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

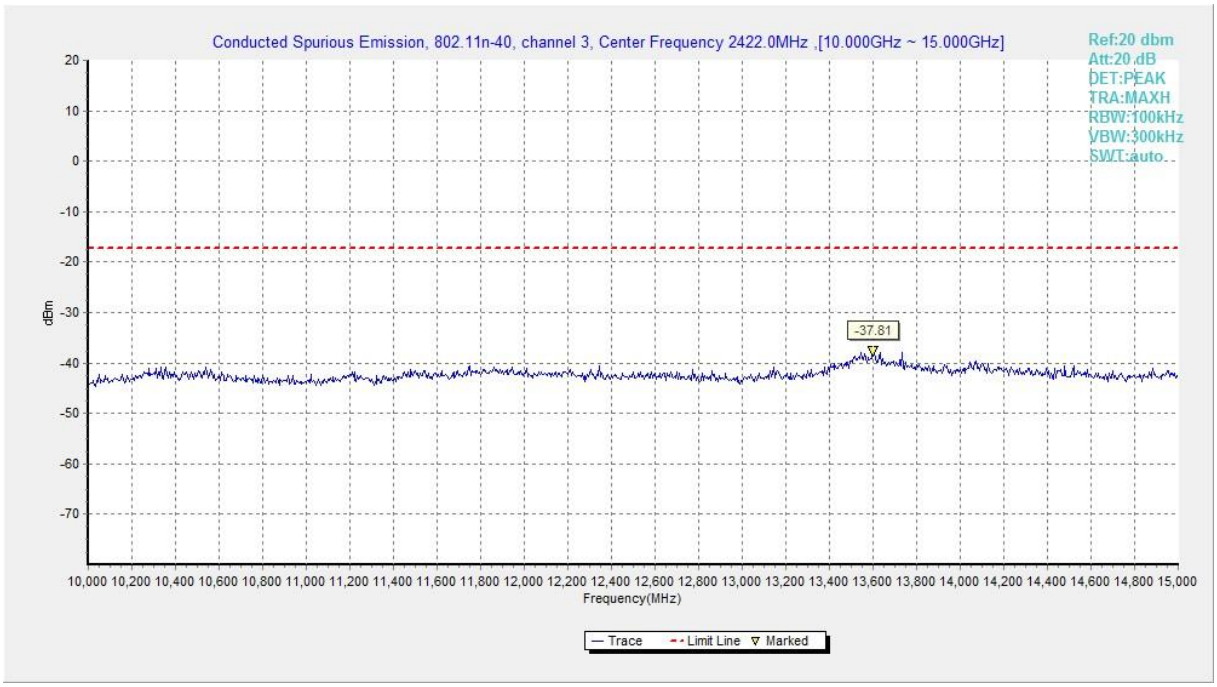

Fig.B.6.1.78 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 10 GHz-15 GHz)

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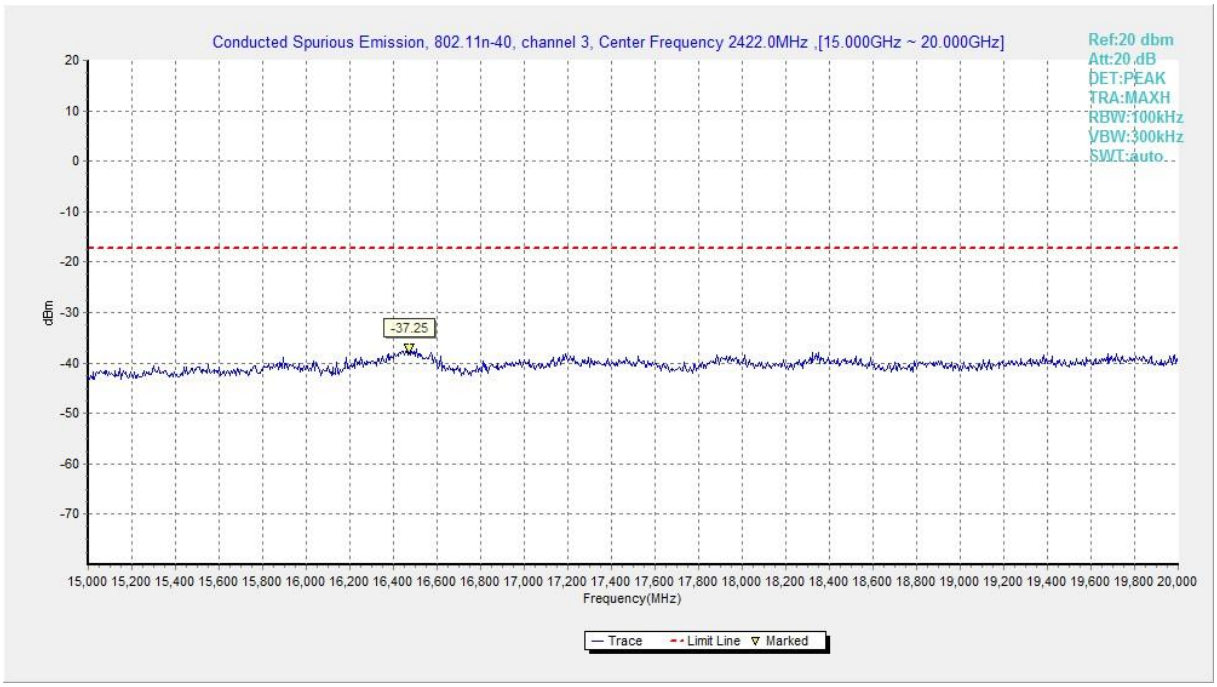

Fig.B.6.1.79 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 15 GHz-20 GHz)

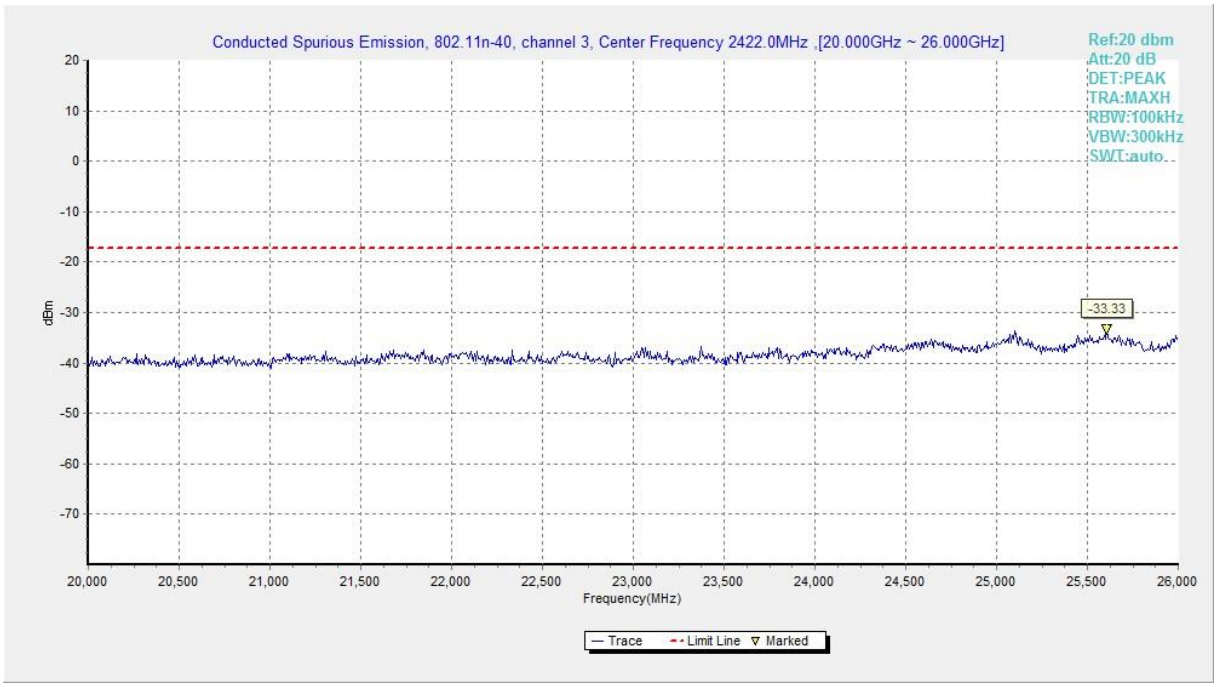

Fig.B.6.1.80 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 20 GHz-26 GHz)

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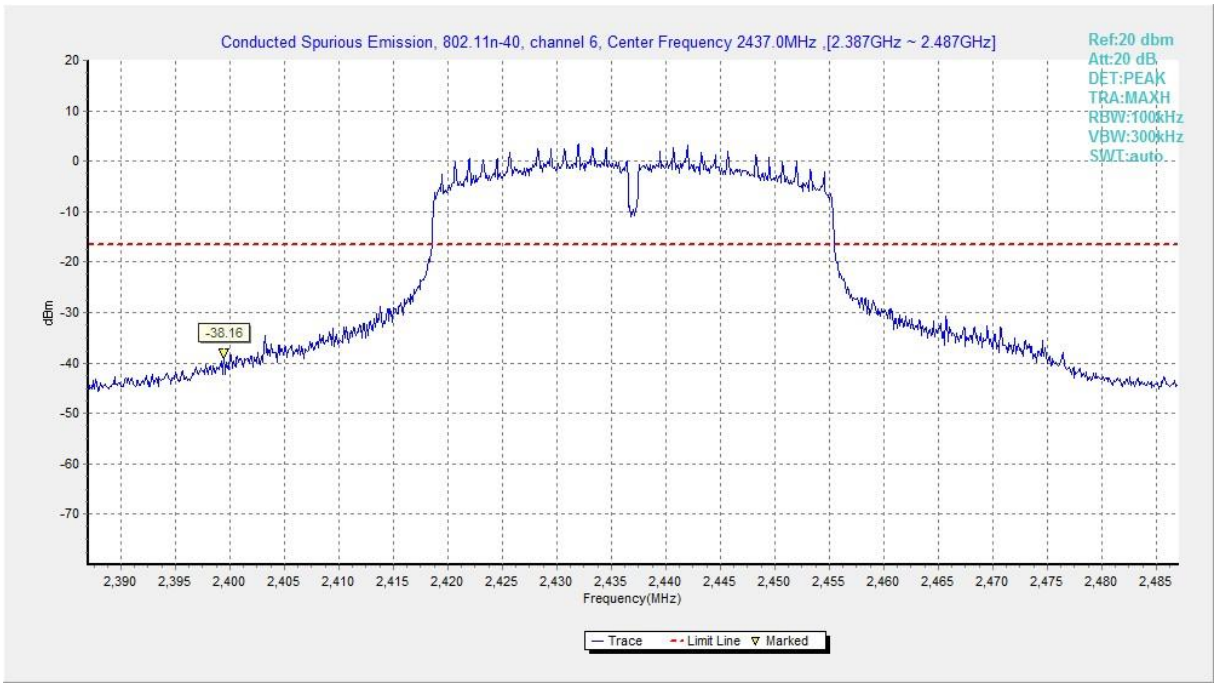

Fig.B.6.1.81 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, Center Frequency)

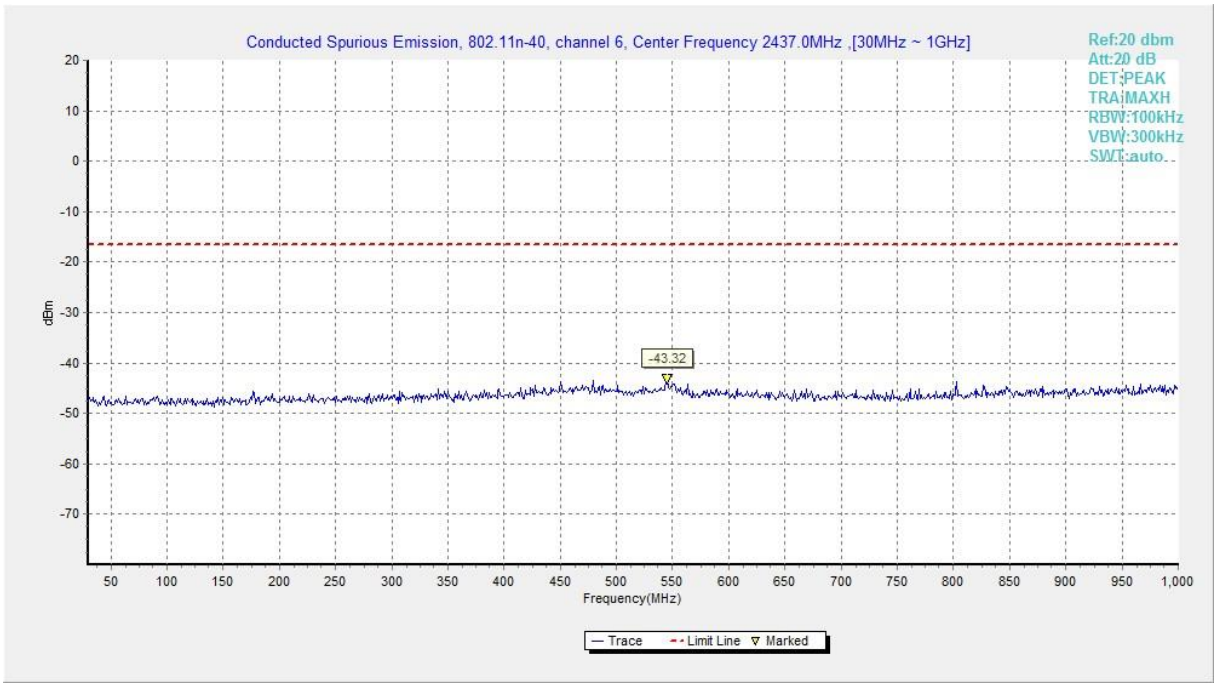

Fig.B.6.1.82 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 30 MHz-1 GHz)

