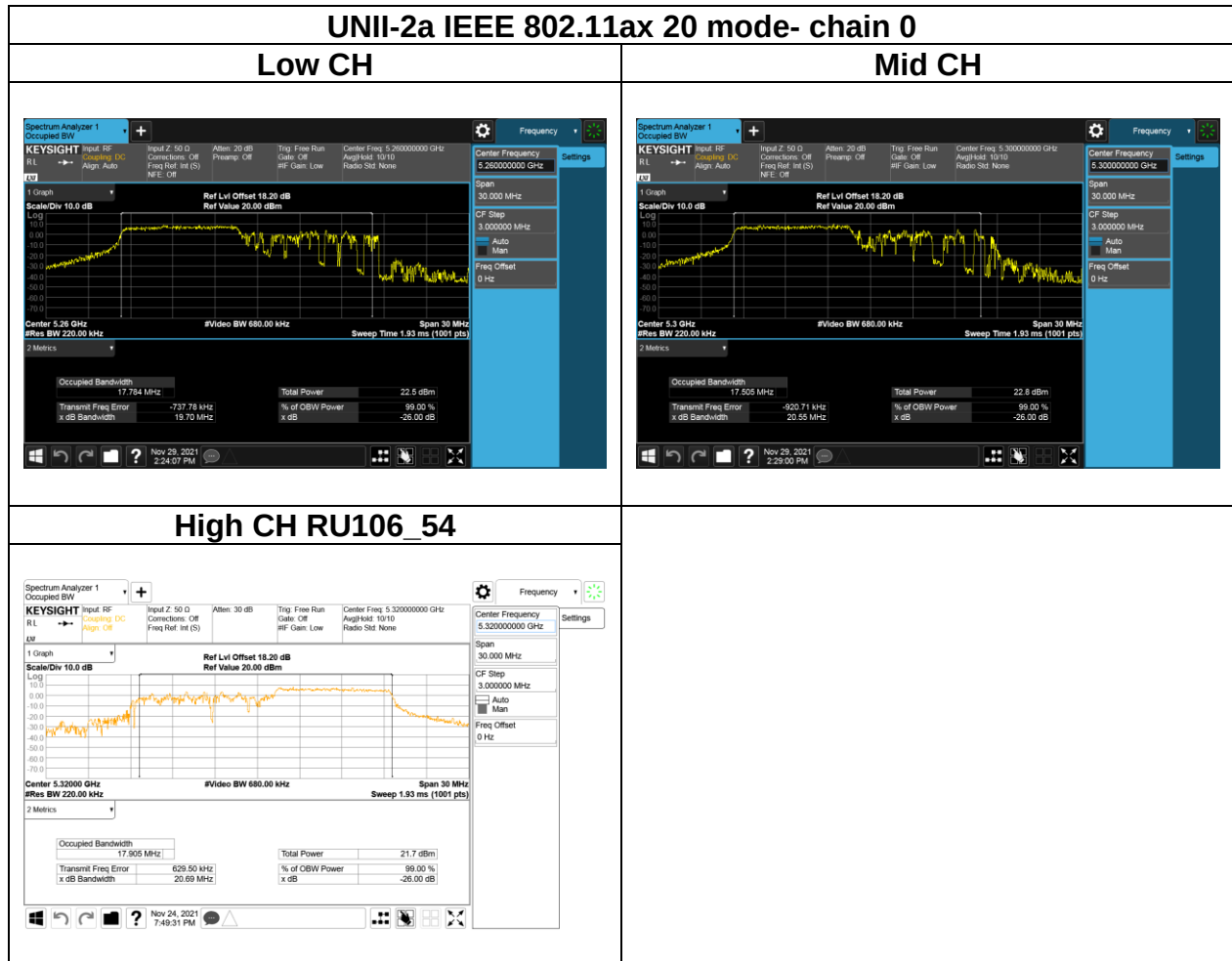


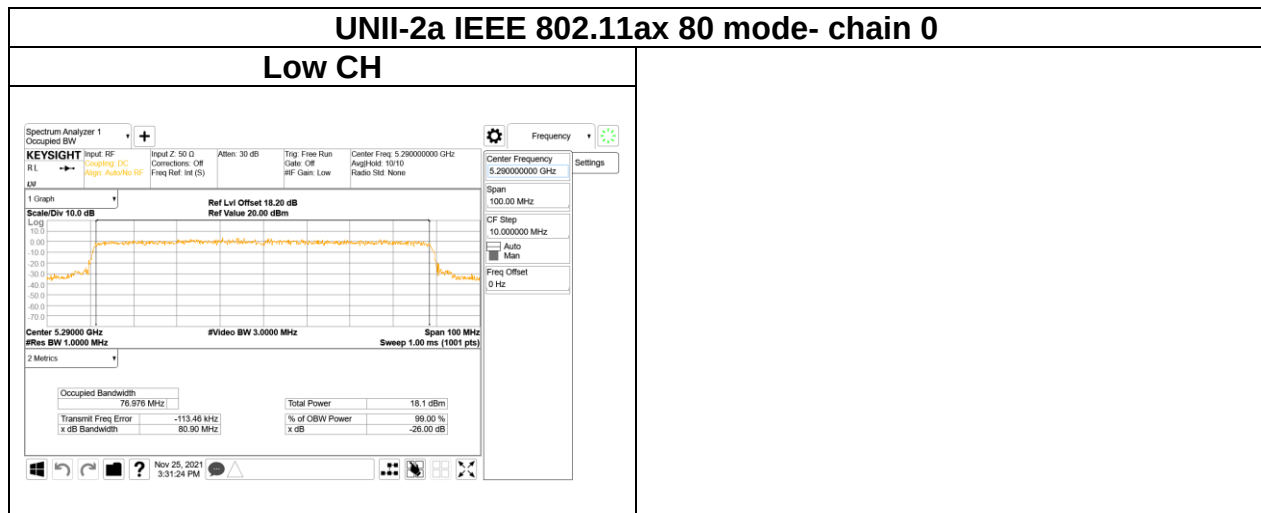
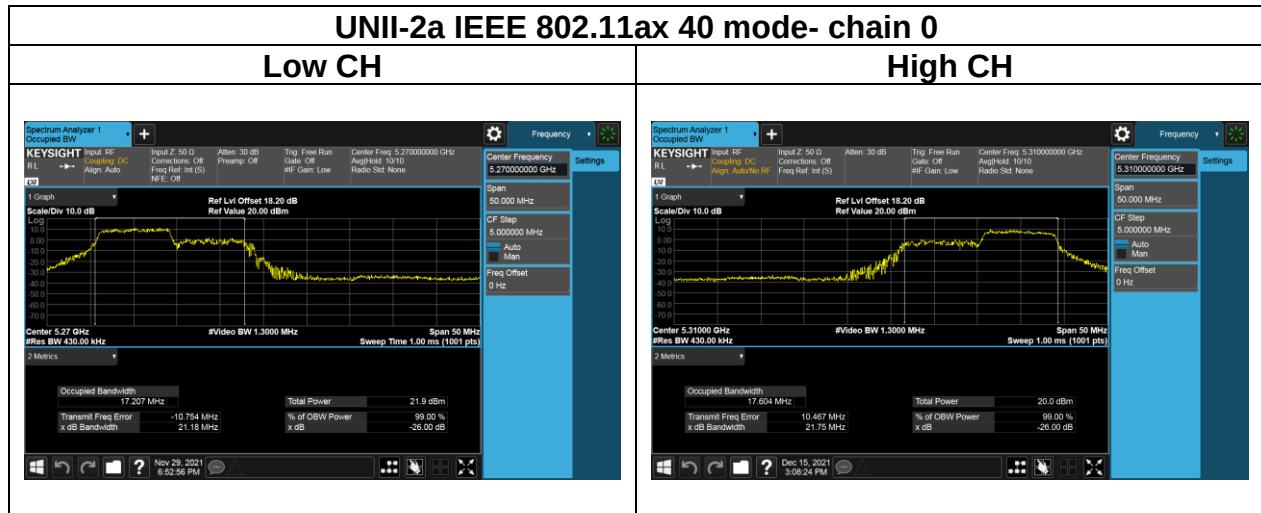


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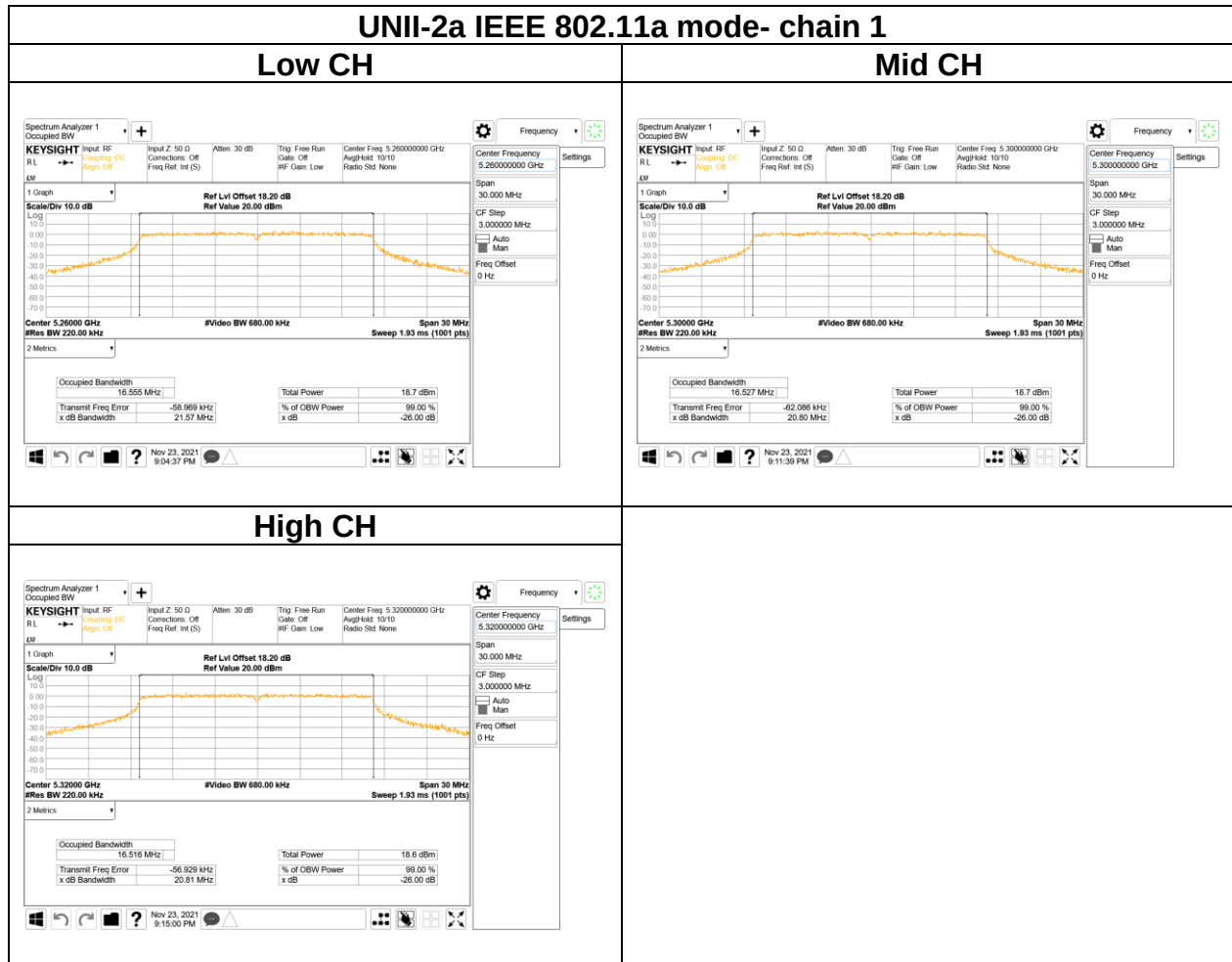
Rev.: 00



