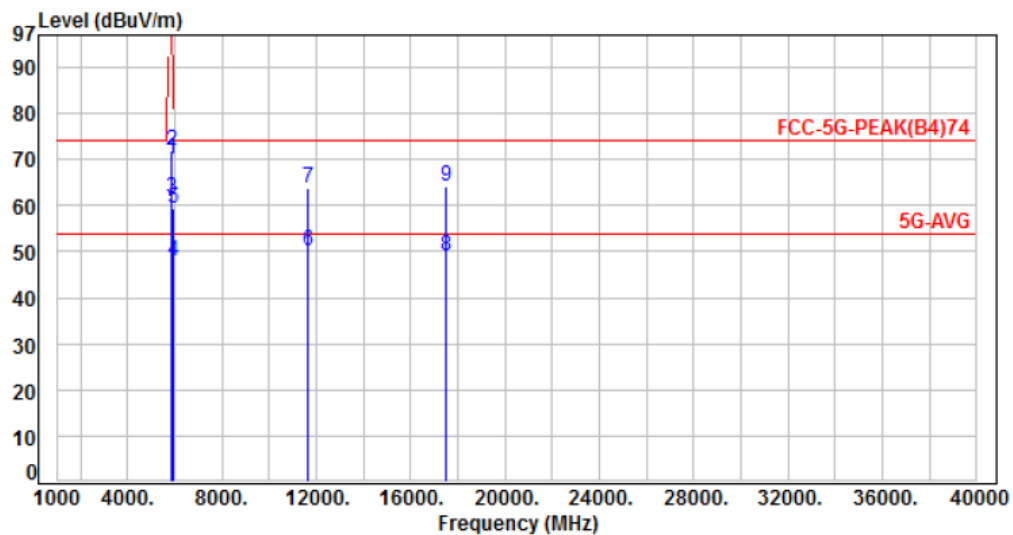




Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, CH165, Band 4	Temperature	: 23 °C
Test Date	: Jul. 14, 2018	Humidity	: 61 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	-7.30	77.36	70.06	122.20	-52.14	Peak	108	82	P
2	5855.00	-7.30	79.26	71.96	110.80	-38.84	Peak	108	82	P
3	5875.00	-7.30	68.95	61.65	105.20	-43.55	Peak	108	82	P
4	5925.00	-7.28	55.18	47.90	54.00	-6.10	Average	108	82	P
5	5925.00	-7.28	66.79	59.51	74.00	-14.49	Peak	108	82	P
6	11650.00	0.91	49.11	50.02	54.00	-3.98	Average	197	33	P
7	11650.00	0.91	62.83	63.74	74.00	-10.26	Peak	197	33	P
8	17475.00	11.29	37.91	49.20	54.00	-4.80	Average	192	304	P
9	17475.00	11.29	52.92	64.21	74.00	-9.79	Peak	192	304	P

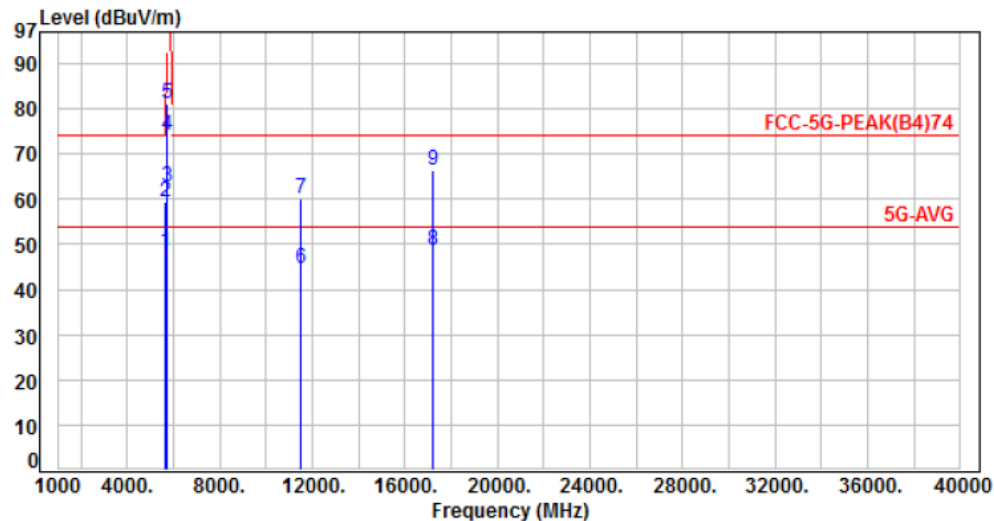
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, CH149, Band 4	Temperature	: 23 °C
Test Date	: Jul. 14, 2018	Humidity	: 61 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-7.37	55.66	48.29	54.00	-5.71	Average	374	359	P
2	5650.00	-7.37	66.81	59.44	74.00	-14.56	Peak	374	359	P
3	5700.00	-7.35	69.92	62.57	105.20	-42.63	Peak	374	359	P
4	5720.00	-7.35	81.53	74.18	110.80	-36.62	Peak	374	359	P
5	5725.00	-7.35	88.57	81.22	122.20	-40.98	Peak	374	359	P
6	11490.00	0.78	43.88	44.66	54.00	-9.34	Average	203	360	P
7	11490.00	0.78	59.25	60.03	74.00	-13.97	Peak	203	360	P
8	17235.00	9.95	38.63	48.58	54.00	-5.42	Average	134	293	P
9	17235.00	9.95	56.39	66.34	74.00	-7.66	Peak	134	293	P

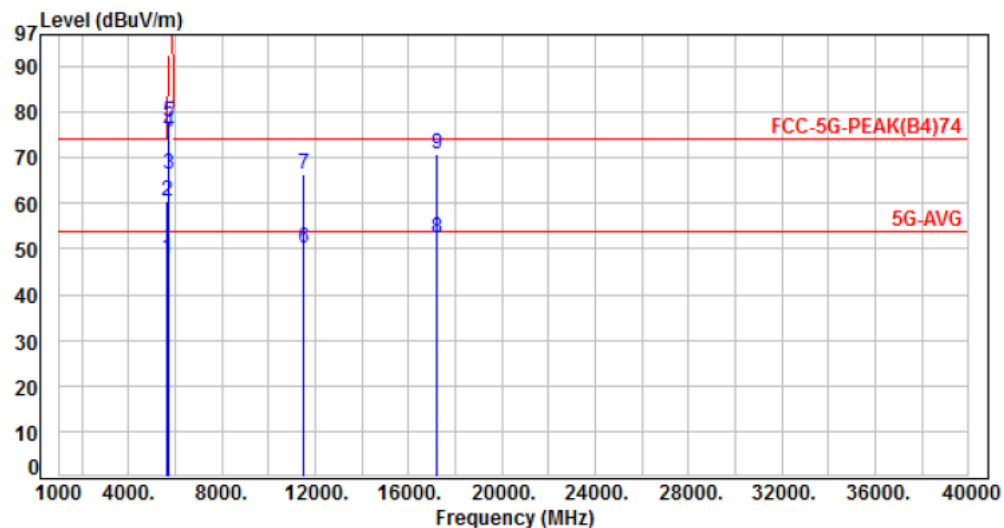
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, CH149, Band 4	Temperature	: 23 °C
Test Date	: Jul. 14, 2018	Humidity	: 61 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-7.37	55.46	48.09	54.00	-5.91	Average	106	78	P
2	5650.00	-7.37	67.92	60.55	74.00	-13.45	Peak	106	78	P
3	5700.00	-7.35	73.69	66.34	105.20	-38.86	Peak	106	78	P
4	5720.00	-7.35	82.98	75.63	110.80	-35.17	Peak	106	78	P
5	5725.00	-7.35	85.33	77.98	122.20	-44.22	Peak	106	78	P
6	11490.00	0.78	49.52	50.30	54.00	-3.70	Average	156	282	P
7	11490.00	0.78	65.67	66.45	74.00	-7.55	Peak	156	282	P
8	17235.00	9.95	42.59	52.54	54.00	-1.46	Average	100	274	P
9	17235.00	9.95	60.87	70.82	74.00	-3.18	Peak	100	274	P

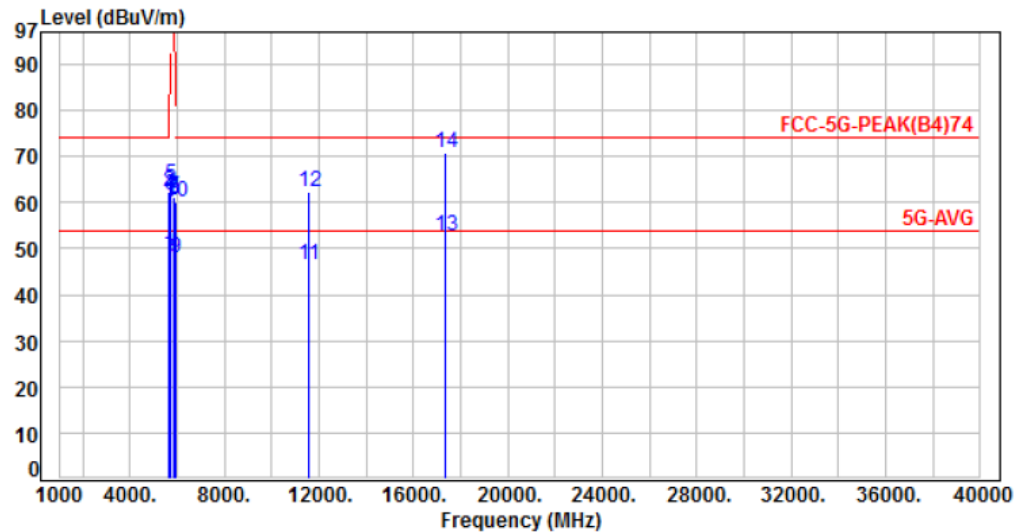
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, CH157, Band 4	Temperature	: 23 °C
Test Date	: Jul. 14, 2018	Humidity	: 61 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-7.37	55.97	48.60	54.00	-5.40	Average	384	359	P
2	5650.00	-7.37	69.74	62.37	74.00	-11.63	Peak	384	359	P
3	5700.00	-7.35	68.83	61.48	105.20	-43.72	Peak	384	359	P
4	5720.00	-7.35	69.22	61.87	110.80	-48.93	Peak	384	359	P
5	5725.00	-7.35	71.25	63.90	122.20	-58.30	Peak	384	359	P
6	5850.00	-7.30	68.27	60.97	122.20	-61.23	Peak	384	359	P
7	5855.00	-7.30	68.34	61.04	110.80	-49.76	Peak	384	359	P
8	5875.00	-7.30	67.94	60.64	105.20	-44.56	Peak	384	359	P
9	5925.00	-7.28	55.38	48.10	54.00	-5.90	Average	384	359	P
10	5925.00	-7.28	67.44	60.16	74.00	-13.84	Peak	384	359	P
11	11570.00	0.85	45.64	46.49	54.00	-7.51	Average	363	329	P
12	11570.00	0.85	61.44	62.29	74.00	-11.71	Peak	363	329	P
13	17355.00	10.63	42.17	52.80	54.00	-1.20	Average	115	174	P
14	17355.00	10.63	60.32	70.95	74.00	-3.05	Peak	115	174	P

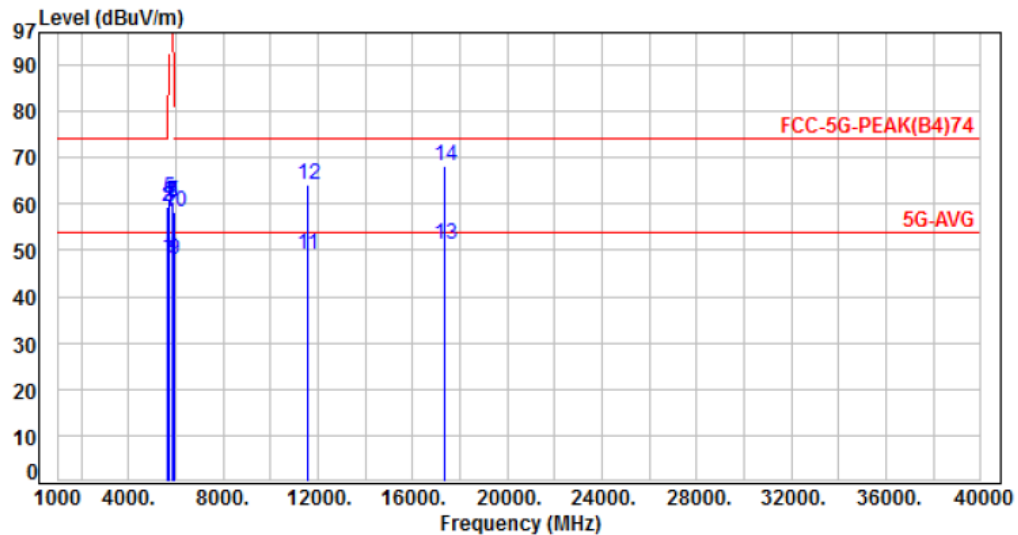
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, CH157, Band 4	Temperature	: 23 °C
Test Date	: Jul. 14, 2018	Humidity	: 61 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-7.37	55.74	48.37	54.00	-5.63	Average	108	72	P
2	5650.00	-7.37	66.76	59.39	74.00	-14.61	Peak	108	72	P
3	5700.00	-7.35	66.91	59.56	105.20	-45.64	Peak	108	72	P
4	5720.00	-7.35	67.93	60.58	110.80	-50.22	Peak	108	72	P
5	5725.00	-7.35	68.50	61.15	122.20	-61.05	Peak	108	72	P
6	5850.00	-7.30	67.91	60.61	122.20	-61.59	Peak	108	72	P
7	5855.00	-7.30	67.72	60.42	110.80	-50.38	Peak	108	72	P
8	5875.00	-7.30	67.39	60.09	105.20	-45.11	Peak	108	72	P
9	5925.00	-7.28	55.12	47.84	54.00	-6.16	Average	108	72	P
10	5925.00	-7.28	65.64	58.36	74.00	-15.64	Peak	108	72	P
11	11570.00	0.85	48.12	48.97	54.00	-5.03	Average	172	281	P
12	11570.00	0.85	63.24	64.09	74.00	-9.91	Peak	172	281	P
13	17355.00	10.63	40.67	51.30	54.00	-2.70	Average	279	275	P
14	17355.00	10.63	57.68	68.31	74.00	-5.69	Peak	279	275	P

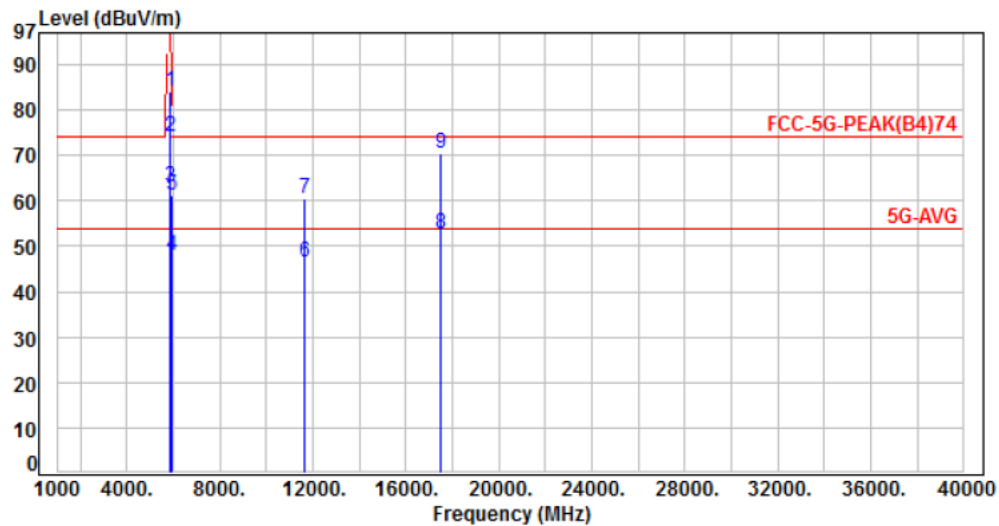
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, CH165, Band 4	Temperature	: 23 °C
Test Date	: Jul. 14, 2018	Humidity	: 61 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	-7.30	91.29	83.99	122.20	-38.21	Peak	381	360	P
2	5855.00	-7.30	81.39	74.09	110.80	-36.71	Peak	381	360	P
3	5875.00	-7.30	70.31	63.01	105.20	-42.19	Peak	381	360	P
4	5925.00	-7.28	55.12	47.84	54.00	-6.16	Average	381	360	P
5	5925.00	-7.28	68.32	61.04	74.00	-12.96	Peak	381	360	P
6	11650.00	0.91	45.53	46.44	54.00	-7.56	Average	365	329	P
7	11650.00	0.91	59.64	60.55	74.00	-13.45	Peak	365	329	P
8	17475.00	11.29	41.31	52.60	54.00	-1.40	Average	364	170	P
9	17475.00	11.29	59.19	70.48	74.00	-3.52	Peak	364	170	P

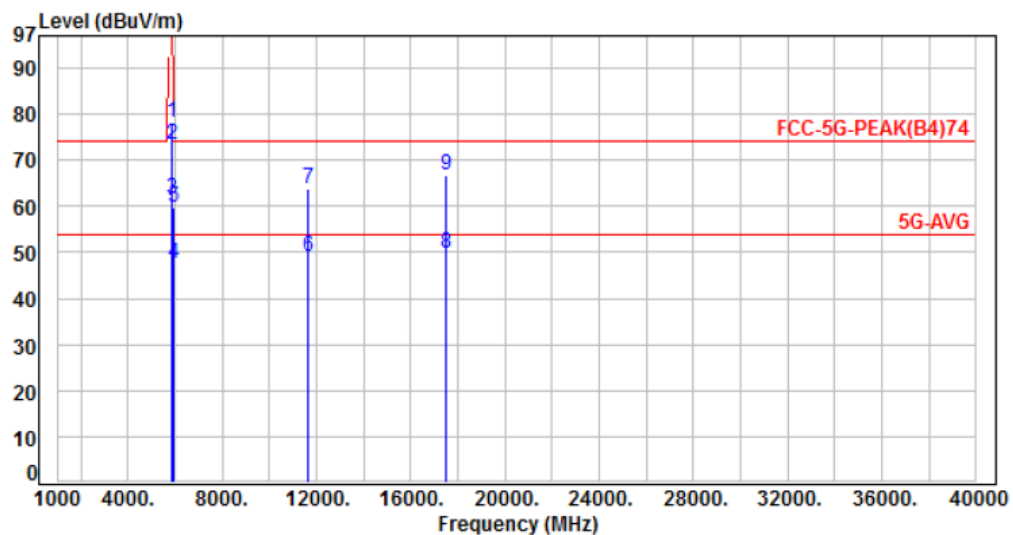
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, CH165, Band 4	Temperature	: 23 °C
Test Date	: Jul. 14, 2018	Humidity	: 61 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	-7.30	85.67	78.37	122.20	-43.83	Peak	106	74	P
2	5855.00	-7.30	80.79	73.49	110.80	-37.31	Peak	106	74	P
3	5875.00	-7.30	68.79	61.49	105.20	-43.71	Peak	106	74	P
4	5925.00	-7.28	54.94	47.66	54.00	-6.34	Average	106	74	P
5	5925.00	-7.28	67.13	59.85	74.00	-14.15	Peak	106	74	P
6	11650.00	0.91	48.25	49.16	54.00	-4.84	Average	191	36	P
7	11650.00	0.91	62.90	63.81	74.00	-10.19	Peak	191	36	P
8	17475.00	11.29	38.59	49.88	54.00	-4.12	Average	192	303	P
9	17475.00	11.29	55.51	66.80	74.00	-7.20	Peak	192	303	P

