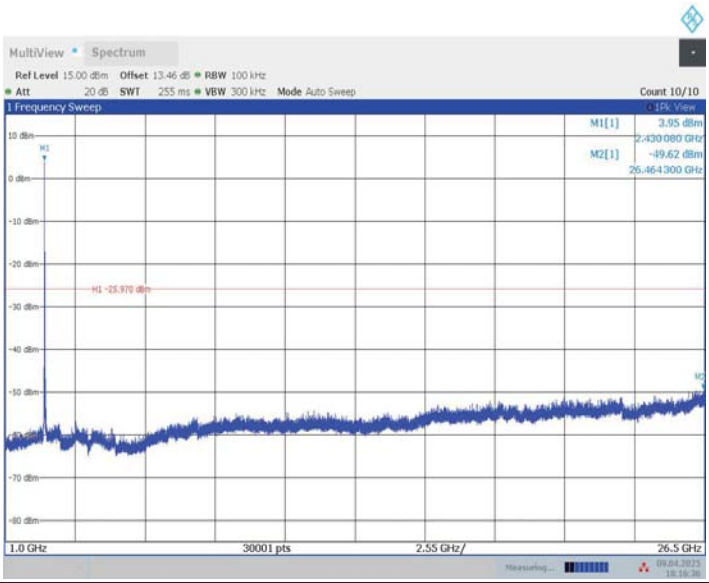
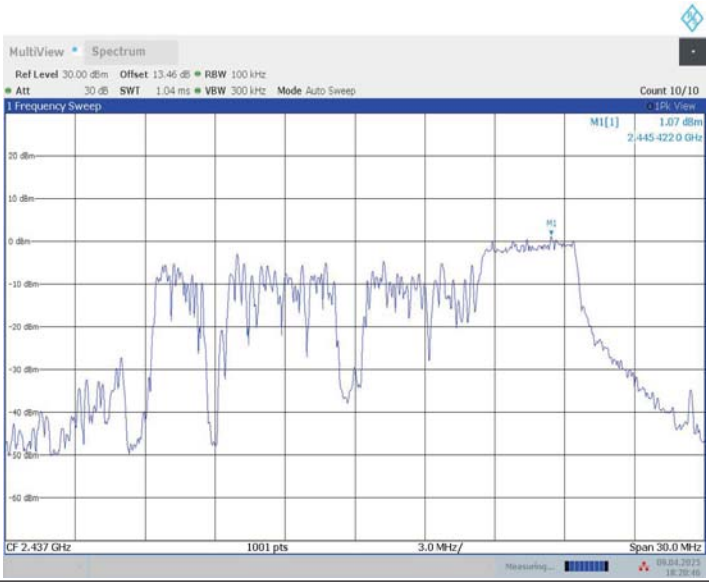
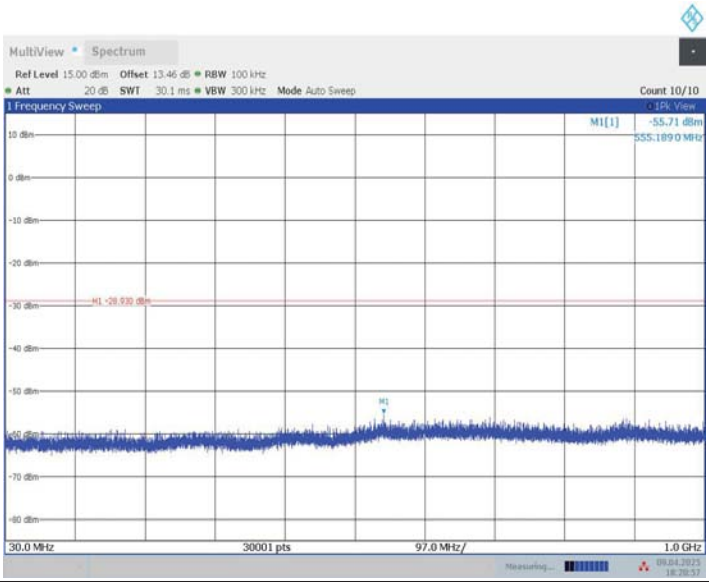


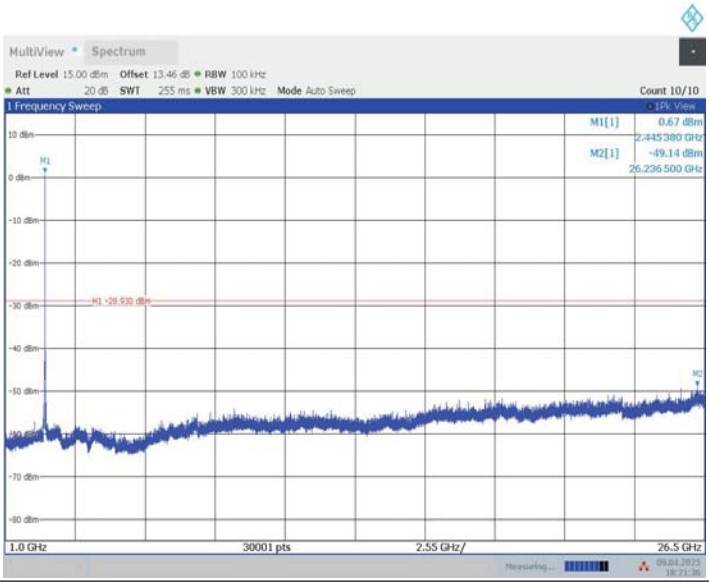
11AX20MIMO_Ant9_2437_52Tone_RU40_0~Reference



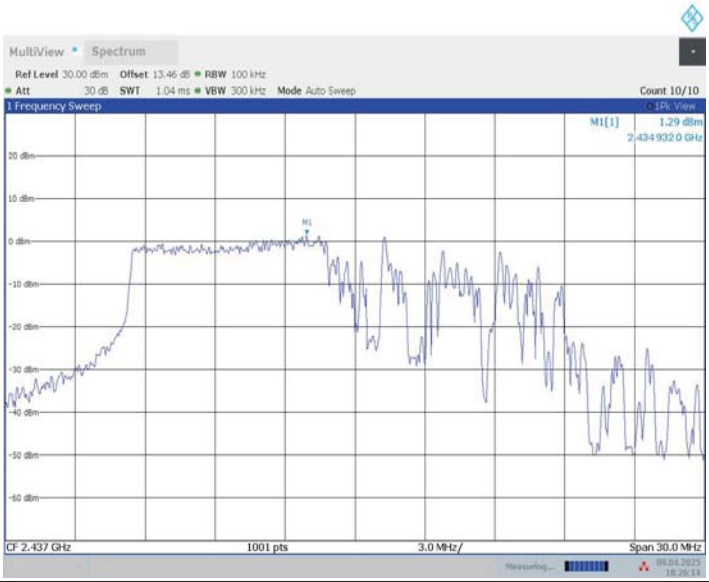
11AX20MIMO_Ant9_2437_52Tone_RU40_30~1000



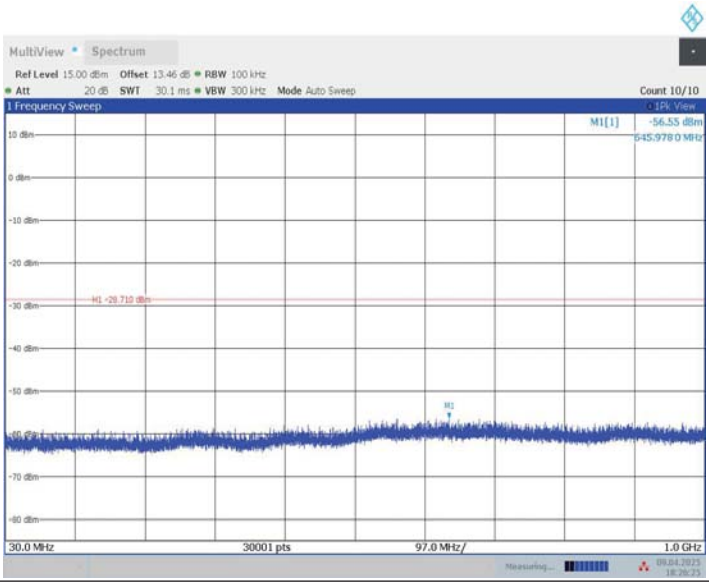
11AX20MIMO_Ant9_2437_52Tone_RU40_1000~26500



11AX20MIMO_Ant9_2437_106Tone_RU53_0~Reference



11AX20MIMO_Ant9_2437_106Tone_RU53_30~1000



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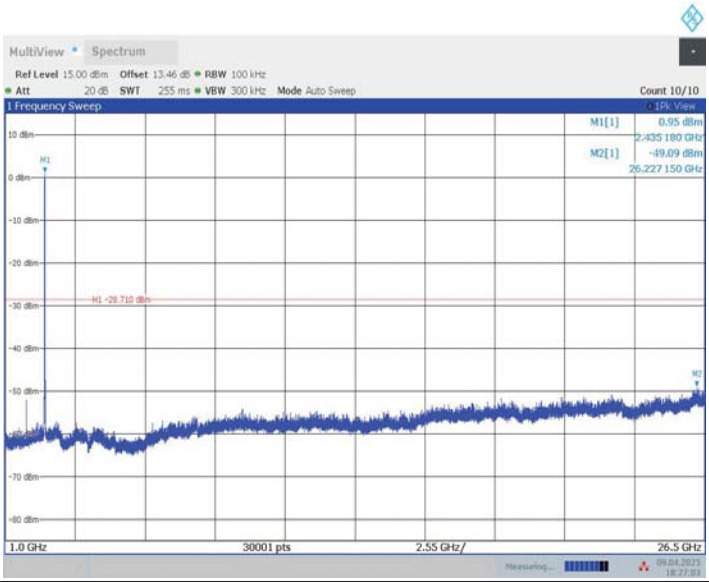

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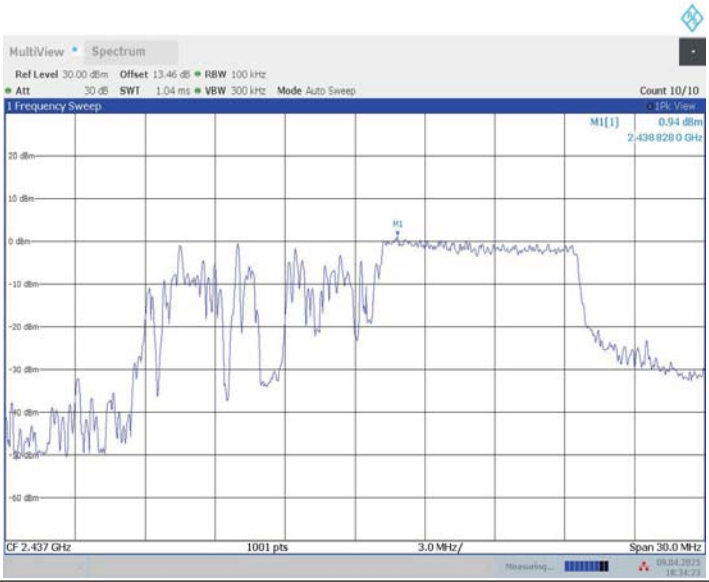

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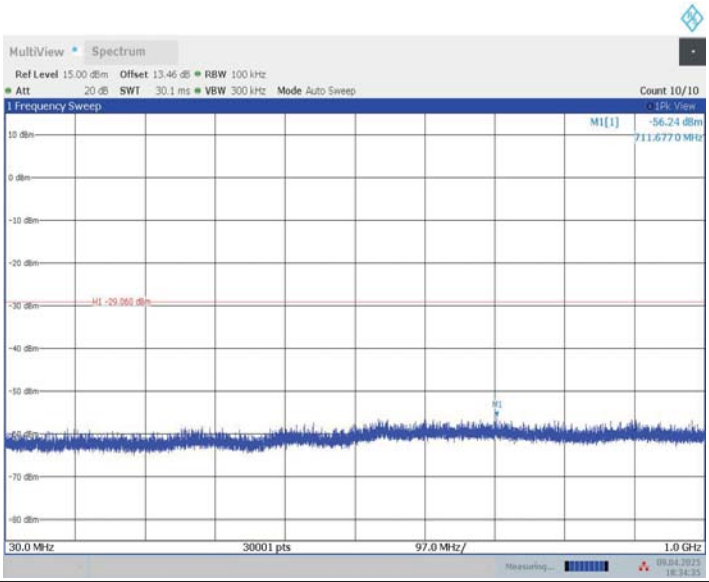

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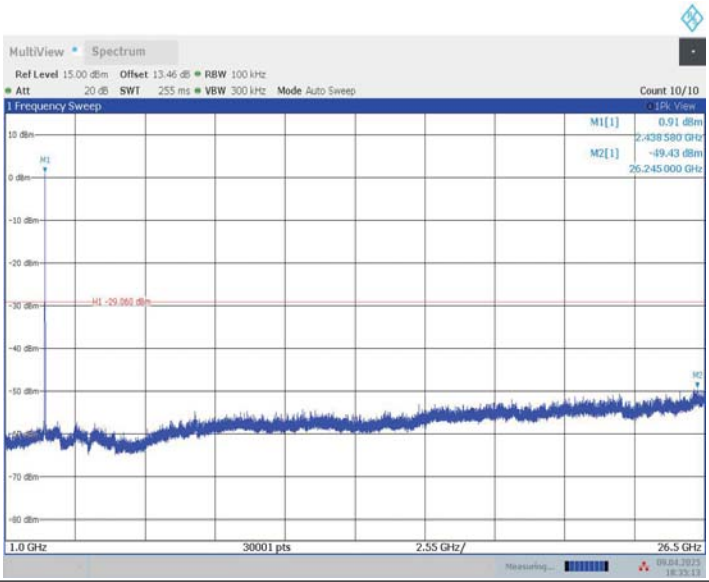
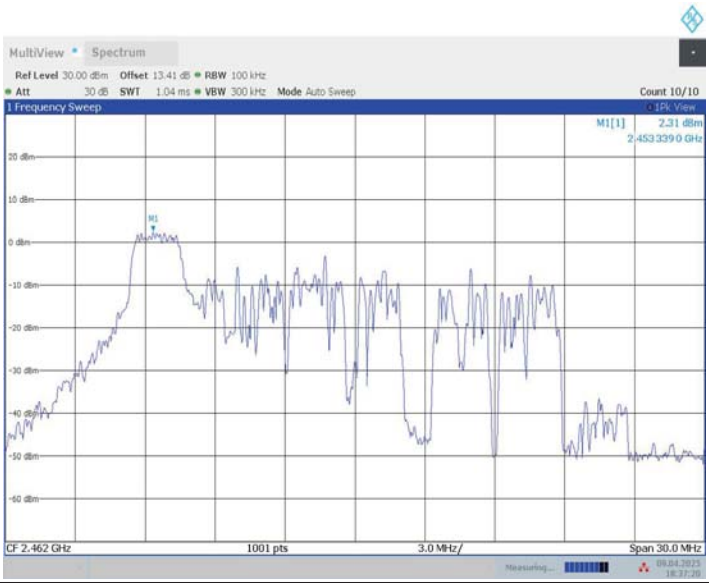
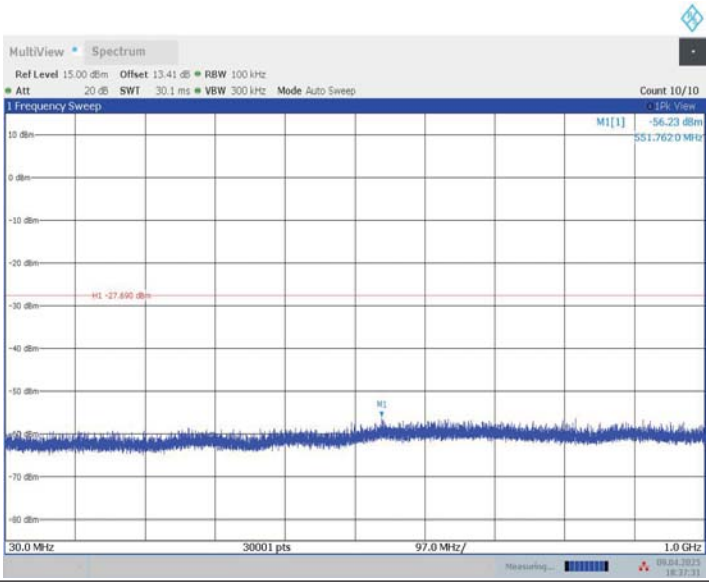


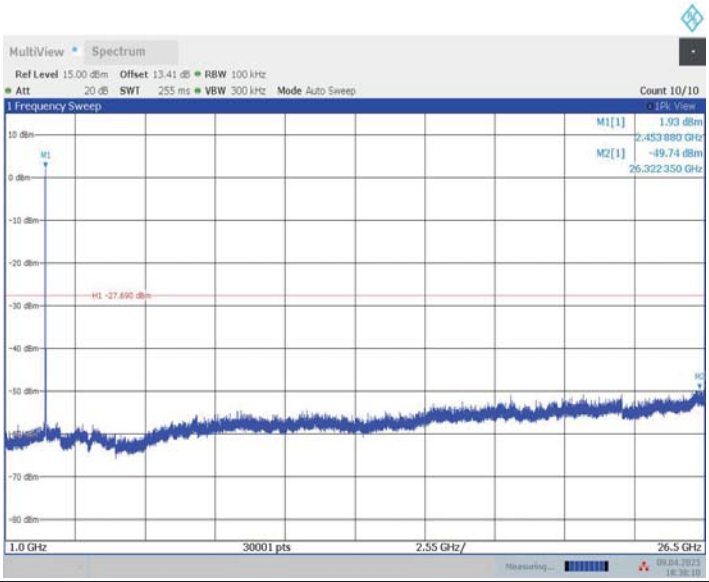
11AX20MIMO_Ant6_2462_26Tone_RU0_0~Reference



