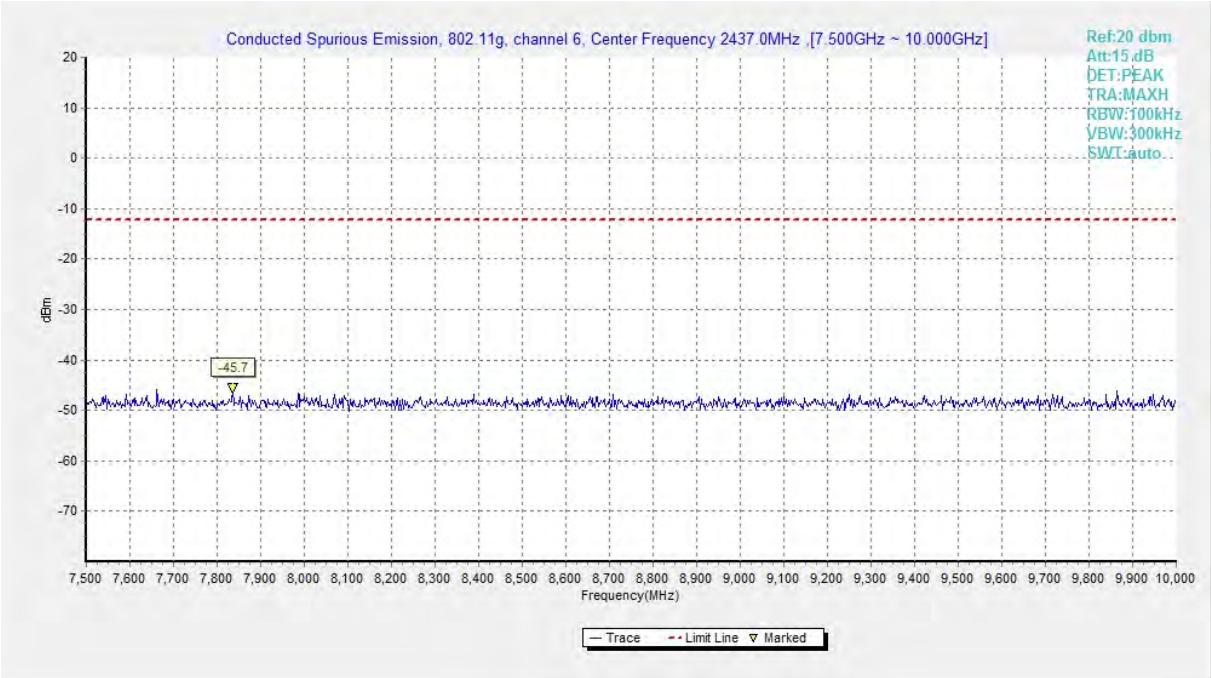

Fig.A.6.1.37 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 7.5 GHz-10 GHz)

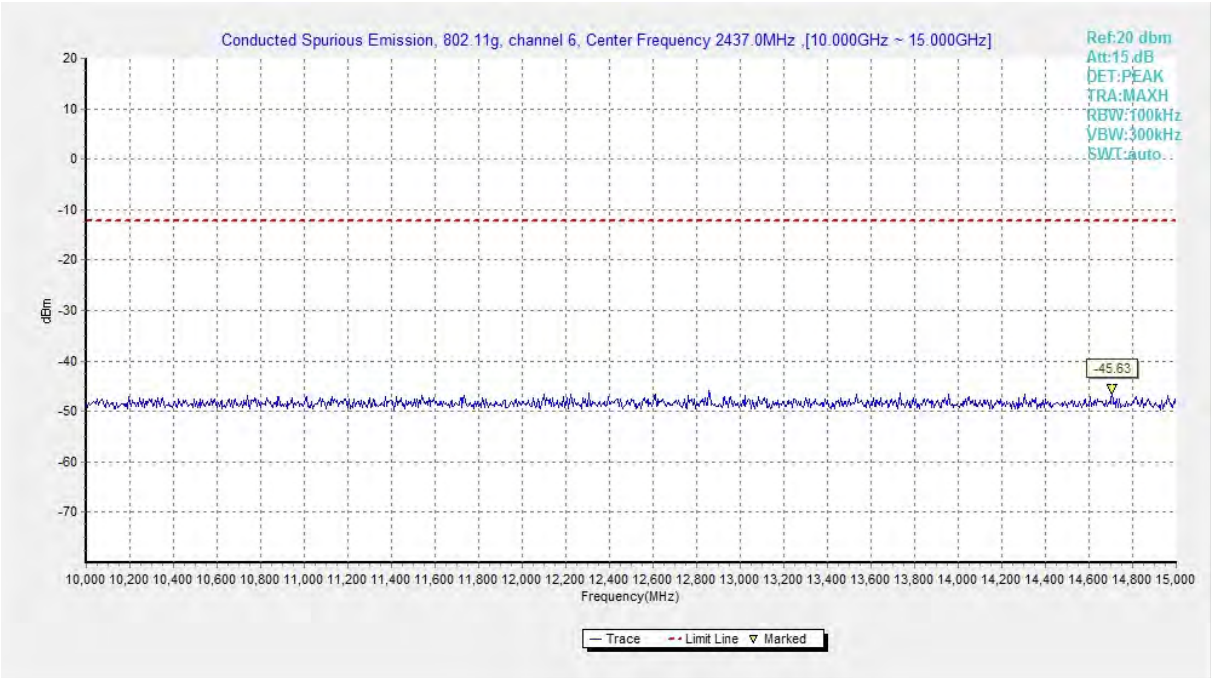

Fig.A.6.1.38 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 10 GHz-15 GHz)

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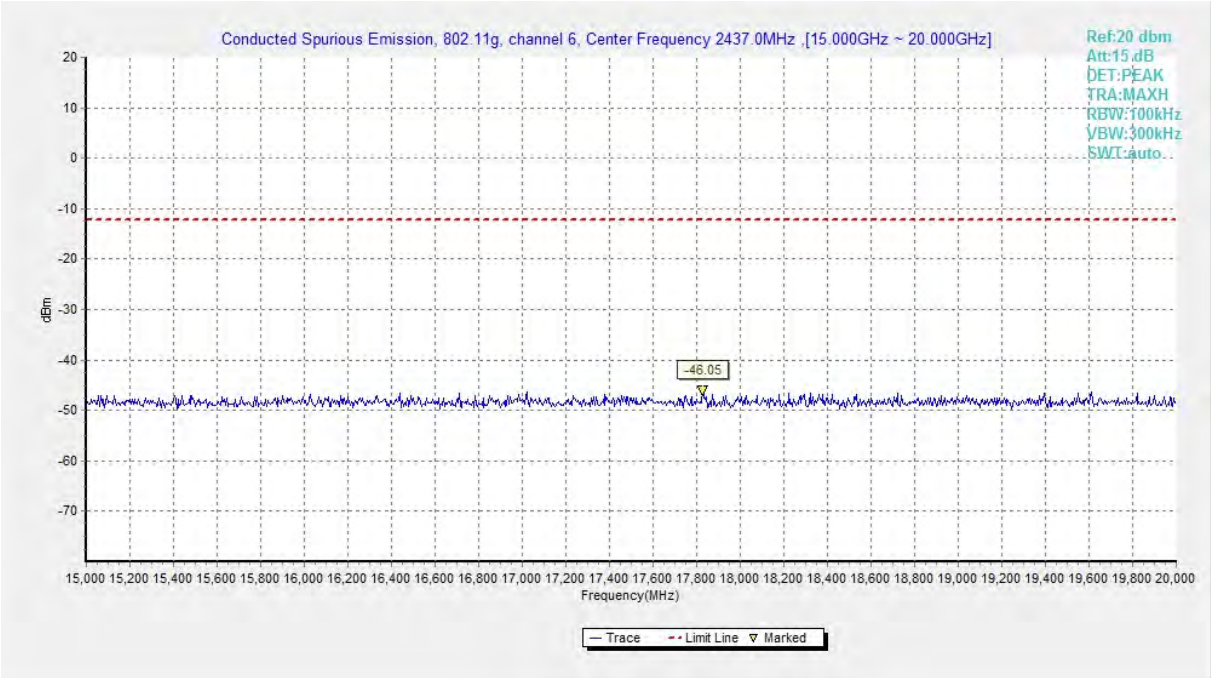

Fig.A.6.1.39 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 15 GHz-20 GHz)

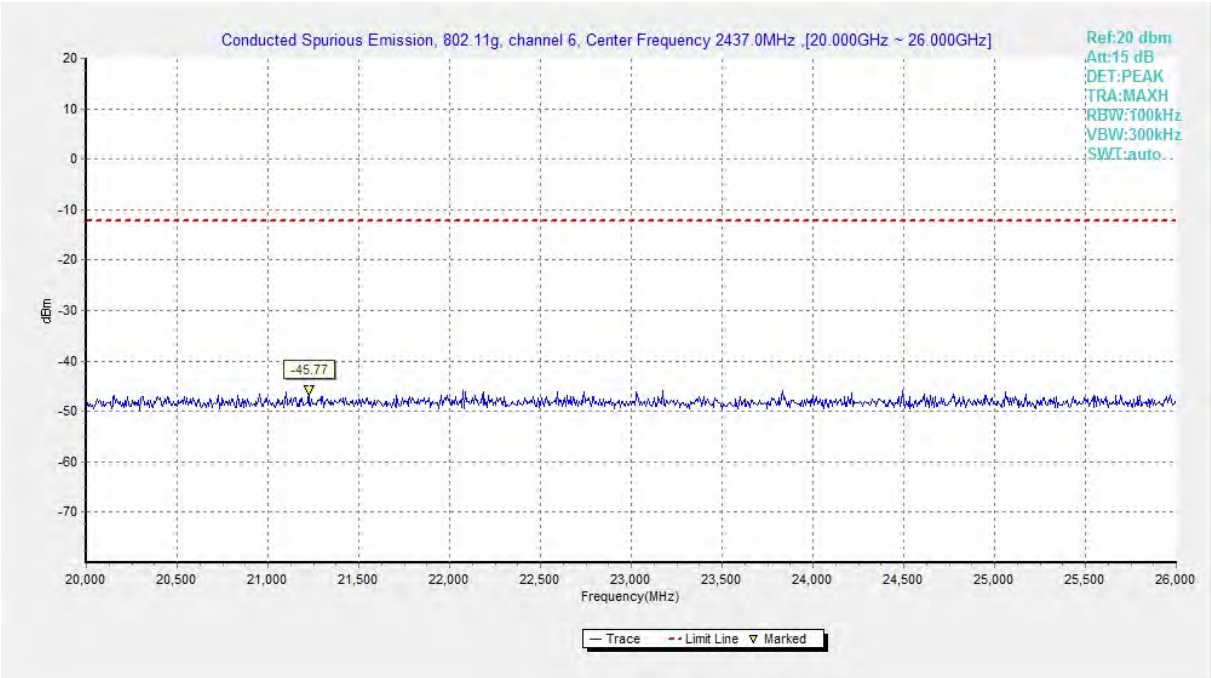

Fig.A.6.1.40 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 20 GHz-26 GHz)

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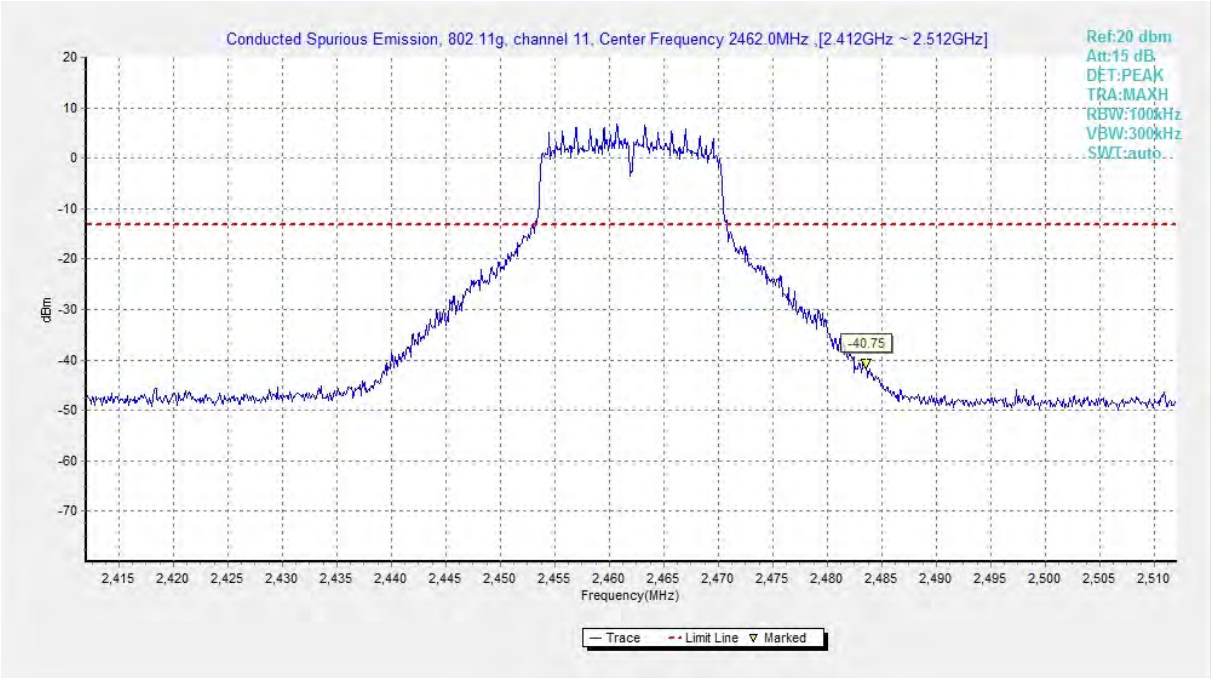

Fig.A.6.1.41 Transmitter Spurious Emission - Conducted (802.11g, Ch11, Center Frequency)

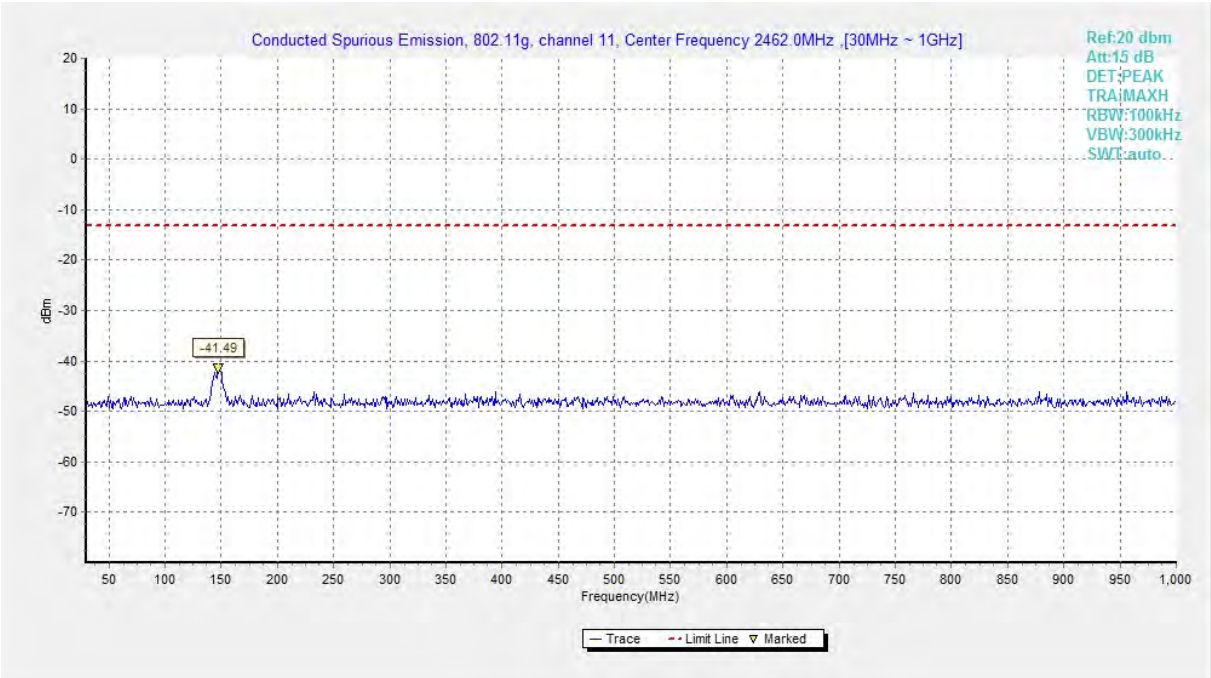

Fig.A.6.1.42 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 30 MHz-1 GHz)

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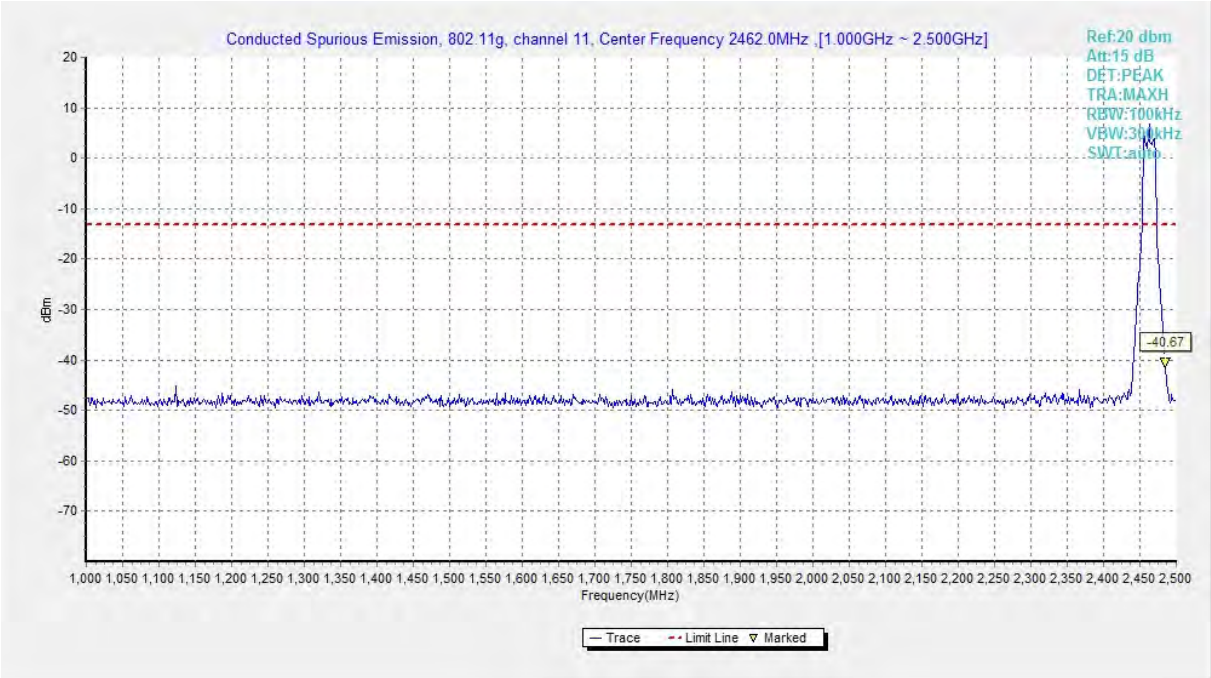

Fig.A.6.1.43 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 1 GHz-2.5 GHz)

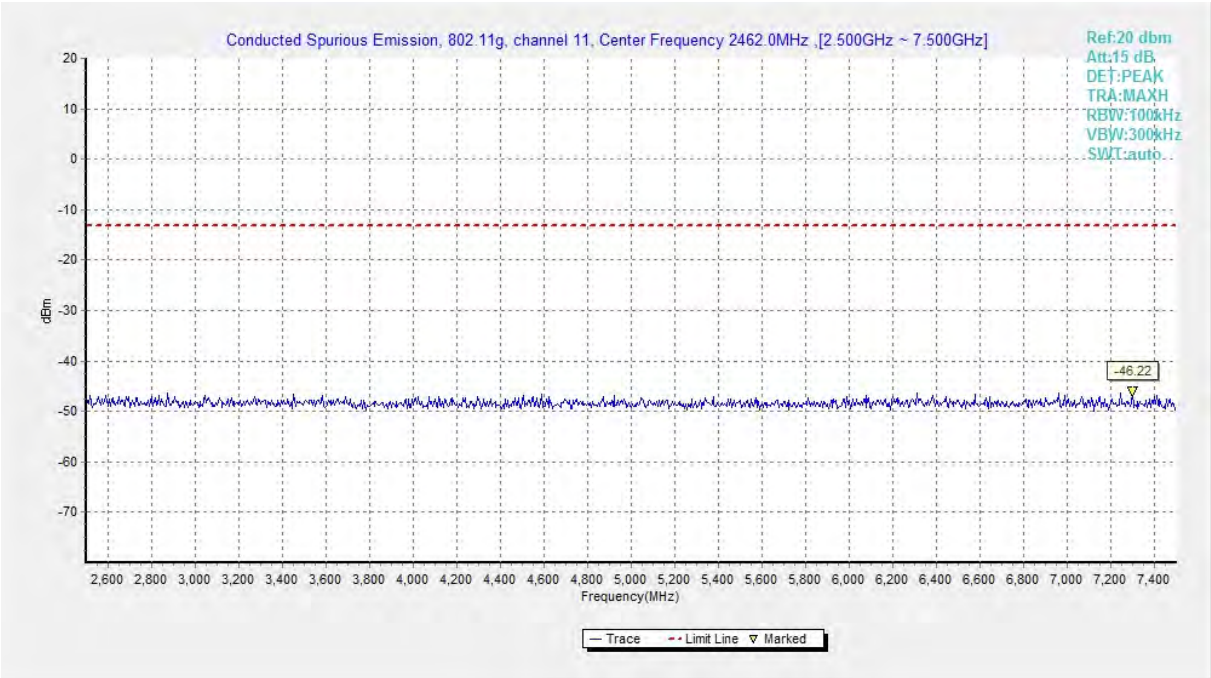

Fig.A.6.1.44 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 2.5 GHz-7.5 GHz)

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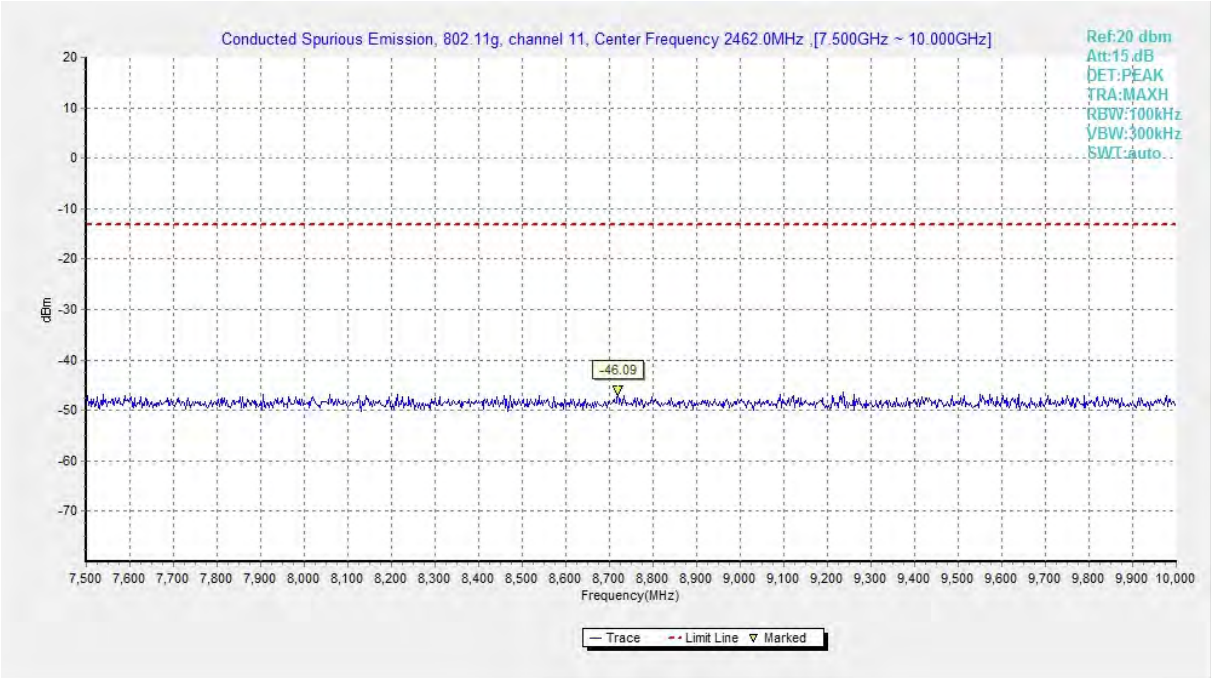

