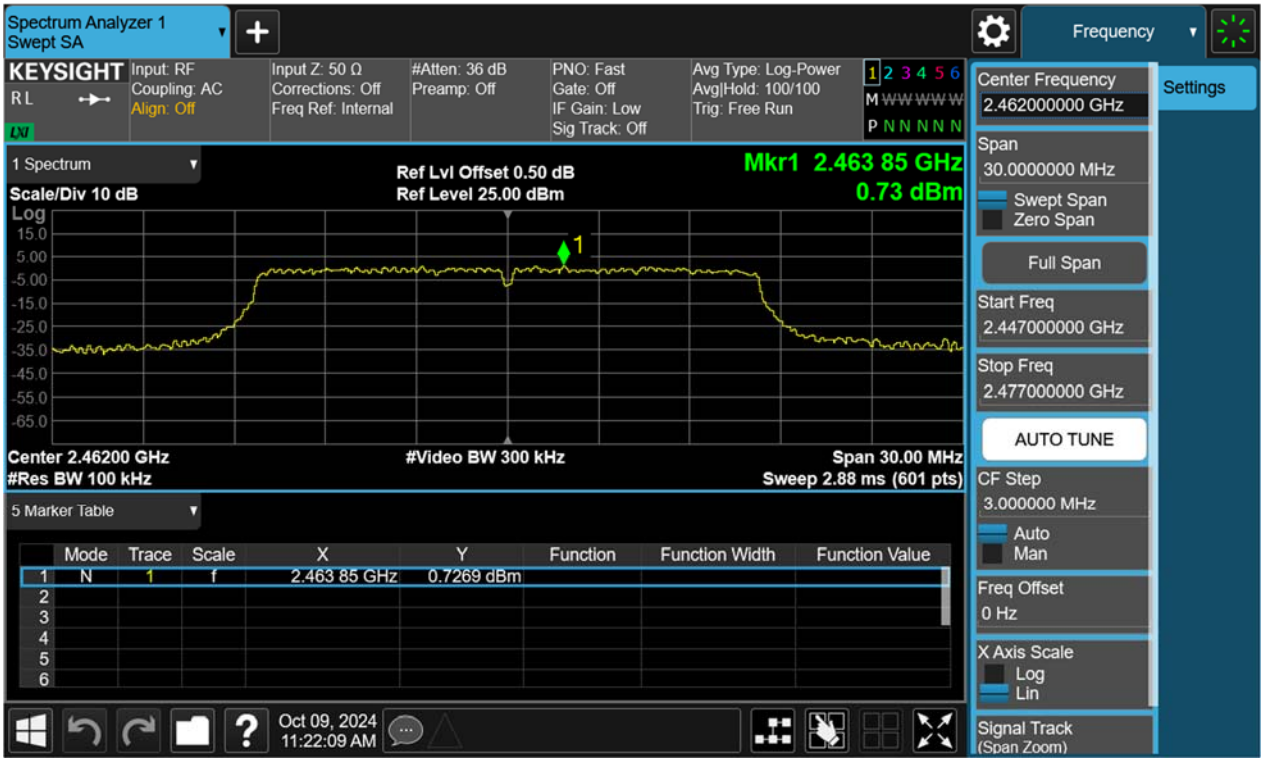
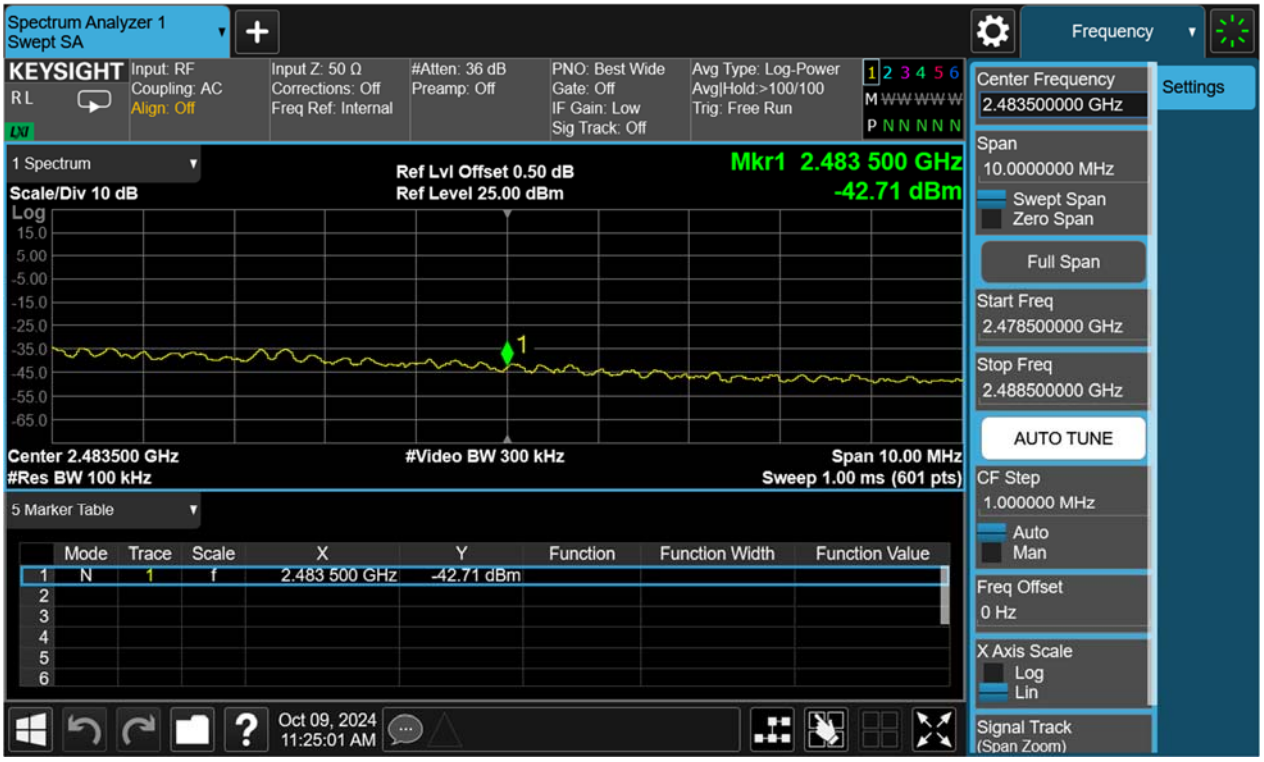
Conducted spurious emissions 30MHz-25GHz

Figure 30: Conducted Spurious Emission & Authorized-band band-edge, 802.11g, 2462MHz

