

FCC CERTIFICATION TEST REPORT

Applicant:	SMART Technologies Inc.
Address:	Suite 600, 214 11 Avenue SW Calgary T2R 0K1 Canada
Manufacturer:	SMART Technologies Inc.
Address:	Suite 600, 214 11 Avenue SW Calgary T2R 0K1 Canada
Product Description:	GX-V4 Plus BT/BLE/WiFi 6 Radio Module
Brand Name:	SMART
Tested Model:	SKI.WB800D80U.5
FCC ID:	QCI-SKIWB8D8U5
Report No.:	JCF250106074-003
Received Date:	Jan. 06, 2025
Tested Date:	Jan. 06, 2025 ~ Feb. 28, 2025
Issued Date:	Feb. 28, 2025
Test Standards:	FCC Rules and Regulations Part 15 Subpart C
Test Procedure:	ANSI C63.10:2013
Test Result:	Pass

Prepared By:  <u>Roger Li/Engineer</u>	Date: Feb. 28, 2025
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Reviewed By:  <u>Kennys Zhang/Engineer</u>	Date: Feb. 28, 2025
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Approved By:  <u>Talent Zhang/Engineer</u>	Date: Feb. 28, 2025
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Note: The test results in this report apply exclusively to the tested model / sample. Without written approval of Guangzhou Jingce Testing Technology Co., Ltd. the test report shall not be reproduced except in full.

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Feb. 28, 2025	Original Report	/

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1. Test Report Declare

Applicant:	SMART Technologies Inc.
Address:	Suite 600, 214 11 Avenue SW Calgary T2R 0K1 Canada
Manufacturer:	SMART Technologies Inc.
Address:	Suite 600, 214 11 Avenue SW Calgary T2R 0K1 Canada
Product Name:	GX-V4 Plus BT/BLE/WiFi 6 Radio Module
Brand Name:	SMART
Model Name:	SKI.WB800D80U.5
Difference Description:	NA

We Declare:

The equipment described above is tested by Guangzhou Jingce Testing Technology Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangzhou Jingce Testing Technology Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests except as provided information by clients.

2. Summary of Test Results

Summary of Test Results			
Clause	Test Items	FCC/ISED Rules	Test Results
1	6dB Bandwidth	FCC Part 15.247 (a) (2)	Pass
2	Peak Conducted Output Power	FCC Part 15.247 (b) (3)	Pass
3	Power Spectral Density	FCC Part 15.247 (e)	Pass
4	Conducted Bandedge and Spurious Emission	FCC Part 15.247 (d)	Pass
5	Radiated Bandedge and Spurious Emission	FCC Part 15.247 (d) FCC Part 15.209 FCC Part 15.205	Pass
6	Conducted Emission Test For AC Power Port	FCC Part 15.207	Pass
7	Antenna Requirement	FCC Part 15.203	Pass

3. Test Laboratory

Guangzhou Jingce Testing Technology Co., Ltd.

Add.: No.10, Hefeng No.1 street, Huangpu District, Guangzhou, Guangdong, People's Republic of China

Association for Laboratory Accreditation(A2LA). Certificate Number: 6594.03

FCC Designation Number: CN1381. Test Firm Registration Number: 486550

IC Test Firm Registration Number: 31808

Conformity Assessment Body identifier: CN0173

4. Equipment Under Test

4.1. Description of EUT

EUT Name:	GX-V4 Plus BT/BLE/WiFi 6 Radio Module
Model Number:	SKI.WB800D80U.5
EUT Function Description:	Please reference user manual of this device
Power Supply:	DC 5V, 1A
Hardware Version:	NA
Software Version:	NA
Radio Specification:	IEEE802.11b/g/n/ax
Operation Frequency:	IEEE 802.11b: 2412MHz—2462MHz IEEE 802.11g: 2412MHz—2462MHz IEEE 802.11n HT20: 2412MHz—2462MHz IEEE 802.11n HT40: 2422MHz—2452MHz IEEE 802.11ax HE20: 2412MHz—2462MHz IEEE 802.11ax HE40: 2422MHz—2452MHz
Modulation:	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n (HT20/40): OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ax (HE20/40): OFDMA (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)
Data Rate:	IEEE 802.11b: 1, 2, 5.5, 11 Mbps IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps IEEE 802.11n HT20: 7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65.0, 72.2 Mbps IEEE 802.11n HT40: 15, 30, 45, 60, 90, 120, 135, 150 Mbps IEEE 802.11ax HE20: 8.6, 17.2, 25.8, 34.4, 51.6, 68.8, 77.4, 86, 103.2, 114.7, 129, 143.4Mbps IEEE 802.11ax HE40: 17.2, 34.4, 51.6, 68.8, 103.2, 137.6, 154.9, 172.1, 206.5, 229.4, 258.1, 286.8Mbps
Antenna Type:	Coaxial Antenna, MAX. Gain: 4.06 dBi

Note 1: EUT is the ab. of equipment under test.

Note 2: The antenna gain is declared by the customer and the laboratory is not responsible for the accuracy of the antenna gain.

4.2. Channel List

Channel List for 802.11b/g/n/ax (20 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	4	2427	7	2442	10	2457
2	2417	5	2432	8	2447	11	2462
3	2422	6	2437	9	2452	/	/

Channel List for 802.11n/ax (40 MHz)					
Channel	Frequency (MHz)	Channel	Frequency(MHz)	Channel	Frequency (MHz)
3	2422	6	2437	9	2452
4	2427	7	2442	/	/
5	2432	8	2447	/	/

4.3. Test Channel Configuration

Tested mode, channel and rand data rate information			
Mode	Data rate (Mbps) (see Note)	Channel	Frequency (MHz)
802.11b	1	Low: CH1	2412
	1	Middle: CH6	2437
	1	High: CH11	2462
802.11g	6 MHz	Low: CH1	2412
	6 MHz	Middle: CH6	2437
	6 MHz	High: CH11	2462
802.11n HT20	MCS 0	Low: CH1	2412
	MCS 0	Middle: CH6	2437
	MCS 0	High: CH11	2462
802.11n HT40	MCS 0	Low: CH3	2422
	MCS 0	Middle: CH6	2437
	MCS 0	High: CH9	2452
802.11ax HE20	MCS 0	Low: CH1	2412
	MCS 0	Middle: CH6	2437
	MCS 0	High: CH11	2462
802.11ax HE40	MCS 0	Low: CH3	2422
	MCS 0	Middle: CH6	2437
	MCS 0	High: CH9	2452

Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.

4.4. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	21-25 °C
Humidity range:	40-75%
Pressure range:	86-106 kPa

4.5. Description of Available Antennas

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band			
Test Software		MobaXterm	
Modulation Mode	Transmit Antenna Number	Test Software Setting Value	
		Channel	ANT1
802.11b	1	CH1	1 0 0 10
		CH6	1 0 0 10
		CH11	1 0 0 10
802.11g	1	CH1	1 0 4 5
		CH6	1 0 4 5
		CH11	1 0 4 5

802.11HT20	1	CH1	1 1 0 5
		CH6	1 1 0 5
		CH11	1 1 0 5
802.11n HT40	1	CH3	1 1 0 6
		CH6	1 1 0 6
		CH9	1 1 0 6
802.11ax HE20	1	CH1	1 2 0 5
		CH6	1 2 0 5
		CH11	1 2 0 5
802.11ax HE40	1	CH3	1 2 0 6
		CH6	1 2 0 6
		CH9	1 2 0 6

4.6. Description of Available Antennas

Test Mode	Transmit and Receive Mode	Description
IEEE 802.11b	☑ 1TX, 1RX	ANT 1 can be used as transmitting/receiving antenna.
IEEE 802.11g	☑ 1TX, 1RX	ANT 1 can be used as transmitting/receiving antenna.
IEEE 802.11n HT20	☑ 1TX, 1RX	ANT 1 can be used as transmitting/receiving antenna.
IEEE 802.11n HT40	☑ 1TX, 1RX	ANT 1 can be used as transmitting/receiving antenna.
IEEE 802.11ax HE20	☑ 1TX, 1RX	ANT 1 can be used as transmitting/receiving antenna.
IEEE 802.11ax HE40	☑ 1TX, 1RX	ANT 1 can be used as transmitting/receiving antenna.
Note: 1. Only 802.11n HT20/HT40, Only 802.11ax HE20/HE40 support MIMO mode 2. WLAN 2.4 GHz & WLAN 5G can't transmit simultaneously. (declared by client)		

5. Description of Test Setup

5.1. Accessory

Description of Accessories	Manufacturer	Model Number	Description	Remark
/	/	/	/	/

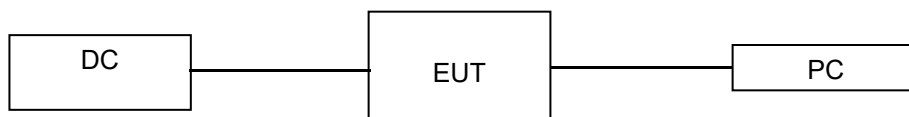
5.2. Support Equipment

Equipment	Brand Name	Model Name	P/N
PC	Lenovo	T480	/

5.3. Test Setup

The EUT can work in Fixed Frequency mode.

5.4. Setup Diagram for Tests



6. Measurement Uncertainty

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

Test Item	Uncertainty
AC Power Conduction emission	1.37 dB
All Radiated emissions	5.4dB
Conducted emissions	3.09 dB
Occupied Channel Bandwidth	1.1%
Conducted Output power	0.82dB
Power Spectral Density	0.82dB
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k = 2.	

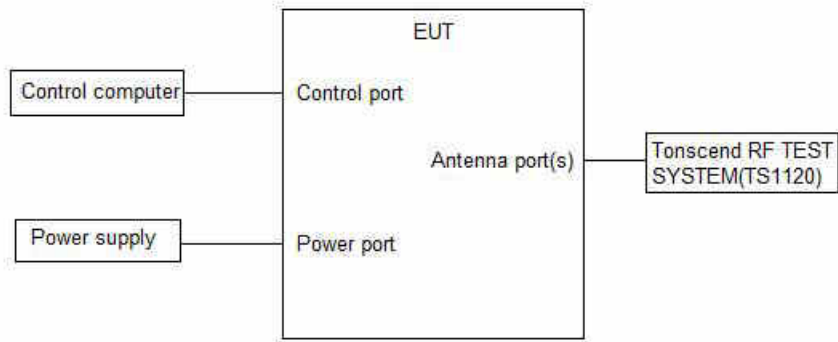
7. Measuring Instrument and Software Used

TS Test System						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
☒	Spectrum Analyzer	Keysight	N9030B	MY56320512	Aug. 22, 2024	Aug. 21, 2025
☒	Vector Signal Generator	Keysight	N5182B	MY57300334	Aug. 22, 2024	Aug. 21, 2025
☒	Signal Generator	Keysight	N5171B	MY57280639	Aug. 22, 2024	Aug. 21, 2025
☒	DC POWER	Keysight	E342A	MY59020356	Aug. 29, 2024	Aug. 28, 2025
☒	Incubator thermometer	GWS	EL-02JA	21107288	Aug. 15, 2024	Aug. 14, 2025
☒	Control unit(Power sensor)	Tonscend	JS0806-2	/	Aug. 23, 2024	Aug. 22, 2025
☒	Spectrum Analyzer	Keysight	N9020B	MY60112206	Sep. 11, 2024	Sep. 10, 2025
☒	Control unit(Power sensor)	Tonscend	JS0806-2	21H8060465	Aug. 22, 2024	Aug. 21, 2025
☒	Spectrum Analyzer	Keysight	N9020B	MY60112811	Aug. 23, 2024	Aug. 22, 2025
☒	Signal Generator	Keysight	N5173B	MY62220145	Aug. 23, 2024	Aug. 22, 2025
☒	Vector Signal Generator	Keysight	N5182B	MY61252859	Aug. 22, 2024	Aug. 21, 2025
☒	DC POWER	Keysight	E3642A	MY40005294	Aug. 30, 2024	Aug. 29, 2025
☒	Control unit(Power sensor)	Tonscend	JS0806-2	24F80620865	Aug. 23, 2024	Aug. 22, 2025
Software						
Used	Description	Manufacturer	Name		Version	
☒	Test software	Tonscend	JS1120-3		V3.3.10	
RSE Test System						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
☒	EMI Receiver	R&S	ESR26	101424	Sep. 14, 2024	Sep. 13, 2025

☒	Hybrid Antenna	Schwarzbeck	VULB9163	01416	May. 22, 2024	May. 21, 2025
☒	Horn Antenna 1	Schwarzbeck	BBHA 9120 D	02910	Sep. 11, 2024	Sep. 10, 2025
☒	Horn Antenna 2	ETS	BBHA 9170	1090	Sep. 11, 2024	Sep. 10, 2025
☒	loop-antenna	Schwarzbeck	FMZB 1513-60	00030	Jan. 12, 2025	Jan. 11, 2026
☒	Test path	/	Path2: WIFI-2.4G 1-3GHz	/	Aug. 23, 2024	Aug. 22, 2025
☒	Test path	/	Path7: ALL PASS 1-18GHz	/	Aug. 23, 2024	Aug. 22, 2025
☒	Test path	/	Path9: 3GHz High PASS 3-18GHz	/	Aug. 23, 2024	Aug. 22, 2025
☒	Test path	/	Path16: 30MHz-1GHz ALL PASS NO AMP	/	Aug. 23, 2024	Aug. 22, 2025
☒	Signal Pre-Amplifier	ETS	3116C-PA	00217677	Sep. 06, 2024	Sep. 05, 2025
☒	3m Fully-anechoic Chamber	YIHENG	9m*6m*6m	001	Sep. 05, 2023	Sep. 04, 2026
Software						
Used	Description	Manufacturer	Name		Version	
☒	Test software	Tonscend	TS+		V5.0.0.0	
Conducted Emission Test For AC Power Port						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
☒	LISN	R&S	ENV216	102509	Aug. 22, 2024	Aug. 21, 2025
☒	EMI Receiver	R&S	ESR	102154	Aug. 22, 2024	Aug. 21, 2025
Software						
Used	Description	Manufacturer	Name		Version	
☒	Test software	EZ	EZ-EMC		EMEC-3A1	
Other Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
☒	Temperature & Humidity	Temperature	HTC-1	/	Sep. 04, 2024	Sep. 03, 2025

8. On Time and Duty Cycle

8.1. Block diagram of test setup



8.2. Limits

None; for reporting purposes only

8.3. Procedure

KDB 558074 Zero-Span Spectrum Analyzer Method

8.4. Results

Test Mode	Ant.	Freq. (MHz)	Transmission Duration (ms)	Transmission Period (ms)	Duty Cycle (%)
11B	Ant1	2412	12.22	12.75	95.84
		2437	12.22	12.74	95.92
		2462	12.22	12.75	95.84
11G	Ant1	2412	2.03	2.56	79.30
		2437	2.03	2.56	79.30
		2462	2.03	2.56	79.30
11N20SISO	Ant1	2412	1.89	2.41	78.42
		2437	1.90	2.43	78.19
		2462	1.89	2.42	78.10
11N40SISO	Ant1	2422	0.93	1.46	63.70
		2437	0.93	1.45	64.14
		2452	0.93	1.46	63.70
11AX20SISO	Ant1	2412	1.46	1.99	73.37
		2437	1.46	1.99	73.37
		2462	1.46	1.98	73.74
11AX40SISO	Ant1	2422	0.77	1.30	59.23
		2437	0.76	1.29	58.91
		2452	0.76	1.29	58.91

Note: Duty Cycle Correction Factor = $10\log(1/x)$.