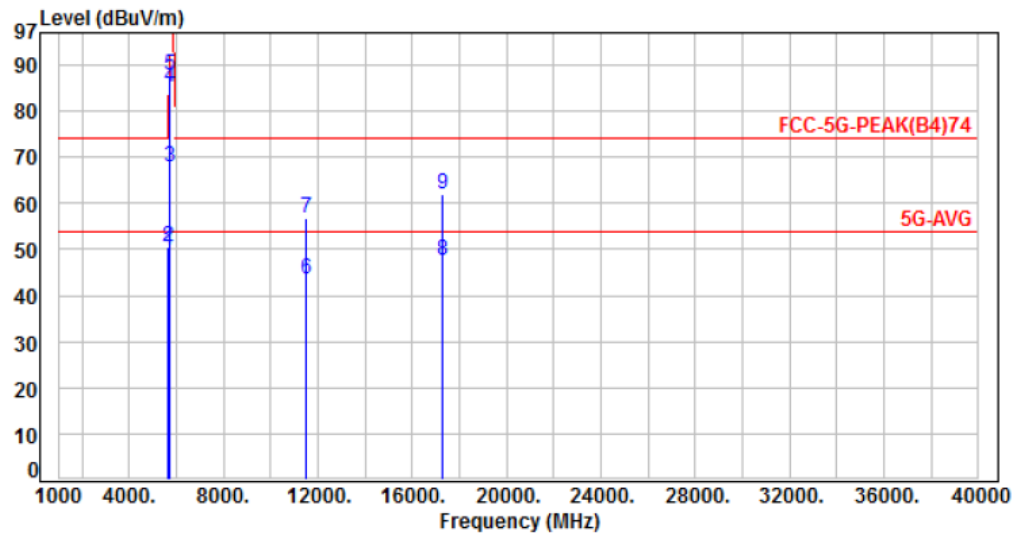
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 3, CH151, Band 4	Temperature	: 23 °C
Test Date	: Jul. 14, 2018	Humidity	: 61 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-7.37	57.04	49.67	54.00	-4.33	Average	298	360	P
2	5650.00	-7.37	57.82	50.45	74.00	-23.55	Peak	298	360	P
3	5700.00	-7.35	75.35	68.00	105.20	-37.20	Peak	298	360	P
4	5720.00	-7.35	92.39	85.04	110.80	-25.76	Peak	298	360	P
5	5725.00	-7.35	95.11	87.76	122.20	-34.44	Peak	298	360	P
6	11510.00	0.81	42.82	43.63	54.00	-10.37	Average	380	330	P
7	11510.00	0.81	56.13	56.94	74.00	-17.06	Peak	380	330	P
8	17265.00	10.12	37.59	47.71	54.00	-6.29	Average	113	174	P
9	17265.00	10.12	51.84	61.96	74.00	-12.04	Peak	113	174	P

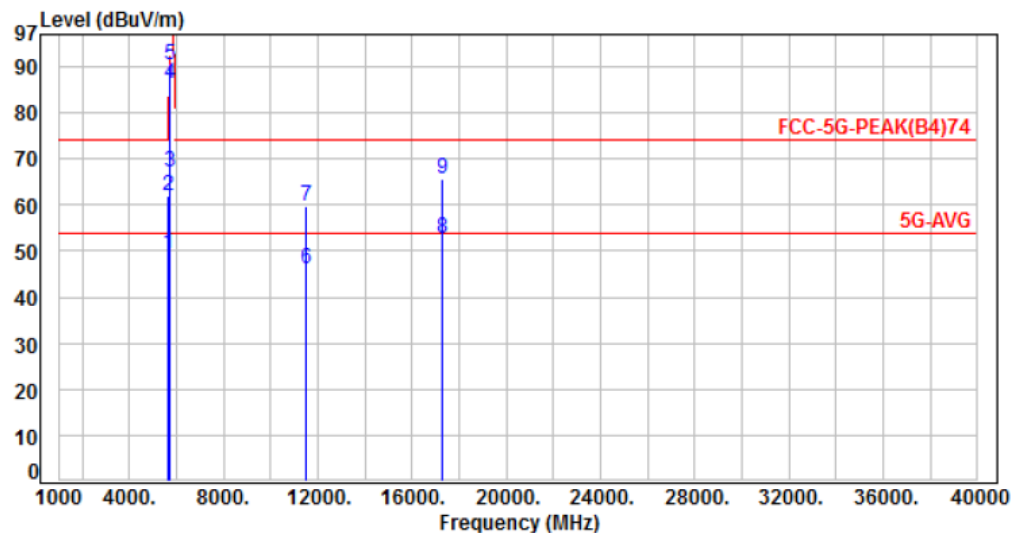
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 3, CH151, Band 4	Temperature	: 23 °C
Test Date	: Jul. 14, 2018	Humidity	: 61 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-7.37	56.92	49.55	54.00	-4.45	Average	119	73	P
2	5650.00	-7.37	69.33	61.96	74.00	-12.04	Peak	119	73	P
3	5700.00	-7.35	74.32	66.97	105.20	-38.23	Peak	119	73	P
4	5720.00	-7.35	93.52	86.17	110.80	-24.63	Peak	119	73	P
5	5725.00	-7.35	97.65	90.30	122.20	-31.90	Peak	119	73	P
6	11510.00	0.81	45.15	45.96	54.00	-8.04	Average	158	280	P
7	11510.00	0.81	58.93	59.74	74.00	-14.26	Peak	158	280	P
8	17265.00	10.12	42.63	52.75	54.00	-1.25	Average	109	275	P
9	17265.00	10.12	55.65	65.77	74.00	-8.23	Peak	109	275	P

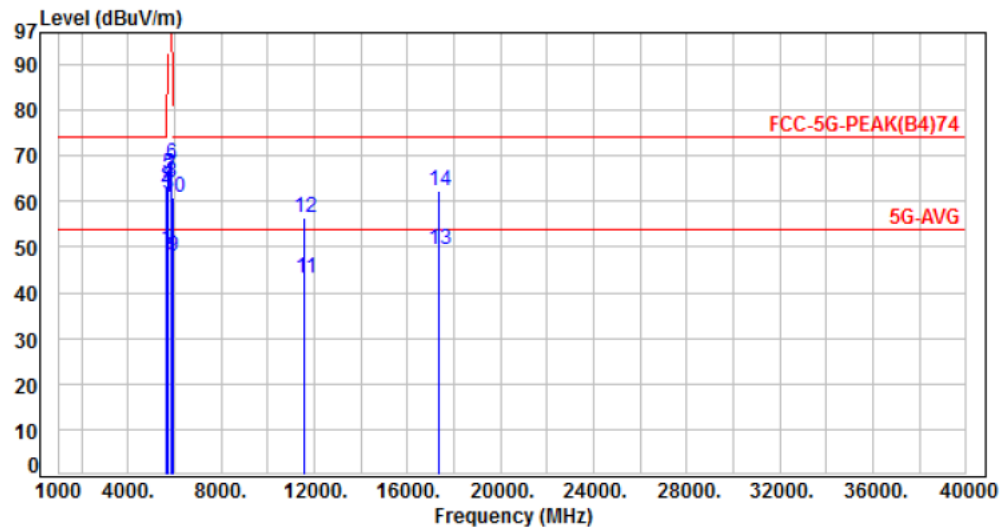
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 3, CH159, Band 4	Temperature	: 23 °C
Test Date	: Jul. 14, 2018	Humidity	: 61 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-7.37	56.90	49.53	54.00	-4.47	Average	156	360	P
2	5650.00	-7.37	70.57	63.20	74.00	-10.80	Peak	156	360	P
3	5700.00	-7.35	68.96	61.61	105.20	-43.59	Peak	156	360	P
4	5720.00	-7.35	71.44	64.09	110.80	-46.71	Peak	156	360	P
5	5725.00	-7.35	73.32	65.97	122.20	-56.23	Peak	156	360	P
6	5850.00	-7.30	75.63	68.33	122.20	-53.87	Peak	156	360	P
7	5855.00	-7.30	73.11	65.81	110.80	-44.99	Peak	156	360	P
8	5875.00	-7.30	71.66	64.36	105.20	-40.84	Peak	156	360	P
9	5925.00	-7.28	55.30	48.02	54.00	-5.98	Average	156	360	P
10	5925.00	-7.28	67.95	60.67	74.00	-13.33	Peak	156	360	P
11	11590.00	0.86	42.32	43.18	54.00	-10.82	Average	293	320	P
12	11590.00	0.86	55.68	56.54	74.00	-17.46	Peak	293	320	P
13	17385.00	10.79	38.81	49.60	54.00	-4.40	Average	196	188	P
14	17385.00	10.79	51.43	62.22	74.00	-11.78	Peak	196	188	P

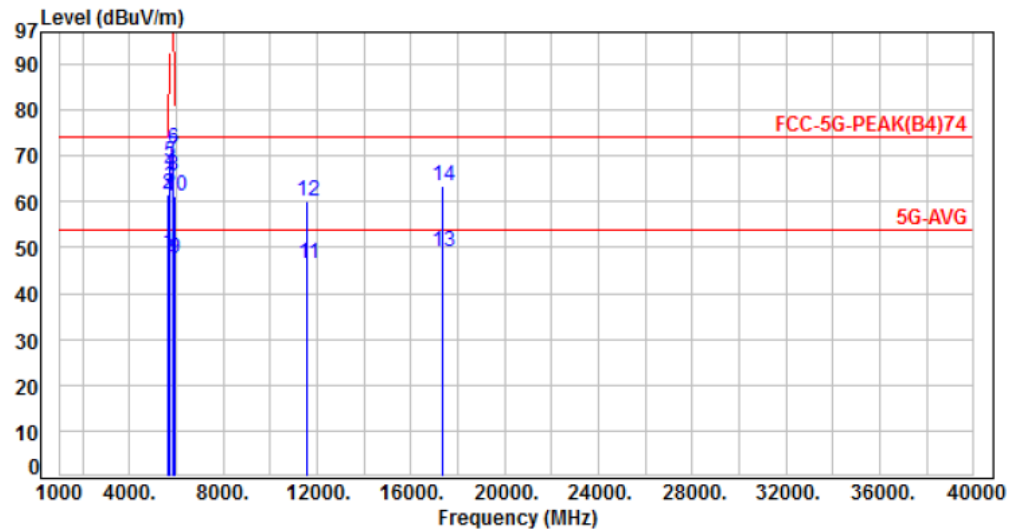
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 3, CH159, Band 4	Temperature	: 23 °C
Test Date	: Jul. 14, 2018	Humidity	: 61 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-7.37	55.94	48.57	54.00	-5.43	Average	133	76	P
2	5650.00	-7.37	68.93	61.56	74.00	-12.44	Peak	133	76	P
3	5700.00	-7.35	70.45	63.10	105.20	-42.10	Peak	133	76	P
4	5720.00	-7.35	73.88	66.53	110.80	-44.27	Peak	133	76	P
5	5725.00	-7.35	75.94	68.59	122.20	-53.61	Peak	133	76	P
6	5850.00	-7.30	78.83	71.53	122.20	-50.67	Peak	133	76	P
7	5855.00	-7.30	76.91	69.61	110.80	-41.19	Peak	133	76	P
8	5875.00	-7.30	72.81	65.51	105.20	-39.69	Peak	133	76	P
9	5925.00	-7.28	54.85	47.57	54.00	-6.43	Average	133	76	P
10	5925.00	-7.28	68.35	61.07	74.00	-12.93	Peak	133	76	P
11	11590.00	0.86	45.48	46.34	54.00	-7.66	Average	149	277	P
12	11590.00	0.86	59.22	60.08	74.00	-13.92	Peak	149	277	P
13	17385.00	10.79	38.18	48.97	54.00	-5.03	Average	100	303	P
14	17385.00	10.79	52.64	63.43	74.00	-10.57	Peak	100	303	P

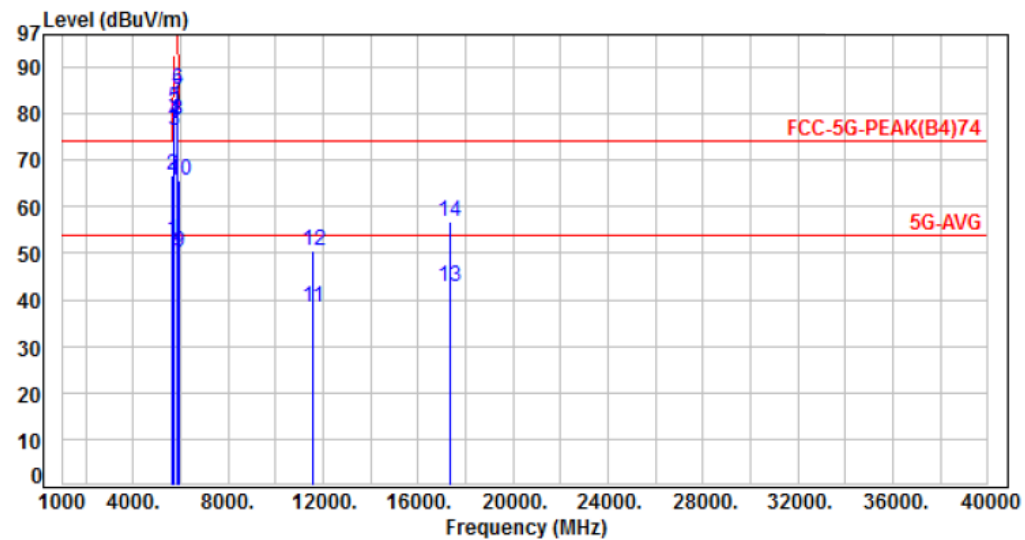
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, CH155, Band 4	Temperature	: 23 °C
Test Date	: Jul. 14, 2018	Humidity	: 61 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-7.37	60.19	52.82	54.00	-1.18	Average	391	360	P
2	5650.00	-7.37	74.25	66.88	74.00	-7.12	Peak	391	360	P
3	5700.00	-7.35	83.59	76.24	105.20	-28.96	Peak	391	360	P
4	5720.00	-7.35	85.60	78.25	110.80	-32.55	Peak	391	360	P
5	5725.00	-7.35	88.54	81.19	122.20	-41.01	Peak	391	360	P
6	5850.00	-7.30	92.64	85.34	122.20	-36.86	Peak	391	360	P
7	5855.00	-7.30	90.35	83.05	110.80	-27.75	Peak	391	360	P
8	5875.00	-7.30	85.94	78.64	105.20	-26.56	Peak	391	360	P
9	5925.00	-7.28	57.51	50.23	54.00	-3.77	Average	391	360	P
10	5925.00	-7.28	73.00	65.72	74.00	-8.28	Peak	391	360	P
11	11550.00	0.84	37.34	38.18	54.00	-15.82	Average	380	330	P
12	11550.00	0.84	49.59	50.43	74.00	-23.57	Peak	380	330	P
13	17325.00	10.45	32.22	42.67	54.00	-11.33	Average	113	174	P
14	17325.00	10.45	46.35	56.80	74.00	-17.20	Peak	113	174	P

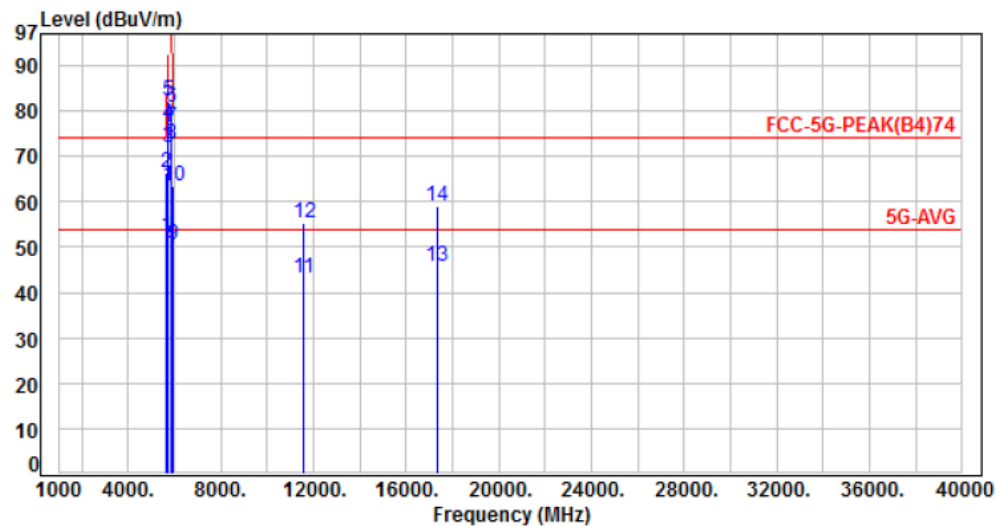
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, CH155, Band 4	Temperature	: 23 °C
Test Date	: Jul. 14, 2018	Humidity	: 61 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-7.37	59.69	52.32	54.00	-1.68	Average	109	73	P
2	5650.00	-7.37	73.60	66.23	74.00	-7.77	Peak	109	73	P
3	5700.00	-7.35	79.30	71.95	105.20	-33.25	Peak	109	73	P
4	5720.00	-7.35	84.60	77.25	110.80	-33.55	Peak	109	73	P
5	5725.00	-7.35	89.72	82.37	122.20	-39.83	Peak	109	73	P
6	5850.00	-7.30	88.06	80.76	122.20	-41.44	Peak	109	73	P
7	5855.00	-7.30	83.49	76.19	110.80	-34.61	Peak	109	73	P
8	5875.00	-7.30	80.09	72.79	105.20	-32.41	Peak	109	73	P
9	5925.00	-7.28	57.85	50.57	54.00	-3.43	Average	109	73	P
10	5925.00	-7.28	70.57	63.29	74.00	-10.71	Peak	109	73	P
11	11550.00	0.84	42.22	43.06	54.00	-10.94	Average	158	280	P
12	11550.00	0.84	54.54	55.38	74.00	-18.62	Peak	158	280	P
13	17325.00	10.45	35.17	45.62	54.00	-8.38	Average	282	275	P
14	17325.00	10.45	48.52	58.97	74.00	-15.03	Peak	282	275	P

Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



6.7. Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.09000 – 0.11000	16.42000 – 16.42300	399.9 – 410.0	4.500 – 5.150
0.49500 – 0.505**	16.69475 – 16.69525	608.0 – 614.0	5.350 – 5.460
2.17350 – 2.19050	16.80425 – 16.80475	960.0 – 1240.0	7.250 – 7.750
4.12500 – 4.12800	25.50000 – 25.67000	1300.0 – 1427.0	8.025 – 8.500
4.17725 – 4.17775	37.50000 – 38.25000	1435.0 – 1626.5	9.000 – 9.200
4.20725 – 4.20775	73.00000 – 74.60000	1645.5 – 1646.5	9.300 – 9.500
6.21500 – 6.21800	74.80000 – 75.20000	1660.0 – 1710.0	10.600 – 12.700
6.26775 – 6.26825	108.00000 – 121.94000	1718.8 – 1722.2	13.250 – 13.400
6.31175 – 6.31225	123.00000 – 138.00000	2200.0 – 2300.0	14.470 – 14.500
8.29100 – 8.29400	149.90000 – 150.05000	2310.0 – 2390.0	15.350 – 16.200
8.36200 – 8.36600	156.52475 – 156.52525	2483.5 – 2500.0	17.700 – 21.400
8.37625 – 8.38675	156.70000 – 156.90000	2655.0 – 2900.0	22.010 – 23.120
8.41425 – 8.41475	162.01250 – 167.17000	3260.0 – 3267.0	23.600 – 24.000
12.29000 – 12.29300	167.72000 – 173.20000	3332.0 – 3339.0	31.200 – 31.800
12.51975 – 12.52025	240.00000 – 285.00000	3345.8 – 3358.0	36.430 – 36.500
12.57675 – 12.57725	322.00000 – 335.40000	3600.0 – 4400.0	Above 38.6
13.36000 – 13.41000			

** : Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz



7. On Time, Duty Cycle and Measurement methods

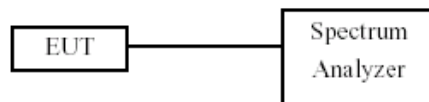
7.1. Test Limit

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

Temperature: 22°C

Humidity: 64%

Test Date: Aug. 03, 2018

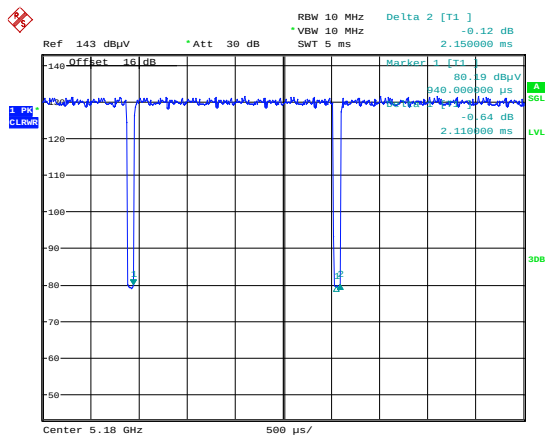
Modulation Type	On Time (msec)	Period Time (msec)	Duty Cycle (%)
802.11a	2.11	2.15	98.14%
802.11ac VHT20	5.06	5.10	99.22%
802.11ac VHT40	2.51	2.56	98.05%
802.11ac VHT80	1.18	1.24	95.15%

7.5. Measurement Methods

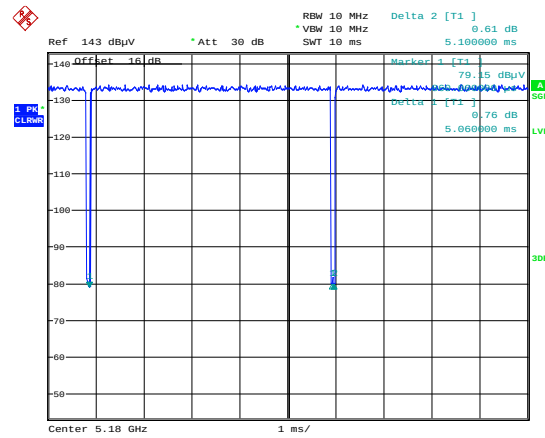
26 dB and 6dB Emission BW	KDB 789033 D02 v02r01, Section C
99% Occupied BW	KDB 789033 D02 v02r01, Section D
Conducted Output Power	KDB 789033 D02 v02r01, Section E.2.d and E.3.b (Method PM-G)
Power Spectral Density	KDB 789033 D02 v02r01, Section F
Unwanted emissions in restricted bands	KDB 789033 D02 v02r01, Sections G and H
Unwanted emissions in non-restricted bands	KDB 789033 D02 v02r01, Sections G and H



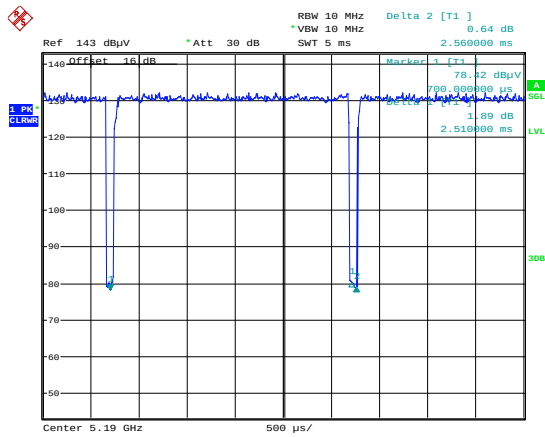
Modulation Standard: 802.11a (6Mbps)



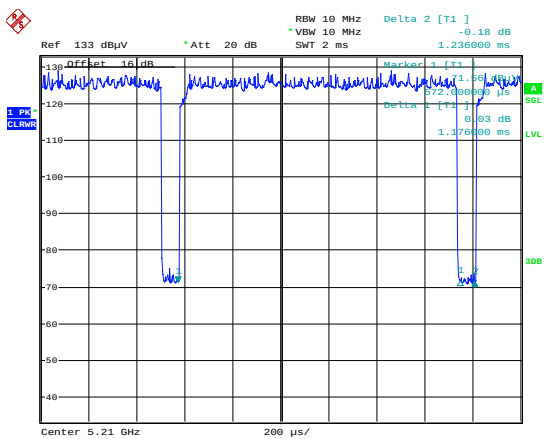
Modulation Standard: 802.11ac VHT20 (6.5Mbps)



Modulation Standard: 802.11ac VHT40 (13.5Mbps)



Modulation Standard: 802.11ac VHT80 (29.3Mbps)





8. 6dB Bandwidth & 99% Bandwidth

8.1. Test Limit

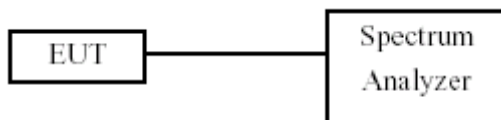
FCC §15.407

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

8.2. Test Procedure

Reference to 789033 D02 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)

Temperature: 22°C

Humidity: 64%

Test Date: Aug. 03, 2018

In the 5.8G Band

Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)
			ANT A	ANT B	
802.11a	149	5745	16.30	16.30	0.50
	157	5785	16.30	16.40	0.50
	165	5825	16.40	16.40	0.50
802.11ac VHT20	149	5745	16.50	16.80	0.50
	157	5785	16.50	17.60	0.50
	165	5825	17.60	17.60	0.50
802.11ac VHT40	151	5755	35.20	35.20	0.50
	159	5795	34.00	35.20	0.50
802.11ac VHT80	155	5775	76.00	76.00	0.50

**8.5. Test Result and Data (99% Bandwidth)**

Temperature: 22°C

Humidity: 64%

Test Date: Aug. 03, 2018

In the 5.8G Band

Modulation Type	Channel	Frequency (MHz)	99% Bandwidth (MHz)	
			ANT A	ANT B
802.11a	149	5745	16.60	16.90
	157	5785	16.80	16.80
	165	5825	16.60	16.70
802.11ac VHT20	149	5745	17.70	17.70
	157	5785	17.80	18.10
	165	5825	17.90	18.00
802.11ac VHT40	151	5755	36.40	36.60
	159	5795	36.20	37.00
802.11ac VHT80	155	5775	76.40	76.00

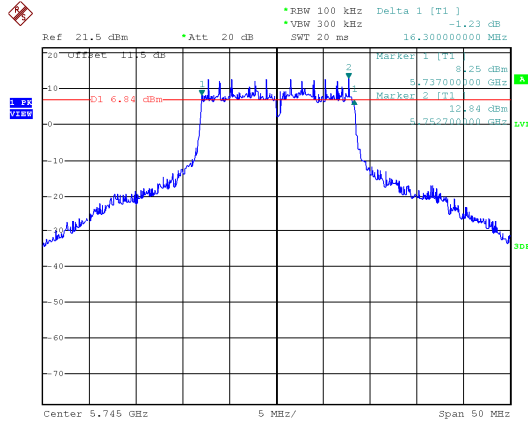


6dB Bandwidth

ANT A

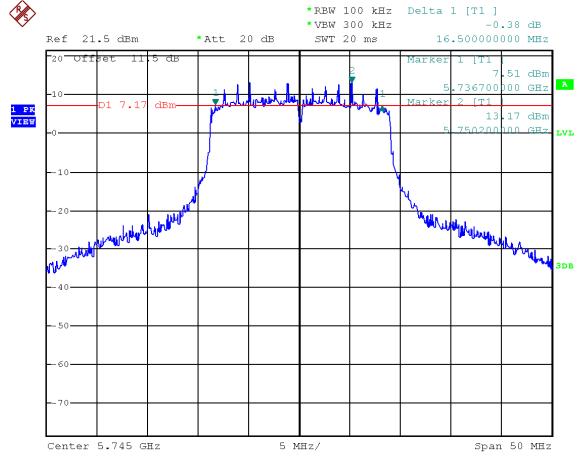
Modulation Standard: 802.11a (6Mbps)

CH149

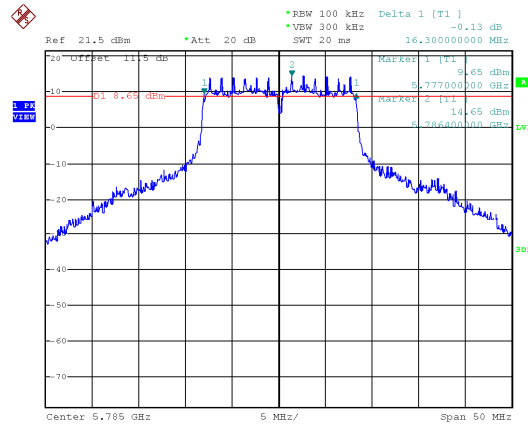


Modulation Standard: 802.11ac, VHT20 (6.5Mbps)

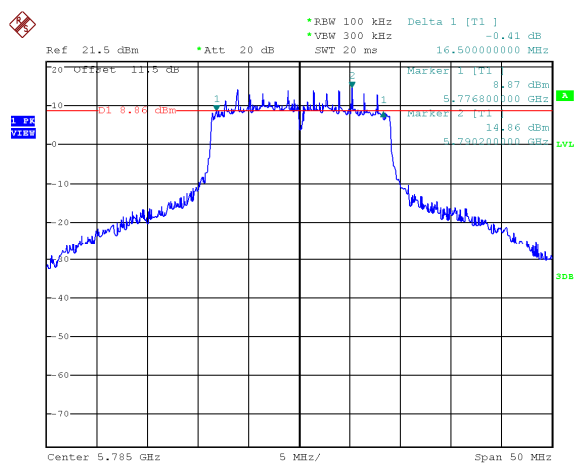
CH149



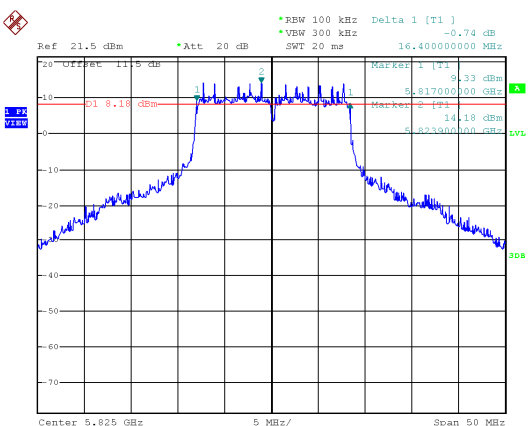
CH157



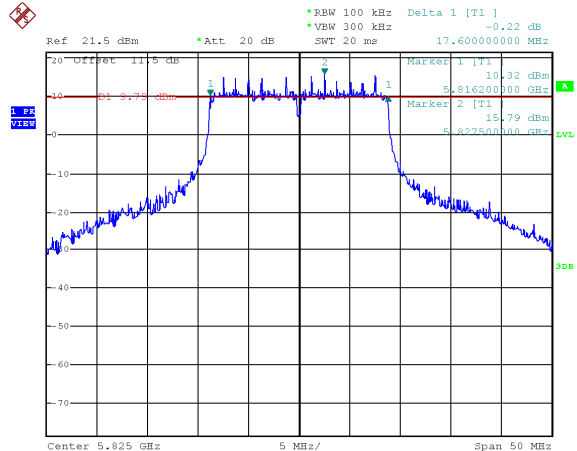
CH157



CH165

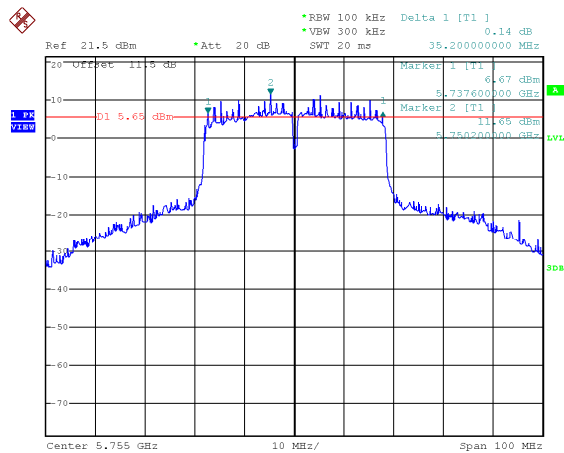


CH165

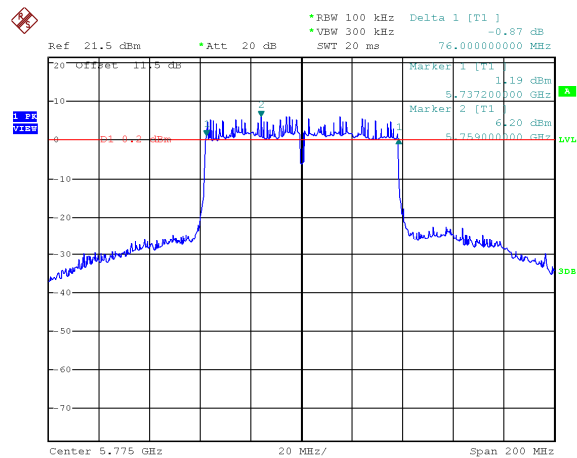




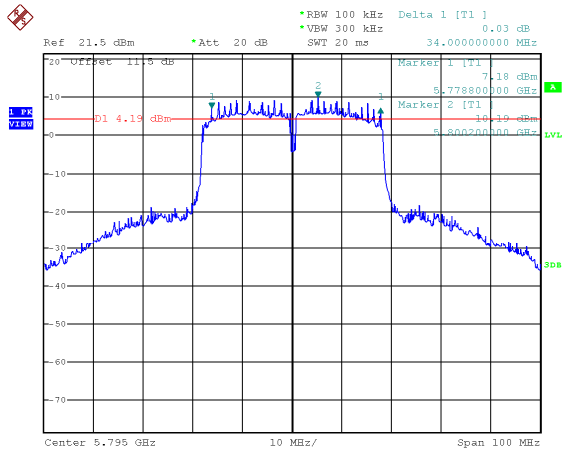
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155



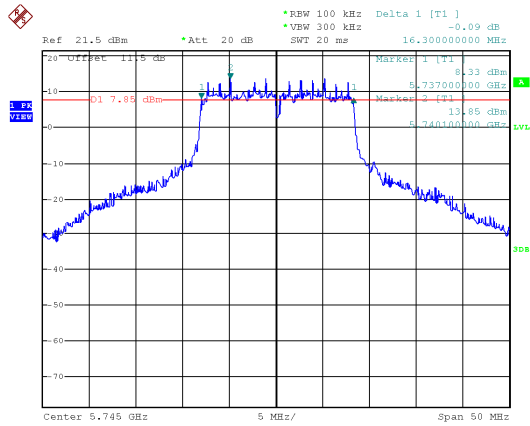
CH159



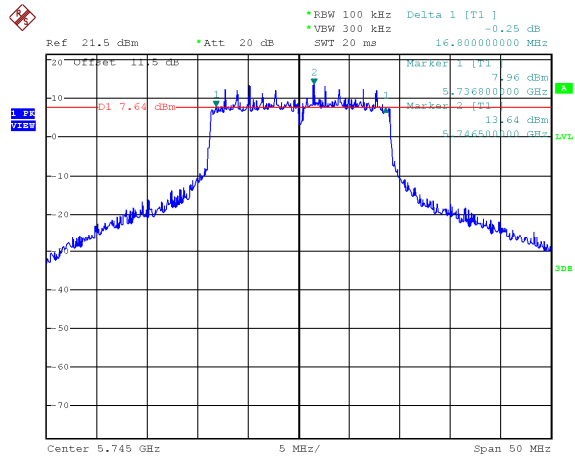


ANT B

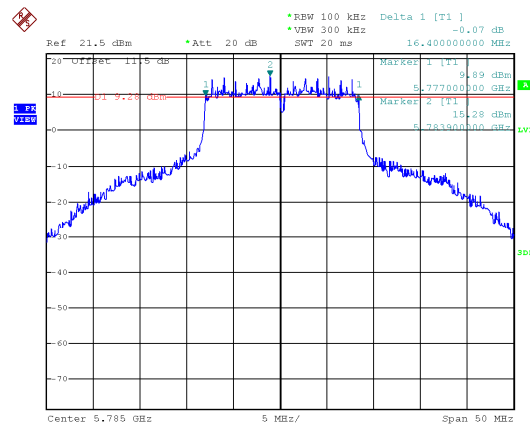
Modulation Standard: 802.11a (6Mbps)
CH149



