

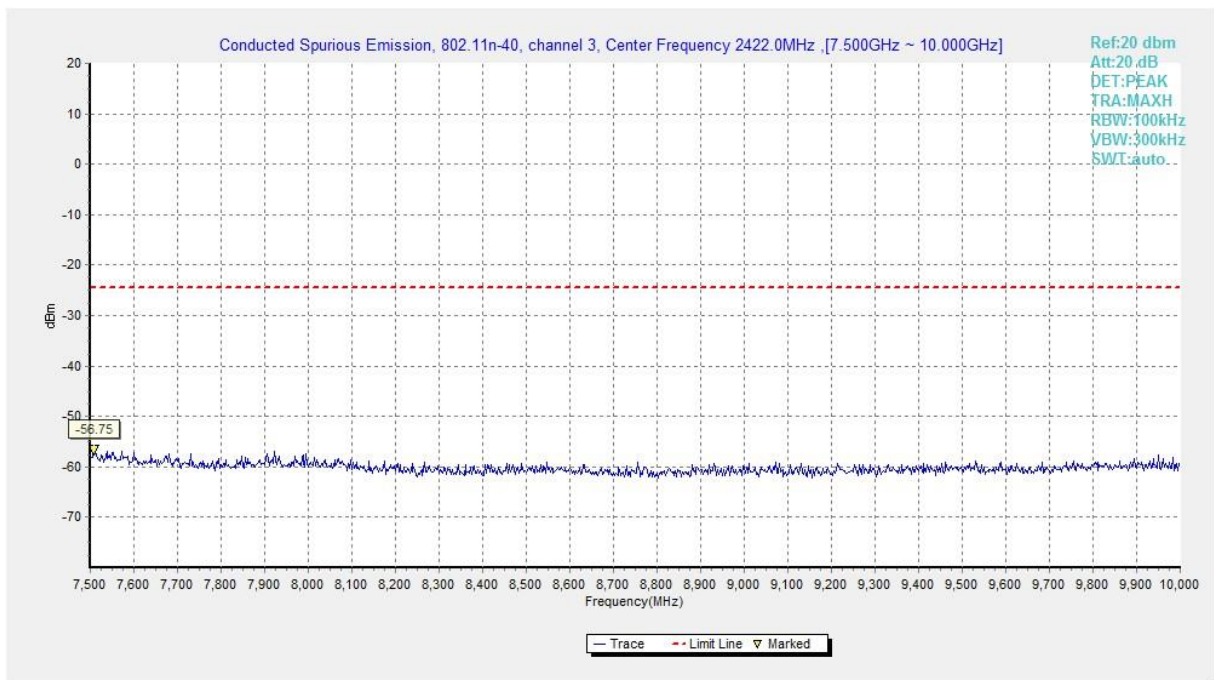


Fig.B.6.1.77 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 7.5 GHz-10 GHz)

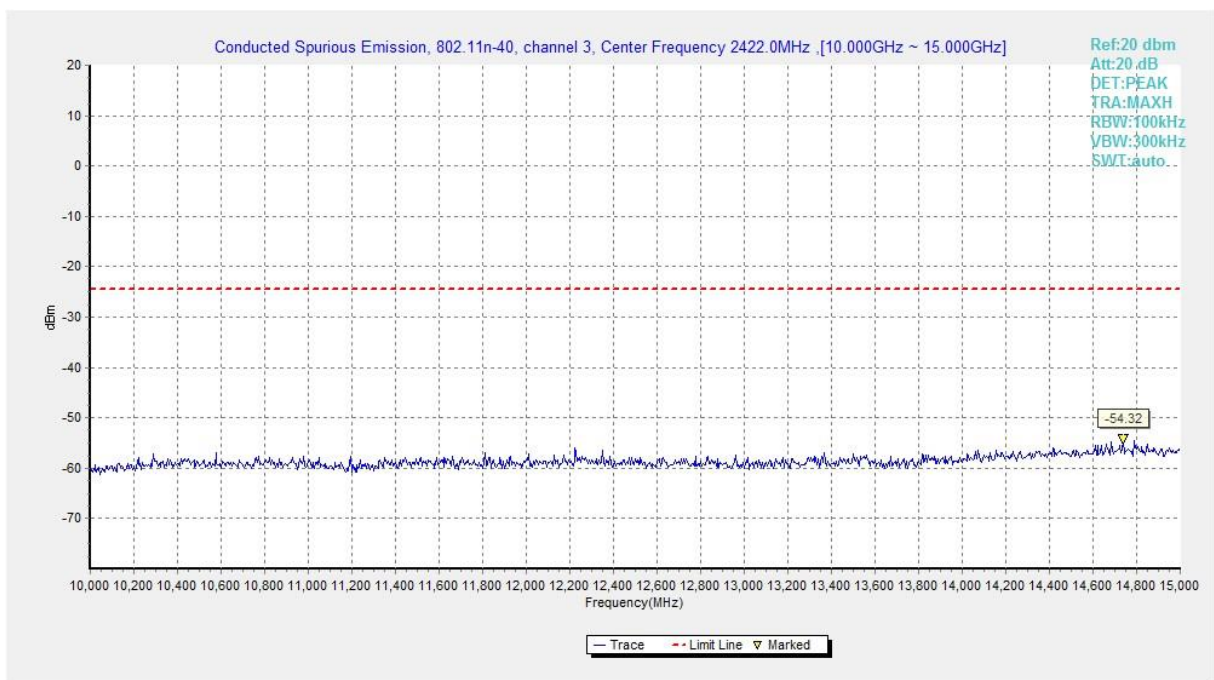


Fig.B.6.1.78 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 10 GHz-15 GHz)

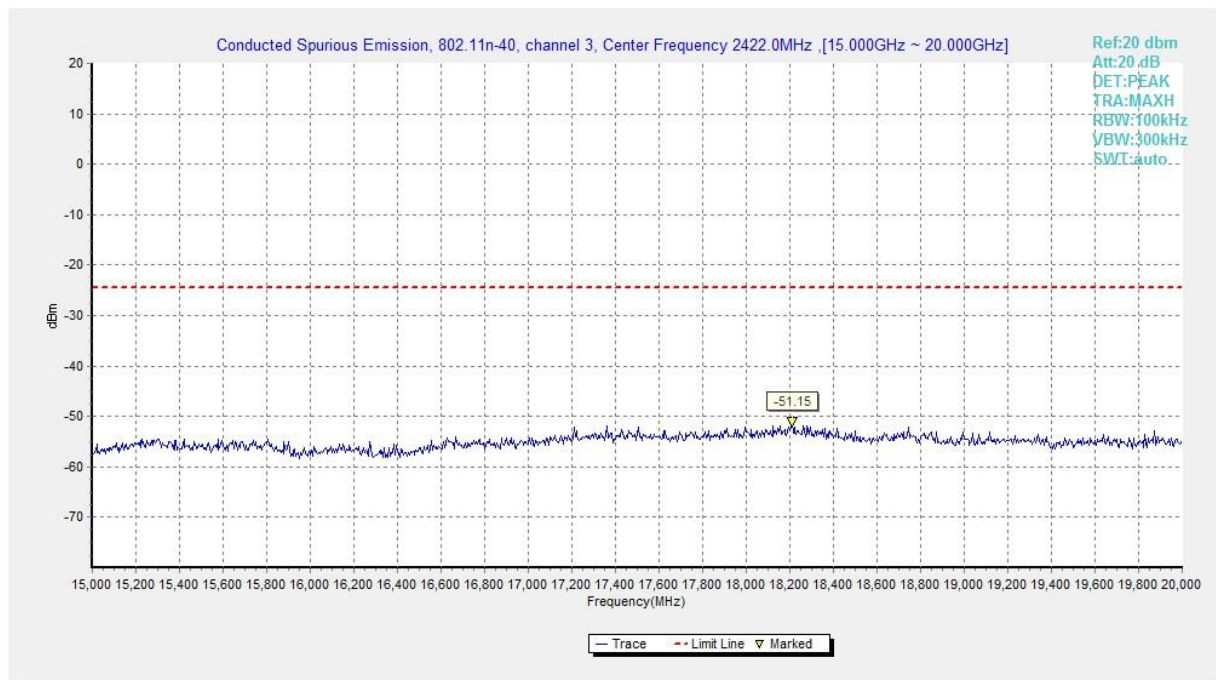


Fig.B.6.1.79 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 15 GHz-20 GHz)

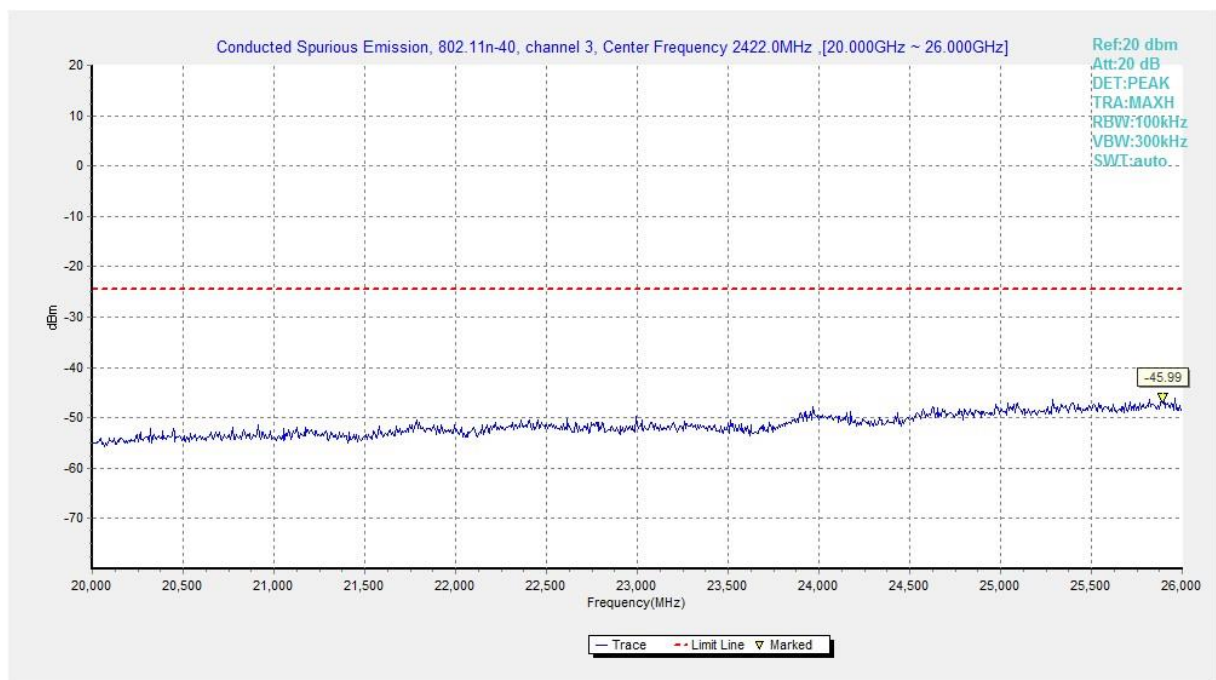


Fig.B.6.1.80 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 20 GHz-26 GHz)