Carrier Level

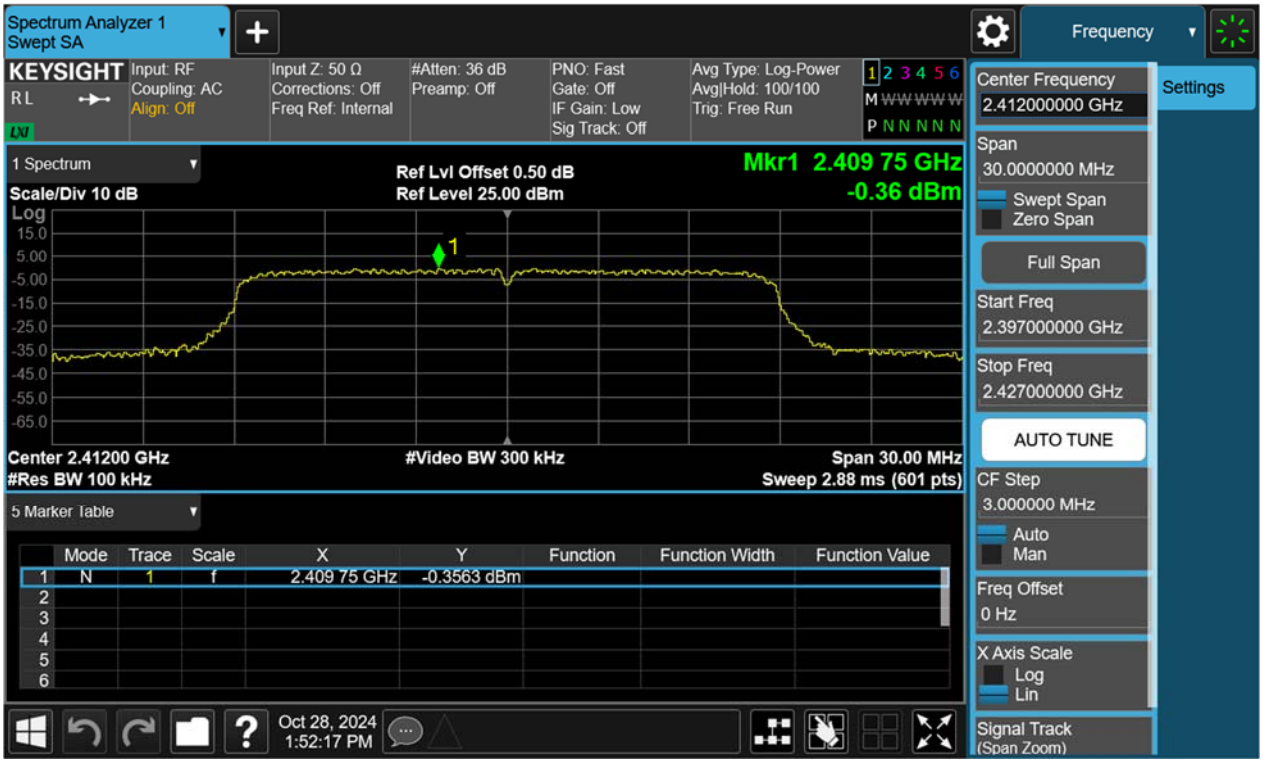


Band Edge



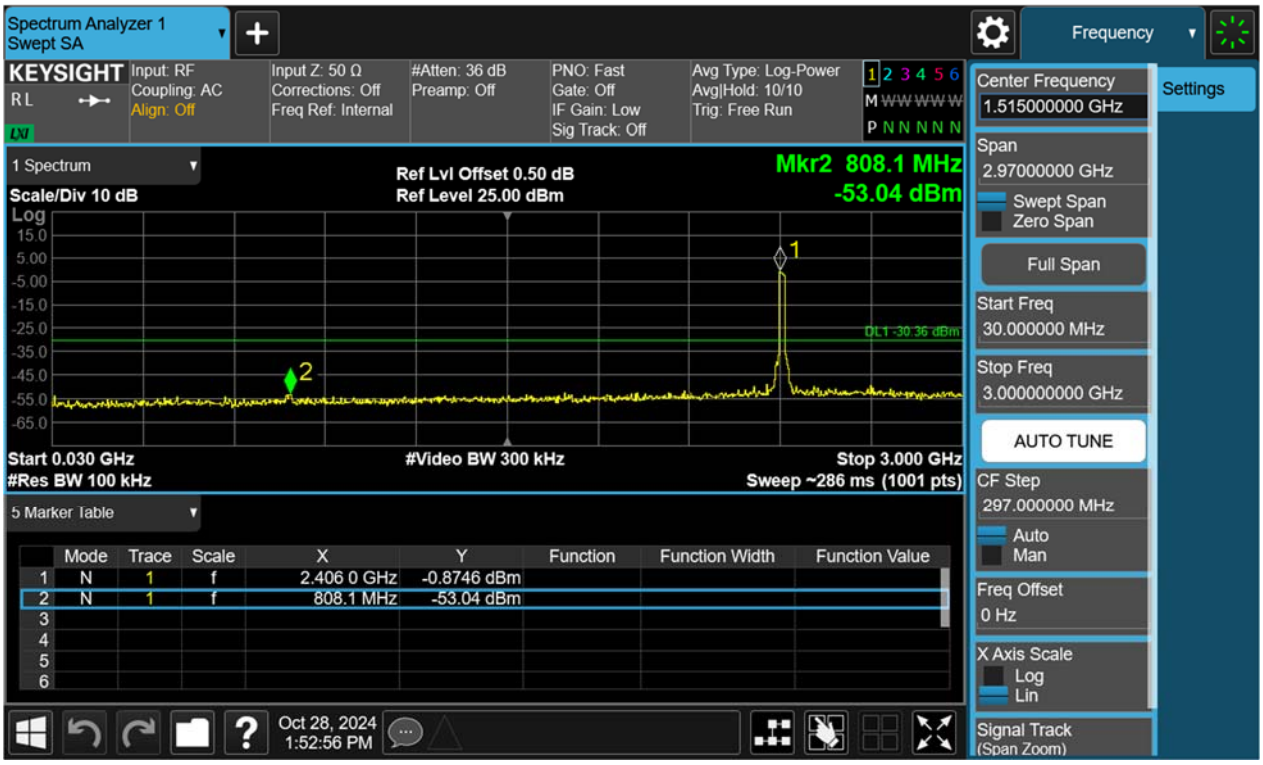
Conducted spurious emissions 30MHz-25GHz

Figure 31: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT20), 2412MHz Carrier Level



Band Edge

Conducted spurious emissions 30MHz-25GHz



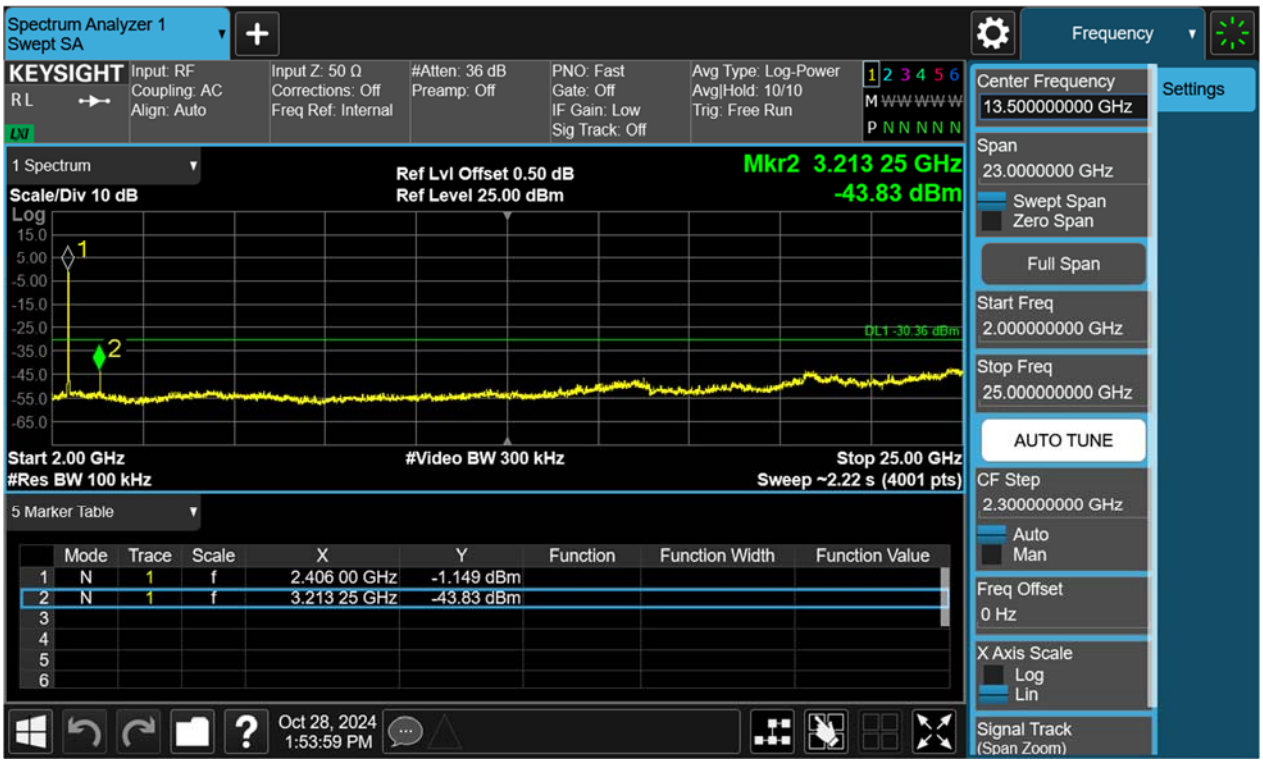
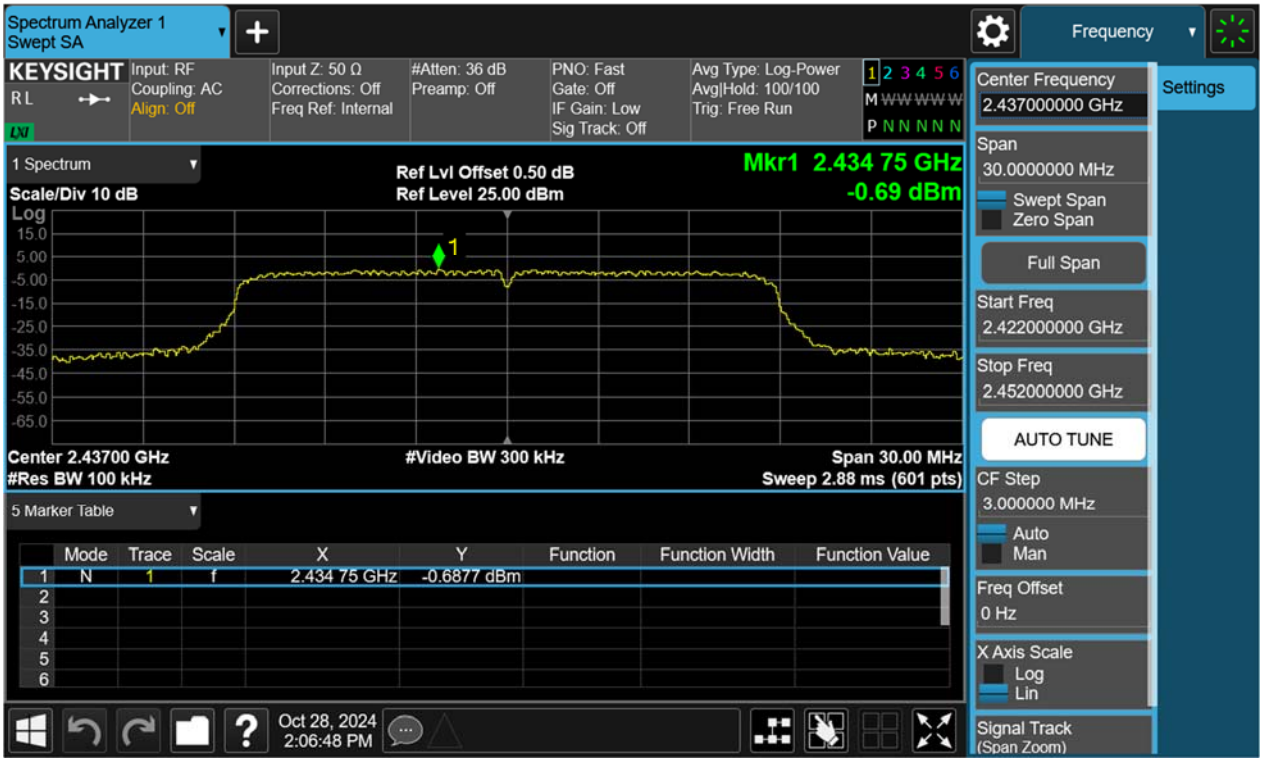


