

Fig.A.6.1.23 Transmitter Spurious Emission - Conducted (802.11b, Ch11, 15 GHz-20 GHz)

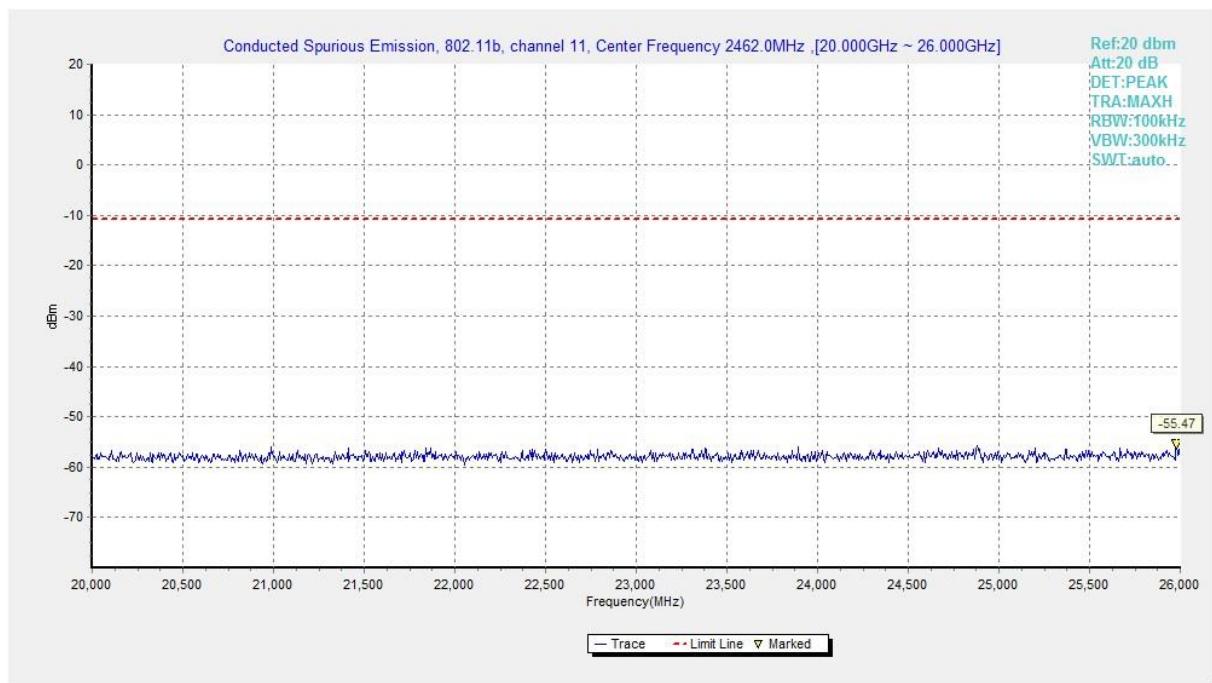


Fig.A.6.1.24 Transmitter Spurious Emission - Conducted (802.11b, Ch11, 20 GHz-26 GHz)

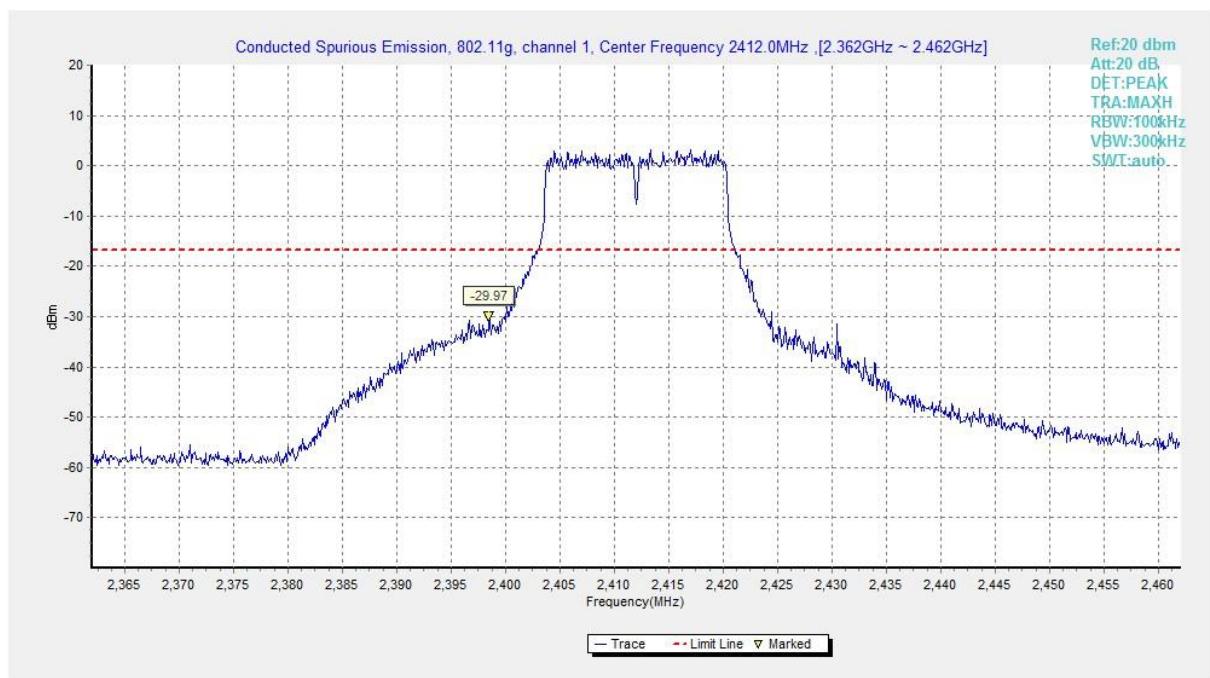


Fig.A.6.1.25 Transmitter Spurious Emission - Conducted (802.11g, Ch1, Center Frequency)

