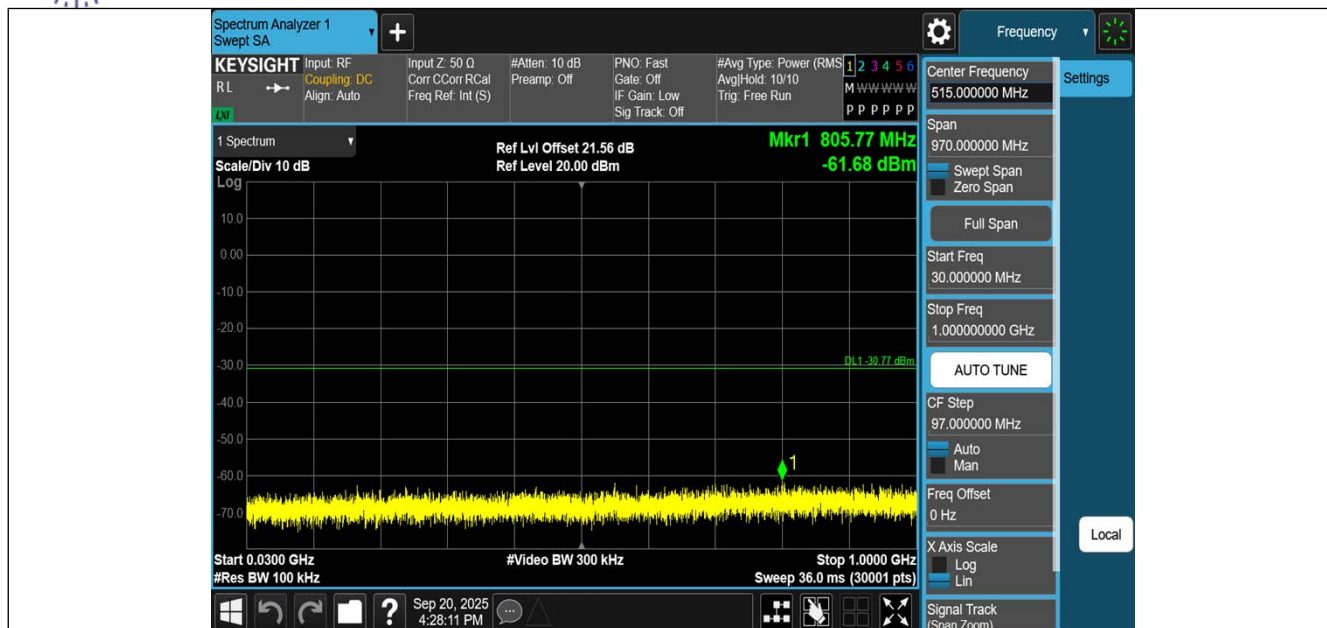
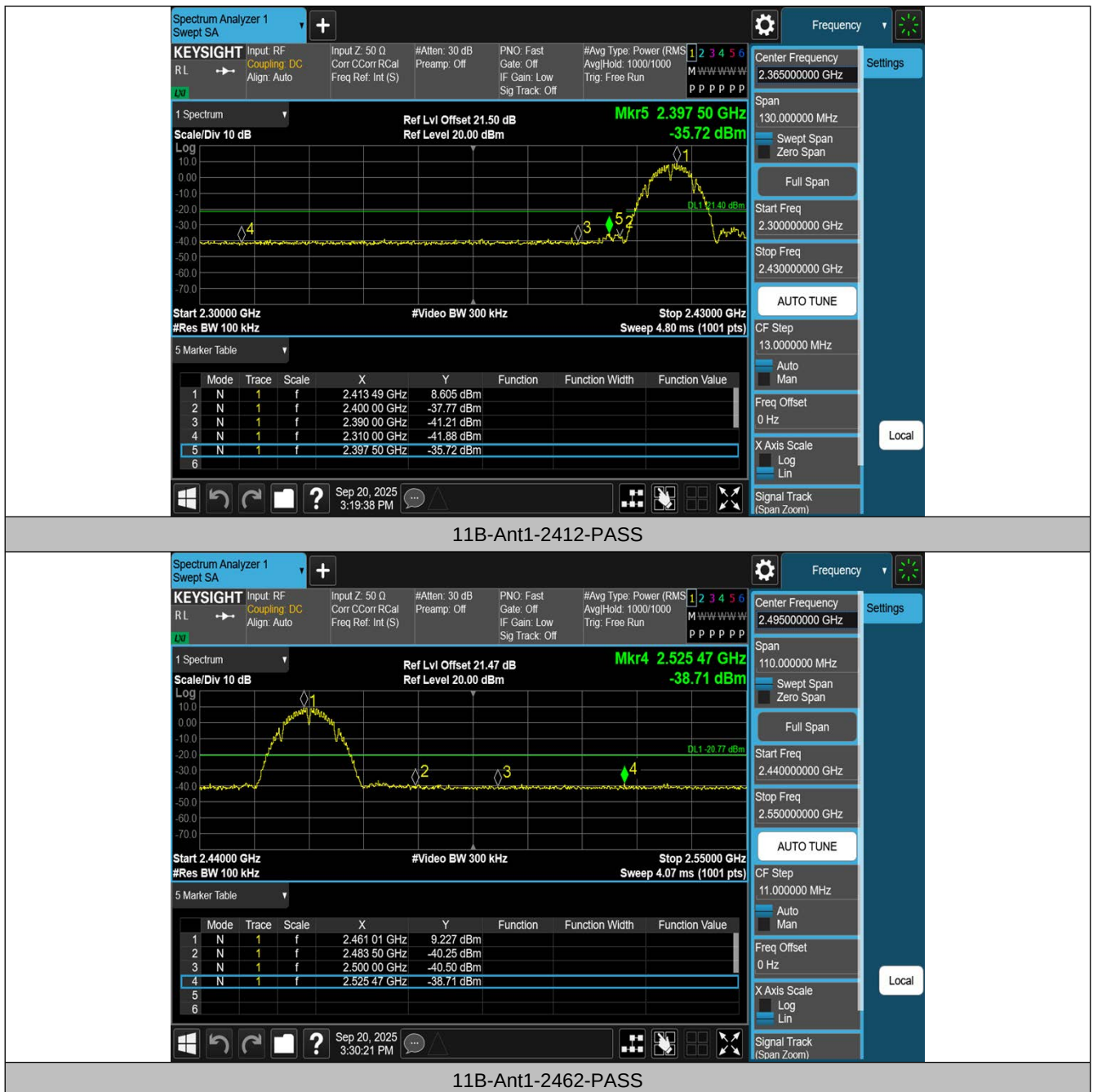




11N40SISO-Ant1-2452-30~1000-PASS



11N40SISO-Ant1-2452-1000~26500-PASS





11G-Ant1-2412-PASS



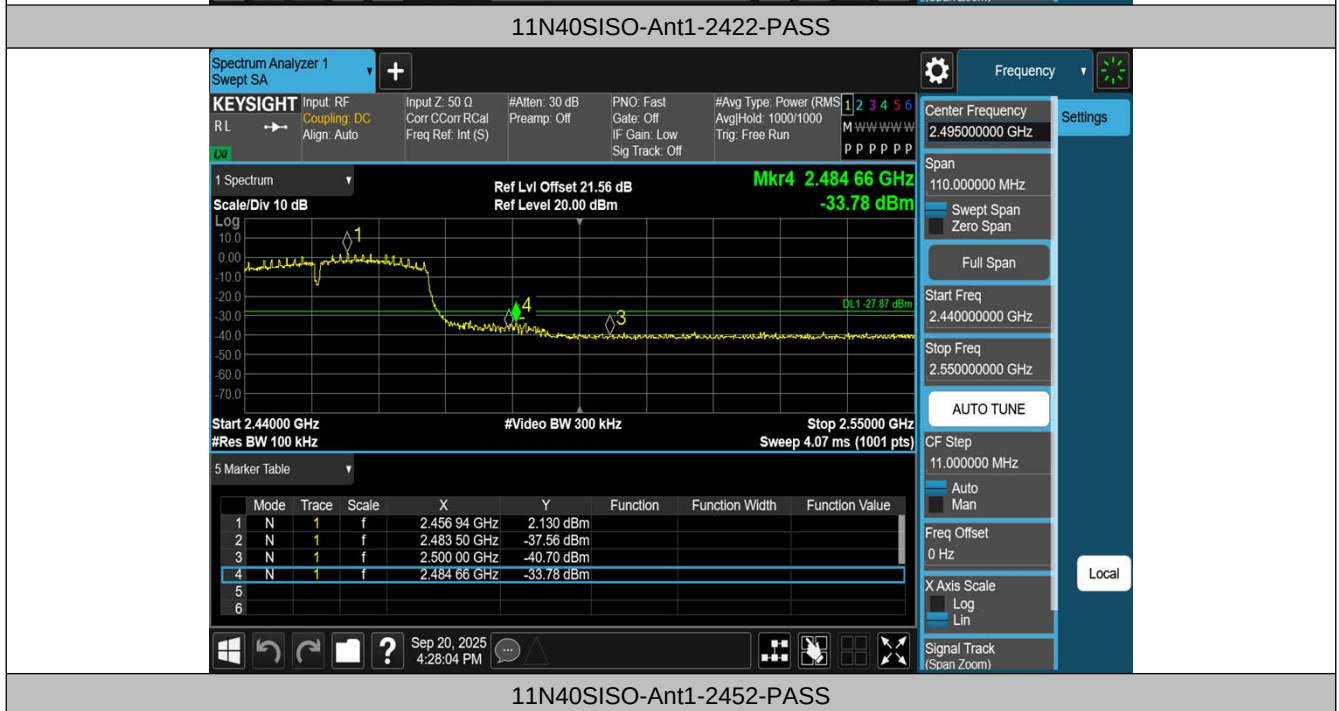
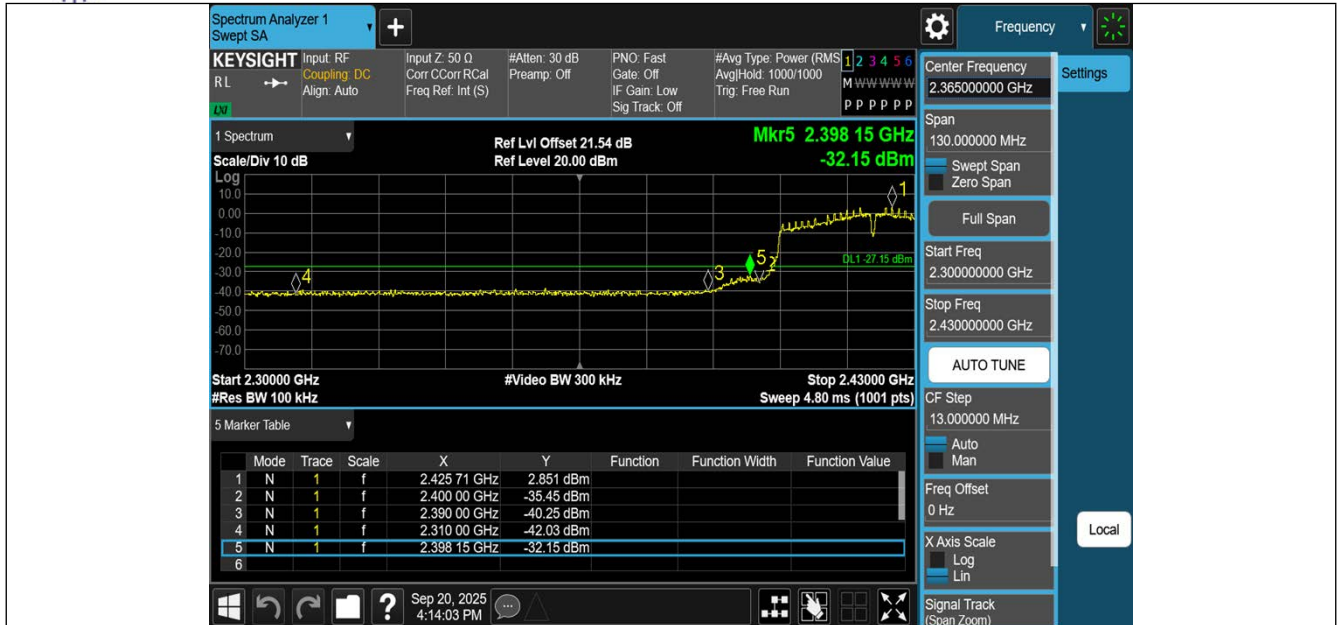
11G-Ant1-2462-PASS



