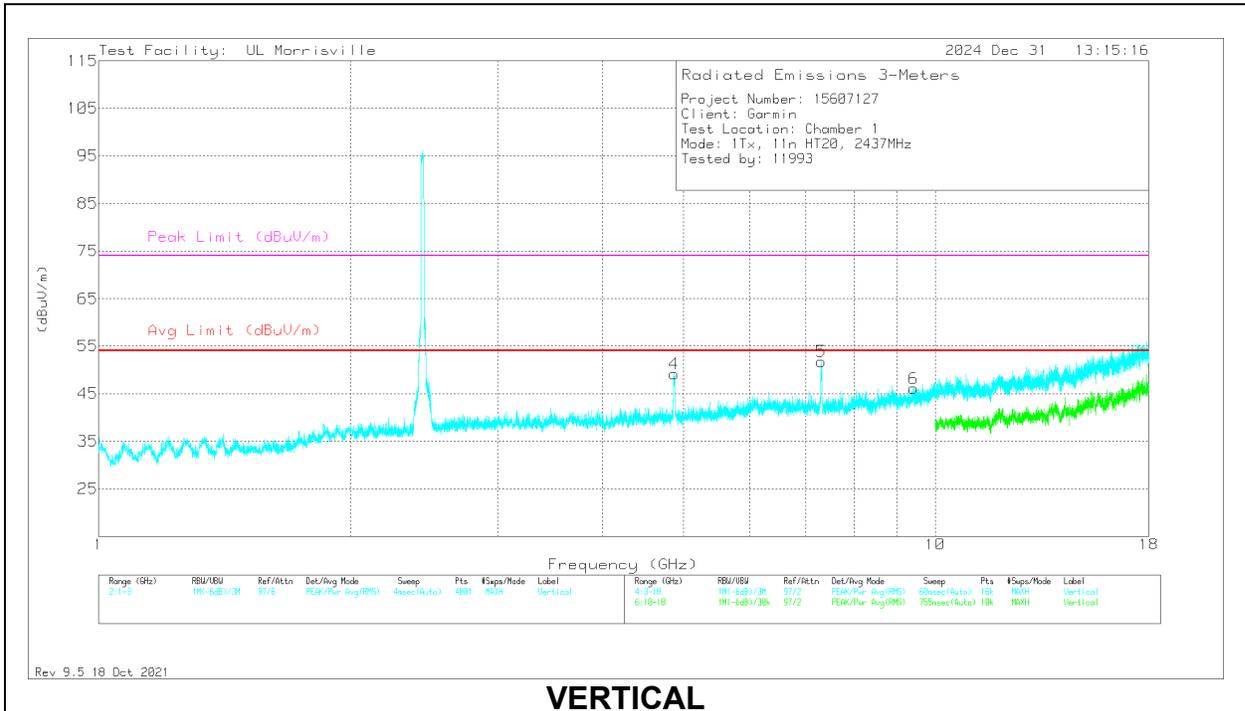
PK2 - Maximum Peak

ADV - Linear Voltage Average

### MID CHANNEL



### HORIZONTAL



### VERTICAL

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	* ** 4.87149	64.15	PK2	34	-44.9	53.25	-	-	74	-20.75	153	134	H
	* ** 4.87518	50.79	ADV	34	-44.8	39.99	54	-14.01	-	-	153	134	H
2	* ** 7.30161	62.03	PK2	35.4	-41.9	55.53	-	-	74	-18.47	171	206	H
	* ** 7.30796	47.86	ADV	35.4	-41.7	41.56	54	-12.44	-	-	171	206	H
3	* ** 9.39375	50.36	Pk	36.3	-40	46.66	54	-7.34	74	-27.34	0-360	101	H
4	* ** 4.87542	63.96	PK2	34	-44.8	53.16	-	-	74	-20.84	152	146	V
	* ** 4.87237	51.3	ADV	34	-44.8	40.5	54	-13.5	-	-	152	146	V
5	* ** 7.30556	61.21	PK2	35.4	-41.8	54.81	-	-	74	-19.19	284	134	V
	* ** 7.3117	47.54	ADV	35.4	-41.7	41.24	54	-12.76	-	-	284	134	V
6	* ** 9.41531	49.49	Pk	36.3	-39.7	46.09	54	-7.91	74	-27.91	0-360	101	V