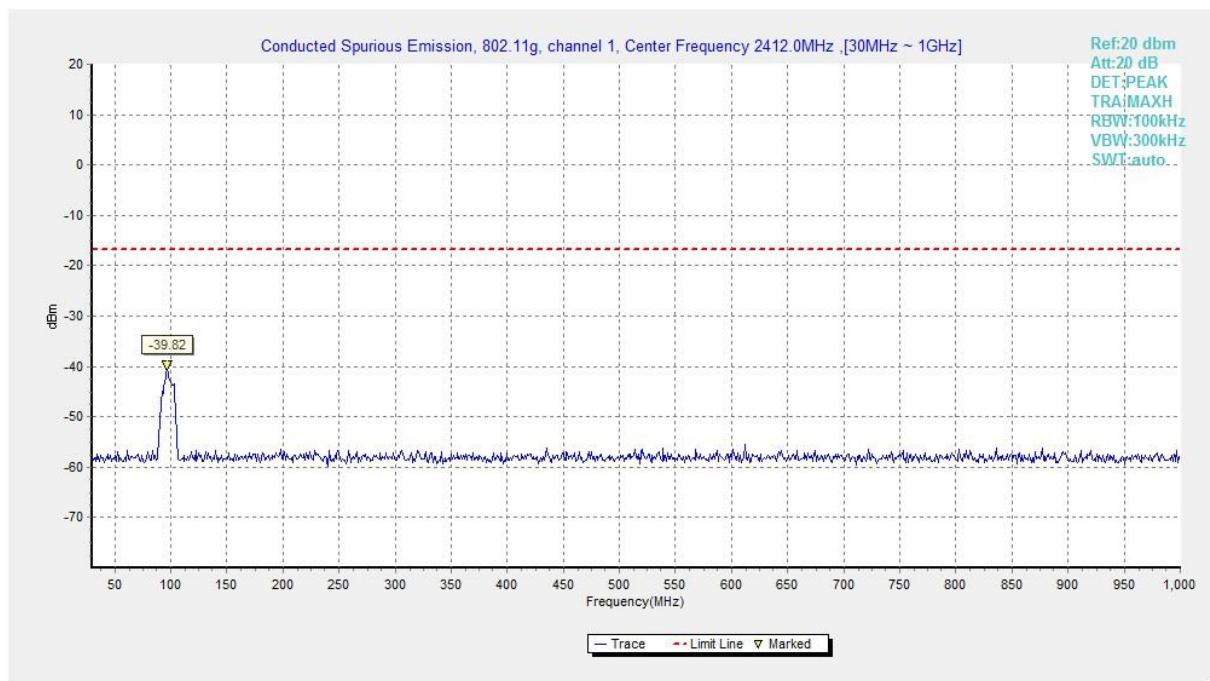


Fig.A.6.1.26 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 30 MHz-1 GHz)

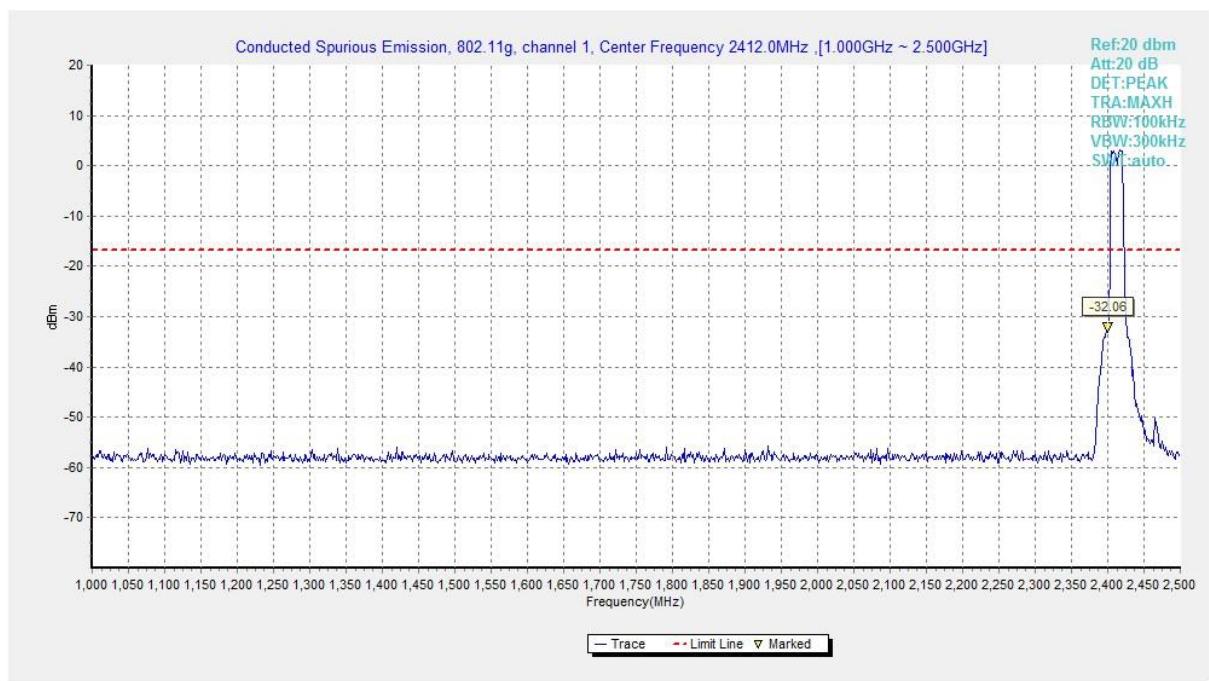


Fig.A.6.1.27 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 1 GHz-2.5 GHz)

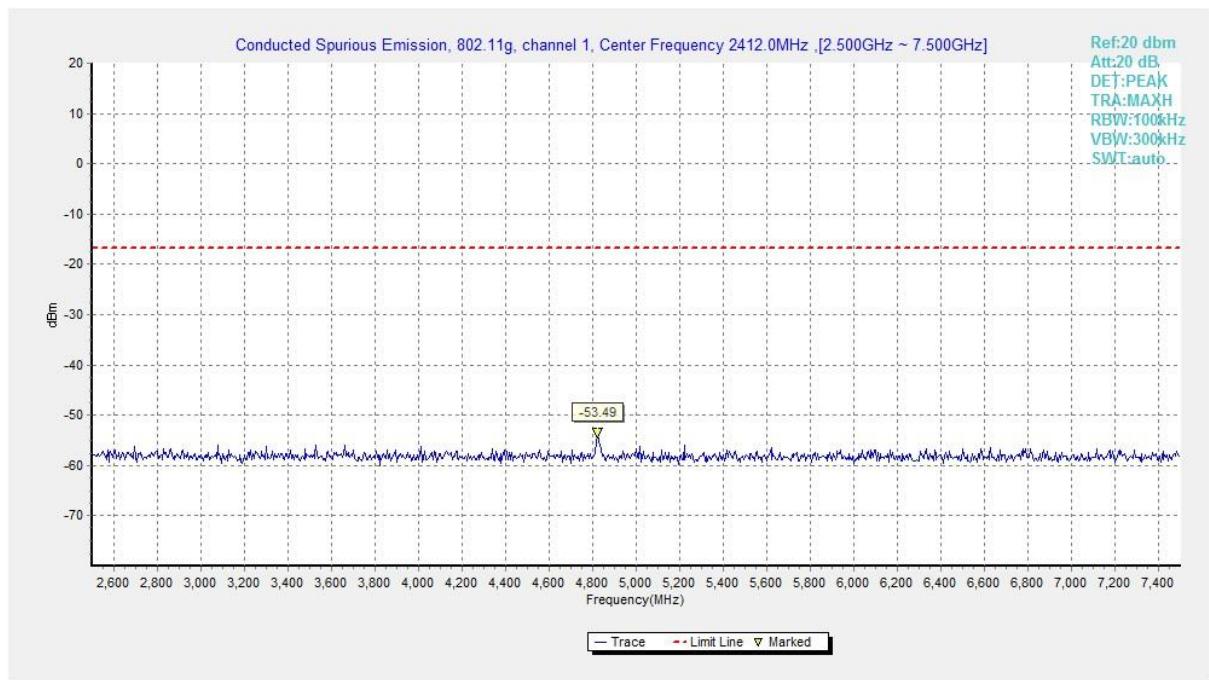


Fig.A.6.1.28 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 2.5 GHz-7.5 GHz)