11N20SISO-Ant1-2412-PASS



11N20SISO-Ant1-2462-PASS



3.4 6dB Bandwidth

3.4.1 Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

3.4.2 Test Procedure

Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ : Test ☐ : No Test	

a) The EUT was connected to the tonscend test system, and the spectrum analyser is set as follow:

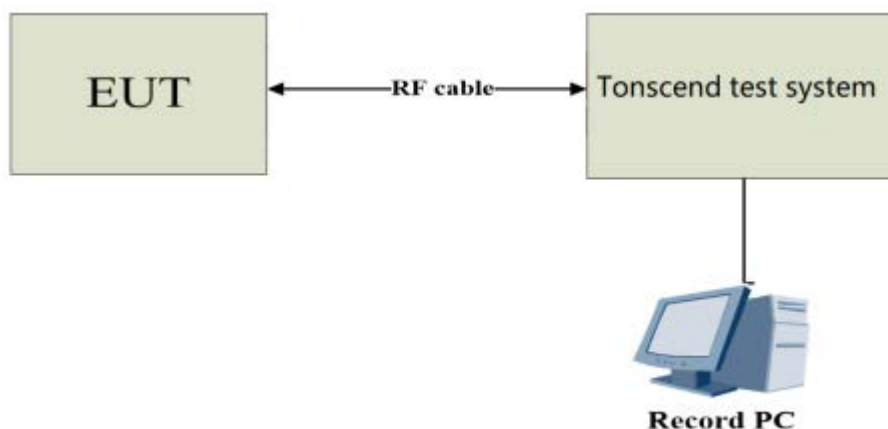
Centre Frequency	The centre frequency of the channel under test
RBW	shall be in the range of 1% to 5% of the OBW but not less than 100 kHz
VBW	[3 × RBW]
Frequency span	2x Nominal Channel Bandwidth
Detector Mode	Peak
Trace Mode	Max Hold
Sweep Time	Auto Couple

b) Wait for the trace to stabilize then find the peak value of the trace and place the analyser marker on this peak.

c) Use the -6dB bandwidth function of the spectrum analyser to measure the 6dB Bandwidth of the EUT. This value shall be recorded.

d) Make sure that the power envelope is sufficiently above the noise floor of the analyser to avoid the noise signals left and right from the power envelope being taken into account by this measurement.

3.4.3 Test Setup



3.4.4 Test Result

DTS Bandwidth

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.040	2408.480	2416.520	0.5	PASS
11B	Ant1	2437	8.040	2432.480	2440.520	0.5	PASS
11B	Ant1	2462	8.040	2457.960	2466.000	0.5	PASS
11G	Ant1	2412	15.680	2404.480	2420.160	0.5	PASS
11G	Ant1	2437	15.680	2428.840	2444.520	0.5	PASS
11G	Ant1	2462	15.080	2454.440	2469.520	0.5	PASS
11N20SISO	Ant1	2412	16.280	2404.480	2420.760	0.5	PASS
11N20SISO	Ant1	2437	16.320	2428.240	2444.560	0.5	PASS
11N20SISO	Ant1	2462	15.040	2454.440	2469.480	0.5	PASS
11N40SISO	Ant1	2422	26.320	2410.720	2437.040	0.5	PASS
11N40SISO	Ant1	2437	35.120	2419.400	2454.520	0.5	PASS
11N40SISO	Ant1	2452	35.040	2434.480	2469.520	0.5	PASS

