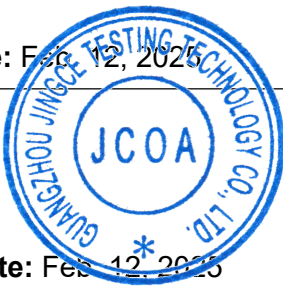
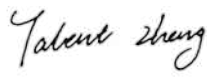


FCC AND ISCED CERTIFICATION TEST REPORT

Applicant:	Shenzhen Dangs Science and Technology Co., Ltd.		
Address:	1301, Block D1, Chuangzhi Yuncheng, Liuxian Avenue, Nanshan District, Shenzhen, Guangdong Province, China		
Manufacturer:	Guangzhou Shikun Electronics Co., Ltd		
Address:	No.6 Liankun Road, Huangpu District, Guangzhou, China		
Product Description:	Smart Projector		
Brand Name:	Dangbei		
Tested Model/HVIN:	N2mini		
FCC ID:	2AV2J-N2MINI		
IC:	27636-N2MINI		
Report No.:	JCF250114121-003		
Received Date:	Jan. 14, 2025		
Tested Date:	Jan. 14, 2025 ~ Feb. 12, 2025		
Issued Date:	Feb. 12, 2025		
Test Standards:	FCC Rules and Regulations Part 15 Subpart C, RSS-247 Issue 3 August 2023		
Test Procedure:	ANSI C63.10:2013, RSS-Gen Issue 5 A2, Feb. 2021		
Test Result:	Pass		

Prepared By:  <u>Roger Li/Engineer</u>	Date: Feb. 12, 2025 
Reviewed By:  <u>Kennys Zhang/Engineer</u>	Date: Feb. 12, 2025
Approved By:  <u>Talent Zhang/Engineer</u>	Date: Feb. 12, 2025

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. 12, 2025	Original Report	/

Table of Contents

1. Test Report Declare	5
2. Summary of Test Results	6
3. Test Laboratory	6
4. Equipment Under Test	7
4.1. Description of EUT	7
4.2. Channel List	7
4.3. Test Channel Configuration	8
4.4. Test environment conditions	8
4.5. Description of Available Antennas	8
4.6. Description of Available Antennas	9
5. Description of Test Setup	9
5.1. Accessory	9
5.2. Support Equipment	9
5.3. Test Setup	9
5.4. Setup Diagram for Tests	9
6. Measurement Uncertainty	10
7. Measuring Instrument and Software Used	10
8. On Time and Duty Cycle	12
8.1. Block diagram of test setup	12
8.2. Limits	12
8.3. Procedure	12
8.4. Results	12
8.5. Original test data	13
9. 6 dB DTS Bandwidth and 99 % Occupied Bandwidth	19
9.1. Block diagram of test setup	19
9.2. Limits	19
9.3. Test Procedure	19
9.4. Results	19
9.5. Original test data	20
10. Conducted Output Power	33
10.1. Block diagram of test setup	33
10.2. Limits	33
10.3. Test Procedure	33
10.4. Results	33
11. Power Spectral Density	34
11.1. Block diagram of test setup	34
11.2. Limits	34
11.3. Test Procedure	34
11.4. Results	34
11.5. Original test data	35
12. Conducted Band edge and Spurious Emissions	41
12.1. Block diagram of test setup	41
12.2. Limits	41
12.3. Test Procedure	41
12.4. Test result	41
12.5. Original test data	43
13. Radiated Emission	65
13.1. Block diagram of test setup	65
13.2. Limit	66
13.3. Test Procedure	67
13.4. Results	69
13.5. Original test data	69

14. AC Power Line Conducted Emissions 70
 14.1. Block diagram of test setup 70
 14.2. Limits 70
 14.3. Test procedure 70
 14.4. Test result 71
 14.5. Original test data 71
15. Antenna Requirements 72
 15.1. Applicable Requirements 72
 15.2. Result 72
APPENDIX A – Radiated Emission Below 1GHz Test Data 73
APPENDIX B – Radiated Emission Above 1GHz Test Data 75
APPENDIX C – AC Power Line Conducted Emission Test Data105

1. Test Report Declare

Applicant:	Shenzhen Dangs Science and Technology Co., Ltd.
Address:	1301, Block D1, Chuangzhi Yuncheng, Liuxian Avenue, Nanshan District, Shenzhen, Guangdong Province, China
Manufacturer:	Guangzhou Shikun Electronics Co., Ltd
Address:	No.6 Liankun Road, Huangpu District, Guangzhou, China
Product Name:	Smart Projector
Brand Name:	Dangbei
Model Name:	N2mini
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 and 99 % Occupied Bandwidth	FCC Part 15.247 (a) (2) RSS-247 Clause 5.2 (a) ISED RSS-Gen Clause 6.7	Pass
2	Peak Conducted Output Power	FCC Part 15.247 (b) (3) RSS-247 Clause 5.4 (d)	Pass
3	Power Spectral Density	FCC Part 15.247 (e) RSS-247 Clause 5.2 (b)	Pass
4	Conducted Bandedge and Spurious Emission	FCC Part 15.247 (d) RSS-247 Clause 5.5	Pass
5	Radiated Bandedge and Spurious Emission	FCC Part 15.247 (d) FCC Part 15.209 FCC Part 15.205 RSS-247 Clause 5.5 RSS-GEN Clause 8.9	Pass
6	Conducted Emission Test For AC Power Port	FCC Part 15.207 RSS-GEN Clause 8.8	Pass
7	Antenna Requirement	FCC Part 15.203 RSS-GEN Clause 6.8	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:	Smart Projector
Model Number:	N2mini
EUT Function Description:	Please refer to the user manual
Power Supply:	100-240V~ 50/60Hz 2A
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:	FPC Antenna, MAX. Gain: 0.17 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 13
		CH6	1 0 0 15
		CH11	1 0 0 15
802.11g	1	CH1	1 0 4 11
		CH6	1 0 4 11
		CH11	1 0 4 11

802.11HT20	1	CH1	1 1 0 1 1
		CH6	1 1 0 1 1
		CH11	1 1 0 1 1
802.11n HT40	1	CH3	1 1 0 1 1
		CH6	1 1 0 1 1
		CH9	1 1 0 1 1
802.11ax HE20	1	CH1	1 2 0 9
		CH6	1 2 0 9
		CH11	1 2 0 9
802.11ax HE40	1	CH3	1 2 0 10
		CH6	1 2 0 10
		CH9	1 2 0 10

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
/	/	/	/	/

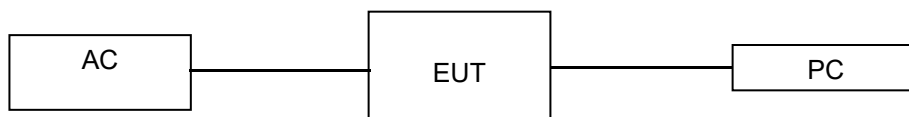
5.2. Support Equipment

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.	

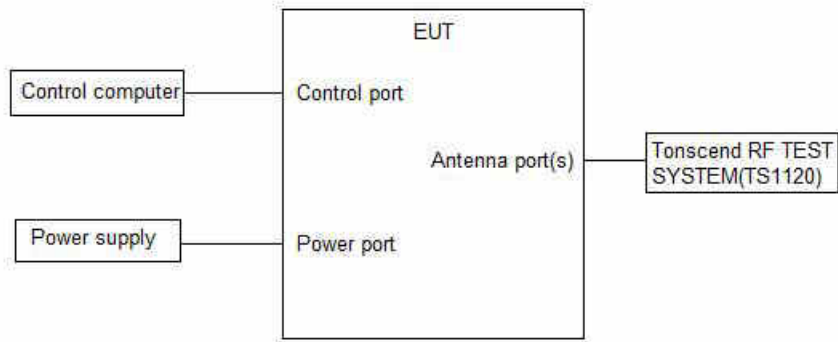
7. Measuring Instrument and Software Used

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	Antenna	Frequency(MHz)	Transmission Duration (ms)	Transmission Period (ms)	Duty Cycle (%)
11B	Ant1	2412	12.22	12.74	95.92
		2437	12.22	12.74	95.92
		2462	12.22	15.29	79.92
11G	Ant1	2412	2.03	2.56	79.30
		2437	2.03	2.55	79.61
		2462	2.03	2.55	79.61
11N20SISO	Ant1	2412	1.89	2.42	78.10
		2437	1.89	2.41	78.42
		2462	1.89	2.41	78.42
11N40SISO	Ant1	2422	0.93	1.46	63.70
		2437	0.93	1.46	63.70
		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	0.76	1.29	58.91
		2437	0.77	1.29	59.69
		2452	0.76	1.28	59.38

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













9. 6 dB DTS Bandwidth and 99 % Occupied Bandwidth

9.1. Block diagram of test setup

Same as section 8.1

9.2. Limits

CFR 47 FCC Part15 (15.247) Subpart C ISED RSS-247 ISSUE 3			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(a)(2) ISED RSS-247 5.2 (a)	6 dB Bandwidth	≥ 500 kHz	2400-2483.5
ISED RSS-Gen Clause 6.7	99 % Occupied Bandwidth	For reporting purposes only.	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:

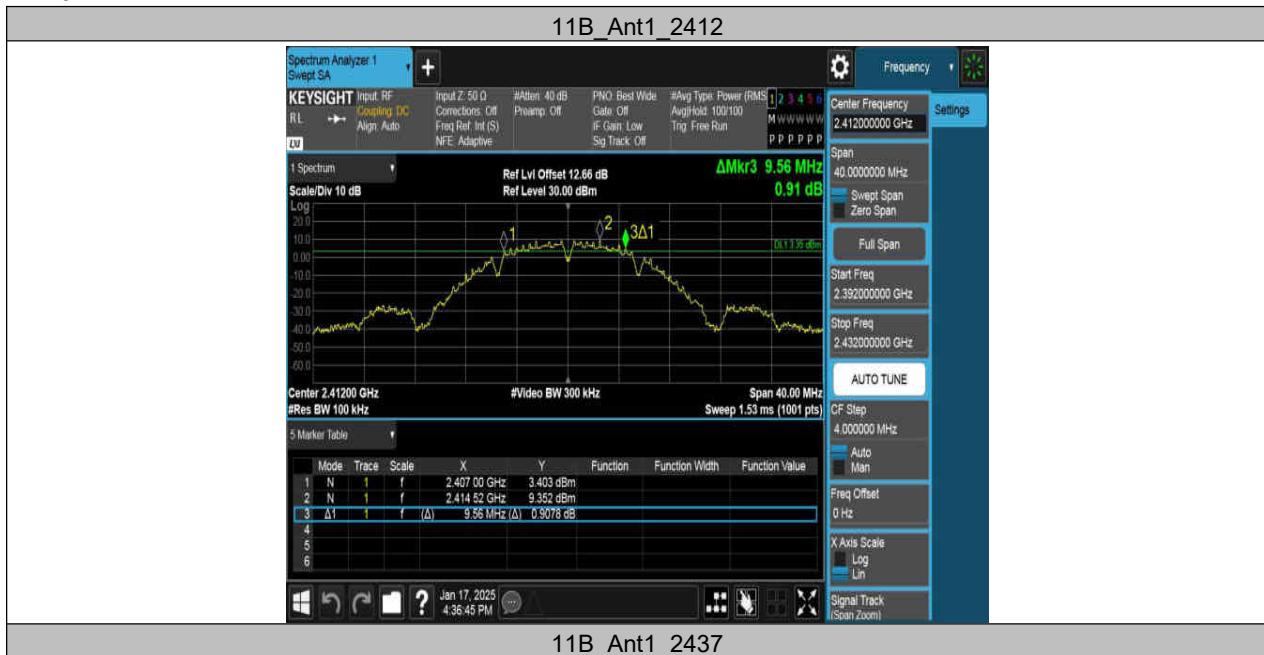
Test Mode	Ant.	Freq. (MHz)	DTS BW (MHz)	FL (MHz)	FH (MHz)	Limit (MHz)	Verdict
11B	Ant1	2412	9.560	2407.000	2416.560	0.5	PASS
		2437	8.520	2432.520	2441.040	0.5	PASS
		2462	8.520	2458.000	2466.520	0.5	PASS
11G	Ant1	2412	16.360	2403.840	2420.200	0.5	PASS
		2437	16.280	2428.880	2445.160	0.5	PASS
		2462	16.280	2453.880	2470.160	0.5	PASS
11N20SISO	Ant1	2412	16.640	2403.880	2420.520	0.5	PASS
		2437	16.640	2428.280	2444.920	0.5	PASS
		2462	16.360	2453.240	2469.600	0.5	PASS
11N40SISO	Ant1	2422	35.440	2404.080	2439.520	0.5	PASS
		2437	35.680	2418.840	2454.520	0.5	PASS
		2452	34.480	2434.160	2468.640	0.5	PASS
11AX20SISO	Ant1	2412	18.880	2402.560	2421.440	0.5	PASS
		2437	18.160	2427.840	2446.000	0.5	PASS
		2462	18.160	2452.720	2470.880	0.5	PASS
11AX40SISO	Ant1	2422	37.360	2403.200	2440.560	0.5	PASS
		2437	37.280	2418.200	2455.480	0.5	PASS
		2452	37.440	2433.040	2470.480	0.5	PASS

