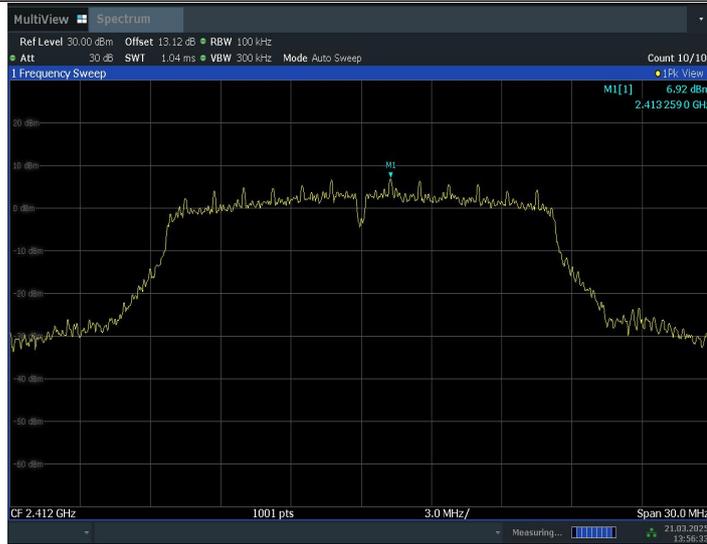




13:54:21 21.03.2025

11G\_2412\_0~Reference



13:56:34 21.03.2025

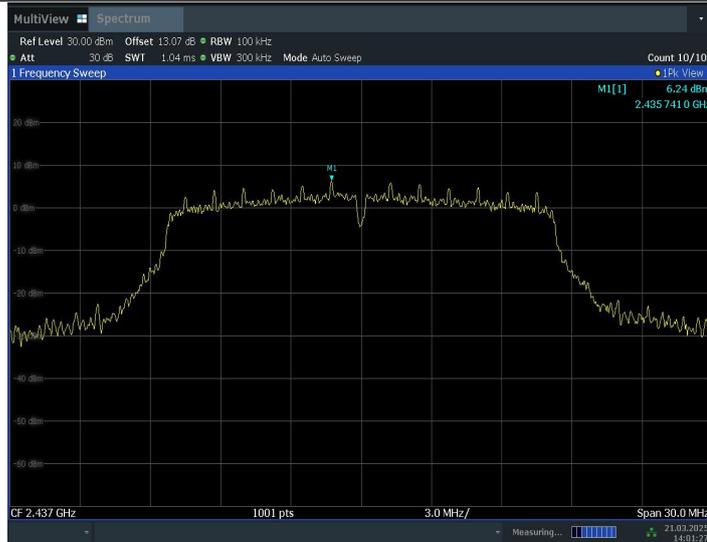
11G\_2412\_30~1000



11G\_2412\_1000~26500

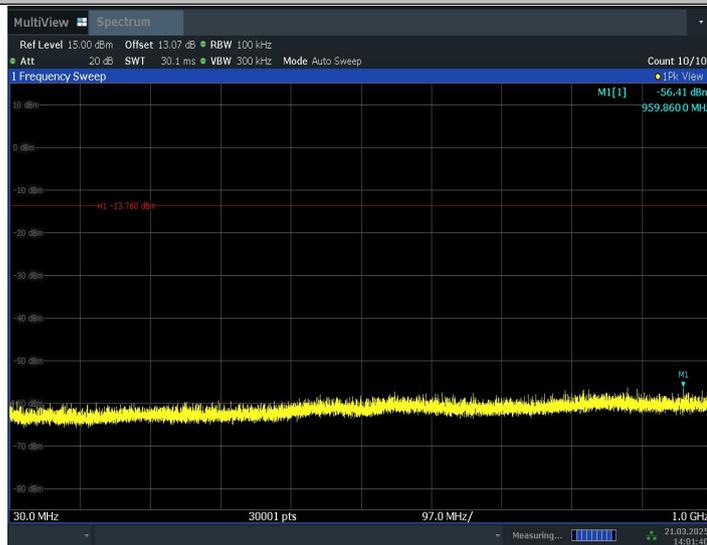


11G\_2437\_0~Reference



14:01:27 21.03.2025

11G\_2437\_30~1000

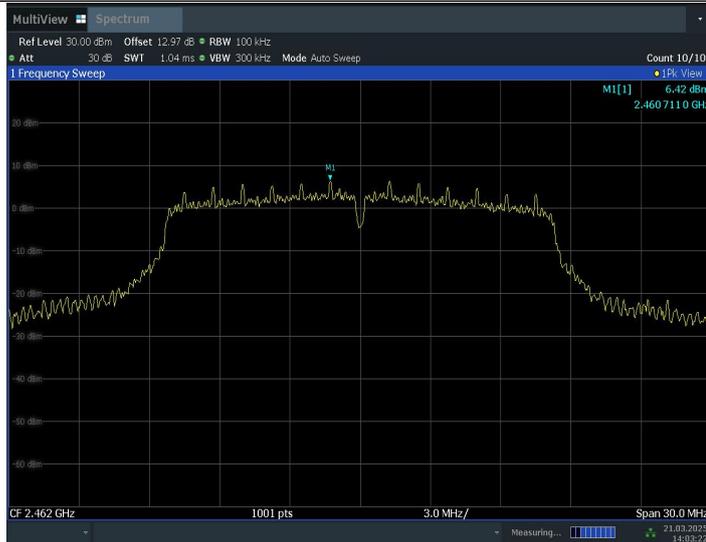


14:01:40 21.03.2025

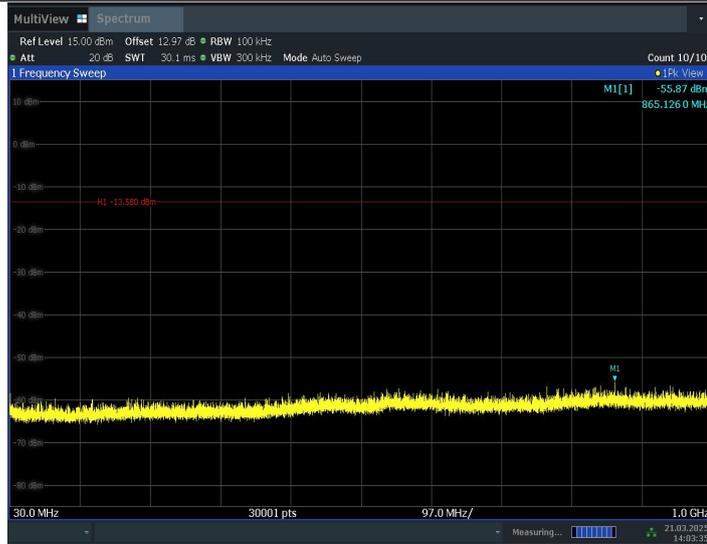
11G\_2437\_1000~26500



11G\_2462\_0~Reference

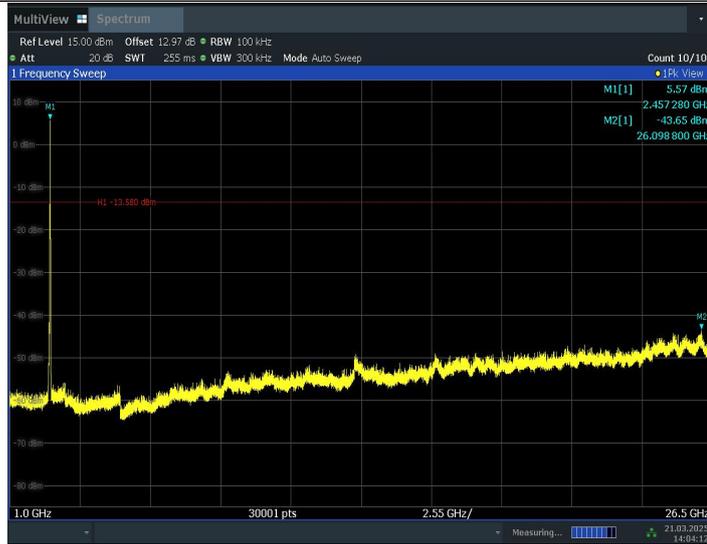


11G\_2462\_30~1000



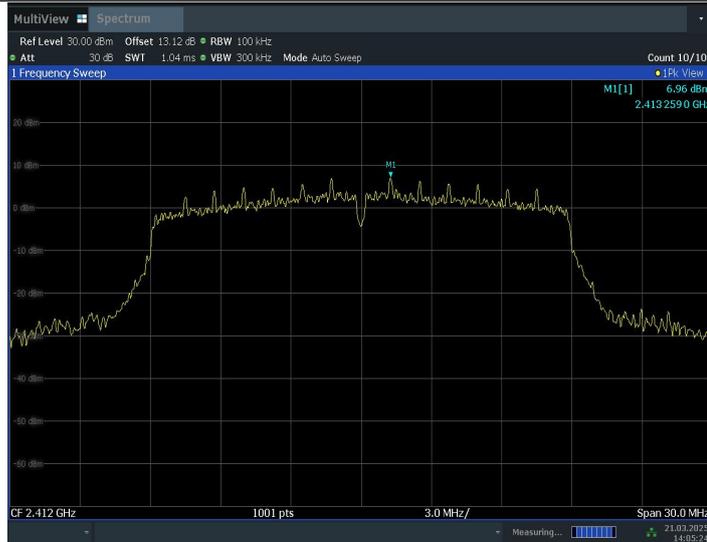
14:03:36 21.03.2025

11G\_2462\_1000~26500



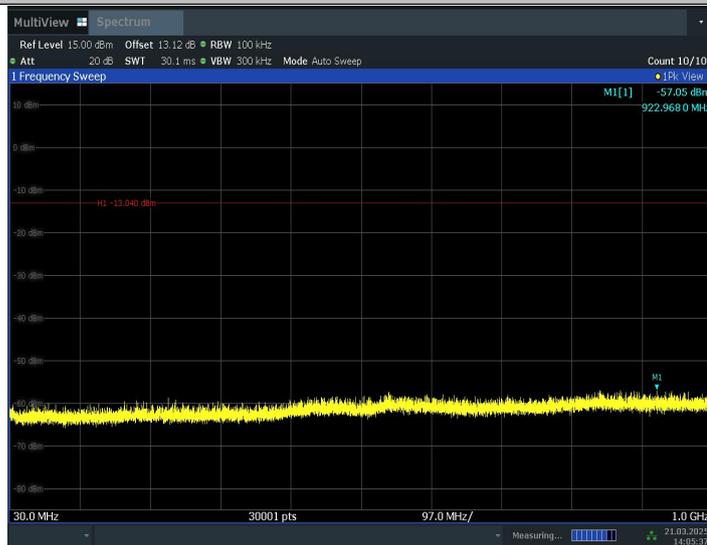
14:04:12 21.03.2025

11N20SISO\_2412\_0~Reference



14:05:24 21.03.2025

11N20SISO\_2412\_30~1000



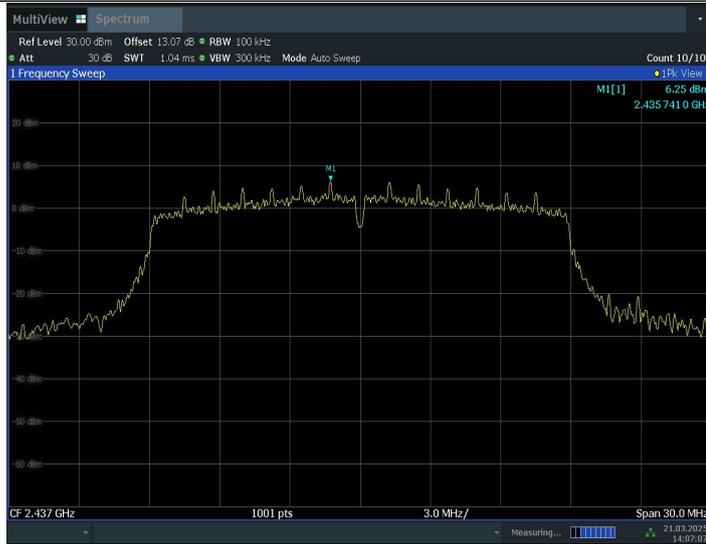
14:05:37 21.03.2025

11N20SISO\_2412\_1000~26500



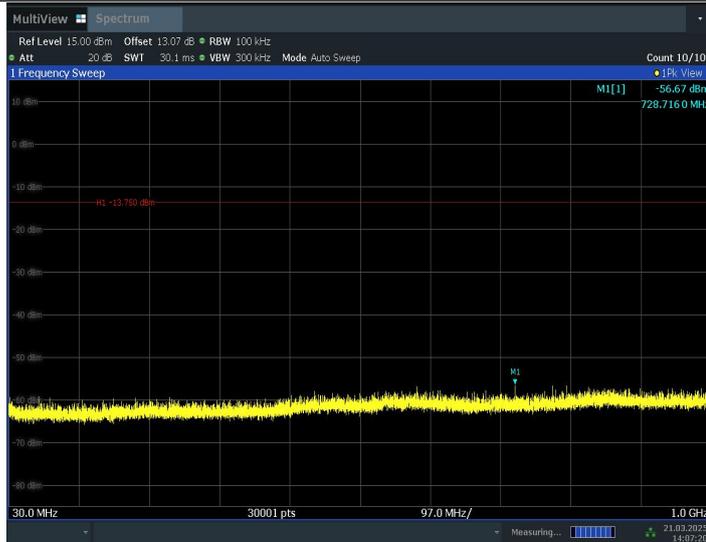
