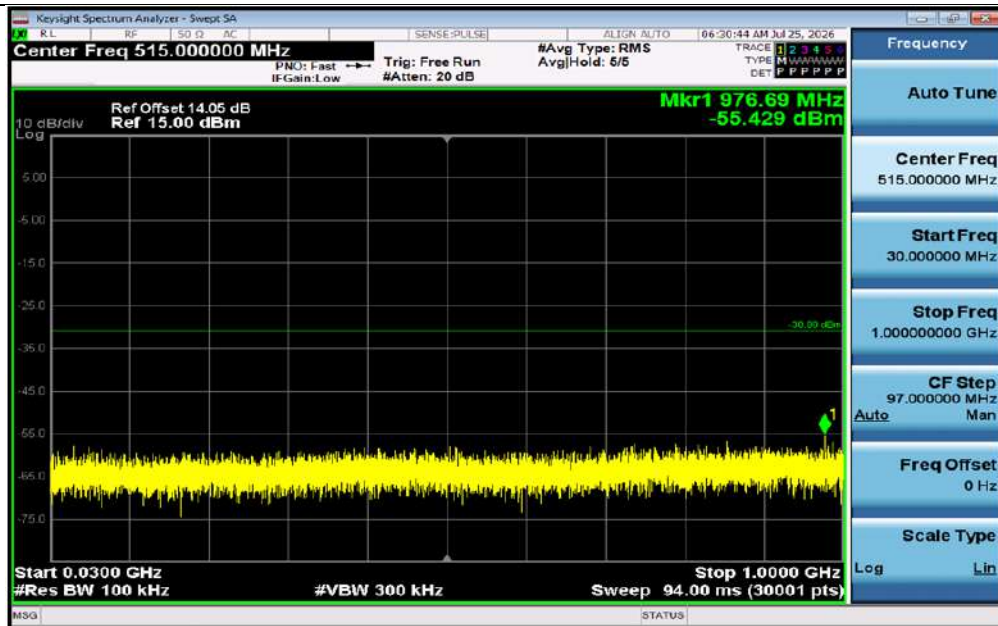
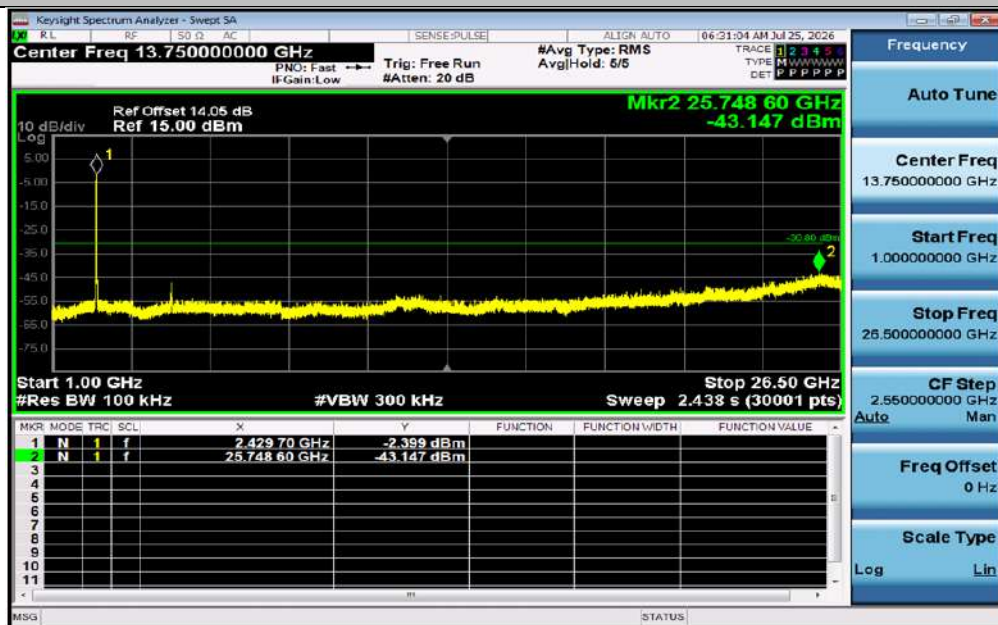