99 % bandwidth:

Test Mode	Ant.	Channel Freq. (MHz)	OCB (MHz)	FL (MHz)	FH (MHz)	Limit (MHz)	Verdict
11B	Ant1	2412	13.871	2405.1349	2419.0059	---	---
		2437	13.355	2430.3776	2443.7326	---	---
		2462	13.331	2455.3790	2468.7100	---	---
11G	Ant1	2412	17.307	2403.2805	2420.5875	---	---
		2437	17.326	2428.2835	2445.6095	---	---
		2462	17.372	2453.2492	2470.6212	---	---
11N20SISO	Ant1	2412	18.356	2402.8466	2421.2026	---	---
		2437	18.392	2427.8028	2446.1948	---	---
		2462	18.324	2452.8253	2471.1493	---	---
11N40SISO	Ant1	2422	36.559	2403.6570	2440.2160	---	---
		2437	36.691	2418.6373	2455.3283	---	---
		2452	36.835	2433.5786	2470.4136	---	---
11AX20SISO	Ant1	2412	19.198	2402.3699	2421.5679	---	---
		2437	19.219	2427.4461	2446.6651	---	---
		2462	19.252	2452.3728	2471.6248	---	---
11AX40SISO	Ant1	2422	38.044	2402.9796	2441.0236	---	---
		2437	37.885	2418.0661	2455.9511	---	---
		2452	37.918	2433.0412	2470.9592	---	---

9.5. Original test data

6dB bandwidth:





11B_Ant1_2462



11G_Ant1_2412



11G_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

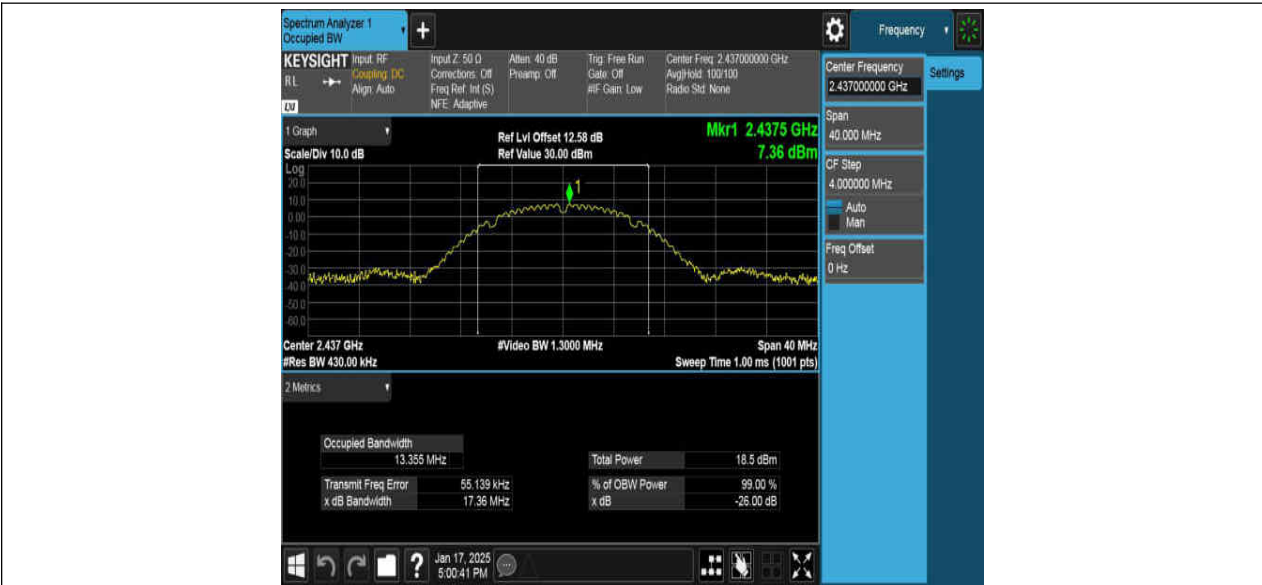


99 % bandwidth:

11B_Ant1_2412



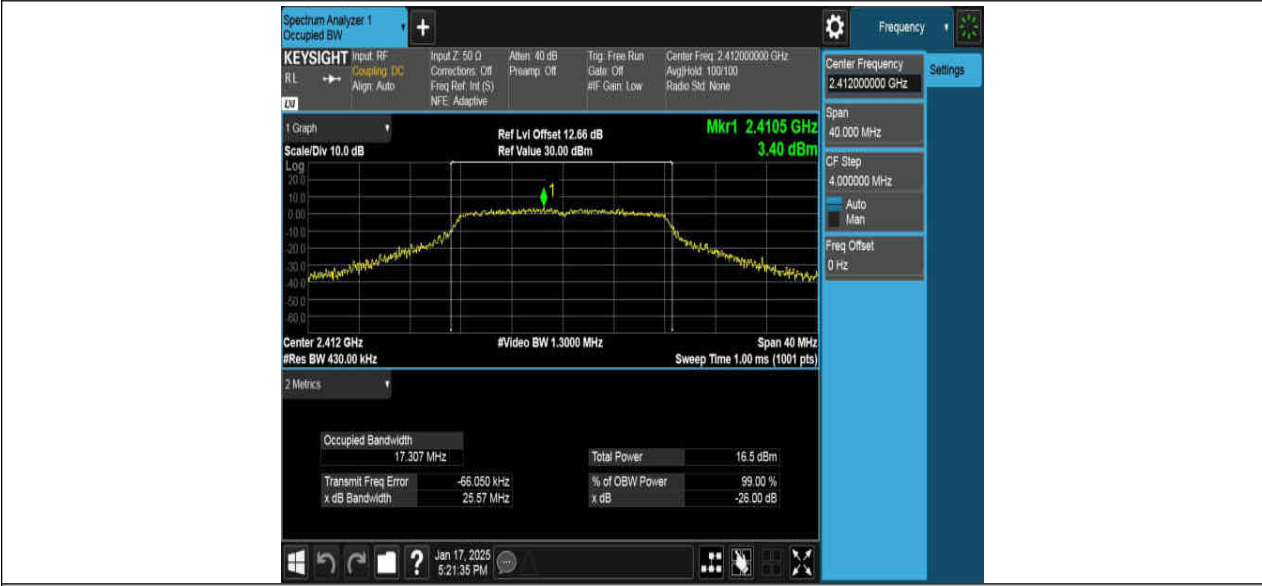
11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



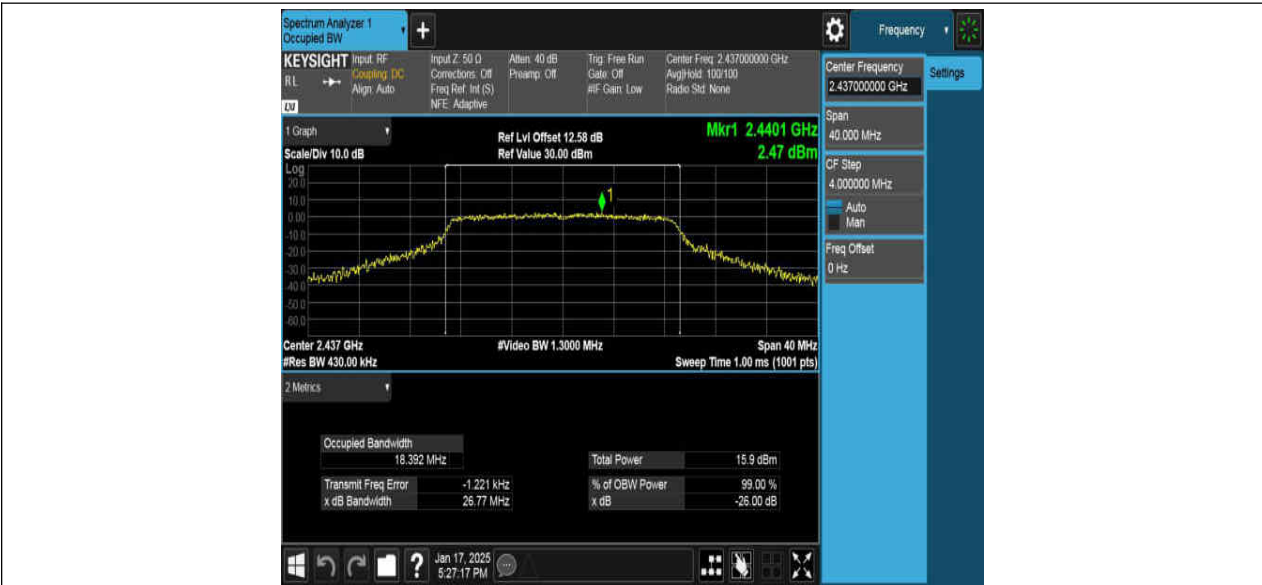
11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