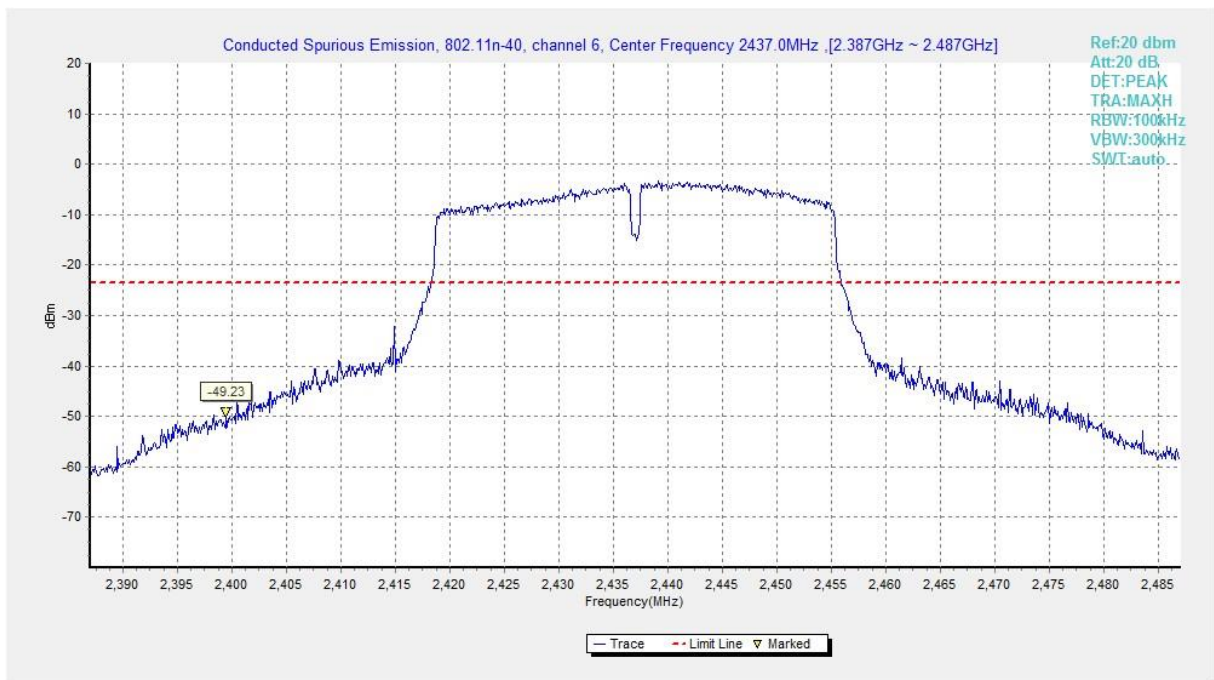


Fig.B.6.1.81 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, Center Frequency)

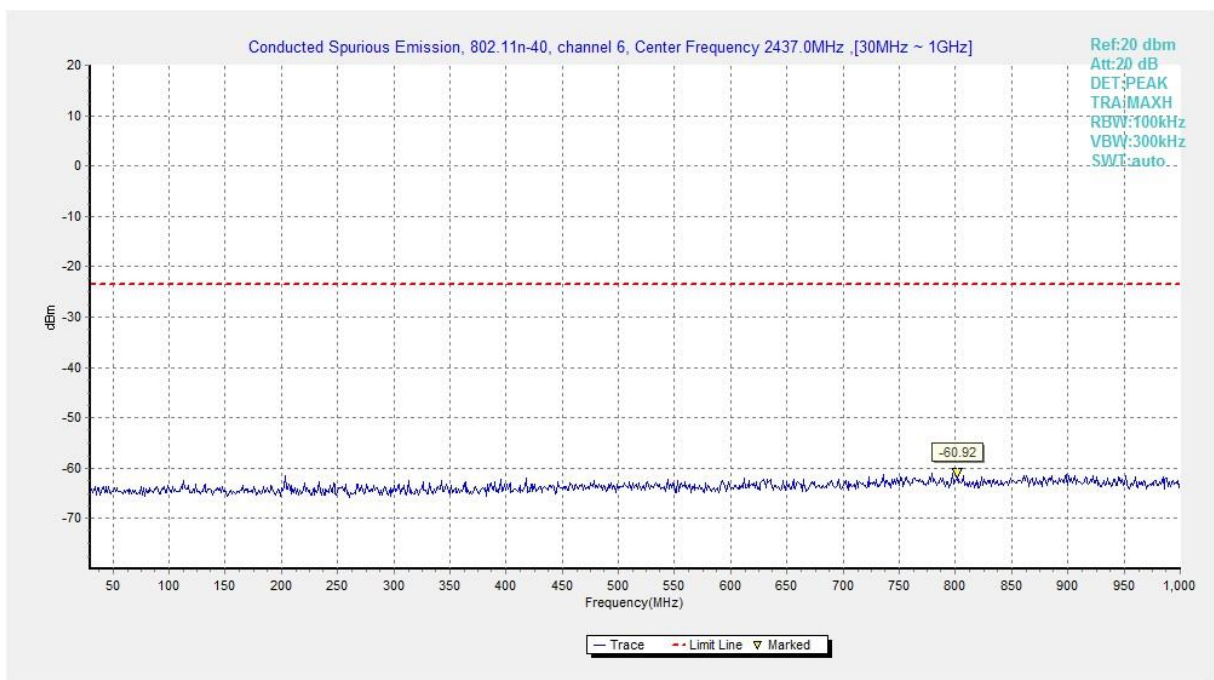


Fig.B.6.1.82 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 30 MHz-1 GHz)

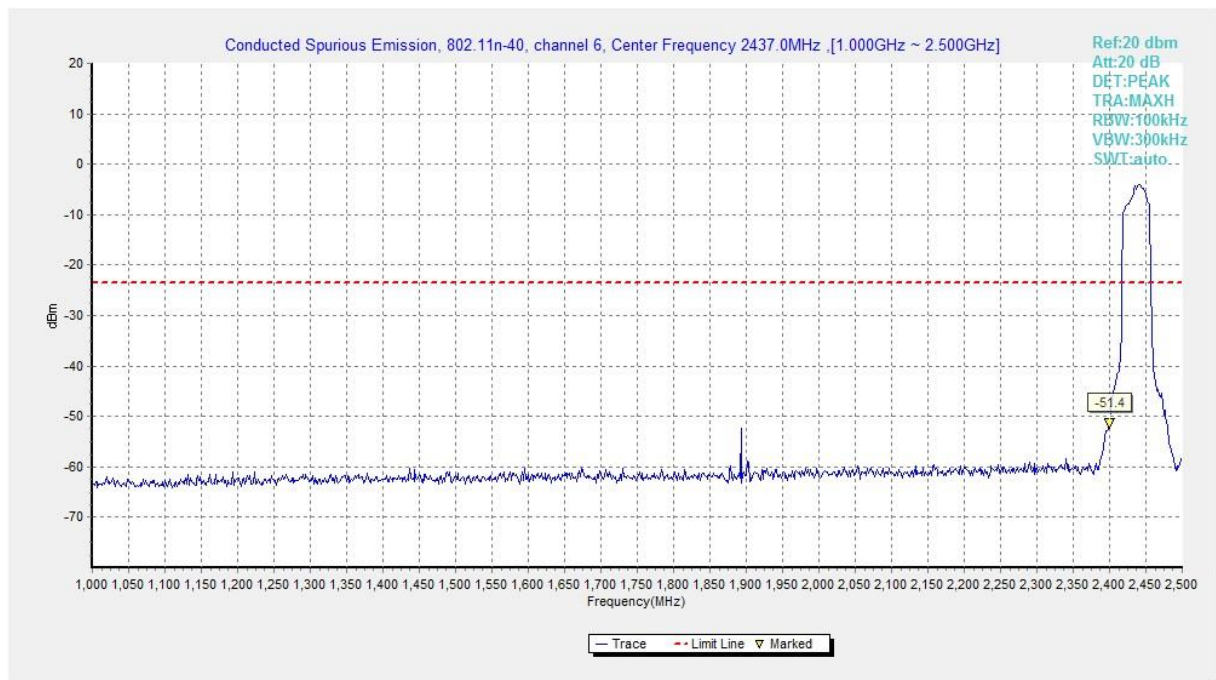


Fig.B.6.1.83 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 1 GHz-2.5 GHz)

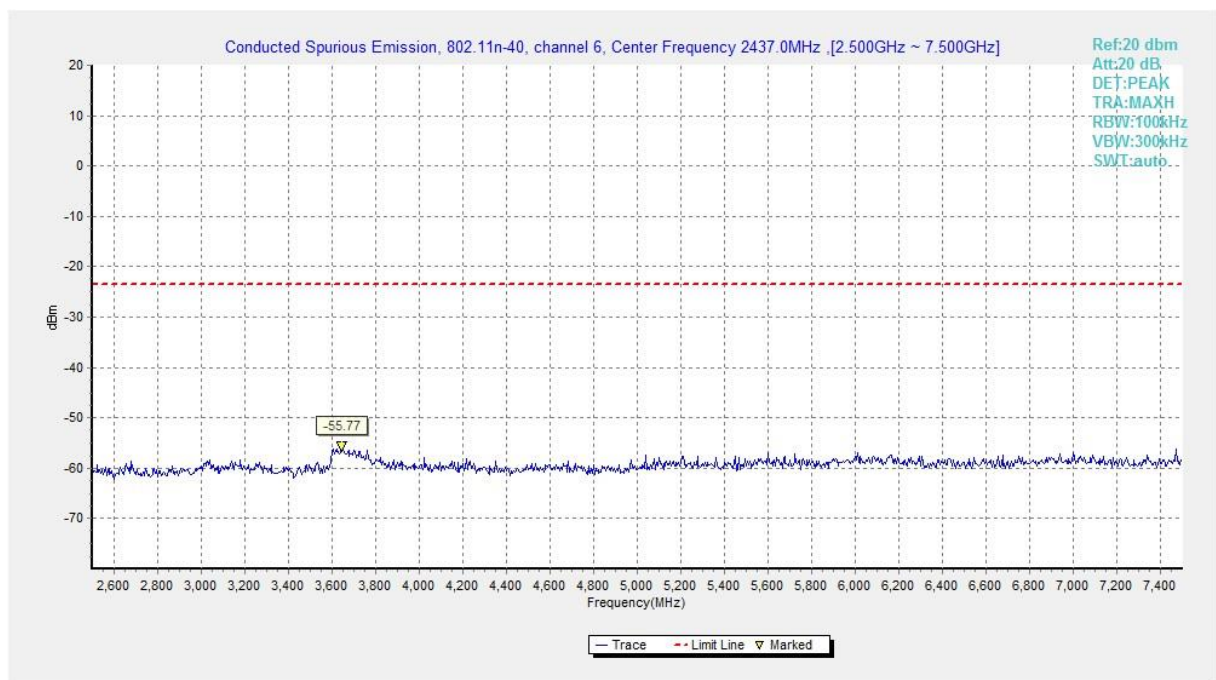


Fig.B.6.1.84 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 2.5 GHz-7.5 GHz)