Where: x is Duty Cycle (Linear)

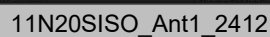
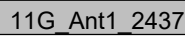
Where: T is On Time

If that calculated VBW is not available on the analyzer, then the next higher value should be used.

For mode 11b, the duty cycle is greater than 98 %, so it can set VBW to 10 Hz.

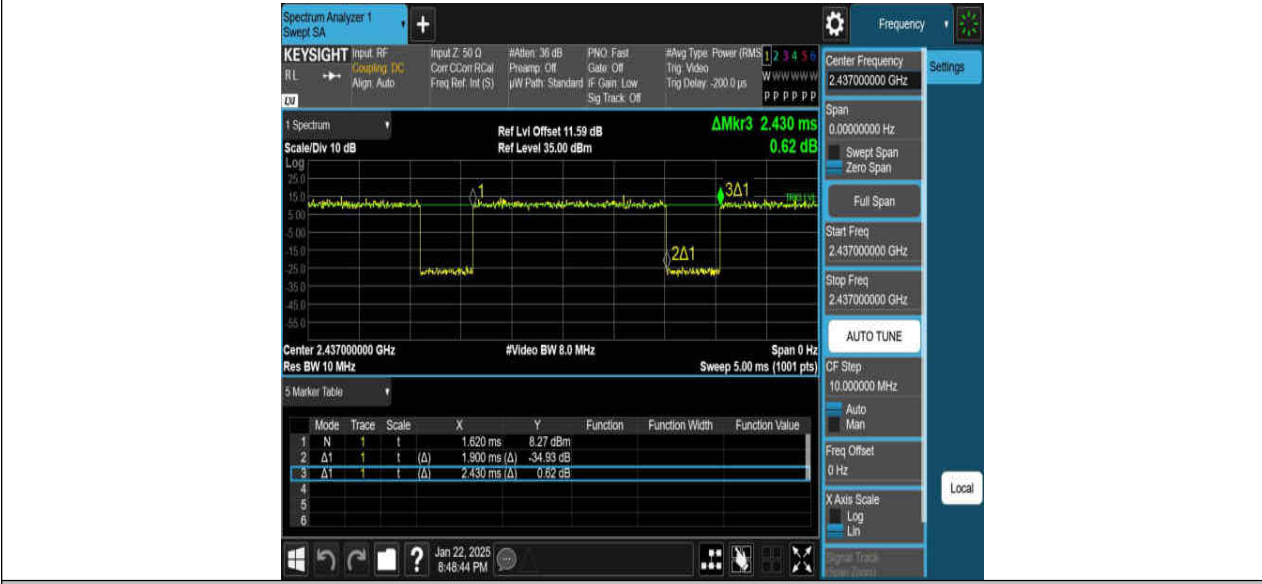
8.5. Original test data







11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



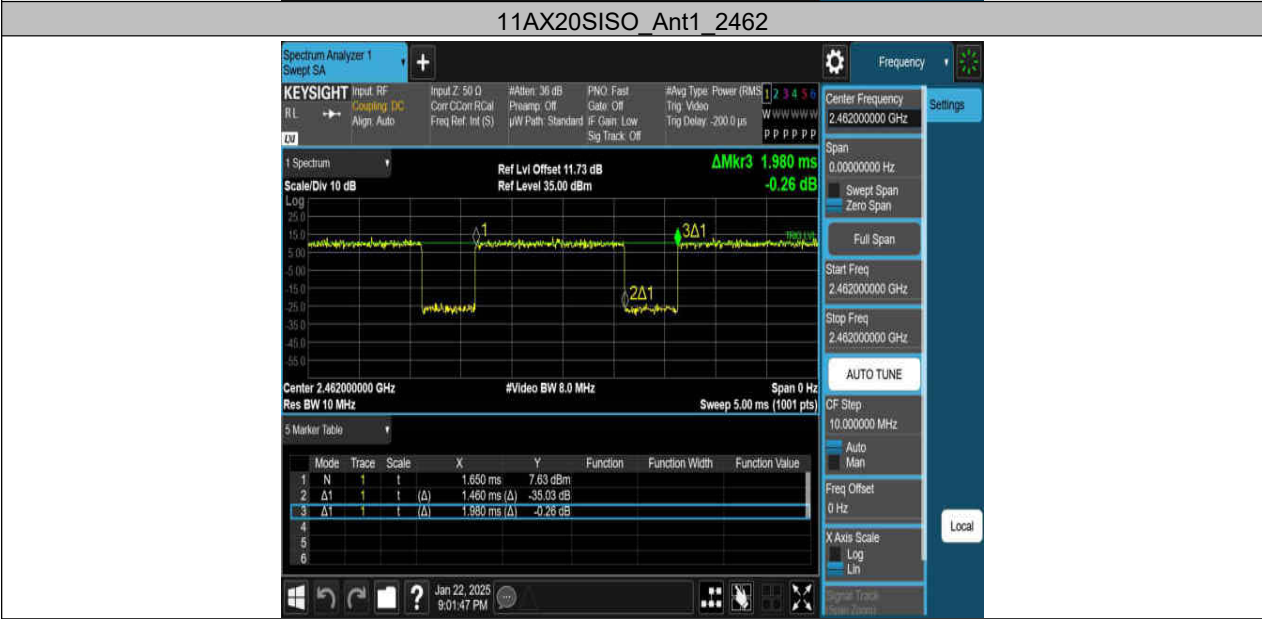
11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



11AX20SISO_Ant1_2412





9. 6 dB DTS Bandwidth

9.1. Block diagram of test setup

Same as section 8.1

9.2. Limits

CFR 47 FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(a)(2)	6 dB Bandwidth	≥ 500 kHz	2400-2483.5

9.3. Test Procedure

Connect the UUT to the spectrum analyzer and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	For 6 dB Bandwidth :100 kHz For 99 % Occupied Bandwidth :1 % to 5 % of the occupied bandwidth
VBW	For 6 dB Bandwidth: $\geq 3 \times$ RBW For 99 % Occupied Bandwidth : $\geq 3 \times$ RBW
Trace	Max hold
Sweep	Auto couple

Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB and 99 % relative to the maximum level measured in the fundamental emission.

9.4. Results

6dB bandwidth:

Test Mode	Ant.	Freq. (MHz)	DTS BW (MHz)	FL (MHz)	FH (MHz)	Limit (MHz)	Verdict
11B	Ant1	2412	9.080	2407.440	2416.520	0.5	PASS
		2437	9.080	2432.440	2441.520	0.5	PASS
		2462	9.080	2457.440	2466.520	0.5	PASS
11G	Ant1	2412	16.280	2403.840	2420.120	0.5	PASS
		2437	16.280	2428.840	2445.120	0.5	PASS
		2462	15.640	2453.840	2469.480	0.5	PASS
11N20SISO	Ant1	2412	17.320	2403.440	2420.760	0.5	PASS
		2437	17.560	2428.200	2445.760	0.5	PASS
		2462	17.160	2453.200	2470.360	0.5	PASS
11N40SISO	Ant1	2422	35.680	2404.080	2439.760	0.5	PASS
		2437	35.440	2419.400	2454.840	0.5	PASS
		2452	35.040	2434.480	2469.520	0.5	PASS
11AX20SISO	Ant1	2412	17.440	2402.960	2420.400	0.5	PASS
		2437	17.840	2428.200	2446.040	0.5	PASS
		2462	16.840	2452.840	2469.680	0.5	PASS
11AX40SISO	Ant1	2422	35.920	2403.600	2439.520	0.5	PASS
		2437	36.480	2419.240	2455.720	0.5	PASS
		2452	36.240	2433.200	2469.440	0.5	PASS

99 % bandwidth:

Test Mode	Ant.	Channel Freq. (MHz)	OCB (MHz)	FL (MHz)	FH (MHz)	Limit (MHz)	Verdict
11B	Ant1	2412	13.080	2405.4692	2418.5492	---	---
		2437	13.047	2430.5298	2443.5768	---	---
		2462	13.073	2455.4459	2468.5189	---	---
11G	Ant1	2412	17.208	2403.3266	2420.5346	---	---
		2437	17.150	2428.3829	2445.5329	---	---
		2462	17.245	2453.2524	2470.4974	---	---
11N20SISO	Ant1	2412	18.354	2402.7745	2421.1285	---	---
		2437	18.327	2427.8288	2446.1558	---	---
		2462	18.350	2452.7567	2471.1067	---	---
11N40SISO	Ant1	2422	36.680	2403.6531	2440.3331	---	---
		2437	36.553	2418.6663	2455.2193	---	---
		2452	36.542	2433.6307	2470.1727	---	---
11AX20SISO	Ant1	2412	19.152	2402.3965	2421.5485	---	---
		2437	19.149	2427.4018	2446.5508	---	---
		2462	19.124	2452.3773	2471.5013	---	---
11AX40SISO	Ant1	2422	37.922	2403.0255	2440.9475	---	---
		2437	37.883	2418.0385	2455.9215	---	---
		2452	37.847	2433.0224	2470.8694	---	---

9.5. Original test data

6dB bandwidth:





11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



11AX20SISO_Ant1_2412



11AX20SISO_Ant1_2437



11AX20SISO_Ant1_2462



11AX40SISO_Ant1_2422



11AX40SISO_Ant1_2437



11AX40SISO_Ant1_2452

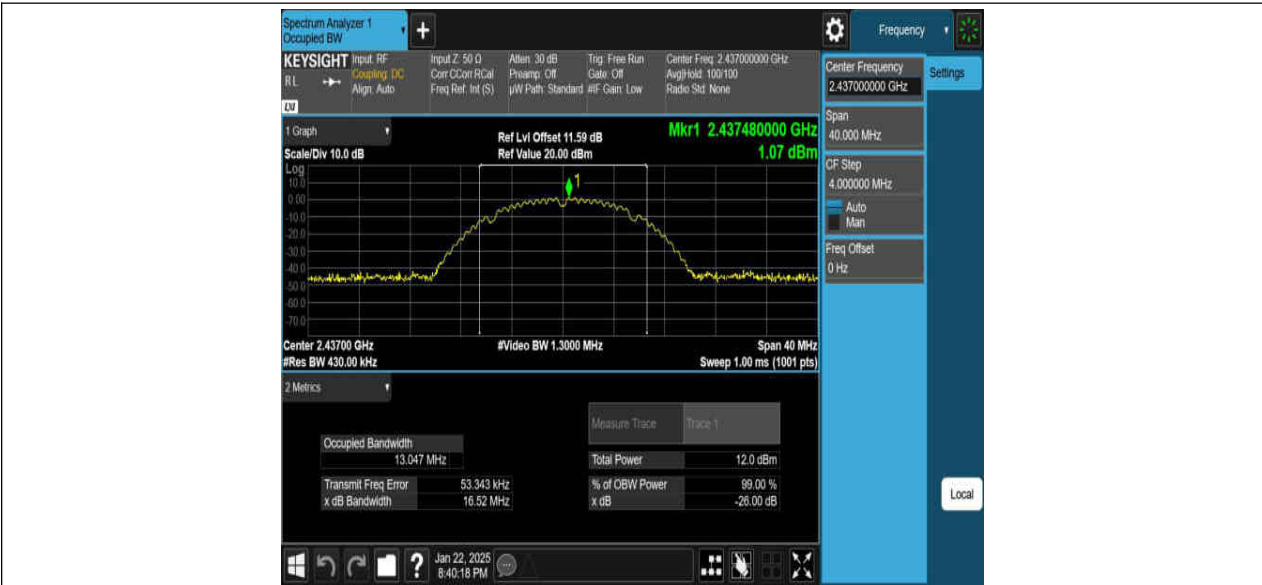


99 % bandwidth:

11B_Ant1_2412



11B_Ant1_2437



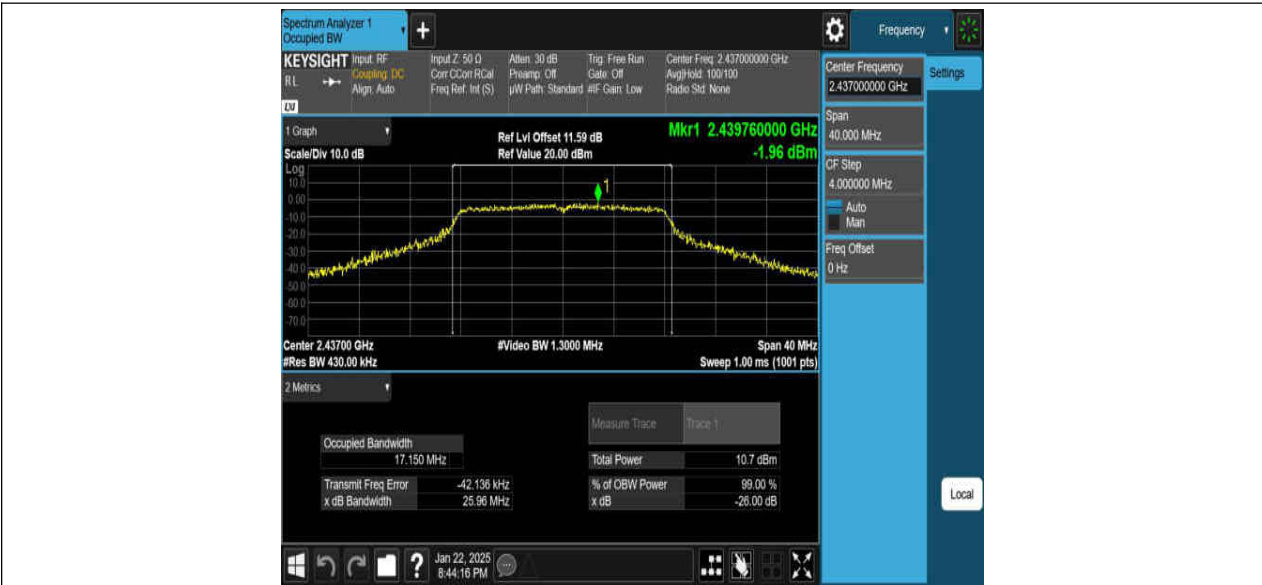
11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412



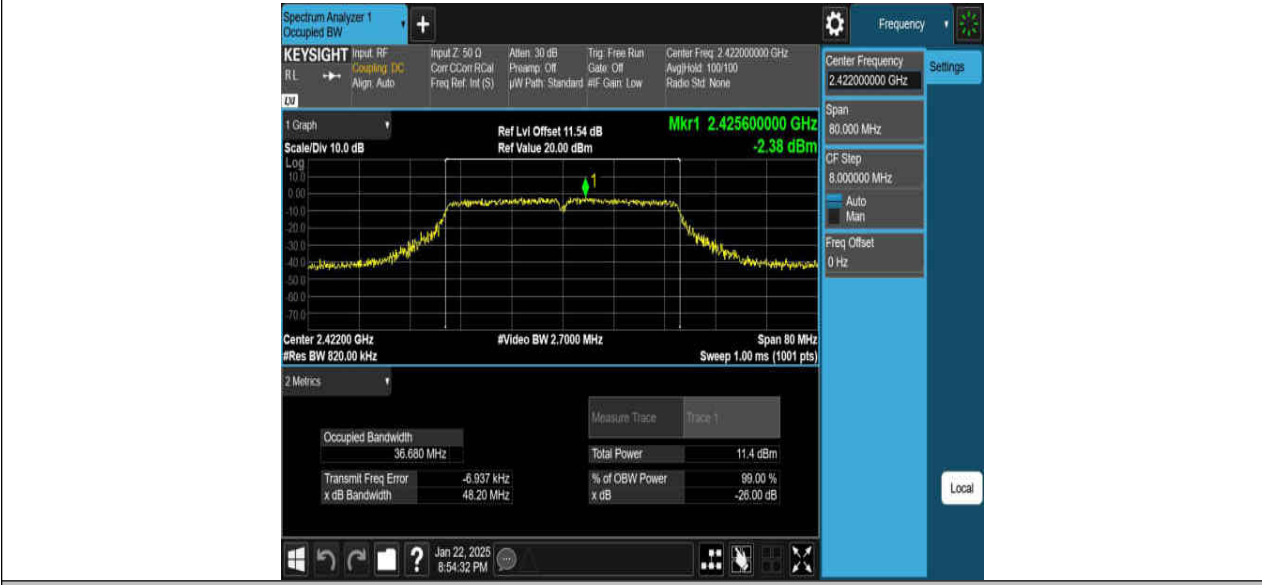
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11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



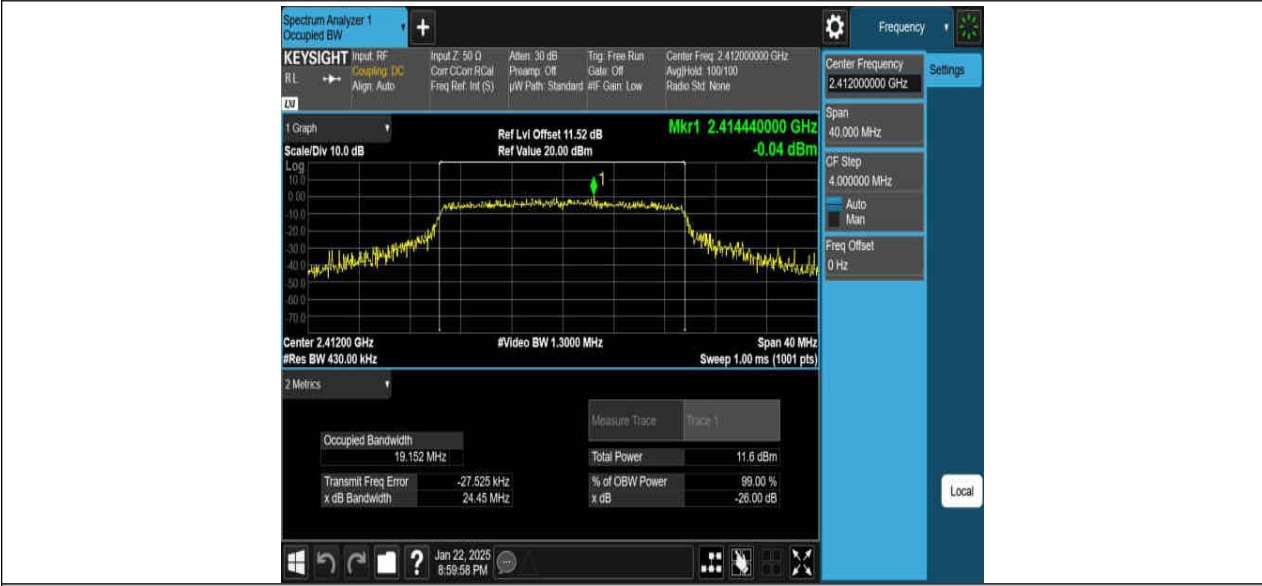
11N40SISO_Ant1_2437



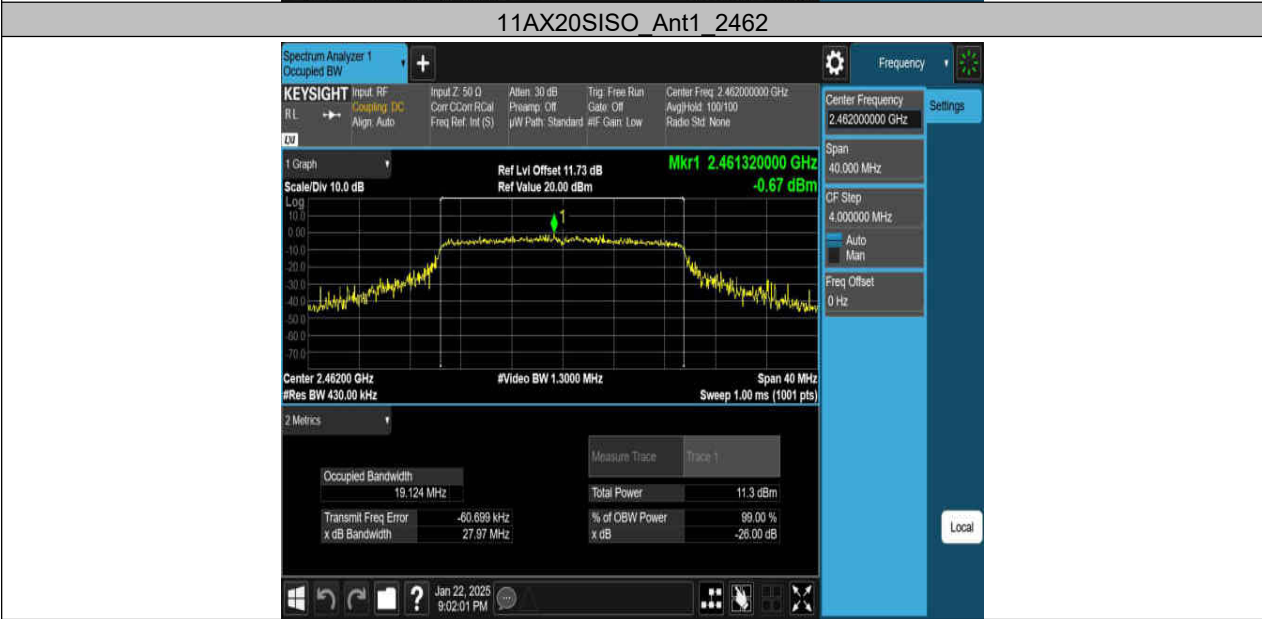
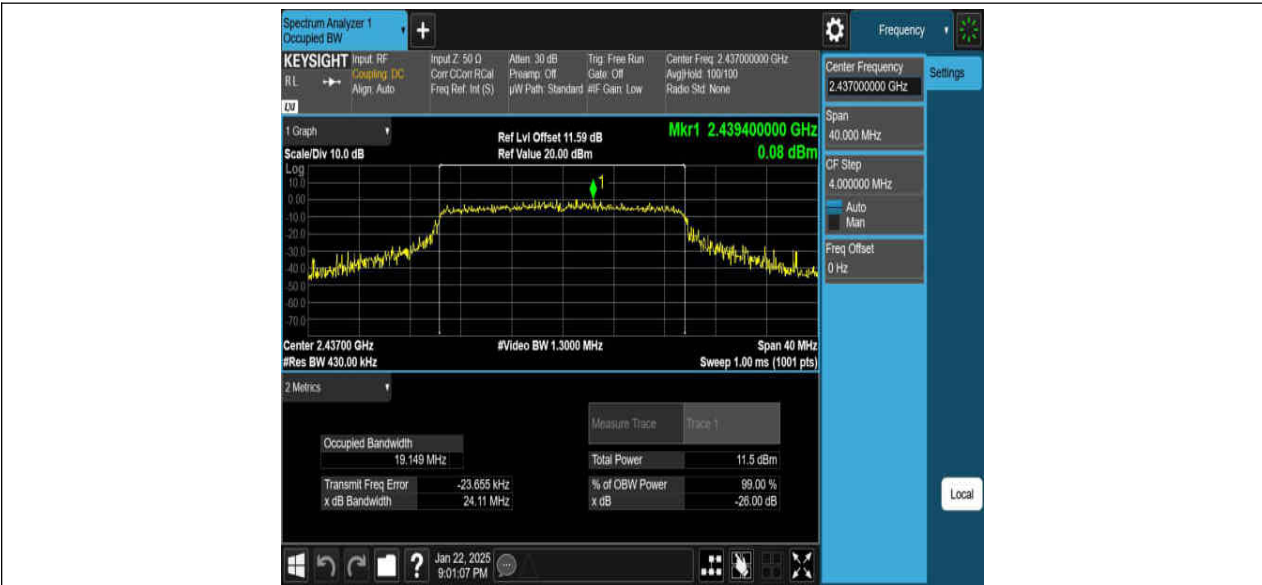
11N40SISO_Ant1_2452



11AX20SISO_Ant1_2412

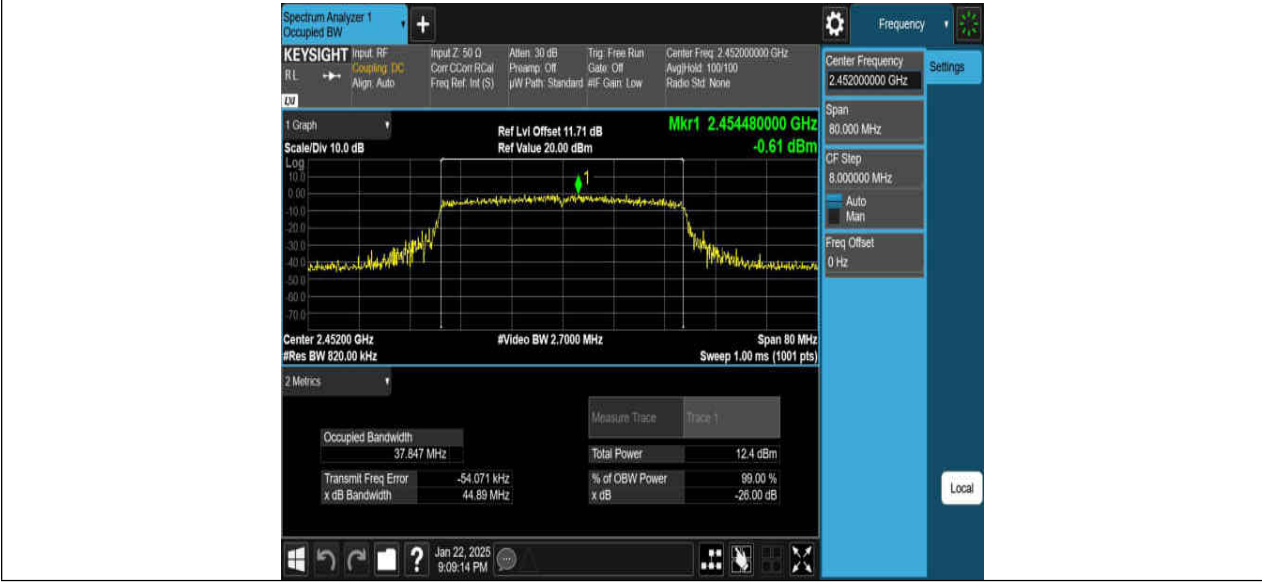


11AX20SISO_Ant1_2437





11AX40SISO_Ant1_2452



10. Conducted Output Power

10.1. Block diagram of test setup

Same as section 8.1

10.2. Limits

CFR 47 FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(b)(3)	Peak Output Power	1 watt or 30 dBm	2400-2483.5

10.3. Test Procedure

Place the EUT on the table and set it in the transmitting mode.

