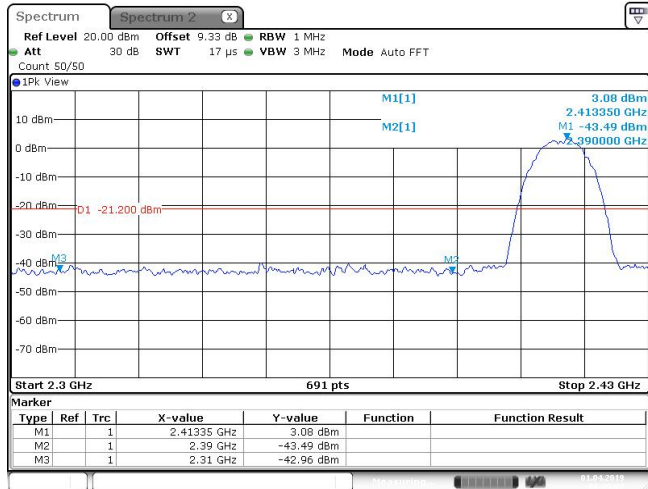
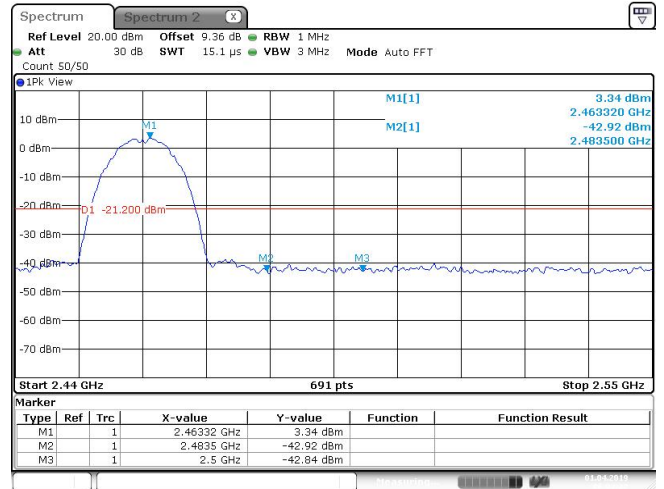


802.11b

CH01-Bandedge

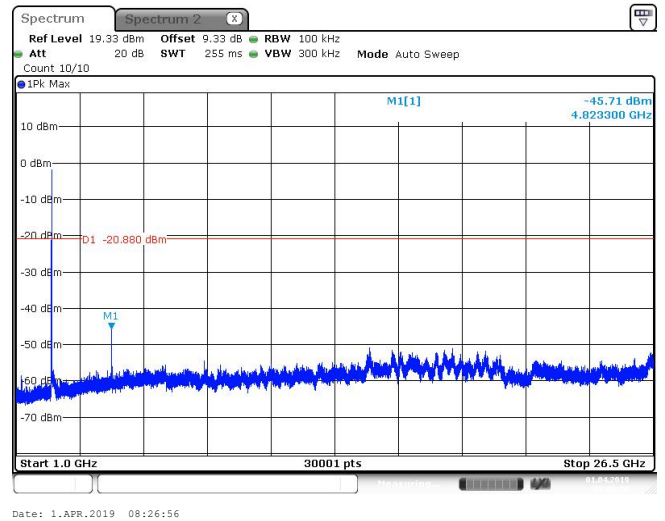
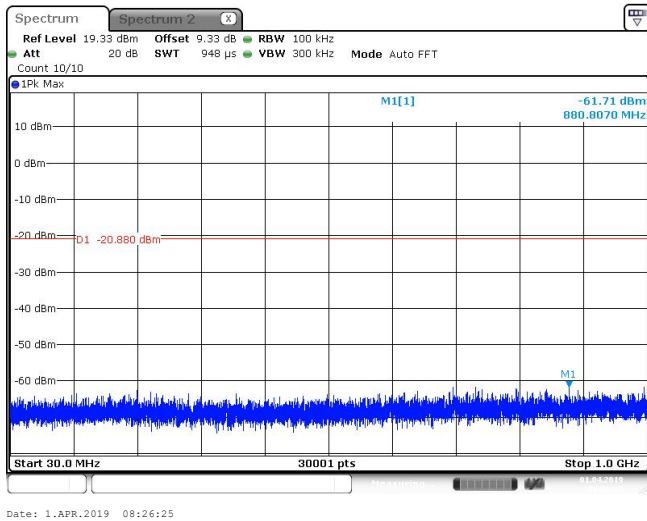


CH11-Bandedge

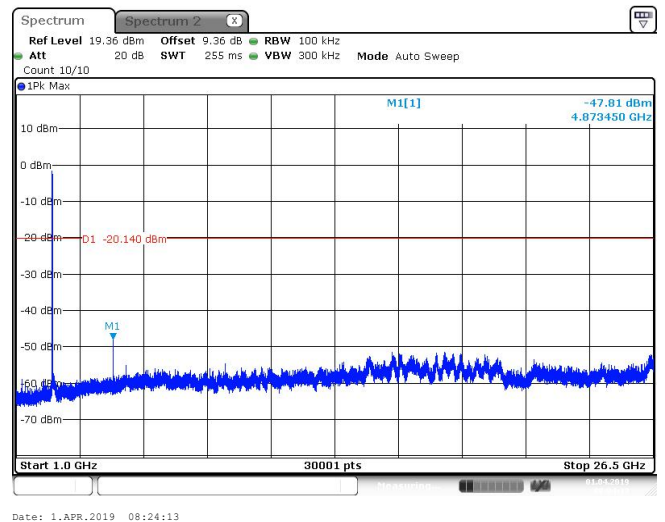
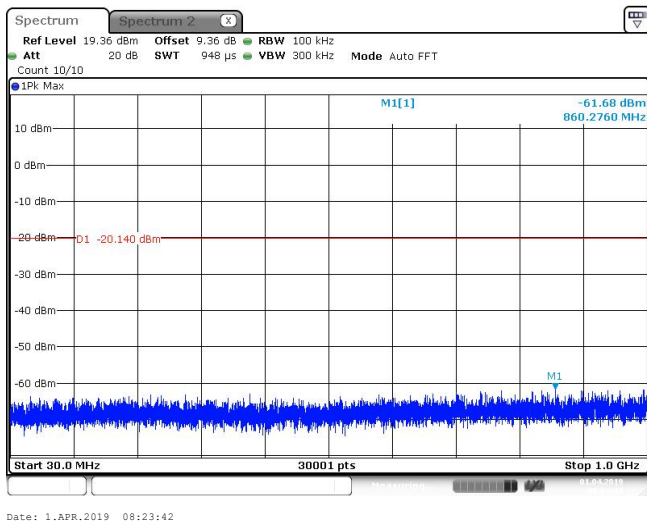