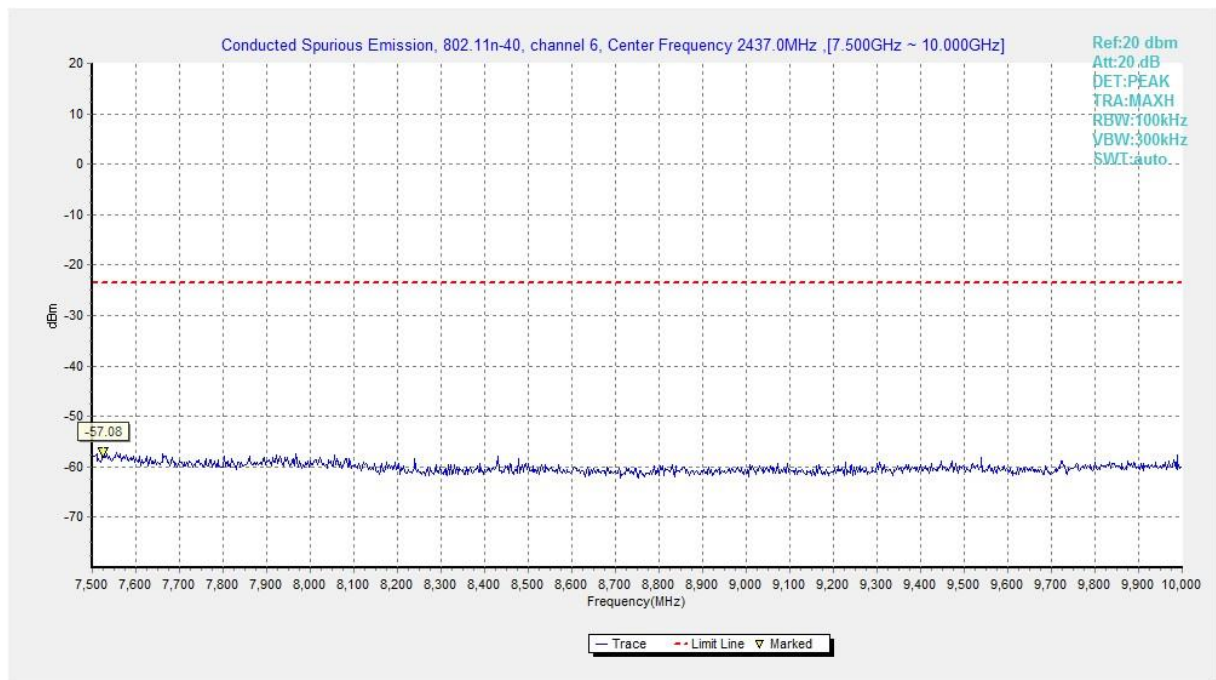


Fig.B.6.1.85 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 7.5 GHz-10 GHz)

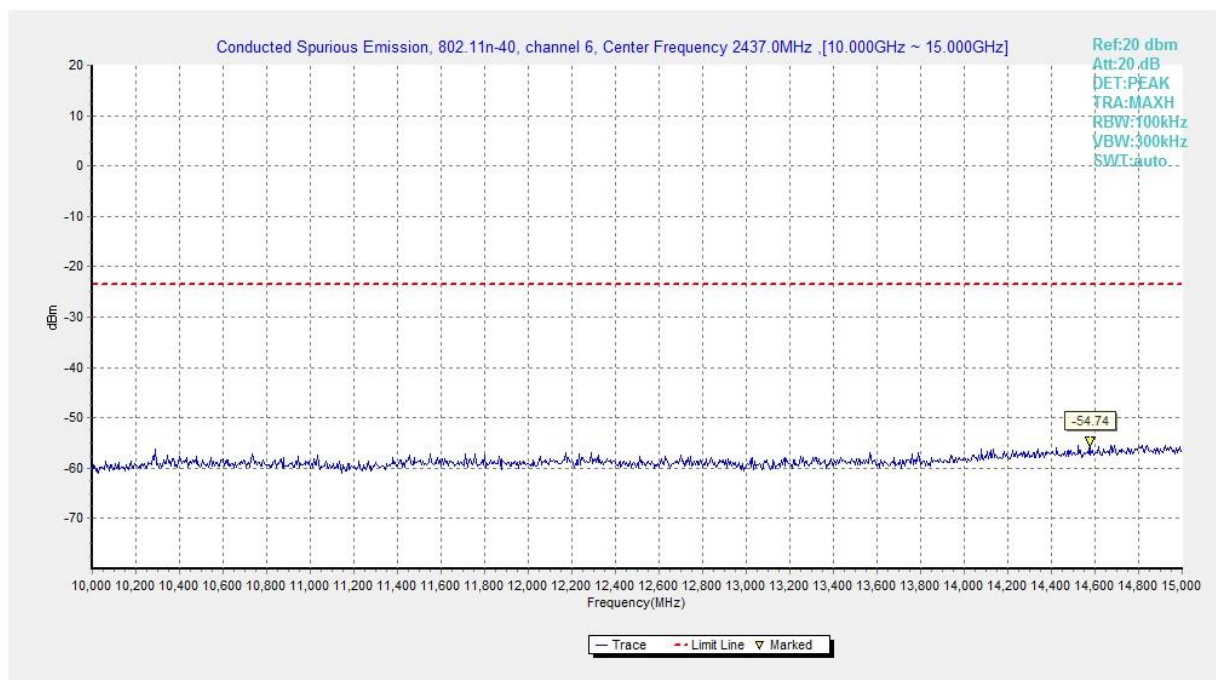


Fig.B.6.1.86 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 10 GHz-15 GHz)

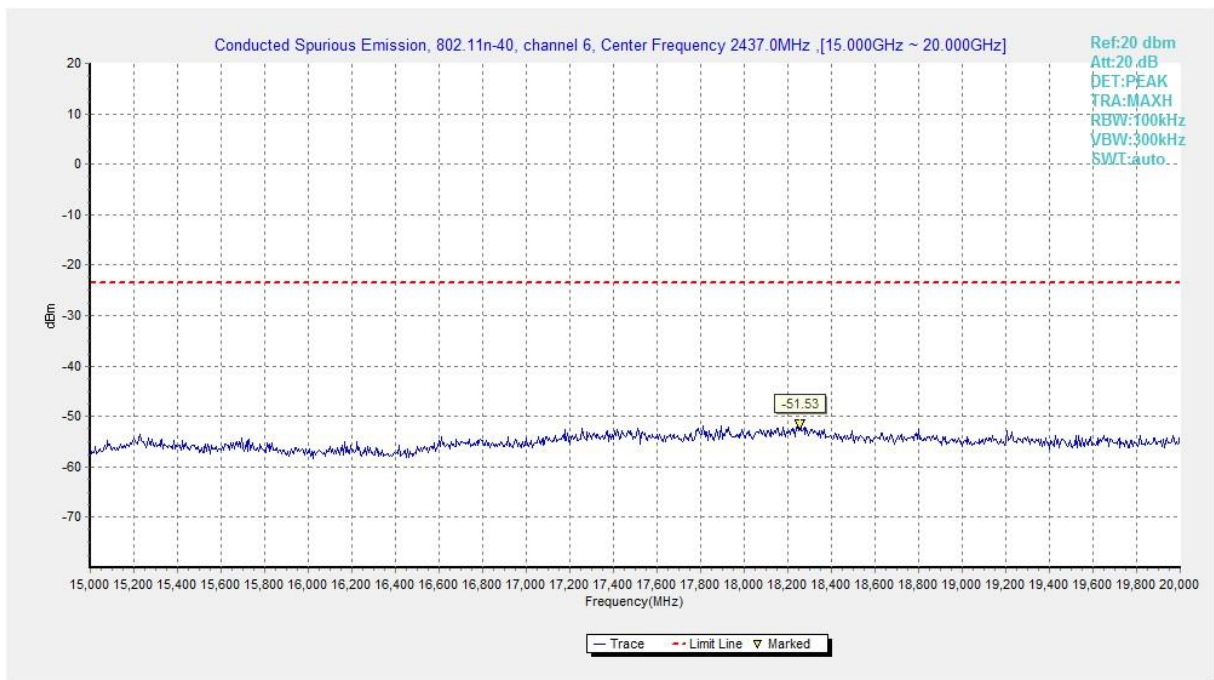


Fig.B.6.1.87 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 15 GHz-20 GHz)

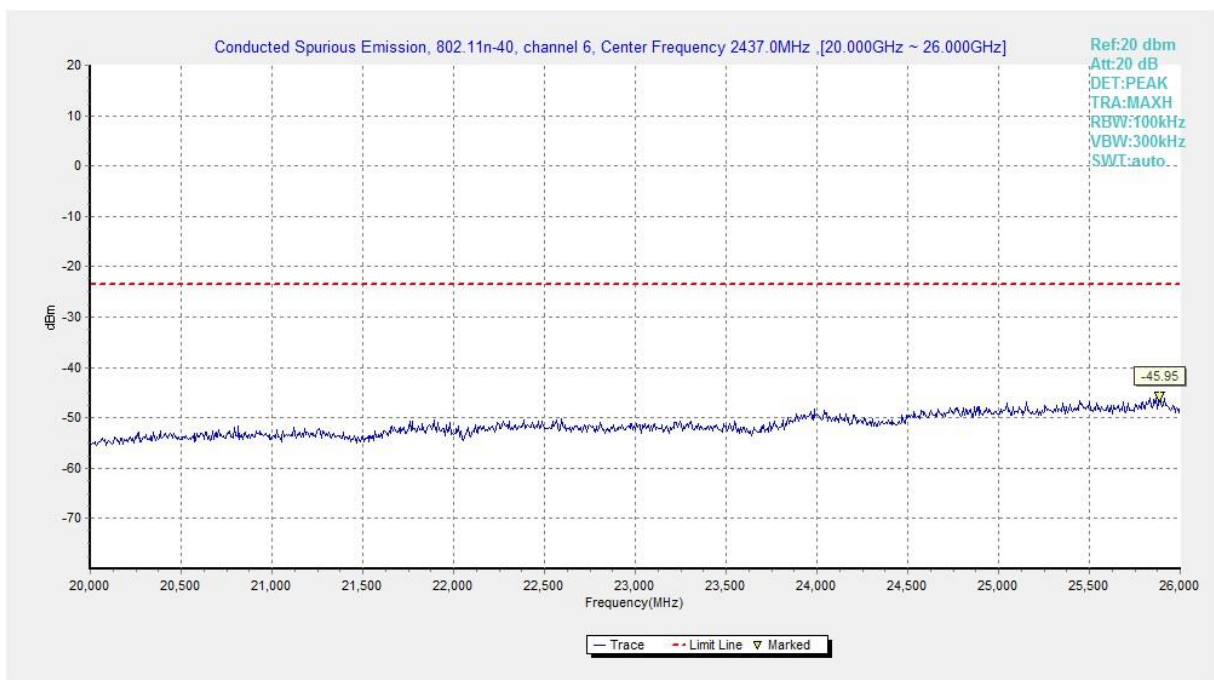


Fig.B.6.1.88 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 20 GHz-26 GHz)