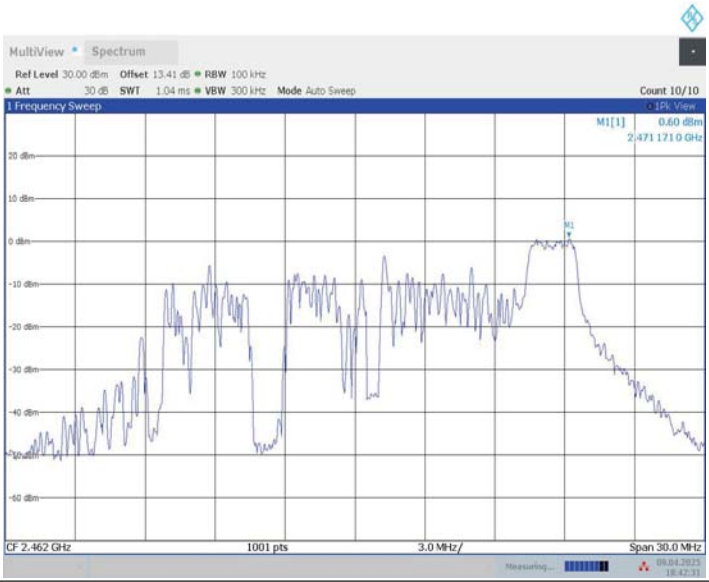
11AX20MIMO_Ant6_2462_26Tone_RU0_30~1000



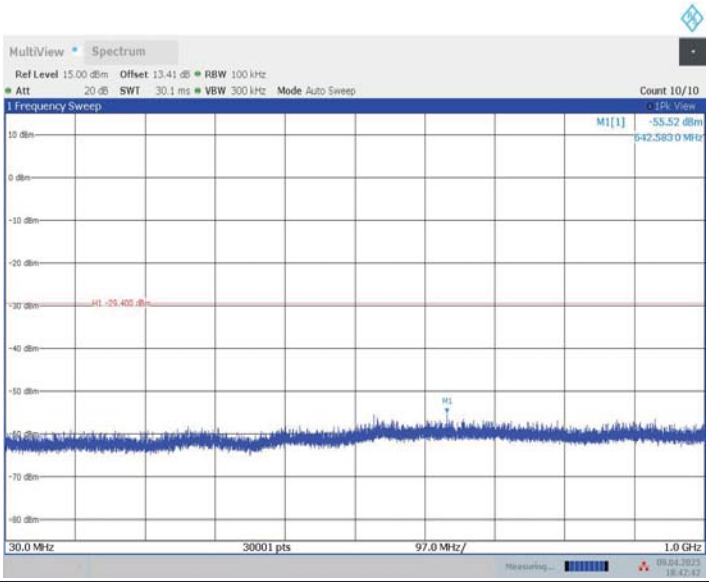
11AX20MIMO_Ant6_2462_26Tone_RU0_1000~26500



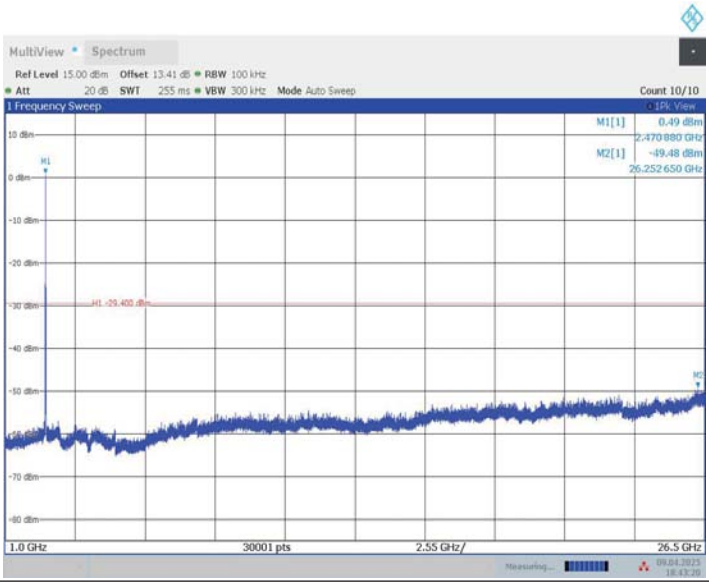
11AX20MIMO_Ant6_2462_26Tone_RU8_0~Reference



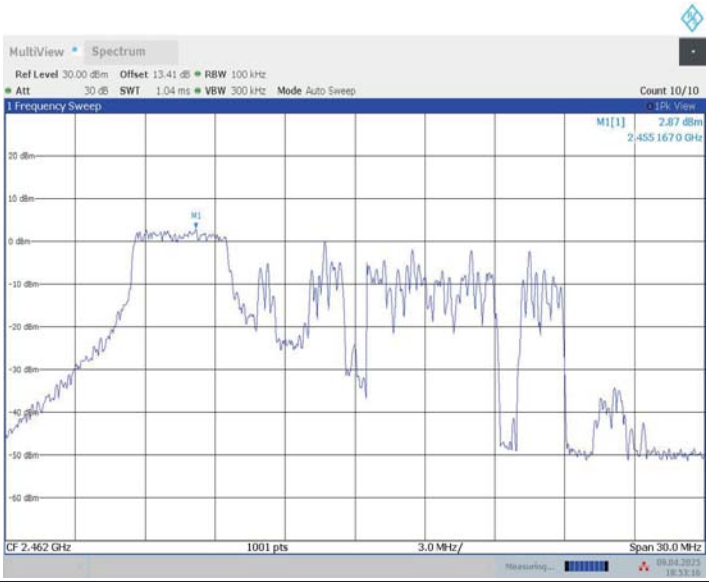
11AX20MIMO_Ant6_2462_26Tone_RU8_30~1000



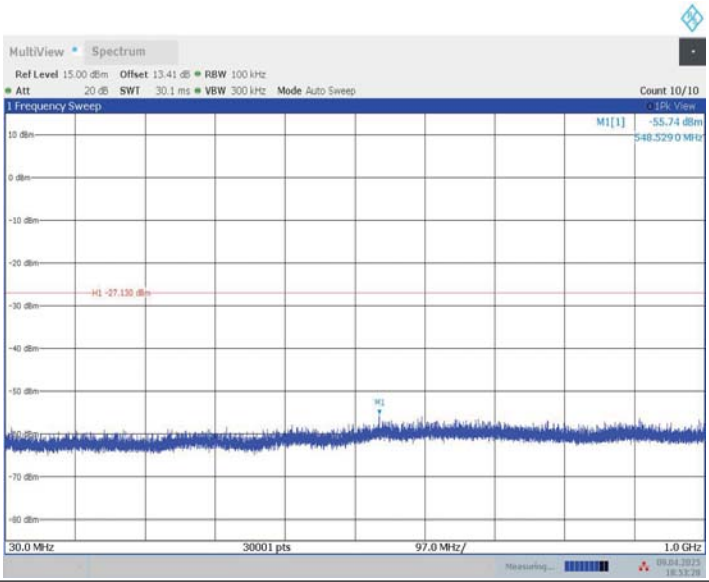
11AX20MIMO_Ant6_2462_26Tone_RU8_1000~26500



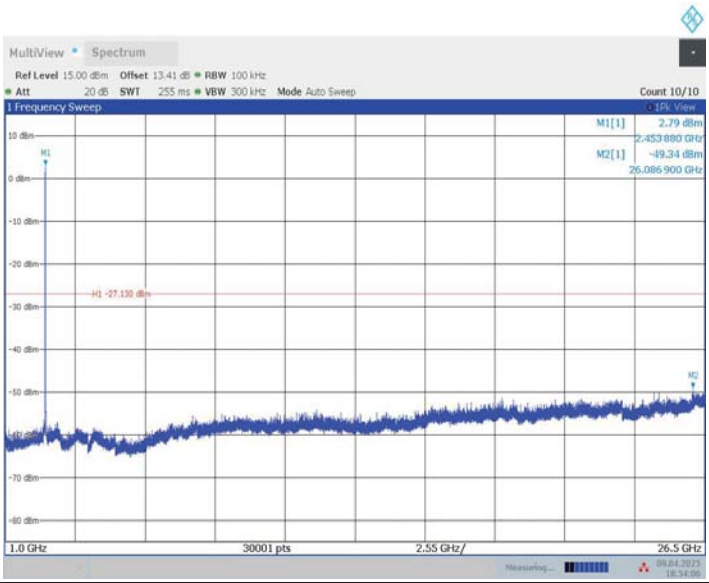
11AX20MIMO_Ant6_2462_52Tone_RU37_0~Reference



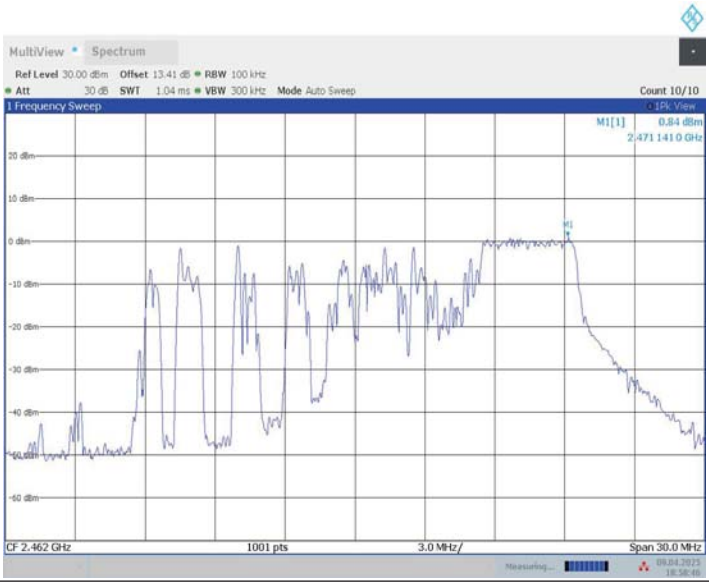
11AX20MIMO_Ant6_2462_52Tone_RU37_30~1000



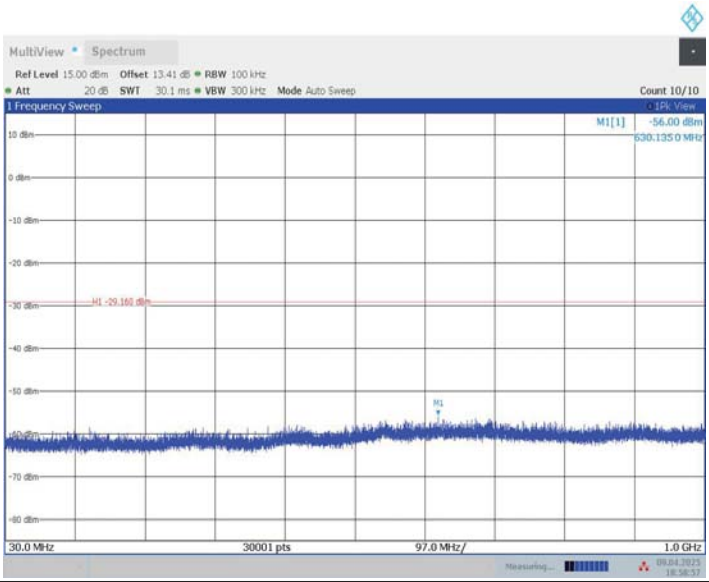
11AX20MIMO_Ant6_2462_52Tone_RU37_1000~26500



11AX20MIMO_Ant6_2462_52Tone_RU40_0~Reference



11AX20MIMO_Ant6_2462_52Tone_RU40_30~1000



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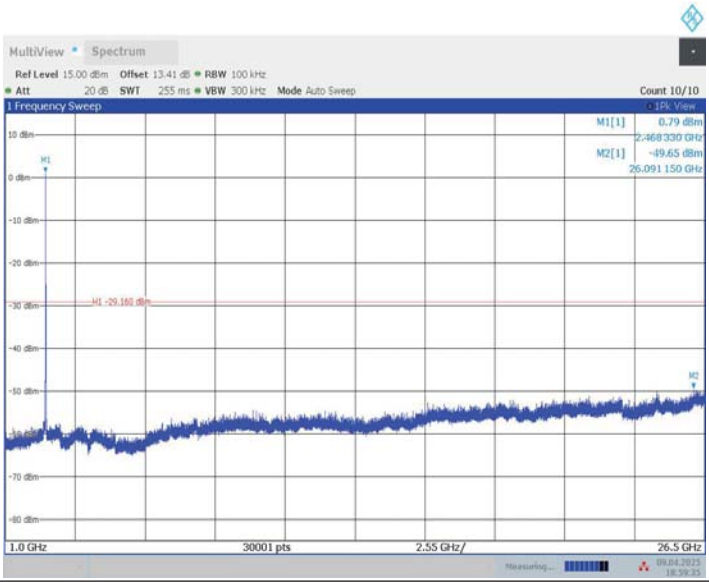
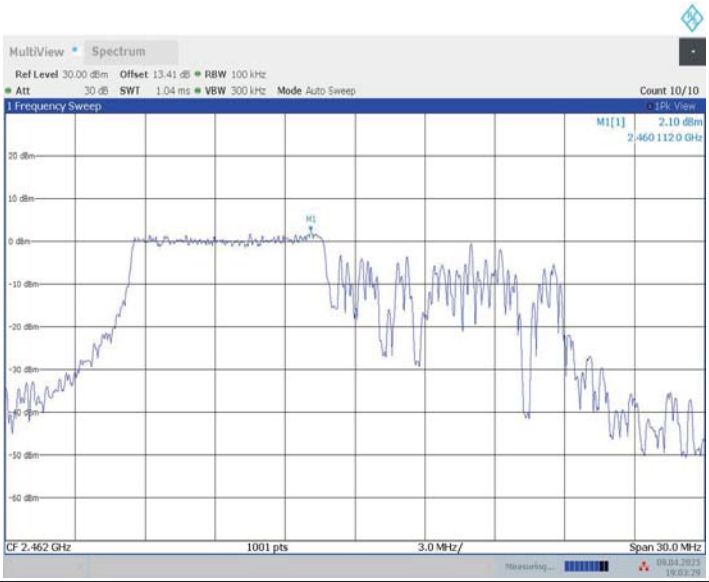
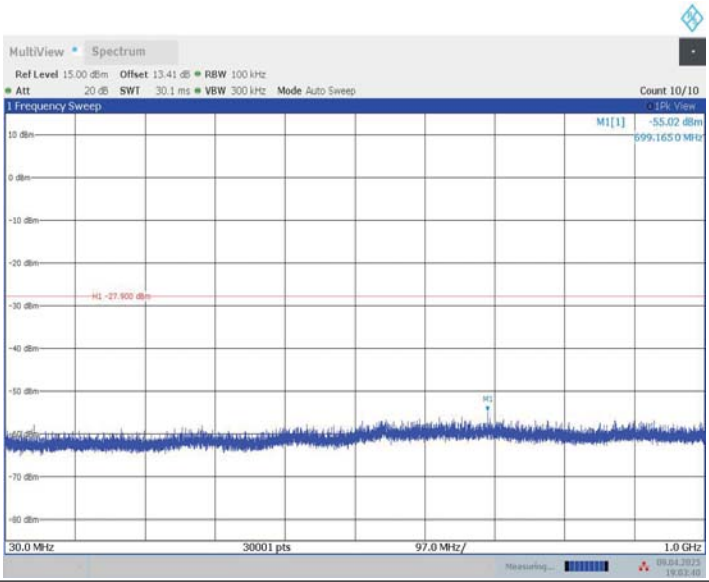


11AX20MIMO_Ant6_2462_106Tone_RU53_0~Reference



11AX20MIMO_Ant6_2462_106Tone_RU53_30~1000



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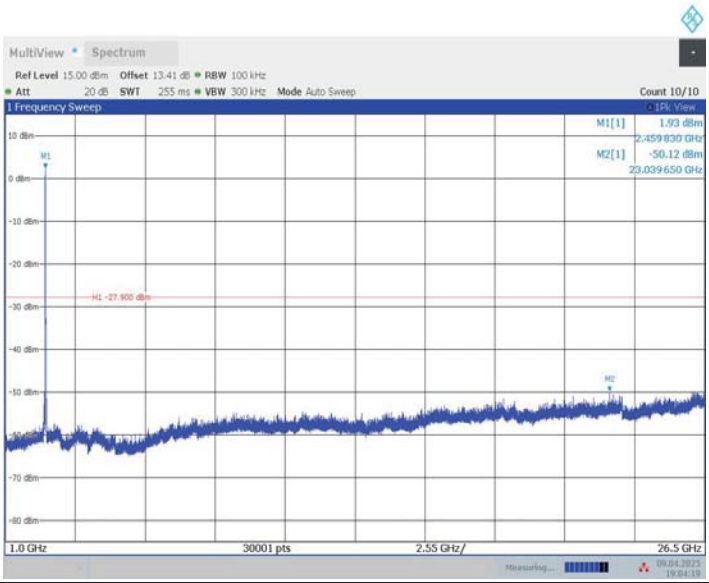

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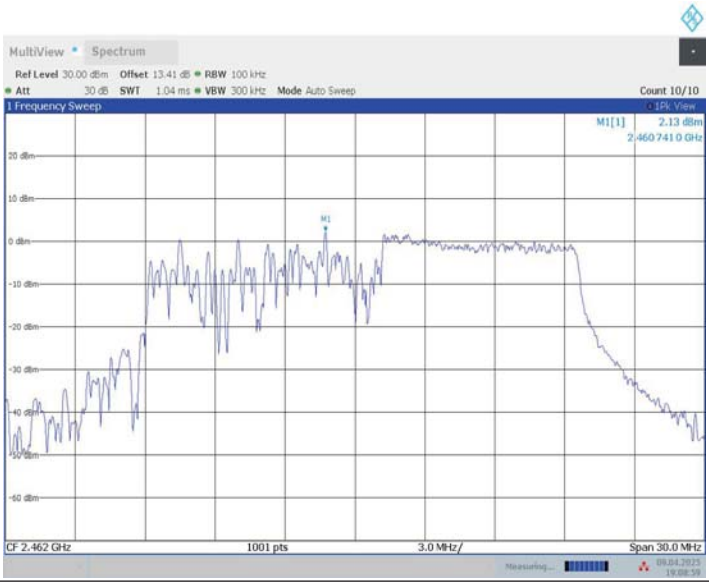
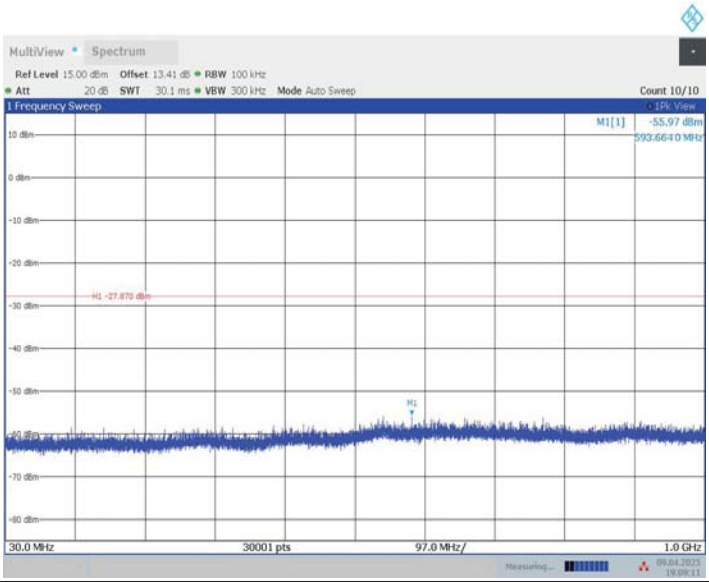