802.11b

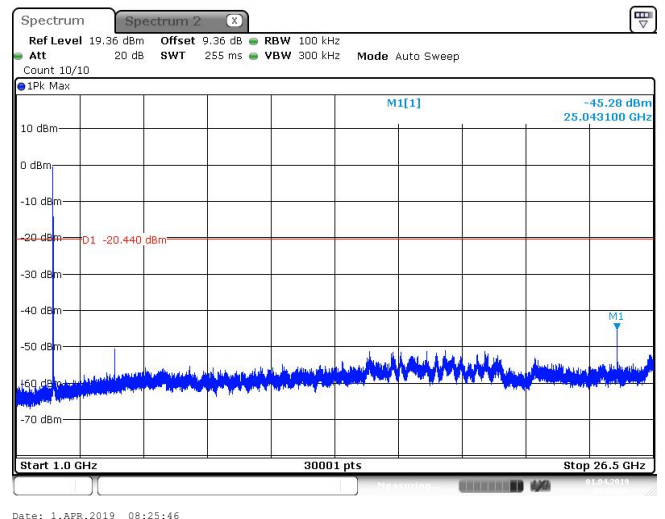
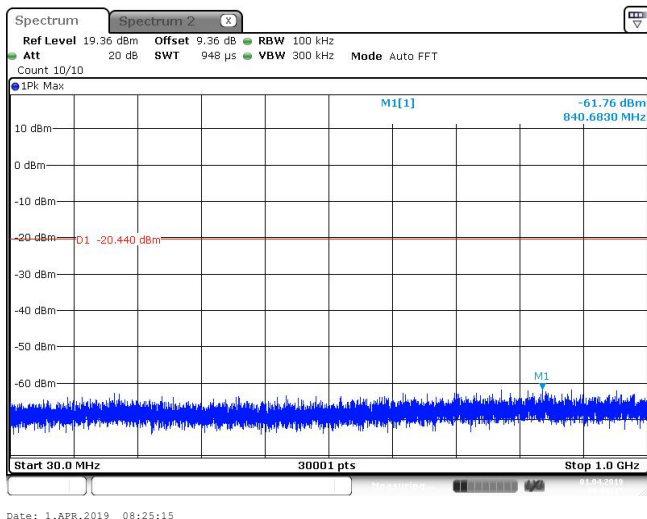
CH01-SE



CH06-SE

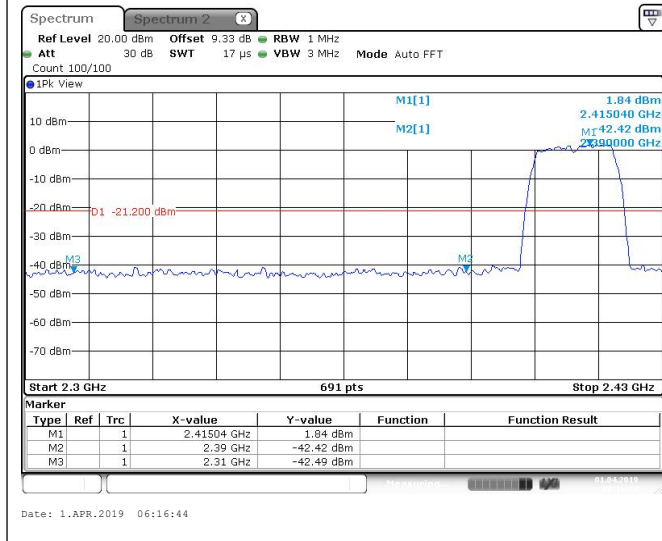


CH11-SE

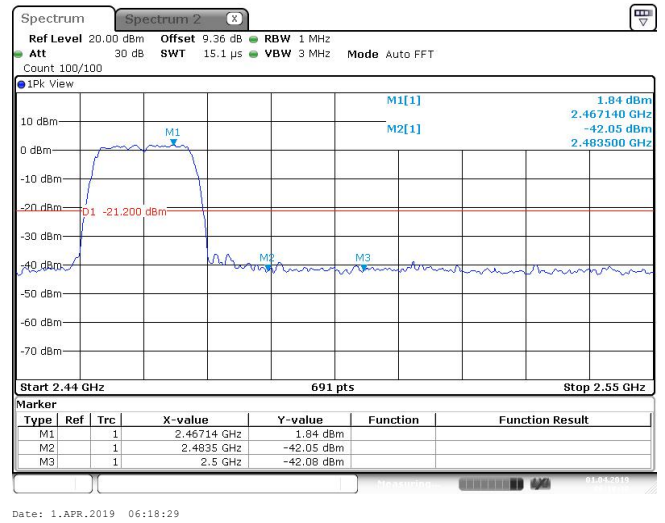


802.11g

CH01-Bandedge

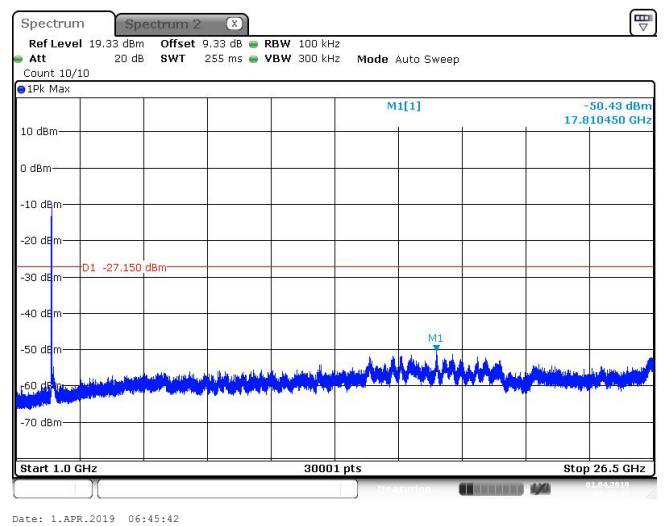
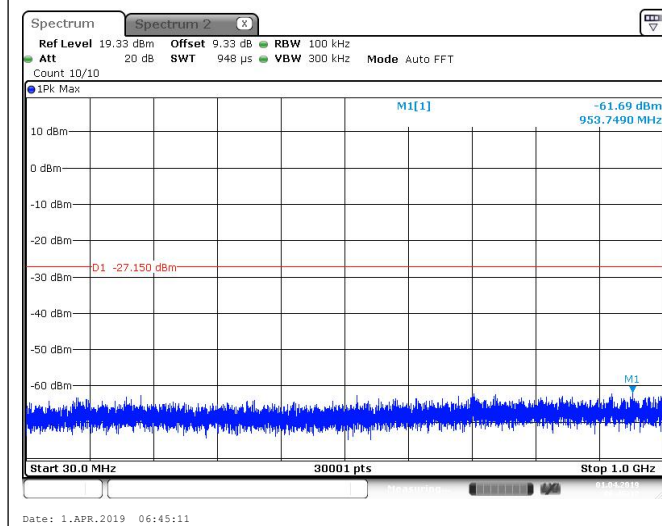