Fig.A.6.1.45 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 7.5 GHz-10 GHz)

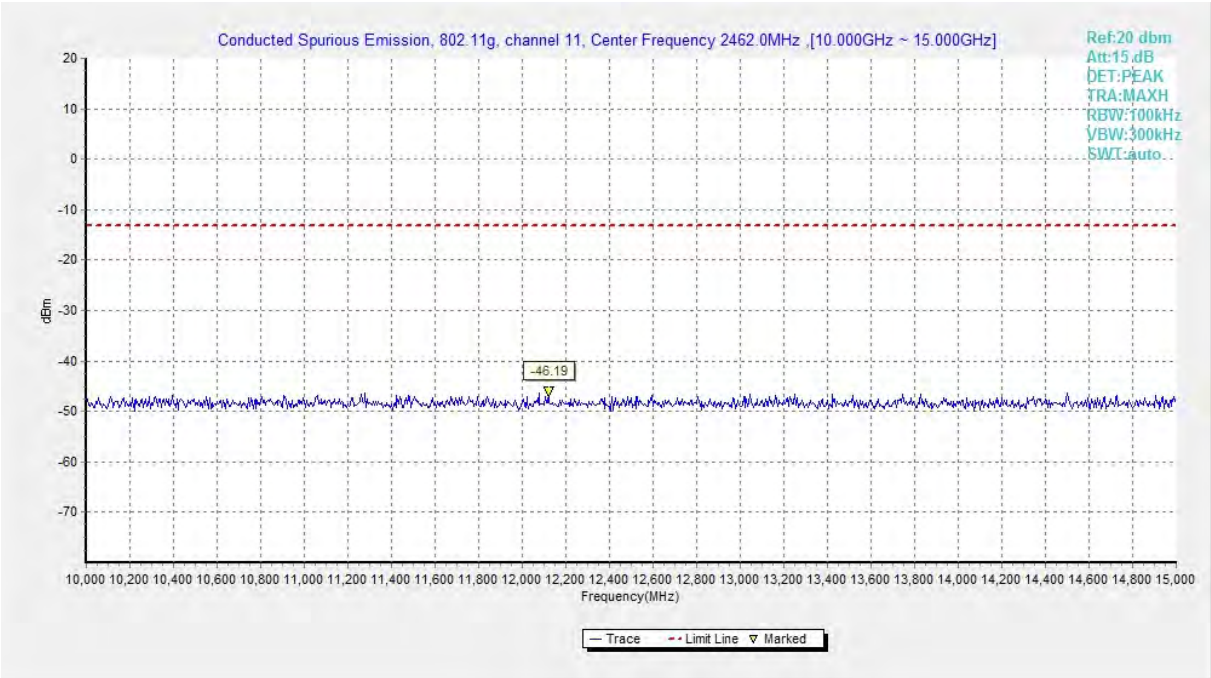

Fig.A.6.1.46 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 10 GHz-15 GHz)

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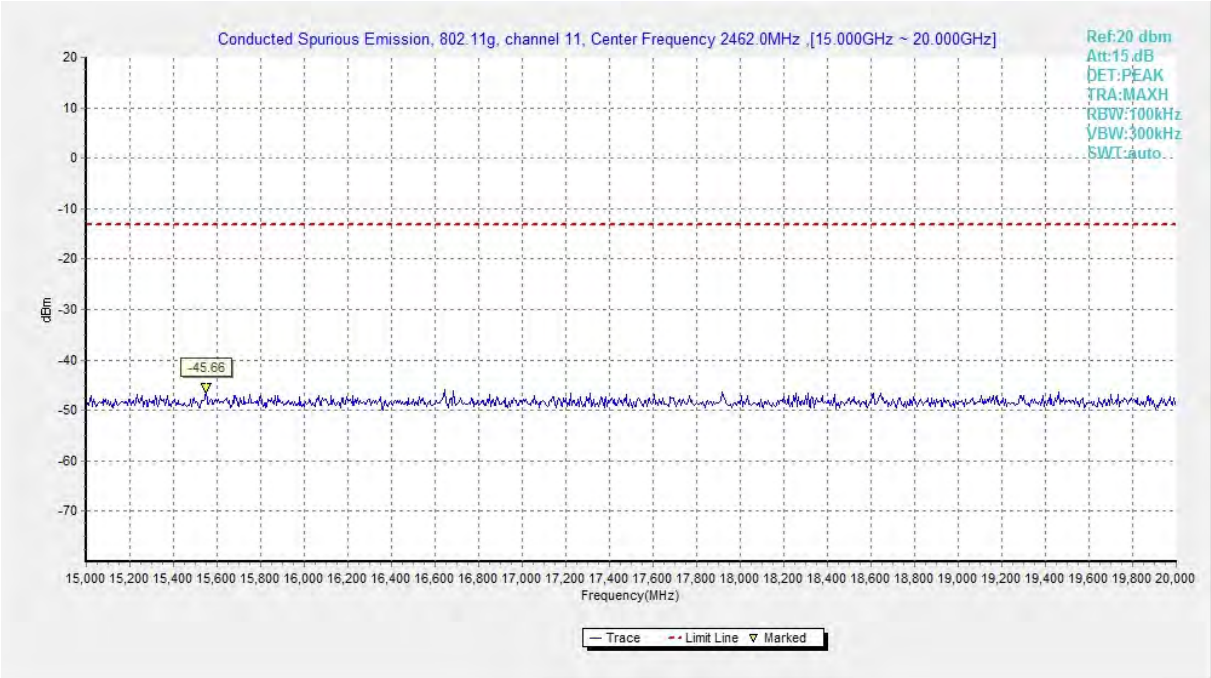

Fig.A.6.1.47 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 15 GHz-20 GHz)

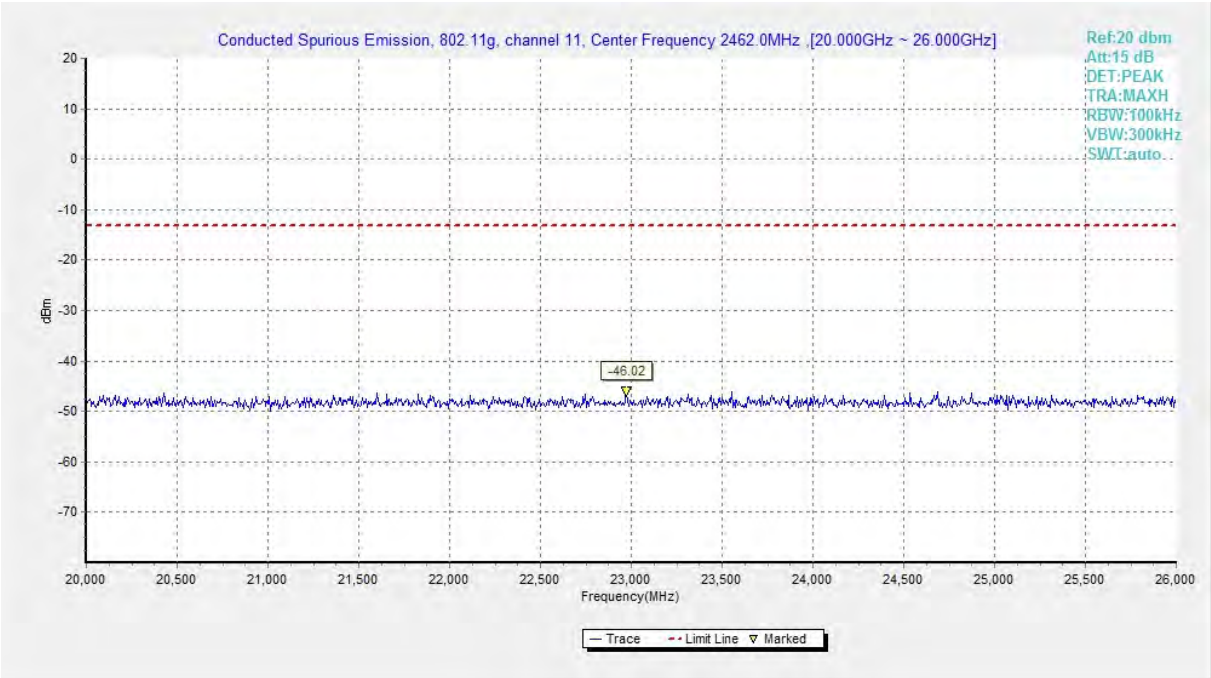

Fig.A.6.1.48 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 20 GHz-26 GHz)

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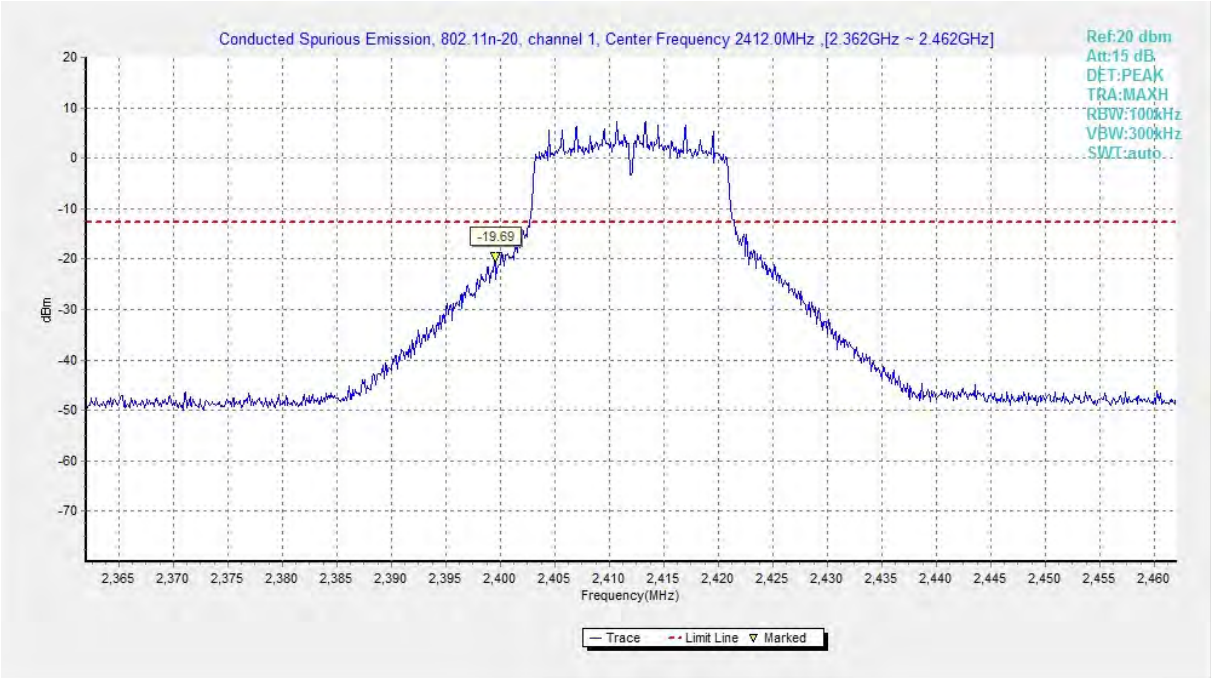

Fig.A.6.1.49 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, Center Frequency)

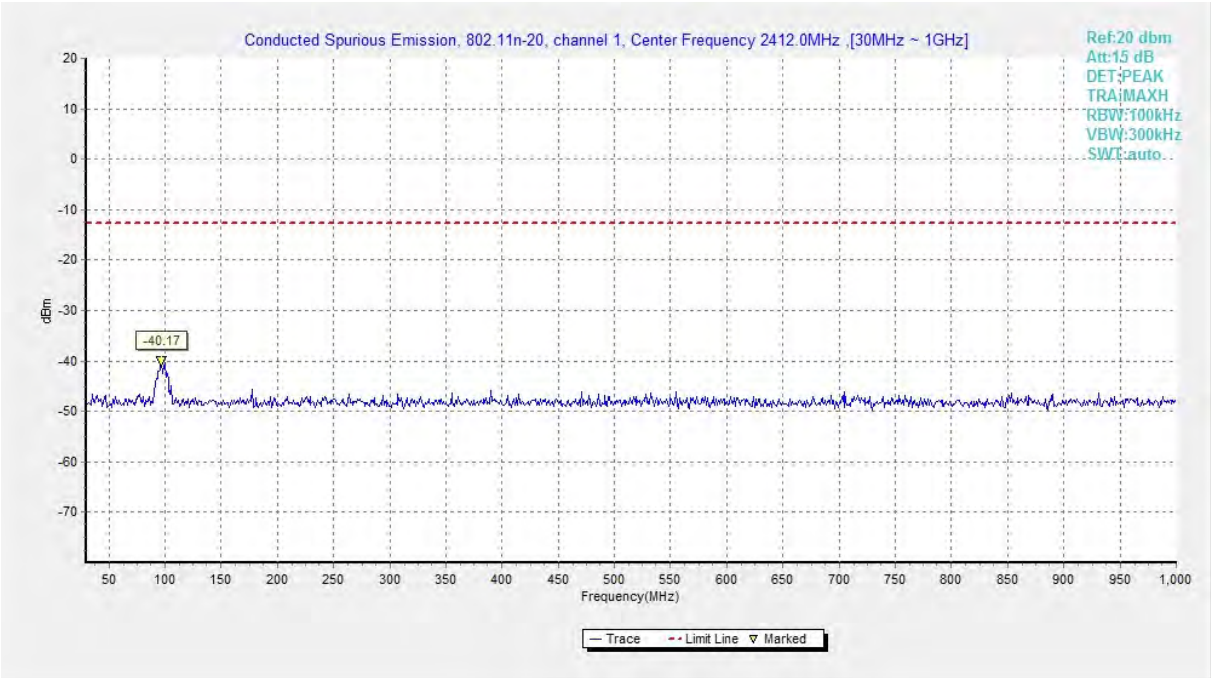

Fig.A.6.1.50 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 30 MHz-1 GHz)

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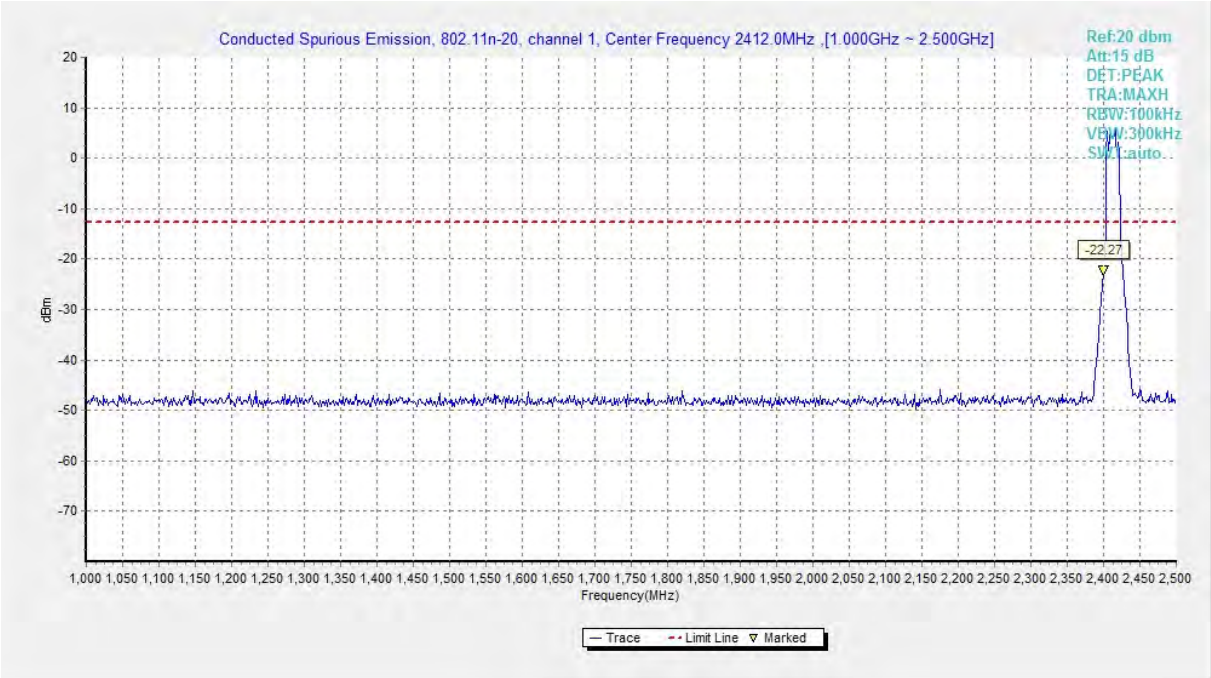

Fig.A.6.1.51 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 1 GHz-2.5 GHz)

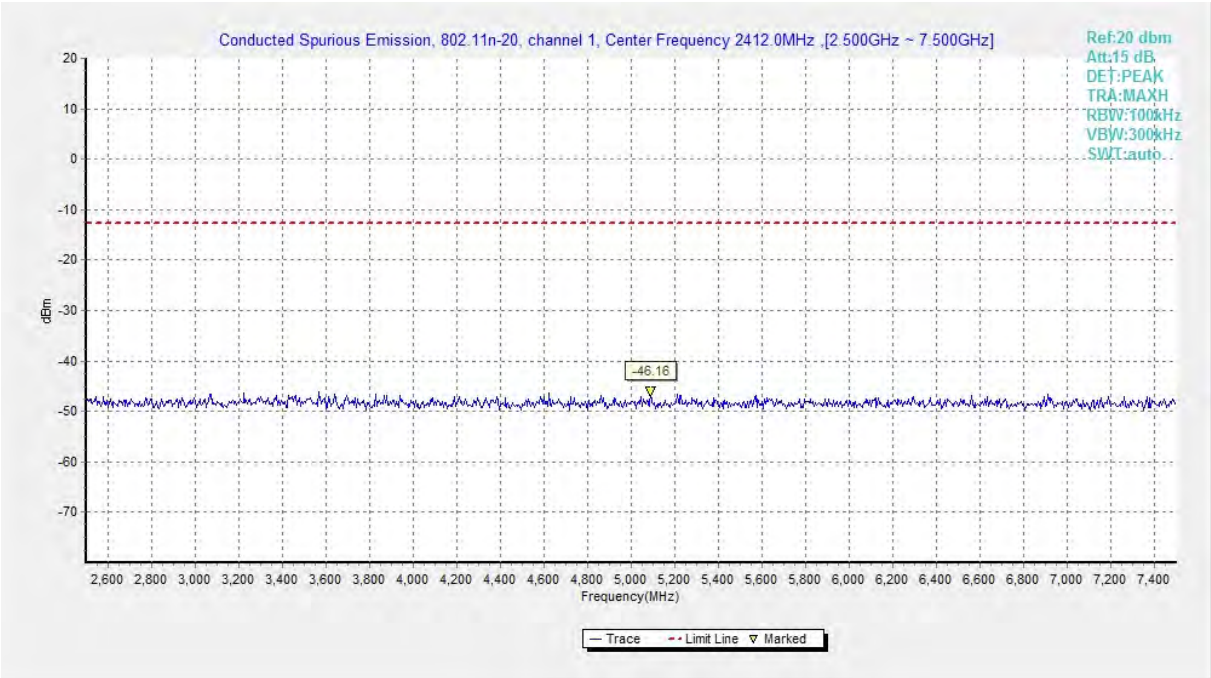

Fig.A.6.1.52 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 2.5 GHz-7.5 GHz)

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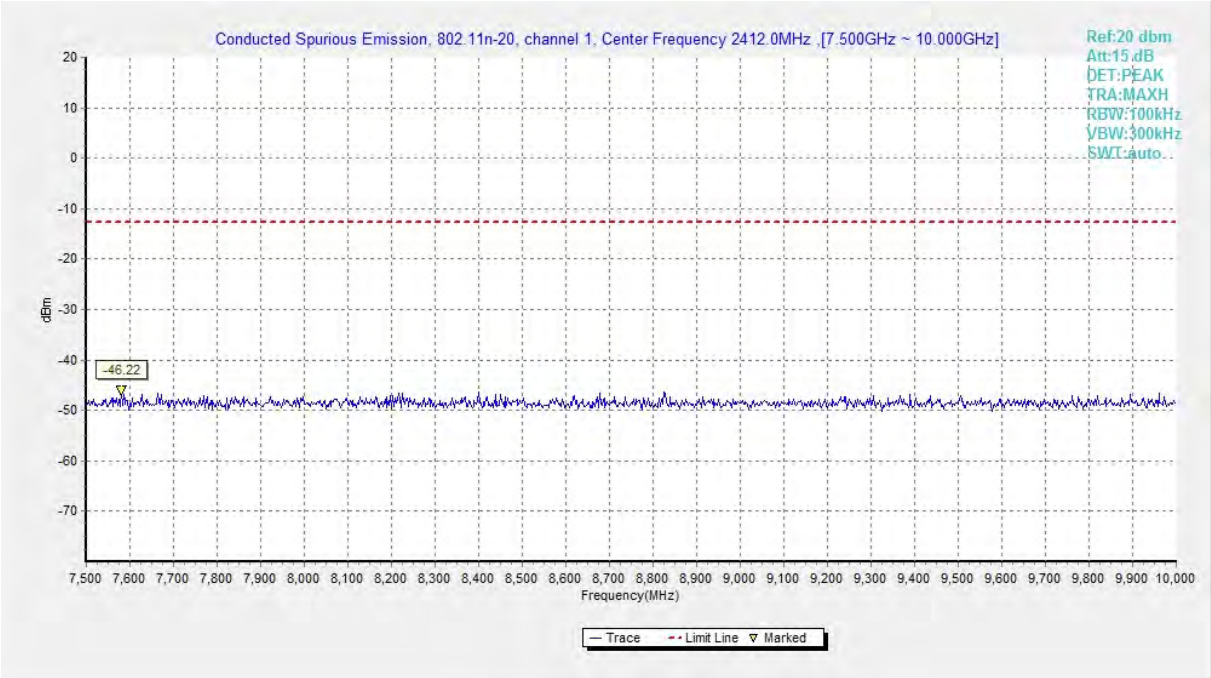

Fig.A.6.1.53 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 7.5 GHz-10 GHz)

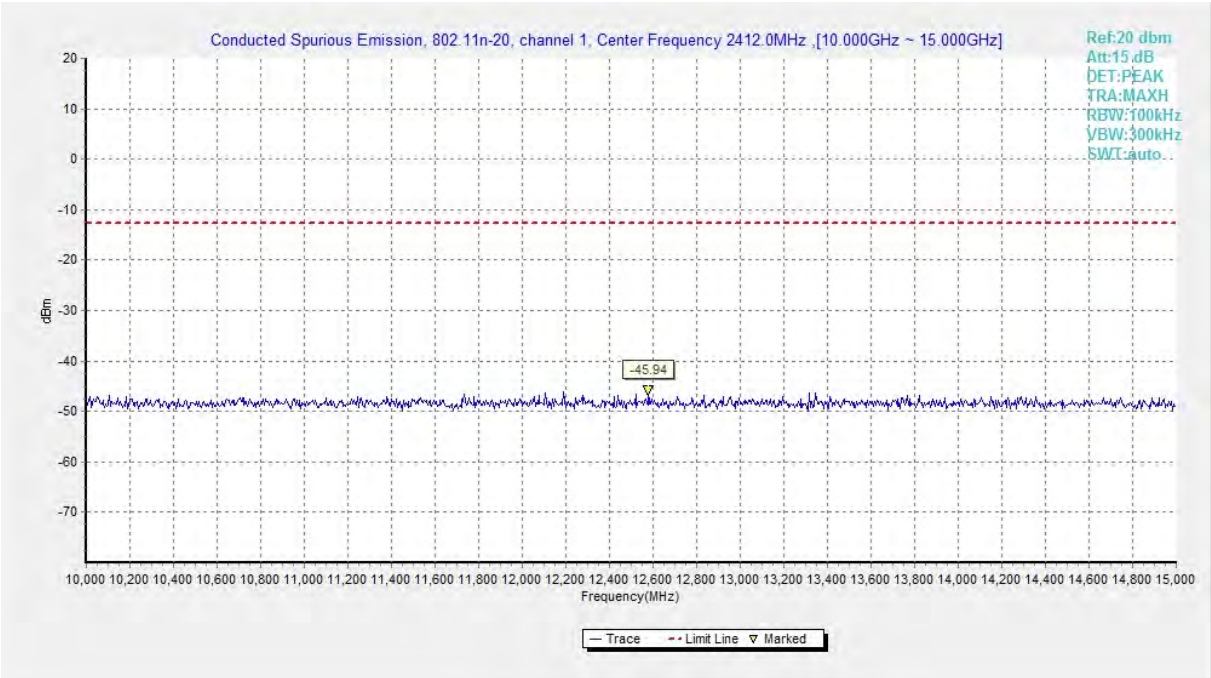

Fig.A.6.1.54 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 10 GHz-15 GHz)

