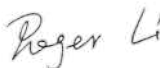


FCC AND ISCED CERTIFICATION TEST REPORT

Applicant:	EXPRESS LUCK INDUSTRIAL (SHENZHEN) LIMITED
Address:	Floor1, Workshop1, NO.88, SOUTH BAOTONG ROAD, XIKENG COMMUNITY, YUANSAN STREET, LONGGANG DISTRICT, Shenzhen
Manufacturer:	EXPRESS LUCK INDUSTRIAL (SHENZHEN) LIMITED
Address:	Floor1, Workshop1, NO.88, SOUTH BAOTONG ROAD, XIKENG COMMUNITY, YUANSAN STREET, LONGGANG DISTRICT, Shenzhen
Product Description:	IEEE 802.11 b/g/n 1T1R USB WiFi+BLE 5.0 Module
Brand Name:	NA
Tested Model:	EL.AT6032X-CWFT
FCC ID:	2AWY6-EAT6032XCT
IC:	26332-EAT6032XCT
Report No.:	JCF250530061-002
Received Date:	May. 30, 2025
Tested Date:	May. 30, 2025 ~ Jun. 12, 2025
Issued Date:	Jun. 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: Jun. 12, 2025

Reviewed By:	
	
<u>Kennys Zhang/Engineer</u>	Date: Jun. 12, 2025

Approved By:	
	
<u>Talent Zhang/Engineer</u>	Date: Jun. 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	/	Jun. 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	7
4.4. Test environment conditions	8
4.5. Description of Available Antennas	8
4.6. Description of Available Antennas	8
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	9
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	17
9.1. Block diagram of test setup	17
9.2. Limits	17
9.3. Test Procedure	17
9.4. Results	17
9.5. Original test data	18
10. Conducted Output Power	27
10.1. Block diagram of test setup	27
10.2. Limits	27
10.3. Test Procedure	27
10.4. Results	27
11. Power Spectral Density	28
11.1. Block diagram of test setup	28
11.2. Limits	28
11.3. Test Procedure	28
11.4. Results	28
11.5. Original test data	29
12. Conducted Band edge and Spurious Emissions	33
12.1. Block diagram of test setup	33
12.2. Limits	33
12.3. Test Procedure	33
12.4. Test result	33
12.5. Original test data	34
13. Radiated Emission	50
13.1. Block diagram of test setup	50
13.2. Limit	51
13.3. Test Procedure	52
13.4. Results	54
13.5. Original test data	54

14. AC Power Line Conducted Emissions 55

14.1. Block diagram of test setup 55

14.2. Limits 55

14.3. Test procedure 55

14.4. Test result 56

14.5. Original test data 56

15. Antenna Requirements 57

15.1. Applicable Requirements 57

15.2. Result 57

APPENDIX A – Radiated Emission Below 1GHz Test Data 58

APPENDIX B – Radiated Emission Above 1GHz Test Data 60

APPENDIX C – AC Power Line Conducted Emission Test Data 82

1. Test Report Declare

Applicant:	EXPRESS LUCK INDUSTRIAL (SHENZHEN) LIMITED
Address:	Floor1, Workshop1, NO.88, SOUTH BAOTONG ROAD, XIKENG COMMUNITY, YUANSAN STREET, LONGGANG DISTRICT, Shenzhen
Manufacturer:	EXPRESS LUCK INDUSTRIAL (SHENZHEN) LIMITED
Address:	Floor1, Workshop1, NO.88, SOUTH BAOTONG ROAD, XIKENG COMMUNITY, YUANSAN STREET, LONGGANG DISTRICT, Shenzhen
Product Name:	IEEE 802.11 b/g/n 1T1R USB WiFi+BLE 5.0 Module
Brand Name:	NA
Model Name:	EL.AT6032X-CWFT
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:	IEEE 802.11 b/g/n 1T1R USB WiFi+BLE 5.0 Module
Model Number:	EL.AT6032X-CWFT
EUT Function Description:	Please refer to the user manual of this device
Power Supply:	DC 3.3V+/-0.3
Serial Number:	250530061-01-01
Hardware Version:	NA
Software Version:	NA
Radio Specification:	IEEE802.11b/g/n
Operation Frequency:	IEEE 802.11b: 2412MHz—2462MHz IEEE 802.11g: 2412MHz—2462MHz IEEE 802.11n HT20: 2412MHz—2462MHz IEEE 802.11n HT40: 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)
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
Antenna Type:	PCB Antenna, MAX. Gain: 0.23 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 (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 (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

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		test_gui_wt20	
Modulation Mode	Transmit Antenna Number	Test Software Setting Value	
		Channel	ANT1
802.11b	1	CH1	DSP power 6
		CH6	DSP power 6
		CH11	DSP power 6
802.11g	1	CH1	DSP power 6
		CH6	DSP power 6
		CH11	DSP power 6
802.11HT20	1	CH1	DSP power 6
		CH6	DSP power 6
		CH11	DSP power 6
802.11n HT40	1	CH3	DSP power 6
		CH6	DSP power 6
		CH9	DSP power 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.

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.	

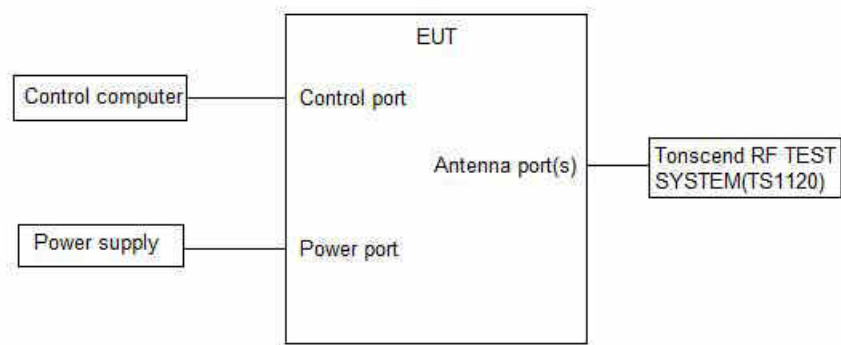
7. Measuring Instrument and Software Used

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	01361	Sep. 25, 2024	Sep. 24, 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	/	Aug. 23, 2024	Aug. 22, 2025

			NO AMP			
☒	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	11.39	18.89	60.30
		2437	11.38	18.89	60.24
		2462	11.39	18.89	60.30
11G	Ant1	2412	1.90	3.15	60.32
		2437	1.90	3.15	60.32
		2462	1.90	3.15	60.32
11N20SISO	Ant1	2412	1.75	2.92	59.93
		2437	1.77	2.92	60.62
		2462	1.78	2.93	60.75
11N40SISO	Ant1	2422	0.86	2.02	42.57
		2437	0.86	2.03	42.36
		2452	0.87	2.04	42.65

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





11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



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	10.040	2407.000	2417.040	0.5	PASS
		2437	9.560	2431.960	2441.520	0.5	PASS
		2462	10.000	2457.000	2467.000	0.5	PASS
11G	Ant1	2412	16.320	2403.840	2420.160	0.5	PASS
		2437	16.320	2428.840	2445.160	0.5	PASS
		2462	16.320	2453.840	2470.160	0.5	PASS
11N20SISO	Ant1	2412	17.520	2403.240	2420.760	0.5	PASS
		2437	16.920	2428.600	2445.520	0.5	PASS
		2462	17.000	2453.480	2470.480	0.5	PASS
11N40SISO	Ant1	2422	35.120	2404.400	2439.520	0.5	PASS
		2437	35.040	2419.480	2454.520	0.5	PASS
		2452	35.120	2434.480	2469.600	0.5	PASS

99 % bandwidth:

Test Mode	Ant.	Channel Freq. (MHz)	OCB (MHz)	FL (MHz)	FH (MHz)	Limit (MHz)	Verdict
11B	Ant1	2412	14.977	2404.5432	2419.5202	---	---
		2437	15.011	2429.5135	2444.5245	---	---
		2462	15.030	2454.4977	2469.5277	---	---
11G	Ant1	2412	16.866	2403.5583	2420.4243	---	---

11N20SISO	Ant1	2437	16.790	2428.6085	2445.3985	---	---
		2462	16.847	2453.5940	2470.4410	---	---
		2412	17.748	2403.1343	2420.8823	---	---
		2437	17.658	2428.1663	2445.8243	---	---
		2462	17.685	2453.1476	2470.8326	---	---
11N40SISO	Ant1	2422	36.117	2403.9714	2440.0884	---	---
		2437	36.116	2418.9283	2455.0443	---	---
		2452	36.098	2433.9416	2470.0396	---	---

9.5. Original test data

6dB bandwidth:





11G_Ant1_2412



11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437

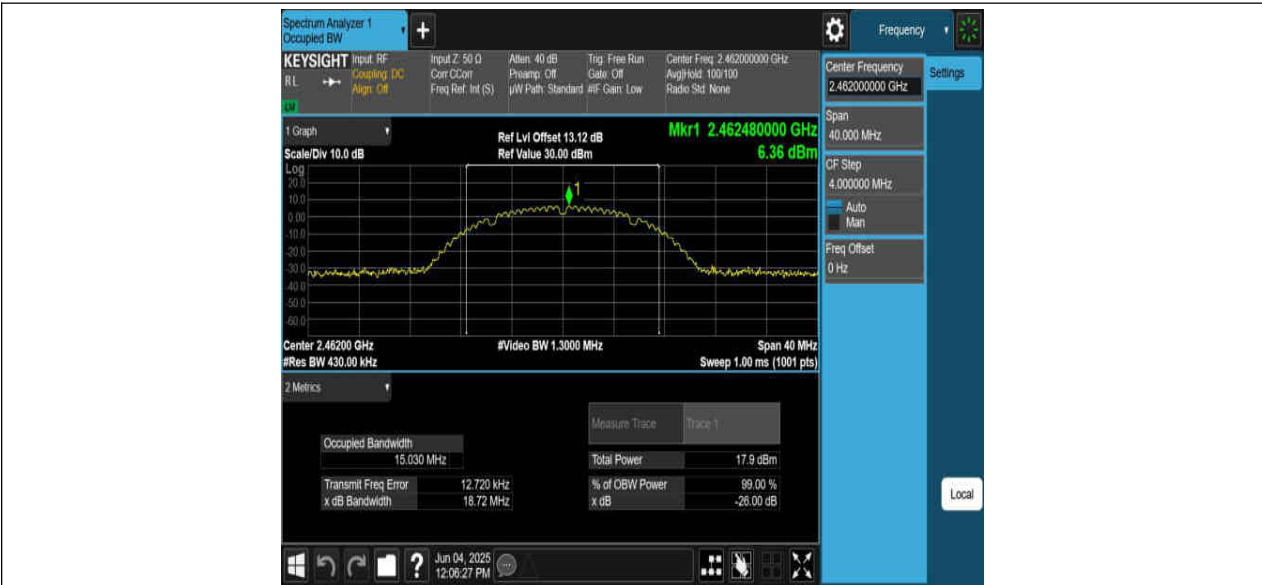


11N40SISO_Ant1_2452



99 % bandwidth:





11G_Ant1_2412



11G_Ant1_2437



11G_Ant1_2462



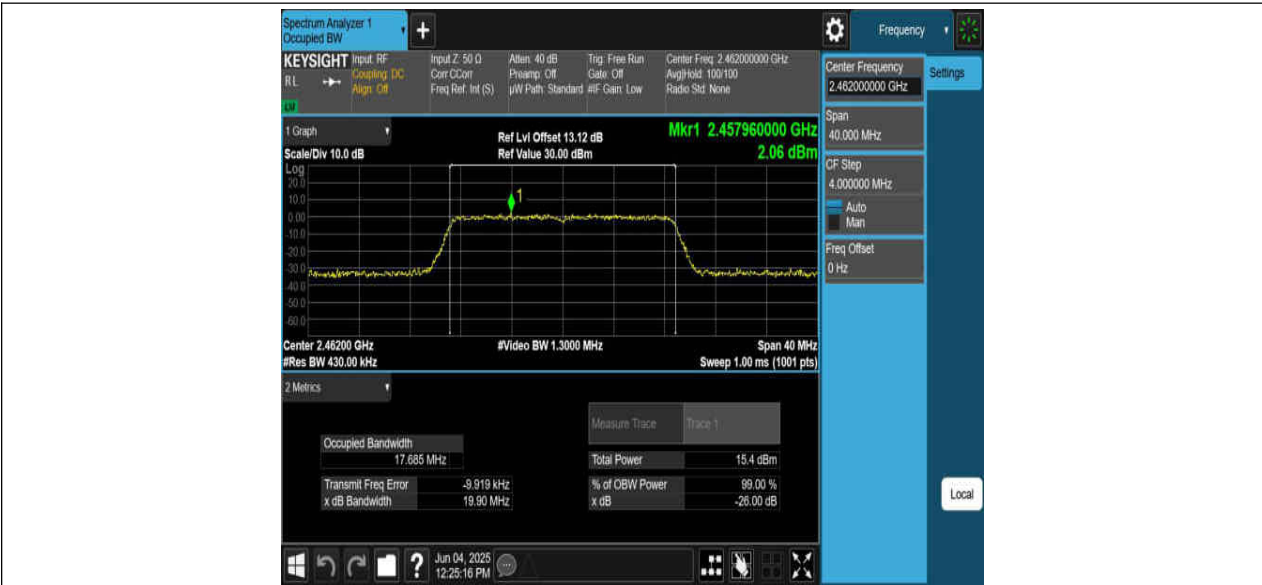
11N20SISO_Ant1_2412



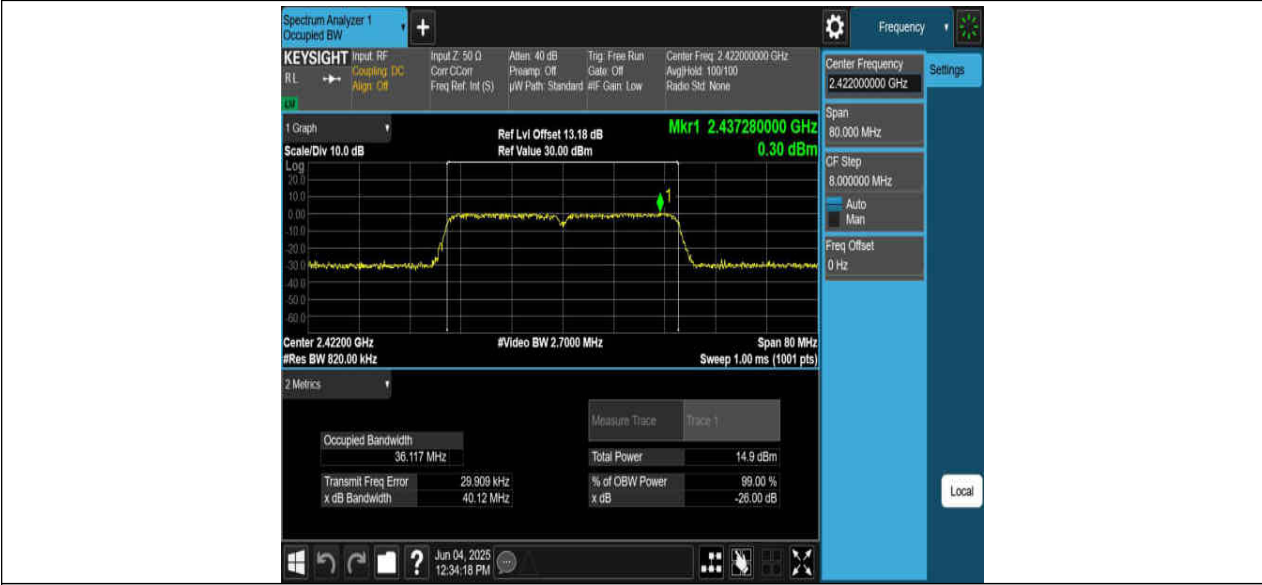
11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



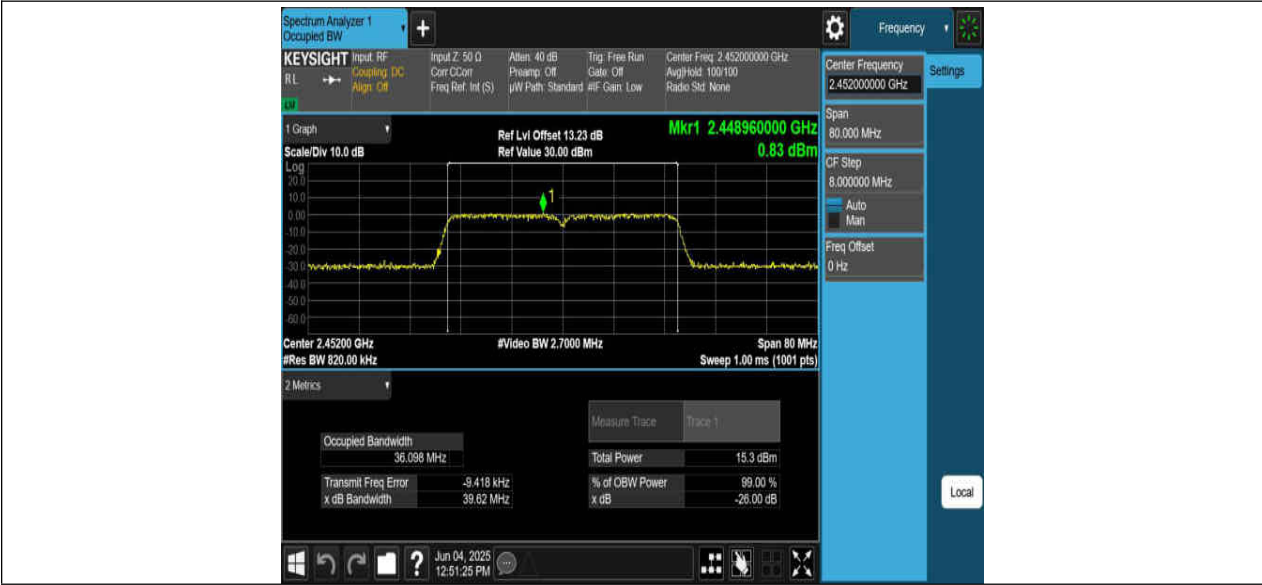
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



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	17.27	≤30.00	17.50	≤36.00	PASS
		2437	17.50	≤30.00	17.73	≤36.00	PASS
		2462	17.60	≤30.00	17.83	≤36.00	PASS
11G	Ant1	2412	16.34	≤30.00	16.57	≤36.00	PASS
		2437	16.55	≤30.00	16.78	≤36.00	PASS
		2462	16.44	≤30.00	16.67	≤36.00	PASS
11N20SISO	Ant1	2412	16.38	≤30.00	16.61	≤36.00	PASS
		2437	16.46	≤30.00	16.69	≤36.00	PASS
		2462	16.38	≤30.00	16.61	≤36.00	PASS
11N40SISO	Ant1	2422	15.26	≤30.00	15.49	≤36.00	PASS
		2437	15.42	≤30.00	15.65	≤36.00	PASS
		2452	15.46	≤30.00	15.69	≤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.

