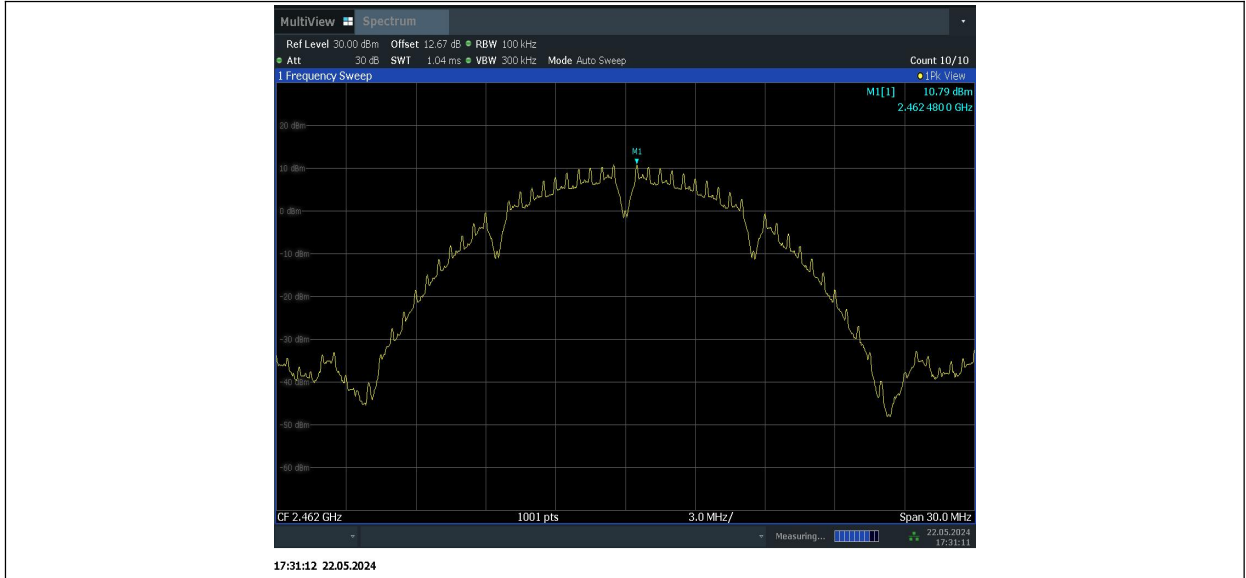


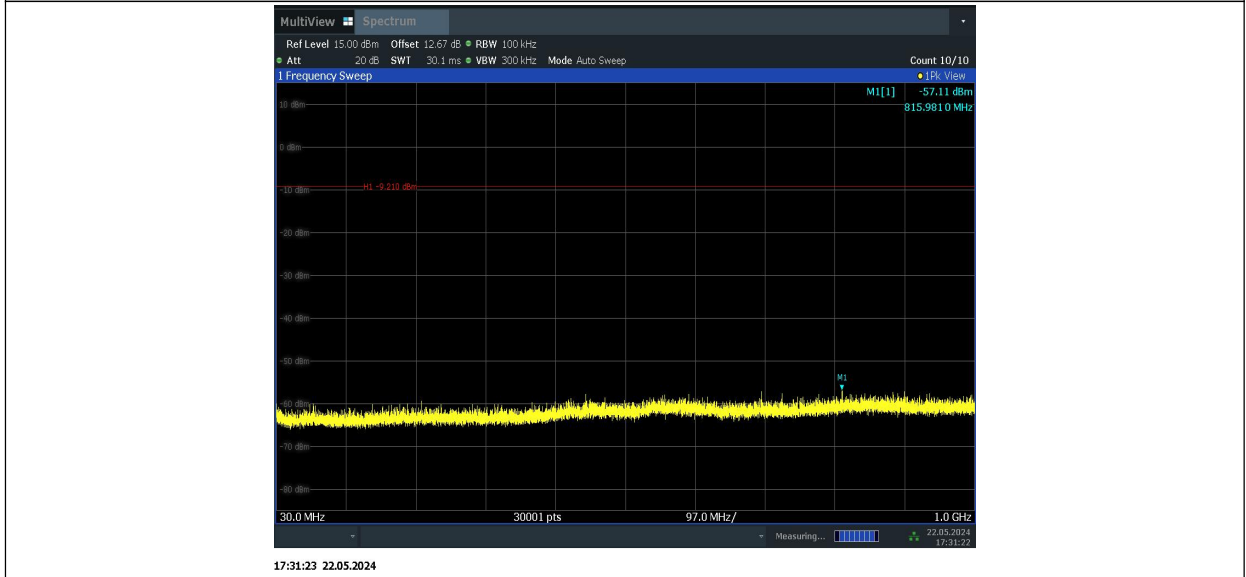
11B_2437_1000~26500



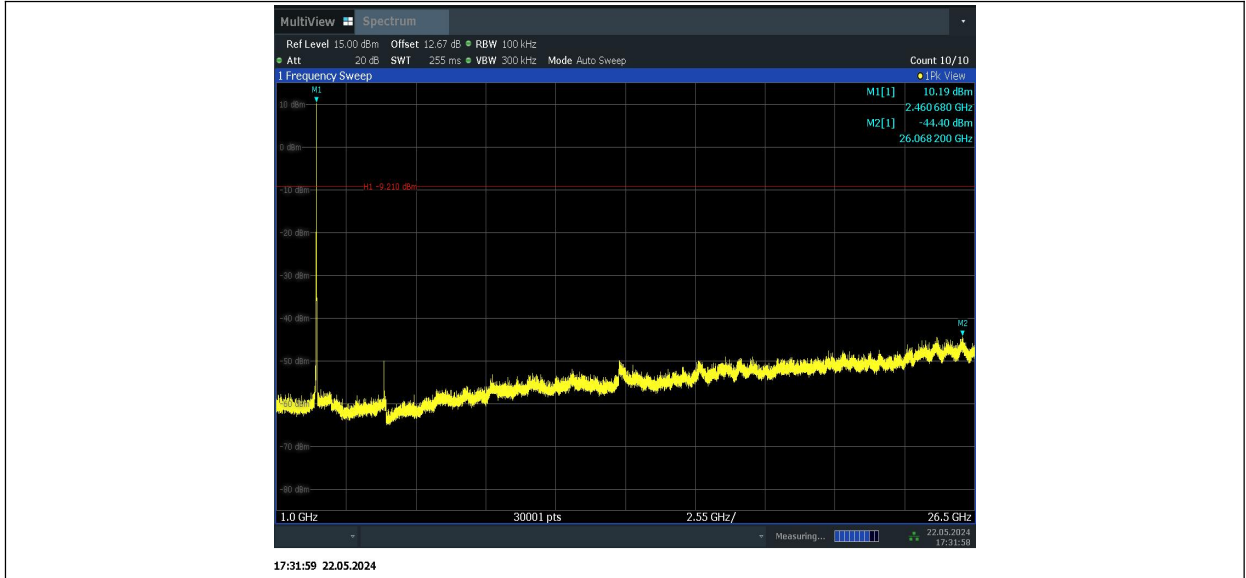
11B_2462_0~Reference



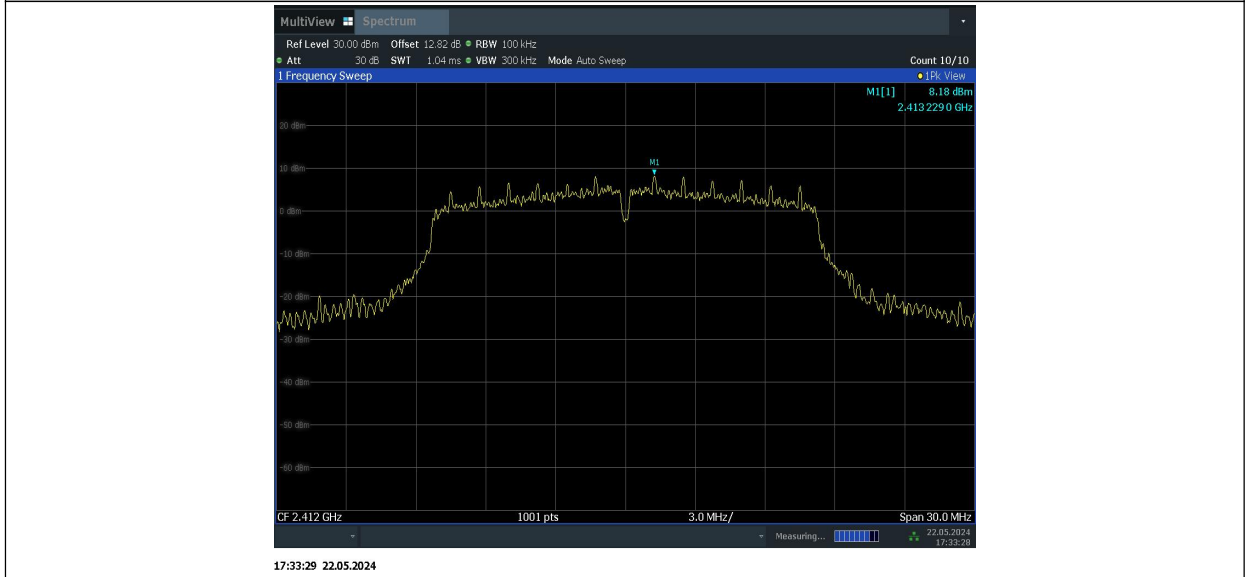
11B_2462_30~1000



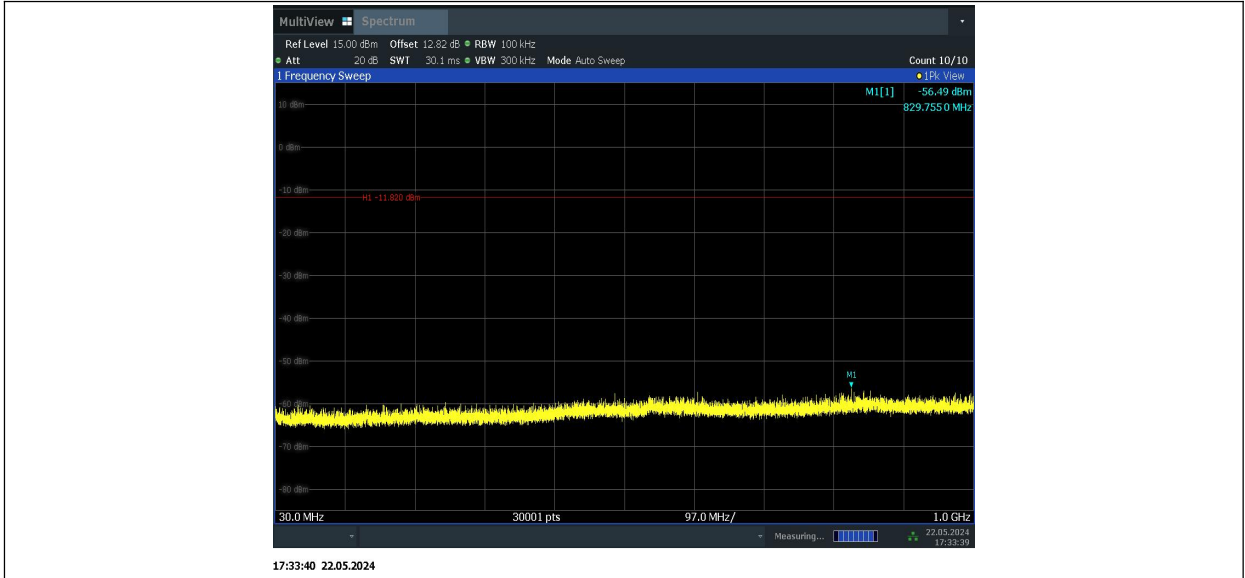
11B_2462_1000~26500



11G_2412_0~Reference



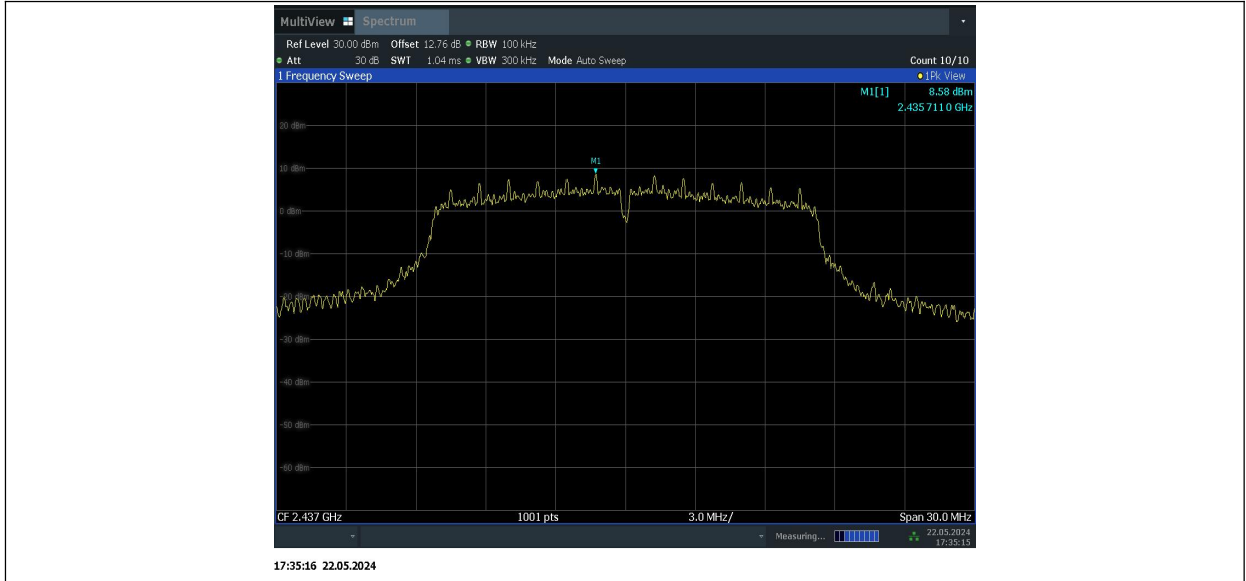
11G_2412_30~1000



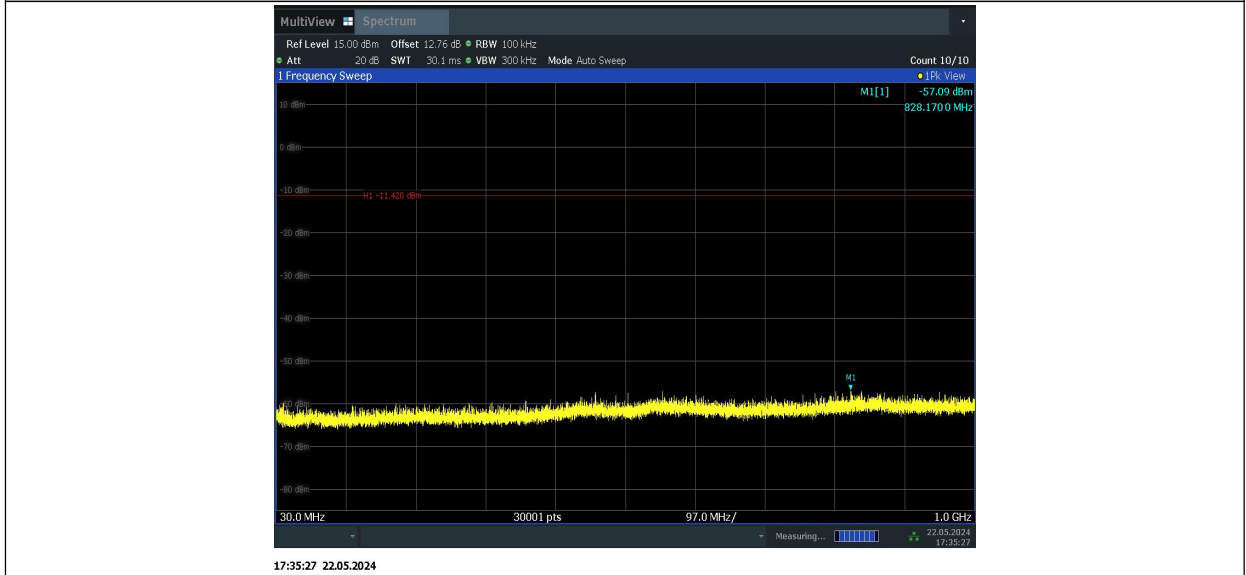
11G_2412_1000~26500



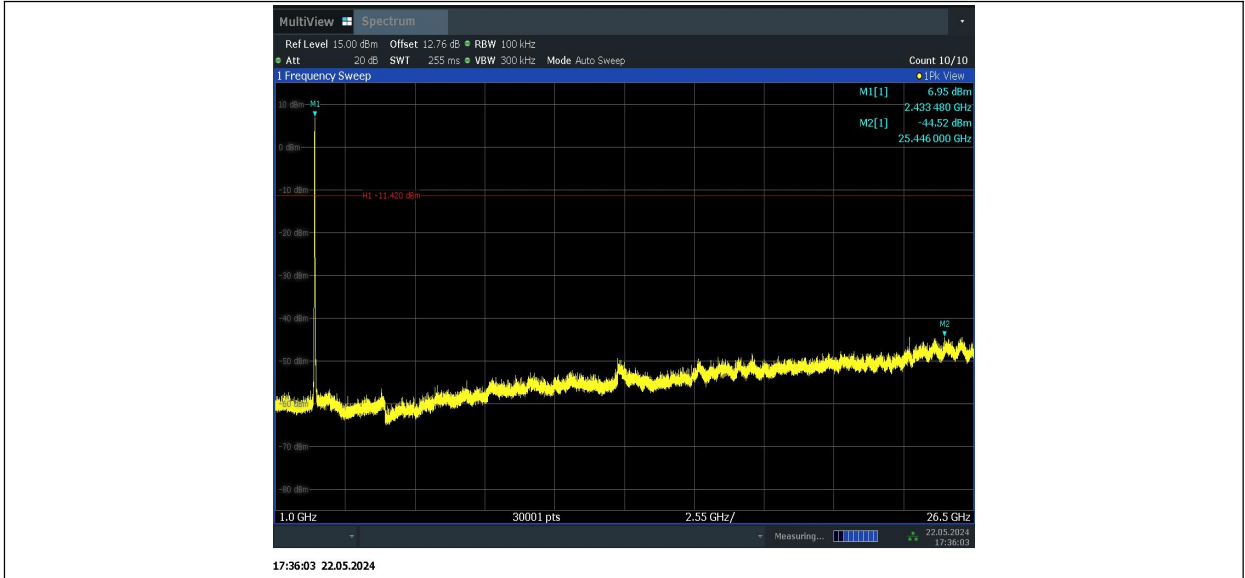
11G_2437_0~Reference



11G_2437_30~1000



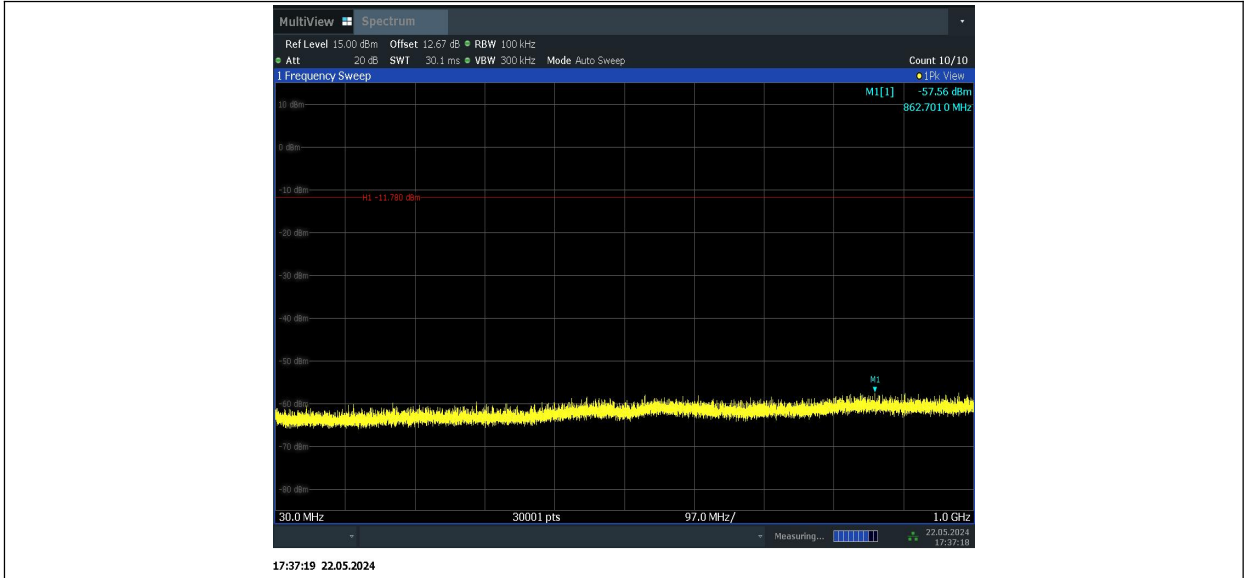
11G_2437_1000~26500



11G_2462_0~Reference



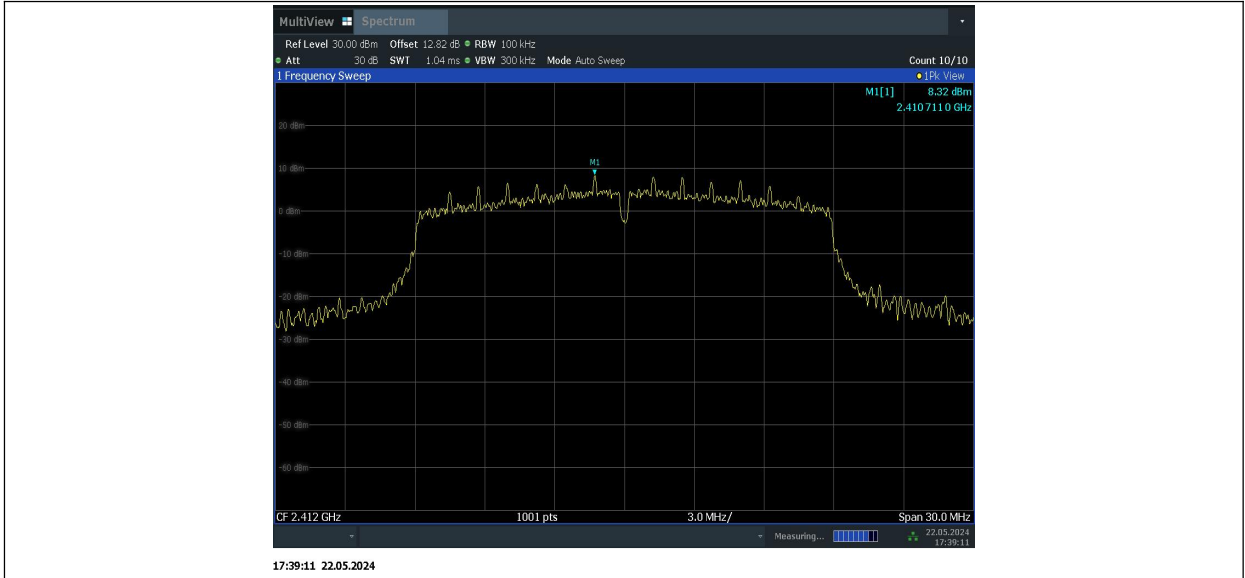
11G_2462_30~1000



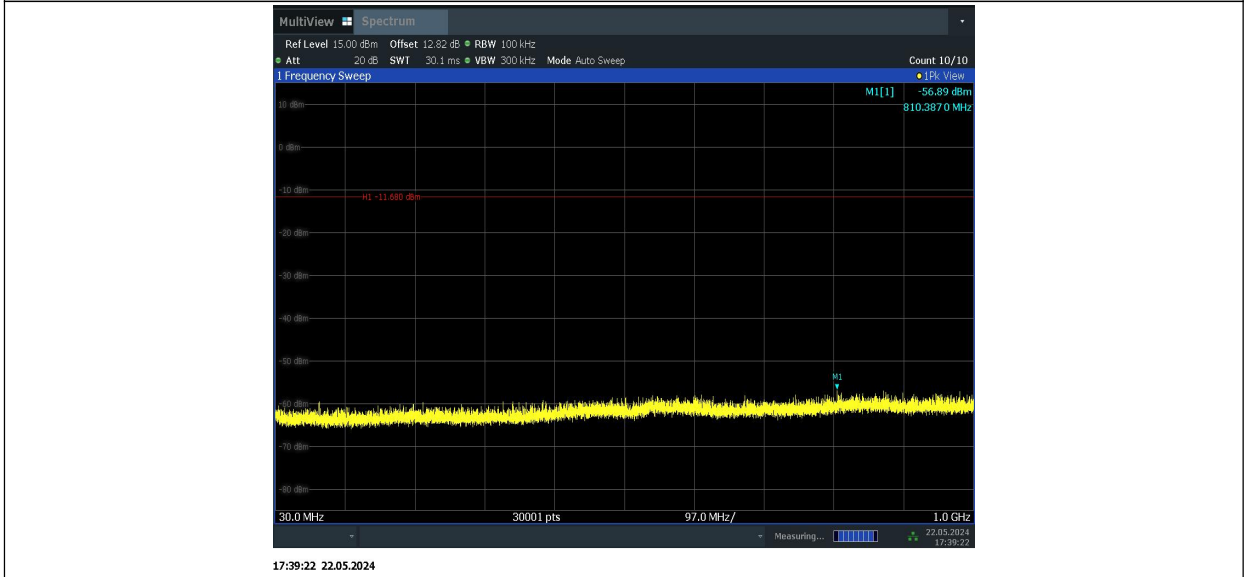
11G_2462_1000~26500



11N20_2412_0~Reference



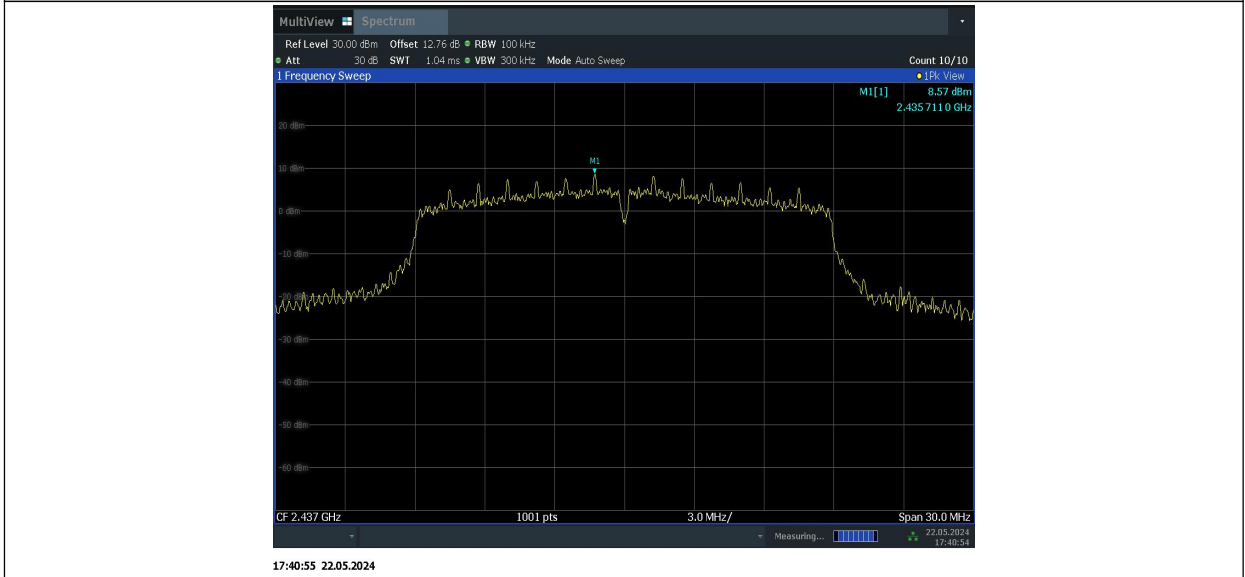
11N20_2412_30~1000



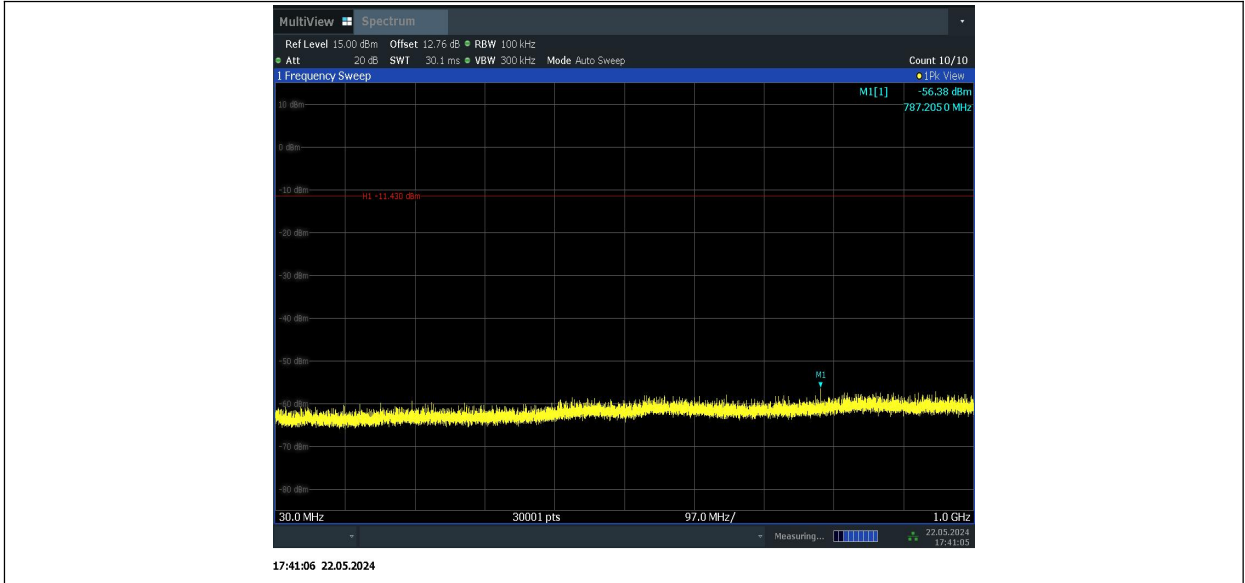
11N20_2412_1000~26500



11N20_2437_0~Reference



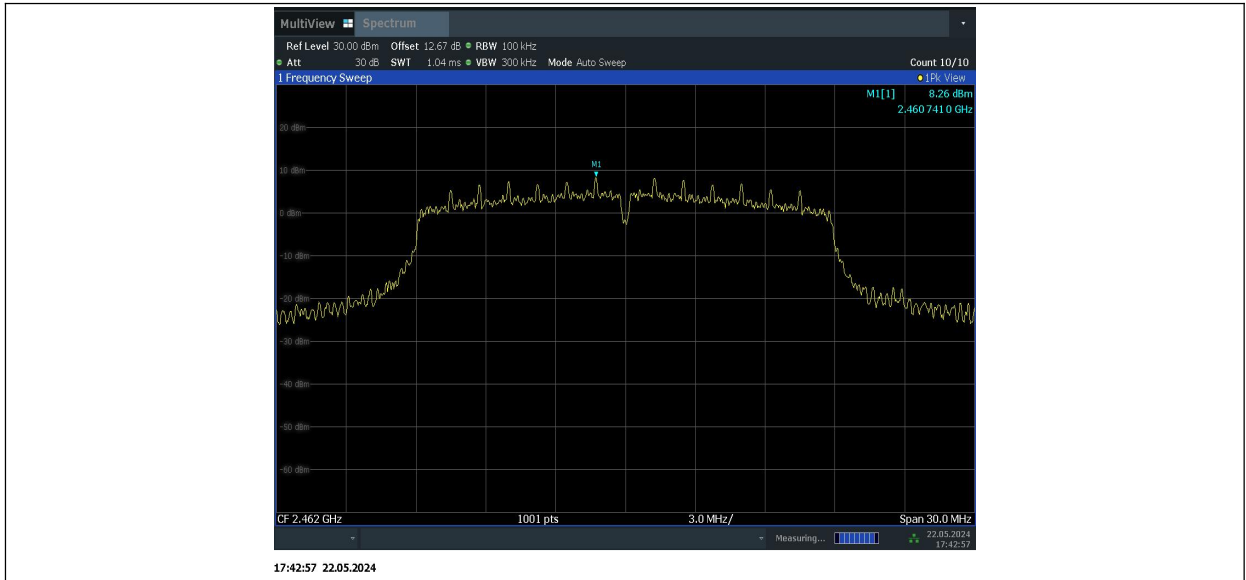
11N20_2437_30~1000



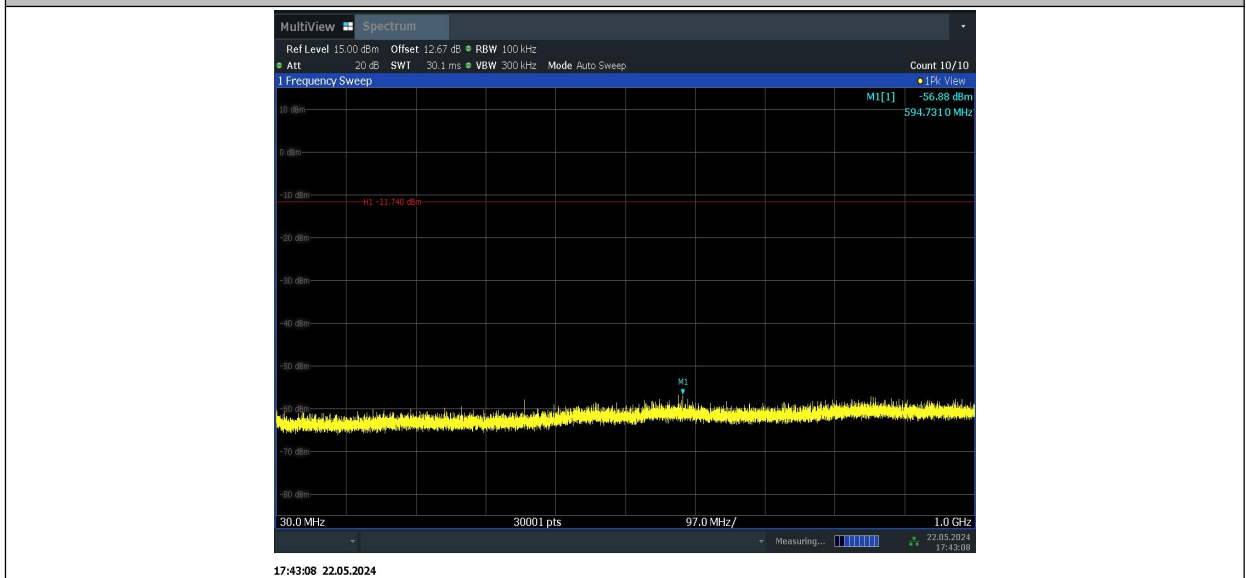
11N20_2437_1000~26500



