

802.11g Ch0							
CH	Freq. (MHz)	Data Rate	Power Setting	Peak Output Power (mW)	Peak Output Power (dBm)	Limit (dBm)	RESULT
1	2412	6	16.5	238.78	23.78	30.00	PASS
6	2437	6	16.5	236.59	23.74	30.00	PASS
11	2462	6	14	137.09	21.37	30.00	PASS

802.11g Ch0							
CH	Freq. (MHz)	Data Rate	Power Setting	Avg. Output Power (mW)	Avg. Output Power (dBm)	Limit (dBm)	RESULT
1	2412	6	16.5	28.03	14.48	30.00	PASS
6	2437	6	16.5	28.42	14.54	30.00	PASS
11	2462	6	14	15.91	12.02	30.00	PASS

802.11g Ch1							
CH	Freq. (MHz)	Data Rate	Power Setting	Peak Output Power (mW)	Peak Output Power (dBm)	Limit (dBm)	RESULT
1	2412	6	16.5	219.28	23.41	30.00	PASS
6	2437	6	16.5	205.12	23.12	30.00	PASS
11	2462	6	14	109.14	20.38	30.00	PASS

802.11g Ch1							
CH	Freq. (MHz)	Data Rate	Power Setting	Avg. Output Power (mW)	Avg. Output Power (dBm)	Limit (dBm)	RESULT
1	2412	6	16.5	25.69	14.10	30.00	PASS
6	2437	6	16.5	24.47	13.89	30.00	PASS
11	2462	6	14	13.08	11.17	30.00	PASS

802.11n_HT20M_2TX									
CH	Freq. (MHz)	Data Rate	Power Setting	Peak Output Power (dBm)		Total Peak Output Power (mW)	Total Peak Output Power (dBm)	Limit (dBm)	RESULT
				Ch0	Ch1				
1	2412	MCS0	14.5	22.27	21.59	312.87	24.95	30.00	PASS
6	2437	MCS0	14.5	21.34	20.87	258.32	24.12	30.00	PASS
11	2462	MCS0	12	18.65	17.93	135.37	21.32	30.00	PASS
802.11n_HT20M_2TX									
CH	Freq. (MHz)	Data Rate	Power Setting	Avg. Output Power (dBm)		Total Avg. Output Power (mW)	Total Avg. Output Power (dBm)	Limit (dBm)	RESULT
				Ch0	Ch1				
1	2412	MCS0	14.5	12.41	11.59	31.88	15.03	30.00	PASS
6	2437	MCS0	14.5	11.69	10.94	27.20	14.35	30.00	PASS
11	2462	MCS0	12	8.52	8.16	13.67	11.36	30.00	PASS
802.11n_HT40M_2TX									
CH	Freq. (MHz)	Data Rate	Power Setting	Peak Output Power (dBm)		Total Peak Output Power (mW)	Total Peak Output Power (dBm)	Limit (dBm)	RESULT
				Ch0	Ch1				
3	2422	MCS0	11	20.34	19.45	196.25	22.93	30.00	PASS
6	2437	MCS0	11	20.57	19.87	211.08	23.24	30.00	PASS
9	2452	MCS0	9	18.38	17.32	122.82	20.89	30.00	PASS
802.11n_HT40M_2TX									
CH	Freq. (MHz)	Data Rate	Power Setting	Avg. Output Power (dBm)		Total Avg. Output Power (mW)	Total Avg. Output Power (dBm)	Limit (dBm)	RESULT
				Ch0	Ch1				
3	2422	MCS0	11	9.07	8.68	15.47	11.89	30.00	PASS
6	2437	MCS0	11	8.92	8.18	14.39	11.58	30.00	PASS
9	2452	MCS0	9	7.07	5.93	9.02	9.55	30.00	PASS

802.11ax_HE20M_2TX

CH	Freq. (MHz)	Data Rate	RU Config	Power Setting	Peak Output Power (dBm)		Total Peak Output Power (mW)	Total Peak Output Power (dBm)	Limit (dBm)	RESULT
					Ch0	Ch1				
1	2412	MCS0	full	13.5	22.68	22.26	353.62	25.49	30.00	PASS
6	2437	MCS0	full	13.5	21.76	21.54	292.53	24.66	30.00	PASS
11	2462	MCS0	full	11	19.89	18.81	173.53	22.39	30.00	PASS

802.11ax_HE20M_2TX

CH	Freq. (MHz)	Data Rate	RU Config	Power Setting	Avg. Output Power (dBm)		Total Avg. Output Power (mW)	Total Avg. Output Power (dBm)	Limit (dBm)	RESULT
					Ch0	Ch1				
1	2412	MCS0	full	13.5	11.44	10.93	26.34	14.21	30.00	PASS
6	2437	MCS0	full	13.5	10.44	10.06	21.23	13.27	30.00	PASS
11	2462	MCS0	full	11	8.13	7.73	12.44	10.95	30.00	PASS

802.11ax_HE40M_2TX

CH	Freq. (MHz)	Data Rate	RU Config	Power Setting	Peak Output Power (dBm)		Total Peak Output Power (mW)	Total Peak Output Power (dBm)	Limit (dBm)	RESULT
					Ch0	Ch1				
3	2422	MCS0	full	10.5	17.77	17.32	113.79	20.56	30.00	PASS
6	2437	MCS0	full	10.5	18.04	17.13	115.32	20.62	30.00	PASS
9	2452	MCS0	full	8.5	15.71	14.68	66.62	18.24	30.00	PASS

802.11ax_HE40M_2TX

CH	Freq. (MHz)	Data Rate	RU Config	Power Setting	Avg. Output Power (dBm)		Total Avg. Output Power (mW)	Total Avg. Output Power (dBm)	Limit (dBm)	RESULT
					Ch0	Ch1				
3	2422	MCS0	full	10.5	8.66	8.22	13.98	11.45	30.00	PASS
6	2437	MCS0	full	10.5	8.48	7.72	12.96	11.13	30.00	PASS
9	2452	MCS0	full	8.5	6.12	5.43	7.58	8.80	30.00	PASS

4.4 POWER SPECTRAL DENSITY

4.4.1 Test Limit

According to §15.247(e),

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

Limit	☒ Antenna not exceed 6 dBi : 8dBm ☐ Antenna with DG greater than 6 dBi : [Limit = 8 – (DG – 6)] ☐ Point-to-point operation :
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4.4.2 Test Procedure

Test method Refer as KDB 558074 D01

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. SA set RBW = 3kHz, VBW = 10kHz, Span = 1.5 times DTS Bandwidth (6 dB BW), Detector = Peak, Sweep Time = Auto and Trace = Max hold.
4. The path loss were compensated to the results for each measurement by SA.
5. Mark the maximum level.
6. Measure and record the result of power spectral density. in the test report.

