

Fig.A.6.1.33 Transmitter Spurious Emission - Conducted (802.11g, Ch6, Center Frequency)

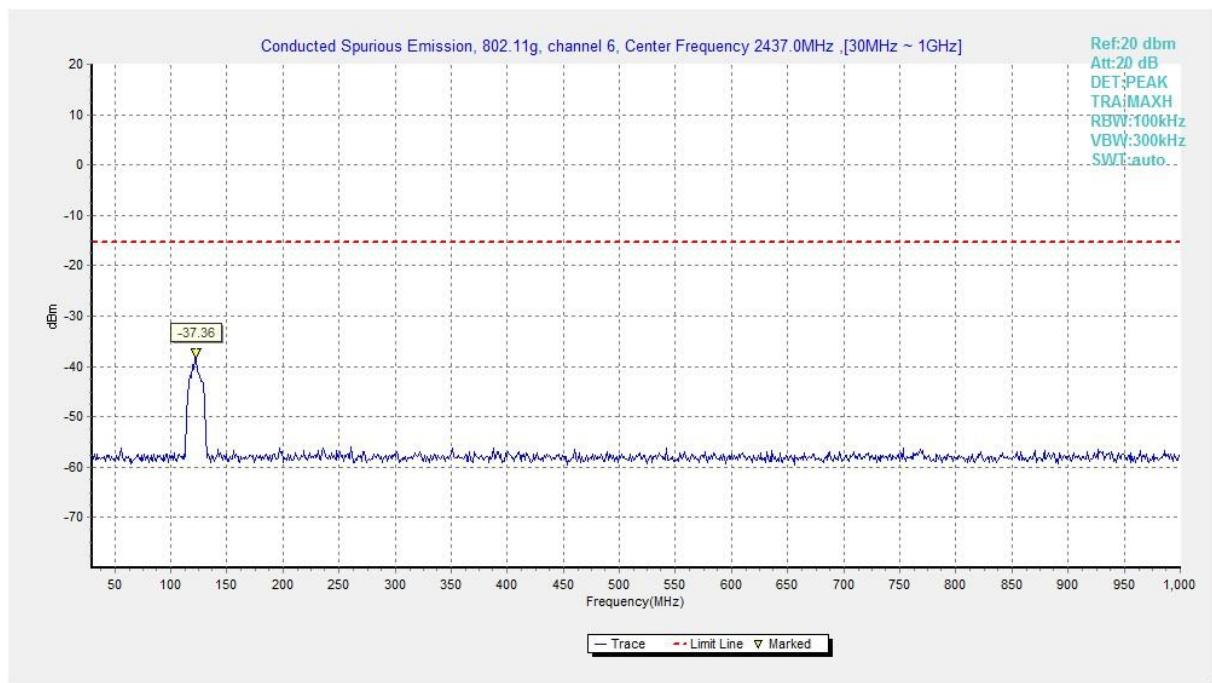


Fig.A.6.1.34 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 30 MHz-1 GHz)

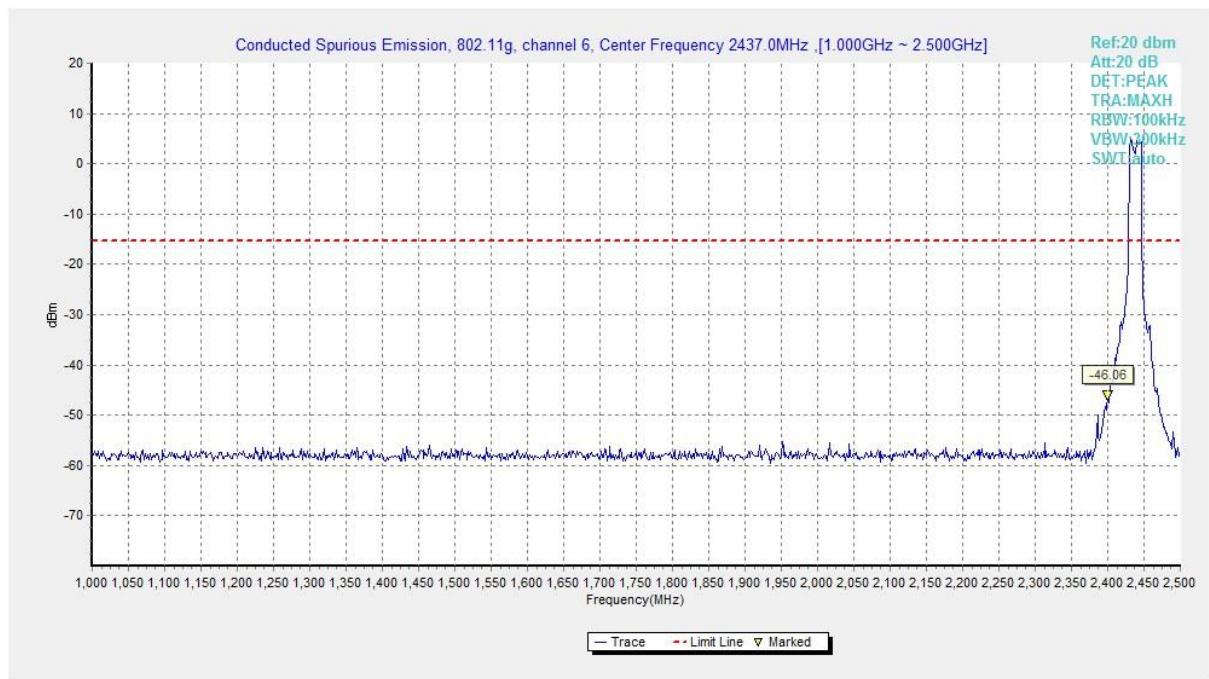


Fig.A.6.1.35 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 1 GHz-2.5 GHz)

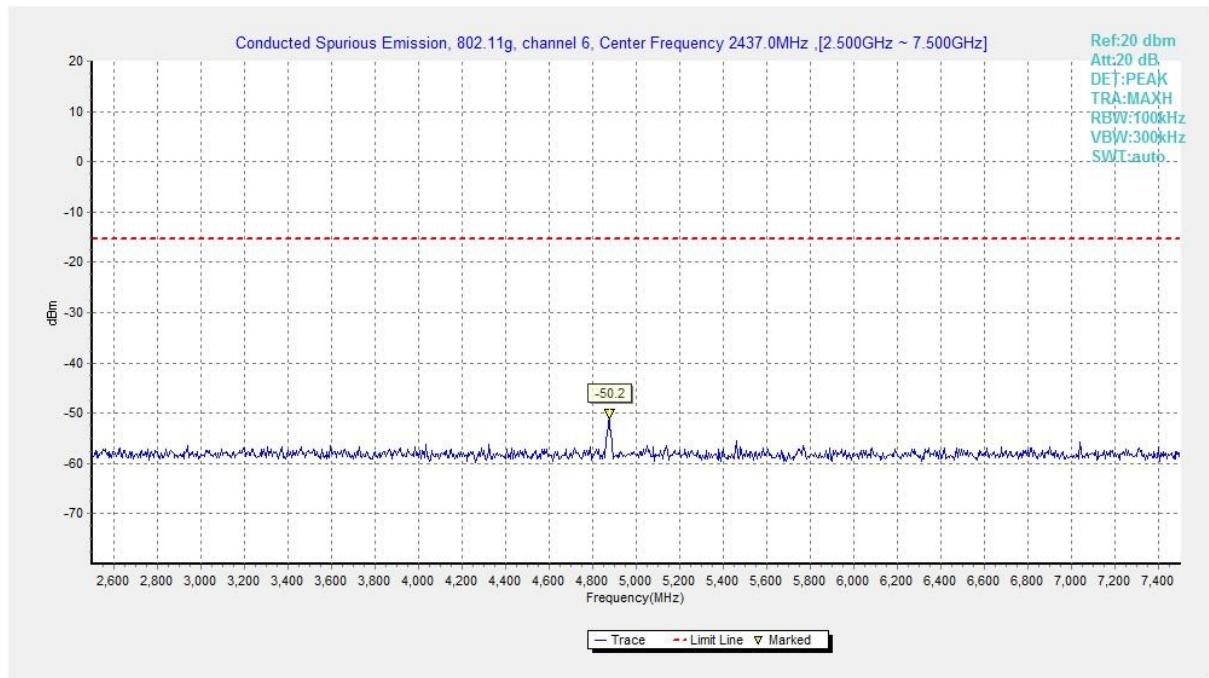


Fig.A.6.1.36 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 2.5 GHz-7.5 GHz)

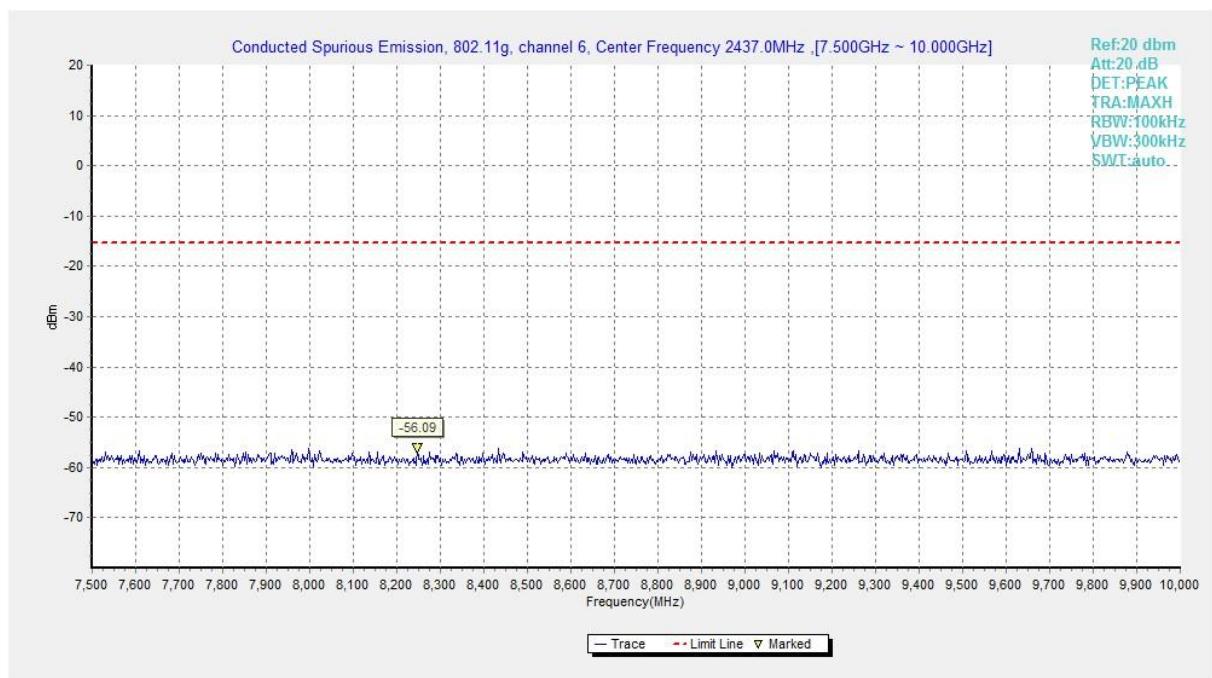


Fig.A.6.1.37 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 7.5 GHz-10 GHz)

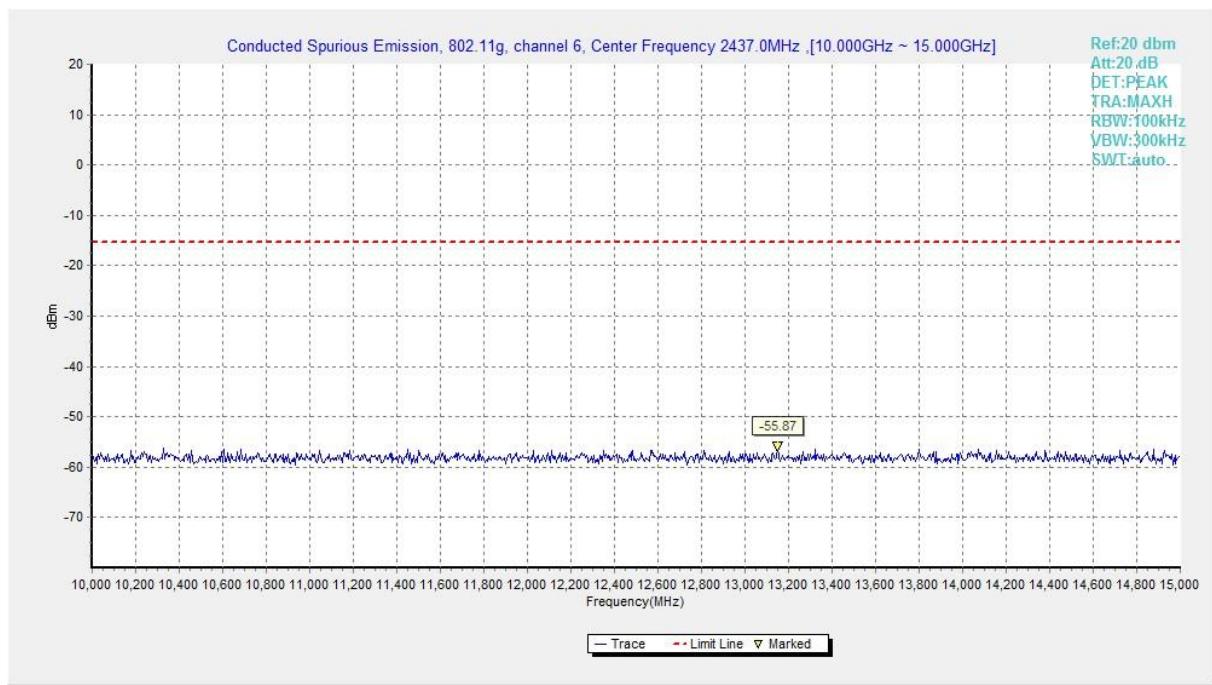


Fig.A.6.1.38 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 10 GHz-15 GHz)

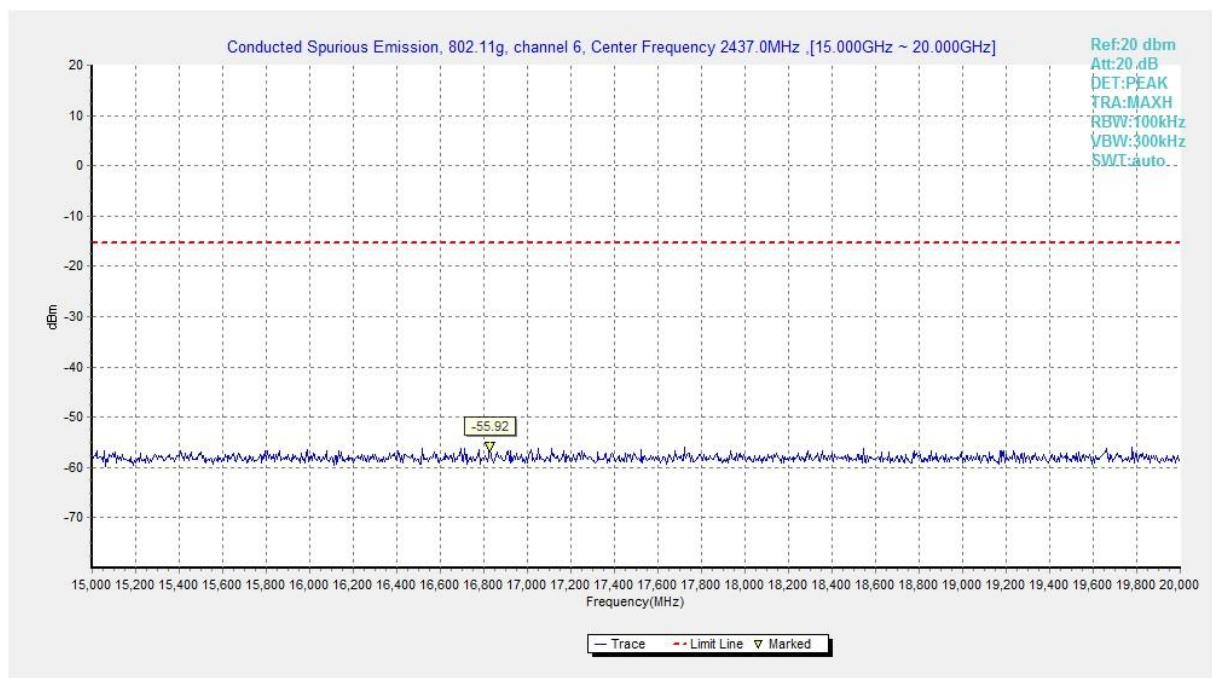


Fig.A.6.1.39 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 15 GHz-20 GHz)

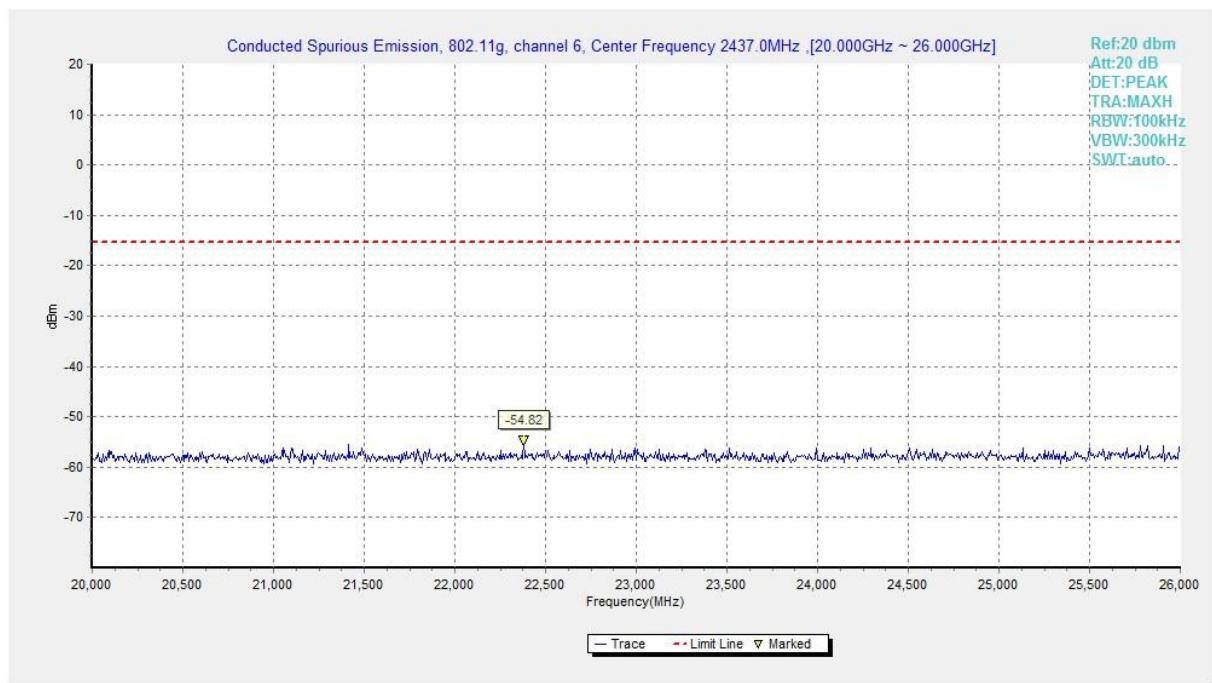


Fig.A.6.1.40 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 20 GHz-26 GHz)

