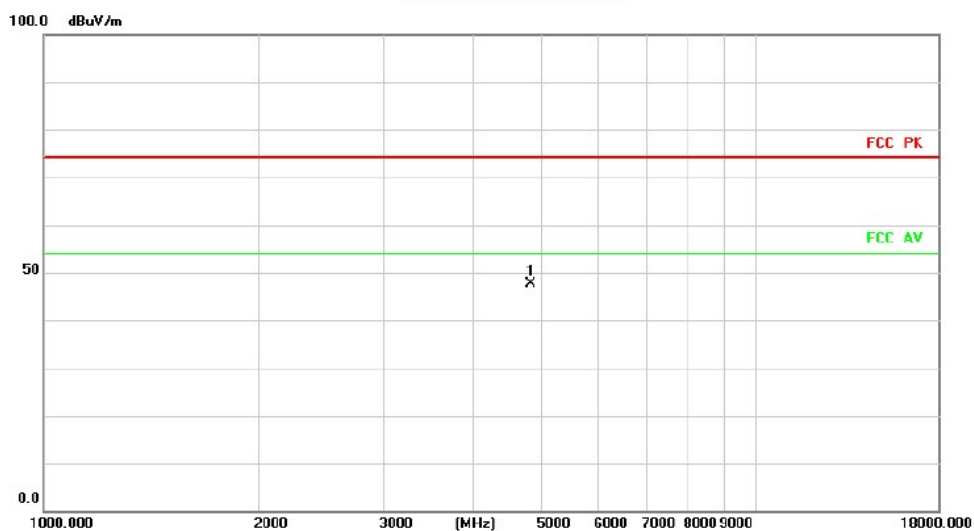


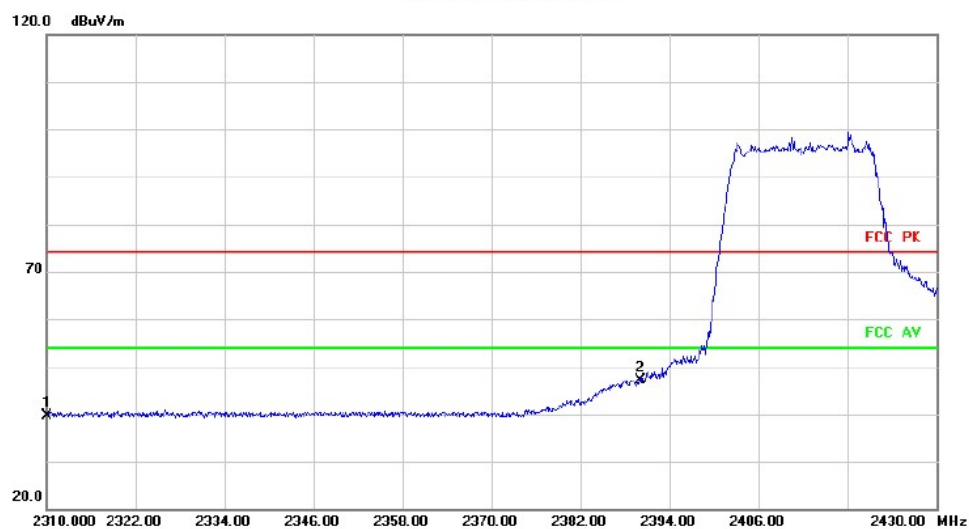
HORIZONTAL

Radiated Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree
1	*	4824.000	51.67	-4.08	47.59	74.00	-26.41	peak	

Radiated Emission



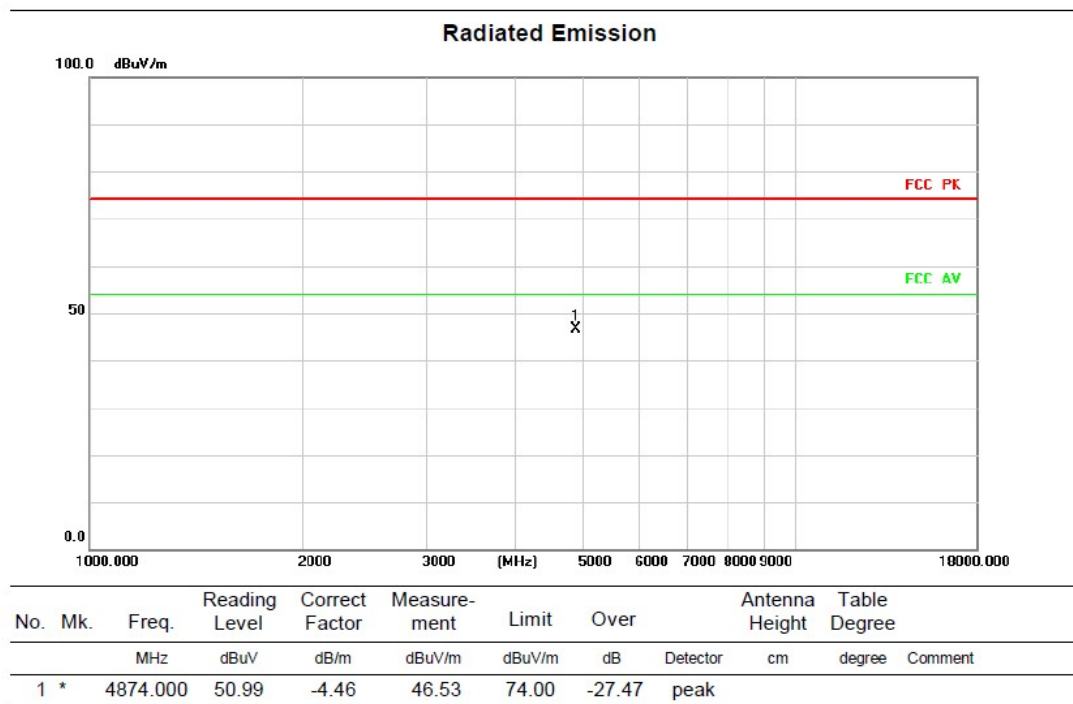
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree
1		2310.000	42.20	-2.53	39.67	74.00	-34.33	peak	
2	*	2390.000	49.49	-2.27	47.22	74.00	-26.78	peak	

Above 1GHz (1GHz~18GHz)

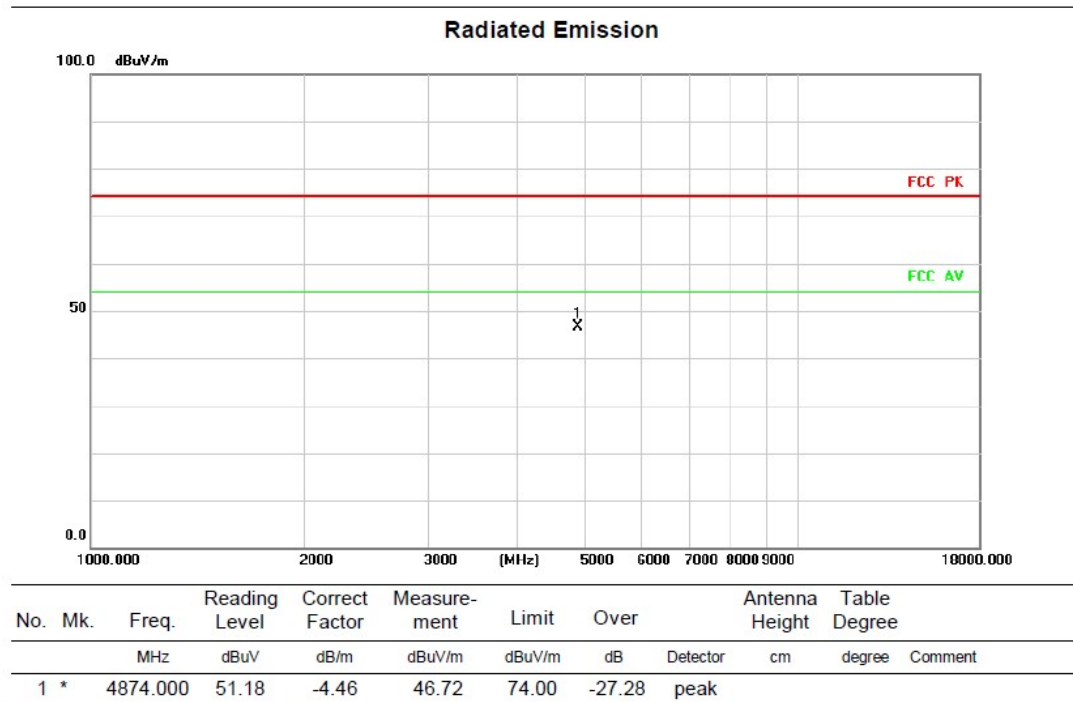
Test mode: 11N20MIMO

Test Channel:6

VERTICAL



HORIZONTAL



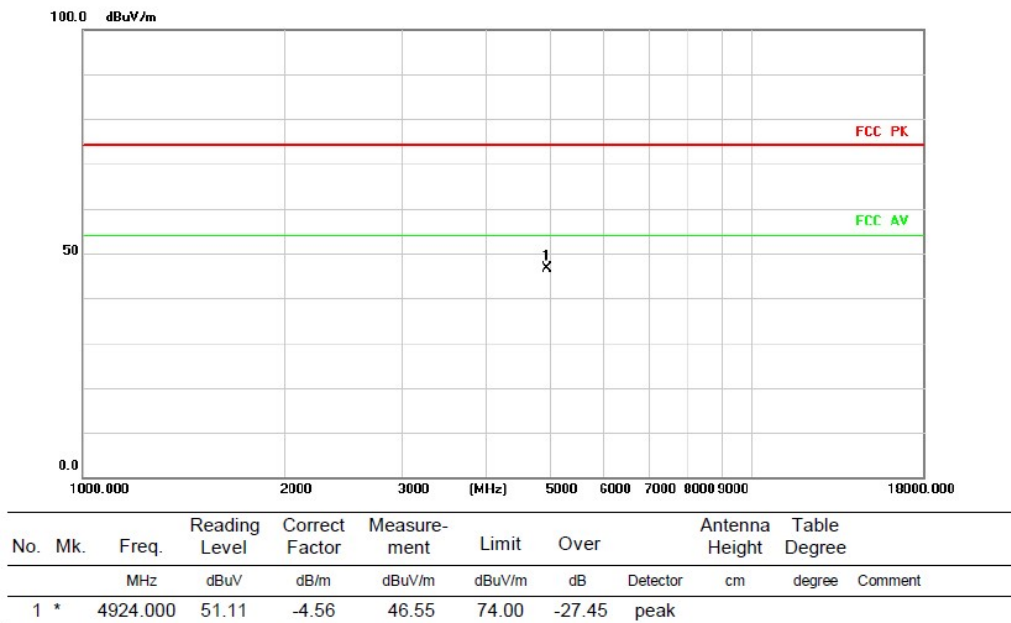
Above 1GHz (1GHz~18GHz)