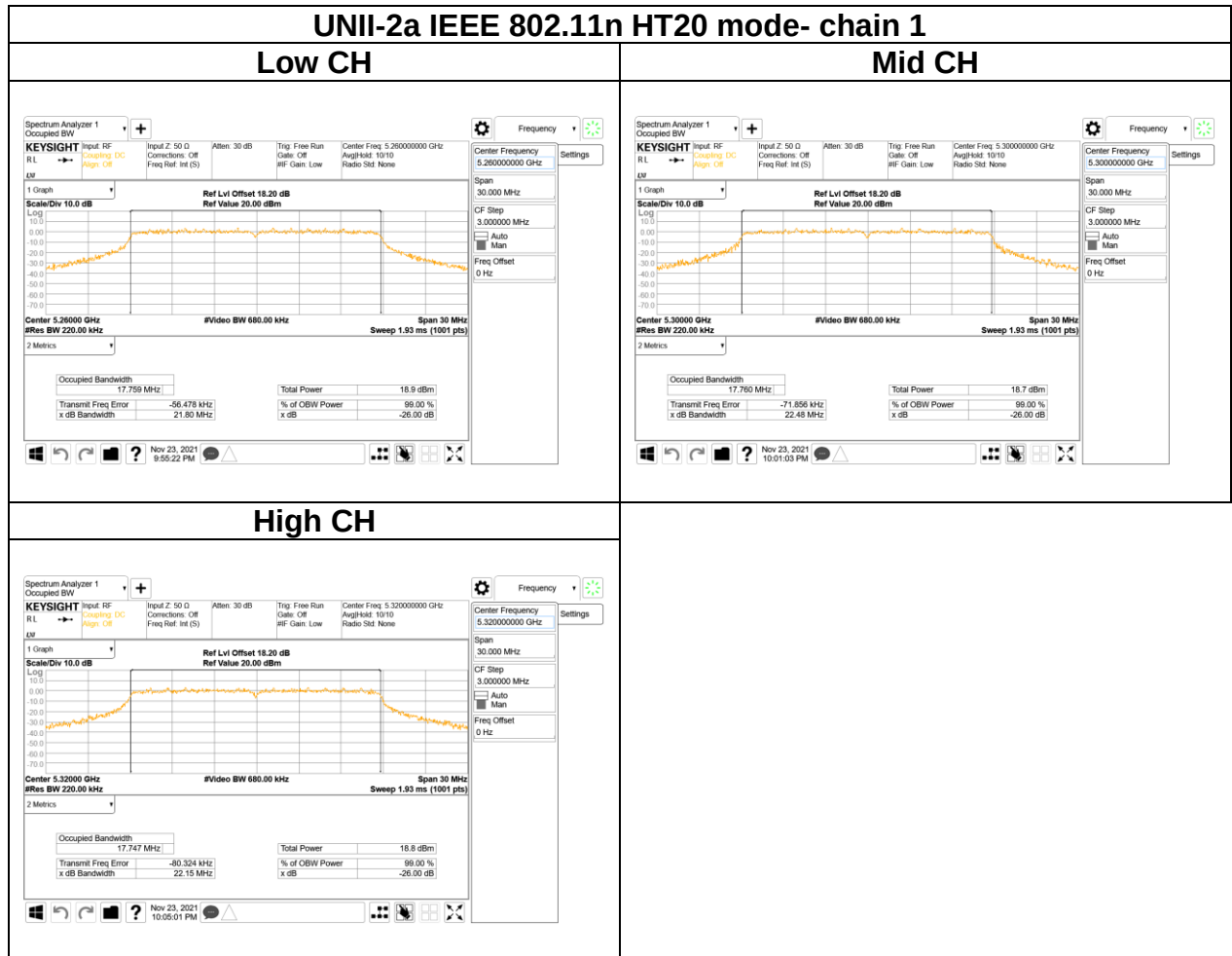




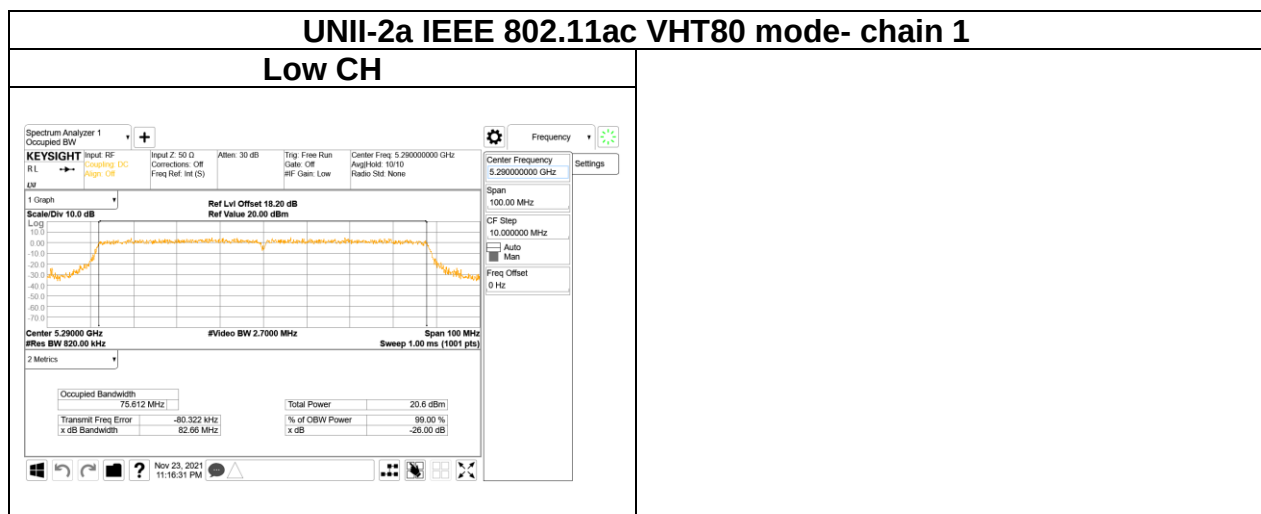
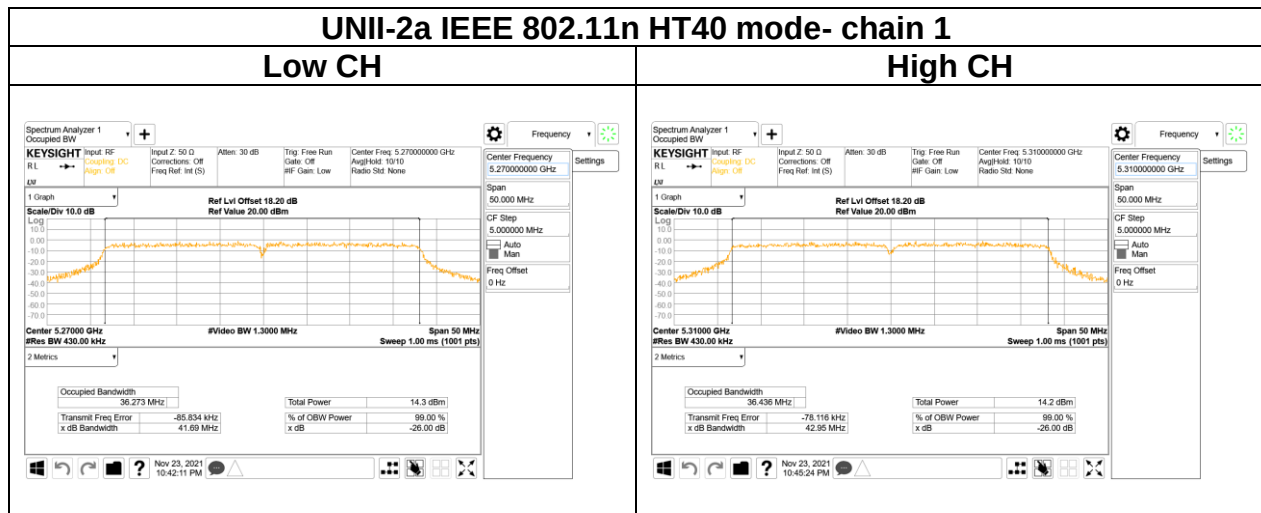
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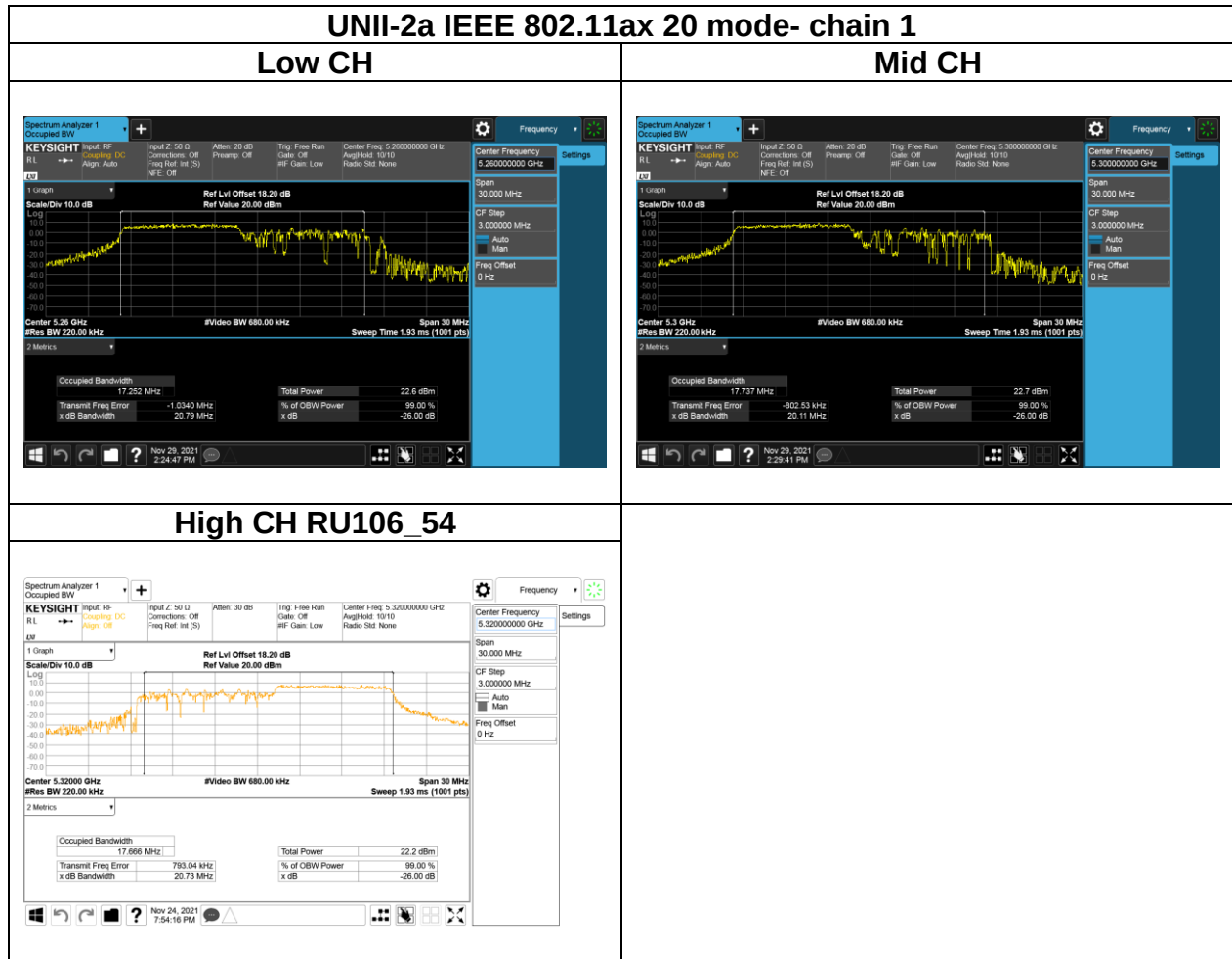


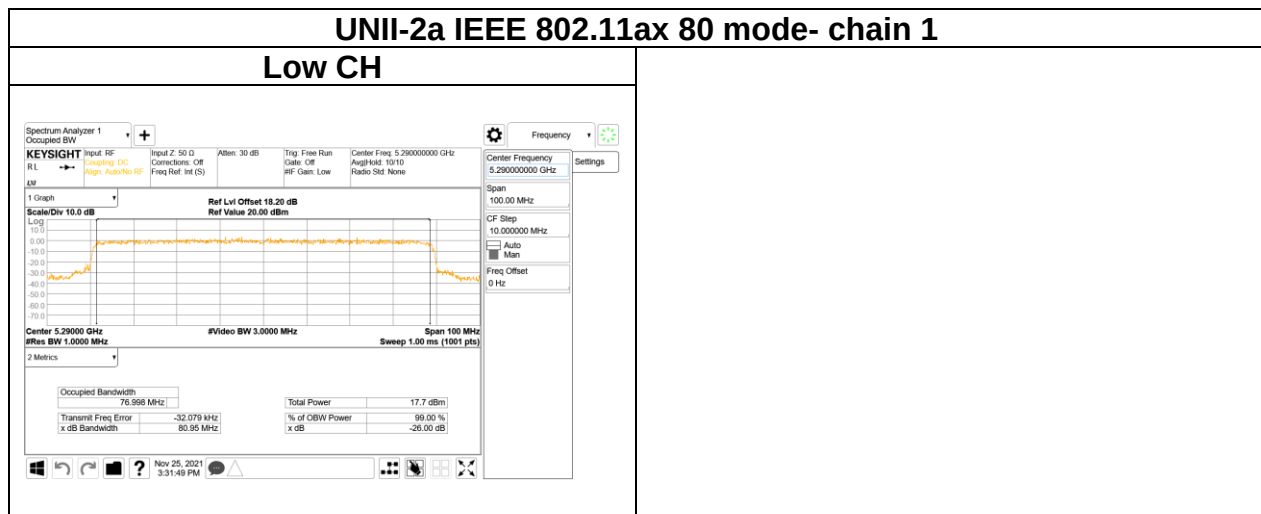
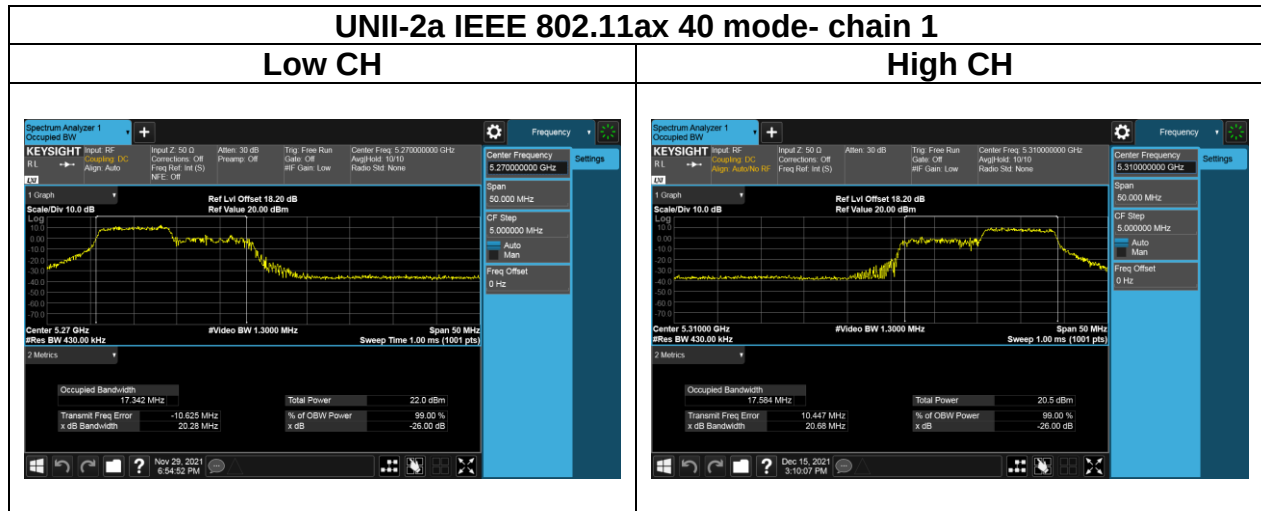
Report No.: T210319W02-RP2