Test Graphs



11B-Ant1-2412-PASS



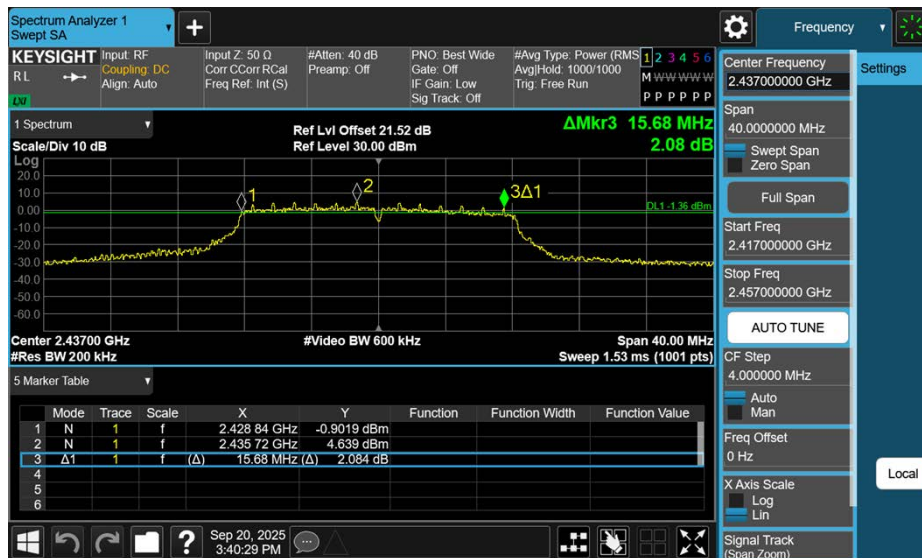
11B-Ant1-2437-PASS



11B-Ant1-2462-PASS



11G-Ant1-2412-PASS



11G-Ant1-2437-PASS



11G-Ant1-2462-PASS



11N20SISO-Ant1-2412-PASS



11N20SISO-Ant1-2437-PASS



11N20SISO-Ant1-2462-PASS



11N40SISO-Ant1-2422-PASS



11N40SISO-Ant1-2437-PASS

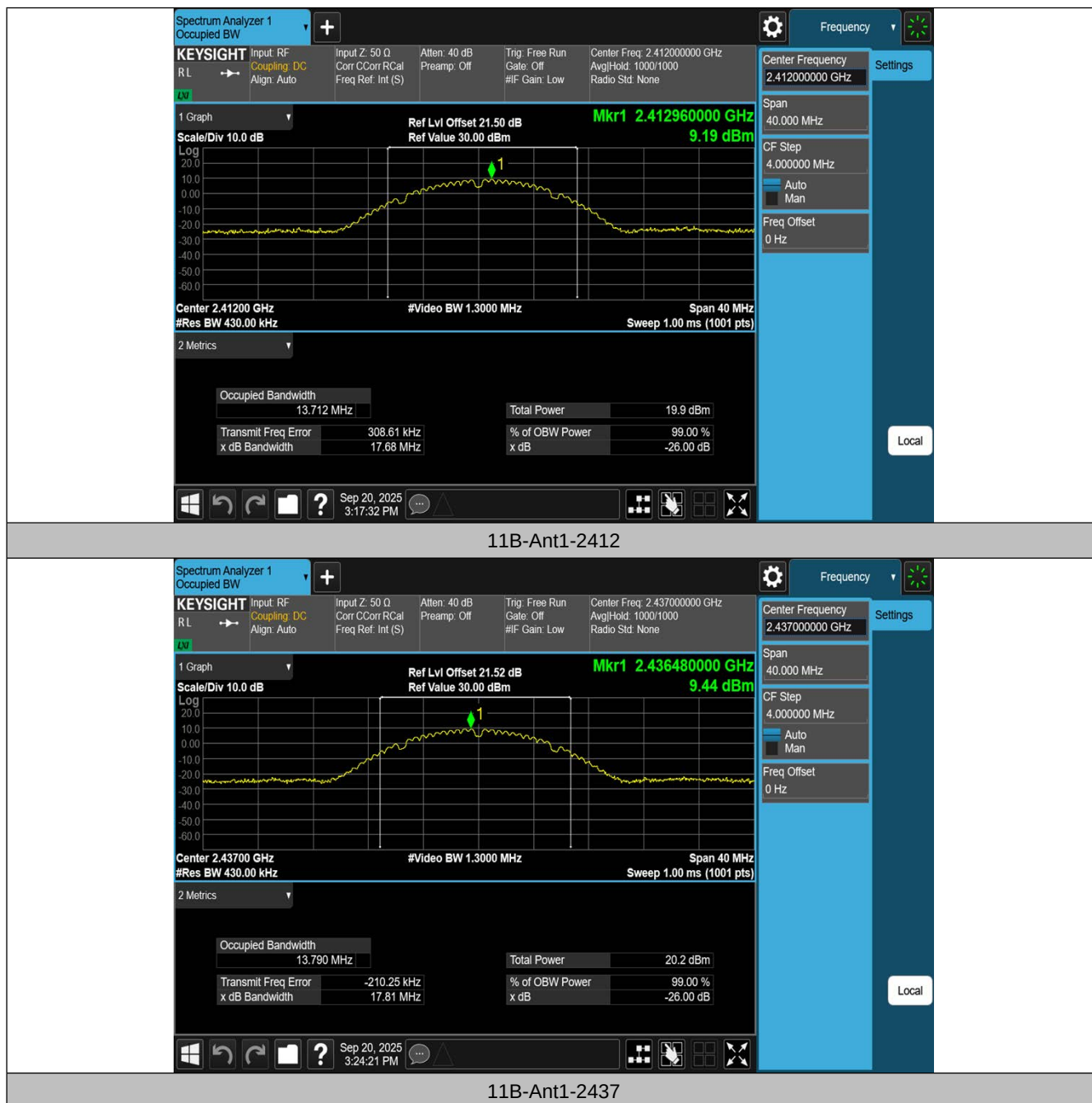


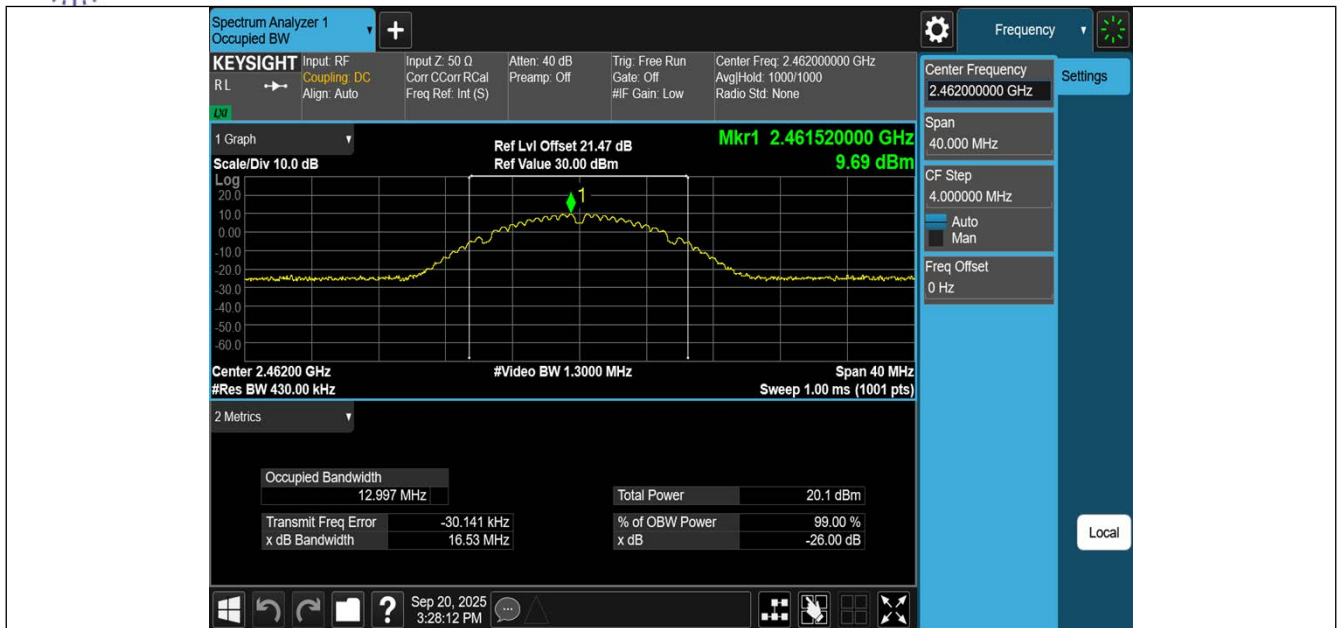
11N40SISO-Ant1-2452-PASS

Occupied Channel Bandwidth

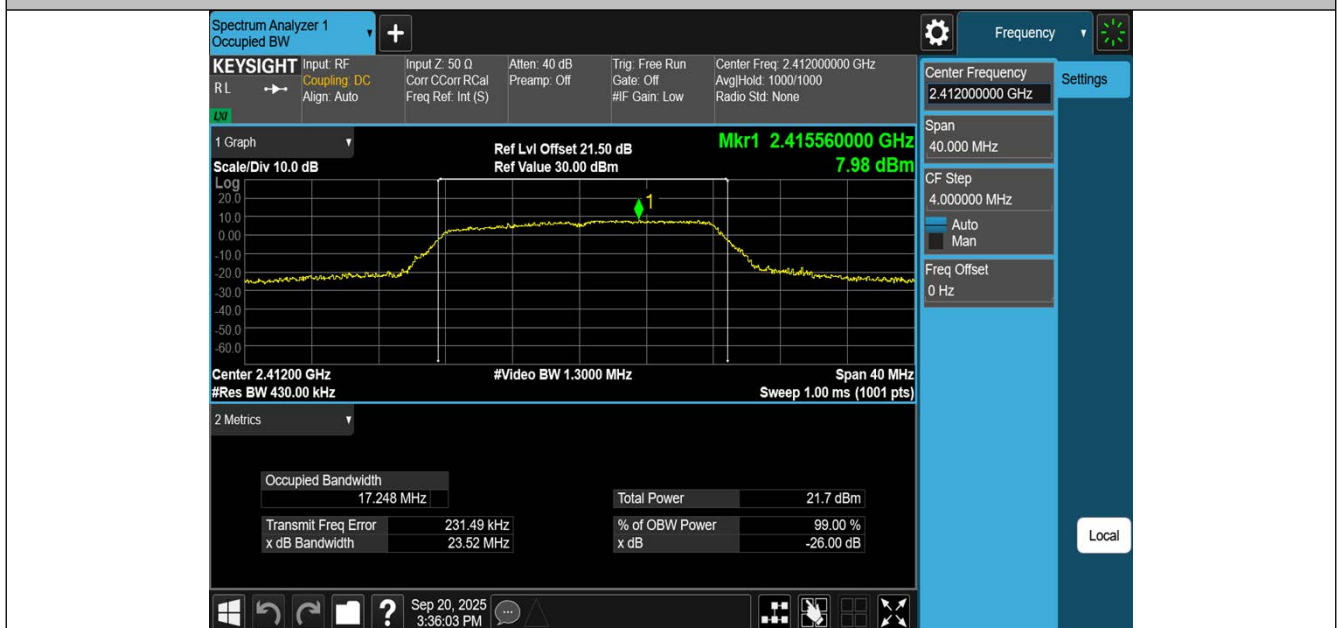
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.712	2405.4526	2419.1646	---	---
11B	Ant1	2437	13.790	2429.8948	2443.6848	---	---
11B	Ant1	2462	12.997	2455.4714	2468.4684	---	---
11G	Ant1	2412	17.248	2403.6075	2420.8555	---	---
11G	Ant1	2437	17.298	2428.1446	2445.4426	---	---
11G	Ant1	2462	16.726	2453.5706	2470.2966	---	---
11N20SISO	Ant1	2412	18.164	2403.1079	2421.2719	---	---
11N20SISO	Ant1	2437	18.280	2427.6671	2445.9471	---	---
11N20SISO	Ant1	2462	17.673	2453.1263	2470.7993	---	---
11N40SISO	Ant1	2422	36.037	2404.0360	2440.0730	---	---
11N40SISO	Ant1	2437	36.983	2418.4677	2455.4507	---	---
11N40SISO	Ant1	2452	36.627	2433.5997	2470.2267	---	---