Test mode: 11N20MIMO

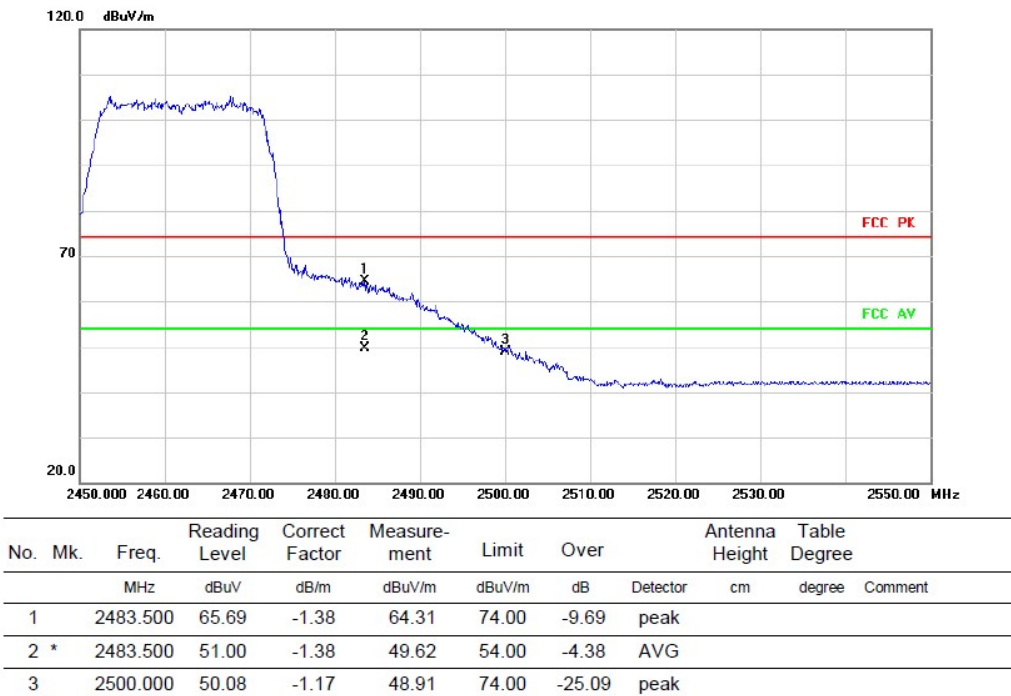
Test Channel:11

VERTICAL

Radiated Emission

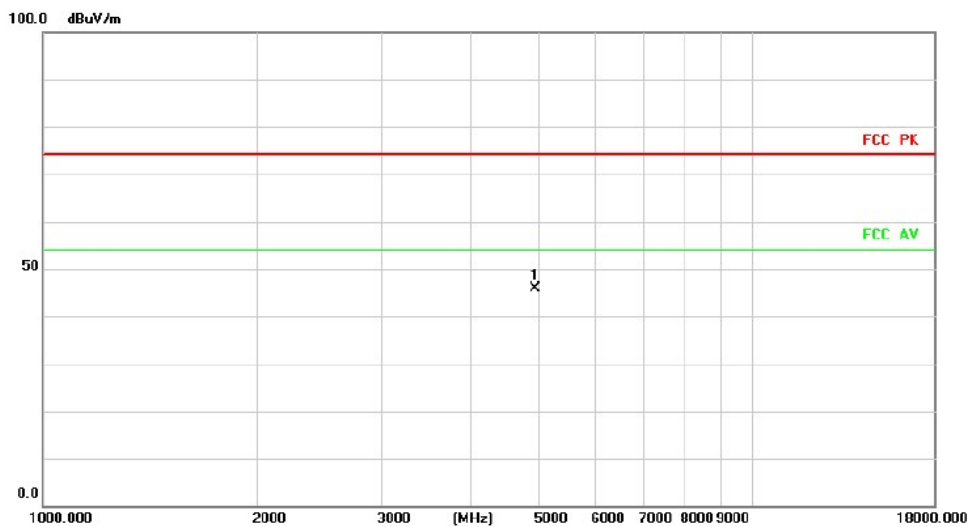


Radiated Emission



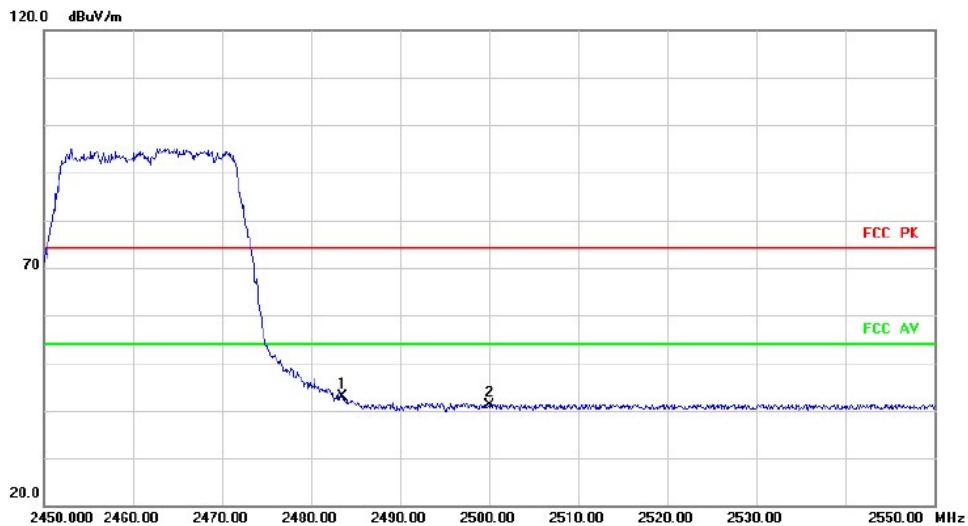
HORIZONTAL

Radiated Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree
1	*	4924.000	50.37	-4.56	45.81	74.00	-28.19	peak		Comment

Radiated Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree
1	*	2483.500	44.27	-1.38	42.89	74.00	-31.11	peak		Comment
2		2500.000	42.40	-1.17	41.23	74.00	-32.77	peak		Comment

Above 1GHz (1GHz~18GHz)

Test mode: 11N40MIMO

Test Channel:3

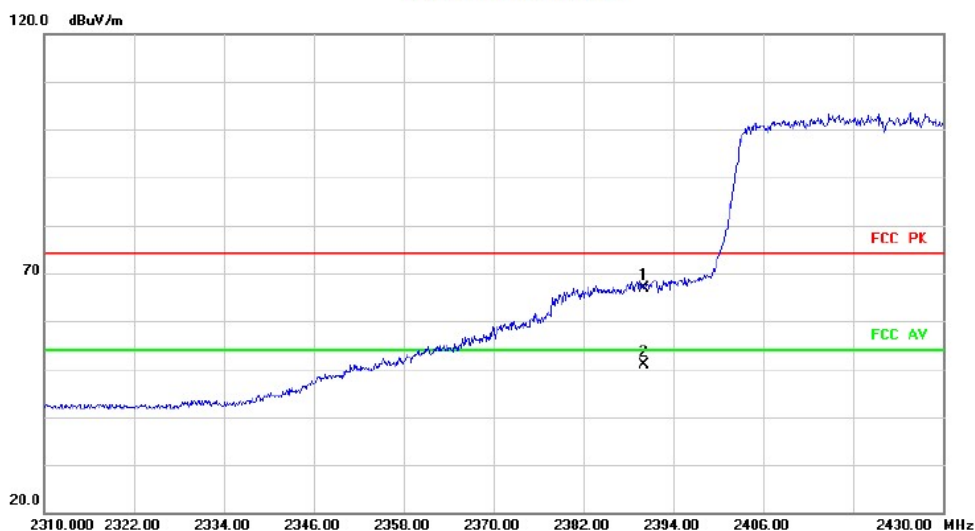
VERTICAL

Radiated Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	4844.000	51.34	-4.28	47.06	74.00	-26.94	peak		

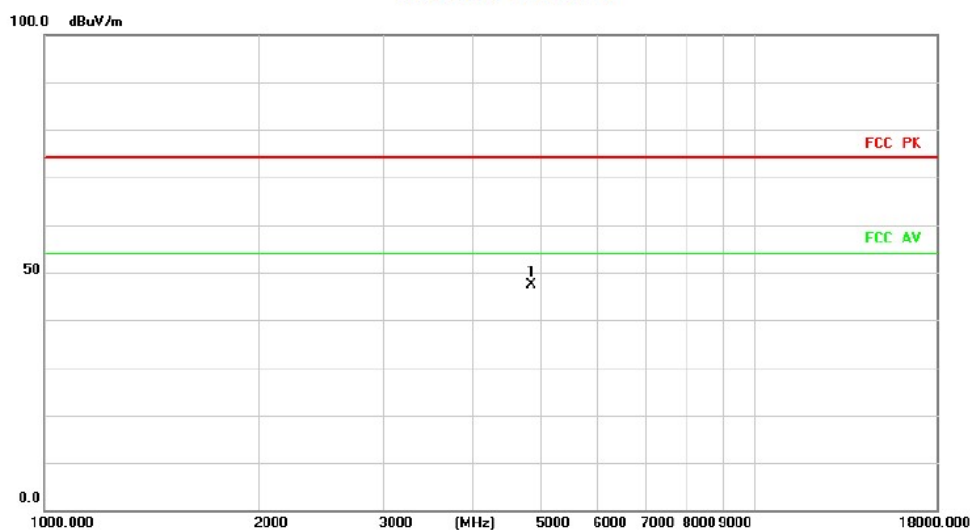
Radiated Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	69.21	-2.27	66.94	74.00	-7.06	peak		
2	*	2390.000	53.10	-2.27	50.83	54.00	-3.17	AVG		

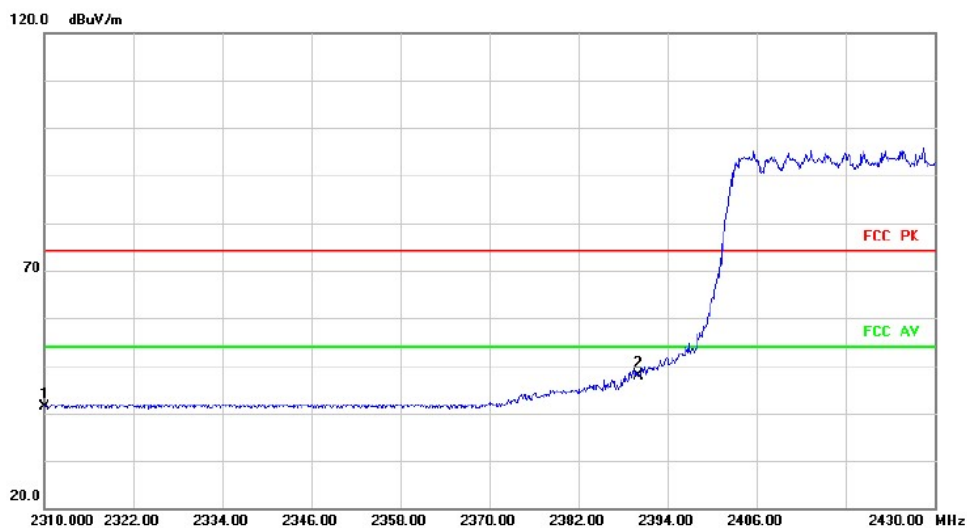
HORIZONTAL

Radiated Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	4844.000	51.67	-4.28	47.39	74.00	-26.61	peak		

Radiated Emission



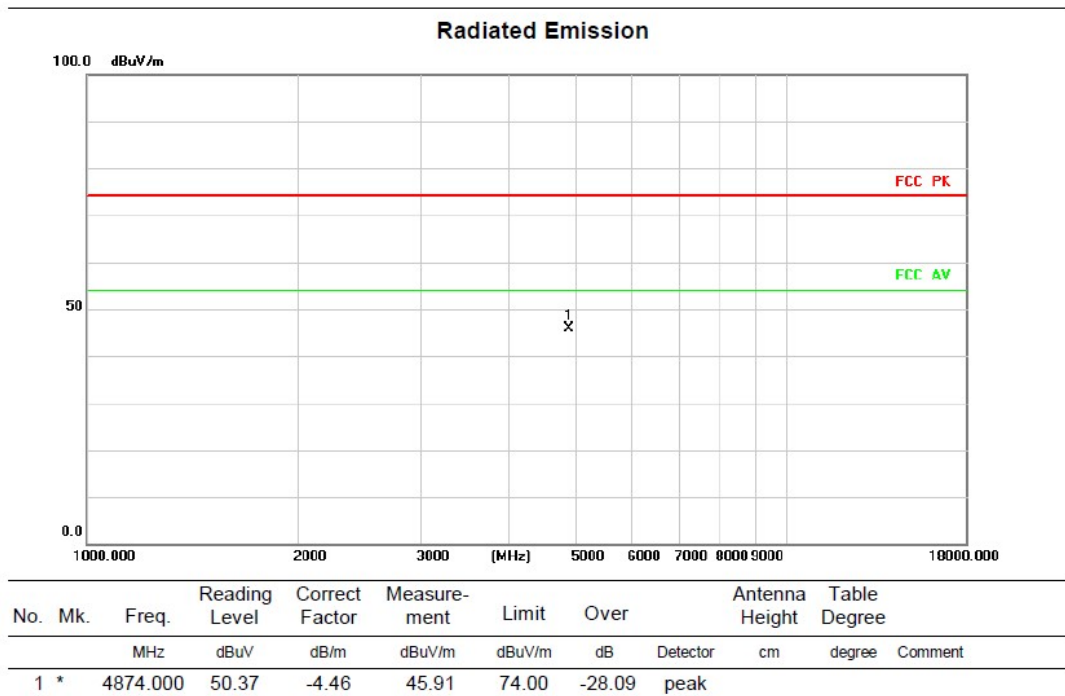
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2310.000	43.84	-2.53	41.31	74.00	-32.69	peak		
2	*	2390.000	50.23	-2.27	47.96	74.00	-26.04	peak		

