

# TEST REPORT

**Report Number:** R15626970-E3

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

**Model :** A04807

**FCC ID :** IPH-04807

**IC :** 1792A-04807

**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:**  
2025-07-23

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## REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2025-07-23	Initial Issue	Manish Baral

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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:** A04807

**SERIAL NUMBER:** 511423961, 511423988

**SAMPLE RECEIPT DATE:** 2025-04-14 and 2025-04-23

**DATE TESTED:** 2025-04-15 to 2025-05-19

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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Engineer  
Consumer, Medical and IT Segment  
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## 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 Durham, NC 27713, USA	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)	141.2 Hz
Occupied Channel Bandwidth	1.22%
RF output power, conducted	1.3 dB (PK) 0.45 dB (AV)
Power Spectral Density, conducted	2.47 dB
Unwanted Emissions, conducted	1.94 dB
All emissions, radiated	6.01 dB
Conducted Emissions (0.150-30MHz) - LISN	3.40 dB
Temperature	0.57°C
Humidity	3.39%
DC Supply voltages	1.70%
Time	3.39%

Uncertainty figures are valid to a confidence level of 95%.

### 5.4. SAMPLE CALCULATION

#### **RADIATED EMISSIONS**

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

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

#### **MAINS CONDUCTED EMISSIONS**

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.

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

## 6. EQUIPMENT UNDER TEST

### 6.1. EUT DESCRIPTION

The EUT is an extremity worn digital transceiver with BT, BLE, ANT/ANT+, 802.11b/g/n 2.4GHz WLAN, NFC, and Global Navigation Satellite System (GNSS) receiver. This report covers full 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	20.89	122.74
2412 - 2472	802.11g	22.78	189.67
2412 - 2472	802.11n HT20	22.48	177.01
2402 - 2480	ANT/ANT+	5.35	3.43
2402 - 2480	BLE 1Mbps	5.22	3.33
2402 - 2480	BLE 2Mbps	5.25	3.21

### 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)
Slot	2402-2480	-6.41

### 6.4. SOFTWARE AND FIRMWARE

FW Version: 16.29

### 6.5. WORST-CASE CONFIGURATION AND MODE

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

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

For 2.4 WLAN all radiated spurious emissions between 1GHz and 18 GHz were tested at mid channel power. Band edge scans were performed on all inner/outer channels up to mid channel power.

For BLE and ANT/ANT+ 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.

As declared by the manufacturer, the EUT does not support channels 2402 MHz and 2480 MHz for BLE 2 Mbps.

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
Tag Reader	Advanced Card Systems	ACR1252U	RR554-214365	V5MACR1252
Laptop	Lenovo	21AJS0KL00	PF4FKVZE	-

### I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Proprietary	1	USB-C	Shielded	<3m	Program/Charge EUT

### SETUP DIAGRAMS

Please refer to R15626970-EP2 for setup diagrams

## **7. 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.

## 8. 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 1)

Equip. ID	Description	Manufacturer	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>					
90629	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2024-01-30	2026-01-30
<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>18-40 GHz</b>					
91186	Horn Antenna, 18-26.5GHz	Antenna Research Associates	MWH-1826/B	2024-05-16	2025-05-16
<b>Gain-Loss Chains</b>					
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
91979	Gain-loss string: 1-18GHz	Various	Various	2024-05-08	2025-05-08
135999	Gain-loss string: 18-40GHz	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
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>					
241205	Environmental Meter	Fisher Scientific	15-077-963	2023-09-05	2025-09-05

**Test Equipment Used - Wireless Conducted Measurement Equipment**

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
<b>Conducted Room 1</b>					
90411	Spectrum Analyzer	Keysight Technologies	N9030A	2024-08-01	2025-08-01
179892	Environmental Meter	Fisher Scientific	15-077-963	2024-08-12	2025-08-12
SOFTEMI	Antenna Port Software	UL	Version 2024.2.23	NA	NA
Power Software	Boonton Power Analyzer	Boonton	Version 3.0.13.0	NA	NA
<b>Additional Equipment used</b>					
211057	Real-Time Peak Power Sensor 50MHz to 8GHz	Boonton	RTP5000	2024-08-01	2025-08-01
<b>Attenuators</b>					
IV	SMA Coaxial 20dB Attenuator	CentricRF	C18S2-20	2025-04-11	2026-04-11
CBL091	Micro-Coax UTIFLEX Cable Assembly, Low Loss	Carlisle Interconnect Technologies	UFA147A-2-0360-200200	2025-03-07	2026-03-07

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

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
70374	EMI Test Receiver	ROHDE & SCHWARZ	ESC17	2024-07-30	2025-07-30
CBL087	Coax cable, RG223, N-male to BNC-male, 20-ft.	Pasternack	PE3W06143-240	2024-04-04	2025-04-30
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
52859	Transient Limiter, 0.009-100MHz	Electro-Metrics	EM-7600	2024-04-04	2025-04-30
236852	CW-AC Power Source	Ametek	CW2501	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		

## 9. ANTENNA PORT TEST RESULTS

### 9.1. ON TIME AND DUTY CYCLE

#### LIMITS

None; for reporting purposes only.

#### PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

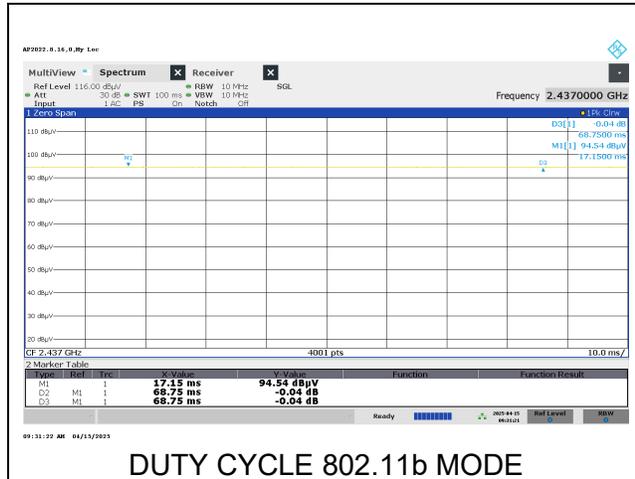
#### ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
<b>2.4GHz Band</b>						
802.11b	100.000	100.00	1.000	100.00	0.00	0.010
802.11g	100.000	100.00	1.000	100.00	0.00	0.010
802.11n HT20	100.000	100.00	1.000	100.00	0.00	0.010
ANT/ANT+	100.000	100.00	1.000	100.00	0.00	0.010
BLE 1Mbps	100.000	100.00	1.000	100.00	0.00	0.010
BLE 2Mbps	100.000	100.00	1.000	100.00	0.00	0.010

