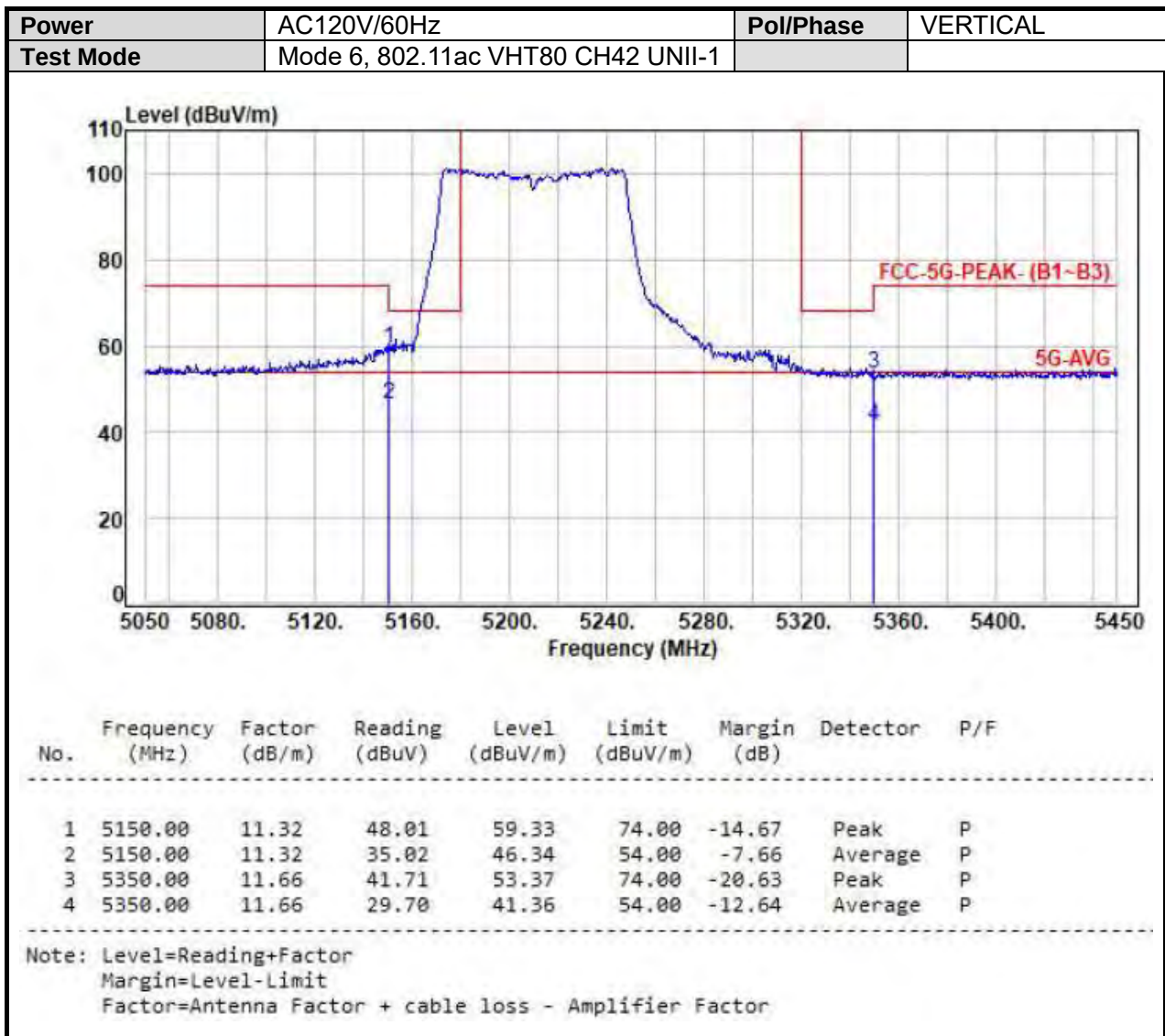
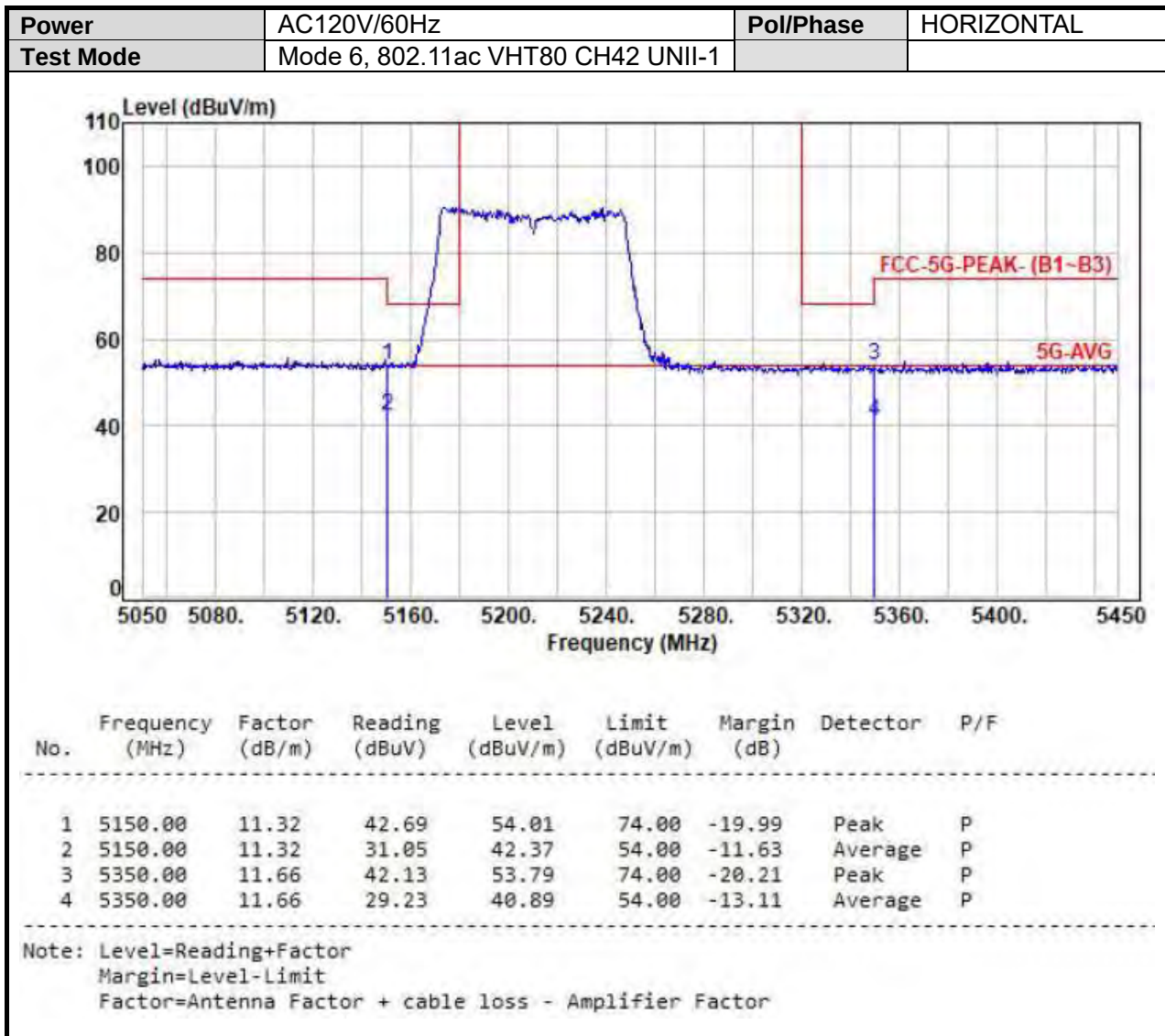
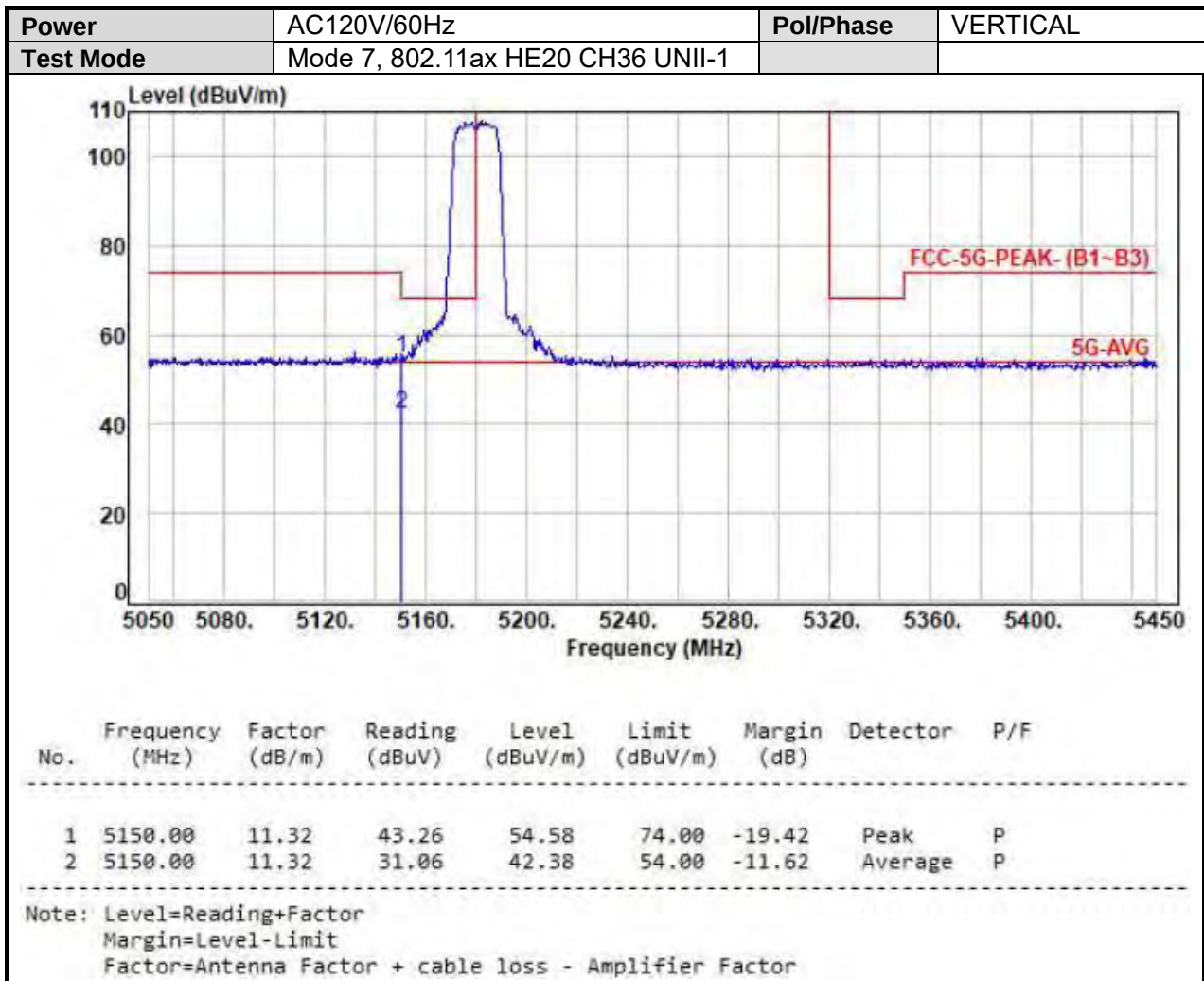
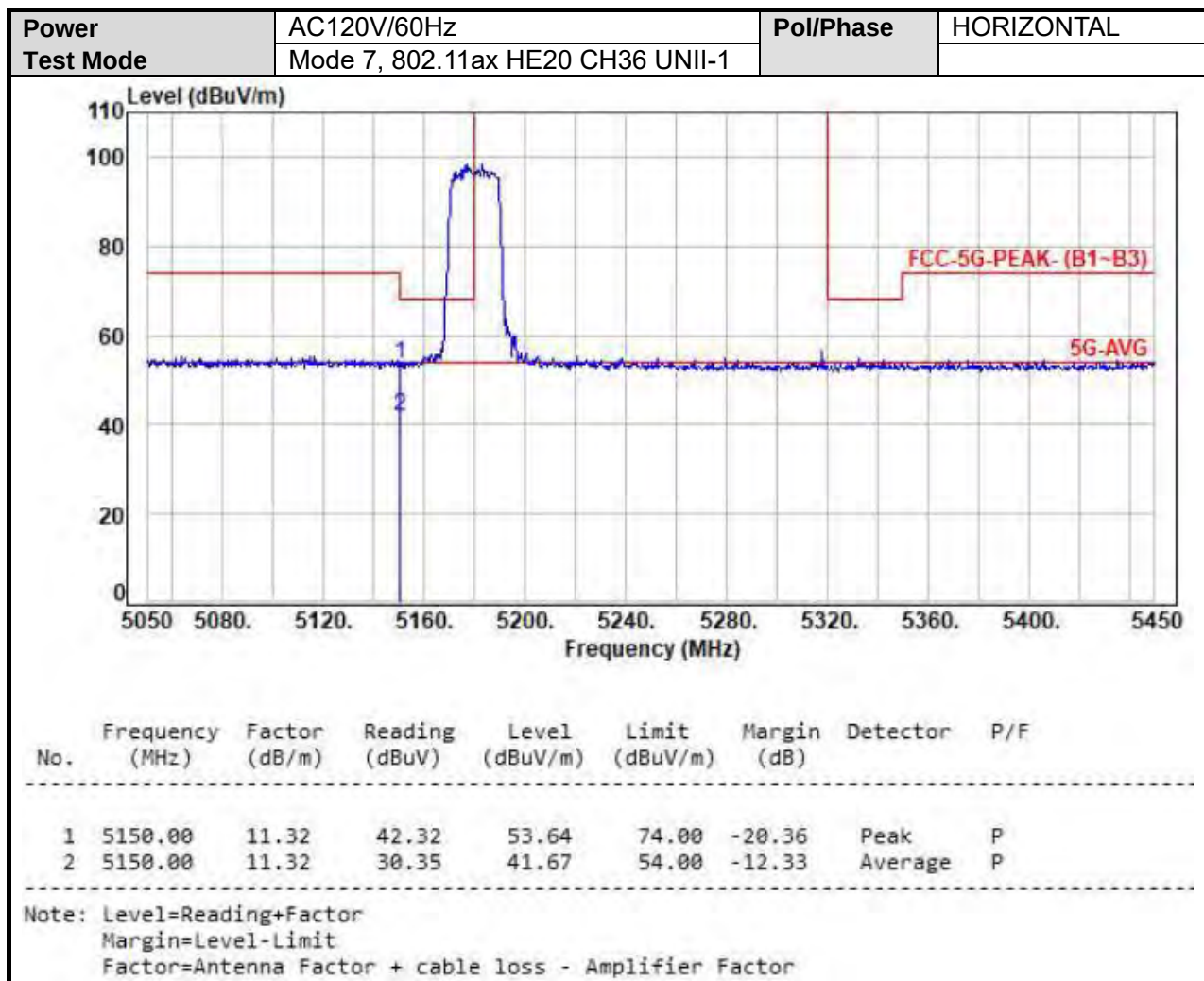
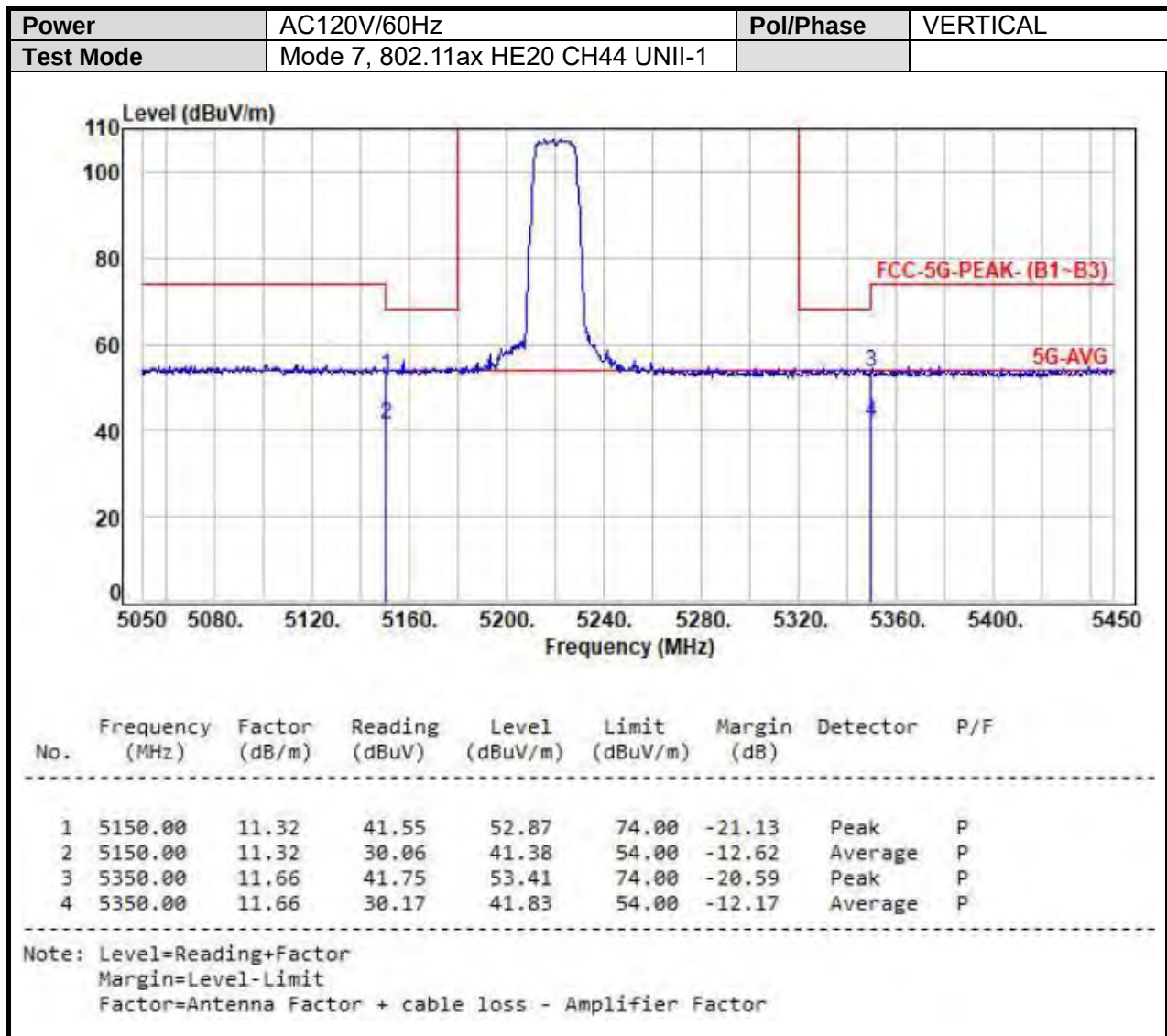


