

RF TEST REPORT

Applicant Lorex Technology Inc.

FCC ID UCZ-IC501

Product 2K INDOOR DUAL LENS PAN-TILT
WI-FI SECURITY CAMERA

Brand LOREX

Model IC501A-PSW-AZ1; IC501A-PSW-AE1

Report No. EFTA25060103-IE-02-R1

Issue Date July 23, 2025

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 15C (2024)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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Summary of Measurement Results

Number	Test Case	Clause in FCC rules	Verdict
1	Maximum output power	15.247(b)(3)	PASS
2	99% Bandwidth and 6dB Bandwidth	15.247(a)(2) C63.10 6.9	PASS
3	Power spectral density	15.247(e)	PASS
4	Band Edge	15.247(d)	PASS
5	Spurious RF Conducted Emissions	15.247(d)	PASS
6	Unwanted Emissions	15.247(d), 15.205, 15.209	PASS
7	Conducted Emissions	15.207	PASS
Date of Testing: June 20, 2025 ~ July 3, 2025 Date of Sample Received: June 16, 2025			
Note: All indications of Pass/Fail in this report are opinions expressed by Eurofins TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.			

1. Test Laboratory

1.1. Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **Eurofins TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test Facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

A2LA (Certificate Number: 3857.01)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

1.3. Testing Location

Company: Eurofins TA Technology (Shanghai) Co., Ltd.
Address: Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China
City: Shanghai
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Website: <https://www.eurofins.com/electrical-and-electronics>
E-mail: Kain.Xu@cpt.eurofinscn.com

2. General Description of Equipment Under Test

2.1. Applicant and Manufacturer Information

Applicant	Lorex Technology Inc.
Applicant address	250 Royal Crest Court, Markham, ontario L3R 3S1, Canada
Manufacturer	Qualvision Technology Co., Ltd
Manufacturer address	2F~5F, Bldg B, No.37, ZhenXing Road, LiYuHe Industrial Park, LouCun, GongMing, ShenZhen, China, 518107

2.2. General Information

EUT Description		
Model	IC501A-PSW-AZ1; IC501A-PSW-AE1	
SN	Conducted	QV0125060001
Lab internal SN	Radiated	250609-15-001
Hardware Version	IOT71485HP13MPT VER.A	
Software Version	/	
Power Supply	AC adapter	
Antenna Type	Internal Antenna	
Antenna Connector	A permanently attached antenna (meet with the standard FCC Part 15.203 requirement)	
Antenna Gain	3.76 dBi	
Additional Beamforming Gain	NA	
Operating Frequency Range(s)	802.11b/g/n(HT20)/ax(HE20): 2412 ~ 2462 MHz 802.11n(HT40)/ax(HE40): 2422 ~ 2452 MHz Bluetooth LE V5.0: 2402 ~2480 MHz	
Modulation Type	802.11b: DSSS 802.11g/n: OFDM 802.11ax: OFDM 802.11ax(RU): OFDMA Bluetooth LE: GFSK	
Max. Output Power	Wi-Fi 2.4GHz: 21.93 dBm Bluetooth LE: 14.11 dBm	
Operating voltage range	110 VAC to 240 VAC	
State voltage	120 VAC	
EUT Accessory		
Adapter 1	Manufacturer: Zhuzhou Dachuan Electronic Technology Co., Ltd Model: DCT10W050150US-C1	
Adapter 2	Manufacturer: Shenzhen Honor Electronic Co., Ltd Model: ADS-10LA-06 05075EPCU	
USB Cable	Manufacturer: Shenzhen Mingyuantong Tech Co., Ltd. Model: MYT-CP00010086B	

Note: 1. The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant.

2. The customer claims that the IC501A-PSW-AZ1 and IC501A-PSW-AE1 only has different models, and everything else is identical.

3. Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards:

FCC CFR47 Part 15C (2024) Radio Frequency Devices

ANSI C63.10-2013

Reference standard:

KDB 558074 D01 15.247 Meas Guidance v05r02

4. Test Configuration

Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate. Preliminary tests have been done on all the configuration for confirming worst case. Data rate below means worst-case rate of each test item.

Worst-case data rates are shown as following table.

Test Mode	Data Rate
Bluetooth(Low Energy)	1Mbps; 2Mbps
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ax HE20	MCS0
802.11ax HE40	MCS0

5. Test Case Results

5.1. Maximum output power

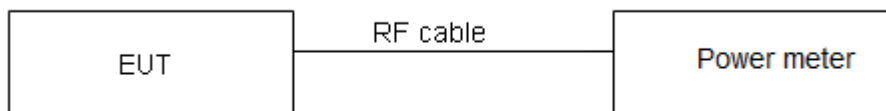
Ambient Condition

Temperature	Relative humidity
15°C ~ 35°C	20% ~ 80%

Methods of Measurement

During the process of the testing, The EUT was connected to Power meter with a known loss. The EUT is max power transmission with proper modulation.

Test Setup



Limits

Rule Part 15.247 (b) (3) specifies that " For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz: 1 Watt."

Average Output Power	$\leq 1\text{W}$ (30dBm)
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Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.44$ dB.

Test Results

Power Index							
Channel	802.11b	802.11g	802.11n HT20	802.11ax HE20	Channel	802.11n HT40	802.11ax HE40
CH1	default	default	default	default	CH3	default	default
CH6	default	default	default	default	CH6	default	default
CH11	default	default	default	default	CH9	default	default

Power Index		
Bluetooth (Low Energy)		
Channel	1M	2M
CH0	default	default
CH19	default	default
CH39	default	default

Test Mode	Duty cycle	Duty cycle correction Factor (dB)
802.11b	0.217	6.63
802.11g	0.120	9.22
802.11n HT20	0.131	8.84
802.11n HT40	0.125	9.04
802.11ax HE20	0.099	10.04
802.11ax HE40	0.100	10.02
802.11ax HE20 242-Tones:RU Index 61	0.101	9.95
Bluetooth LE (1M)	0.216	3.7
Bluetooth LE (2M)	0.219	6.6
Note: when Duty cycle ≥ 0.98 , Duty cycle correction Factor not required.		

Bluetooth LE

Test Mode	Carrier frequency (MHz)/ Channel	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
Bluetooth (Low Energy) (1M)	2402/CH0	-1.21	2.49	30	PASS
	2440/CH19	7.95	11.65	30	PASS
	2480/CH39	7.77	11.47	30	PASS
Bluetooth (Low Energy) (2M)	2402/CH0	7.09	13.69	30	PASS
	2440/CH19	7.51	14.11	30	PASS
	2480/CH39	7.12	13.72	30	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

SU Mode

Test Mode	Carrier frequency (MHz)/ Channel	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11b	2412/CH 1	14.30	20.93	30	PASS
	2437/CH 6	14.71	21.34	30	PASS
	2462/CH11	14.85	21.48	30	PASS
802.11g	2412/CH 1	12.17	21.39	30	PASS
	2437/CH 6	12.71	21.93	30	PASS
	2462/CH11	12.05	21.27	30	PASS
802.11n HT20	2412/CH 1	12.63	21.47	30	PASS
	2437/CH 6	11.69	20.53	30	PASS
	2462/CH11	11.61	20.45	30	PASS
802.11n HT40	2422/CH3	10.53	19.57	30	PASS
	2437/CH6	10.83	19.87	30	PASS
	2452/CH9	10.83	19.87	30	PASS
802.11ax HE20	2412/CH 1	10.95	20.99	30	PASS
	2437/CH 6	10.87	20.91	30	PASS
	2462/CH11	11.05	21.09	30	PASS
802.11ax HE40	2422/CH3	9.62	19.64	30	PASS
	2437/CH6	10.27	20.29	30	PASS
	2452/CH9	9.79	19.81	30	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

ERSU Mode

Test Mode	Carrier frequency (MHz)/ Channel	RU Index	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11ax HE20 242-Tones	2412/CH 1	61	10.95	20.99	30	PASS
	2437/CH 6	61	10.87	20.91	30	PASS
	2462/CH11	61	11.05	21.09	30	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor						

5.2. 99% Bandwidth and 6dB Bandwidth

Ambient Condition

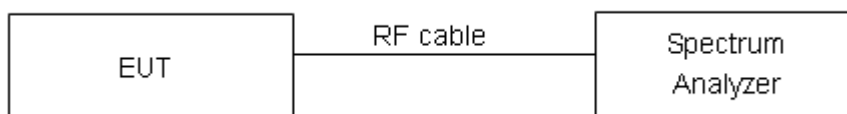
Temperature	Relative humidity
15°C ~ 35°C	20% ~ 80%

Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable. RBW is set to 100 kHz; VBW is set to 300 kHz on spectrum analyzer. Dector=Peak, Trace mode=max hold.

The EUT was connected to the spectrum analyzer through a known loss cable. The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the actual occupied / x dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value.

Test Setup



Limits

Rule Part 15.247 (a) (2) specifies that “Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.”

minimum 6 dB bandwidth	≥ 500 kHz
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Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 936$ Hz.

Test Results:
Bluetooth LE

Test Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 6 dB bandwidth (MHz)	Limit (kHz)	Conclusion
Bluetooth (Low Energy) (1M)	2402	1.034	0.695	500	PASS
	2440	1.024	0.693	500	PASS
	2480	1.033	0.699	500	PASS
Bluetooth (Low Energy) (2M)	2402	2.045	1.170	500	PASS
	2440	2.042	1.234	500	PASS
	2480	2.047	1.231	500	PASS

SU Mode

Test Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 6 dB bandwidth (MHz)	Limit (kHz)	Conclusion
802.11b	2412	14.940	10.014	500	PASS
	2437	14.967	10.090	500	PASS
	2462	14.957	10.006	500	PASS
802.11g	2412	16.187	12.578	500	PASS
	2437	16.290	15.120	500	PASS
	2462	16.257	13.795	500	PASS
802.11n HT20	2412	17.410	15.008	500	PASS
	2437	17.381	13.878	500	PASS
	2462	17.394	14.968	500	PASS
802.11n HT40	2422	35.987	35.024	500	PASS
	2437	36.090	35.285	500	PASS
	2452	35.991	34.948	500	PASS
802.11ax HE20	2412	18.743	12.580	500	PASS
	2437	18.755	16.151	500	PASS
	2462	18.677	13.950	500	PASS
802.11ax HE40	2422	37.683	36.009	500	PASS
	2437	37.696	34.659	500	PASS
	2452	37.791	35.258	500	PASS

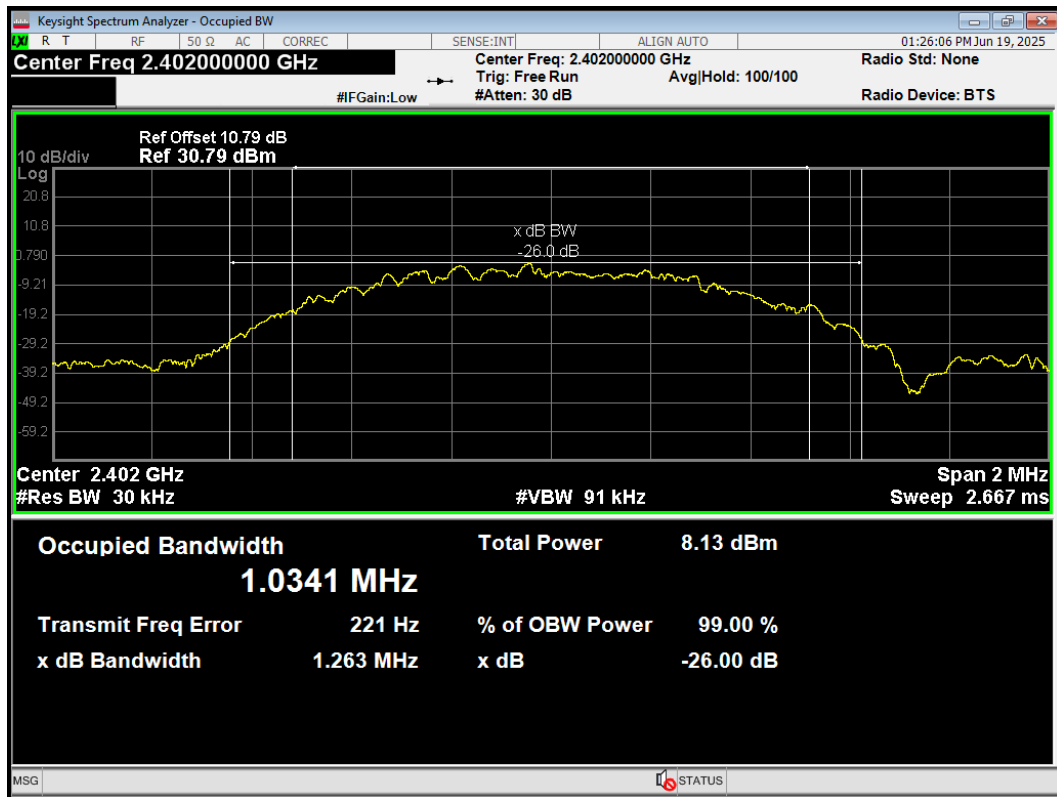
ERSU Mode

Test Mode	Carrier frequency (MHz)	RU Index	99% bandwidth (MHz)	Minimum 6 dB bandwidth (MHz)	Limit (kHz)	Conclusion
802.11ax HE20 242-Tones	2412	61	18.652	12.636	500	PASS
	2437	61	18.737	13.888	500	PASS
	2462	61	18.743	8.921	500	PASS