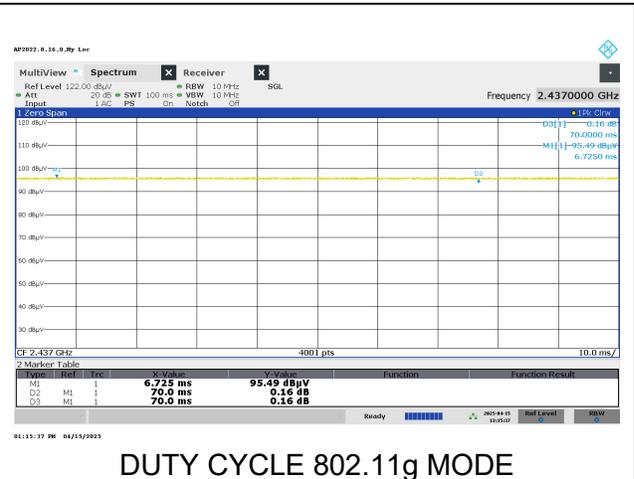
**Tester ID:** 84740/11993

**Date:** 2025-04-15 to 2025-04-16

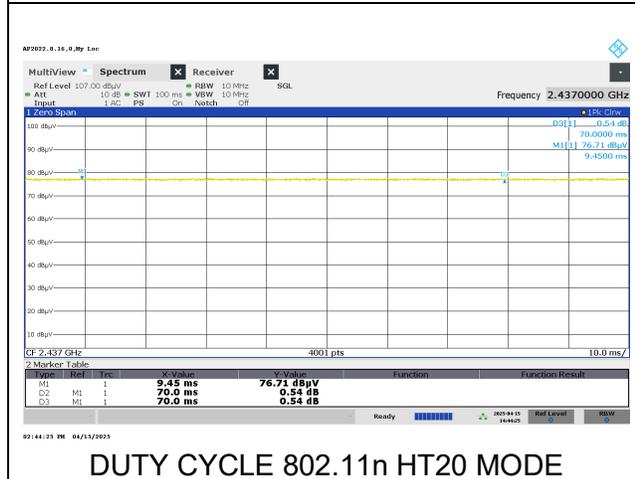
DUTY CYCLE PLOTS



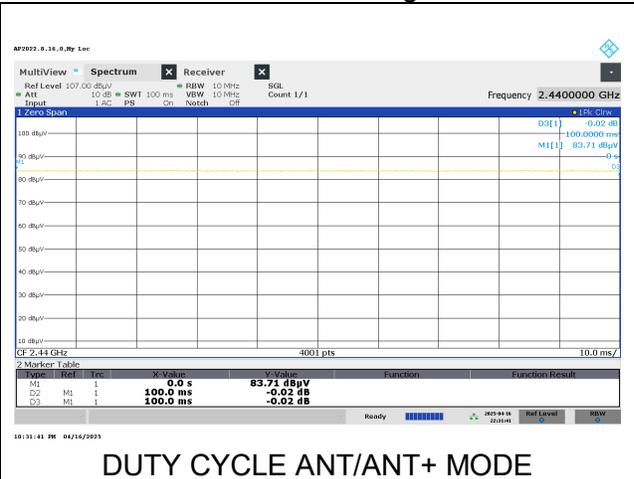
DUTY CYCLE 802.11b MODE



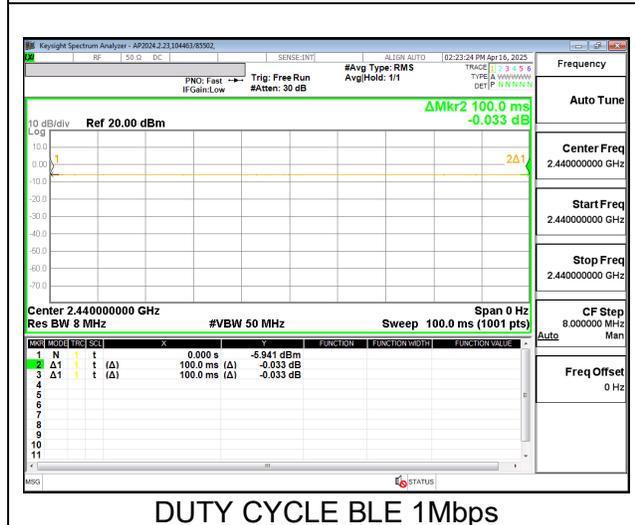
DUTY CYCLE 802.11g MODE



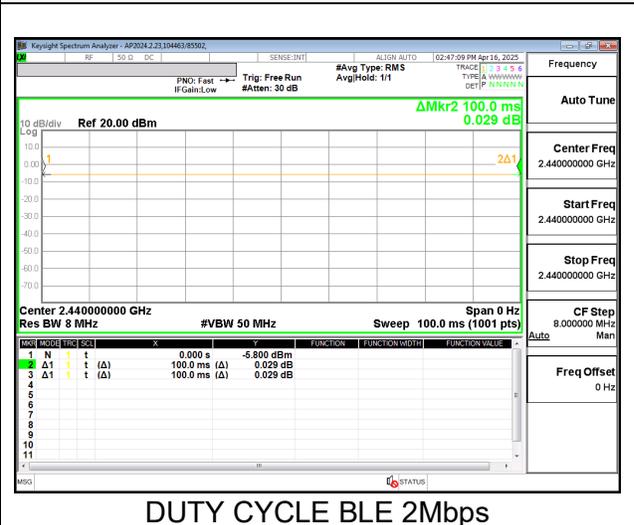
DUTY CYCLE 802.11n HT20 MODE



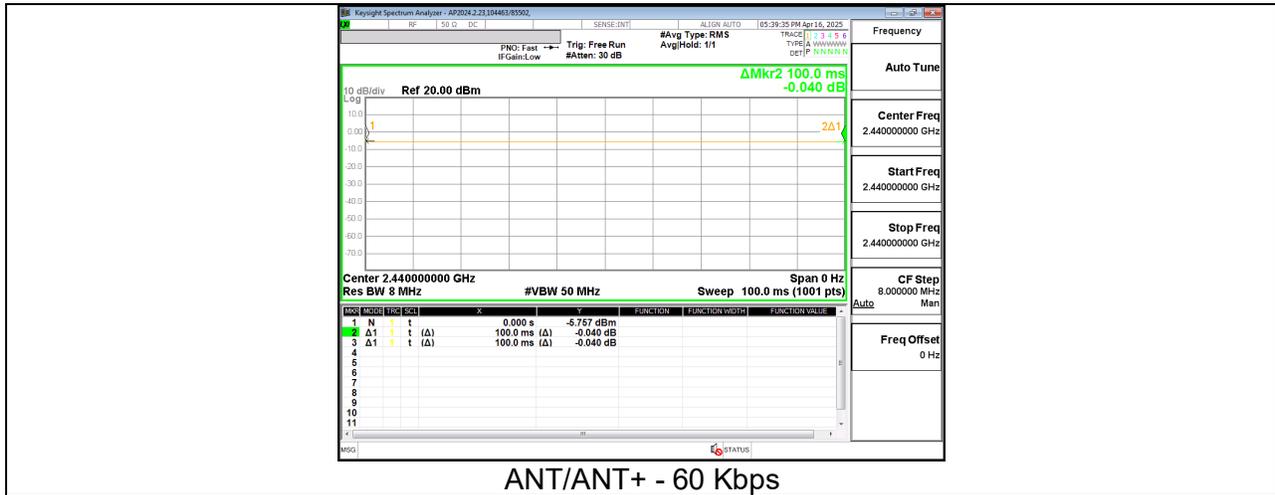
DUTY CYCLE ANT/ANT+ MODE



DUTY CYCLE BLE 1Mbps



DUTY CYCLE BLE 2Mbps



## **9.2. 99% BANDWIDTH**

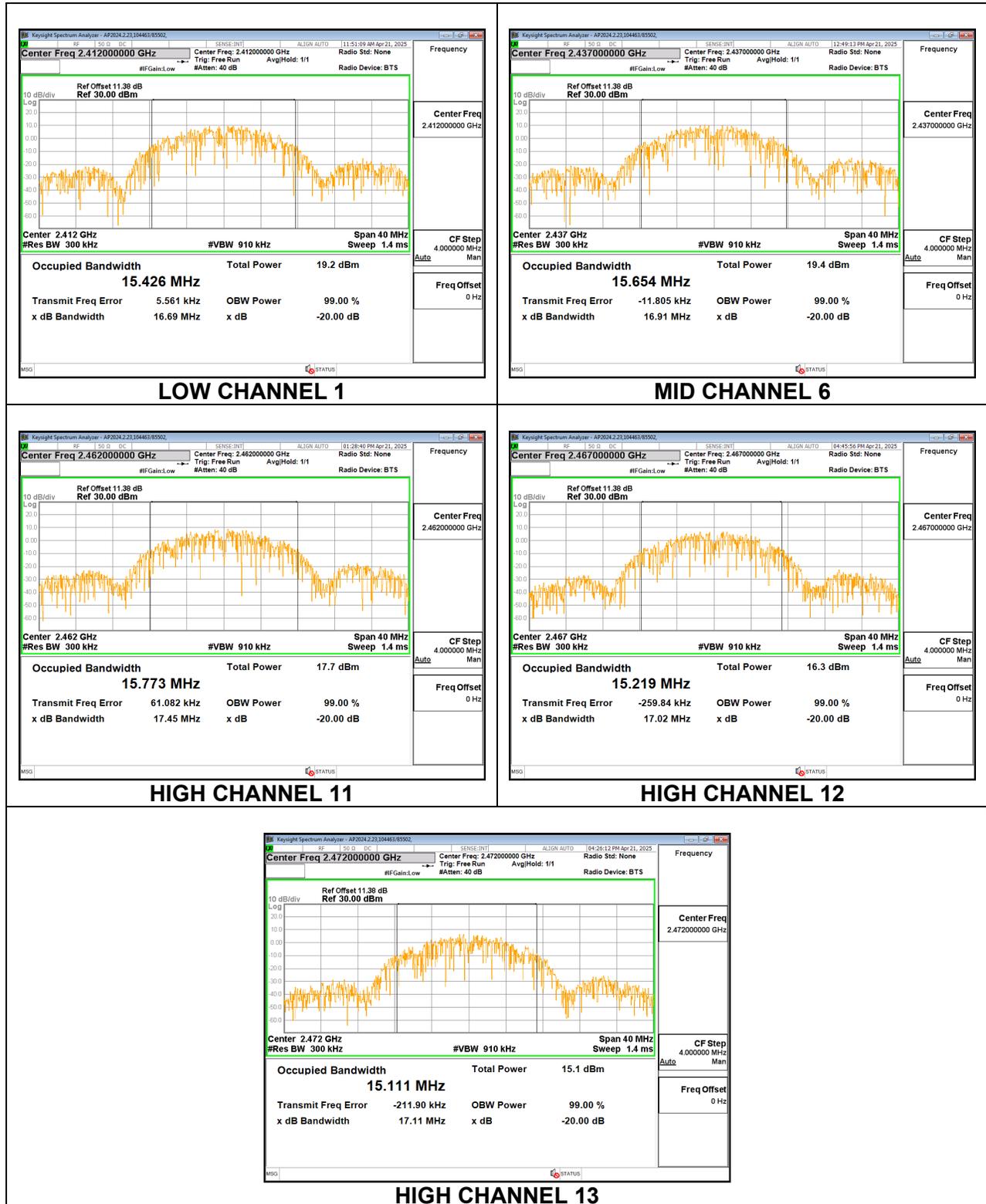
### **LIMITS**

None; for reporting purposes only.