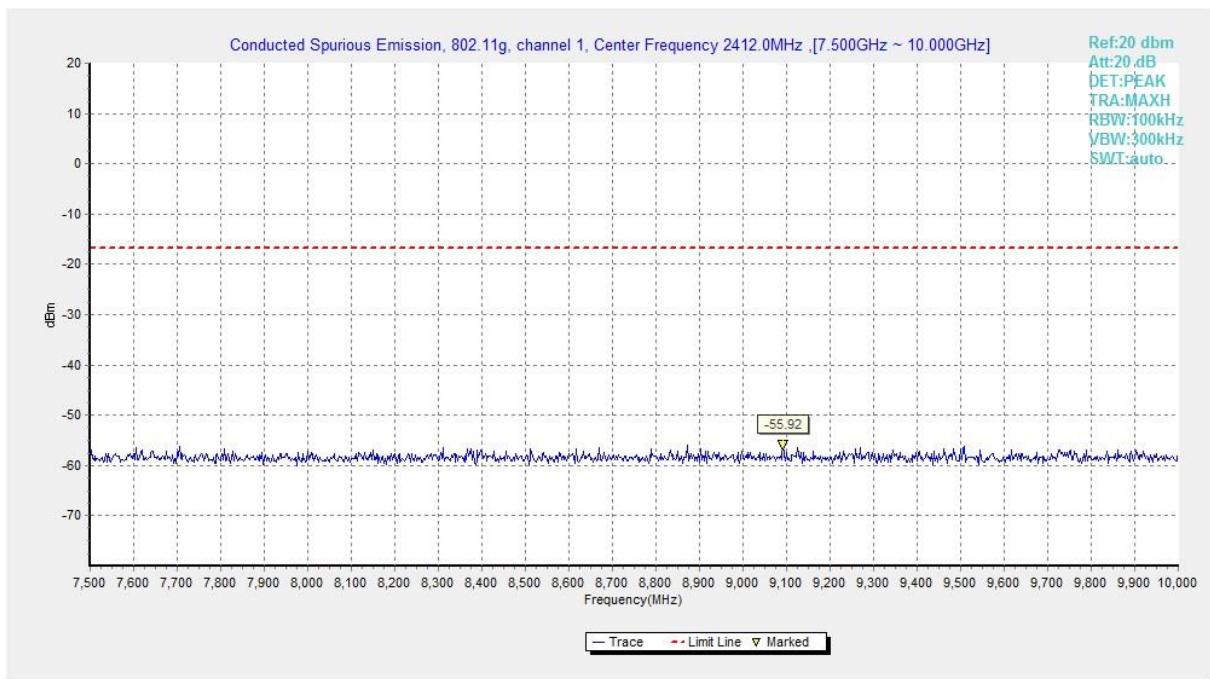


Fig.A.6.1.29 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 7.5 GHz-10 GHz)

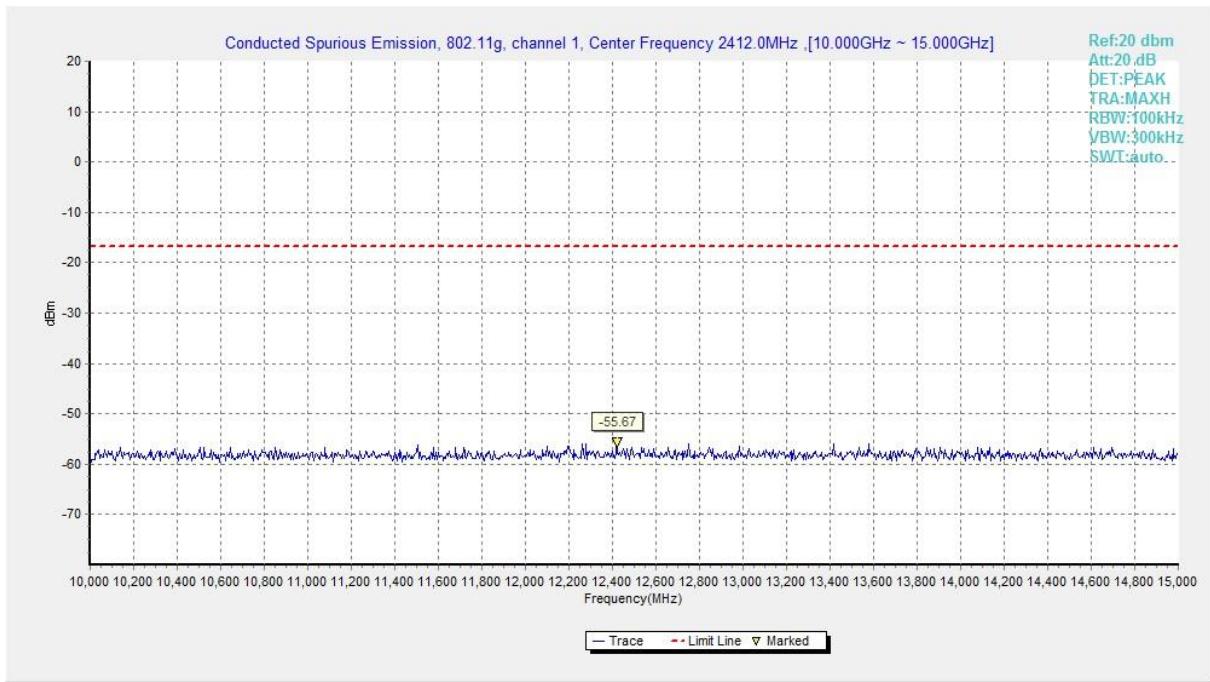


Fig.A.6.1.30 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 10 GHz-15 GHz)

