

Fig.B.6.1.68 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 2.5 GHz-7.5 GHz)

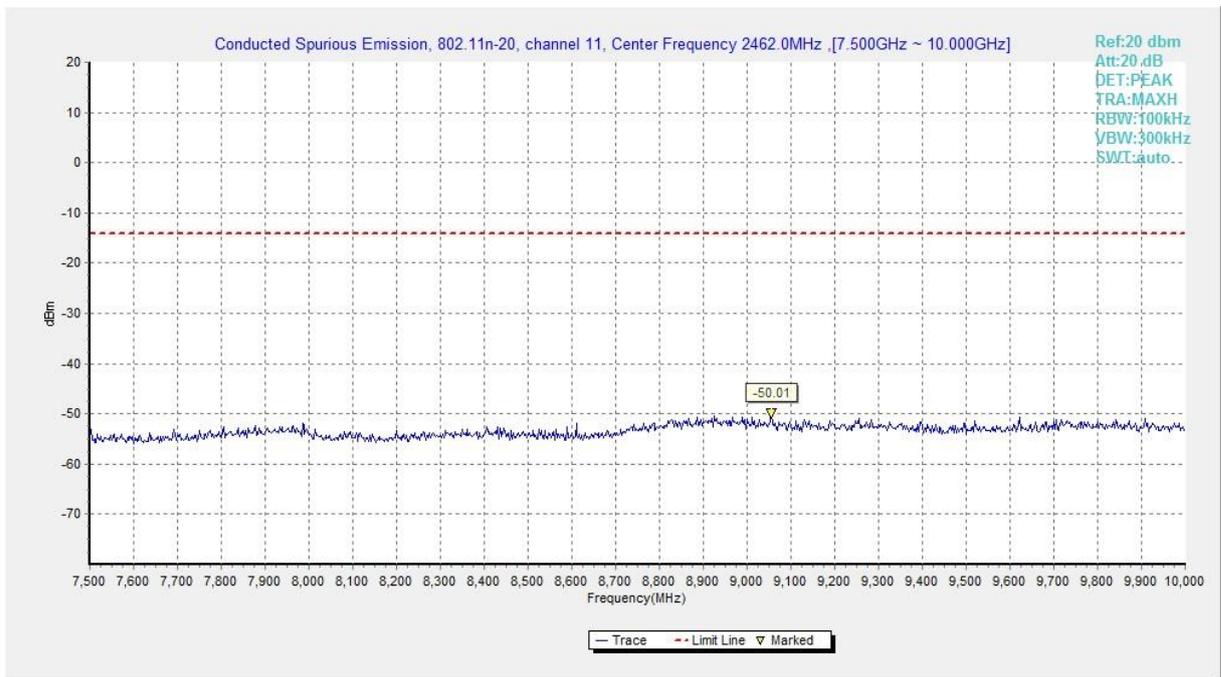


Fig.B.6.1.69 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 7.5 GHz-10 GHz)

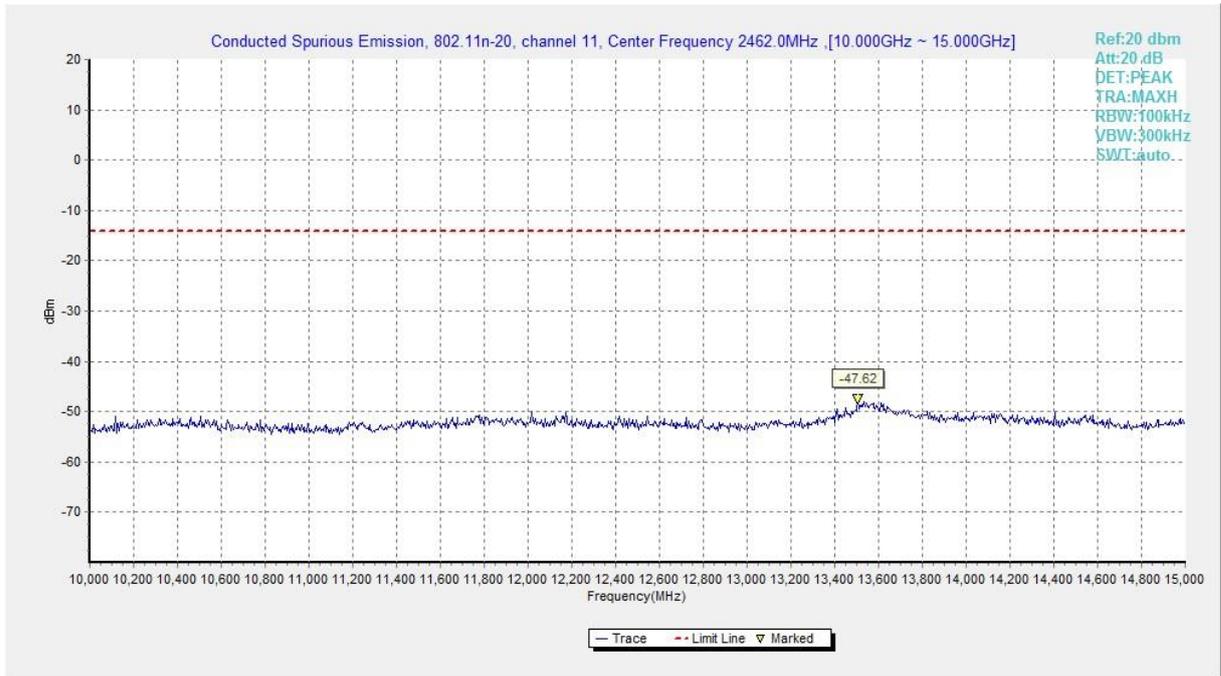


Fig.B.6.1.70 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 10 GHz-15 GHz)

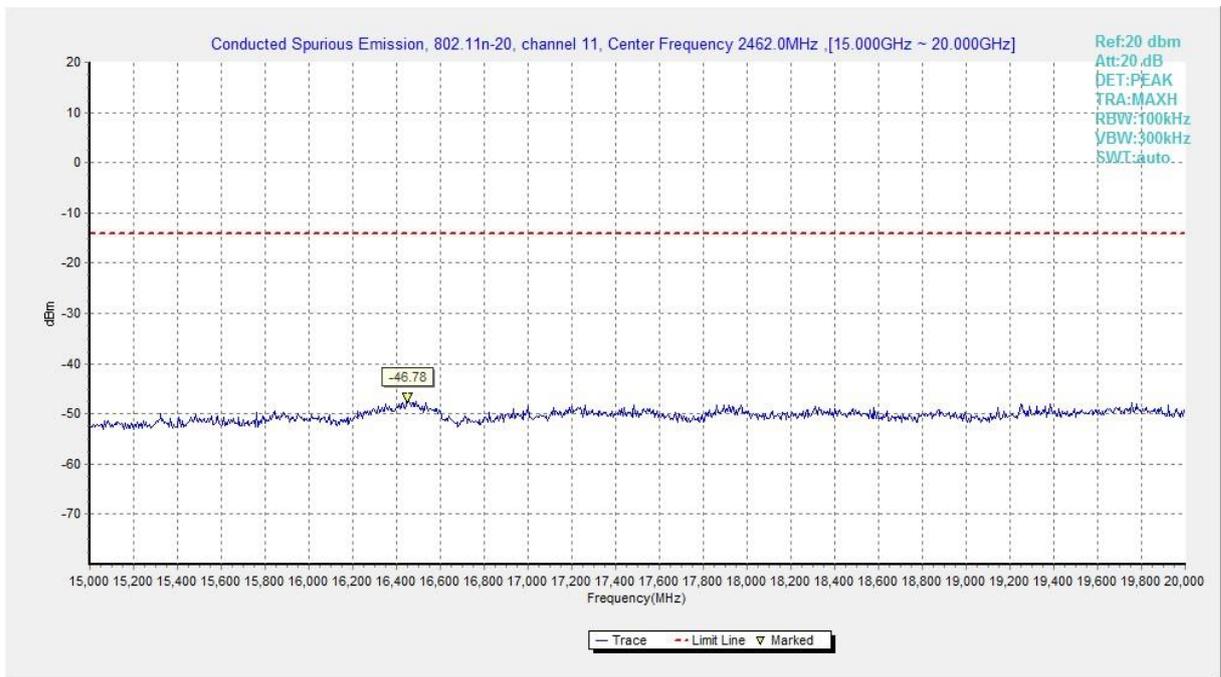


Fig.B.6.1.71 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 15 GHz-20 GHz)

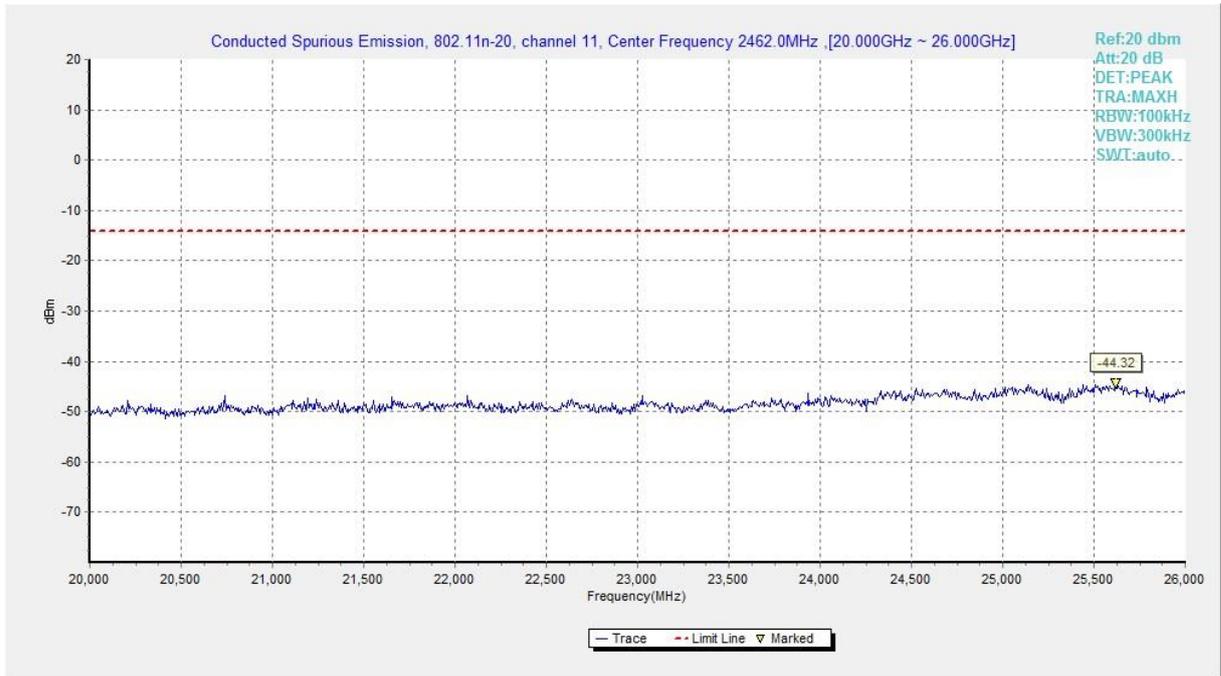


Fig.B.6.1.72 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 20 GHz-26 GHz)

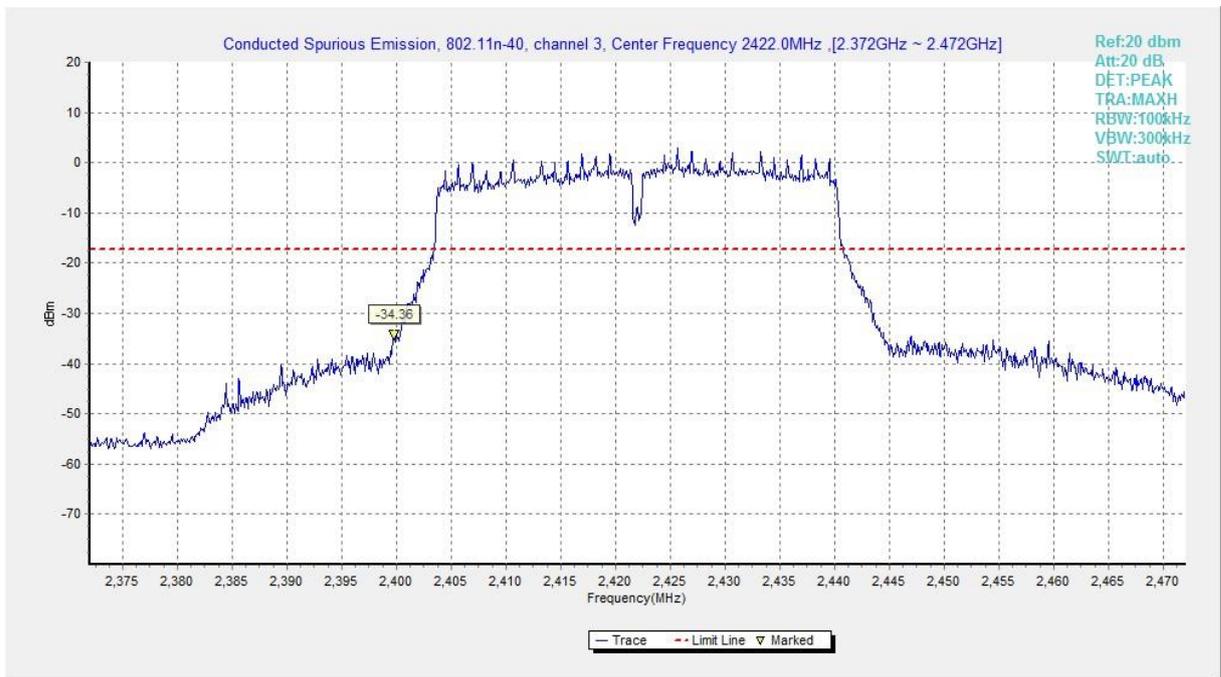


Fig.B.6.1.73 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, Center Frequency)