Test Graphs

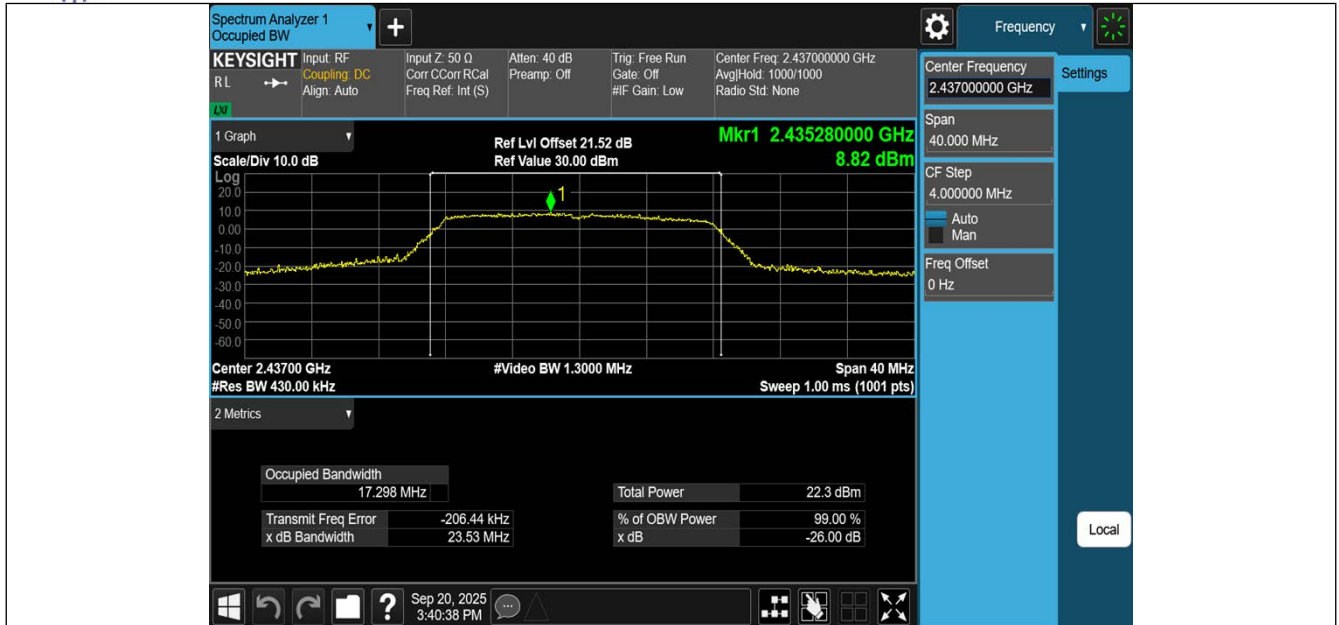




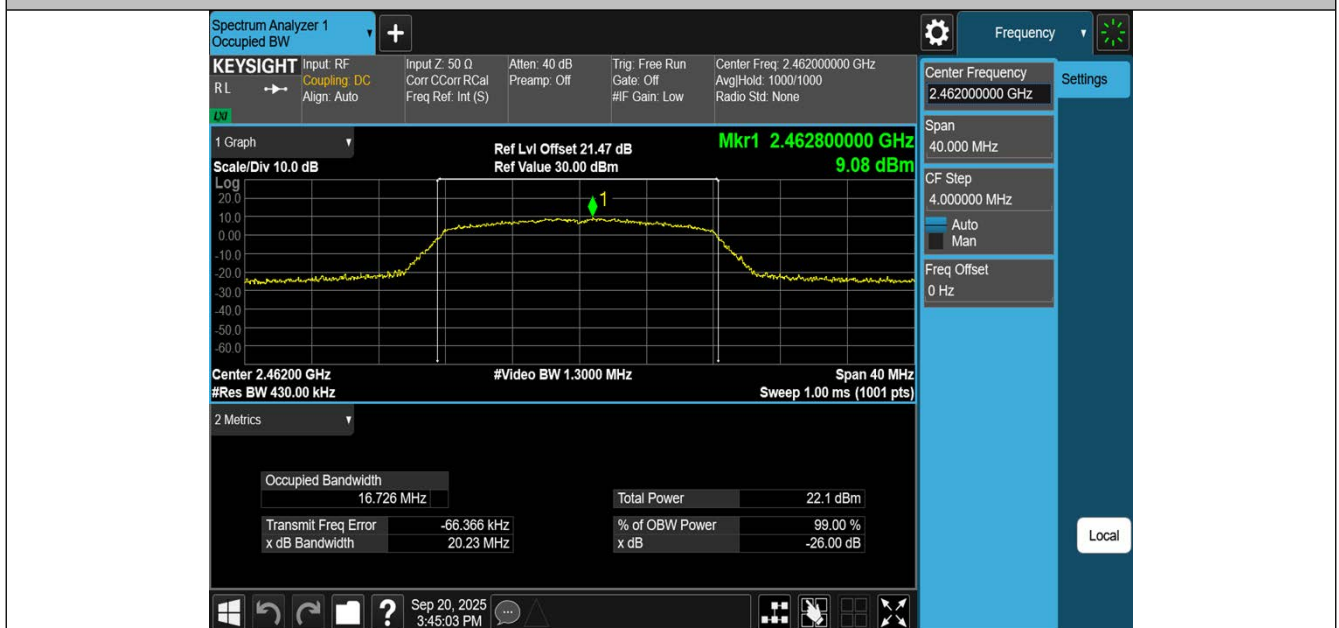
11B-Ant1-2462



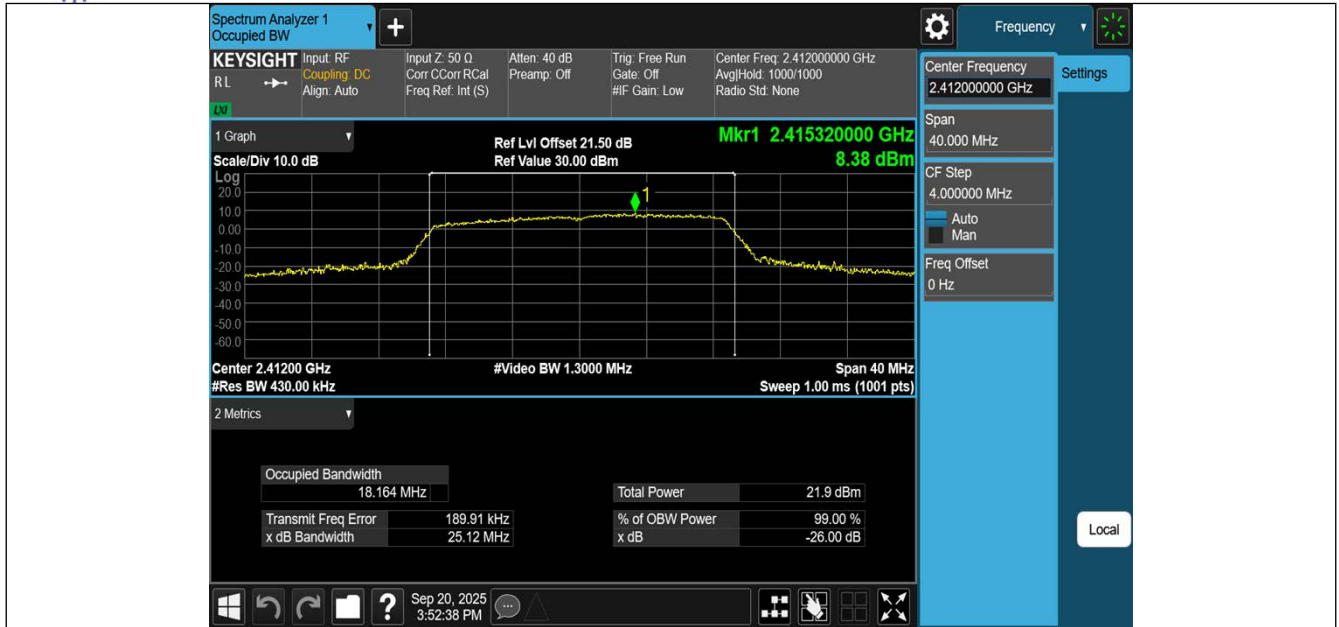
11G-Ant1-2412



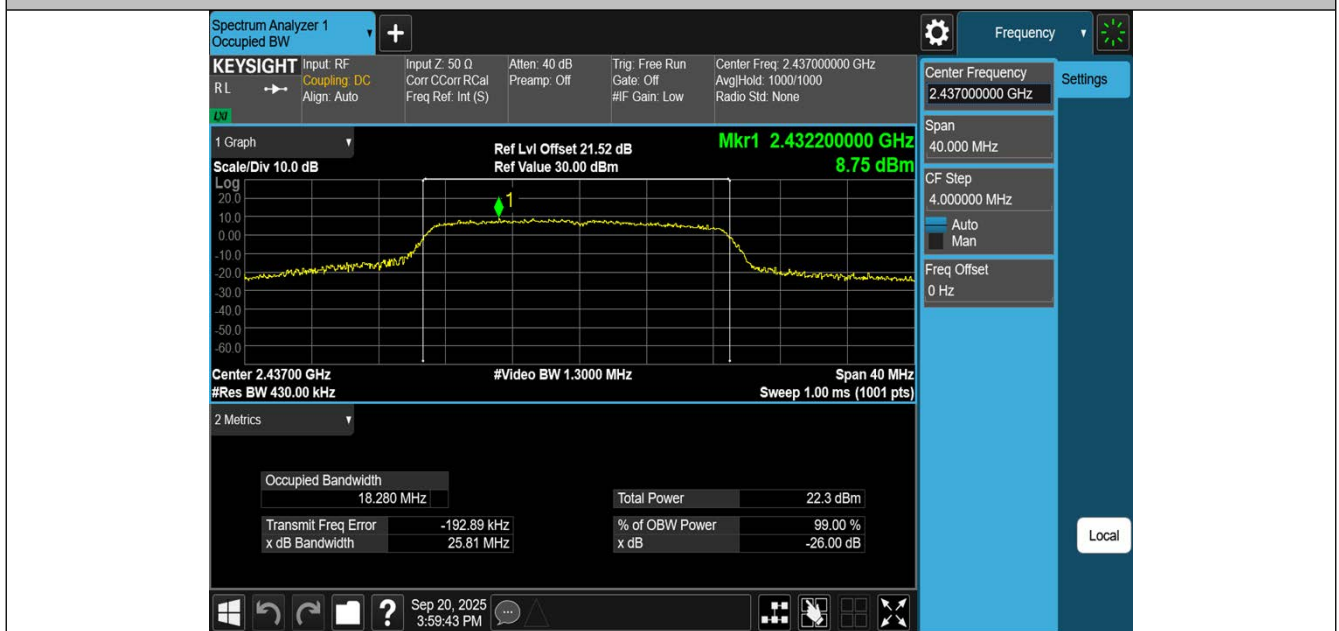
11G-Ant1-2437



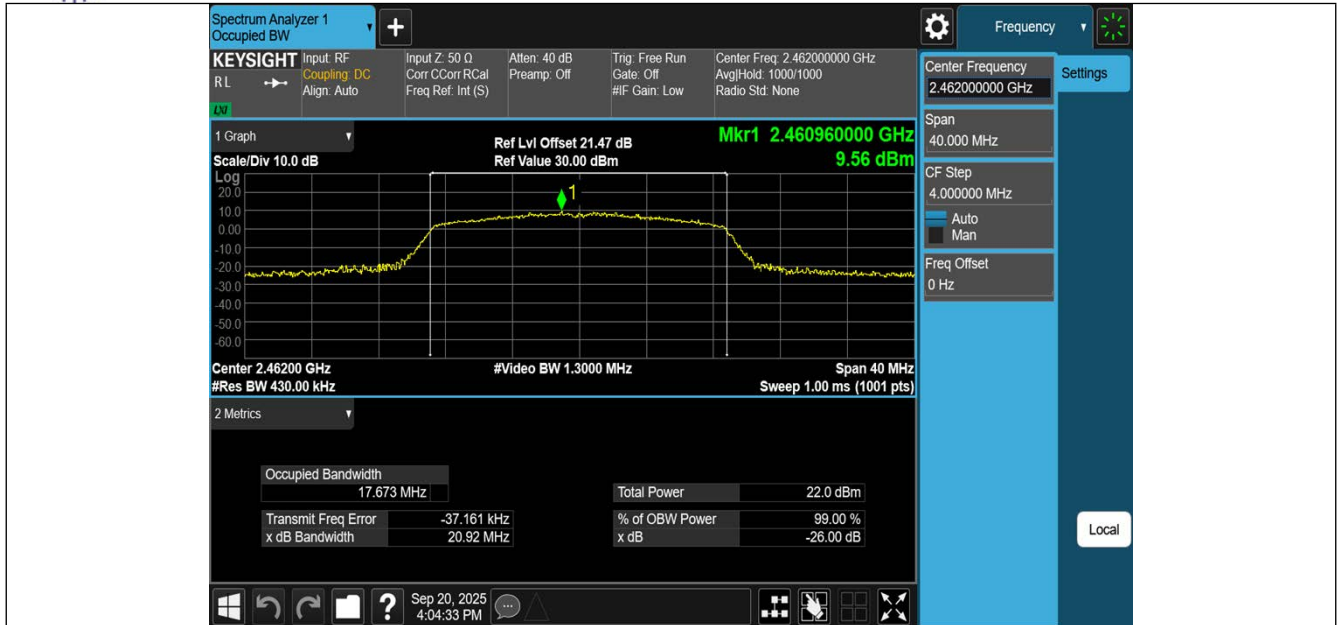
11G-Ant1-2462



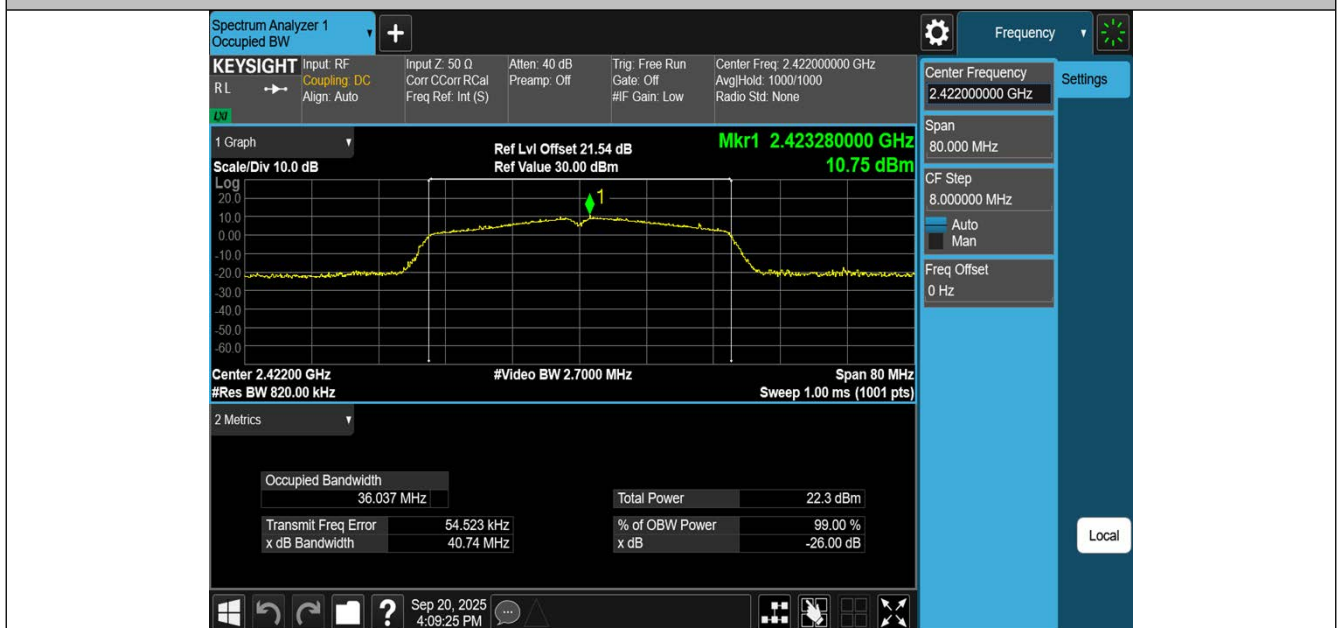
11N20SISO-Ant1-2412



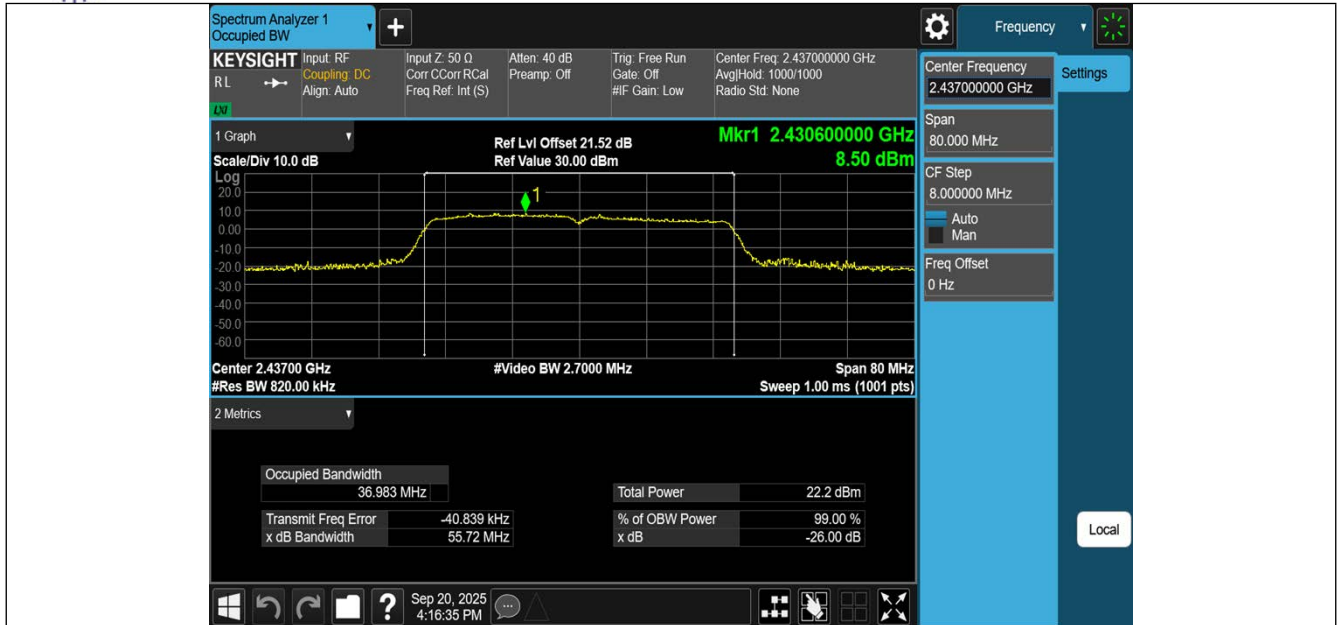
11N20SISO-Ant1-2437



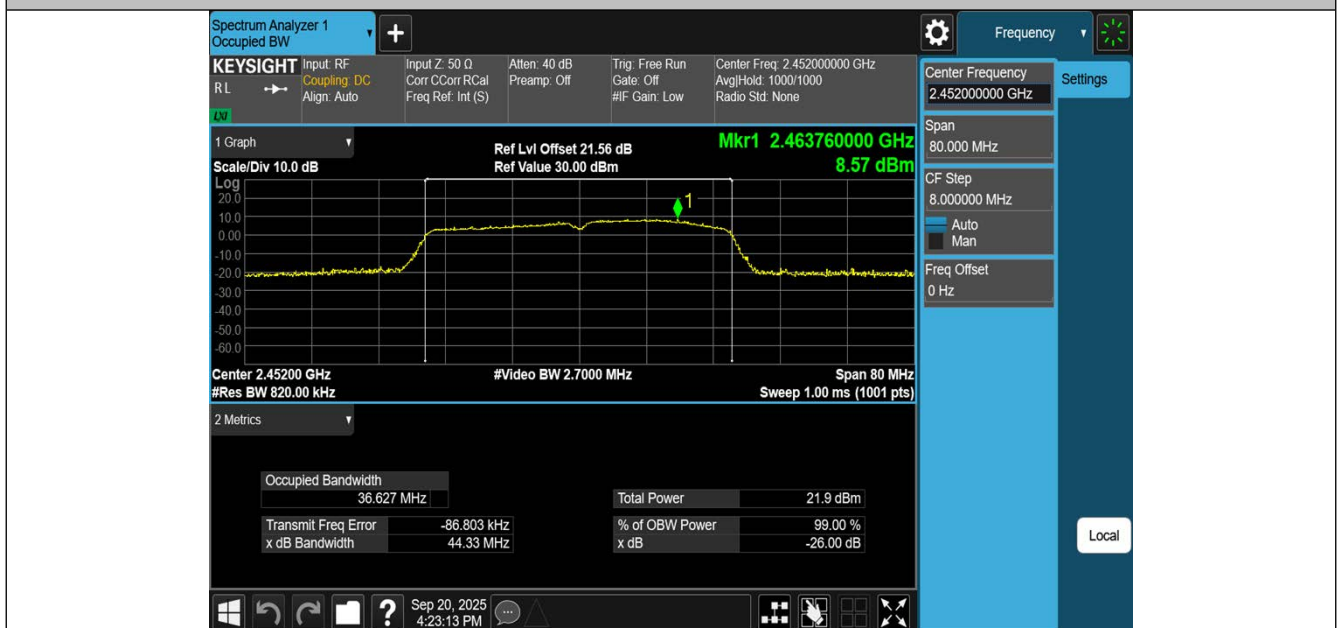
11N20SISO-Ant1-2462



11N40SISO-Ant1-2422



11N40SISO-Ant1-2437



11N40SISO-Ant1-2452

3.5 Maximum conducted output power

3.5.1 Limit

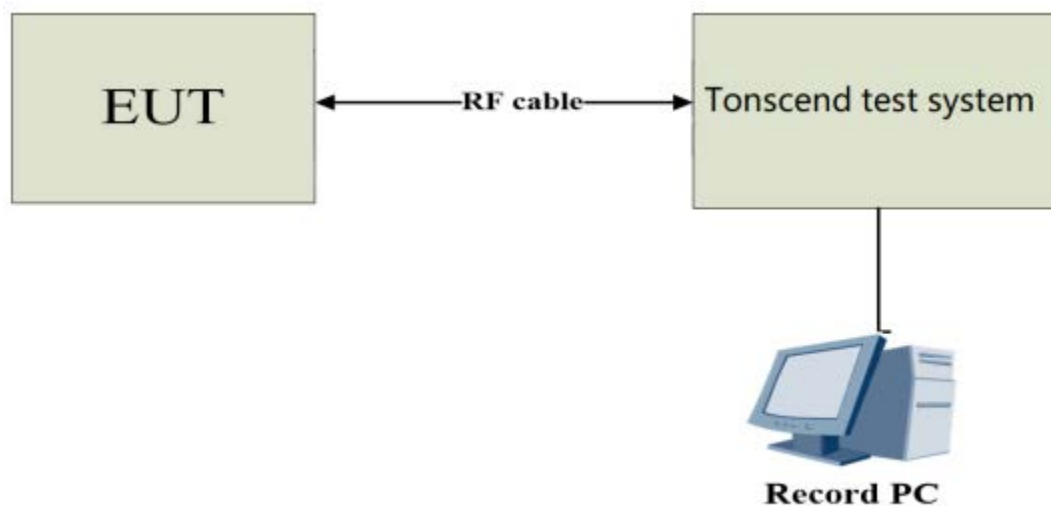
For systems using digital modulation in the 2400~2483.5MHz, The Maximum output Power shall not exceed 1W(30dBm)

3.5.2 Test Procedure

Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ : Test ☐ : No Test	

- The EUT was directly connected to the tonscond test system and antenna output port as show in the block diagram below.
- The maximum conducted output power was performed in accordance with method 11.9.2.3.1 (for method AVGPM)of ANSI C63.10-2020.