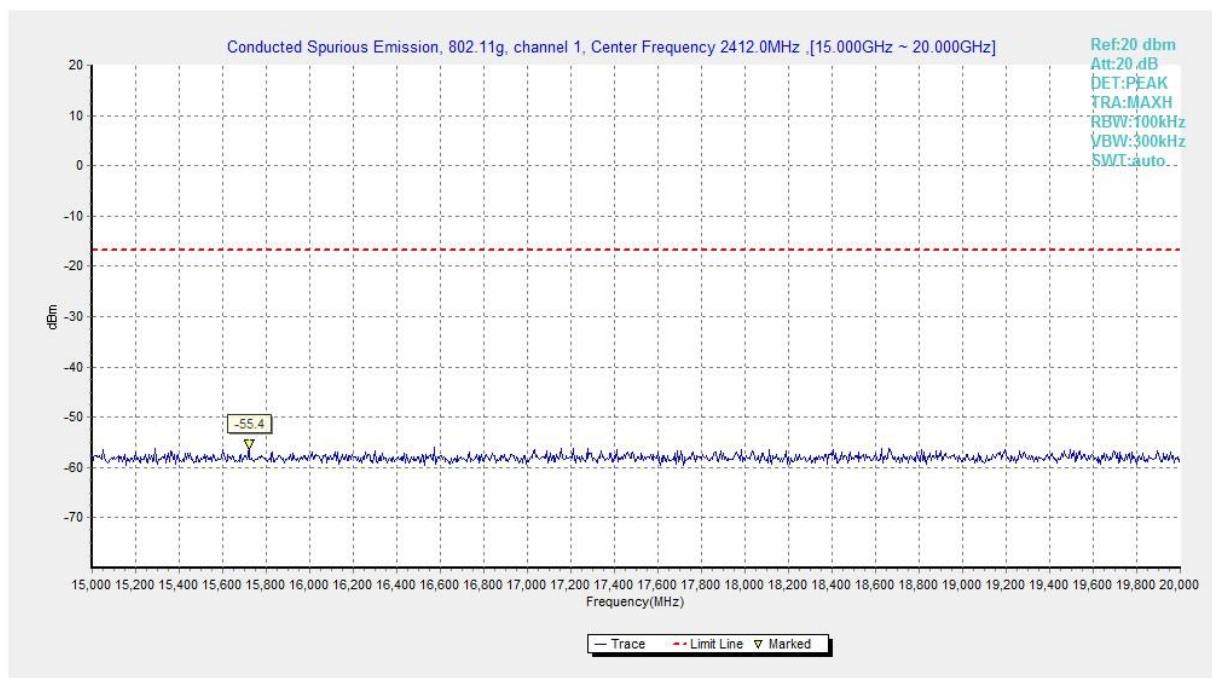


Fig.A.6.1.31 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 15 GHz-20 GHz)

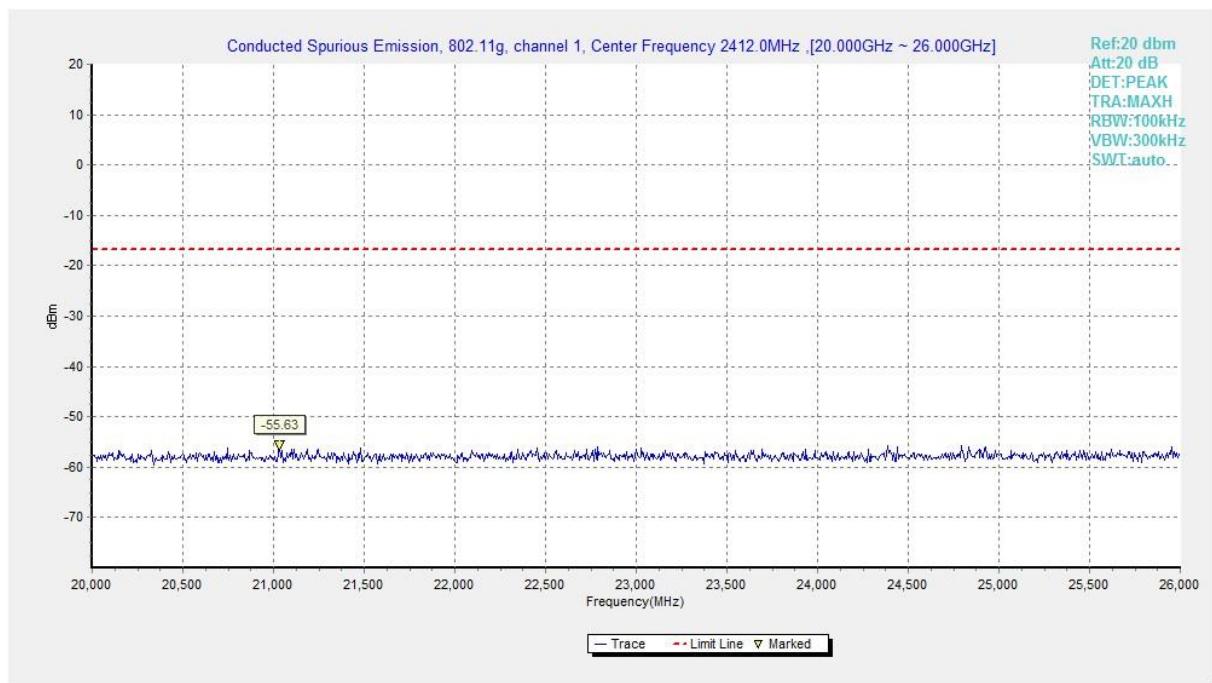


Fig.A.6.1.32 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 20 GHz-26 GHz)

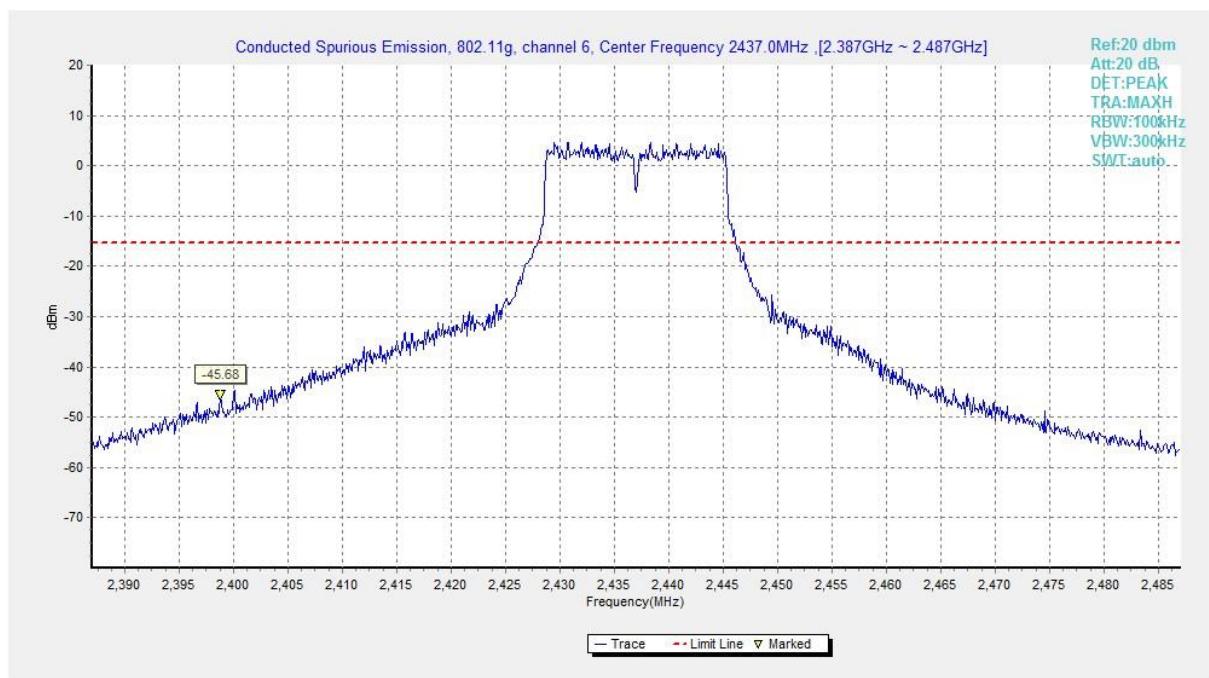


Fig.A.6.1.33 Transmitter Spurious Emission - Conducted (802.11g, Ch6, Center Frequency)