4.4.3 Test Setup

Refer to section 1.8.

4.4.4 Test Result

Temperature: 19.5 ~ 23.7°C

Test date:

January 23 ~
February 14, 2025

Humidity: 48 ~ 59% RH

Tested by:

Jerry Chang

POWER DENSITY 802.11b				
Freq. (MHz)	Ch0 PSD	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
2412	-6.9	-6.90	8.00	PASS
2437	-6.41	-6.41	8.00	PASS
2462	-7.56	-7.56	8.00	PASS

POWER DENSITY 802.11g				
Freq. (MHz)	Ch0 PSD	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
2412	-14.22	-14.22	8.00	PASS
2437	-14.38	-14.38	8.00	PASS
2462	-16.76	-16.76	8.00	PASS

POWER DENSITY 802.11n HT20					
Freq. (MHz)	Ch0 PSD	Ch1 PSD	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
2412	-15	-17.06	-12.90	7.30	PASS
2437	-16.06	-17.57	-13.74	7.30	PASS
2462	-18.81	-20.24	-16.46	7.30	PASS

POWER DENSITY 802.11n HT40					
Freq. (MHz)	Ch0 PSD	Ch1 PSD	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
2422	-21.82	-22.57	-19.17	7.30	PASS
2437	-20.86	-23.73	-19.05	7.30	PASS
2452	-21.86	-24.95	-20.13	7.30	PASS

POWER DENSITY 802.11ax HE20						
Freq. (MHz)	RU Config	Ch0 PSD	Ch1 PSD	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
2412	full	-15.91	-16.6	-13.23	7.30	PASS
2437	full	-17.24	-18.34	-14.74	7.30	PASS
2462	full	-20.14	-20.33	-17.22	7.30	PASS

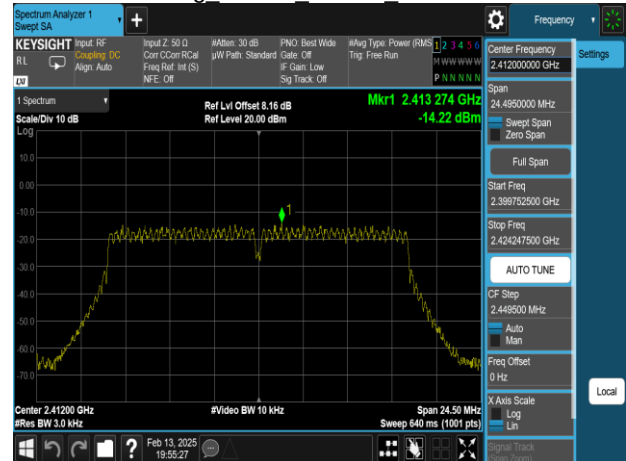
POWER DENSITY 802.11ax HE40						
Freq. (MHz)	RU Config	Ch0 PSD	Ch1 PSD	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
2422	full	-21.37	-21.12	-18.23	7.30	PASS
2437	full	-20.95	-22.21	-18.52	7.30	PASS
2452	full	-24.19	-24.66	-21.41	7.30	PASS

Test Data

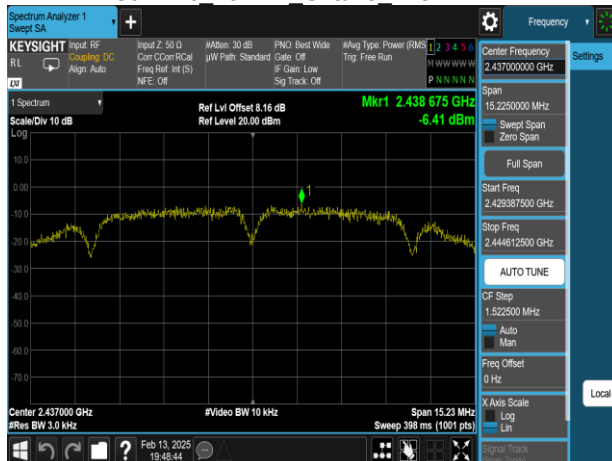
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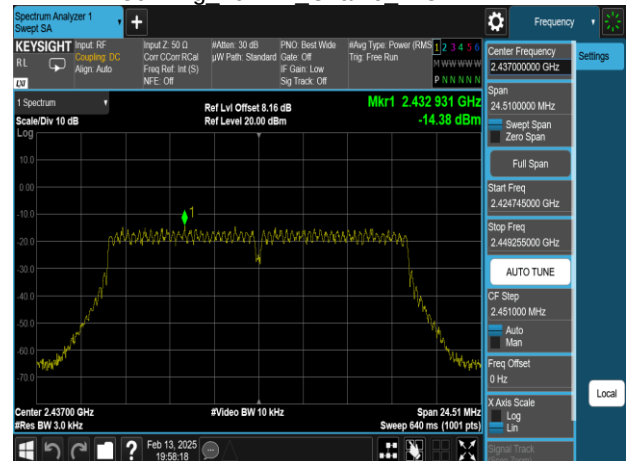
802.11g 20MHz Chain0 2412MHz