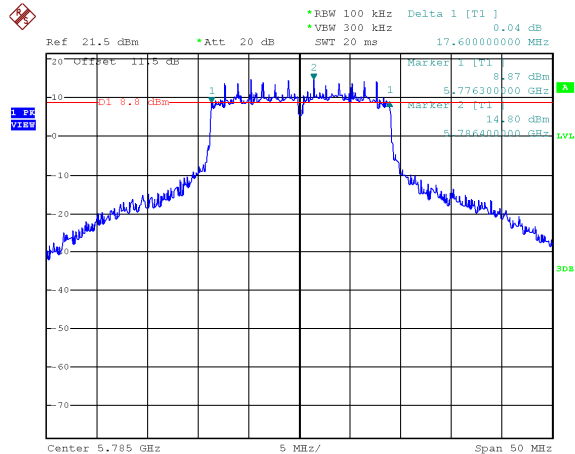
Modulation Standard: 802.11ac, VHT20 (6.5Mbps)
CH149



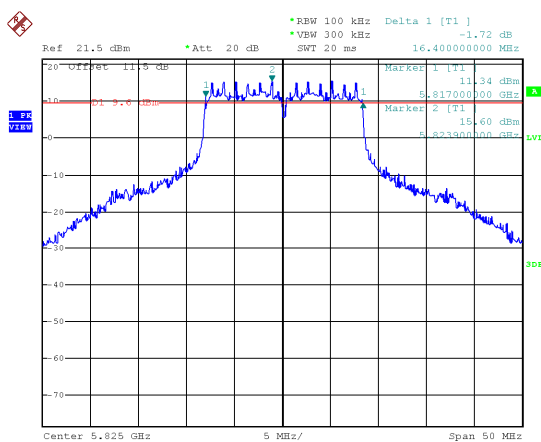
CH157



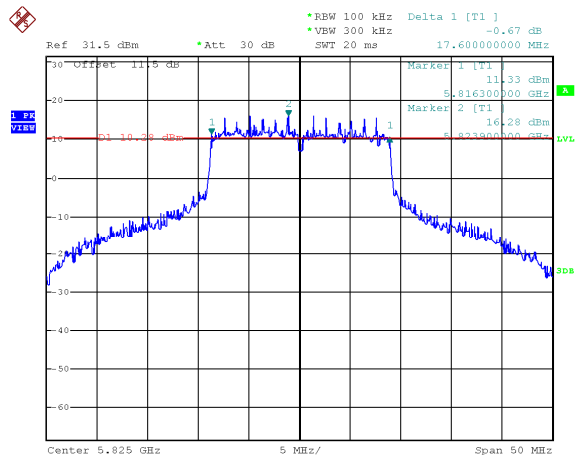
CH157



CH165

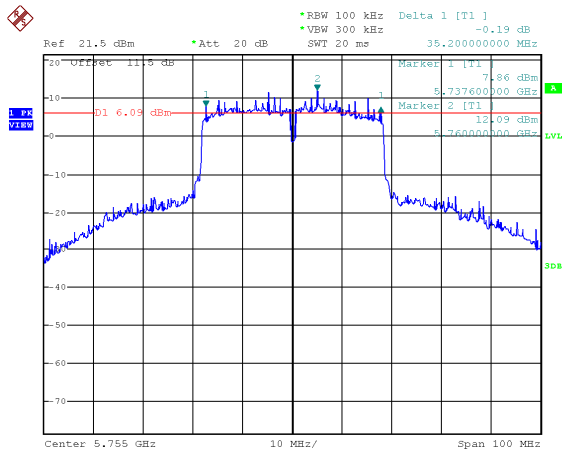


CH165

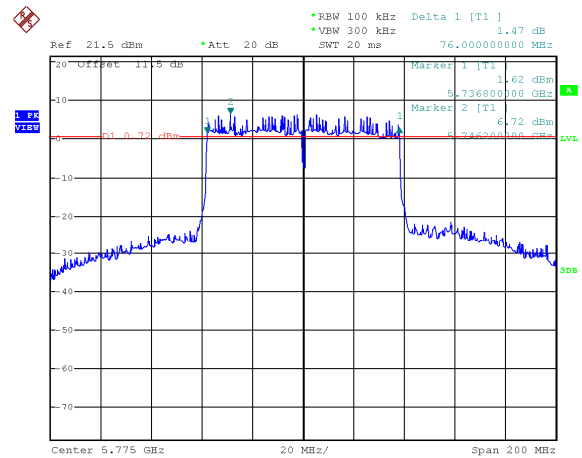




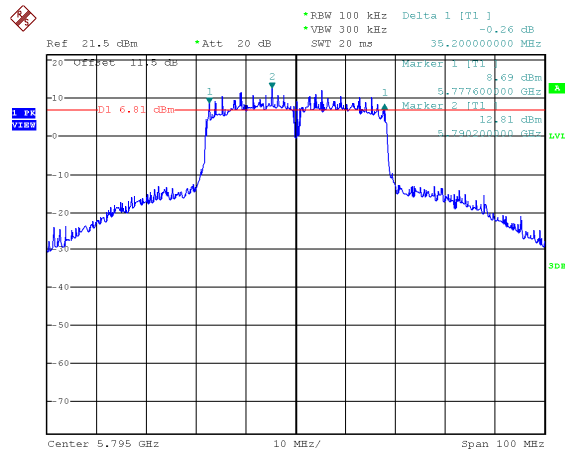
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155



CH159



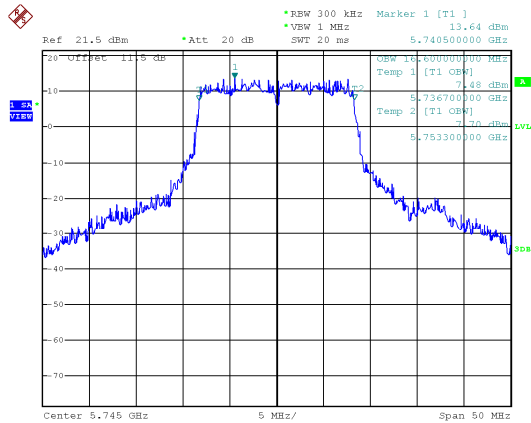


99% Bandwidth

ANT A

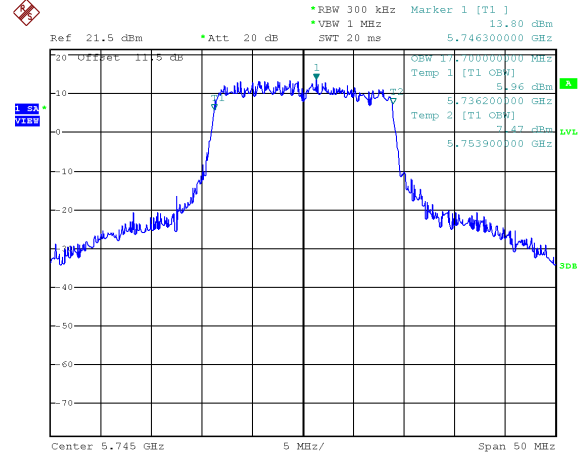
Modulation Standard: 802.11a (6Mbps)

CH149

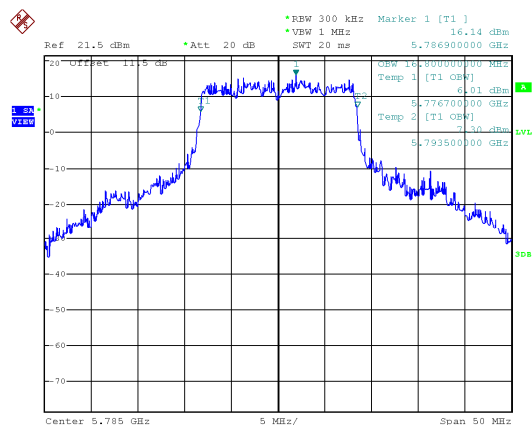


Modulation Standard: 802.11ac, VHT20 (6.5Mbps)

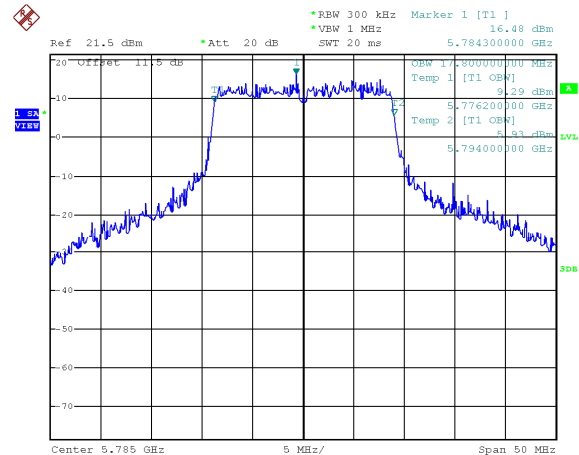
CH149



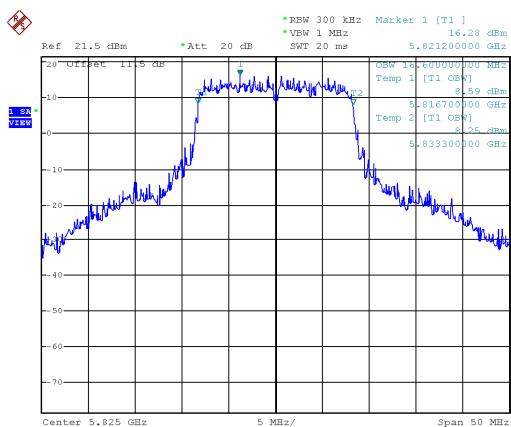
CH157



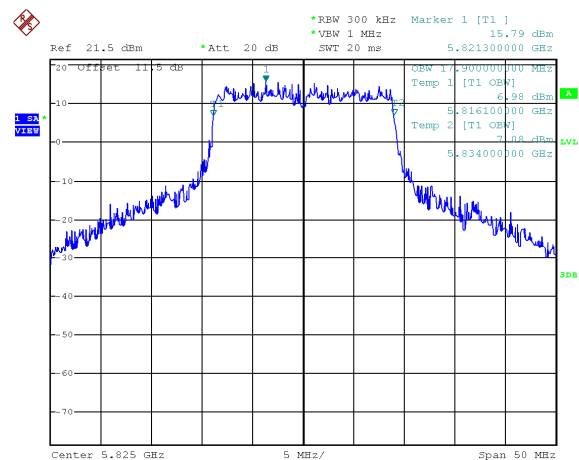
CH157



CH165

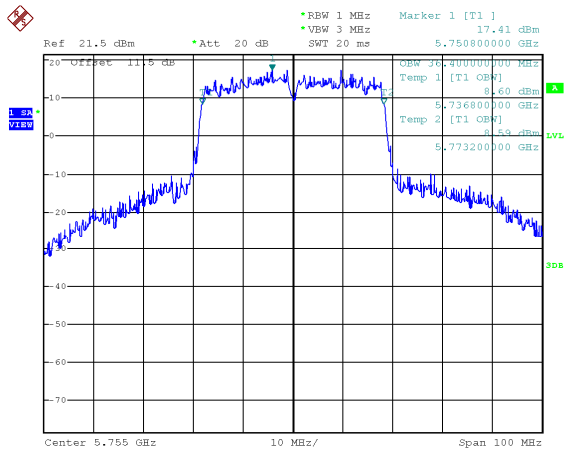


CH165

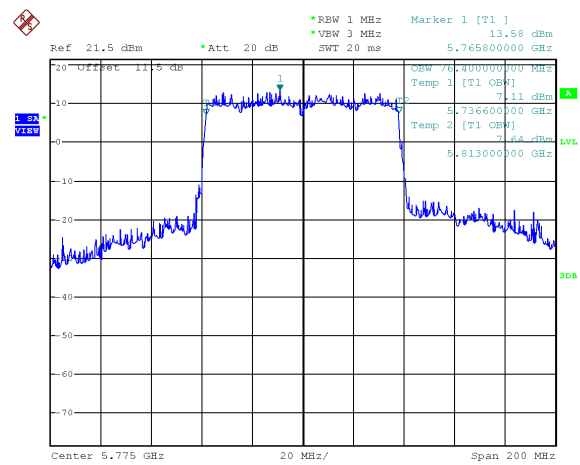




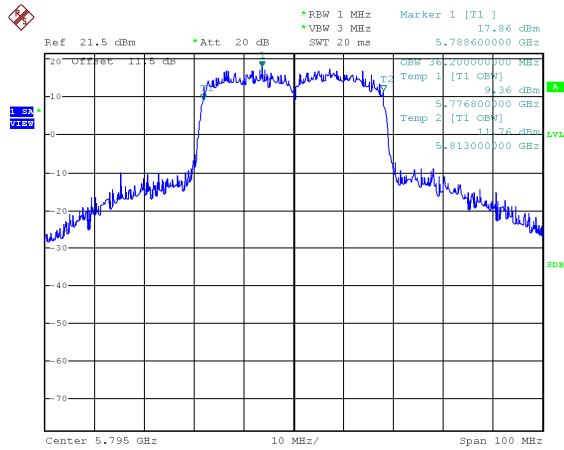
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155



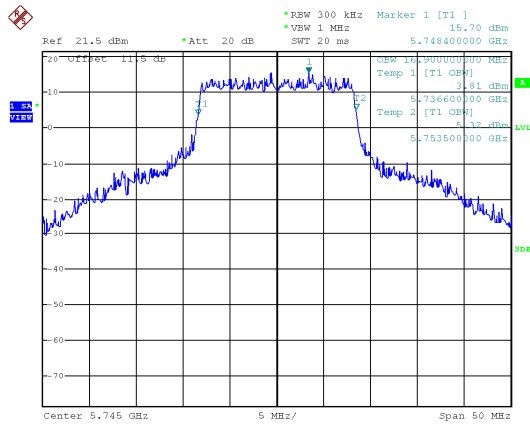
CH159



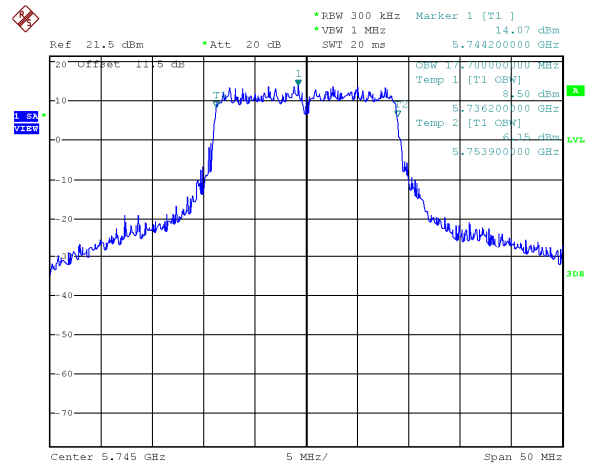


ANT B

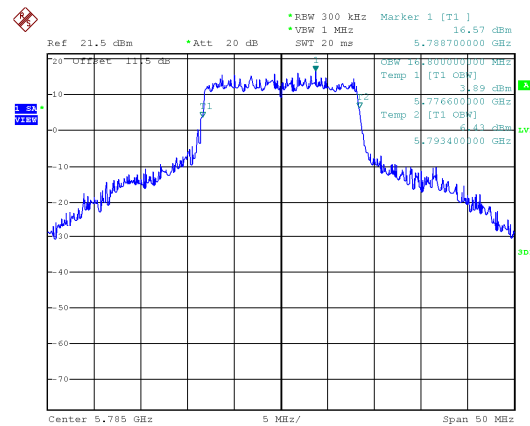
Modulation Standard: 802.11a (6Mbps)
CH149



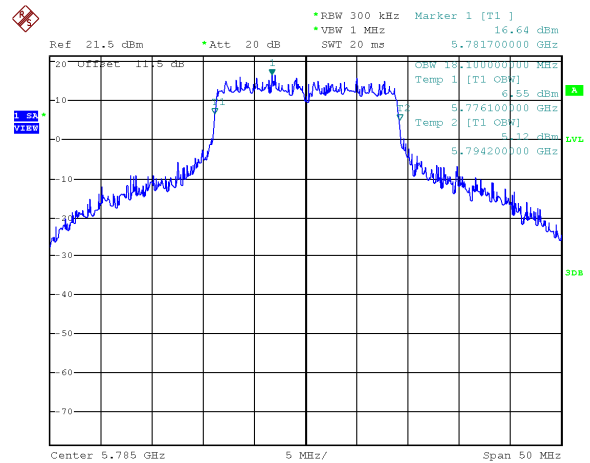
Modulation Standard: 802.11ac, VHT20 (6.5Mbps)
CH149



