

RF TEST REPORT

Applicant Dreamtek Intelligent Technology Co., Ltd.
FCC ID 2BOUAD1
Product D1
Brand Dreamtek
Model D1
Report No. EFTA25040106-IE-02-R2V1
Issue Date August 18, 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.

Prepared by: Xu Ying

Approved by: Xu Kai

Eurofins TA Technology (Shanghai) Co., Ltd.

Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China

TEL: +86-021-50791141/2/3

FAX: +86-021-50791141/2/3-8000

TABLE OF CONTENT

1. Test Laboratory	5
1.1. Notes of the Test Report.....	5
1.2. Test Facility	5
1.3. Testing Location.....	5
2. General Description of Equipment Under Test.....	6
2.1. Applicant and Manufacturer Information	6
2.2. General Information	6
3. Applied Standards	8
4. Test Configuration	9
5. Test Case Results.....	10
5.1. Maximum output power	10
5.2. 99% Bandwidth and 6dB Bandwidth	13
5.3. Band Edge	31
5.4. Power Spectral Density	42
5.5. Spurious RF Conducted Emissions.....	53
5.6. Unwanted Emission	70
5.7. Conducted Emission.....	149
6. Main Test Instruments.....	154
ANNEX A: The EUT Appearance.....	155
ANNEX B: Test Setup Photos	156

Version	Revision Description	Issue Date
Rev.0	Initial issue of report.	July 30, 2025
Rev.1	Updated data and description.	August 18, 2025
Note: This revised report (Report No.: EFTA25040106-IE-02-R2V1) supersedes and replaces the previously issued report (Report No.: EFTA25040106-IE-02-R2). Please discard or destroy the previously issued report and dispose of it accordingly.		

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: April 16, 2025 ~ May 28, 2025 and August 15, 2025 ~ August 18, 2025 Date of Sample Received: April 11, 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
Post code: 201201
Country: P. R. China
Contact: Xu Kai
Telephone: +86-021-50791141/2/3
Fax: +86-021-50791141/2/3-8000
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	Dreamtek Intelligent Technology Co., Ltd.
Applicant address	Room 508, Building A2, Area one of Zhongan Chuanggu Science Park, No. 900 of Wangjiang West Road, High-tech Zone, Hefei, Anhui, China
Manufacturer	Dreamtek Intelligent Technology Co., Ltd.
Manufacturer address	Room 508, Building A2, Area one of Zhongan Chuanggu Science Park, No. 900 of Wangjiang West Road, High-tech Zone, Hefei, Anhui, China

2.2. General Information

EUT Description		
Model	D1	
SN	Conducted	XBBA2FC1700085
	Radiated	DA00000389
Hardware Version	H554-07-DC-0N4-32C-A1 H554-07-DC-0N5-32C-A1	
Software Version	1A.1.3(202503171200 INTL)	
Power Supply	Battery / AC adapter	
Antenna Type	Internal Antenna	
Antenna Connector	A permanently attached antenna (meet with the standard FCC Part 15.203 requirement)	
Antenna Gain	Bluetooth LE: 1.57 dBi Wi-Fi 2.4GHz: 0.78 dBi	
Additional Beamforming Gain	NA	
Operating Frequency Range(s)	802.11b/g/n(HT20): 2412 ~ 2462 MHz Bluetooth LE V5.0: 2402 ~2480 MHz	
Modulation Type	802.11b: DSSS 802.11g/n: OFDM Bluetooth LE: GFSK	
Max. Output Power	Wi-Fi 2.4GHz: 19.72 dBm Bluetooth LE: 1.15 dBm	
Operating voltage range	7 VDC to 8.4 VDC	
State voltage	7.6 VDC	
EUT Accessory		
Adapter 1	Manufacturer: SHENZHEN TIANYIN ELECTRONICS CO.,LTD.	

	Model: TPA-418G050200UU01
Adapter 2	Manufacturer: Chongqing Lianmao Electronics Co.,Ltd. Model: LM-603U-050200U02UL
Adapter 3	Manufacturer: SHENZHEN TIANYIN ELECTRONICS CO.,LTD. Model: TPA-418G050200VU01
Adapter 4	Manufacturer: Chongqing Lianmao Electronics Co.,Ltd. Model: LM-603E-050200U02CE
Battery 1	Manufacturer: Dongguan HongDe Battery Co.,Ltd. Model: BPK550-026-72-A
Battery 2	Manufacturer: Guangdong Fenghua New Energy Co.,Ltd. Model: BPK550-026-74-B
USB cable 1	Manufacturer: Shanghai Wangxing Electronic Technology Co.,Ltd. Model: 809.001.0010
USB cable 2	Manufacturer: Chongqing Lianmao Electronics Co.,Ltd. Model: 809.001.0012
<p>Note: 1. The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant.</p> <p>2. There is more than one USB cable/Adapter/Battery, each one should be applied throughout the compliance test respectively, and however, only the worst case (USB cable 2/Adapter 4/ Battery 1) will be recorded in this report.</p>	

D1	Configurations 1 (D1+ Token Version with the 1st supply of main materials)	Configurations 2 (D1+ Token Version with the 2nd supply of main materials)	Configurations 3 (D1+ Standard Version with the 1st supply of main materials)	Configurations 4 (D1+ Standard Version with the 2nd supply of main materials)	Configurations 5 (D1A Token Version with the 1st supply of main materials)	Configurations 6 (D1A Token Version with the 2nd supply of main materials)	Configurations 7 (D1A Standard Version with the 1st supply of main materials)	Configurations 8 (D1A Standard Version with the 2nd supply of main materials)
Screen	6.517-inch	6.517-inch	6.517-inch	6.517-inch	5-inch	5-inch	5-inch	5-inch
Front Camera	2M FF	2M FF	2M FF	2M FF	0.3M FF	0.3M FF	0.3M FF	0.3M FF
Rear Camera	The 1st supplier	The 2nd supplier	The 1st supplier	The 2nd supplier	The 1st supplier	The 2nd supplier	The 1st supplier	The 2nd supplier
Printer	The 1st supplier	The 2nd supplier	The 1st supplier	The 2nd supplier	The 1st supplier	The 2nd supplier	The 1st supplier	The 2nd supplier
MSR	The 1st supplier	The 2nd supplier	The 1st supplier	The 2nd supplier	The 1st supplier	The 2nd supplier	The 1st supplier	The 2nd supplier
Button Cell CR2032	The 1st supplier	The 2nd supplier	The 1st supplier	The 2nd supplier	The 1st supplier	The 2nd supplier	The 1st supplier	The 2nd supplier
Hardware Version	H554-07-DC-0N5-32C-A1				H554-07-DC-0N4-32C-A1			
Note: This report only tests configurations 1.								

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.

The test software is used MTS8310 V2.0.0.0.

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

5. Test Case Results

5.1. Maximum output power

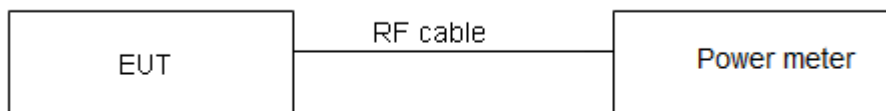
Ambient Condition

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	$\leq 1\text{W (30dBm)}$
----------------------	--------------------------

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
CH1	19.5	17.5	17.5
CH6	19.5	17.5	17.5
CH11	19.5	17.5	17.5

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	1.00	0.00
802.11g	0.97	0.13
802.11n HT20	0.97	0.15
Bluetooth LE (1M)	0.610	2.15
Bluetooth LE (2M)	0.319	4.97
Note: when Duty cycle ≥ 0.98 , Duty cycle correction Factor not required.		

Test Mode	Carrier frequency (MHz)/ Channel	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11b	2412/CH 1	19.22	19.22	30	PASS
	2437/CH 6	19.72	19.72	30	PASS
	2462/CH11	18.99	18.99	30	PASS
802.11g	2412/CH 1	16.91	17.04	30	PASS
	2437/CH 6	17.52	17.65	30	PASS
	2462/CH11	16.90	17.03	30	PASS
802.11n HT20	2412/CH 1	16.79	16.94	30	PASS
	2437/CH 6	17.65	17.80	30	PASS
	2462/CH11	17.01	17.16	30	PASS
Bluetooth (Low Energy) (1M)	2402/CH0	-7.28	-5.13	30	PASS
	2440/CH19	-6.19	-4.05	30	PASS
	2480/CH39	-8.10	-5.95	30	PASS
Bluetooth (Low Energy) (2M)	2402/CH0	-9.76	-4.79	30	PASS
	2440/CH19	-3.82	1.15	30	PASS
	2480/CH39	-10.92	-5.95	30	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

5.2. 99% Bandwidth and 6dB Bandwidth

Ambient Condition

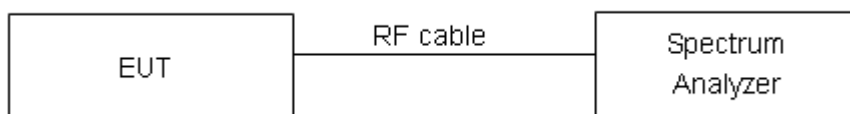
Temperature	Relative humidity
15°C ~ 35°C	20% ~ 80%

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. Detector=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
------------------------	-----------

Measurement Uncertainty

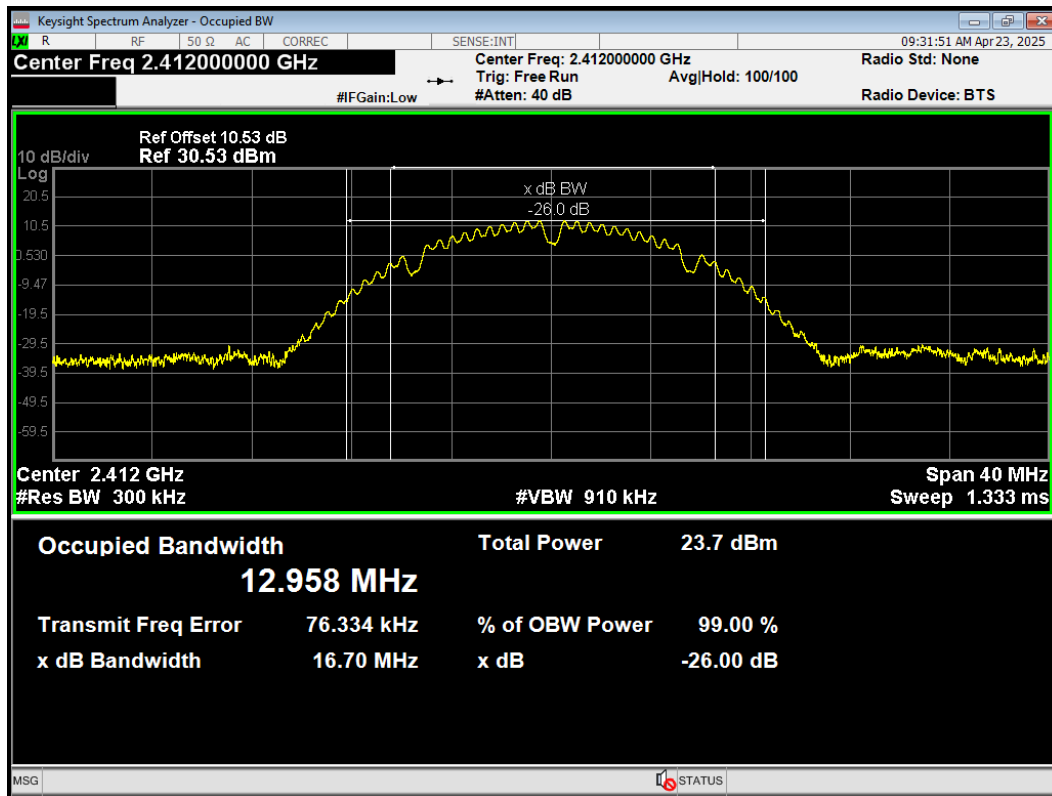
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 936$ Hz.

Test Results:

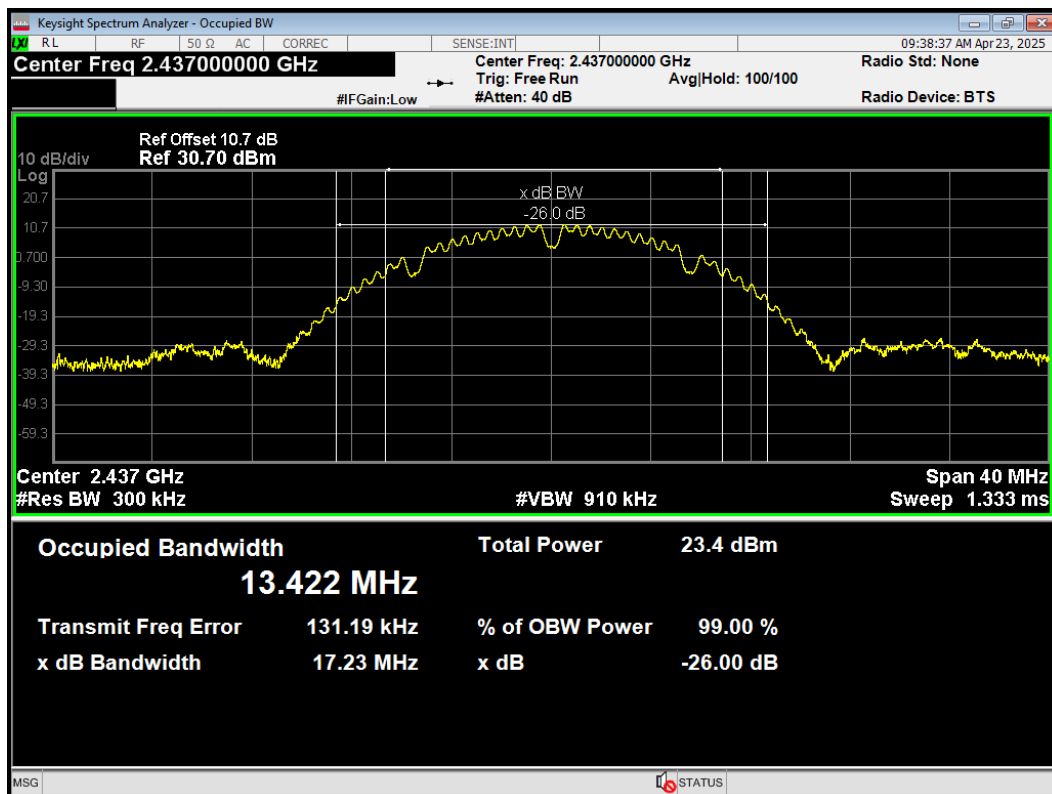
Test Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 6 dB bandwidth (MHz)	Limit (kHz)	Conclusion
802.11b	2412	12.958	7.523	500	PASS
	2437	13.422	7.521	500	PASS
	2462	13.439	8.543	500	PASS
802.11g	2412	16.468	11.569	500	PASS
	2437	16.742	16.039	500	PASS
	2462	16.521	12.971	500	PASS
802.11n HT20	2412	17.600	13.819	500	PASS
	2437	17.788	15.708	500	PASS
	2462	17.639	15.090	500	PASS
Bluetooth (Low Energy) (1M)	2402	1.041	0.675	500	PASS
	2440	1.042	0.678	500	PASS
	2480	1.036	0.679	500	PASS
Bluetooth (Low Energy) (2M)	2402	2.074	1.132	500	PASS
	2440	2.079	1.241	500	PASS
	2480	2.077	1.166	500	PASS