11AX20MIMO_Ant6_2462_106Tone_RU54_30~1000



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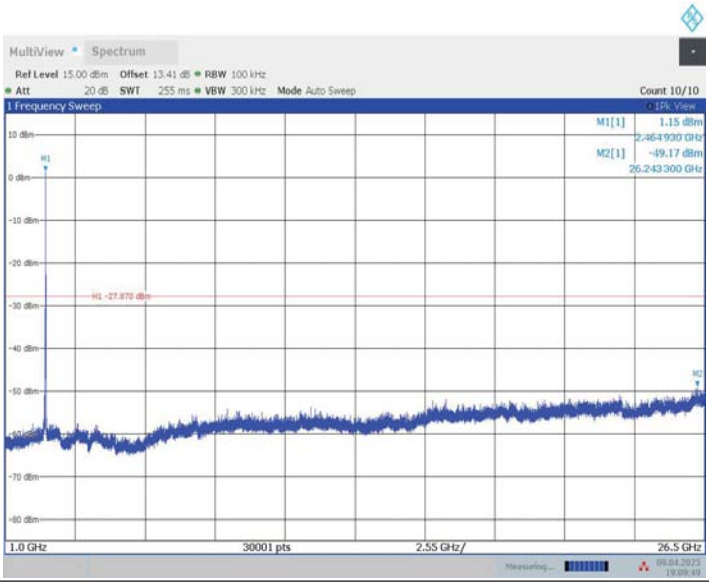
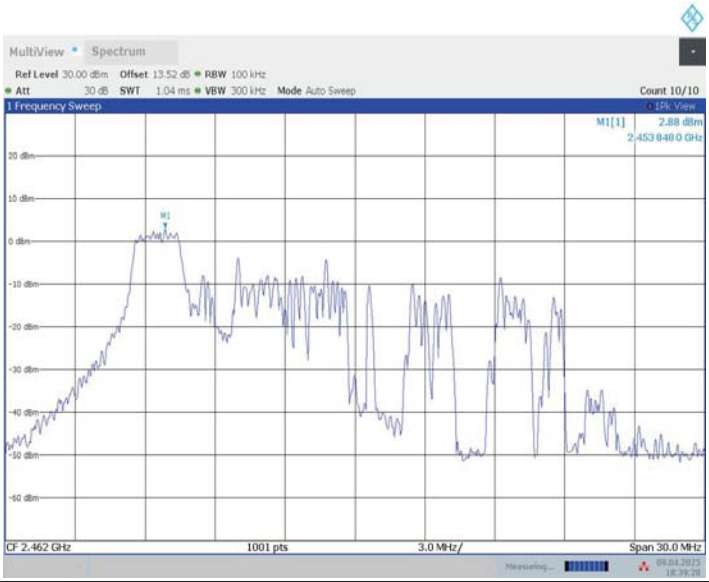
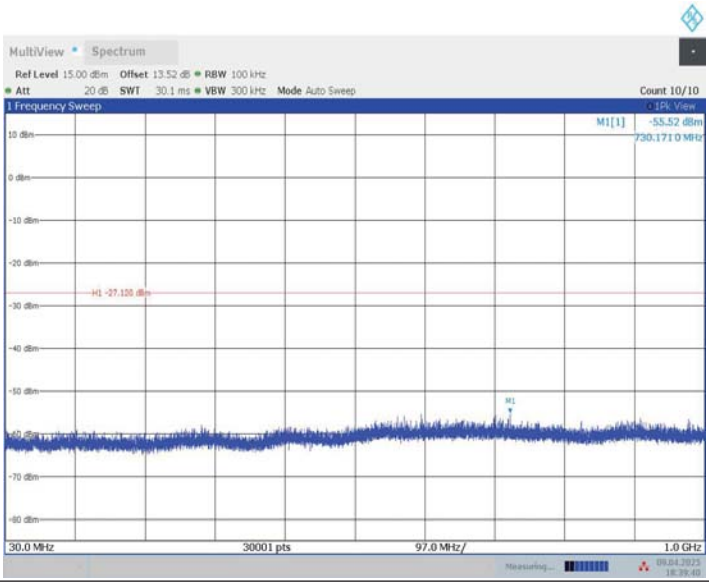


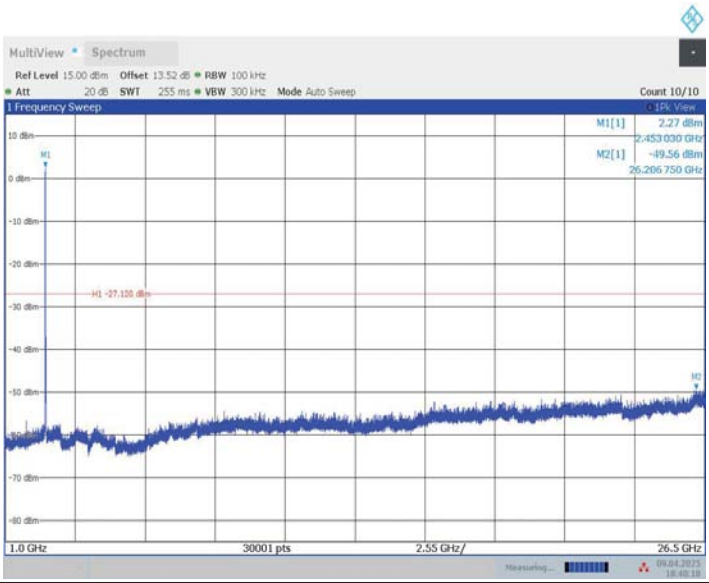
11AX20MIMO_Ant9_2462_26Tone_RU0_0~Reference



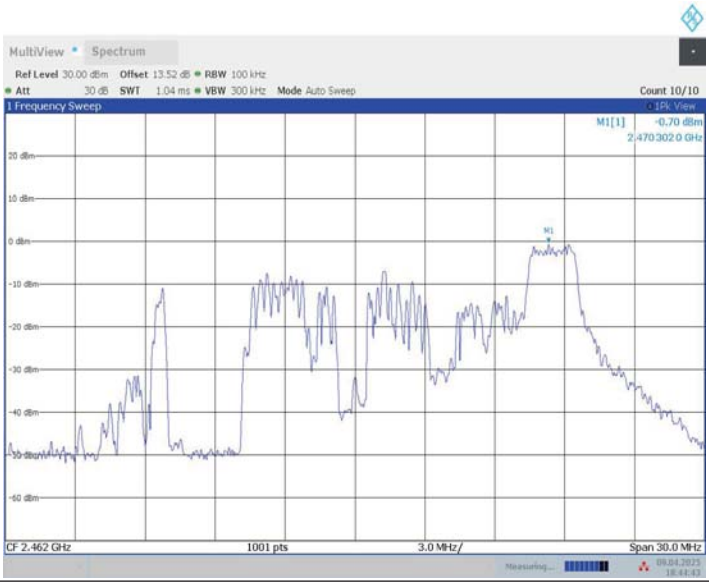
11AX20MIMO_Ant9_2462_26Tone_RU0_30~1000



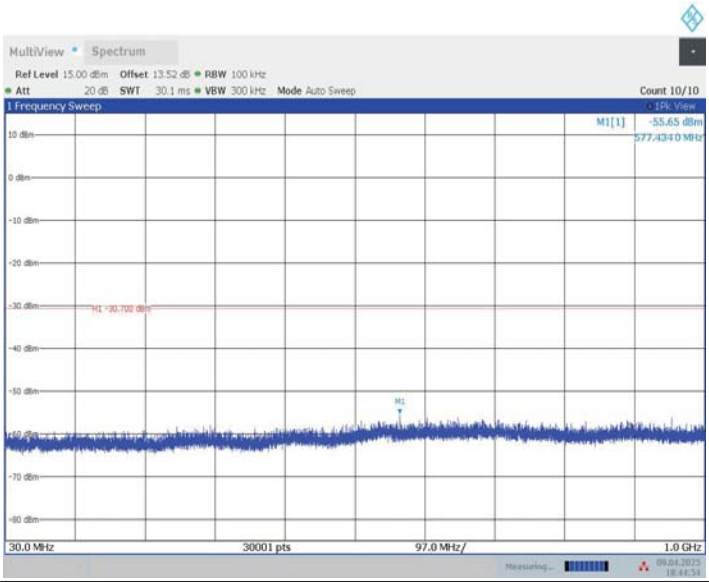
11AX20MIMO_Ant9_2462_26Tone_RU0_1000~26500



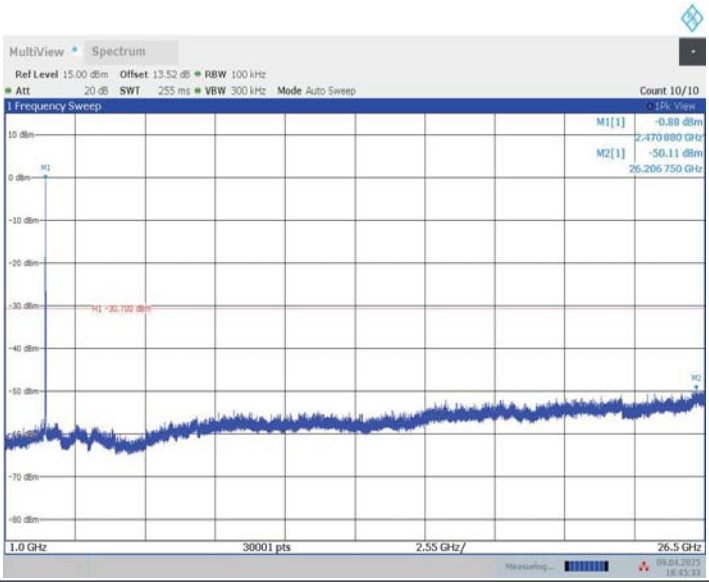
11AX20MIMO_Ant9_2462_26Tone_RU8_0~Reference



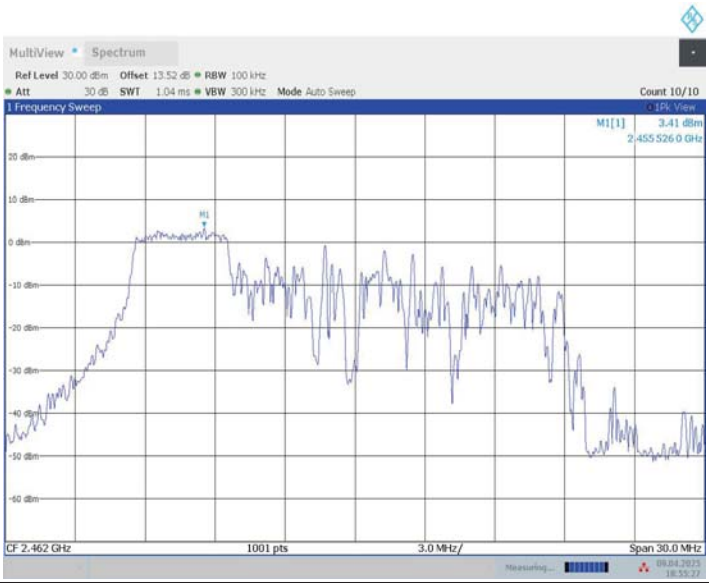
11AX20MIMO_Ant9_2462_26Tone_RU8_30~1000



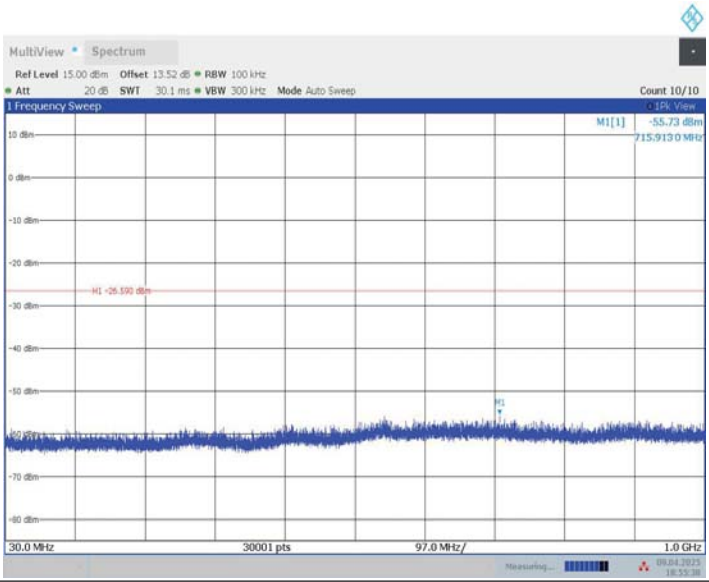
11AX20MIMO_Ant9_2462_26Tone_RU8_1000~26500



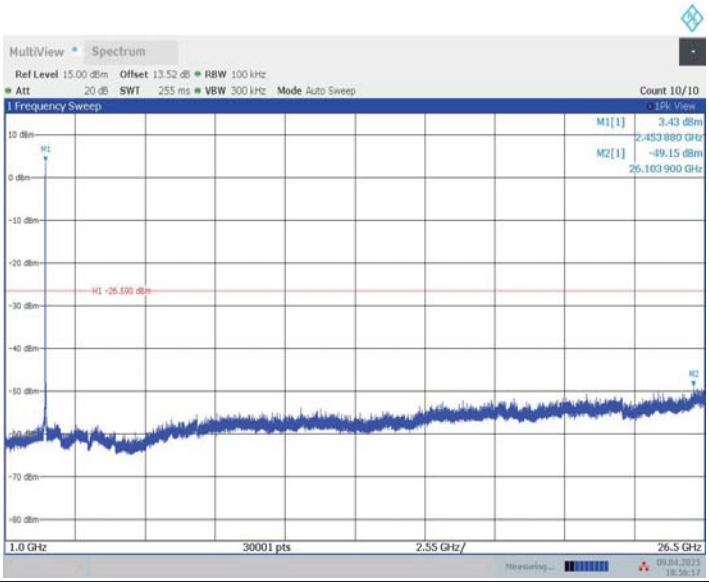
11AX20MIMO_Ant9_2462_52Tone_RU37_0~Reference



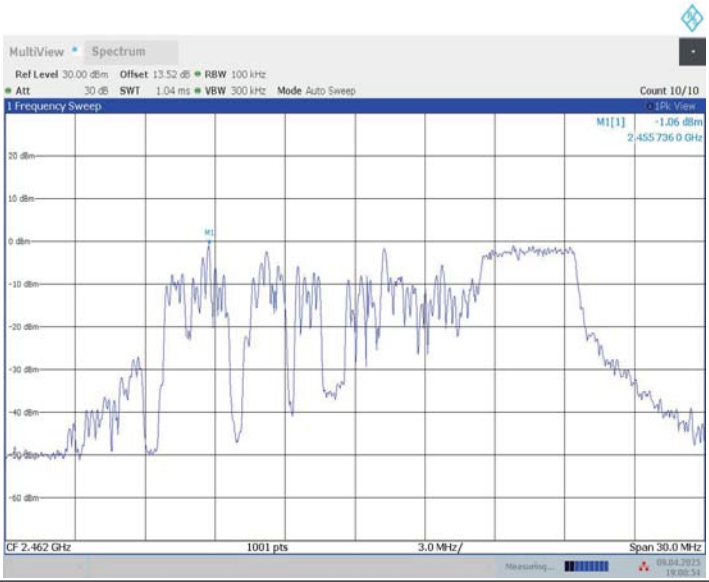
11AX20MIMO_Ant9_2462_52Tone_RU37_30~1000



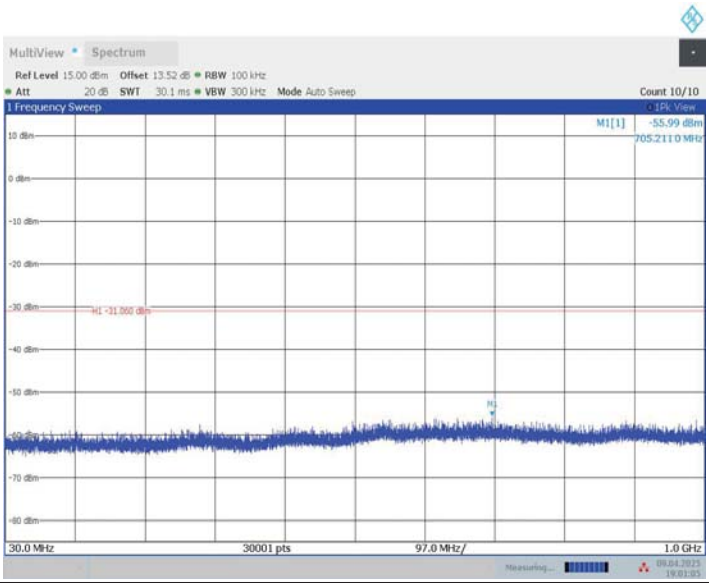
11AX20MIMO_Ant9_2462_52Tone_RU37_1000~26500



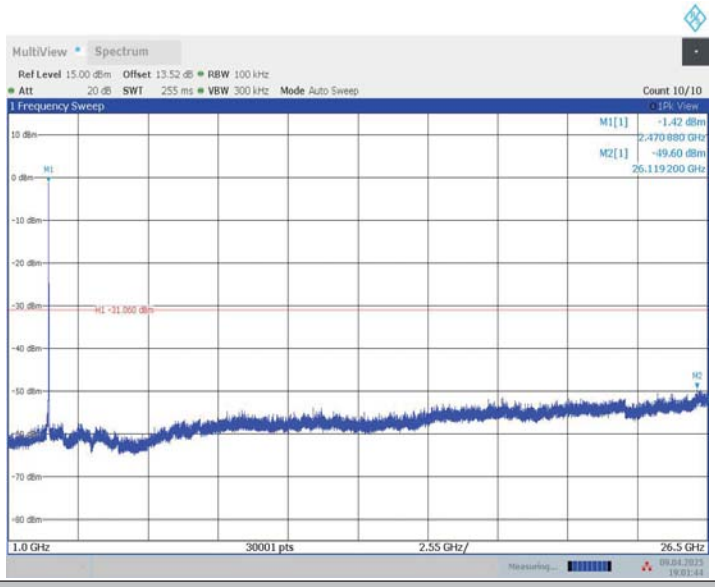
11AX20MIMO_Ant9_2462_52Tone_RU40_0~Reference