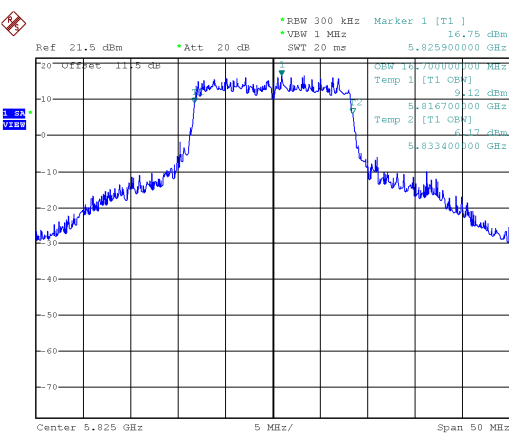
CH157



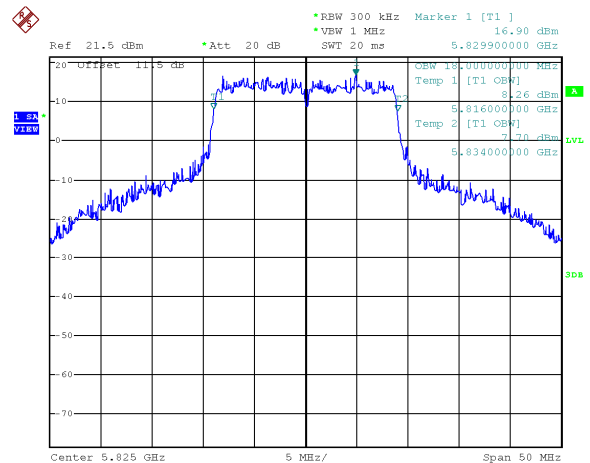
CH157



CH165

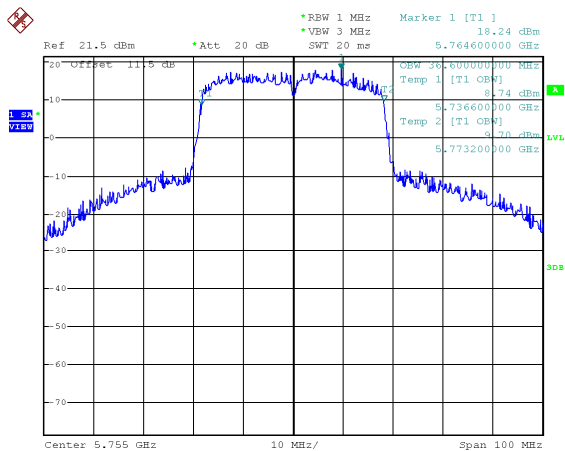


CH165

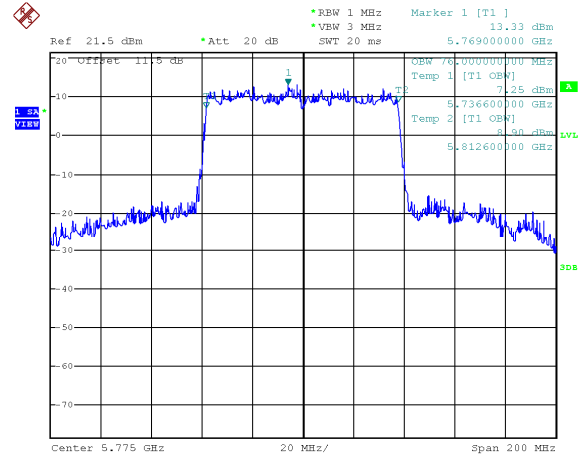




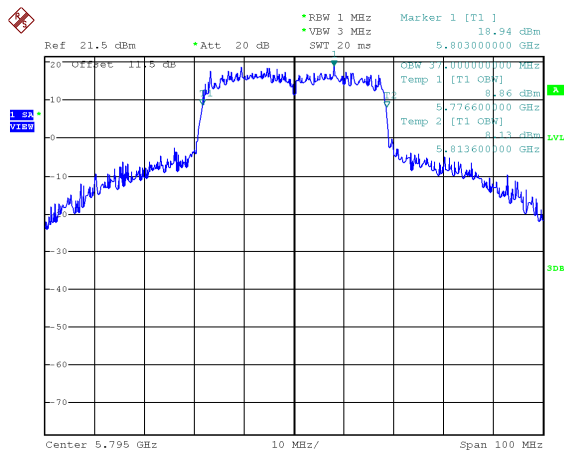
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155



CH159





9. 26dB Bandwidth & 99% Bandwidth

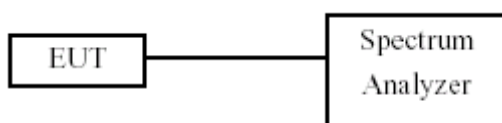
9.1. Test Limit

None; for reporting purposes only.

9.2. Test Procedure

Reference to 789033 D02 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)

Temperature: 22°C

Humidity: 64%

Test Date: Aug. 03, 2018

In the 5.2G Band

Modulation Type	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
			ANT A	ANT B
802.11a	36	5180	19.50	19.20
	44	5220	19.60	19.30
	48	5240	19.70	19.40
802.11ac VHT20	36	5180	20.50	20.30
	44	5220	20.70	20.80
	48	5240	20.70	20.60
802.11ac VHT40	38	5190	40.80	41.00
	46	5230	45.20	44.20
802.11ac VHT80	42	5210	83.60	83.60

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

Temperature: 22°C

Humidity: 64%

Test Date: Aug. 03, 2018

In the 5.2G Band

Modulation Type	Channel	Frequency (MHz)	99% Bandwidth (MHz)	
			ANT A	ANT B
802.11a	36	5180	16.50	16.50
	44	5220	16.50	16.50
	48	5240	16.50	16.50
802.11ac VHT20	36	5180	17.70	17.70
	44	5220	17.70	17.70
	48	5240	17.70	17.70
802.11ac VHT40	38	5190	37.40	37.00
	46	5230	36.40	36.40
802.11ac VHT80	42	5210	76.00	76.00



Ref 31.5 dBm Att 30 dB RBW 300 kHz VBW 1 MHz SWT 20 ms Marker 1 [T1] 5.176300000 GHz

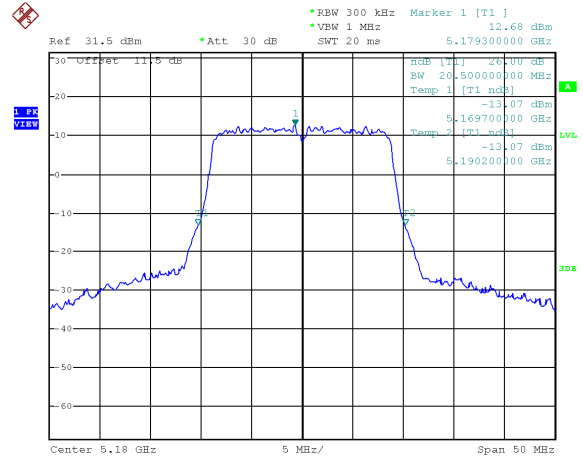
Center 5.18 GHz 5 MHz/ Span 50 MHz

dBm

30
20
10
0
-10
-20
-30
-40
-50
-60

5.17 5.18 5.19 GHz

19.50000000 MHz BW
Temp 1 [T1 nbf]
-12.96 dBm
5.176300000 GHz
Temp 2 [T1 nbf]
-12.96 dBm
5.189700000 GHz

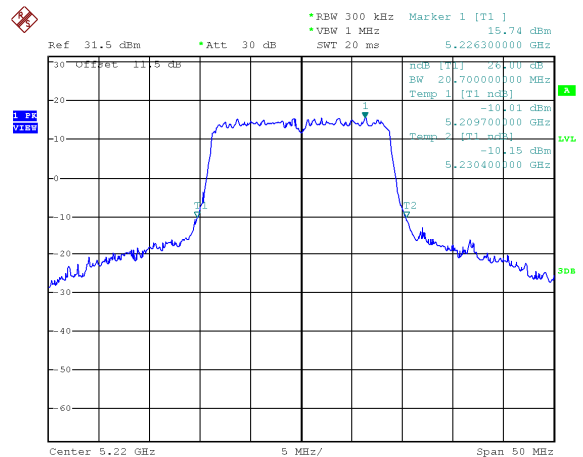


Ref 31.5 dBm • Att 30 dB SMT 20 ms 5.222500000 GHz

100 Offset 11.8 dB

100 dBm [T1] 20.00 dBm
BW 19.600000000 MHz
Temp 1 [T1 add] -10.04 dBm
5.210100000 GHz
Temp 2 [T1 add] -9.44 dBm
5.229700000 GHz

Center 5.22 GHz 5 MHz/ Span 50 MHz

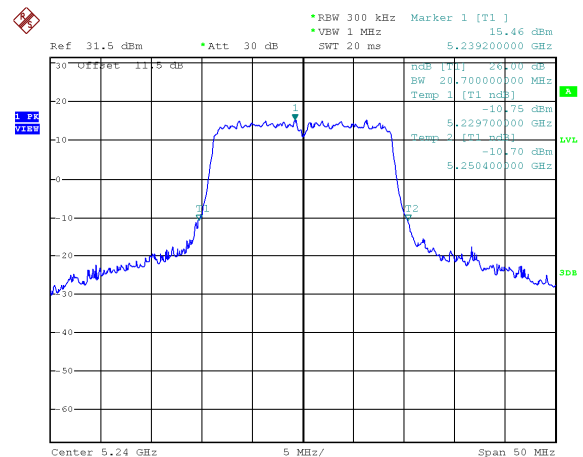


*REW 300 kHz
 *VIEW 1 MHz
 *Att 30 dB
 *SWT 20 ms
 Marker 1 [T1]
 16.05 dBm
 5.236300000 GHz

Ref 31.5 dBm
 11.69 dB
 5.23020000 GHz
 19.70000000 MHz
 19.70000000 MHz
 19.70000000 MHz

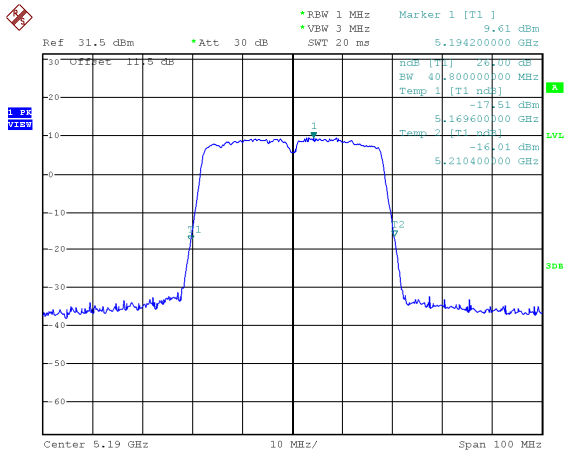
10 dB
 0 dB
 -10 dB
 -20 dB
 -30 dB
 -40 dB
 -50 dB
 -60 dB

5.24 MHz
 5 MHz/
 Span 50 MHz

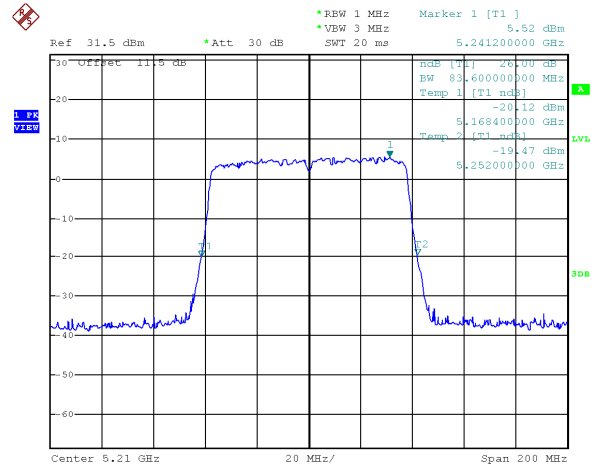




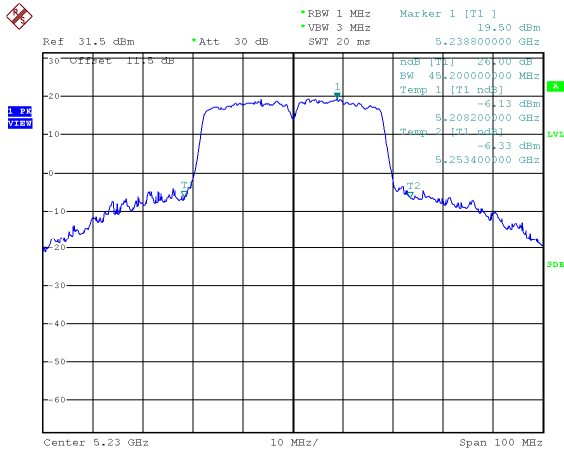
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42



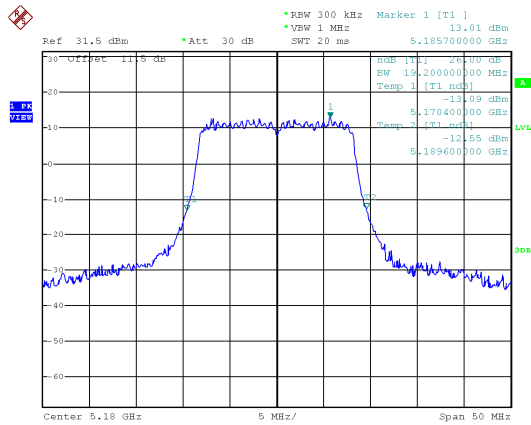
CH46



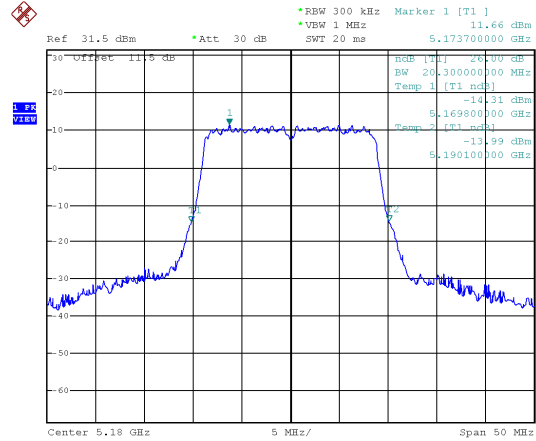


ANT B

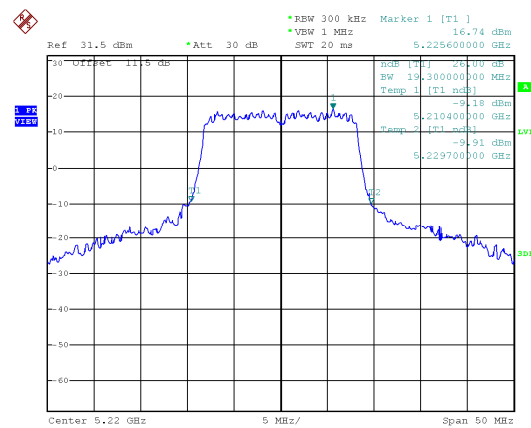
Modulation Standard: 802.11a (6Mbps)
CH36



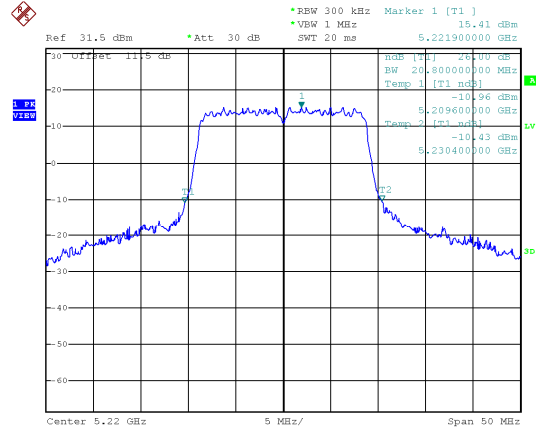
802.11ac VHT20 (6.5Mbps)
CH36



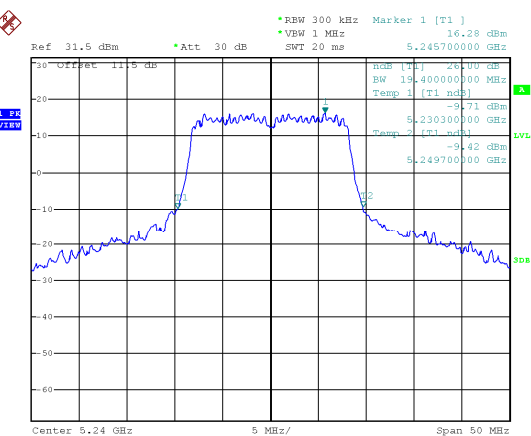
CH44



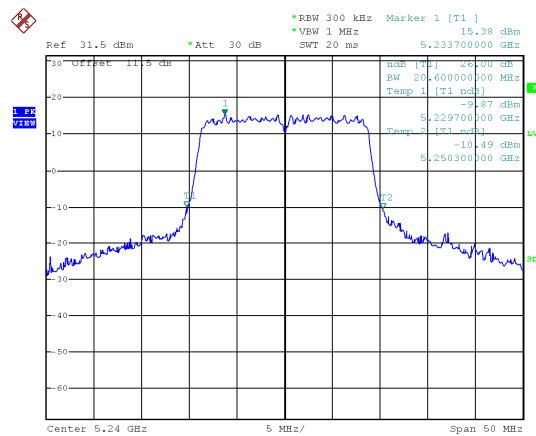
CH44



CH48



CH48





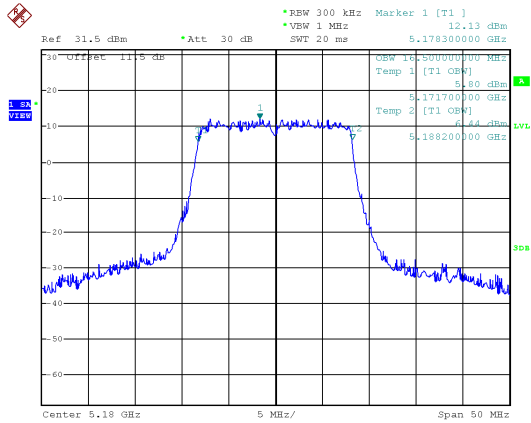


99% Bandwidth

ANT A

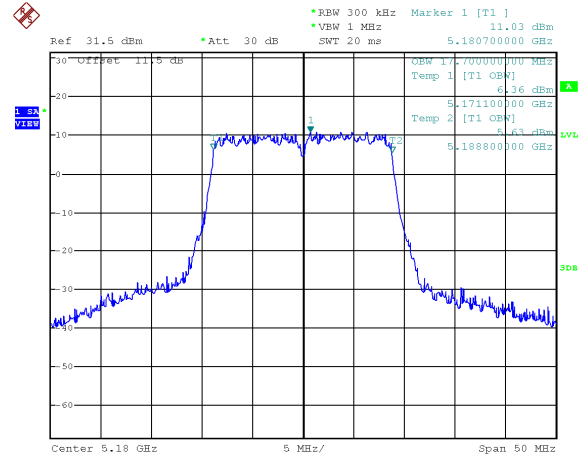
Modulation Standard: 802.11a (6Mbps)

CH36

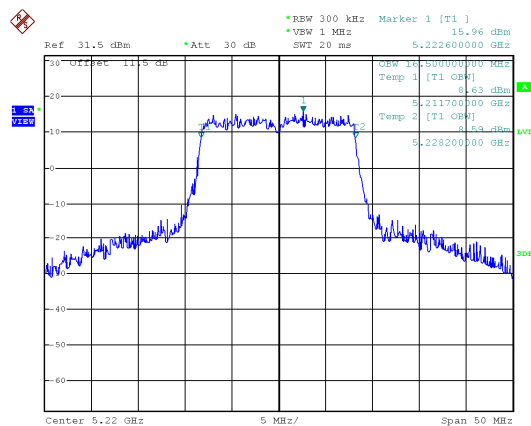


802.11ac VHT20 (6.5Mbps)