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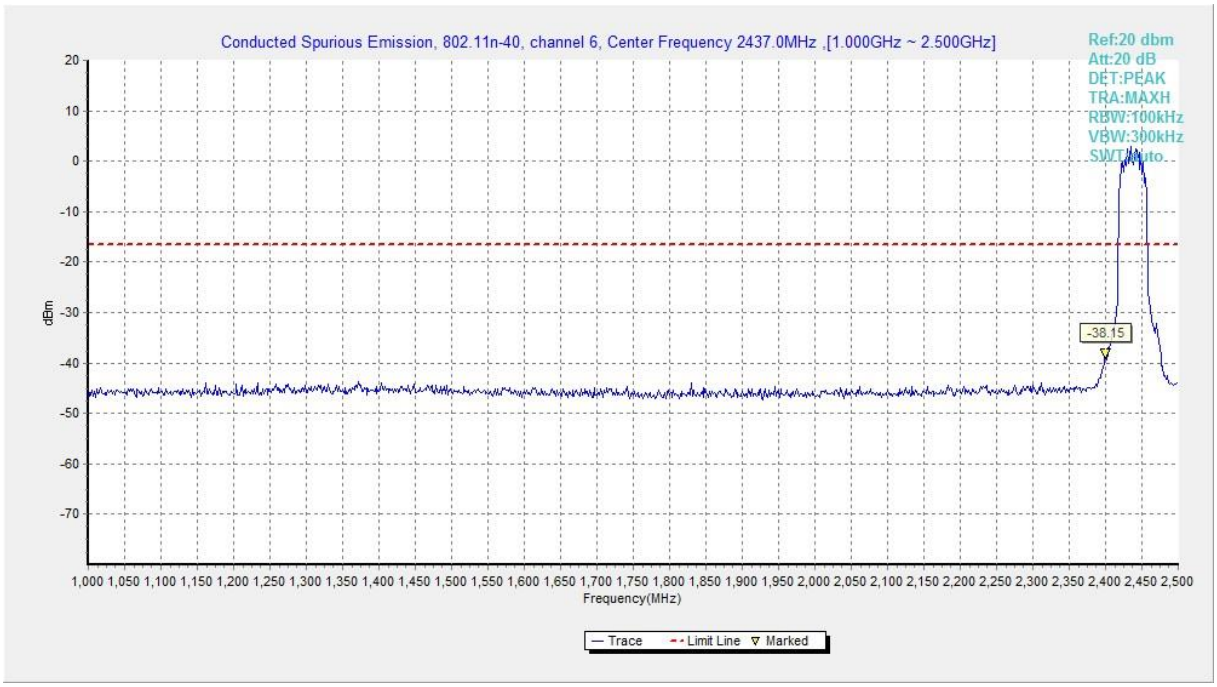

Fig.B.6.1.83 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 1 GHz-2.5 GHz)

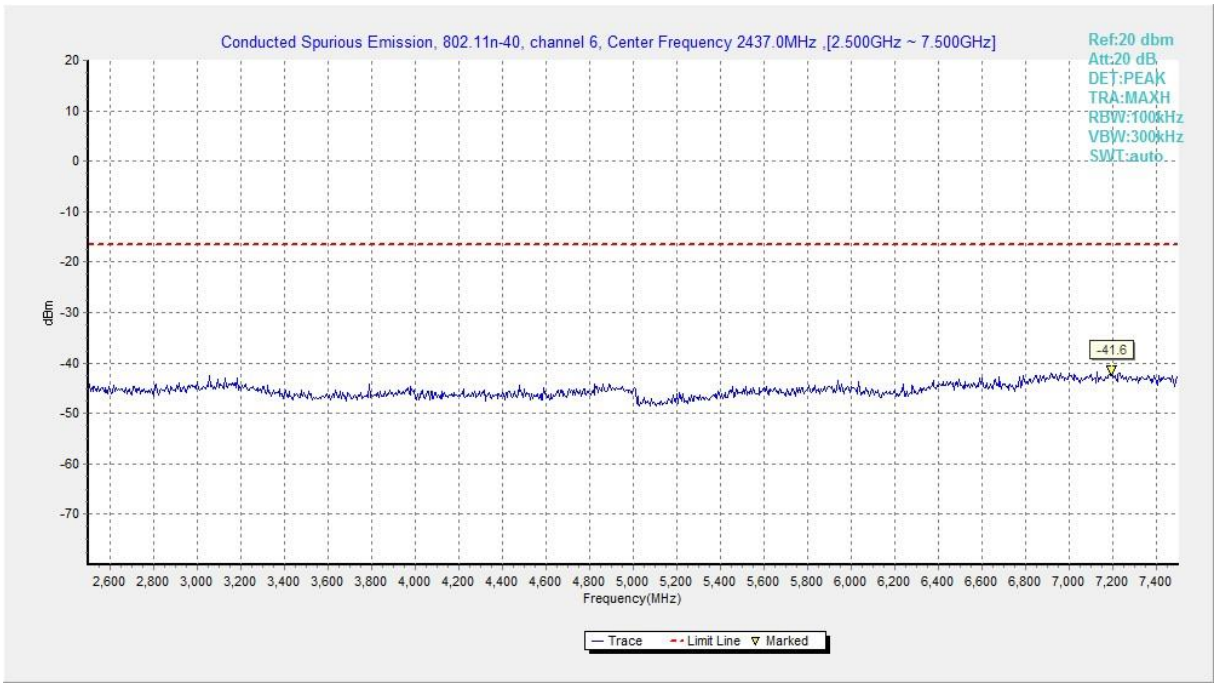

Fig.B.6.1.84 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 2.5 GHz-7.5 GHz)

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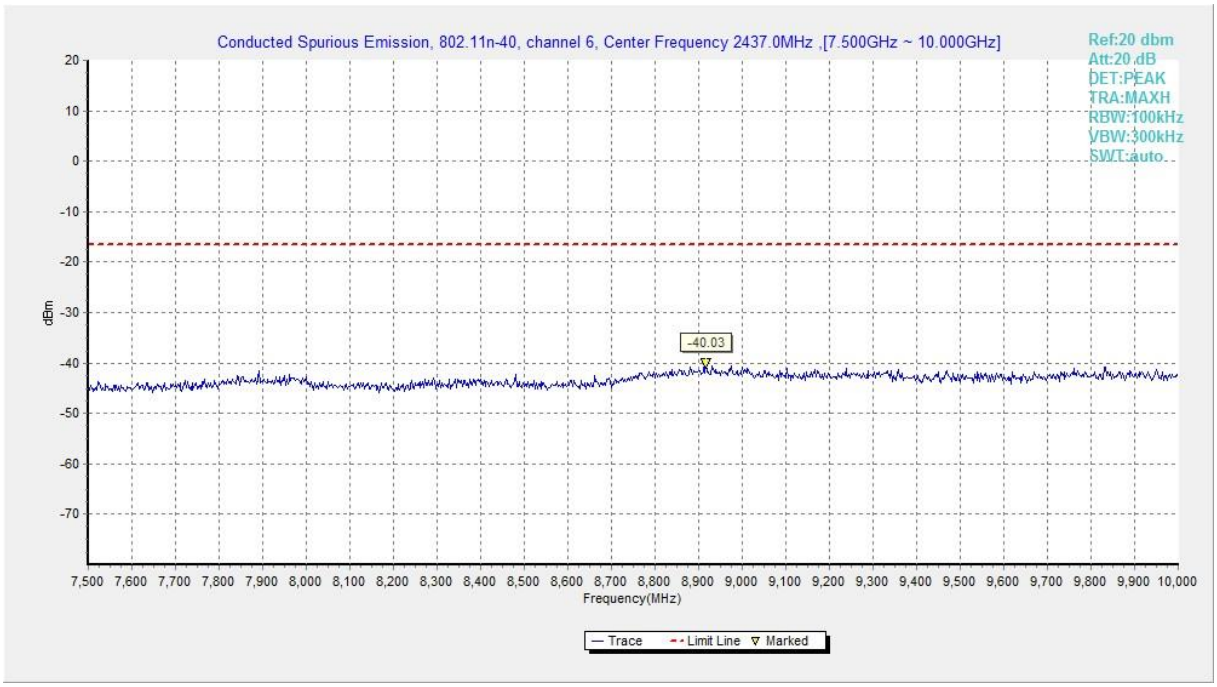

Fig.B.6.1.85 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 7.5 GHz-10 GHz)

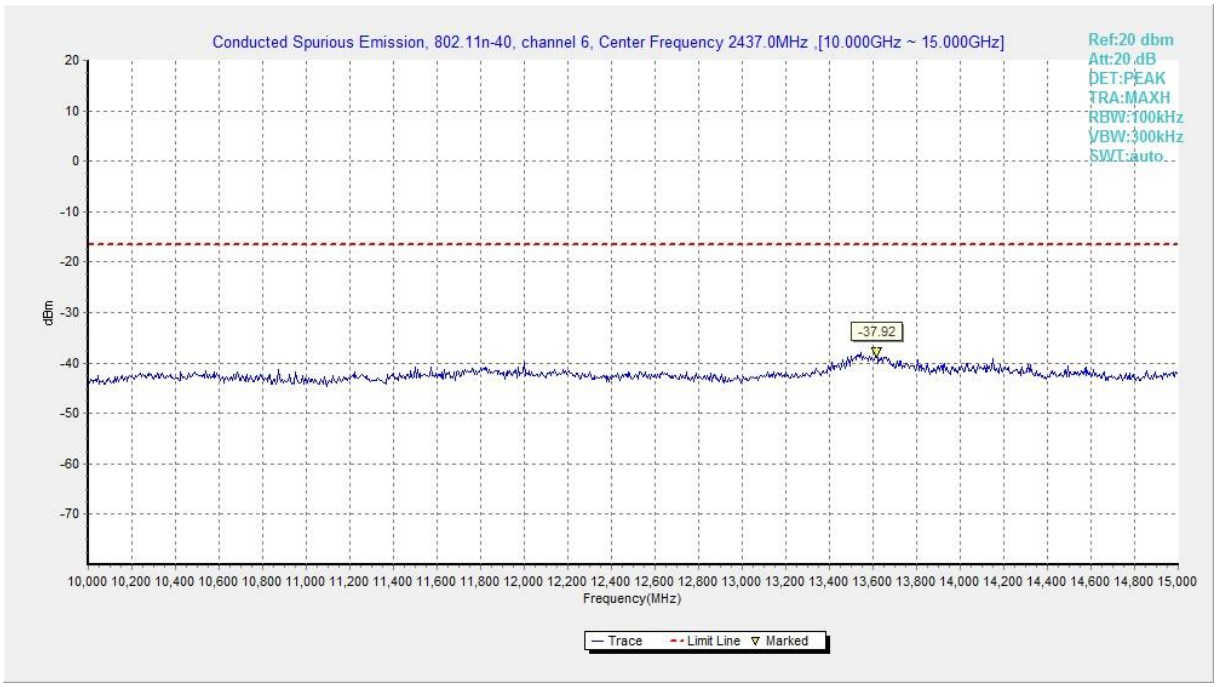

Fig.B.6.1.86 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 10 GHz-15 GHz)

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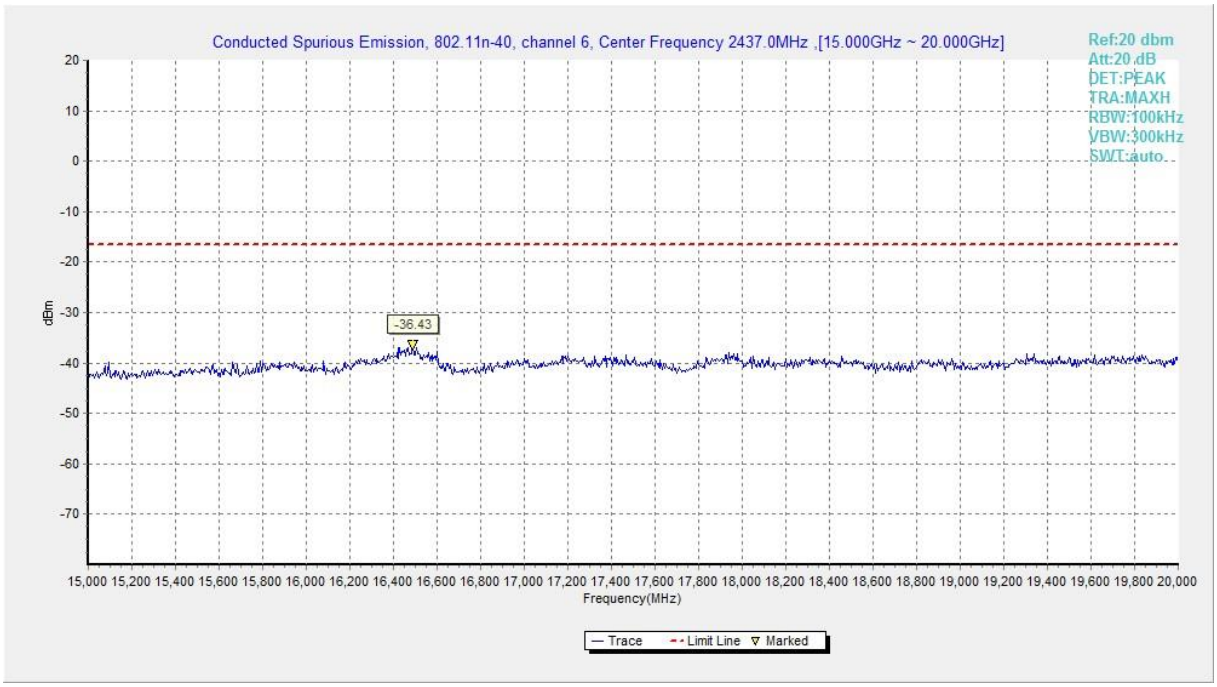

Fig.B.6.1.87 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 15 GHz-20 GHz)