11AX20MIMO_Ant9_2462_52Tone_RU40_30~1000



11AX20MIMO_Ant9_2462_52Tone_RU40_1000~26500



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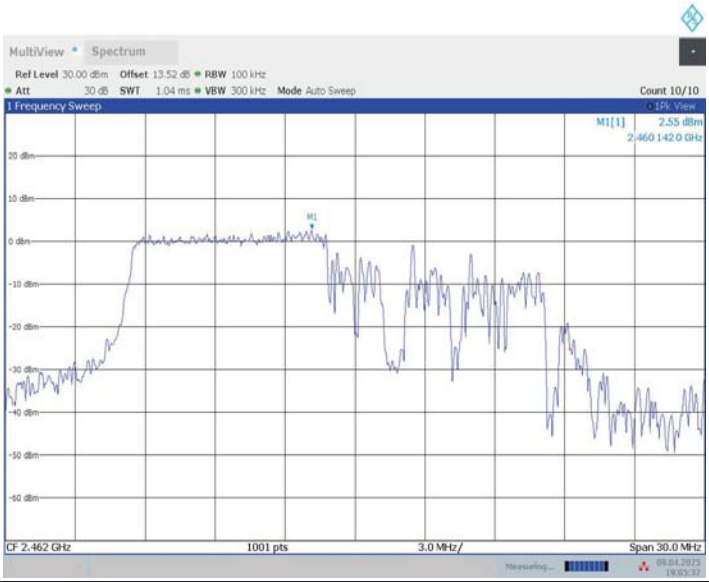
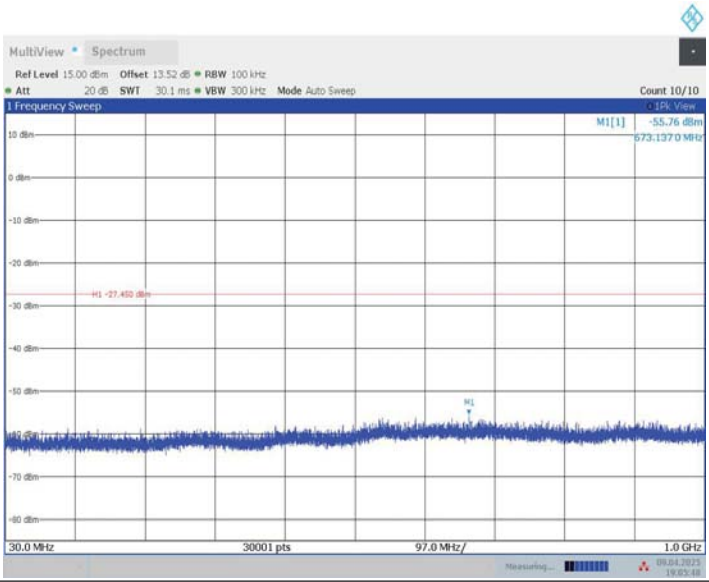
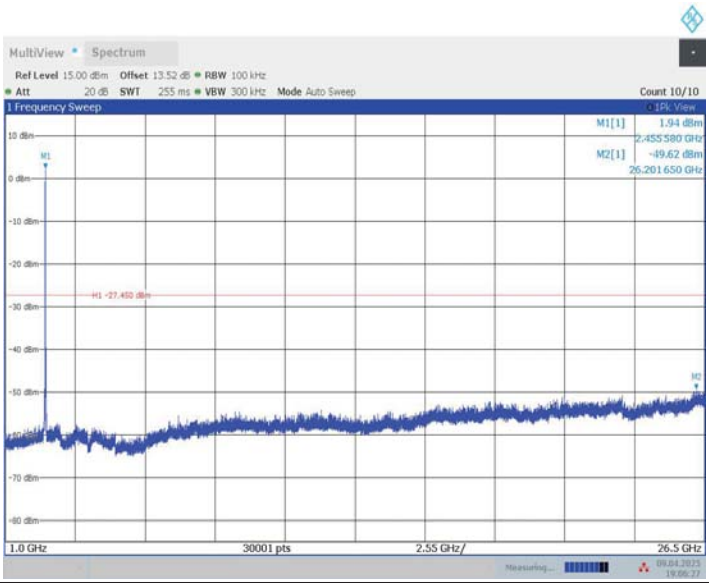


11AX20MIMO_Ant9_2462_106Tone_RU53_30~1000



11AX20MIMO_Ant9_2462_106Tone_RU53_1000~26500



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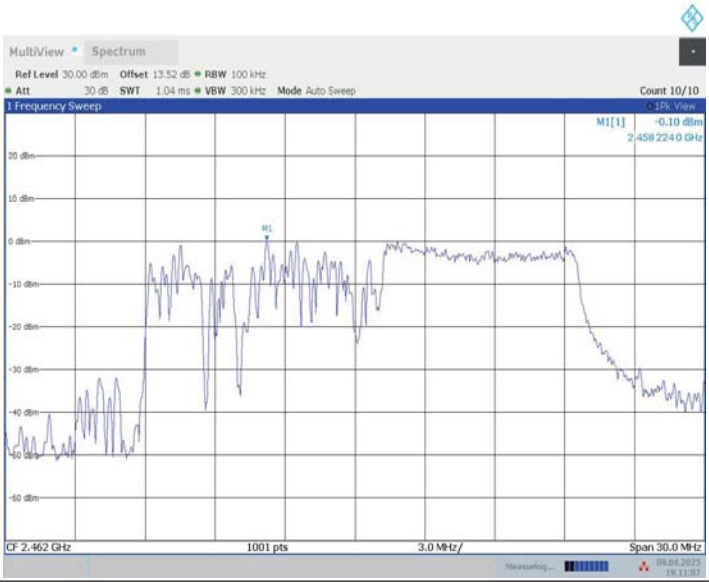
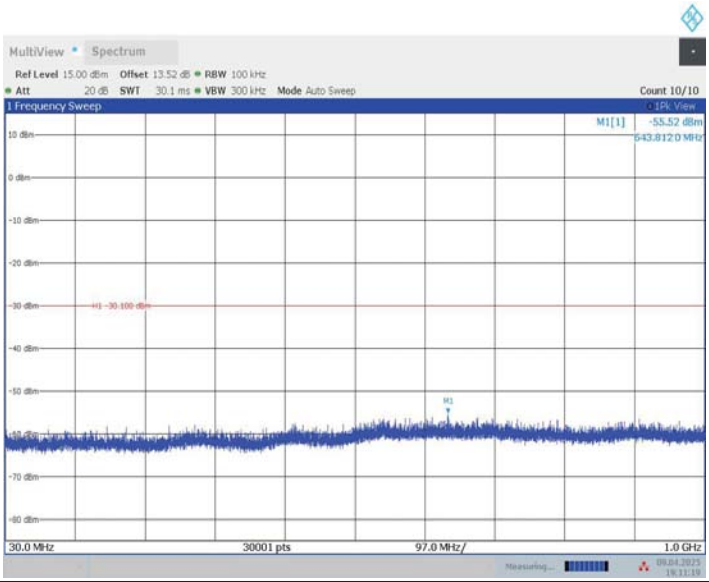
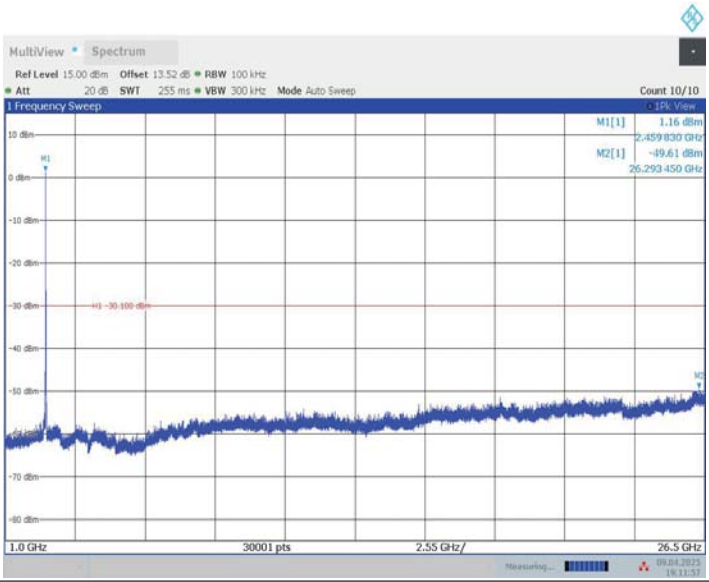


11AX20MIMO_Ant9_2462_106Tone_RU54_30~1000



11AX20MIMO_Ant9_2462_106Tone_RU54_1000~26500



Conclusion: Pass

A.6.2 Transmitter Spurious Emission - Radiated

Method of Measurement: See ANSI C63.10-2013-clause 6.4 &6.5 & 6.6

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 of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Frequency (MHz)	Field strength(μV/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

Test Condition

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	100KHz/300KHz	5
1000-4000	1MHz/1MHz	15
4000-18000	1MHz/1MHz	40
18000-26500	1MHz/1MHz	20

EUT ID: UT84a

Measurement Results:

FULL RB

802.11b mode

Mode	Channel	Test Results	Conclusion
802.11b	1	Fig.A.6.2.1	P
	11	Fig.A.6.2.2	P

802.11g mode

Mode	Channel	Test Results	Conclusion
802.11g	1	Fig.A.6.2.3	P
	2	Fig.A.6.2.4	P
	11	Fig.A.6.2.5	P

802.11n-HT20 mode

Mode	Channel	Test Results	Conclusion
802.11n (HT20)	1	Fig.A.6.2.6	P
	2	Fig.A.6.2.7	P
	3	Fig.A.6.2.8	P
	11	Fig.A.6.2.9	P

802.11n-HT40 mode

Mode	Channel	Test Results	Conclusion
802.11n (HT40)	3	Fig.A.6.2.10	P
	5	Fig.A.6.2.11	P
	7	Fig.A.6.2.12	P
	9	Fig.A.6.2.13	P

802.11ax-HT20 mode

Mode	Channel	Test Results	Conclusion
802.11ax (HT20)	1	Fig.A.6.2.14	P
	2	Fig.A.6.2.15	P
	3	Fig.A.6.2.16	P
	11	Fig.A.6.2.17	P

802.11ax-HT40 mode

Mode	Channel	Test Results	Conclusion
802.11ax (HT40)	3	Fig.A.6.2.18	P
	4	Fig.A.6.2.19	P
	7	Fig.A.6.2.20	P
	9	Fig.A.6.2.21	P

Partial RB

Mode	Channel	RU size and index	Test Results	Conclusion
802.11ax HT20	1	52RU-index37	Fig.A.6.2.22	**P**
	11	52RU-index40	Fig.A.6.2.23	**P**

Mode	Channel	RU size and index	Test Results	Conclusion
802.11ax HT40	1	242RU-index61	Fig.A.6.2.24	**P**
	11	242RU-index62	Fig.A.6.2.25	**P**

Note1: All partial RU and full RU have been tested, in spurious domain there are basically noises with suspicious emission, thus only the full RU results were reported.

Note2: All SISO and MIMO emissions have been checked, only the worst cases were reported.

Conclusion: Pass

Note:

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_{Mea}+$A_{Rpl=}$ P_{Mea}+Cable Loss+Antenna Factor

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)
17928.500	56.21	-25.40	42.30	39.31	74.00	17.79	H
13877.000	51.79	-28.90	40.90	39.79	74.00	22.21	H
12709.000	49.39	-30.40	39.40	40.39	74.00	24.61	V
9882.500	47.10	-33.10	38.10	42.10	74.00	26.90	H
7244.500	45.84	-34.50	37.40	42.94	74.00	28.16	V
2384.000	56.40	-19.20	27.50	48.10	74.00	17.60	H

Peak
802.11b
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)
17831.000	56.05	-25.40	42.30	39.15	74.00	17.95	H
13790.500	52.22	-29.10	40.90	40.42	74.00	21.78	H
11917.500	49.55	-31.00	38.80	41.75	74.00	24.45	H
8863.000	47.27	-33.60	37.70	43.17	74.00	26.73	H
7208.000	46.07	-34.50	37.40	43.17	74.00	27.93	H
4764.000	41.02	-36.80	32.50	45.32	74.00	32.98	V

Peak
802.11b
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)
17934.000	56.49	-25.40	42.30	39.59	74.00	17.51	V
14675.000	51.84	-28.30	39.40	40.74	74.00	22.16	H
11853.500	49.53	-31.00	38.90	41.63	74.00	24.47	H
9211.500	47.82	-33.90	38.00	43.72	74.00	26.18	H
7141.500	46.41	-34.50	37.30	43.61	74.00	27.59	H
2485.800	57.38	-19.00	27.90	48.48	74.00	16.62	H

Peak
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)
17939.000	56.60	-25.40	42.30	39.70	74.00	17.40	H
13840.500	51.94	-29.10	40.90	40.14	74.00	22.06	V
12481.500	49.32	-30.10	39.00	40.42	74.00	24.68	H
9611.000	47.91	-33.00	37.90	43.01	74.00	26.09	H
7310.000	45.87	-35.10	37.50	43.47	74.00	28.13	V
2389.600	62.65	-19.20	27.50	54.35	74.00	11.35	H

Peak
802.11g
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)
17853.500	56.52	-25.40	42.30	39.62	74.00	17.48	H
13717.000	51.97	-29.10	40.70	40.37	74.00	22.03	H
12292.500	49.61	-30.10	38.80	40.91	74.00	24.39	H
9631.500	47.91	-33.00	37.90	43.01	74.00	26.09	V
7520.000	46.27	-34.60	37.50	43.37	74.00	27.73	H
4967.500	41.00	-36.70	32.90	44.80	74.00	33.00	H

Peak
802.11g
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)
17895.000	56.66	-25.40	42.30	39.76	74.00	17.34	V
13859.500	51.68	-29.10	40.90	39.88	74.00	22.32	V
12880.000	49.32	-30.60	39.70	40.22	74.00	24.68	H
9126.000	48.02	-33.70	37.80	43.92	74.00	25.98	V
7433.000	46.35	-34.30	37.50	43.15	74.00	27.65	V
2496.200	57.99	-19.00	27.90	49.09	74.00	16.01	H

Peak

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)
17928.000	56.75	-25.40	42.30	39.85	74.00	17.25	V
13840.000	51.65	-29.10	40.90	39.85	74.00	22.35	H
11793.000	50.11	-31.30	38.90	42.51	74.00	23.89	H
8932.000	47.22	-33.60	37.70	43.12	74.00	26.78	V
7722.500	45.93	-34.60	37.10	43.43	74.00	28.07	H
2388.900	63.87	-19.20	27.50	55.57	74.00	10.13	H

Peak

802.11n-HT20

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)
17909.000	56.19	-25.40	42.30	39.29	74.00	17.81	H
13649.500	51.80	-29.90	40.60	41.10	74.00	22.20	V
12220.000	49.62	-30.90	38.70	41.82	74.00	24.38	V
9849.500	47.21	-33.10	38.00	42.31	74.00	26.79	H
7243.000	46.63	-34.50	37.40	43.73	74.00	27.37	V
4924.500	42.04	-36.90	32.90	46.04	74.00	31.96	V

Peak

802.11n-HT20

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)
17980.000	56.44	-25.40	42.30	39.54	74.00	17.56	H
13841.000	51.92	-29.10	40.90	40.12	74.00	22.08	V
12795.000	49.43	-30.40	39.60	40.23	74.00	24.57	H
9619.000	47.28	-33.00	37.90	42.38	74.00	26.72	H
7492.000	45.60	-34.60	37.50	42.70	74.00	28.40	H
2486.000	58.63	-19.00	27.90	49.73	74.00	15.37	H

Peak

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)
17958.500	56.76	-25.40	42.30	39.86	74.00	17.24	V
14107.500	51.84	-28.70	40.50	40.04	74.00	22.16	V
12562.500	49.93	-30.40	39.00	41.33	74.00	24.07	H
9612.000	47.44	-33.00	37.90	42.54	74.00	26.56	V
7613.500	46.18	-34.80	37.40	43.58	74.00	27.82	H
2385.800	59.18	-19.20	27.50	50.88	74.00	14.82	H

Peak

802.11n-HT40

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)
17908.000	55.92	-25.40	42.30	39.02	74.00	18.08	V
13690.500	51.91	-29.90	40.70	41.11	74.00	22.09	H
12489.500	49.47	-30.10	39.00	40.57	74.00	24.53	H
9097.500	47.09	-33.50	37.70	42.89	74.00	26.91	V
7230.000	46.96	-34.50	37.40	44.06	74.00	27.04	V
4879.500	41.34	-36.90	32.80	45.44	74.00	32.66	H

Peak

802.11n-HT40

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)
17937.500	55.98	-25.40	42.30	39.08	74.00	18.02	H
14073.500	51.99	-28.70	40.50	40.19	74.00	22.01	H
12371.500	49.59	-30.10	38.80	40.89	74.00	24.41	H
8962.000	48.00	-33.60	37.60	44.00	74.00	26.00	H
7167.000	46.68	-34.50	37.30	43.88	74.00	27.32	H
2489.200	61.82	-19.00	27.90	52.92	74.00	12.18	H

Peak

802.11ax-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)
17920.000	55.88	-25.40	42.30	38.98	74.00	18.12	H
14178.000	51.62	-29.40	40.40	40.62	74.00	22.38	H
12893.000	49.76	-30.60	39.70	40.66	74.00	24.24	V
9170.500	46.97	-33.70	37.90	42.77	74.00	27.03	H
7251.000	46.34	-34.50	37.40	43.44	74.00	27.66	H
2389.700	63.29	-19.20	27.50	54.99	74.00	10.71	H

Peak

802.11ax-HT20

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)
17947.000	56.08	-25.40	42.30	39.18	74.00	17.92	V
14765.000	51.64	-28.40	39.20	40.84	74.00	22.36	H
12444.000	49.92	-30.10	38.80	41.22	74.00	24.08	H
9771.000	47.09	-33.10	38.00	42.19	74.00	26.91	H
7433.000	45.75	-34.30	37.50	42.55	74.00	28.25	H
4956.000	41.62	-36.70	32.90	45.42	74.00	32.38	V

Peak

802.11ax-HT20

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)
17922.500	56.41	-25.40	42.30	39.51	74.00	17.59	V
14173.000	51.93	-29.40	40.40	40.93	74.00	22.07	H
12046.000	49.59	-31.50	38.70	42.39	74.00	24.41	H
9228.000	46.86	-33.90	38.00	42.76	74.00	27.14	V
7505.000	46.27	-34.60	37.50	43.37	74.00	27.73	H
2485.100	61.78	-19.00	27.90	52.88	74.00	12.22	H

Peak

802.11ax-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)
17916.500	56.11	-25.40	42.30	39.21	74.00	17.89	V
13740.500	52.00	-29.10	40.70	40.40	74.00	22.00	H
12951.500	49.34	-29.80	39.70	39.44	74.00	24.66	H
9640.000	47.15	-33.00	37.90	42.25	74.00	26.85	V
7532.000	46.98	-34.60	37.40	44.18	74.00	27.02	H
2389.600	59.13	-19.20	27.50	50.83	74.00	14.87	H

Peak

802.11ax-HT40

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)
17907.000	56.38	-25.40	42.30	39.48	74.00	17.62	H
13845.500	52.30	-29.10	40.90	40.50	74.00	21.70	H
12998.000	49.48	-29.80	39.80	39.48	74.00	24.52	H
9000.500	46.91	-33.60	37.60	42.91	74.00	27.09	V
7426.000	46.62	-34.30	37.50	43.42	74.00	27.38	H
4853.500	41.46	-36.90	32.80	45.56	74.00	32.54	H

Peak

802.11ax-HT40

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)
17932.000	56.51	-25.40	42.30	39.61	74.00	17.49	V
13845.500	51.78	-29.10	40.90	39.98	74.00	22.22	V
12378.000	49.33	-30.10	38.80	40.63	74.00	24.67	V
9709.500	47.30	-33.10	37.90	42.50	74.00	26.70	V
7505.500	46.11	-34.60	37.50	43.21	74.00	27.89	V
2486.500	61.82	-19.00	27.90	52.92	74.00	12.18	H