Report No.: T210319W02-RP2

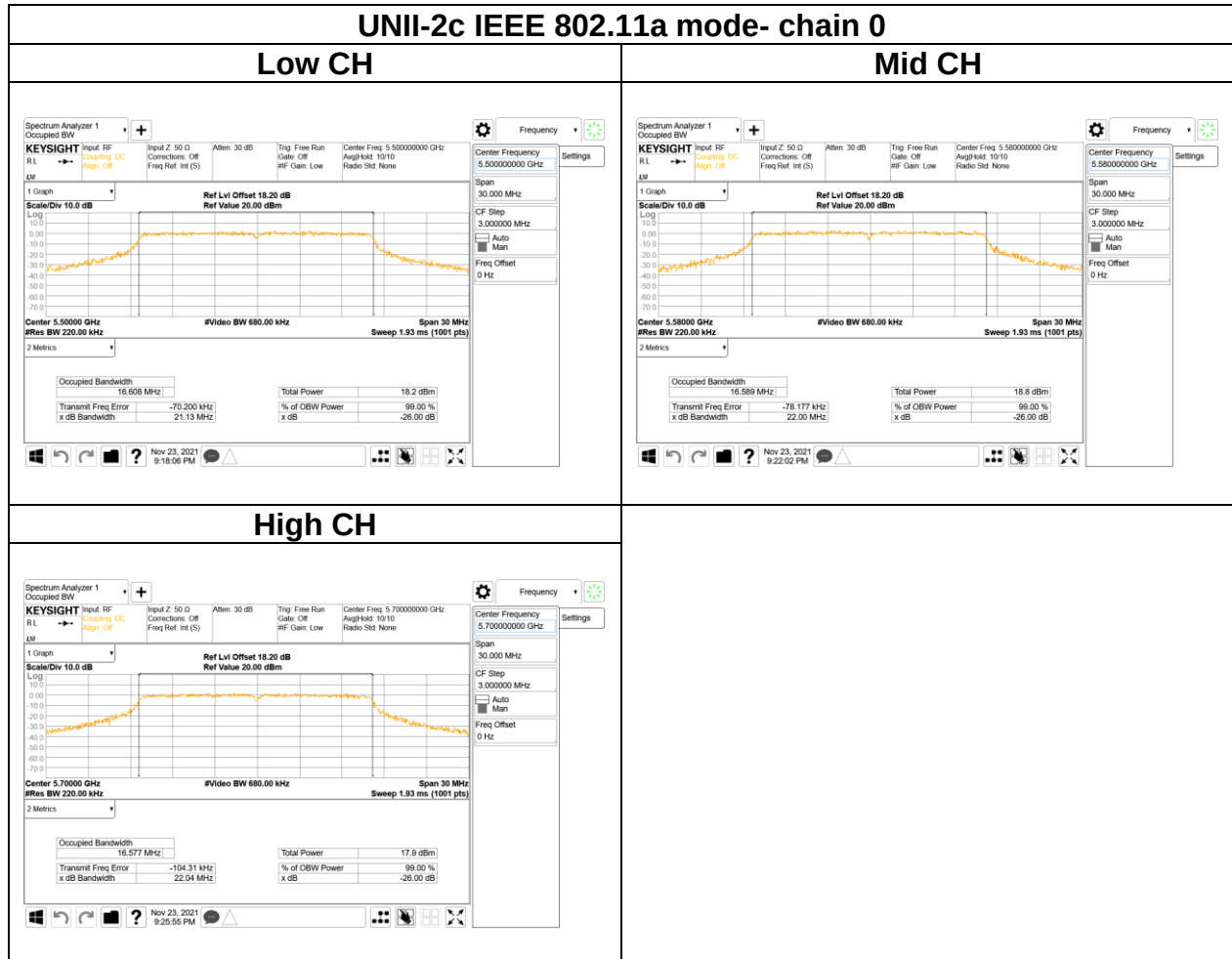


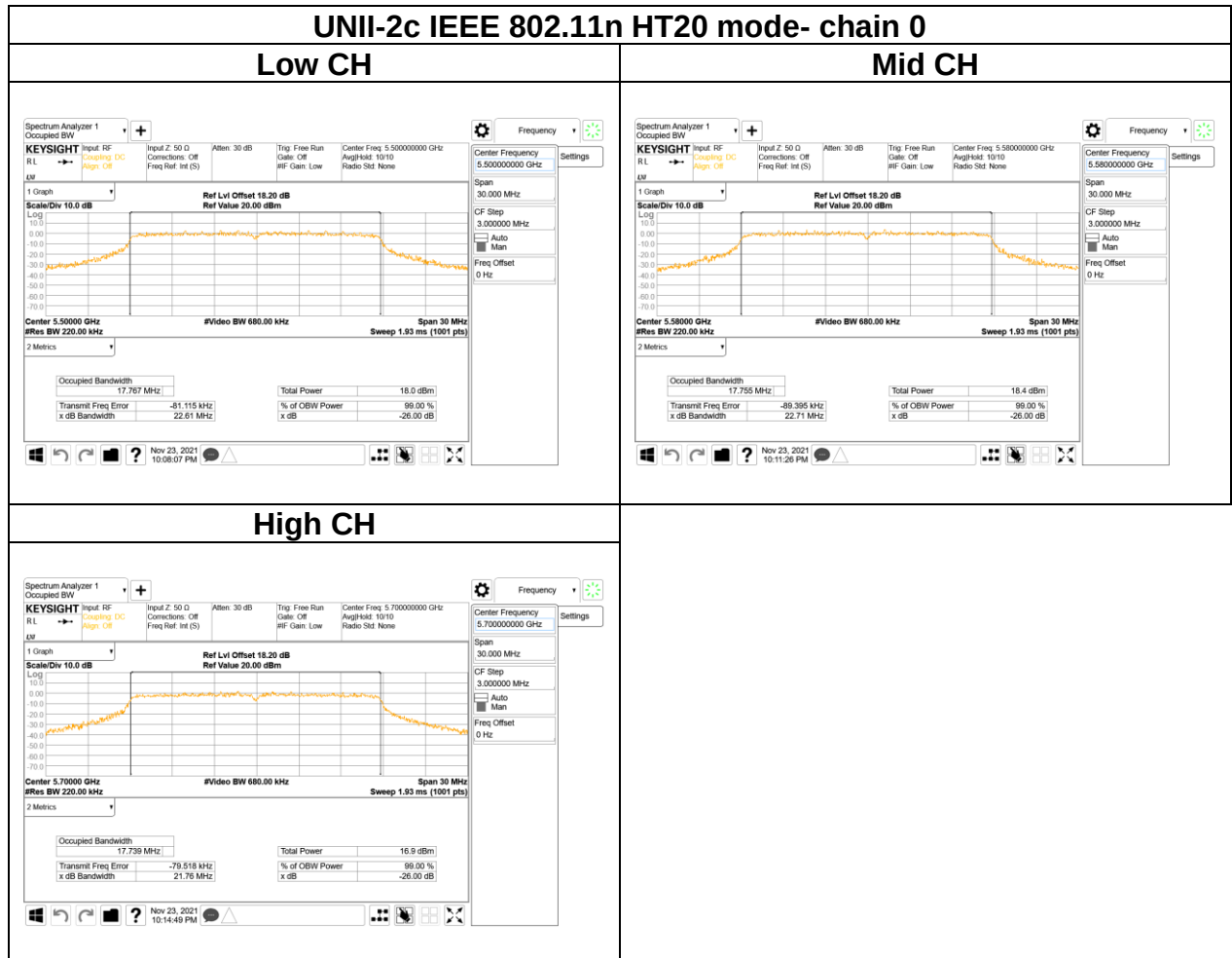


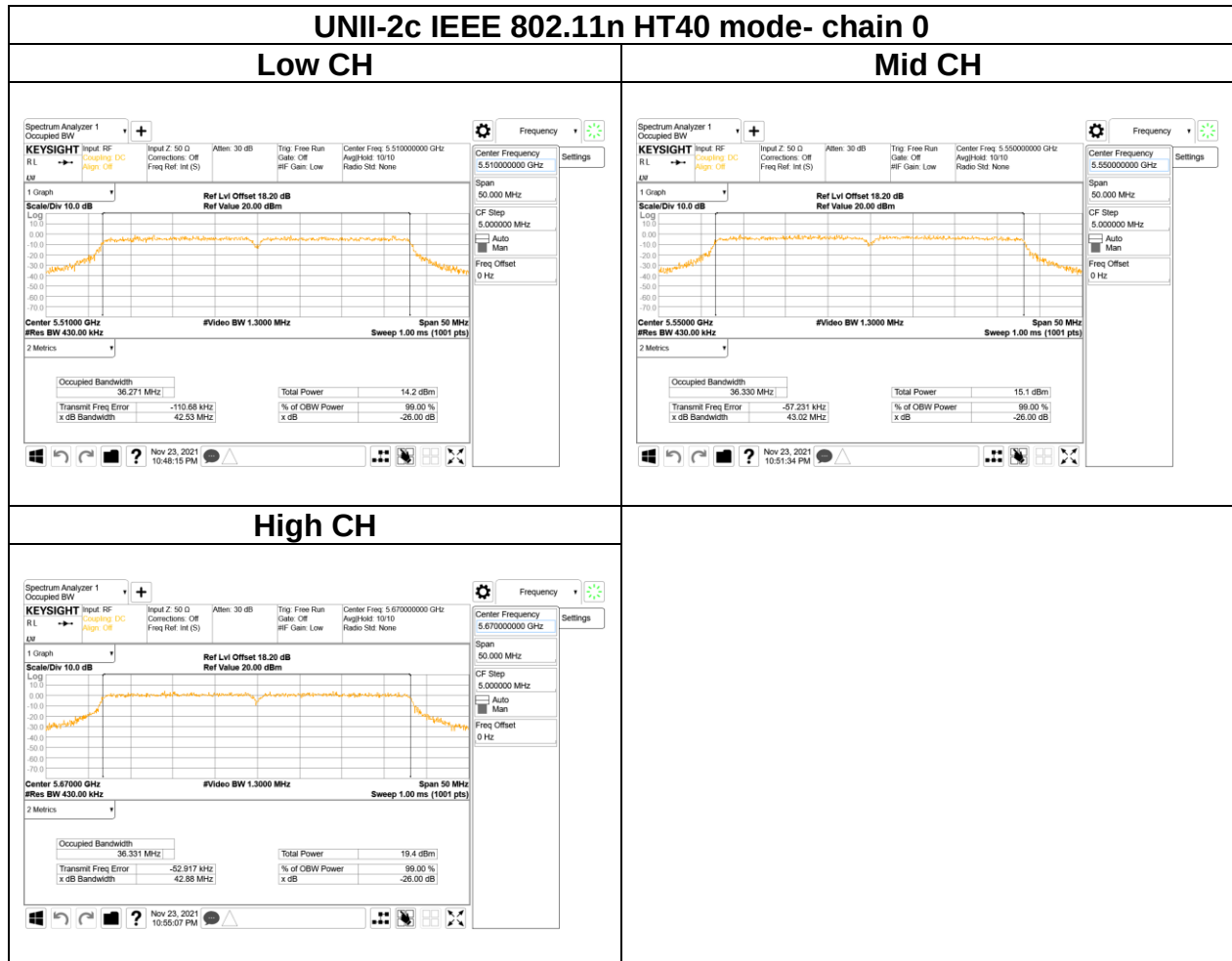


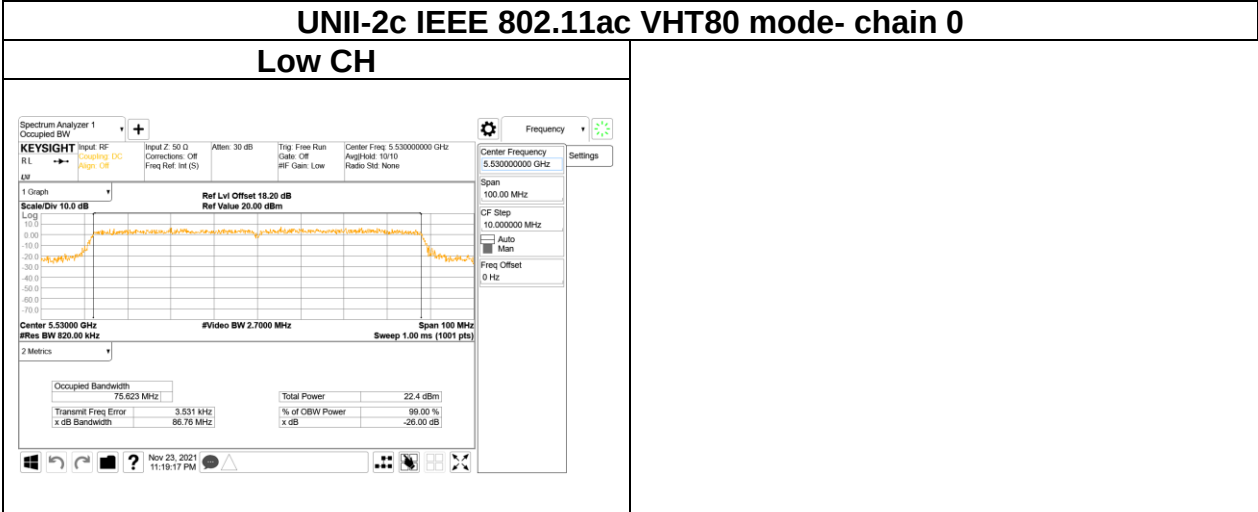
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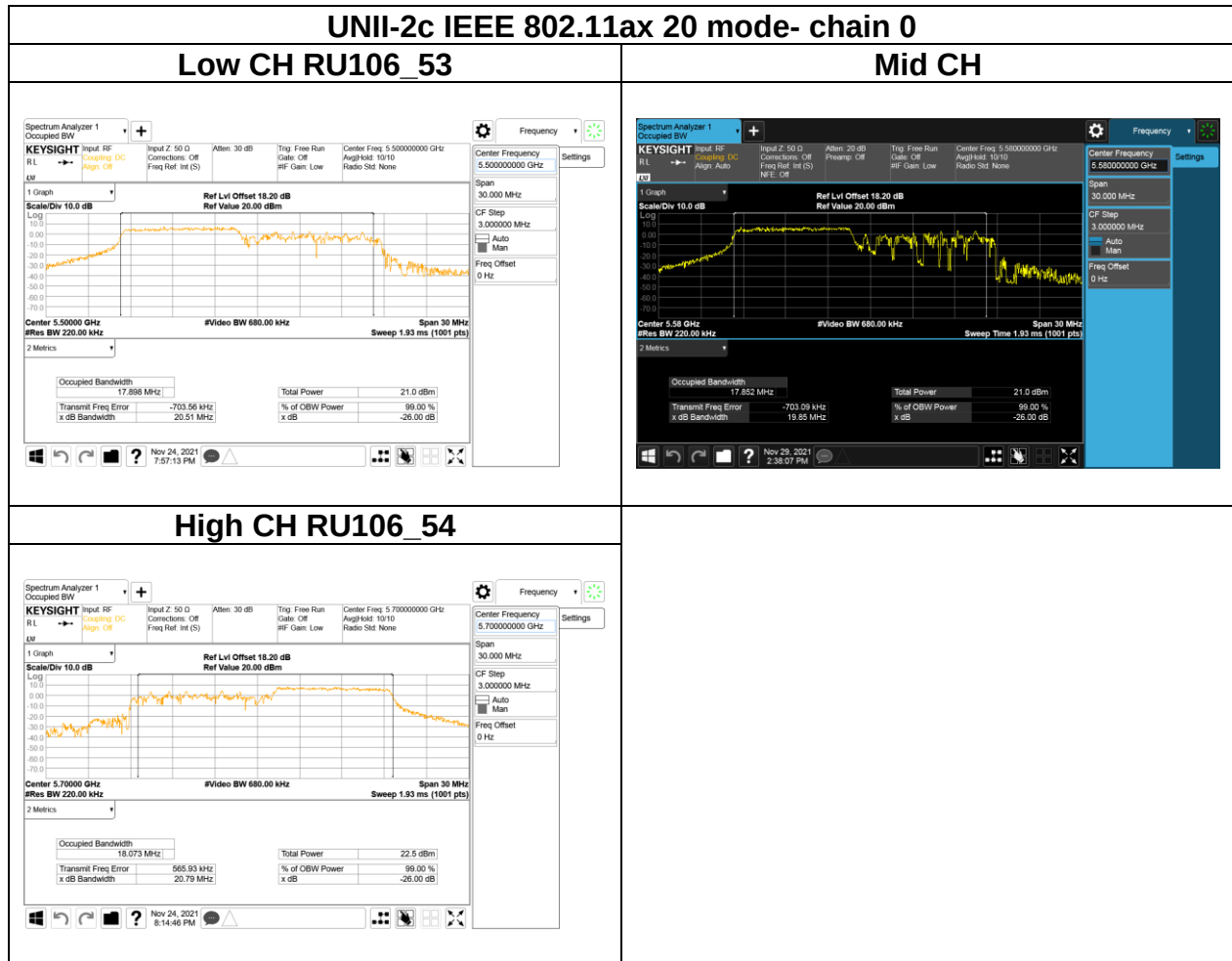
Test Plots (OBW 99%)