Above 1GHz (1GHz~18GHz)

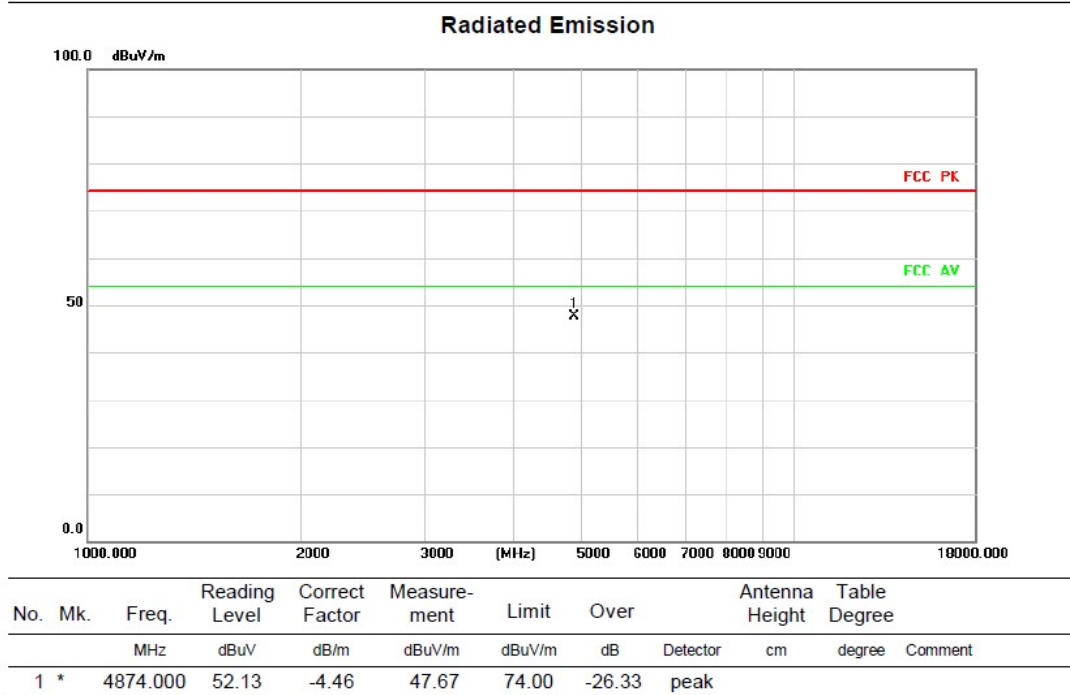
Test mode: 11N40MIMO

Test Channel:6

VERTICAL



HORIZONTAL

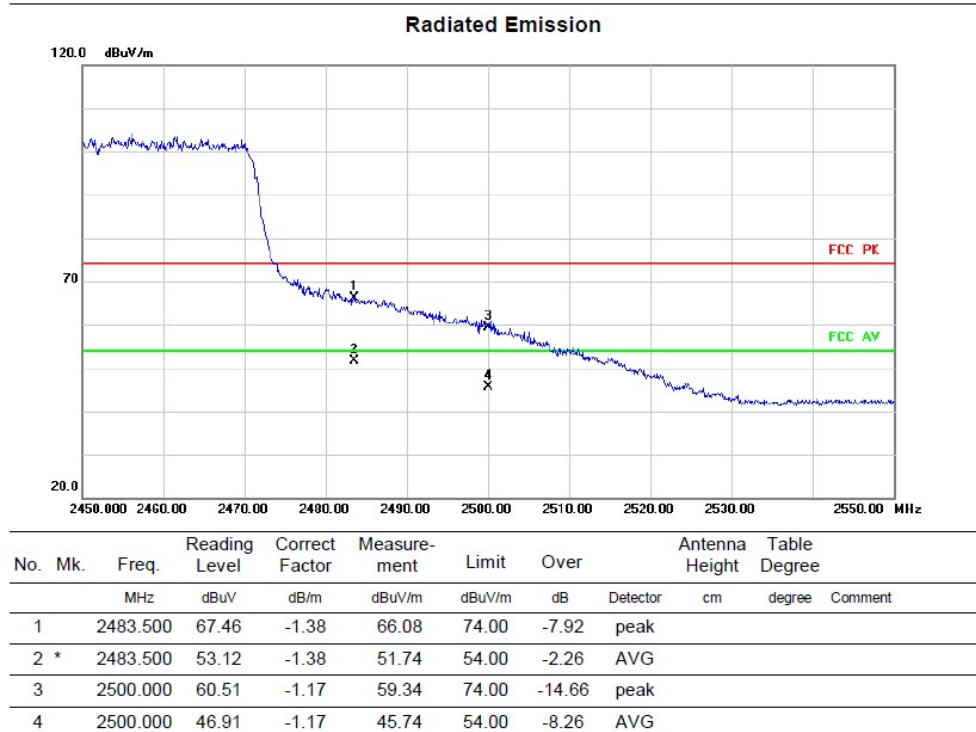
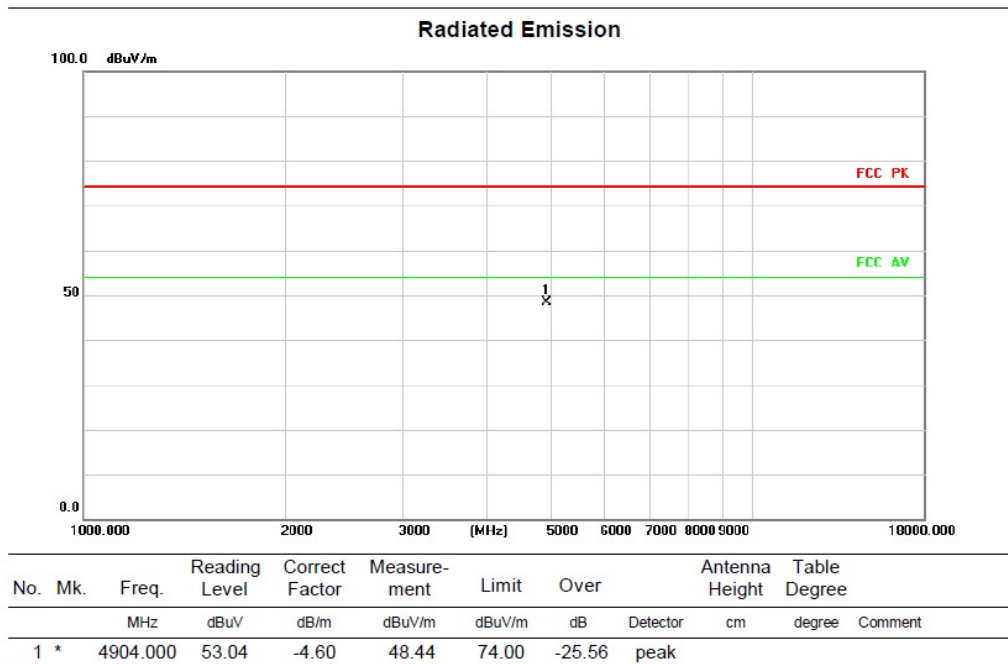


Above 1GHz (1GHz~18GHz)

Test mode: 11N40MIMO

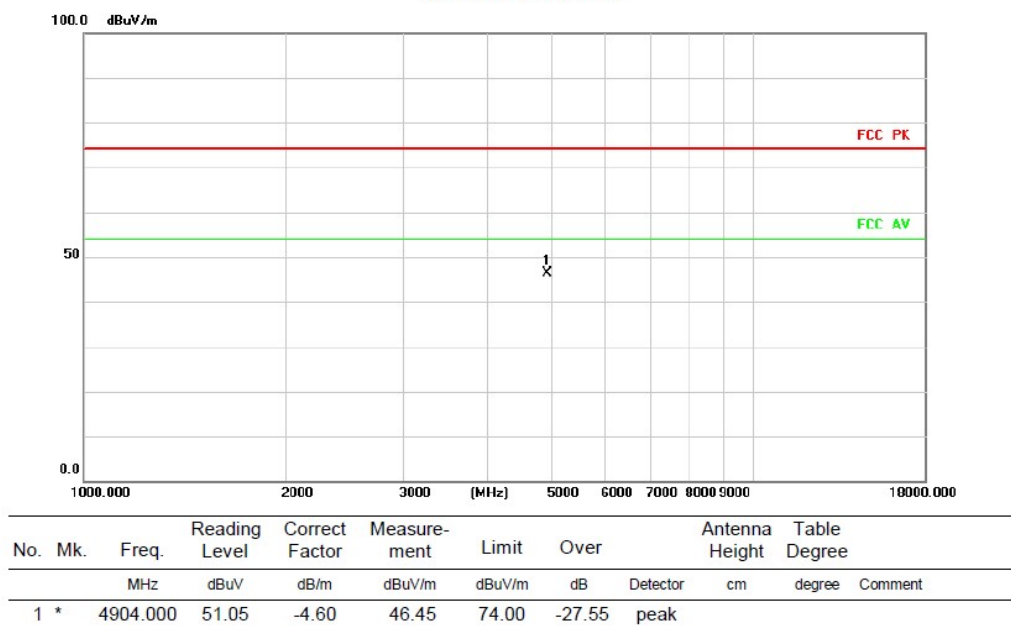
Test Channel:9

VERTICAL

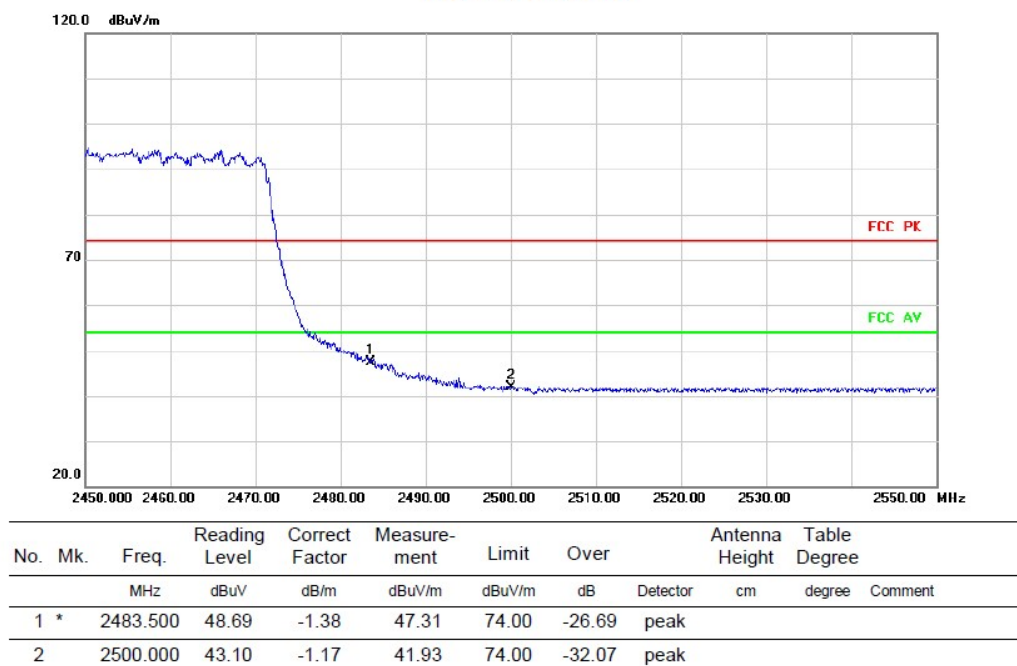


HORIZONTAL

Radiated Emission



Radiated Emission



The high frequency, which started from 18GHz to 25GHz, was pre-scanned and the result which was 20dB lower than the limit line was not recorded in this report.