### **RESULTS**

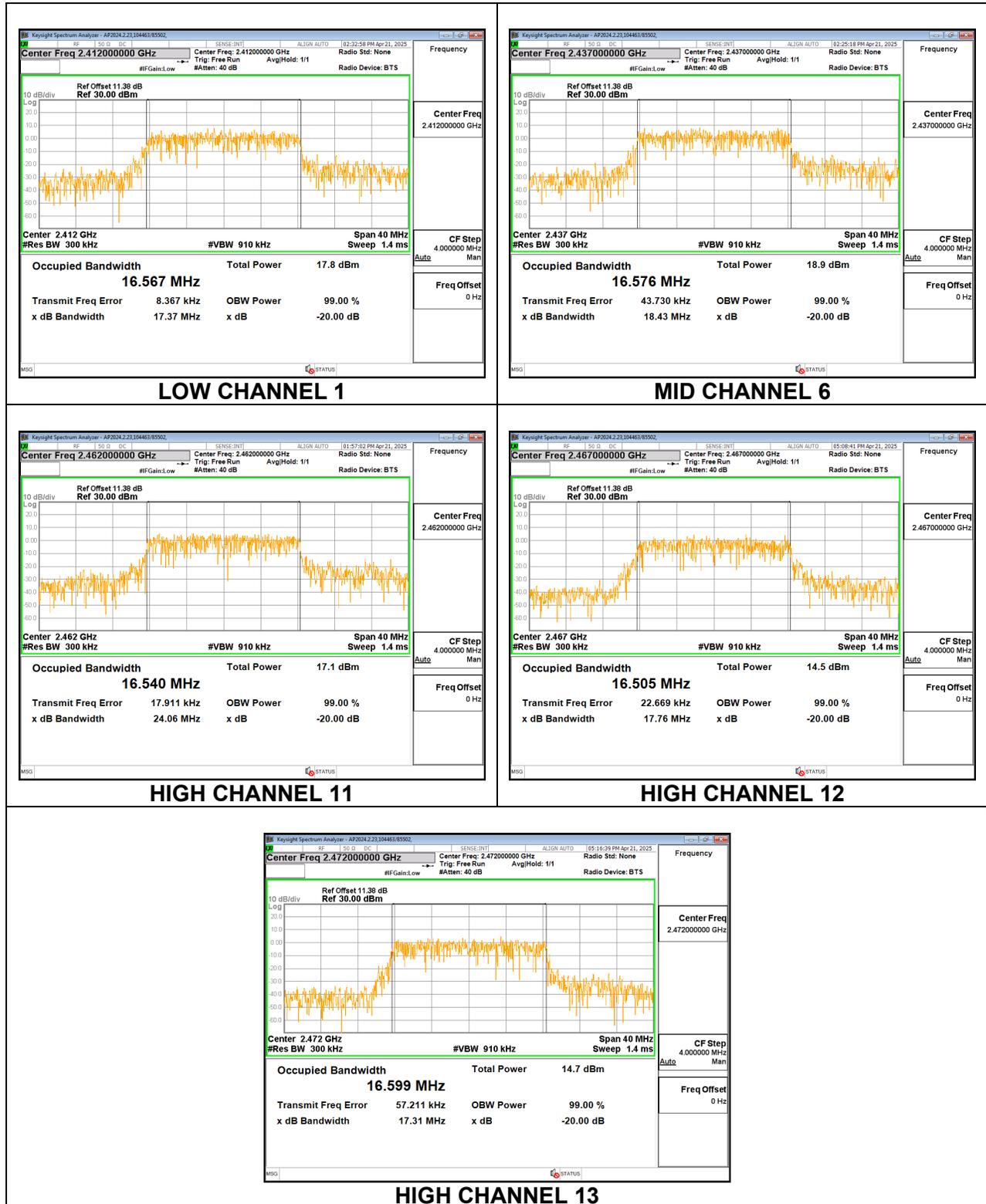
### 9.2.1. 802.11b MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	15.426
Mid	2437	15.654
High 11	2462	15.773
High 12	2467	15.219
High 13	2472	15.111



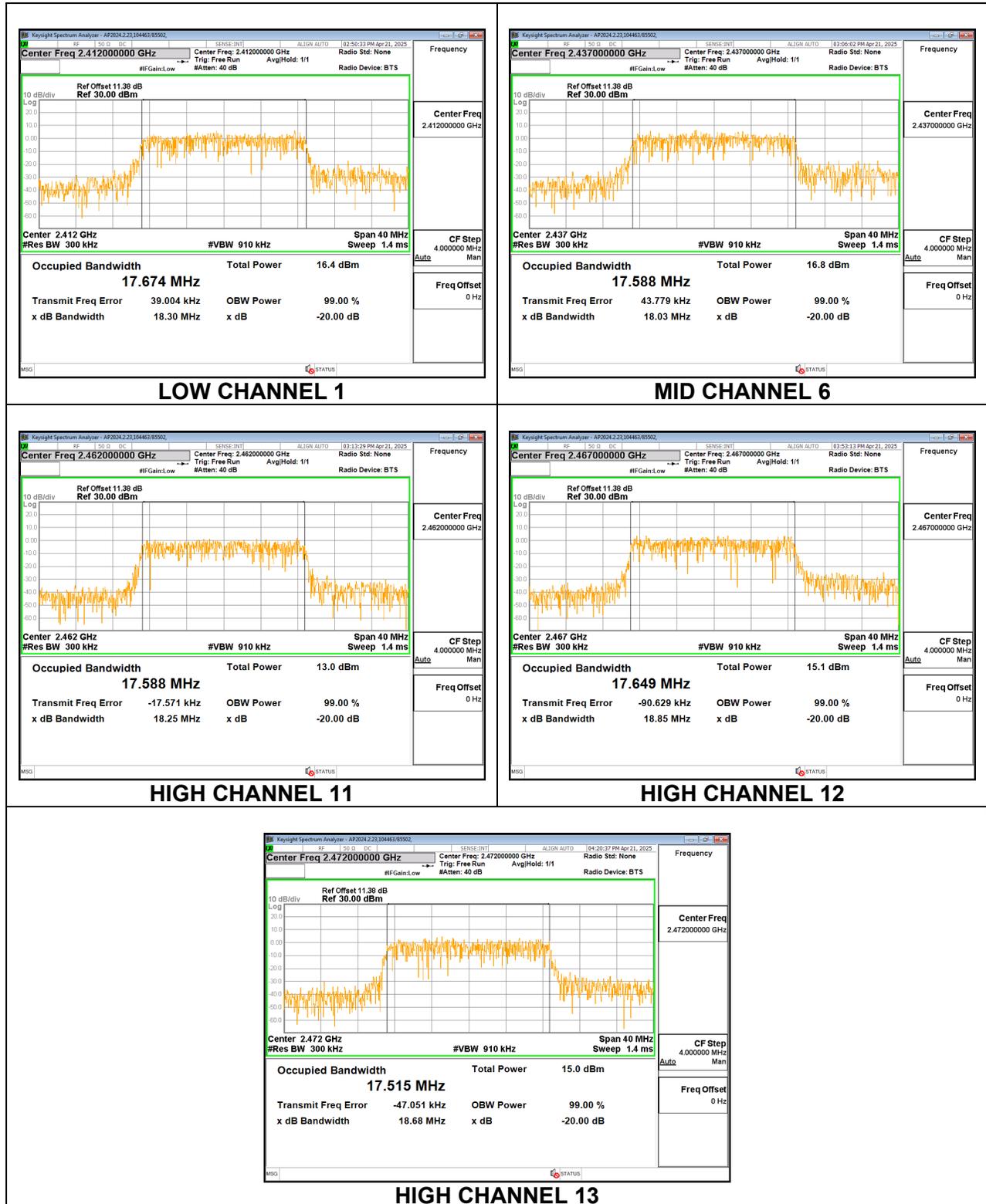
### 9.2.2. 802.11g MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.567
Mid	2437	16.576
High 11	2462	16.540
High 12	2467	16.505
High 13	2472	16.599



### 9.2.3. 802.11n HT20 MODE

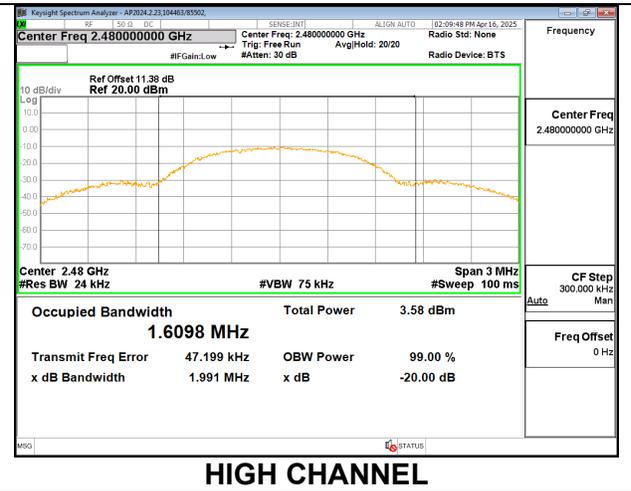
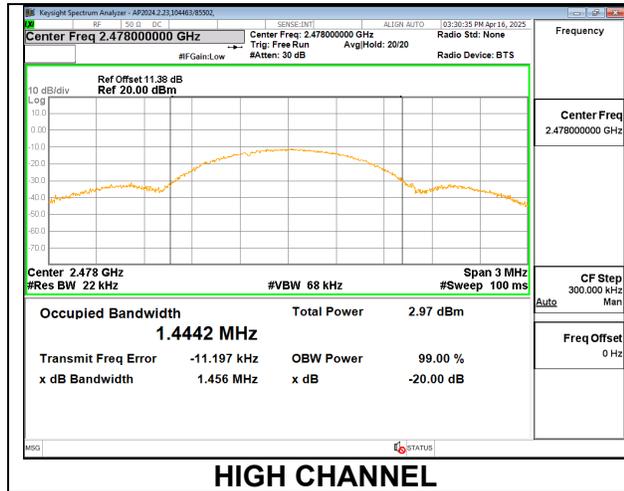
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.674
Mid	2437	17.588
High 11	2462	17.588
High 12	2467	17.649
High 13	2472	17.515



### 9.2.4. BLE (1Mbps)

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.3973
Low	2404	1.6262
Middle	2440	1.8251
High	2476	1.8548
High	2478	1.4442
High	2480	1.6098





