

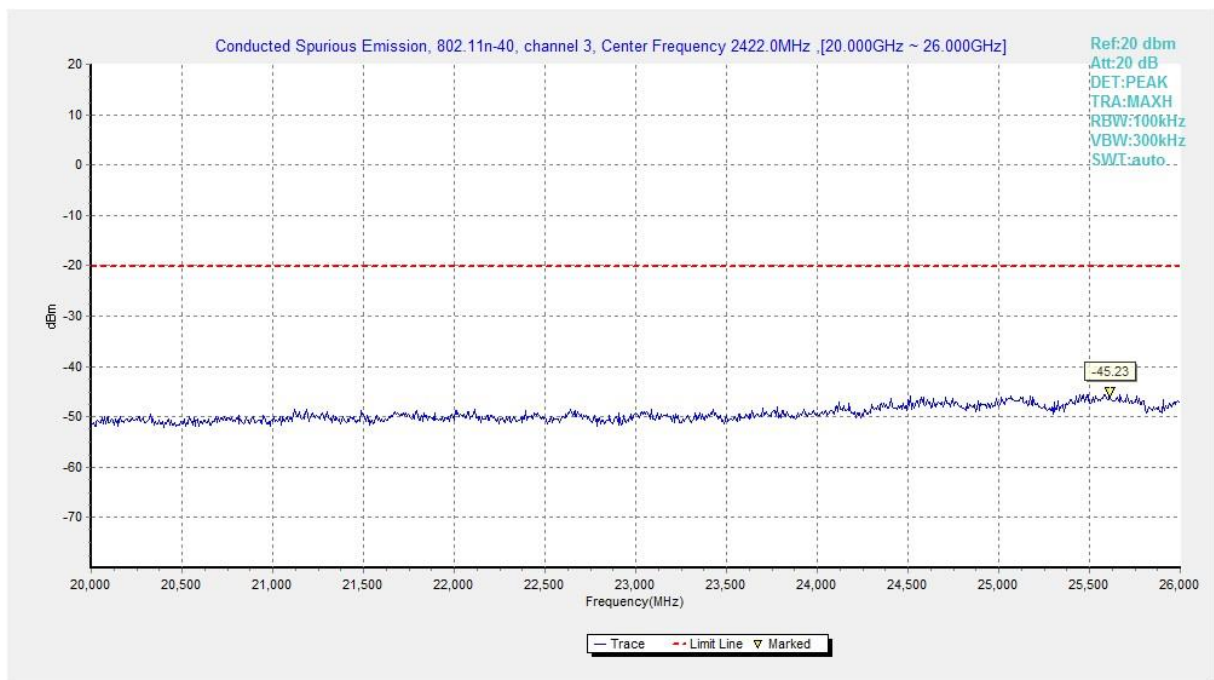


Fig.A.6.1.80 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 20 GHz-26 GHz)

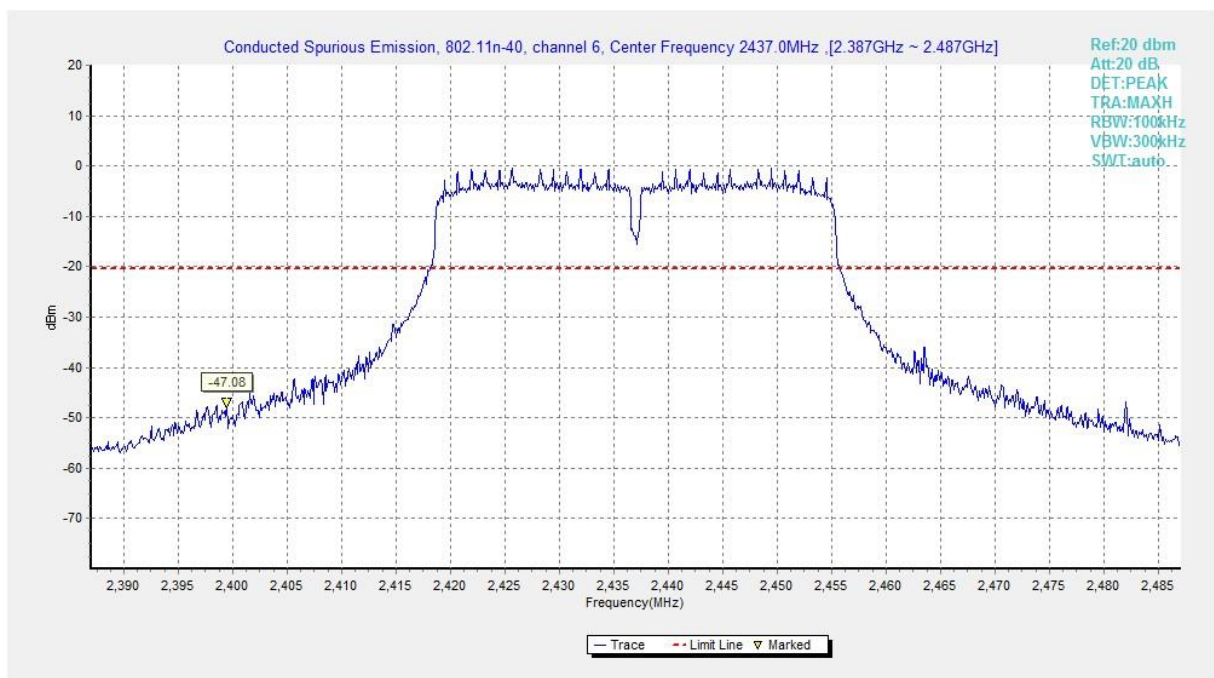


Fig.A.6.1.81 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, Center Frequency)

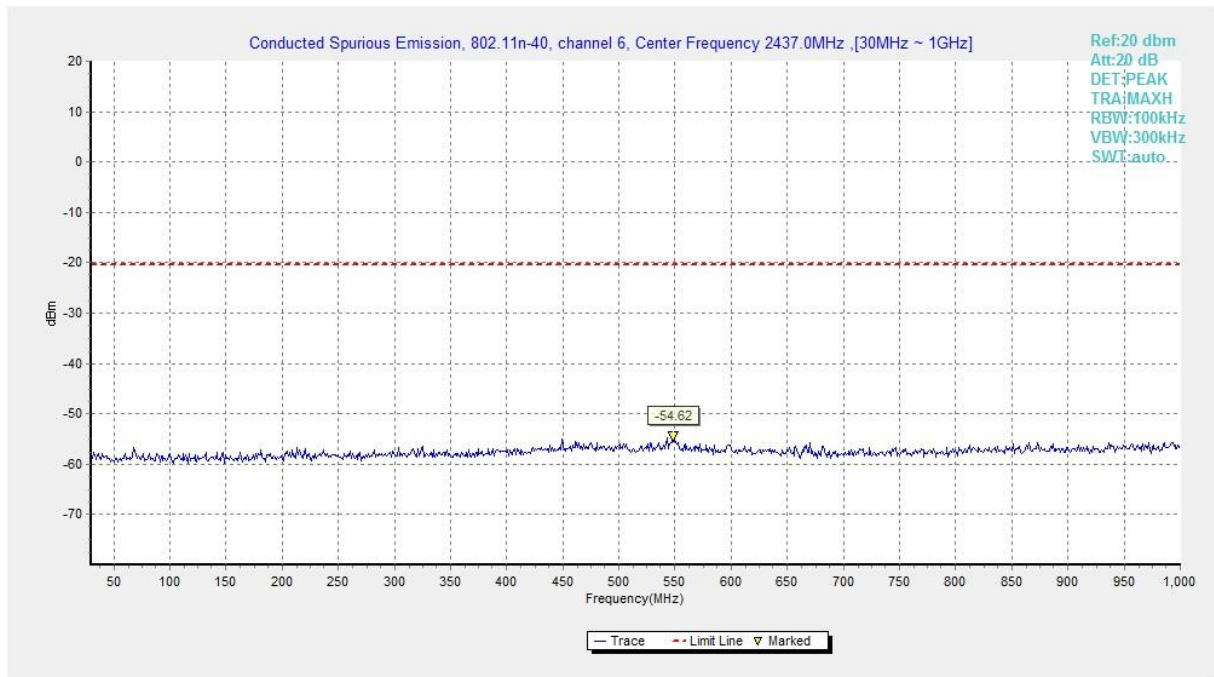


Fig.A.6.1.82 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 30 MHz-1 GHz)

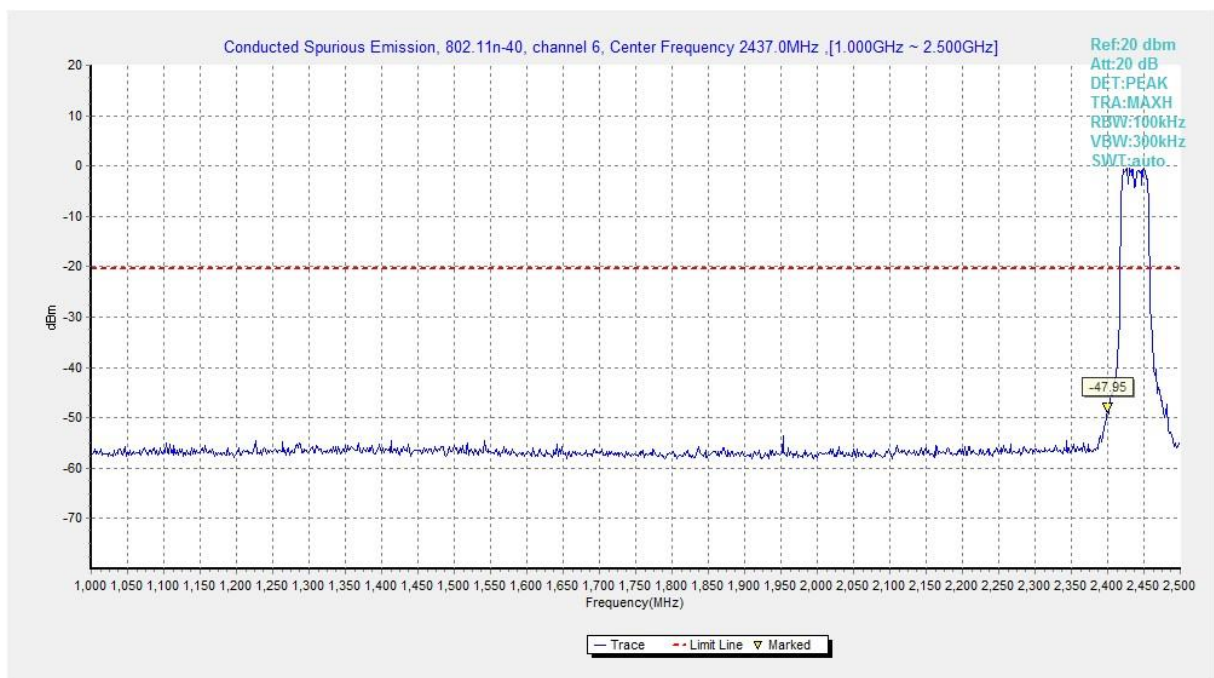


Fig.A.6.1.83 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 1 GHz-2.5 GHz)