11N20_2462_0~Reference



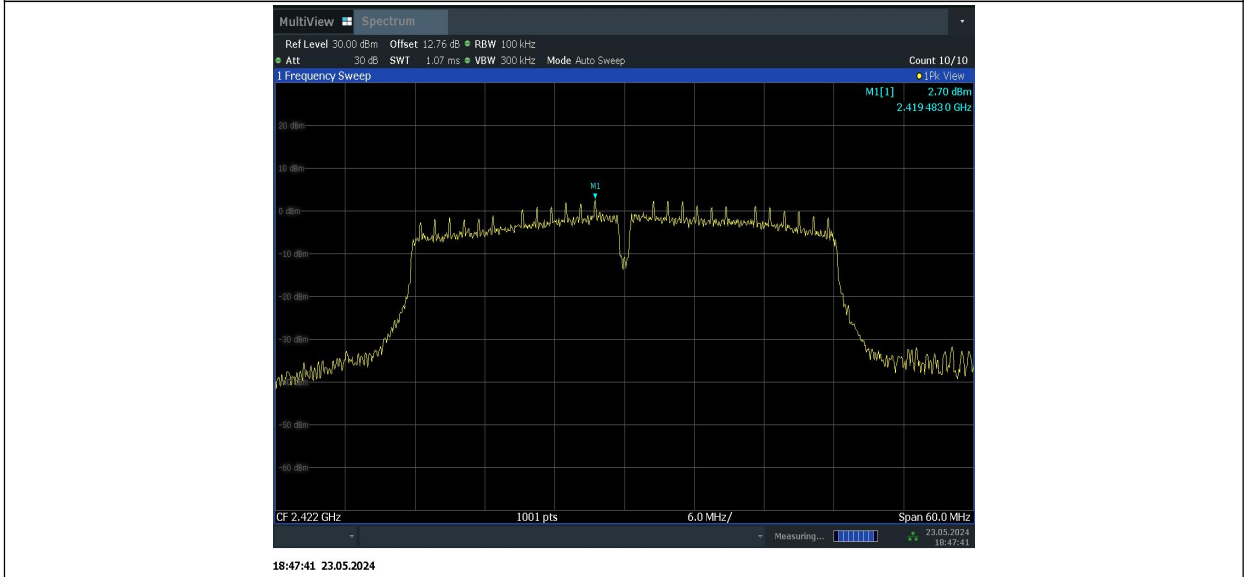
11N20_2462_30~1000



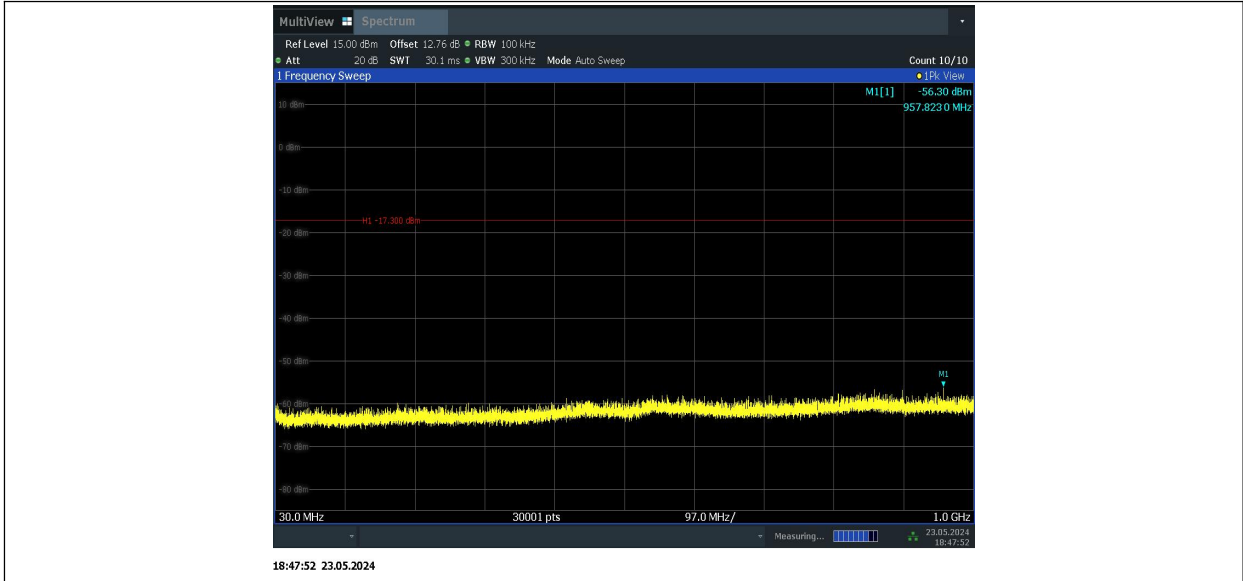
11N20_2462_1000~26500



11N40_2422_0~Reference



11N40_2422_30~1000



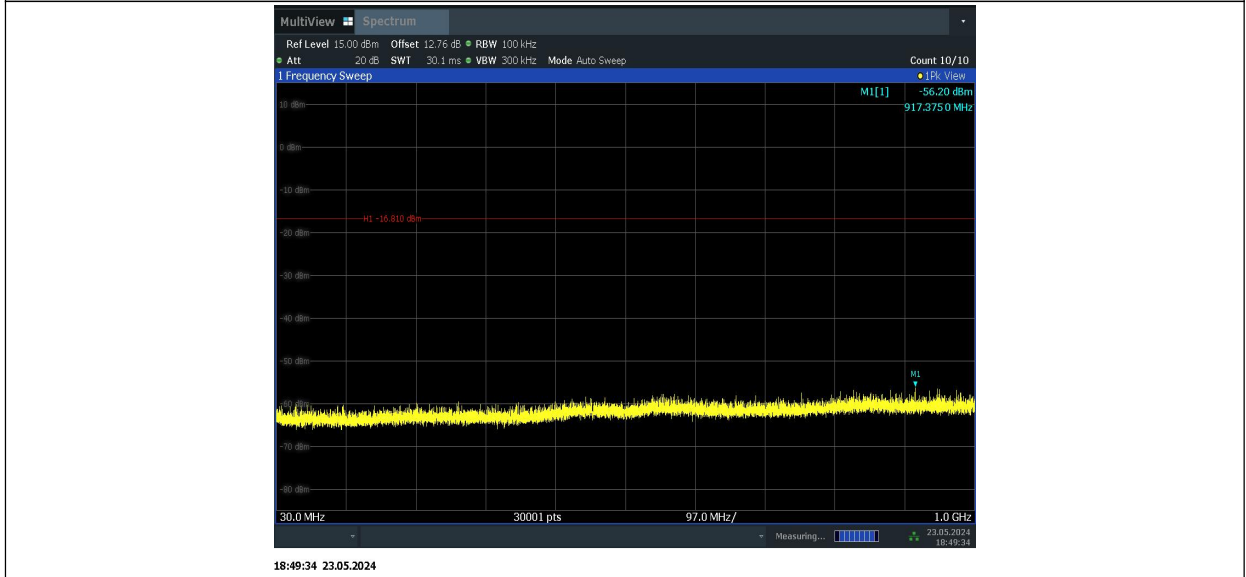
11N40_2422_1000~26500



11N40_2437_0~Reference



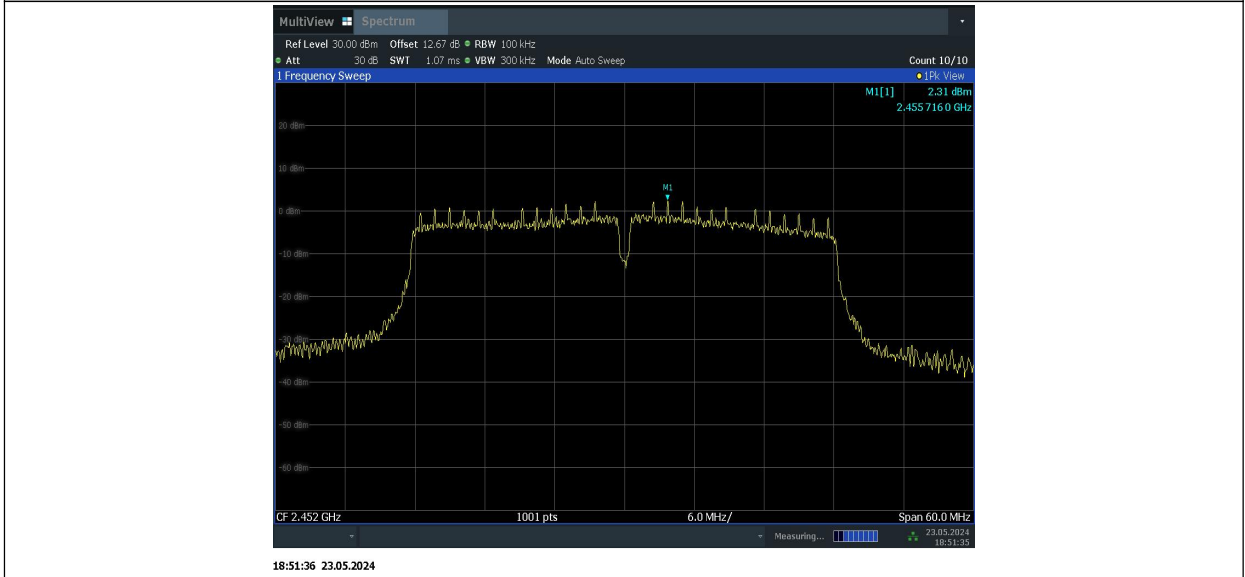
11N40_2437_30~1000



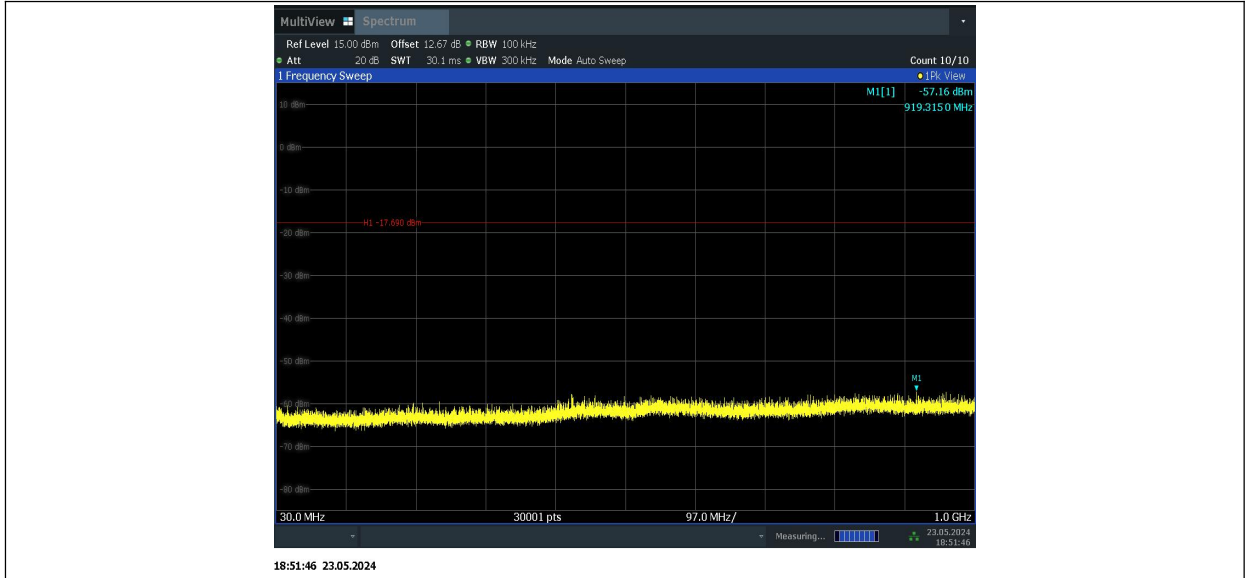
11N40_2437_1000~26500



11N40_2452_0~Reference



11N40_2452_30~1000



11N40_2452_1000~26500



Conclusion: Pass

A.6.2 Transmitter Spurious Emission - Radiated

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

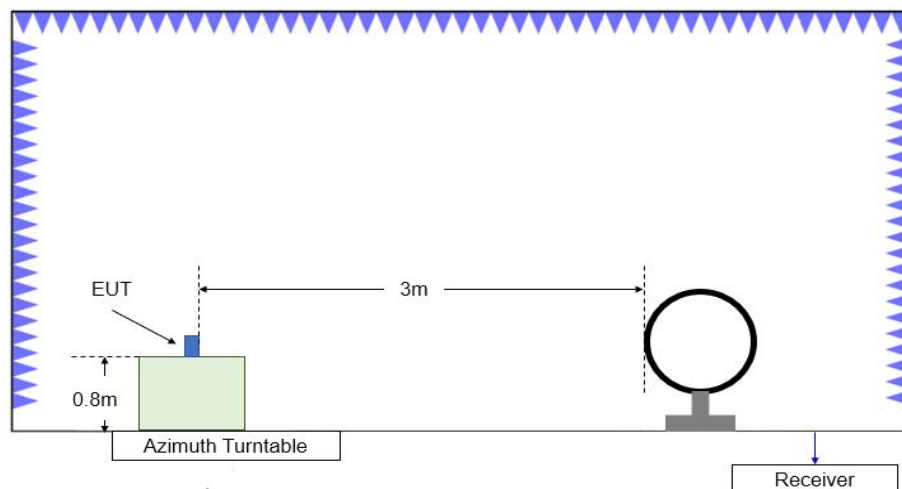


Figure A.2.1. Test Site Diagram (9kHz-30MHz)

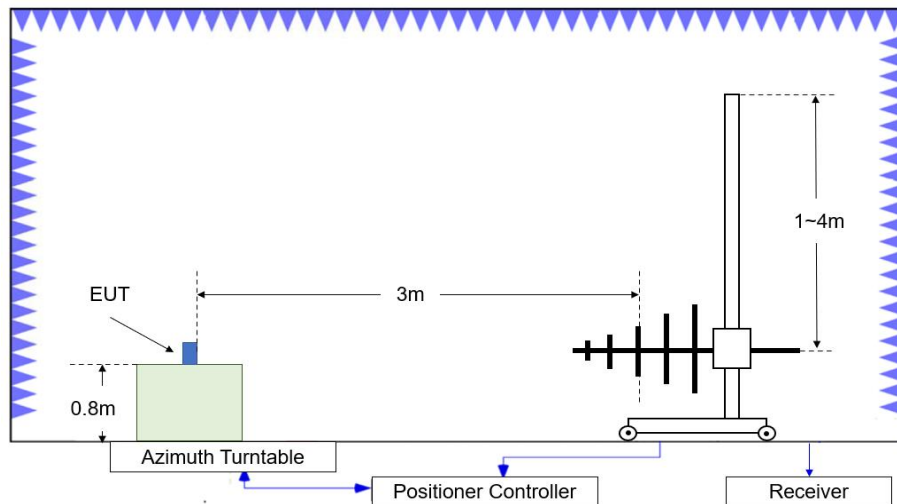


Figure A.2.2. Test Site Diagram (30MHz-1GHz)

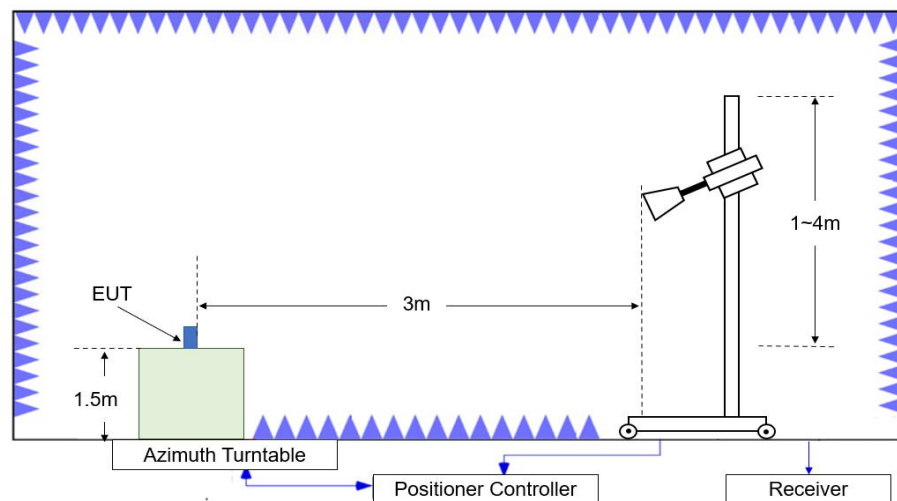


Figure A.2.3. Test Site Diagram (1GHz-40GHz)

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:

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

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 10th harmonic of highest fundamental frequency.