3.5.3 Test Setup



3.5.4 Table of Parameters of Text Software Setting

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Test Software Version	engineering mode		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	19.5	19.5	19.5
IEEE 802.11g	17.5	17.5	17.5
IEEE 802.11n(20)	17.5	17.5	17.5
Frequency (MHz)	2422	2437	2452
IEEE 802.11n(40)	16.5	16.5	16.5

3.5.5 The Result

Test Mode	Antenna	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	16.92	≤30.00	PASS
11B	Ant1	2437	17.16	≤30.00	PASS
11B	Ant1	2462	17.08	≤30.00	PASS
11G	Ant1	2412	14.59	≤30.00	PASS
11G	Ant1	2437	15.03	≤30.00	PASS
11G	Ant1	2462	15.04	≤30.00	PASS
11N20SISO	Ant1	2412	14.83	≤30.00	PASS
11N20SISO	Ant1	2437	15.15	≤30.00	PASS
11N20SISO	Ant1	2462	14.88	≤30.00	PASS
11N40SISO	Ant1	2422	14.80	≤30.00	PASS
11N40SISO	Ant1	2437	14.59	≤30.00	PASS
11N40SISO	Ant1	2452	14.38	≤30.00	PASS

Note: The duty cycle factor is compensated in the average conducted output power.

3.6 Power Spectral Density

3.6.1 Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmitting.