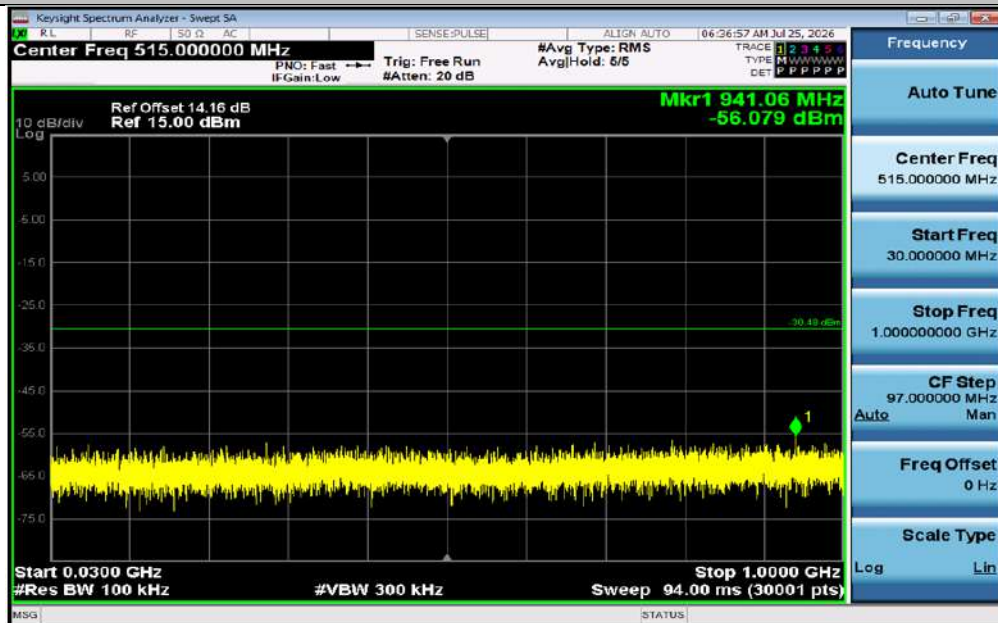
11AX40SISO-Ant1-2422-30~1000-PASS



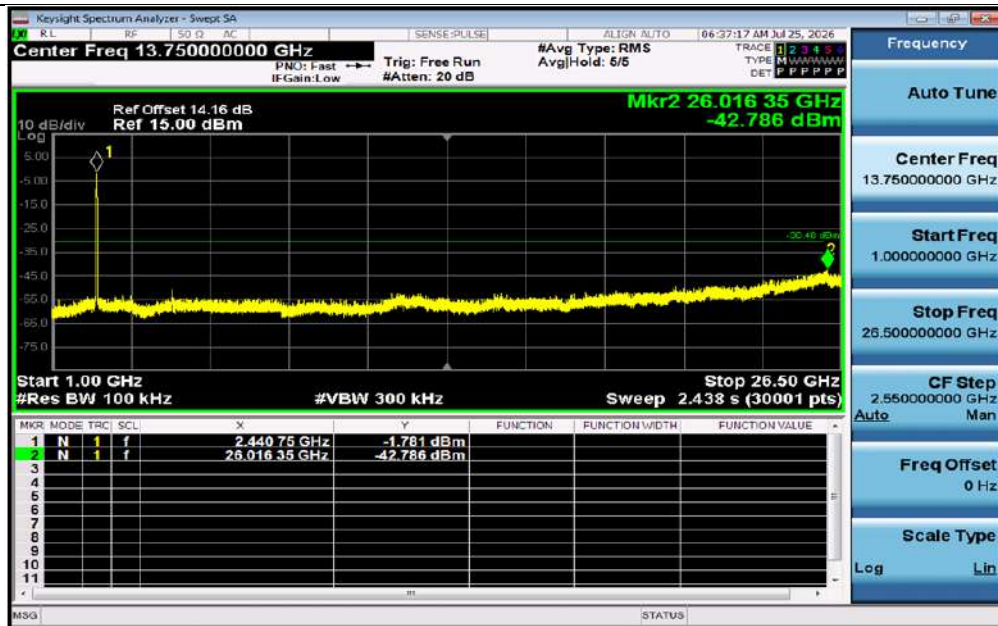
11AX40SISO-Ant1-2422-1000~26500-PASS



11AX40SISO-Ant1-2437-0~Reference-PASS



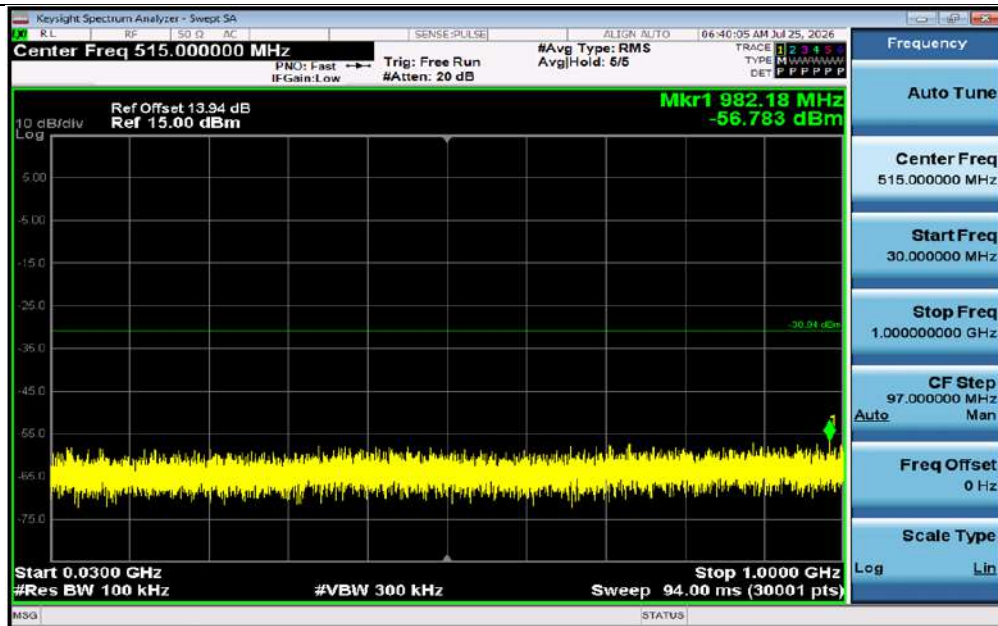
11AX40SISO-Ant1-2437-30~1000-PASS



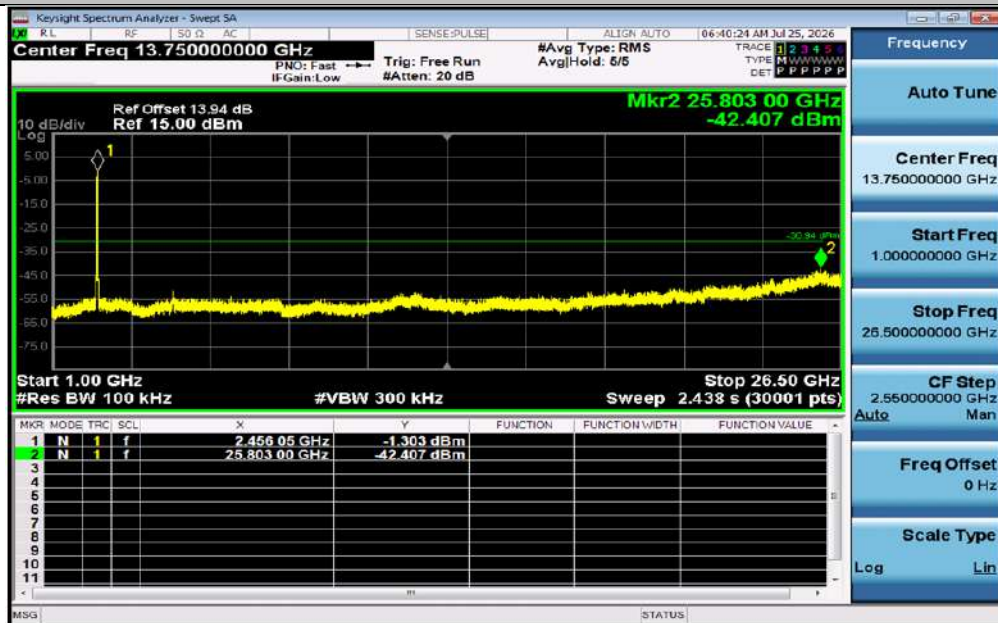
11AX40SISO-Ant1-2437-1000~26500-PASS



11AX40SISO-Ant1-2452-0~Reference-PASS

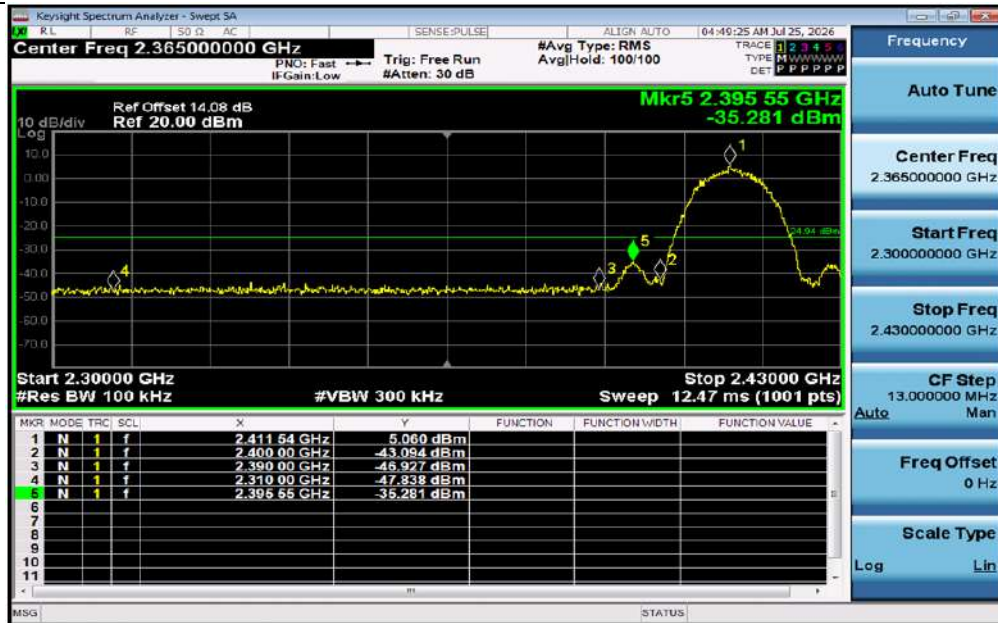


11AX40SISO-Ant1-2452-30~1000-PASS



11AX40SISO-Ant1-2452-1000~26500-PASS

Band edge



11B-Ant1-2412-PASS



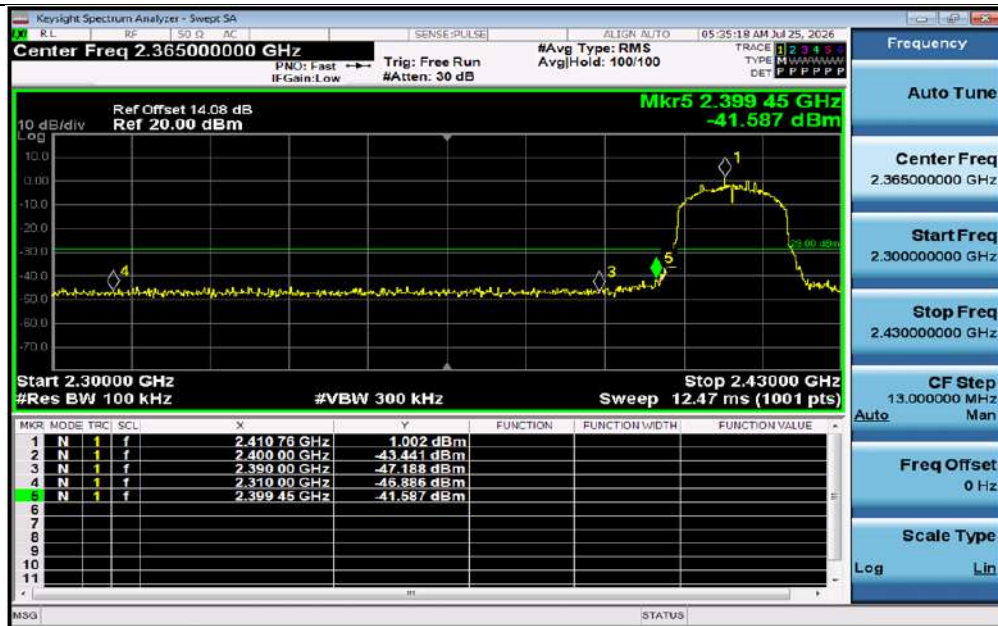
11B-Ant1-2462-PASS



11G-Ant1-2412-PASS



11G-Ant1-2462-PASS



11N20SISO-Ant1-2412-PASS



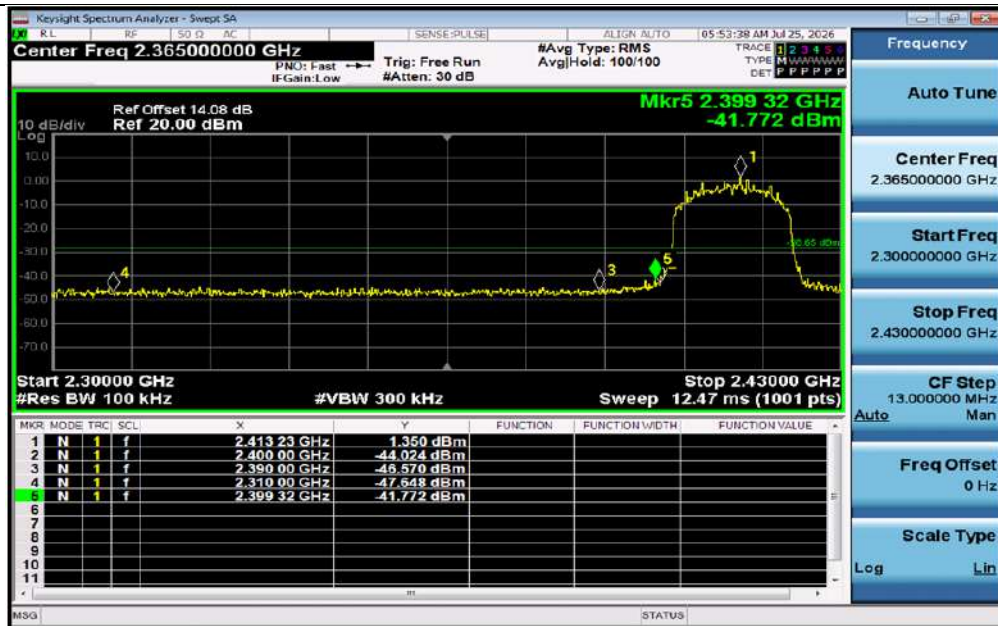
11N20SISO-Ant1-2462-PASS



11N40SISO-Ant1-2422-PASS



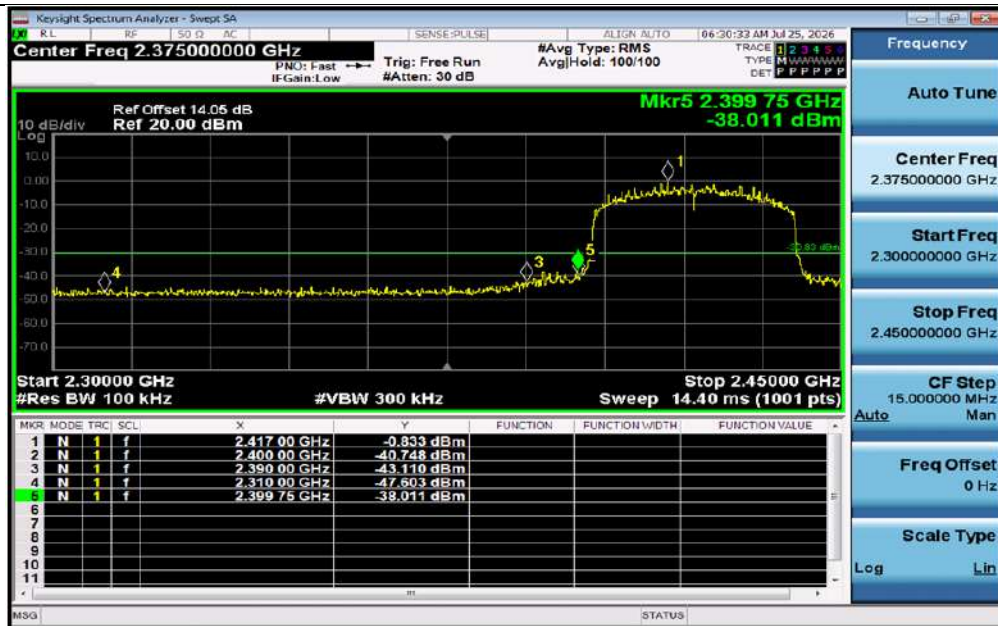
11N40SISO-Ant1-2452-PASS



11AX20SISO-Ant1-2412-PASS



11AX20SISO-Ant1-2462-PASS



11AX40SISO-Ant1-2422-PASS



11AX40SISO-Ant1-2452-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:

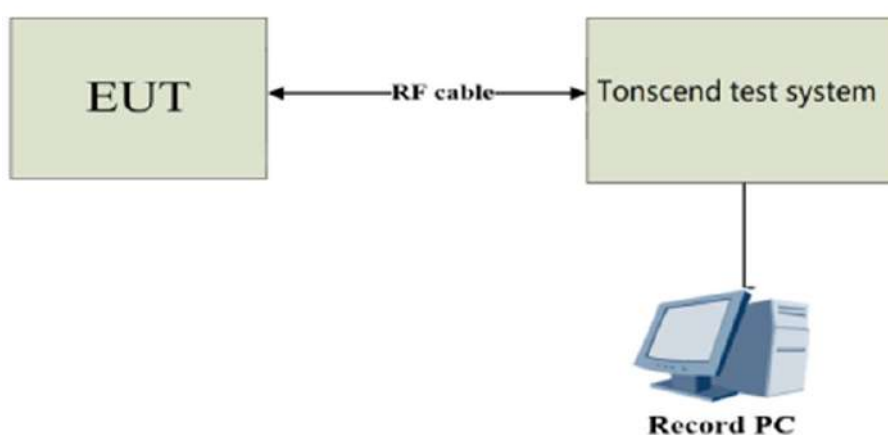
Centre Frequency	The centre frequency of the channel under test
RBW	1%~5% OBW but not less than 100 kHz.
VBW	≥ 3 RBW