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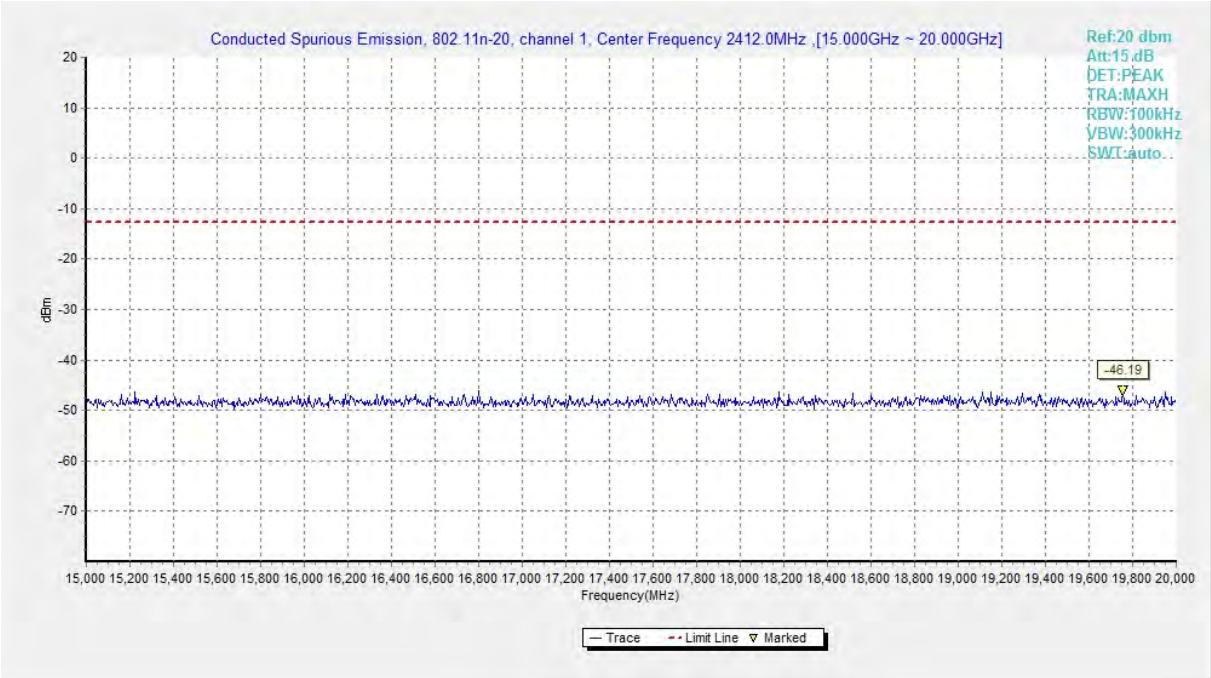

Fig.A.6.1.55 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 15 GHz-20 GHz)

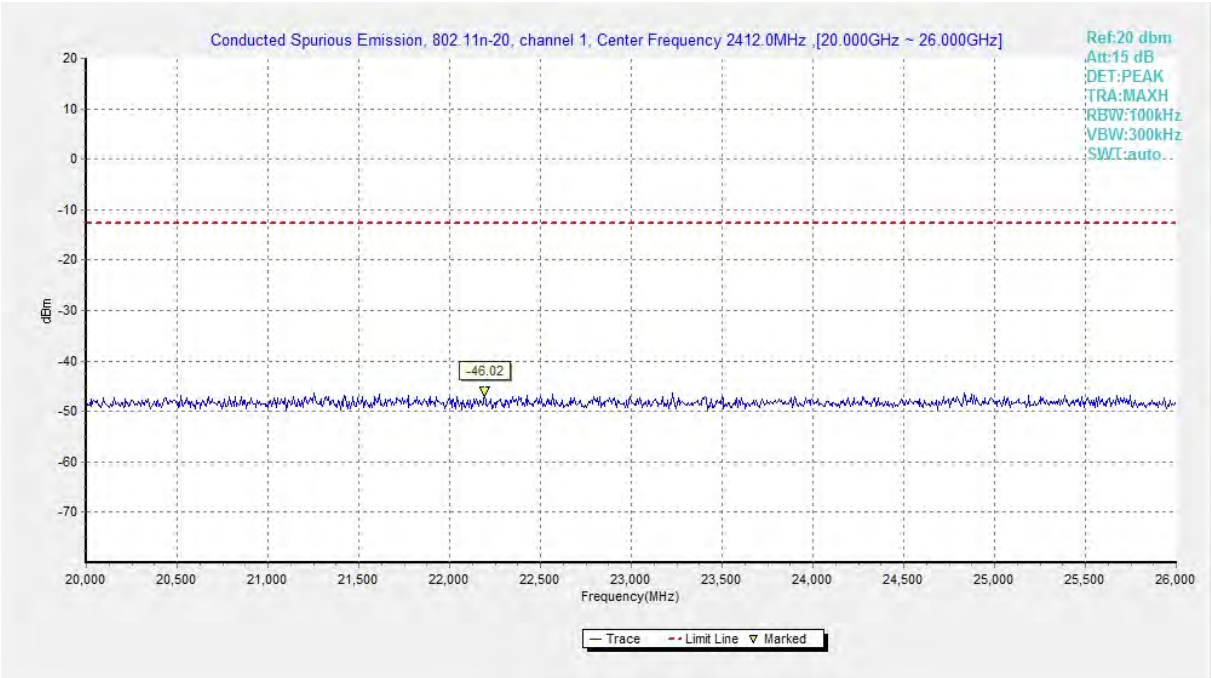

Fig.A.6.1.56 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 20 GHz-26 GHz)

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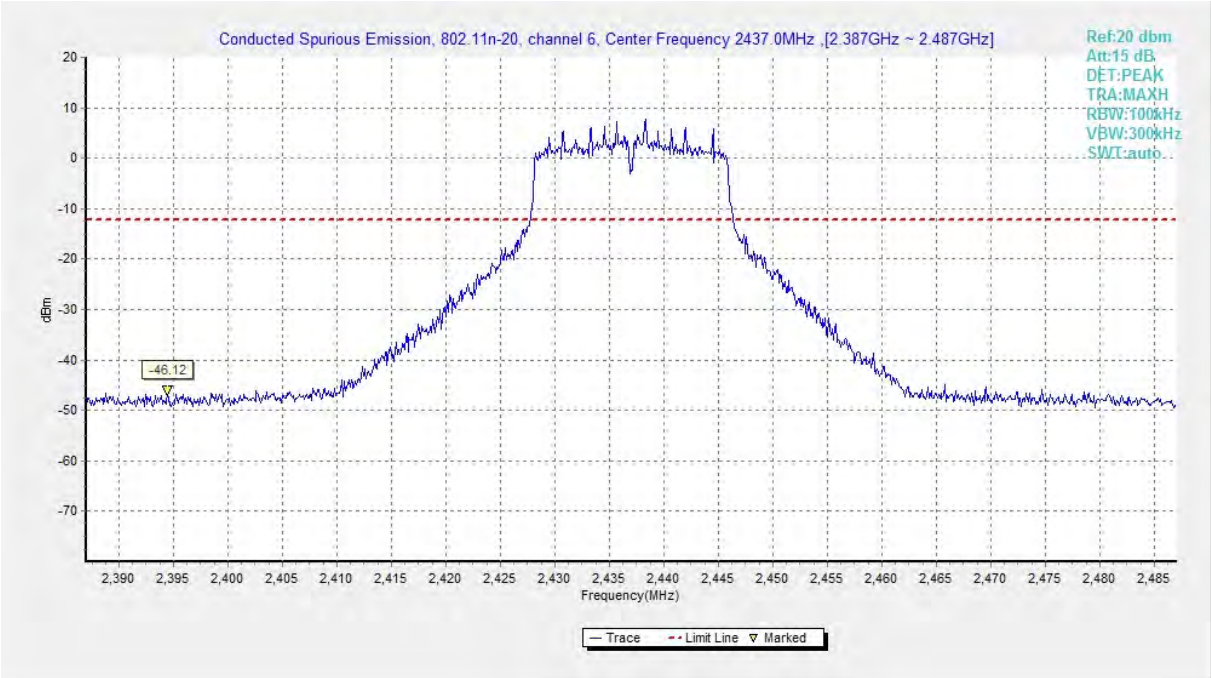

Fig.A.6.1.57 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, Center Frequency)

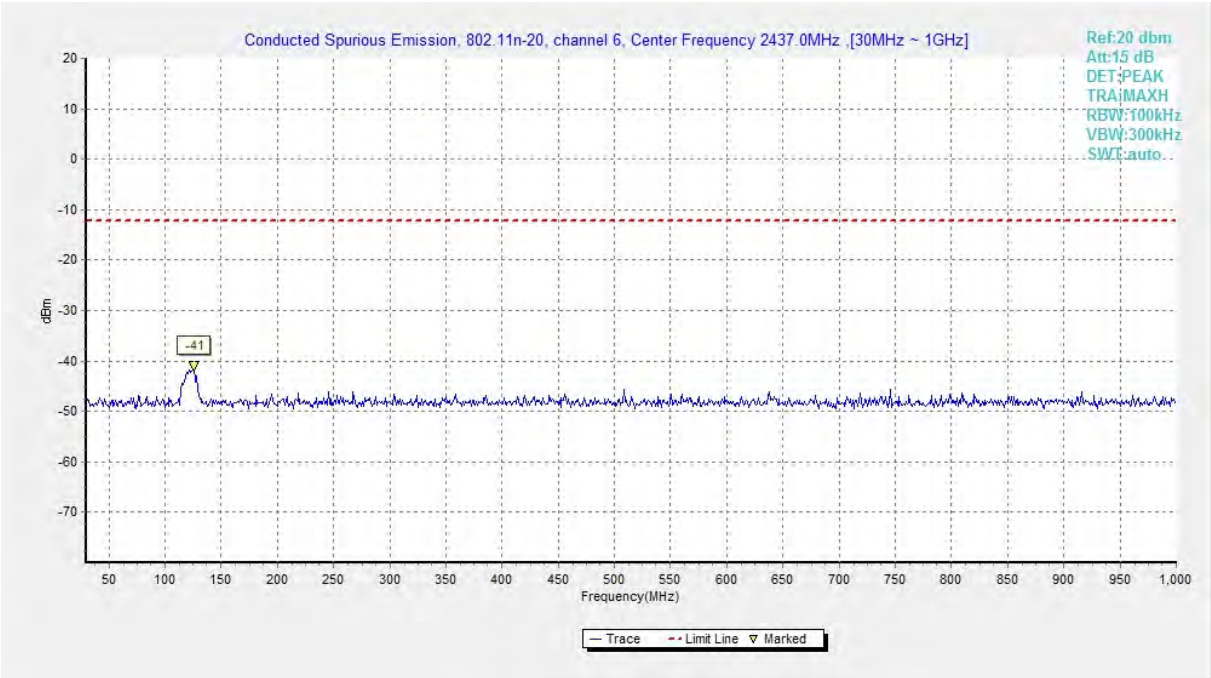

Fig.A.6.1.58 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 30 MHz-1 GHz)

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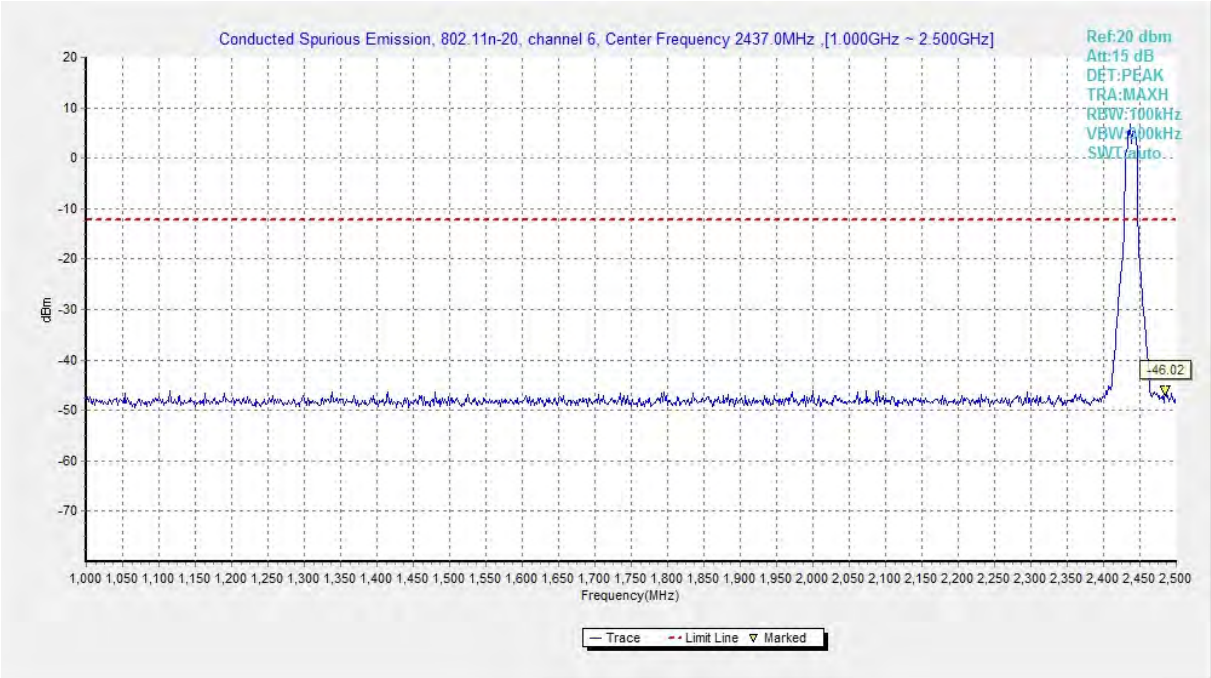

Fig.A.6.1.59 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 1 GHz-2.5 GHz)

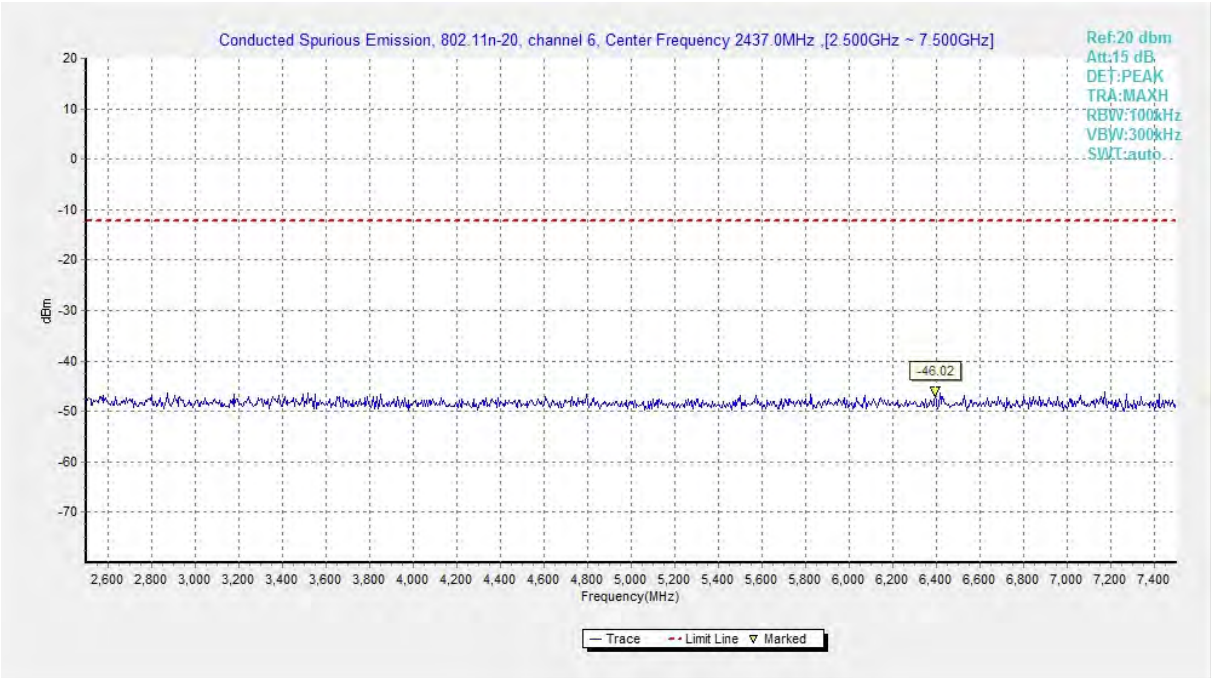

Fig.A.6.1.60 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 2.5 GHz-7.5 GHz)

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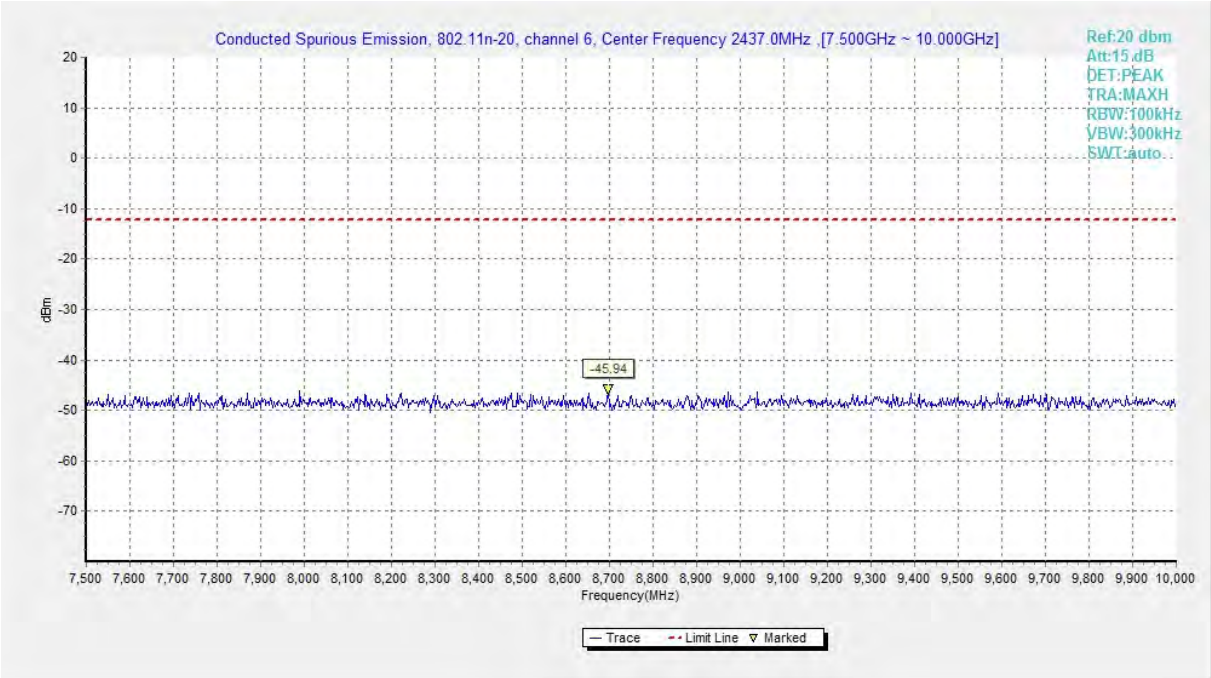

Fig.A.6.1.61 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 7.5 GHz-10 GHz)

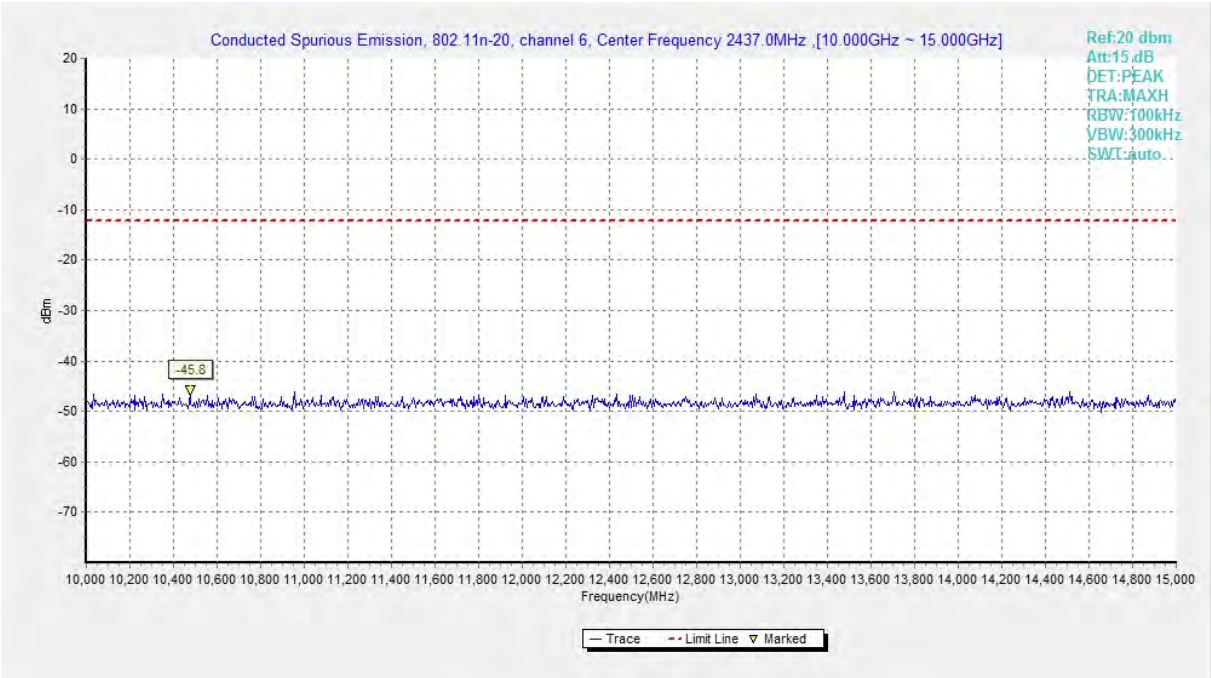

Fig.A.6.1.62 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 10 GHz-15 GHz)

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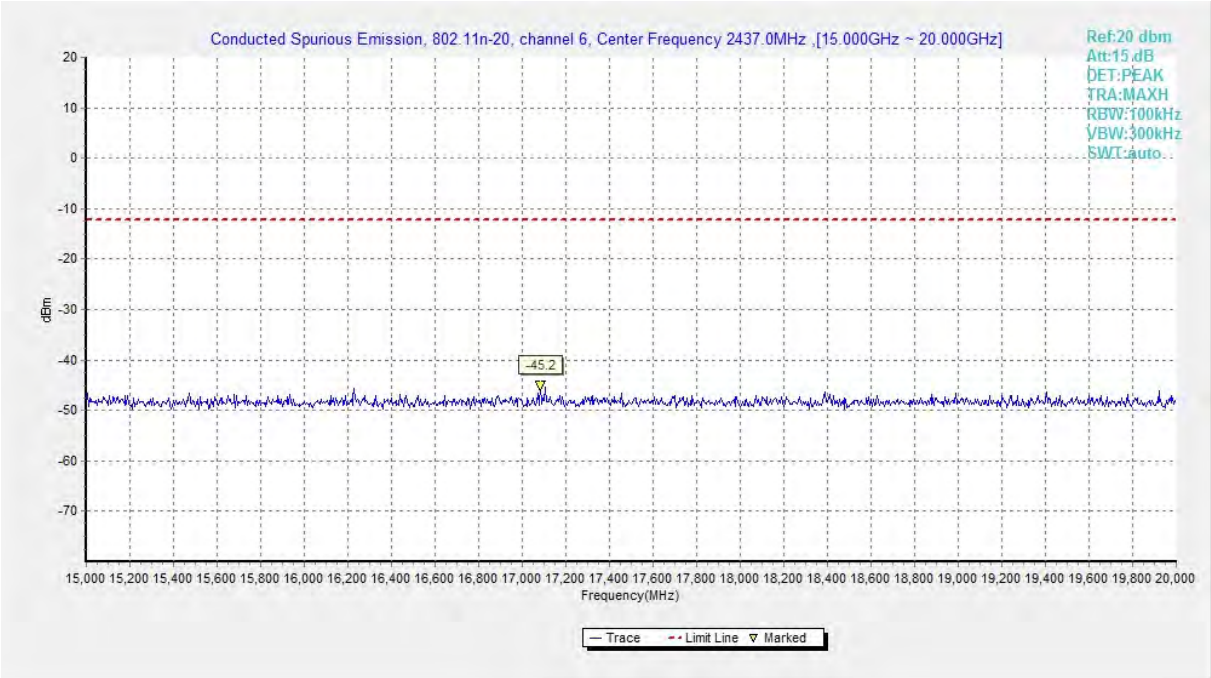