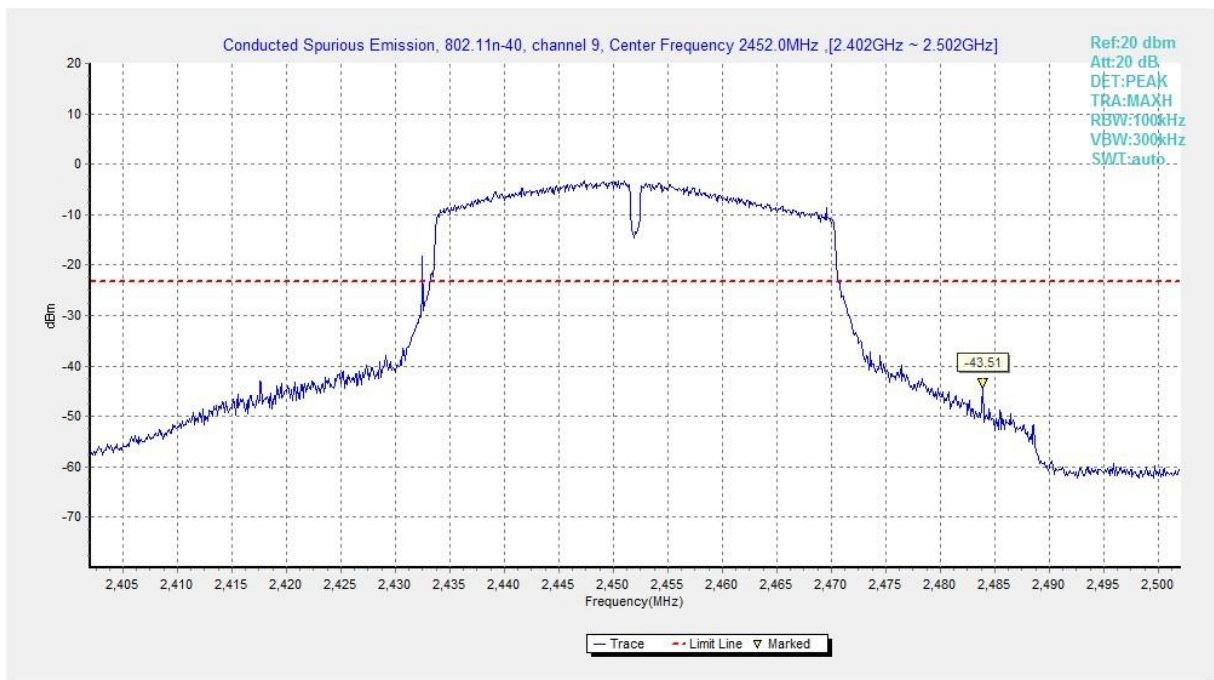


Fig.B.6.1.89 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, Center Frequency)

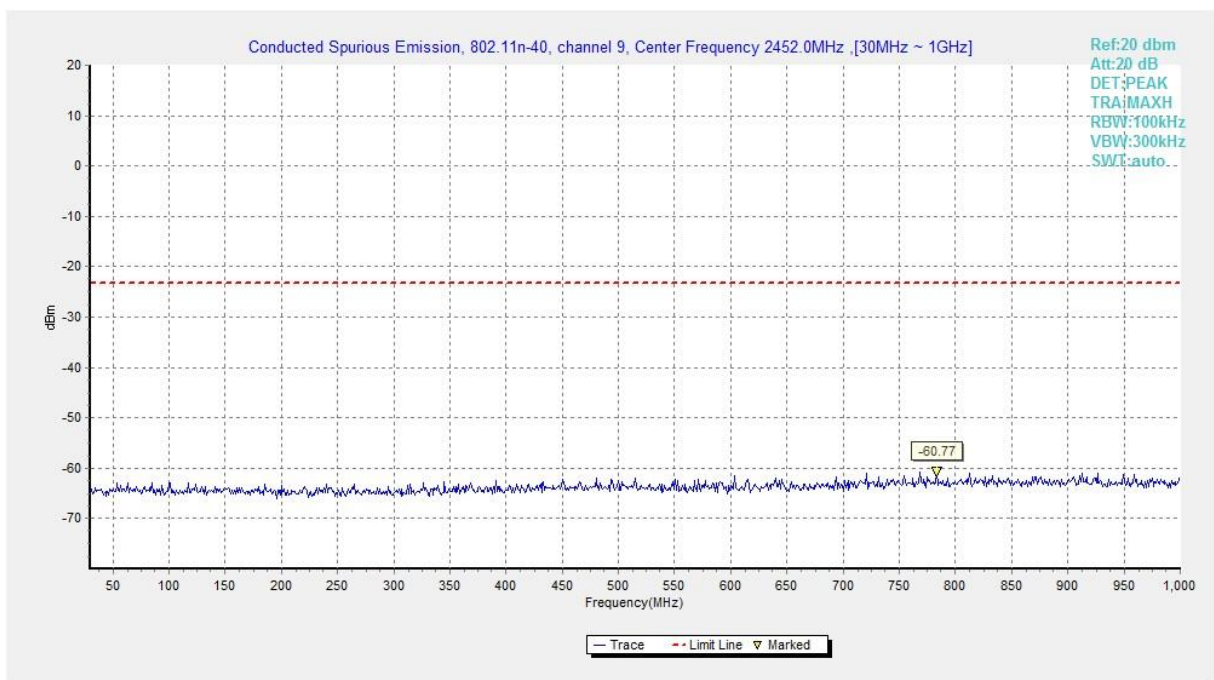


Fig.B.6.1.90 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 30 MHz-1 GHz)

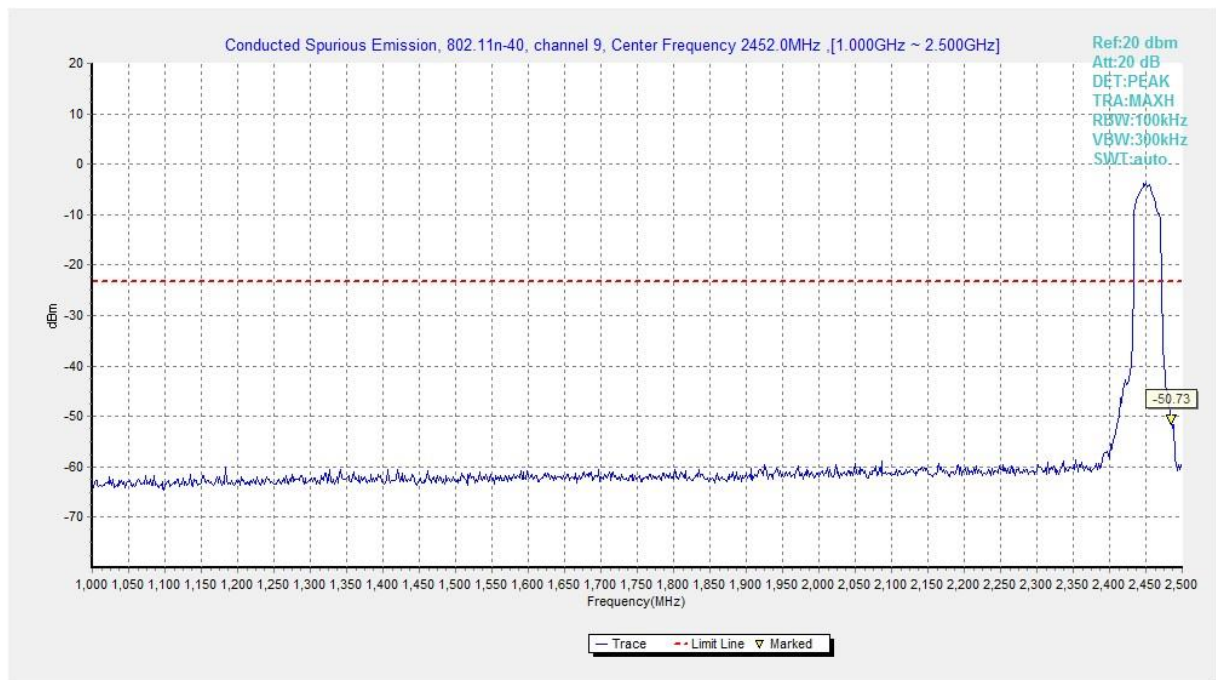


Fig.B.6.1.91 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 1 GHz-2.5 GHz)

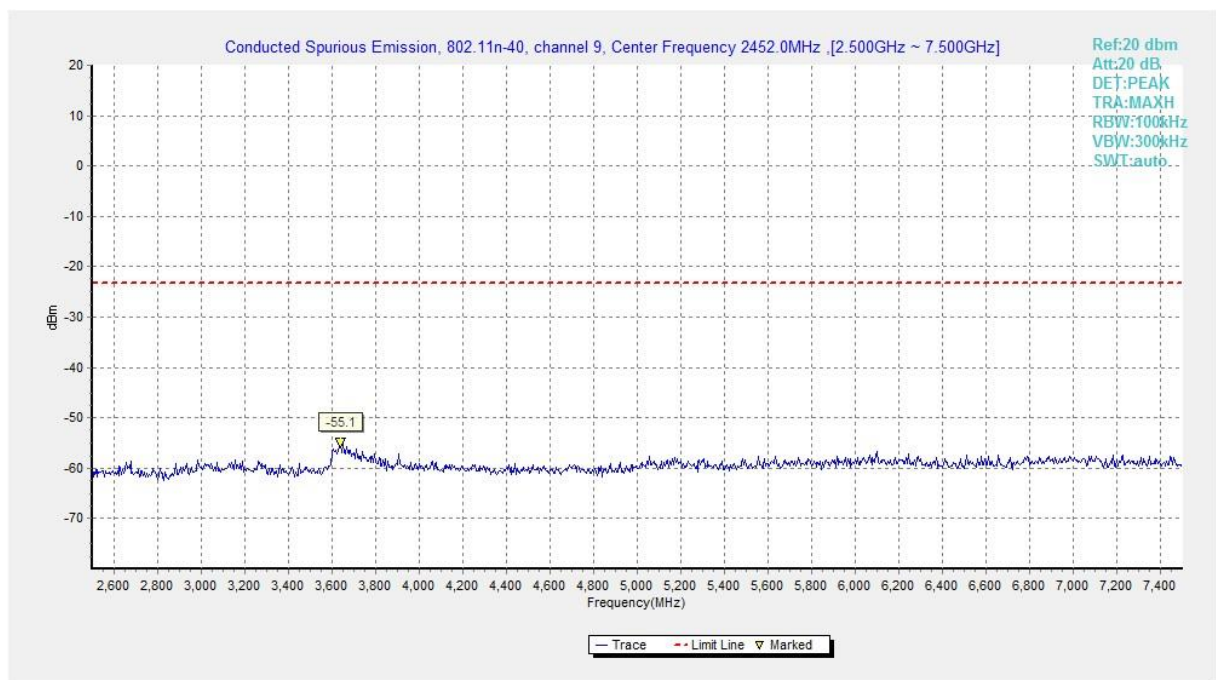


Fig.B.6.1.92 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 2.5 GHz-7.5 GHz)

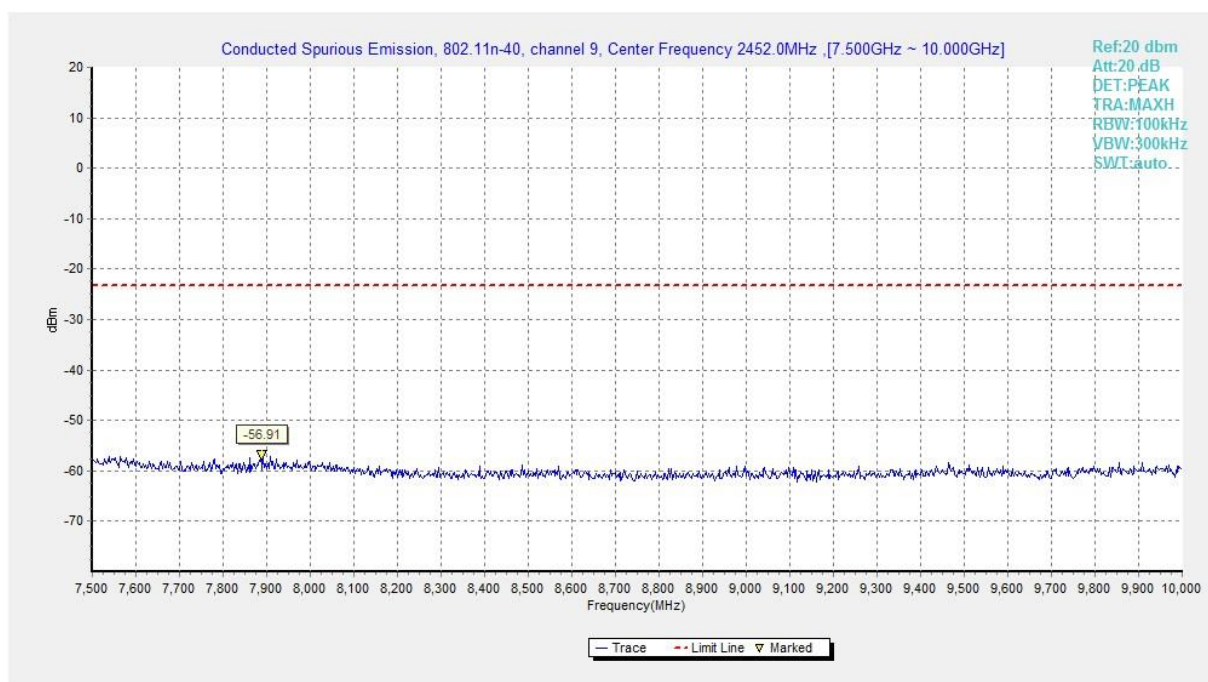


Fig.B.6.1.93 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 7.5 GHz-10 GHz)