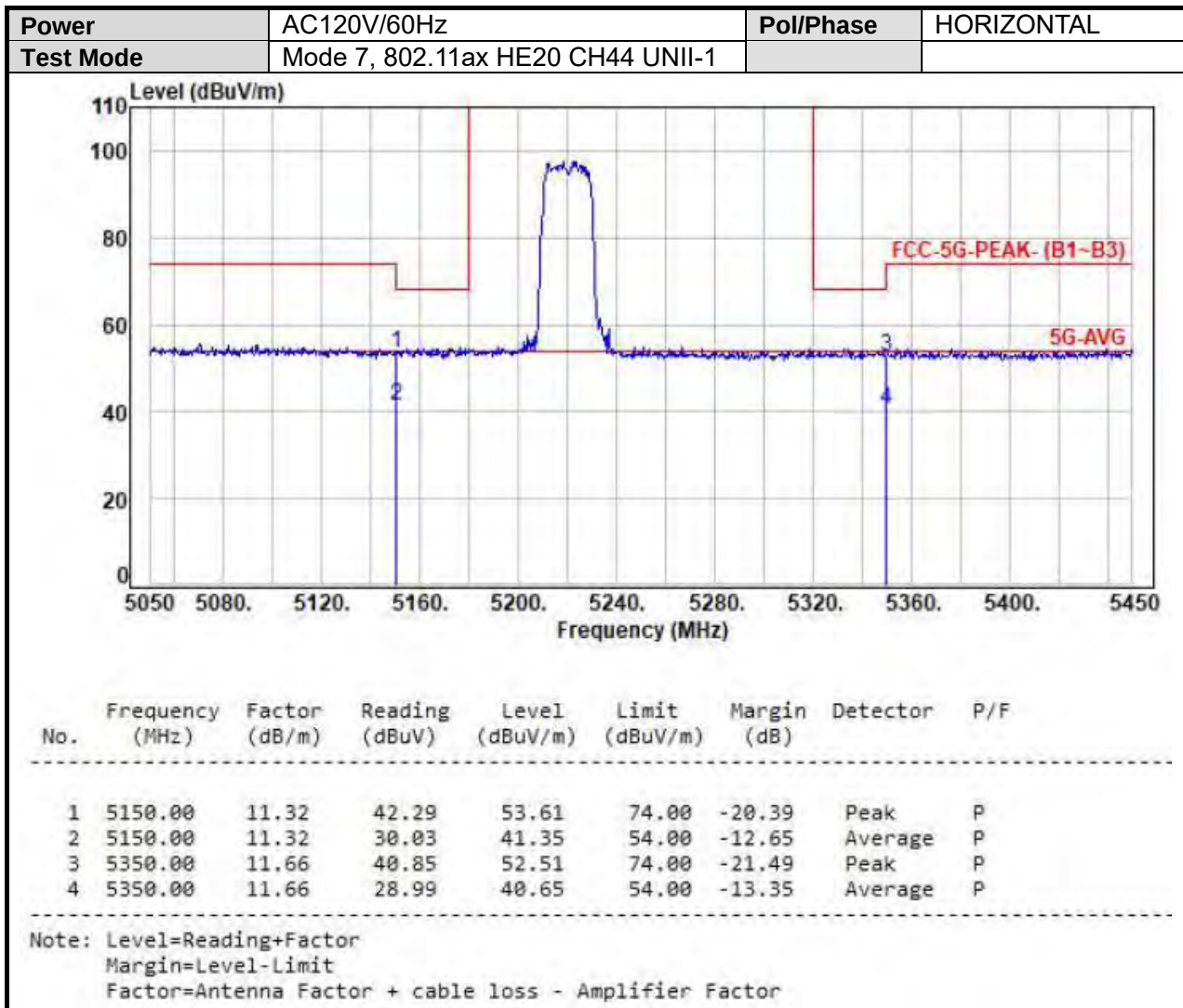


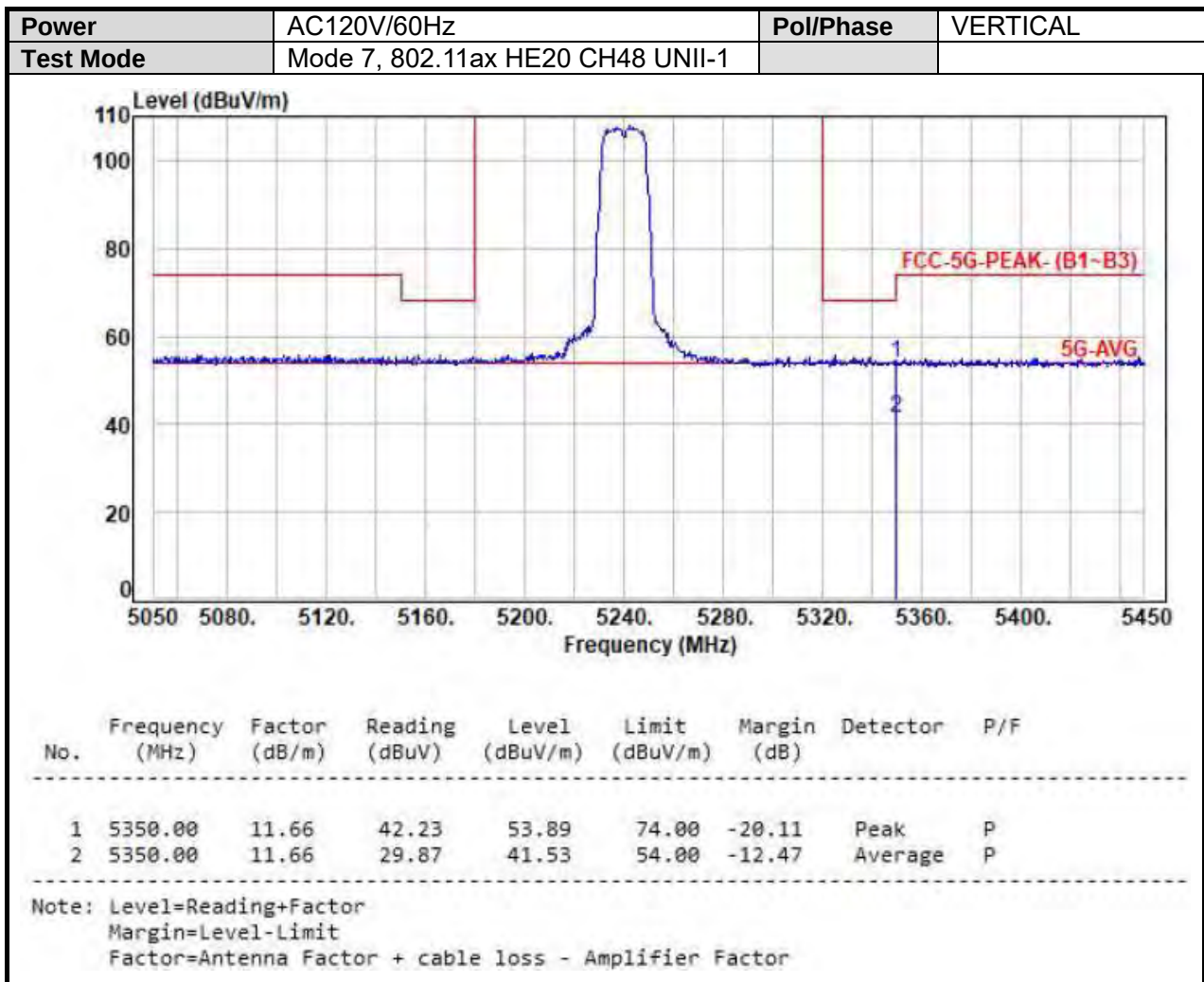


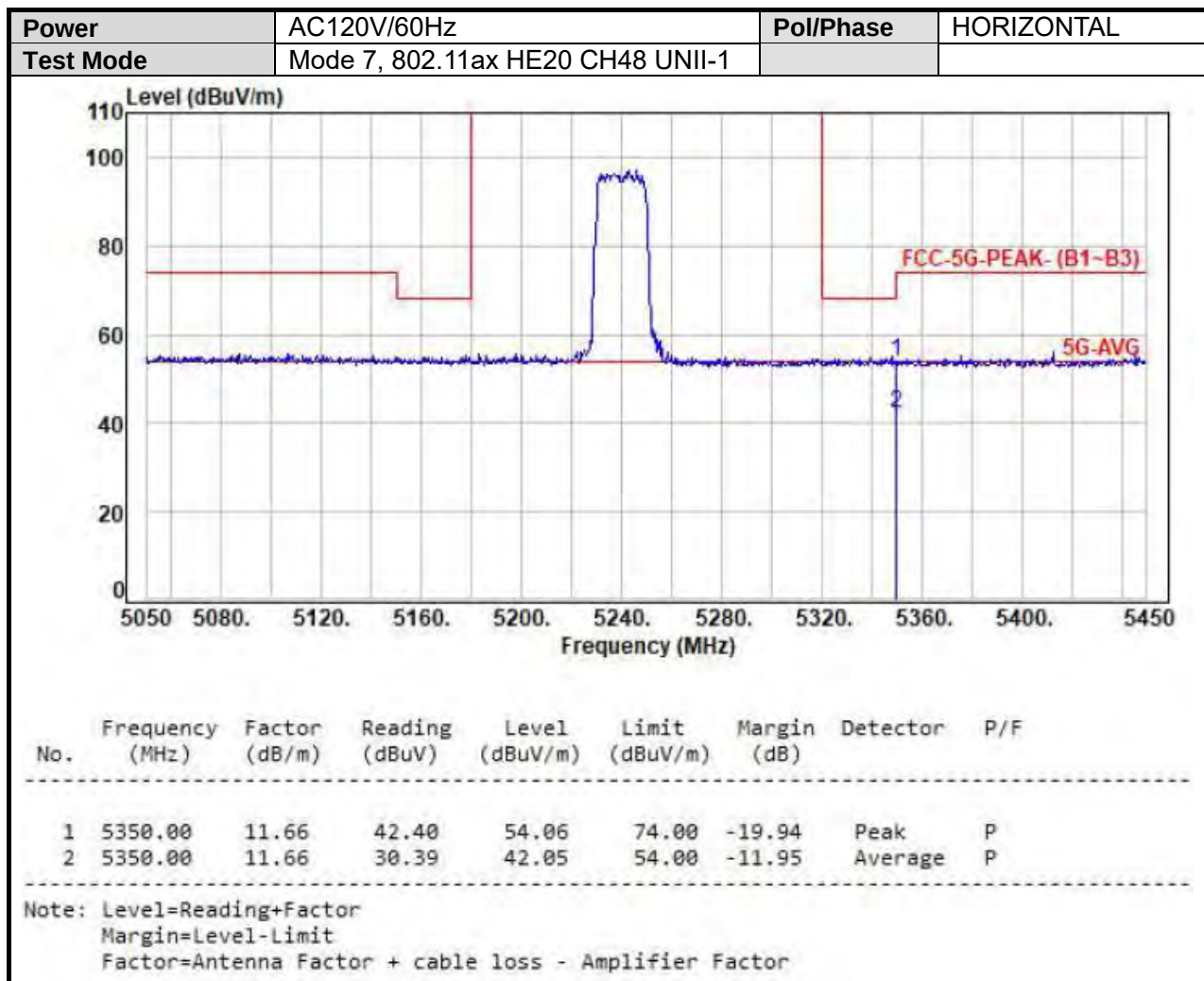


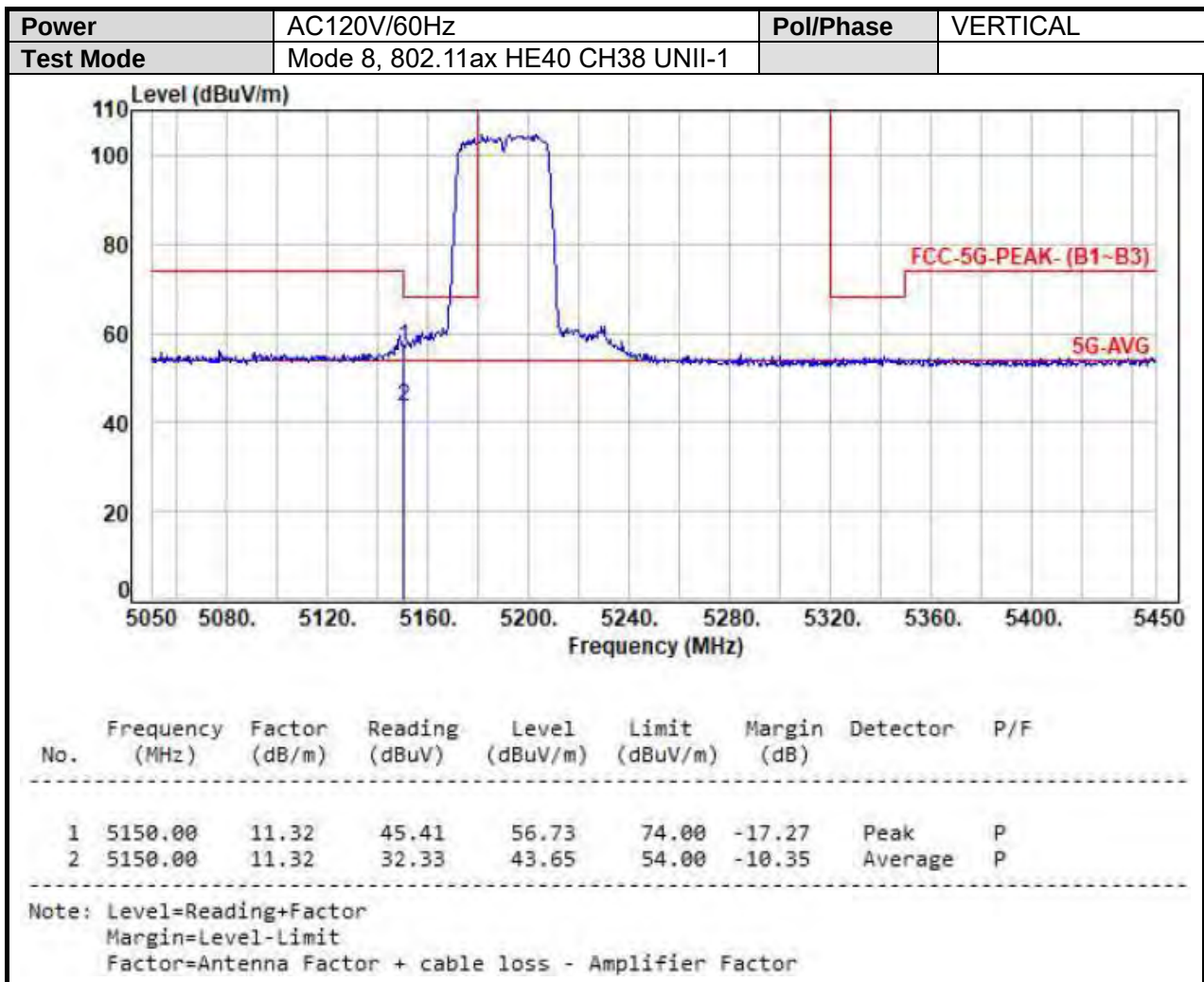


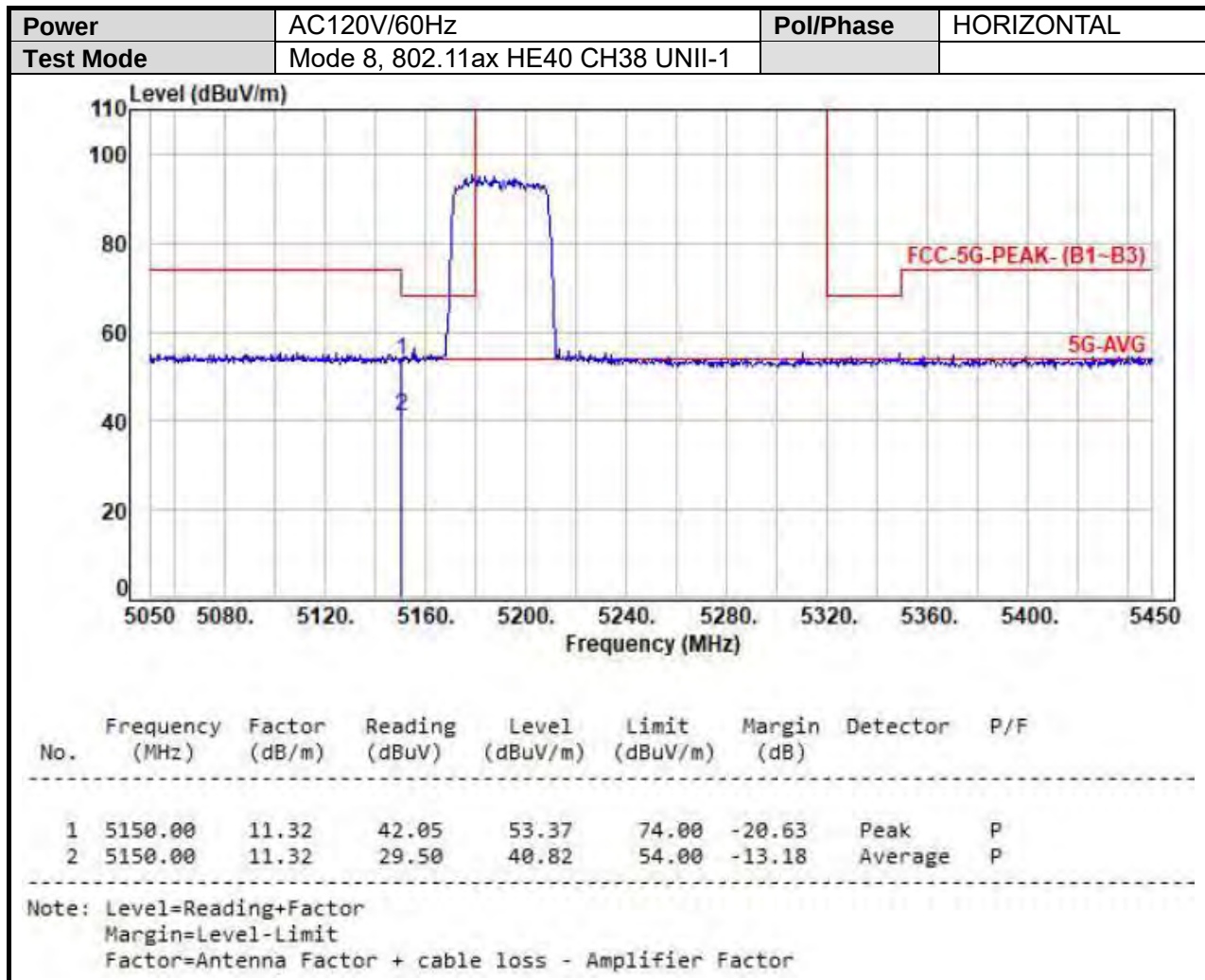


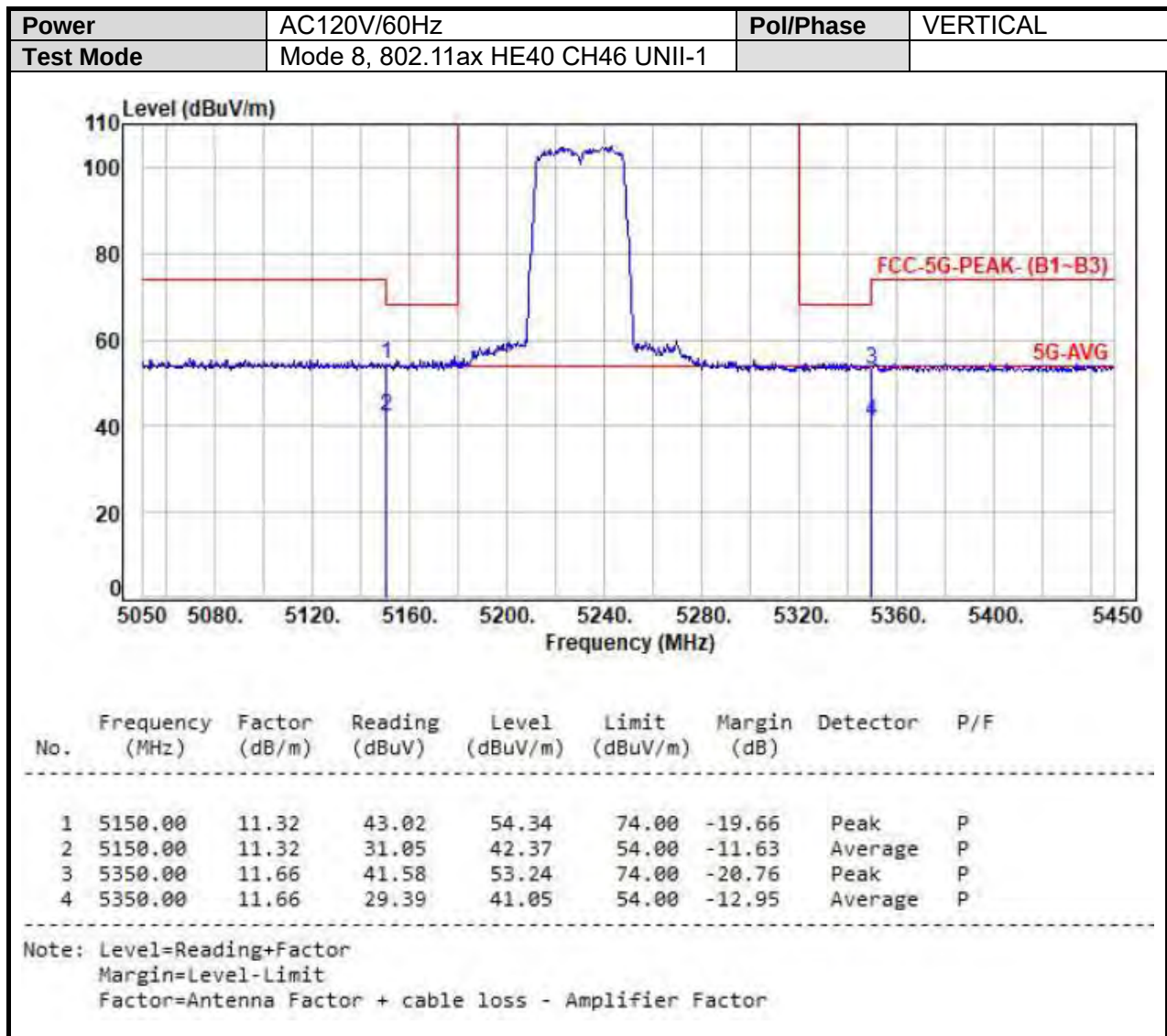


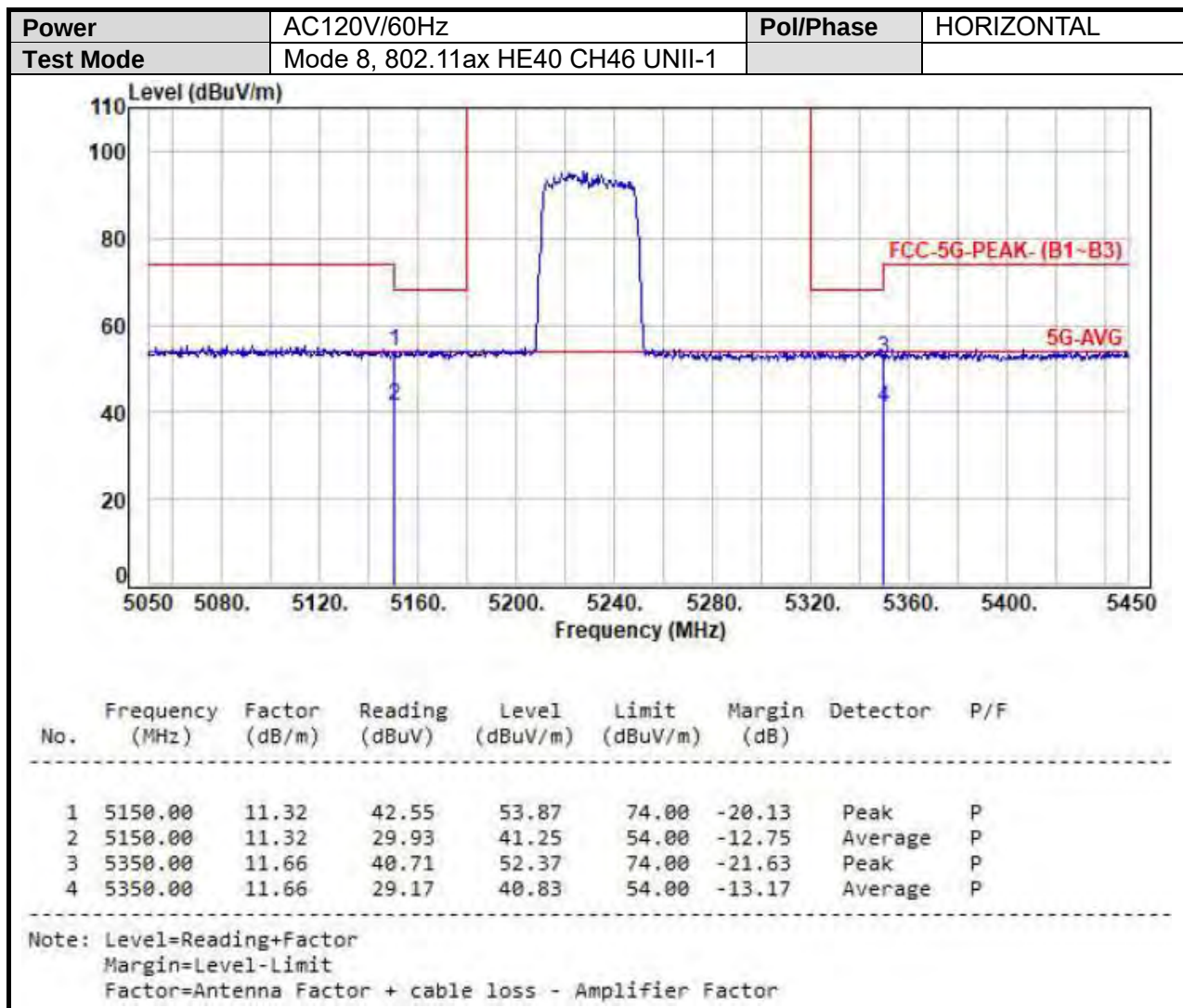


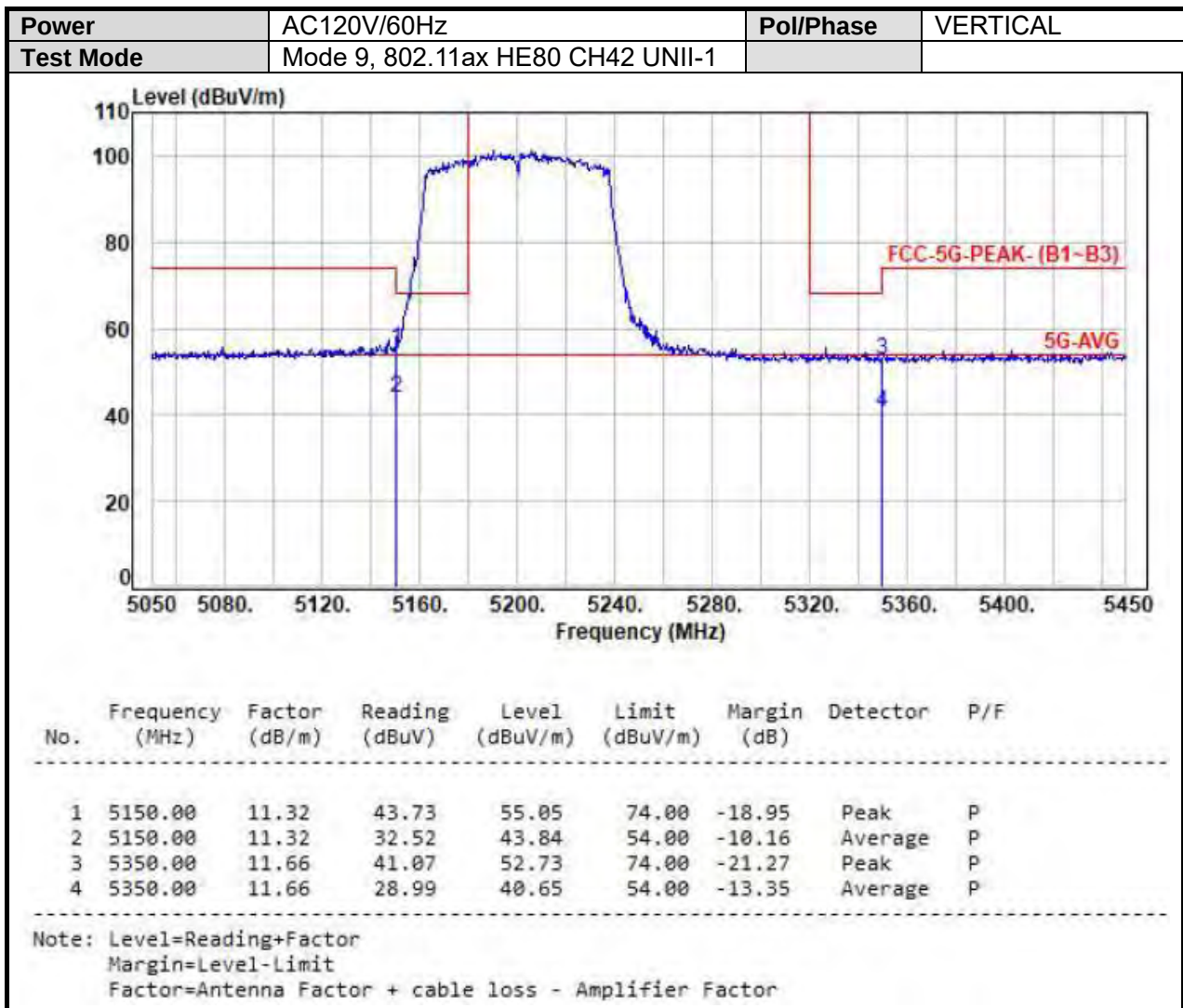


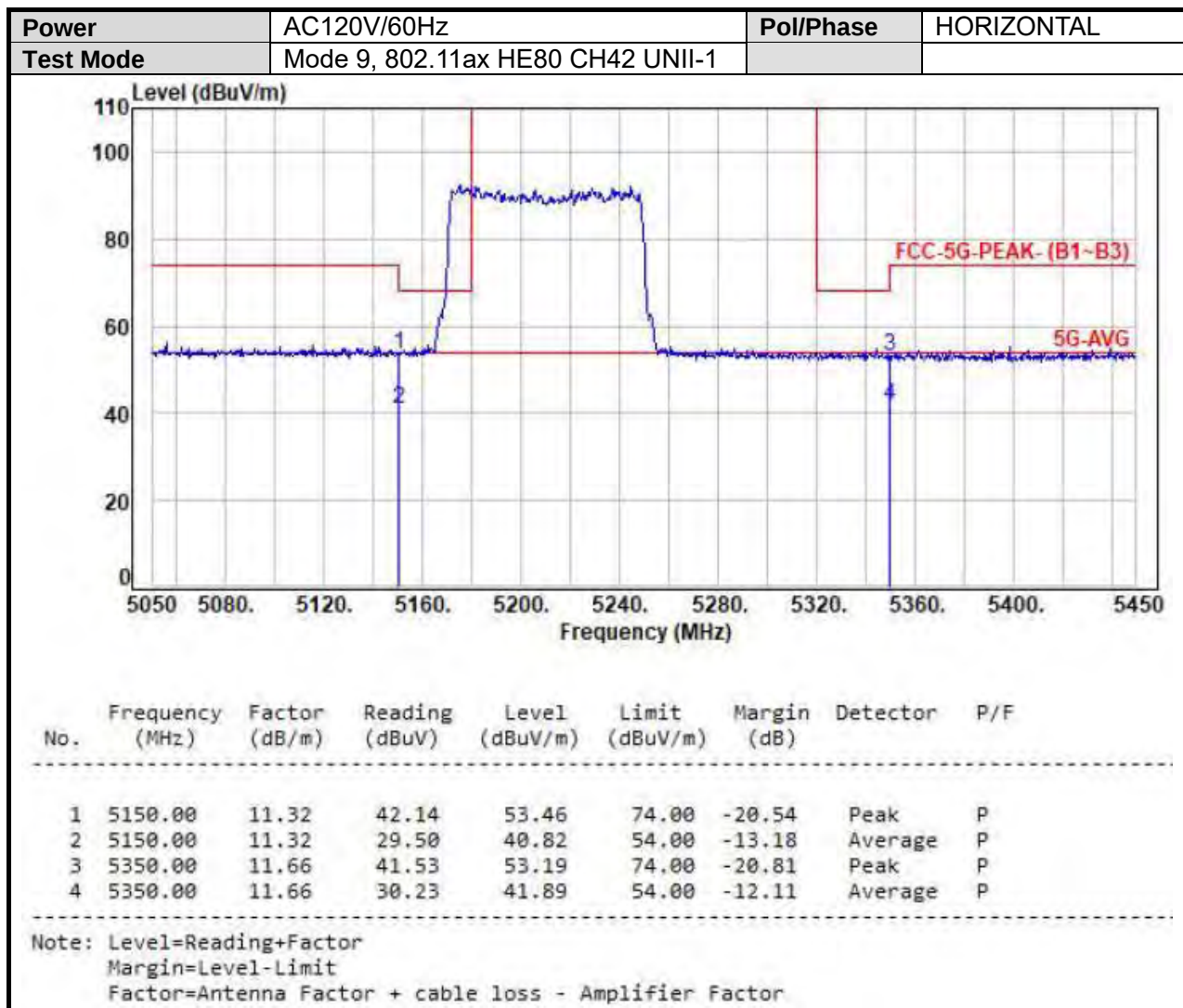


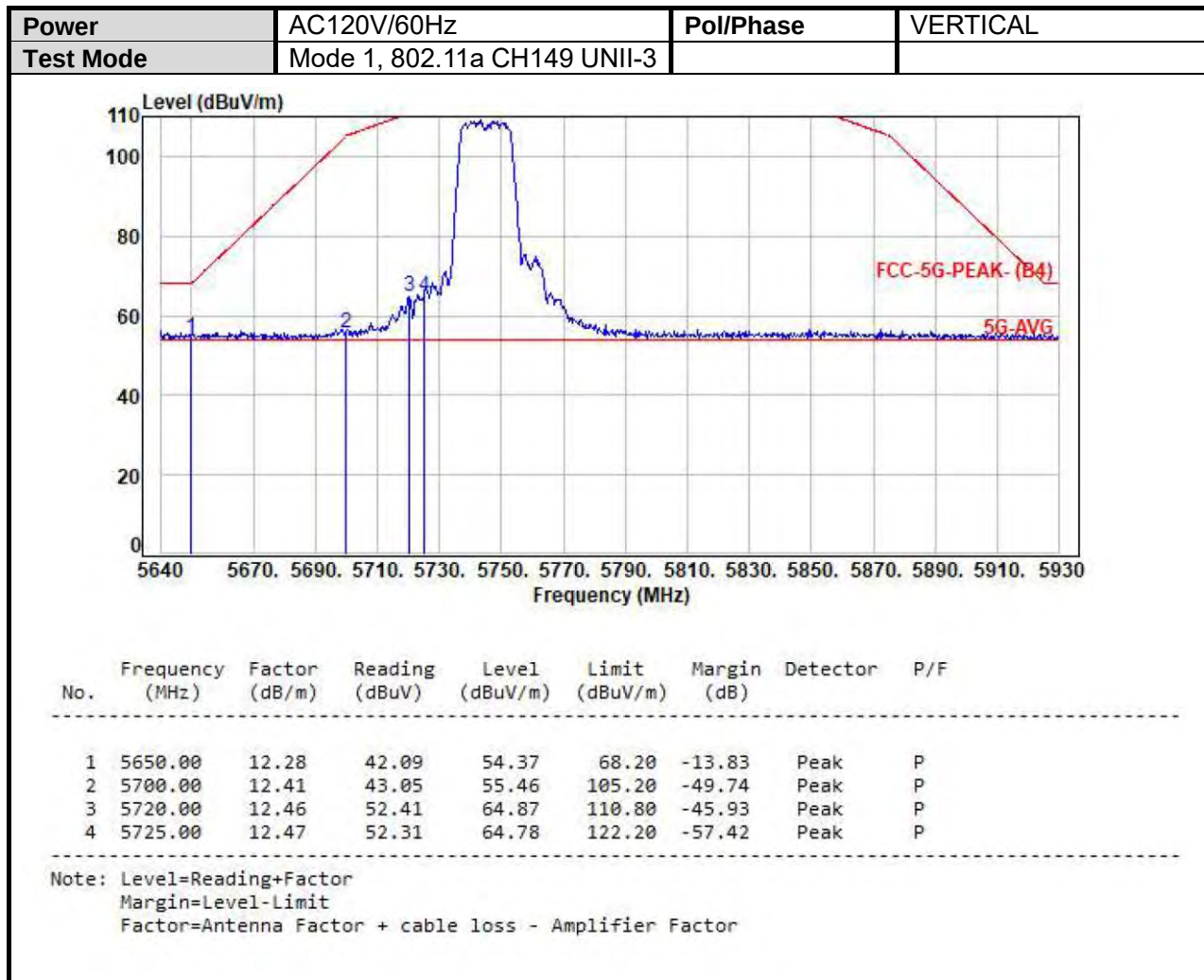


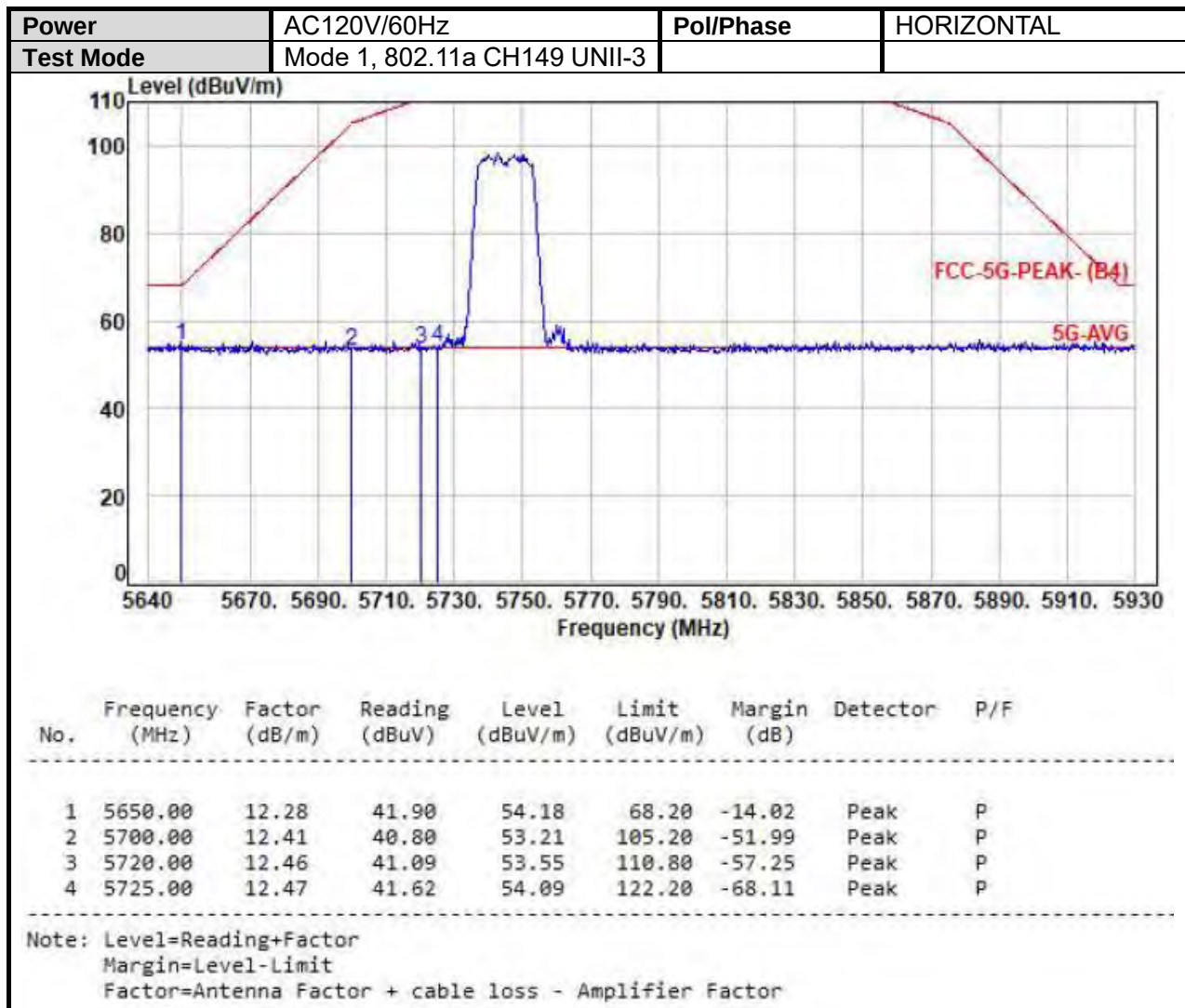


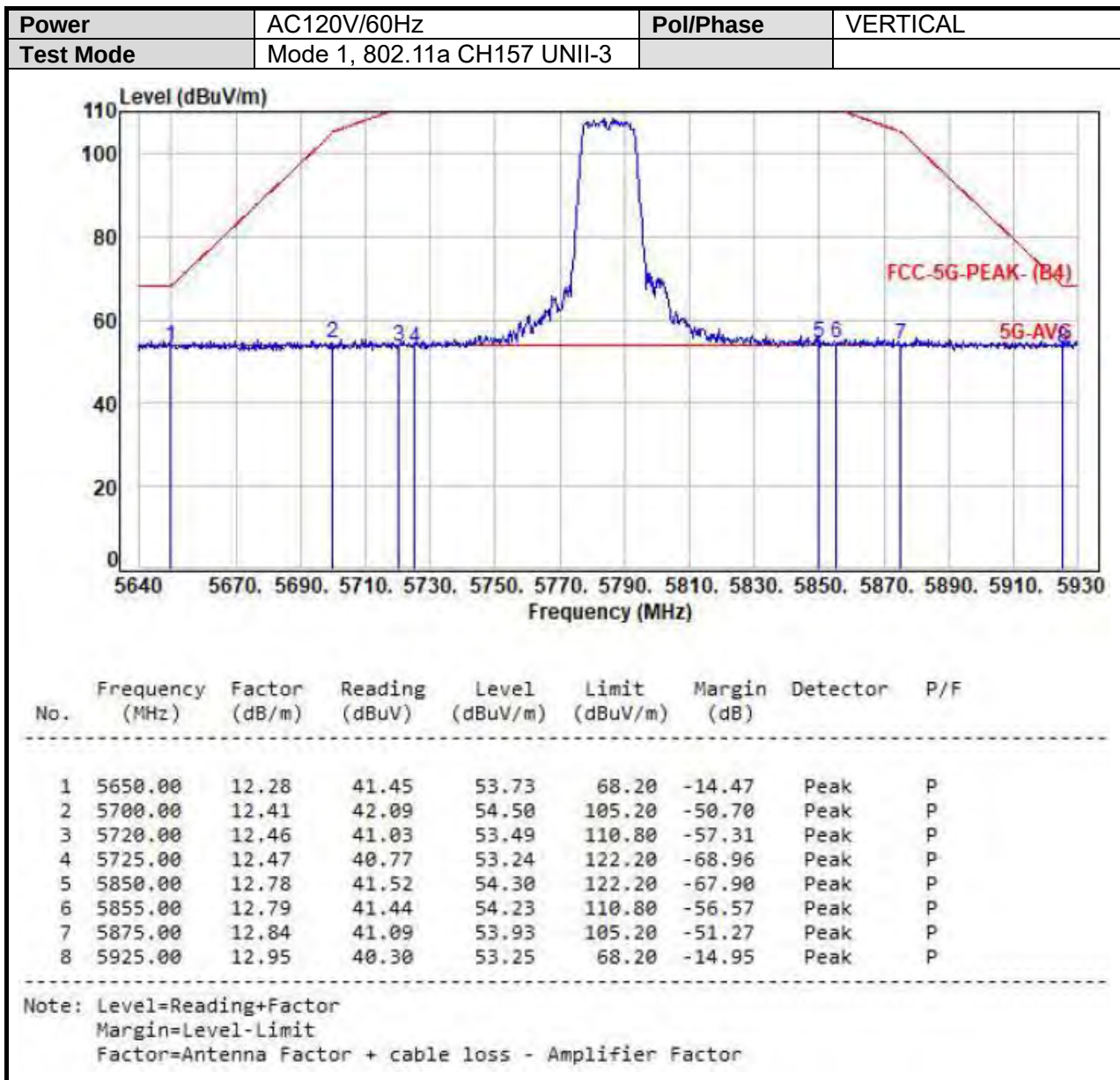


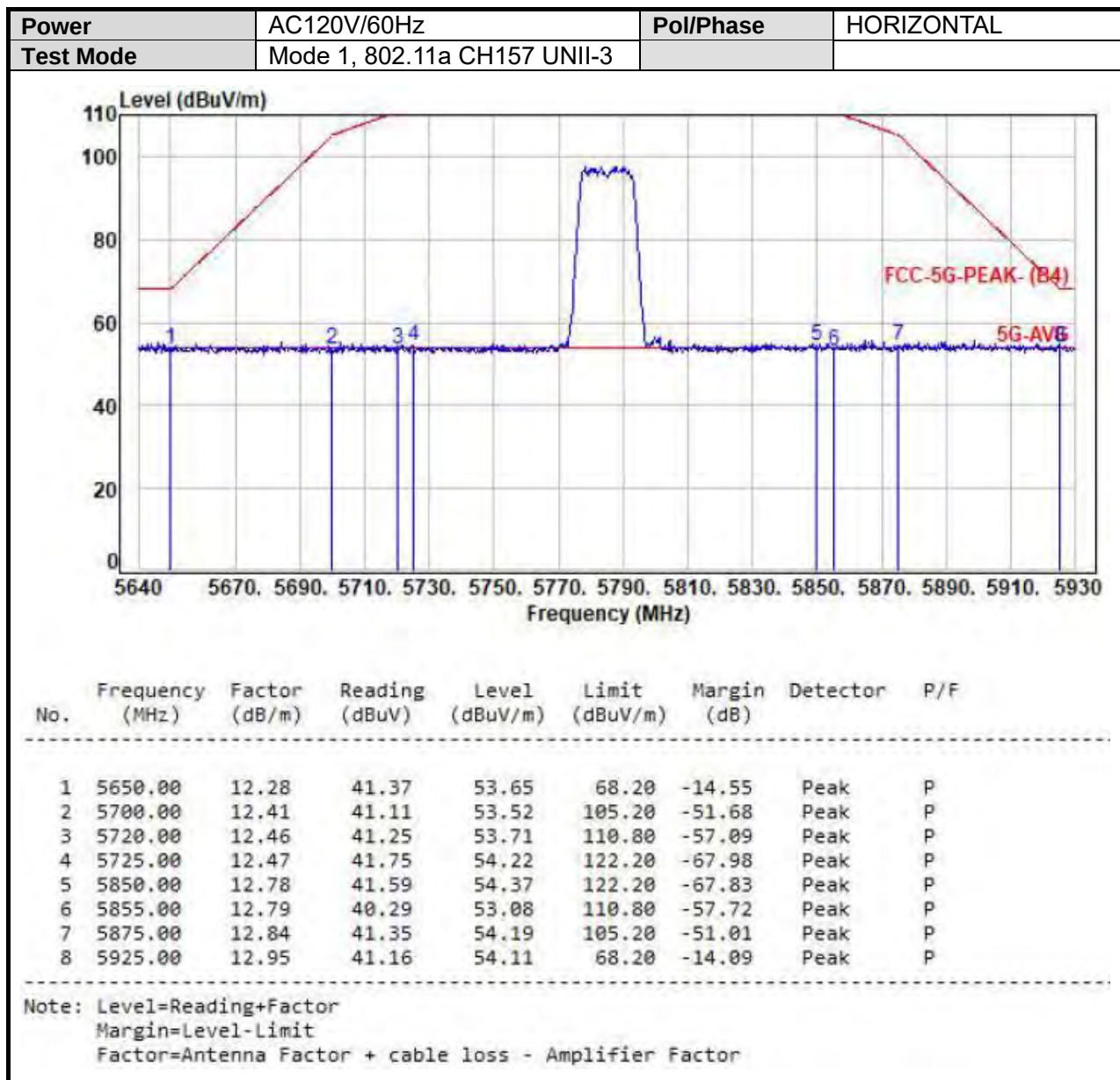


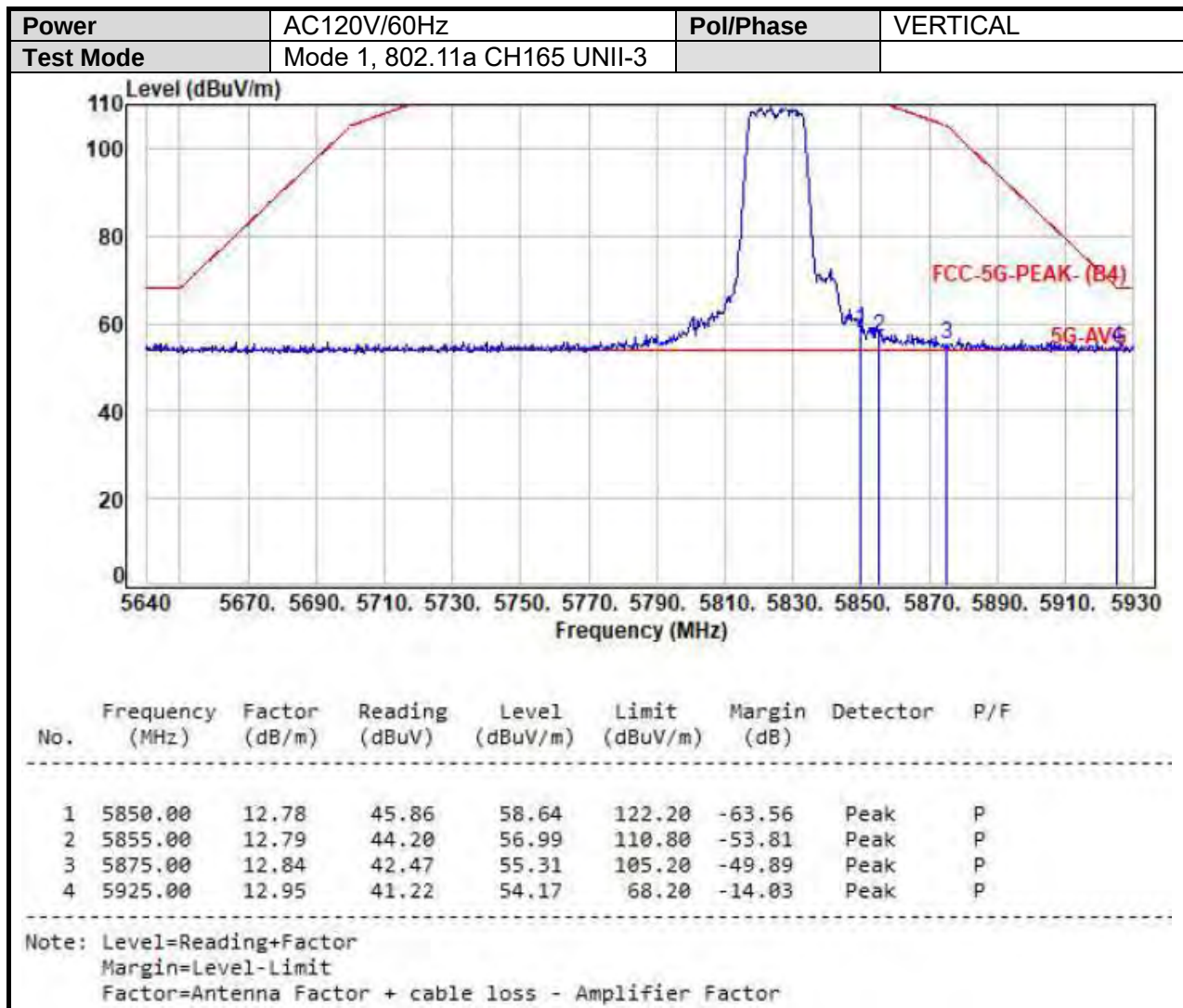


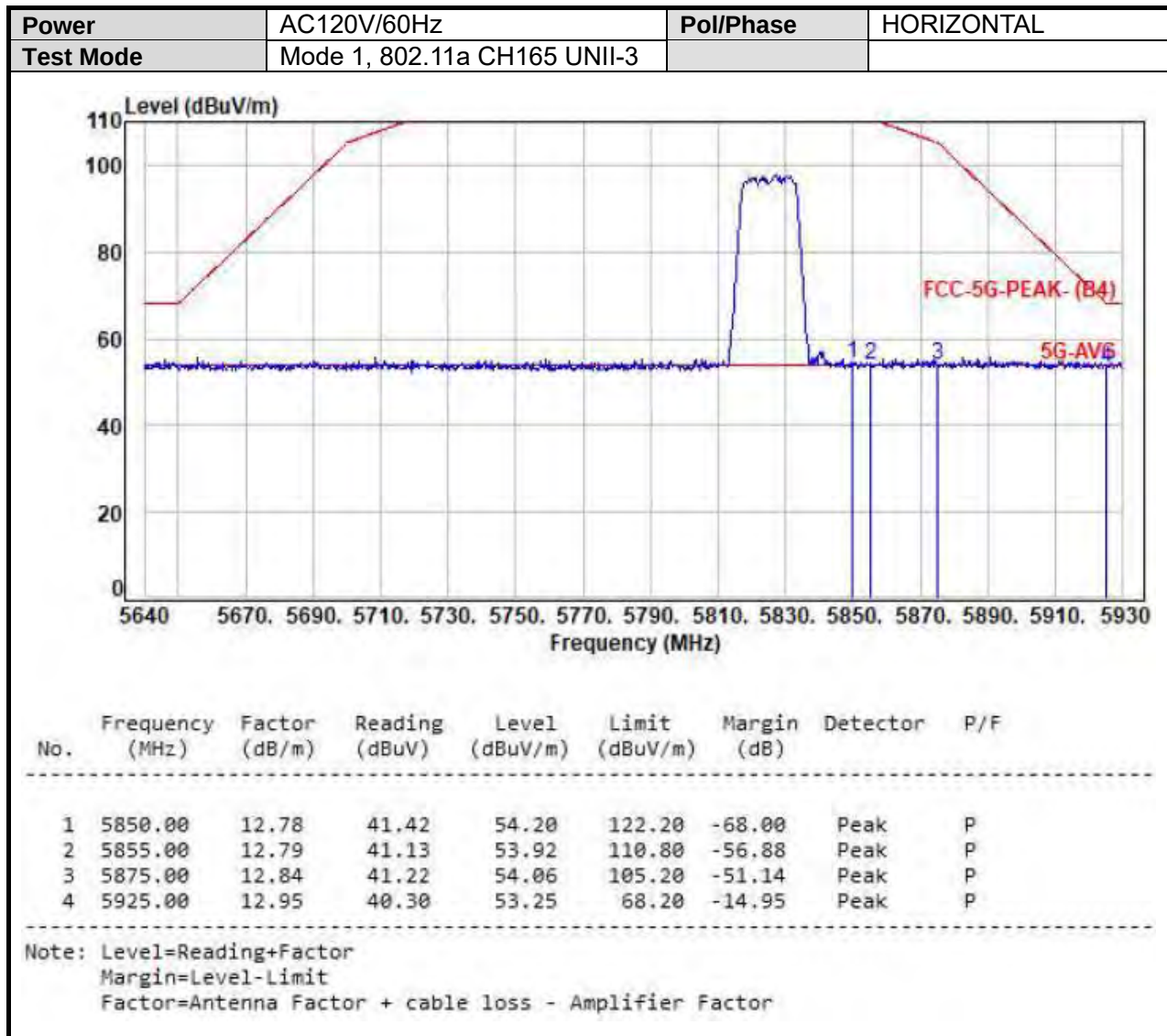


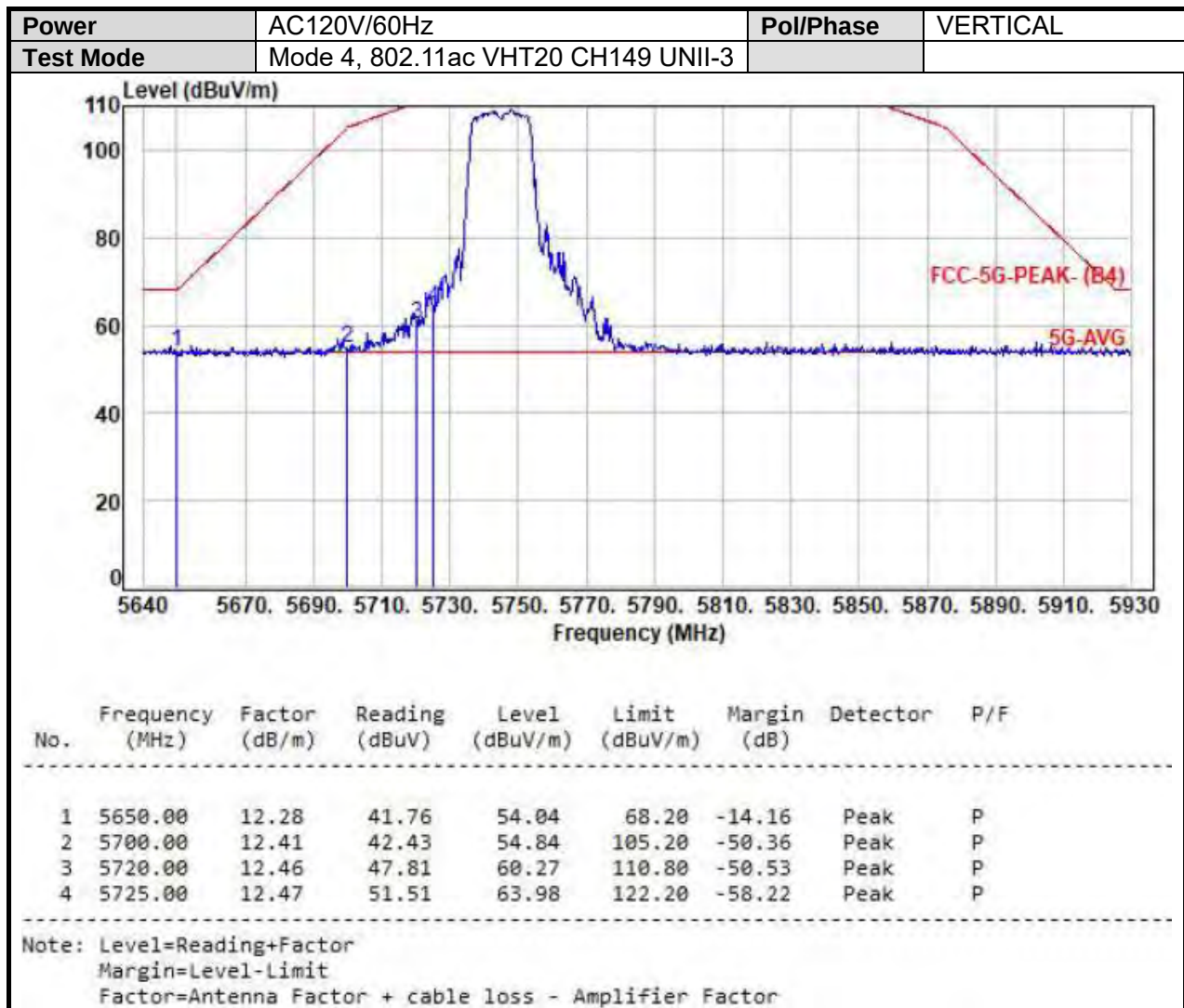


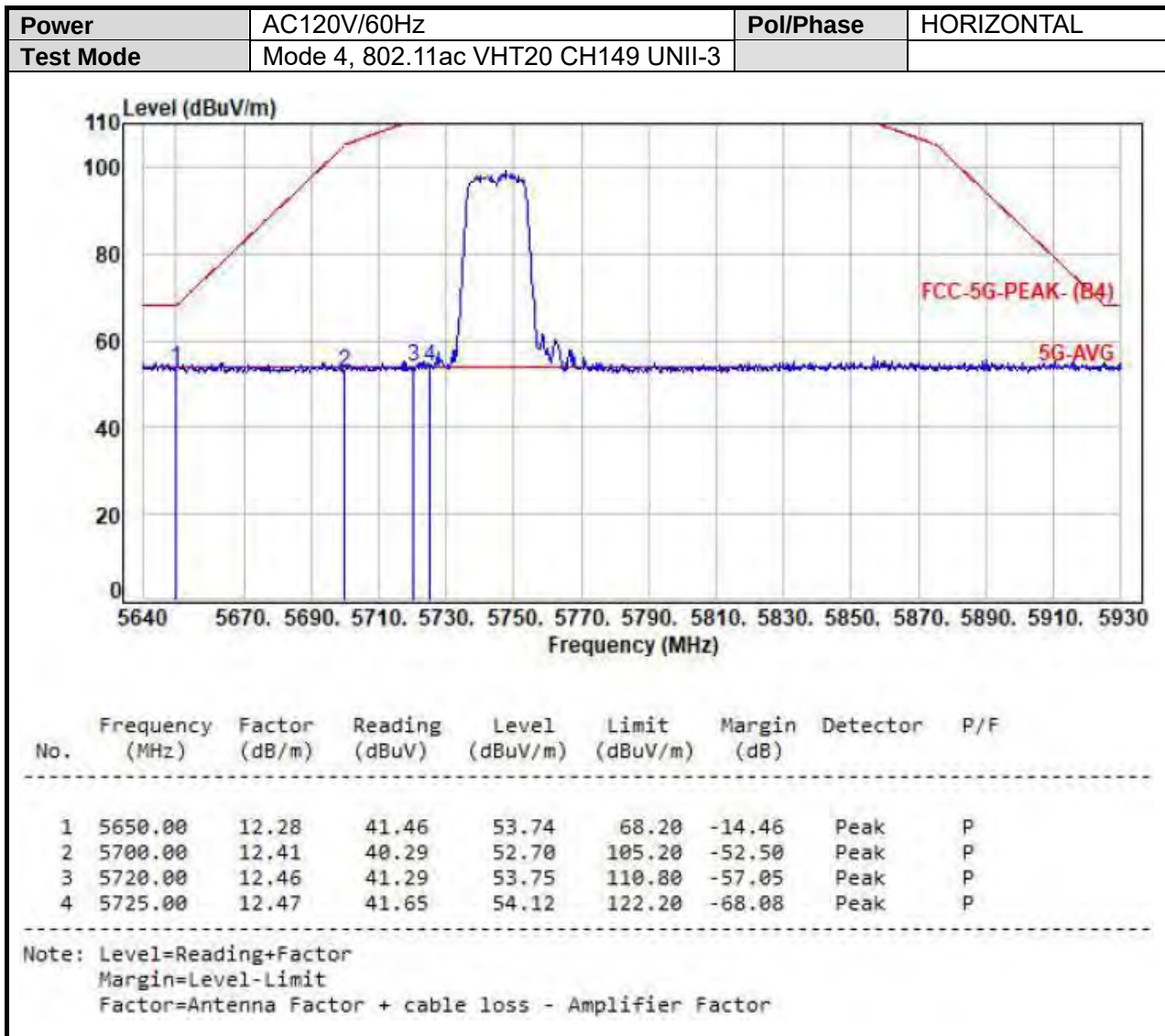


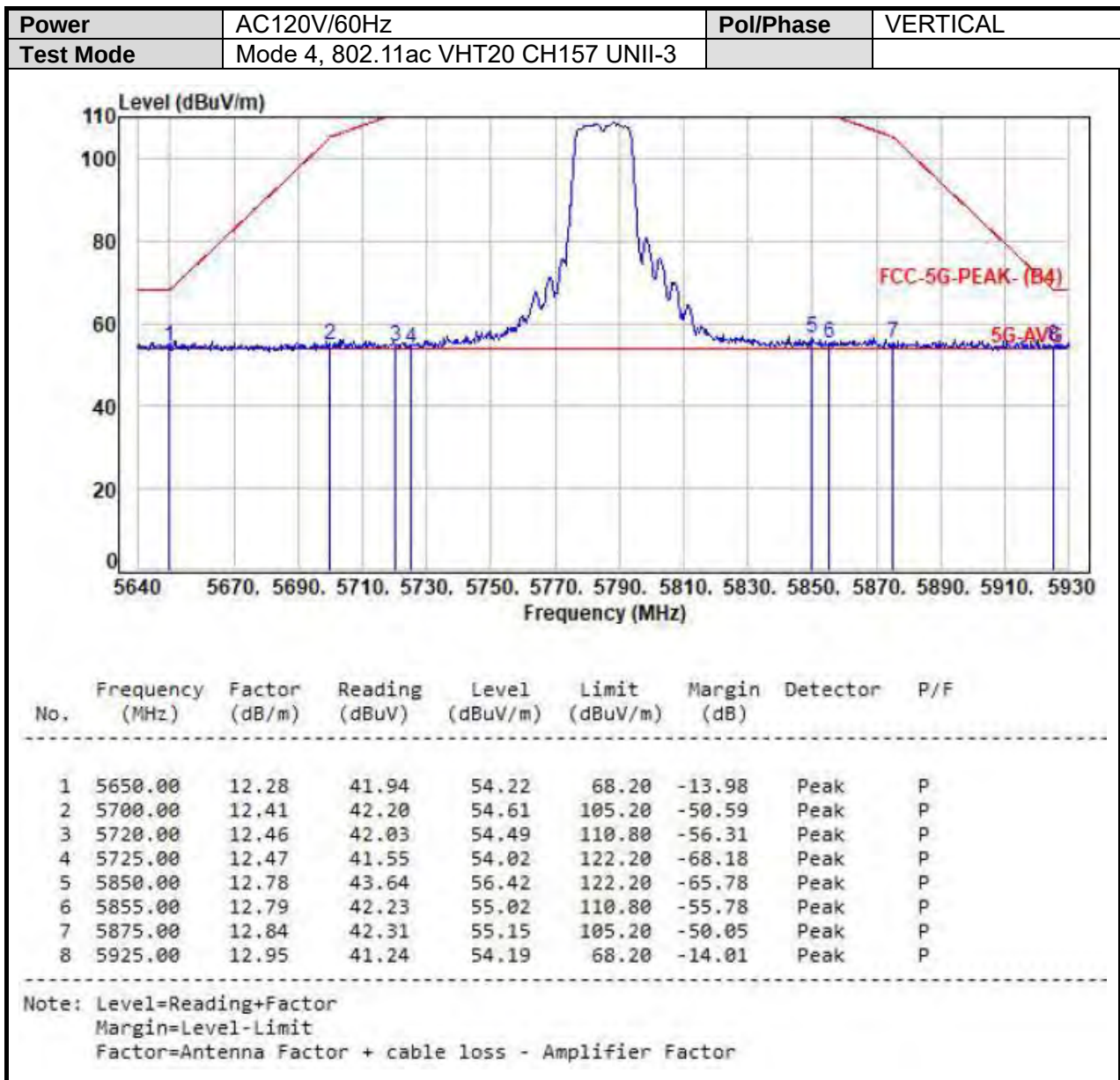


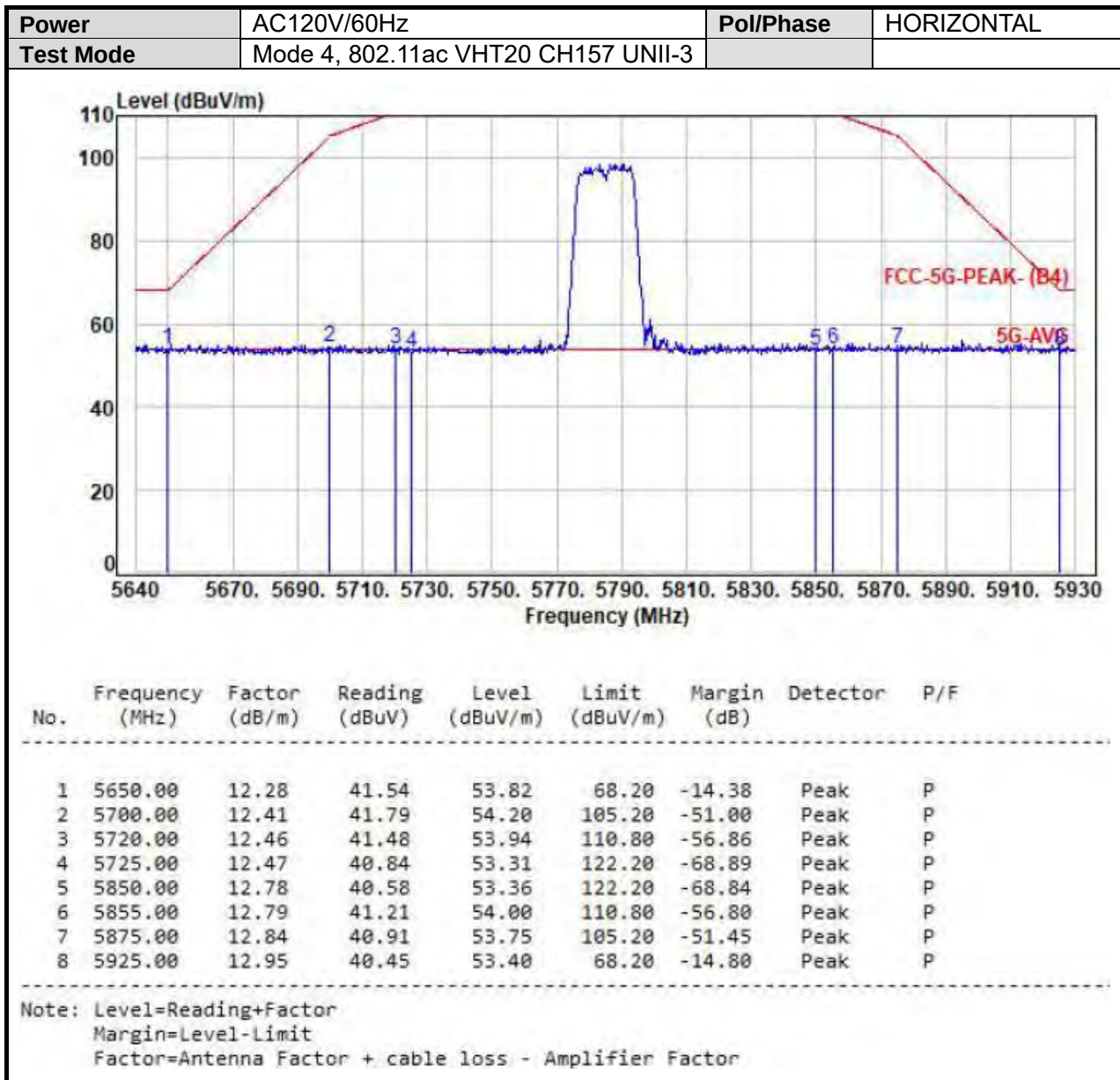


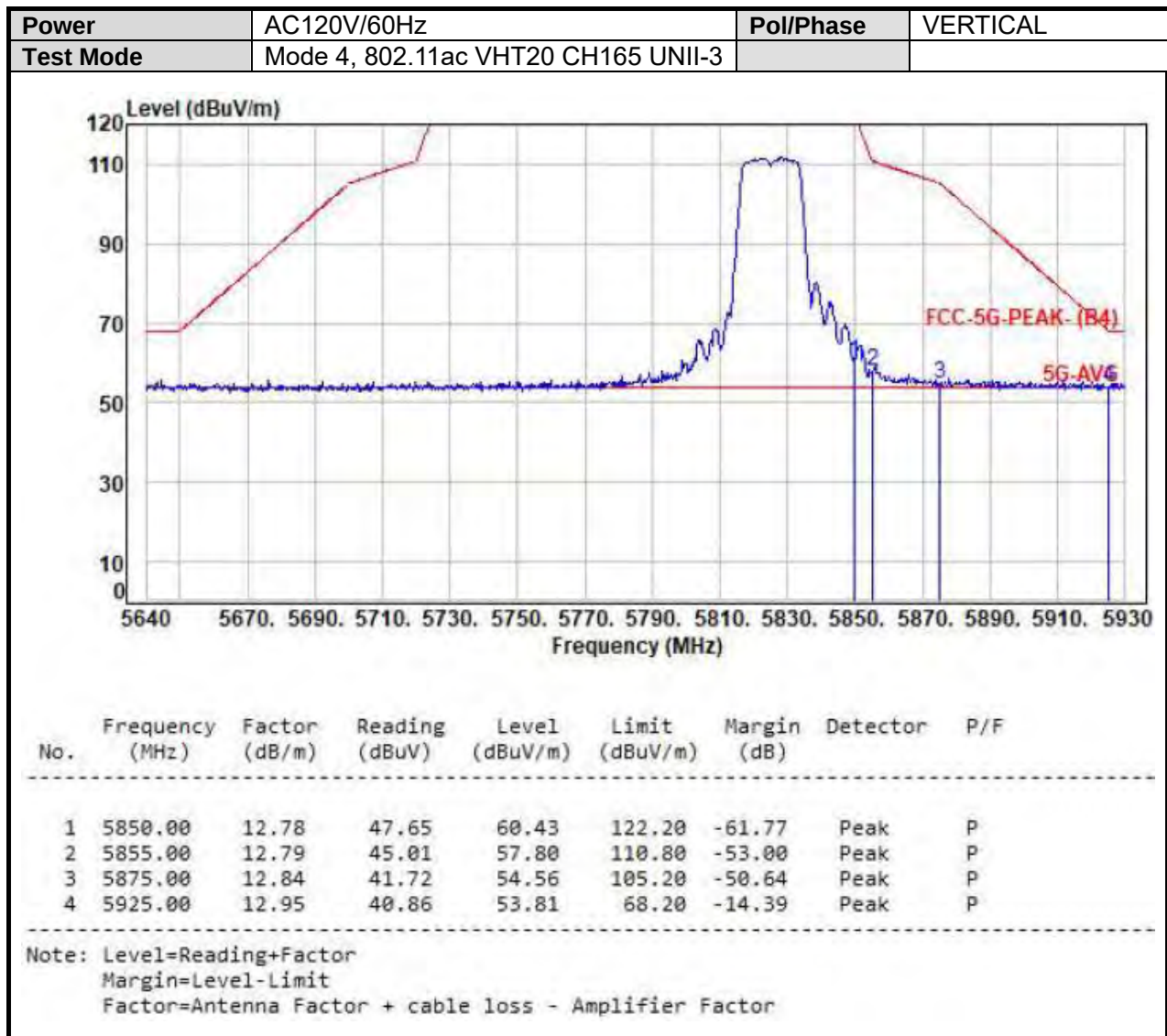


