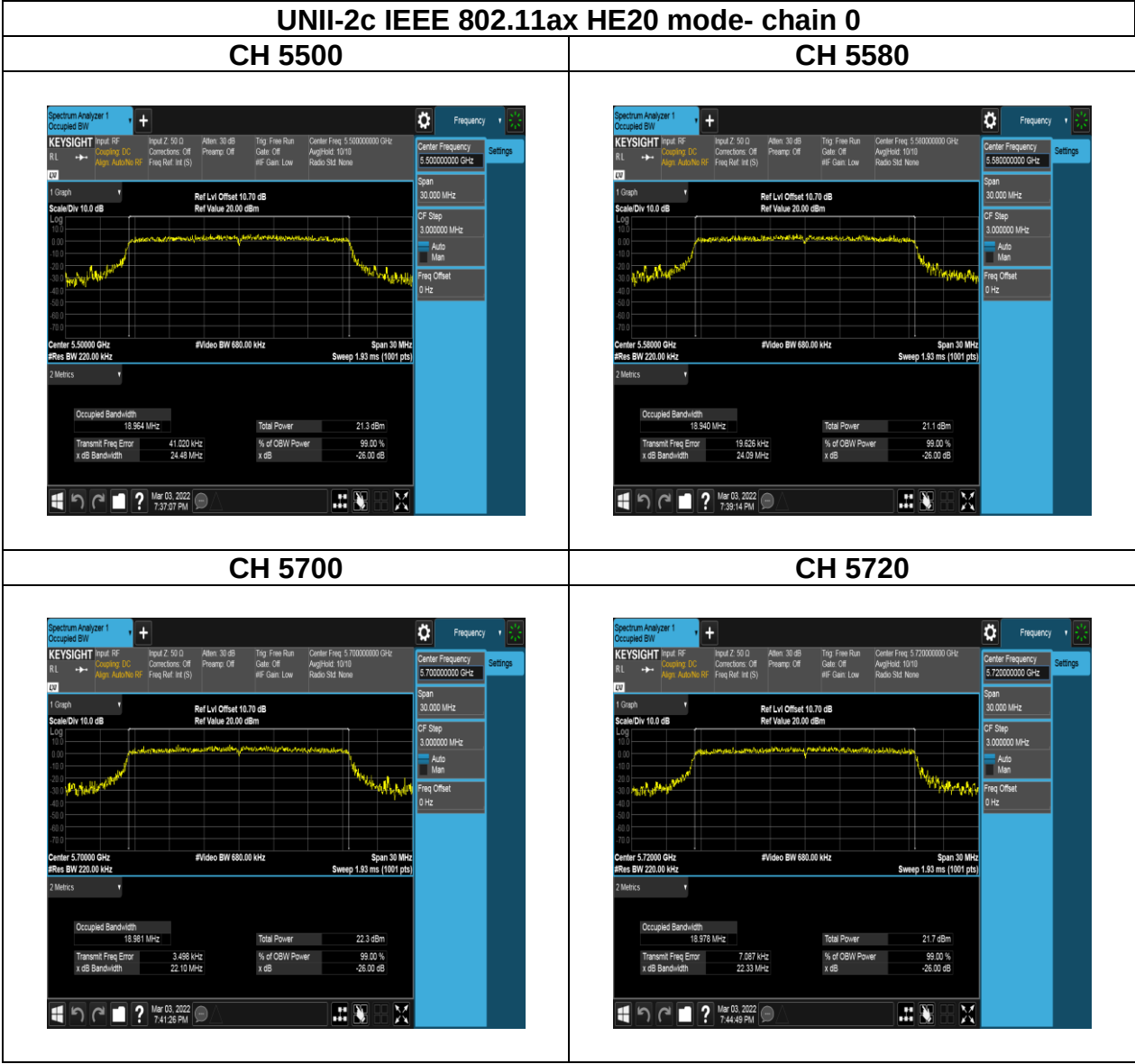
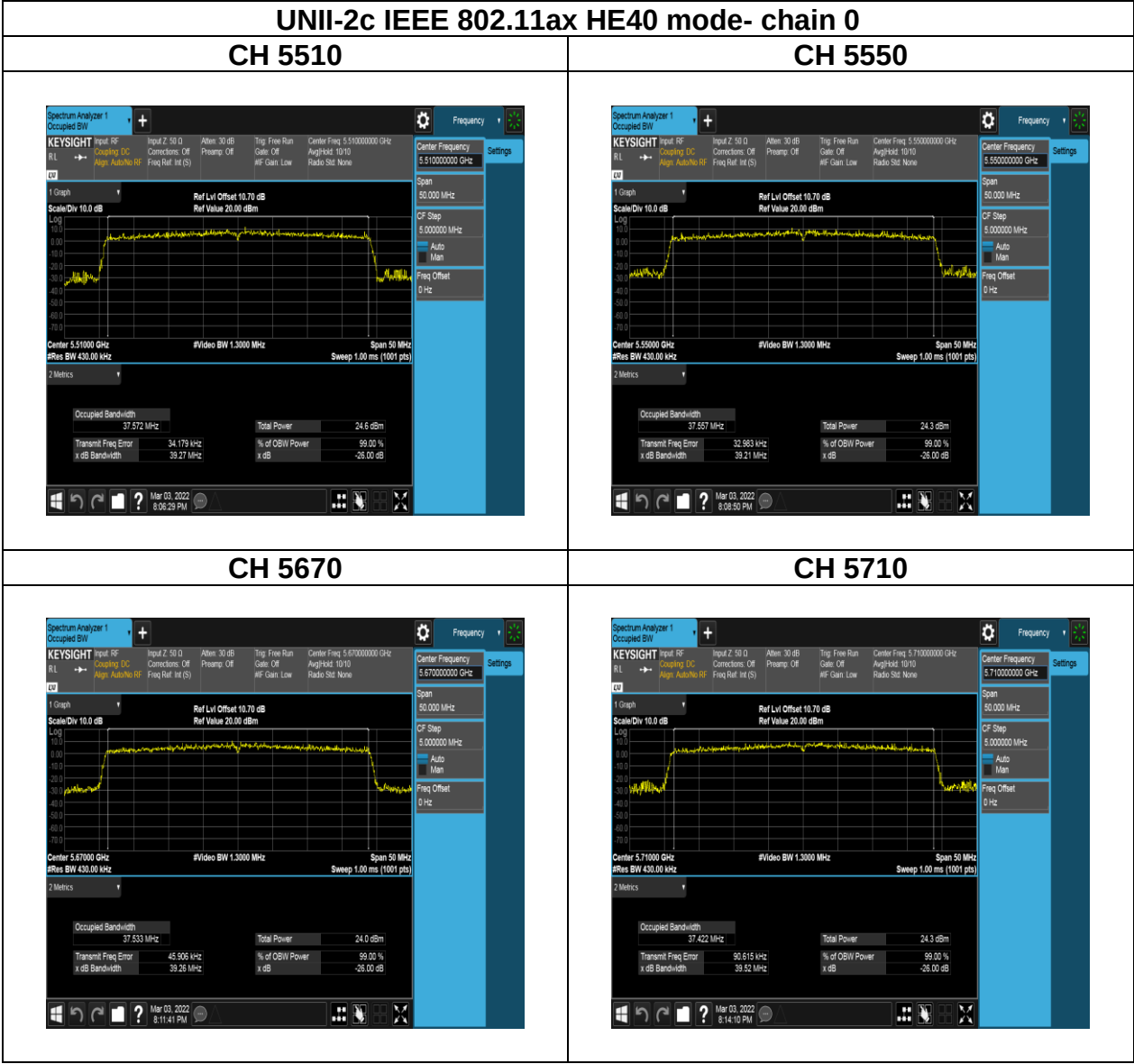
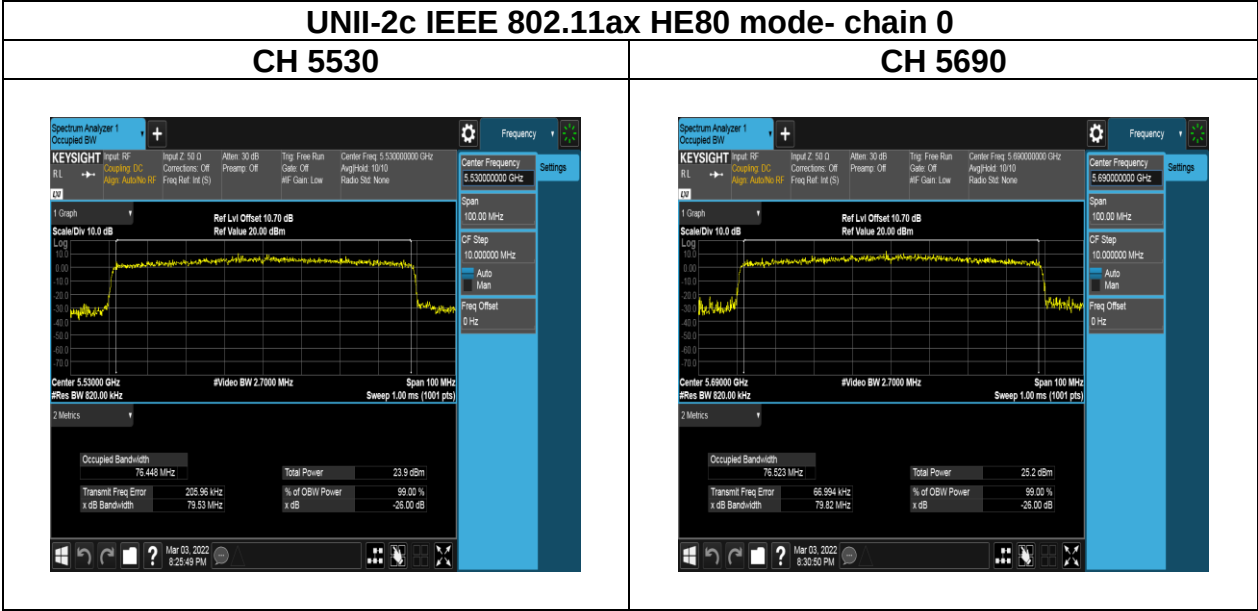