14:06:13 21.03.2025

11N20SISO\_2437\_0~Reference



14:07:08 21.03.2025

11N20SISO\_2437\_30~1000



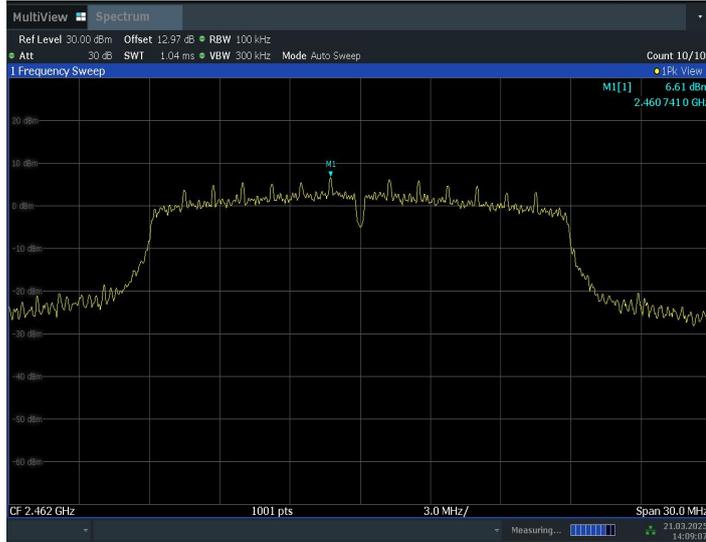
14:07:21 21.03.2025

11N20SISO\_2437\_1000~26500



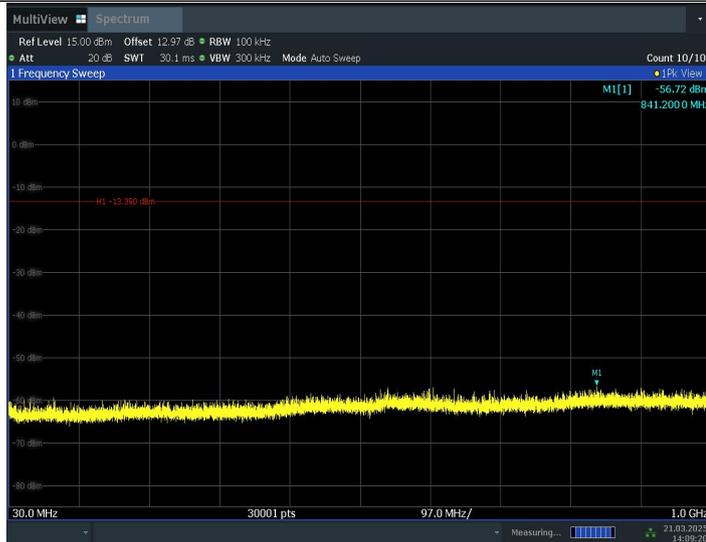
14:07:57 21.03.2025

11N20SISO\_2462\_0~Reference



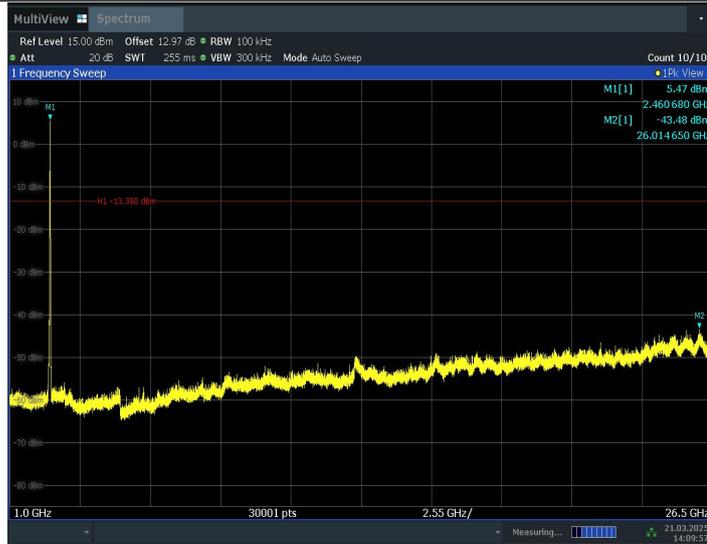
14:09:08 21.03.2025

11N20SISO\_2462\_30~1000



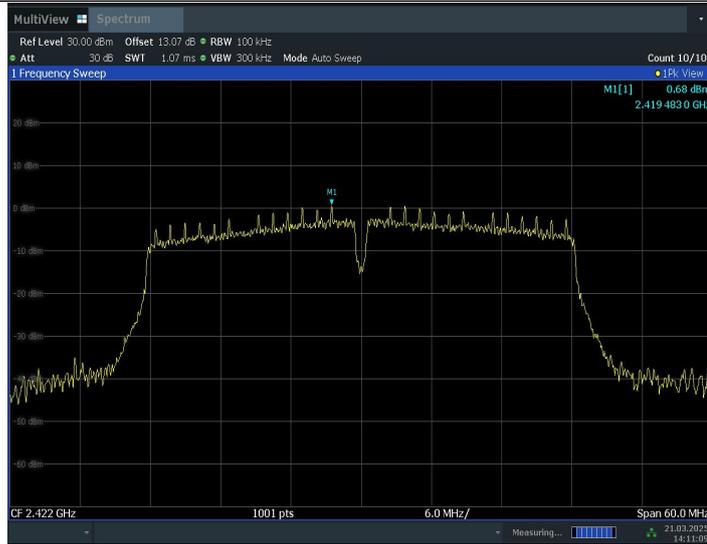
14:09:21 21.03.2025

11N20SISO\_2462\_1000~26500



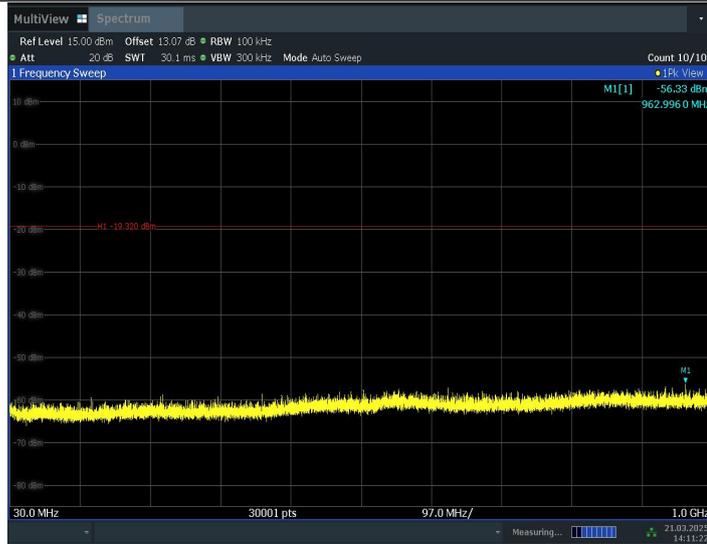
14:09:57 21.03.2025

11N40SISO\_2422\_0~Reference



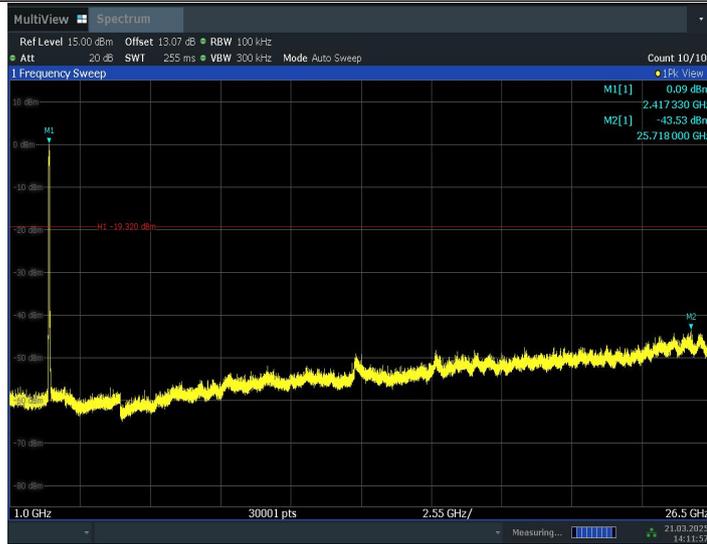
14:11:09 21.03.2025

11N40SISO\_2422\_30~1000



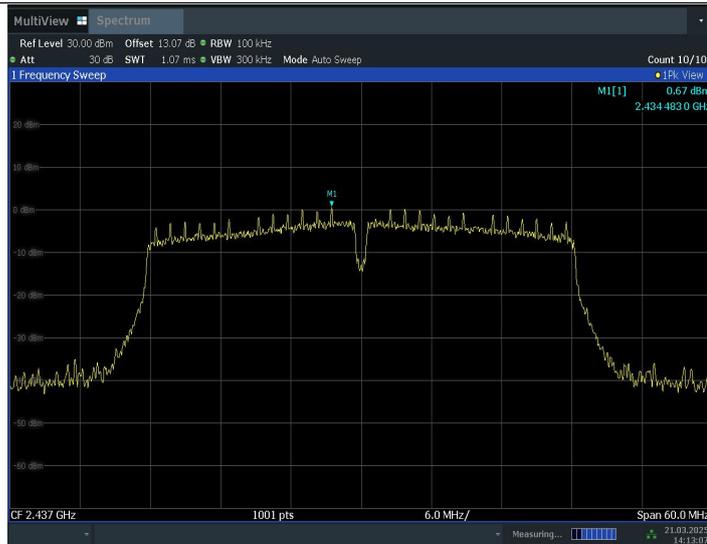
14:11:22 21.03.2025

11N40SISO\_2422\_1000~26500



14:11:58 21.03.2025

11N40SISO\_2437\_0~Reference



14:13:08 21.03.2025

11N40SISO\_2437\_30~1000

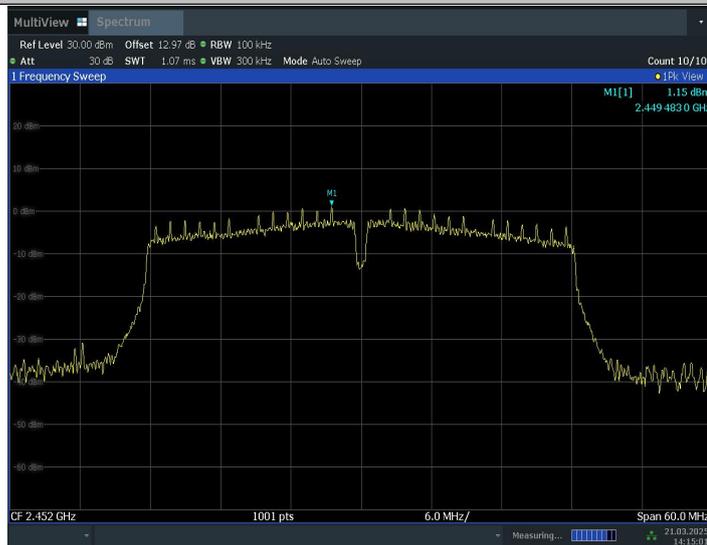


14:13:21 21.03.2025