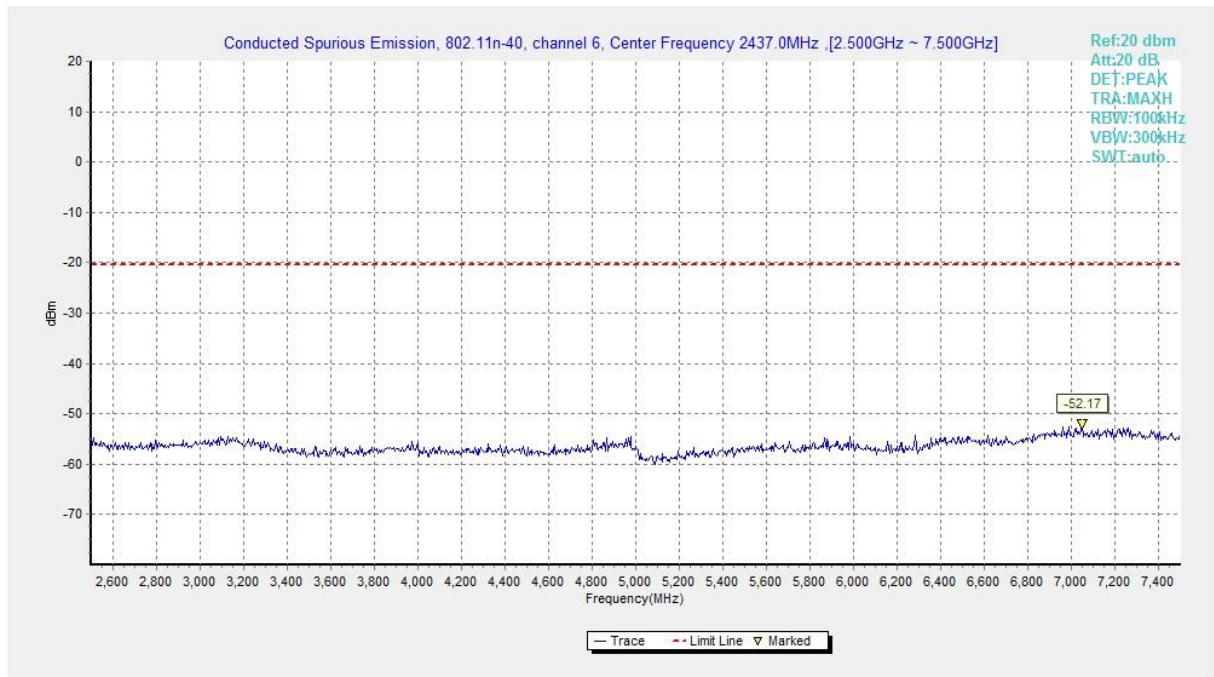


Fig.A.6.1.84 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 2.5 GHz-7.5 GHz)

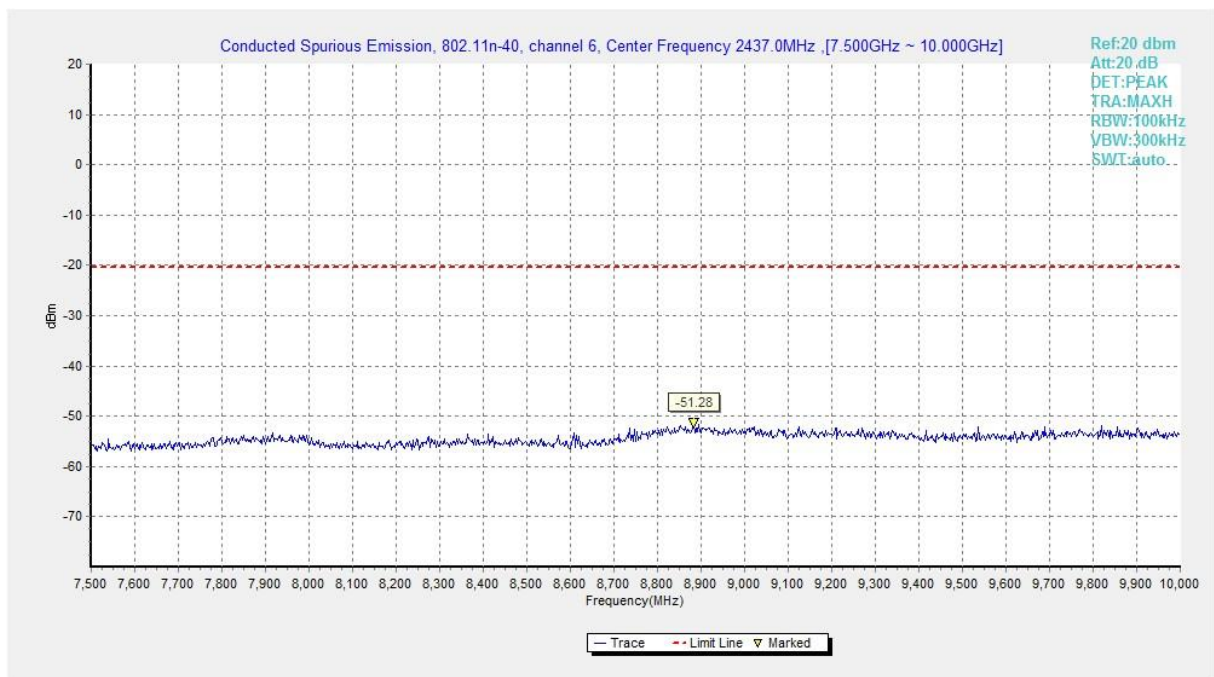


Fig.A.6.1.85 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 7.5 GHz-10 GHz)

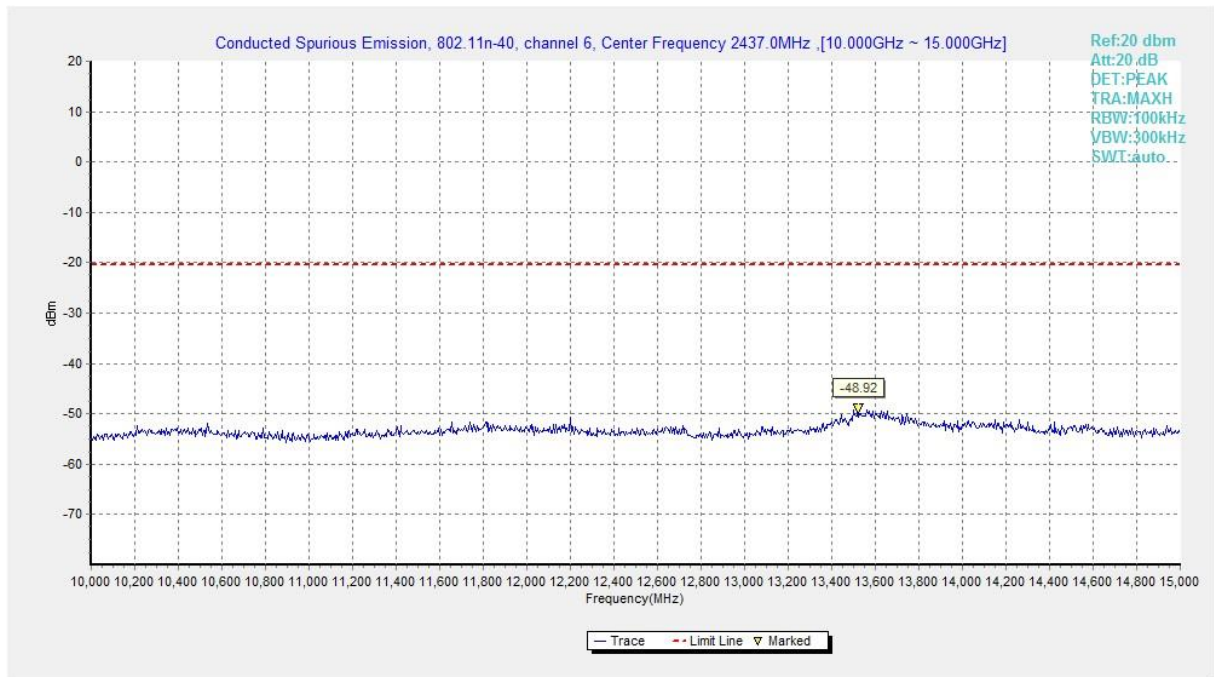


Fig.A.6.1.86 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 10 GHz-15 GHz)

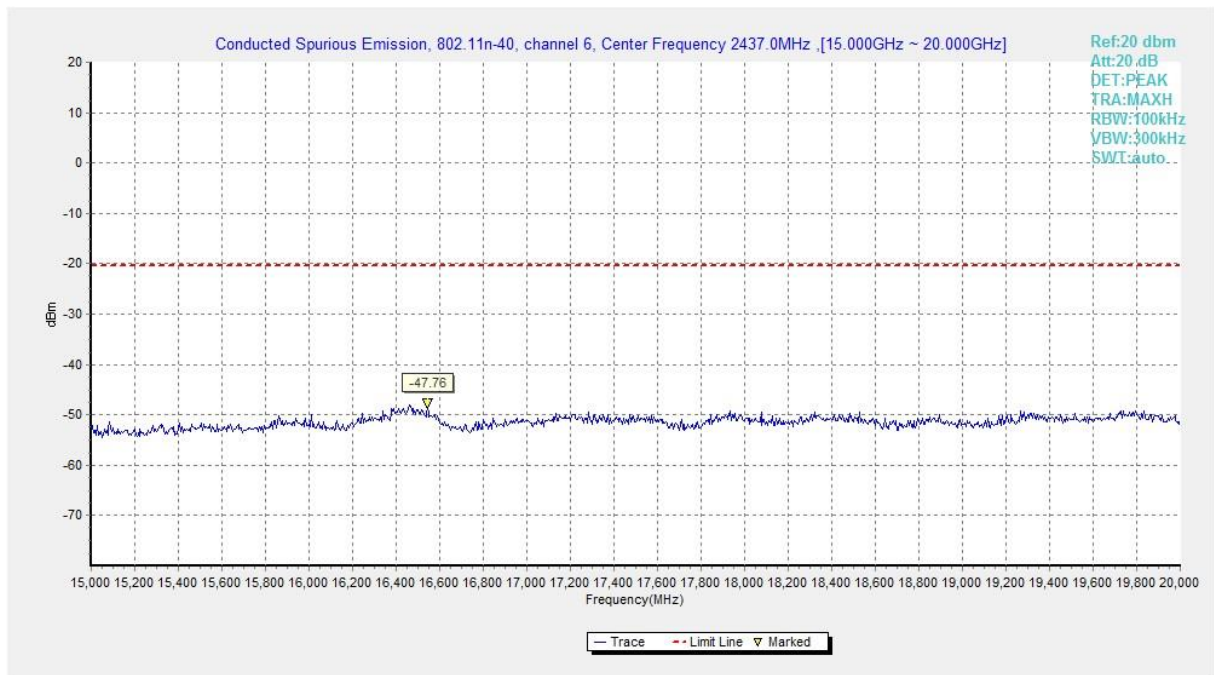


Fig.A.6.1.87 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 15 GHz-20 GHz)