Fig.A.6.1.63 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 15 GHz-20 GHz)

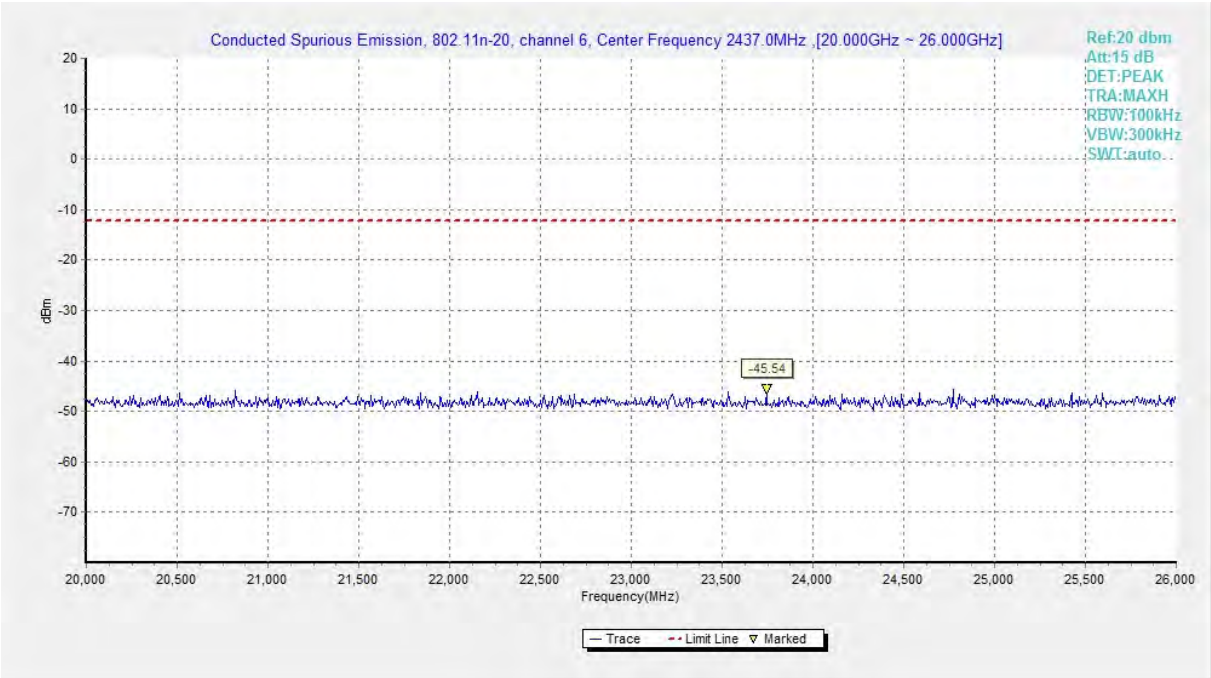

Fig.A.6.1.64 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 20 GHz-26 GHz)

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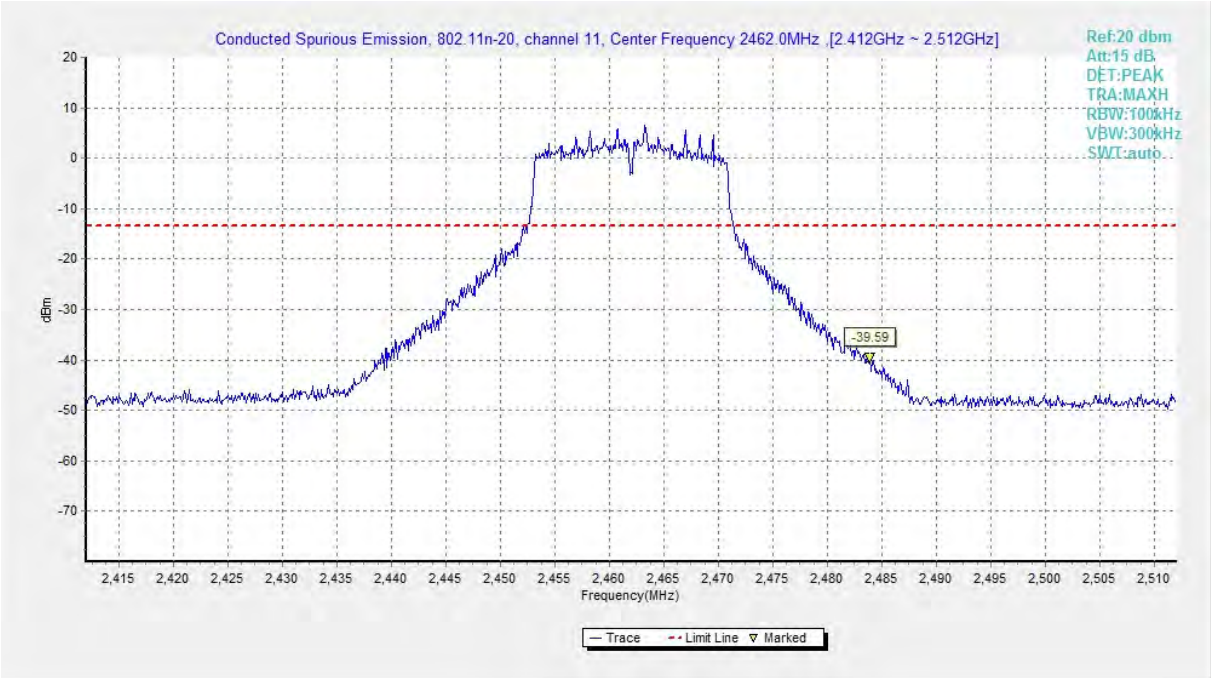

Fig.A.6.1.65 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, Center Frequency)

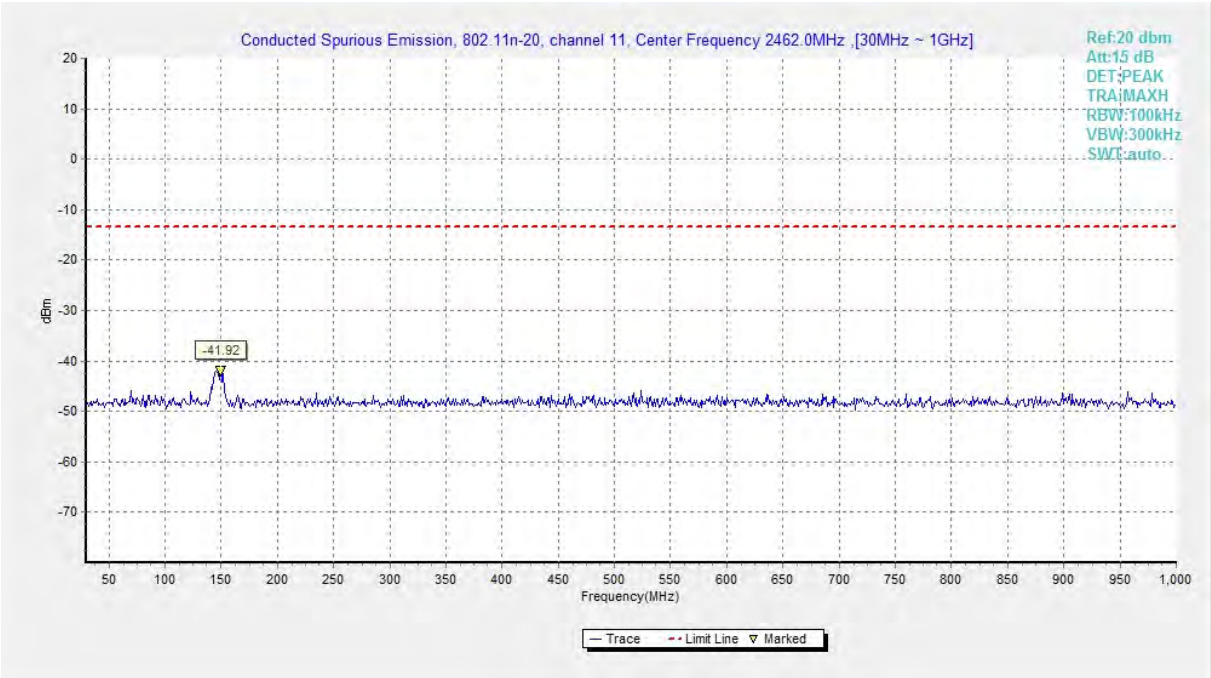

Fig.A.6.1.66 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 30 MHz-1 GHz)

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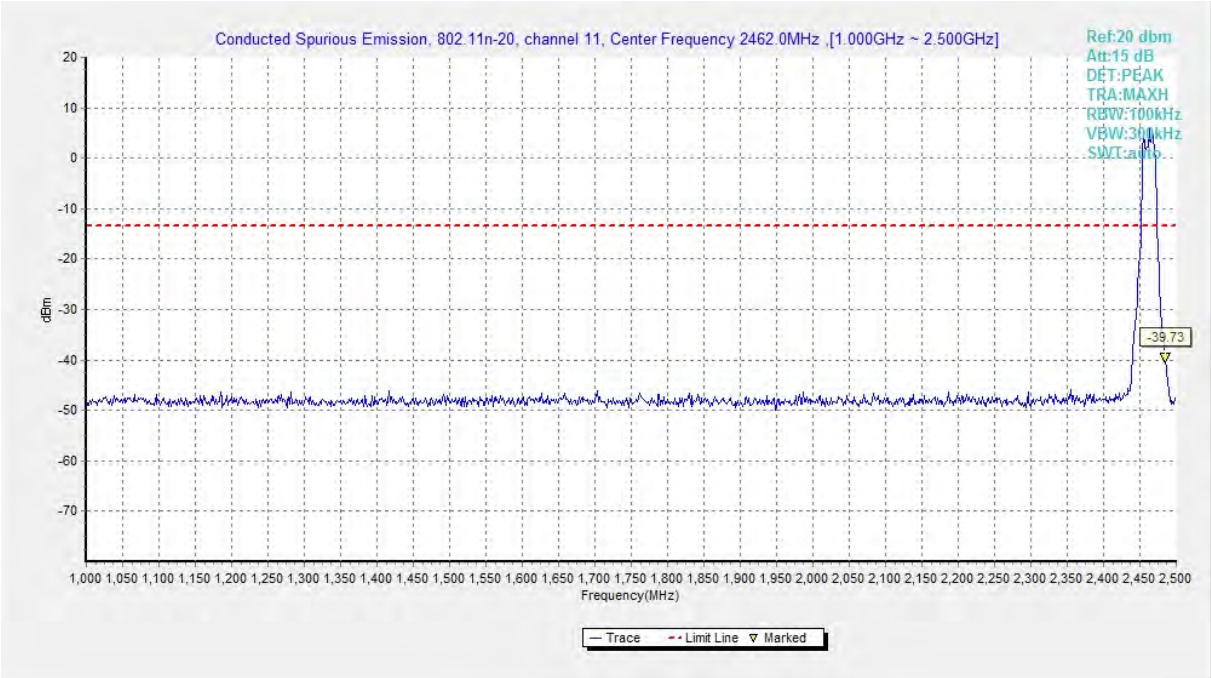

Fig.A.6.1.67 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 1 GHz-2.5 GHz)

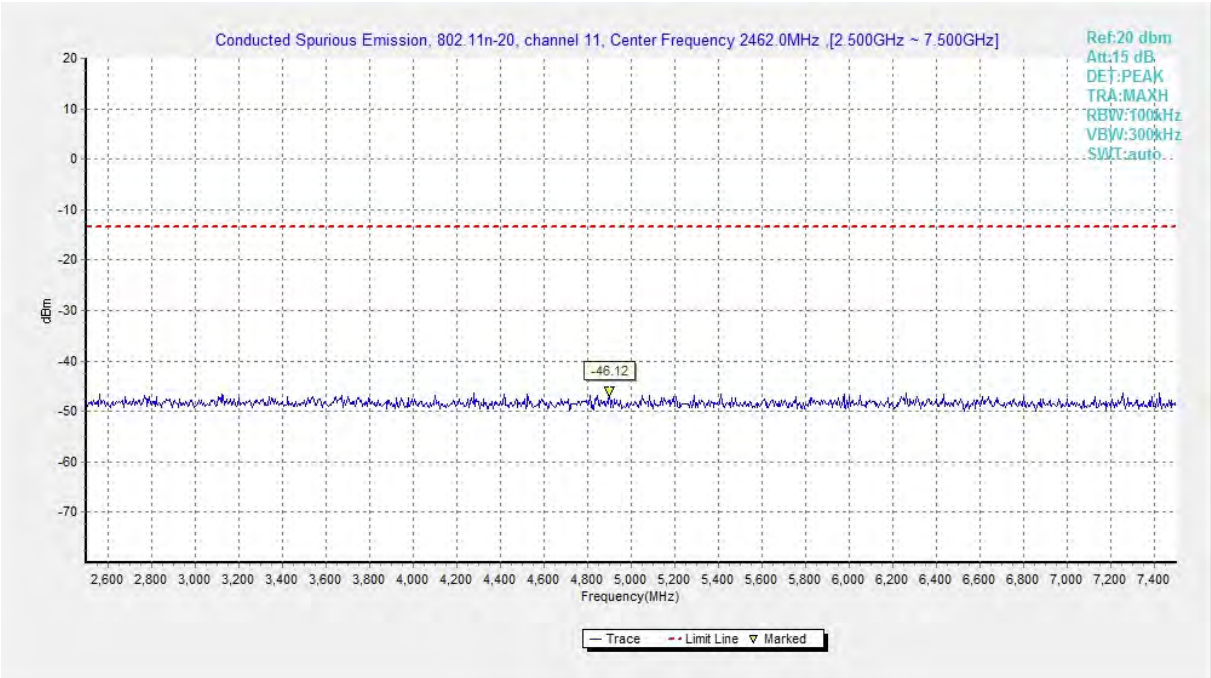

Fig.A.6.1.68 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 2.5 GHz-7.5 GHz)

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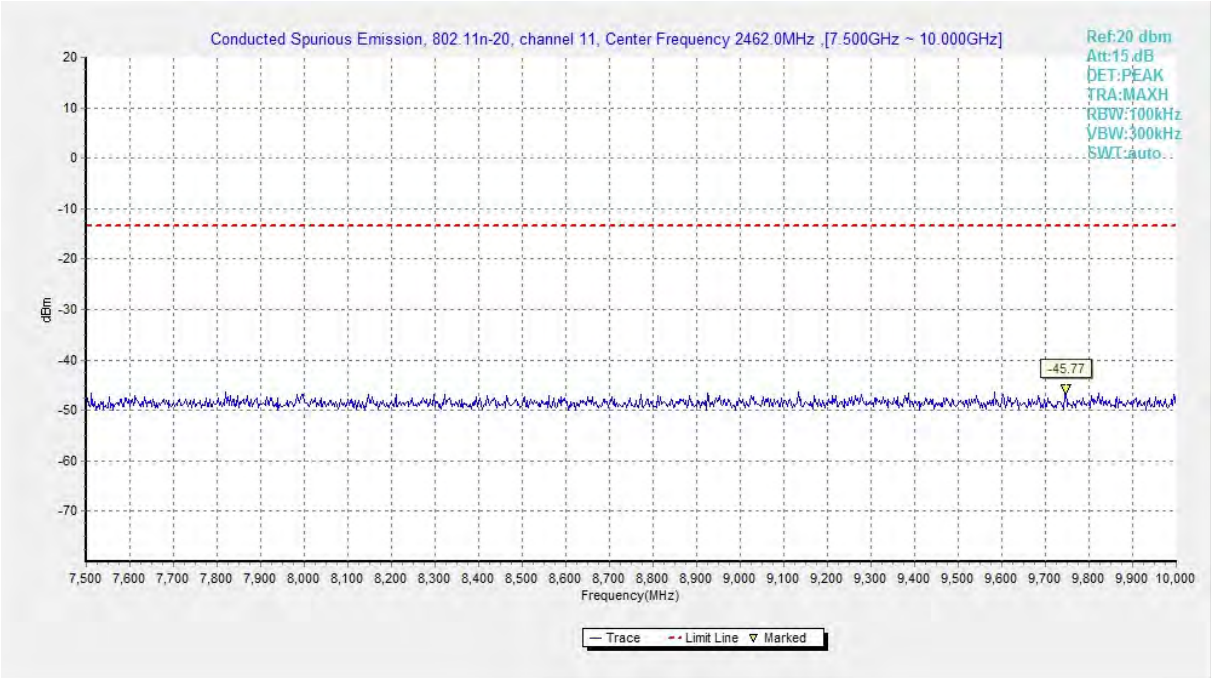

Fig.A.6.1.69 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 7.5 GHz-10 GHz)

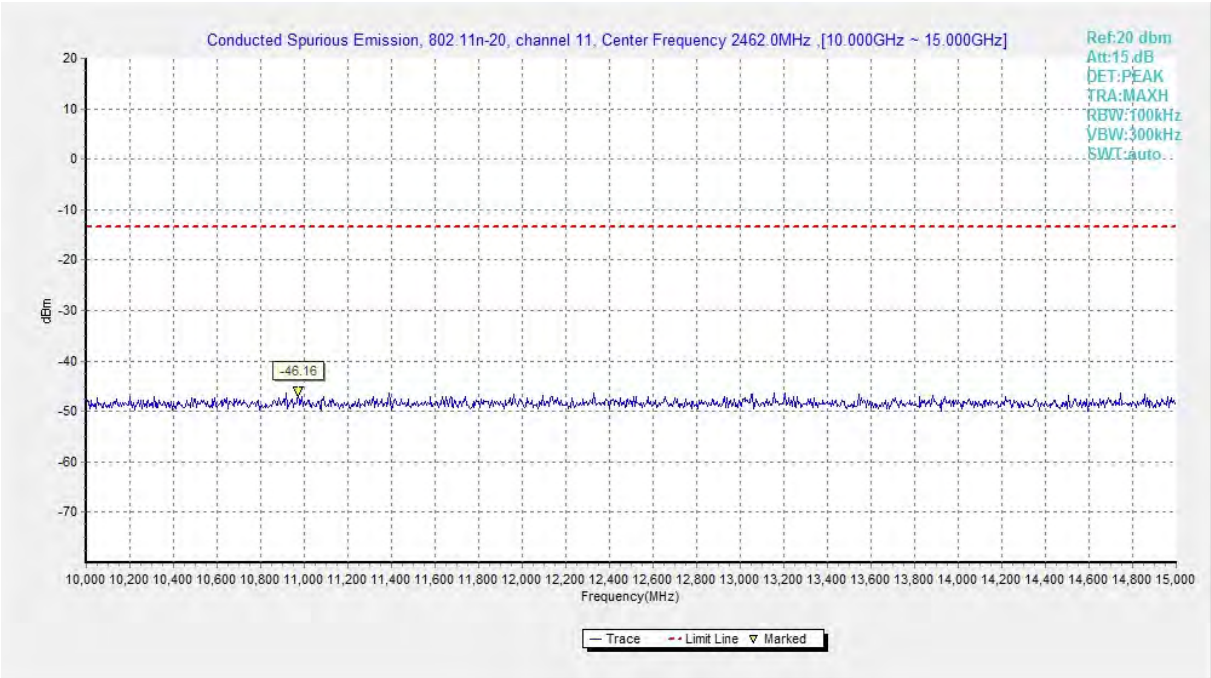

Fig.A.6.1.70 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 10 GHz-15 GHz)

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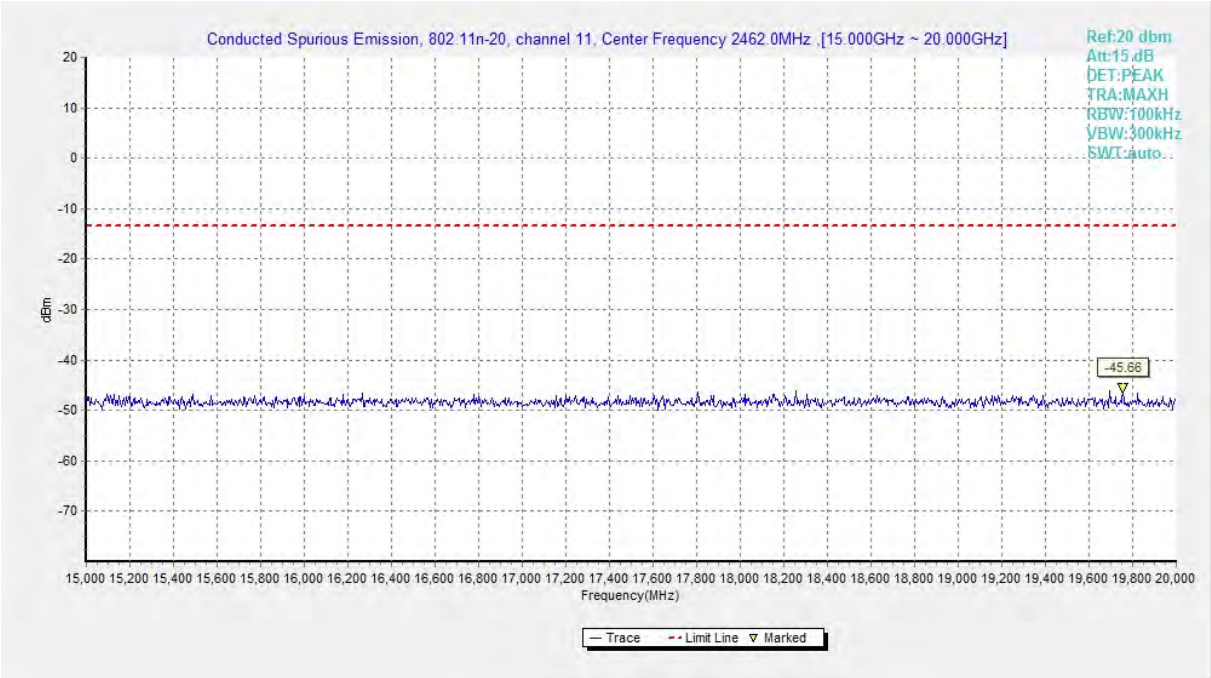

Fig.A.6.1.71 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 15 GHz-20 GHz)

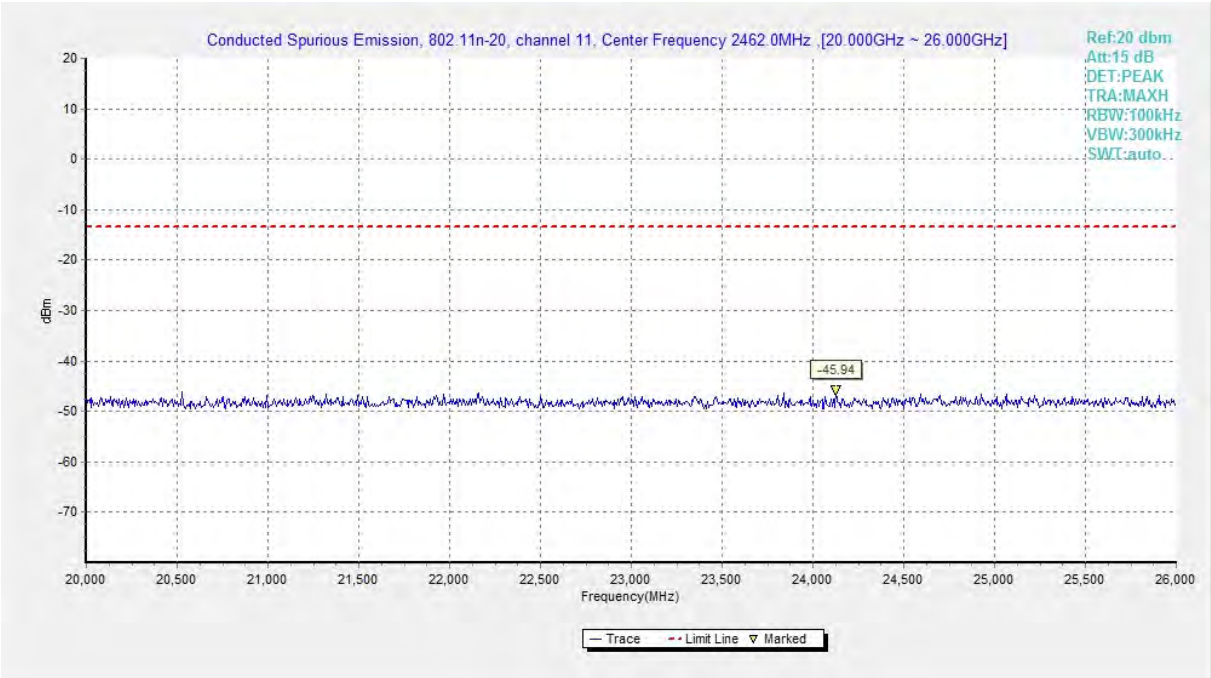

Fig.A.6.1.72 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 20 GHz-26 GHz)