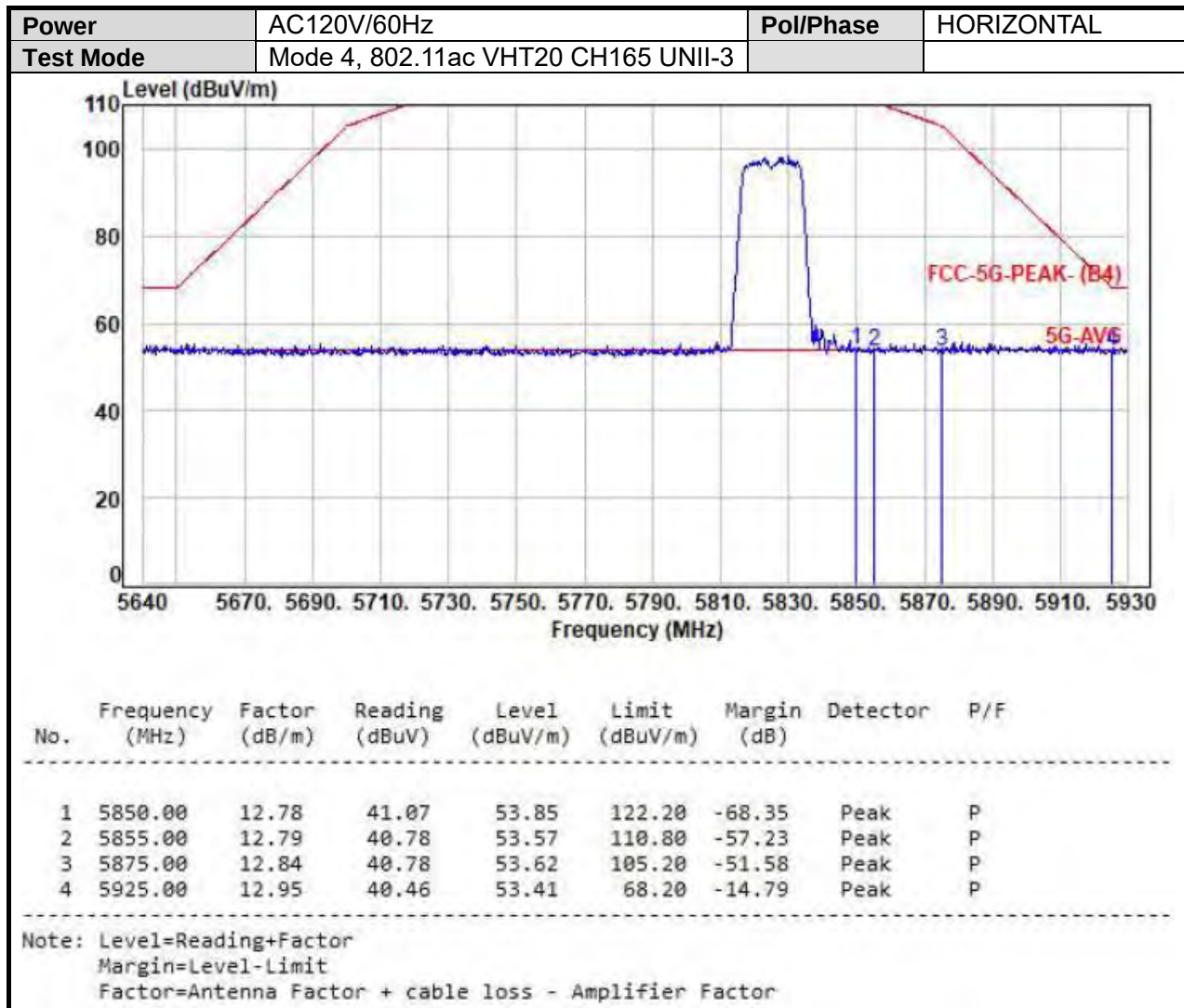


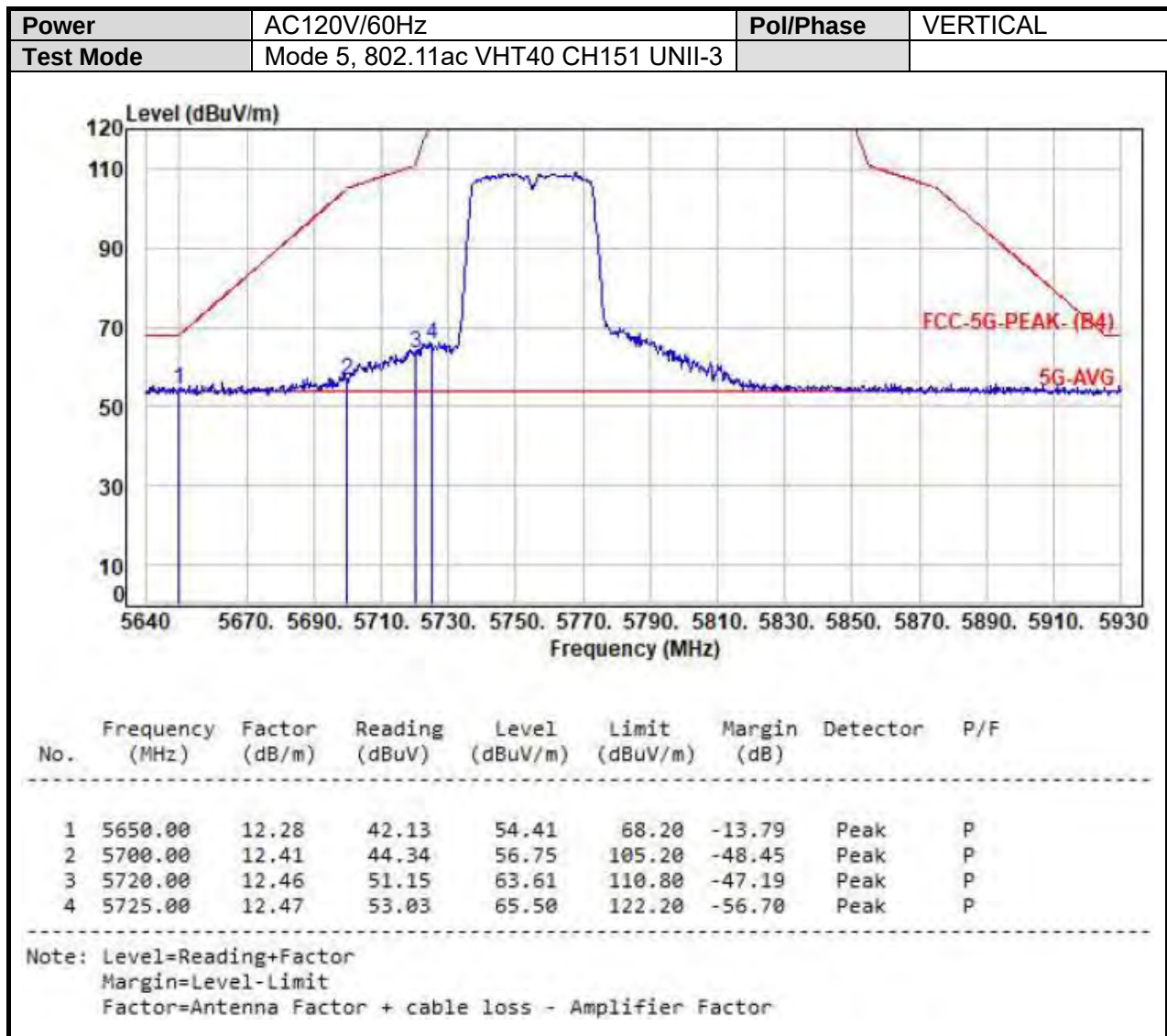


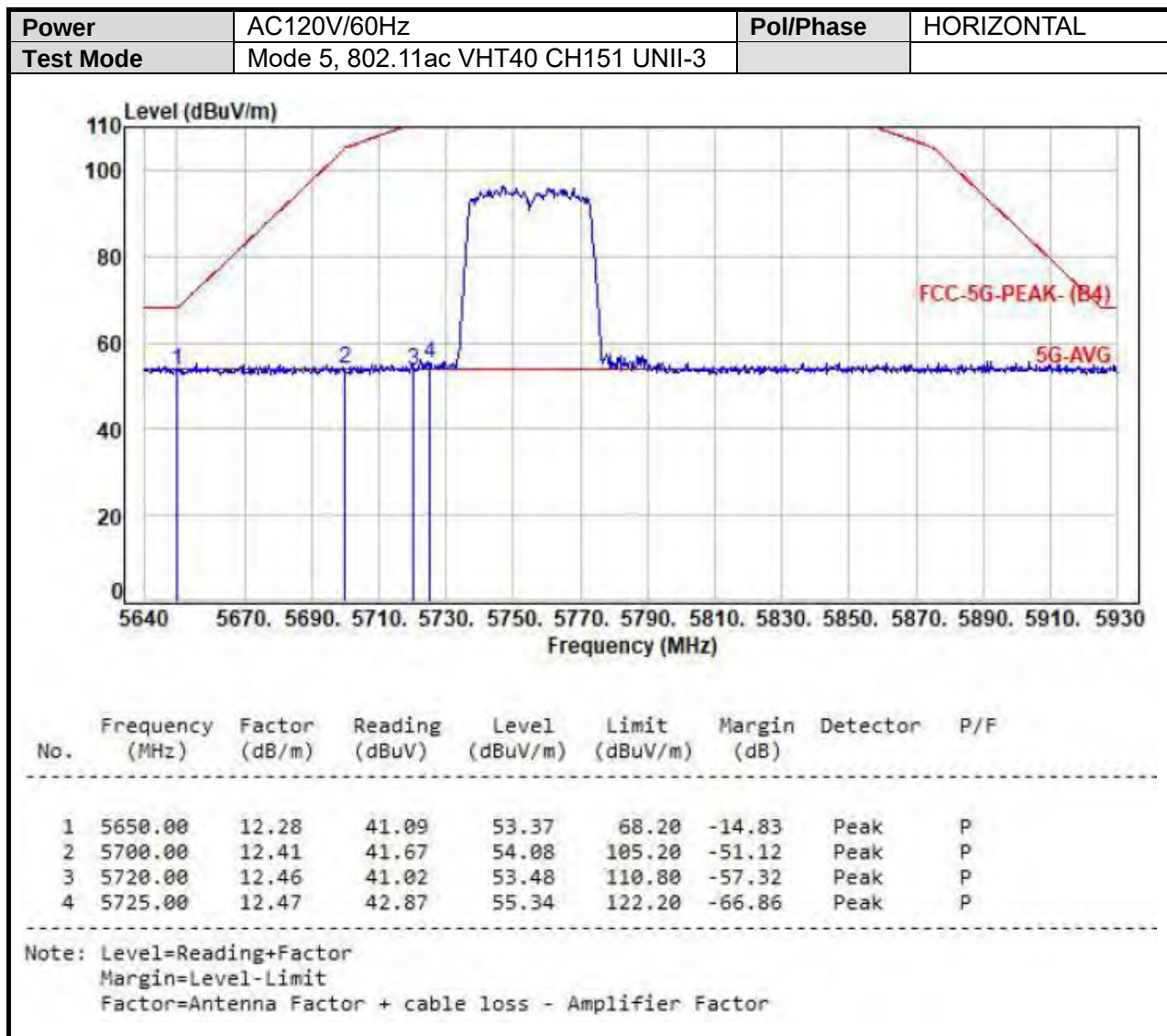


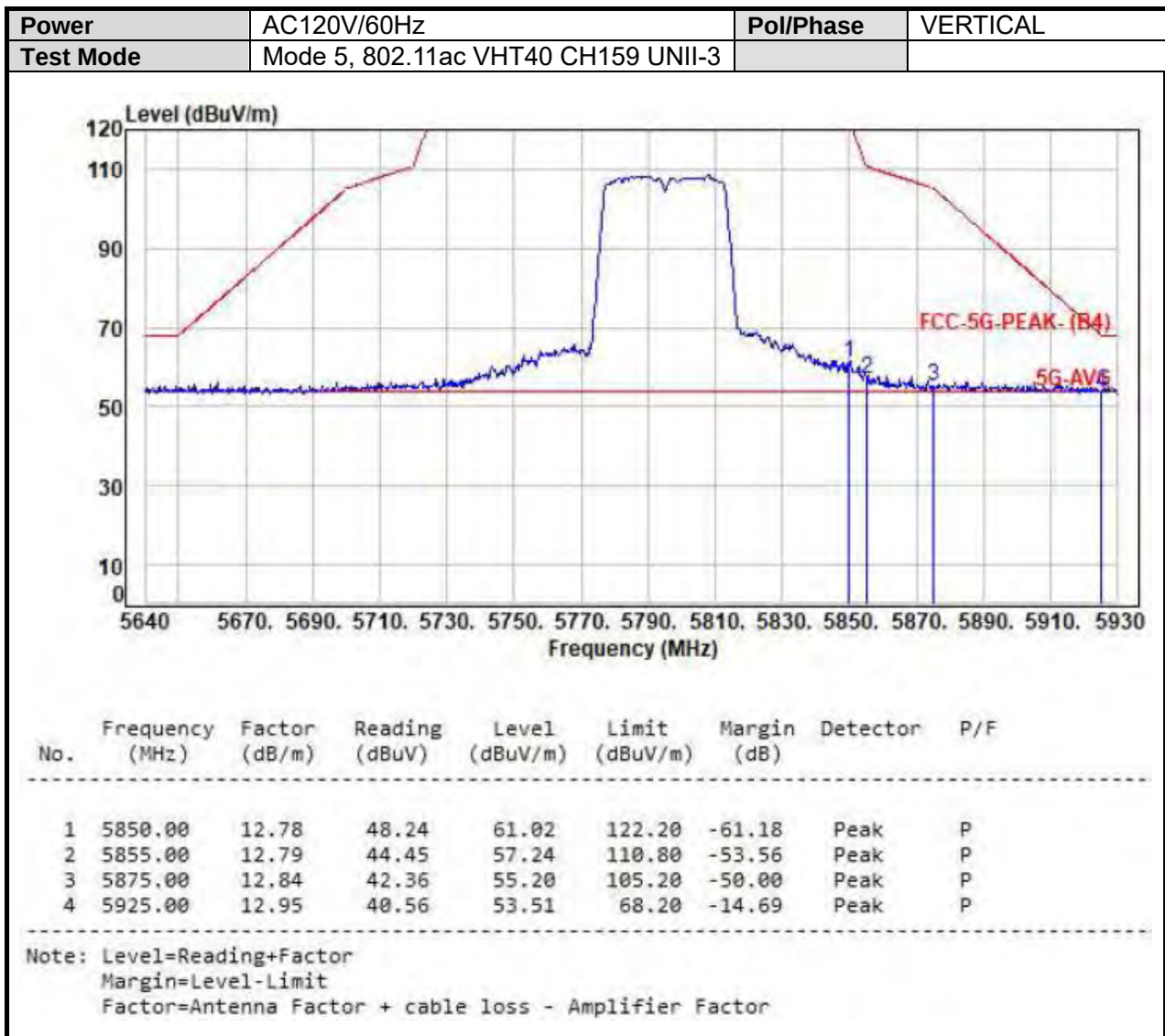


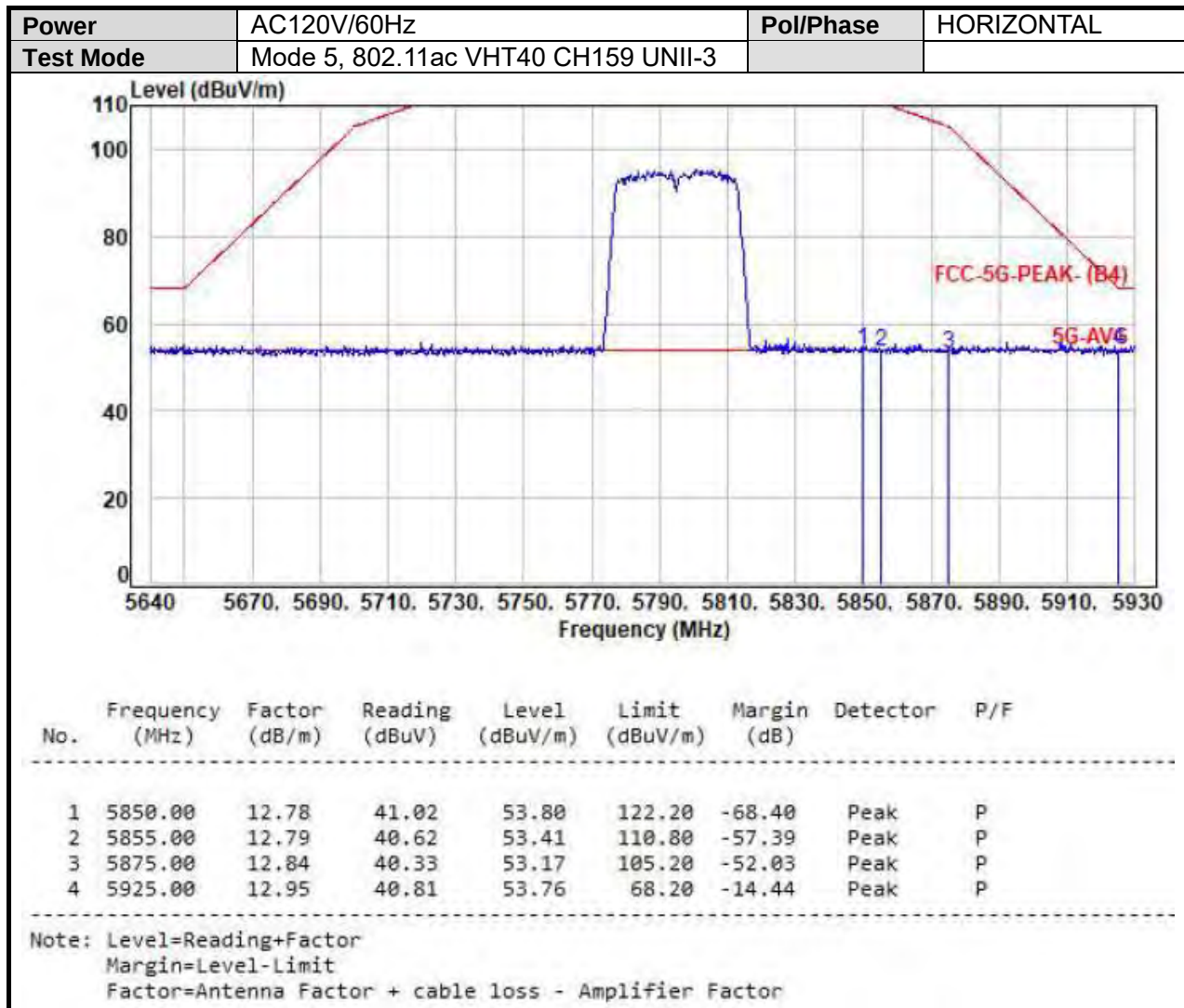


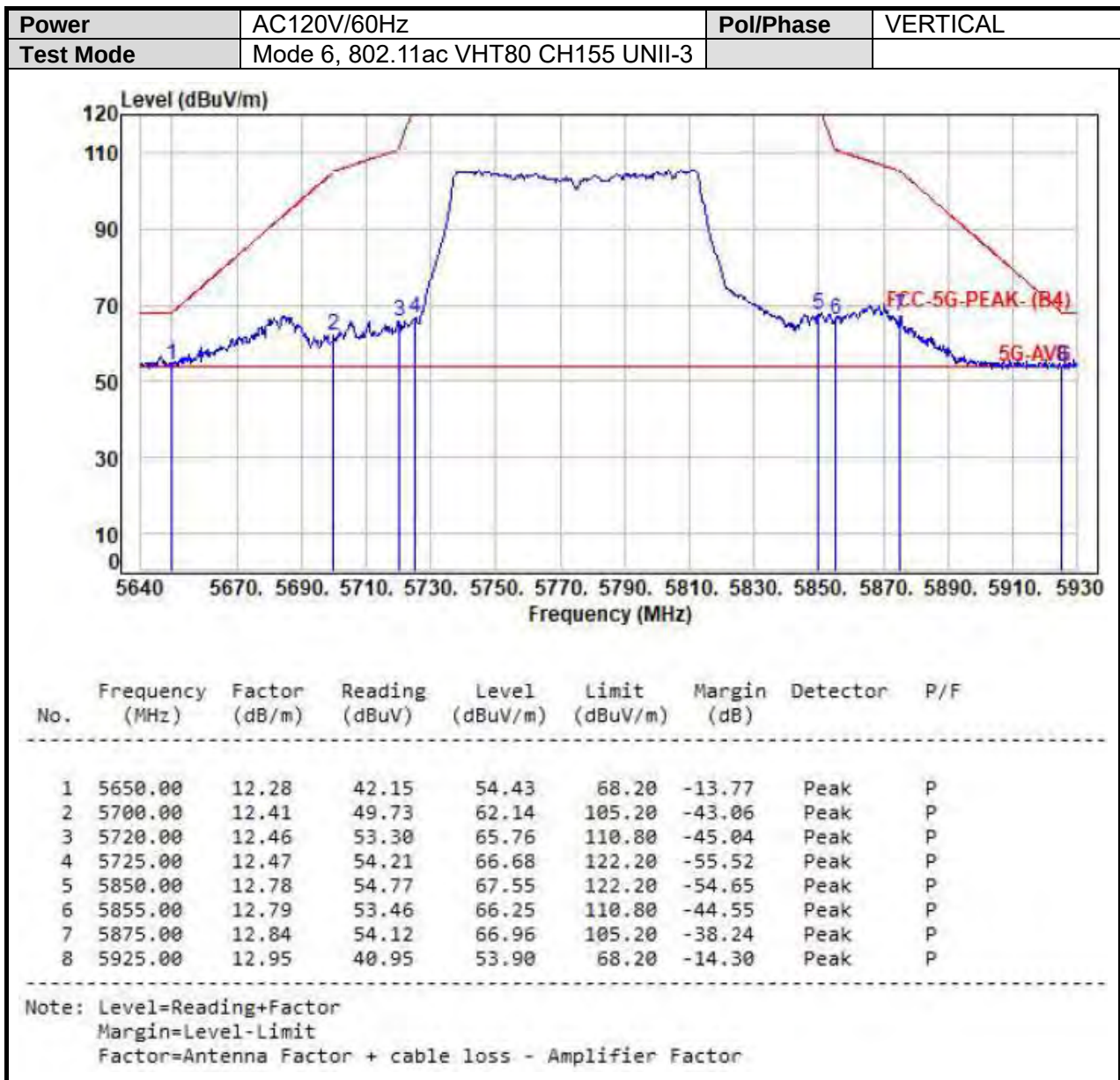


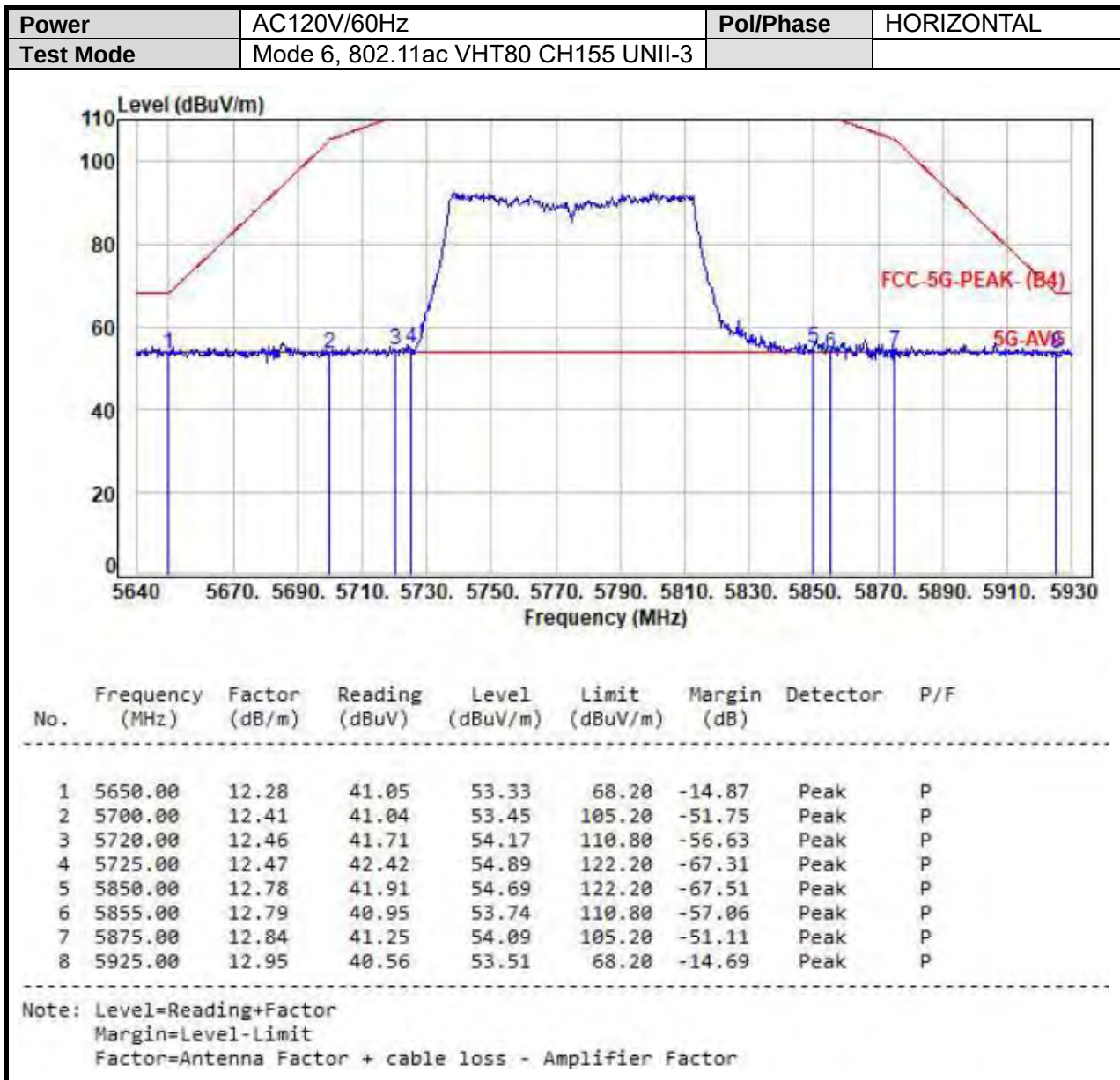


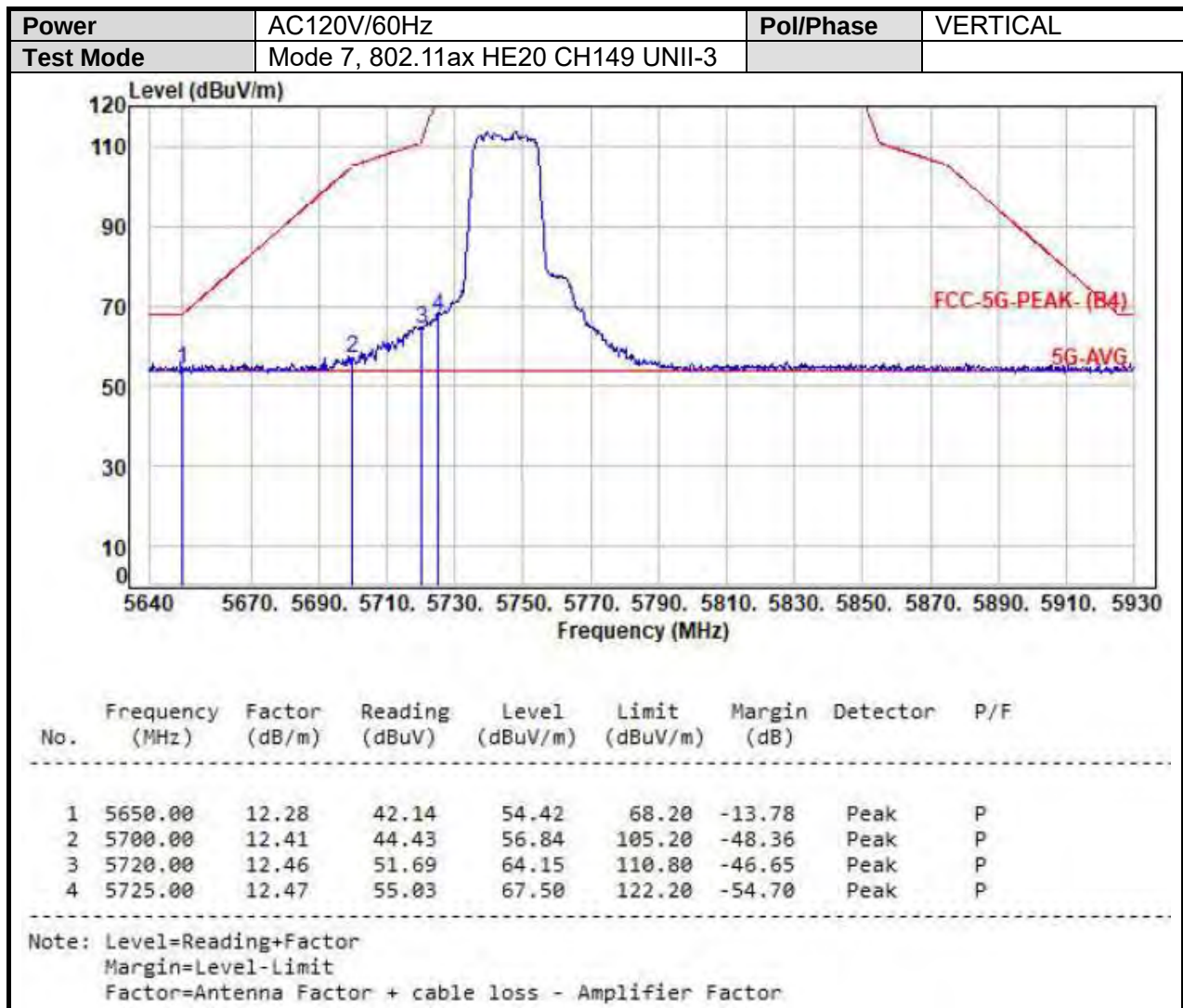


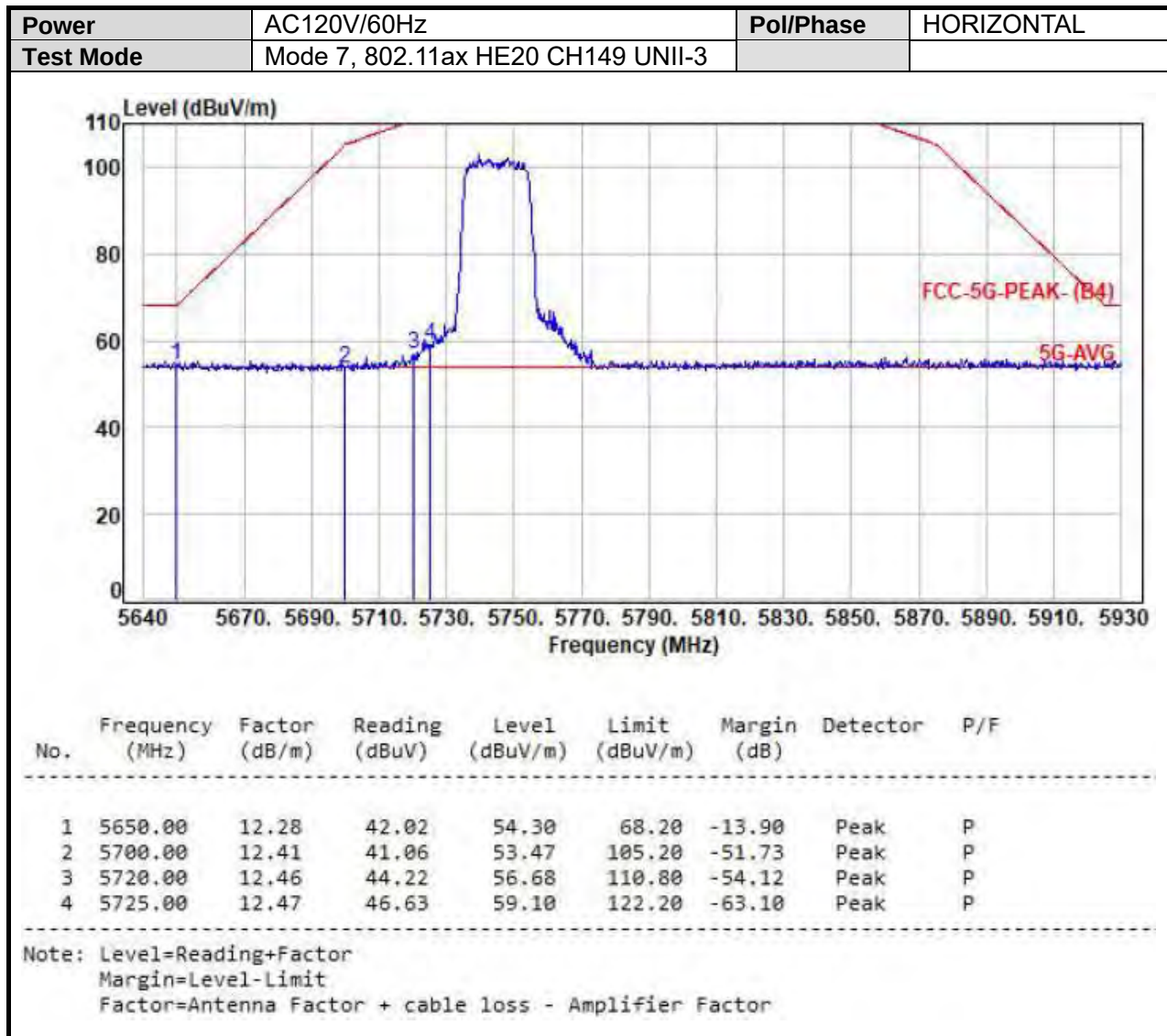


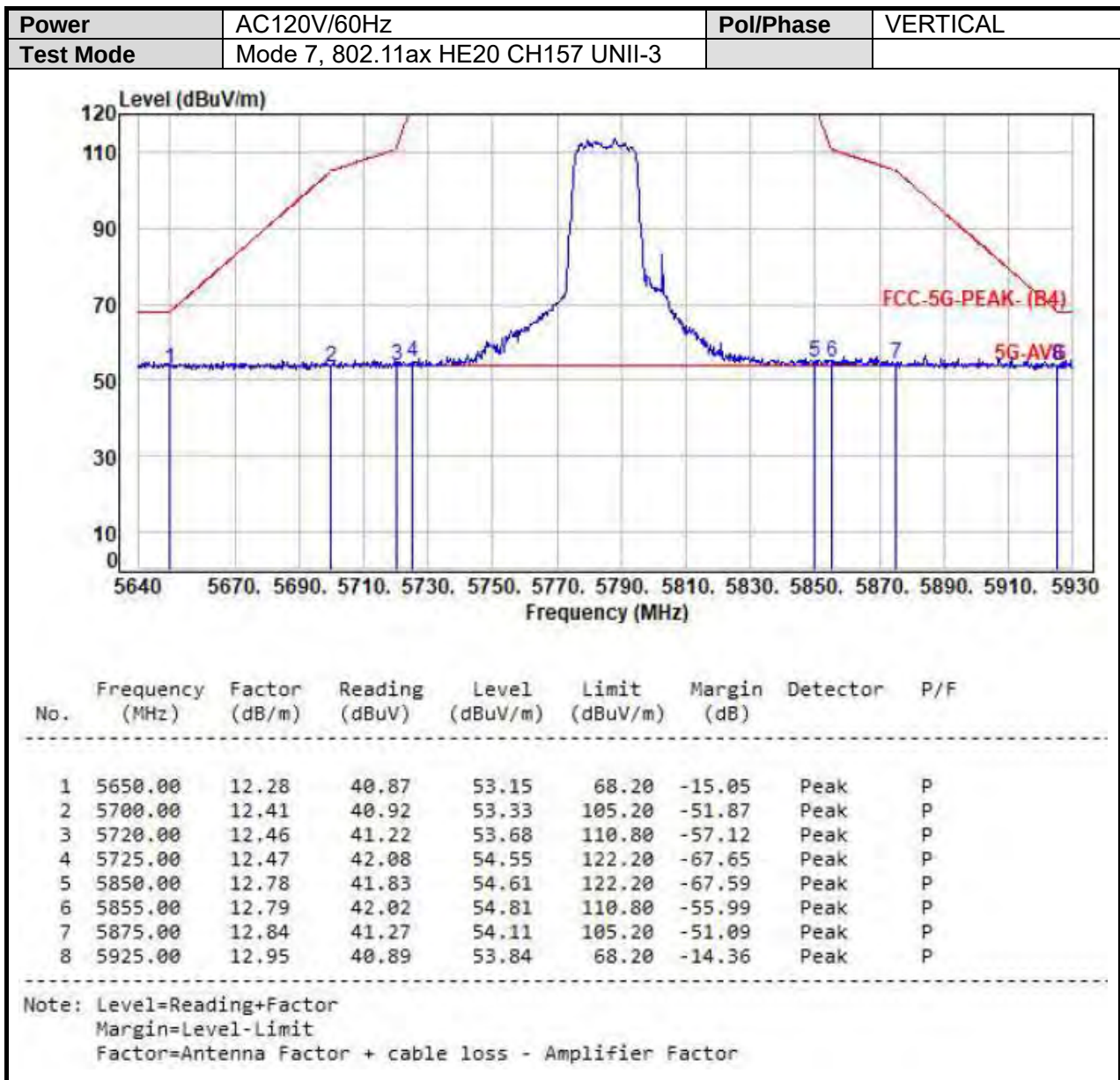


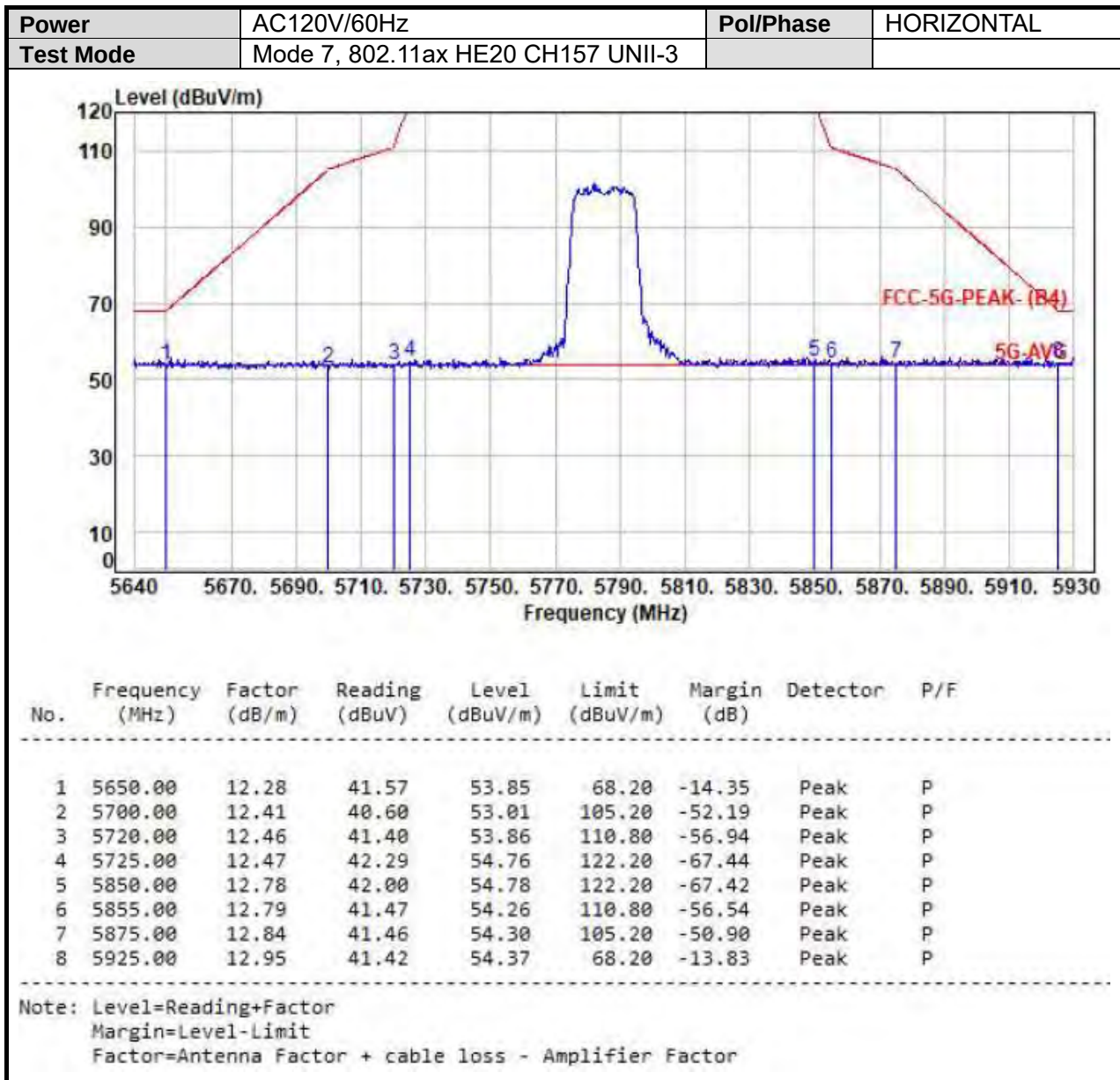


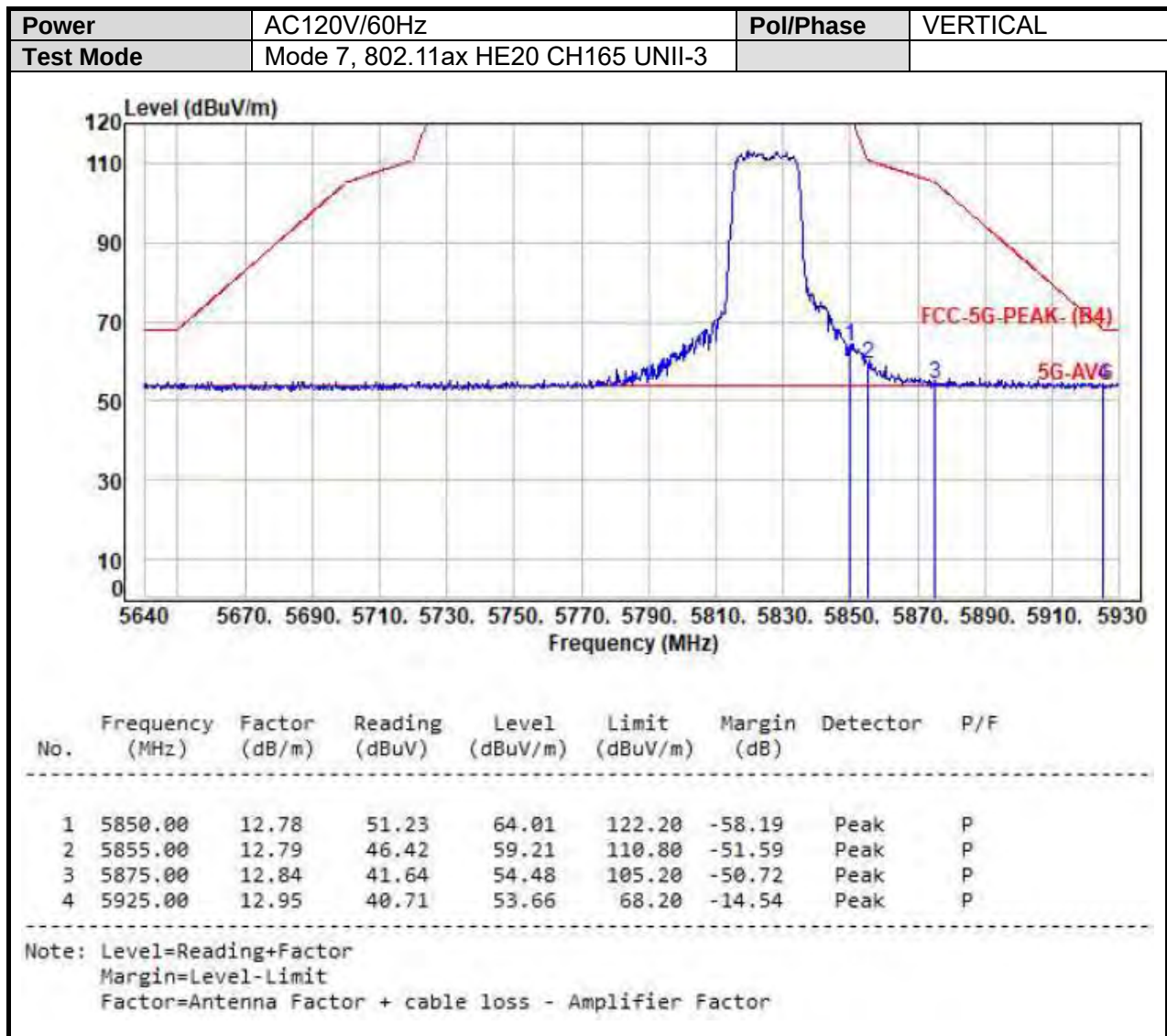


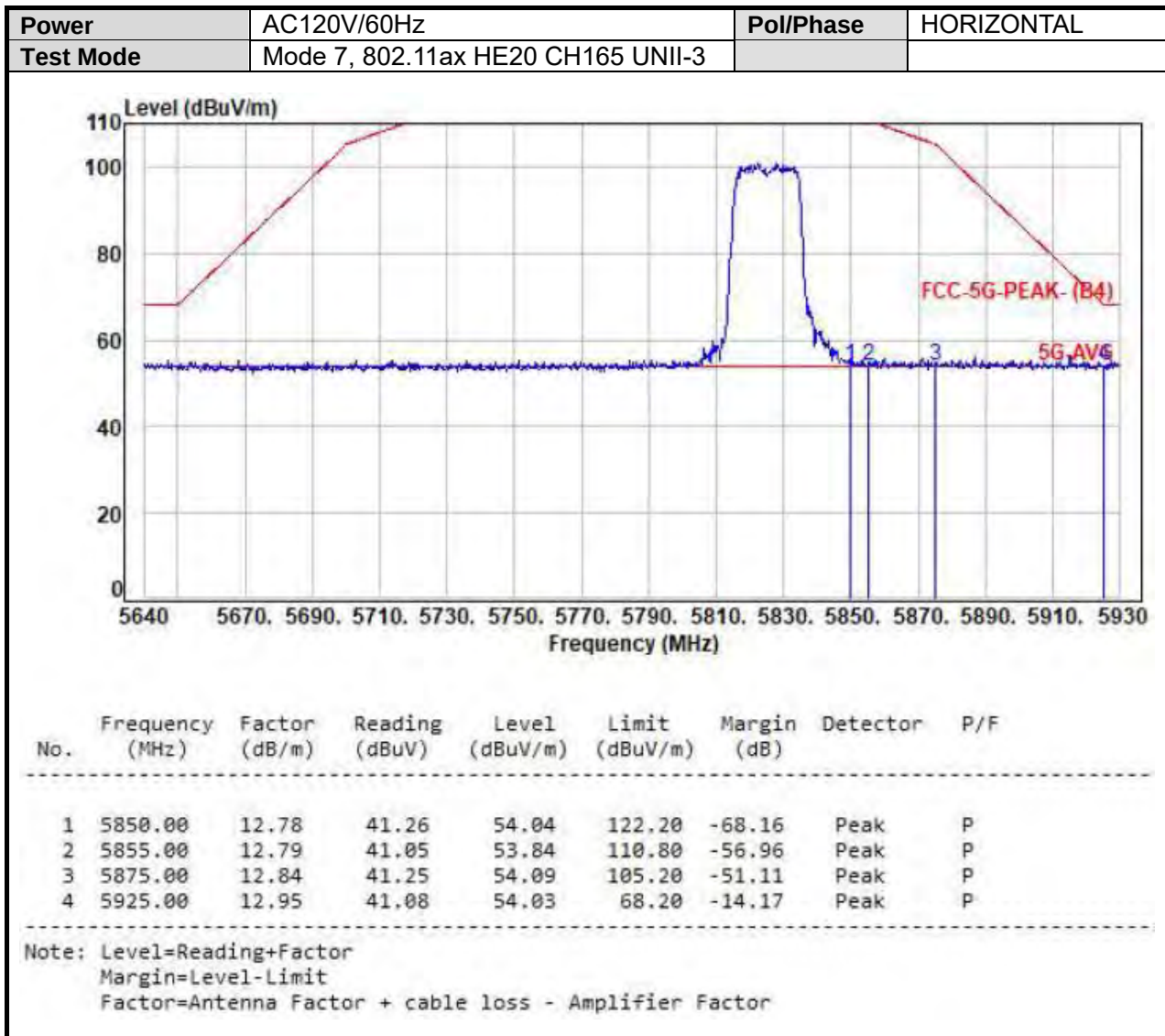


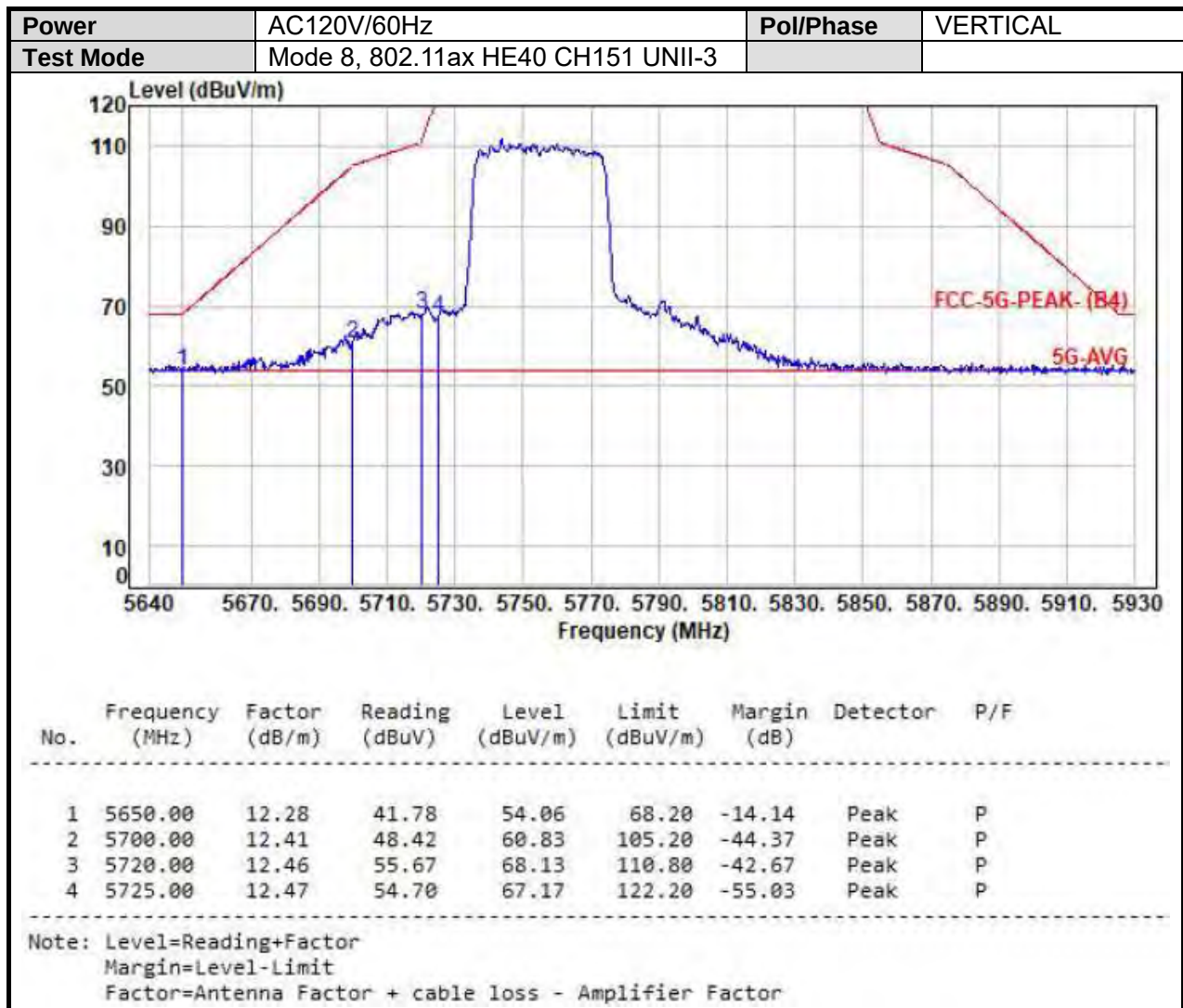


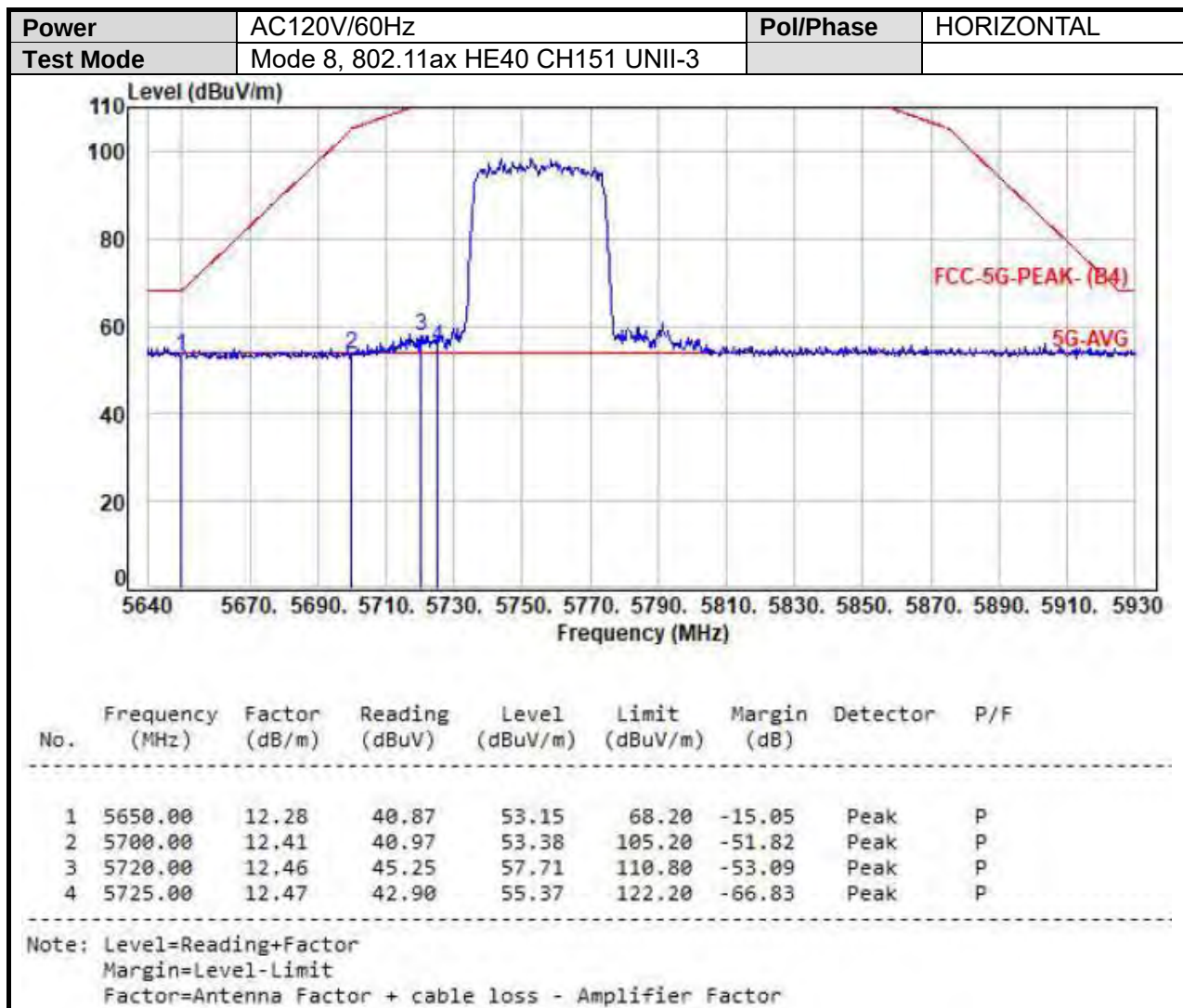


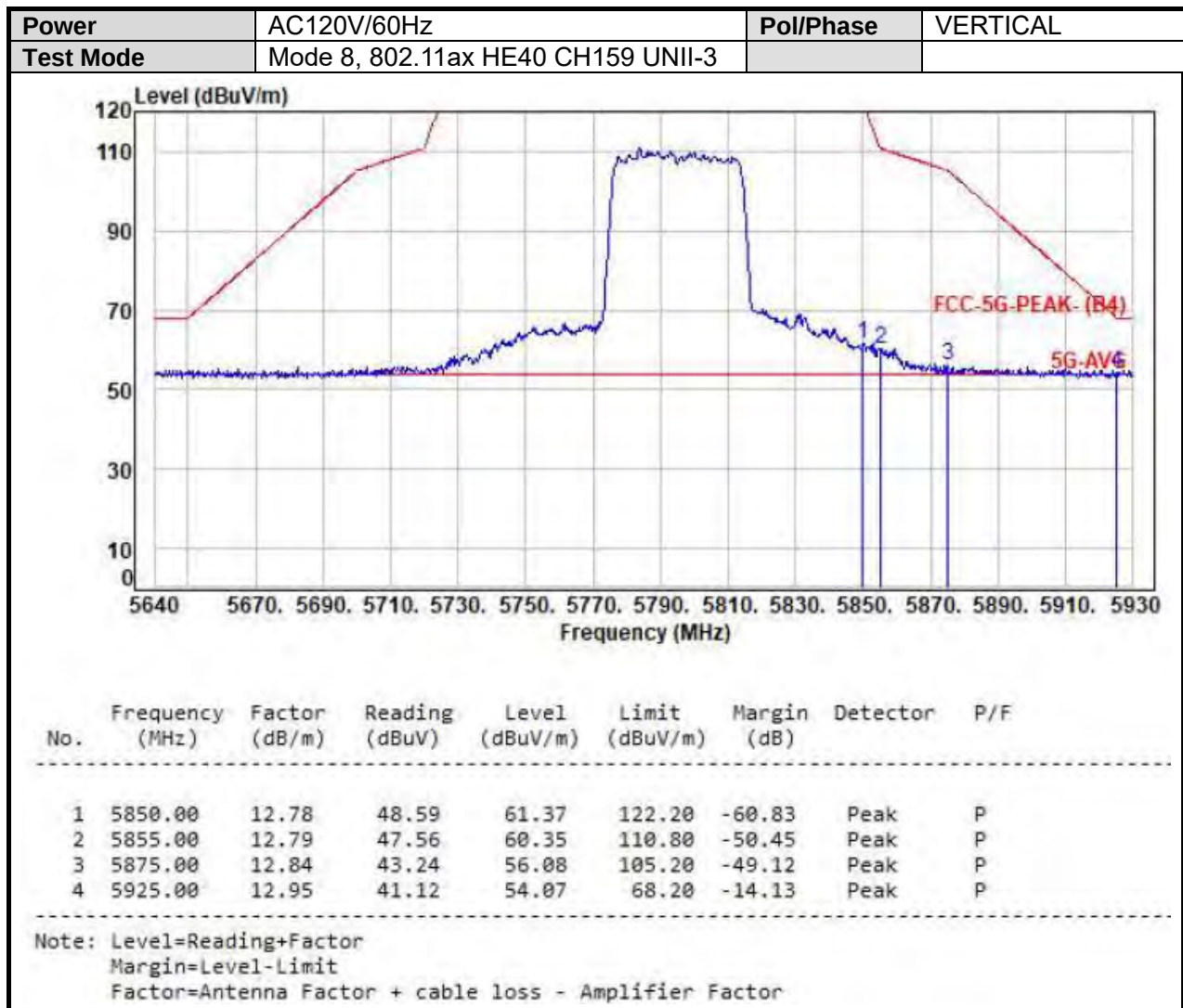


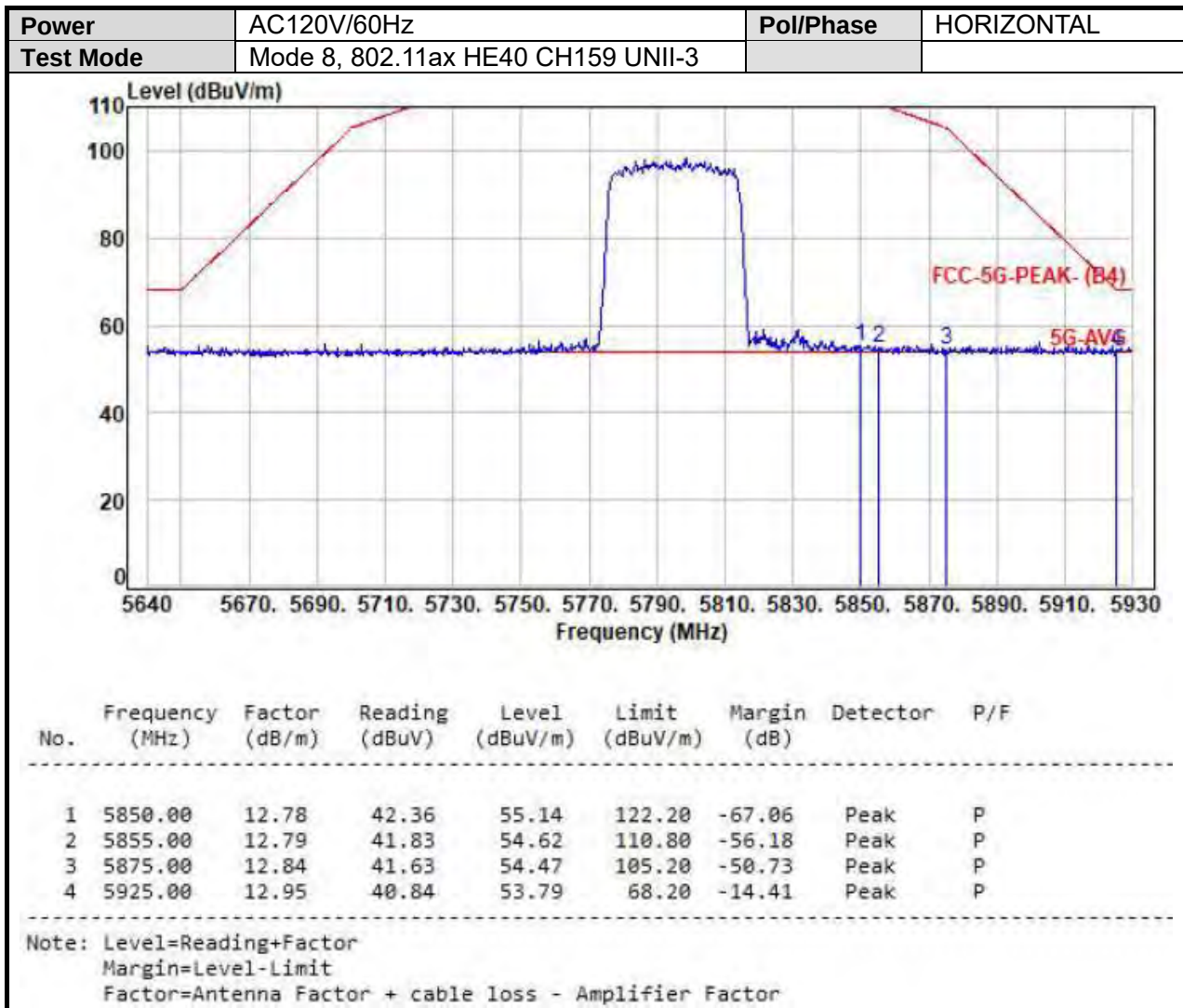






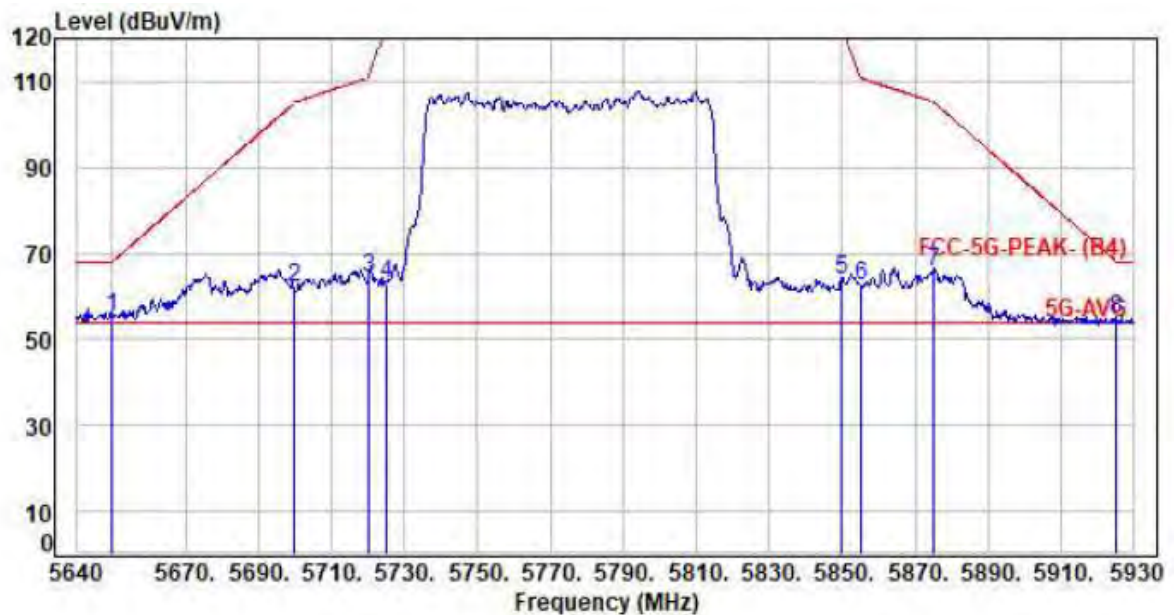








Power	AC120V/60Hz	Pol/Phase	VERTICAL