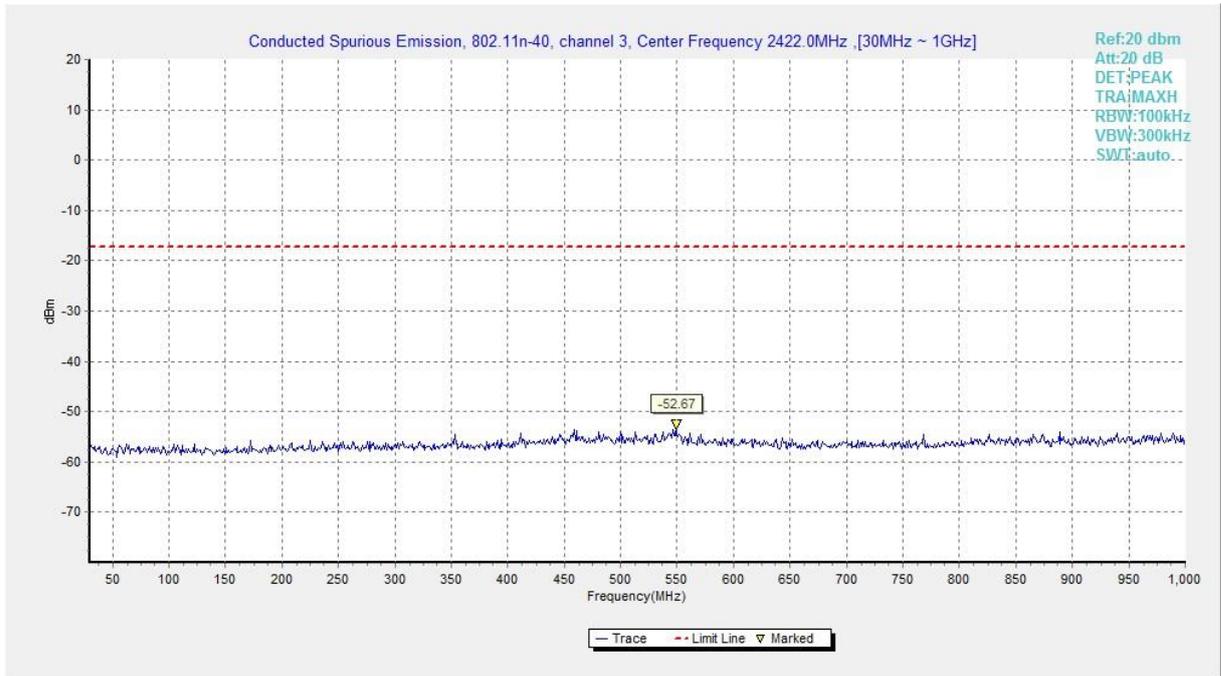


Fig.B.6.1.74 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 30 MHz-1 GHz)

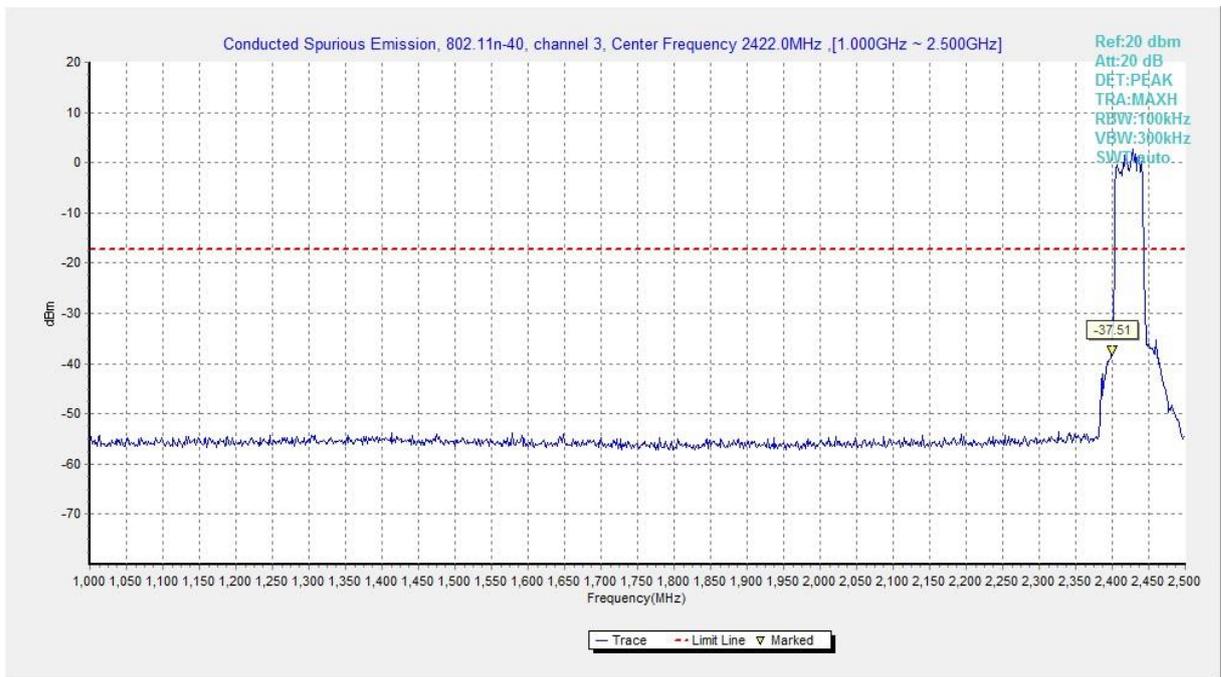


Fig.B.6.1.75 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 1 GHz-2.5 GHz)

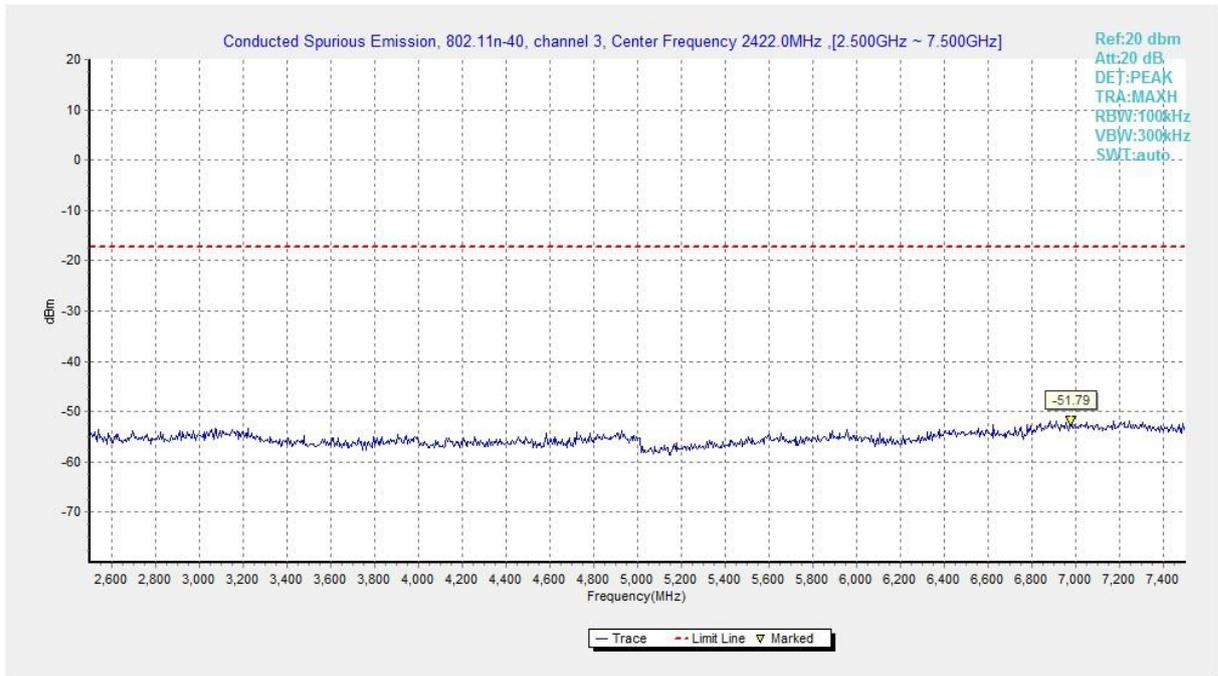


Fig.B.6.1.76 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 2.5 GHz-7.5 GHz)

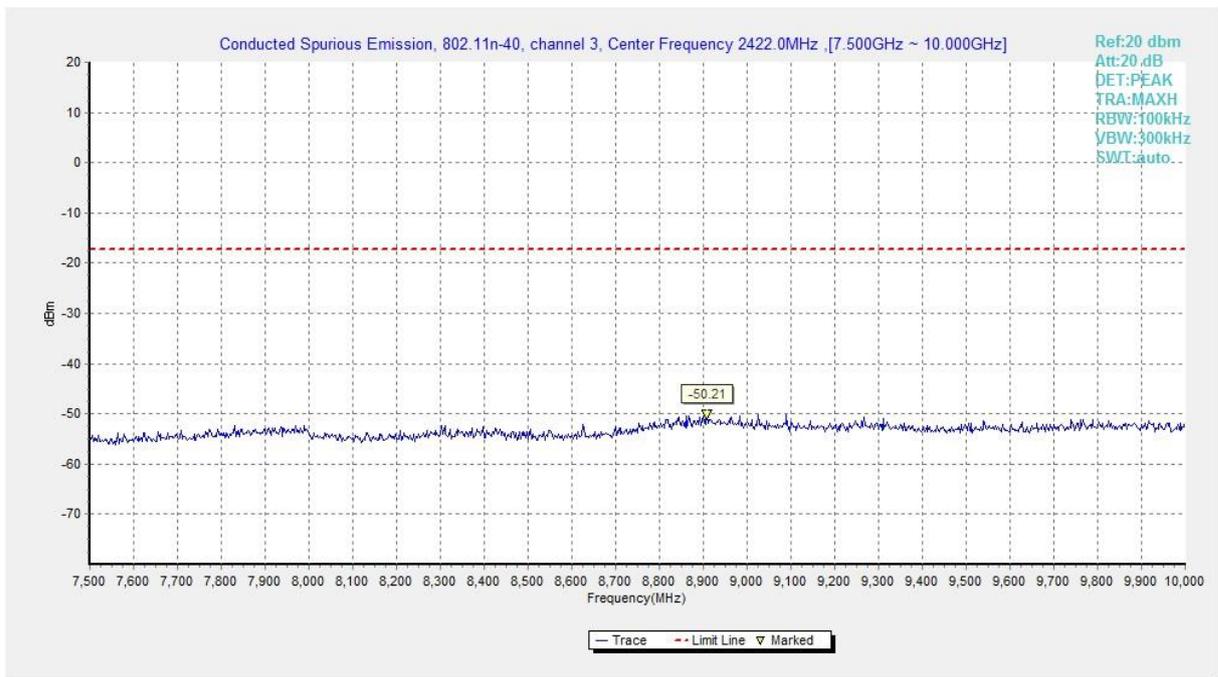


Fig.B.6.1.77 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 7.5 GHz-10 GHz)

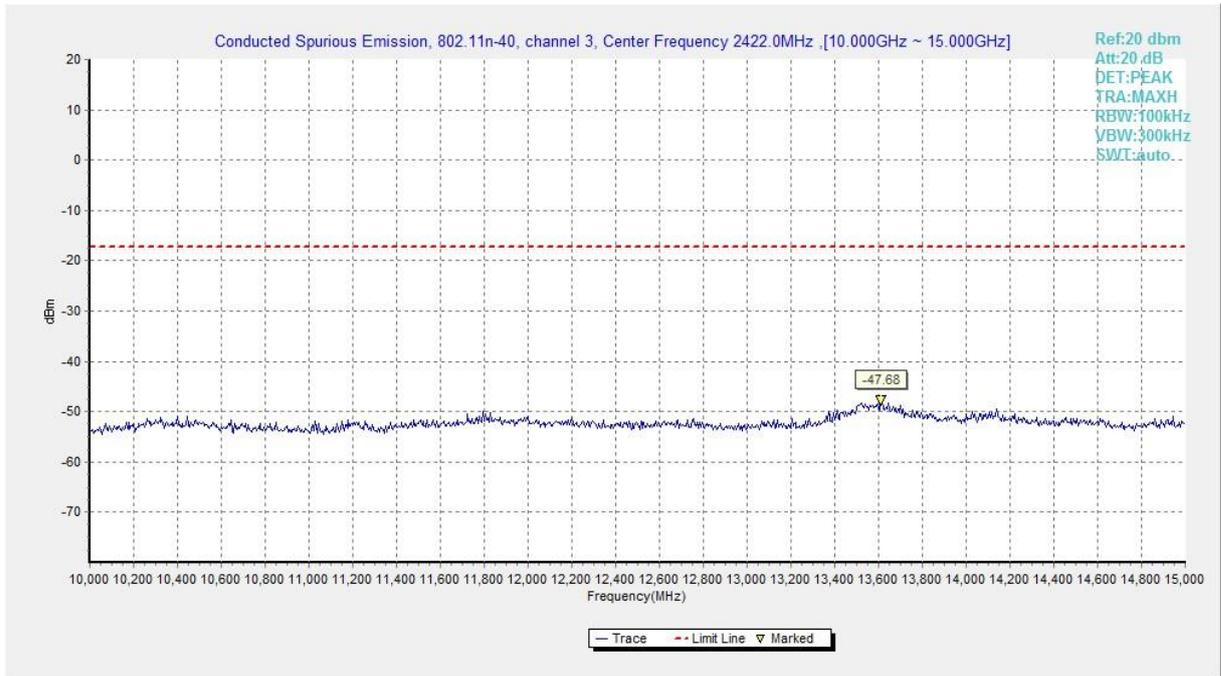


Fig.B.6.1.78 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 10 GHz-15 GHz)

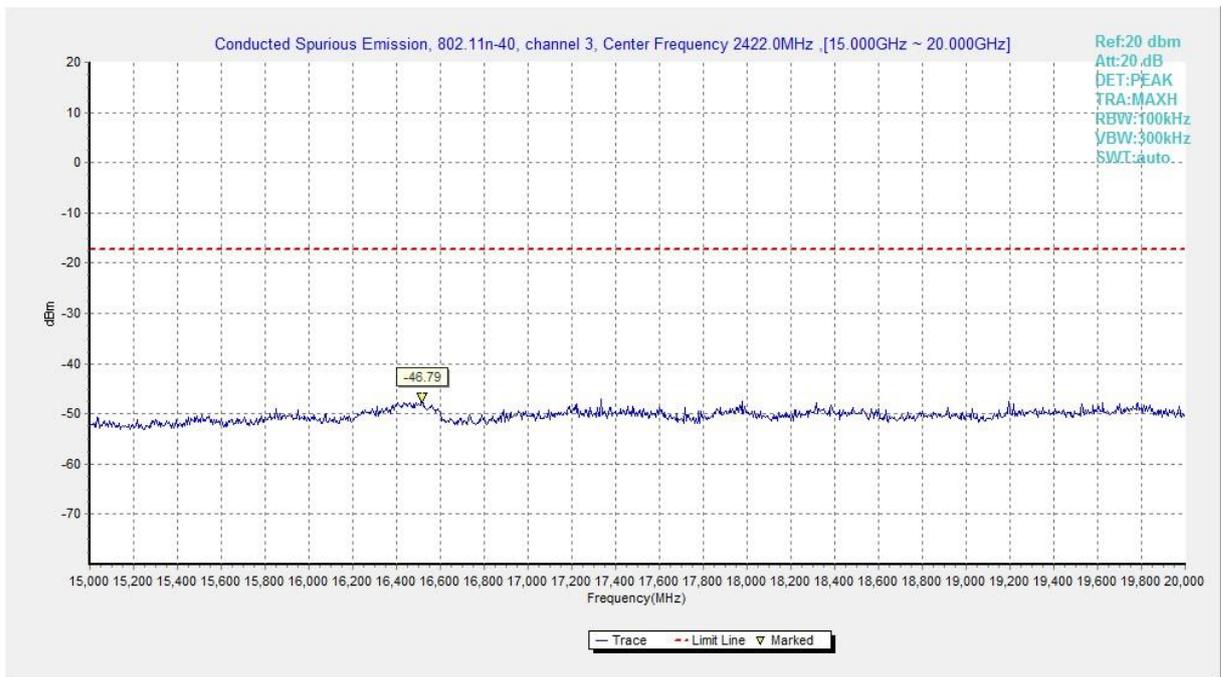


Fig.B.6.1.79 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 15 GHz-20 GHz)