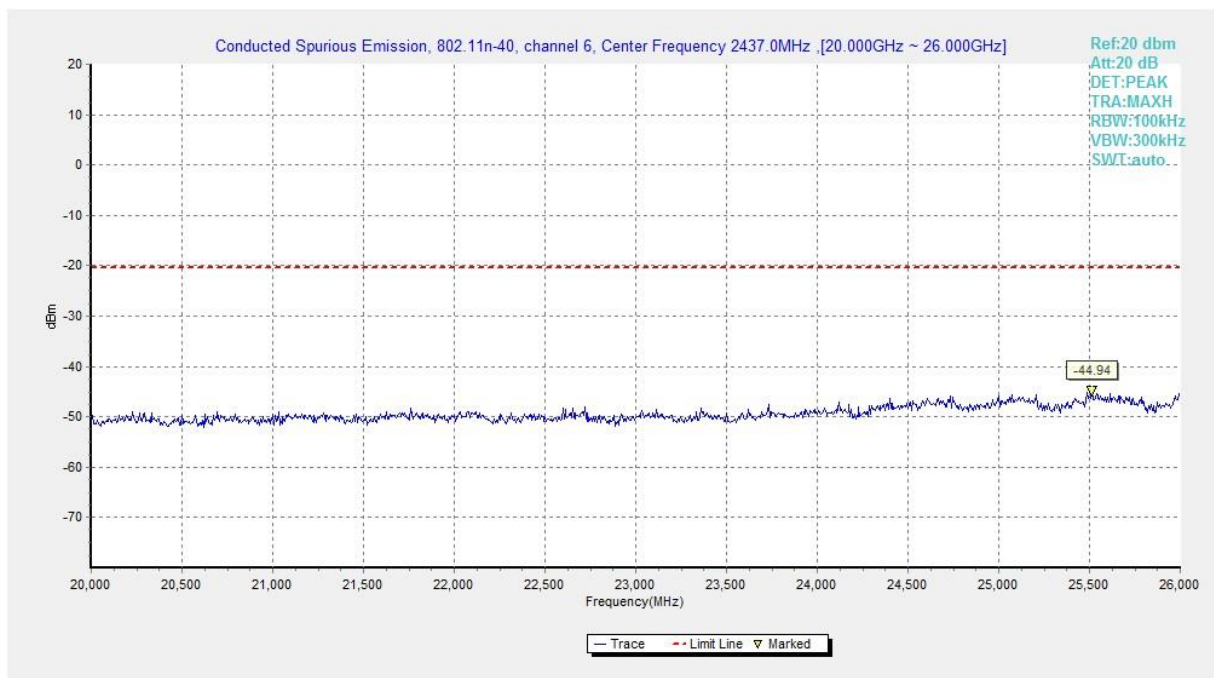


Fig.A.6.1.88 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 20 GHz-26 GHz)

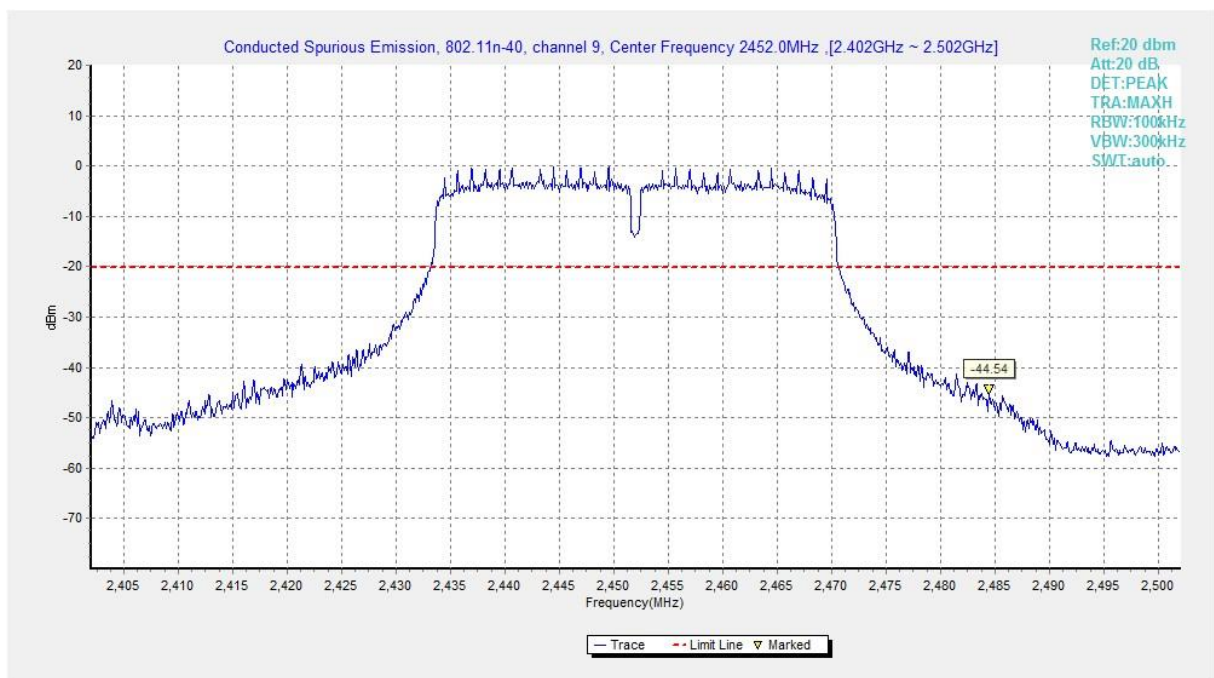


Fig.A.6.1.89 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, Center Frequency)

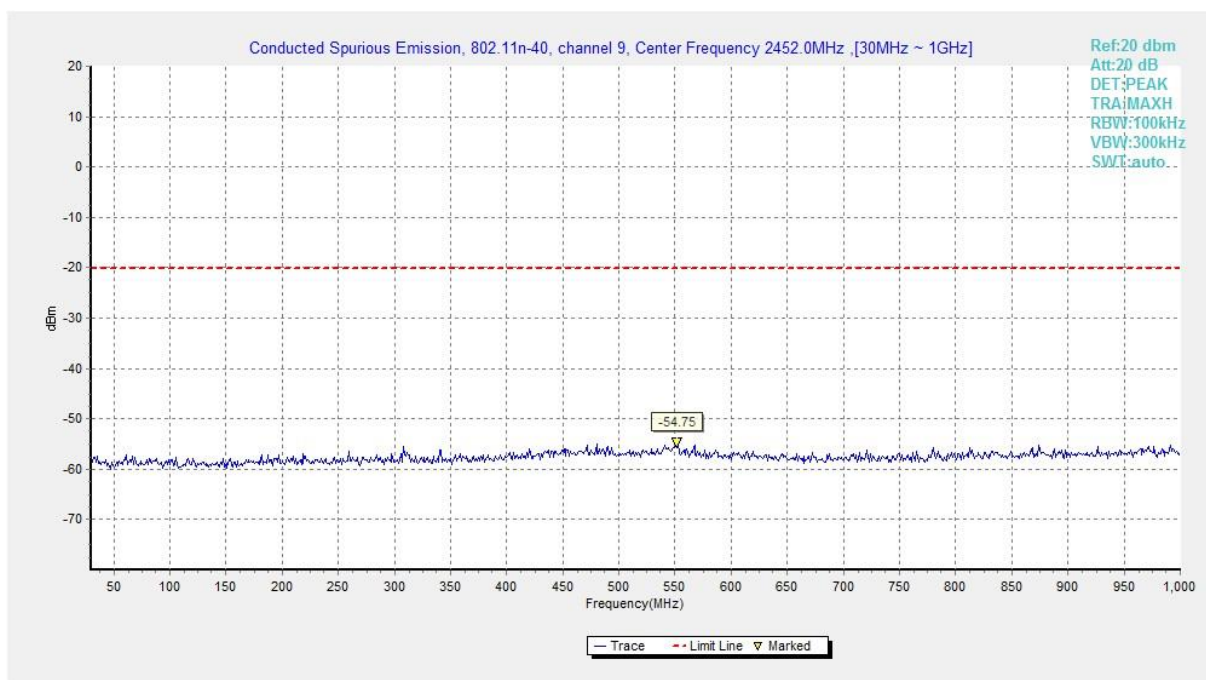


Fig.A.6.1.90 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 30 MHz-1 GHz)