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

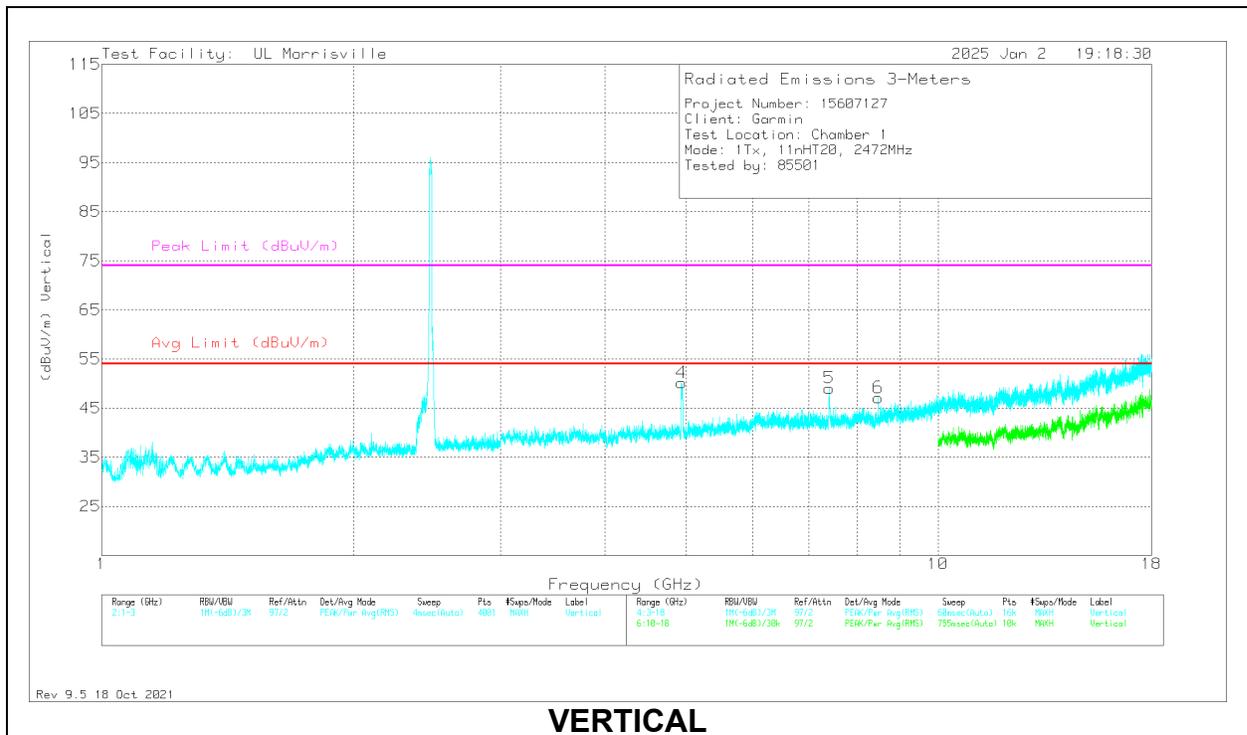
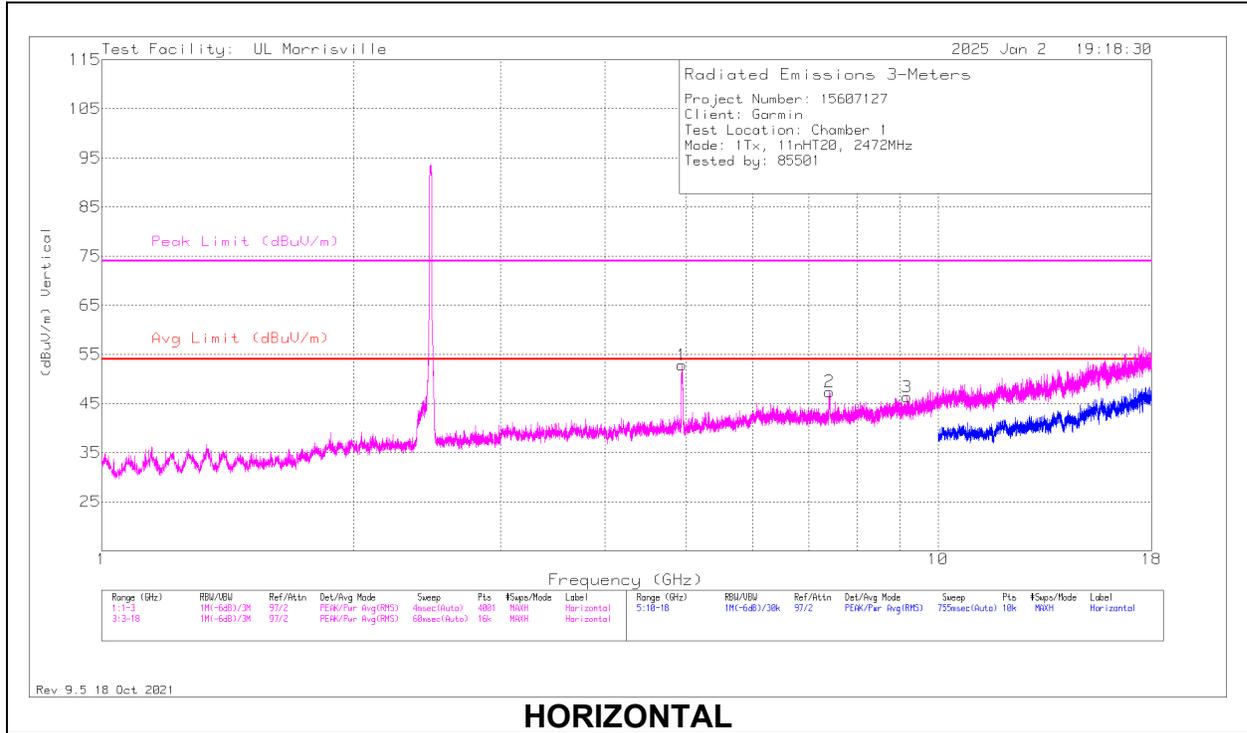
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

ADV - Linear Voltage Average

### HIGH CHANNEL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	135143 (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	*** 4.94198	68.1	PK2	34.1	-44.3	57.9	-	-	74	-16.1	165	161	H
	*** 4.94187	52.28	ADV	34.1	-44.3	42.08	54	-11.92	-	-	165	161	H
2	*** 7.41844	53.19	Pk	35.4	-41.2	47.39	54	-6.61	74	-26.61	0-360	101	H
3	*** 9.18281	50.13	Pk	36	-39.8	46.33	54	-7.67	74	-27.67	0-360	101	H
4	*** 4.93627	62.9	PK2	34.1	-44.2	52.8	-	-	74	-21.2	164	117	V
	*** 4.93684	49.57	ADV	34.1	-44.2	39.47	54	-14.53	-	-	164	117	V
5	*** 7.41088	58.9	PK2	35.4	-41.3	53	-	-	74	-21	280	117	V
	*** 7.41259	45.29	ADV	35.4	-41.2	39.49	54	-14.51	-	-	280	117	V
6	*** 8.47969	52.03	Pk	35.8	-40.7	47.13	54	-6.87	74	-26.87	0-360	200	V

