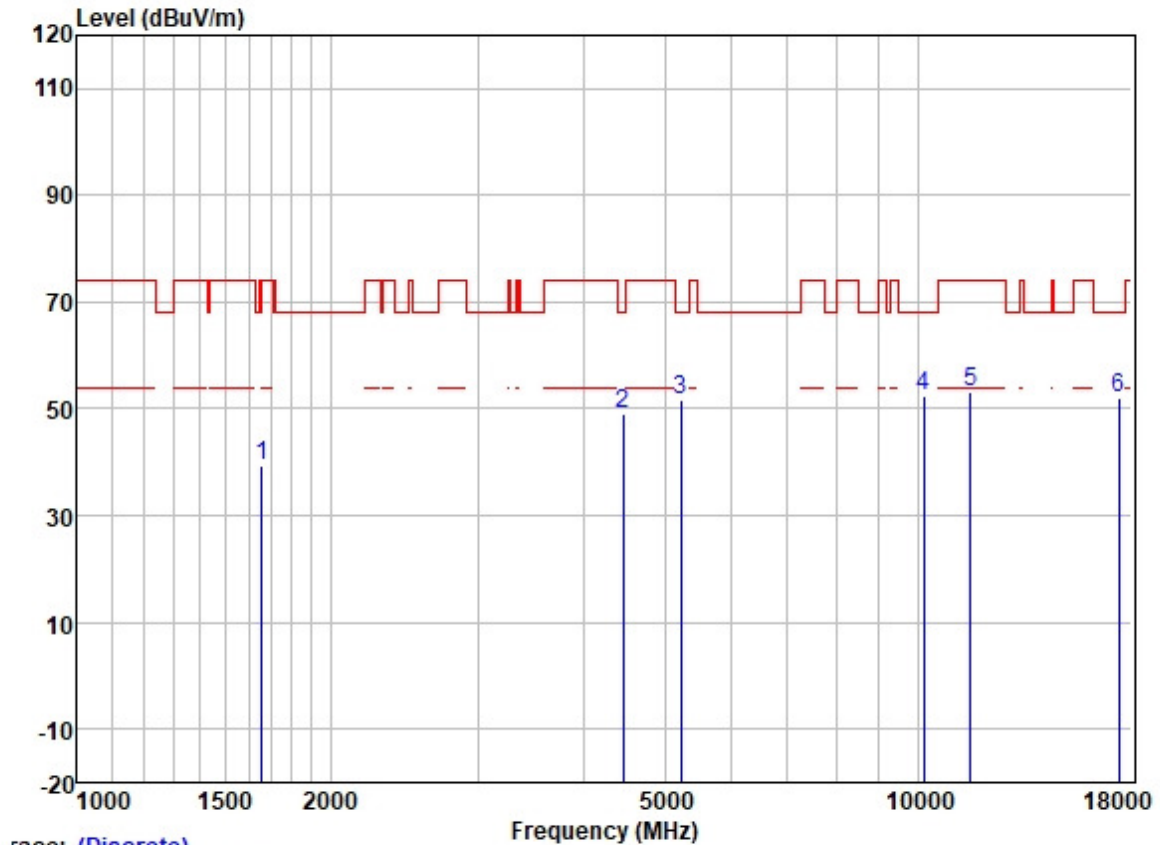
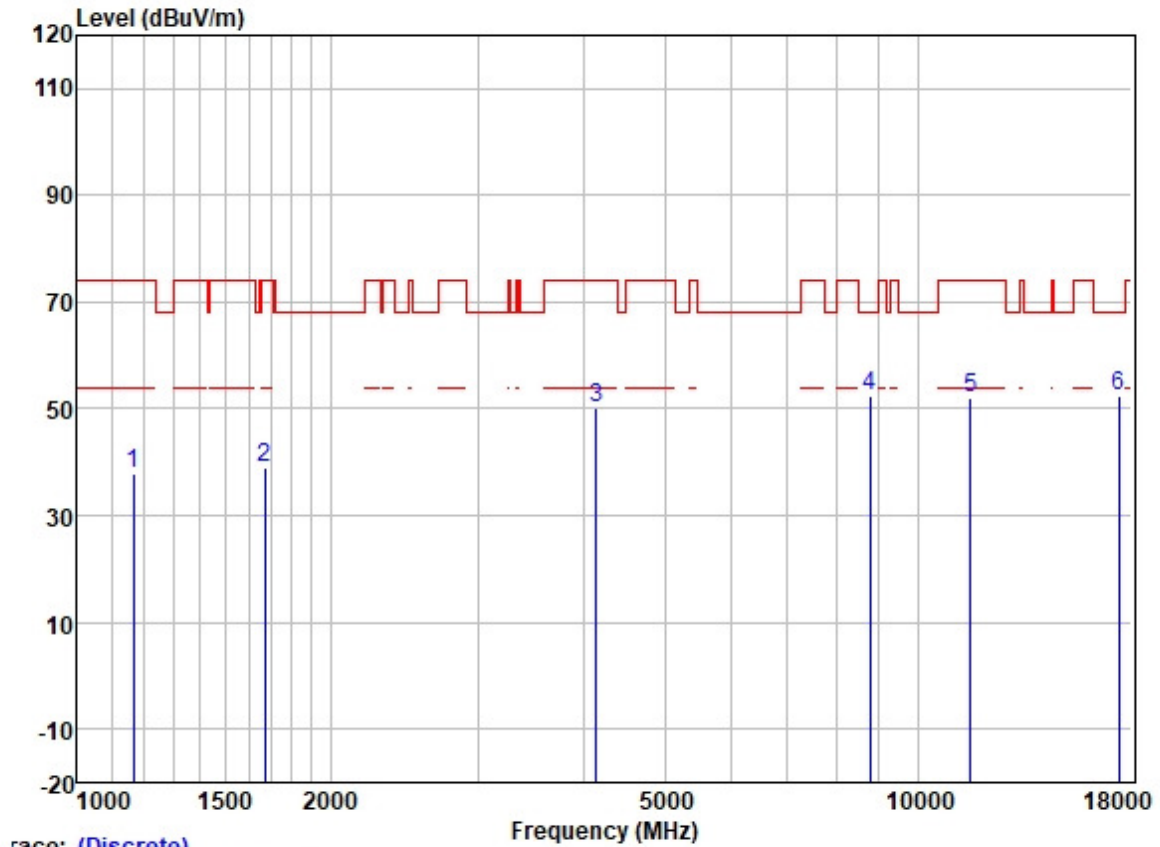


Test Mode: 02; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel: middle



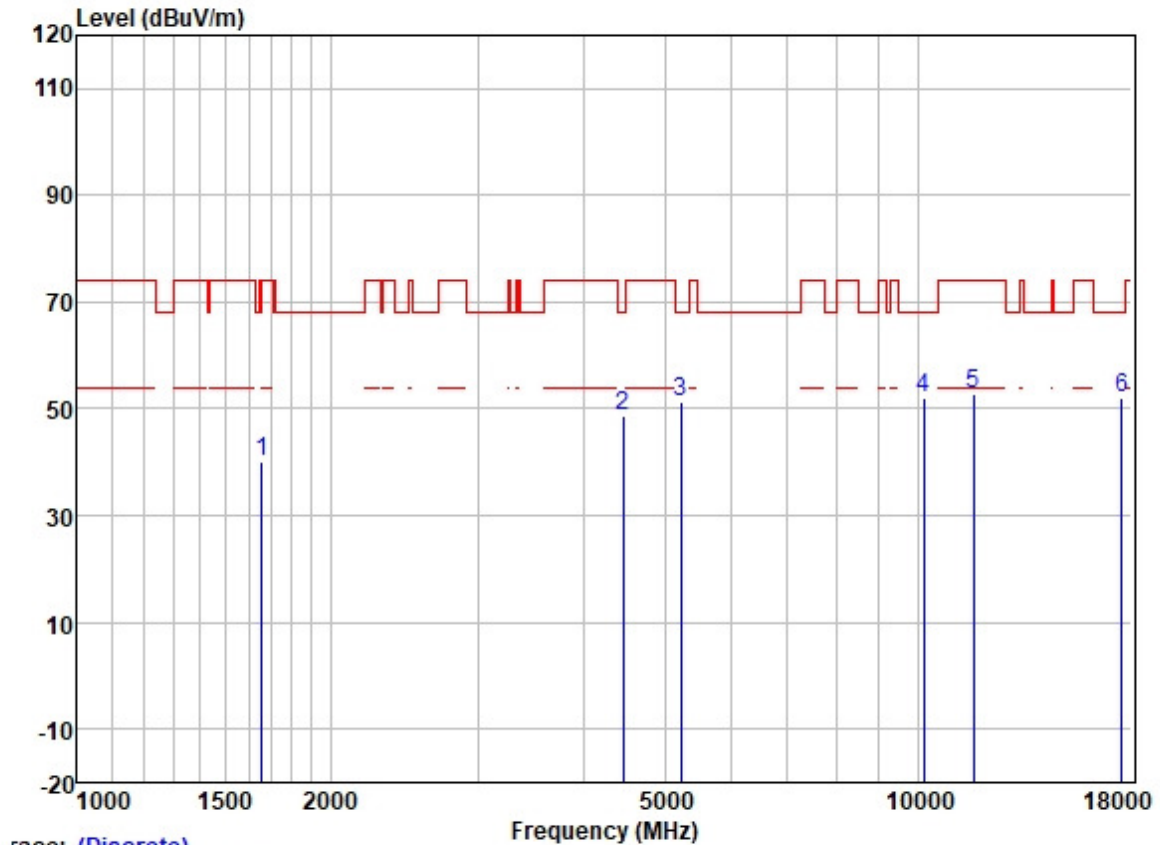
		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1658.337	49.00	25.65	2.80	37.93	39.52	68.20	-28.68	HORIZONTAL	Peak
2	4456.315	50.13	30.75	4.88	36.81	48.95	68.20	-19.25	HORIZONTAL	Peak
3	5224.153	51.25	31.74	5.70	36.87	51.82	68.20	-16.38	HORIZONTAL	Peak
4	10156.140	43.77	38.89	7.05	37.39	52.32	68.20	-15.88	HORIZONTAL	Peak
5	11570.000	42.11	39.78	8.38	37.14	53.13	74.00	-20.87	HORIZONTAL	Peak
6	17355.000	33.75	43.40	10.39	35.32	52.22	68.20	-15.98	HORIZONTAL	Peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel: middle



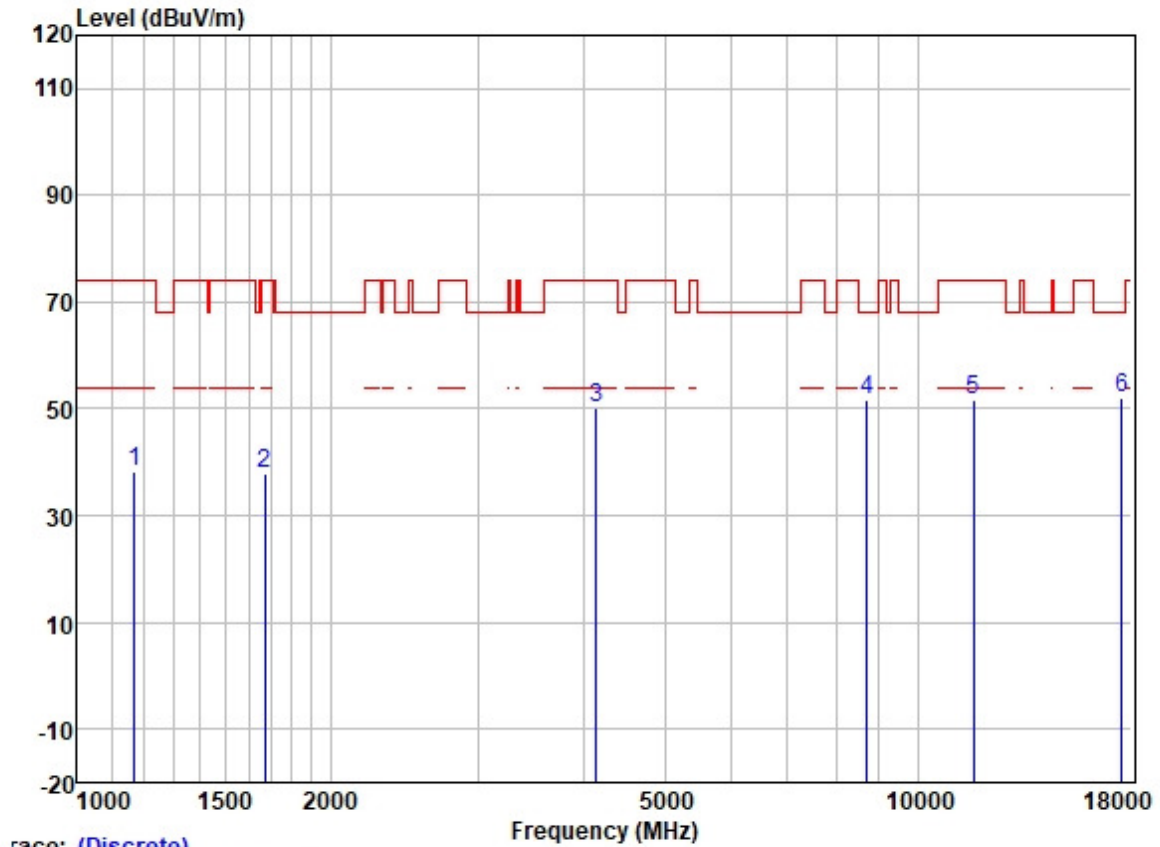
		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1165.546	49.30	24.54	2.39	38.40	37.83	74.00	-36.17	VERTICAL	Peak
2	1672.779	48.24	25.67	2.80	37.91	38.80	74.00	-35.20	VERTICAL	Peak
3	4145.664	52.51	30.03	4.60	36.80	50.34	74.00	-23.66	VERTICAL	Peak
4	8764.146	45.32	37.32	7.19	37.54	52.29	68.20	-15.91	VERTICAL	Peak
5	11570.000	41.18	39.78	8.38	37.14	52.20	74.00	-21.80	VERTICAL	Peak
6	17355.000	33.78	43.40	10.39	35.32	52.25	68.20	-15.95	VERTICAL	Peak

Test Mode: 02; Polarity: Horizontal; Modulation: 802.11a; Bandwidth: 20MHz; Channel: High



		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1658.359	49.69	25.65	2.80	37.93	40.21	68.20	-27.99	HORIZONTAL	Peak
2	4466.361	49.74	30.77	4.93	36.81	48.63	68.20	-19.57	HORIZONTAL	Peak
3	5224.153	50.69	31.74	5.70	36.87	51.26	68.20	-16.94	HORIZONTAL	Peak
4	10156.140	43.46	38.89	7.05	37.39	52.01	68.20	-16.19	HORIZONTAL	Peak
5	11650.000	42.02	39.65	8.35	37.13	52.89	74.00	-21.11	HORIZONTAL	Peak
6	17475.000	32.54	43.90	10.77	35.32	51.89	68.20	-16.31	HORIZONTAL	Peak

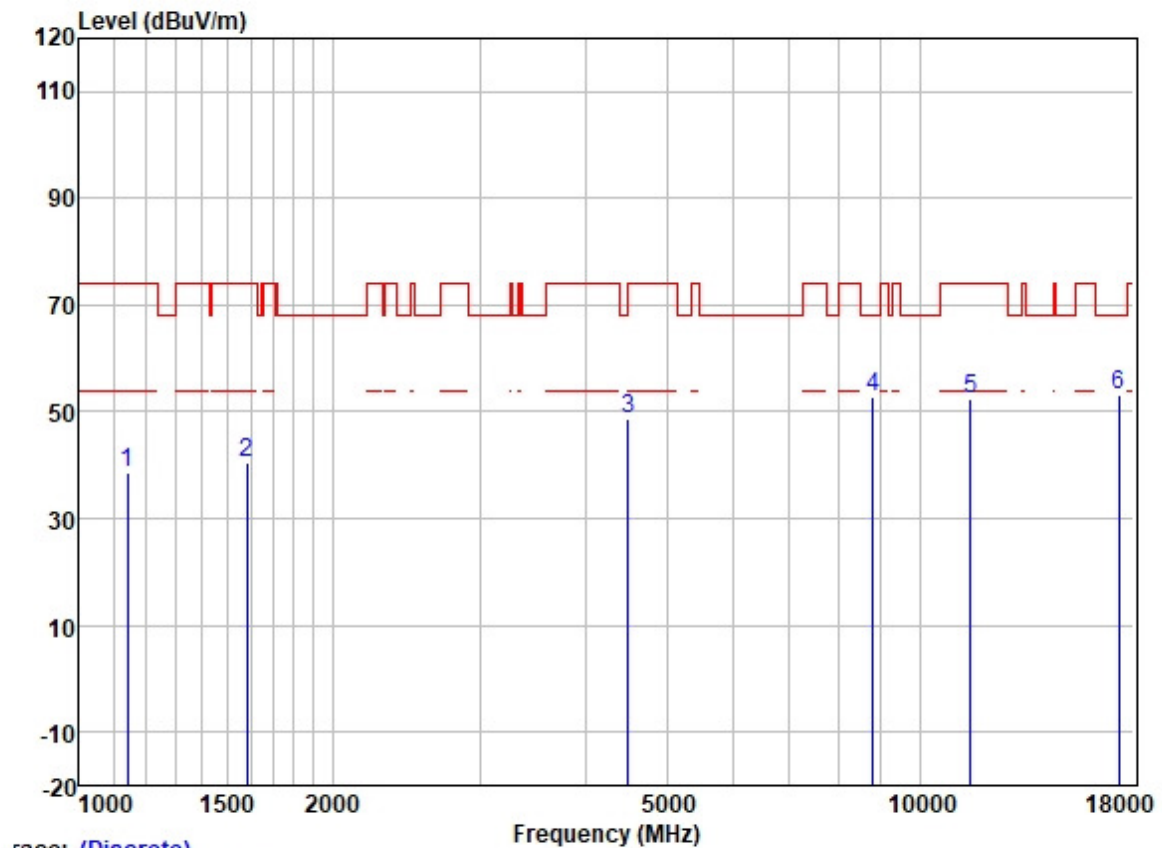
Test Mode: 02; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel: High