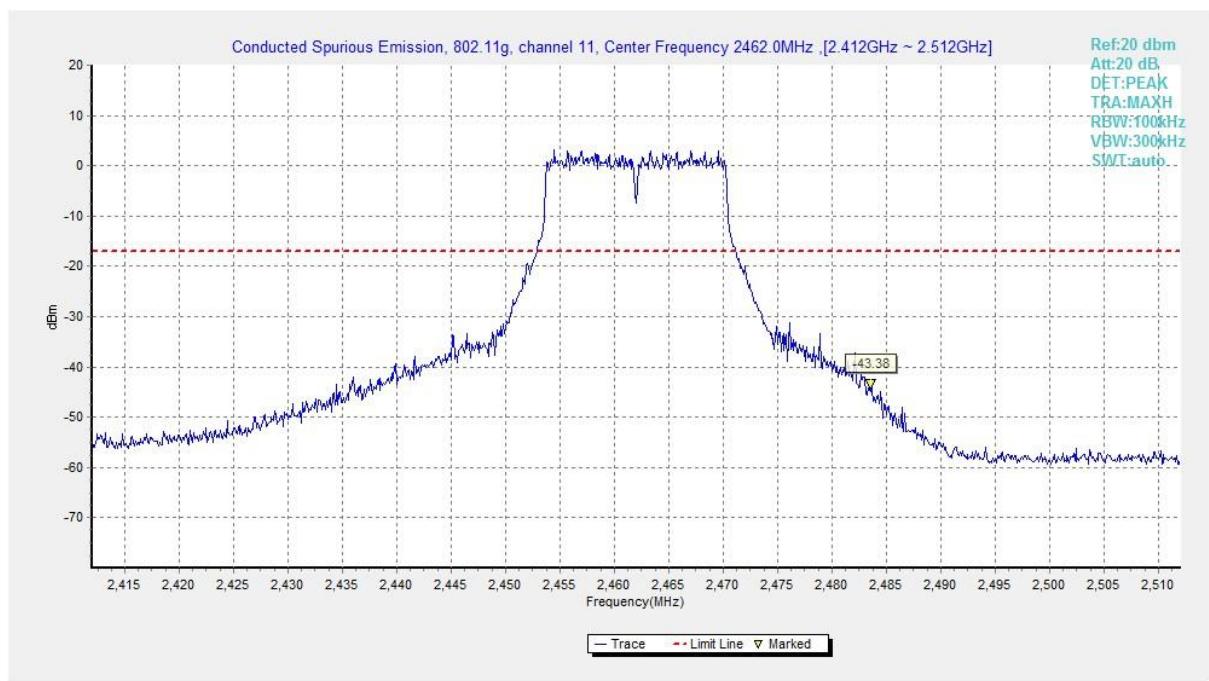


Fig.A.6.1.41 Transmitter Spurious Emission - Conducted (802.11g, Ch11, Center Frequency)

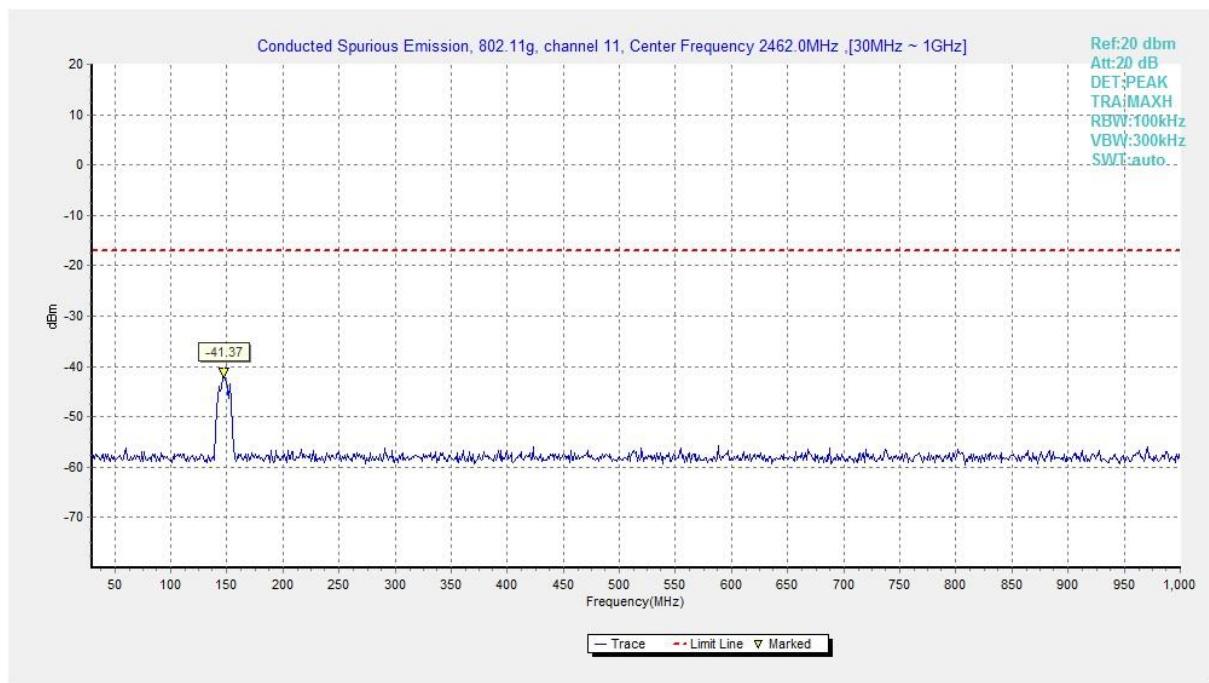


Fig.A.6.1.42 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 30 MHz-1 GHz)

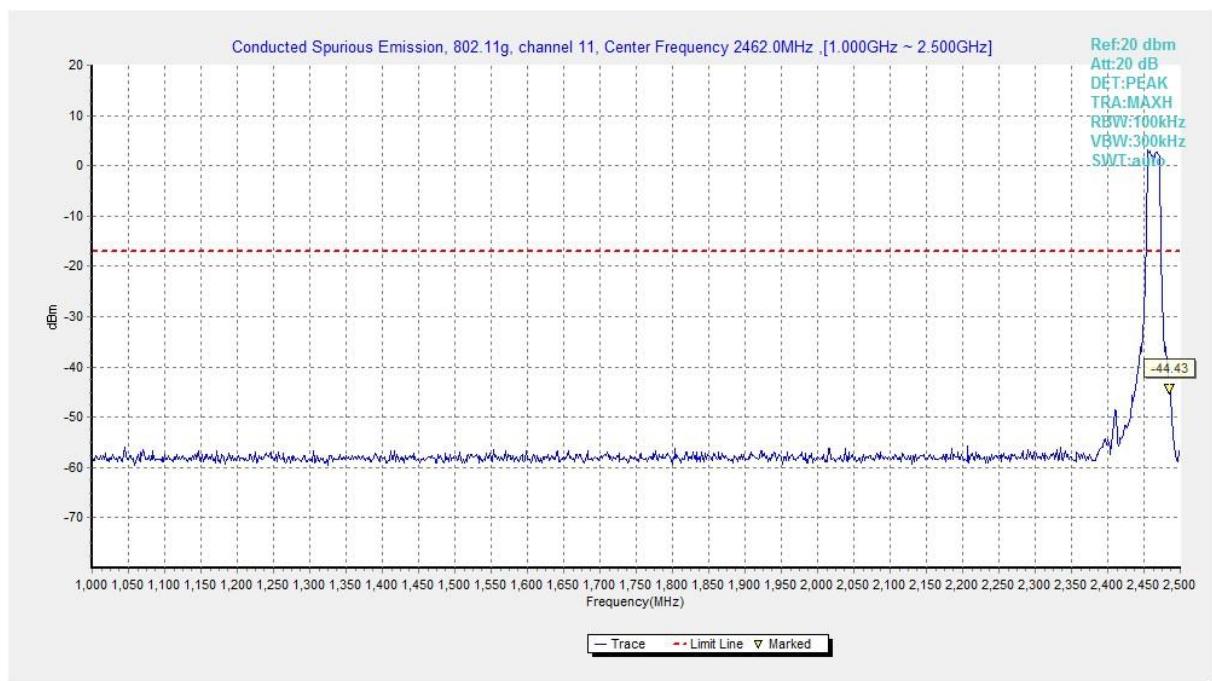


Fig.A.6.1.43 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 1 GHz-2.5 GHz)

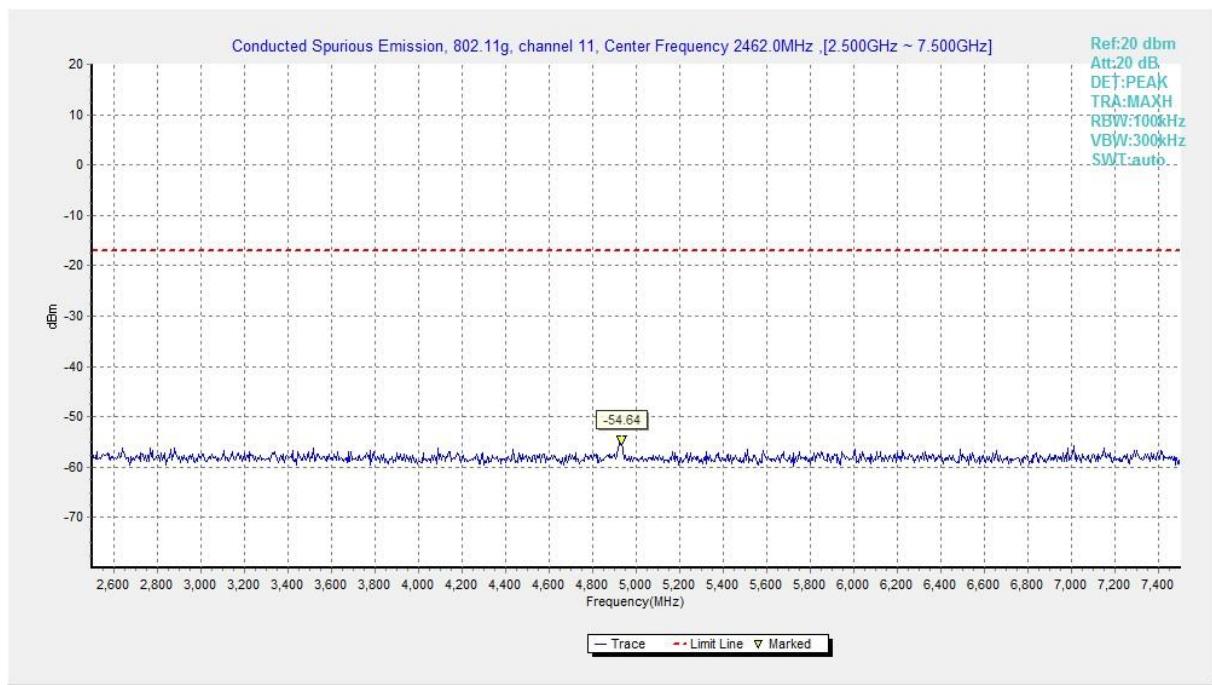


Fig.A.6.1.44 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 2.5 GHz-7.5 GHz)

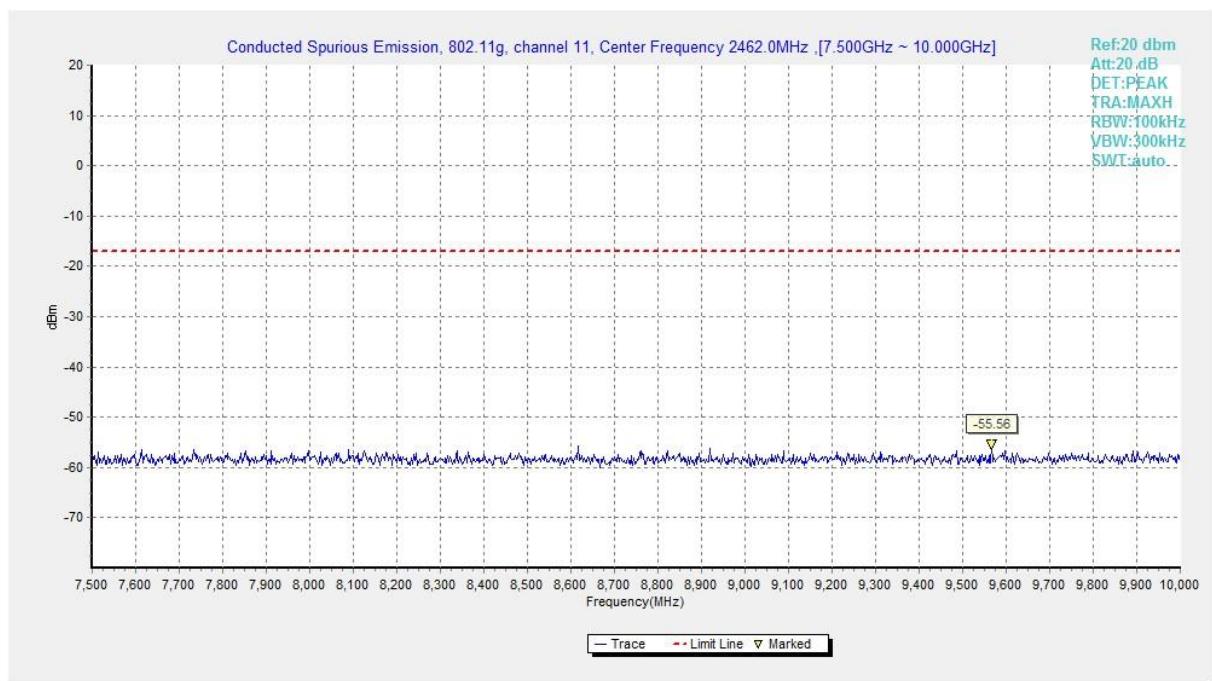


Fig.A.6.1.45 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 7.5 GHz-10 GHz)

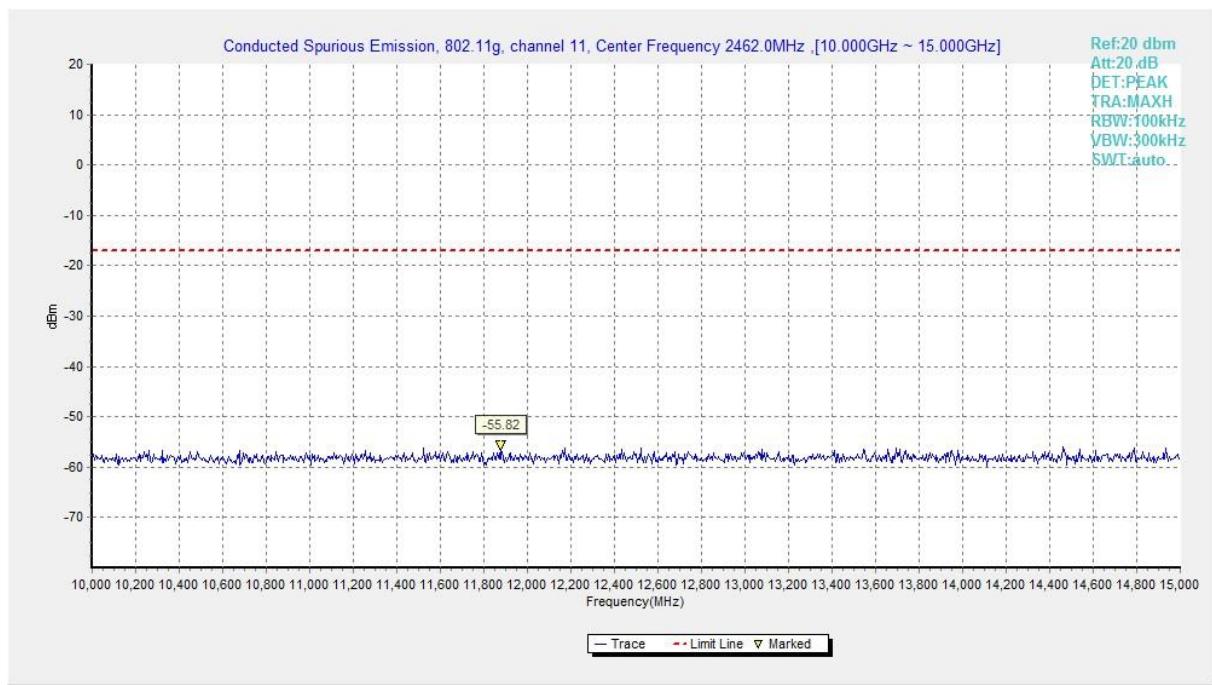


Fig.A.6.1.46 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 10 GHz-15 GHz)