Report No.: TMWK2201000141KR

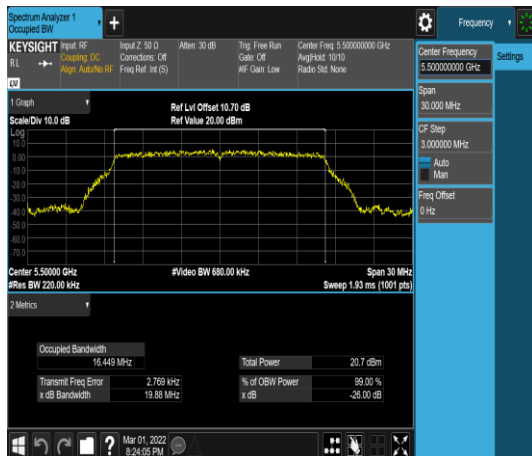




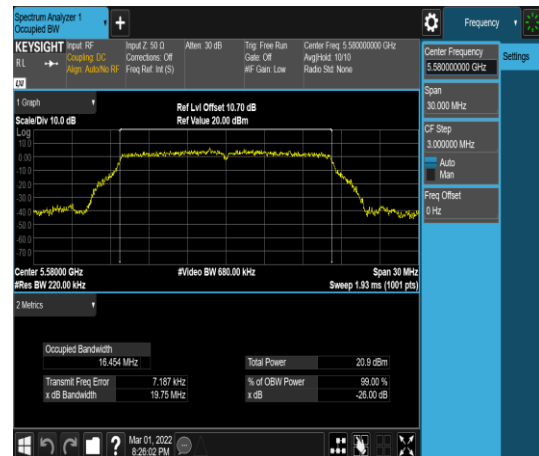
Report No.: TMWK2201000141KR

UNII-2c IEEE 802.11a mode- chain 1

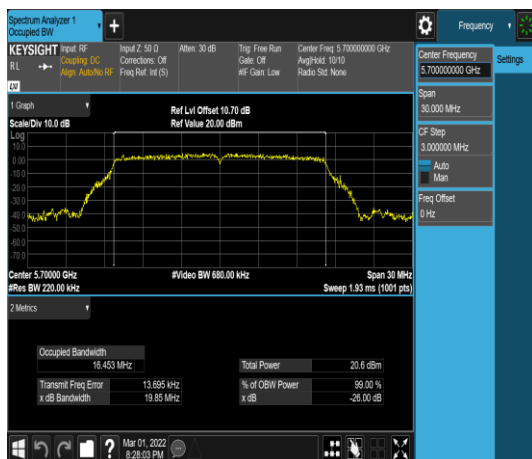
CH 5500



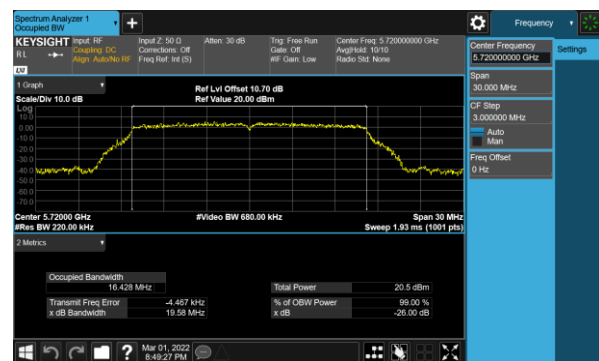
CH 5580



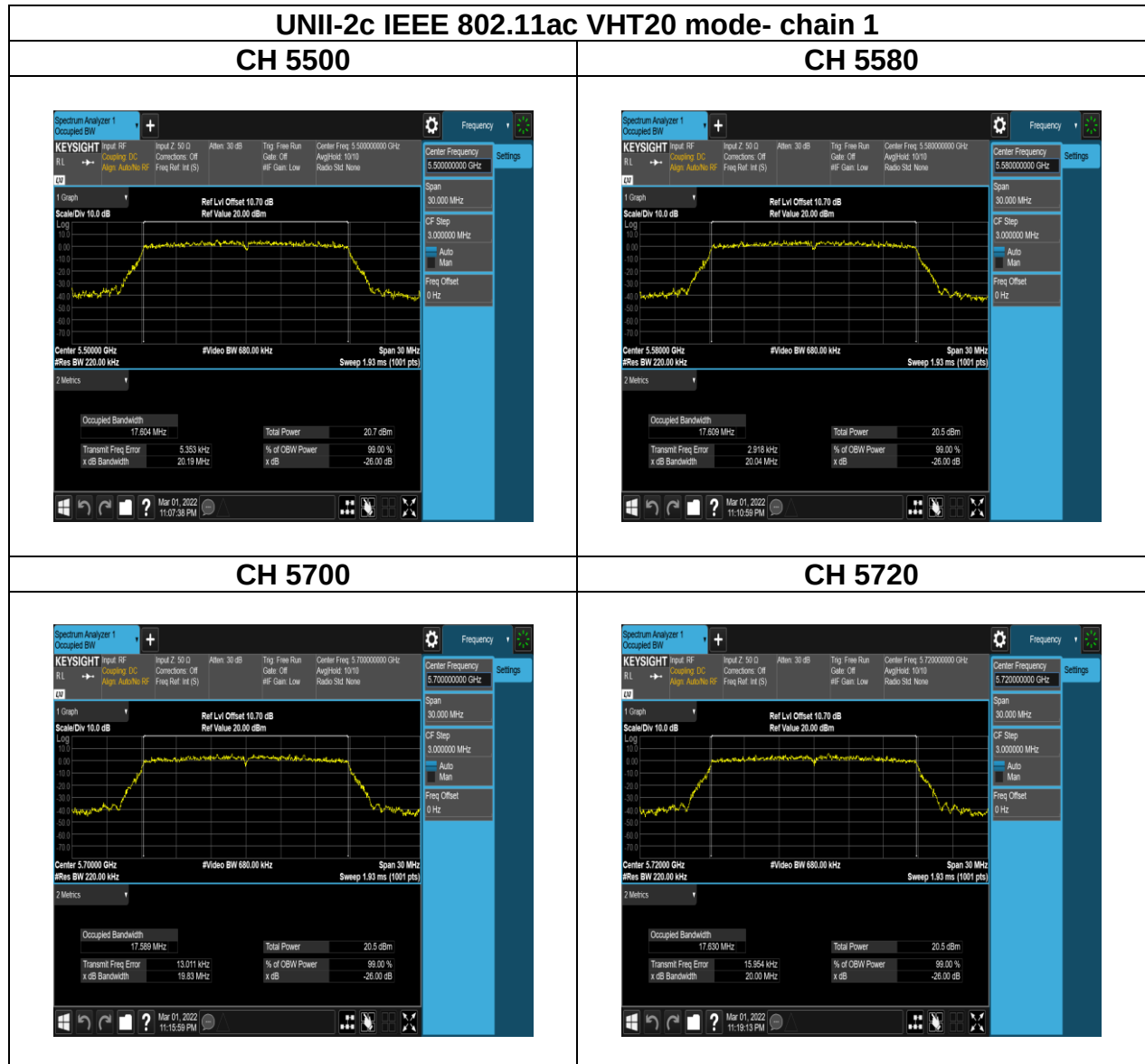
CH 5700