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)
17938.500	47.19	-25.40	42.30	30.29	54.00	6.81	H
13967.500	42.21	-28.90	40.70	30.41	54.00	11.79	H
12908.500	39.57	-30.60	39.70	30.47	54.00	14.43	V
9243.000	37.46	-33.90	38.00	33.36	54.00	16.54	V
7430.500	36.34	-34.30	37.50	33.14	54.00	17.66	V
2383.900	50.46	-19.20	27.50	42.16	54.00	3.54	H

Average

802.11b

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)
17916.000	46.83	-25.40	42.30	29.93	54.00	7.17	V
13766.000	42.53	-29.10	40.90	30.73	54.00	11.47	H
12797.500	39.63	-30.40	39.60	30.43	54.00	14.37	H
9656.500	38.00	-33.00	37.80	33.20	54.00	16.00	H
7230.000	36.55	-34.50	37.40	33.65	54.00	17.45	H
4923.500	32.21	-36.90	32.90	36.21	54.00	21.79	V

Average

802.11b

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)
17930.500	46.93	-25.40	42.30	30.03	54.00	7.07	V
14071.500	42.49	-28.70	40.50	30.69	54.00	11.51	V
12827.500	39.90	-30.60	39.60	30.90	54.00	14.10	H
9115.500	37.63	-33.70	37.80	33.53	54.00	16.37	H
7435.000	36.77	-34.30	37.50	33.57	54.00	17.23	H
2486.800	50.56	-19.00	27.90	41.66	54.00	3.44	H

Average

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)
17926.000	46.38	-25.40	42.30	29.48	54.00	7.62	V
13749.500	42.28	-29.10	40.70	30.68	54.00	11.72	H
12838.500	40.04	-30.60	39.60	31.04	54.00	13.96	H
9212.500	37.50	-33.90	38.00	33.40	54.00	16.50	V
7509.500	36.28	-34.60	37.50	33.38	54.00	17.72	V
2389.400	50.70	-19.20	27.50	42.40	54.00	3.30	H

Average

802.11g

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)
17926.500	47.03	-25.40	42.30	30.13	54.00	6.97	H
13737.000	42.12	-29.10	40.70	30.52	54.00	11.88	H
12520.000	39.91	-30.10	39.00	31.01	54.00	14.09	H
9637.000	37.69	-33.00	37.90	32.79	54.00	16.31	H
7529.500	36.32	-34.60	37.40	33.52	54.00	17.68	V
4995.000	31.73	-36.70	32.90	35.53	54.00	22.27	V

Average

802.11g

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)
17880.500	46.53	-25.40	42.30	29.63	54.00	7.47	V
13755.500	42.38	-29.10	40.70	30.78	54.00	11.62	V
12435.000	39.74	-30.10	38.80	31.04	54.00	14.26	V
9615.500	37.62	-33.00	37.90	32.72	54.00	16.38	H
7415.000	36.47	-34.90	37.50	33.87	54.00	17.53	H
2485.000	46.96	-19.00	27.90	38.06	54.00	7.04	H

Average

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)
17952.000	46.85	-25.40	42.30	29.95	54.00	7.15	V
14067.500	42.15	-28.70	40.50	30.35	54.00	11.85	H
12985.000	39.96	-29.80	39.80	29.96	54.00	14.04	H
9703.000	37.58	-33.10	37.90	32.78	54.00	16.42	V
7516.000	36.40	-34.60	37.50	33.50	54.00	17.60	H
2390.000	50.40	-19.20	27.50	42.10	54.00	3.60	H

Average

802.11n-HT20

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)
17920.500	47.29	-25.40	42.30	30.39	54.00	6.71	V
13749.500	42.32	-29.10	40.70	30.72	54.00	11.68	H
12404.000	39.62	-30.10	38.80	30.92	54.00	14.38	H
9124.500	37.35	-33.70	37.80	33.25	54.00	16.65	H
7422.500	37.07	-34.90	37.50	34.47	54.00	16.93	H
4937.000	31.54	-36.90	32.90	35.54	54.00	22.46	V

Average

802.11n-HT20

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)
17931.500	46.77	-25.40	42.30	29.87	54.00	7.23	H
13771.000	42.48	-29.10	40.90	30.68	54.00	11.52	H
12914.500	40.14	-30.60	39.70	31.04	54.00	13.86	H
9743.000	37.48	-33.10	37.90	32.68	54.00	16.52	H
7231.500	36.58	-34.50	37.40	33.68	54.00	17.42	V
2485.100	47.49	-19.00	27.90	38.59	54.00	6.51	H

Average

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)
17930.000	46.61	-25.40	42.30	29.71	54.00	7.39	V
14134.500	42.43	-29.40	40.50	31.33	54.00	11.57	V
12662.000	39.61	-30.40	39.20	30.81	54.00	14.39	H
9138.000	37.54	-33.70	37.80	33.44	54.00	16.46	V
7524.500	36.52	-34.60	37.50	33.62	54.00	17.48	V
2389.600	48.29	-19.20	27.50	39.99	54.00	5.71	H

Average

802.11n-HT40

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)
17899.000	46.62	-25.40	42.30	29.72	54.00	7.38	H
14116.500	42.06	-29.40	40.50	30.96	54.00	11.94	V
12847.500	39.58	-30.60	39.60	30.58	54.00	14.42	V
9659.000	37.32	-33.00	37.80	32.52	54.00	16.68	V
7217.500	36.54	-34.50	37.40	33.64	54.00	17.46	H
4951.000	31.86	-36.70	32.90	35.66	54.00	22.14	H

Average

802.11n-HT40

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)
17928.000	46.45	-25.40	42.30	29.55	54.00	7.55	H
13715.500	42.48	-29.10	40.70	30.88	54.00	11.52	H
12800.000	39.46	-30.40	39.60	30.26	54.00	14.54	V
9557.000	37.85	-33.20	37.90	33.15	54.00	16.15	V
7521.500	36.51	-34.60	37.50	33.61	54.00	17.49	V
2486.000	49.57	-19.00	27.90	40.67	54.00	4.43	H

Average

802.11ax-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)
17931.500	47.07	-25.40	42.30	30.17	54.00	6.93	V
13832.000	42.88	-29.10	40.90	31.08	54.00	11.12	V
12842.000	39.80	-30.60	39.60	30.80	54.00	14.20	V
8940.500	37.86	-33.60	37.70	33.76	54.00	16.14	H
7513.000	36.16	-34.60	37.50	33.26	54.00	17.84	H
2389.900	50.81	-19.20	27.50	42.51	54.00	3.19	H

Average

802.11ax-HT20

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)
17918.000	46.66	-25.40	42.30	29.76	54.00	7.34	V
14080.500	42.63	-28.70	40.50	30.83	54.00	11.37	H
12390.000	39.94	-30.10	38.80	31.24	54.00	14.06	V
8890.500	37.73	-33.60	37.70	33.63	54.00	16.27	H
7490.500	36.39	-34.60	37.50	33.49	54.00	17.61	H
4965.500	31.38	-36.70	32.90	35.18	54.00	22.62	V

Average

802.11ax-HT20

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)
17914.500	46.79	-25.40	42.30	29.89	54.00	7.21	V
13816.500	42.11	-29.10	40.90	30.31	54.00	11.89	V
12993.000	39.95	-29.80	39.80	29.95	54.00	14.05	H
9651.500	37.51	-33.00	37.90	32.61	54.00	16.49	V
7526.000	36.85	-34.60	37.40	34.05	54.00	17.15	V
2485.300	48.05	-19.00	27.90	39.15	54.00	5.95	H

Average

802.11ax-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)
17923.500	46.74	-25.40	42.30	29.84	54.00	7.26	H
13743.500	42.11	-29.10	40.70	30.51	54.00	11.89	H
12364.000	39.85	-30.10	38.80	31.15	54.00	14.15	V
9621.500	37.31	-33.00	37.90	32.41	54.00	16.69	V
7175.500	36.52	-34.50	37.30	33.72	54.00	17.48	V
2389.800	47.53	-19.20	27.50	39.23	54.00	6.47	H

Average

802.11ax-HT40

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)
17931.000	46.62	-25.40	42.30	29.72	54.00	7.38	H
13837.500	42.49	-29.10	40.90	30.69	54.00	11.51	H
12897.500	39.75	-30.60	39.70	30.65	54.00	14.25	H
9614.500	37.31	-33.00	37.90	32.41	54.00	16.69	H
7530.500	36.51	-34.60	37.40	33.71	54.00	17.49	V
4937.500	31.54	-36.90	32.90	35.54	54.00	22.46	V

Average

802.11ax-HT40

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)
17964.000	46.93	-25.40	42.30	30.03	54.00	7.07	H
13767.000	42.12	-29.10	40.90	30.32	54.00	11.88	V
12809.500	39.88	-30.40	39.60	30.68	54.00	14.12	V
8917.500	37.66	-33.60	37.70	33.56	54.00	16.34	H
7426.500	36.37	-34.30	37.50	33.17	54.00	17.63	H
2486.500	49.99	-19.00	27.90	41.09	54.00	4.01	H

Test graphs as below:

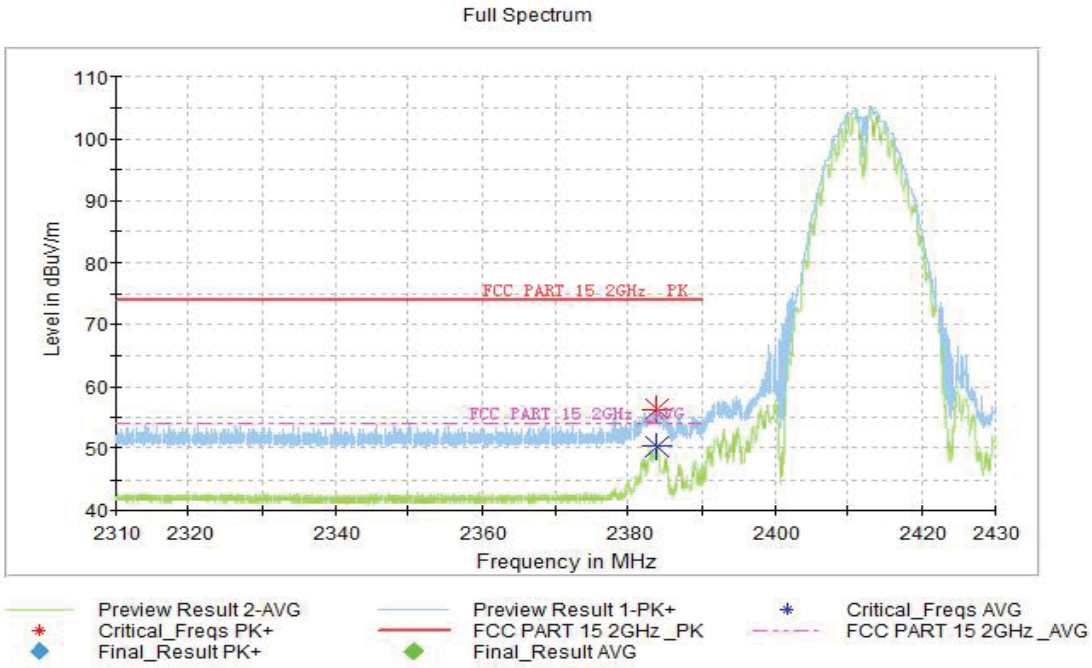


Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.43GHz, FULL RB

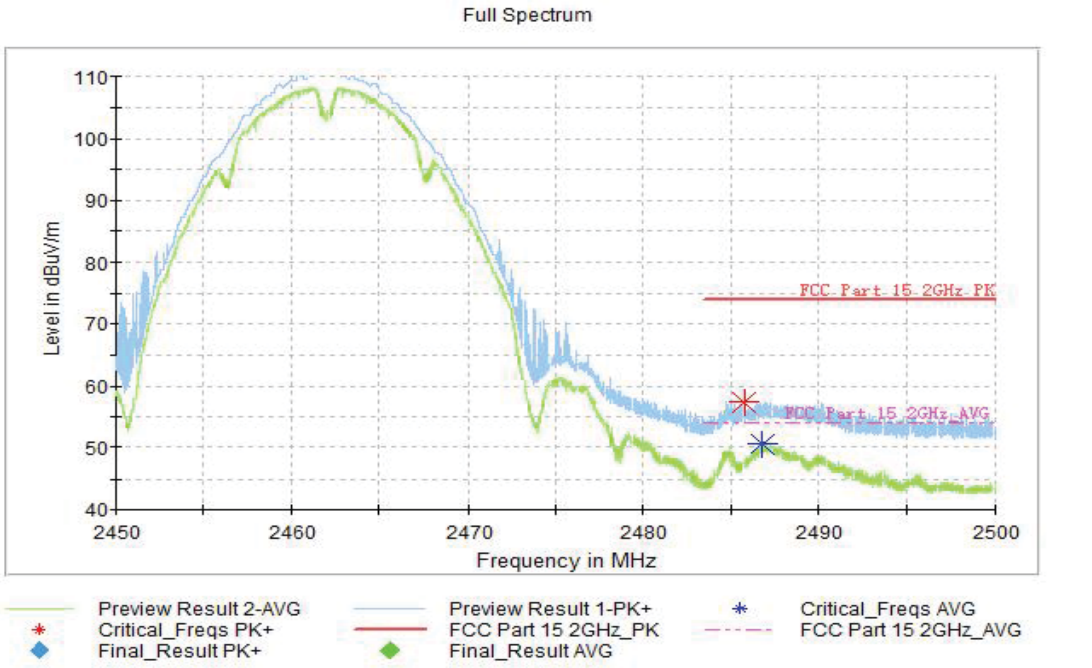


Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz, FULL RB

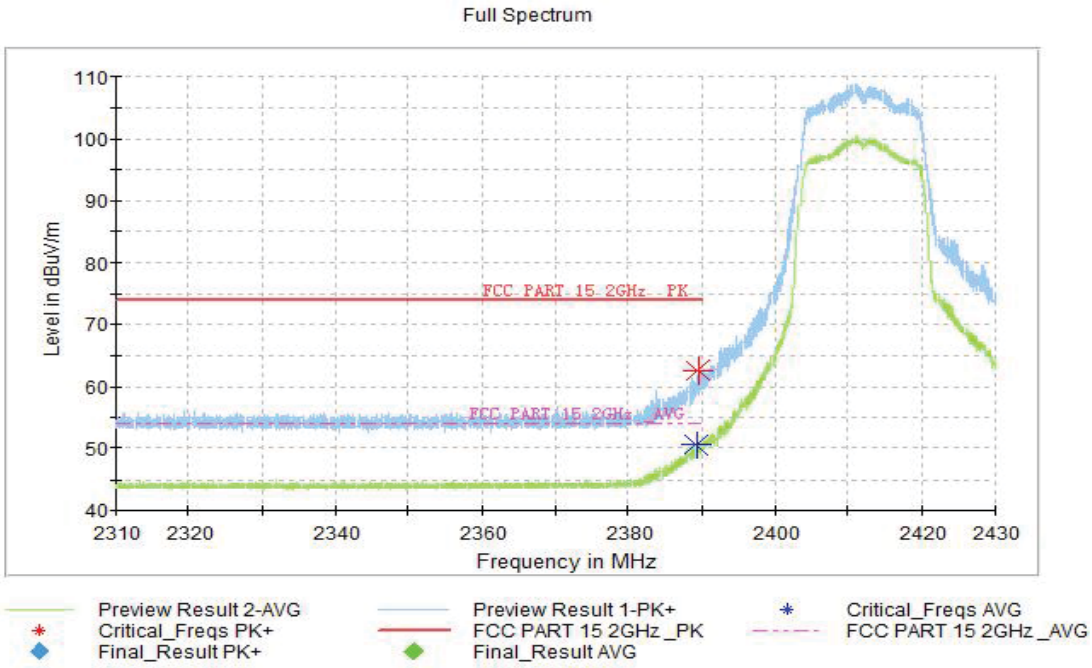


Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.43GHz, FULL RB

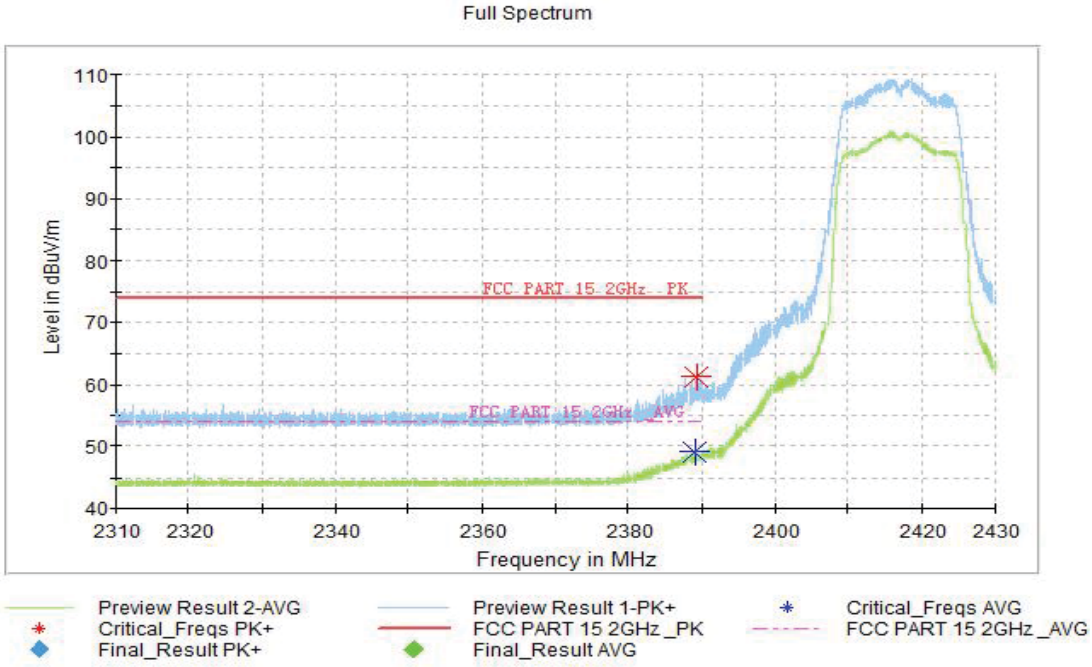


Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch2, 2.31 GHz - 2.43GHz, FULL RB