Frequency span	2x Nominal Channel Bandwidth
Detector Mode	Peak
Trace Mode	Max Hold
Sweep Time	Auto Couple

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

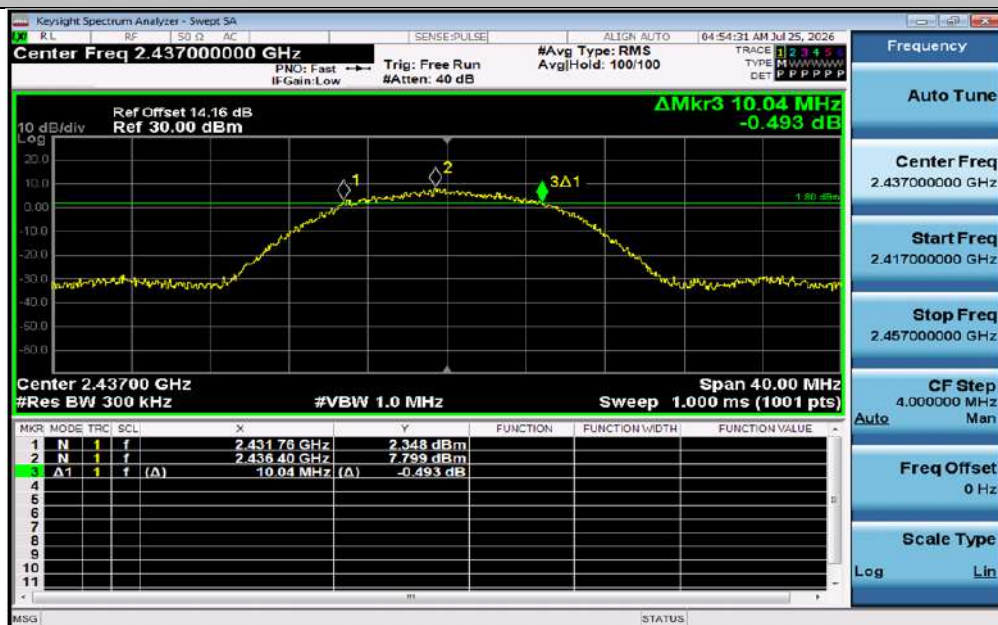
DTS Bandwidth

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.320	2407.320	2416.640	0.5	PASS
11B	Ant1	2437	10.040	2431.760	2441.800	0.5	PASS
11B	Ant1	2462	10.800	2456.440	2467.240	0.5	PASS
11G	Ant1	2412	16.000	2403.960	2419.960	0.5	PASS
11G	Ant1	2437	16.080	2428.920	2445.000	0.5	PASS
11G	Ant1	2462	16.240	2453.840	2470.080	0.5	PASS
11N20SISO	Ant1	2412	17.320	2403.280	2420.600	0.5	PASS
11N20SISO	Ant1	2437	12.720	2430.360	2443.080	0.5	PASS
11N20SISO	Ant1	2462	13.960	2454.920	2468.880	0.5	PASS
11N40SISO	Ant1	2422	32.560	2405.680	2438.240	0.5	PASS
11N40SISO	Ant1	2437	32.000	2421.240	2453.240	0.5	PASS
11N40SISO	Ant1	2452	31.120	2436.320	2467.440	0.5	PASS
11AX20SISO	Ant1	2412	14.720	2404.600	2419.320	0.5	PASS
11AX20SISO	Ant1	2437	12.960	2430.840	2443.800	0.5	PASS
11AX20SISO	Ant1	2462	13.720	2455.160	2468.880	0.5	PASS
11AX40SISO	Ant1	2422	32.080	2405.600	2437.680	0.5	PASS
11AX40SISO	Ant1	2437	30.160	2421.800	2451.960	0.5	PASS
11AX40SISO	Ant1	2452	30.640	2436.160	2466.800	0.5	PASS