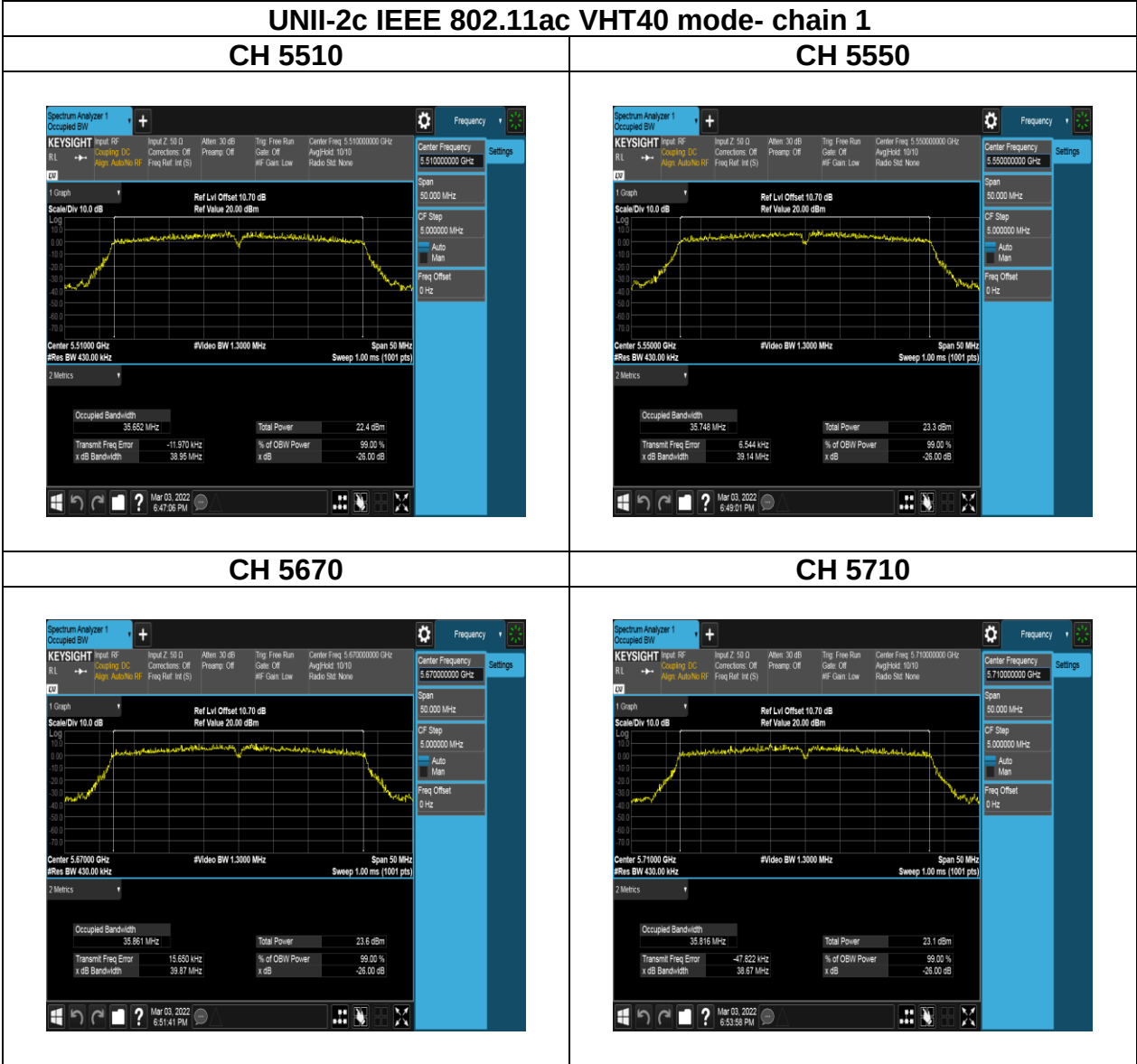


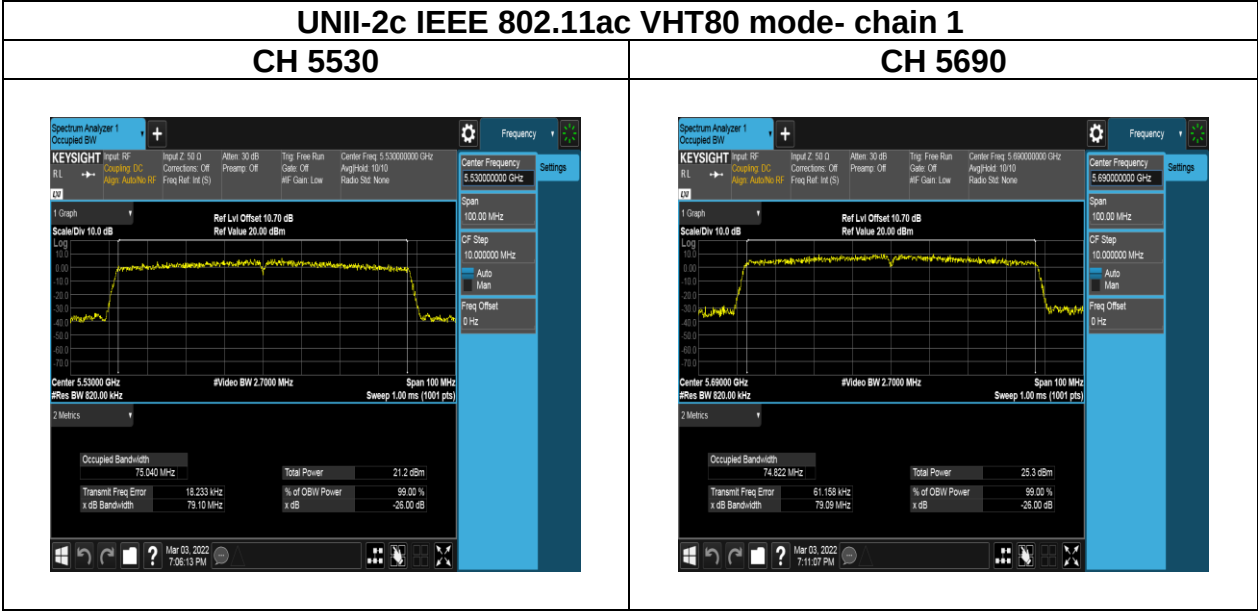
CH 5720



Report No.: TMWK2201000141KR



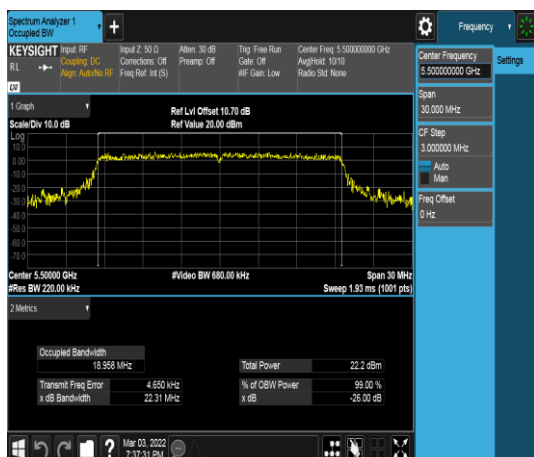




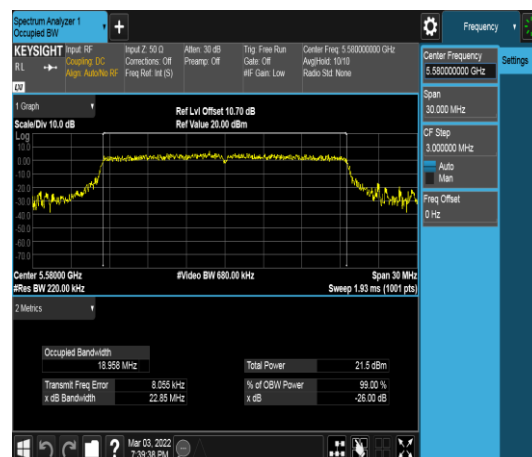
Report No.: TMWK2201000141KR

UNII-2c IEEE 802.11ax HE20 mode- chain 1

CH 5500



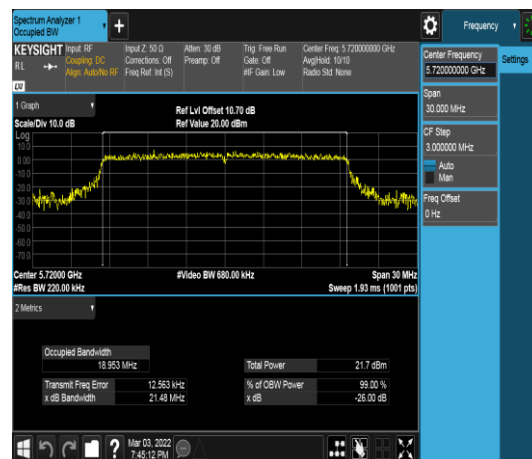