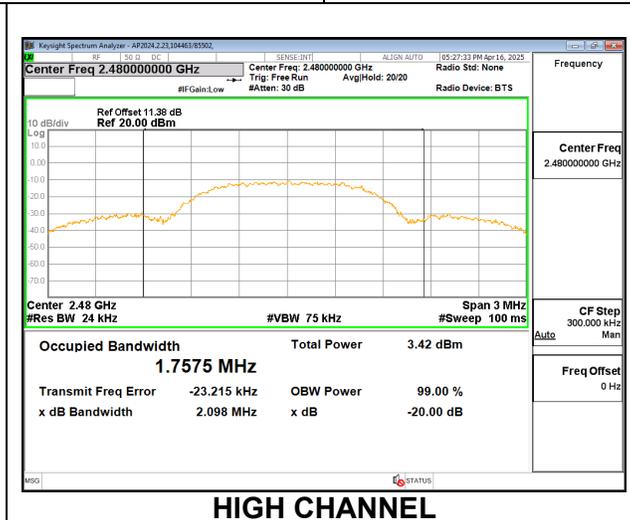
### 9.2.5. BLE (2Mbps)

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2404	2.6954
Middle	2440	2.8095
High	2476	2.9227
High	2478	2.6363



**9.2.6. ANT/ANT+ (60 Kbps)**

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>99% Bandwidth (MHz)</b>
Low	2402	1.3340
Low	2404	1.3857
Middle	2440	1.3435
High	2478	1.8189
High	2480	1.7575



### **9.3. 6 dB BANDWIDTH**

#### **LIMITS**

FCC §15.247 (a) (2)

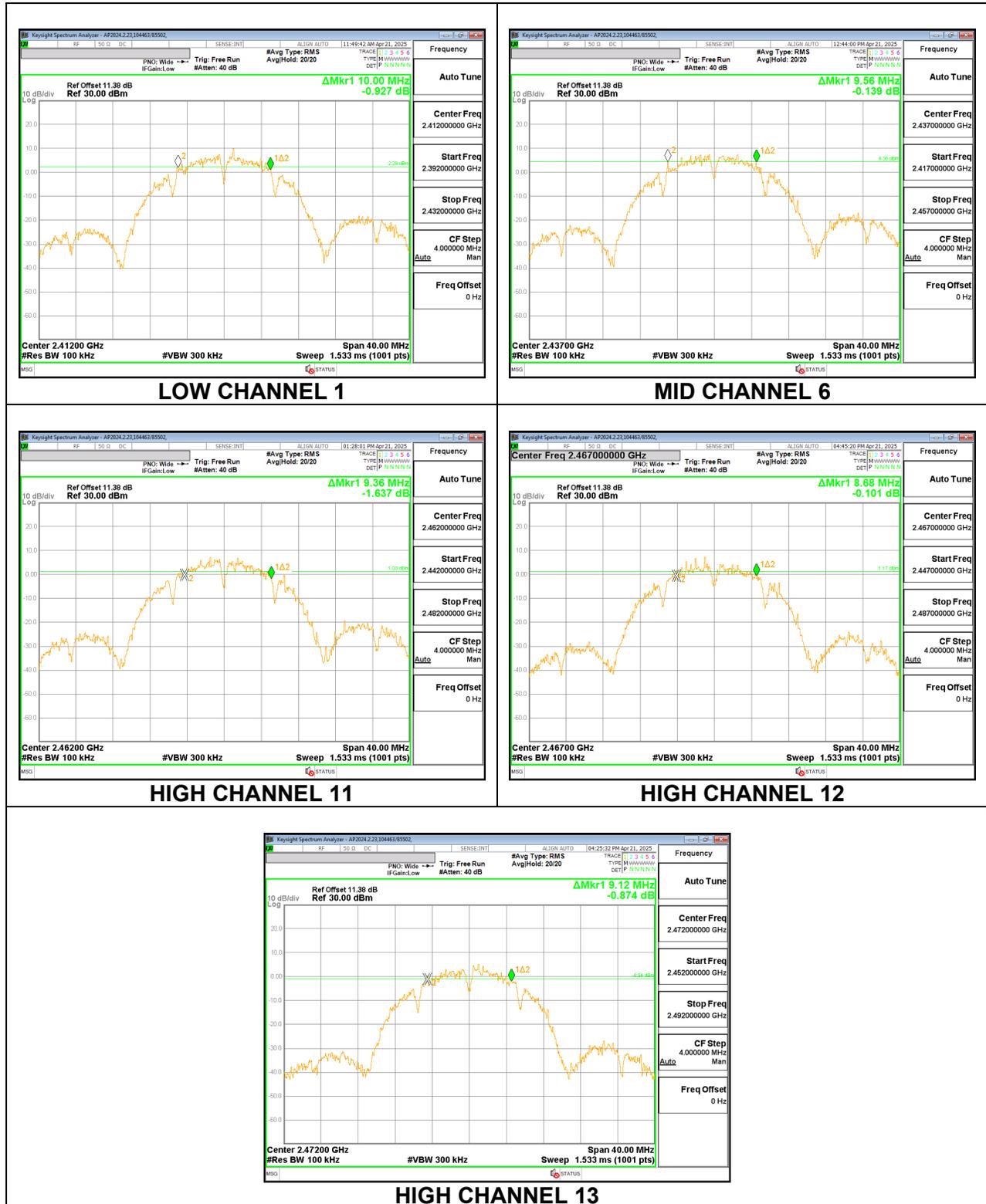
RSS-247 5.2 (a)

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

#### **RESULTS**

### 9.3.1. 802.11b MODE

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	10.00	0.5
Mid	2437	9.56	0.5
High 11	2462	9.36	0.5
High 12	2467	8.68	0.5
High 13	2472	9.12	0.5

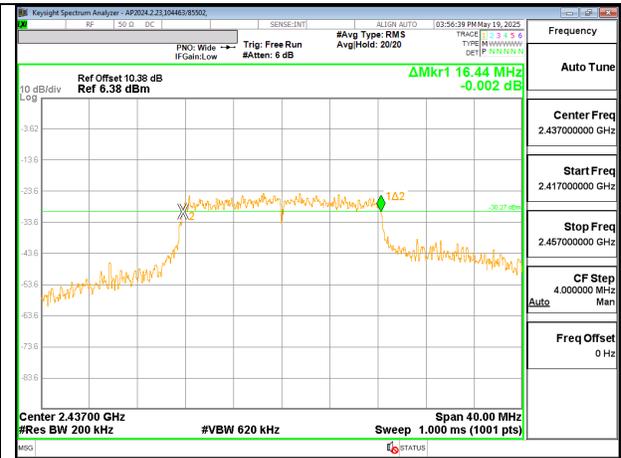


### 9.3.2. 802.11g MODE

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.48	0.5
Mid	2437	16.44	0.5
High 11	2462	16.48	0.5
High 12	2467	16.40	0.5
High 13	2472	16.60	0.5