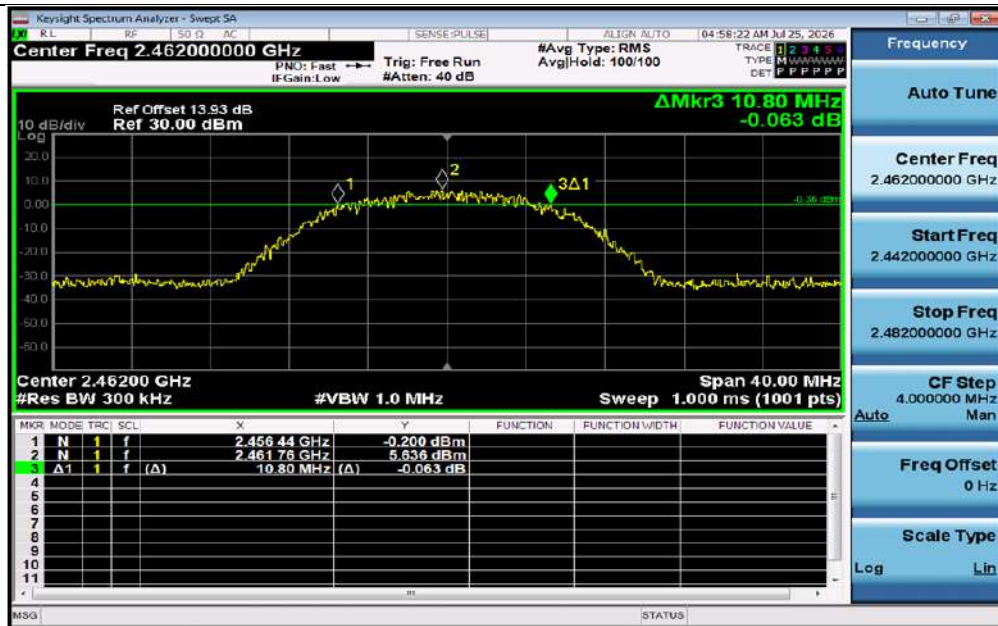
Test Graphs



11B-Ant1-2412-PASS



11B-Ant1-2437-PASS



11B-Ant1-2462-PASS



11G-Ant1-2412-PASS



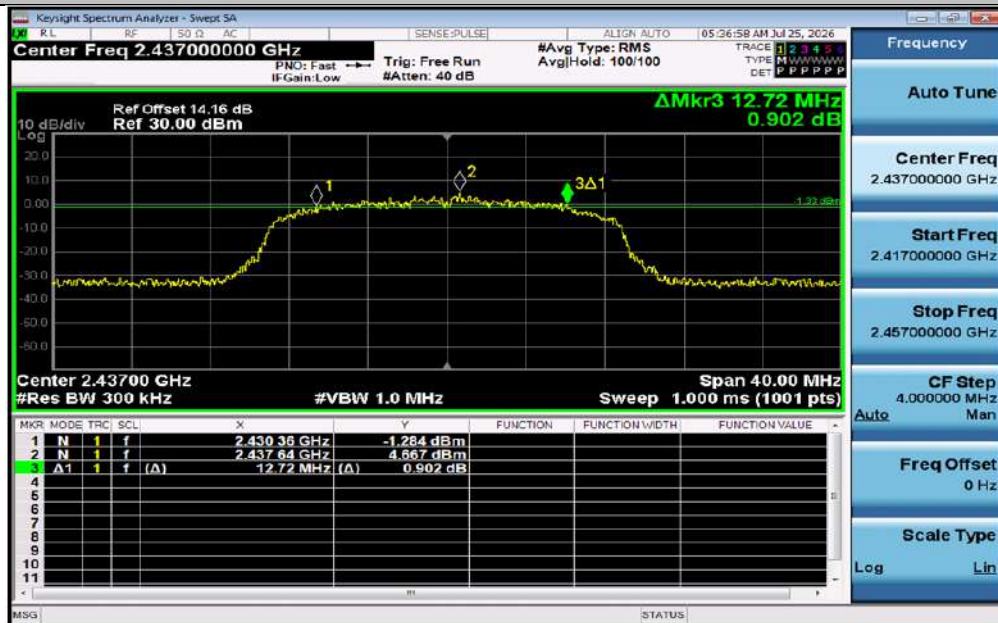
11G-Ant1-2437-PASS



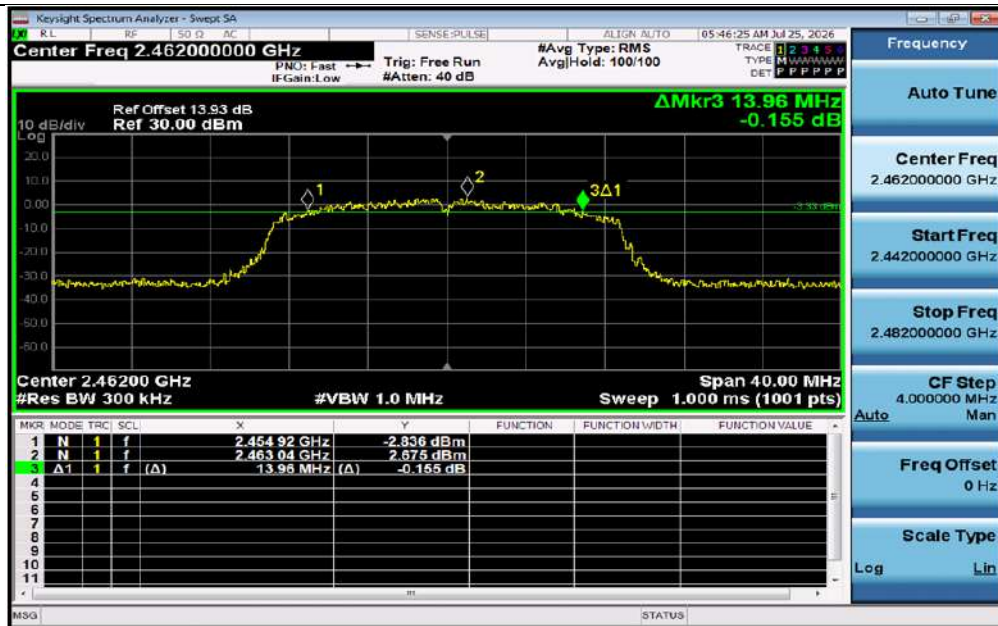
11G-Ant1-2462-PASS



11N20SISO-Ant1-2412-PASS



11N20SISO-Ant1-2437-PASS



11N20SISO-Ant1-2462-PASS



11N40SISO-Ant1-2422-PASS



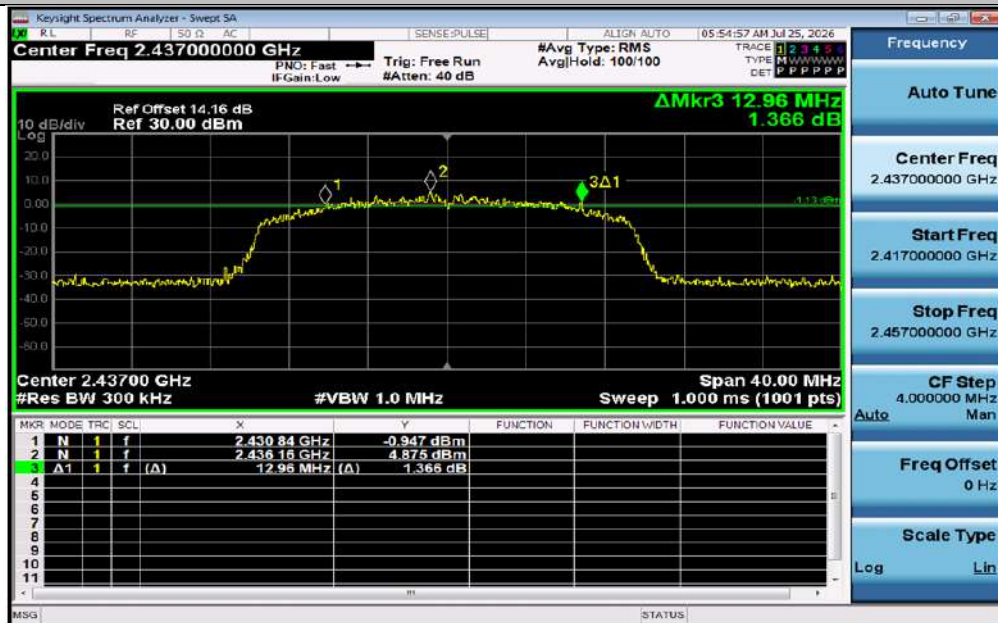
11N40SISO-Ant1-2437-PASS



11N40SISO-Ant1-2452-PASS



11AX20SISO-Ant1-2412-PASS



11AX20SISO-Ant1-2437-PASS



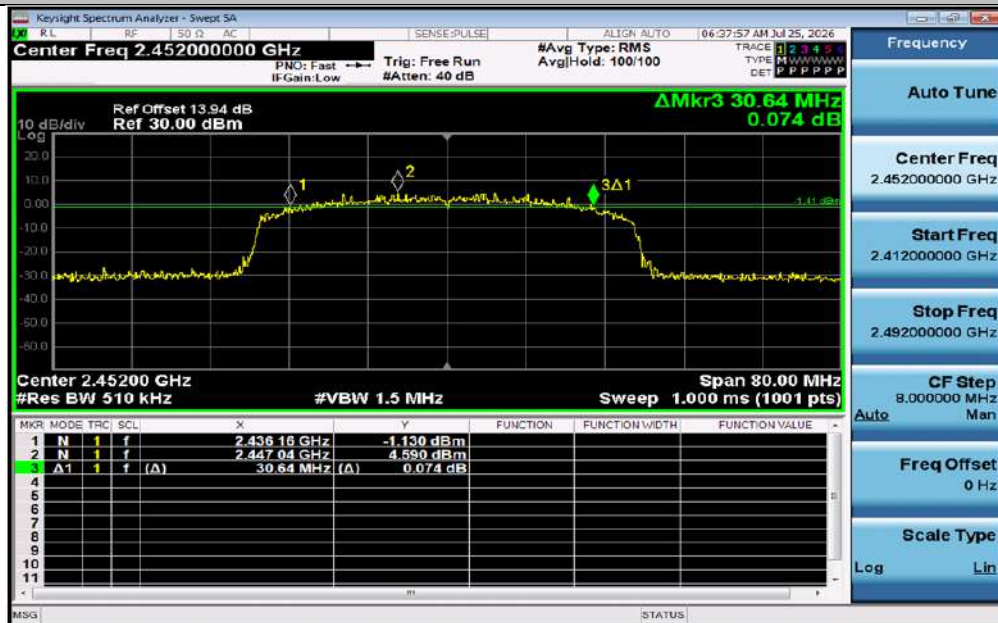
11AX20SISO-Ant1-2462-PASS



11AX40SISO-Ant1-2422-PASS



11AX40SISO-Ant1-2437-PASS

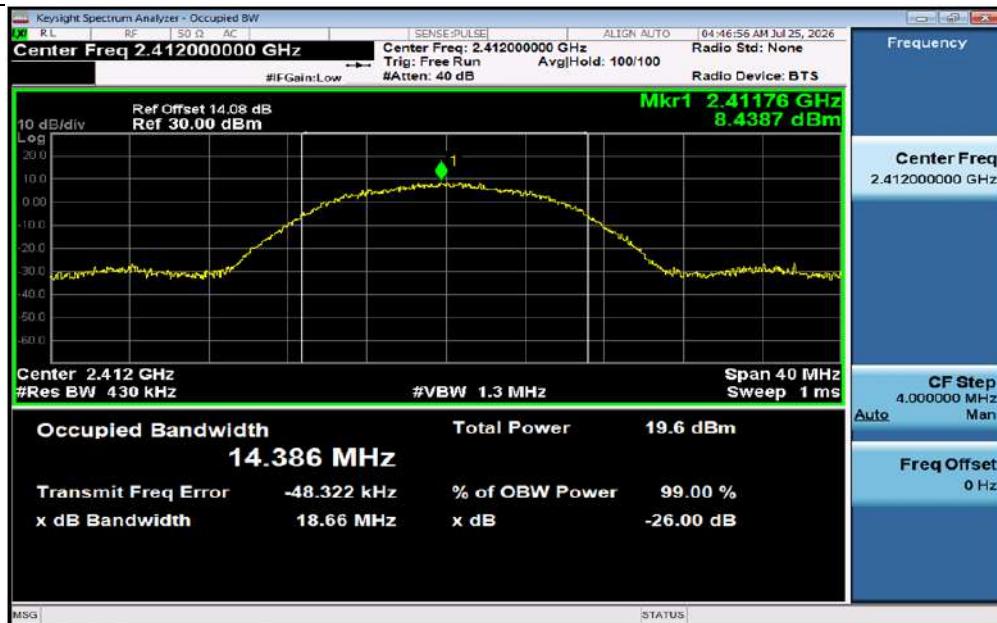


11AX40SISO-Ant1-2452-PASS

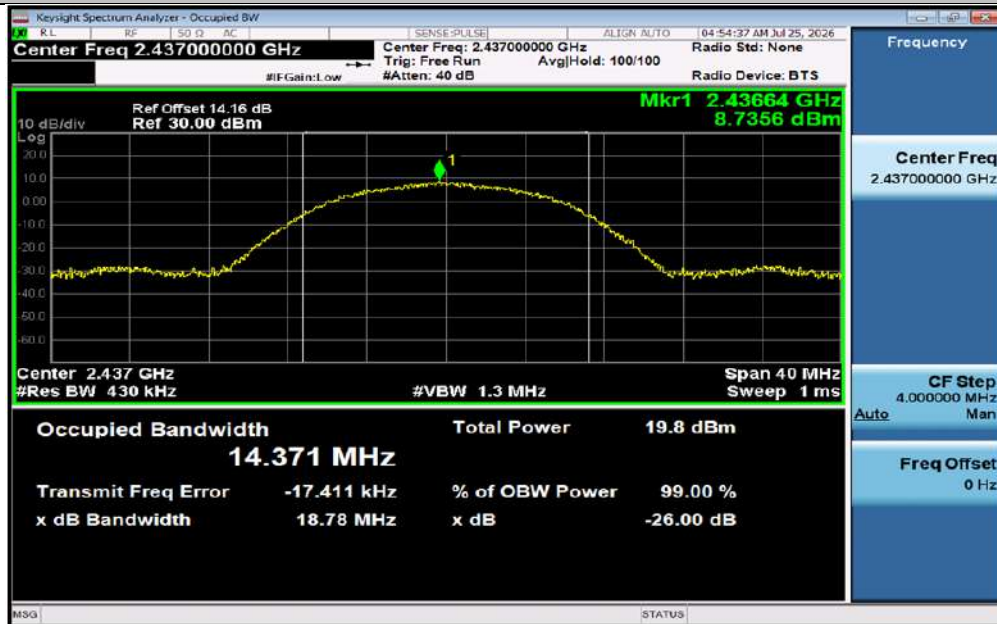
Occupied Channel Bandwidth

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	14.386	2404.7587	2419.1447	---	---
11B	Ant1	2437	14.371	2429.7971	2444.1681	---	---
11B	Ant1	2462	14.351	2454.8842	2469.2352	---	---
11G	Ant1	2412	16.902	2403.5194	2420.4214	---	---
11G	Ant1	2437	17.010	2428.4376	2445.4476	---	---
11G	Ant1	2462	17.010	2453.4589	2470.4689	---	---
11N20SISO	Ant1	2412	18.199	2402.8559	2421.0549	---	---
11N20SISO	Ant1	2437	17.155	2428.4131	2445.5681	---	---
11N20SISO	Ant1	2462	17.178	2453.4061	2470.5841	---	---
11N40SISO	Ant1	2422	35.275	2404.3173	2439.5923	---	---
11N40SISO	Ant1	2437	35.299	2419.2972	2454.5962	---	---
11N40SISO	Ant1	2452	35.343	2434.2956	2469.6386	---	---
11AX20SISO	Ant1	2412	18.187	2402.8426	2421.0296	---	---
11AX20SISO	Ant1	2437	18.164	2427.9016	2446.0656	---	---
11AX20SISO	Ant1	2462	18.096	2452.9114	2471.0074	---	---
11AX40SISO	Ant1	2422	36.430	2403.7207	2440.1507	---	---
11AX40SISO	Ant1	2437	36.418	2418.6821	2455.1001	---	---
11AX40SISO	Ant1	2452	36.376	2433.7010	2470.0770	---	---