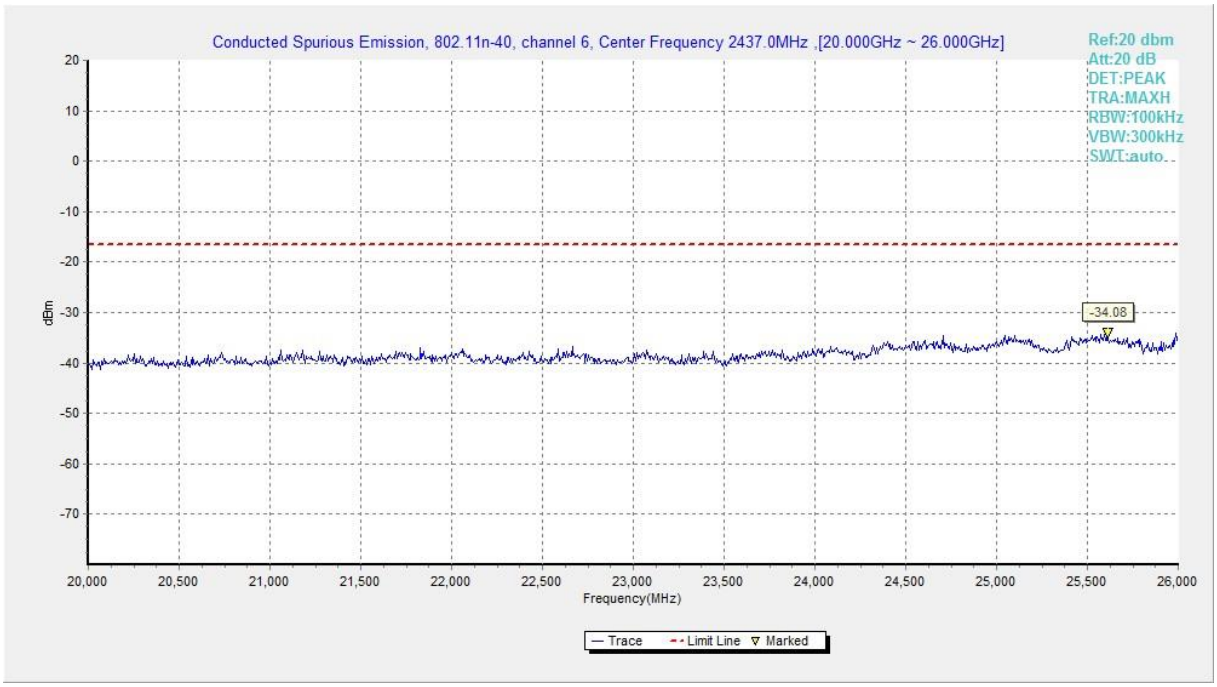

Fig.B.6.1.88 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 20 GHz-26 GHz)

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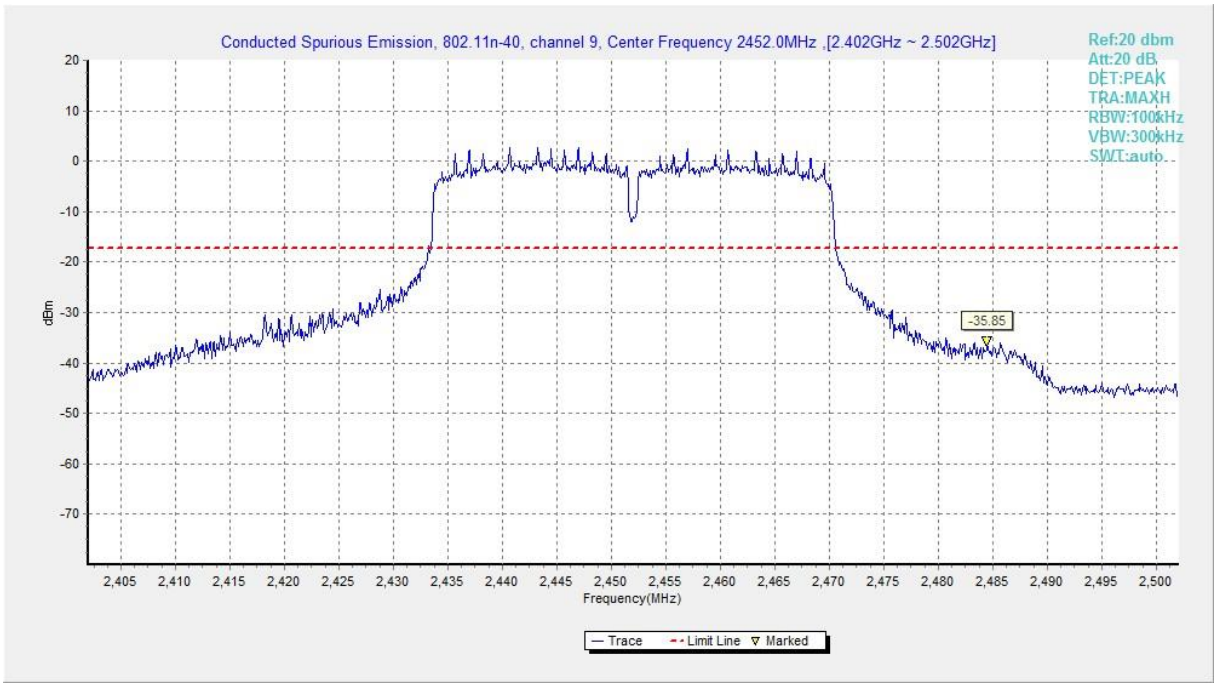

Fig.B.6.1.89 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, Center Frequency)

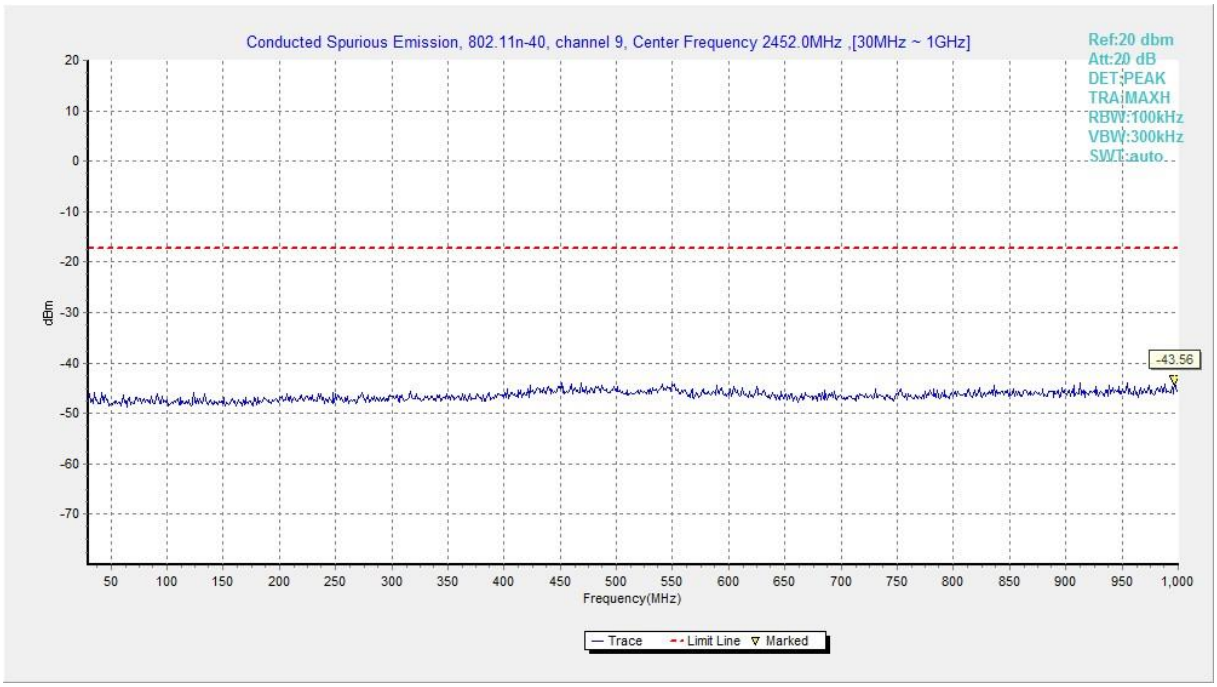

Fig.B.6.1.90 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 30 MHz-1 GHz)

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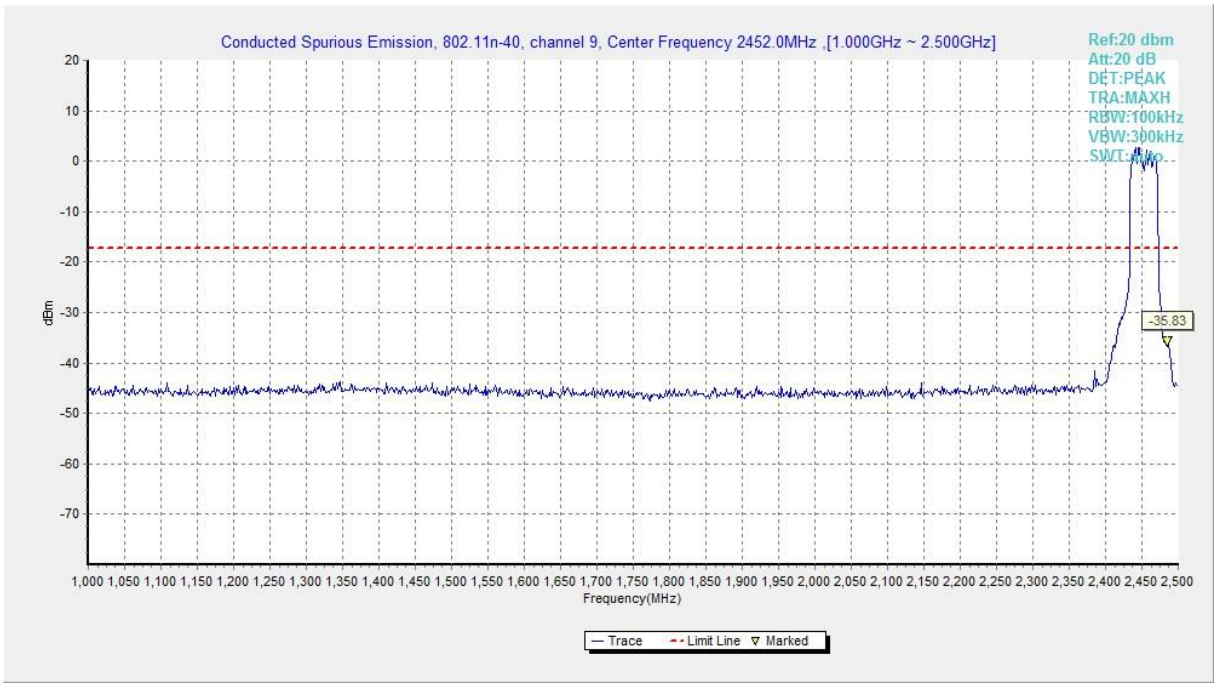

Fig.B.6.1.91 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 1 GHz-2.5 GHz)

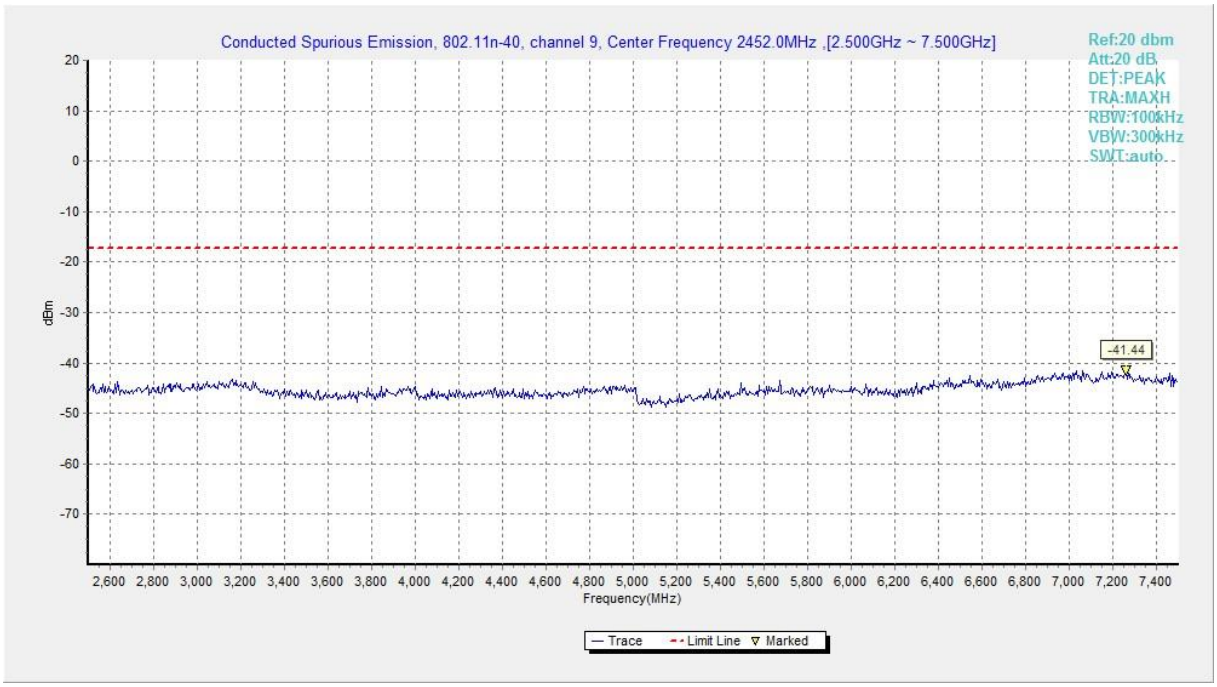

Fig.B.6.1.92 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 2.5 GHz-7.5 GHz)