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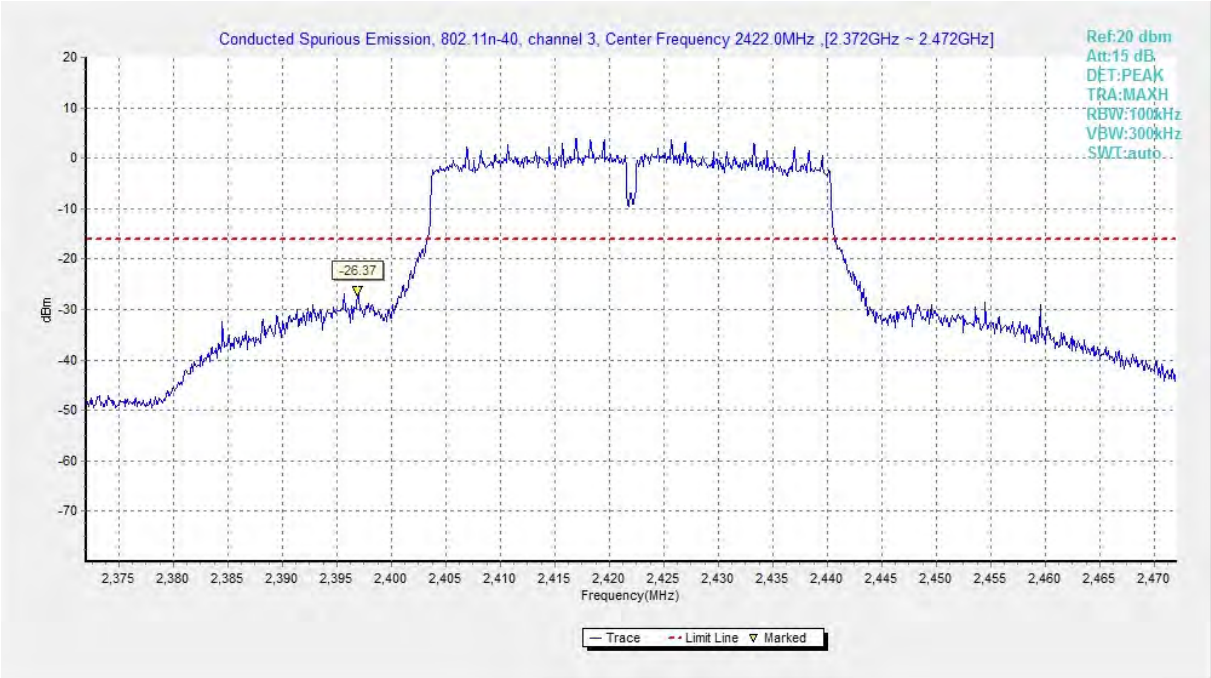

Fig.A.6.1.73 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, Center Frequency)

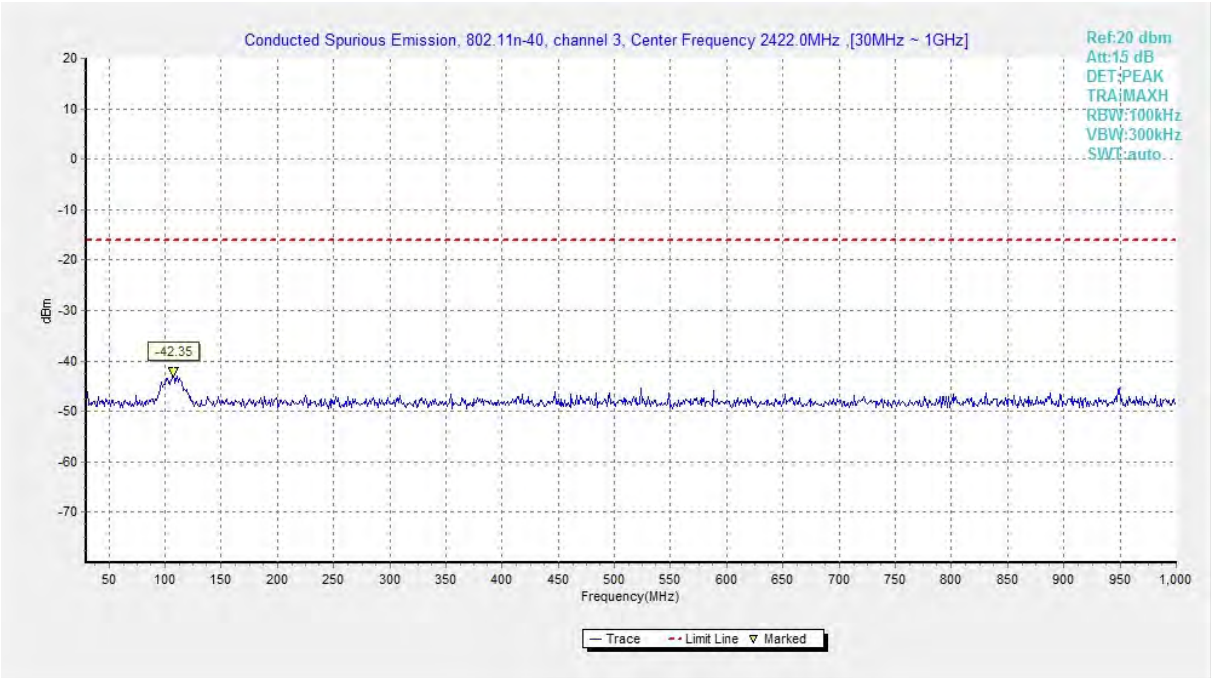

Fig.A.6.1.74 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 30 MHz-1 GHz)

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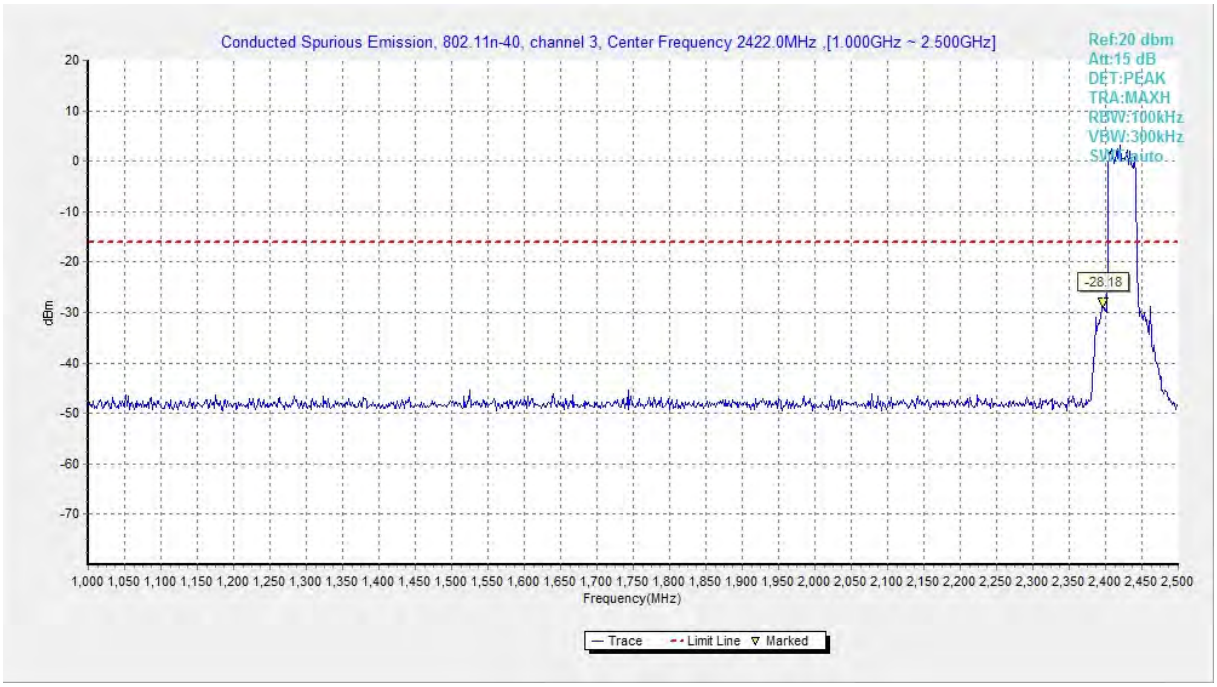

Fig.A.6.1.75 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 1 GHz-2.5 GHz)

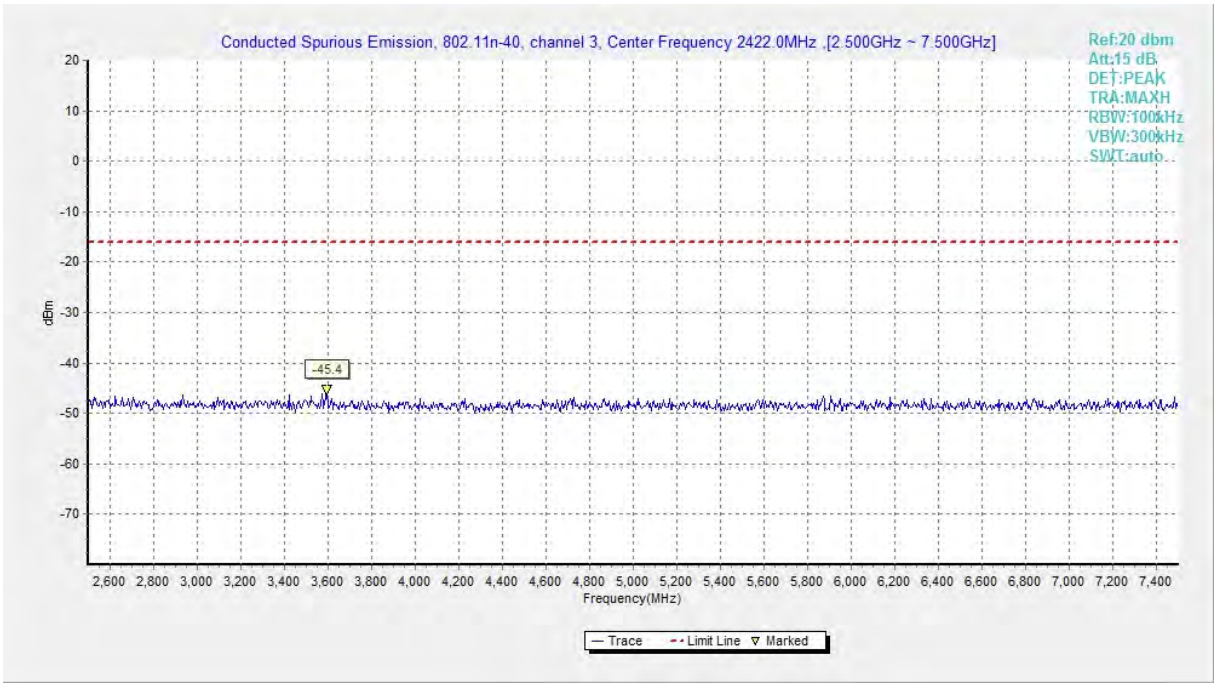

Fig.A.6.1.76 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 2.5 GHz-7.5 GHz)

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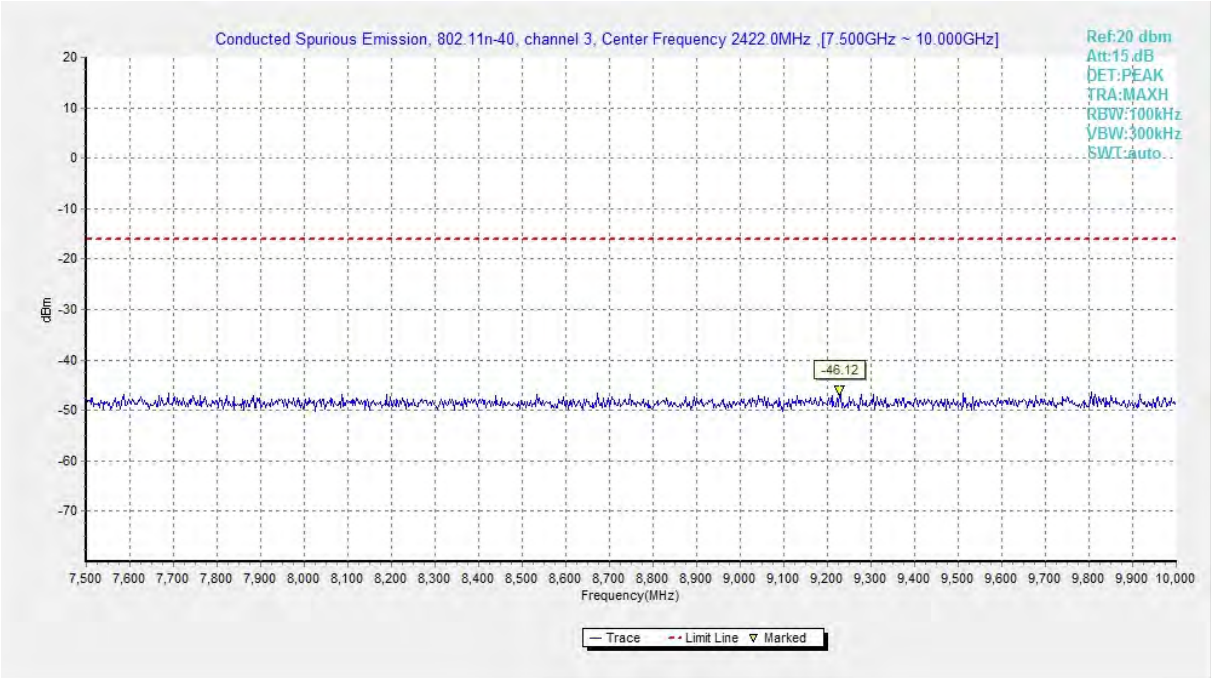

Fig.A.6.1.77 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 7.5 GHz-10 GHz)

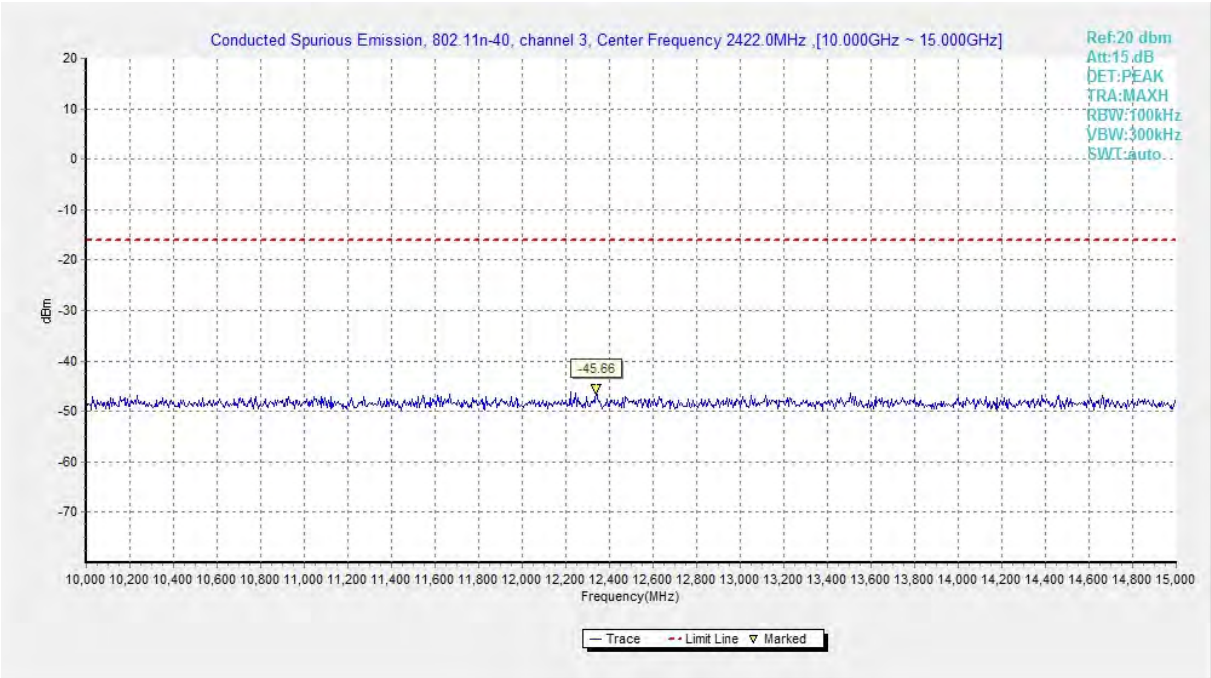

Fig.A.6.1.78 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 10 GHz-15 GHz)

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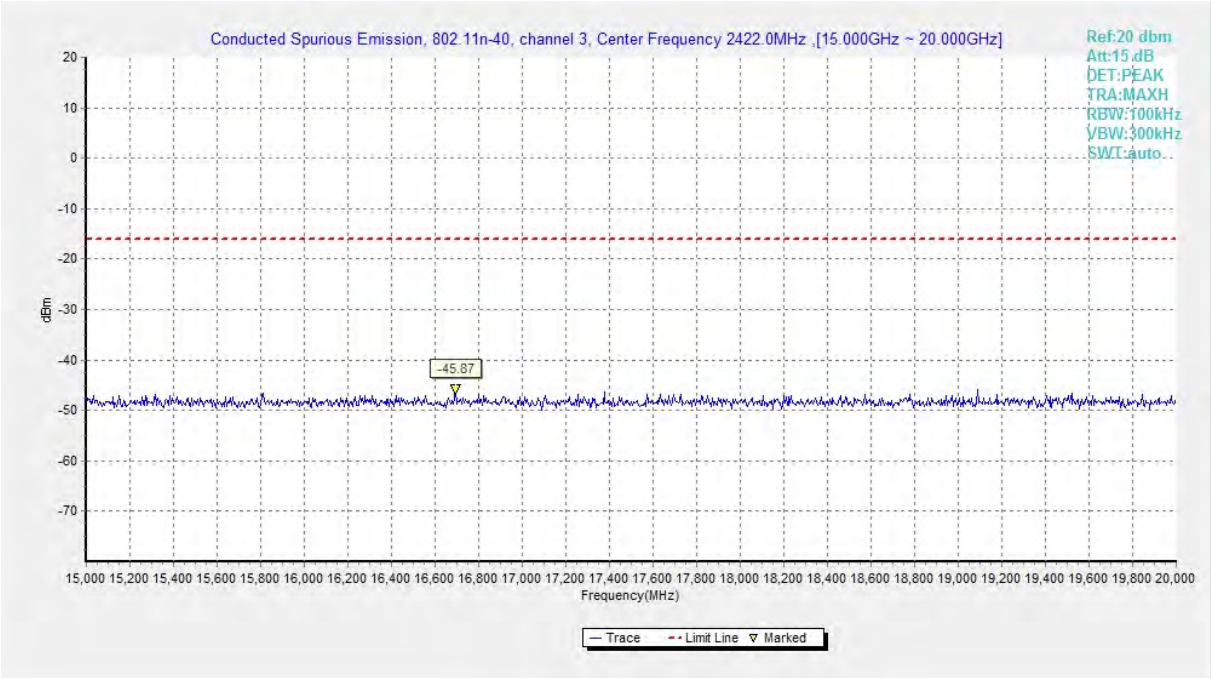

Fig.A.6.1.79 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 15 GHz-20 GHz)

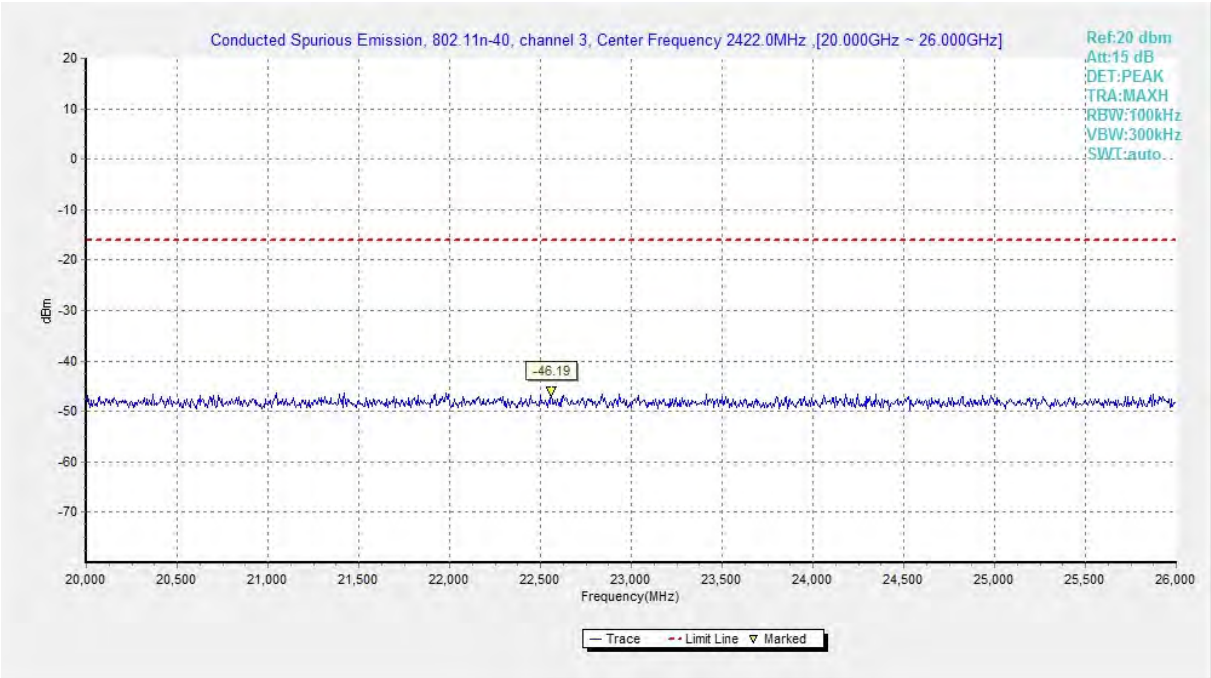

Fig.A.6.1.80 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 20 GHz-26 GHz)

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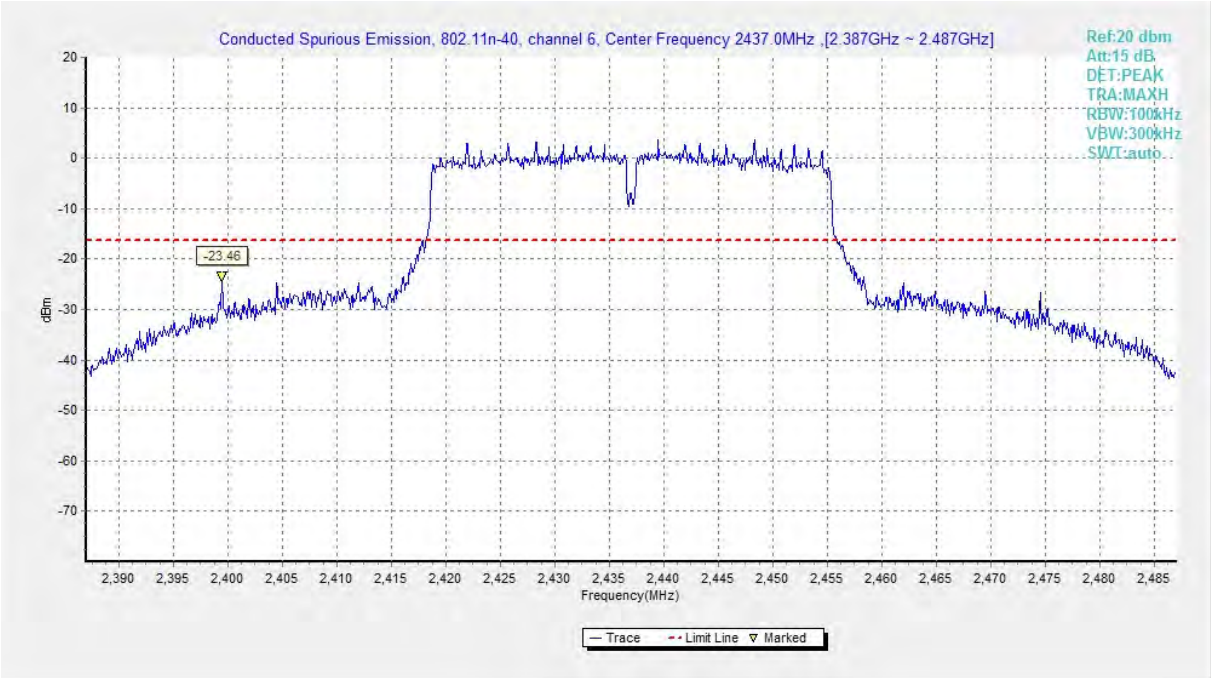