Figure 32: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT20), 2437MHz Carrier Level



Conducted spurious emissions 30MHz-25GHz

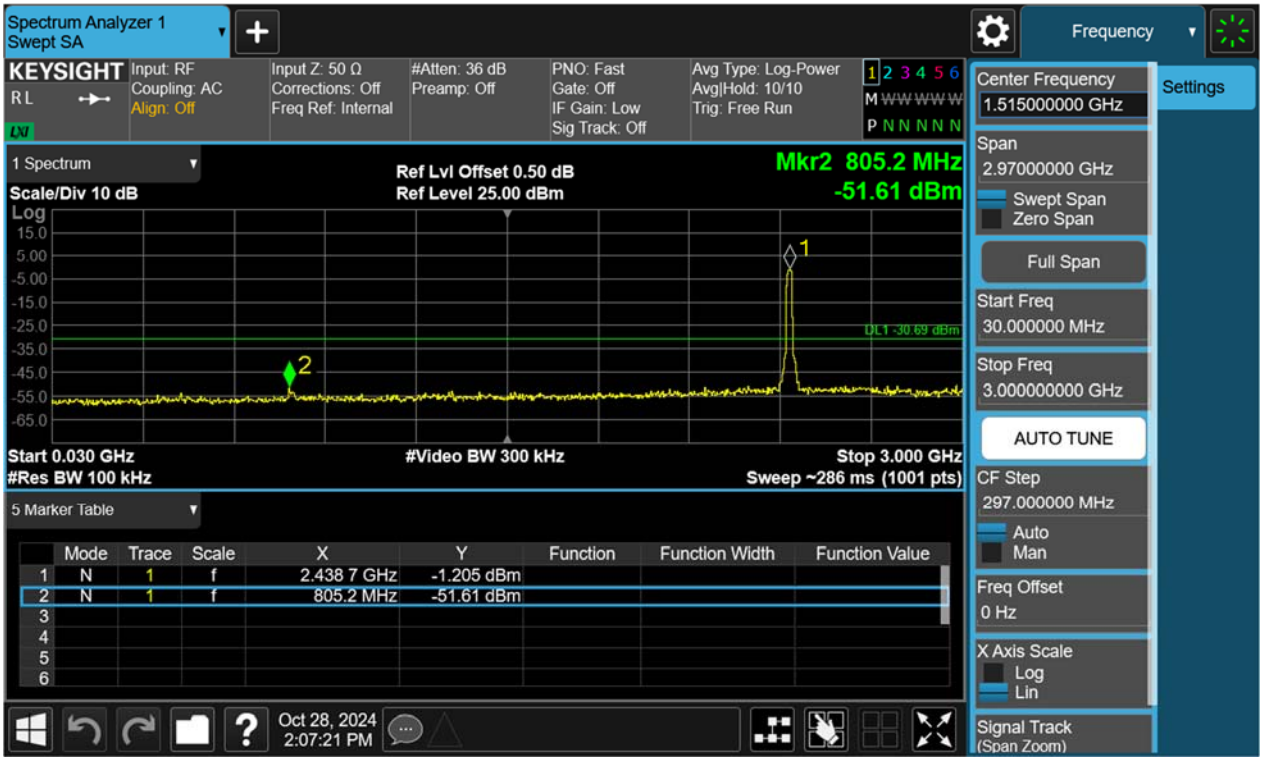
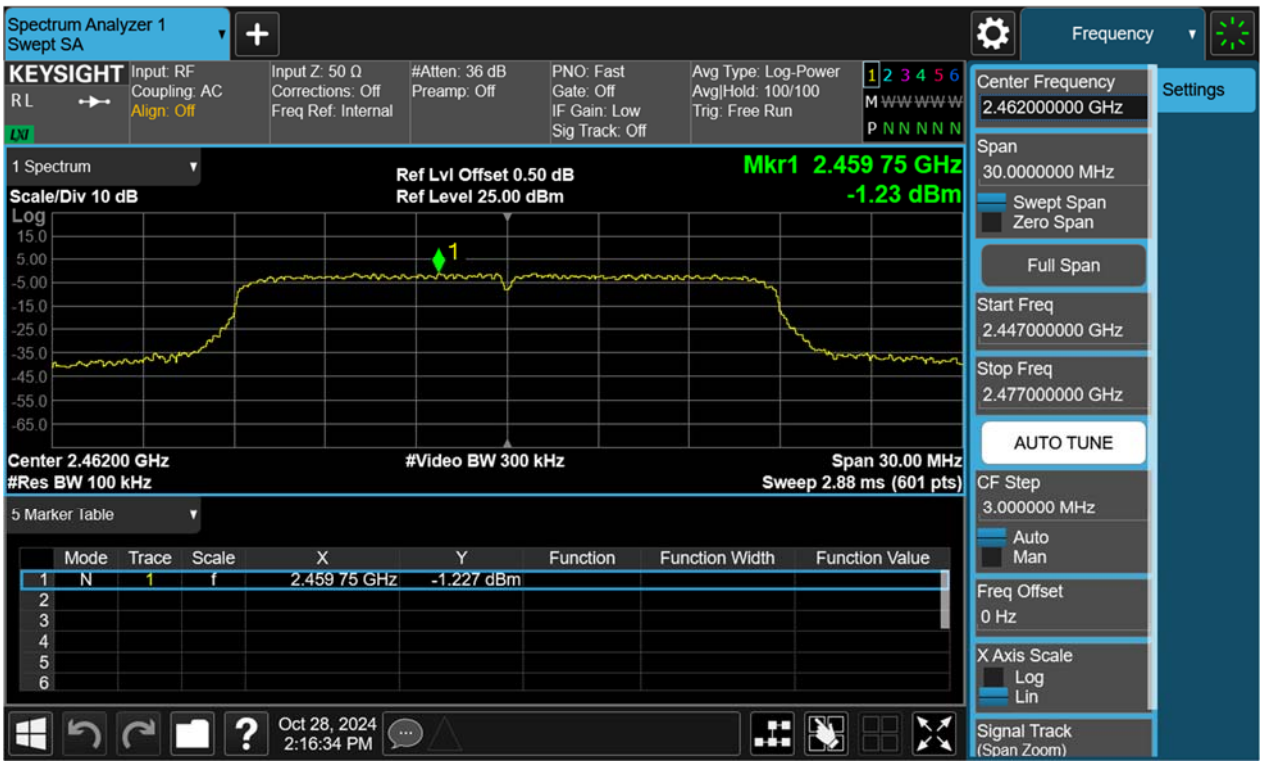
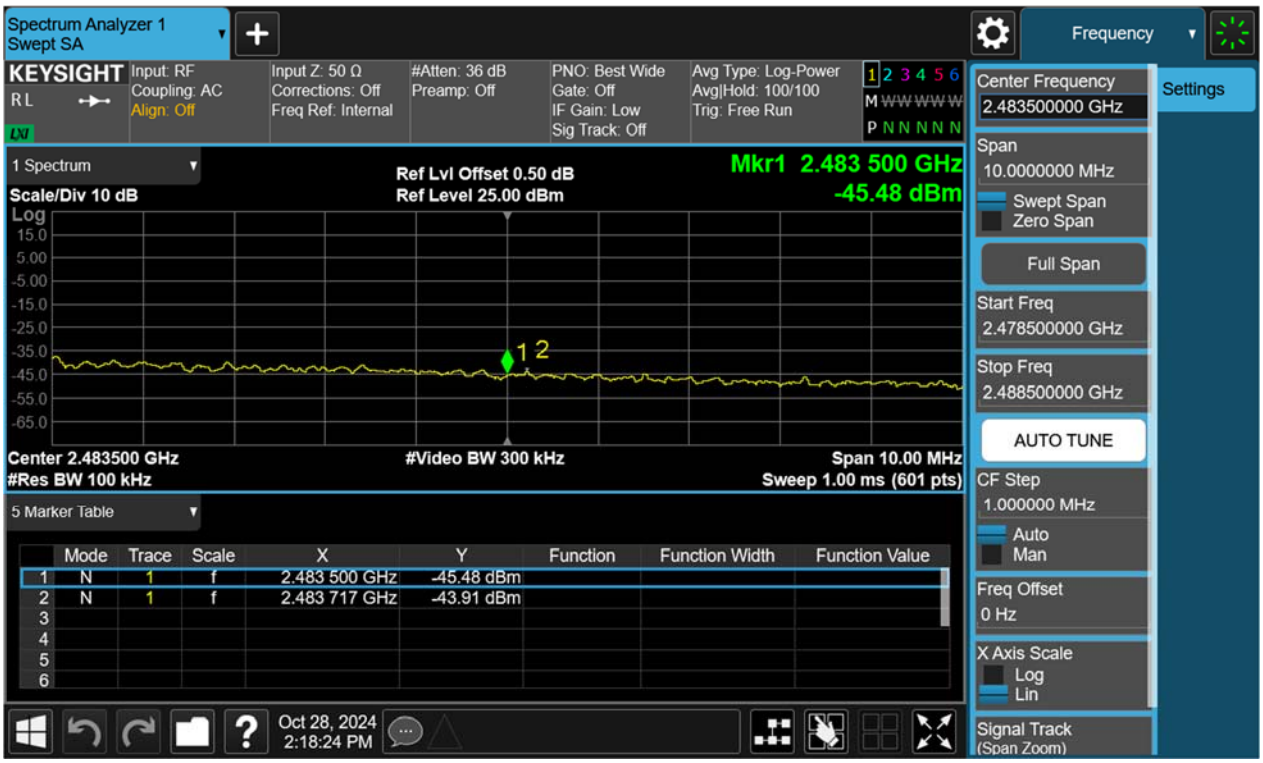