CH11-Bandedge

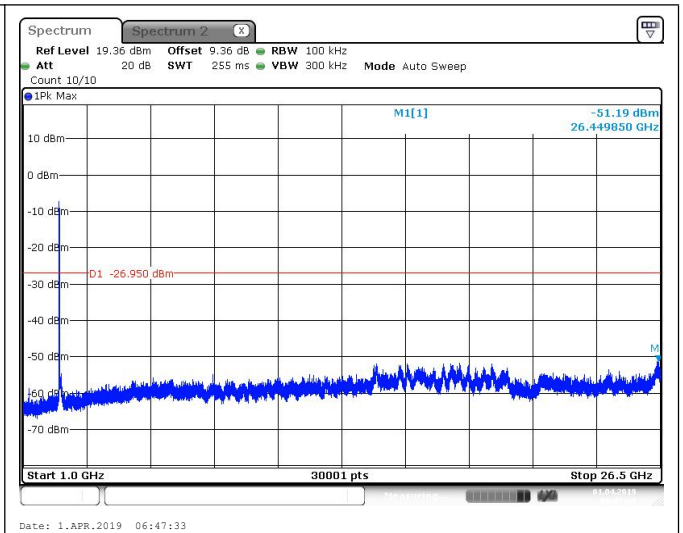
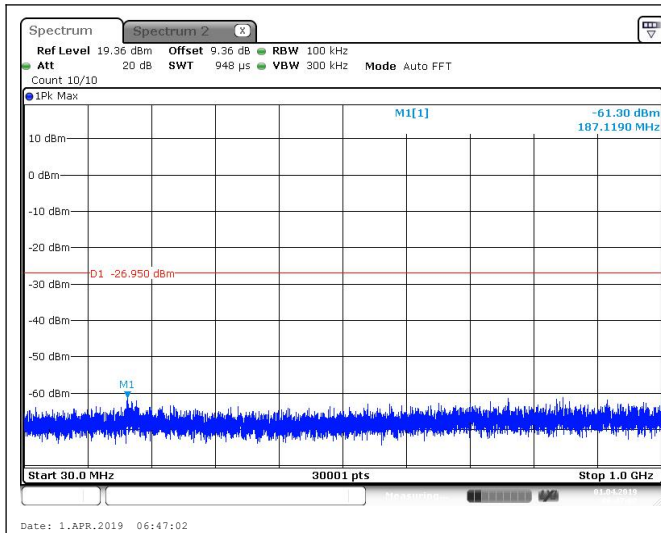


802.11g

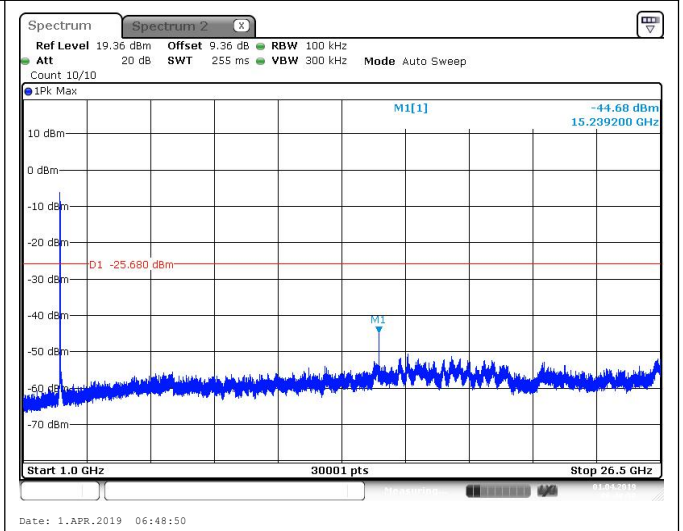
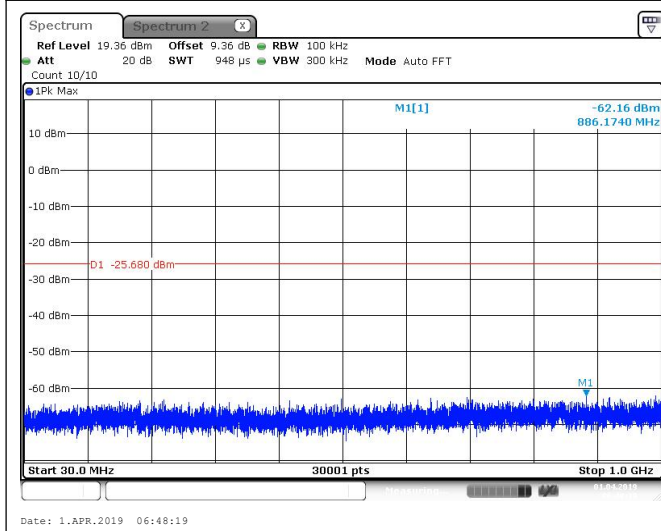
CH01-SE