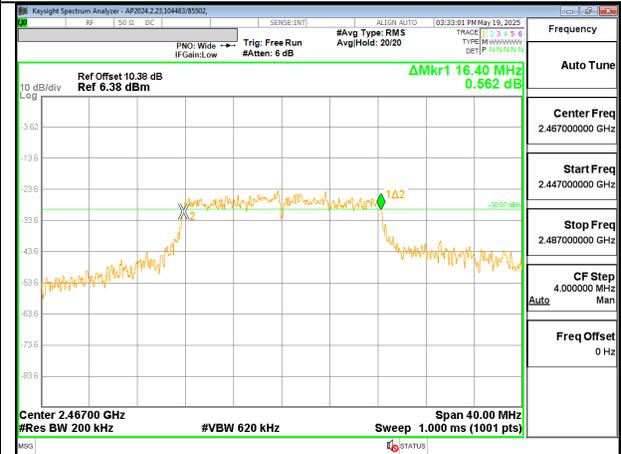
LOW CHANNEL 1



MID CHANNEL 6



HIGH CHANNEL 11



HIGH CHANNEL 12



HIGH CHANNEL 13

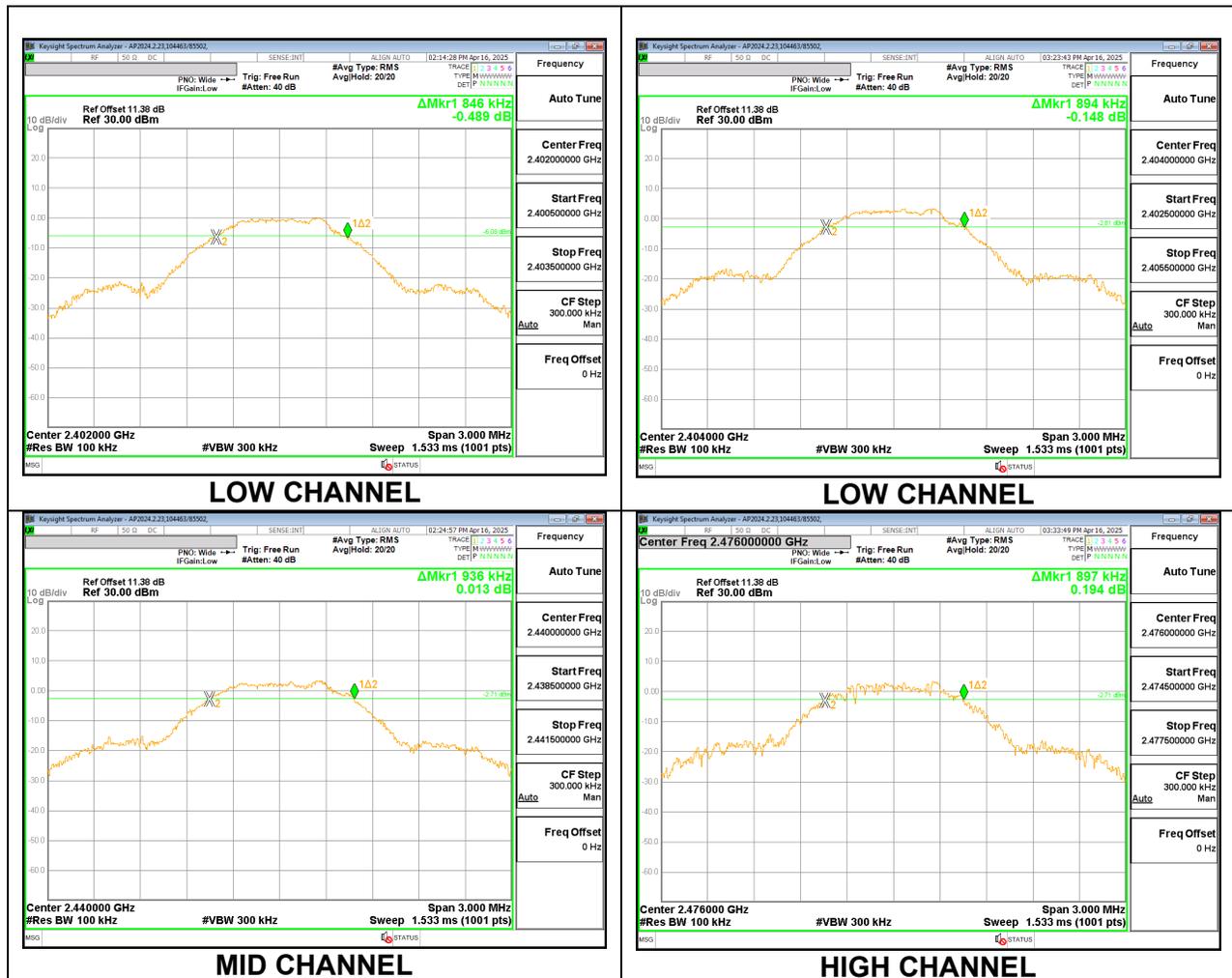
**9.3.3. 802.11n HT20 MODE**

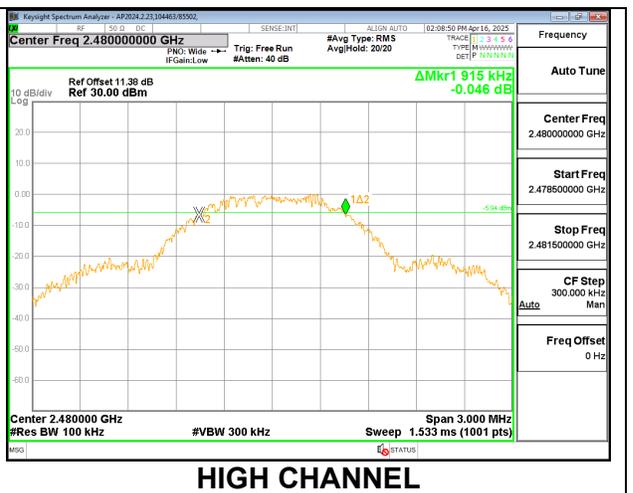
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	17.64	0.5
Mid	2437	17.48	0.5
High 11	2462	17.64	0.5
High 12	2467	17.68	0.5
High 13	2472	17.44	0.5



### 9.3.4. BLE (1Mbps)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2402	0.8460	0.5
Low	2404	0.8940	0.5
Middle	2440	0.9360	0.5
High	2476	0.8970	0.5
High	2478	0.8730	0.5
High	2480	0.9150	0.5





### 9.3.5. BLE (2Mbps)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2404	1.6620	0.5
Middle	2440	1.8300	0.5
High	2476	1.8540	0.5
High	2478	1.6620	0.5



**LOW CHANNEL**



**MID CHANNEL**



**HIGH CHANNEL**



**HIGH CHANNEL**

**9.3.6. ANT (60 Kbps)**

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>6 dB Bandwidth (MHz)</b>	<b>Minimum Limit (MHz)</b>
Low	2402	0.9030	0.5
Low	2404	0.9000	0.5
Middle	2440	0.7890	0.5
High	2478	0.9840	0.5
High	2480	0.9480	0.5



LOW CHANNEL



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL



HIGH CHANNEL

## **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 10.69 dB (0.69 dB EUT cable loss and 10.00 dB attenuation pad) 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>	105900/84740
<b>Test Date:</b>	2025-04-16 to 2025-04-17

**Results**

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>Measured Power (dBm)</b>	<b>Power Limit (dBm)</b>	<b>Margin (dB)</b>
Low 1	2412	20.89	30.00	-9.11
Mid 6	2437	18.78	30.00	-11.22
High 11	2462	20.01	30.00	-9.99
High 12	2467	18.53	30.00	-11.47
High 13	2472	17.68	30.00	-12.32

### 9.4.2. 802.11g MODE

<b>Test Engineer:</b>	105900/84740
<b>Test Date:</b>	2025-04-16 to 2025-04-17

#### Results

Channel	Frequency (MHz)	Measured Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	22.68	30.00	-7.32
Mid 6	2437	22.78	30.00	-7.22
High 11	2462	22.77	30.00	-7.23
High 12	2467	20.70	30.00	-9.30
High 13	2472	20.90	30.00	-9.10

### 9.4.3. 802.11n HT20 MODE

<b>Test Engineer:</b>	105900/84740
<b>Test Date:</b>	2025-04-16 to 2025-04-17

#### Results

Channel	Frequency (MHz)	Measured Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	22.36	30.00	-7.64
Mid 6	2437	21.88	30.00	-8.12
High 11	2462	22.11	30.00	-7.89
High 12	2467	21.53	30.00	-8.47
High 13	2472	21.32	30.00	-8.68

### 9.4.4. BLE (1Mbps)

<b>Test Engineer:</b>	105900/84740
<b>Test Date:</b>	2025-04-16 to 2025-04-17

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>Peak Power Reading (dBm)</b>	<b>Limit (dBm)</b>	<b>Margin (dB)</b>
Low	2402	1.270	30	-28.730
Low	2404	4.850	30	-25.150
Middle	2440	5.220	30	-24.780
High	2476	5.180	30	-24.820
High	2478	1.990	30	-28.010
High	2480	1.950	30	-28.050

### 9.4.5. BLE (2Mbps)

<b>Test Engineer:</b>	105900/84740
<b>Test Date:</b>	2025-04-16 to 2025-04-17

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>Peak Power Reading (dBm)</b>	<b>Limit (dBm)</b>	<b>Margin (dB)</b>
Low	2404	5.010	30	-24.990
Middle	2440	5.060	30	-24.940
High	2476	5.250	30	-24.750
High	2478	1.590	30	-28.410

### 9.4.6. ANT/ANT+ (60 Kbps)

<b>Test Engineer:</b>	105900/84740
<b>Test Date:</b>	2025-04-16 to 2025-04-17

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>Peak Power Reading (dBm)</b>	<b>Limit (dBm)</b>	<b>Margin (dB)</b>
Low	2402	1.780	30	-28.220
Low	2404	5.100	30	-24.900
Middle	2440	5.350	30	-24.650
High	2478	5.340	30	-24.660
High	2480	2.100	30	-27.900

## **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 10.69 dB (0.69 dB EUT cable loss and 10.00 dB attenuation pad) 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**

**9.5.1. 802.11b MODE**

<b>Test Engineer:</b>	105900/84740
<b>Test Date:</b>	2025-04-16 to 2025-04-17

Channel	Frequency (MHz)	Power (dBm)
Low	2412	18.84
Mid	2437	16.66
High	2467	16.44
High	2472	15.49

### 9.5.2. 802.11g MODE

<b>Test Engineer:</b>	105900/84740
<b>Test Date:</b>	2025-04-16 to 2025-04-17

Channel	Frequency (MHz)	Power (dBm)
Low	2412	17.47
Mid	2437	17.79
High	2462	17.55
High	2467	14.26
High	2472	14.22

### 9.5.3. 802.11n HT20 MODE

<b>Test Engineer:</b>	105900/84740
<b>Test Date:</b>	2025-04-16 to 2025-04-17

Channel	Frequency (MHz)	Power (dBm)
Low	2412	15.94
Mid	2437	16.01
High	2462	15.63
High	2467	14.61
High	2472	14.27

### 9.5.4. BLE (1Mbps)

<b>Test Engineer:</b>	105900/84740
<b>Test Date:</b>	2025-04-16 to 2025-04-17

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>AV power (dBm)</b>
Low	2402	0.957
Low	2404	4.597
Middle	2440	4.949
High	2476	4.859
High	2478	1.684
High	2480	1.66

### 9.5.5. BLE (2Mbps)

<b>Test Engineer:</b>	105900/84740
<b>Test Date:</b>	2025-04-16 to 2025-04-17

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>AV power (dBm)</b>
Low	2404	4.715
Middle	2440	4.781
High	2476	4.994
High	2478	1.252

**9.5.6. ANT/ANT+ (60 Kbps)**

<b>Test Engineer:</b>	105900/84740
<b>Test Date:</b>	2025-04-16 to 2025-04-17

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>AV power (dBm)</b>
Low	2402	1.485
Low	2404	4.839
Middle	2440	5.068
High	2478	5.09
High	2480	1.784

## 9.6. POWER SPECTRAL DENSITY

### LIMITS

FCC §15.247 (e)

RSS-247 (5.2) (b)