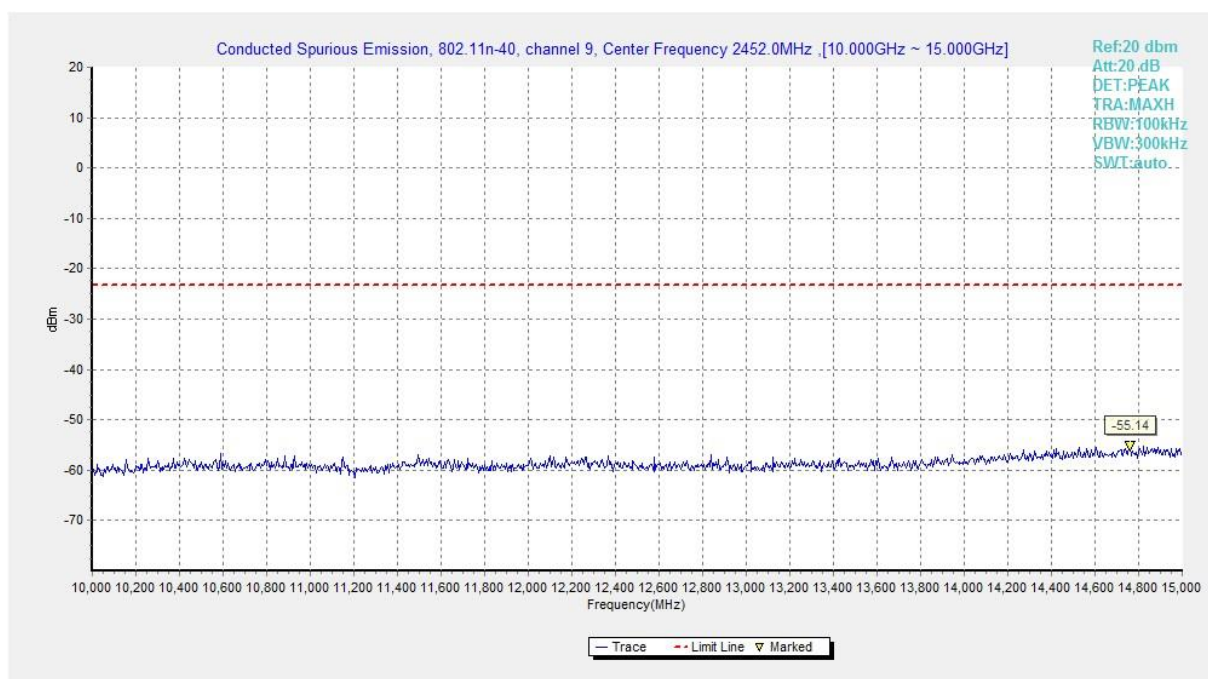


Fig.B.6.1.94 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 10 GHz-15 GHz)

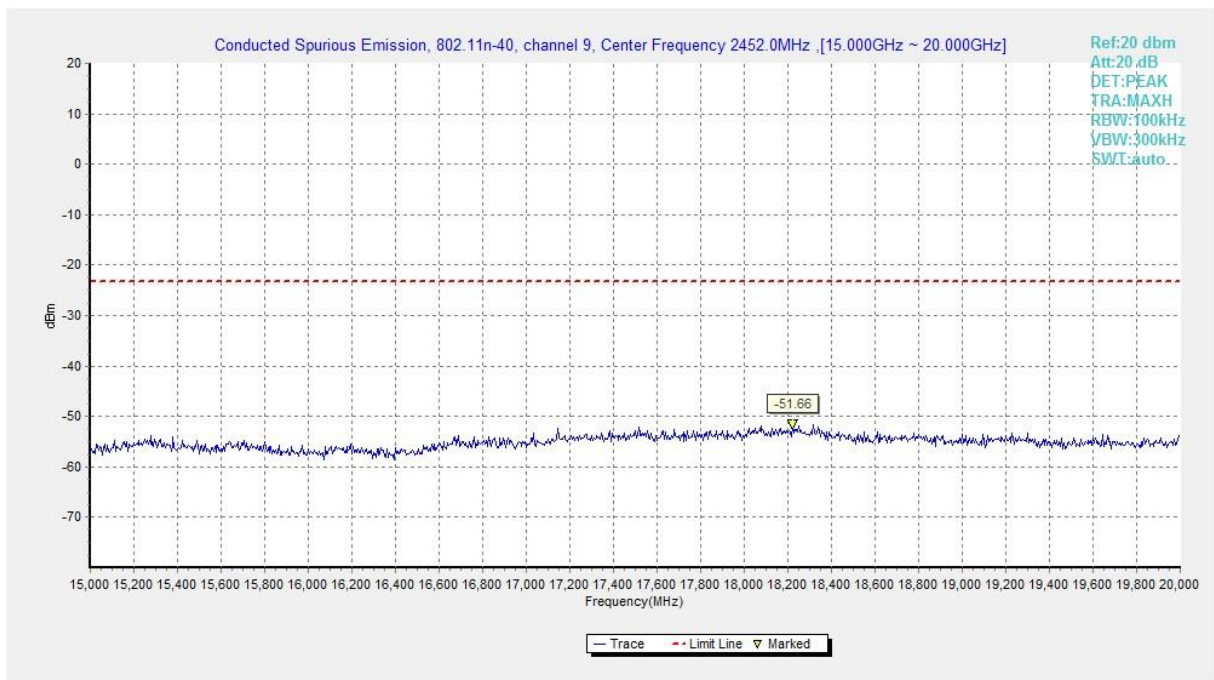


Fig.B.6.1.95 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 15 GHz-20 GHz)

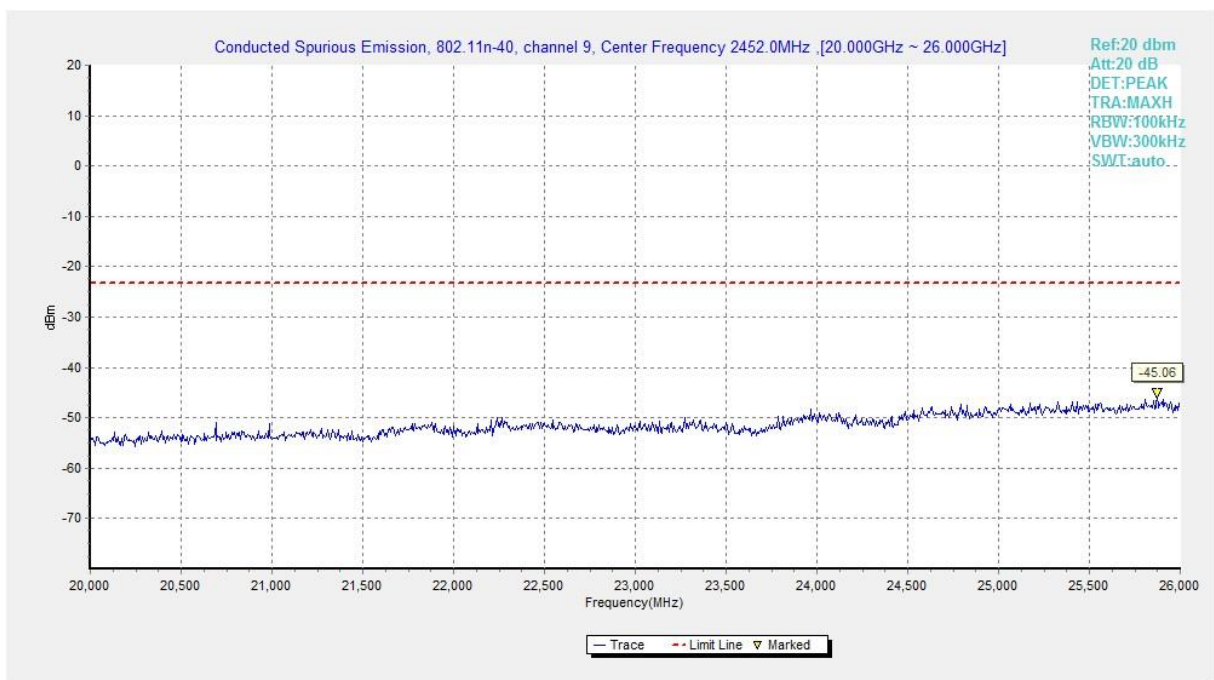


Fig.B.6.1.96 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 20 GHz-26 GHz)

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: UT08a

Measurement Results for EUT1:

802.11b mode

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

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	Power(ch1)	2.31GHz ~2.43GHz	Fig.B.6.2.3	P
	Power(ch11)	2.45GHz ~2.5GHz	Fig.B.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.B.6.2.5	P
	Power(ch11)	2.45GHz ~2.5GHz	Fig.B.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.B.6.2.7	P
	Power(ch9)	2.45GHz ~2.5GHz	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:

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

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)
2388.200	46.59	2.9	32.0	11.73	54.0	7.4	H	90
2390.000	46.65	2.9	32.0	11.78	54.0	7.4	H	78
4823.500	49.88	-33.2	34.1	48.98	54.0	4.1	H	110
7236.400	29.70	-30.9	35.8	24.78	54.0	24.3	V	132
9648.400	29.98	-30.5	36.7	23.73	54.0	24.0	V	66
12060.400	32.65	-28.7	38.7	22.62	54.0	21.3	V	88

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)
2422.100	47.09	2.9	32.0	12.17	54.0	6.9	V	0
2452.000	47.52	2.9	32.1	12.55	54.0	6.5	H	18
4873.900	47.76	-33.3	34.2	46.90	54.0	6.2	V	22
7311.100	29.48	-30.8	35.8	24.47	54.0	24.5	H	0
9748.300	30.11	-30.3	36.9	23.58	54.0	23.9	H	44
12184.600	32.98	-28.1	38.8	22.28	54.0	21.0	V	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)
2483.600	46.74	2.9	32.1	11.73	54.0	7.3	H	22
2486.400	46.71	2.9	32.1	11.69	54.0	7.3	H	242
4923.400	49.87	-33.5	34.2	49.22	54.0	4.1	V	44
7385.800	28.89	-31.5	35.9	24.49	54.0	25.1	H	88
9848.200	29.98	-30.2	37.0	23.17	54.0	24.0	V	176
12309.700	32.65	-27.8	38.9	21.52	54.0	21.3	H	0