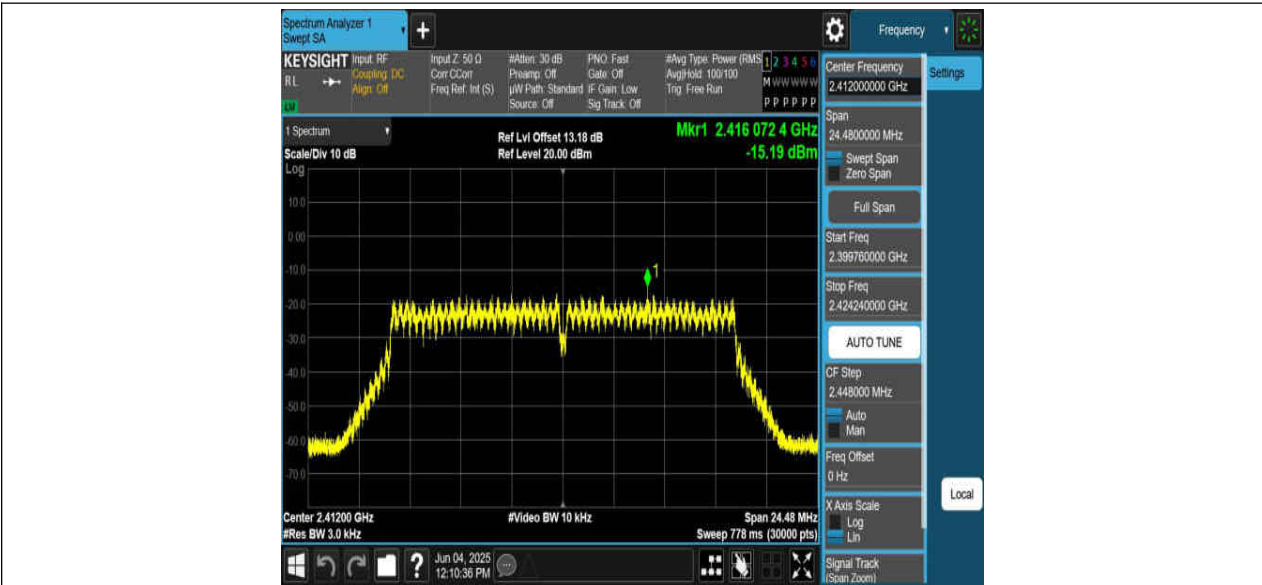
If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

11.4. Results

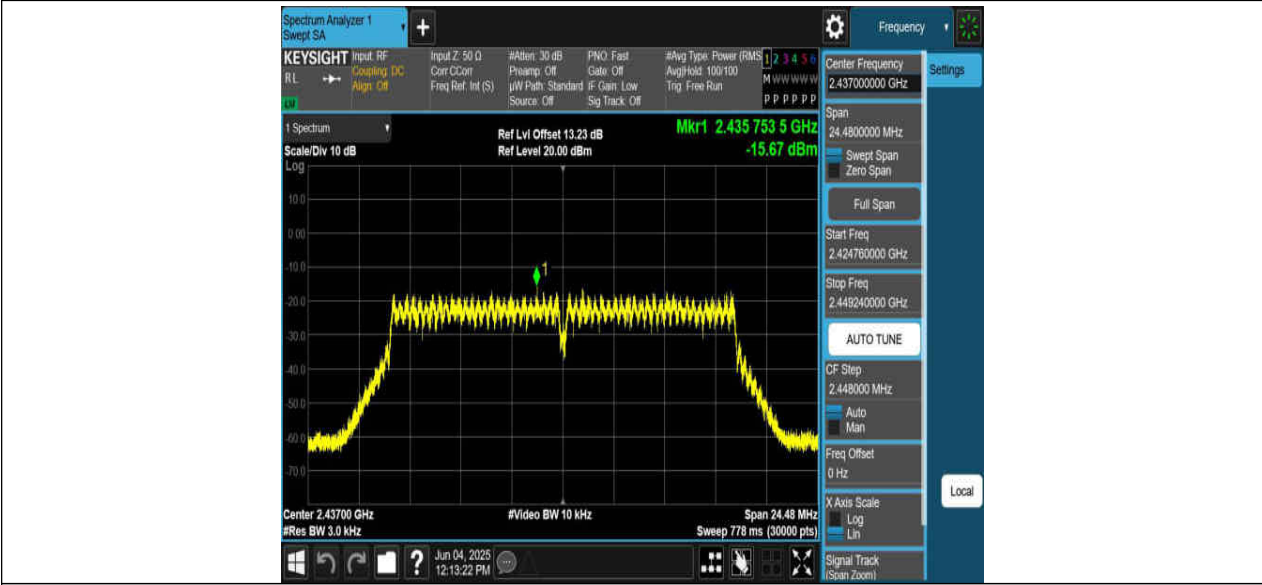
Test Mode	Ant.	Freq. (MHz)	Result (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
11B	Ant1	2412	-7.74	≤ 8.00	PASS
		2437	-8.44	≤ 8.00	PASS
		2462	-7.24	≤ 8.00	PASS
11G	Ant1	2412	-15.19	≤ 8.00	PASS
		2437	-15.67	≤ 8.00	PASS
		2462	-15.70	≤ 8.00	PASS
11N20SISO	Ant1	2412	-16.92	≤ 8.00	PASS
		2437	-15.30	≤ 8.00	PASS
		2462	-15.27	≤ 8.00	PASS
11N40SISO	Ant1	2422	-19.27	≤ 8.00	PASS
		2437	-18.94	≤ 8.00	PASS
		2452	-19.07	≤ 8.00	PASS