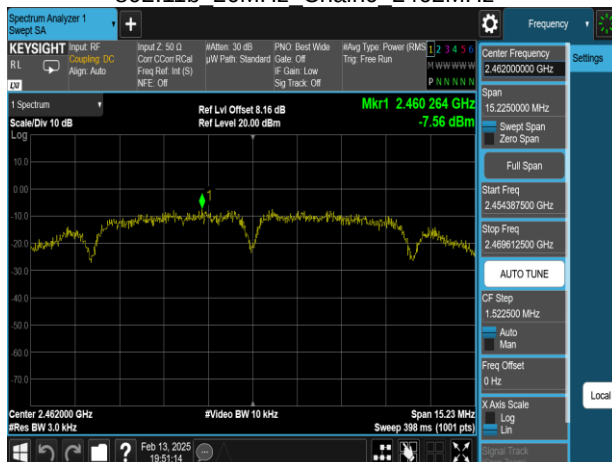
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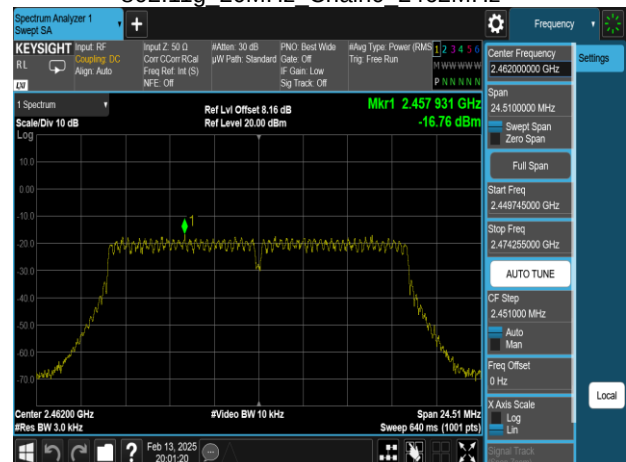
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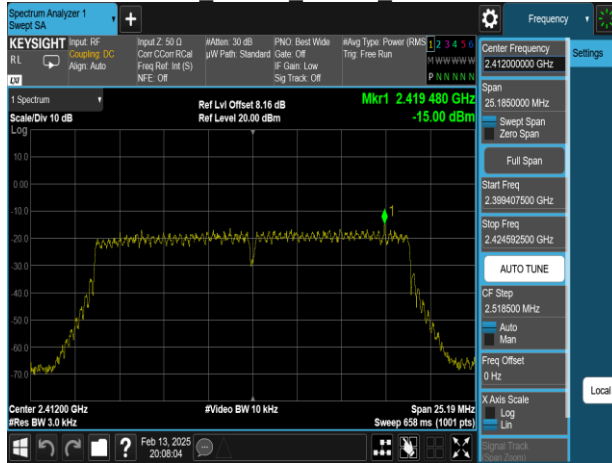
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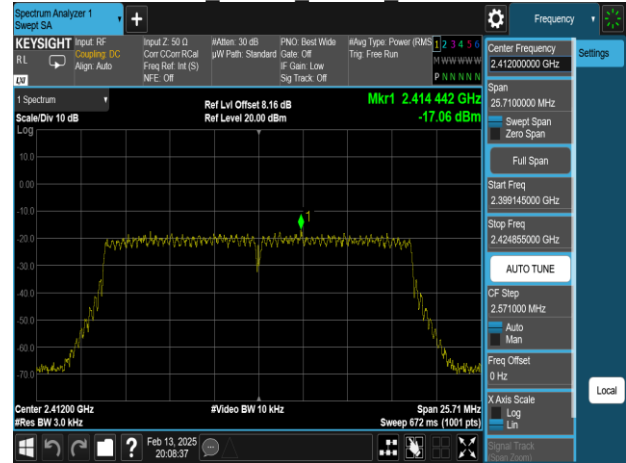
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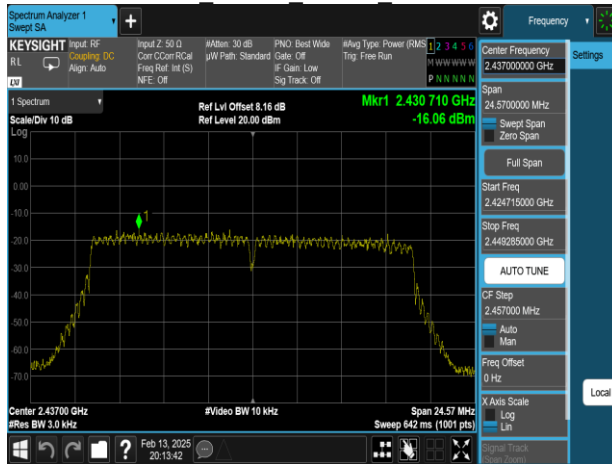
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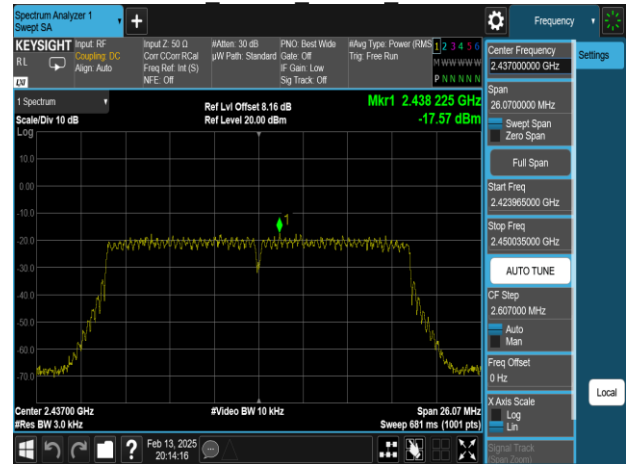
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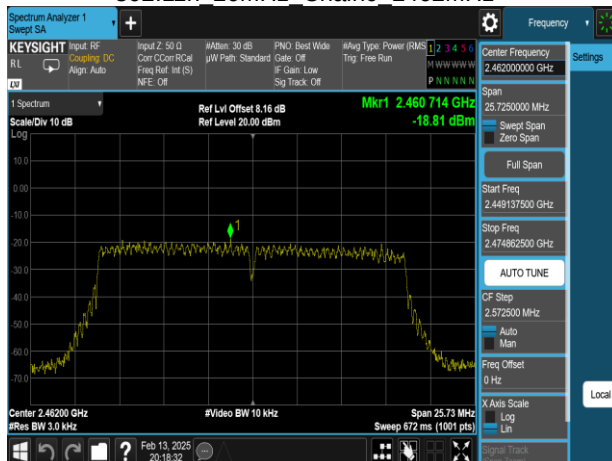
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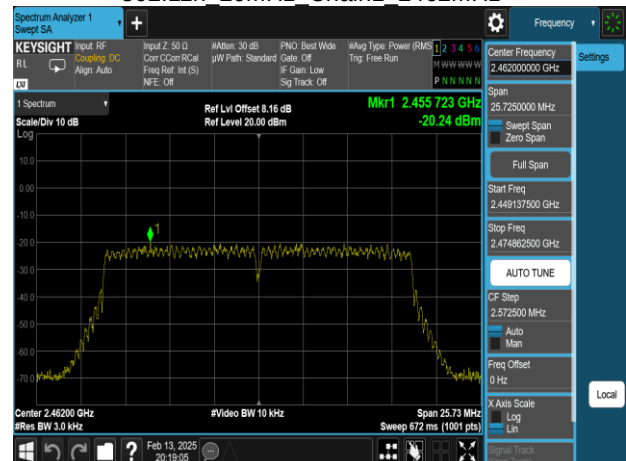