3.6.2 Test Procedure

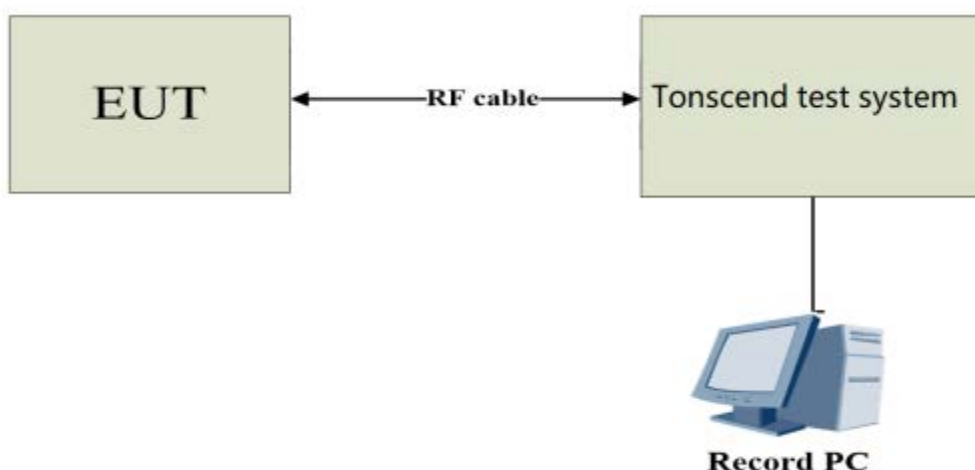
Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ : Test ☐ : No Test	

a) The EUT was directly connected to the tonskend test system and antenna output port as show in the block diagram below.

b) Spectrum analyser settings as following:

Spectrum Parameters	Setting
Span Frequency	2 times the OBW bandwidth
RBW	3 kHz
VBW	10 kHz
Detector	RMS
Trace	Max Hold
Sweep Time	Auto

3.6.3 Test Setup

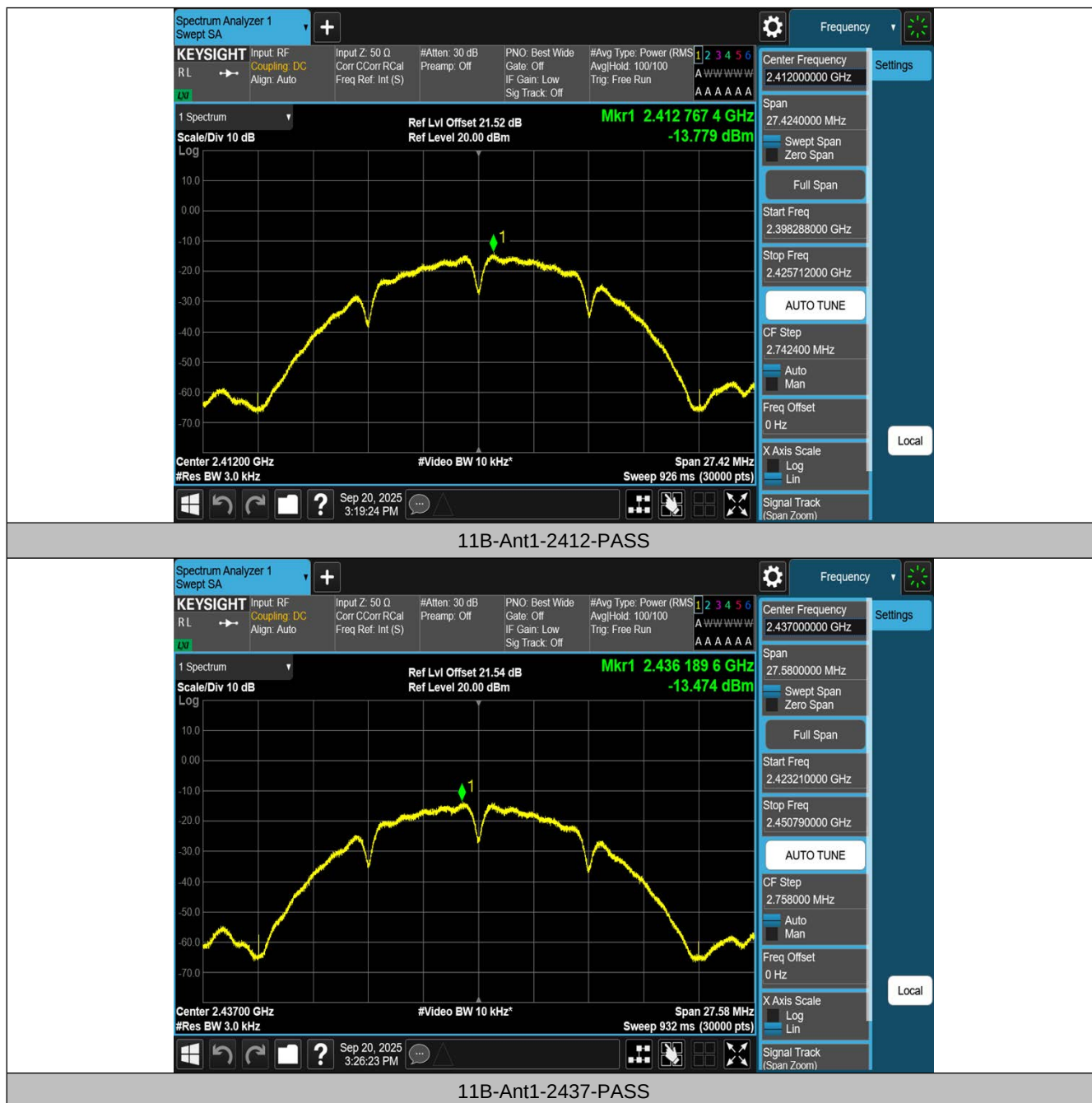


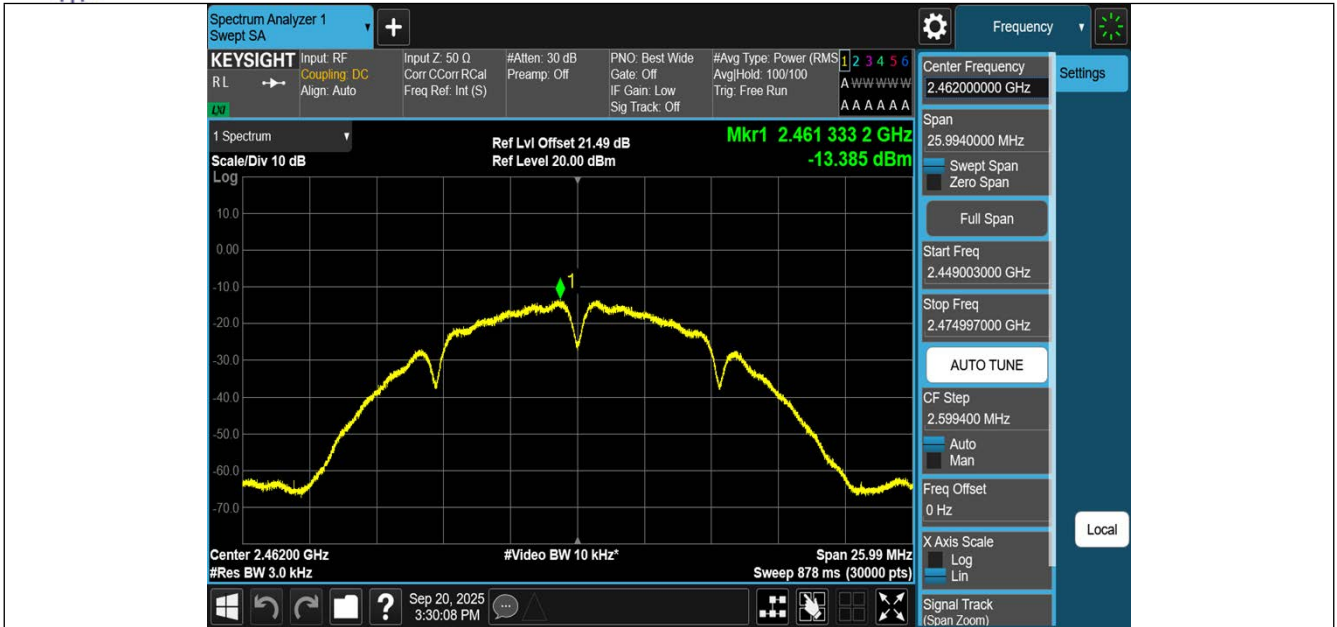
3.6.4 The Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-13.78	≤8.00	PASS
11B	Ant1	2437	-13.47	≤8.00	PASS
11B	Ant1	2462	-13.39	≤8.00	PASS
11G	Ant1	2412	-18.48	≤8.00	PASS
11G	Ant1	2437	-18.15	≤8.00	PASS
11G	Ant1	2462	-17.13	≤8.00	PASS
11N20SISO	Ant1	2412	-18.19	≤8.00	PASS
11N20SISO	Ant1	2437	-18.15	≤8.00	PASS
11N20SISO	Ant1	2462	-17.61	≤8.00	PASS
11N40SISO	Ant1	2422	-17.71	≤8.00	PASS
11N40SISO	Ant1	2437	-19.25	≤8.00	PASS
11N40SISO	Ant1	2452	-18.47	≤8.00	PASS

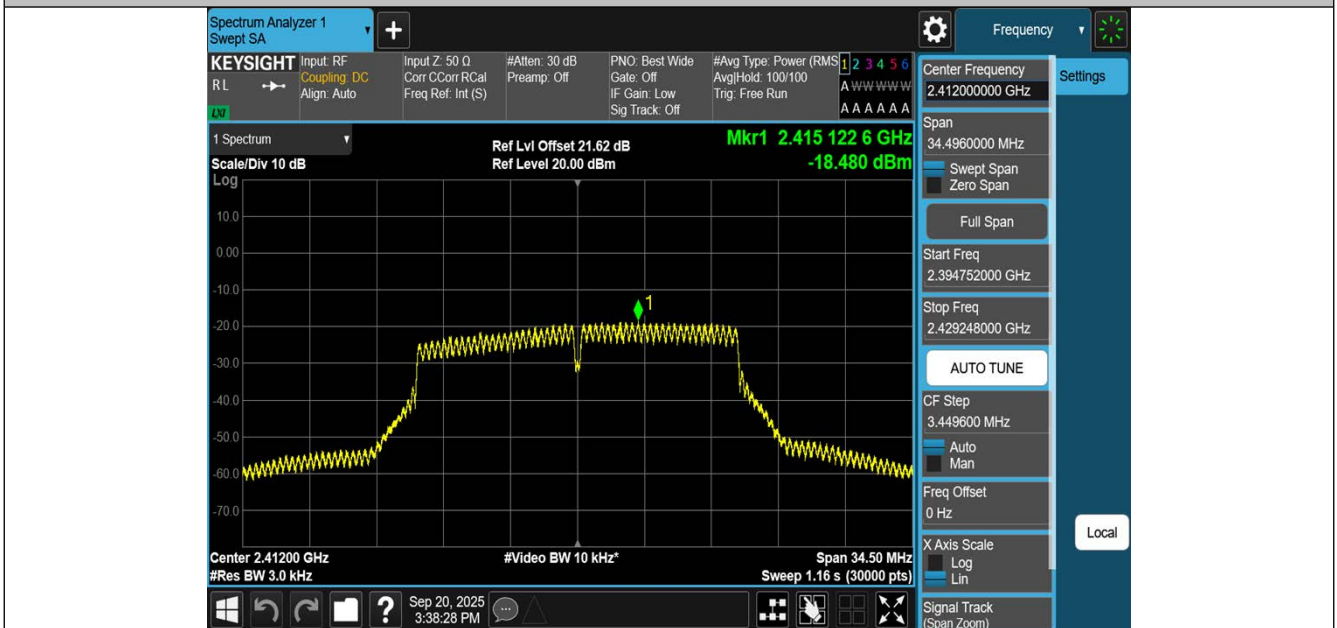
Note: The line loss are compensated in the test graph.