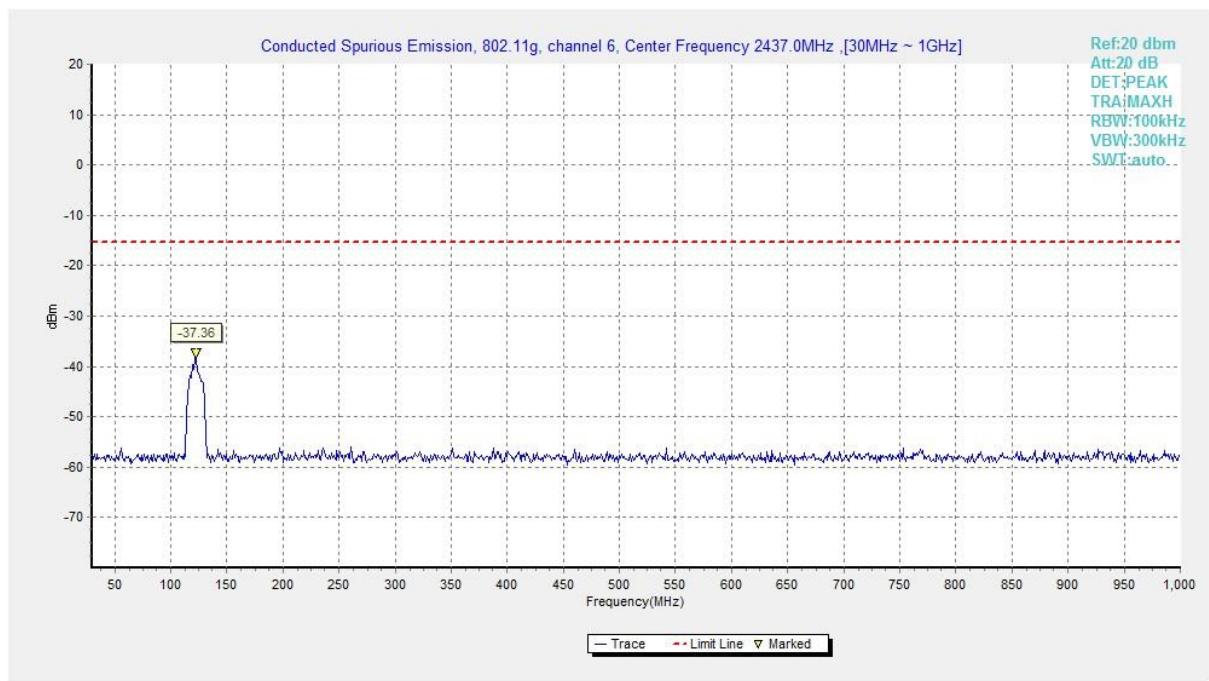


Fig.A.6.1.34 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 30 MHz-1 GHz)

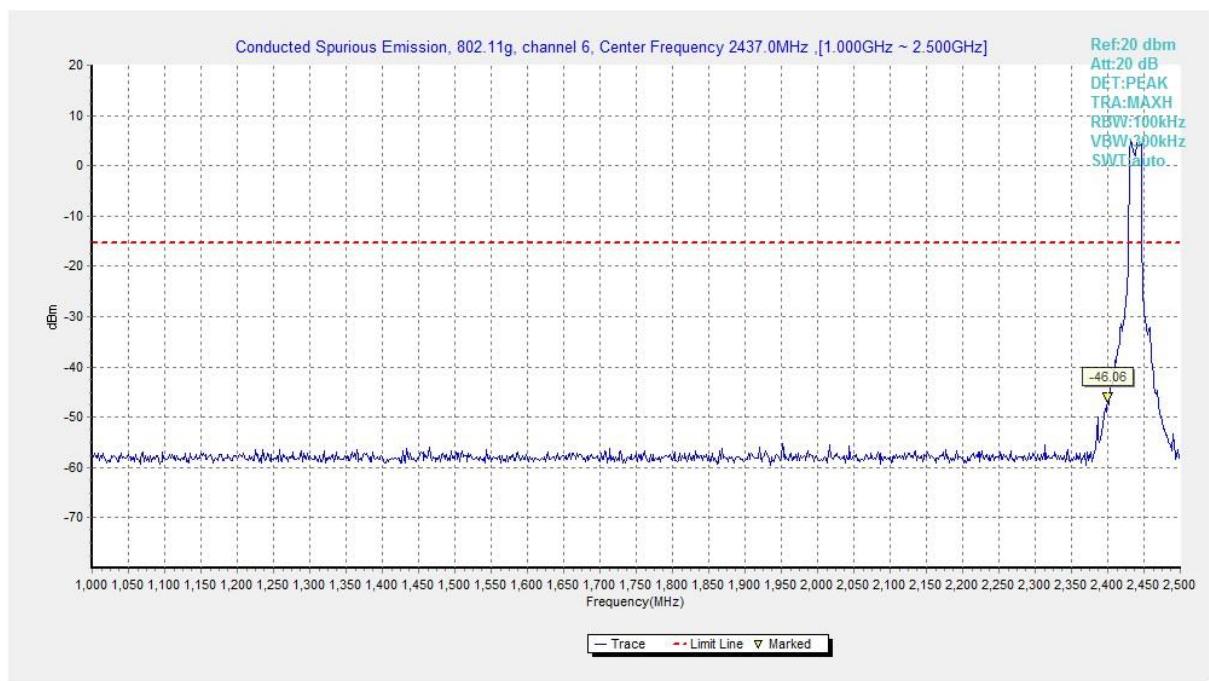


Fig.A.6.1.35 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 1 GHz-2.5 GHz)