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Power sensor.

Measure peak power each channel.

Peak Detector use for Peak result.

AVG Detector use for AVG result.

10.4. Results

Test Mode	Ant.	Freq. (MHz)	Peak Power (dBm)	Conducted Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
11B	Ant1	2412	11.13	≤30.00	15.19	≤36.00	PASS
		2437	11.80	≤30.00	15.86	≤36.00	PASS
		2462	12.07	≤30.00	16.13	≤36.00	PASS
11G	Ant1	2412	11.39	≤30.00	15.45	≤36.00	PASS
		2437	11.45	≤30.00	15.51	≤36.00	PASS
		2462	11.32	≤30.00	15.38	≤36.00	PASS
11N20SISO	Ant1	2412	11.48	≤30.00	15.54	≤36.00	PASS
		2437	11.91	≤30.00	15.97	≤36.00	PASS
		2462	11.75	≤30.00	15.81	≤36.00	PASS
11N40SISO	Ant1	2422	11.71	≤30.00	15.77	≤36.00	PASS
		2437	12.00	≤30.00	16.06	≤36.00	PASS
		2452	11.82	≤30.00	15.88	≤36.00	PASS
11AX20SISO	Ant1	2412	11.58	≤30.00	15.64	≤36.00	PASS
		2437	11.44	≤30.00	15.50	≤36.00	PASS
		2462	11.53	≤30.00	15.59	≤36.00	PASS
11AX40SISO	Ant1	2422	11.77	≤30.00	15.83	≤36.00	PASS
		2437	12.46	≤30.00	16.52	≤36.00	PASS
		2452	12.42	≤30.00	16.48	≤36.00	PASS

11. Power Spectral Density

11.1. Block diagram of test setup

Same as section 8.1

11.2. Limits

CFR 47 FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC §15.247 (e)	Power Spectral Density	8 dBm/3 kHz	2400-2483.5

11.3. Test Procedure

Connect the UUT to the spectrum analyzer and use the following settings:

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	$3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$
VBW	$\geq 3 \times \text{RBW}$
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

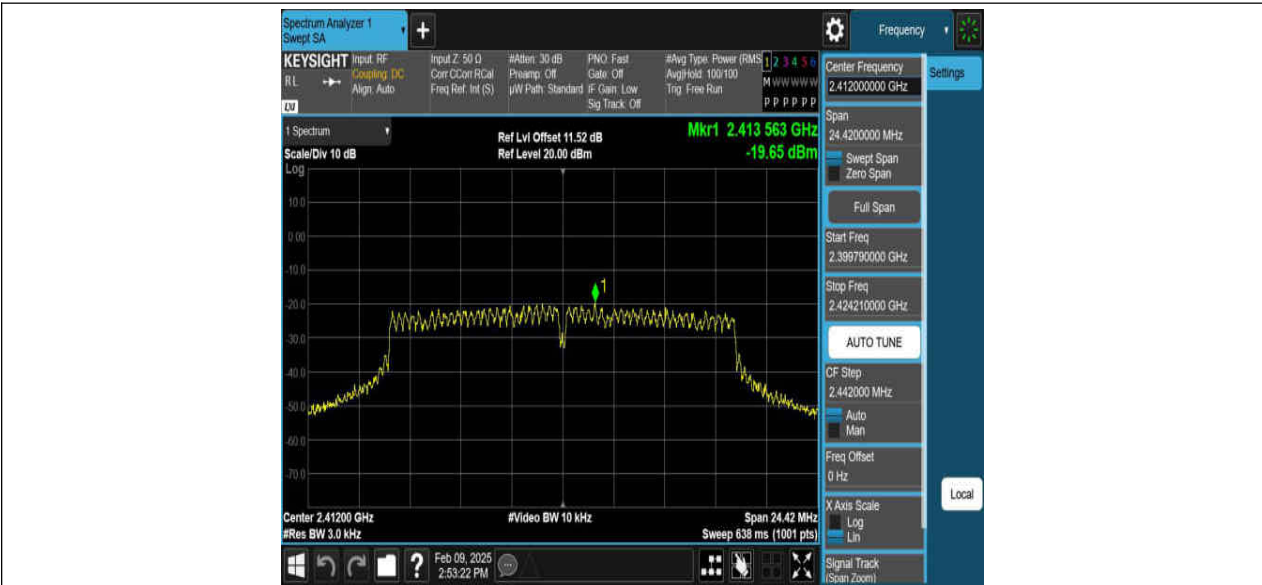
If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

11.4. Results

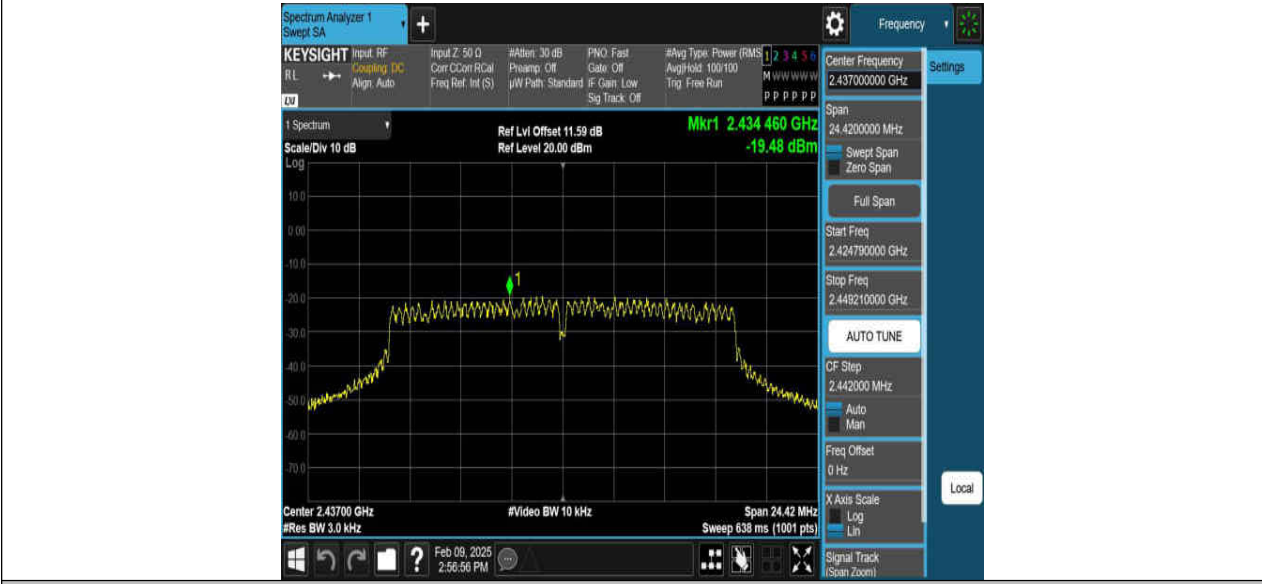
Test Mode	Ant.	Freq. (MHz)	Result (dBm/3-100kHz)	Limit (dBm/3kHz)	Verdict
11B	Ant1	2412	-12.79	≤ 8.00	PASS
		2437	-12.86	≤ 8.00	PASS
		2462	-13.03	≤ 8.00	PASS
11G	Ant1	2412	-19.65	≤ 8.00	PASS
		2437	-19.48	≤ 8.00	PASS
		2462	-19.86	≤ 8.00	PASS
11N20SISO	Ant1	2412	-18.79	≤ 8.00	PASS
		2437	-19.24	≤ 8.00	PASS
		2462	-19.34	≤ 8.00	PASS
11N40SISO	Ant1	2422	-22.14	≤ 8.00	PASS
		2437	-20.15	≤ 8.00	PASS
		2452	-21.61	≤ 8.00	PASS
11AX20SISO	Ant1	2412	-20.91	≤ 8.00	PASS
		2437	-20.91	≤ 8.00	PASS
		2462	-19.62	≤ 8.00	PASS
11AX40SISO	Ant1	2422	-22.42	≤ 8.00	PASS
		2437	-22.23	≤ 8.00	PASS
		2452	-22.55	≤ 8.00	PASS

11.5. Original test data

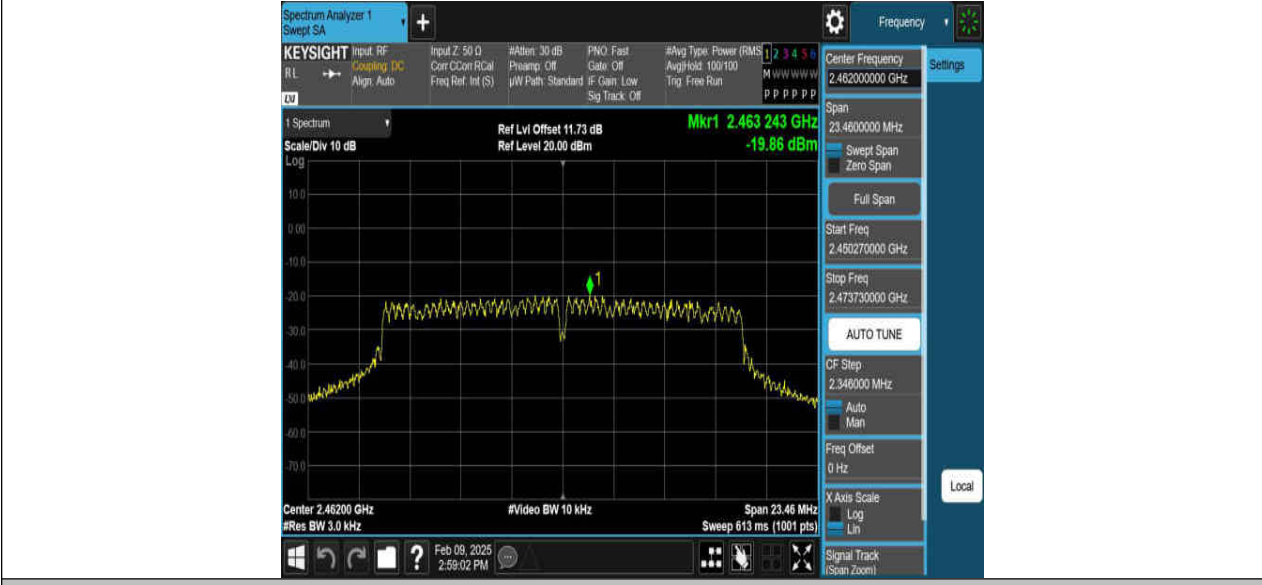




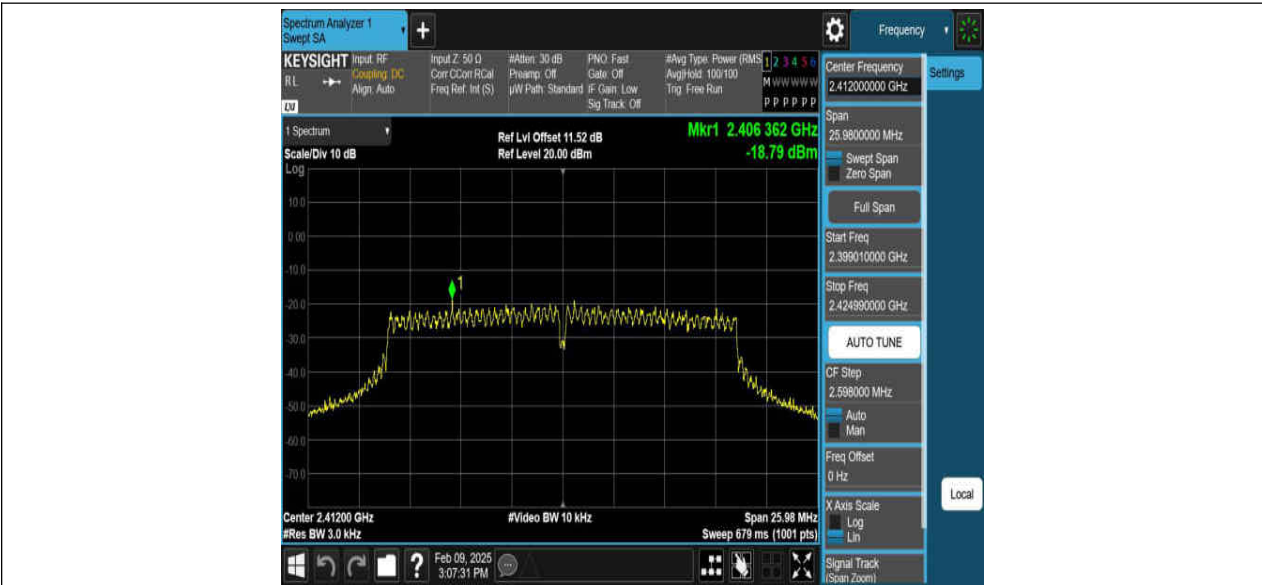
11G_Ant1_2437



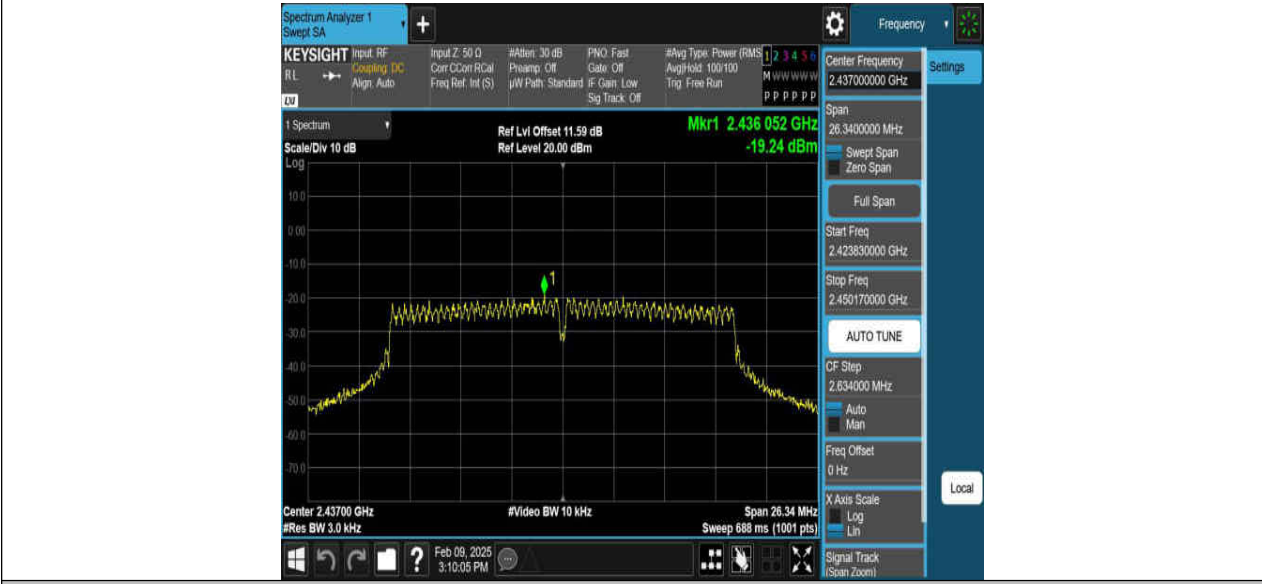
11G_Ant1_2462



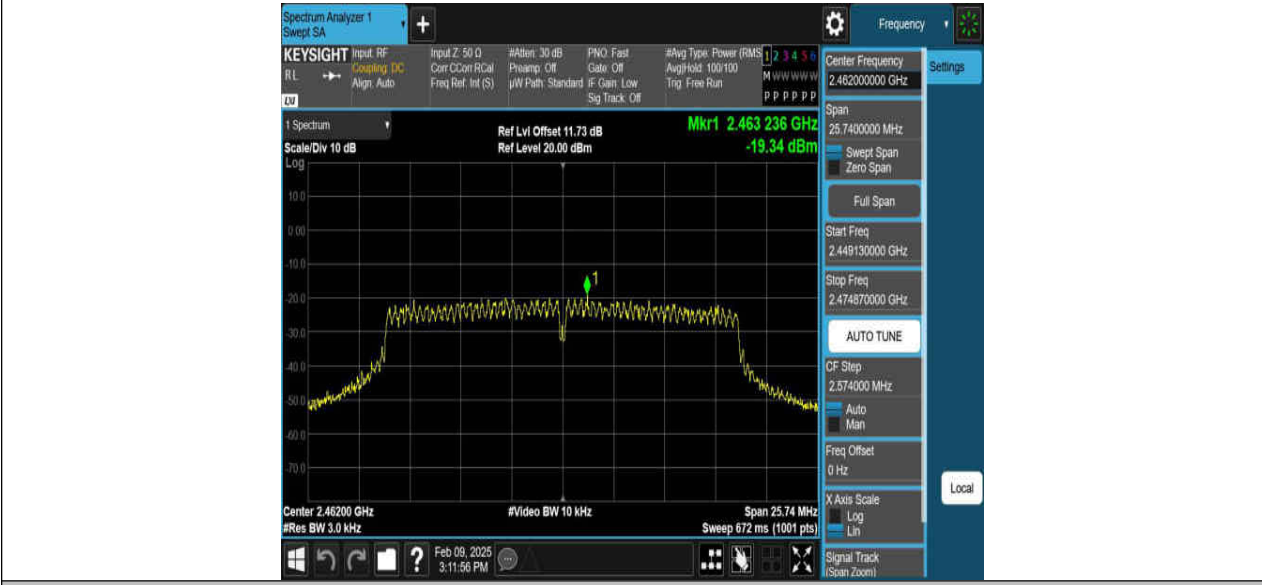
11N20SISO_Ant1_2412



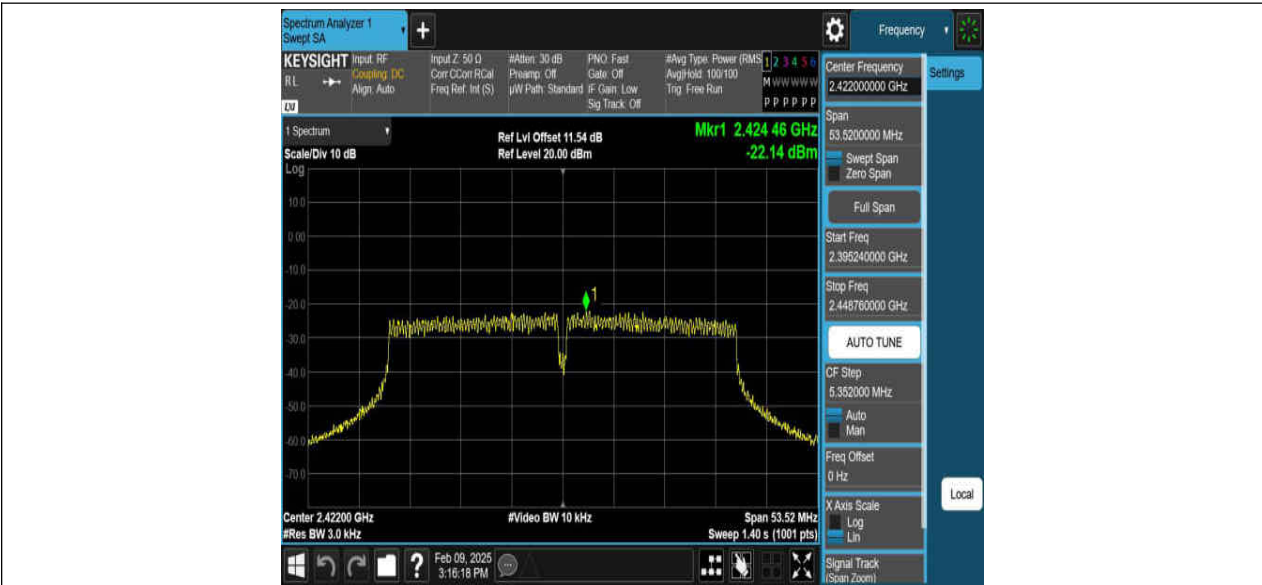
11N20SISO_Ant1_2437



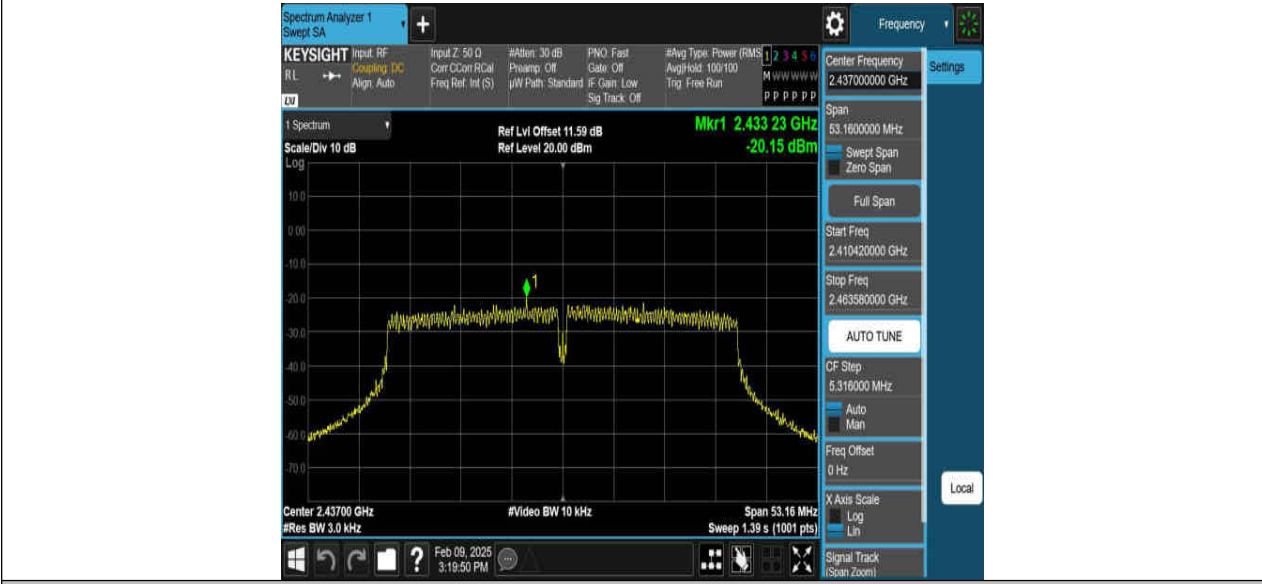
11N20SISO_Ant1_2462



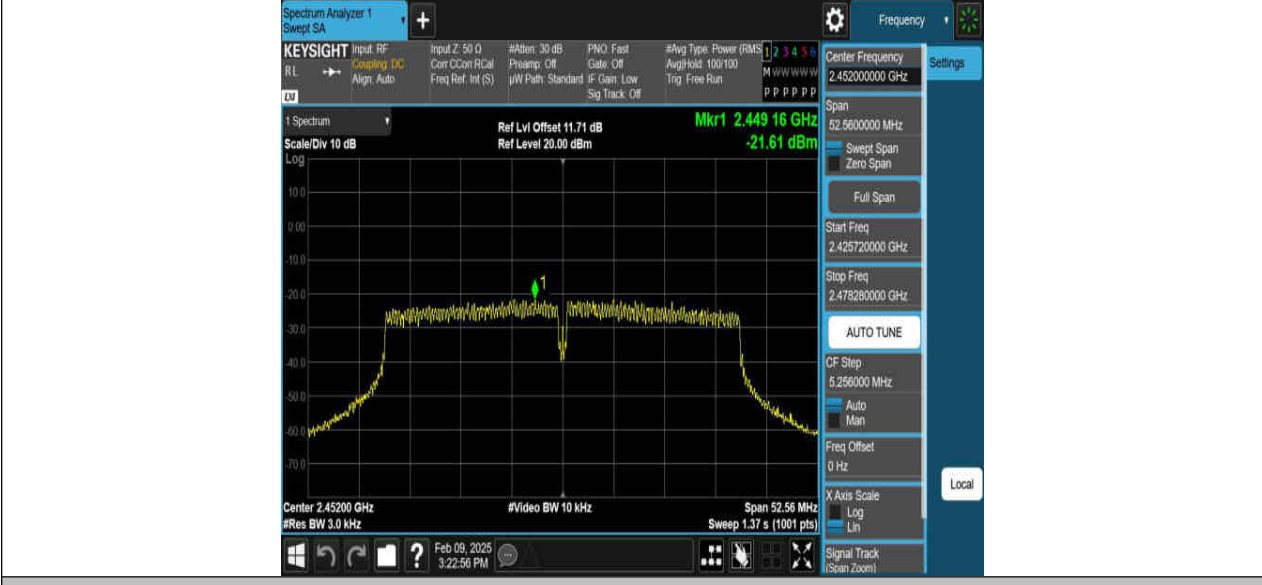
11N40SISO_Ant1_2422



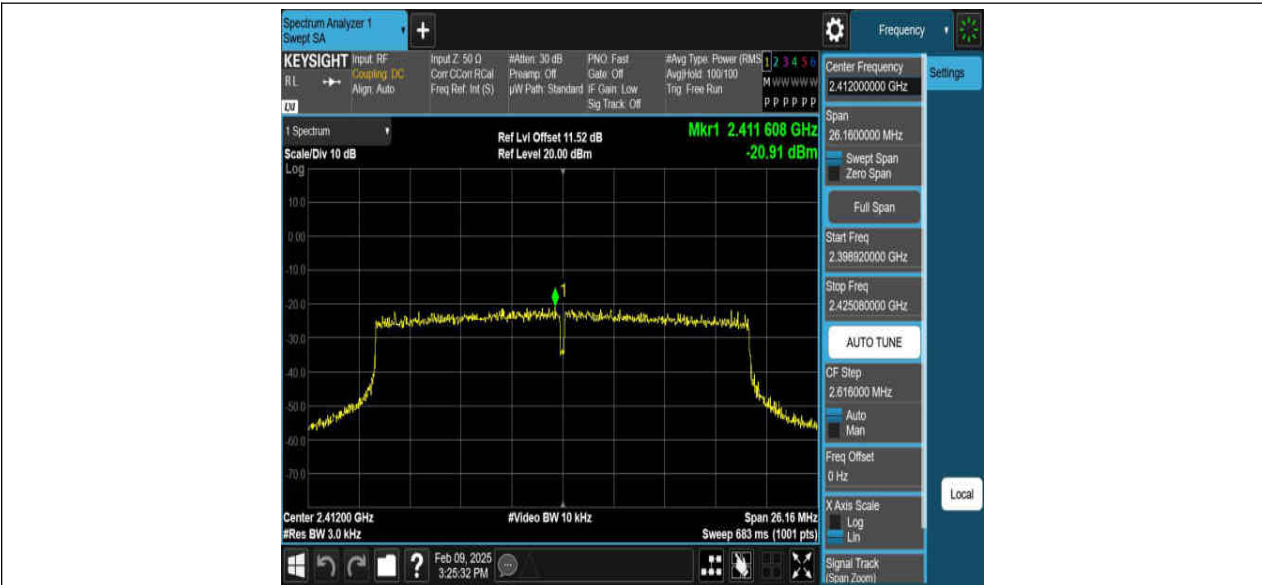
11N40SISO_Ant1_2437



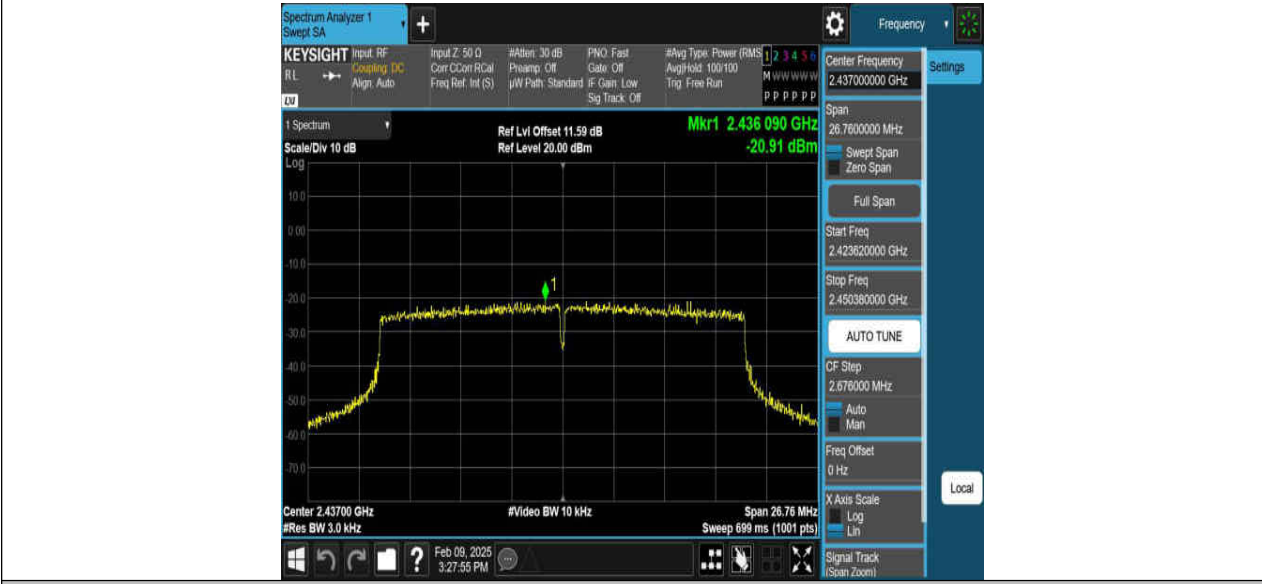
11N40SISO_Ant1_2452



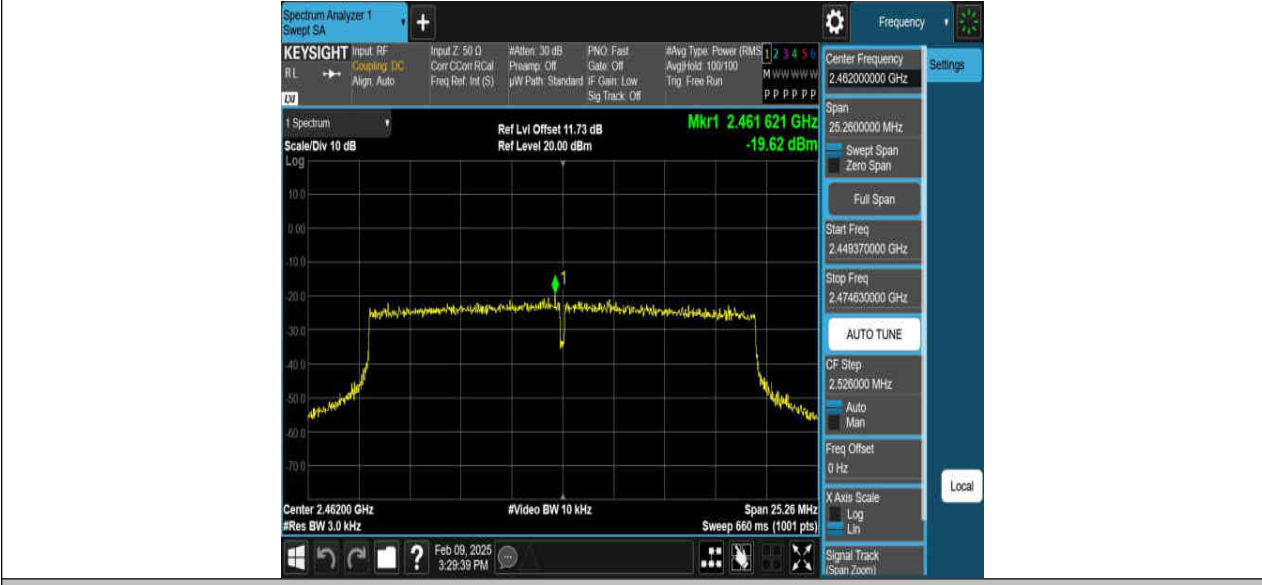
11AX20SISO_Ant1_2412



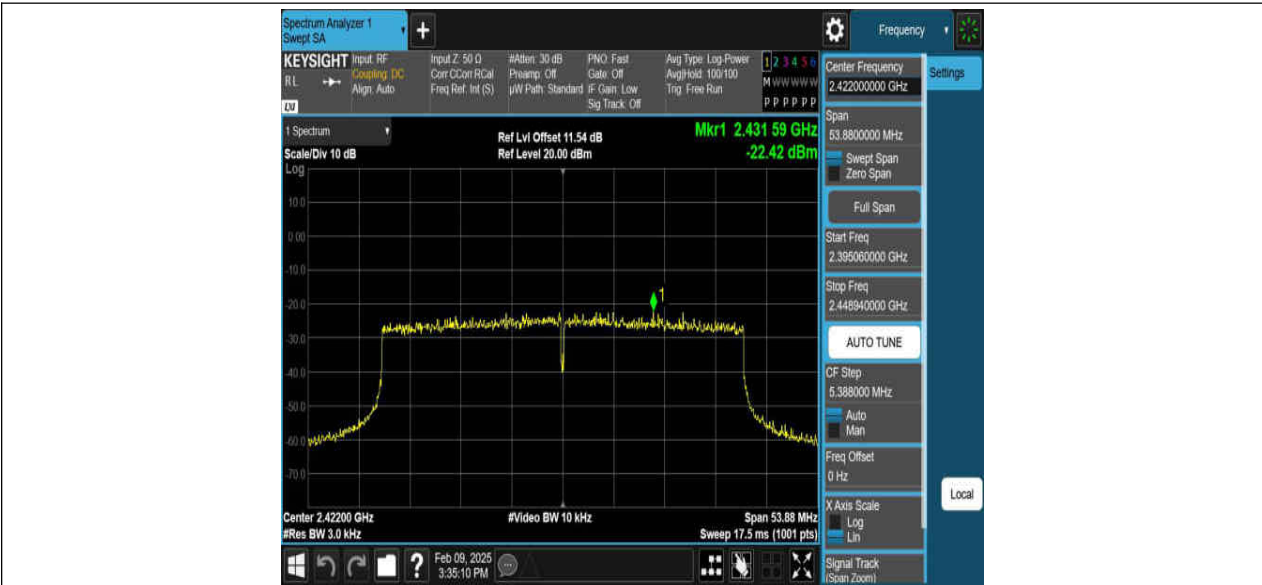
11AX20SISO_Ant1_2437



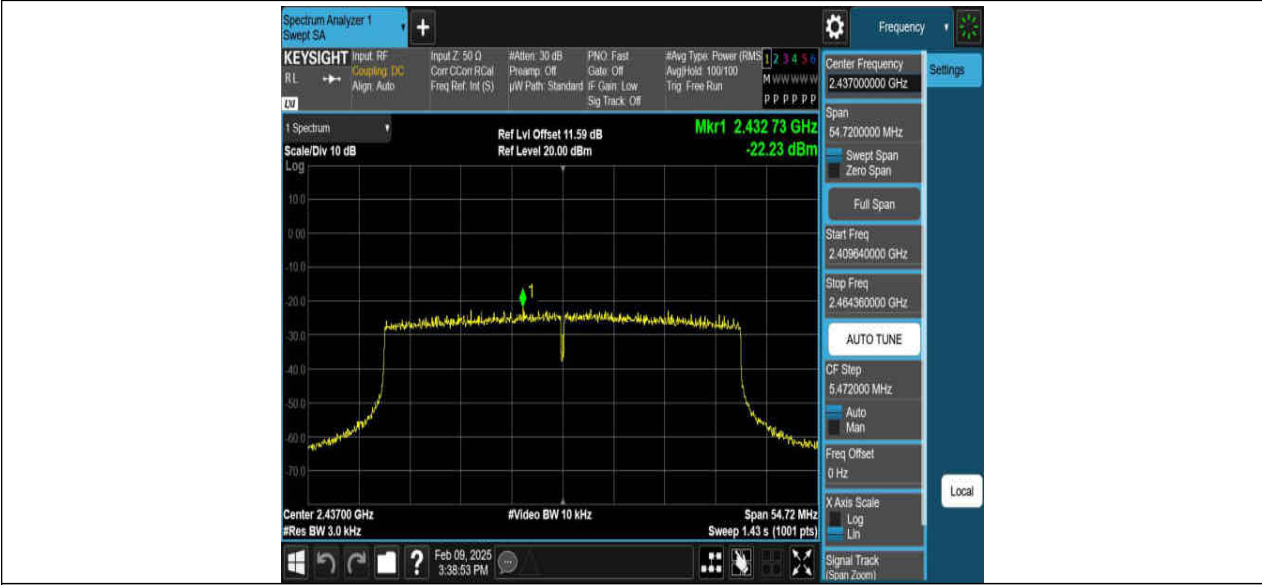
11AX20SISO_Ant1_2462



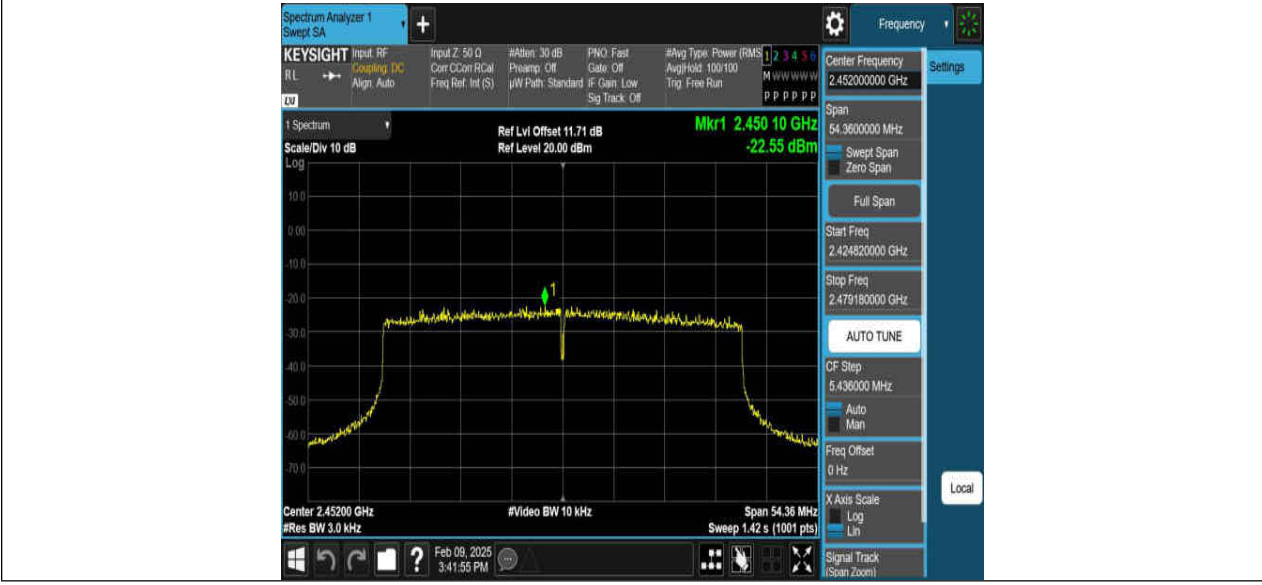
11AX40SISO_Ant1_2422



11AX40SISO_Ant1_2437



11AX40SISO_Ant1_2452



12. Conducted Band edge and Spurious Emissions

12.1. Block diagram of test setup

Same as section 8.1

12.2. Limits

CFR 47 FCC Part15 (15.247) Subpart C		
Section	Test Item	Limit
CFR 47 FCC §15.247 (d)	Conducted Bandedge and Spurious Emissions	at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

12.3. Test Procedure

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	100 kHz
VBW	$\geq 3 \times \text{RBW}$
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

Connect the UUT to the spectrum analyzer and use the following settings:

Use the peak marker function to determine the maximum PSD level.

Span	Set the center frequency and span to encompass frequency range to be measured
Detector	Peak
RBW	100 kHz
VBW	$\geq 3 \times \text{RBW}$
measurement points	$\geq \text{span}/\text{RBW}$
Trace	Max hold
Sweep time	Auto couple.

Use the peak marker function to determine the maximum amplitude level.