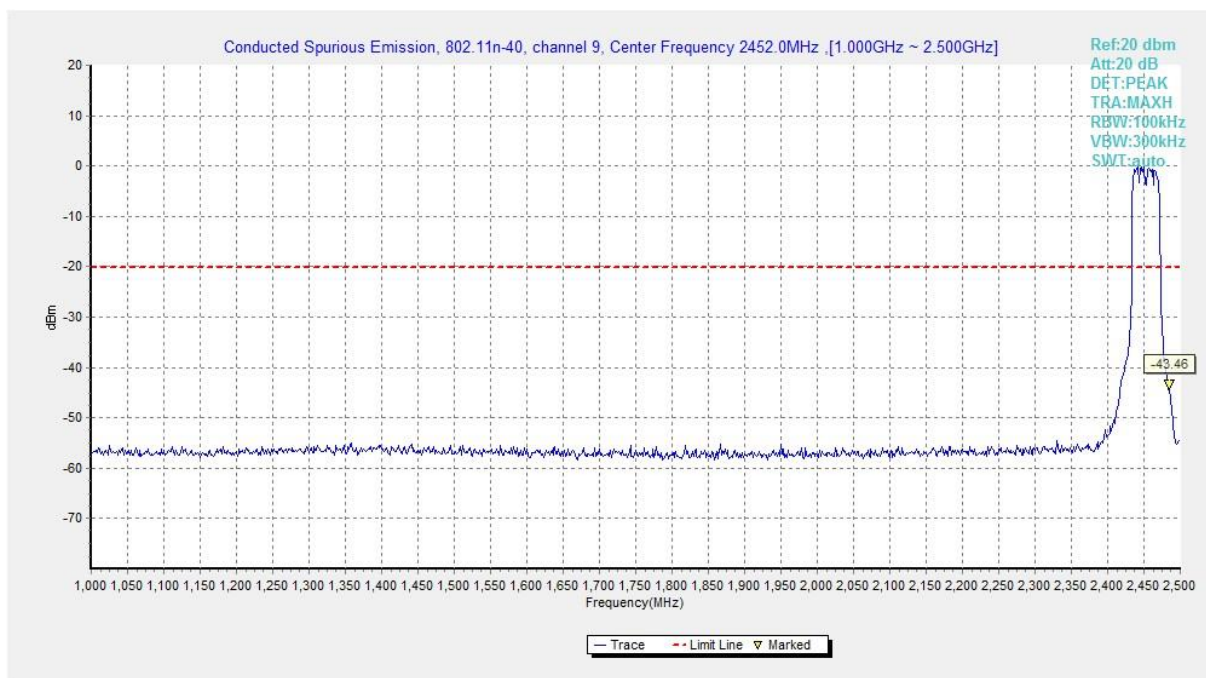


Fig.A.6.1.91 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 1 GHz-2.5 GHz)

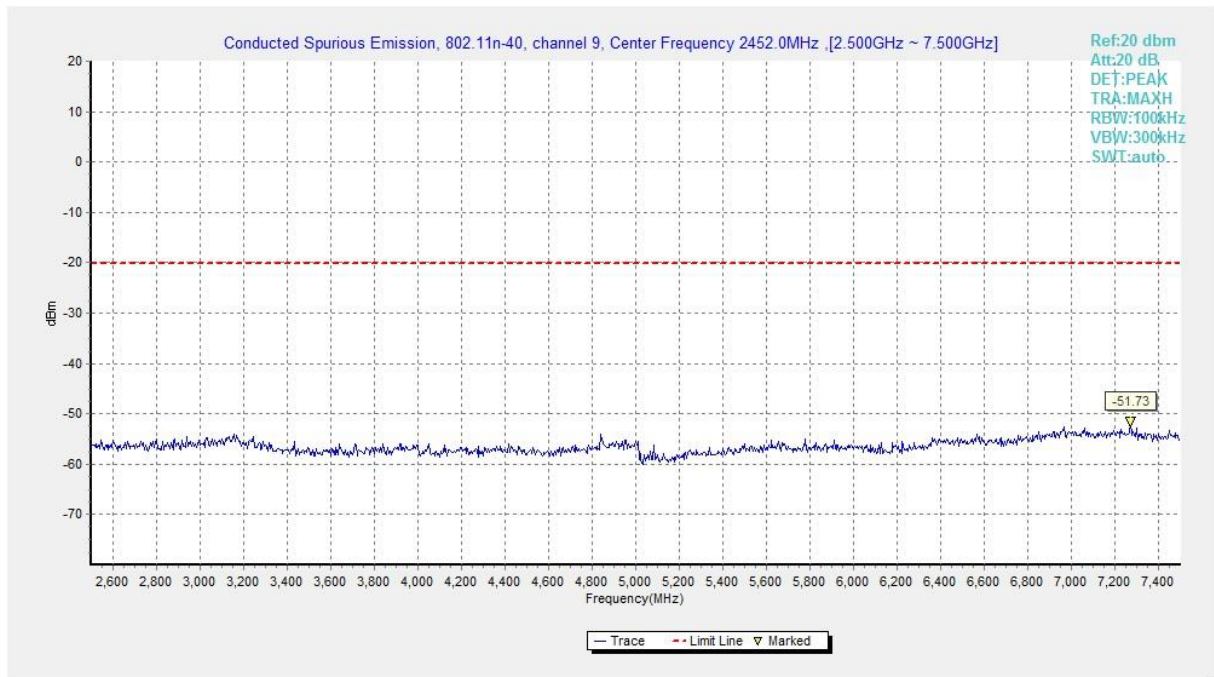


Fig.A.6.1.92 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 2.5 GHz-7.5 GHz)

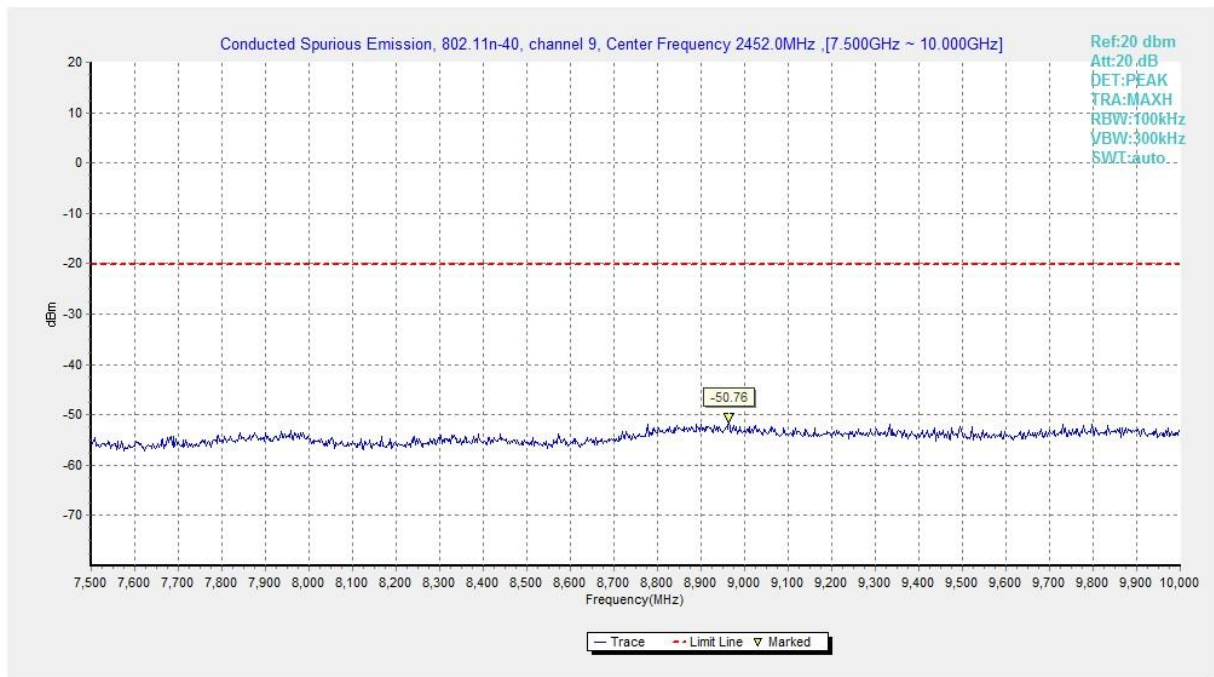


Fig.A.6.1.93 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 7.5 GHz-10 GHz)

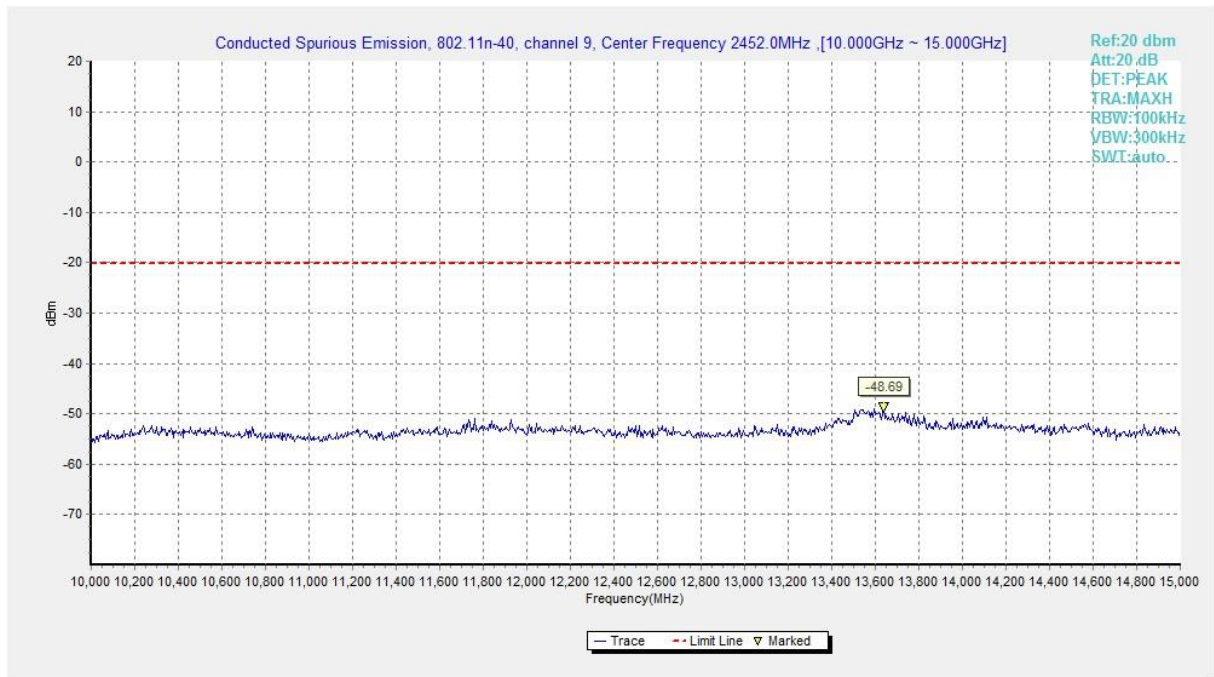


Fig.A.6.1.94 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 10 GHz-15 GHz)