11N40SISO\_2437\_1000~26500



11N40SISO\_2452\_0~Reference



11N40SISO\_2452\_30~1000



11N40SISO\_2452\_1000~26500



**Conclusion: Pass**

## A.7. Radiated Unwanted Emission

### Limits

Measurement Limit

Standard	Limit
FCC 47 CFR Part 15.247, 15.205, 15.209	20dB below peak output power

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

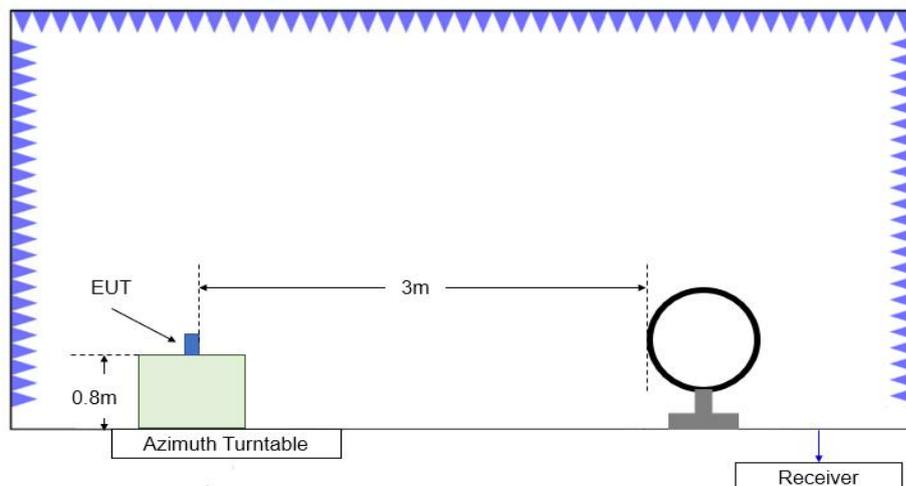
Limit in restricted band

Frequency (MHz)	Field strength( $\mu\text{V}/\text{m}$ )	Measurement distance (m)
0.009 - 0.490	$2400/F(\text{kHz})$	300
0.490 - 1.705	$24000/F(\text{kHz})$	30
1.705 – 30.0	30	30

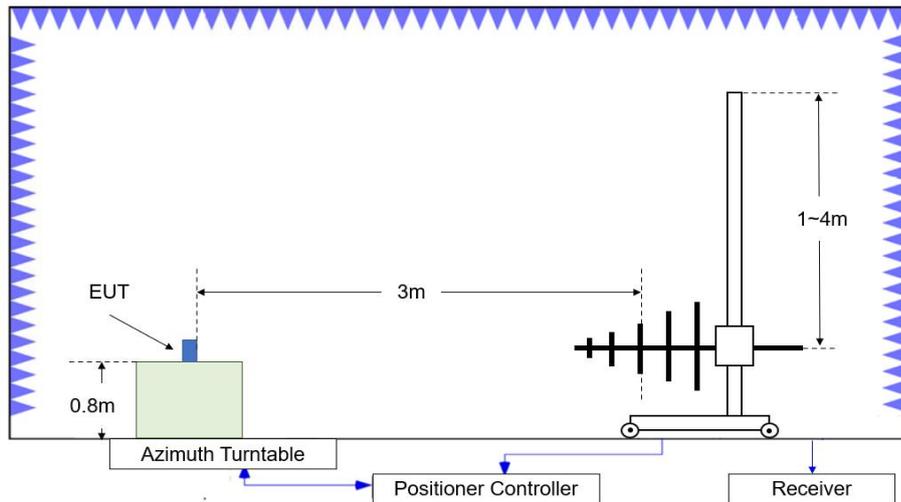
Frequency of emission (MHz)	Field strength ( $\mu\text{V}/\text{m}$ )	Field strength (dB $\mu\text{V}/\text{m}$ )	Measurement distance (m)
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Note: When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor.