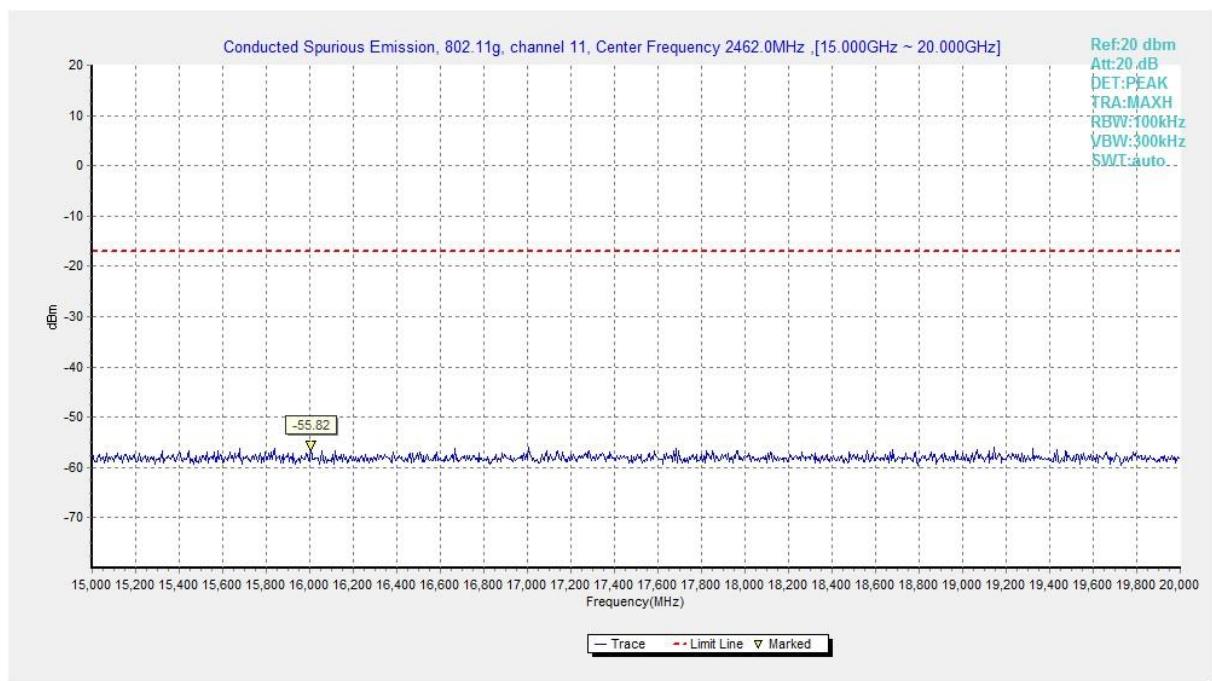


Fig.A.6.1.47 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 15 GHz-20 GHz)

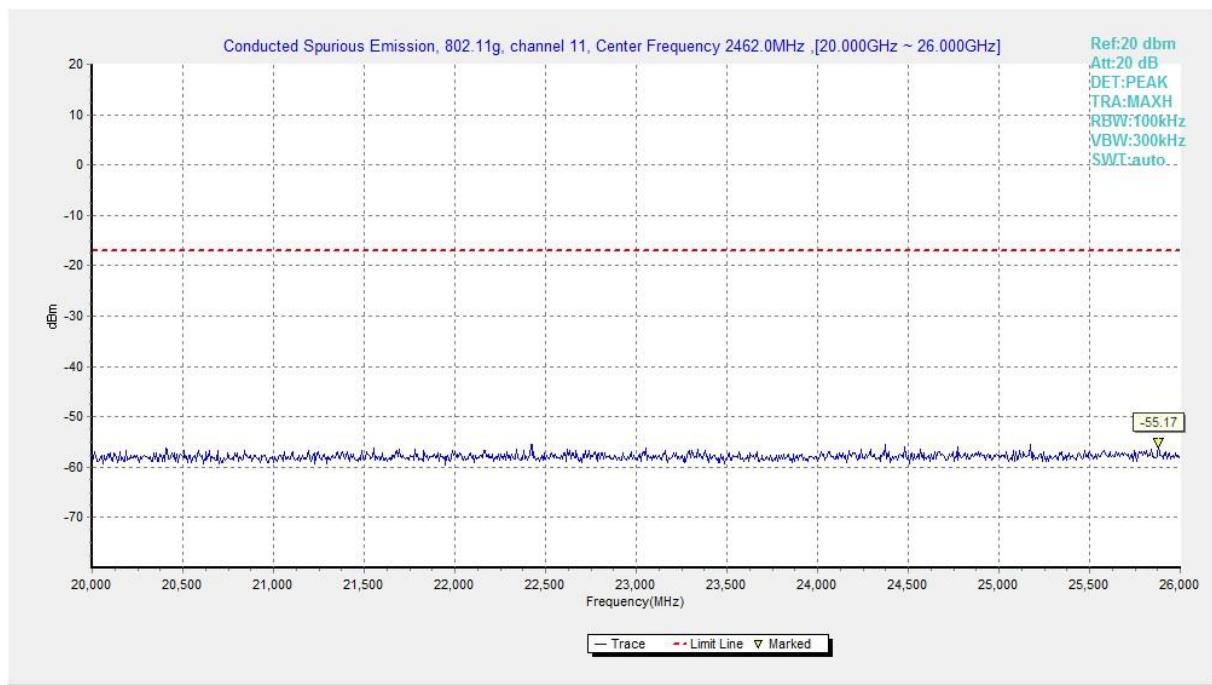


Fig.A.6.1.48 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 20 GHz-26 GHz)

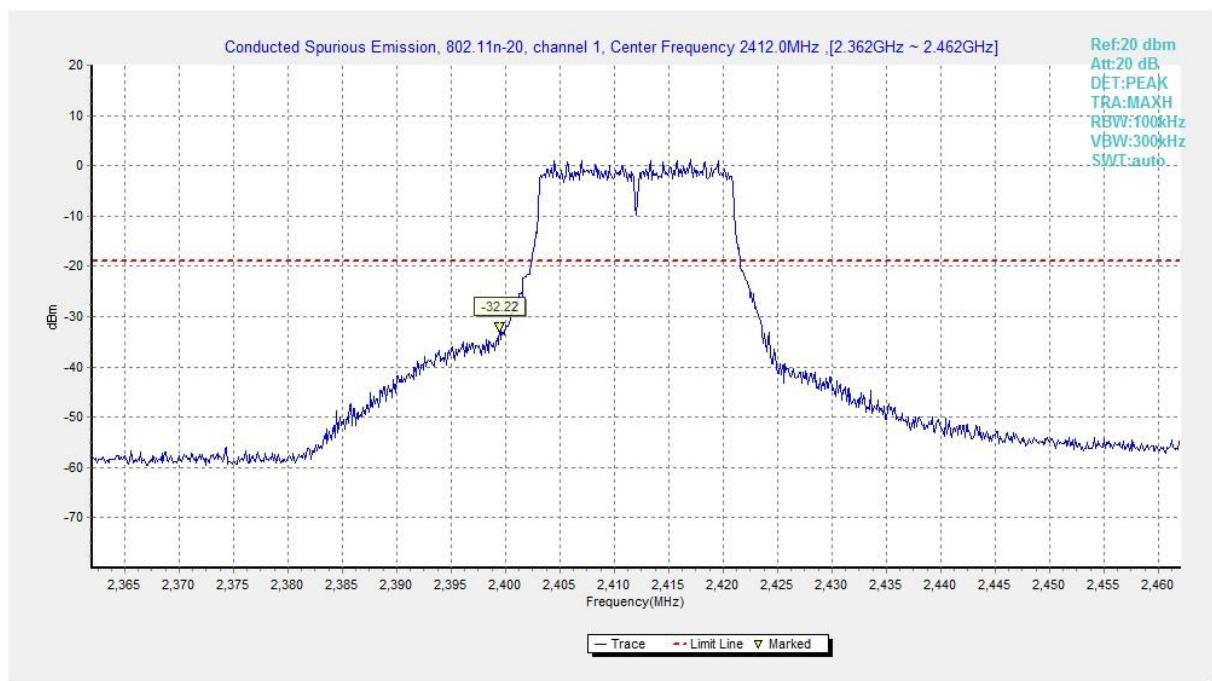


Fig.A.6.1.49 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, Center Frequency)

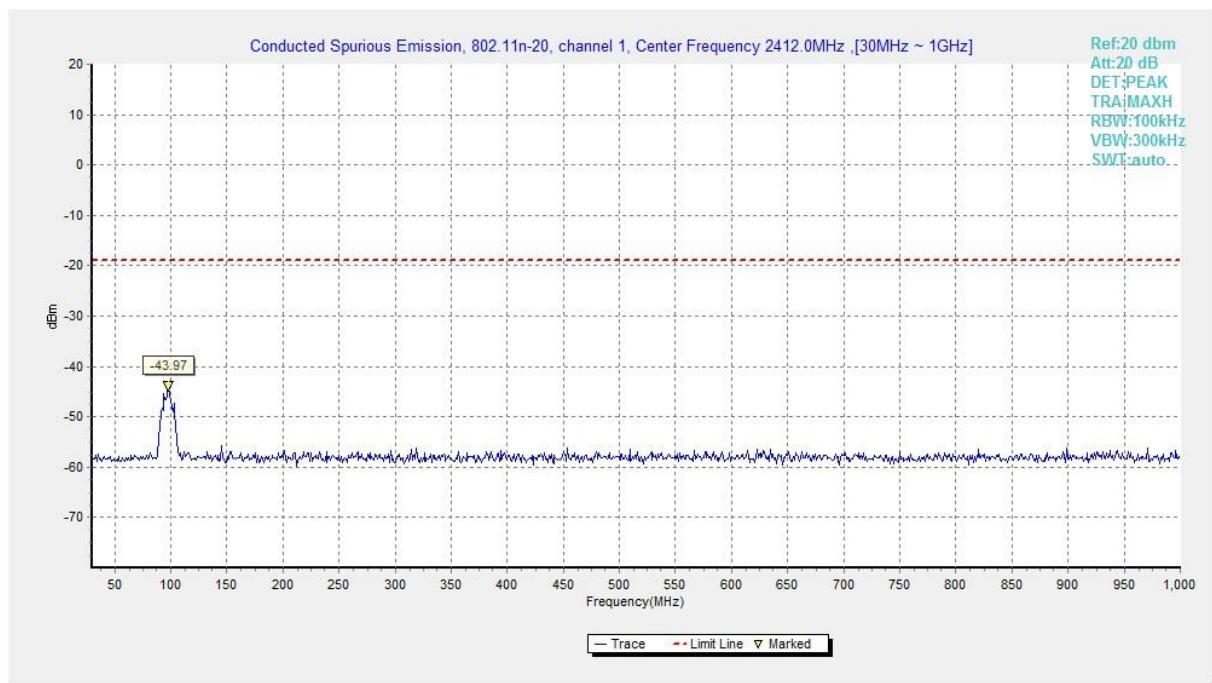


Fig.A.6.1.50 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 30 MHz-1 GHz)

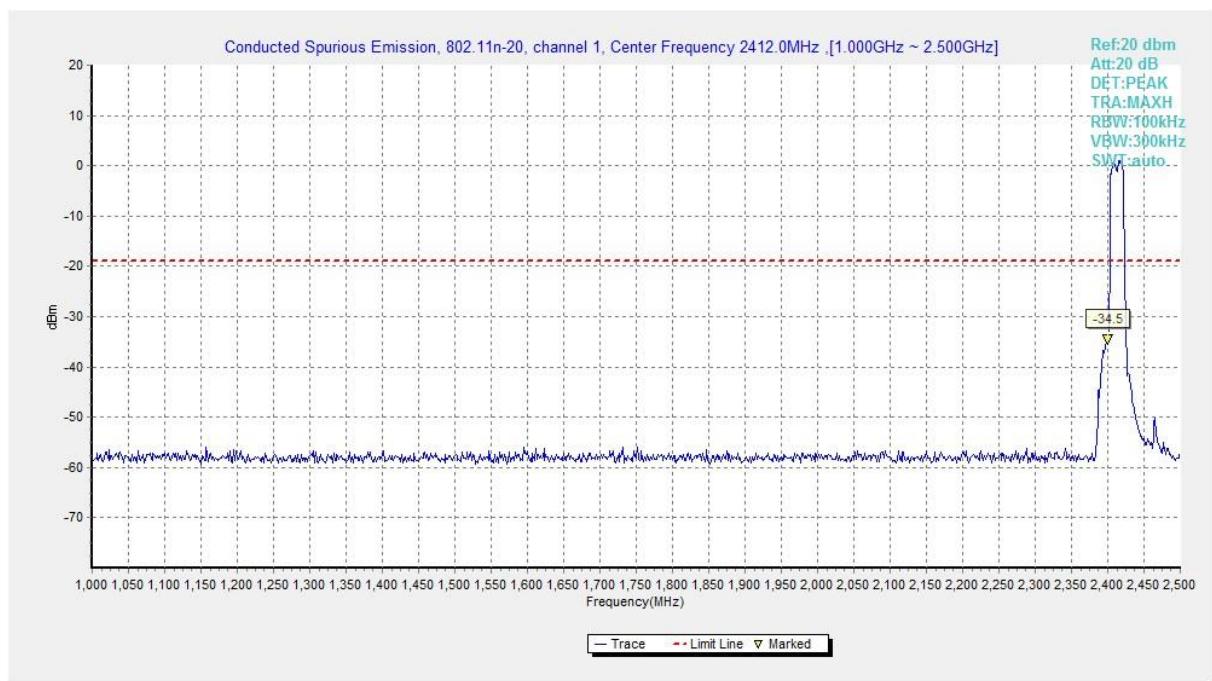


Fig.A.6.1.51 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 1 GHz-2.5 GHz)

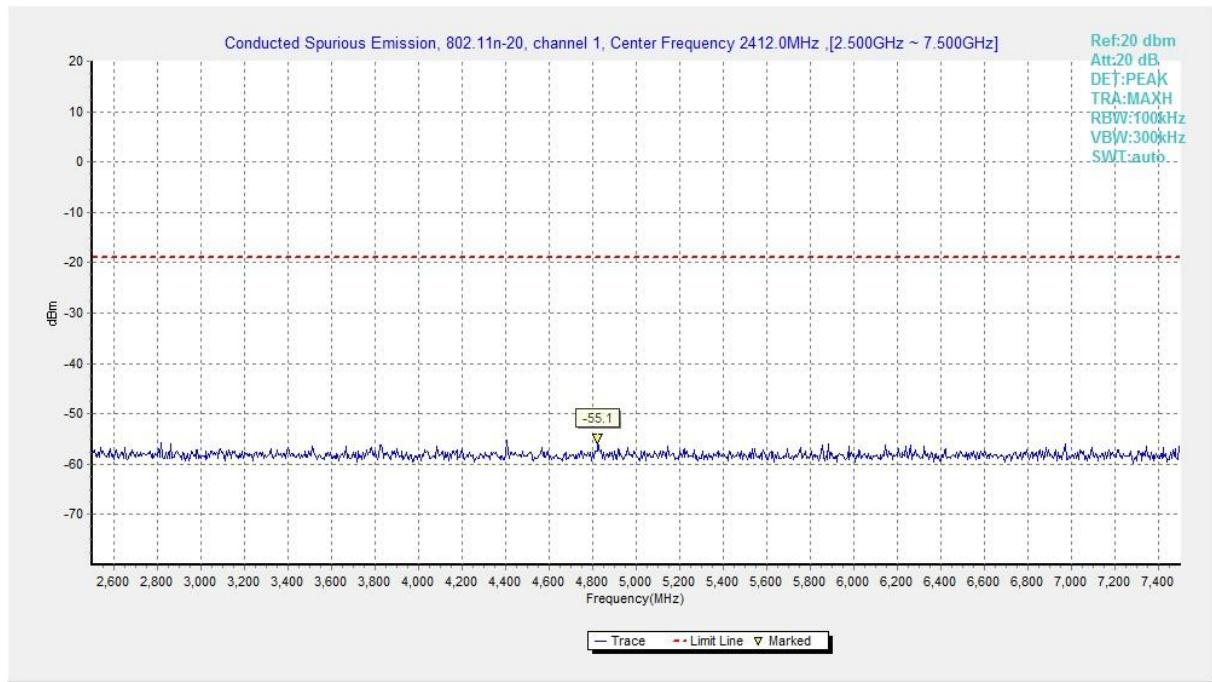


Fig.A.6.1.52 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 2.5 GHz-7.5 GHz)

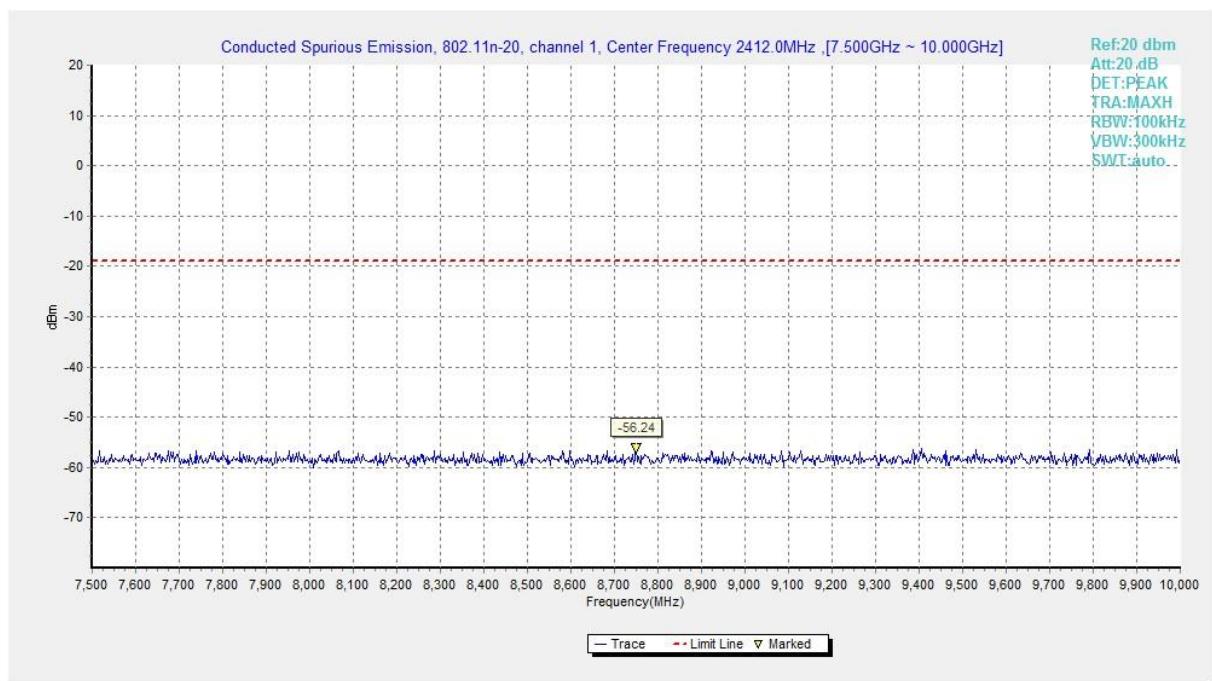


Fig.A.6.1.53 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 7.5 GHz-10 GHz)