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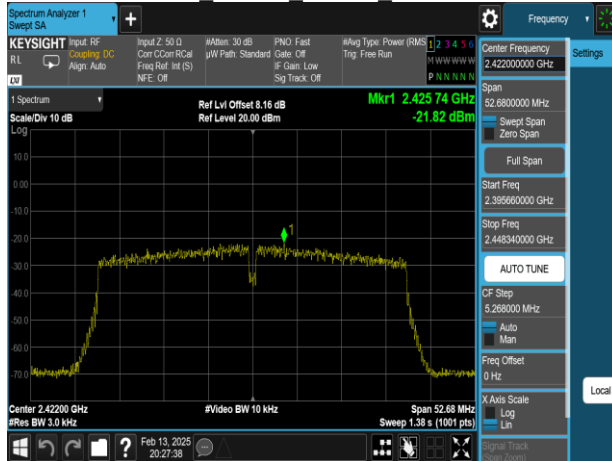
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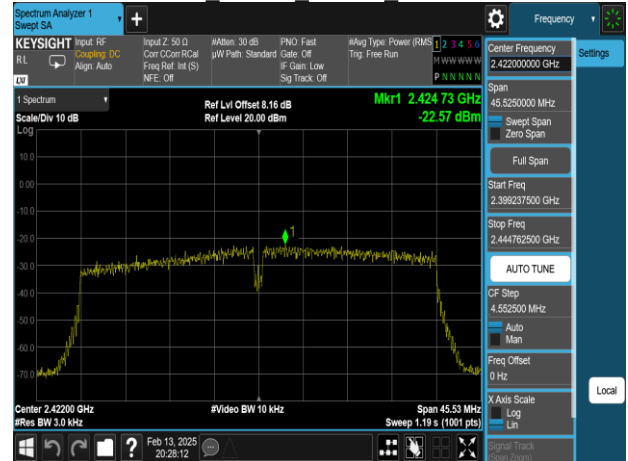
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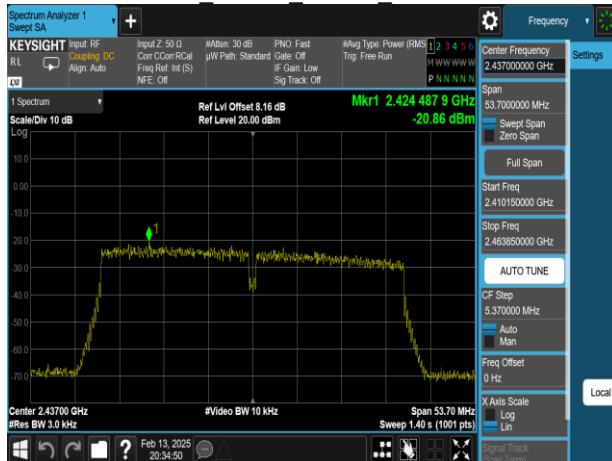
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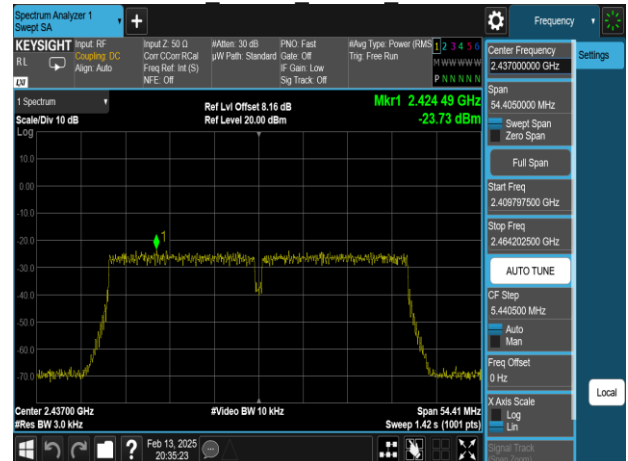
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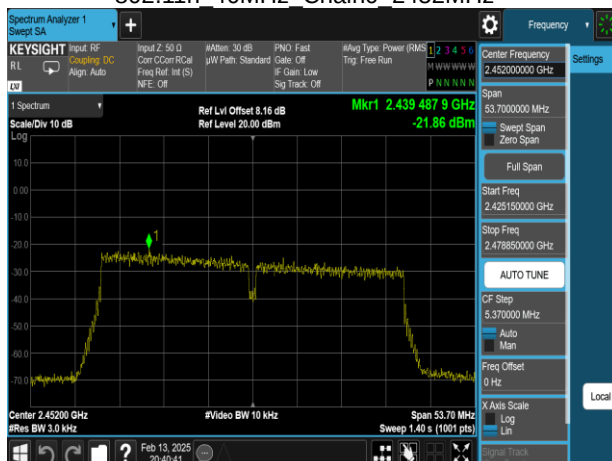
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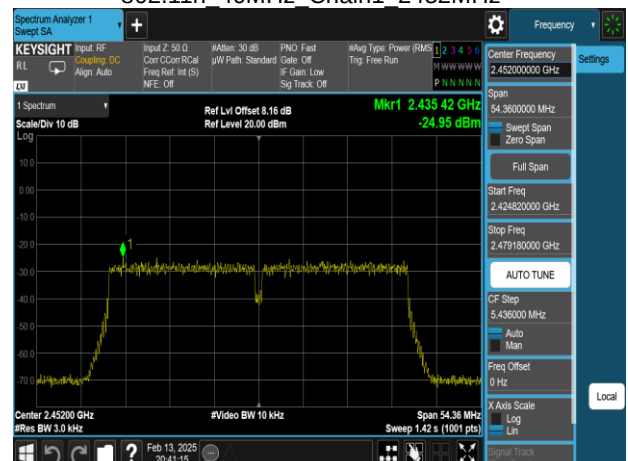
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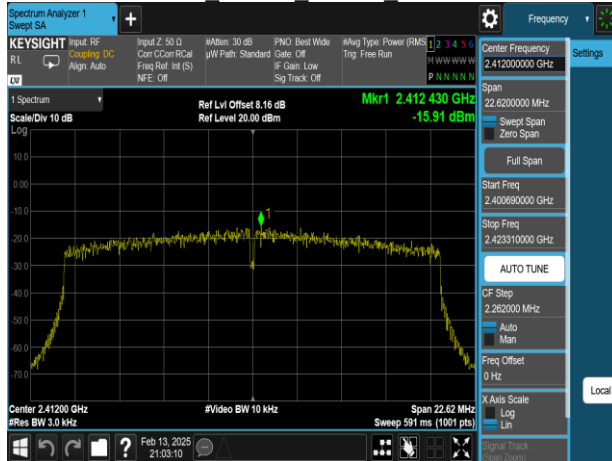
802.11n 40MHz Chain0 2452MHz



