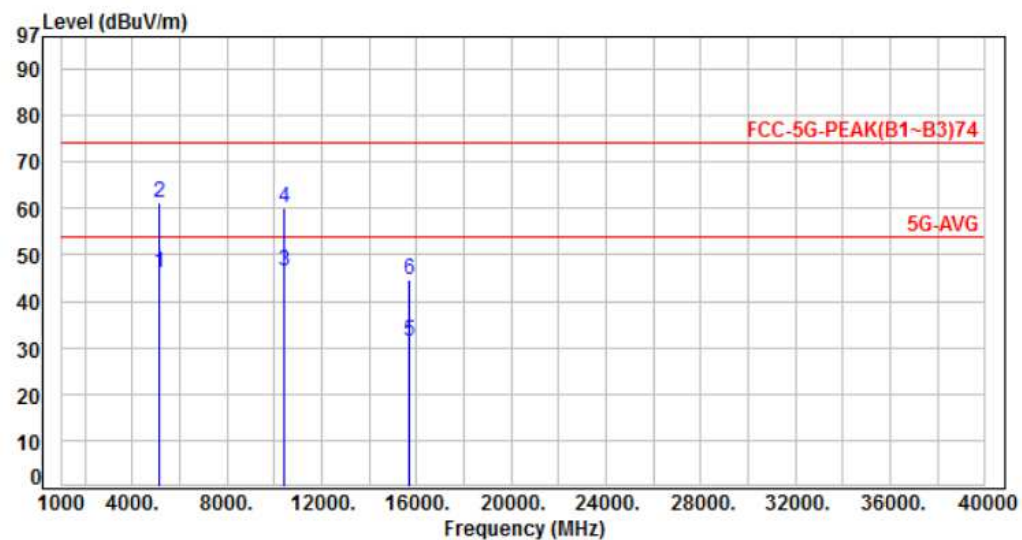




Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, CH44	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-12.71	58.97	46.26	54.00	-7.74	Average	291	144	P
2	5150.00	-12.71	73.86	61.15	74.00	-12.85	Peak	291	144	P
3	10440.00	-7.43	53.81	46.38	54.00	-7.62	Average	100	216	P
4	10440.00	-7.43	67.49	60.06	74.00	-13.94	Peak	100	216	P
5	15660.00	-3.80	34.97	31.17	54.00	-22.83	Average	100	252	P
6	15660.00	-3.80	48.61	44.81	74.00	-29.19	Peak	100	252	P

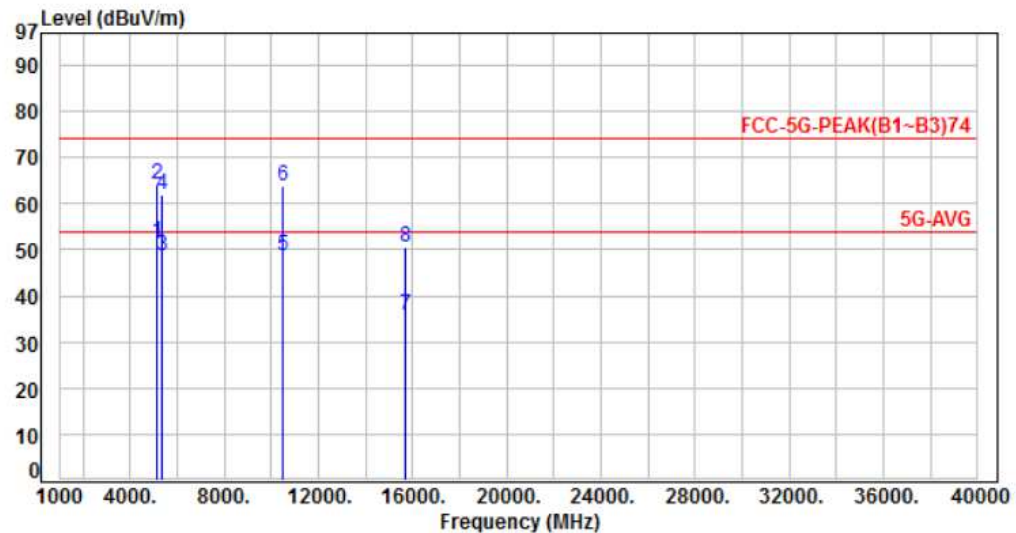
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, CH48	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-12.71	64.35	51.64	54.00	-2.36	Average	390	244	P
2	5150.00	-12.71	76.83	64.12	74.00	-9.88	Peak	390	244	P
3	5350.00	-12.32	60.88	48.56	54.00	-5.44	Average	390	244	P
4	5350.00	-12.32	74.24	61.92	74.00	-12.08	Peak	390	244	P
5	10480.00	-7.42	55.98	48.56	54.00	-5.44	Average	104	48	P
6	10480.00	-7.42	71.16	63.74	74.00	-10.26	Peak	104	48	P
7	15720.00	-3.81	39.54	35.73	54.00	-18.27	Average	281	322	P
8	15720.00	-3.81	54.22	50.41	74.00	-23.59	Peak	281	322	P

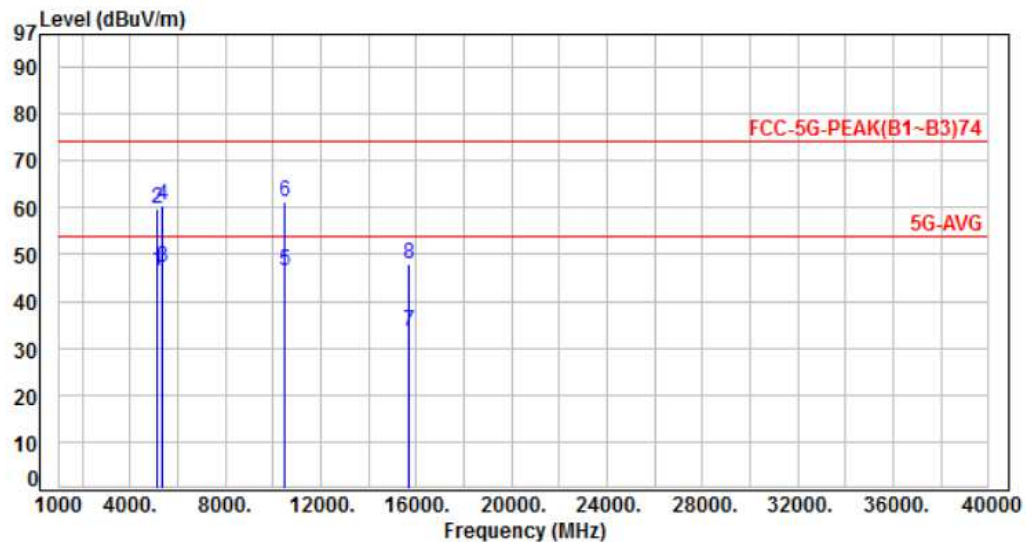
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, CH48	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-12.71	59.15	46.44	54.00	-7.56	Average	291	132	P
2	5150.00	-12.71	72.47	59.76	74.00	-14.24	Peak	291	132	P
3	5350.00	-12.32	59.36	47.04	54.00	-6.96	Average	291	132	P
4	5350.00	-12.32	72.88	60.56	74.00	-13.44	Peak	291	132	P
5	10480.00	-7.42	53.90	46.48	54.00	-7.52	Average	116	220	P
6	10480.00	-7.42	68.66	61.24	74.00	-12.76	Peak	116	220	P
7	15720.00	-3.81	37.25	33.44	54.00	-20.56	Average	118	212	P
8	15720.00	-3.81	51.77	47.96	74.00	-26.04	Peak	118	212	P

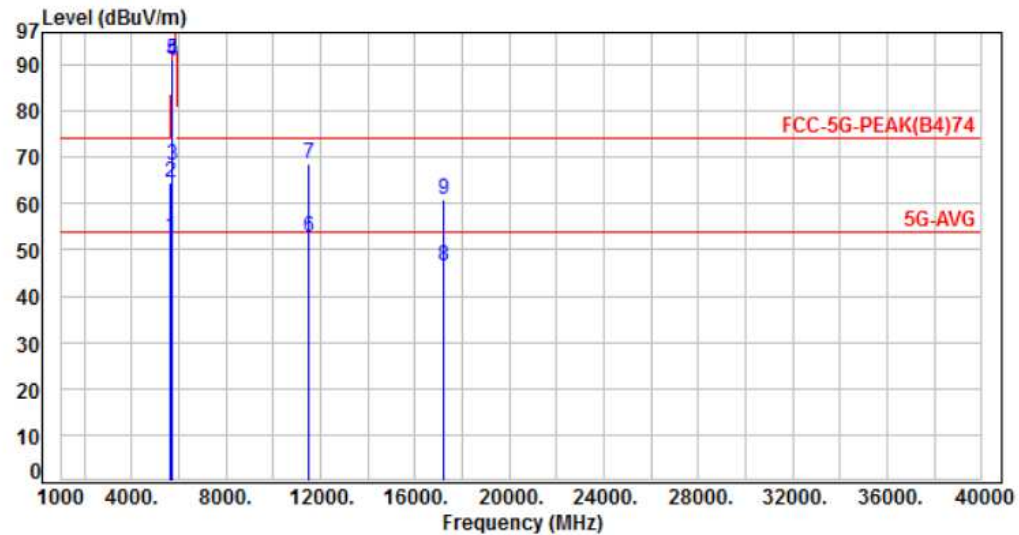
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, CH149	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-12.09	64.74	52.65	54.00	-1.35	Average	271	329	P
2	5650.00	-12.09	76.62	64.53	74.00	-9.47	Peak	271	329	P
3	5700.00	-12.11	80.46	68.35	105.20	-36.85	Peak	271	329	P
4	5720.00	-12.12	103.02	90.90	110.80	-19.90	Peak	271	329	P
5	5725.00	-12.12	103.25	91.13	122.20	-31.07	Peak	271	329	P
6	11490.00	-6.25	59.11	52.86	54.00	-1.14	Average	100	276	P
7	11490.00	-6.25	74.73	68.48	74.00	-5.52	Peak	100	276	P
8	17235.00	1.48	45.11	46.59	54.00	-7.41	Average	284	341	P
9	17235.00	1.48	59.52	61.00	74.00	-13.00	Peak	284	341	P

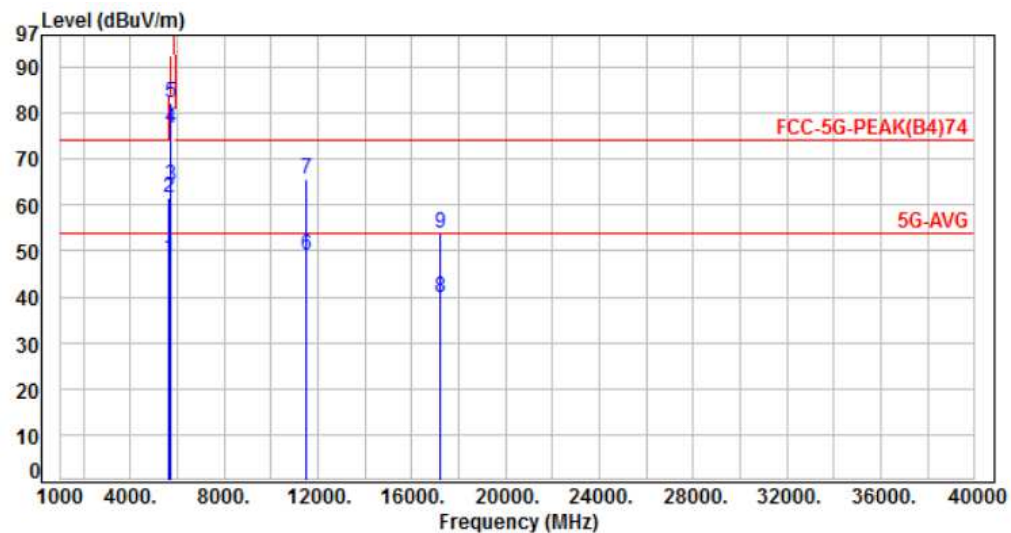
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, CH149	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-12.09	60.50	48.41	54.00	-5.59	Average	100	307	P
2	5650.00	-12.09	73.62	61.53	74.00	-12.47	Peak	100	307	P
3	5700.00	-12.11	76.46	64.35	105.20	-40.85	Peak	100	307	P
4	5720.00	-12.12	88.99	76.87	110.80	-33.93	Peak	100	307	P
5	5725.00	-12.12	94.42	82.30	122.20	-39.90	Peak	100	307	P
6	11490.00	-6.25	55.31	49.06	54.00	-4.94	Average	100	166	P
7	11490.00	-6.25	71.97	65.72	74.00	-8.28	Peak	100	166	P
8	17235.00	1.48	38.40	39.88	54.00	-14.12	Average	284	179	P
9	17235.00	1.48	52.37	53.85	74.00	-20.15	Peak	284	179	P

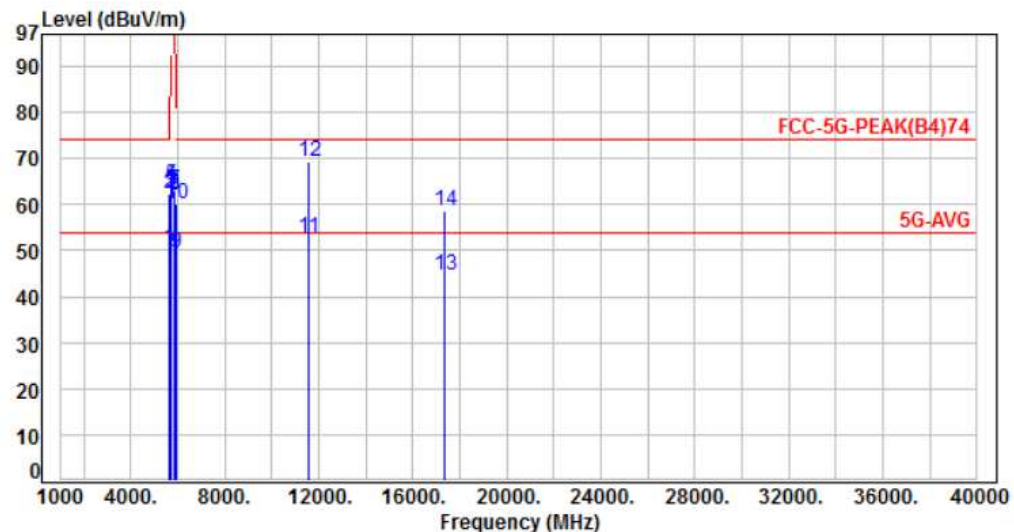
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, CH157	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-12.09	62.68	50.59	54.00	-3.41	Average	259	341	P
2	5650.00	-12.09	74.44	62.35	74.00	-11.65	Peak	259	341	P
3	5700.00	-12.11	74.99	62.88	105.20	-42.32	Peak	259	341	P
4	5720.00	-12.12	76.16	64.04	110.80	-46.76	Peak	259	341	P
5	5725.00	-12.12	76.29	64.17	122.20	-58.03	Peak	259	341	P
6	5850.00	-12.16	74.55	62.39	122.20	-59.81	Peak	247	313	P
7	5855.00	-12.16	75.05	62.89	110.80	-47.91	Peak	247	313	P
8	5875.00	-12.17	74.11	61.94	105.20	-43.26	Peak	247	313	P
9	5925.00	-12.18	61.53	49.35	54.00	-4.65	Average	247	313	P
10	5925.00	-12.18	72.33	60.15	74.00	-13.85	Peak	247	313	P
11	11570.00	-6.23	58.98	52.75	54.00	-1.25	Average	100	276	P
12	11570.00	-6.23	75.73	69.50	74.00	-4.50	Peak	100	276	P
13	17355.00	2.11	42.39	44.50	54.00	-9.50	Average	224	289	P
14	17355.00	2.11	56.43	58.54	74.00	-15.46	Peak	224	289	P

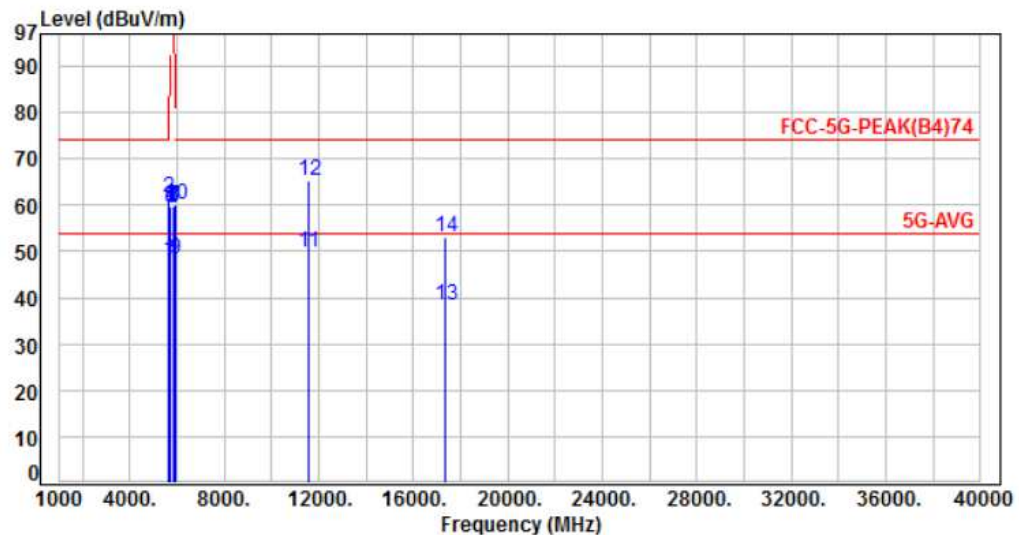
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, CH157	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-12.09	59.97	47.88	54.00	-6.12	Average	100	314	P
2	5650.00	-12.09	73.71	61.62	74.00	-12.38	Peak	100	314	P
3	5700.00	-12.11	71.89	59.78	105.20	-45.42	Peak	100	314	P
4	5720.00	-12.12	72.03	59.91	110.80	-50.89	Peak	100	314	P
5	5725.00	-12.12	71.51	59.39	122.20	-62.81	Peak	100	314	P
6	5850.00	-12.16	71.46	59.30	122.20	-62.90	Peak	100	314	P
7	5855.00	-12.16	71.97	59.81	110.80	-50.99	Peak	100	314	P
8	5875.00	-12.17	72.00	59.83	105.20	-45.37	Peak	100	314	P
9	5925.00	-12.18	60.49	48.31	54.00	-5.69	Average	100	314	P
10	5925.00	-12.18	72.43	60.25	74.00	-13.75	Peak	100	314	P
11	11570.00	-6.23	55.89	49.66	54.00	-4.34	Average	100	169	P
12	11570.00	-6.23	71.66	65.43	74.00	-8.57	Peak	100	169	P
13	17355.00	2.11	36.17	38.28	54.00	-15.72	Average	271	193	P
14	17355.00	2.11	50.88	52.99	74.00	-21.01	Peak	271	193	P

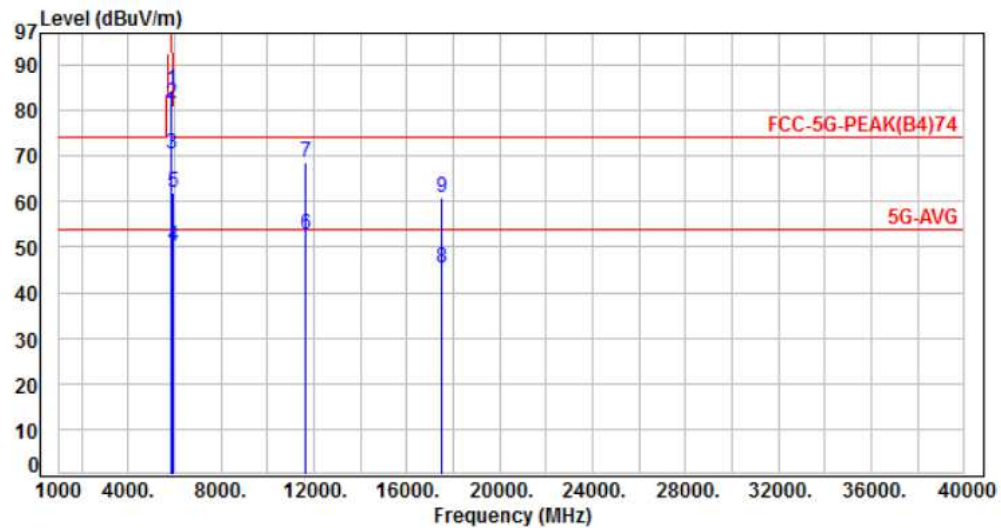
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, CH165	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	-12.16	96.60	84.44	122.20	-37.76	Peak	251	358	P
2	5855.00	-12.16	93.74	81.58	110.80	-29.22	Peak	251	358	P
3	5875.00	-12.17	82.55	70.38	105.20	-34.82	Peak	251	358	P
4	5925.00	-12.18	62.42	50.24	54.00	-3.76	Average	251	358	P
5	5925.00	-12.18	74.08	61.90	74.00	-12.10	Peak	251	358	P
6	11650.00	-6.21	58.99	52.78	54.00	-1.22	Average	110	277	P
7	11650.00	-6.21	74.75	68.54	74.00	-5.46	Peak	110	277	P
8	17475.00	2.74	42.79	45.53	54.00	-8.47	Average	304	189	P
9	17475.00	2.74	58.23	60.97	74.00	-13.03	Peak	304	187	P

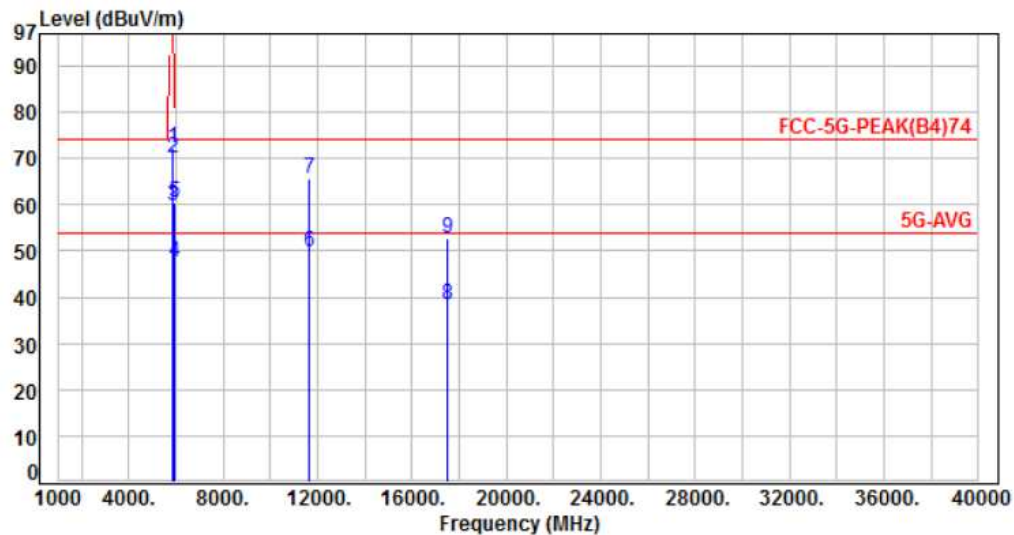
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, CH165	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	-12.16	84.41	72.25	122.20	-49.95	Peak	100	308	P
2	5855.00	-12.16	82.17	70.01	110.80	-40.79	Peak	100	308	P
3	5875.00	-12.17	72.02	59.85	105.20	-45.35	Peak	100	308	P
4	5925.00	-12.18	59.93	47.75	54.00	-6.25	Average	100	308	P
5	5925.00	-12.18	72.70	60.52	74.00	-13.48	Peak	100	308	P
6	11650.00	-6.21	55.89	49.68	54.00	-4.32	Average	100	162	P
7	11650.00	-6.21	71.93	65.72	74.00	-8.28	Peak	100	162	P
8	17475.00	2.74	35.67	38.41	54.00	-15.59	Average	287	194	P
9	17475.00	2.74	50.10	52.84	74.00	-21.16	Peak	287	194	P