CH 5580



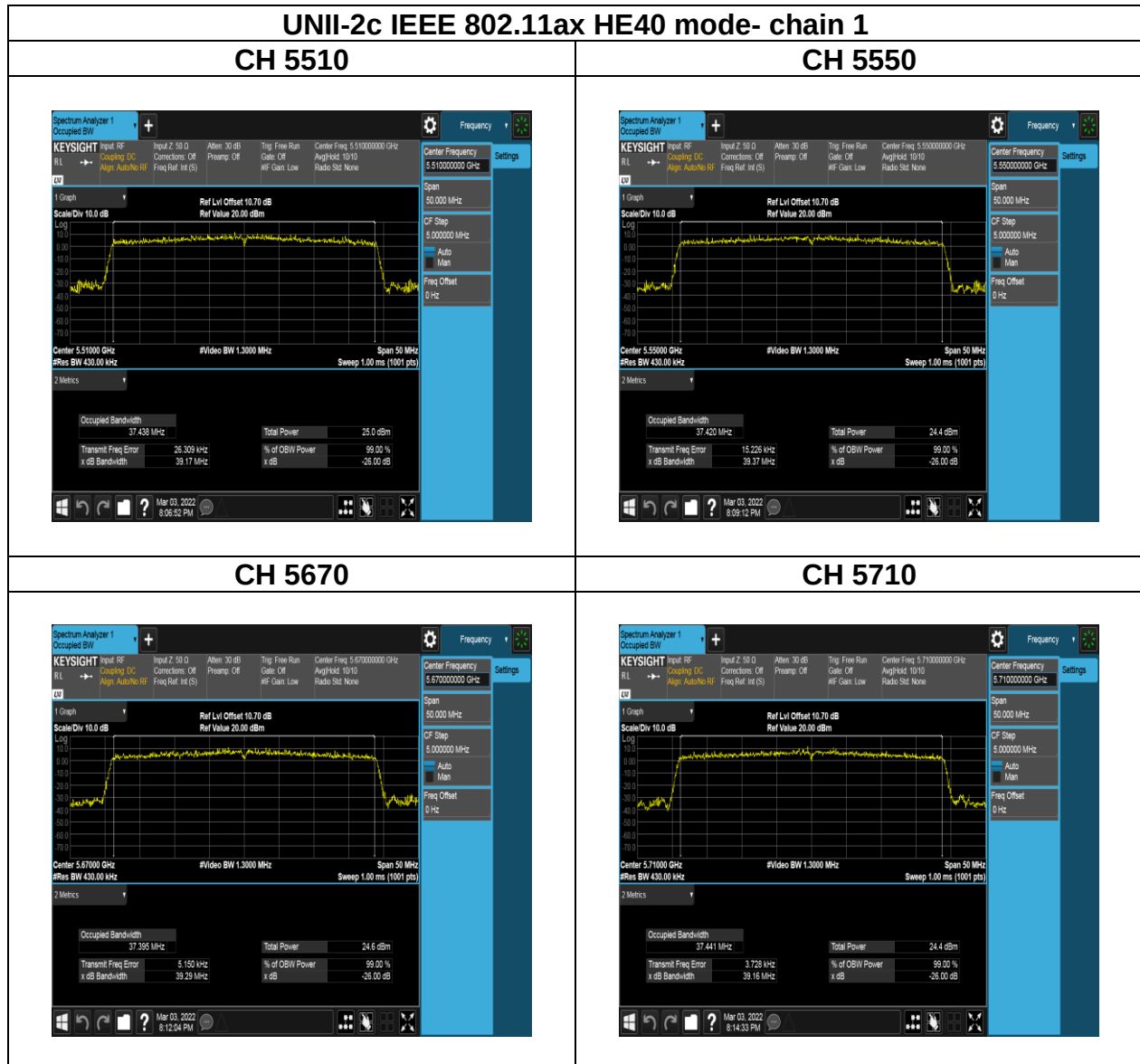
CH 5700

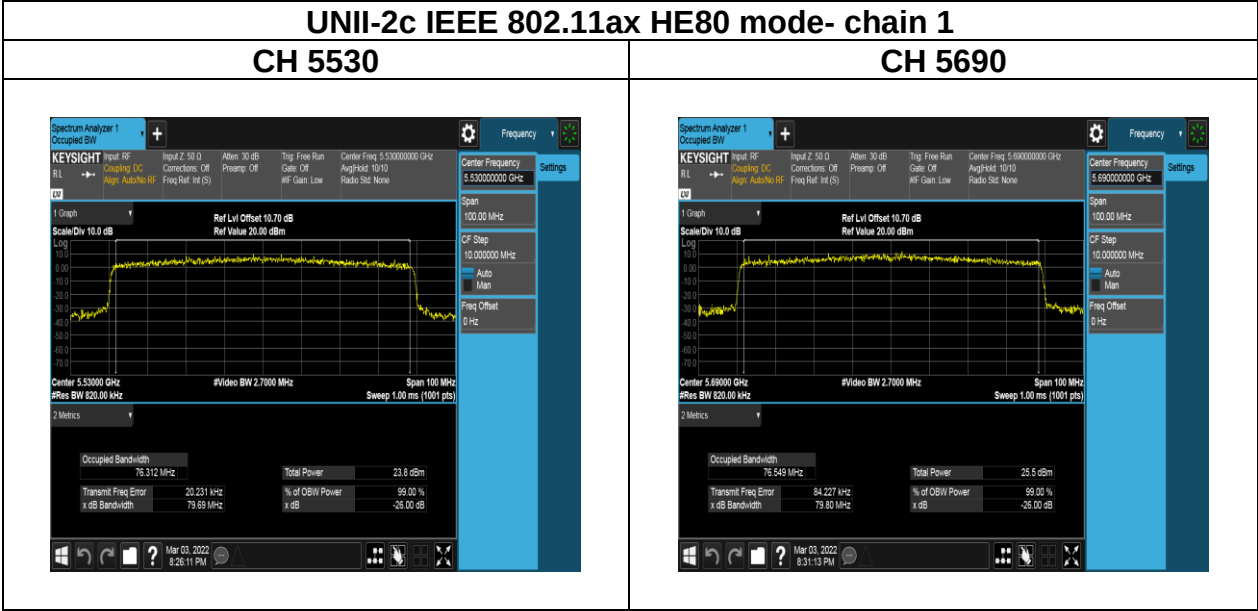


CH 5720



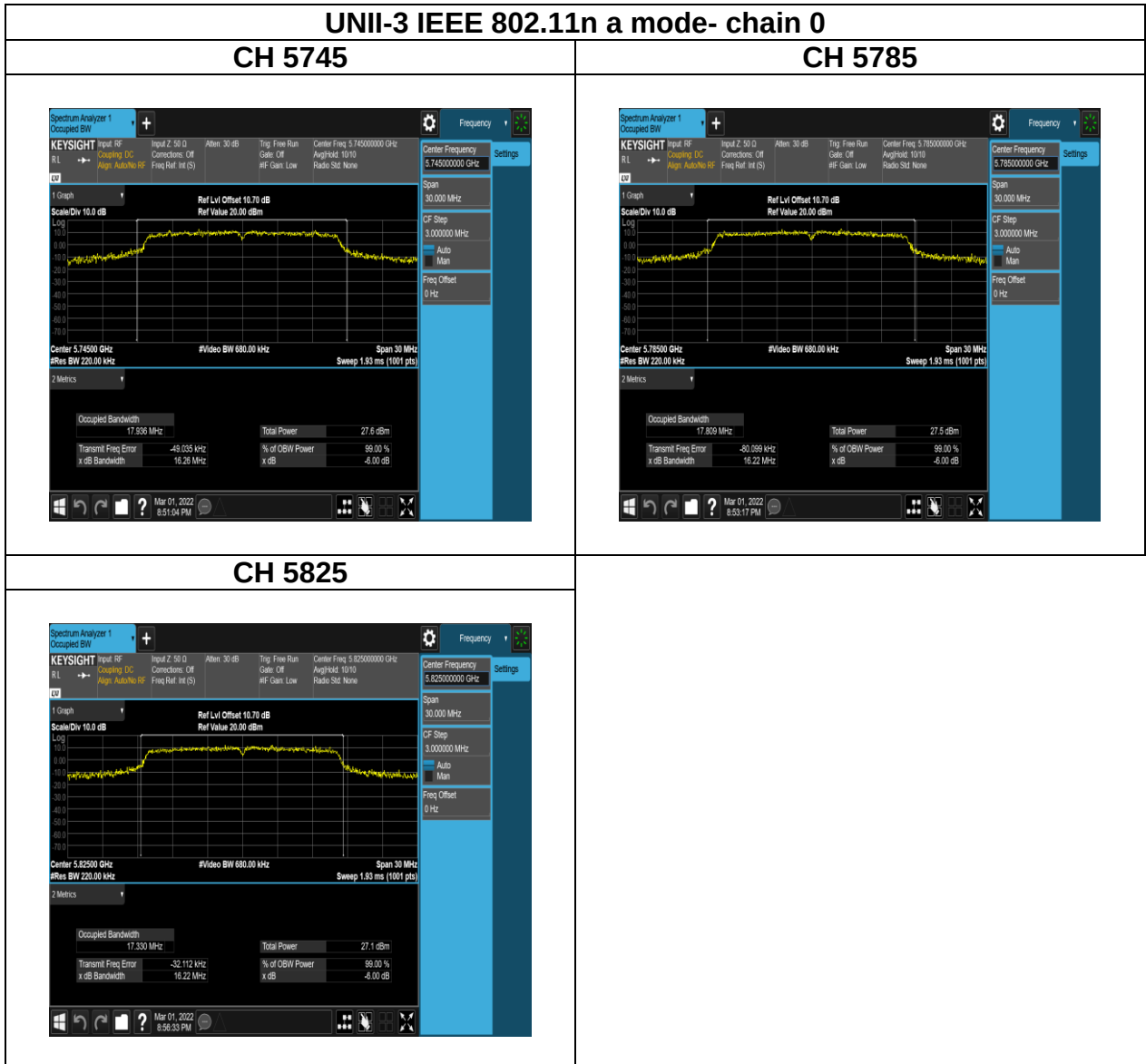
Report No.: TMWK2201000141KR



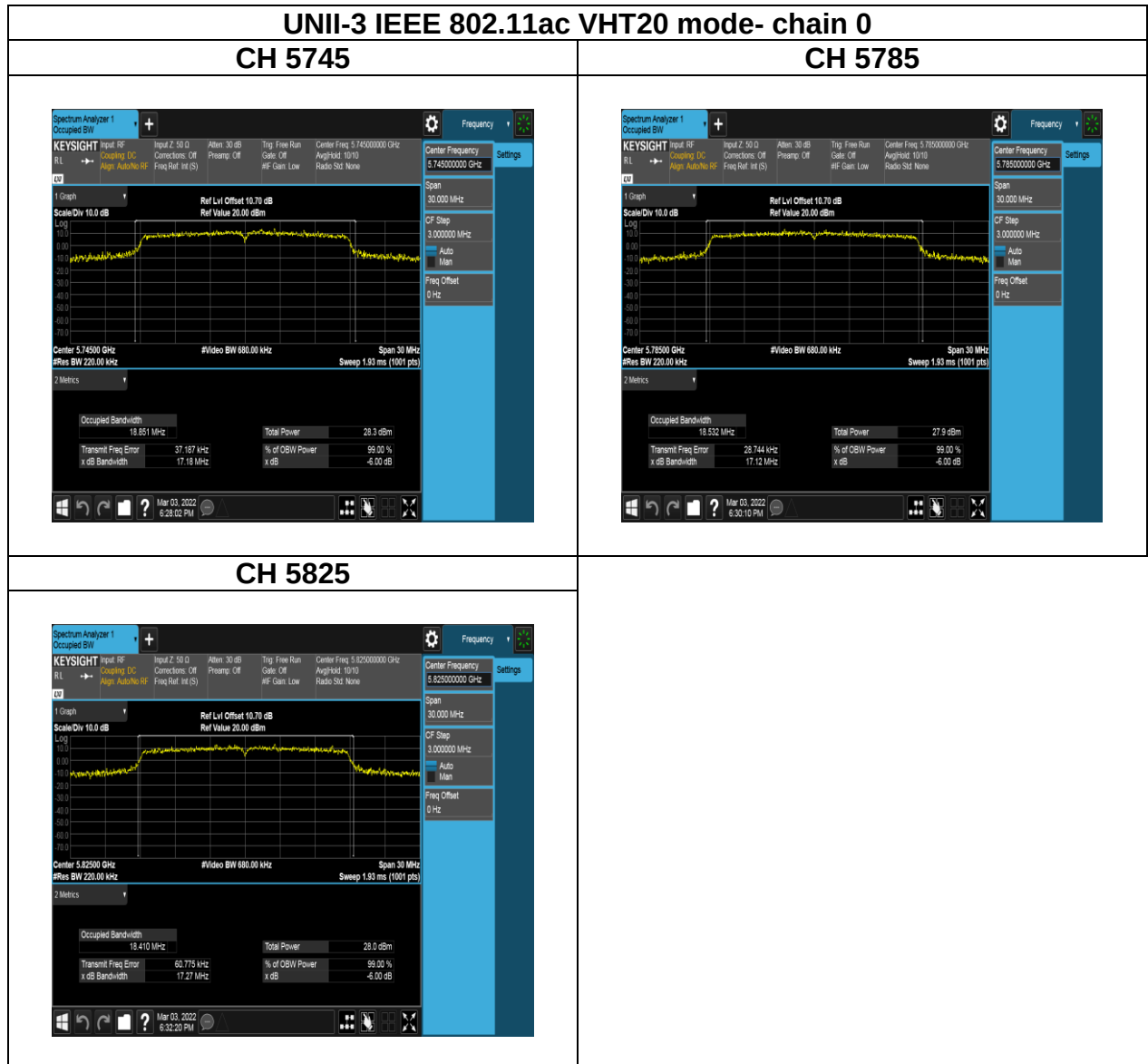


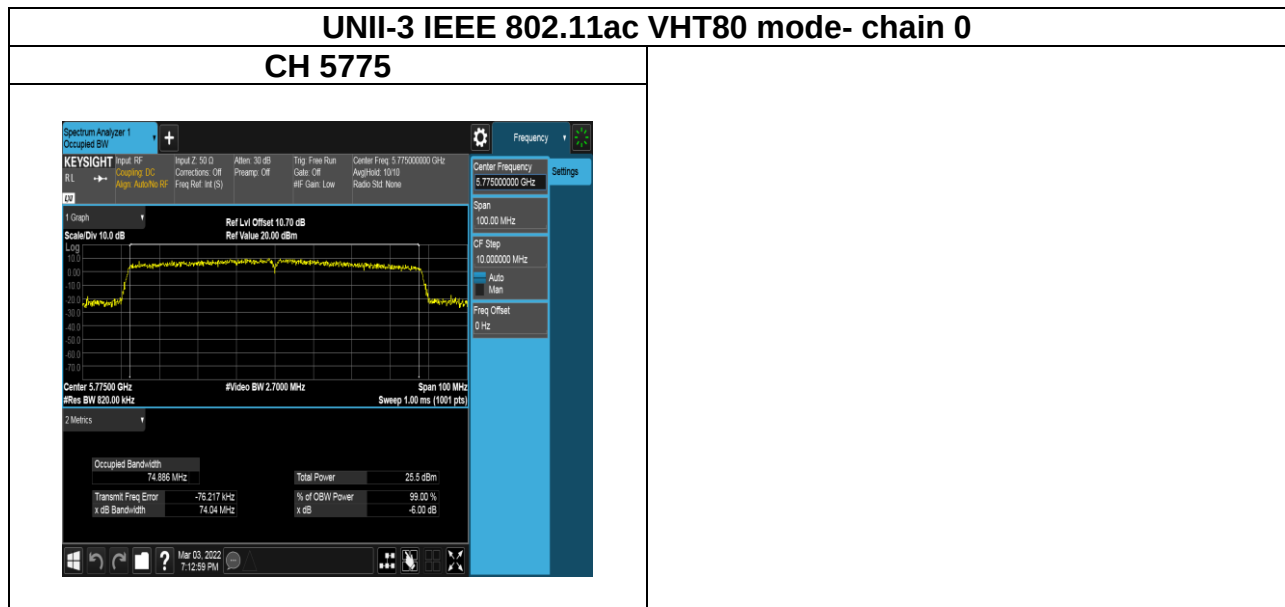
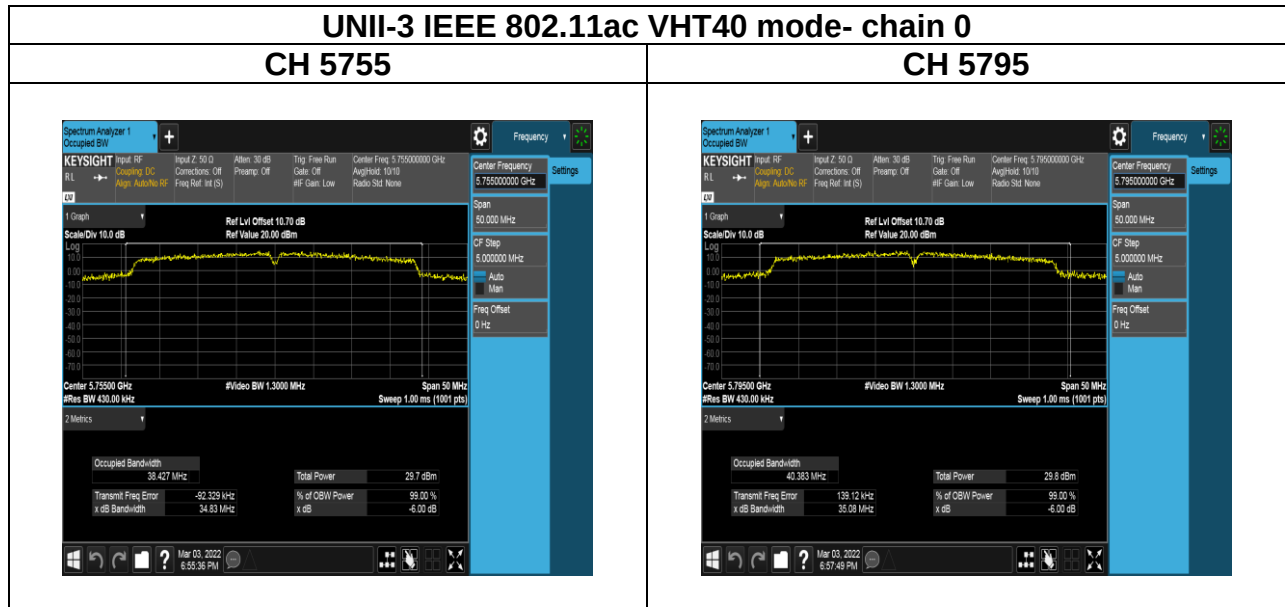
Report No.: TMWK2201000141KR