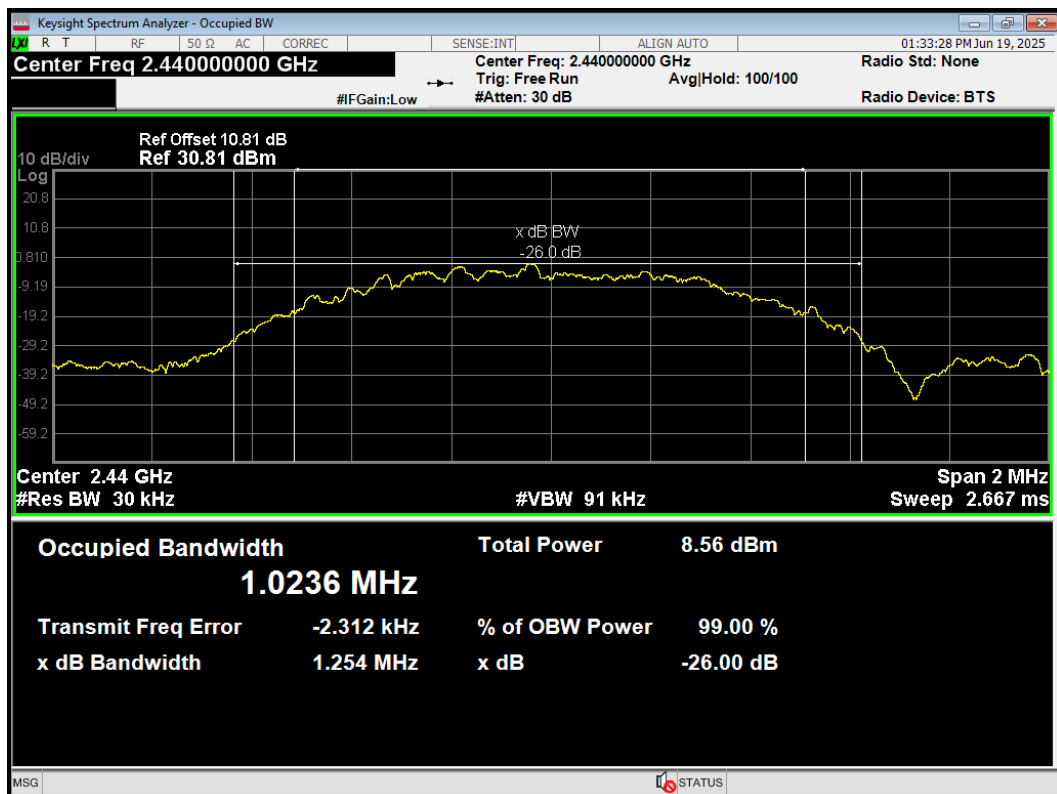
99%bandwidth

Bluetooth LE

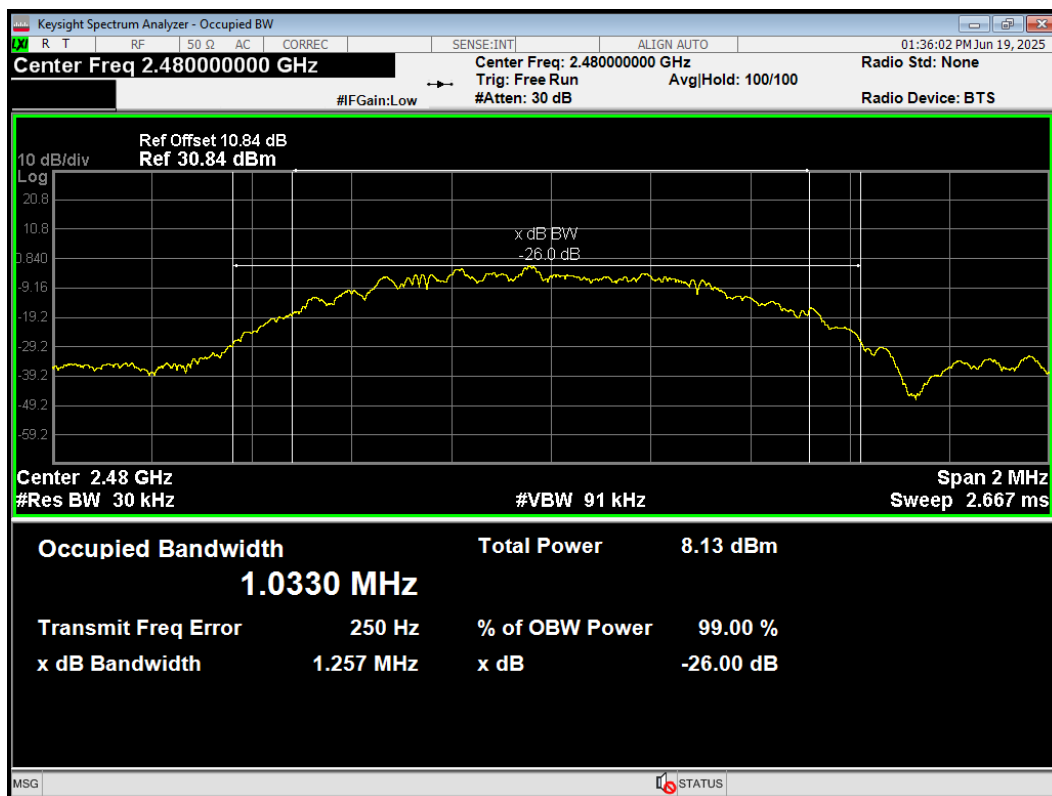
OBW BLE (1M) 2402MHz



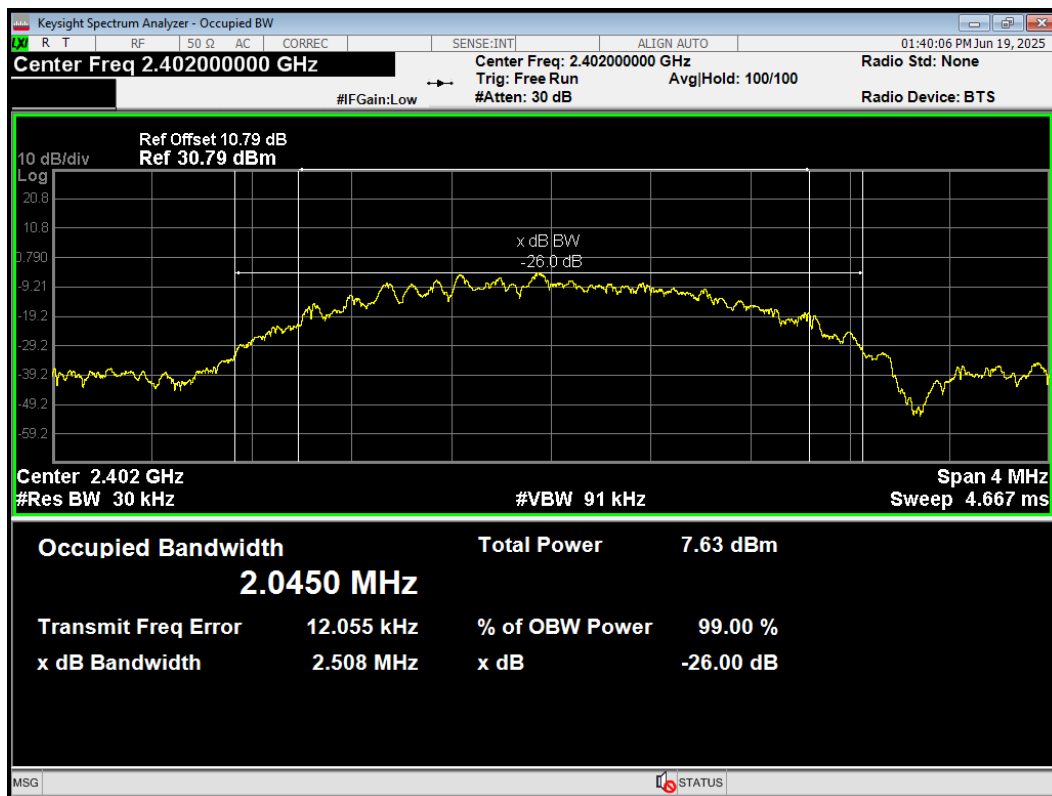
OBW BLE (1M) 2440MHz



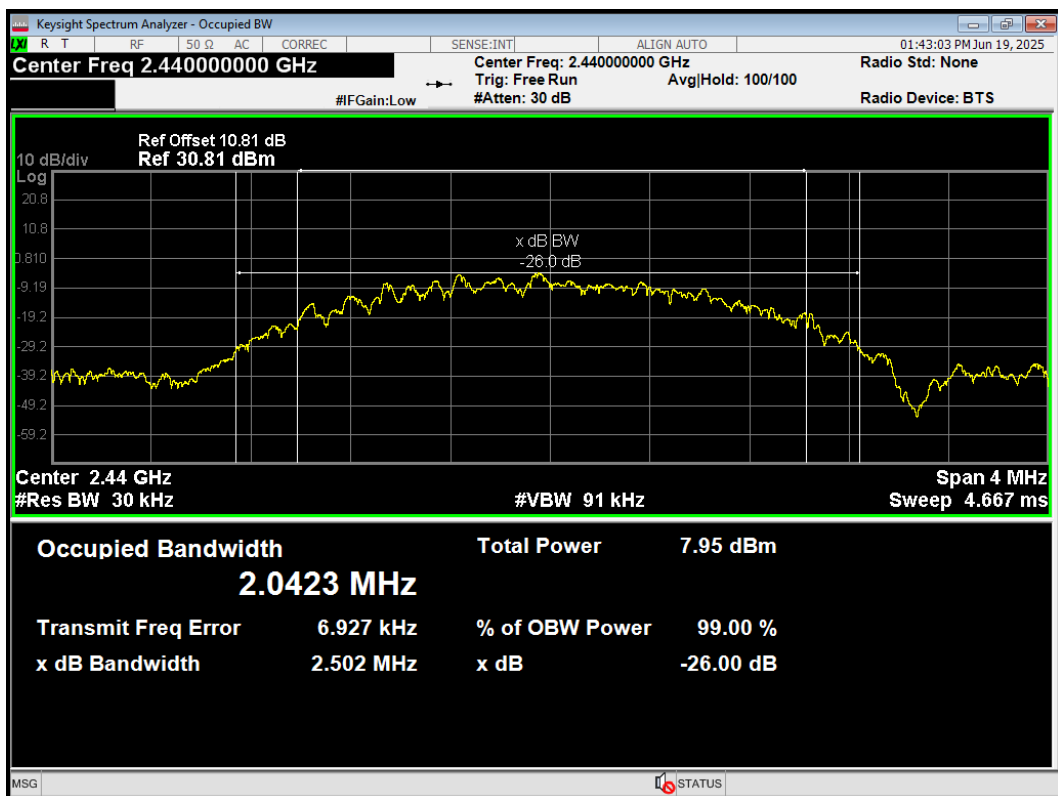
OBW BLE (1M) 2480MHz



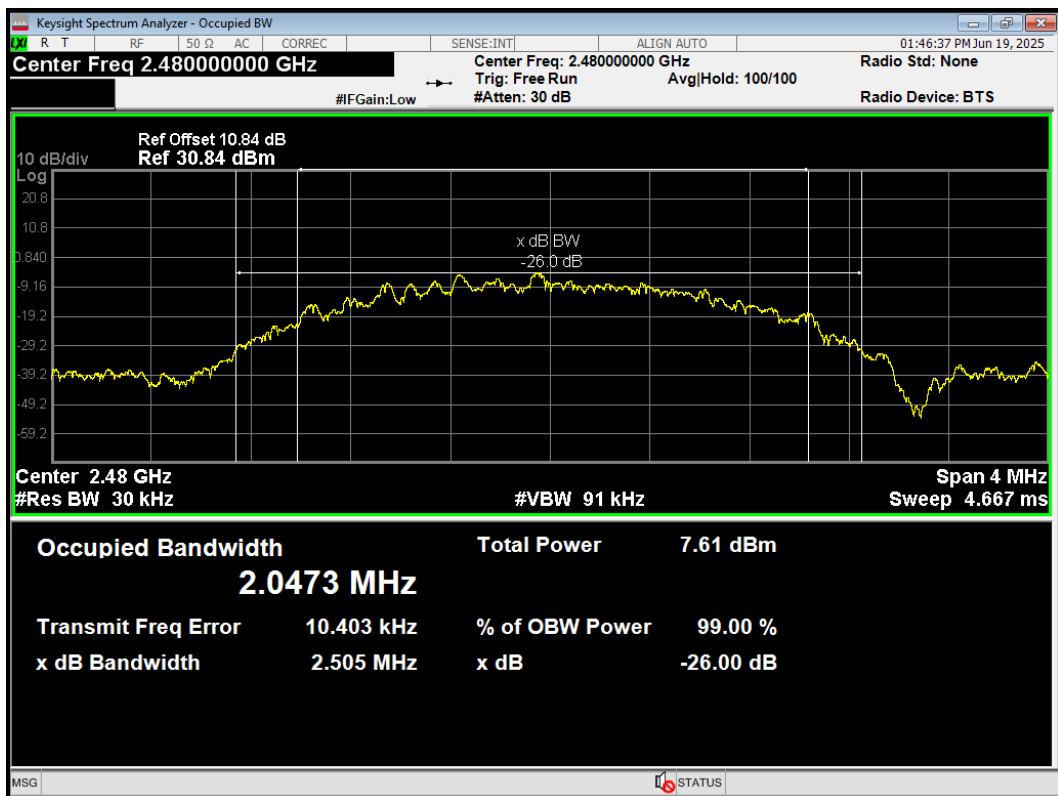
OBW BLE (2M) 2402MHz



OBW BLE (2M) 2440MHz

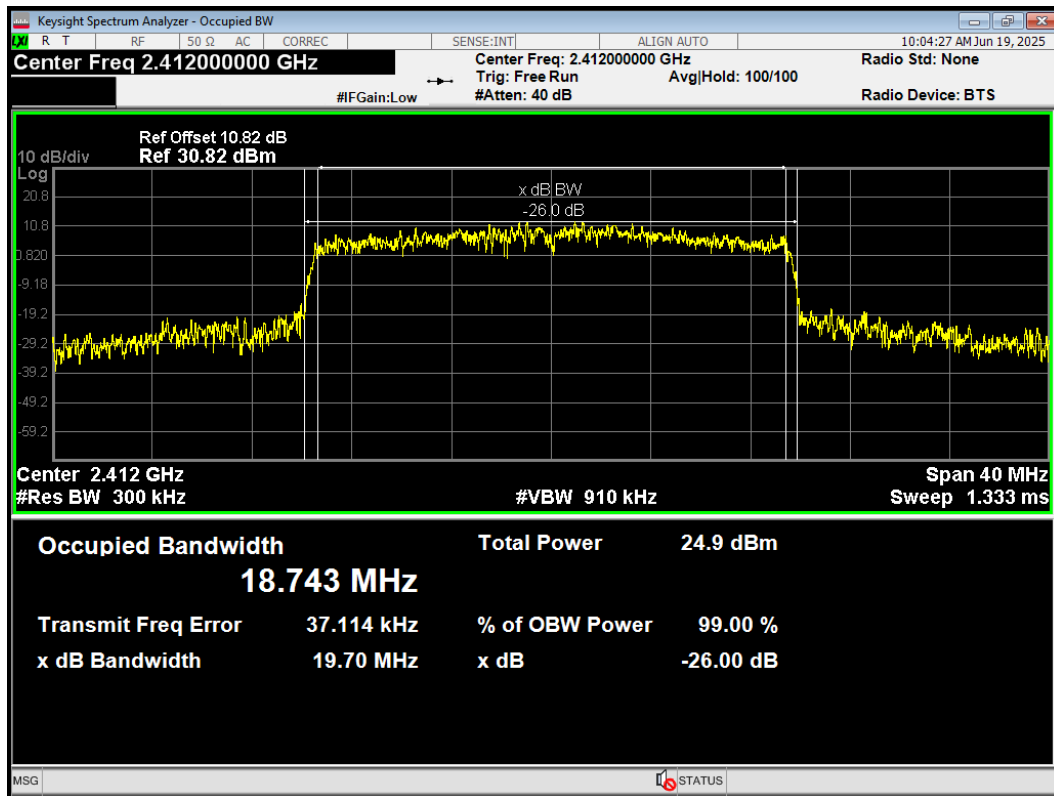


OBW BLE (2M) 2480MHz

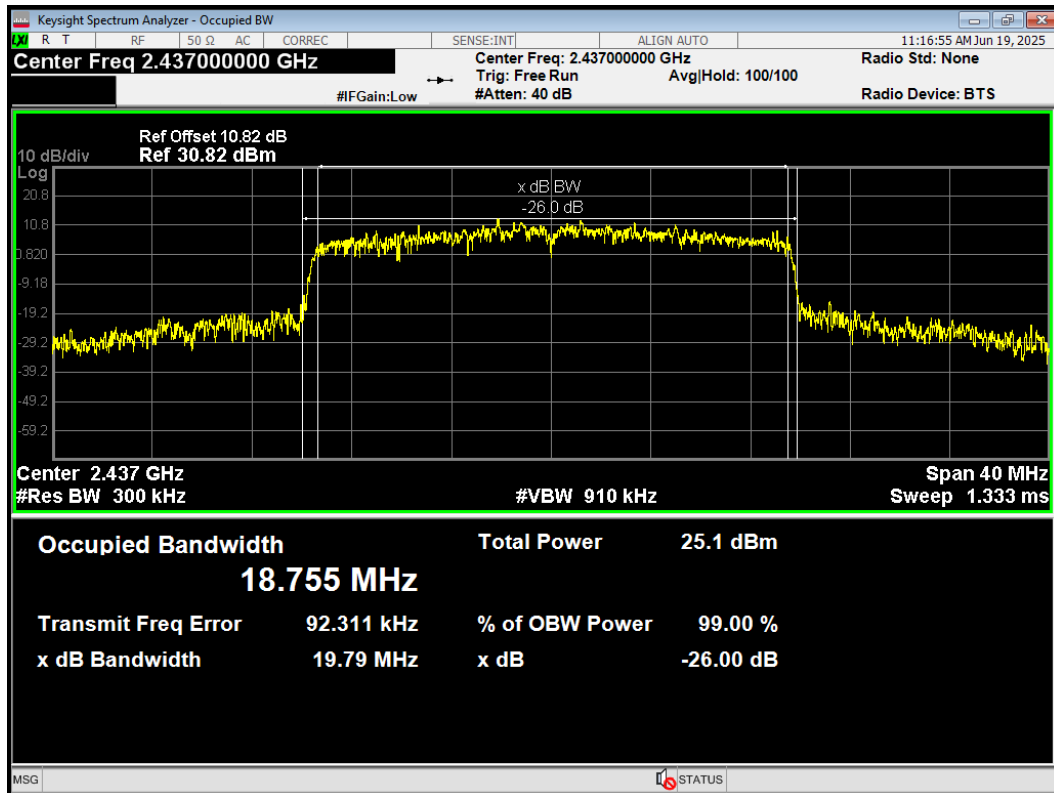


SU Mode