CH06-SE

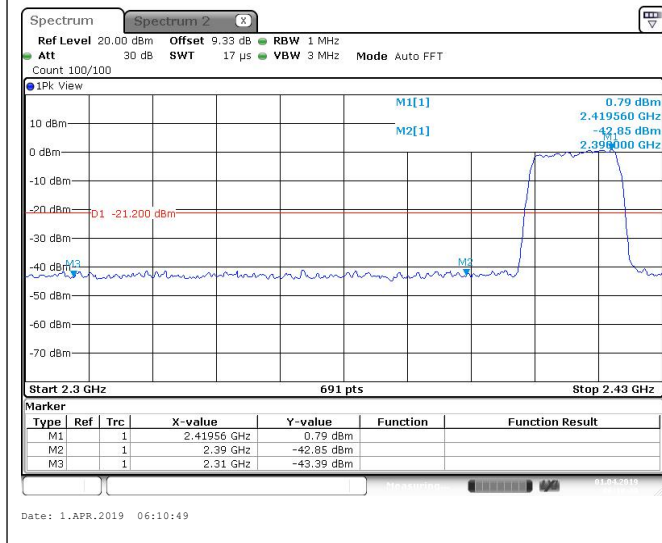


CH11-SE

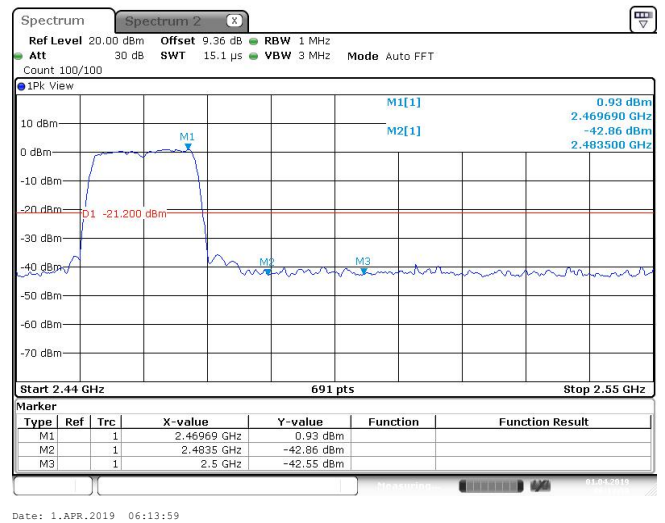


802.11n20

CH01-Bandedge

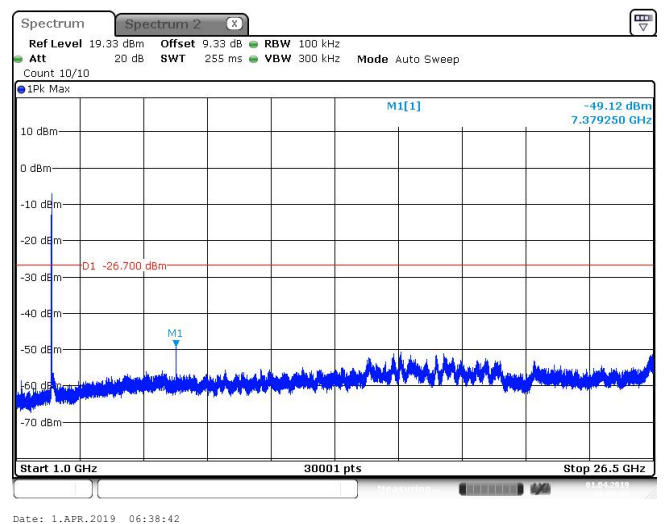
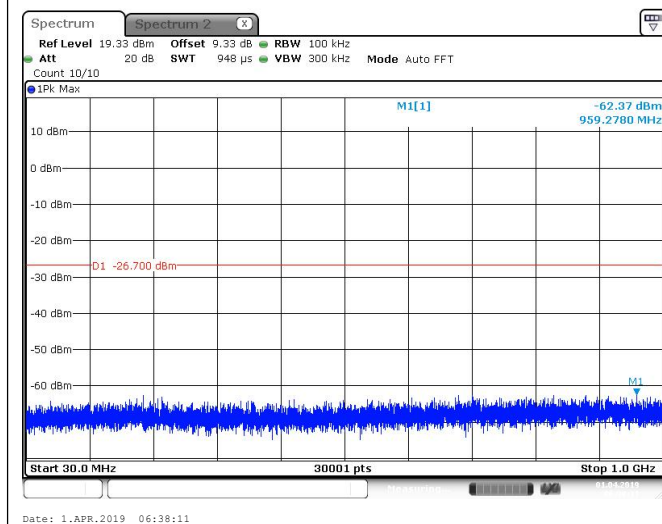


CH11-Bandedge

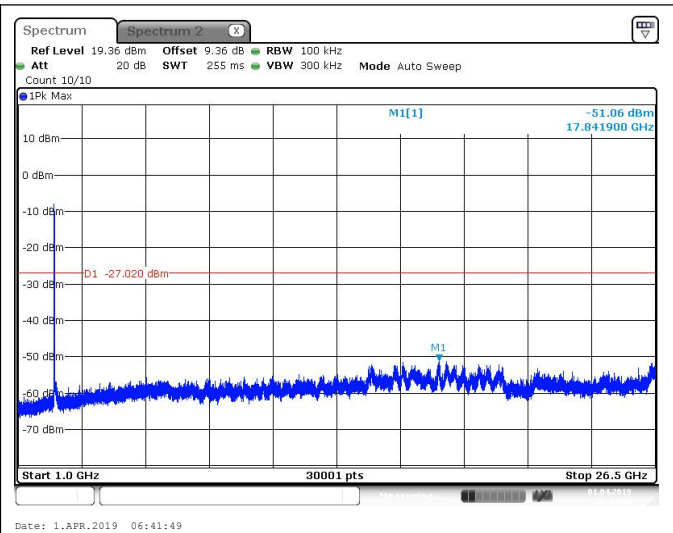
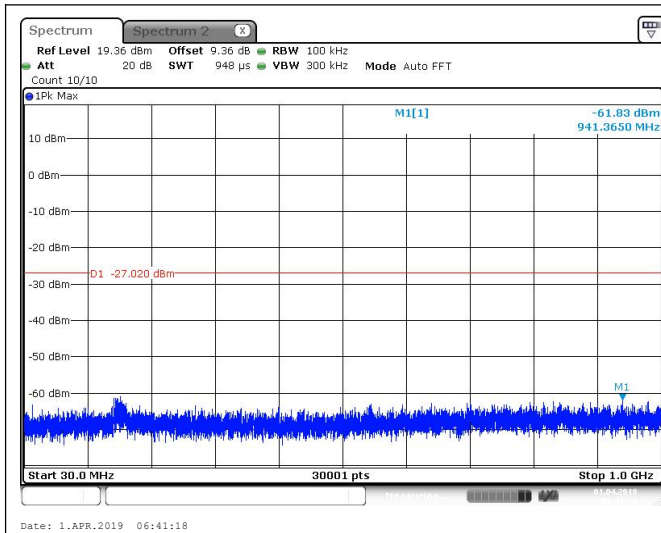


802.11n20

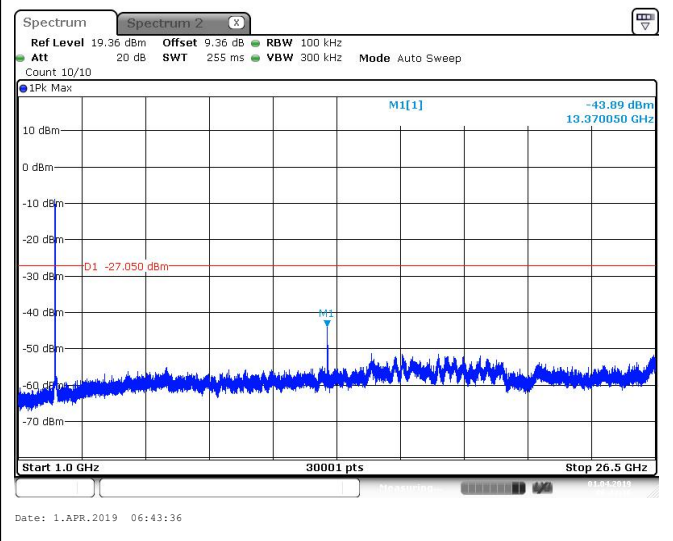
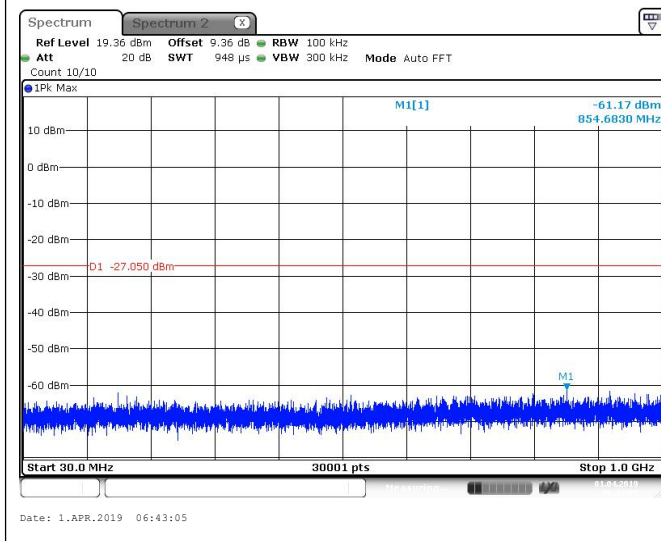
CH01-SE