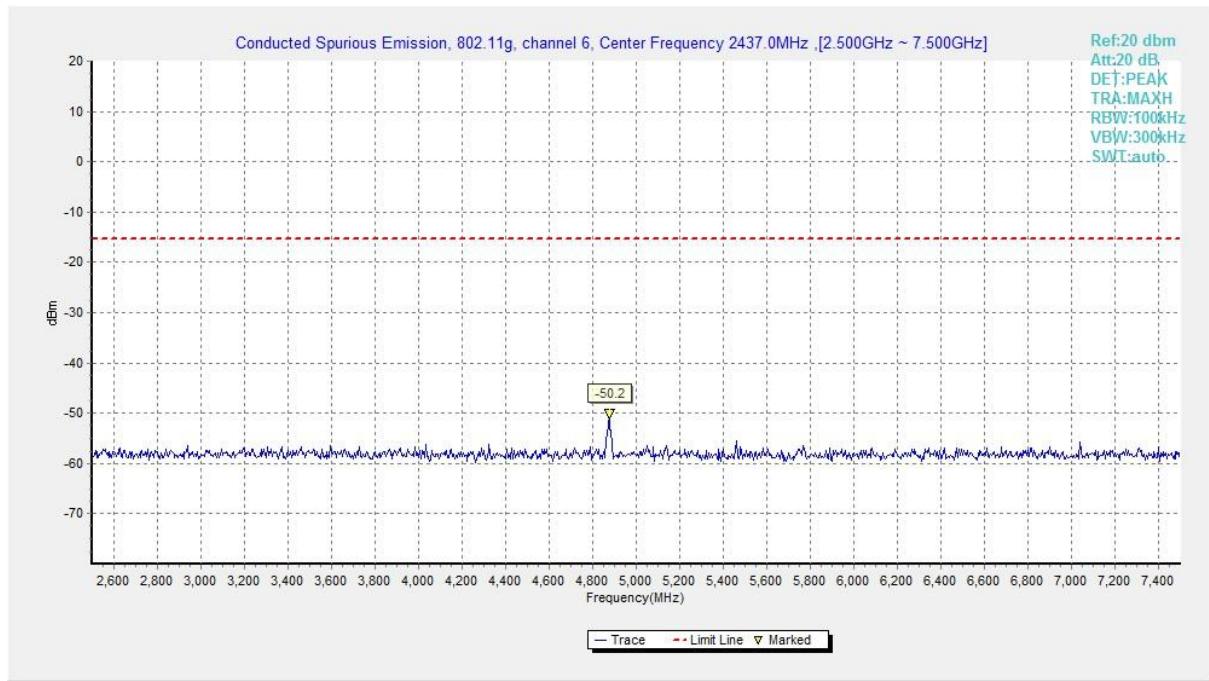


Fig.A.6.1.36 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 2.5 GHz-7.5 GHz)

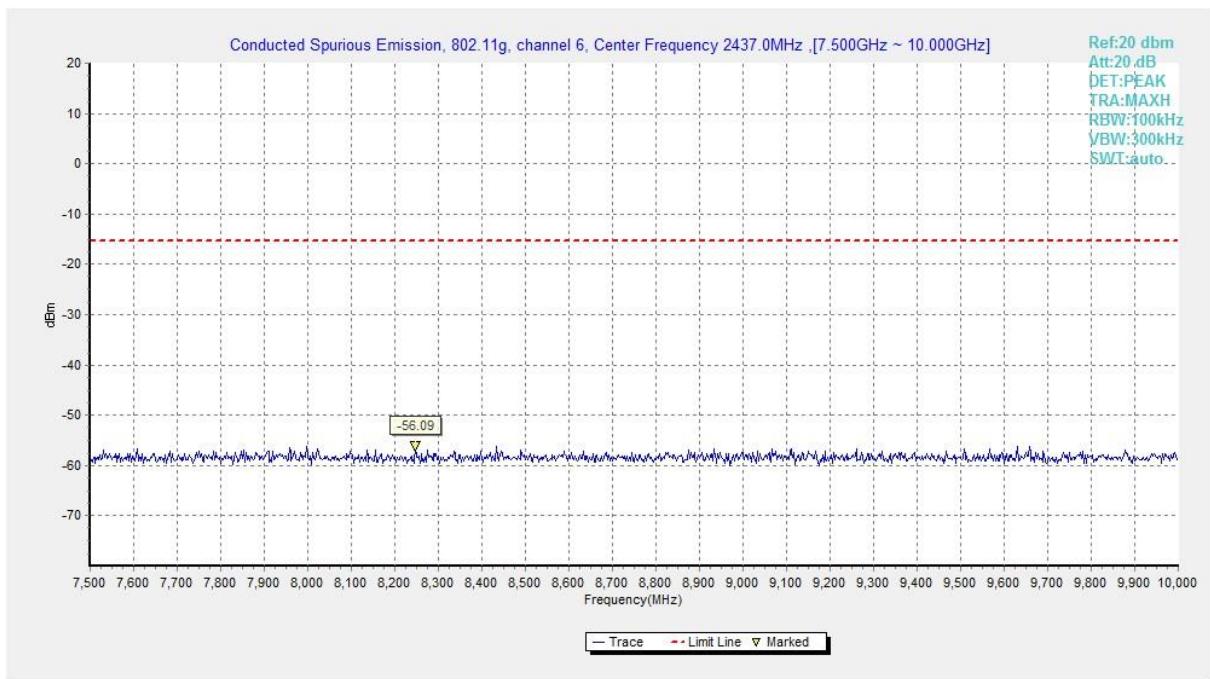


Fig.A.6.1.37 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 7.5 GHz-10 GHz)

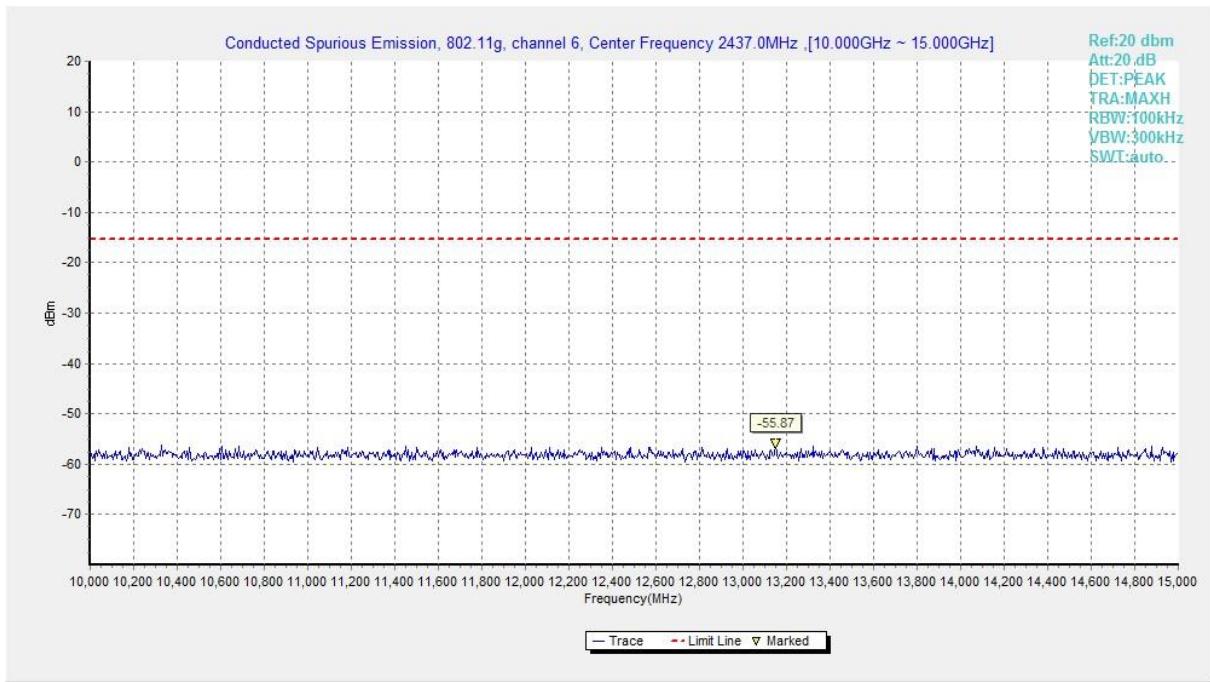


Fig.A.6.1.38 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 10 GHz-15 GHz)