11.5. Original test data

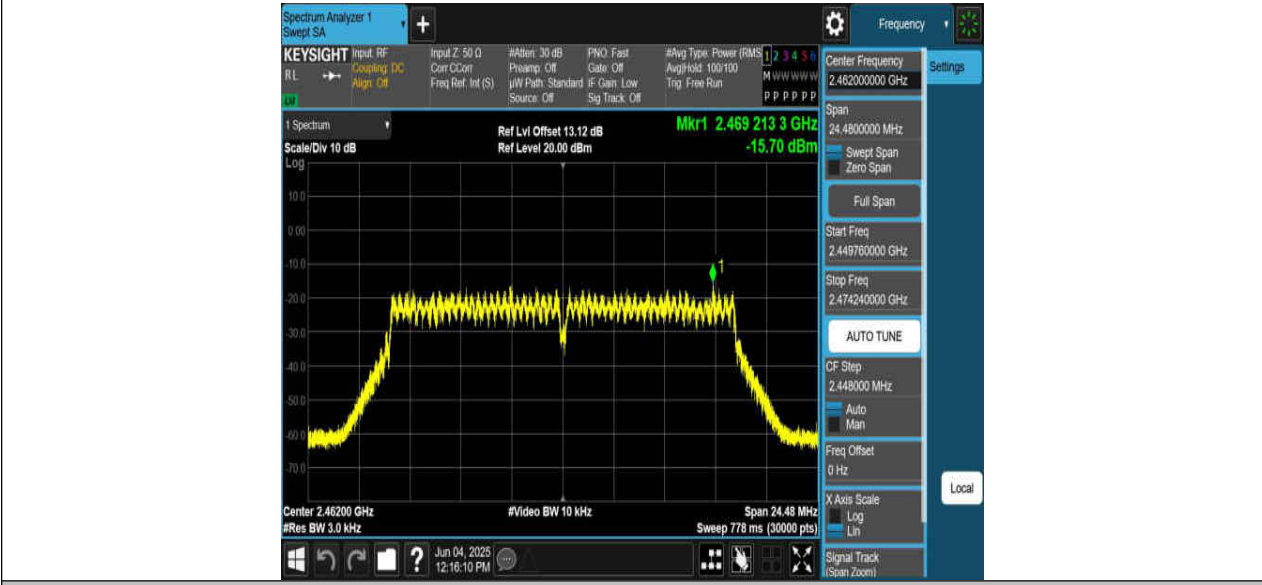




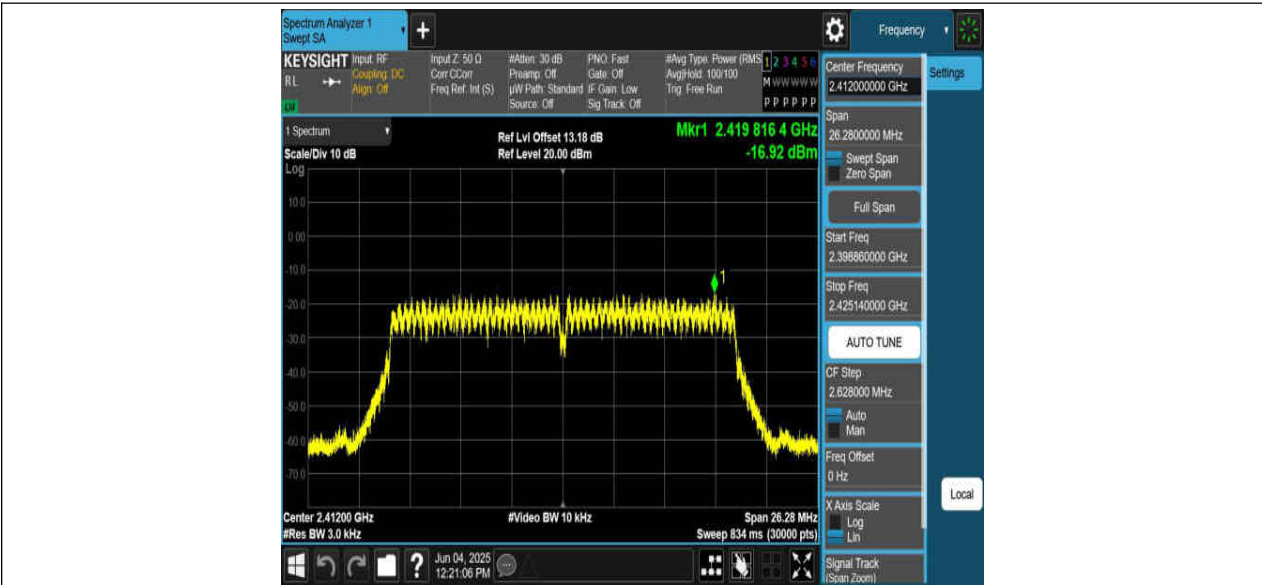
11G_Ant1_2437



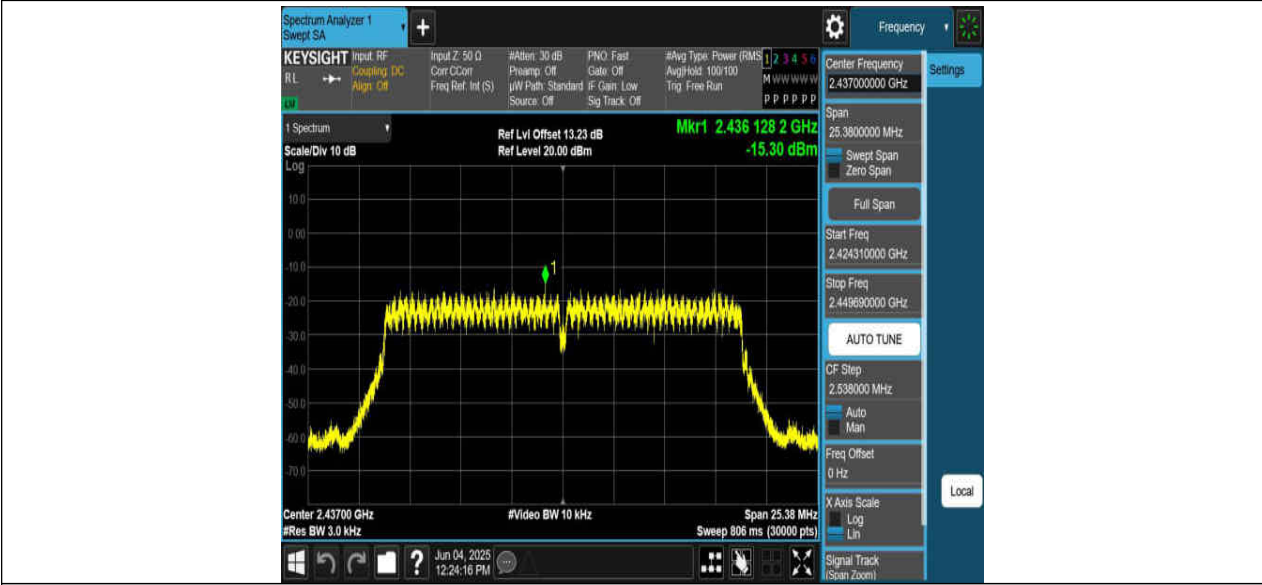
11G_Ant1_2462



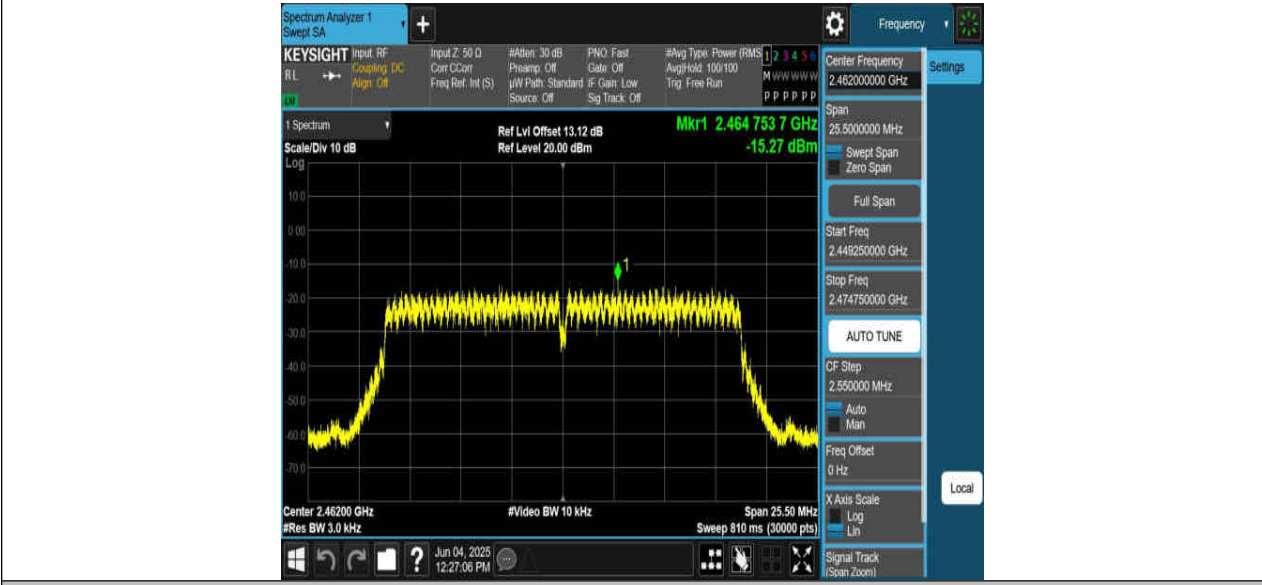
11N20SISO_Ant1_2412



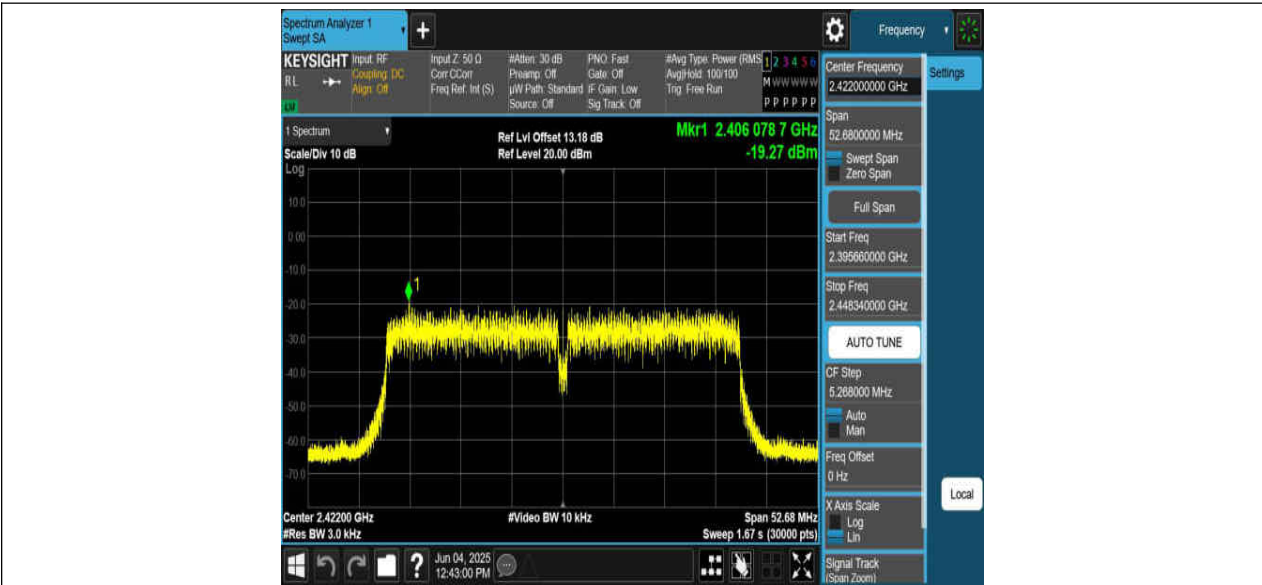
11N20SISO_Ant1_2437



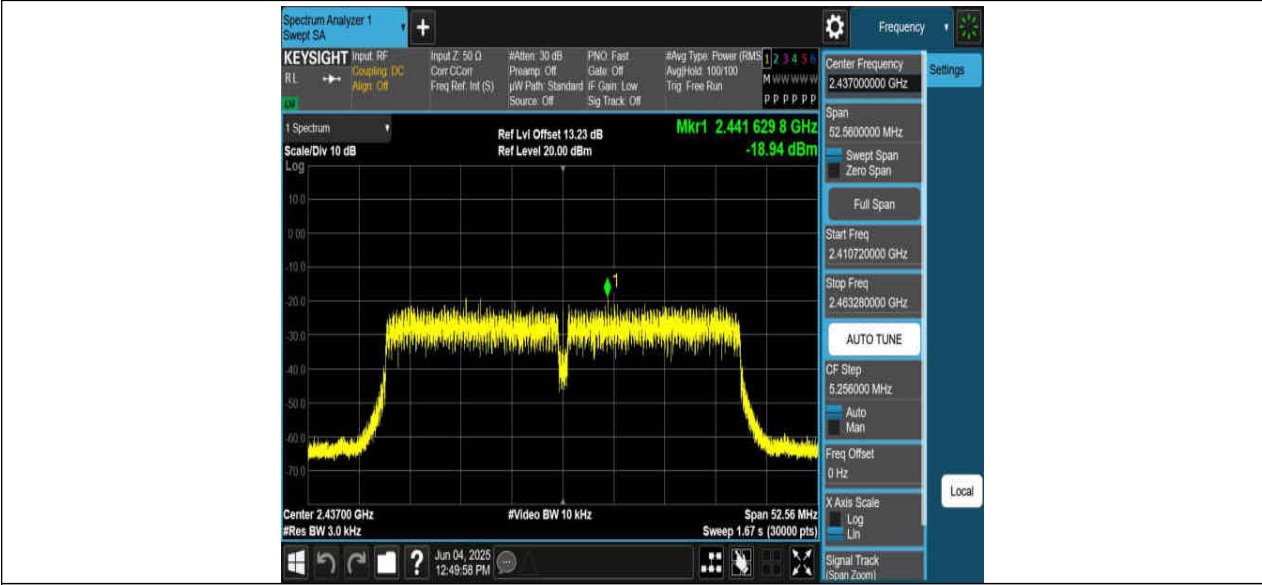
11N20SISO_Ant1_2462



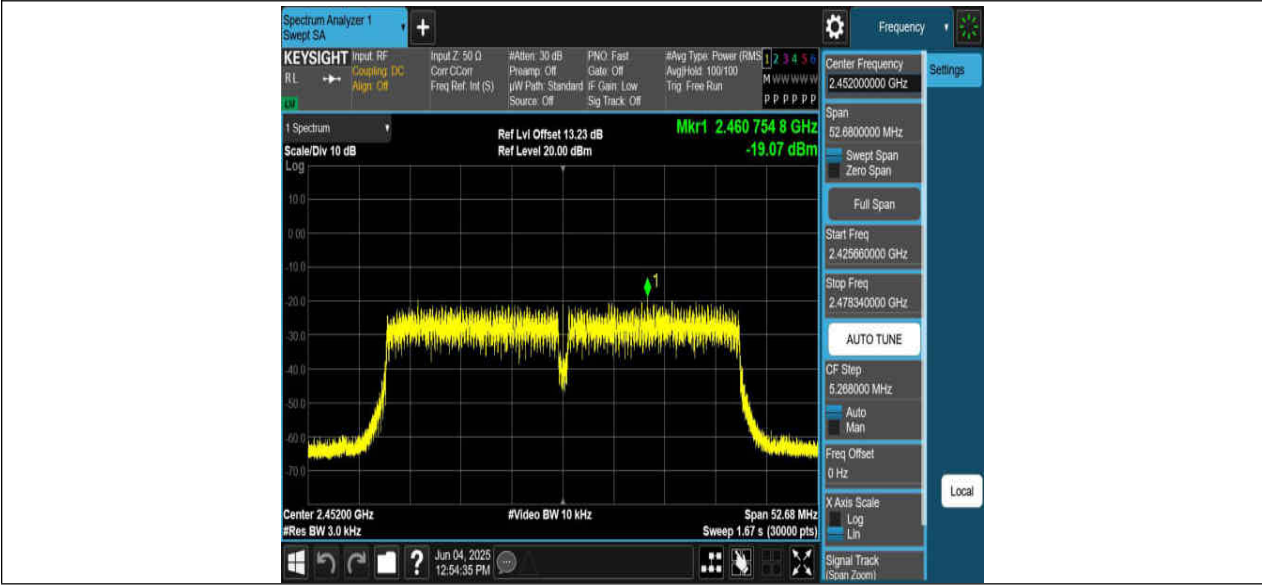
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



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	$\geq \text{span/RBW}$
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	5.05	-40.57	≤ -14.95	PASS
		High	2462	5.04	-44.81	≤ -14.96	PASS
11G	Ant1	Low	2412	-2.06	-43.39	≤ -22.06	PASS
		High	2462	-2.61	-46.53	≤ -22.61	PASS
11N20SISO	Ant1	Low	2412	-3.83	-45.33	≤ -23.83	PASS
		High	2462	-1.55	-46.18	≤ -21.55	PASS
11N40SISO	Ant1	Low	2422	-5.93	-46.73	≤ -25.93	PASS
		High	2452	-5.79	-45.29	≤ -25.79	PASS

Test Mode	Ant.	Freq. (MHz)	Freq Range (Mhz)	Ref Level (dBm)	Result (dBm)	Limit (dBm)	Verdict
11B	Ant1	2412	Reference	3.34	3.34	---	PASS
			30~1000	3.34	-54.99	≤ -16.66	PASS
			1000~26500	3.34	-43.87	≤ -16.66	PASS
		2437	Reference	3.53	3.53	---	PASS
			30~1000	3.53	-55.25	≤ -16.47	PASS
			1000~26500	3.53	-45.15	≤ -16.47	PASS