12.4. Test result

Test Mode	Ant.	Ch Name	Freq. (MHz)	Ref Level (dBm)	Result (dBm)	Limit (dBm)	Verdict
11B	Ant1	Low	2412	-0.06	-48.74	≤ -20.06	PASS
		High	2462	0.69	-48.36	≤ -19.31	PASS
11G	Ant1	Low	2412	-7.47	-36.12	≤ -27.47	PASS
		High	2462	-7.21	-48.67	≤ -27.21	PASS
11N20SISO	Ant1	Low	2412	-7.33	-35.39	≤ -27.33	PASS
		High	2462	-6.70	-48.84	≤ -26.7	PASS
11N40SISO	Ant1	Low	2422	-8.41	-39.99	≤ -28.41	PASS
		High	2452	-7.66	-48.31	≤ -27.66	PASS
11AX20SISO	Ant1	Low	2412	-7.36	-35.59	≤ -27.36	PASS
		High	2462	-7.27	-47.88	≤ -27.27	PASS
11AX40SISO	Ant1	Low	2422	-8.44	-38.77	≤ -28.44	PASS
		High	2452	-7.28	-48.06	≤ -27.28	PASS

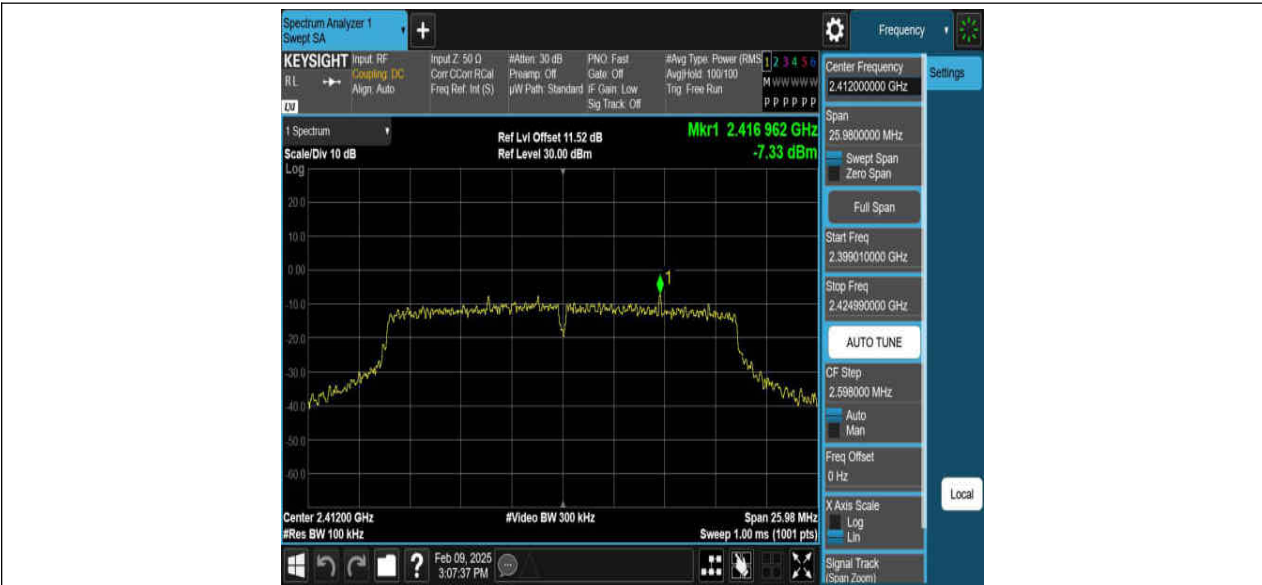
Test Mode	Ant.	Freq. (MHz)	Freq Range (Mhz)	Ref Level (dBm)	Result (dBm)	Limit (dBm)	Verdict
11B	Ant1	2412	30~1000	-0.06	-62.21	≤-20.06	PASS
			1000~26500	-0.06	-50.27	≤-20.06	PASS
		2437	30~1000	0.63	-62.51	≤-19.37	PASS
			1000~26500	0.63	-49.53	≤-19.37	PASS
		2462	30~1000	0.69	-62.21	≤-19.31	PASS
			1000~26500	0.69	-48.9	≤-19.31	PASS
11G	Ant1	2412	30~1000	-7.47	-62.11	≤-27.47	PASS
			1000~26500	-7.47	-50.27	≤-27.47	PASS
		2437	30~1000	-8.14	-61.51	≤-28.14	PASS
			1000~26500	-8.14	-49.9	≤-28.14	PASS
		2462	30~1000	-7.21	-61.96	≤-27.21	PASS
			1000~26500	-7.21	-48.59	≤-27.21	PASS
11N20SISO	Ant1	2412	30~1000	-7.33	-61.92	≤-27.33	PASS
			1000~26500	-7.33	-50.38	≤-27.33	PASS
		2437	30~1000	-5.90	-61.57	≤-25.9	PASS
			1000~26500	-5.90	-50.22	≤-25.9	PASS
		2462	30~1000	-6.70	-62.8	≤-26.7	PASS
			1000~26500	-6.70	-49.73	≤-26.7	PASS
11N40SISO	Ant1	2422	30~1000	-8.41	-62.47	≤-28.41	PASS
			1000~26500	-8.41	-49.83	≤-28.41	PASS
		2437	30~1000	-7.91	-61.07	≤-27.91	PASS
			1000~26500	-7.91	-50.13	≤-27.91	PASS
		2452	30~1000	-7.66	-61.75	≤-27.66	PASS
			1000~26500	-7.66	-50.14	≤-27.66	PASS
11AX20SISO	Ant1	2412	30~1000	-7.36	-60.85	≤-27.36	PASS
			1000~26500	-7.36	-50.66	≤-27.36	PASS
		2437	30~1000	-6.02	-62.35	≤-26.02	PASS
			1000~26500	-6.02	-50.45	≤-26.02	PASS
		2462	30~1000	-7.27	-61.77	≤-27.27	PASS
			1000~26500	-7.27	-49.99	≤-27.27	PASS
11AX40SISO	Ant1	2422	30~1000	-8.44	-62.29	≤-28.44	PASS
			1000~26500	-8.44	-50.59	≤-28.44	PASS
		2437	30~1000	-7.47	-60.31	≤-27.47	PASS
			1000~26500	-7.47	-50.13	≤-27.47	PASS
		2452	30~1000	-7.28	-61.85	≤-27.28	PASS
			1000~26500	-7.28	-49.93	≤-27.28	PASS

12.5. Original test data

Reference level







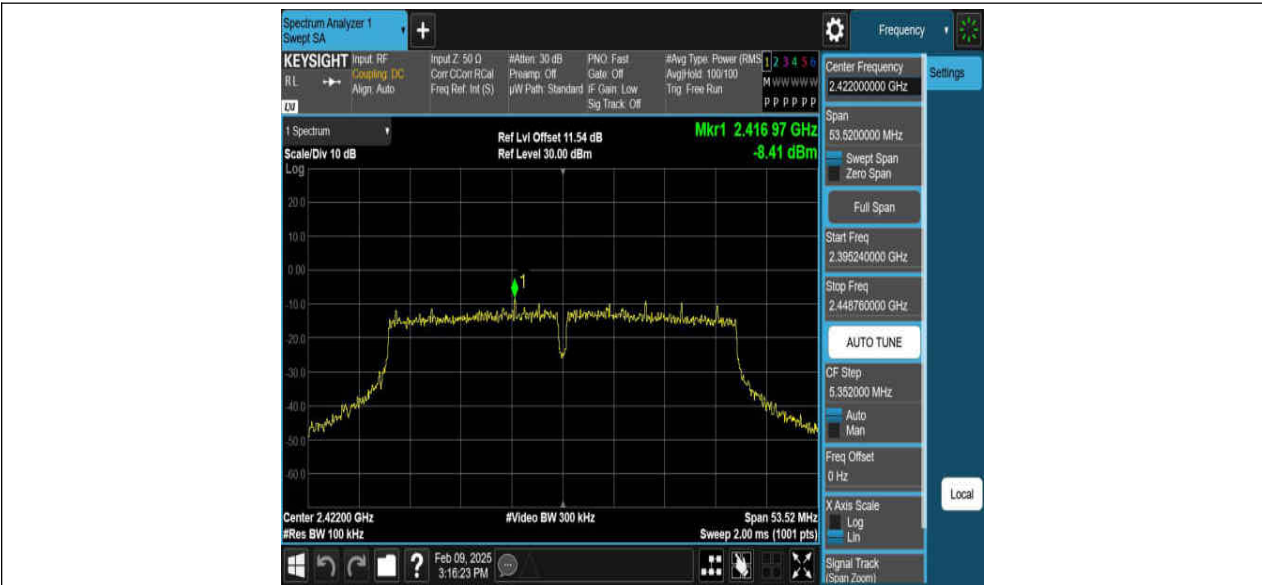
11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



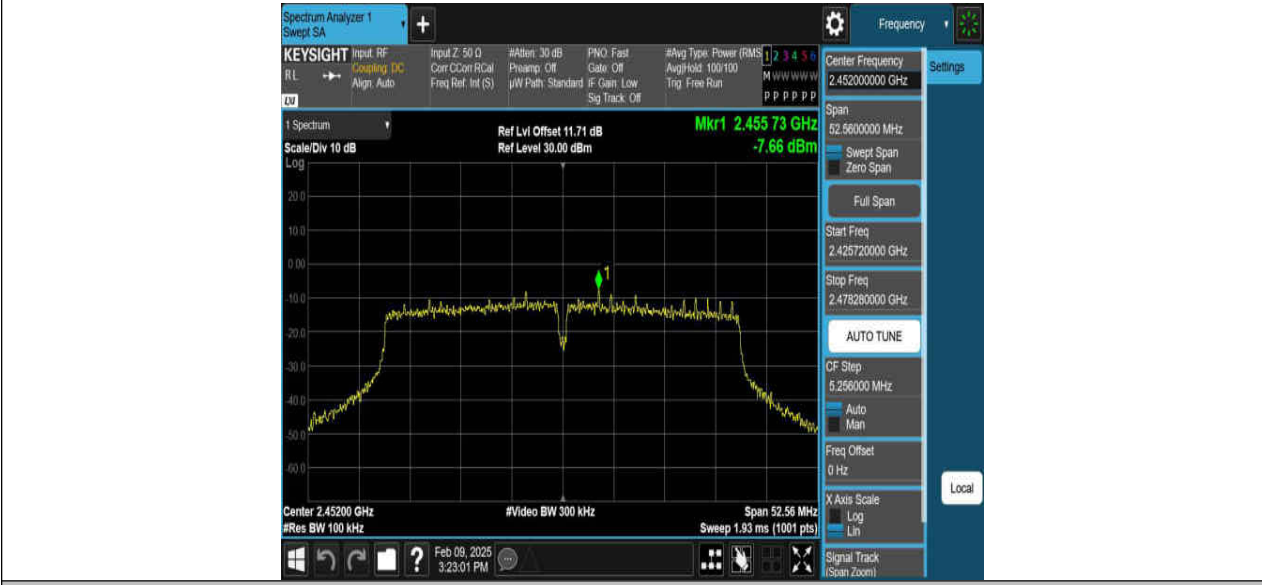
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