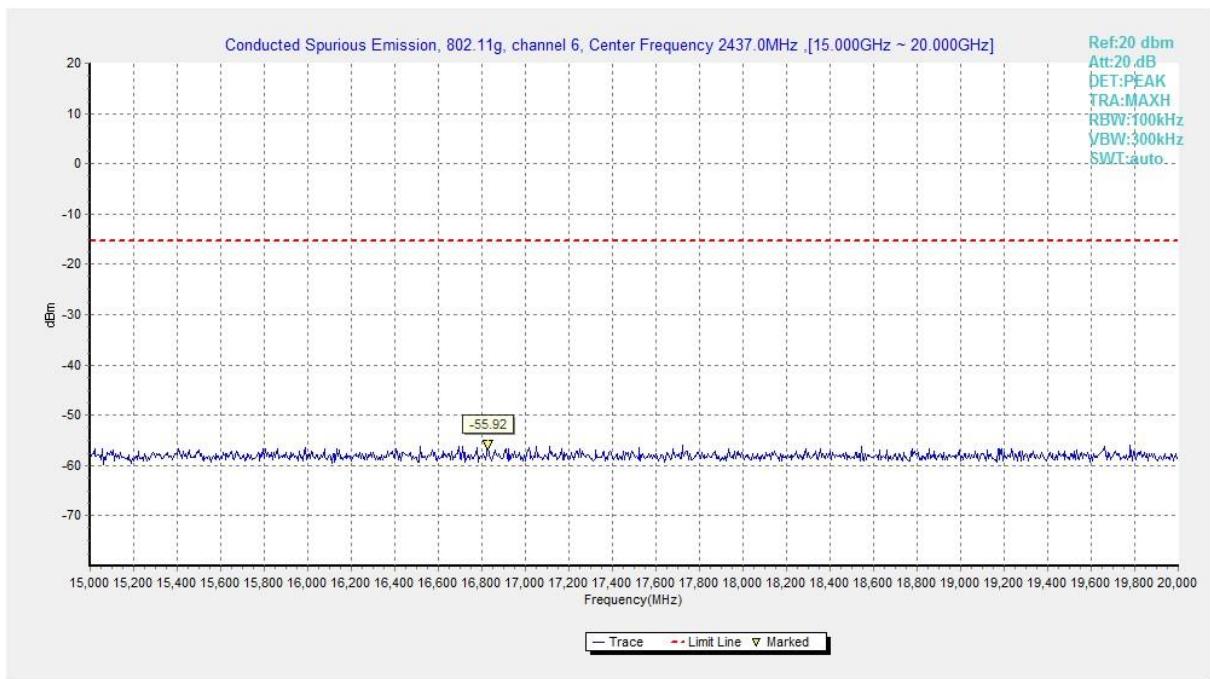


Fig.A.6.1.39 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 15 GHz-20 GHz)

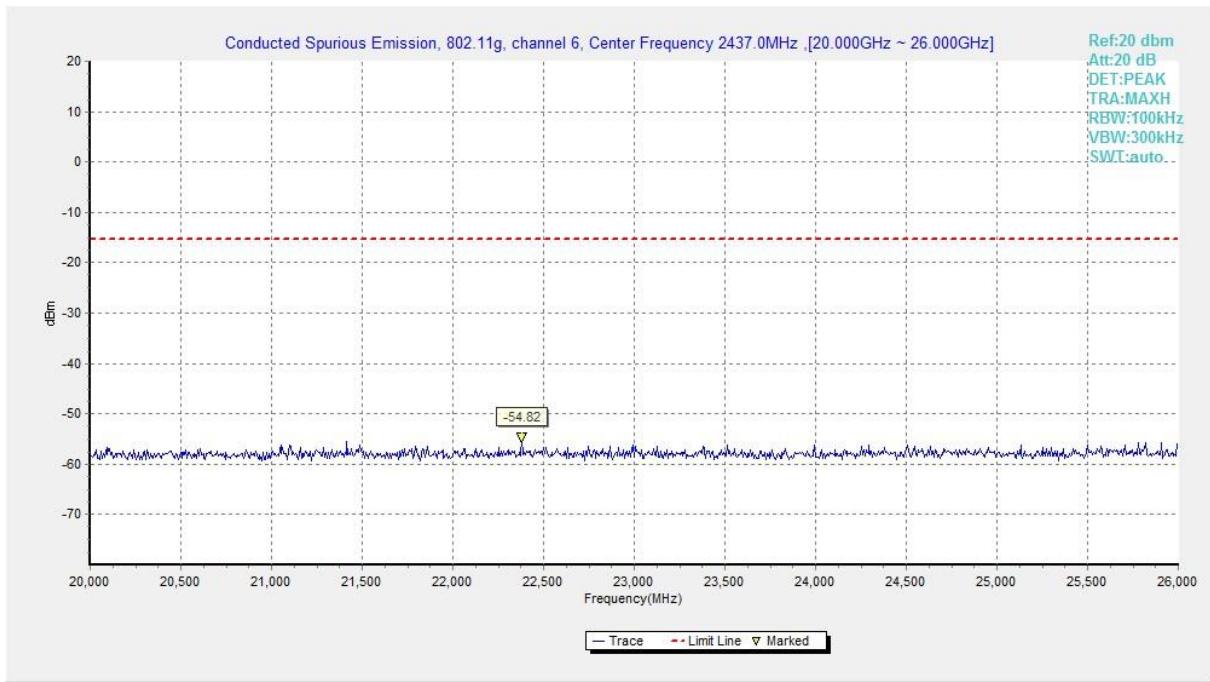


Fig.A.6.1.40 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 20 GHz-26 GHz)