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

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

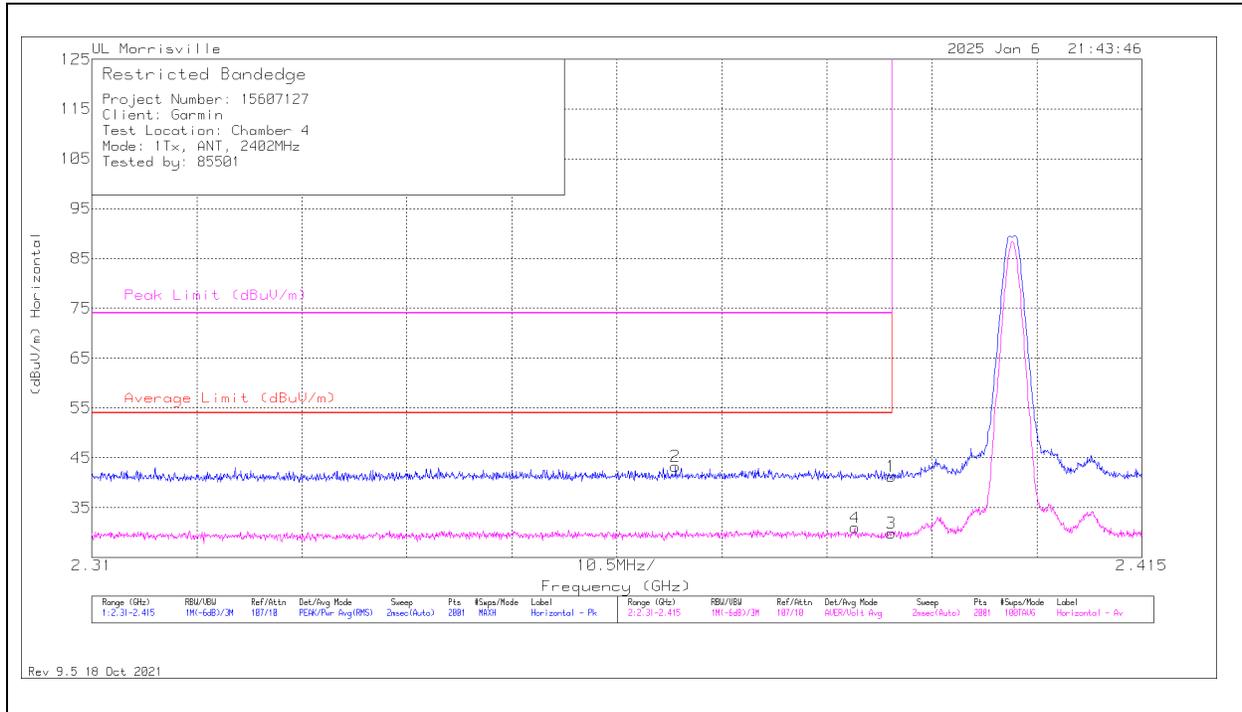
PK2 - Maximum Peak

ADV - Linear Voltage Average

### 10.1.4. TX ABOVE 1 GHz ANT/ANT+ MODE IN THE 2.4 GHz BAND

#### BANDEDGE (LOW CHANNEL, 2402MHz)

#### HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.38996	32.44	Pk	32	-23.2	41.24	-	-	74	-32.76	353	124	H
2	*** 2.36838	34.37	Pk	31.9	-23	43.27	-	-	74	-30.73	353	124	H
3	*** 2.38996	21.03	ADV	32	-23.2	29.83	54	-24.17	-	-	353	124	H
4	*** 2.38628	22.25	ADV	32	-23.3	30.95	54	-23.05	-	-	353	124	H

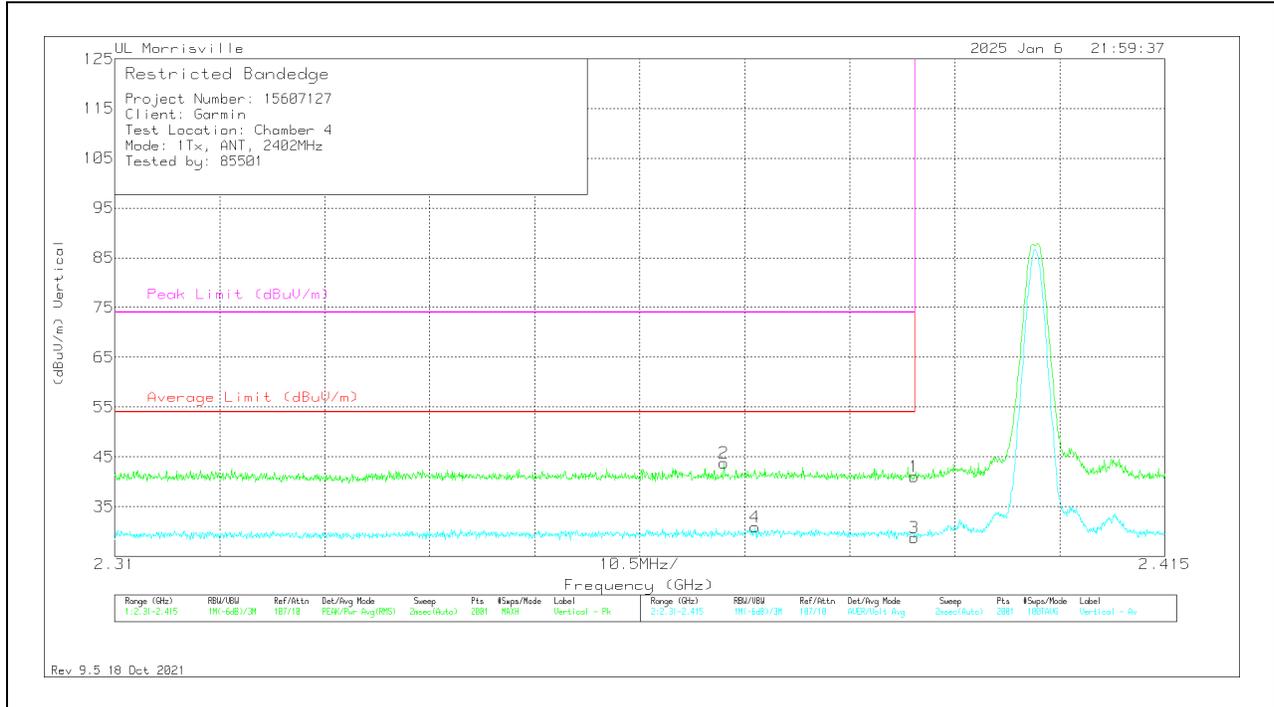
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - 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)	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	32.24	Pk	32	-23.2	41.04	-	-	74	-32.96	28	103	V
2	*** 2.3709	34.83	Pk	31.9	-23	43.73	-	-	74	-30.27	28	103	V
3	*** 2.38996	19.92	ADV	32	-23.2	28.72	54	-25.28	-	-	28	103	V
4	*** 2.37405	21.84	ADV	31.9	-22.9	30.84	54	-23.16	-	-	28	103	V

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

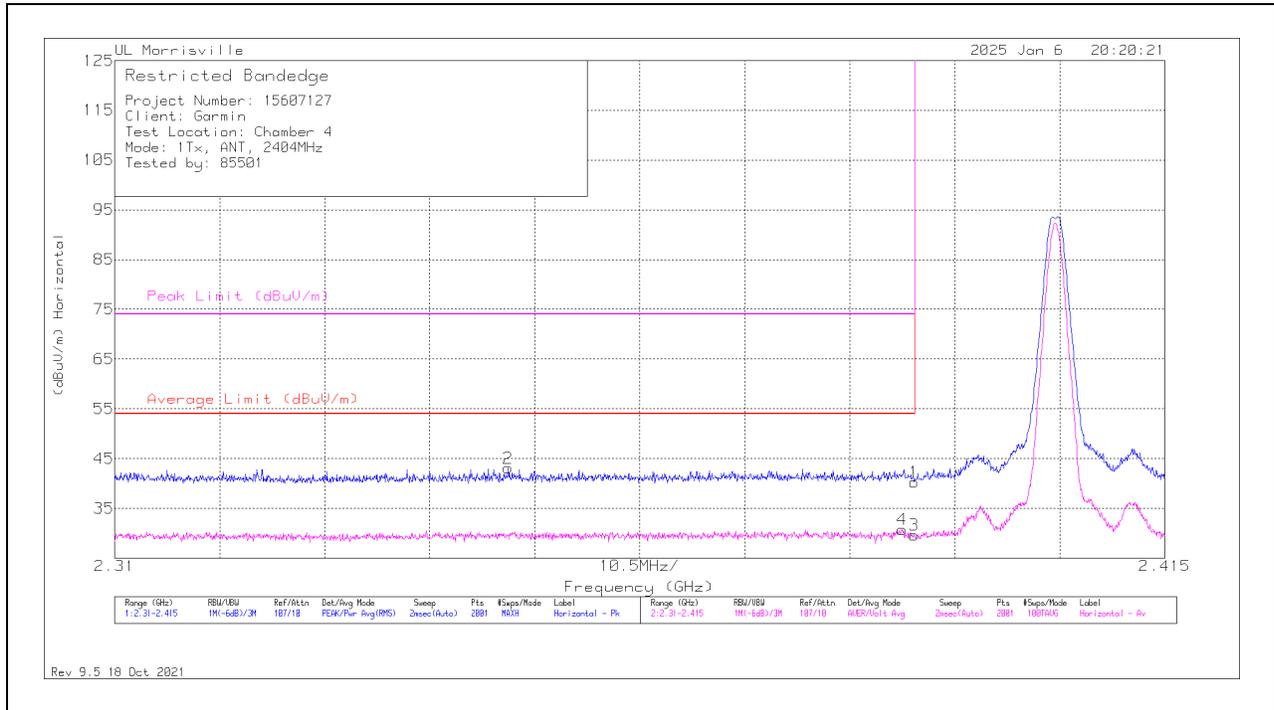
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