99%bandwidth

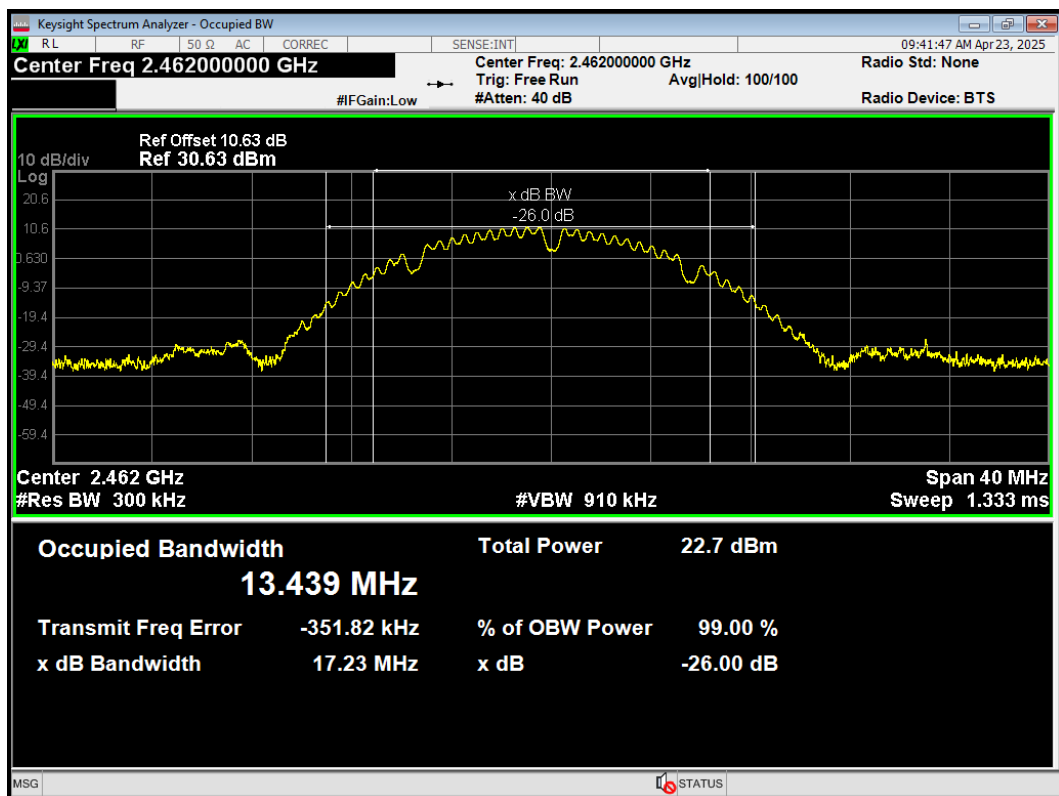
OBW 802.11b 2412MHz



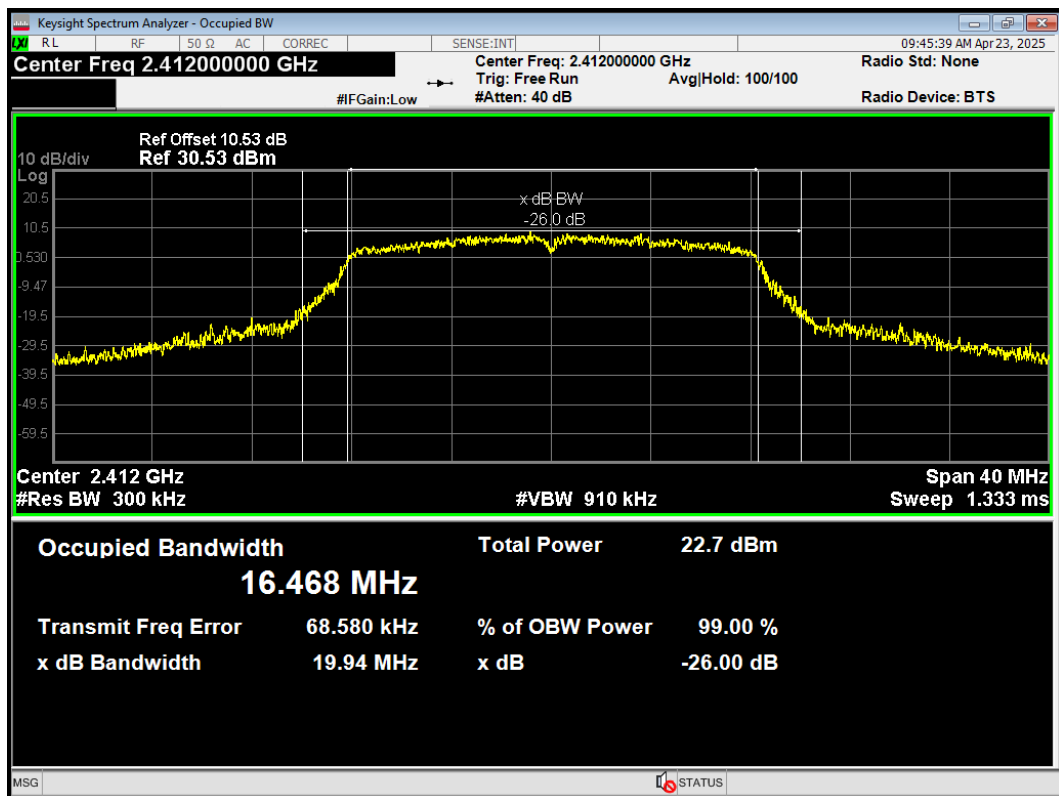
OBW 802.11b 2437MHz



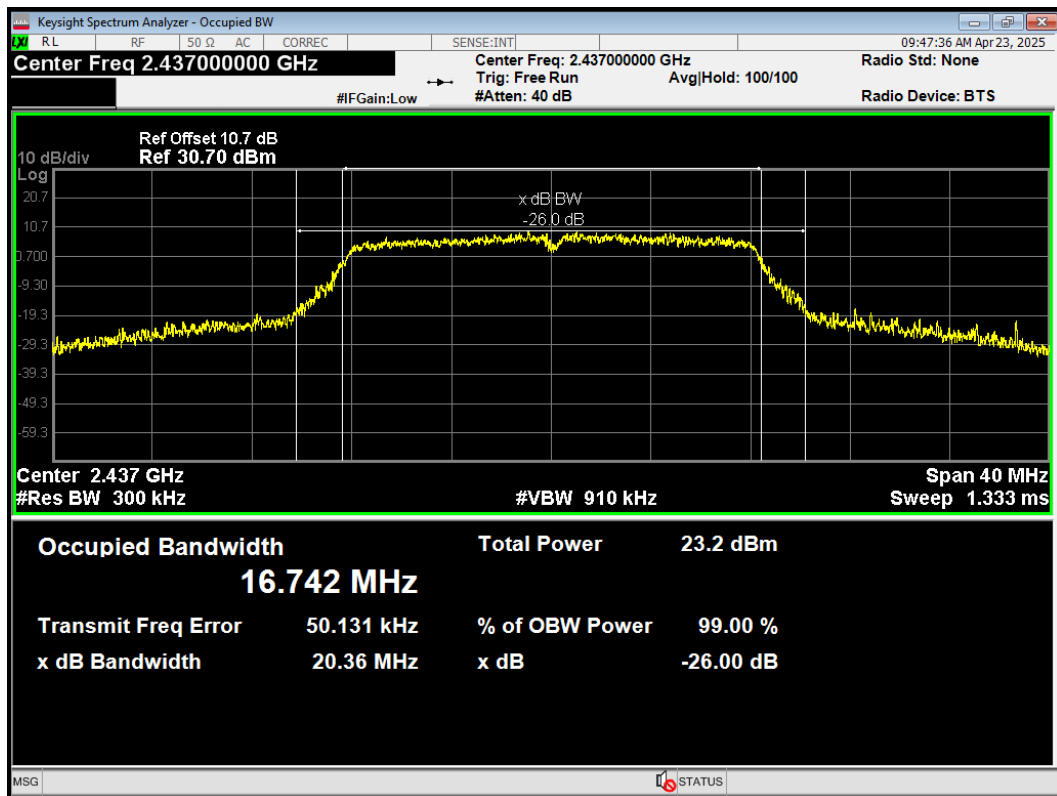
OBW 802.11b 2462MHz



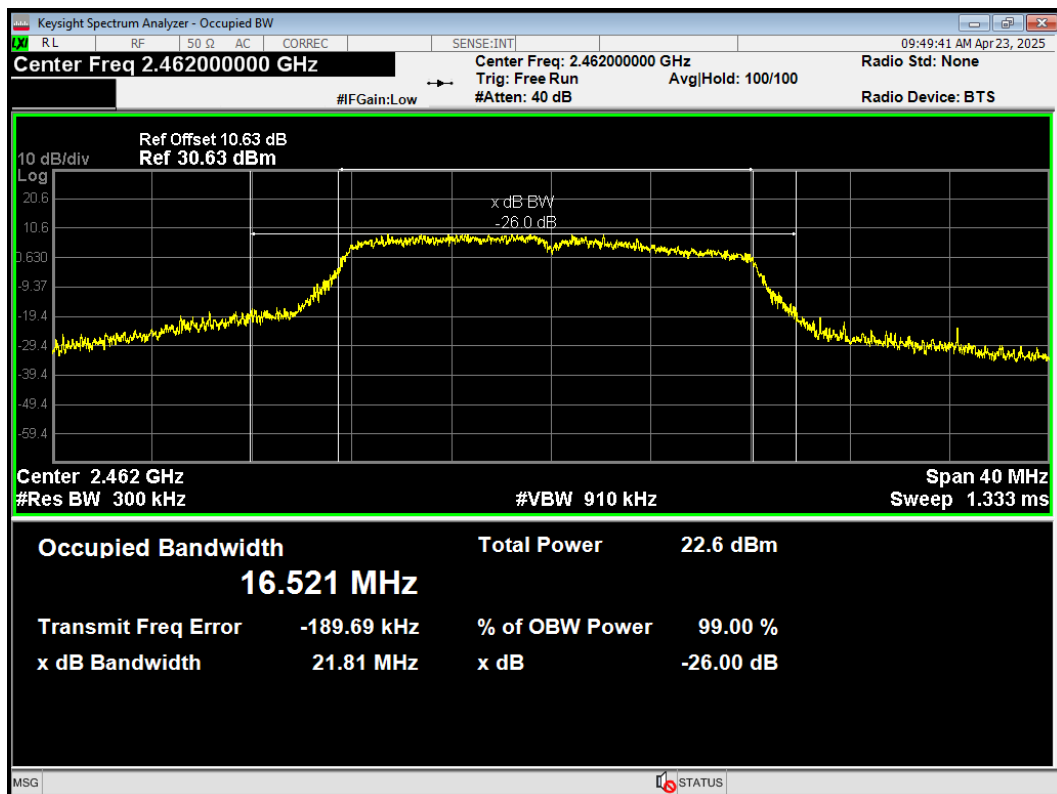
OBW 802.11g 2412MHz



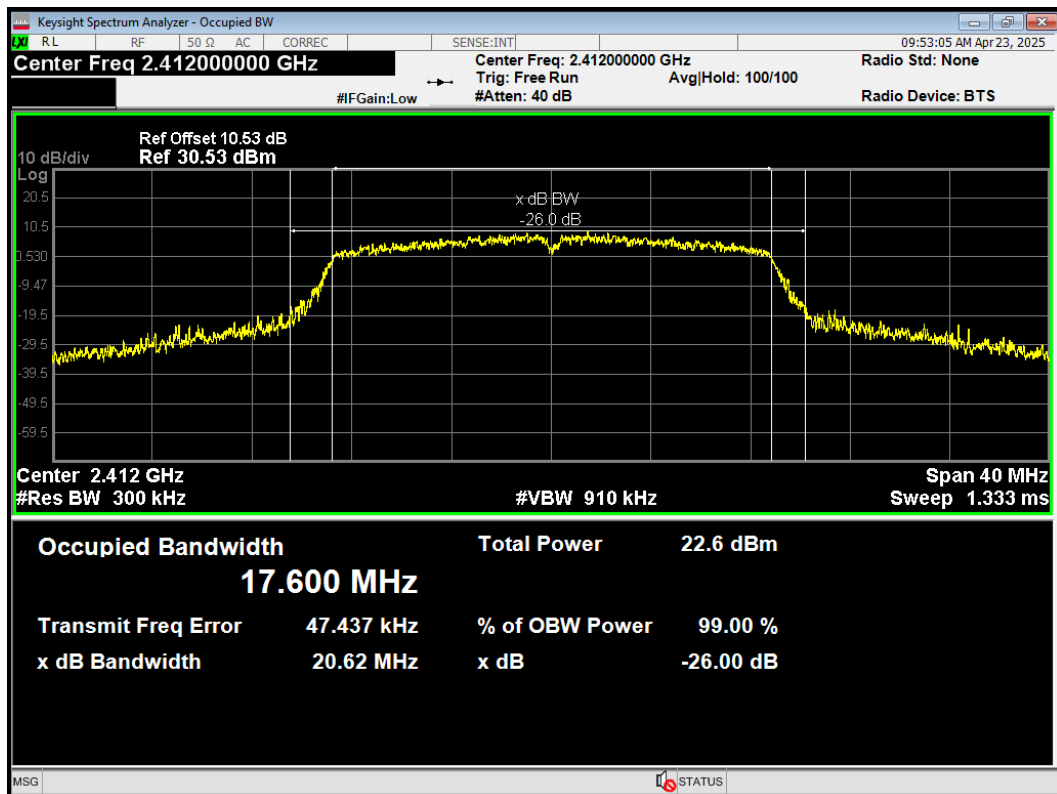
OBW 802.11g 2437MHz



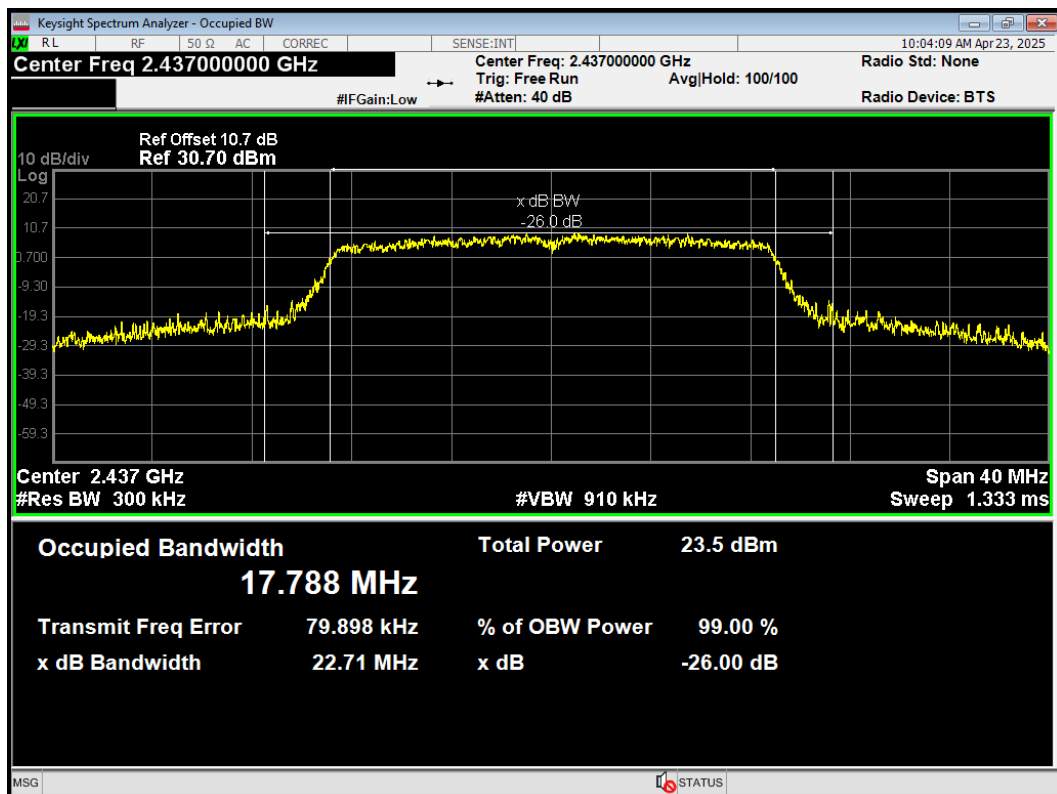
OBW 802.11g 2462MHz



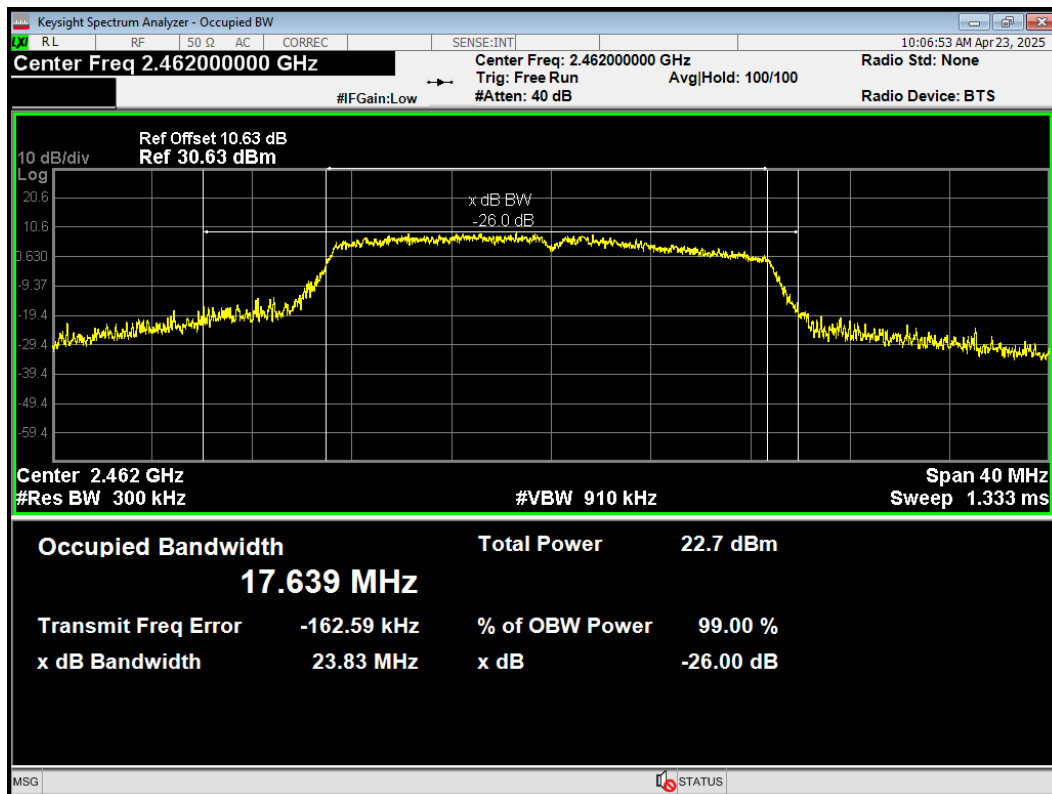
OBW 802.11n(HT20) 2412MHz



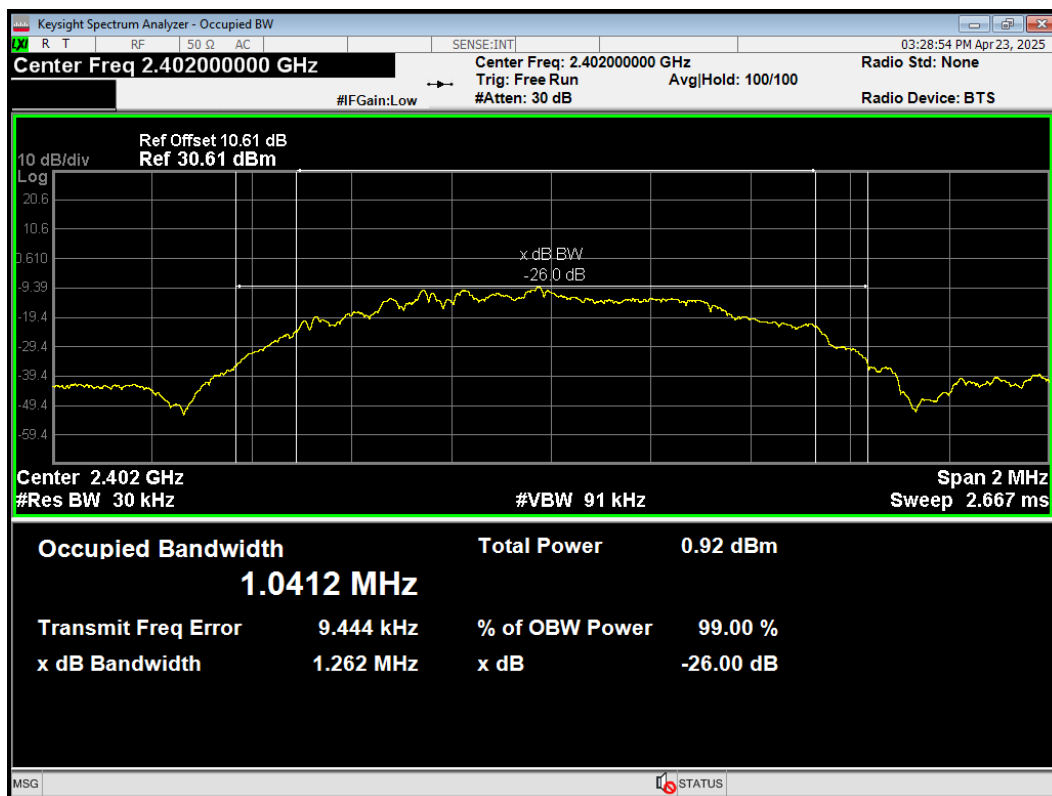
OBW 802.11n(HT20) 2437MHz



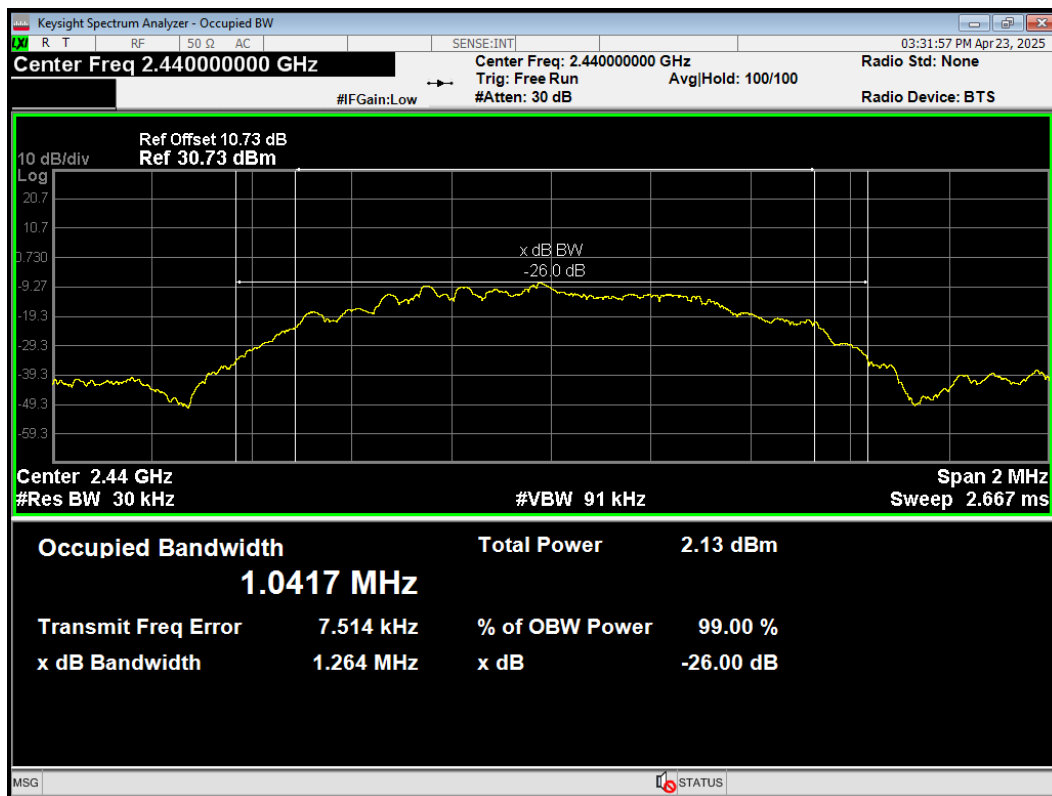
OBW 802.11n(HT20) 2462MHz



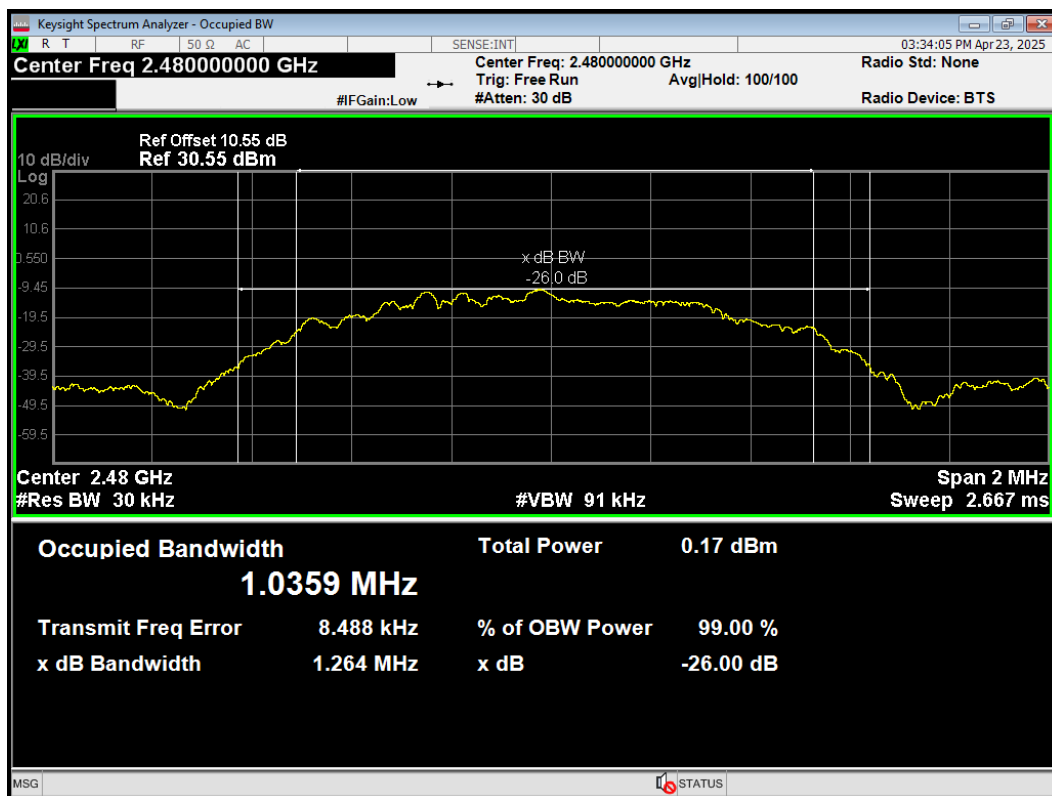
OBW BLE (1M) 2402MHz



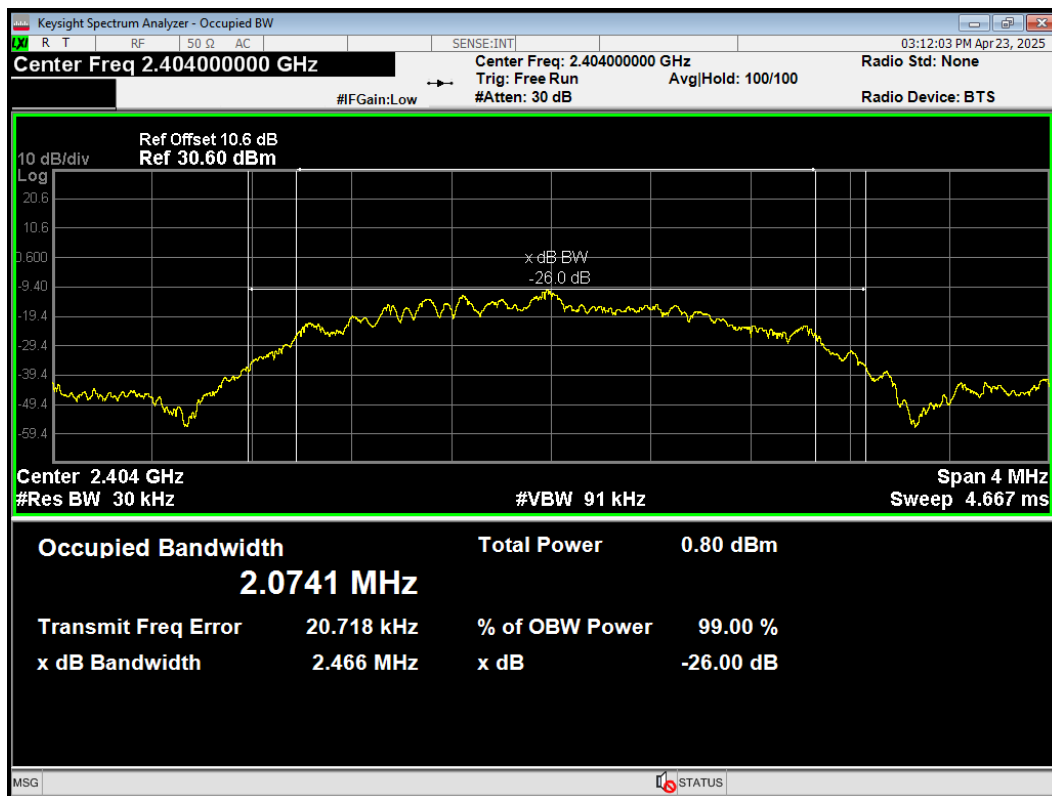
OBW BLE (1M) 2440MHz



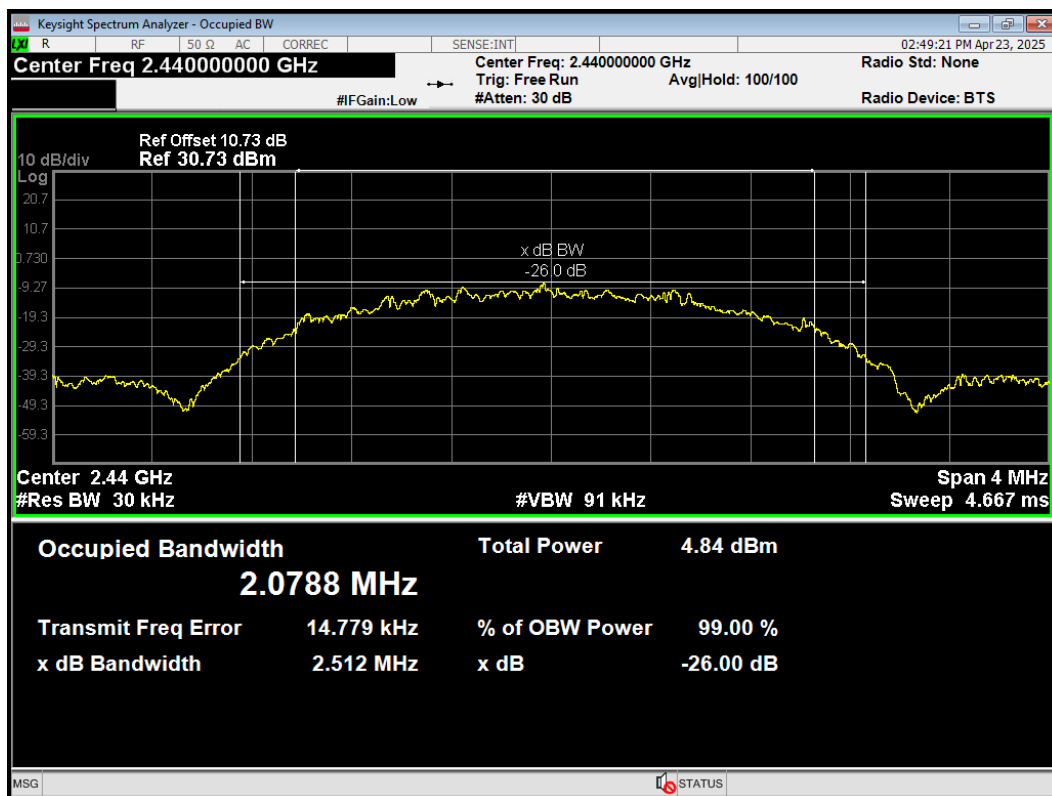
OBW BLE (1M) 2480MHz



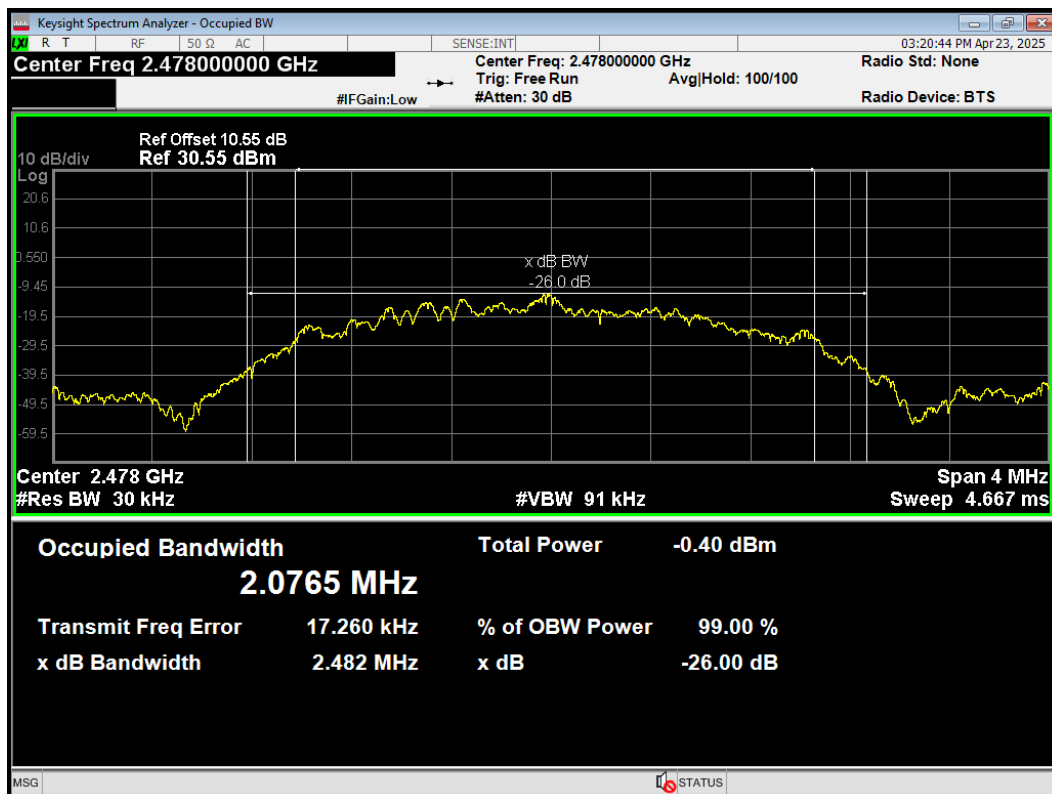
OBW BLE (2M) 2404MHz



OBW BLE (2M) 2440MHz

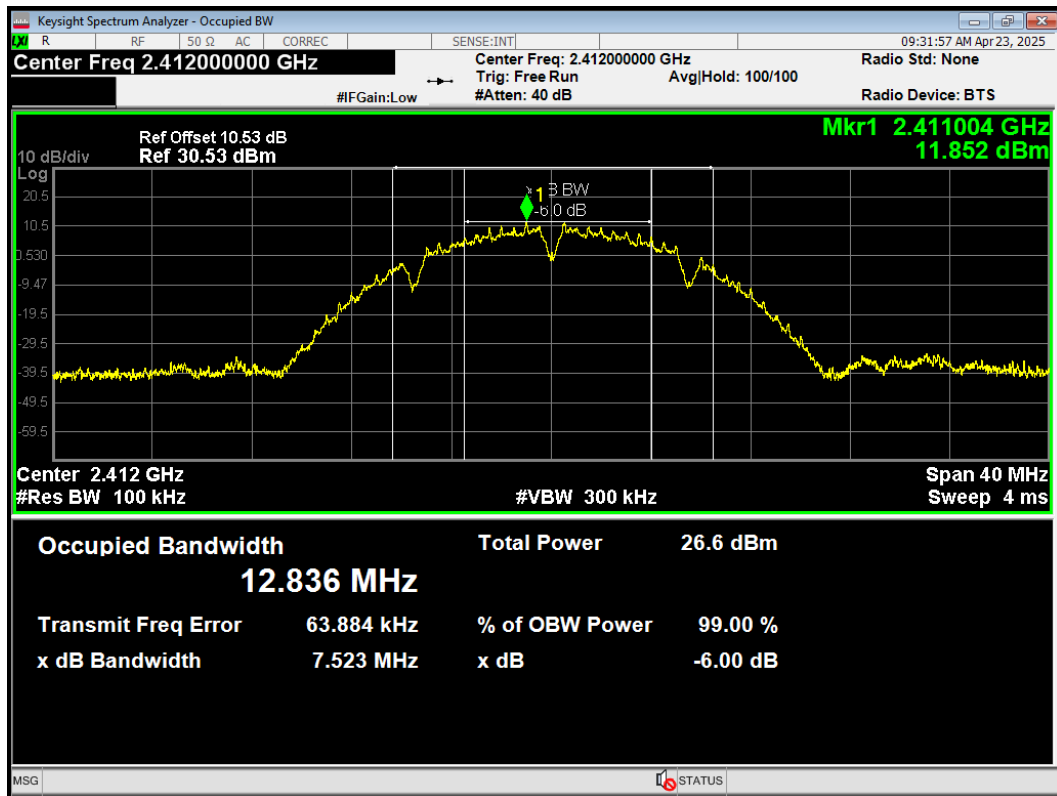


OBW BLE (2M) 2478MHz

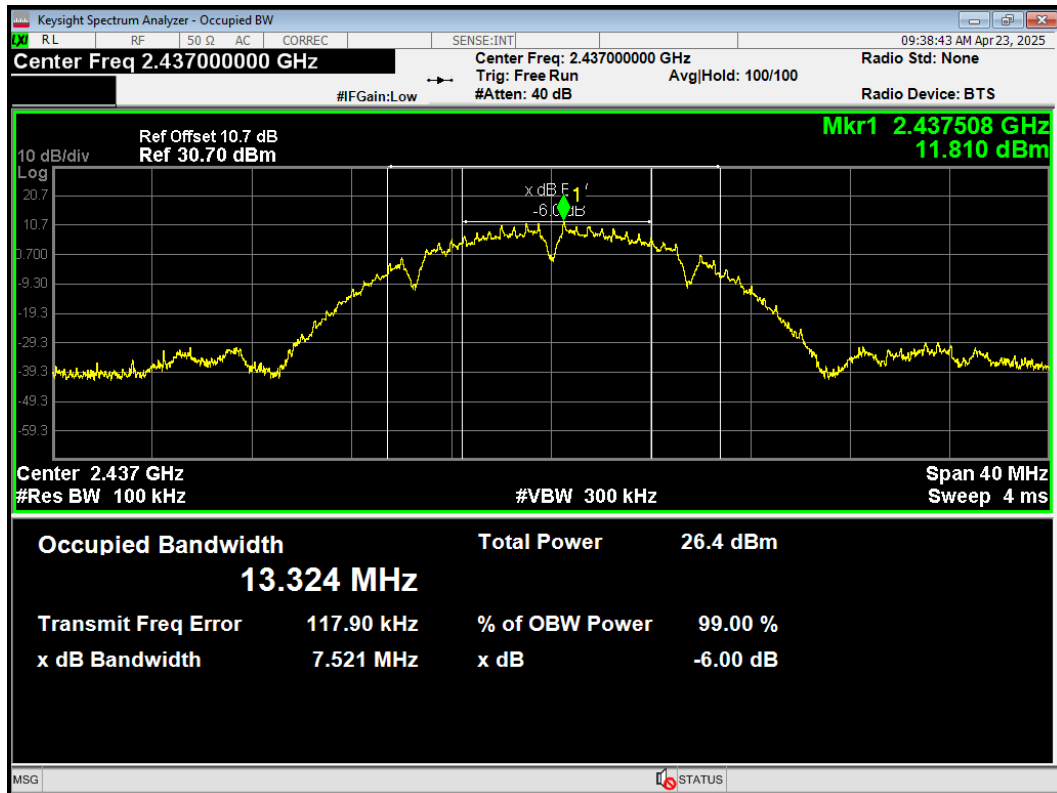


6 dB bandwidth

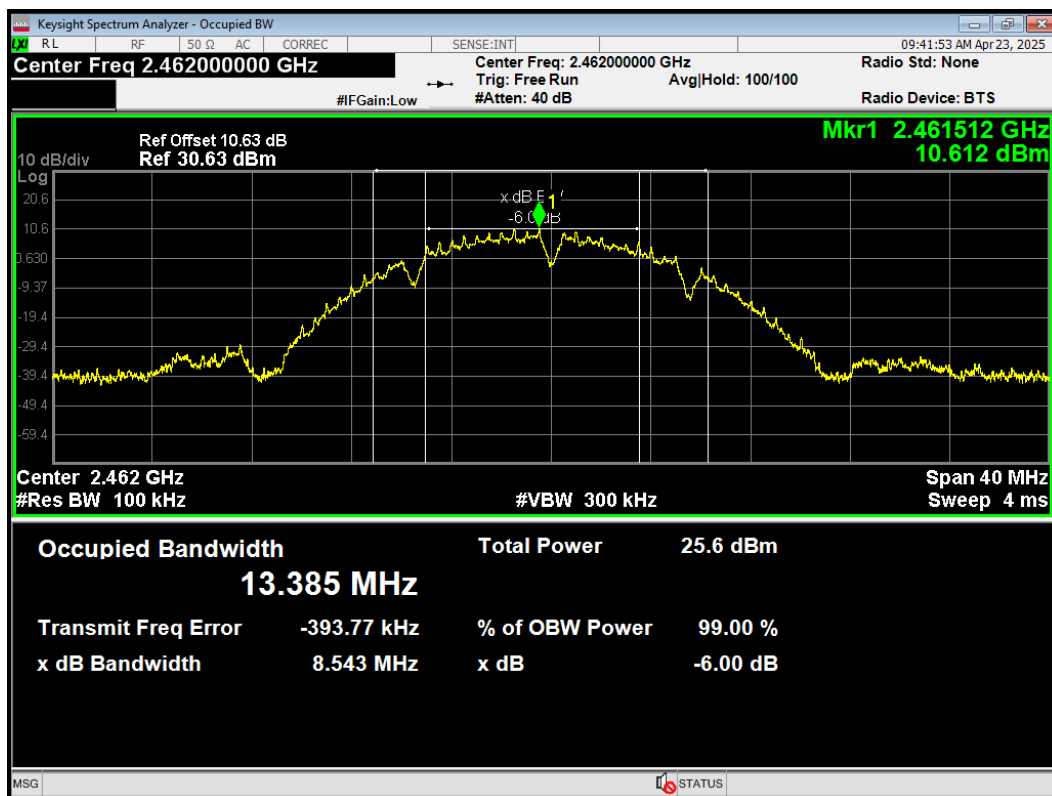
-6dB Bandwidth 802.11b 2412MHz



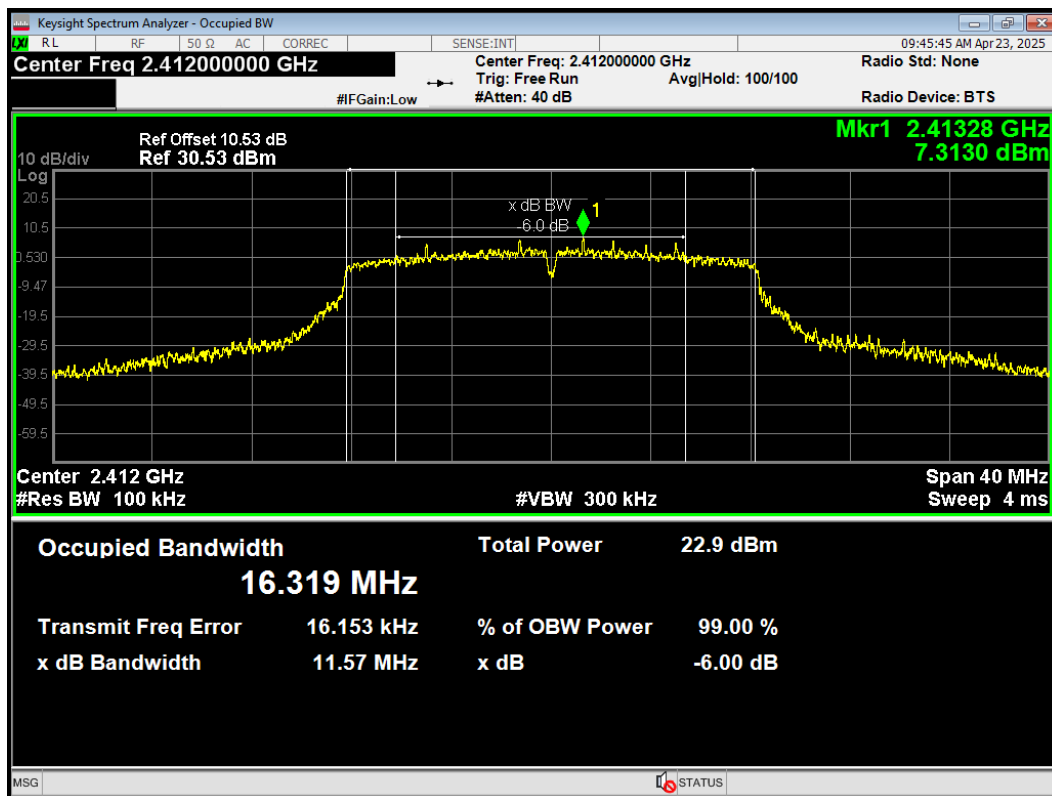
-6dB Bandwidth 802.11b 2437MHz



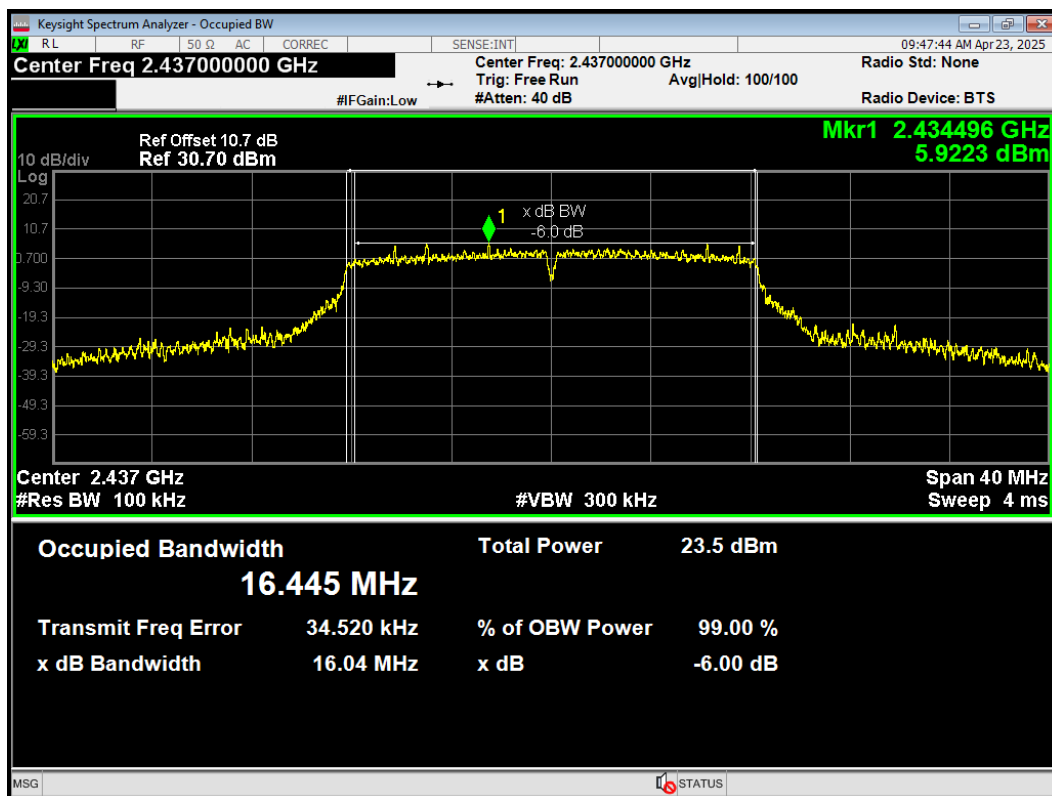
-6dB Bandwidth 802.11b 2462MHz



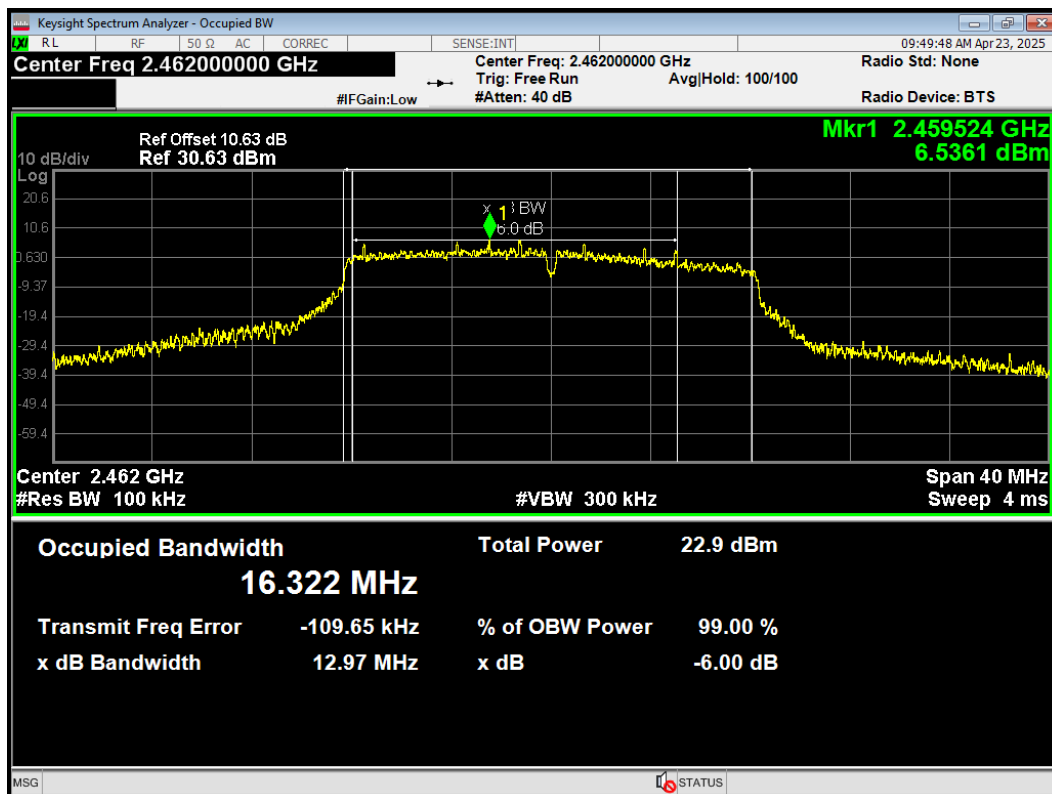
-6dB Bandwidth 802.11g 2412MHz



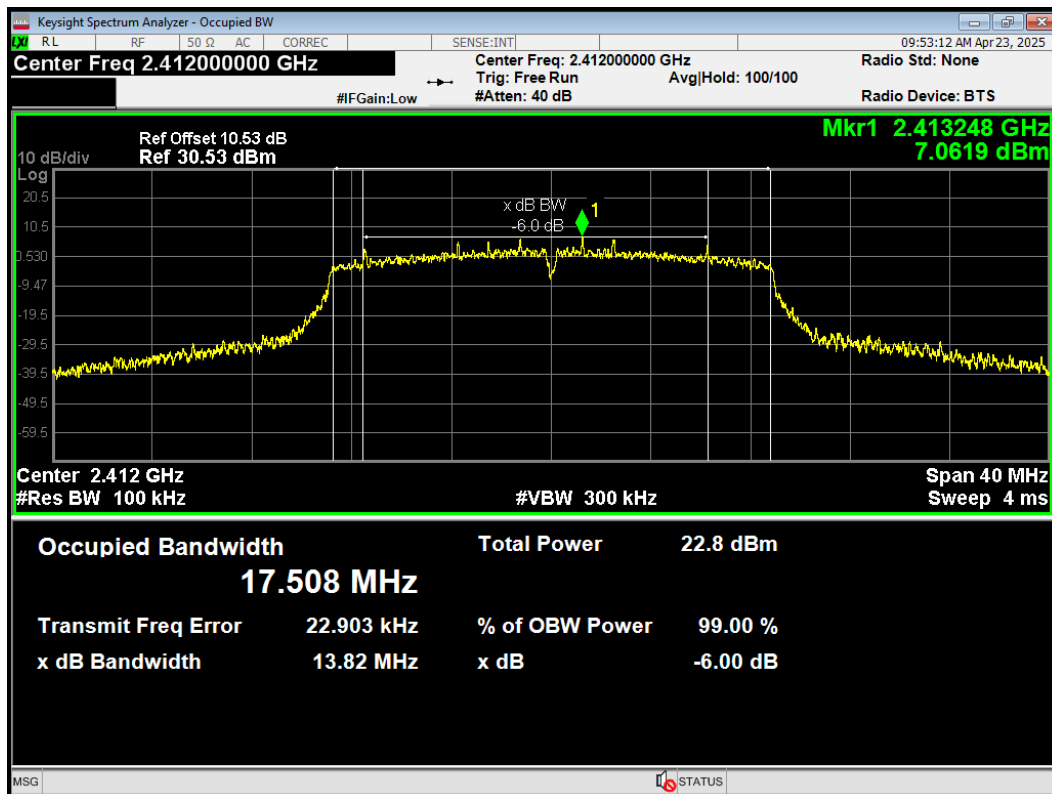
-6dB Bandwidth 802.11g 2437MHz