CH06-SE



CH11-SE

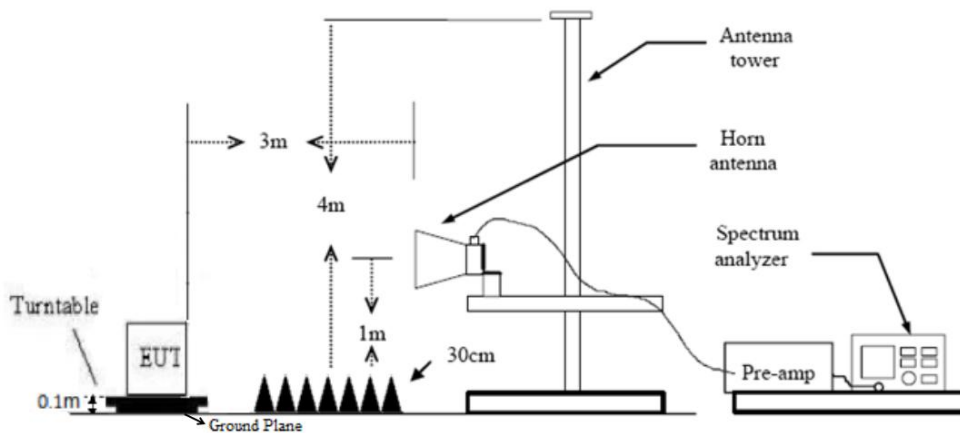


3.7. Band Edge Emissions

Limit

Restricted Frequency Band (MHz)	(dBuV/m)(at 3m)	
	Peak	Average
2310 ~2390	74	54
2483.5 ~2500	74	54
Note: All restriction bands have been tested, only the worst case is reported.		

Test Configuration



Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013 requirements.
2. The EUT is placed on a turn table which is 0.1 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.
5. The receiver set as follow:
 RBW=1MHz, VBW=3MHz PEAK detector for Peak value.
 RBW=1MHz, VBW=10Hz with PEAK Detector for Average Value.

Test Mode

Please refer to the clause 2.3.

Test Results

☒ **Passed** ☐ **Not Applicable**

Note:

- 1) Final level= Read level + Antenna Factor + Cable Loss - Preamp Factor

802.11b					CH01				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
2310	19.44	26.01	4.52	0	49.97	74	-24.03	Vertical	Peak
2390.01	20.32	26.84	4.89	0	52.05	74	-21.95	Vertical	
2310	14.39	26.01	4.52	0	44.92	54	-9.08	Vertical	Average
2390.01	15.86	26.84	4.89	0	47.59	54	-6.41	Vertical	
2310	18.26	26.11	4.52	0	48.89	74	-25.11	Horizontal	Peak
2390.01	18.97	26.75	4.89	0	50.61	74	-23.39	Horizontal	
2310	15.21	26.11	4.52	0	45.84	54	-8.16	Horizontal	Average
2390.01	15.79	26.75	4.89	0	47.43	54	-6.57	Horizontal	

802.11b					CH11				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
2483.49	20.58	27.1	4.52	0	52.2	74	-21.80	Vertical	Peak
2500.00	20.62	27.6	4.89	0	53.11	74	-20.89	Vertical	
2483.49	15.36	27.1	4.52	0	46.98	54	-7.02	Vertical	Average
2500.00	15.64	27.6	4.89	0	48.13	54	-5.87	Vertical	
2483.49	19.81	26.33	4.52	0	50.66	74	-23.34	Horizontal	Peak
2500.00	19.78	27.6	4.89	0	52.27	74	-21.73	Horizontal	
2483.49	15.49	26.33	4.52	0	46.34	54	-7.66	Horizontal	Average
2500.00	15.86	27.6	4.89	0	48.35	54	-5.65	Horizontal	

802.11g					CH01				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
2310.00	20.26	27.1	4.52	0	51.88	74	-22.12	Vertical	Peak
2390.01	20.89	27.6	4.89	0	53.38	74	-20.62	Vertical	
2310.00	15.44	27.1	4.52	0	47.06	54	-6.94	Vertical	Average
2390.01	15.37	27.6	4.89	0	47.86	54	-6.14	Vertical	
2310.00	19.73	26.33	4.52	0	50.58	74	-23.42	Horizontal	Peak
2390.01	19.52	27.6	4.89	0	52.01	74	-21.99	Horizontal	
2310.00	15.29	26.33	4.52	0	46.14	54	-7.86	Horizontal	Average
2390.01	15.77	27.6	4.89	0	48.26	54	-5.74	Horizontal	

802.11g					CH11				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
2483.49	20.47	27.1	4.52	0	52.09	74	-21.91	Vertical	Peak
2500.00	20.85	27.6	4.89	0	53.34	74	-20.66	Vertical	
2483.49	15.78	27.1	4.52	0	47.4	54	-6.6	Vertical	Average
2500.00	15.83	27.6	4.89	0	48.32	54	-5.68	Vertical	
2483.49	19.45	26.33	4.52	0	50.3	74	-23.7	Horizontal	Peak
2500.00	19.77	27.6	4.89	0	52.26	74	-21.74	Horizontal	
2483.49	15.63	26.33	4.52	0	46.48	54	-7.52	Horizontal	Average
2500.00	15.82	27.6	4.89	0	48.31	54	-5.69	Horizontal	

802.11n(H20)					CH01				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
2310.00	18.64	27.1	4.52	0	49.49	74	-24.51	Vertical	Peak
2390.01	19.52	27.6	4.89	0	52.01	74	-21.99	Vertical	
2310.00	15.46	27.1	4.52	0	47.08	54	-6.92	Vertical	Average
2390.01	16.22	27.6	4.89	0	48.71	54	-5.29	Vertical	
2310.00	19.68	22.1	4.52	0	52.95	74	-21.05	Horizontal	Peak
2390.01	20.33	20.6	4.89	0	53.09	74	-20.91	Horizontal	
2310.00	15.49	26.33	4.52	0	46.34	54	-7.66	Horizontal	Average
2390.01	15.89	27.6	4.89	0	48.38	54	-5.62	Horizontal	

802.11n(H20)					CH11				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
2483.49	19.85	27.1	4.52	0	51.47	74	-22.53	Vertical	Peak
2500.00	19.25	27.6	4.89	0	51.74	74	-22.26	Vertical	
2483.49	15.49	27.1	4.52	0	47.11	54	-6.89	Vertical	Average
2500.00	15.91	27.6	4.89	0	48.4	54	-5.60	Vertical	
2483.49	19.44	26.33	4.52	0	50.29	74	-23.71	Horizontal	Peak
2500.00	20.91	27.6	4.89	0	53.4	74	-20.60	Horizontal	
2483.49	15.43	26.33	4.52	0	46.28	54	-7.72	Horizontal	Average
2500.00	15.39	27.6	4.89	0	47.88	54	-6.12	Horizontal	