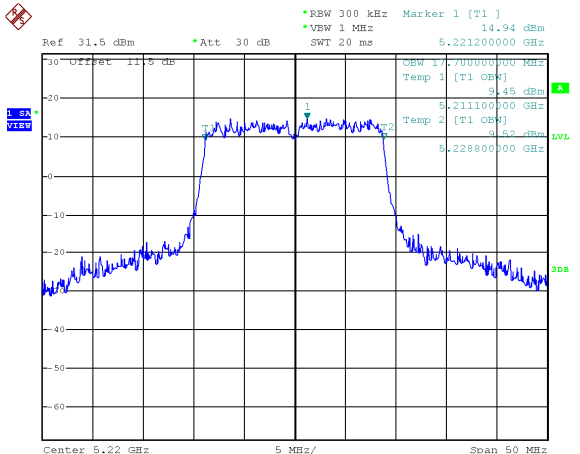
CH36



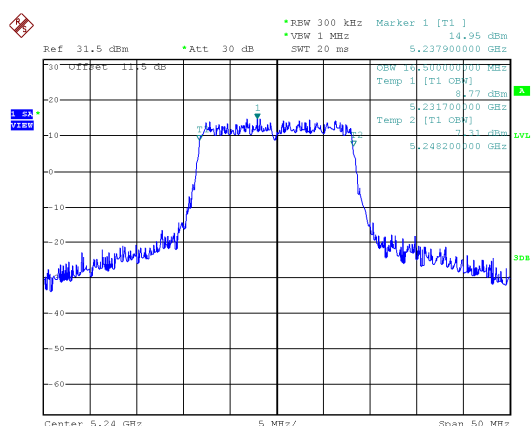
CH44



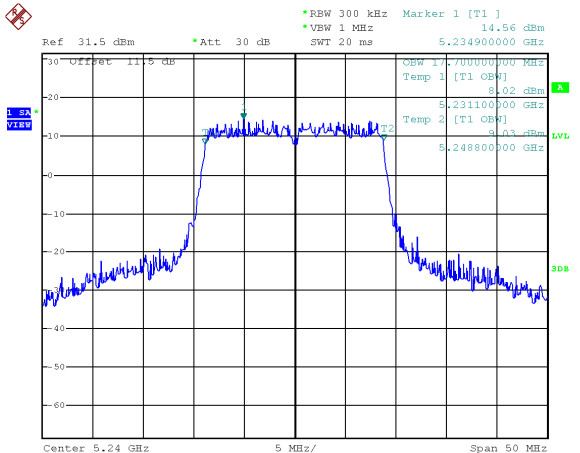
CH44



CH48

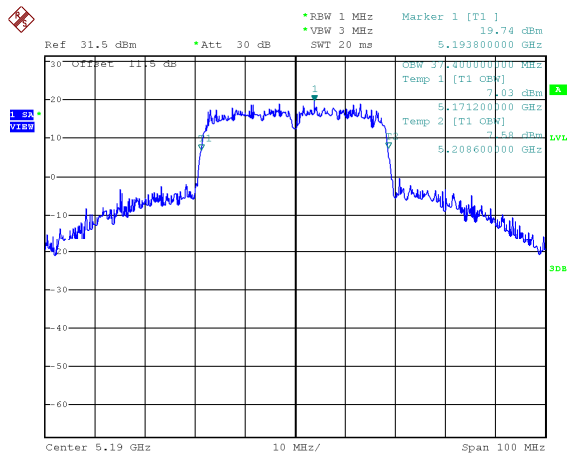


CH48

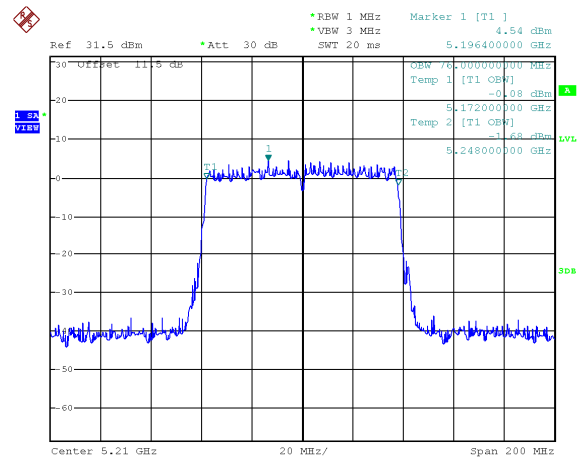




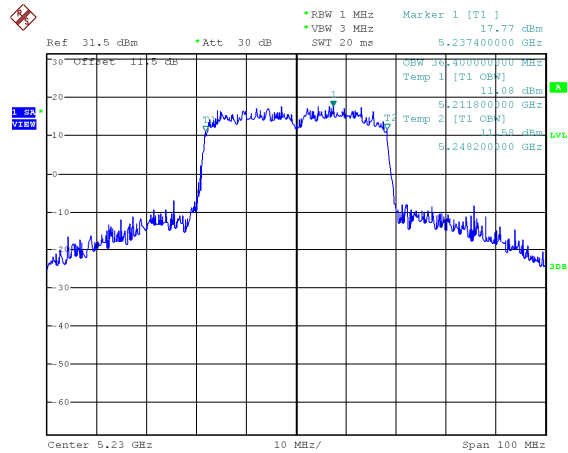
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42



CH46

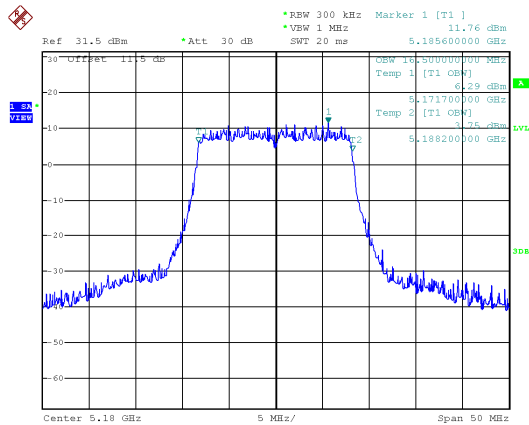




ANT B

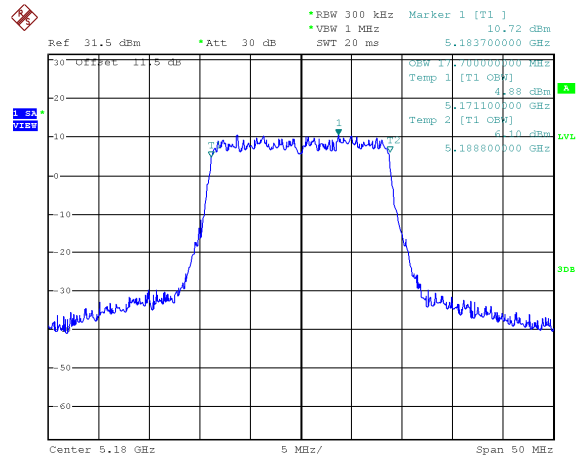
Modulation Standard: 802.11a (6Mbps)

CH36

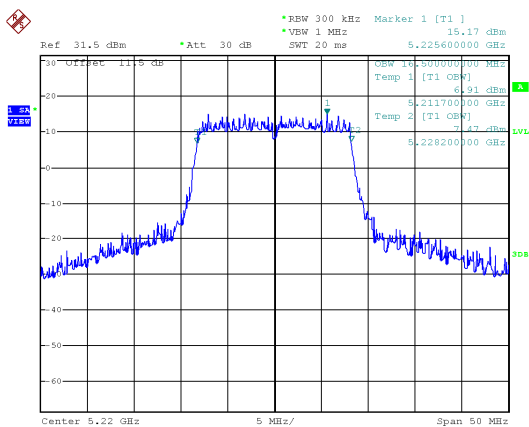


802.11ac VHT20 (6.5Mbps)

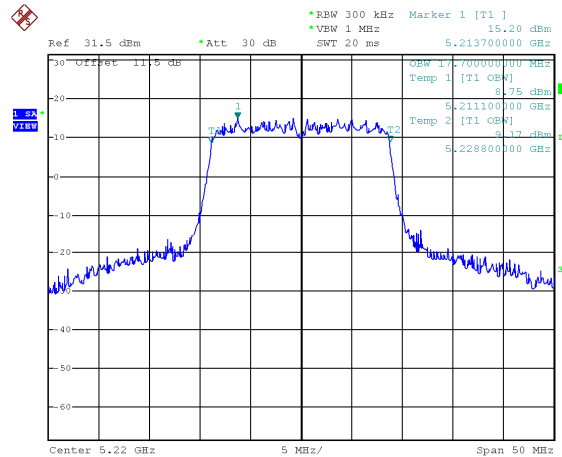
CH36



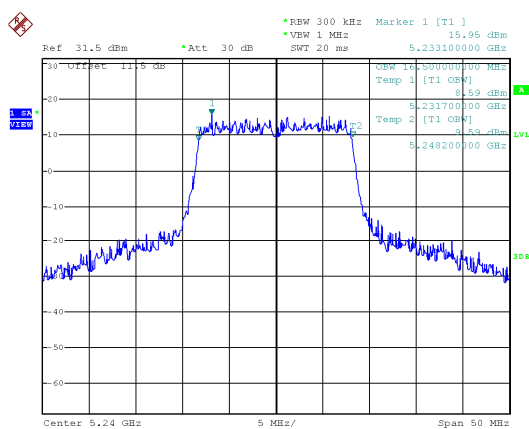
CH44



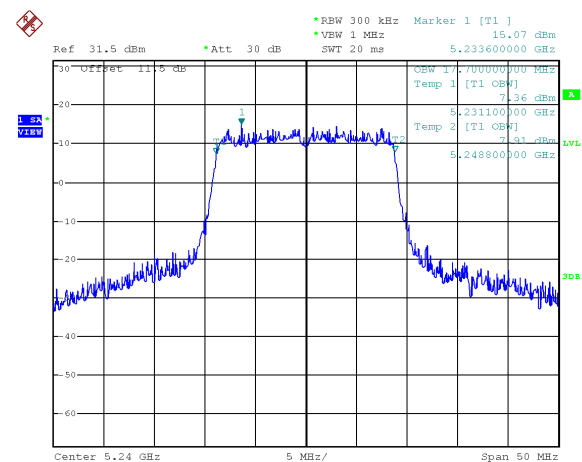
CH44



CH48

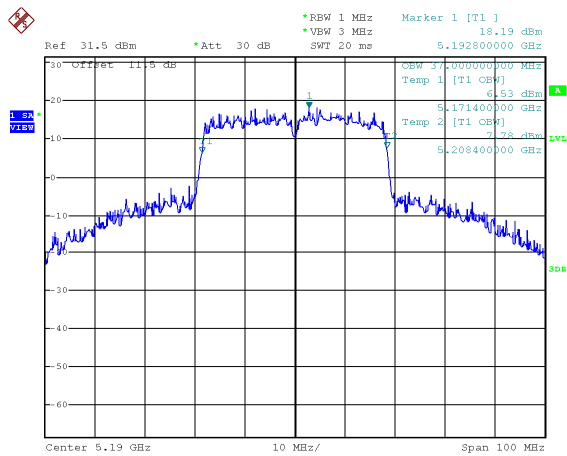


CH48

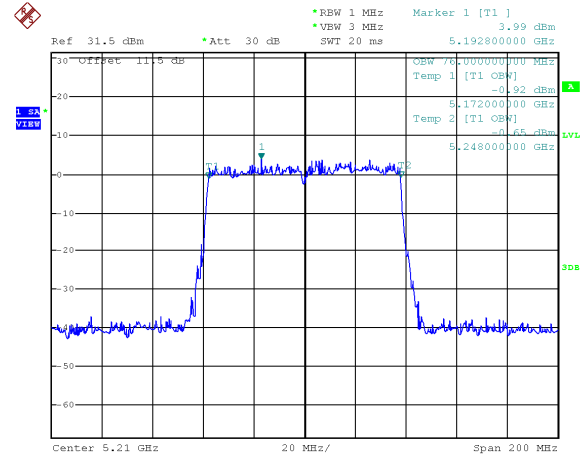




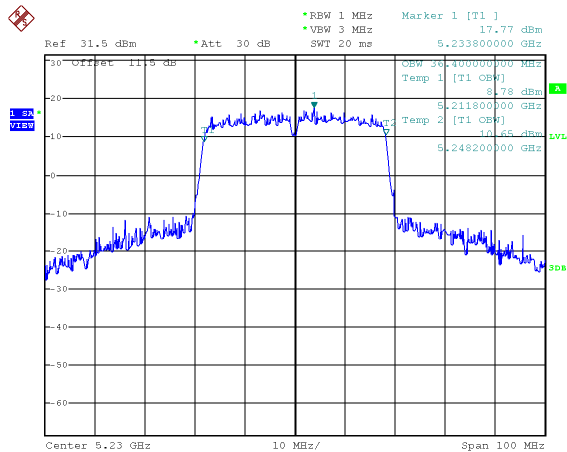
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42



CH46





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.



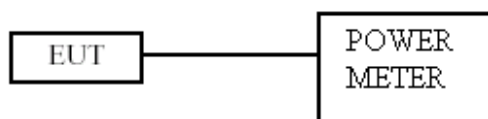
Frequency Band		Limit
☐	5.25-5.35 GHz	The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, 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

Temperature: 22°C
Test Date: Aug. 03, 2018

Humidity: 64%
Test Mode: Non-Beamforming

In the 5.2G Band

Modulation Type	Channel	Frequency (MHz)	Avg Power Output (dBm)		Total Power (mW)	Total Power dBm)	Power Limit (dBm)
			ANT A	ANT B			
802.11a	36	5180	20.56	19.98	213.303	23.29	30.00
	44	5220	23.52	23.21	434.317	26.38	30.00
	48	5240	23.07	23.03	403.678	26.06	30.00
802.11an HT20	36	5180	19.90	19.41	185.021	22.67	30.00
	44	5220	23.49	23.20	432.287	26.36	30.00
	48	5240	23.08	23.04	404.608	26.07	30.00
802.11an HT40	38	5190	14.52	14.12	54.137	17.33	30.00
	46	5230	23.75	23.46	458.957	26.62	30.00
802.11ac VHT20	36	5180	19.92	19.46	186.483	22.71	30.00
	44	5220	23.51	23.24	435.251	26.39	30.00
	48	5240	23.11	23.06	406.946	26.10	30.00
802.11ac VHT40	38	5190	14.53	14.15	54.381	17.35	30.00
	46	5230	23.77	23.48	461.075	26.64	30.00
802.11ac VHT80	42	5210	13.44	13.22	43.069	16.34	30.00

In the 5.8G Band

Modulation Type	Channel	Frequency (MHz)	Avg Power Output (dBm)		Total Power (mW)	Total Power dBm)	Power Limit (dBm)
			ANT A	ANT B			
802.11a	149	5745	23.19	23.49	431.806	26.35	30.00
	157	5785	24.60	25.10	611.997	27.87	30.00
	165	5825	25.08	25.45	672.859	28.28	30.00
802.11an HT20	149	5745	23.20	23.72	444.435	26.48	30.00
	157	5785	24.34	24.86	577.840	27.62	30.00
	165	5825	25.00	25.78	694.670	28.42	30.00
802.11an HT40	151	5755	23.80	24.63	530.286	27.25	30.00
	159	5795	23.15	24.50	488.376	26.89	30.00
802.11ac VHT20	149	5745	23.21	23.76	447.095	26.50	30.00
	157	5785	24.36	24.90	581.927	27.65	30.00
	165	5825	25.10	25.80	703.783	28.47	30.00
802.11ac VHT40	151	5755	23.81	24.66	532.852	27.27	30.00
	159	5795	23.17	24.52	490.631	26.91	30.00
802.11ac VHT80	155	5775	22.46	22.82	367.623	25.65	30.00



Temperature: 22°C
Test Date: Aug. 03, 2018

Humidity: 64%
Test Mode: Beamforming

In the 5.2G Band

Modulation Type	Channel	Frequency (MHz)	Avg Power Output (dBm)		Total Power (mW)	Total Power dBm)	Power Limit (dBm)
			ANT A	ANT B			
802.11a	36	5180	17.55	16.97	106.659	20.28	28.49
	44	5220	20.51	20.20	217.173	23.37	28.49
	48	5240	20.06	20.02	201.853	23.05	28.49
802.11an HT20	36	5180	16.89	16.40	92.517	19.66	28.49
	44	5220	20.48	20.19	216.158	23.35	28.49
	48	5240	20.07	20.03	202.318	23.06	28.49
802.11an HT40	38	5190	11.51	11.11	27.070	14.32	28.49
	46	5230	20.74	20.45	229.494	23.61	28.49
802.11ac VHT20	36	5180	16.91	16.45	93.248	19.70	28.49
	44	5220	20.50	20.23	217.641	23.38	28.49
	48	5240	20.10	20.05	203.487	23.09	28.49
802.11ac VHT40	38	5190	11.52	11.14	27.192	14.34	28.49
	46	5230	20.76	20.47	230.554	23.63	28.49
802.11ac VHT80	42	5210	10.43	10.21	21.536	13.33	28.49

In the 5.8G Band

Modulation Type	Channel	Frequency (MHz)	Avg Power Output (dBm)		Total Power (mW)	Total Power dBm)	Power Limit (dBm)
			ANT A	ANT B			
802.11a	149	5745	20.18	20.48	215.918	23.34	28.44
	157	5785	21.59	22.09	306.020	24.86	28.44
	165	5825	22.07	22.44	336.453	25.27	28.44
802.11an HT20	149	5745	20.19	20.71	222.233	23.47	28.44
	157	5785	21.33	21.85	288.940	24.61	28.44
	165	5825	21.99	22.77	347.359	25.41	28.44
802.11an HT40	151	5755	20.79	21.62	265.161	24.24	28.44
	159	5795	20.14	21.49	244.205	23.88	28.44
802.11ac VHT20	149	5745	20.20	20.75	223.563	23.49	28.44
	157	5785	21.35	21.89	290.984	24.64	28.44
	165	5825	22.09	22.79	351.916	25.46	28.44
802.11ac VHT40	151	5755	20.80	21.65	266.444	24.26	28.44
	159	5795	20.16	21.51	245.332	23.90	28.44
802.11ac VHT80	155	5775	19.45	19.81	183.824	22.64	28.44



11. Maximum Power Spectral Density

11.1. Test Limit

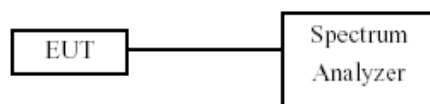
PSD:

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 D02 General UNII Test Procedures New Rules v02r01