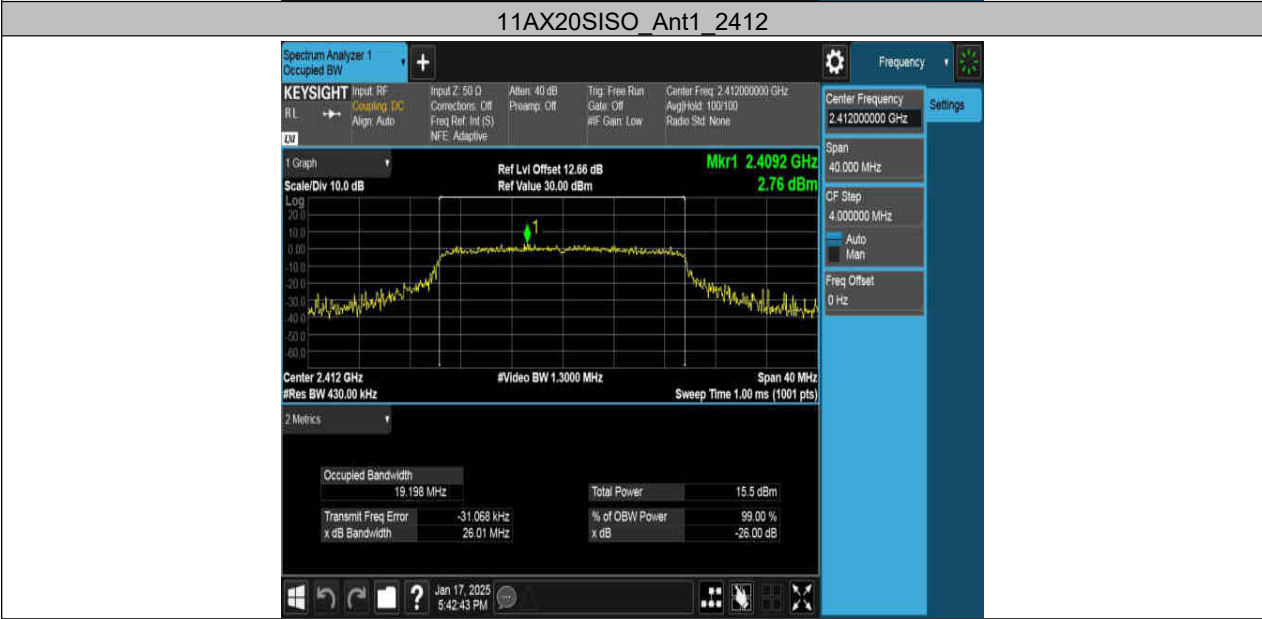
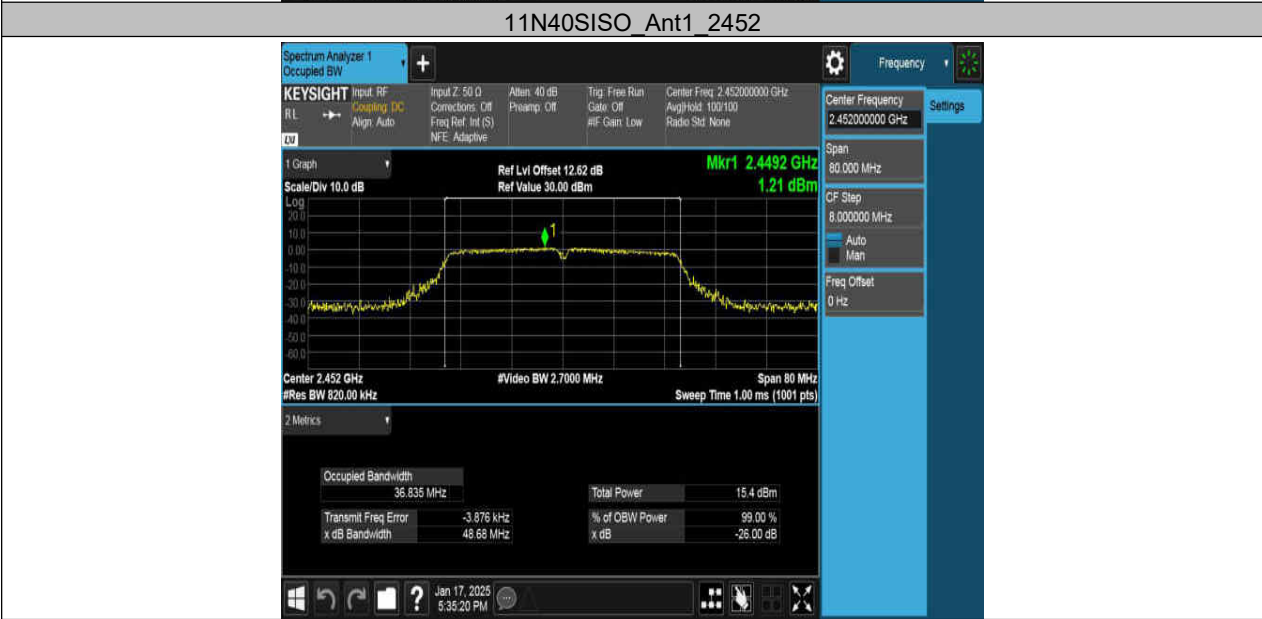
11N20SISO_Ant1_2462

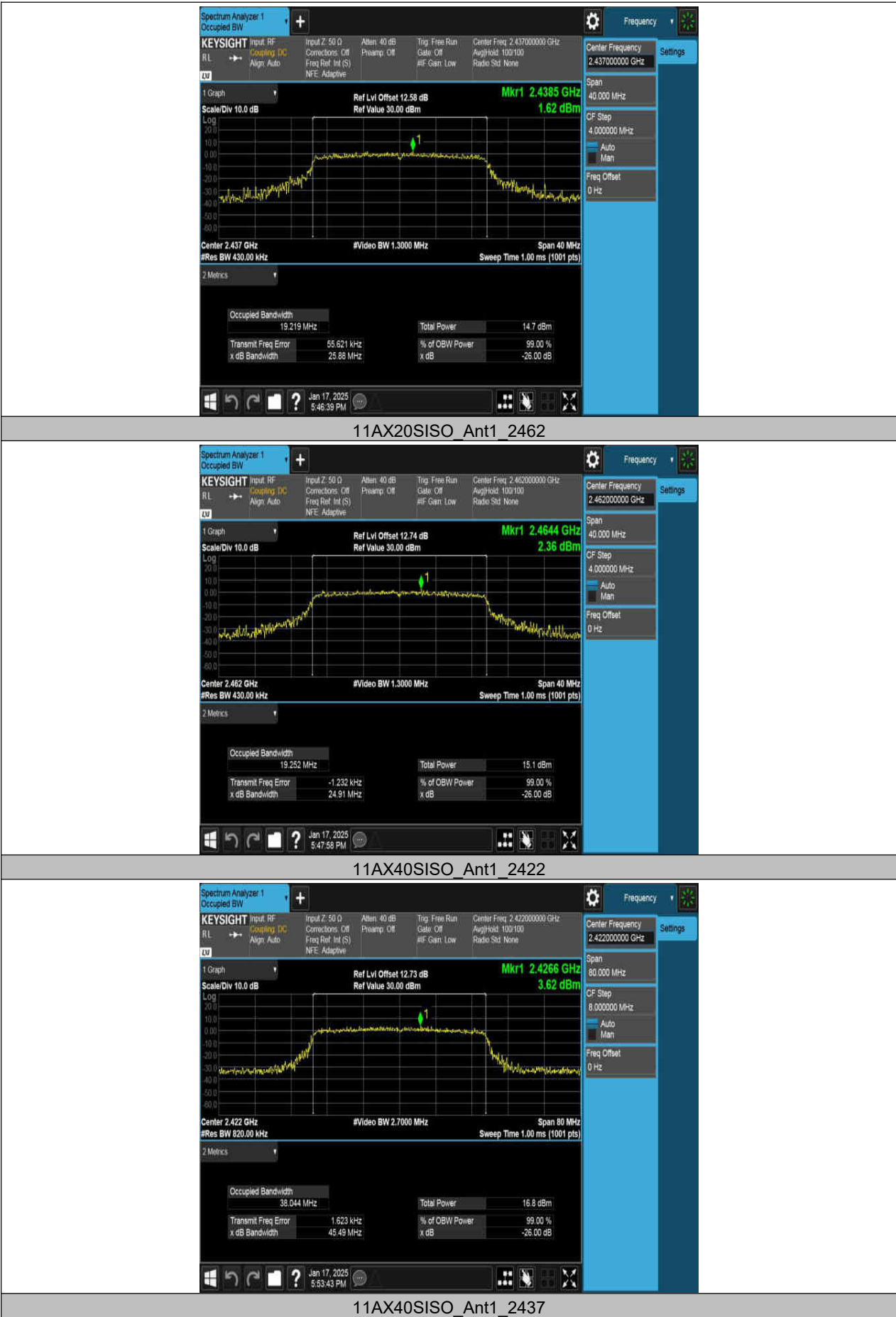


11N40SISO_Ant1_2422



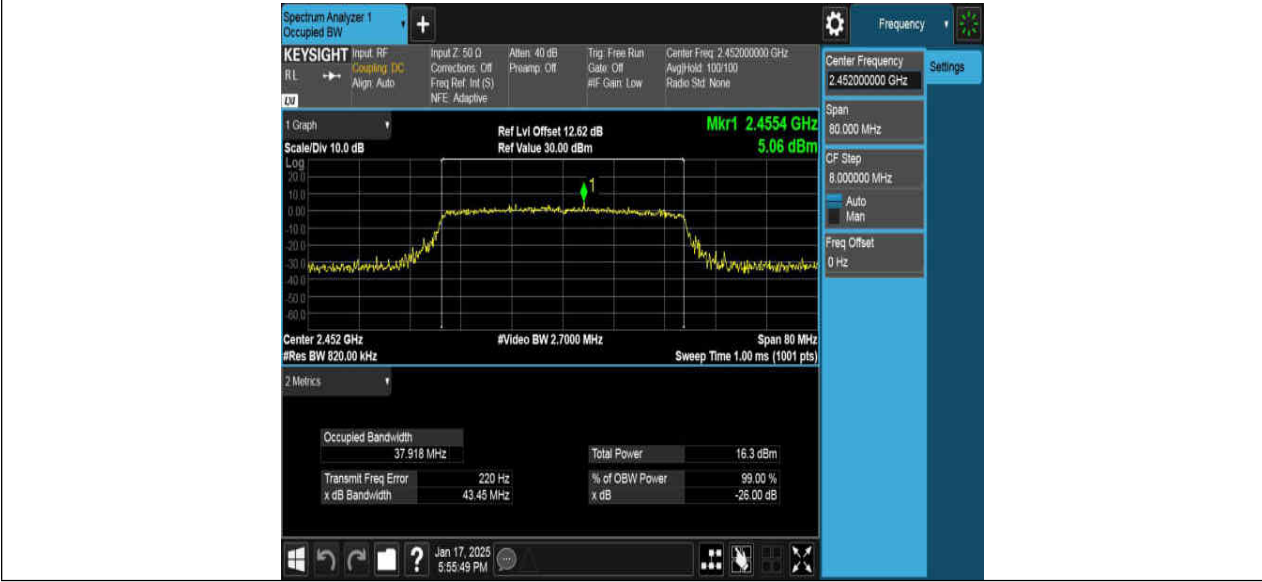
11N40SISO_Ant1_2437







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 ISED RSS-247 ISSUE 3			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(b)(3) ISED RSS-247 5.4 (d)	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	17.71	≤30.00	17.88	≤36.00	PASS
		2437	17.80	≤30.00	17.97	≤36.00	PASS
		2462	17.95	≤30.00	18.12	≤36.00	PASS
11G	Ant1	2412	17.56	≤30.00	17.73	≤36.00	PASS
		2437	16.91	≤30.00	17.08	≤36.00	PASS
		2462	17.77	≤30.00	17.94	≤36.00	PASS
11N20SISO	Ant1	2412	17.53	≤30.00	17.70	≤36.00	PASS
		2437	17.37	≤30.00	17.54	≤36.00	PASS
		2462	17.47	≤30.00	17.64	≤36.00	PASS
11N40SISO	Ant1	2422	16.76	≤30.00	16.93	≤36.00	PASS
		2437	17.20	≤30.00	17.37	≤36.00	PASS
		2452	16.95	≤30.00	17.12	≤36.00	PASS
11AX20SISO	Ant1	2412	16.38	≤30.00	16.55	≤36.00	PASS
		2437	15.79	≤30.00	15.96	≤36.00	PASS
		2462	15.63	≤30.00	15.80	≤36.00	PASS
11AX40SISO	Ant1	2422	16.91	≤30.00	17.08	≤36.00	PASS
		2437	16.96	≤30.00	17.13	≤36.00	PASS
		2452	16.32	≤30.00	16.49	≤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 ISED RSS-247 ISSUE 3			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC §15.247 (e) ISED RSS-247 5.2 (b)	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.