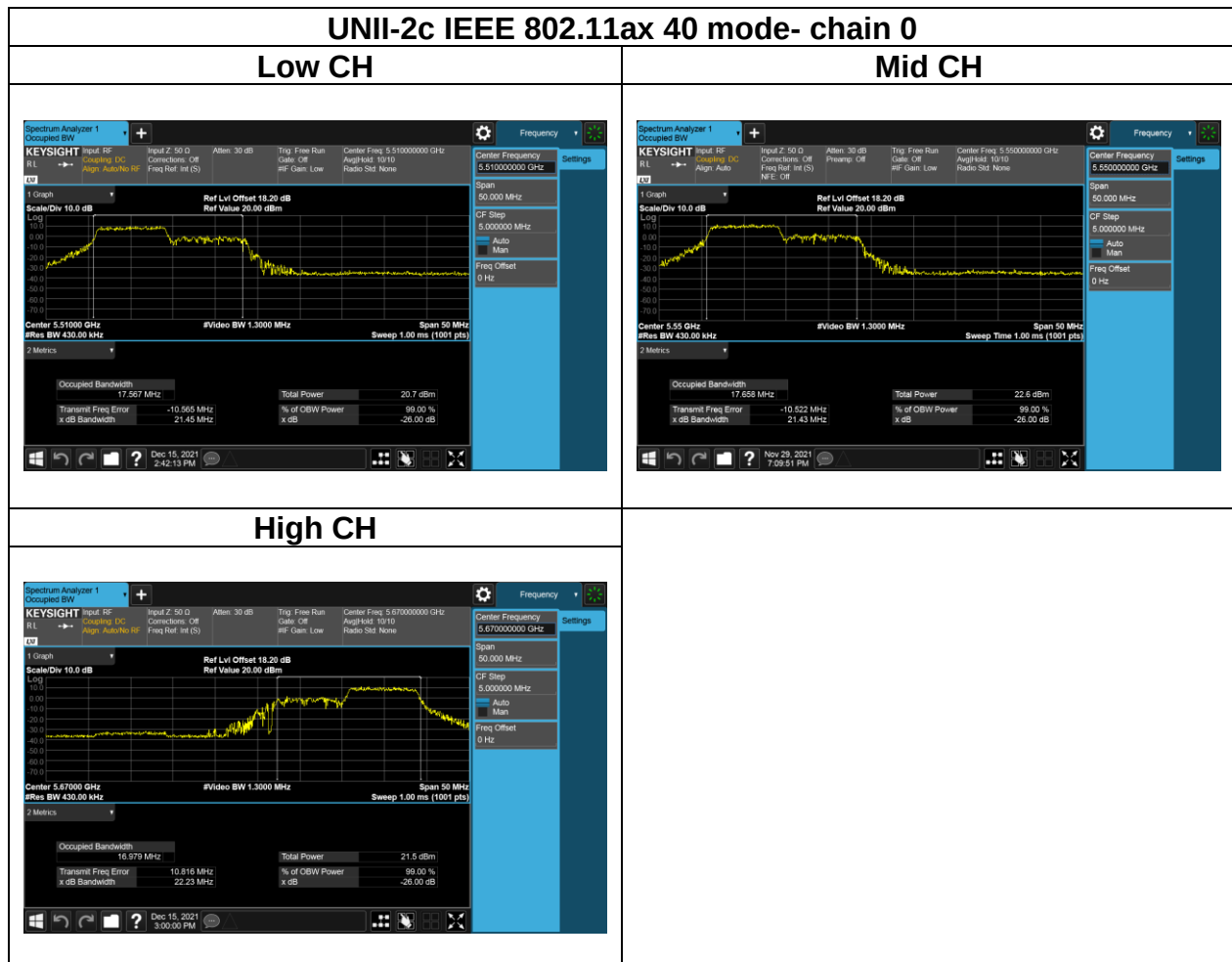


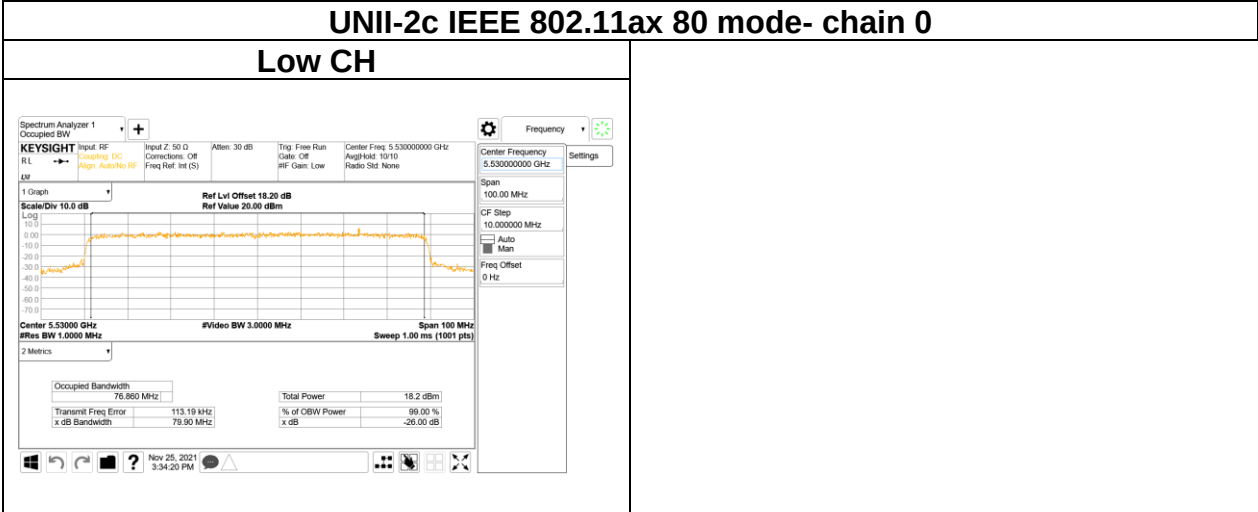


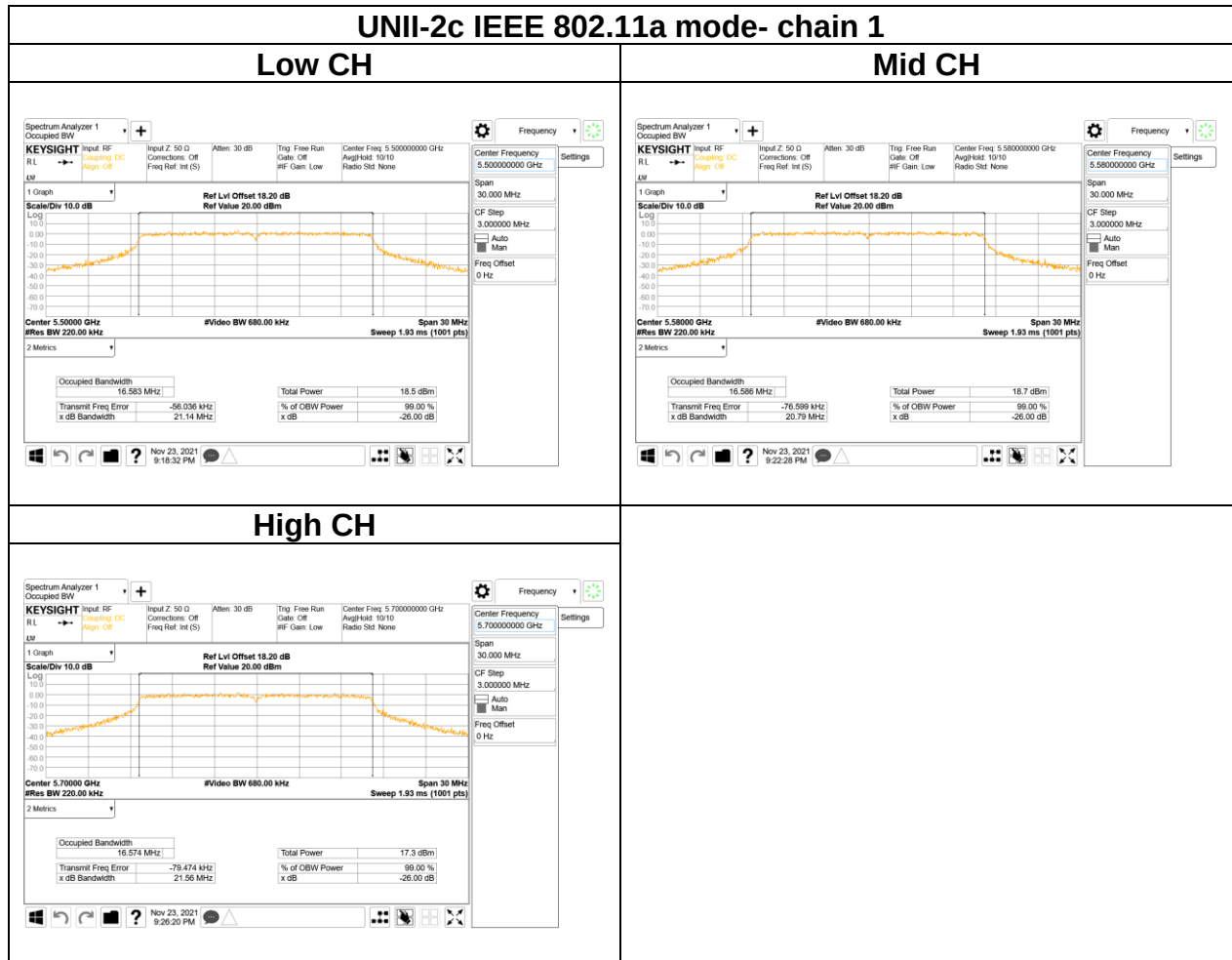




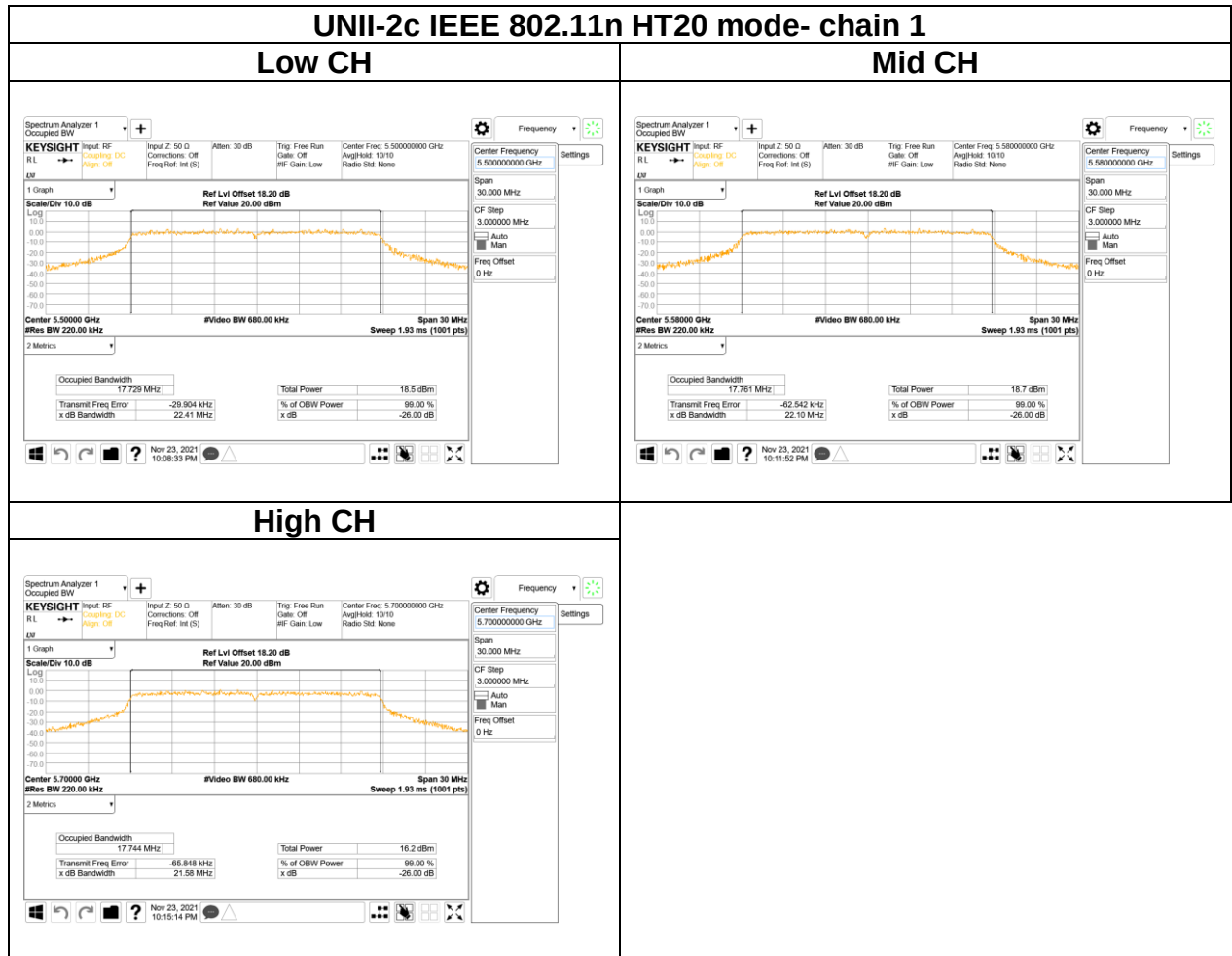




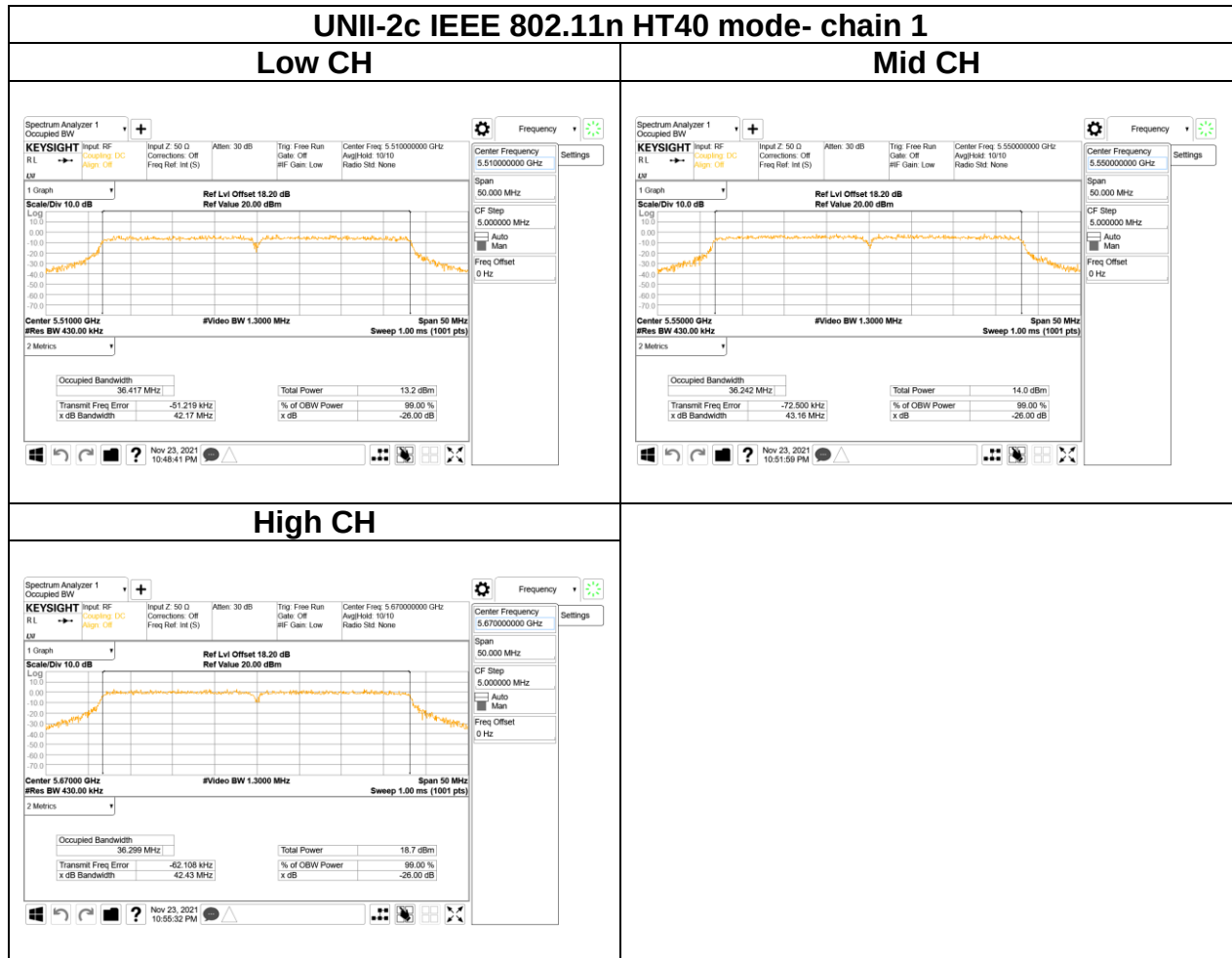