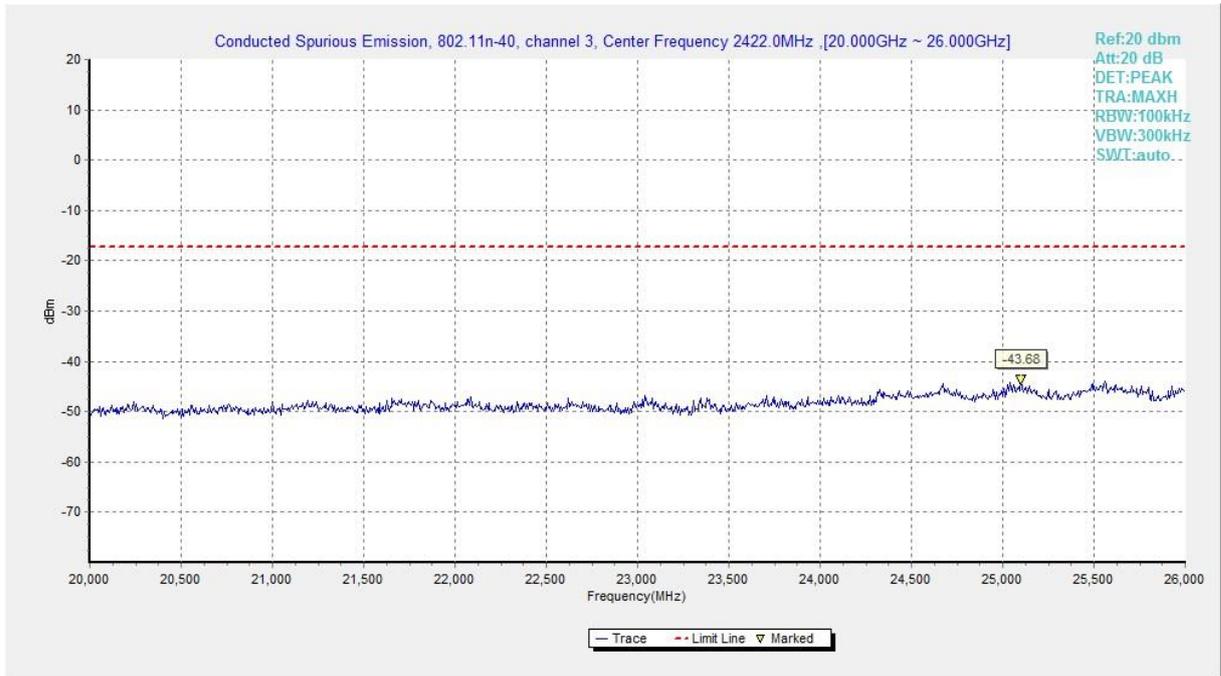


Fig.B.6.1.80 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 20 GHz-26 GHz)

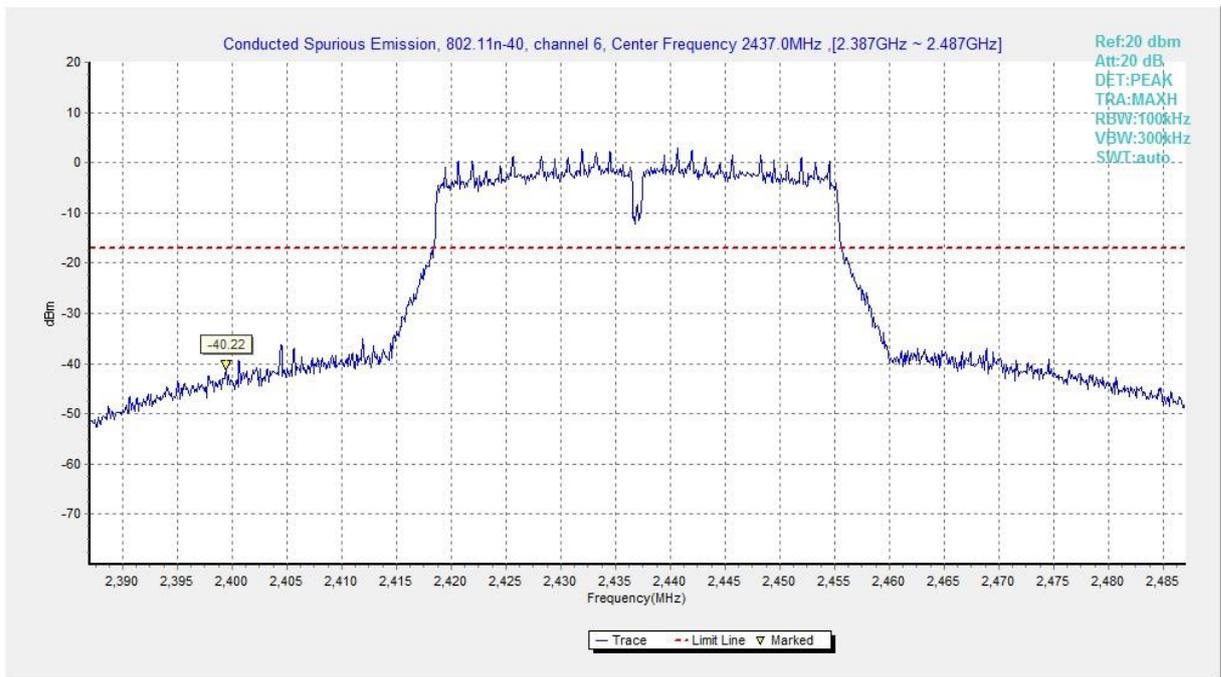


Fig.B.6.1.81 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, Center Frequency)

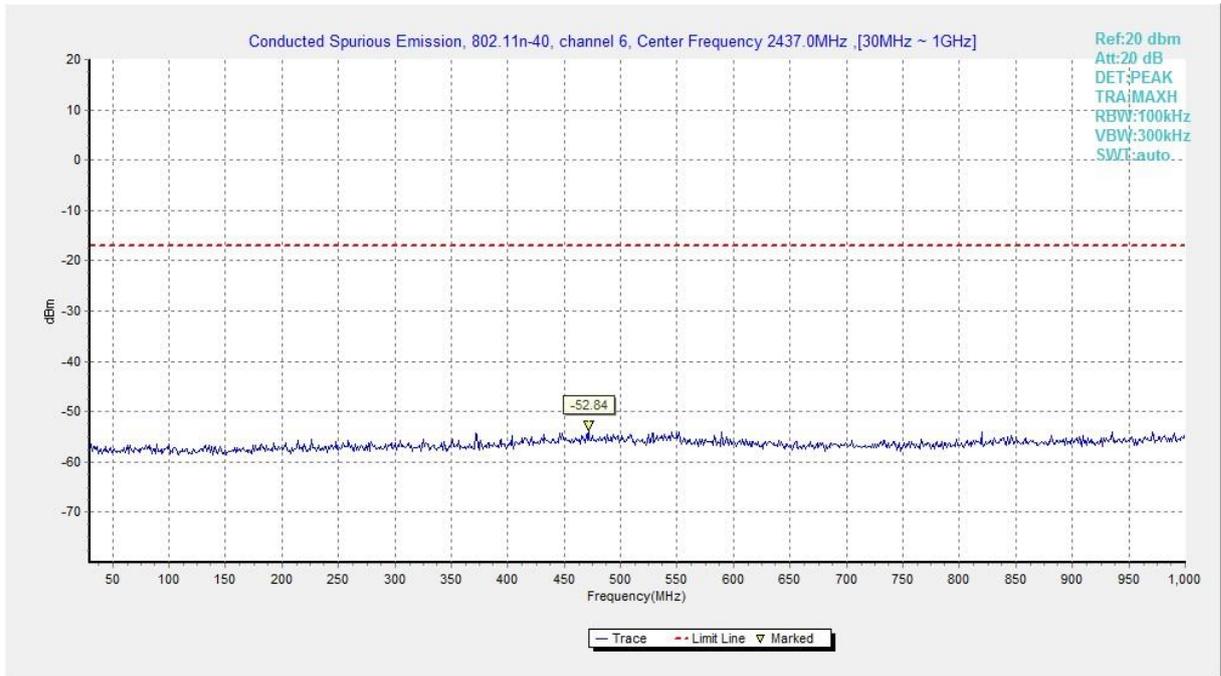


Fig.B.6.1.82 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 30 MHz-1 GHz)

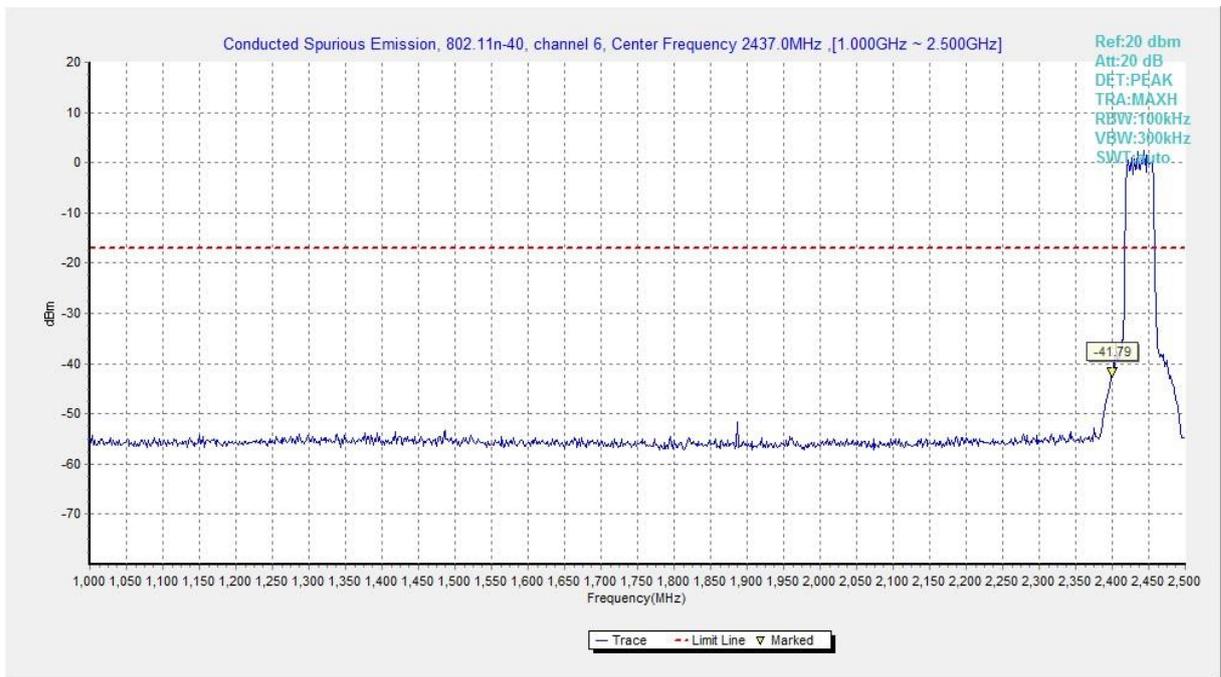


Fig.B.6.1.83 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 1 GHz-2.5 GHz)

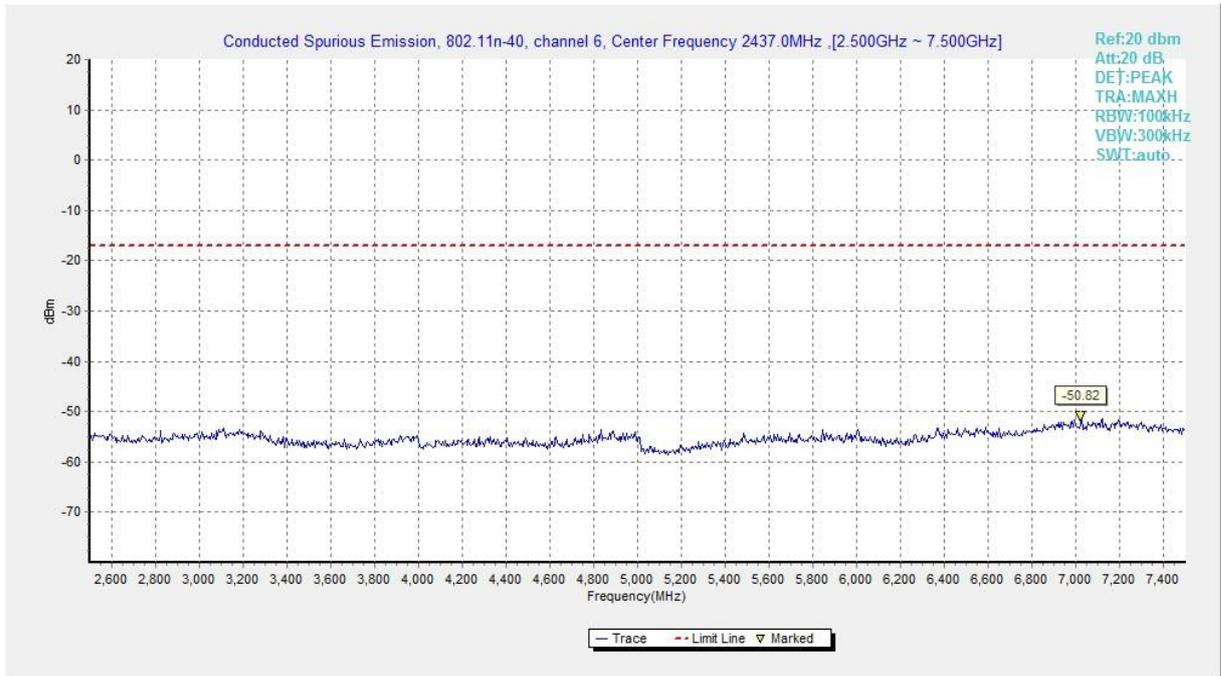


Fig.B.6.1.84 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 2.5 GHz-7.5 GHz)