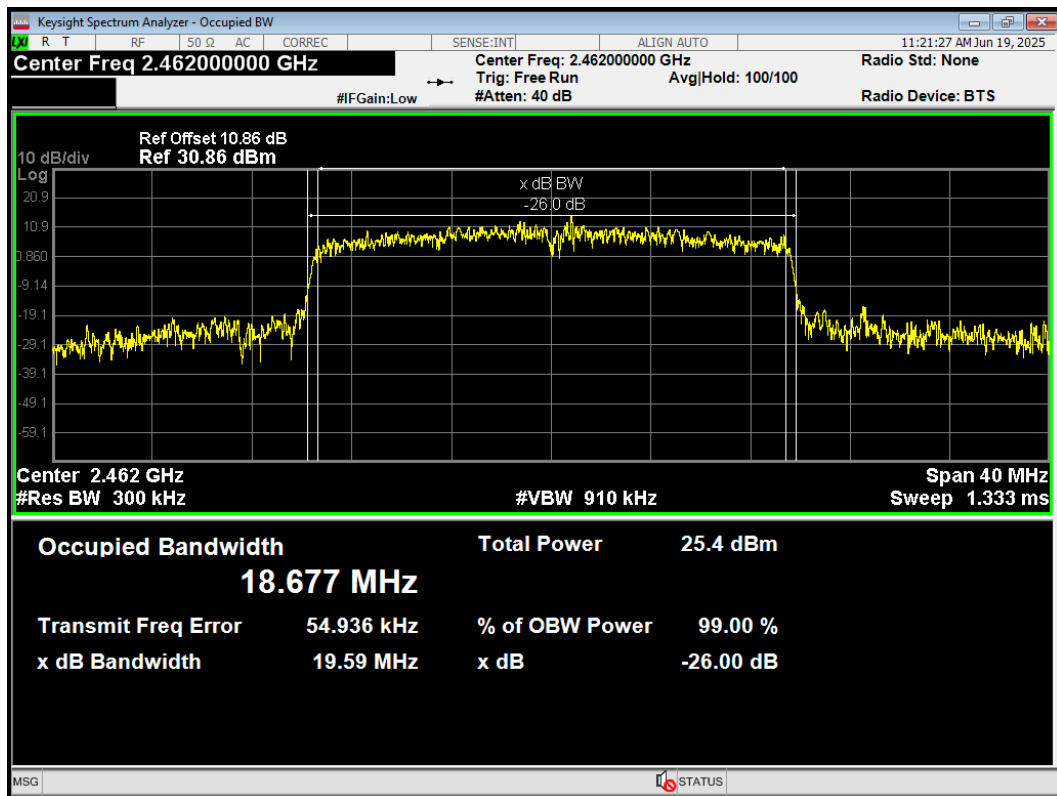
OBW 802.11ax(HE20) 2412MHz



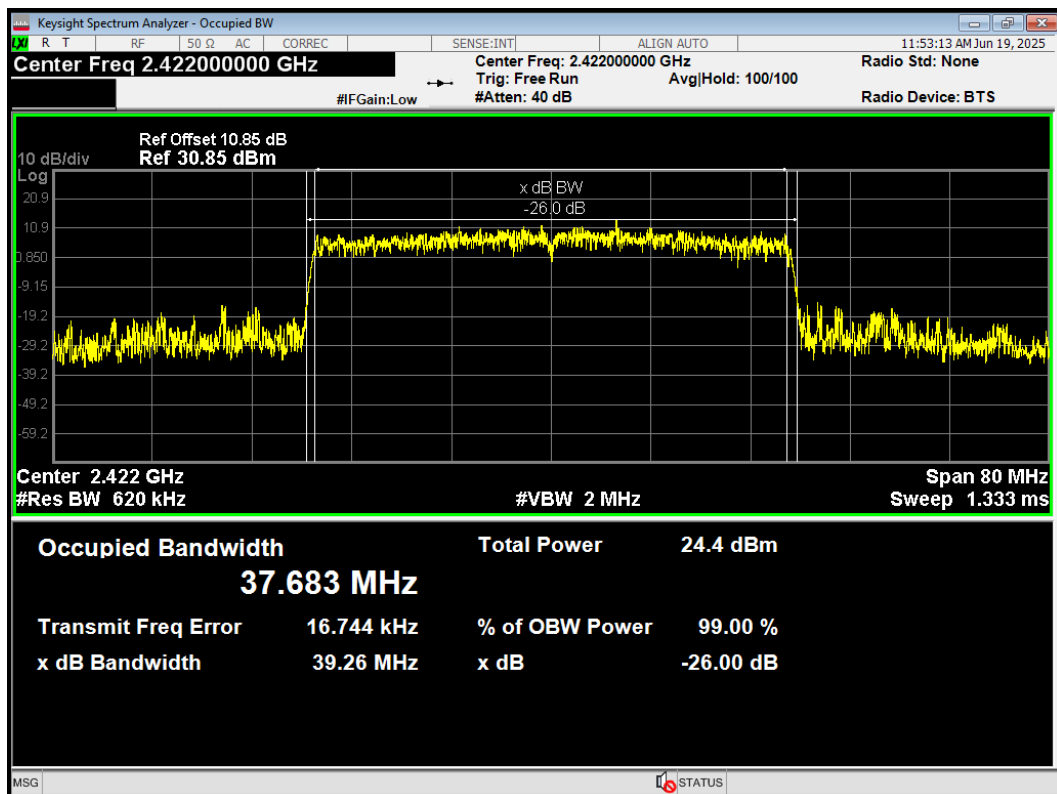
OBW 802.11ax(HE20) 2437MHz



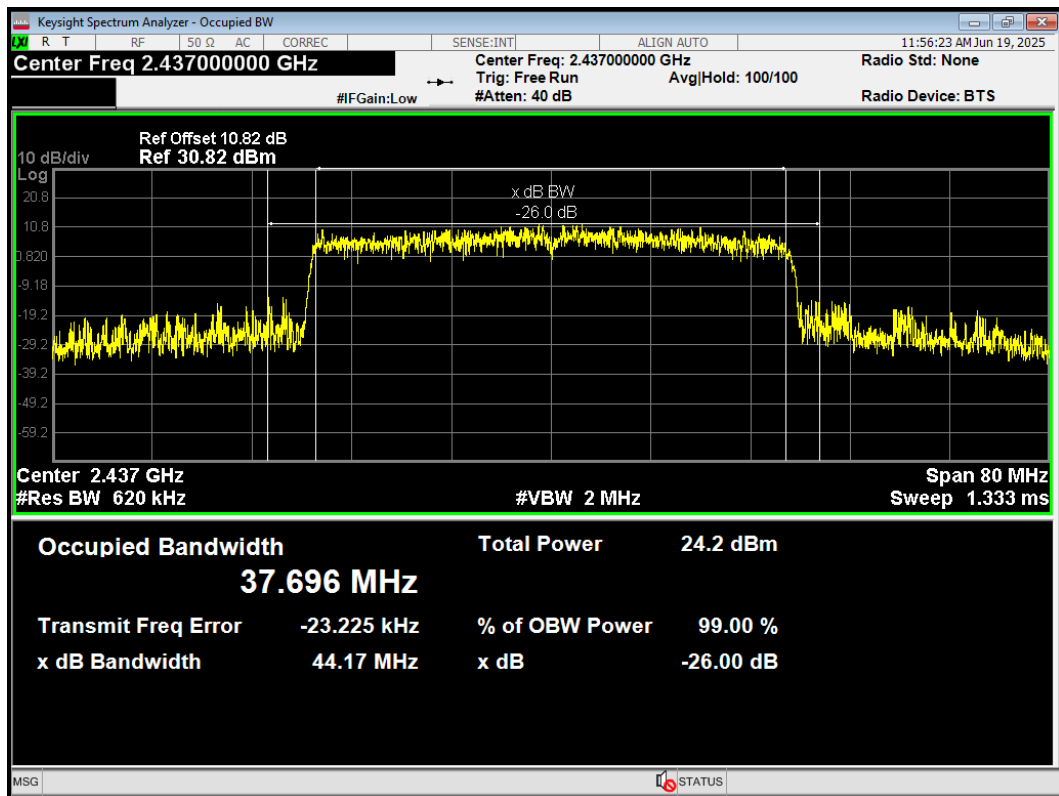
OBW 802.11ax(HE20) 2462MHz



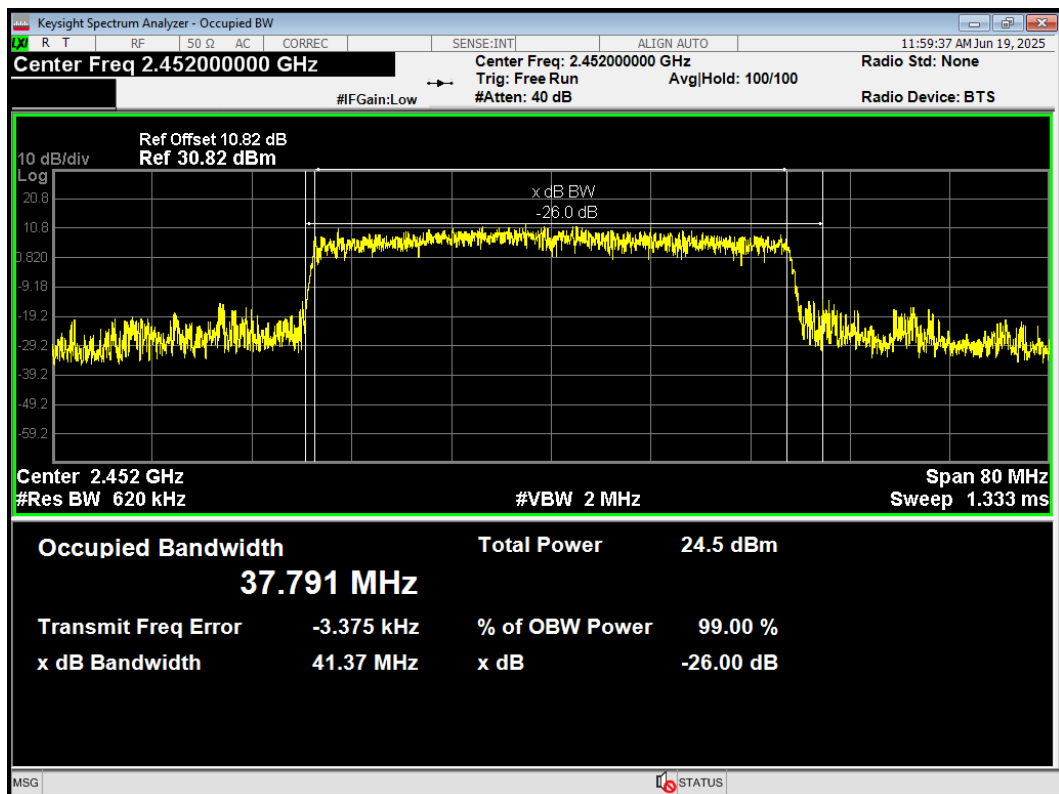
OBW 802.11ax(HE40) 2422MHz



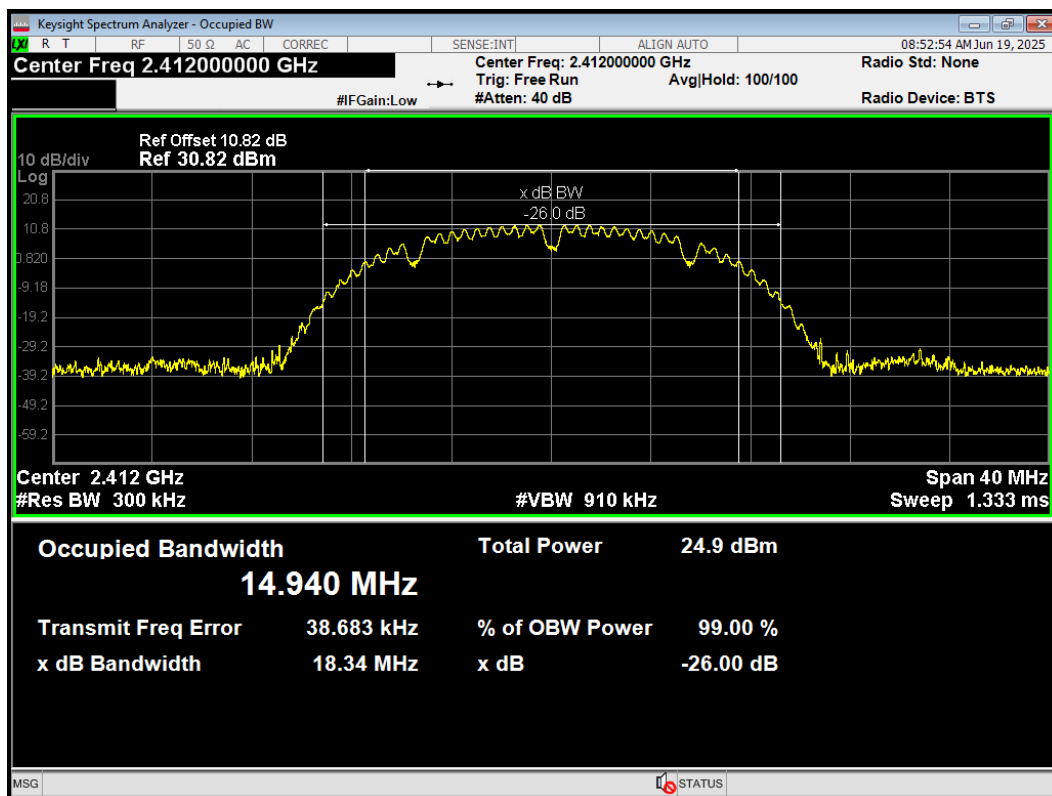
OBW 802.11ax(HE40) 2437MHz



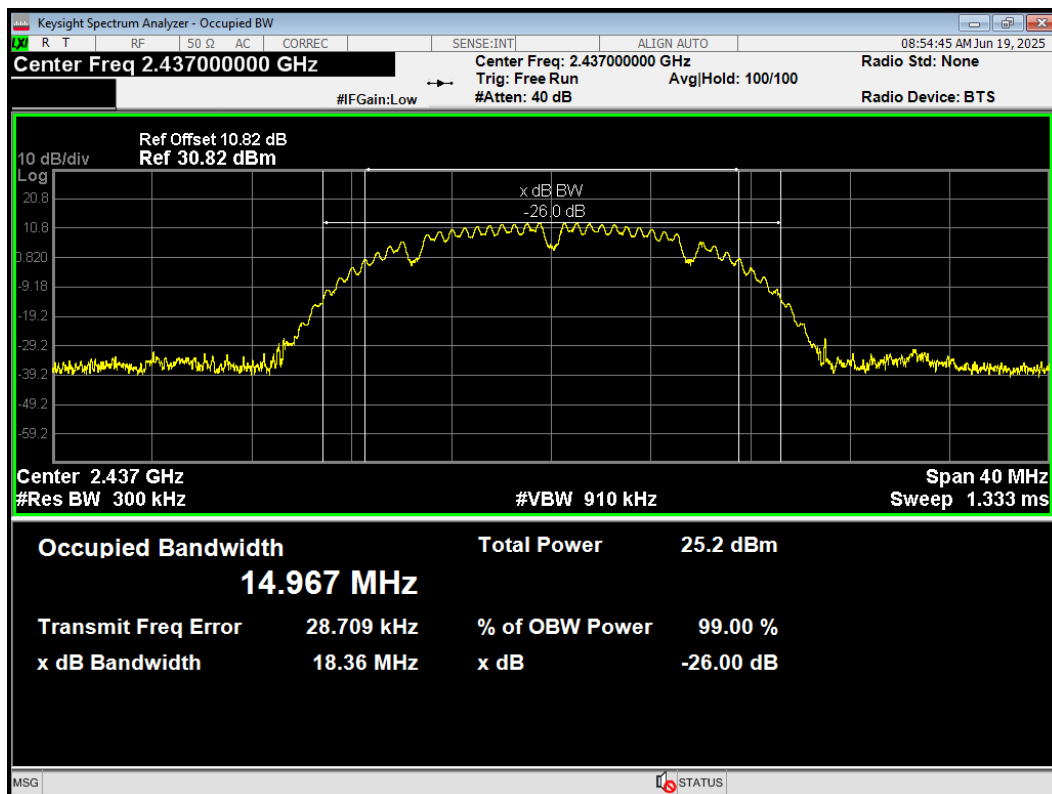
OBW 802.11ax(HE40) 2452MHz



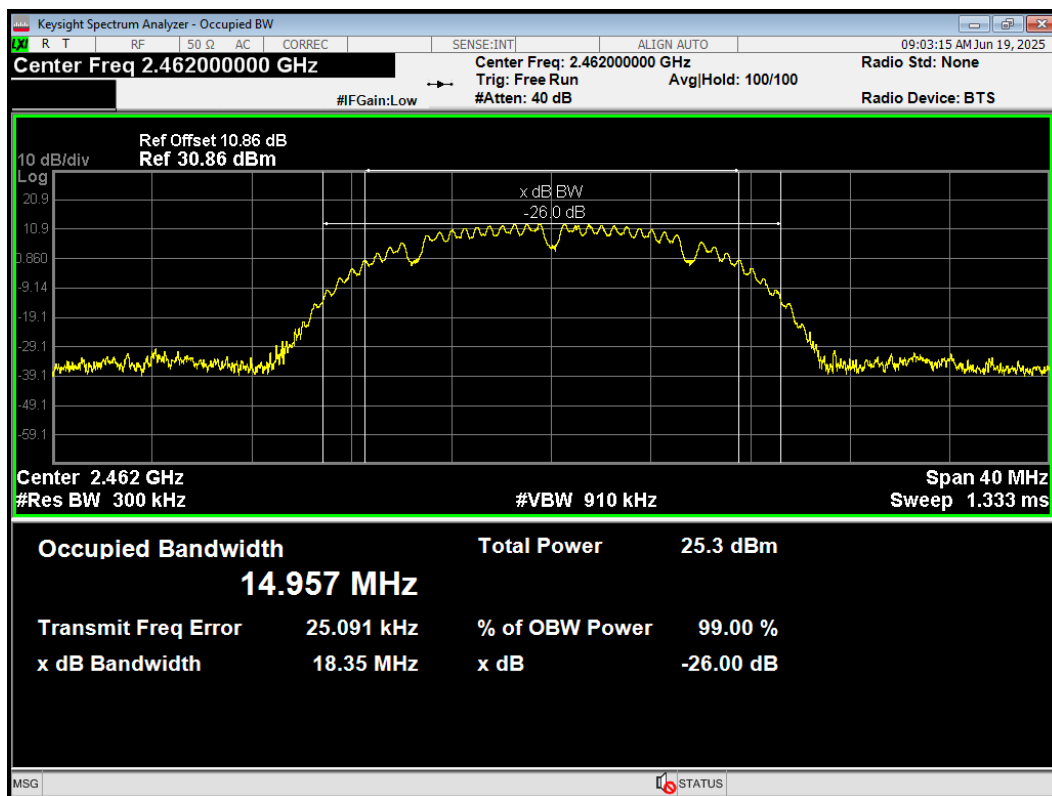