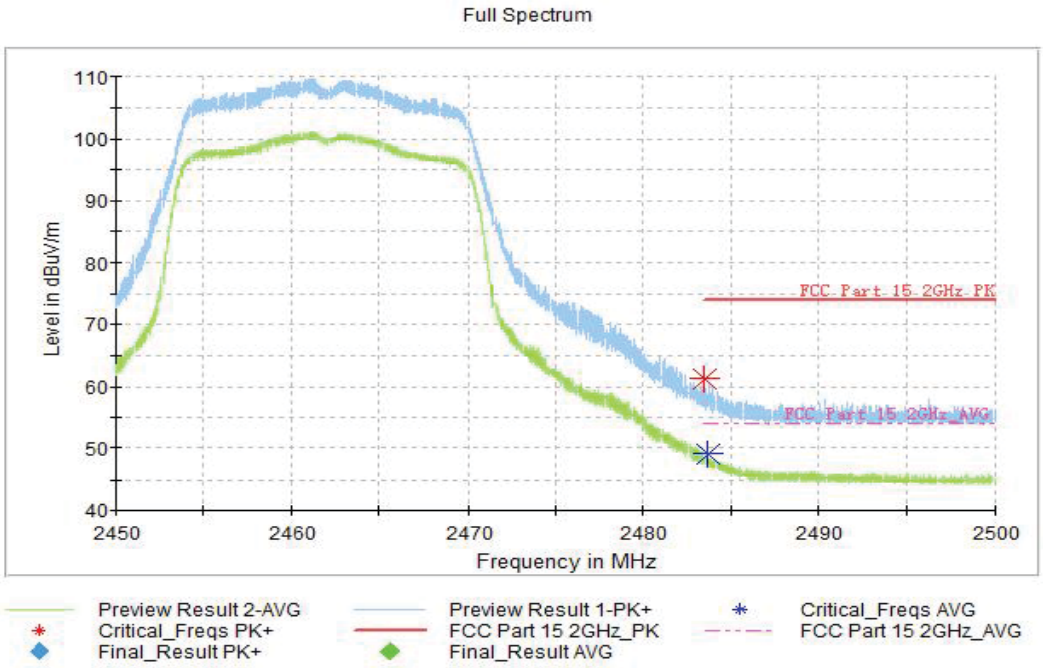


Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz, FULL RB

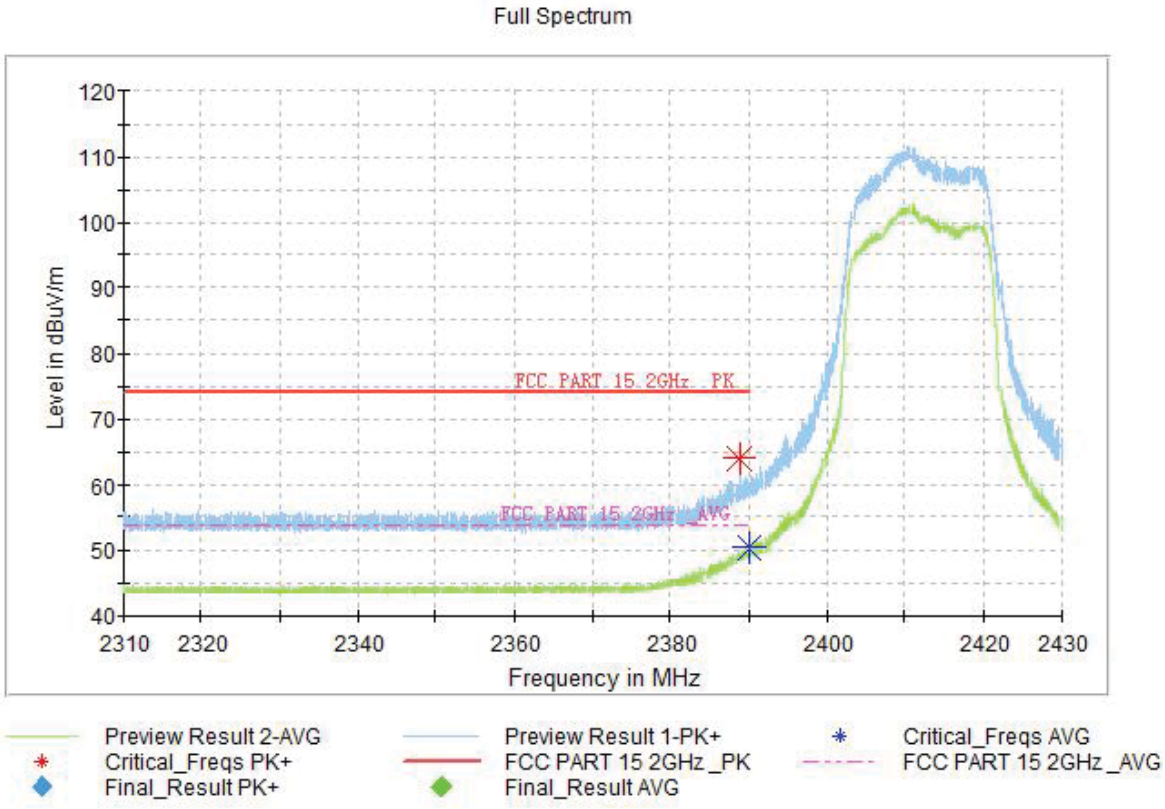


Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31 GHz - 2.43GHz, FULL RB

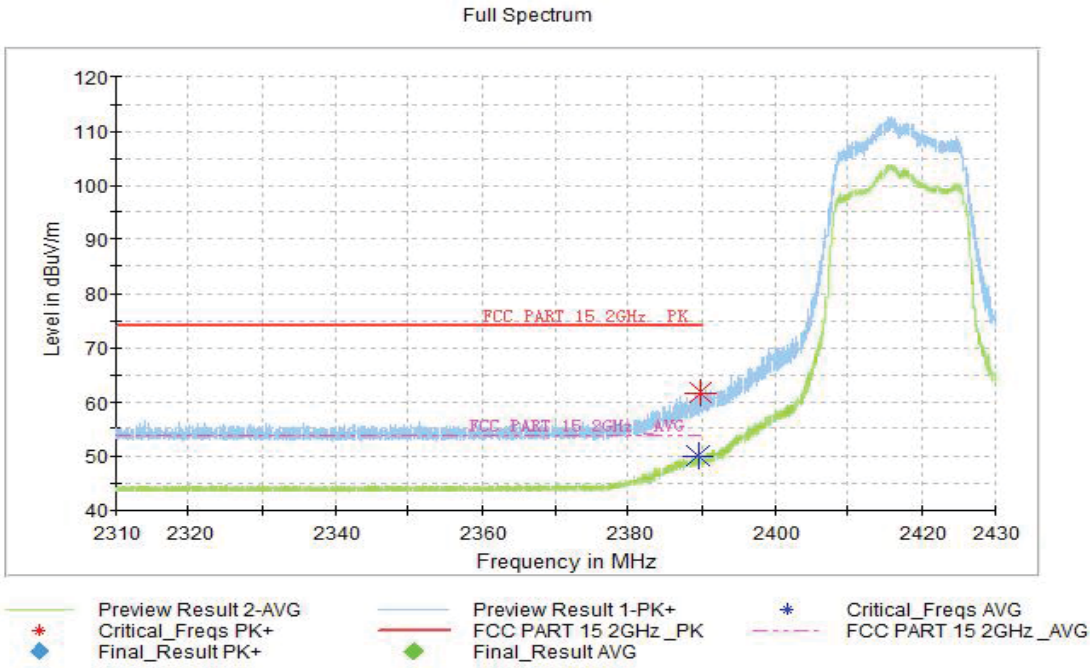


Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch2, 2.31 GHz - 2.43GHz, FULL RB

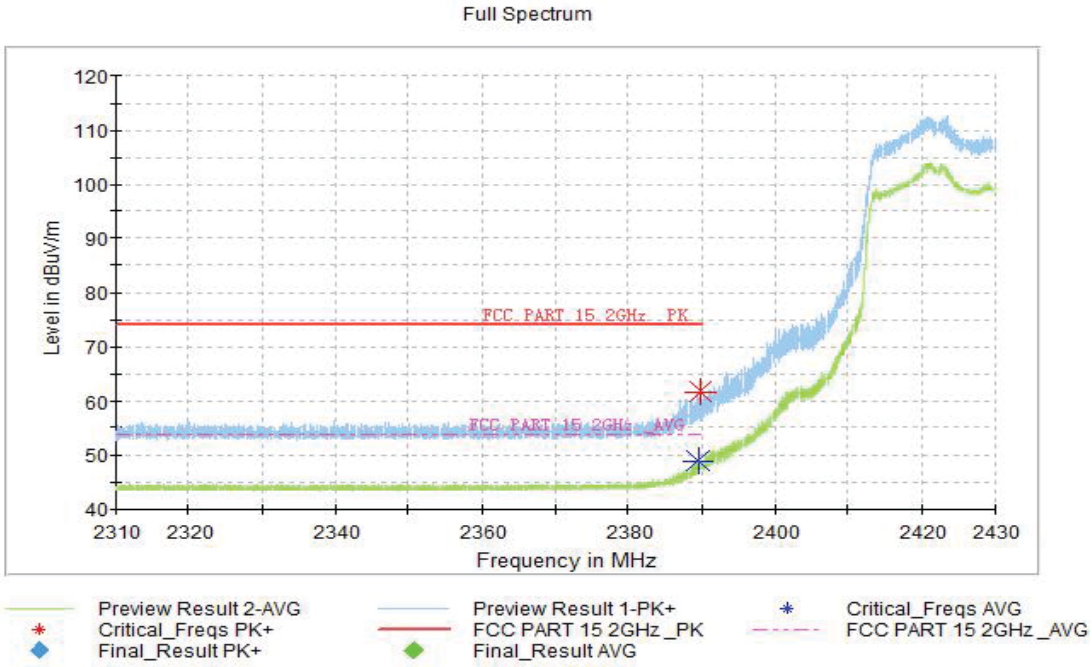


Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch3, 2.31 GHz - 2.43GHz, FULL RB

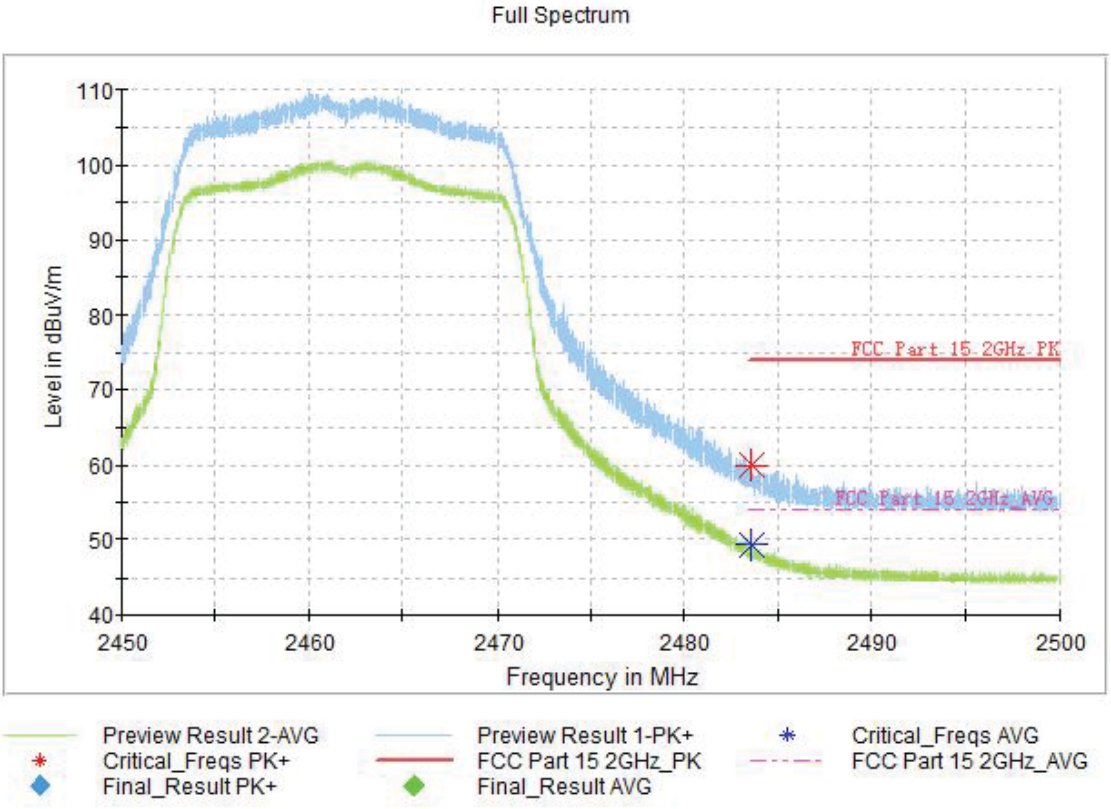


Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz, FULL RB

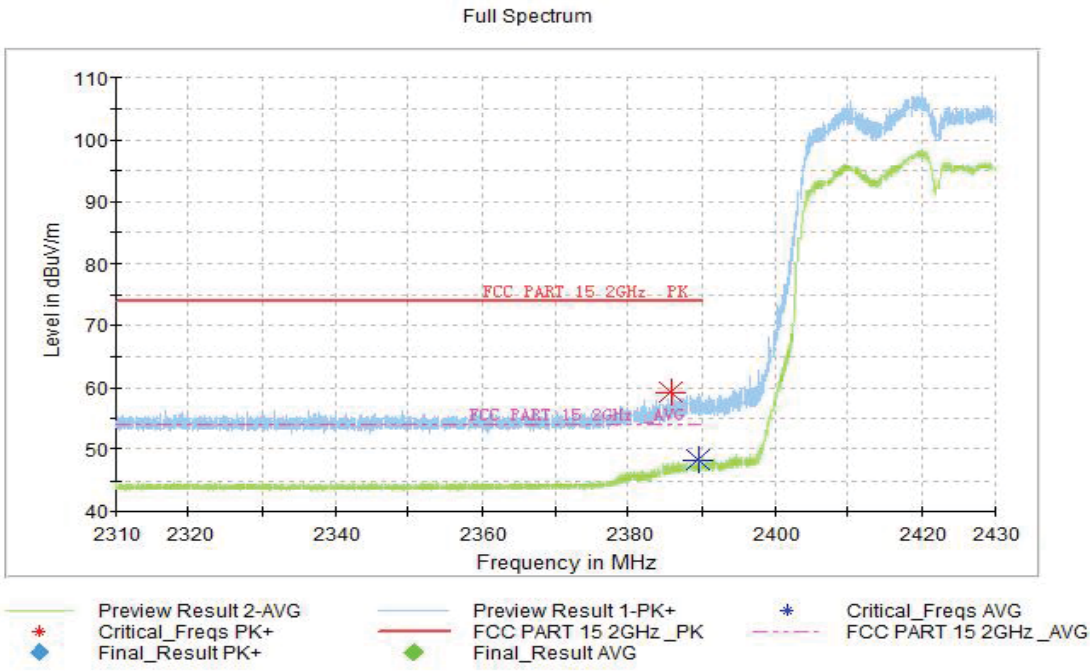


Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31 GHz - 2.43GHz, FULL RB

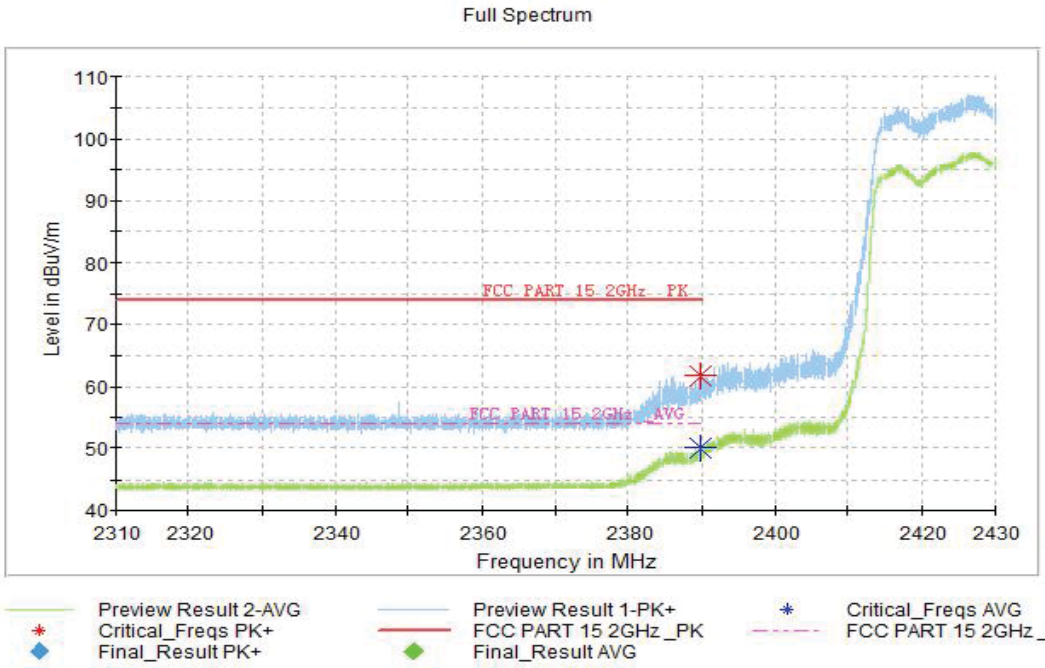


Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch5, 2.31 GHz - 2.43GHz, FULL RB

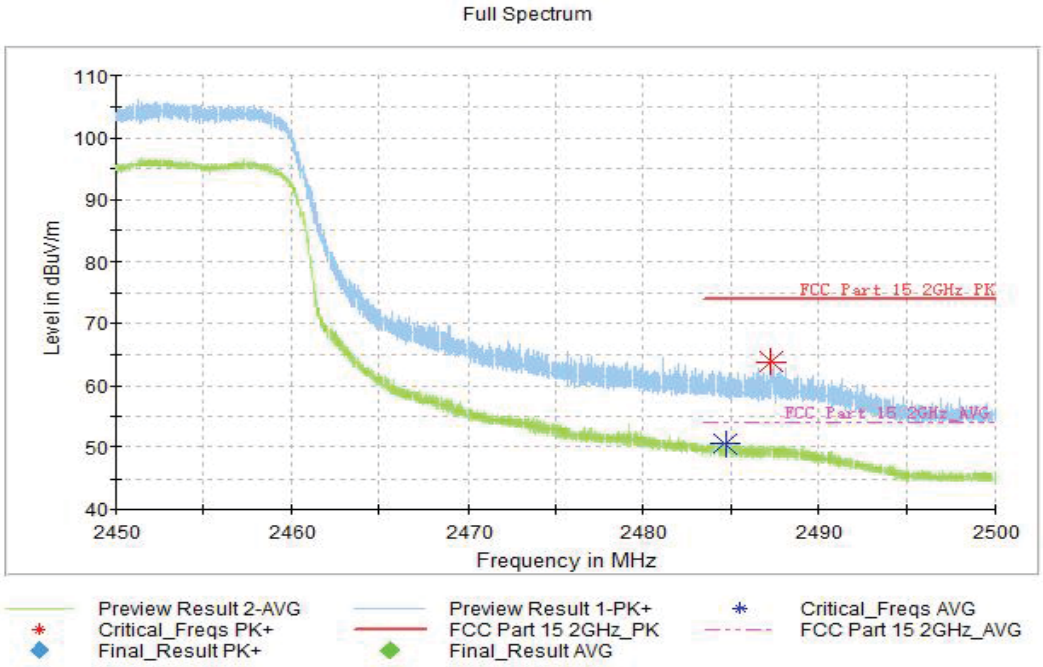


Fig.A.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch7, 2.45 GHz - 2.50GHz, FULL RB