Test Mode	Mode 9, 802.11ax HE80 CH155 UNII-3		

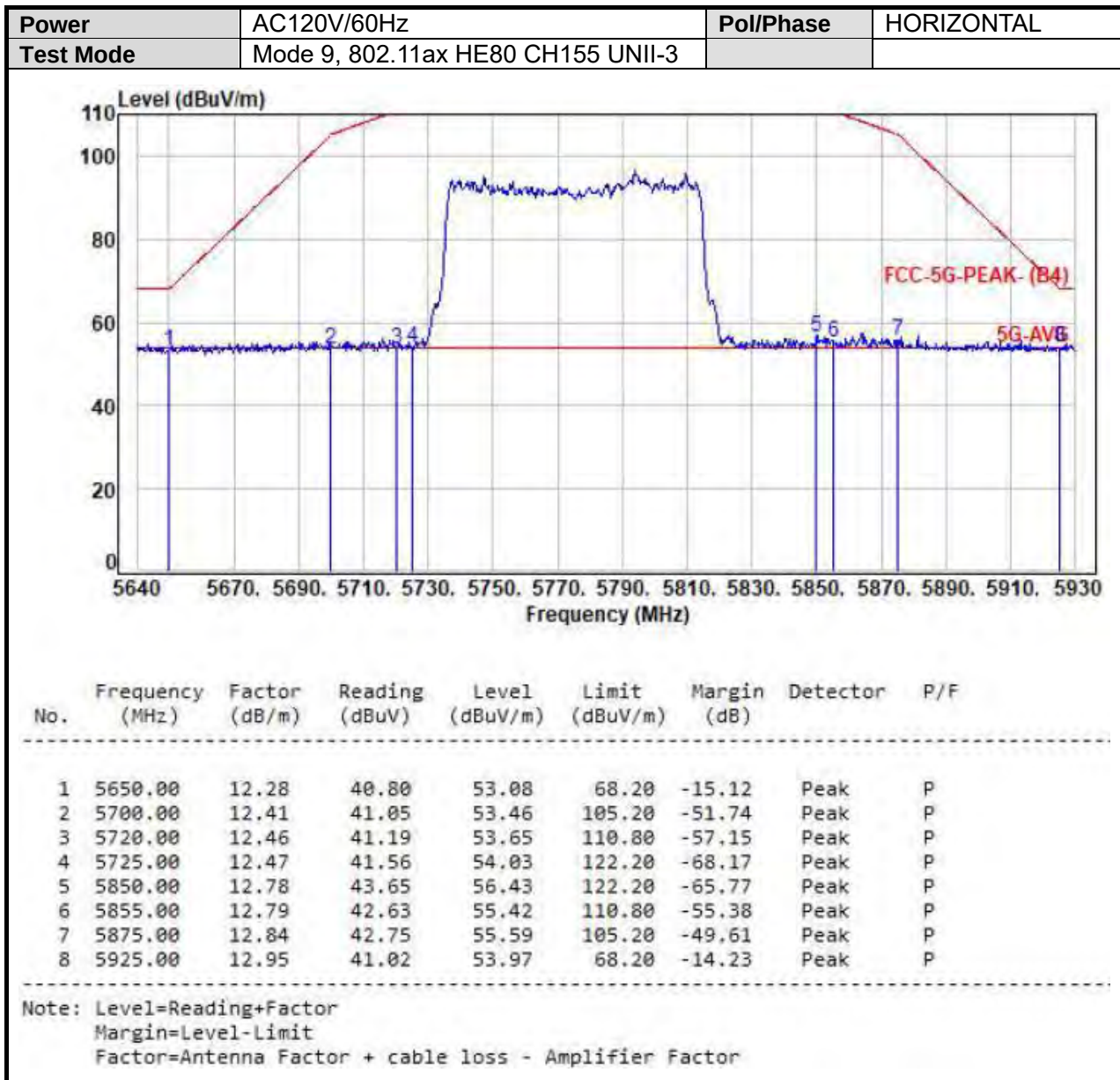


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBUV)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	P/F
1	5650.00	12.28	43.04	55.32	68.20	-12.88	Peak	P
2	5700.00	12.41	49.78	62.19	105.20	-43.01	Peak	P
3	5720.00	12.46	51.92	64.38	110.80	-46.42	Peak	P
4	5725.00	12.47	50.52	62.99	122.20	-59.21	Peak	P
5	5850.00	12.78	50.91	63.69	122.20	-58.51	Peak	P
6	5855.00	12.79	49.85	62.64	110.80	-48.16	Peak	P
7	5875.00	12.84	52.92	65.76	105.20	-39.44	Peak	P
8	5925.00	12.95	41.92	54.87	68.20	-13.33	Peak	P

Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor





7. On Time, Duty Cycle and Measurement methods

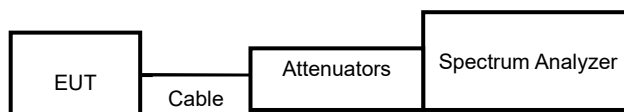
7.1. Test Limit

None; for reporting purposes only.

7.2. Test Procedure

KDB 789033 Zero-Span Spectrum Analyzer Method.