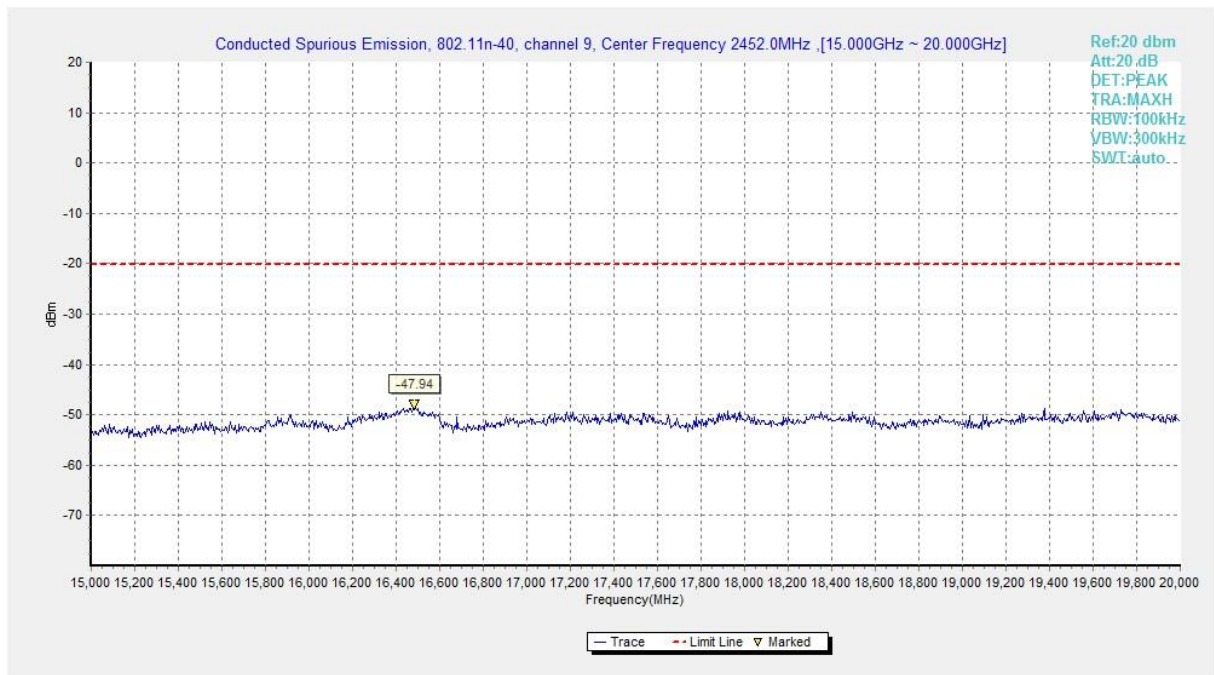


Fig.A.6.1.95 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 15 GHz-20 GHz)

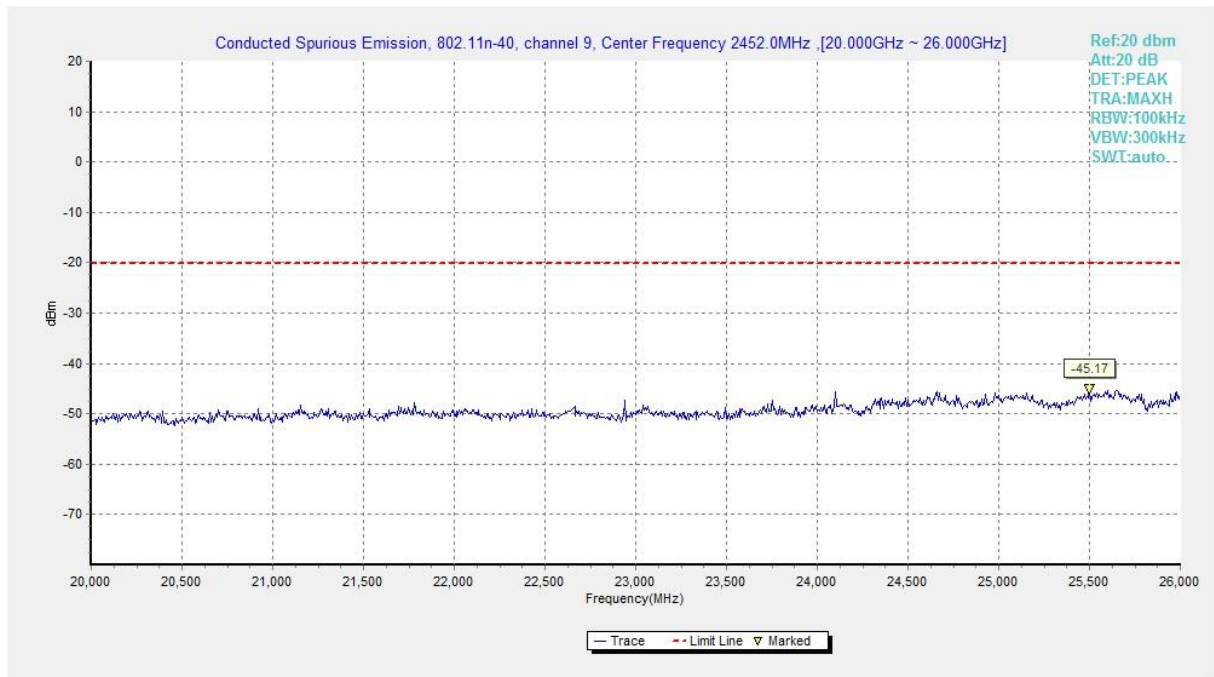


Fig.A.6.1.96 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 20 GHz-26 GHz)

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/3MHz	15
4000-18000	1MHz/3MHz	40
18000-26500	1MHz/3MHz	20

EUT ID: UT08a

Measurement Results for EUT1:

802.11b mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	Power(ch1)	2.31GHz ~2.43GHz	Fig.A.6.2.1	P
	Power(ch11)	2.45GHz ~2.5GHz	Fig.A.6.2.2	P

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	Power(ch1)	2.31GHz ~2.43GHz	Fig.A.6.2.3	P
	Power(ch11)	2.45GHz ~2.5GHz	Fig.A.6.2.4	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT20)	Power(ch1)	2.31GHz ~2.43GHz	Fig.A.6.2.5	P
	Power(ch11)	2.45GHz ~2.5GHz	Fig.A.6.2.6	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT40)	Power(ch3)	2.31GHz ~2.43GHz	Fig.A.6.2.7	P
	Power(ch9)	2.45GHz ~2.5GHz	Fig.A.6.2.8	P

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:

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

802.11b-Average

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2388.600	46.30	2.9	32.0	11.44	54.0	7.7	H	24
2390.000	46.29	2.9	32.0	11.42	54.0	7.7	H	46
4823.200	35.74	-33.2	34.1	34.85	54.0	18.3	H	6
7236.400	30.24	-30.9	35.8	25.32	54.0	23.8	H	5
9648.400	31.17	-30.5	36.7	24.91	54.0	22.8	H	25
12060.000	33.10	-28.7	38.7	23.06	54.0	20.9	H	184

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2423.600	50.04	2.9	32.0	15.12	54.0	4.0	H	28
2450.900	49.42	2.9	32.1	14.46	54.0	4.6	H	248
4873.600	30.60	-33.3	34.2	29.75	54.0	23.4	H	38
7310.800	30.22	-30.8	35.8	25.20	54.0	23.8	H	98
9748.000	32.09	-30.3	36.9	25.57	54.0	21.9	H	183
12185.200	33.43	-28.1	38.8	22.72	54.0	20.6	H	356

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2483.500	46.46	2.9	32.1	11.44	54.0	7.5	H	354
2484.500	46.49	2.9	32.1	11.47	54.0	7.5	H	28
4924.000	28.44	-33.5	34.2	27.80	54.0	25.6	H	348
7386.400	29.74	-31.5	35.9	25.34	54.0	24.3	H	345
9847.600	34.44	-30.2	37.0	27.63	54.0	19.6	H	184
12310.000	33.40	-27.8	38.9	22.26	54.0	20.6	H	182

802.11b-Peak

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2380.476	60.09	2.9	32.0	25.24	74.0	13.9	H	22
2388.596	59.95	2.9	32.0	25.09	74.0	14.1	H	44
4824.000	43.72	-33.2	34.1	42.82	74.0	30.3	V	0
7236.000	41.27	-30.9	35.8	36.35	74.0	32.7	H	0
9648.000	42.24	-30.5	36.7	35.99	74.0	31.8	V	22
12227.000	47.33	-28.0	38.8	36.46	74.0	26.7	H	176

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2364.600	44.82	-34.7	32.0	47.54	74.0	29.2	H	22
2504.600	45.21	-34.2	32.1	47.30	74.0	28.8	H	242
4874.000	31.72	-33.3	34.2	30.86	74.0	42.3	V	44
7311.000	41.40	-30.8	35.8	36.39	74.0	32.6	H	88
9748.000	43.45	-30.3	36.9	36.93	74.0	30.6	V	176
12185.000	46.54	-28.1	38.8	35.83	74.0	27.5	H	0

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2491.910	60.39	2.9	32.1	25.36	74.0	13.6	H	0
2494.575	61.12	2.9	32.1	26.09	74.0	12.9	H	22
4924.000	39.26	-33.5	34.2	38.61	74.0	34.7	V	352
7386.000	40.81	-31.5	35.9	36.41	74.0	33.2	V	352
9848.000	44.29	-30.2	37.0	37.48	74.0	29.7	H	176
12310.000	44.71	-27.8	38.9	33.57	74.0	29.3	V	176

802.11g - Average

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2389.900	48.68	2.9	32.0	13.82	54.0	5.3	H	6
2390.000	48.89	2.9	32.0	14.02	54.0	5.1	H	26
4824.400	28.77	-33.2	34.1	27.87	54.0	25.2	H	92
7236.400	30.41	-30.9	35.8	25.49	54.0	23.6	H	24
9648.400	31.08	-30.5	36.7	24.83	54.0	22.9	H	136
12060.400	33.32	-28.7	38.7	23.28	54.0	20.7	H	356

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2417.400	46.52	2.9	32.0	11.61	54.0	7.5	H	18
2453.600	47.44	2.9	32.1	12.47	54.0	6.6	H	4
4873.600	28.11	-33.3	34.2	27.26	54.0	25.9	H	20
7310.800	30.24	-30.8	35.8	25.23	54.0	23.8	H	28
9748.000	31.77	-30.3	36.9	25.25	54.0	22.2	H	4
12852.000	33.59	-28.5	39.2	22.91	54.0	20.4	H	40

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2483.500	48.47	2.9	32.1	13.45	54.0	5.5	H	92
2483.700	48.42	2.9	32.1	13.40	54.0	5.6	H	26
4924.000	28.21	-33.5	34.2	27.56	54.0	25.8	H	222
7386.400	29.62	-31.5	35.9	25.22	54.0	24.4	H	248
9847.600	33.93	-30.2	37.0	27.12	54.0	20.1	H	46
12310.000	33.33	-27.8	38.9	22.19	54.0	20.7	H	68