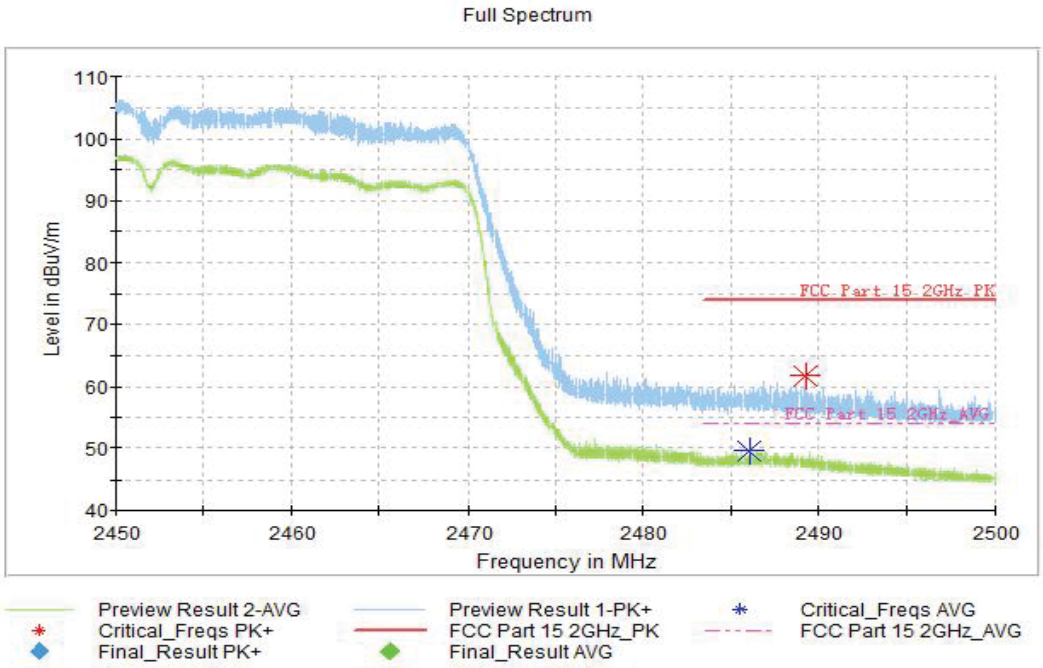


Fig.A.6.2.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz, FULL RB

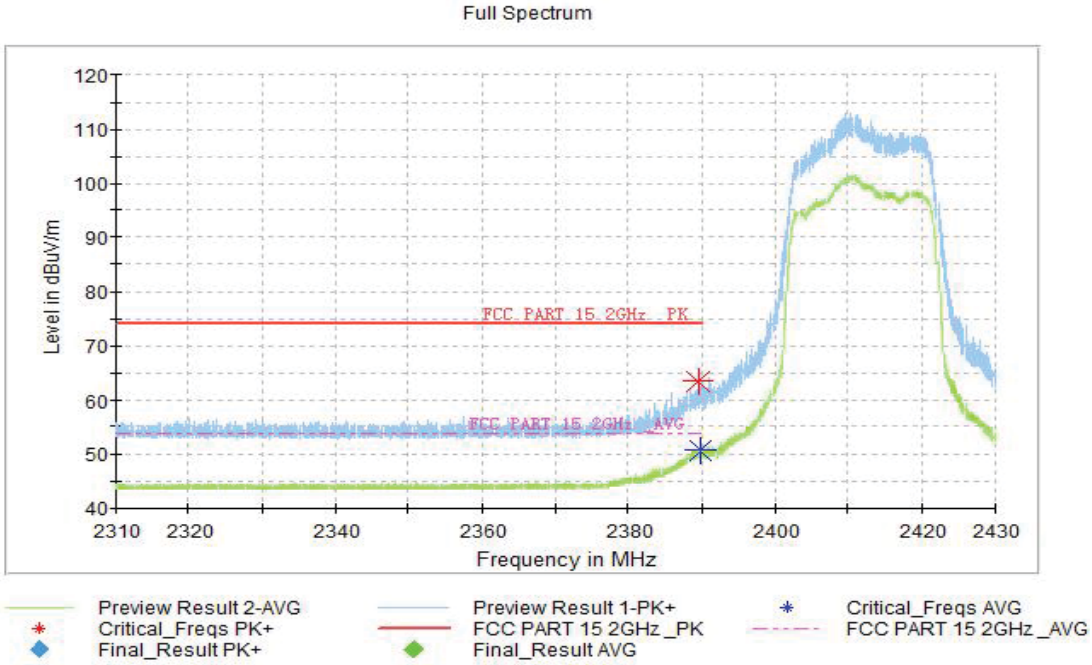


Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, ch1, 2.31 GHz - 2.43GHz, FULL RB

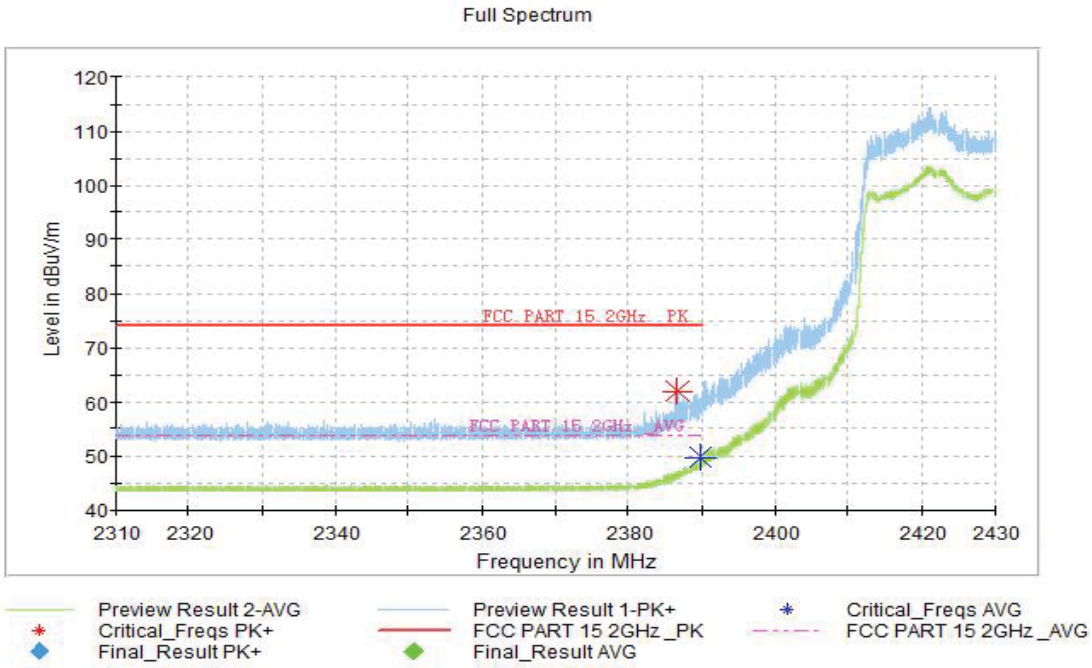


Fig.A.6.2.7 Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, ch2, 2.31 GHz - 2.43GHz, FULL RB

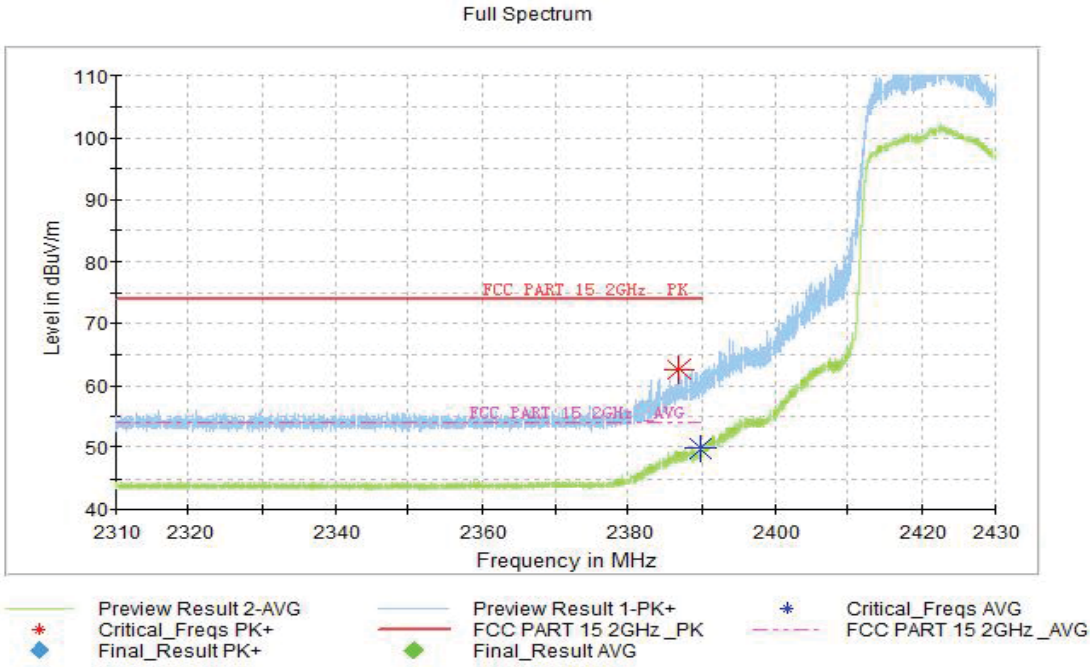


Fig.A.6.2.8 Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, ch3, 2.31 GHz - 2.43GHz, FULL RB

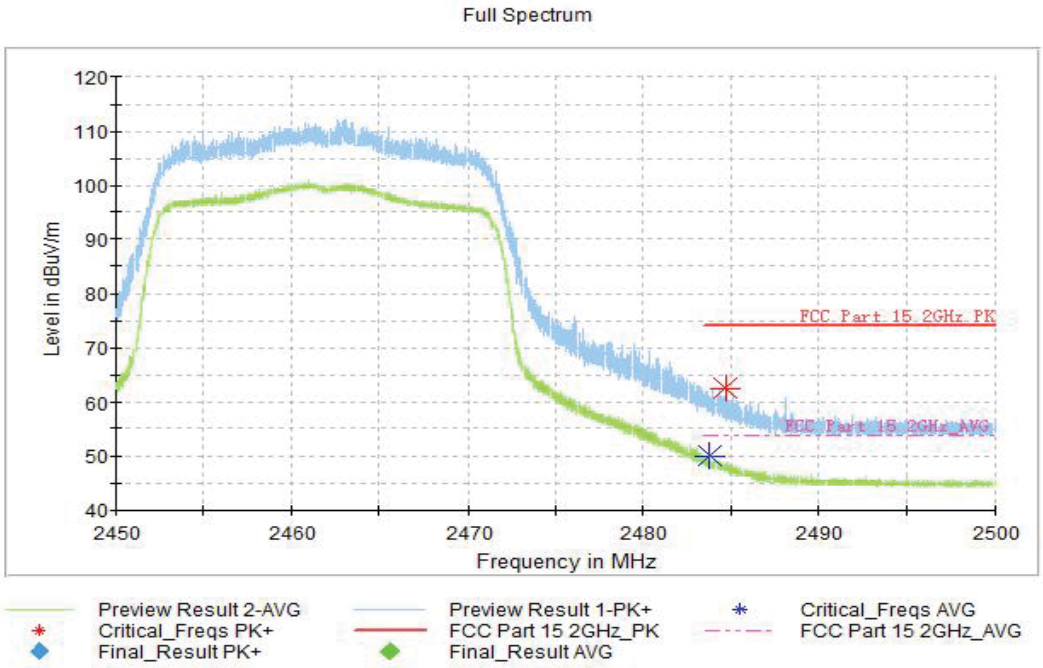


Fig.A.6.2.9 Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, ch11, 2.45 GHz - 2.50GHz, FULL RB

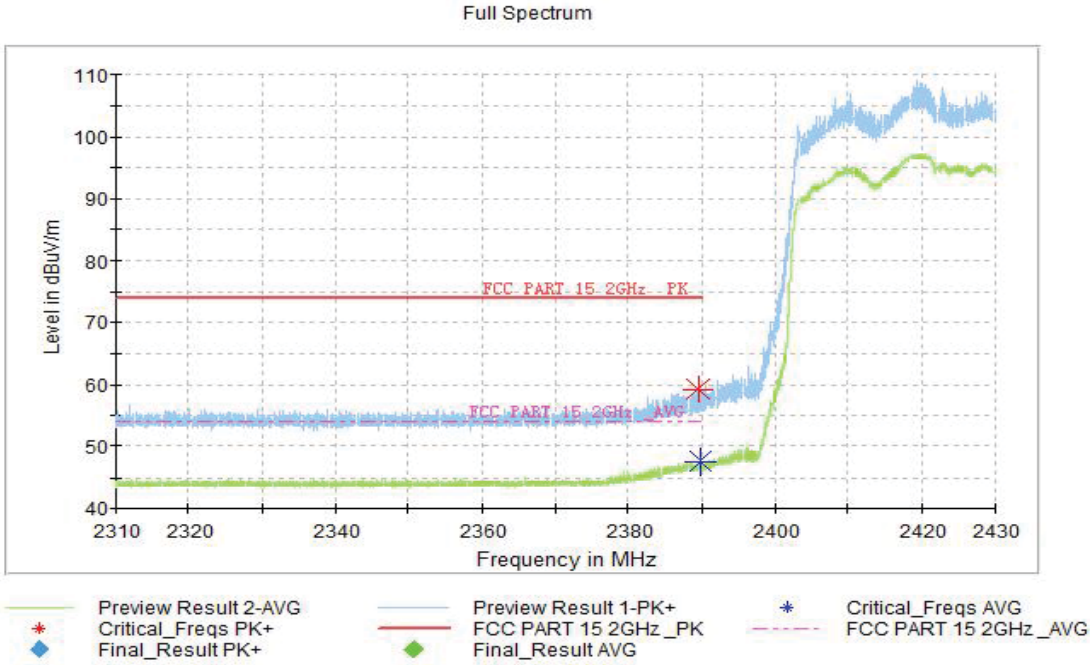


Fig.A.6.2.10 Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, ch3, 2.31 GHz - 2.43GHz, FULL RB

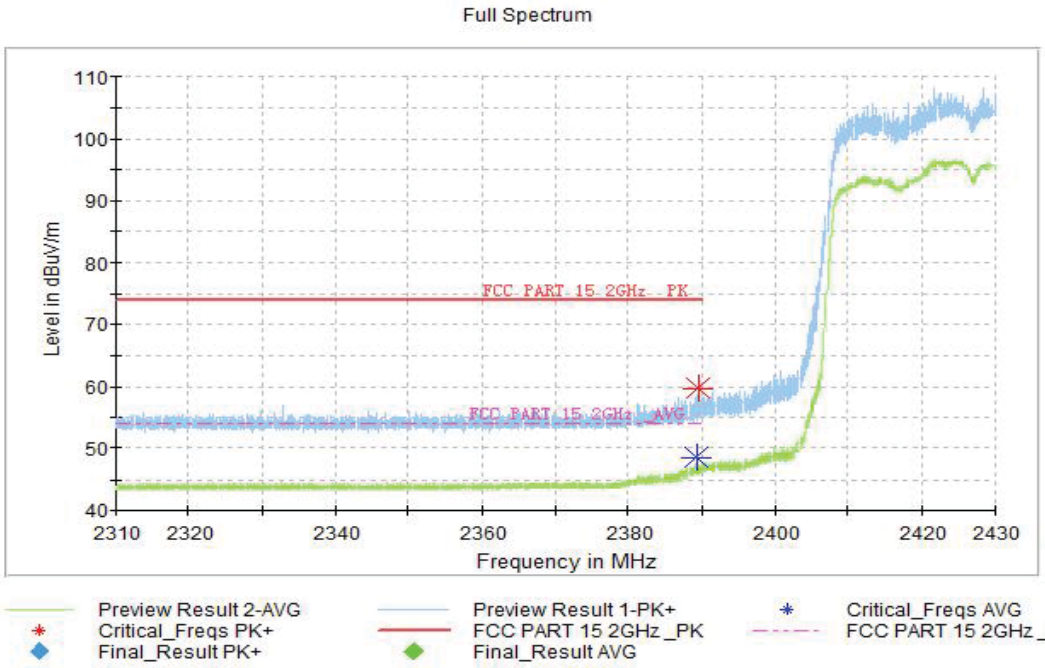


Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, ch4, 2.31 GHz - 2.43GHz, FULL RB

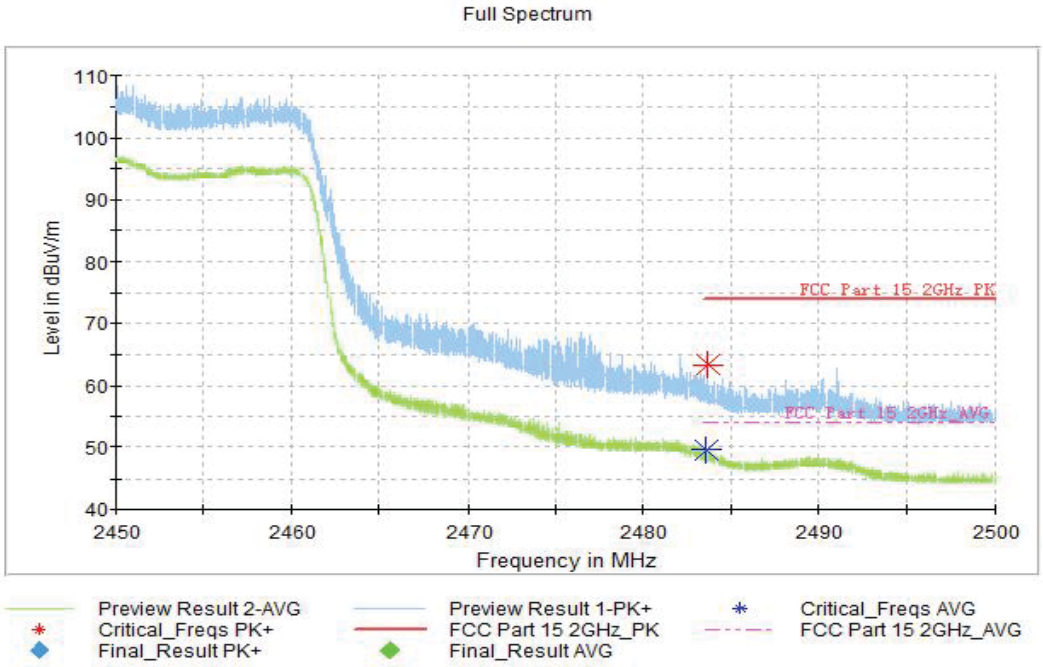


Fig.A.6.2.11 Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, ch7, 2.45 GHz - 2.50GHz, FULL RB