Test Graphs

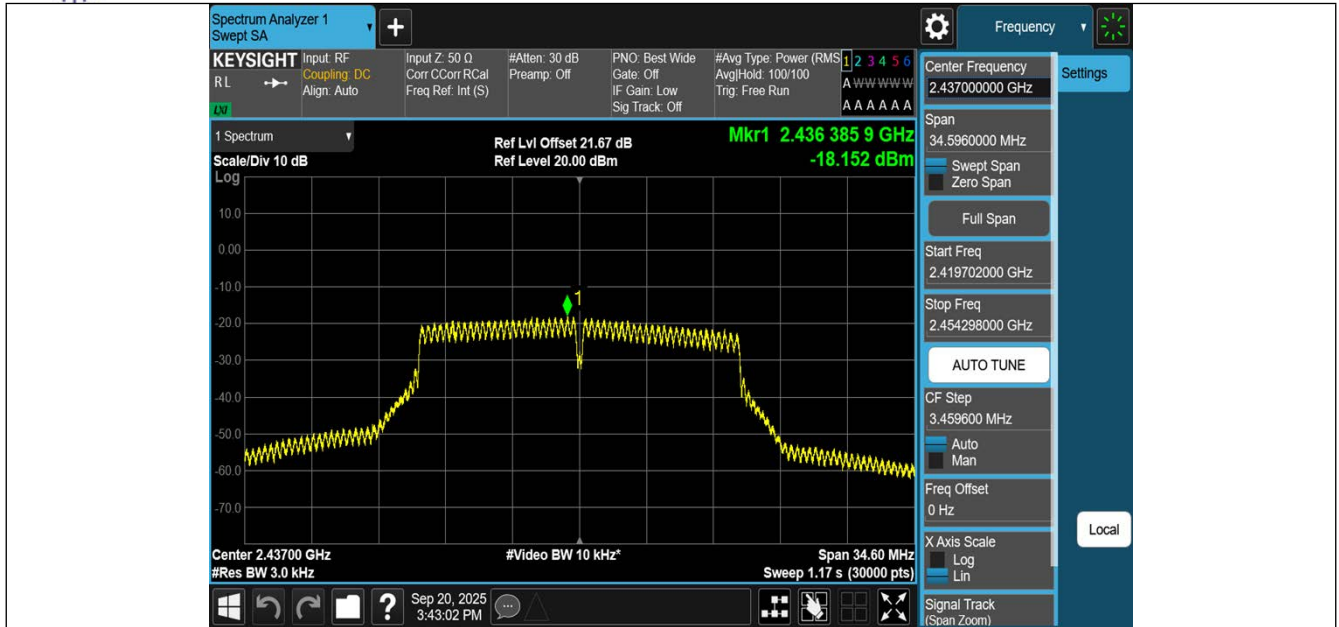




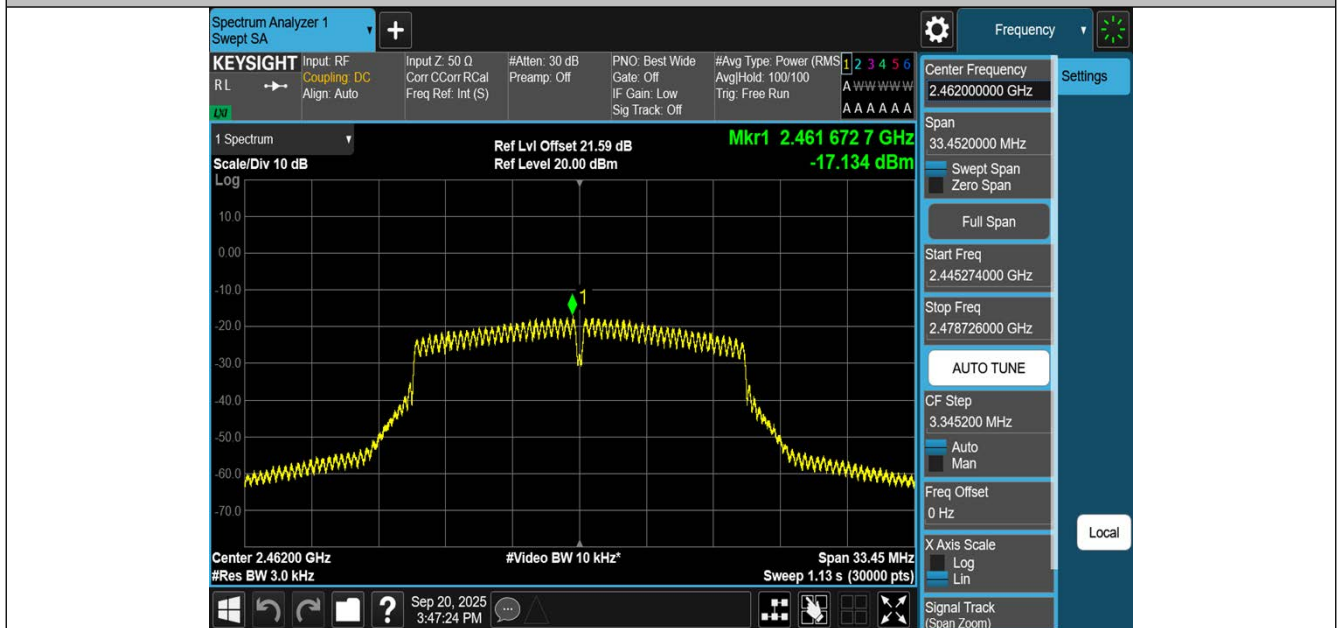
11B-Ant1-2462-PASS



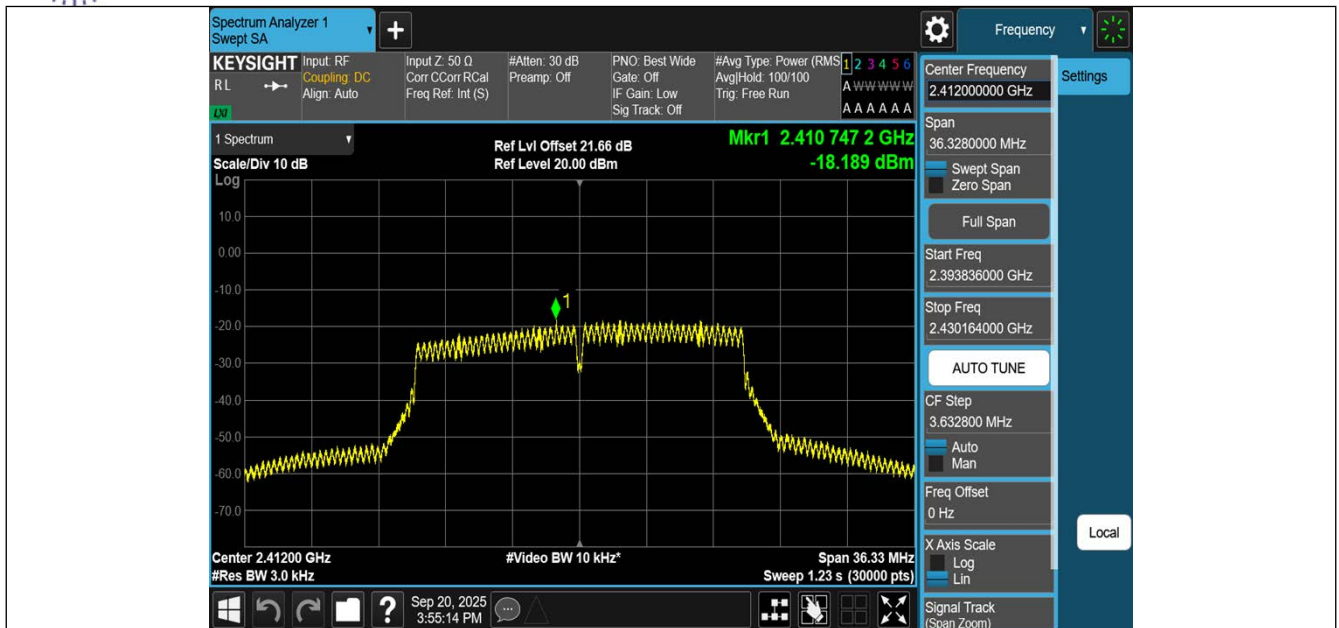
11G-Ant1-2412-PASS



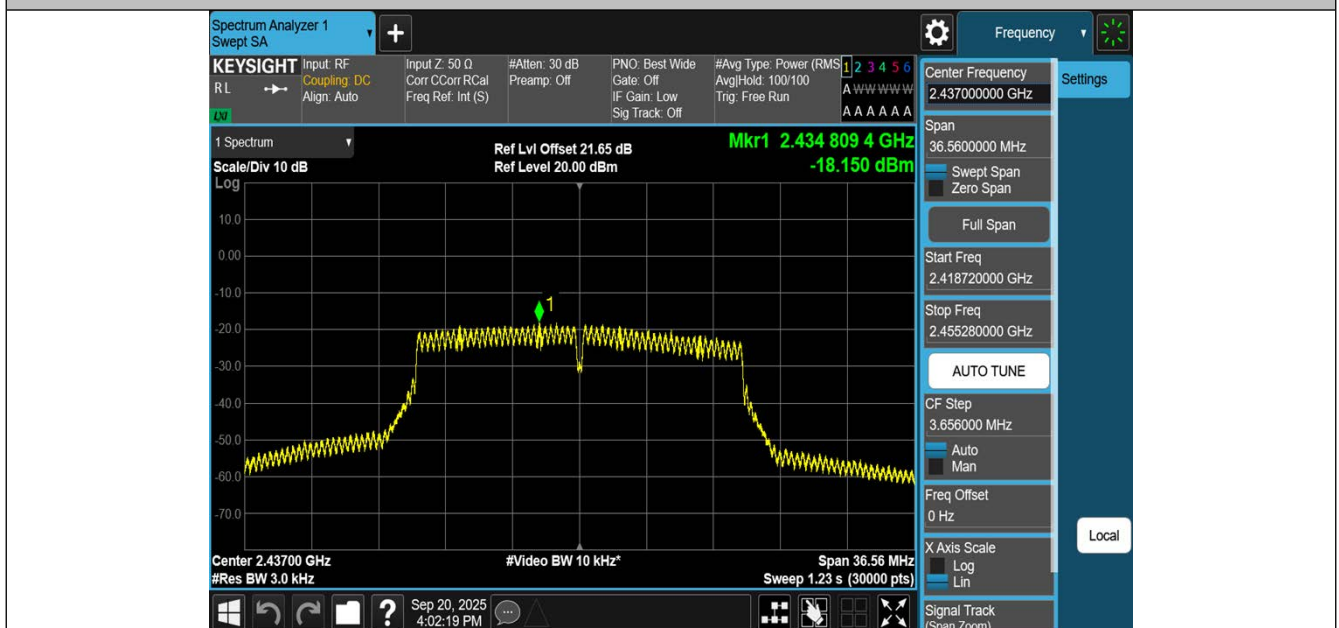
11G-Ant1-2437-PASS



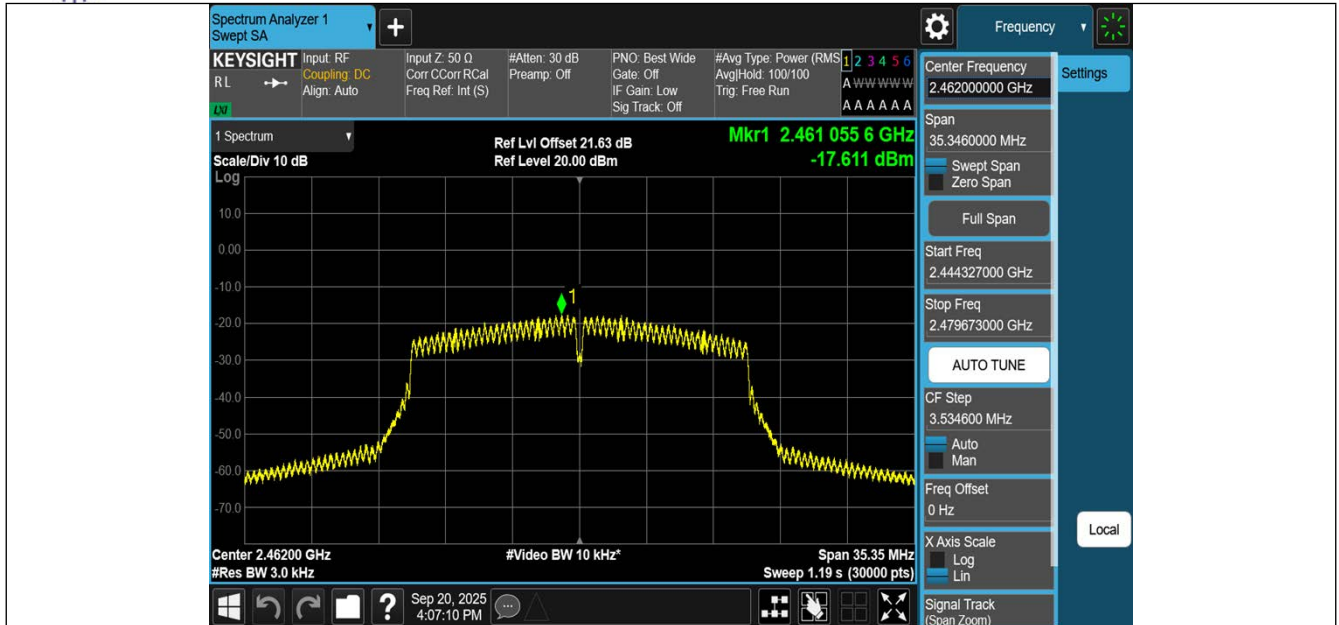
11G-Ant1-2462-PASS



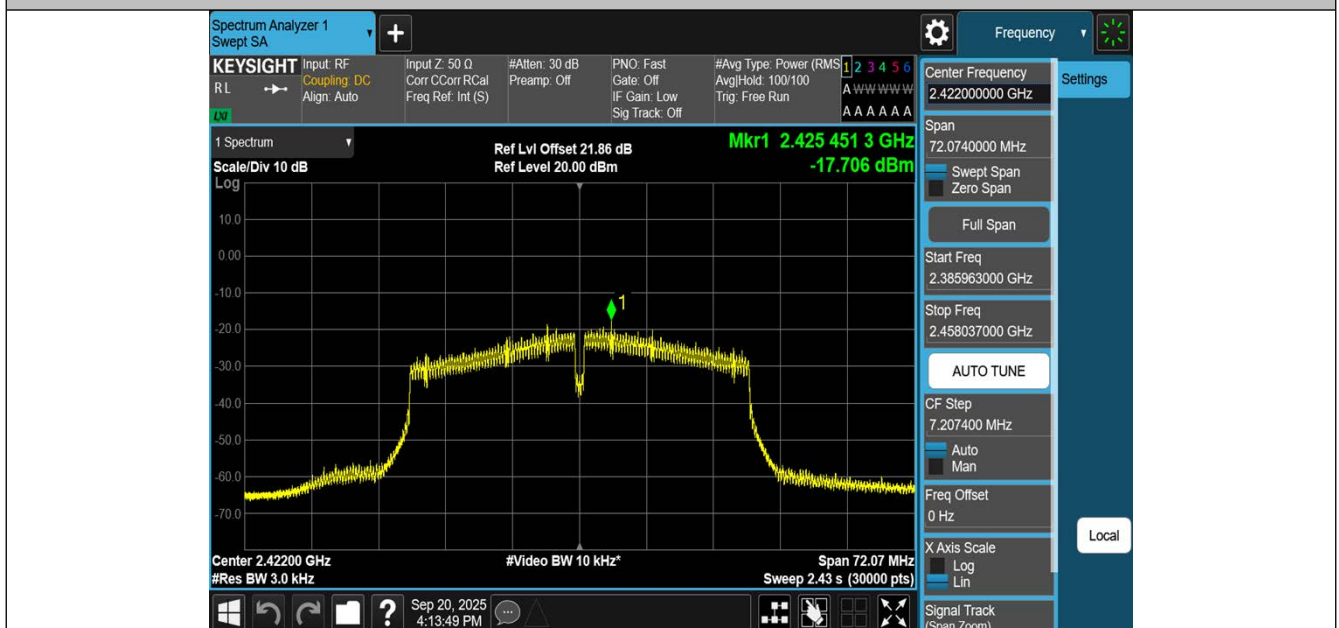
11N20SISO-Ant1-2412-PASS



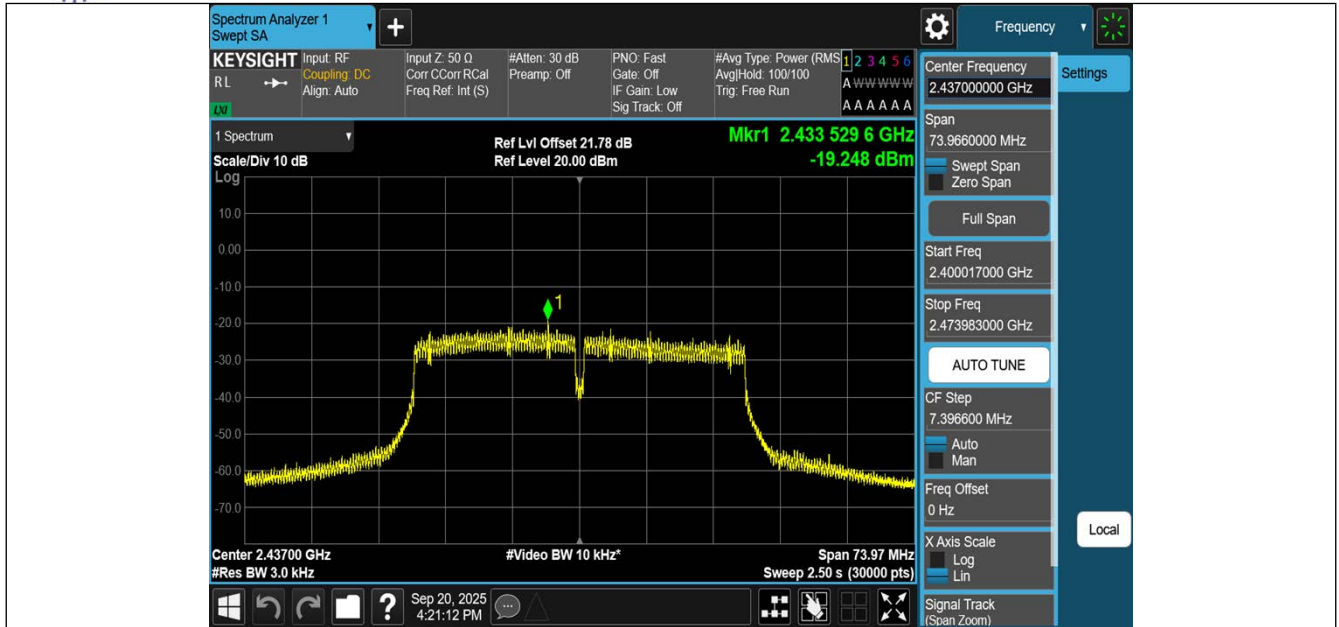
11N20SISO-Ant1-2437-PASS



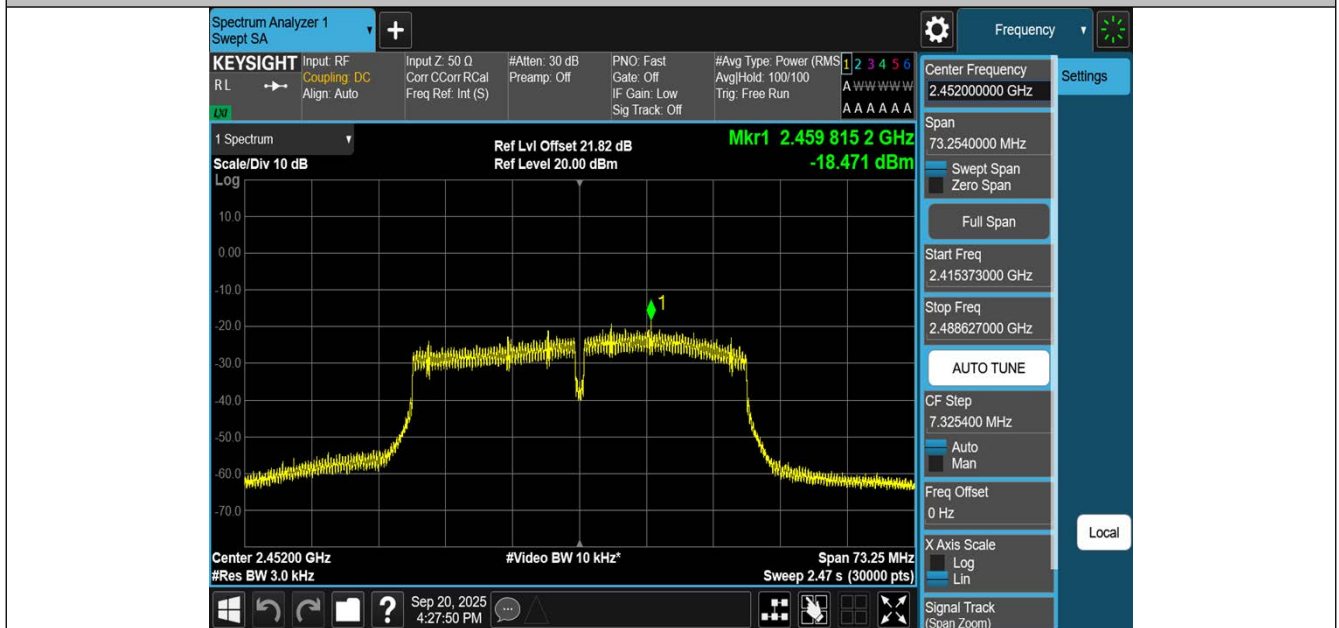
11N20SISO-Ant1-2462-PASS



11N40SISO-Ant1-2422-PASS



11N40SISO-Ant1-2437-PASS



11N40SISO-Ant1-2452-PASS

Statement

1. The report is invalid without the official seal or special seal of Shenzhen Haiyun Standard Technical Co., Ltd. (hereinafter referred to as the unit).
2. The report is invalid without the signature of the approver.
3. The report is invalid if altered arbitrarily.
4. The report shall not be partially copied without the written approval of the unit.
5. The reported test results are only valid for the tested samples.
6. If there is any objection to the test report, it shall be submitted to the test unit within 15 days from the date of receiving the report, and the overdue shall not be accepted.

Shenzhen Haiyun Standard Technical Co., Ltd.

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Tel: 0755-26024411

Email: service@hy-lab.cn

End of Test Report