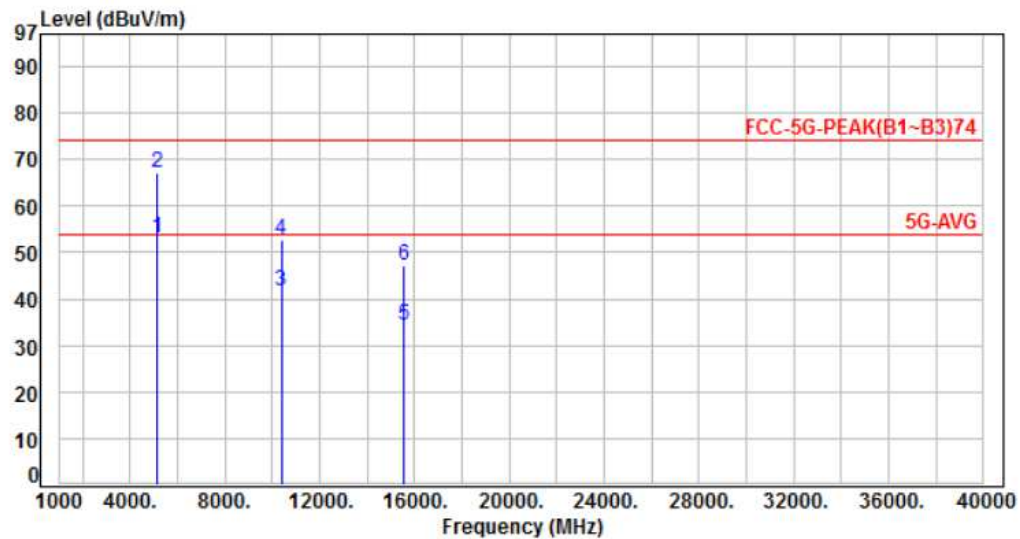
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 5, CH38	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-12.71	65.93	53.22	54.00	-0.78	Average	391	177	P
2	5150.00	-12.71	79.78	67.07	74.00	-6.93	Peak	391	177	P
3	10380.00	-7.43	49.17	41.74	54.00	-12.26	Average	100	82	P
4	10380.00	-7.43	60.31	52.88	74.00	-21.12	Peak	100	82	P
5	15570.00	-3.78	38.25	34.47	54.00	-19.53	Average	100	341	P
6	15570.00	-3.78	51.16	47.38	74.00	-26.62	Peak	100	341	P

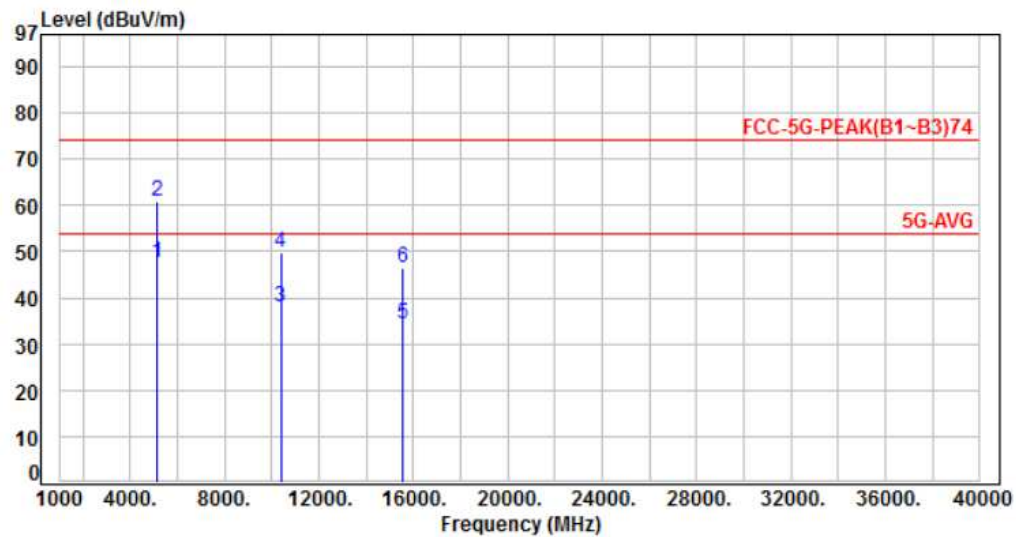
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5, CH38	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-12.71	60.33	47.62	54.00	-6.38	Average	256	112	P
2	5150.00	-12.71	73.47	60.76	74.00	-13.24	Peak	256	112	P
3	10380.00	-7.43	45.30	37.87	54.00	-16.13	Average	100	218	P
4	10380.00	-7.43	57.40	49.97	74.00	-24.03	Peak	100	218	P
5	15570.00	-3.78	37.91	34.13	54.00	-19.87	Average	104	251	P
6	15570.00	-3.78	50.16	46.38	74.00	-27.62	Peak	104	251	P

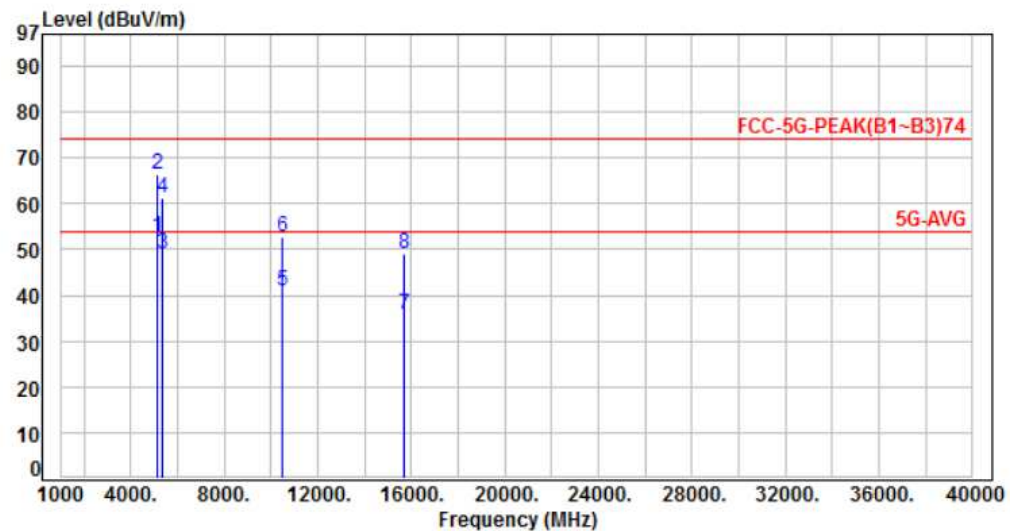
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 5, CH46	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-12.71	65.62	52.91	54.00	-1.09	Average	400	227	P
2	5150.00	-12.71	79.02	66.31	74.00	-7.69	Peak	400	227	P
3	5350.00	-12.32	61.31	48.99	54.00	-5.01	Average	400	227	P
4	5350.00	-12.32	73.56	61.24	74.00	-12.76	Peak	400	227	P
5	10460.00	-7.42	48.51	41.09	54.00	-12.91	Average	100	83	P
6	10460.00	-7.42	60.11	52.69	74.00	-21.31	Peak	100	83	P
7	15690.00	-3.81	39.53	35.72	54.00	-18.28	Average	100	340	P
8	15690.00	-3.81	53.02	49.21	74.00	-24.79	Peak	100	340	P

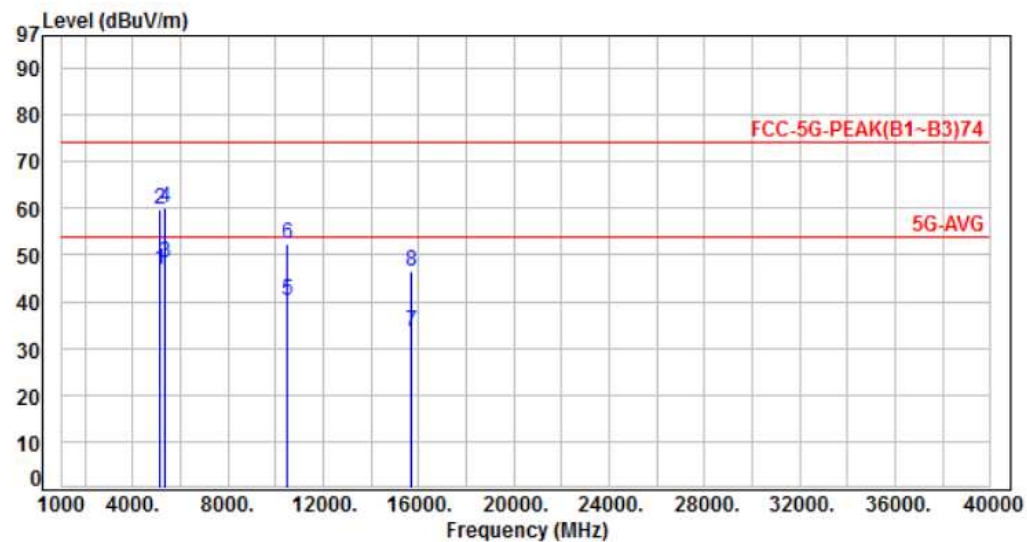
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5, CH46	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-12.71	59.69	46.98	54.00	-7.02	Average	303	137	P
2	5150.00	-12.71	72.45	59.74	74.00	-14.26	Peak	303	137	P
3	5350.00	-12.32	60.56	48.24	54.00	-5.76	Average	303	137	P
4	5350.00	-12.32	72.58	60.26	74.00	-13.74	Peak	303	137	P
5	10460.00	-7.42	47.71	40.29	54.00	-13.71	Average	100	215	P
6	10460.00	-7.42	59.95	52.53	74.00	-21.47	Peak	100	215	P
7	15690.00	-3.81	37.24	33.43	54.00	-20.57	Average	100	221	P
8	15690.00	-3.81	50.41	46.60	74.00	-27.40	Peak	100	221	P

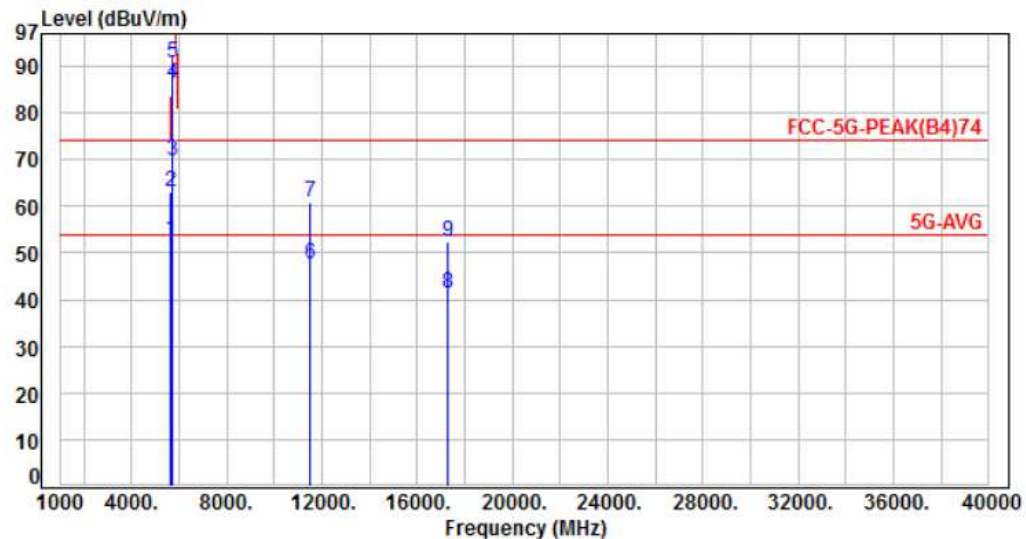
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 5, CH151	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-12.09	64.69	52.60	54.00	-1.40	Average	286	183	P
2	5650.00	-12.09	75.18	63.09	74.00	-10.91	Peak	286	183	P
3	5700.00	-12.11	81.76	69.65	105.20	-35.55	Peak	286	183	P
4	5720.00	-12.12	98.40	86.28	110.80	-24.52	Peak	286	183	P
5	5725.00	-12.12	102.85	90.73	122.20	-31.47	Peak	286	183	P
6	11510.00	-6.26	53.85	47.59	54.00	-6.41	Average	105	191	P
7	11510.00	-6.26	67.01	60.75	74.00	-13.25	Peak	105	191	P
8	17265.00	1.65	39.57	41.22	54.00	-12.78	Average	271	216	P
9	17265.00	1.65	50.56	52.21	74.00	-21.79	Peak	271	216	P

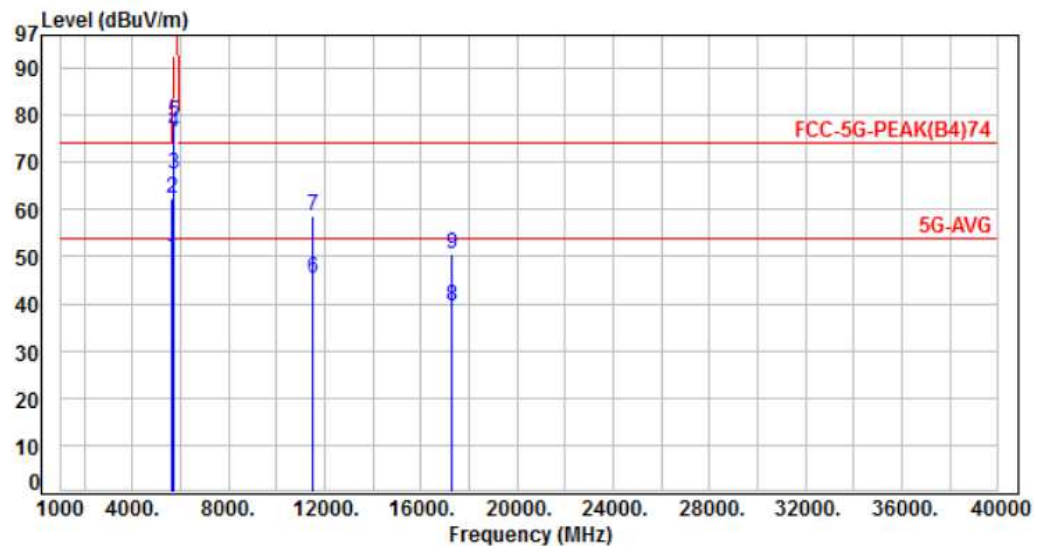
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5, CH151	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-12.09	61.90	49.81	54.00	-4.19	Average	100	308	P
2	5650.00	-12.09	74.44	62.35	74.00	-11.65	Peak	100	308	P
3	5700.00	-12.11	79.44	67.33	105.20	-37.87	Peak	100	308	P
4	5720.00	-12.12	88.32	76.20	110.80	-34.60	Peak	100	308	P
5	5725.00	-12.12	90.75	78.63	122.20	-43.57	Peak	100	308	P
6	11510.00	-6.26	51.49	45.23	54.00	-8.77	Average	114	163	P
7	11510.00	-6.26	64.86	58.60	74.00	-15.40	Peak	114	163	P
8	17265.00	1.65	37.65	39.30	54.00	-14.70	Average	268	177	P
9	17265.00	1.65	48.90	50.55	74.00	-23.45	Peak	268	177	P

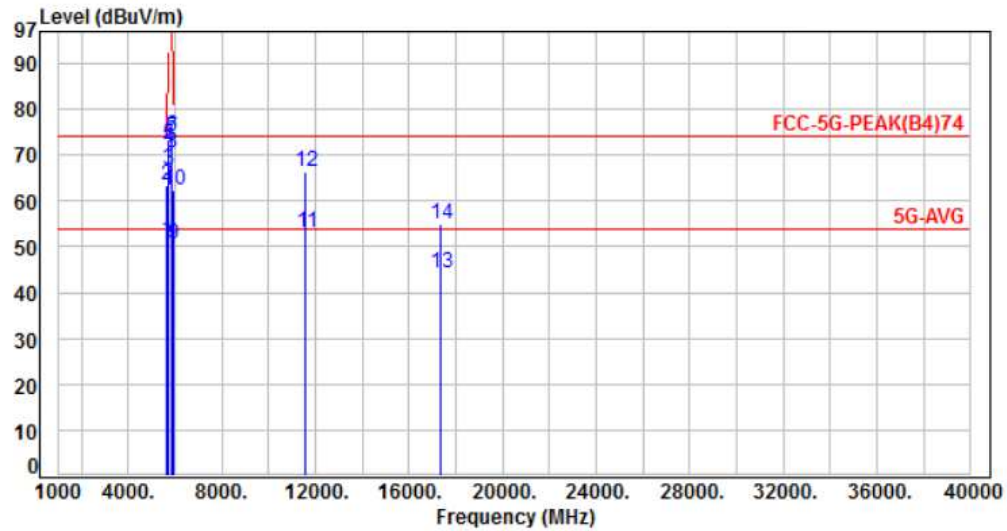
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 5, CH159	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-12.09	63.52	51.43	54.00	-2.57	Average	279	166	P
2	5650.00	-12.09	75.70	63.61	74.00	-10.39	Peak	279	166	P
3	5700.00	-12.11	78.72	66.61	105.20	-38.59	Peak	279	166	P
4	5720.00	-12.12	83.63	71.51	110.80	-39.29	Peak	279	166	P
5	5725.00	-12.12	84.50	72.38	122.20	-49.82	Peak	279	166	P
6	5850.00	-12.16	86.44	74.28	122.20	-47.92	Peak	277	203	P
7	5855.00	-12.16	85.82	73.66	110.80	-37.14	Peak	277	203	P
8	5875.00	-12.17	82.50	70.33	105.20	-34.87	Peak	277	203	P
9	5925.00	-12.18	62.89	50.71	54.00	-3.29	Average	277	203	P
10	5925.00	-12.18	74.67	62.49	74.00	-11.51	Peak	277	203	P
11	11590.00	-6.23	59.52	53.29	54.00	-0.71	Average	107	188	P
12	11590.00	-6.23	72.67	66.44	74.00	-7.56	Peak	107	188	P
13	17385.00	2.26	41.86	44.12	54.00	-9.88	Average	274	224	P
14	17385.00	2.26	52.61	54.87	74.00	-19.13	Peak	274	224	P

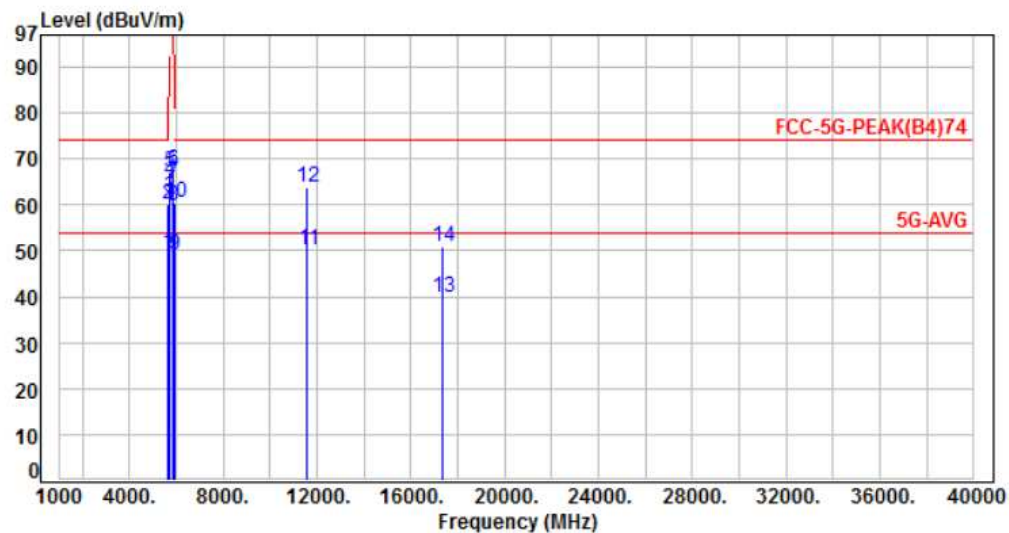
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5, CH159	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-12.09	61.43	49.34	54.00	-4.66	Average	100	312	P
2	5650.00	-12.09	72.14	60.05	74.00	-13.95	Peak	100	312	P
3	5700.00	-12.11	73.54	61.43	105.20	-43.77	Peak	100	312	P
4	5720.00	-12.12	77.27	65.15	110.80	-45.65	Peak	100	312	P
5	5725.00	-12.12	79.12	67.00	122.20	-55.20	Peak	100	312	P
6	5850.00	-12.16	79.62	67.46	122.20	-54.74	Peak	100	312	P
7	5855.00	-12.16	77.25	65.09	110.80	-45.71	Peak	100	312	P
8	5875.00	-12.17	72.02	59.85	105.20	-45.35	Peak	100	312	P
9	5925.00	-12.18	61.26	49.08	54.00	-4.92	Average	100	312	P
10	5925.00	-12.18	72.81	60.63	74.00	-13.37	Peak	100	312	P
11	11590.00	-6.23	56.31	50.08	54.00	-3.92	Average	116	166	P
12	11590.00	-6.23	70.06	63.83	74.00	-10.17	Peak	116	166	P
13	17385.00	2.26	37.44	39.70	54.00	-14.30	Average	273	185	P
14	17385.00	2.26	48.61	50.87	74.00	-23.13	Peak	273	185	P

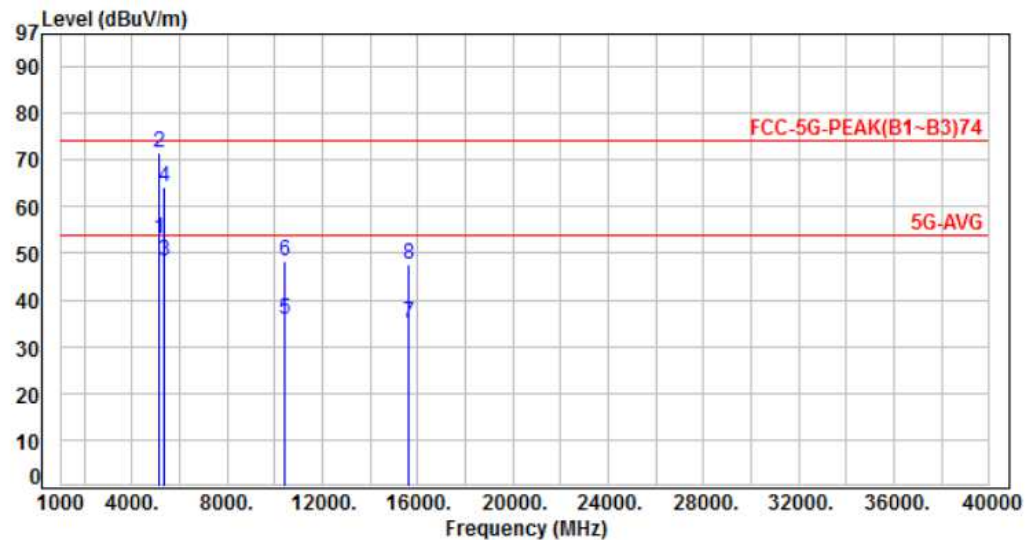
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 6, CH42	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-12.71	65.97	53.26	54.00	-0.74	Average	383	179	P
2	5150.00	-12.71	84.28	71.57	74.00	-2.43	Peak	383	179	P
3	5350.00	-12.32	60.58	48.26	54.00	-5.74	Average	383	179	P
4	5350.00	-12.32	76.64	64.32	74.00	-9.68	Peak	383	179	P
5	10420.00	-7.44	43.35	35.91	54.00	-18.09	Average	100	102	P
6	10420.00	-7.44	55.61	48.17	74.00	-25.83	Peak	100	102	P
7	15630.00	-3.80	38.97	35.17	54.00	-18.83	Average	100	347	P
8	15630.00	-3.80	51.40	47.60	74.00	-26.40	Peak	100	347	P