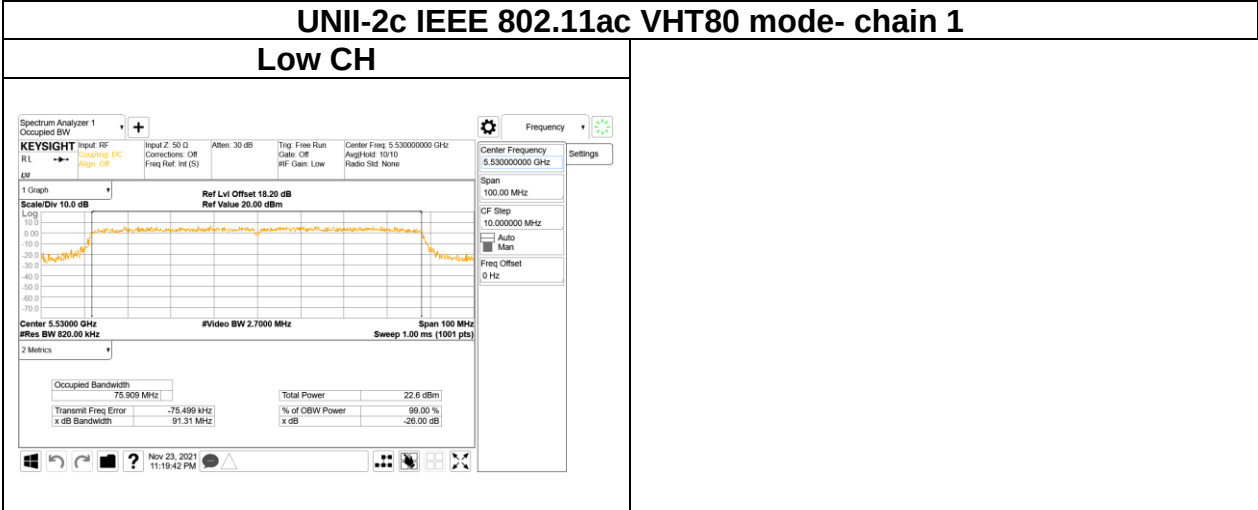


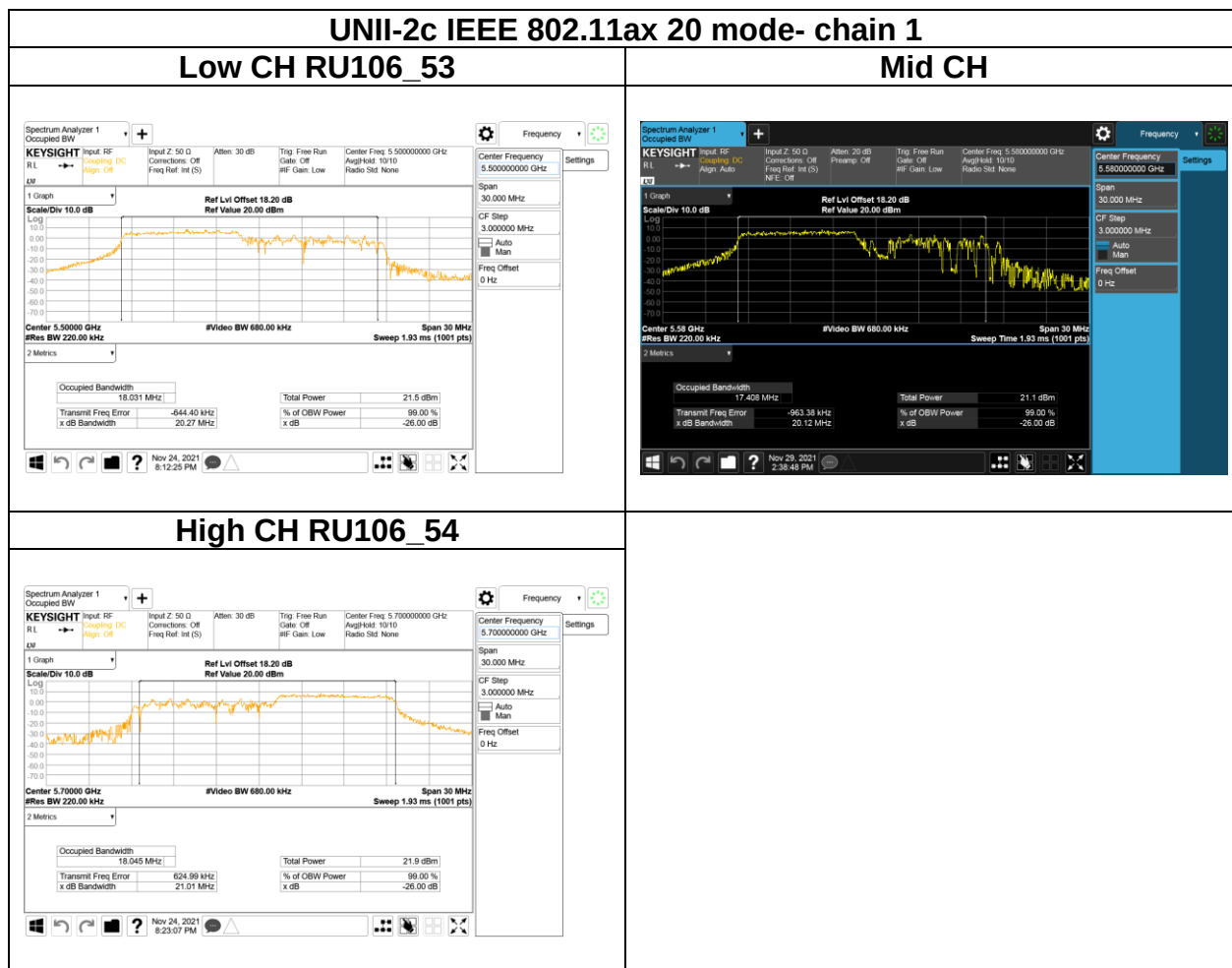
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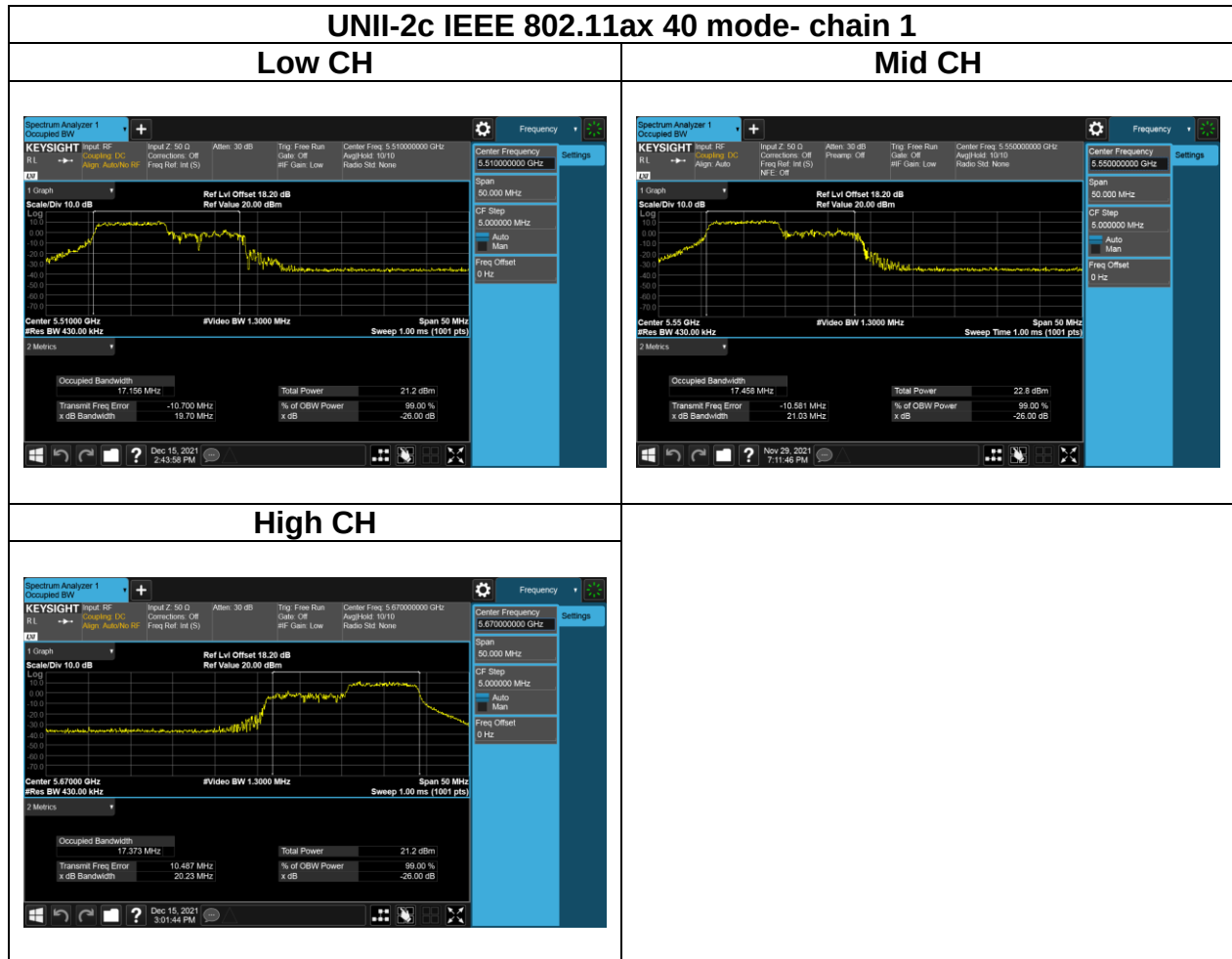