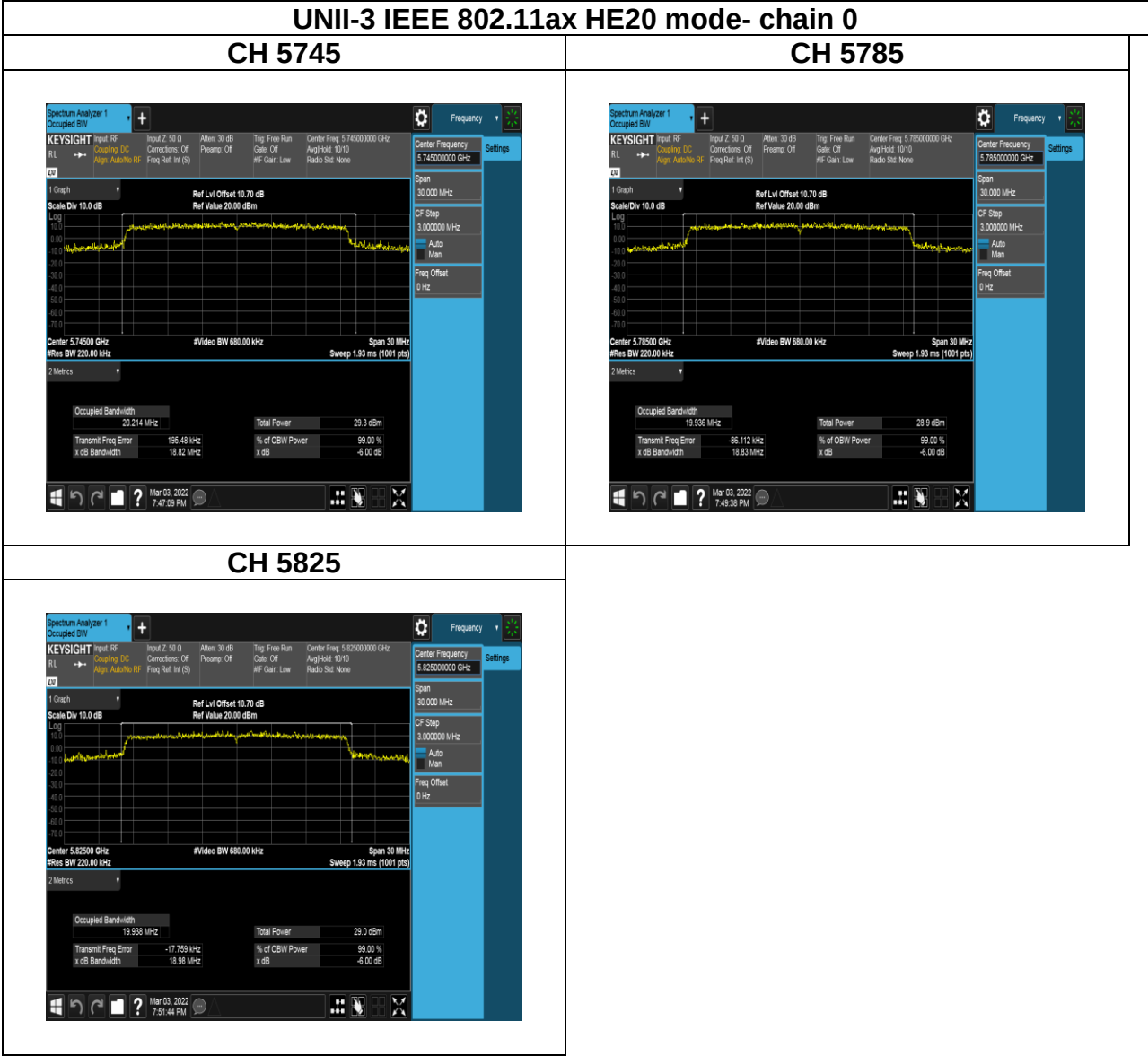
Test Plots (OBW 99%)