Test Result

Peak
802.11b

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17976.000	52.29	-29.40	46.00	35.69	74.00	21.71	V
13745.000	48.87	-31.00	41.10	38.77	74.00	25.13	H
11397.000	46.73	-32.60	39.00	40.33	74.00	27.27	H
9407.500	45.66	-33.60	37.90	41.36	74.00	28.34	H
7383.000	44.24	-35.10	36.60	42.74	74.00	29.76	H
2368.900	54.69	-19.60	28.20	46.09	74.00	19.31	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17606.500	51.82	-29.60	45.10	36.22	74.00	22.18	V
13624.000	48.41	-31.30	40.90	38.81	74.00	25.59	V
12571.000	46.25	-31.20	39.20	38.25	74.00	27.75	V
9005.500	44.21	-34.70	37.70	41.21	74.00	29.79	V
7388.500	43.17	-35.10	36.60	41.67	74.00	30.83	V
4874.000	41.93	-37.50	33.40	46.03	74.00	32.07	V

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17977.000	51.54	-29.40	46.00	34.94	74.00	22.46	V
13706.000	48.28	-31.00	41.00	38.28	74.00	25.72	V
11895.000	45.38	-32.40	39.10	38.68	74.00	28.62	V
8712.500	44.75	-34.40	37.70	41.45	74.00	29.25	V
7208.000	43.26	-35.40	36.20	42.46	74.00	30.74	H