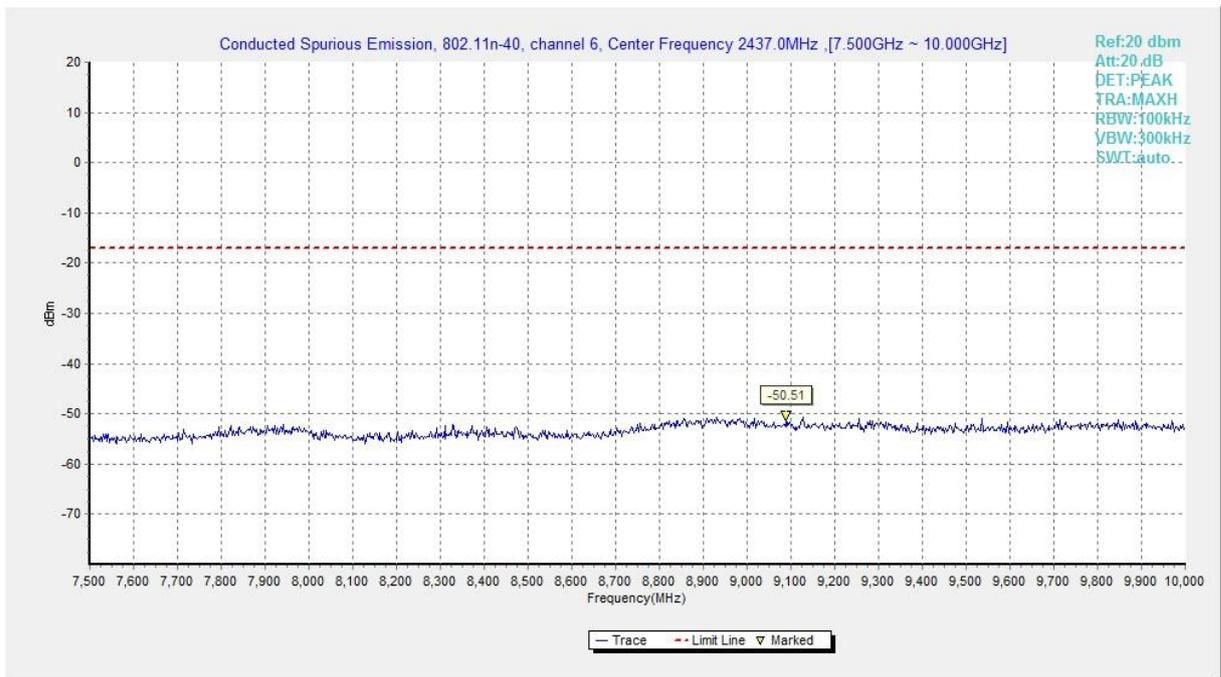


Fig.B.6.1.85 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 7.5 GHz-10 GHz)

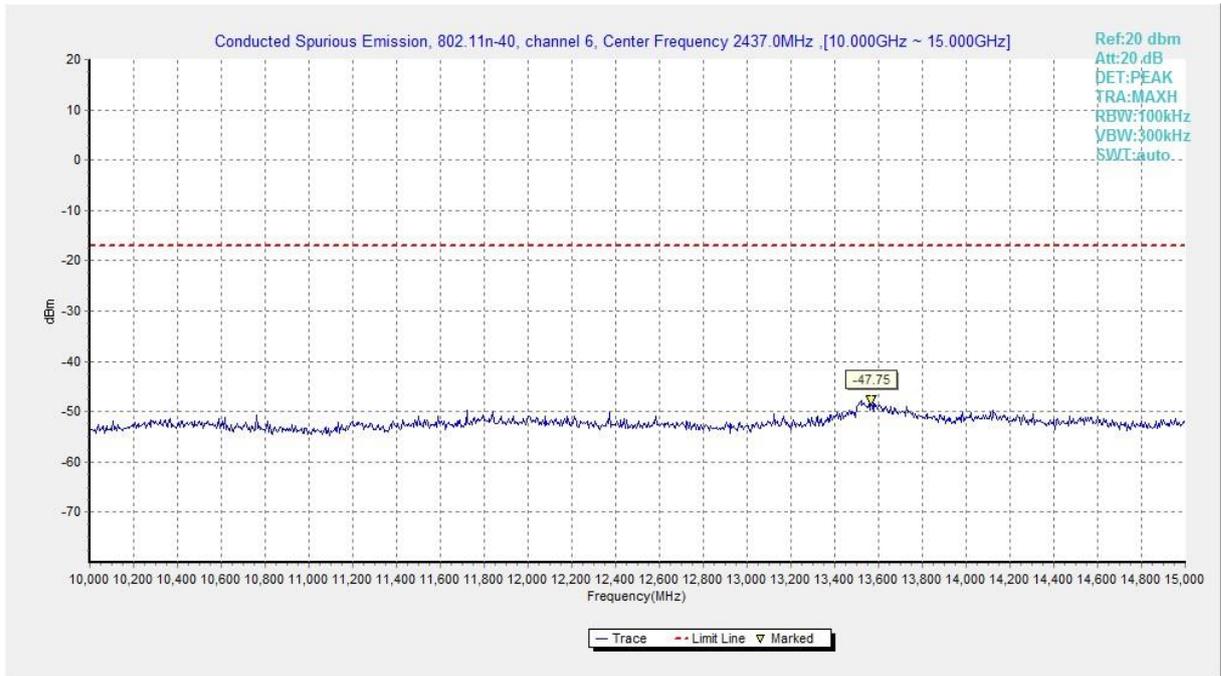


Fig.B.6.1.86 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 10 GHz-15 GHz)

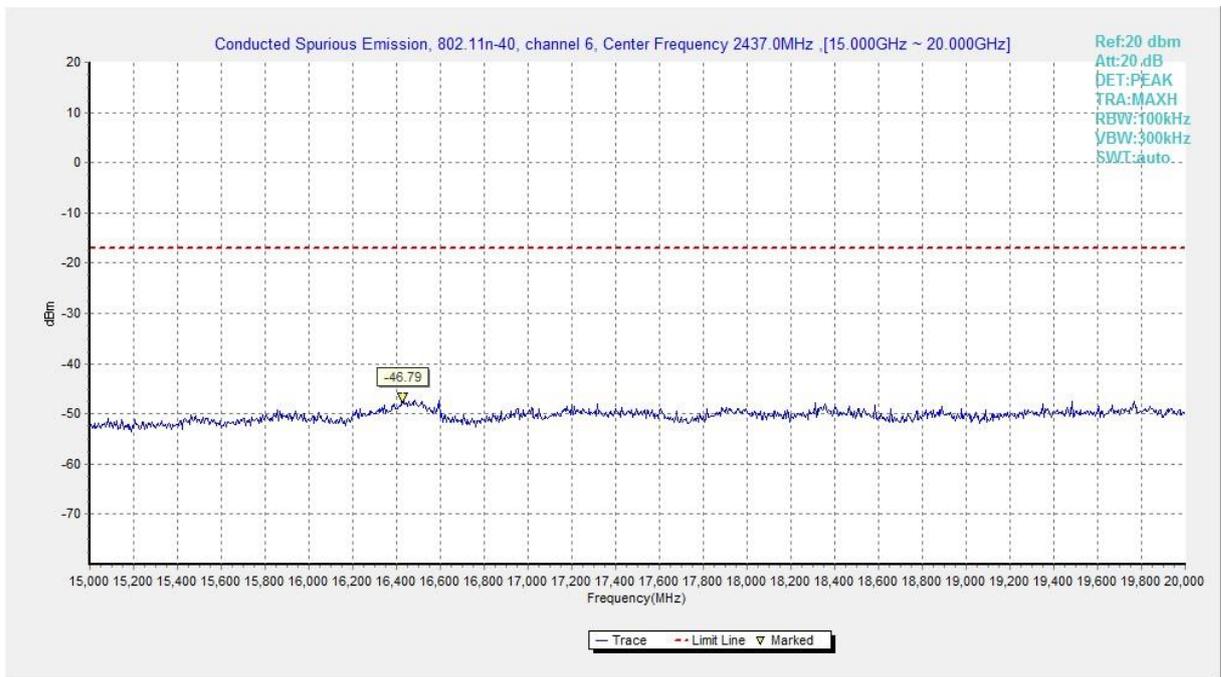


Fig.B.6.1.87 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 15 GHz-20 GHz)

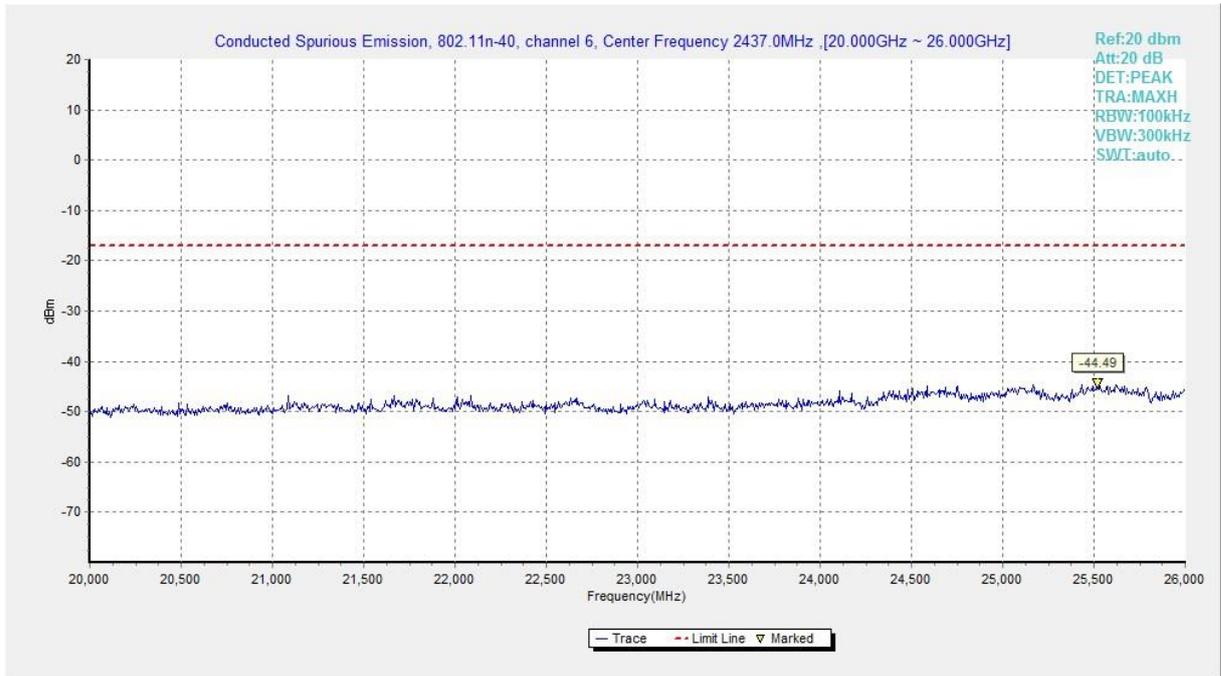


Fig.B.6.1.88 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 20 GHz-26 GHz)

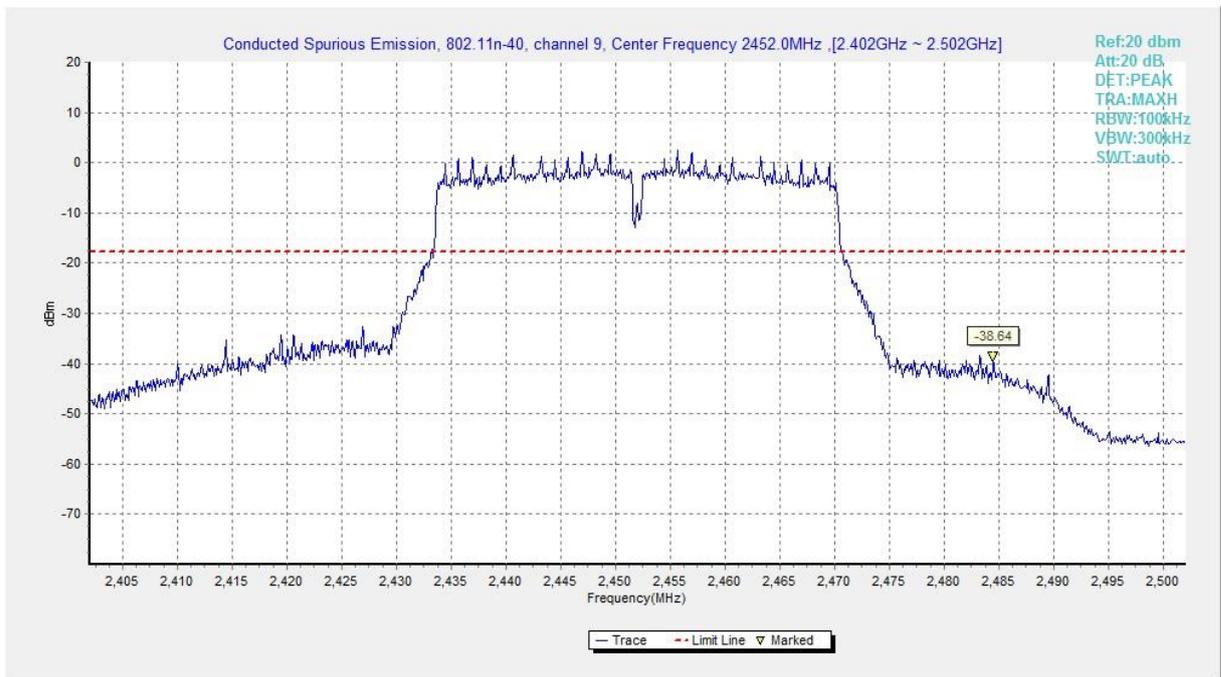


Fig.B.6.1.89 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, Center Frequency)

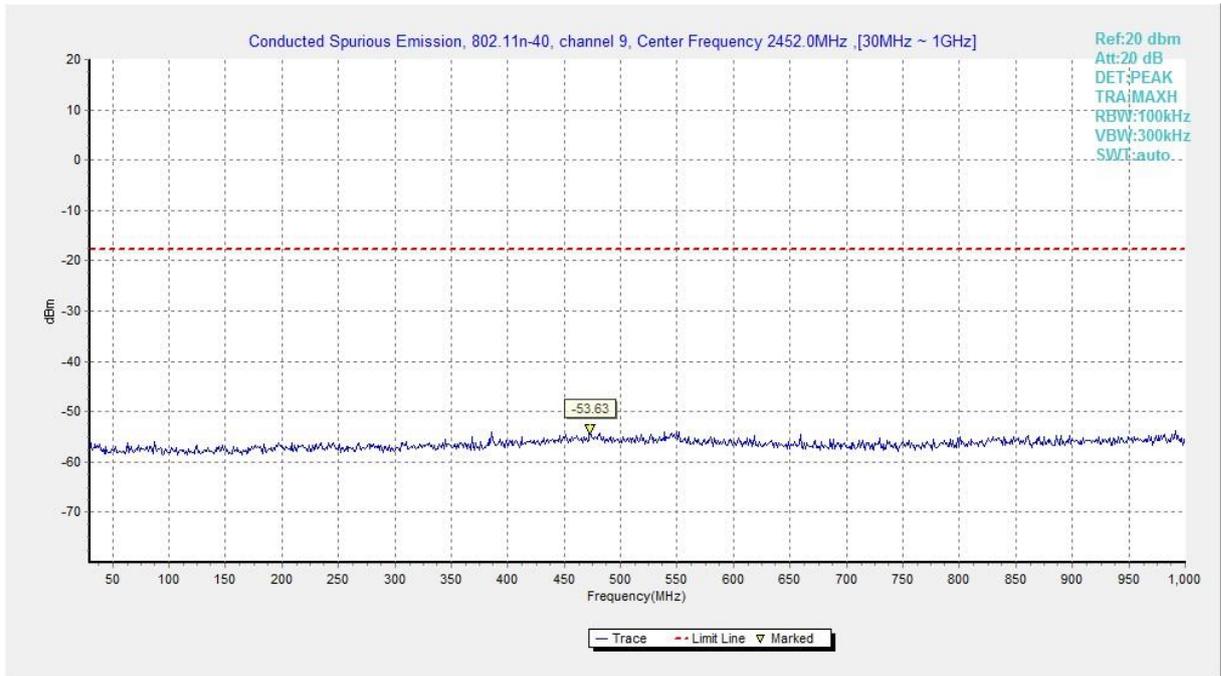


Fig.B.6.1.90 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 30 MHz-1 GHz)