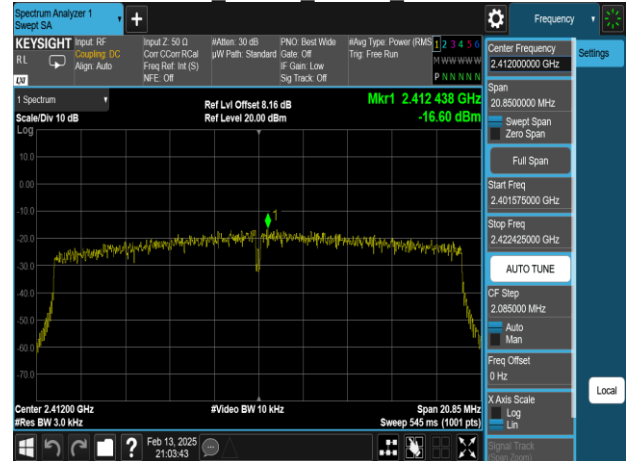
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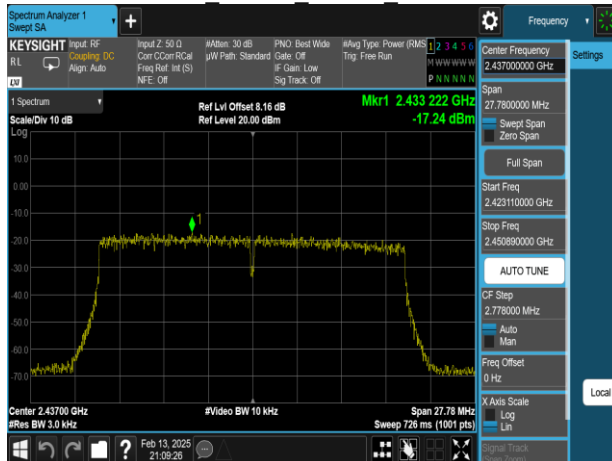
802.11ax 20MHz Chain0 2412MHz