2489.300	54.99	-19.70	28.20	46.49	74.00	19.01	V

802.11g

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17974.000	51.28	-29.40	46.00	34.68	74.00	22.72	V
13951.500	47.95	-30.60	41.40	37.15	74.00	26.05	V
12769.000	44.56	-31.80	39.60	36.66	74.00	29.44	V
9203.500	44.14	-34.70	37.70	41.14	74.00	29.86	V
7947.000	42.87	-35.40	36.80	41.47	74.00	31.13	V
2390.000	66.11	-19.80	28.20	57.71	74.00	7.89	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17984.000	51.21	-29.40	46.00	34.61	74.00	22.79	V
13935.500	47.93	-30.60	41.40	37.13	74.00	26.07	V
12701.500	44.34	-31.90	39.50	36.74	74.00	29.66	V
9459.500	43.31	-34.60	37.70	40.21	74.00	30.69	V
7315.500	42.25	-35.40	36.60	41.05	74.00	31.75	V
4936.000	37.91	-37.60	33.30	42.21	74.00	36.09	V

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17975.500	51.13	-29.40	46.00	34.53	74.00	22.87	V
13777.500	47.94	-30.90	41.20	37.64	74.00	26.06	V
12842.000	45.26	-31.90	39.90	37.26	74.00	28.74	V
9509.500	43.25	-33.80	37.60	39.45	74.00	30.75	V
6974.000	43.07	-36.10	35.20	43.97	74.00	30.93	V
2485.300	65.84	-19.70	28.20	57.34	74.00	8.16	V