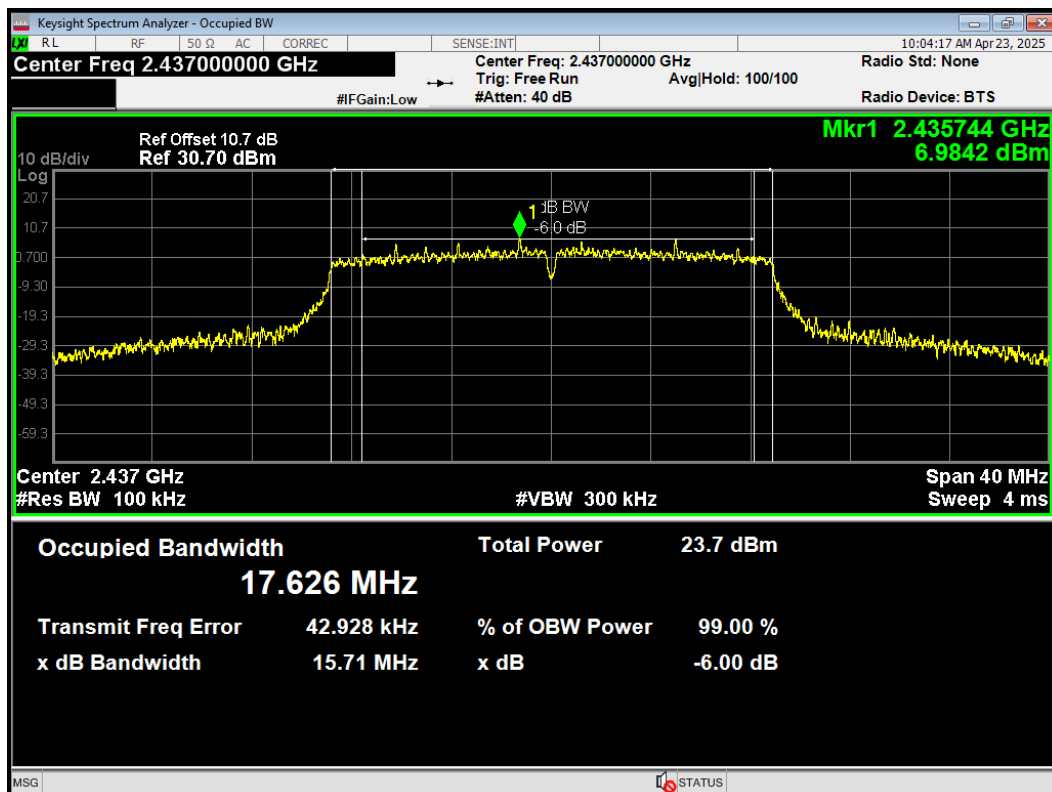
-6dB Bandwidth 802.11g 2462MHz



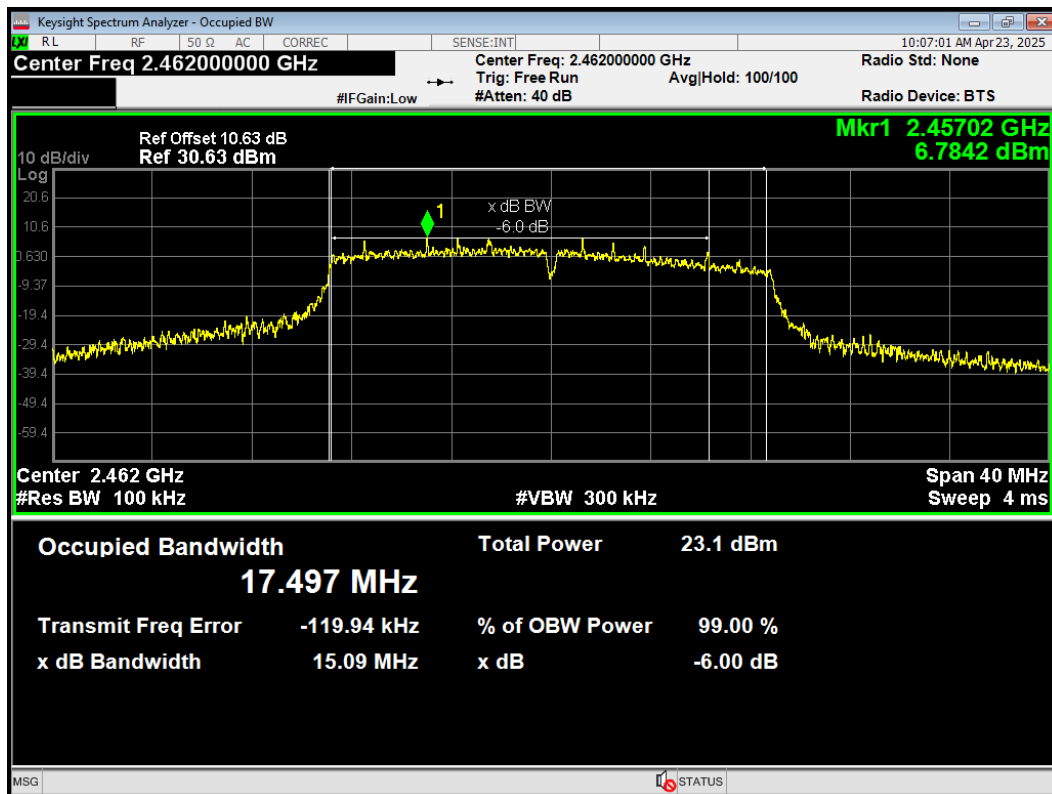
-6dB Bandwidth 802.11n(HT20) 2412MHz



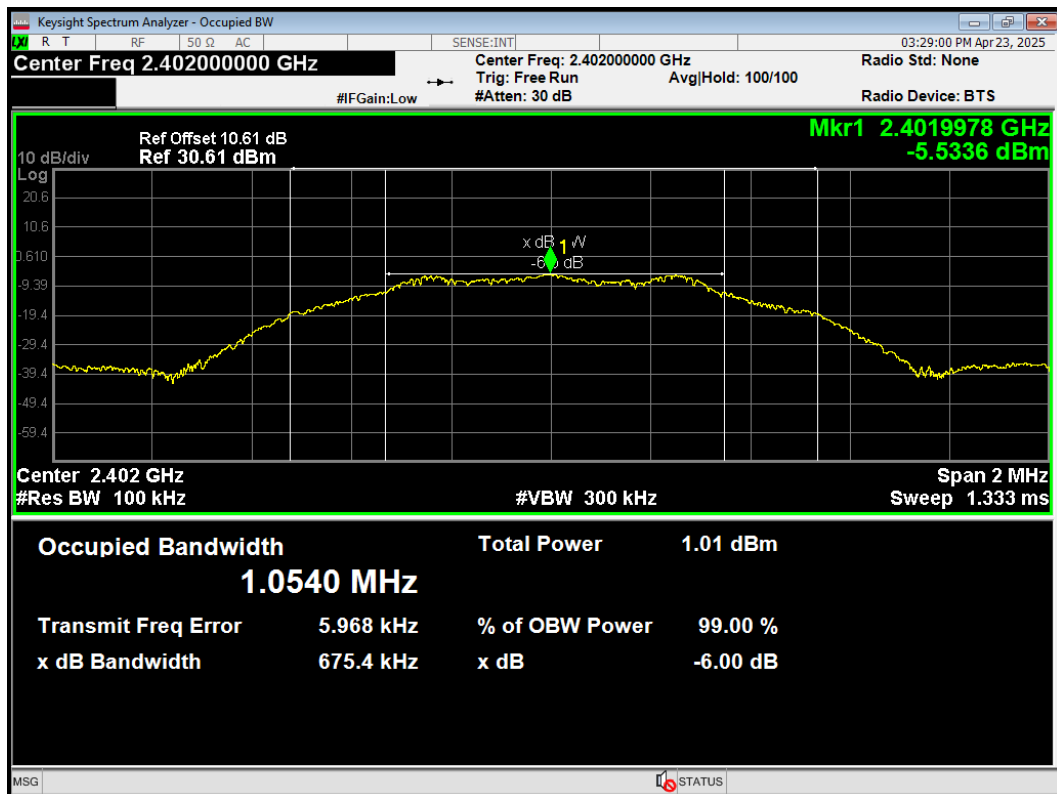
-6dB Bandwidth 802.11n(HT20) 2437MHz



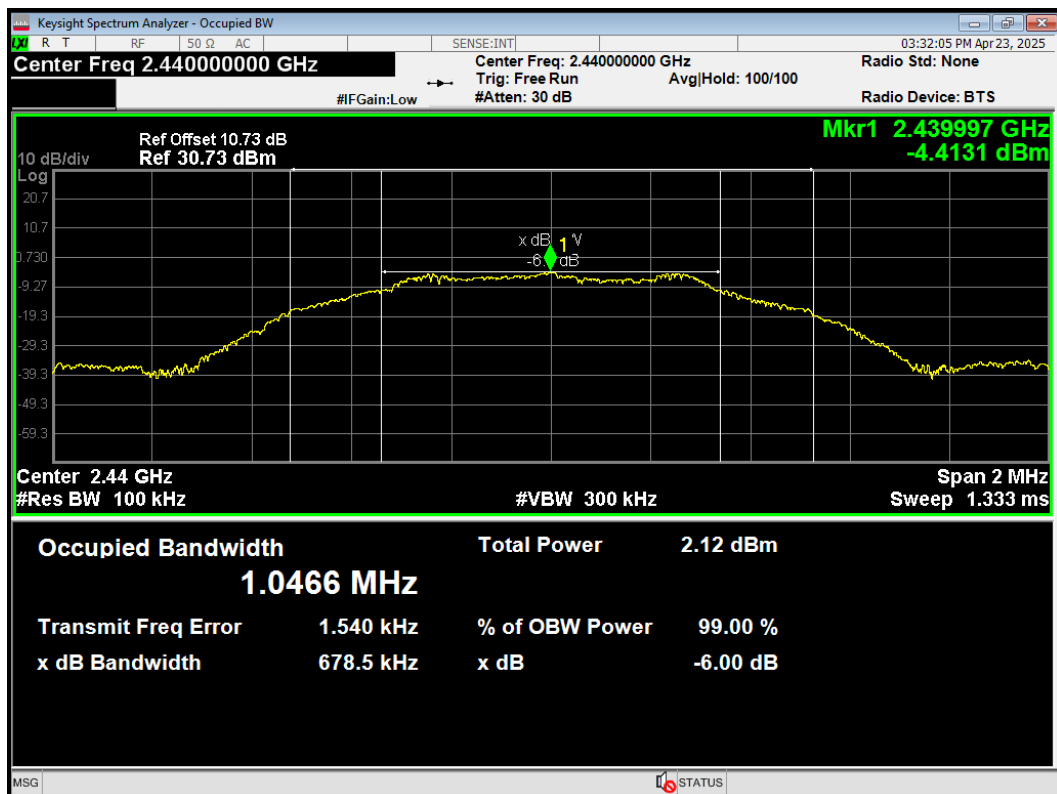
-6dB Bandwidth 802.11n(HT20) 2462MHz



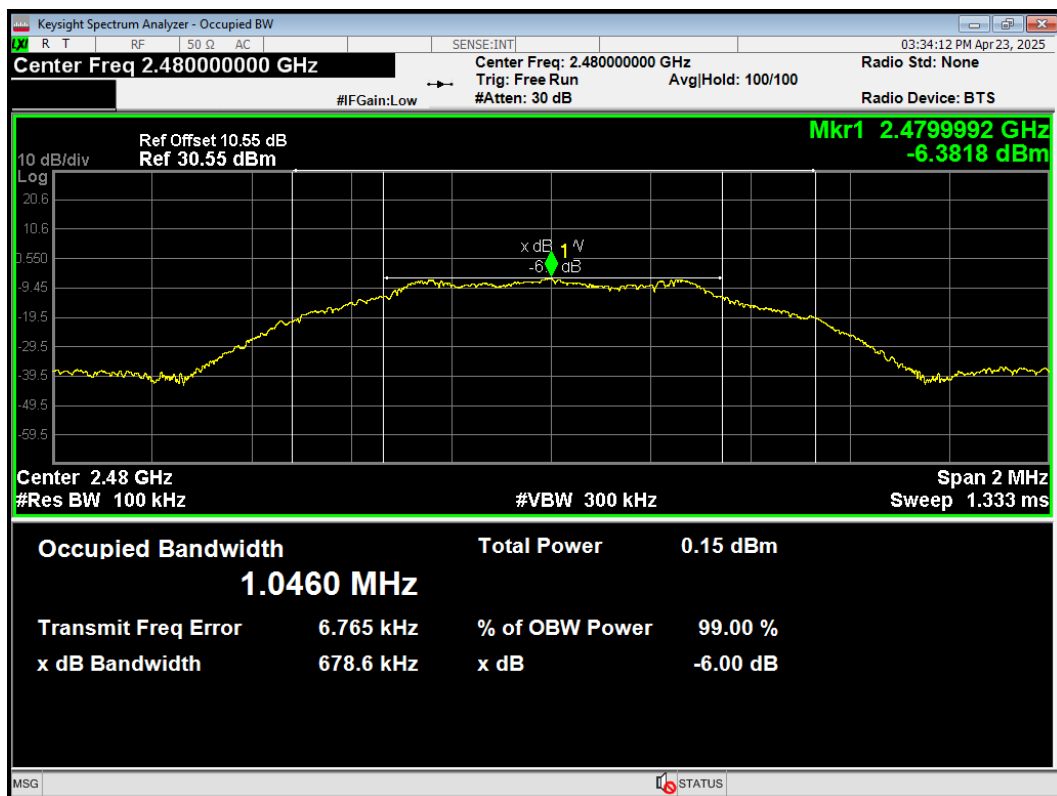
-6dB Bandwidth BLE (1M) 2402MHz



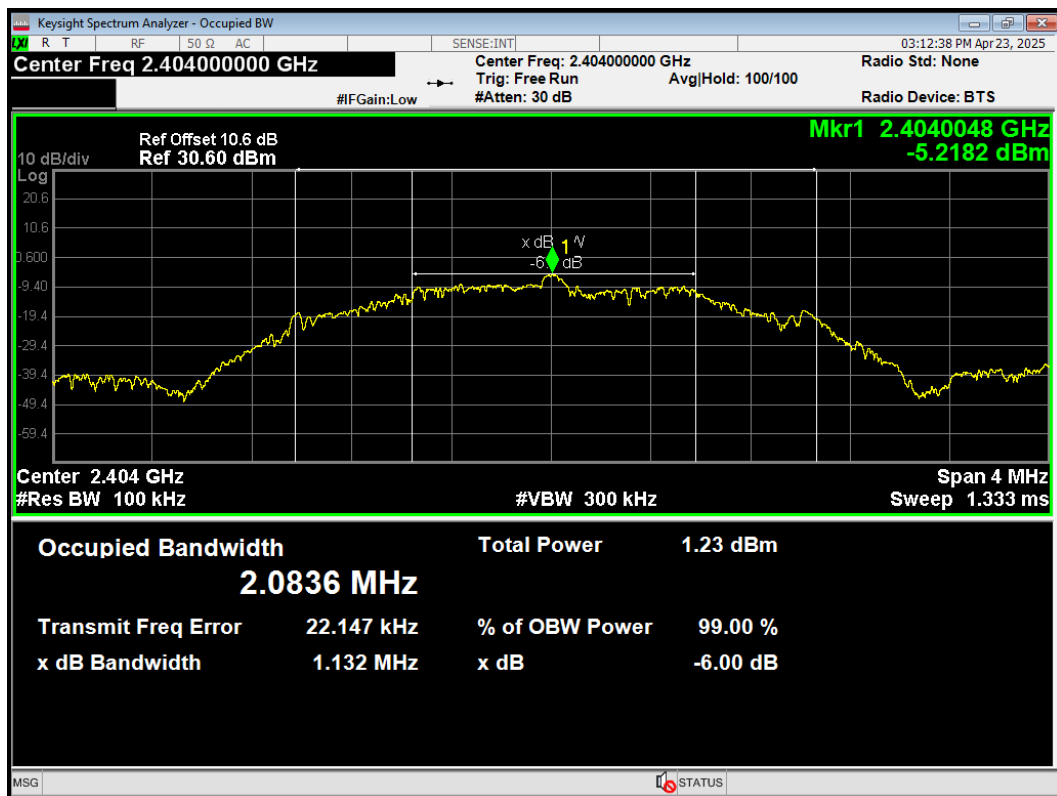
-6dB Bandwidth BLE (1M) 2440MHz



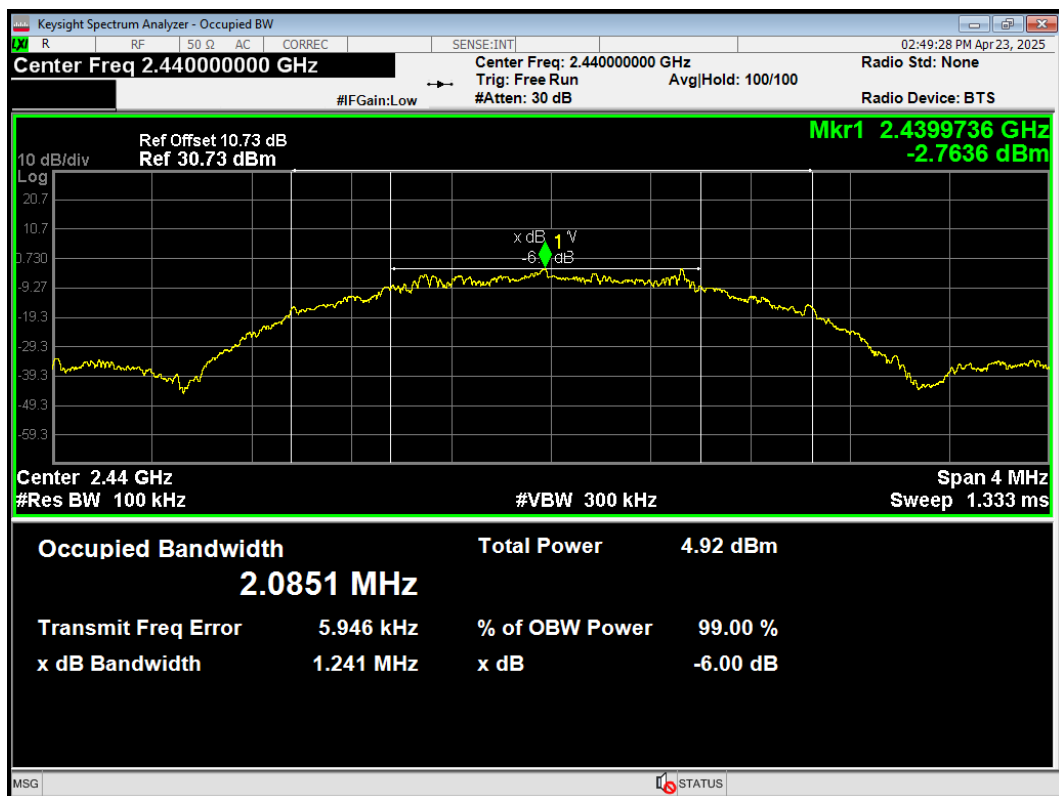
-6dB Bandwidth BLE (1M) 2480MHz



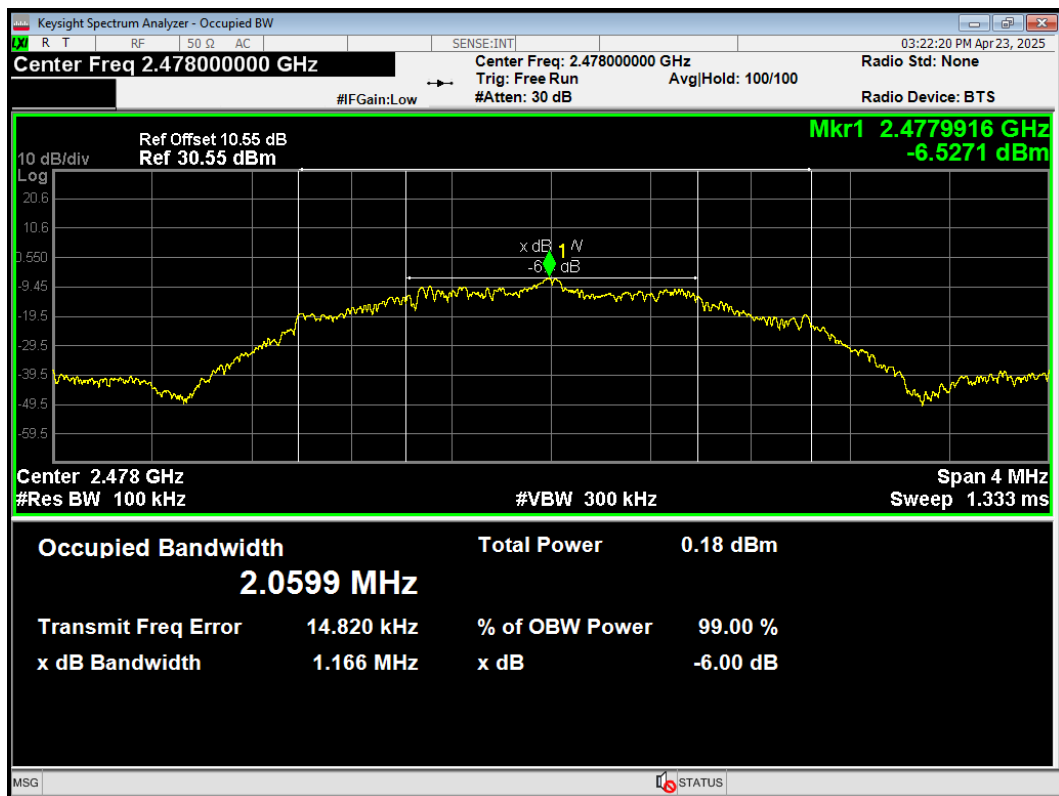
-6dB Bandwidth BLE (2M) 2404MHz



-6dB Bandwidth BLE (2M) 2440MHz



-6dB Bandwidth BLE (2M) 2478MHz



5.3. Band Edge

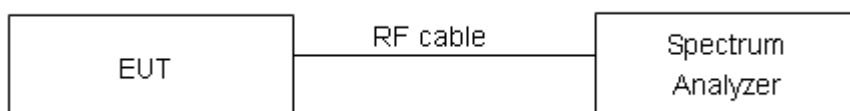
Ambient Condition

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 the band edge of the lowest and highest channels were measured. The peak detector is used and RBW is set to 100 kHz and VBW is set to 300 kHz on spectrum analyzer. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

Rule Part 15.247(d) specifies that “In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.” If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.”

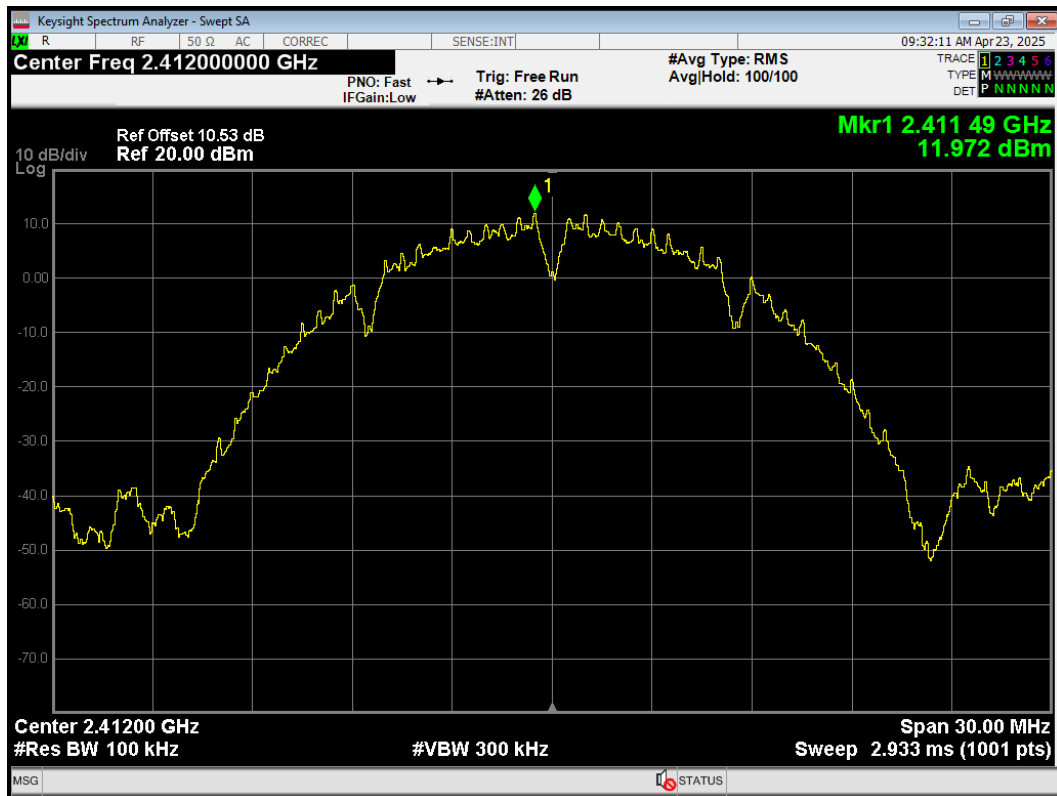
Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

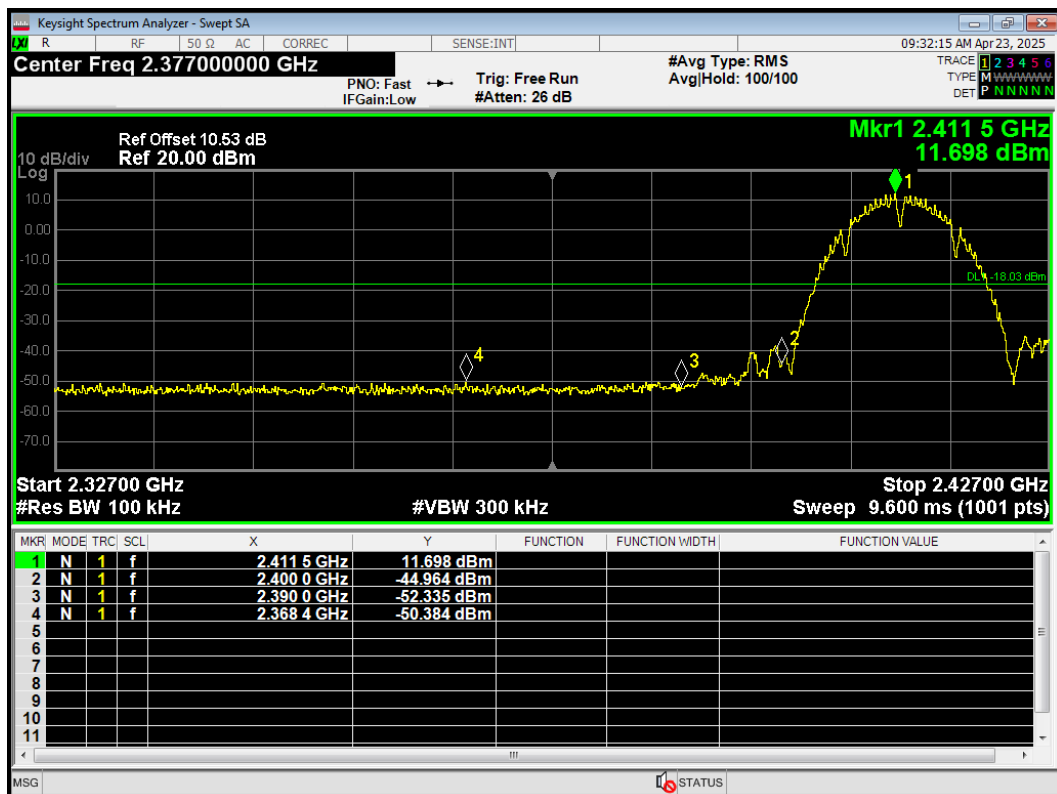
Frequency	Uncertainty
2GHz-3GHz	1.407 dB