**BANEDGE (LOW CHANNEL, 2404MHz)**

**HORIZONTAL RESULT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38996	31.46	Pk	32	-23.2	40.26	-	-	74	-33.74	357	122	H
2	* ** 2.34932	34.28	Pk	31.8	-23	43.08	-	-	74	-30.92	357	122	H
3	* ** 2.38996	20.8	ADV	32	-23.2	29.6	54	-24.4	-	-	357	122	H
4	* ** 2.38875	21.94	ADV	32	-23.2	30.74	54	-23.26	-	-	357	122	H

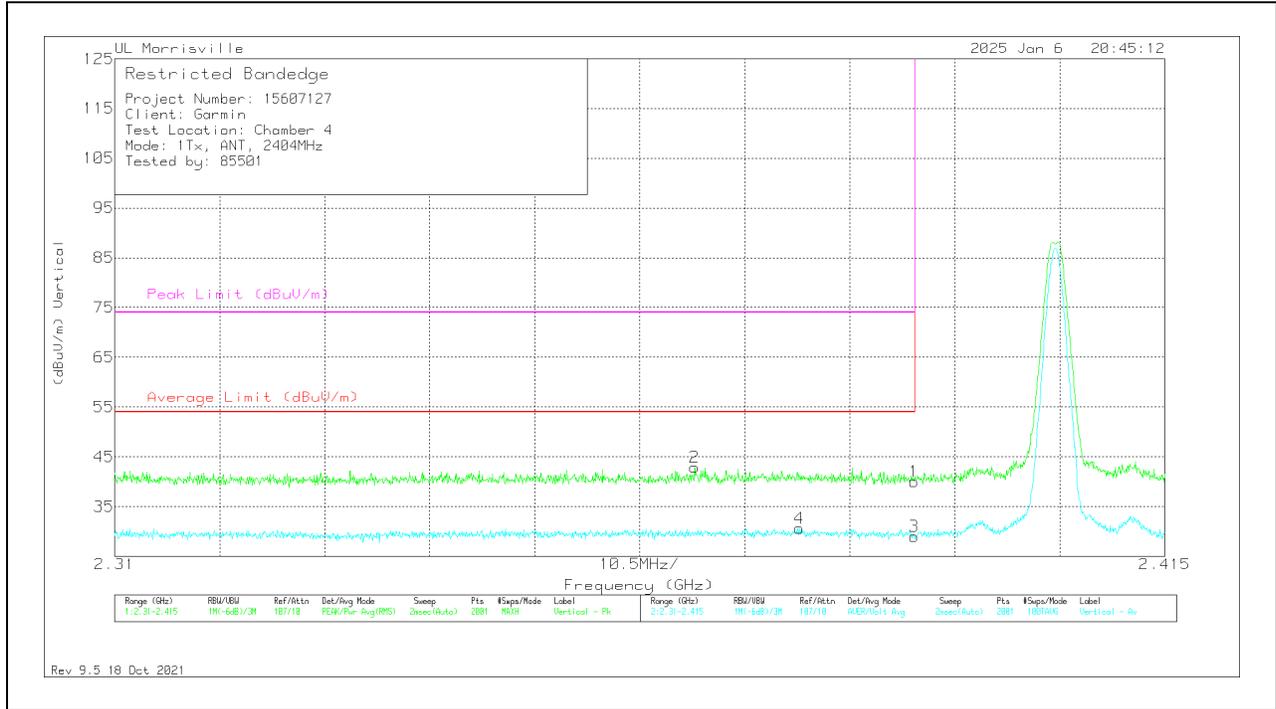
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