802.11n-HT20

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17508.000	50.78	-29.20	44.50	35.38	74.00	23.22	V
13609.500	47.53	-31.30	40.80	38.03	74.00	26.47	V
12725.000	44.76	-31.80	39.60	36.86	74.00	29.24	V
9951.000	43.98	-34.10	38.00	40.18	74.00	30.02	H
7956.000	42.35	-35.40	36.80	40.95	74.00	31.65	V
2389.800	70.29	-19.80	28.20	61.89	74.00	3.71	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17947.500	50.62	-29.40	46.00	34.02	74.00	23.38	V
13572.500	47.46	-31.30	40.80	37.96	74.00	26.54	H
12841.000	44.88	-31.90	39.90	36.88	74.00	29.12	V
9398.500	44.24	-34.10	37.90	40.44	74.00	29.76	V
7237.500	42.38	-35.60	36.40	41.58	74.00	31.62	H
4854.000	38.95	-37.50	33.40	43.05	74.00	35.05	V

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17554.500	50.71	-29.20	44.90	35.01	74.00	23.29	H
13636.000	47.63	-31.30	40.90	38.03	74.00	26.37	V
11855.500	44.66	-32.80	39.10	38.26	74.00	29.34	H
8840.500	43.17	-34.50	37.80	39.87	74.00	30.83	V
7214.000	42.52	-35.40	36.20	41.72	74.00	31.48	V
2485.200	67.88	-19.70	28.20	59.38	74.00	6.12	V