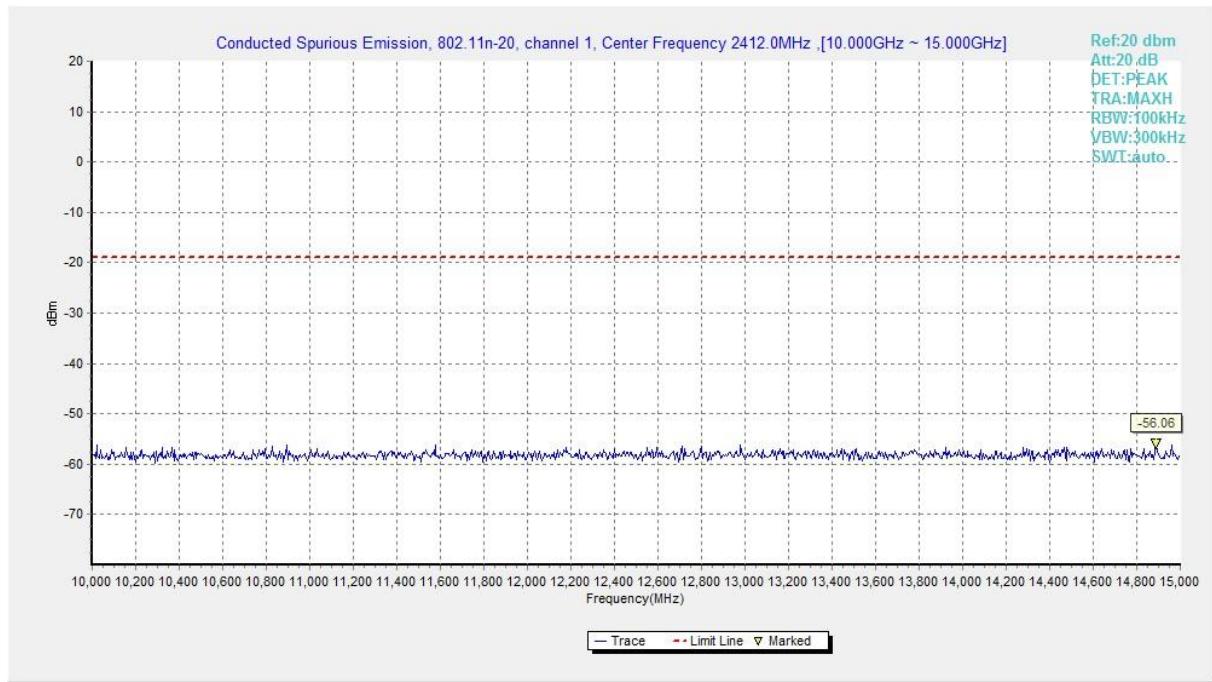


Fig.A.6.1.54 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 10 GHz-15 GHz)

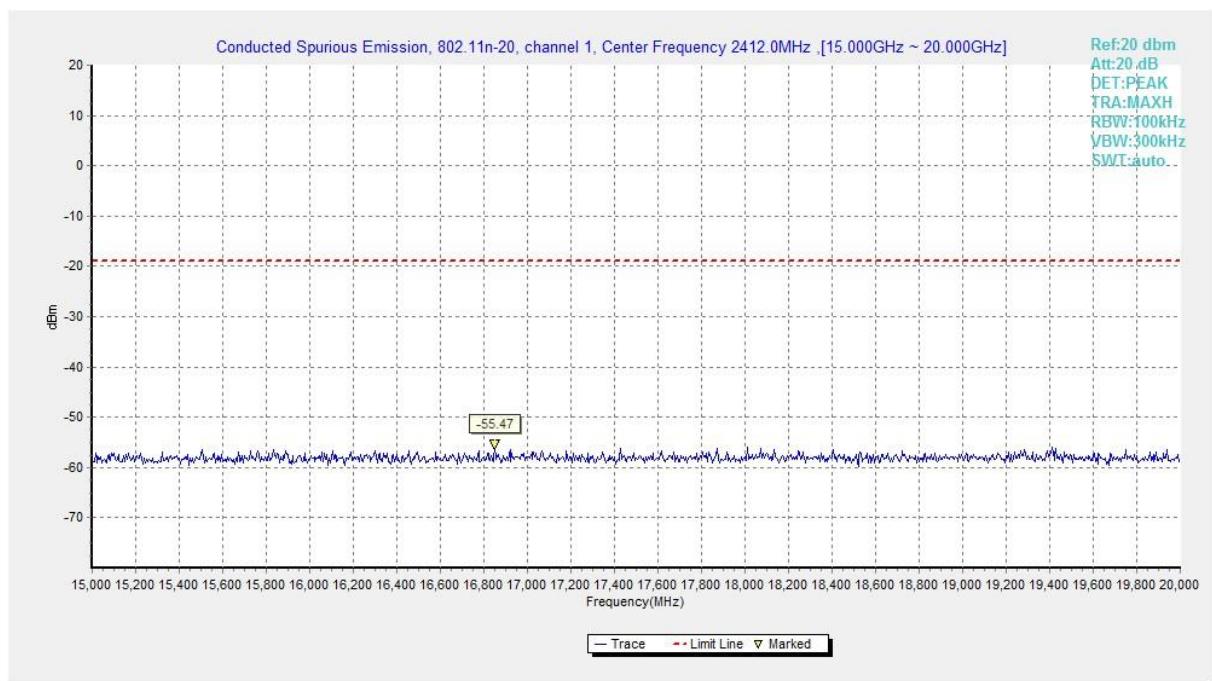


Fig.A.6.1.55 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 15 GHz-20 GHz)

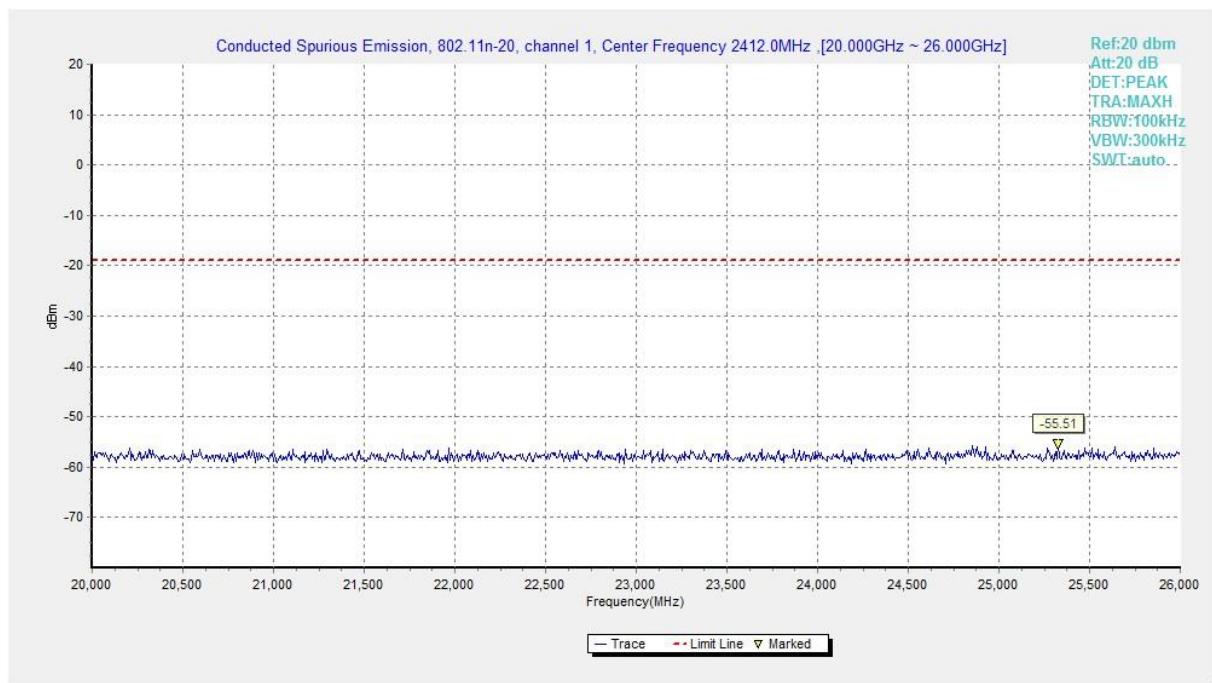


Fig.A.6.1.56 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 20 GHz-26 GHz)

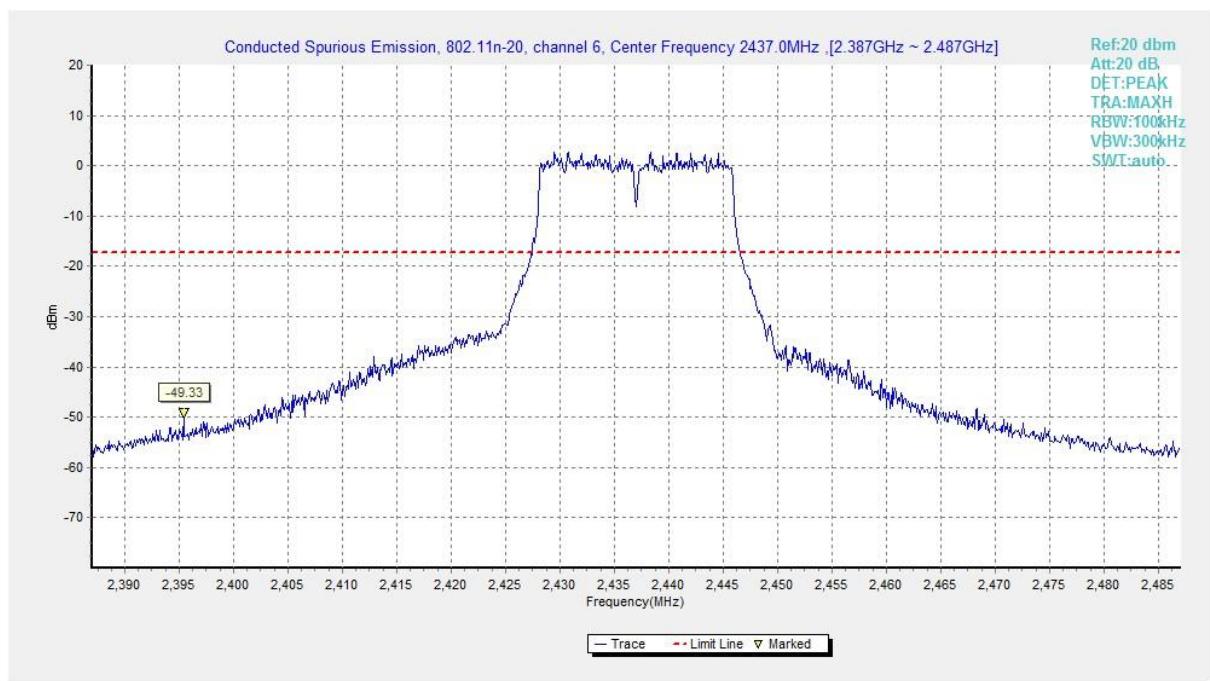


Fig.A.6.1.57 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, Center Frequency)

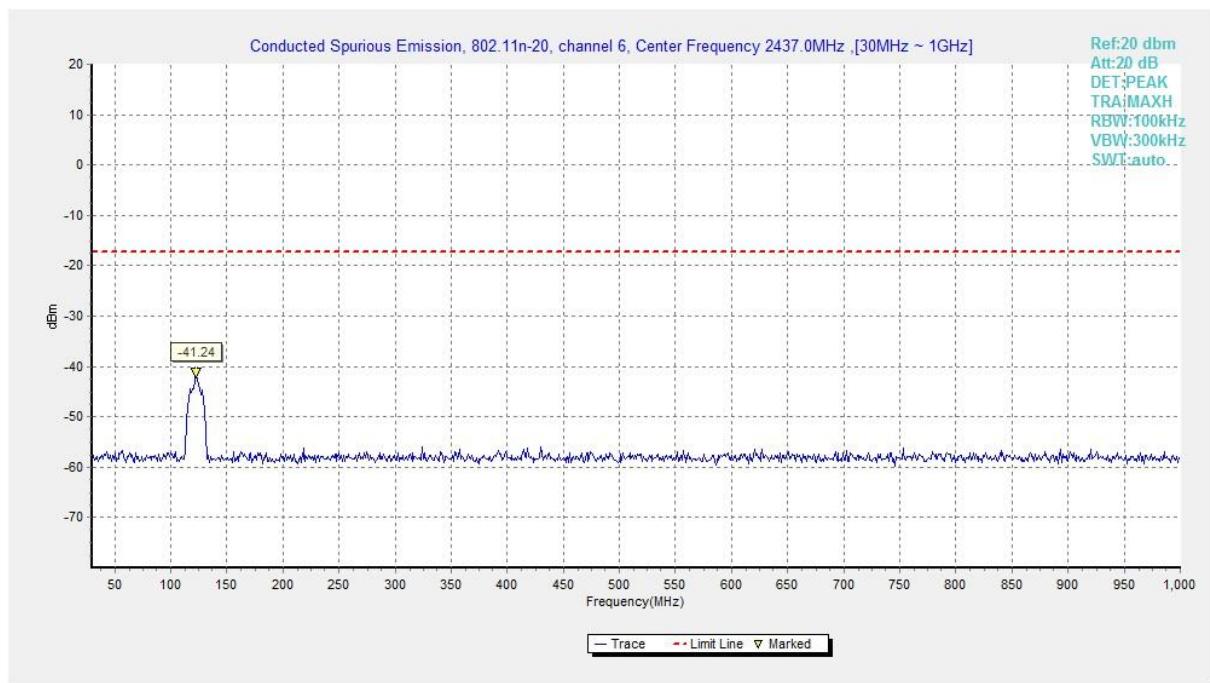


Fig.A.6.1.58 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 30 MHz-1 GHz)

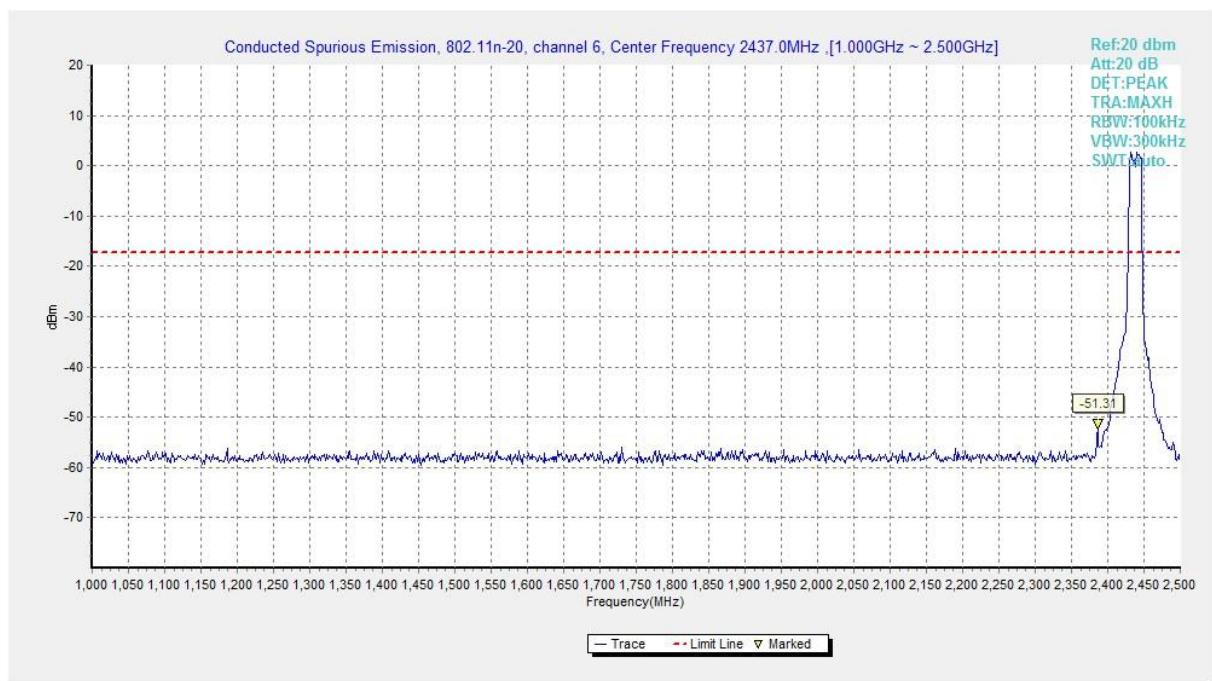


Fig.A.6.1.59 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 1 GHz-2.5 GHz)