### VERTICAL RESULT

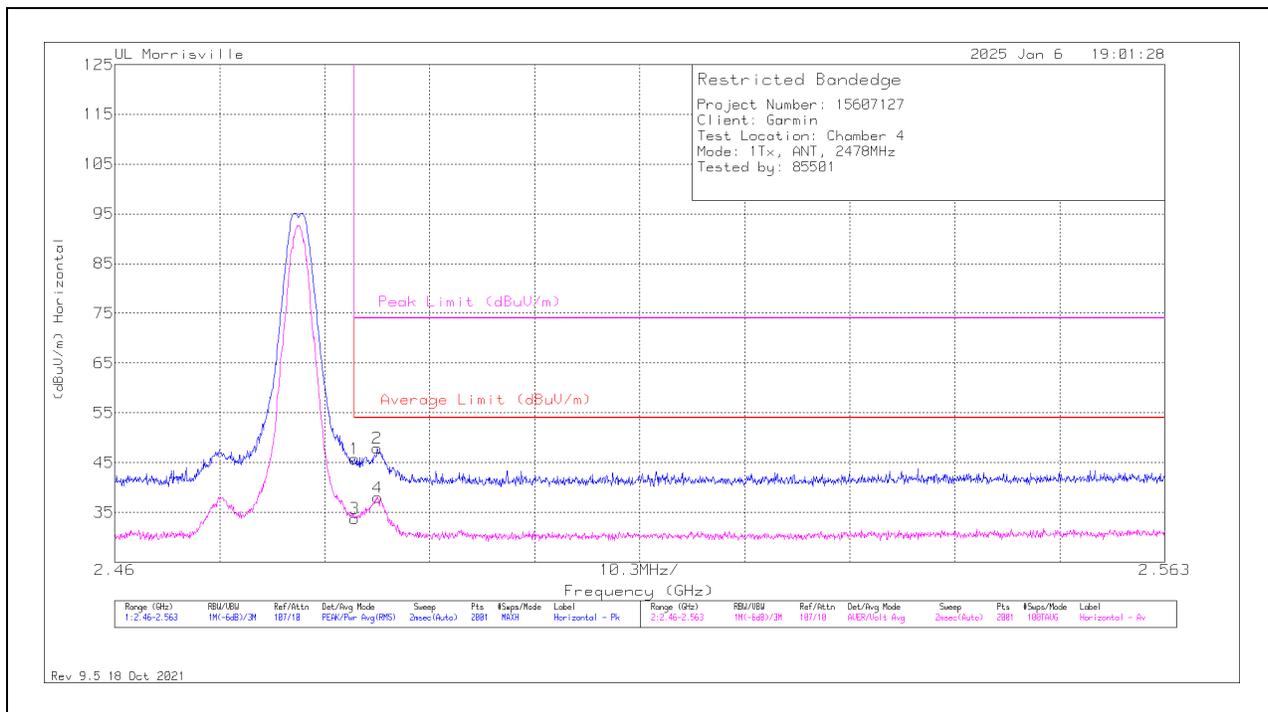


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38996	31.21	Pk	32	-23.2	40.01	-	-	74	-33.99	315	124	V
2	* ** 2.36796	33.96	Pk	31.9	-23	42.86	-	-	74	-31.14	315	124	V
3	* ** 2.38996	20.21	ADV	32	-23.2	29.01	54	-24.99	-	-	315	124	V
4	* ** 2.37846	21.59	ADV	32	-23	30.59	54	-23.41	-	-	315	124	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, 2478MHz)**

**HORIZONTAL RESULT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	36.23	Pk	32.3	-22.8	45.73	-	-	74	-28.27	354	137	H
2	* ** 2.48575	38.37	Pk	32.3	-22.8	47.87	-	-	74	-26.13	354	137	H
3	* ** 2.48354	24.26	ADV	32.3	-22.8	33.76	54	-20.24	-	-	354	137	H
4	* ** 2.4858	28.45	ADV	32.3	-22.8	37.95	54	-16.05	-	-	354	137	H

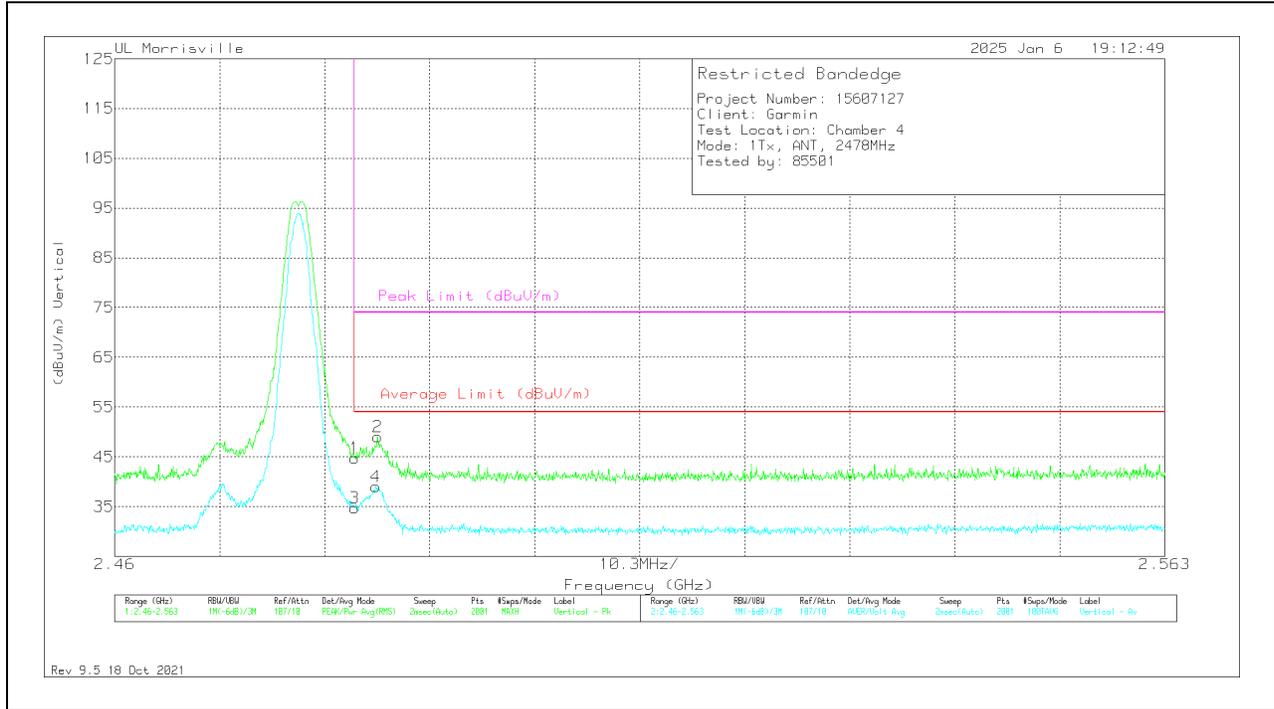
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - 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)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	35.25	Pk	32.3	-22.8	44.75	-	-	74	-29.25	24	121	V
2	* ** 2.4858	39.51	Pk	32.3	-22.8	49.01	-	-	74	-24.99	24	121	V
3	* ** 2.48354	25.27	ADV	32.3	-22.8	34.77	54	-19.23	-	-	24	121	V
4	* ** 2.4856	29.51	ADV	32.3	-22.8	39.01	54	-14.99	-	-	24	121	V