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)
2364.348	60.47	2.8	32.0	25.64	74.0	13.5	H	90
2389.338	60.70	2.9	32.0	25.84	74.0	13.3	H	78
4823.500	51.81	-33.2	34.1	50.91	74.0	22.2	H	110
7235.000	44.39	-30.9	35.8	39.48	74.0	29.6	V	132
9648.000	42.48	-30.5	36.7	36.23	74.0	31.5	V	66
12060.000	46.25	-28.7	38.7	36.22	74.0	27.7	V	88

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)
2338.600	42.97	-35.3	32.0	46.28	74.0	31.0	V	0
2511.000	44.77	-34.3	32.1	46.91	74.0	29.2	H	18
4873.500	50.49	-33.3	34.2	49.64	74.0	23.5	V	22
7311.000	43.34	-30.8	35.8	38.33	74.0	30.7	H	0
9748.000	41.74	-30.3	36.9	35.22	74.0	32.3	H	44
12185.000	45.14	-28.1	38.8	34.43	74.0	28.9	V	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)
2484.965	60.37	2.9	32.1	25.35	74.0	13.6	H	22
2485.485	60.84	2.9	32.1	25.82	74.0	13.2	H	242
4923.500	52.73	-33.5	34.2	52.09	74.0	21.3	V	44
7386.000	39.63	-31.5	35.9	35.23	74.0	34.4	H	88
9848.000	41.33	-30.2	37.0	34.52	74.0	32.7	V	176
12310.000	44.15	-27.8	38.9	33.01	74.0	29.9	H	0

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)
2388.100	46.62	2.9	32.0	11.76	54.0	7.4	H	22
2390.000	46.94	2.9	32.0	12.08	54.0	7.1	H	44
4823.500	34.00	-33.2	34.1	33.11	54.0	20.0	V	0
7236.400	29.60	-30.9	35.8	24.68	54.0	24.4	H	0
9648.400	30.04	-30.5	36.7	23.78	54.0	24.0	V	22
12060.400	32.74	-28.7	38.7	22.70	54.0	21.3	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)
2401.500	46.53	2.9	32.0	11.64	54.0	7.5	V	2
2457.000	46.84	2.9	32.1	11.86	54.0	7.2	V	20
4873.000	32.43	-33.3	34.2	31.58	54.0	21.6	V	176
7311.100	29.67	-30.8	35.8	24.66	54.0	24.3	V	198
9748.300	30.40	-30.3	36.9	23.88	54.0	23.6	H	0
12184.600	33.16	-28.1	38.8	22.46	54.0	20.8	V	22

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	46.77	2.9	32.1	11.75	54.0	7.2	H	176
2485.000	46.64	2.9	32.1	11.62	54.0	7.4	H	0
4922.500	33.40	-33.5	34.2	32.75	54.0	20.6	V	22
7385.800	28.86	-31.5	35.9	24.46	54.0	25.1	V	352
9848.200	30.26	-30.2	37.0	23.44	54.0	23.7	V	0
12309.700	32.78	-27.8	38.9	21.64	54.0	21.2	H	0

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)
2389.744	64.42	2.9	32.0	29.56	74.0	9.6	H	22
2389.842	64.10	2.9	32.0	29.23	74.0	9.9	H	44
4823.500	46.74	-33.2	34.1	45.84	74.0	27.3	V	0
7236.000	41.02	-30.9	35.8	36.10	74.0	33.0	H	0
9648.000	40.94	-30.5	36.7	34.69	74.0	33.1	V	22
12060.000	45.32	-28.7	38.7	35.29	74.0	28.7	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)
2362.600	45.14	-34.8	32.0	47.94	74.0	28.9	V	2
2503.600	44.68	-34.2	32.1	46.76	74.0	29.3	V	20
4871.000	45.20	-33.3	34.2	44.34	74.0	28.8	V	176
7311.000	40.96	-30.8	35.8	35.95	74.0	33.0	V	198
9748.000	41.50	-30.3	36.9	34.98	74.0	32.5	H	0
12185.000	44.09	-28.1	38.8	33.38	74.0	29.9	V	22

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)
2483.535	62.90	2.9	32.1	27.88	74.0	11.1	H	176
2483.875	62.17	2.9	32.1	27.15	74.0	11.8	H	0
4923.000	45.55	-33.5	34.2	44.91	74.0	28.4	V	22
7386.000	41.10	-31.5	35.9	36.70	74.0	32.9	V	352
9848.000	42.14	-30.2	37.0	35.33	74.0	31.9	V	0
12310.000	43.87	-27.8	38.9	32.74	74.0	30.1	H	0

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)
2389.700	46.69	2.9	32.0	11.83	54.0	7.3	H	22
2389.800	46.74	2.9	32.0	11.88	54.0	7.3	H	66
4821.700	32.75	-33.2	34.1	31.86	54.0	21.3	V	132
7236.400	29.73	-30.9	35.8	24.81	54.0	24.3	H	0
9648.400	30.29	-30.5	36.7	24.04	54.0	23.7	V	88
12060.400	32.92	-28.7	38.7	22.89	54.0	21.1	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)
2390.000	46.54	2.9	32.0	11.67	54.0	7.5	V	180
2483.500	46.68	2.9	32.1	11.67	54.0	7.3	V	180
4873.900	32.55	-33.3	34.2	31.70	54.0	21.4	V	44
7311.100	29.83	-30.8	35.8	24.82	54.0	24.2	H	88
9748.300	30.57	-30.3	36.9	24.04	54.0	23.4	V	176
12184.600	33.29	-28.1	38.8	22.59	54.0	20.7	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)
2483.500	47.00	2.9	32.1	11.98	54.0	7.0	V	0
2483.600	46.97	2.9	32.1	11.96	54.0	7.0	V	22
4921.600	33.77	-33.5	34.2	33.12	54.0	20.2	H	0
7385.800	29.26	-31.5	35.9	24.86	54.0	24.7	H	264
9848.200	30.52	-30.2	37.0	23.70	54.0	23.5	H	110
12309.700	33.07	-27.8	38.9	21.94	54.0	20.9	H	242

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)
2388.600	46.52	2.9	32.0	11.66	74.0	27.5	H	22
2389.700	46.63	2.9	32.0	11.77	74.0	27.4	H	66
4821.000	45.41	-33.2	34.1	44.52	74.0	28.6	V	132
7236.000	41.74	-30.9	35.8	36.82	74.0	32.3	H	0
9648.000	41.43	-30.5	36.7	35.18	74.0	32.6	V	88
12060.000	44.19	-28.7	38.7	34.16	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)
2372.400	43.95	-34.4	32.0	46.37	74.0	30.0	V	180
2514.800	45.80	-34.3	32.1	47.97	74.0	28.2	V	180
4868.500	45.05	-33.3	34.1	44.19	74.0	28.9	V	44
7311.000	40.96	-30.8	35.8	35.95	74.0	33.0	H	88
9748.000	42.63	-30.3	36.9	36.11	74.0	31.4	V	176
12185.000	45.18	-28.1	38.8	34.47	74.0	28.8	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)
2483.545	61.56	2.9	32.1	26.54	74.0	12.4	V	0
2484.930	61.96	2.9	32.1	26.94	74.0	12.0	V	22
4927.500	47.06	-33.5	34.2	46.43	74.0	26.9	H	0
7386.000	42.11	-31.5	35.9	37.71	74.0	31.9	H	264
9848.000	41.10	-30.2	37.0	34.29	74.0	32.9	H	110
12310.000	43.32	-27.8	38.9	32.19	74.0	30.7	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)
2389.700	49.02	2.9	32.0	14.15	54.0	5.0	H	88
2390.000	48.89	2.9	32.0	14.03	54.0	5.1	H	22
4837.000	30.87	-33.2	34.1	29.95	54.0	23.1	V	220
7266.100	30.37	-30.6	35.8	25.16	54.0	23.6	V	242
9688.000	30.41	-30.4	36.8	24.01	54.0	23.6	V	44
12109.900	33.16	-28.5	38.8	22.86	54.0	20.8	V	66

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)
2390.000	46.63	2.9	32.0	11.76	54.0	7.4	H	0
2483.500	47.11	2.9	32.1	12.09	54.0	6.9	V	0
4877.500	31.24	-33.3	34.2	30.39	54.0	22.8	V	88
7311.100	29.98	-30.8	35.8	24.97	54.0	24.0	V	0
9748.300	30.62	-30.3	36.9	24.10	54.0	23.4	H	110
12184.600	33.42	-28.1	38.8	22.71	54.0	20.6	H	132

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	48.67	2.9	32.1	13.65	54.0	5.3	H	176
2484.100	48.52	2.9	32.1	13.50	54.0	5.5	H	198
4904.500	31.18	-33.4	34.2	30.45	54.0	22.8	H	220
7356.100	29.85	-31.2	35.8	25.18	54.0	24.1	H	198
9807.700	30.25	-30.3	36.9	23.64	54.0	23.7	V	242
12260.200	32.96	-27.9	38.9	21.98	54.0	21.0	H	264

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)
2389.000	67.18	2.9	32.0	32.32	74.0	6.8	H	88
2389.562	67.60	2.9	32.0	32.74	74.0	6.4	H	22
4843.000	44.13	-33.2	34.1	43.22	74.0	29.9	V	220
7266.000	41.40	-30.6	35.8	36.19	74.0	32.6	V	242
9688.000	42.42	-30.4	36.8	36.02	74.0	31.6	V	44
12110.000	43.97	-28.5	38.8	33.67	74.0	30.0	V	66

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)
2366.200	44.88	-34.6	32.0	47.54	74.0	29.1	H	0
2504.200	44.68	-34.2	32.1	46.77	74.0	29.3	V	0
4872.500	44.40	-33.3	34.2	43.55	74.0	29.6	V	88
7311.000	41.41	-30.8	35.8	36.40	74.0	32.6	V	0
9748.000	43.26	-30.3	36.9	36.74	74.0	30.7	H	110
12185.000	45.06	-28.1	38.8	34.36	74.0	28.9	H	132

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)
2483.720	69.63	2.9	32.1	34.61	74.0	4.4	H	176
2484.940	70.02	2.9	32.1	35.00	74.0	4.0	H	198
4910.000	43.89	-33.5	34.2	43.18	74.0	30.1	H	220
9356.000	41.03	-30.8	36.4	35.37	74.0	33.0	H	198
9808.000	41.64	-30.3	36.9	35.03	74.0	32.4	V	242
12260.000	45.95	-27.9	38.9	34.97	74.0	28.1	H	264

Test graphs as below:

RE - Power-2.31GHz-2.45GHz

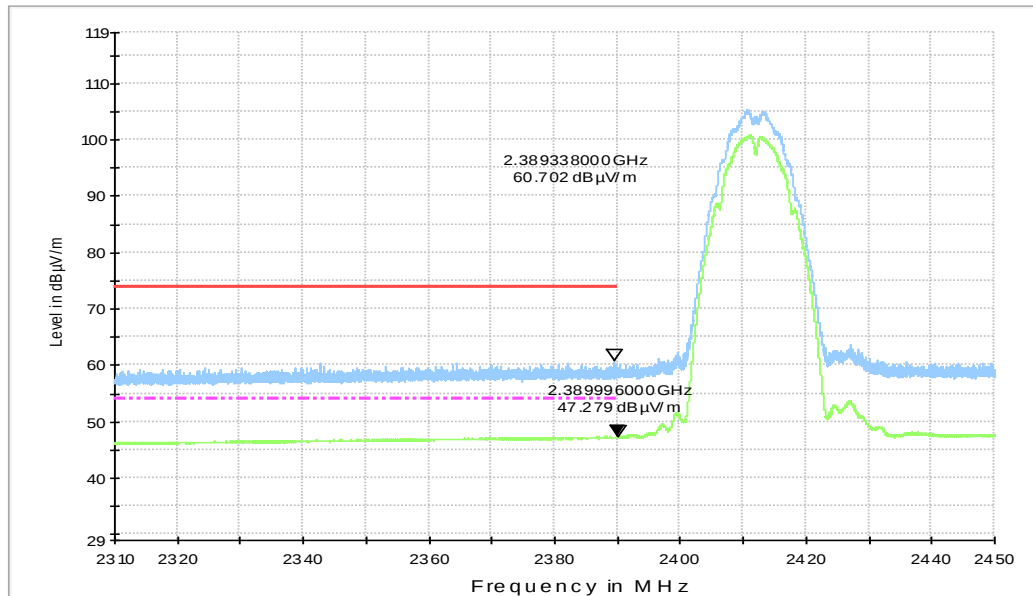


Fig.B.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.45GHz

RE - Power-2.45GHz-2.5GHz

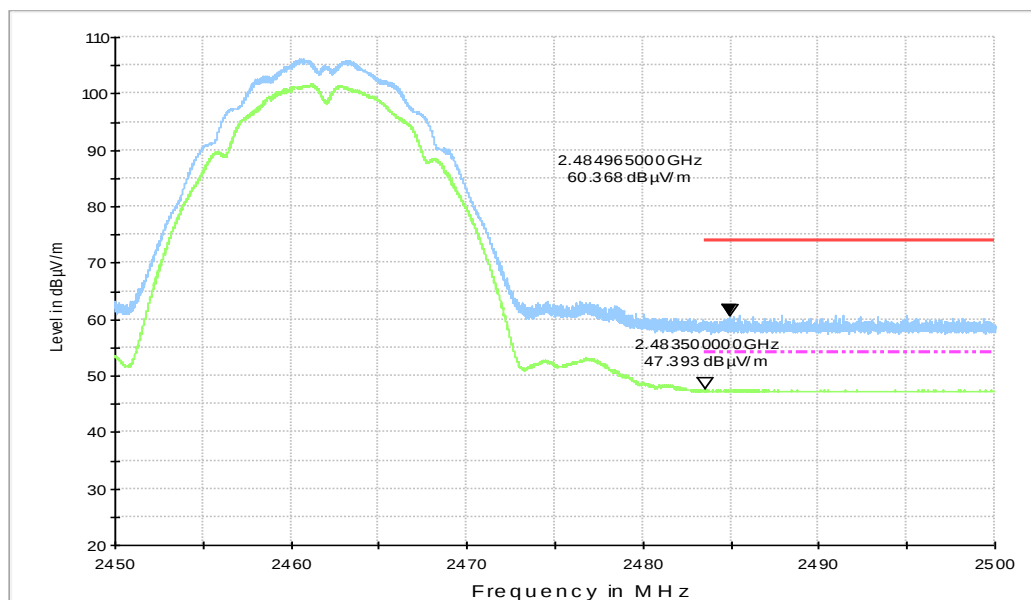


Fig.B.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

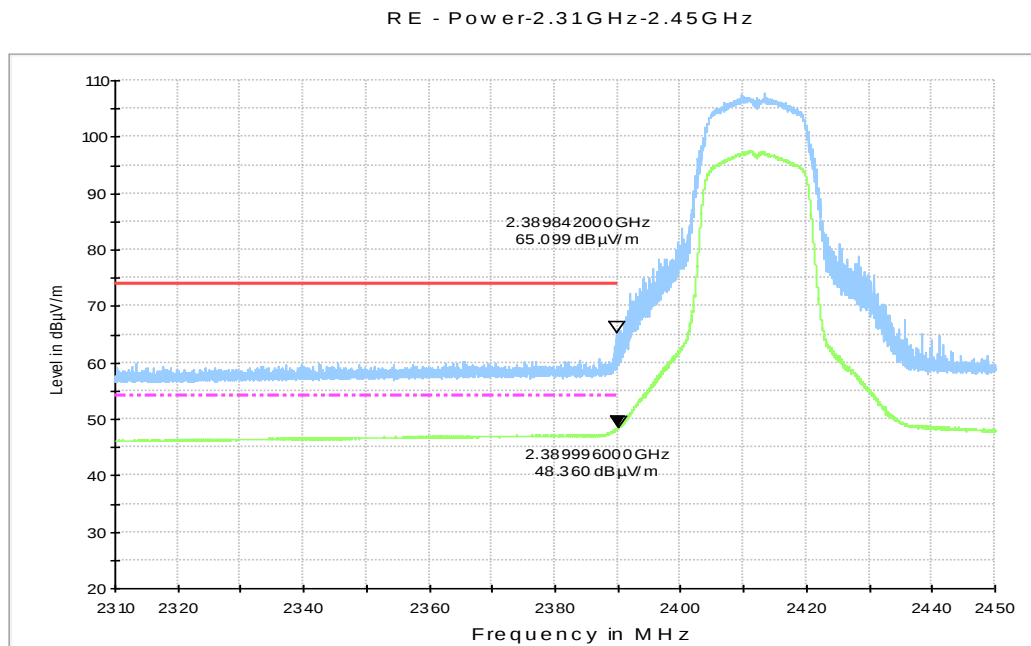


Fig.B.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.43GHz

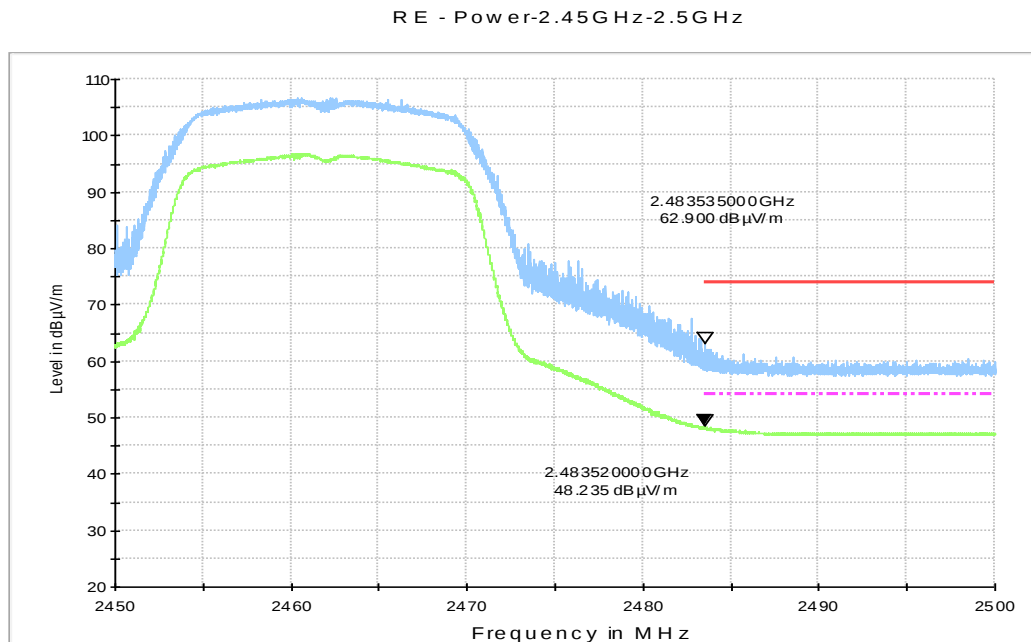


Fig.B.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

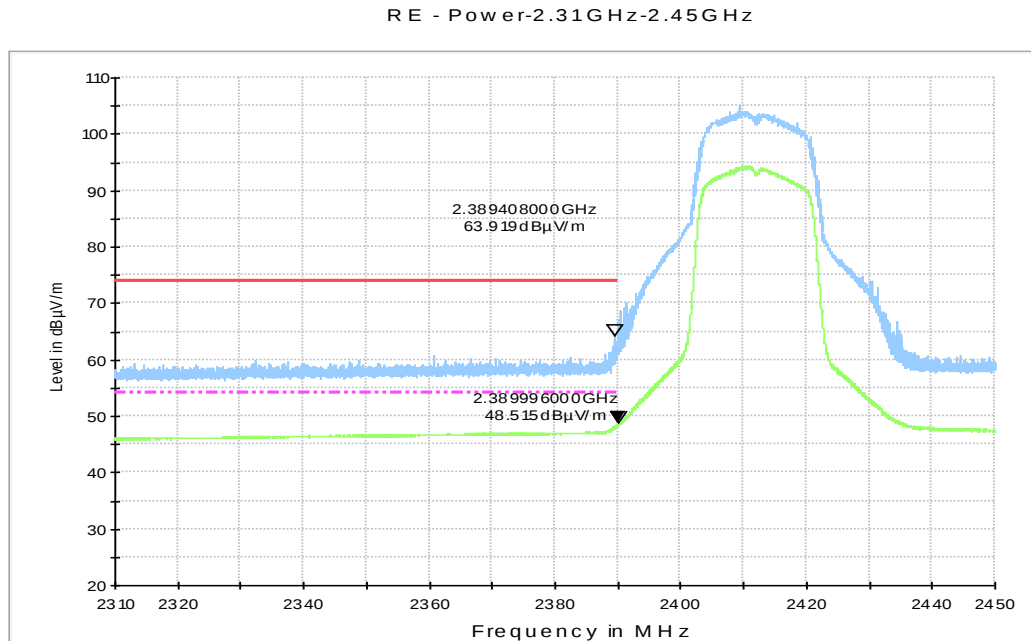


Fig.B.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31GHz - 2.45GHz

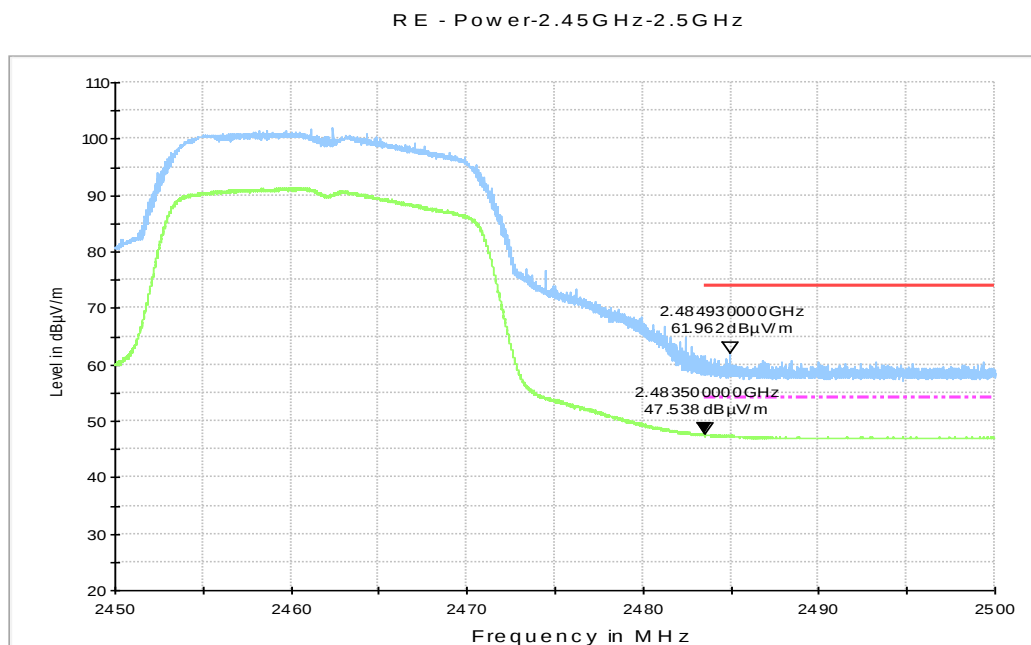


Fig.B.6.2.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

RE - Power-2.31GHz-2.45GHz

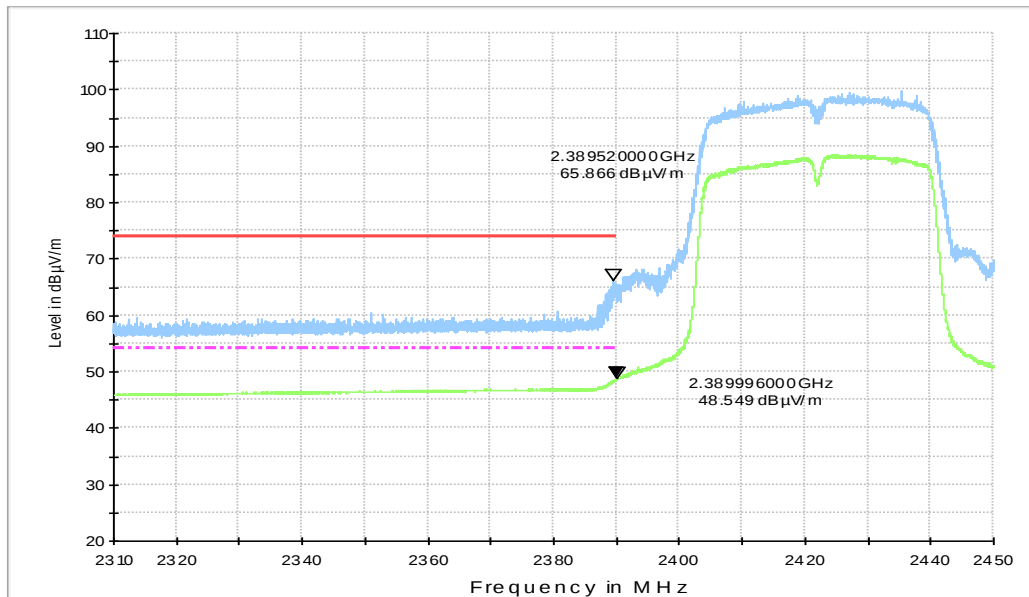


Fig.B.6.2.7 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31GHz - 2.45GHz

RE - Power-2.45GHz-2.5GHz

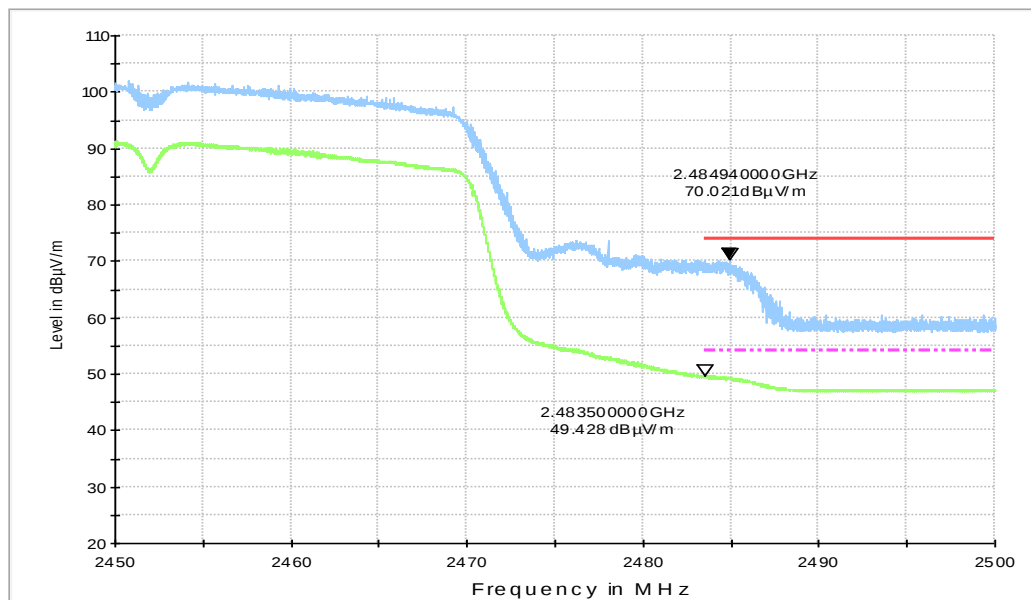


Fig.B.6.2.8 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz

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 (dBμV)	Result (dBμV)		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 (dBμV)	Result (dBμV)		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:

Traffic:

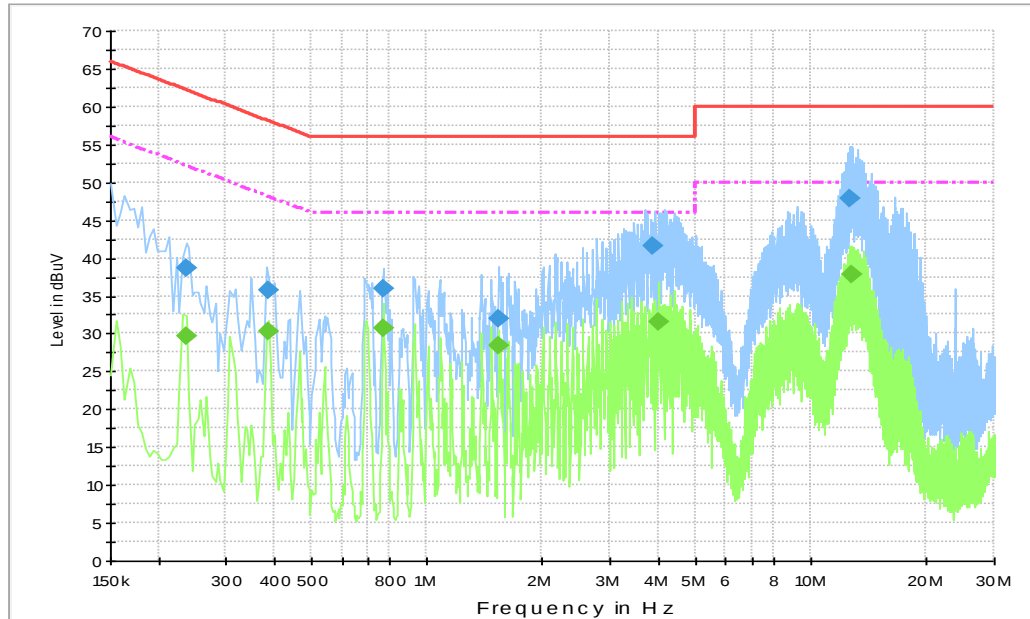


Fig.B.7.1 AC Powerline Conducted Emission-802.11b

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)
0.235500	38.7	1000.	9.000	L1	19.9	23.5	62.3
0.388500	35.8	1000.	9.000	L1	20.0	22.3	58.1
0.771000	35.9	1000.	9.000	L1	19.9	20.1	56.0
1.531500	32.0	1000.	9.000	L1	19.8	24.0	56.0
3.853500	41.5	1000.	9.000	L1	19.8	14.5	56.0