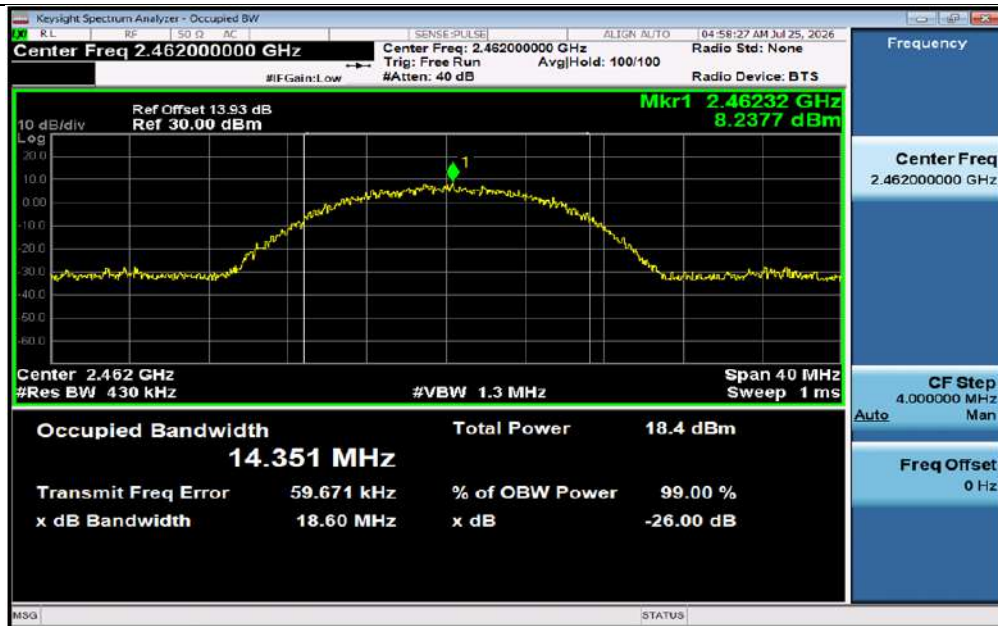
Test Graphs



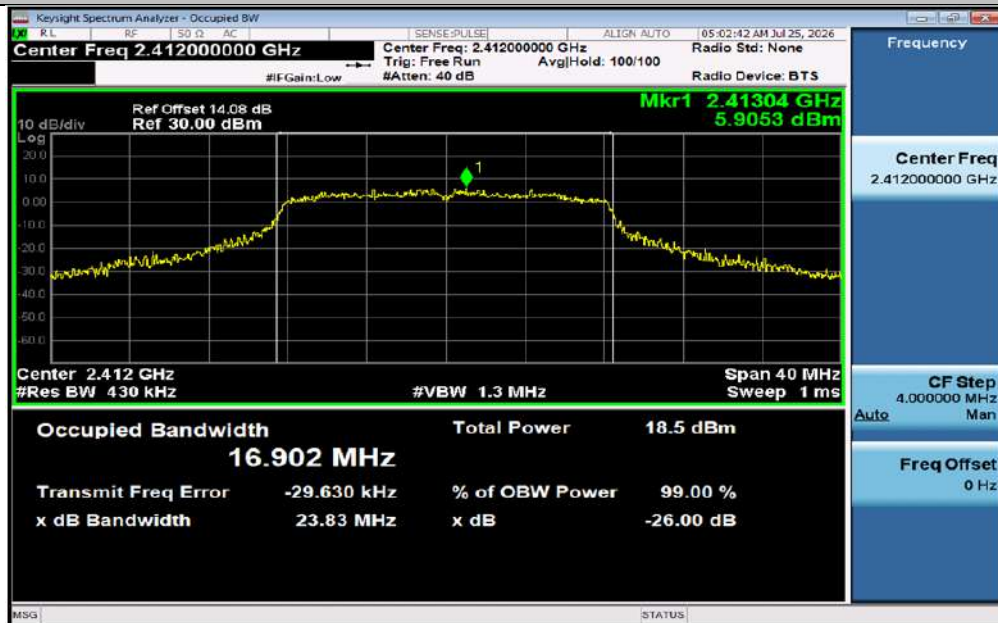
11B-Ant1-2412



11B-Ant1-2437



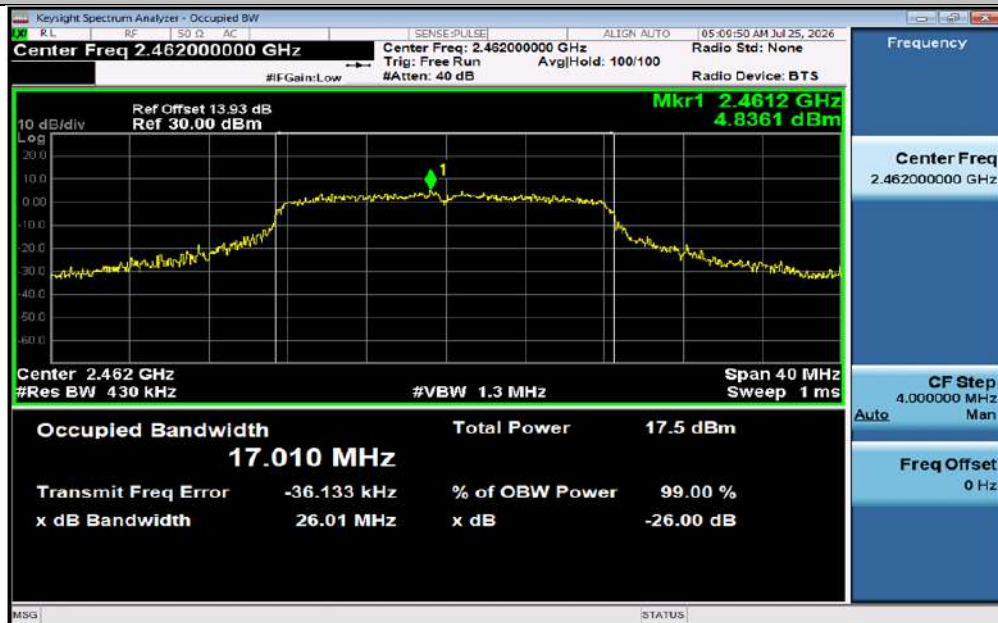
11B-Ant1-2462



11G-Ant1-2412



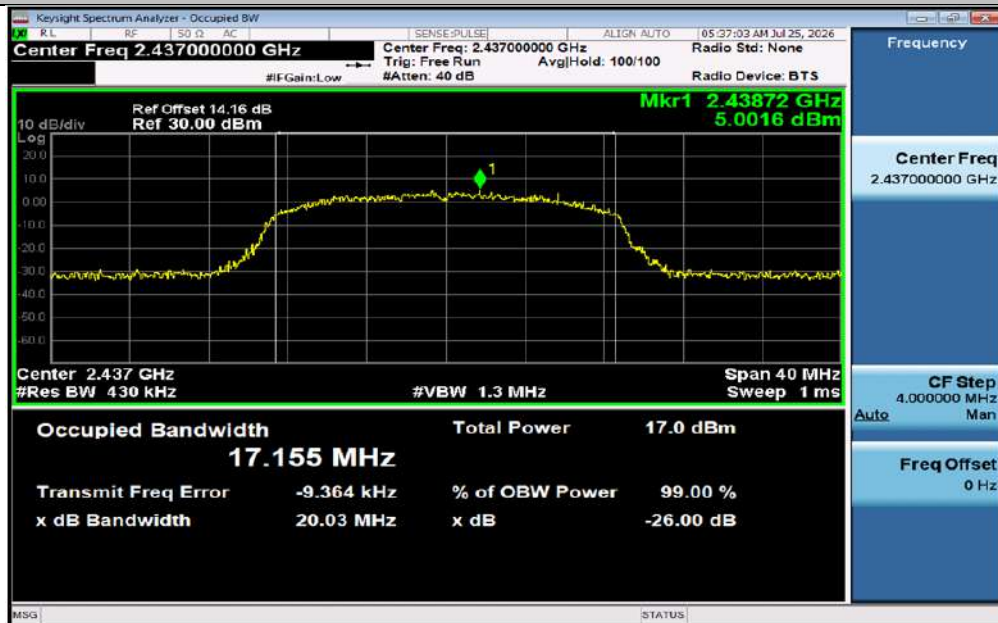
11G-Ant1-2437



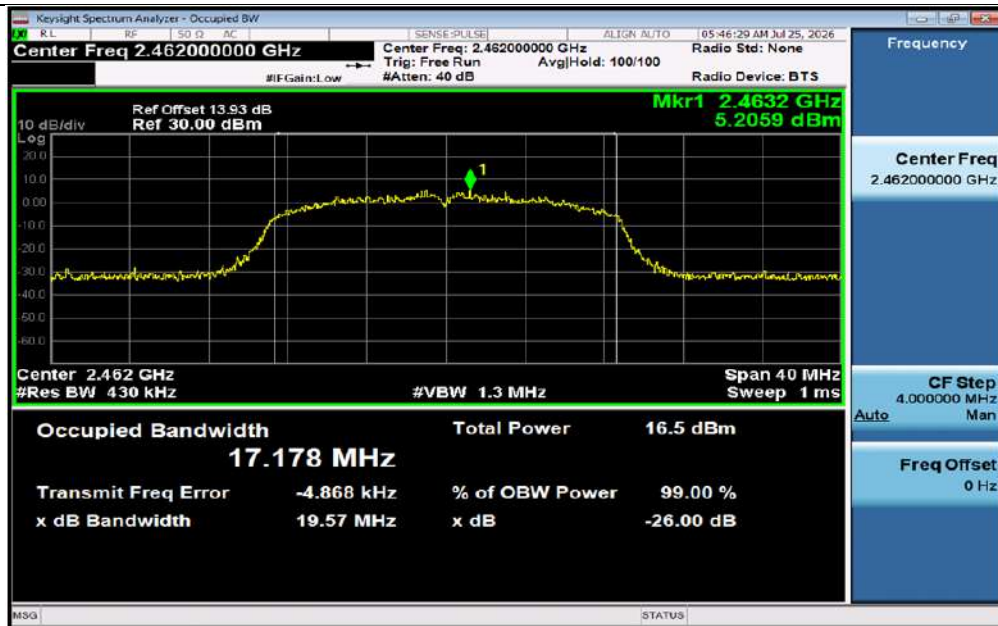
11G-Ant1-2462



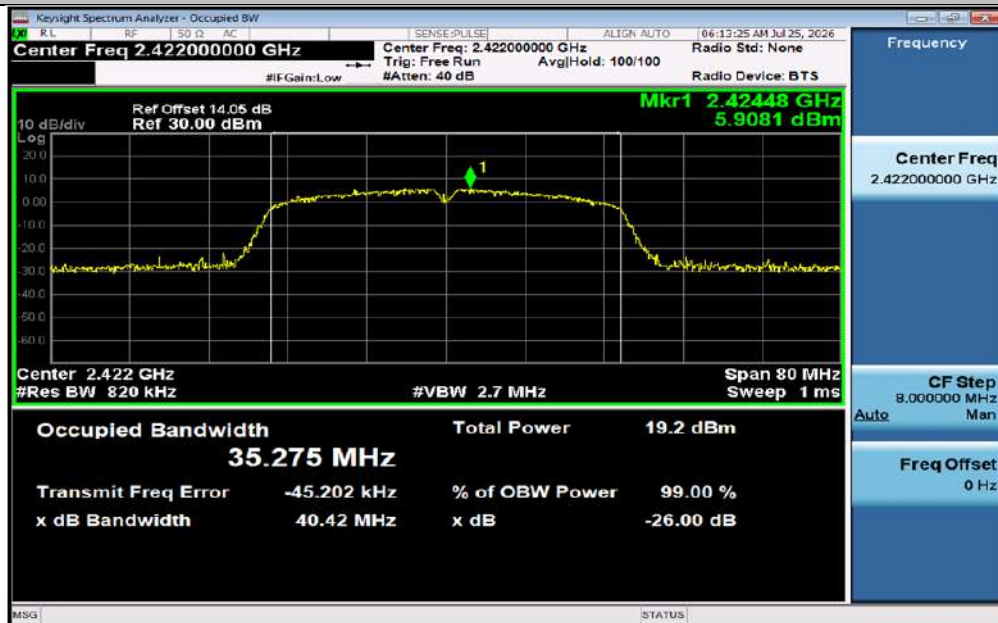
11N20SISO-Ant1-2412



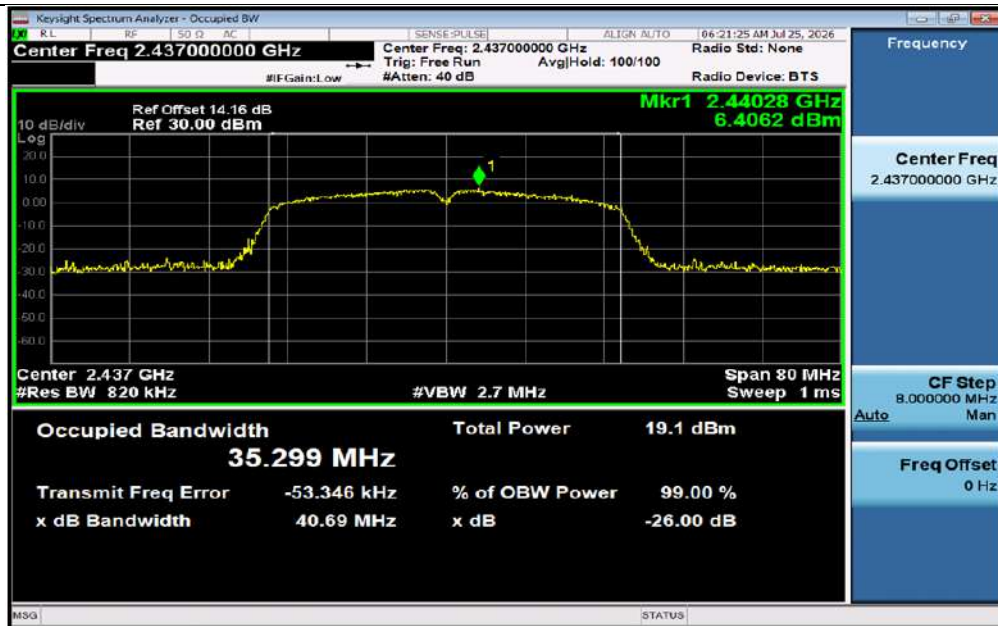
11N20SISO-Ant1-2437



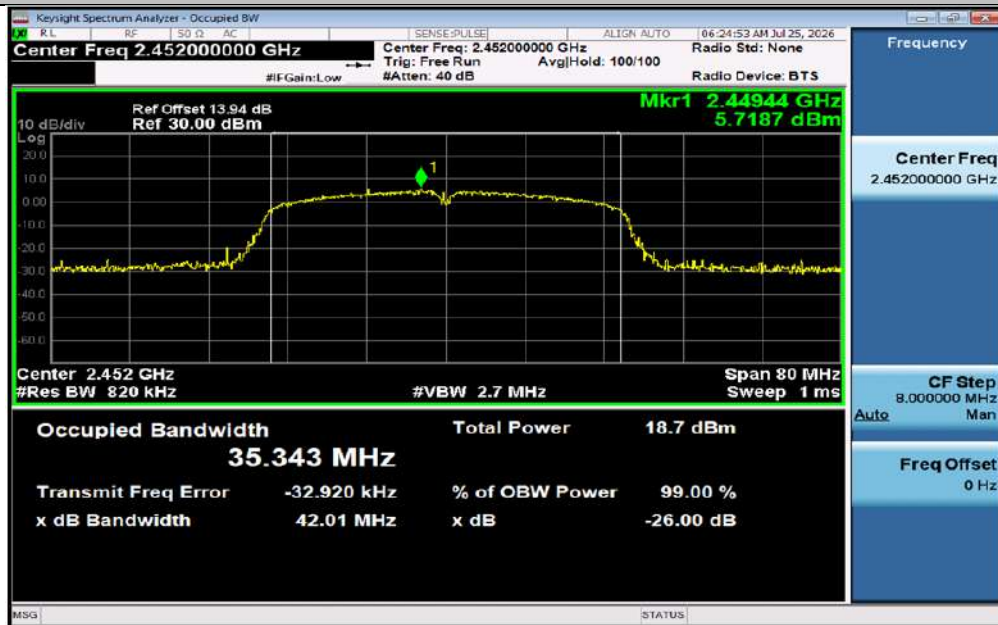
11N20SISO-Ant1-2462



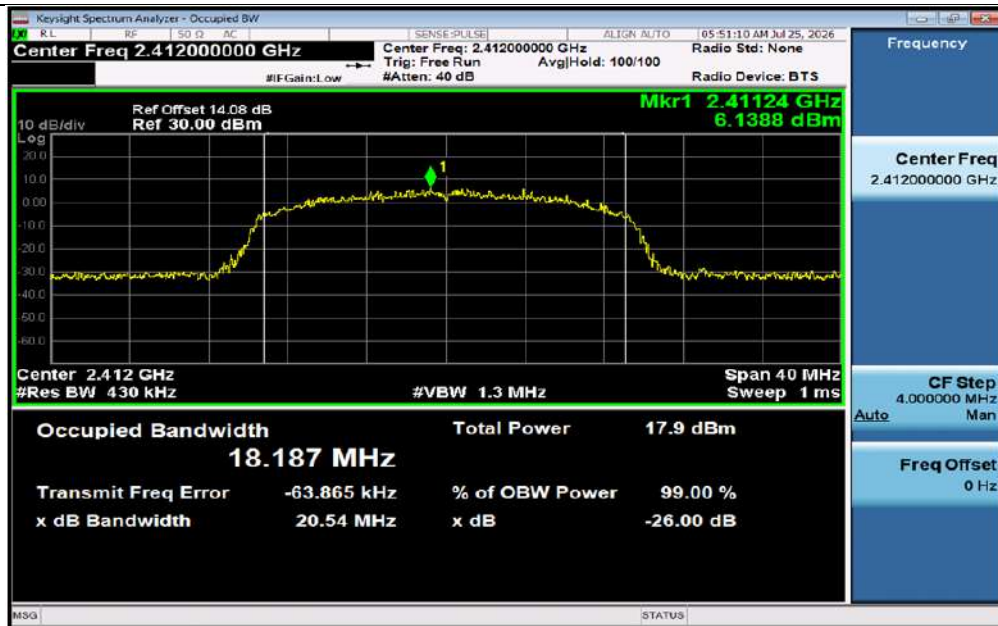
11N40SISO-Ant1-2422



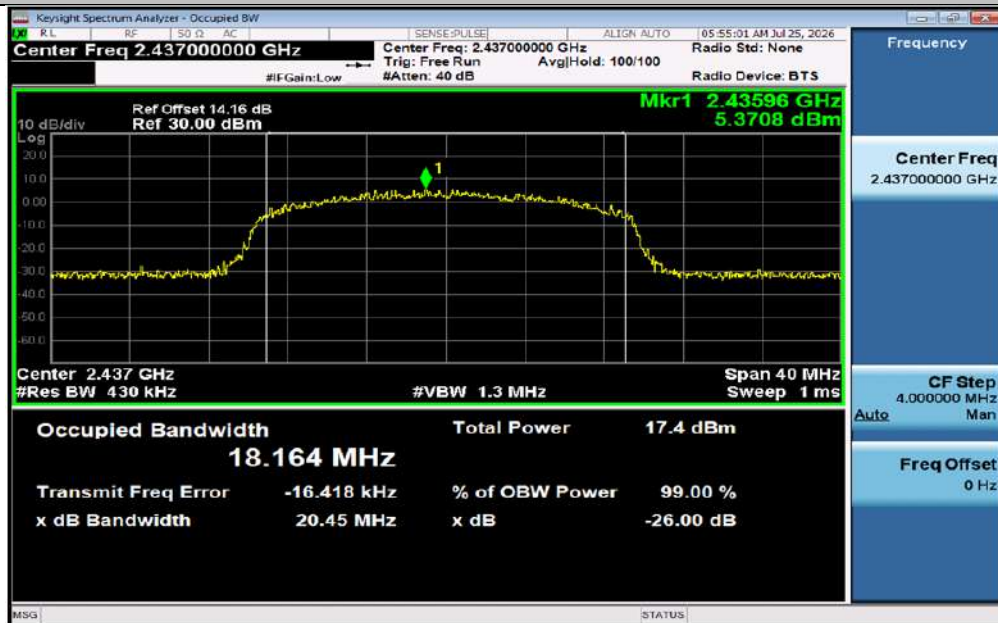
11N40SISO-Ant1-2437



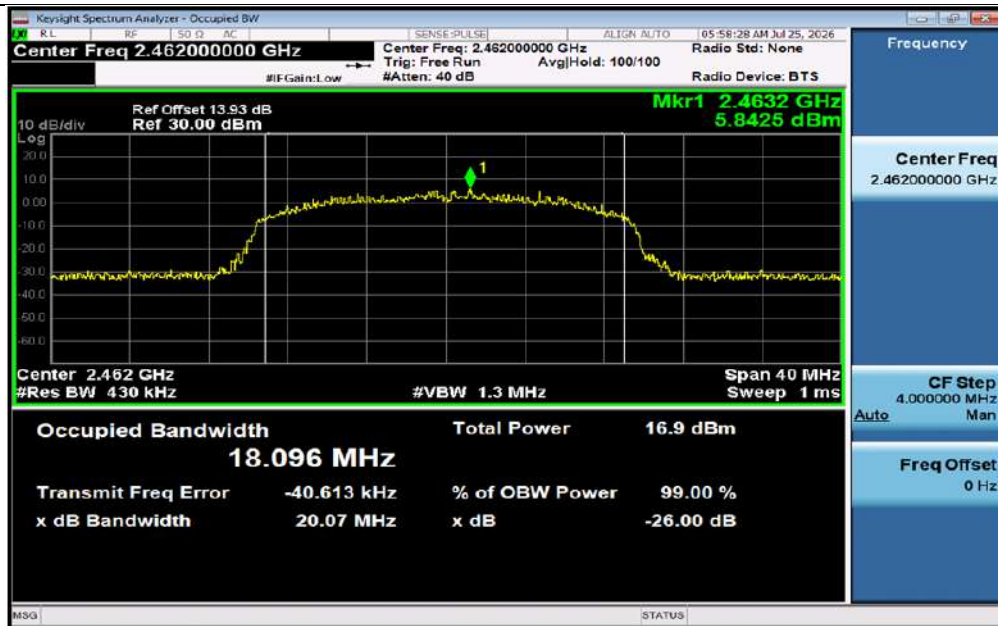
11N40SISO-Ant1-2452



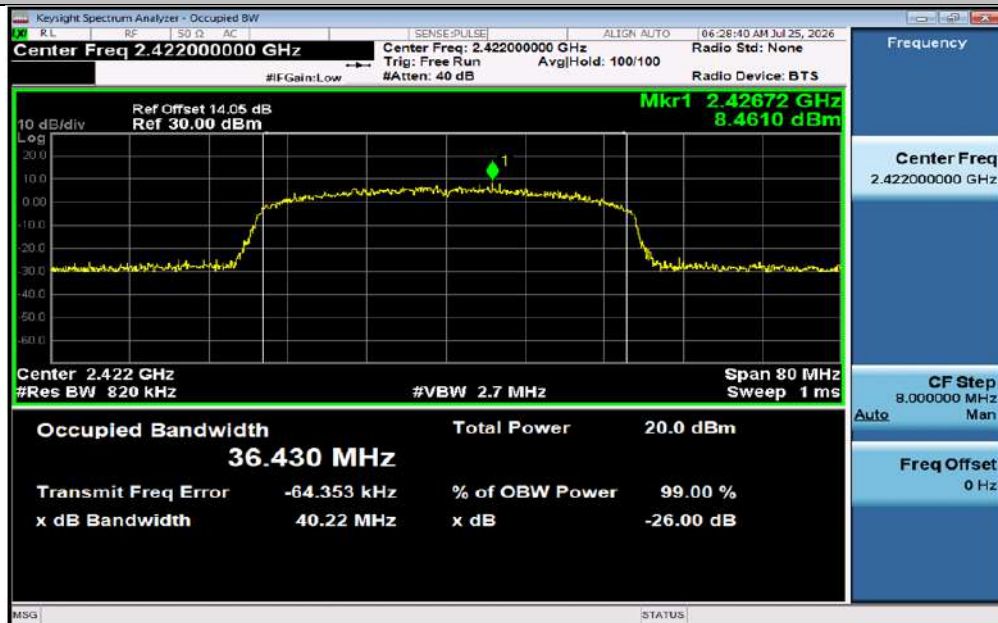
11AX20SISO-Ant1-2412



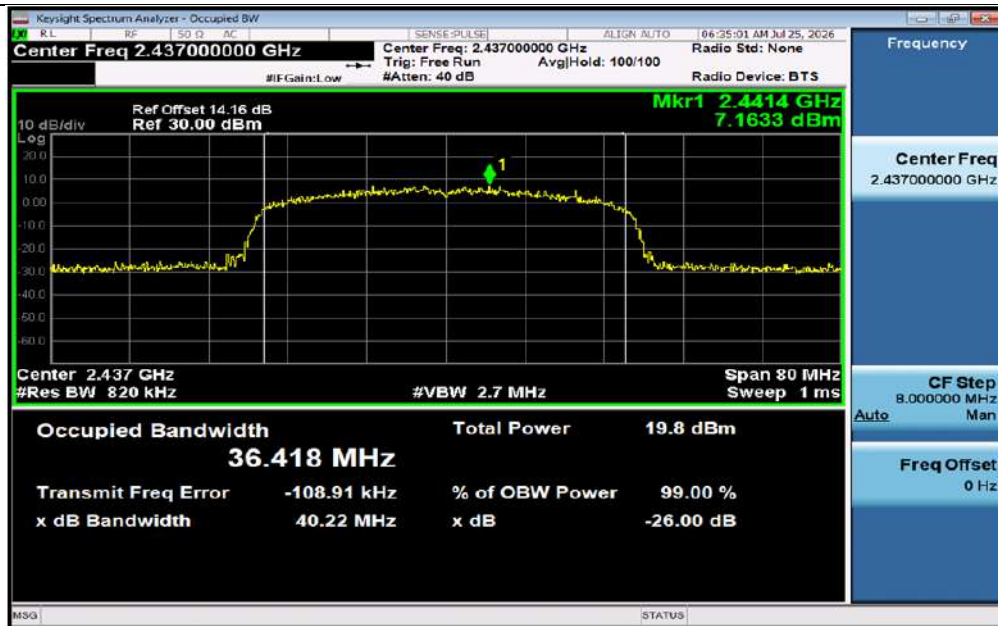
11AX20SISO-Ant1-2437



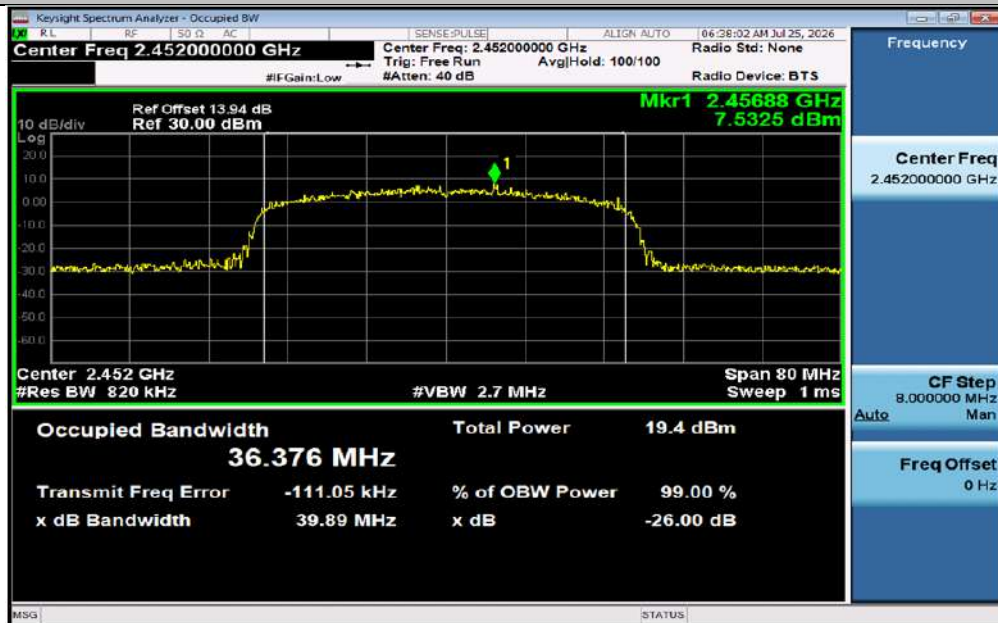
11AX20SISO-Ant1-2462



11AX40SISO-Ant1-2422



11AX40SISO-Ant1-2437



11AX40SISO-Ant1-2452

3.5 Maximum conducted output power

3.5.1 Limit

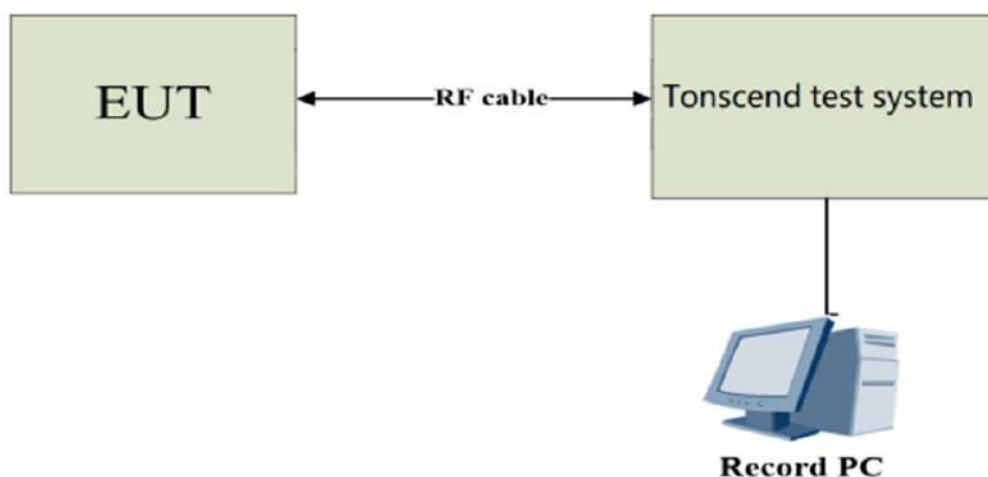
For systems using digital modulation in the 2400~2483.5MHz, The Maximum output Power shall not exceed 1W(30dBm)

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 tonscend 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 average power)of ANSI C63.10-2020.

3.5.3 Test Setup



3.5.4 Table of Parameters of Text Software Setting

Test Mode	Power Level Setting defined by Manufacturer		