Report No.: TMWK2201000141KR



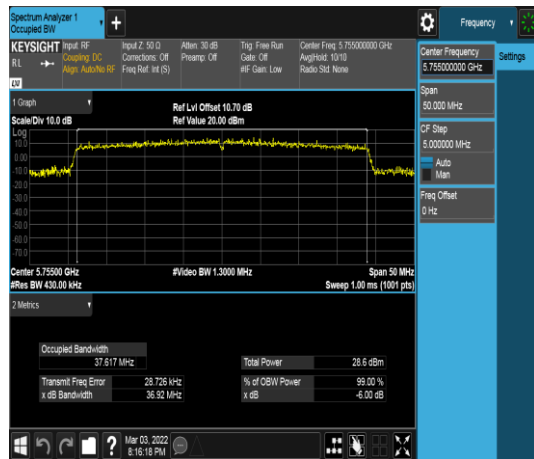




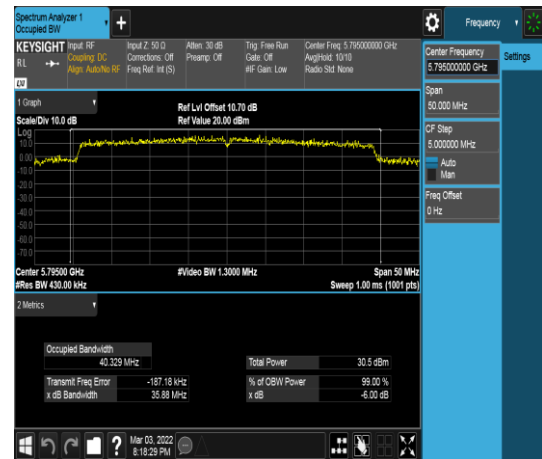
Report No.: TMWK2201000141KR

UNII-3 IEEE 802.11ax HE40 mode- chain 0

CH 5755

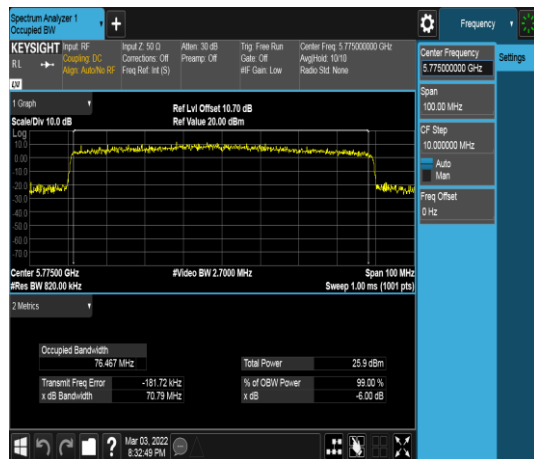


CH 5795



UNII-3 IEEE 802.11ax HE80 mode- chain 0

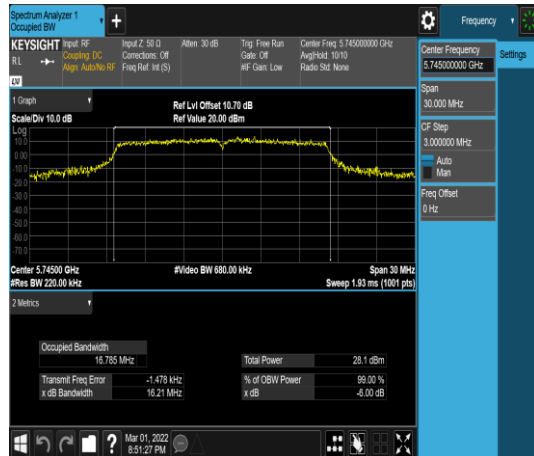
CH 5775



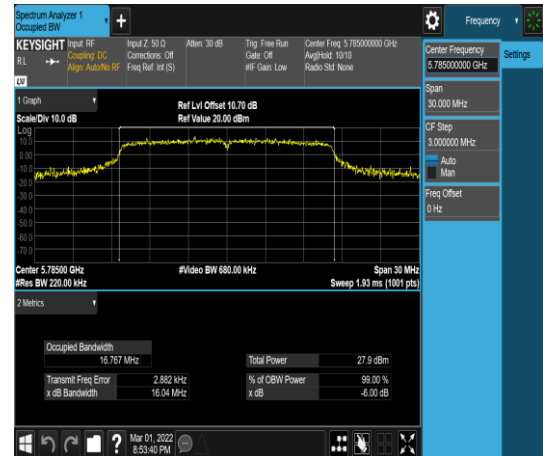
Report No.: TMWK2201000141KR

UNII-3 IEEE 802.11n a mode- chain 1

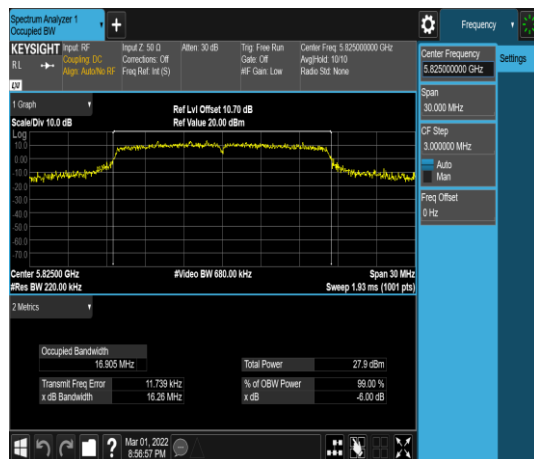
CH 5745



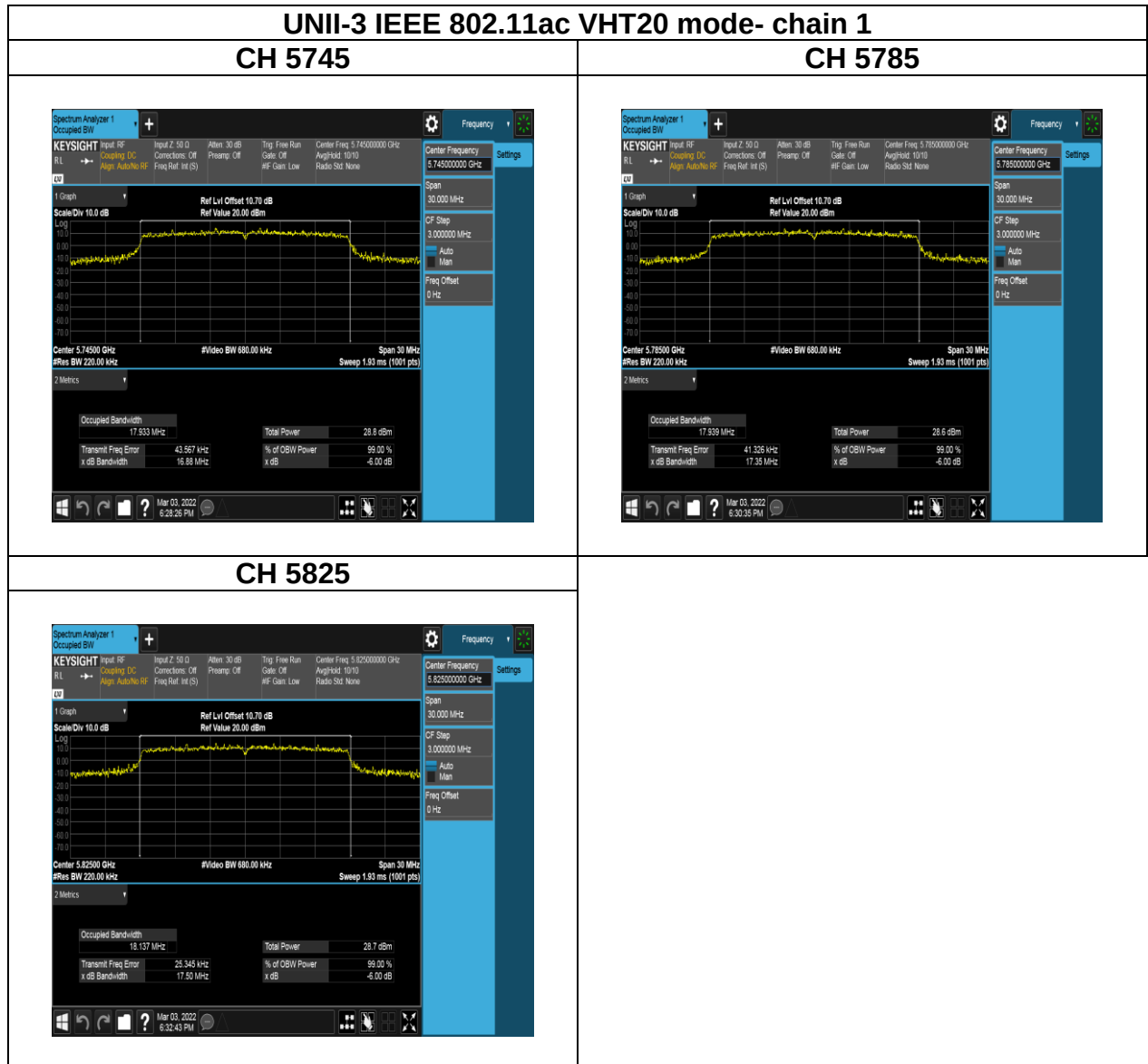
CH 5785

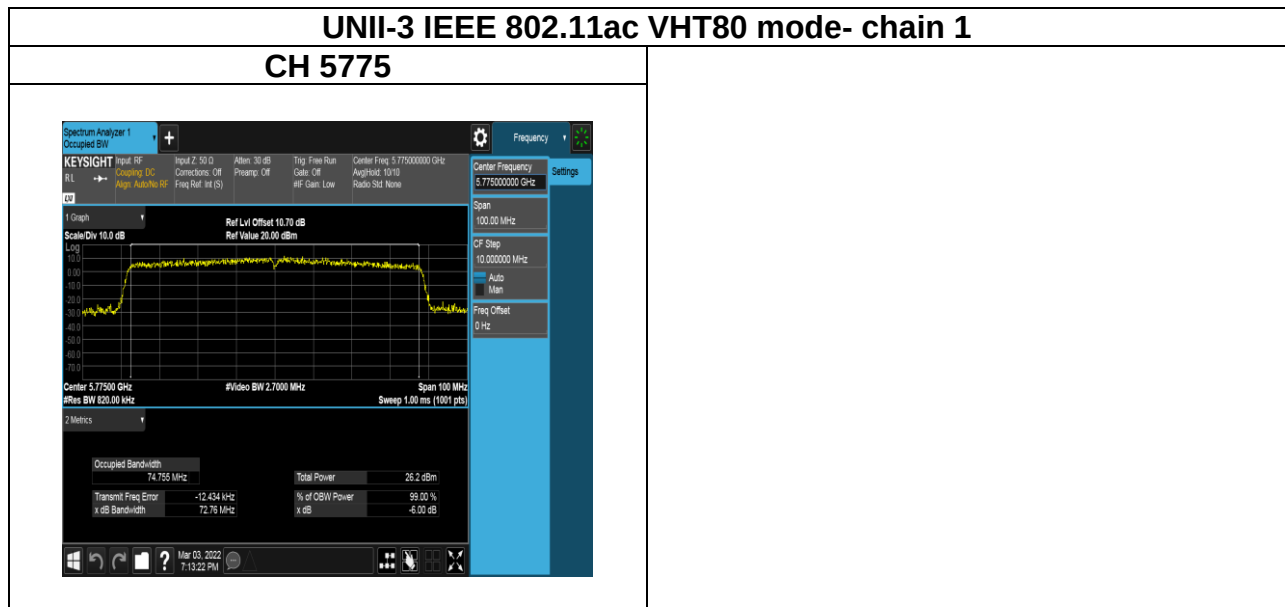
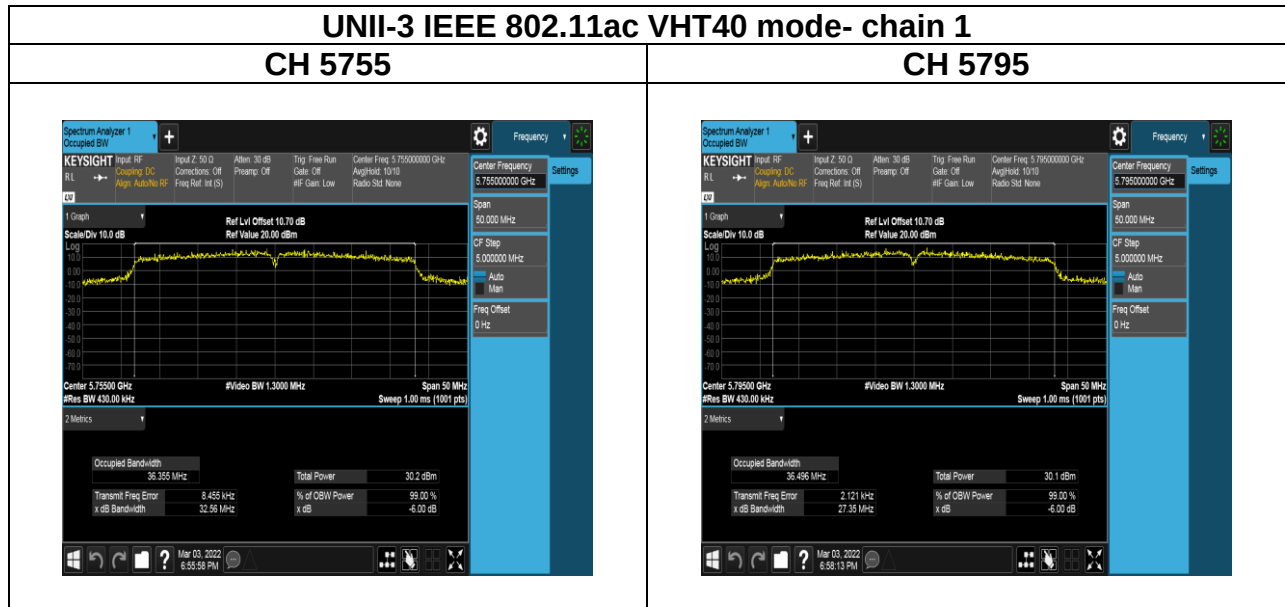