3.8. Spurious Emission (radiated)

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.209

Radiated Emission Limits (9 kHz~1000 MHz)

Frequency (MHz)	Field Strength (microvolt/meter)	Measurement Distance (meters)
0.009~0.490	$2400/F(\text{KHz})$	300
0.490~1.705	$24000/F(\text{KHz})$	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

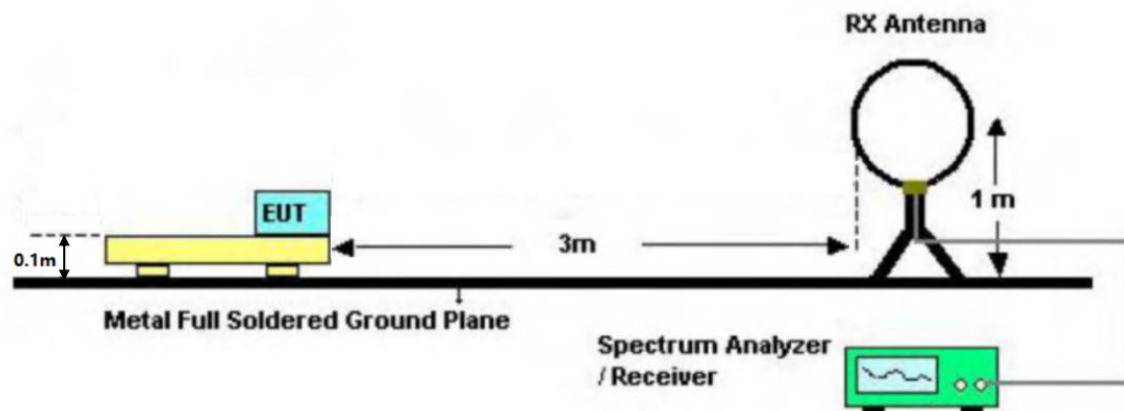
Radiated Emission Limit (Above 1000MHz)

Frequency (MHz)	Distance Meters(at 3m)	
	Peak	Average
Above 1000	74	54

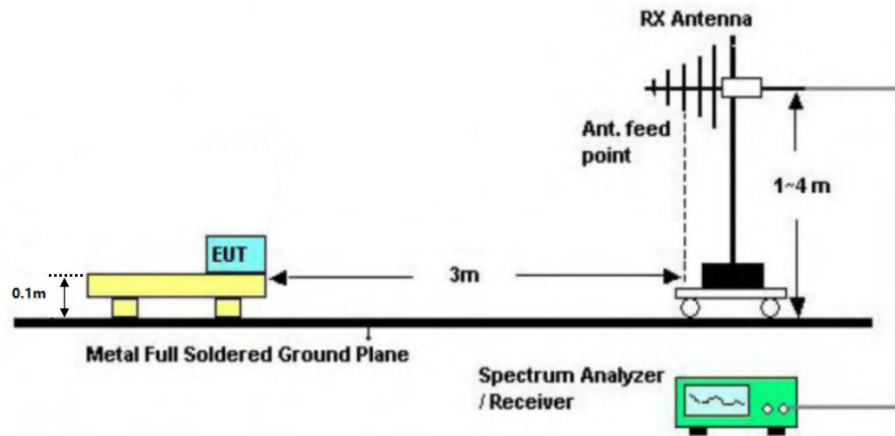
Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission Level (dBuV/m)=20log Emission Level (uV/m)

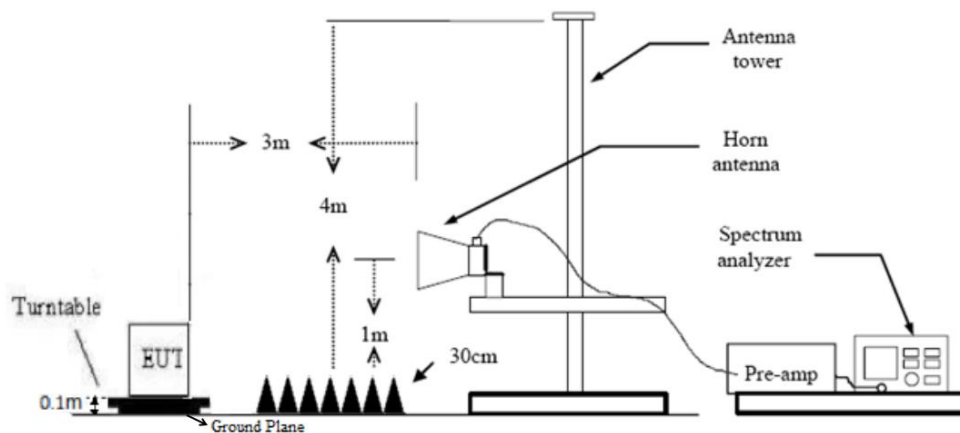
Test Configuration



Below 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013
2. The EUT is placed on a turn table which is 0.1 meter above ground for below 1 GHz, and 0.1m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Below 1 GHz:
RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;
If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
 - (3) From 1 GHz to 10th harmonic:
RBW=1MHz, VBW=3MHz Peak detector for Peak value.
RBW=1MHz, VBW=10Hz RMS detector for Average value.

Test Mode

Please refer to the clause 2.3.