802.11g - Peak

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2389.450	68.86	2.9	32.0	34.00	74.0	5.1	H	0
2389.870	69.69	2.9	32.0	34.82	74.0	4.3	H	22
4824.000	39.77	-33.2	34.1	38.87	74.0	34.2	H	88
7236.000	43.61	-30.9	35.8	38.70	74.0	30.4	V	22
9648.000	42.87	-30.5	36.7	36.61	74.0	31.1	V	132
12060.000	42.22	-28.7	38.7	32.19	74.0	31.8	H	352

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2374.800	43.83	-34.3	32.0	46.15	74.0	30.2	H	22
2508.800	45.33	-34.2	32.1	47.45	74.0	28.7	H	0
4874.000	39.30	-33.3	34.2	38.44	74.0	34.7	V	44
7311.000	41.19	-30.8	35.8	36.18	74.0	32.8	H	22
9748.000	43.00	-30.3	36.9	36.48	74.0	31.0	V	0
12185.000	45.71	-28.1	38.8	35.01	74.0	28.3	V	44

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2483.820	67.39	2.9	32.1	32.37	74.0	6.6	H	88
2483.715	67.29	2.9	32.1	32.27	74.0	6.7	H	22
4924.000	39.18	-33.5	34.2	38.54	74.0	34.8	V	220
7386.000	40.68	-31.5	35.9	36.28	74.0	33.3	V	242
9848.000	43.98	-30.2	37.0	37.17	74.0	30.0	V	44
12310.000	45.18	-27.8	38.9	34.04	74.0	28.8	V	66

802.11n-HT20-Average

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2389.900	48.37	2.9	32.0	13.50	54.0	5.6	H	24
2390.000	48.47	2.9	32.0	13.60	54.0	5.5	H	336
4824.400	28.39	-33.2	34.1	27.50	54.0	25.6	H	248
7236.400	30.48	-30.9	35.8	25.56	54.0	23.5	H	268
9647.200	31.25	-30.5	36.7	25.00	54.0	22.7	H	290
12060.400	33.39	-28.7	38.7	23.35	54.0	20.6	H	300

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2415.500	46.62	2.9	32.0	11.72	54.0	7.4	H	16
2455.300	47.27	2.9	32.1	12.30	54.0	6.7	H	48
4873.600	28.43	-33.3	34.2	27.58	54.0	25.6	H	80
7310.800	30.34	-30.8	35.8	25.33	54.0	23.7	H	8
9748.000	31.53	-30.3	36.9	25.01	54.0	22.5	H	102
12185.200	33.66	-28.1	38.8	22.95	54.0	20.3	H	118

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2483.500	48.65	2.9	32.1	13.63	54.0	5.4	H	92
2483.800	48.50	2.9	32.1	13.48	54.0	5.5	H	136
4924.000	28.38	-33.5	34.2	27.73	54.0	25.6	H	8
7386.400	29.78	-31.5	35.9	25.39	54.0	24.2	H	70
9847.600	34.68	-30.2	37.0	27.87	54.0	19.3	H	48
12310.000	33.49	-27.8	38.9	22.35	54.0	20.5	H	246

802.11n-HT20-Peak

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2389.674	68.69	2.9	32.0	33.82	74.0	5.3	H	110
2389.814	70.31	2.9	32.0	35.45	74.0	3.7	V	132
4824.000	40.98	-33.2	34.1	40.08	74.0	33.0	H	242
7236.000	41.36	-30.9	35.8	36.44	74.0	32.6	V	264
9648.000	43.14	-30.5	36.7	36.89	74.0	30.9	V	286
12060.000	44.78	-28.7	38.7	34.74	74.0	29.2	V	308

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2368.600	44.13	-34.5	32.0	46.69	74.0	29.9	H	22
2507.400	45.07	-34.2	32.1	47.18	74.0	28.9	H	44
4874.000	39.58	-33.3	34.2	38.73	74.0	34.4	V	88
7311.000	41.41	-30.8	35.8	36.40	74.0	32.6	V	0
9748.000	42.86	-30.3	36.9	36.34	74.0	31.1	H	110
12185.000	45.35	-28.1	38.8	34.64	74.0	28.6	H	132

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2483.880	70.79	2.9	32.1	35.78	74.0	3.2	H	88
2484.500	69.84	2.9	32.1	34.82	74.0	4.2	H	132
4924.000	40.35	-33.5	34.2	39.70	74.0	33.7	H	0
7386.000	46.98	-31.5	35.9	42.57	74.0	27.0	H	66
9848.000	43.91	-30.2	37.0	37.10	74.0	30.1	V	44
12310.000	44.18	-27.8	38.9	33.04	74.0	29.8	H	242

802.11n-HT40-Average

Ch3

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2389.600	46.64	2.9	32.0	11.78	54.0	7.4	H	226
2390.000	46.67	2.9	32.0	11.80	54.0	7.3	H	92
4843.600	28.29	-33.2	34.1	27.38	54.0	25.7	H	70
7266.400	30.88	-30.6	35.8	25.66	54.0	23.1	H	8
9688.000	31.70	-30.4	36.8	25.30	54.0	22.3	H	48
12109.600	33.51	-28.5	38.8	23.22	54.0	20.5	H	246

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2408.000	46.50	2.9	32.0	11.60	54.0	7.5	H	28
2463.300	46.61	2.9	32.1	11.62	54.0	7.4	H	46
4873.600	28.18	-33.3	34.2	27.33	54.0	25.8	H	8
7310.800	30.40	-30.8	35.8	25.39	54.0	23.6	H	6
9748.000	31.40	-30.3	36.9	24.88	54.0	22.6	H	24
12852.000	33.66	-28.5	39.2	22.99	54.0	20.3	H	185

Ch9

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2483.500	47.15	2.9	32.1	12.13	54.0	6.9	H	184
2483.600	47.12	2.9	32.1	12.11	54.0	6.9	H	6
4903.600	28.62	-33.4	34.2	27.88	54.0	25.4	H	26
7356.000	30.53	-31.2	35.8	25.86	54.0	23.5	H	246
9808.000	32.80	-30.3	36.9	26.19	54.0	21.2	H	8
12260.000	33.54	-27.9	38.9	22.56	54.0	20.5	H	2

802.11n-HT40-Peak

Ch3

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2386.594	60.45	2.9	32.0	25.59	74.0	13.6	H	220
2388.946	62.85	2.9	32.0	27.99	74.0	11.1	H	88
4844.000	39.29	-33.2	34.1	38.38	74.0	34.7	H	66
7266.000	41.73	-30.6	35.8	36.52	74.0	32.3	V	0
9688.000	44.22	-30.4	36.8	37.82	74.0	29.8	V	44
12110.000	44.21	-28.5	38.8	33.91	74.0	29.8	V	242

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2370.400	43.93	-34.5	32.0	46.42	74.0	30.1	H	22
2499.800	45.04	-34.2	32.1	47.09	74.0	29.0	H	44
4874.000	39.94	-33.3	34.2	39.09	74.0	34.1	V	0
7311.000	41.36	-30.8	35.8	36.35	74.0	32.6	H	0
9748.000	42.86	-30.3	36.9	36.34	74.0	31.1	V	22
12185.000	45.97	-28.1	38.8	35.27	74.0	28.0	H	176

Ch9

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Turntable angle (deg)
2483.785	65.33	2.9	32.1	30.32	74.0	8.7	H	176
2483.915	65.94	2.9	32.1	30.93	74.0	8.1	H	0
4904.000	39.93	-33.4	34.2	39.19	74.0	34.1	V	22
7356.000	41.71	-31.2	35.8	37.04	74.0	32.3	V	352
9808.000	43.12	-30.3	36.9	36.51	74.0	30.9	V	0
12260.000	43.74	-27.9	38.9	32.76	74.0	30.3	H	0

Test graphs as below:

RE - Power-2.31GHz-2.45GHz

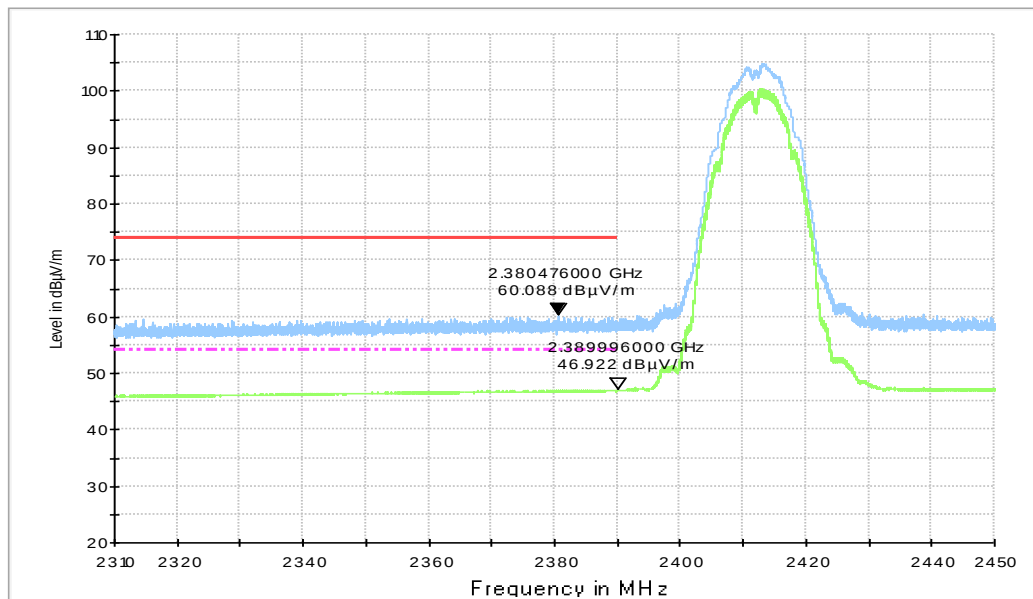


Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.45GHz

RE - Power-2.45GHz-2.5GHz

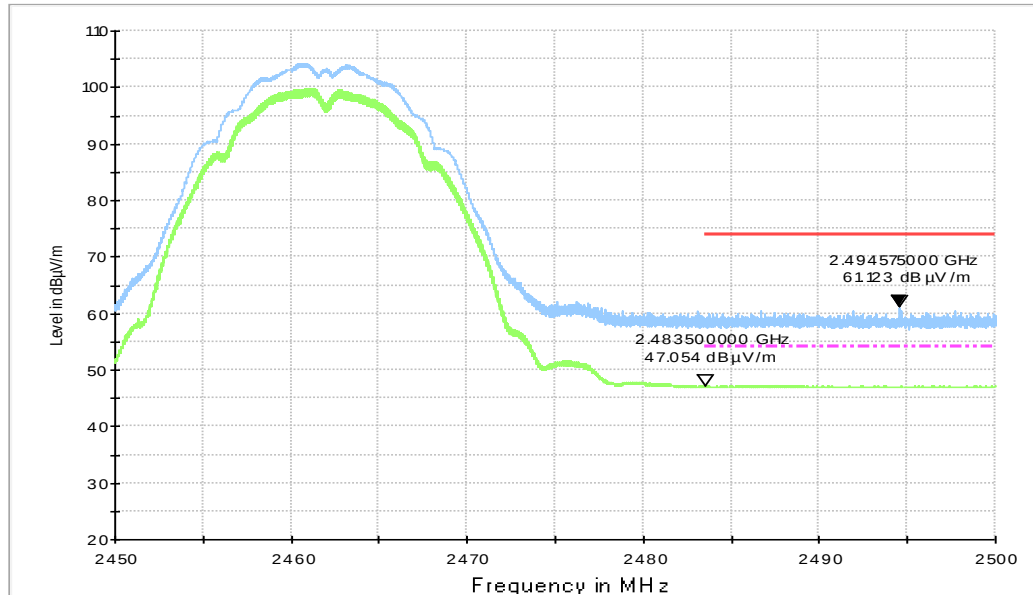


Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

RE - Power-2.31GHz-2.45GHz

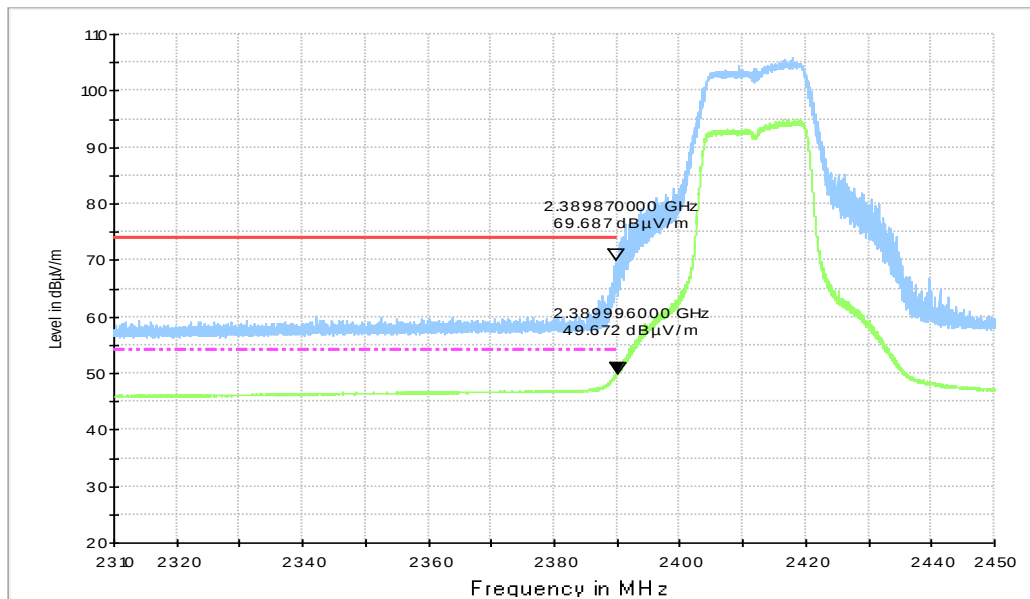


Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.43GHz

RE - Power-2.45GHz-2.5GHz

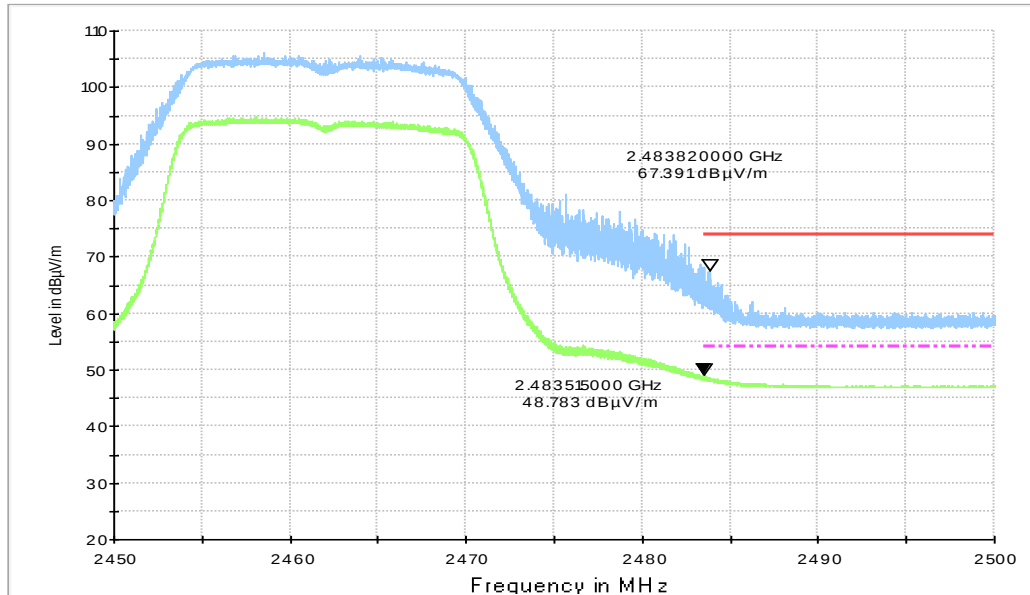


Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

RE - Power-2.31GHz-2.45GHz

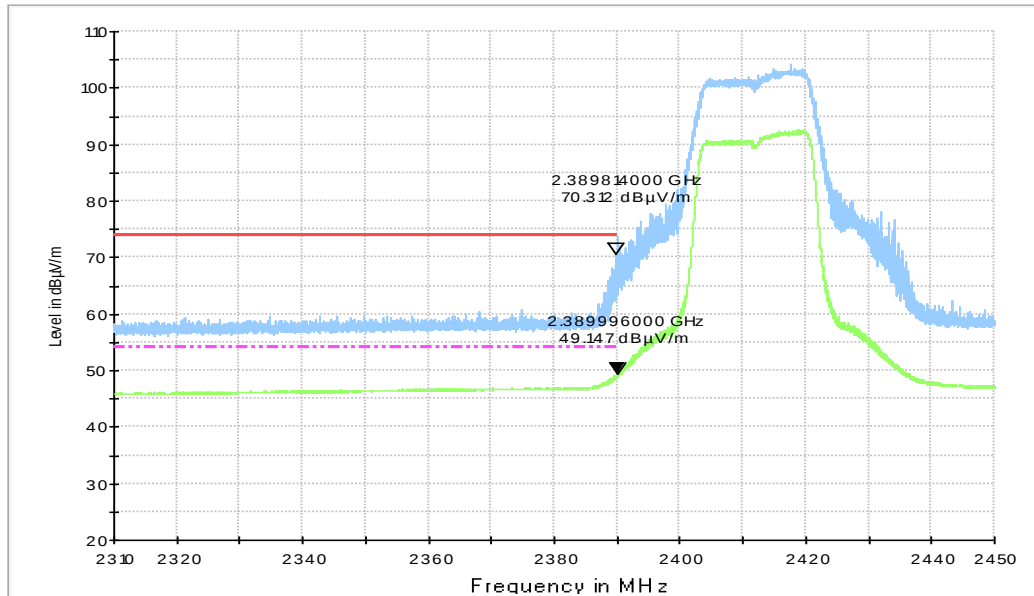


Fig.A.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31GHz - 2.45GHz

RE - Power-2.45GHz-2.5GHz

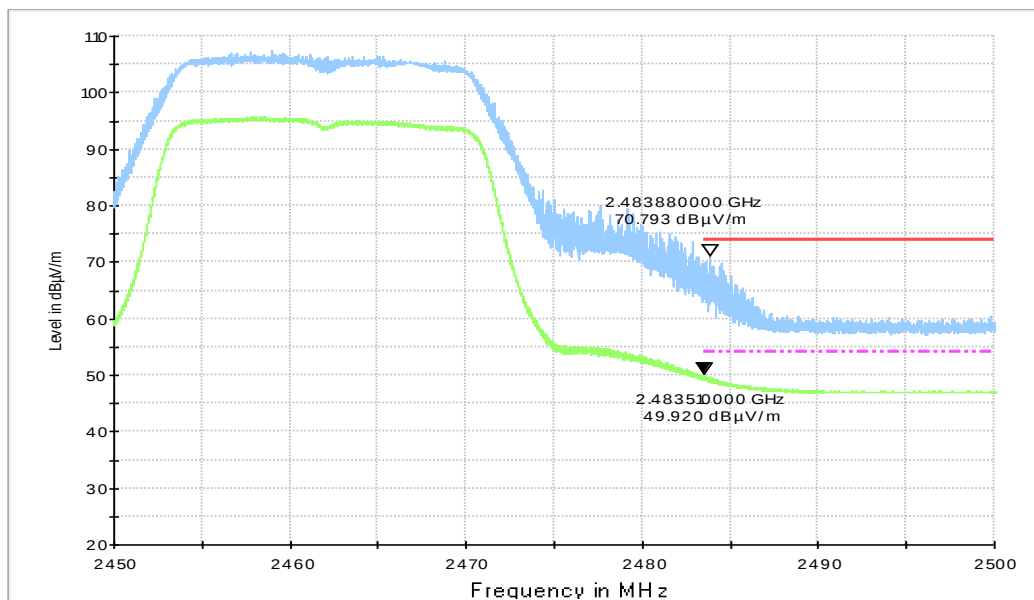


Fig.A.6.2.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

RE - Power-2.31GHz-2.45GHz

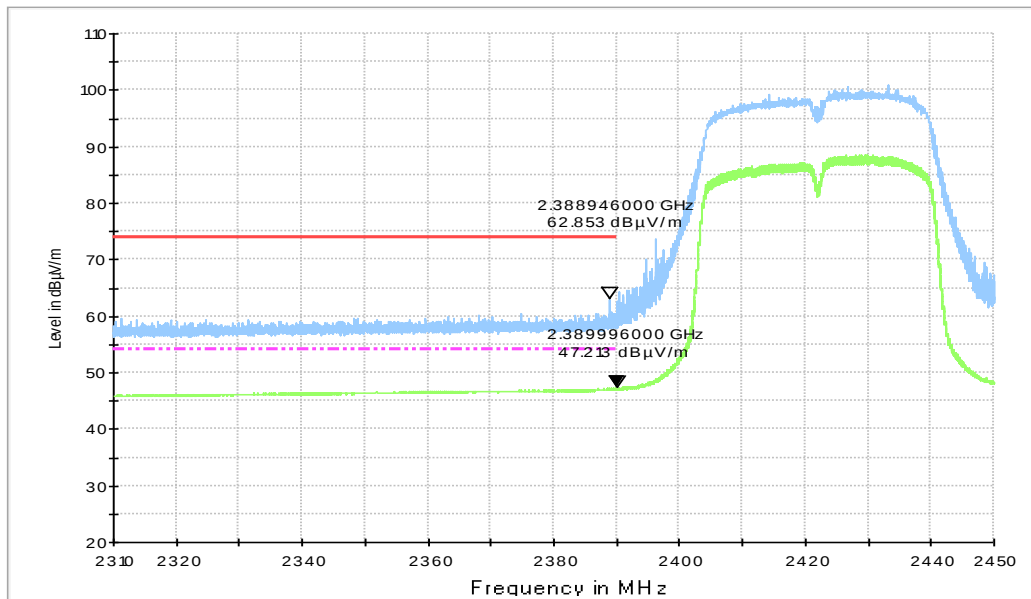


Fig.A.6.2.7 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31GHz - 2.45GHz

RE - Power-2.45GHz-2.5GHz

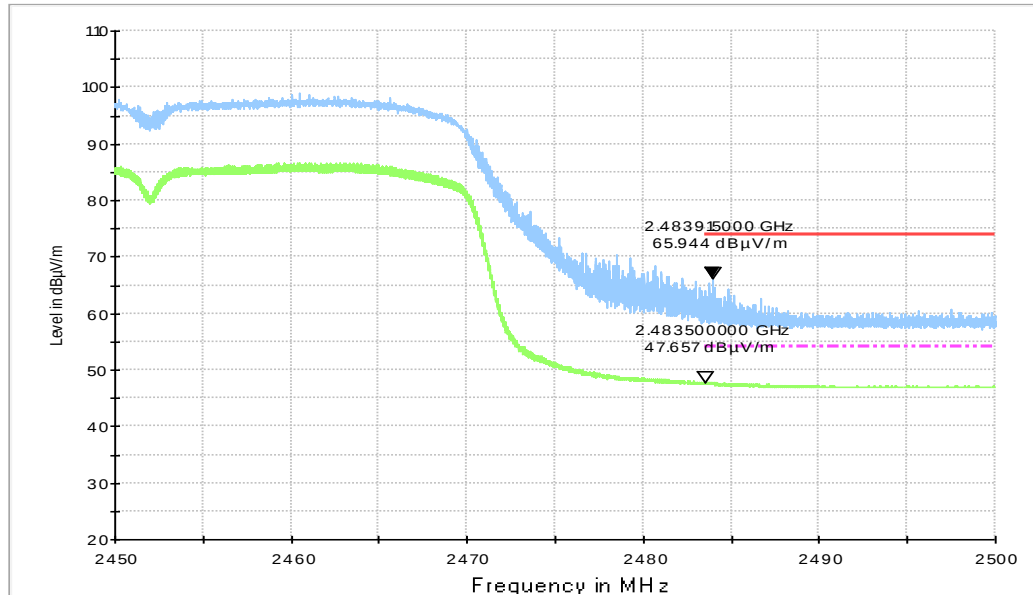


Fig.A.6.2.8 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz

A.7. AC Power-line Conducted Emission

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:

Traffic:

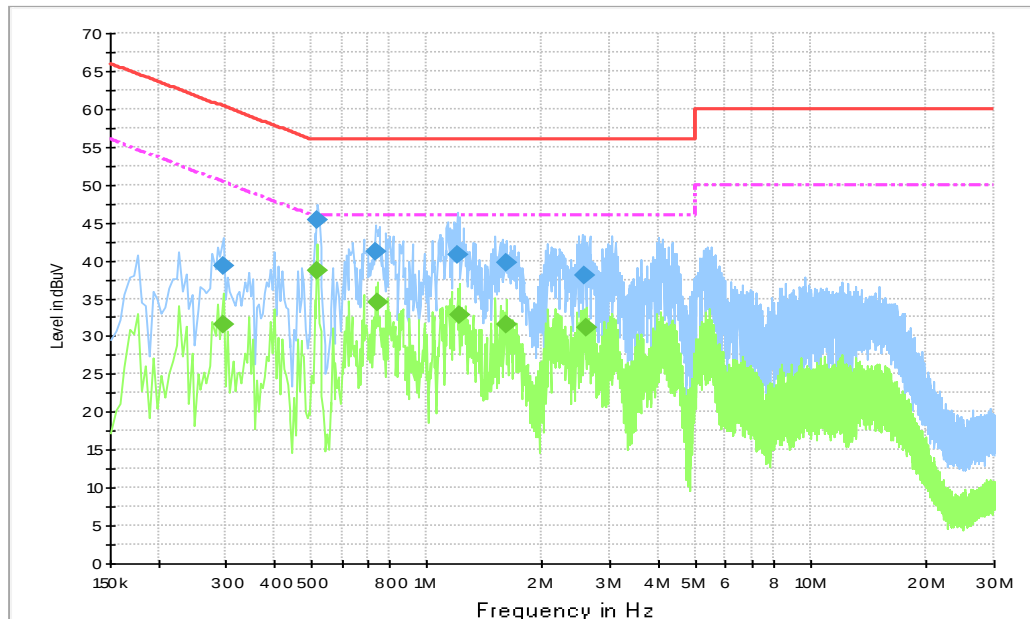


Fig.A.7.1 AC Powerline Conducted Emission-802.11b

Note1: 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)
0.294000	39.2	1000.	9.000	L1	19.9	21.2	60.4
0.519000	45.4	1000.	9.000	L1	20.0	10.6	56.0
0.735000	41.1	1000.	9.000	L1	19.9	14.9	56.0
1.198500	40.7	1000.	9.000	L1	19.8	15.3	56.0
1.608000	39.7	1000.	9.000	L1	19.8	16.3	56.0
2.575500	38.1	1000.	9.000	L1	19.8	17.9	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.294000	31.6	1000.0	9.000	L1	19.9	18.8	50.4
0.519000	38.7	1000.0	9.000	L1	20.0	7.3	46.0
0.744000	34.5	1000.0	9.000	L1	19.9	11.5	46.0
1.216500	32.7	1000.0	9.000	L1	19.8	13.3	46.0