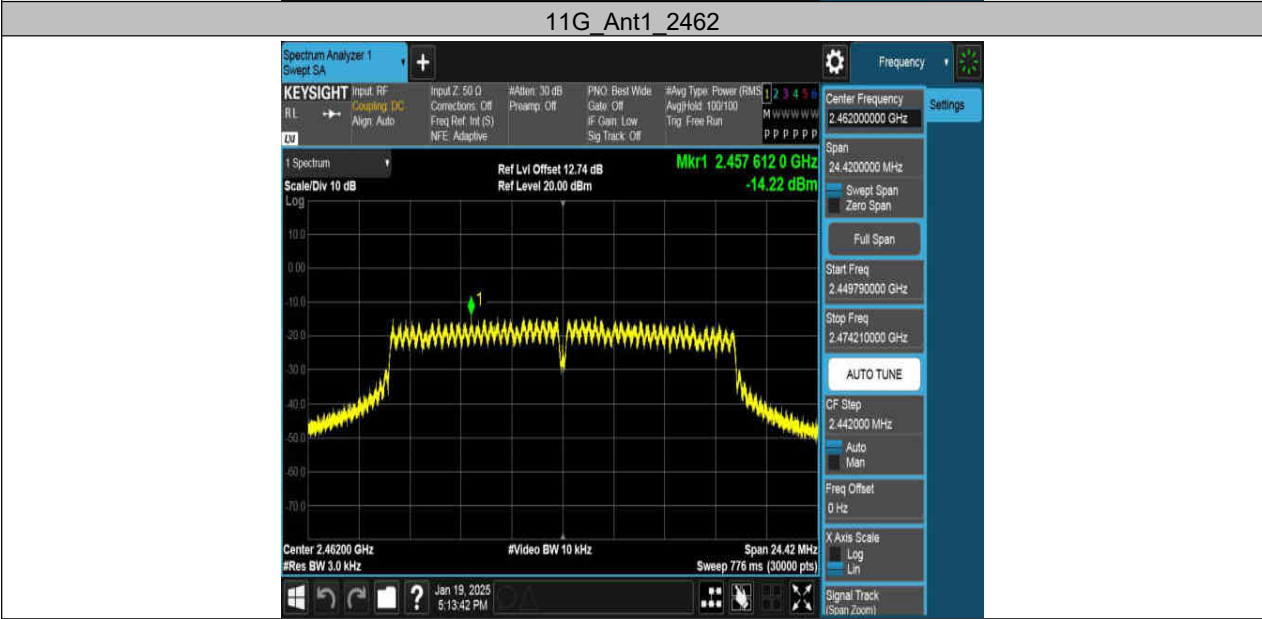
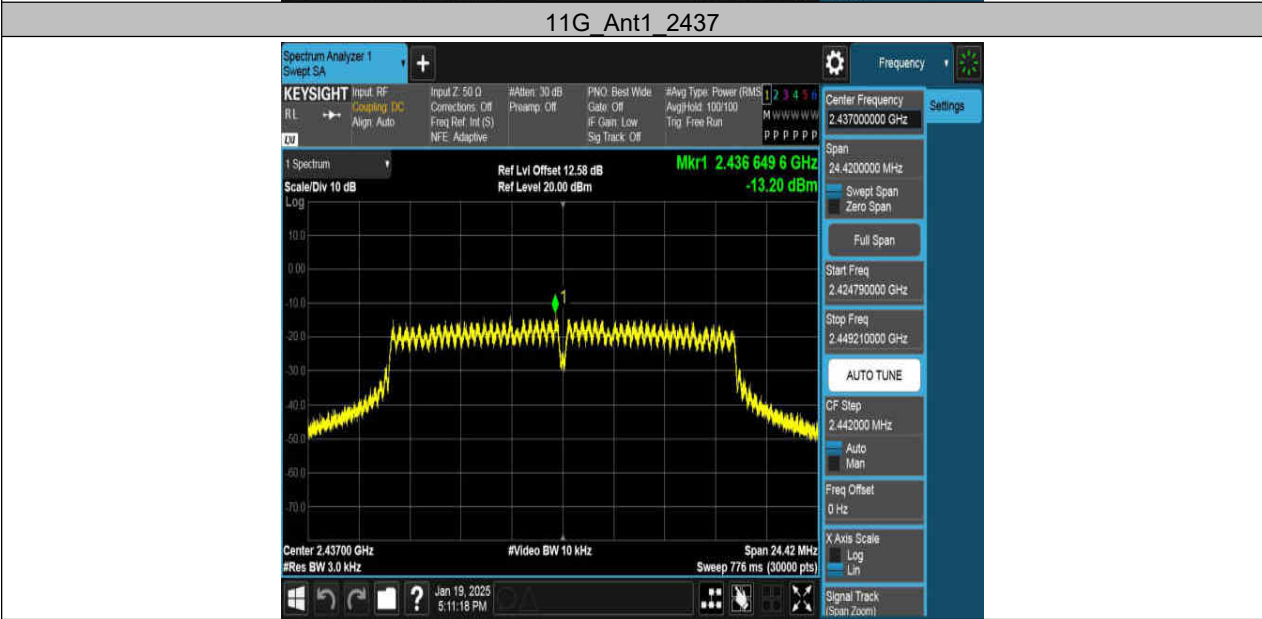
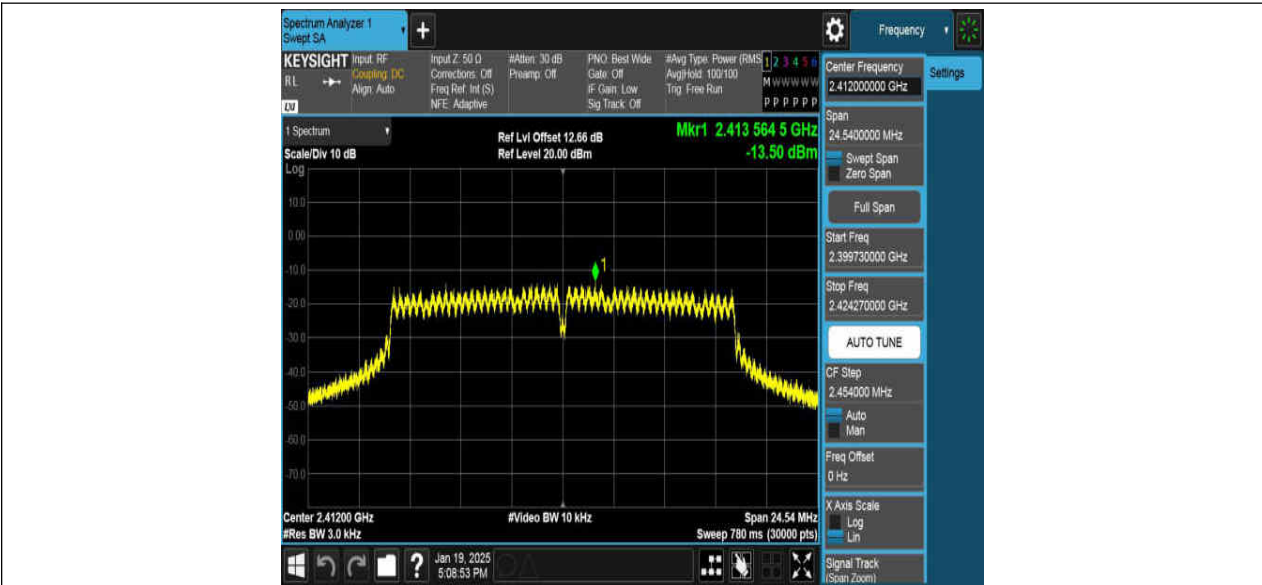
If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

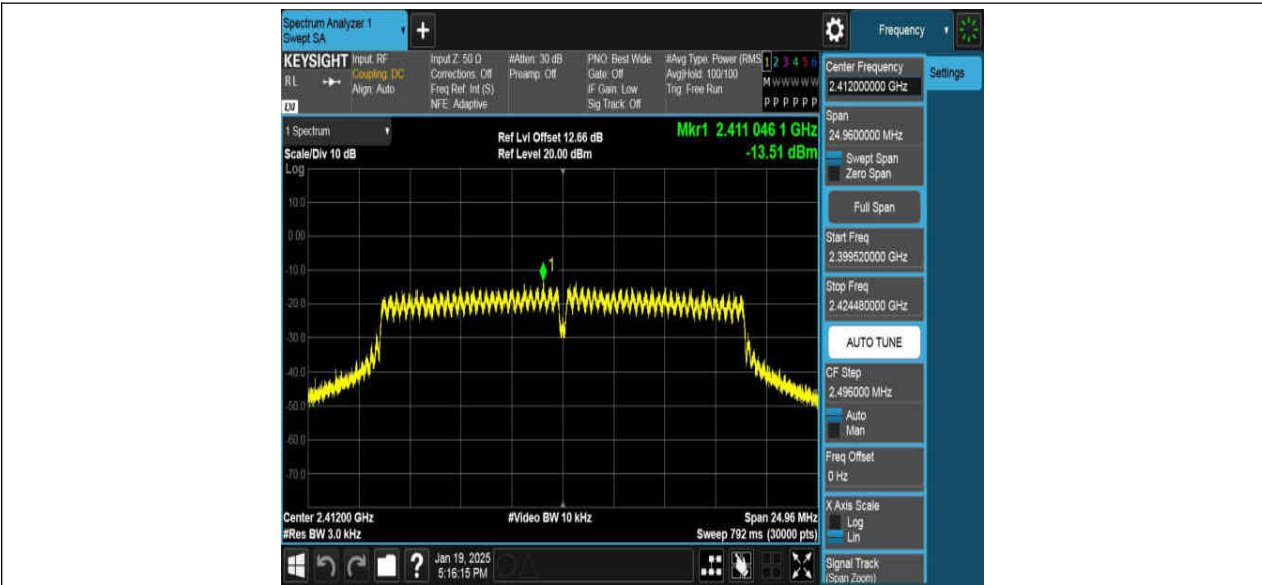
11.4. Results

Test Mode	Ant.	Freq. (MHz)	Result (dBm/3-100kHz)	Limit (dBm/3kHz)	Verdict
11B	Ant1	2412	-4.32	≤ 8.00	PASS
		2437	-5.46	≤ 8.00	PASS
		2462	-6.19	≤ 8.00	PASS
11G	Ant1	2412	-13.50	≤ 8.00	PASS
		2437	-13.20	≤ 8.00	PASS
		2462	-14.22	≤ 8.00	PASS
11N20SISO	Ant1	2412	-13.51	≤ 8.00	PASS
		2437	-14.00	≤ 8.00	PASS
		2462	-13.15	≤ 8.00	PASS
11N40SISO	Ant1	2422	-16.96	≤ 8.00	PASS
		2437	-15.74	≤ 8.00	PASS
		2452	-16.15	≤ 8.00	PASS
11AX20SISO	Ant1	2412	-15.06	≤ 8.00	PASS
		2437	-15.97	≤ 8.00	PASS
		2462	-15.06	≤ 8.00	PASS
11AX40SISO	Ant1	2422	-17.84	≤ 8.00	PASS
		2437	-17.83	≤ 8.00	PASS
		2452	-19.28	≤ 8.00	PASS