CH 5825



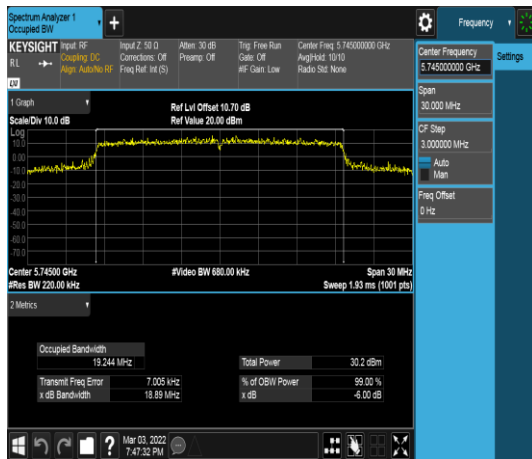
Report No.: TMWK2201000141KR



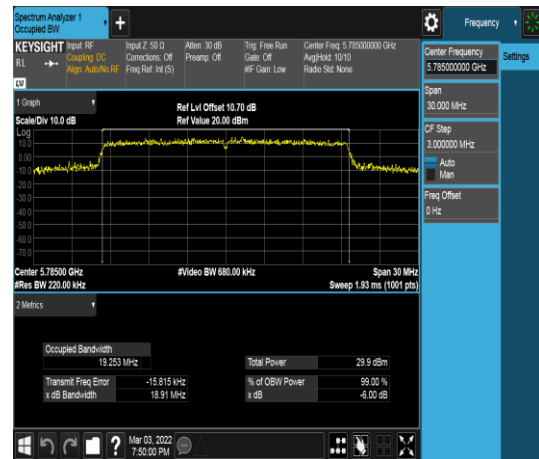


UNII-3 IEEE 802.11ax HE20 mode- chain 1

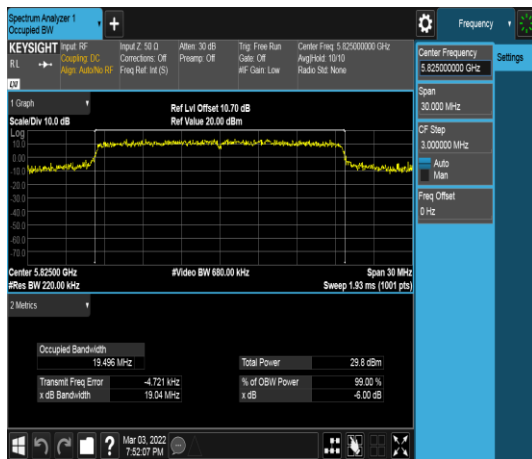
CH 5745



CH 5785

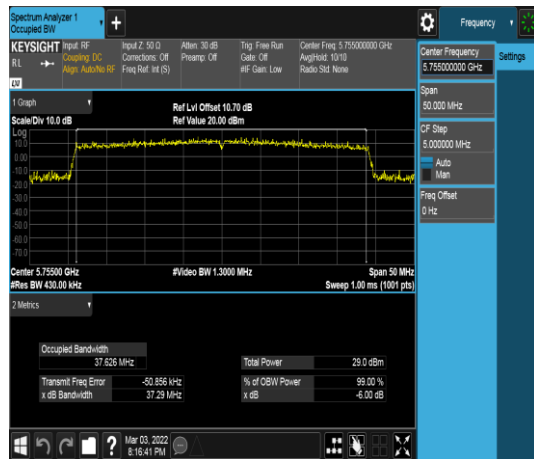


CH 5825

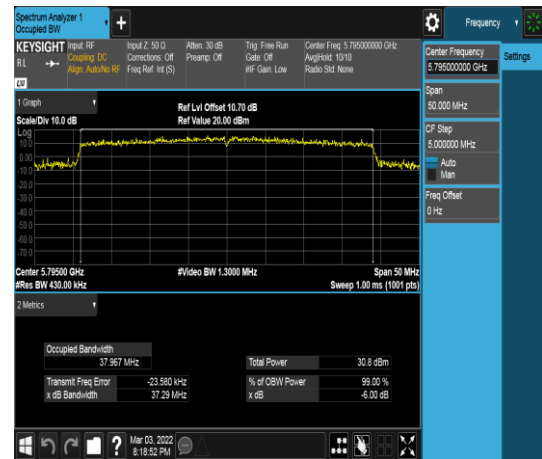


UNII-3 IEEE 802.11ax HE40 mode- chain 1

CH 5755

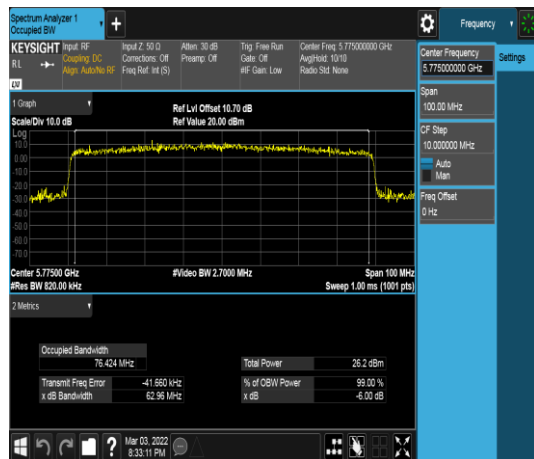


CH 5795



UNII-3 IEEE 802.11ax HE80 mode- chain 1

CH 5775



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 : 30dBm ☒ Antenna with DG greater than 6 dBi : [Limit = 30 – (DG – 6)]
UNII-1 Limit (For client devices)	☐ 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)]

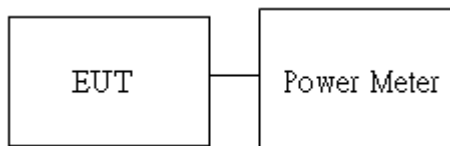
4.3.2 Test Procedure

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

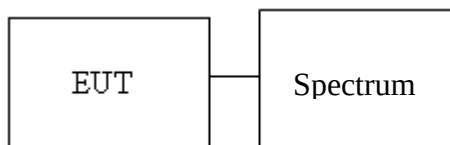
1. The EUT RF output connected to the power meter or spectrum by RF cable.
2. Setting maximum power transmit of EUT.
3. The path loss was compensated to the results for each measurement.
4. Measure and record the result of Average output power. in the test report.

4.3.3 Test Setup

For BW 20MHz and 40MHz



For BW 80MHz



4.3.4 Test Result

Temperature: 16.5 ~ 23.6°C

Test date: February 10 ~ March 7, 2022

Humidity: 53 ~ 68% RH

Tested by: Jack Chen

BFM OFF- Master

Conducted output power :

Test Mode: IEEE 802.11a mode

802.11a_2TX

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	16.5	20.71	20.83	23.96	248.886	27.89	PASS
44	5220	6	18	21.64	22.05	25.04	319.154	27.89	PASS
48	5240	6	18	21.85	22.18	25.21	331.894	27.89	PASS
52	5260	6	12	16.15	17.12	19.85	96.605	21.87	PASS
60	5300	6	12.5	16.38	16.71	19.74	94.189	21.87	PASS
64	5320	6	12.5	16.53	16.58	19.74	94.189	21.87	PASS
100	5500	6	12.5	16.15	16.95	19.76	94.624	21.87	PASS
116	5580	6	12.5	16.51	16.62	19.75	94.406	21.87	PASS
140	5700	6	13	16.61	16.82	19.90	97.724	21.87	PASS
144	5720(U-NII 2C)	6	13	15.10	15.44	18.46	70.219	21.87	PASS
144	5720 (U-NII 3)	6	13	10.26	10.58	13.61	22.970	28.44	PASS
149	5745	6	20	23.15	23.93	26.74	472.063	28.44	PASS
157	5785	6	20	22.97	23.56	26.46	442.588	28.44	PASS
165	5825	6	20	22.98	23.97	26.69	466.659	28.44	PASS

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802.11n_HT20_MIMO

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	18.5	20.46	20.52	23.70	234.423	27.89	PASS
44	5220	MCS8	21	22.04	22.42	25.44	349.945	27.89	PASS
48	5240	MCS8	21	22.18	22.51	25.55	358.922	27.89	PASS
52	5260	MCS8	14.5	15.97	17.01	19.73	93.972	21.87	PASS
60	5300	MCS8	15.5	16.74	17.15	20.16	103.753	21.87	PASS
64	5320	MCS8	15.5	16.86	16.95	20.11	102.565	21.87	PASS
100	5500	MCS8	15	16.02	16.393	19.42	87.498	21.87	PASS
116	5580	MCS8	15	16.38	16.45	19.62	91.622	21.87	PASS
140	5700	MCS8	15.5	16.42	16.52	19.68	92.897	21.87	PASS
144	5720(U-NII 2C)	MCS8	15.5	15.00	15.22	18.31	67.822	21.87	PASS
144	5720 (U-NII 3)	MCS8	15.5	10.27	10.48	13.58	22.787	28.44	PASS
149	5745	MCS8	23	23.31	24.07	26.91	490.908	28.44	PASS
157	5785	MCS8	23	22.85	23.41	26.34	430.527	28.44	PASS
165	5825	MCS8	23	22.81	23.62	26.44	440.555	28.44	PASS

802.11ac_VHT20_MIMO

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	18.5	20.57	20.59	23.78	238.781	27.89	PASS
44	5220	MCS0	21	22.07	22.47	25.48	353.183	27.89	PASS
48	5240	MCS0	21	22.31	22.63	25.68	369.828	27.89	PASS
52	5260	MCS0	14.5	16.08	17.13	19.84	96.383	21.87	PASS
60	5300	MCS0	15.5	16.83	17.21	20.23	105.439	21.87	PASS
64	5320	MCS0	15.5	16.94	17.03	20.19	104.472	21.87	PASS
100	5500	MCS0	15	15.94	16.81	19.60	91.201	21.87	PASS
116	5580	MCS0	15	16.46	16.53	19.70	93.325	21.87	PASS
140	5700	MCS0	15.5	16.49	16.64	19.77	94.842	21.87	PASS
144	5720(U-NII 2C)	MCS0	15.5	15.09	15.35	18.42	69.571	21.87	PASS
144	5720 (U-NII 3)	MCS0	15.5	10.36	10.61	13.69	23.374	28.44	PASS
149	5745	MCS0	23	23.45	24.32	27.11	514.044	28.44	PASS
157	5785	MCS0	23	23.21	23.49	26.56	452.898	28.44	PASS
165	5825	MCS0	23	23.24	24.37	27.05	506.991	28.44	PASS

802.11n_HT40_MIMO

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	16.5	17.76	18.02	21.27	133.968	27.89	PASS
46	5230	MCS8	23.5	23.88	24.25	27.45	555.904	27.89	PASS
54	5270	MCS8	16.5	18.34	18.36	21.73	148.936	21.87	PASS
62	5310	MCS8	17	18.24	18.27	21.64	145.881	21.87	PASS
102	5510	MCS8	15.5	15.65	16.47	19.46	88.308	21.87	PASS
110	5550	MCS8	18	18.11	18.15	21.51	141.579	21.87	PASS
134	5670	MCS8	17	17.83	18.42	21.52	141.906	21.87	PASS
142	5710(U-NII 2C)	MCS8	17.5	17.43	17.50	20.85	121.536	21.87	PASS
142	5710 (U-NII 3)	MCS8	17.5	8.97	8.96	12.34	17.152	28.44	PASS
151	5755	MCS8	24	23.98	24.22	27.48	559.758	28.44	PASS
159	5795	MCS8	24	24.02	24.19	27.49	561.048	28.44	PASS

802.11ac_VHT40_MIMO

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	16.5	18.17	18.33	21.63	145.546	27.89	PASS
46	5230	MCS0	23.5	23.92	24.26	27.47	558.470	27.89	PASS
54	5270	MCS0	16.5	18.02	18.75	21.78	150.661	21.87	PASS
62	5310	MCS0	17	18.26	18.68	21.85	153.109	21.87	PASS
102	5510	MCS0	15.5	16.01	16.96	19.89	97.499	21.87	PASS
110	5550	MCS0	18	18.12	18.64	21.77	150.314	21.87	PASS
134	5670	MCS0	17	18.13	18.47	21.68	147.231	21.87	PASS
142	5710(U-NII 2C)	MCS0	17.5	17.48	17.75	21.00	125.864	21.87	PASS
142	5710 (U-NII 3)	MCS0	17.5	9.02	9.21	12.49	17.759	28.44	PASS
151	5755	MCS0	24	23.91	24.3	27.49	561.048	28.44	PASS
159	5795	MCS0	24	23.83	24.35	27.48	559.758	28.44	PASS