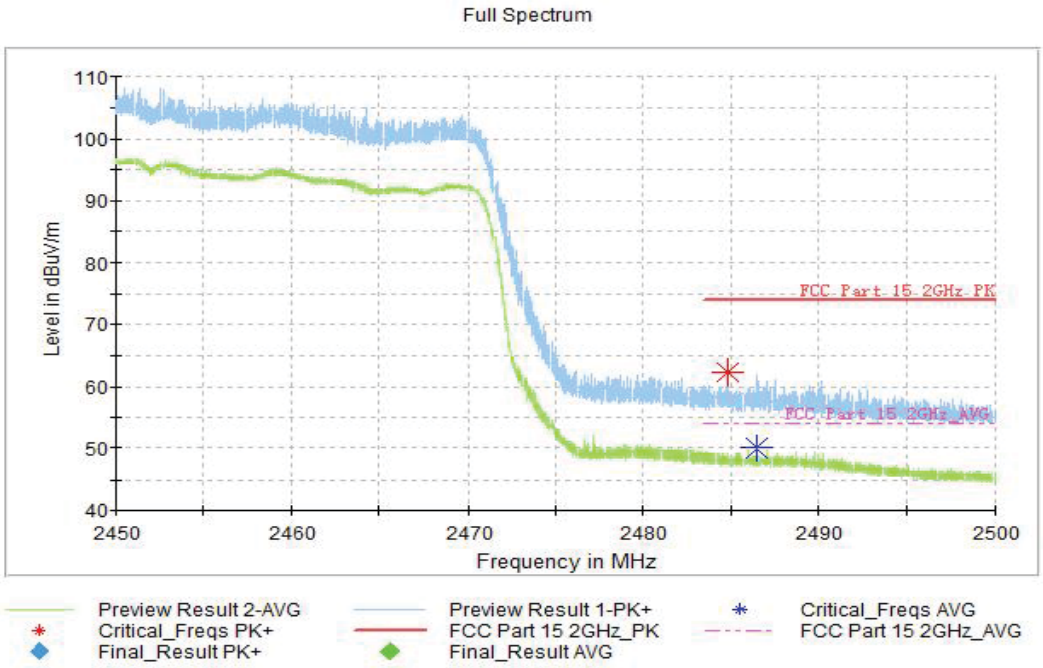


Fig.A.6.2.12 Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, ch9, 2.45 GHz - 2.50GHz, FULL RB

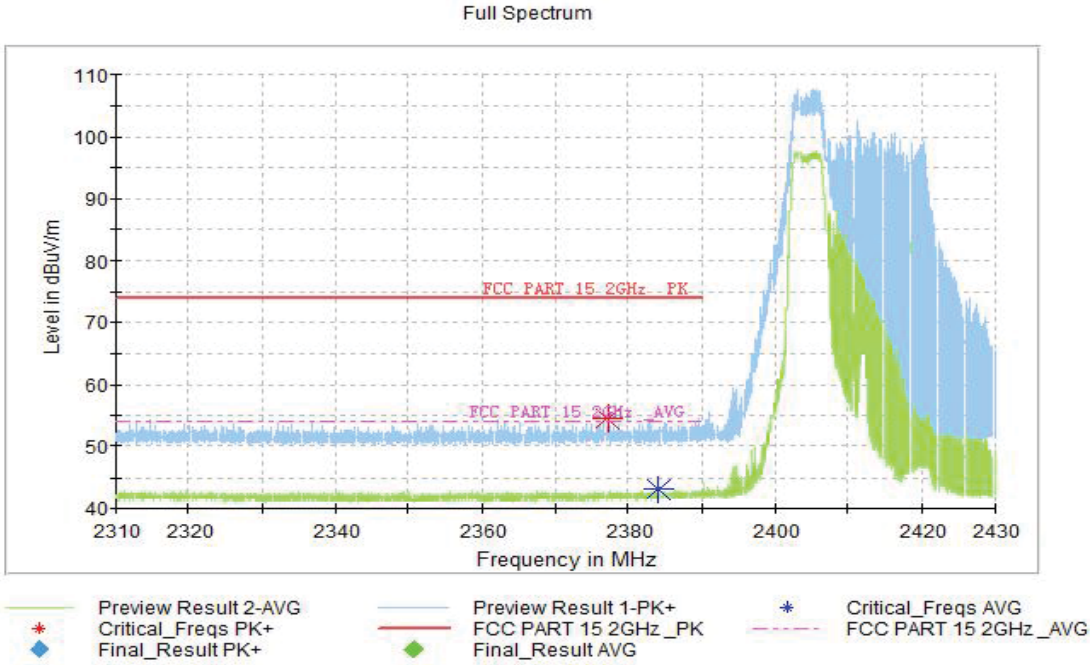


Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, RU52, ch1, 2.31 GHz - 2.43GHz, Partial RU

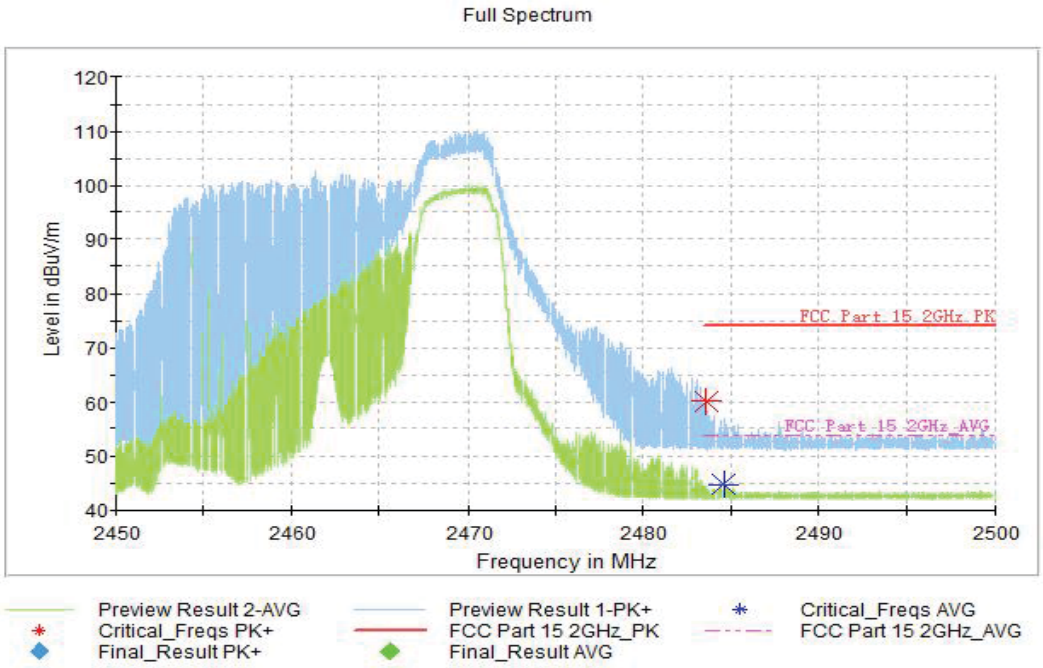


Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, RU52, ch11, 2.45 GHz - 2.50GHz, Partial RU

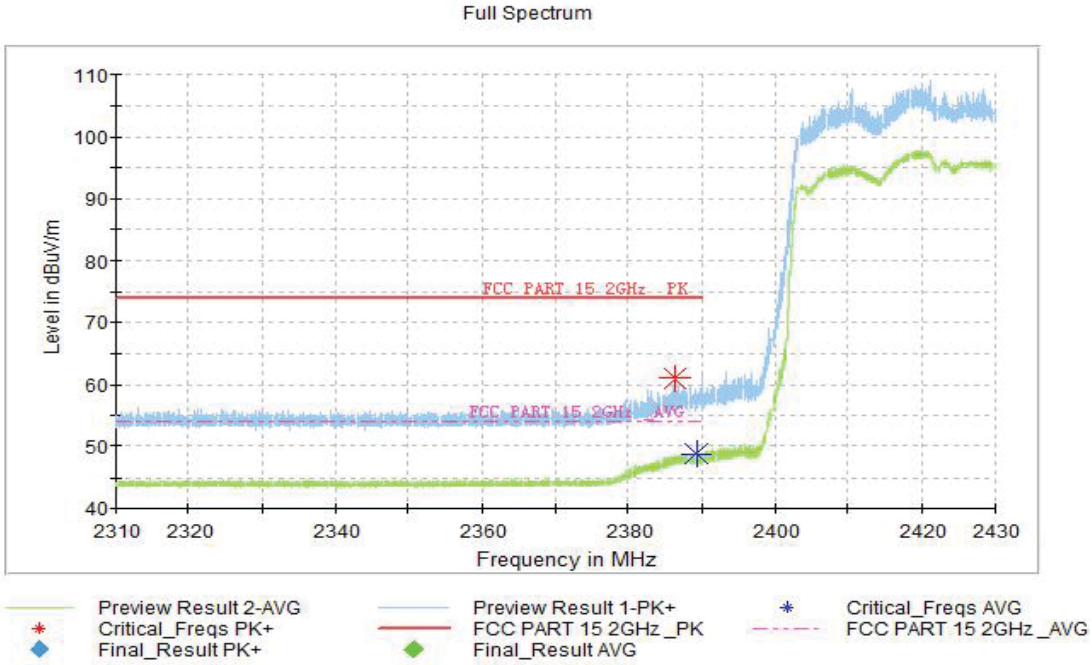


Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, RU242, ch3, 2.31 GHz - 2.43GHz, Partial RU

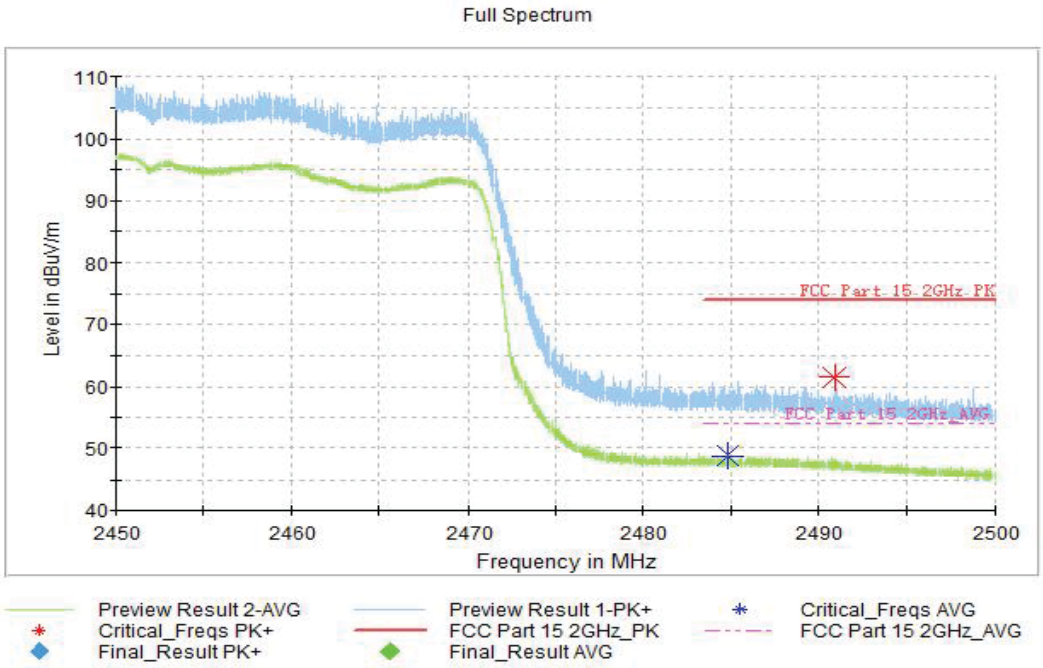


Fig.A.6.2.13 Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, RU242, ch9, 2.45 GHz - 2.50GHz, Partial RU

A.7. AC Power-line Conducted Emission

Method of Measurement: See ANSI C63.10-2013-clause 6.2

1 The one EUT cable configuration and arrangement and mode of operation that produced the emission with the highest amplitude relative to the limit is selected for the final measurement, while applying the appropriate modulating signal to the EUT.

2 If the EUT is relocated from an exploratory test site to a final test site, the highest emissions shall be remaximized at the final test location before final ac power-line conducted emission measurements are performed.

3 The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment in the system) is then performed for the full frequency range for which the EUT is being tested for compliance without further variation of the EUT arrangement, cable positions, or EUT mode of operation.

4 If the EUT is comprised of equipment units that have their own separate ac power connections, e.g., floor-standing equipment with independent power cords for each shelf that are able to connect directly to the ac power network, each current-carrying conductor of one unit is measured while the other units are connected to a second (or more) LISN(s). All units shall be separately measured. If a power strip is provided by the manufacturer, to supply all of the units making up the EUT, only the conductors in the power cord of the power strip shall be measured.

5 If the EUT uses a detachable antenna, these measurements shall be made with a suitable dummy load connected to the antenna output terminals; otherwise, the tests shall be made with the antenna connected and, if adjustable, fully extended. When measuring the ac conducted emissions from a device that operates between 150 kHz and 30 MHz a non-detachable antenna may be replaced with a dummy load for the measurements within the fundamental emission band of the transmitter, but only for those measurements.36 Record the six highest EUT emissions relative to the limit of each of the current-carrying conductors of the power cords of the equipment that comprises the EUT over the frequency range specified by the procuring or regulatory agency. Diagram or photograph the test setup that was used. See Clause 8 for full reporting requirements.

Test Condition:

Voltage（V）	Frequency（Hz）
120	60

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		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 (dBμV)	Result (dBμV)		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:

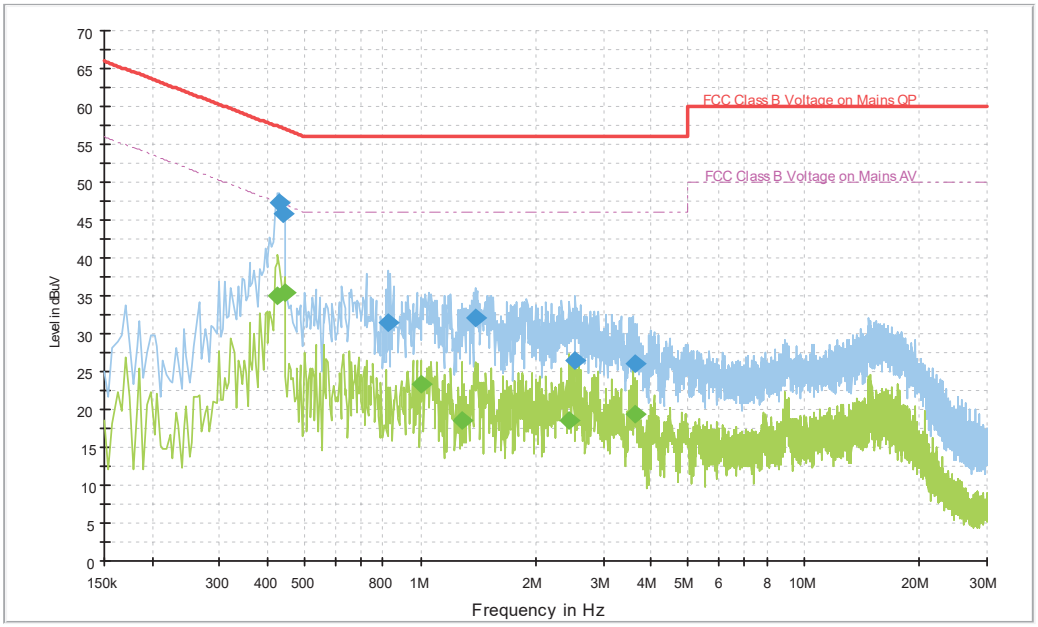


Fig.A.7.1 AC Powerline Conducted Emission-802.11b

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)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.430000	47.4	N	19.9	9.9	57.3
0.438000	45.8	N	19.9	11.3	57.1
0.826000	31.4	L1	19.9	24.6	56.0
1.386000	32.1	L1	19.9	23.9	56.0
2.538000	26.4	N	19.6	29.6	56.0
3.610000	26.1	L1	19.8	29.9	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.426000	35.0	L1	20.0	12.4	47.3
0.442000	35.4	N	19.9	11.6	47.0
1.002000	23.3	N	19.7	22.7	46.0
1.282000	18.6	L1	19.9	27.4	46.0
2.442000	18.6	N	19.6	27.4	46.0
3.610000	19.4	L1	19.8	26.6	46.0

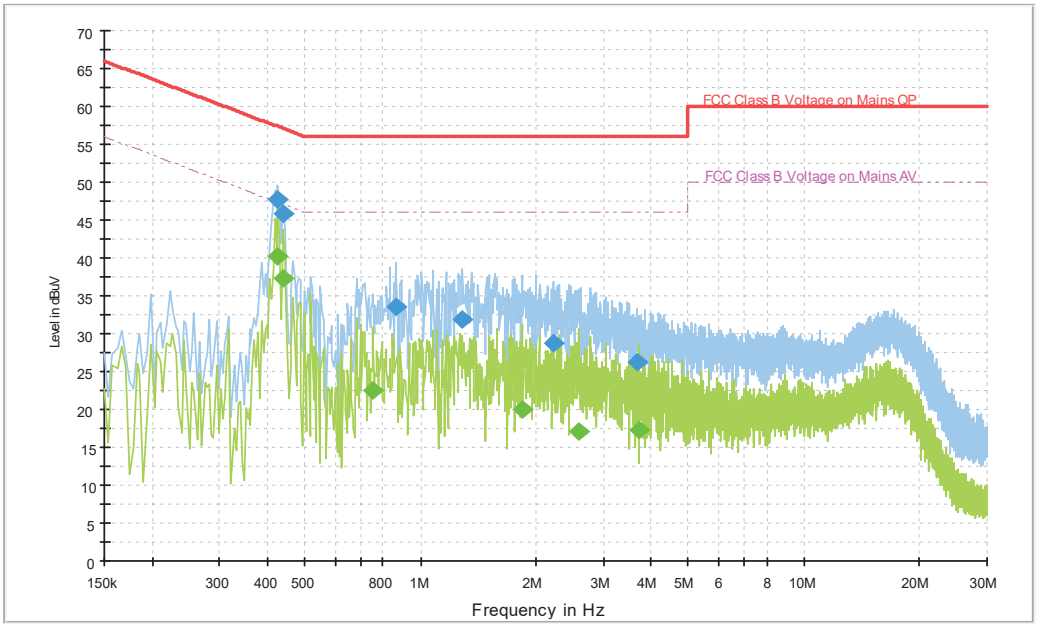


Fig.A.7.2 AC Powerline Conducted Emission-Idle

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)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.426000	47.7	N	19.9	9.6	57.3
0.438000	45.9	N	19.9	11.2	57.1
0.862000	33.5	L1	19.9	22.5	56.0
1.290000	31.8	N	19.7	24.2	56.0
2.230000	28.7	L1	19.8	27.3	56.0
3.678000	26.3	L1	19.8	29.7	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.426000	35.0	L1	20.0	12.4	47.3
0.442000	35.4	N	19.9	11.6	47.0
1.002000	23.3	N	19.7	22.7	46.0
1.282000	18.6	L1	19.9	27.4	46.0
2.442000	18.6	N	19.6	27.4	46.0
3.610000	19.4	L1	19.8	26.6	46.0

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 23rd 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*****