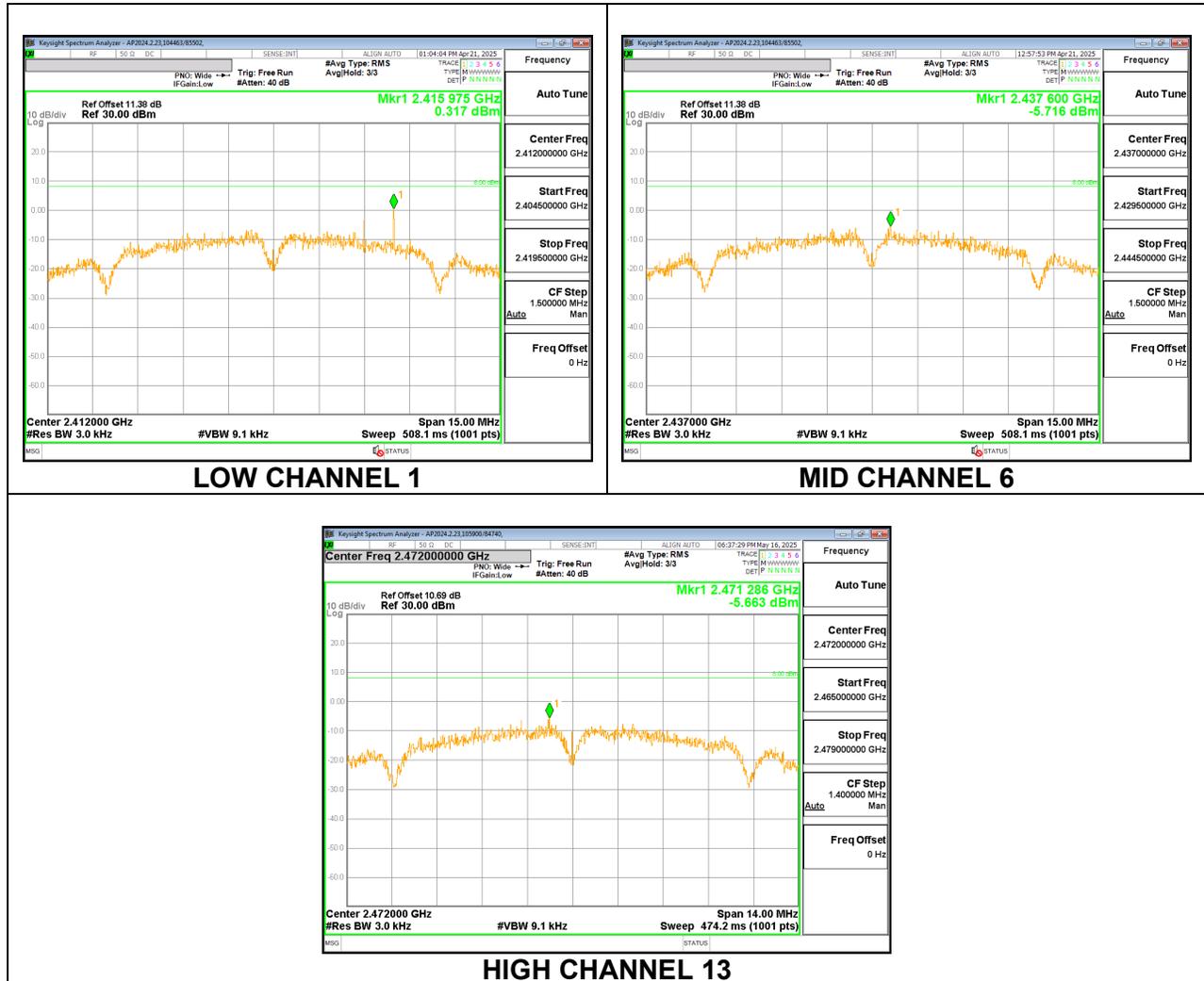
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

### RESULTS

### 9.6.1. 802.11b MODE

#### PSD Results

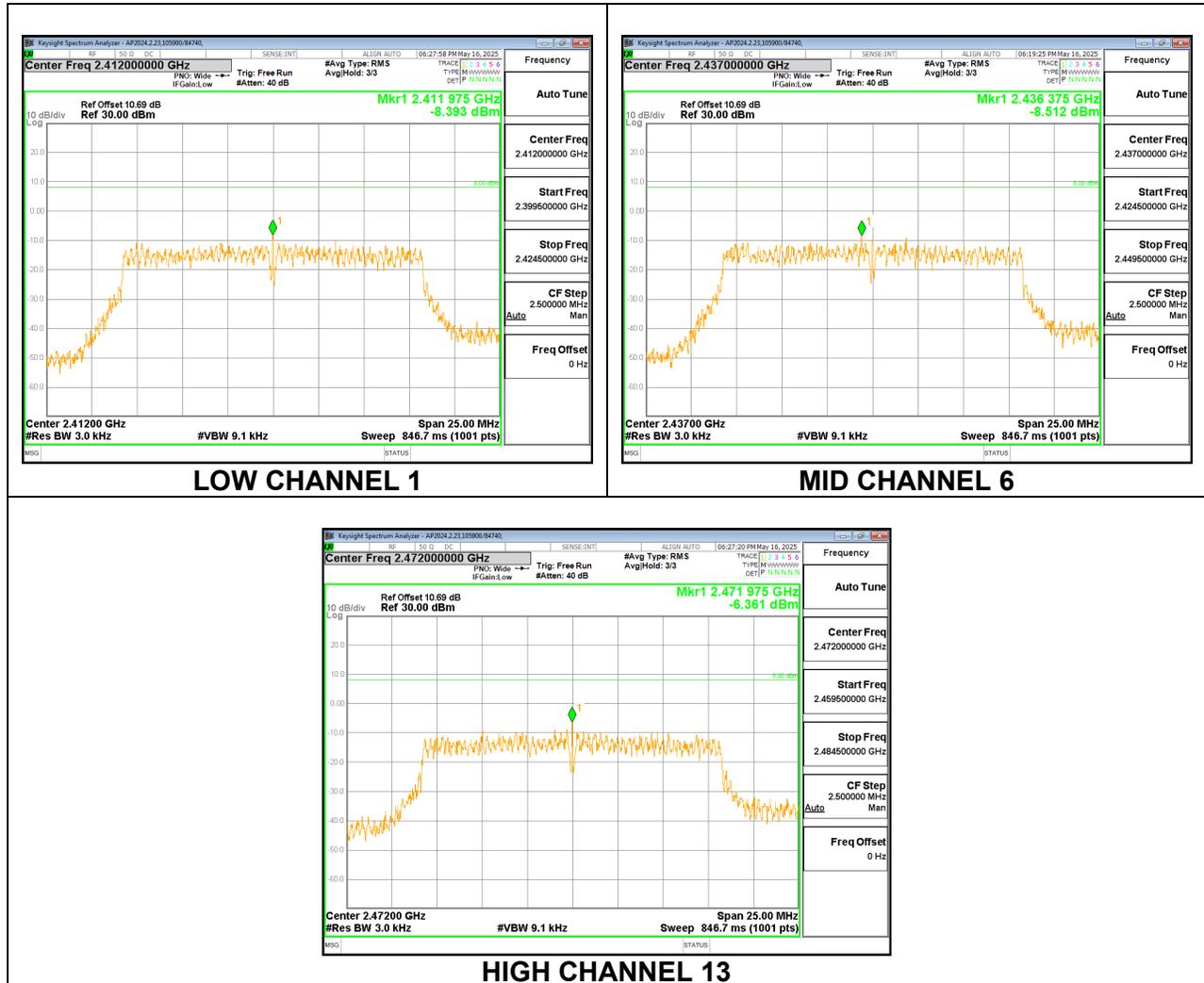
Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	0.32	8.0	-7.7
Mid 6	2437	-5.72	8.0	-13.7
High 13	2472	-5.66	8.0	-13.7



### 9.6.2. 802.11g MODE

#### PSD Results

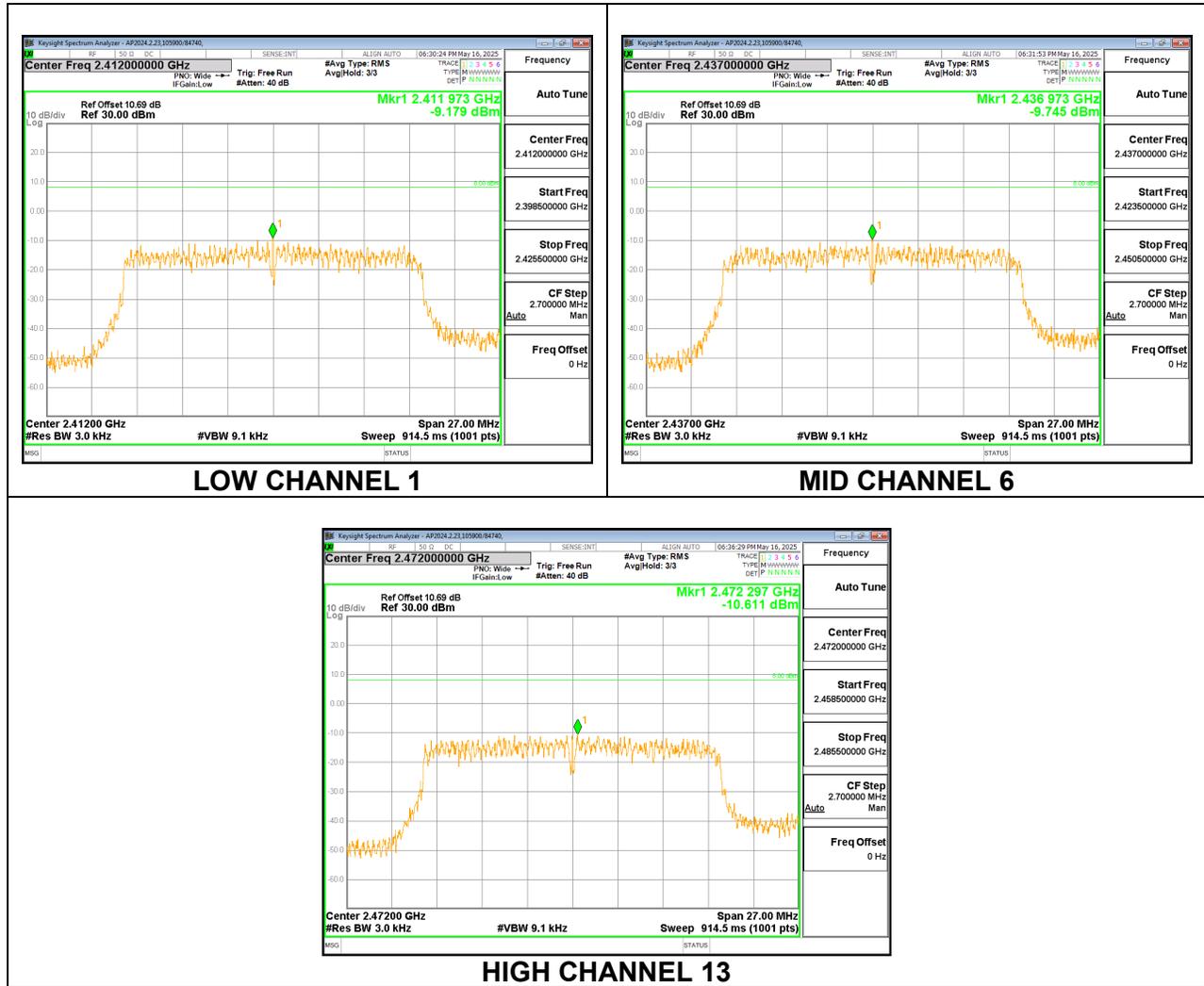
Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-8.39	8.0	-16.4
Mid 6	2437	-8.51	8.0	-16.5
High 13	2472	-6.36	8.0	-14.4