OBW 802.11b 2412MHz



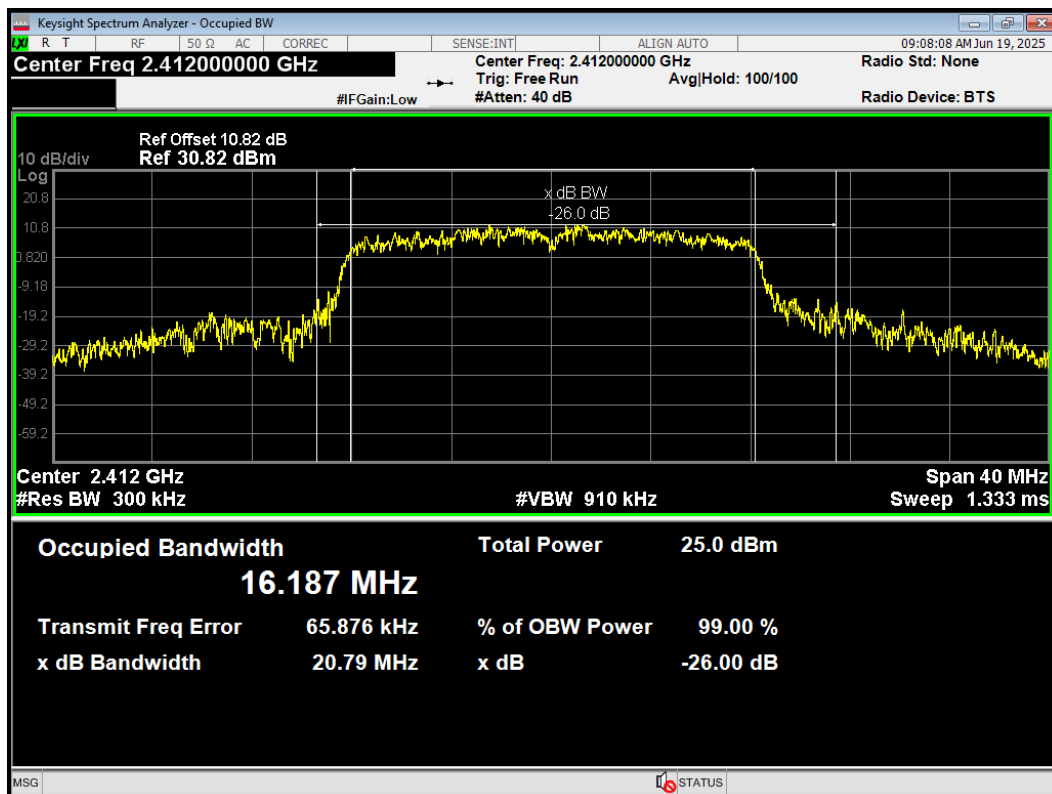
OBW 802.11b 2437MHz



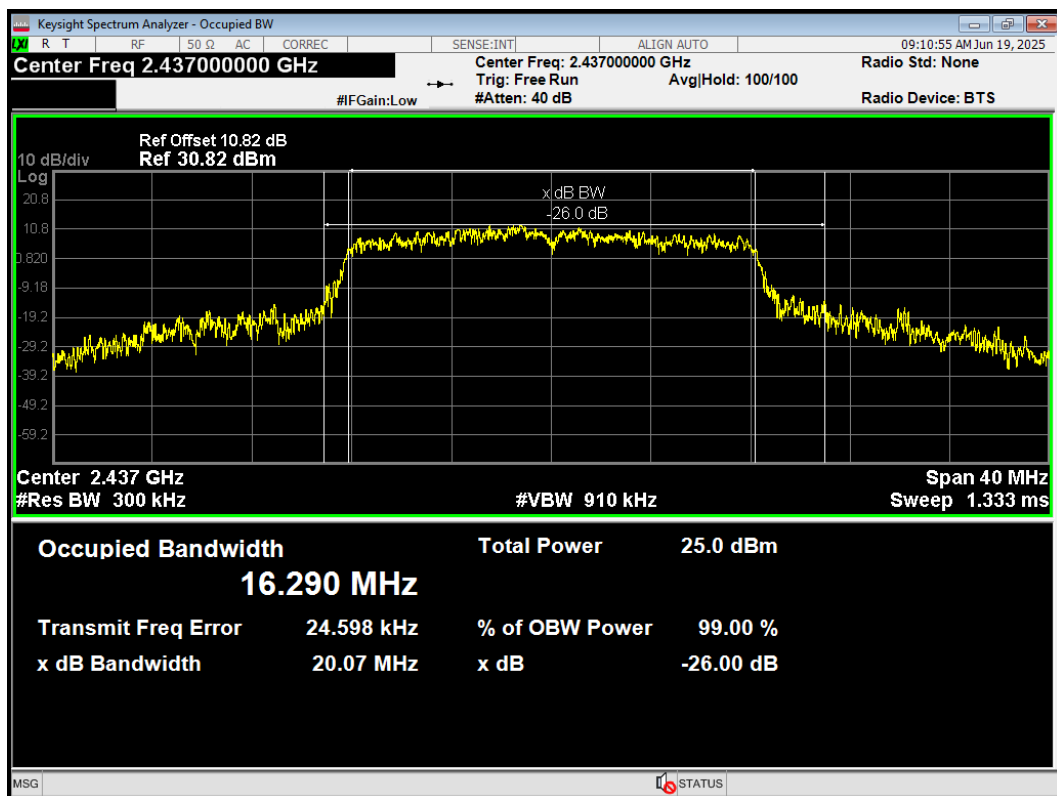
OBW 802.11b 2462MHz



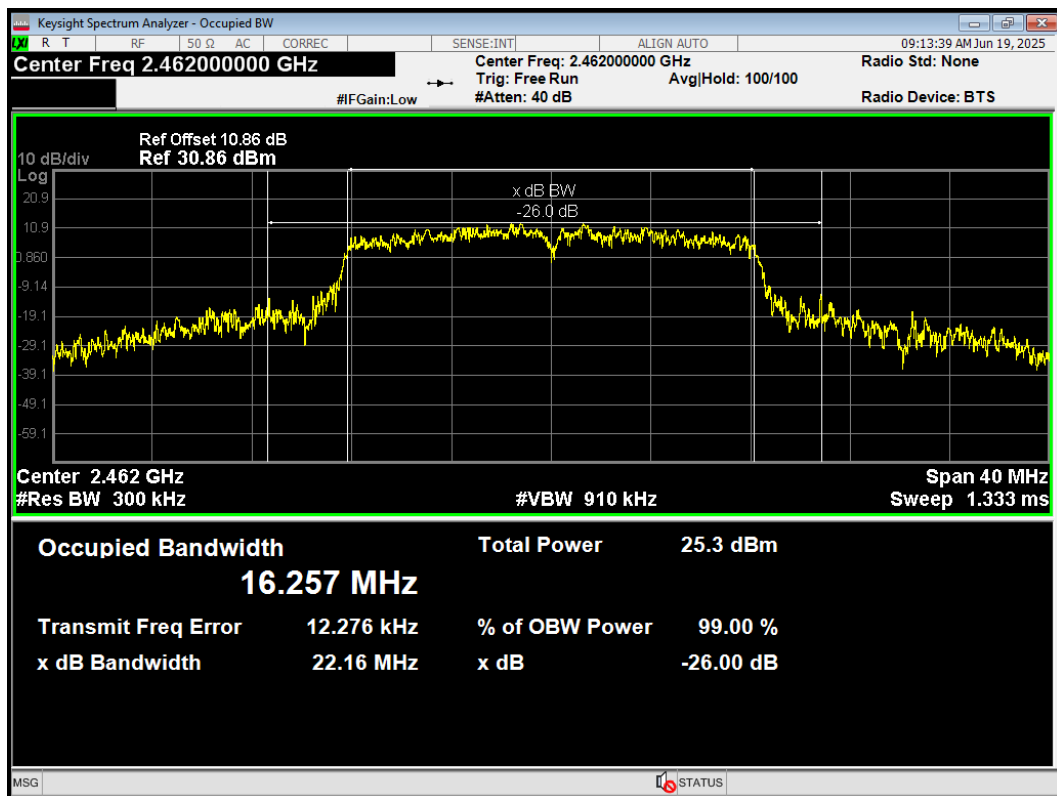
OBW 802.11g 2412MHz



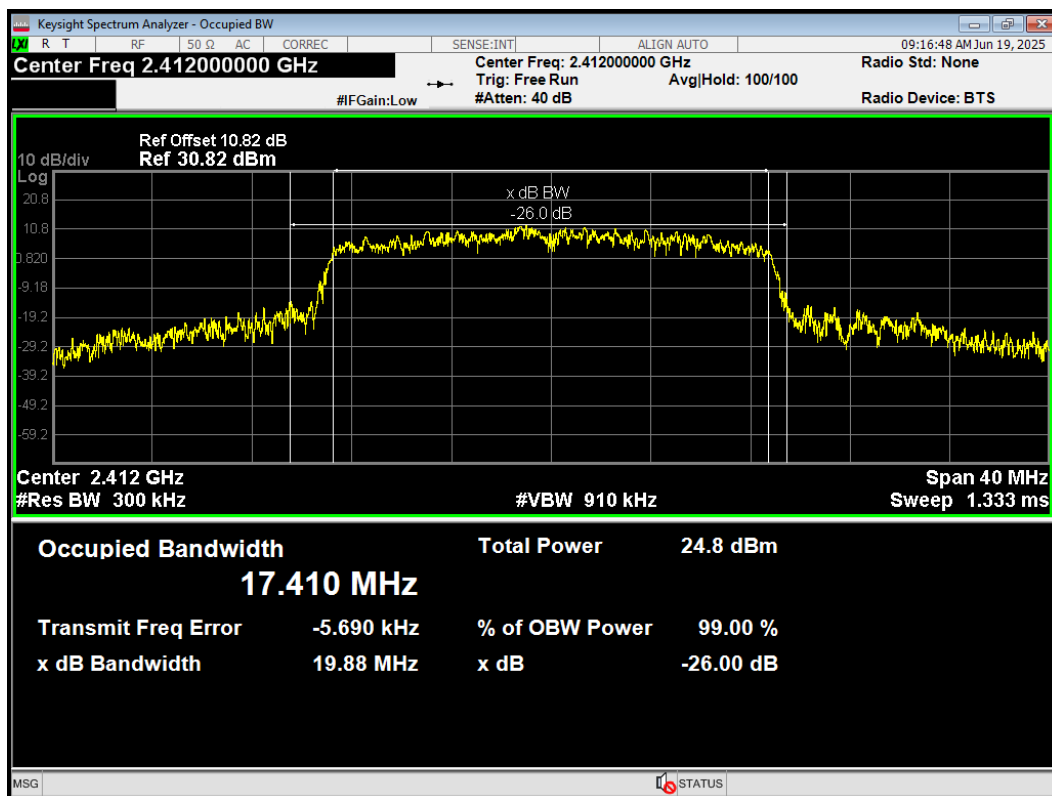
OBW 802.11g 2437MHz



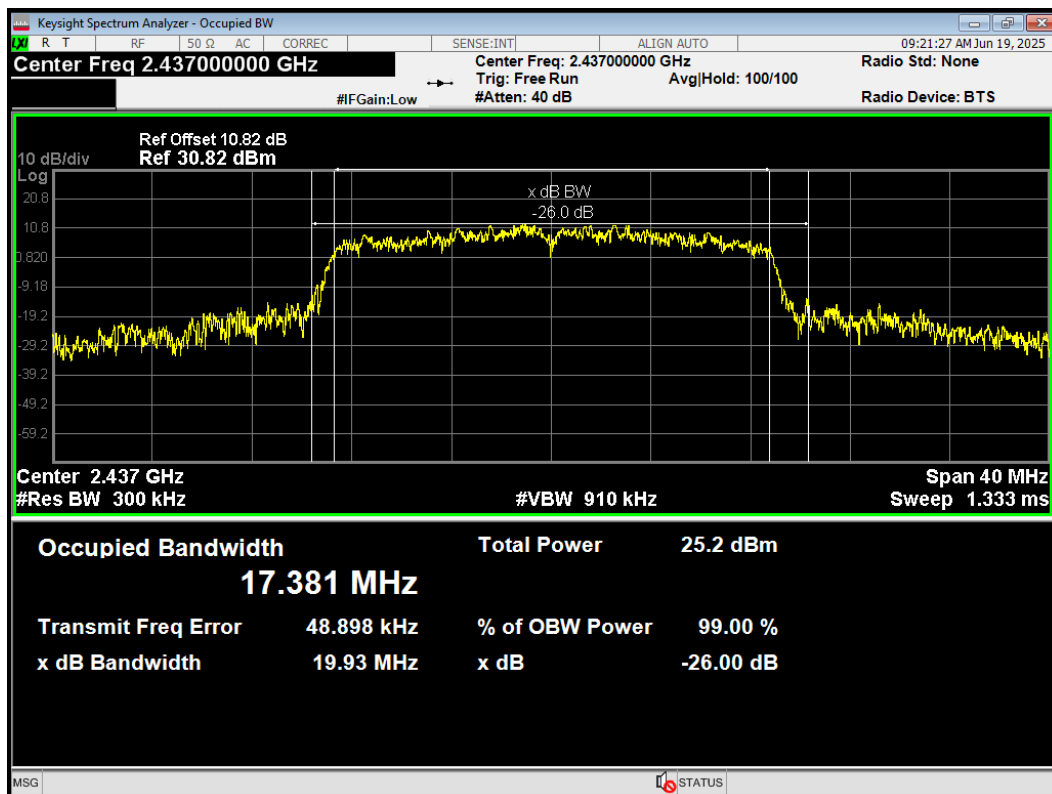
OBW 802.11g 2462MHz



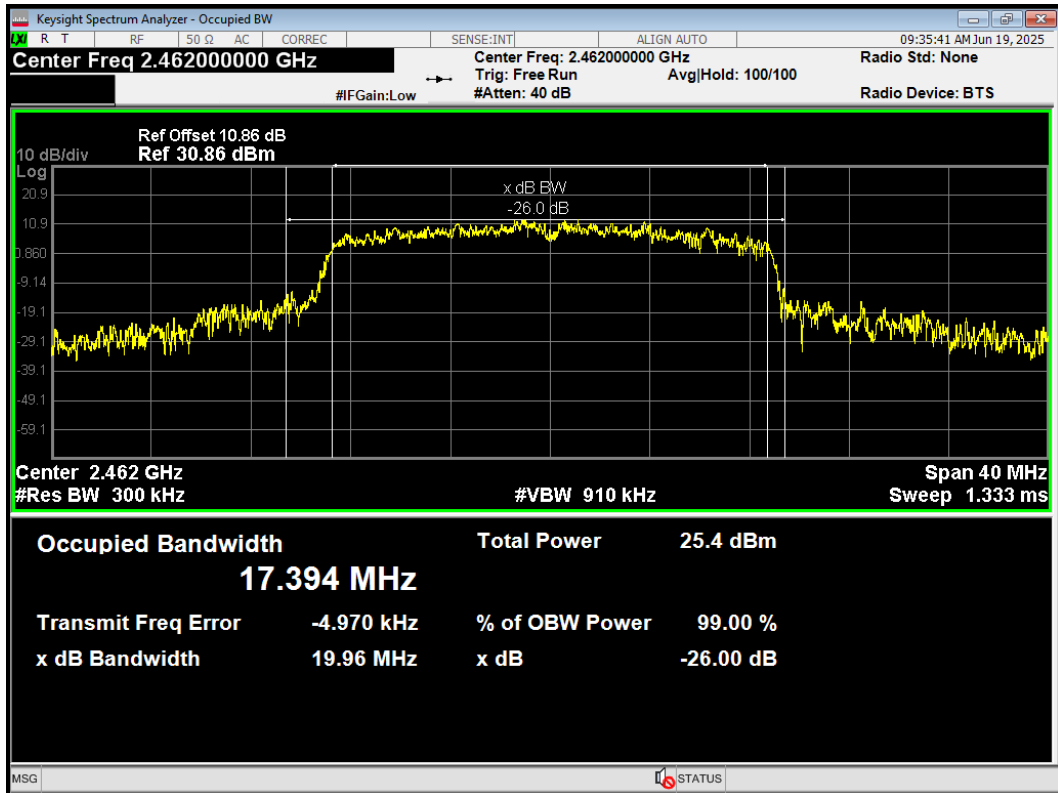
OBW 802.11n(HT20) 2412MHz



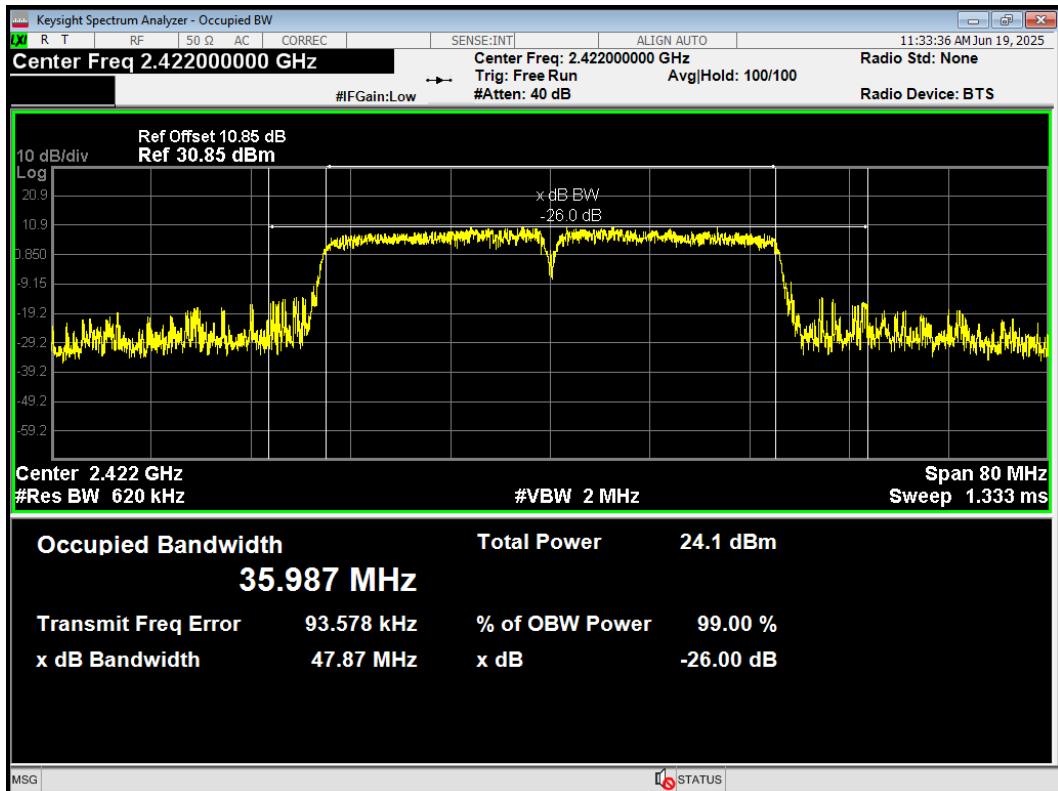