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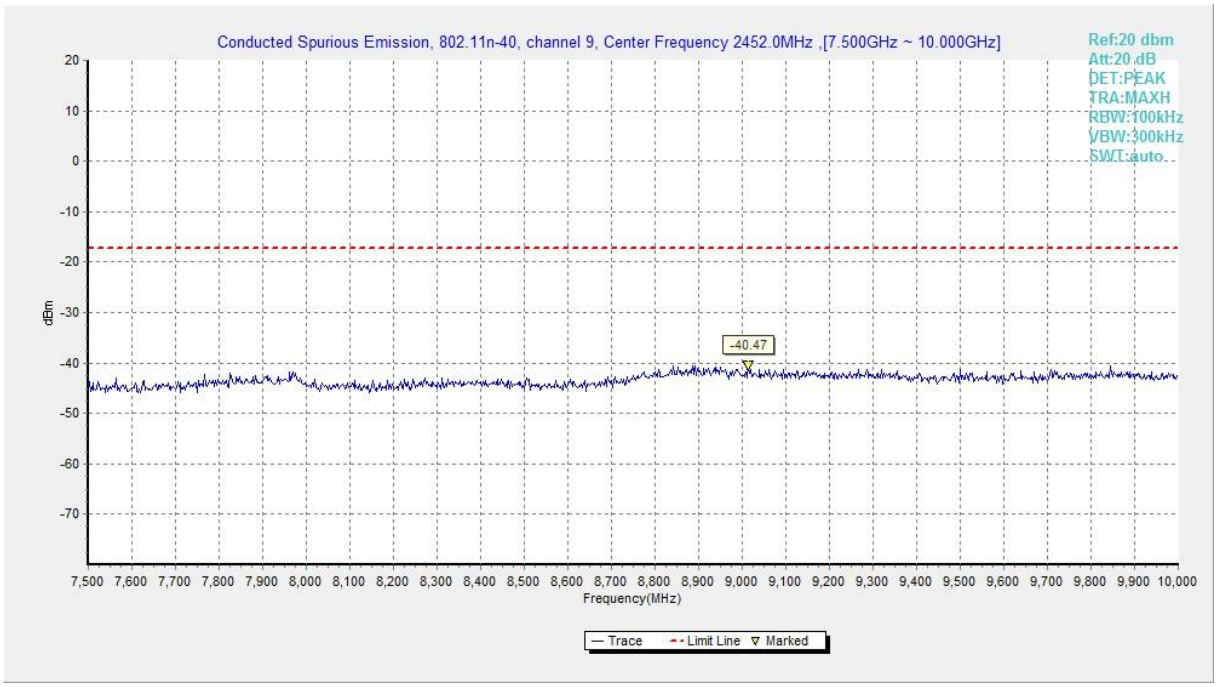

Fig.B.6.1.93 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 7.5 GHz-10 GHz)

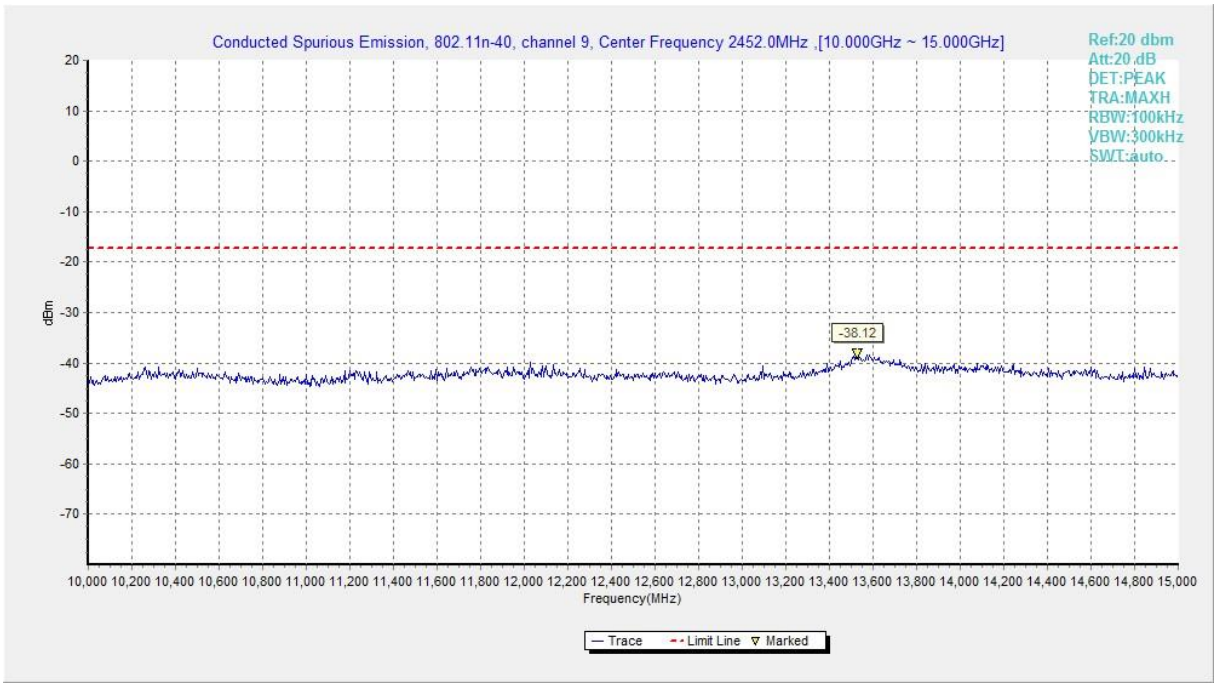

Fig.B.6.1.94 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 10 GHz-15 GHz)

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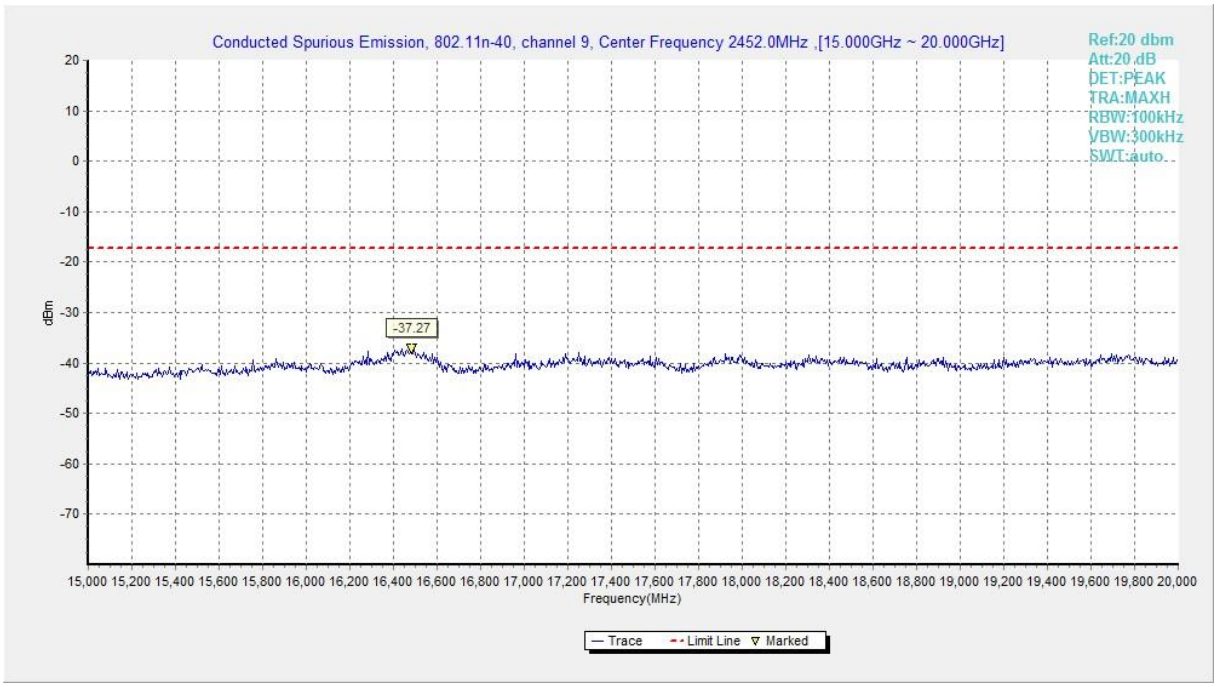

Fig.B.6.1.95 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 15 GHz-20 GHz)

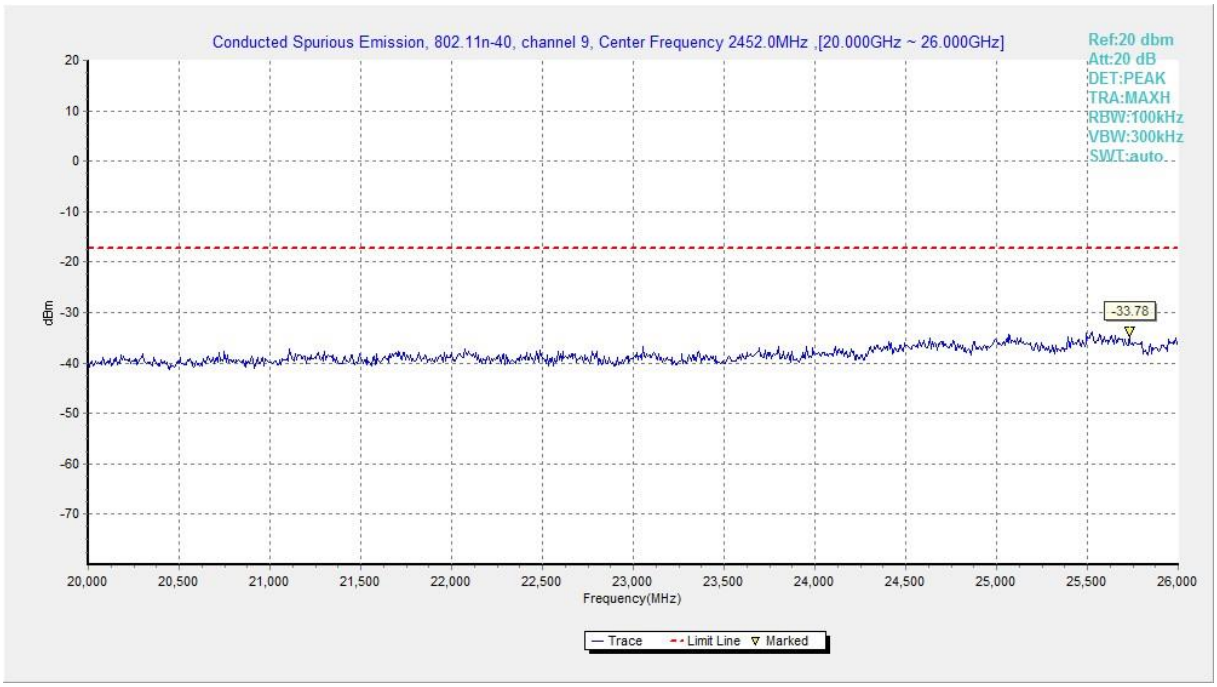

Fig.B.6.1.96 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 20 GHz-26 GHz)

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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

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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(ch2)	2.31GHz ~2.43GHz	Fig.B.6.2.4	**P**
	Power(ch10)	2.45GHz ~2.5GHz	Fig.B.6.2.5	**P**
	Power(ch11)	2.45GHz ~2.5GHz	Fig.B.6.2.6	**P**

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT20)	Power(ch1)	2.31GHz ~2.43GHz	Fig.B.6.2.7	**P**
	Power(ch2)	2.31GHz ~2.43GHz	Fig.B.6.2.8	**P**
	Power(ch10)	2.45GHz ~2.5GHz	Fig.B.6.2.9	**P**
	Power(ch11)	2.45GHz ~2.5GHz	Fig.B.6.2.10	**P**

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT40)	Power(ch3)	2.31GHz ~2.43GHz	Fig.B.6.2.11	**P**
	Power(ch4)	2.31GHz ~2.43GHz	Fig.B.6.2.12	**P**
	Power(ch6)	2.31GHz ~2.43GHz	Fig.B.6.2.13	**P**
	Power(ch6)	2.45GHz ~2.5GHz	Fig.B.6.2.14	**P**
	Power(ch8)	2.45GHz ~2.5GHz	Fig.B.6.2.15	**P**
	Power(ch9)	2.45GHz ~2.5GHz	Fig.B.6.2.16	**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

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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)	Antenna Height (cm)	Turntable angle (deg)
2389.900	47.43	2.9	32.0	12.56	54.0	6.6	H	155	4
2390.000	47.62	2.9	32.0	12.76	54.0	6.4	H	155	2
4824.000	34.54	-33.2	34.1	33.64	54.0	19.5	H	155	25
7236.000	31.39	-30.9	35.8	26.48	54.0	22.6	H	155	350
9648.000	31.50	-30.5	36.7	25.25	54.0	22.5	H	155	92
12060.000	33.98	-28.7	38.7	23.94	54.0	20.0	H	155	85

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)
2410.600	49.42	2.9	32.0	14.52	54.0	4.6	H	155	8
2459.600	48.48	2.9	32.1	13.50	54.0	5.5	H	155	6
4874.000	35.58	-33.3	34.2	34.73	54.0	18.4	H	155	25
7311.000	31.13	-30.8	35.8	26.12	54.0	22.9	H	155	70
9748.000	31.94	-30.3	36.9	25.42	54.0	22.1	H	155	135
12185.000	34.43	-28.1	38.8	23.72	54.0	19.6	H	155	270

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)
2487.100	47.10	2.9	32.1	12.07	54.0	6.9	H	155	354
2487.700	47.11	2.9	32.1	12.08	54.0	6.9	H	155	28
4924.000	34.14	-33.5	34.2	33.50	54.0	19.9	H	155	348
7386.000	30.68	-31.5	35.9	26.28	54.0	23.3	H	155	345
9848.000	31.88	-30.2	37.0	25.06	54.0	22.1	H	155	184
12310.000	34.17	-27.8	38.9	23.03	54.0	19.8	H	155	182

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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)	Antenna Height (cm)	Turntable angle (deg)
2388.246	60.89	2.9	32.0	26.03	74.0	13.1	H	155	0
2389.044	60.56	2.9	32.0	25.69	74.0	13.4	H	155	0
4824.000	42.70	-33.2	34.1	41.81	74.0	31.3	H	155	22
7236.000	42.70	-30.9	35.8	37.78	74.0	31.3	H	155	352
9648.000	43.72	-30.5	36.7	37.47	74.0	30.3	V	155	88
12060.000	47.13	-28.7	38.7	37.10	74.0	26.9	V	155	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)	Antenna Height (cm)	Turntable angle (deg)
2368.200	43.92	-34.6	32.0	46.50	74.0	30.1	H	155	0
2509.800	44.17	-34.3	32.1	46.31	74.0	29.8	V	155	0
4873.500	44.59	-33.3	34.2	43.74	74.0	29.4	H	155	22
7311.000	42.36	-30.8	35.8	37.35	74.0	31.6	H	155	66
9748.000	43.62	-30.3	36.9	37.10	74.0	30.4	V	155	132
12185.000	45.56	-28.1	38.8	34.86	74.0	28.4	H	155	274