		2462	Reference	3.96	3.96	---	PASS
			30~1000	3.96	-55.34	≤ -16.04	PASS
			1000~26500	3.96	-44.92	≤ -16.04	PASS
11G	Ant1	2412	Reference	-4.97	-4.97	---	PASS
			30~1000	-4.97	-54.64	≤ -24.97	PASS
			1000~26500	-4.97	-49.62	≤ -24.97	PASS
		2437	Reference	-4.96	-4.96	---	PASS
			30~1000	-4.96	-54.78	≤ -24.96	PASS
			1000~26500	-4.96	-49.72	≤ -24.96	PASS
		2462	Reference	-5.41	-5.41	---	PASS
			30~1000	-5.41	-55.01	≤ -25.41	PASS
			1000~26500	-5.41	-49.13	≤ -25.41	PASS
11N20SISO	Ant1	2412	Reference	-5.36	-5.36	---	PASS
			30~1000	-5.36	-54.71	≤ -25.36	PASS
			1000~26500	-5.36	-49.81	≤ -25.36	PASS
		2437	Reference	-5.32	-5.32	---	PASS
			30~1000	-5.32	-53.85	≤ -25.32	PASS
			1000~26500	-5.32	-49.94	≤ -25.32	PASS
		2462	Reference	-5.64	-5.64	---	PASS
			30~1000	-5.64	-55.33	≤ -25.64	PASS
			1000~26500	-5.64	-50	≤ -25.64	PASS
11N40SISO	Ant1	2422	Reference	-5.39	-5.39	---	PASS
			30~1000	-5.39	-53.11	≤ -25.39	PASS
			1000~26500	-5.39	-49.43	≤ -25.39	PASS
		2437	Reference	-9.01	-9.01	---	PASS
			30~1000	-9.01	-53.8	≤ -29.01	PASS
			1000~26500	-9.01	-48.99	≤ -29.01	PASS
		2452	Reference	-7.33	-7.33	---	PASS
			30~1000	-7.33	-53.17	≤ -27.33	PASS
			1000~26500	-7.33	-49.58	≤ -27.33	PASS

12.5. Original test data

Band edge:

11B_Ant1_Low_2412



11B_Ant1_High_2462



11G_Ant1_Low_2412



11G_Ant1_High_2462



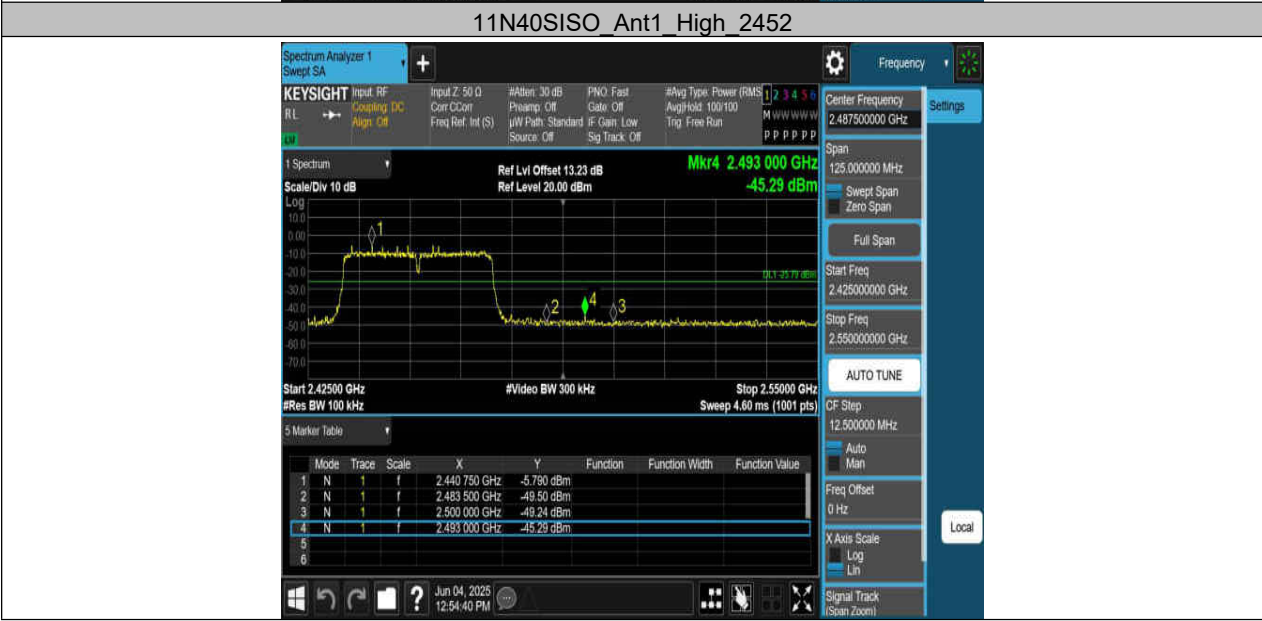
11N20SISO Ant1 Low 2412



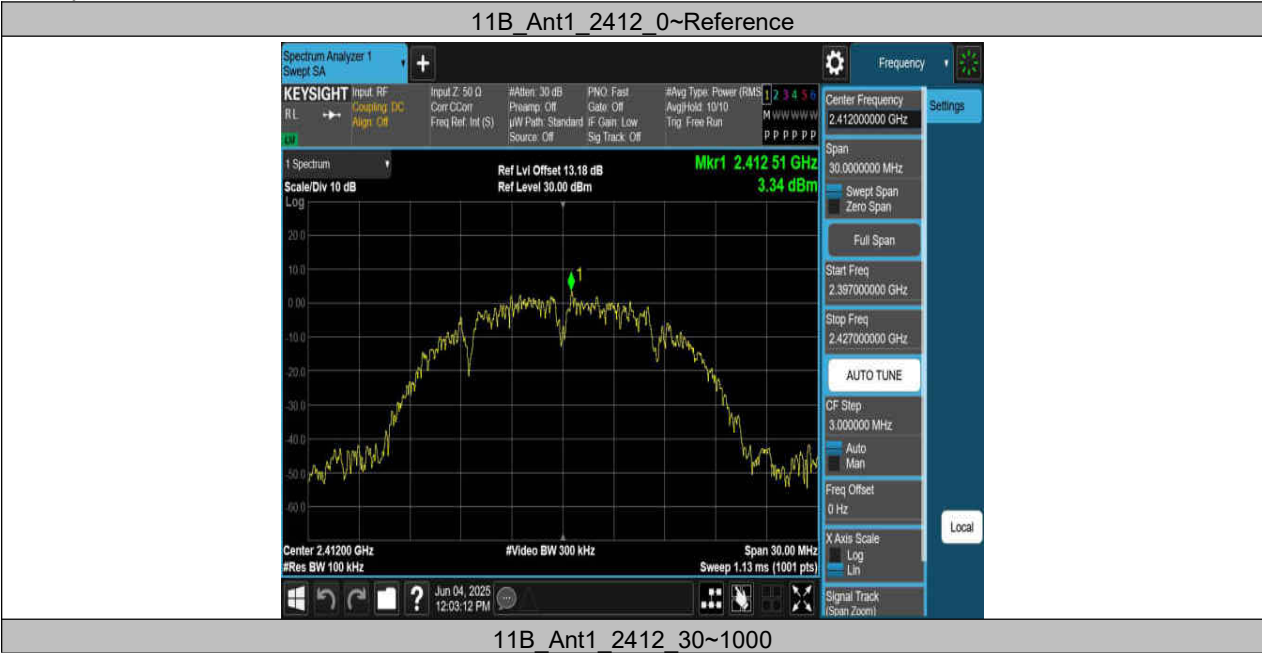
11N20SISO Ant1 High 2462

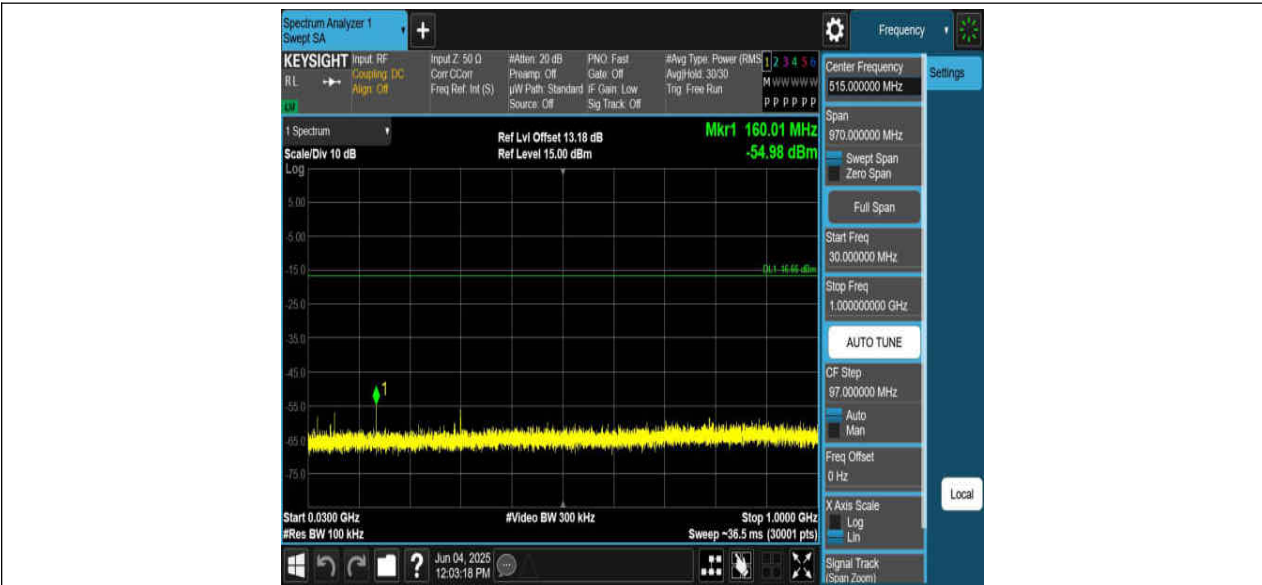


11N40SISO Ant1 Low 2422



Spurious Emission:





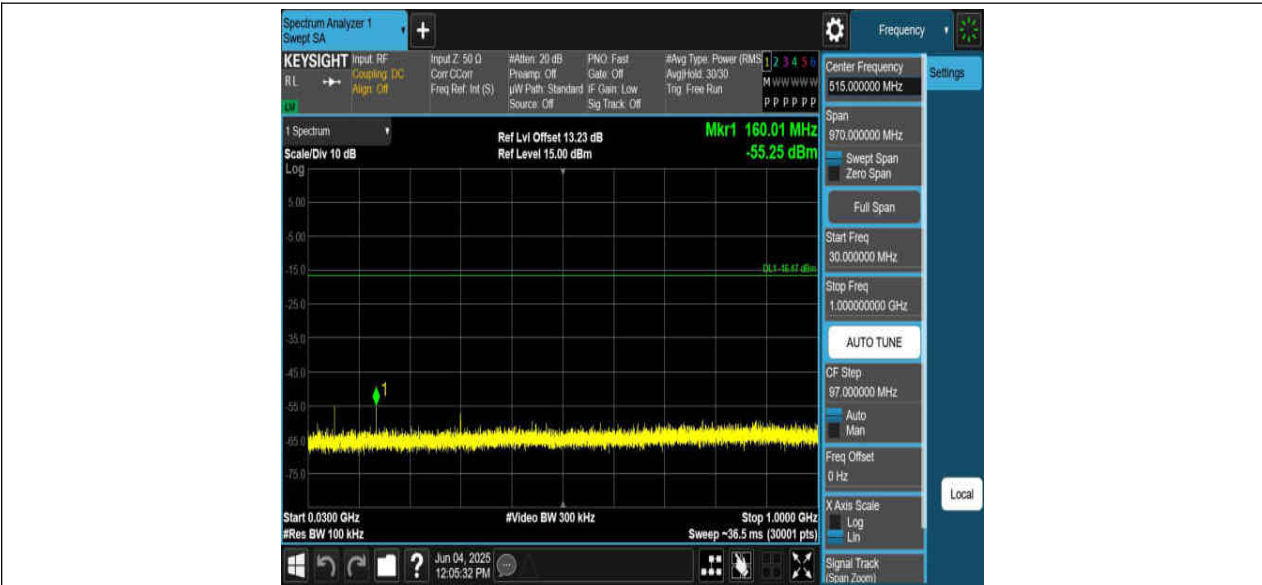
11B_Ant1_2412_1000~26500



11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



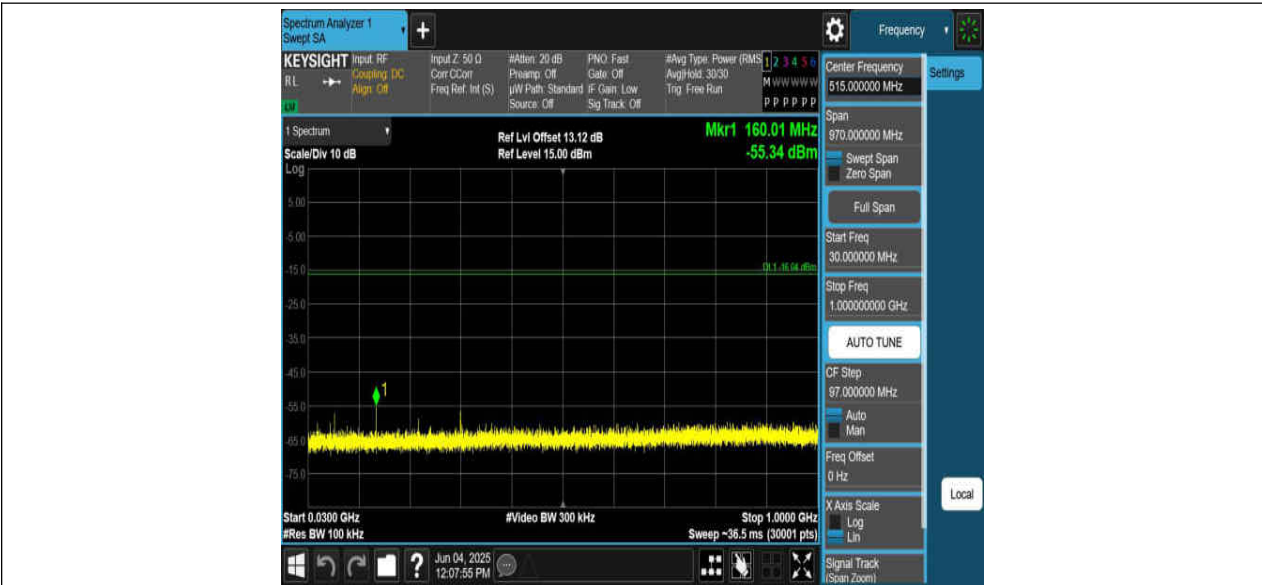
11B_Ant1_2437_1000~26500



11B_Ant1_2462_0~Reference



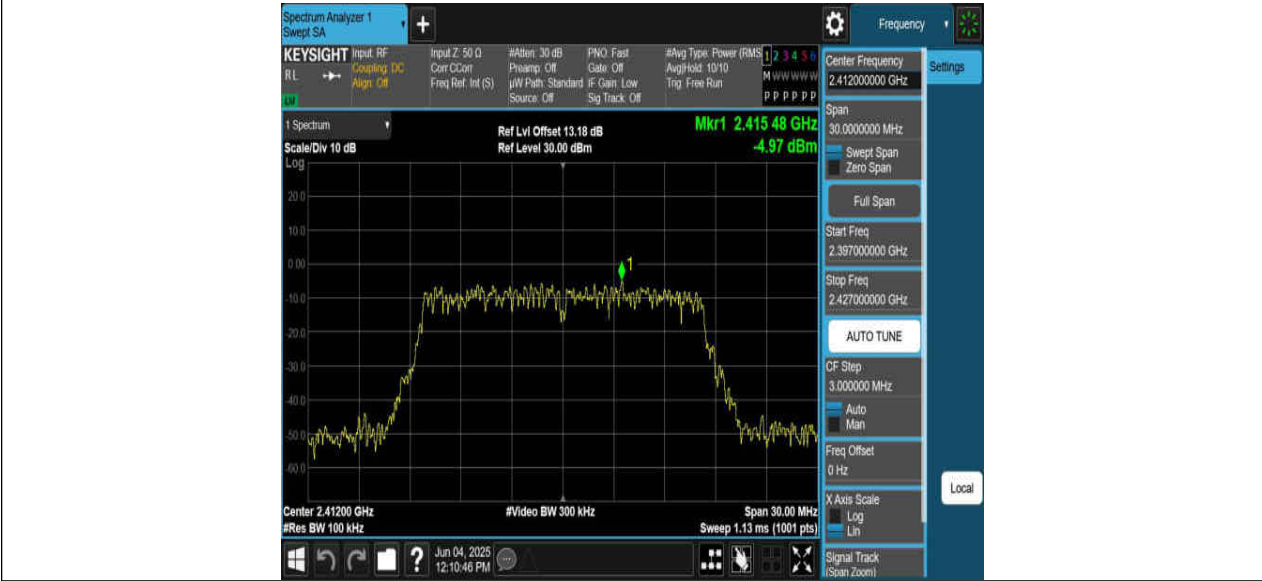
11B_Ant1_2462_30~1000



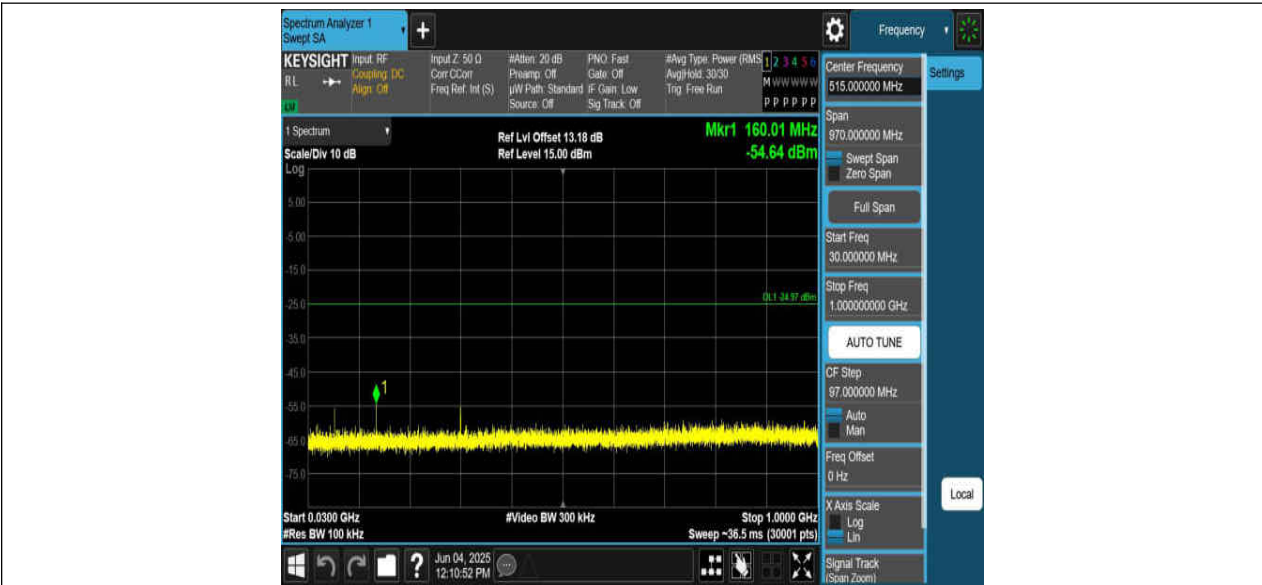
11B_Ant1_2462_1000~26500



11G_Ant1_2412_0~Reference



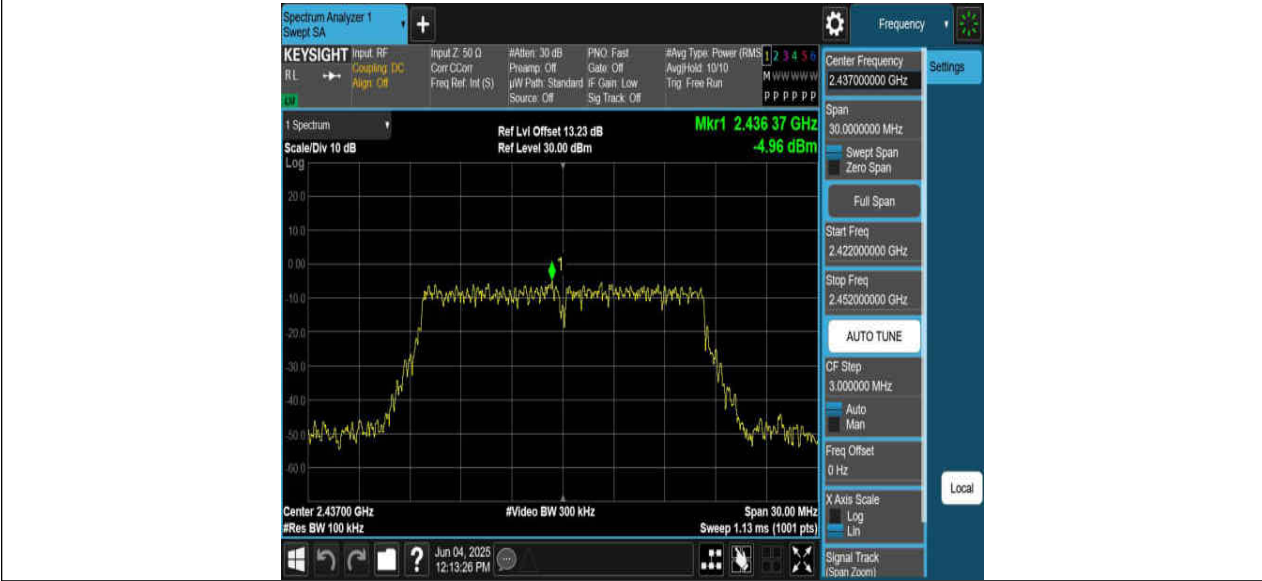