OBW 802.11n(HT20) 2437MHz



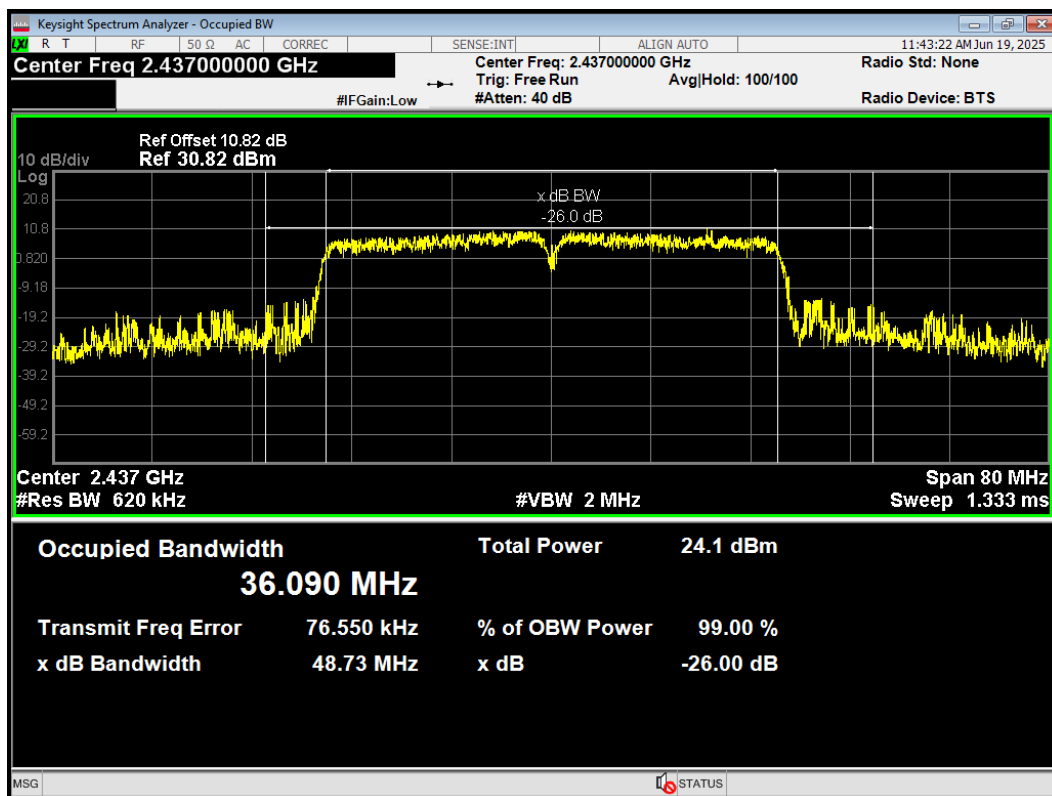
OBW 802.11n(HT20) 2462MHz



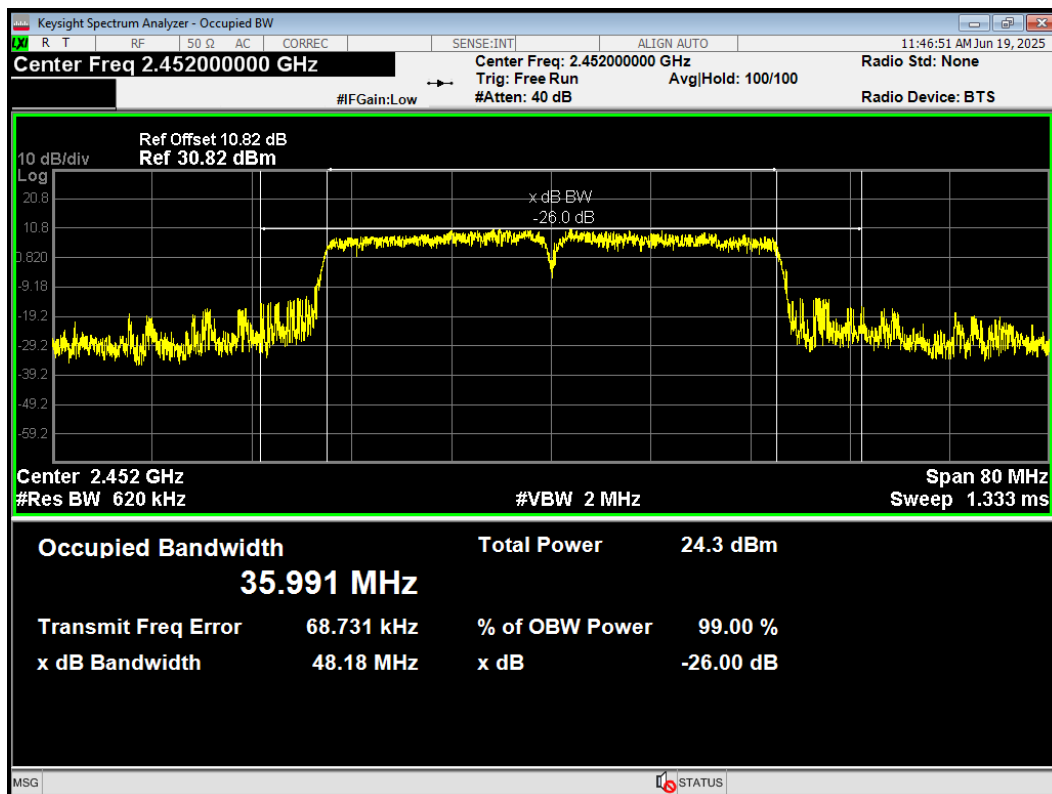
OBW 802.11n(HT40) 2422MHz



OBW 802.11n(HT40) 2437MHz

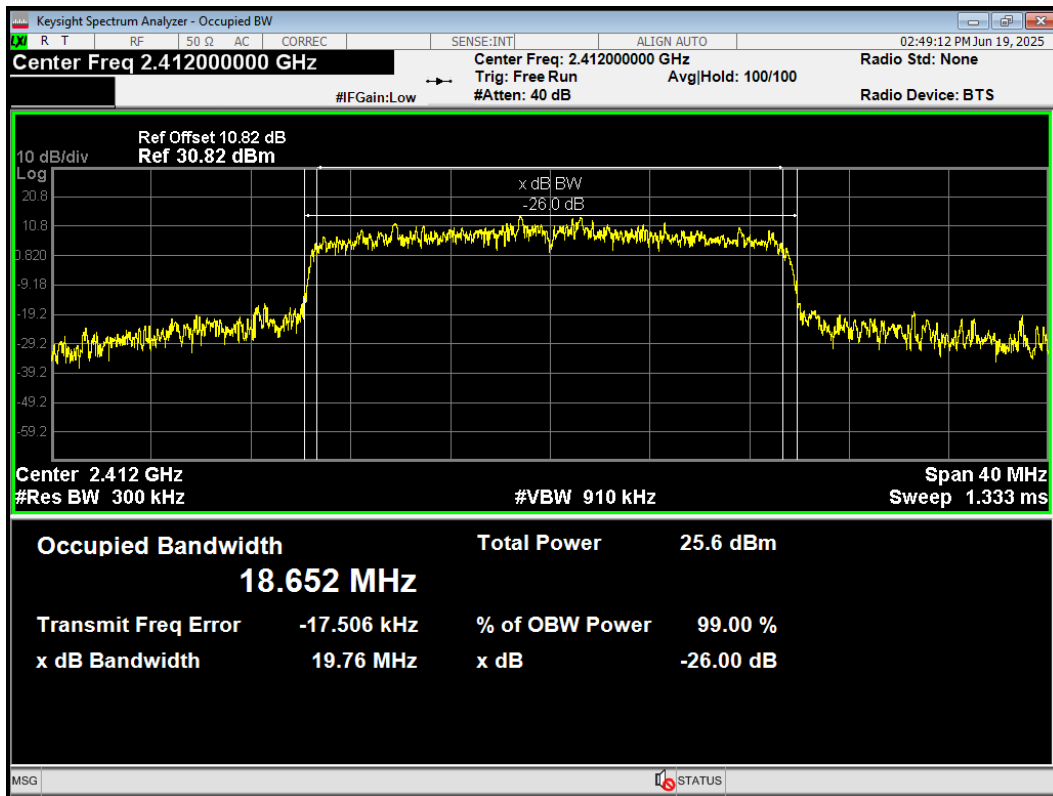


OBW 802.11n(HT40) 2452MHz

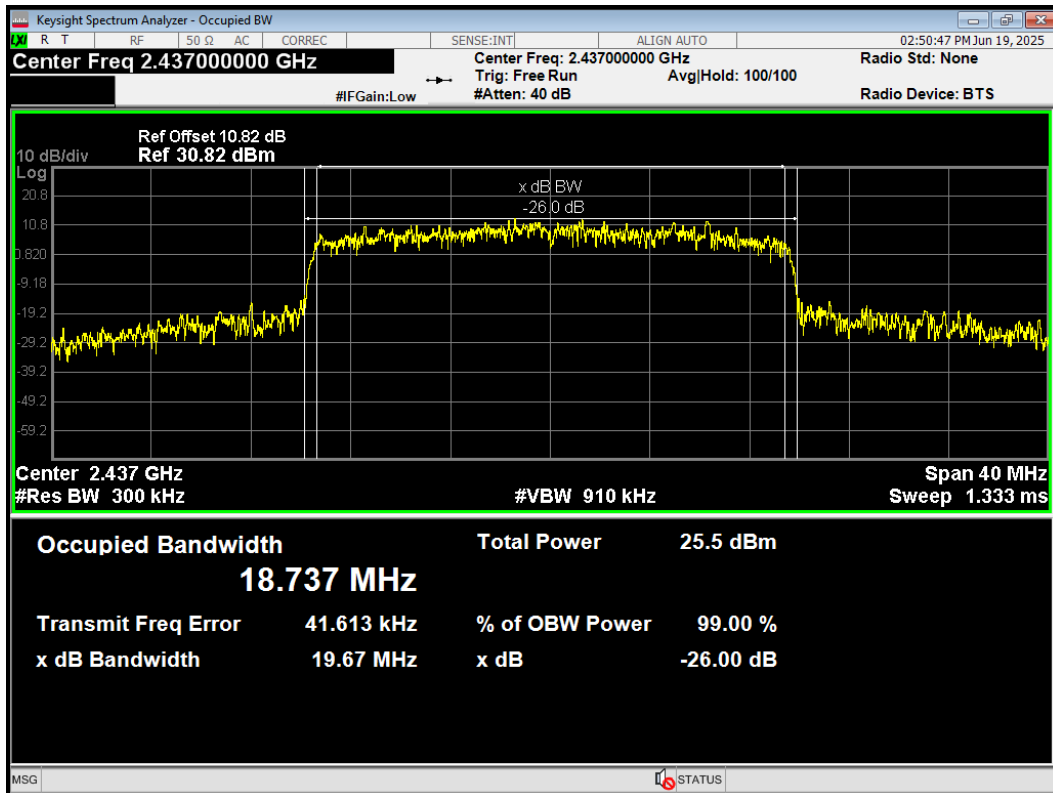


ERSU Mode

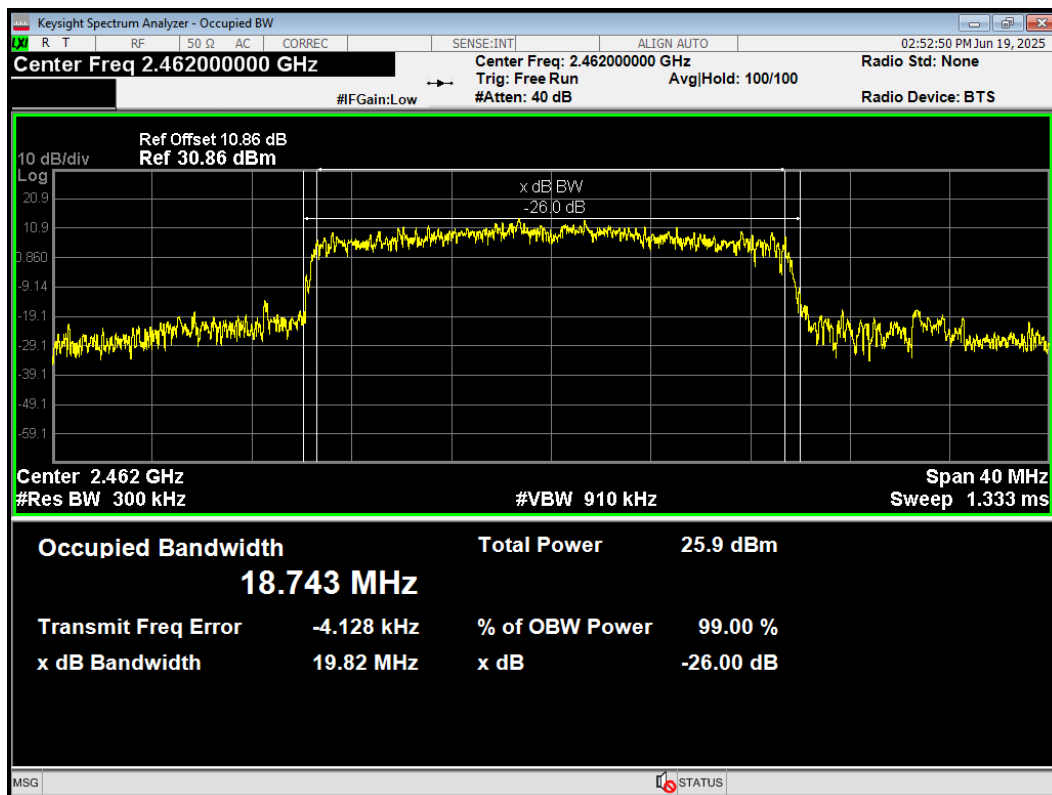
OBW 802.11ax HE20 242-Tones 2412MHz



OBW 802.11ax HE20 242-Tones 2437MHz



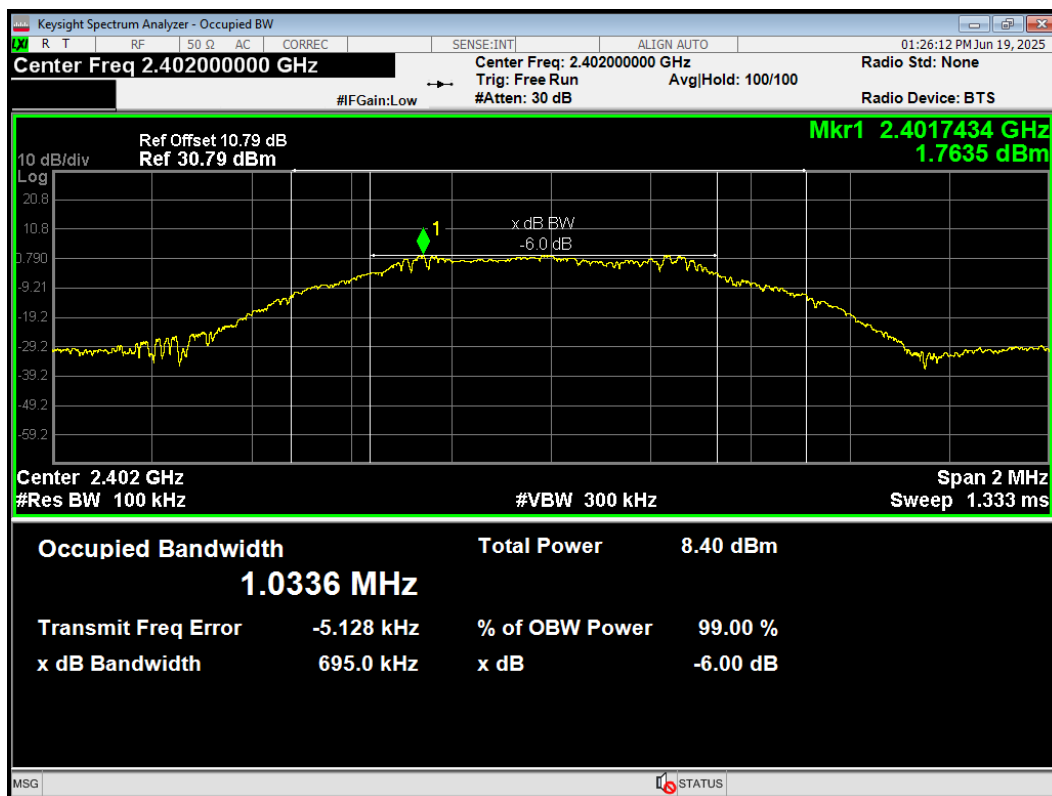