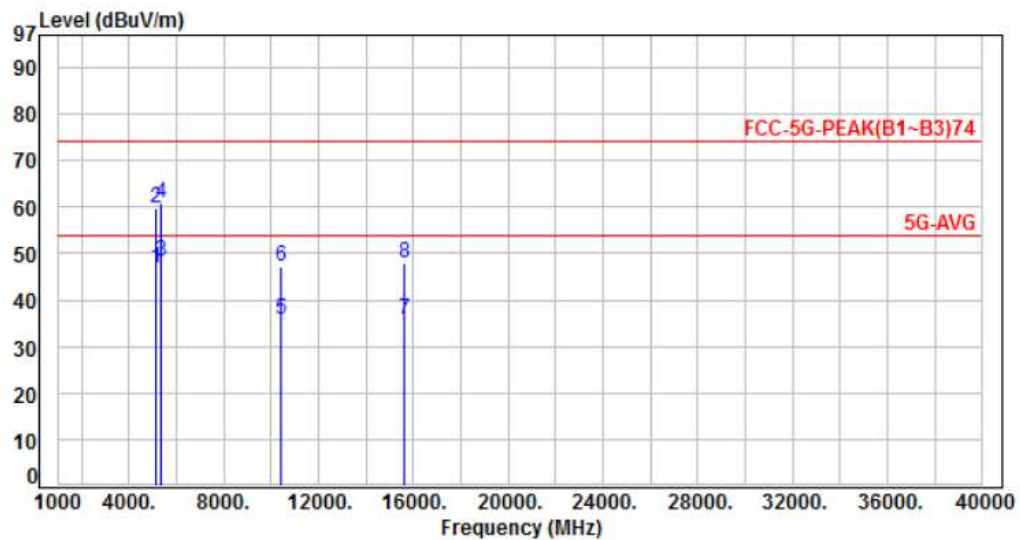
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 6, CH42	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-12.71	59.38	46.67	54.00	-7.33	Average	154	320	P
2	5150.00	-12.71	72.52	59.81	74.00	-14.19	Peak	154	320	P
3	5350.00	-12.32	60.63	48.31	54.00	-5.69	Average	154	320	P
4	5350.00	-12.32	73.17	60.85	74.00	-13.15	Peak	154	320	P
5	10420.00	-7.44	43.32	35.88	54.00	-18.12	Average	100	212	P
6	10420.00	-7.44	54.67	47.23	74.00	-26.77	Peak	100	212	P
7	15630.00	-3.80	39.62	35.82	54.00	-18.18	Average	105	244	P
8	15630.00	-3.80	51.83	48.03	74.00	-25.97	Peak	105	244	P

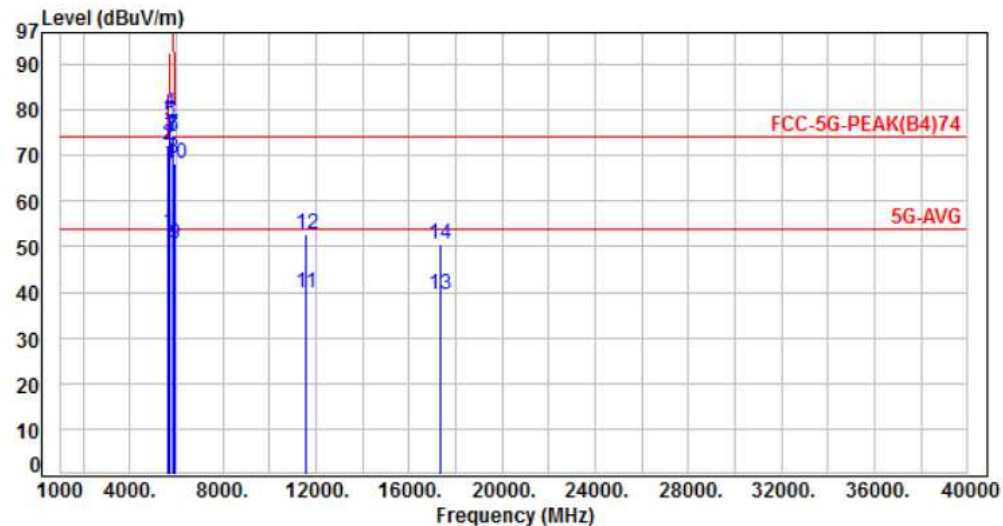
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 6, CH155	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-12.09	65.31	53.22	54.00	-0.78	Average	253	154	P
2	5650.00	-12.09	84.20	72.11	74.00	-1.89	Peak	253	154	P
3	5700.00	-12.11	86.20	74.09	105.20	-31.11	Peak	253	154	P
4	5720.00	-12.12	91.42	79.30	110.80	-31.50	Peak	253	154	P
5	5725.00	-12.12	89.44	77.32	122.20	-44.88	Peak	253	154	P
6	5850.00	-12.16	86.39	74.23	122.20	-47.97	Peak	241	45	P
7	5855.00	-12.16	86.68	74.52	110.80	-36.28	Peak	241	45	P
8	5875.00	-12.17	81.51	69.34	105.20	-35.86	Peak	241	45	P
9	5925.00	-12.18	62.86	50.68	54.00	-3.32	Average	241	45	P
10	5925.00	-12.18	80.35	68.17	74.00	-5.83	Peak	241	45	P
11	11550.00	-6.24	45.93	39.69	54.00	-14.31	Average	109	186	P
12	11550.00	-6.24	59.05	52.81	74.00	-21.19	Peak	109	186	P
13	17325.00	1.96	37.49	39.45	54.00	-14.55	Average	271	218	P
14	17325.00	1.96	48.71	50.67	74.00	-23.33	Peak	271	218	P

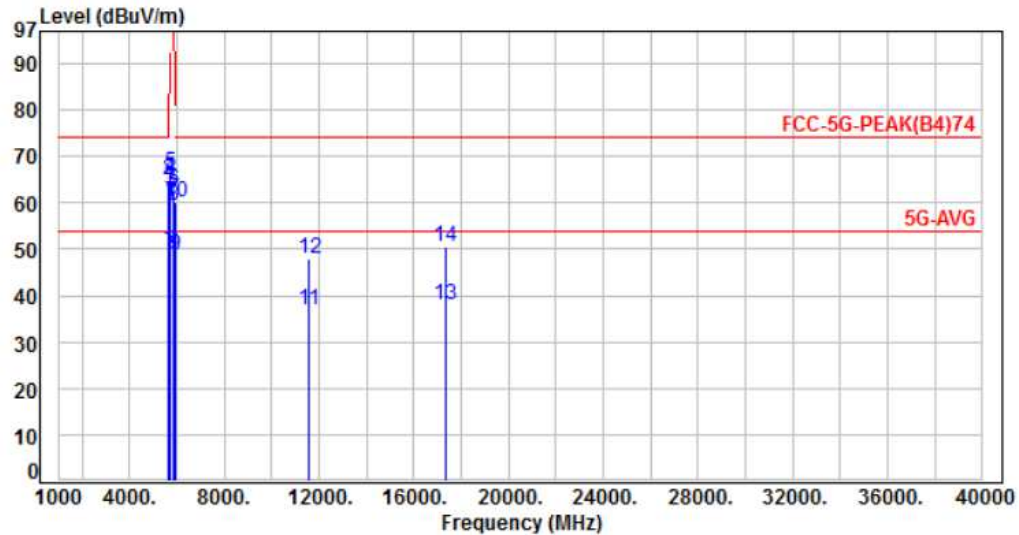
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 6, CH155	Temperature	: 24°C
Test Date	: Jun. 13, 2017	Humidity	: 66%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-12.09	61.94	49.85	54.00	-4.15	Average	100	311	P
2	5650.00	-12.09	76.90	64.81	74.00	-9.19	Peak	100	311	P
3	5700.00	-12.11	74.94	62.83	105.20	-42.37	Peak	100	311	P
4	5720.00	-12.12	77.30	65.18	110.80	-45.62	Peak	100	311	P
5	5725.00	-12.12	78.32	66.20	122.20	-56.00	Peak	100	311	P
6	5850.00	-12.16	74.82	62.66	122.20	-59.54	Peak	100	311	P
7	5855.00	-12.16	73.11	60.95	110.80	-49.85	Peak	100	311	P
8	5875.00	-12.17	71.60	59.43	105.20	-45.77	Peak	100	311	P
9	5925.00	-12.18	60.89	48.71	54.00	-5.29	Average	100	311	P
10	5925.00	-12.18	72.16	59.98	74.00	-14.02	Peak	100	311	P
11	11550.00	-6.24	42.95	36.71	54.00	-17.29	Average	112	173	P
12	11550.00	-6.24	54.34	48.10	74.00	-25.90	Peak	112	173	P
13	17325.00	1.96	36.15	38.11	54.00	-15.89	Average	268	179	P
14	17325.00	1.96	48.50	50.46	74.00	-23.54	Peak	268	179	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

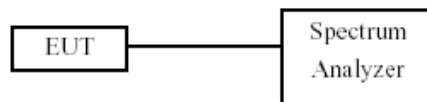
7.1. Test Limit

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: 23°C

Humidity: 61%

Test Date: Jul. 27, 2017

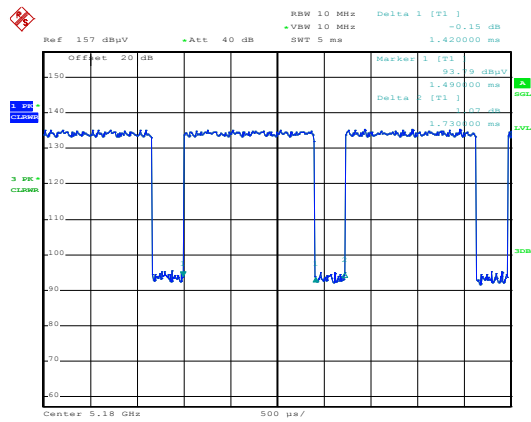
Modulation Type	On Time (msec)	Period Time (msec)	Duty Cycle (%)	1/T Minimum VBW(Hz)	Duty Cycle correction Factor (dB)
802.11a	1.42	1.73	82.08%	704.23	0.86
802.11ac VHT20	0.38	0.70	54.55%	2604.17	2.63
802.11ac VHT40	0.22	0.55	40.15%	4545.45	3.96
802.11ac VHT80	0.14	0.46	29.82%	7352.94	5.25

7.5. Measurement Methods

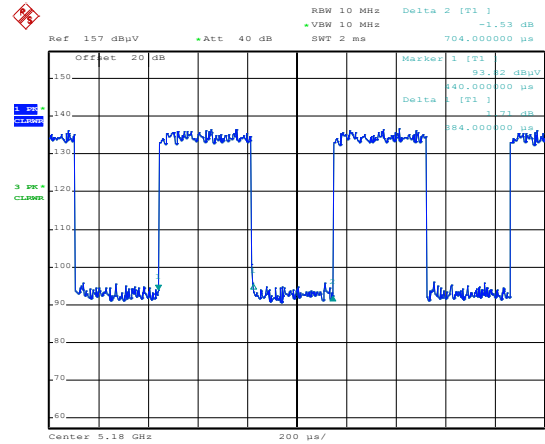
26 dB and 6dB Emission BW	KDB 789033 D02 v01, Section C
99% Occupied BW	KDB 789033 D02 v01, Section D
Conducted Output Power	KDB 789033 D02 v01, Section E.2.d and E.3.b (Method PM-G)
Power Spectral Density	KDB 789033 D02 v01, Section F
Unwanted emissions in restricted bands	KDB 789033 D02 v01, Sections G and H
Unwanted emissions in non-restricted bands	KDB 789033 D02 v01, Sections G and H



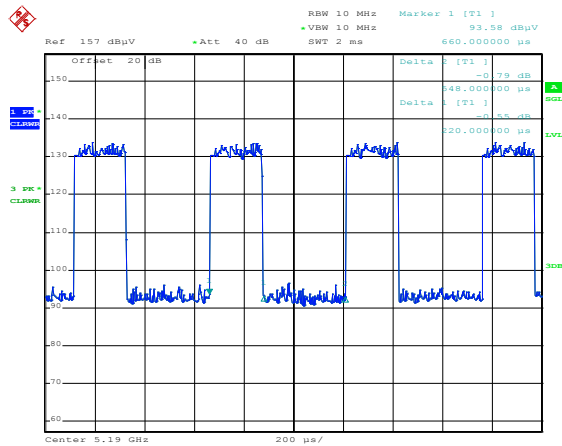
Modulation Standard: 802.11a (6Mbps)



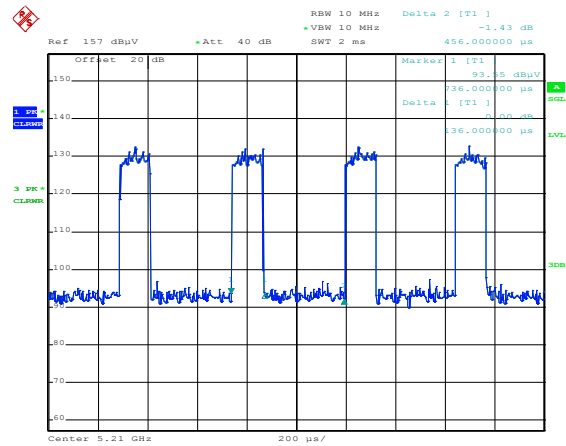
Modulation Standard: 802.11ac VHT20 (6.5Mbps)



Modulation Standard: 802.11ac VHT40 (13.5Mbps)



Modulation Standard: 802.11ac VHT80 (29.3Mbps)





8. 6dB Bandwidth

8.1. Test Limit

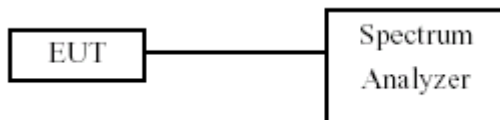
FCC §15.407

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

Temperature: 23°C

Humidity: 61%

Test Date: Jul. 27, 2017

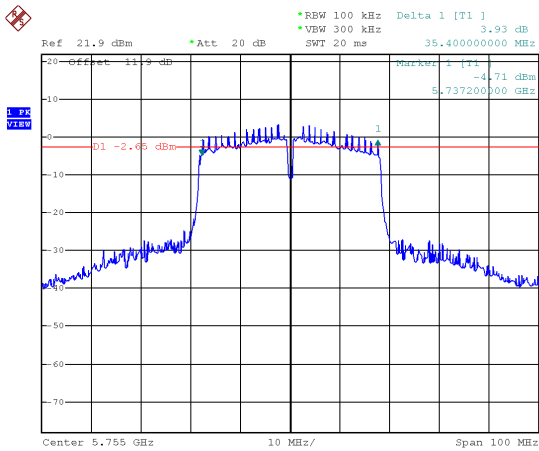
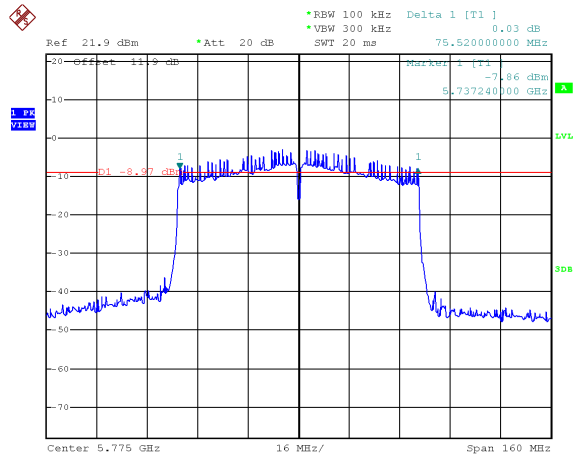
In the 5.8G Band

Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)
			ANT 0	ANT 1	ANT 2	ANT 3	
802.11a	149	5745	16.00	16.30	15.30	16.20	0.50
	157	5785	16.20	16.10	16.00	16.30	0.50
	165	5825	15.30	16.10	15.30	16.30	0.50
802.11ac VHT20	149	5745	16.10	16.70	16.30	16.00	0.50
	157	5785	16.10	17.00	16.80	16.00	0.50
	165	5825	16.20	16.90	16.90	16.20	0.50
802.11ac VHT40	155	5755	35.40	35.40	35.40	35.80	0.50
	159	5795	35.40	35.40	35.20	35.40	0.50
802.11ac VHT80	155	5775	75.52	75.52	75.52	75.20	0.50

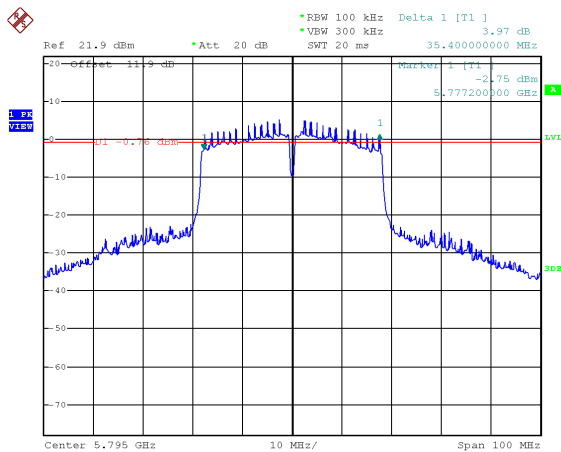




ANT 0

Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155

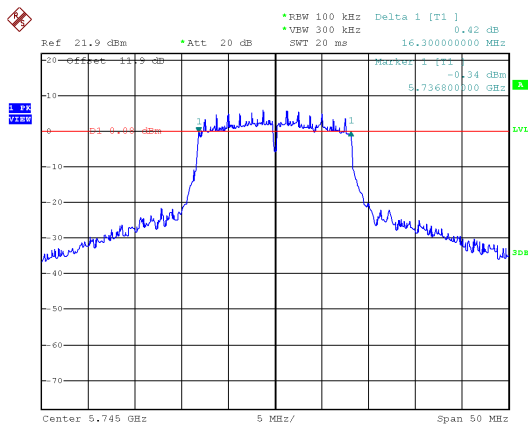
CH159



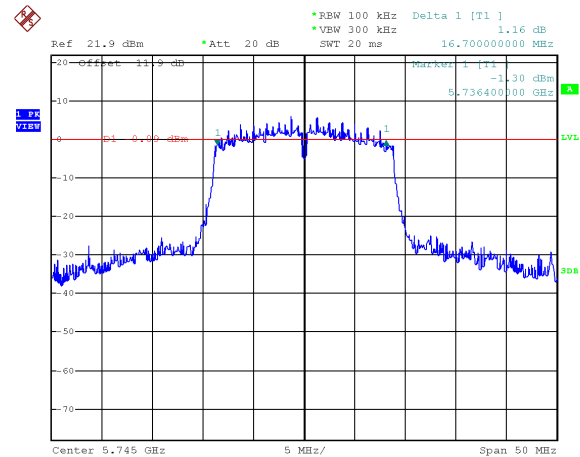


ANT 1

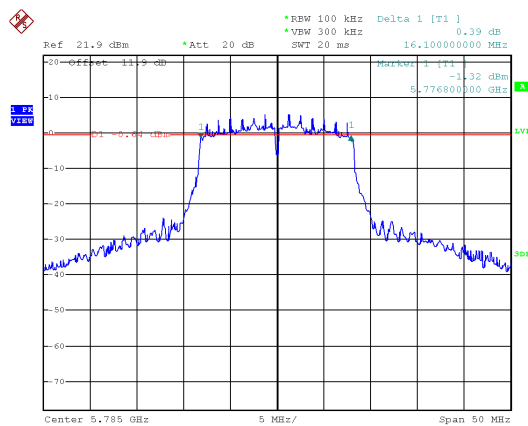
Modulation Standard: 802.11a (6Mbps)
CH149



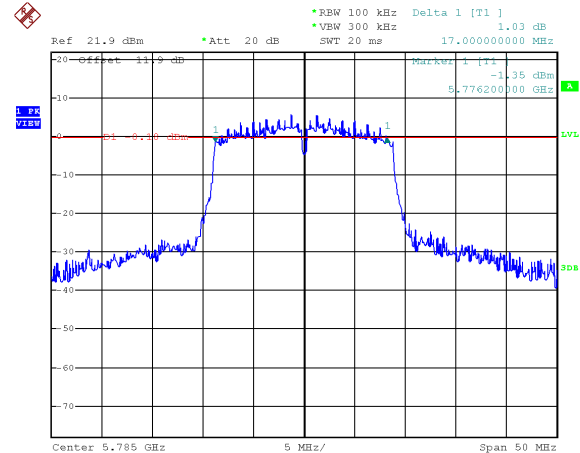
Modulation Standard: 802.11ac, VHT20 (6.5Mbps)
CH149



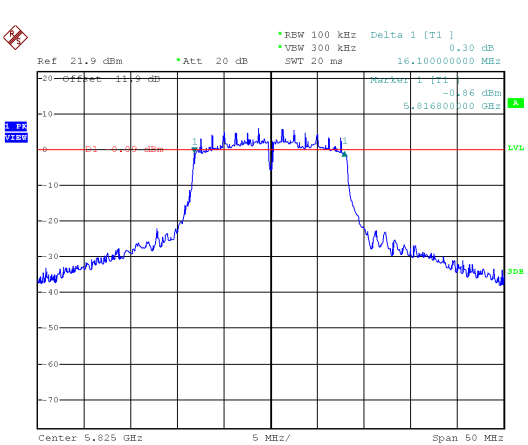
CH157



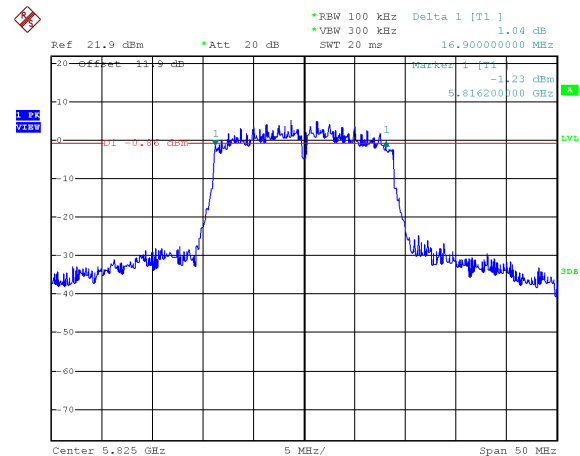
CH157



CH165

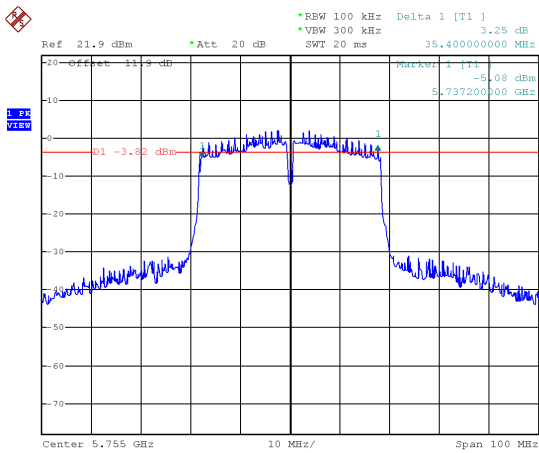
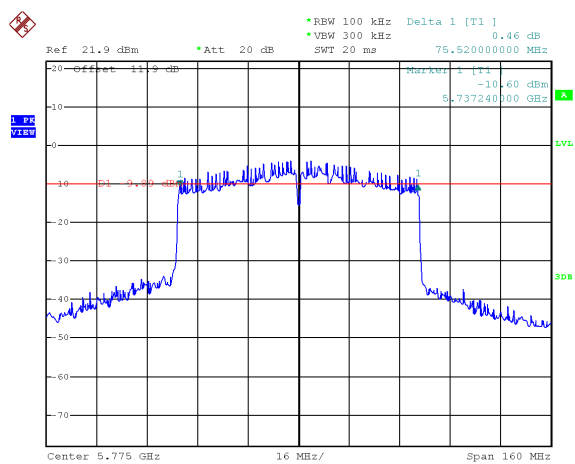