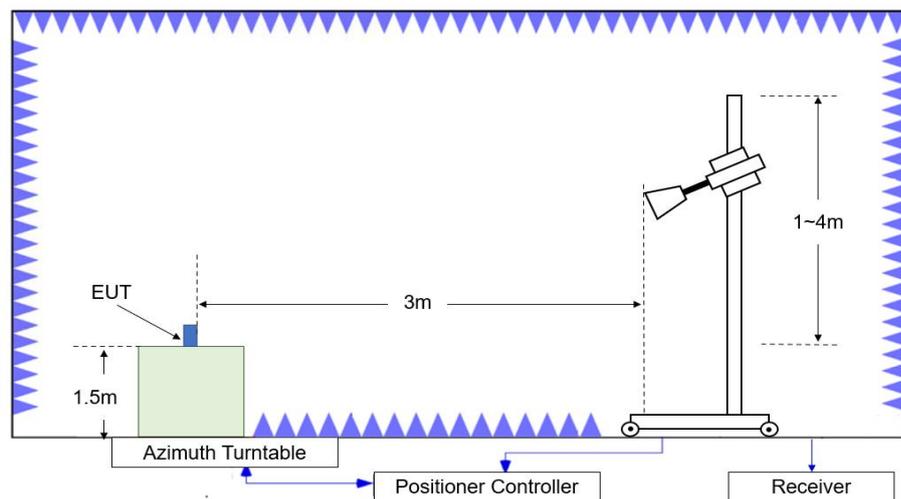
### Test setup



**Figure A.2.1. Test Site Diagram (9kHz-30MHz)**



**Figure A.2.2. Test Site Diagram (30MHz-1GHz)**



**Figure A.2.3. Test Site Diagram (1GHz-40GHz)**

### **Test Procedures**

Radiated unwanted emissions from the EUT were measured according to ANSI C63.10.

### **Test setting**

Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	100kHz/300kHz	5
1000-3000	1MHz/3MHz	15
3000-18000	1MHz/3MHz	40
18000-26500	1MHz/3MHz	20

### Sample Calculation

A "reference path loss" is established and the  $A_{Rpl}$  is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

$P_{Mea}$  is the field strength recorded from the instrument.

The measurement results are obtained as described below:

$$\text{Result} = P_{Mea} + A_{Rpl} = P_{Mea} + \text{Cable Loss} + \text{Antenna Factor}$$

### Test note

1. The EUT is operating at its maximum duty cycle and its maximum power control level.
2. Investigation has been done on all modes and modulations/data rates. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.
3. Spurious emissions for all channels were investigated and almost the same below 1GHz. According to FCC 47 CFR §15.31, emission levels are not report much lower than the limit by over 20dB
4. Measurement frequencies were performed from 9 kHz to the 10<sup>th</sup> harmonic of highest fundamental frequency or 40GHz, whichever is lower.

### Test Result

#### Peak

#### 802.11b

#### Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17971.5	55.76	-25.4	42.3	38.86	74	18.24	V
13778	52.26	-29.1	40.9	40.46	74	21.74	V
12334.5	49.09	-30.1	38.8	40.39	74	24.91	V
9619.5	47.12	-33	37.9	42.22	74	26.88	H
7242.5	45.74	-34.5	37.4	42.84	74	28.26	V
2354.8	55.68	-19.2	27.3	47.58	74	18.32	H

#### Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17953	56.51	-25.4	42.3	39.61	74	17.49	V
13744.5	51.43	-29.1	40.7	39.83	74	22.57	V
12359	48.94	-30.1	38.8	40.24	74	25.06	V
9360.5	46.98	-34.1	38.1	42.98	74	27.02	H
7423.5	45.68	-34.9	37.5	43.08	74	28.32	H
4252	40.72	-37.3	31.9	46.12	74	33.28	H

## Ch11

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17935	56.26	-25.4	42.3	39.36	74	17.74	H
13838.5	51.49	-29.1	40.9	39.69	74	22.51	H
12529	49.38	-30.4	39	40.78	74	24.62	H
8968	47.7	-33.6	37.6	43.7	74	26.3	V
7235	46.22	-34.5	37.4	43.32	74	27.78	H
2489.5	57.39	-19	27.9	48.49	74	16.61	H

**802.11g**

## Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17931	56.19	-25.4	42.3	39.29	74	17.81	H
14150	51.65	-29.4	40.5	40.55	74	22.35	V
12931	49.3	-29.8	39.7	39.4	74	24.7	H
9834.5	47.06	-33.1	38	42.16	74	26.94	H
7233	46.57	-34.5	37.4	43.67	74	27.43	H
2389.1	59.1	-19.2	27.5	50.8	74	14.9	H

## Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17869	56.39	-25.4	42.3	39.49	74	17.61	H
13821	51.85	-29.1	40.9	40.05	74	22.15	V
12389	49.3	-30.1	38.8	40.6	74	24.7	H
9426.5	46.76	-33.6	38.1	42.26	74	27.24	V
7230.5	45.99	-34.5	37.4	43.09	74	28.01	V
4849.5	40.85	-37.1	32.6	45.35	74	33.15	H

## Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17927.5	57.15	-25.4	42.3	40.25	74	16.85	V
13715.5	51.54	-29.1	40.7	39.94	74	22.46	V
12388	49.11	-30.1	38.8	40.41	74	24.89	H
9105	46.73	-33.5	37.7	42.53	74	27.27	V
7519	46.3	-34.6	37.5	43.4	74	27.7	H
2486.3	58.8	-19	27.9	49.9	74	15.2	H

**802.11n-HT20**

## Ch1

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17944	56.12	-25.4	42.3	39.22	74	17.88	V
13843.5	51.96	-29.1	40.9	40.16	74	22.04	V
12442.5	49.11	-30.1	38.8	40.41	74	24.89	V
9827.5	46.79	-33.1	38	41.89	74	27.21	V
7429.5	46.3	-34.3	37.5	43.1	74	27.7	V
2389.9	61.88	-19.2	27.5	53.58	74	12.12	H

## Ch6

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17898.5	56.8	-25.4	42.3	39.9	74	17.2	H
13753	51.89	-29.1	40.7	40.29	74	22.11	H
11902	49.38	-31	38.8	41.58	74	24.62	H
9499.5	46.92	-33.6	38.1	42.42	74	27.08	H
7520	45.55	-34.6	37.5	42.65	74	28.45	V
4987	41.83	-36.7	32.9	45.63	74	32.17	V

## Ch11

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17960.5	56.17	-25.4	42.3	39.27	74	17.83	V
13807.5	51.37	-29.1	40.9	39.57	74	22.63	V
12401.5	49.01	-30.1	38.8	40.31	74	24.99	H
9518.5	46.92	-33.2	38	42.12	74	27.08	V
7452	45.98	-34.3	37.5	42.78	74	28.02	V
2485	58.8	-19	27.9	49.9	74	15.2	H

**802.11n-HT40**

## Ch3

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17902.5	56.64	-25.4	42.3	39.74	74	17.36	V
13776	51.54	-29.1	40.9	39.74	74	22.46	V
11893.5	49.12	-31	38.8	41.32	74	24.88	H
9813.5	47.25	-33.1	38	42.35	74	26.75	H
7290	46.16	-35.1	37.5	43.76	74	27.84	H
2389.6	59.19	-19.2	27.5	50.89	74	14.81	H

## Ch6

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17928.5	56.12	-25.4	42.3	39.22	74	17.88	V
14125	51.25	-29.4	40.5	40.15	74	22.75	H
11869	49.04	-31	38.9	41.14	74	24.96	H
8840.5	46.87	-33.8	37.7	42.97	74	27.13	H
7516.5	46.1	-34.6	37.5	43.2	74	27.9	H
4693	41.11	-37.1	32.4	45.81	74	32.89	V

## Ch9

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17985	56.43	-25.4	42.3	39.53	74	17.57	V
13818	51.44	-29.1	40.9	39.64	74	22.56	V
12857	49.41	-30.6	39.6	40.41	74	24.59	H
8565.5	46.75	-33.6	37.6	42.75	74	27.25	V
7602	45.93	-34.8	37.4	43.33	74	28.07	H
2485.2	66.78	-19	27.9	57.88	74	7.22	H

**Average**
**802.11b**

## Ch1

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17906.5	46.41	-25.4	42.3	29.51	54	7.59	H
13744.5	42.11	-29.1	40.7	30.51	54	11.89	H
12856.5	39.31	-30.6	39.6	30.31	54	14.69	V
9722	37.21	-33.1	37.9	32.41	54	16.79	H
7210.5	36.37	-34.5	37.4	33.47	54	17.63	H
2387.3	43.85	-19.2	27.5	35.55	54	10.15	H