3.3 Spurious Emission at Antenna Port

3.3.1 Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak Output Power limits. If the transmitter complies with the Output Power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

3.3.2 Test Procedure

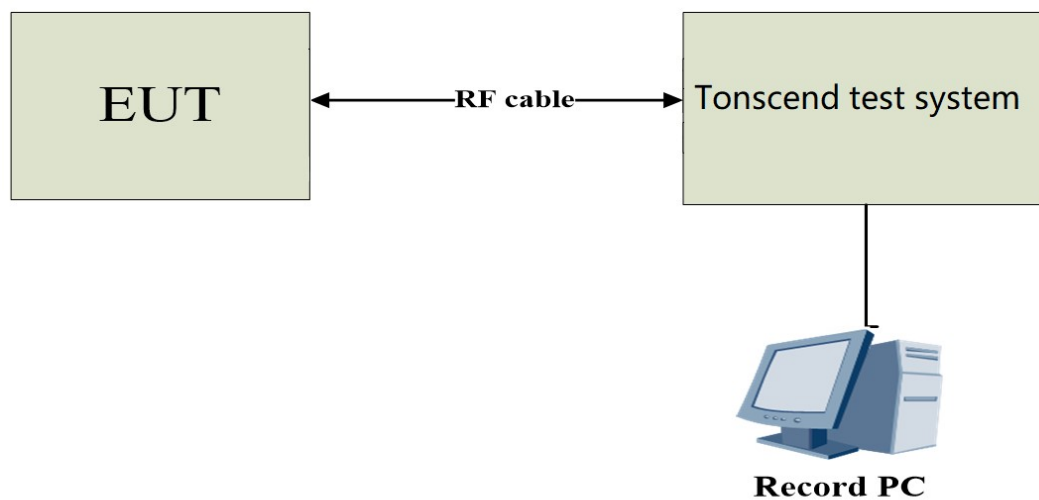
Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ : Test ☐ : No Test	

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

b) Spectrum Setting as below:

Centre Frequency	The centre frequency of the channel under test
Spectrum Parameters	Setting
Start Frequency	30 MHz
Stop Frequency	26.5 GHz
RBW	100 kHz
VBW	300 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

3.3.3 Test Setup



3.3.4 The Result

3.3.4.1 Conducted Spurious Emission

Test result: PASS

Note: For test data, please refer to the report 4790010773.1-3.

3.3.4.2 Band edge

Test result: PASS

Note: For test data, please refer to the report 4790010773.1-3.

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 tonscond test system, and the spectrum analyser is set as follow:

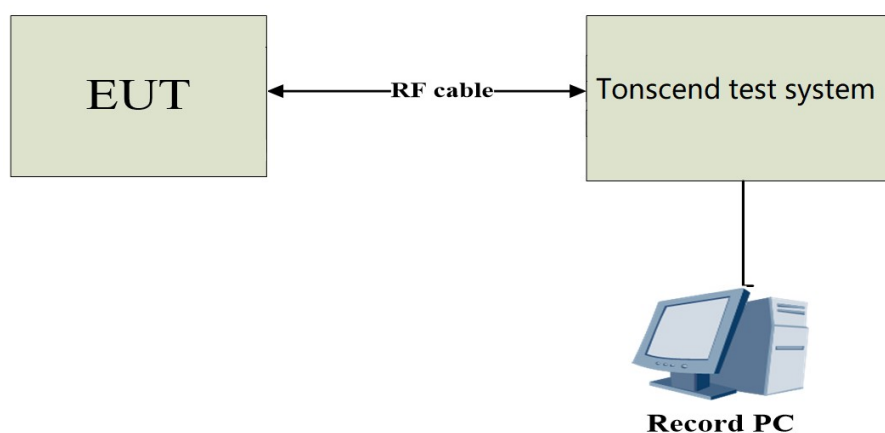
Centre Frequency	The centre frequency of the channel under test
RBW	1%~5% OBW but not less than 100 kHz.
VBW	≥ 3 RBW
Frequency span	2x Nominal Channel Bandwidth
Detector Mode	Peak
Trace Mode	Max Hold
Sweep Time	Auto Couple

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.

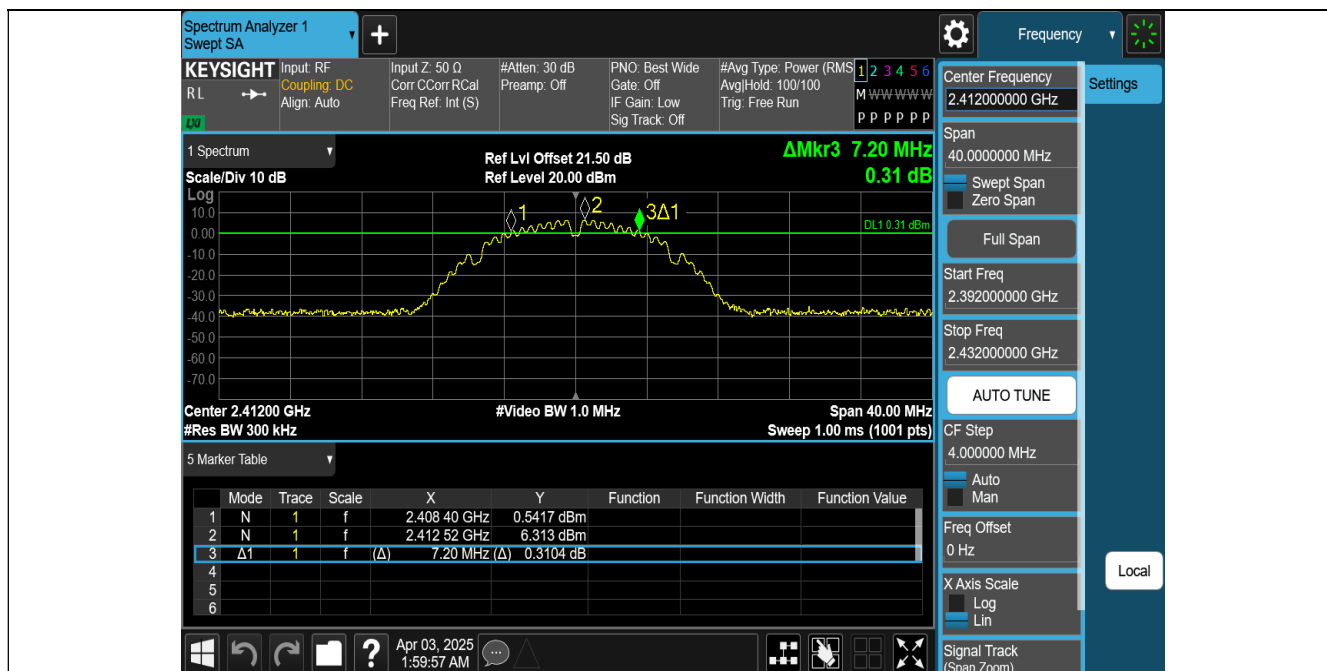
d) Make sure that the power envelope is sufficiently above the noise floor of the analyser to avoid the noise signals left and right from the power envelope being taken into account by this measurement.