CH165

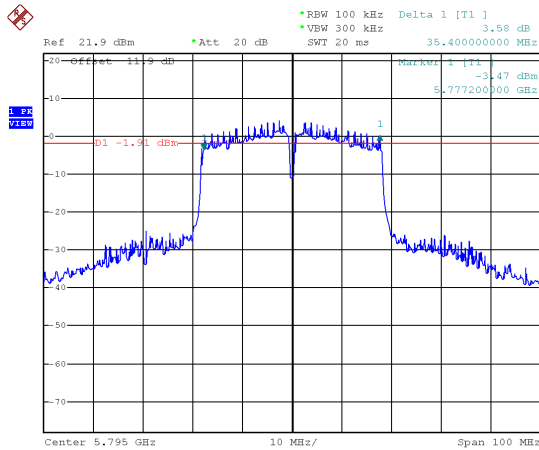




ANT 2

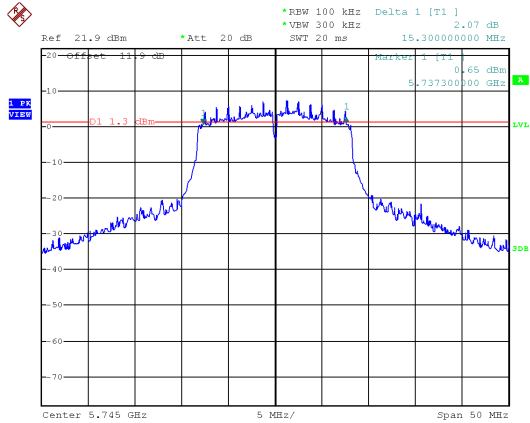
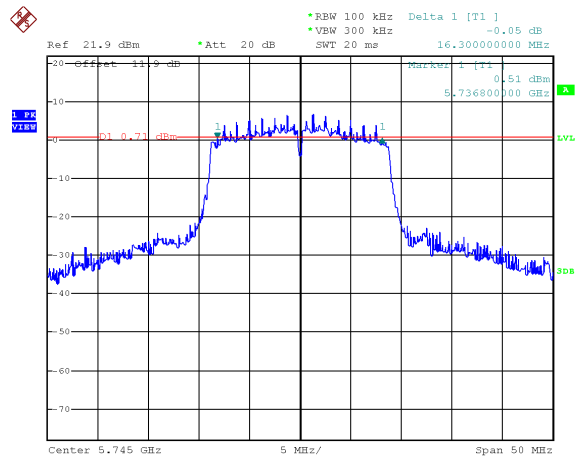
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155

CH159

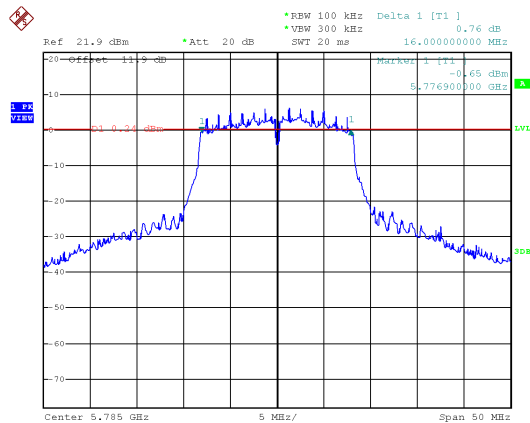




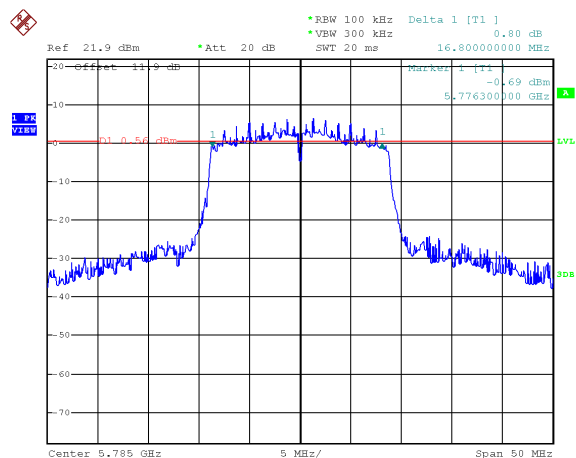
ANT 2

Modulation Standard: 802.11a (6Mbps)
CH149Modulation Standard: 802.11ac, VHT20 (6.5Mbps)
CH149

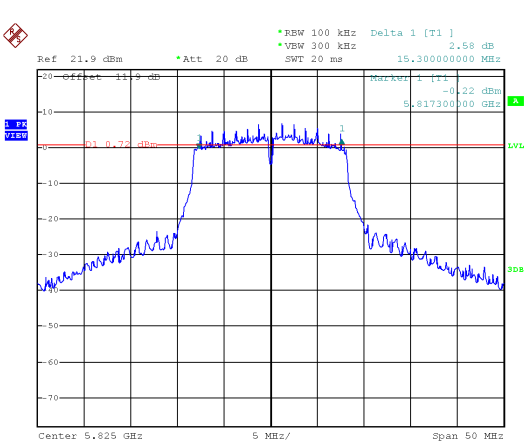
CH157



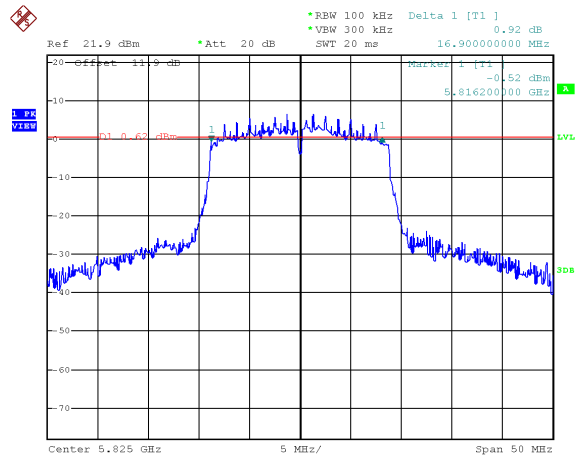
CH157



CH165

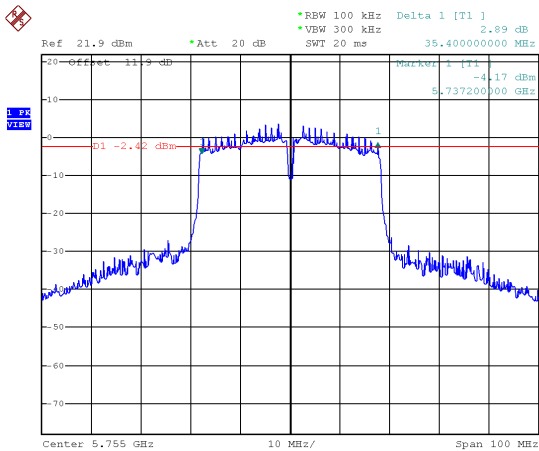
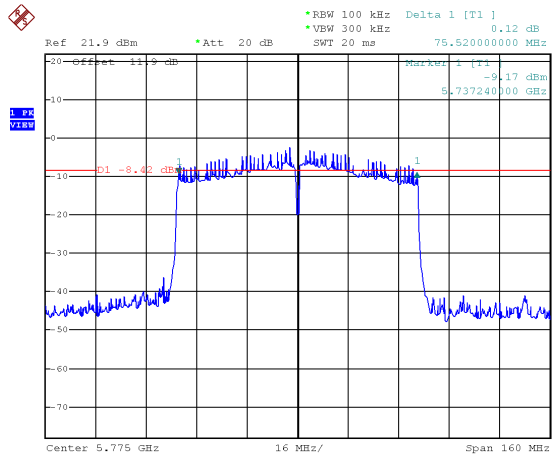


CH165

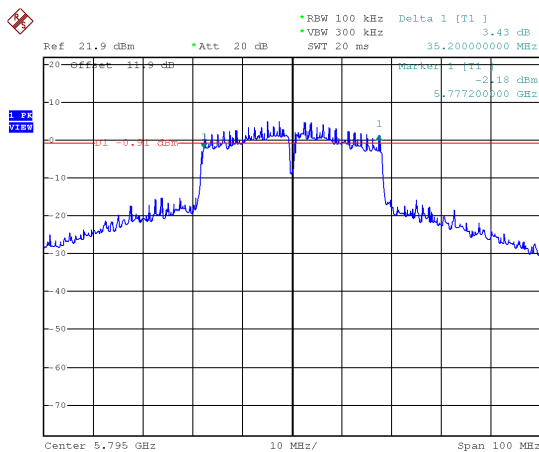




ANT 2

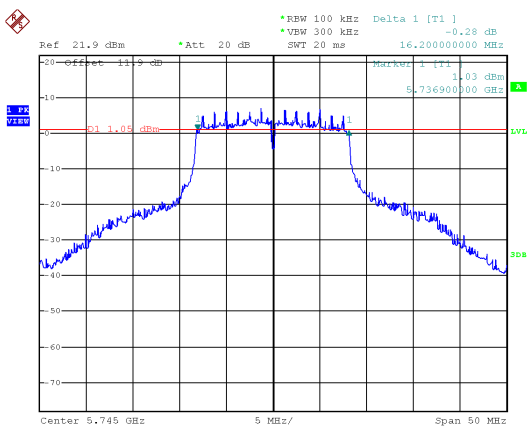
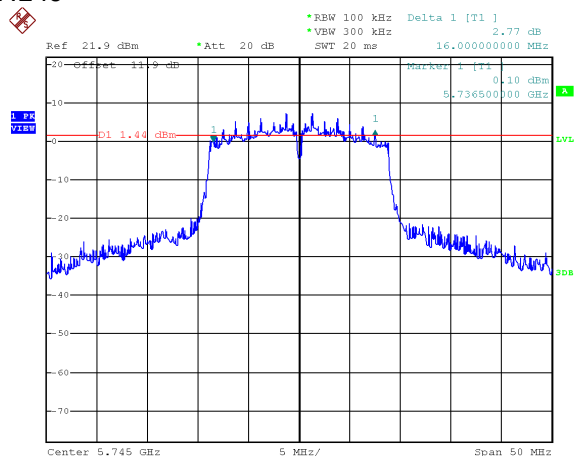
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155

CH159

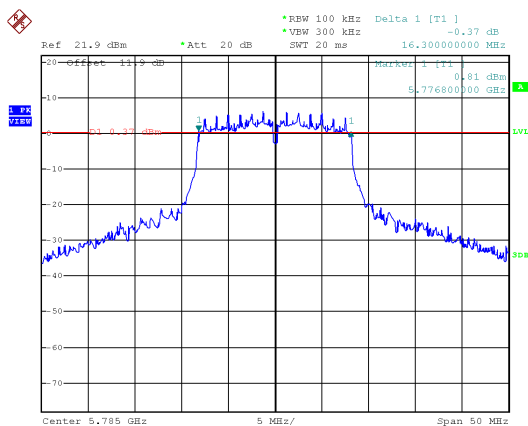




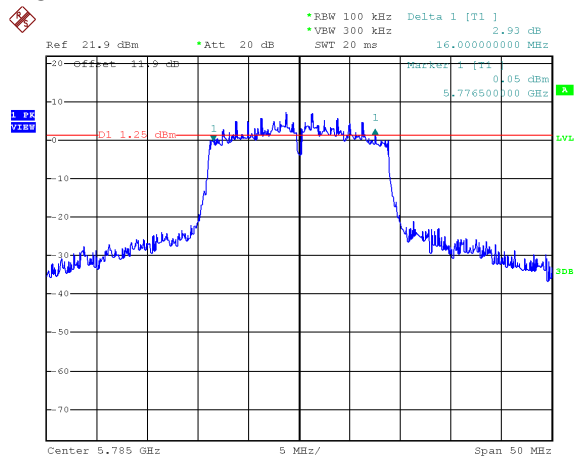
ANT 3

Modulation Standard: 802.11a (6Mbps)
CH149Modulation Standard: 802.11ac, VHT20 (6.5Mbps)
CH149

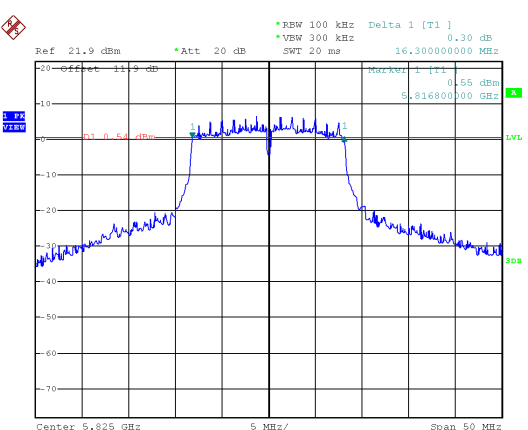
CH157



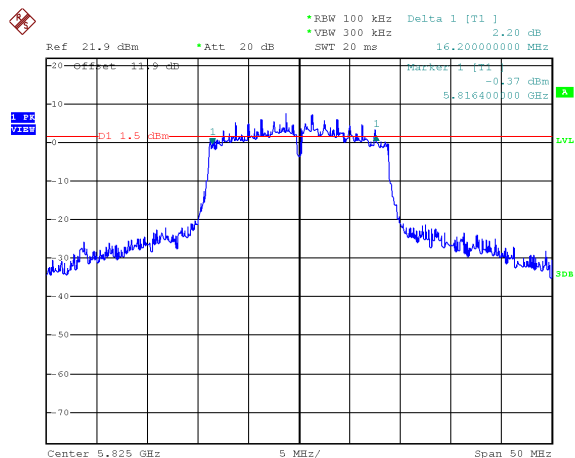
CH157



CH165

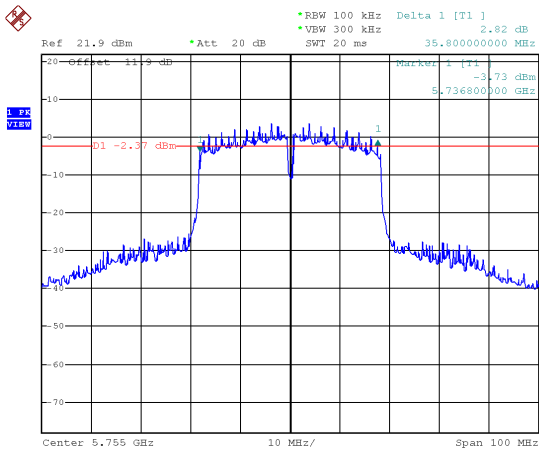
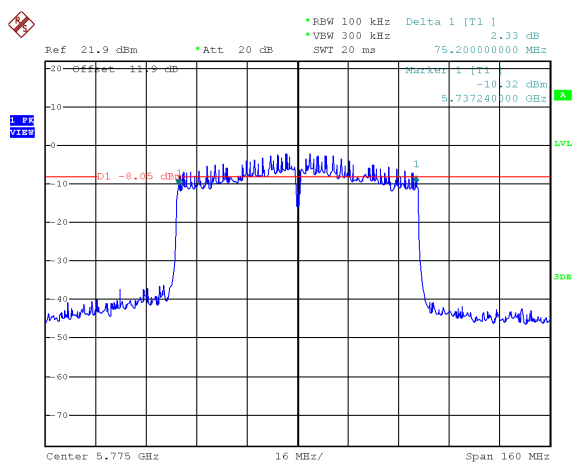


CH165

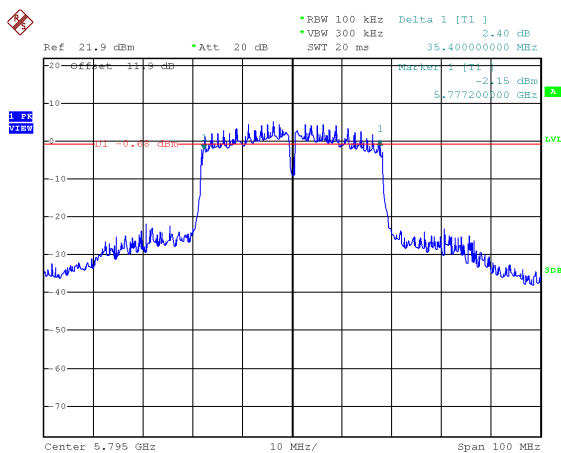




ANT 3

Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155

CH159





9. 26dB Bandwidth

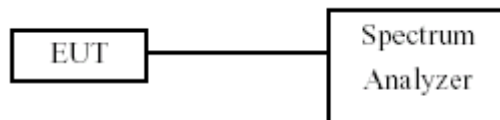
9.1. Test Limit

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

Temperature: 23°C

Humidity: 61%

Test Date: Jul. 27, 2017

In the 5.2G Band

Modulation Type	Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
			ANT 0	ANT 1	ANT 2	ANT 3
802.11a	36	5180	20.10	20.30	20.05	20.10
	44	5220	19.90	19.95	20.00	19.95
	48	5240	19.80	19.95	19.70	20.40
802.11ac VHT20	36	5180	20.60	20.20	20.30	20.50
	44	5220	20.60	20.20	20.30	20.40
	48	5240	20.50	20.10	20.30	20.40
802.11ac VHT40	38	5190	41.60	41.60	41.40	41.60
	46	5230	41.80	41.40	41.60	42.00
802.11ac VHT80	42	5210	80.64	80.00	80.96	80.96

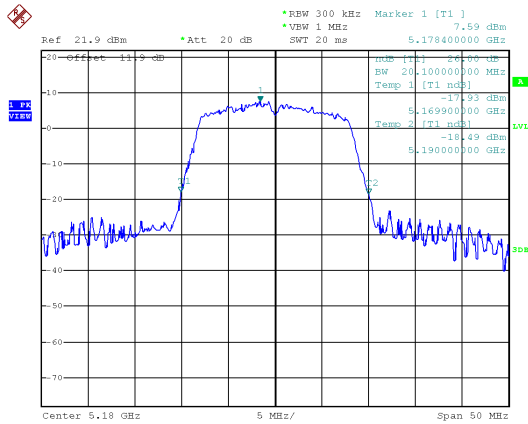


26dB Bandwidth

ANT 0

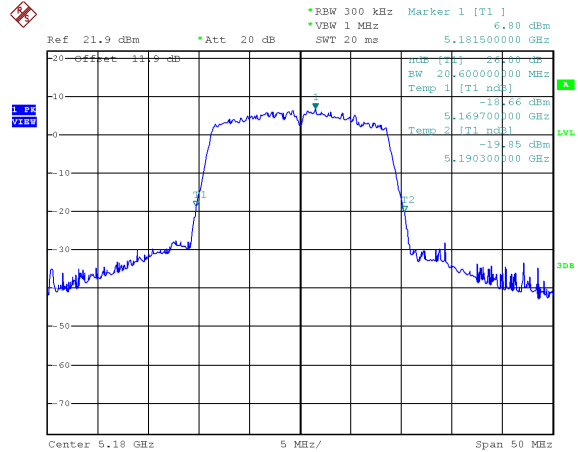
Modulation Standard: 802.11a (6Mbps)

CH36

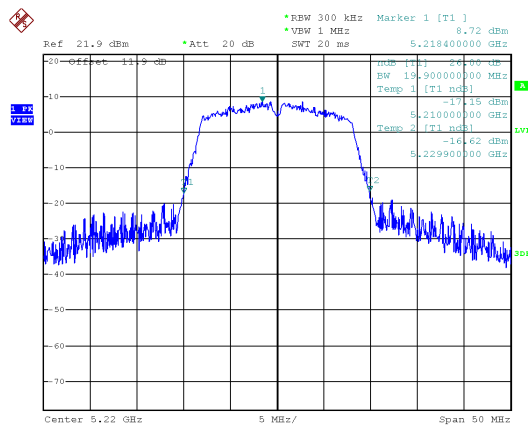


802.11ac VHT20 (6.5Mbps)

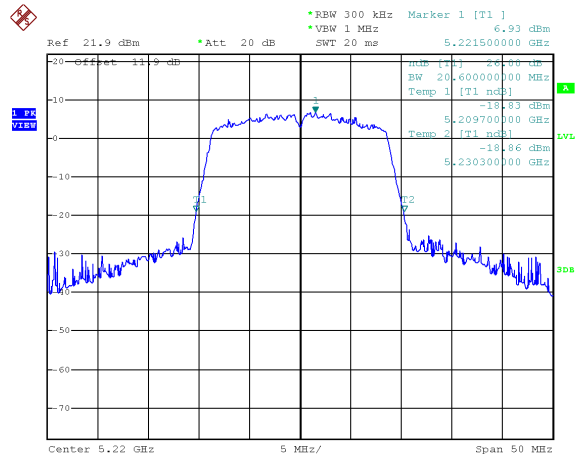
CH36



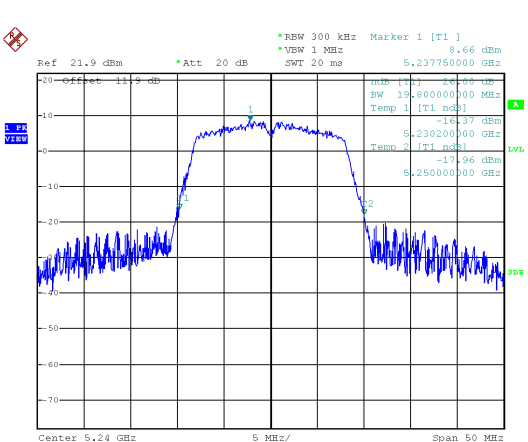
CH44



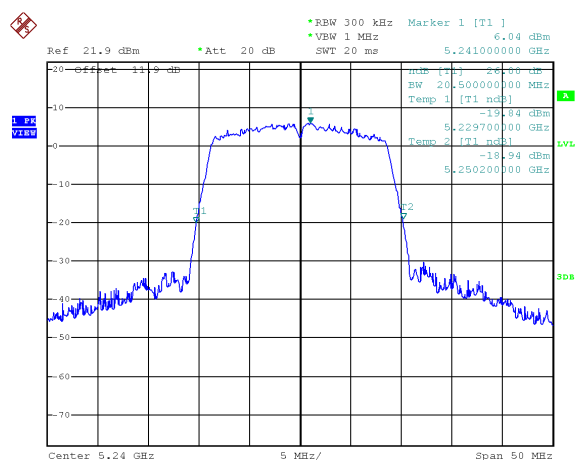
CH44



CH48

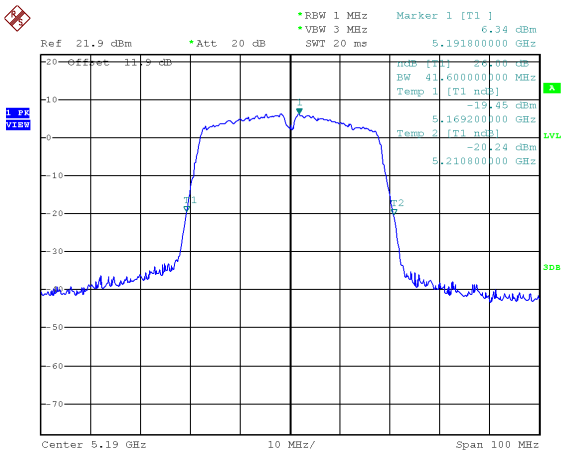
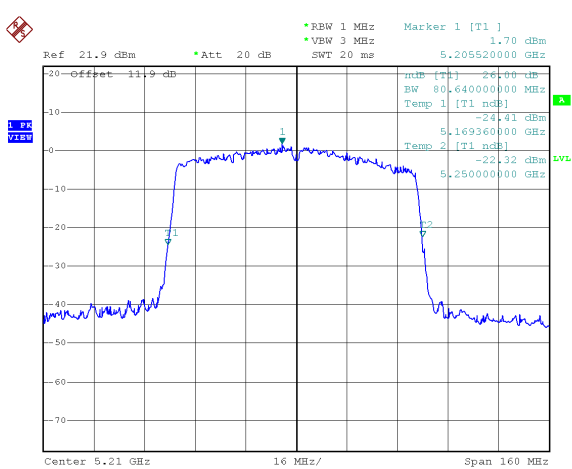


CH48

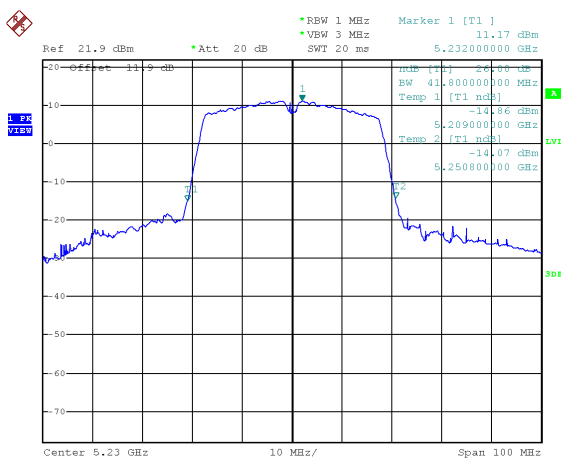




ANT 0

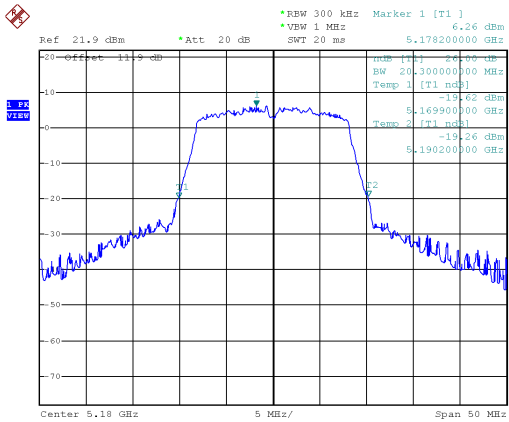
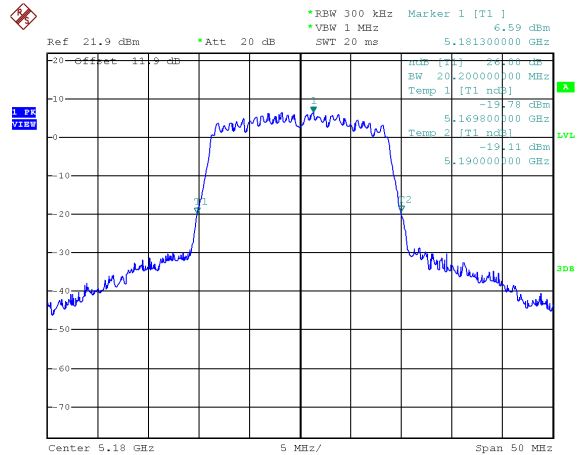
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42