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

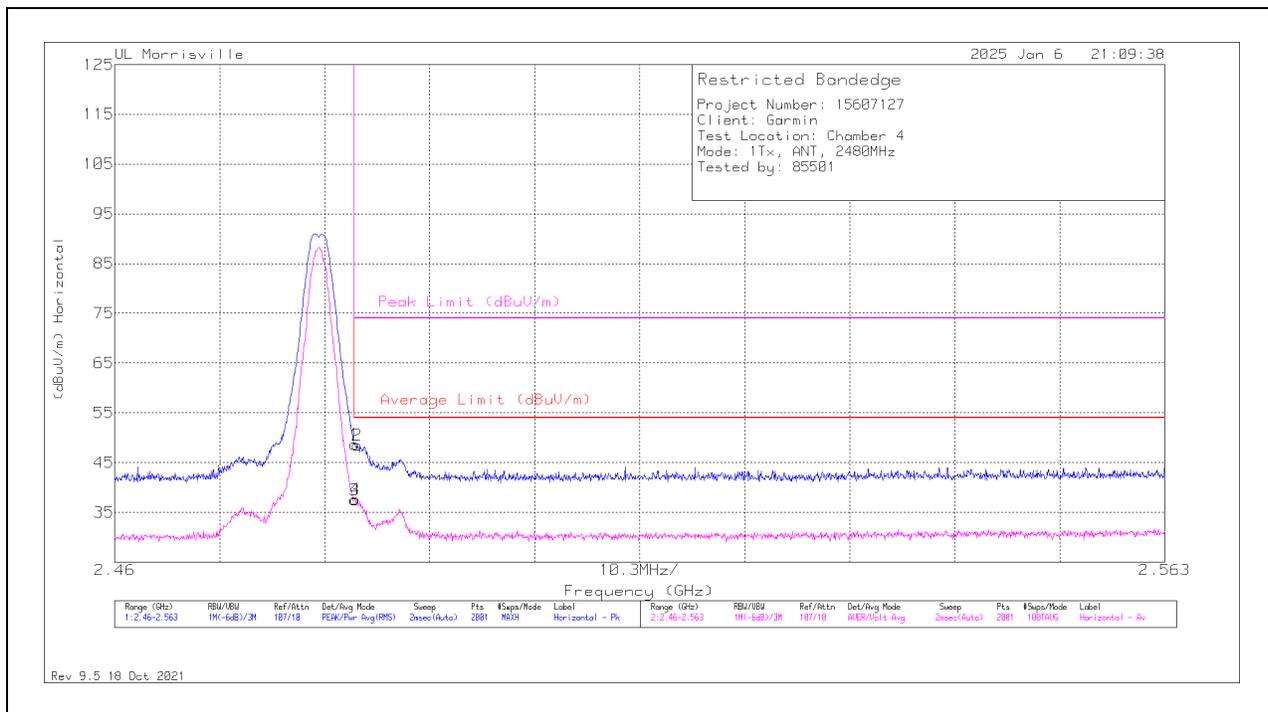
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

**BANDEDGE (HIGH CHANNEL, 2480MHz)**

**HORIZONTAL RESULT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	39.12	Pk	32.3	-22.8	48.62	-	-	74	-25.38	348	110	H
2	* ** 2.48379	39.05	Pk	32.3	-22.8	48.55	-	-	74	-25.45	348	110	H
3	* ** 2.48354	28.03	ADV	32.3	-22.8	37.53	54	-16.47	-	-	348	110	H
4	* ** 2.48359	28.16	ADV	32.3	-22.8	37.66	54	-16.34	-	-	348	110	H

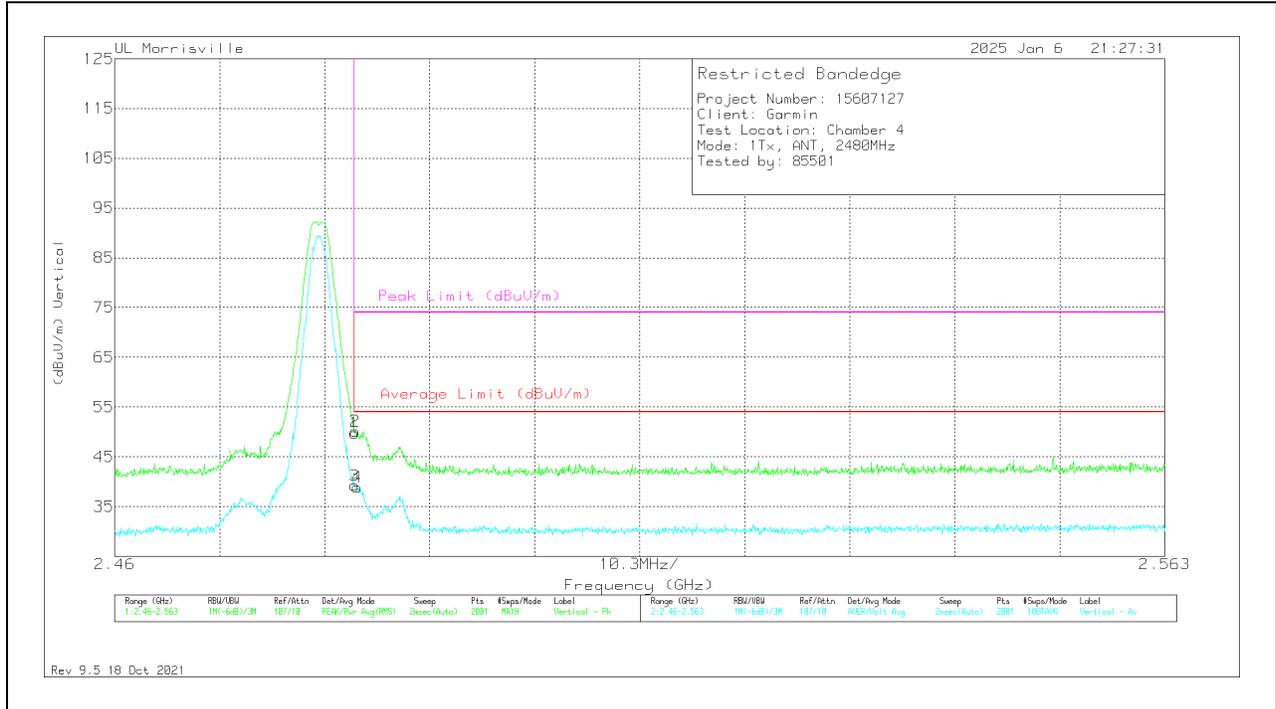
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - 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)	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	40.29	Pk	32.3	-22.8	49.79	-	-	74	-24.21	26	101	V
2	*** 2.48359	40.62	Pk	32.3	-22.8	50.12	-	-	74	-23.88	26	101	V
3	*** 2.48354	29.71	ADV	32.3	-22.8	39.21	54	-14.79	-	-	26	100	V
4	*** 2.48379	29.35	ADV	32.3	-22.8	38.85	54	-15.15	-	-	26	100	V