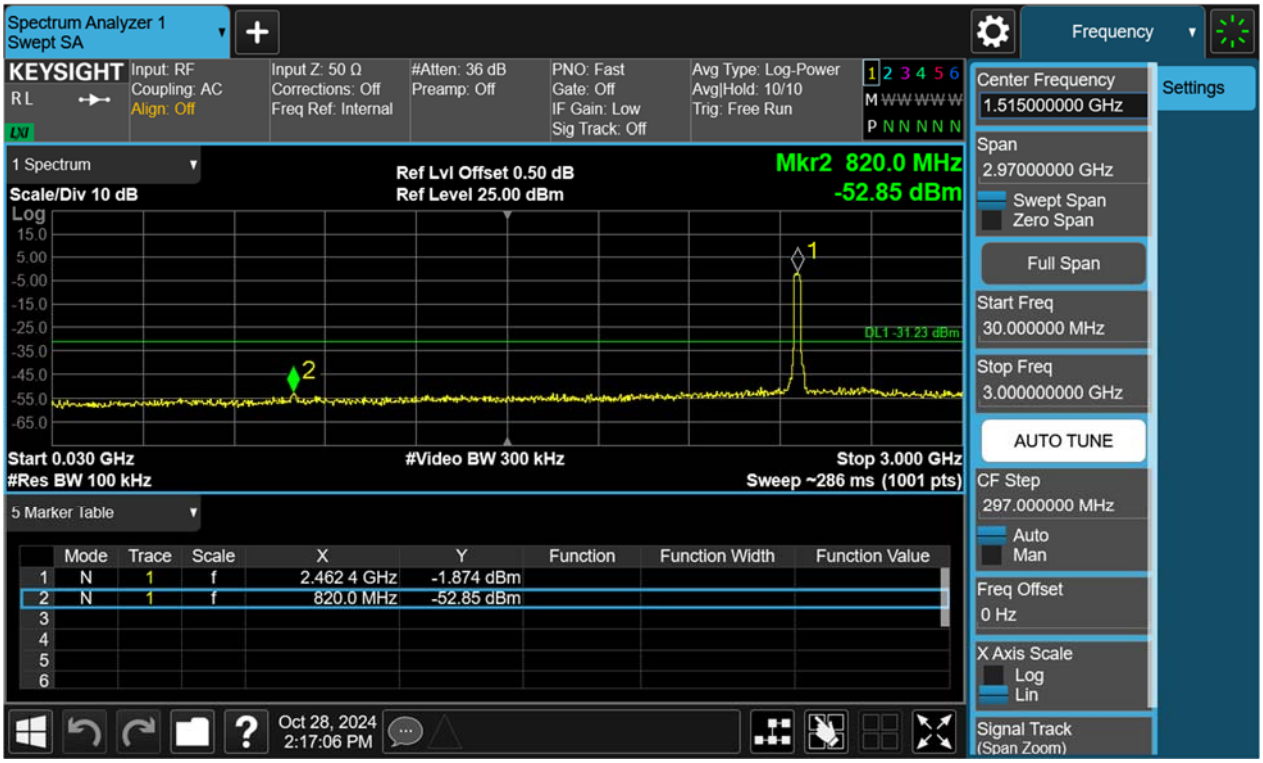
Figure 33: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT20), 2462MHz Carrier Level