Test Software Version	adb.exe		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	Default	Default	Default
IEEE 802.11g	Default	Default	Default
IEEE 802.11n20	Default	Default	Default
IEEE 802.11n40	Default	Default	Default
Frequency (MHz)	2412	2437	2462
IEEE 802.11ax20	Default	Default	Default
IEEE 802.11ax40	Default	Default	Default

3.5.5 The Result

Test Mode	Antenna	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	13.47	≤30.00	PASS
11B	Ant1	2437	13.55	≤30.00	PASS
11B	Ant1	2462	13.18	≤30.00	PASS
11G	Ant1	2412	11.95	≤30.00	PASS
11G	Ant1	2437	11.65	≤30.00	PASS
11G	Ant1	2462	10.74	≤30.00	PASS
11N20SISO	Ant1	2412	12.03	≤30.00	PASS
11N20SISO	Ant1	2437	10.77	≤30.00	PASS
11N20SISO	Ant1	2462	10.24	≤30.00	PASS
11N40SISO	Ant1	2422	12.54	≤30.00	PASS
11N40SISO	Ant1	2437	12.17	≤30.00	PASS
11N40SISO	Ant1	2452	12.01	≤30.00	PASS
11AX20SISO	Ant1	2412	11.45	≤30.00	PASS
11AX20SISO	Ant1	2437	11.26	≤30.00	PASS
11AX20SISO	Ant1	2462	11.43	≤30.00	PASS
11AX40SISO	Ant1	2422	12.30	≤30.00	PASS
11AX40SISO	Ant1	2437	12.05	≤30.00	PASS
11AX40SISO	Ant1	2452	11.37	≤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

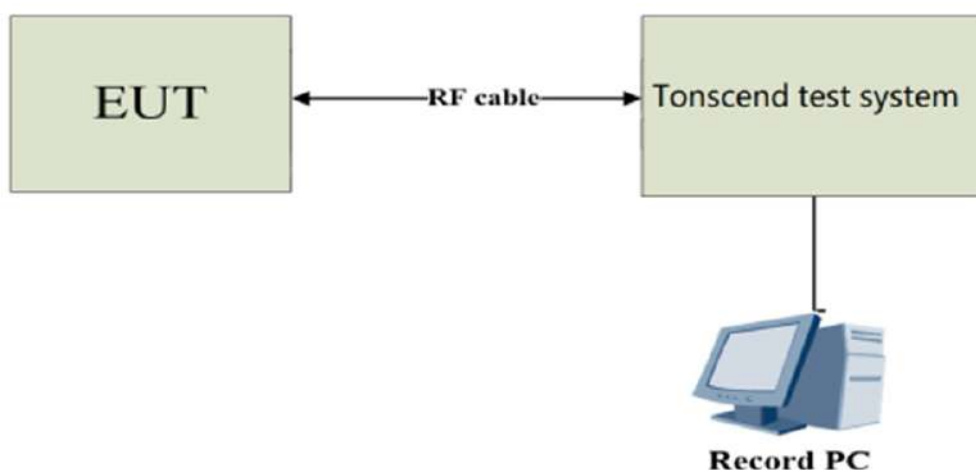
Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ● : Test ○ : No Test	

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

b) Spectrum analyser settings as following:

Spectrum Parameters	Setting
Span Frequency	> 1.5 times the OBW bandwidth
RBW	3 kHz
VBW	10 kHz
Detector	RMS
Trace	RMS
Sweep Time	Auto