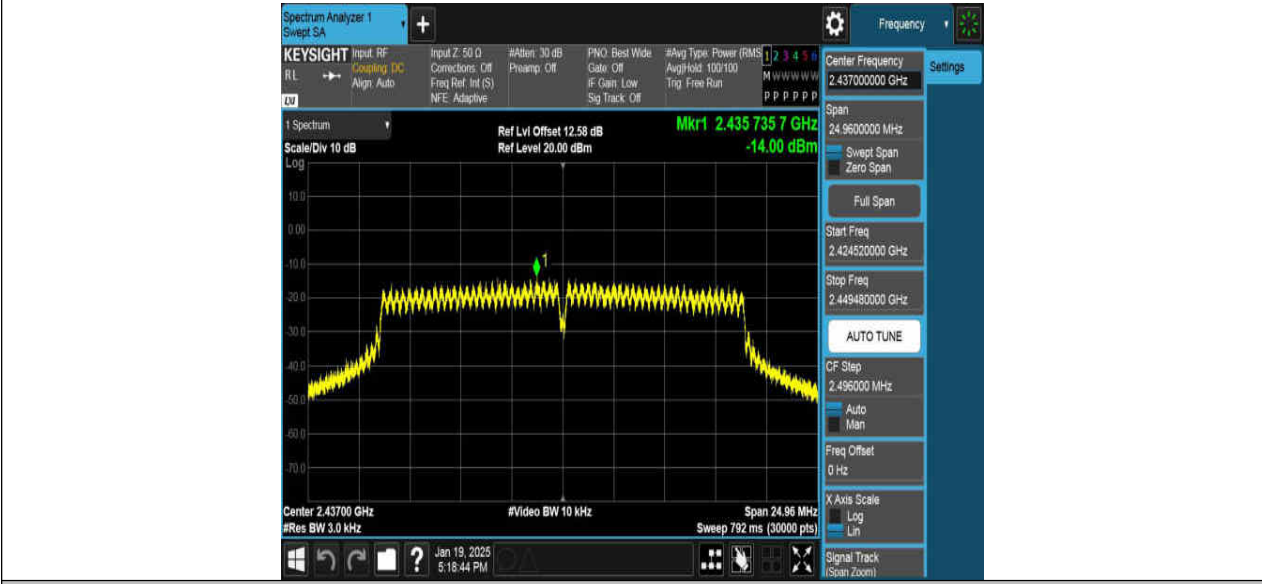
11.5. Original test data



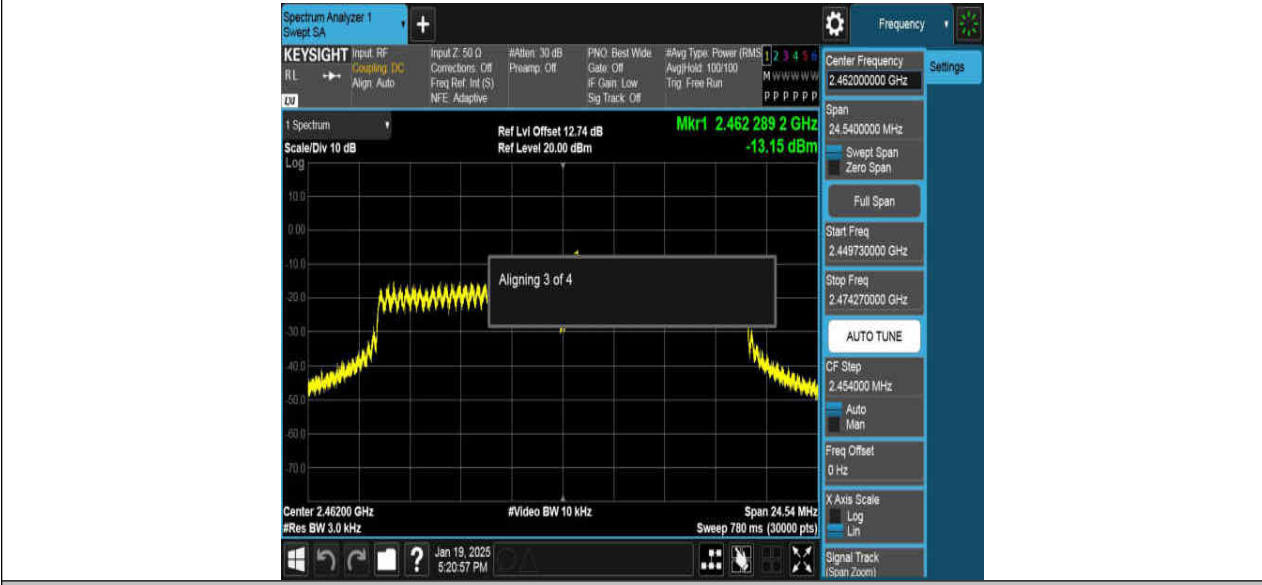




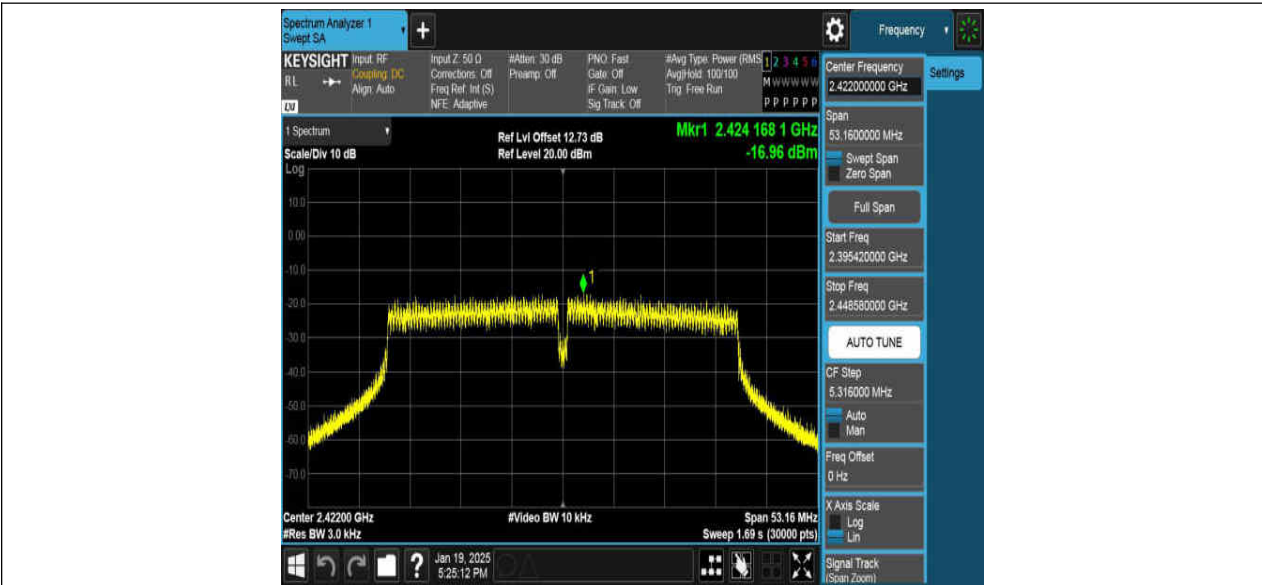
11N20SISO_Ant1_2437



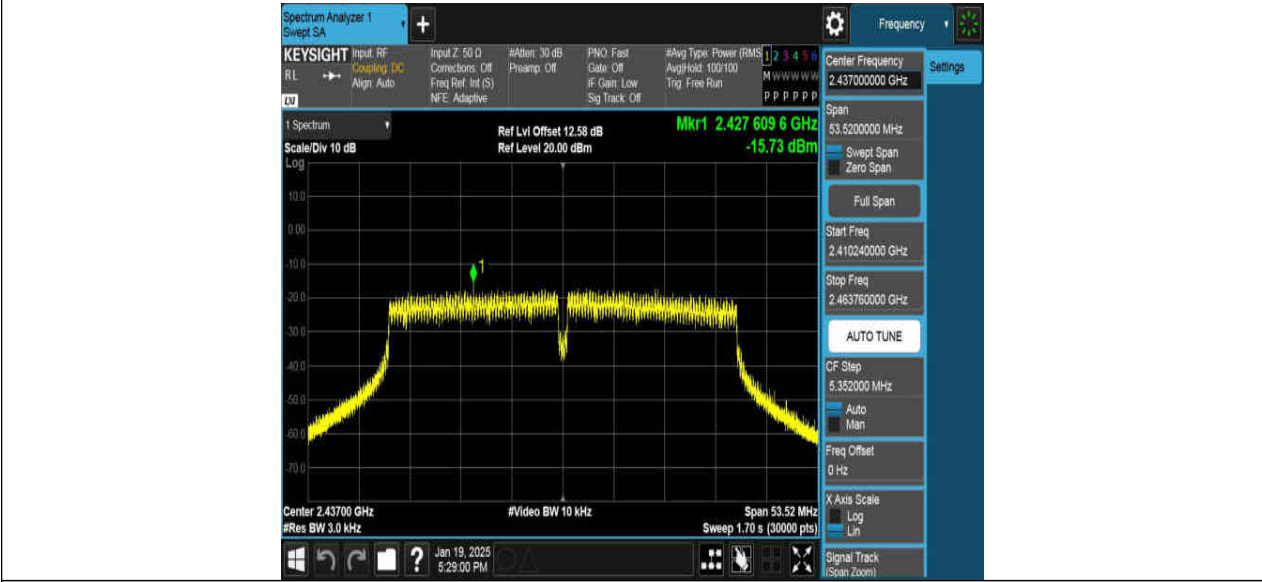
11N20SISO_Ant1_2462



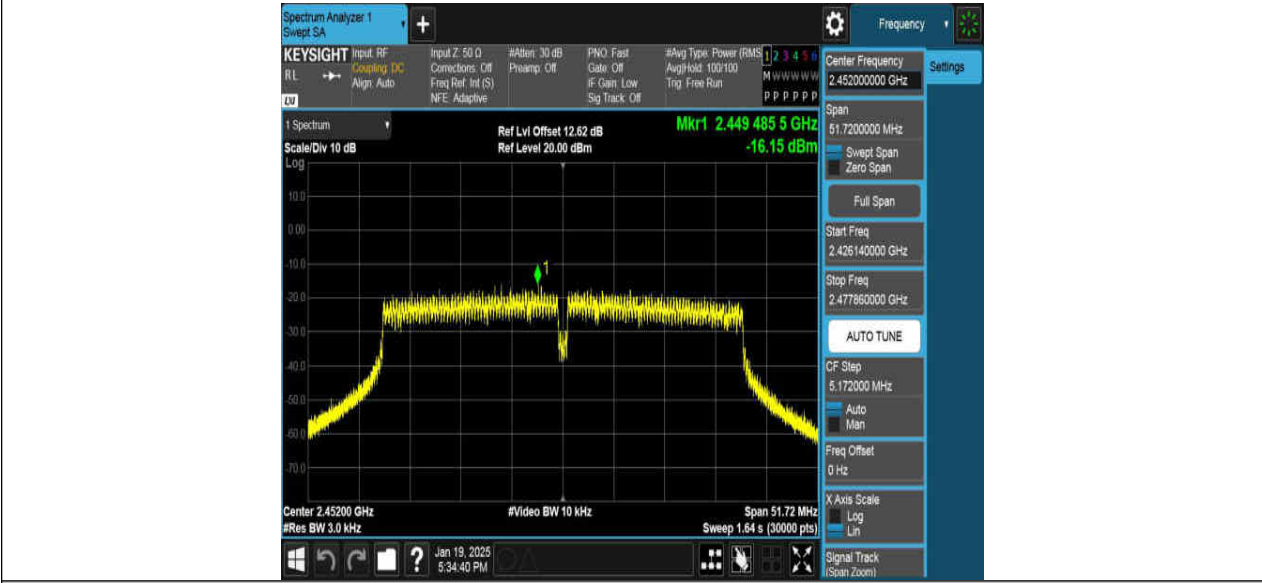
11N40SISO_Ant1_2422



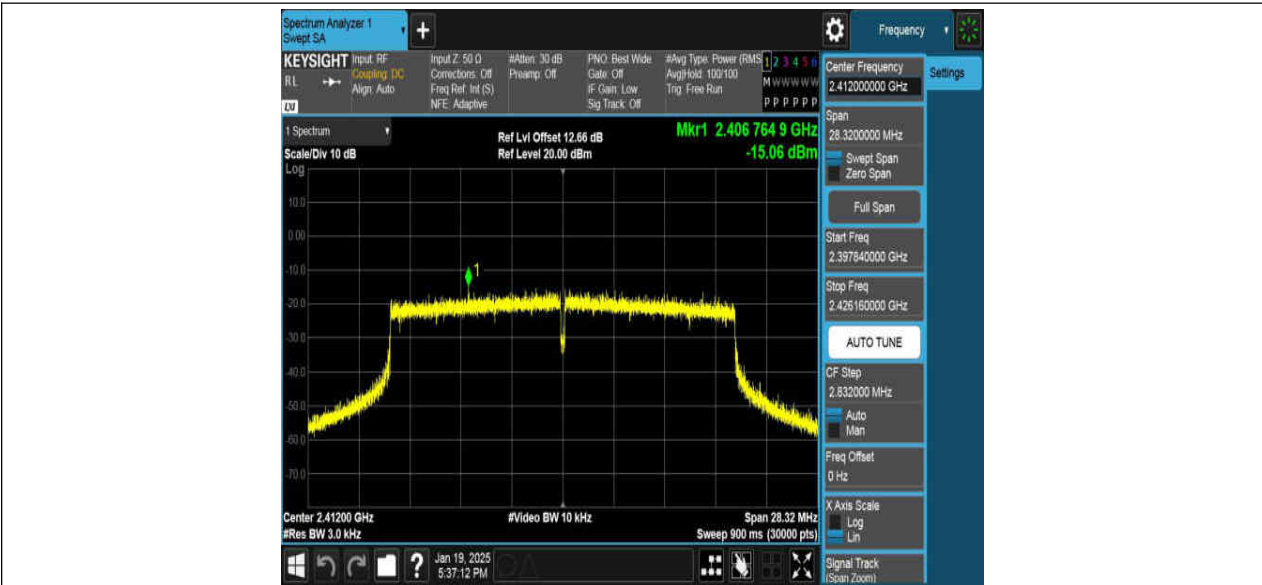
11N40SISO_Ant1_2437



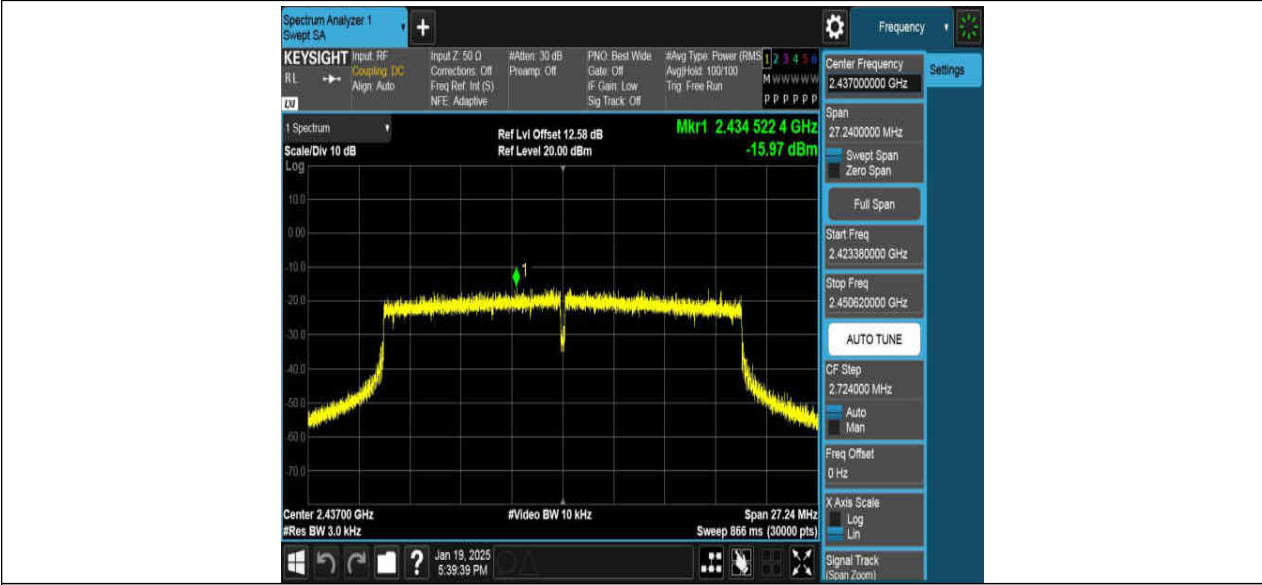
11N40SISO_Ant1_2452



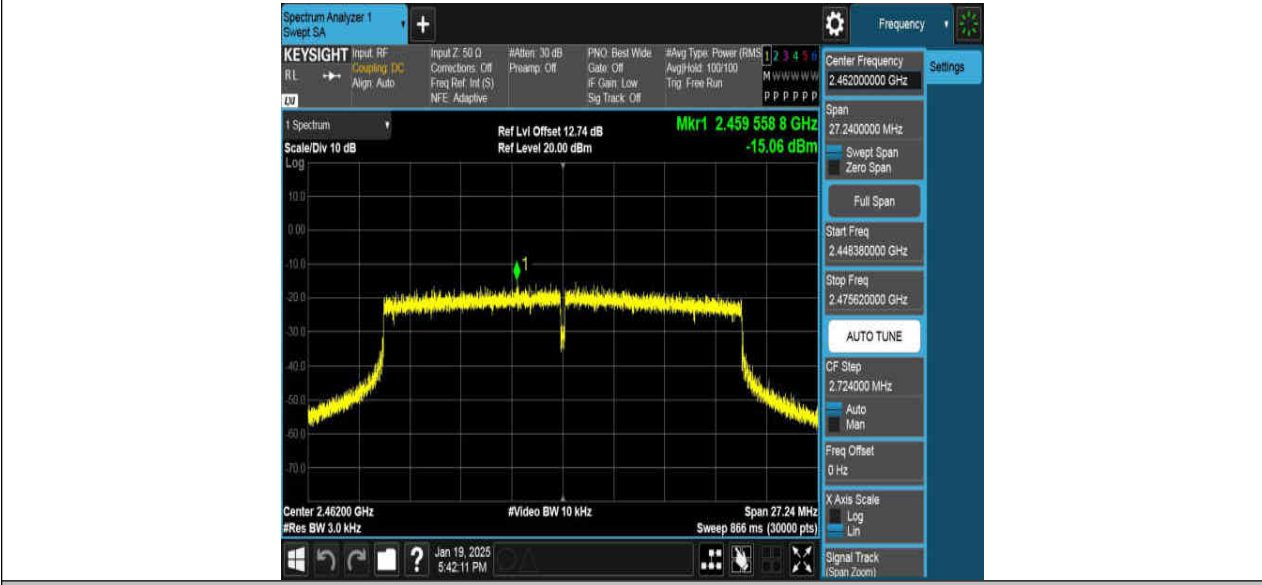
11AX20SISO_Ant1_2412



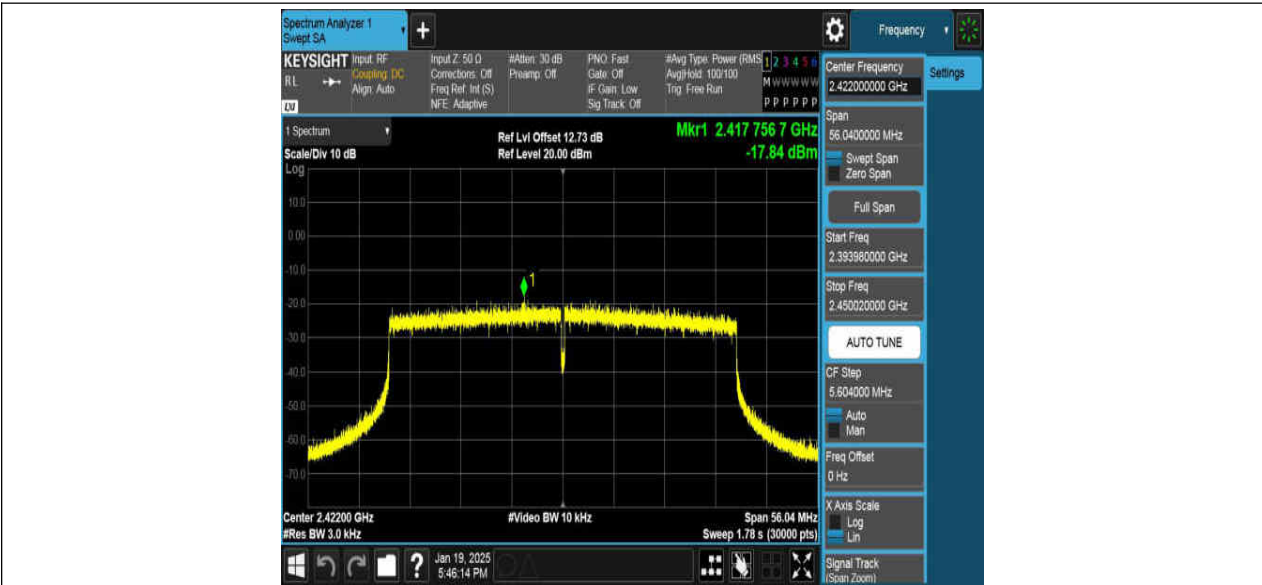
11AX20SISO_Ant1_2437



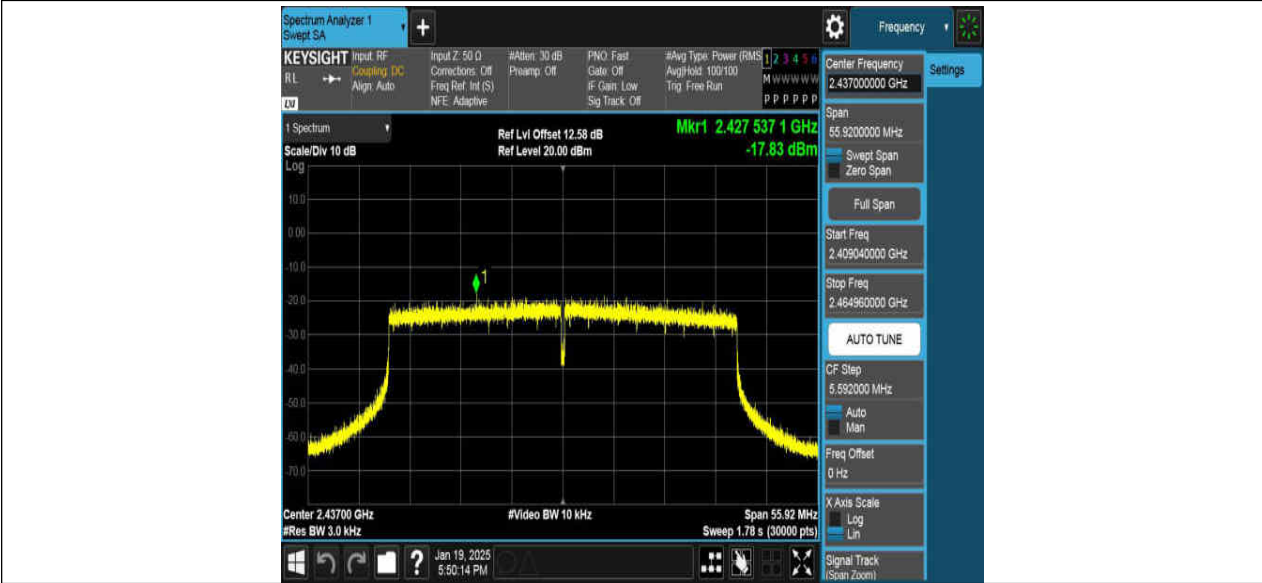
11AX20SISO_Ant1_2462



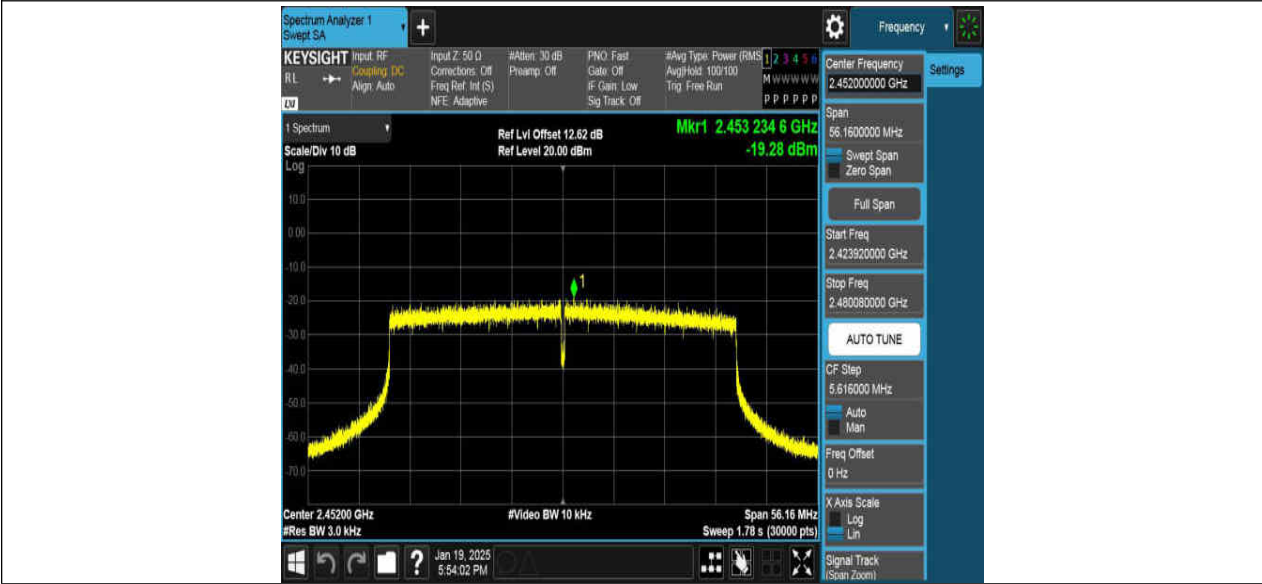
11AX40SISO_Ant1_2422



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 ISED RSS-247 ISSUE 3		
Section	Test Item	Limit
CFR 47 FCC §15.247 (d) ISED RSS-247 5.5	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	6.16	-37.25	≤ -13.84	PASS
		High	2462	7.35	-46.24	≤ -12.65	PASS
11G	Ant1	Low	2412	-0.87	-30.92	≤ -20.87	PASS
		High	2462	-0.26	-45.36	≤ -20.26	PASS
11N20SISO	Ant1	Low	2412	-0.63	-31.21	≤ -20.63	PASS
		High	2462	-1.44	-46.41	≤ -21.44	PASS
11N40SISO	Ant1	Low	2422	-3.77	-35.14	≤ -23.77	PASS
		High	2452	-3.45	-46.91	≤ -23.45	PASS
11AX20SISO	Ant1	Low	2412	-1.94	-31.77	≤ -21.94	PASS
		High	2462	-1.30	-47.11	≤ -21.3	PASS
11AX40SISO	Ant1	Low	2422	-5.10	-36.55	≤ -25.1	PASS