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)
2486.690	61.92	2.9	32.1	26.90	74.0	12.1	H	155	0
2488.710	61.01	2.9	32.1	25.98	74.0	13.0	H	155	22
4923.500	42.95	-33.5	34.2	42.30	74.0	31.1	V	155	352
7386.000	42.11	-31.5	35.9	37.71	74.0	31.9	V	155	352
9848.000	43.49	-30.2	37.0	36.68	74.0	30.5	H	155	176
12310.000	46.24	-27.8	38.9	35.11	74.0	27.8	V	155	176

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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)	Antenna Height (cm)	Turntable angle (deg)
2389.700	49.67	2.9	32.0	14.80	54.0	4.3	H	155	20
2390.000	49.78	2.9	32.0	14.91	54.0	4.2	H	155	45
4824.000	29.22	-33.2	34.1	28.32	54.0	24.8	H	155	240
7236.000	31.36	-30.9	35.8	26.45	54.0	22.6	H	155	180
9648.000	32.14	-30.5	36.7	25.89	54.0	21.9	H	155	85
12060.000	34.13	-28.7	38.7	24.10	54.0	19.9	H	155	25

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)
2403.200	48.17	2.9	32.0	13.28	54.0	5.8	H	155	28
2467.900	47.82	2.9	32.1	12.82	54.0	6.2	H	155	48
4874.000	29.48	-33.3	34.2	28.63	54.0	24.5	H	155	92
7311.000	31.15	-30.8	35.8	26.14	54.0	22.9	H	155	72
9748.000	31.82	-30.3	36.9	25.30	54.0	22.2	H	155	226
12185.000	34.39	-28.1	38.8	23.68	54.0	19.6	H	155	4

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	50.63	2.9	32.1	18.05	54.0	3.4	H	155	6
2483.700	50.37	2.9	32.1	17.52	54.0	3.6	H	155	26
4924.000	29.44	-33.5	34.2	28.79	54.0	24.6	H	155	92
7386.000	30.57	-31.5	35.9	26.17	54.0	23.4	H	155	24
9848.000	31.73	-30.2	37.0	24.92	54.0	22.3	H	155	136
12310.000	34.20	-27.8	38.9	23.07	54.0	19.8	H	155	356

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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)	Antenna Height (cm)	Turntable angle (deg)
2389.128	63.11	2.9	32.0	28.25	74.0	10.9	H	155	22
2389.898	63.60	2.9	32.0	28.74	74.0	10.4	H	155	44
4824.000	40.88	-33.2	34.1	39.98	74.0	33.1	V	155	242
7236.000	43.51	-30.9	35.8	38.59	74.0	30.5	V	155	176
9648.000	43.94	-30.5	36.7	37.69	74.0	30.1	V	155	88
12060.000	46.52	-28.7	38.7	36.48	74.0	27.5	H	155	22

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)
2358.000	44.11	-35.0	32.0	47.10	74.0	29.9	V	155	22
2507.200	44.56	-34.2	32.1	46.67	74.0	29.4	H	155	44
4874.000	40.02	-33.3	34.2	39.17	74.0	34.0	H	155	88
7311.000	42.53	-30.8	35.8	37.52	74.0	31.5	V	155	66
9748.000	44.02	-30.3	36.9	37.50	74.0	30.0	H	155	220
12185.000	45.00	-28.1	38.8	34.29	74.0	29.0	V	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)
2483.685	63.67	2.9	32.1	28.66	74.0	10.3	H	155	0
2483.870	63.75	2.9	32.1	28.74	74.0	10.2	H	155	22
4924.000	41.22	-33.5	34.2	40.58	74.0	32.8	H	155	88
7386.000	41.75	-31.5	35.9	37.35	74.0	32.2	V	155	22
9848.000	43.26	-30.2	37.0	36.45	74.0	30.7	V	155	132
12310.000	46.89	-27.8	38.9	35.76	74.0	27.1	H	155	352

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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)	Antenna Height (cm)	Turntable angle (deg)
2389.900	50.01	2.9	32.0	15.14	54.0	4.0	H	155	24
2390.000	50.13	2.9	32.0	15.26	54.0	3.9	H	155	46
4824.000	29.06	-33.2	34.1	28.17	54.0	24.9	H	155	6
7236.000	31.23	-30.9	35.8	26.32	54.0	22.8	H	155	5
9648.000	31.70	-30.5	36.7	25.45	54.0	22.3	H	155	25
12060.000	34.25	-28.7	38.7	24.21	54.0	19.8	H	155	184

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2393.700	47.98	2.9	32.0	13.11	54.0	6.0	H	155	20
2473.500	49.15	2.9	32.1	14.15	54.0	4.8	H	155	40
4874.000	28.94	-33.3	34.2	28.09	54.0	25.1	H	155	56
7311.000	31.05	-30.8	35.8	26.04	54.0	23.0	H	155	4
9748.000	31.88	-30.3	36.9	25.36	54.0	22.1	H	155	18
12185.000	34.37	-28.1	38.8	23.66	54.0	19.6	H	155	48

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	49.77	2.9	32.1	14.76	54.0	4.2	H	155	28
2483.700	49.59	2.9	32.1	14.58	54.0	4.4	H	155	248
4924.000	29.25	-33.5	34.2	28.60	54.0	24.8	H	155	38
7386.000	30.58	-31.5	35.9	26.18	54.0	23.4	H	155	98
9848.000	32.01	-30.2	37.0	25.20	54.0	22.0	H	155	183
12310.000	34.30	-27.8	38.9	23.16	54.0	19.7	H	155	356

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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)	Antenna Height (cm)	Turntable angle (deg)
2389.310	63.88	2.9	32.0	29.02	74.0	10.1	H	155	22
2389.506	63.91	2.9	32.0	29.04	74.0	10.1	H	155	44
4824.000	43.05	-33.2	34.1	42.16	74.0	30.9	V	155	0
7236.000	42.81	-30.9	35.8	37.89	74.0	31.2	H	155	0
9648.000	43.16	-30.5	36.7	36.91	74.0	30.8	V	155	22
12060.000	44.87	-28.7	38.7	34.83	74.0	29.1	H	155	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)	Antenna Height (cm)	Turntable angle (deg)
2364.600	43.67	-34.7	32.0	46.40	74.0	30.3	H	155	22
2522.000	45.37	-34.4	32.1	47.60	74.0	28.6	H	155	44
4874.000	39.35	-33.3	34.2	38.50	74.0	34.7	H	155	66
7311.000	41.96	-30.8	35.8	36.95	74.0	32.0	H	155	0
9748.000	42.80	-30.3	36.9	36.28	74.0	31.2	V	155	22
12185.000	45.89	-28.1	38.8	35.19	74.0	28.1	V	155	44

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2483.520	64.47	2.9	32.1	29.45	74.0	9.5	H	155	22
2483.615	64.03	2.9	32.1	29.01	74.0	10.0	H	155	242
4924.000	41.21	-33.5	34.2	40.57	74.0	32.8	V	155	44
7386.000	41.91	-31.5	35.9	37.50	74.0	32.1	H	155	88
9848.000	43.70	-30.2	37.0	36.89	74.0	30.3	V	155	176
12310.000	46.05	-27.8	38.9	34.91	74.0	28.0	H	155	0

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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)	Antenna Height (cm)	Turntable angle (deg)
2389.900	50.48	2.9	32.0	15.62	54.0	3.5	H	155	226
2390.000	50.58	2.9	32.0	15.71	54.0	3.4	H	155	92
4844.000	29.04	-33.2	34.1	28.13	54.0	25.0	H	155	70
7266.000	31.45	-30.6	35.8	26.24	54.0	22.6	H	155	8
9688.000	31.72	-30.4	36.8	25.32	54.0	22.3	H	155	48
12110.000	34.25	-28.5	38.8	23.95	54.0	19.8	H	155	246

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2389.100	48.08	2.9	32.0	13.22	54.0	5.9	H	155	90
2390.000	48.73	2.9	32.0	13.86	54.0	5.3	H	155	90
2483.600	48.23	2.9	32.1	13.21	54.0	5.8	H	155	90
2483.700	48.14	2.9	32.1	13.12	54.0	5.9	H	155	90
9748.000	31.86	-30.3	36.9	25.34	54.0	22.1	H	155	48
12185.000	34.41	-28.1	38.8	23.70	54.0	19.6	H	155	246

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)	Antenna Height (cm)	Turntable angle (deg)
2483.500	49.98	2.9	32.1	14.96	54.0	4.0	H	155	18
2483.700	49.99	2.9	32.1	14.97	54.0	4.0	H	155	4
4904.000	29.54	-33.4	34.2	28.80	54.0	24.5	H	155	20
7356.000	31.17	-31.2	35.8	26.50	54.0	22.8	H	155	28
9808.000	31.67	-30.3	36.9	25.06	54.0	22.3	H	155	4
12260.000	34.20	-27.9	38.9	23.22	54.0	19.8	H	155	40

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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)	Antenna Height (cm)	Turntable angle (deg)
2388.065	67.16	2.9	32.0	32.29	74.0	6.8	H	155	220
2388.792	66.75	2.9	32.0	31.89	74.0	7.2	H	155	88
4844.000	40.11	-33.2	34.1	39.20	74.0	33.9	H	155	66
7266.000	42.46	-30.6	35.8	37.25	74.0	31.5	V	155	0
9688.000	43.05	-30.4	36.8	36.65	74.0	31.0	V	155	44
12110.000	46.29	-28.5	38.8	35.99	74.0	27.7	V	155	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)	Antenna Height (cm)	Turntable angle (deg)
2387.910	62.34	2.9	32.0	27.47	74.0	11.7	H	155	22
2389.590	63.92	2.9	32.0	29.05	74.0	10.1	H	155	44
2483.840	64.34	2.9	32.1	29.32	74.0	9.7	H	155	87
2484.210	63.30	2.9	32.1	28.29	74.0	10.7	H	155	85
7311.000	42.52	-30.8	35.8	37.51	74.0	31.5	H	155	66
12110.000	45.53	-28.5	38.8	35.23	74.0	28.5	H	155	242

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)	Antenna Height (cm)	Turntable angle (deg)
2485.240	68.20	2.9	32.1	33.18	74.0	5.8	H	155	22
2486.095	67.97	2.9	32.1	32.95	74.0	6.0	H	155	0
4904.000	41.29	-33.4	34.2	40.55	74.0	32.7	V	155	44
7356.000	42.53	-31.2	35.8	37.86	74.0	31.5	H	155	22
9808.000	42.08	-30.3	36.9	35.47	74.0	31.9	V	155	0
12260.000	45.58	-27.9	38.9	34.60	74.0	28.4	V	155	44

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Test graphs as below:

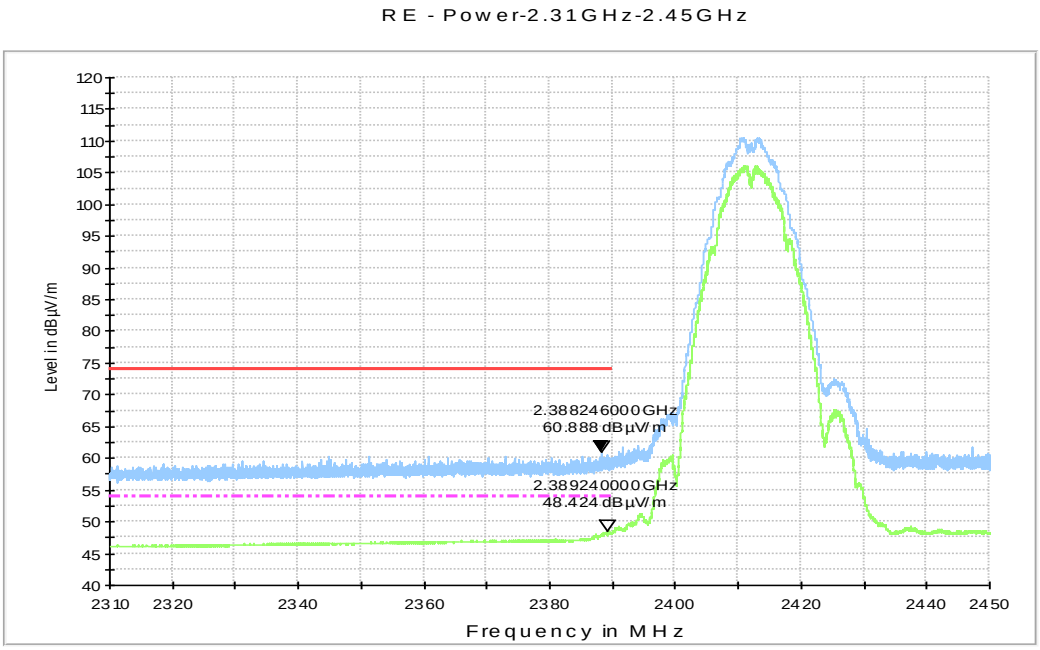

Fig.B.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.45GHz

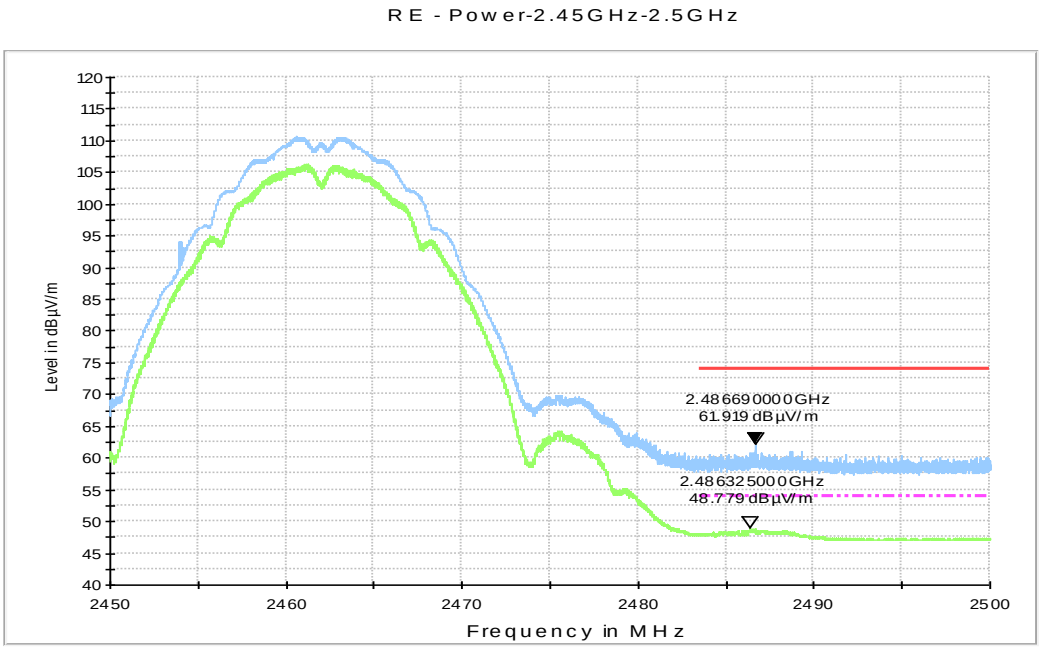

Fig.B.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

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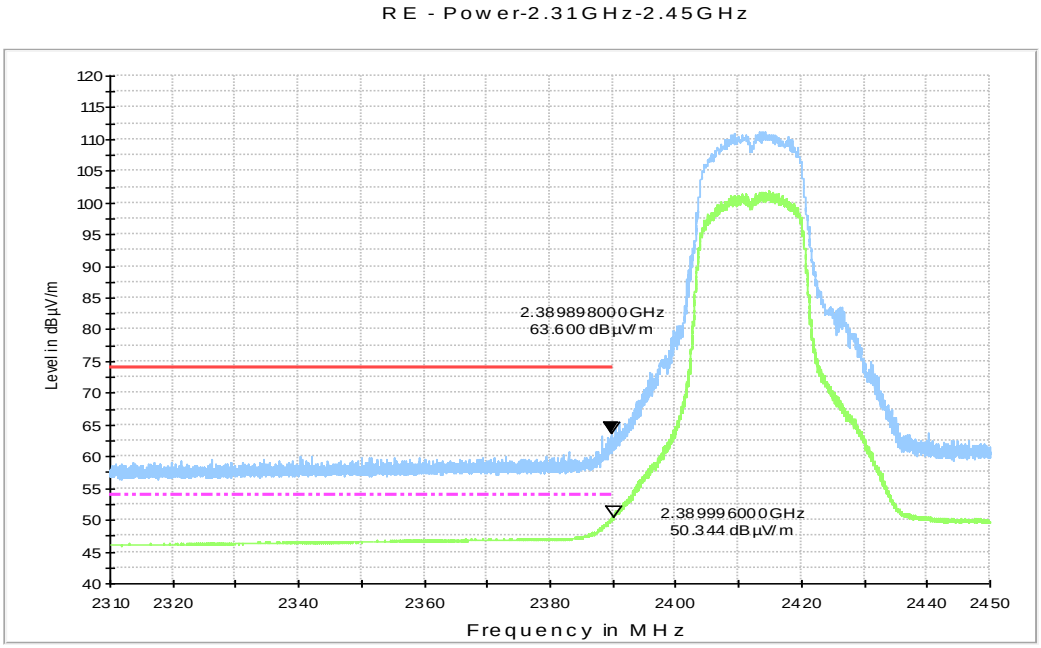

Fig.B.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.43GHz

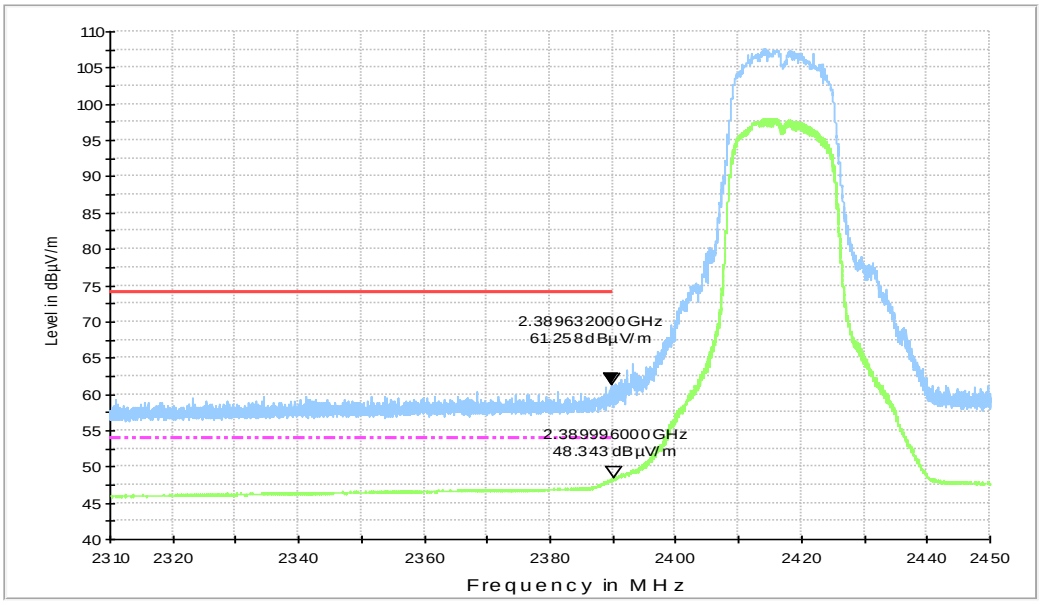

Fig.B.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch2, 2.31 GHz - 2.43GHz

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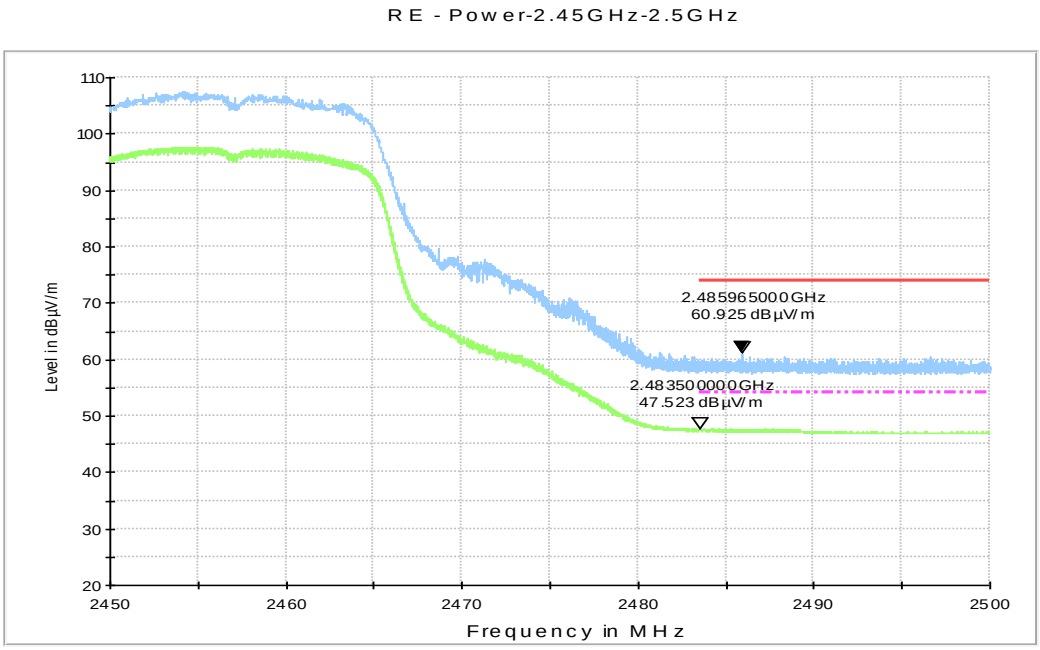

Fig.B.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch10, 2.45 GHz - 2.50GHz

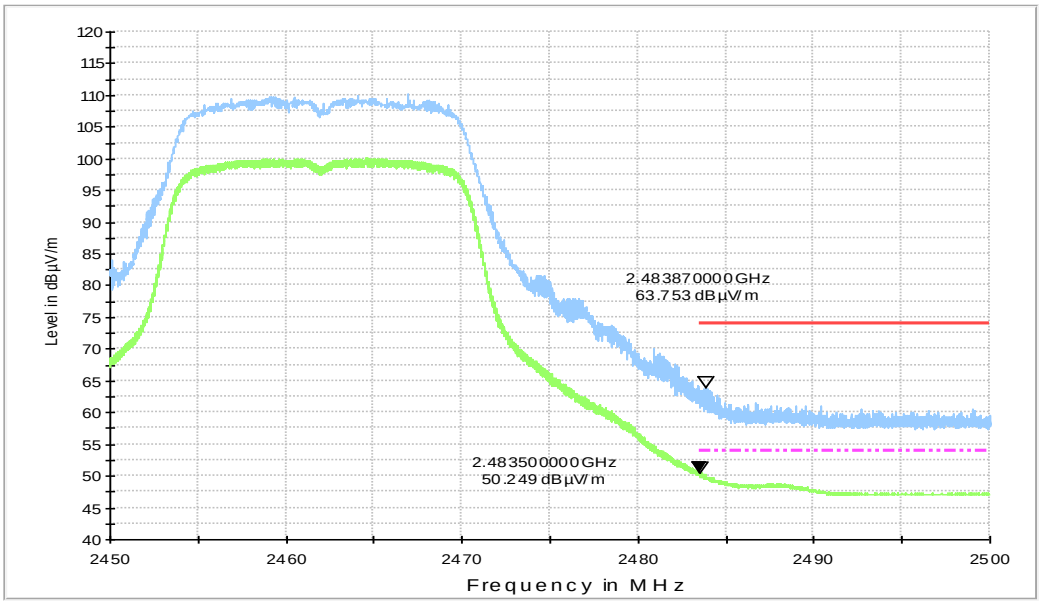

Fig.B.6.2.6 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

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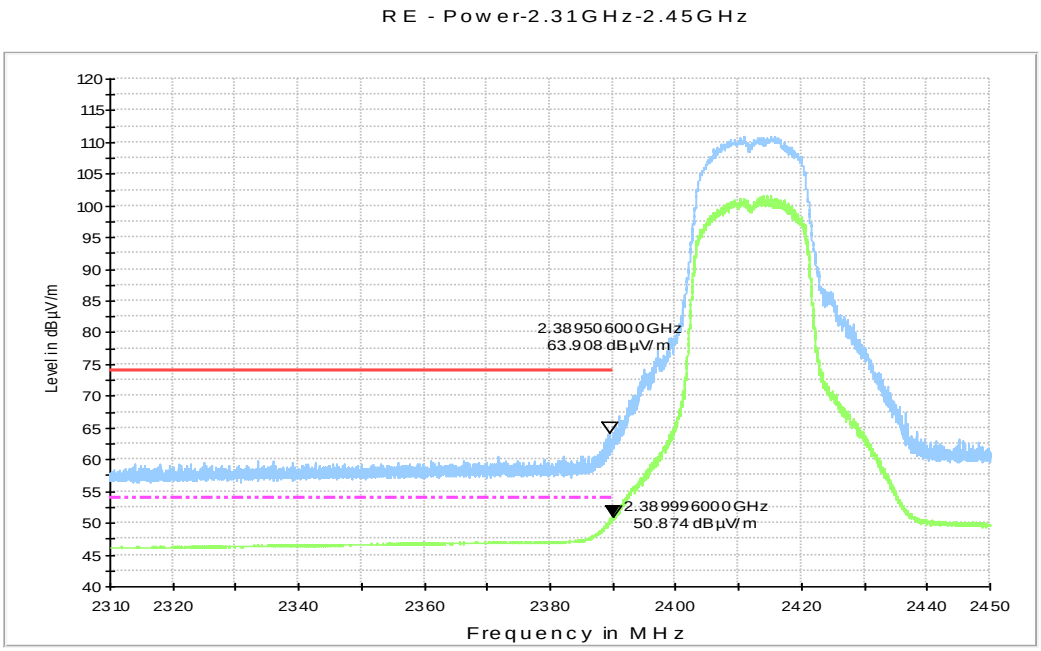

Fig.B.6.2.7 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31GHz - 2.45GHz

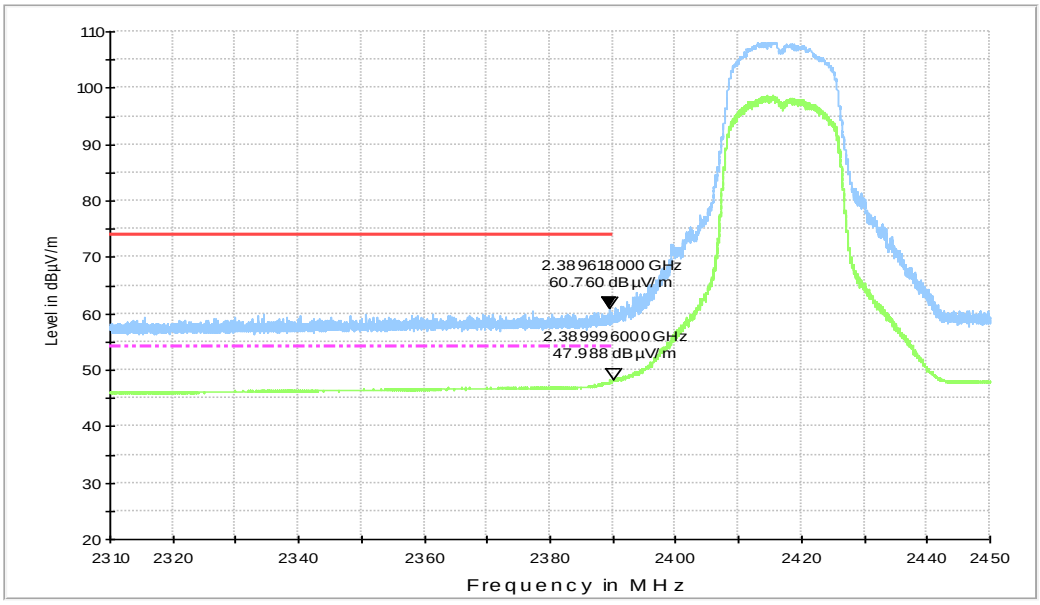

Fig.B.6.2.8 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch2, 2.31GHz - 2.45GHz