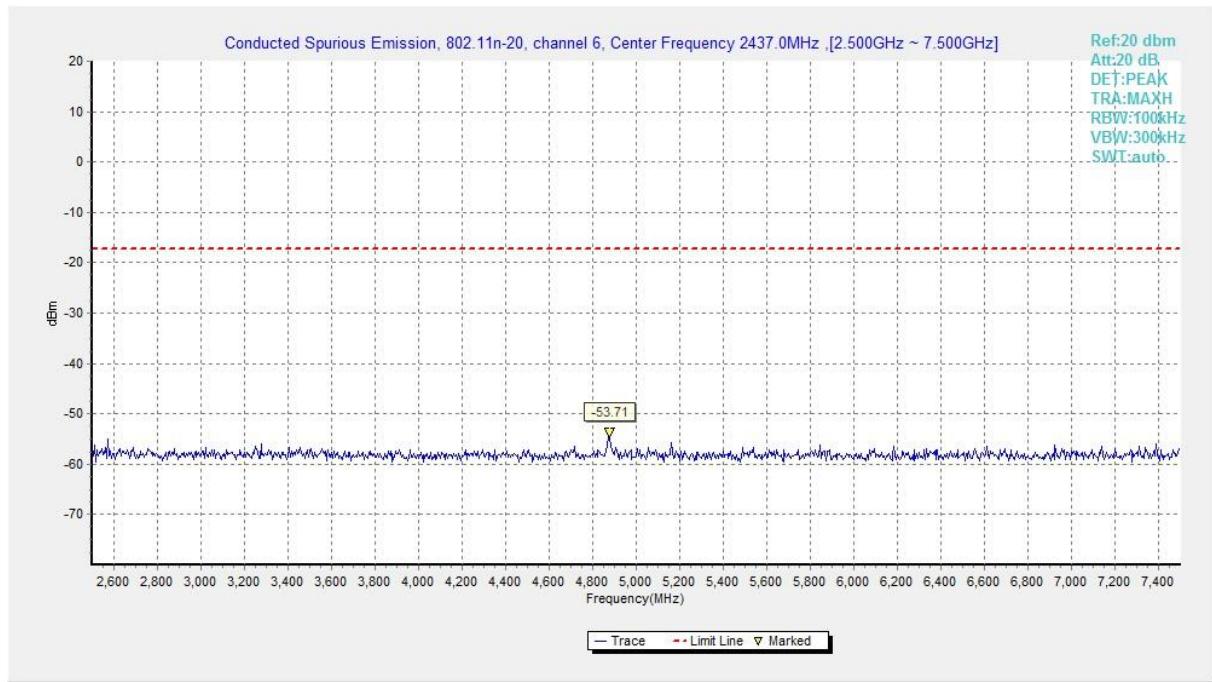


Fig.A.6.1.60 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 2.5 GHz-7.5 GHz)

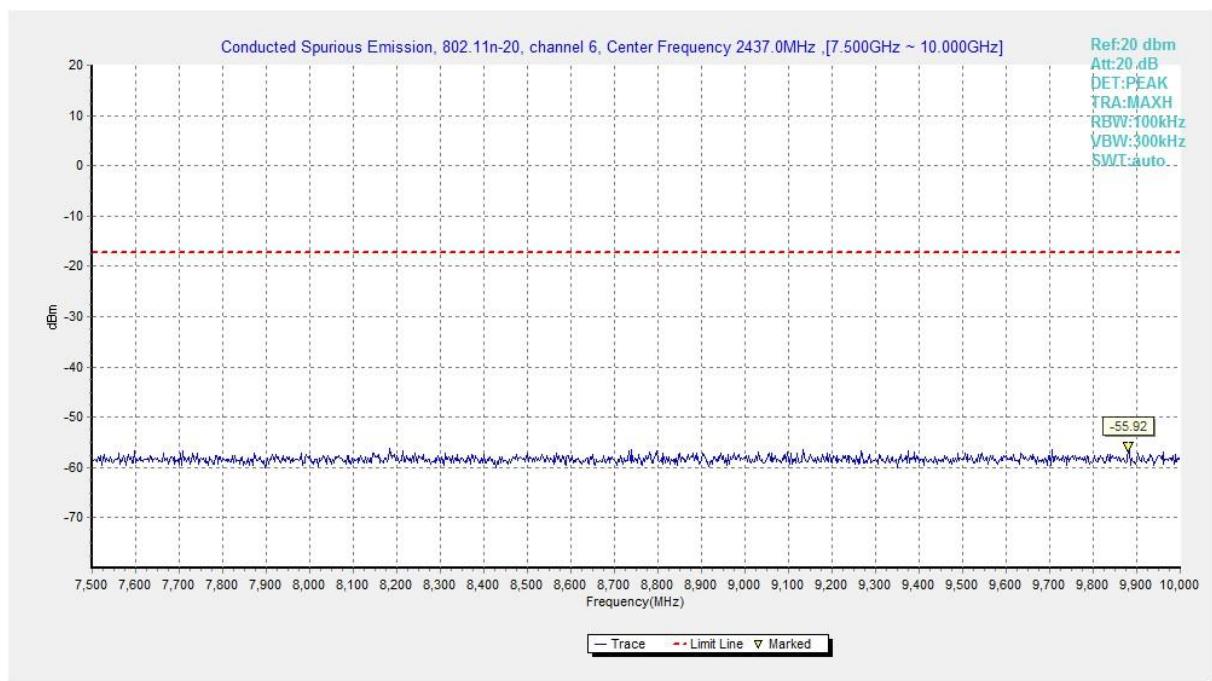


Fig.A.6.1.61 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 7.5 GHz-10 GHz)

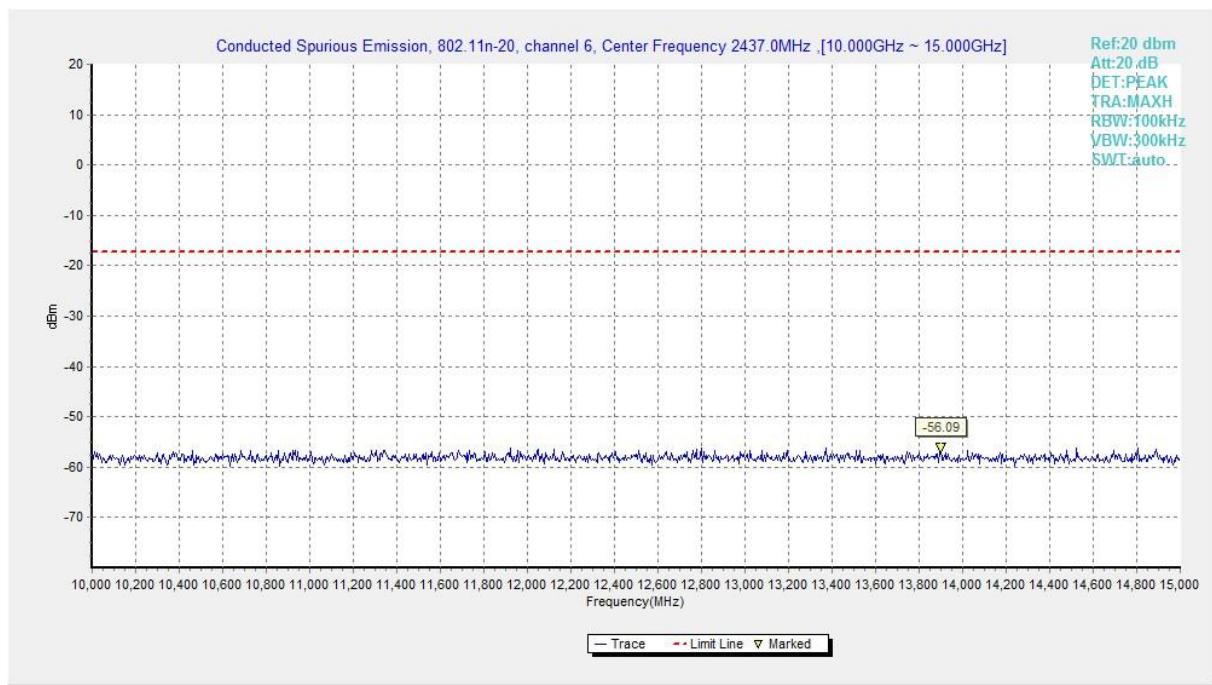


Fig.A.6.1.62 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 10 GHz-15 GHz)

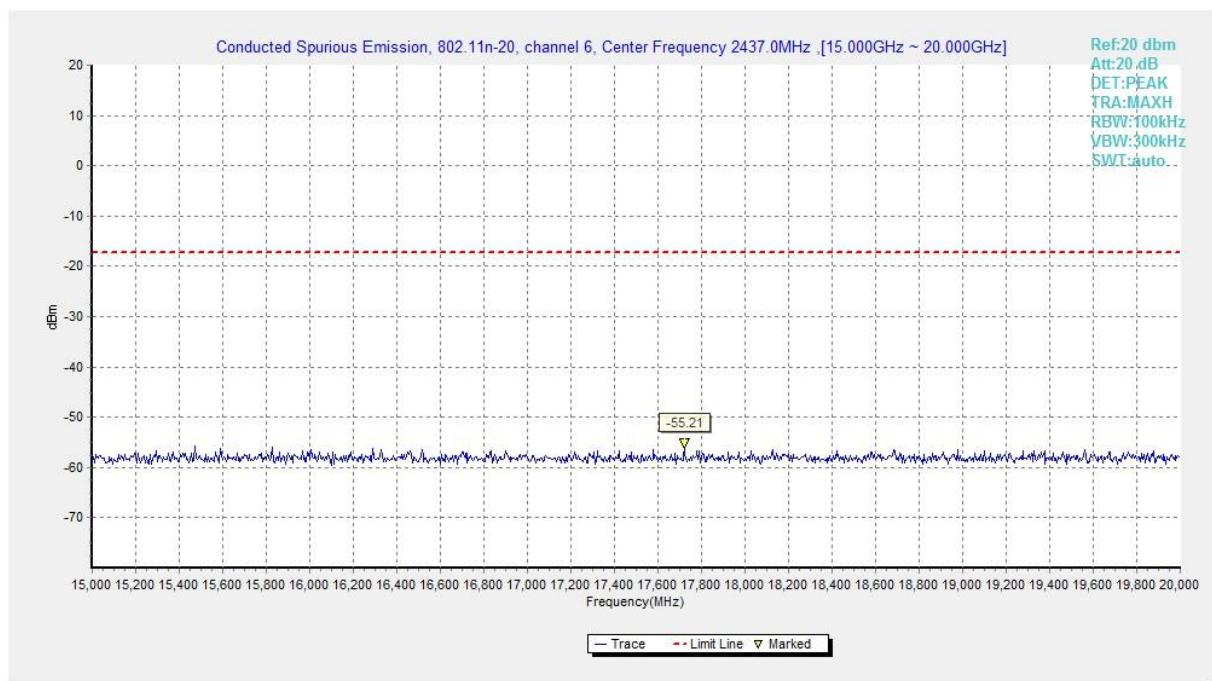


Fig.A.6.1.63 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 15 GHz-20 GHz)

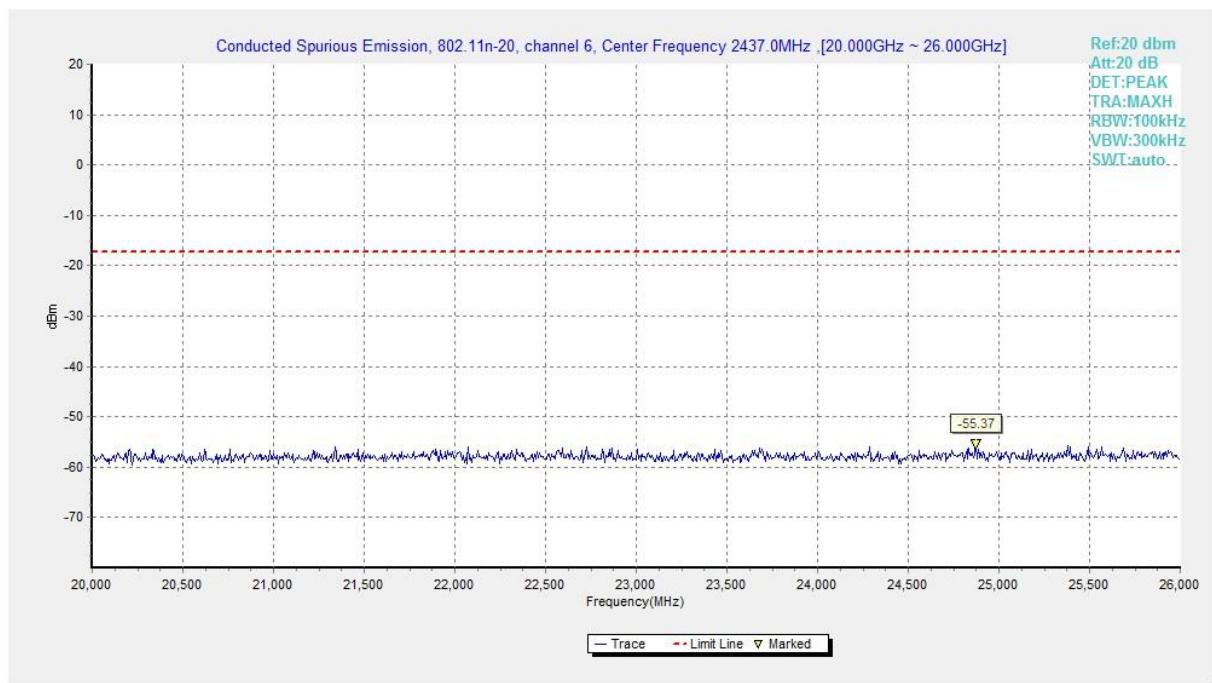


Fig.A.6.1.64 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 20 GHz-26 GHz)

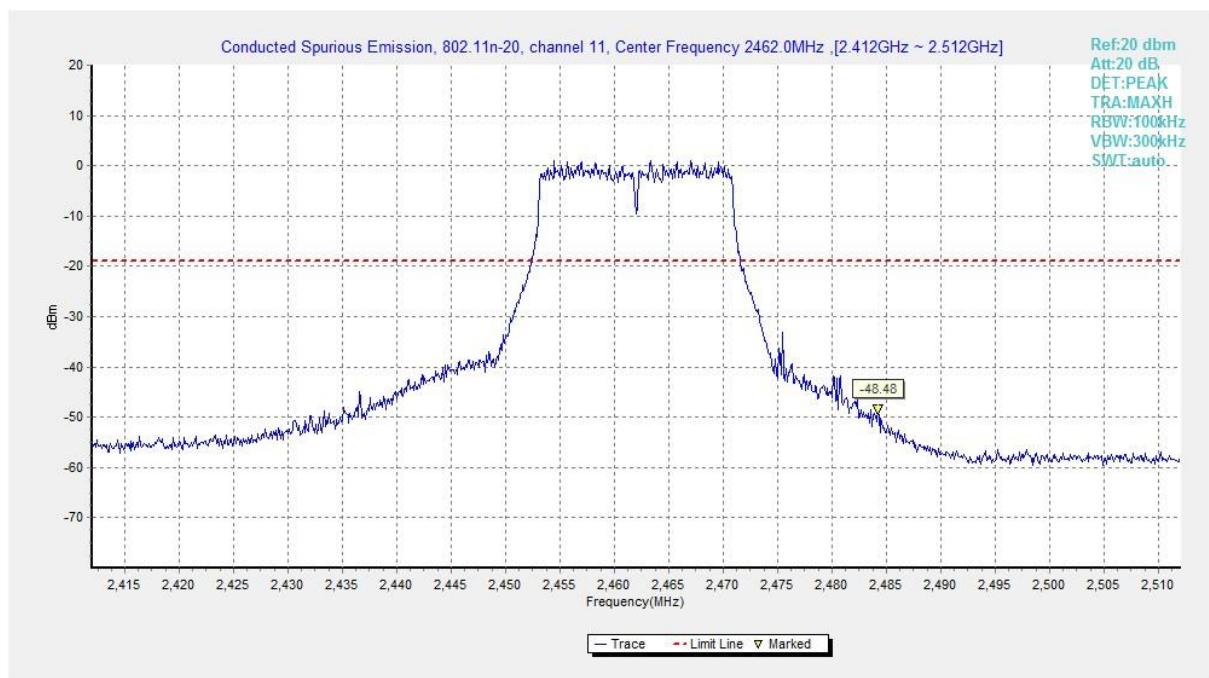


Fig.A.6.1.65 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, Center Frequency)

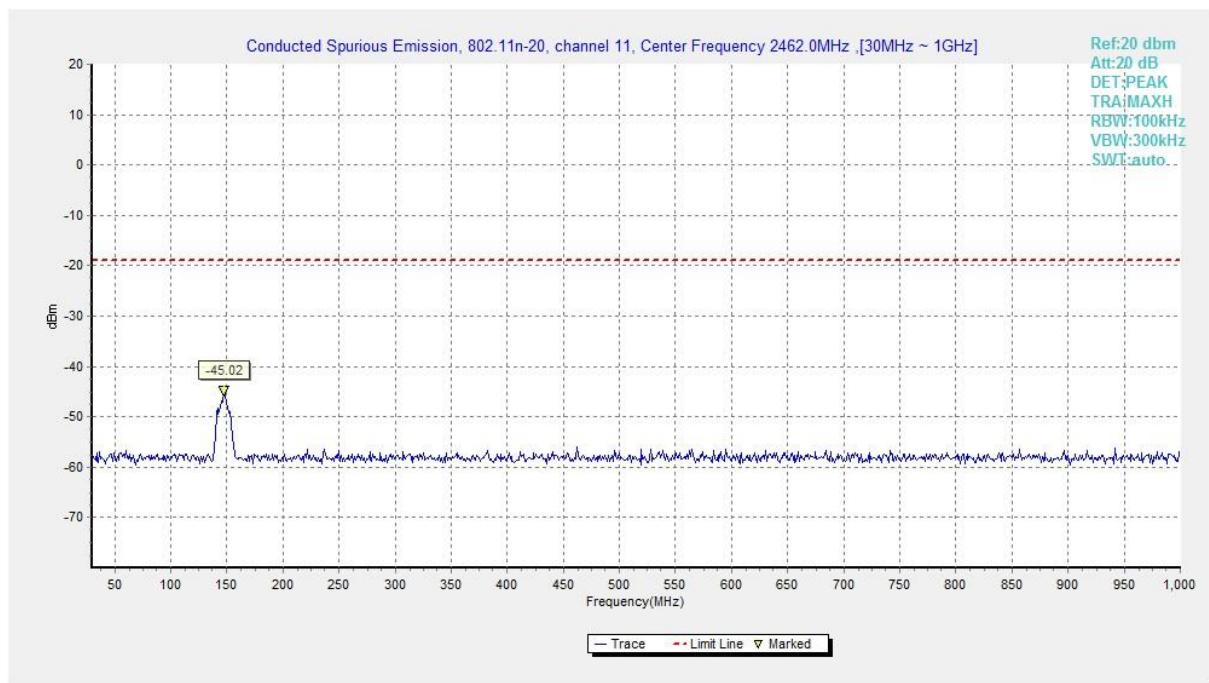


Fig.A.6.1.66 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 30 MHz-1 GHz)