		High	2452	-4.68	-46.43	≤-24.68	PASS
--	--	------	------	-------	--------	---------	------

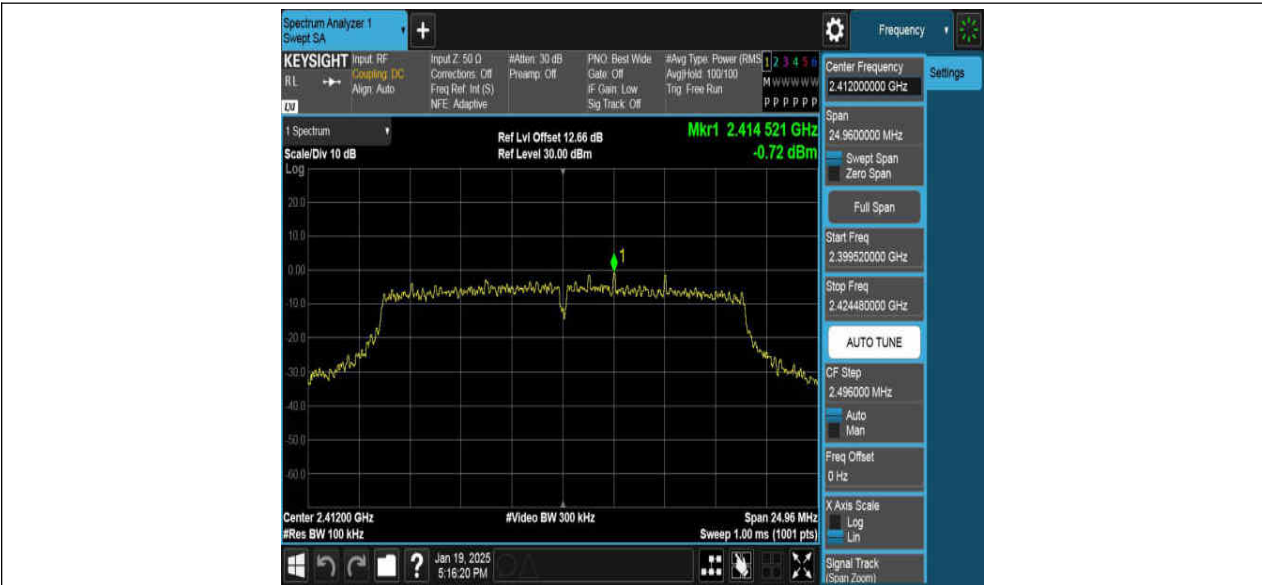
Test Mode	Antenna	Frequency(MHz)	Freq. Range (Mhz)	Ref Level (dBm)	Result (dBm)	Limit (dBm)	Verdict
11B	Ant1	2412	30~1000	7.99	-58.25	≤-12.01	PASS
			1000~26500	7.99	-46.02	≤-12.01	PASS
		2437	30~1000	7.94	-60.61	≤-12.06	PASS
			1000~26500	7.94	-42.6	≤-12.06	PASS
		2462	30~1000	7.28	-57.2	≤-12.72	PASS
			1000~26500	7.28	-43.04	≤-12.72	PASS
11G	Ant1	2412	30~1000	-0.92	-60.77	≤-20.92	PASS
			1000~26500	-0.92	-50.81	≤-20.92	PASS
		2437	30~1000	-2.68	-60.83	≤-22.68	PASS
			1000~26500	-2.68	-51.64	≤-22.68	PASS
		2462	30~1000	-1.09	-61.18	≤-21.09	PASS
			1000~26500	-1.09	-46.85	≤-21.09	PASS
11N20SISO	Ant1	2412	30~1000	-0.72	-60.43	≤-20.72	PASS
			1000~26500	-0.72	-50.95	≤-20.72	PASS
		2437	30~1000	-2.14	-60.84	≤-22.14	PASS
			1000~26500	-2.14	-51.08	≤-22.14	PASS
		2462	30~1000	-0.80	-60.24	≤-20.8	PASS
			1000~26500	-0.80	-46.63	≤-20.8	PASS
11N40SISO	Ant1	2422	30~1000	-3.28	-60.64	≤-23.28	PASS
			1000~26500	-3.28	-51.29	≤-23.28	PASS
		2437	30~1000	-2.66	-61.06	≤-22.66	PASS
			1000~26500	-2.66	-51.36	≤-22.66	PASS
		2452	30~1000	-4.27	-60.52	≤-24.27	PASS
			1000~26500	-4.27	-51.82	≤-24.27	PASS
11AX20SISO	Ant1	2412	30~1000	-1.15	-61.44	≤-21.15	PASS
			1000~26500	-1.15	-50.75	≤-21.15	PASS
		2437	30~1000	-1.24	-61.39	≤-21.24	PASS
			1000~26500	-1.24	-51.74	≤-21.24	PASS
		2462	30~1000	-1.57	-60.36	≤-21.57	PASS
			1000~26500	-1.57	-51.96	≤-21.57	PASS
11AX40SISO	Ant1	2422	30~1000	-4.24	-60.49	≤-24.24	PASS
			1000~26500	-4.24	-51.07	≤-24.24	PASS
		2437	30~1000	-4.75	-61.05	≤-24.75	PASS
			1000~26500	-4.75	-51.6	≤-24.75	PASS
		2452	30~1000	-4.43	-59.98	≤-24.43	PASS
			1000~26500	-4.43	-51.13	≤-24.43	PASS

12.5. Original test data

Reference level



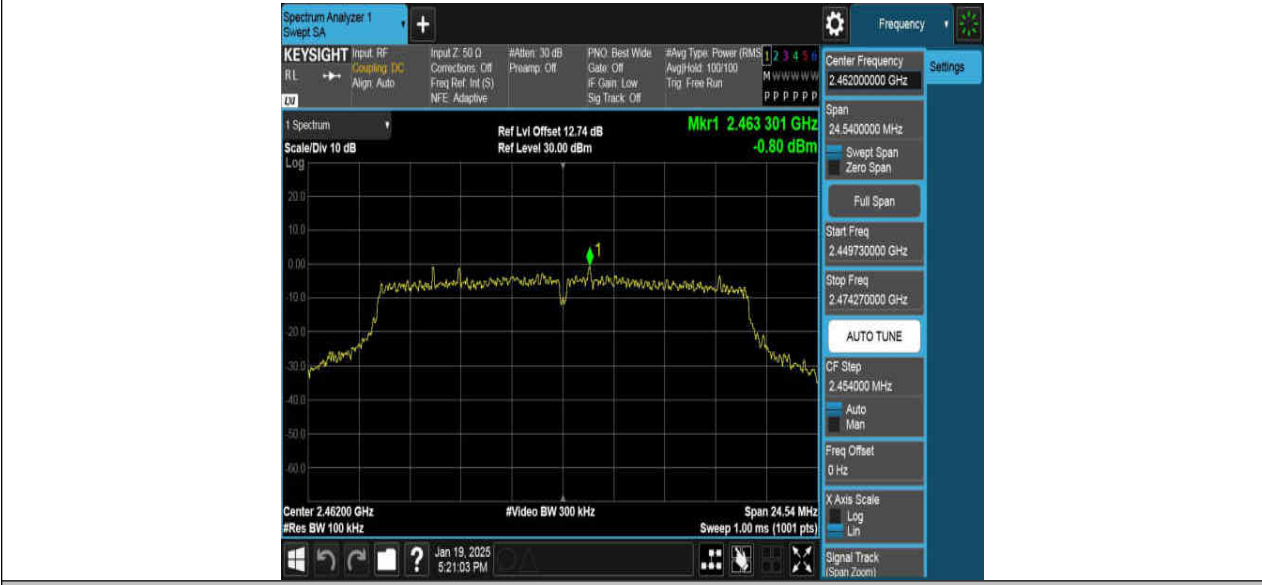




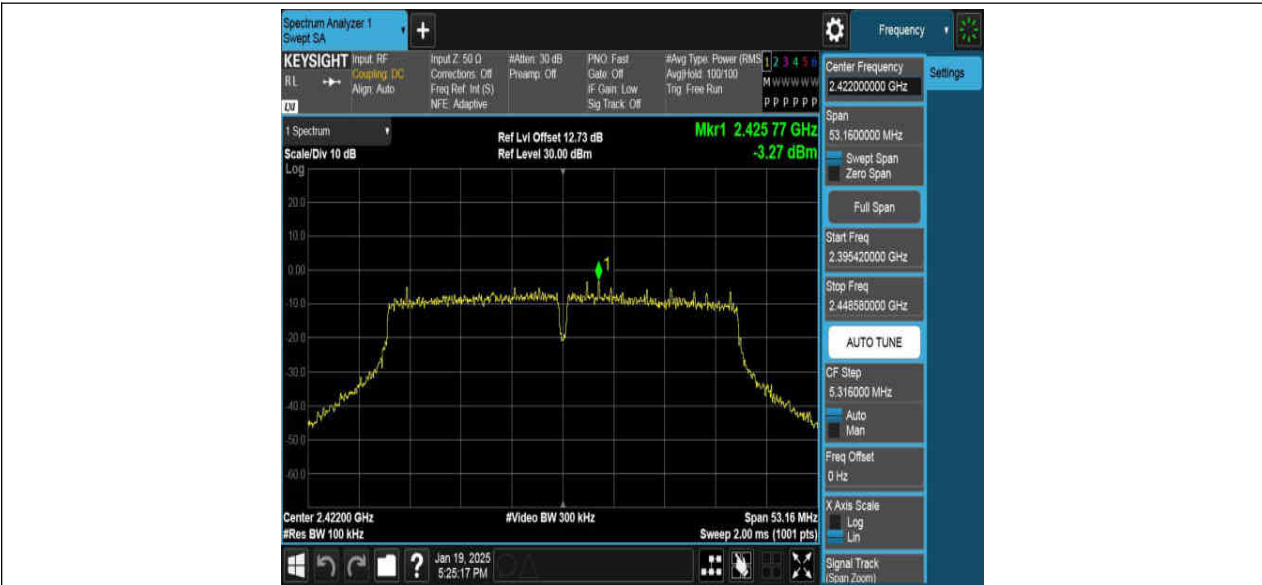
11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