CH46

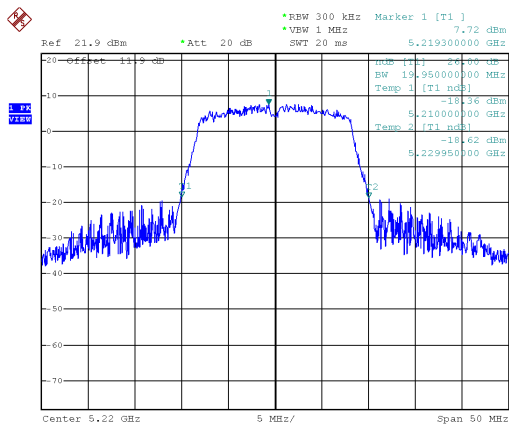




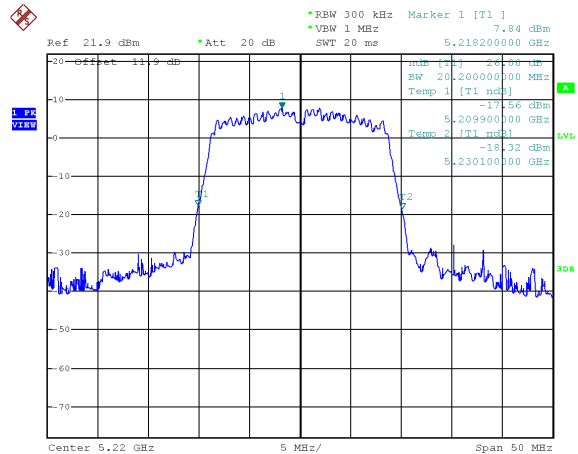
ANT 1

Modulation Standard: 802.11a (6Mbps)
CH36802.11ac VHT20 (6.5Mbps)
CH36

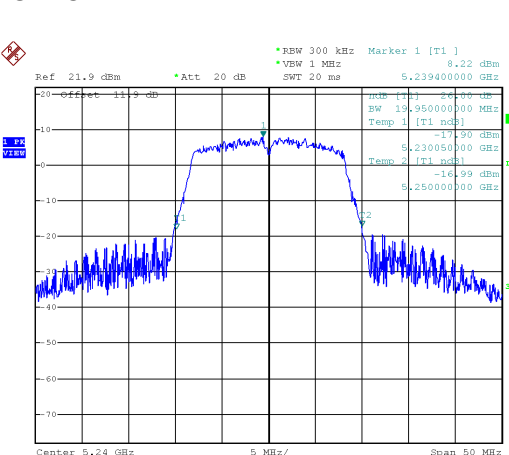
CH44



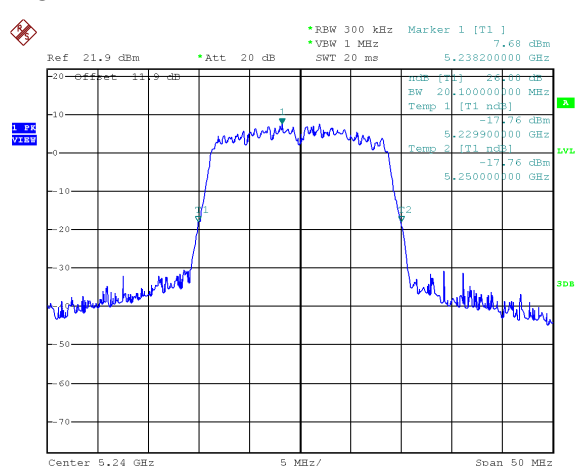
CH44



CH48

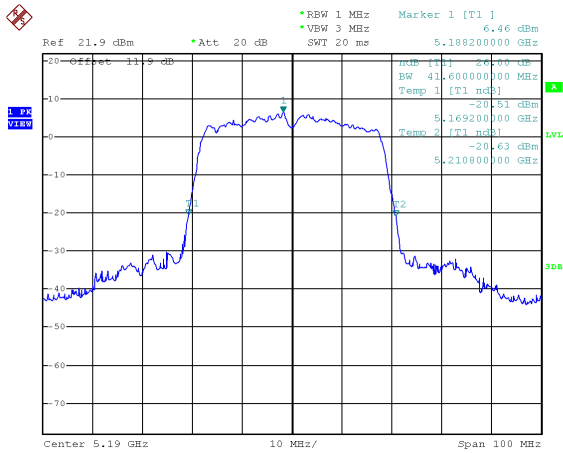
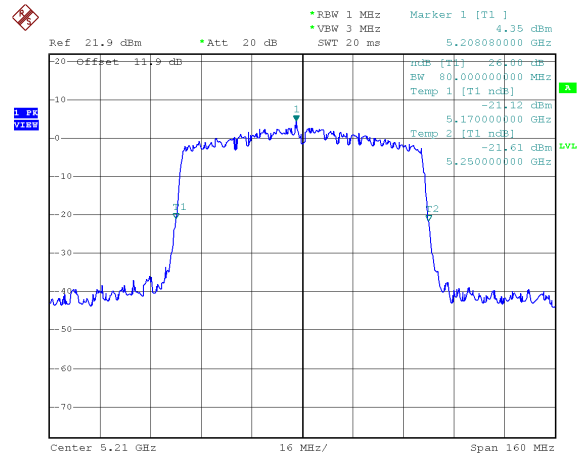


CH48

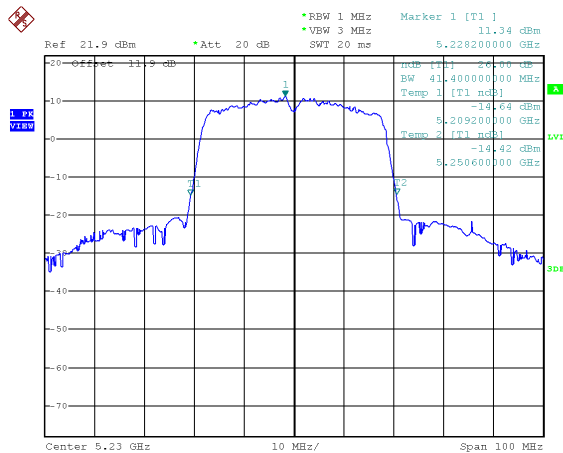




ANT 1

Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42

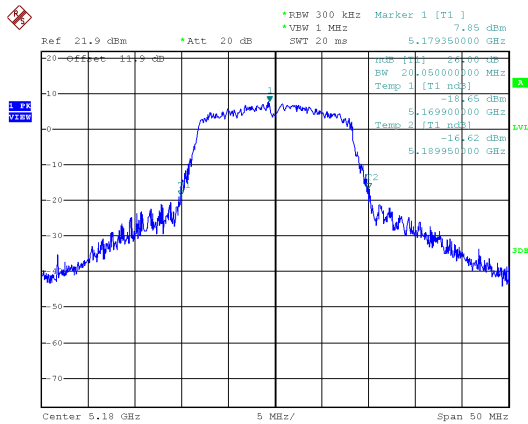
CH46



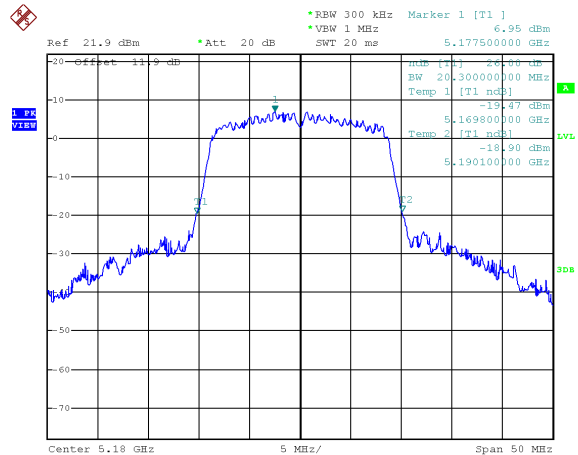


ANT 2

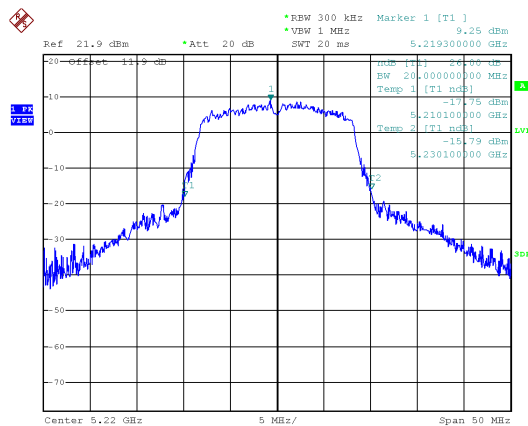
Modulation Standard: 802.11a (6Mbps)
CH36



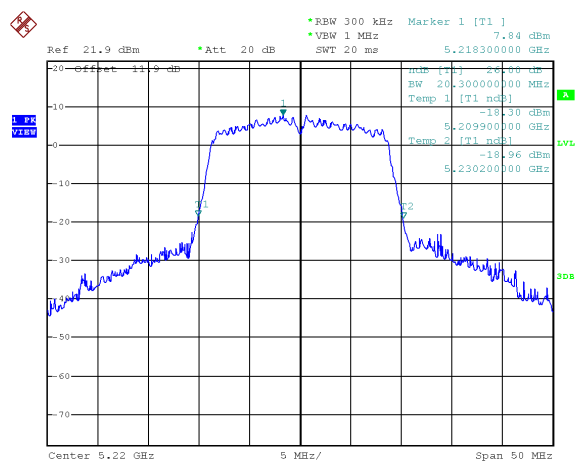
802.11ac VHT20 (6.5Mbps)
CH36



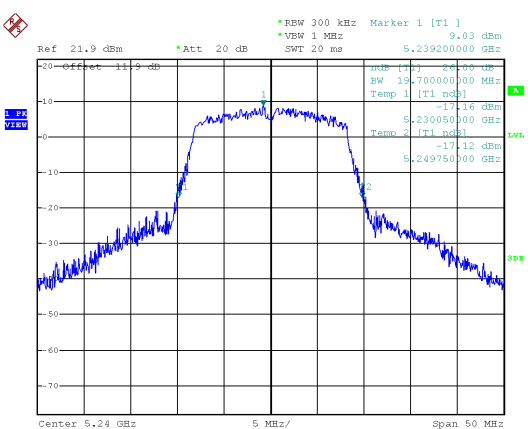
CH44



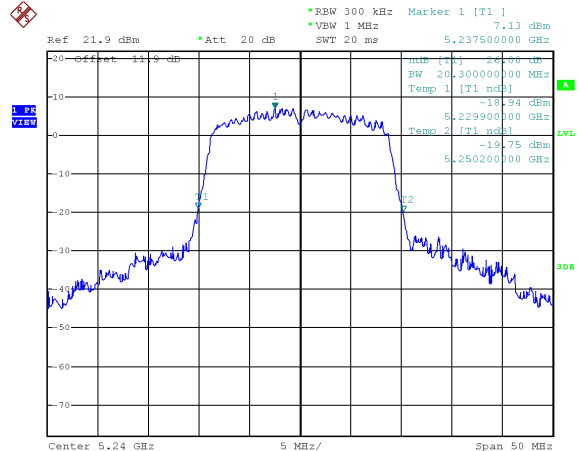
CH44



CH48

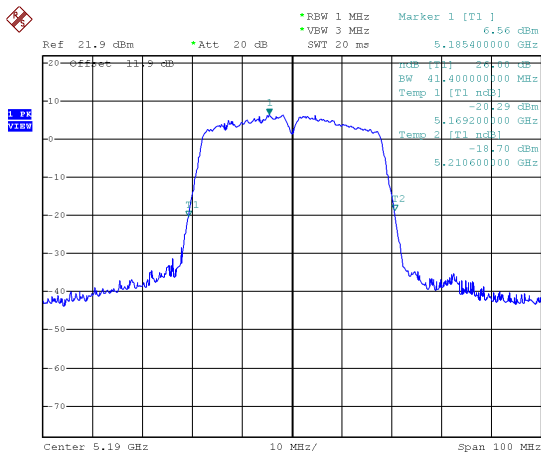
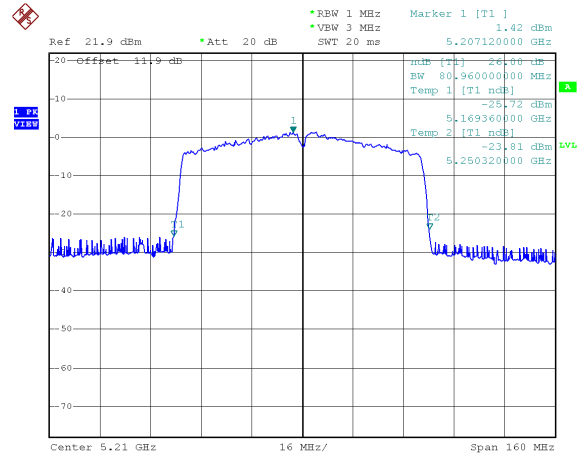


CH48

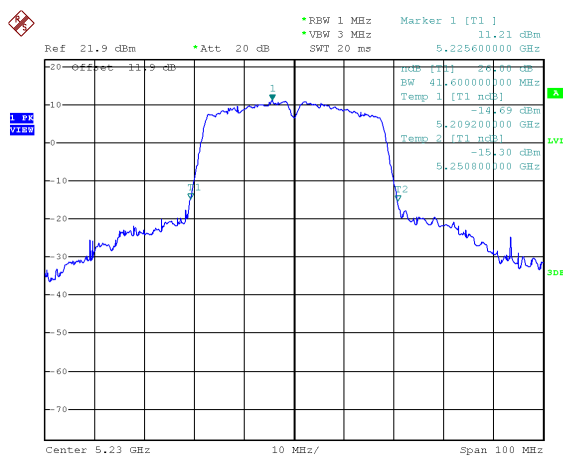




ANT 2

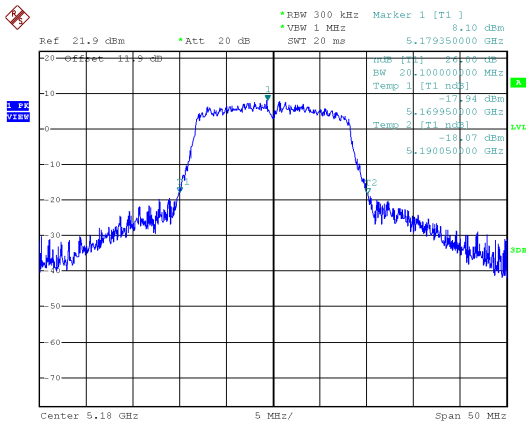
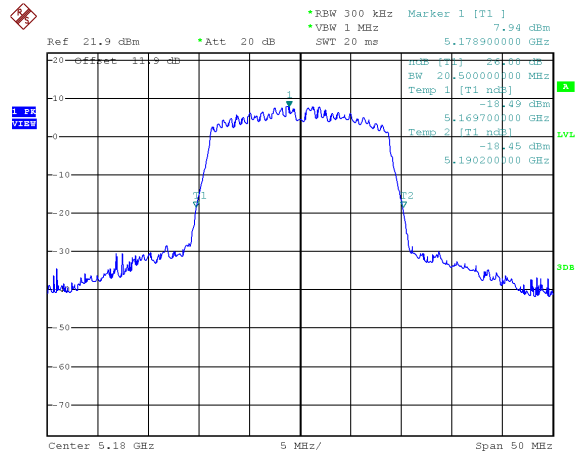
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42

CH46

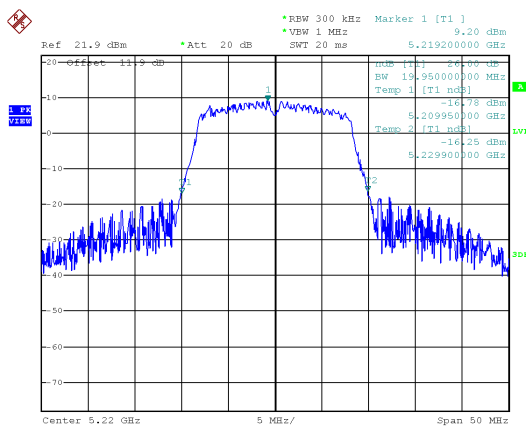




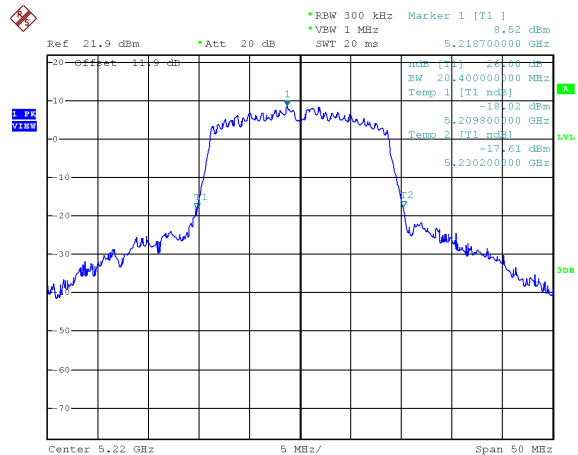
ANT 3

Modulation Standard: 802.11a (6Mbps)
CH36802.11ac VHT20 (6.5Mbps)
CH36

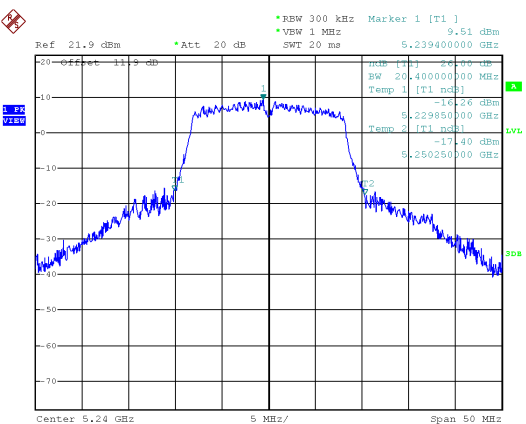
CH44



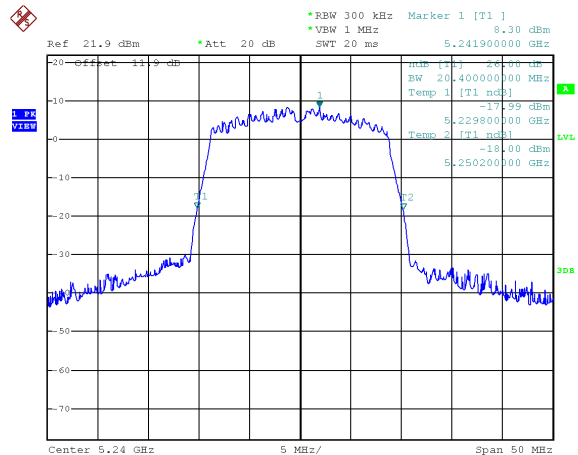
CH44



CH48

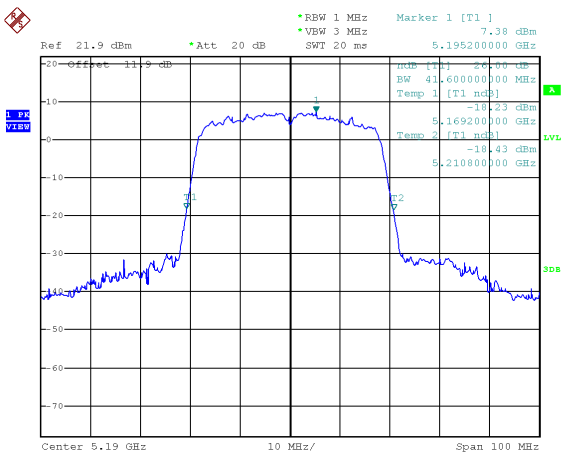
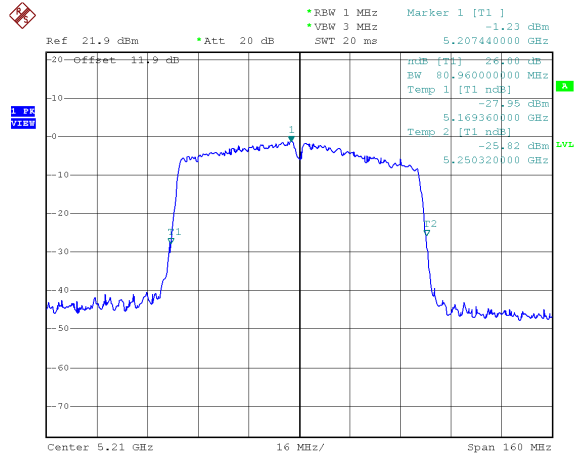


CH48

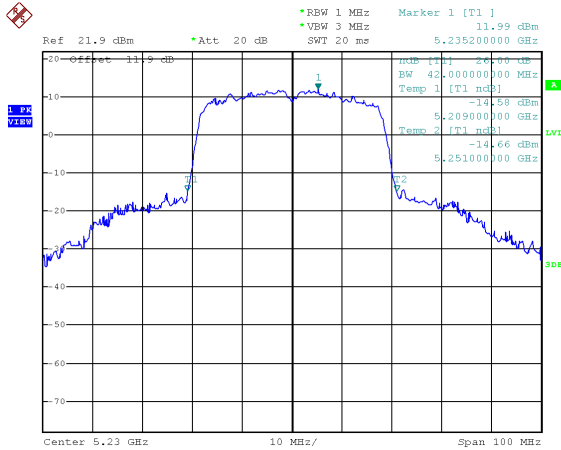




ANT 3

Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42

CH46





10. Average Power

10.1. Test Limit

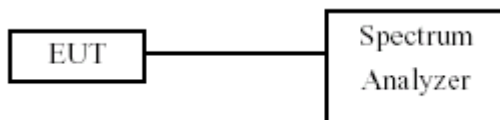
None; for reporting purposes only.