11.3. Test Setup Layout



**11.4. Test Result and Data**

Temperature: 22°C

Humidity: 64%

Test Date: Aug. 03, 2018

In the 5.2G Band

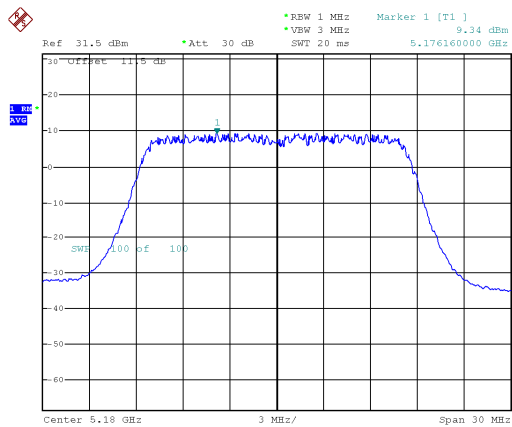
Modulation Type	CH	Freq. (MHz)	Meas PSD (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PSD (dBm/MHz)	PSD Limit (dBm/MHz)
			ANT A	ANT B				
802.11a	36	5180	9.34	8.46	11.93	0.00	11.93	15.49
	44	5220	12.64	12.23	15.45	0.00	15.45	15.49
	48	5240	12.40	12.09	15.26	0.00	15.26	15.49
802.11ac VHT20	36	5180	8.65	7.95	11.32	0.00	11.32	15.49
	44	5220	12.42	12.08	15.26	0.00	15.26	15.49
	48	5240	12.11	12.02	15.08	0.00	15.08	15.49
802.11ac VHT40	38	5190	0.52	-0.30	3.14	0.00	3.14	15.49
	46	5230	10.21	9.48	12.87	0.00	12.87	15.49
802.11ac VHT80	42	5210	-3.73	-4.35	-1.02	0.22	-0.80	15.49

In the 5.8G Band

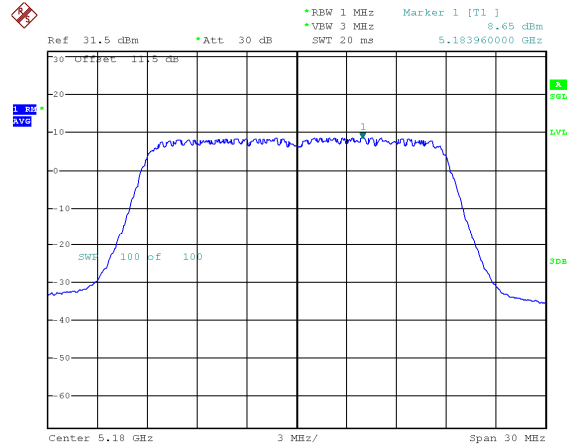
Modulation Type	CH	Freq. (MHz)	Meas PSD (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	10log(500K Hz/RBW) CF (dB)	Total Corr'd PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)
			ANT A	ANT B					
802.11a	149	5745	11.63	12.11	14.89	0.00	-3.01	11.88	28.44
	157	5785	13.50	13.81	16.67	0.00	-3.01	13.66	28.44
	165	5825	13.79	14.29	17.06	0.00	-3.01	14.05	28.44
802.11ac VHT20	149	5745	11.55	12.08	14.83	0.00	-3.01	11.82	28.44
	157	5785	13.25	13.59	16.43	0.00	-3.01	13.42	28.44
	165	5825	12.51	14.11	16.39	0.00	-3.01	13.38	28.44
802.11ac VHT40	155	5755	10.06	10.32	13.20	0.00	-3.01	10.19	28.44
	159	5795	10.27	10.89	13.60	0.00	-3.01	10.59	28.44
802.11ac VHT80	155	5775	5.39	5.52	8.47	0.22	-3.01	5.68	28.44



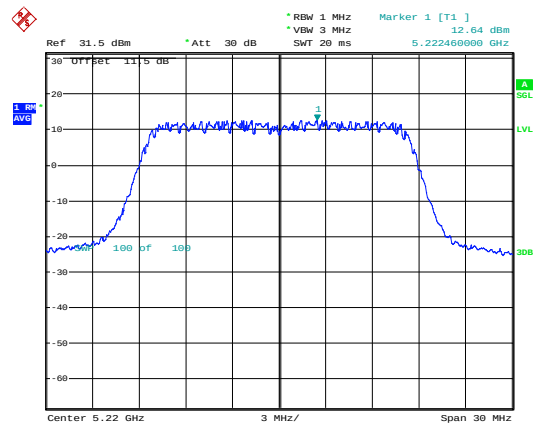
5.2G Band 1, ANT A
Modulation Standard: 802.11a (6Mbps)
CH36



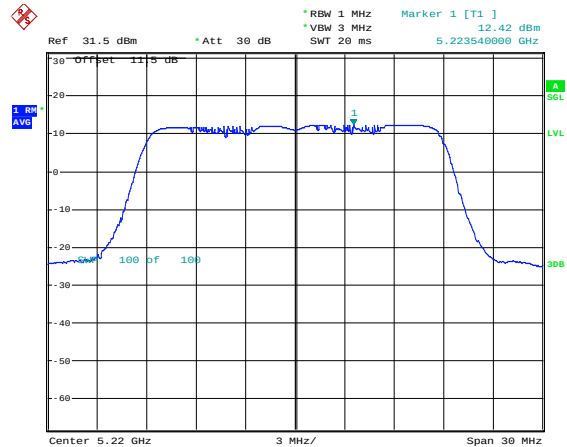
Modulation Standard: 802.11ac VHT20 (6.5Mbps)
CH36



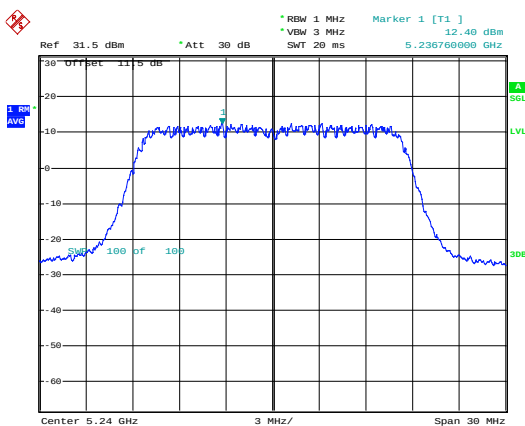
CH44



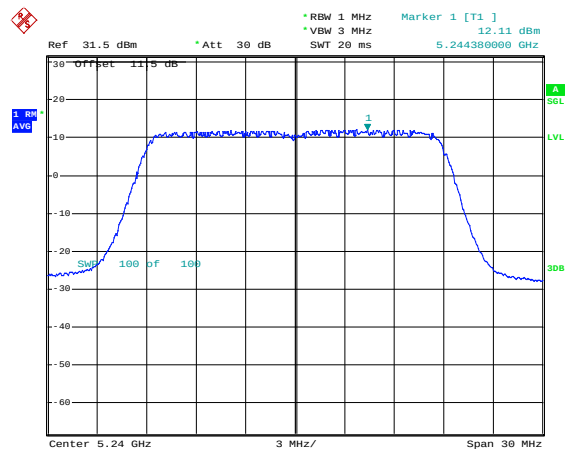
CH44



CH48

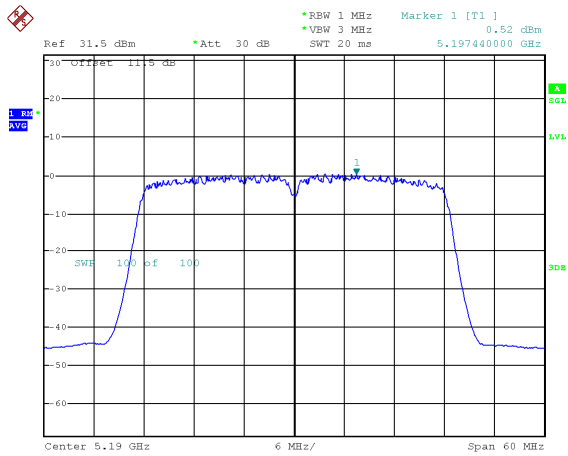


CH48

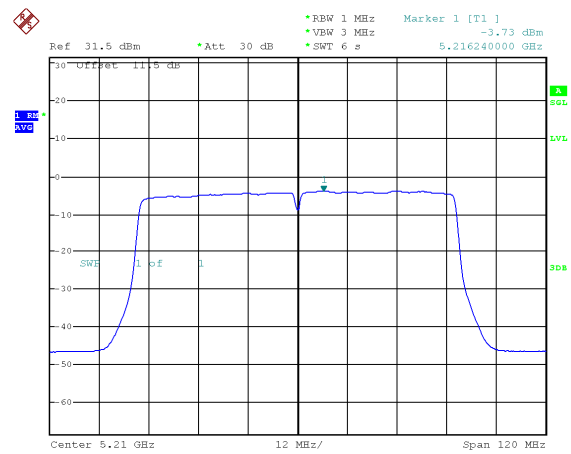




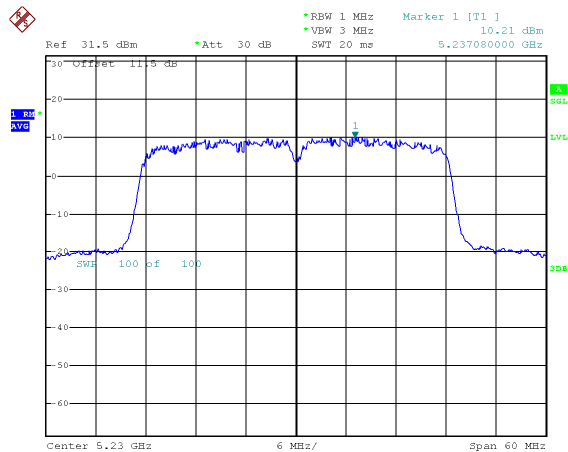
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42

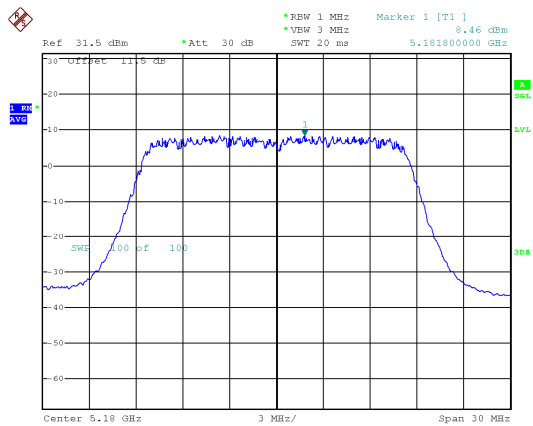


CH46

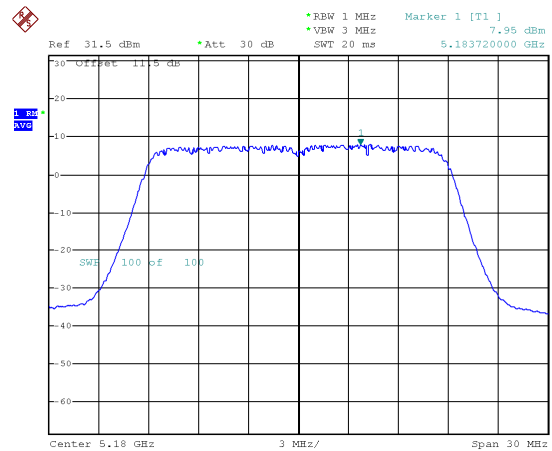




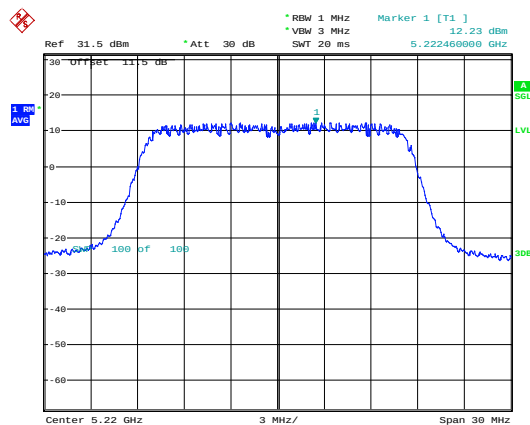
5.2G Band 1, ANT B
Modulation Standard: 802.11a (6Mbps)
CH36



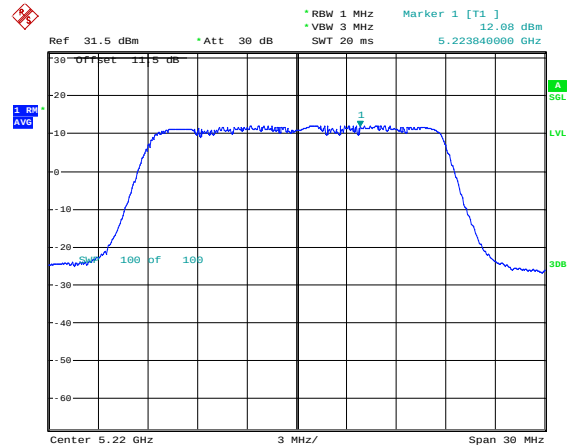
Modulation Standard: 802.11ac VHT20 (6.5Mbps)
CH36



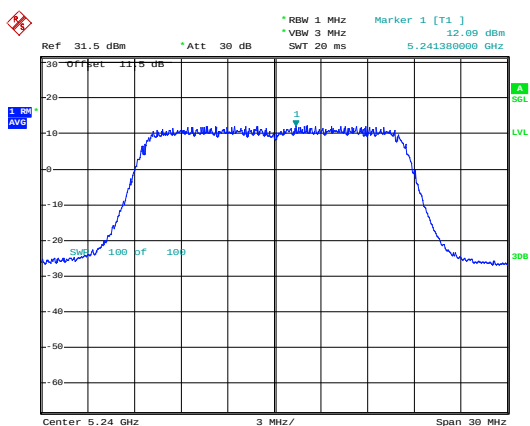
CH44



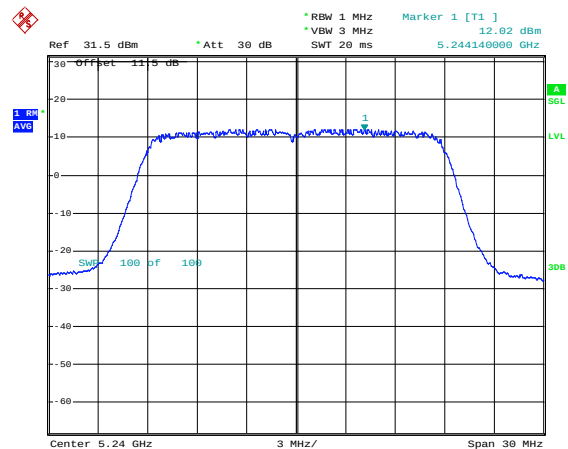
CH44



CH48

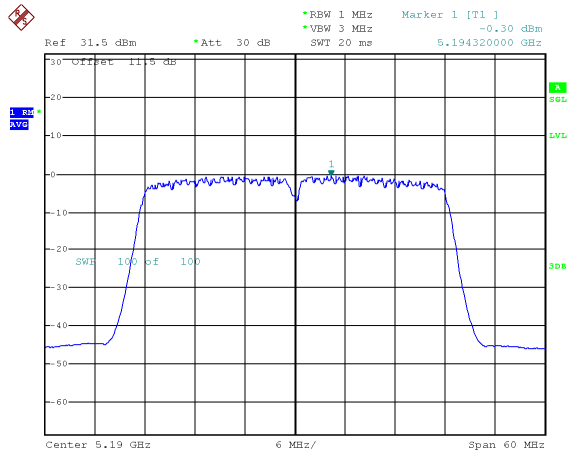


CH48

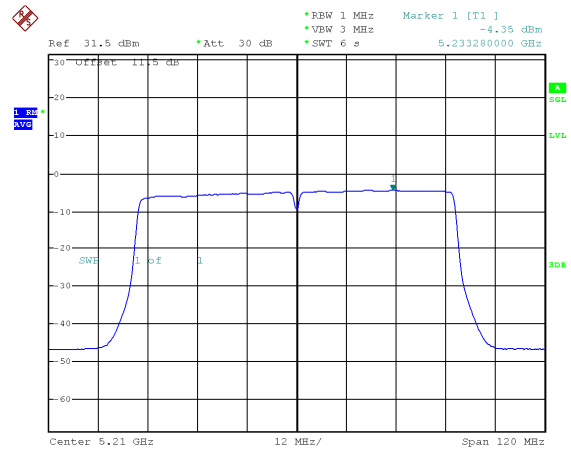




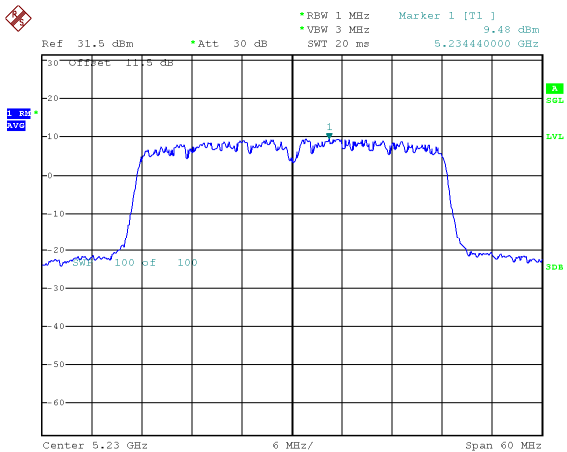
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42