Band Edge



Conducted spurious emissions 30MHz-25GHz



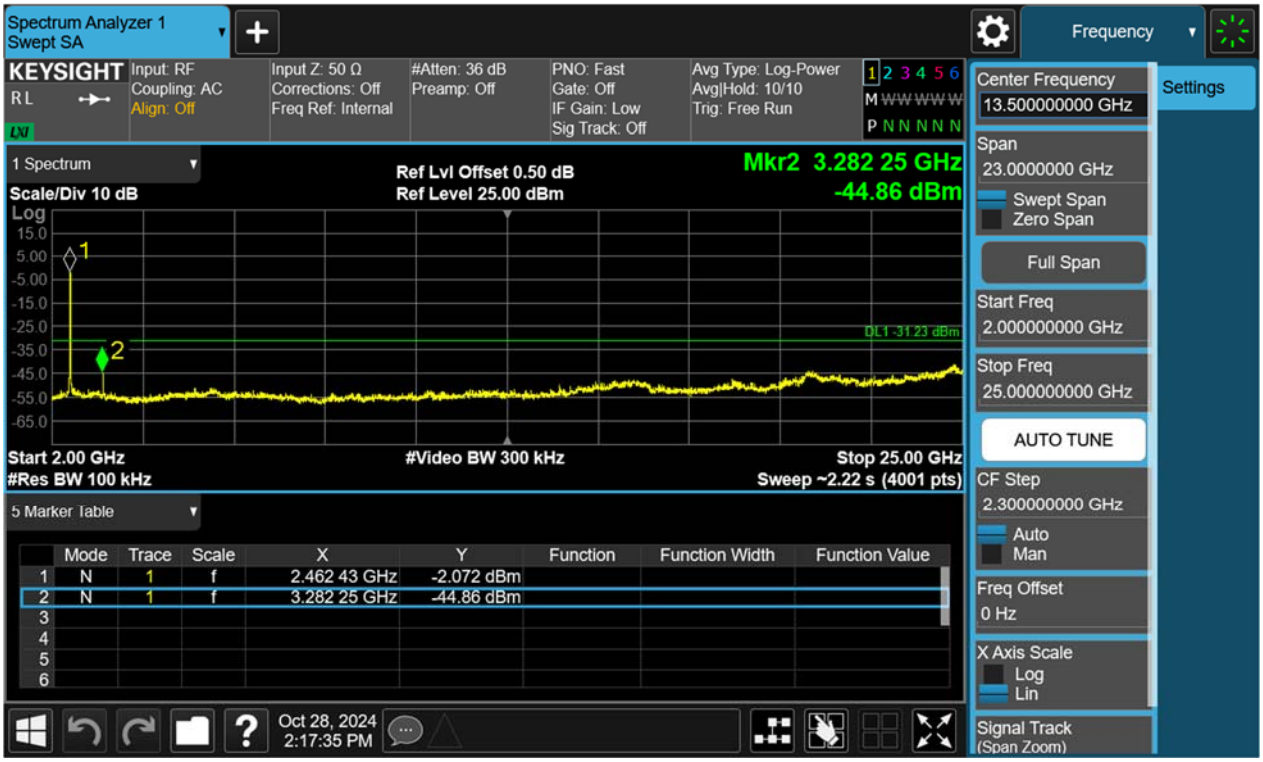
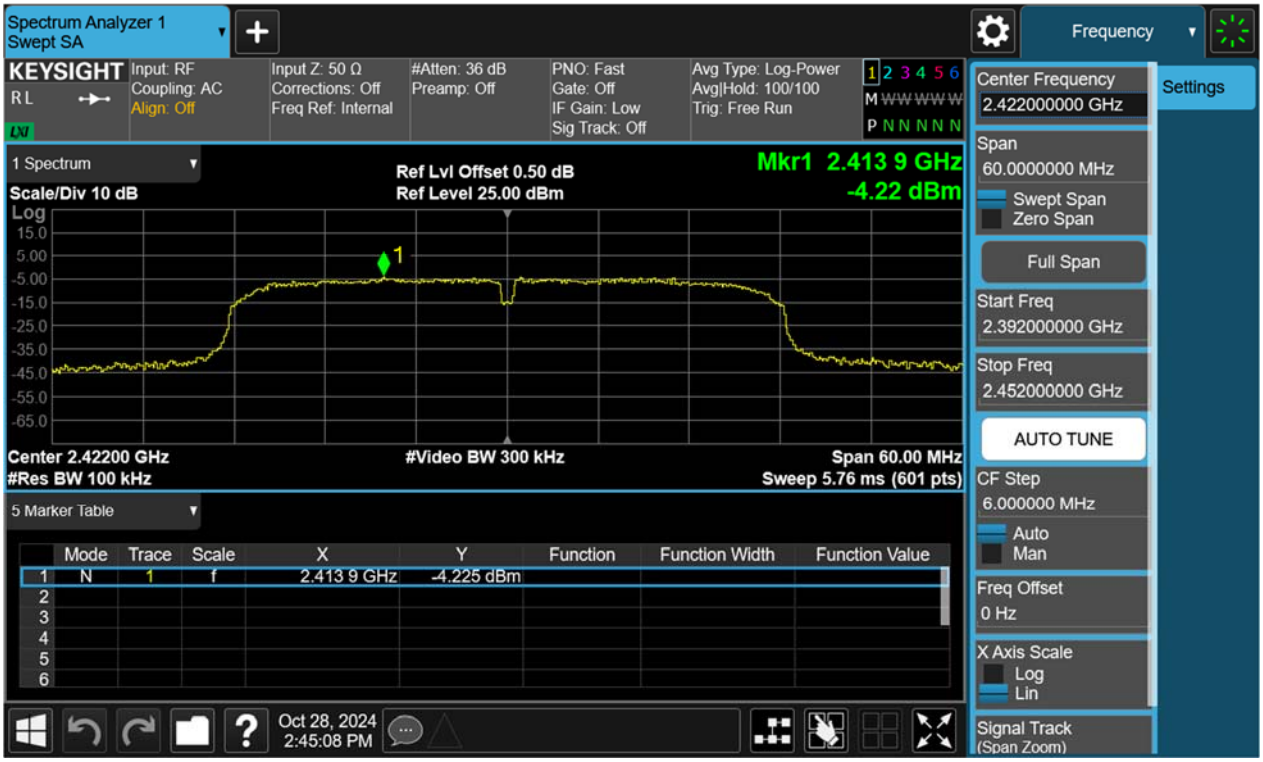
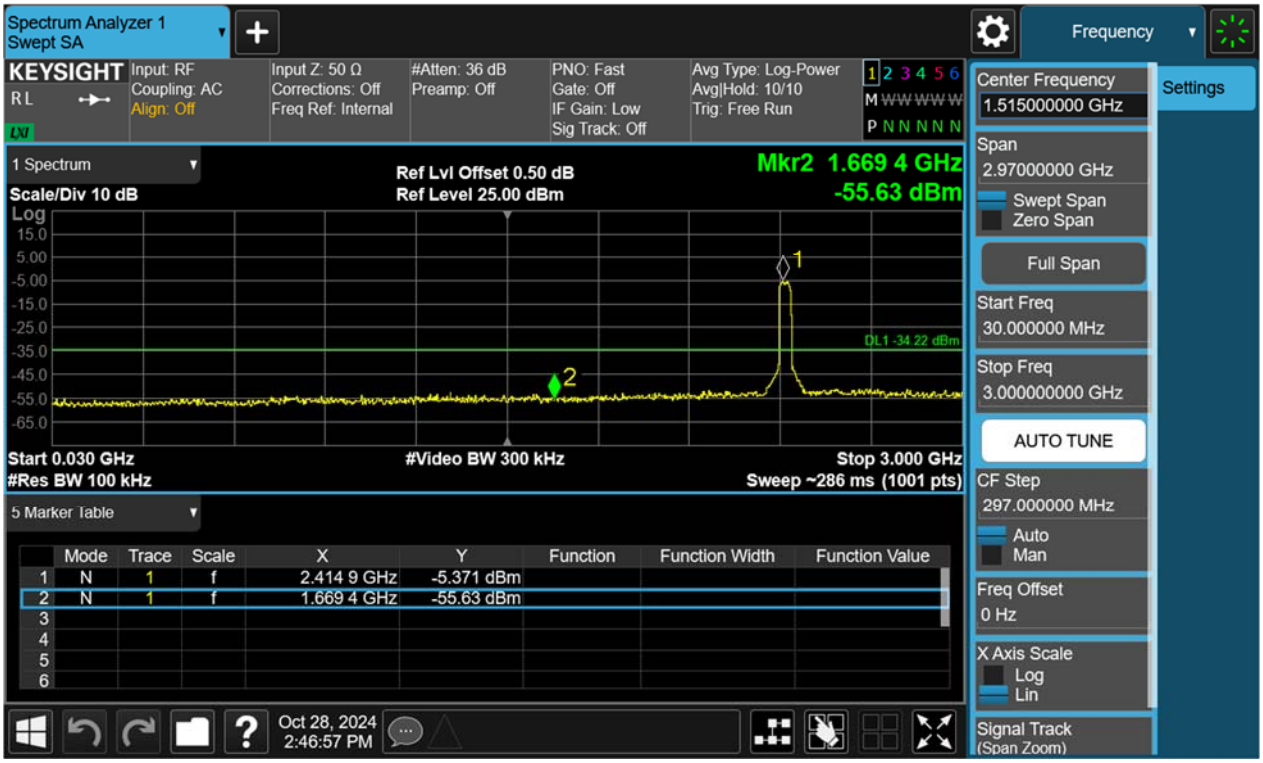


Figure 34: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT40), 2422MHz Carrier Level