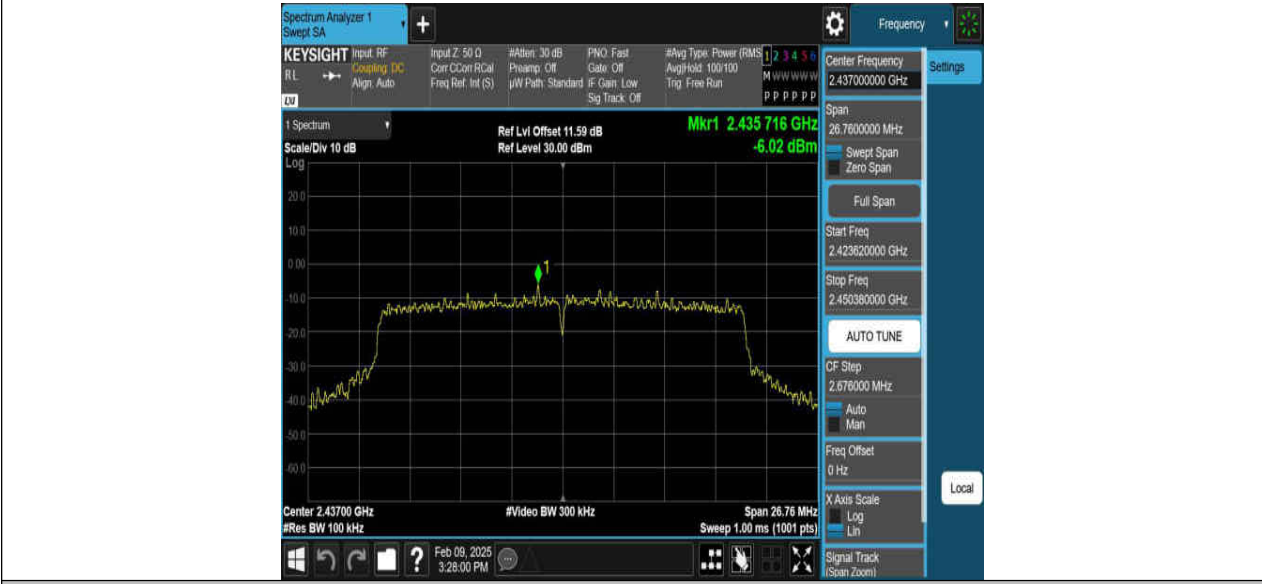
11N40SISO_Ant1_2452



11AX20SISO_Ant1_2412



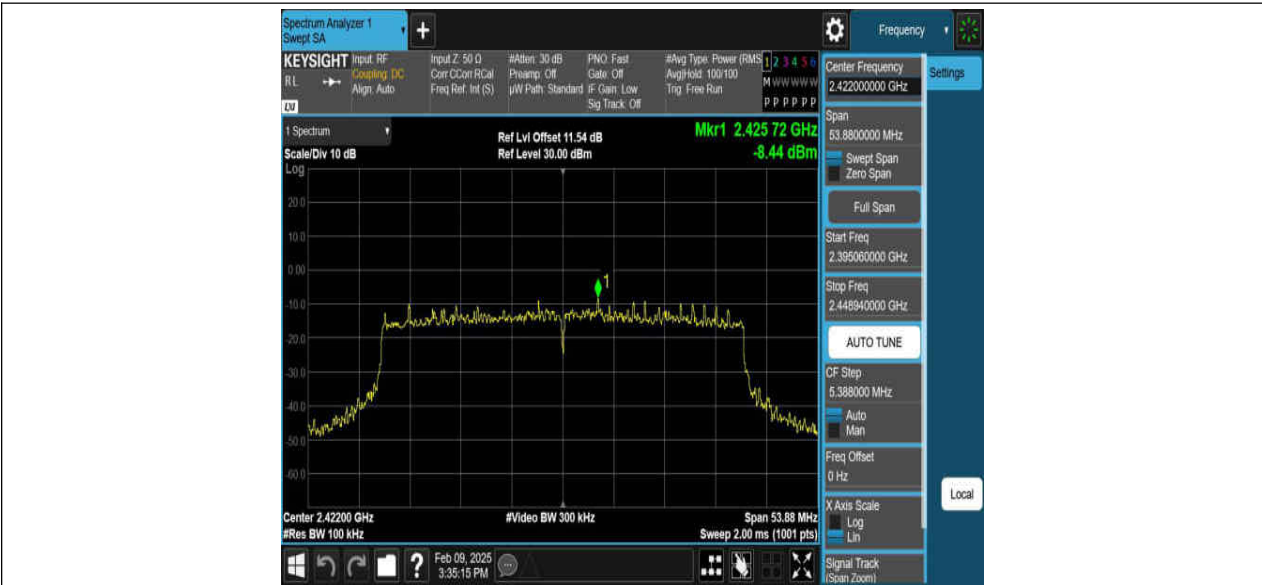
11AX20SISO_Ant1_2437



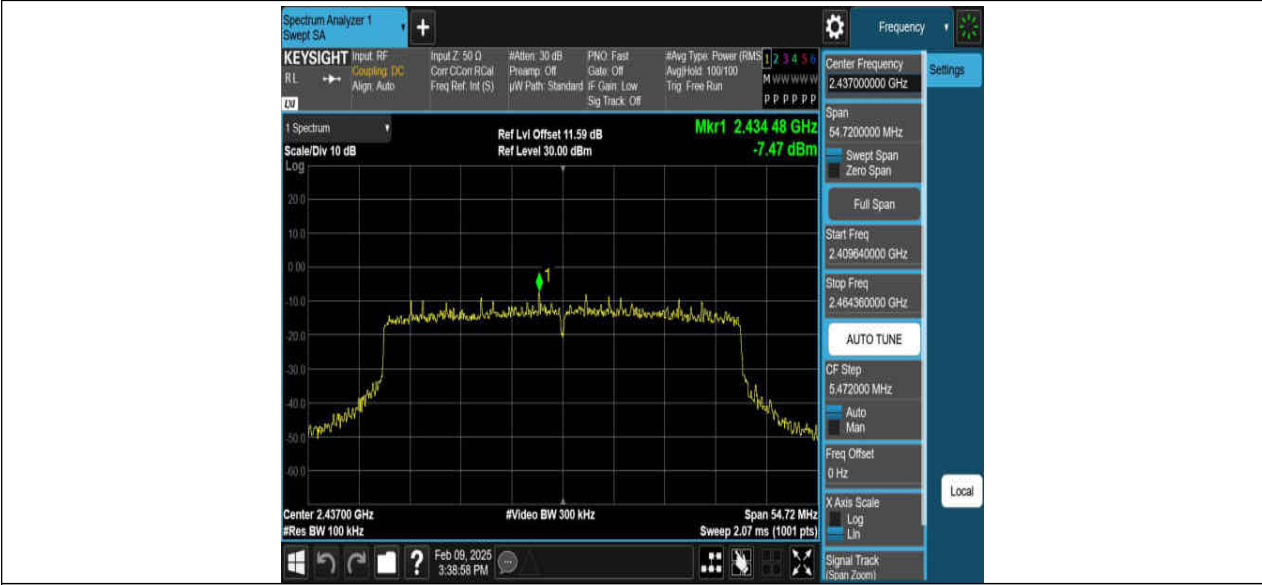
11AX20SISO_Ant1_2462



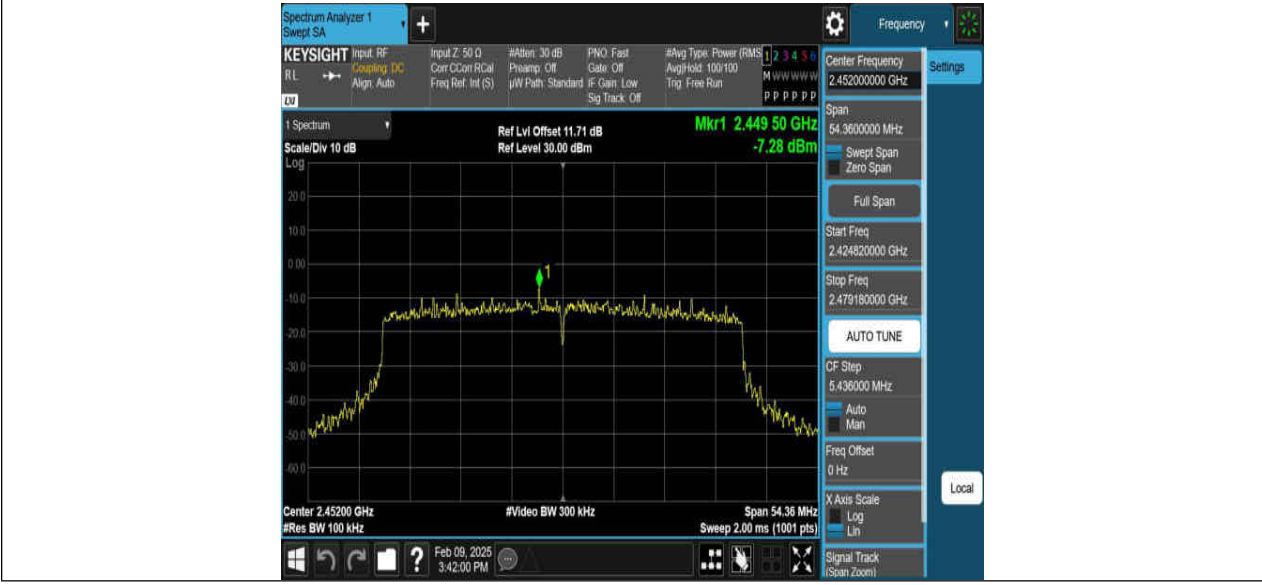
11AX40SISO_Ant1_2422



11AX40SISO_Ant1_2423



11AX40SISO_Ant1_2452



Band edge:





11N20SISO Ant1 Low 2412



11N20SISO Ant1 High 2462



11N40SISO Ant1 Low 2422



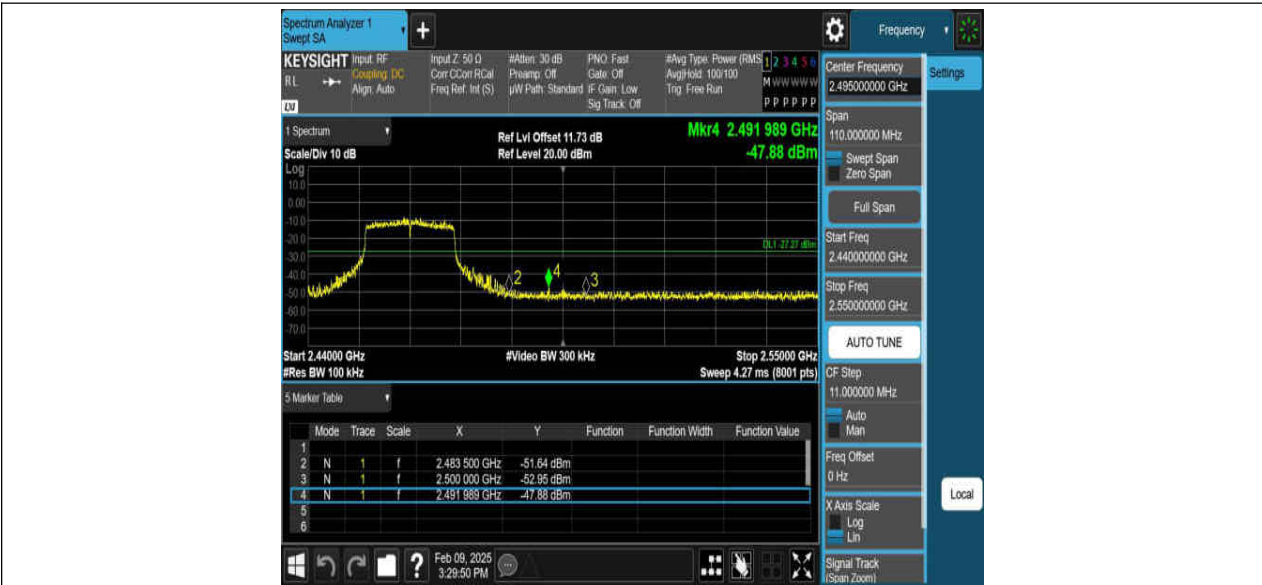
11N40SISO_Ant1_High_2452



11AX20SISO_Ant1_Low_2412



11AX20SISO_Ant1_High_2462



11AX40SISO_Ant1_Low_2422

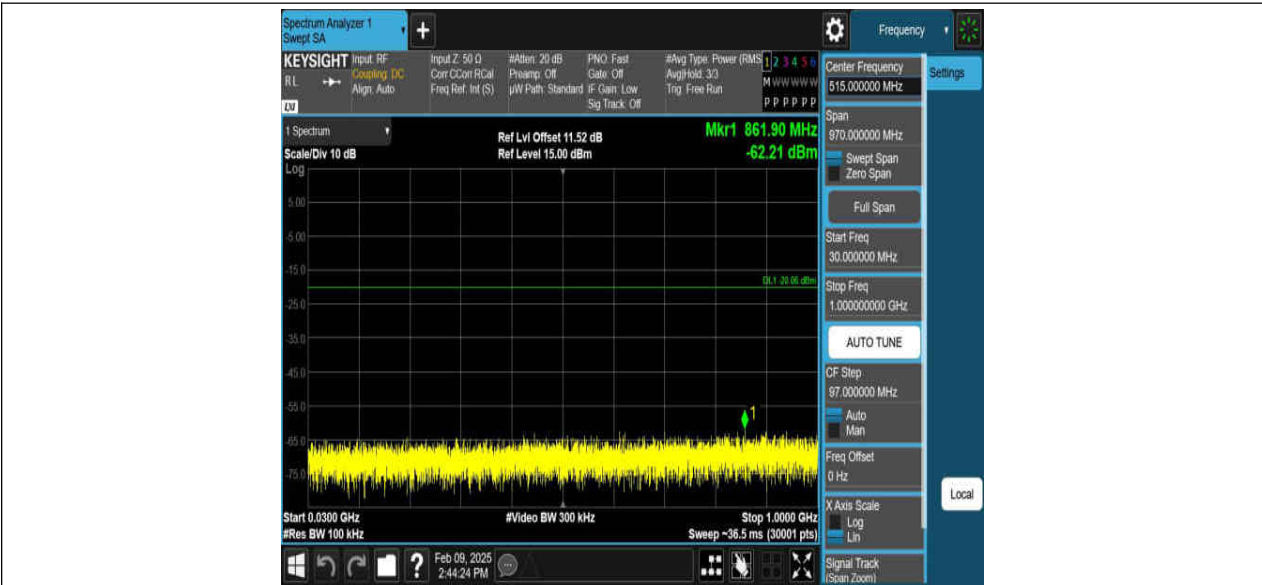


11AX40SISO_Ant1_High_2452



Spurious Emission:

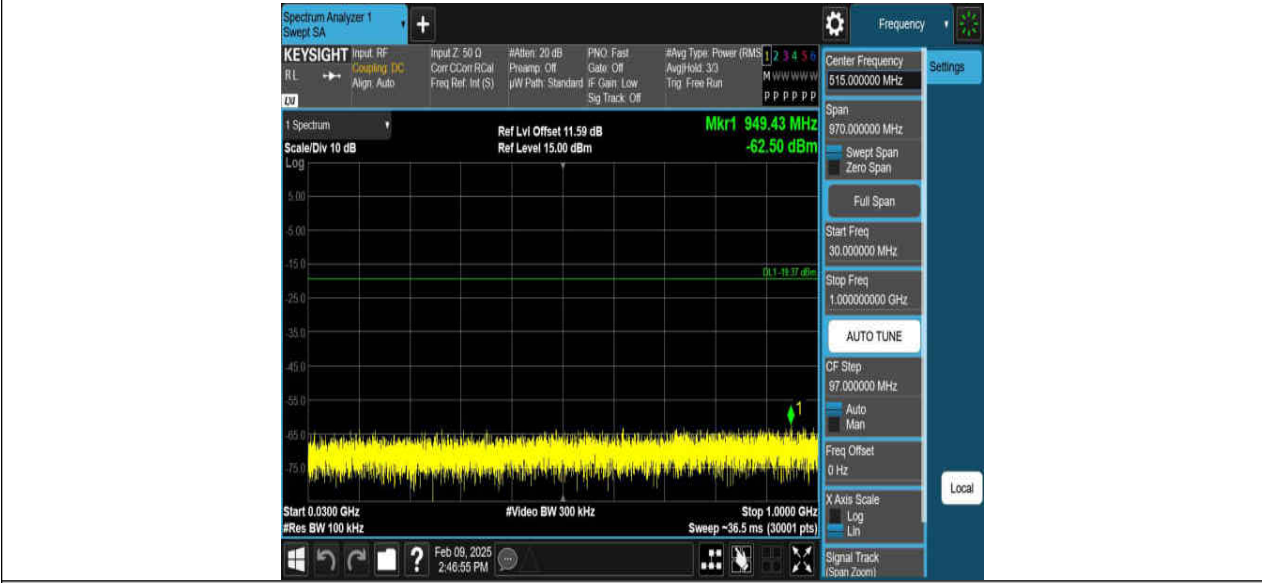
11B_Ant1_2412_30~1000



11B_Ant1_2412_1000~26500



11B_Ant1_2437_30~1000



11B_Ant1_2437_1000~26500