3.4.3 Test Setup

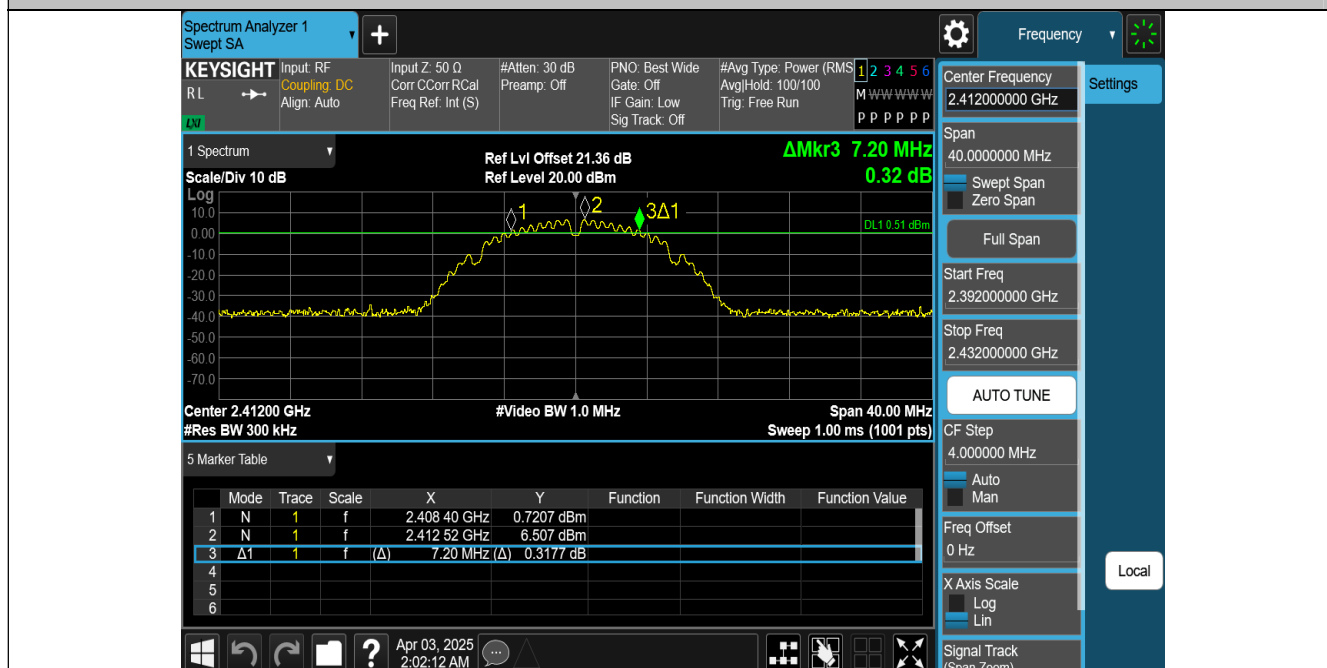


3.4.4 Test Result

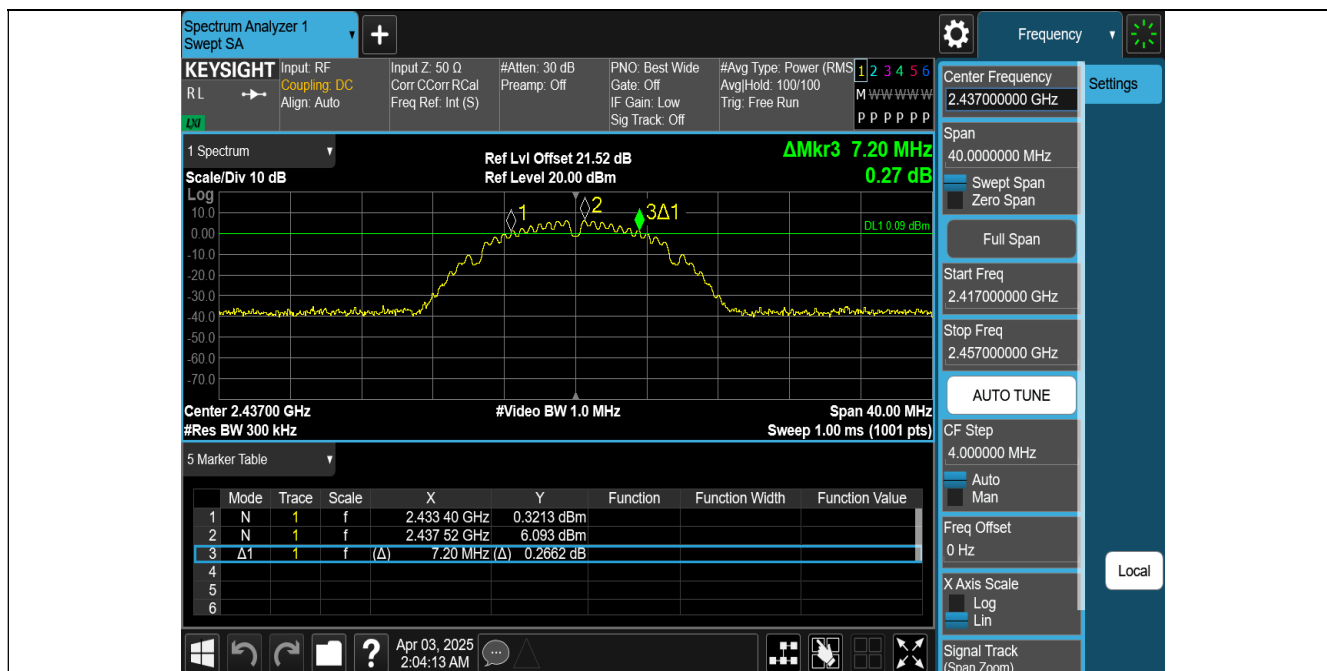
Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	7.200	2408.400	2415.600	0.5	PASS
11B	Ant2	2412	7.200	2408.400	2415.600	0.5	PASS
11B	Ant1	2437	7.200	2433.400	2440.600	0.5	PASS
11B	Ant2	2437	7.200	2433.400	2440.600	0.5	PASS
11B	Ant1	2462	7.200	2458.400	2465.600	0.5	PASS
11B	Ant2	2462	7.200	2458.400	2465.600	0.5	PASS
11G	Ant1	2412	16.520	2403.760	2420.280	0.5	PASS
11G	Ant2	2412	16.520	2403.760	2420.280	0.5	PASS
11G	Ant1	2437	16.520	2428.760	2445.280	0.5	PASS
11G	Ant2	2437	16.480	2428.760	2445.240	0.5	PASS
11G	Ant1	2462	16.440	2453.800	2470.240	0.5	PASS
11G	Ant2	2462	16.480	2453.760	2470.240	0.5	PASS
11N20MIMO	Ant1	2412	17.920	2402.960	2420.880	0.5	PASS
11N20MIMO	Ant2	2412	17.720	2403.160	2420.880	0.5	PASS
11N20MIMO	Ant1	2437	17.800	2428.160	2445.960	0.5	PASS
11N20MIMO	Ant2	2437	17.640	2428.160	2445.800	0.5	PASS
11N20MIMO	Ant1	2462	17.720	2453.160	2470.880	0.5	PASS
11N20MIMO	Ant2	2462	17.600	2453.200	2470.800	0.5	PASS
11N40MIMO	Ant1	2422	36.480	2403.760	2440.240	0.5	PASS
11N40MIMO	Ant2	2422	36.400	2403.840	2440.240	0.5	PASS
11N40MIMO	Ant1	2437	36.480	2418.760	2455.240	0.5	PASS
11N40MIMO	Ant2	2437	36.240	2418.840	2455.080	0.5	PASS
11N40MIMO	Ant1	2452	36.560	2433.760	2470.320	0.5	PASS
11N40MIMO	Ant2	2452	36.480	2433.840	2470.320	0.5	PASS