Band Edge

Conducted spurious emissions 30MHz-25GHz



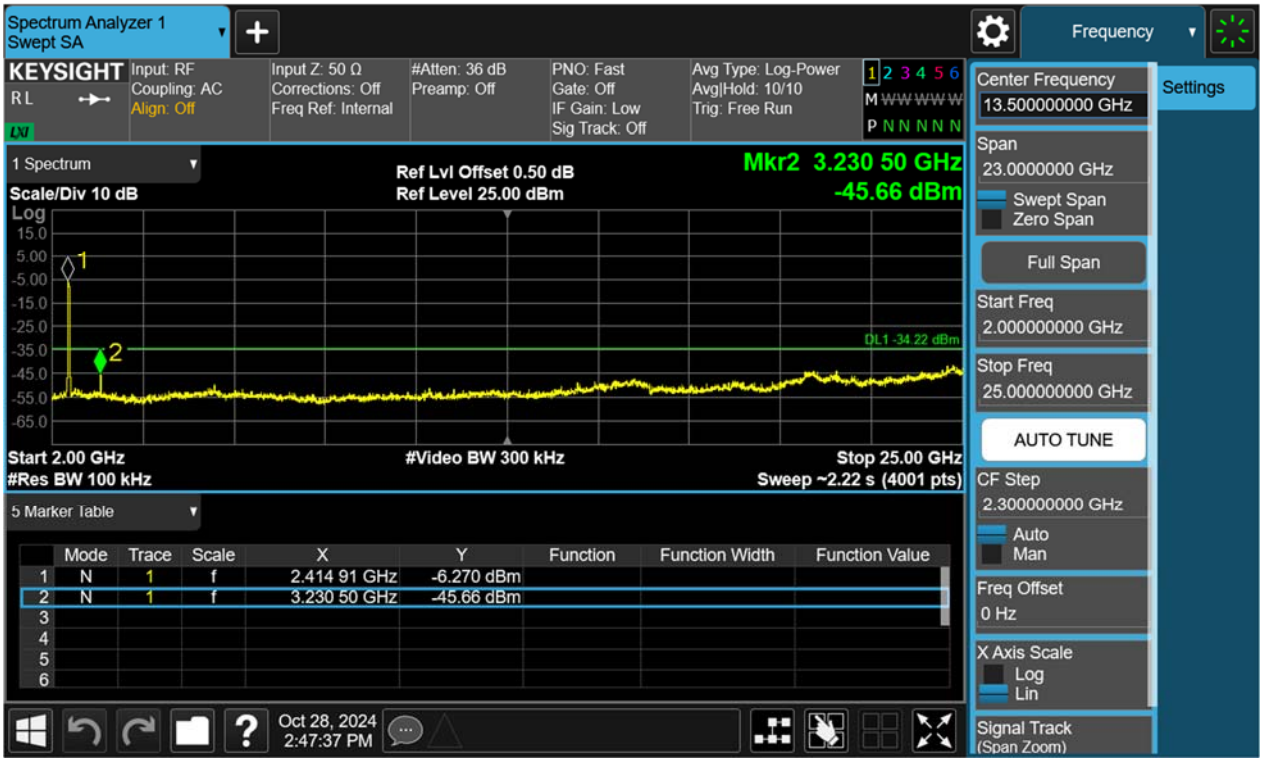


Figure 35: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT40), 2437MHz Carrier Level

Conducted spurious emissions 30MHz-25GHz

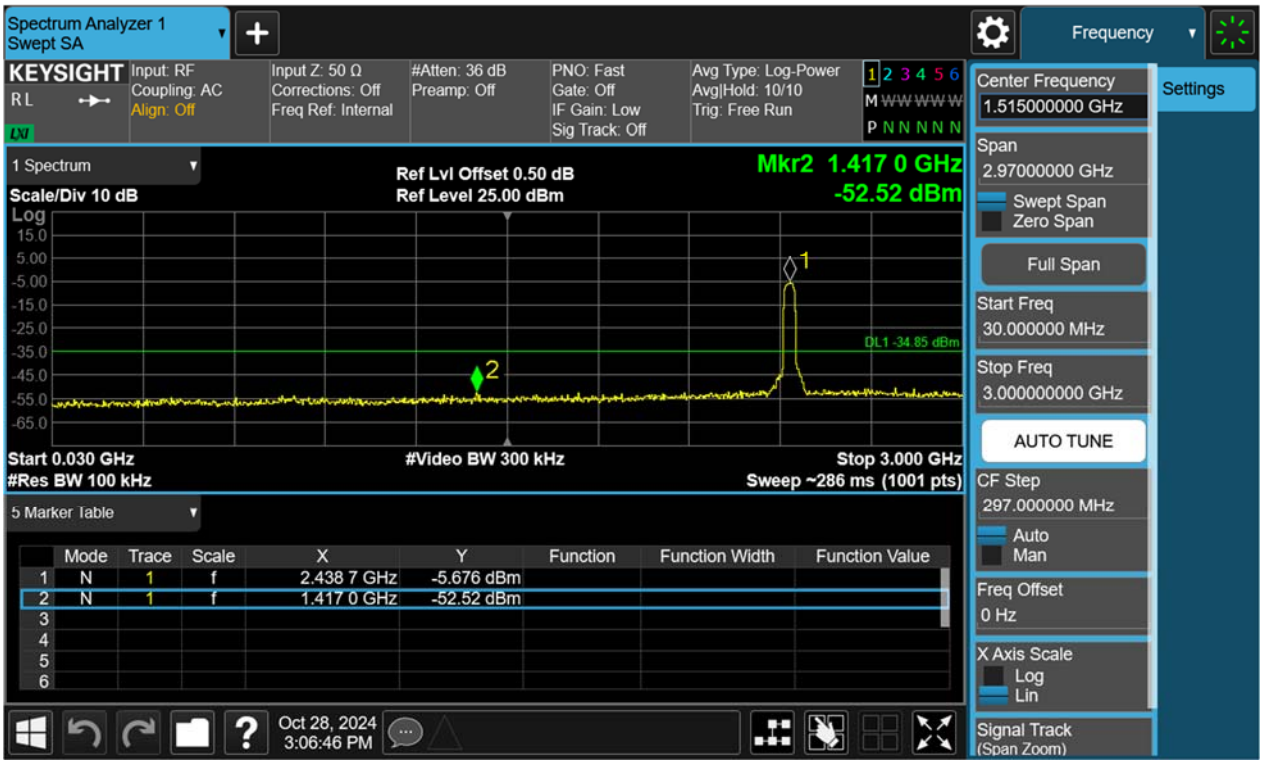
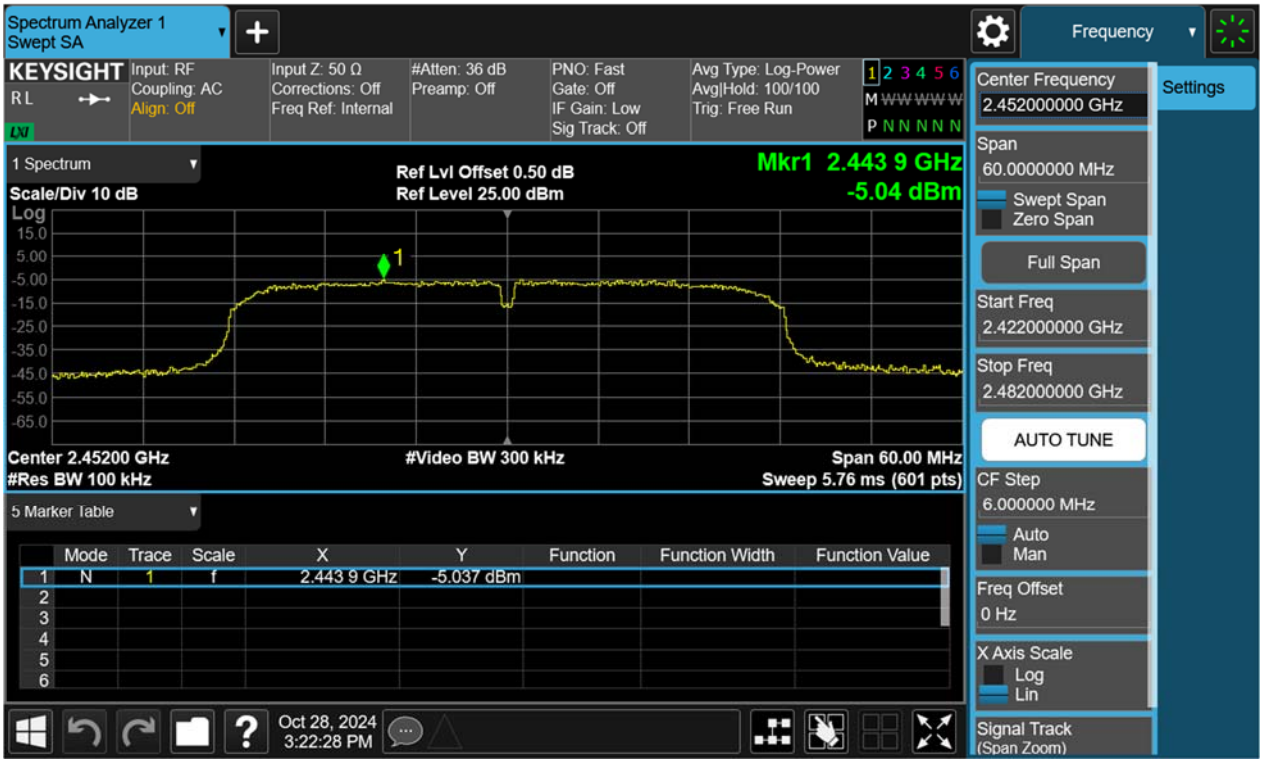
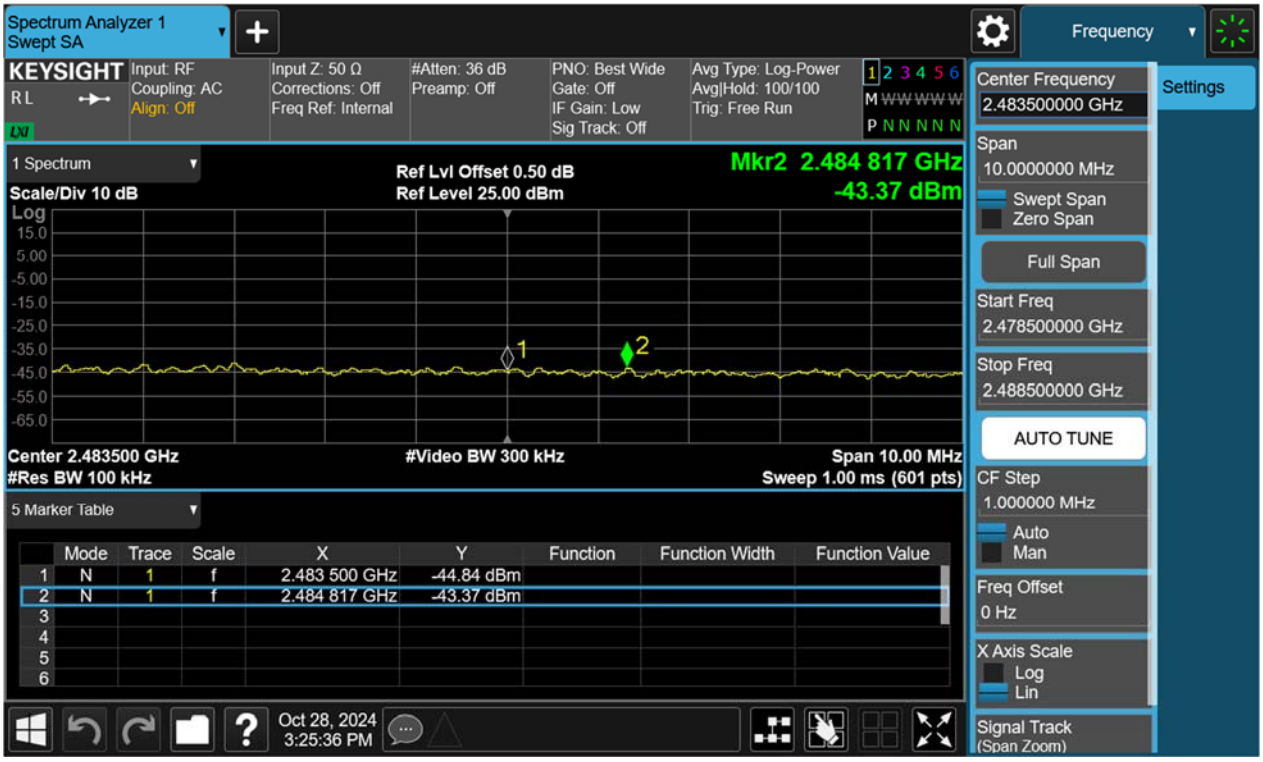