Test Results: PASS

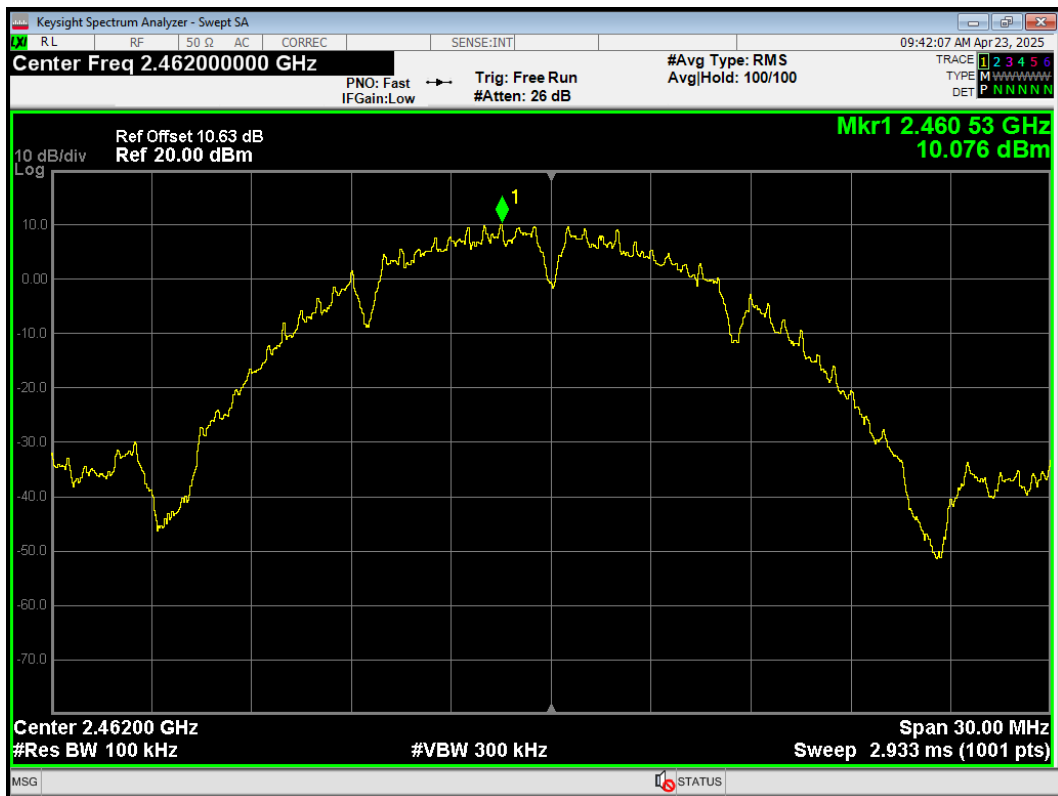
Band Edge 802.11b 2412MHz Ref



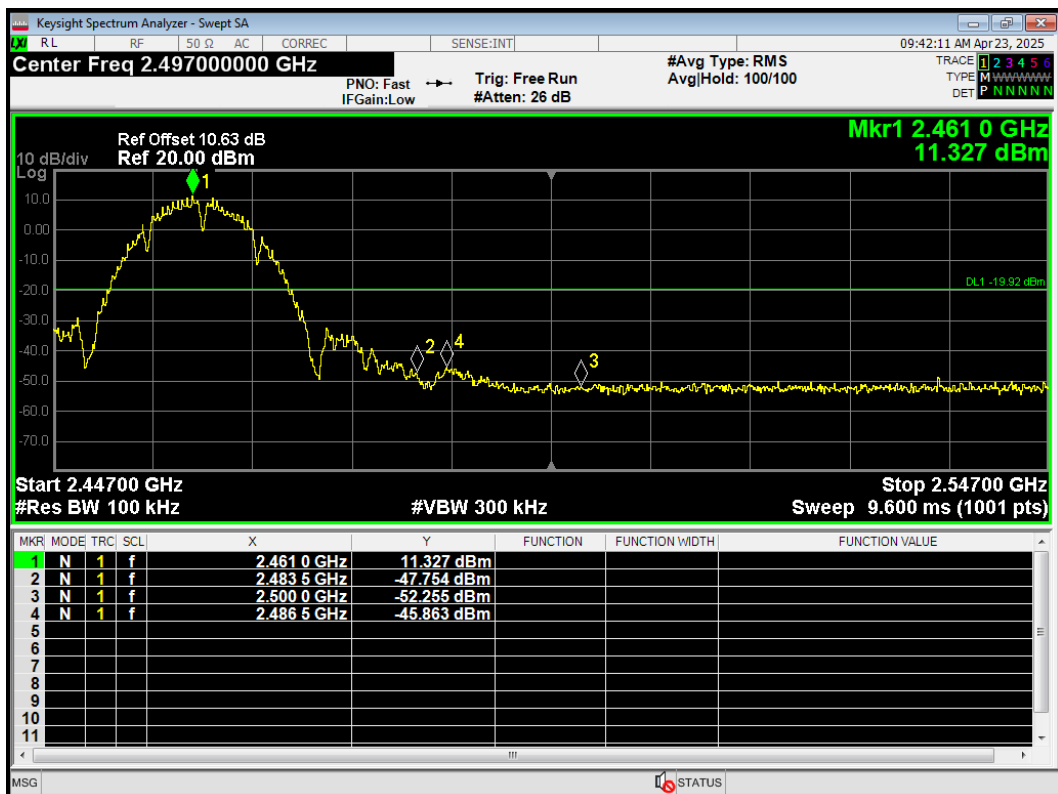
Band Edge 802.11b 2412MHz Emission



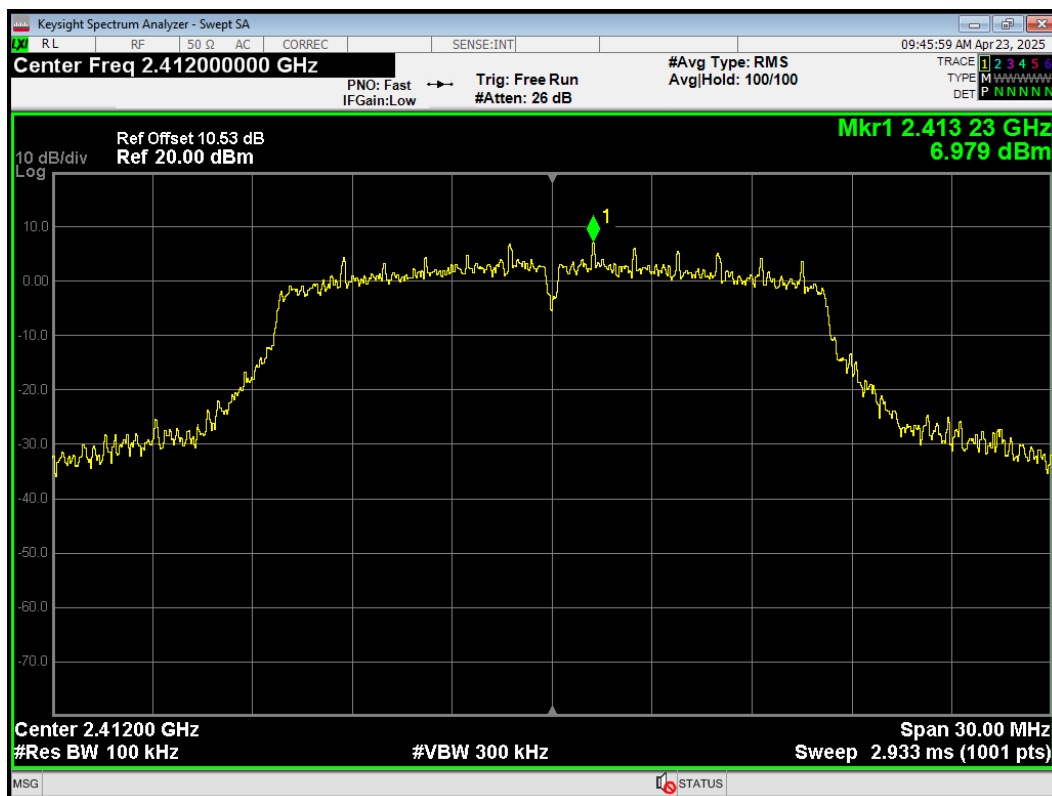
Band Edge 802.11b 2462MHz Ref



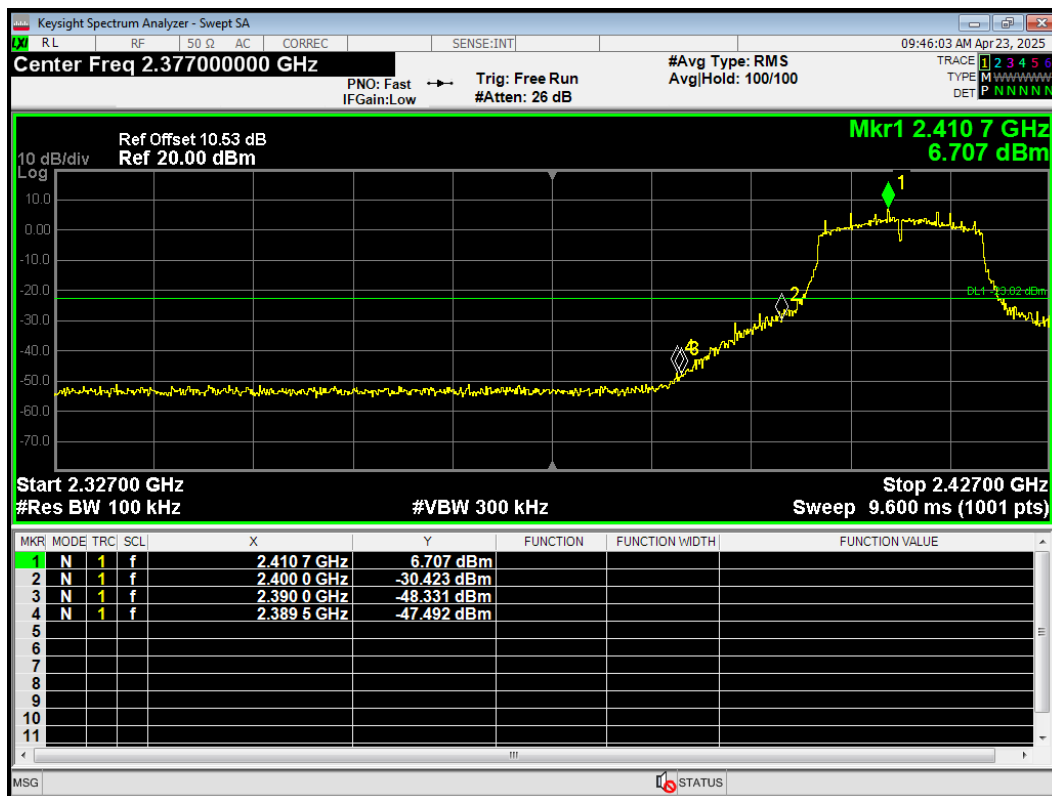
Band Edge 802.11b 2462MHz Emission



Band Edge 802.11g 2412MHz Ref



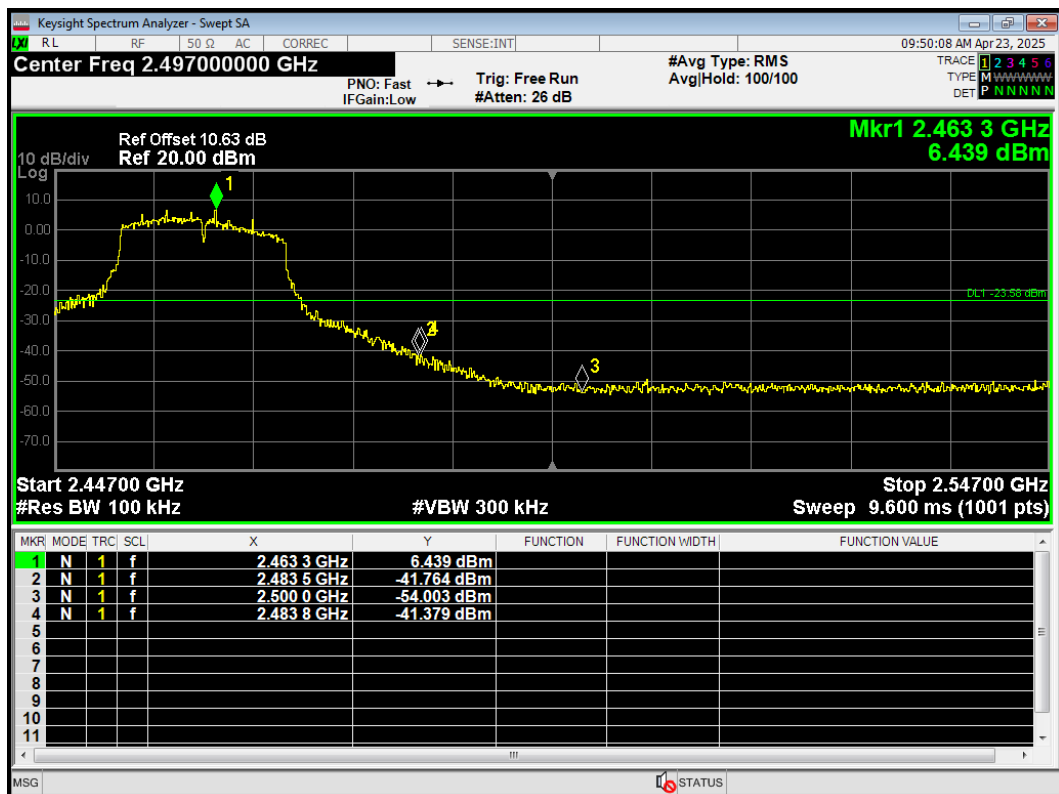
Band Edge 802.11g 2412MHz Emission



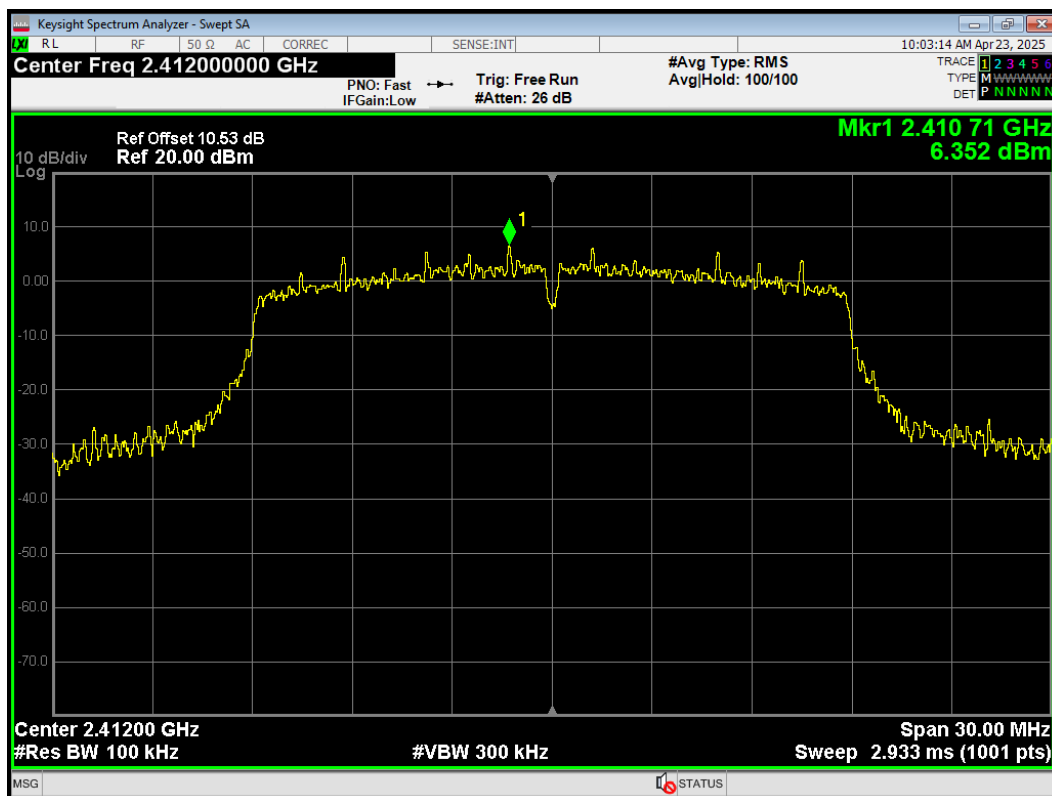
Band Edge 802.11g 2462MHz Ref



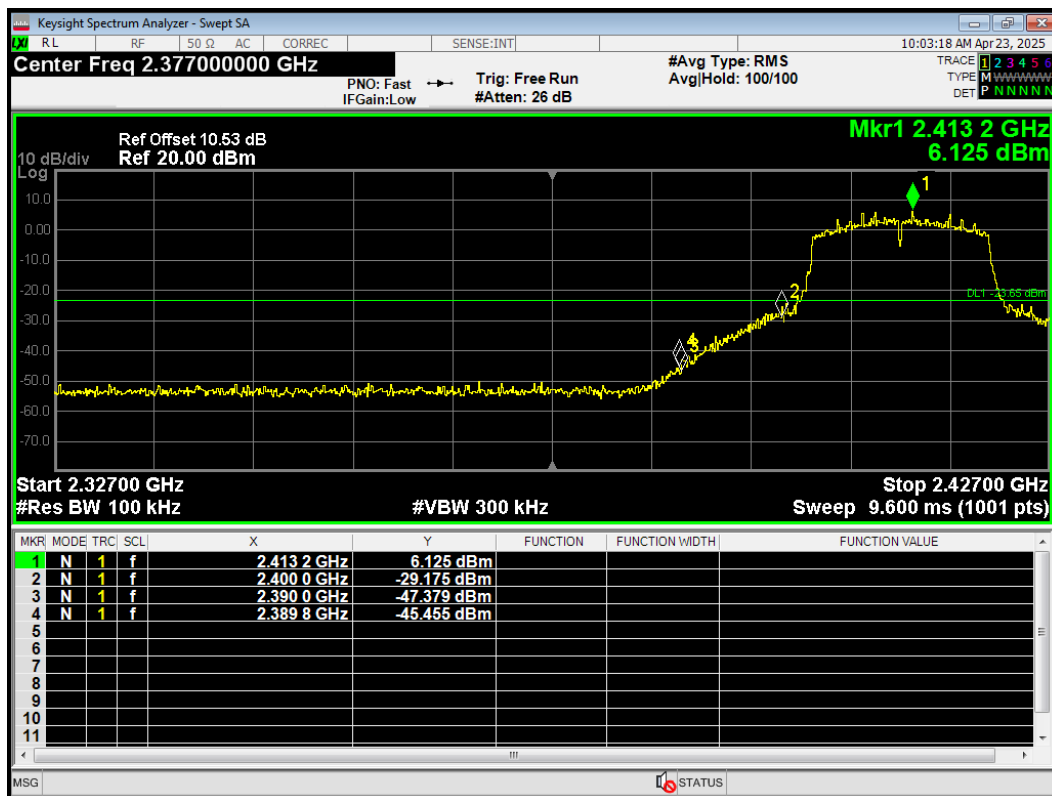
Band Edge 802.11g 2462MHz Emission



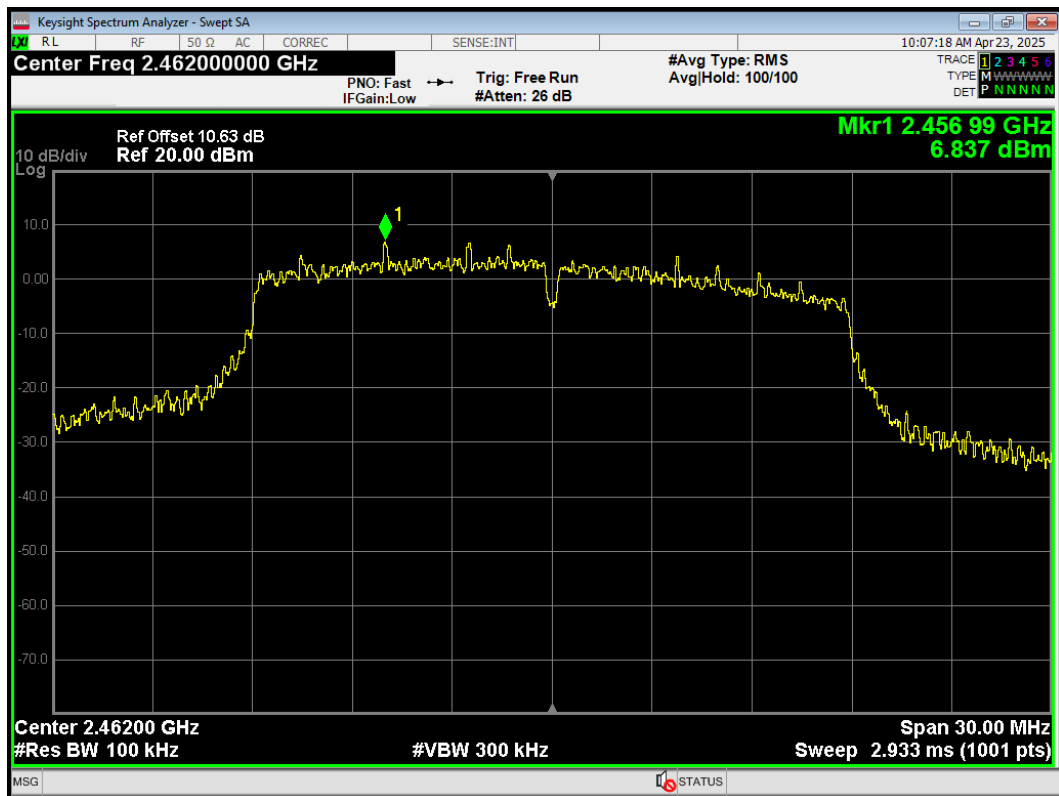
Band Edge 802.11n(HT20) 2412MHz Ref



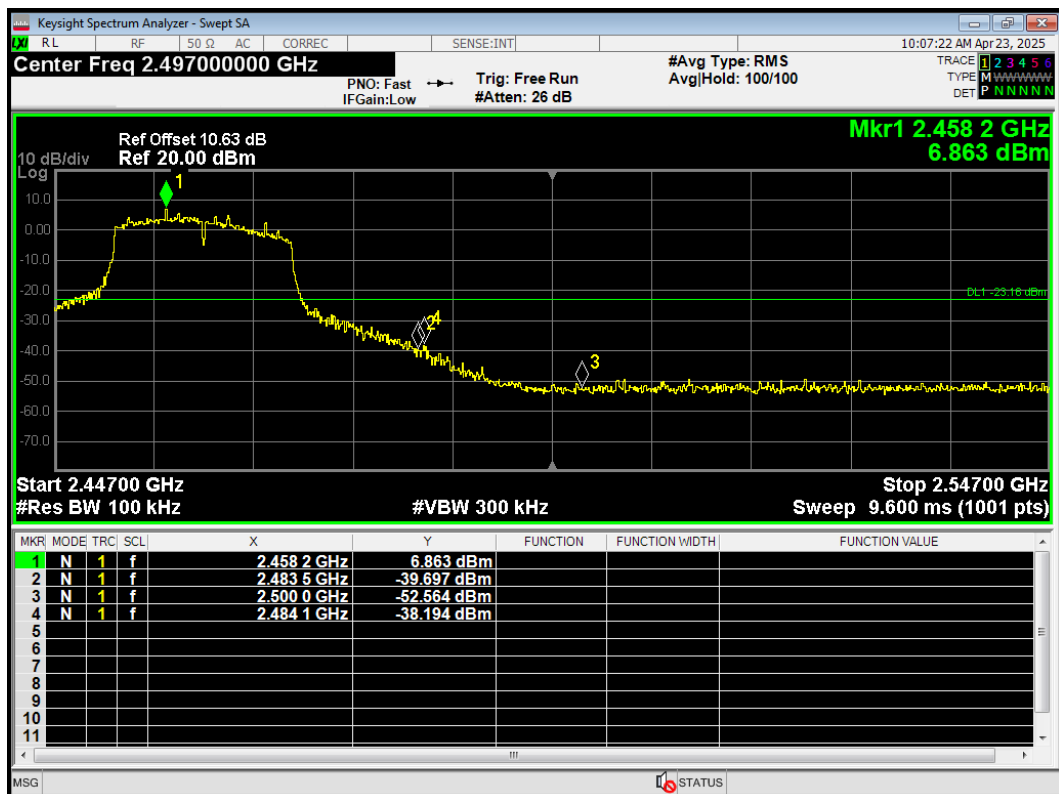
Band Edge 802.11n(HT20) 2412MHz Emission



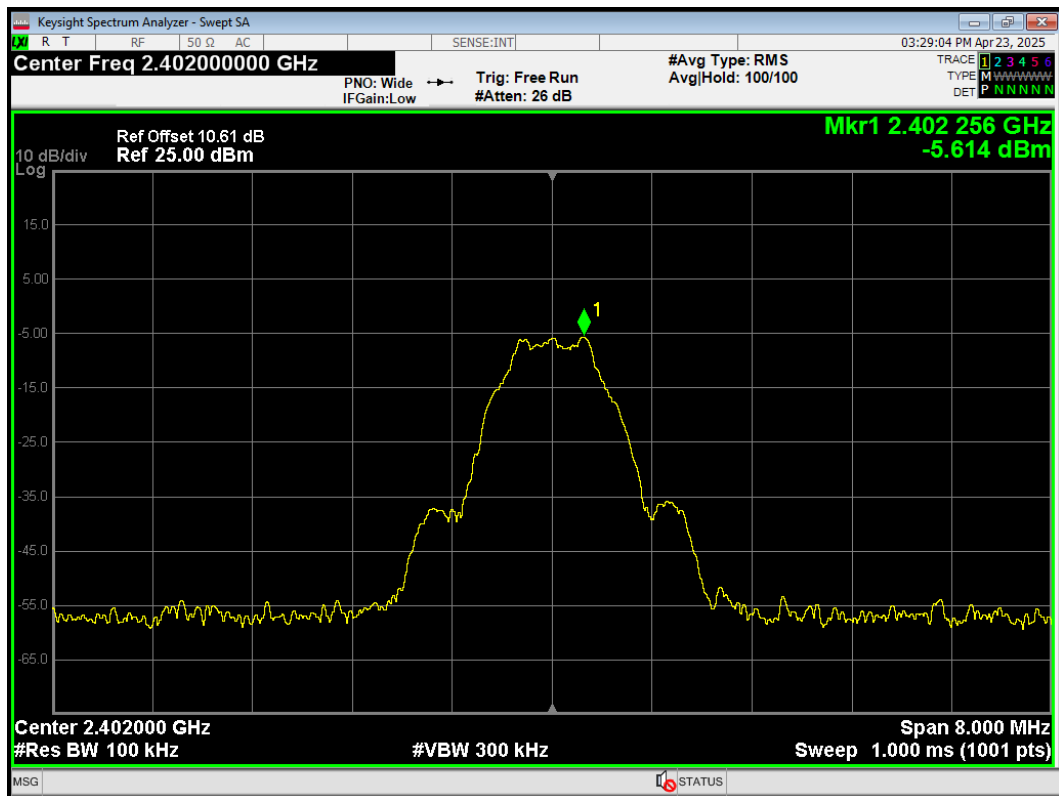
Band Edge 802.11n(HT20) 2462MHz Ref



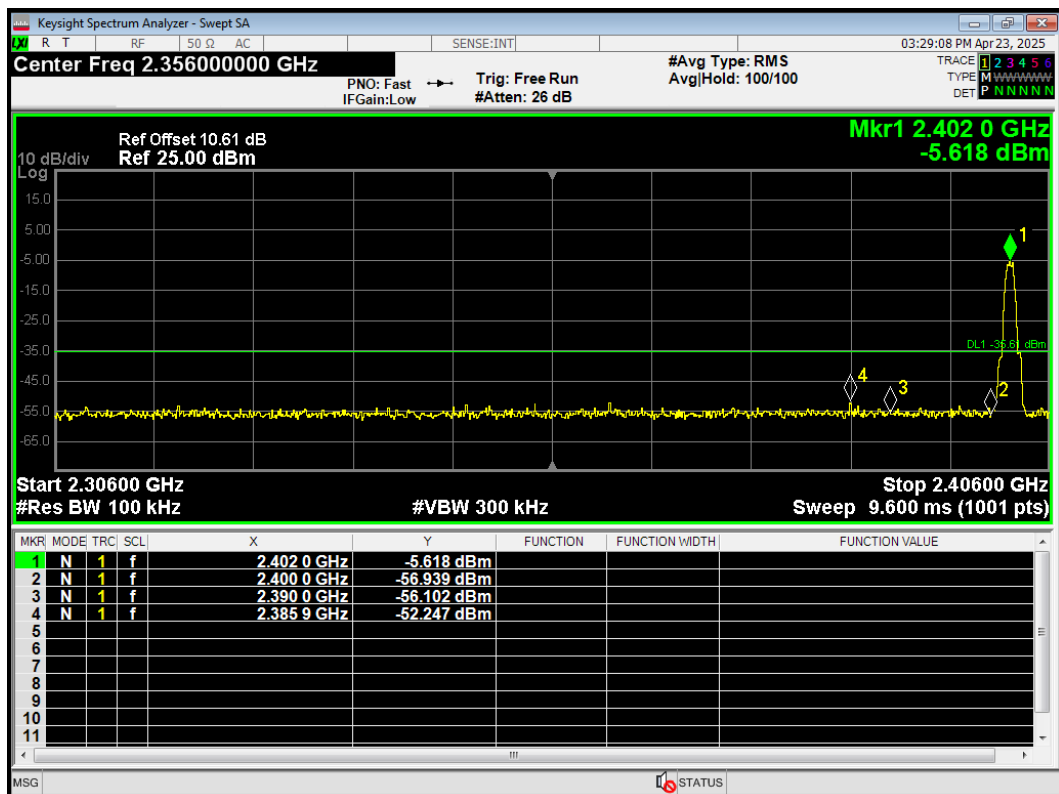
Band Edge 802.11n(HT20) 2462MHz Emission