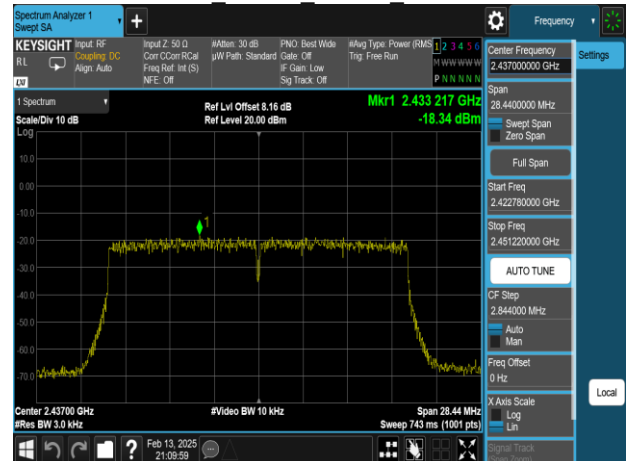
802.11ax 20MHz Chain1 2412MHz



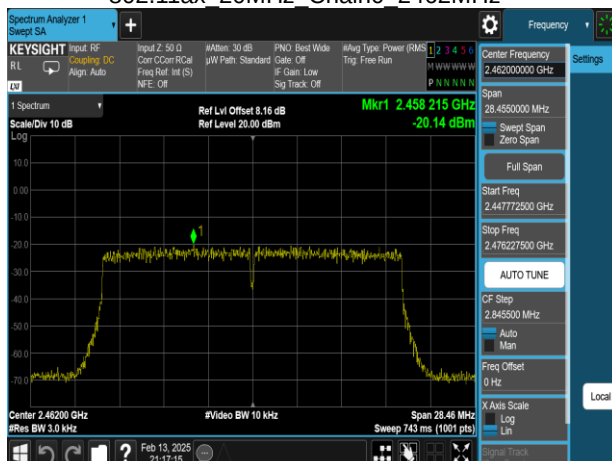
802.11ax 20MHz Chain0 2437MHz



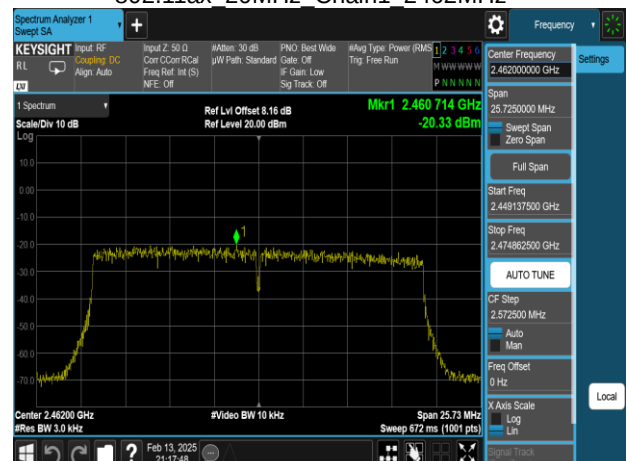
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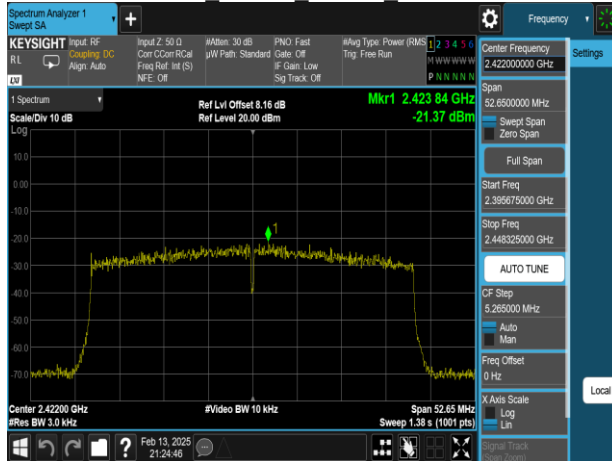
802.11ax 20MHz Chain0 2462MHz



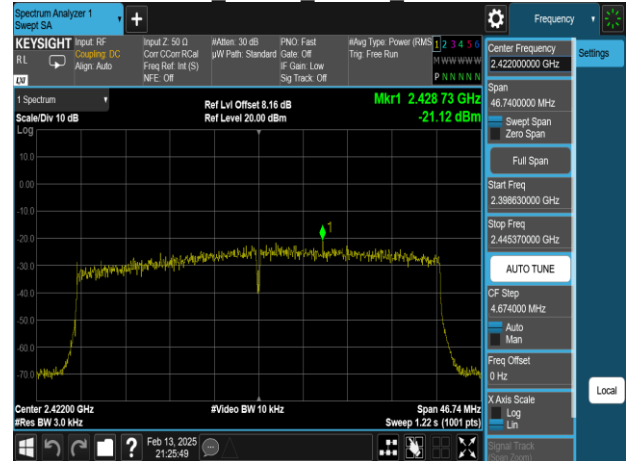
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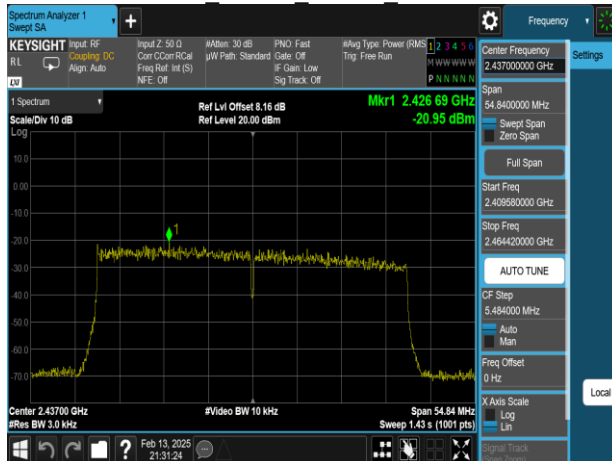
802.11ax 40MHz Chain0 2422MHz



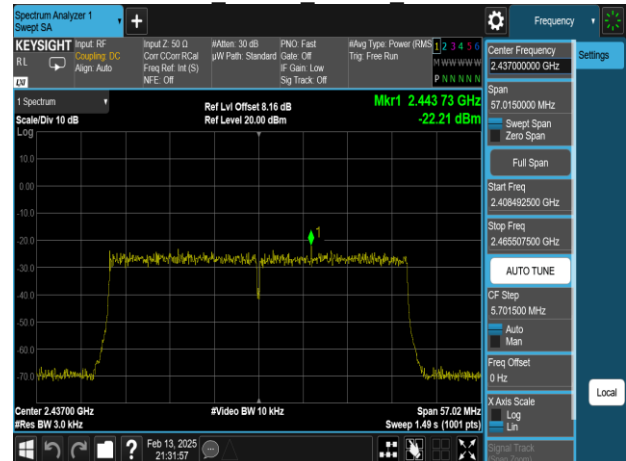
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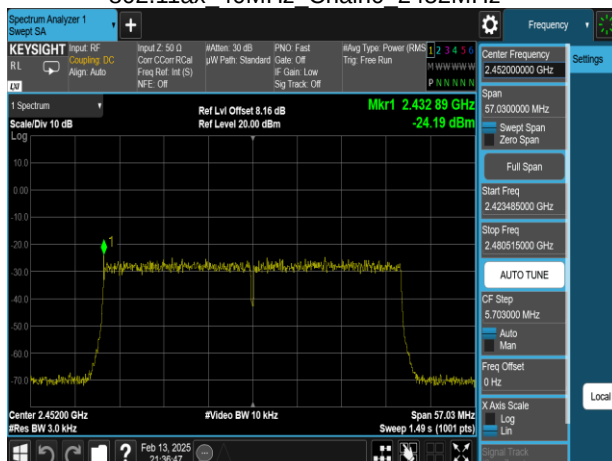
802.11ax 40MHz Chain0 2437MHz



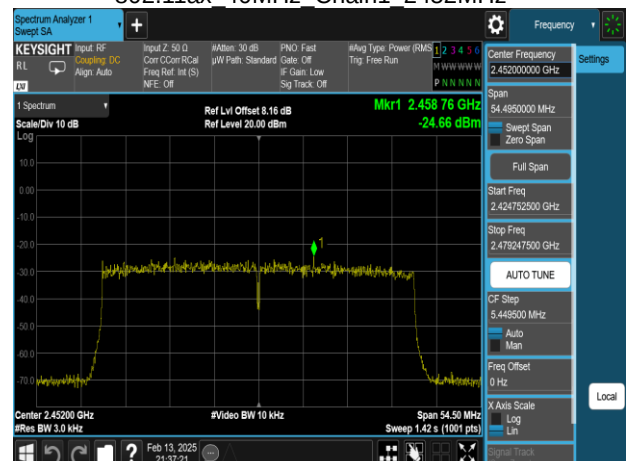
802.11ax 40MHz Chain1 2437MHz



802.11ax 40MHz Chain0 2452MHz



802.11ax 40MHz Chain1 2452MHz



4.5 CONDUCTED BANDEDGE AND SPURIOUS EMISSION

4.5.1 Test Limit

According to §15.247(d),

In any 100 kHz bandwidth outside the authorized frequency band,

Non-restricted bands shall be attenuated at least 20 dB/30 dB relative to the maximum PSD level in 100 kHz by RF conducted or a radiated measurement which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

4.5.2 Test Procedure

Test method Refer as KDB 662911 D01, KDB 558074 D01.