### 9.6.3. 802.11n HT20 MODE

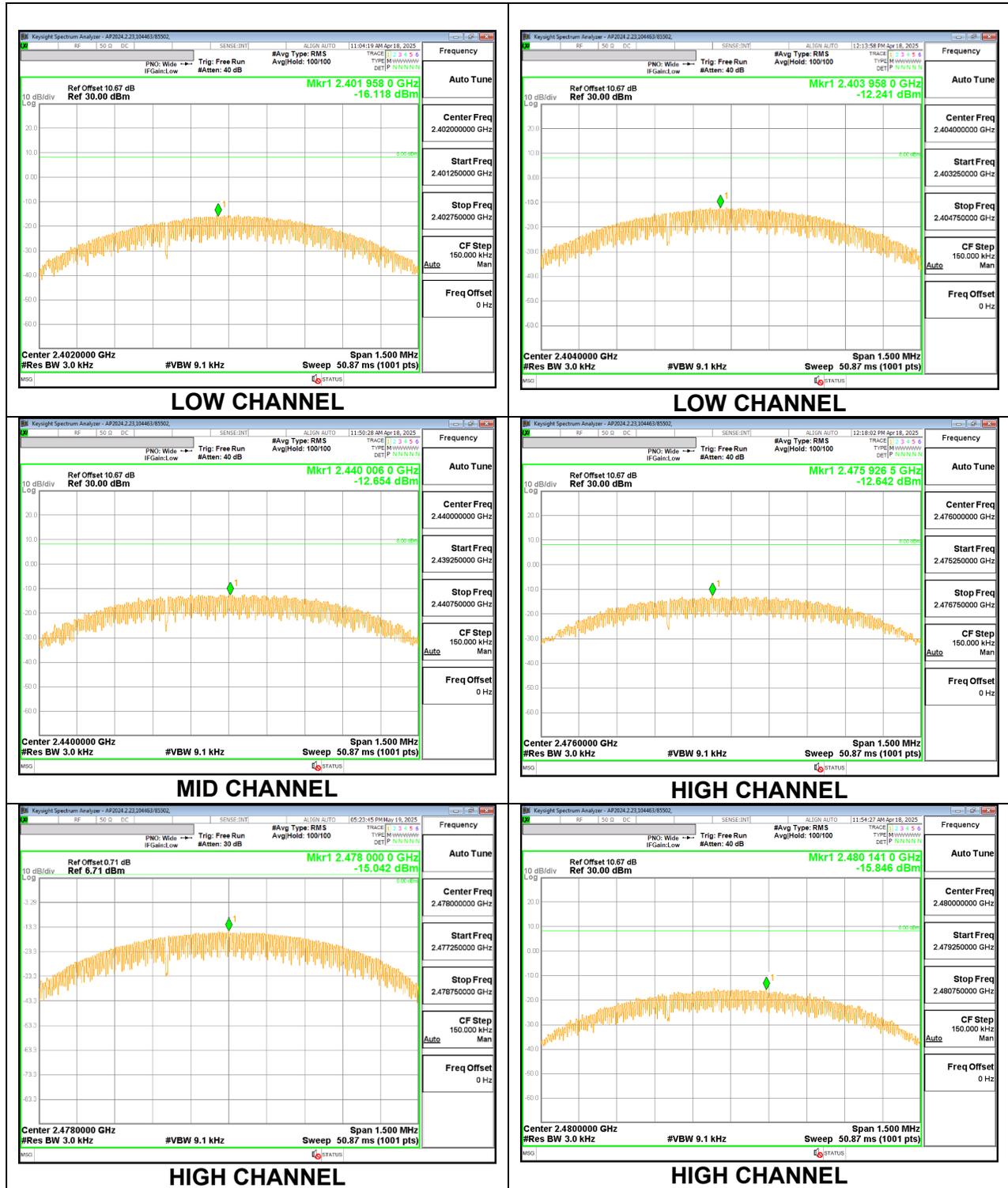
#### PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-9.18	8.0	-17.2
Mid 6	2437	-9.75	8.0	-17.7
High 13	2472	-10.61	8.0	-18.6



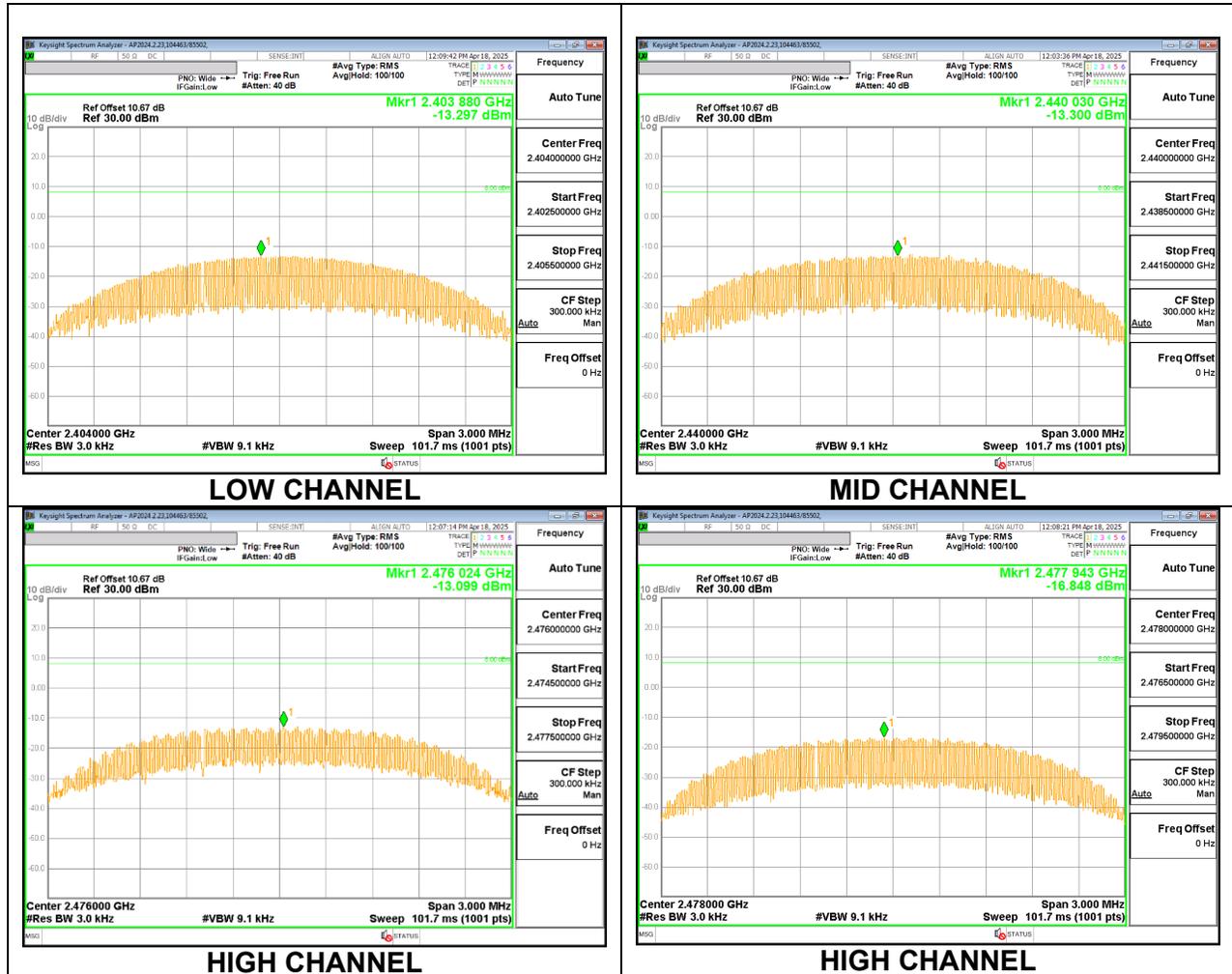
**9.6.4. BLE (1Mbps)**

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>PSD (dBm/3kHz)</b>	<b>Limit (dBm/3kHz)</b>	<b>Margin (dB)</b>
Low	2402	-16.12	8	-24.12
Low	2404	-12.24	8	-20.24
Middle	2440	-12.65	8	-20.65
High	2476	-12.64	8	-20.64
High	2478	-15.04	8	-23.04
High	2480	-15.85	8	-23.85