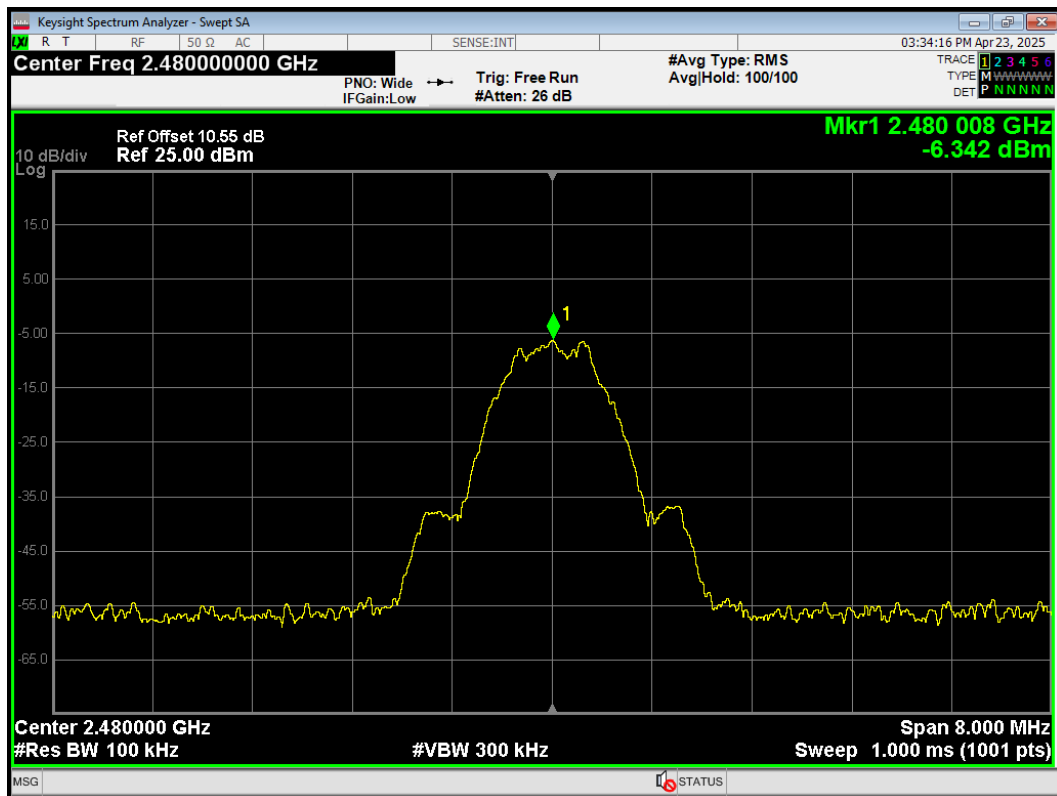
Band Edge BLE (1M) 2402MHz Ref



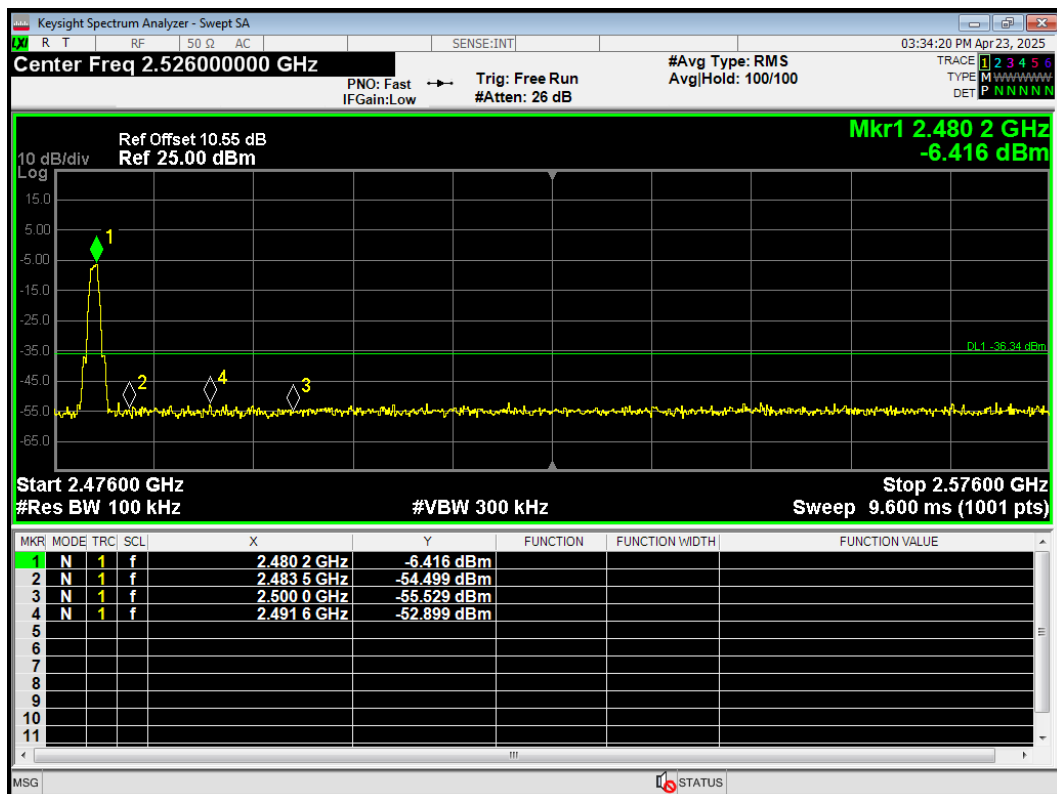
Band Edge BLE (1M) 2402MHz Emission



Band Edge BLE (1M) 2480MHz Ref



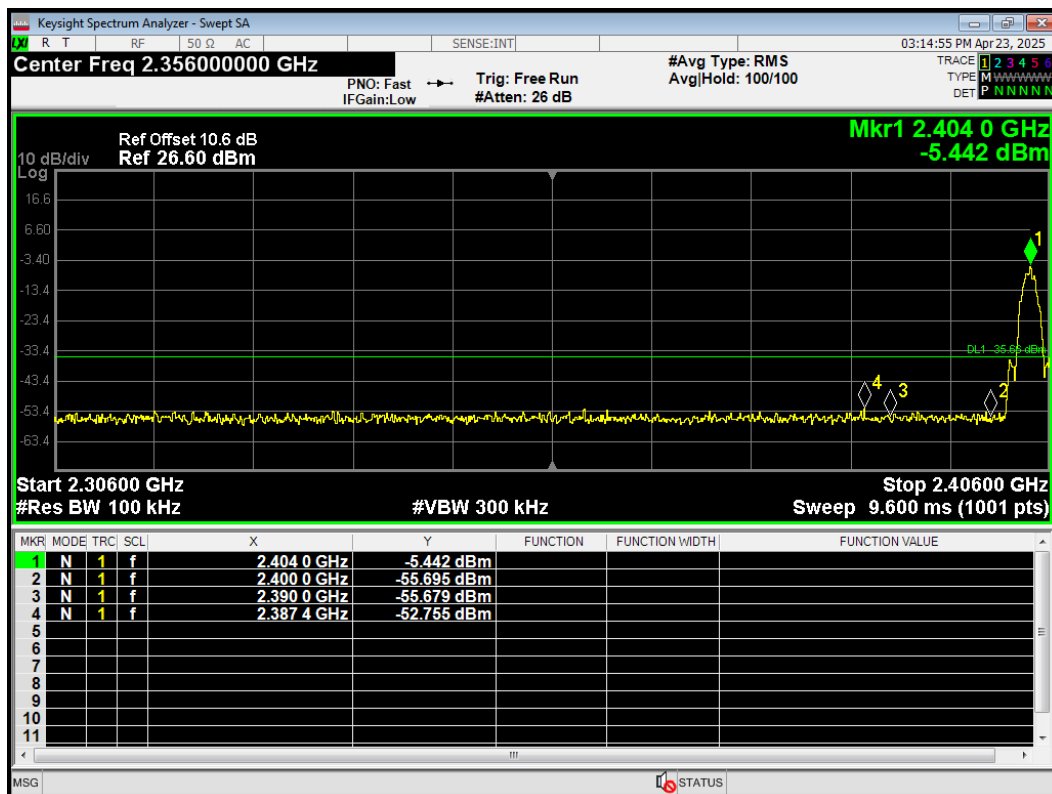
Band Edge BLE (1M) 2480MHz Emission



Band Edge BLE (2M) 2404MHz Ref



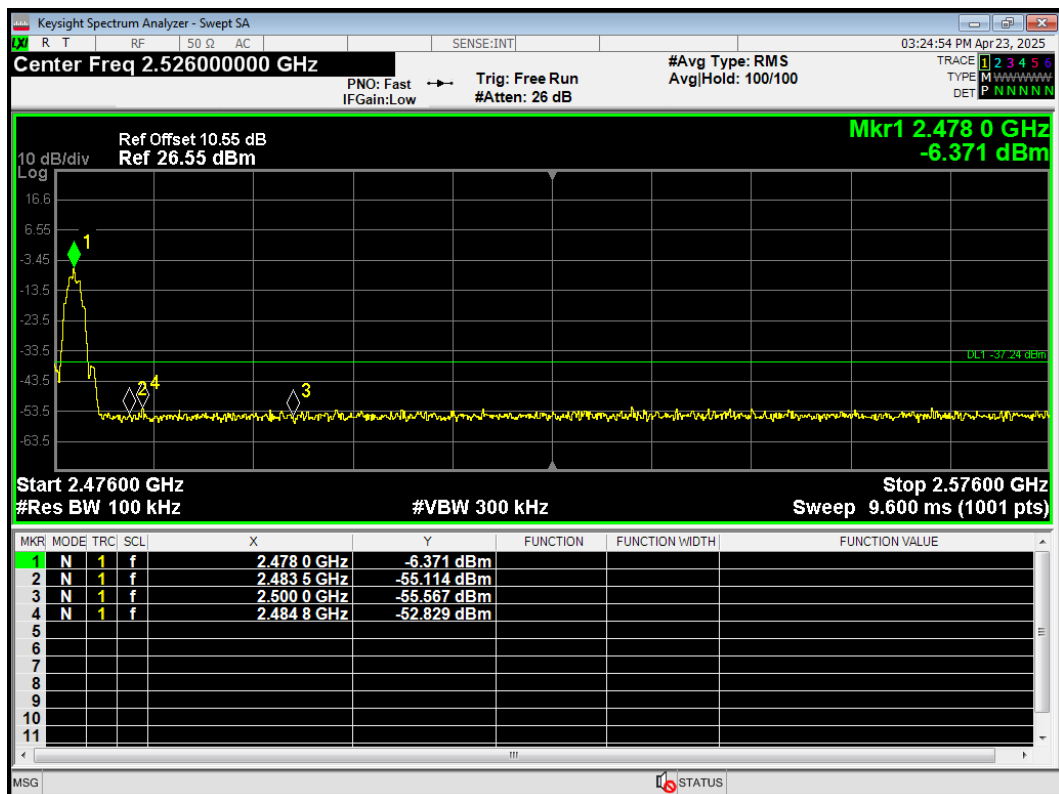
Band Edge BLE (2M) 2404MHz Emission



Band Edge BLE (2M) 2478MHz Ref



Band Edge BLE (2M) 2478MHz Emission



5.4. Power Spectral Density

Ambient Condition

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

Method of Measurement

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

Method AVGPSD-1 was used for this test.

- Set instrument center frequency to DTS channel center frequency
- Set span to at least 1.5 times the OBW
- Set RBW to: $3\text{kHz} \leq \text{RBW} \leq 100\text{kHz}$
- Set VBW $\geq [3 \times \text{RBW}]$
- Detector=power averaging (rms) or sample detector (when rms not available)
- Ensure that the number of measurement points in the sweep $\geq [2 \times \text{span}/\text{RBW}]$
- Sweep time auto couple
- Employ trace averaging (rms) mode over a minimum of 100 traces
- Use the peak marker function to determine the maximum amplitude level.
- If the measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat (note that this may require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced)

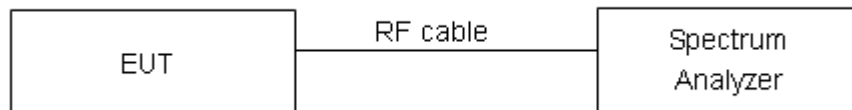
Method AVGPSD-2 was used for this test.

- Measure the duty cycle (D) of the transmitter output signal as described in 11.6
- Set instrument center frequency to DTS channel center frequency
- Set span to at least 1.5 times the OBW
- Set RBW to: $3\text{kHz} \leq \text{RBW} \leq 100\text{kHz}$
- Set VBW $\geq [3 \times \text{RBW}]$
- Detector= power averaging (rms) or sample detector (when rms not available)
- Ensure that the number of measurement points in the sweep $\geq [2 \times \text{span}/\text{RBW}]$
- Sweep time =auto couple
- Do not use sweep triggering; allow sweep to "free run"
- Employ trace averaging (rms) mode over a minimum of 100 traces
- Use the peak marker function to determine the maximum amplitude level

l) Add $[10 \log(1/D)]$, where D is the duty cycle measured in step a), to the measured PSD to compute the average PSD during the actual transmission time

m) If measured value exceeds requirement specified by regulatory agency then reduce RBW (but no less than 3 kHz) and repeat (note that this may require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced)

Test setup



Limits

Rule Part 15.247(e) specifies that "For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. "

Limits	$\leq 8 \text{ dBm} / 3\text{kHz}$
--------	------------------------------------

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.75\text{dB}$.

Test Results:

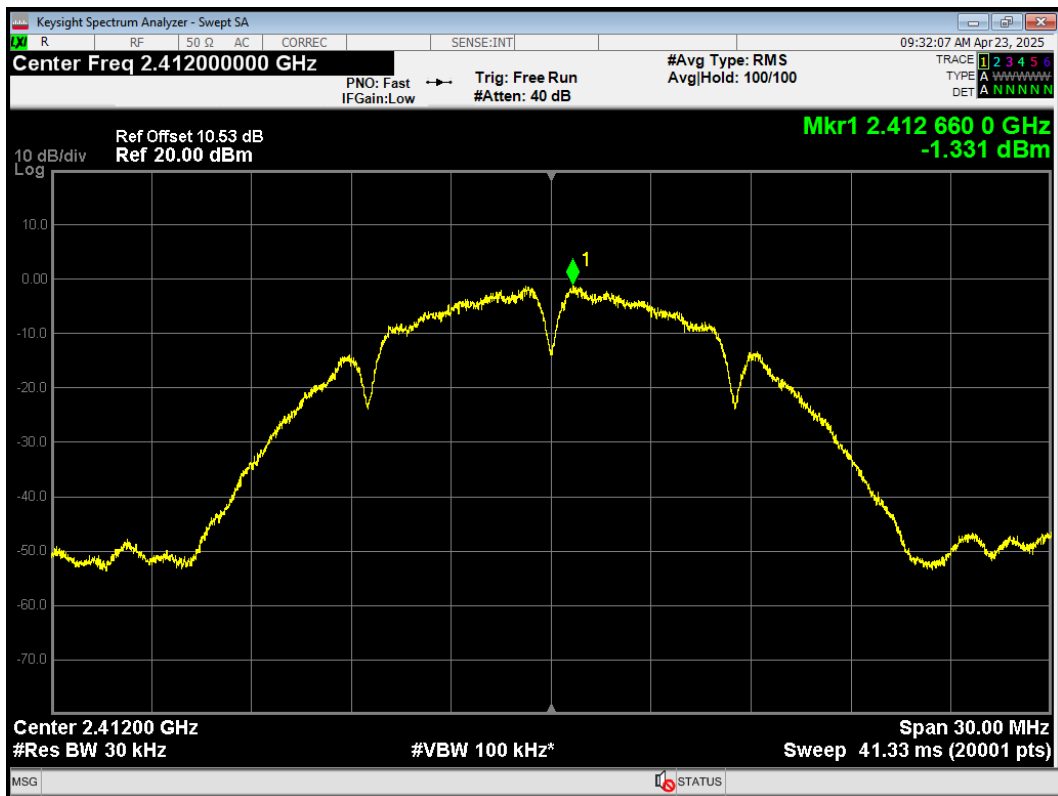
Test Mode	Carrier frequency (MHz)/ Channel	Read Value (dBm / 30kHz)	Power Spectral Density (dBm / 3kHz)	Limit (dBm / 3kHz)	Conclusion
802.11b	2412/CH 1	-1.33	-11.33	8	PASS
	2437/CH 6	-1.76	-11.76	8	PASS
	2462/CH11	-2.09	-12.09	8	PASS
802.11g	2412/CH 1	-6.20	-16.07	8	PASS
	2437/CH 6	-6.00	-15.87	8	PASS
	2462/CH11	-5.80	-15.67	8	PASS
802.11n HT20	2412/CH 1	-6.54	-16.39	8	PASS
	2437/CH 6	-6.17	-16.02	8	PASS
	2462/CH11	-6.29	-16.14	8	PASS

Note: Power Spectral Density (dBm/3kHz) =Read Value+Duty cycle correction factor + 10*log10(3/30)

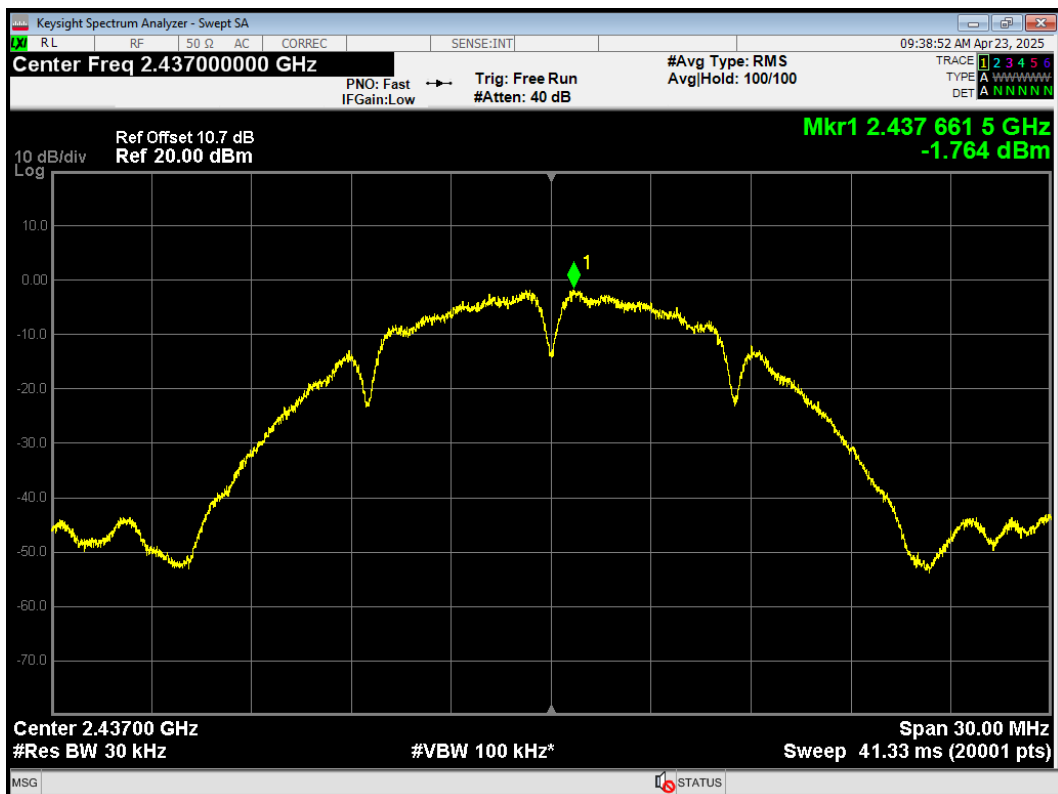
Test Mode	Carrier frequency (MHz) / Channel	Read Value (dBm / 3kHz)	Power Spectral Density (dBm / 3kHz)	Limit (dBm / 3kHz)	Conclusion
Bluetooth (Low Energy) (1M)	2402/CH0	-24.50	-22.35	8	PASS
	2440/CH19	-22.79	-20.64	8	PASS
	2480/CH39	-25.01	-22.86	8	PASS
Bluetooth (Low Energy) (2M)	2402/CH0	-28.34	-23.37	8	PASS
	2440/CH19	-27.36	-22.39	8	PASS
	2480/CH39	-29.26	-24.29	8	PASS