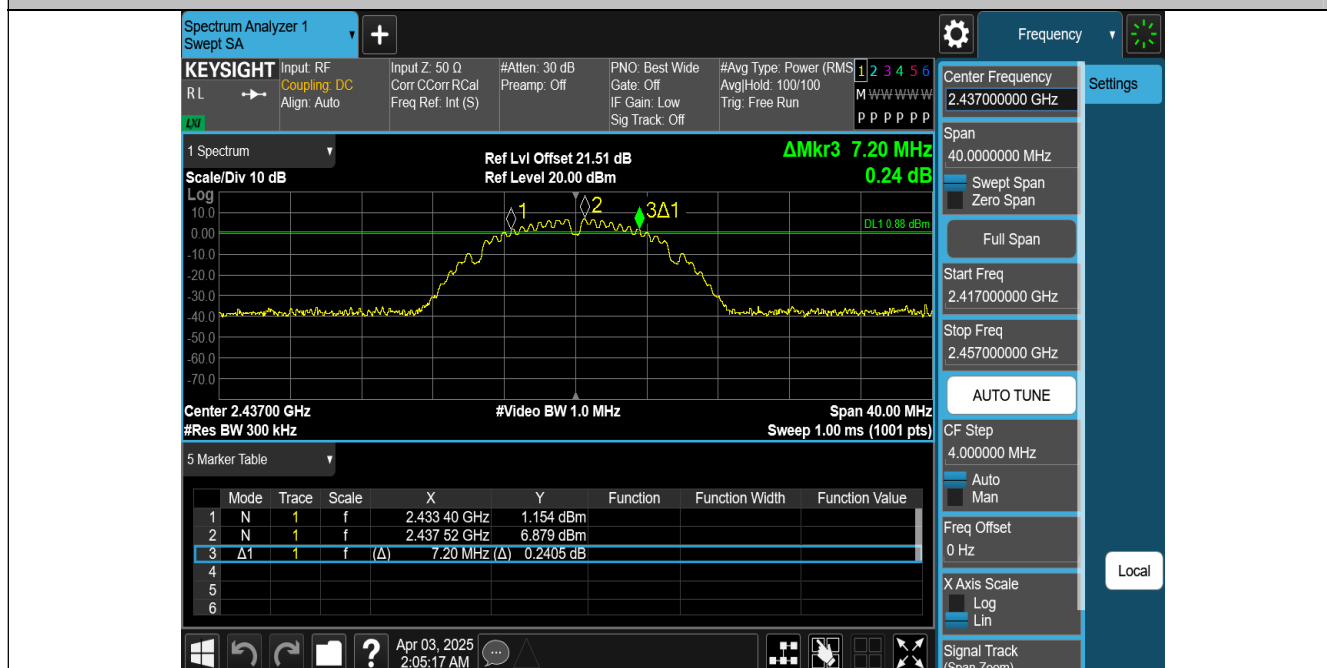
11B-Ant1-2412-PASS



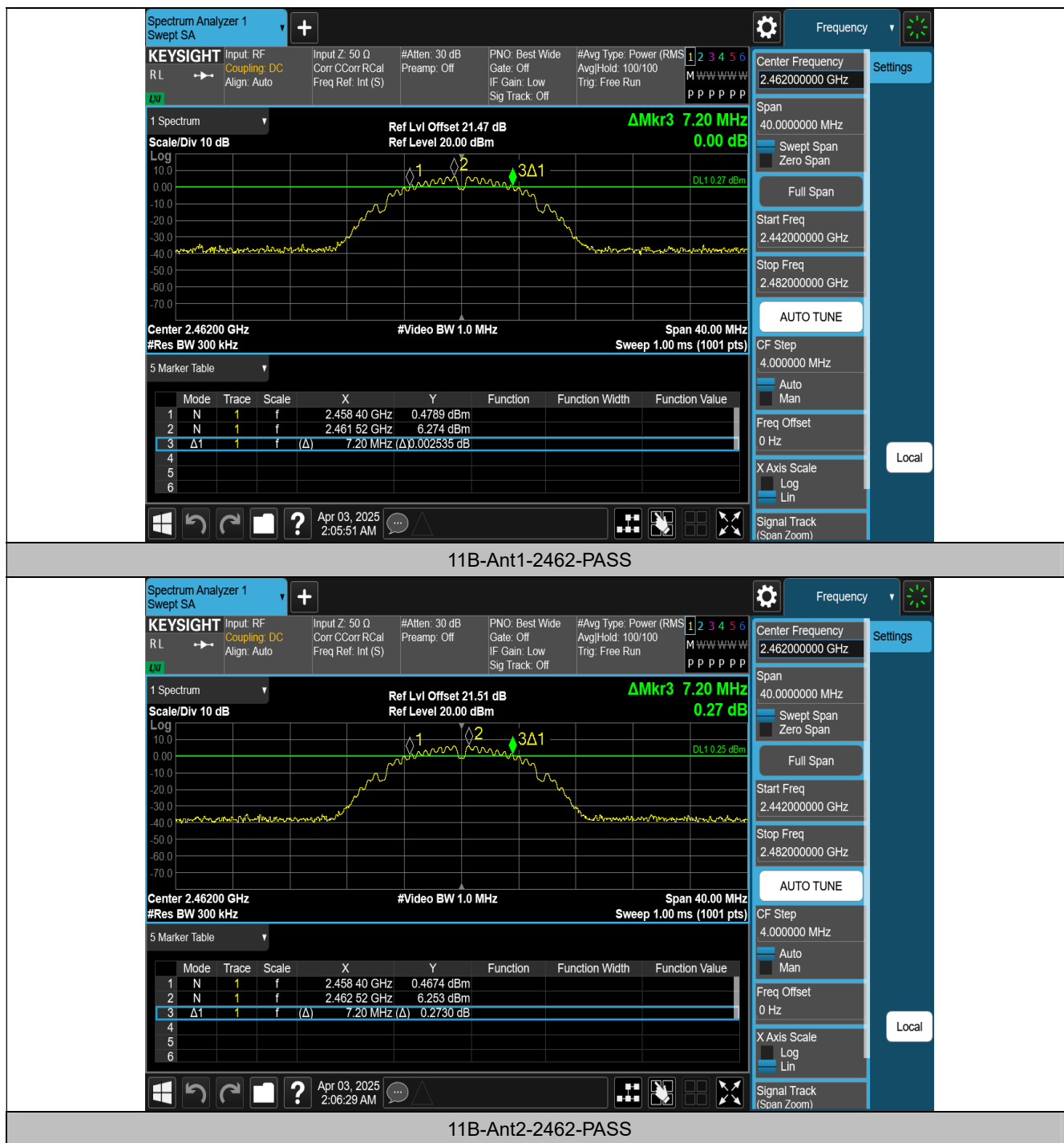
11B-Ant2-2412-PASS

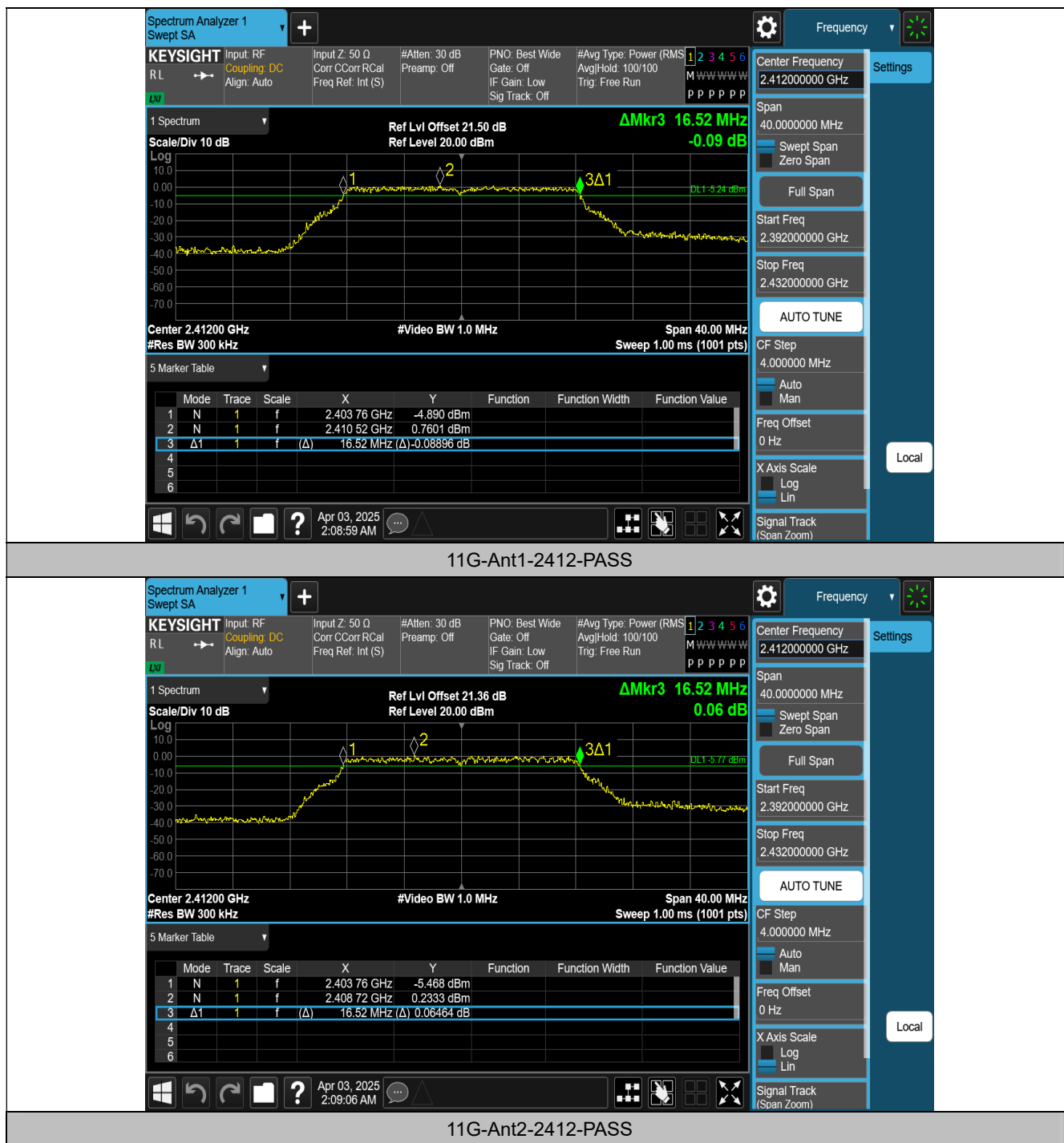


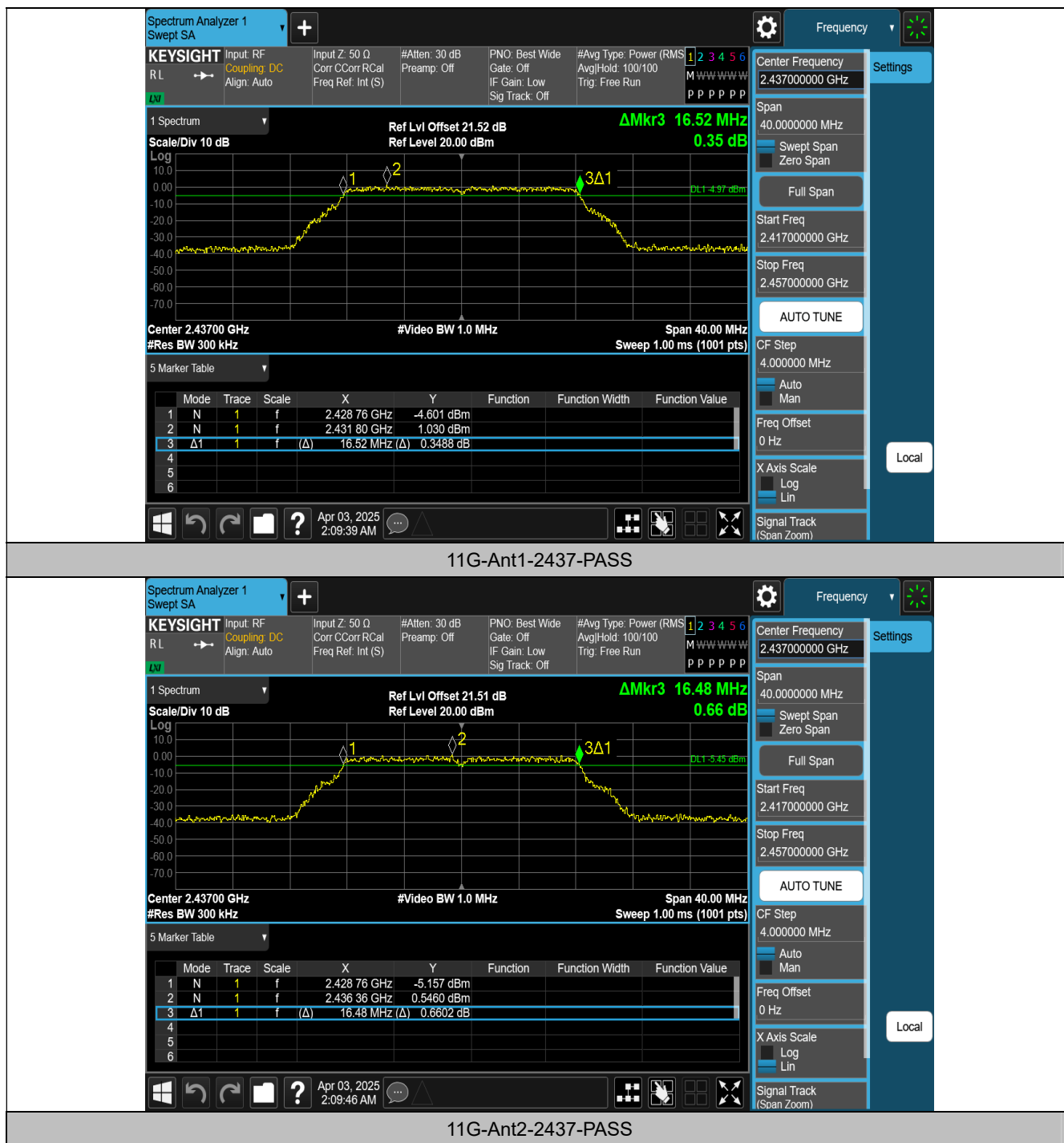
11B-Ant1-2437-PASS

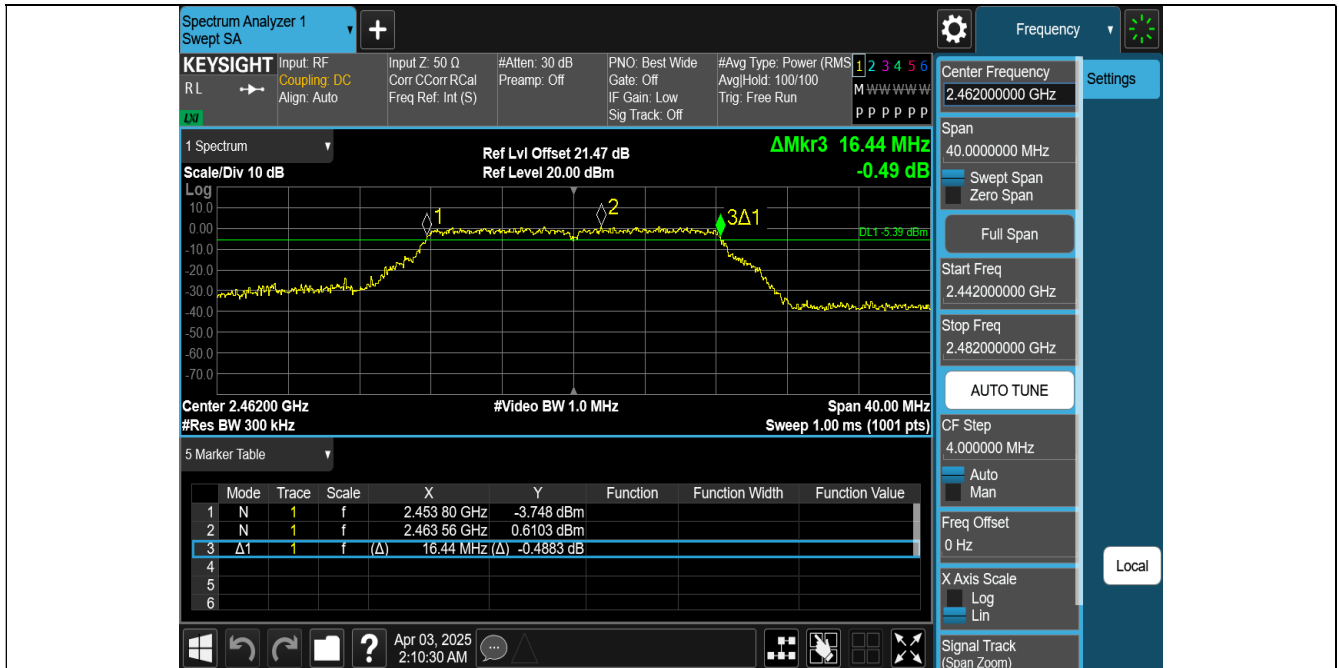


11B-Ant2-2437-PASS

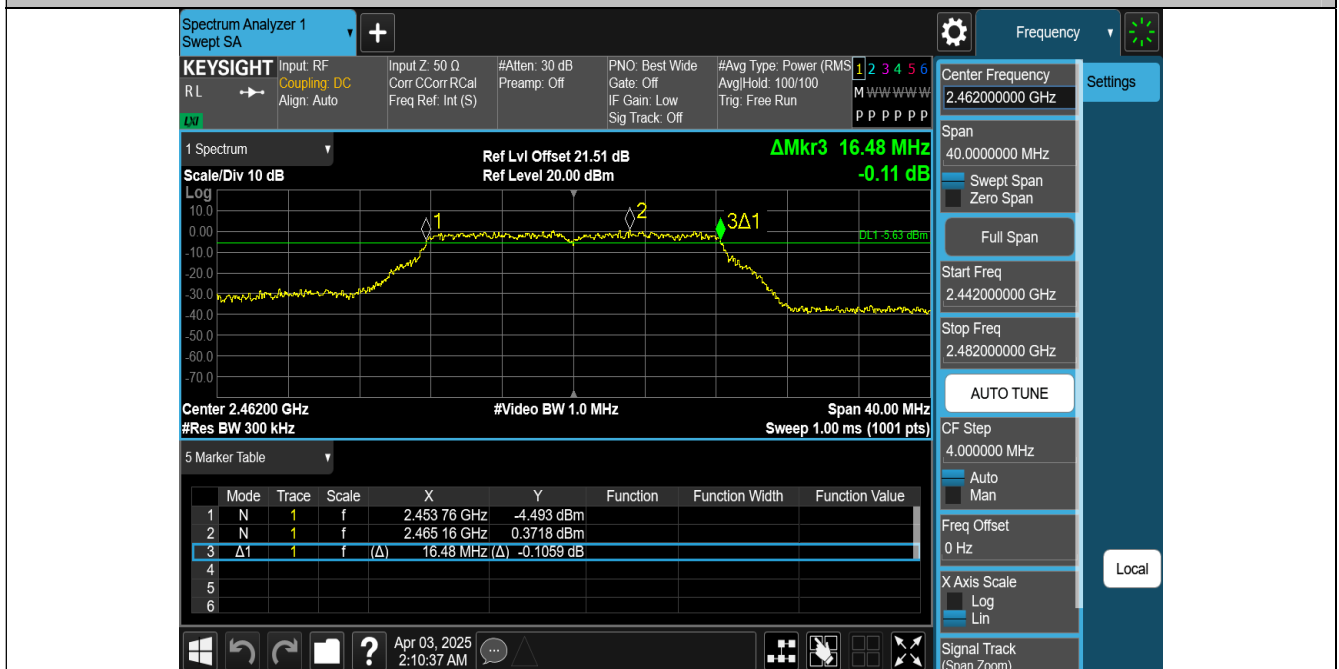




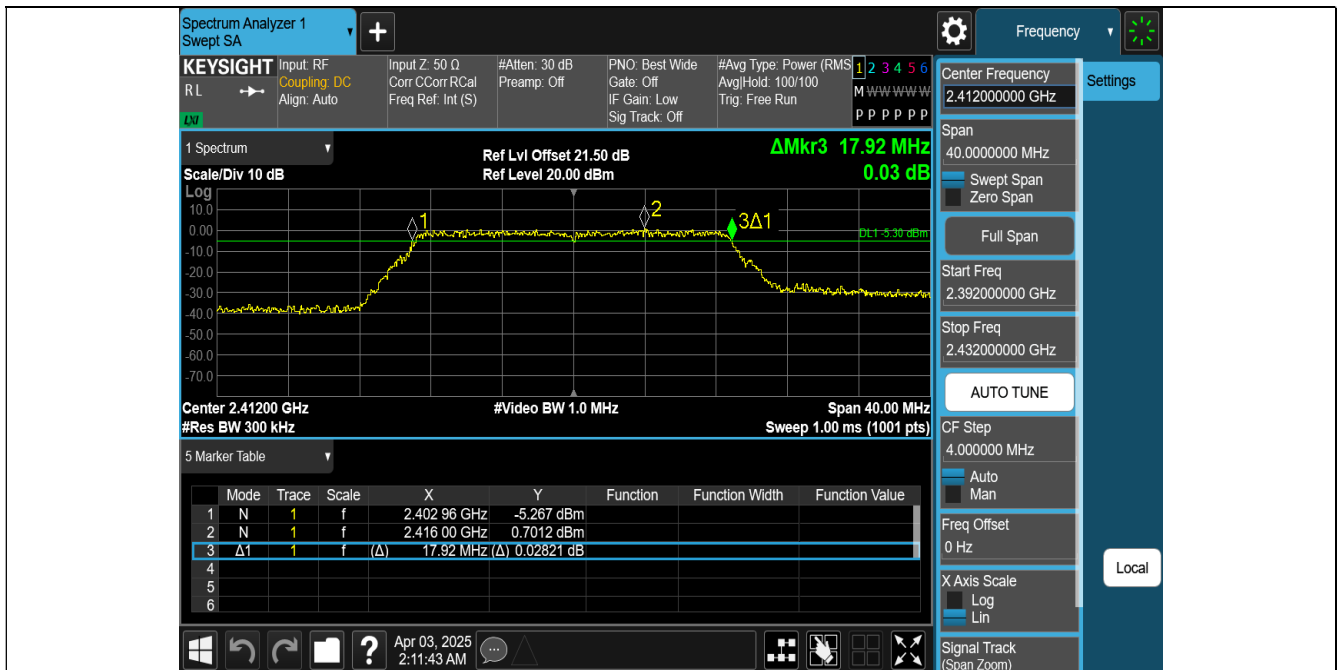




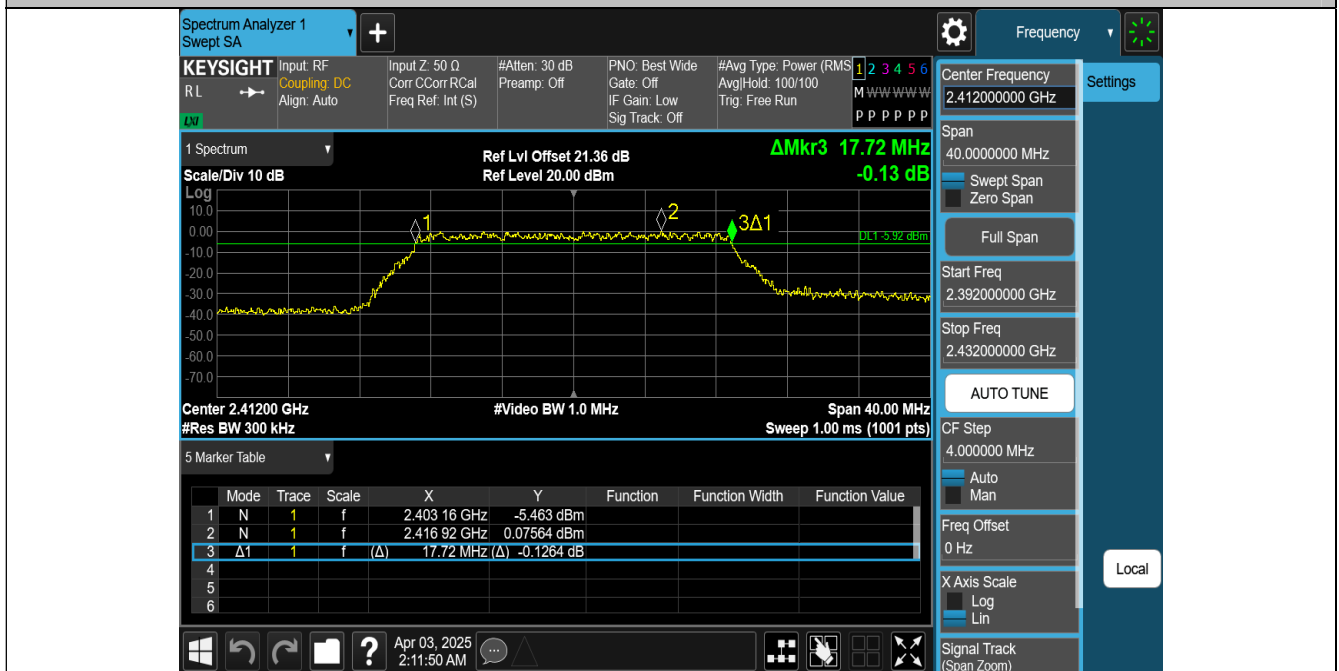
11G-Ant1-2462-PASS



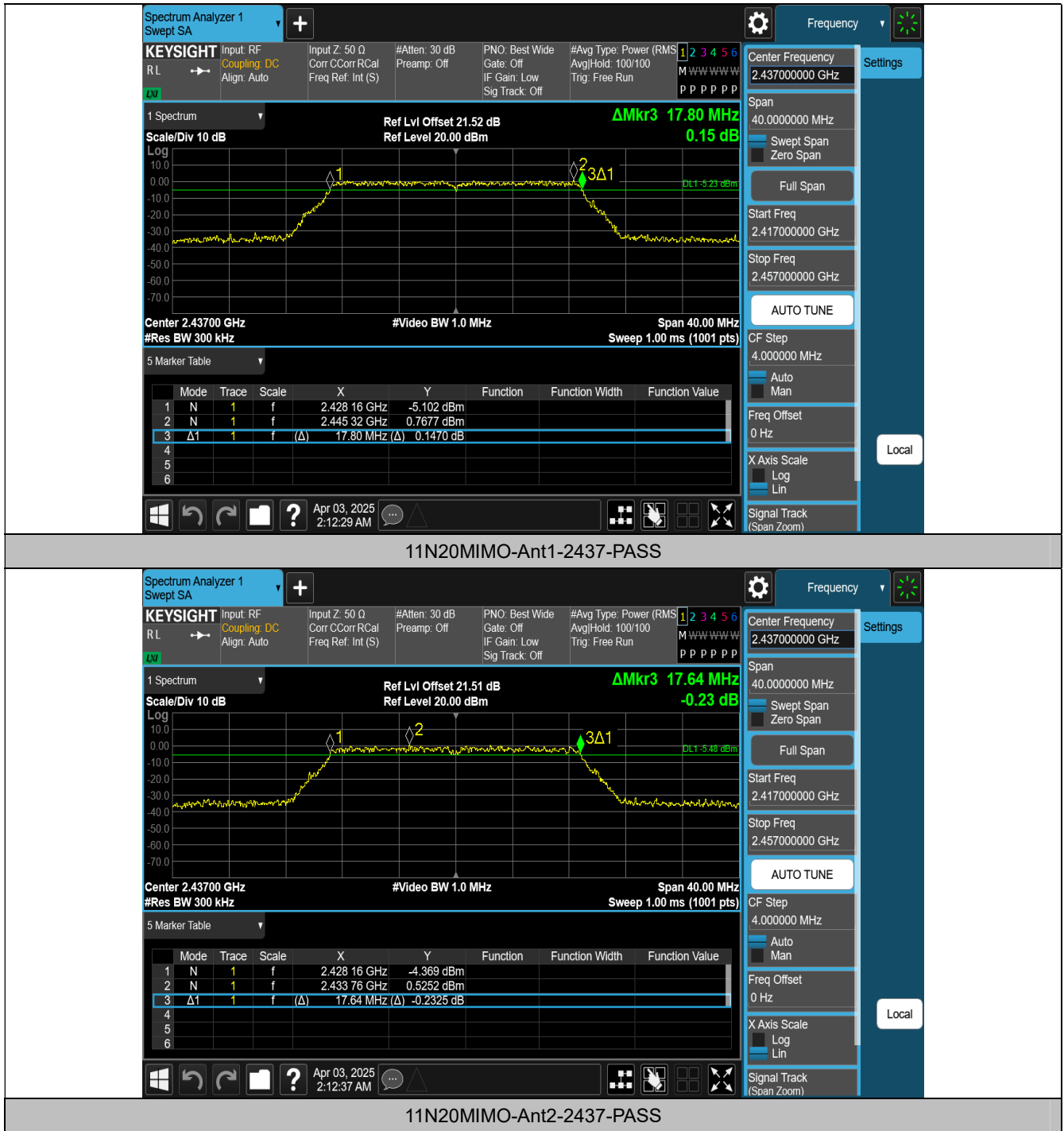
11G-Ant2-2462-PASS



11N20MIMO-Ant1-2412-PASS



11N20MIMO-Ant2-2412-PASS

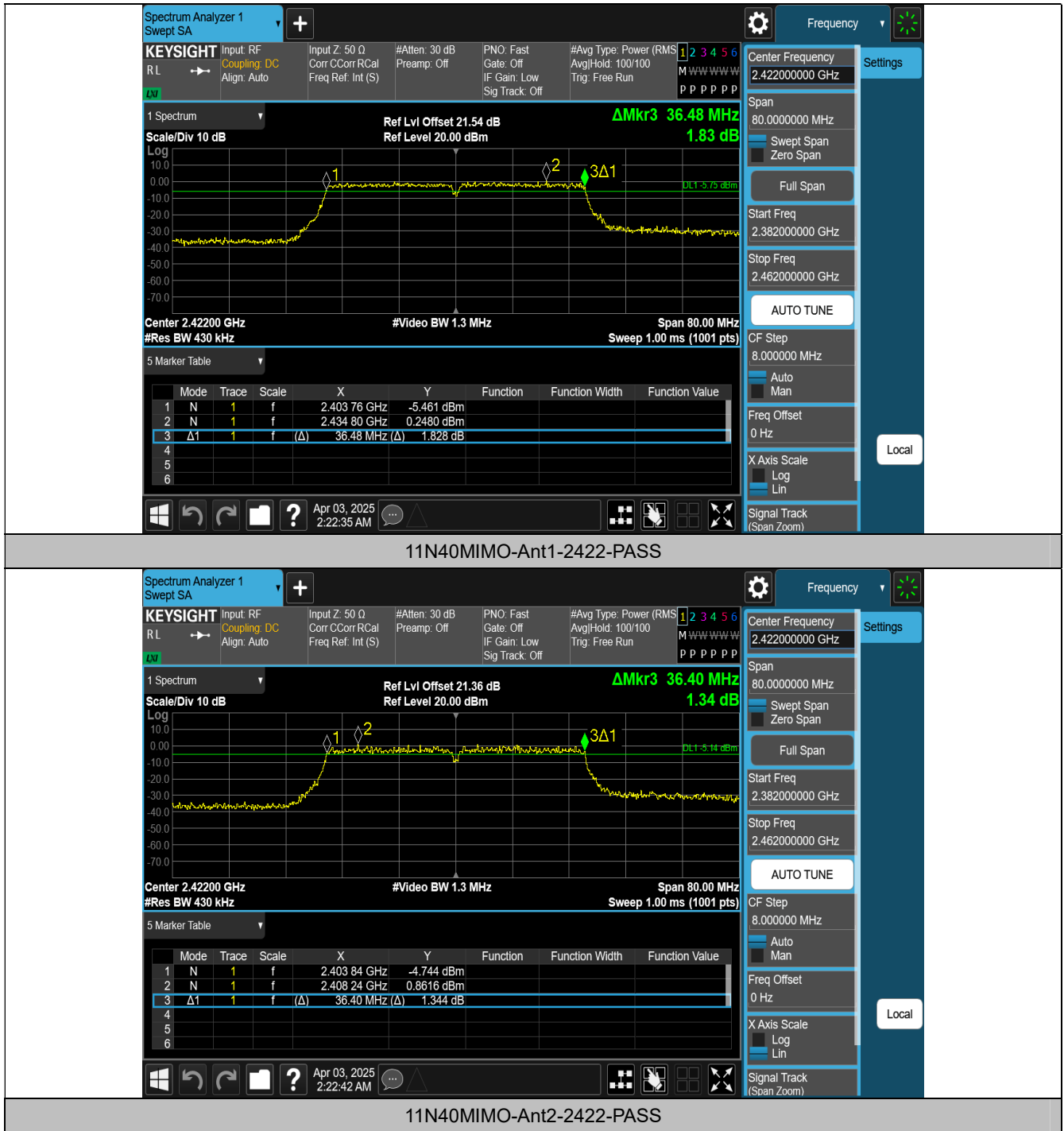