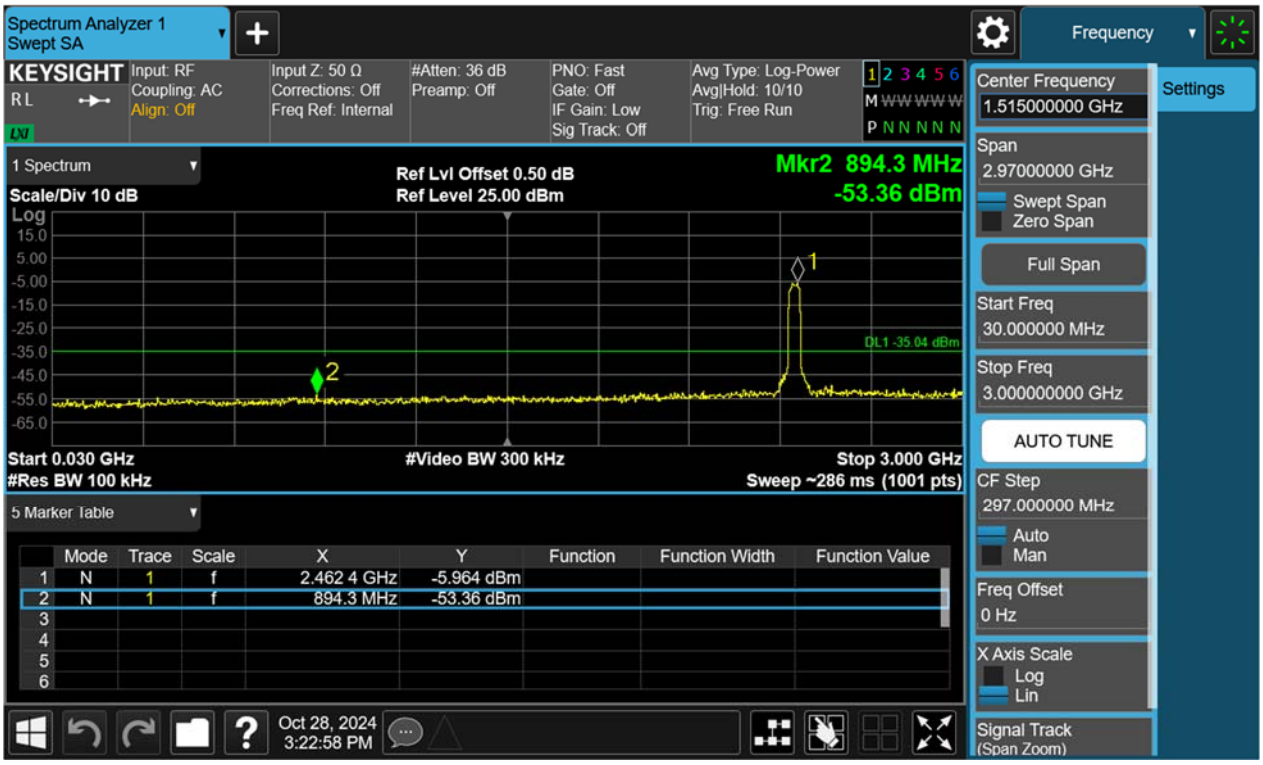
Figure 36: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT40), 2452MHz Carrier Level



Band Edge



Conducted spurious emissions 30MHz-25GHz



4.1.6 Radiated Emission

RESULT: **PASS**

Test standard	:	FCC Part 15.247(d), 15.205, 15.209
Requirement	:	ANSI C63.10-2013, Clause 11.12 KDB 558074 D01 v05r02, Clause 8.6
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Test Channel	:	Low/Middle/High
Operation Mode	:	A.1.a
Ambient temperature	:	23.6°C
Relative humidity	:	44%

Notes

Test plots please refer to the annex document "SHE24090019-02CE DATA WIFI 2.4GHz-TX EXHIBIT A".

1. For 9 kHz ~ 30 MHz, the amplitude of spurious emissions that are attenuated by more than 20dB below the permissible. The value has no need to be reported.

2. The spurious above 18GHz is noise only and 20dB below the limit. The value has no need to be reported.

3. All test modes had been pre-tested, but only the 802.11b at low channel of below 1 GHz is the worst case and recorded in the report.

4. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement –X, Y, and Z-plane. The X-plane results were found as the worst case and were shown in this report.

4.1.7 Band Edge (Restricted-band band-edge)

RESULT: **PASS**

Test standard	:	FCC Part 15.247(d), 15.205, 15.209
Requirement	:	ANSI C63.10-2013, Clause 11.13 KDB 558074 D01 v05r02, Clause 8.7
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Test Channel	:	Low/Middle/High
Operation Mode	:	A.1.a
Ambient temperature	:	23.6°C
Relative humidity	:	44%

Notes:

1. Test plots please refer to the annex document "SHE24090019-02CE DATA WIFI 2.4GHz-TX EXHIBIT A".

2. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement –X, Y, and Z-plane. The X-plane results were found as the worst case and were shown in this report.