## Ch6

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17861	46.64	-25.4	42.3	29.74	54	7.36	H
13831	42.01	-29.1	40.9	30.21	54	11.99	H
12849.5	40.09	-30.6	39.6	31.09	54	13.91	H
9617.5	37.49	-33	37.9	32.59	54	16.51	V
7425	36.72	-34.9	37.5	34.12	54	17.28	V
4710.5	31.32	-36.9	32.5	35.72	54	22.68	V

## Ch11

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17940	47.21	-25.4	42.3	30.31	54	6.79	H
14117	41.93	-29.4	40.5	30.83	54	12.07	V
12864.5	39.45	-30.6	39.6	30.45	54	14.55	H
9608.5	38.13	-33	37.9	33.23	54	15.87	H
7449	36.62	-34.3	37.5	33.42	54	17.38	V
2487.5	46.26	-19	27.9	37.36	54	7.74	H

**802.11g**

## Ch1

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17936	46.49	-25.4	42.3	29.59	54	7.51	H
14103	41.88	-28.7	40.5	30.08	54	12.12	H
12452.5	40.27	-30.1	38.8	31.57	54	13.73	H
8957	37.01	-33.6	37.7	32.91	54	16.99	V
7524	36.95	-34.6	37.5	34.05	54	17.05	H
2389.9	46.99	-19.2	27.5	38.69	54	7.01	H

## Ch6

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17922	46.53	-25.4	42.3	29.63	54	7.47	H
13741	41.95	-29.1	40.7	30.35	54	12.05	H
12834.5	39.22	-30.6	39.6	30.22	54	14.78	V
9725	37.18	-33.1	37.9	32.38	54	16.82	H
7469	36.18	-34.3	37.5	32.98	54	17.82	H
4868.5	31.39	-36.9	32.8	35.49	54	22.61	V

## Ch11

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17948.5	46.71	-25.4	42.3	29.81	54	7.29	H
13801.5	41.96	-29.1	40.9	30.16	54	12.04	H
12826.5	39.61	-30.6	39.6	30.61	54	14.39	H
9624	36.99	-33	37.9	32.09	54	17.01	V
6958.5	35.99	-34.6	36.7	33.89	54	18.01	V
2485.1	45.8	-19	27.9	36.9	54	8.2	H

**802.11n-HT20**
**Ch1**

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17918	46.69	-25.4	42.3	29.79	54	7.31	V
14203	42.51	-29.4	40.4	31.51	54	11.49	V
12986.5	39.34	-29.8	39.8	29.34	54	14.66	V
9542	37.1	-33.2	38	32.3	54	16.9	V
7607.5	36.29	-34.8	37.4	33.69	54	17.71	V
2389.9	47.56	-19.2	27.5	39.26	54	6.44	H

**Ch6**

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17951.5	46.38	-25.4	42.3	29.48	54	7.62	V
13702.5	41.95	-29.9	40.7	31.15	54	12.05	V
12651.5	39.43	-30.4	39.2	30.63	54	14.57	V
9816.5	37.11	-33.1	38	32.21	54	16.89	V
7528	36.26	-34.6	37.4	33.46	54	17.74	H
4949	31.4	-36.9	32.9	35.4	54	22.6	H

**Ch11**

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17944	46.59	-25.4	42.3	29.69	54	7.41	H
13754	42.14	-29.1	40.7	30.54	54	11.86	V
12347.5	39.56	-30.1	38.8	30.86	54	14.44	V
9068	37.3	-33.5	37.7	33.1	54	16.7	H
7540	36.51	-34.6	37.4	33.71	54	17.49	H
2485.1	46.26	-19	27.9	37.36	54	7.74	H

**802.11n-HT40**

## Ch3

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17915.5	46.52	-25.4	42.3	29.62	54	7.48	H
13789.5	42.29	-29.1	40.9	30.49	54	11.71	H
12387	39.5	-30.1	38.8	30.8	54	14.5	V
9122	37.67	-33.7	37.8	33.57	54	16.33	V
7230	36.33	-34.5	37.4	33.43	54	17.67	H
2389.9	47.04	-19.2	27.5	38.74	54	6.96	H

## Ch6

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17925.5	46.68	-25.4	42.3	29.78	54	7.32	V
14112.5	41.98	-29.4	40.5	30.88	54	12.02	V
12816	39.56	-30.4	39.6	30.36	54	14.44	V
9604	37.33	-33	37.9	32.43	54	16.67	H
7201	36.34	-34.5	37.4	33.44	54	17.66	V
4841.5	31.41	-37.1	32.6	35.91	54	22.59	H

## Ch9

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17911.5	46.71	-25.4	42.3	29.81	54	7.29	H
14126.5	42.09	-29.4	40.5	30.99	54	11.91	V
11910.5	39.5	-31	38.8	31.7	54	14.5	V
9818	37.11	-33.1	38	32.21	54	16.89	H
7330	36.08	-34.9	37.5	33.48	54	17.92	V
2485.3	52.48	-19	27.9	43.58	54	1.52	H

**Band edge compliance**

**802.11b mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	1	2.31GHz~2.43GHz---L	Fig.1	<b>P</b>
	11	2.45GHz~2.50GHz---H	Fig.2	<b>P</b>

**802.11g mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	1	2.31GHz~2.43GHz---L	Fig.3	<b>P</b>
	11	2.45GHz~2.50GHz---H	Fig.4	<b>P</b>

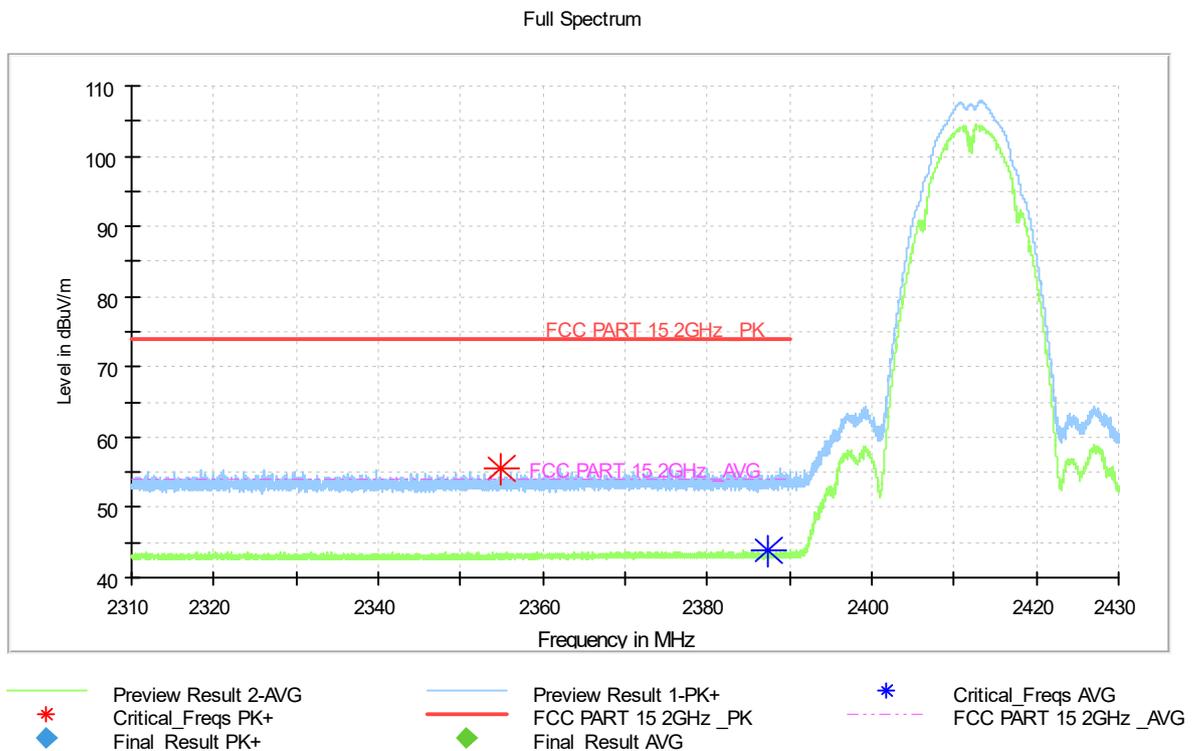
**802.11n-HT20 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	1	2.31GHz~2.43GHz---L	Fig.5	<b>P</b>
	11	2.45GHz~2.50GHz---H	Fig.6	<b>P</b>