7.3. Test Setup Layout



7.4. Test Result and Data

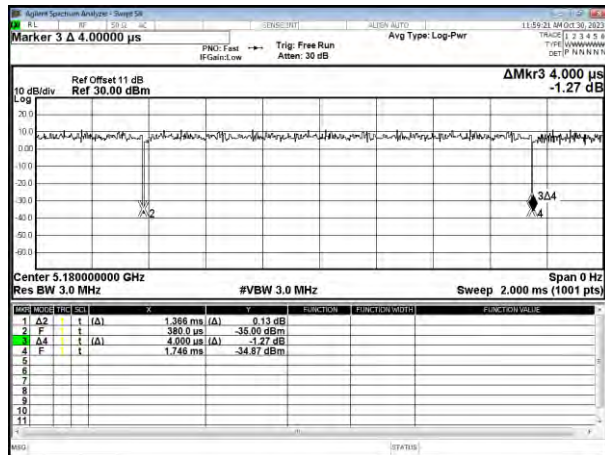
Modulation Mode	On Time (msec)	Period Time (msec)	Duty Cycle (%)
802.11a	1.366	1.370	99.71%
802.11ac VHT20	1.282	1.284	99.84%
802.11ac VHT40	0.638	0.643	99.22%
802.11ac VHT80	0.318	0.322	98.76%
802.11ax HE20	0.990	0.994	99.60%
802.11ax HE40	0.523	0.528	99.05%
802.11ax HE80	0.282	0.287	98.26%

7.5. Measurement Methods

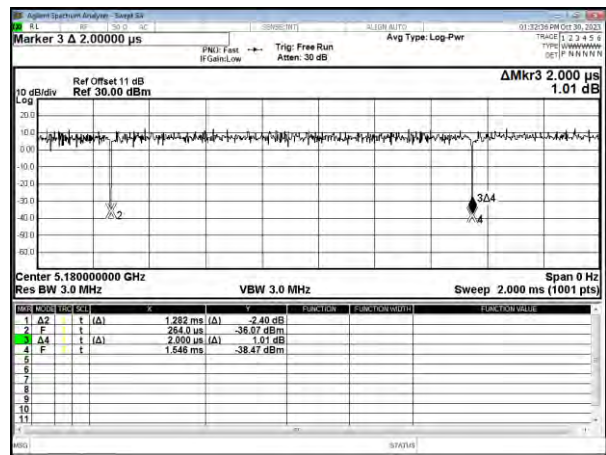
26 dB and 6dB Emission BW	KDB 789033 v02r01, Section C
99% Occupied BW	KDB 789033 v02r01, Section D
Conducted Output Power	KDB 789033 v02r01, Section E.2.d and E.3.b (Method PM-G)
Power Spectral Density	KDB 789033 v02r01, Section F
Unwanted emissions in restricted bands	KDB 789033 v02r01, Sections G and H
Unwanted emissions in non-restricted bands	KDB 789033 v02r01, Sections G and H



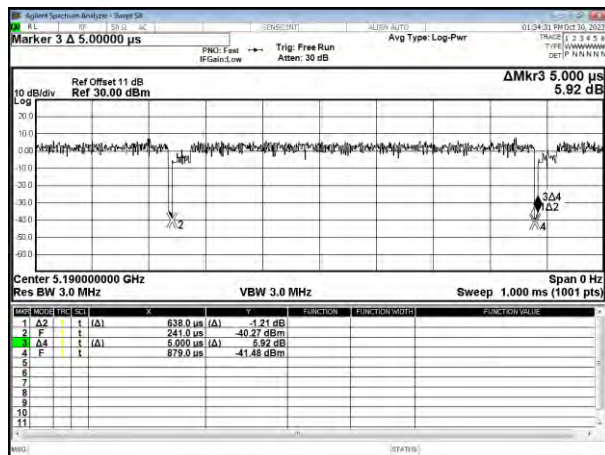
Modulation Type: 802.11a (6Mbps)



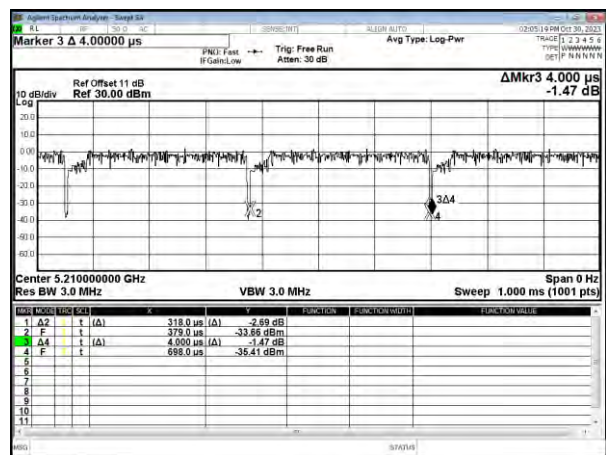
Modulation Type: 802.11ac VHT20 (6.5Mbps)



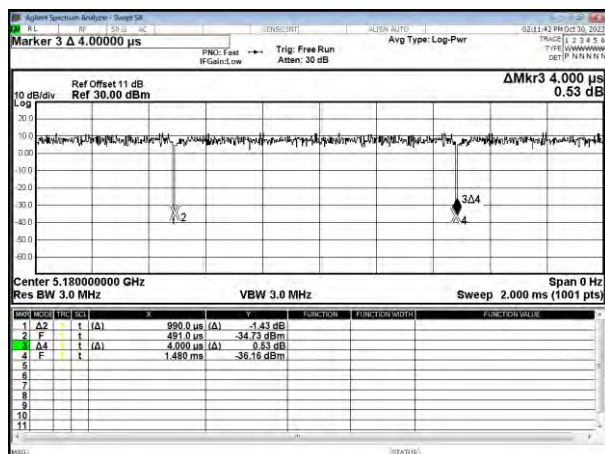
Modulation Type: 802.11ac VHT40 (13.5Mbps)



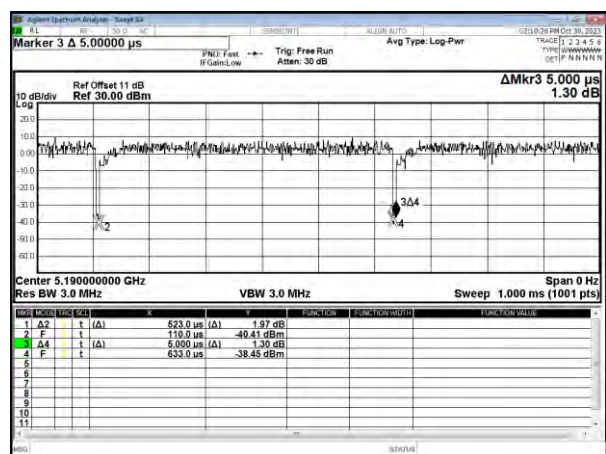
Modulation Type: 802.11ac VHT80 (29.3Mbps)



Modulation Type: 802.11ax HE20 (7.3Mbps)

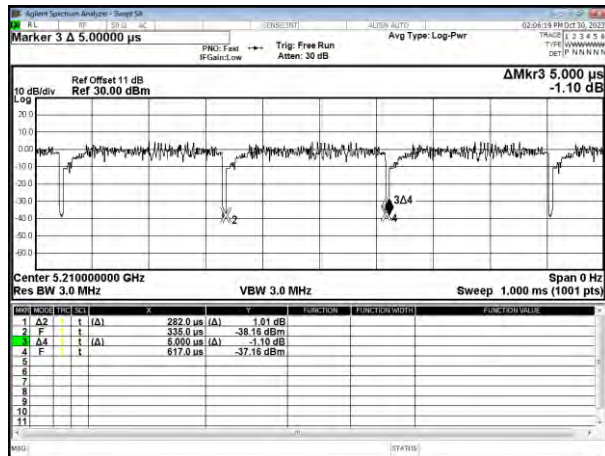


Modulation Type: 802.11ax HE40 (14.6Mbps)





Modulation Type: 802.11ax HE80 (30.6Mbps)





8. 6dB Bandwidth & 99% Occupied Bandwidth

8.1. Test Limit

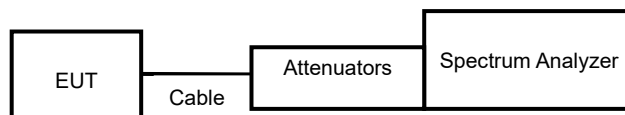
FCC §15.407

The minimum 6 dB bandwidth shall be at least 500 kHz.

8.2. Test Procedure

Reference to 789033 v02r01 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW set to 100KHz, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

8.3. Test Setup Layout



8.4. Test Result and Data (6dB Bandwidth)

In the 5.8GHz Band

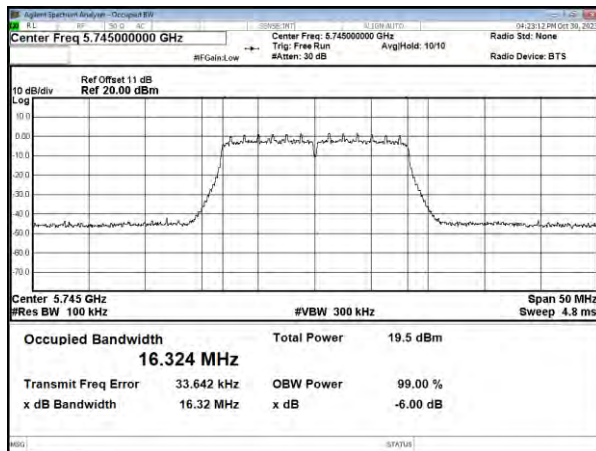
Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)
			ANT A	ANT B	
802.11a	149	5745	16.32	16.39	0.50
	157	5785	16.35	16.38	0.50
	165	5825	16.35	16.36	0.50
802.11ac VHT20	149	5745	17.12	17.33	0.50
	157	5785	17.55	17.06	0.50
	165	5825	16.98	16.95	0.50
802.11ac VHT40	155	5755	35.69	35.69	0.50
	159	5795	35.61	35.77	0.50
802.11ac VHT80	155	5775	75.86	76.00	0.50
802.11ax HE20	149	5745	17.88	18.67	0.50
	157	5785	18.00	18.26	0.50
	165	5825	18.03	18.27	0.50
802.11ax HE40	155	5755	37.55	37.95	0.50
	159	5795	37.56	37.95	0.50
802.11ax HE80	155	5775	77.46	77.63	0.50

**8.5. Test Result and Data (99% Occupied Bandwidth)****In the 5.8GHz Band**

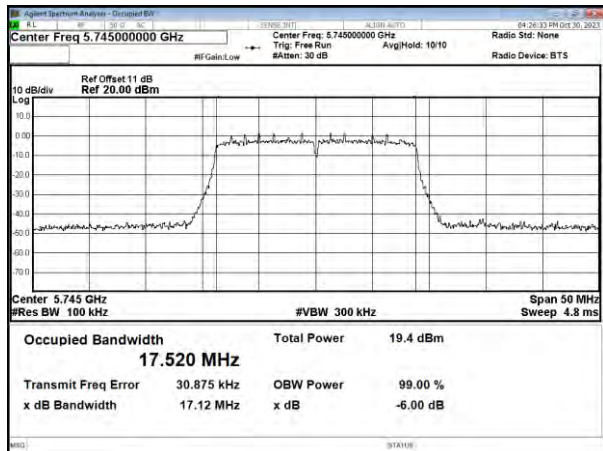
Mode	Channel	Frequency (MHz)	99% Bandwidth(MHz)	
			ANT A	ANT B
802.11a	149	5745	16.38	16.38
	157	5785	16.40	16.38
	165	5825	16.40	16.36
802.11ac VHT20	149	5745	17.52	17.55
	157	5785	17.52	17.55
	165	5825	17.53	17.52
802.11ac VHT40	155	5755	36.10	36.06
	159	5795	36.08	36.13
802.11ac VHT80	155	5775	76.48	76.26
802.11ax HE20	149	5745	18.94	18.95
	157	5785	18.93	18.92
	165	5825	17.53	18.91
802.11ax HE40	155	5755	37.64	37.67
	159	5795	37.63	37.66
802.11ax HE80	155	5775	77.27	77.35



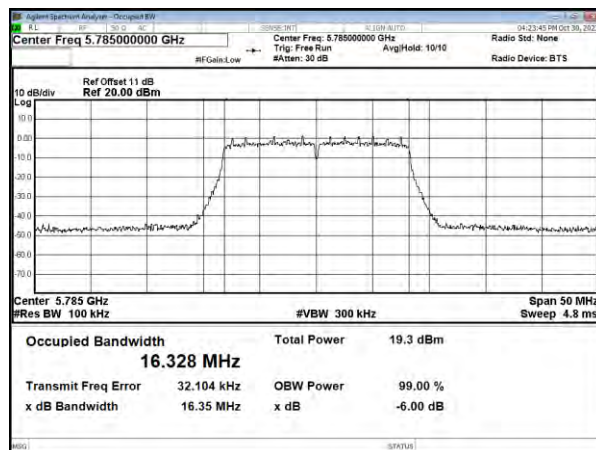
MIMO (ANT A)
6dB Bandwidth
Modulation Type: 802.11a (6Mbps)
CH149



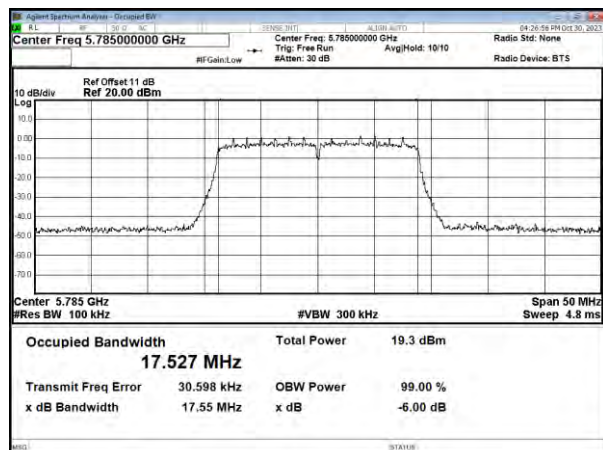
Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



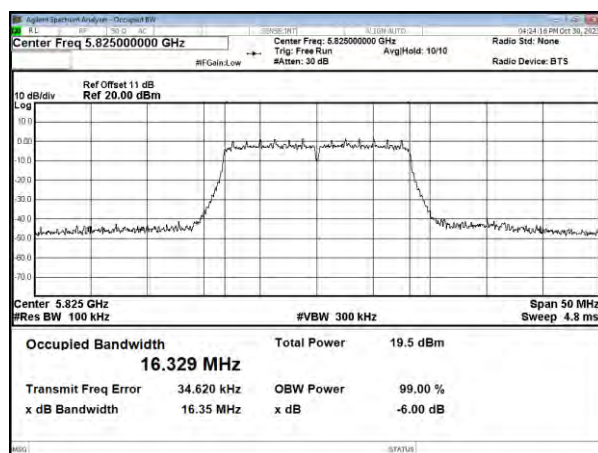
CH157



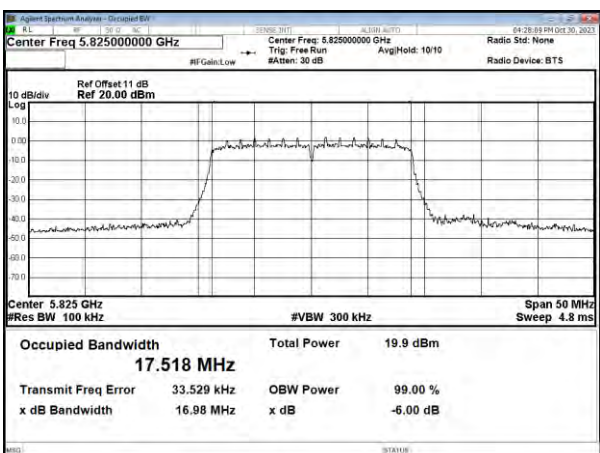
CH157



CH165

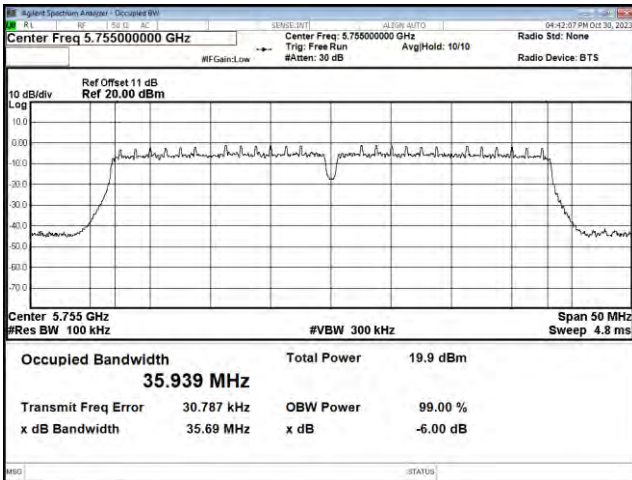
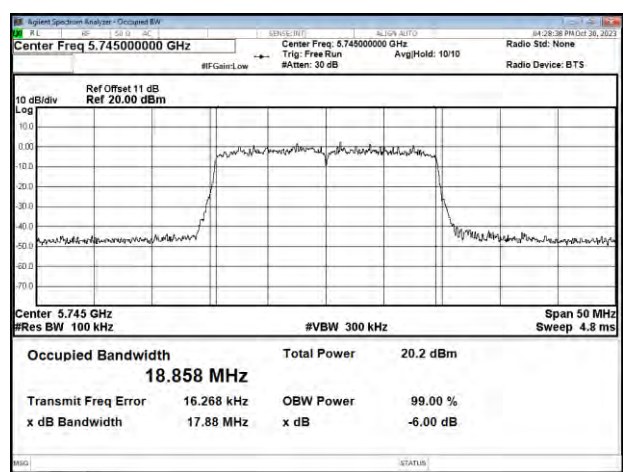


CH165

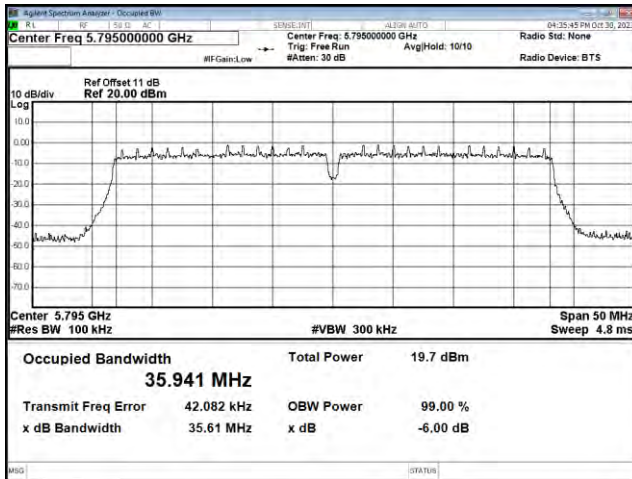




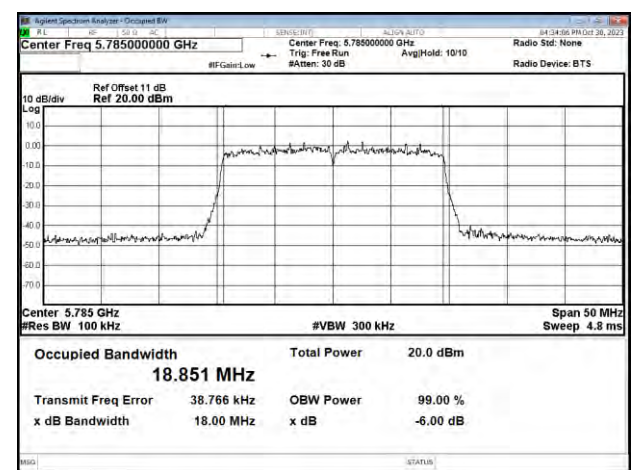
6dB Bandwidth

Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151Modulation Type: 802.1111ax HE20 (7.3Mbps)
CH149

CH159

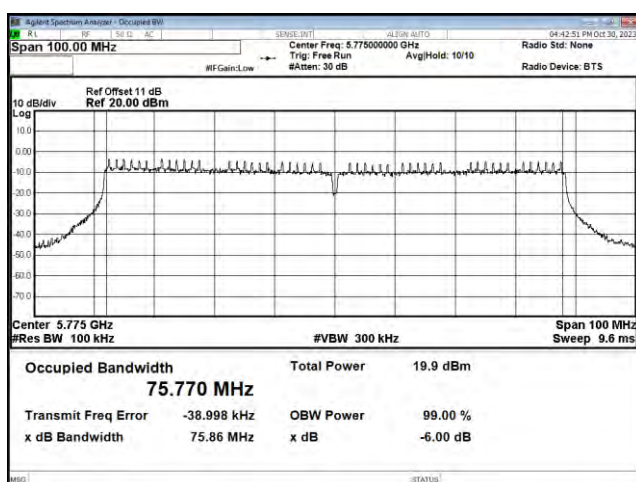


CH157

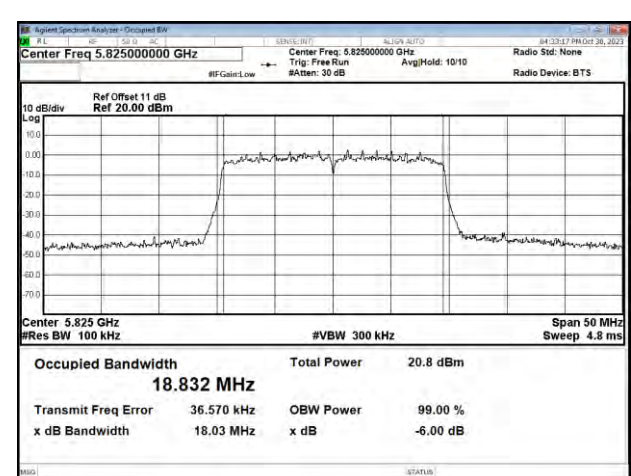


Modulation Type: 802.11ac, VHT80 (29.3Mbps)

CH155



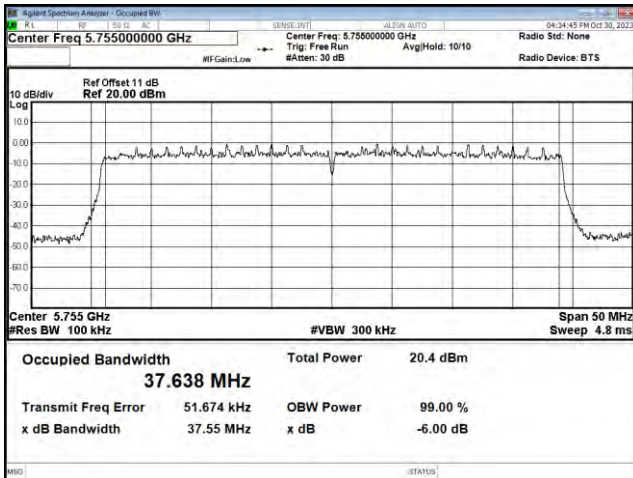
CH165



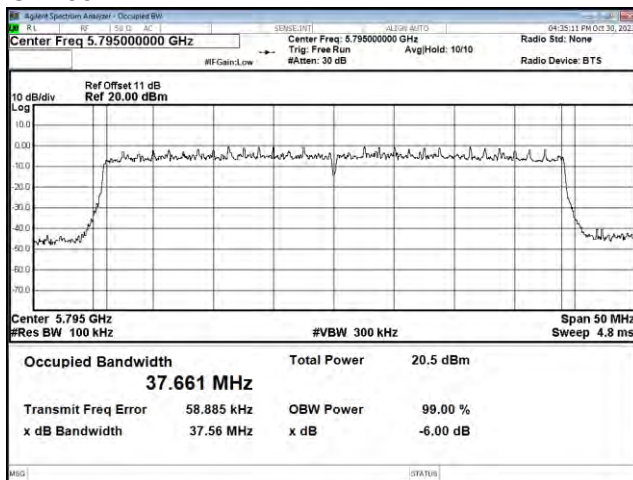


6dB Bandwidth

Modulation Type: 802.11 ax HE40 (14.6Mbps)
CH151

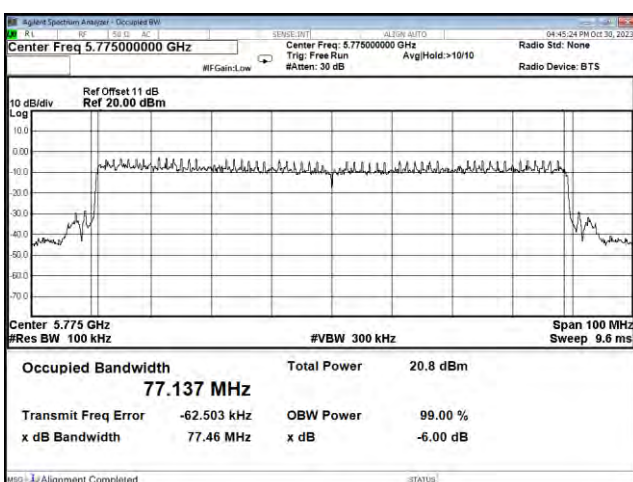


CH159



Modulation Type: 802.11ax HE80 (30.6Mbps)

CH155



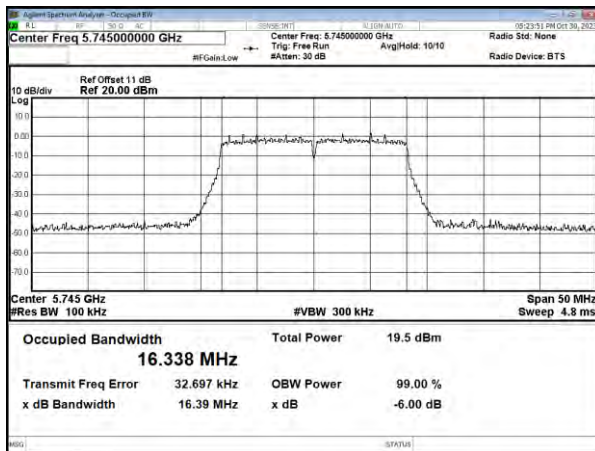


MIMO (ANT B)

6dB Bandwidth

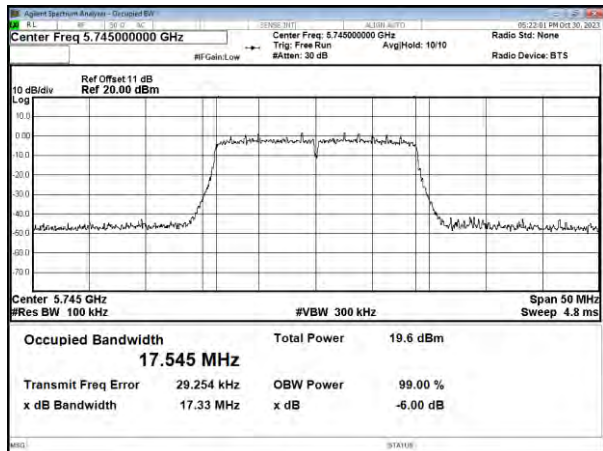
Modulation Type: 802.11a (6Mbps)

CH149

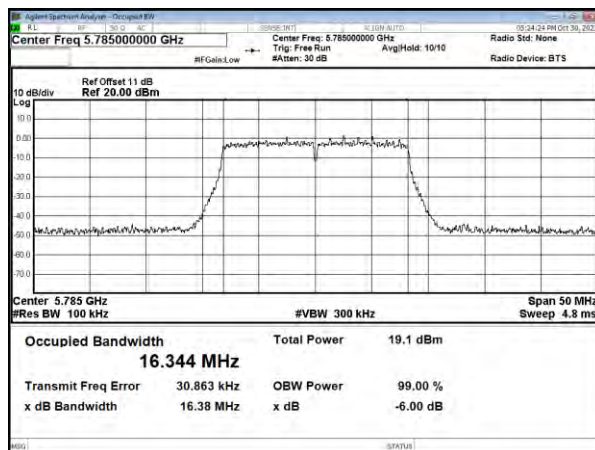


Modulation Type: 802.11ac, VHT20 (6.5Mbps)

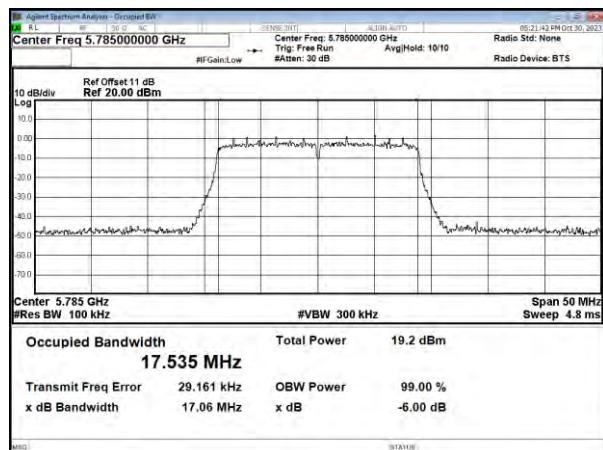
CH149



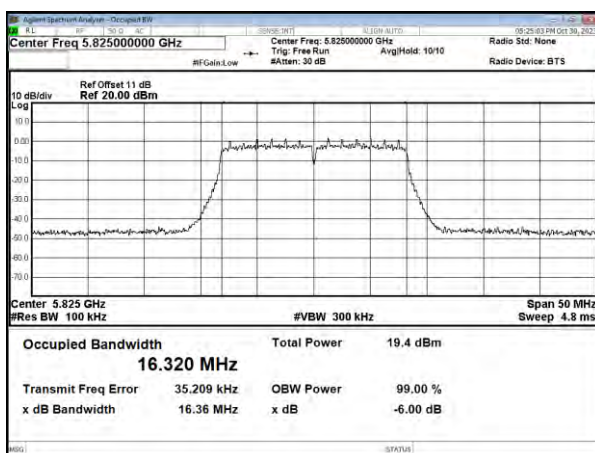
CH157



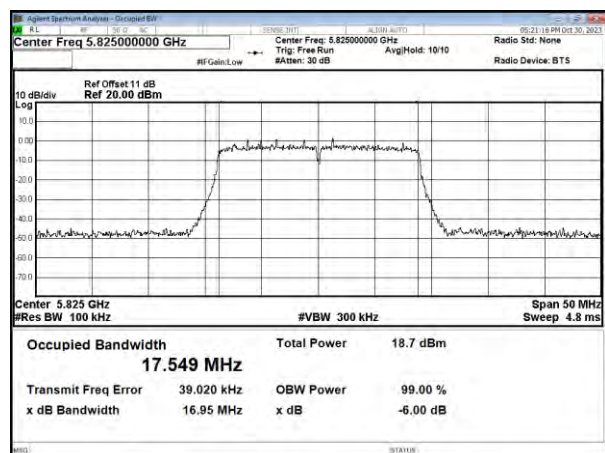
CH157



CH165

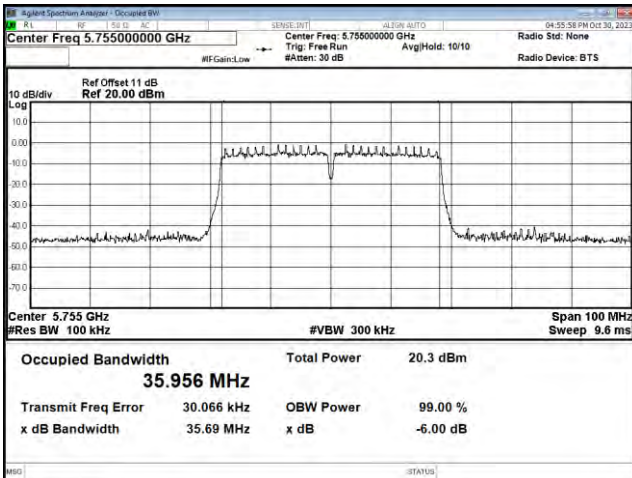
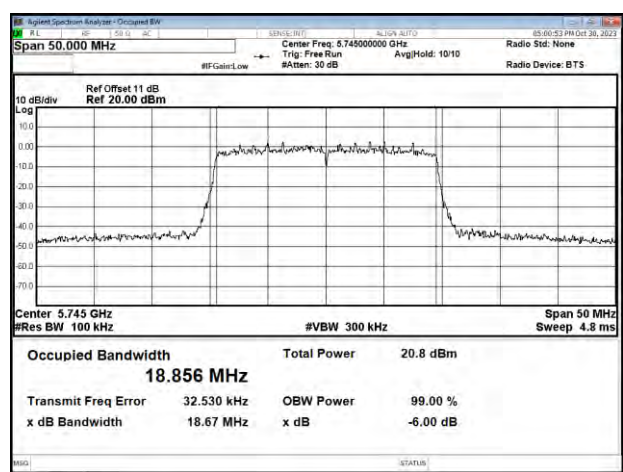


CH165

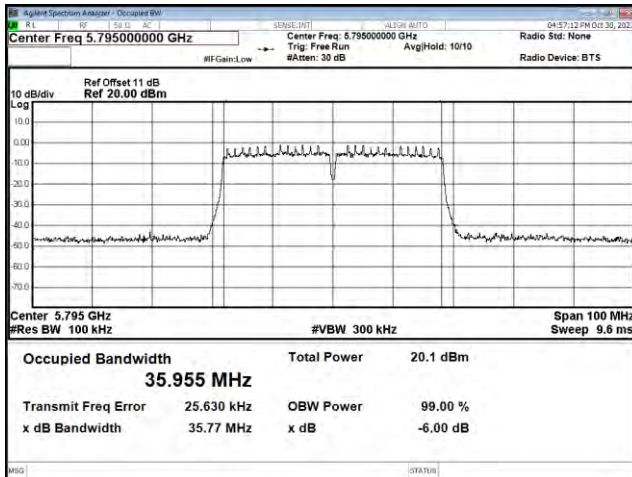




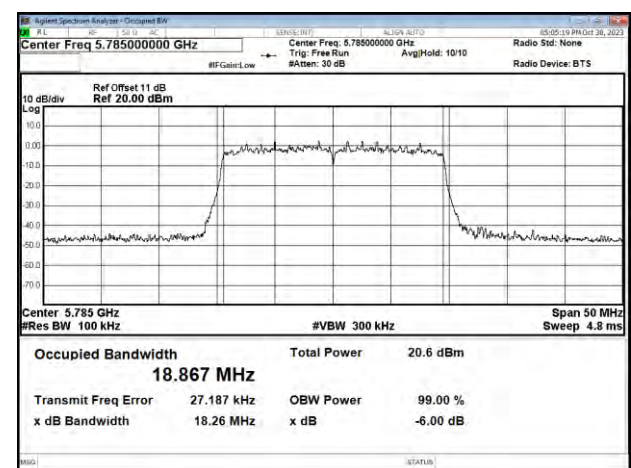
6dB Bandwidth

Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151Modulation Type: 802.1111ax HE20 (7.3Mbps)
CH149

CH159

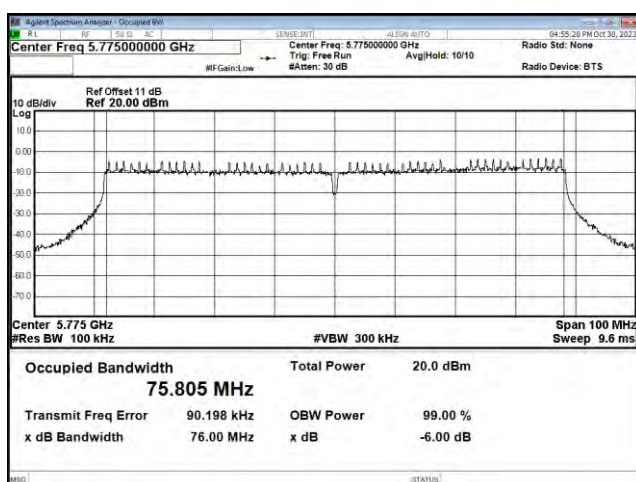


CH157

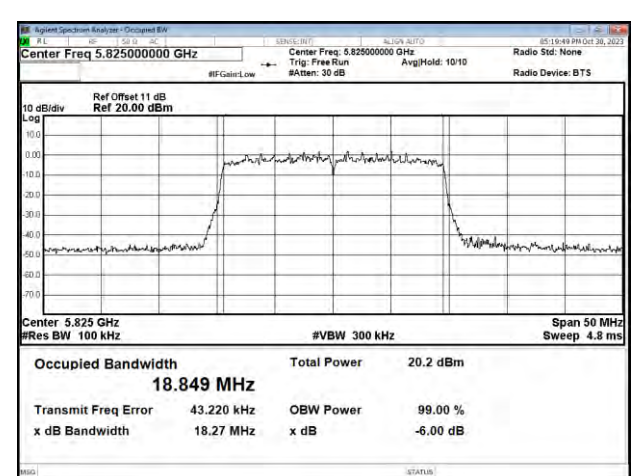


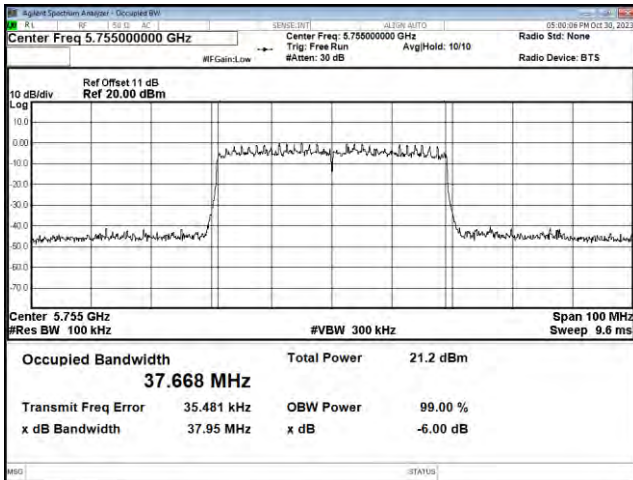
Modulation Type: 802.11ac, VHT80 (29.3Mbps)

CH155

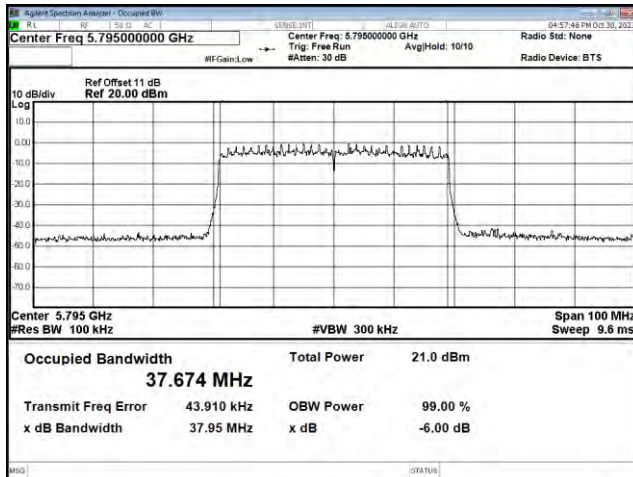


CH165



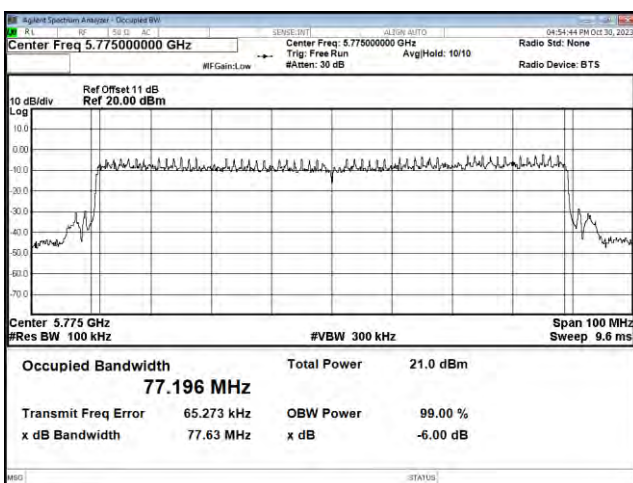
Modulation Type: 802.11 ax HE40 (14.6Mbps)
CH151

CH159



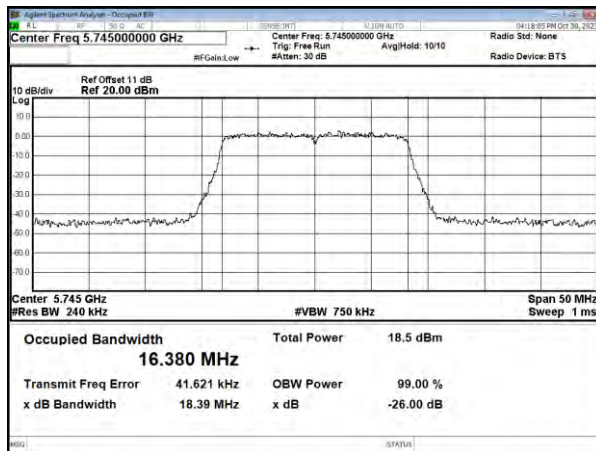
Modulation Type: 802.11ax HE80 (30.6Mbps)

CH155

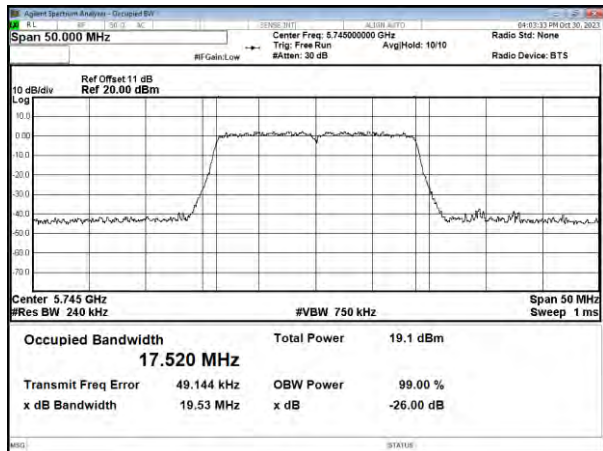




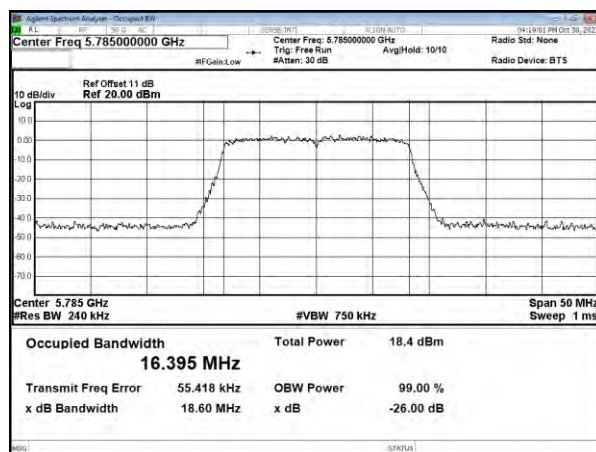
MIMO (ANT A)
99% Occupied Bandwidth
Modulation Type: 802.11a (6Mbps)
CH149



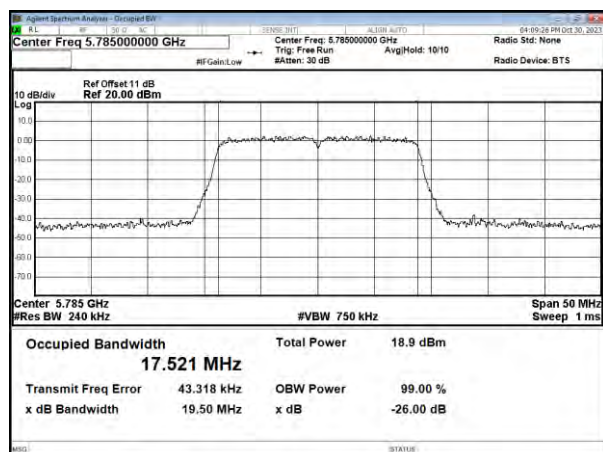
Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