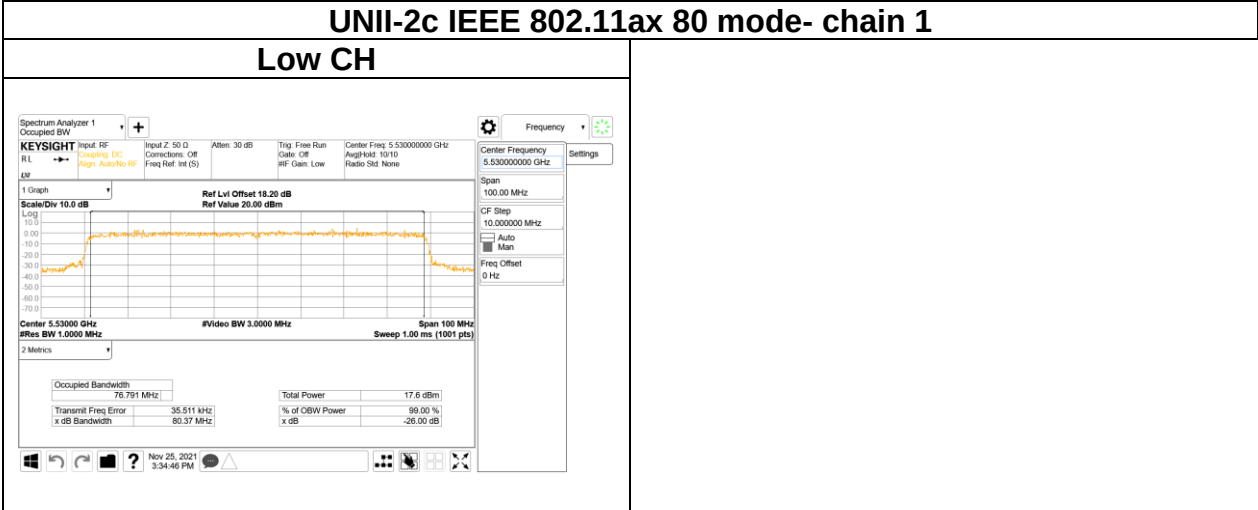
Report No.: T210319W02-RP2





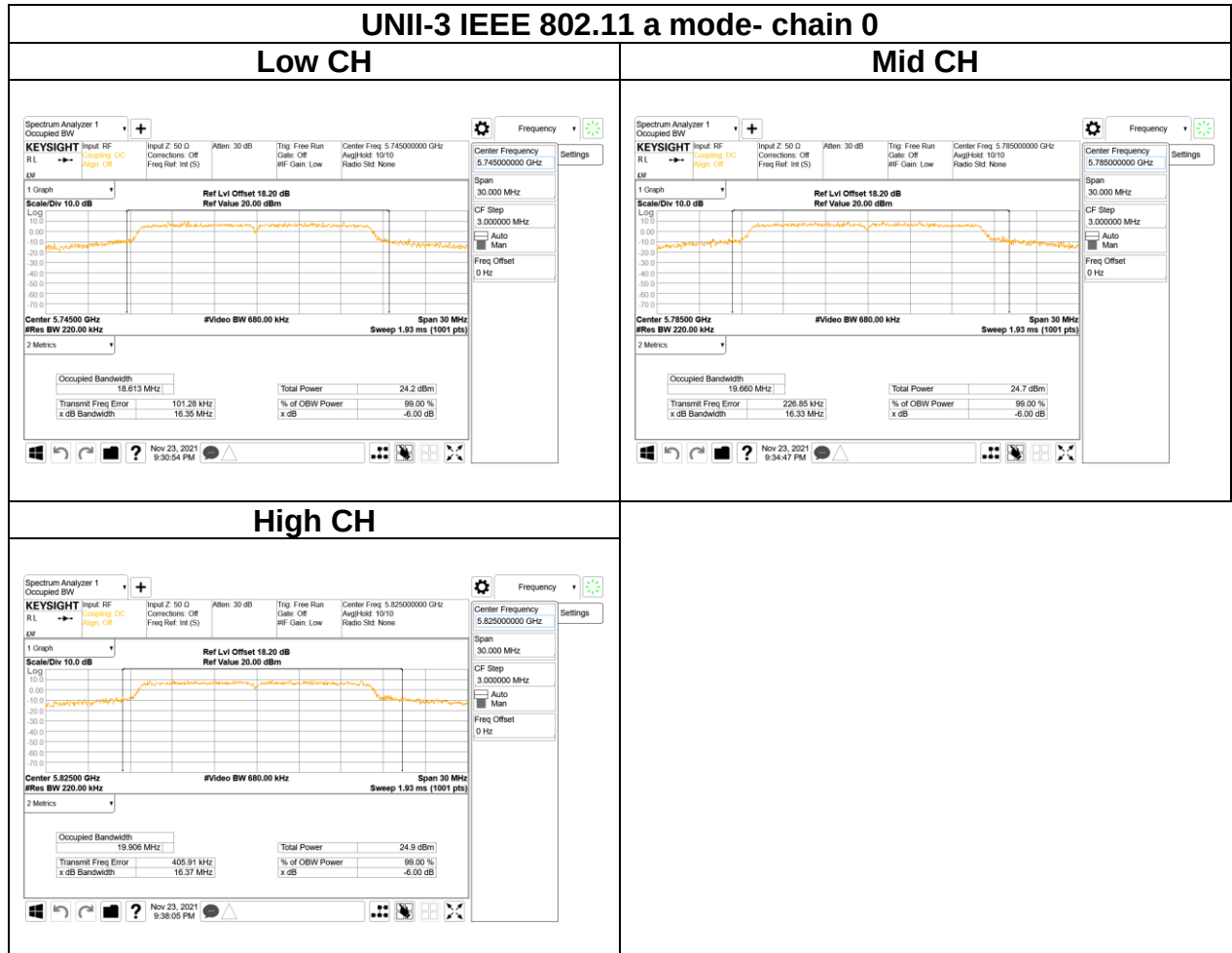




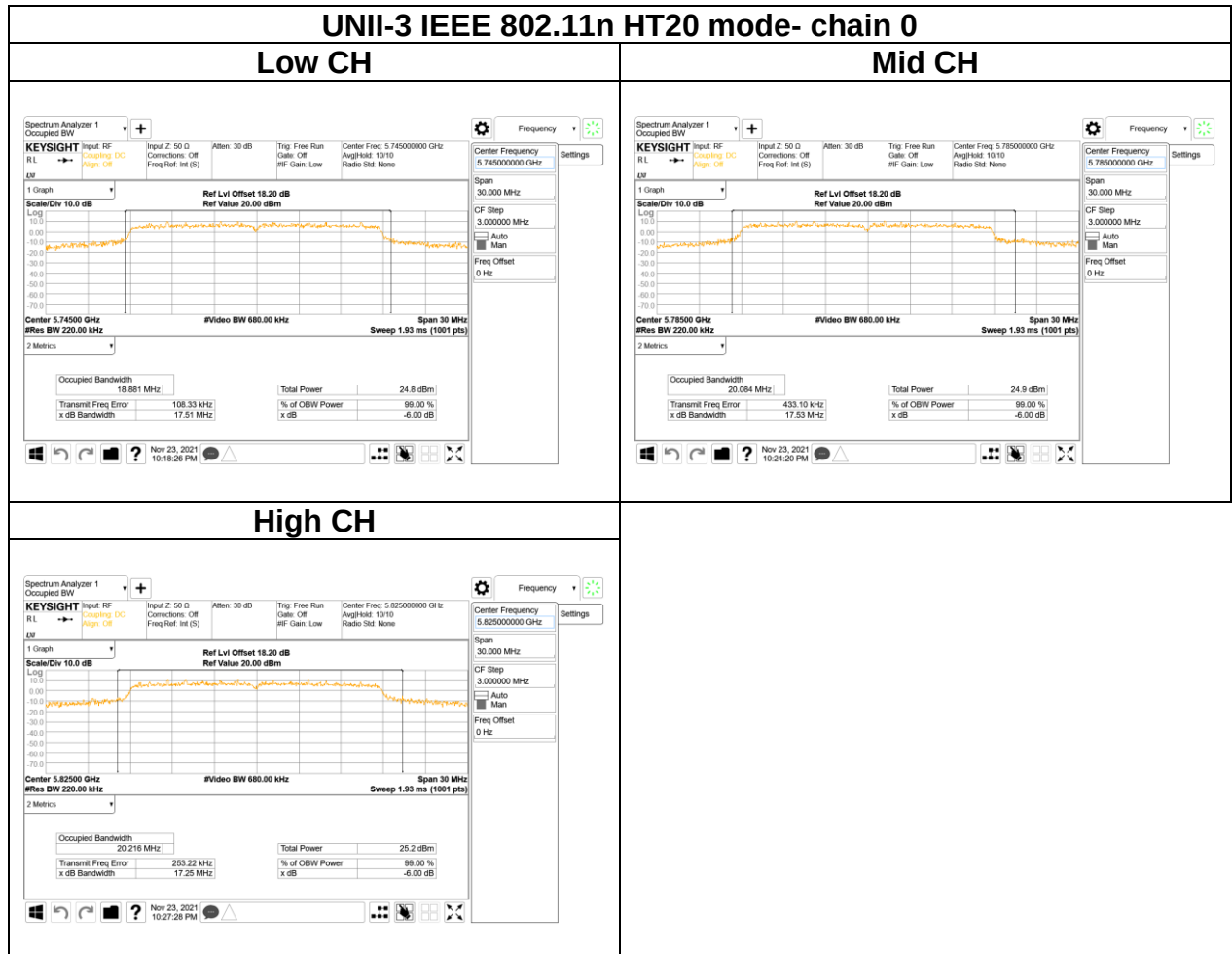


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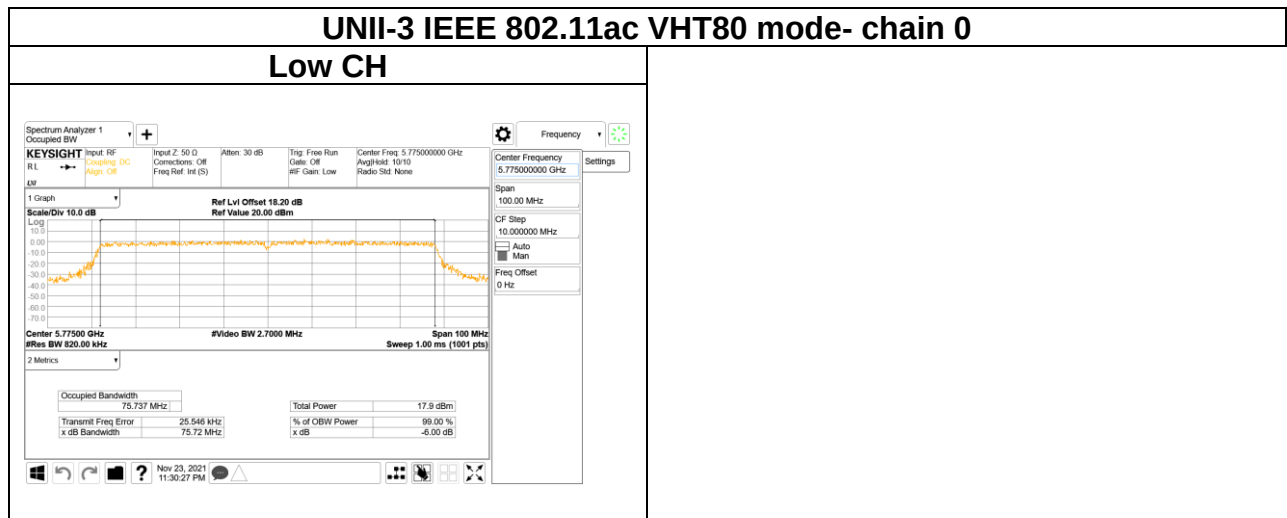
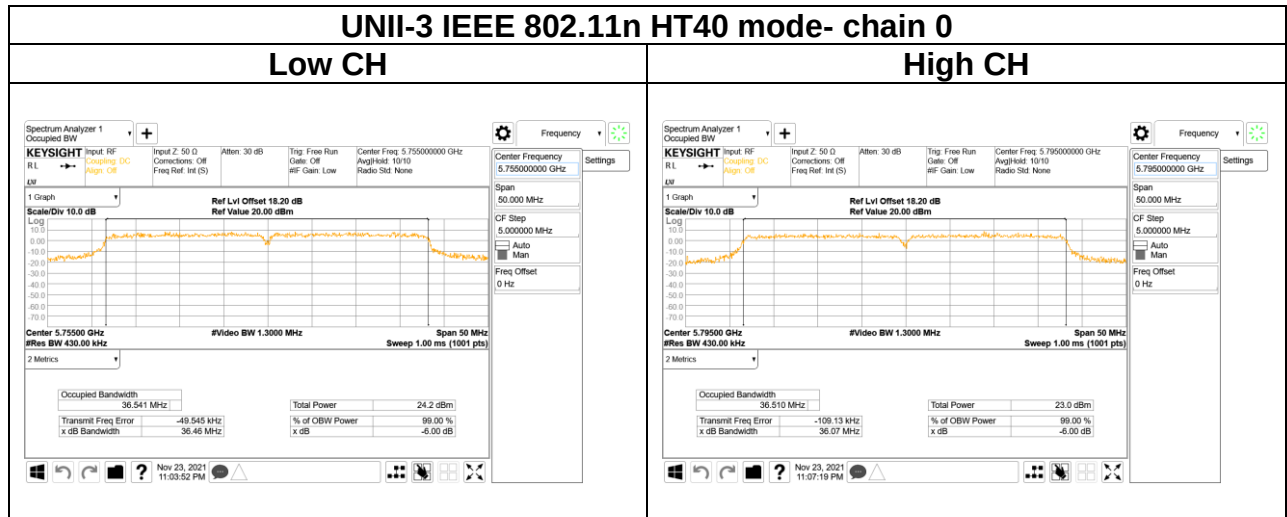
Test Plots (OBW 99%)