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802.11ac_VHT80_MIMO

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	13	14.87	15.18	18.75	74.989	27.89	PASS
58	5290	MCS0	14.5	16.89	16	20.19	104.472	21.87	PASS
106	5530	MCS0	14.5	16.15	16.07	19.84	96.383	21.87	PASS
138	5690(U-NII 2C)	MCS0	17	17.56	17.89	21.46	139.923	21.87	PASS
138	5690 (U-NII 3)	MCS0	17	5.44	5.44	9.17	8.263	28.44	PASS
155	5775	MCS0	18	19.18	19.36	23.00	199.526	28.44	PASS

802.11ax_HE20_MIMO

CH	Frequency (MHz)	Data Rate	RU config.	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
					Ch0	Ch1				
36	5180	MCS0	full	16.5	19.78	19.81	23.04	201.372	27.89	PASS
		MCS0	26/0	18	11.08	11.72	14.66	29.242	27.89	PASS
		MCS0	52/37	18	14.1	14.69	17.65	58.210	27.89	PASS
		MCS0	106/53	16.5	16.7	16.75	19.97	99.312	27.89	PASS
44	5220	MCS0	full	19.5	21.87	22.27	25.32	340.408	27.89	PASS
		MCS0	26/0	21.5	13.68	14.17	17.18	52.240	27.89	PASS
		MCS0	26/8	21.5	13.34	14.03	16.95	49.545	27.89	PASS
		MCS0	52/37	20.5	16.08	16.31	19.45	88.105	27.89	PASS
		MCS0	52/40	20.5	15.94	16.29	19.37	86.497	27.89	PASS
		MCS0	106/53	20	18.65	18.74	21.94	156.315	27.89	PASS
		MCS0	106/54	20	18.6	18.7	21.90	154.882	27.89	PASS
48	5240	MCS0	full	19.5	21.86	22.32	25.34	341.979	27.89	PASS
		MCS0	26/8	21.5	13.85	13.92	17.13	51.642	27.89	PASS
		MCS0	52/40	20.5	16.13	16.31	19.47	88.512	27.89	PASS
		MCS0	106/54	20	18.52	18.91	21.97	157.398	27.89	PASS
52	5260	MCS0	full	13	15.8	16.82	19.59	90.991	21.87	PASS
		MCS0	26/0	15	7.84	8.57	11.47	14.028	21.87	PASS
		MCS0	52/37	14.5	10.28	10.97	13.89	24.491	21.87	PASS
		MCS0	106/53	14	12.96	13.63	16.56	45.290	21.87	PASS
60	5300	MCS0	full	14	16.61	16.87	19.99	99.770	21.87	PASS
		MCS0	26/0	16	8.14	8.56	11.60	14.454	21.87	PASS
		MCS0	26/8	15.5	8.18	8.21	11.44	13.932	21.87	PASS
		MCS0	52/37	15	10.24	10.62	13.68	23.335	21.87	PASS
		MCS0	52/40	15	10.66	10.69	13.92	24.660	21.87	PASS
		MCS0	106/53	14.5	12.95	13.23	16.34	43.053	21.87	PASS
		MCS0	106/54	14.5	13.3	13.4	16.60	45.709	21.87	PASS
64	5320	MCS0	full	13.5	16.29	16.36	19.57	90.573	21.87	PASS
		MCS0	26/8	15.5	8.15	8.25	11.45	13.964	21.87	PASS
		MCS0	52/40	15	10.63	10.73	13.93	24.717	21.87	PASS
		MCS0	106/54	14	12.9	13.02	16.21	41.783	21.87	PASS

100	5500	MCS0	full	13.5	16.55	16.62	19.83	96.161	21.87	PASS
		MCS0	26/0	15.5	7.83	9.11	11.77	15.031	21.87	PASS
		MCS0	52/37	15	10.47	11.33	14.17	26.122	21.87	PASS
		MCS0	106/53	14	12.65	13.54	16.37	43.351	21.87	PASS
116	5580	MCS0	full	13	15.48	16	19.00	79.433	21.87	PASS
		MCS0	26/0	15.5	8.06	8.25	11.40	13.804	21.87	PASS
		MCS0	26/8	15.5	8.09	8.15	11.37	13.709	21.87	PASS
		MCS0	52/37	14.5	10.03	10.26	13.40	21.878	21.87	PASS
		MCS0	52/40	14.5	10.1	10.27	13.43	22.029	21.87	PASS
		MCS0	106/53	14	12.8	12.82	16.06	40.365	21.87	PASS
		MCS0	106/54	14	12.78	12.89	16.08	40.551	21.87	PASS
140	5700	MCS0	full	14.5	16.78	16.83	20.05	101.158	21.87	PASS
		MCS0	26/8	16	7.94	8.09	11.26	13.366	21.87	PASS
		MCS0	52/40	15.5	10.48	10.61	13.79	23.933	21.87	PASS
		MCS0	106/54	15	13.09	13.29	16.44	44.055	21.87	PASS
144	5720	MCS0	full	14	15.91	16.06	19.23	83.753	21.87	PASS
		MCS0	26/0	16.5	8.21	8.53	11.62	14.521	21.87	PASS
		MCS0	26/8	16	7.78	7.9	11.09	12.853	21.87	PASS
		MCS0	52/37	15.5	10.22	10.52	13.62	23.014	21.87	PASS
		MCS0	52/40	15.5	10.3	10.49	13.64	23.121	21.87	PASS
		MCS0	106/53	15	12.86	13.19	16.28	42.462	21.87	PASS
		MCS0	106/54	15	13.11	13.31	16.46	44.259	21.87	PASS
149	5745	MCS0	full	22	23.65	24.51	27.35	543.250	28.44	PASS
		MCS0	26/0	23	15.88	16.39	19.39	86.896	28.44	PASS
		MCS0	52/37	22.5	18.29	18.76	21.78	150.661	28.44	PASS
		MCS0	106/53	22	20.7	21.32	24.27	267.301	28.44	PASS
157	5785	MCS0	full	22	23.14	24.04	26.86	485.289	28.44	PASS
		MCS0	26/0	22.5	15.3	15.43	18.61	72.611	28.44	PASS
		MCS0	26/8	22.5	14.82	15.14	18.23	66.527	28.44	PASS
		MCS0	52/37	22	17.64	17.75	20.94	124.165	28.44	PASS
		MCS0	52/40	22.5	17.54	17.95	21.00	125.893	28.44	PASS
		MCS0	106/53	22	20.47	20.82	23.90	245.471	28.44	PASS
		MCS0	106/54	22	20.36	20.8	23.83	241.546	28.44	PASS
165	5825	MCS0	full	22	23.47	24.46	27.24	529.663	28.44	PASS
		MCS0	26/8	22.5	15.06	15.36	18.46	70.146	28.44	PASS
		MCS0	52/40	22	17.63	17.87	21.00	125.893	28.44	PASS
		MCS0	106/54	21	19.8	20.14	23.22	209.894	28.44	PASS

802.11ax_HE40_MIMO

CH	Frequency (MHz)	Data Rate	RU config.	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
					Ch0	Ch1				
38	5190	MCS0	full	14.5	17.4	17.68	20.99	125.603	27.89	PASS
		MCS0	242/61	15	14.7	15.2	18.41	69.343	27.89	PASS
46	5230	MCS0	full	22	23.86	24.17	27.47	558.470	27.89	PASS
		MCS0	242/62	22	20.39	21.07	24.19	262.422	27.89	PASS
54	5270	MCS0	full	15.5	18.13	18.62	21.83	152.405	21.87	PASS
		MCS0	242/61	16	15.05	16.13	19.07	80.724	21.87	PASS
62	5310	MCS0	full	15.5	17.92	18.01	21.41	138.357	21.87	PASS
		MCS0	242/62	16	14.91	15.17	18.49	70.632	21.87	PASS
102	5510	MCS0	full	15.5	18.12	18.28	21.65	146.218	21.87	PASS
		MCS0	242/61	16	14.48	15.55	18.50	70.795	21.87	PASS
110	5550	MCS0	full	16.5	17.78	17.86	21.27	133.968	21.87	PASS
		MCS1	242/61	17.5	14.82	15.1	18.41	69.343	21.87	PASS
		MCS2	242/62	17.5	14.68	15.54	18.58	72.111	21.87	PASS
134	5670	MCS3	full	15.5	17.88	18.12	21.45	139.637	21.87	PASS
		MCS0	242/62	16	14.75	15.12	18.39	69.024	21.87	PASS
142	5710	MCS0	full	16.5	18.21	18.23	21.67	146.893	21.87	PASS
		MCS0	242/61	17.5	15.5	15.79	19.10	81.283	21.87	PASS
		MCS0	242/62	17	14.96	15.52	18.70	74.131	21.87	PASS
151	5755	MCS0	full	20	22.23	22.5	25.82	381.944	28.44	PASS
		MCS0	242/61	20.5	19.8	19.96	23.33	215.278	28.44	PASS
159	5795	MCS0	full	22.5	23.88	24.19	27.49	561.048	28.44	PASS
		MCS0	242/62	22.5	21.18	21.36	24.72	296.483	28.44	PASS

802.11ax_HE80_MIMO

CH	Frequency (MHz)	Data Rate	RU config.	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
					Ch0	Ch1				
42	5210	MCS0	full	12.5	14.11	14.59	18.11	64.714	27.89	PASS
		MCS0	484/65	12.5	11.04	11.38	14.97	31.405	27.89	PASS
58	5290	MCS0	full	13.5	14.83	15.66	19.02	79.799	21.87	PASS
		MCS0	484/66	13.5	11.75	12.48	15.89	38.815	21.87	PASS
106	5530	MCS0	full	15.5	16.87	17	20.69	117.220	21.87	PASS
		MCS0	484/65	16	13.28	14.38	17.62	57.810	21.87	PASS
138	5690	MCS0	full	17.5	18.01	18.19	21.86	153.462	21.87	PASS
		MCS0	484/65	17	13.62	14.45	17.81	60.395	21.87	PASS
		MCS0	484/66	17.5	15	16.35	19.49	88.920	21.87	PASS
155	5775	MCS0	full	18	19.1	19.22	22.92	195.884	28.44	PASS
		MCS0	484/65	18	16.21	16.34	20.03	100.693	28.44	PASS
		MCS0	484/66	18.5	16.22	16.53	20.14	103.276	28.44	PASS