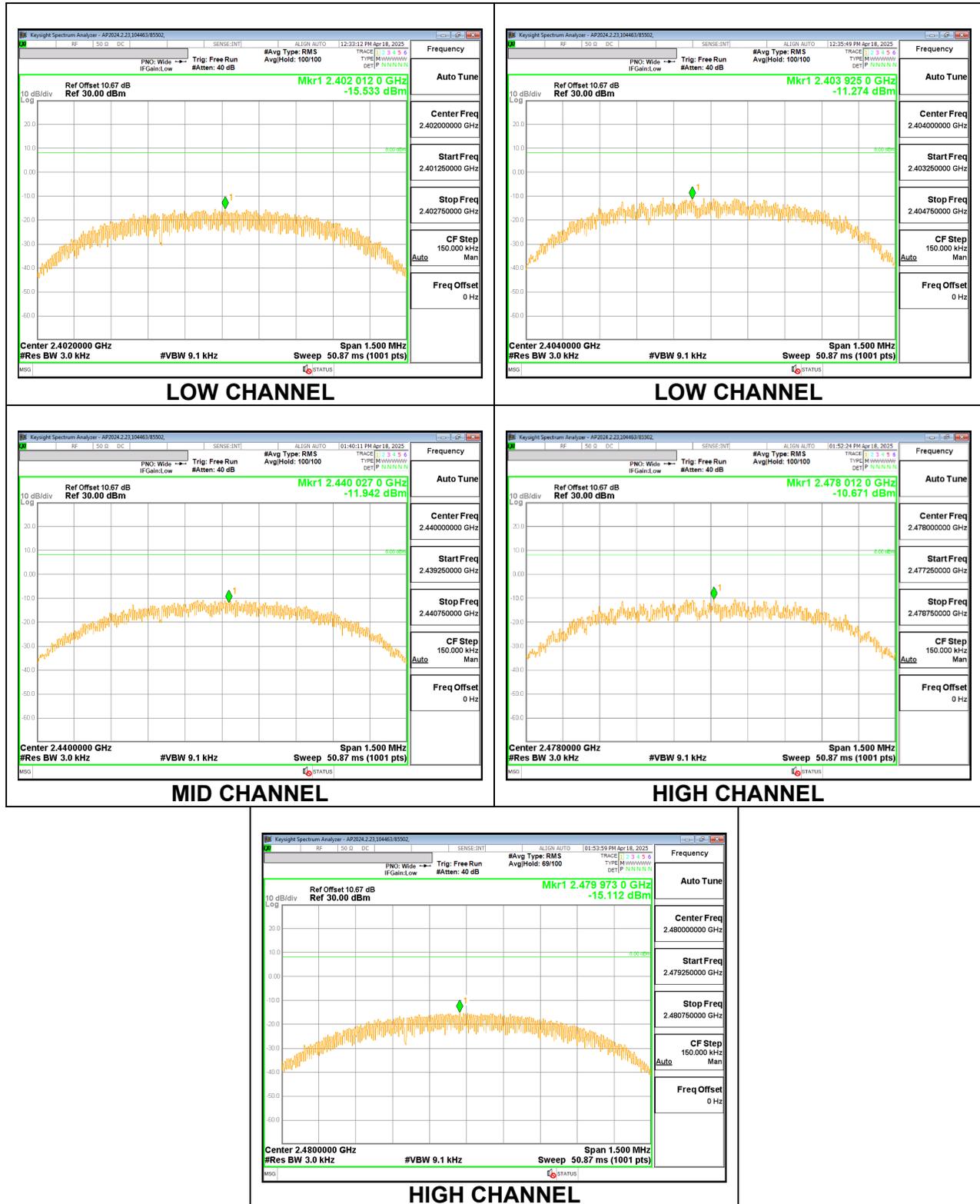
### 9.6.5. BLE (2Mbps)

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2404	-13.30	8	-21.30
Middle	2440	-13.30	8	-21.30
High	2476	-13.10	8	-21.10
High	2478	-16.85	8	-24.85



**9.6.6. ANT/ANT+ (60 Kbps)**

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>PSD (dBm/3kHz)</b>	<b>Limit (dBm/3kHz)</b>	<b>Margin (dB)</b>
Low	2402	-15.53	8	-23.53
Low	2404	-11.27	8	-19.27
Middle	2440	-11.94	8	-19.94
High	2478	-10.67	8	-18.67
High	2480	-15.11	8	-23.11



## **9.7. CONDUCTED SPURIOUS EMISSIONS**

### **LIMITS**

FCC §15.247 (d)

RSS-247 5.5

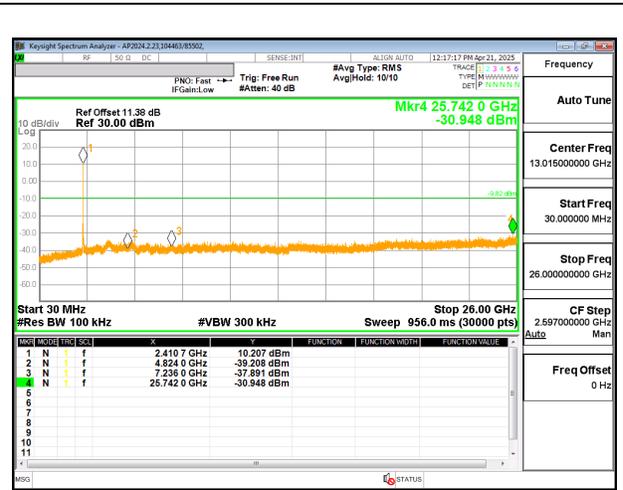
Output power was measured based on the use of peak measurement, therefore the required attenuation is -20 dBc.

### **RESULTS**

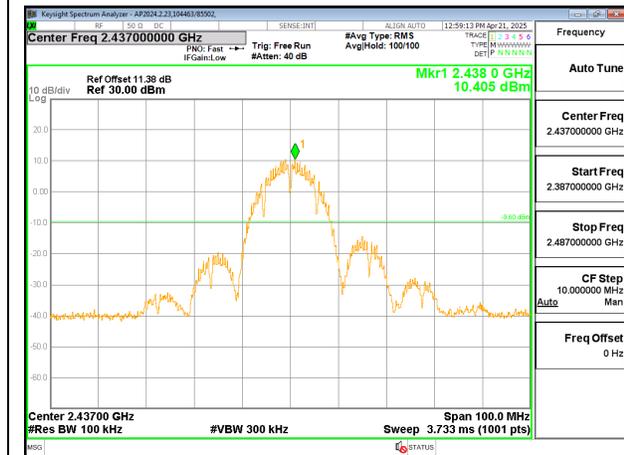
### 9.7.1. 802.11b MODE



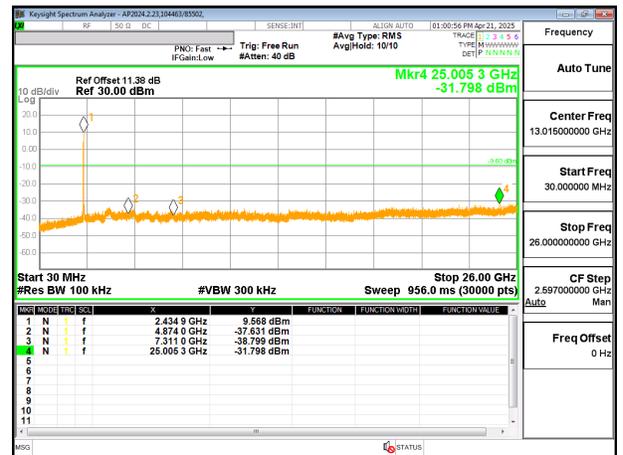
**LOW CHANNEL 1 BANDEdge**



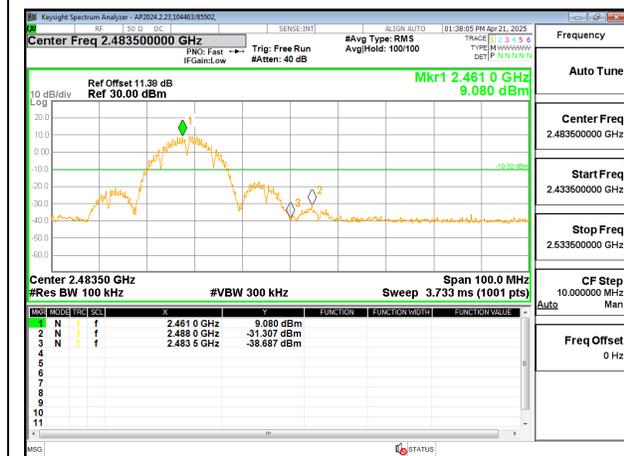
**OUT-OF-BAND LOW CHANNEL 1**



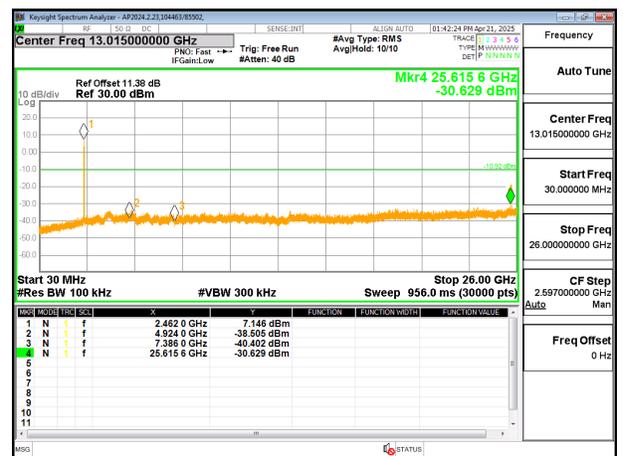
**IN-BAND REFERENCE LEVEL**



**OUT-OF-BAND MID CHANNEL**



**HIGH CHANNEL 11 BANDEdge**



**OUT-OF-BAND HIGH CHANNEL 11**