Note: Power Spectral Density =Read Value+Duty cycle correction factor

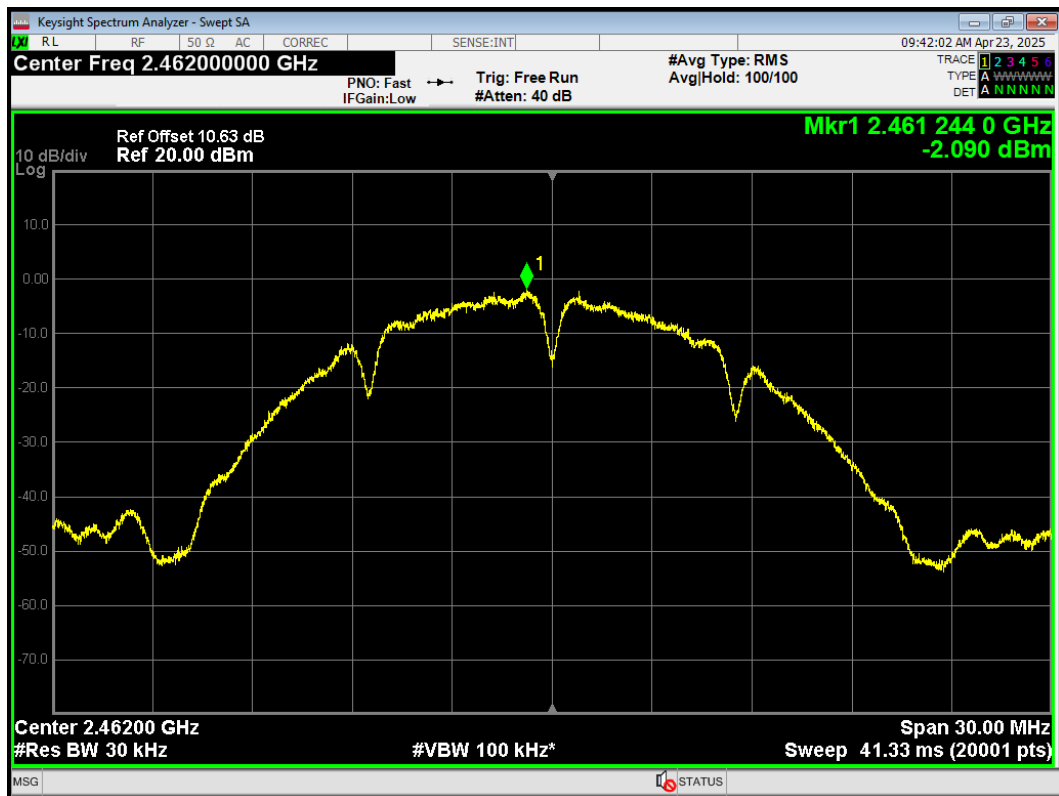
PSD 802.11b 2412MHz



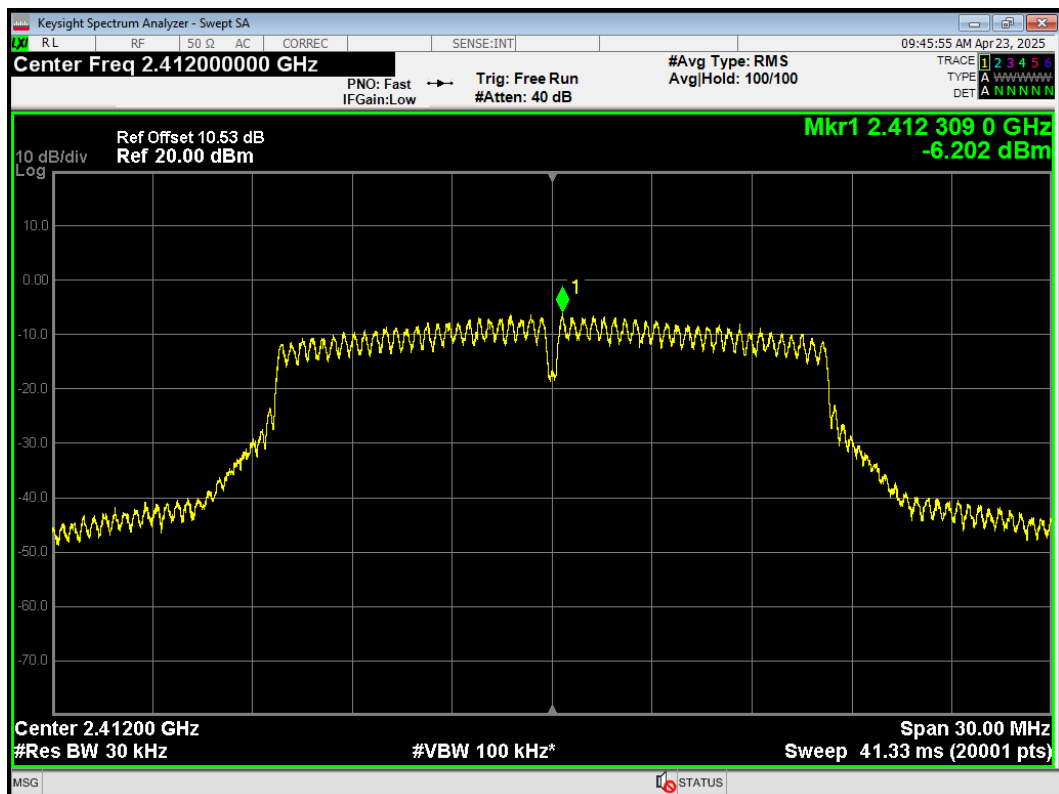
PSD 802.11b 2437MHz



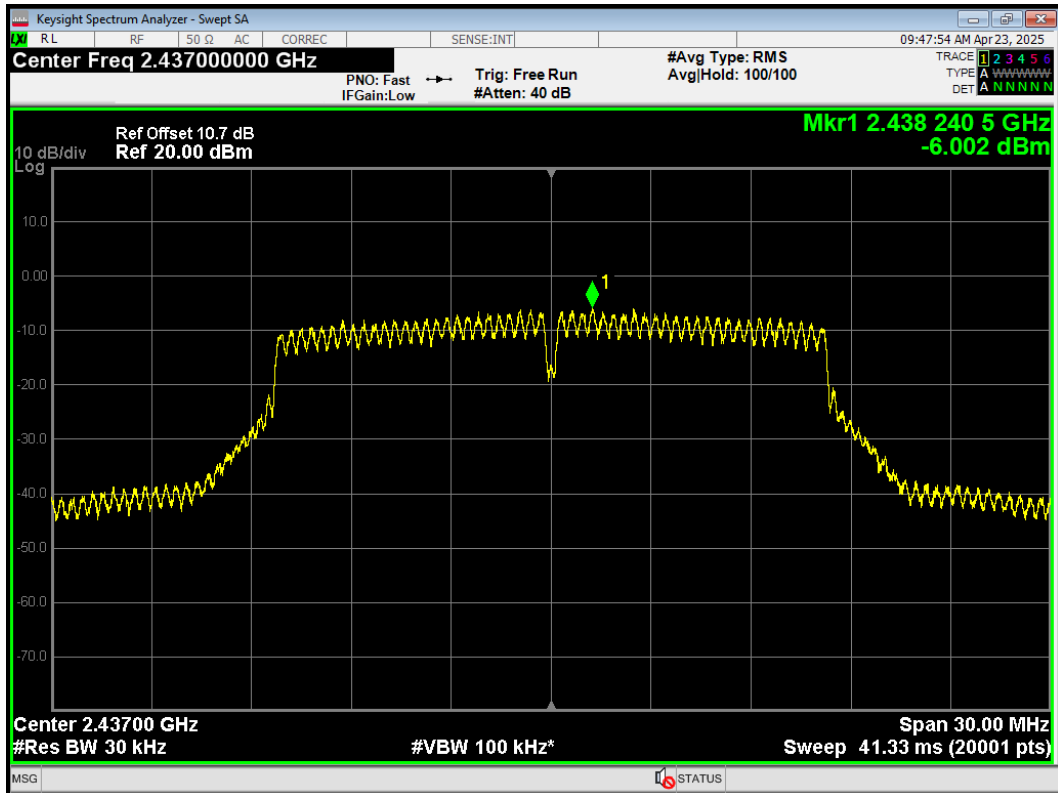
PSD 802.11b 2462MHz



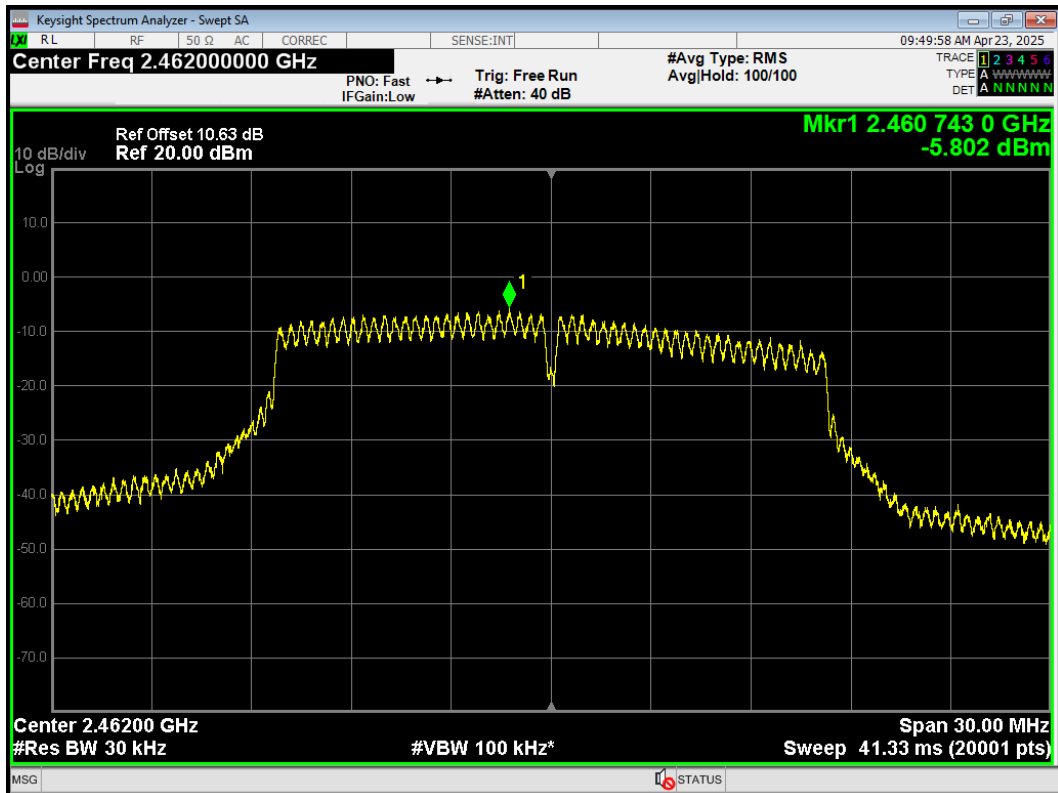
PSD 802.11g 2412MHz



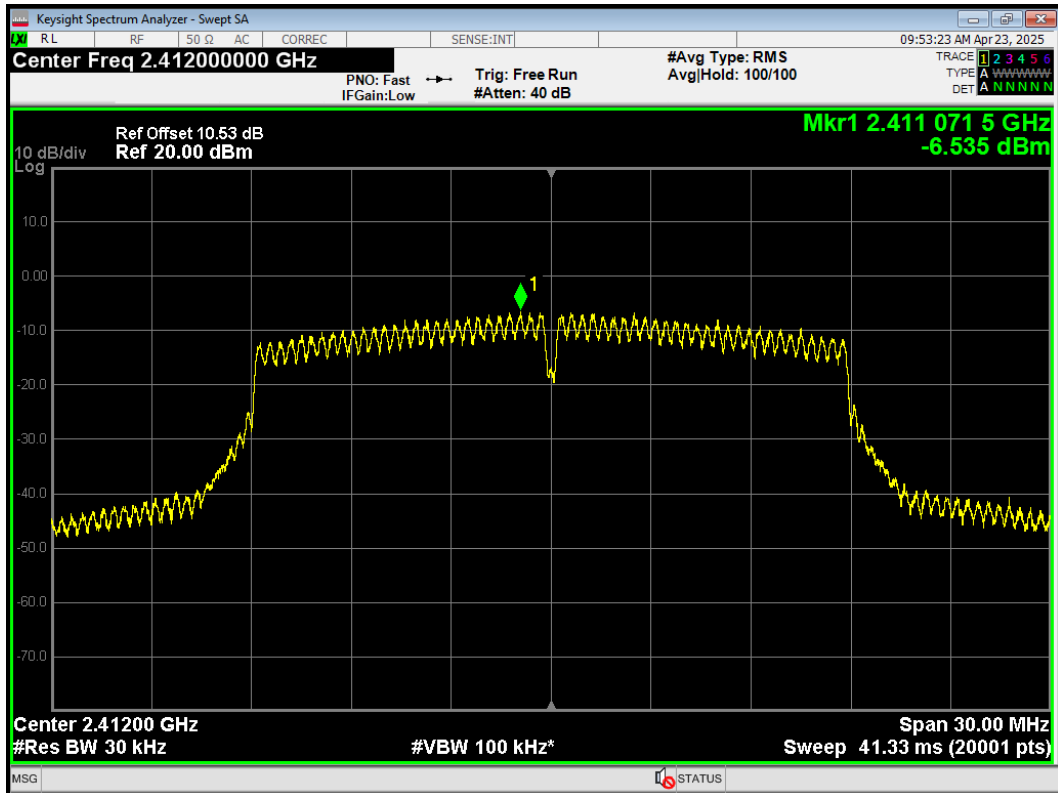
PSD 802.11g 2437MHz



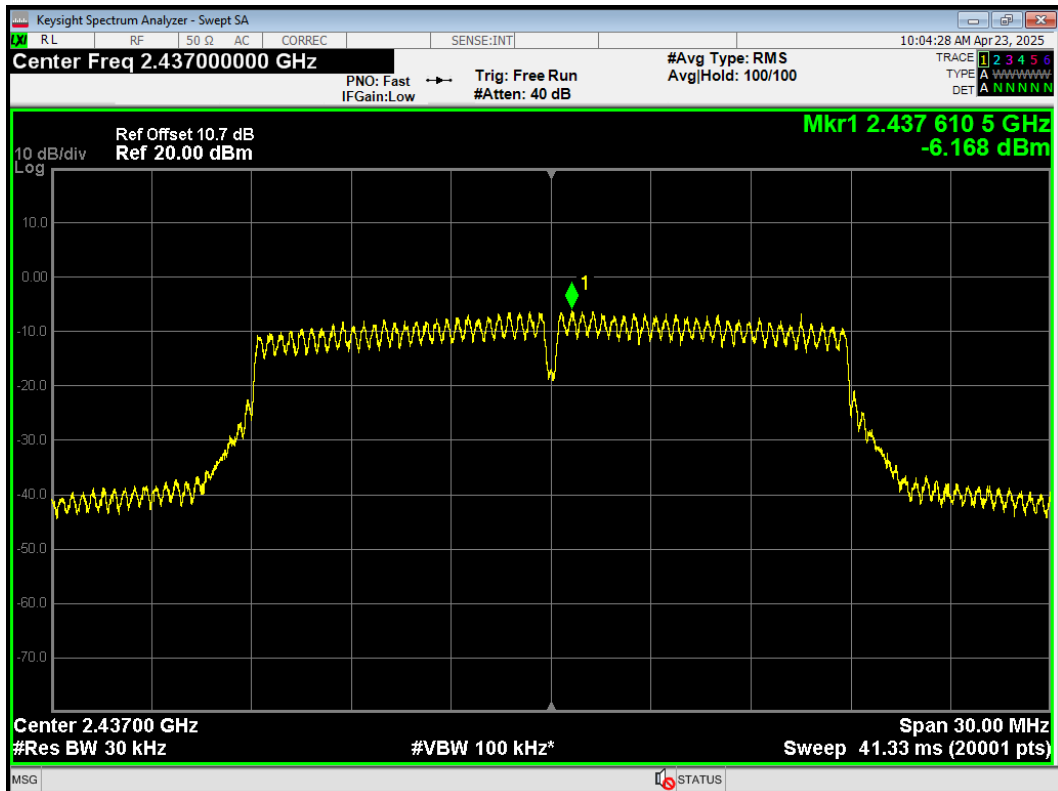
PSD 802.11g 2462MHz



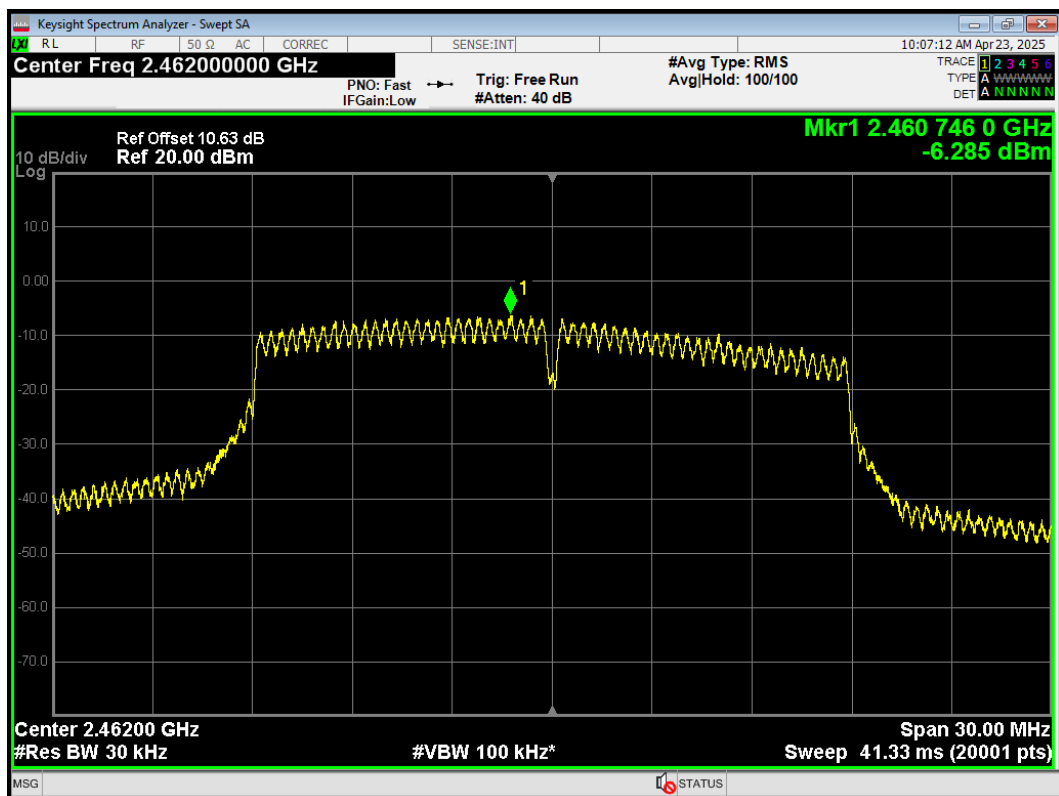
PSD 802.11n(HT20) 2412MHz



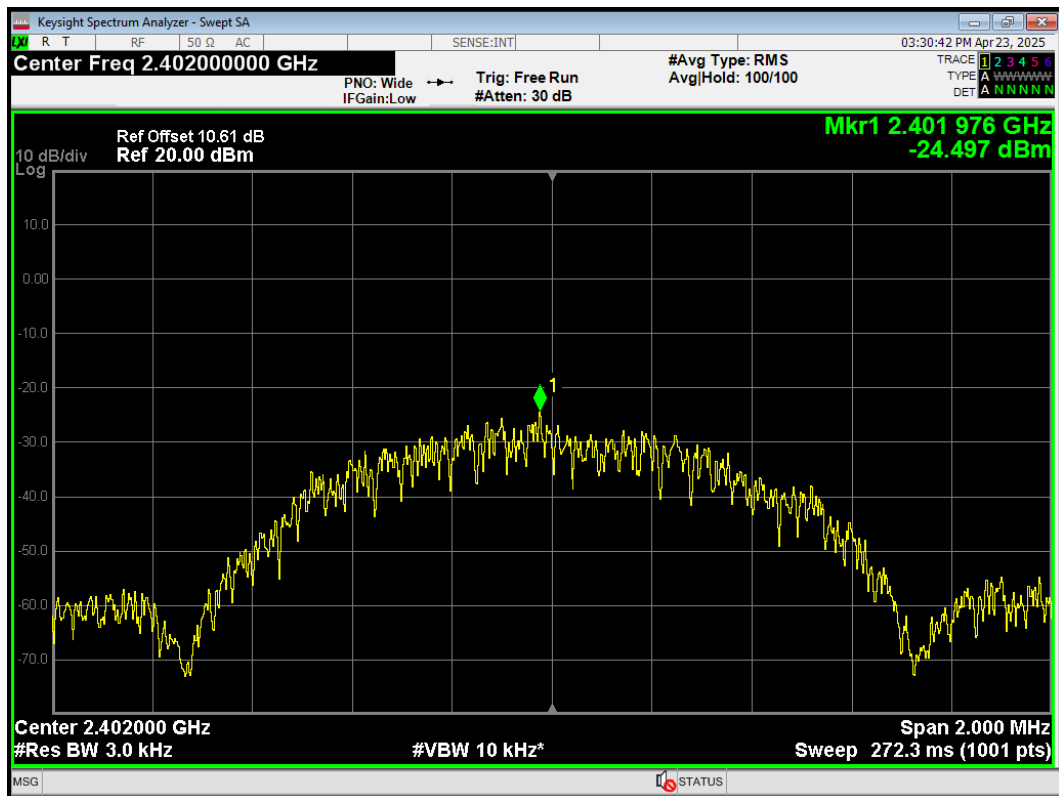
PSD 802.11n(HT20) 2437MHz



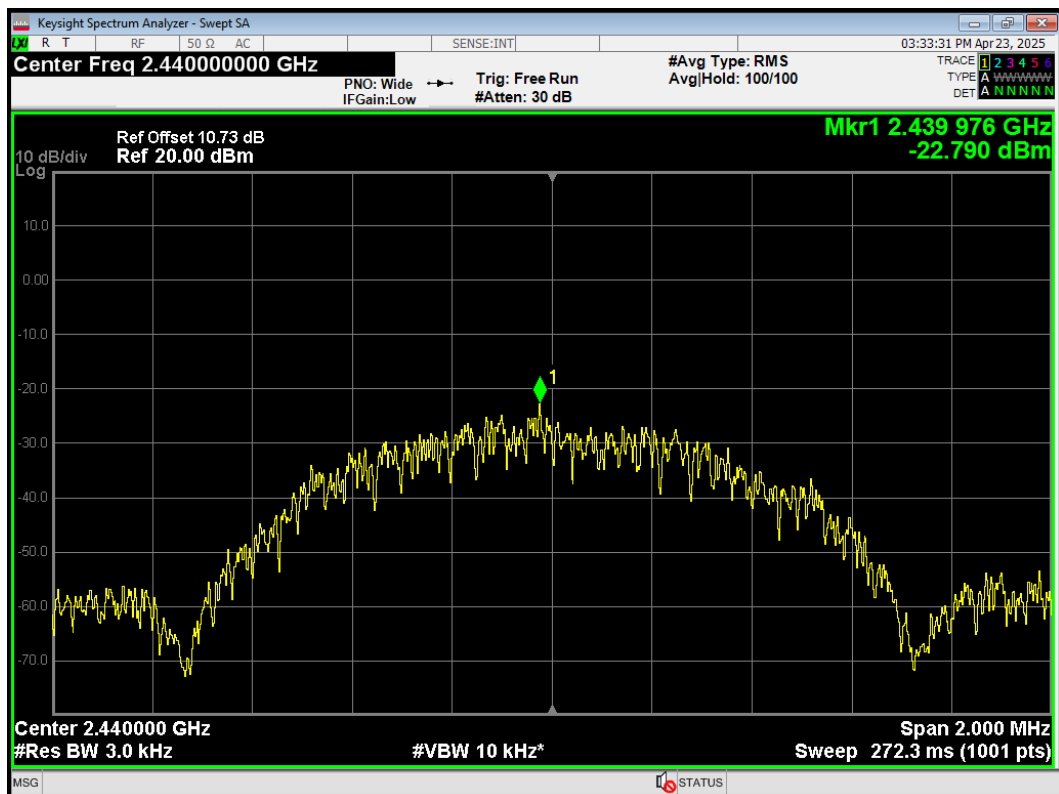
PSD 802.11n(HT20) 2462MHz



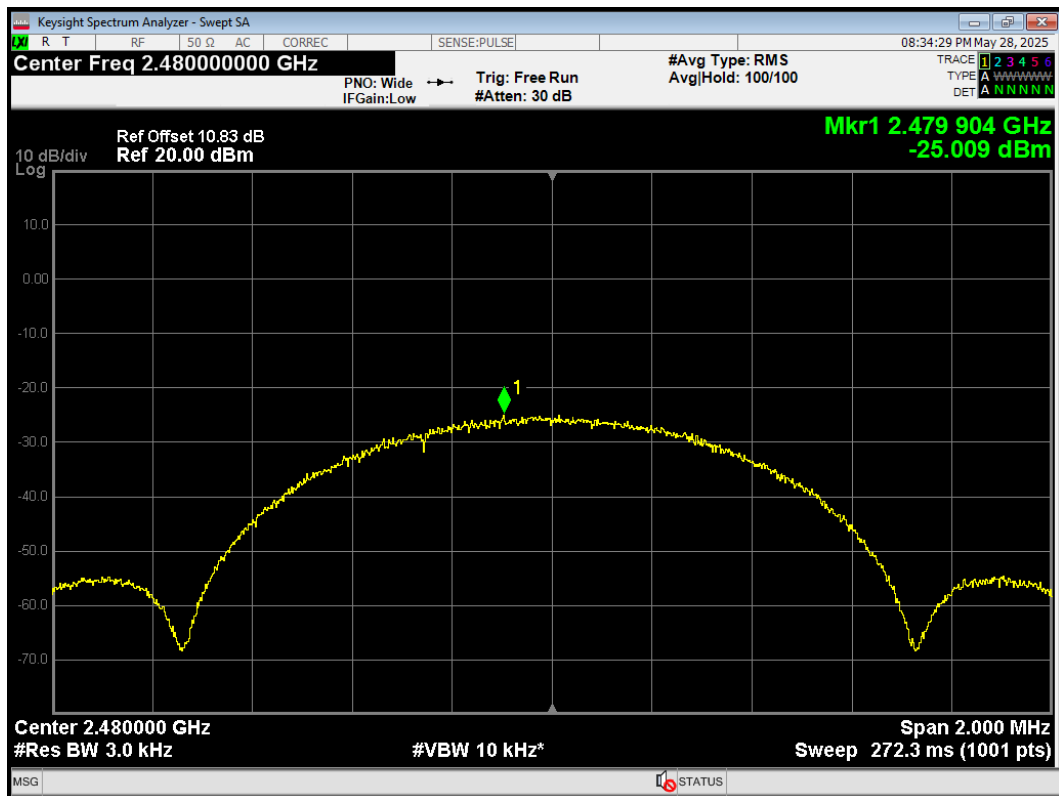
PSD BLE (1M) 2402MHz



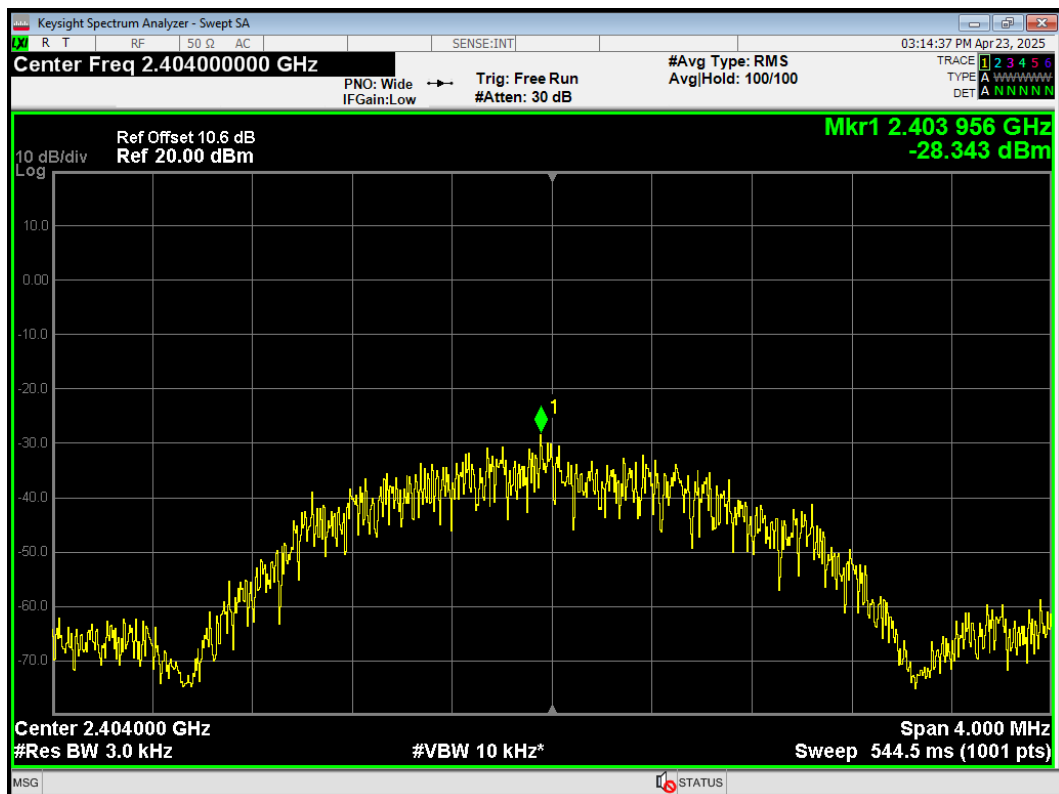
PSD BLE (1M) 2440MHz



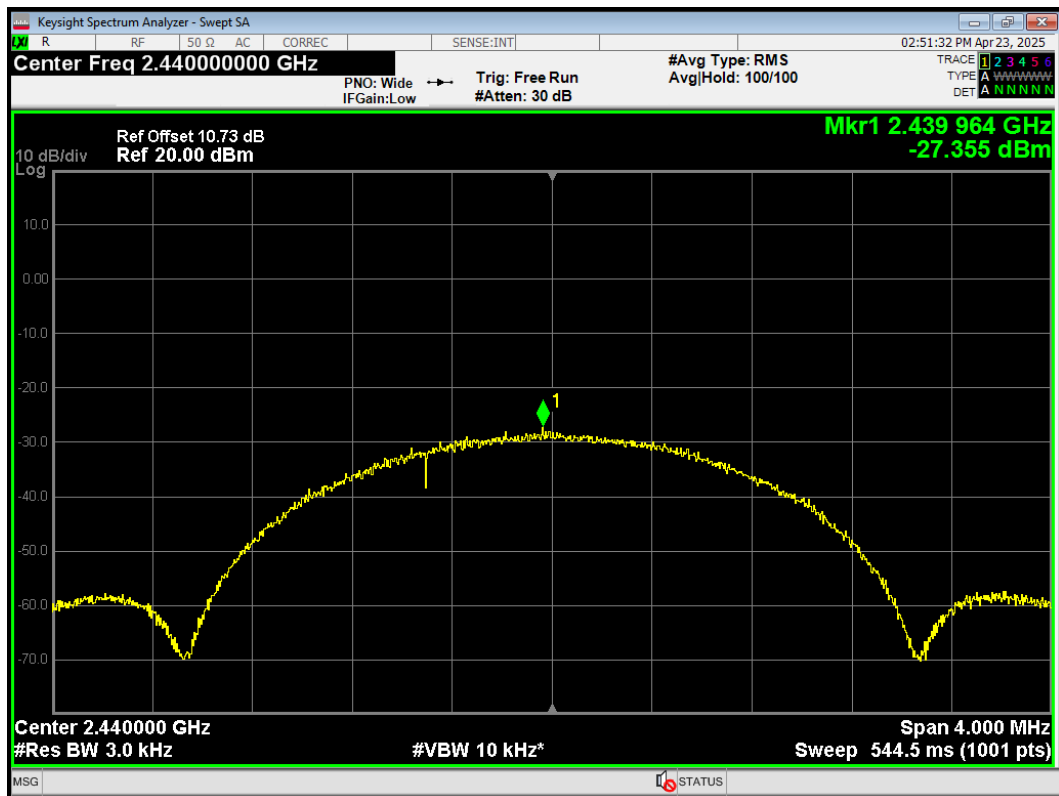
PSD BLE (1M) 2480MHz



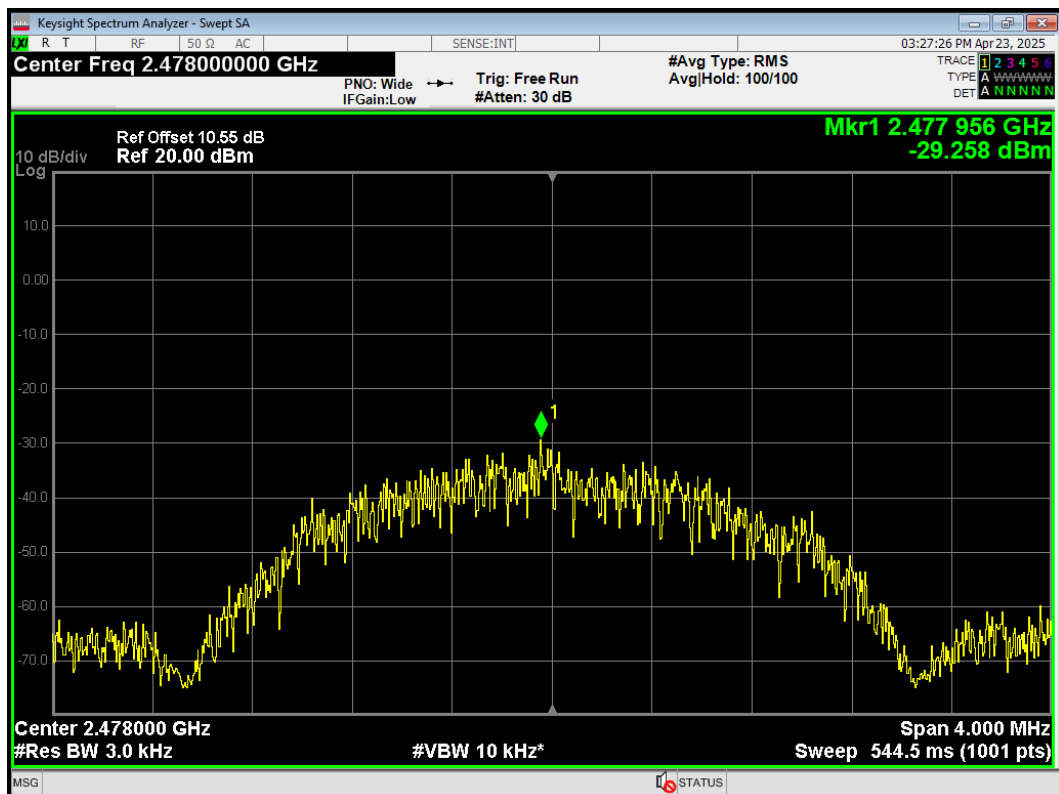
PSD BLE (2M) 2404MHz



PSD BLE (2M) 2440MHz



PSD BLE (2M) 2478MHz



5.5. Spurious RF Conducted Emissions

Ambient Condition

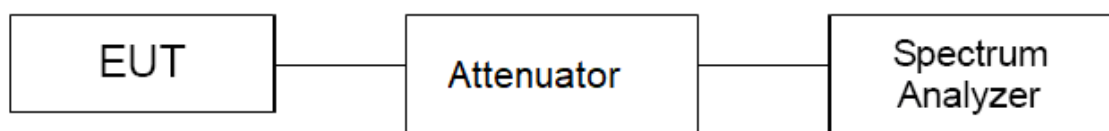
Temperature	Relative humidity
15°C ~ 35°C	20% ~ 80%

Method of Measurement

The EUT was connected to the spectrum analyzer with a known loss. The spectrum analyzer scans from 30MHz to the 10th harmonic of the carrier. The peak detector is used. Set RBW to 100 kHz and VBW to 300 kHz, Sweep is set to AUTO.

The test is in transmitting mode.

Test Setup



Limits

Rule Part 15.247(d) specifies that "In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. "

Test Mode	Carrier frequency (MHz)	Reference value (dBm)	Limit
802.11b	2412	11.350	-18.65
	2437	10.660	-19.34
	2462	10.360	-19.64
802.11g	2412	5.790	-24.21
	2437	5.700	-24.3
	2462	5.360	-24.64
802.11n HT20	2412	6.640	-23.36
	2437	7.010	-22.99
	2462	7.090	-22.91
Bluetooth (Low Energy) (1M)	2402	-5.510	-35.51
	2440	-4.400	-34.40
	2480	-6.380	-36.38
Bluetooth (Low Energy) (2M)	2402	-5.220	-35.22
	2440	-2.290	-32.29
	2480	-6.370	-36.37

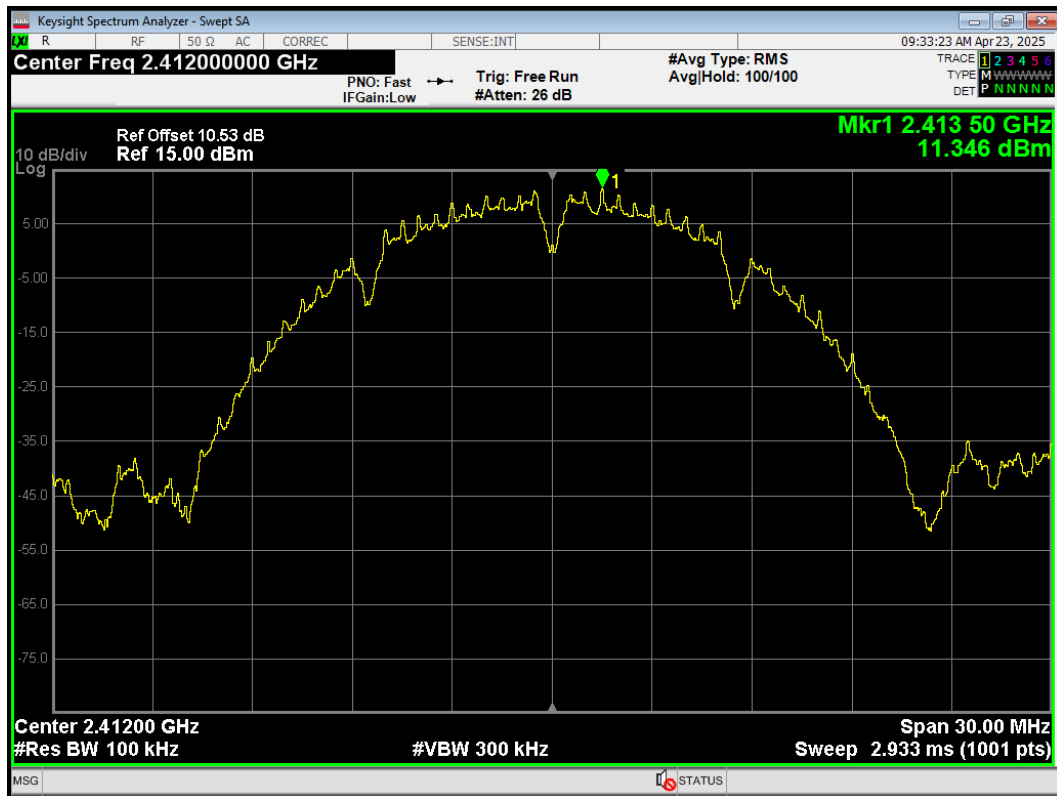
Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

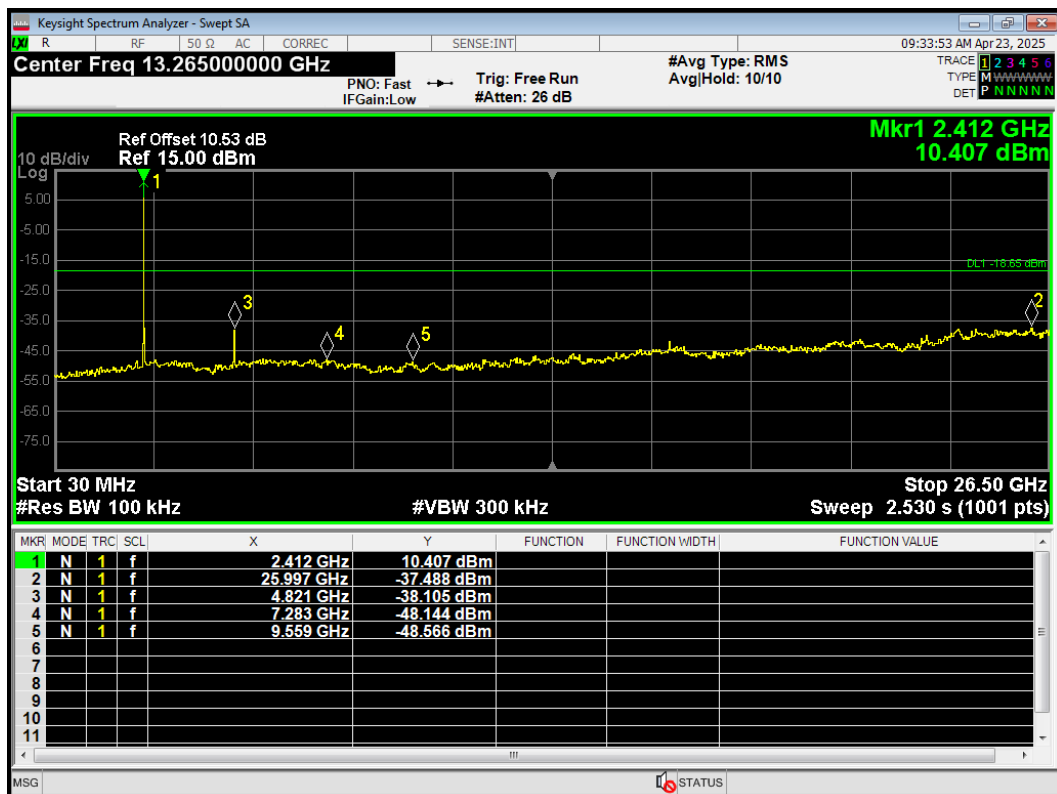
Frequency	Uncertainty
100kHz-2GHz	0.684 dB
2GHz-26GHz	1.407 dB

Test Results:

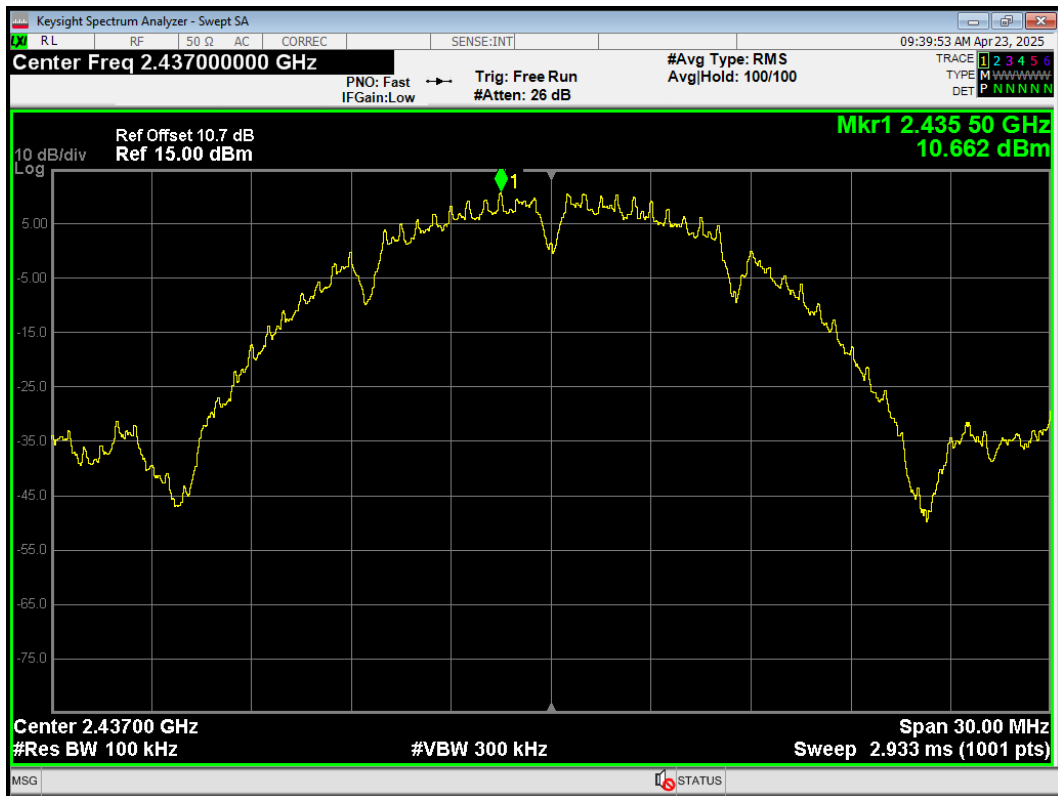
Tx. Spurious 802.11b 2412MHz Ref



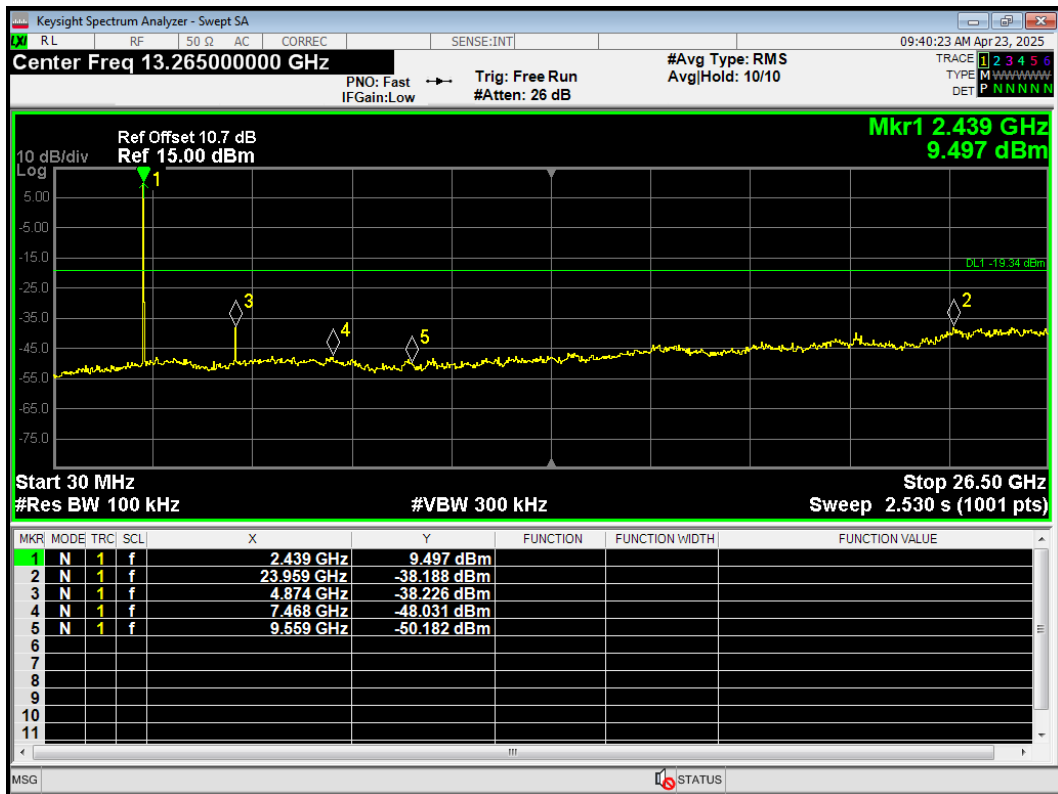
Tx. Spurious 802.11b 2412MHz Emission



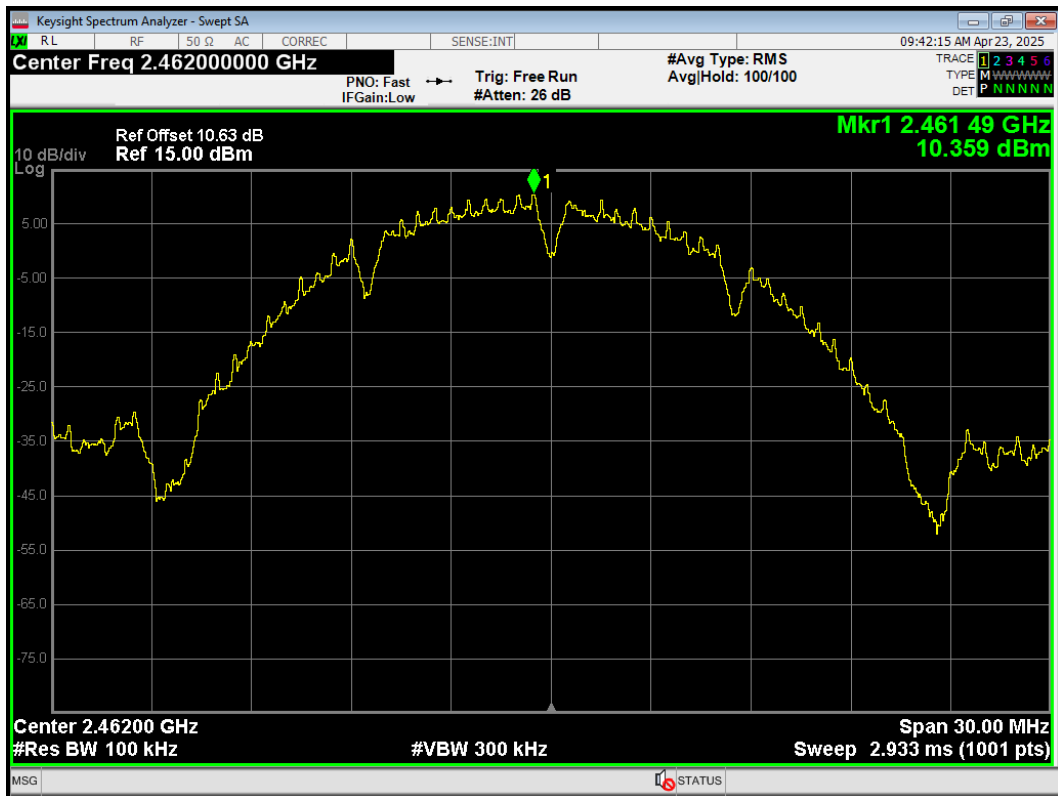
Tx. Spurious 802.11b 2437MHz Ref



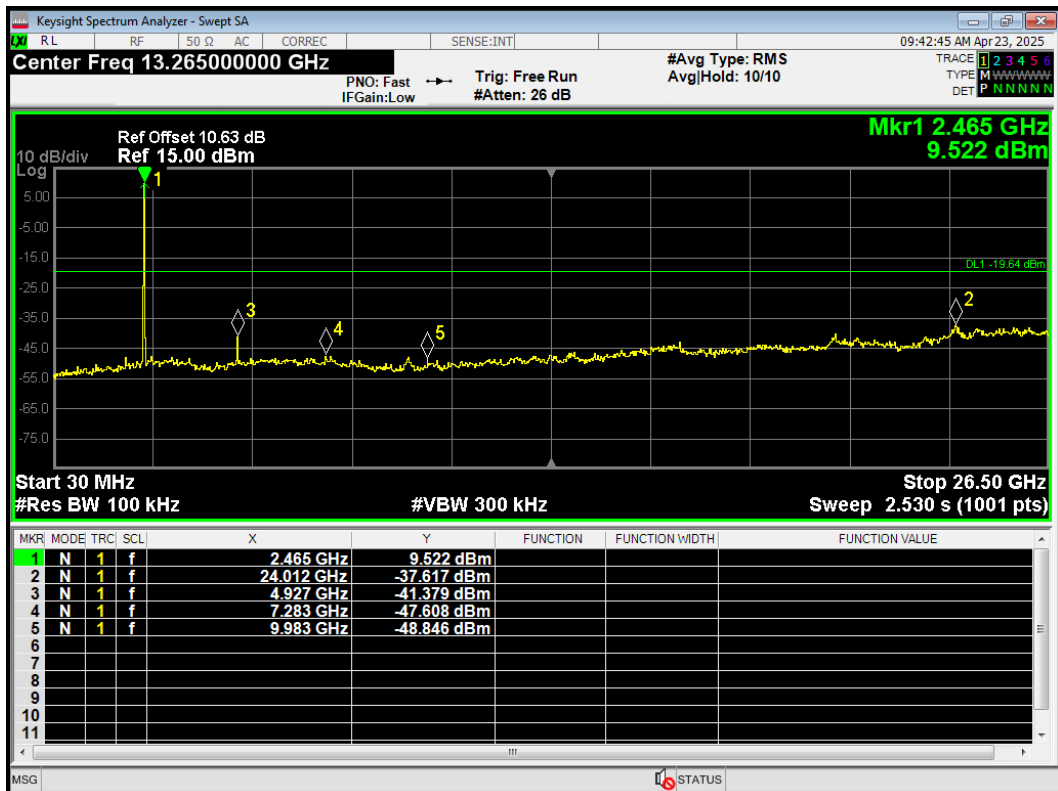
Tx. Spurious 802.11b 2437MHz Emission



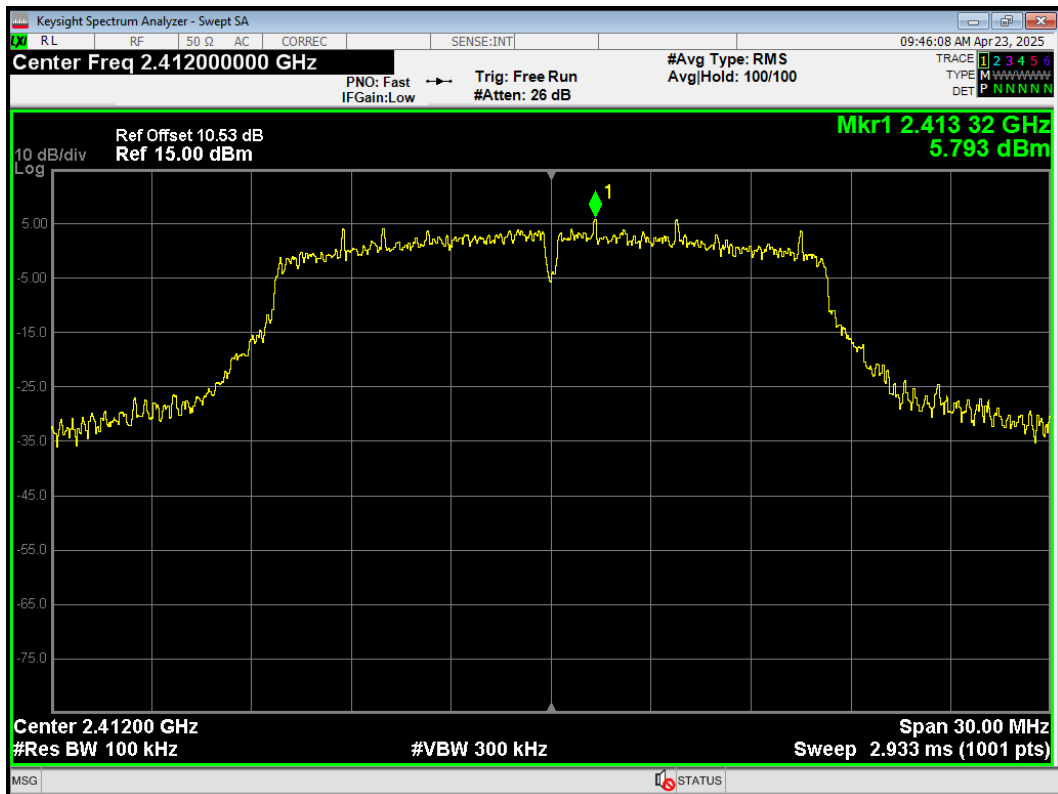
Tx. Spurious 802.11b 2462MHz Ref



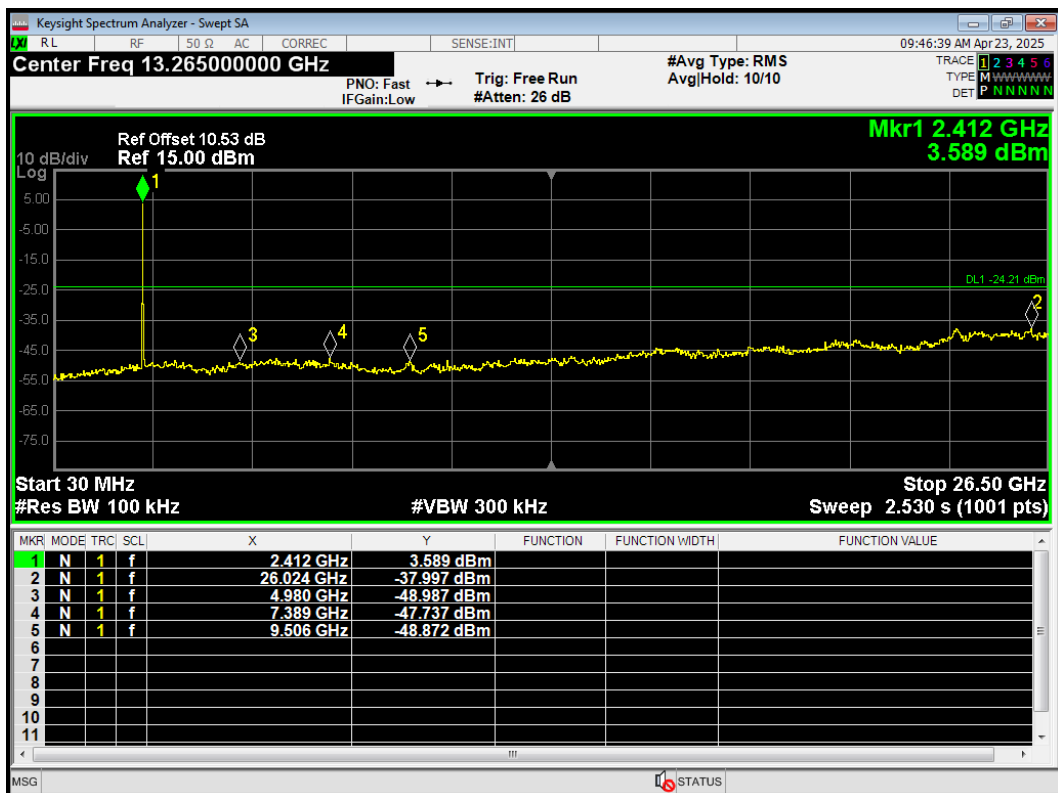
Tx. Spurious 802.11b 2462MHz Emission



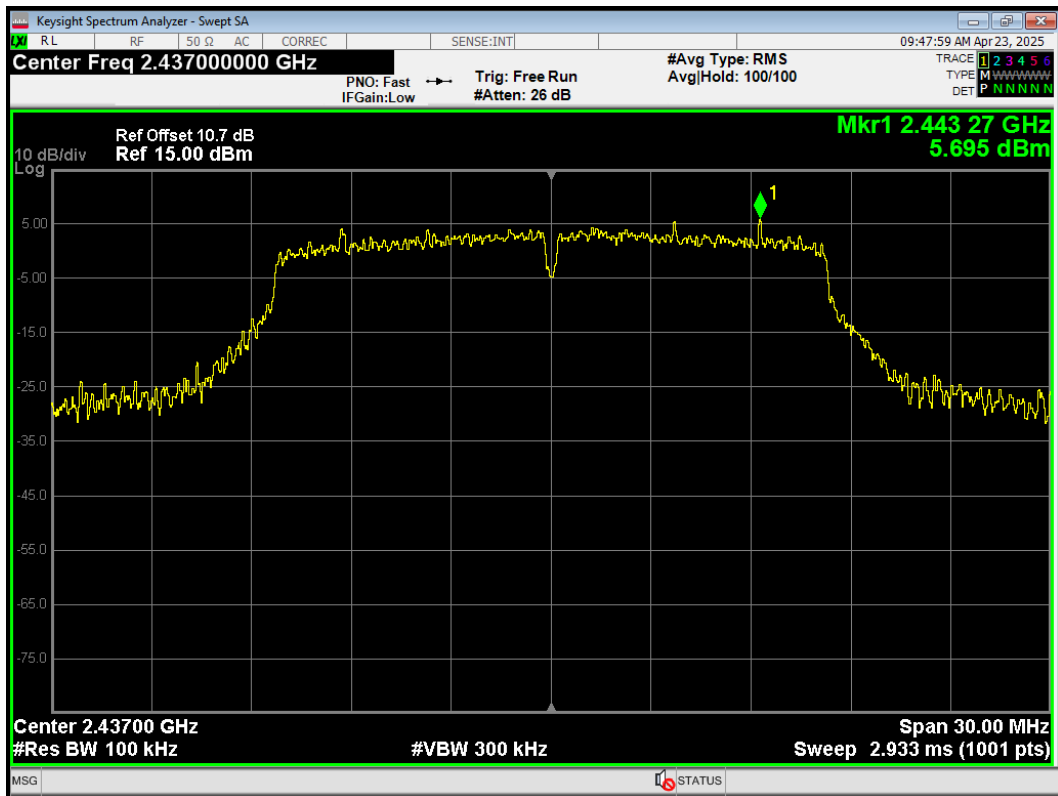
Tx. Spurious 802.11g 2412MHz Ref



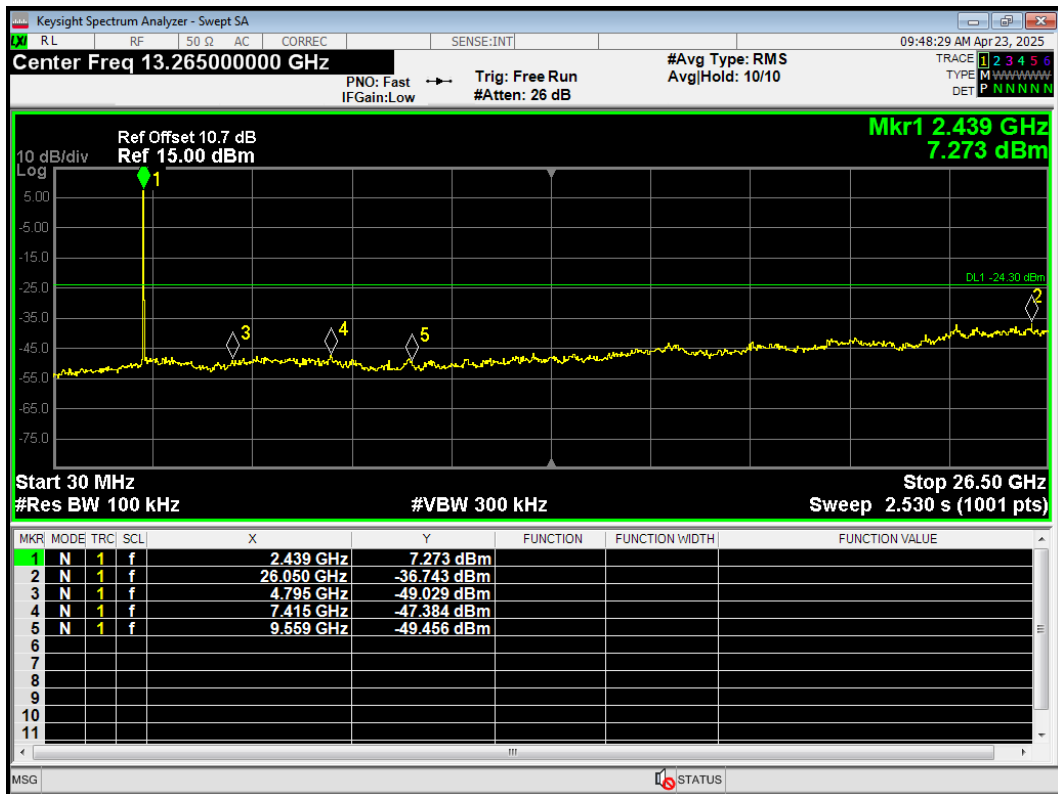
Tx. Spurious 802.11g 2412MHz Emission



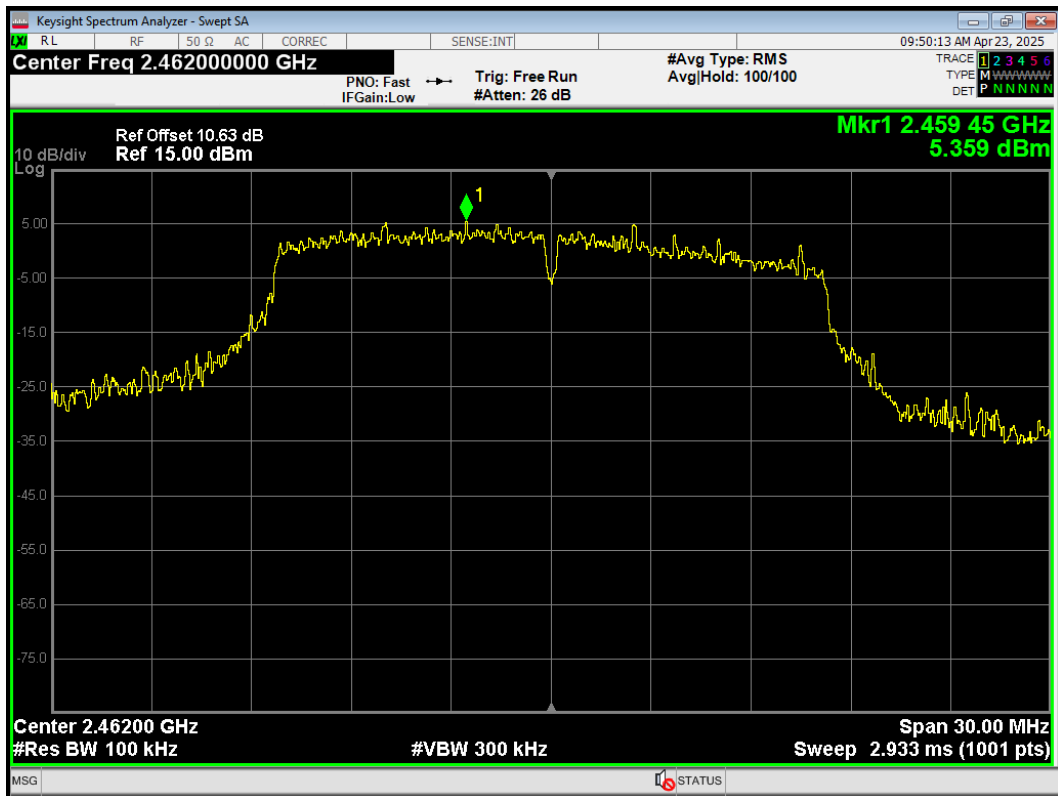
Tx. Spurious 802.11g 2437MHz Ref



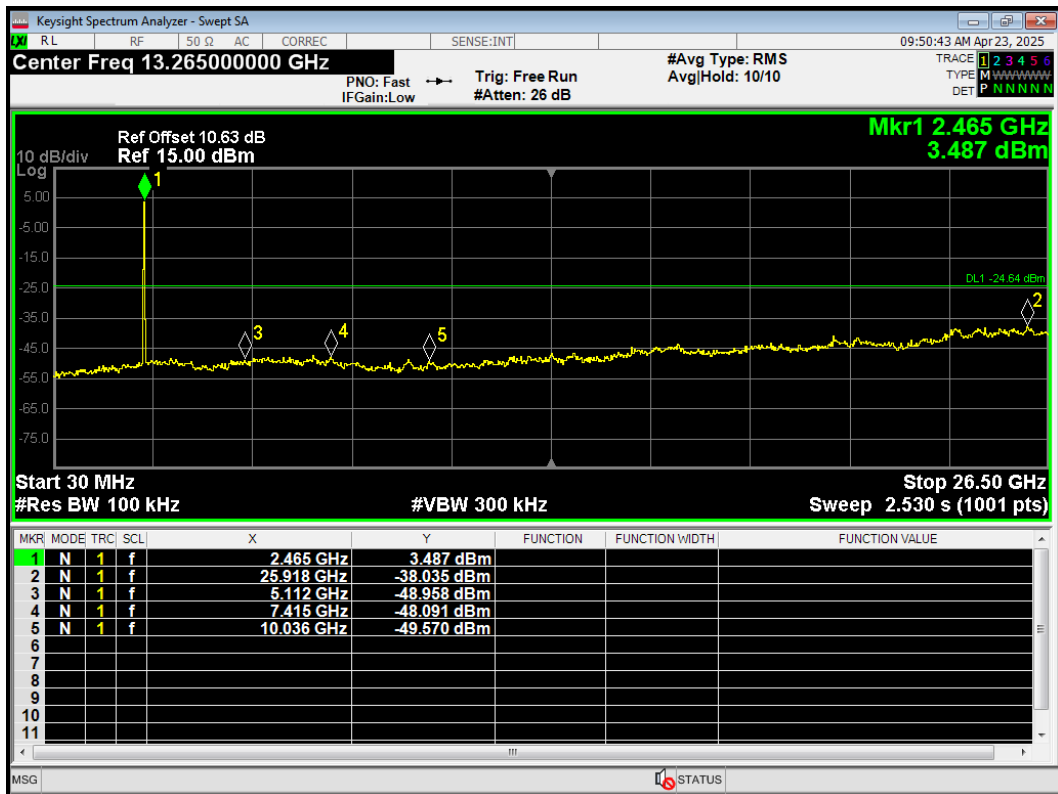
Tx. Spurious 802.11g 2437MHz Emission



Tx. Spurious 802.11g 2462MHz Ref



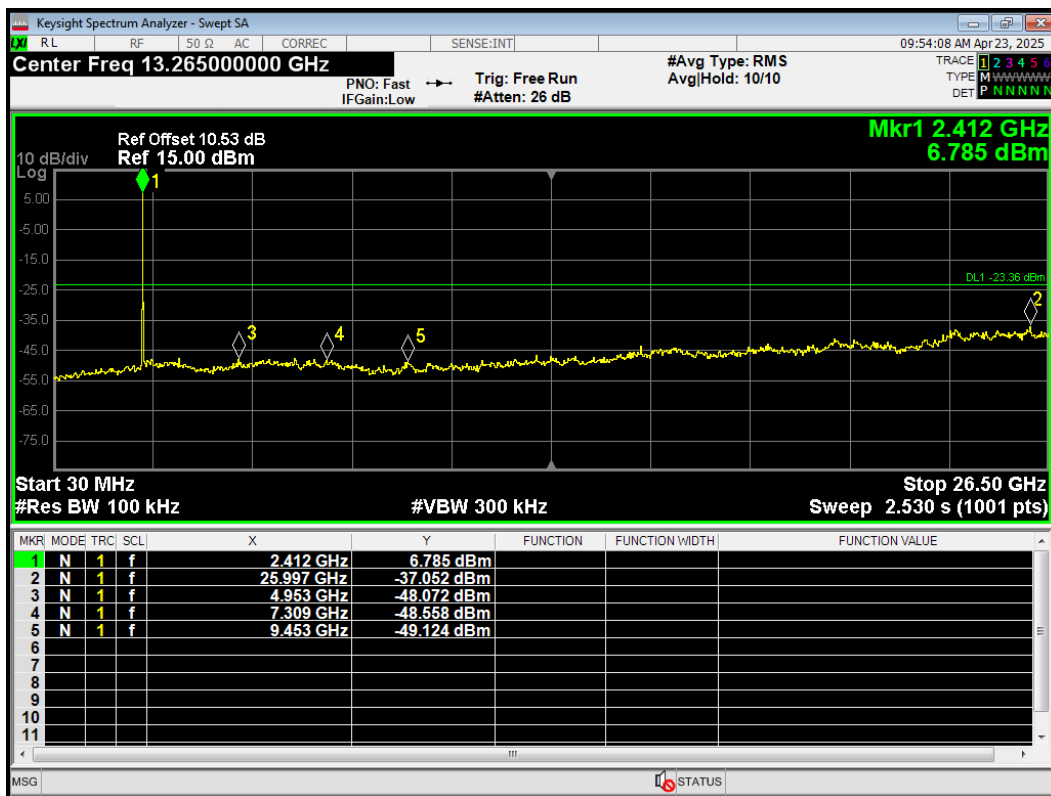
Tx. Spurious 802.11g 2462MHz Emission



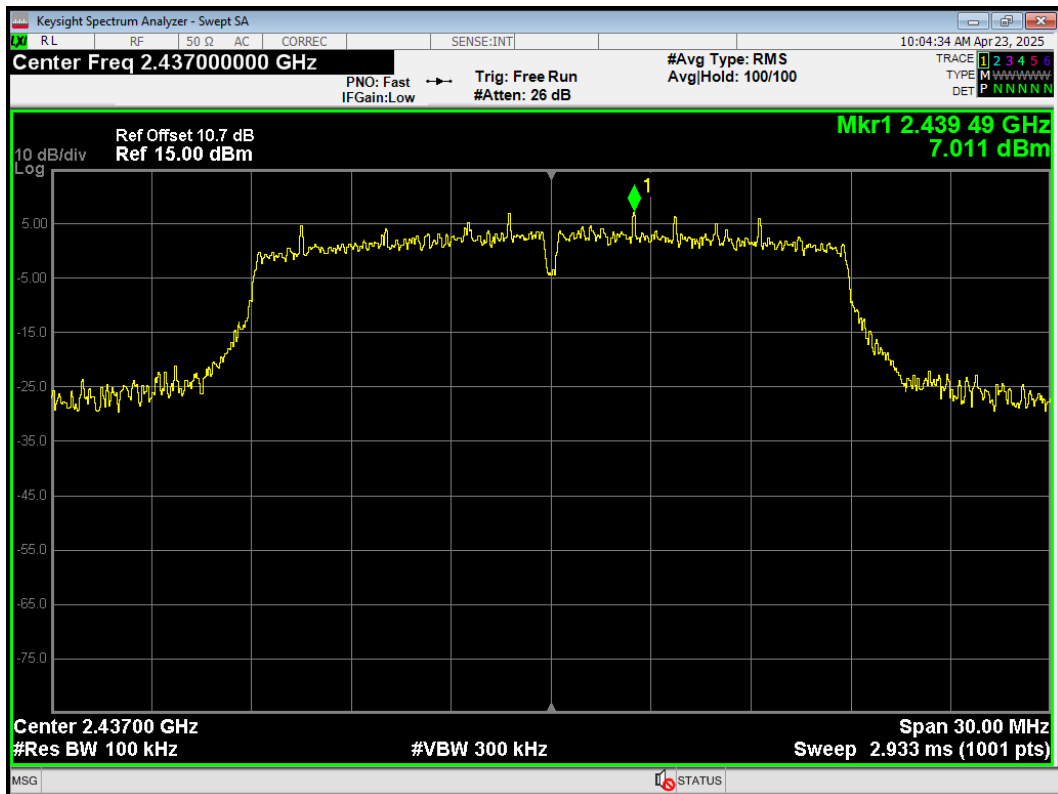
Tx. Spurious 802.11n(HT20) 2412MHz Ref



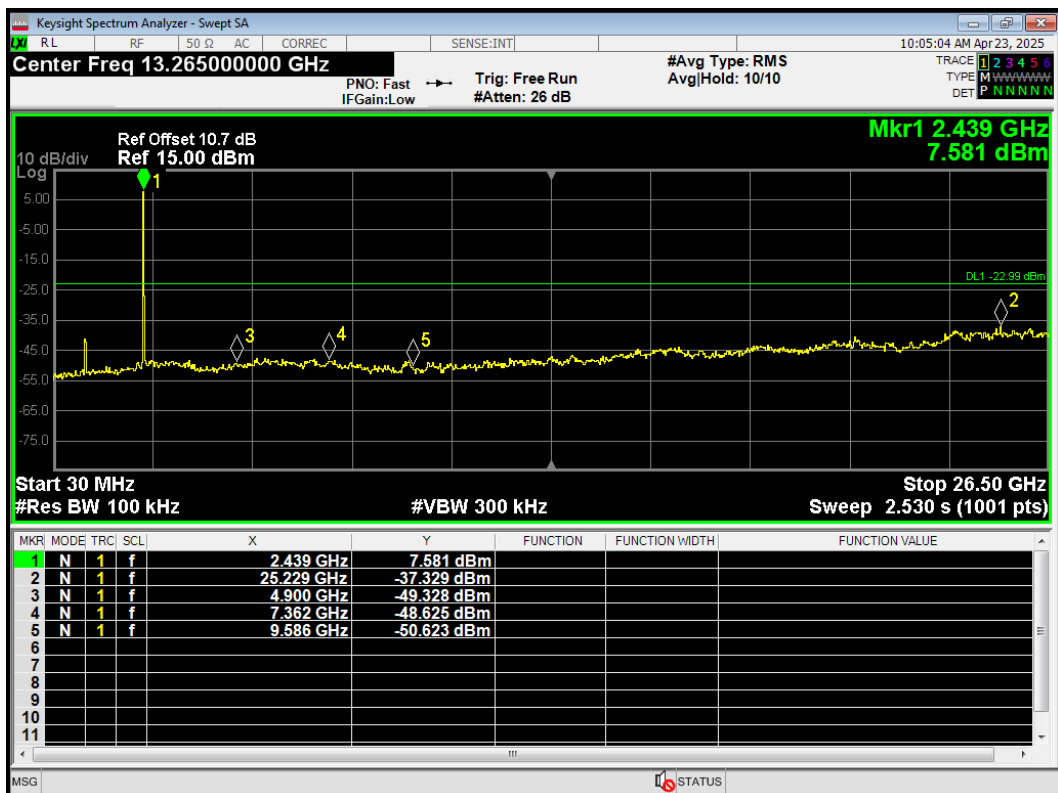
Tx. Spurious 802.11n(HT20) 2412MHz Emission



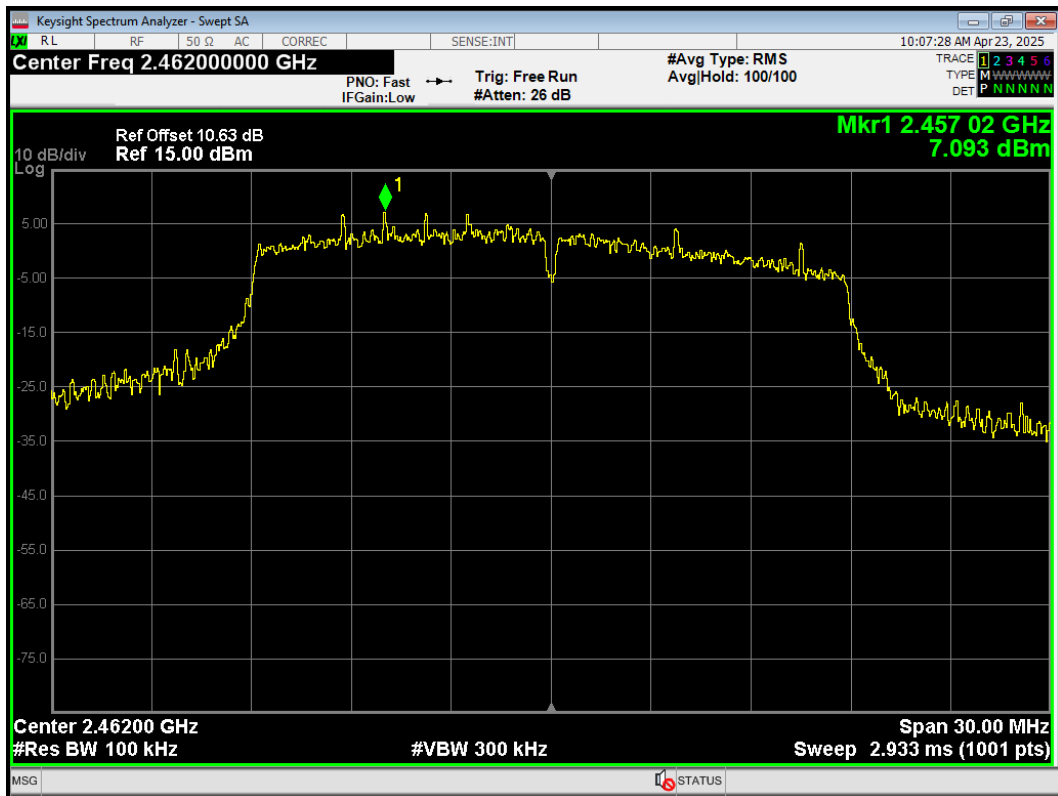
Tx. Spurious 802.11n(HT20) 2437MHz Ref



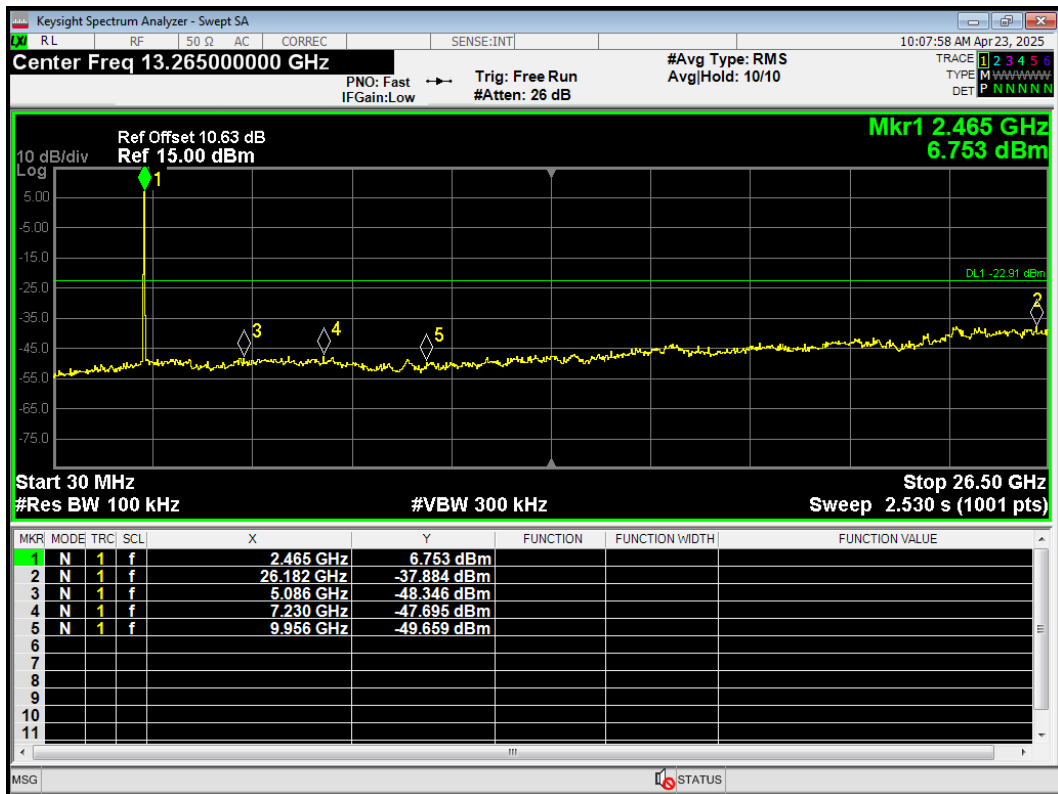
Tx. Spurious 802.11n(HT20) 2437MHz Emission