Test Result

9 KHz~30 MHz and 18GHz~25GHz

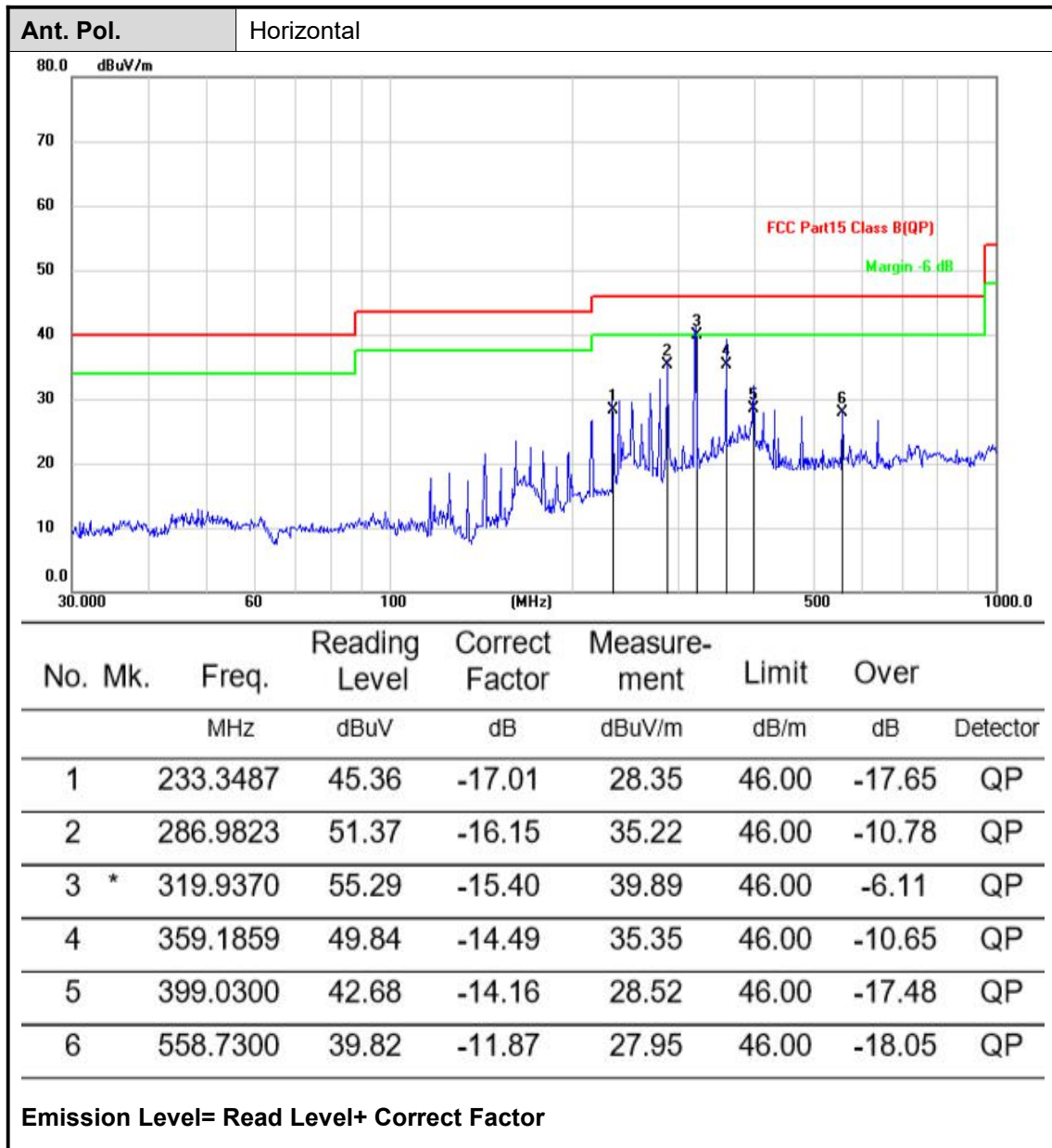
From 9 KHz~30 MHz and 18GHz~25GHz: Conclusion: PASS

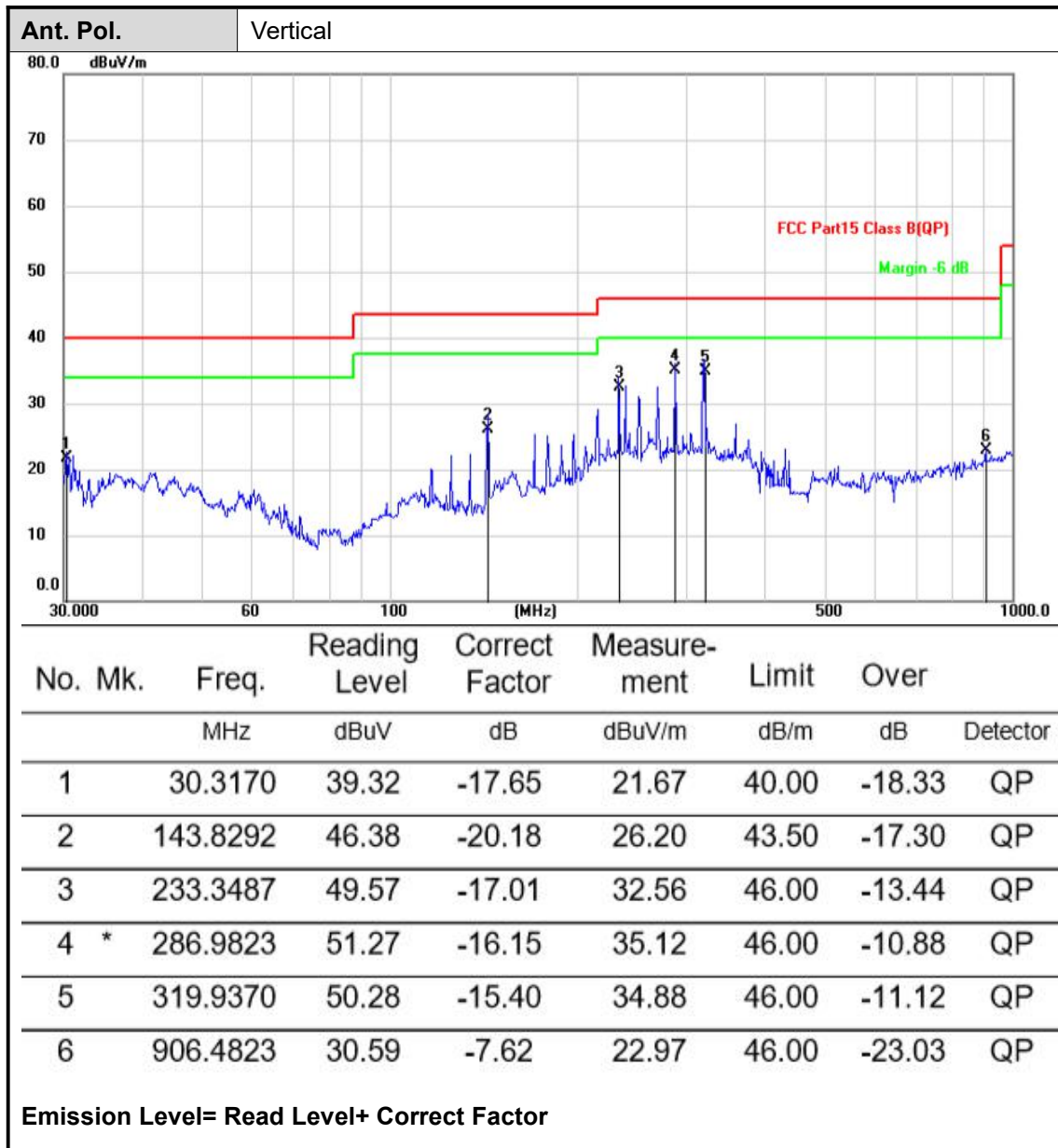
Note: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Note:

- 1) Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- 2) The emission levels of other frequencies are very lower than the limit and not show in test report.