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: 23°C
Test Date: Jul. 27, 2017

Humidity: 61%

Non Beamforming

In the 5.2G Band

Modulation Type	CH	Freq. (MHz)	Avg Power Output (dBm)				Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
			ANT 0	ANT 1	ANT 2	ANT 3			
802.11a	36	5180	14.6	13.78	14.64	15.16	20.59	114.64	30.00
	44	5220	15.68	15.29	14.28	16.36	21.49	140.83	30.00
	48	5240	15.62	15.42	15.05	16.05	21.57	143.57	30.00
802.11an HT20	36	5180	14.09	13.21	13.92	14.48	19.97	99.30	30.00
	44	5220	13.8	14.06	14.08	14.52	20.14	103.36	30.00
	48	5240	13.41	14.1	12.59	14.05	19.60	91.20	30.00
802.11an HT40	38	5190	10.95	10.17	10.73	11.55	16.90	48.96	30.00
	46	5230	15.33	14.5	15.1	15.85	21.24	133.12	30.00
802.11ac VHT20	36	5180	14.11	13.25	13.94	14.49	19.99	99.79	30.00
	44	5220	13.88	14.07	14.1	14.53	20.17	104.04	30.00
	48	5240	13.4	14.12	12.62	14.12	19.63	91.80	30.00
802.11ac VHT40	38	5190	10.94	10.19	10.75	11.57	16.91	49.10	30.00
	46	5230	15.34	14.54	15.13	15.84	21.26	133.60	30.00
802.11ac VHT80	42	5210	5.41	6.68	8.08	7.66	13.09	20.39	30.00

In the 5.8G Band

Modulation Type	CH	Freq. (MHz)	Avg Power Output (dBm)				Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
			ANT 0	ANT 1	ANT 2	ANT 3			
802.11a	149	5745	18.03	16.99	18.15	17.85	23.80	239.80	30.00
	157	5785	17.11	16.68	17.44	17.25	23.15	206.51	30.00
	165	5825	17.06	16.45	17.35	17.45	23.12	204.89	30.00
802.11an HT20	149	5745	17.46	16.4	17.78	17.49	23.33	215.45	30.00
	157	5785	16.89	16.59	17.37	16.85	22.95	197.46	30.00
	165	5825	16.73	16.5	17.18	16.86	22.85	192.53	30.00
802.11an HT40	151	5755	16.61	15.67	16.63	16.87	22.49	177.38	30.00
	159	5795	18.08	17.18	17.84	18.4	23.92	246.50	30.00
802.11ac VHT20	149	5745	17.44	16.43	17.79	17.51	23.34	215.90	30.00
	157	5785	16.93	16.6	17.35	16.88	22.97	198.10	30.00
	165	5825	16.74	16.51	17.26	16.91	22.88	194.28	30.00
802.11ac VHT40	151	5755	16.65	15.69	16.7	16.76	22.49	177.50	30.00
	159	5795	18.09	17.23	17.96	18.42	23.97	249.28	30.00
802.11ac VHT80	155	5775	13.24	12.19	13.06	13.18	18.96	78.67	30.00

**Beamforming****In the 5.2G Band**

Modulation Type	CH	Freq. (MHz)	Avg Power Output (dBm)				Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
			ANT 0	ANT 1	ANT 2	ANT 3			
802.11ac VHT20	36	5180	8.09	7.23	7.92	8.47	13.97	24.95	24.98
	44	5220	7.86	8.05	8.08	8.51	14.15	26.01	24.98
	48	5240	7.38	8.1	6.6	8.1	13.61	22.95	24.98
802.11ac VHT40	38	5190	4.92	4.17	4.73	5.55	10.89	12.28	24.98
	46	5230	9.32	8.52	9.11	9.82	15.24	33.40	24.98
802.11ac VHT80	42	5210	-0.61	0.66	2.06	1.64	7.07	5.10	24.98

In the 5.8G Band

Modulation Type	CH	Freq. (MHz)	Avg Power Output (dBm)				Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
			ANT 0	ANT 1	ANT 2	ANT 3			
802.11ac VHT20	149	5745	11.42	10.41	11.77	11.49	17.32	53.98	24.98
	157	5785	10.91	10.58	11.33	10.86	16.95	49.53	24.98
	165	5825	10.72	10.49	11.24	10.89	16.86	48.58	24.98
802.11ac VHT40	151	5755	10.63	9.67	10.68	10.74	16.47	44.38	24.98
	159	5795	12.07	11.21	11.94	12.4	17.95	62.33	24.98
802.11ac VHT80	155	5775	7.22	6.17	7.04	7.16	12.94	19.67	24.98



11. Output Power and PPSD

11.1. 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.
☐	Mobile and portable 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.

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
☐	Mobile and portable client devices	11 dBm/MHz
☐	5.725~5.85 GHz	11 dBm/MHz
☐	5.470-5.725 GHz	11 dBm/MHz
☒	5.725~5.85 GHz	30 dBm/500kHz



11.2. Test Procedure

As an alternative to FCC KDB-789033, the EUT maximum conducted output power was Measured with an average power meter employing a video bandwidth greater than 6dB BW of the emission under test. Maximum conducted output power was read directly from the meter across all data rates, and across three channels within each sub-band. Special care was used to make sure that the EUT was transmitting in continuous mode. This method exceeds the limitations of FCC KDB-789033, and provides more accurate measurements.

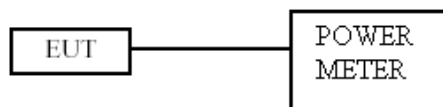
802.11an (BW $\leq$ 40MHz) Maximum conducted output power using KDB 789033 section E)3)b) Method PM-G (Measurement using a gated RF average power meter)

Note: the power meter have a video bandwidth that is greater than or equal to the measurement bandwidth, (Anritsu/ MA2411B video bandwidth: 65MHz)

802.11ac (BW=80MHz) Maximum conducted output power using KDB 789033 section E)2)b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep).

When transmitted signals consist of two or more non-contiguous spectrum segments (e.g., 80+80 MHz mode) or when a single spectrum segment of a transmission crosses the boundary between two adjacent U-NII bands, KDB 644545 D01 section F) procedure is used for measurements.

11.3. Test Setup Layout





11.4. Test Result and Data

Temperature: 23°C

Humidity: 61%

Test Date: Jul. 27, 2017

In the 5.2G Band

Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)			
			ANT 0	ANT 1	ANT 2	ANT 3
802.11a	36	5180	4.68	2.40	4.01	4.00
	44	5220	4.99	4.35	4.77	5.12
	48	5240	5.07	4.70	4.85	5.20
802.11ac VHT20	36	5180	3.70	2.21	2.83	3.65
	44	5220	2.66	2.99	3.12	3.73
	48	5240	2.33	3.26	2.75	3.46
802.11ac VHT40	38	5190	-4.06	-4.77	-4.07	-3.48
	46	5230	0.57	0.14	0.48	1.25
802.11ac VHT80	42	5210	-15.53	-14.45	-13.38	-14.32

Modulation Type	CH	Freq. (MHz)	Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PPSD (dBm/MHz)	PPSD Limit (dBm/MHz)
802.11a	36	5180	9.87	0.86	10.73	11.98
	44	5220	10.84	0.86	11.70	11.98
	48	5240	10.98	0.86	11.84	11.98
802.11ac VHT20	36	5180	9.16	2.63	11.79	11.98
	44	5220	9.16	2.63	11.79	11.98
	48	5240	8.99	2.63	11.62	11.98
802.11ac VHT40	38	5190	1.95	3.96	5.91	11.98
	46	5230	6.65	3.96	10.61	11.98
802.11ac VHT80	42	5210	-8.33	5.25	-3.08	11.98

**In the 5.8G Band**

Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)			
			ANT 0	ANT 1	ANT 2	ANT 3
802.11a	149	5745	7.15	5.84	7.17	6.63
	157	5785	5.93	5.51	6.70	6.20
	165	5825	6.28	5.74	6.57	5.63
802.11ac VHT20	149	5745	6.43	5.40	6.49	6.90
	157	5785	5.83	5.74	6.57	6.21
	165	5825	5.89	5.84	6.53	6.77
802.11ac VHT40	155	5755	1.75	1.02	2.08	2.20
	159	5795	3.45	2.57	3.22	3.97
802.11ac VHT80	155	5775	-4.97	-6.22	-5.33	-4.89

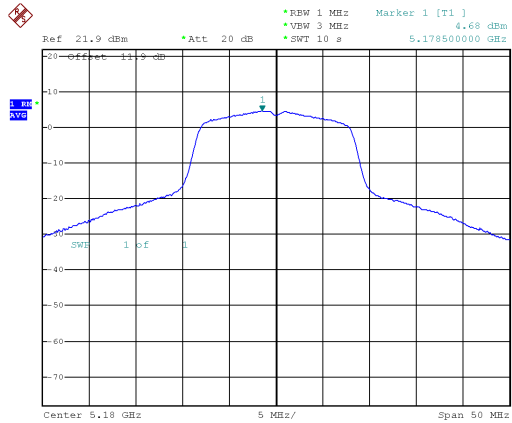
Modulation Type	CH	Freq. (MHz)	Sum chain (dBm)	Duty Cycle CF(dB)	10log(500KH z/RBW) CF (dB)	Total Corr'd PPSD (dBm/MHz)	PPSD Limit (dBm/MHz)
802.11a	149	5745	12.75	0.86	-3.01	10.60	24.98
	157	5785	12.13	0.86	-3.01	9.98	24.98
	165	5825	12.09	0.86	-3.01	9.94	24.98
802.11ac VHT20	149	5745	12.36	2.63	-3.01	11.98	24.98
	157	5785	12.12	2.63	-3.01	11.74	24.98
	165	5825	12.30	2.63	-3.01	11.92	24.98
802.11ac VHT40	155	5755	7.81	3.96	-3.01	8.76	24.98
	159	5795	9.35	3.96	-3.01	10.30	24.98
802.11ac VHT80	155	5775	0.70	5.25	-3.01	2.94	24.98



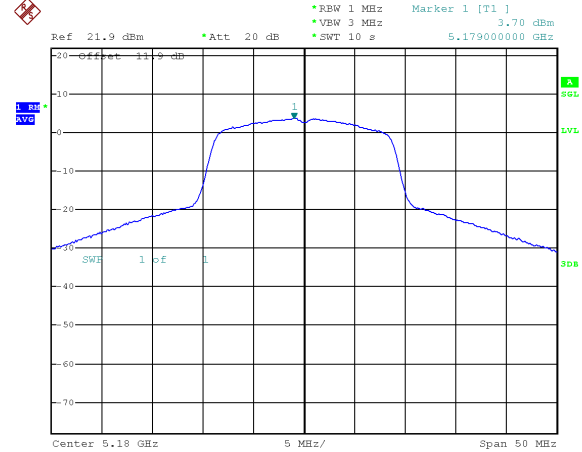
5.2G Band

ANT 0

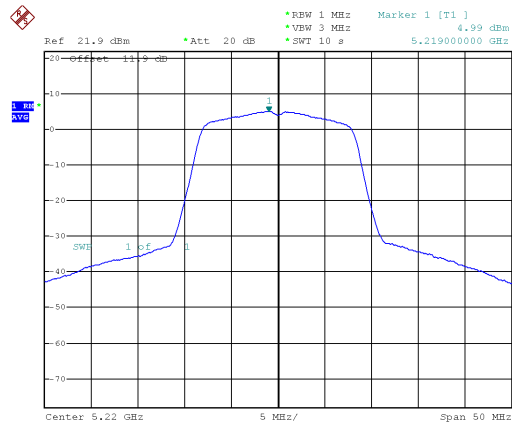
Modulation Standard: 802.11a (6Mbps)
CH36



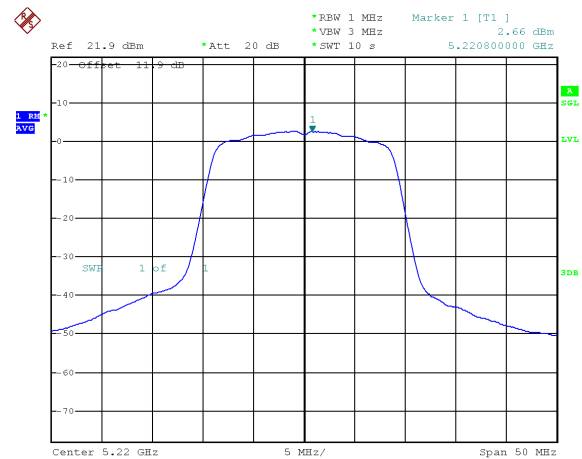
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CH36



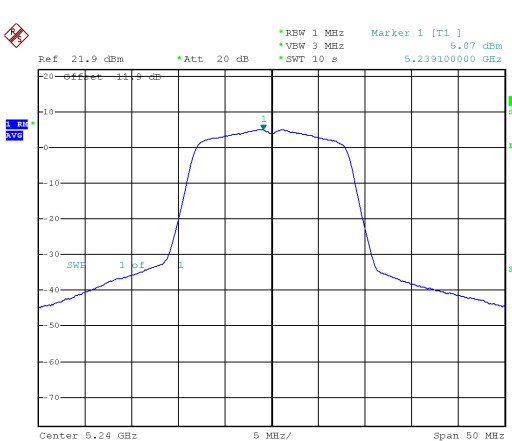
CH44



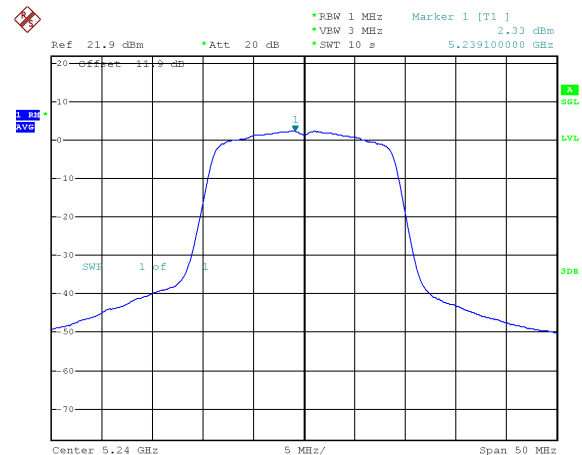
CH44



CH48



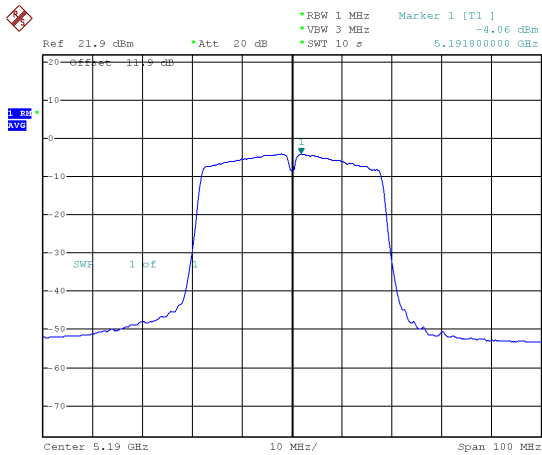
CH48



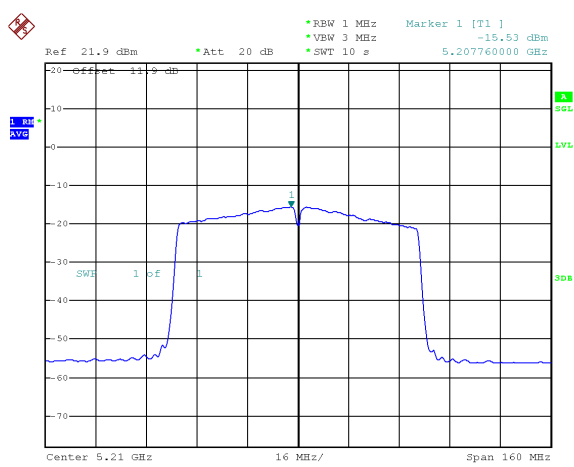


ANT 0

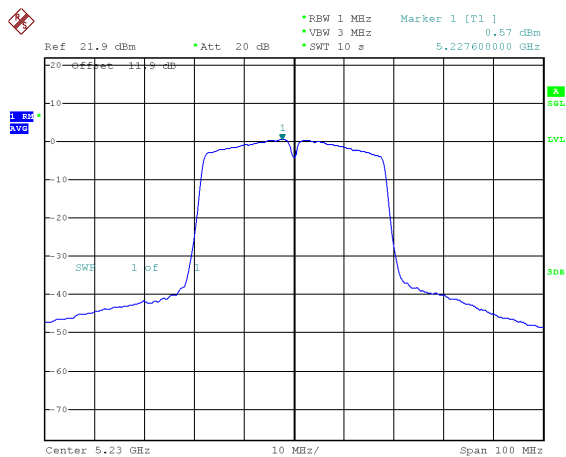
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42

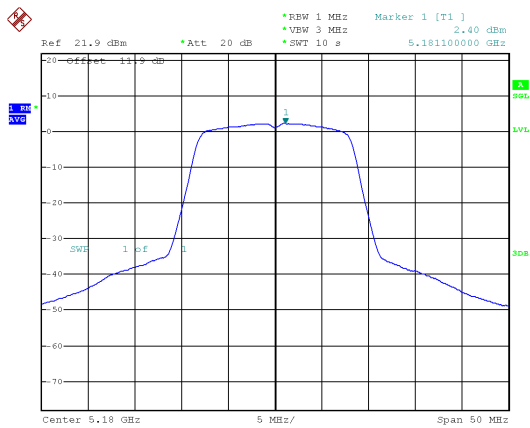


CH46

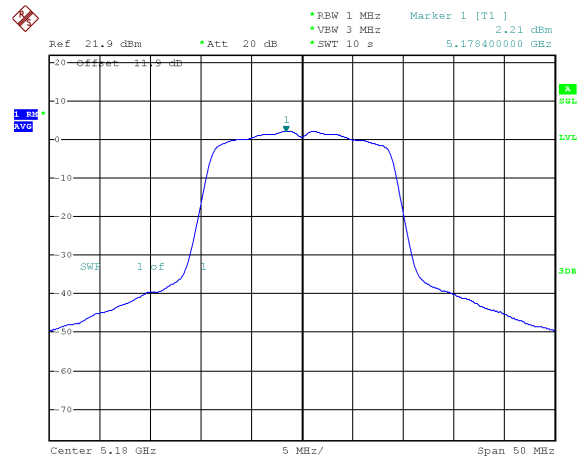




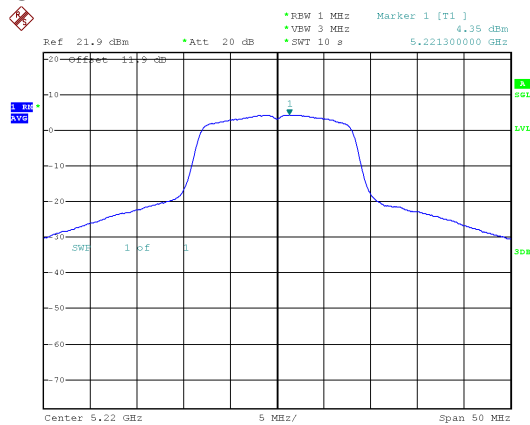
ANT 1
Modulation Standard: 802.11a (6Mbps)
CH36



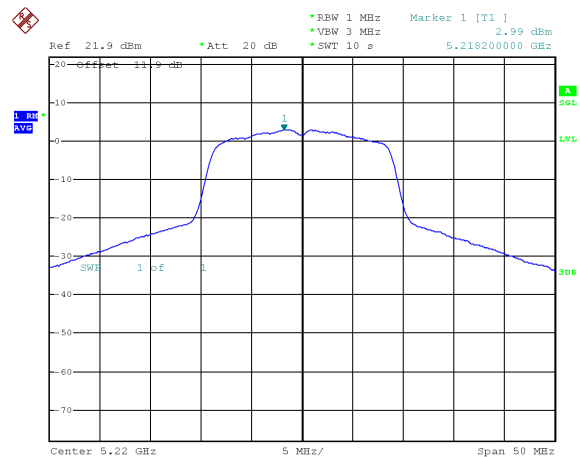
Modulation Standard: 802.11ac VHT20 (6.5Mbps)
CH36



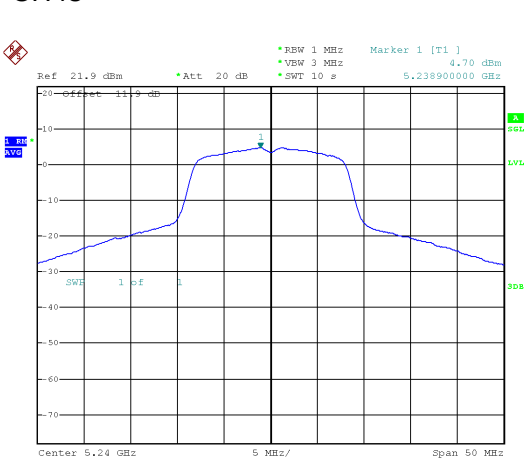
CH44



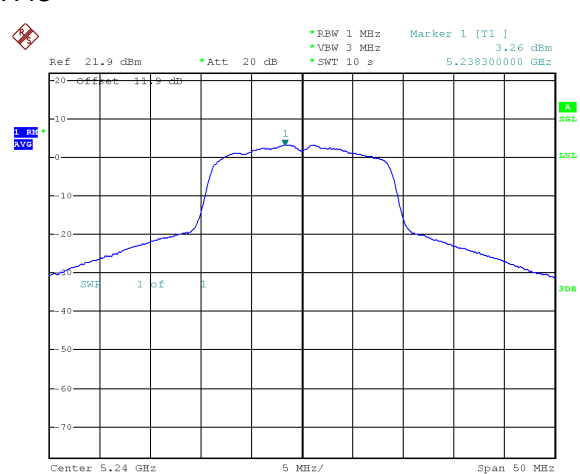
CH44



CH48



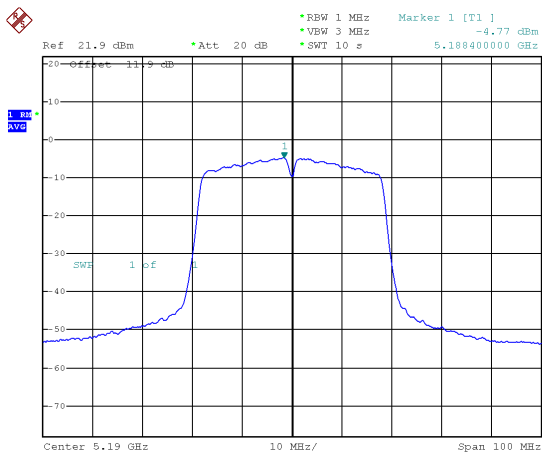
CH48



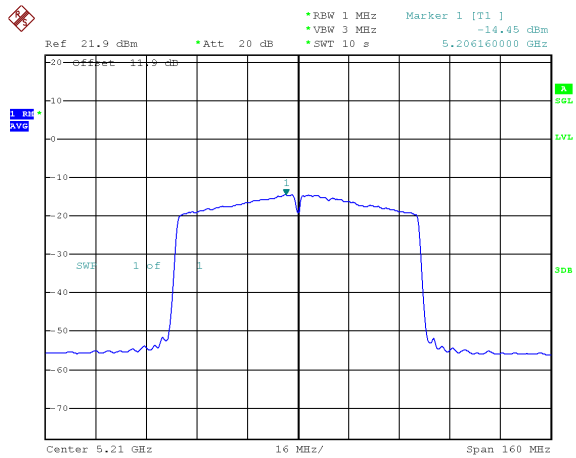


ANT 1

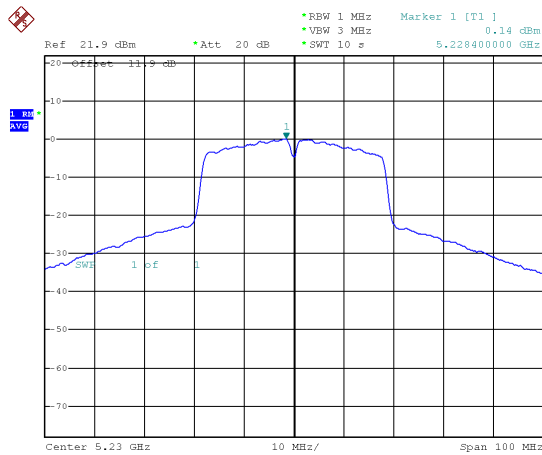
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42

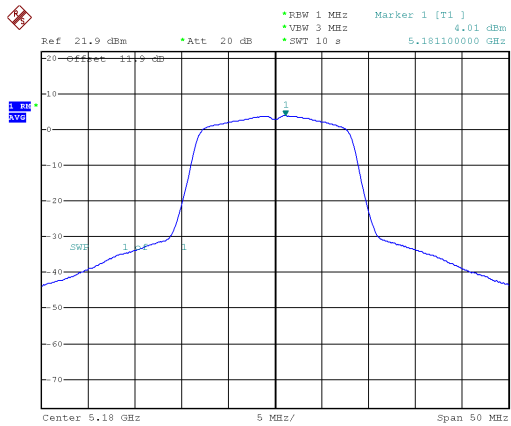


CH46

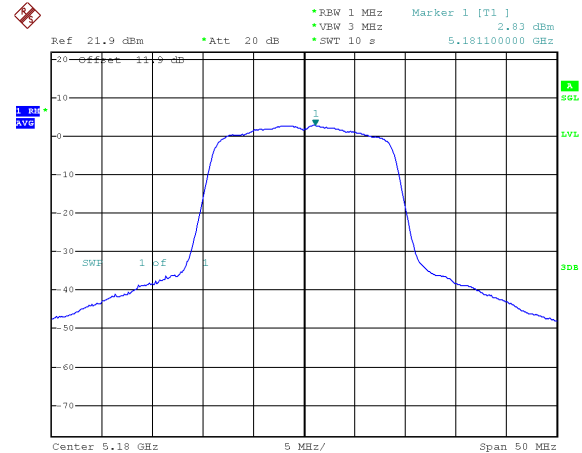




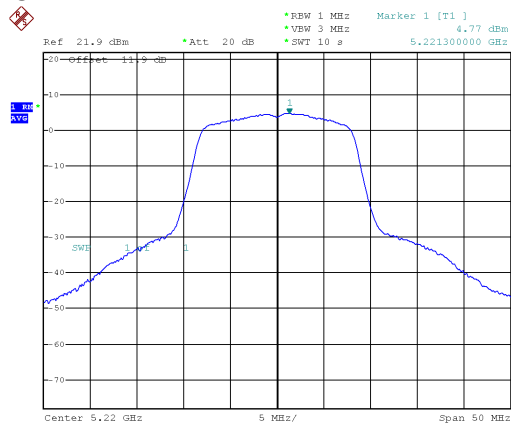
ANT 2
Modulation Standard: 802.11a (6Mbps)
CH36