Trace: (Discrete)

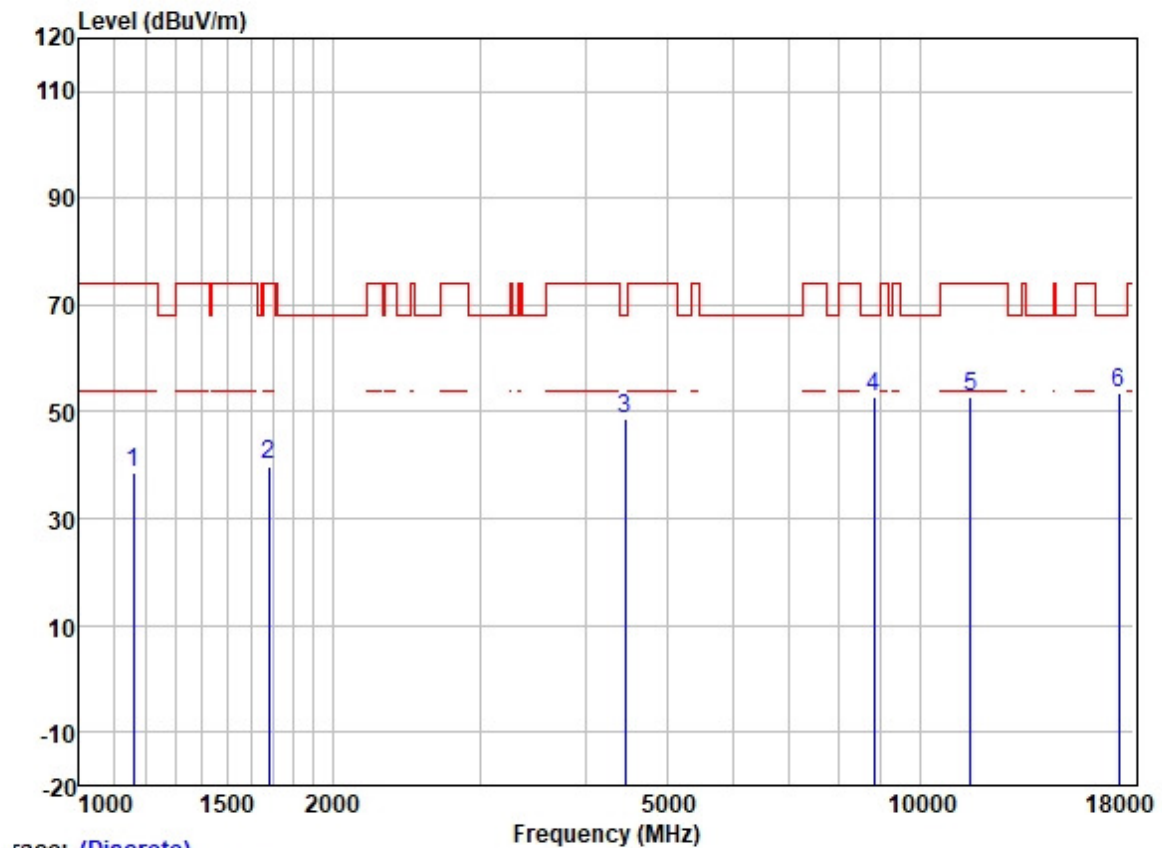
	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1169.551	49.64	24.55	2.39	38.40	38.18	74.00	-35.82	VERTICAL	Peak
2	1672.931	47.32	25.67	2.80	37.91	37.88	74.00	-36.12	VERTICAL	Peak
3	4145.664	52.18	30.03	4.60	36.80	50.01	74.00	-23.99	VERTICAL	Peak
4	8714.252	44.78	37.30	7.07	37.55	51.60	68.20	-16.60	VERTICAL	Peak
5	11650.000	40.72	39.65	8.35	37.13	51.59	74.00	-22.41	VERTICAL	Peak
6	17475.000	32.62	43.90	10.77	35.32	51.97	68.20	-16.23	VERTICAL	Peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel: Low



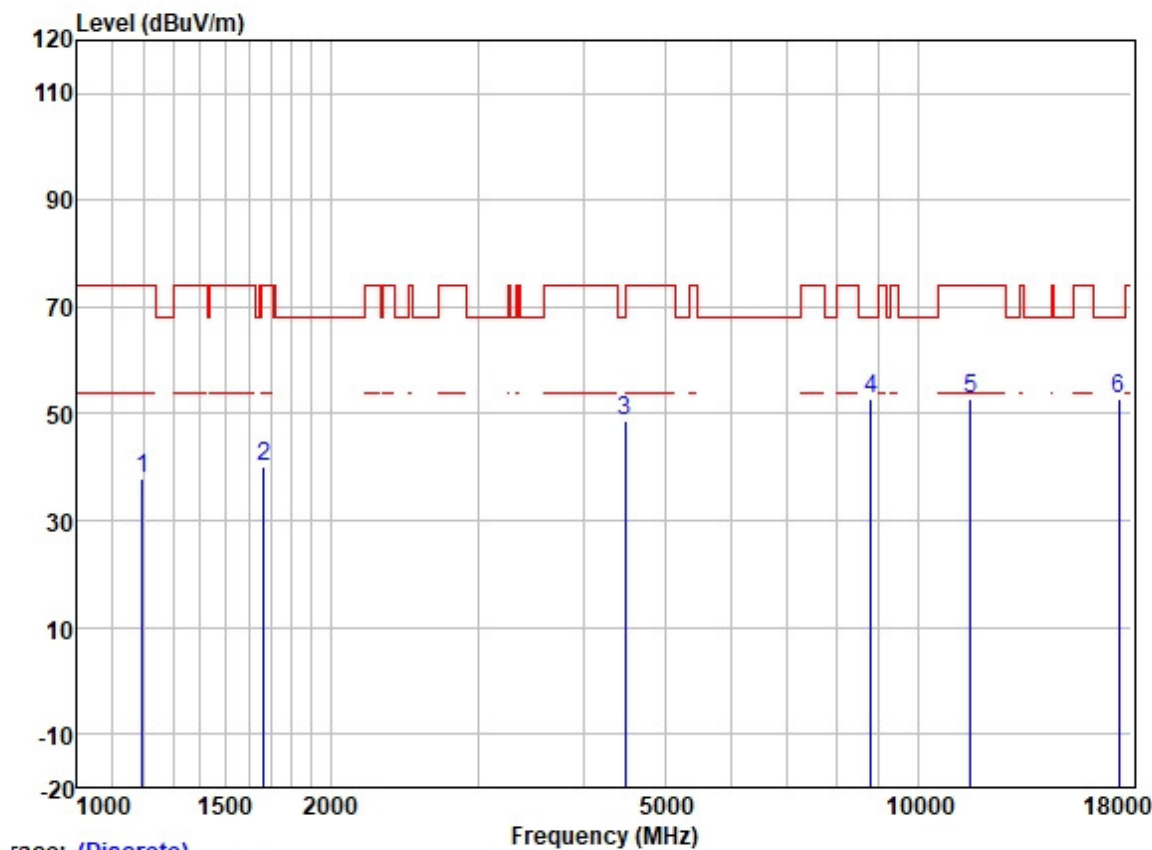
		Read	Antenna	Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1142.201	50.15	24.47	2.30	38.42	38.50	74.00	-35.50	HORIZONTAL	Peak
2	1583.392	50.06	25.56	2.80	38.00	40.42	74.00	-33.58	HORIZONTAL	Peak
3	4495.125	49.48	30.80	5.05	36.82	48.51	68.20	-19.69	HORIZONTAL	Peak
4	8789.516	45.66	37.33	7.24	37.54	52.69	68.20	-15.51	HORIZONTAL	Peak
5	11490.000	41.25	39.90	8.41	37.15	52.41	74.00	-21.59	HORIZONTAL	Peak
6	17235.000	35.29	43.01	10.08	35.33	53.05	68.20	-15.15	HORIZONTAL	Peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel: Low



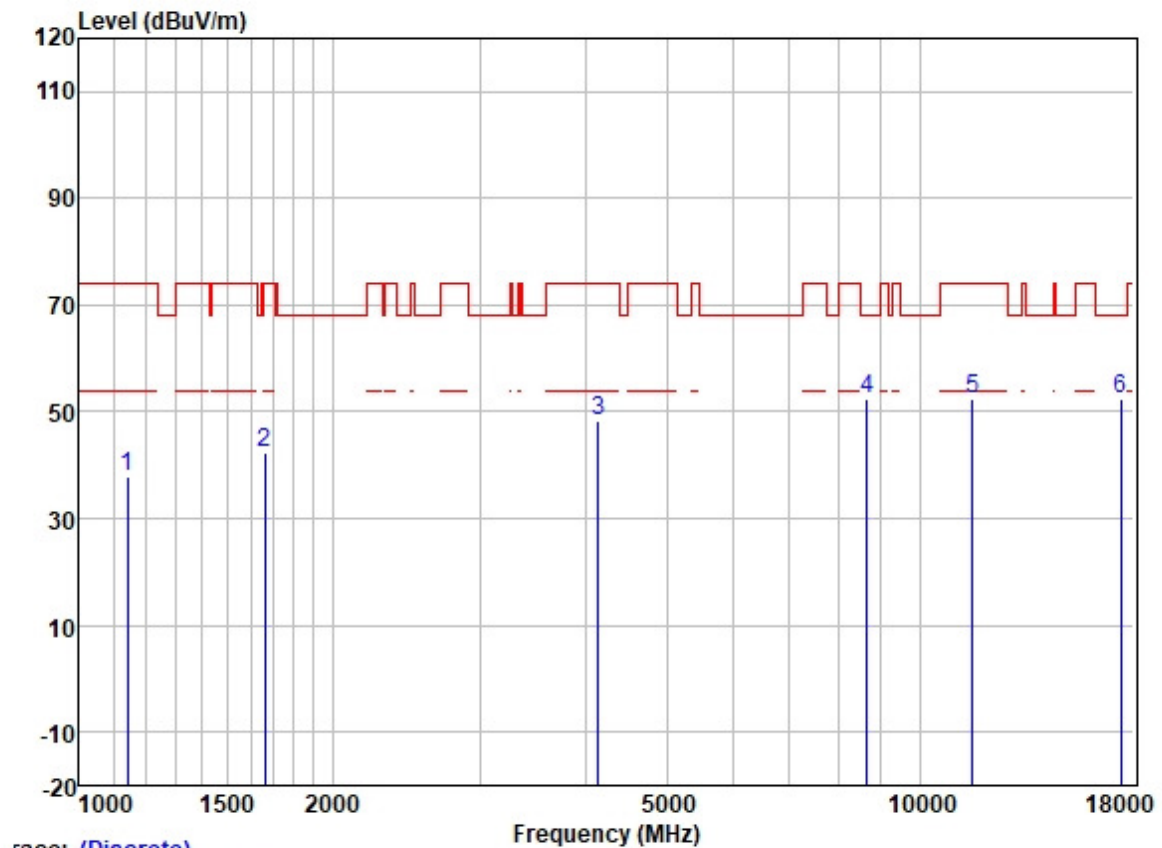
		Read	Antenna	Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1158.828	50.02	24.52	2.40	38.42	38.52	74.00	-35.48	VERTICAL	Peak
2	1682.477	49.35	25.68	2.80	37.91	39.92	74.00	-34.08	VERTICAL	Peak
3	4456.315	49.74	30.75	4.88	36.81	48.56	68.20	-19.64	VERTICAL	Peak
4	8814.957	45.67	37.34	7.29	37.53	52.77	68.20	-15.43	VERTICAL	Peak
5	11490.000	41.80	39.90	8.41	37.15	52.96	74.00	-21.04	VERTICAL	Peak
6	17235.000	35.83	43.01	10.08	35.33	53.59	68.20	-14.61	VERTICAL	Peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel: middle



		Read	Antenna	Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1196.264	49.28	24.67	2.35	38.39	37.91	74.00	-36.09	HORIZONTAL	Peak
2	1667.951	49.52	25.66	2.80	37.91	40.07	74.00	-33.93	HORIZONTAL	Peak
3	4482.150	49.66	30.78	4.99	36.81	48.62	68.20	-19.58	HORIZONTAL	Peak
4	8789.516	45.72	37.33	7.24	37.54	52.75	68.20	-15.45	HORIZONTAL	Peak
5	11570.000	41.65	39.78	8.38	37.14	52.67	74.00	-21.33	HORIZONTAL	Peak
6	17355.000	34.43	43.40	10.39	35.32	52.90	68.20	-15.30	HORIZONTAL	Peak

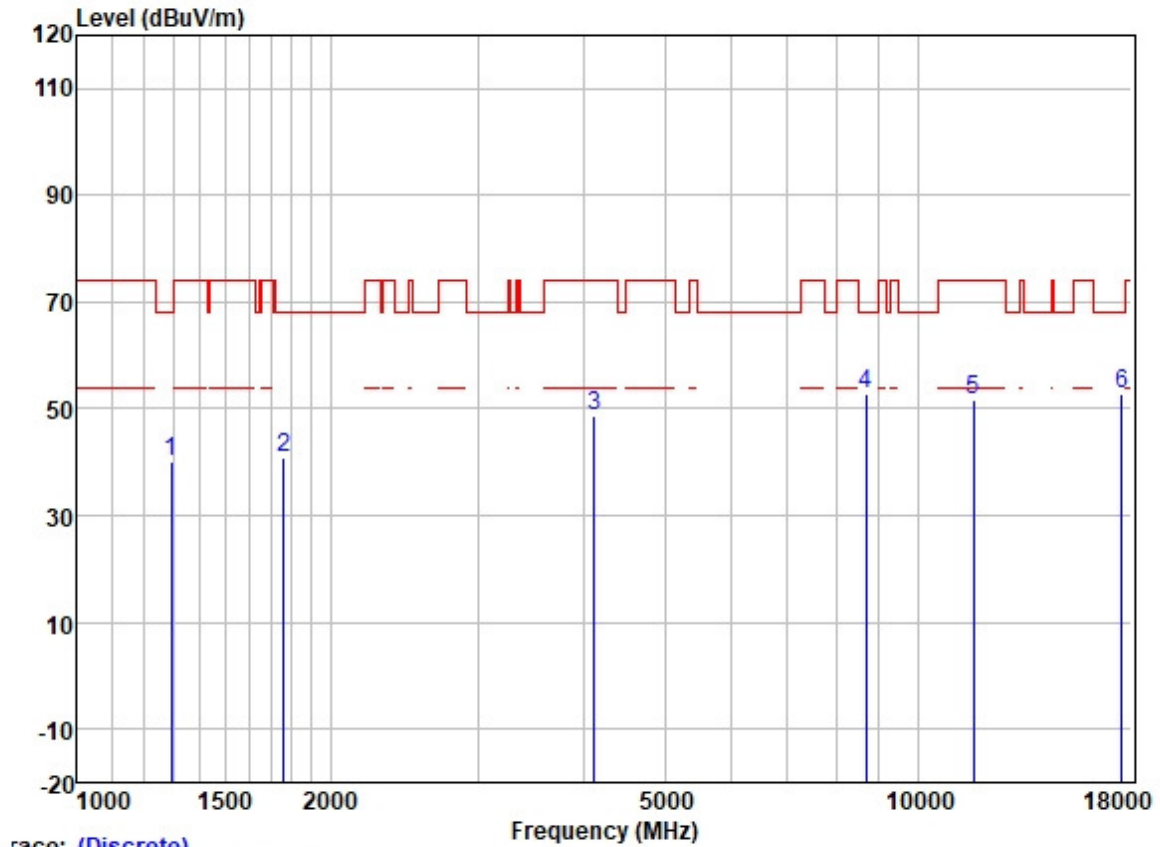
Test Mode: 02; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel: middle



race: (Discrete)

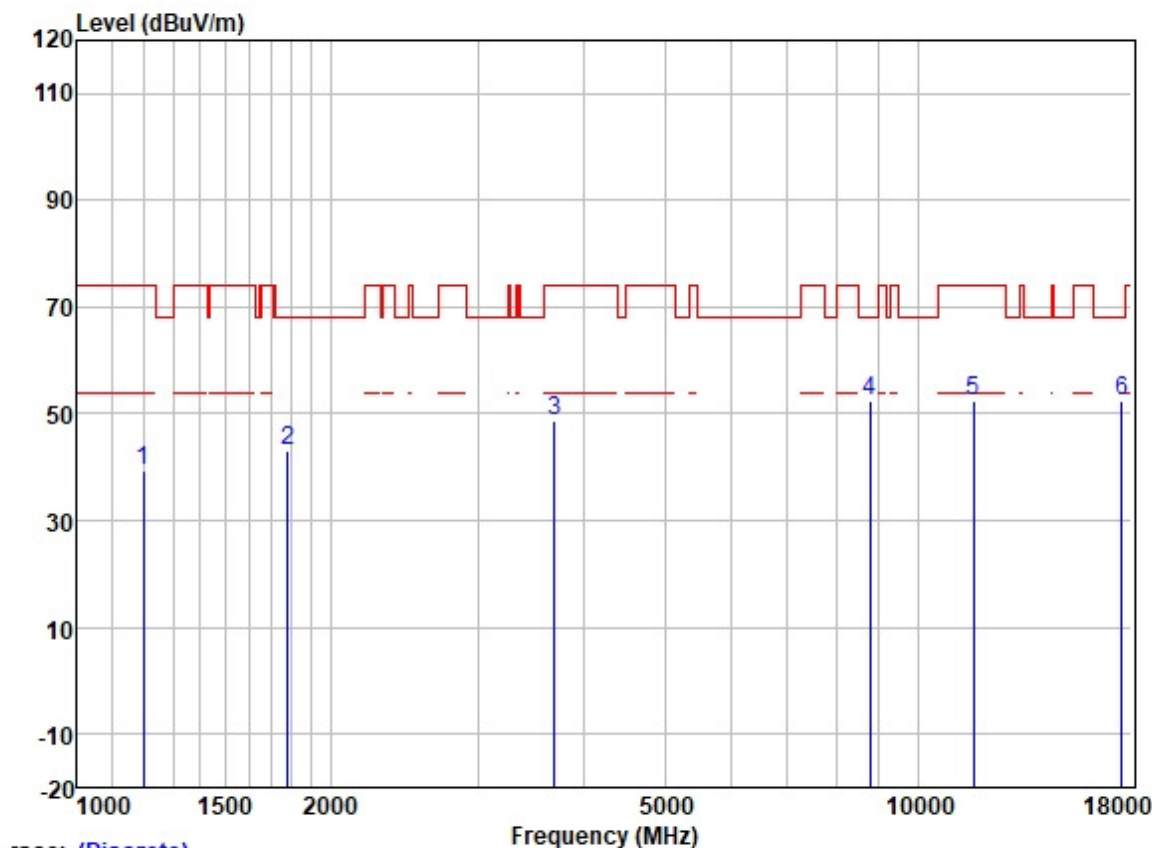
		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1142.201	49.38	24.47	2.30	38.42	37.73	74.00	-36.27	VERTICAL	Peak
2	1663.137	51.85	25.65	2.80	37.91	42.39	74.00	-31.61	VERTICAL	Peak
3	4145.664	50.64	30.03	4.60	36.80	48.47	74.00	-25.53	VERTICAL	Peak
4	8663.404	45.79	37.27	6.97	37.55	52.48	68.20	-15.72	VERTICAL	Peak
5	11570.000	41.51	39.78	8.38	37.14	52.53	74.00	-21.47	VERTICAL	Peak
6	17355.000	33.96	43.40	10.39	35.32	52.43	68.20	-15.77	VERTICAL	Peak

Test Mode: 02; Polarity: Horizontal; Modulation: 802.11n; Bandwidth: 20MHz; Channel: High



		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1293.290	50.71	25.18	2.57	38.31	40.15	68.20	-28.05	HORIZONTAL	Peak
2	1761.337	50.01	25.88	2.93	37.85	40.97	68.20	-27.23	HORIZONTAL	Peak
3	4122.920	50.75	29.98	4.60	36.80	48.53	74.00	-25.47	HORIZONTAL	Peak
4	8688.480	45.93	37.28	7.02	37.55	52.68	68.20	-15.52	HORIZONTAL	Peak
5	11650.000	40.77	39.65	8.35	37.13	51.64	74.00	-22.36	HORIZONTAL	Peak
6	17475.000	33.40	43.90	10.77	35.32	52.75	68.20	-15.45	HORIZONTAL	Peak

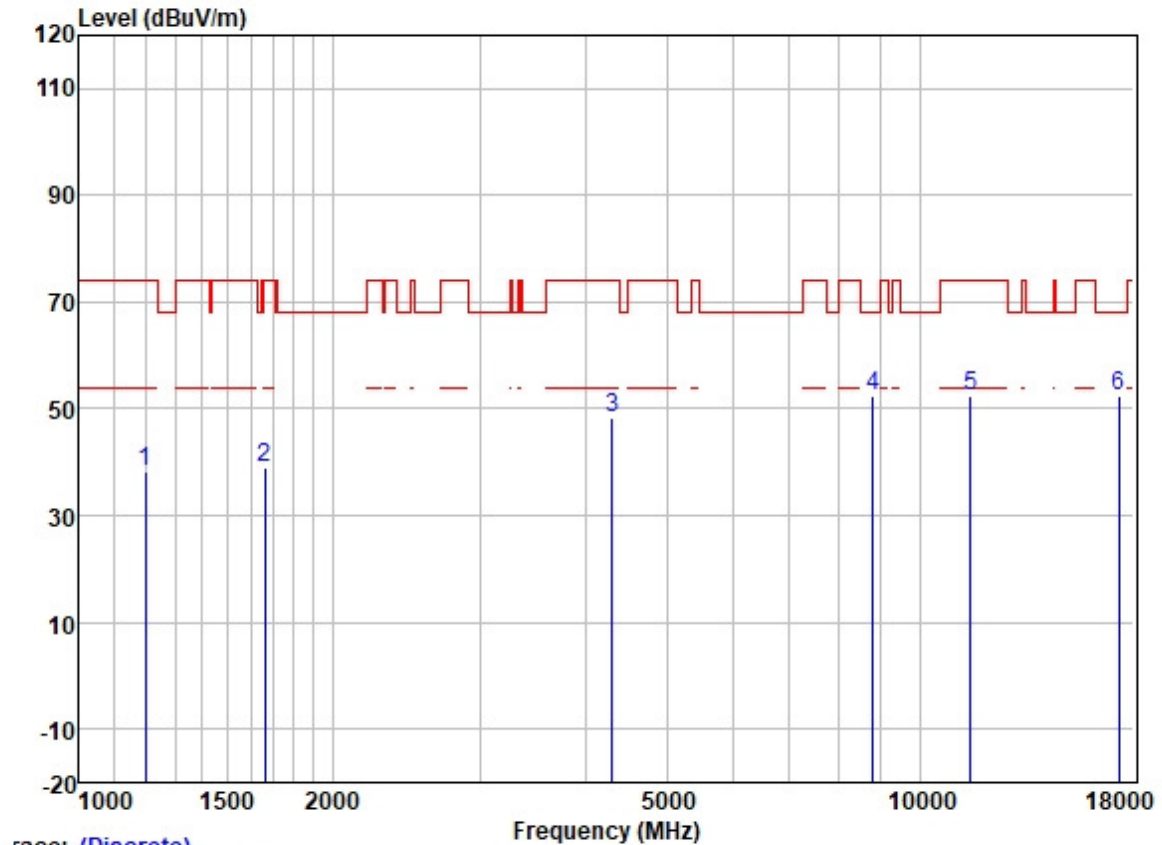
Test Mode: 02; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel: High



race: (Discrete)

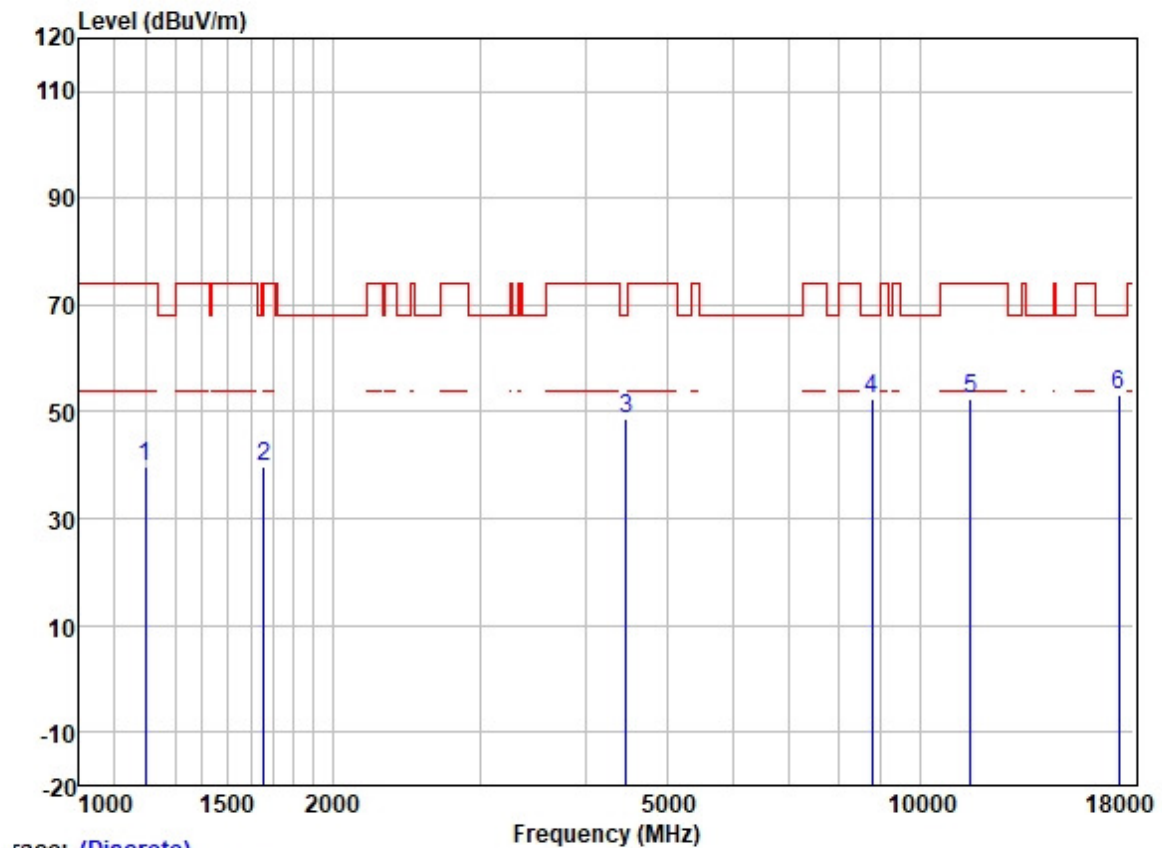
		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1199.733	50.72	24.68	2.34	38.39	39.35	74.00	-34.65	VERTICAL	Peak
2	1781.701	51.99	25.92	2.97	37.83	43.05	68.20	-25.15	VERTICAL	Peak
3	3695.616	51.81	29.22	4.55	36.88	48.70	74.00	-25.30	VERTICAL	Peak
4	8764.146	45.42	37.32	7.19	37.54	52.39	68.20	-15.81	VERTICAL	Peak
5	11650.000	41.71	39.65	8.35	37.13	52.58	74.00	-21.42	VERTICAL	Peak
6	17475.000	33.10	43.90	10.77	35.32	52.45	68.20	-15.75	VERTICAL	Peak

Test Mode: 02; Polarity: Horizontal; Modulation: 802.11n; Bandwidth: 40MHz; Channel: Low



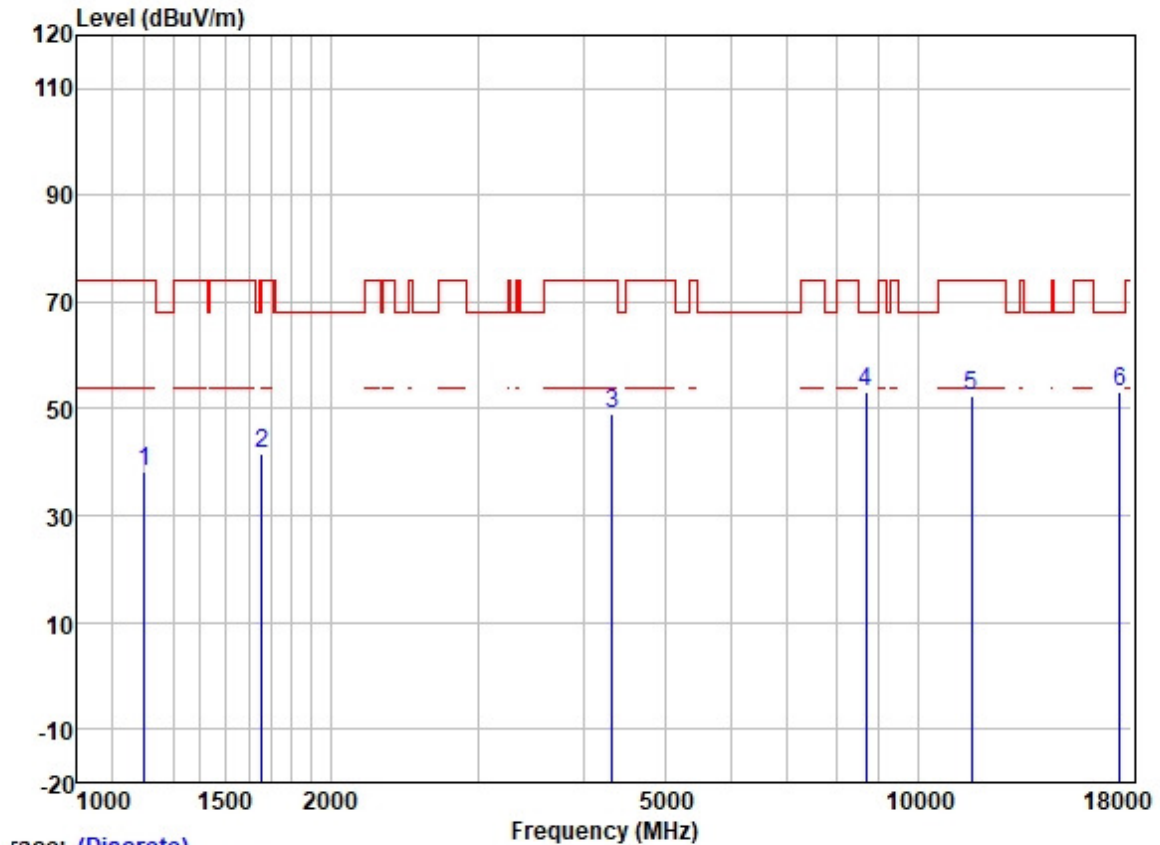
		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1199.726	49.56	24.68	2.34	38.39	38.19	74.00	-35.81	HORIZONTAL	Peak
2	1663.137	48.63	25.65	2.80	37.91	39.17	74.00	-34.83	HORIZONTAL	Peak
3	4304.400	50.15	30.48	4.65	36.81	48.47	74.00	-25.53	HORIZONTAL	Peak
4	8789.516	45.26	37.33	7.24	37.54	52.29	68.20	-15.91	HORIZONTAL	Peak
5	11510.000	41.30	39.90	8.41	37.15	52.46	74.00	-21.54	HORIZONTAL	Peak
6	17265.000	34.41	43.21	10.24	35.33	52.53	68.20	-15.67	HORIZONTAL	Peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel: Low



		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1199.726	51.13	24.68	2.34	38.39	39.76	74.00	-34.24	VERTICAL	Peak
2	1658.337	49.07	25.65	2.80	37.93	39.59	68.20	-28.61	VERTICAL	Peak
3	4469.214	49.83	30.77	4.93	36.81	48.72	68.20	-19.48	VERTICAL	Peak
4	8764.146	45.59	37.32	7.19	37.54	52.56	68.20	-15.64	VERTICAL	Peak
5	11510.000	41.28	39.90	8.41	37.15	52.44	74.00	-21.56	VERTICAL	Peak
6	17265.000	34.93	43.21	10.24	35.33	53.05	68.20	-15.15	VERTICAL	Peak

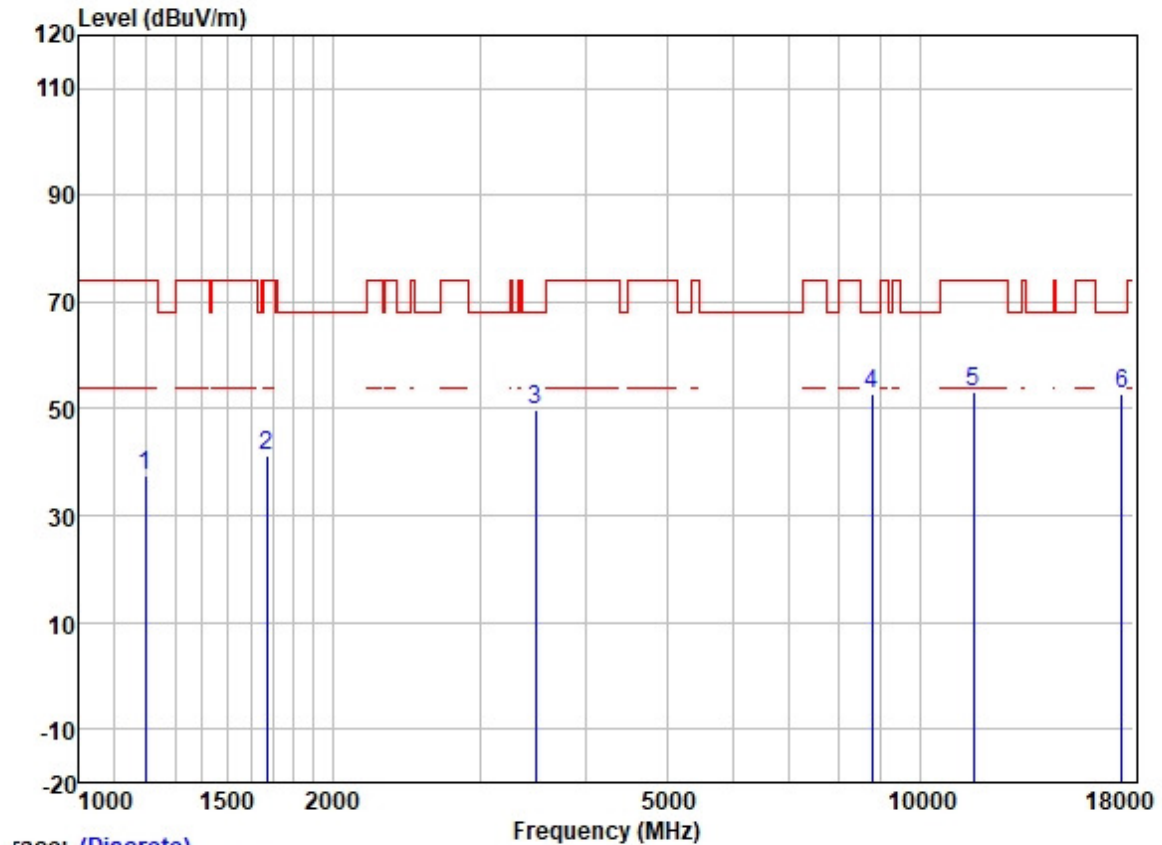
Test Mode: 02; Polarity: Horizontal; Modulation: 802.11n; Bandwidth: 40MHz; Channel: High



Trace: (Discrete)

		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1203.199	49.50	24.70	2.34	38.39	38.15	74.00	-35.85	HORIZONTAL	Peak
2	1658.337	50.99	25.65	2.80	37.93	41.51	68.20	-26.69	HORIZONTAL	Peak
3	4329.354	50.52	30.54	4.67	36.81	48.92	74.00	-25.08	HORIZONTAL	Peak
4	8688.480	46.38	37.28	7.02	37.55	53.13	68.20	-15.07	HORIZONTAL	Peak
5	11590.000	41.56	39.72	8.37	37.14	52.51	74.00	-21.49	HORIZONTAL	Peak
6	17385.000	34.22	43.57	10.53	35.32	53.00	68.20	-15.20	HORIZONTAL	Peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel: High



		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1199.726	48.93	24.68	2.34	38.39	37.56	74.00	-36.44	VERTICAL	Peak
2	1672.779	50.49	25.67	2.80	37.91	41.05	74.00	-32.95	VERTICAL	Peak
3	3495.691	53.37	28.90	4.30	36.94	49.63	68.20	-18.57	VERTICAL	Peak
4	8764.146	45.78	37.32	7.19	37.54	52.75	68.20	-15.45	VERTICAL	Peak
5	11590.000	42.28	39.72	8.37	37.14	53.23	74.00	-20.77	VERTICAL	Peak
6	17385.000	34.18	43.57	10.53	35.32	52.96	68.20	-15.24	VERTICAL	Peak

7.10 Radiated Emissions (below 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.407(b)

Test Method: KDB 789033 D02 II G

Measurement Distance: 10m

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
960-1000	500	3

*(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

7.10.1 E.U.T. Operation

Operating Environment:

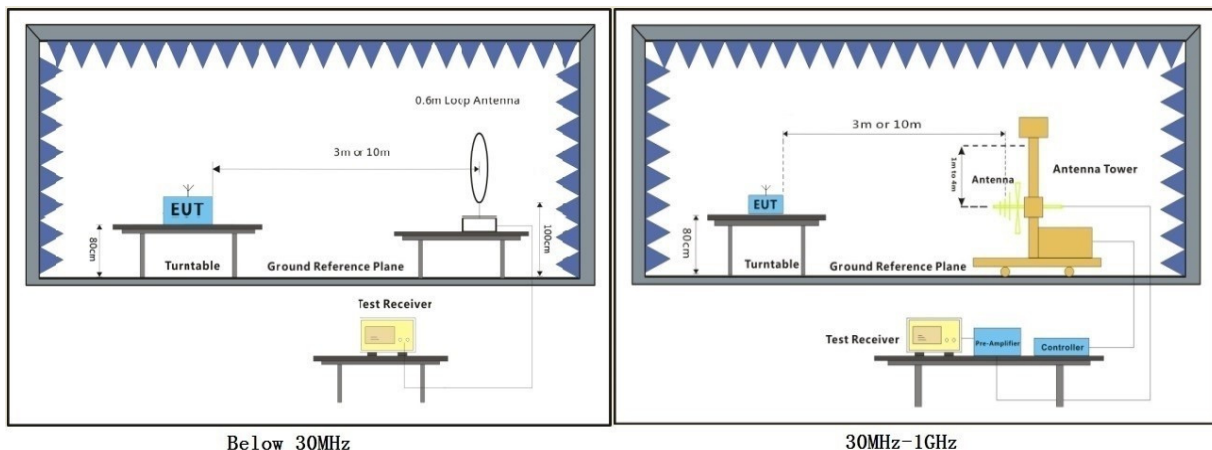
Temperature: 22.9 °C Humidity: 53.9 % RH Atmospheric Pressure: 1003 mbar

7.10.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
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Pre-scan	01	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.
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Final test	02	TX mode (U-NII-3)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.
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7.10.3 Test Setup Diagram

Below 30MHz

30MHz-1GHz



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SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch Testing Laboratory

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7.10.4 Measurement Procedure and Data

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

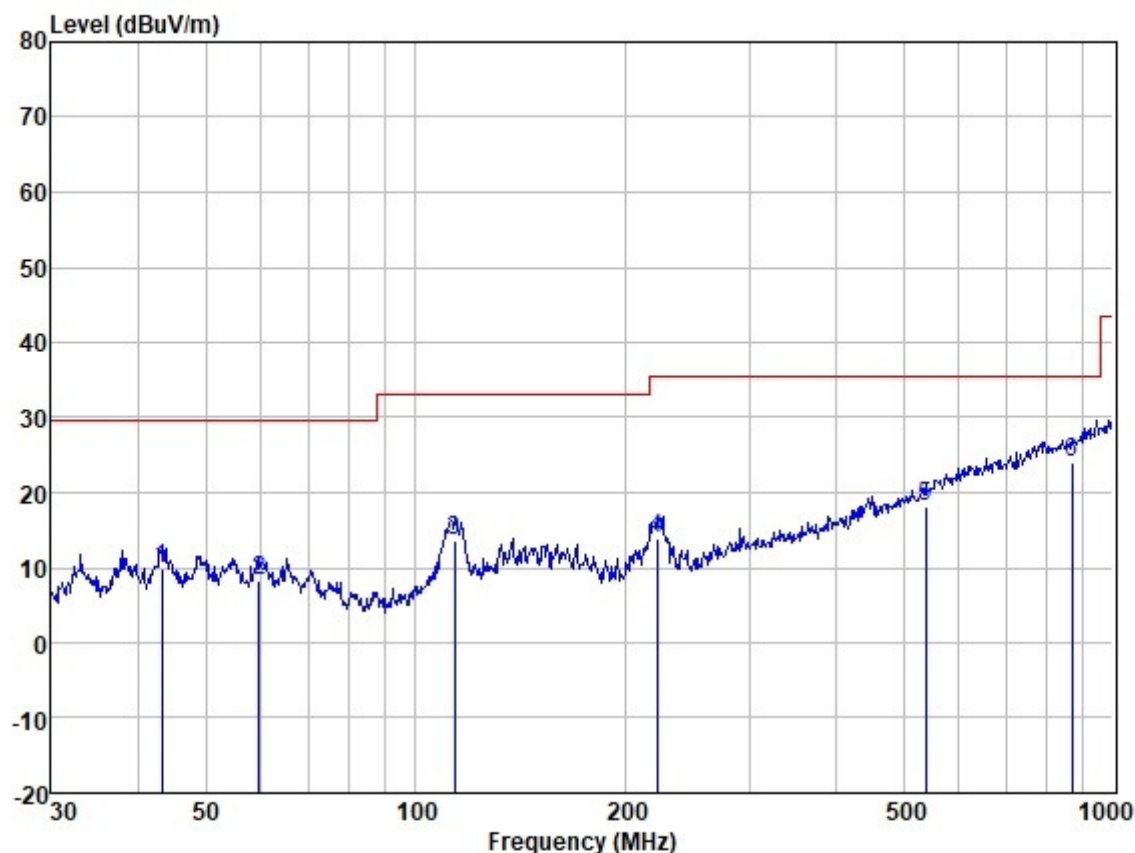
1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. For emission below 1GHz, through the pre-scan found the worst case is the lowest channel of 802.11a. Only the worst case is recorded in the report.
3. Scan from 9kHz to 1GHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.



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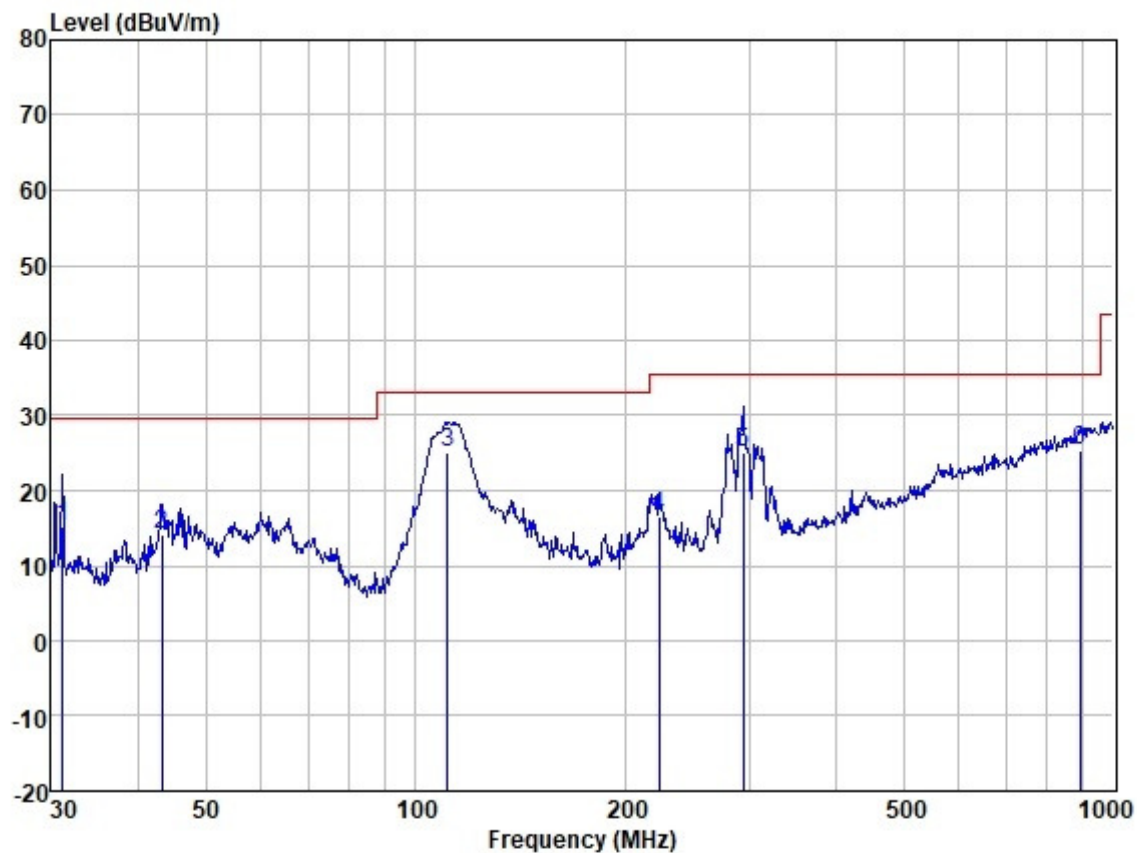
Test Mode: 02; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel: Middle



Site : SGS
Job :
Model :
Power :
Test Mode : 02

	Freq	Read Level	Antenna Factor	Cable Loss	Preamplifier Factor	Measured Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	43.202	28.39	13.34	1.12	32.98	9.87	29.50	-19.63	HORIZONTAL	QP
2	59.649	27.02	12.93	1.25	33.00	8.20	29.50	-21.30	HORIZONTAL	QP
3	113.714	34.40	10.40	1.82	33.00	13.62	33.10	-19.48	HORIZONTAL	QP
4	221.392	34.44	9.71	2.65	33.02	13.78	35.60	-21.82	HORIZONTAL	QP
5	537.589	28.66	18.22	4.70	33.34	18.24	35.60	-17.36	HORIZONTAL	QP
6	872.183	27.44	22.24	6.71	32.47	23.92	35.60	-11.68	HORIZONTAL	QP

Test Mode: 02; Polarity: Vertical; Modulation: 802.11a; Bandwidth: 20MHz; Channel: Middle



Site : SGS
Job :
Model :
Power :
Test Mode : 02

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Measured Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	31.180	35.23	11.84	1.03	32.94	15.16	29.50	-14.34	VERTICAL	QP
2	43.202	32.67	13.34	1.12	32.98	14.15	29.50	-15.35	VERTICAL	QP
3	110.957	46.18	10.14	1.80	33.00	25.12	33.10	-7.98	VERTICAL	QP
4	222.950	37.25	9.74	2.67	33.02	16.64	35.60	-18.96	VERTICAL	QP
5	294.114	42.01	13.07	3.15	33.09	25.14	35.60	-10.46	VERTICAL	QP
6	893.857	27.46	23.24	6.86	32.34	25.22	35.60	-10.38	VERTICAL	QP

The test was performed at a 10m test site. According to below formulate and the test data at 10m test distance,

$$L_3 / L_{10} = D_{10} / D_3$$

Note:

L₃: Level @ 3m distance. Unit: uV/m;

L₁₀: Level @ 10m distance. Unit: uV/m;

D₃: 3m distance. Unit: m

D₁₀: 10m distance. Unit: m

The level at 3m test distance is below:

Frequency (MHz)	Level @ 10m (dBuV/m)	Level @ 10m (uV/m)	Level @ 3m (uV/m)	Level @ 3m (dBuV/m)	Limit @ 3m (dBuV/m)	Margin (dB)	Ant. Polarization
43.202	9.87	3.12	10.38	20.33	40	-19.67	H
59.649	8.20	2.57	8.57	18.66	40	-21.34	H
113.714	13.62	4.80	15.99	24.08	43.5	-19.42	H
221.392	13.78	4.89	16.29	24.24	46	-21.76	H
537.589	18.24	8.17	27.22	28.70	46	-17.30	H
872.183	23.92	15.70	52.35	34.38	46	-11.62	H
31.180	15.16	5.73	19.09	25.62	40	-14.38	V
43.202	14.15	5.10	17.00	24.61	40	-15.39	V
110.957	25.12	18.03	60.10	35.58	43.5	-7.92	V
222.950	16.64	6.79	22.64	27.10	46	-18.90	V
294.114	25.14	18.07	60.24	35.60	46	-10.40	V
893.857	26.22	20.46	68.21	36.68	46	-9.32	V

7.11 Frequency Stability

Test Requirement 47 CFR Part 15, Subpart C 15.407 (g)
 Test Method: ANSI C63.10 (2013) Section 6.8

7.11.1 E.U.T. Operation

Operating Environment:
 Temperature: 22.8 °C Humidity: 54.1 % RH Atmospheric Pressure: 1003 mbar

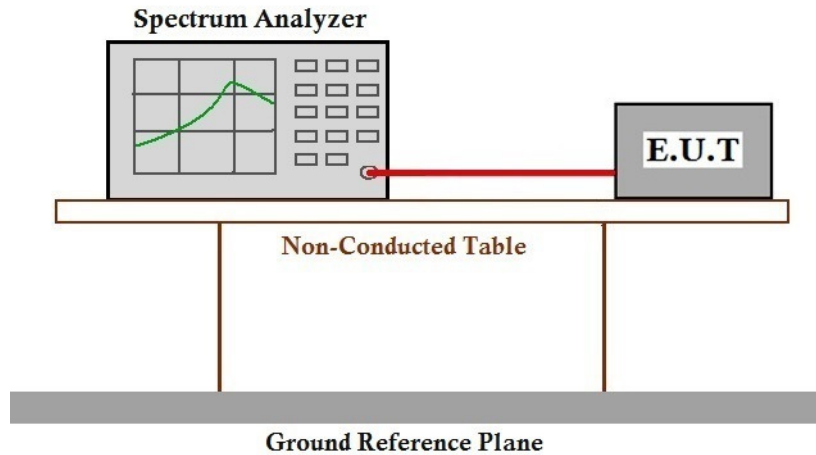
7.11.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.
Final test	02	TX mode (U-NII-3)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.



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7.11.3 Test Setup Diagram



7.11.4 Measurement Procedure and Data

Please Refer to Appendix for Details

The applicant declares that the emissions are maintained within the band of operation under all conditions of normal operation as specified in the user's manual and meets Section 15.407(g) requirements.

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for GZCR2206000734AT

9 EUT Constructional Details (EUT Photos)

Refer to Appendix – External and Internal Photos for GZCR2206000734AT

10 Appendix

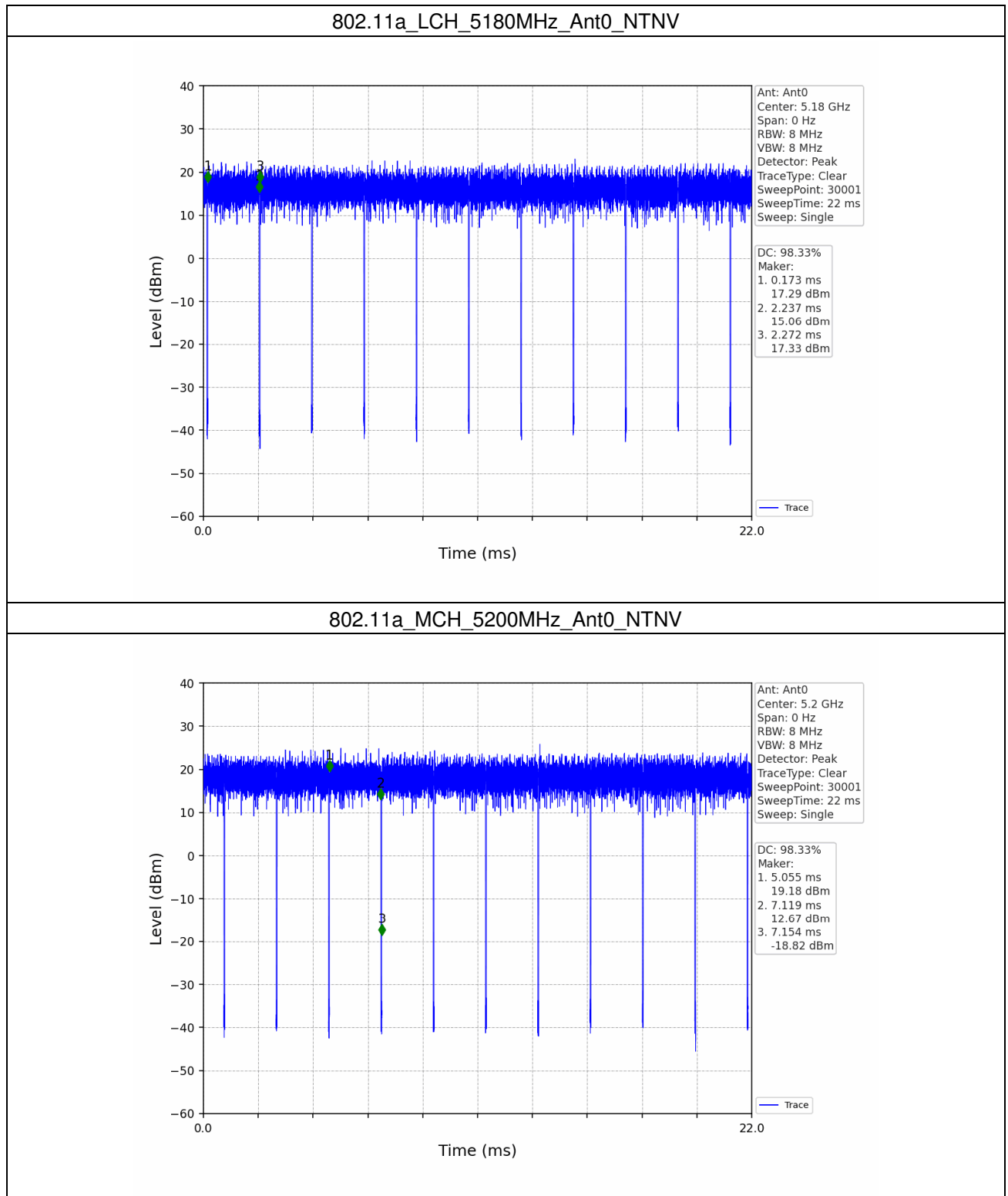
1. Duty Cycle

1.1 Ant0

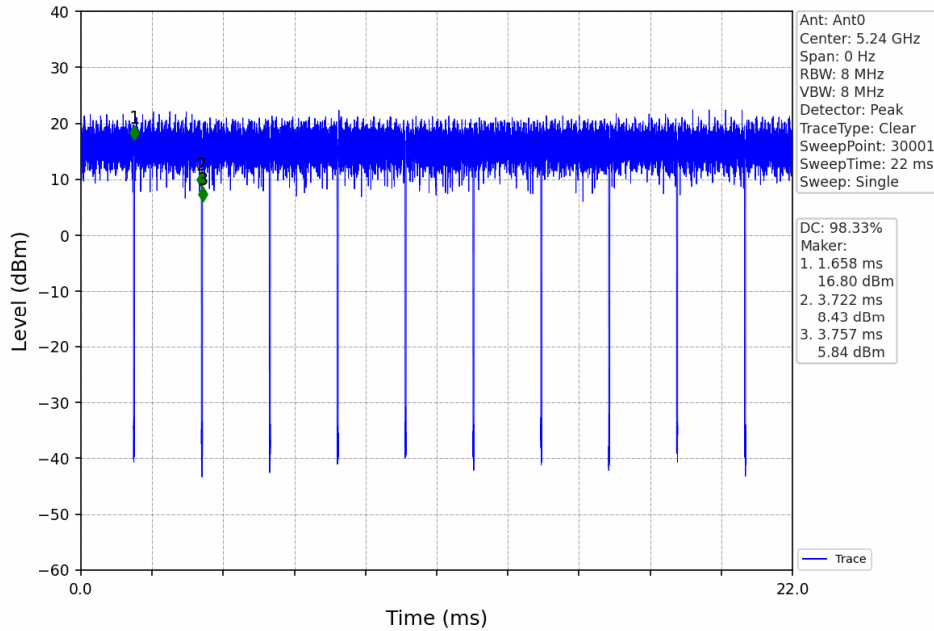
1.1.1 Test Result

Ant0							
Mode	TX Type	Frequency (MHz)	T _{on} (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	2.064	2.099	98.33	0.07	0.03
		5200	2.064	2.099	98.33	0.07	0.03
		5240	2.064	2.099	98.33	0.07	0.00
		5745	2.065	2.100	98.33	0.07	0.03
		5785	2.064	2.099	98.33	0.07	0.03
		5825	2.064	2.100	98.29	0.08	0.07
802.11n (HT20)	MIMO	5180	1.920	1.955	98.21	0.08	0.03
		5200	1.920	1.955	98.21	0.08	0.03
		5240	0.984	1.019	96.57	0.15	0.03
		5745	0.985	1.019	96.66	0.15	0.03
		5785	0.984	1.019	96.57	0.15	0.03
		5825	0.985	1.019	96.66	0.15	0.03
802.11n (HT40)	MIMO	5190	0.496	0.530	93.58	0.29	0.03
		5230	0.497	0.531	93.60	0.29	0.03
		5755	0.498	0.531	93.79	0.28	0.06
		5795	0.496	0.530	93.58	0.29	0.06

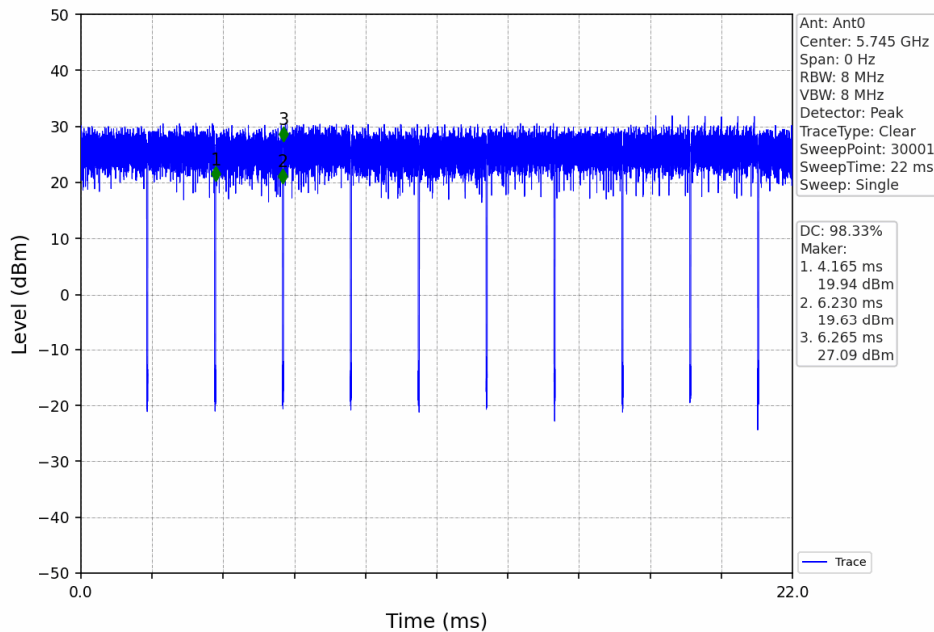
1.1.2 Test Graph



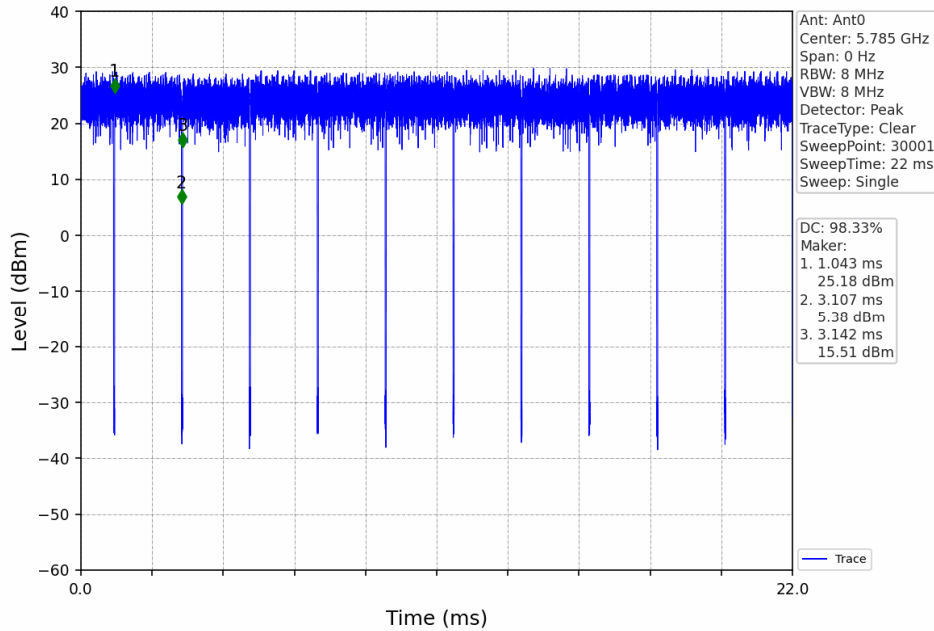
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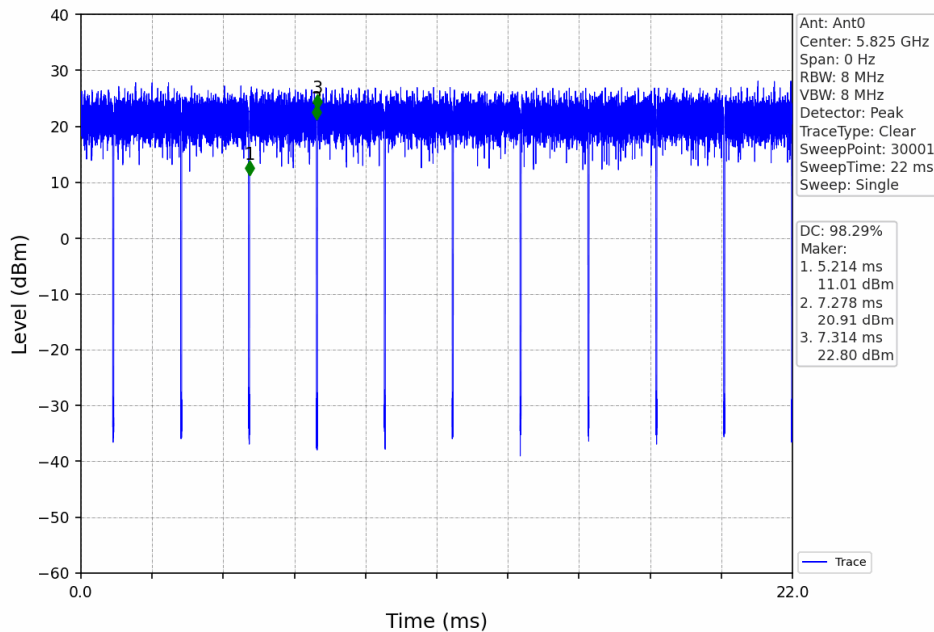
802.11a_LCH_5745MHz_Ant0_NTNV



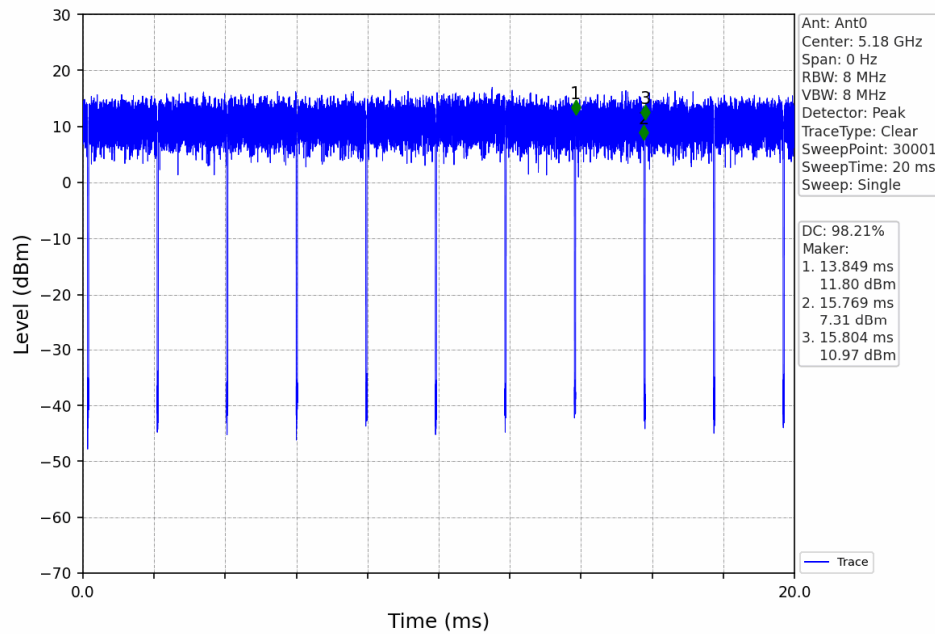
802.11a_MCH_5785MHz_Ant0_NTNV



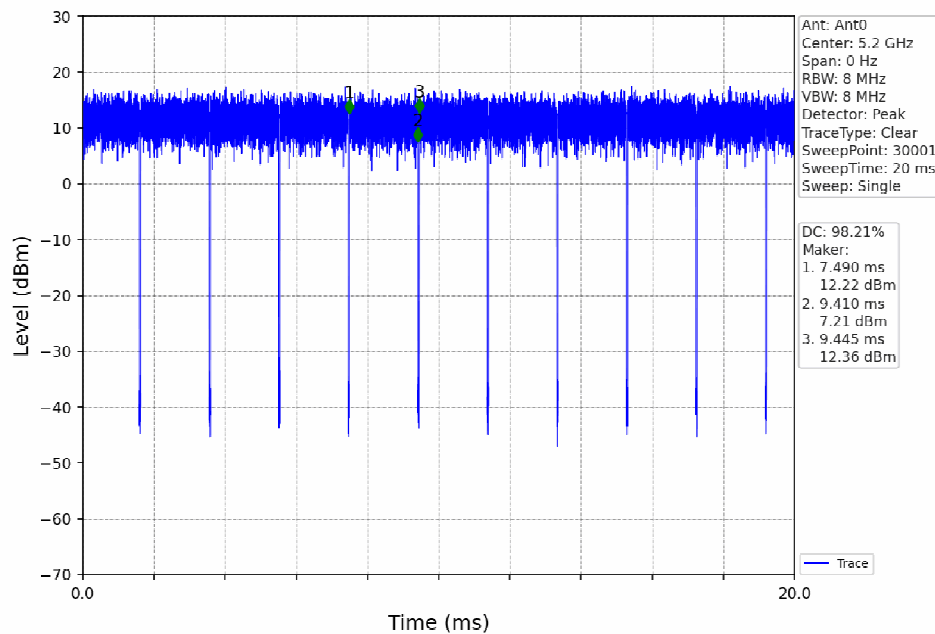
802.11a_HCH_5825MHz_Ant0_NTNV



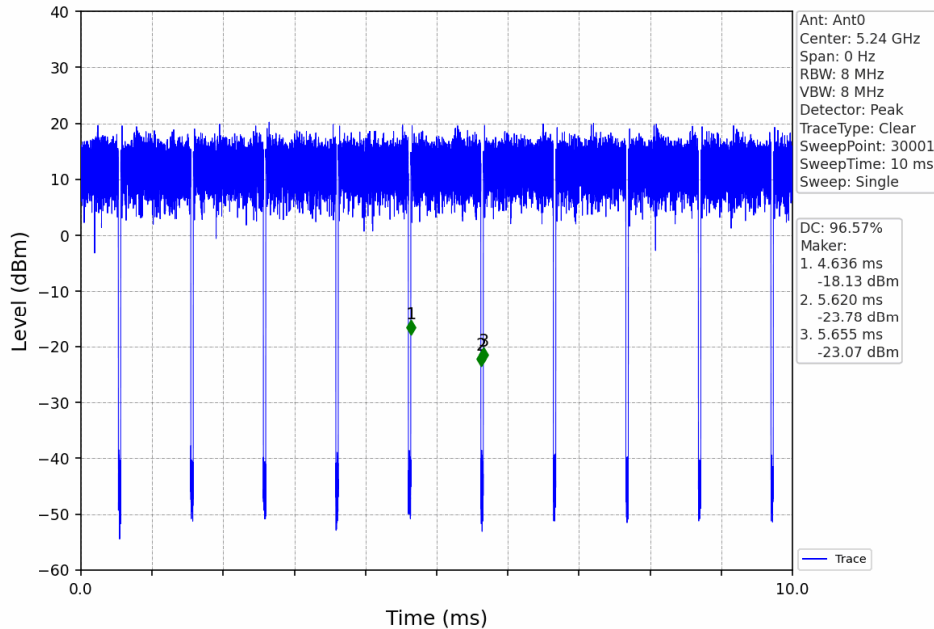
802.11n(HT20)_LCH_5180MHz_Ant0_NTNV



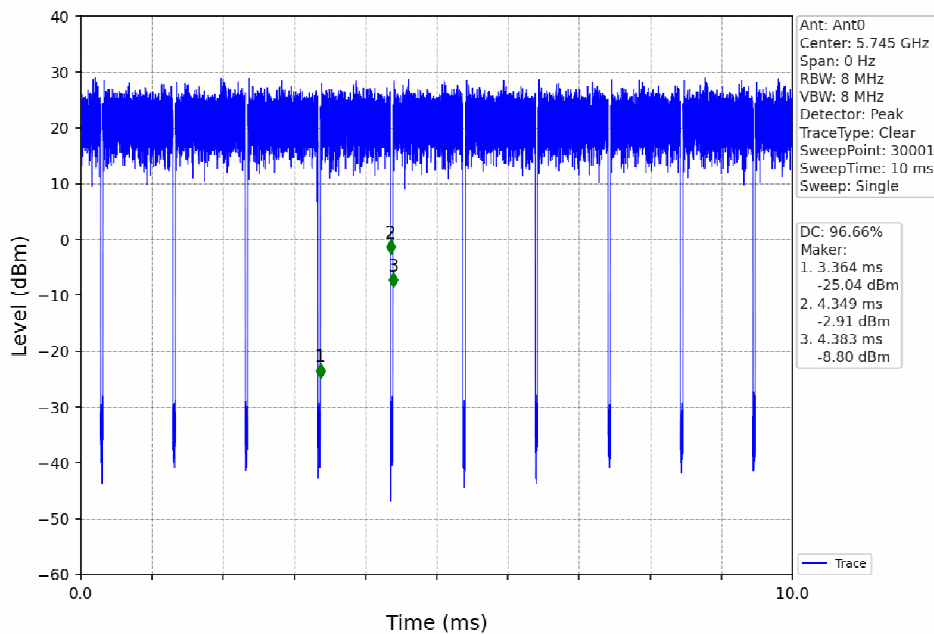
802.11n(HT20)_MCH_5200MHz_Ant0_NTNV



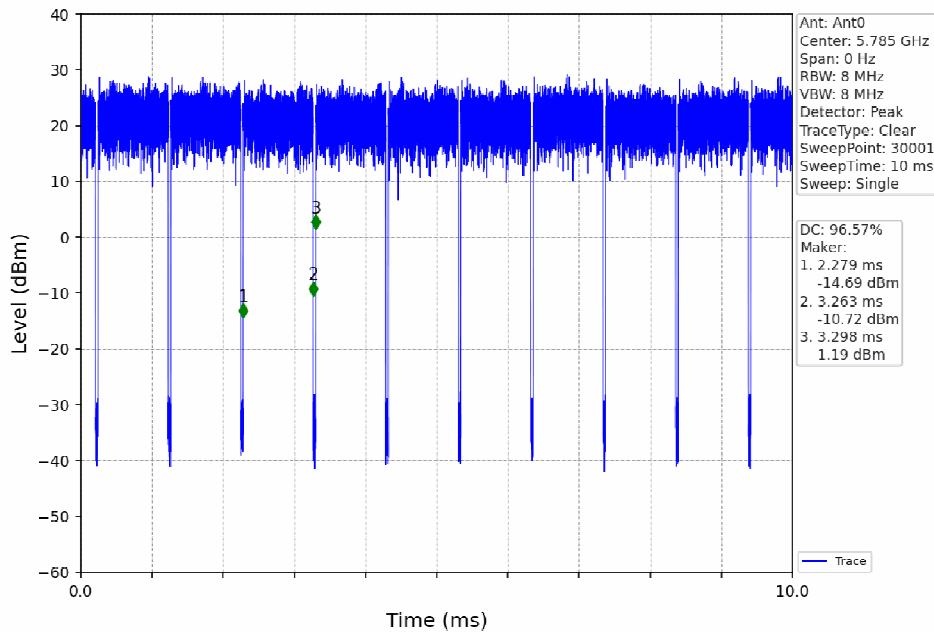
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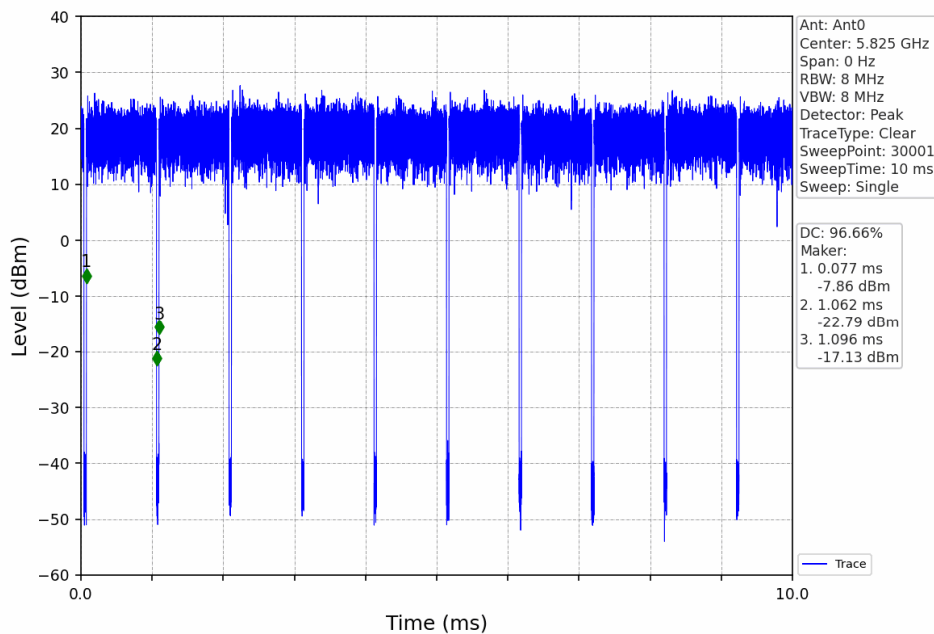
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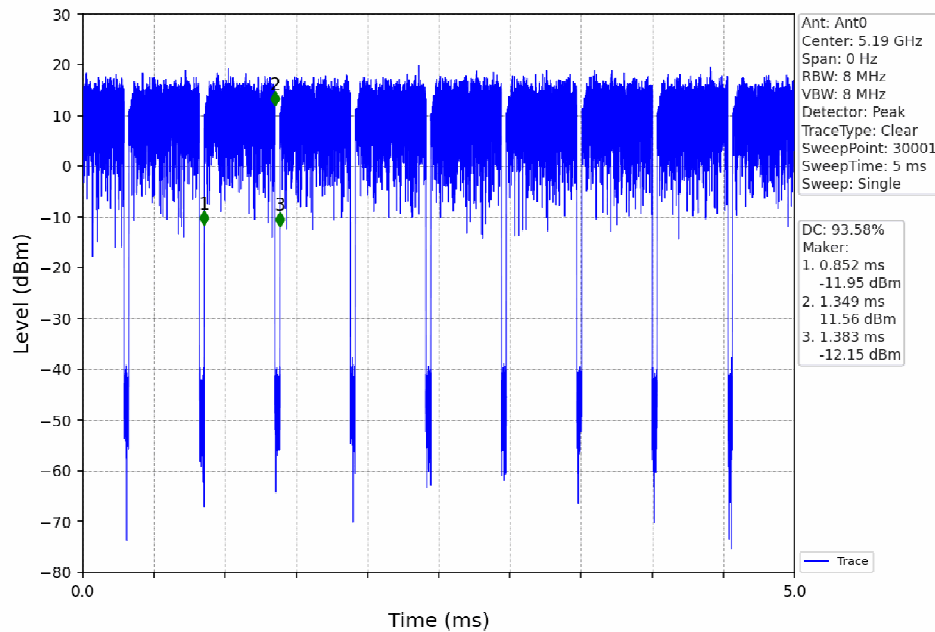
802.11n(HT20)_MCH_5785MHz_Ant0_NTNV



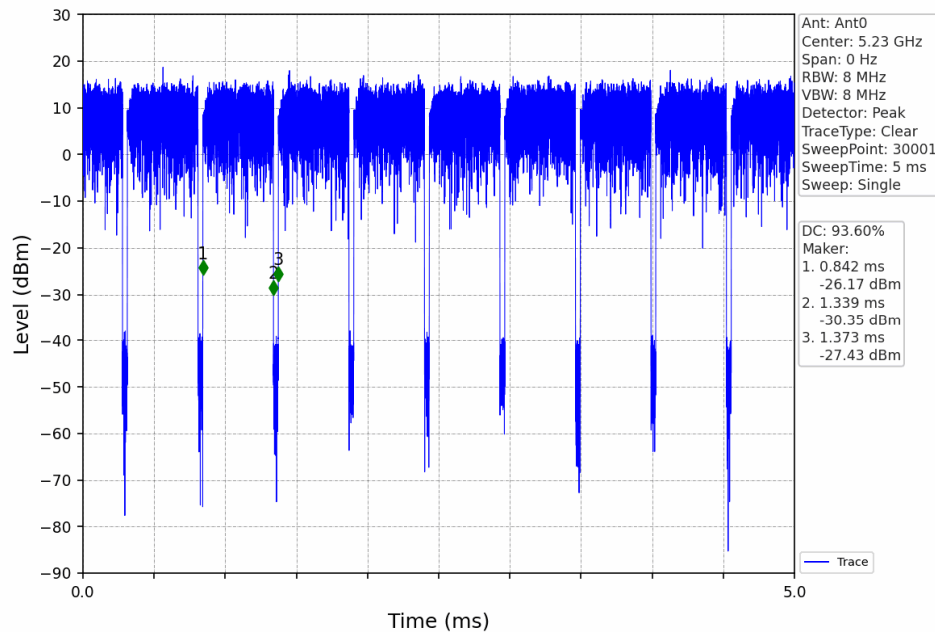
802.11n(HT20)_HCH_5825MHz_Ant0_NTNV



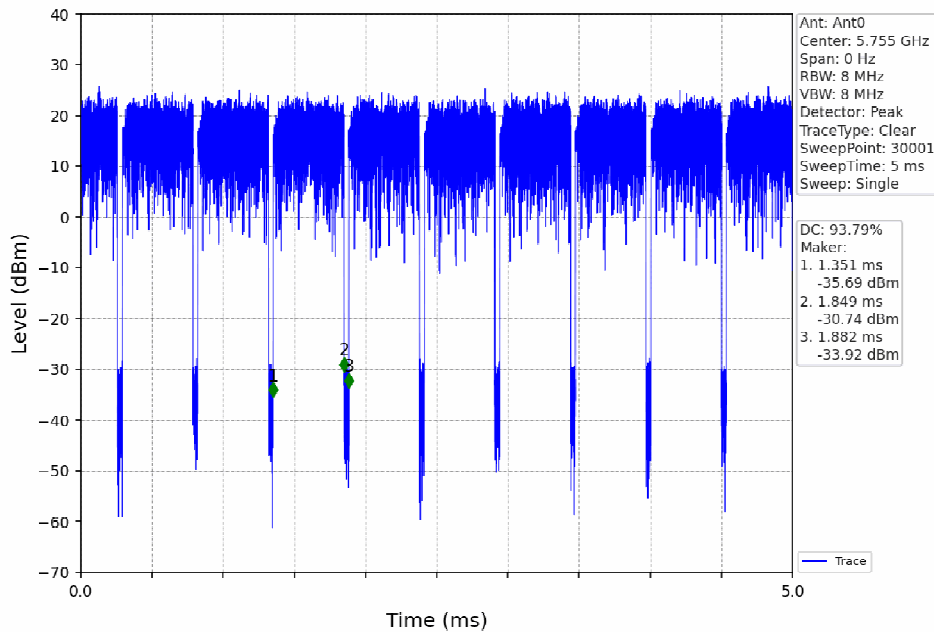
802.11n(HT40)_LCH_5190MHz_Ant0_NTNV



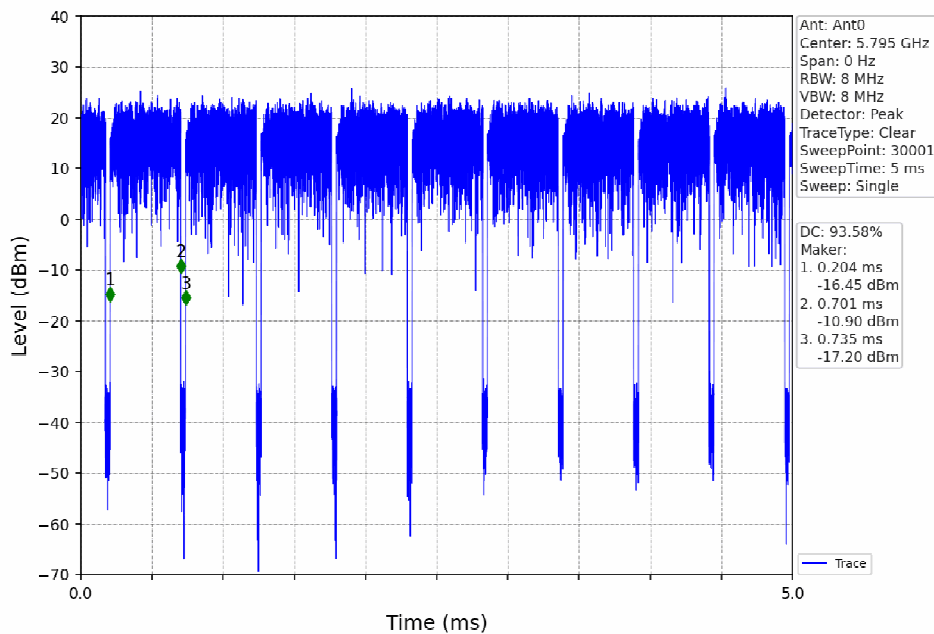
802.11n(HT40)_HCH_5230MHz_Ant0_NTNV



802.11n(HT40)_LCH_5755MHz_Ant0_NTNV



802.11n(HT40)_HCH_5795MHz_Ant0_NTNV



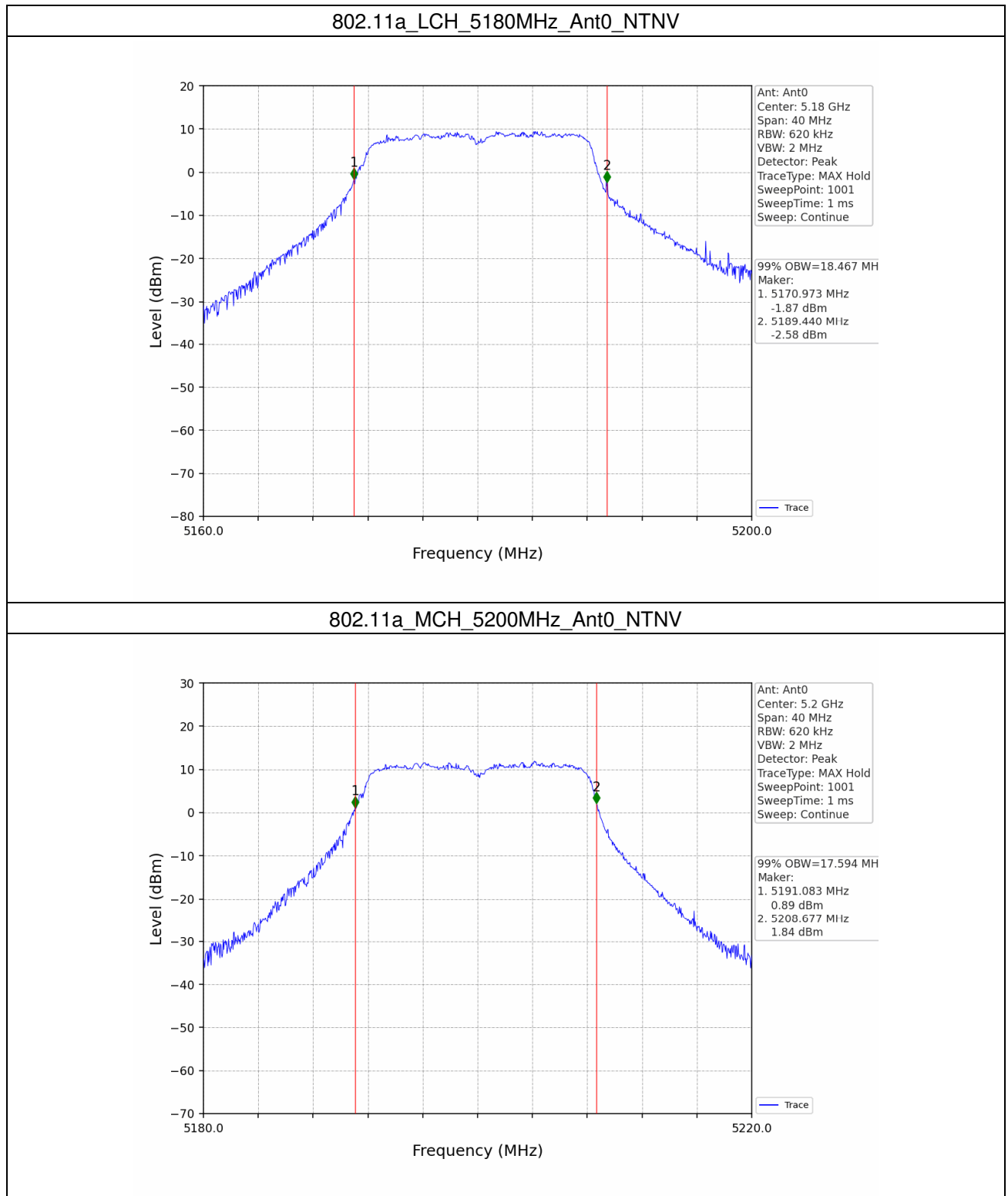
2. Bandwidth

2.1 OBW

2.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)	Verdict
				Result	
802.11a	SISO	5180	0	18.467	Pass
		5200	0	17.594	Pass
		5240	0	17.617	Pass
		5745	0	17.845	Pass
		5785	0	17.715	Pass
		5825	0	17.622	Pass
802.11n (HT20)	MIMO	5180	0	18.410	Pass
		5200	0	18.418	Pass
		5240	0	18.200	Pass
		5745	0	18.248	Pass
		5785	0	18.226	Pass
		5825	0	18.168	Pass
802.11n (HT40)	MIMO	5190	0	37.258	Pass
		5230	0	37.110	Pass
		5755	0	37.338	Pass
		5795	0	37.435	Pass

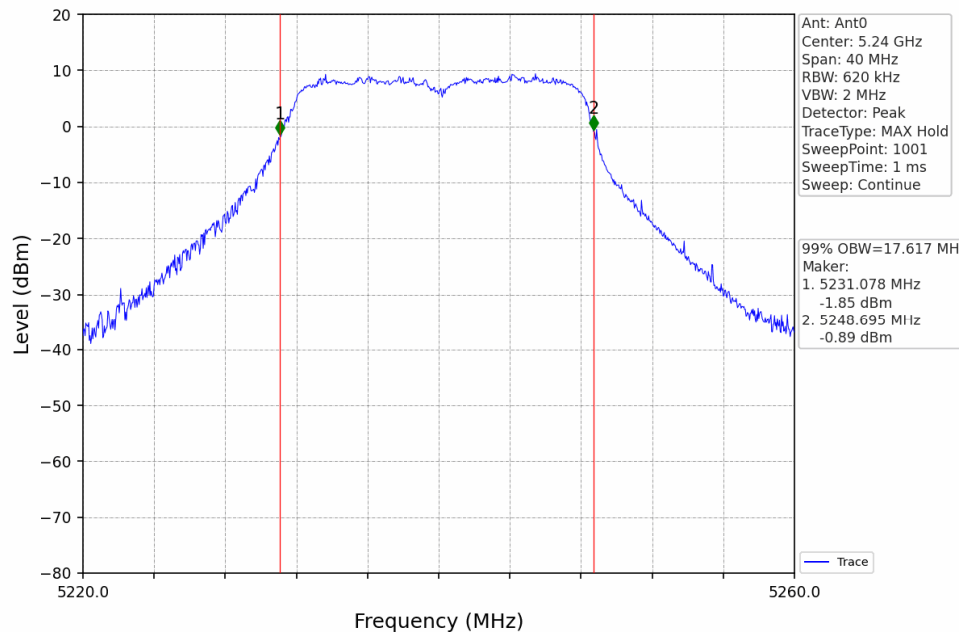
2.1.2 Test Graph



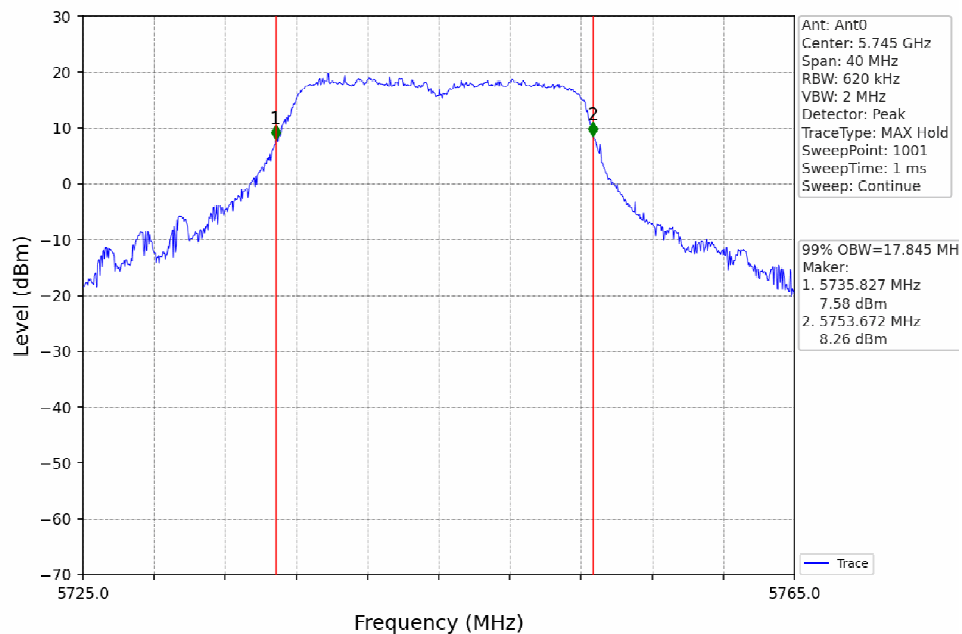
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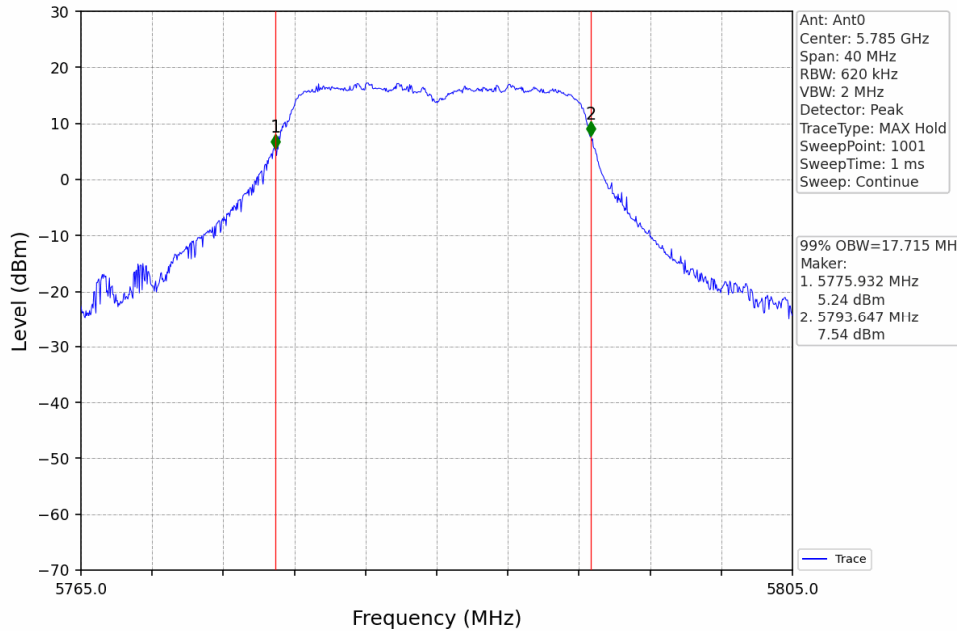
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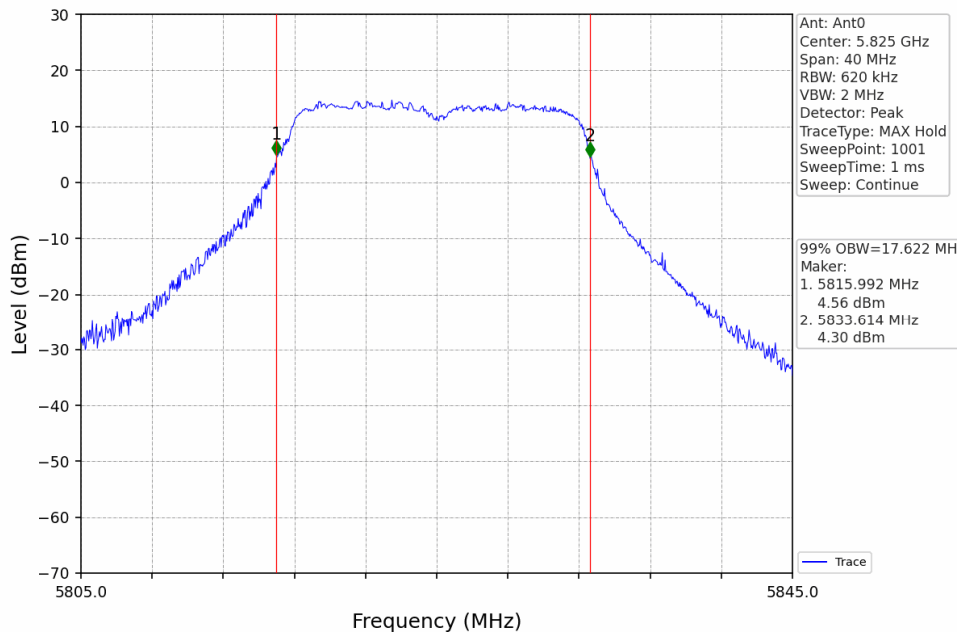
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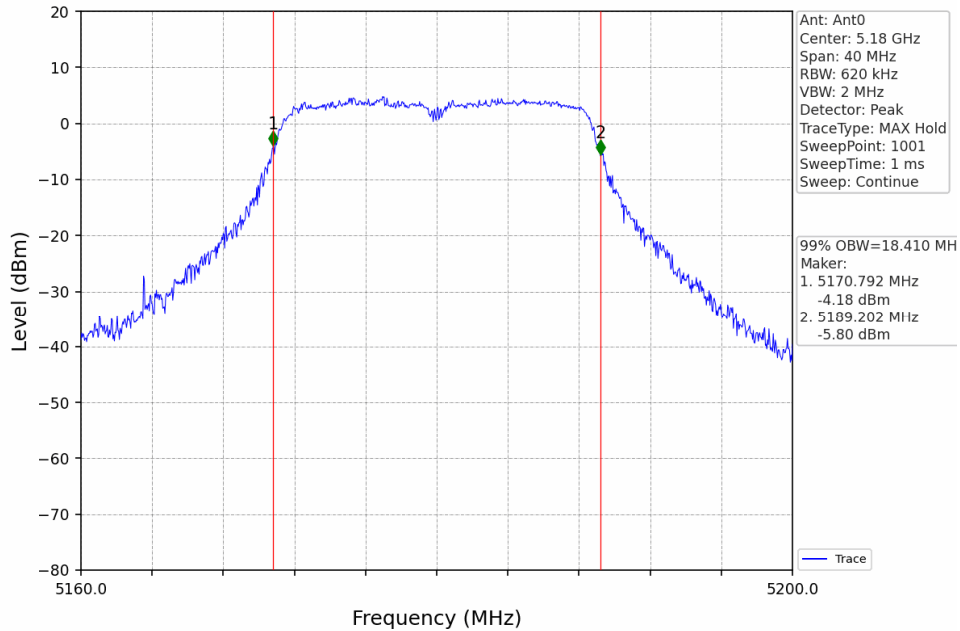
802.11a_MCH_5785MHz_Ant0_NTNV



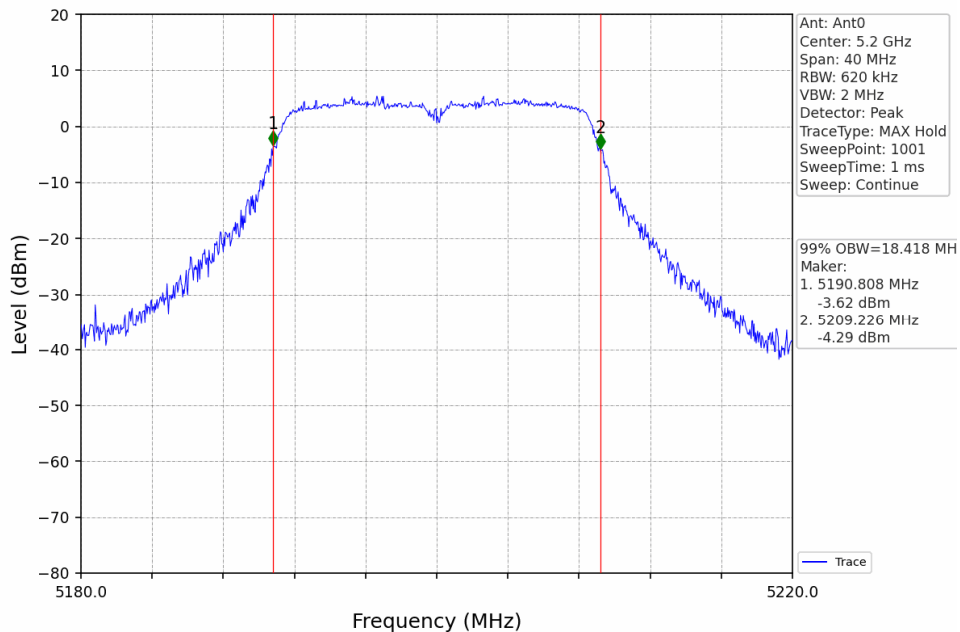
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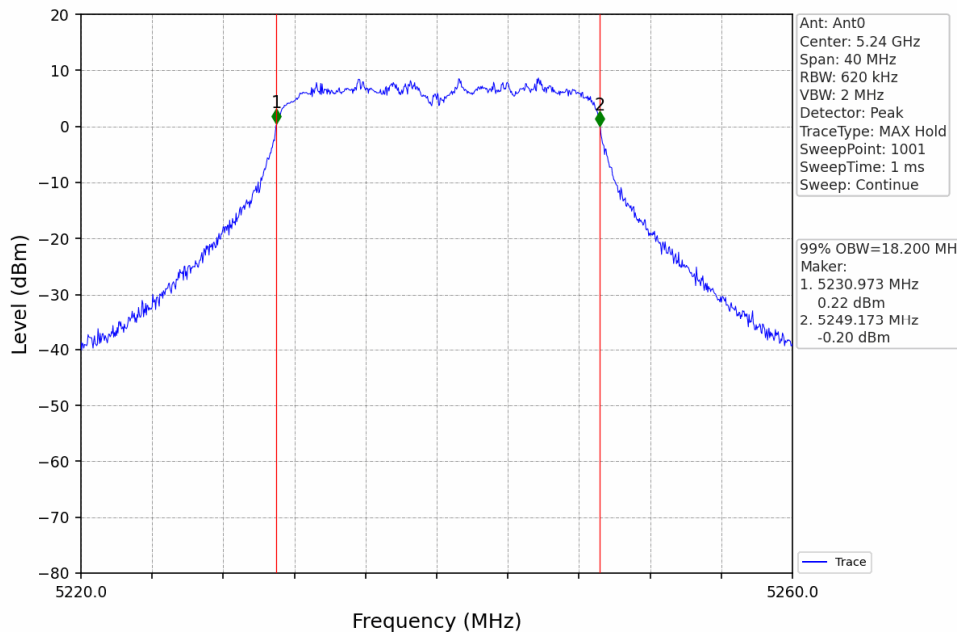
802.11n(HT20)_LCH_5180MHz_Ant0_NTNV



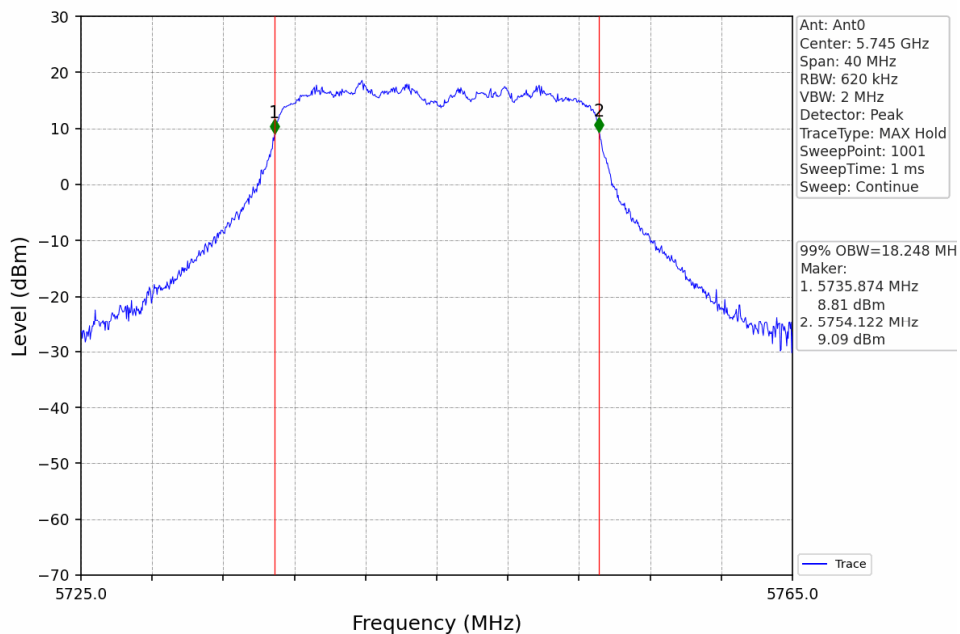
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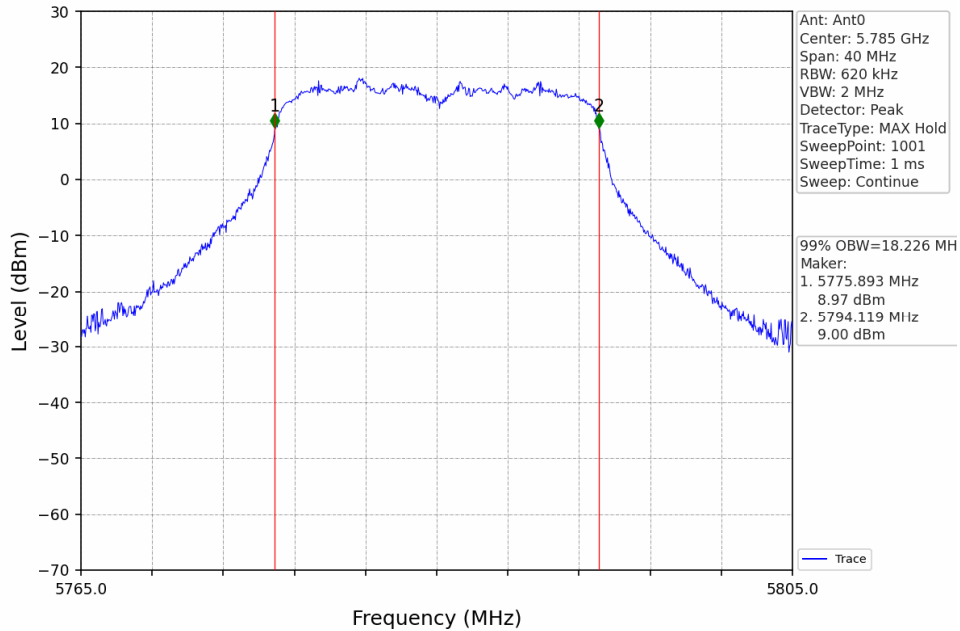
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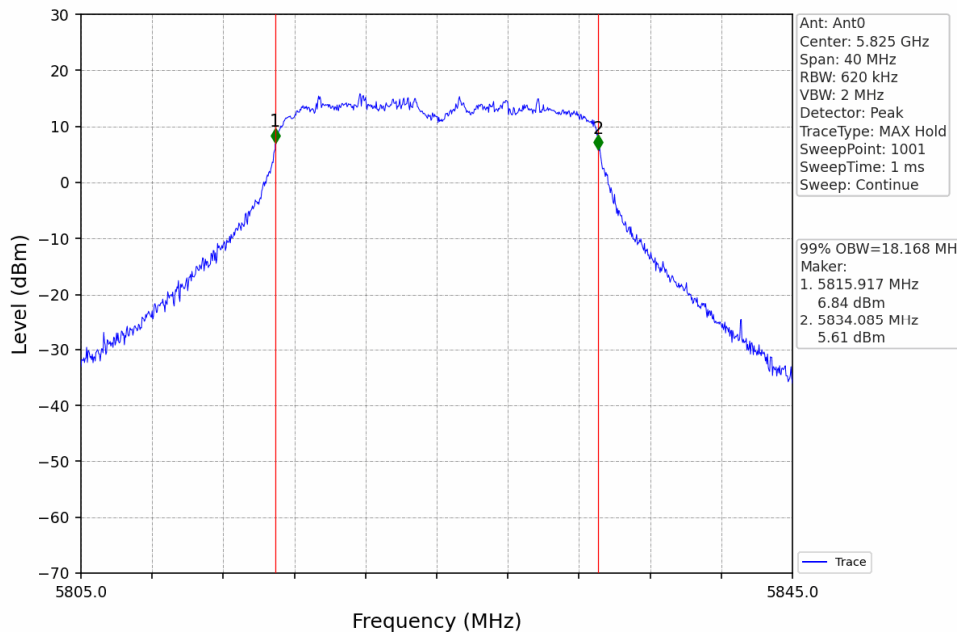
802.11n(HT20)_LCH_5745MHz_Ant0_NTNV



802.11n(HT20)_MCH_5785MHz_Ant0_NTNV



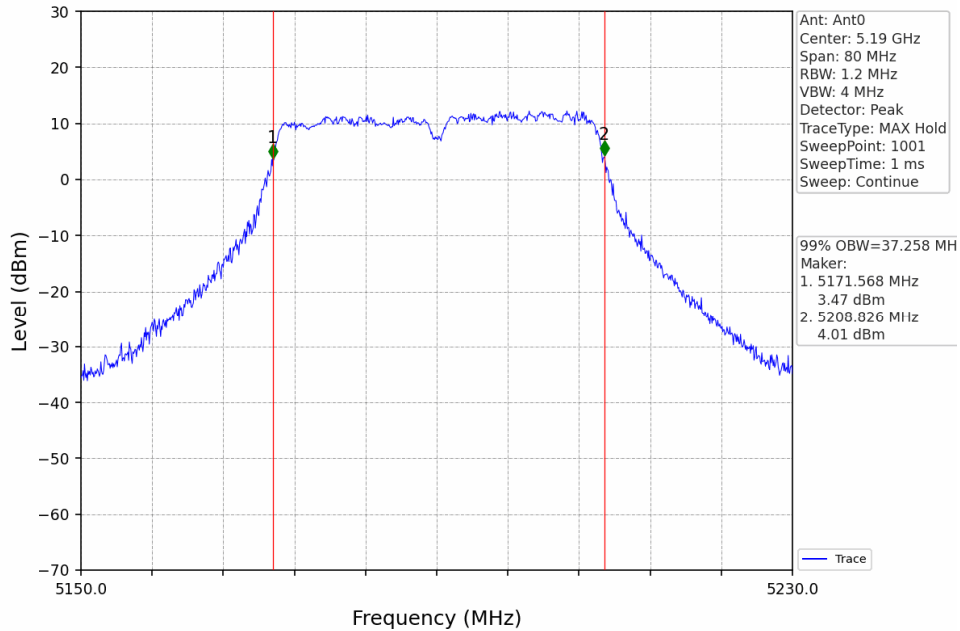
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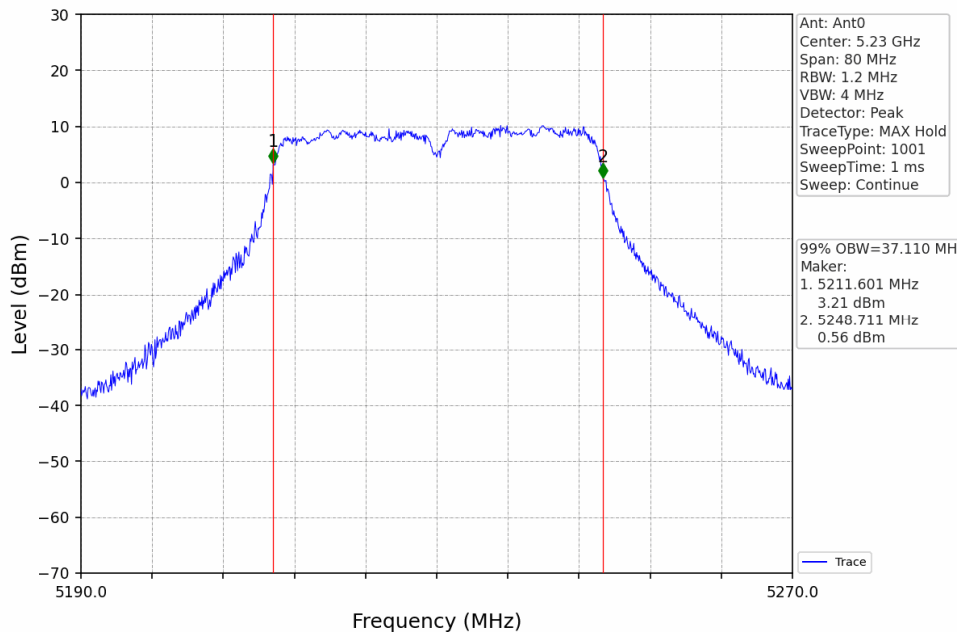
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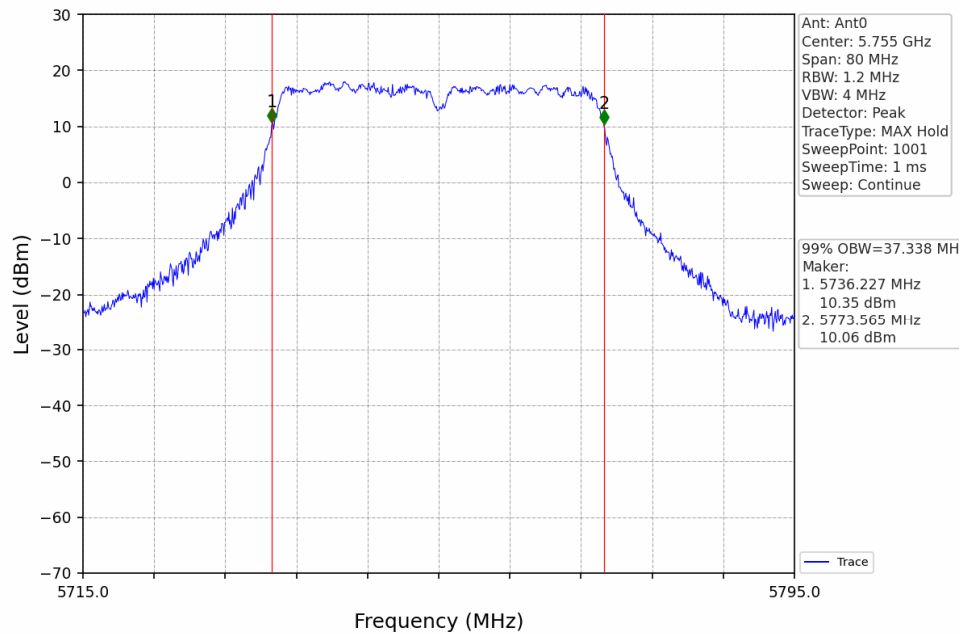
802.11n(HT40)_LCH_5190MHz_Ant0_NTNV



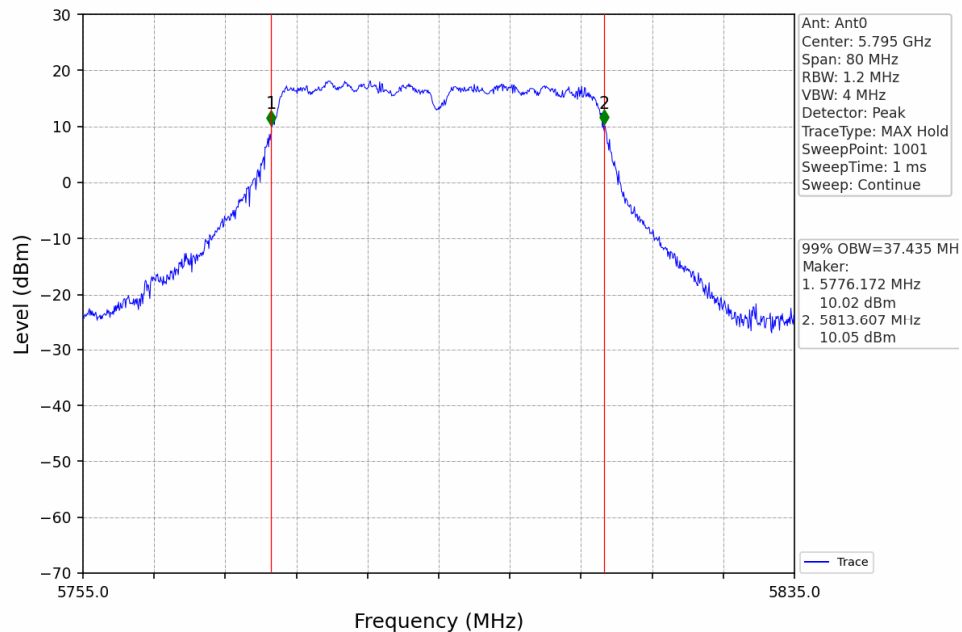
802.11n(HT40)_HCH_5230MHz_Ant0_NTNV



802.11n(HT40)_LCH_5755MHz_Ant0_NTNV



802.11n(HT40)_HCH_5795MHz_Ant0_NTNV



2.2 6dB BW

2.2.1 Test Result

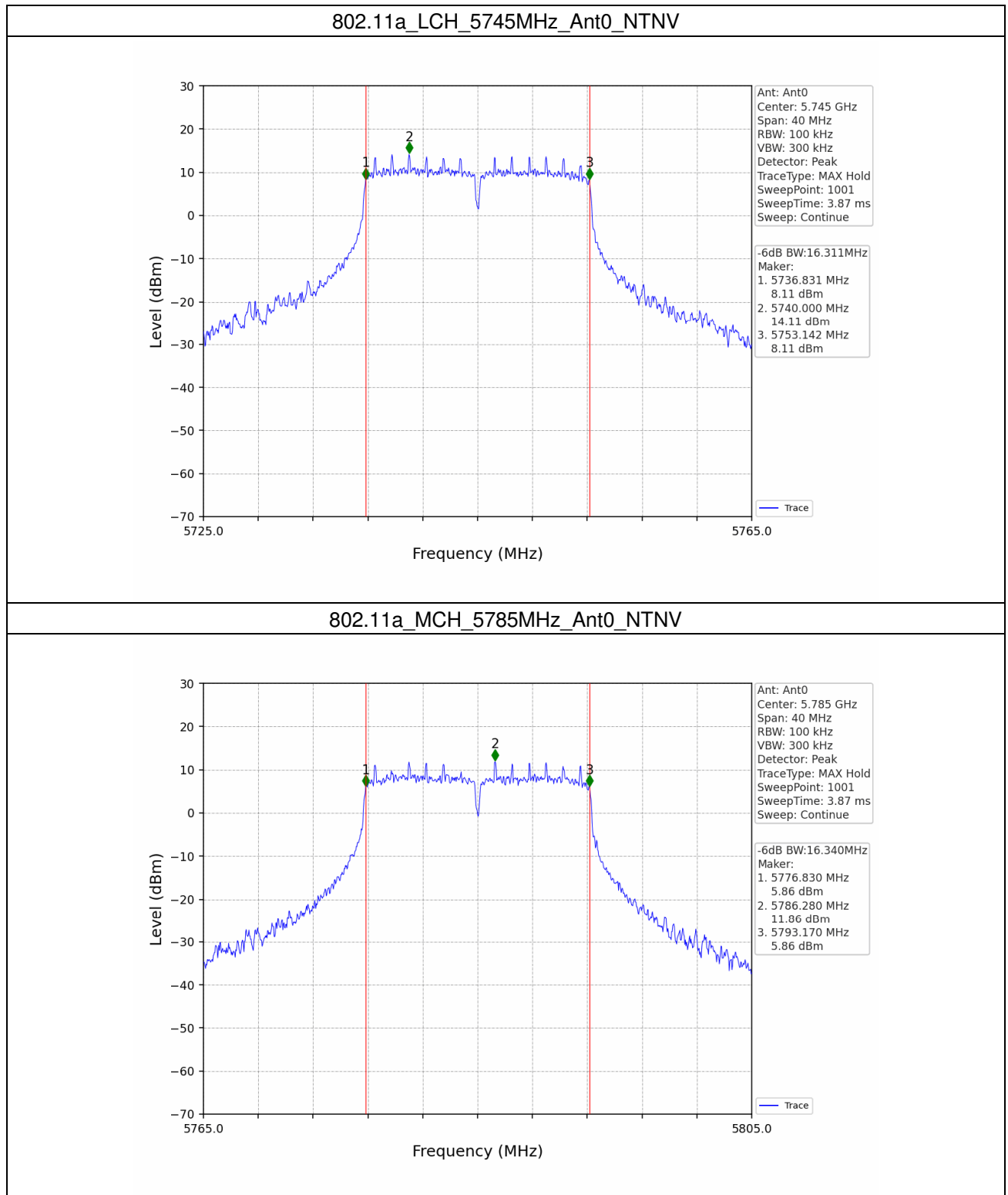
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5745	0	16.311	≥ 0.5	Pass
		5785	0	16.340	≥ 0.5	Pass
		5825	0	16.340	≥ 0.5	Pass
802.11n (HT20)	MIMO	5745	0	17.653	≥ 0.5	Pass
		5785	0	17.603	≥ 0.5	Pass
		5825	0	17.614	≥ 0.5	Pass
802.11n (HT40)	MIMO	5755	0	35.525	≥ 0.5	Pass
		5795	0	35.536	≥ 0.5	Pass



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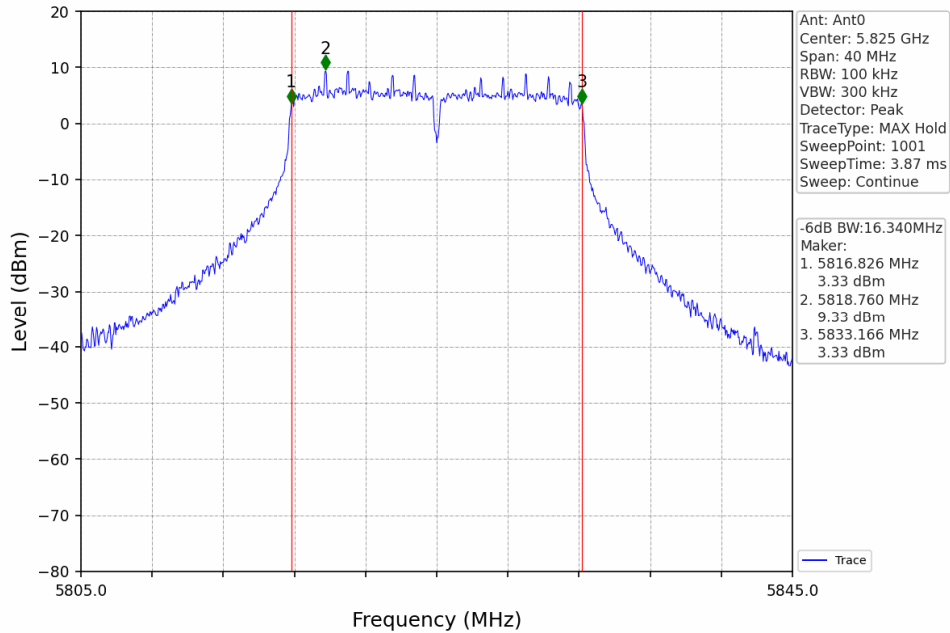
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2.2.2 Test Graph

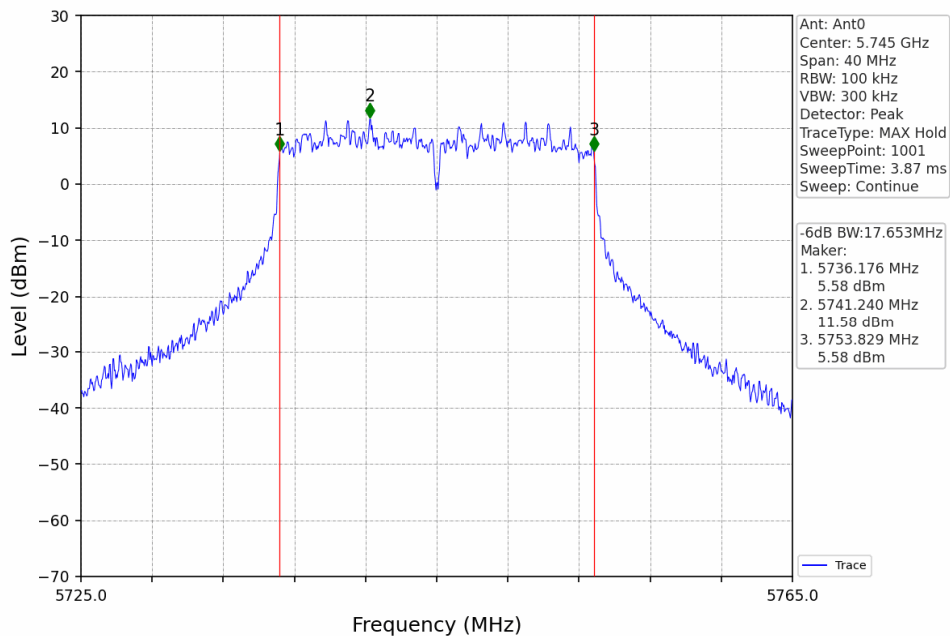


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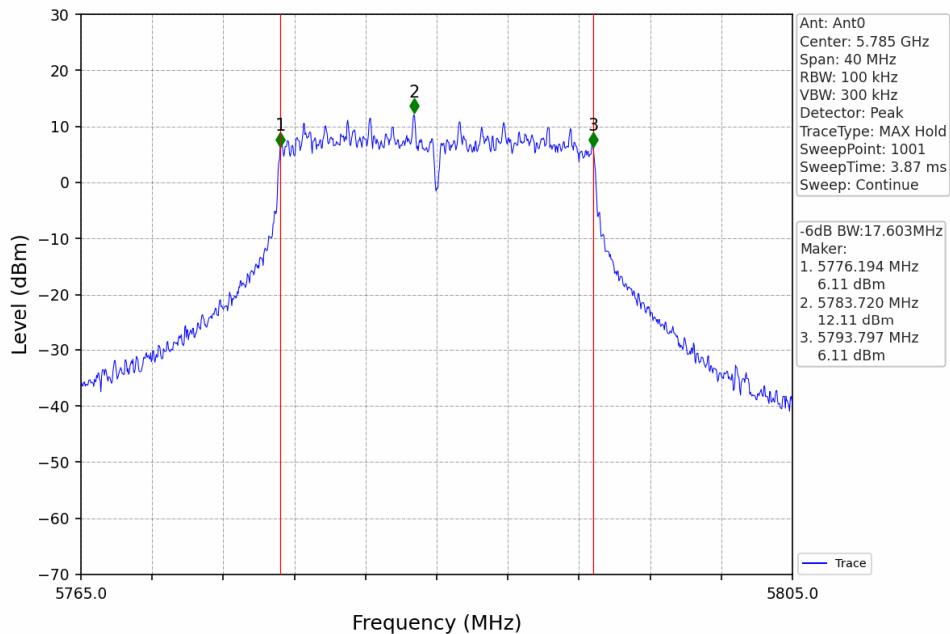
802.11a_HCH_5825MHz_Ant0_NTNV



802.11n(HT20)_LCH_5745MHz_Ant0_NTNV



802.11n(HT20)_MCH_5785MHz_Ant0_NTNV



802.11n(HT20)_HCH_5825MHz_Ant0_NTNV