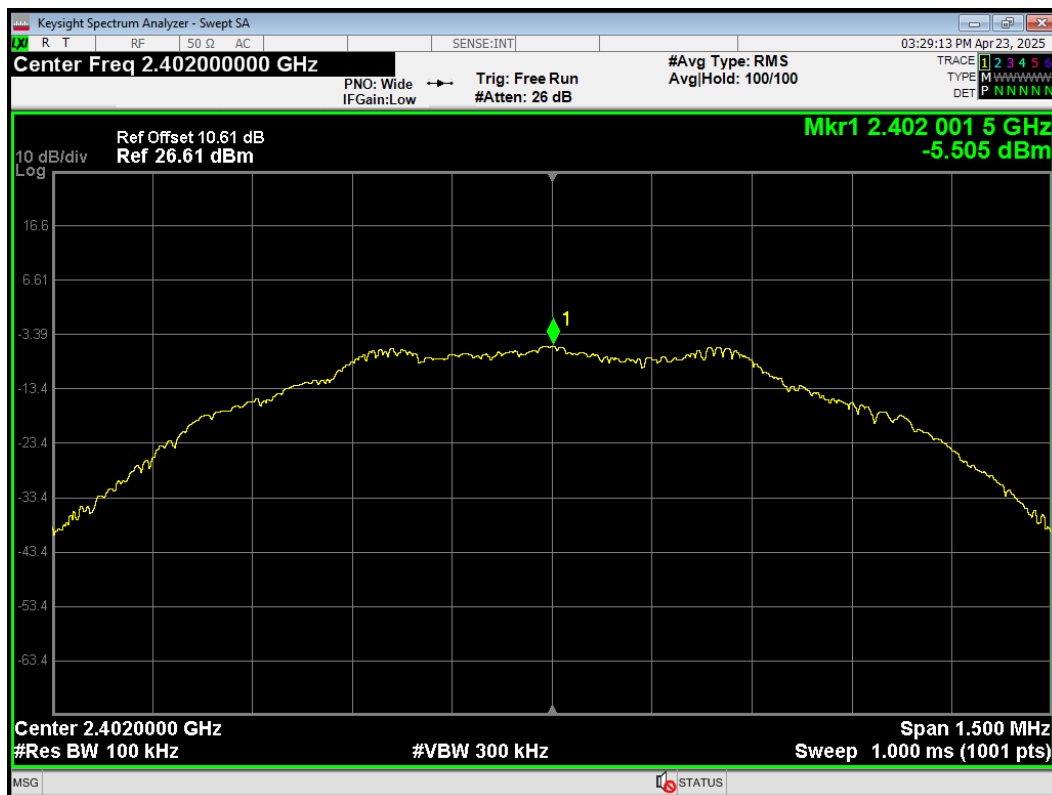
Tx. Spurious 802.11n(HT20) 2462MHz Ref



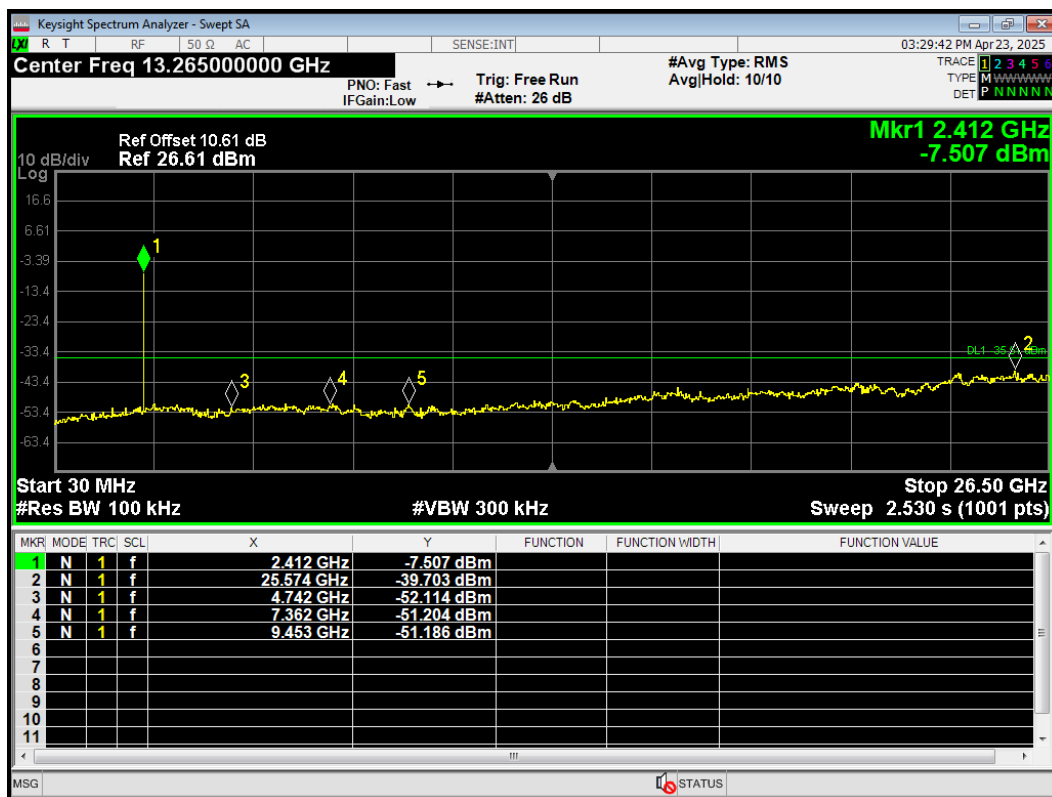
Tx. Spurious 802.11n(HT20) 2462MHz Emission



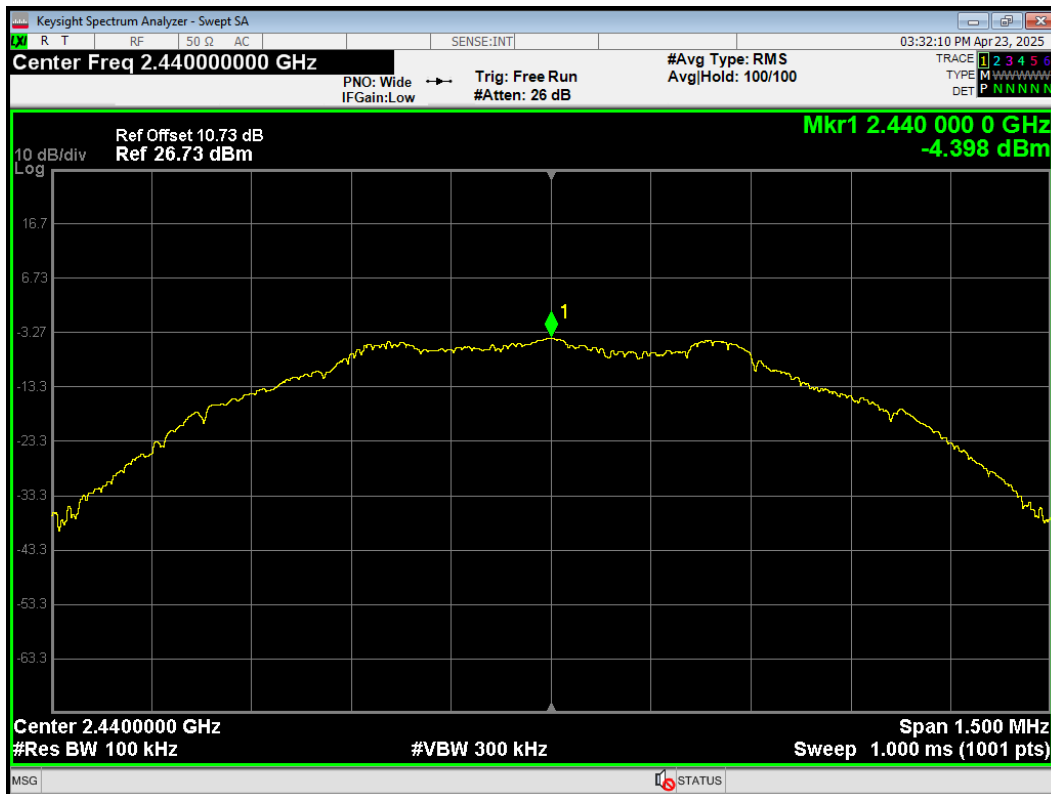
Tx. Spurious BLE (1M) 2402MHz Ref



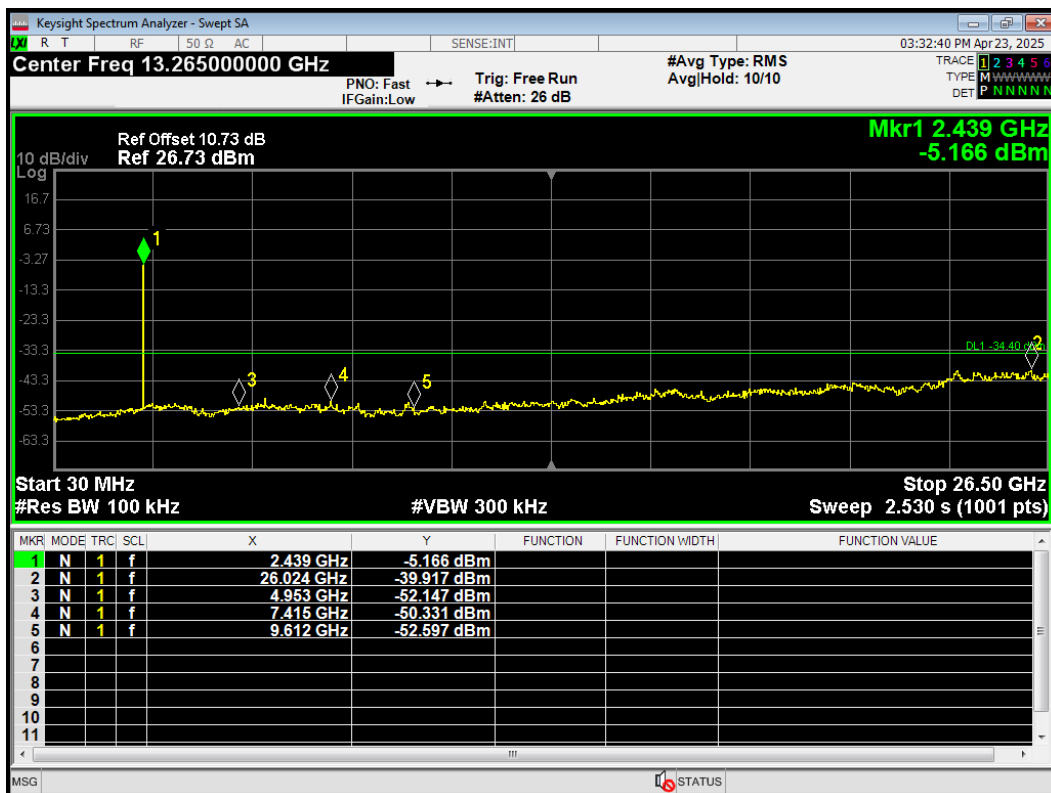
Tx. Spurious BLE (1M) 2402MHz Emission



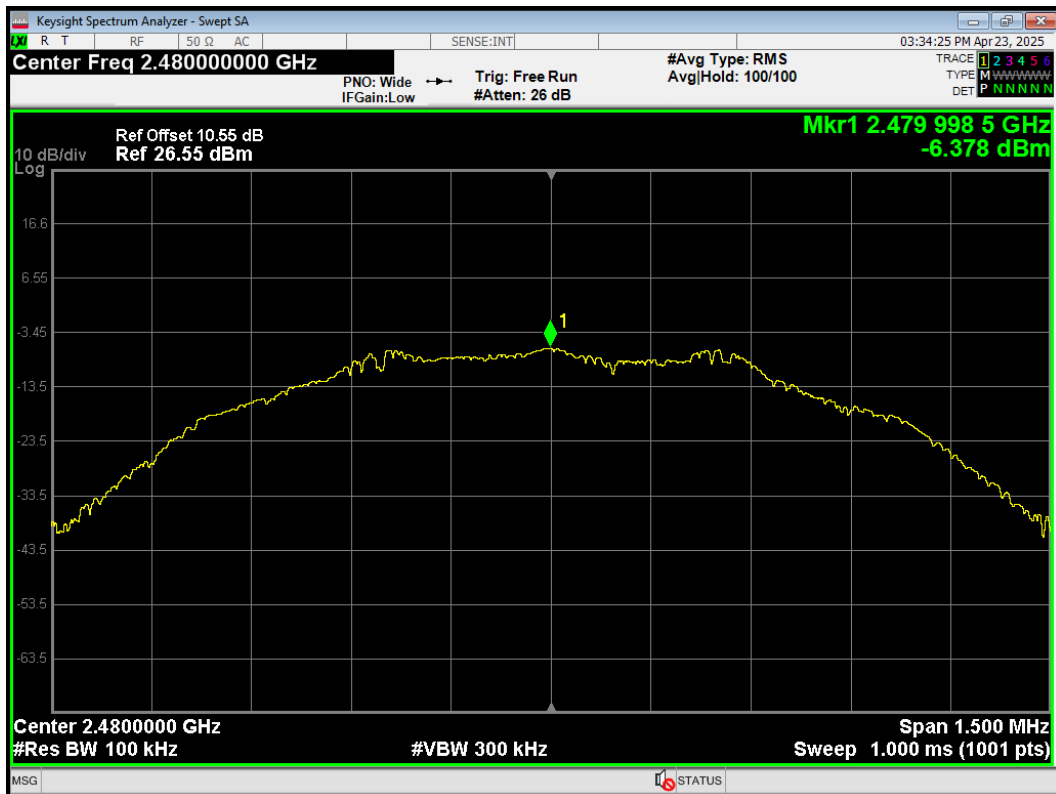
Tx. Spurious BLE (1M) 2440MHz Ref



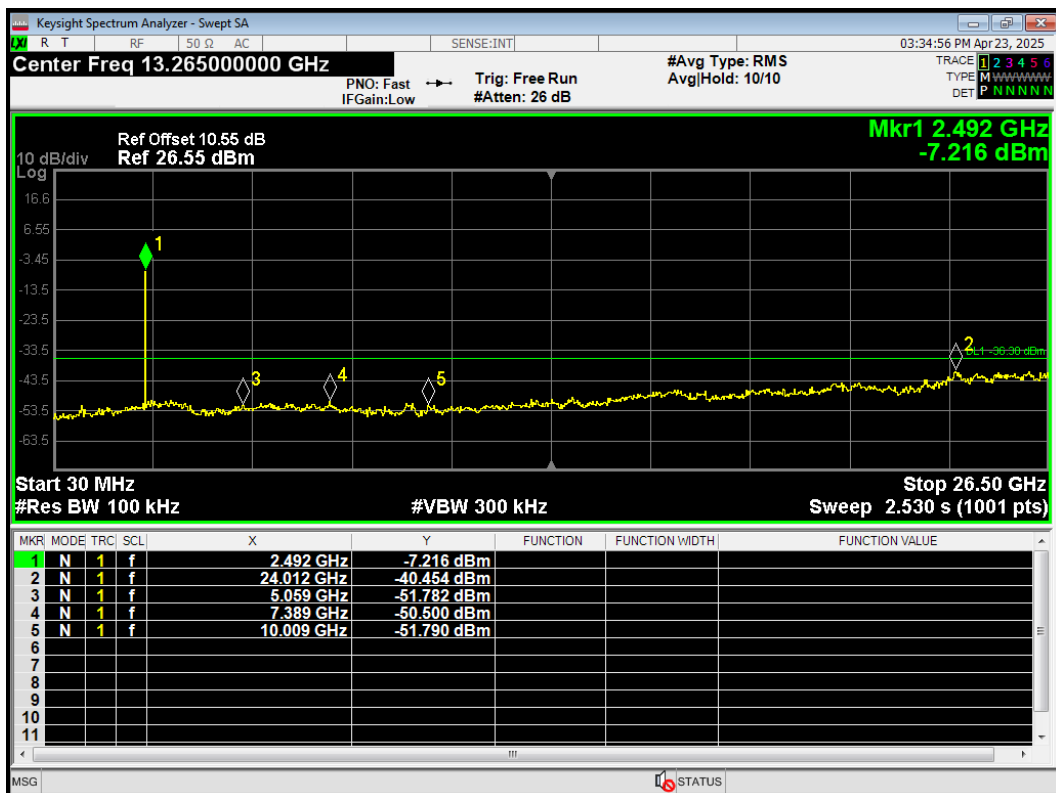
Tx. Spurious BLE (1M) 2440MHz Emission



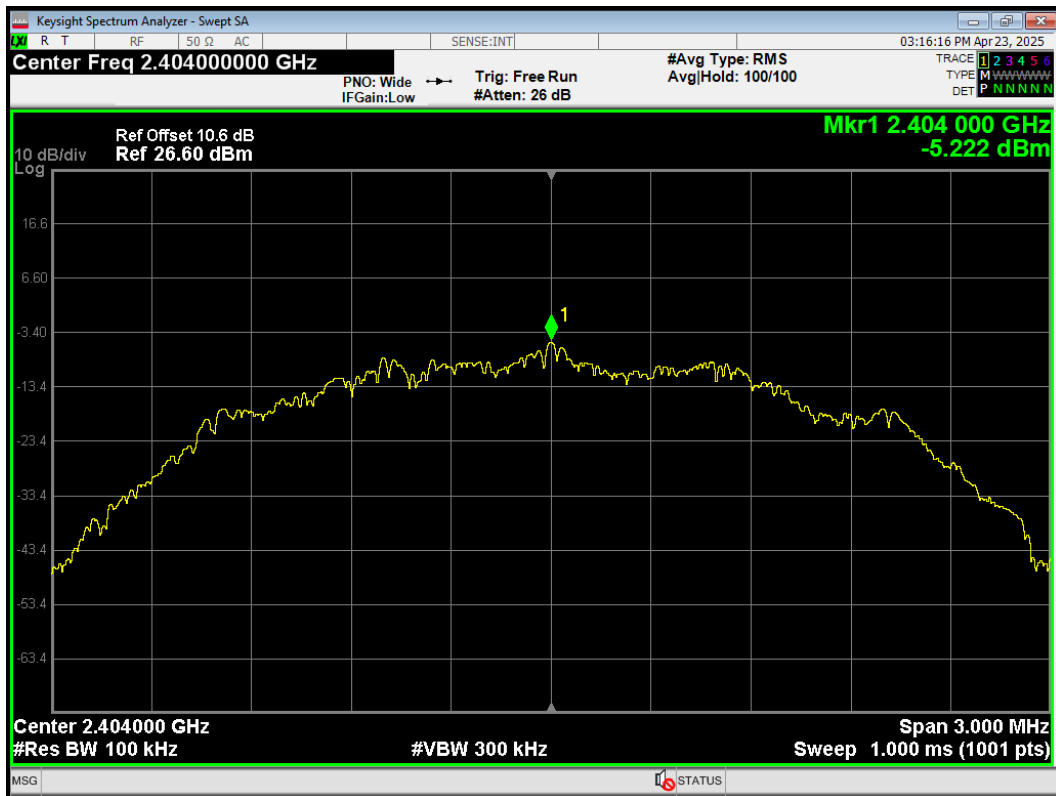
Tx. Spurious BLE (1M) 2480MHz Ref



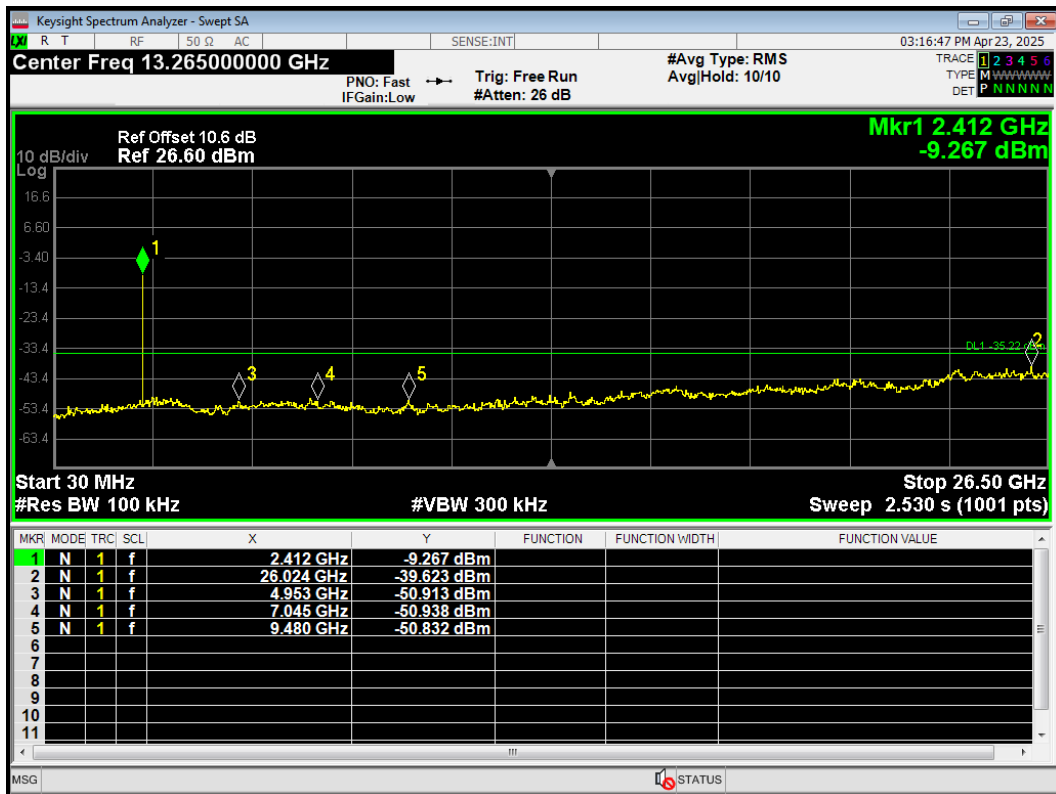
Tx. Spurious BLE (1M) 2480MHz Emission



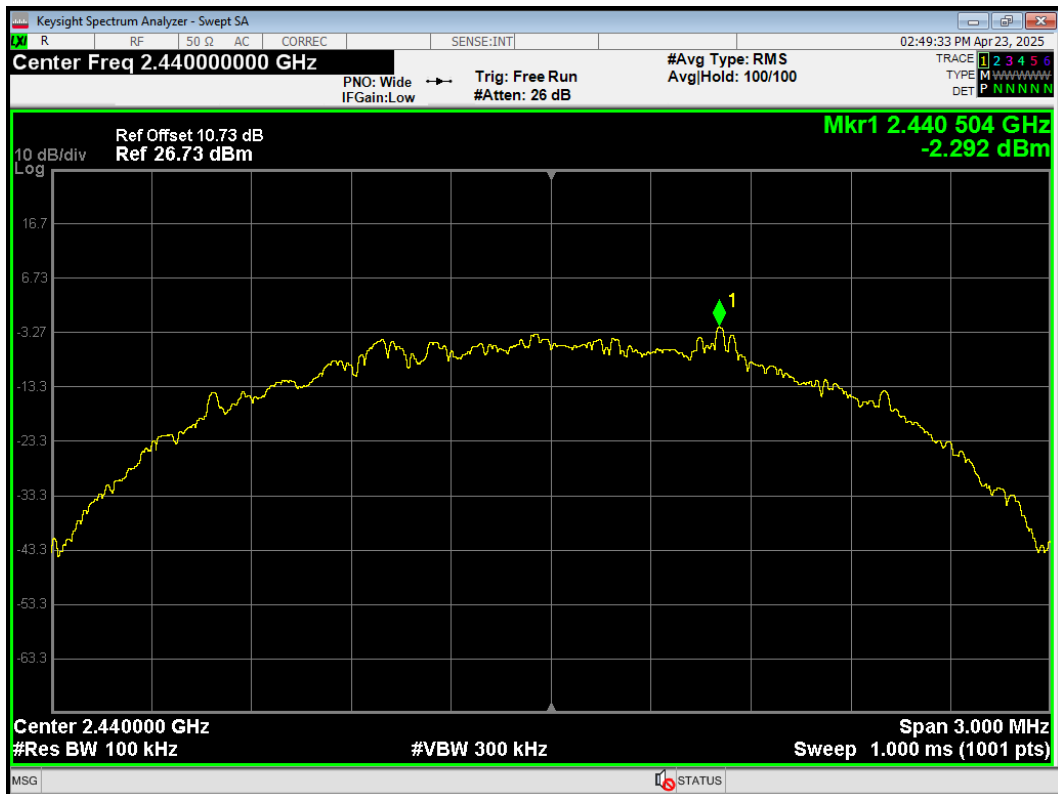
Tx. Spurious BLE (2M) 2404MHz Ref



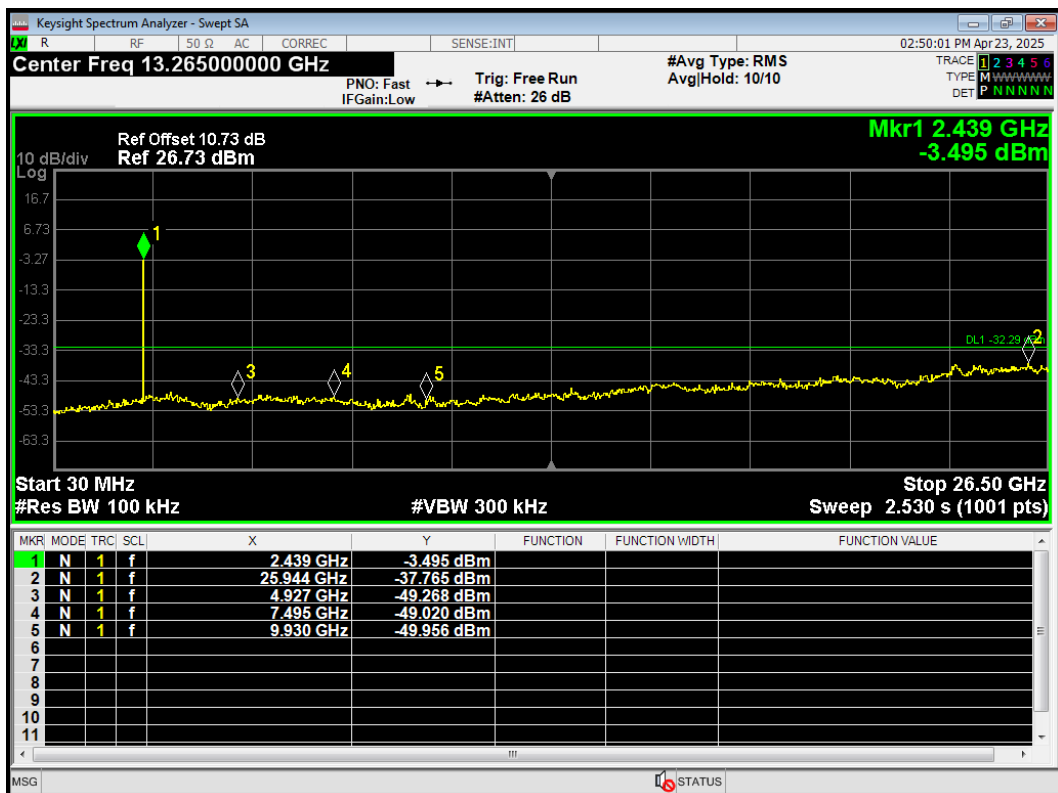
Tx. Spurious BLE (2M) 2404MHz Emission



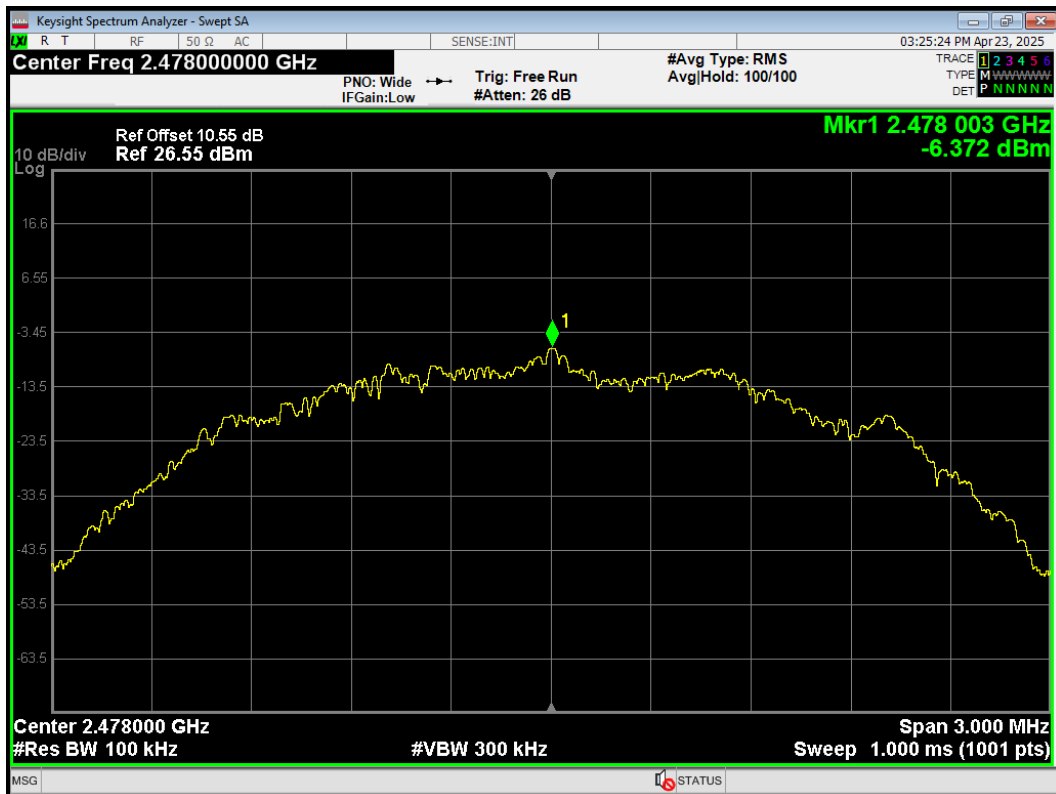
Tx. Spurious BLE (2M) 2440MHz Ref



Tx. Spurious BLE (2M) 2440MHz Emission



Tx. Spurious BLE (2M) 2478MHz Ref



Tx. Spurious BLE (2M) 2478MHz Emission