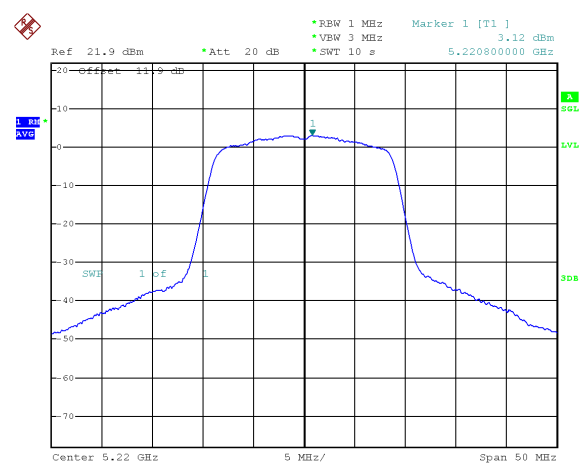
Modulation Standard: 802.11ac VHT20 (6.5Mbps)
CH36



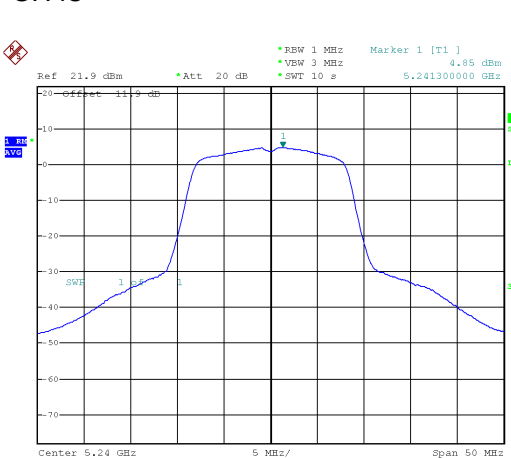
CH44



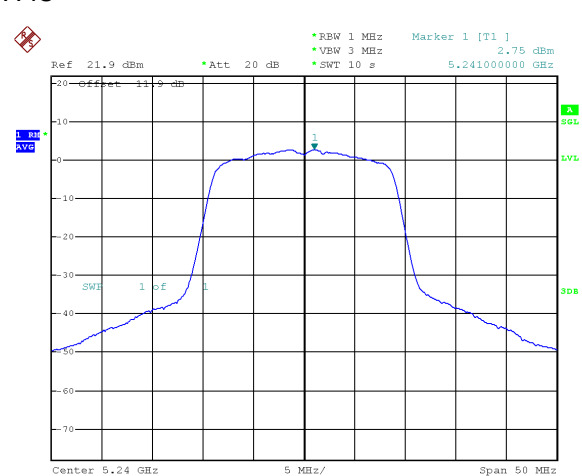
CH44



CH48



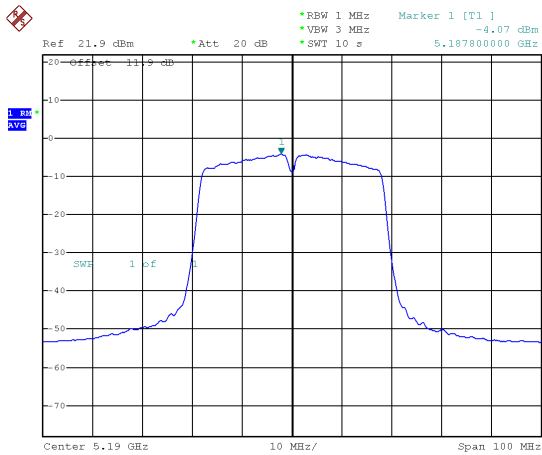
CH48



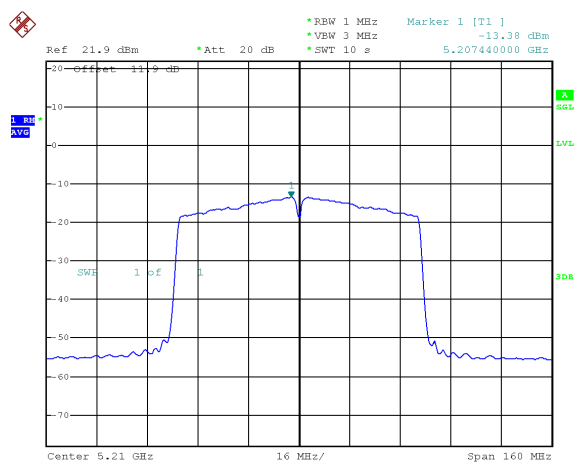


ANT 2

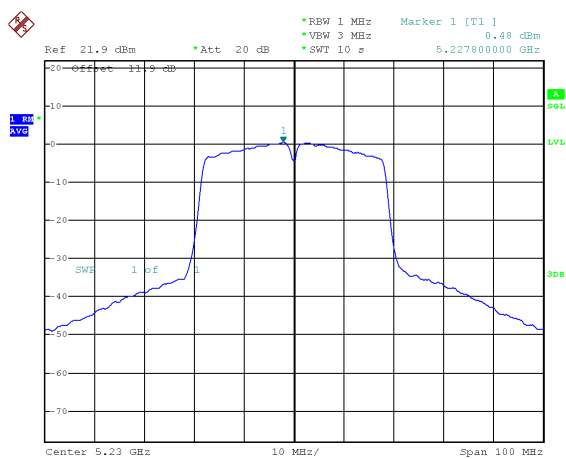
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CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42



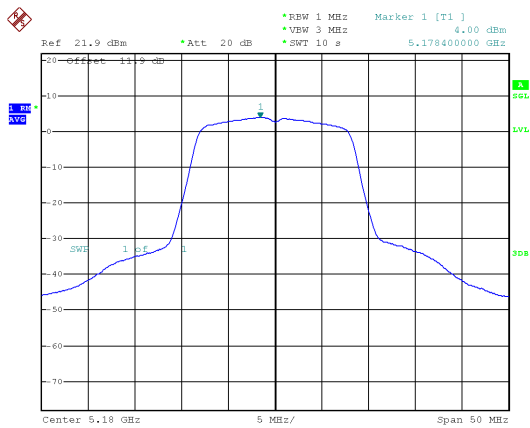
CH46



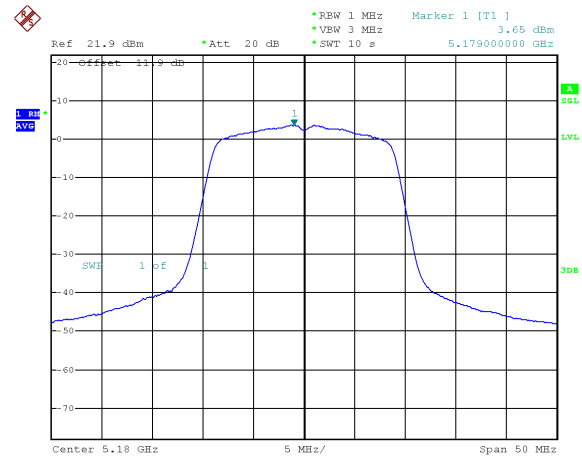


ANT 3

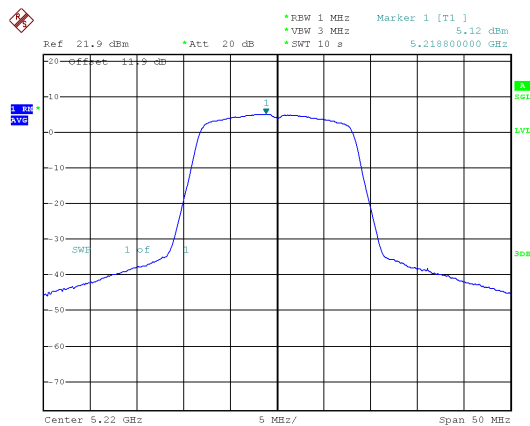
Modulation Standard: 802.11a (6Mbps)
CH36



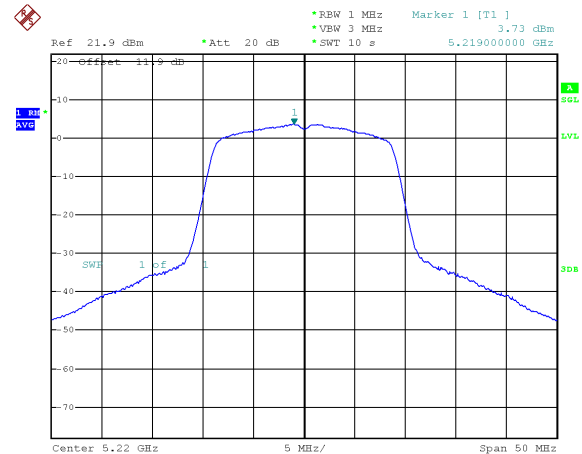
Modulation Standard: 802.11ac VHT20 (6.5Mbps)
CH36



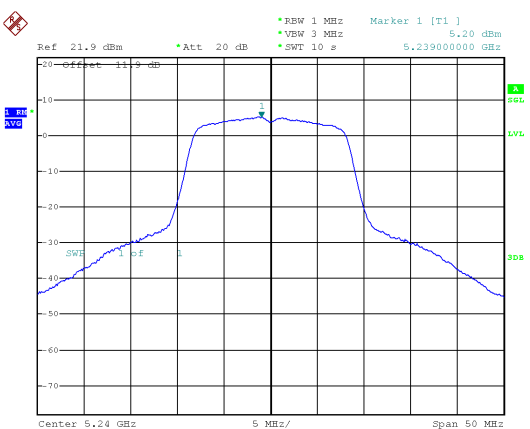
CH44



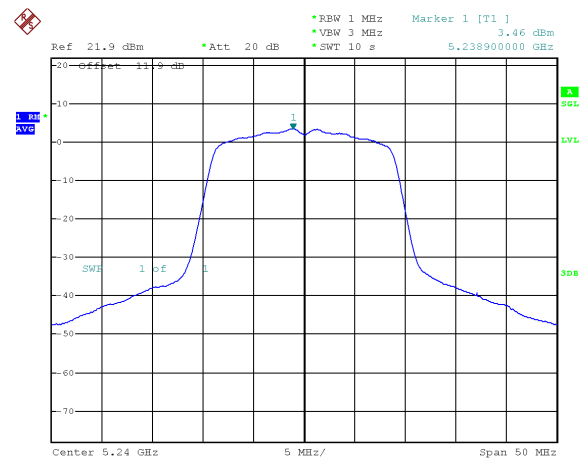
CH44



CH48



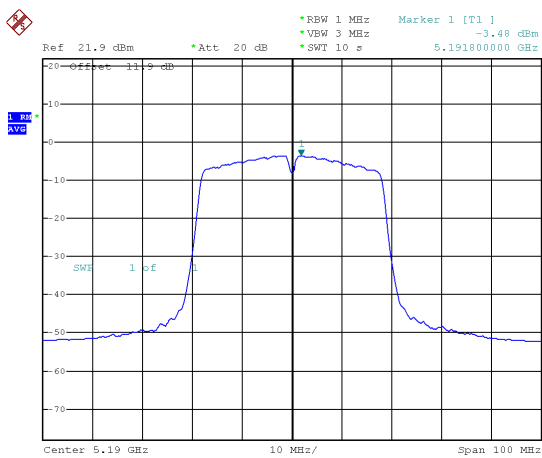
CH48



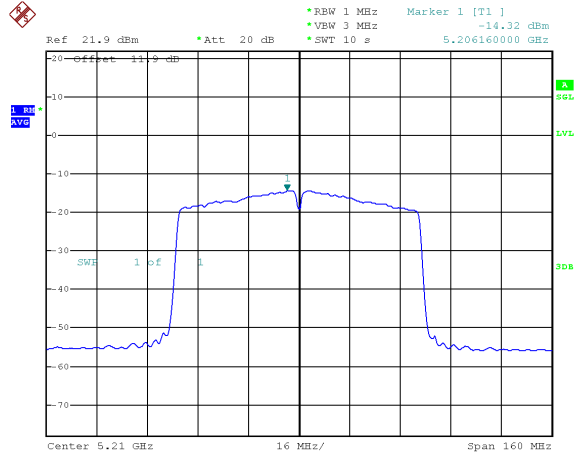


ANT 3

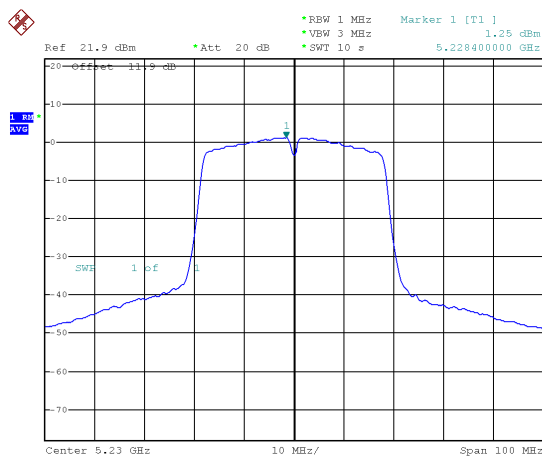
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42

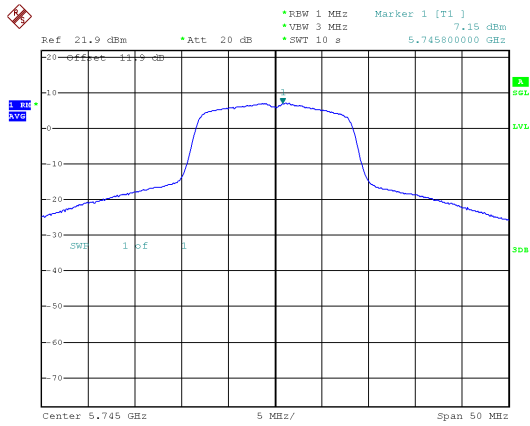


CH46

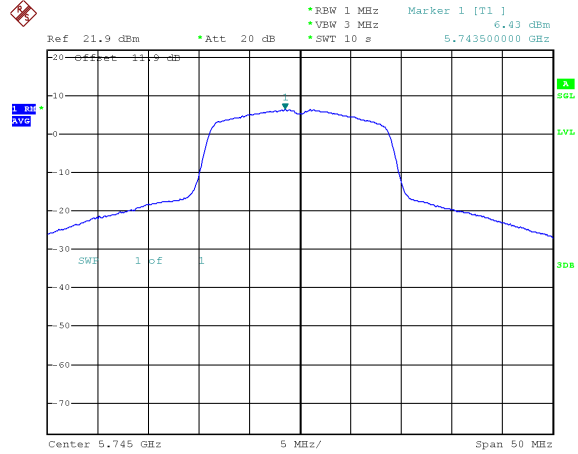




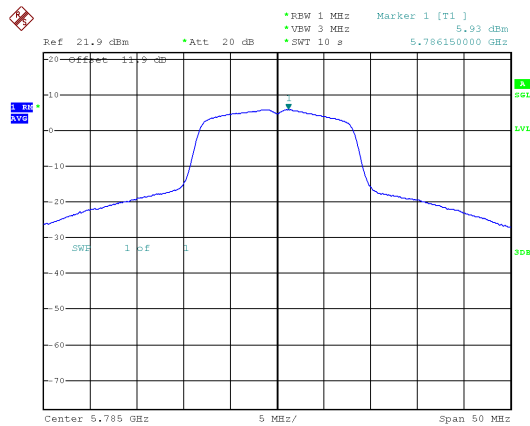
5.8G Band
ANT 0
Modulation Standard: 802.11a (6Mbps)
CH149



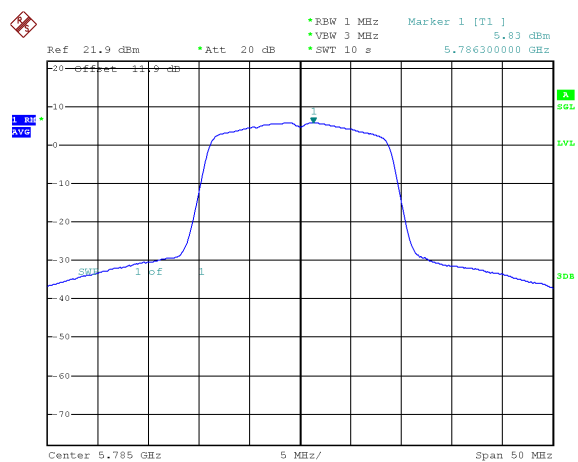
Modulation Standard: 802.11ac, VHT20 (6.5Mbps)
CH149



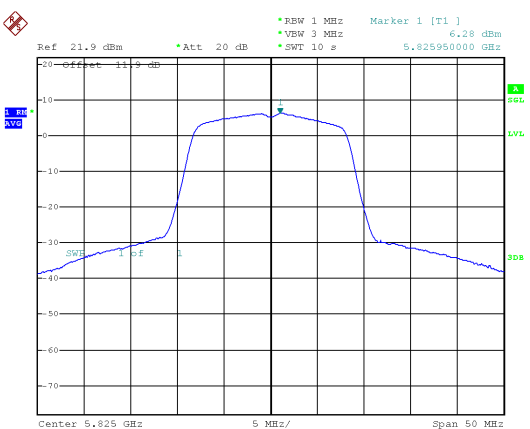
CH157



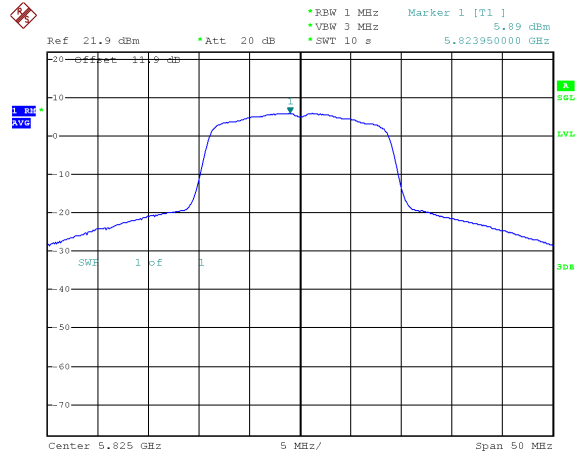
CH157



CH165

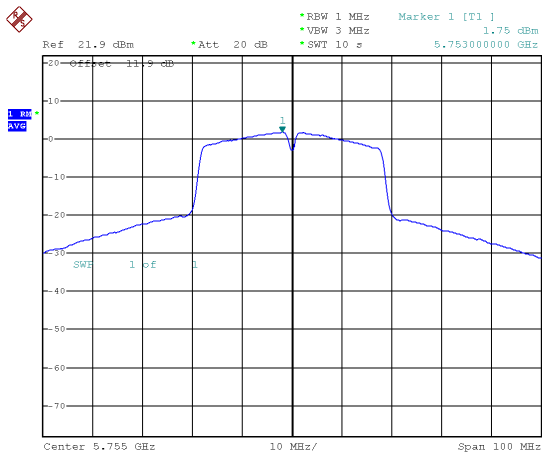
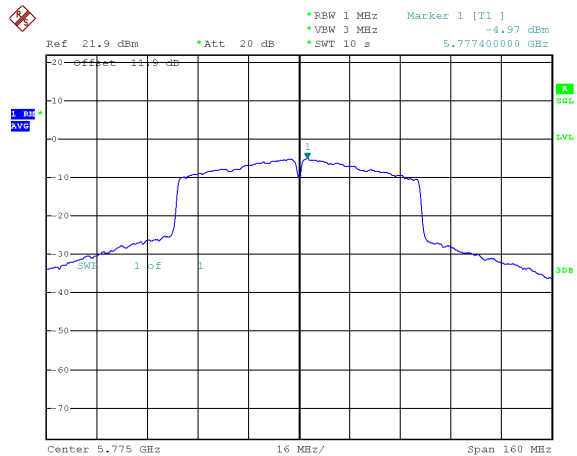


CH165

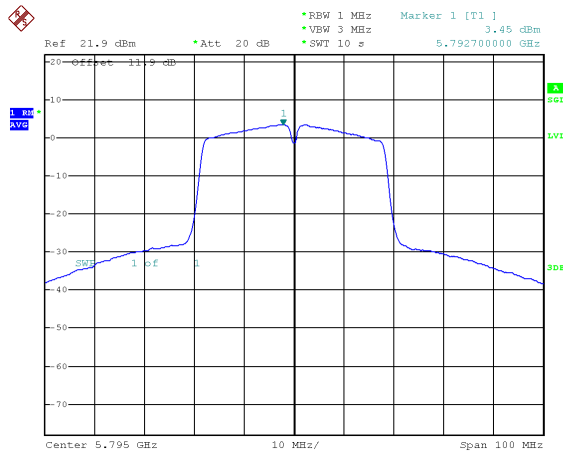




ANT 0

Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155

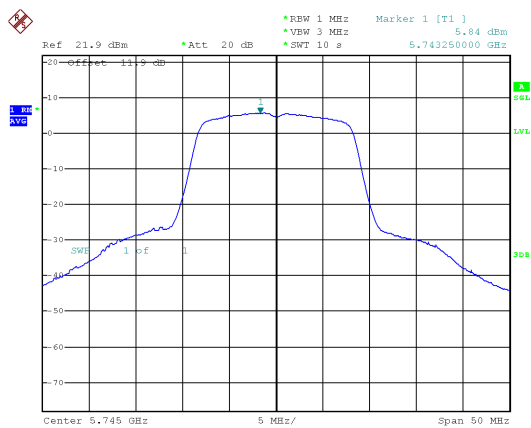
CH159



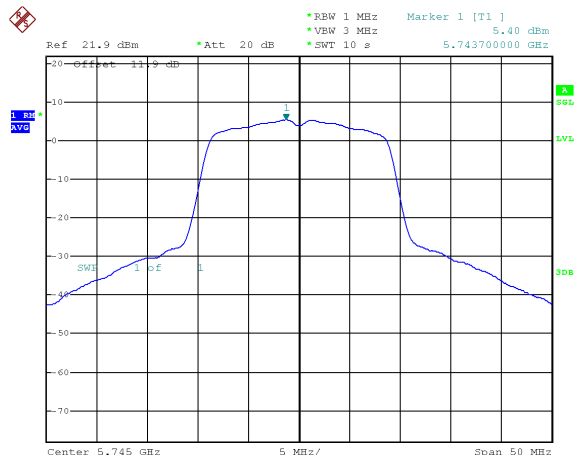


ANT 1

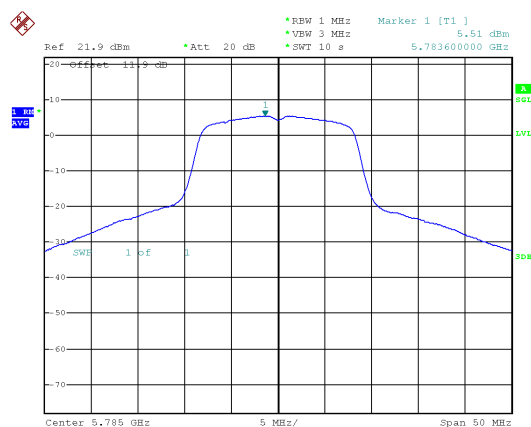
Modulation Standard: 802.11a (6Mbps)
CH149