12.624000	47.8	1000.	9.000	L1	19.9	12.2	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.235500	29.7	1000.0	9.000	L1	19.9	22.6	52.3
0.388500	30.3	1000.0	9.000	L1	20.0	17.8	48.1
0.771000	30.7	1000.0	9.000	L1	19.9	15.3	46.0
1.540500	28.4	1000.0	9.000	L1	19.8	17.6	46.0
4.002000	31.7	1000.0	9.000	L1	19.8	14.3	46.0
12.763500	37.9	1000.0	9.000	L1	19.9	12.1	50.0

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

Idle:

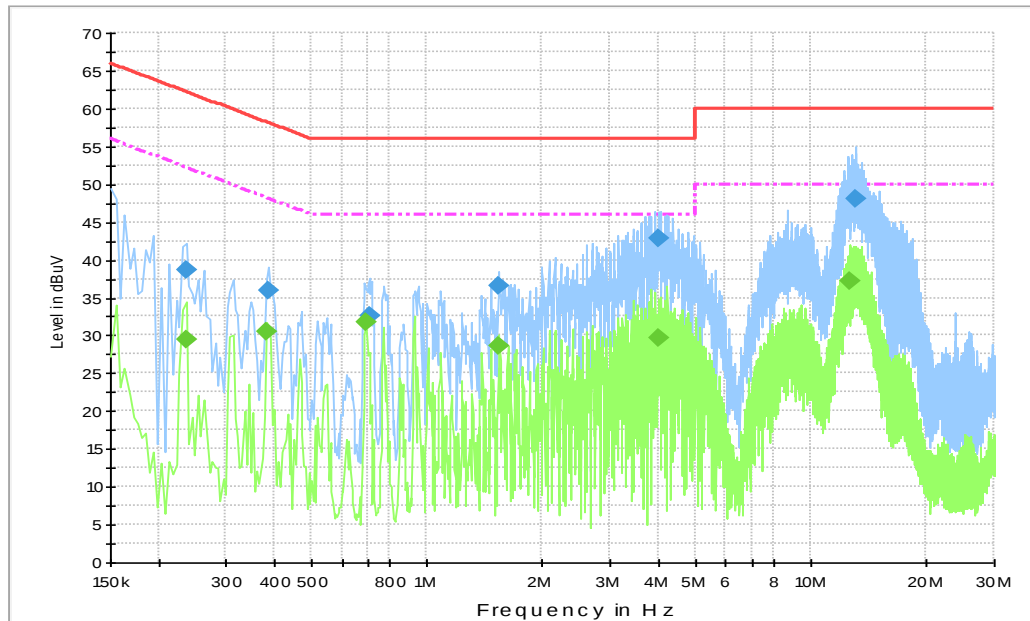


Fig.B.7.2 AC Powerline Conducted Emission-Idle

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

Final Result 1

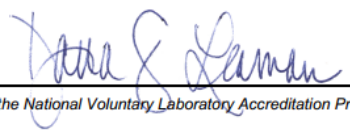
Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.235500	38.6	1000.	9.000	L1	19.9	23.6	62.3
0.388500	35.9	1000.	9.000	L1	20.0	22.2	58.1
0.708000	32.5	1000.	9.000	L1	19.9	23.5	56.0
1.540500	36.5	1000.	9.000	L1	19.8	19.5	56.0
4.002000	42.8	1000.	9.000	L1	19.8	13.2	56.0
13.137000	48.0	1000.	9.000	L1	19.9	12.0	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.235500	29.5	1000.0	9.000	L1	19.9	22.8	52.3
0.384000	30.6	1000.0	9.000	L1	20.0	17.6	48.2
0.694500	31.7	1000.0	9.000	N	19.9	14.3	46.0
1.540500	28.6	1000.0	9.000	L1	19.8	17.4	46.0
3.993000	29.7	1000.0	9.000	L1	19.8	16.3	46.0
12.592500	37.3	1000.0	9.000	L1	19.9	12.7	50.0

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

ANNEX C: Accreditation Certificate

United States Department of Commerce National Institute of Standards and Technology NVLAP[®]  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 Communiqué 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