Fig.A.6.1.81 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, Center Frequency)

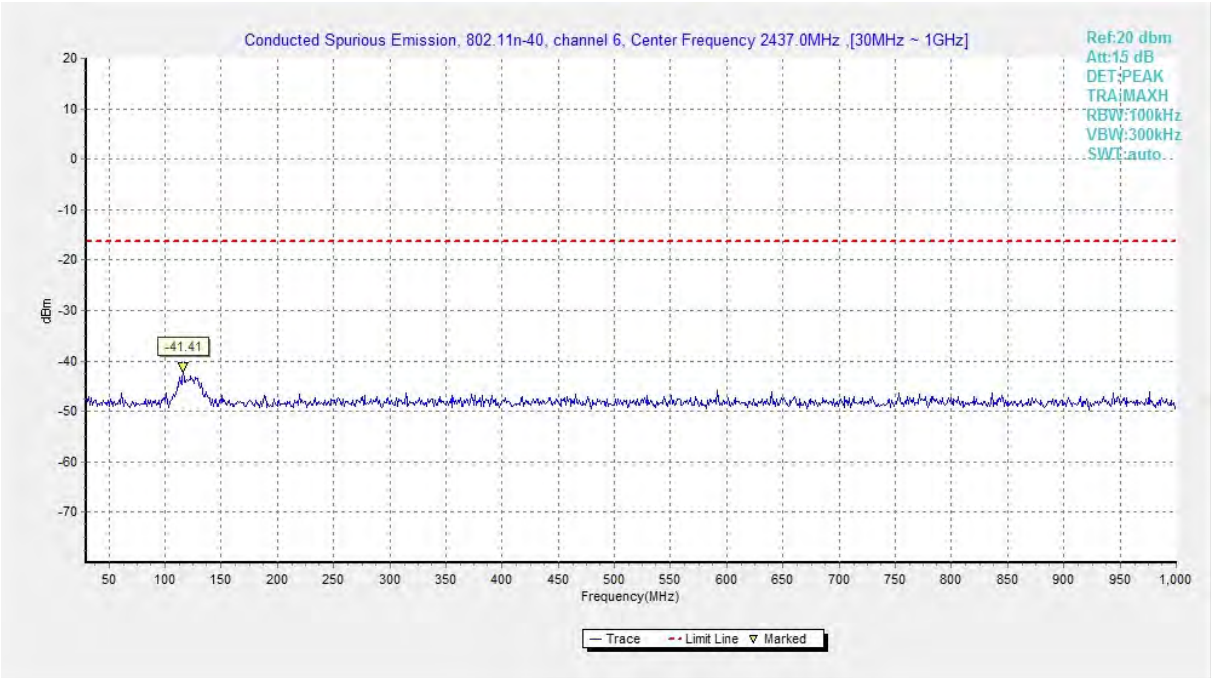

Fig.A.6.1.82 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 30 MHz-1 GHz)

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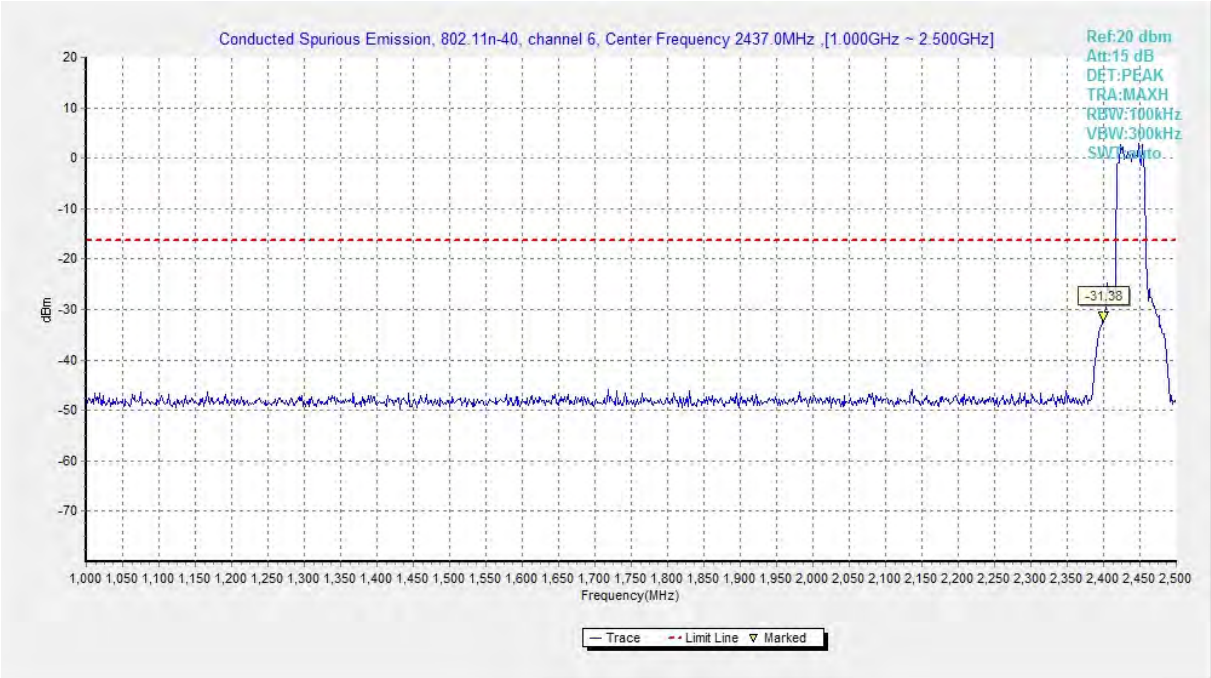

Fig.A.6.1.83 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 1 GHz-2.5 GHz)

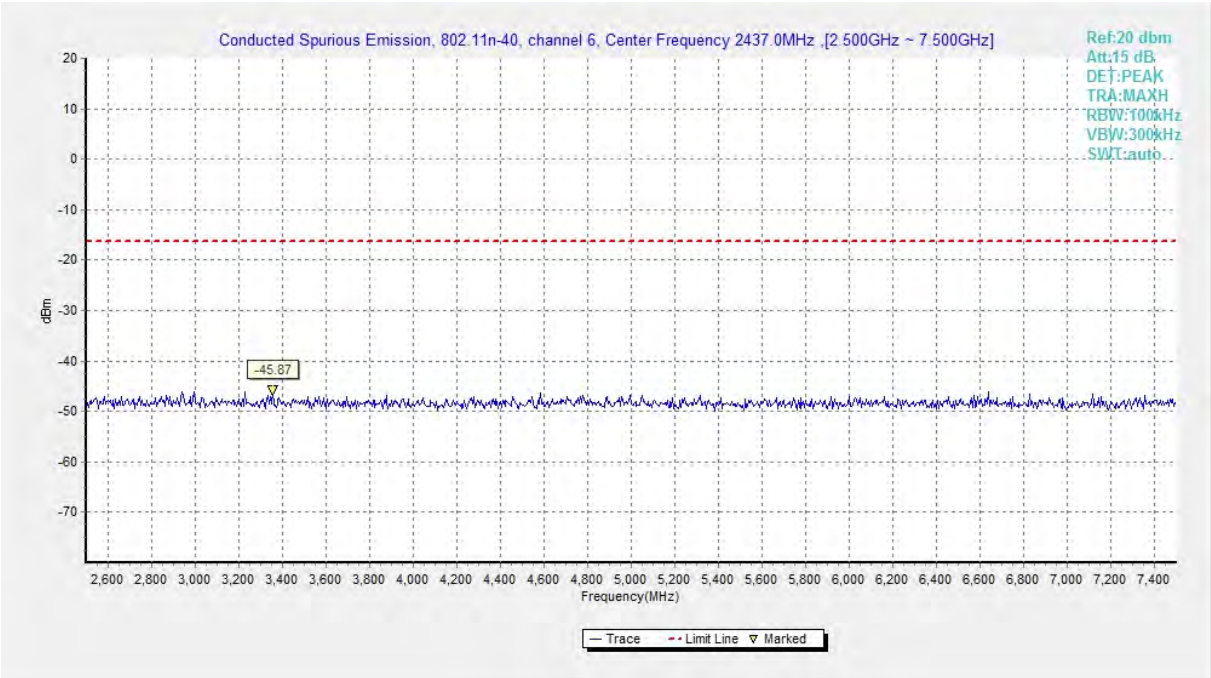

Fig.A.6.1.84 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 2.5 GHz-7.5 GHz)

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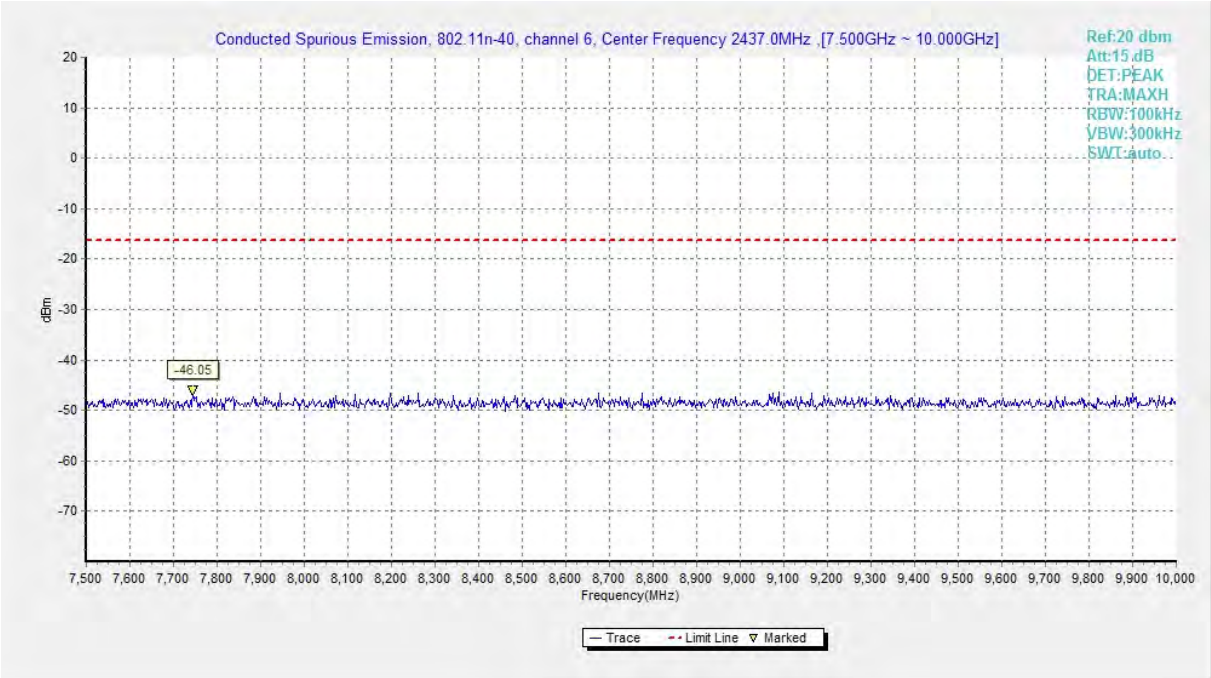

Fig.A.6.1.85 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 7.5 GHz-10 GHz)

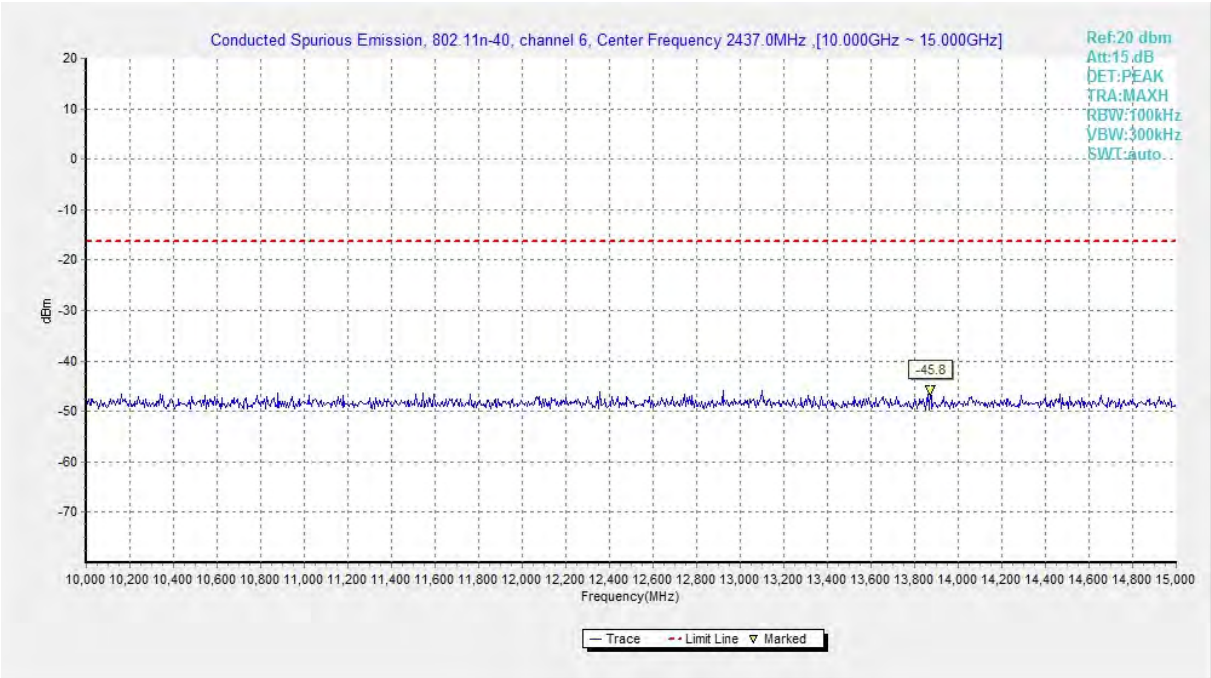

Fig.A.6.1.86 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 10 GHz-15 GHz)

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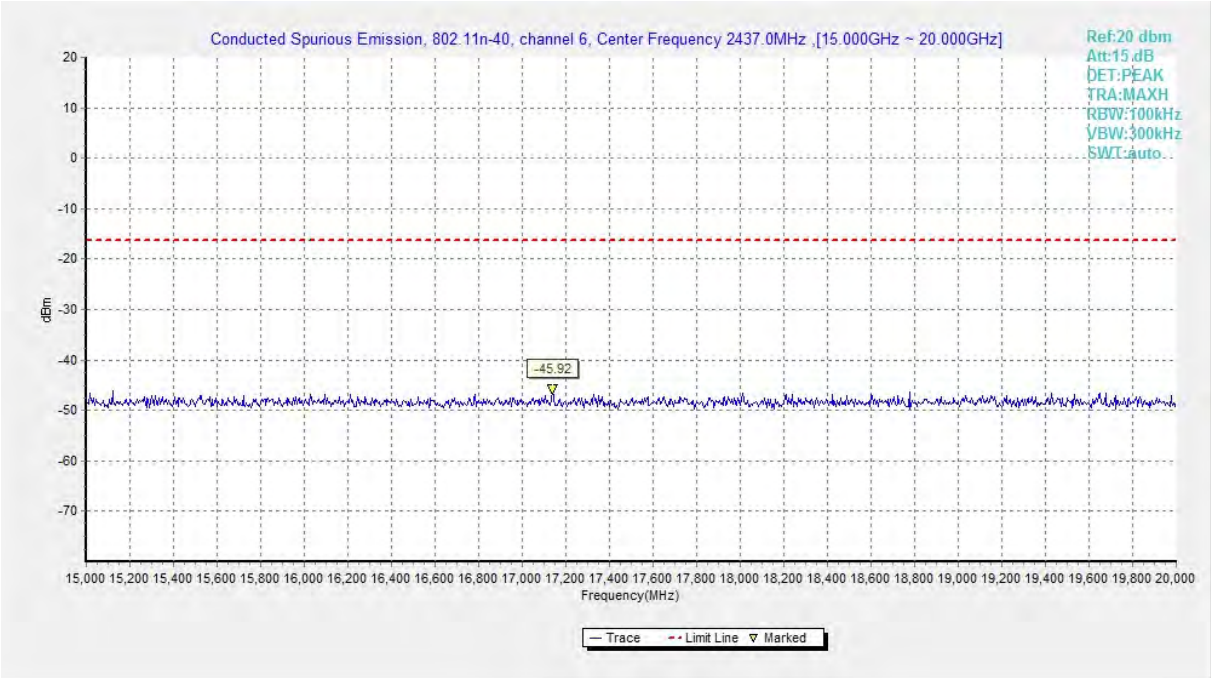

Fig.A.6.1.87 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 15 GHz-20 GHz)

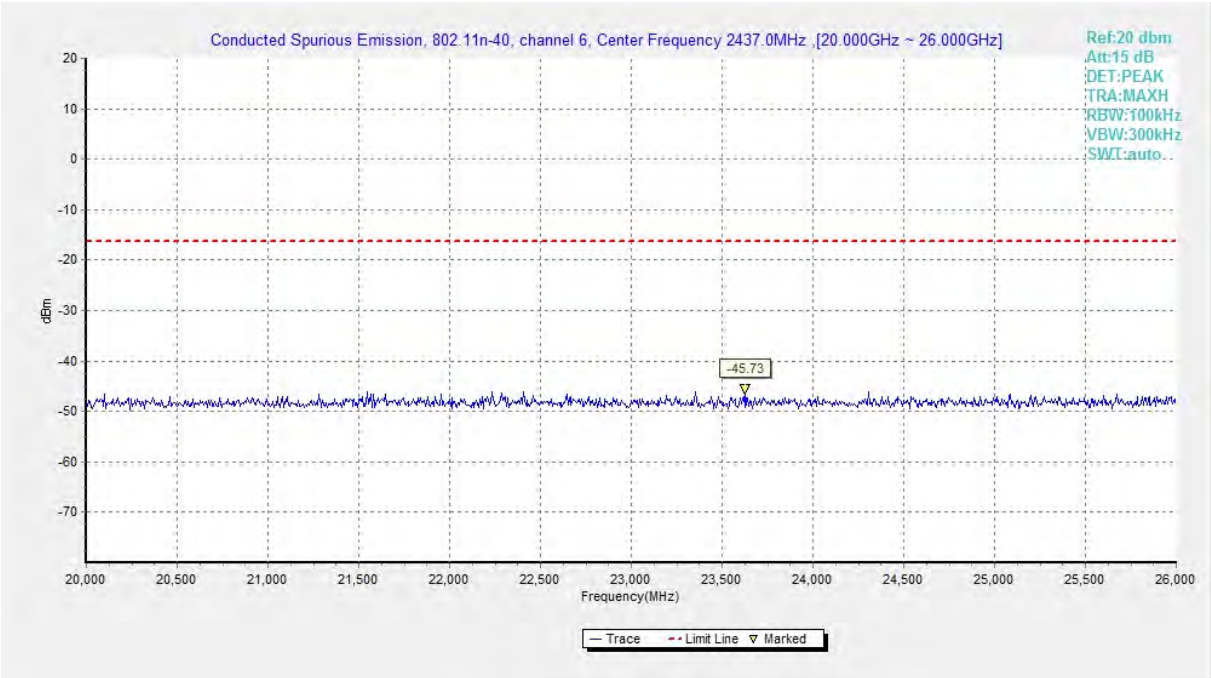

Fig.A.6.1.88 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 20 GHz-26 GHz)

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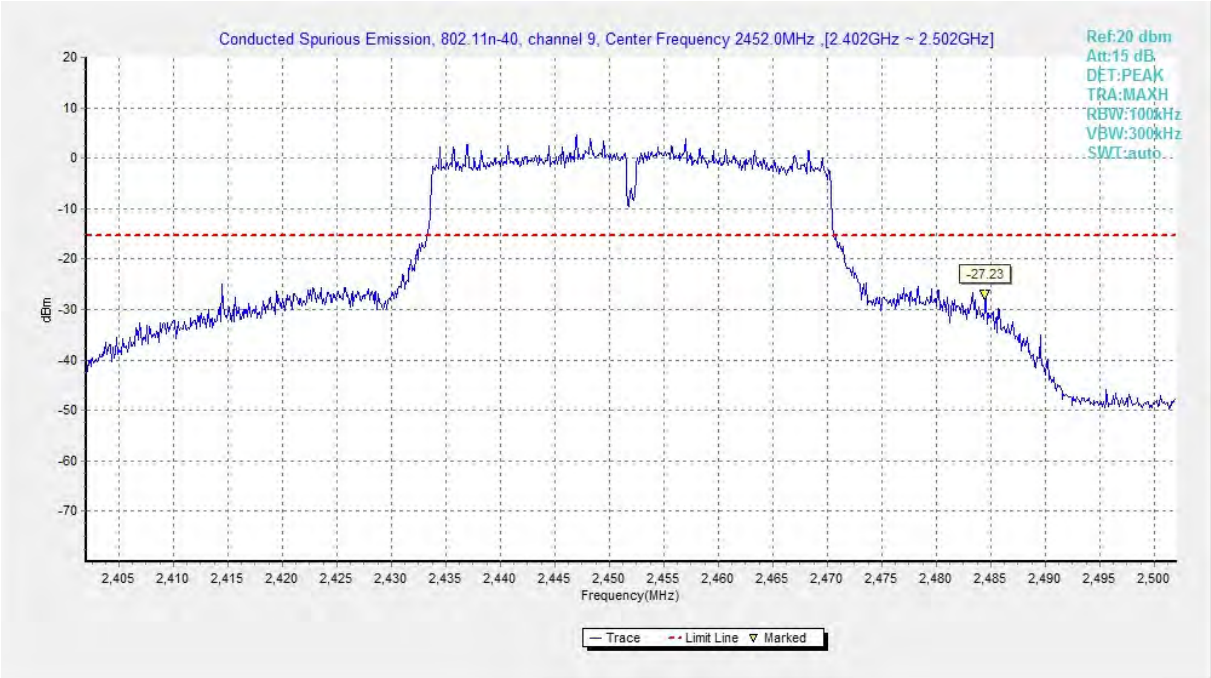

Fig.A.6.1.89 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, Center Frequency)

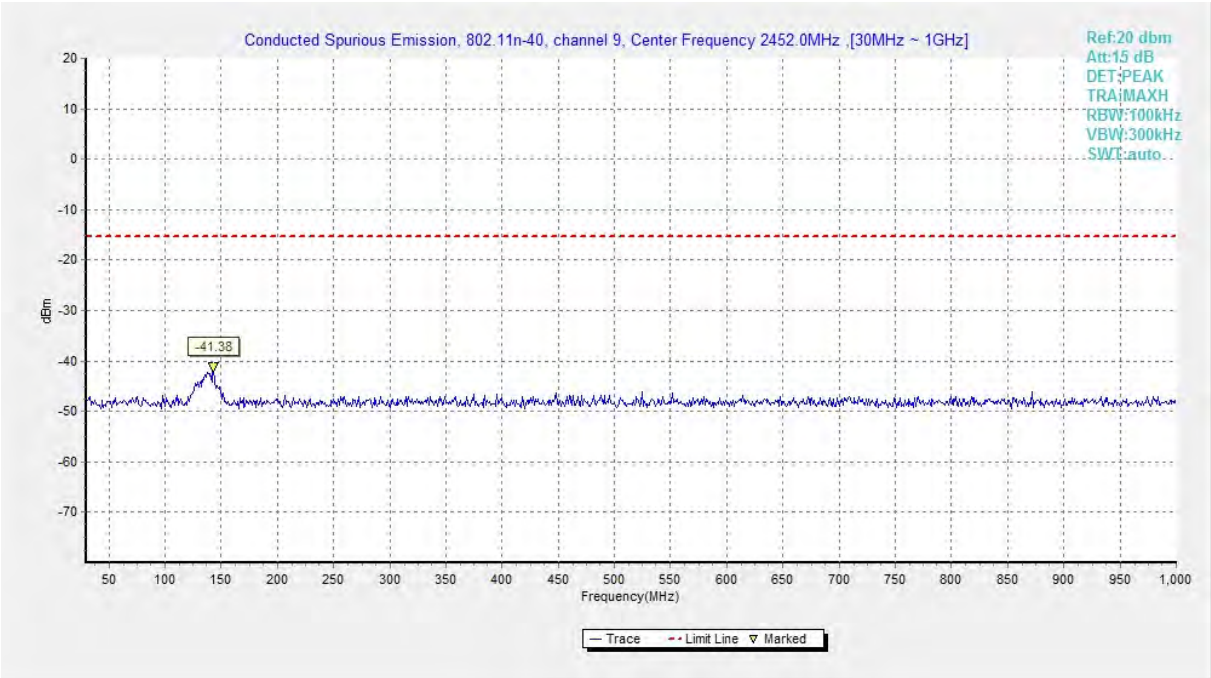

Fig.A.6.1.90 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 30 MHz-1 GHz)