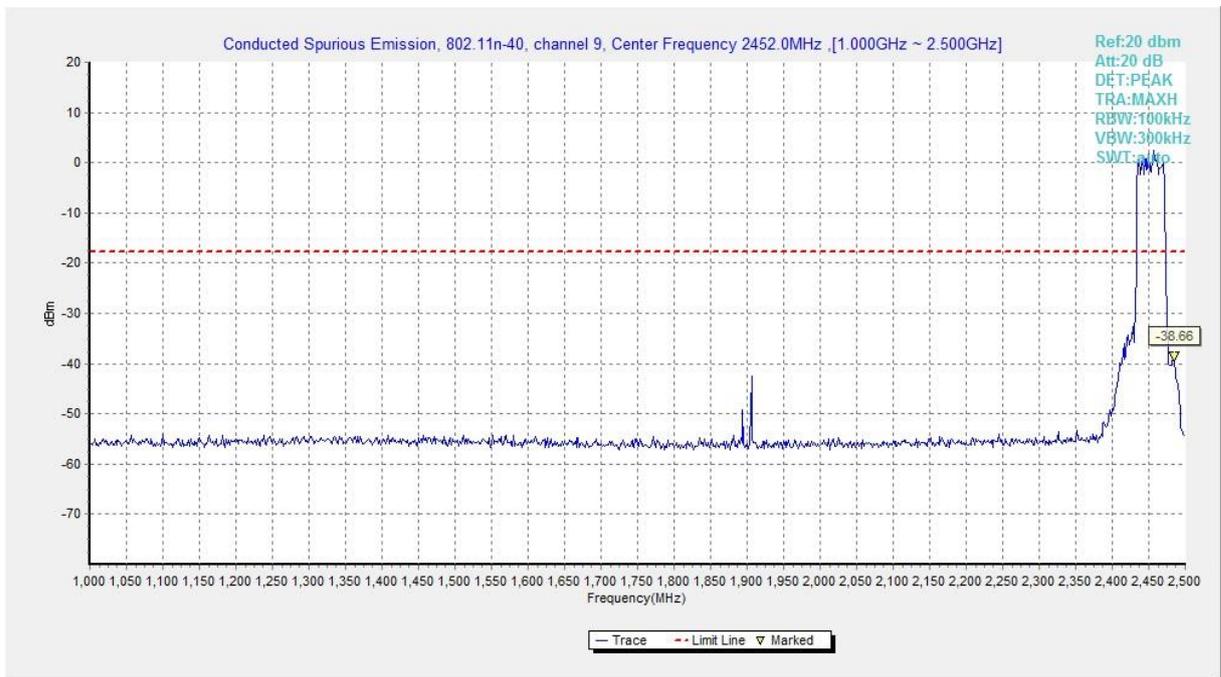


Fig.B.6.1.91 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 1 GHz-2.5 GHz)

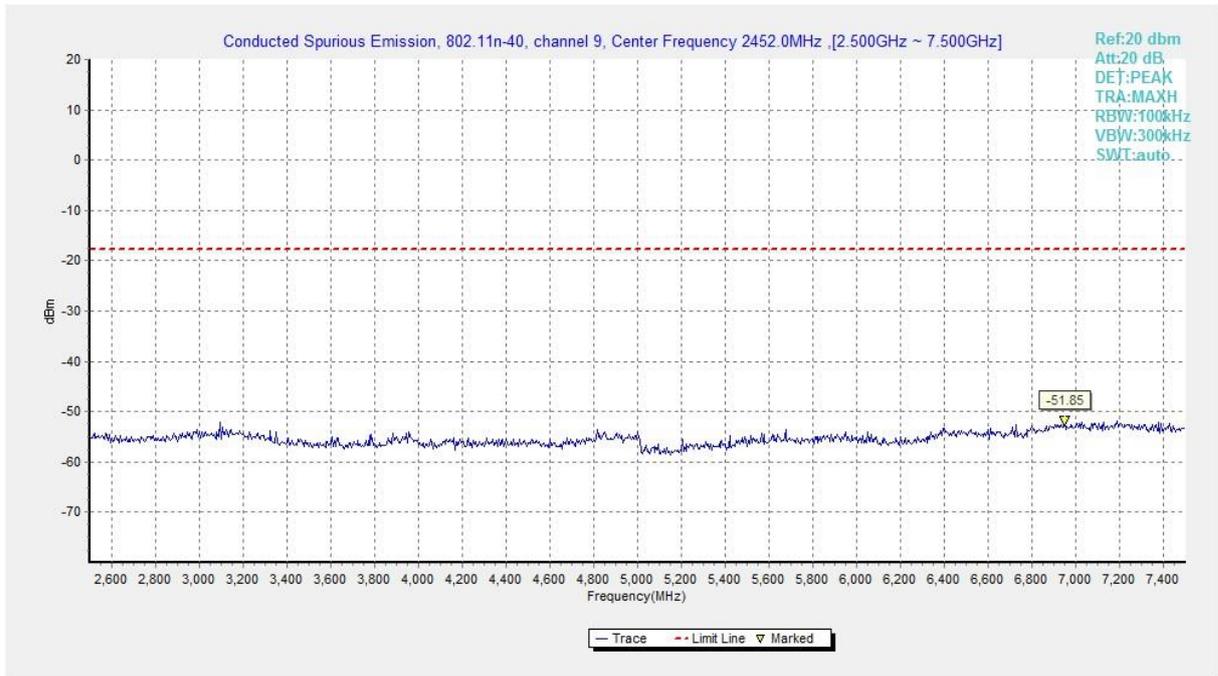


Fig.B.6.1.92 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 2.5 GHz-7.5 GHz)

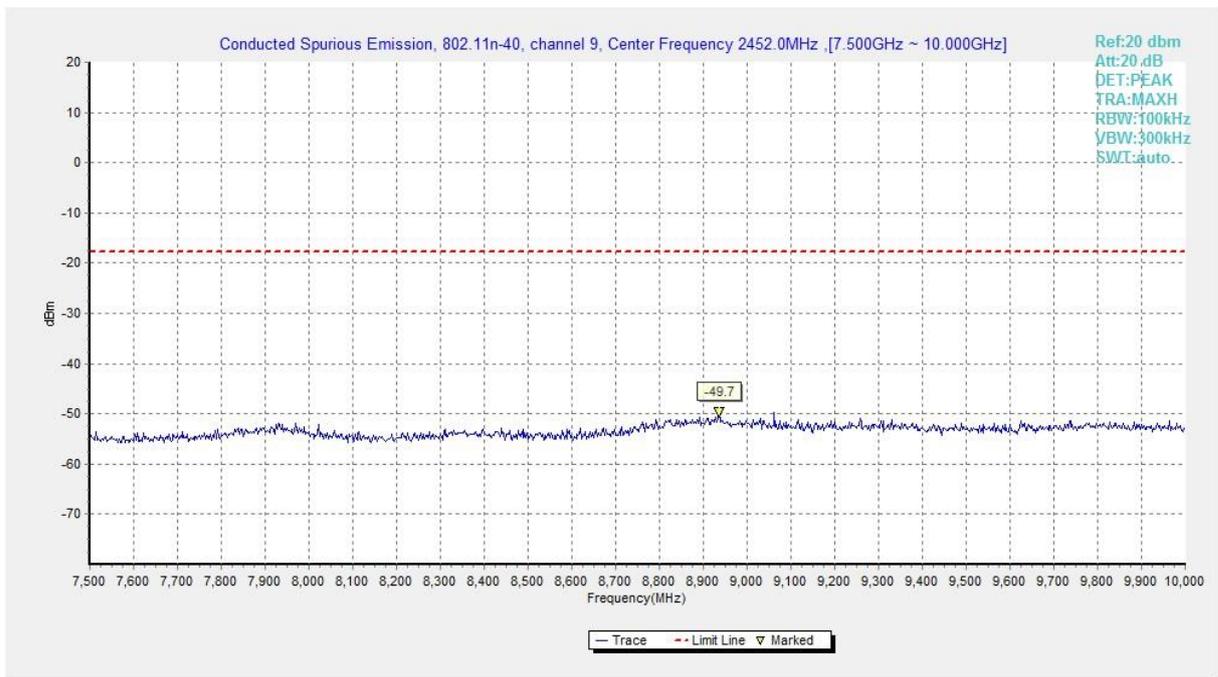


Fig.B.6.1.93 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 7.5 GHz-10 GHz)

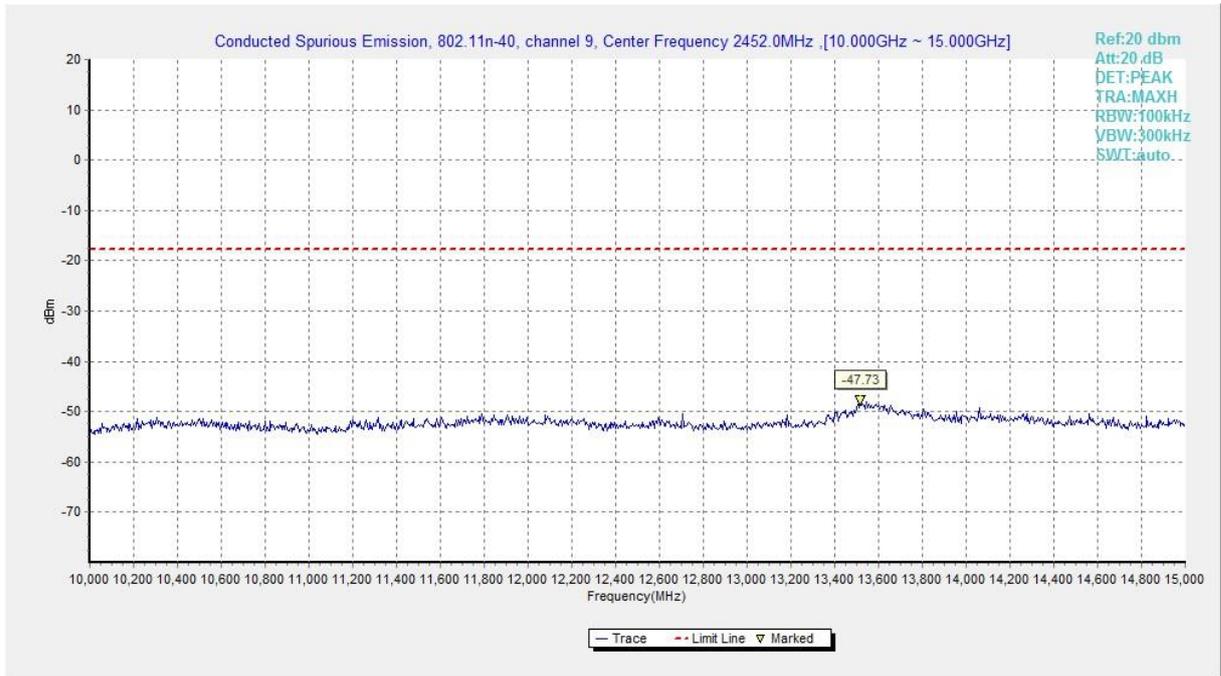


Fig.B.6.1.94 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 10 GHz-15 GHz)

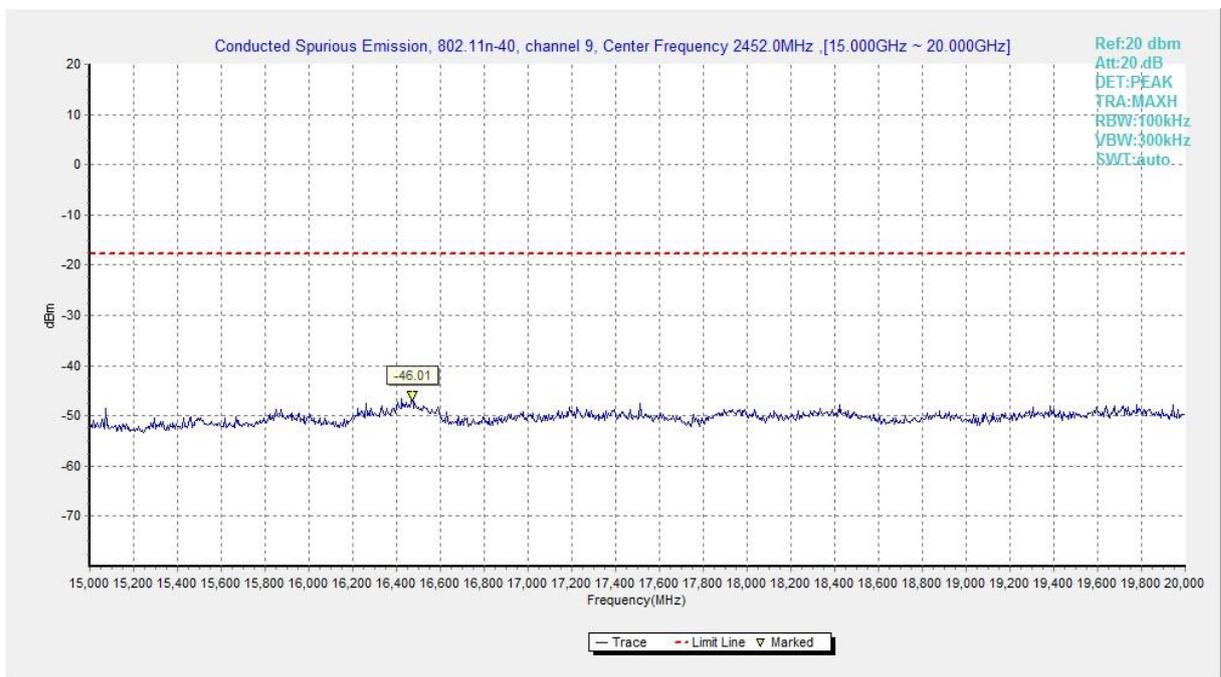


Fig.B.6.1.95 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 15 GHz-20 GHz)