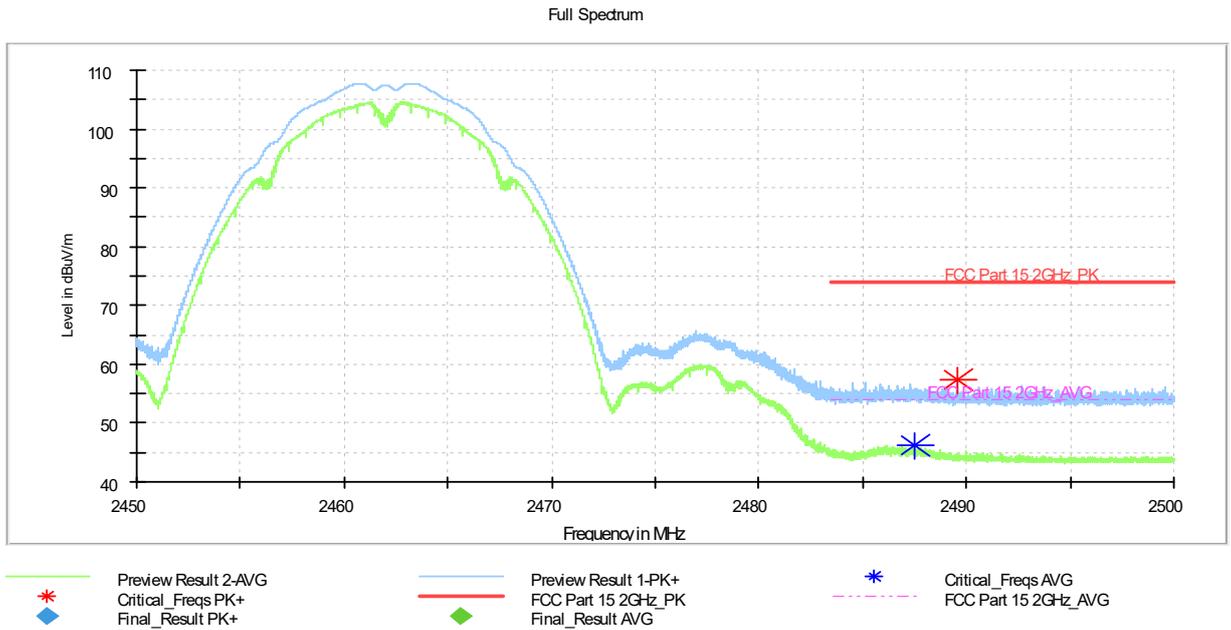
**802.11n-HT40 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	3	2.31GHz~2.43GHz---L	Fig.7	<b>P</b>
	9	2.45GHz~2.50GHz---H	Fig.8	<b>P</b>

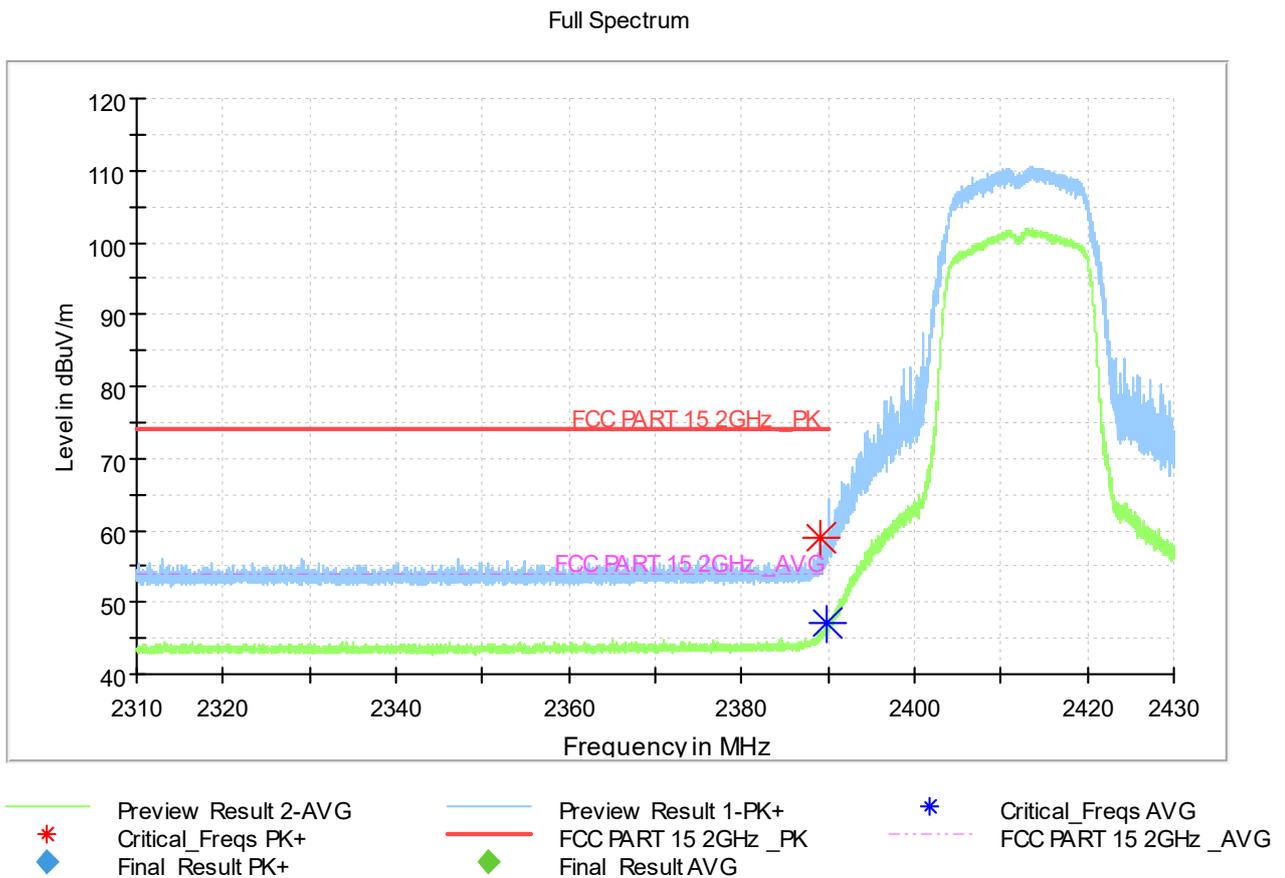
Test graphs as below:



**Fig.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.43GHz**

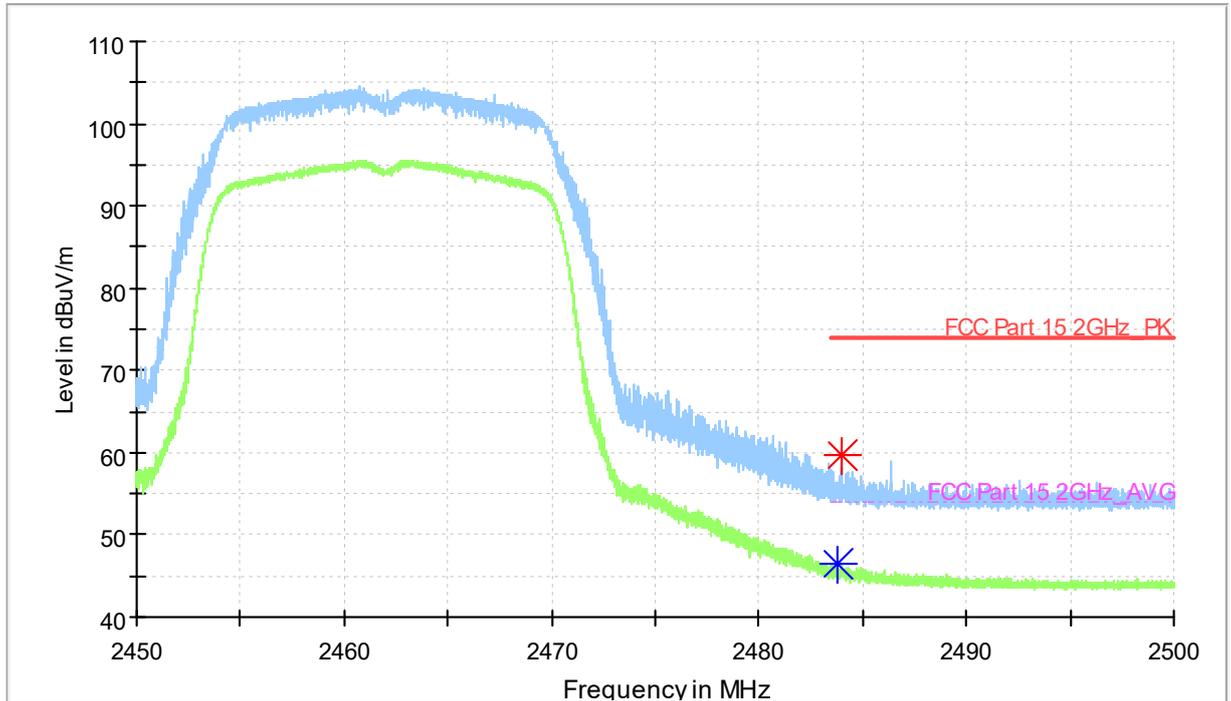


**Fig.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz**



**Fig.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.43GHz**

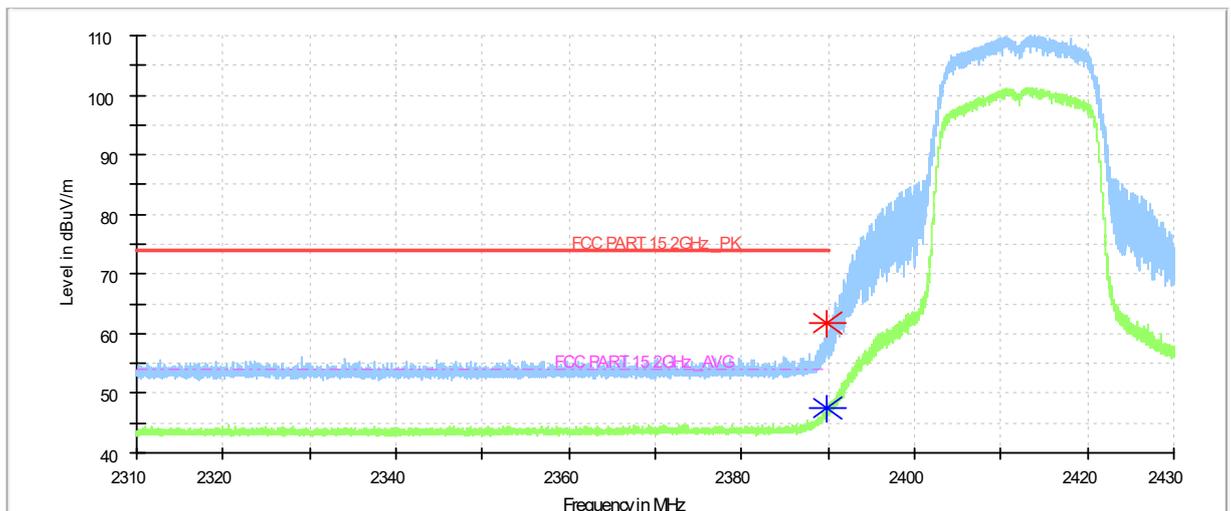
Full Spectrum



- Preview Result 2-AVG
- Preview Result 1-PK+
- \* Critical\_Freqs PK+
- FCC Part 15 2GHz\_PK
- FCC Part 15 2GHz\_AVG
- \* Critical\_Freqs AVG
- ◆ Final\_Result PK+
- ◆ Final\_Result AVG

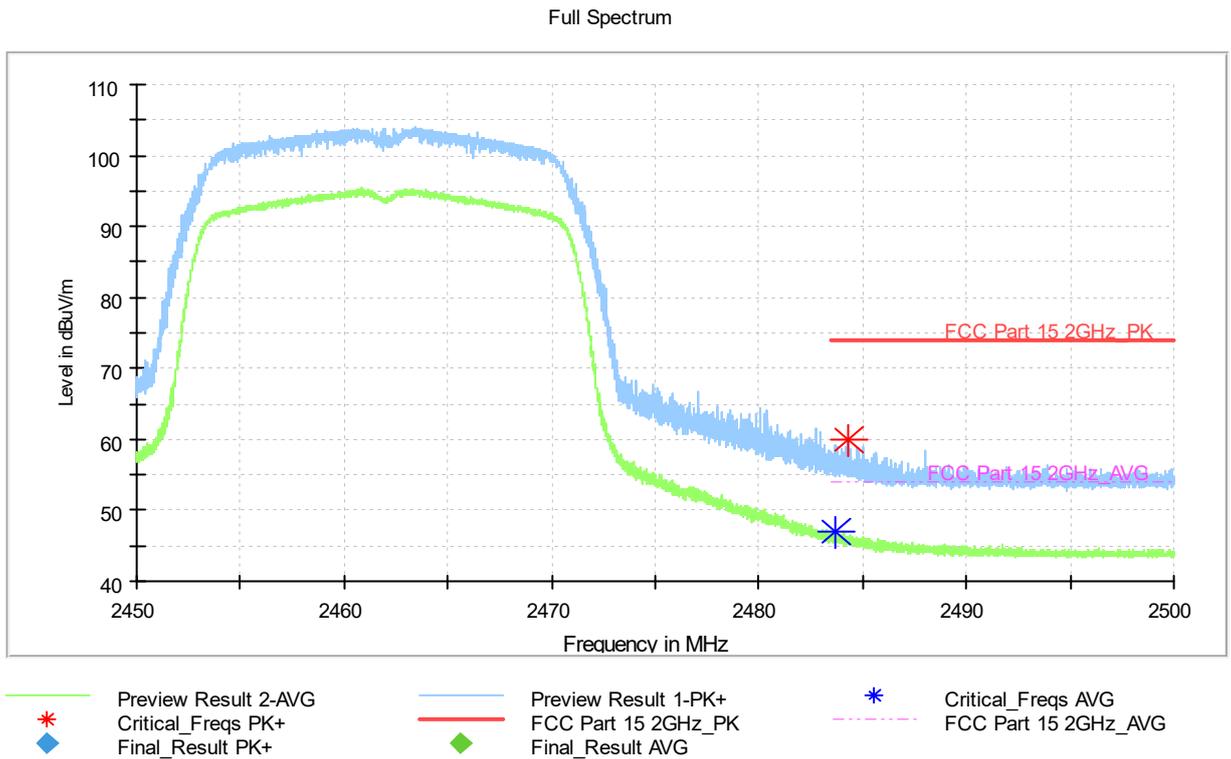
**Fig.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz**

Full Spectrum

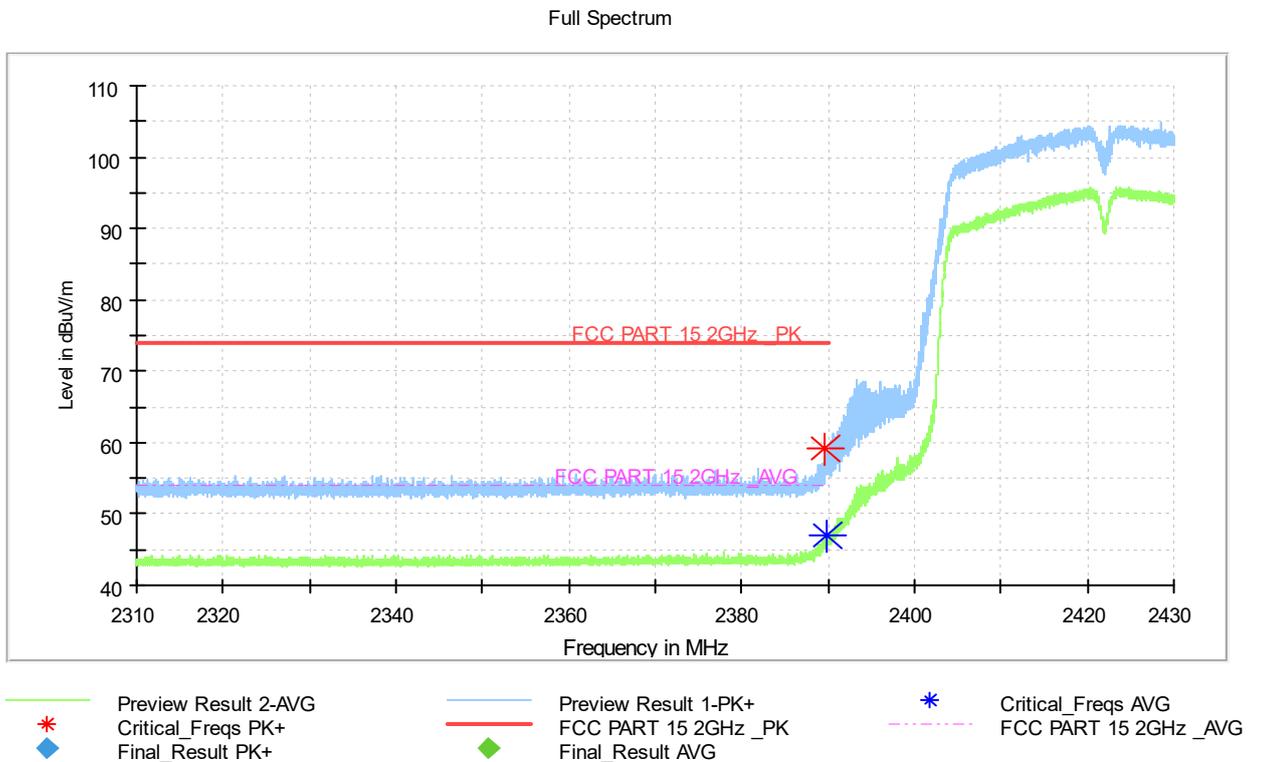


- Preview Result 2-AVG
- Preview Result 1-PK+
- \* Critical\_Freqs PK+
- FCC PART 15 2GHz\_PK
- FCC PART 15 2GHz\_AVG
- \* Critical\_Freqs AVG
- ◆ Final\_Result PK+
- ◆ Final\_Result AVG