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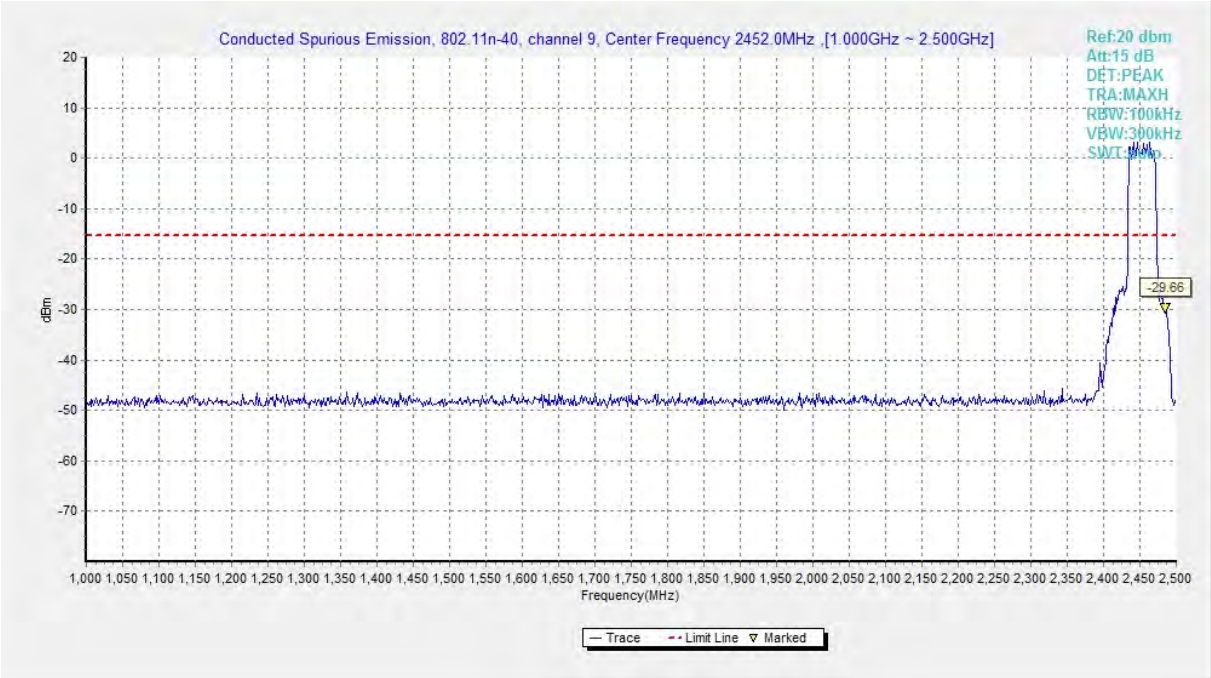

Fig.A.6.1.91 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 1 GHz-2.5 GHz)

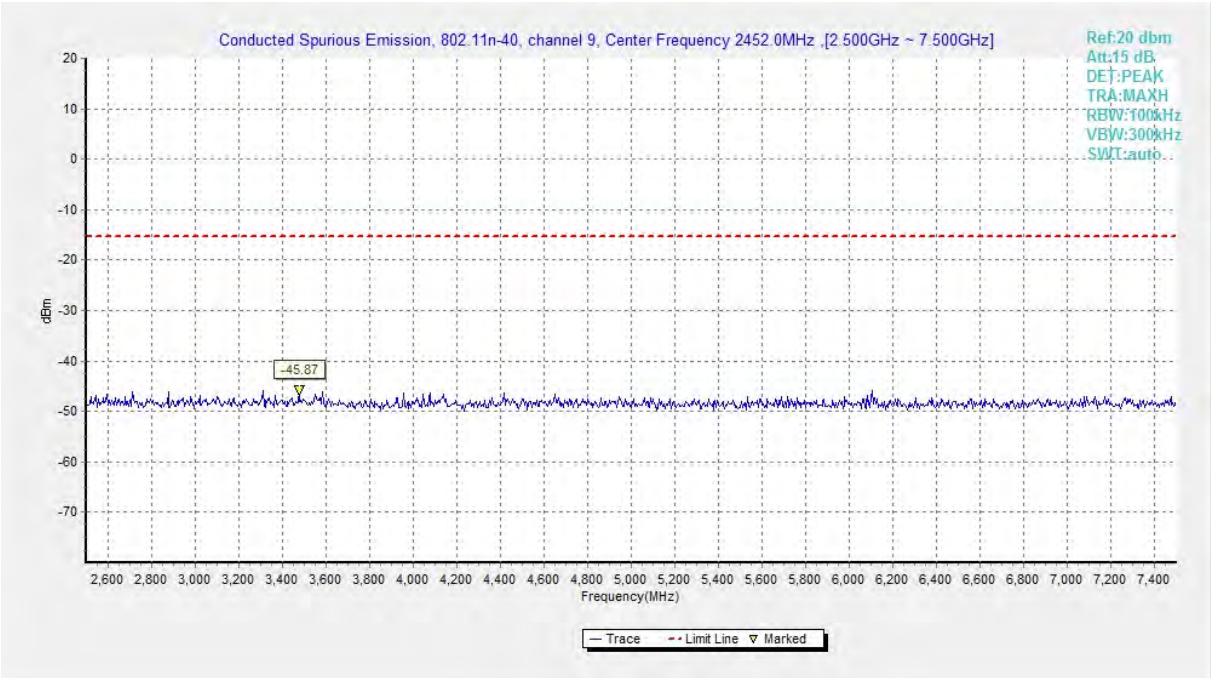

Fig.A.6.1.92 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 2.5 GHz-7.5 GHz)

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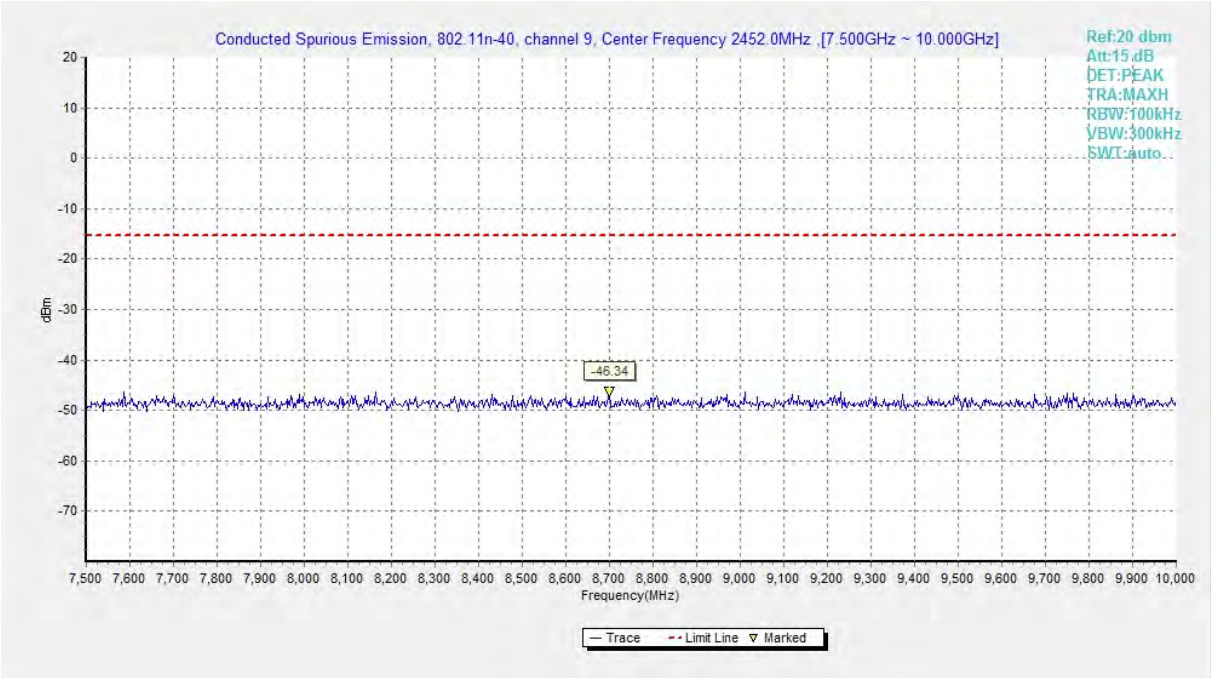

Fig.A.6.1.93 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 7.5 GHz-10 GHz)

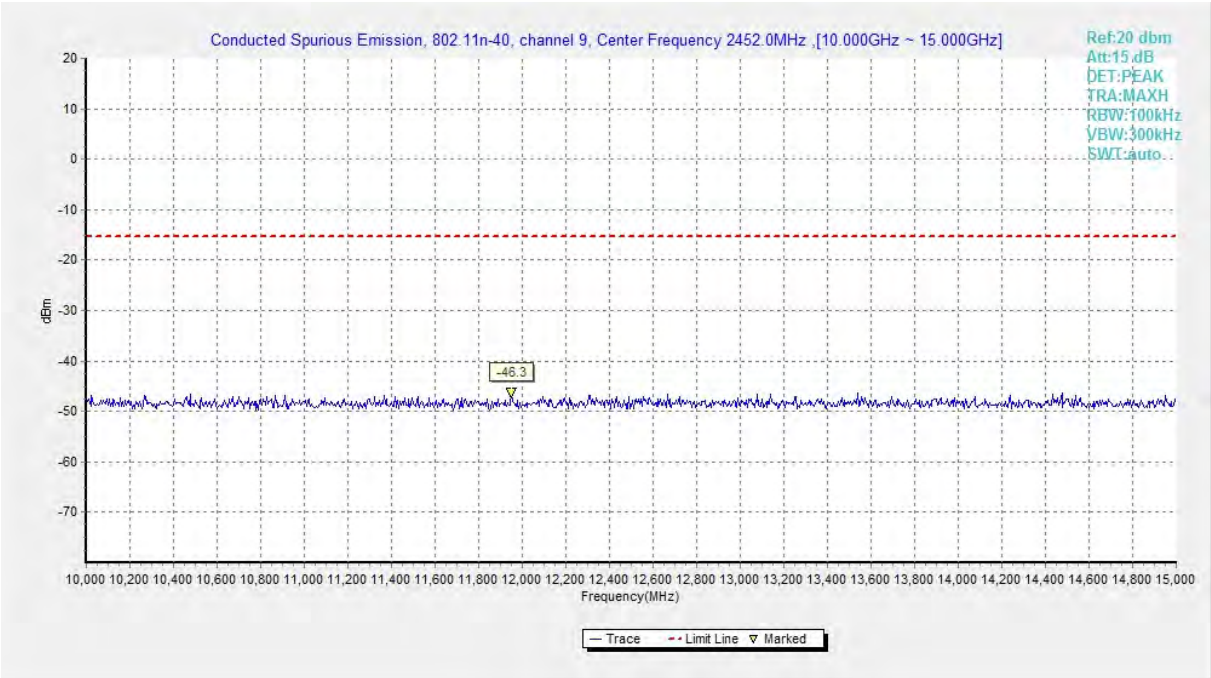

Fig.A.6.1.94 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 10 GHz-15 GHz)

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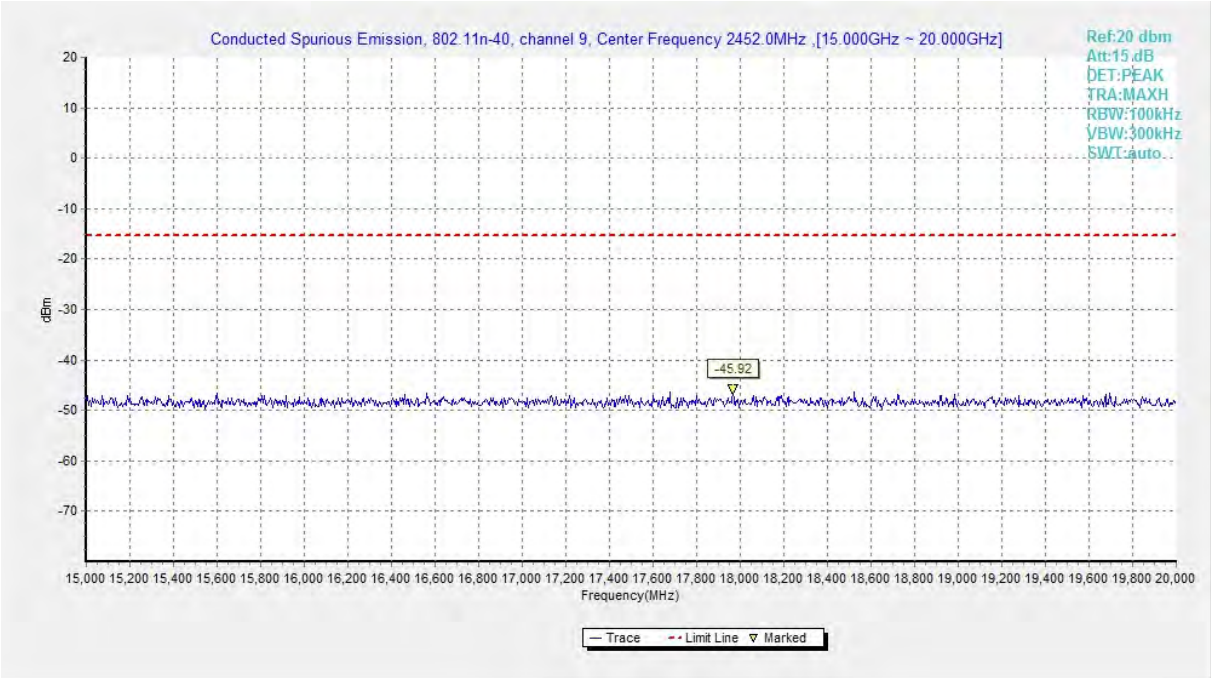

Fig.A.6.1.95 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 15 GHz-20 GHz)

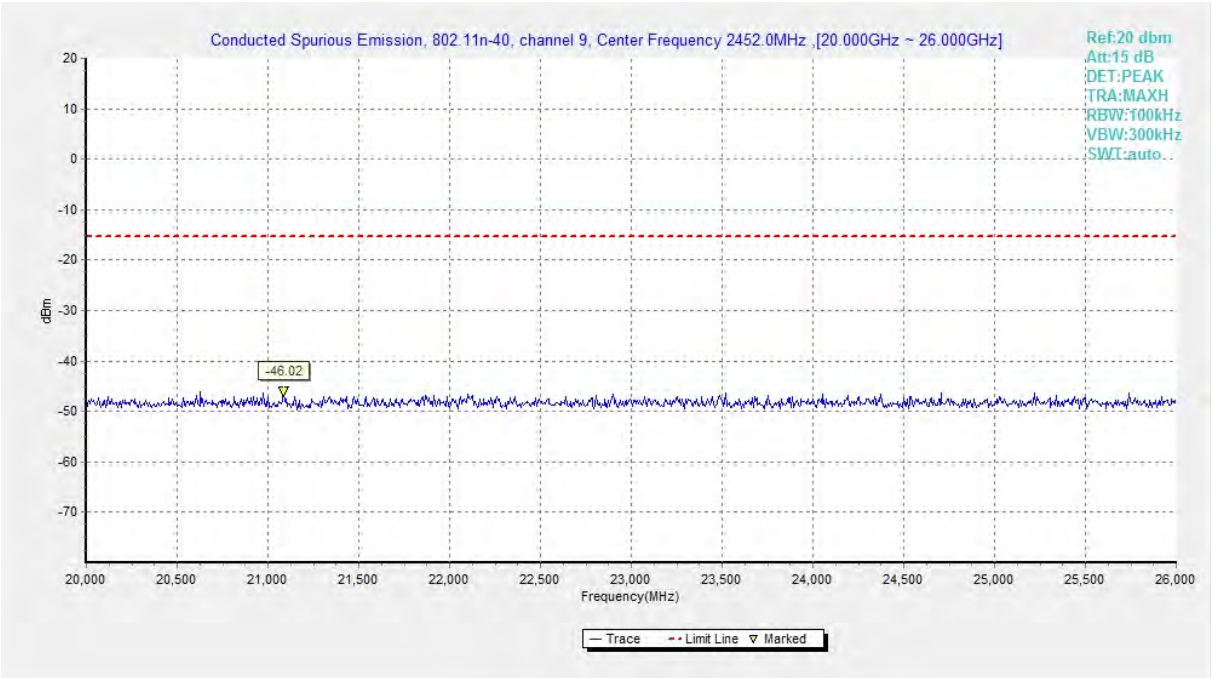

Fig.A.6.1.96 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 20 GHz-26 GHz)

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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: EUT1

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Measurement Results:

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)	3	2.31GHz~2.43GHz	Fig.A.6.2.7	**P**
	9	2.45GHz~2.50GHz	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:

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

1. The EUT is operating at its maximum duty cycle and its maximum power control level.

2. Investigation has been done on all channel, modes and modulations/data rates. Only the radiated emissions of the configurations that produced the worst case emissions are reported in this section.

3. The measurements were performed separately in Chain 1, Chain 2, and MIMO (Chain 1+2), and only the worst cases are shown in this report.

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802.11b-Average

Ch1

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17986	45.95	-25.5	46.7	24.75	V	54	8.05
4823.5	41.17	-37.5	33.1	45.47	H	54	12.83
14509	40.35	-28.6	42.5	26.45	V	54	13.65
12901.5	36.31	-30.5	39.2	27.61	V	54	17.69
7237	34.26	-35.5	36.4	33.36	V	54	19.74
2387.3	45.44	-20	28.1	37.44	H	54	8.56

Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17998.5	45.74	-25.5	46.7	24.54	V	54	8.26
4874	44.99	-37.2	33.2	48.99	H	54	9.01
14402	40.15	-28.6	42.5	26.25	V	54	13.85
12647.5	36.37	-30.5	39.1	27.77	H	54	17.63
8996	33.64	-33.3	38.2	28.74	V	54	20.36
7507	32.29	-34.5	36.8	29.99	H	54	21.71

Ch11

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17993	45.59	-25.5	46.7	24.39	V	54	8.41
4924	40.82	-37.1	33.3	44.62	H	54	13.18
14478	40.16	-28.6	42.5	26.26	V	54	13.84
7385	37.73	-35.1	36.6	36.23	H	54	16.27
12996.5	36.31	-30.5	39.2	27.61	V	54	17.69
2487.6	47.38	-20	28.3	39.08	H	54	6.62

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802.11b-Peak

Ch1

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17940.5	58.32	-25.5	46.7	37.12	V	74	15.68
14462	51.95	-28.6	42.5	38.05	V	74	22.05
12865	48.84	-30.7	39.1	40.34	H	74	25.16
4824	46.19	-37.5	33.1	50.49	H	74	27.81
9234	45.76	-33.7	38	41.46	V	74	28.24
2387.9	55.24	-20	28.1	47.24	H	74	18.76

Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17955.5	57.12	-25.5	46.7	35.92	H	74	16.88
14375.5	51.41	-28.4	42.3	37.51	V	74	22.59
4874	48.14	-37.2	33.2	52.14	H	74	25.86
12432	48.1	-31.2	38.9	40.4	H	74	25.9
9731	45.24	-33	38	40.24	V	74	28.76
7370	44.91	-35.1	36.6	43.41	H	74	29.09

Ch11

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17934.5	56.64	-25.5	46.7	35.44	H	74	17.36
14521.5	51.51	-28.6	42.5	37.61	H	74	22.49
12769.5	47.97	-30.5	39.1	39.37	V	74	26.03
7384	45.98	-35.1	36.6	44.48	H	74	28.02
9315	45.58	-33.9	38	41.48	V	74	28.42
2487.5	56.77	-20	28.3	48.47	H	74	17.23

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802.11g - Average

Ch1

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17974.5	45.71	-25.5	46.7	24.51	V	54	8.29
14379.5	40.22	-28.4	42.3	26.32	V	54	13.78
12858	36.18	-30.7	39.1	27.68	V	54	17.82
9005.5	33.6	-33.3	38.2	28.7	V	54	20.4
7914.5	32.24	-34.9	37.1	30.04	V	54	21.76
2390	53.02	-20	28.1	45.02	H	54	0.98

Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17991.5	45.9	-25.5	46.7	24.7	V	54	8.1
14387	40.13	-28.4	42.3	26.23	H	54	13.87
12987.5	36.36	-30.5	39.2	27.66	V	54	17.64
4875	34.16	-37.2	33.2	38.16	H	54	19.84
8894.5	33.91	-33.5	38.1	29.31	V	54	20.09
7982	32.41	-34.8	37.1	30.11	H	54	21.59

Ch11

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17994	45.64	-25.5	46.7	24.44	H	54	8.36
14377	40.23	-28.4	42.3	26.33	H	54	13.77
12637.5	36.64	-31	39	28.74	H	54	17.36
8997	33.8	-33.3	38.2	28.9	V	54	20.2
7383.5	33.71	-35.1	36.6	32.21	H	54	20.29
2485	48.78	-20	28.3	40.48	H	54	5.22

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802.11g - Peak

Ch1

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17950.5	57.29	-25.5	46.7	36.09	V	74	16.71
14417	52.08	-28.6	42.5	38.18	V	74	21.92
12932.5	47.89	-30.5	39.2	39.19	V	74	26.11
9864	45.71	-33.5	38.1	41.11	H	74	28.29
7983	43.99	-34.8	37.1	41.69	V	74	30.01
2390	65.49	-20	28.1	57.49	H	74	8.51

Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17982	57.71	-25.5	46.7	36.51	H	74	16.29
14573.5	51.58	-27.3	41.9	36.98	V	74	22.42
12882	48.51	-30.7	39.1	40.01	H	74	25.49
4874.5	46.56	-37.2	33.2	50.56	H	74	27.44
9654.5	45.73	-33.1	38	40.83	H	74	28.27
7813.5	44.99	-35.1	37	43.09	V	74	29.01

Ch11

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17989.5	57.19	-25.5	46.7	35.99	H	74	16.81
14417	52.41	-28.6	42.5	38.51	H	74	21.59
11867	48	-31.8	39	40.8	H	74	26
8901	45.4	-33.5	38.1	40.8	H	74	28.6
7369.5	44.7	-35.1	36.6	43.2	V	74	29.3
2485	62.83	-20	28.3	54.53	H	74	11.17

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802.11n-HT20-Average

Ch1

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17999	45.99	-25.5	46.7	24.79	V	54	8.01
14504	40.18	-28.6	42.5	26.28	H	54	13.82
12661.5	36.21	-30.5	39.1	27.61	V	54	17.79
9523	33.65	-33.2	37.9	28.95	V	54	20.35
7923.5	32.36	-34.8	37.1	30.06	H	54	21.64
2389.9	43.84	-20	28.1	35.84	H	54	10.16

Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17985	45.8	-25.5	46.7	24.6	V	54	8.2
14362.5	40.15	-28.4	42.3	26.25	V	54	13.85
12952.5	36.19	-30.5	39.2	27.49	H	54	17.81
4876	34.44	-37.2	33.2	38.44	H	54	19.56
9538	33.86	-33.2	37.9	29.16	V	54	20.14
7995	32.46	-34.8	37.1	30.16	H	54	21.54

Ch11

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17993.5	45.75	-25.5	46.7	24.55	V	54	8.25
14509	40.22	-28.6	42.5	26.32	V	54	13.78
12937	36.6	-30.5	39.2	27.9	H	54	17.4
9124.5	33.88	-33.8	38.1	29.68	V	54	20.12
4921.5	33.61	-37.1	33.3	37.41	H	54	20.39
2485.1	47.77	-20	28.3	39.47	H	54	6.23

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802.11n-HT20-Peak

Ch1

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17992.5	57.75	-25.5	46.7	36.55	V	74	16.25
14483.5	51.58	-28.6	42.5	37.68	H	74	22.42
11985.5	47.67	-31.5	39.1	40.07	H	74	26.33
9754.5	45.28	-33	38	40.28	H	74	28.72
7386	43.96	-35.1	36.6	42.46	H	74	30.04
2388.6	55.34	-20	28.1	47.34	H	74	18.66

Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17990	57.87	-25.5	46.7	36.67	H	74	16.13
14355.5	51.9	-28.4	42.3	38	V	74	22.1
12654.5	47.74	-30.5	39.1	39.14	V	74	26.26
9118	45.13	-33.8	38.1	40.93	V	74	28.87
4868.5	44.69	-37.2	33.2	48.69	H	74	29.31
7409.5	43.58	-35.2	36.7	41.98	V	74	30.42