OBW 802.11ax HE20 242-Tones 2462MHz



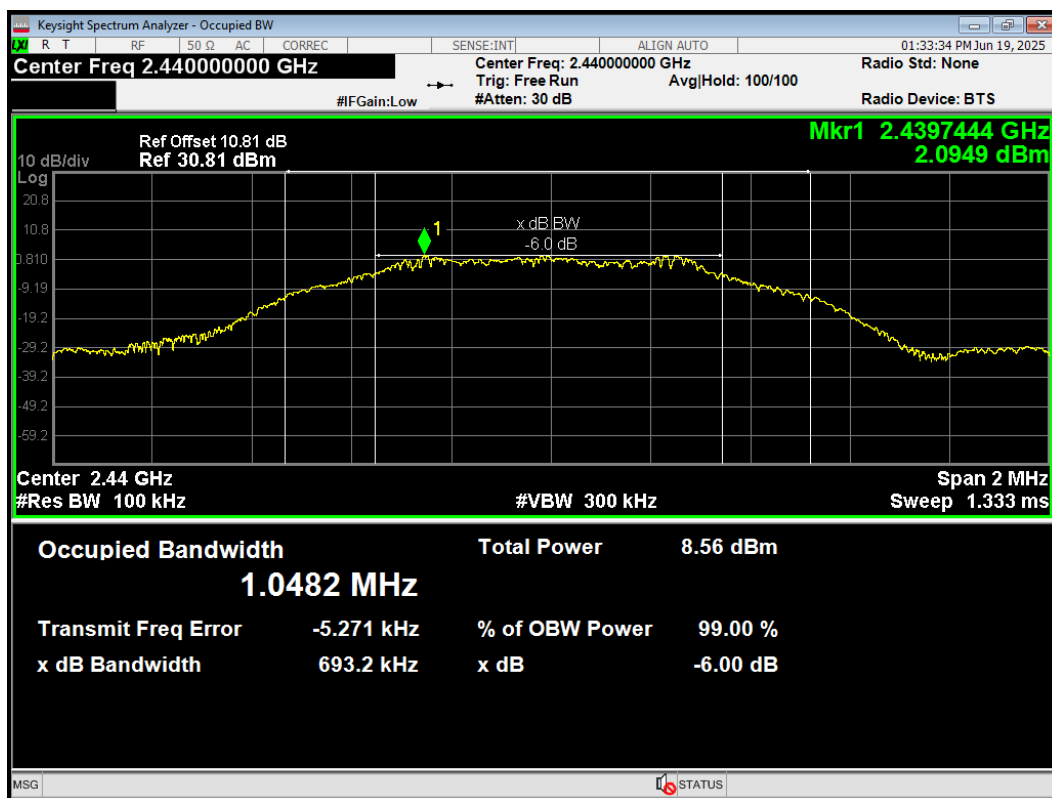
6 dB bandwidth

Bluetooth LE

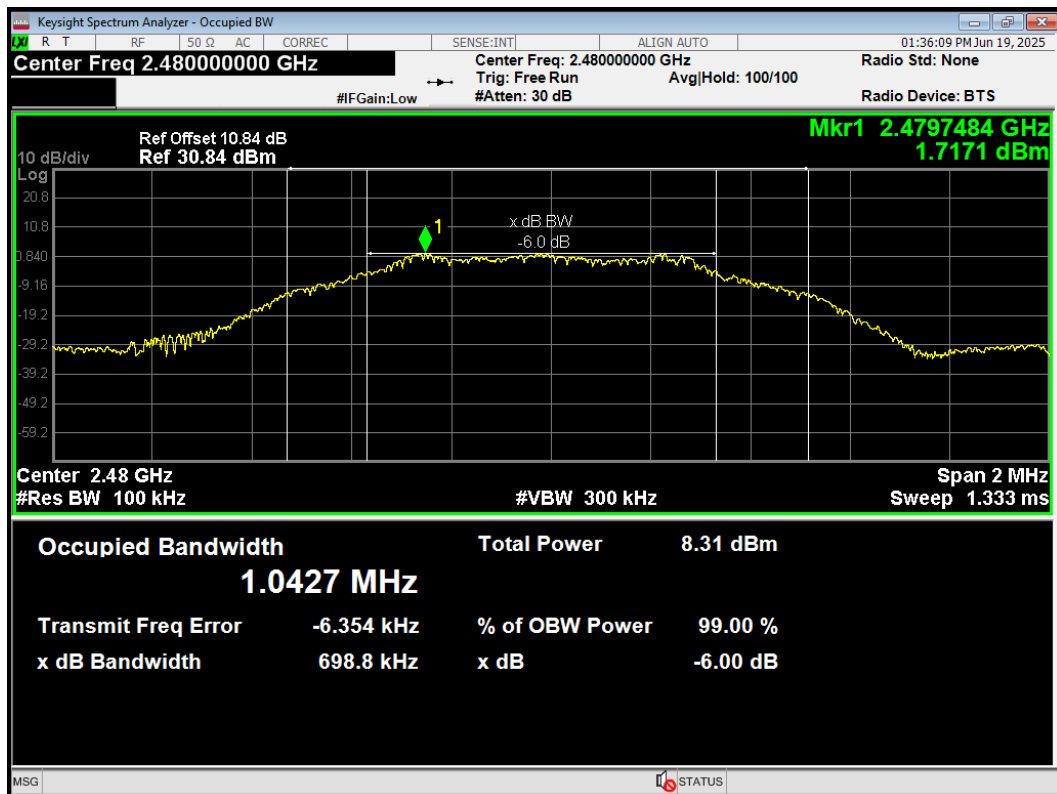
-6dB Bandwidth BLE (1M) 2402MHz



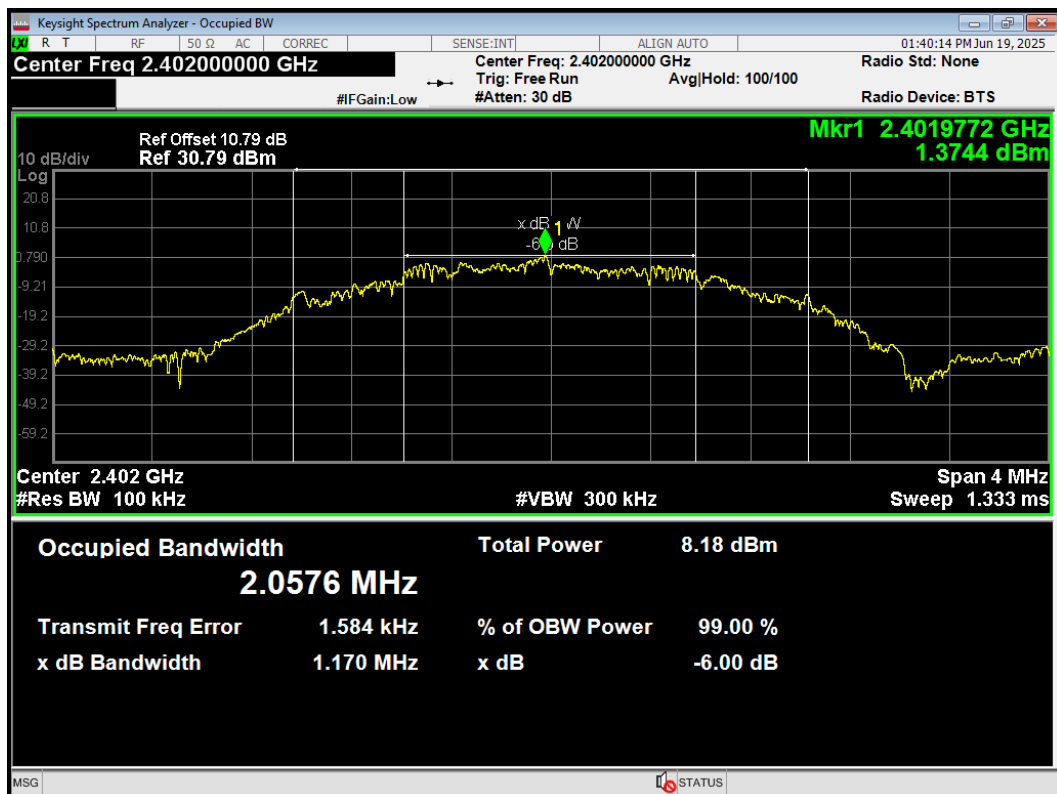
-6dB Bandwidth BLE (1M) 2440MHz



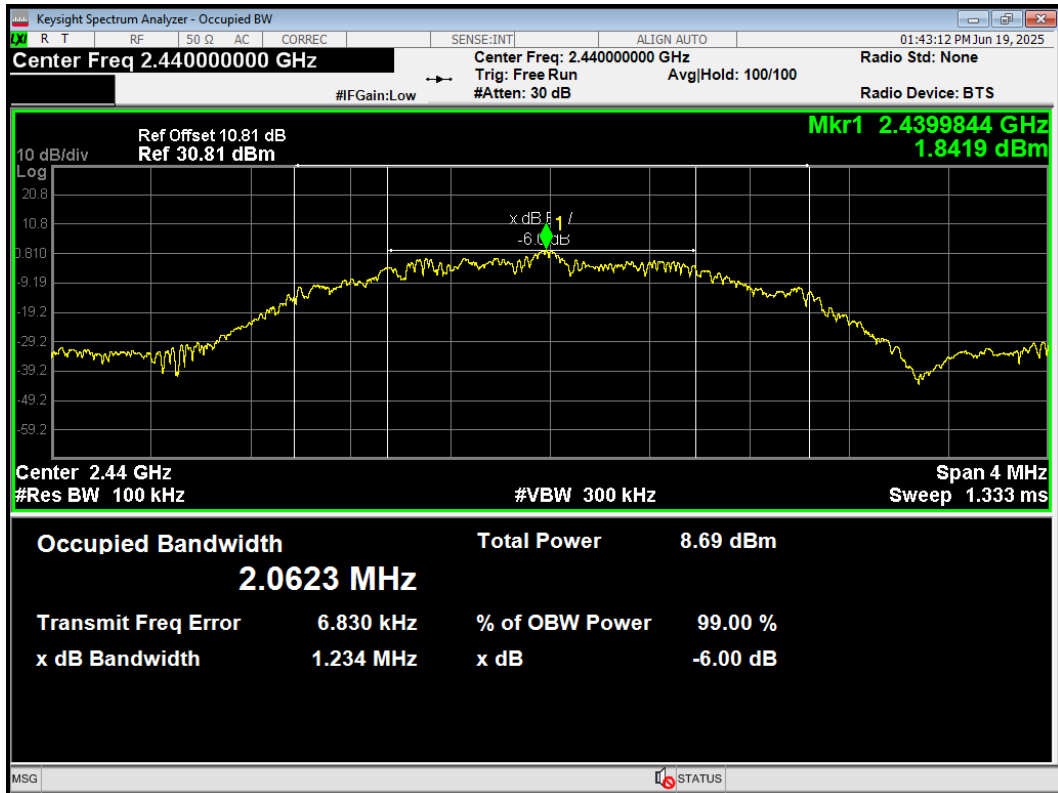
-6dB Bandwidth BLE (1M) 2480MHz



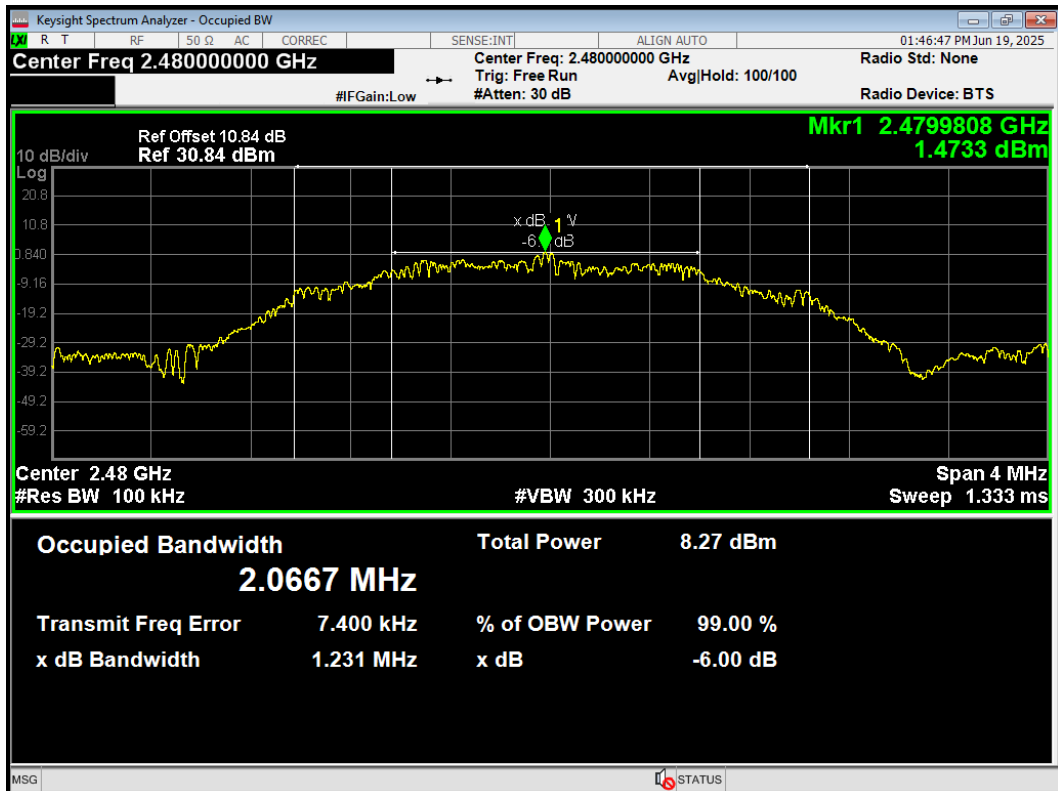
-6dB Bandwidth BLE (2M) 2402MHz



-6dB Bandwidth BLE (2M) 2440MHz