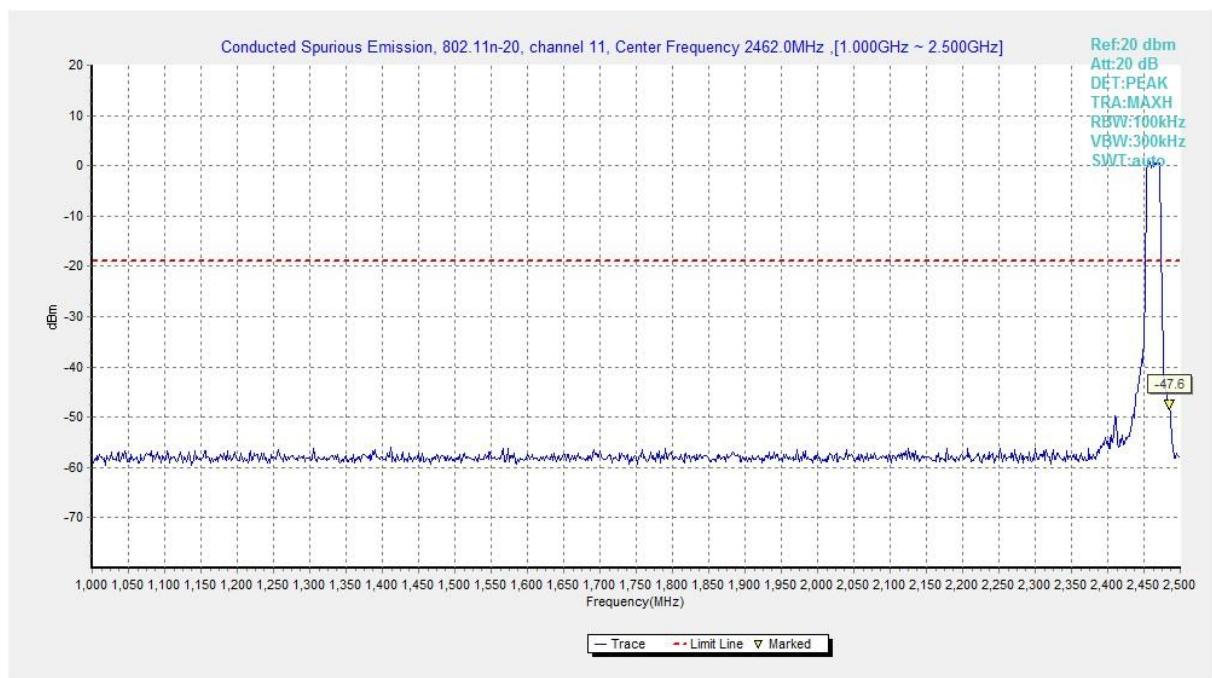


Fig.A.6.1.67 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 1 GHz-2.5 GHz)

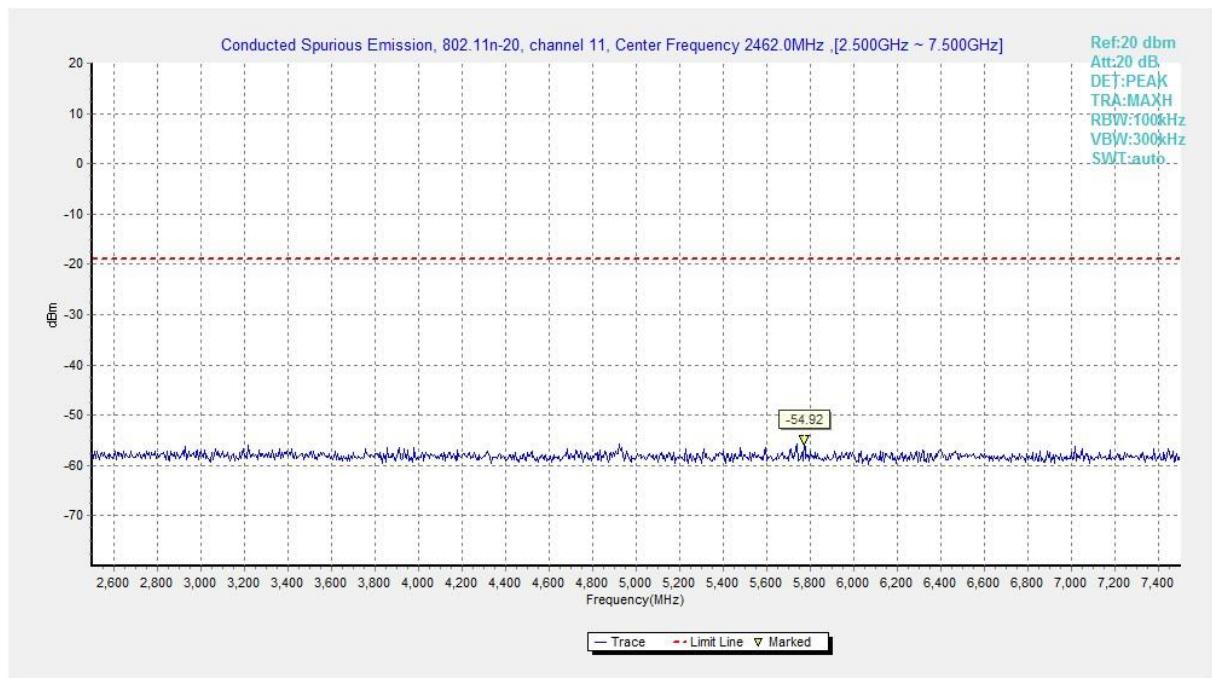


Fig.A.6.1.68 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 2.5 GHz-7.5 GHz)

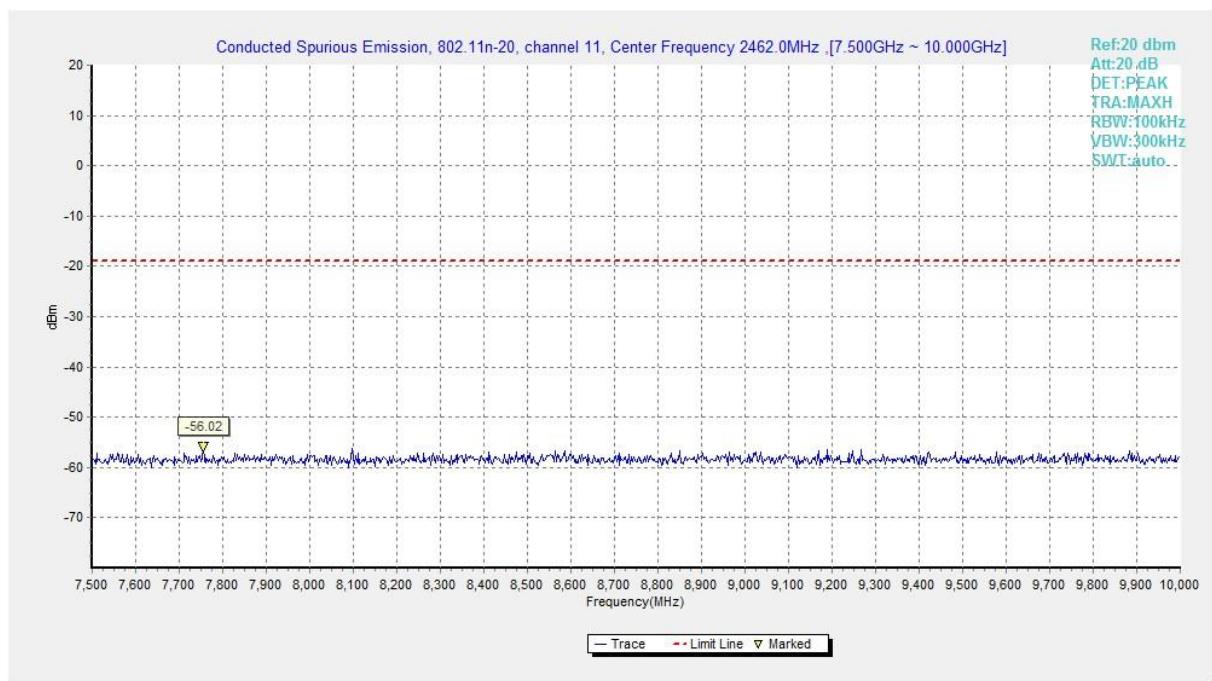


Fig.A.6.1.69 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 7.5 GHz-10 GHz)

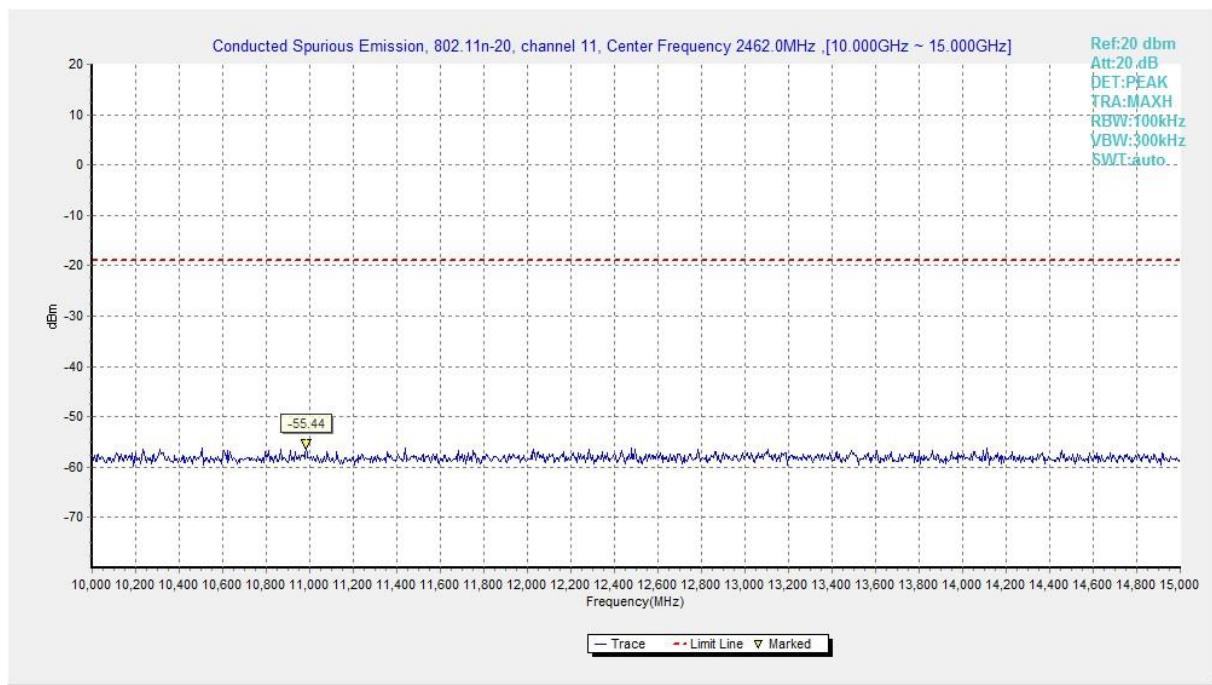


Fig.A.6.1.70 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 10 GHz-15 GHz)

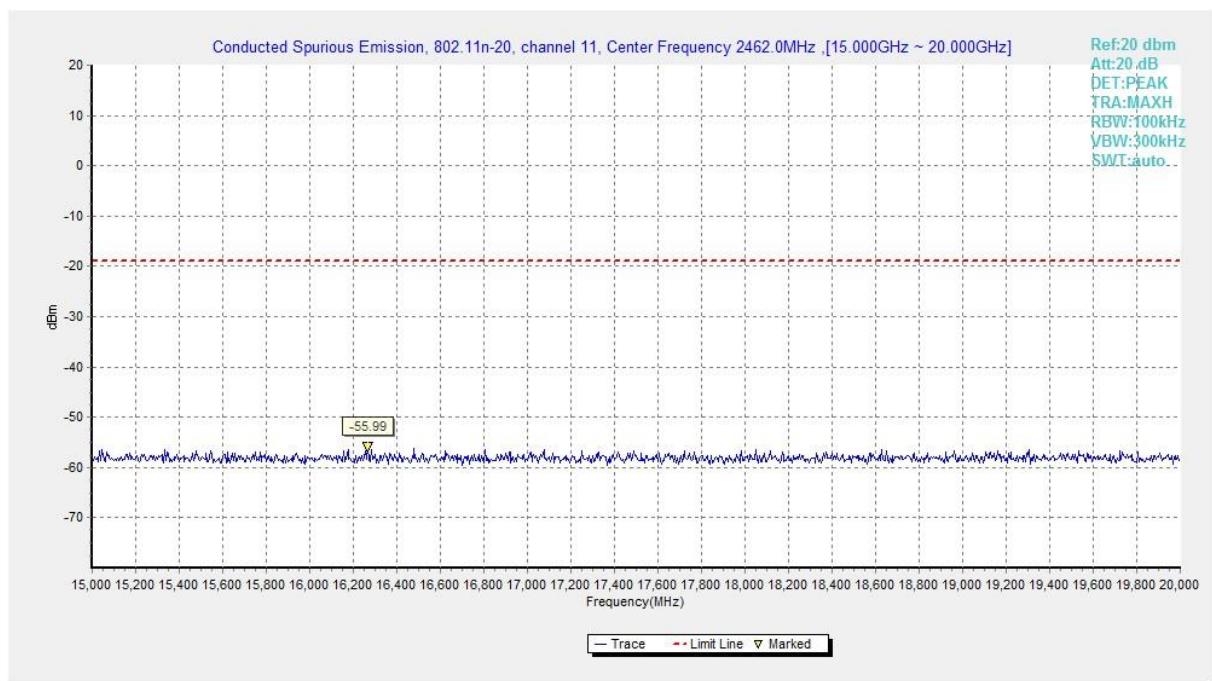


Fig.A.6.1.71 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 15 GHz-20 GHz)

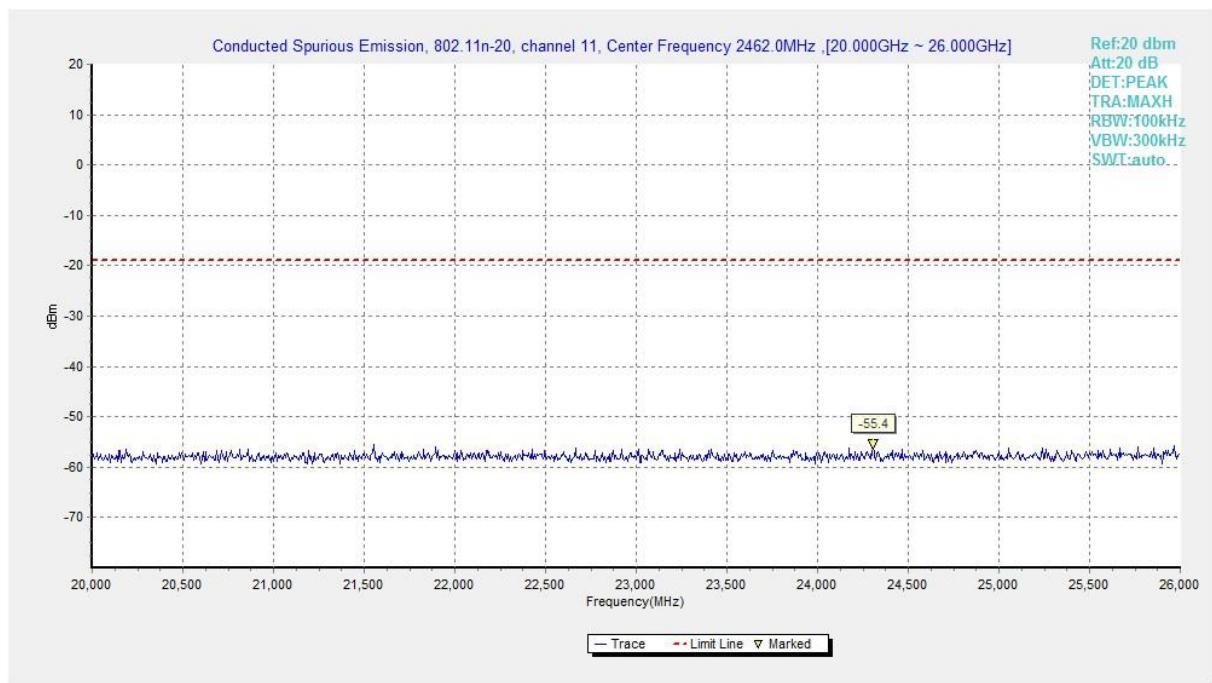


Fig.A.6.1.72 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 20 GHz-26 GHz)

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(μ V/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/1MHz	15
4000-18000	1MHz/1MHz	40
18000-26500	1MHz/1MHz	20

EUT ID: EUT1

Measurement Results for Set.11:**802.11b mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	Power(ch1)	2.38GHz ~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)	2.38GHz ~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)	2.38GHz ~2.43GHz	Fig.A.6.2.5	P
	Power(ch11)	2.45GHz ~2.5GHz	Fig.A.6.2.6	P

Conclusion: Pass**Note:**

A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

P_{Mea} is the field strength recorded from the instrument.