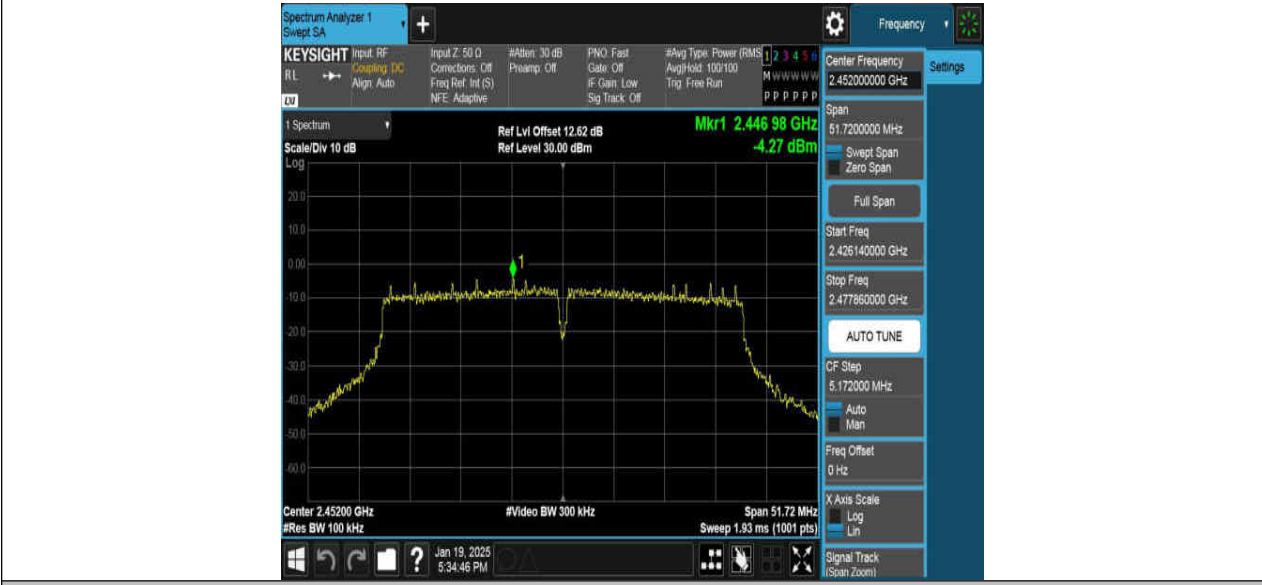
11N40SISO_Ant1_2422



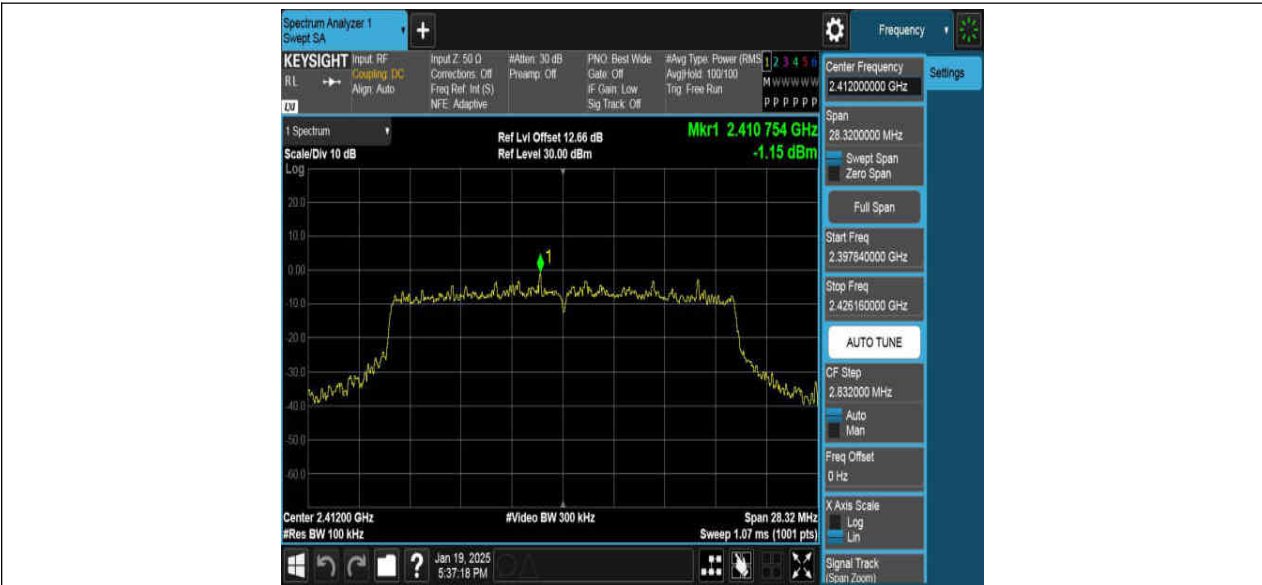
11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



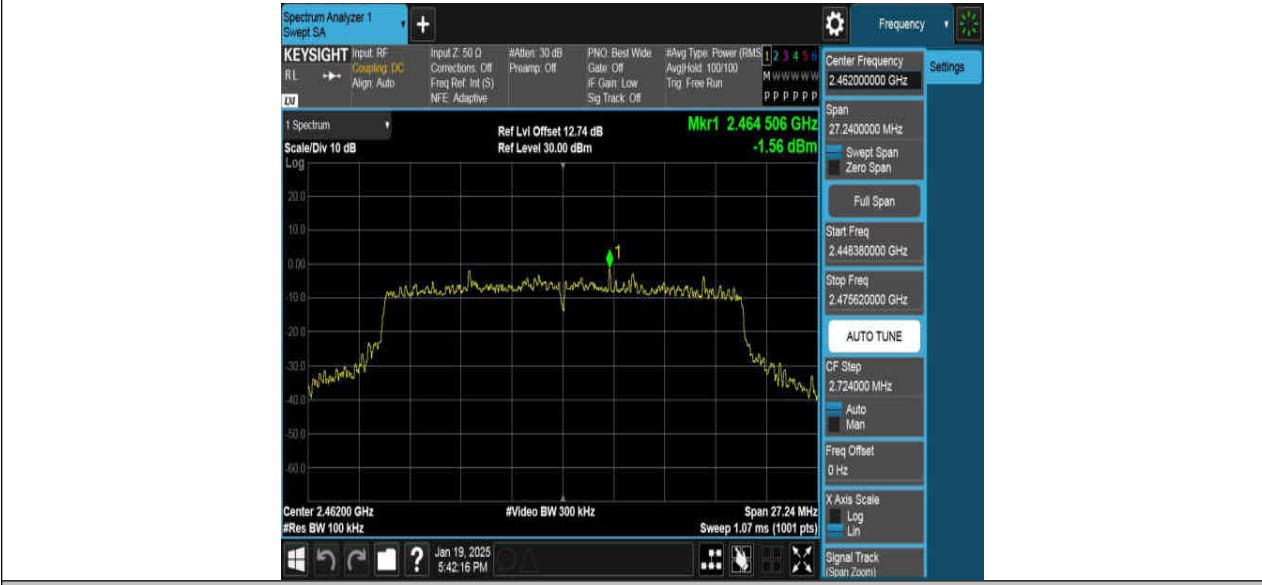
11AX20SISO_Ant1_2412



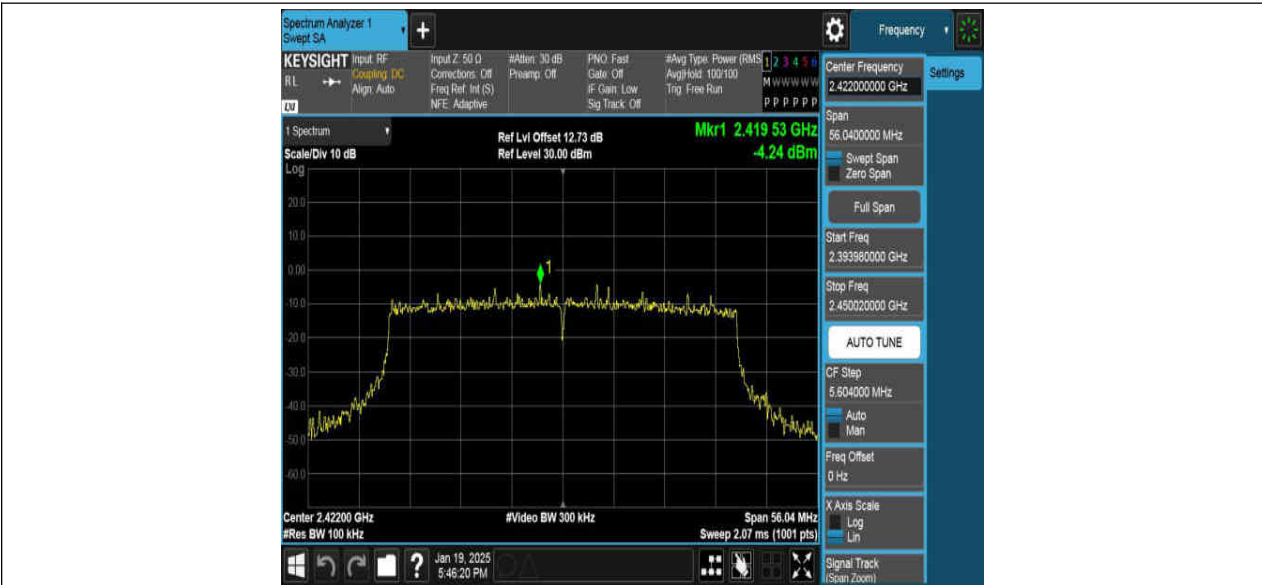
11AX20SISO_Ant1_2437



11AX20SISO_Ant1_2462



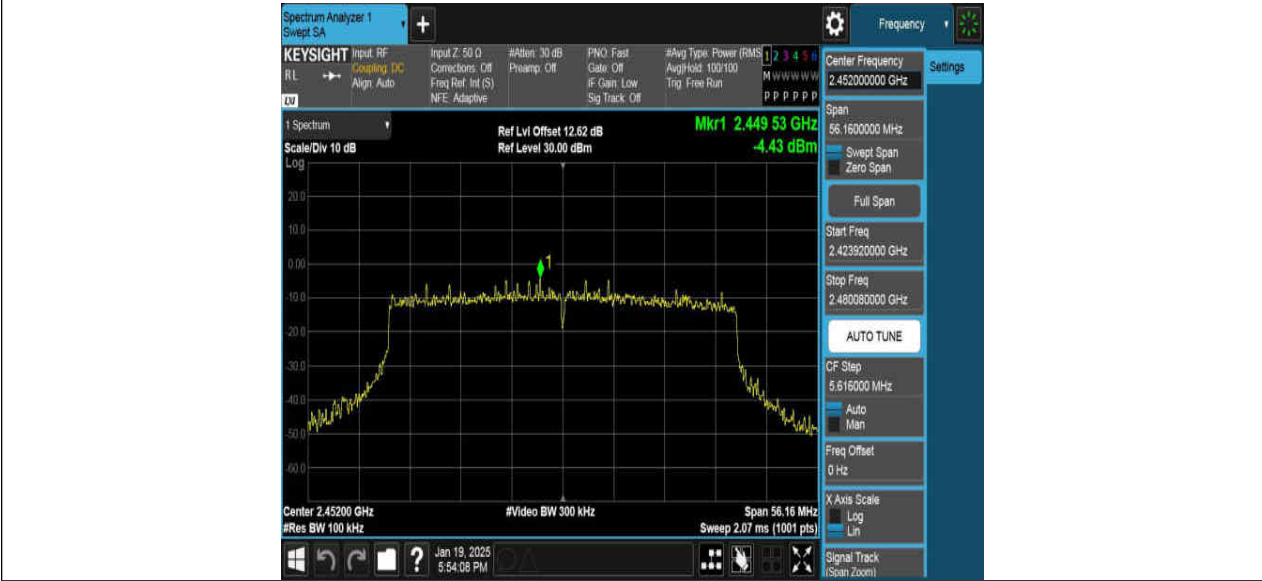
11AX40SISO_Ant1_2422



11AX40SISO_Ant1_2437



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:

