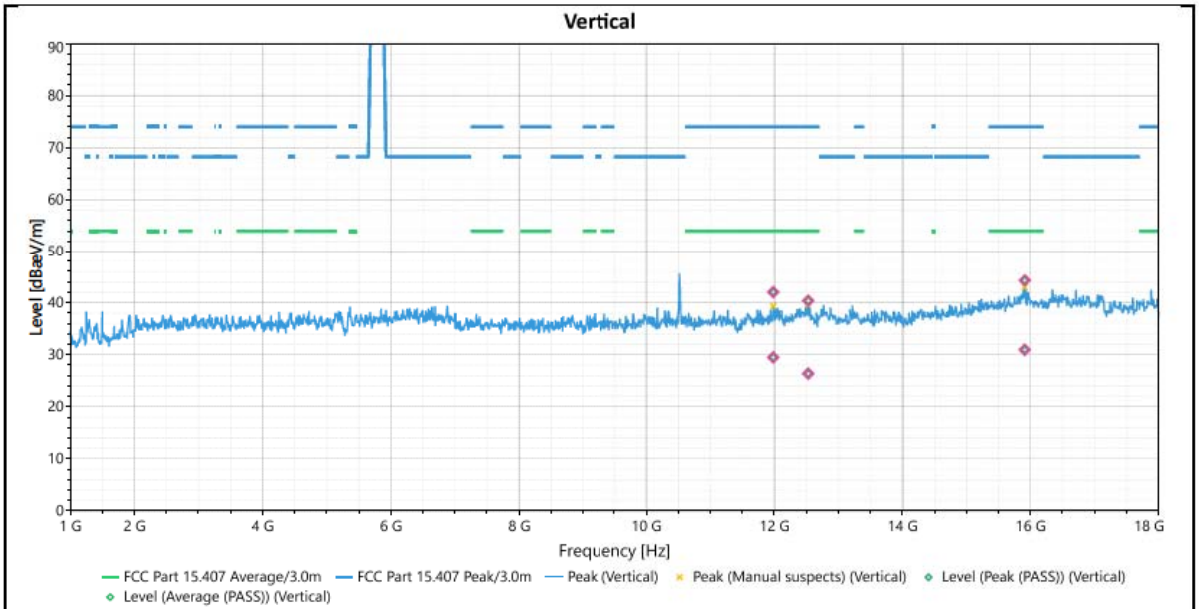
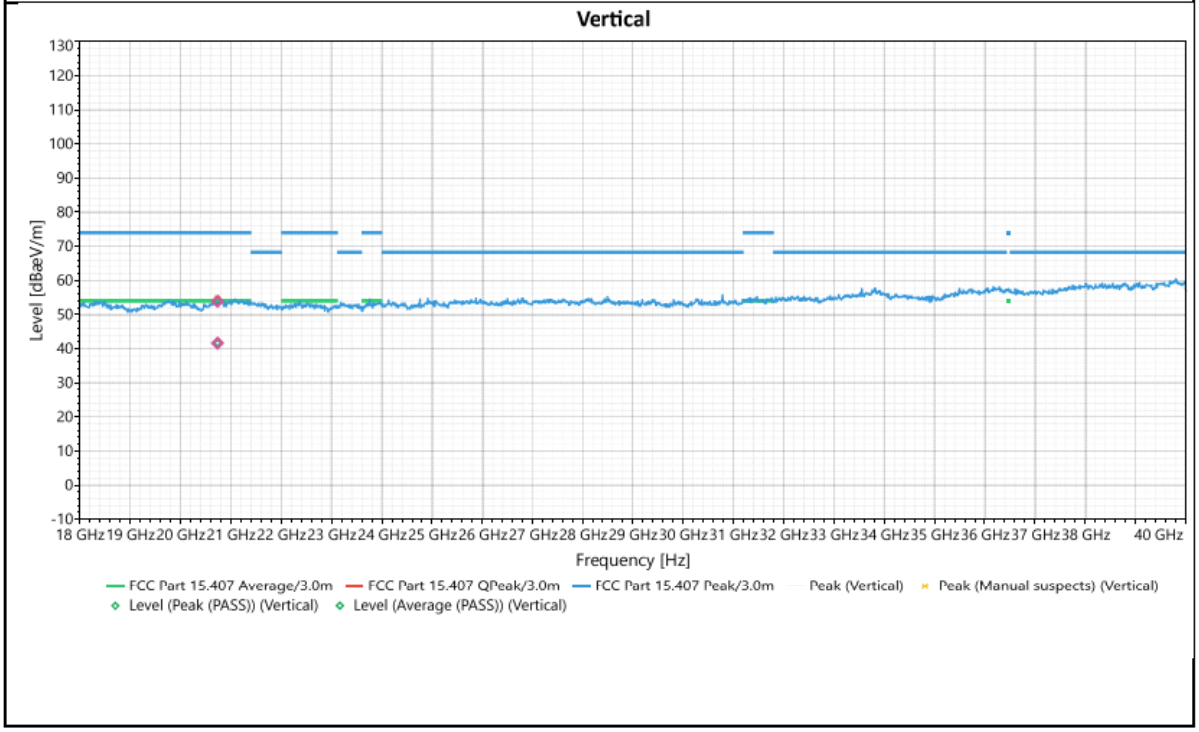
Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	11393.85	Horizontal	60.919	74	-13.081	2.05	221	2.74	Peak (PASS)
2	11393.85	Horizontal	49.276	54	-4.724	2.05	221	2.74	Average (PASS)
3	12590.55	Horizontal	38.137	74	-35.863	1	269	3.88	Peak (PASS)
4	12590.55	Horizontal	25.087	54	-28.913	1	269	3.88	Average (PASS)
5	15859.68	Horizontal	42.413	74	-31.587	1	317	4.78	Peak (PASS)
6	15859.68	Horizontal	29.475	54	-24.525	1	317	4.78	Average (PASS)
7	20787.3	Horizontal	54.598	74	-19.402	1.02	232	8.46	Peak (PASS)
8	20787.3	Horizontal	41.651	54	-12.349	1.02	232	8.46	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

CHANNEL	802.11N HT20 5260 MHz	DETECTOR FUNCTION	Prak/Average
FREQUENCY RANGE	1GHz-40GHz		



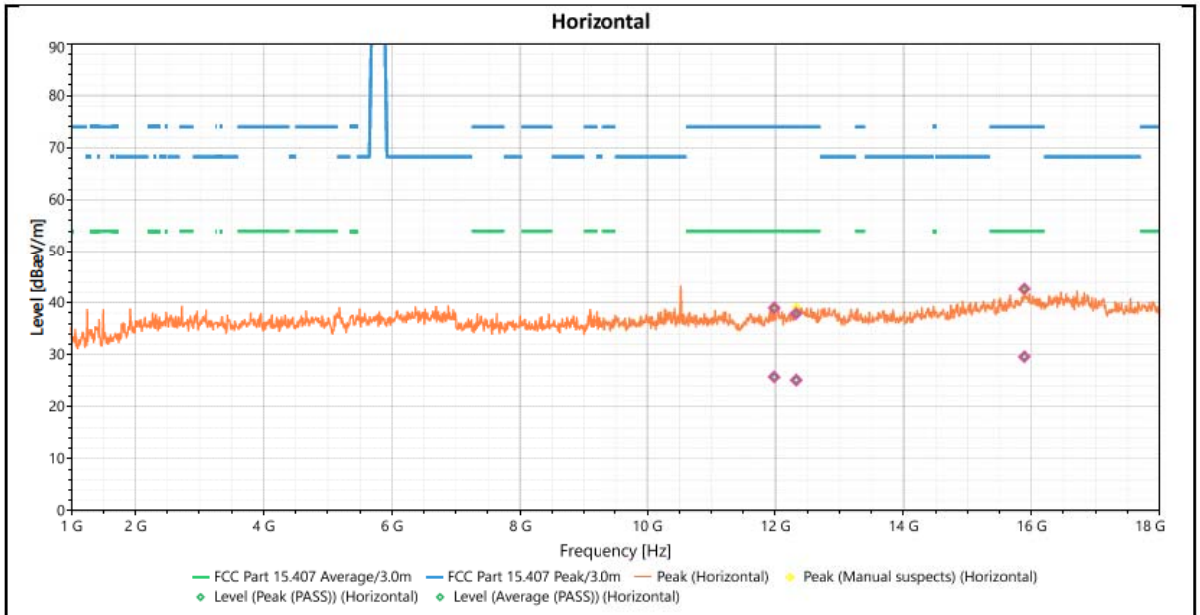


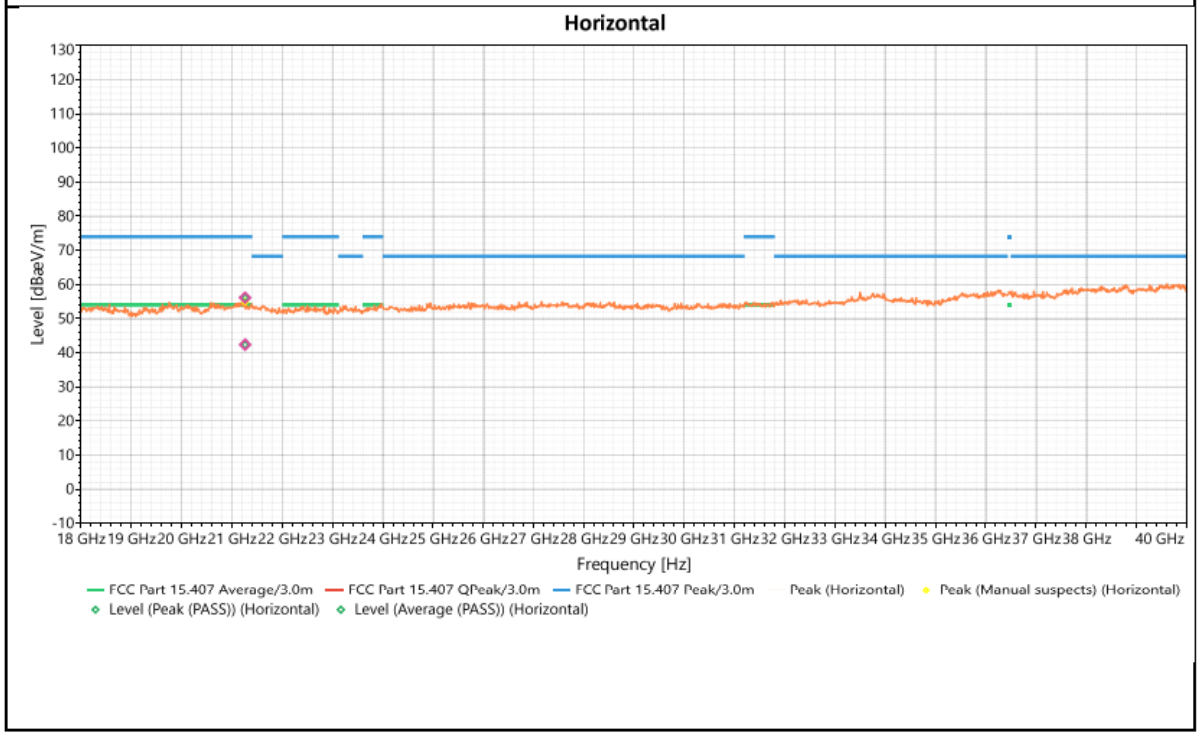
Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	11982.08	Vertical	42.022	74	-31.978	3.2	244	3.56	Peak (PASS)
2	11982.08	Vertical	29.463	54	-24.537	3.2	244	3.56	Average (PASS)
3	12527.73	Vertical	40.344	74	-33.656	1	172	3.8	Peak (PASS)
4	12527.73	Vertical	26.34	54	-27.66	1	172	3.8	Average (PASS)
5	15909.06	Vertical	44.271	74	-29.729	2.9	360	4.96	Peak (PASS)
6	15909.06	Vertical	30.923	54	-23.077	2.9	360	4.96	Average (PASS)
7	20736.81	Vertical	53.89	74	-20.11	1.82	4	8.51	Peak (PASS)
8	20736.81	Vertical	41.618	54	-12.382	1.82	4	8.51	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

Frequency	802.11N HT20 5260 MHz	DETECTOR FUNCTION	Prak/Average
FREQUENCY RANGE	1GHz-40GHz		



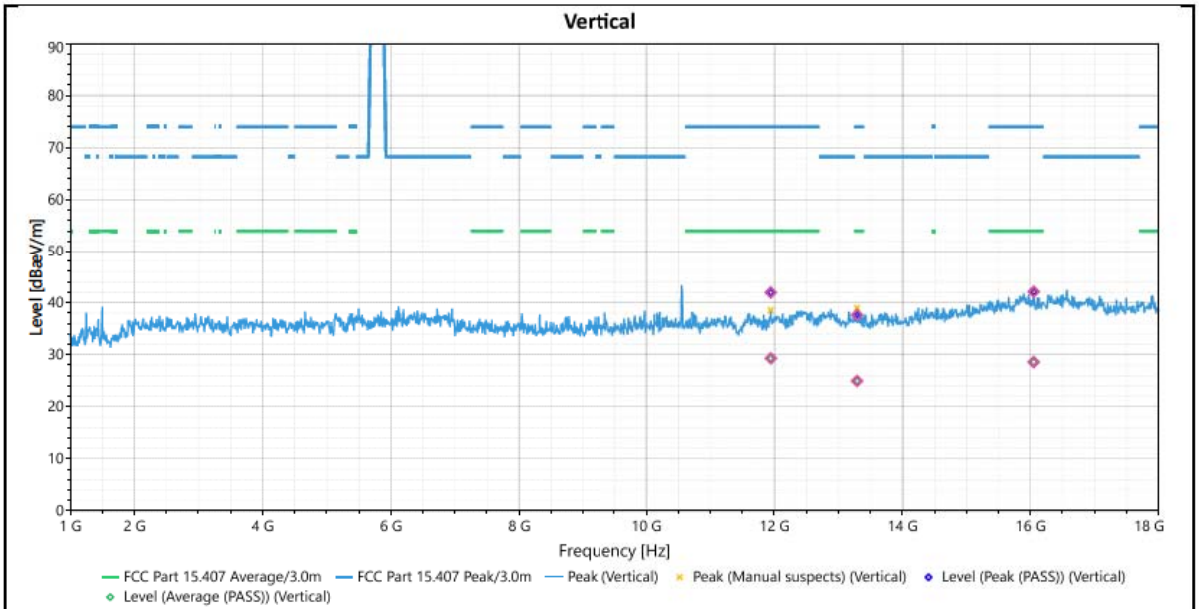


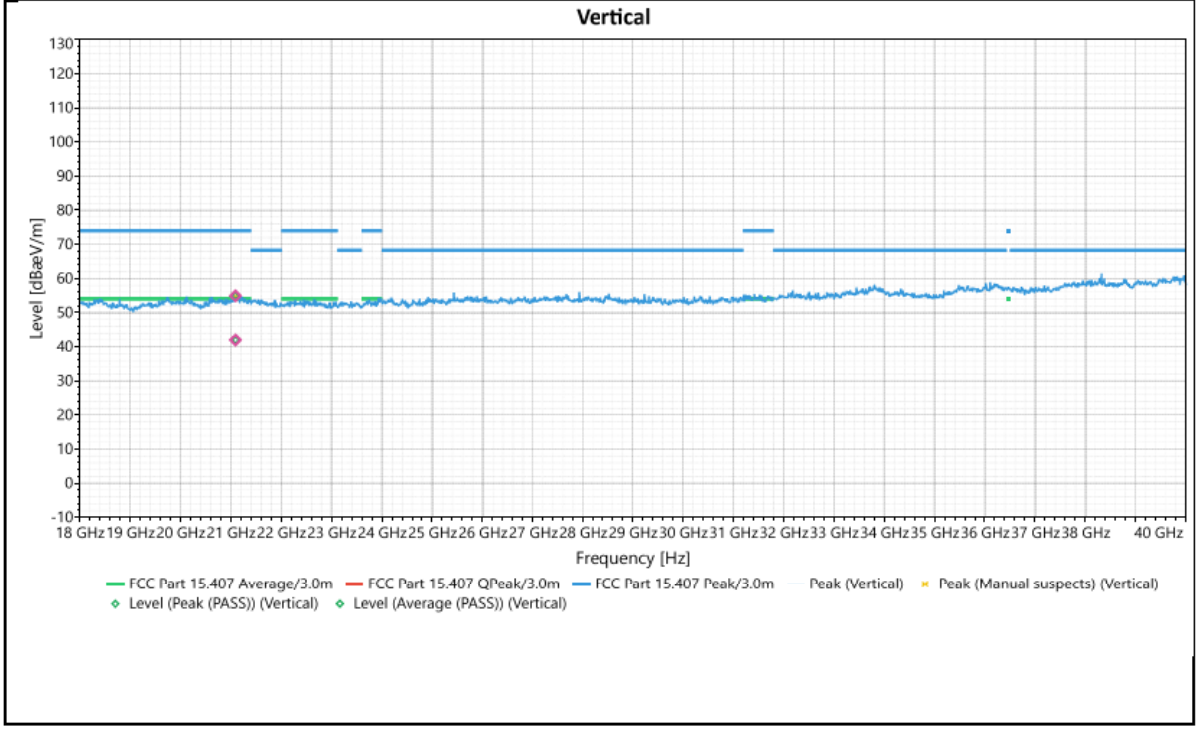
Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	11981.95	Horizontal	38.938	74	-35.062	1	221	3.5	Peak (PASS)
2	11981.95	Horizontal	25.693	54	-28.307	1	221	3.5	Average (PASS)
3	12325.4	Horizontal	37.868	74	-36.132	1	269	3.65	Peak (PASS)
4	12325.4	Horizontal	25.115	54	-28.885	1	269	3.65	Average (PASS)
5	15886.89	Horizontal	42.604	74	-31.396	1	357	4.8	Peak (PASS)
6	15886.89	Horizontal	29.582	54	-24.418	1	357	4.8	Average (PASS)
7	21264.7	Horizontal	56.103	74	-17.897	1.4	66	8.29	Peak (PASS)
8	21264.7	Horizontal	42.363	54	-11.637	1.4	66	8.29	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

CHANNEL	802.11N HT20 5280 MHz	DETECTOR FUNCTION	Prak/Average
FREQUENCY RANGE	1GHz-40GHz		



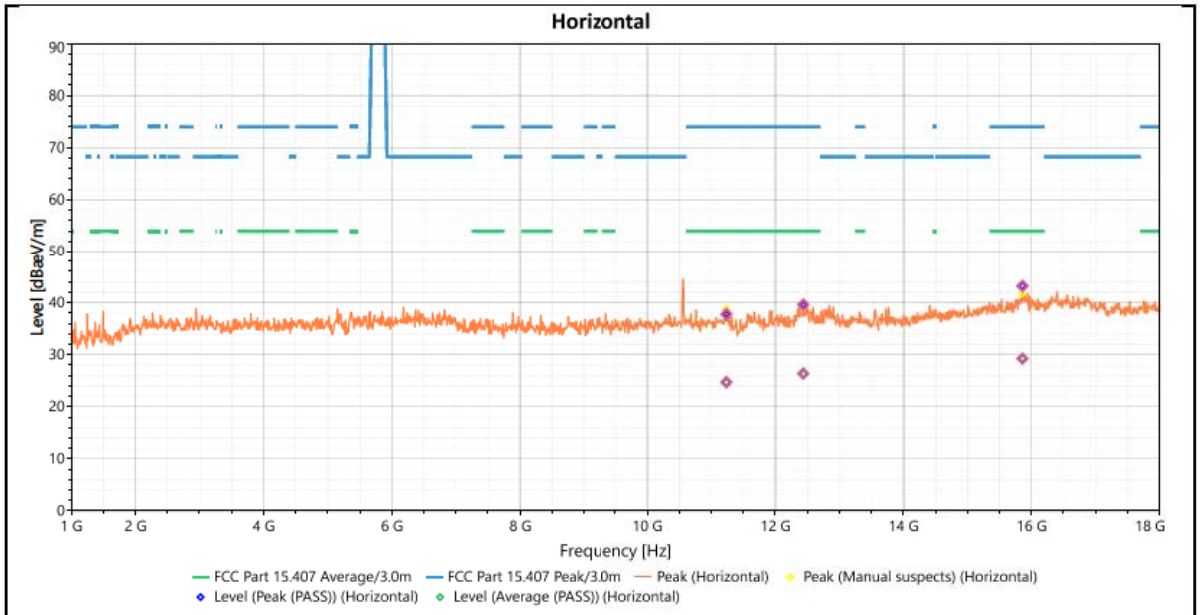


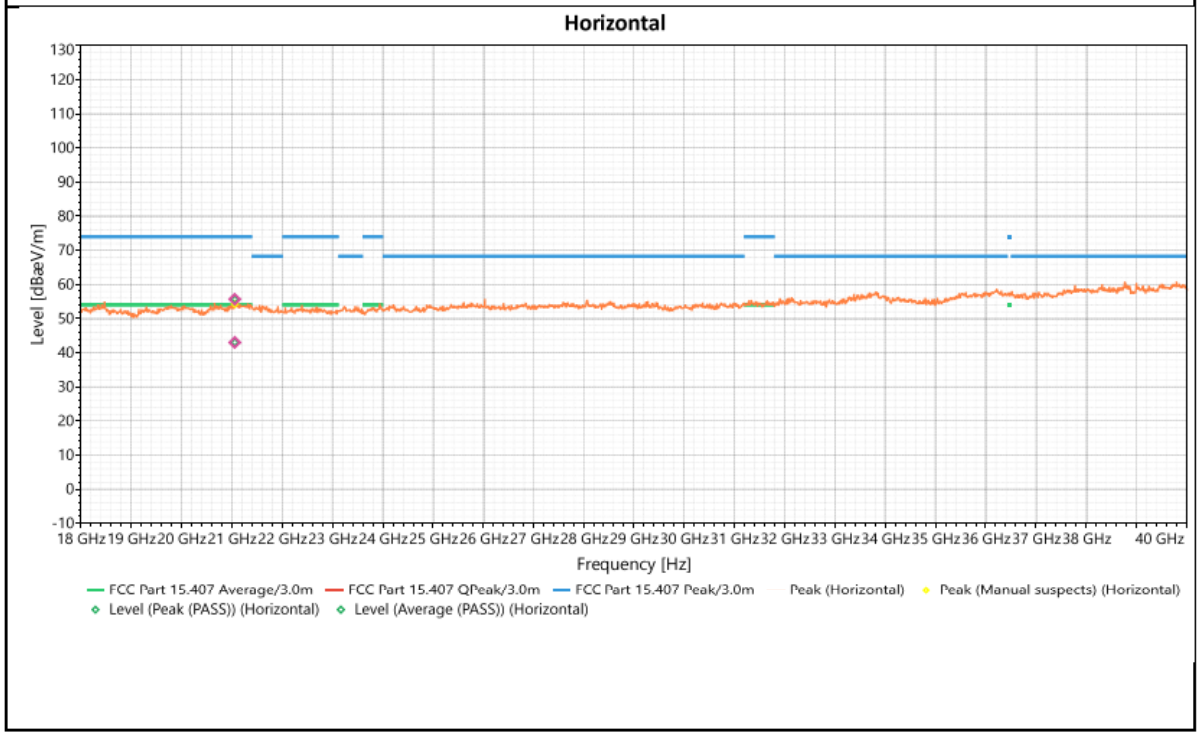
Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	11944.61	Vertical	41.92	74	-32.08	3.08	351	3.51	Peak (PASS)
2	11944.61	Vertical	29.281	54	-24.719	3.08	351	3.51	Average (PASS)
3	13292.68	Vertical	37.613	74	-36.387	1.21	357	3.28	Peak (PASS)
4	13292.68	Vertical	24.925	54	-29.075	1.21	357	3.28	Average (PASS)
5	16050.08	Vertical	42.053	74	-31.947	1.49	357	4.95	Peak (PASS)
6	16050.08	Vertical	28.566	54	-25.434	1.49	357	4.95	Average (PASS)
7	21093.18	Vertical	54.897	74	-19.103	1.97	74	8.63	Peak (PASS)
8	21093.18	Vertical	41.954	54	-12.046	1.97	74	8.63	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

Frequency	802.11N HT20 5280 MHz	DETECTOR FUNCTION	Prak/Average
FREQUENCY RANGE	1GHz-40GHz		



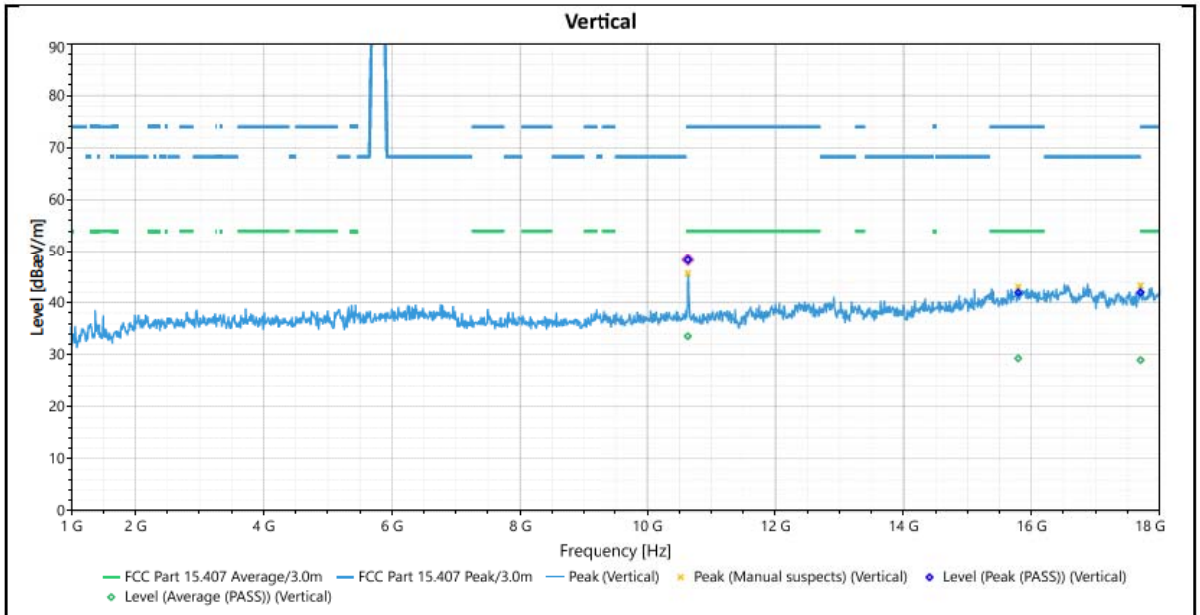


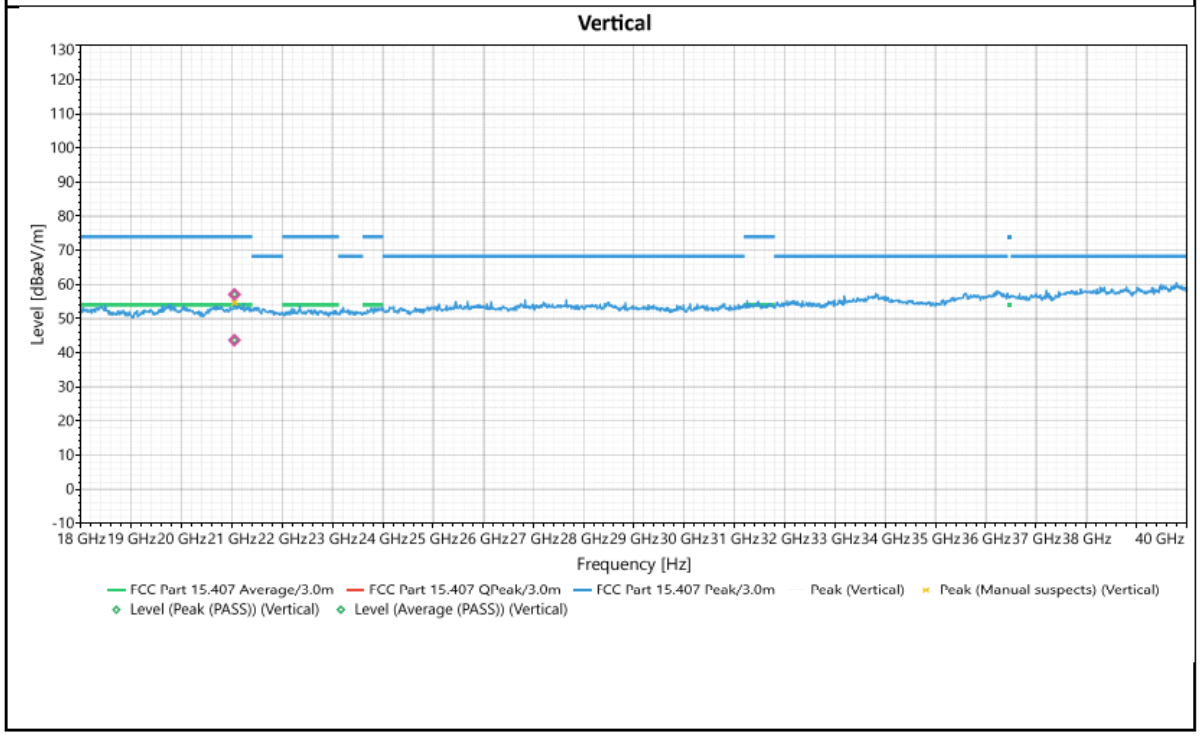
Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	11235.69	Horizontal	37.766	74	-36.234	1	221	2.69	Peak (PASS)
2	11235.69	Horizontal	24.685	54	-29.315	1	221	2.69	Average (PASS)
3	12435.89	Horizontal	39.585	74	-34.415	1	125	3.72	Peak (PASS)
4	12435.89	Horizontal	26.347	54	-27.653	1	125	3.72	Average (PASS)
5	15858.08	Horizontal	43.17	74	-30.83	1.21	317	4.78	Peak (PASS)
6	15858.08	Horizontal	29.216	54	-24.784	1.21	317	4.78	Average (PASS)
7	21060.1	Horizontal	55.637	74	-18.363	1.79	172	8.5	Peak (PASS)
8	21060.1	Horizontal	43.007	54	-10.993	1.79	172	8.5	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

CHANNEL	802.11N HT20 5320 MHz	DETECTOR FUNCTION	Prak/Average
FREQUENCY RANGE	1GHz-40GHz		



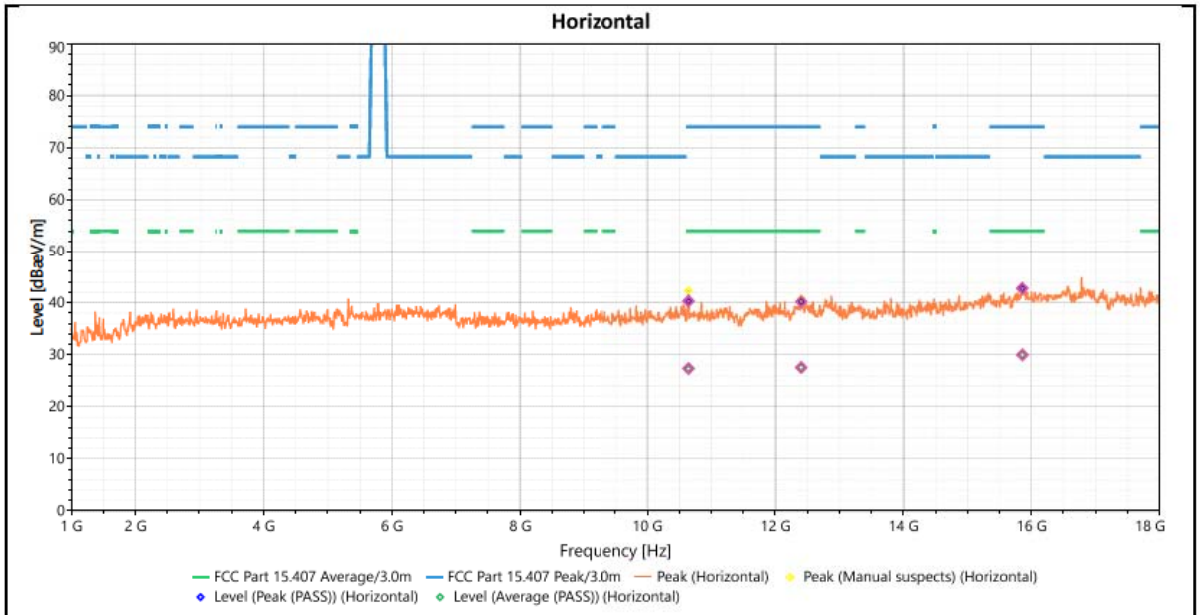


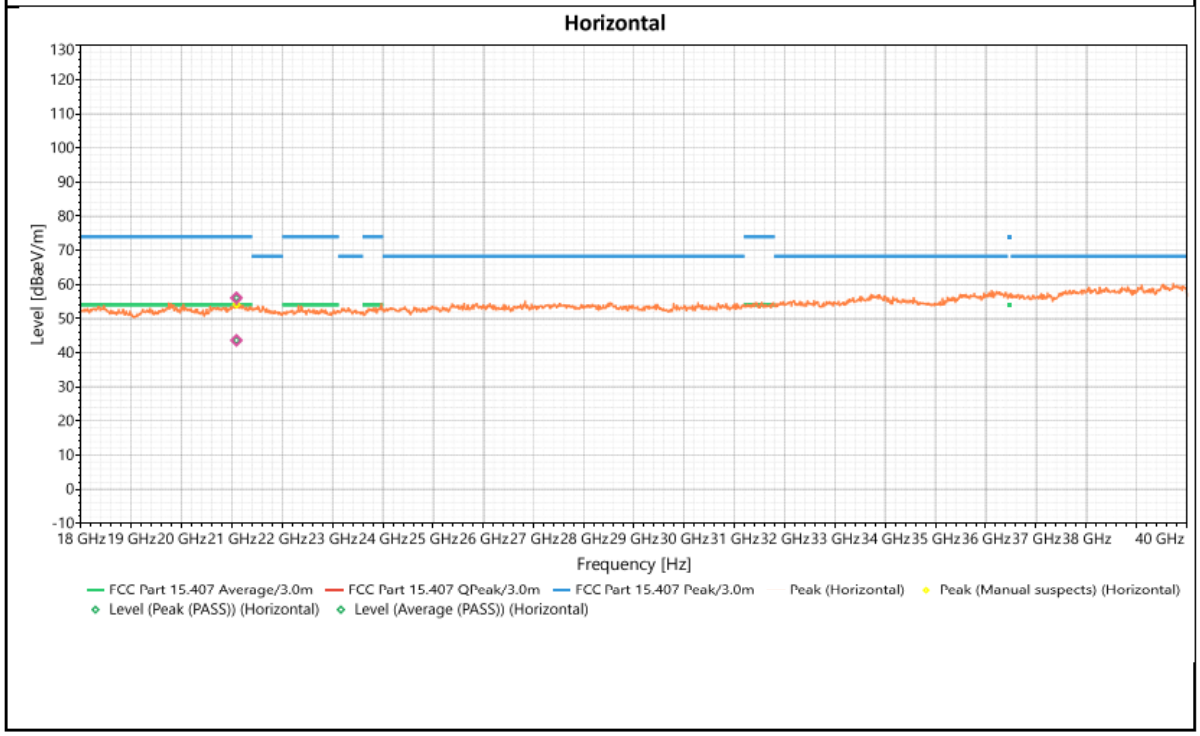
Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	10633.96	Vertical	48.241	74	-25.759	1.95	311	2.69	Peak (PASS)
2	10633.96	Vertical	33.512	54	-20.488	1.95	311	2.69	Average (PASS)
3	15791.78	Vertical	41.917	74	-32.083	1	357	4.91	Peak (PASS)
4	15791.78	Vertical	29.258	54	-24.742	1	357	4.91	Average (PASS)
5	17702.44	Vertical	41.938	74	-32.062	1.21	29	2.9	Peak (PASS)
6	17702.44	Vertical	28.921	54	-25.079	1.21	29	2.9	Average (PASS)
7	21053.64	Vertical	57.078	74	-16.922	1.61	168	8.64	Peak (PASS)
8	21053.64	Vertical	43.637	54	-10.363	1.61	168	8.64	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

Frequency	802.11N HT20 5320 MHz	DETECTOR FUNCTION	Prak/Average
FREQUENCY RANGE	1GHz-40GHz		



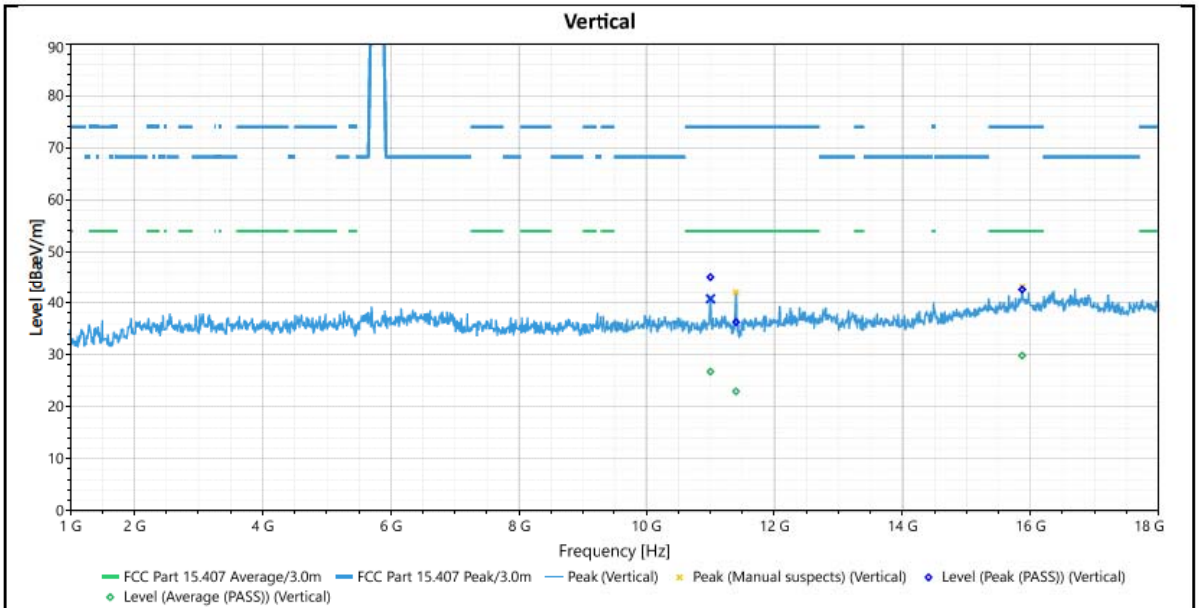


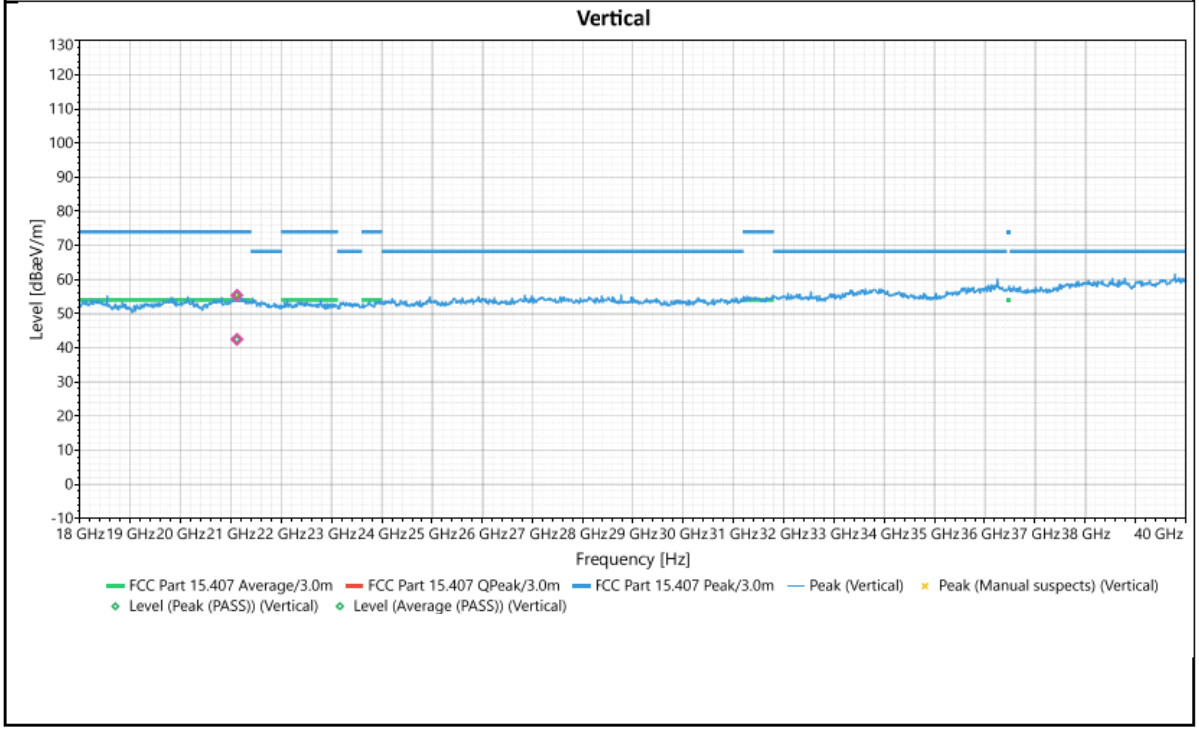
Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	10644.18	Horizontal	40.273	74	-33.727	1	317	2.83	Peak (PASS)
2	10644.18	Horizontal	27.292	54	-26.708	1	317	2.83	Average (PASS)
3	12403.57	Horizontal	40.168	74	-33.832	1	360	3.67	Peak (PASS)
4	12403.57	Horizontal	27.509	54	-26.491	1	360	3.67	Average (PASS)
5	15856.27	Horizontal	42.707	74	-31.293	1	268	4.78	Peak (PASS)
6	15856.27	Horizontal	29.95	54	-24.05	1	268	4.78	Average (PASS)
7	21093.1	Horizontal	56.05	74	-17.95	1.6	270	8.49	Peak (PASS)
8	21093.1	Horizontal	43.617	54	-10.383	1.6	270	8.49	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

CHANNEL	802.11N HT20 5500 MHz	DETECTOR FUNCTION	Prak/Average
FREQUENCY RANGE	1GHz-40GHz		



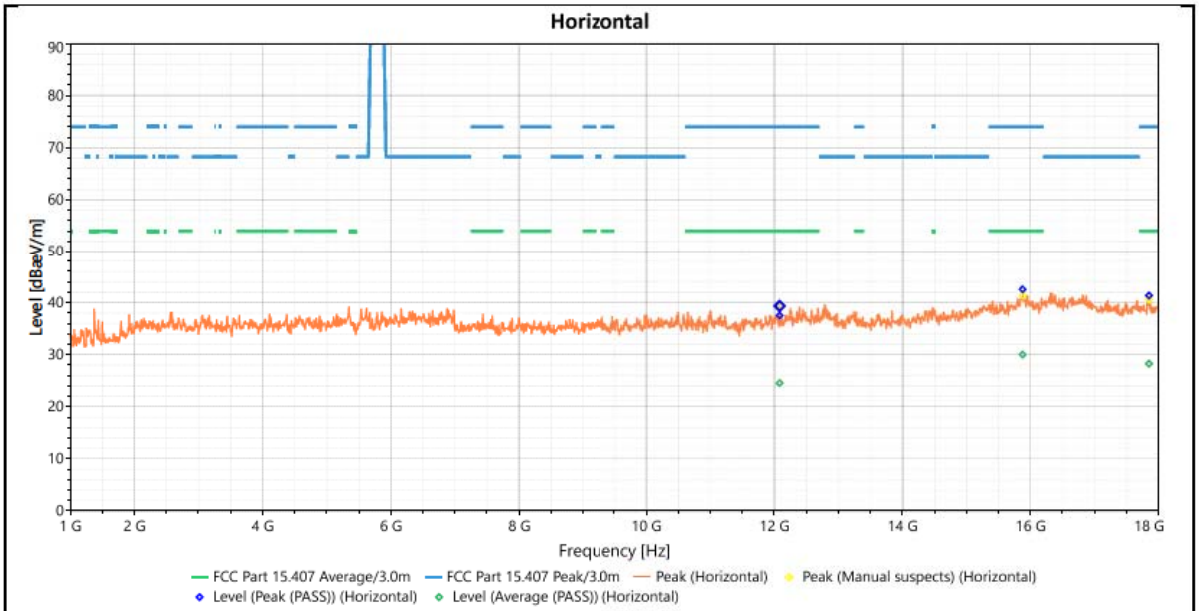


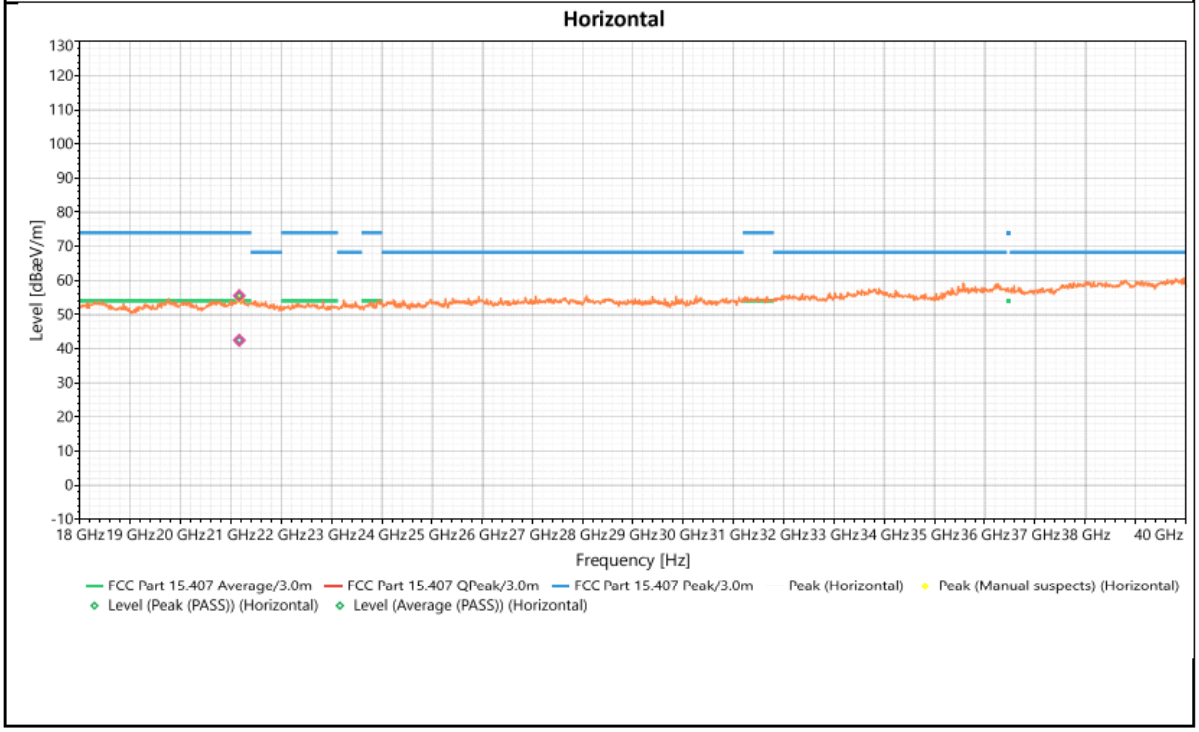
Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	11002.79	Vertical	45.178	74	-28.822	1.73	175	2.73	Peak (PASS)
2	11002.79	Vertical	26.746	54	-27.254	1.73	175	2.73	Average (PASS)
3	11402.27	Vertical	36.245	74	-37.755	1	317	2.71	Peak (PASS)
4	11402.27	Vertical	22.926	54	-31.074	1	317	2.71	Average (PASS)
5	15869.85	Vertical	42.486	74	-31.514	1	77	4.97	Peak (PASS)
6	15869.85	Vertical	29.826	54	-24.174	1	77	4.97	Average (PASS)
7	21121.84	Vertical	55.369	74	-18.631	1.7	238	8.59	Peak (PASS)
8	21121.84	Vertical	42.454	54	-11.546	1.7	238	8.59	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

Frequency	802.11N HT20 5500 MHz	DETECTOR FUNCTION	Prak/Average
FREQUENCY RANGE	1GHz-40GHz		



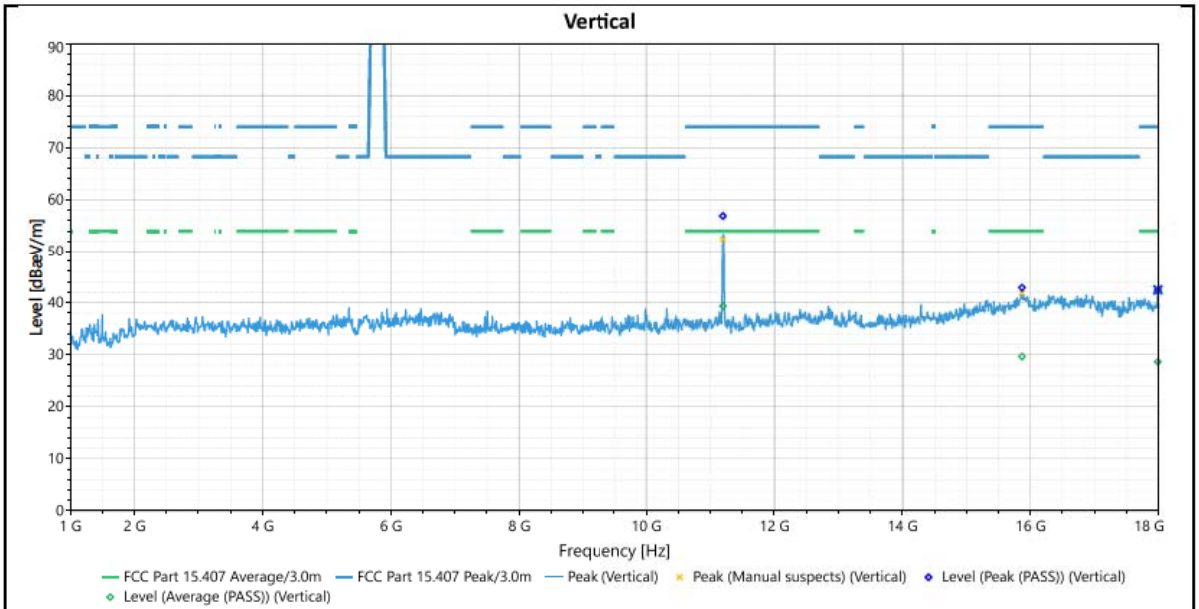


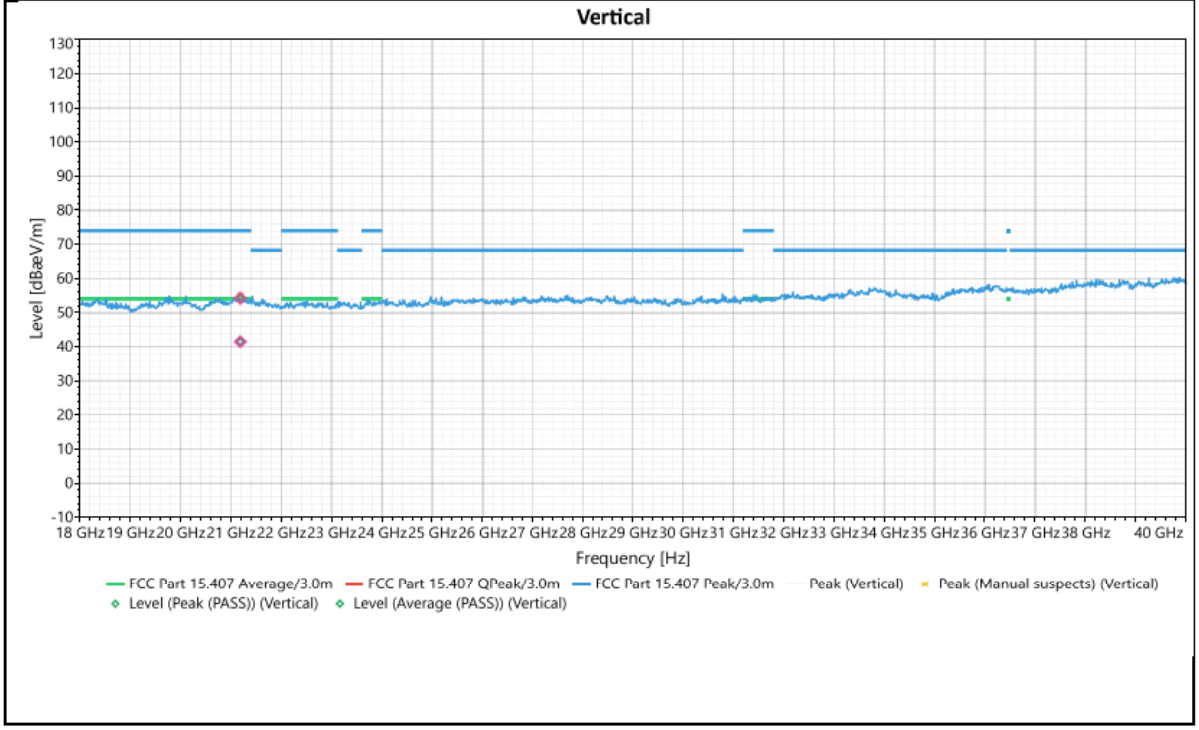
Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	12082.26	Horizontal	37.511	74	-36.489	1	357	3.6	Peak (PASS)
2	12082.26	Horizontal	24.528	54	-29.472	1	357	3.6	Average (PASS)
3	15876.73	Horizontal	42.538	74	-31.462	1	360	4.8	Peak (PASS)
4	15876.73	Horizontal	29.992	54	-24.008	1	360	4.8	Average (PASS)
5	17848.64	Horizontal	41.324	74	-32.676	1	125	2.62	Peak (PASS)
6	17848.64	Horizontal	28.251	54	-25.749	1	125	2.62	Average (PASS)
7	21167.9	Horizontal	55.522	74	-18.478	1.63	356	8.4	Peak (PASS)
8	21167.9	Horizontal	42.469	54	-11.531	1.63	356	8.4	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

CHANNEL	802.11N HT20 5600 MHz	DETECTOR FUNCTION	Prak/Average
FREQUENCY RANGE	1GHz-40GHz		



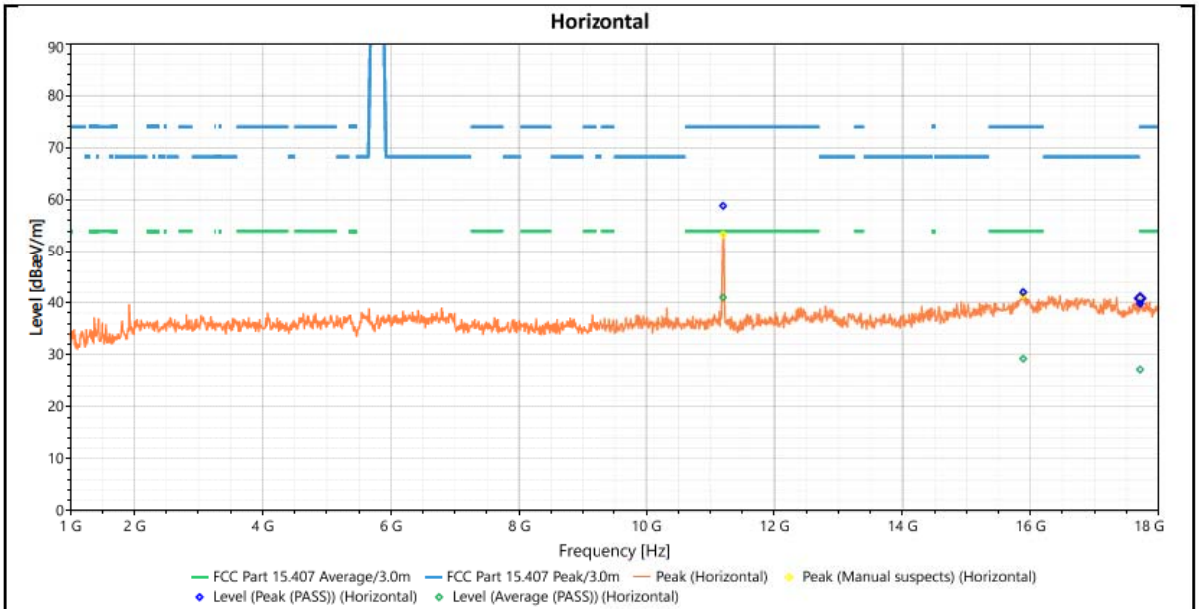


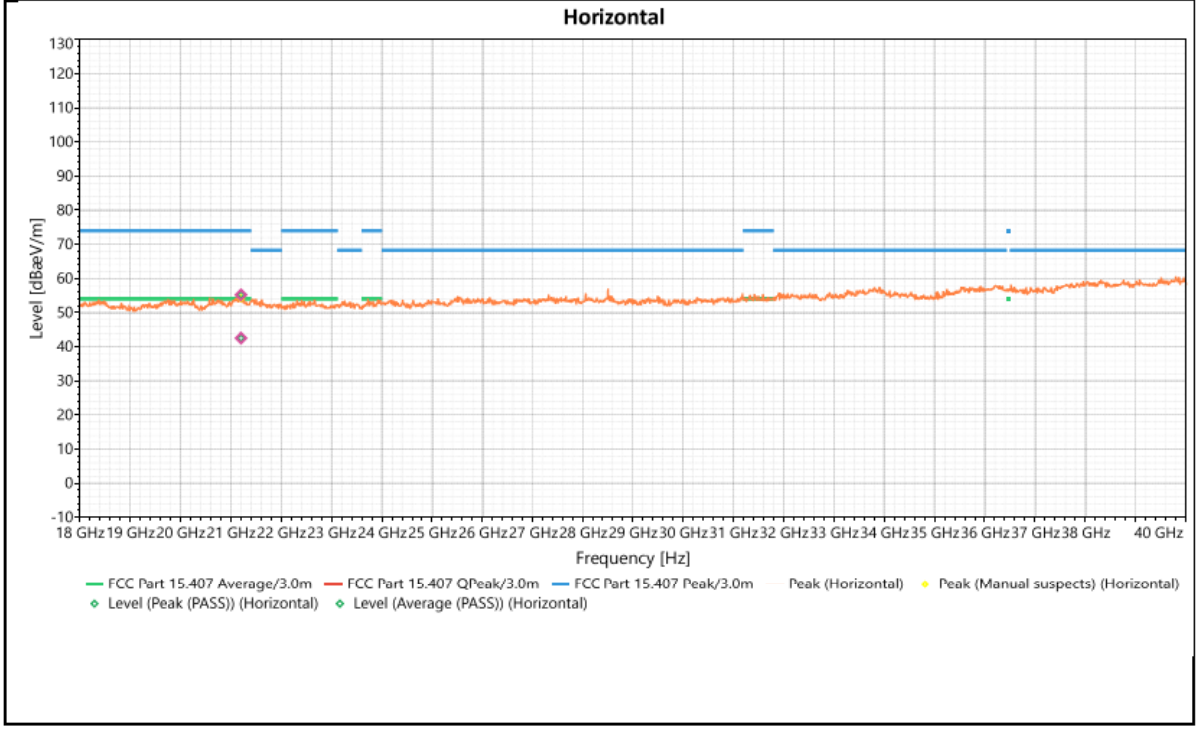
Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	11196.57	Vertical	56.889	74	-17.111	1.93	177	2.65	Peak (PASS)
2	11196.57	Vertical	39.301	54	-14.699	1.93	177	2.65	Average (PASS)
3	15866.47	Vertical	42.862	74	-31.138	1.21	29	4.97	Peak (PASS)
4	15866.47	Vertical	29.62	54	-24.38	1.21	29	4.97	Average (PASS)
5	17988.13	Vertical	42.342	74	-31.658	1.77	357	3.18	Peak (PASS)
6	17988.13	Vertical	28.61	54	-25.39	1.77	357	3.18	Average (PASS)
7	21190.03	Vertical	54.225	74	-19.775	1	203	8.47	Peak (PASS)
8	21190.03	Vertical	41.452	54	-12.548	1	203	8.47	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

Frequency	802.11N HT20 5600 MHz	DETECTOR FUNCTION	Prak/Average
FREQUENCY RANGE	1GHz-40GHz		



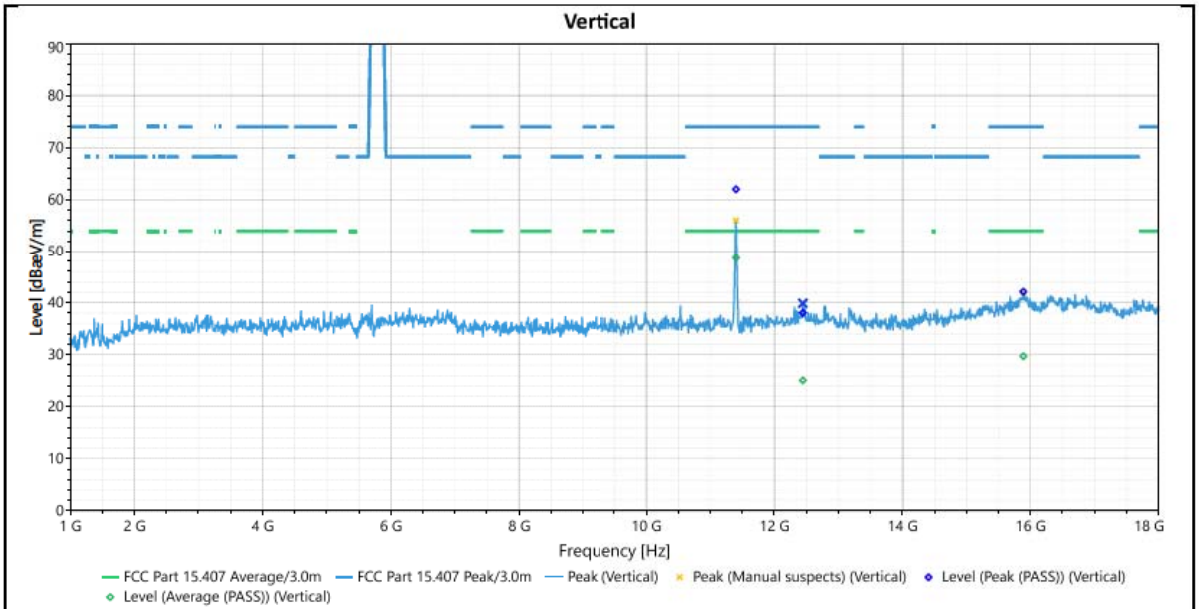


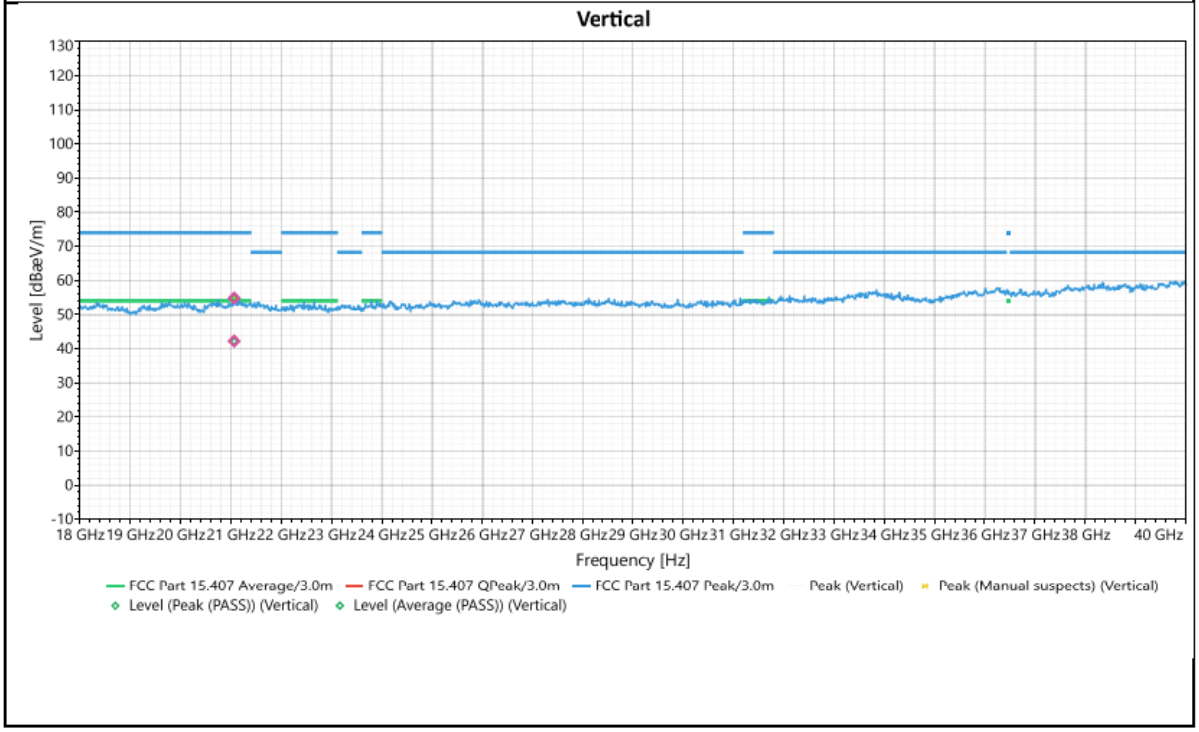
Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	11200.06	Horizontal	58.853	74	-15.147	2.05	221	2.64	Peak (PASS)
2	11200.06	Horizontal	40.957	54	-13.043	2.05	221	2.64	Average (PASS)
3	15885.16	Horizontal	41.995	74	-32.005	2.05	221	4.8	Peak (PASS)
4	15885.16	Horizontal	29.196	54	-24.804	2.05	221	4.8	Average (PASS)
5	17710.97	Horizontal	39.804	74	-34.196	2.05	360	2.57	Peak (PASS)
6	17710.97	Horizontal	27.134	54	-26.866	2.05	360	2.57	Average (PASS)
7	21203.1	Horizontal	55.171	74	-18.829	2	116	8.36	Peak (PASS)
8	21203.1	Horizontal	42.509	54	-11.491	2	116	8.36	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

CHANNEL	802.11N HT20 5700 MHz	DETECTOR FUNCTION	Prak/Average
FREQUENCY RANGE	1GHz-40GHz		



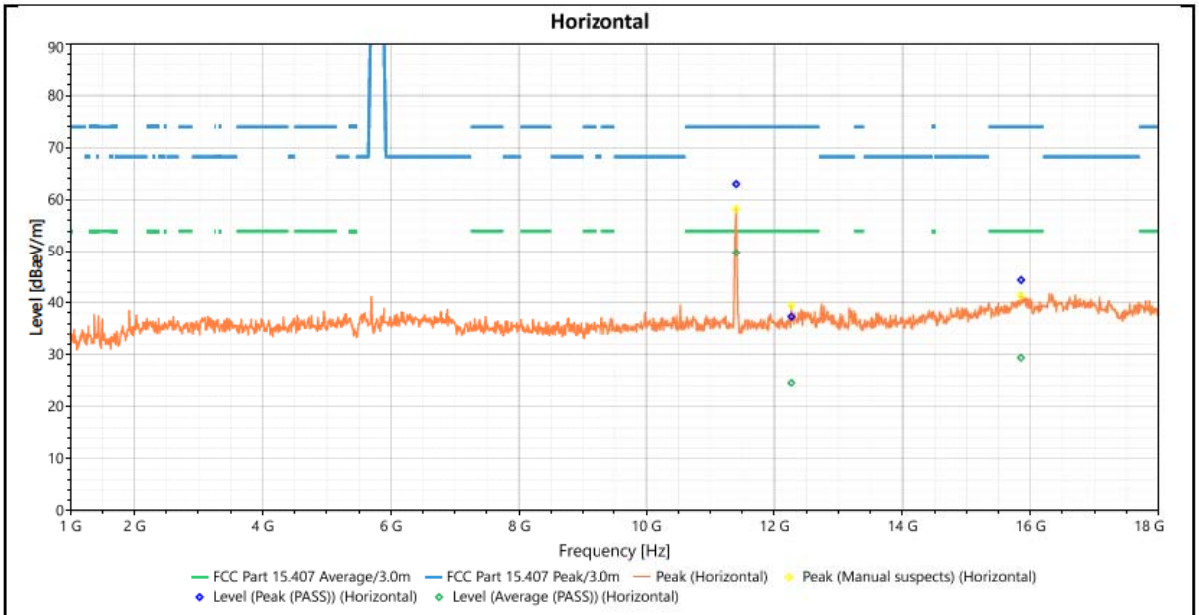


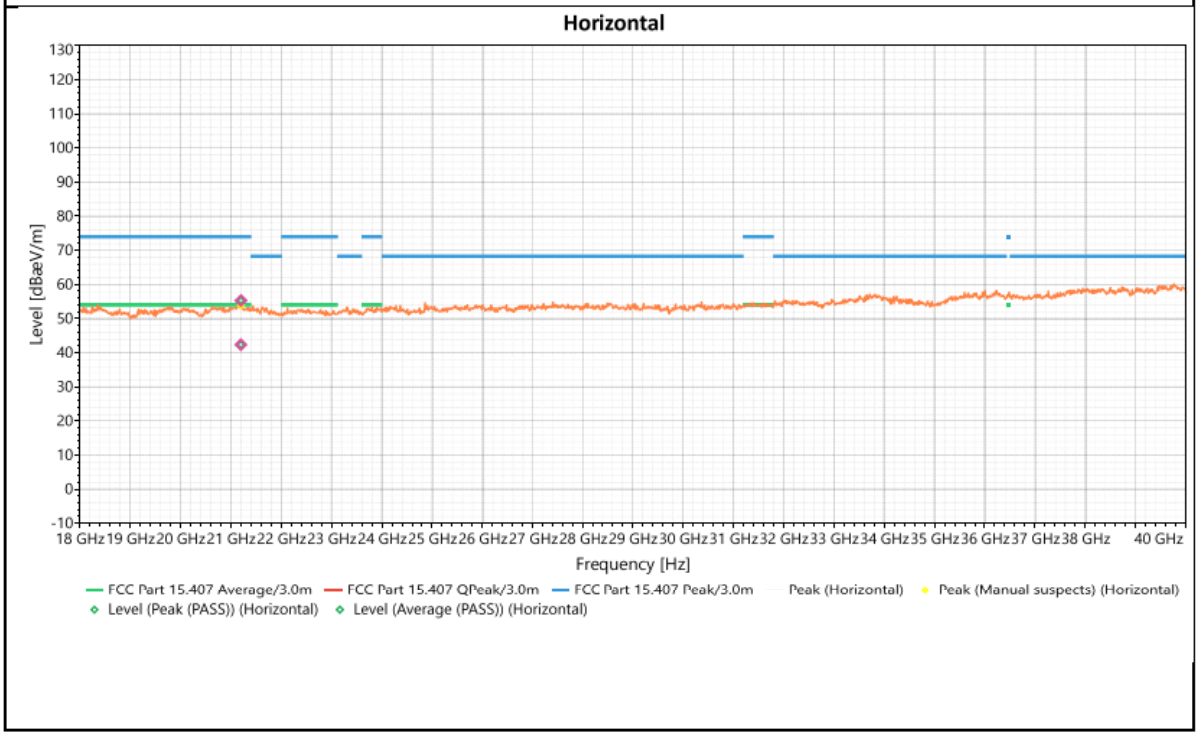
Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	11400.61	Vertical	62.027	74	-11.973	2.17	174	2.71	Peak (PASS)
2	11400.61	Vertical	48.673	54	-5.327	2.17	174	2.71	Average (PASS)
3	12444.41	Vertical	38.016	74	-35.984	1.21	77	3.74	Peak (PASS)
4	12444.41	Vertical	25.041	54	-28.959	1.21	77	3.74	Average (PASS)
5	15888.64	Vertical	42.095	74	-31.905	1.21	172	4.96	Peak (PASS)
6	15888.64	Vertical	29.67	54	-24.33	1.21	172	4.96	Average (PASS)
7	21066.8	Vertical	54.824	74	-19.176	1.69	237	8.64	Peak (PASS)
8	21066.8	Vertical	42.207	54	-11.793	1.69	237	8.64	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

Frequency	802.11N HT20 5700 MHz	DETECTOR FUNCTION	Prak/Average
FREQUENCY RANGE	1GHz-40GHz		



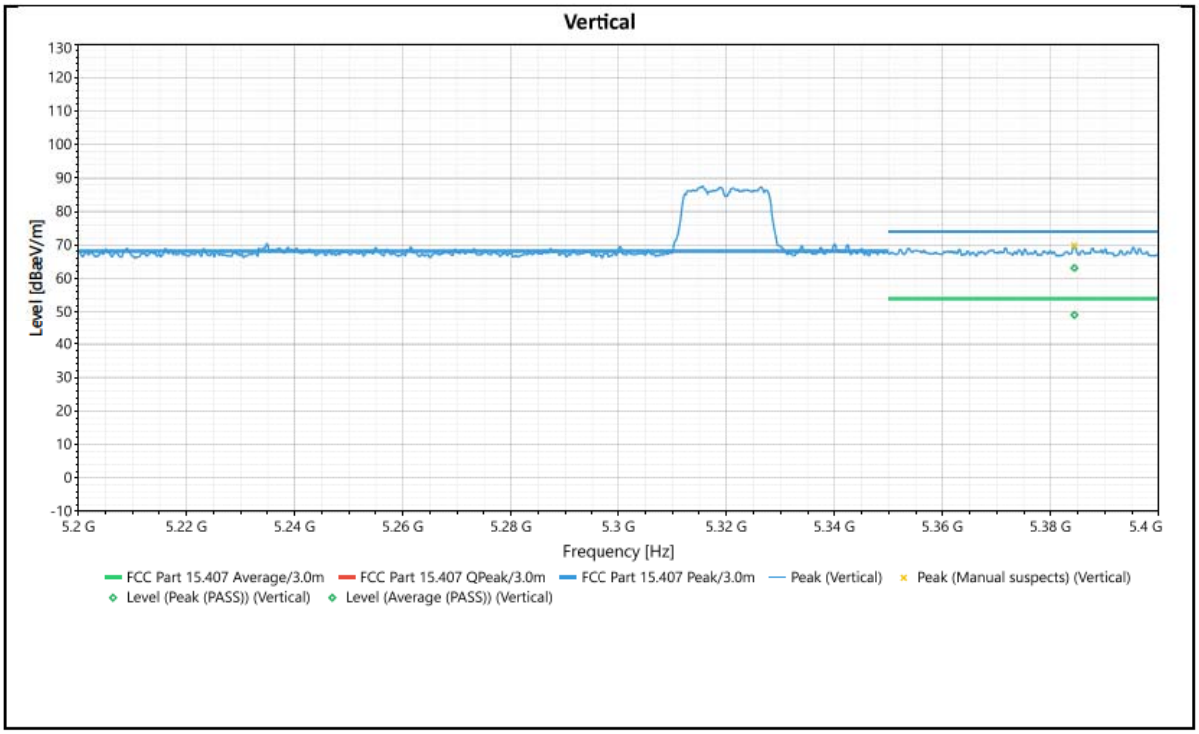


Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	11404.07	Horizontal	63.017	74	-10.983	2.05	221	2.75	Peak (PASS)
2	11404.07	Horizontal	49.723	54	-4.277	2.05	221	2.75	Average (PASS)
3	12264.14	Horizontal	37.278	74	-36.722	1.21	77	3.7	Peak (PASS)
4	12264.14	Horizontal	24.552	54	-29.448	1.21	77	3.7	Average (PASS)
5	15851.18	Horizontal	44.331	74	-29.669	1.77	317	4.78	Peak (PASS)
6	15851.18	Horizontal	29.391	54	-24.609	1.77	317	4.78	Average (PASS)
7	21200.9	Horizontal	55.292	74	-18.708	1.25	263	8.36	Peak (PASS)
8	21200.9	Horizontal	42.351	54	-11.649	1.25	263	8.36	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

RESTRICTED BAND Test Plots
802.11a – 5320MHz

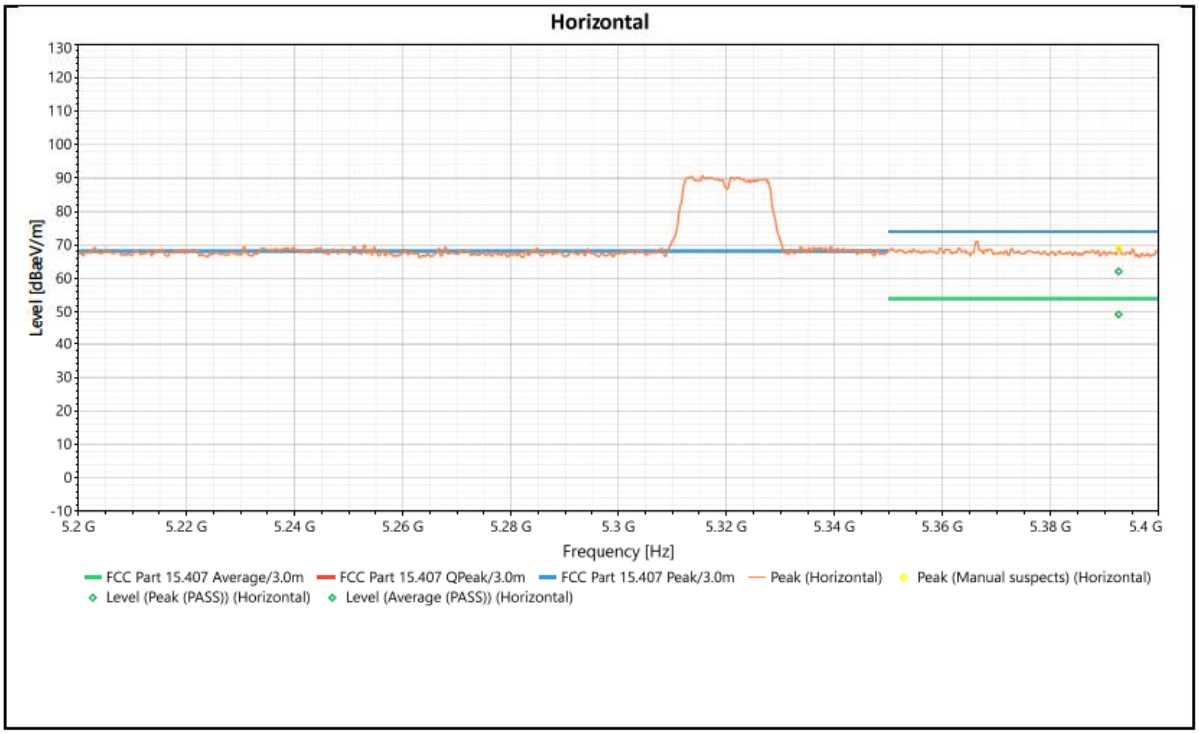


Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	5384.421	Vertical	63.128	74	-10.872	3.17	101	39.65	Peak (PASS)
2	5384.421	Vertical	49.122	54	-4.878	3.17	101	39.65	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

RESTRICTED BAND Test Plots
802.11a – 5320MHz

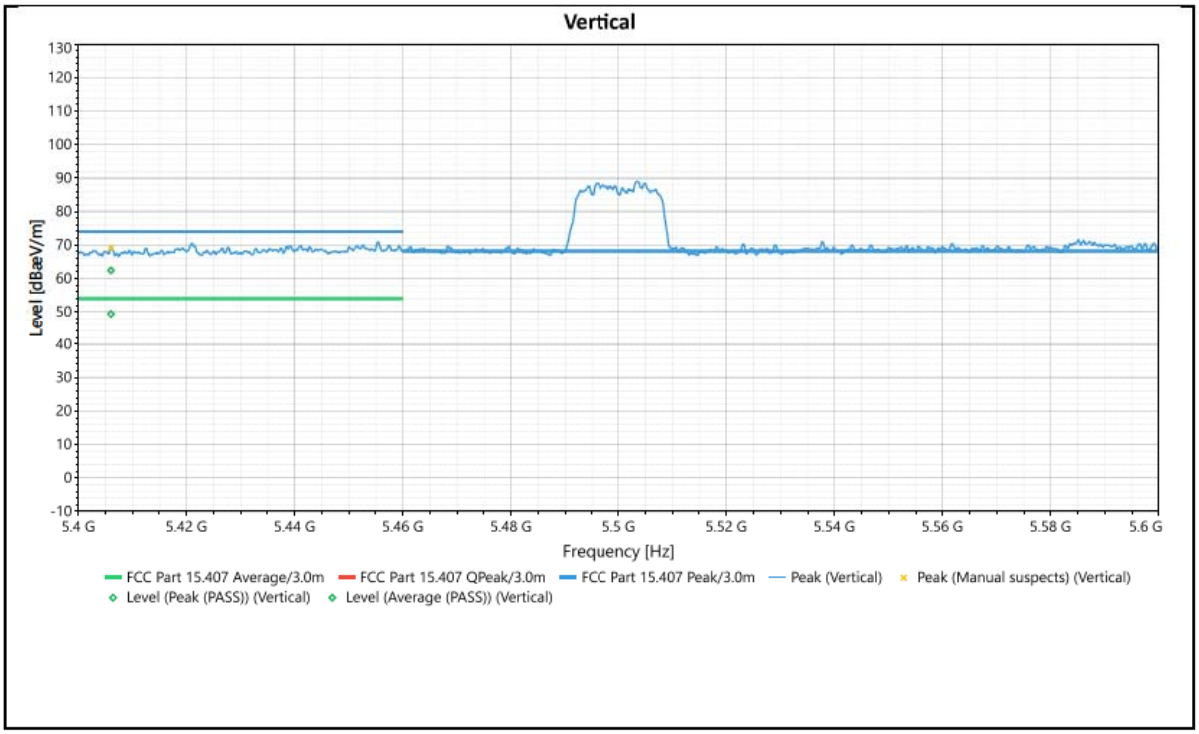


Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	5392.596	Horizontal	62.109	74	-11.891	3.18	29	39.7	Peak (PASS)
2	5392.596	Horizontal	49.292	54	-4.708	3.18	29	39.7	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

RESTRICTED BAND Test Plots
802.11a – 5500MHz

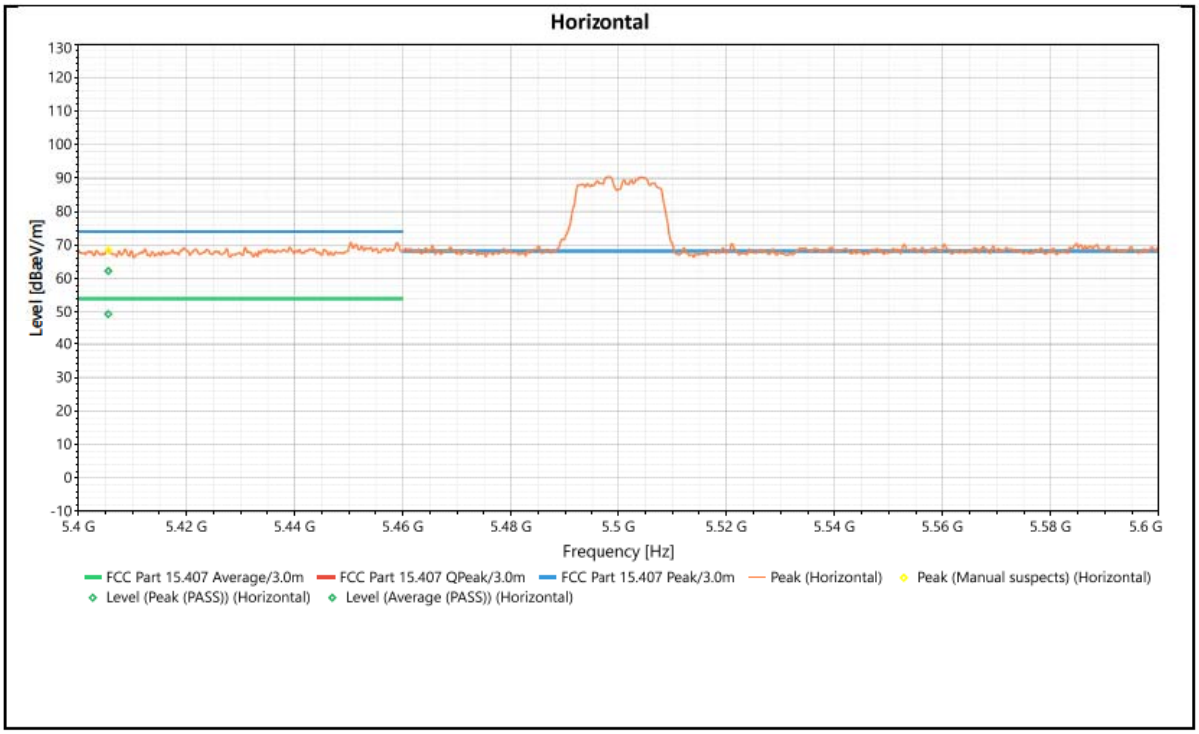


Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	5406.048	Vertical	62.445	74	-11.555	1.27	292	39.72	Peak (PASS)
2	5406.048	Vertical	49.363	54	-4.637	1.27	292	39.72	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

RESTRICTED BAND Test Plots
802.11a – 5500MHz

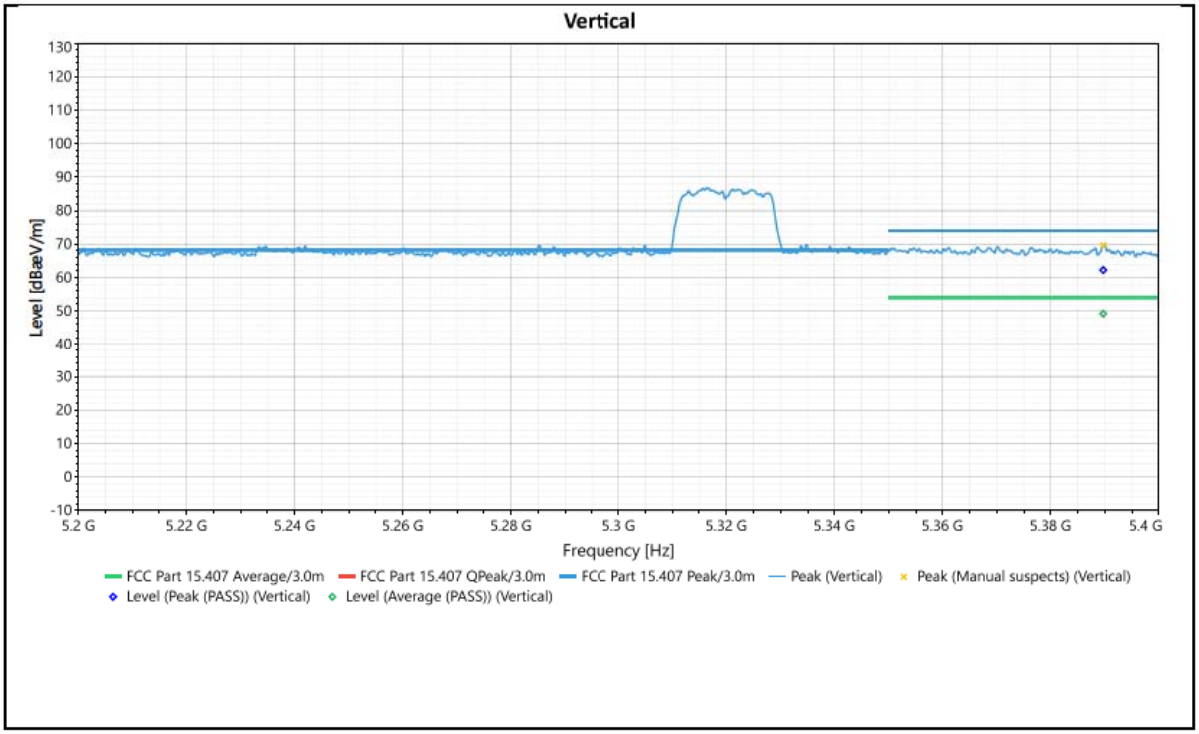


Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	5405.549	Horizontal	62.256	74	-11.744	3.46	77	39.7	Peak (PASS)
2	5405.549	Horizontal	49.368	54	-4.632	3.46	77	39.7	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

RESTRICTED BAND Test Plots
802.11n HT20 – 5320MHz

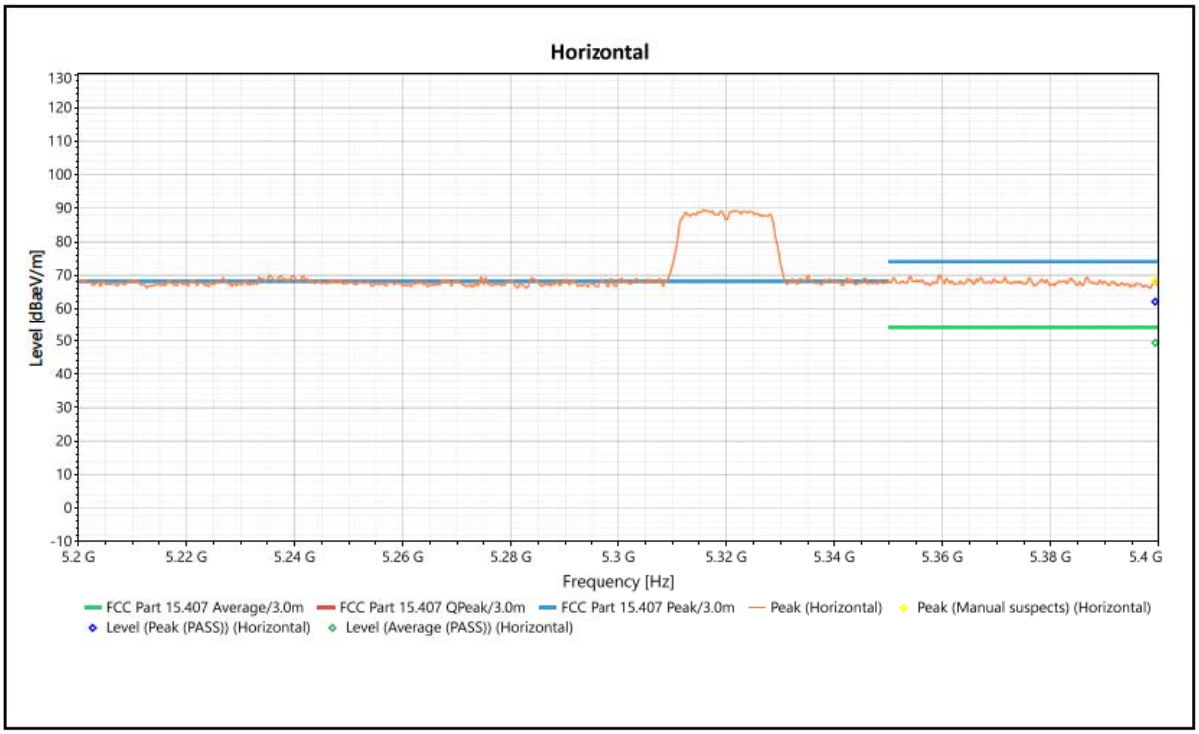


Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	5389.751	Vertical	62.234	74	-11.766	2.24	251	39.67	Peak (PASS)
2	5389.751	Vertical	49.205	54	-4.795	2.24	251	39.67	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

RESTRICTED BAND Test Plots
802.11n HT20 – 5320MHz

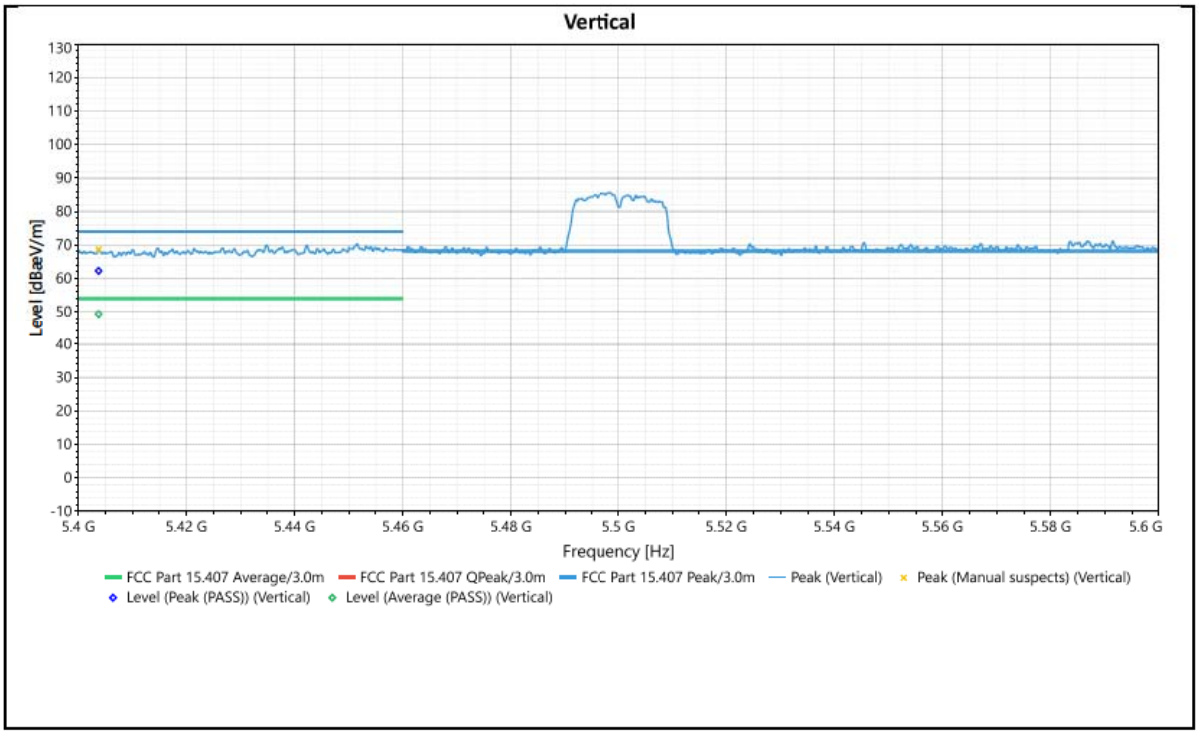


Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	5399.376	Horizontal	62.09	74	-11.91	1.49	269	39.71	Peak (PASS)
2	5399.376	Horizontal	49.377	54	-4.623	1.49	269	39.71	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

RESTRICTED BAND Test Plots
802.11n HT20 – 5500MHz

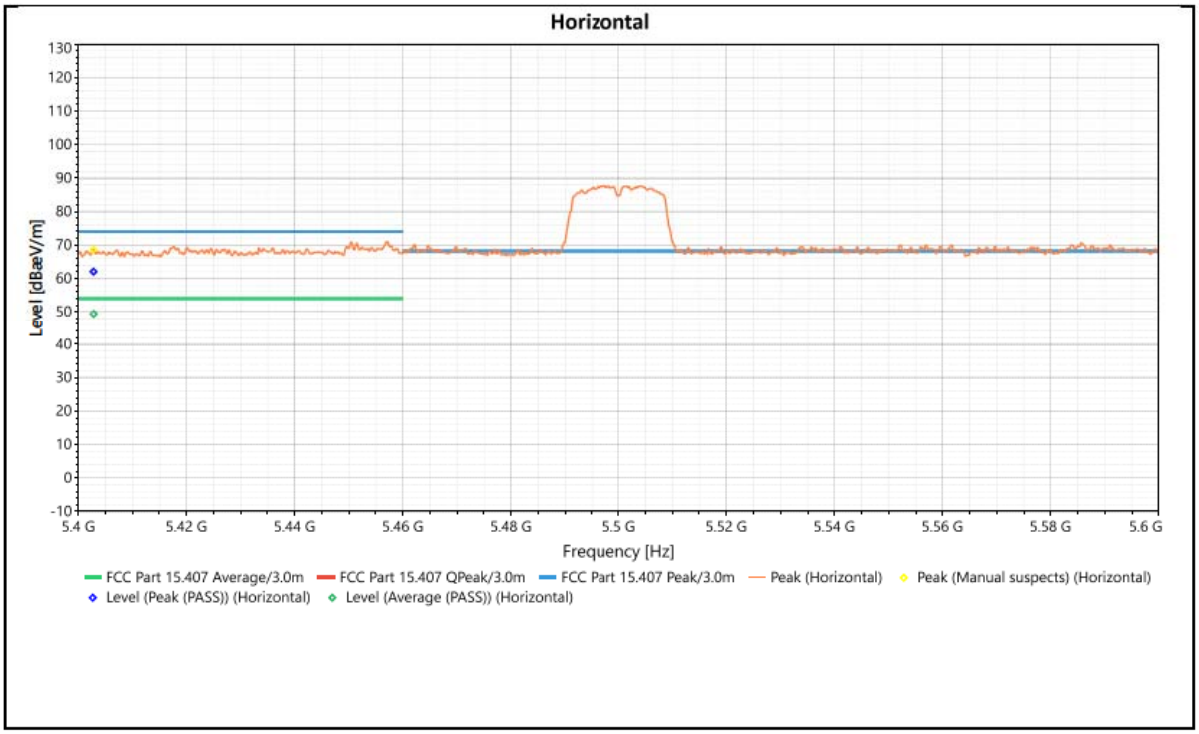


Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	5403.76	Vertical	62.3	74	-11.7	3.46	0	39.71	Peak (PASS)
2	5403.76	Vertical	49.375	54	-4.625	3.46	0	39.71	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

RESTRICTED BAND Test Plots
802.11n HT20 – 5500MHz



Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	5402.83	Horizontal	62.066	74	-11.934	2.8	17	39.71	Peak (PASS)
2	5402.83	Horizontal	49.381	54	-4.619	2.8	17	39.71	Average (PASS)

REMARKS:

1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
3. Margin value = Emission level – Limit value.
4. The emission levels of other frequencies were less than 20dB margin agains

3.3 Conducted Emission Measurement

3.3.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3.3.2 Test Instruments

Test Name: CE Voltage – AC Power Port			**Test Date(s):** 1/17/2023		
MET Asset #	**Equipment**	**Manufacturer**	**Model**	**Last Cal Date**	**Cal Due Date**
1U0337	LISN	Com-Power	LI-215A	10/12/2022	10/12/2023
1S2003	EMI Test Receiver	Keysight	N9030B	11/01/2022	11/01/2023
Note: Functionally tested equipment is verified using calibrated instrumentation at the time of testing.					

NOTE:

3.3.3 Test Procedure

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

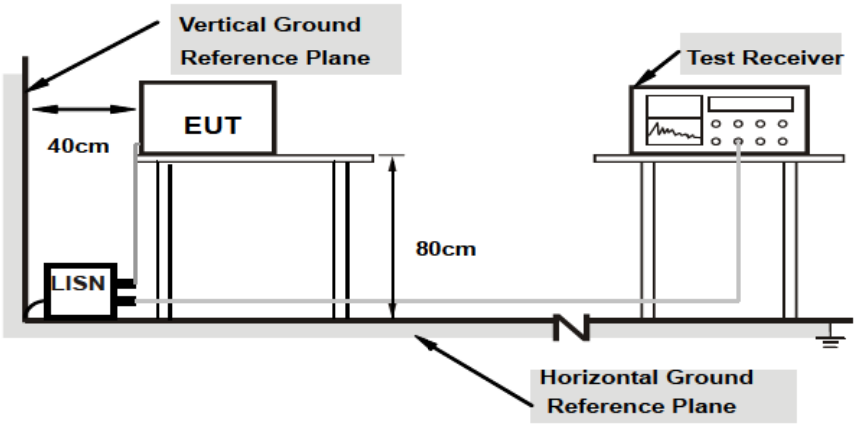
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

3.3.4 Deviation from Test Standard

No deviation.

3.3.5 Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the related item - Test Setup Photos.

2.Both LISNs (AMN) are placed 80 cm from the nearest 80 from other units and other metal planes

3.3.6 EUT Operating Condition

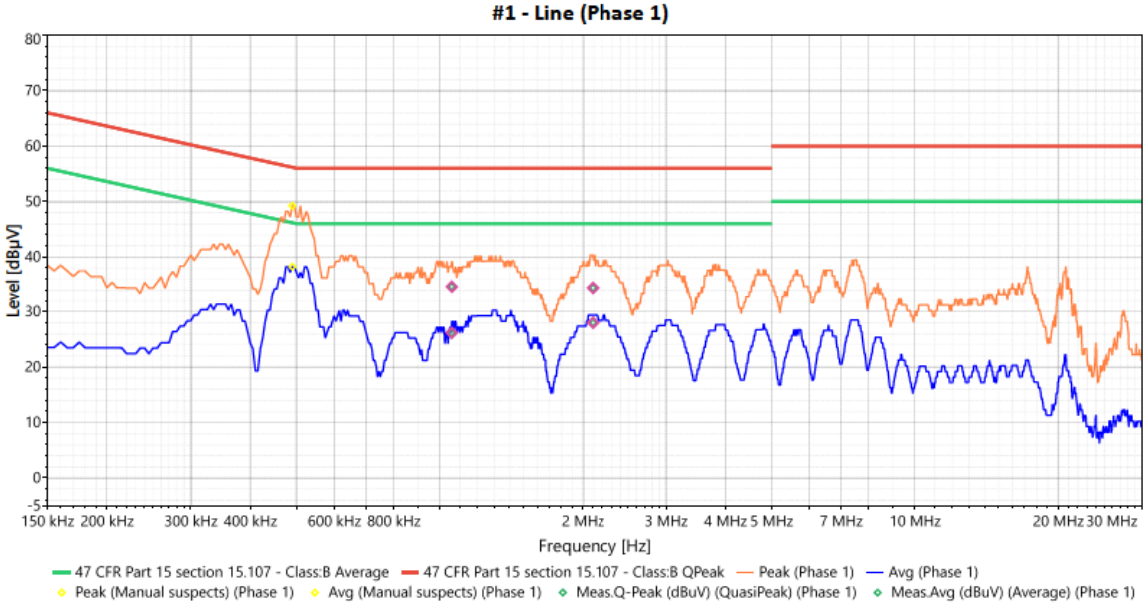
Same as 4.1.6.

3.3.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak / Average

Conducted Emission									
No.	Frequency (MHz)	Polarization	Level QP[dB(uV/m)]	Level Average[dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Source	Factor [dB(1/m)]	Result
1	1.059081	Line	34.648	NaN	56	-21.352	QuasiPeak	0.21	Pass
2	1.059081	Line	NaN	26.148	46	-19.852	Average	0.21	Pass
3	2.098634	Line	34.433	NaN	56	-21.567	QuasiPeak	0.35	Pass
4	2.098634	Line	NaN	27.993	46	-18.007	Average	0.35	Pass

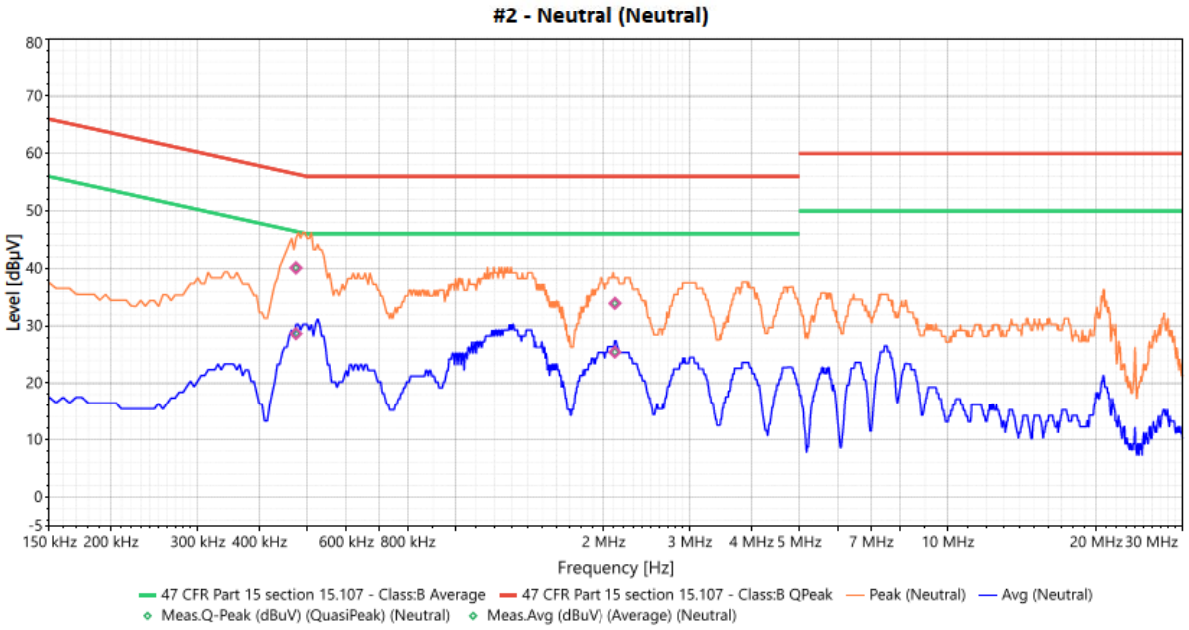
Test Plot:



Phase	Neutral (N)	Detector Function	Quasi-Peak / Average

Conducted Emission									
No.	Frequency (MHz)	Polarization	Level QP[dB(uV/m)]	Level Average[dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Source	Factor [dB(1/m)]	Result
1	0.474545	Neutral	40.085	NaN	56.426	-16.341	QuasiPeak	0.25	Pass
2	0.474545	Neutral	NaN	28.635	46.426	-17.791	Average	0.25	Pass
3	2.113394	Neutral	33.915	NaN	56	-22.085	QuasiPeak	0.35	Pass
4	2.113394	Neutral	NaN	25.425	46	-20.575	Average	0.35	Pass

Test Plot:



3.4 Transmit Power Measurement

3.4.1 Limits of Transmit Power Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Client device	250mW (24 dBm)
U-NII-2A	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√		1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/Nss) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

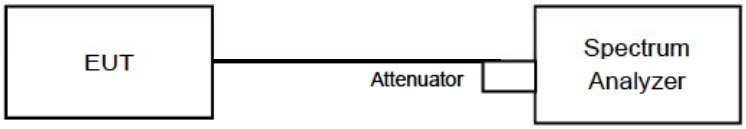
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/Nss) dB.

3.4.2 Test Setup

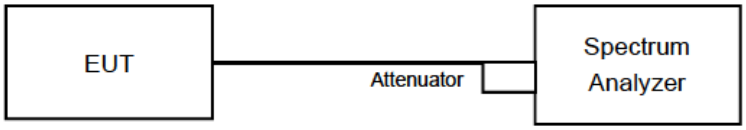
FOR POWER OUTPUT MEASUREMENT

◆ **Power Meter Measurement**

◆ **Spectrum Measurement**



FOR 26dB OCCUPIED BANDWIDTH



3.4.3 Test Instruments

Asset #	Equipment	Manufacturer	Model	Last Cal Date	Cal Due Date
1S4775	Power Meter	ROHDE & SCHWARZ	NRQ6	06/23/2022	06/23/2023

3.4.4 Test Procedure

For Average Power Measurement

For 802.11a, 802.11n (HT20), 802.11n (HT40), 802.11ac (VHT20, 802.11ac (VHT40)

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst and set the detector to AVERAGE. Duty factor is not added to measured value.

For 802.11ac (VHT80)

1) Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
2) Set sweep trigger to “free run”.
3) Set RBW = 1 MHz.
4) Set VBW ≥ 3 MHz
5) Number of points in sweep ≥ 2 Span / RBW.
6) Sweep time ≤ (number of points in sweep) * T
7) Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
8) Detector = RMS.
9) Trace mode = max hold.
10) Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.

◆ **Power Meter Measurement**

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

◆ **Spectrum Measurement**

Follow FCC KDB 789033 UNII test procedure:
Method SA-1

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW =1MHz.
3. Set the VBW ≥ 3 x RBW.
4. Number of points in sweep ≥ 2 Span / RBW.
5. Sweep time = auto.
6. Set trigger to free run (duty cycle ≥ 98 percent)
7. Detector = RMS.
8. Trace average at least 100 traces in power averaging mode
9. Compute power by integrating the spectrum across the 26 dB EBW of the signal.

Follow FCC KDB 789033 UNII test procedure:
Method SA-2

1. Set span to encompass the emission bandwidth (EBW) of the signal.
2. Set RBW =1MHz.
3. Set the VBW ≥ 3 x RBW.
4. Number of points in sweep ≥ 2 Span / RBW.
5. Sweep time = auto.
6. Detector = RMS.
7. Trace average at least 100 traces in power averaging mode
8. Compute power by integrating the spectrum across the 26 dB EBW of the signal.
9. Duty factor need added to measured value (duty cycle < 98 percent).

FOR 26dB OCCUPIED BANDWIDTH

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

3.4.5 Deviation from Test Standard

No deviation.

3.4.6 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

3.4.7 Test Results

Output Power measurement result for UNII-2 Band

Type	Test mode	Freq (MHz)	CH	Conducted Power (dBm)	Limit (dBm)	Result
Output Power	802.11a	5260	Low	6.49	24	Pass
		5280	Mid	6.59	24	Pass
		5320	High	6.73	24	Pass
		5500	Low	6.52	24	Pass
		5600	Mid	6.87	24	Pass
		5700	High	6.85	24	Pass
	802.11n-HT20	5260	Low	6.64	24	Pass
		5280	Mid	6.57	24	Pass
		5320	High	6.27	24	Pass
		5500	Low	6.6	24	Pass
		5600	Mid	6.73	24	Pass
		5700	High	6.72	24	Pass