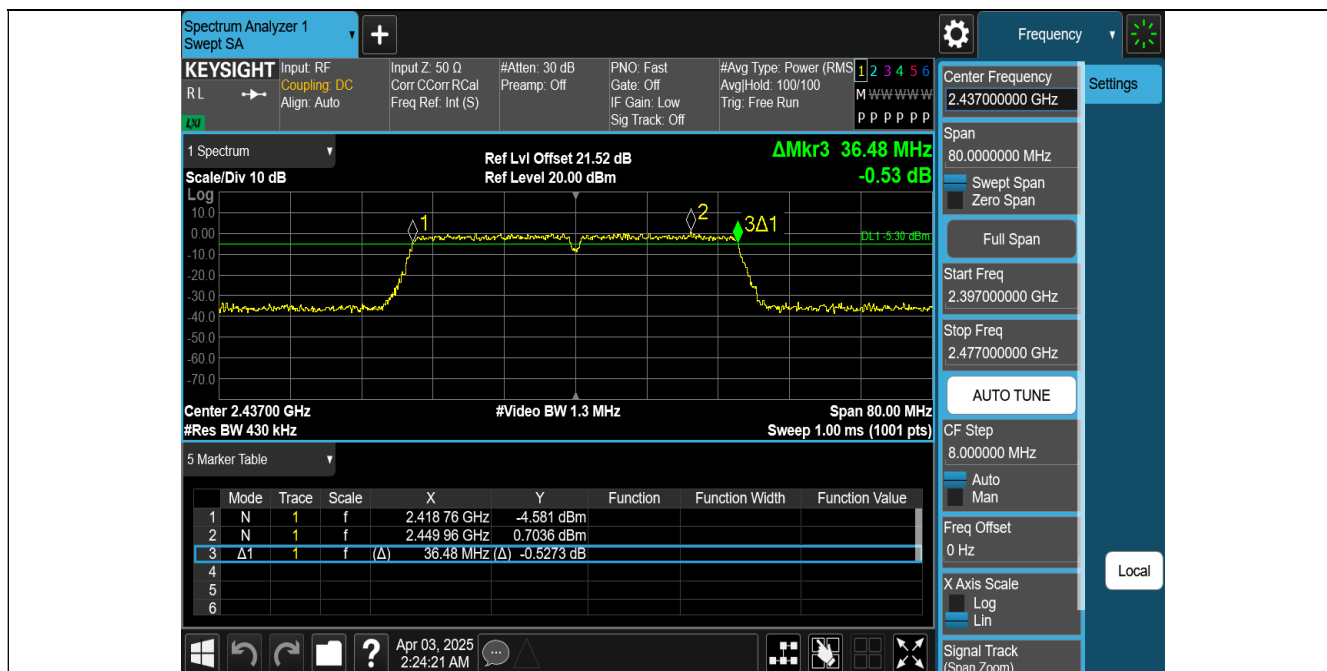


11N20MIMO-Ant1-2462-PASS

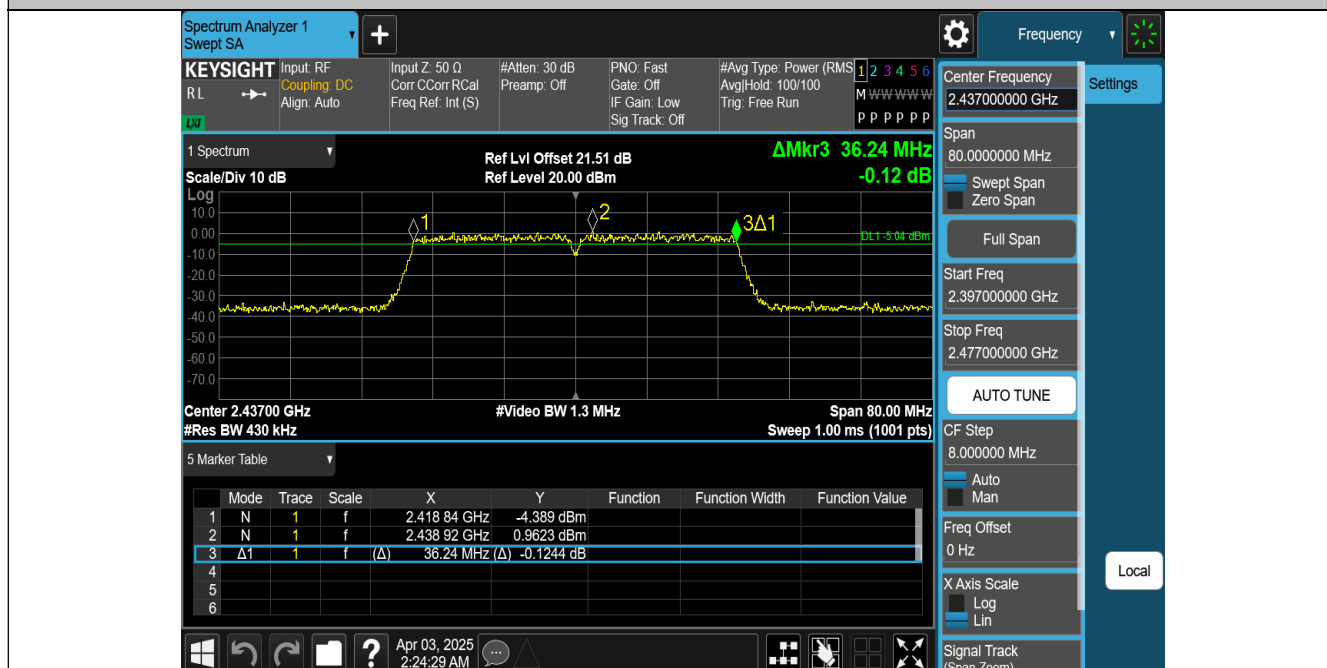


11N20MIMO-Ant2-2462-PASS

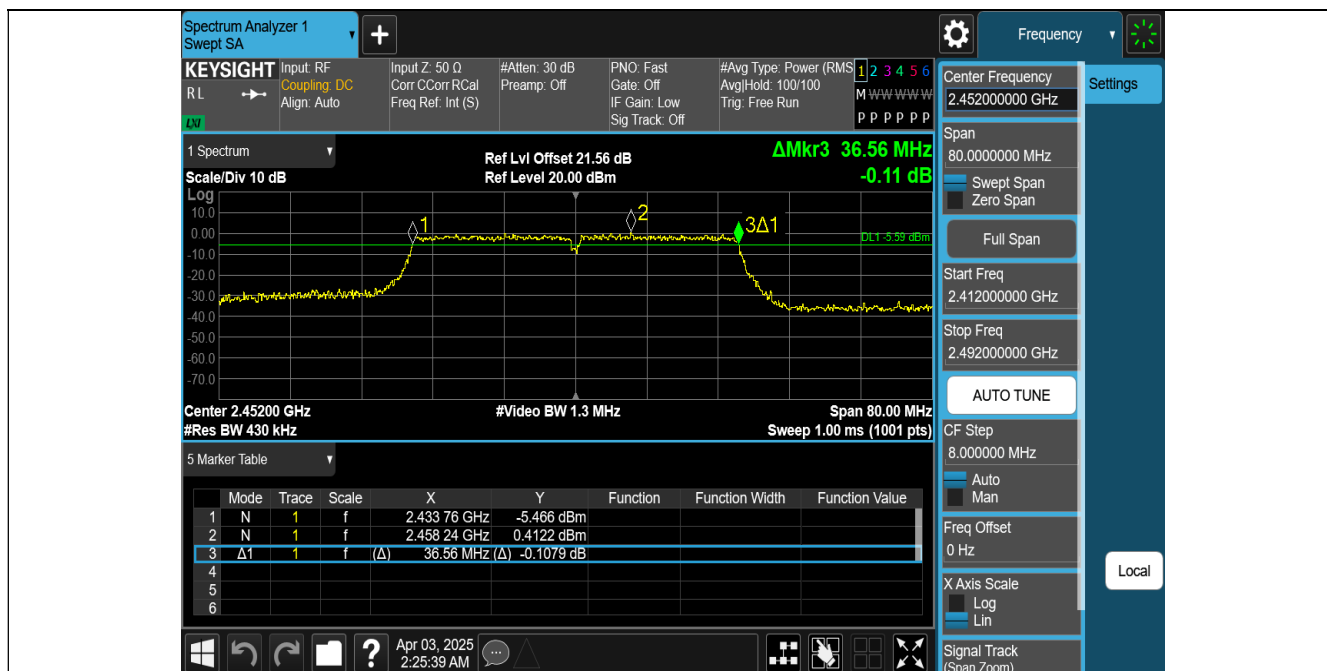




11N40MIMO-Ant1-2437-PASS



11N40MIMO-Ant2-2437-PASS



11N40MIMO-Ant1-2452-PASS



11N40MIMO-Ant2-2452-PASS

3.5 Maximum conducted output power

3.5.1 Limit

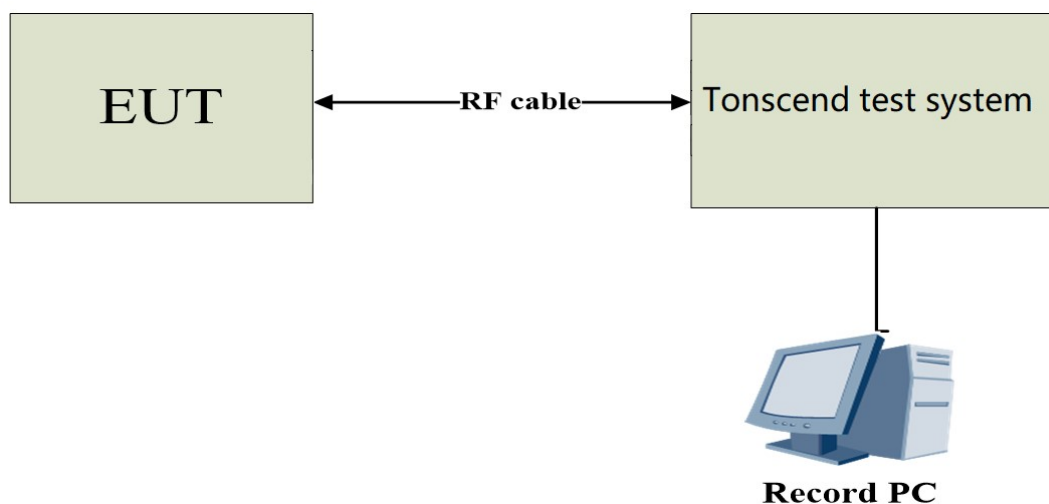
For systems using digital modulation in the 2400~2483.5MHz, The Maximum output Power shall not exceed 1W(30dBm)

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 (for average power) of ANSI C63.10-2013 and FCC KDB 662911 D01 v02r01 Multiple Transmitter Output.