1. EUT RF output port connected to the SA by RF cable, and the path loss was compensated to result.
2. SA setting, RBW=100kHz, VBW=300kHz, Detector=Peak, Trace mode = max hold, SWT = Auto.
3. In any 100 kHz bandwidth outside the authorized frequency band, shall be attenuated at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when conducted power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

4.5.3 Test Setup

Refer to section 1.8.

4.5.4 Test Result

Temperature: 19.5 ~ 23.7°C

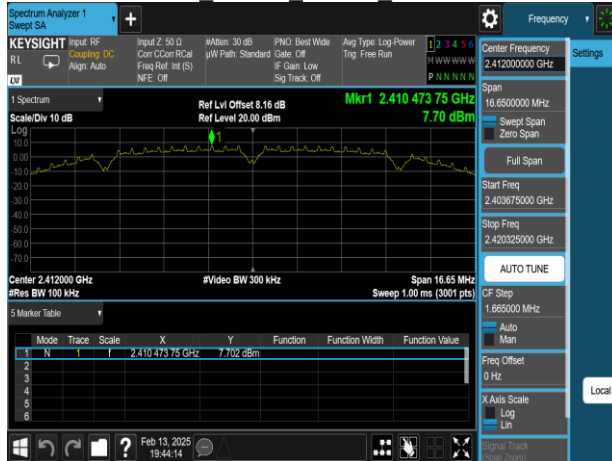
Humidity: 48 ~ 59% RH

Test date: January 23 ~
February 14, 2025

Tested by: Jerry Chang

Reference Level

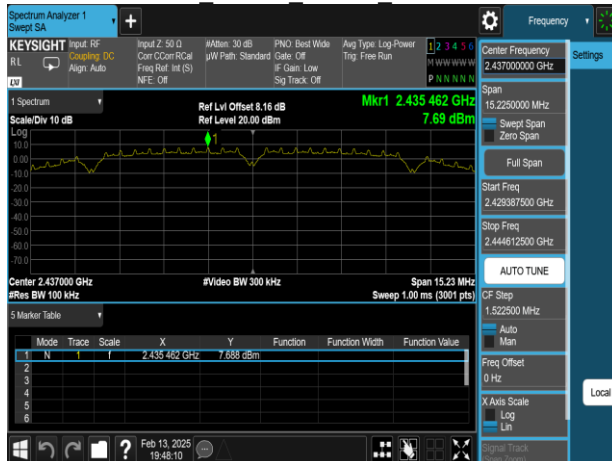
802.11b 20MHz Chain0 2412MHz



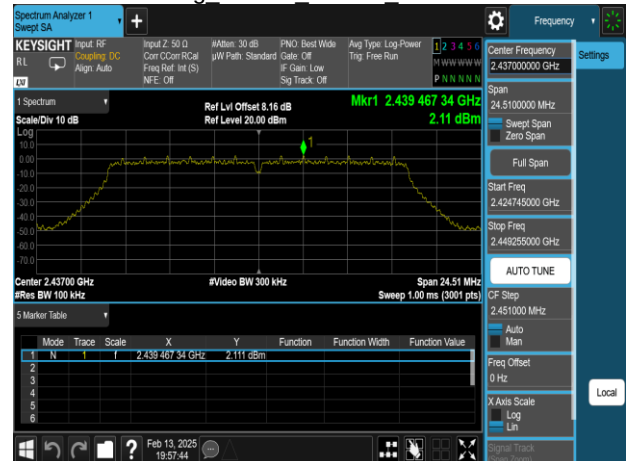
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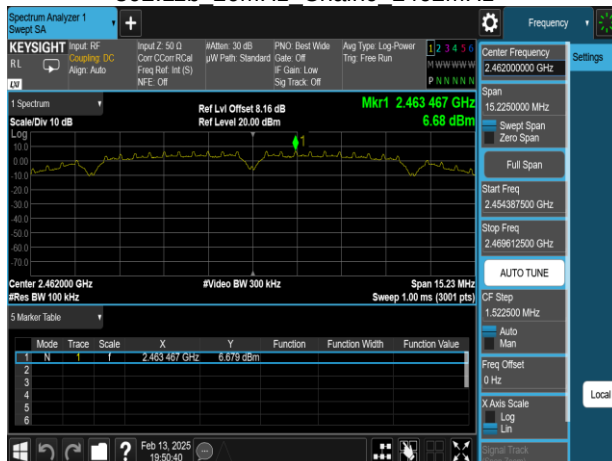
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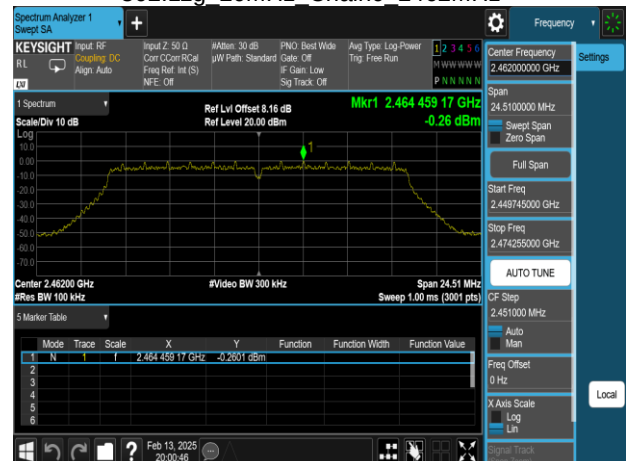
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802.11b 20MHz Chain0 2462MHz