11G_Ant1_2412_30~1000



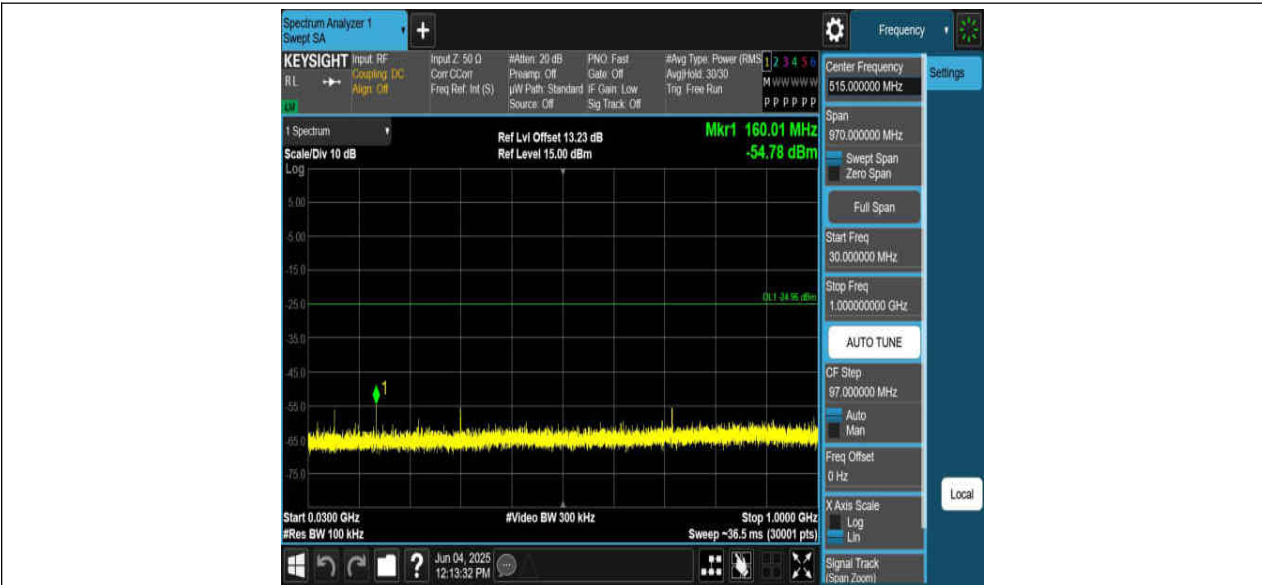
11G_Ant1_2412_1000~26500



11G_Ant1_2437_0~Reference



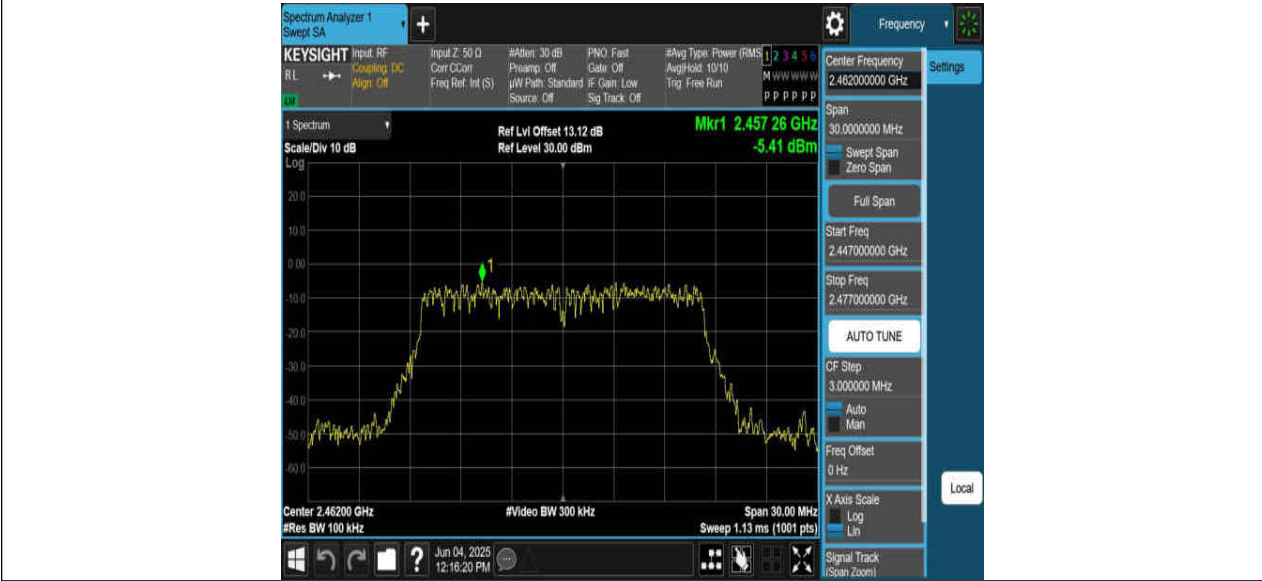
11G_Ant1_2437_30~1000



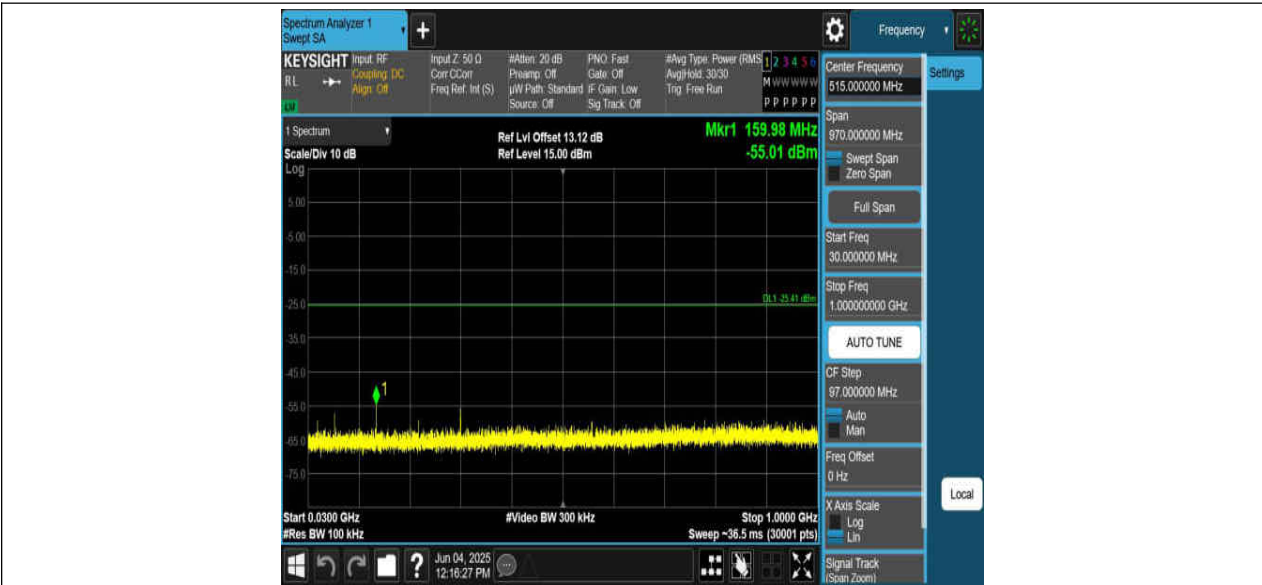
11G_Ant1_2437_1000~26500



11G_Ant1_2462_0~Reference



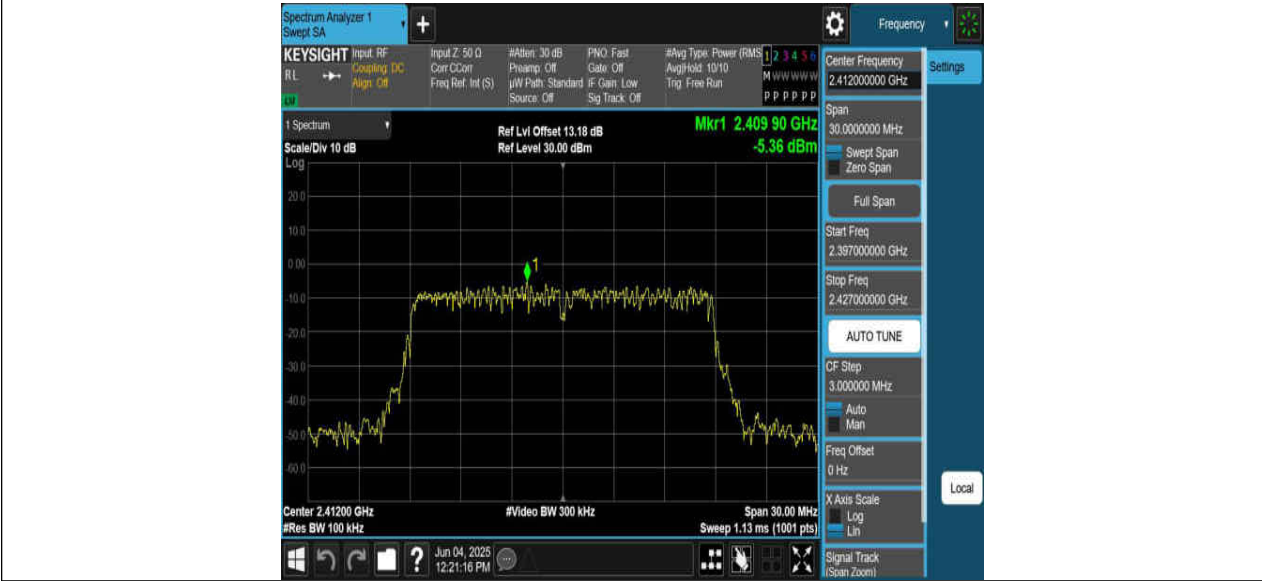
11G_Ant1_2462_30~1000



11G_Ant1_2462_1000~26500



11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000