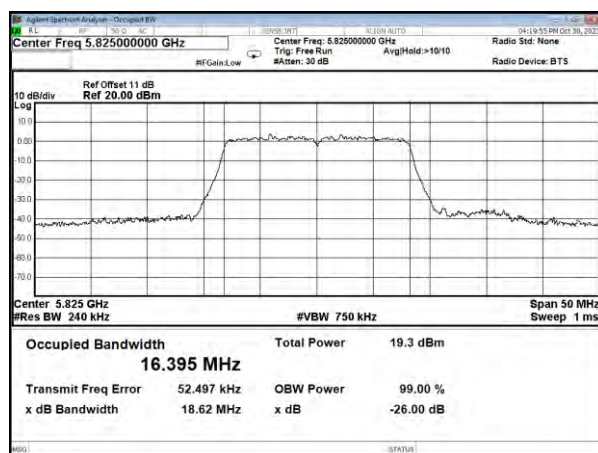
CH157



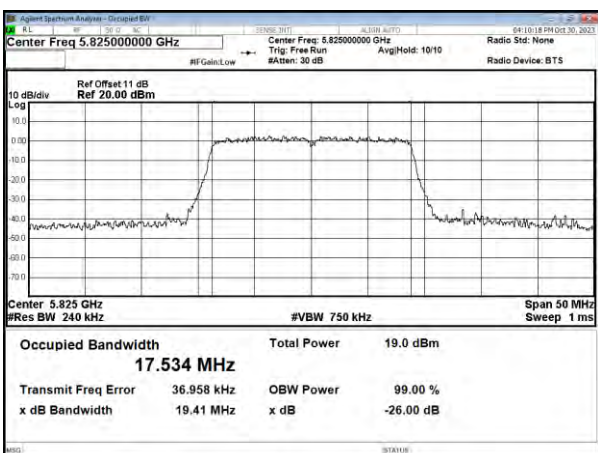
CH157



CH165

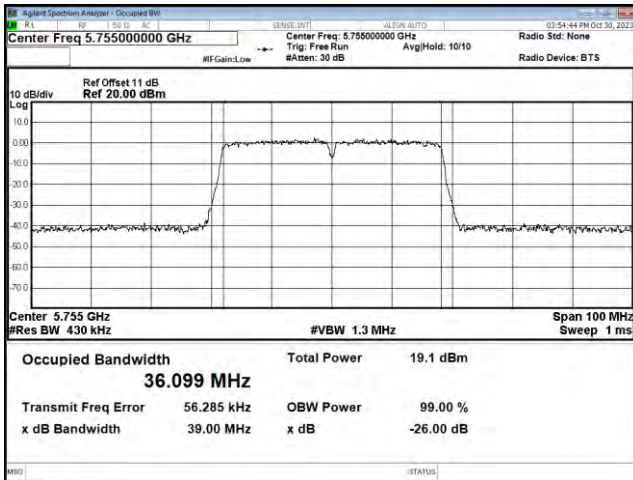


CH165

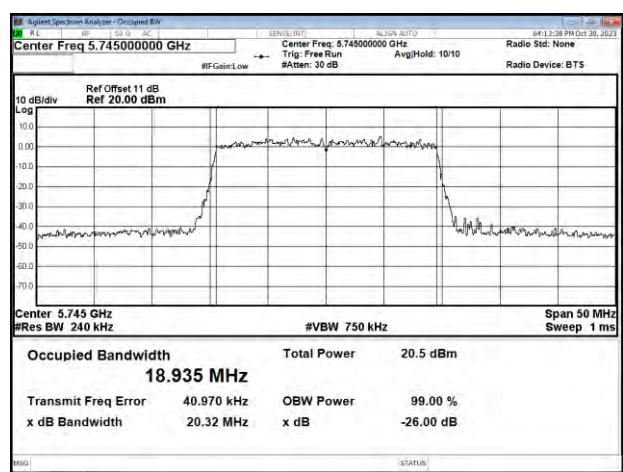




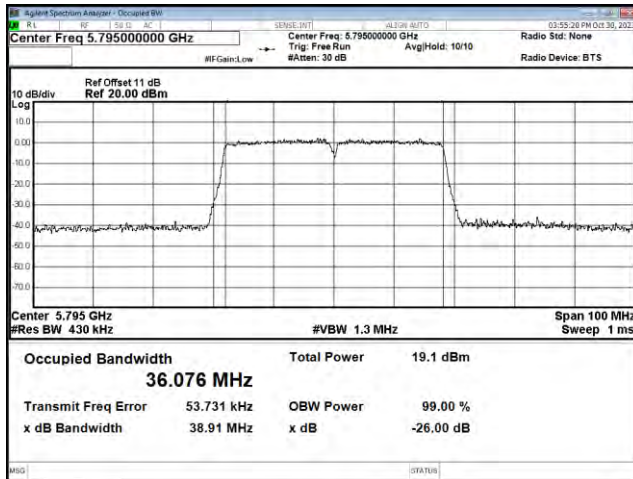
99% Occupied Bandwidth
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



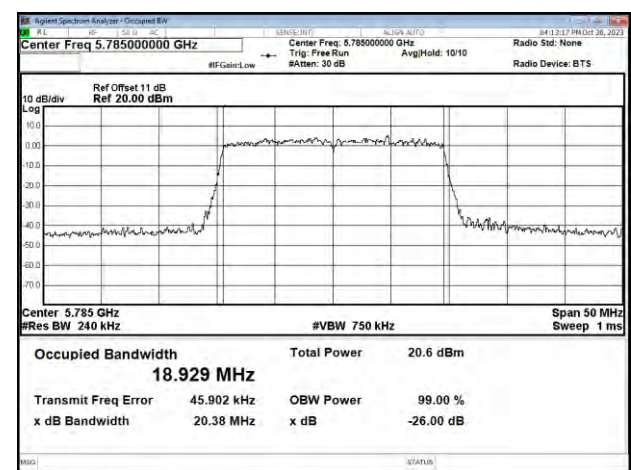
Modulation Type: 802.1111ax HE20 (7.3Mbps)
CH149



CH159

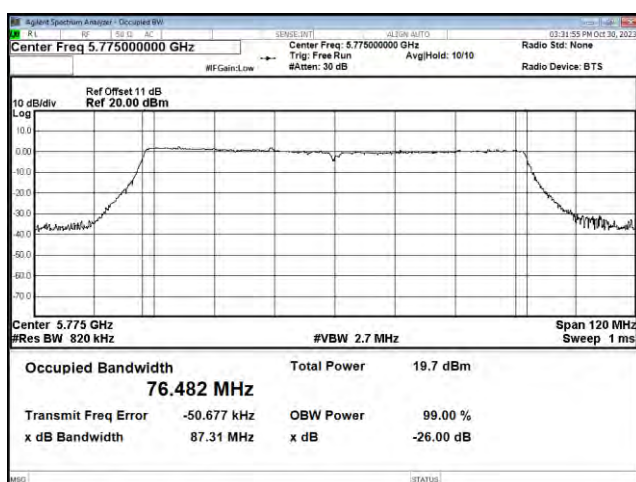


CH157

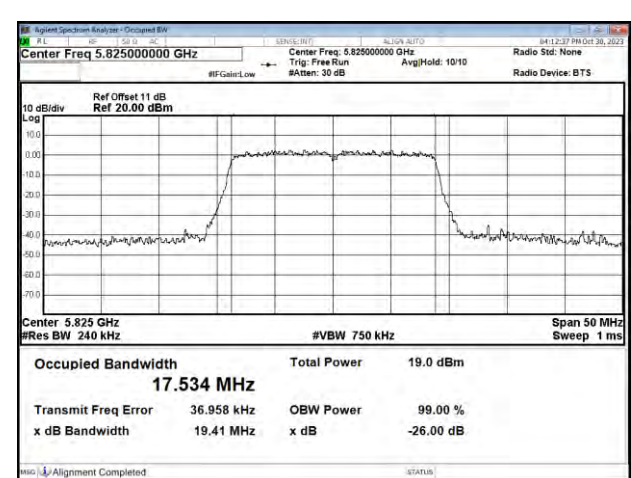


Modulation Type: 802.11ac, VHT80 (29.3Mbps)

CH155

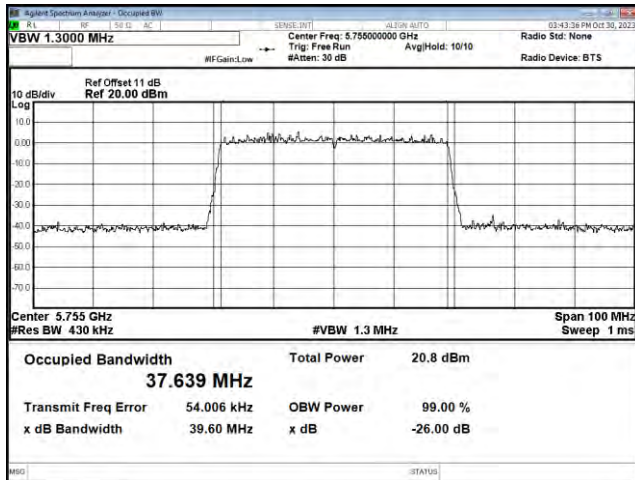


CH165

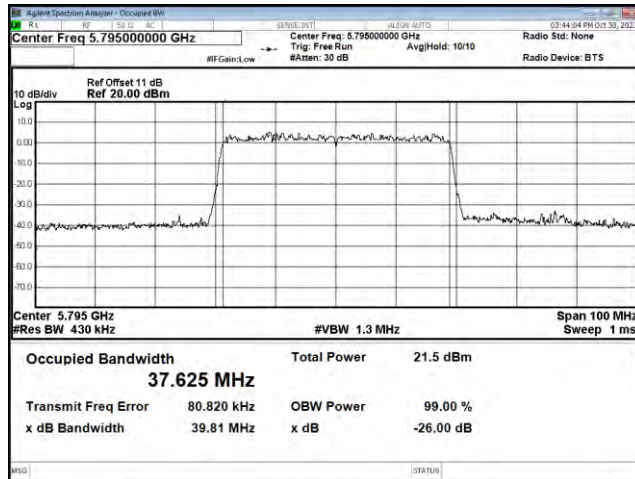




99% Occupied Bandwidth
Modulation Type: 802.11 ax HE40 (14.6Mbps)
CH151

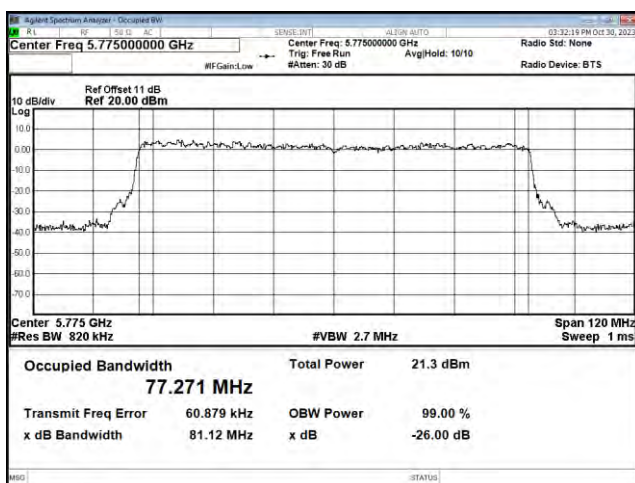


CH159



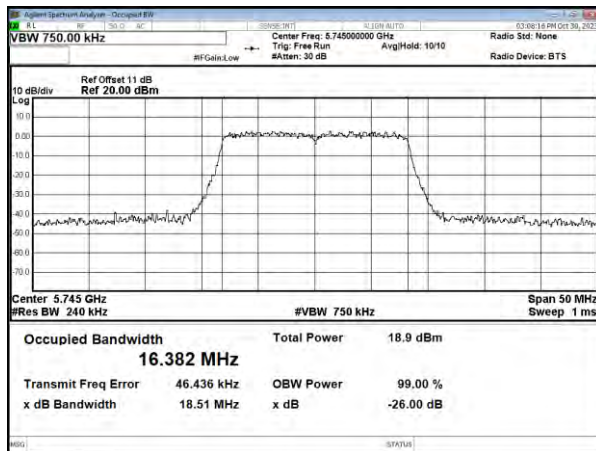
Modulation Type: 802.11ax HE80 (30.6Mbps)

CH155

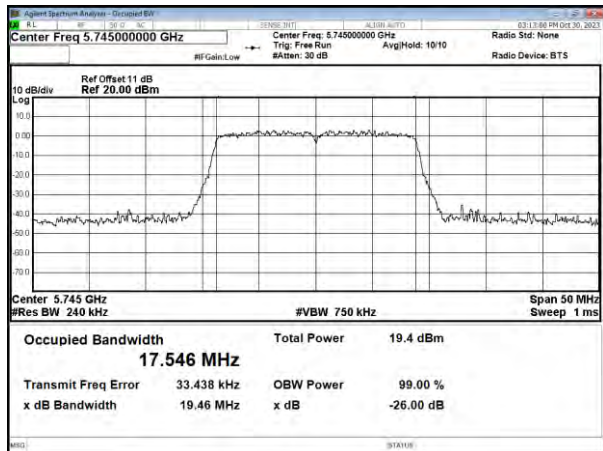




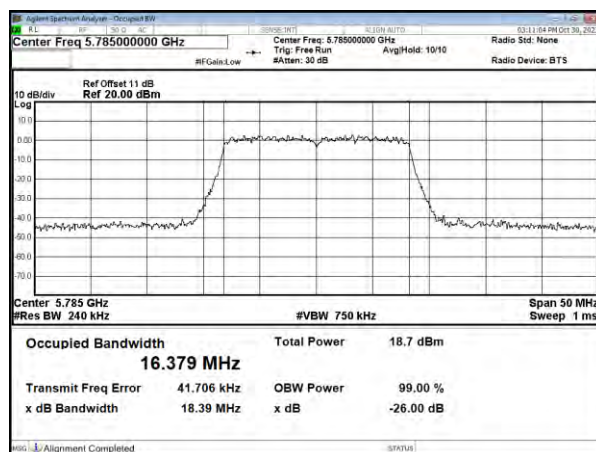
MIMO (ANT B)
99% Occupied Bandwidth
Modulation Type: 802.11a (6Mbps)
CH149



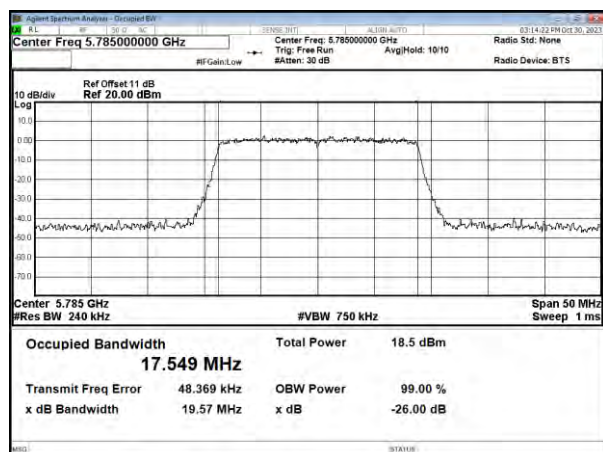
Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



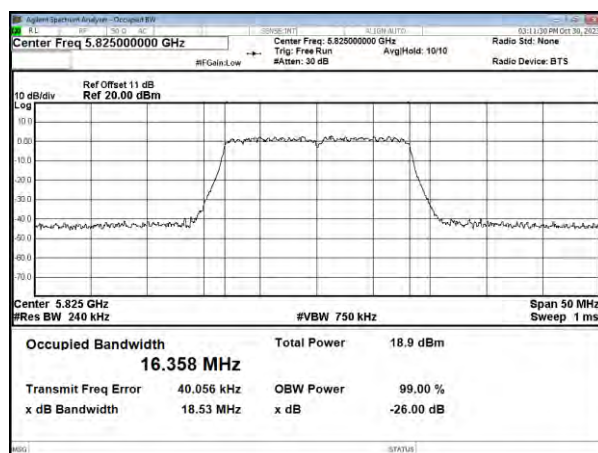
CH157



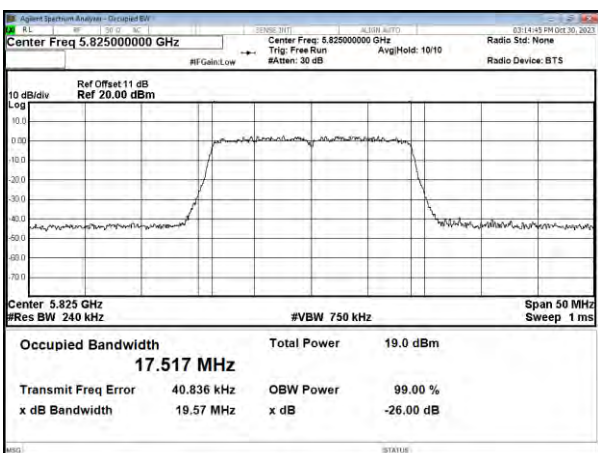
CH157



CH165

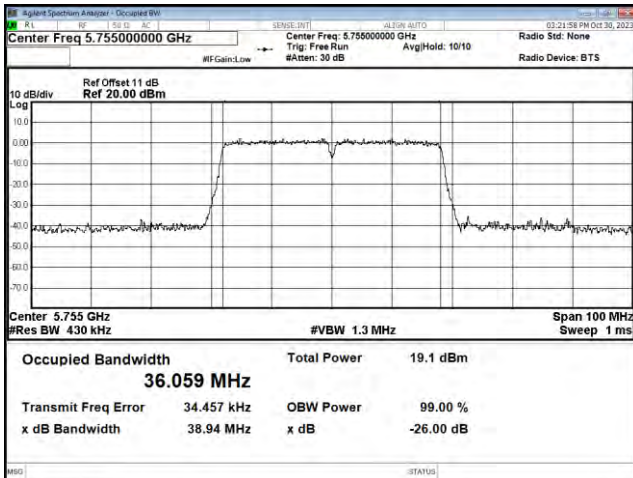
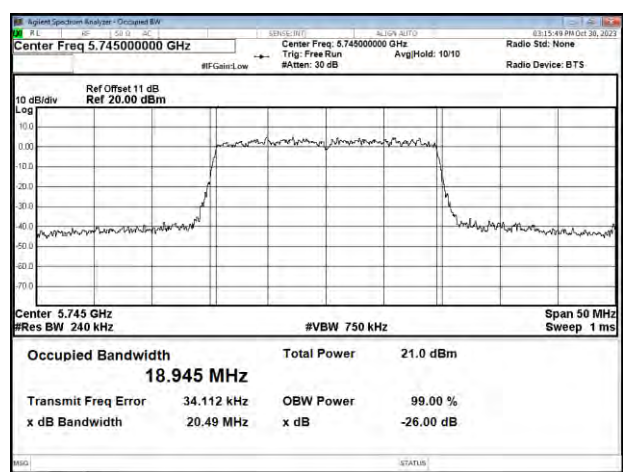


CH165

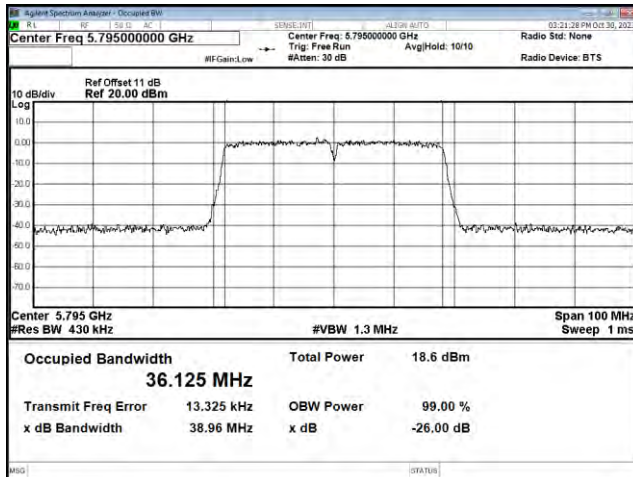




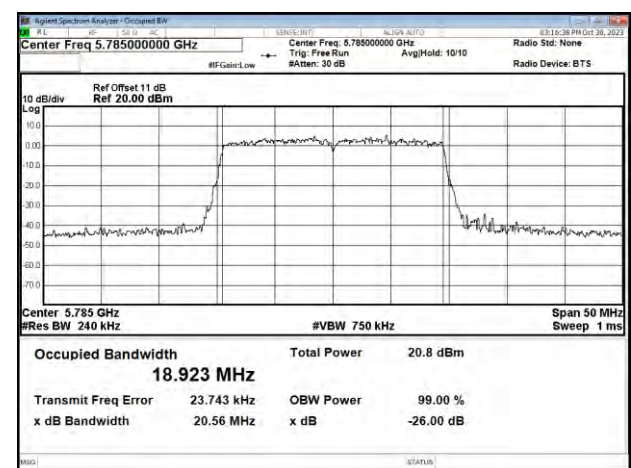
99% Occupied Bandwidth

Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151Modulation Type: 802.1111ax HE20 (7.3Mbps)
CH149

CH159

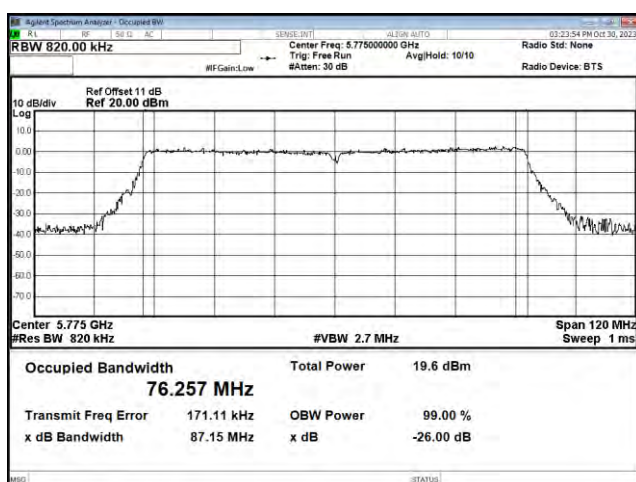


CH157

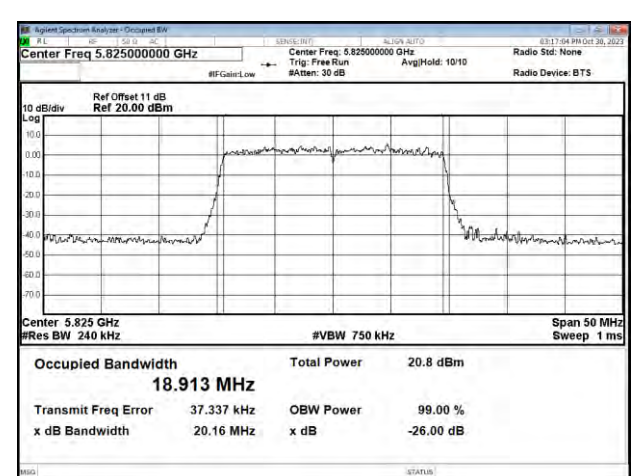


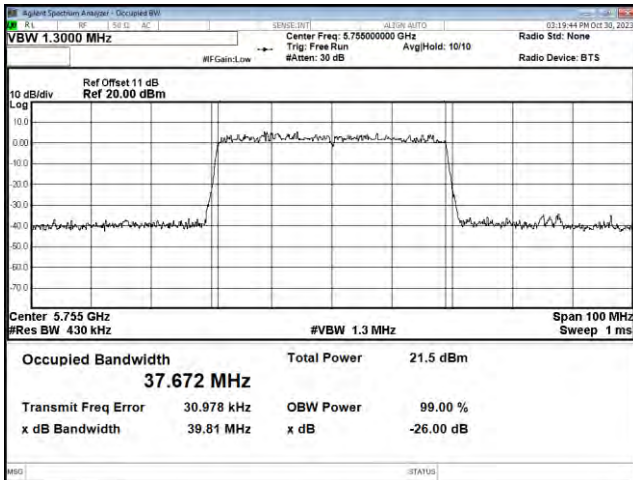
Modulation Type: 802.11ac, VHT80 (29.3Mbps)

CH155

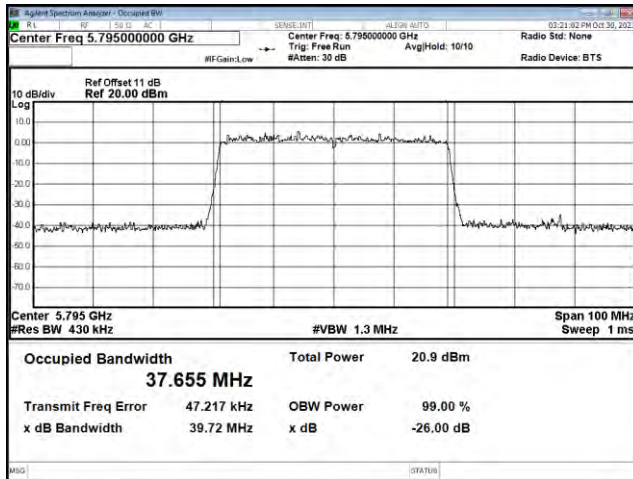


CH165



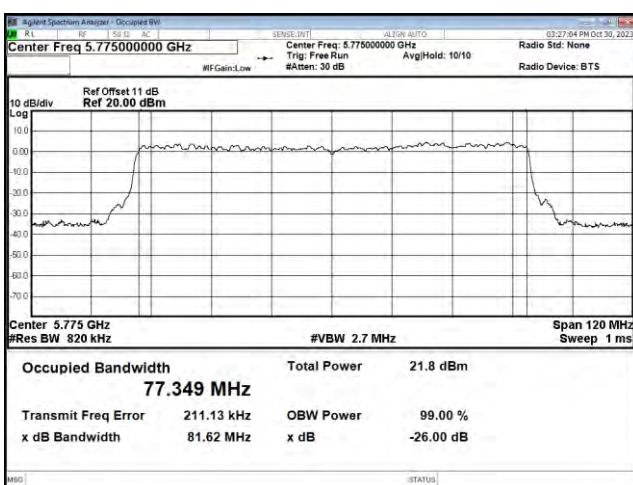
Modulation Type: 802.11 ax HE40 (14.6Mbps)
CH151

CH159



Modulation Type: 802.11ax HE80 (30.6Mbps)

CH155





9. 26dB Bandwidth & 99% Occupied Bandwidth

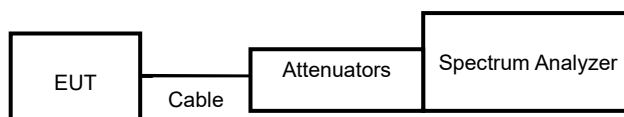
9.1. Test Limit

None; for reporting purposes only.

9.2. Test Procedure

Reference to 789033 v02r01 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW = approximately 1% of the emission bandwidth, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

9.3. Test Setup Layout



**9.4. Test Result and Data (26dB Bandwidth)****In the 5.2G Band
MIMO**

Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
			ANT A	ANT B
802.11a	36	5180	18.73	18.38
	44	5220	18.47	18.36
	48	5240	18.42	18.45
802.11ac VHT20	36	5180	19.48	19.39
	44	5220	19.46	19.51
	48	5240	19.52	19.48
802.11ac VHT40	38	5190	38.76	39.00
	46	5230	39.13	38.73
802.11ac VHT80	42	5210	88.63	87.41
802.11ax HE20	36	5180	20.55	20.48
	44	5220	20.52	20.50
	48	5240	20.54	20.53
802.11ax HE40	38	5190	39.67	39.87
	46	5230	39.86	39.71
802.11ax HE80	42	5210	81.23	80.91

**9.5. Test Result and Data (99% Occupied Bandwidth)**

In the 5.2G Band

MIMO

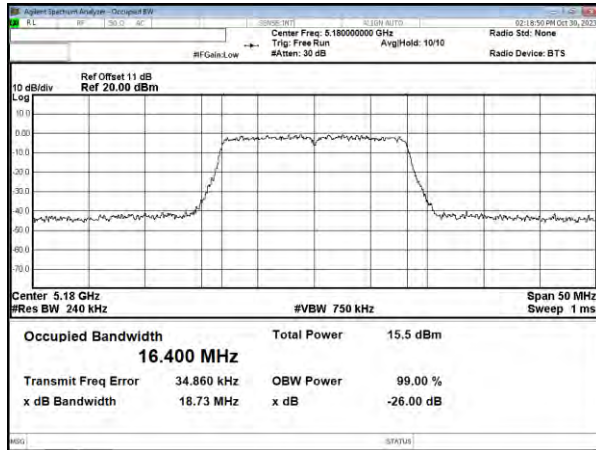
Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	
			ANT A	ANT B
802.11a	36	5180	16.40	16.36
	44	5220	16.37	16.38
	48	5240	16.39	16.37
802.11ac VHT20	36	5180	17.54	17.55
	44	5220	17.53	17.54
	48	5240	17.53	17.52
802.11ac VHT40	38	5190	36.14	36.09
	46	5230	36.05	36.07
802.11ac VHT80	42	5210	76.40	76.36
802.11ax HE20	36	5180	18.93	18.92
	44	5220	18.91	18.92
	48	5240	18.91	18.91
802.11ax HE40	38	5190	37.61	37.61
	46	5230	37.68	37.65
802.11ax HE80	42	5210	77.31	77.31

**MIMO (ANT A)**

26dB Bandwidth & 99% Occupied Bandwidth, UNII-1

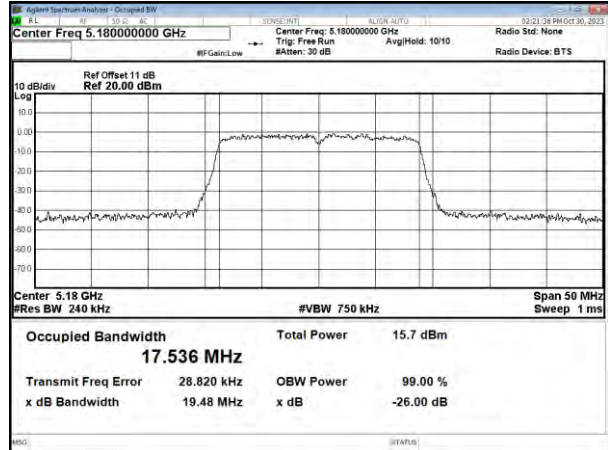
Modulation Standard: 802.11a (6Mbps)

CH36

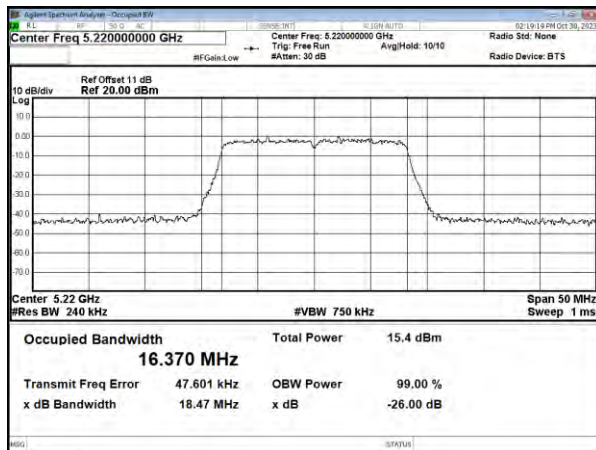


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

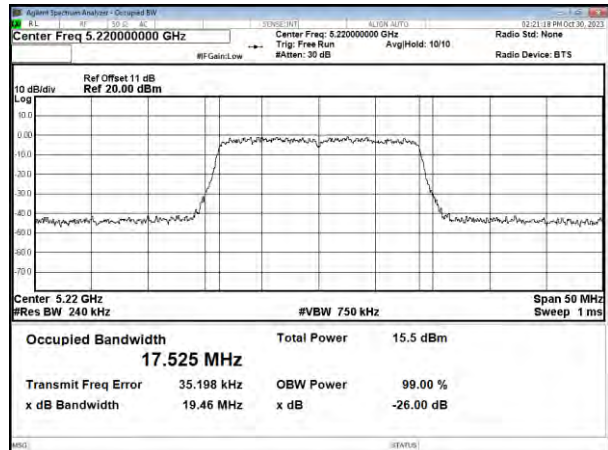
CH36



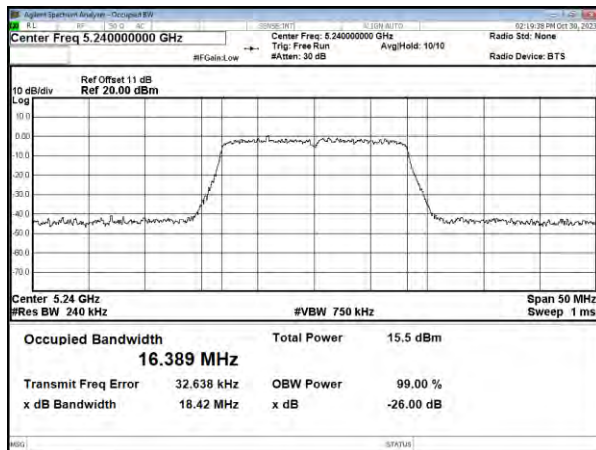
CH44



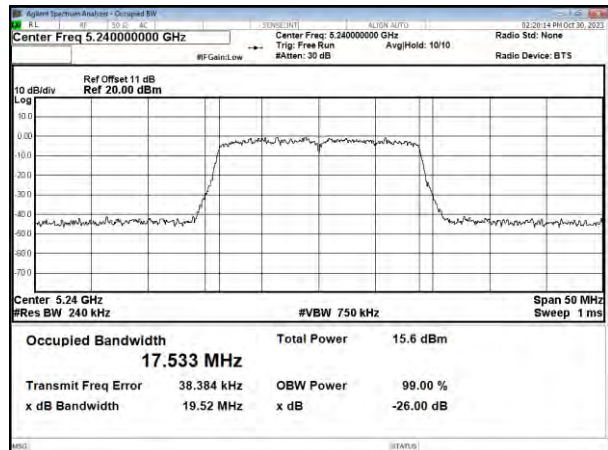
CH44



CH48



CH48

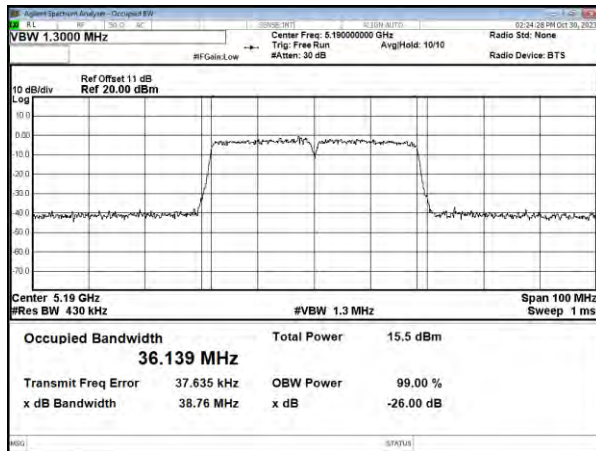




26dB Bandwidth & 99% Occupied Bandwidth, UNII-1

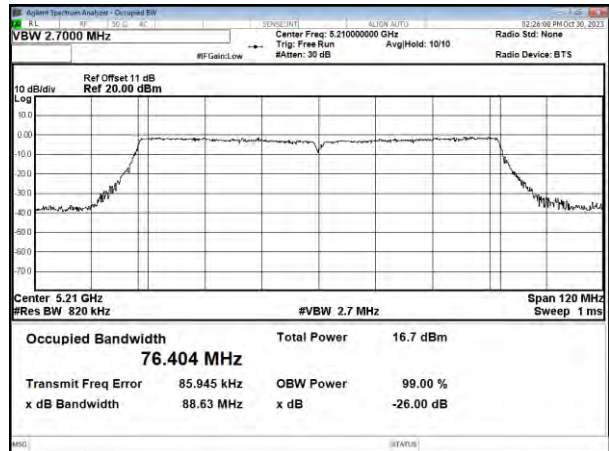
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

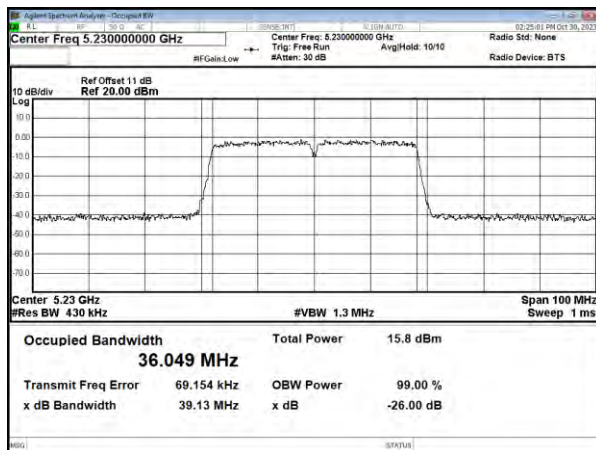


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



CH46

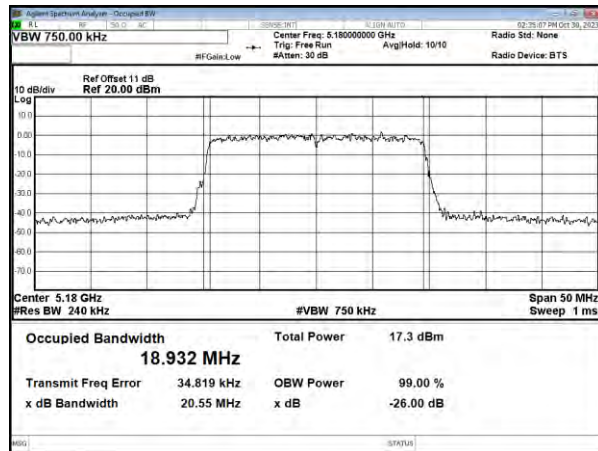




26dB Bandwidth & 99% Occupied Bandwidth, UNII-1

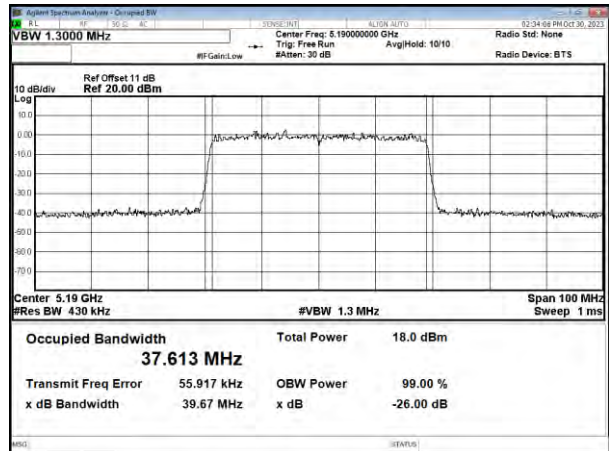
Modulation Standard: 802.11 ax HE20 (7.3Mbps)

CH36

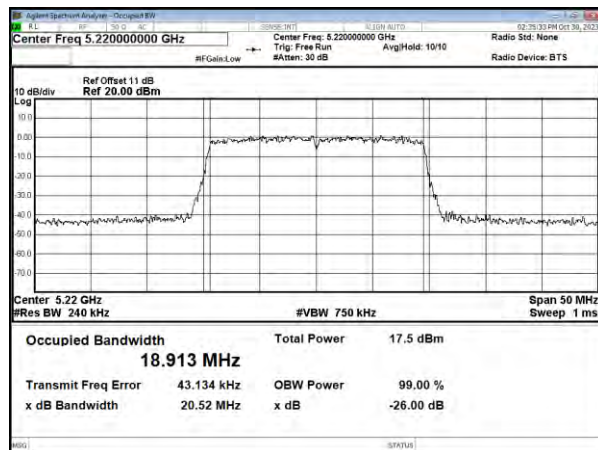


Modulation Standard: 802.11 ax HE40 (14.6Mbps)

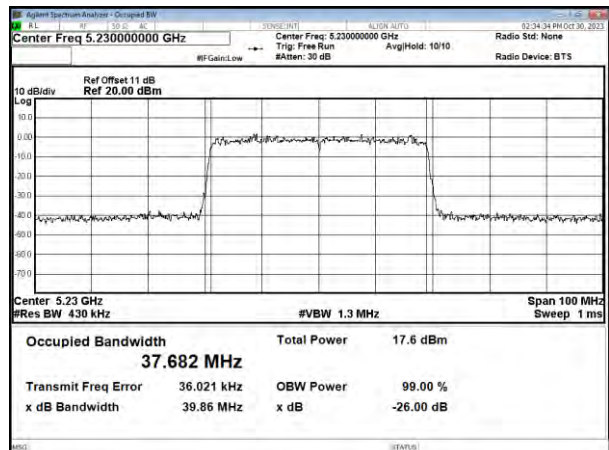
CH38



CH44

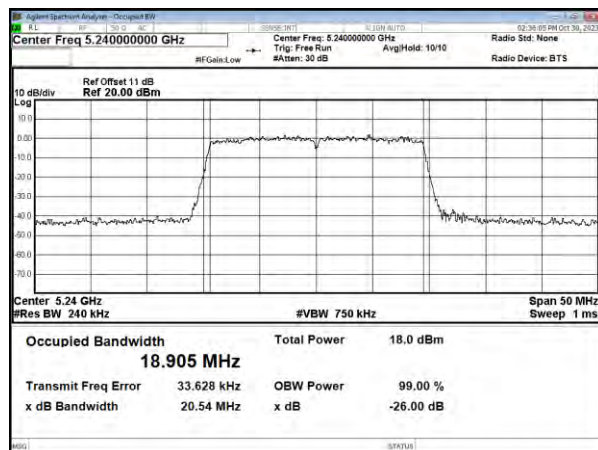


CH46

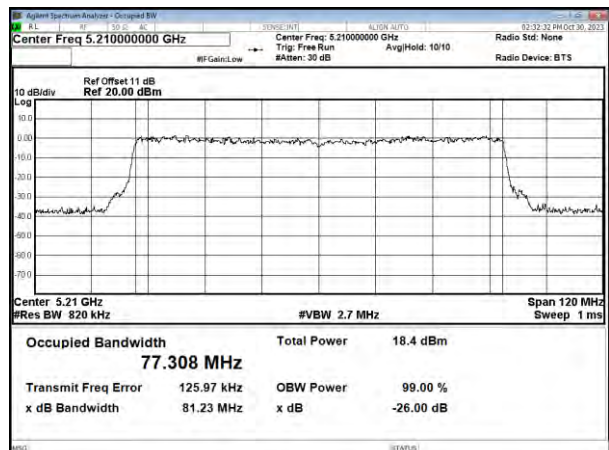


Modulation Standard: 802.11 ax HE80 (30.6Mbps)