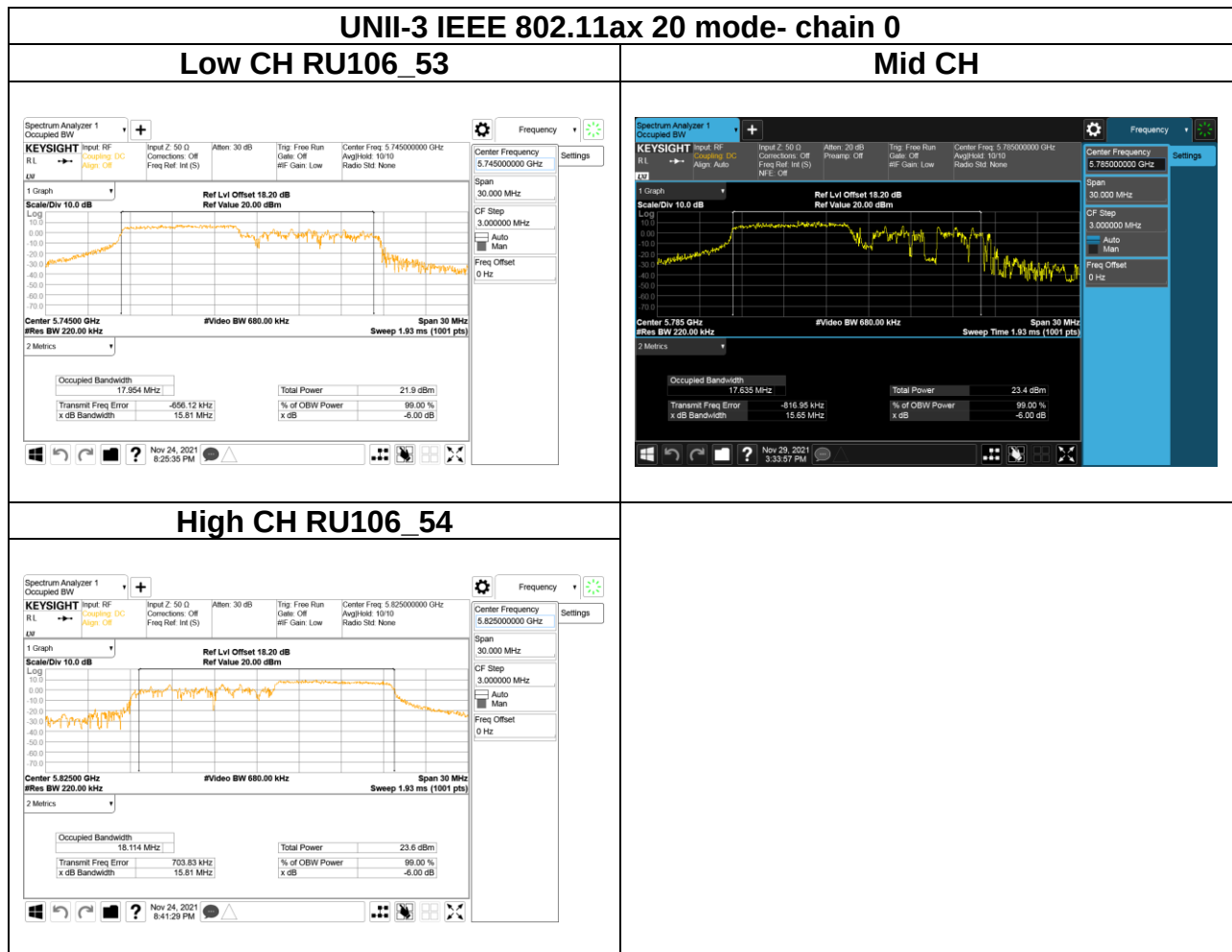


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Report No.: T210319W02-RP2





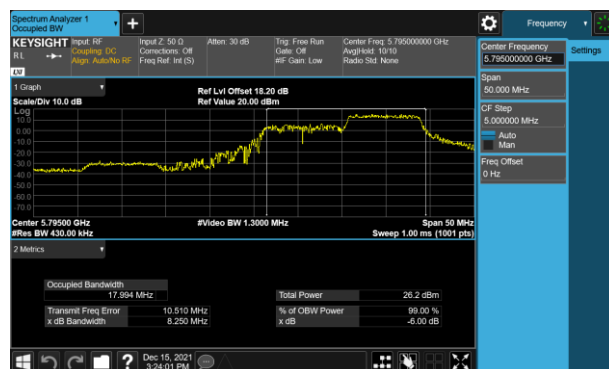
Report No.: T210319W02-RP2

UNII-3 IEEE 802.11ax 40 mode- chain 0

Low CH

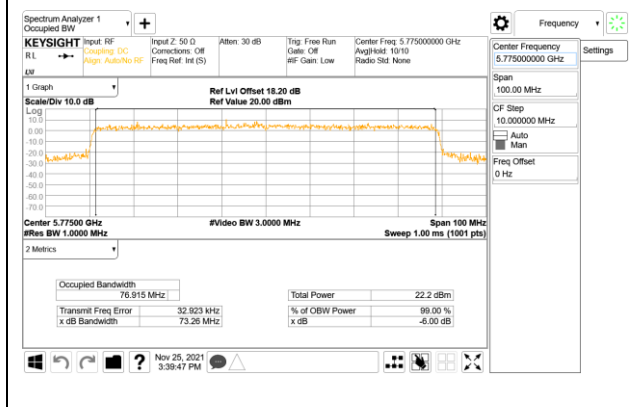


High CH

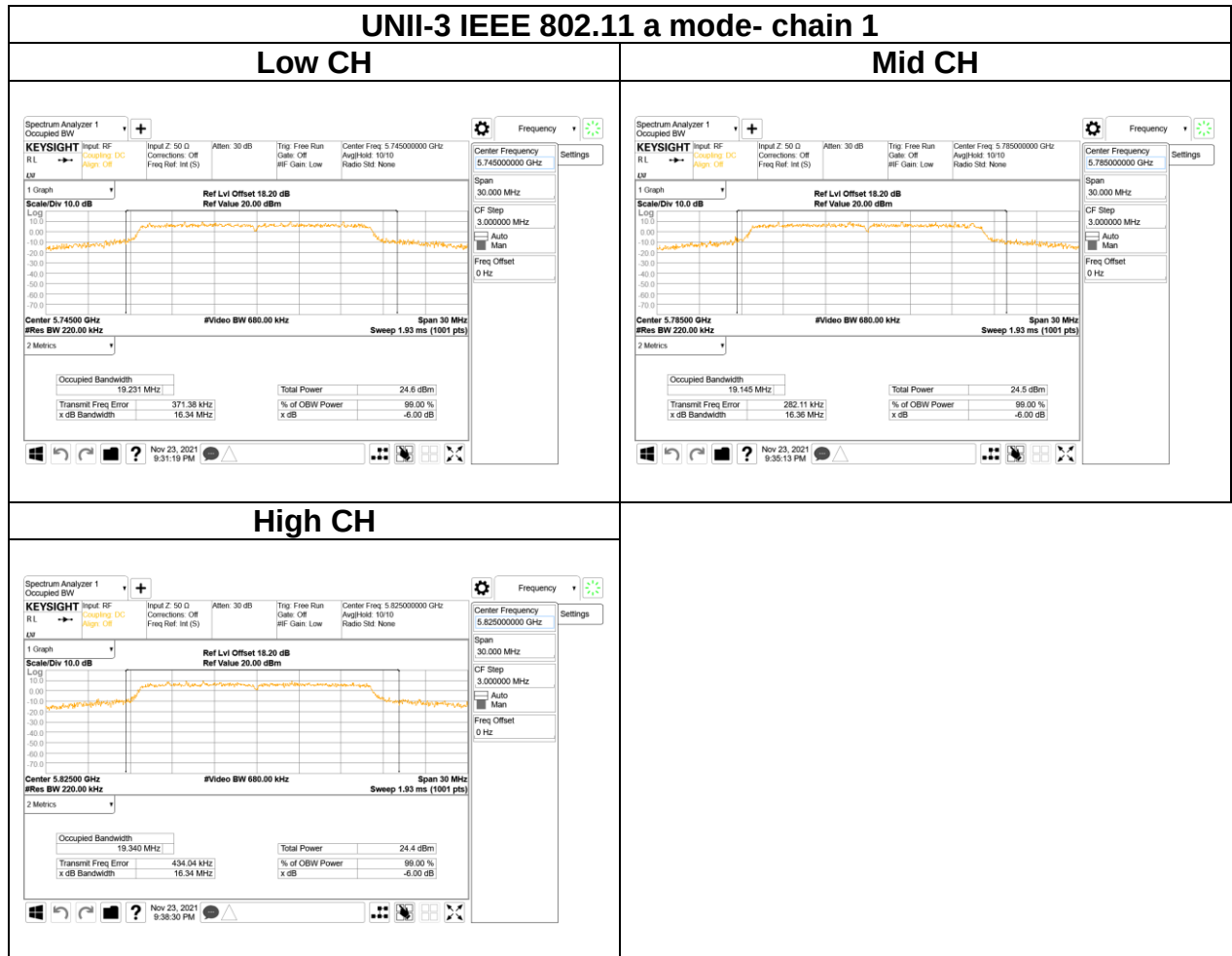


UNII-3 IEEE 802.11ax 80 mode- chain 0

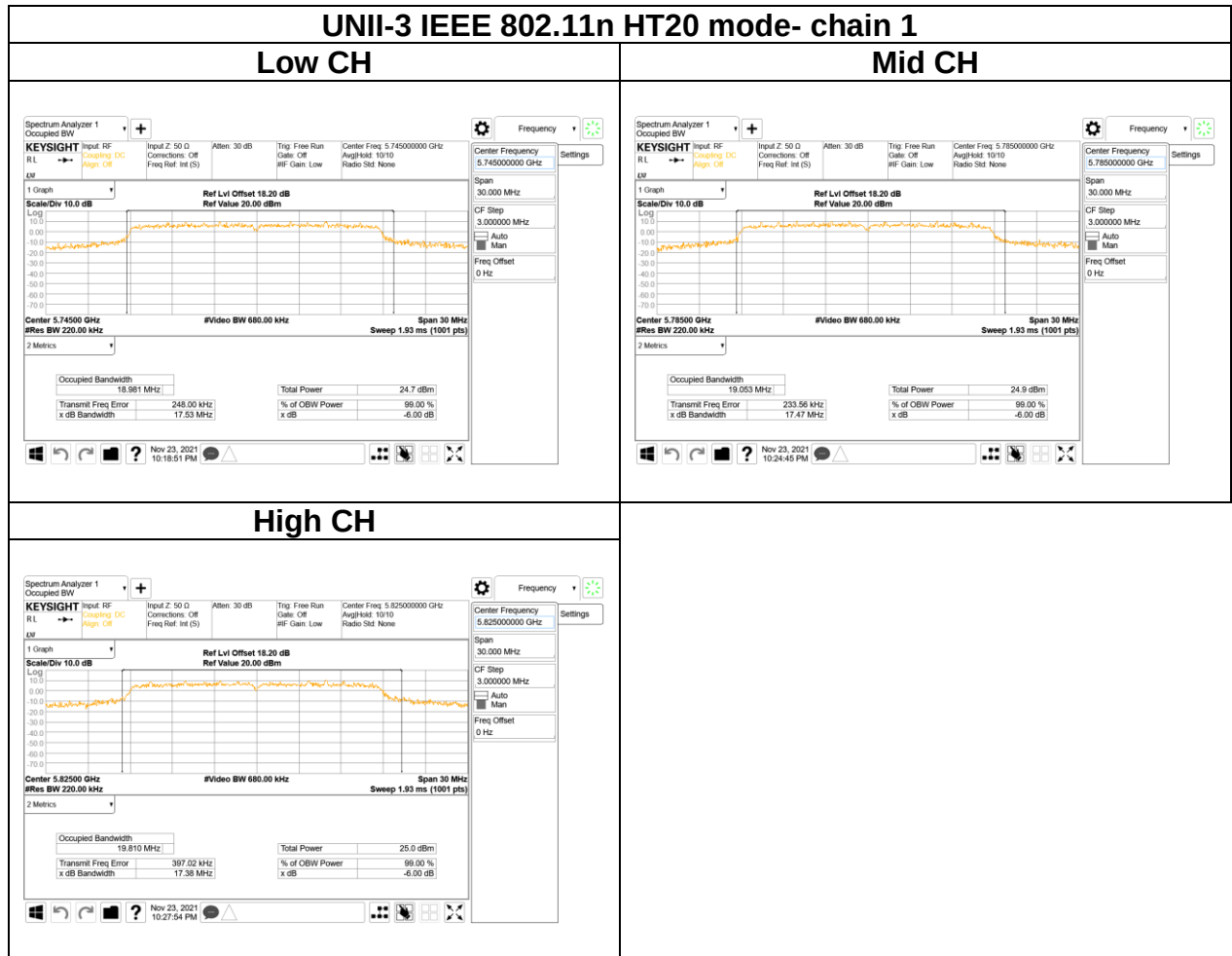
Low CH



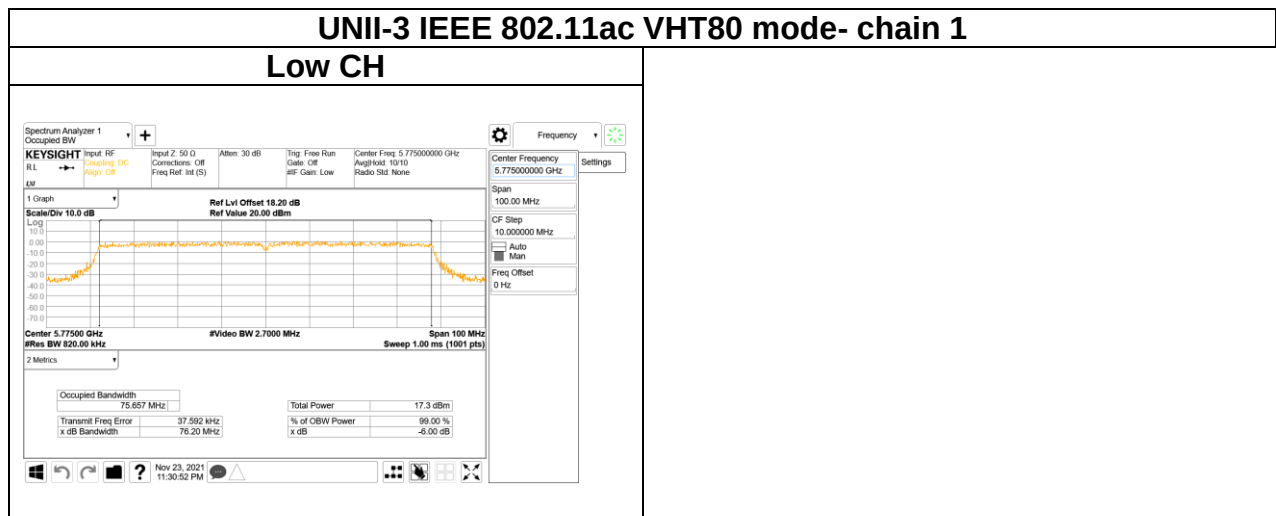
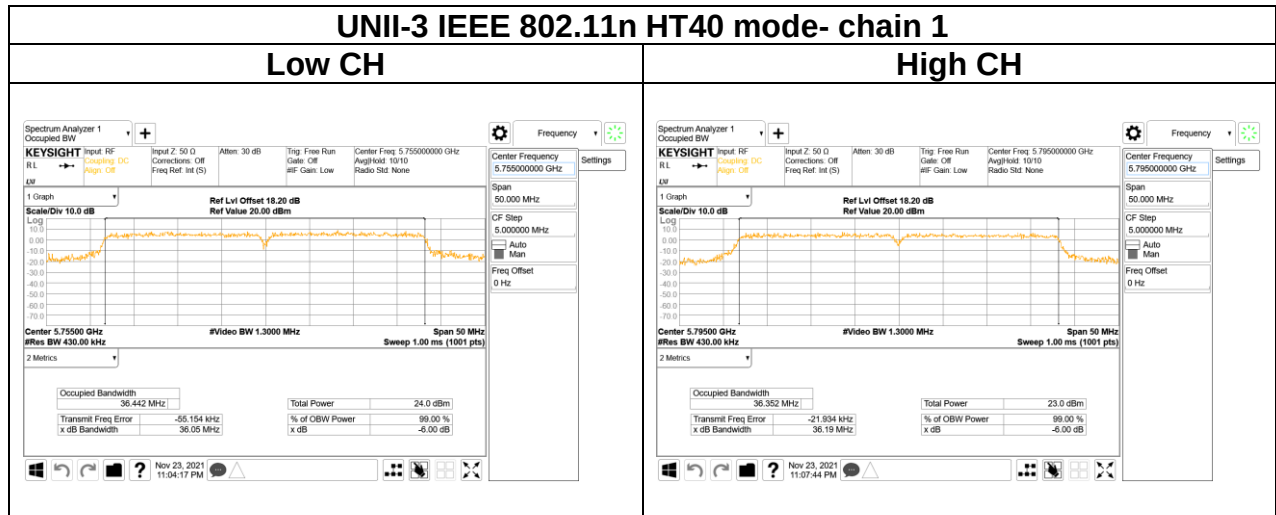
Report No.: T210319W02-RP2