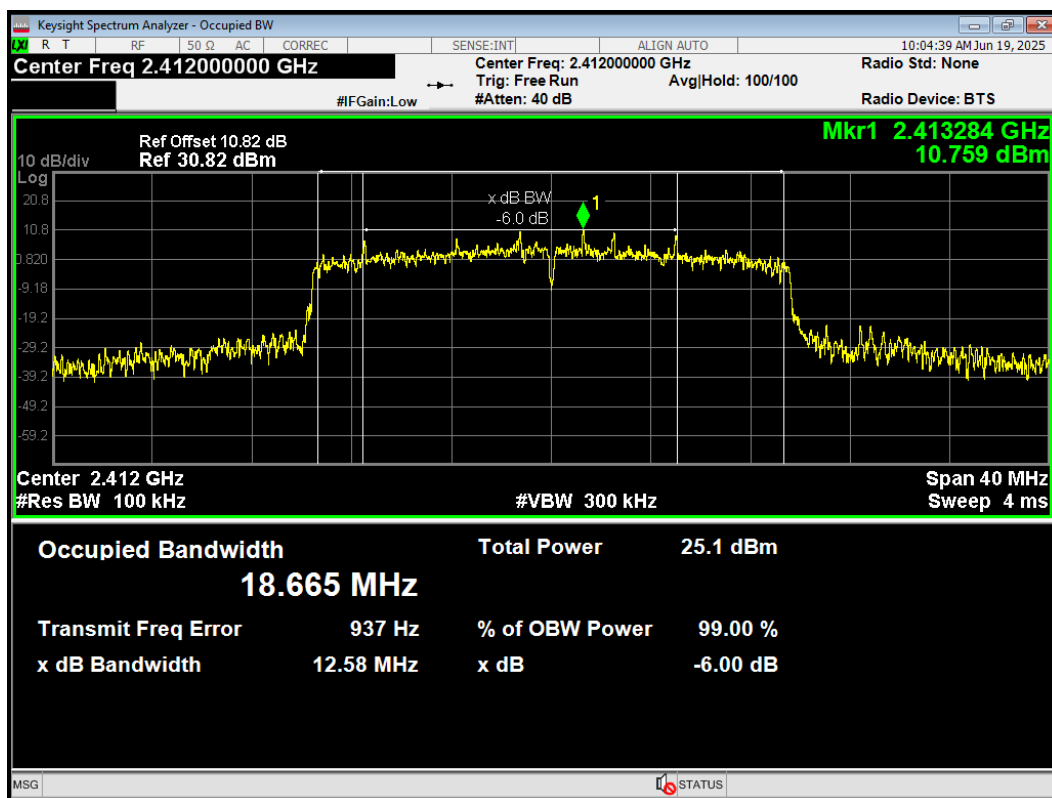


-6dB Bandwidth BLE (2M) 2480MHz

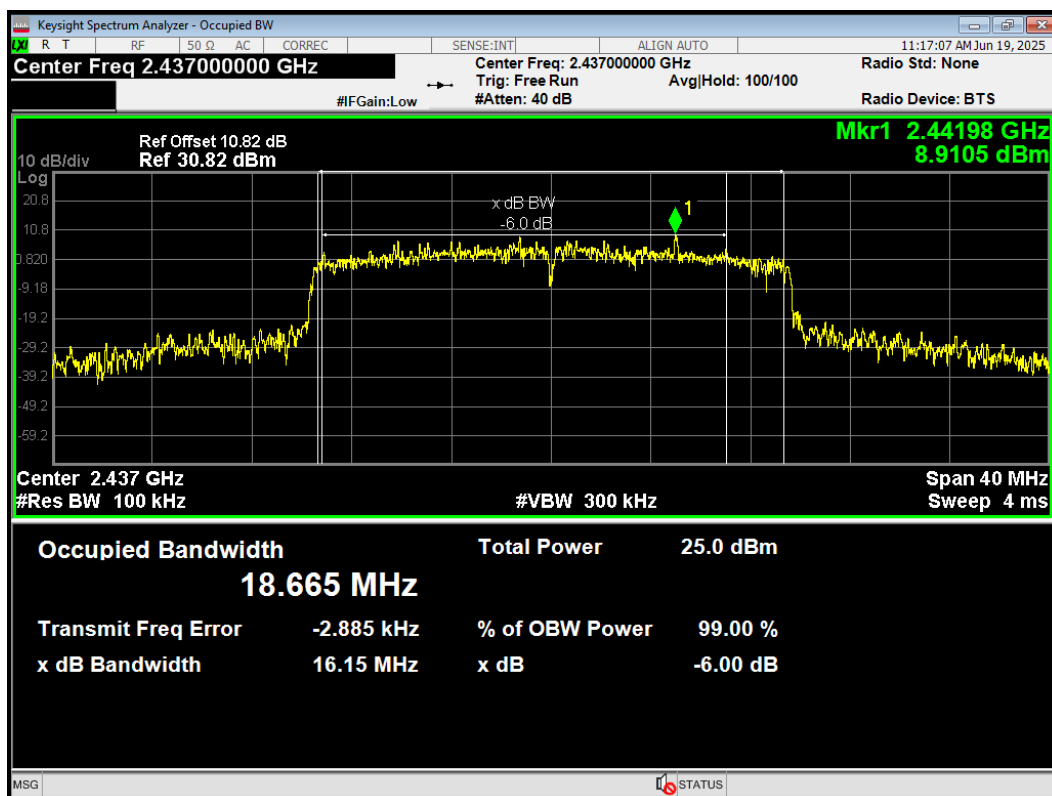


SU Mode

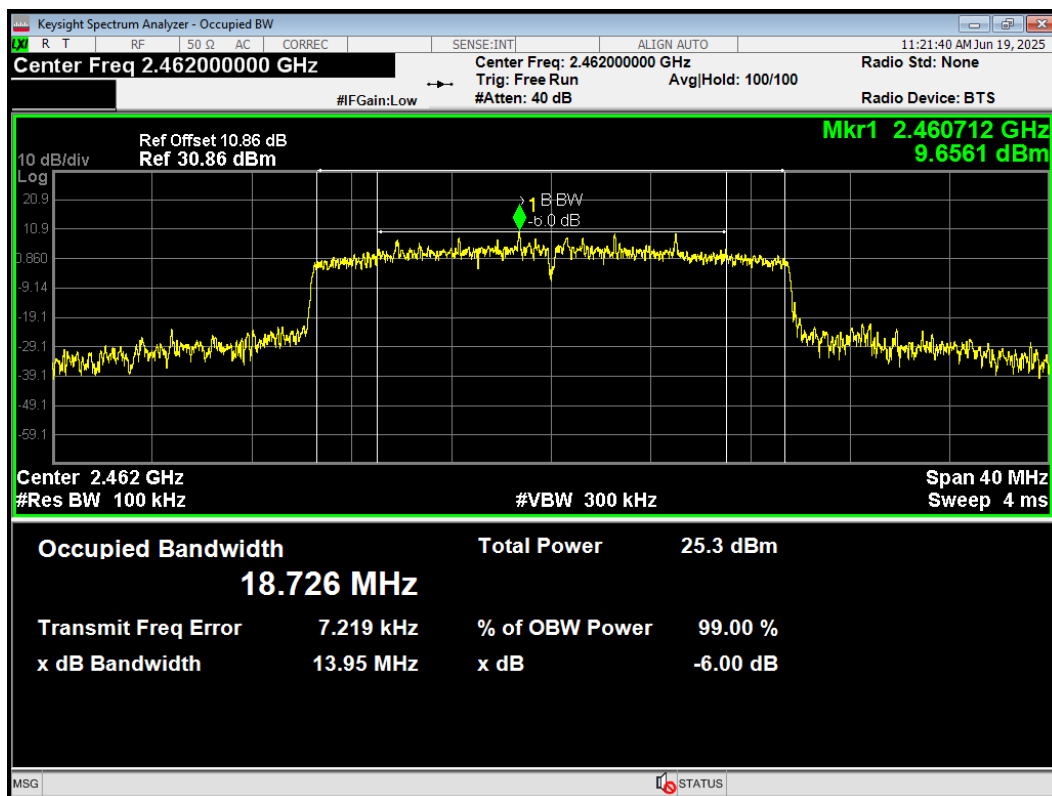
-6dB Bandwidth 802.11ax(HE20) 2412MHz



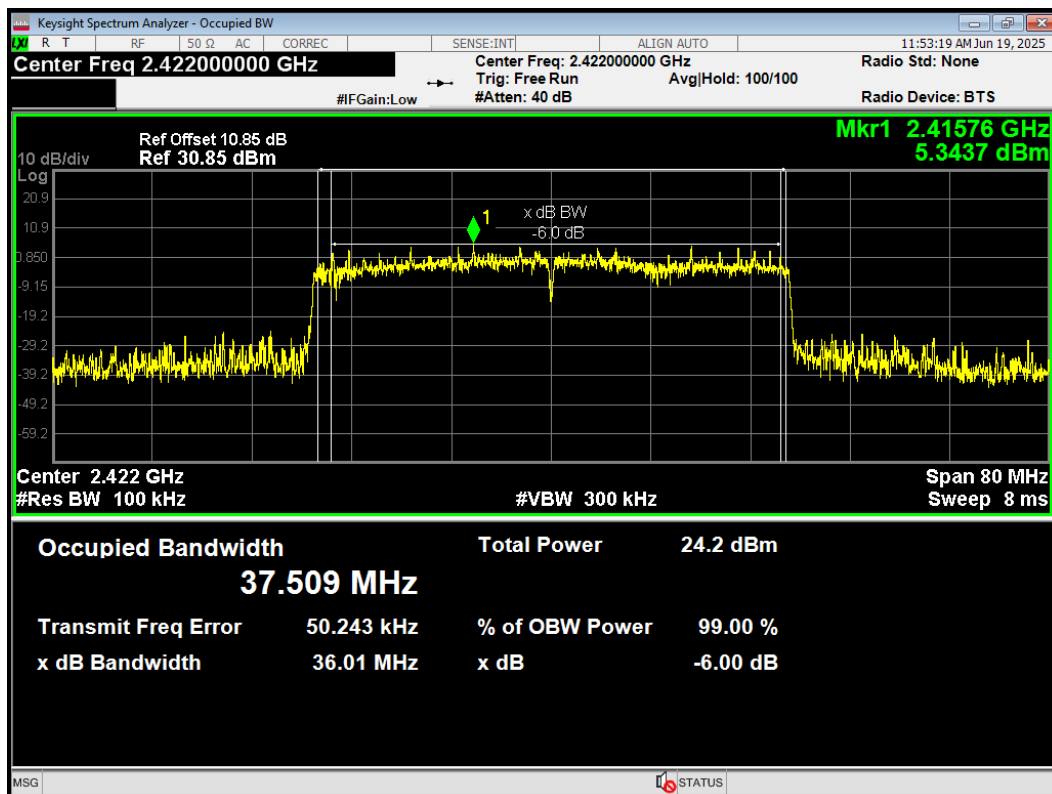
-6dB Bandwidth 802.11ax(HE20) 2437MHz



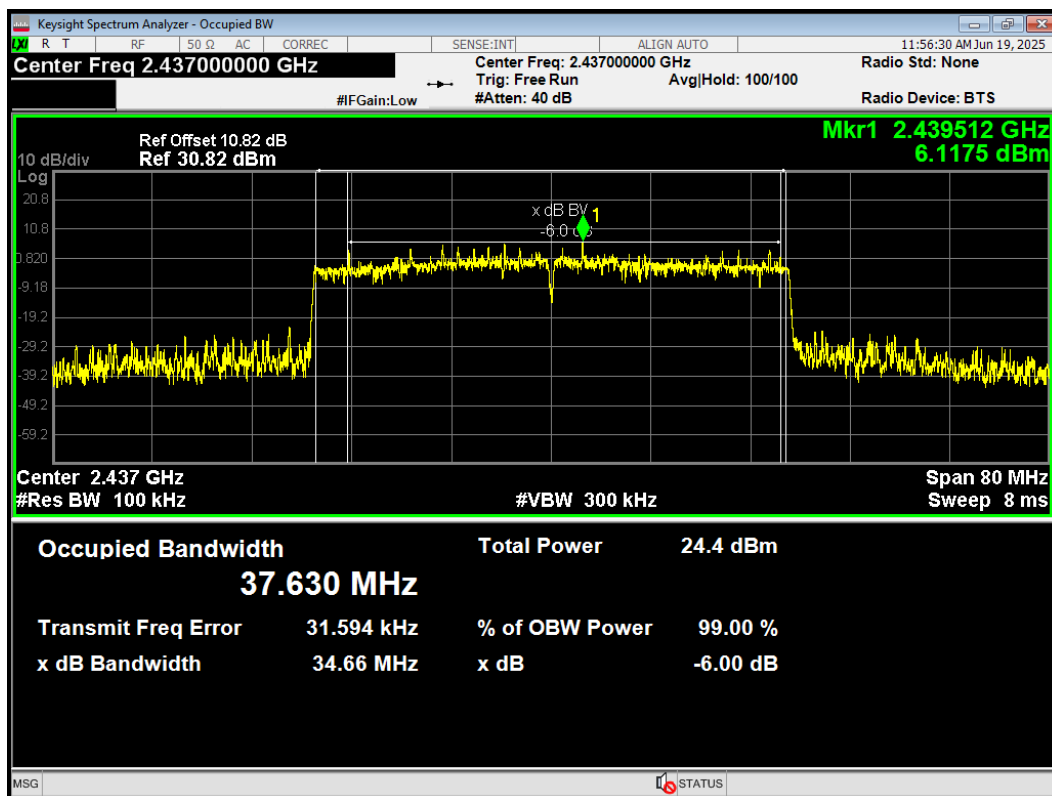
-6dB Bandwidth 802.11ax(HE20) 2462MHz



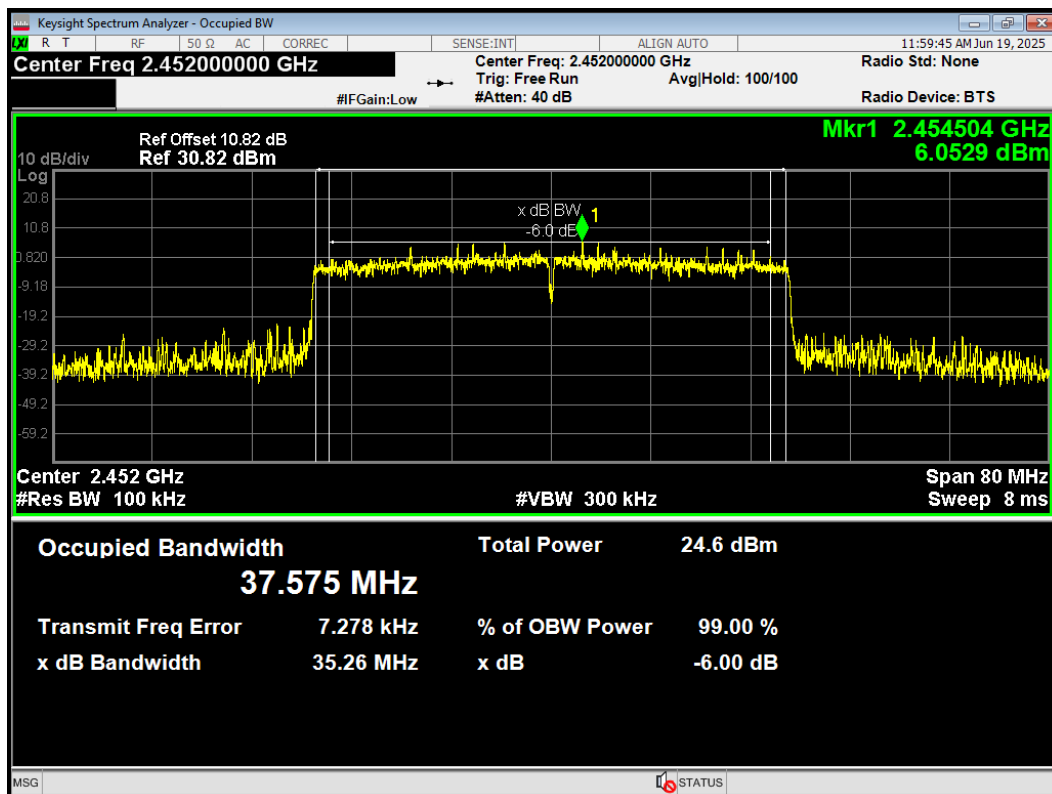
-6dB Bandwidth 802.11ax(HE40) 2422MHz



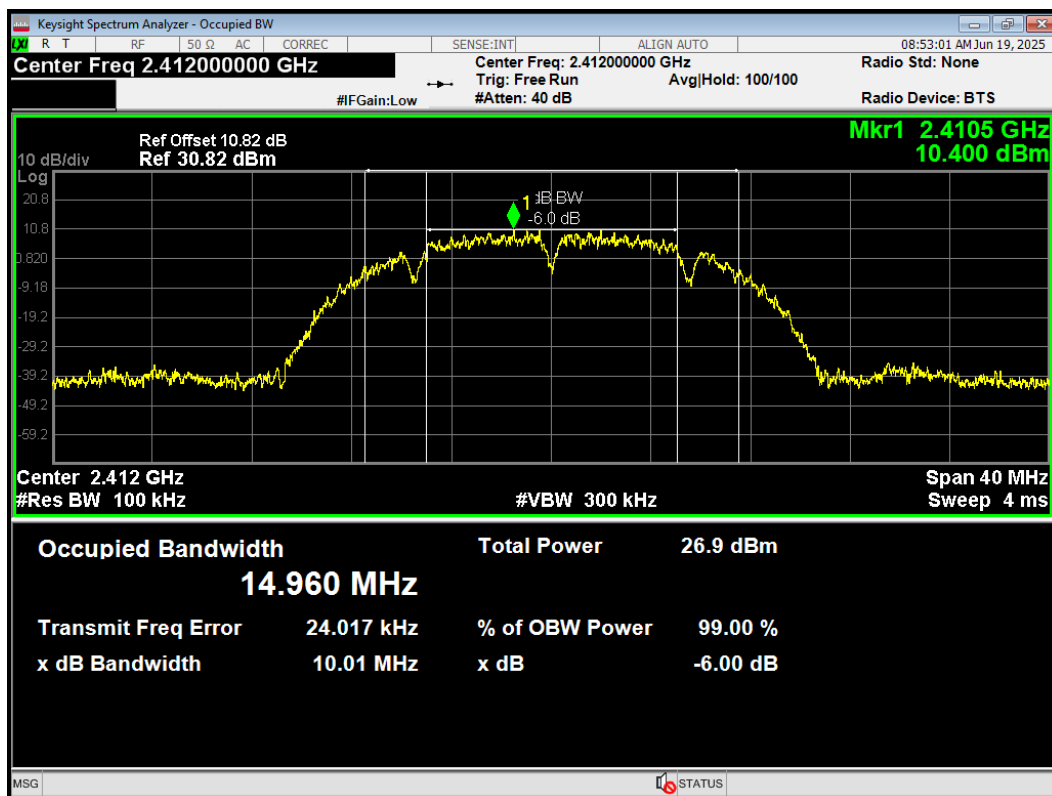