CH48



CH42

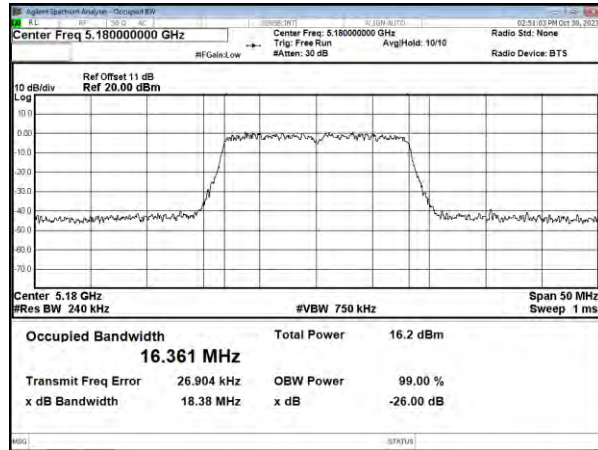


**MIMO (ANT B)**

26dB Bandwidth & 99% Occupied Bandwidth, UNII-1

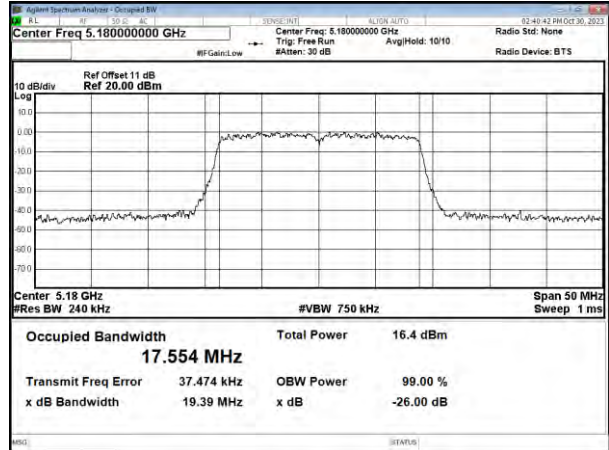
Modulation Standard: 802.11a (6Mbps)

CH36

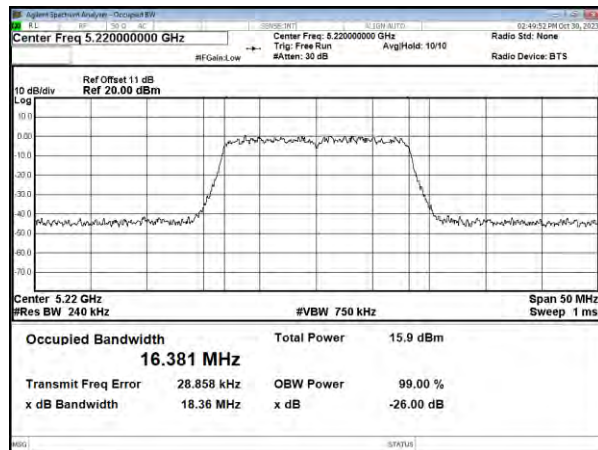


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

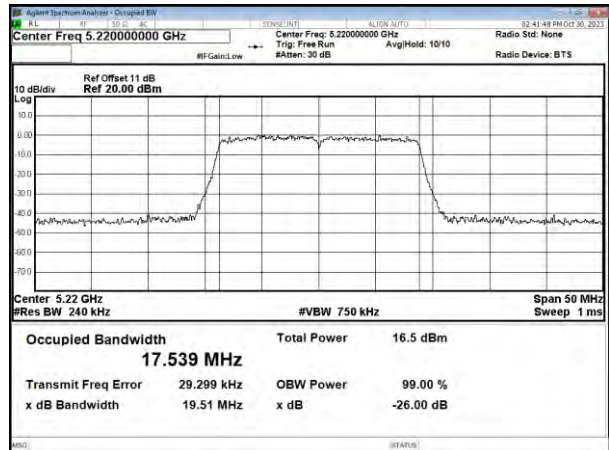
CH36



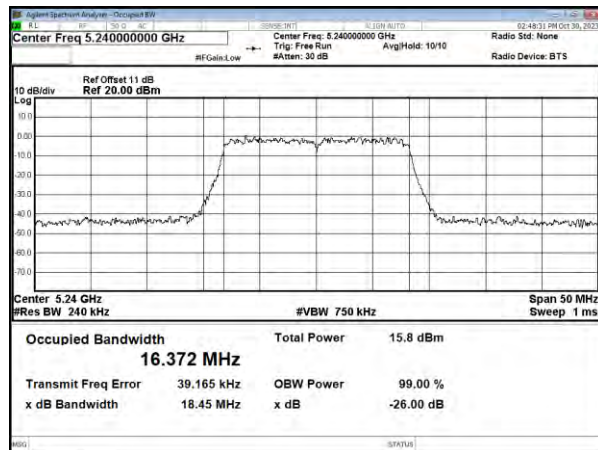
CH44



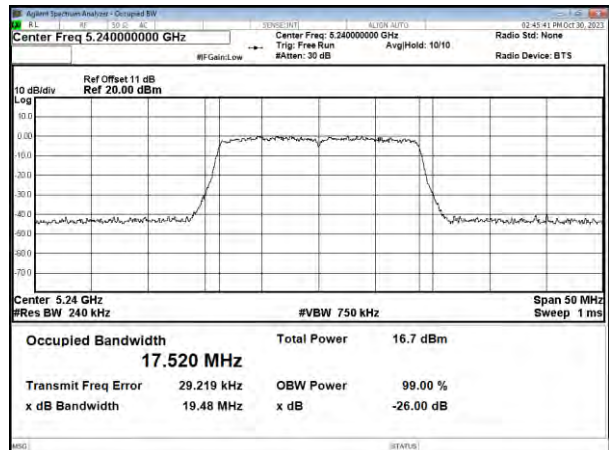
CH44



CH48



CH48

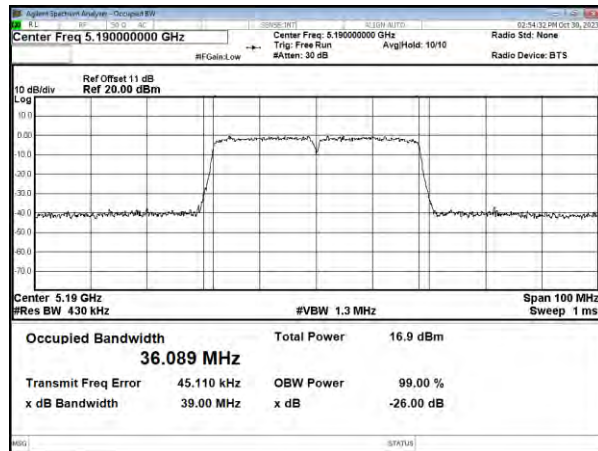




26dB Bandwidth & 99% Occupied Bandwidth, UNII-1

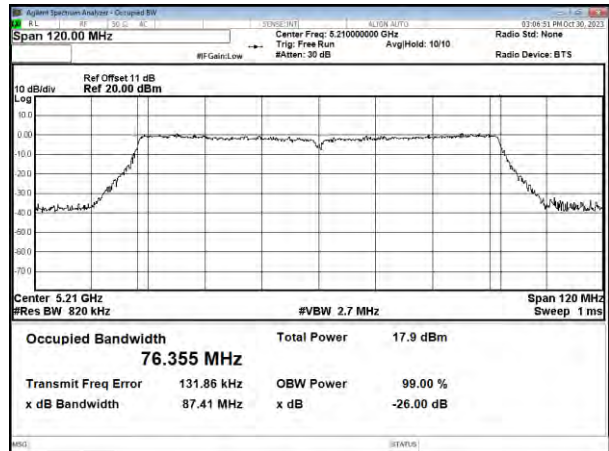
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

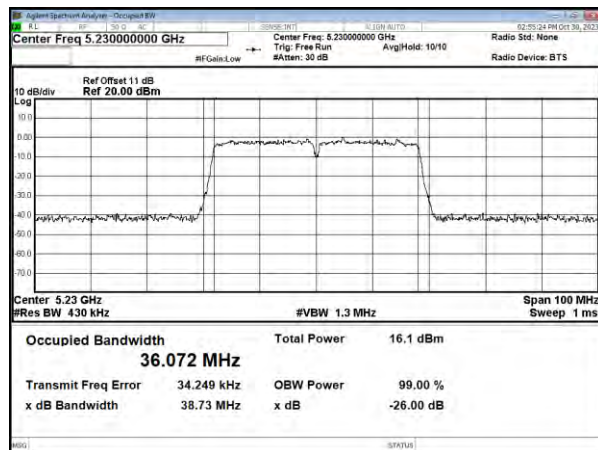


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



CH46

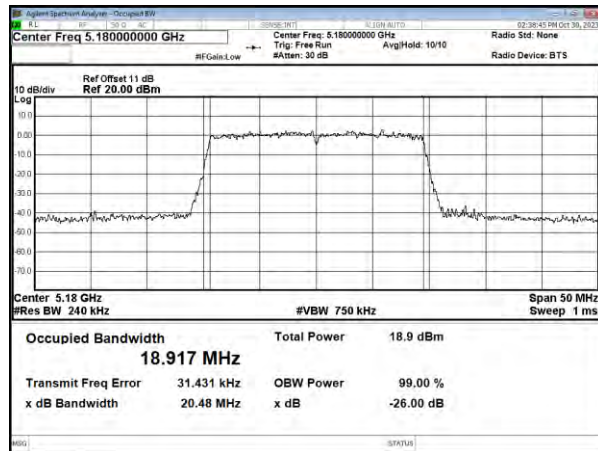




26dB Bandwidth &99% Occupied Bandwidth, UNII-1

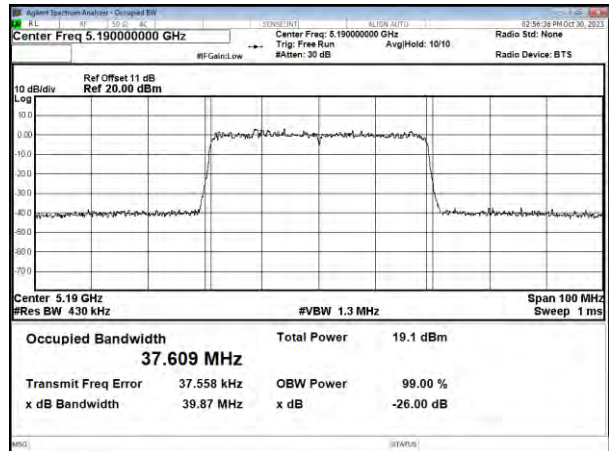
Modulation Standard: 802.11 ax HE20 (7.3Mbps)

CH36

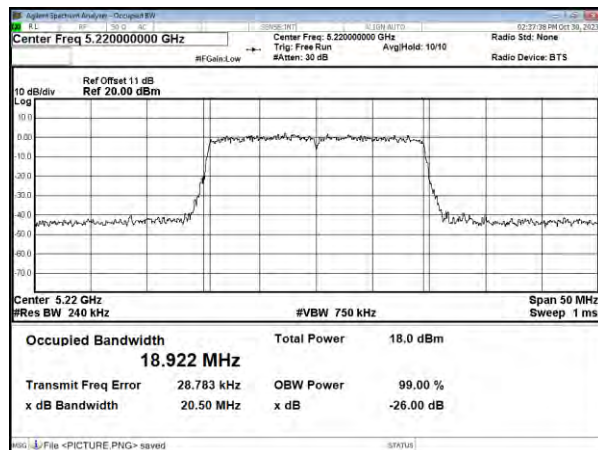


Modulation Standard: 802.11 ax HE40 (14.6Mbps)

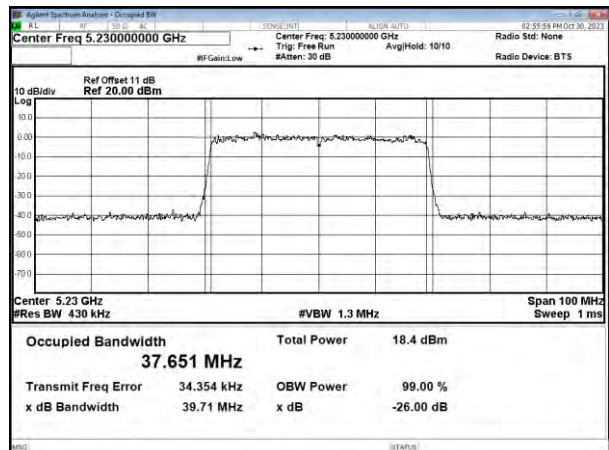
CH38



CH44

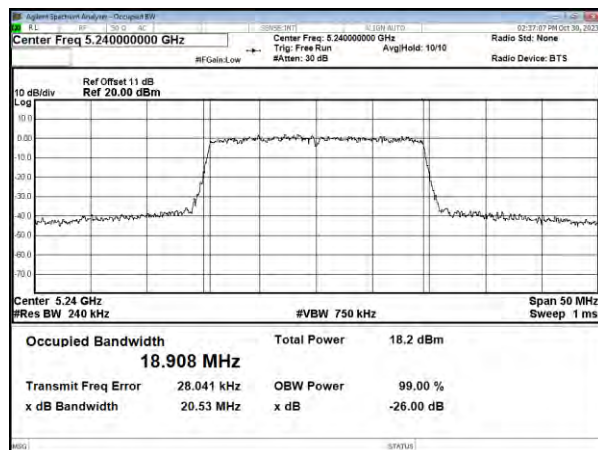


CH46

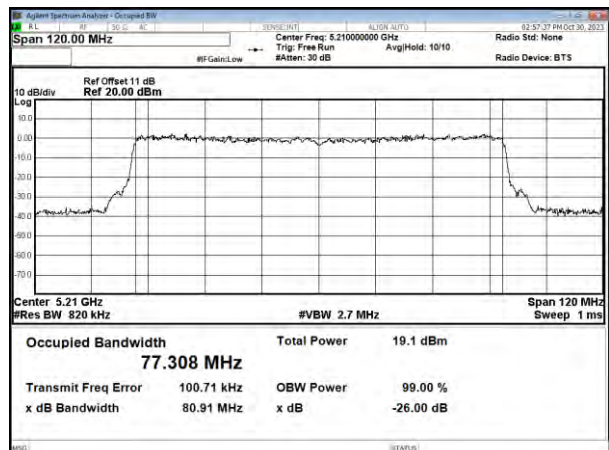


Modulation Standard: 802.11 ax HE80 (30.6Mbps)

CH48



CH42





10. Average Power

10.1. Test Limit

Output Power:

Frequency Band		Limit
☒	5.15~5.25GHz	
	Operating Mode	
☐	Outdoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. 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 30degrees as measured from the horizon must not exceed 125 mW (21 dBm).
☐	Indoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. 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.
☐	Fixed point-to-point access points	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.
☒	client devices	The maximum conducted output power over the frequency band of operation shall not exceed 250 mW (24dBm) provided the maximum antenna gain does not exceed 6 dBi. 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.



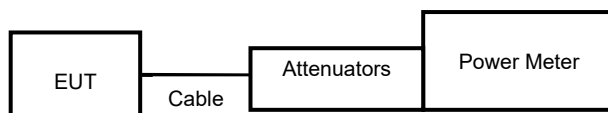
Frequency Band		Limit
☐	5.25-5.35 GHz	The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, 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.
☐	5.470-5.725 GHz	
☒	5.725~5.85 GHz	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). 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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power.

10.2. Test Procedure

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

10.3. Test Setup Layout





10.4. Test Result and Data In the 5.2G Band

Modulation Type	Data Rate	Setting	Channel	Frequency (MHz)	Avg Power Output (dBm)		Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
					ANT A	ANT B	A+B	A+B	
11a	6 Mbps	16	36	5180	9.58	10.13	12.87	19.382	24.00
11a	6 Mbps	16	44	5220	9.42	9.81	12.63	18.322	24.00
11a	6 Mbps	16	48	5240	9.53	9.86	12.71	18.657	24.00
11n HT20	MCS 0	16	36	5180	9.30	9.83	12.58	18.128	24.00
11n HT20	MCS 0	16	44	5220	9.18	9.58	12.39	17.358	24.00
11n HT20	MCS 0	16	48	5240	9.29	9.62	12.47	17.654	24.00
11n HT40	MCS 0	18	38	5190	9.47	10.15	12.83	19.203	24.00
11n HT40	MCS 0	18	46	5230	9.51	9.54	12.54	17.928	24.00
11ac VHT20	MCS 0	16	36	5180	9.44	10.00	12.74	18.790	24.00
11ac VHT20	MCS 0	16	44	5220	9.35	9.93	12.66	18.450	24.00
11ac VHT20	MCS 0	16	48	5240	9.44	9.70	12.58	18.123	24.00
11ac VHT40	MCS 0	18	38	5190	9.53	10.33	12.96	19.764	24.00
11ac VHT40	MCS 0	18	46	5230	9.62	10.08	12.87	19.348	24.00
11ac VHT80	MCS 0	18	42	5210	9.57	10.26	12.94	19.674	24.00
802.11ax HE20	MCS 0	16	36	5180	10.21	11.17	13.73	23.587	24.00
802.11ax HE20	MCS 0	16	44	5220	10.05	10.77	13.44	22.056	24.00
802.11ax HE20	MCS 0	16	48	5240	10.08	10.54	13.33	21.510	24.00
802.11ax HE40	MCS 0	18	38	5190	10.49	11.05	13.79	23.929	24.00
802.11ax HE40	MCS 0	18	46	5230	10.44	10.79	13.63	23.061	24.00
802.11ax HE80	MCS 0	18	42	5210	10.48	11.28	13.91	24.596	24.00

In the 5.8G Band

Modulation Type	Data Rate	Setting	Channel	Frequency (MHz)	Avg Power Output (dBm)		Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
					ANT A	ANT B	A+B	A+B	
11a	MCS8	16	149	5745	12.21	12.28	15.26	33.539	30.00
11a	MCS8	16	157	5785	12.24	12.33	15.30	33.850	30.00
11a	MCS8	16	165	5825	12.58	12.64	15.62	36.479	30.00
11n HT20	MCS8	16	149	5745	12.01	12.21	15.12	32.520	30.00
11n HT20	MCS8	16	157	5785	12.15	12.03	15.10	32.365	30.00
11n HT20	MCS8	16	165	5825	12.20	12.32	15.27	33.657	30.00
11n HT40	MCS8	18	151	5755	12.17	12.57	15.38	34.553	30.00
11n HT40	MCS8	18	159	5795	12.22	12.31	15.28	33.694	30.00
11ac VHT20	MCS8	16	149	5745	12.13	12.29	15.22	33.274	30.00
11ac VHT20	MCS8	16	157	5785	12.08	12.34	15.22	33.283	30.00
11ac VHT20	MCS8	16	165	5825	12.24	12.58	15.42	34.863	30.00
11ac VHT40	MCS0	18	151	5755	12.53	12.65	15.60	36.314	30.00
11ac VHT40	MCS0	18	159	5795	12.42	12.68	15.56	35.994	30.00
11ac VHT80	MCS0	18	155	5775	12.15	12.20	15.19	33.002	30.00
802.11ax HE20	MCS0	16	149	5745	12.89	13.02	15.97	39.498	30.00
802.11ax HE20	MCS0	16	157	5785	13.02	13.11	16.08	40.509	30.00
802.11ax HE20	MCS0	16	165	5825	13.27	13.33	16.31	42.760	30.00
802.11ax HE40	MCS8	18	151	5755	13.13	13.20	16.18	41.452	30.00
802.11ax HE40	MCS8	18	159	5795	13.27	13.35	16.32	42.860	30.00
802.11ax HE80	MCS8	18	155	5775	13.10	13.14	16.13	41.024	30.00



11. Maximum Power Spectral Density

11.1. Test Limit

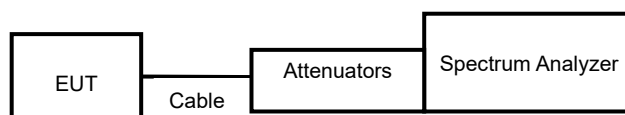
PSD:

Frequency Band		Limit
☒	5.15~5.25GHz	
	Operating Mode	
☐	Outdoor access point	17 dBm/MHz
☐	Indoor access point	17 dBm/MHz
☐	Fixed point-to-point access points	17 dBm/MHz
☒	client devices	11 dBm/MHz
☐	5.250~5.350 GHz	11 dBm/MHz
☐	5.470~5.725 GHz	11 dBm/MHz
☒	5.725~5.85 GHz	30 dBm/500kHz

11.2. Test Procedure

Reference to KDB789033 v02r01 General UNII Test Procedures New Rules.

11.3. Test Setup Layout

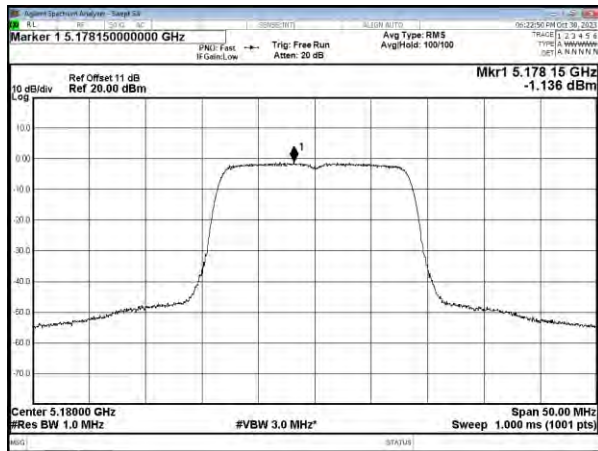
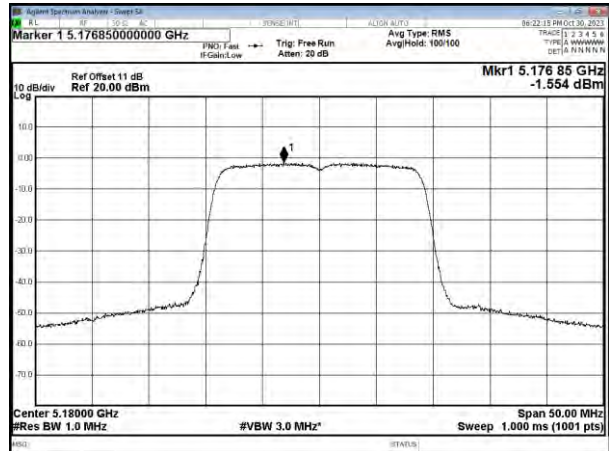


**11.4. Test Result and Data****In the 5.2G Band**

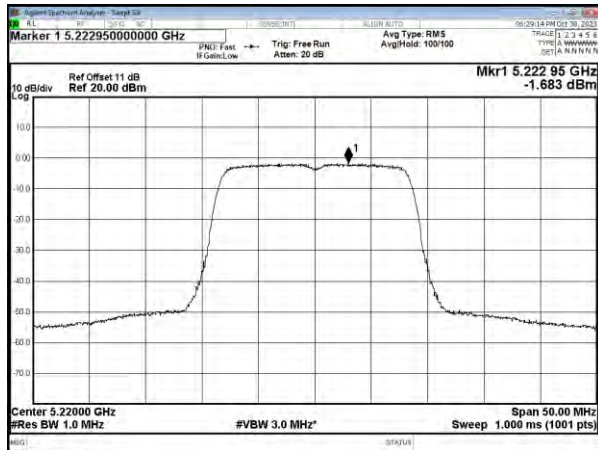
Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PPSD (dBm/MHz)	PPSD Limit (dBm/MHz)
			ANT A	ANT B				
11a	36	5180	-1.136	-0.657	2.12	0.00	2.12	9.73
11a	44	5220	-1.683	-1.037	1.66	0.00	1.66	9.73
11a	48	5240	-1.062	-0.857	2.05	0.00	2.05	9.73
11ac VHT20	36	5180	-1.554	-0.877	1.81	0.00	1.81	9.73
11ac VHT20	44	5220	-1.699	-1.170	1.58	0.00	1.58	9.73
11ac VHT20	48	5240	-1.715	-1.299	1.51	0.00	1.51	9.73
11ac VHT40	38	5190	-4.605	-3.563	-1.04	0.00	-1.04	9.73
11ac VHT40	46	5230	-4.526	-4.247	-1.37	0.00	-1.37	9.73
11ac VHT80	42	5210	-7.384	-6.483	-3.90	0.00	-3.90	9.73
802.11ax HE20	36	5180	-0.885	0.196	2.70	0.00	2.70	9.73
802.11ax HE20	44	5220	-1.167	0.012	2.47	0.00	2.47	9.73
802.11ax HE20	48	5240	-0.979	-0.268	2.40	0.00	2.40	9.73
802.11ax HE40	38	5190	-3.624	-2.731	-0.14	0.00	-0.14	9.73
802.11ax HE40	46	5230	-3.842	-3.411	-0.61	0.00	-0.61	9.73
802.11ax HE80	42	5210	-6.204	-5.398	-2.77	0.00	-2.77	9.73

In the 5.8G Band

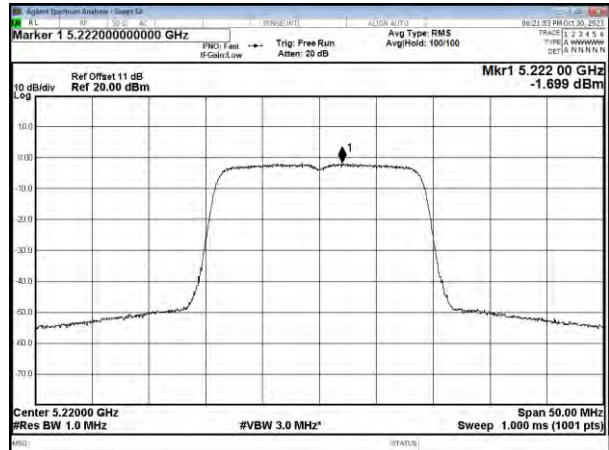
Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	10log(500K Hz/RBW) CF (dB)	Total Corr'd PPSD (dBm/500kHz)	PPSD Limit (dBm/500kHz)
			ANT A	ANT B					
11a	149	5745	1.586	2.258	4.95	0.00	-3.01	1.93	28.53
11a	157	5785	1.659	1.723	4.70	0.00	-3.01	1.69	28.53
11a	165	5825	1.618	2.325	5.00	0.00	-3.01	1.99	28.53
11ac VHT20	149	5745	1.302	1.869	4.61	0.00	-3.01	1.59	28.53
11ac VHT20	157	5785	1.205	1.355	4.29	0.00	-3.01	1.28	28.53
11ac VHT20	165	5825	1.378	1.078	4.24	0.00	-3.01	1.23	28.53
11ac VHT40	151	5755	-1.612	-1.394	1.51	0.00	-3.01	-1.50	28.53
11ac VHT40	159	5795	-0.883	-1.838	1.68	0.00	-3.01	-1.33	28.53
11ac VHT80	155	5775	-4.349	-4.392	-1.36	0.00	-3.01	-4.37	28.53
802.11ax HE20	149	5745	1.801	2.453	5.15	0.00	-3.01	2.14	28.53
802.11ax HE20	157	5785	1.981	2.351	5.18	0.00	-3.01	2.17	28.53
802.11ax HE20	165	5825	2.085	1.873	4.99	0.00	-3.01	1.98	28.53
802.11ax HE40	151	5755	-0.693	-0.572	2.38	0.00	-3.01	-0.63	28.53
802.11ax HE40	159	5795	-0.645	-1.008	2.19	0.00	-3.01	-0.82	28.53
802.11ax HE80	155	5775	-3.217	-3.369	-0.28	0.00	-3.01	-3.29	28.53

**5.2G, UNII-1
MIMO (ANT A)**Modulation Standard: 802.11a (6Mbps)
CH36Modulation Standard: 802.11ac VHT20 (6.5Mbps)
CH36

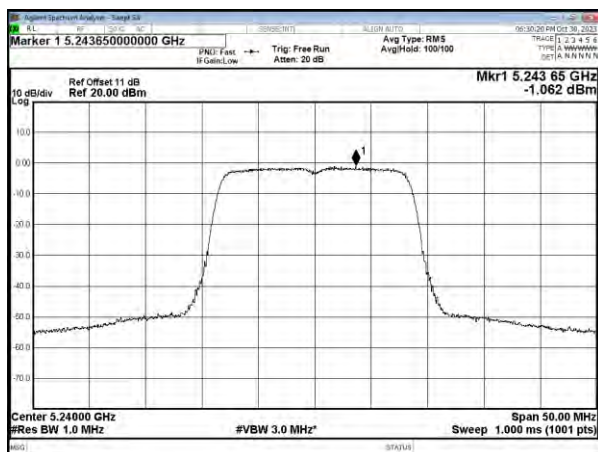
CH44



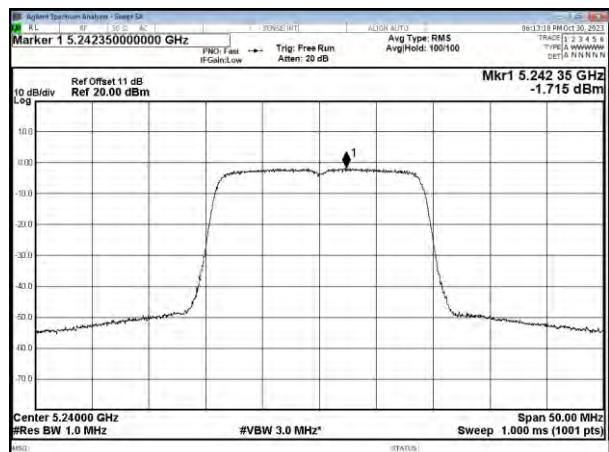
CH44



CH48



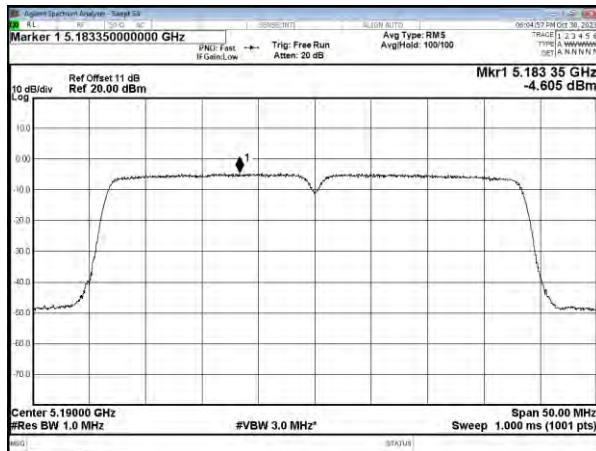
CH48





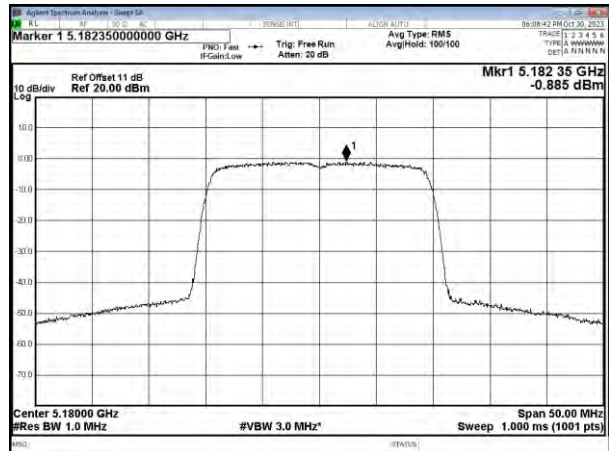
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

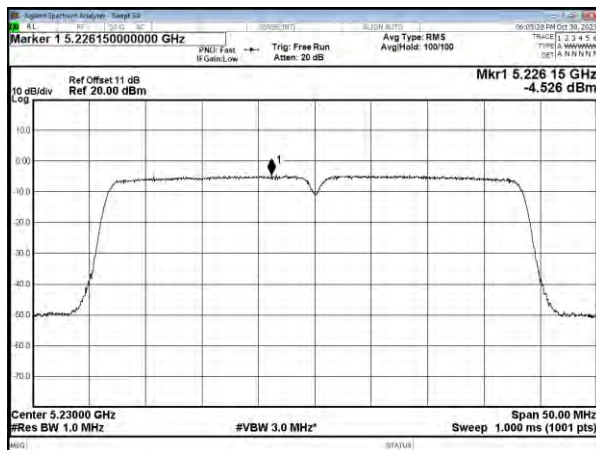


Modulation Standard: 802.11 ax HE20 (7.3Mbps)

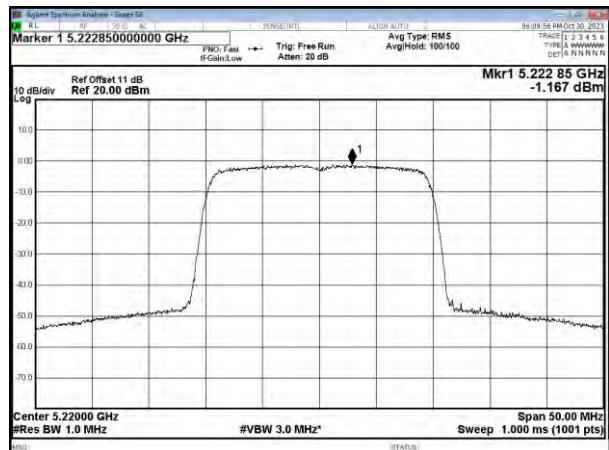
CH36



CH46

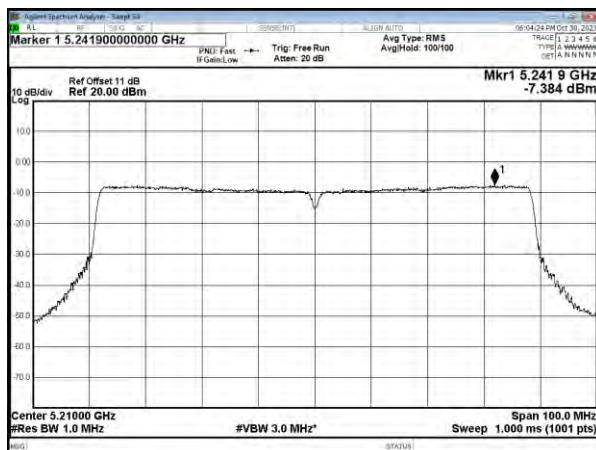


CH44

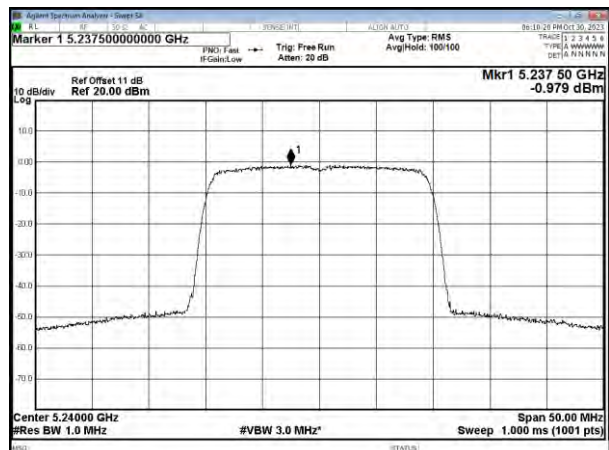


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



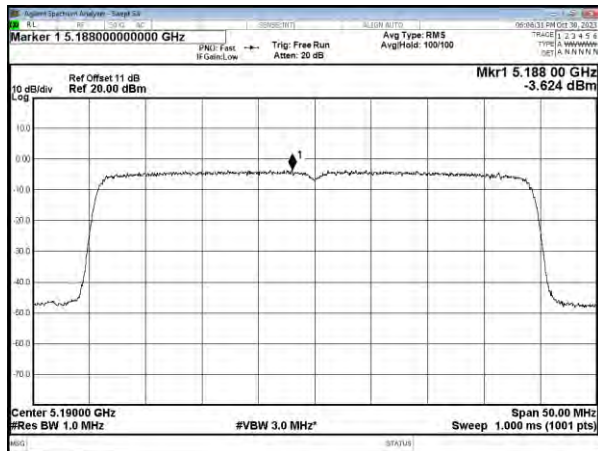
CH48



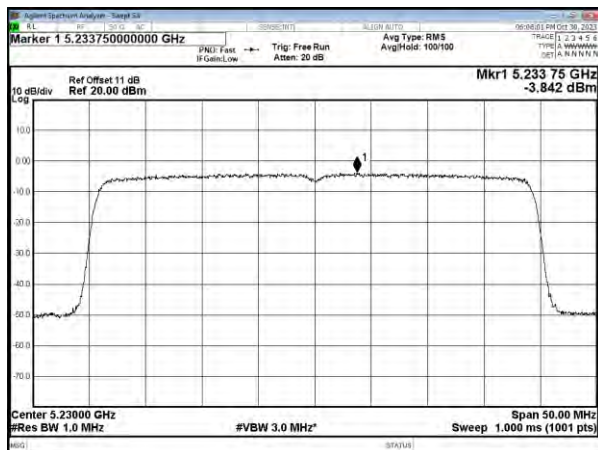


Modulation Standard: 802.11 ax HE40 (14.6Mbps)

CH38

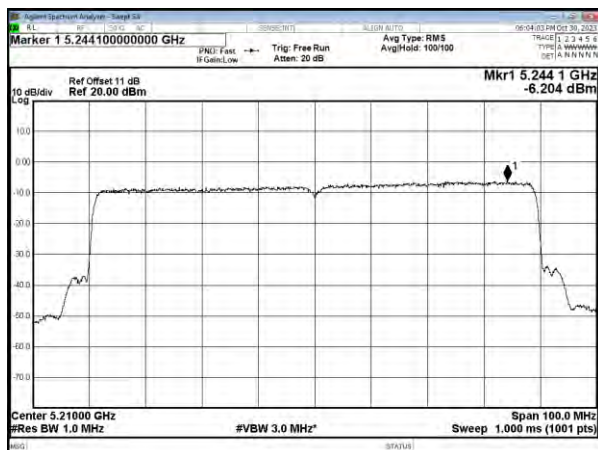


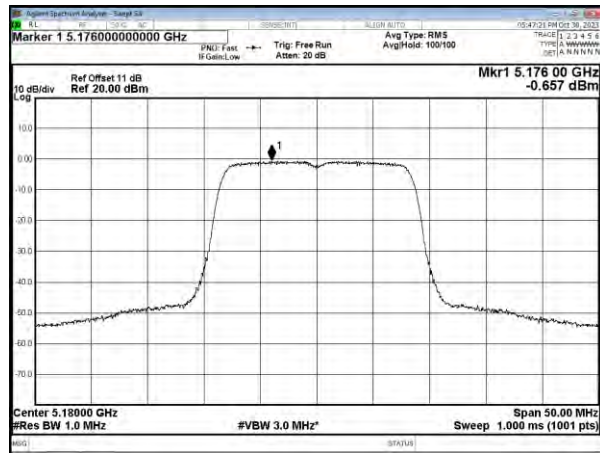
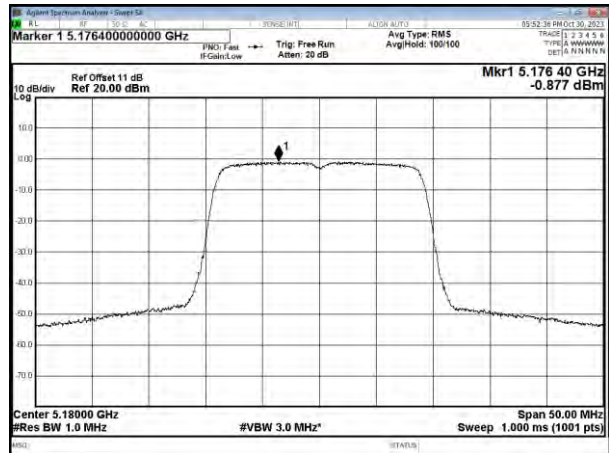
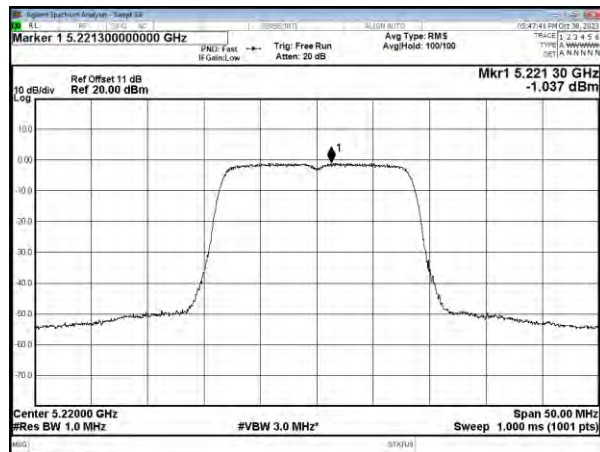
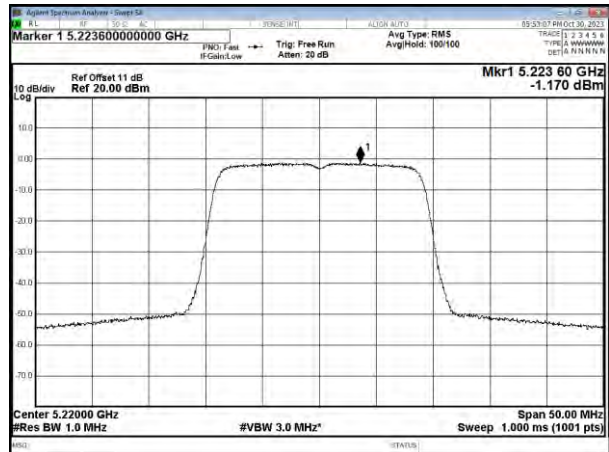
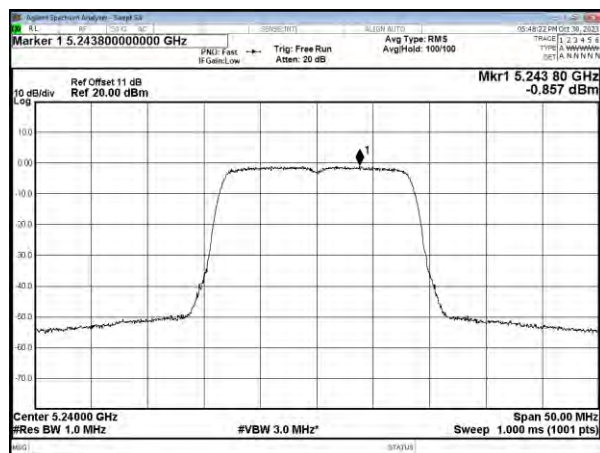
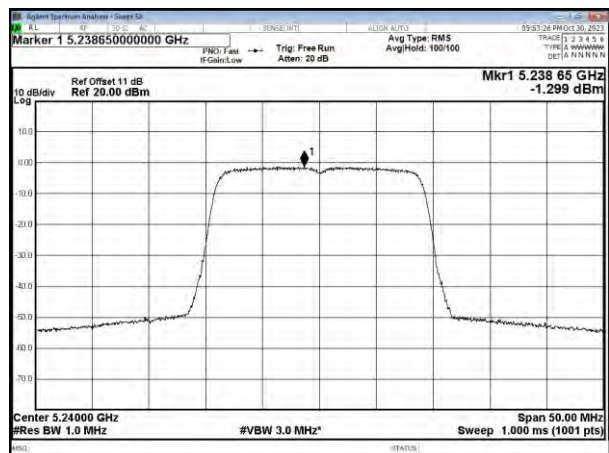
CH46