**Fig.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31 GHz - 2.43GHz**

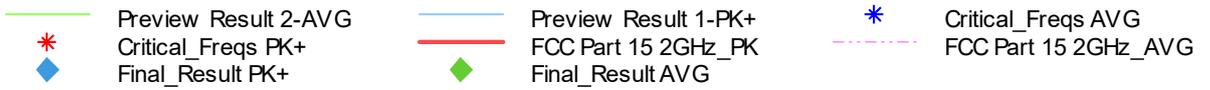
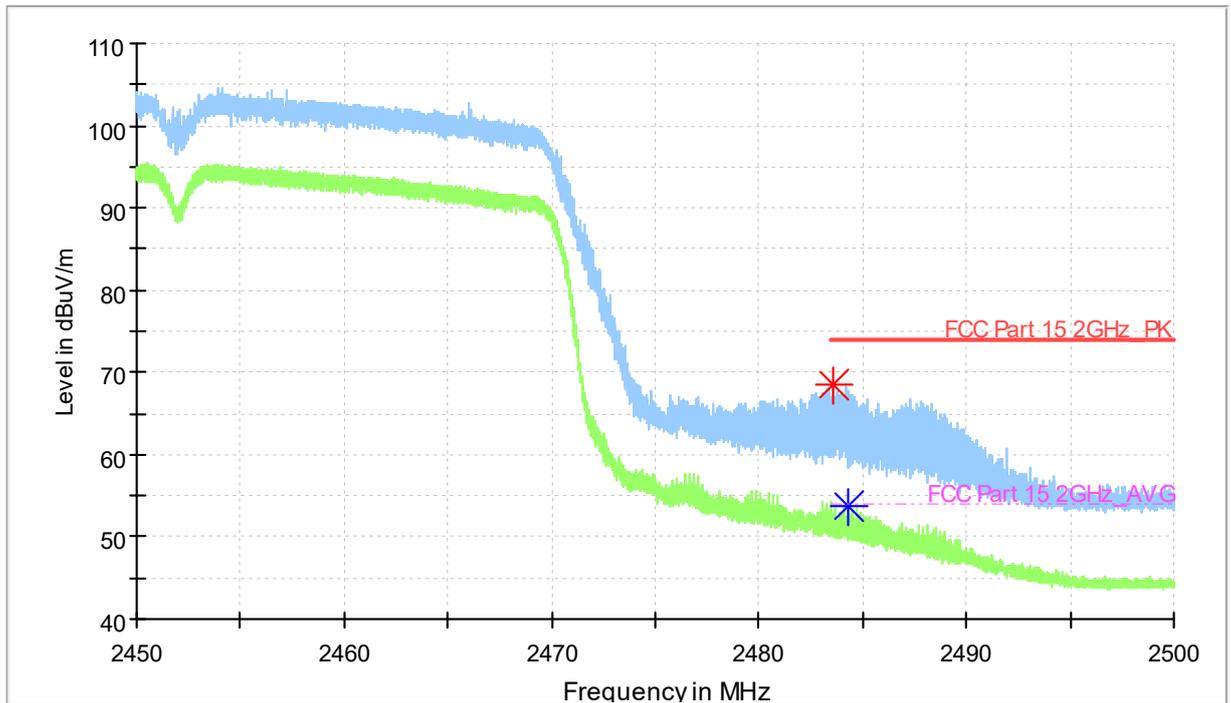


**Fig.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz**



**Fig.7 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31 GHz - 2.43GHz**

Full Spectrum



**Fig.8 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz**

## **A.8. AC Power-line Conducted Emission**

### **Summary**

All AC line conducted spurious emissions are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for conducted spurious emissions. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section

### **Method of Measurement:**

See Clause 6.2 of ANSI C63.10 specifically.

See Clause 4 and Clause 5 of ANSI C63.10 generally.

The conducted emissions from the AC port of the EUT are measured in a shielding room. The EUT is connected to a Line Impedance Stabilization Network (LISN). An overview sweep with peak detection was performed. The measurements were performed with a quasi-peak detector and if required, an average detector.

The conducted emission measurements were made with the following detector of the test receiver: Quasi-Peak / Average Detector.

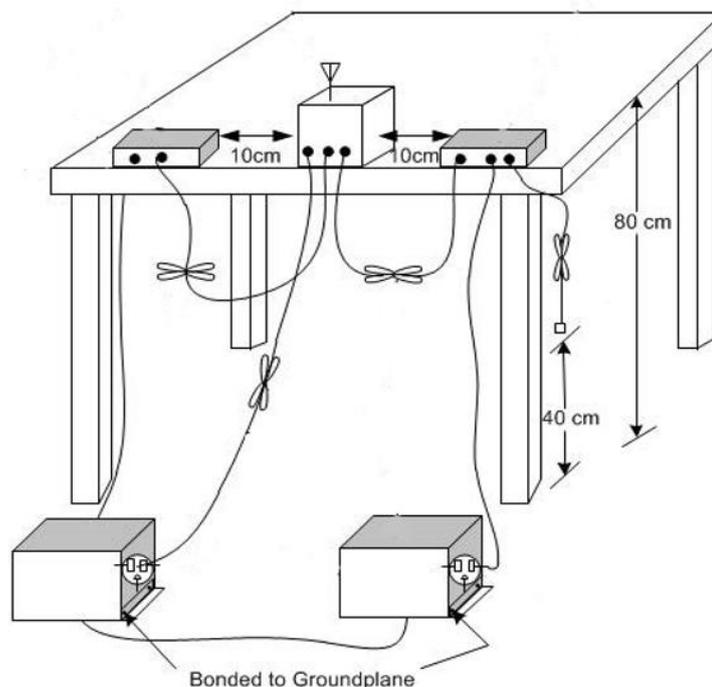
The measurement bandwidth is:

Frequency of Emission (MHz)	RBW/IF bandwidth
0.15-30	9kHz

### **Test Condition:**

Voltage (V)	Frequency (Hz)
120	60

### **Test setup**



**Measurement Result and limit:**

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		With charger	
		802.11b	
0.15 to 0.5	66 to 56	Fig.A.8.1	P
0.5 to 5	56		
5 to 30	60		

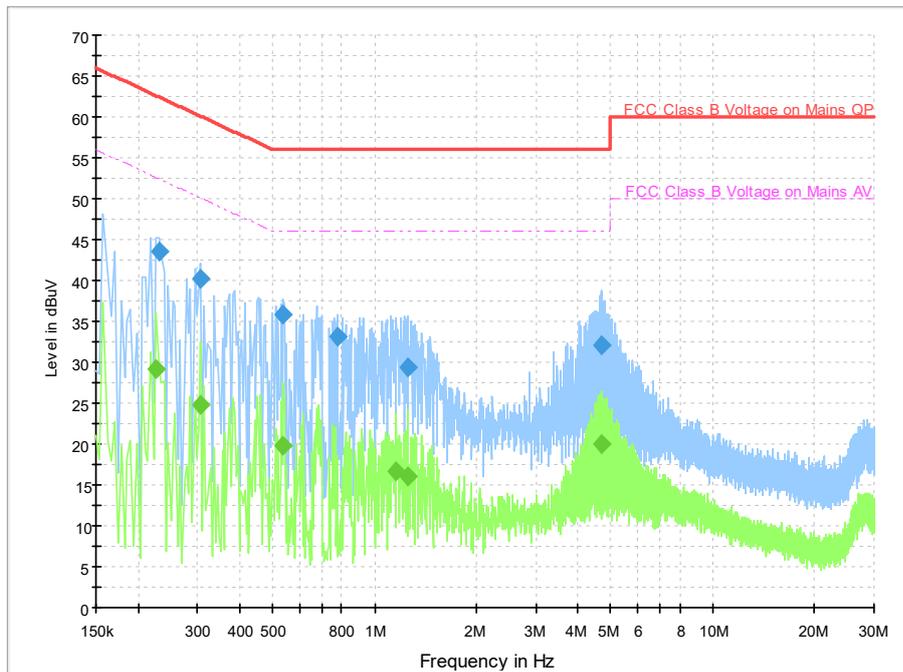
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		With charger	
		802.11b	
0.15 to 0.5	56 to 46	Fig.A.8.1	P
0.5 to 5	46		
5 to 30	50		

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

**Conclusion: Pass**
**Test graphs as below:**



**Fig.A.8.1 AC Powerline Conducted Emission-802.11b**

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

**Final Result 1**

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.234000	44.8	2000.0	9.000	On	N	19.8	17.6	62.3
0.394000	39.5	2000.0	9.000	On	L1	20.0	18.5	58.0
0.702000	39.1	2000.0	9.000	On	N	19.8	16.9	56.0
0.766000	39.6	2000.0	9.000	On	L1	19.9	16.4	56.0
1.310000	30.2	2000.0	9.000	On	N	19.7	25.8	56.0
4.990000	31.5	2000.0	9.000	On	L1	19.8	24.5	56.0

**Final Result 2**

Frequency (MHz)	CAverage (dB $\mu$ V)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.234000	27.8	2000.0	9.000	On	N	19.8	24.5	52.3
0.394000	27.7	2000.0	9.000	On	L1	20.0	20.3	48.0
0.478000	26.0	2000.0	9.000	On	L1	20.0	20.4	46.4
0.782000	28.1	2000.0	9.000	On	L1	19.9	17.9	46.0
3.258000	22.9	2000.0	9.000	On	L1	19.8	23.1	46.0
3.858000	23.7	2000.0	9.000	On	L1	19.8	22.3	46.0

### **A.9. Antenna Requirement**

The antenna of the device is permanently attached. There are no provisions for connection to an external antenna.

The unit complies with the requirement of FCC Part 15.203.

### **ANNEX B: EUT parameters**

Disclaimer: The antenna gain and worse case provided by the client may affect the validity of the measurement results in this report, and the client shall bear the impact and consequences arising therefrom.

### **ANNEX C: Accreditation Certificate**



**Accredited Laboratory**

A2LA has accredited

**TELECOMMUNICATION TECHNOLOGY LABS, CAICT**  
*Beijing, People's Republic of China*

for technical competence in the field of  
**Electrical Testing**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 23<sup>rd</sup> day of July 2024.



Mr. Trace McInturff, Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 7049.01  
Valid to July 31, 2026

*For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.*

**\*\*\*END OF REPORT\*\*\***