-6dB Bandwidth 802.11ax(HE40) 2437MHz



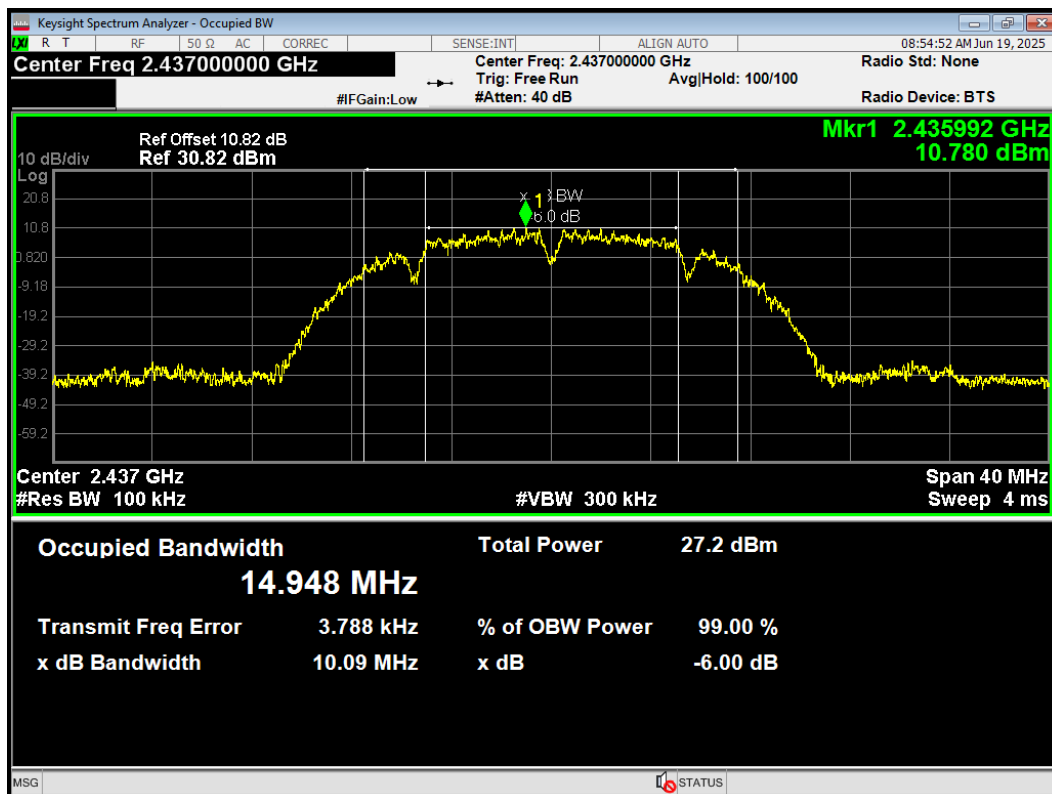
-6dB Bandwidth 802.11ax(HE40) 2452MHz



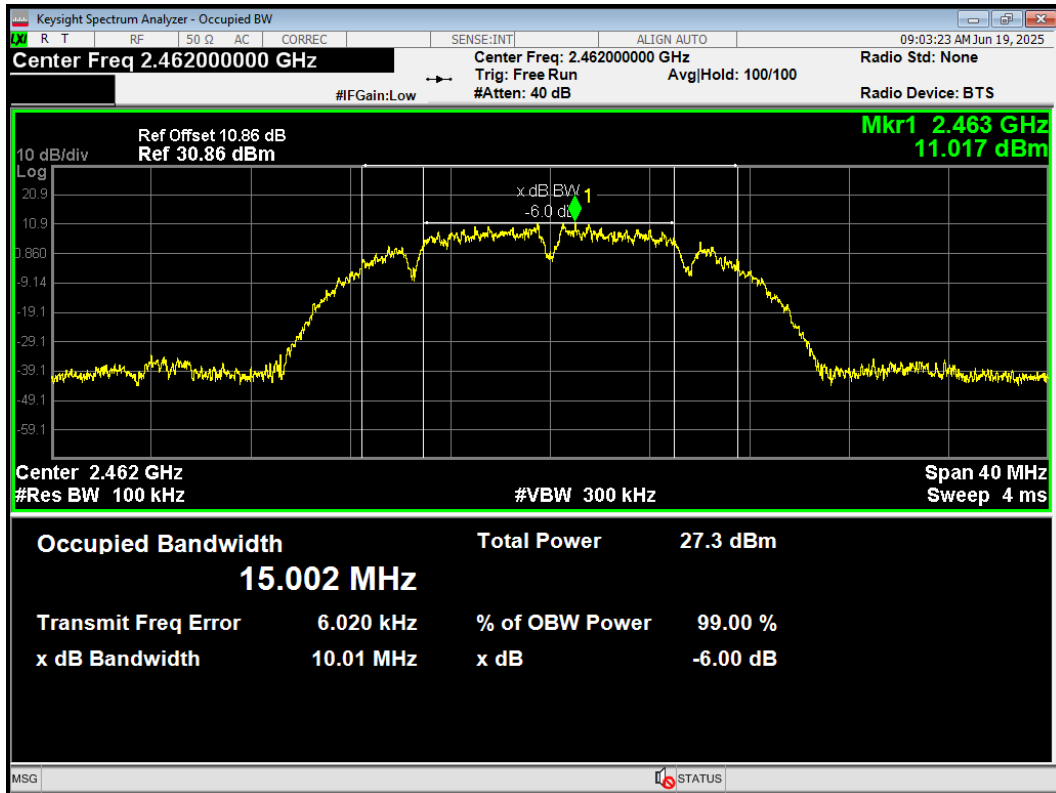
-6dB Bandwidth 802.11b 2412MHz



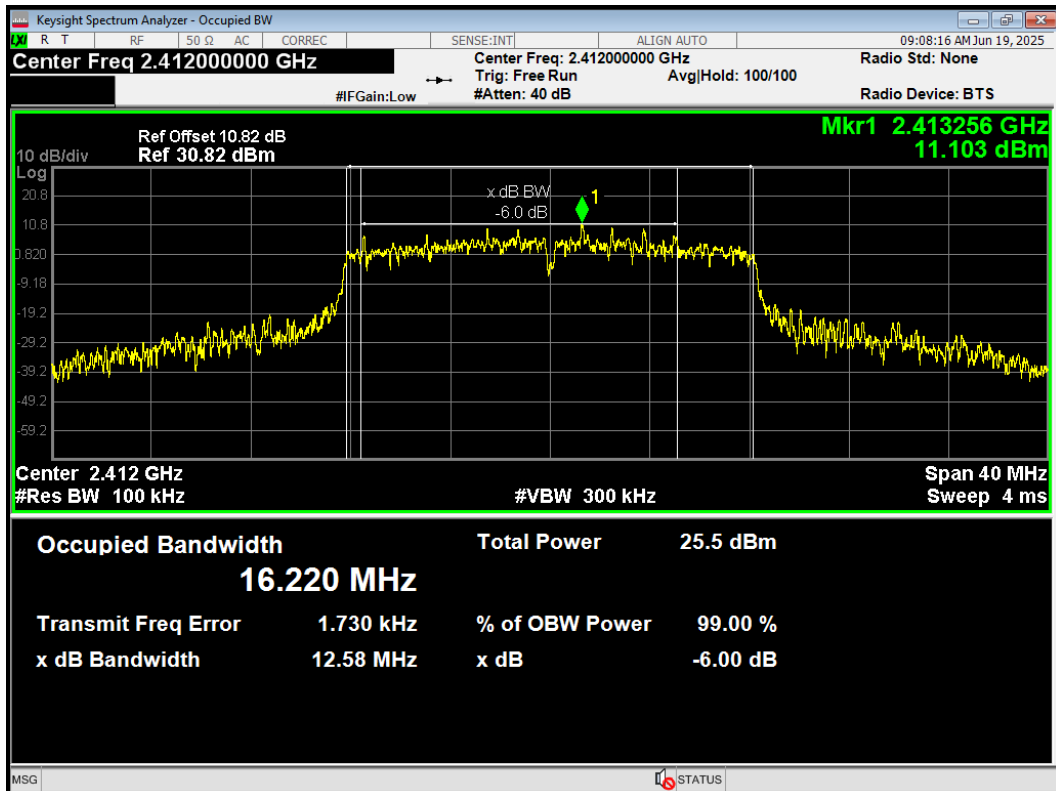
-6dB Bandwidth 802.11b 2437MHz



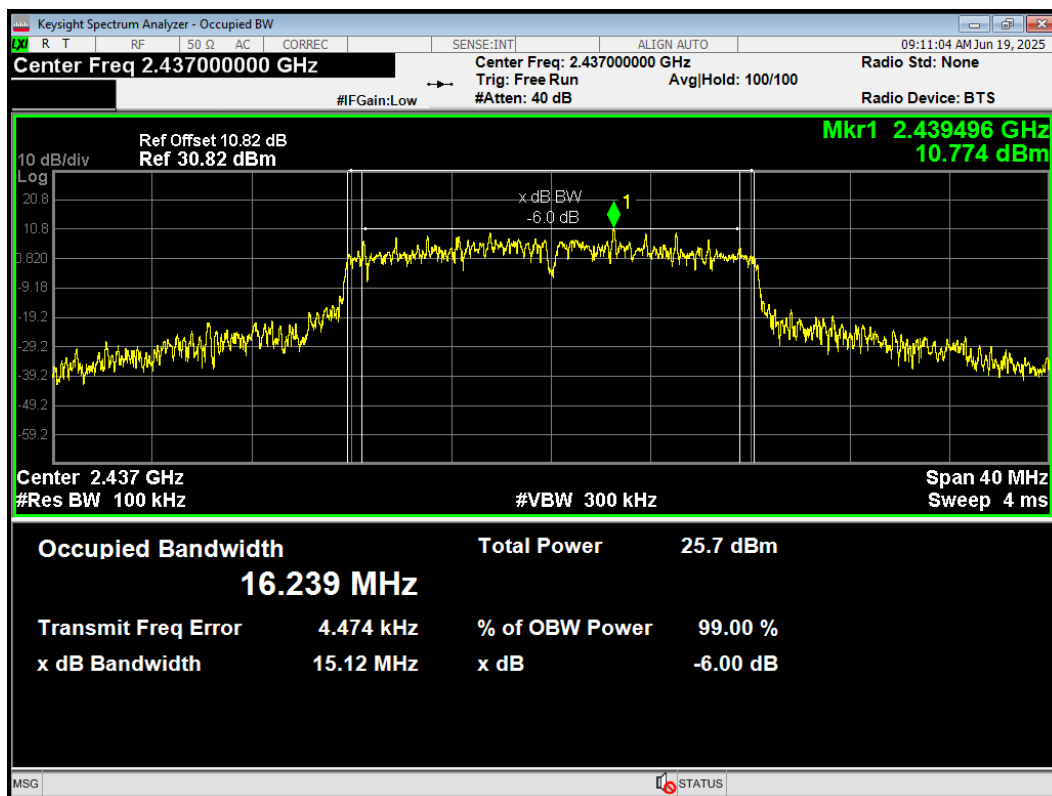
-6dB Bandwidth 802.11b 2462MHz



-6dB Bandwidth 802.11g 2412MHz



-6dB Bandwidth 802.11g 2437MHz



-6dB Bandwidth 802.11g 2462MHz