30MHz-1GHz





Adobe 1GHz

802.11b					CH01				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
1591.29	44.56	24.99	3.36	26.38	46.53	74	-27.47	Vertical	Peak
2132.74	43.22	26.94	3.74	37.33	36.57	74	-37.43	Vertical	
4823.30	50.47	31.74	6.27	36.26	52.22	74	-21.78	Vertical	
6733.25	35.74	34.14	6.5	35.12	41.26	74	-32.74	Vertical	
1751.29	38.12	25.3	3.39	37.04	29.77	74	-44.23	Horizontal	
2125.32	41.91	26.94	3.68	37.33	35.2	74	-38.80	Horizontal	
4823.30	50.42	31.74	6.27	36.26	52.17	74	-21.83	Horizontal	
6629.39	32.35	34.2	6.74	35.31	37.98	74	-36.02	Horizontal	

802.11b					CH06				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
1442.76	39.25	24.99	3.36	26.38	41.22	74	-32.78	Vertical	Peak
2129.79	39.45	26.94	3.74	37.33	32.8	74	-41.20	Vertical	
4874.30	52.07	31.74	6.27	36.26	53.82	74	-20.18	Vertical	
7585.53	31.46	34.14	6.5	35.12	36.98	74	-37.02	Vertical	
1750.7	40.58	25.3	3.39	37.04	32.23	74	-41.77	Horizontal	
2129.79	39.47	26.94	3.68	37.33	32.76	74	-41.24	Horizontal	
3579.82	37.59	31.44	5.8	37.01	37.82	74	-36.18	Horizontal	
4874.30	52.16	31.74	6.27	36.26	53.91	74	-20.09	Horizontal	

802.11b					CH11				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
1208.37	36.38	24.99	3.36	26.38	38.35	74	-35.65	Vertical	Peak
2125.62	37.25	26.94	3.74	37.33	30.6	74	-43.40	Vertical	
4923.60	48.01	31.74	6.27	36.26	49.76	74	-24.24	Vertical	
7612.33	31.97	34.14	6.5	35.12	37.49	74	-36.51	Vertical	
1259.64	41.28	25.3	3.39	37.04	32.93	74	-41.07	Horizontal	
1706.39	39.64	26.94	3.68	37.33	32.93	74	-41.07	Horizontal	
3217.97	37.61	31.44	5.8	37.01	37.84	74	-36.16	Horizontal	
4923.60	50.25	31.74	6.27	36.26	52	74	-22.00	Horizontal	

802.11g					CH01				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
1586.23	41.35	24.99	3.36	26.38	43.32	74	-30.68	Vertical	Peak
2133.65	40.69	26.94	3.74	37.33	34.04	74	-39.96	Vertical	
4819.90	43.75	31.74	6.27	36.26	45.5	74	-28.50	Vertical	
5631.97	35.62	34.14	6.5	35.12	41.14	74	-32.86	Vertical	
1597.48	43.29	25.3	3.39	37.04	34.94	74	-39.06	Horizontal	
2129.55	44.56	26.94	3.68	37.33	37.85	74	-36.15	Horizontal	
4826.7	42.38	31.74	6.27	36.26	44.13	74	-29.87	Horizontal	
6697.21	34.28	34.2	6.74	35.31	39.91	74	-34.09	Horizontal	

802.11g					CH06				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
1644.38	38.64	24.99	3.36	26.38	40.61	74	-33.39	Vertical	Peak
2133.65	41.59	26.94	3.74	37.33	34.94	74	-39.06	Vertical	
4876	49.08	31.74	6.27	36.26	50.83	74	-23.17	Vertical	
5525.39	34.61	34.14	6.5	35.12	40.13	74	-33.87	Vertical	
1598.43	43.25	25.3	3.39	37.04	34.9	74	-39.10	Horizontal	
2119.65	44.36	26.94	3.68	37.33	37.65	74	-36.35	Horizontal	
4876	43.85	31.74	6.27	36.26	45.6	74	-28.40	Horizontal	
5117.62	35.69	34.2	6.74	35.31	41.32	74	-32.68	Horizontal	

802.11g					CH11				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
1587.63	42.58	24.99	3.36	26.38	44.55	74	-29.45	Vertical	Peak
3185.67	36.76	26.94	3.74	37.33	30.11	74	-43.89	Vertical	
4927	44.06	31.74	6.27	36.26	45.81	74	-28.19	Vertical	
6595.71	35.31	34.14	6.5	35.12	40.83	74	-33.17	Vertical	
1588.23	44.34	25.3	3.39	37.04	35.99	74	-38.01	Horizontal	
1684.5	43.13	26.94	3.68	37.33	36.42	74	-37.58	Horizontal	
2117.89	45.21	31.44	5.8	37.01	45.44	74	-28.56	Horizontal	
4927	40.7	31.74	6.27	36.26	42.45	74	-31.55	Horizontal	

802.11n(H20)					CH01				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
1665.64	37.26	24.99	3.36	26.38	39.23	74	-34.77	Vertical	Peak
2140.75	36.45	26.94	3.74	37.33	29.8	74	-44.20	Vertical	
4825	44.75	31.74	6.27	36.26	46.5	74	-27.50	Vertical	
6956.33	33.25	34.14	6.5	35.12	38.77	74	-35.23	Vertical	
1706.95	38.71	25.3	3.39	37.04	30.36	74	-43.64	Horizontal	
3184.8	39.26	26.94	3.68	37.33	32.55	74	-41.45	Horizontal	
4825	42.43	31.74	6.27	36.26	44.18	74	-29.82	Horizontal	
6998.64	34.59	34.2	6.74	35.31	40.22	74	-33.78	Horizontal	

802.11n(H20)					CH06				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
1777.89	38.78	24.99	3.36	26.38	40.75	74	-33.25	Vertical	Peak
2229.38	38.96	26.94	3.74	37.33	32.31	74	-41.69	Vertical	
4876	44.29	31.74	6.27	36.26	46.04	74	-27.96	Vertical	
7233.64	34.71	34.14	6.5	35.12	40.23	74	-33.77	Vertical	
1758.14	36.51	25.3	3.39	37.04	28.16	74	-45.84	Horizontal	
3153.47	36.25	26.94	3.68	37.33	29.54	74	-44.46	Horizontal	
4876	44.29	31.74	6.27	36.26	46.04	74	-27.96	Horizontal	
6993.64	33.77	34.2	6.74	35.31	39.4	74	-34.60	Horizontal	

802.11n(H20)					CH11				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
2199.33	37.48	24.99	3.36	26.38	39.45	74	-34.55	Vertical	Peak
3185.64	38.62	26.94	3.74	37.33	31.97	74	-42.03	Vertical	
4927	46.56	31.74	6.27	36.26	48.31	74	-25.69	Vertical	
6816.79	34.89	34.14	6.5	35.12	40.41	74	-33.59	Vertical	
1238.85	37.31	25.3	3.39	37.04	28.96	74	-45.04	Horizontal	
1663.72	38.62	26.94	3.68	37.33	31.91	74	-42.09	Horizontal	
4927	45.2	31.74	6.27	36.26	46.95	74	-27.05	Horizontal	
6995.11	34.94	34.2	6.74	35.31	40.57	74	-33.43	Horizontal	

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor
2. The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.

4.EUT TEST PHOTOS

Reference to the document No.: Test Photos

5. PHOTOGRAPHS OF EUT CONSTRUCTIONAL

Reference to the document No.: External Photos and Internal Photos.

*****THE END*****