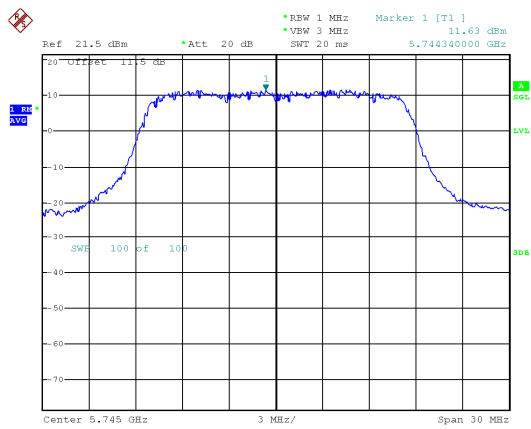


CH46

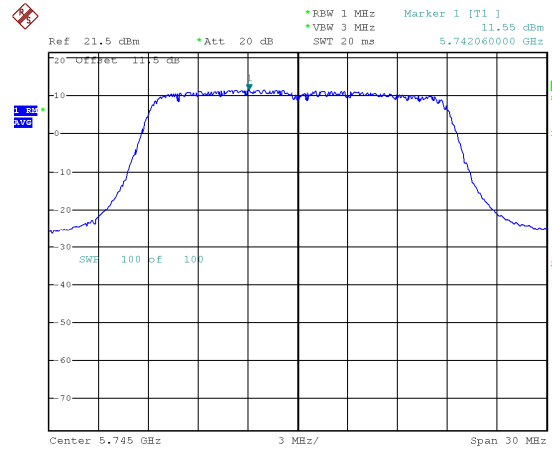




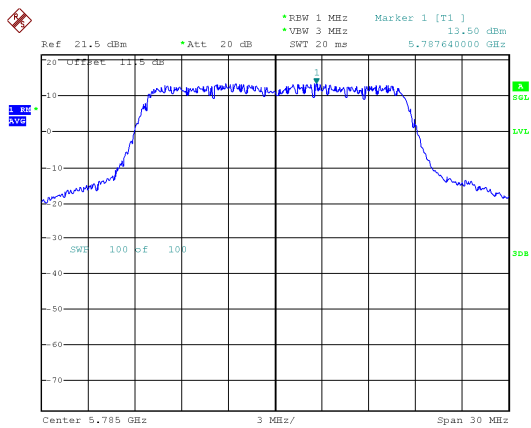
5.8G Band 4, ANT A
Modulation Standard: 802.11a (6Mbps)
CH149



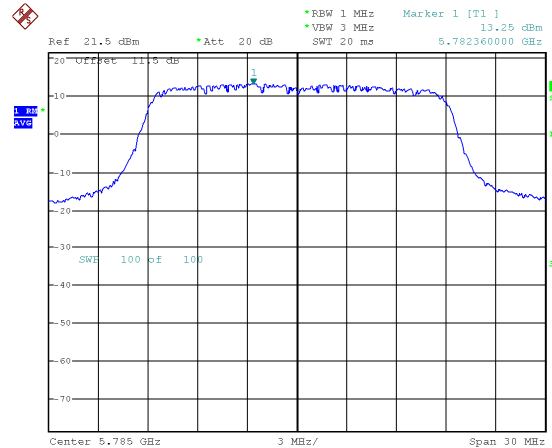
Modulation Standard: 802.11ac VHT20 (6.5Mbps)
CH149



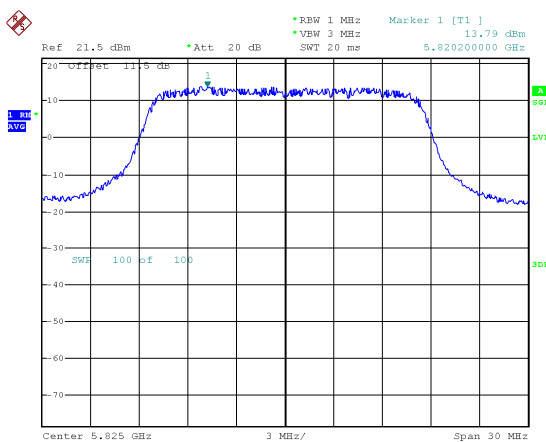
CH157



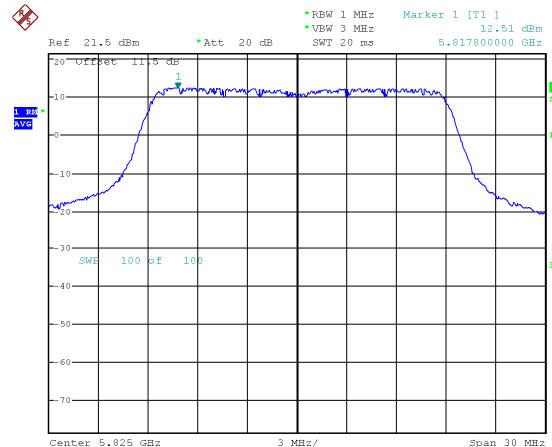
CH157



CH165

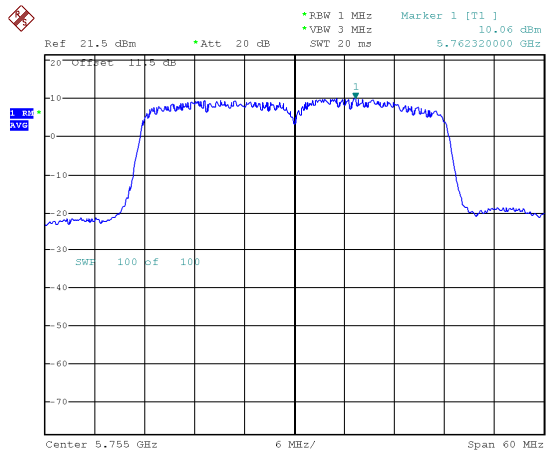


CH165

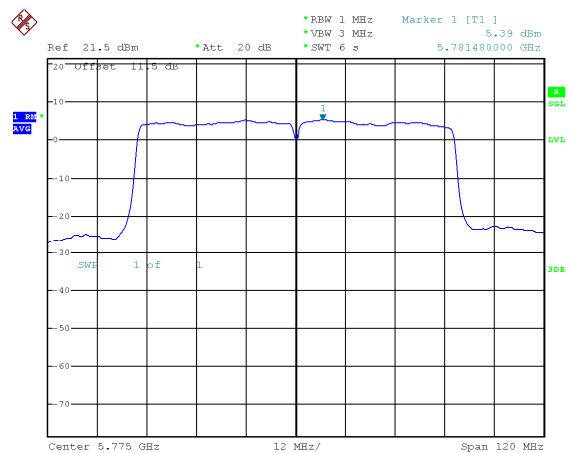




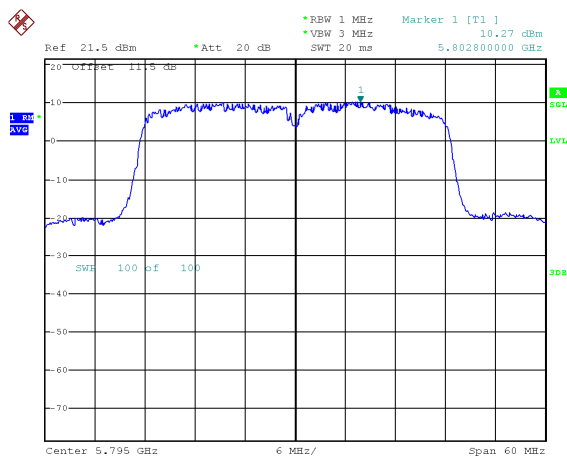
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH151



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH155

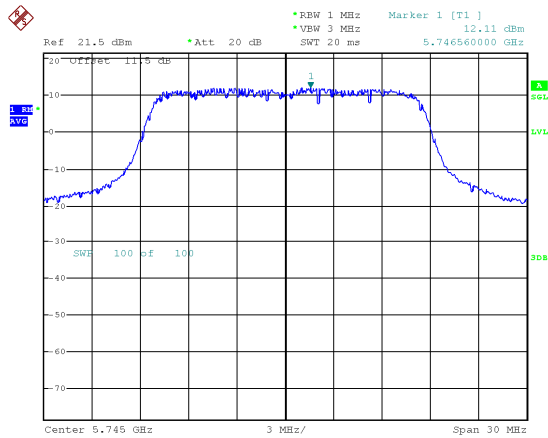


CH159

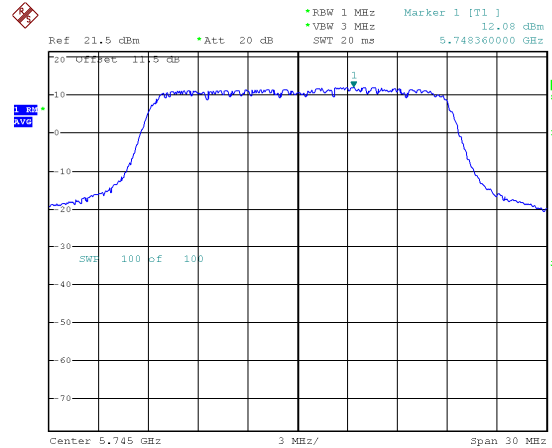




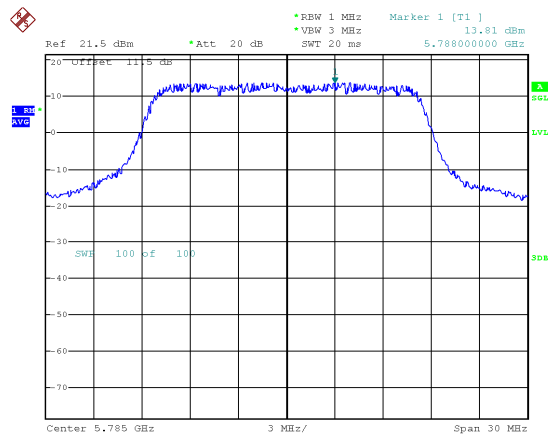
5.8G Band 4, ANT B
Modulation Standard: 802.11a (6Mbps)
CH149



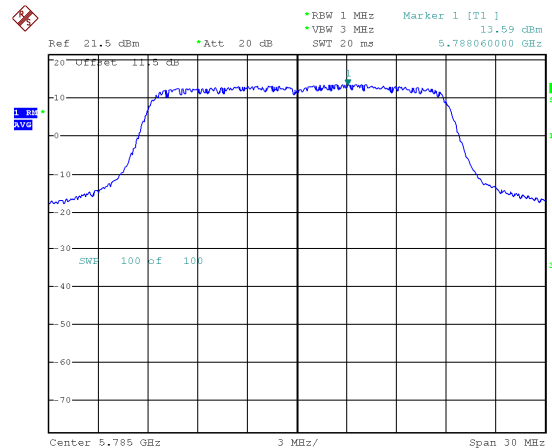
Modulation Standard: 802.11ac VHT20 (6.5Mbps)
CH149



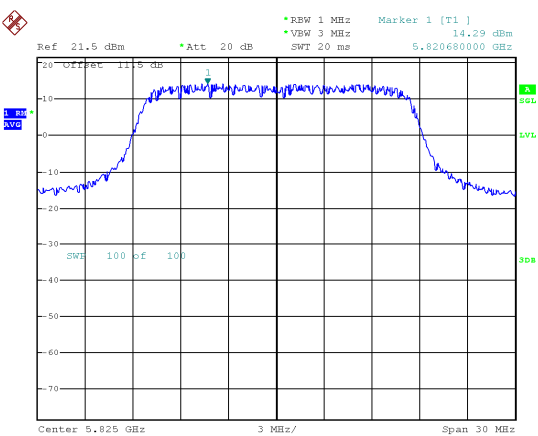
CH157



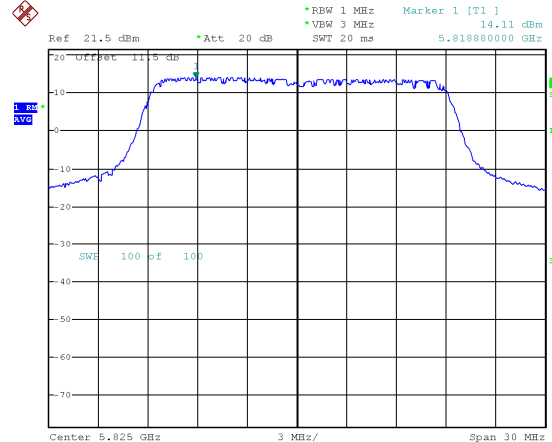
CH157



CH165

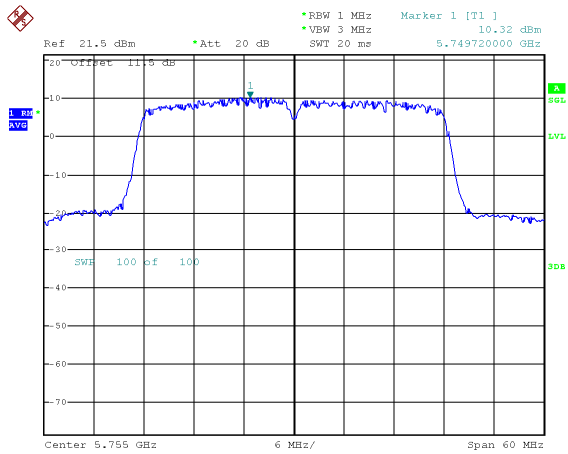


CH165

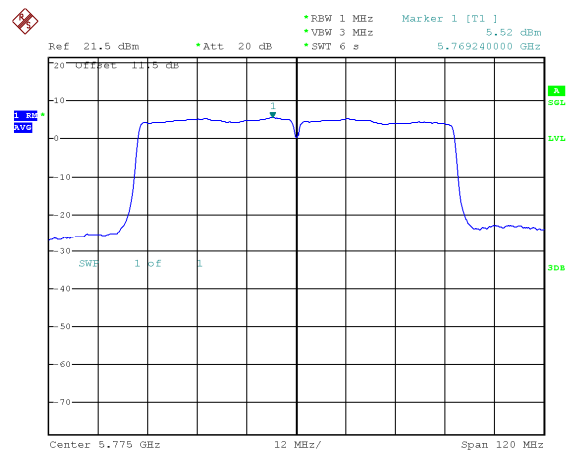




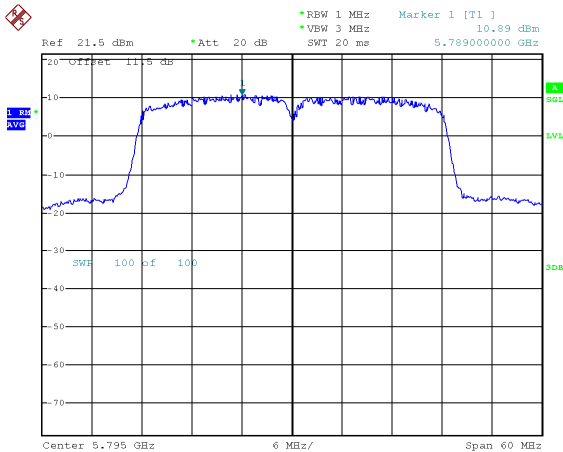
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH151



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH155



CH159



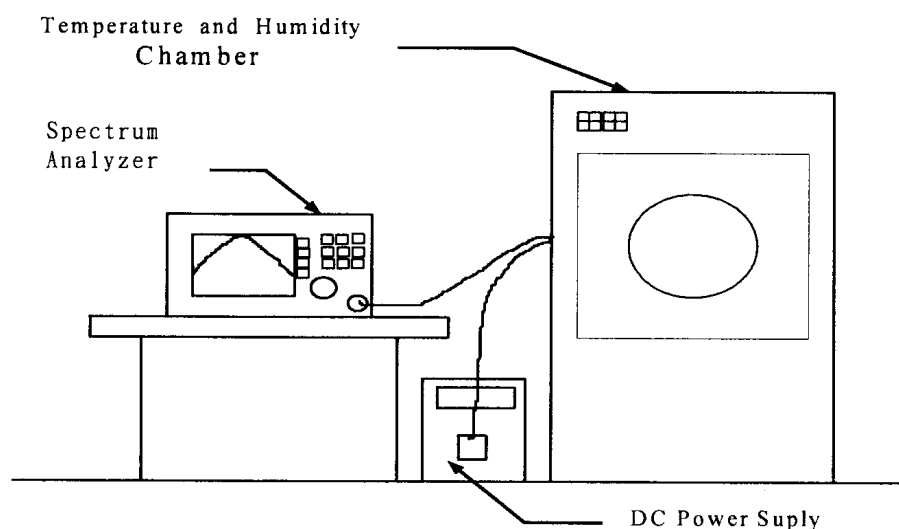


12. Frequency Stability

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**

Temperature: 22°C

Humidity: 64%

Test Date: Aug. 03, 2018

Operating frequency: 5180 MHz							
Temp	Power supply	2 minute		5 minute		10 minute	
(°C)	(V)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	102	5179.9094	-0.001749	5180.0809	0.001561	5180.0239	0.000461
	120	5179.9223	-0.001499	5179.9854	-0.000282	5180.0801	0.001547
	138	5180.0079	0.000153	5180.0796	0.001537	5180.0526	0.001016
40	102	5180.0839	0.001620	5180.0193	0.000373	5180.0658	0.001270
	120	5179.9426	-0.001108	5180.0849	0.001639	5180.0780	0.001505
	138	5180.0608	0.001174	5179.9335	-0.001283	5180.0064	0.000124
30	102	5180.0672	0.001297	5179.9736	-0.000510	5179.9265	-0.001419
	120	5180.0913	0.001762	5179.9015	-0.001901	5179.9136	-0.001669
	138	5180.0713	0.001377	5180.0201	0.000388	5180.0313	0.000605
20	102	5180.0320	0.000618	5180.0185	0.000356	5180.0692	0.001335
	120	5179.9145	-0.001650	5179.9112	-0.001715	5179.9464	-0.001035
	138	5180.0031	0.000060	5180.0384	0.000742	5179.9035	-0.001863
10	102	5180.0896	0.001730	5180.0663	0.001280	5179.9653	-0.000669
	120	5180.0870	0.001680	5179.9305	-0.001341	5180.0320	0.000617
	138	5179.9383	-0.001192	5180.0187	0.000361	5180.0344	0.000663
0	102	5179.9599	-0.000774	5180.0780	0.001505	5180.0725	0.001400
	120	5180.0686	0.001325	5180.0782	0.001509	5180.0652	0.001258
	138	5180.0320	0.000618	5179.9369	-0.001219	5180.0646	0.001247
-10	102	5180.0387	0.000748	5179.9404	-0.001151	5180.0754	0.001455
	120	5179.9156	-0.001630	5179.9855	-0.000280	5179.9271	-0.001407
	138	5180.0613	0.001183	5179.9315	-0.001322	5180.0089	0.000172
-20	102	5179.9428	-0.001105	5179.9941	-0.000114	5180.0503	0.000971
	120	5179.9904	-0.000185	5179.9920	-0.000154	5180.0258	0.000499
	138	5179.9670	-0.000637	5180.0638	0.001231	5179.9714	-0.000553
-30	102	5180.0295	0.000570	5179.9642	-0.000692	5179.9341	-0.001272
	120	5179.9899	-0.000195	5180.0561	0.001084	5179.9595	-0.000782
	138	5180.0902	0.001741	5180.0405	0.000782	5180.0620	0.001198

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 users manual.



13. Automatically Discontinue Transmission

13.1.Limit of Automatically Discontinue Transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

13.2.Test Result of Automatically Discontinue Transmission

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.