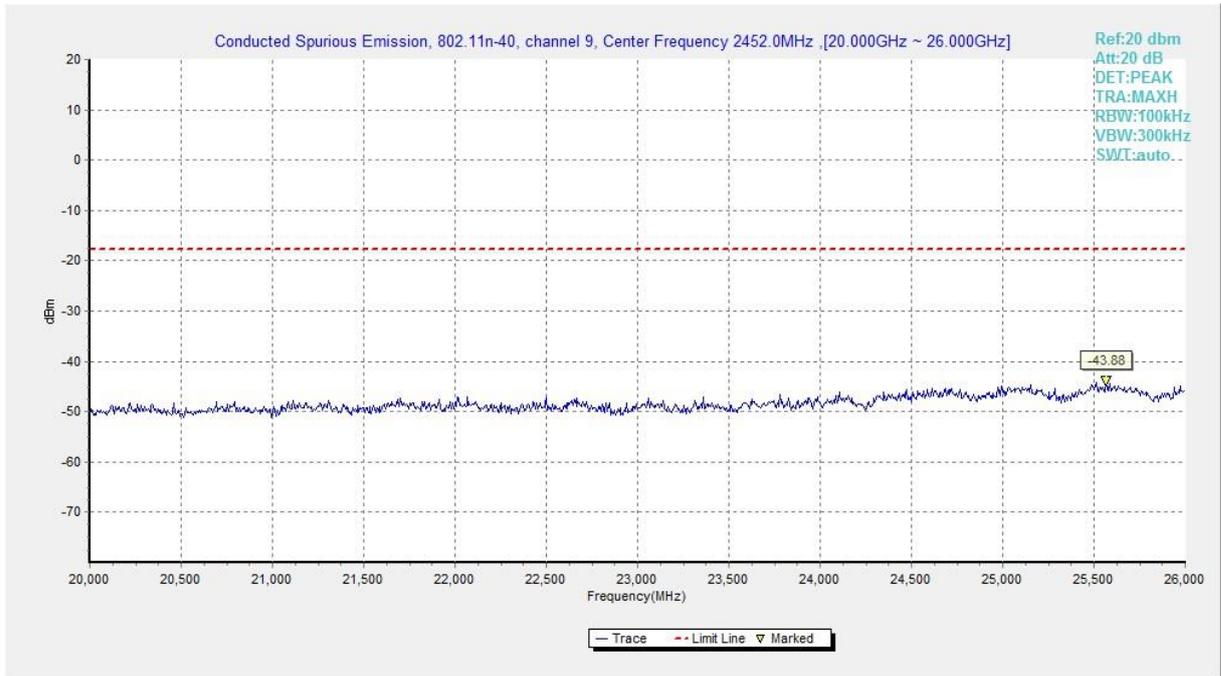


Fig.B.6.1.96 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 20 GHz-26 GHz)

B.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: EUT1(UT38a)

Measurement Results:
802.11b mode

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

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	1	2.31GHz~2.43GHz---L	Fig.B.6.2.3	P
	11	2.45GHz~2.50GHz---H	Fig.B.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.B.6.2.5	P
	11	2.45GHz~2.50GHz---H	Fig.B.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.B.6.2.7	P
	9	2.45GHz~2.50GHz---H	Fig.B.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:

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

Peak
802.11b
 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)	Antenna Height (cm)	Turntable angle (deg)
2381.848	60.53	2.9	32.0	25.68	74.0	13.5	V	155	22
2389.688	60.26	2.9	32.0	25.40	74.0	13.7	H	155	44
4824.000	43.27	-33.2	34.1	42.38	74.0	30.7	H	155	88
7236.000	42.36	-30.9	35.8	37.45	74.0	31.6	V	155	66
9648.000	43.21	-30.5	36.7	36.96	74.0	30.8	H	155	220
12060.000	46.60	-28.7	38.7	36.57	74.0	27.4	V	155	0

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)	Antenna Height (cm)	Turntable angle (deg)
2375.400	44.22	-34.3	32.0	46.51	74.0	29.8	H	155	0
2501.000	44.86	-34.2	32.1	46.92	74.0	29.1	H	155	22
4874.000	43.88	-33.3	34.2	43.03	74.0	30.1	V	155	352
7311.000	42.56	-30.8	35.8	37.55	74.0	31.4	V	155	352
9748.000	44.24	-30.3	36.9	37.72	74.0	29.8	H	155	176
12185.000	46.71	-28.1	38.8	36.00	74.0	27.3	V	155	176

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)	Antenna Height (cm)	Turntable angle (deg)
2483.880	60.44	2.9	32.1	25.42	74.0	13.6	H	155	22
2494.760	60.74	2.9	32.1	25.70	74.0	13.3	H	155	44
4924.000	43.18	-33.5	34.2	42.53	74.0	30.8	V	155	0
7386.000	41.90	-31.5	35.9	37.50	74.0	32.1	H	155	0
9848.000	43.83	-30.2	37.0	37.02	74.0	30.2	V	155	22
12310.000	46.29	-27.8	38.9	35.16	74.0	27.7	H	155	176

802.11g

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)	Antenna Height (cm)	Turntable angle (deg)
2363.620	60.40	2.8	32.0	25.58	74.0	13.6	H	155	22
2387.084	60.44	2.9	32.0	25.58	74.0	13.6	H	155	44
4824.000	41.51	-33.2	34.1	40.61	74.0	32.5	H	155	66
7236.000	43.94	-30.9	35.8	39.02	74.0	30.1	H	155	0
9648.000	46.20	-30.5	36.7	39.94	74.0	27.8	V	155	22
12060.000	46.19	-28.7	38.7	36.16	74.0	27.8	V	155	44

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)	Antenna Height (cm)	Turntable angle (deg)
2375.400	45.09	-34.3	32.0	47.39	74.0	28.9	H	155	22
2501.800	44.47	-34.2	32.1	46.54	74.0	29.5	H	155	242
4874.000	40.31	-33.3	34.2	39.46	74.0	33.7	V	155	44
7311.000	42.28	-30.8	35.8	37.27	74.0	31.7	H	155	88
9748.000	43.56	-30.3	36.9	37.04	74.0	30.4	V	155	176
12185.000	45.94	-28.1	38.8	35.24	74.0	28.1	H	155	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)	Antenna Height (cm)	Turntable angle (deg)
2486.590	60.72	2.9	32.1	25.69	74.0	13.3	H	155	0
2493.655	60.50	2.9	32.1	25.46	74.0	13.5	H	155	22
4924.000	40.76	-33.5	34.2	40.12	74.0	33.2	H	155	88
7386.000	42.20	-31.5	35.9	37.80	74.0	31.8	V	155	22
9848.000	43.26	-30.2	37.0	36.45	74.0	30.7	V	155	132
12310.000	46.22	-27.8	38.9	35.08	74.0	27.8	H	155	352

802.11n-HT20
Ch1

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2379.398	61.08	2.9	32.0	26.23	74.0	12.9	H	155	0
2383.682	60.73	2.9	32.0	25.88	74.0	13.3	H	155	0
4824.000	42.16	-33.2	34.1	41.26	74.0	31.8	H	155	22
7236.000	41.72	-30.9	35.8	36.80	74.0	32.3	H	155	352
9648.000	43.50	-30.5	36.7	37.25	74.0	30.5	V	155	88
12060.000	45.38	-28.7	38.7	35.34	74.0	28.6	V	155	88

Ch6

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2368.400	43.95	-34.6	32.0	46.52	74.0	30.1	H	155	0
2515.200	43.85	-34.3	32.1	46.03	74.0	30.1	V	155	0
4874.000	40.12	-33.3	34.2	39.27	74.0	33.9	H	155	22
7311.000	41.51	-30.8	35.8	36.50	74.0	32.5	H	155	66
9748.000	42.86	-30.3	36.9	36.34	74.0	31.1	V	155	132
12185.000	46.41	-28.1	38.8	35.71	74.0	27.6	H	155	274

Ch11

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2483.820	60.56	2.9	32.1	25.54	74.0	13.4	V	155	88
2492.480	60.27	2.9	32.1	25.23	74.0	13.7	H	155	242
4924.000	40.17	-33.5	34.2	39.52	74.0	33.8	V	155	110
7386.000	42.42	-31.5	35.9	38.02	74.0	31.6	H	155	0
9848.000	43.68	-30.2	37.0	36.87	74.0	30.3	H	155	44
12310.000	46.30	-27.8	38.9	35.16	74.0	27.7	V	155	22

802.11n-HT40
Ch3

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2388.036	61.83	2.9	32.0	26.97	74.0	12.2	V	155	110
2389.492	62.01	2.9	32.0	27.15	74.0	12.0	V	155	132
4844.000	40.25	-33.2	34.1	39.34	74.0	33.7	H	155	88
7266.000	42.27	-30.6	35.8	37.06	74.0	31.7	H	155	44
9688.000	43.44	-30.4	36.8	37.04	74.0	30.6	H	155	0
12110.000	45.94	-28.5	38.8	35.64	74.0	28.1	H	155	22

Ch6

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2370.800	43.30	-34.5	32.0	45.77	74.0	30.7	H	155	176
2506.000	44.42	-34.2	32.1	46.53	74.0	29.6	H	155	0
4874.000	40.99	-33.3	34.2	40.14	74.0	33.0	H	155	22
7311.000	41.60	-30.8	35.8	36.59	74.0	32.4	V	155	352
9748.000	43.32	-30.3	36.9	36.80	74.0	30.7	H	155	0
12185.000	45.85	-28.1	38.8	35.14	74.0	28.2	V	155	0

Ch9

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2484.150	60.81	2.9	32.1	25.79	74.0	13.2	H	155	22
2486.690	61.15	2.9	32.1	26.13	74.0	12.8	H	155	44
4904.000	40.27	-33.4	34.2	39.54	74.0	33.7	V	155	242
7356.000	43.94	-31.2	35.8	39.27	74.0	30.1	V	155	176
9808.000	42.74	-30.3	36.9	36.12	74.0	31.3	V	155	88
12260.000	45.92	-27.9	38.9	34.94	74.0	28.1	H	155	22

Average
802.11b

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)	Antenna Height (cm)	Turntable angle (deg)
2386.100	46.39	2.9	32.0	11.53	54.0	7.6	H	155	28
2390.000	46.38	2.9	32.0	11.52	54.0	7.6	H	155	48
4824.000	35.32	-33.2	34.1	34.42	54.0	18.7	H	155	92
7236.000	30.80	-30.9	35.8	25.88	54.0	23.2	H	155	72
9648.000	31.84	-30.5	36.7	25.59	54.0	22.2	H	155	226
12060.000	34.18	-28.7	38.7	24.14	54.0	19.8	H	155	4

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)	Antenna Height (cm)	Turntable angle (deg)
2423.100	49.10	2.9	32.0	14.18	54.0	4.9	H	155	354
2451.600	46.87	2.9	32.1	11.91	54.0	7.1	H	155	28
4874.000	37.42	-33.3	34.2	36.56	54.0	16.6	H	155	348
7311.000	30.71	-30.8	35.8	25.70	54.0	23.3	H	155	345
9748.000	31.69	-30.3	36.9	25.17	54.0	22.3	H	155	184
12185.000	34.80	-28.1	38.8	24.10	54.0	19.2	H	155	182

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)	Antenna Height (cm)	Turntable angle (deg)
2483.500	46.53	2.9	32.1	11.52	54.0	7.5	H	155	24
2484.700	46.55	2.9	32.1	11.53	54.0	7.4	H	155	46
4924.000	34.18	-33.5	34.2	33.53	54.0	19.8	H	155	6
7386.000	30.48	-31.5	35.9	26.08	54.0	23.5	H	155	5
9848.000	31.60	-30.2	37.0	24.78	54.0	22.4	H	155	25
12310.000	34.59	-27.8	38.9	23.46	54.0	19.4	H	155	184

802.11g

Ch1

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2385.400	46.49	2.9	32.0	11.63	54.0	7.5	H	155	20
2390.000	46.65	2.9	32.0	11.79	54.0	7.3	H	155	40
4824.000	29.20	-33.2	34.1	28.31	54.0	24.8	H	155	56
7236.000	30.80	-30.9	35.8	25.88	54.0	23.2	H	155	4
9648.000	31.77	-30.5	36.7	25.51	54.0	22.2	H	155	18
12060.000	34.12	-28.7	38.7	24.09	54.0	19.9	H	155	48

Ch6

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2413.900	46.94	2.9	32.0	12.03	54.0	7.1	H	155	28
2457.400	46.67	2.9	32.1	11.70	54.0	7.3	H	155	248
4874.000	29.42	-33.3	34.2	28.57	54.0	24.6	H	155	38
7311.000	30.81	-30.8	35.8	25.80	54.0	23.2	H	155	98
9748.000	31.77	-30.3	36.9	25.25	54.0	22.2	H	155	183
12185.000	34.91	-28.1	38.8	24.20	54.0	19.1	H	155	356

Ch11

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2483.500	46.63	2.9	32.1	11.61	54.0	7.4	H	155	6
2484.700	46.64	2.9	32.1	11.62	54.0	7.4	H	155	26
4924.000	29.23	-33.5	34.2	28.59	54.0	24.8	H	155	92
7386.000	30.55	-31.5	35.9	26.15	54.0	23.5	H	155	24
9848.000	31.65	-30.2	37.0	24.84	54.0	22.3	H	155	136
12310.000	34.58	-27.8	38.9	23.45	54.0	19.4	H	155	356

802.11n-HT20
Ch1

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2386.400	46.55	2.9	32.0	11.69	54.0	7.5	H	155	4
2390.000	46.65	2.9	32.0	11.79	54.0	7.3	H	155	2
4824.000	29.39	-33.2	34.1	28.49	54.0	24.6	H	155	25
7236.000	30.92	-30.9	35.8	26.00	54.0	23.1	H	155	350
9648.000	31.60	-30.5	36.7	25.35	54.0	22.4	H	155	92
12060.000	34.10	-28.7	38.7	24.07	54.0	19.9	H	155	85

Ch6

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2412.700	47.08	2.9	32.0	12.18	54.0	6.9	H	155	8
2455.900	47.31	2.9	32.1	12.34	54.0	6.7	H	155	6
4874.000	29.26	-33.3	34.2	28.41	54.0	24.7	H	155	25
7311.000	30.77	-30.8	35.8	25.76	54.0	23.2	H	155	70
9748.000	31.71	-30.3	36.9	25.19	54.0	22.3	H	155	135
12185.000	34.85	-28.1	38.8	24.15	54.0	19.1	H	155	270

Ch11

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2483.500	46.60	2.9	32.1	11.58	54.0	7.4	H	155	92
2485.230	46.61	2.9	32.1	11.59	54.0	7.4	H	155	248
4924.000	28.92	-33.5	34.2	28.27	54.0	25.1	H	155	132
7386.000	30.67	-31.5	35.9	26.27	54.0	23.3	H	155	8
9848.000	31.66	-30.2	37.0	24.85	54.0	22.3	H	155	36
12310.000	34.56	-27.8	38.9	23.42	54.0	19.4	H	155	28