3.6.3 Test Setup

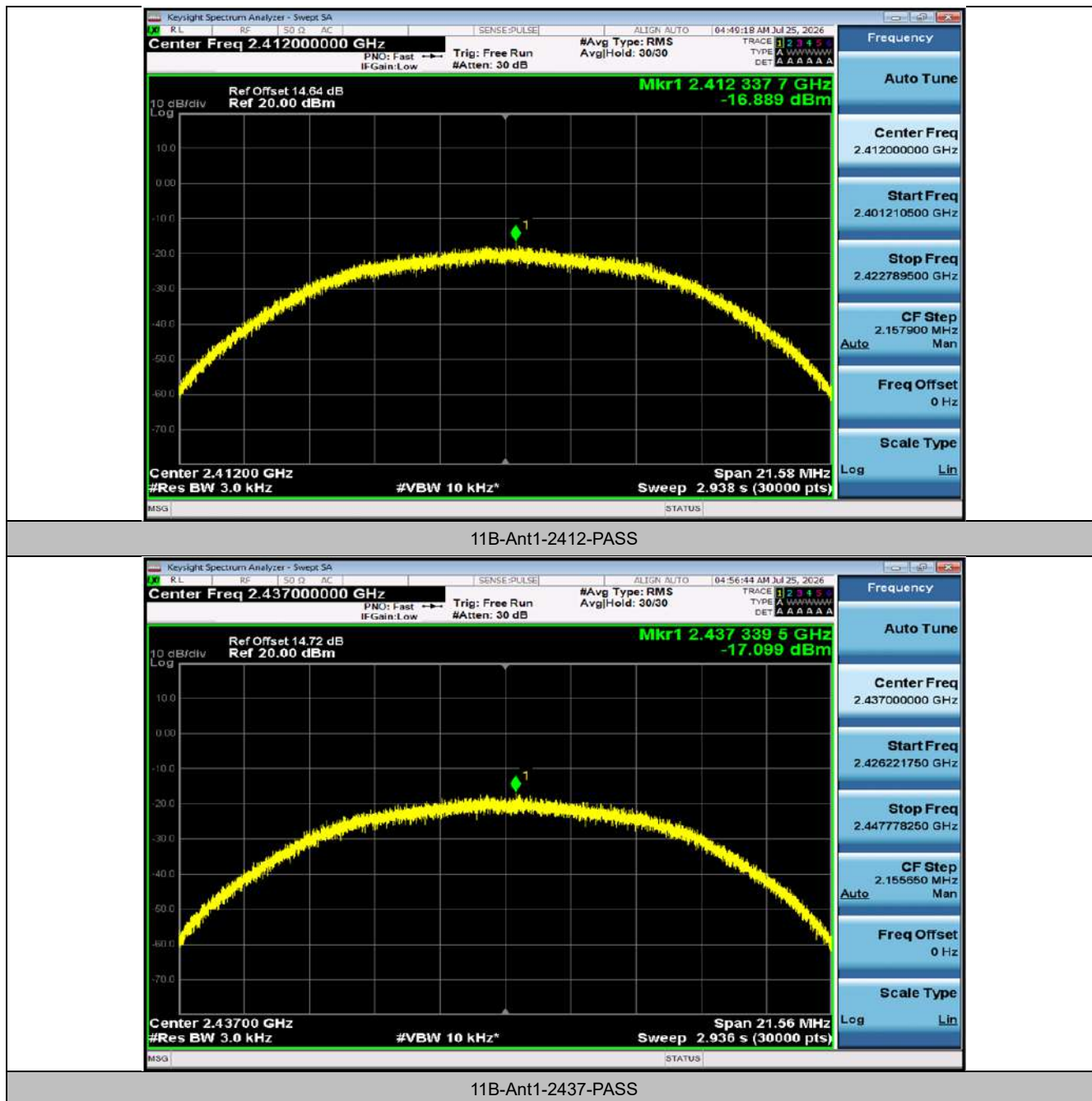


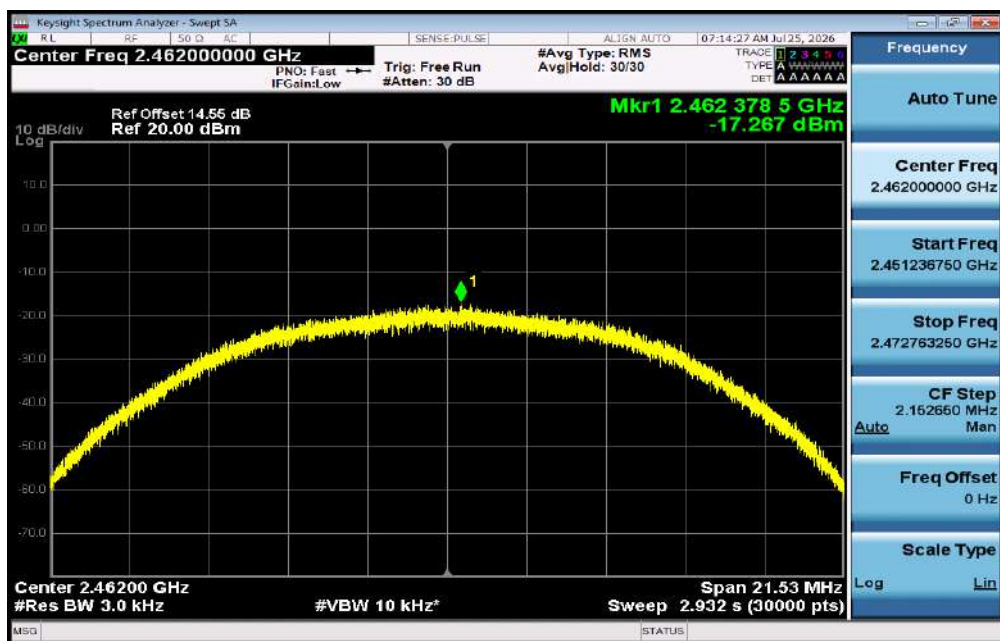
3.6.4 The Result

Test Mode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-16.89	≤8.00	PASS
11B	Ant1	2437	-17.10	≤8.00	PASS
11B	Ant1	2462	-12.68	≤8.00	PASS
11G	Ant1	2412	-18.90	≤8.00	PASS
11G	Ant1	2437	-19.00	≤8.00	PASS
11G	Ant1	2462	-20.13	≤8.00	PASS
11N20SISO	Ant1	2412	-18.22	≤8.00	PASS
11N20SISO	Ant1	2437	-18.45	≤8.00	PASS
11N20SISO	Ant1	2462	-18.78	≤8.00	PASS
11N40SISO	Ant1	2422	-21.49	≤8.00	PASS
11N40SISO	Ant1	2437	-21.10	≤8.00	PASS
11N40SISO	Ant1	2452	-22.13	≤8.00	PASS
11AX20SISO	Ant1	2412	-20.61	≤8.00	PASS
11AX20SISO	Ant1	2437	-21.52	≤8.00	PASS
11AX20SISO	Ant1	2462	-21.21	≤8.00	PASS
11AX40SISO	Ant1	2422	-21.58	≤8.00	PASS
11AX40SISO	Ant1	2437	-22.31	≤8.00	PASS
11AX40SISO	Ant1	2452	-22.01	≤8.00	PASS

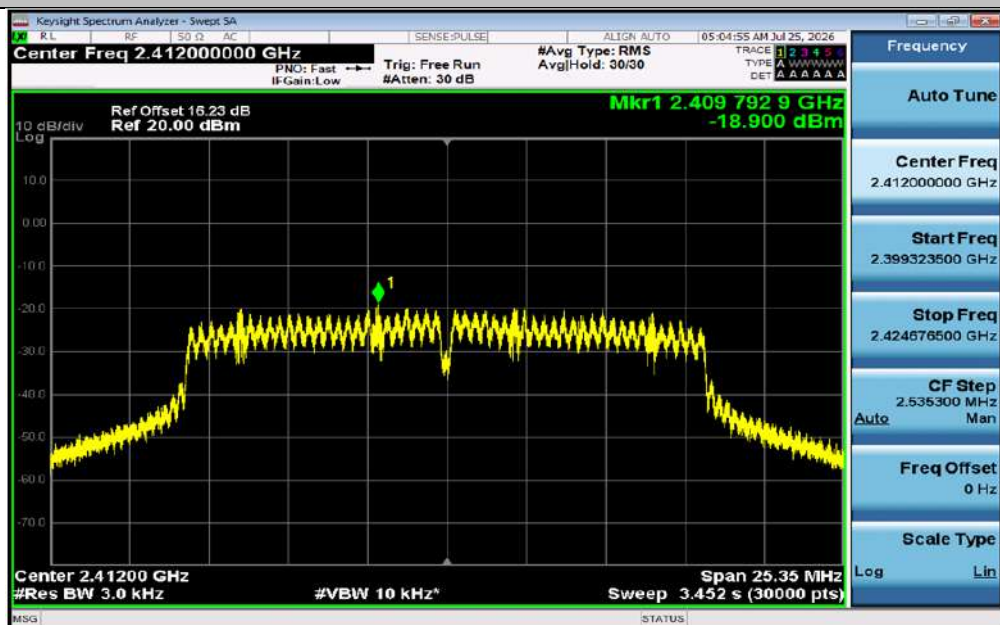
Note: The duty cycle factor has been included in the test diagram.