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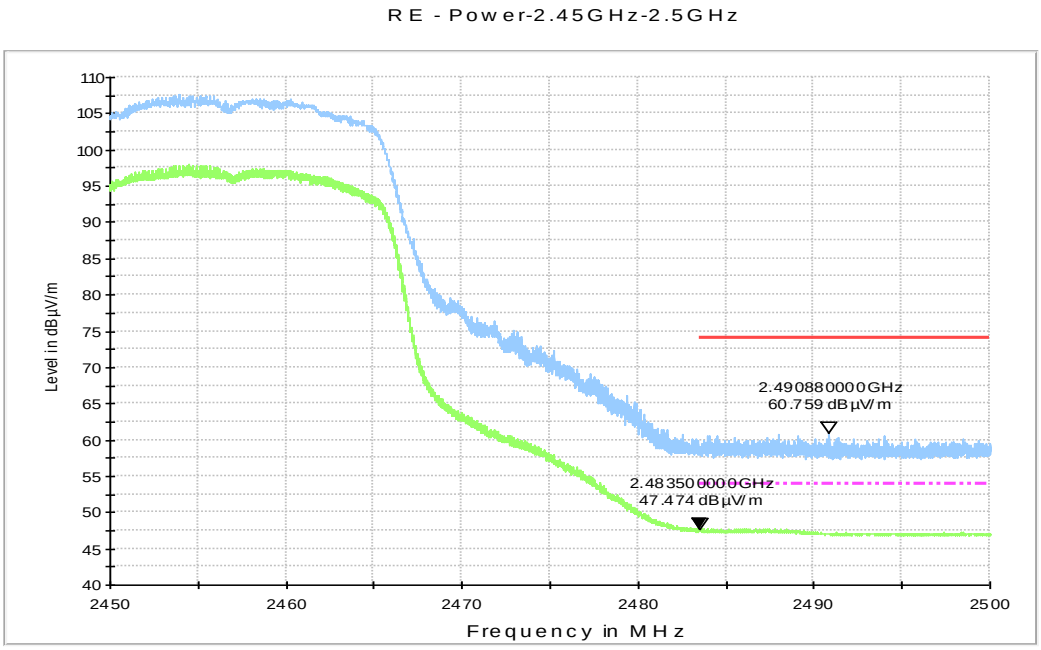

Fig.B.6.2.9 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch10, 2.45 GHz - 2.50GHz

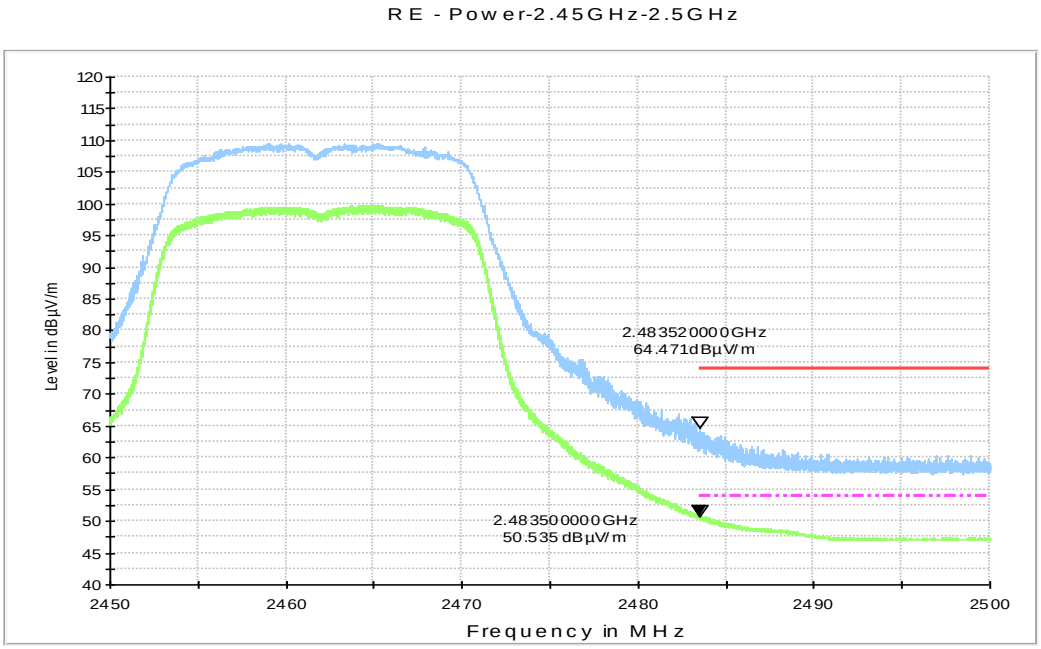

Fig.B.6.2.10 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

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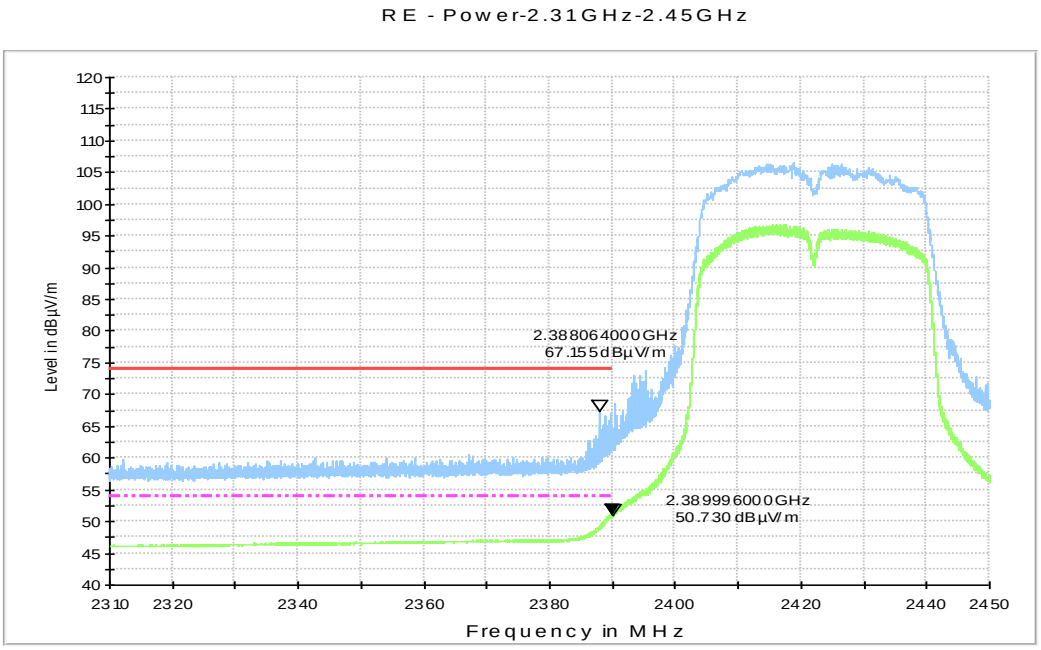

Fig.B.6.2.11 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31GHz - 2.45GHz

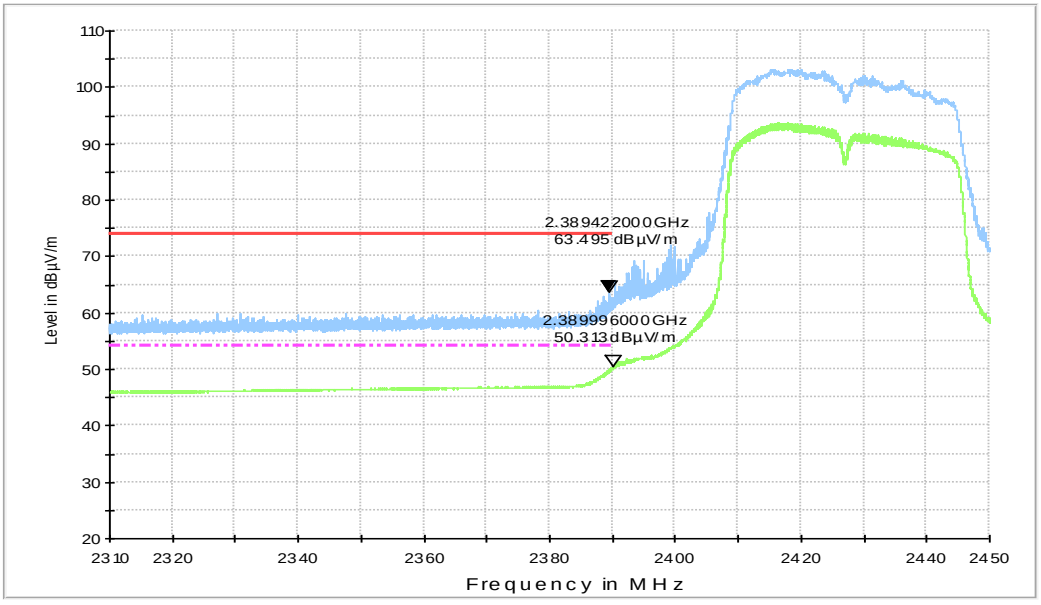

Fig.B.6.2.12 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch4, 2.31GHz - 2.45GHz

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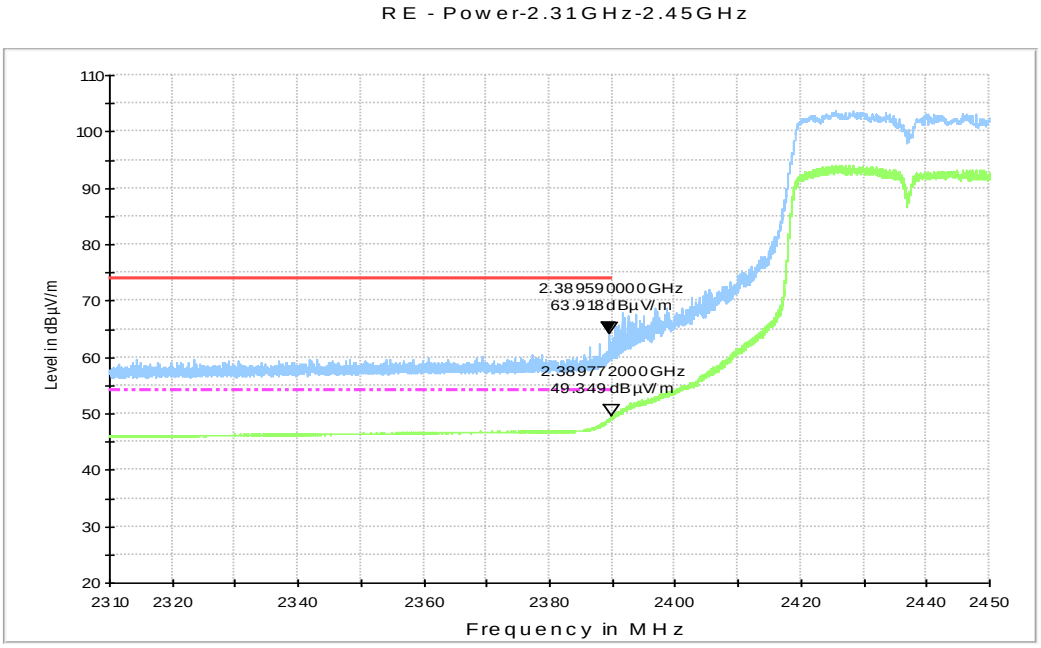

Fig.B.6.2.13 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch6, 2.31GHz - 2.45GHz

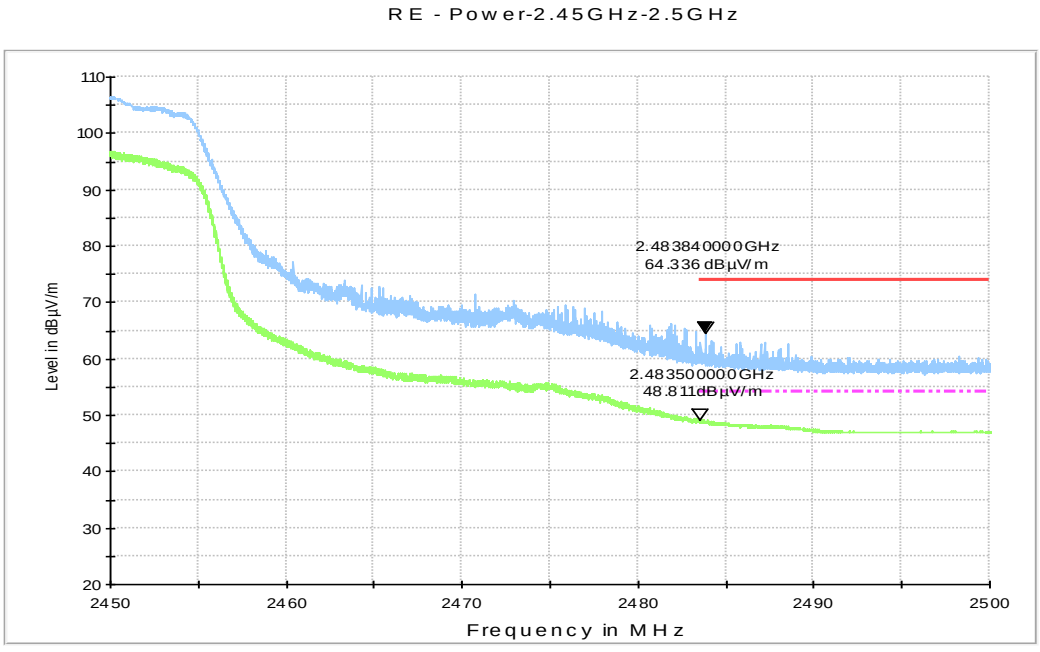

Fig.B.6.2.14 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch6, 2.45 GHz - 2.50GHz