802.11n-HT40
Ch3

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2388.400	48.20	2.9	32.0	13.34	54.0	5.8	H	155	116
2390.000	48.85	2.9	32.0	13.99	54.0	5.1	H	155	139
4844.000	29.18	-33.2	34.1	28.27	54.0	24.8	H	155	94
7266.000	31.33	-30.6	35.8	26.12	54.0	22.7	H	155	49
9688.000	31.66	-30.4	36.8	25.26	54.0	22.3	H	155	4
12110.000	34.45	-28.5	38.8	24.15	54.0	19.5	H	155	28

Ch6

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2412.200	51.63	2.9	32.0	16.73	54.0	2.4	H	155	175
2463.100	47.01	2.9	32.1	12.02	54.0	7.0	H	155	5
4874.000	28.70	-33.3	34.2	27.85	54.0	25.3	H	155	26
7311.000	30.86	-30.8	35.8	25.85	54.0	23.1	H	155	355
9748.000	31.79	-30.3	36.9	25.27	54.0	22.2	H	155	6
12185.000	34.93	-28.1	38.8	24.22	54.0	19.1	H	155	12

Ch9

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2483.500	47.11	2.9	32.1	12.09	54.0	6.9	H	155	20
2484.500	47.13	2.9	32.1	12.11	54.0	6.9	H	155	45
4904.000	28.97	-33.4	34.2	28.23	54.0	25.0	H	155	240
7356.000	30.90	-31.2	35.8	26.22	54.0	23.1	H	155	180
9808.000	31.49	-30.3	36.9	24.88	54.0	22.5	H	155	85
12260.000	34.57	-27.9	38.9	23.59	54.0	19.4	H	155	25

Test graphs as below:

RE - Power-2.31GHz-2.45GHz

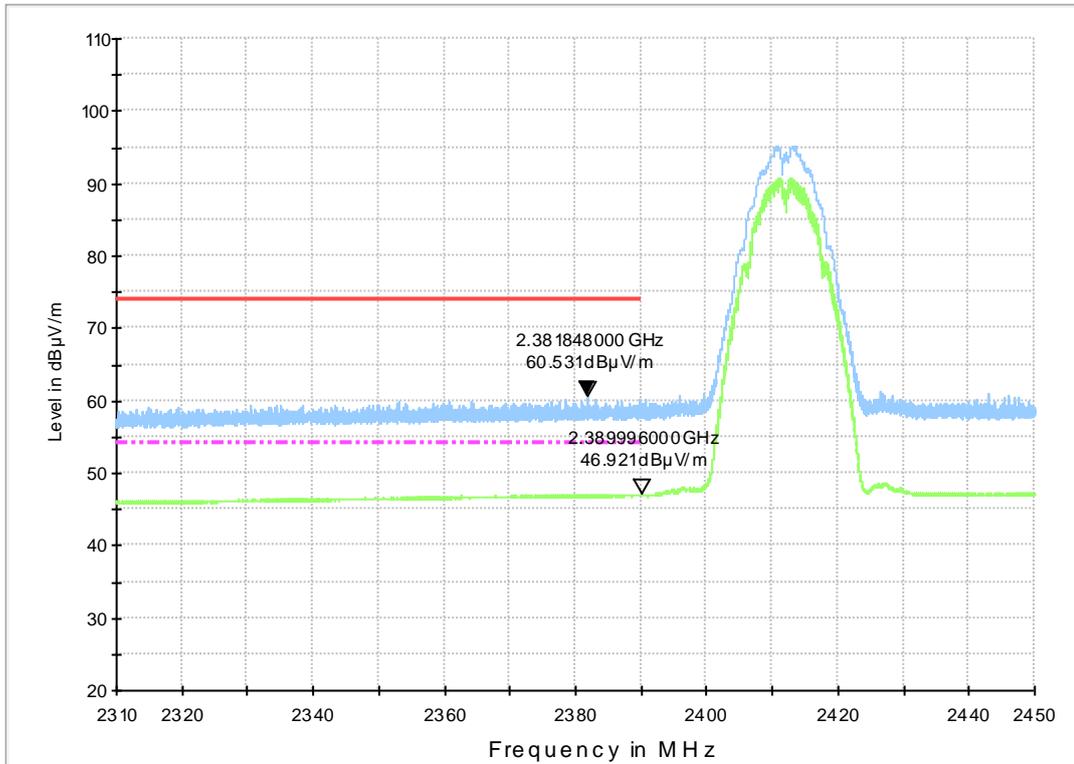


Fig.B.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.45GHz

RE - Power-2.45GHz-2.5GHz

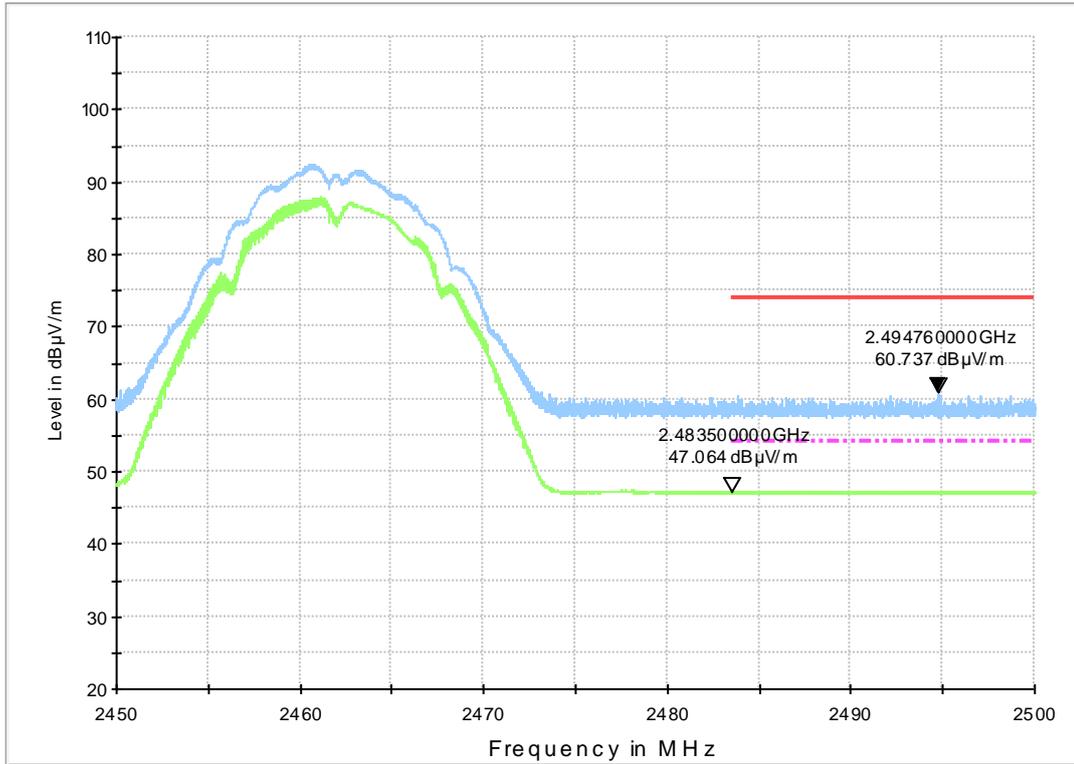


Fig.B.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

RE - Power-2.31GHz-2.45GHz

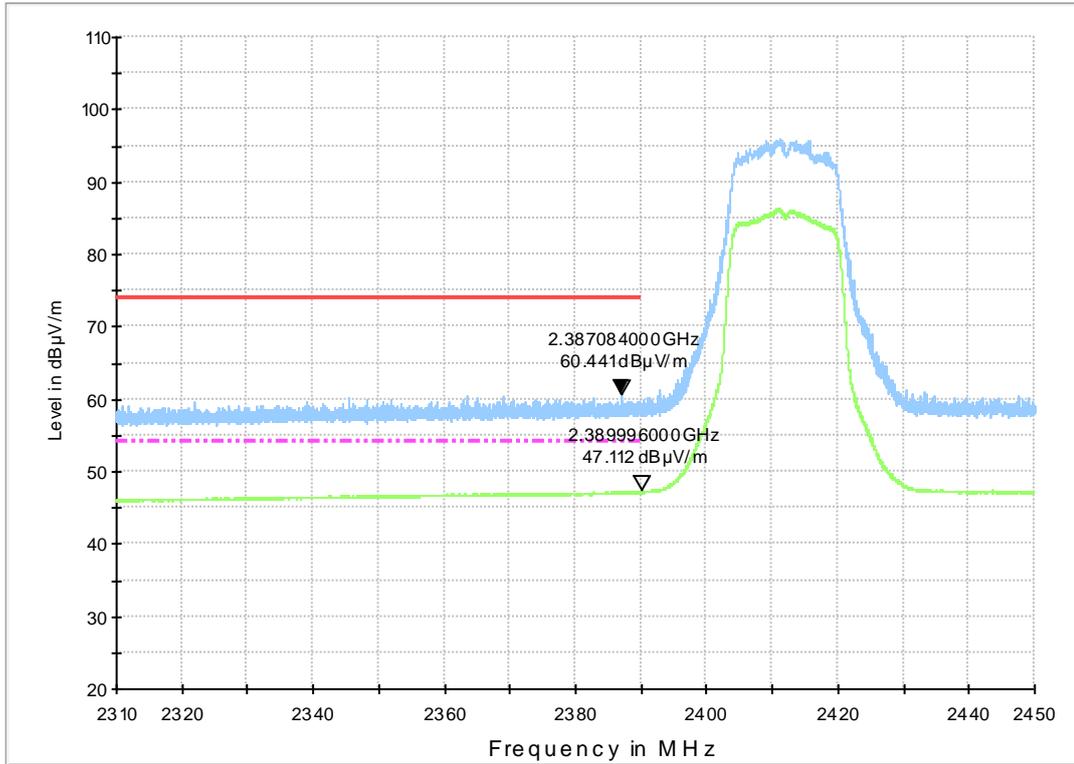


Fig.B.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.45GHz

RE - Power-2.45GHz-2.5GHz

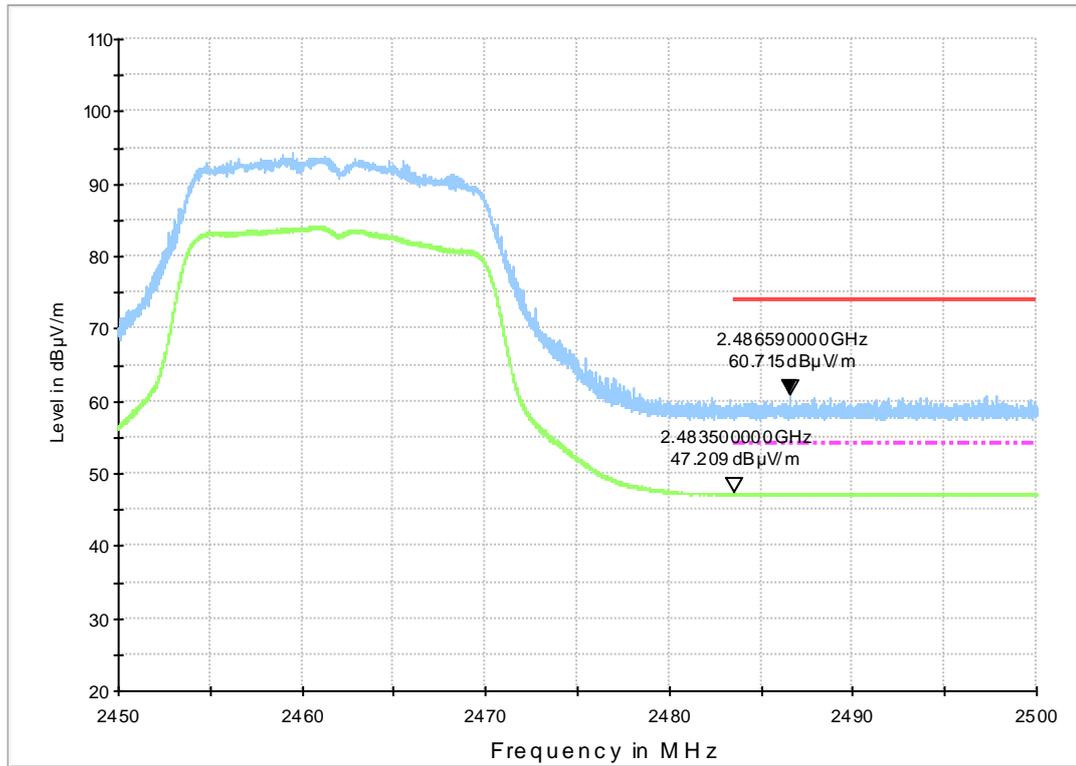


Fig.B.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

RE - Power-2.31GHz-2.45GHz

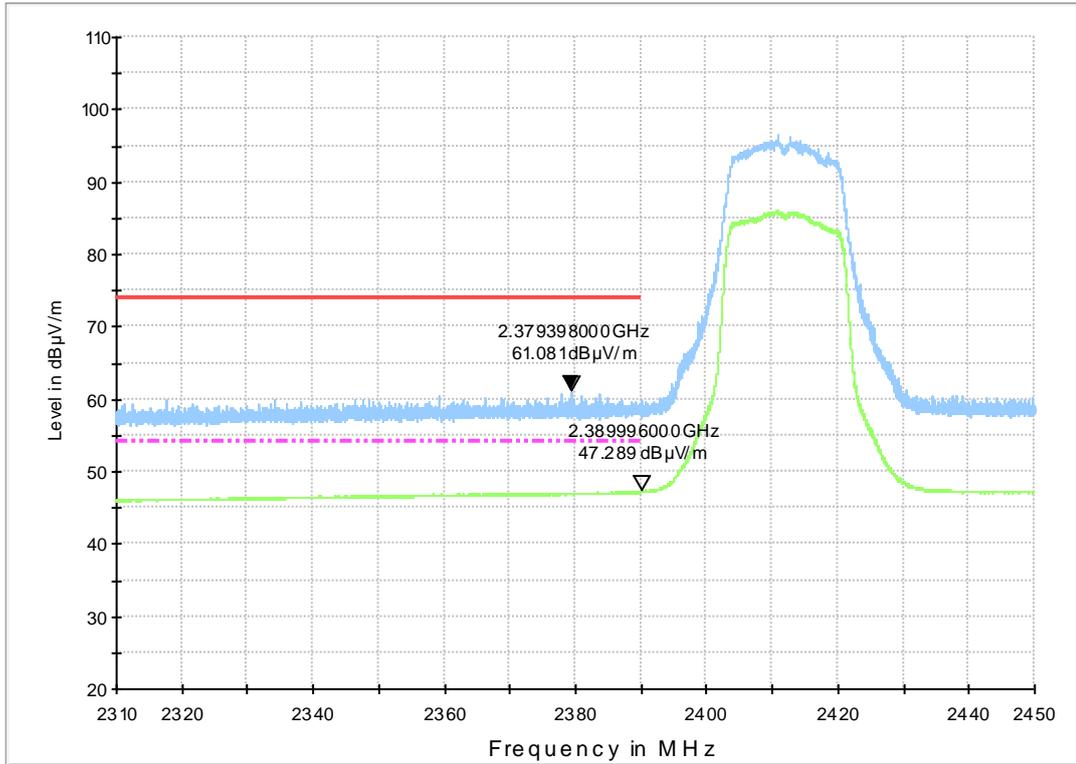


Fig.B.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31 GHz - 2.45GHz

RE - Power-2.45GHz-2.5GHz

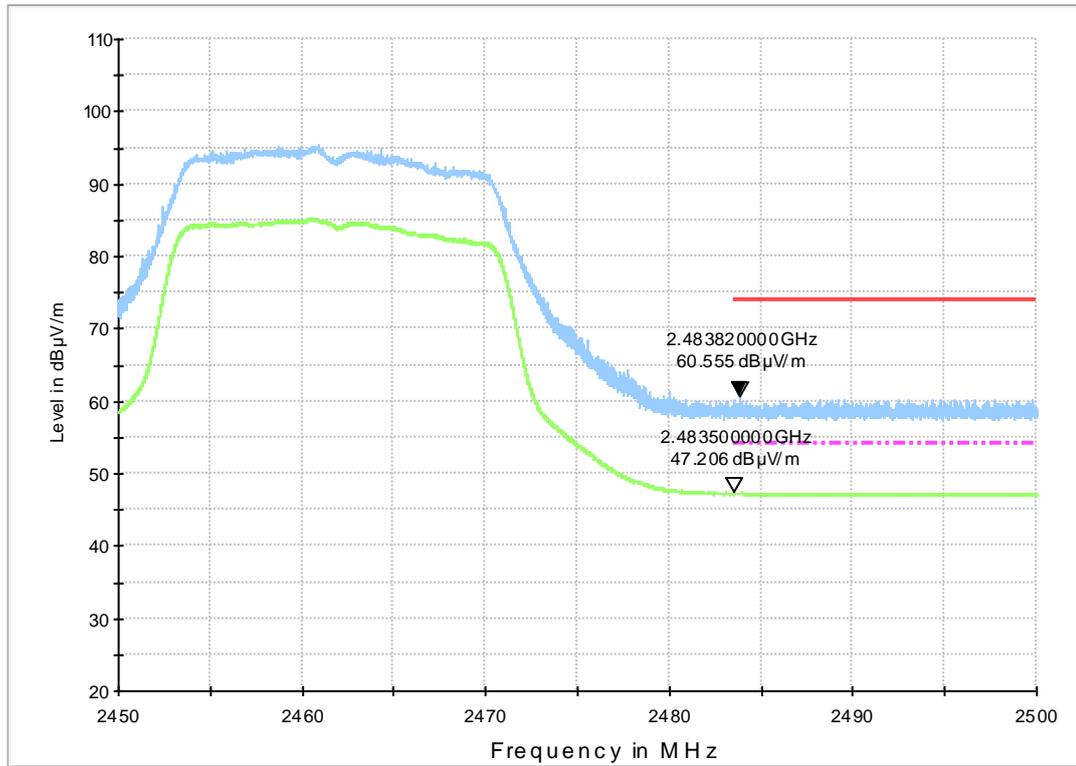


Fig.B.6.2.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

RE - Power-2.31GHz-2.45GHz

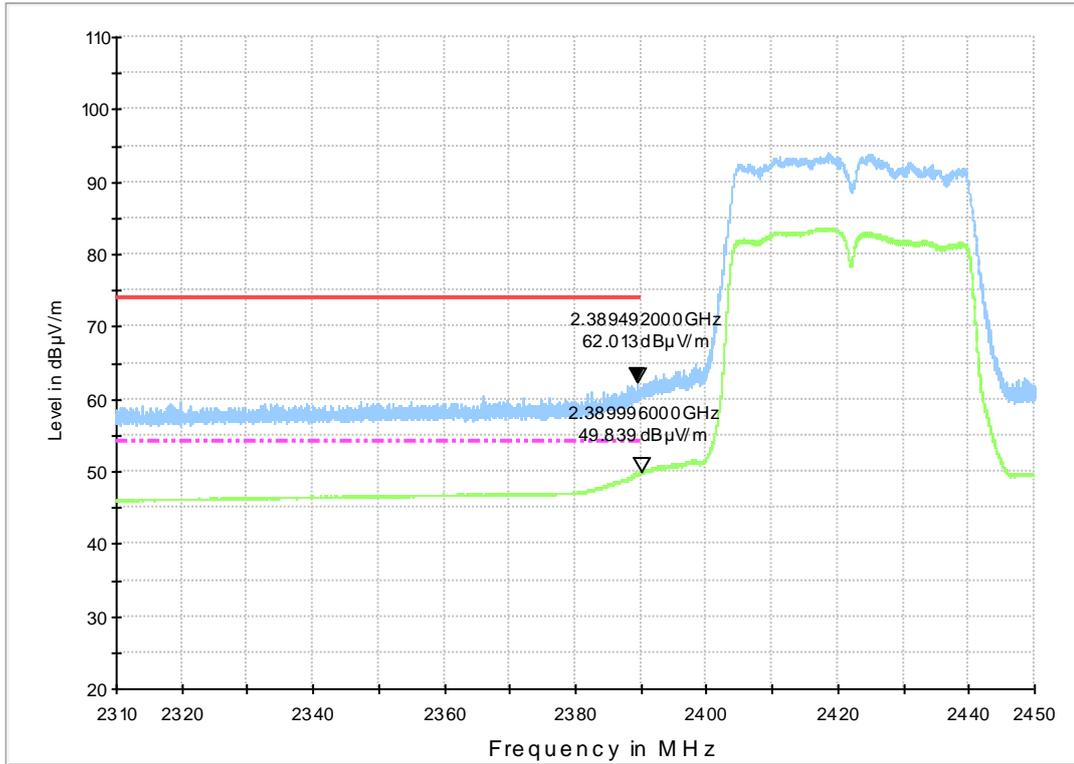


Fig.B.6.2.7 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31 GHz - 2.45GHz

RE - Power-2.45GHz-2.5GHz

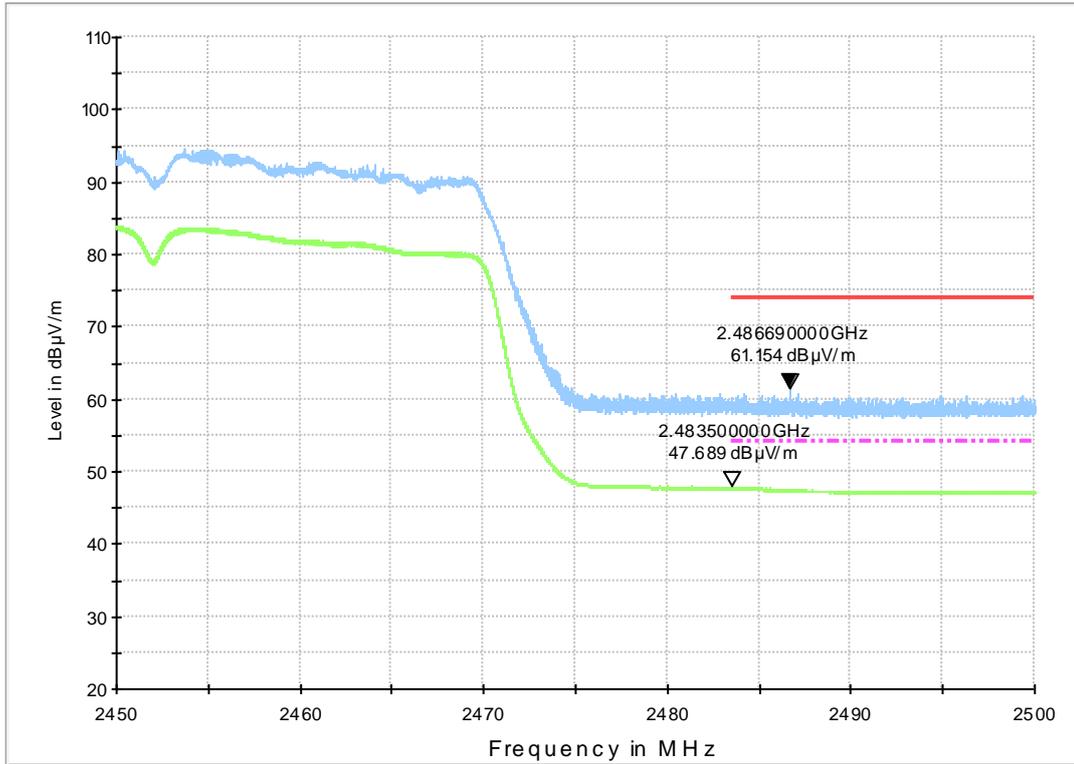


Fig.B.6.2.8 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz

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

Result for Traffic:

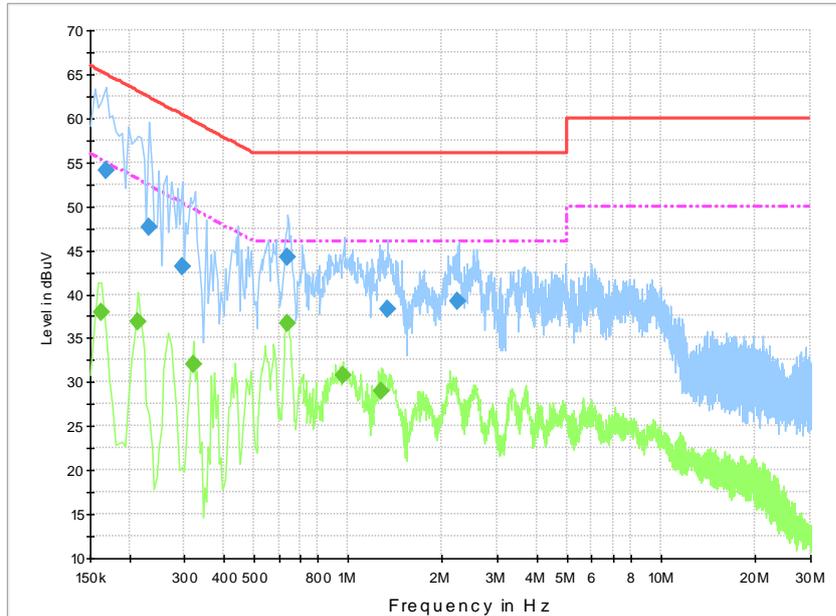


Fig.B.7.1 AC Powerline Conducted Emission-802.11b

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

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.168000	54.1	5000.0	9.000	On	L1	20.1	11.0	65.1	
0.231000	47.7	5000.0	9.000	On	N	19.9	14.8	62.4	
0.294000	43.1	5000.0	9.000	On	L1	19.9	17.3	60.4	
0.640500	44.2	5000.0	9.000	On	L1	19.9	11.8	56.0	
1.333500	38.3	5000.0	9.000	On	L1	19.8	17.7	56.0	
2.229000	39.2	5000.0	9.000	On	N	19.8	16.8	56.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.163500	37.9	5000.0	9.000	On	L1	20.0	17.4	55.3	
0.213000	36.9	5000.0	9.000	On	L1	19.9	16.2	53.1	
0.321000	32.1	5000.0	9.000	On	L1	19.9	17.6	49.7	
0.640500	36.7	5000.0	9.000	On	L1	19.9	9.3	46.0	
0.960000	30.8	5000.0	9.000	On	L1	19.9	15.2	46.0	
1.279500	29.0	5000.0	9.000	On	L1	19.8	17.0	46.0	

Result for Idle:

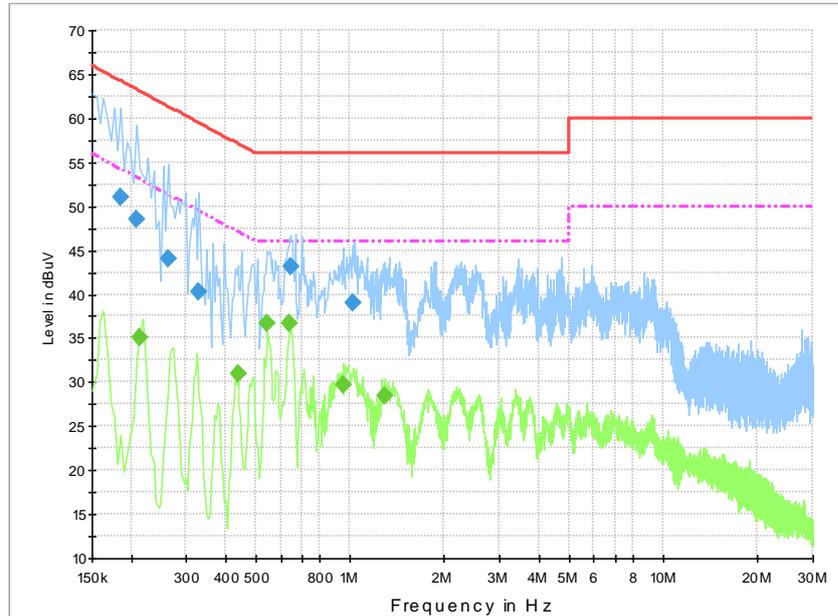


Fig.B.7.2 AC Powerline Conducted Emission-Idle

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

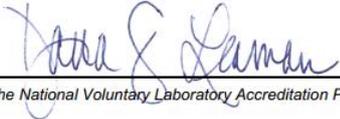
Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.186000	51.0	5000.0	9.000	On	L1	20.0	13.2	64.2	
0.208500	48.5	5000.0	9.000	On	L1	19.9	14.8	63.3	
0.262500	44.0	5000.0	9.000	On	L1	19.9	17.4	61.4	
0.330000	40.2	5000.0	9.000	On	L1	19.9	19.3	59.5	
0.645000	43.2	5000.0	9.000	On	L1	19.9	12.8	56.0	
1.018500	39.0	5000.0	9.000	On	L1	19.8	17.0	56.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.213000	35.0	5000.0	9.000	On	L1	19.9	18.1	53.1	
0.438000	31.0	5000.0	9.000	On	L1	20.0	16.1	47.1	
0.546000	36.7	5000.0	9.000	On	L1	20.0	9.3	46.0	
0.640500	36.7	5000.0	9.000	On	L1	19.9	9.3	46.0	
0.955500	29.7	5000.0	9.000	On	L1	19.9	16.3	46.0	
1.284000	28.4	5000.0	9.000	On	L1	19.8	17.6	46.0	

ANNEX C: Accreditation Certificate

<p>United States Department of Commerce National Institute of Standards and Technology</p>  	
<hr/> <h3>Certificate of Accreditation to ISO/IEC 17025:2017</h3> <hr/>	
<p>NVLAP LAB CODE: 600118-0</p>	
<p>Telecommunication Technology Labs, CAICT Beijing China</p>	
<p><i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i></p>	
<p>Electromagnetic Compatibility & Telecommunications</p>	
<p><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></p>	
<p>2020-09-29 through 2021-09-30 <i>Effective Dates</i></p>	  <i>For the National Voluntary Laboratory Accreditation Program</i>

END OF REPORT