1.608000	31.7	1000.0	9.000	L1	19.8	14.3	46.0
2.593500	31.1	1000.0	9.000	L1	19.8	14.9	46.0

Note2: The measurement results showed here are worst cases of the combinations of different chargers.

Idle:

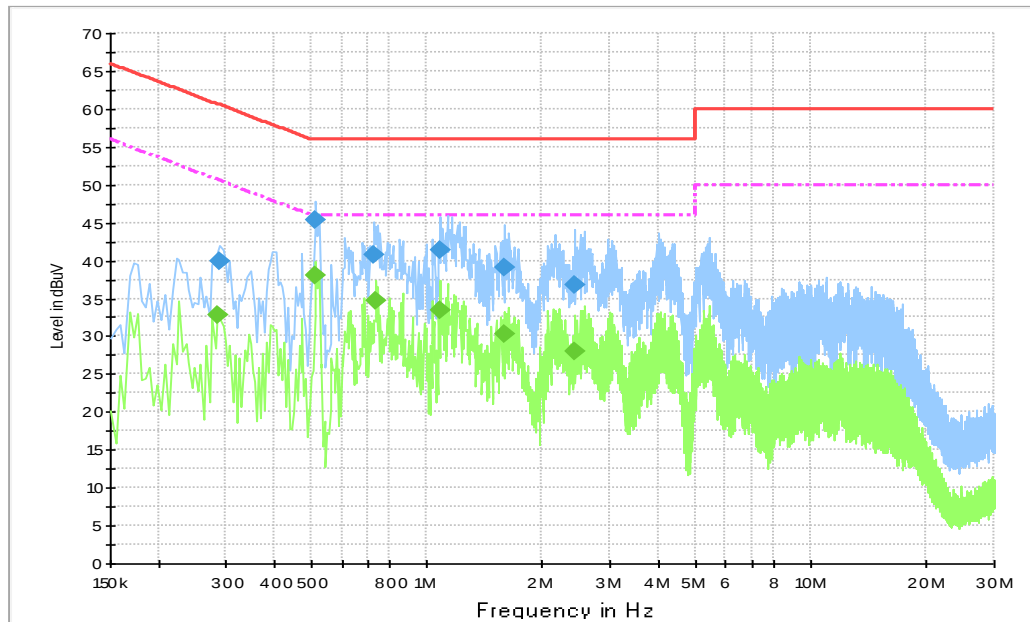


Fig.A.7.2 AC Powerline Conducted Emission-Idle

Note1: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

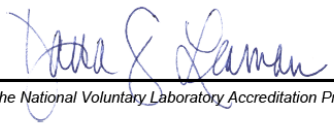
Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.289500	39.8	1000.	9.000	L1	19.9	20.7	60.5
0.514500	45.4	1000.	9.000	L1	20.0	10.6	56.0
0.730500	40.8	1000.	9.000	L1	19.9	15.2	56.0
1.081500	41.3	1000.	9.000	L1	19.8	14.7	56.0
1.590000	39.0	1000.	9.000	L1	19.8	17.0	56.0
2.436000	36.9	1000.	9.000	L1	19.8	19.1	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.285000	32.8	1000.0	9.000	L1	19.9	17.8	50.7
0.514500	38.1	1000.0	9.000	L1	20.0	7.9	46.0
0.739500	34.7	1000.0	9.000	L1	19.9	11.4	46.0
1.081500	33.4	1000.0	9.000	L1	19.8	12.6	46.0
1.590000	30.3	1000.0	9.000	L1	19.8	15.7	46.0
2.436000	27.9	1000.0	9.000	L1	19.8	18.1	46.0

Note2: The measurement results showed here are worst cases of the combinations of different chargers

ANNEX B: Accreditation Certificate

United States Department of Commerce National Institute of Standards and Technology NV LAP[®]  ilac-MRA	
Certificate of Accreditation to ISO/IEC 17025:2017	
NVLAP LAB CODE: 600118-0	
Telecommunication Technology Labs, CAICT Beijing China	
<i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i>	
Electromagnetic Compatibility & Telecommunications	
<i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).</i>	
2020-09-29 through 2021-09-30 <i>Effective Dates</i>	 DEPARTMENT OF COMMERCE UNITED STATES OF AMERICA  For the National Voluntary Laboratory Accreditation Program

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