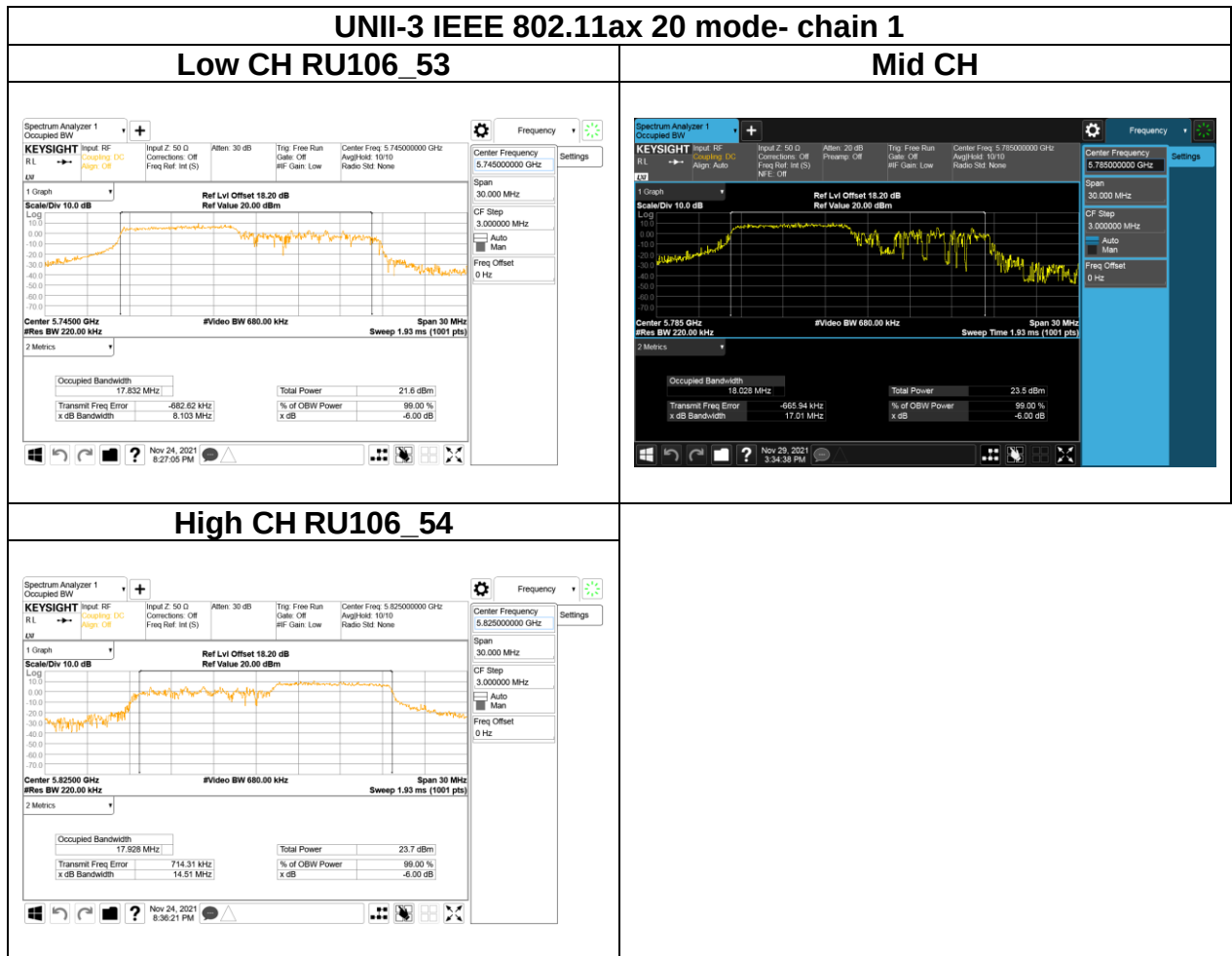


Report No.: T210319W02-RP2

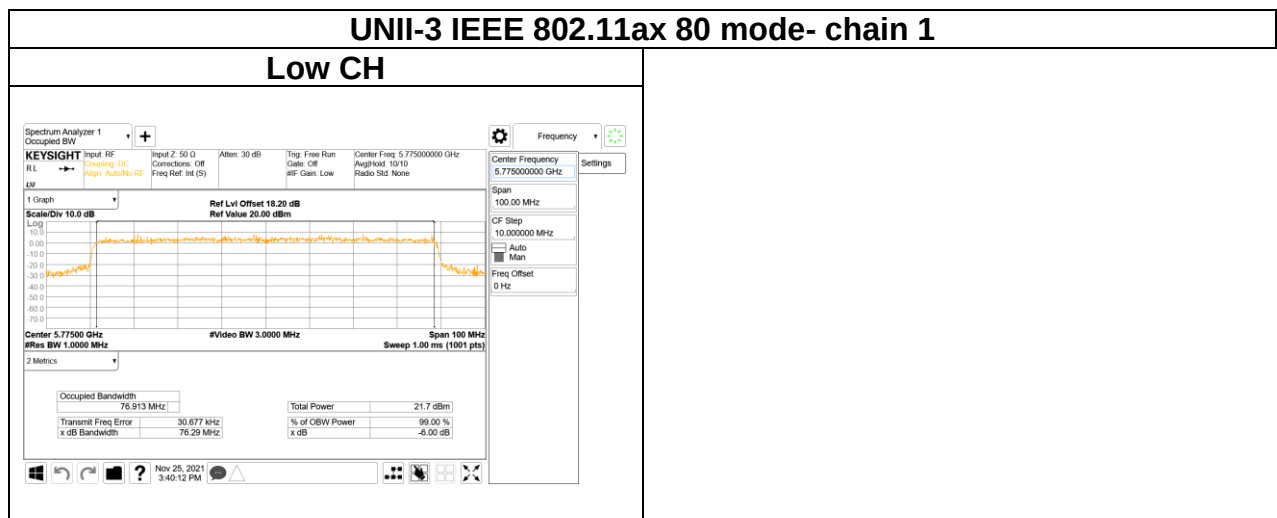
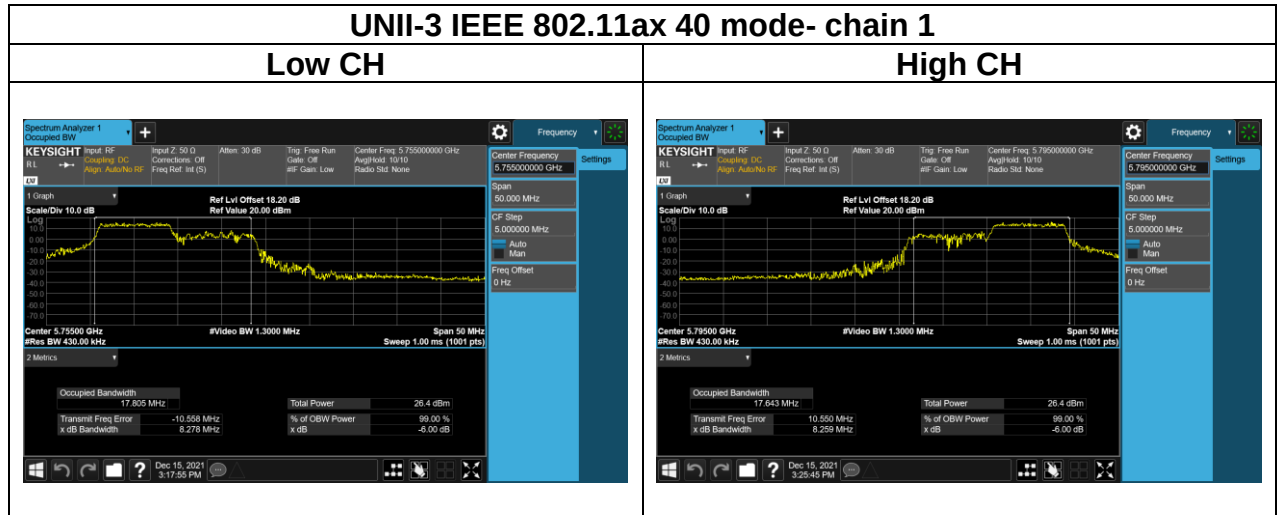


Report No.: T210319W02-RP2





Report No.: T210319W02-RP2



4.3 OUTPUT POWER MEASUREMENT

4.3.1 Test Limit

According to §15.407 (a)(1) and 15.407(a)(3),

UNII-1 :

The maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(iv) For client devices, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

UNII-2a and 2c:

the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

UNII-3:

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

UNII-1 Limit	☐ Antenna not exceed 6 dBi : 24dBm ☒ Antenna with DG greater than 6 dBi : [Limit = 24 – (DG – 6)]
UNII-2a/2c Limit	☐ Antenna not exceed 6 dBi : 24dBm ☒ Antenna with DG greater than 6 dBi : [Limit = 24 – (DG – 6)]
UNII-3 Limit	☐ Antenna not exceed 6 dBi : 30dBm ☒ Antenna with DG greater than 6 dBi : [Limit = 30 – (DG – 6)]

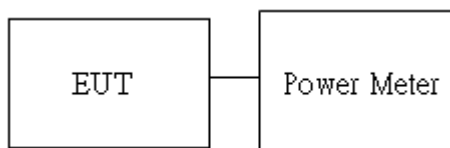
4.3.2 Test Procedure

Test method Refer as KDB 789033 D02, Section E.3.b for BW 20MHz and 40MHz, E.2.b for BW 80MHz.

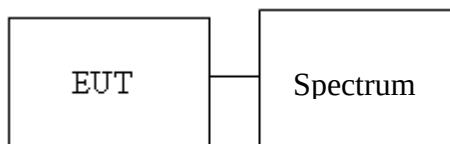
1. The EUT RF output connected to the power meter or spectrum by RF cable.
2. Setting maximum power transmit of EUT.
3. The path loss was compensated to the results for each measurement.
4. Measure and record the result of Average output power. in the test report.

4.3.3 Test Setup

For BW 20MHz and 40MHz



For BW 80MHz



4.3.4 Test Result

Temperature: 21.3~24.9°C

Test date:

November 22 ~
December 17, 2021

Humidity: 47~60% RH

Tested by:

Jack Chen

Test Mode: Non-BeanForming Mode

FCC Conducted output power :

Test Mode: IEEE 802.11a mode

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
36	5180	6	15	14.79	14.67	18.05	63.826	23.77	PASS
44	5220	6	15	14.62	14.58	17.92	61.944	23.77	PASS
48	5240	6	15	14.51	14.47	17.81	60.395	23.77	PASS
52	5260	6	15	14.68	14.63	17.98	62.806	23.77	PASS
60	5300	6	15	14.82	14.76	18.11	64.714	23.77	PASS
64	5320	6	15	14.77	14.65	18.03	63.533	23.77	PASS
100	5500	6	15	14.57	14.49	17.85	60.954	23.77	PASS
116	5580	6	15	14.68	14.61	17.97	62.661	23.77	PASS
140	5700	6	14	14.02	13.51	17.10	51.286	23.77	PASS
149	5745	6	19.5	18.77	18.69	22.05	160.325	29.79	PASS
157	5785	6	19.5	18.79	18.73	22.08	161.436	29.79	PASS
165	5825	6	19.5	19.13	18.76	22.27	168.655	29.79	PASS

Test Mode: IEEE 802.11n HT20 mode

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
36	5180	MCS8	15	14.43	14.35	18.08	64.269	23.77	PASS
44	5220	MCS8	15	14.22	14.21	17.91	61.802	23.77	PASS
48	5240	MCS8	15	14.13	14.1	17.81	60.395	23.77	PASS
52	5260	MCS8	15	14.37	14.28	18.02	63.387	23.77	PASS
60	5300	MCS8	15	14.53	14.42	18.17	65.615	23.77	PASS
64	5320	MCS8	15	14.51	14.34	18.12	64.863	23.77	PASS
100	5500	MCS8	15	14.21	14.17	17.88	61.376	23.77	PASS
116	5580	MCS8	15	14.28	14.16	17.91	61.802	23.77	PASS
140	5700	MCS8	13	12.75	12.07	16.12	40.926	23.77	PASS
149	5745	MCS8	19.5	18.43	18.36	22.09	161.808	29.79	PASS
157	5785	MCS8	19.5	18.37	18.29	22.02	159.221	29.79	PASS
165	5825	MCS8	19.5	18.52	18.44	22.17	164.816	29.79	PASS

Test Mode: IEEE 802.11ac VHT20 mode

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
36	5180	MCS0	15	14.37	14.31	18.03	63.533	23.77	PASS
44	5220	MCS0	15	14.19	14.14	17.86	61.094	23.77	PASS
48	5240	MCS0	15	14.09	14.03	17.75	59.566	23.77	PASS
52	5260	MCS0	15	14.33	14.26	17.99	62.951	23.77	PASS
60	5300	MCS0	15	14.47	14.37	18.11	64.714	23.77	PASS
64	5320	MCS0	15	14.47	14.29	18.08	64.269	23.77	PASS
100	5500	MCS0	15	14.14	14.09	17.81	60.395	23.77	PASS
116	5580	MCS0	15	14.23	14.05	17.84	60.814	23.77	PASS
140	5700	MCS0	13	12.71	12.01	16.07	40.458	23.77	PASS
149	5745	MCS0	19.5	18.39	18.28	22.03	159.588	29.79	PASS
157	5785	MCS0	19.5	18.34	18.22	21.97	157.398	29.79	PASS
165	5825	MCS0	19.5	18.47	18.39	22.12	162.930	29.79	PASS

Test Mode: IEEE 802.11n HT40 mode

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
38	5190	MCS8	12	11.39	10.89	15.39	34.594	23.77	PASS
46	5230	MCS8	12	11.26	10.79	15.28	33.729	23.77	PASS
54	5270	MCS8	10.5	10.25	9.27	14.03	25.293	23.77	PASS
62	5310	MCS8	10.5	10.27	9.28	14.05	25.410	23.77	PASS
102	5510	MCS8	10	9.48	8.79	13.39	21.827	23.77	PASS
110	5550	MCS8	10	9.96	9.23	13.86	24.322	23.77	PASS
134	5670	MCS8	15	14.22	13.61	18.17	65.615	23.77	PASS
151	5755	MCS8	18	16.85	16.47	20.91	123.310	29.79	PASS
159	5795	MCS8	18	17.03	16.81	21.17	130.918	29.79	PASS

Test Mode: IEEE 802.11ac VHT40 mode

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
38	5190	MCS0	12	11.36	10.84	15.35	34.277	23.77	PASS
46	5230	MCS0	12	11.19	10.71	15.20	33.113	23.77	PASS
54	5270	MCS0	10.5	10.19	9.2	13.97	24.946	23.77	PASS
62	5310	MCS0	10.5	10.23	9.18	13.98	25.003	23.77	PASS
102	5510	MCS0	10	9.44	8.71	13.34	21.577	23.77	PASS
110	5550	MCS0	10	9.89	9.18	13.80	23.988	23.77	PASS
134	5670	MCS0	15	14.17	13.54	18.11	64.714	23.77	PASS
151	5755	MCS0	18	16.79	16.37	20.83	121.060	29.79	PASS
159	5795	MCS0	18	16.98	16.77	21.12	129.420	29.79	PASS

Test Mode: IEEE 802.11ac VHT80 mode

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
42	5210	MCS0	16	14.93	14.84	19.20	83.176	23.77	PASS
58	5290	MCS0	16	14.65	14.52	18.90	77.625	23.77	PASS
106	5530	MCS0	18	16.74	16.62	21.00	125.893	23.77	PASS
155	5775	MCS0	13	12.37	11.42	16.24	42.073	29.79	PASS

Test Mode: IEEE 802.11ax 20 Mode

CH	Frequency (MHz)	Data Rate	RU config.	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
					CH 0	CH 1				
36	5180	MCS0	26/0	8	8.73	10.27	12.64	18.365	23.77	PASS
		MCS0	52/37	13	13.35	13.12	16.31	42.756	23.77	PASS
		MCS0	106/53	15	15.03	14.92	18.05	63.826	23.77	PASS
44	5220	MCS0	106/53	15.75	15.87	15.69	18.85	76.736	23.77	PASS
48	5240	MCS0	106/53	15.75	15.71	15.53	18.69	73.961	23.77	PASS
52	5260	MCS0	106/53	15.75	15.88	15.75	18.89	77.446	23.77	PASS
60	5300	MCS0	106/53	15.75	15.84	15.79	18.89	77.446	23.77	PASS
64	5320	MCS0	26/8	11	11.08	10.23	13.75	23.714	23.77	PASS
		MCS0	52/40	14	13.38	13.27	16.40	43.652	23.77	PASS
		MCS0	106/54	16	15.61	15.45	18.60	72.444	23.77	PASS
100	5500	MCS0	26/0	11	11.12	10.75	14.01	25.177	23.77	PASS
		MCS0	52/37	12.5	12.29	12.23	15.33	34.119	23.77	PASS
		MCS0	106/53	15	14.6	14.48	17.61	57.677	23.77	PASS
116	5580	MCS0	106/53	14.5	14.36	14.24	17.37	54.576	23.77	PASS
140	5700	MCS0	26/8	10	10.41	8.63	12.68	18.535	23.77	PASS
		MCS0	52/40	14	13.56	13.08	16.40	43.652	23.77	PASS
		MCS0	106/54	16	15.72	15.21	18.55	71.614	23.77	PASS
149	5745	MCS0	26/0	14.5	14.67	14.03	17.44	55.463	29.79	PASS
		MCS0	52/37	14	14.19	13.72	17.03	50.466	29.79	PASS
		MCS0	106/53	15.5	15.43	15.07	18.33	68.077	29.79	PASS
157	5785	MCS0	106/54	17	16.83	16.25	19.62	91.622	29.79	PASS
165	5825	MCS0	26/8	15	15.07	14.48	17.86	61.094	29.79	PASS
		MCS0	52/40	16	15.59	15.44	18.59	72.277	29.79	PASS
		MCS0	106/54	17.5	17.36	17.23	20.37	108.893	29.79	PASS