802.11n-HT40

Ch3

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17977.000	51.66	-29.40	46.00	35.06	74.00	22.34	H
13685.500	47.79	-31.00	41.00	37.79	74.00	26.21	V
12558.000	45.33	-31.20	39.20	37.33	74.00	28.67	V
9093.000	44.43	-34.60	37.70	41.33	74.00	29.57	V
7238.000	43.08	-35.60	36.40	42.28	74.00	30.92	V
2389.60	69.19	-19.80	28.20	60.79	74.00	4.81	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17901.500	51.31	-29.40	46.00	34.71	74.00	22.69	H
14429.500	47.81	-30.10	41.90	36.01	74.00	26.19	H
11774.500	45.65	-32.90	39.20	39.35	74.00	28.35	V
8695.000	43.89	-34.40	37.70	40.59	74.00	30.11	V
7305.000	43.06	-35.40	36.60	41.86	74.00	30.94	V
4684.000	39.18	-37.50	32.80	43.88	74.00	34.82	H

Ch9

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17959.500	50.73	-29.40	46.00	34.13	74.00	23.27	V
13778.500	48.14	-30.90	41.20	37.84	74.00	25.86	V
10752.500	45.39	-33.00	38.50	39.99	74.00	28.61	H
8657.500	44.08	-34.00	37.50	40.58	74.00	29.92	H
7315.500	42.53	-35.40	36.60	41.33	74.00	31.47	V
2490.100	68.86	-19.70	28.20	60.36	74.00	5.14	V

Average
802.11b

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17607.000	42.89	-29.60	45.10	27.29	54.00	11.11	H
13716.500	39.70	-31.00	41.10	29.60	54.00	14.30	H
4824.000	38.76	-37.70	33.00	43.46	54.00	15.24	V
12772.500	36.92	-31.50	39.80	28.62	54.00	17.08	H
9204.500	35.78	-34.70	37.70	32.78	54.00	18.22	H
2350.000	43.96	-19.60	28.20	35.36	54.00	10.04	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17588.000	41.66	-29.60	45.10	26.06	54.00	12.34	V
13795.500	39.00	-30.90	41.20	28.70	54.00	15.00	H
4874.000	37.99	-37.50	33.40	42.09	54.00	16.01	V
12662.500	35.79	-31.80	39.40	28.19	54.00	18.21	H
9404.000	34.65	-34.10	37.90	30.85	54.00	19.35	V
7405.500	34.50	-35.10	36.60	33.00	54.00	19.50	V

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17970.500	41.70	-29.40	46.00	25.10	54.00	12.30	H
13683.000	38.65	-31.00	41.00	28.65	54.00	15.35	V
4923.500	38.32	-37.60	33.30	42.62	54.00	15.68	V
12658.500	35.88	-31.80	39.40	28.28	54.00	18.12	V
9400.500	34.82	-34.10	37.90	31.02	54.00	19.18	H
2488.400	44.19	-19.70	28.20	35.69	54.00	9.81	V

802.11g

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17955.000	41.98	-29.40	46.00	25.38	54.00	12.02	H
14098.000	38.15	-30.20	41.70	26.65	54.00	15.85	H
11854.500	35.24	-32.80	39.10	28.84	54.00	18.76	V
9425.000	34.33	-33.60	37.90	30.03	54.00	19.67	V
7322.500	33.61	-35.40	36.60	32.41	54.00	20.39	V
2389.900	51.49	-19.80	28.20	43.09	54.00	2.51	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17606.500	41.78	-29.60	45.10	26.18	54.00	12.22	H
13727.000	38.50	-31.00	41.10	28.40	54.00	15.50	V
12974.000	34.97	-31.90	40.10	26.77	54.00	19.03	V
9402.000	34.40	-34.10	37.90	30.60	54.00	19.60	V
7421.500	33.47	-35.10	36.60	31.97	54.00	20.53	V
4665.500	28.51	-37.50	32.80	33.21	54.00	25.49	V

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17624.500	41.90	-29.50	45.40	26.00	54.00	12.10	H
14064.500	38.55	-30.20	41.70	27.05	54.00	15.45	V
12993.000	35.90	-31.90	40.10	27.70	54.00	18.10	V
9222.500	34.68	-34.30	37.60	31.38	54.00	19.32	H
7318.000	33.77	-35.40	36.60	32.57	54.00	20.23	H
2485.000	48.43	-19.70	28.20	39.93	54.00	5.57	V

802.11n-HT20

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17624.000	41.43	-29.50	45.40	25.53	54.00	12.57	V
13697.000	38.31	-31.00	41.00	28.31	54.00	15.69	H
11919.000	34.86	-32.40	39.10	28.16	54.00	19.14	V
9492.500	34.33	-34.60	37.70	31.23	54.00	19.67	H
7327.500	33.43	-35.90	36.60	32.73	54.00	20.57	V
2390.00	53.25	-19.80	28.20	44.85	54.00	0.75	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17603.500	41.39	-29.60	45.10	25.79	54.00	12.61	H
13717.500	38.17	-31.00	41.10	28.07	54.00	15.83	V
12771.000	35.37	-31.80	39.60	27.47	54.00	18.63	V
8704.000	34.06	-34.40	37.70	30.76	54.00	19.94	V
7426.000	33.46	-35.50	36.50	32.46	54.00	20.54	H
4854.000	29.07	-37.50	33.40	33.17	54.00	24.93	V

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17974.000	41.71	-29.40	46.00	25.11	54.00	12.29	H
14086.000	38.92	-30.20	41.70	27.42	54.00	15.08	V
11896.000	35.21	-32.40	39.10	28.51	54.00	18.79	V
9509.000	34.02	-33.80	37.60	30.22	54.00	19.98	V
7404.000	33.26	-35.10	36.60	31.76	54.00	20.74	V
2485.20	52.41	-19.70	28.20	43.91	54.00	1.59	V

802.11n-HT40

Ch3

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17604.500	41.51	-29.60	45.10	25.91	54.00	12.49	V
13800.500	38.18	-30.90	41.20	27.88	54.00	15.82	V
12931.000	35.39	-31.40	40.00	26.79	54.00	18.61	V
9196.500	34.29	-34.70	37.70	31.29	54.00	19.71	H
7866.000	33.48	-35.20	36.60	32.08	54.00	20.52	V
2389.70	51.78	-19.80	28.20	43.38	54.00	2.22	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17983.500	42.01	-29.40	46.00	25.41	54.00	11.99	V
13720.500	39.25	-31.00	41.10	29.15	54.00	14.75	V
12980.500	35.40	-31.90	40.10	27.20	54.00	18.60	V
8709.500	34.51	-34.40	37.70	31.21	54.00	19.49	V
7320.500	33.72	-35.40	36.60	32.52	54.00	20.28	V
4952.500	29.45	-37.40	33.60	33.25	54.00	24.55	V

Ch9

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17617.500	41.68	-29.60	45.10	26.08	54.00	12.32	H
13712.500	38.42	-31.00	41.00	28.42	54.00	15.58	V
12853.000	35.70	-31.90	39.90	27.70	54.00	18.30	V
9398.000	34.19	-34.10	37.90	30.39	54.00	19.81	V
7306.500	33.50	-35.40	36.60	32.30	54.00	20.50	V
2489.400	52.98	-19.70	28.20	44.48	54.00	1.02	V

Conclusion: Pass

Note: the spurious emission above 18G is noise only and did not show on the report.

Band edge compliance

802.11b mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	1	2.31GHz~2.43GHz---L	Fig.6.2.1	P
	11	2.45GHz~2.50GHz---H	Fig.6.2.2	P

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	1	2.31GHz~2.43GHz---L	Fig.6.2.3	P
	11	2.45GHz~2.50GHz---H	Fig.6.2.4	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	1	2.31GHz~2.43GHz---L	Fig.6.2.5	P
	11	2.45GHz~2.50GHz---H	Fig.6.2.6	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	3	2.31GHz~2.43GHz---L	Fig.6.2.7	P
	9	2.45GHz~2.50GHz---H	Fig.6.2.8	P

Test graphs as below:

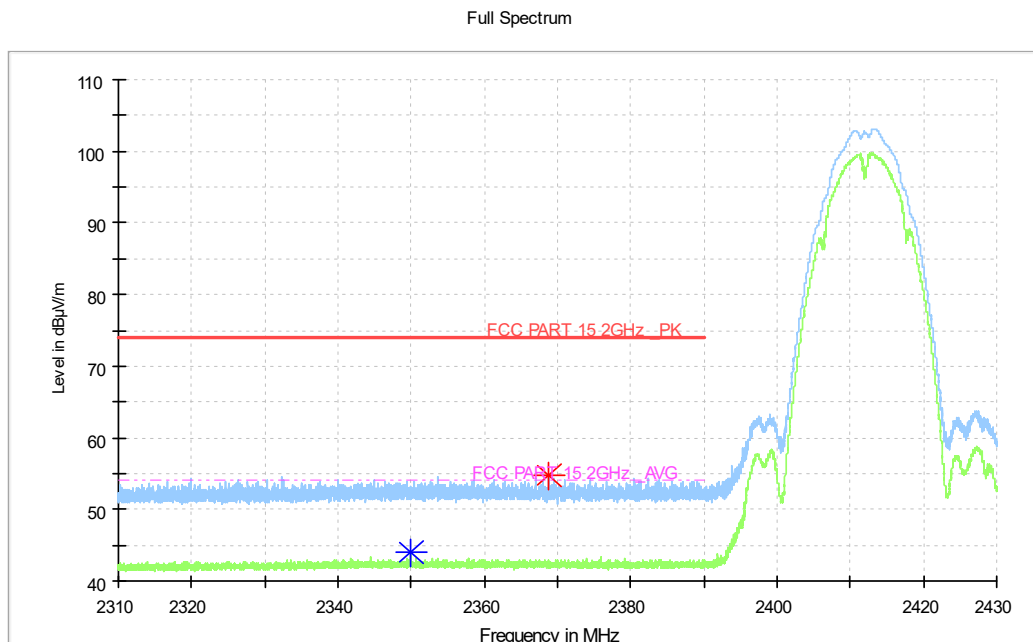


Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.43GHz

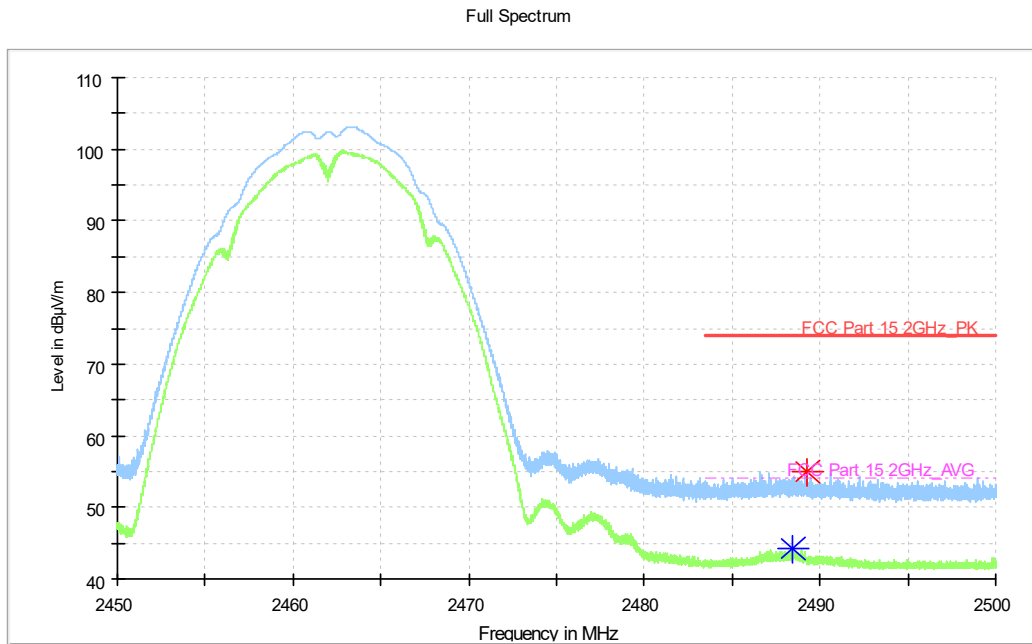


Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

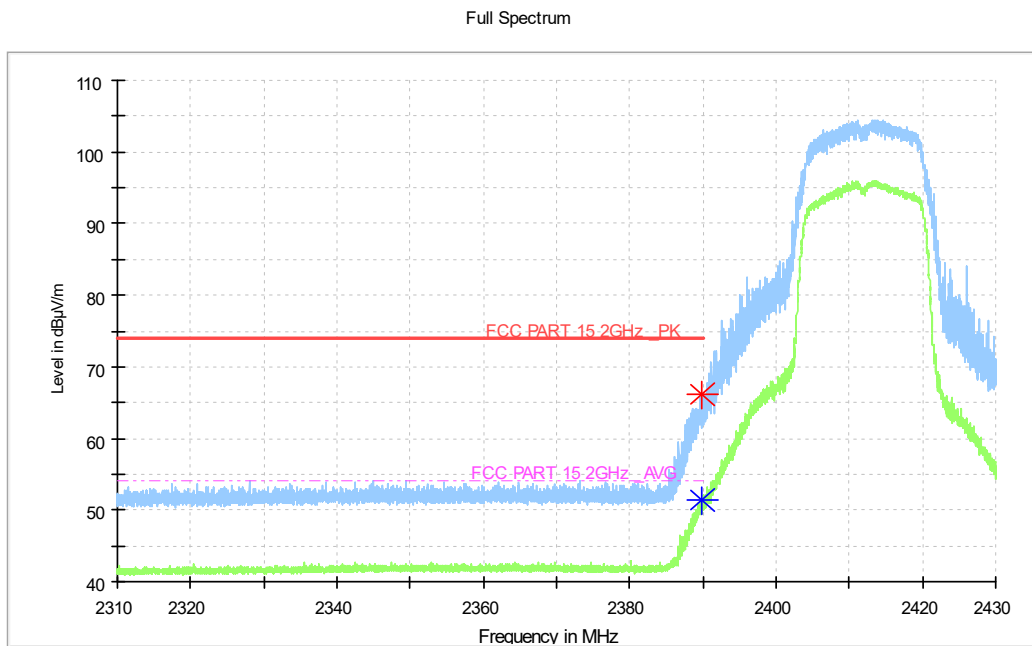


Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.43GHz

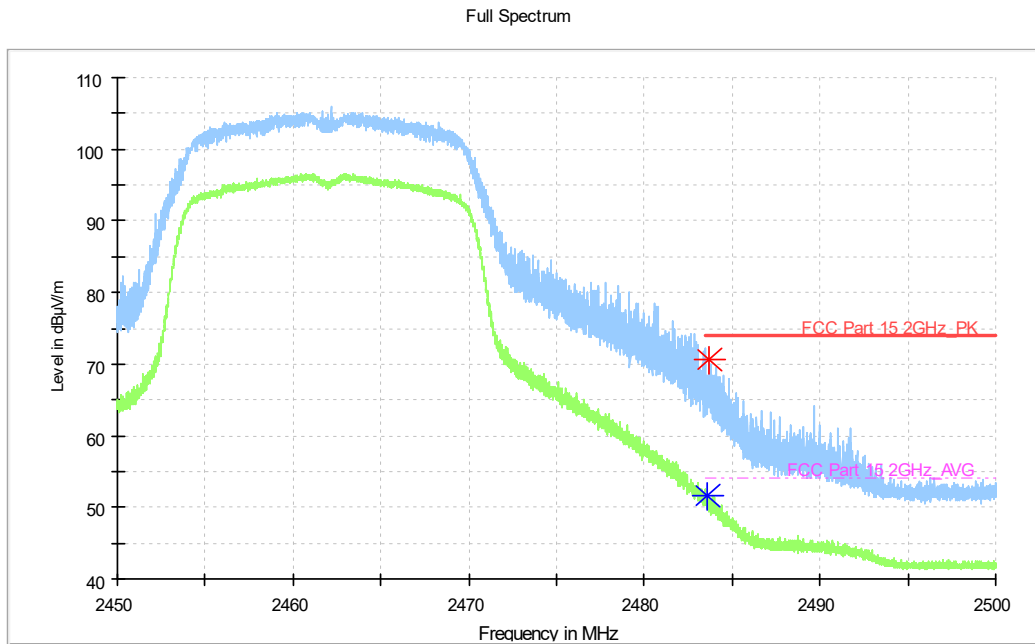


Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

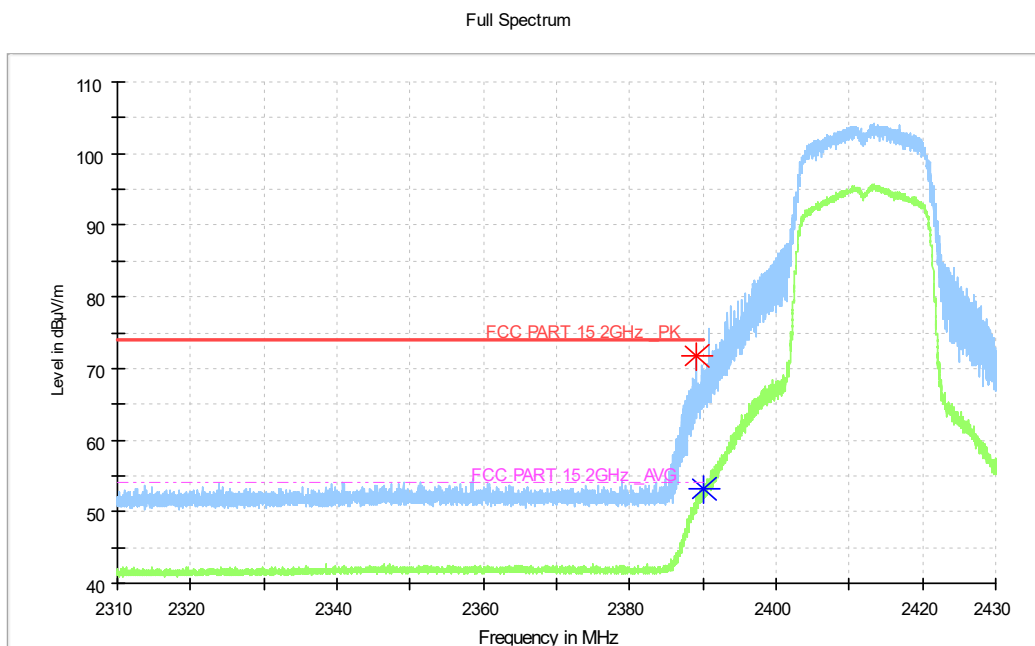


Fig.A.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31 GHz - 2.43GHz

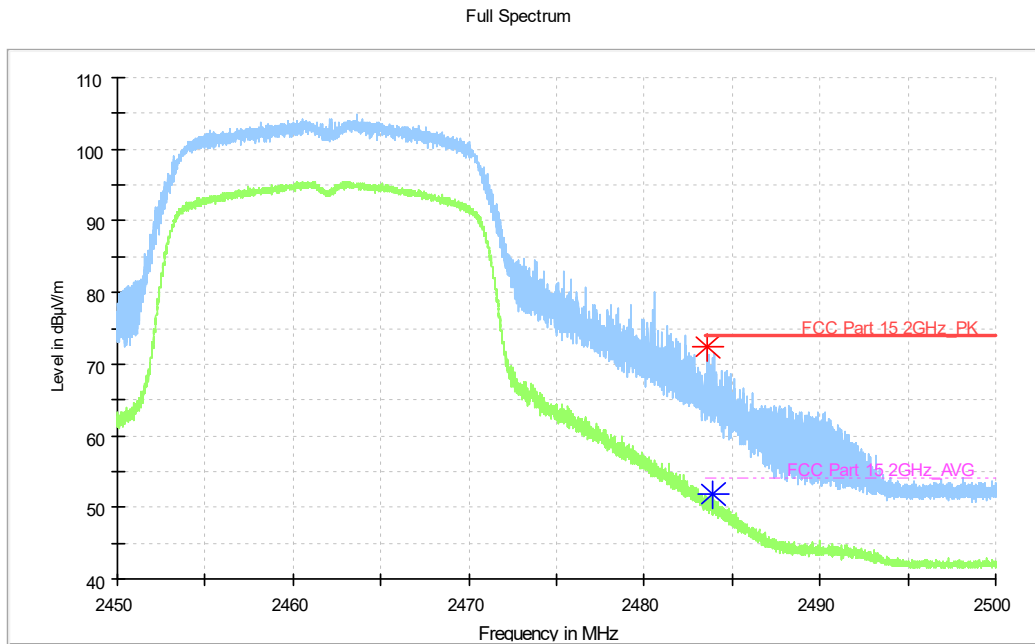


Fig.A.6.2.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

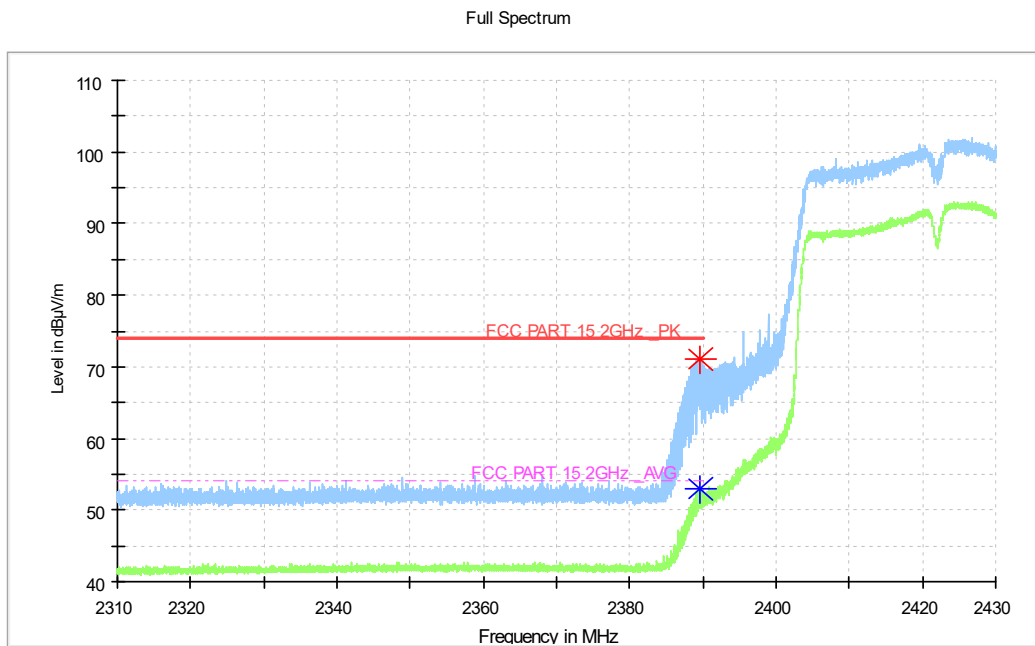


Fig.A.6.2.7 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31 GHz - 2.43GHz