4.2 Mains Emissions

4.2.1 Conducted Emission on AC Mains

RESULT: **PASS**

Test standard	:	FCC Part 15.207(a)
Requirement	:	ANSI C63.10-2013, Clause 6.2
Kind of test site	:	Shielded room

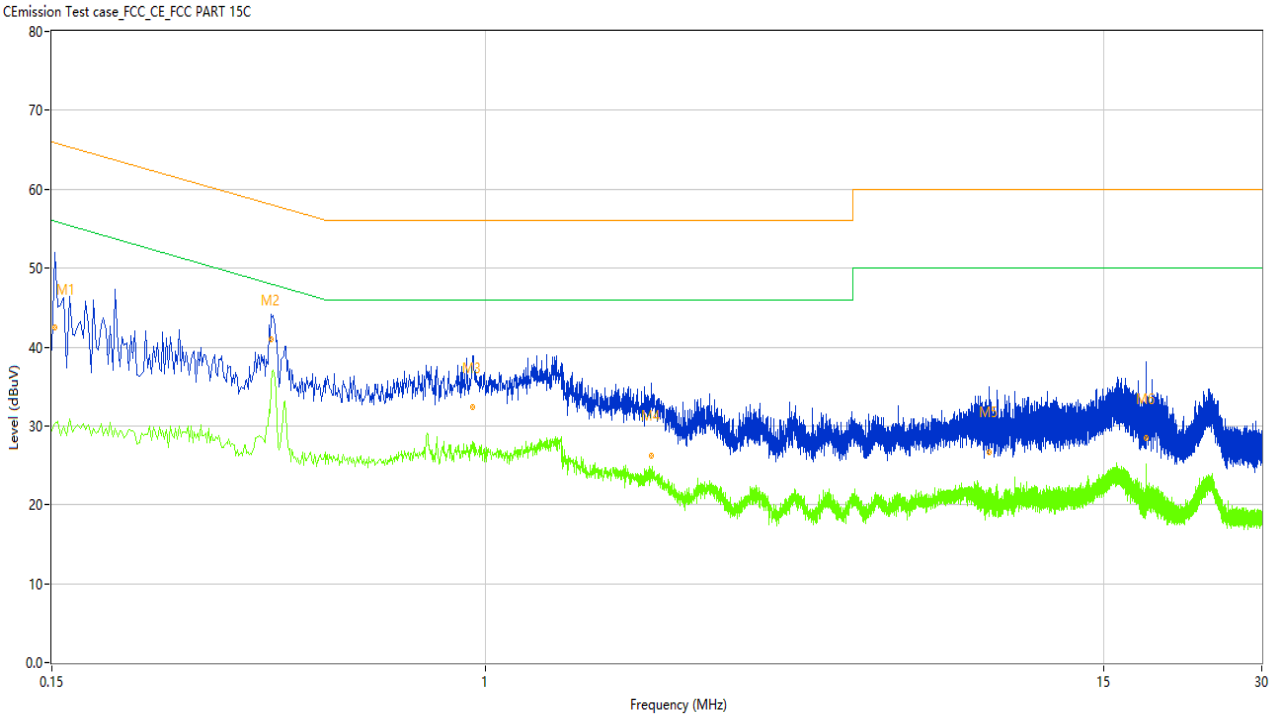
Test setup

Input Voltage	:	DC 12V supply by AC adapter (which received AC 120V, 60Hz)
Operation Mode	:	A.1.a
Earthing	:	Disconnected to GND
Ambient temperature	:	22.9°C
Relative humidity	:	53%

For details refer to following test plot.

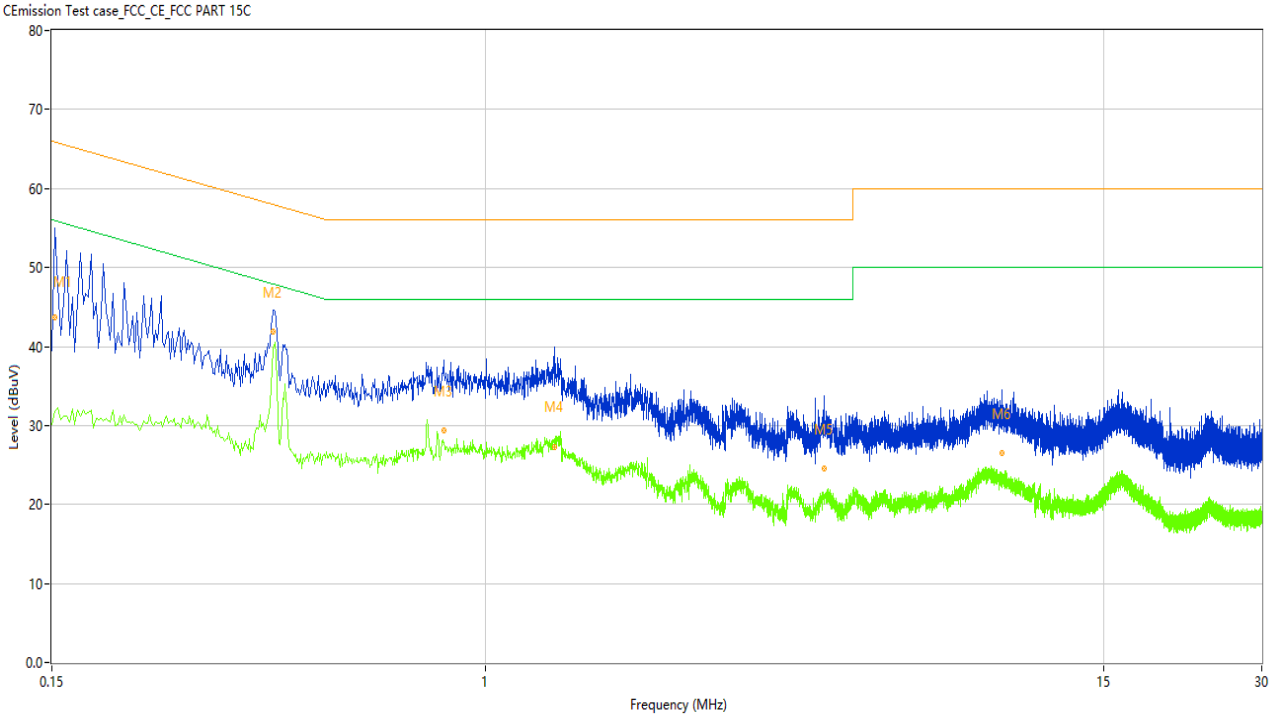
Note：All test modes had been pre-tested, but only the 802.11b at low channel is the worst case and recorded in the report.

Figure 37: Conducted Emission on AC Mains, L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.152	59.02	10.25	65.89	6.87	Peak	L	Pass
1*	0.152	42.46	10.25	65.89	23.43	QP	L	Pass
1**	0.152	30.26	10.25	55.89	25.63	AV	L	Pass
2	0.392	45.81	10.25	58.02	12.21	Peak	L	Pass
2*	0.392	41.00	10.25	58.02	17.02	QP	L	Pass
2**	0.392	35.05	10.25	48.02	12.97	AV	L	Pass
3	0.948	38.57	10.25	56.00	17.43	Peak	L	Pass
3*	0.948	32.45	10.25	56.00	23.55	QP	L	Pass
3**	0.948	27.13	10.25	46.00	18.87	AV	L	Pass
4	2.074	32.94	10.20	56.00	23.06	Peak	L	Pass
4*	2.074	26.15	10.20	56.00	29.85	QP	L	Pass
4**	2.074	23.64	10.20	46.00	22.36	AV	L	Pass
5	9.094	34.99	10.43	60.00	25.01	Peak	L	Pass
5*	9.094	26.67	10.43	60.00	33.33	QP	L	Pass
5**	9.094	21.49	10.43	50.00	28.51	AV	L	Pass
6	18.086	40.32	10.85	60.00	19.68	Peak	L	Pass
6*	18.086	28.43	10.85	60.00	31.57	QP	L	Pass
6**	18.086	25.13	10.85	50.00	24.87	AV	L	Pass

Figure 38: Conducted Emission on AC Mains, N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.152	60.37	10.12	65.89	5.52	Peak	N	Pass
1*	0.152	43.72	10.12	65.89	22.17	QP	N	Pass
1**	0.152	31.72	10.12	55.89	24.17	AV	N	Pass
2	0.396	48.26	10.13	57.94	9.68	Peak	N	Pass
2*	0.396	41.84	10.13	57.94	16.10	QP	N	Pass
2**	0.396	39.80	10.13	47.94	8.14	AV	N	Pass
3	0.834	37.29	10.15	56.00	18.71	Peak	N	Pass
3*	0.834	29.37	10.15	56.00	26.63	QP	N	Pass
3**	0.834	27.69	10.15	46.00	18.31	AV	N	Pass
4	1.358	34.97	10.04	56.00	21.03	Peak	N	Pass
4*	1.358	27.29	10.04	56.00	28.71	QP	N	Pass
4**	1.358	27.71	10.04	46.00	18.29	AV	N	Pass
5	4.412	33.22	10.22	56.00	22.78	Peak	N	Pass
5*	4.412	24.48	10.22	56.00	31.52	QP	N	Pass
5**	4.412	21.28	10.22	46.00	24.72	AV	N	Pass
6	9.622	36.00	10.34	60.00	24.00	Peak	N	Pass
6*	9.622	26.55	10.34	60.00	33.45	QP	N	Pass
6**	9.622	23.64	10.34	50.00	26.36	AV	N	Pass