Ch 11

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17982	56.63	-25.5	46.7	35.43	V	74	17.37
14377.5	51.89	-28.4	42.3	37.99	H	74	22.11
12642	47.97	-31	39	40.07	V	74	26.03
9446.5	45.26	-32.9	37.9	40.26	V	74	28.74
7380.5	44.42	-35.1	36.6	42.92	H	74	29.58
2485.3	61.88	-20	28.3	53.58	H	74	12.12

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802.11n-HT40-Average

Ch3

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17998.5	45.24	-25.5	46.7	24.04	H	54	8.76
14401	39.97	-28.6	42.5	26.07	V	54	14.03
12662.5	35.55	-30.5	39.1	26.95	V	54	18.45
9533.5	33	-33.2	37.9	28.3	H	54	21
7680	32.72	-34.7	36.9	30.42	V	54	21.28
2390	53.98	-20	28.1	45.98	H	54	0.02

Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17988	45.24	-25.5	46.7	24.04	H	54	8.76
14505	39.78	-28.6	42.5	25.88	H	54	14.22
12952.5	35.45	-30.5	39.2	26.75	V	54	18.55
8994.5	32.68	-33.3	38.2	27.78	H	54	21.32
7981.5	31.57	-34.8	37.1	29.27	H	54	22.43
4874	29.92	-37.2	33.2	33.92	H	54	24.08

Ch9

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17997	45.31	-25.5	46.7	24.11	H	54	8.69
14362	39.54	-28.4	42.3	25.64	V	54	14.46
12988	35.36	-30.5	39.2	26.66	V	54	18.64
9080	32.81	-33.8	38.1	28.41	H	54	21.19
7680	32.17	-34.7	36.9	29.87	V	54	21.83
2485.1	51.15	-20	28.3	42.85	H	54	2.85

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802.11n-HT40-Peak

Ch3

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17998	57.08	-25.5	46.7	35.88	V	74	16.92
14330	51.66	-28.4	42.3	37.76	H	74	22.34
12645.5	47.07	-31	39	39.17	V	74	26.93
9039	44.41	-33.8	38.1	40.01	H	74	29.59
7799.5	43.88	-35.1	37	41.98	V	74	30.12
2388.4	64.72	-20	28.1	56.72	H	74	9.28

Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17971.5	56.36	-25.5	46.7	35.16	V	74	17.64
14557	51.15	-27.3	41.9	36.55	H	74	22.85
12275.5	46.92	-31.1	38.9	39.12	H	74	27.08
9739.5	45.43	-33	38	40.43	H	74	28.57
7998	43.71	-34.8	37.1	41.41	V	74	30.29
4874	40.21	-37.2	33.2	44.21	H	74	33.79

Ch 9

Frequency (MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization	Limit (dBμV/m)	Margin (dB)
17987.5	56.63	-25.5	46.7	35.43	V	74	17.37
14333.5	51.45	-28.4	42.3	37.55	H	74	22.55
12638	47.07	-31	39	39.17	V	74	26.93
9657.5	44.35	-33.1	38	39.45	V	74	29.65
7659	43.09	-34.7	36.9	40.79	H	74	30.91
2487.5	64.5	-20	28.3	56.2	H	74	9.5

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Test graphs as below:

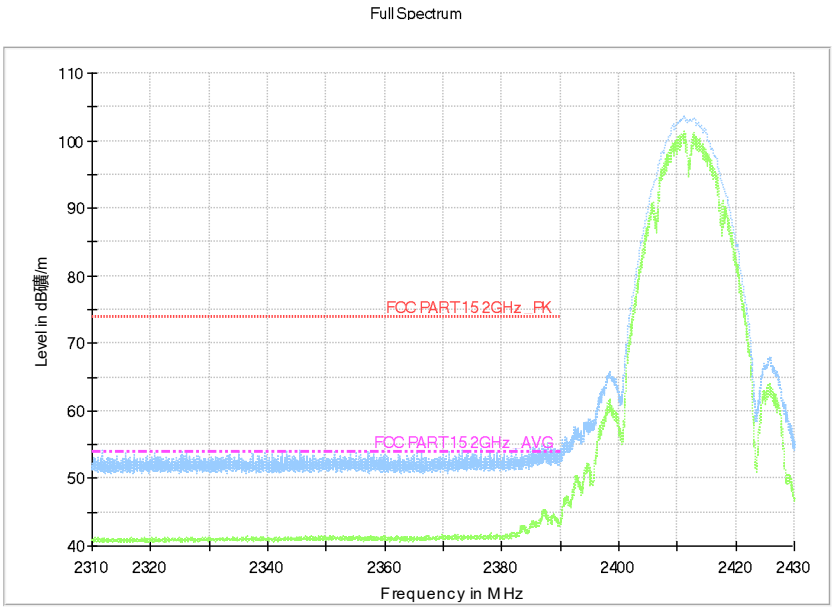

Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.43GHz

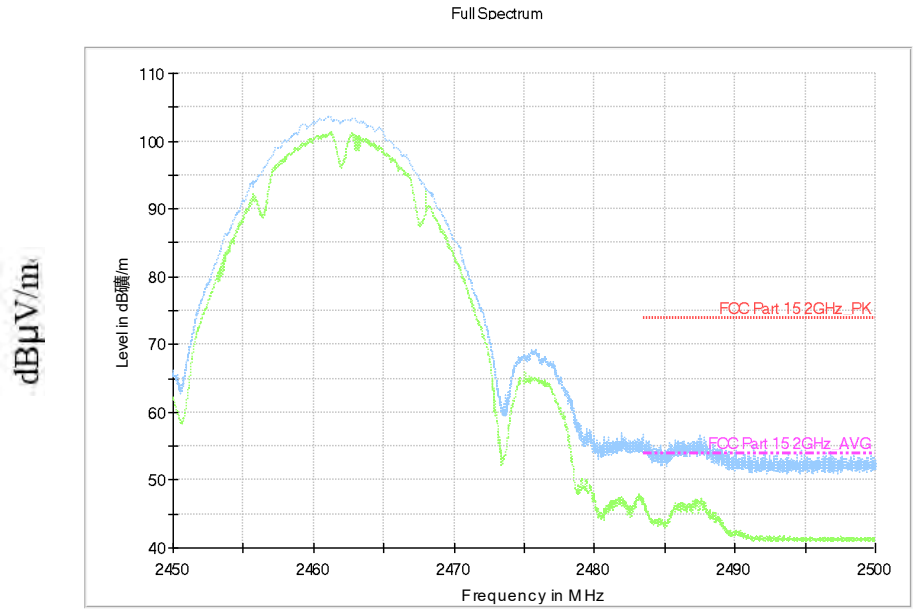

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Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

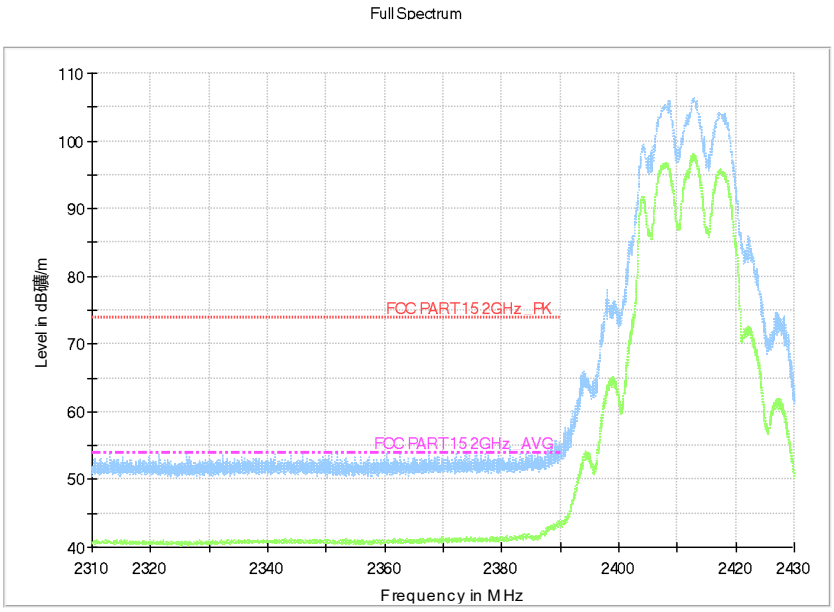

Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.43GHz

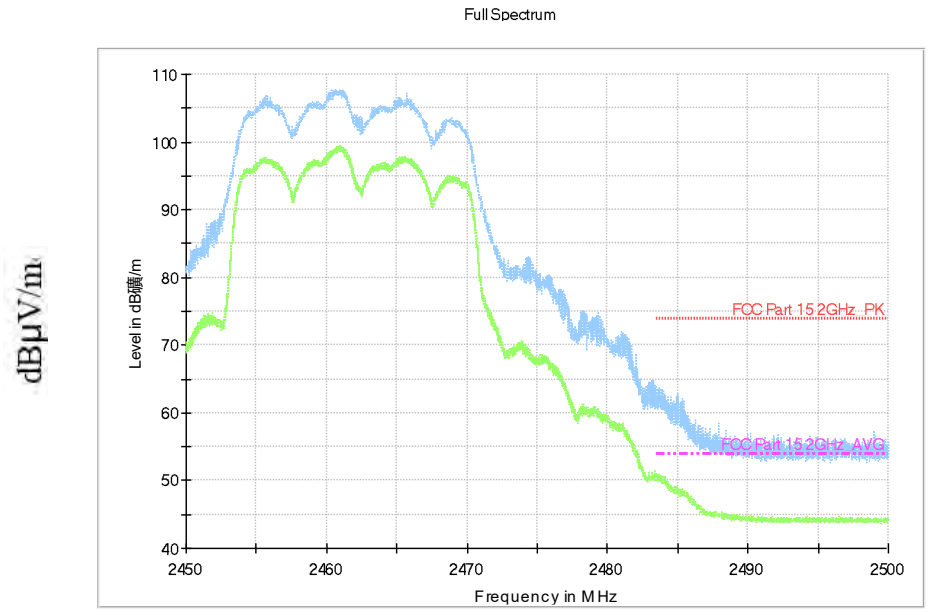

Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

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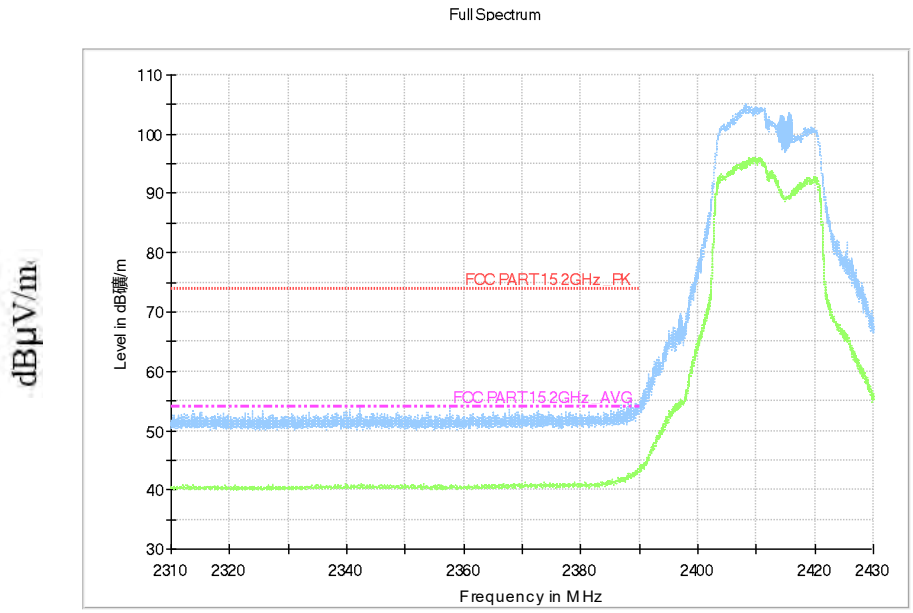

Fig.A.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31 GHz - 2.43GHz

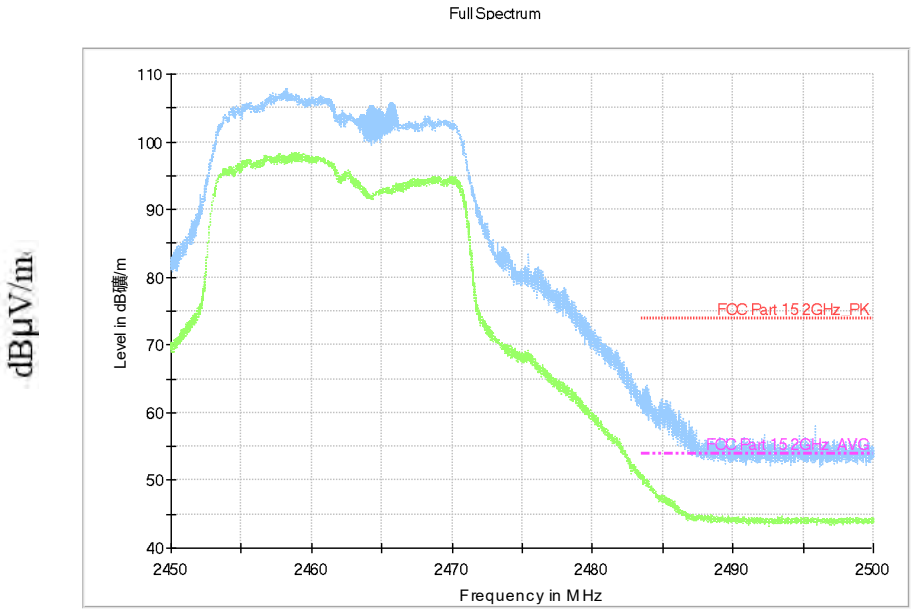

Fig.A.6.2.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

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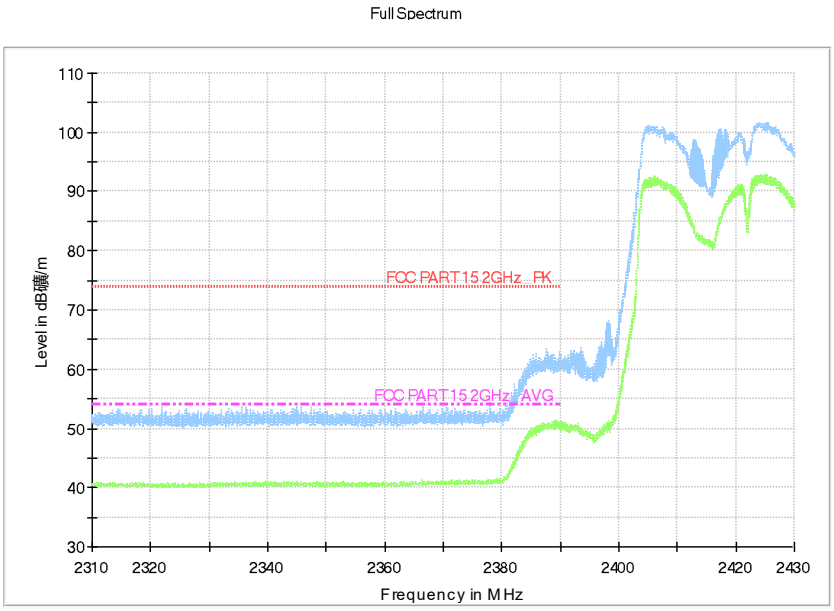

Fig.A.6.2.7 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31 GHz - 2.43GHz

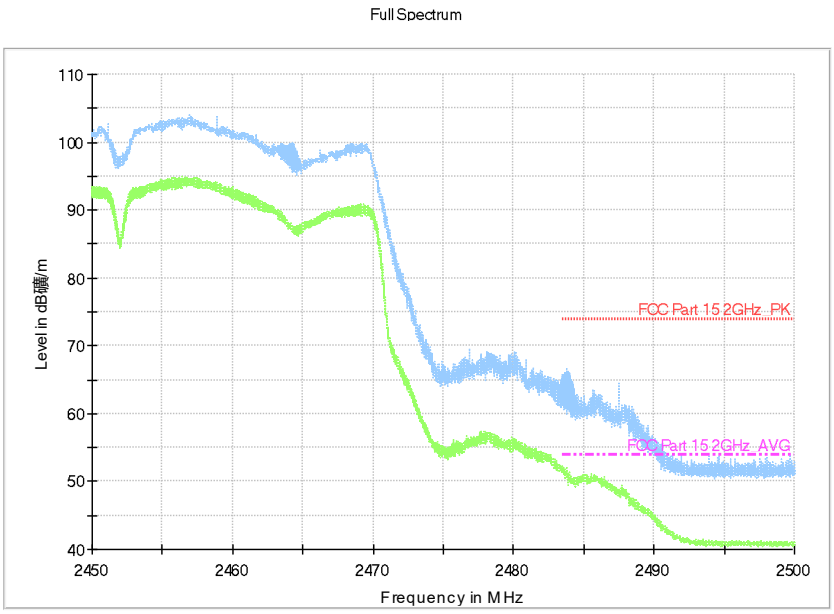

Fig.A.6.2.8 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz

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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

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Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		Traffic	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		
		Traffic	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:

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Result for Traffic:

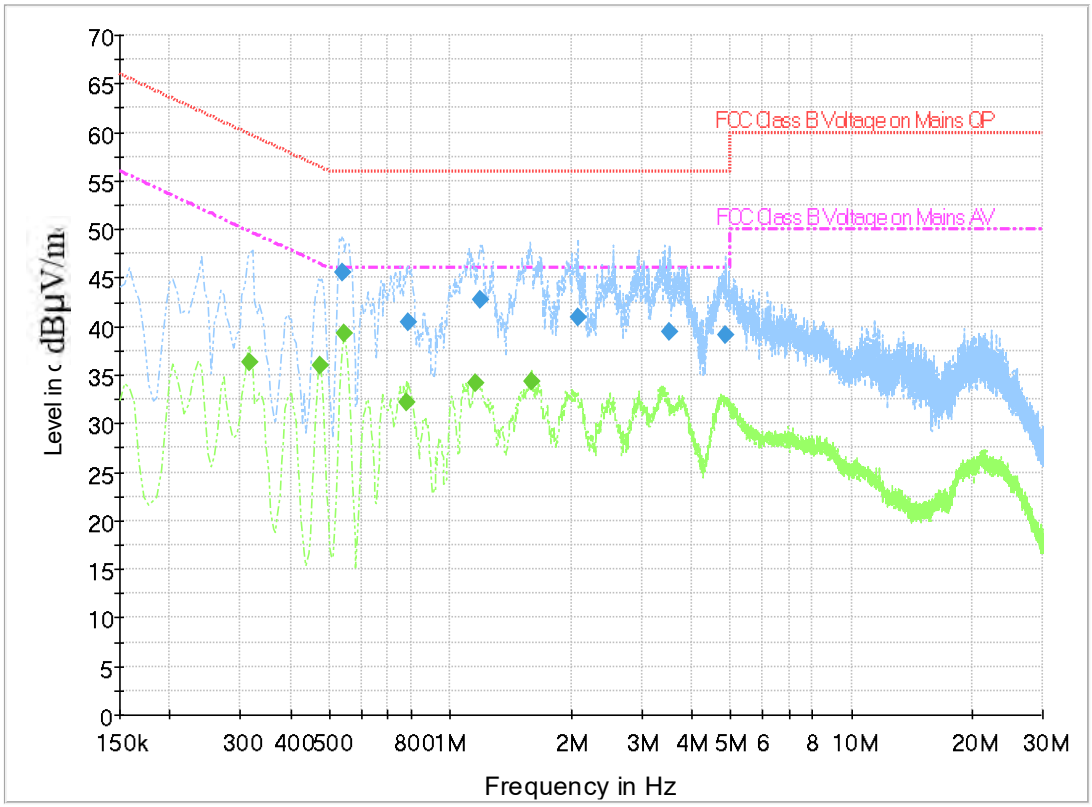

Fig.A.7.1 AC Powerline Conducted Emission-Traffic

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)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.537000	45.6	GND	N	10.0	10.4	56.0
0.784500	40.4	GND	L1	10.0	15.6	56.0
1.189500	42.8	GND	L1	10.0	13.2	56.0
2.080500	40.9	GND	L1	10.0	15.1	56.0
3.516000	39.5	GND	L1	10.1	16.5	56.0
4.848000	39.1	GND	L1	10.2	16.9	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.316500	36.3	GND	N	10.0	13.5	49.8
0.474000	36.0	GND	N	10.0	10.5	46.4
0.546000	39.2	GND	L1	10.0	6.8	46.0
0.775500	32.2	GND	L1	10.0	13.8	46.0
1.158000	34.1	GND	N	10.0	11.9	46.0

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1.590000	**34.3**	**GND**	**L1**	**10.0**	**11.7**	**46.0**

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Result for Idle:

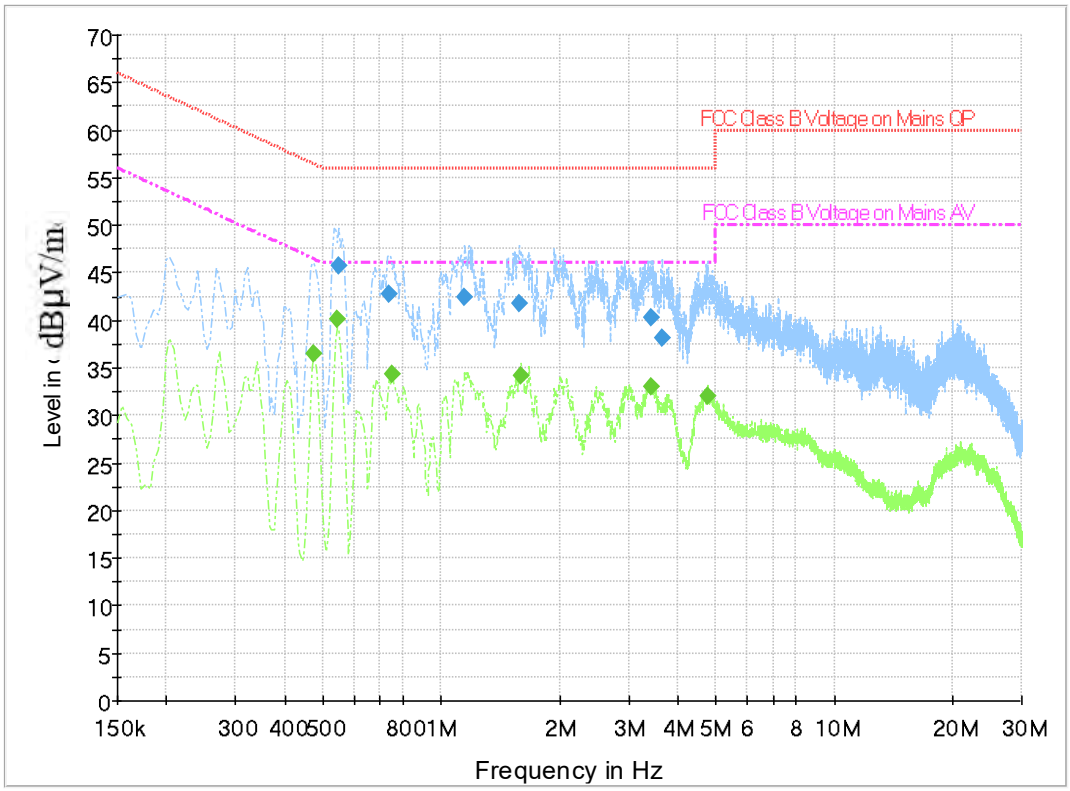

Fig.A.7.2 AC Powerline Conducted Emission-Idle

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)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.550500	45.7	GND	L1	10.0	10.3	56.0
0.735000	42.8	GND	N	10.0	13.2	56.0
1.149000	42.4	GND	L1	10.0	13.6	56.0
1.581000	41.8	GND	L1	10.0	14.2	56.0
3.417000	40.4	GND	N	10.1	15.6	56.0
3.660000	38.2	GND	L1	10.1	17.8	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.474000	36.5	GND	N	10.0	9.9	46.4
0.546000	40.1	GND	N	10.0	5.9	46.0
0.753000	34.4	GND	N	10.0	11.6	46.0
1.599000	34.1	GND	L1	10.0	11.9	46.0
3.421500	33.0	GND	N	10.1	13.0	46.0
4.744500	32.0	GND	L1	10.2	14.0	46.0

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ANNEX B: EUT parameters

Disclaimer: The 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.

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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

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Electromagnetic Compatibility & Telecommunications

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).

2020-09-29 through 2021-09-30
Effective Dates

DEPARTMENT OF COMMERCE · UNITED STATES OF AMERICA

For the National Voluntary Laboratory Accreditation Program

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

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