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

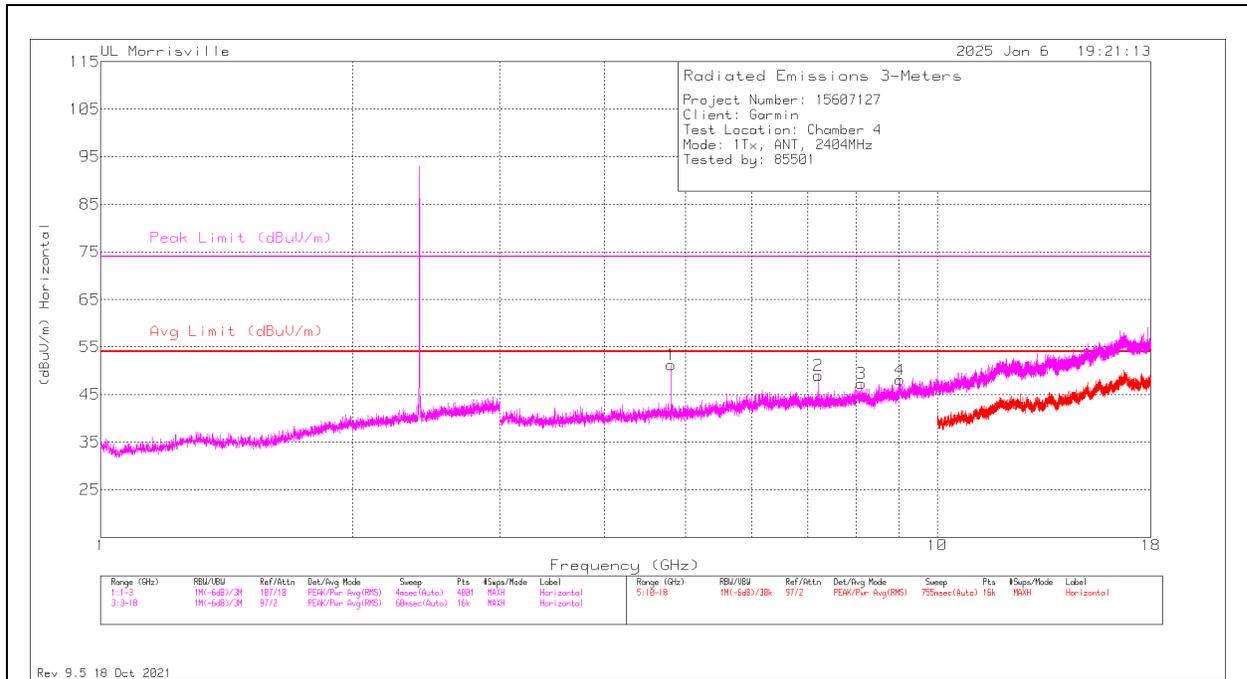
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

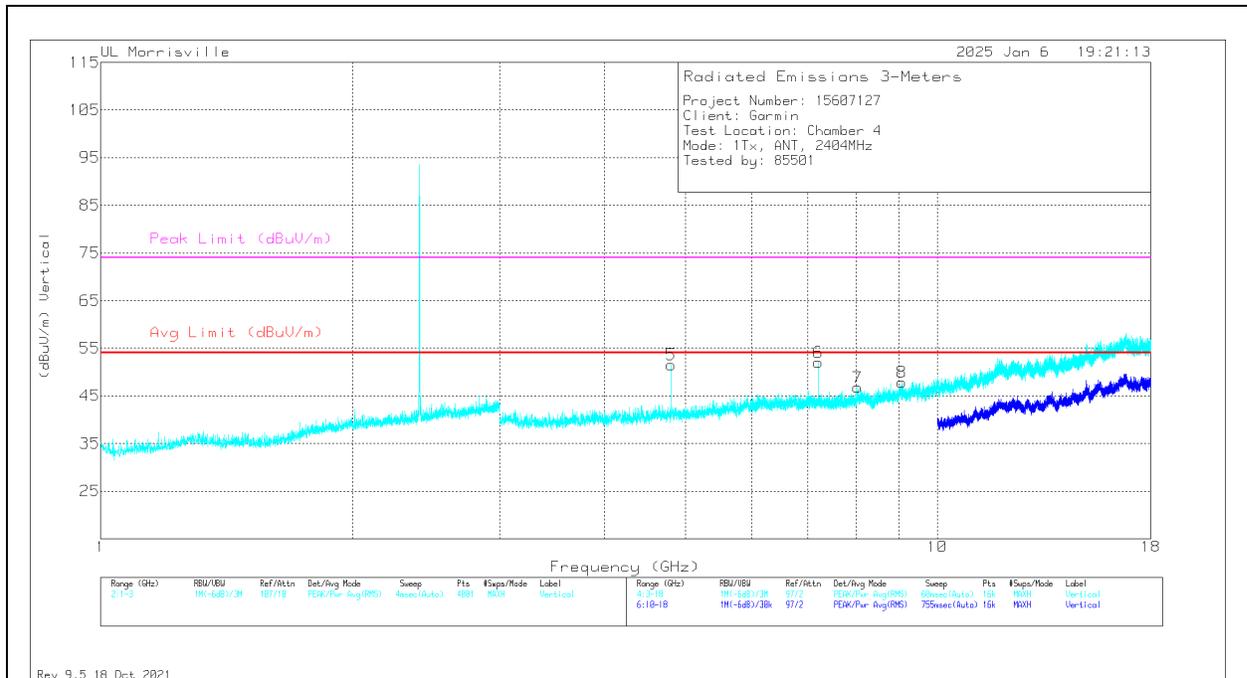
ADV - Linear Voltage Average

# HARMONICS AND SPURIOUS EMISSIONS

## LOW CHANNEL



## HORIZONTAL



## VERTICAL

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.8085	50.61	PK2	34.1	-31.3	53.41	-	-	74	-20.59	198	136	H
	* ** 4.80836	44.26	ADV	34.1	-31.3	47.06	54	-6.94	-	-	198	136	H
3	* ** 8.11969	38.18	Pk	35.8	-26.7	47.28	54	-6.72	74	-26.72	0-360	100	H
4	* ** 9.02884	37.1	PK2	36.2	-24.4	48.9	-	-	74	-25.1	254	295	H
	* ** 9.03091	24.12	ADV	36.2	-24.4	35.92	54	-18.08	-	-	254	295	H
5	* ** 4.80847	51.48	PK2	34.1	-31.3	54.28	-	-	74	-19.72	351	254	V
	* ** 4.80836	45.3	ADV	34.1	-31.3	48.1	54	-5.9	-	-	351	254	V
7	* ** 8.03438	38.15	Pk	35.8	-27.2	46.75	54	-7.25	74	-27.25	0-360	200	V
8	* ** 9.07313	36.03	Pk	36.2	-24.4	47.83	54	-6.17	74	-26.17	0-360	200	V
2	7.21125	41.38	Pk	35.6	-27.9	49.08	-	-	-	-	0-360	100	H
6	7.21125	44.39	Pk	35.6	-27.9	52.09	-	-	-	-	0-360	200	V