The measurement results are obtained as described below:

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

802.11b-Average

Ch1

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2390.000	46.44	2.9	32.0	11.59	54.0	7.6	H	155	135
2385.500	46.40	2.9	32.0	11.52	54.0	7.6	H	155	160
4824.000	35.53	-32.8	34.5	33.78	54.0	18.5	H	155	92
7236.000	37.23	-31.7	36.1	32.87	54.0	16.8	H	155	115
9648.000	40.49	-30.4	37.0	33.81	54.0	13.5	H	155	112
12060.000	41.79	-29.6	39.3	32.11	54.0	12.2	H	155	85

Ch6

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2382.456	46.42	-25.3	32.0	39.63	54.0	7.6	H	155	8
2496.378	46.48	-25.1	32.4	39.14	54.0	7.5	H	155	28
4873.500	39.61	-32.7	34.5	37.82	54.0	14.4	H	155	135
7311.000	38.26	-31.9	36.1	34.09	54.0	15.7	H	155	156
9748.500	39.54	-30.7	37.2	33.00	54.0	14.5	H	155	180
12184.500	43.73	-29.4	39.2	33.93	54.0	10.3	H	155	204

Ch11

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2483.500	46.32	2.9	32.8	10.62	54.0	7.7	H	155	86
2486.800	46.52	2.9	32.7	10.91	54.0	7.5	H	155	107
4924.500	37.24	-33.1	34.5	35.83	54.0	16.8	H	155	72
7386.000	38.69	-31.8	36.0	34.48	54.0	15.3	H	155	92
9847.500	40.39	-30.1	37.3	33.14	54.0	13.6	H	155	40
12310.500	41.57	-29.7	39.2	32.10	54.0	12.4	H	155	6

802.11b-Peak

Ch1

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2385.992	60.31	2.9	32.0	25.43	74.0	13.7	H	155	135
2388.526	60.46	2.9	32.0	25.60	74.0	13.5	H	155	160
4824.000	46.21	-32.8	34.5	44.47	74.0	27.8	H	155	92
7236.000	43.62	-31.7	36.1	39.26	74.0	30.4	H	155	115
9648.000	47.03	-30.4	37.0	40.34	74.0	27.0	H	155	112
12060.000	47.25	-29.6	39.3	37.58	74.0	26.8	H	155	85

Ch6

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2342.200	48.24	-27.7	31.5	44.39	74.0	25.8	V	155	0
2508.800	48.79	-26.5	32.4	42.81	74.0	25.2	V	155	22
4874.250	47.89	-32.7	34.5	46.10	74.0	26.1	H	155	132
7311.000	45.25	-31.9	36.1	41.08	74.0	28.8	V	155	154
9747.750	45.55	-30.7	37.2	39.03	74.0	28.4	V	155	176
12185.250	48.75	-29.4	39.2	38.95	74.0	25.3	H	155	198

Ch11

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2486.410	60.21	2.9	32.7	24.59	74.0	13.8	H	155	88
2486.780	60.22	2.9	32.7	24.62	74.0	13.8	H	155	110
4923.750	48.51	-33.1	34.5	47.09	74.0	25.5	V	155	66
7386.000	45.04	-31.8	36.0	40.83	74.0	29.0	H	155	88
9848.250	46.13	-30.1	37.3	38.88	74.0	27.9	V	155	44
12309.750	45.93	-29.7	39.2	36.46	74.0	28.1	V	155	0

802.11g - Average

Ch1

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2387.000	46.46	2.9	32.0	11.59	54.0	7.5	H	155	174
2390.000	46.50	2.9	32.0	11.65	54.0	7.5	H	155	195
4824.000	33.64	-32.8	34.5	31.89	54.0	20.4	H	155	140
7236.000	37.17	-31.7	36.1	32.81	54.0	16.8	H	155	8
9648.000	40.51	-30.4	37.0	33.83	54.0	13.5	H	155	80
12060.000	41.73	-29.6	39.3	32.06	54.0	12.3	H	155	243

Ch6

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2380.690	46.43	-26.0	32.1	40.39	54.0	7.6	H	155	175
2492.338	46.48	-20.6	32.5	34.61	54.0	7.5	H	155	194
4873.500	32.85	-32.7	34.5	31.06	54.0	21.2	H	155	296
7311.000	38.08	-31.9	36.1	33.92	54.0	15.9	H	155	314
9748.500	39.38	-30.7	37.2	32.85	54.0	14.6	H	155	90
12184.500	43.68	-29.4	39.2	33.89	54.0	10.3	H	155	112

Ch11

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2483.500	46.41	2.9	32.8	10.72	54.0	7.6	H	155	4
2487.600	46.49	2.9	32.6	10.91	54.0	7.5	H	155	26
4924.500	33.58	-33.1	34.5	32.17	54.0	20.4	H	155	72
7386.000	38.60	-31.8	36.0	34.39	54.0	15.4	H	155	90
9847.500	40.16	-30.1	37.3	32.91	54.0	13.8	H	155	46
12310.500	41.54	-29.7	39.2	32.06	54.0	12.5	H	155	16

**802.11g - Peak**

Ch1

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2388.778	65.16	2.9	32.0	30.31	74.0	8.8	V	155	176
2389.492	65.00	2.9	32.0	30.15	74.0	9.0	V	155	198
4826.250	44.39	-32.7	34.5	42.63	74.0	29.6	V	155	132
7236.000	43.34	-31.7	36.1	38.98	74.0	30.7	H	155	0
9648.000	47.21	-30.4	37.0	40.53	74.0	26.8	V	155	88
12060.000	46.23	-29.6	39.3	36.55	74.0	27.8	V	155	242

Ch6

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2361.200	49.12	-27.5	31.9	44.78	74.0	24.9	H	155	176
2509.000	48.89	-26.5	32.4	42.91	74.0	25.1	H	155	198
4881.750	45.38	-32.7	34.5	43.59	74.0	28.6	V	155	286
7311.000	43.86	-31.9	36.1	39.70	74.0	30.1	H	155	308
9747.750	45.21	-30.7	37.2	38.68	74.0	28.8	V	155	88
12185.250	48.62	-29.4	39.2	38.82	74.0	25.4	V	155	110

Ch11

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2483.760	62.46	2.9	32.8	26.78	74.0	11.5	H	155	0
2484.040	60.90	2.9	32.7	25.22	74.0	13.1	V	155	22
4934.250	45.17	-33.2	34.5	43.85	74.0	28.8	V	155	66
7386.000	46.19	-31.8	36.0	41.98	74.0	27.8	V	155	88
9848.250	47.07	-30.1	37.3	39.81	74.0	26.9	V	155	44
12309.750	46.56	-29.7	39.2	37.08	74.0	27.4	H	155	22

802.11n-HT20-Average

Ch1

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2387.700	46.42	2.9	32.0	11.56	54.0	7.6	H	155	4
2390.000	46.40	2.9	32.0	11.55	54.0	7.6	H	155	2
4824.000	32.95	-32.8	34.5	31.20	54.0	21.1	H	155	25
7236.000	37.15	-31.7	36.1	32.79	54.0	16.8	H	155	350
9648.000	40.46	-30.4	37.0	33.78	54.0	13.5	H	155	92
12060.000	41.69	-29.6	39.3	32.02	54.0	12.3	H	155	85

Ch6

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2380.750	46.39	-26.0	32.1	40.32	54.0	7.6	H	155	40
2499.778	46.45	-26.2	32.3	40.37	54.0	7.6	H	155	65
4873.500	32.89	-32.7	34.5	31.10	54.0	21.1	H	155	222
7311.000	38.03	-31.9	36.1	33.87	54.0	16.0	H	155	190
9748.500	39.32	-30.7	37.2	32.79	54.0	14.7	H	155	240
12184.500	43.68	-29.4	39.2	33.89	54.0	10.3	H	155	270

Ch11

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2483.500	46.34	2.9	32.8	10.65	54.0	7.7	H	155	180
2491.500	46.48	2.9	32.5	11.01	54.0	7.5	H	155	202
4924.500	33.47	-33.1	34.5	32.06	54.0	20.5	H	155	312
7386.000	38.53	-31.8	36.0	34.33	54.0	15.5	H	155	46
9847.500	40.07	-30.1	37.3	32.82	54.0	13.9	H	155	70
12310.500	41.51	-29.7	39.2	32.04	54.0	12.5	H	155	92

802.11n-HT20-Peak

Ch1

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2388.610	63.18	2.9	32.0	28.32	74.0	10.8	H	155	0
2389.926	63.34	2.9	32.0	28.49	74.0	10.7	H	155	0
4824.000	41.12	-32.8	34.5	39.37	74.0	32.9	V	155	22
7236.000	43.56	-31.7	36.1	39.20	74.0	30.4	V	155	352
9648.000	46.49	-30.4	37.0	39.81	74.0	27.5	V	155	88
12060.000	47.66	-29.6	39.3	37.99	74.0	26.3	V	155	88

Ch6

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2378.400	49.34	-26.4	32.1	43.69	74.0	24.7	V	155	44
2508.600	48.45	-26.5	32.4	42.47	74.0	25.6	H	155	66
4874.250	41.93	-32.7	34.5	40.14	74.0	32.1	V	155	220
7311.000	44.90	-31.9	36.1	40.74	74.0	29.1	V	155	198
9747.750	45.80	-30.7	37.2	39.27	74.0	28.2	H	155	242
12185.250	47.80	-29.4	39.2	38.00	74.0	26.2	V	155	264

Ch11

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2493.650	61.05	2.9	32.5	25.64	74.0	12.9	H	155	176
2496.910	60.48	2.9	32.4	25.15	74.0	13.5	H	155	198
4923.750	41.58	-33.1	34.5	40.16	74.0	32.4	V	155	308
7386.000	44.49	-31.8	36.0	40.29	74.0	29.5	H	155	44
9848.250	45.71	-30.1	37.3	38.46	74.0	28.3	H	155	66
12309.750	45.67	-29.7	39.2	36.20	74.0	28.3	V	155	88

Test graphs as below:

R E - Power-2.38GHz-2.45GHz

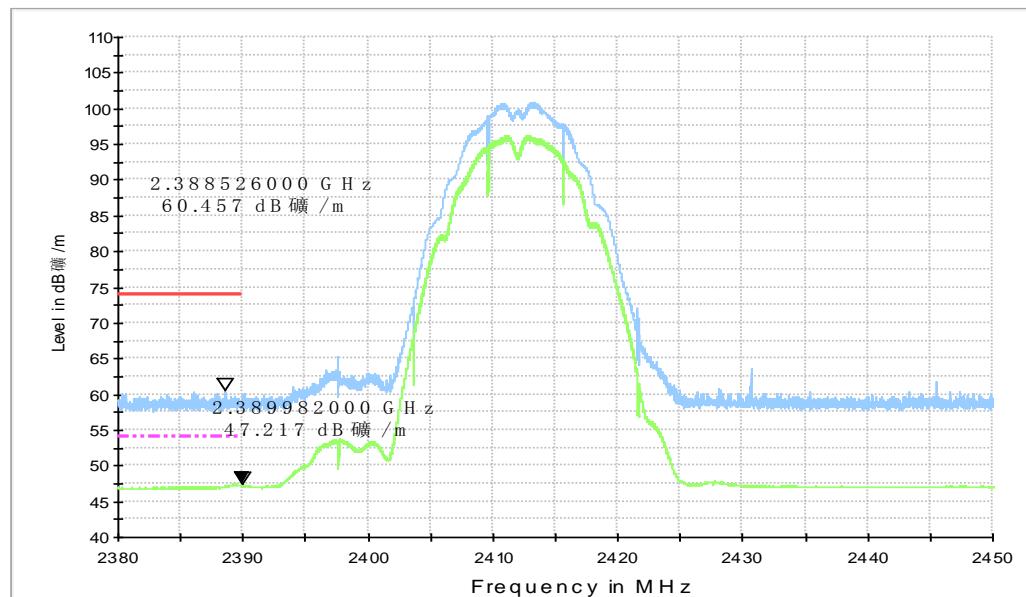


Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.38 GHz – 2.43GHz

R E - Power-2.45GHz-2.5GHz

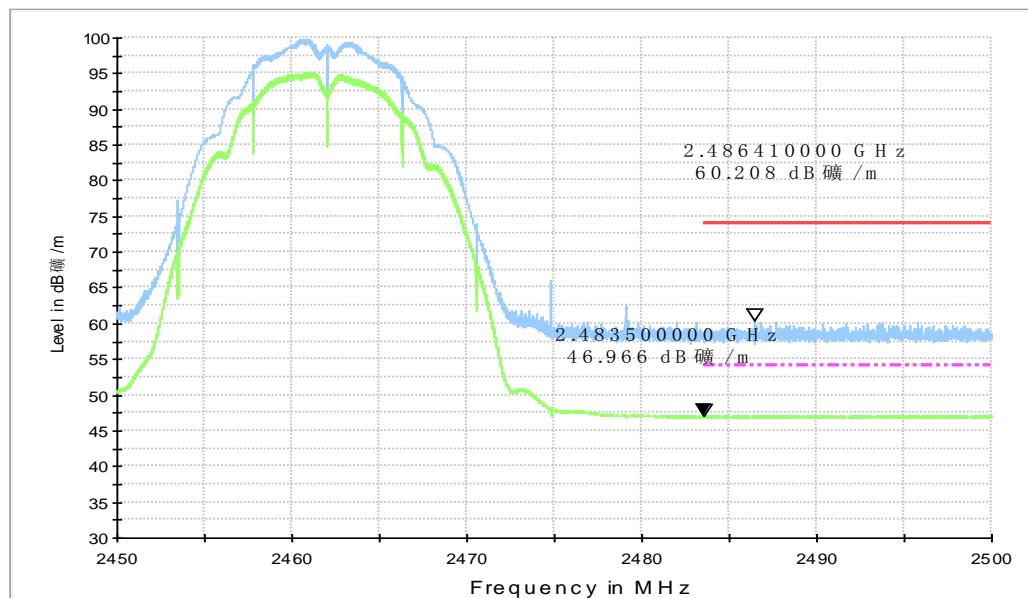


Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

R E - Power-2.38GHz-2.45GHz

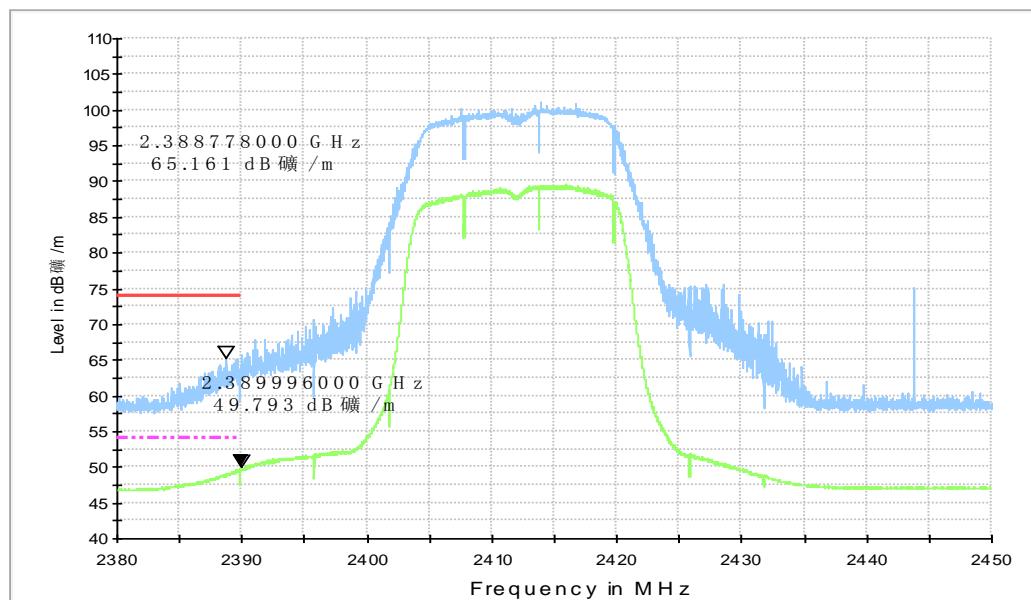


Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.38 GHz - 2.43GHz

R E - Power-2.45GHz-2.5GHz

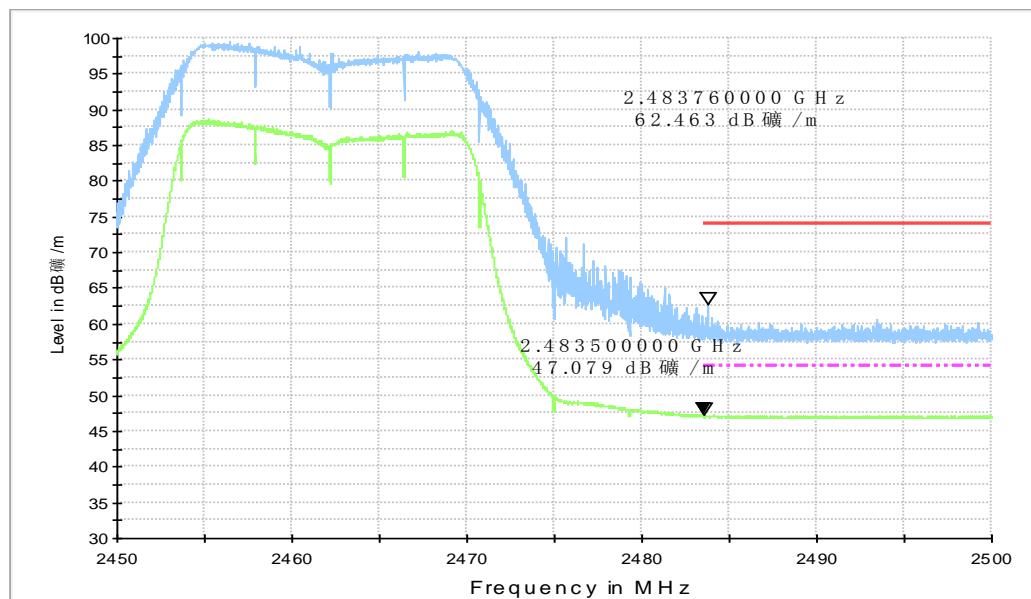


Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

R E - Power-2.38GHz-2.45GHz

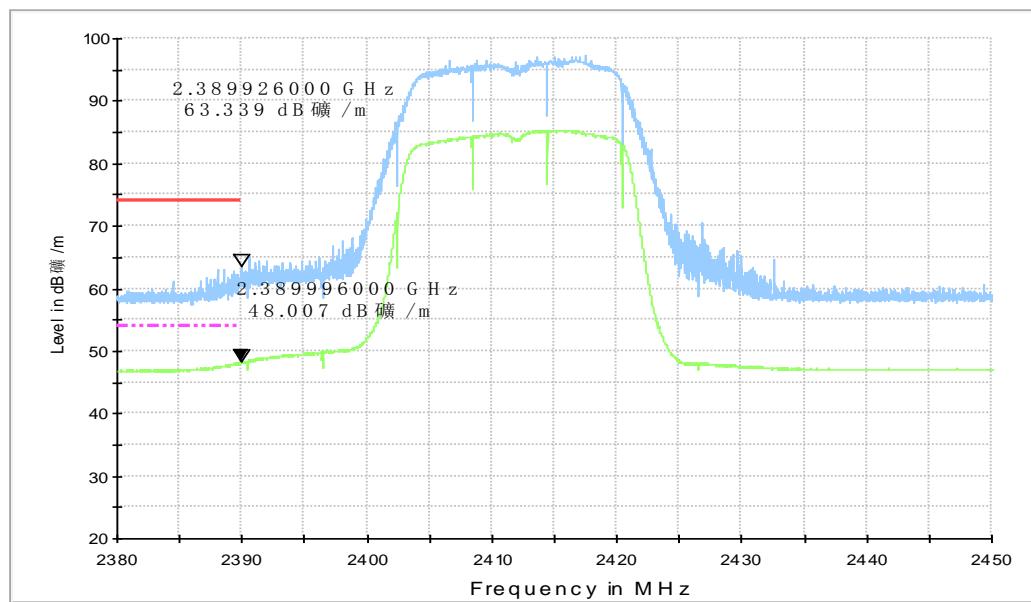


Fig.A.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.38 GHz - 2.45GHz

R E - Power-2.45GHz-2.5GHz

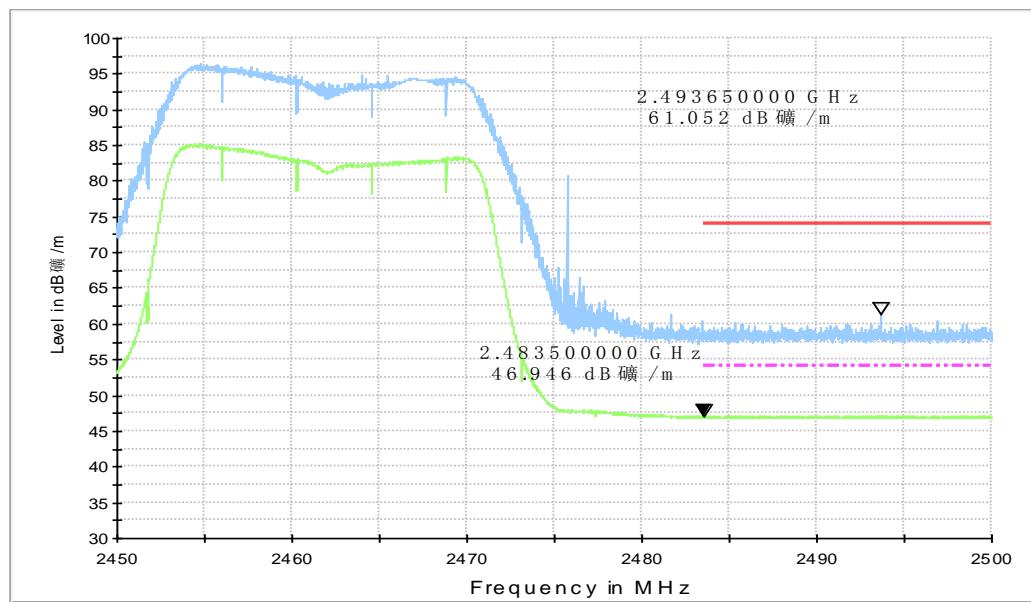


Fig.A.6.2.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

A.7. AC Power-line Conducted Emission

Method of Measurement: See ANSI C63.10-2013-clause 6.2

- 1 The one EUT cable configuration and arrangement and mode of operation that produced the emission with the highest amplitude relative to the limit is selected for the final measurement, while applying the appropriate modulating signal to the EUT.
- 2 If the EUT is relocated from an exploratory test site to a final test site, the highest emissions shall be remaximized at the final test location before final ac power-line conducted emission measurements are performed.
- 3 The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment in the system) is then performed for the full frequency range for which the EUT is being tested for compliance without further variation of the EUT arrangement, cable positions, or EUT mode of operation.
- 4 If the EUT is comprised of equipment units that have their own separate ac power connections, e.g., floor-standing equipment with independent power cords for each shelf that are able to connect directly to the ac power network, each current-carrying conductor of one unit is measured while the other units are connected to a second (or more) LISN(s). All units shall be separately measured. If a power strip is provided by the manufacturer, to supply all of the units making up the EUT, only the conductors in the power cord of the power strip shall be measured.
- 5 If the EUT uses a detachable antenna, these measurements shall be made with a suitable dummy load connected to the antenna output terminals; otherwise, the tests shall be made with the antenna connected and, if adjustable, fully extended. When measuring the ac conducted emissions from a device that operates between 150 kHz and 30 MHz a non-detachable antenna may be replaced with a dummy load for the measurements.³⁶ Record the six highest EUT emissions relative to the limit of each of the current-carrying conductors of the power cords of the equipment that comprises the EUT over the frequency range specified by the procuring or regulatory agency. Diagram or photograph the test setup that was used. See Clause 8 for full reporting requirements.

Test Condition:

Voltage (V)	Frequency (Hz)
120	60

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)		Conclusion	
		With charger			
		802.11b	Idle		
0.15 to 0.5	66 to 56	Fig.A.7.1 Fig.A.7.3 Fig.A.7.4	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.

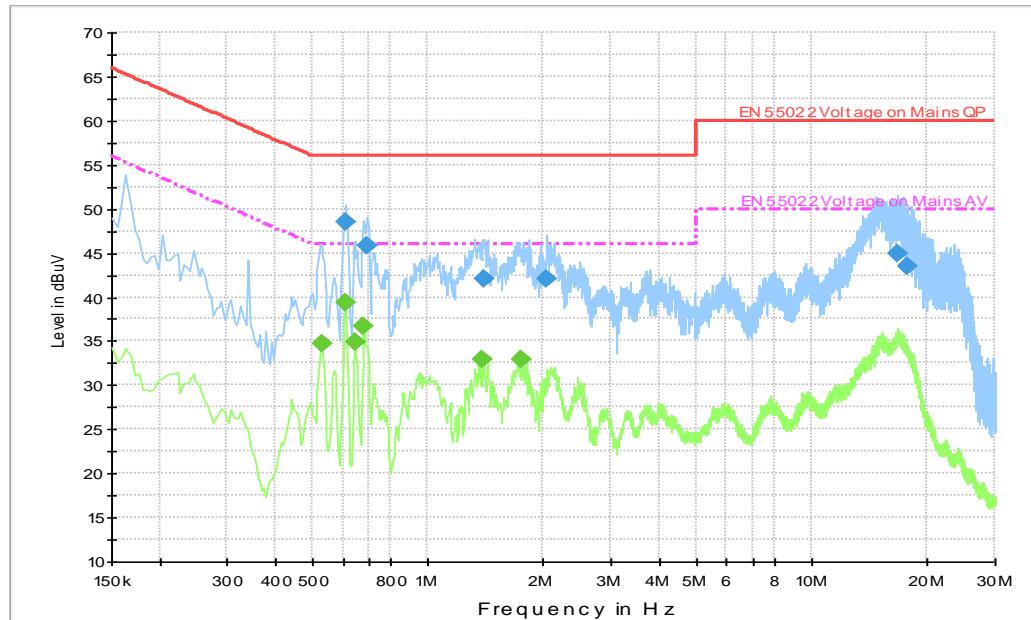
WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dB μ V)	Result (dB μ V)		Conclusion	
		With charger			
		802.11b	Idle		
0.15 to 0.5	56 to 46	Fig.A.7.1 Fig.A.7.3 Fig.A.7.4	Fig.A.7.2	P	
0.5 to 5	46				
5 to 30	50				

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

Conclusion: Pass

Test graphs as below:

Traffic: Set.11

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

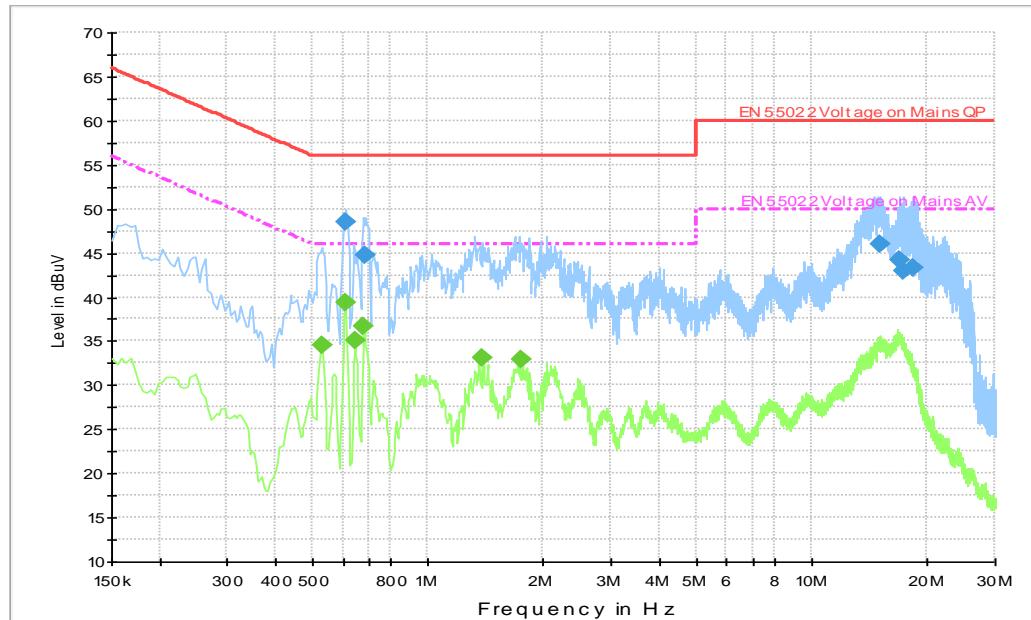
Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.613500	48.4	10000	9.000	GND	L1	10.4	7.6	56.0
0.694500	45.9	10000	9.000	GND	L1	10.3	10.1	56.0
1.396500	42.0	10000	9.000	GND	L1	10.4	14.0	56.0
2.044500	42.1	10000	9.000	GND	L1	10.4	13.9	56.0
16.782000	44.9	10000	9.000	GND	L1	11.2	15.1	60.0
17.718000	43.5	10000	9.000	GND	L1	11.3	16.5	60.0

Final Result 2

Frequency (MHz)	Average (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.528000	34.6	10000.	9.000	GND	L1	10.3	11.4	46.0
0.609000	39.4	10000.	9.000	GND	L1	10.4	6.6	46.0
0.645000	34.9	10000.	9.000	GND	N	10.3	11.1	46.0
0.681000	36.7	10000.	9.000	GND	L1	10.3	9.3	46.0
1.392000	32.9	10000.	9.000	GND	L1	10.4	13.1	46.0
1.756500	32.9	10000.	9.000	GND	L1	10.4	13.1	46.0

Idle: Set.11

Fig.A.7.2 AC Powerline Conducted Emission-Idle

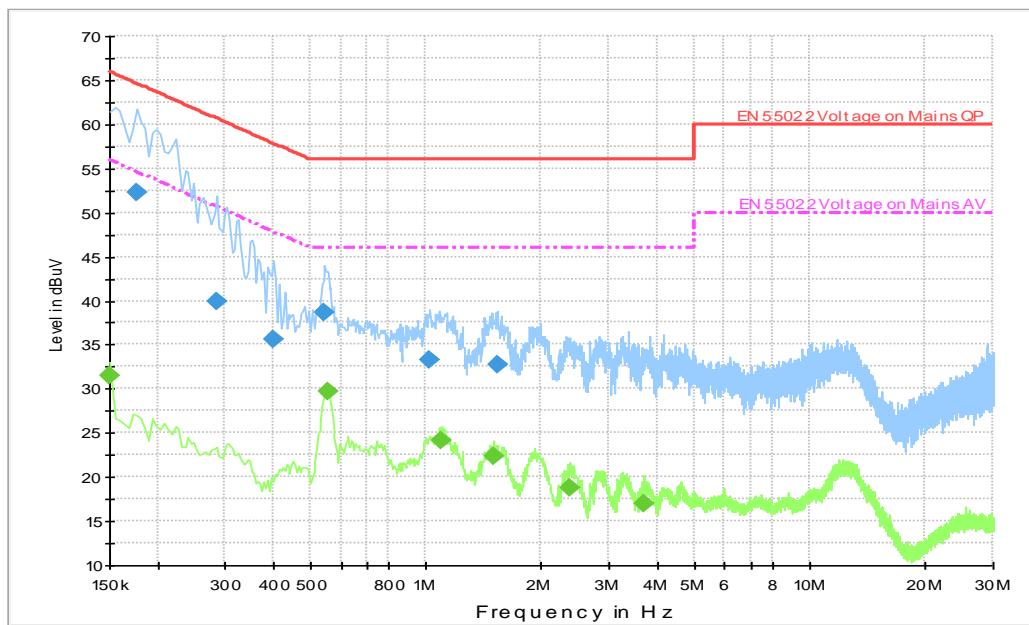
Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.613500	48.5	10000	9.000	GND	L1	10.4	7.5	56.0
0.690000	44.8	10000	9.000	GND	L1	10.3	11.2	56.0
15.004500	46.0	10000	9.000	GND	L1	11.1	14.0	60.0
16.885500	44.2	10000	9.000	GND	L1	11.2	15.8	60.0
17.290500	42.9	10000	9.000	GND	L1	11.2	17.1	60.0
18.321000	43.4	10000	9.000	GND	L1	11.3	16.6	60.0

Final Result 2

Frequency (MHz)	Average (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.528000	34.6	10000.	9.000	GND	L1	10.3	11.4	46.0
0.609000	39.4	10000.	9.000	GND	L1	10.4	6.6	46.0
0.645000	35.0	10000.	9.000	GND	N	10.3	11.0	46.0
0.681000	36.8	10000.	9.000	GND	L1	10.3	9.2	46.0
1.392000	33.1	10000.	9.000	GND	L1	10.4	13.0	46.0
1.756500	33.0	10000.	9.000	GND	L1	10.4	13.0	46.0

Traffic: Set.12

Fig.A.7.3 AC Powerline Conducted Emission-802.11b

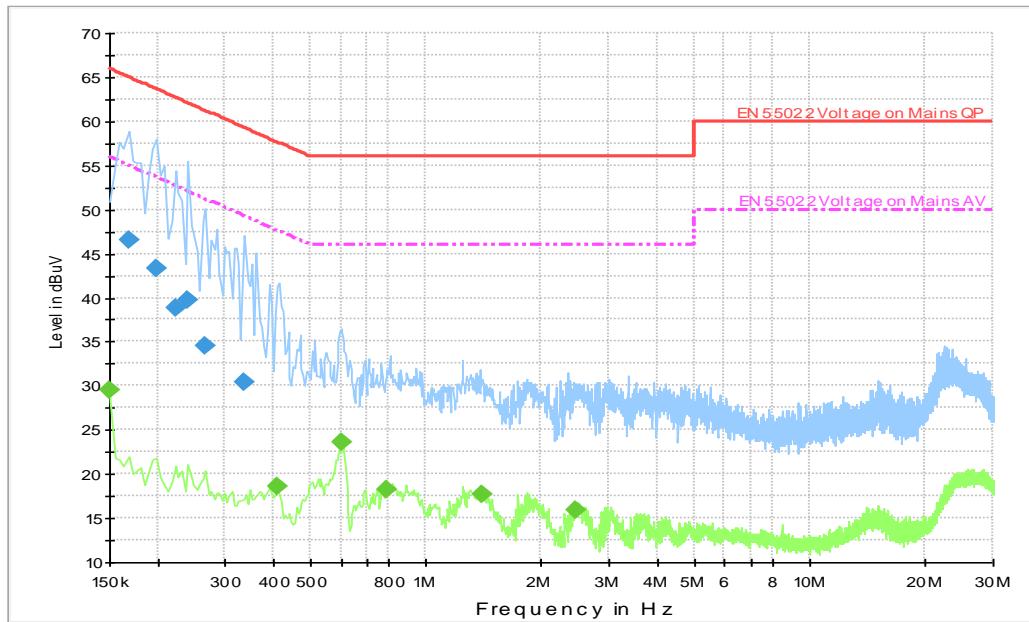
Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.177000	52.2	10000	9.000	GND	N	10.3	12.4	64.6
0.285000	39.9	10000	9.000	GND	N	10.3	20.8	60.7
0.402000	35.6	10000	9.000	GND	N	10.3	22.2	57.8
0.546000	38.7	10000	9.000	GND	L1	10.3	17.3	56.0
1.023000	33.3	10000	9.000	GND	L1	10.3	22.7	56.0
1.531500	32.8	10000	9.000	GND	L1	10.4	23.2	56.0

Final Result 2

Frequency (MHz)	Average (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.150000	31.4	10000.	9.000	GND	L1	10.2	24.6	56.0
0.555000	29.8	10000.	9.000	GND	N	10.4	16.2	46.0
1.099500	24.1	10000.	9.000	GND	L1	10.4	21.9	46.0
1.495500	22.3	10000.	9.000	GND	L1	10.4	23.7	46.0
2.368500	18.8	10000.	9.000	GND	L1	10.4	27.2	46.0
3.709500	16.9	10000.	9.000	GND	L1	10.5	29.1	46.0

Traffic: Set.13

Fig.A.7.4 AC Powerline Conducted Emission-802.11b

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

Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.168000	46.6	10000	9.000	GND	L1	10.3	18.4	65.1
0.199500	43.3	10000	9.000	GND	N	10.3	20.4	63.6
0.222000	38.8	10000	9.000	GND	N	10.3	23.9	62.7
0.240000	39.8	10000	9.000	GND	L1	10.3	22.3	62.1
0.267000	34.5	10000	9.000	GND	N	10.3	26.7	61.2
0.334500	30.4	10000	9.000	GND	N	10.3	29.0	59.3

Final Result 2

Frequency (MHz)	Average (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.150000	29.6	10000.	9.000	GND	L1	10.2	26.4	56.0
0.411000	18.5	10000.	9.000	GND	L1	10.3	29.1	47.6
0.604500	23.6	10000.	9.000	GND	N	10.4	22.4	46.0
0.789000	18.3	10000.	9.000	GND	L1	10.4	27.7	46.0
1.396500	17.7	10000.	9.000	GND	L1	10.4	28.3	46.0
2.463000	15.9	10000.	9.000	GND	L1	10.4	30.1	46.0



ANNEX B: Accreditation Certificate

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

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 17025:2005.
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).*

2018-09-28 through 2019-09-30

Effective Dates



For the National Voluntary Laboratory Accreditation Program

END OF REPORT