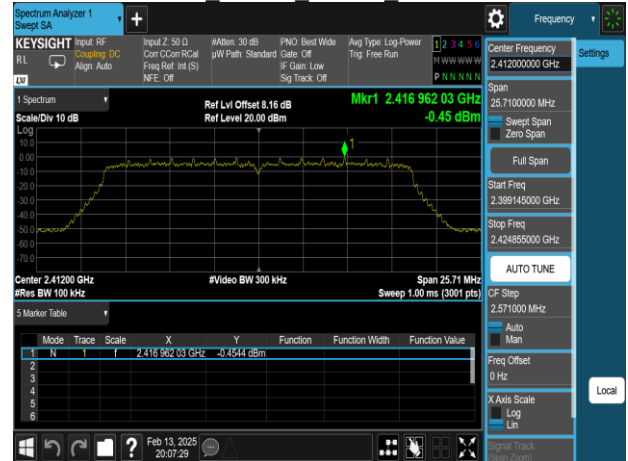
802.11g 20MHz Chain0 2462MHz



802.11n 20MHz Chain0 2412MHz



802.11n 20MHz Chain1 2412MHz



802.11n 20MHz Chain0 2437MHz



802.11n 20MHz Chain1 2437MHz



802.11n 20MHz Chain0 2462MHz



802.11n 20MHz Chain1 2462MHz



802.11n 40MHz Chain0 2422MHz



802.11n 40MHz Chain1 2422MHz



802.11n 40MHz Chain0 2437MHz



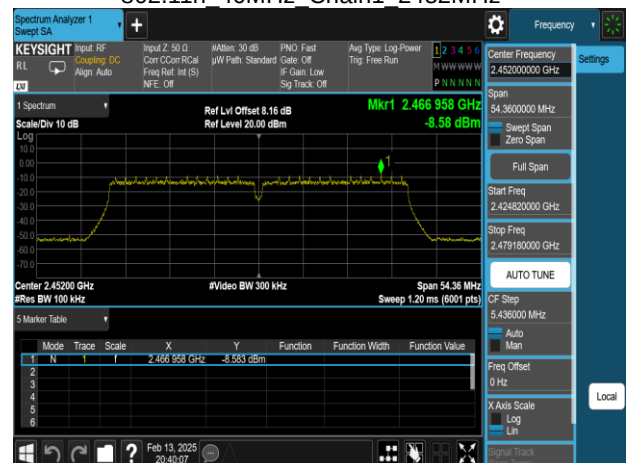
802.11n 40MHz Chain1 2437MHz



802.11n 40MHz Chain0 2452MHz



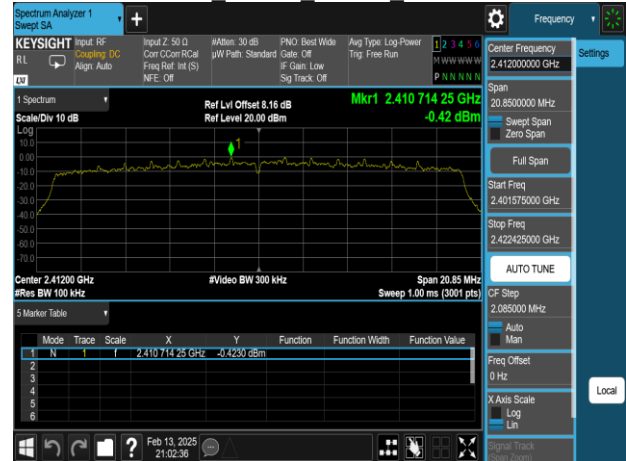
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802.11ax 20MHz Chain0 2412MHz



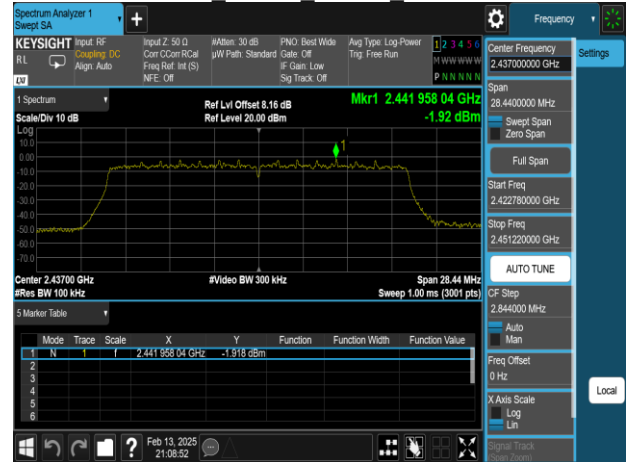
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802.11ax 20MHz Chain0 2437MHz



802.11ax 20MHz Chain1 2437MHz



802.11ax 20MHz Chain0 2462MHz



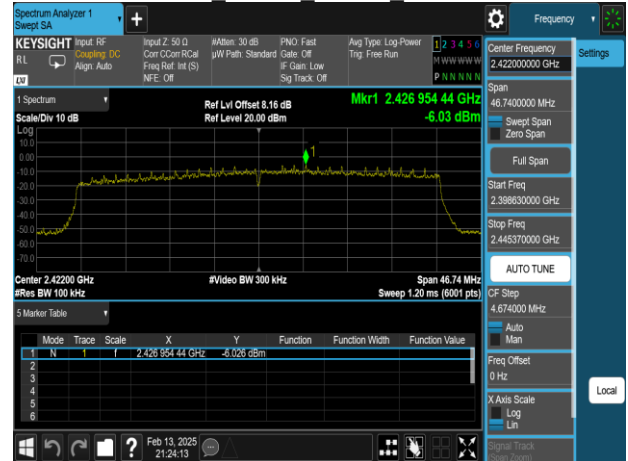
802.11ax 20MHz Chain1 2462MHz



802.11ax 40MHz Chain0 2422MHz



802.11ax 40MHz Chain1 2422MHz



802.11ax 40MHz Chain0 2437MHz



802.11ax 40MHz Chain1 2437MHz



802.11ax 40MHz Chain0 2452MHz



802.11ax 40MHz Chain1 2452MHz