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

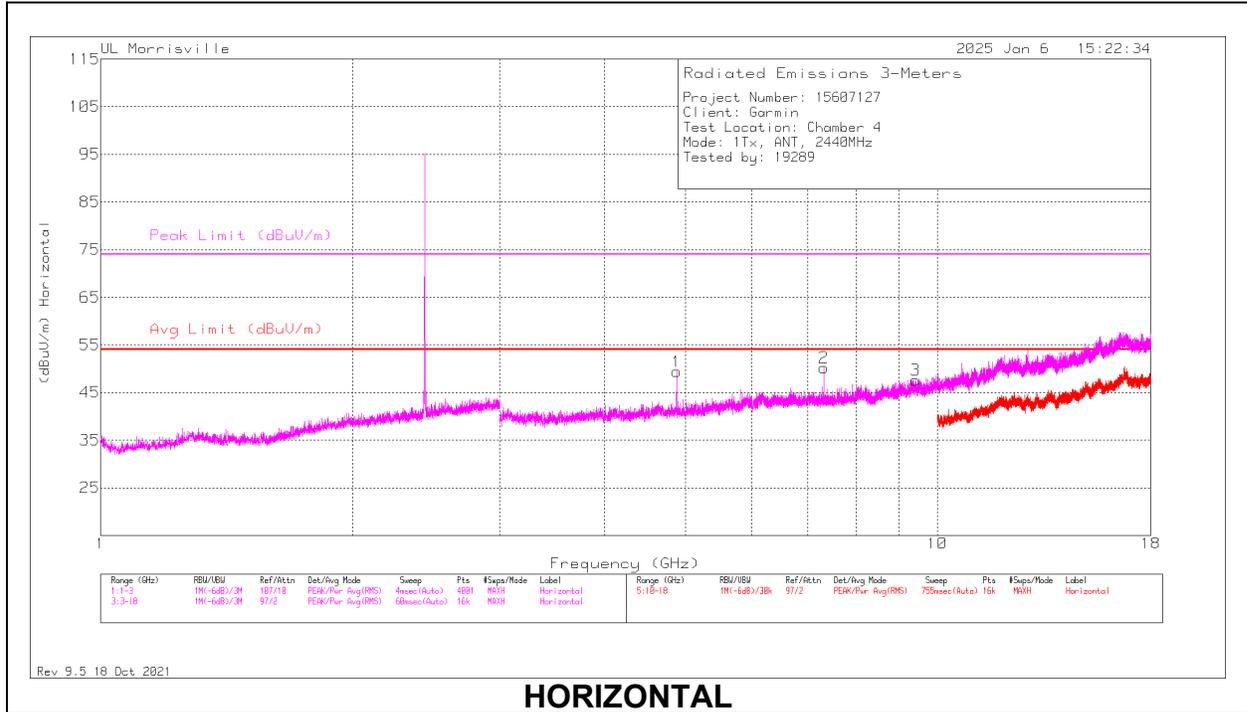
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

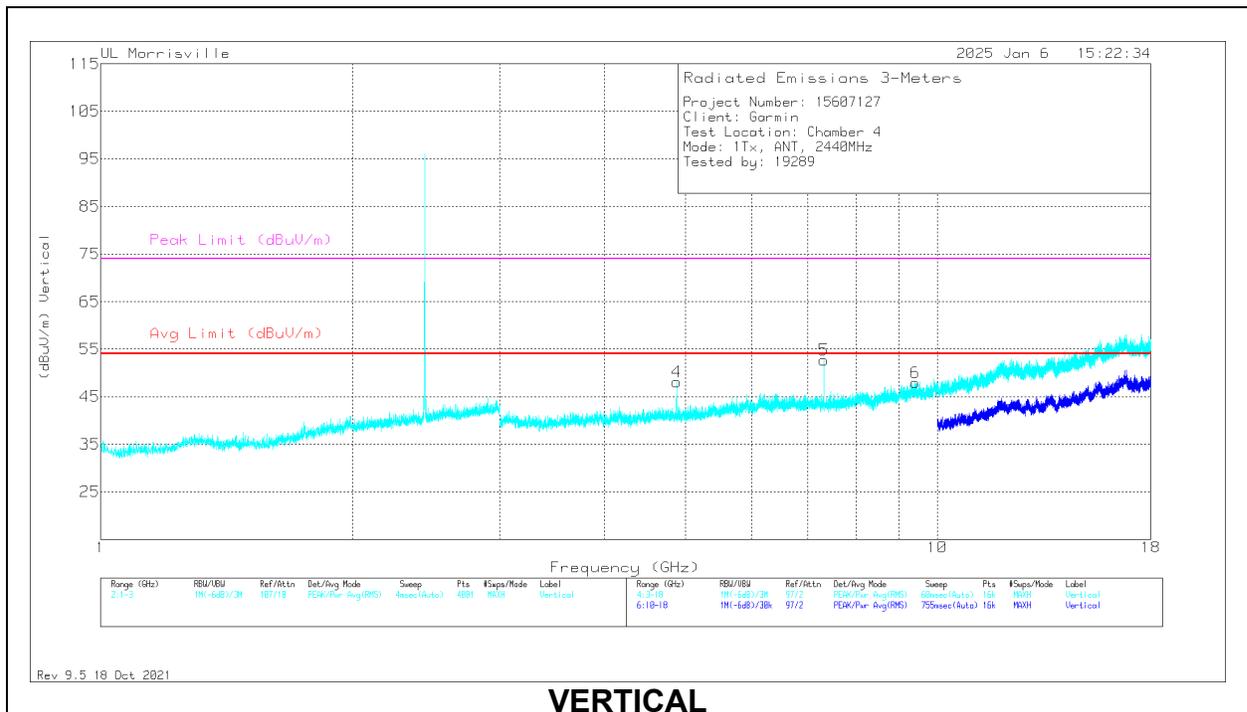
PK2 - Maximum Peak

ADV - Linear Voltage Average

### MID CHANNEL



### HORIZONTAL



### VERTICAL

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	89509 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 4.88075	48.73	PK2	34	-31	51.73	-	-	74	-22.27	199	140	H
	*** 4.87949	40.5	ADV	34	-31	43.5	54	-10.5	-	-	199	140	H
2	*** 7.32088	45.59	PK2	35.6	-27.7	53.49	-	-	74	-20.51	53	125	H
	*** 7.31932	37.48	ADV	35.6	-27.7	45.38	54	-8.62	-	-	53	125	H
3	*** 9.41719	36.09	Pk	36.6	-25.1	47.59	54	-6.41	74	-26.41	0-360	100	H
4	*** 4.88047	48.81	PK2	34	-31	51.81	-	-	74	-22.19	48	359	V
	*** 4.87956	41.62	ADV	34	-31	44.62	54	-9.38	-	-	48	359	V
5	*** 7.31904	46.88	PK2	35.6	-27.7	54.78	-	-	74	-19.22	346	200	V
	*** 7.31923	39.34	ADV	35.6	-27.7	47.24	54	-6.76	-	-	346	200	V
6	*** 9.41438	36.53	Pk	36.6	-25.2	47.93	54	-6.07	74	-26.07	0-360	200	V

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