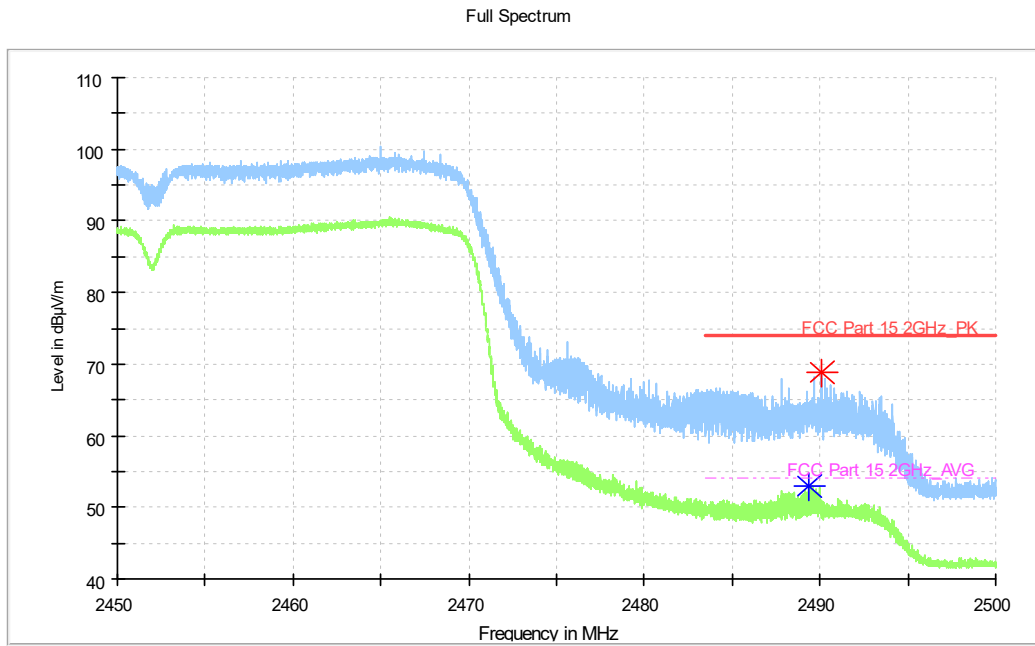


Fig.A.6.2.8 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz

A.7. 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.

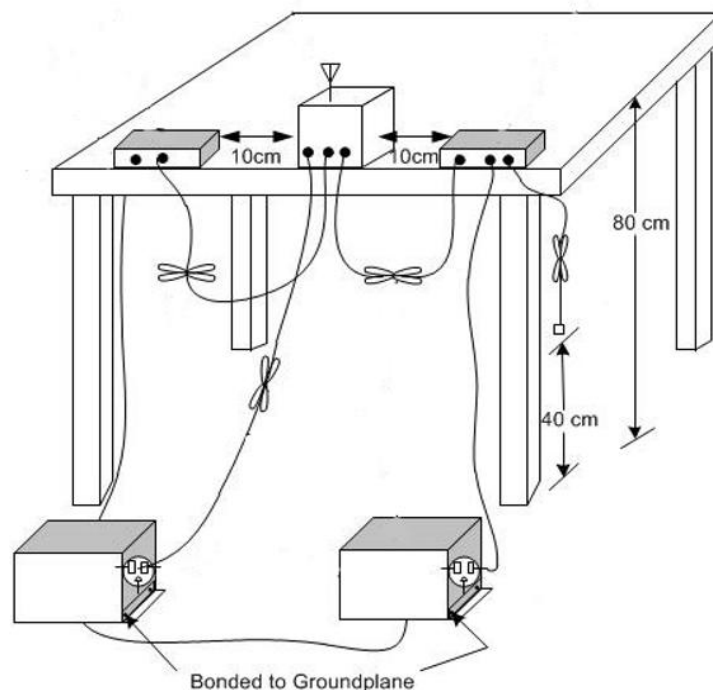
The measurement bandwidth is:

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 μ V)	Result (dB μ V)		Conclusion
		With charger		
		802.11b	Idle	
0.15 to 0.5	66 to 56	Fig.A.7.1	Fig.A.7.2	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 μ V)	Result (dB μ V)		Conclusion
		With charger		
		802.11b	Idle	
0.15 to 0.5	56 to 46	Fig.A.7.1	Fig.A.7.2	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:

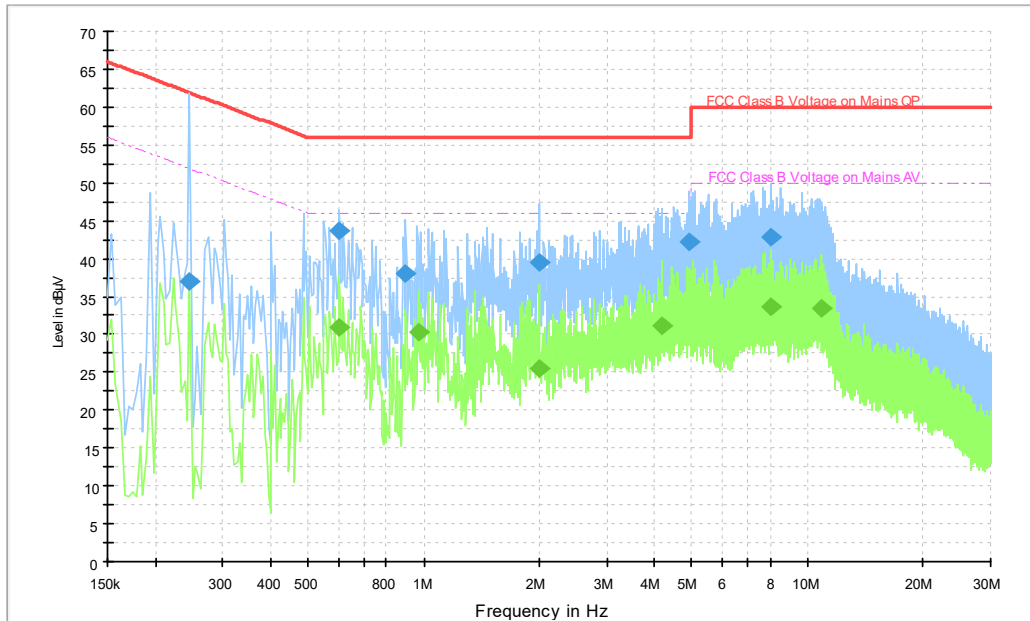


Fig.A.7.1 AC Powerline Conducted Emission-802.11b

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

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.246000	36.9	2000.0	9.000	N	19.8	25.0	61.9
0.602000	43.8	2000.0	9.000	L1	20.0	12.2	56.0
0.898000	38.1	2000.0	9.000	L1	19.9	17.9	56.0
2.002000	39.4	2000.0	9.000	L1	19.8	16.6	56.0
4.942000	42.2	2000.0	9.000	L1	19.8	13.8	56.0
7.998000	42.9	2000.0	9.000	L1	19.9	17.1	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.602000	31.0	2000.0	9.000	L1	20.0	15.0	46.0
0.966000	30.2	2000.0	9.000	L1	19.9	15.8	46.0
2.002000	25.6	2000.0	9.000	L1	19.8	20.4	46.0
4.182000	31.2	2000.0	9.000	L1	19.8	14.8	46.0
8.046000	33.7	2000.0	9.000	L1	19.9	16.3	50.0
10.806000	33.5	2000.0	9.000	L1	19.9	16.5	50.0

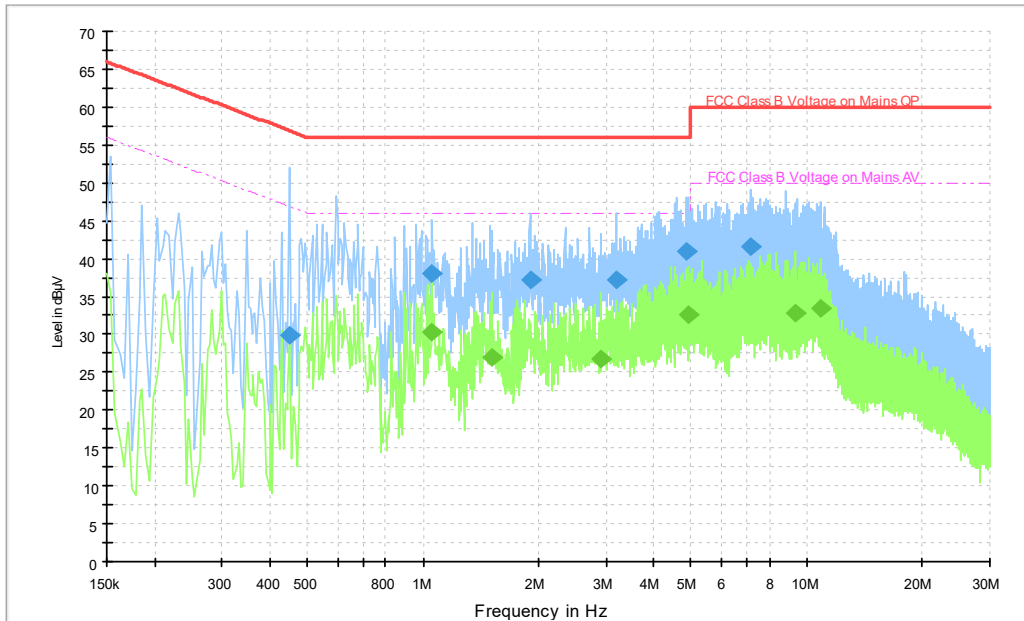


Fig.A.7.2 AC Powerline Conducted Emission-Idle

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

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.450000	29.9	2000.0	9.000	L1	20.0	27.0	56.9
1.058000	38.0	2000.0	9.000	L1	19.9	18.0	56.0
1.902000	37.3	2000.0	9.000	L1	19.8	18.7	56.0
3.194000	37.2	2000.0	9.000	L1	19.8	18.8	56.0
4.878000	41.0	2000.0	9.000	L1	19.8	15.0	56.0
7.122000	41.7	2000.0	9.000	L1	19.9	18.3	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
1.058000	30.3	2000.0	9.000	L1	19.9	15.7	46.0
1.510000	27.0	2000.0	9.000	L1	19.9	19.0	46.0
2.902000	26.8	2000.0	9.000	L1	19.8	19.2	46.0
4.938000	32.5	2000.0	9.000	L1	19.8	13.5	46.0
9.314000	32.8	2000.0	9.000	L1	19.9	17.2	50.0
10.838000	33.3	2000.0	9.000	L1	19.9	16.7	50.0

A.8. 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 26th day of June 2023.



Mr. Trace McInturf, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 7049.01
Valid to July 31, 2024

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

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