Modulation Standard: 802.11 ax HE80 (30.6Mbps)

CH42

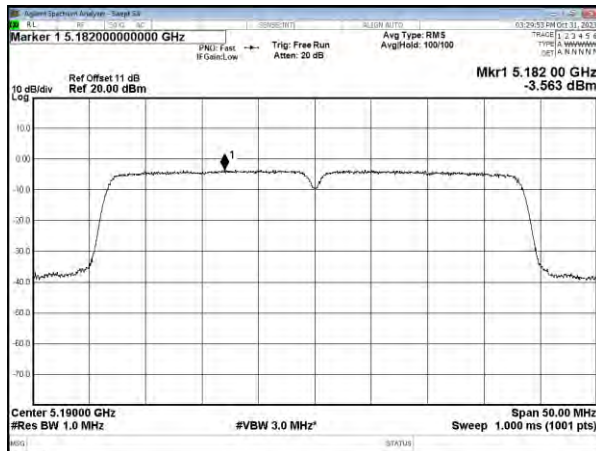


**MIMO (ANT B)**Modulation Standard: 802.11a (6Mbps)
CH36Modulation Standard: 802.11ac VHT20 (6.5Mbps)
CH36**CH44****CH44****CH48****CH48**



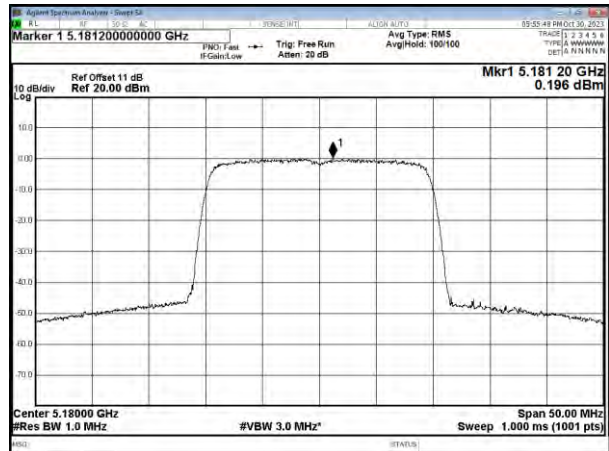
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

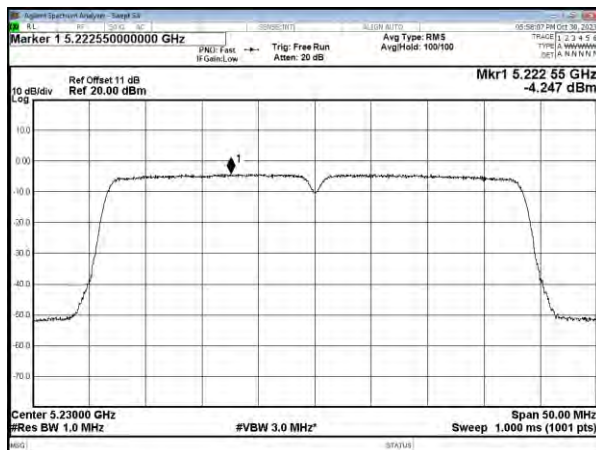


Modulation Standard: 802.11 ax HE20 (7.3Mbps)

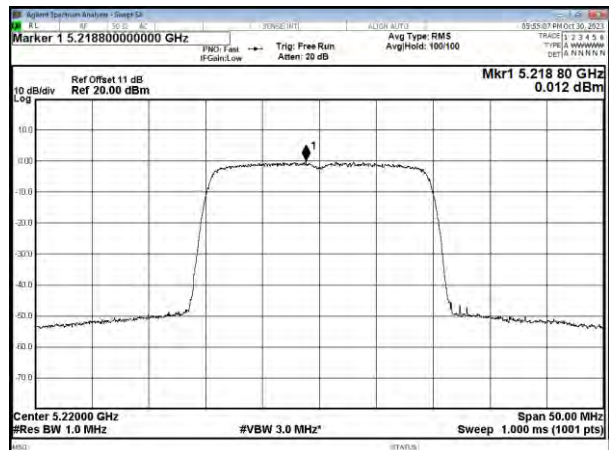
CH36



CH46

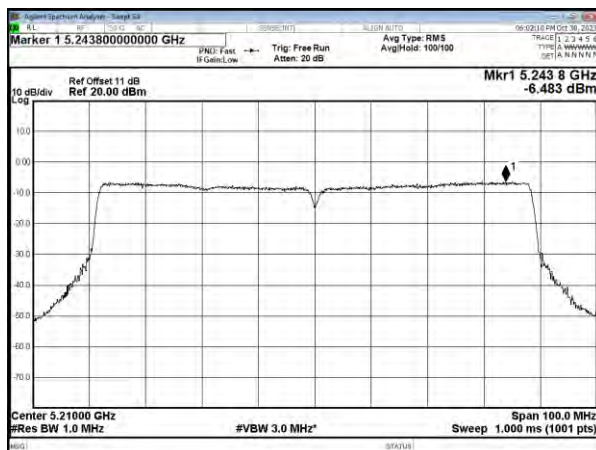


CH44

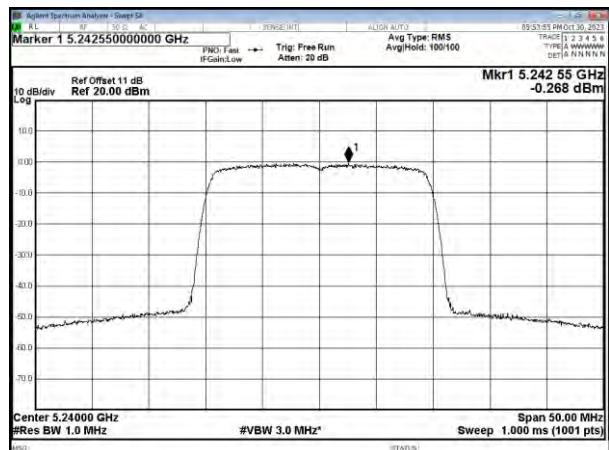


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



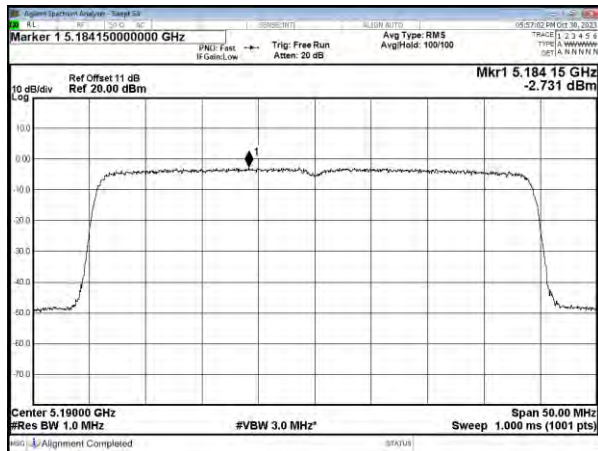
CH48



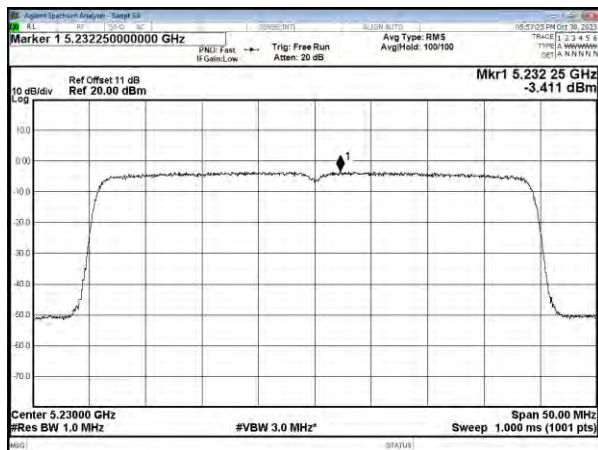


Modulation Standard: 802.11 ax HE40 (14.6Mbps)

CH38

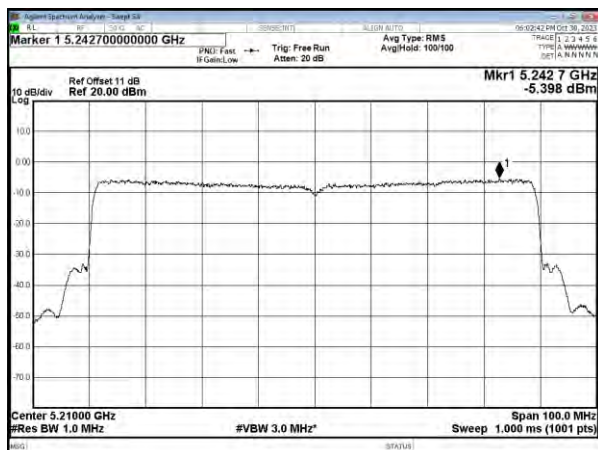


CH46



Modulation Standard: 802.11 ax HE80 (30.6Mbps)

CH42

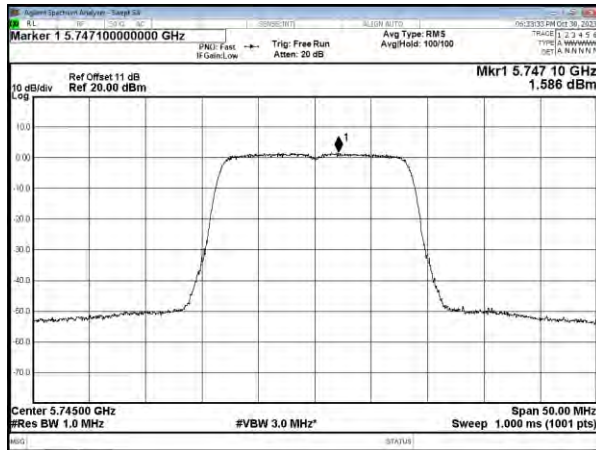




5.8G, UNII-3 MIMO (ANT A)

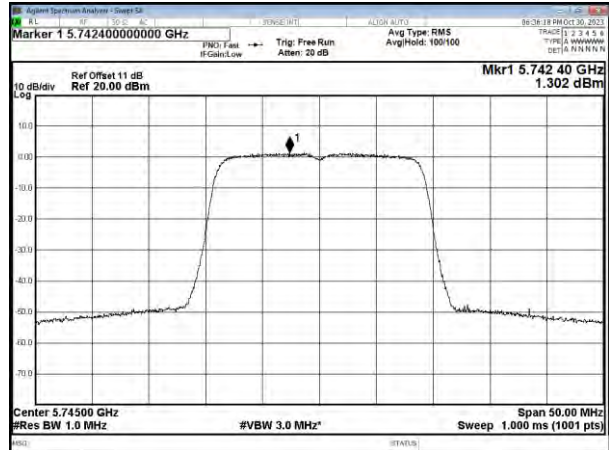
Modulation Standard: 802.11a (6Mbps)

CH149

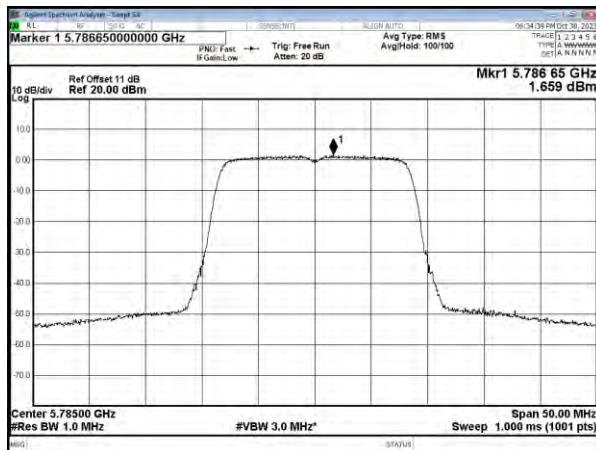


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

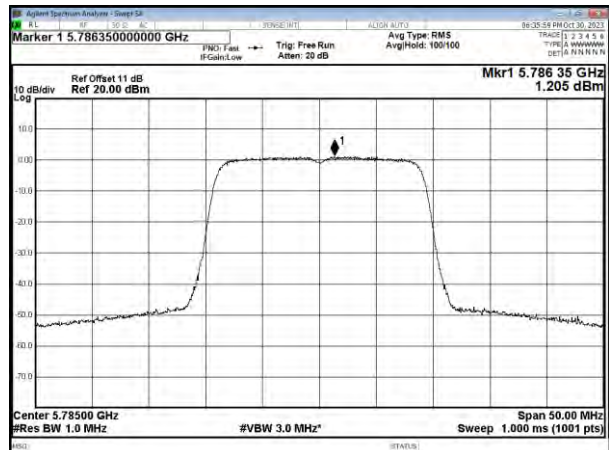
CH149



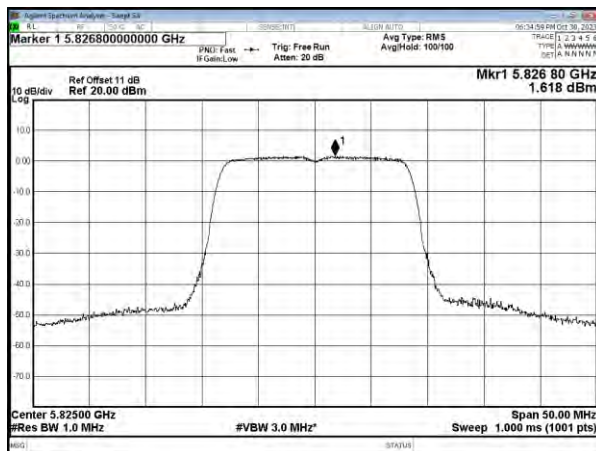
CH157



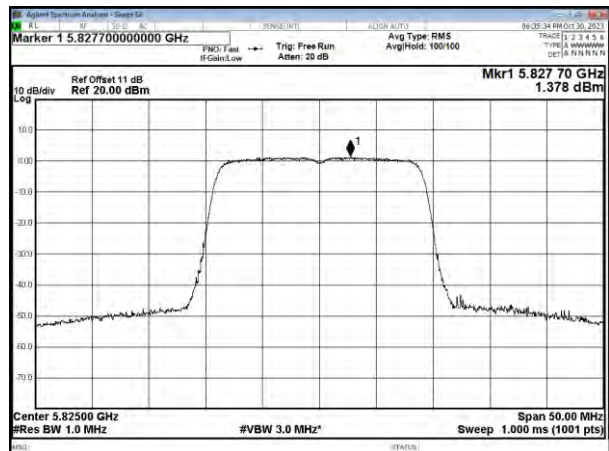
CH157



CH165



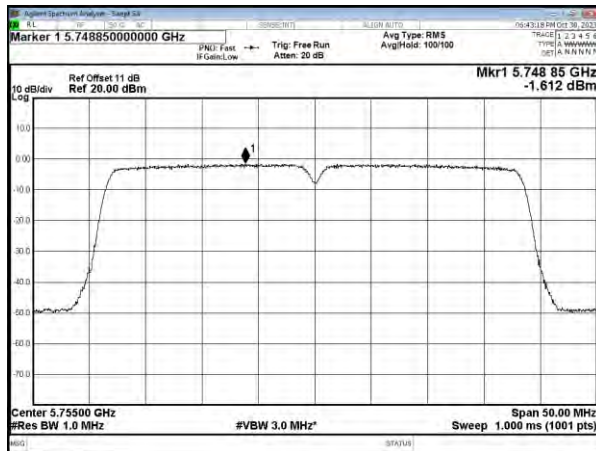
CH165





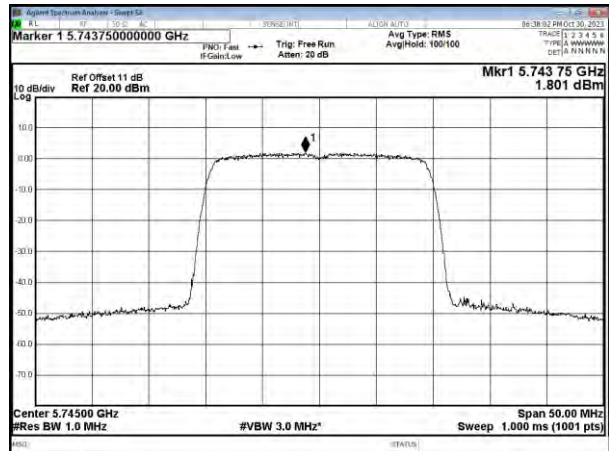
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH151

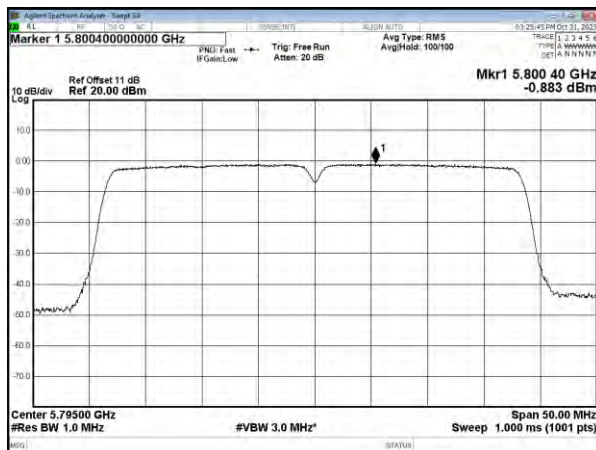


Modulation Type: 802.1111ax HE20 (7.3Mbps)

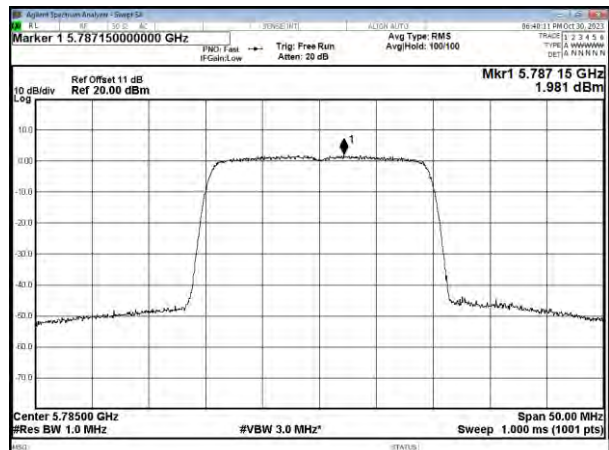
CH149



CH159

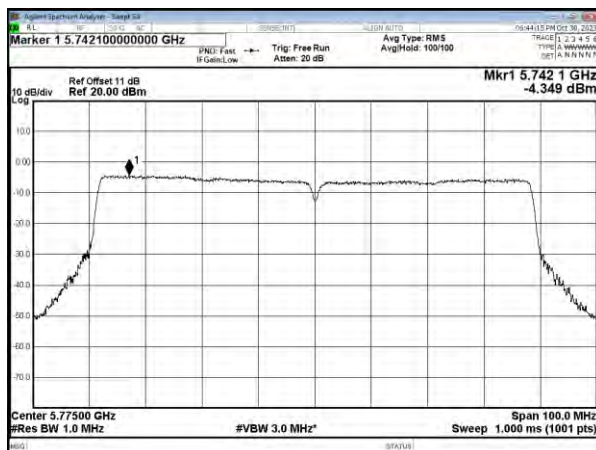


CH157

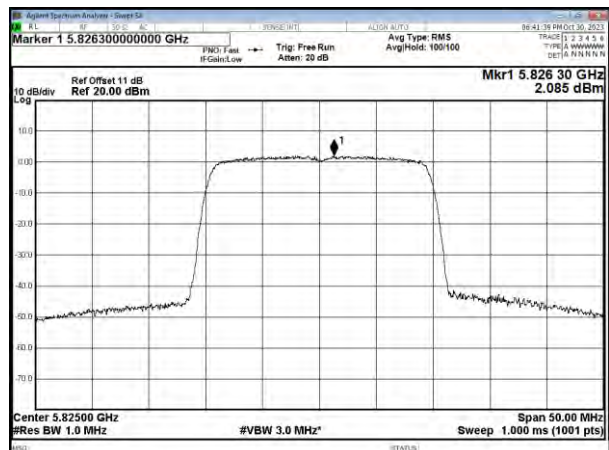


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH155



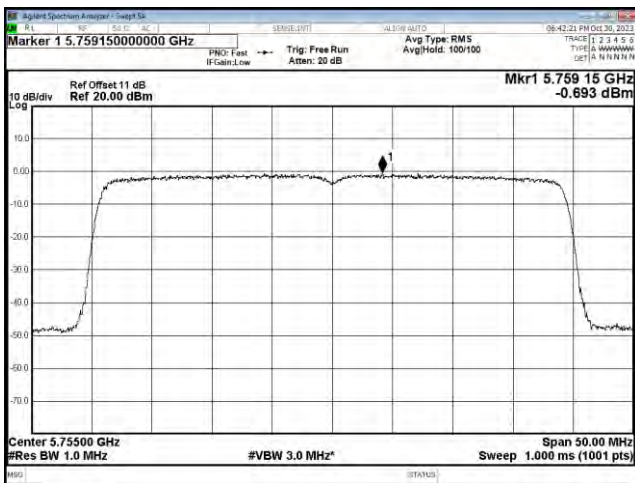
CH165



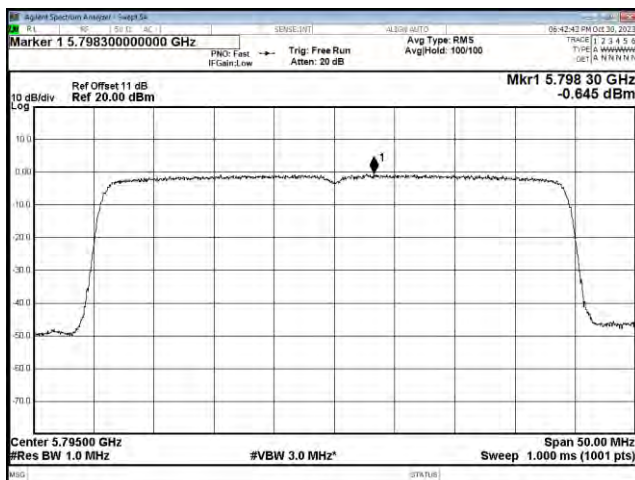


Modulation Type: 802.11 ax HE40 (14.6Mbps)

CH151

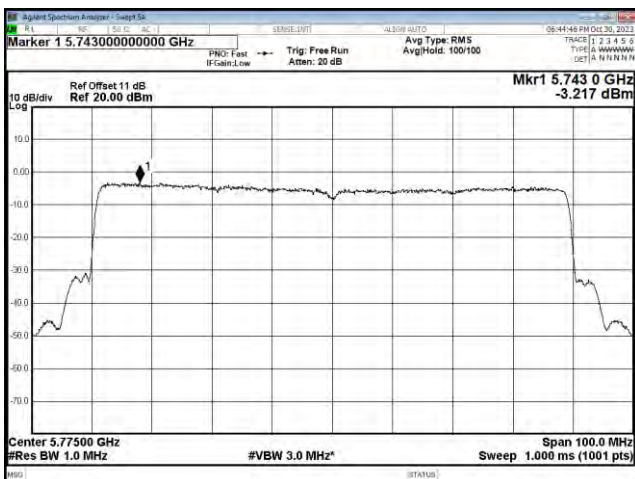


CH159



Modulation Type: 802.11ax HE80 (30.6Mbps)

CH155

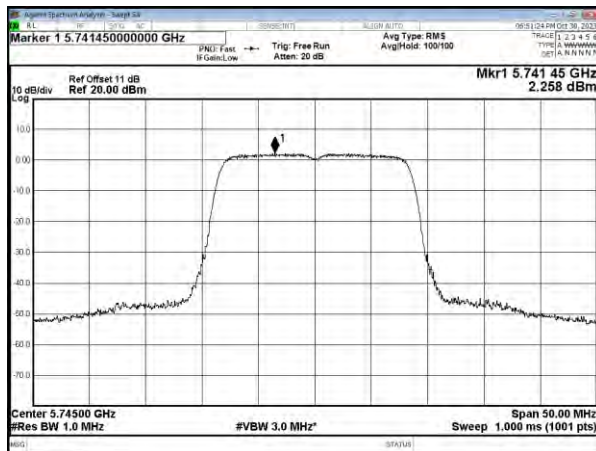




MIMO (ANT B)

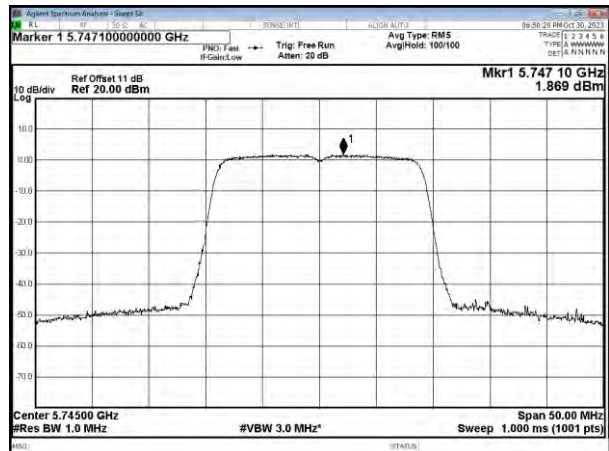
Modulation Standard: 802.11a (6Mbps)

CH149

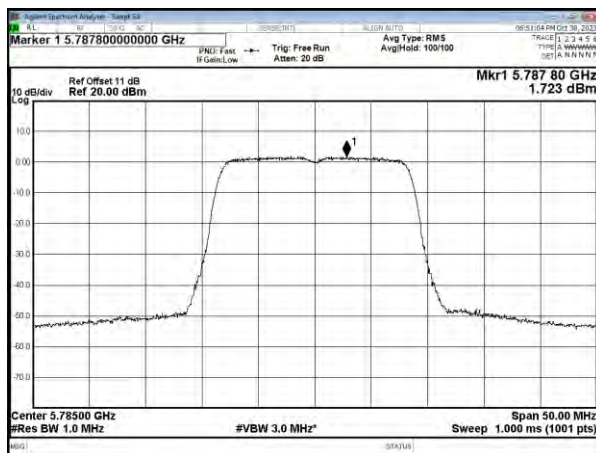


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

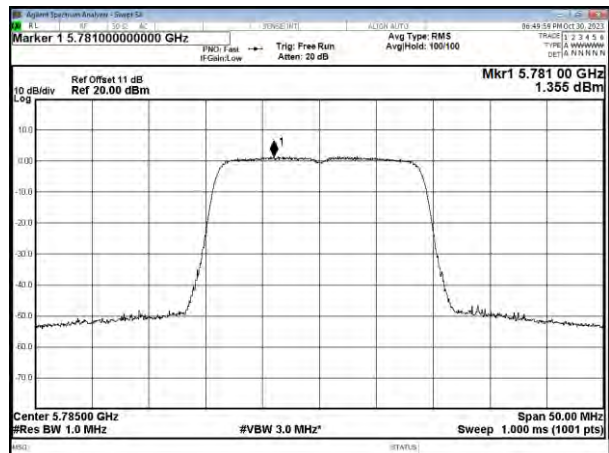
CH149



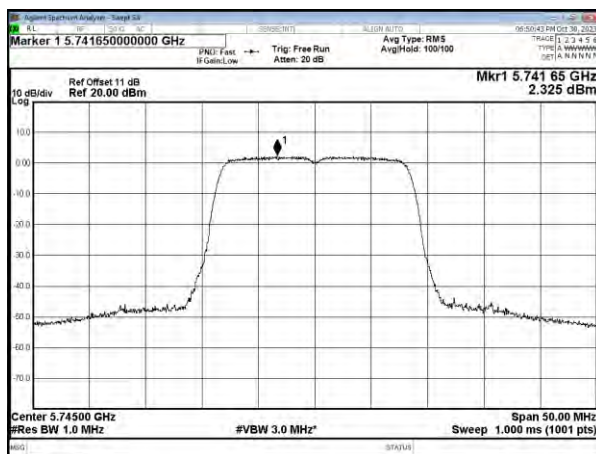
CH157



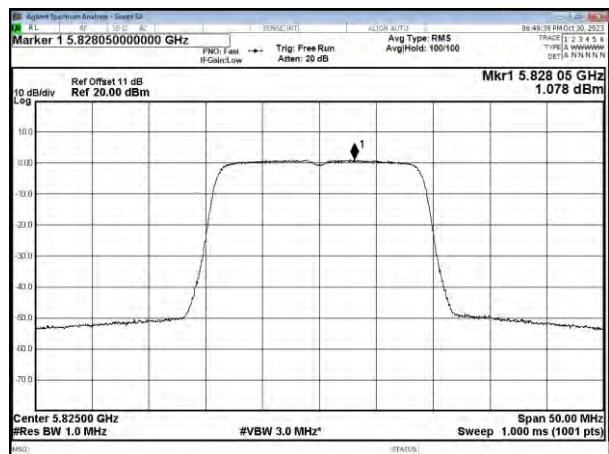
CH157



CH165



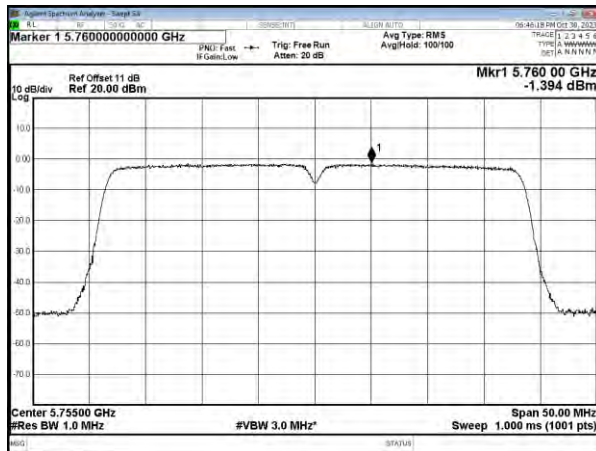
CH165





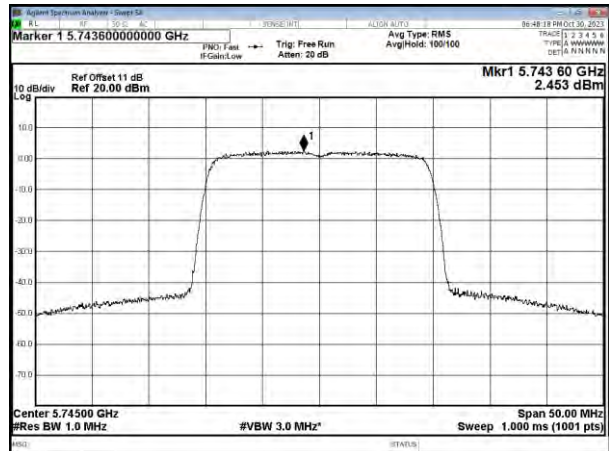
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH151

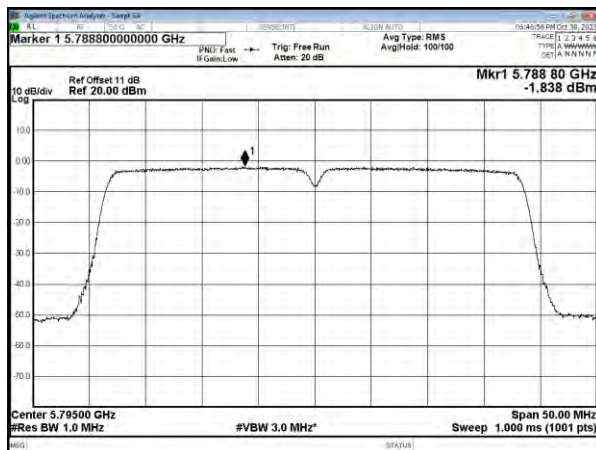


Modulation Type: 802.1111ax HE20 (7.3Mbps)

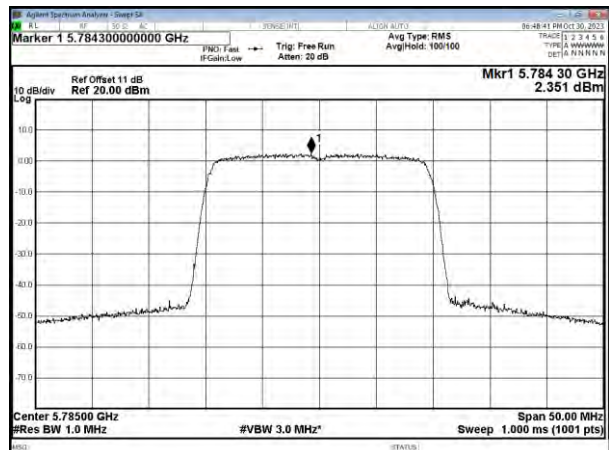
CH149



CH159

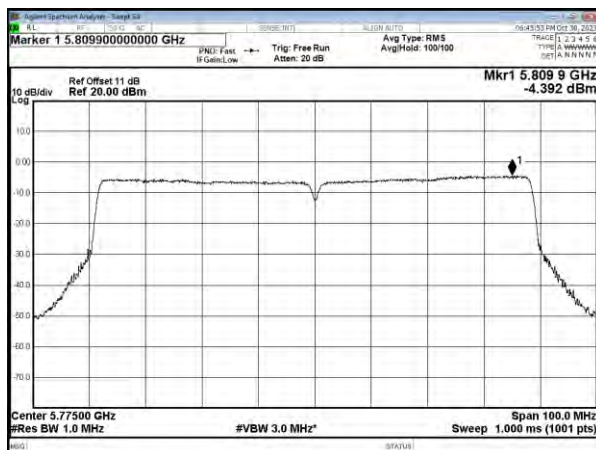


CH157

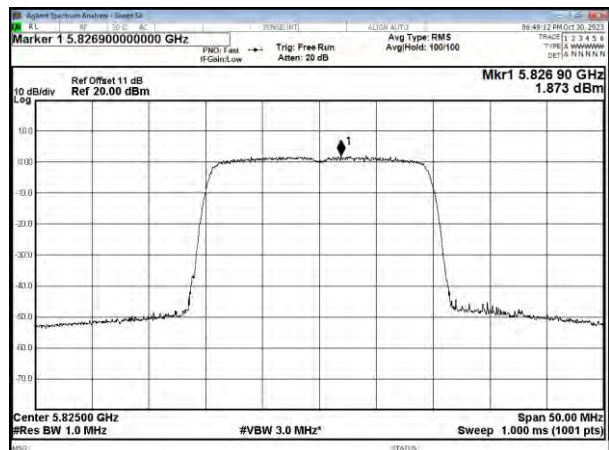


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH155



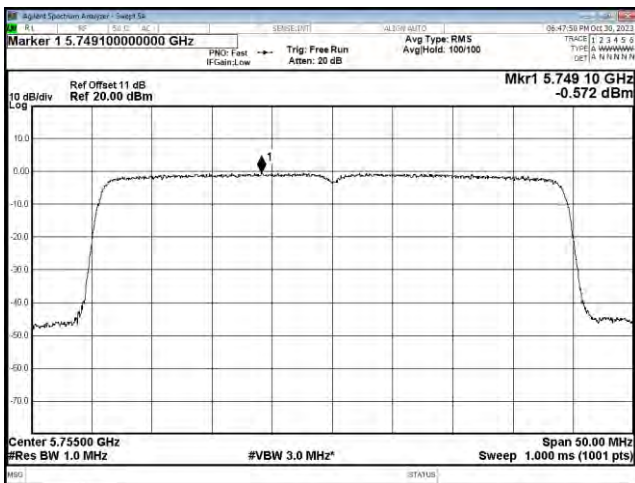
CH165



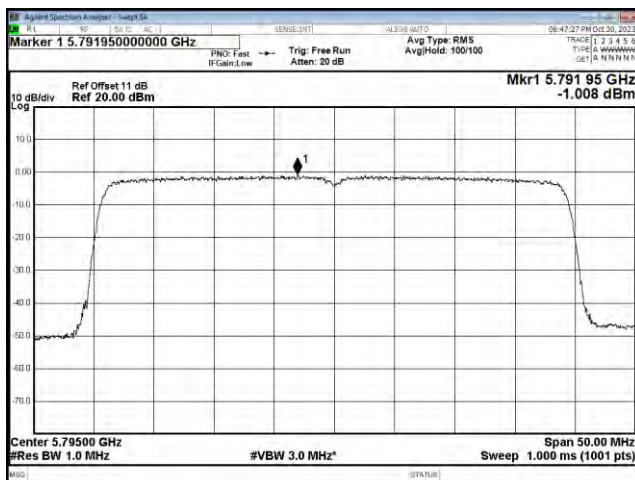


Modulation Type: 802.11 ax HE40 (14.6Mbps)

CH151

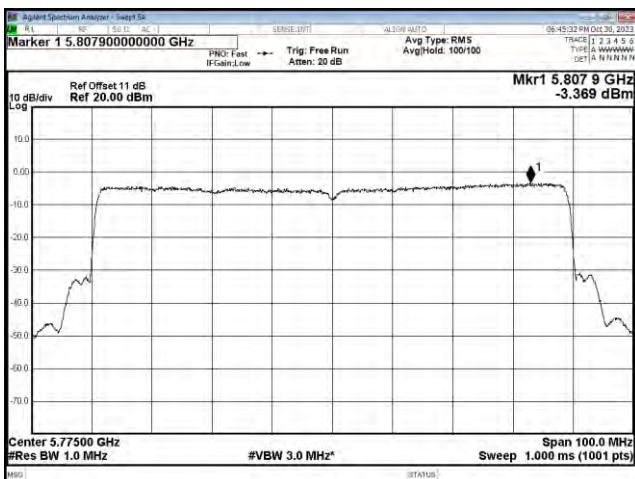


CH159



Modulation Type: 802.11ax HE80 (30.6Mbps)

CH155



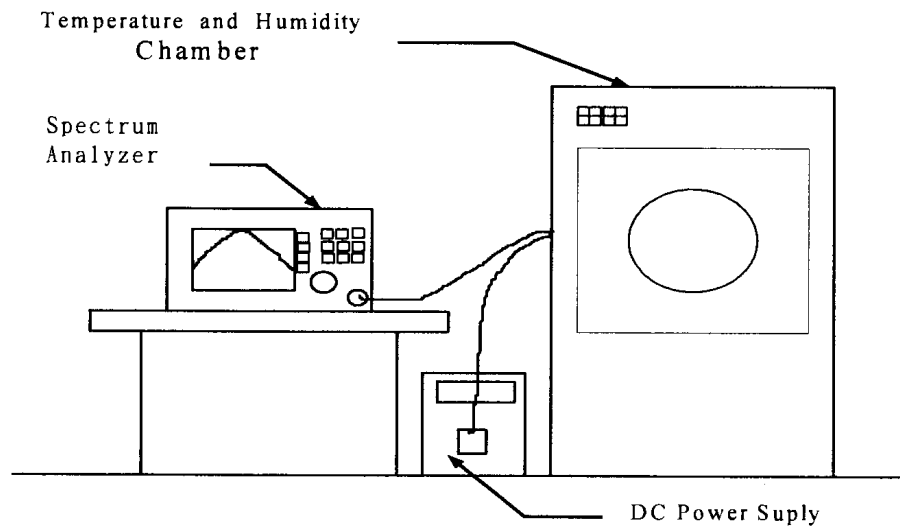


12. Frequency Stability

12.1. Test Procedure

1. The EUT was placed inside the Temperature and Humidity chamber.
2. The transmitter output was connected to spectrum analyzer.
3. Turn the EUT on and couple its output to a spectrum analyzer.
4. Turn the EUT off and set the chamber to the highest temperature specified.
5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
6. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
7. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

12.2. Test Setup Layout



**12.3. Test Result and Data**

Operating frequency: 5180 MHz							
Temp	Power supply	2 minute		5 minute		10 minute	
(°C)	(V)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
40	13.2	5180.00061	0.000012	5180.00053	0.000010	5180.00036	0.000007
	12	5180.00054	0.000010	5180.00047	0.000009	5180.00041	0.000008
	10.8	5180.00076	0.000015	5180.00078	0.000015	5180.00055	0.000011
30	13.2	5180.00082	0.000016	5180.00015	0.000003	5180.00047	0.000009
	12	5180.00046	0.000009	5180.00083	0.000016	5180.00036	0.000007
	10.8	5180.00052	0.000010	5180.00015	0.000003	5180.00084	0.000016
20	13.2	5180.00073	0.000014	5180.00001	0.000002	5180.00064	0.000012
	12	5180.00056	0.000011	5180.00052	0.000010	5180.00036	0.000007
	10.8	5180.00058	0.000011	5180.00075	0.000014	5180.00073	0.000014
10	13.2	5180.00069	0.000013	5180.00038	0.000007	5180.00045	0.000009
	12	5180.00073	0.000014	5180.00014	0.000003	5180.00068	0.000013
	10.8	5180.00041	0.000008	5180.00052	0.000010	5180.00015	0.000003
0	13.2	5180.00028	0.000005	5180.00046	0.000009	5180.00048	0.000009
	12	5180.00077	0.000015	5180.00071	0.000014	5180.00068	0.000013
	10.8	5180.00038	0.000007	5180.00002	0.000004	5180.00028	0.000005

Limit:

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

-----End of the report -----