3.5.3 Test Setup





3.5.4 The Result

Test result: PASS

Note: For test data, please refer to the report 4790010773.1-3.

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

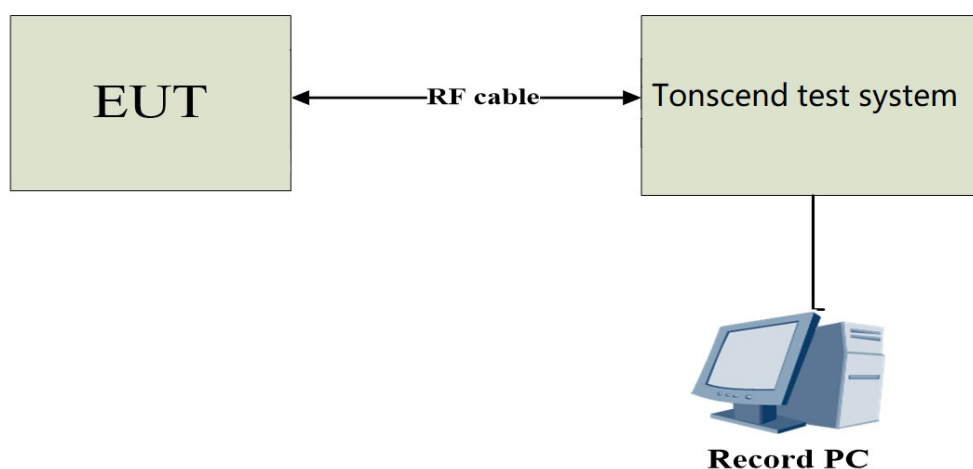
Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ : Test ☐ : No Test	

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 DTS bandwidth
RBW	3 kHz
VBW	10 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

3.6.3 Test Setup





3.6.4 The Result

Test result: PASS

Note: For test data, please refer to the report 4790010773.1-3.

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