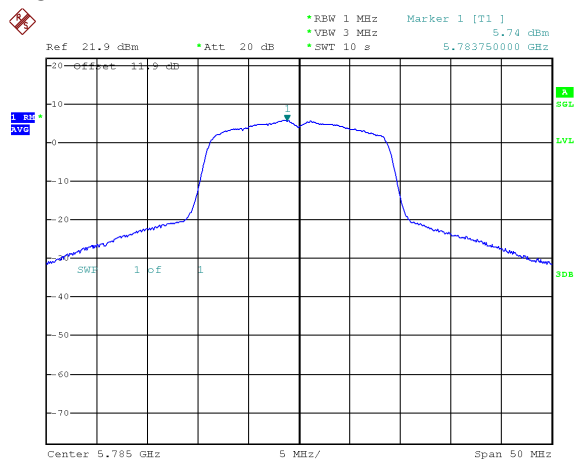
Modulation Standard: 802.11ac, VHT20 (6.5Mbps)
CH149



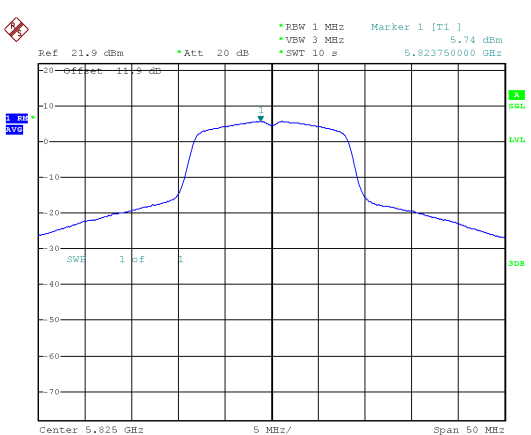
CH157



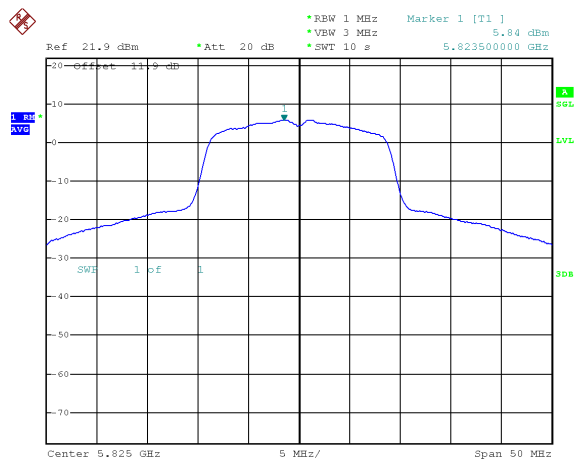
CH157



CH165



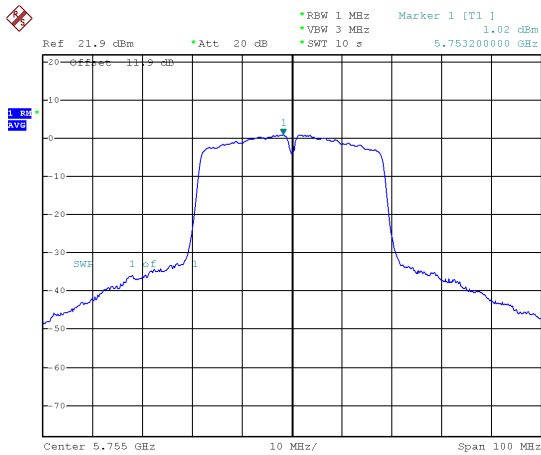
CH165



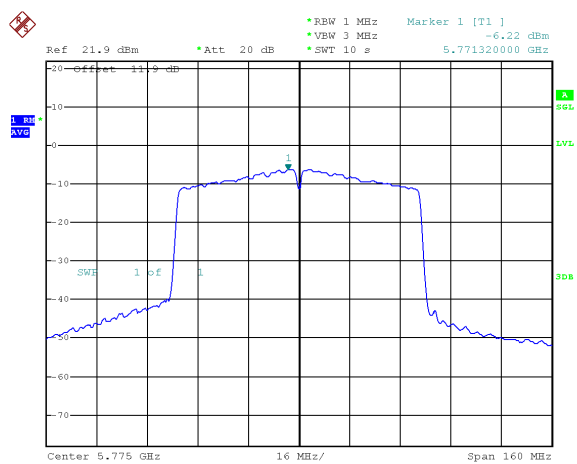


ANT 1

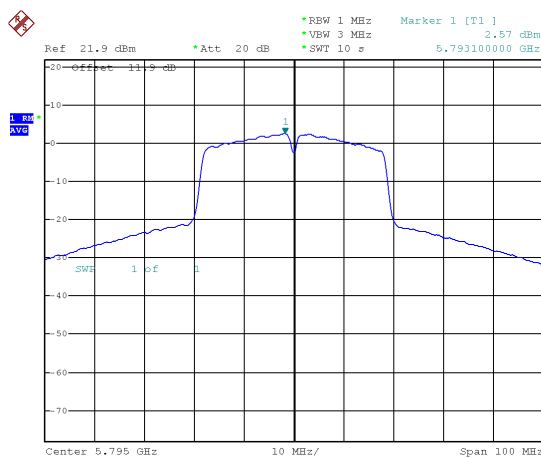
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151



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

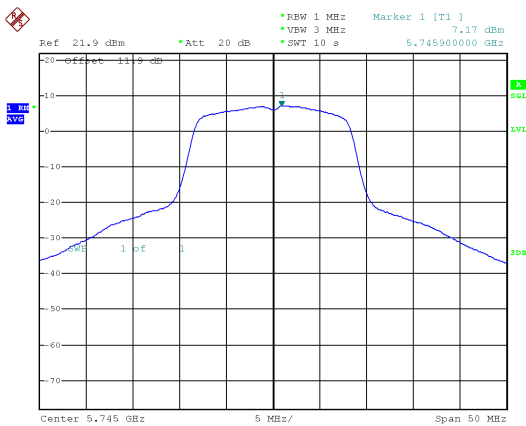


CH159

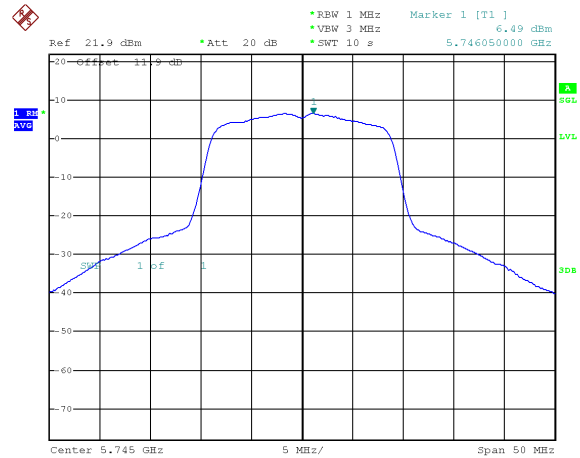




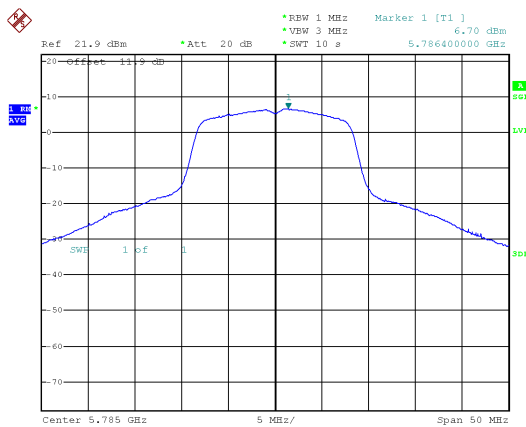
ANT 2
Modulation Standard: 802.11a (6Mbps)
CH149



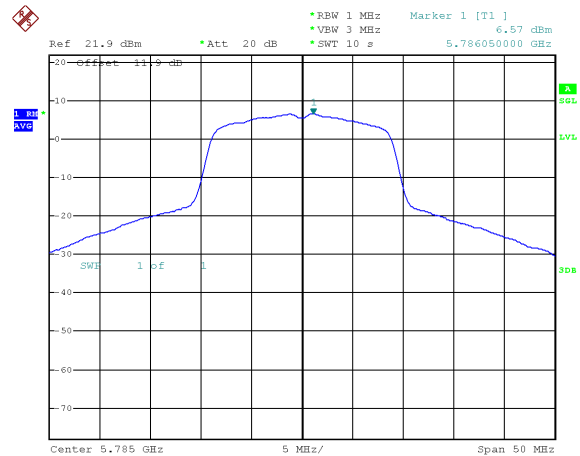
Modulation Standard: 802.11ac, VHT20 (6.5Mbps)
CH149



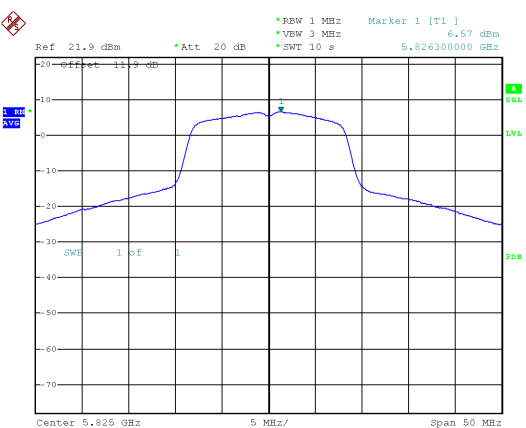
CH157



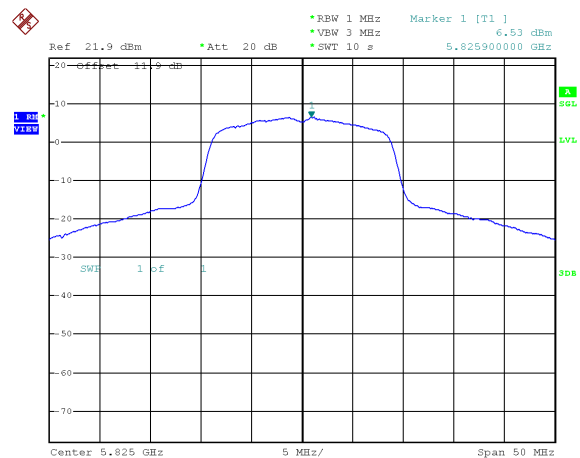
CH157



CH165



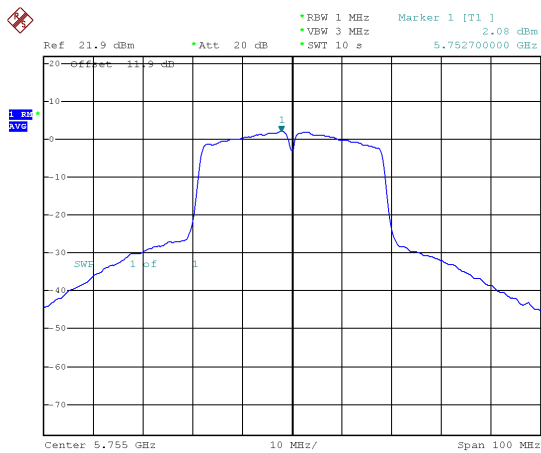
CH165



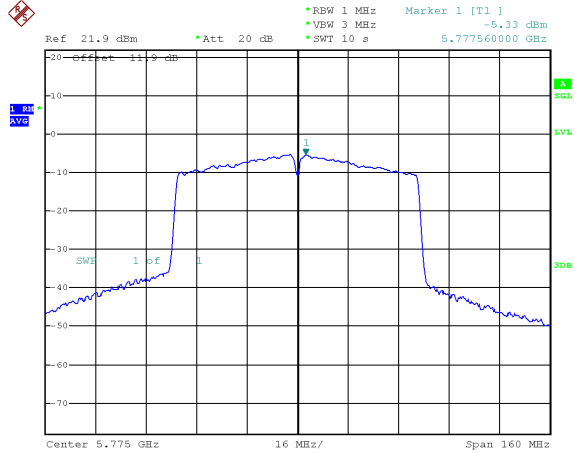


ANT 2

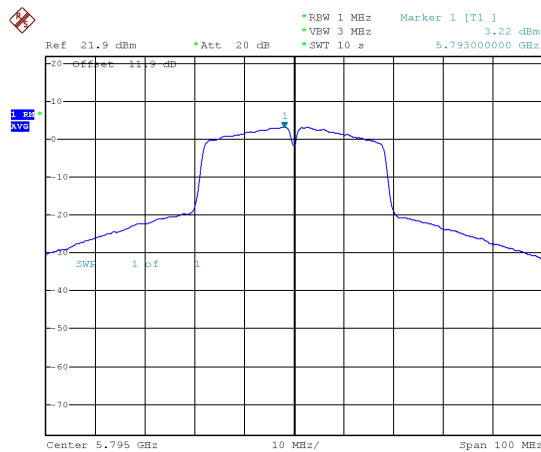
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151



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



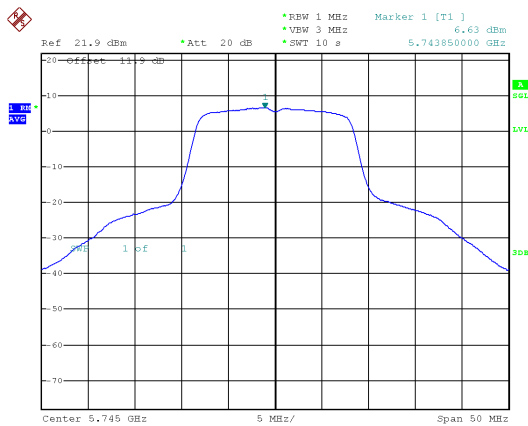
CH159



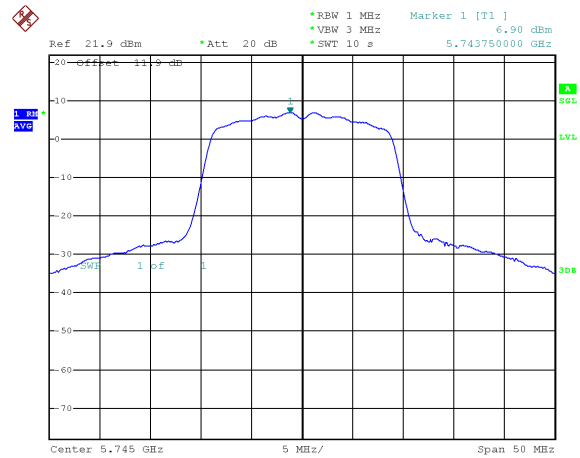


ANT 3

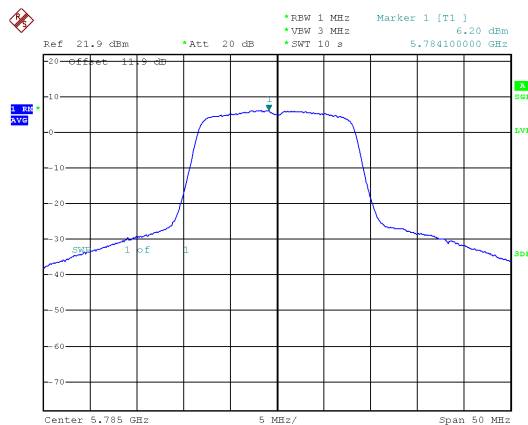
Modulation Standard: 802.11a (6Mbps)
CH149



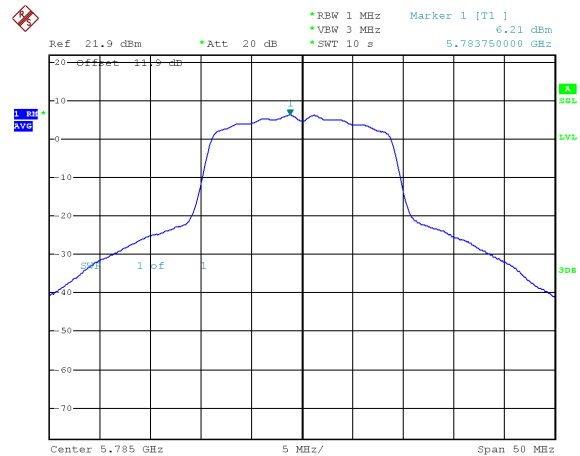
Modulation Standard: 802.11ac, VHT20 (6.5Mbps)
CH149



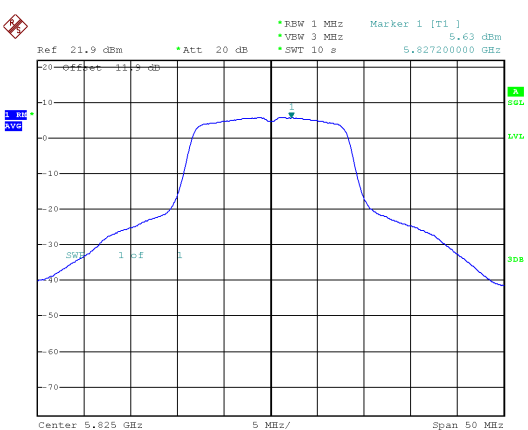
CH157



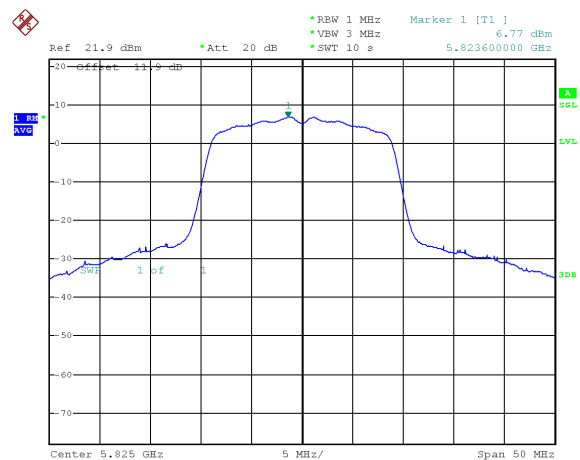
CH157



CH165



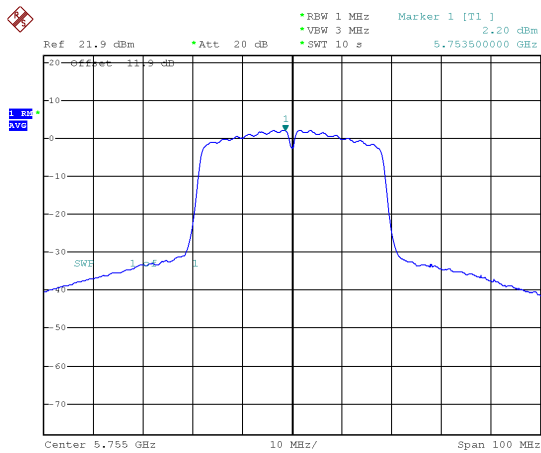
CH165



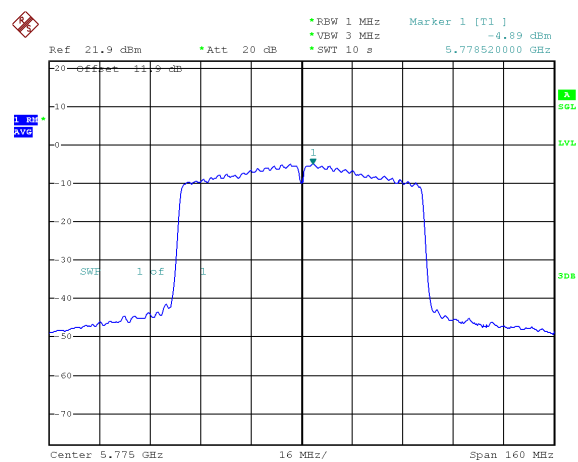


ANT 3

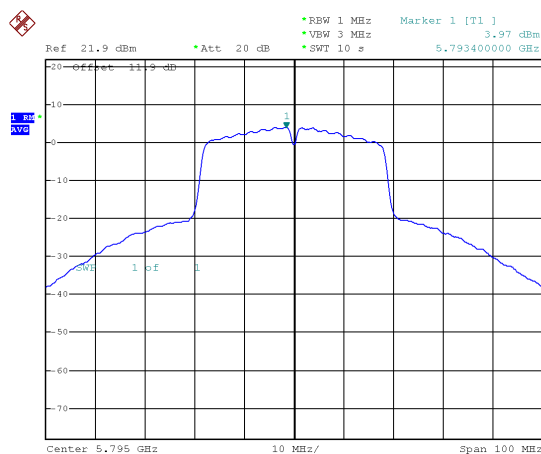
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151



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



CH159



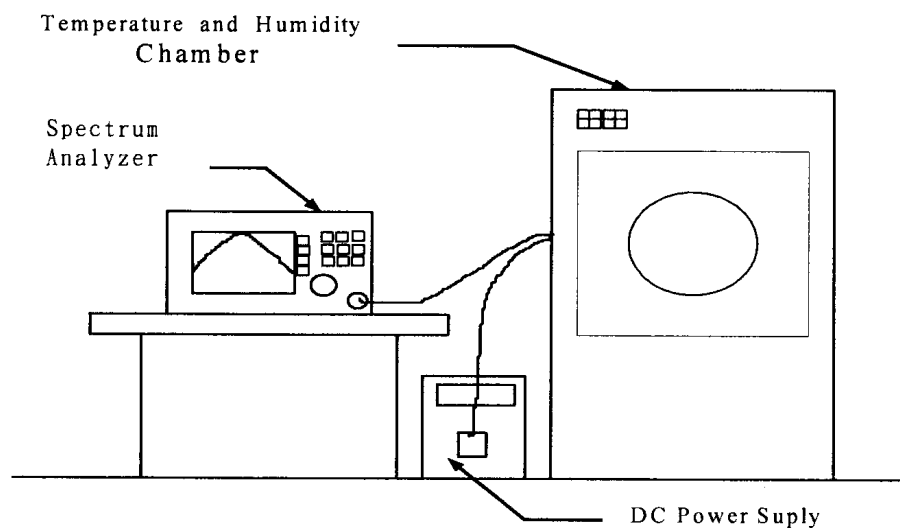


12. Frequency Stability

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: 23°C

Humidity: 61%

Test Date: Jul. 27, 2017

Operating frequency: 5180 MHz							
Temp	Power supply	2 minute		5 minute		10 minute	
(°C)	(V)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	102	5180.0347	0.000669	5180.0675	0.001302	5180.0751	0.001450
	120	5179.9166	-0.001609	5179.9643	-0.000690	5179.9745	-0.000492
	138	5180.0928	0.001791	5179.9892	-0.000209	5180.0267	0.000515
40	102	5179.9400	-0.001157	5180.0870	0.001679	5179.9071	-0.001793
	120	5179.9274	-0.001401	5180.0817	0.001577	5180.0515	0.000995
	138	5180.0247	0.000476	5179.9277	-0.001395	5179.9271	-0.001407
30	102	5179.9165	-0.001612	5179.9398	-0.001162	5179.9358	-0.001240
	120	5180.0166	0.000321	5179.9654	-0.000668	5180.0542	0.001045
	138	5179.9178	-0.001588	5179.9604	-0.000764	5180.0169	0.000326
20	102	5179.9435	-0.001092	5179.9855	-0.000281	5180.0205	0.000396
	120	5179.9165	-0.001612	5180.0099	0.000192	5179.9013	-0.001906
	138	5180.0593	0.001145	5180.0354	0.000683	5179.9381	-0.001195
10	102	5179.9267	-0.001416	5180.0648	0.001252	5180.0856	0.001653
	120	5180.0187	0.000361	5179.9776	-0.000432	5179.9400	-0.001157
	138	5180.0210	0.000405	5179.9213	-0.001519	5179.9215	-0.001516
0	102	5179.9466	-0.001031	5179.9748	-0.000486	5179.9077	-0.001781
	120	5180.0790	0.001525	5179.9727	-0.000527	5180.0565	0.001092
	138	5180.0048	0.000092	5180.0190	0.000367	5180.0935	0.001806
-10	102	5179.9298	-0.001354	5179.9196	-0.001551	5180.0825	0.001593
	120	5179.9145	-0.001651	5180.0282	0.000544	5180.0164	0.000317
	138	5179.9978	-0.000042	5179.9655	-0.000667	5180.0327	0.000632
-20	102	5180.0301	0.000582	5179.9105	-0.001727	5179.9484	-0.000996
	120	5180.0334	0.000645	5180.0230	0.000444	5179.9280	-0.001390
	138	5180.0635	0.001227	5180.0564	0.001088	5180.0544	0.001051
-30	102	5180.0802	0.001548	5179.9725	-0.000530	5180.0004	0.000008
	120	5179.9271	-0.001407	5180.0132	0.000256	5180.0778	0.001501
	138	5180.0999	0.001929	5180.0334	0.000645	5180.0906	0.001748

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.