Test Graphs





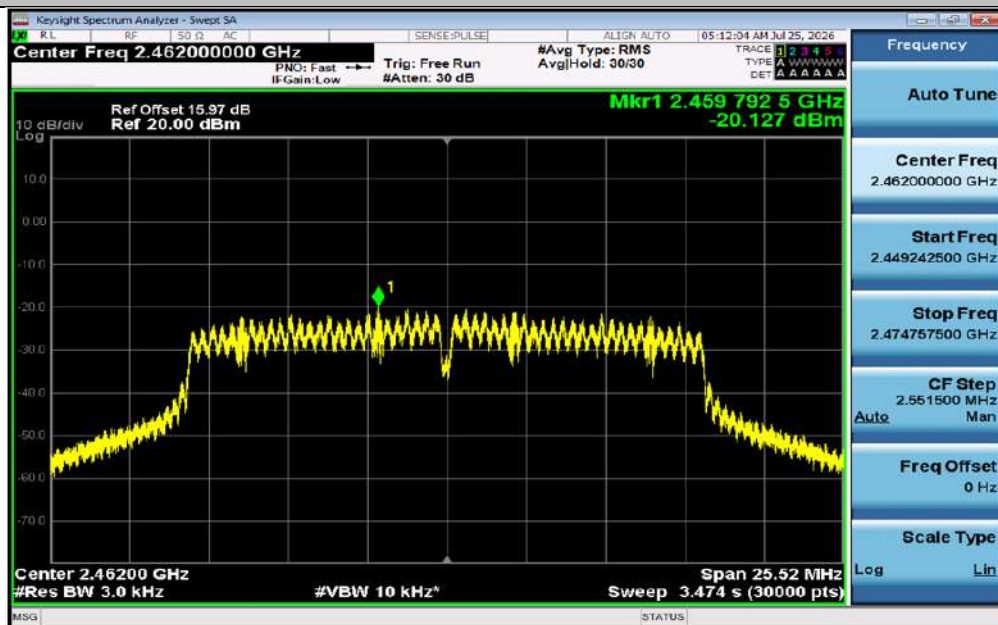
11B-Ant1-2462-PASS



11G-Ant1-2412-PASS



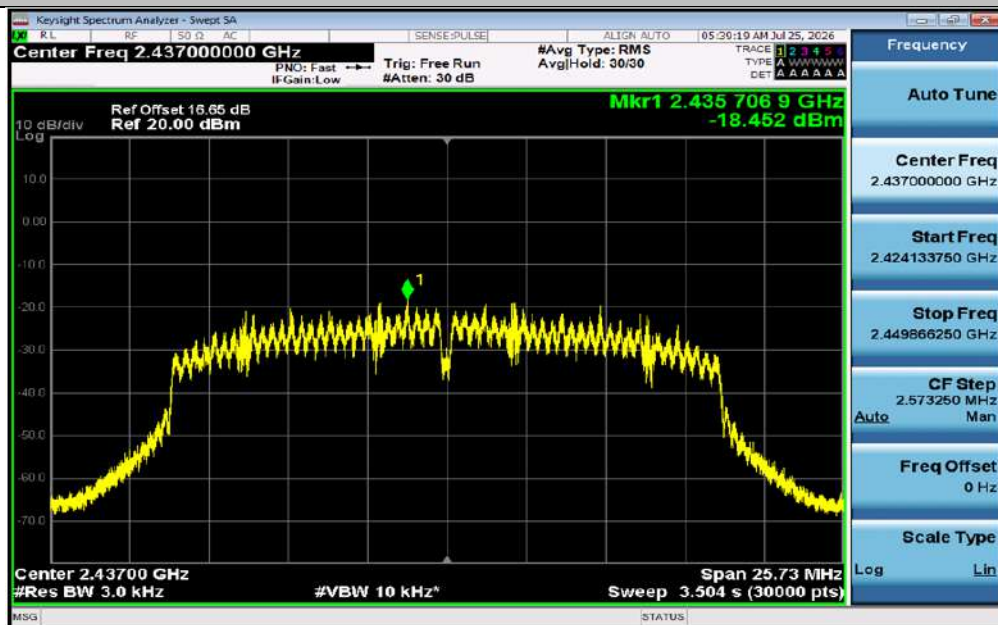
11G-Ant1-2437-PASS



11G-Ant1-2462-PASS



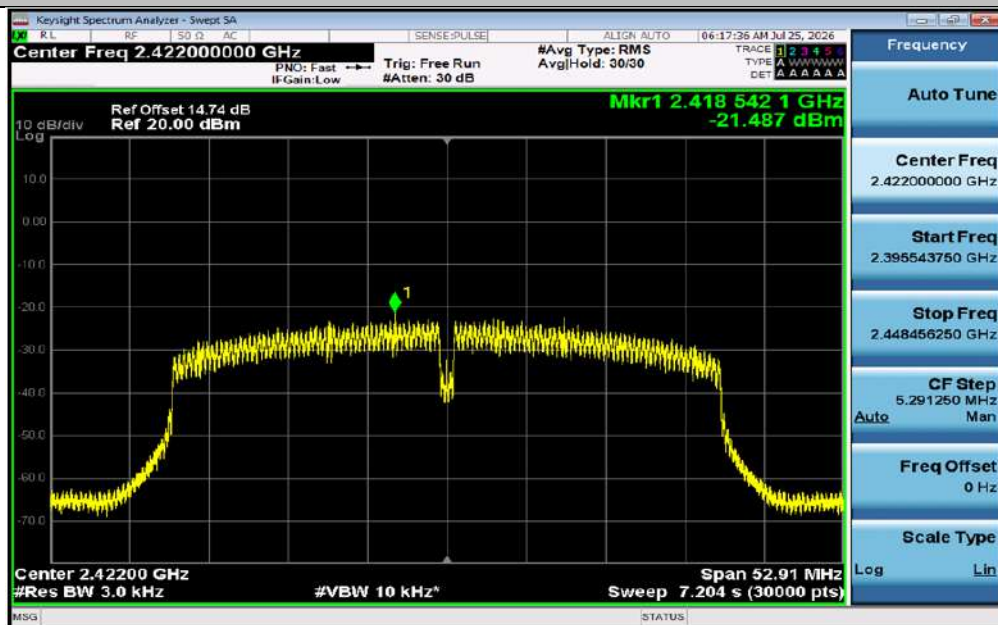
11N20SISO-Ant1-2412-PASS



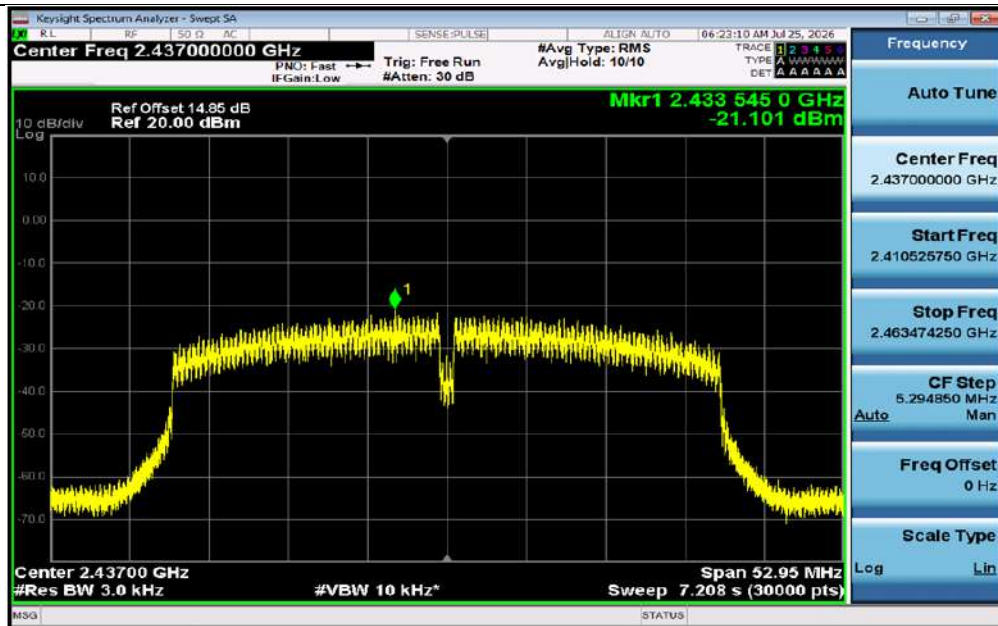
11N20SISO-Ant1-2437-PASS



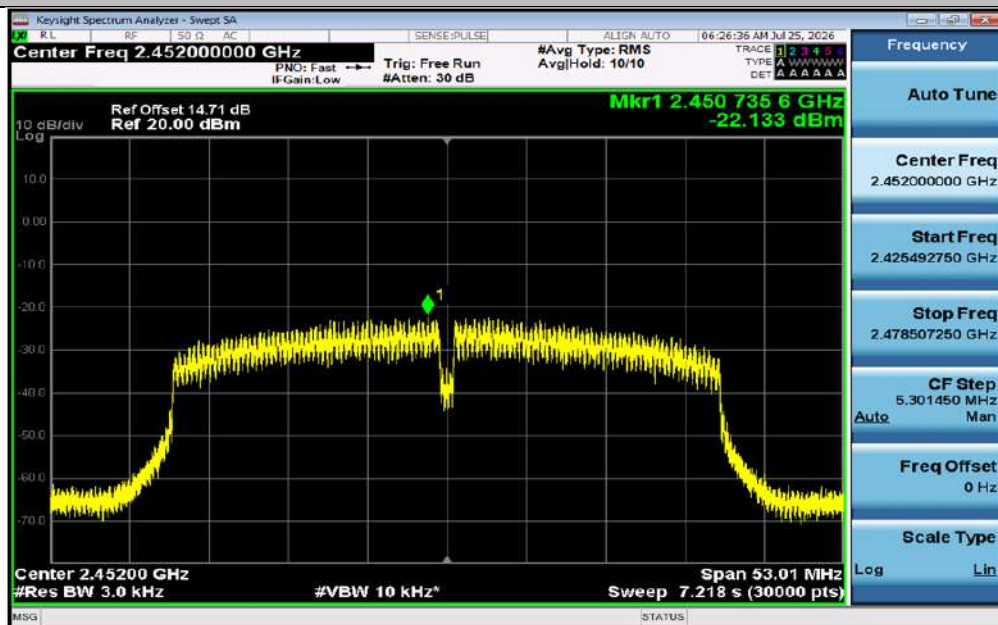
11N20SISO-Ant1-2462-PASS



11N40SISO-Ant1-2422-PASS



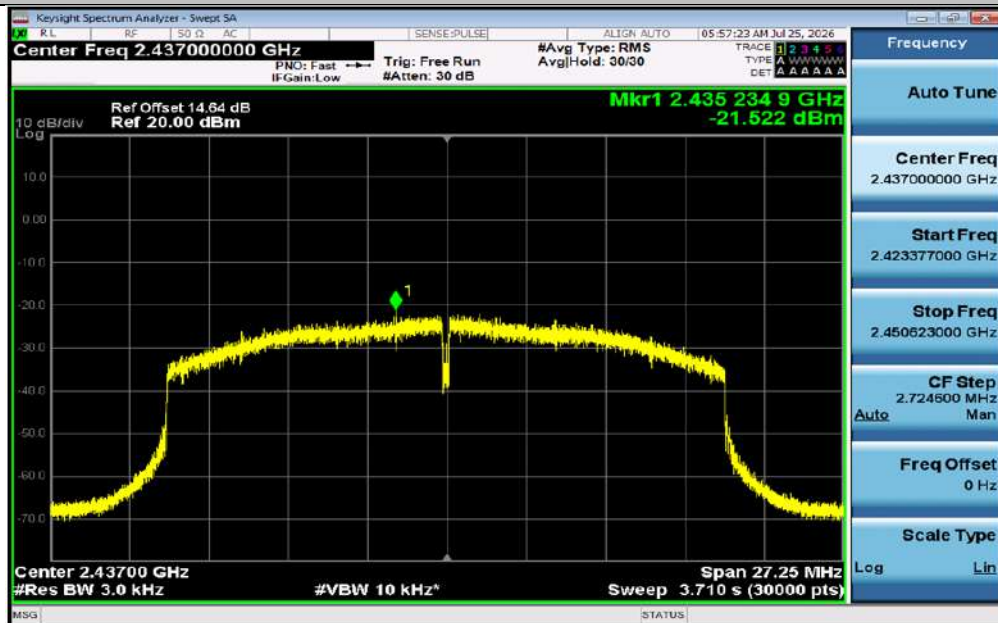
11N40SISO-Ant1-2437-PASS



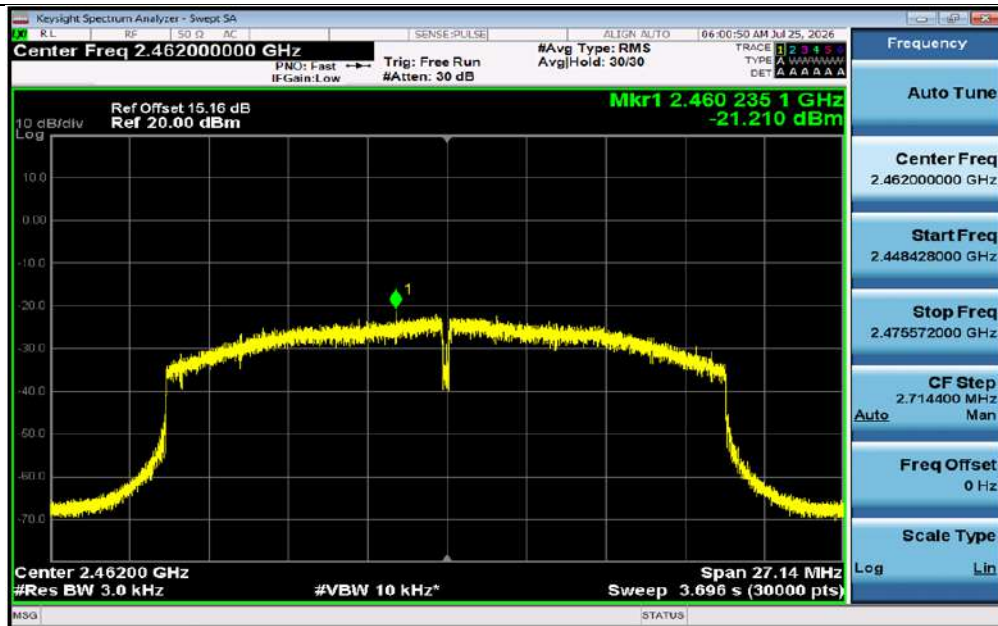
11N40SISO-Ant1-2452-PASS



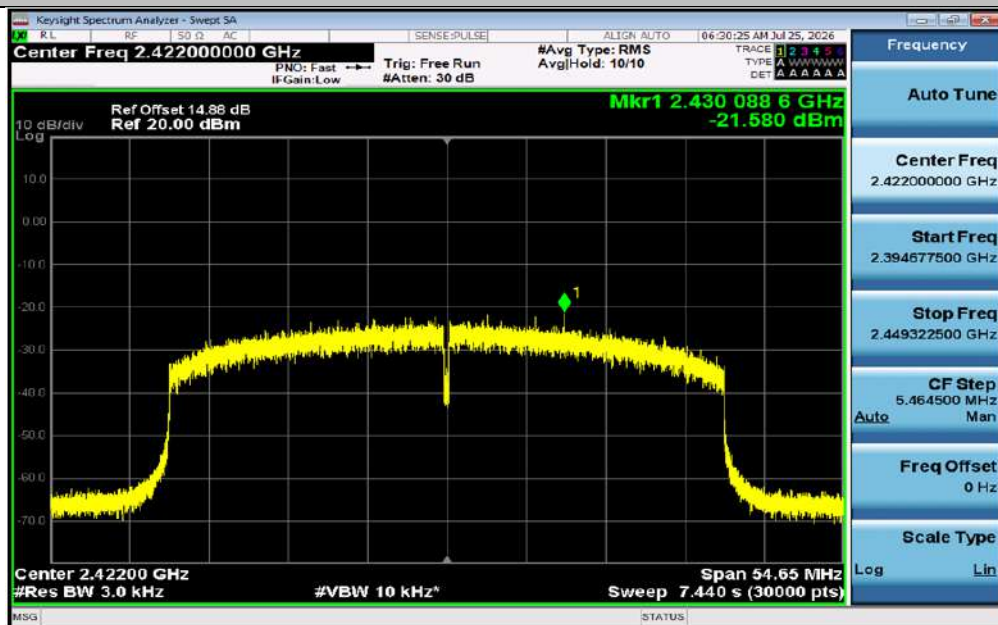
11AX20SISO-Ant1-2412-PASS



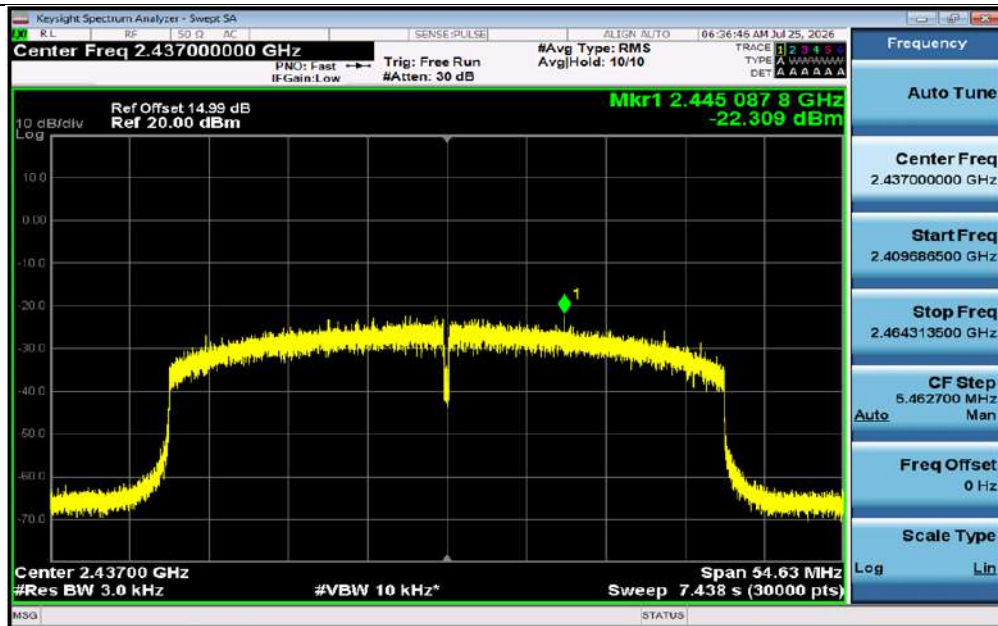
11AX20SISO-Ant1-2437-PASS



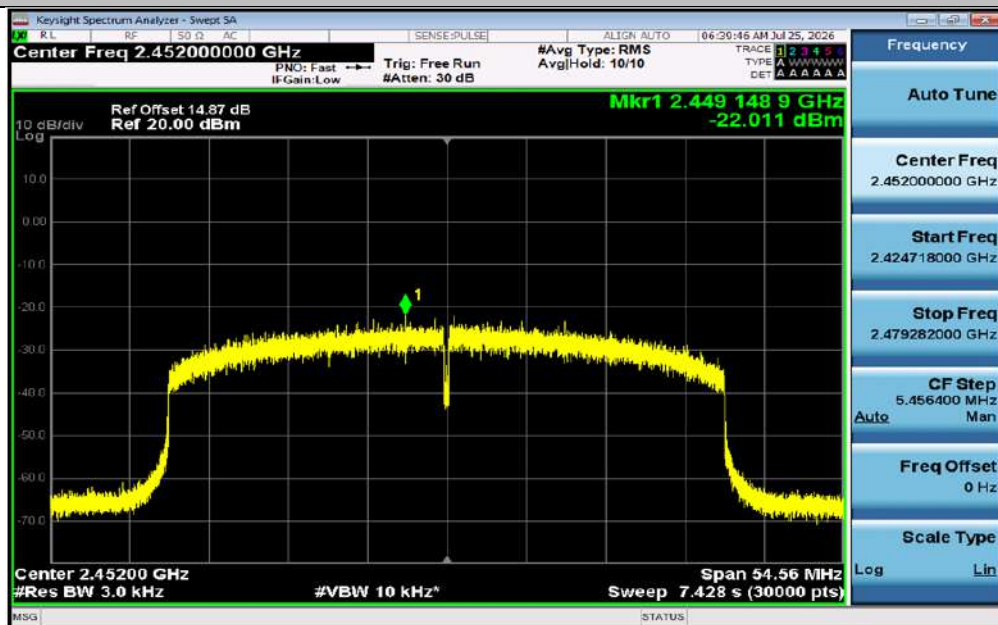
11AX20SISO-Ant1-2462-PASS



11AX40SISO-Ant1-2422-PASS



11AX40SISO-Ant1-2437-PASS



11AX40SISO-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.

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End of Test Report