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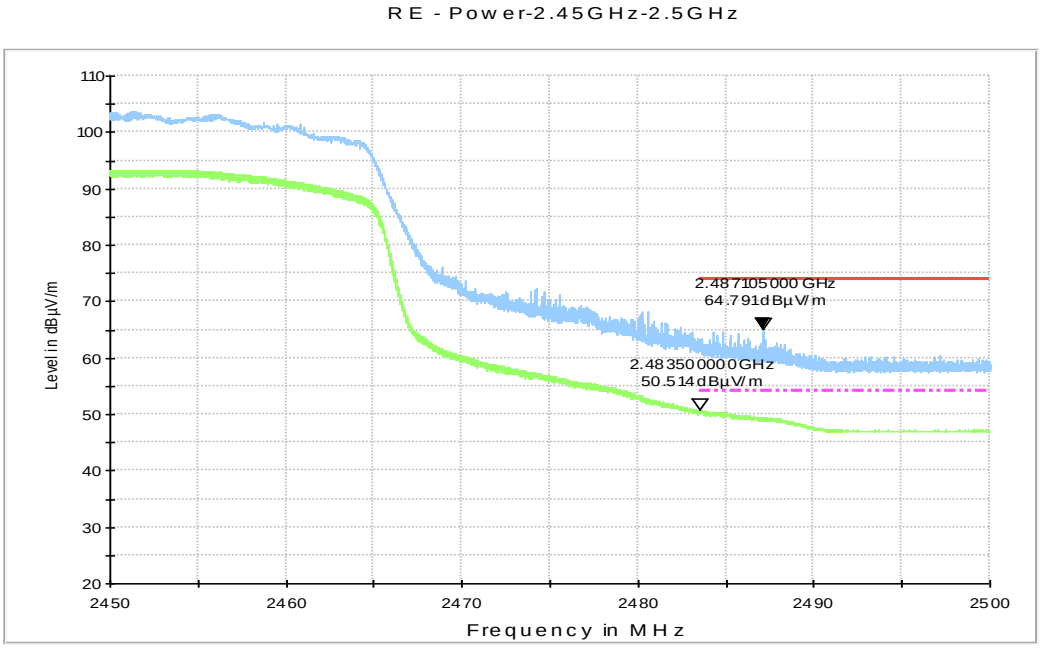

Fig.B.6.2.15 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch8, 2.45 GHz - 2.50GHz

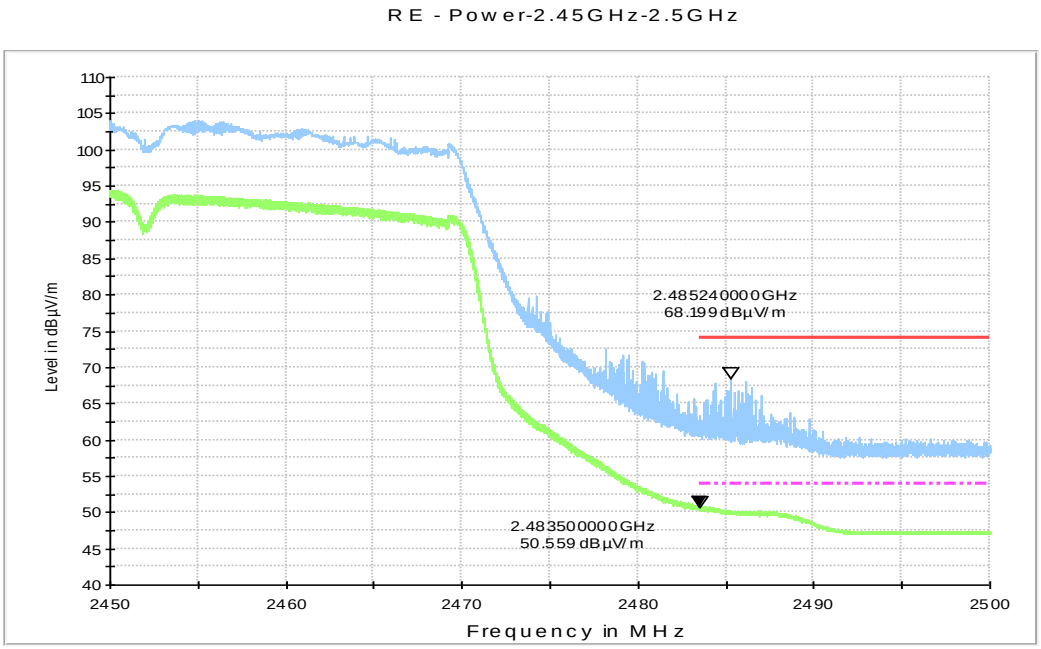

Fig.B.6.2.16 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz

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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

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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:

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Traffic:

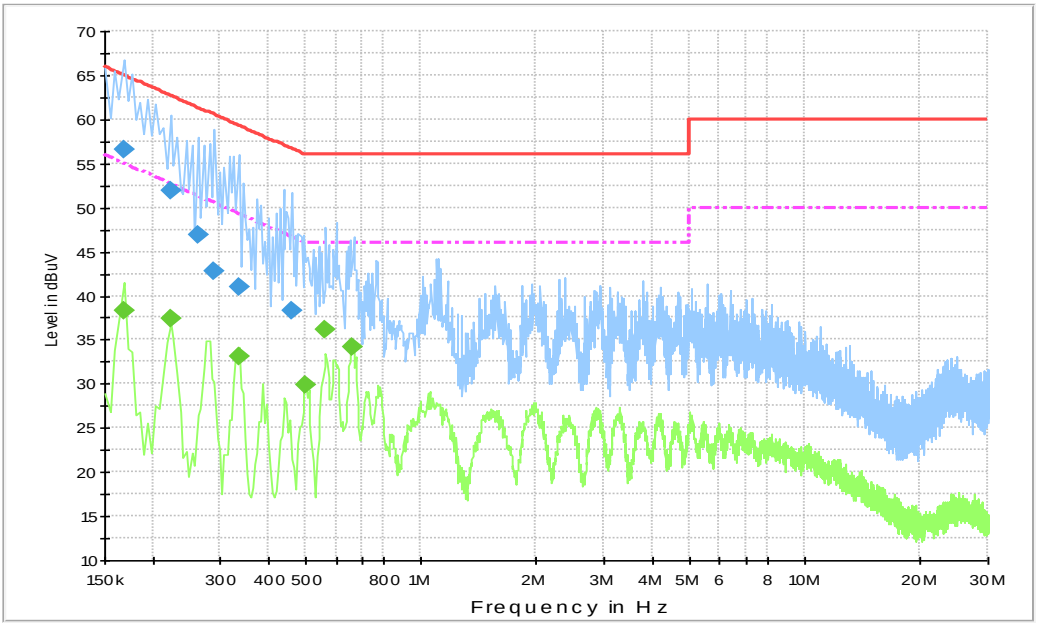

Fig.B.7.1 AC Powerline Conducted Emission-802.11b

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)
0.168000	56.6	5000.	9.000	L1	20.1	8.5	65.1
0.222000	51.9	5000.	9.000	L1	19.9	10.9	62.7
0.262500	46.8	5000.	9.000	L1	19.9	14.5	61.4
0.289500	42.8	5000.	9.000	N	19.9	17.7	60.5
0.334500	40.9	5000.	9.000	L1	19.9	18.4	59.3
0.460500	38.3	5000.	9.000	L1	20.0	18.3	56.7

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.168000	38.3	5000.0	9.000	L1	20.1	16.8	55.1
0.222000	37.4	5000.0	9.000	L1	19.9	15.3	52.7
0.334500	33.2	5000.0	9.000	L1	19.9	16.2	49.3
0.501000	29.8	5000.0	9.000	L1	20.0	16.2	46.0
0.564000	36.2	5000.0	9.000	L1	20.0	9.8	46.0
0.663000	34.2	5000.0	9.000	L1	19.9	11.8	46.0

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Idle:

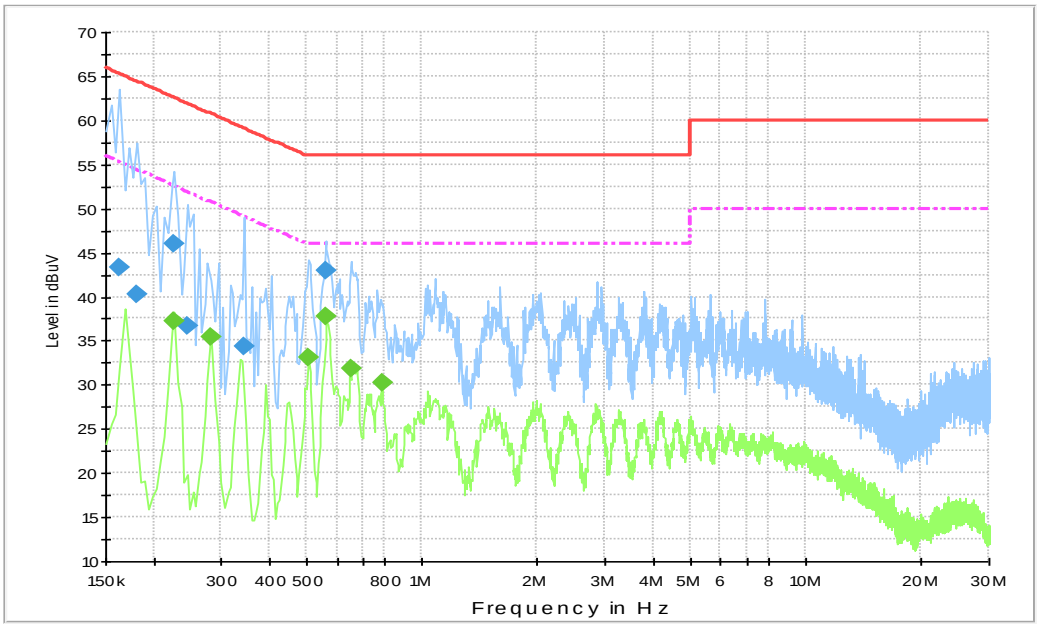

Fig.B.7.2 AC Powerline Conducted Emission-Idle

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)
0.163500	43.3	5000.	9.000	N	20.0	21.9	65.3
0.181500	40.3	5000.	9.000	L1	20.1	24.2	64.4
0.226500	46.0	5000.	9.000	L1	19.9	16.6	62.6
0.244500	36.7	5000.	9.000	N	19.9	25.3	61.9
0.343500	34.4	5000.	9.000	L1	20.0	24.7	59.1
0.559500	42.9	5000.	9.000	L1	20.0	13.1	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.226500	37.3	5000.0	9.000	L1	19.9	15.3	52.6
0.280500	35.4	5000.0	9.000	L1	19.9	15.4	50.8
0.505500	33.1	5000.0	9.000	L1	20.0	12.9	46.0
0.564000	37.7	5000.0	9.000	L1	20.0	8.3	46.0
0.658500	31.9	5000.0	9.000	L1	19.9	14.1	46.0
0.789000	30.2	5000.0	9.000	L1	19.9	15.8	46.0

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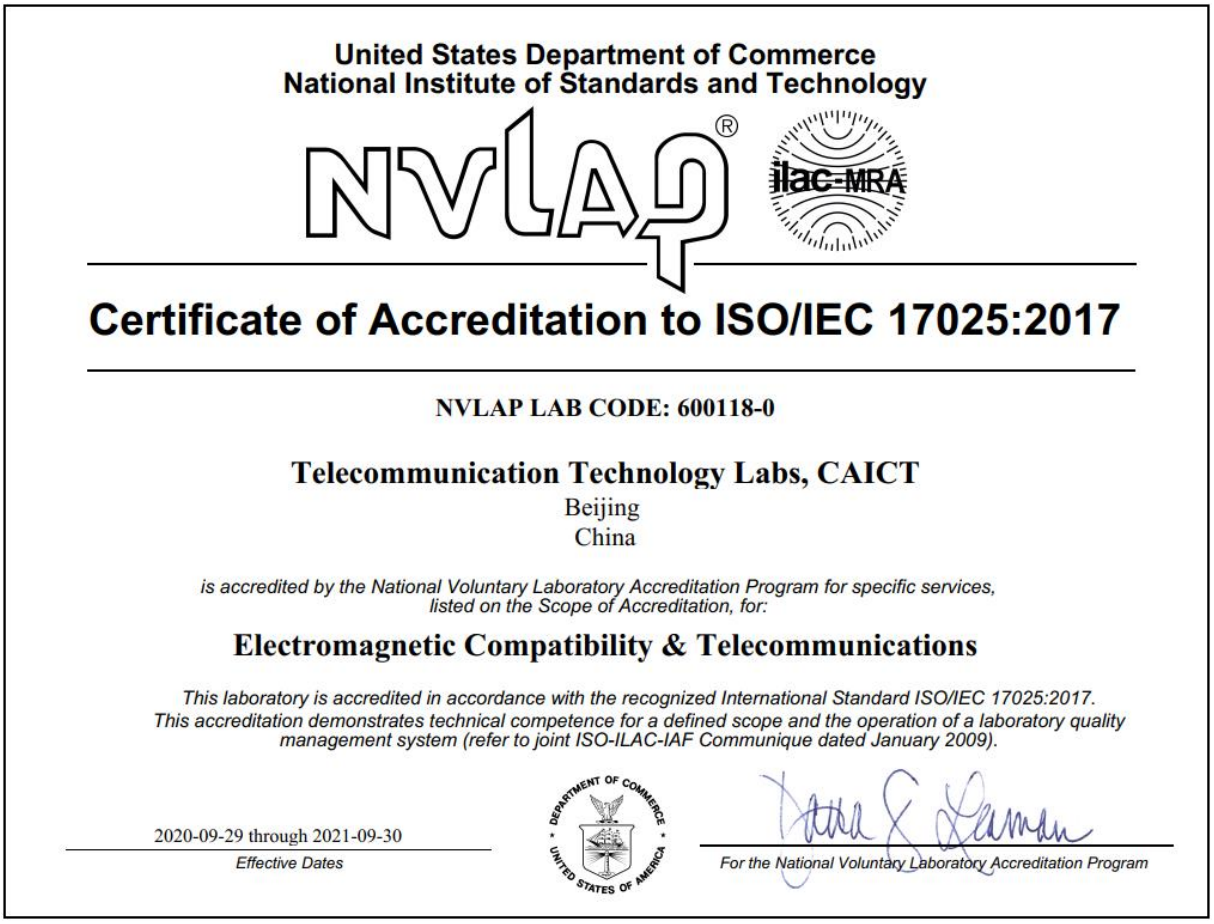
ANNEX C: Accreditation Certificate



United States Department of Commerce
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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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