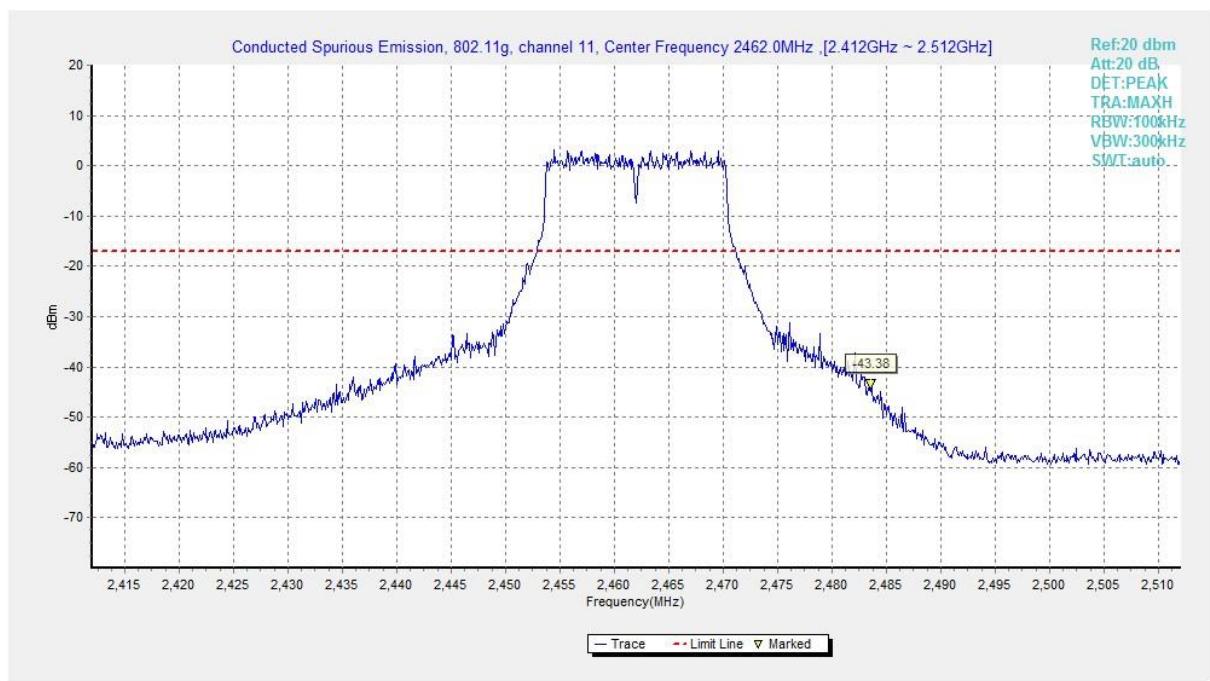


Fig.A.6.1.41 Transmitter Spurious Emission - Conducted (802.11g, Ch11, Center Frequency)

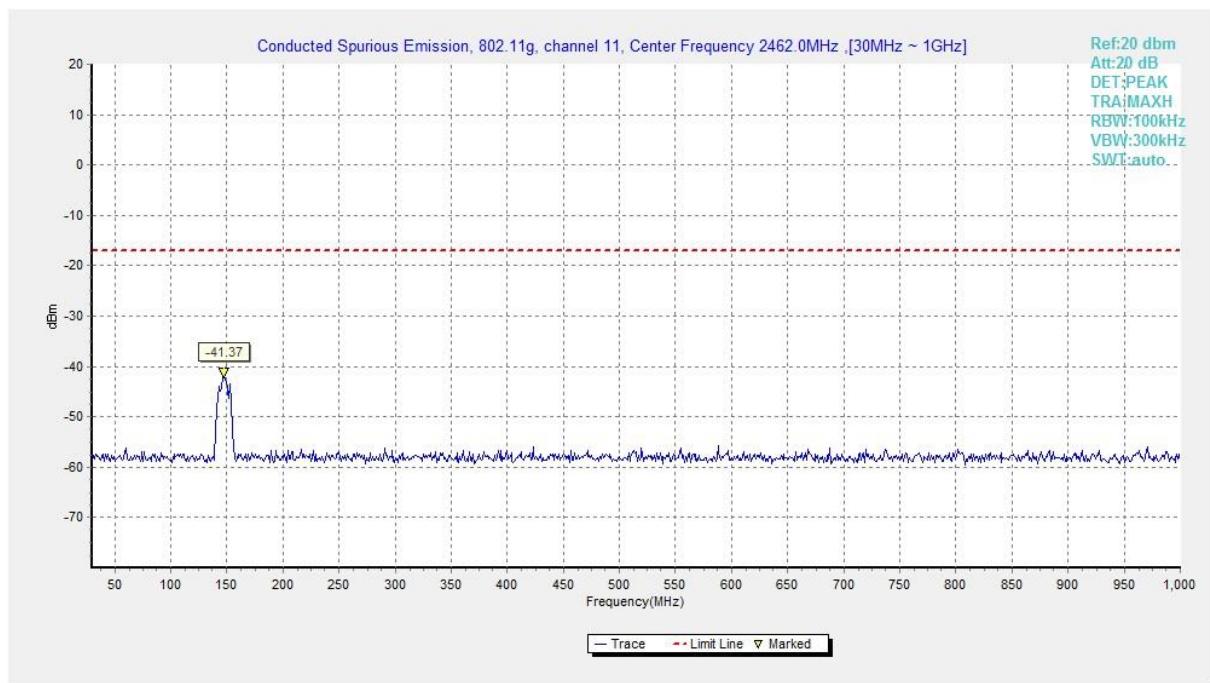


Fig.A.6.1.42 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 30 MHz-1 GHz)

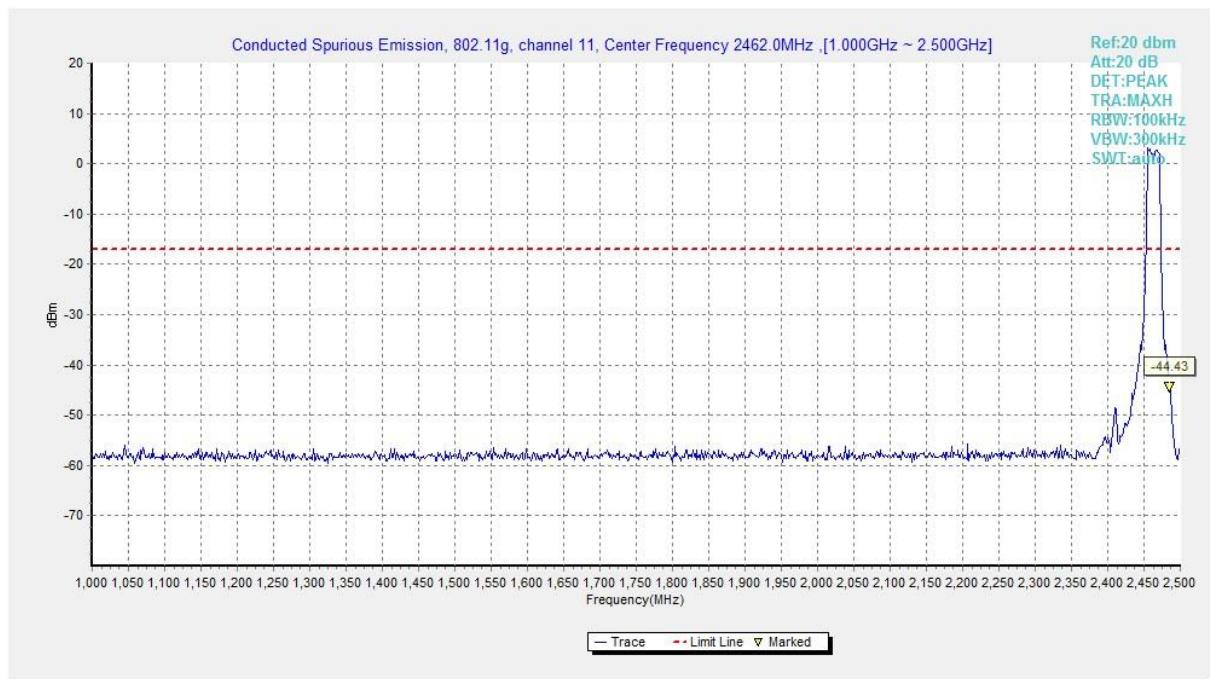


Fig.A.6.1.43 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 1 GHz-2.5 GHz)

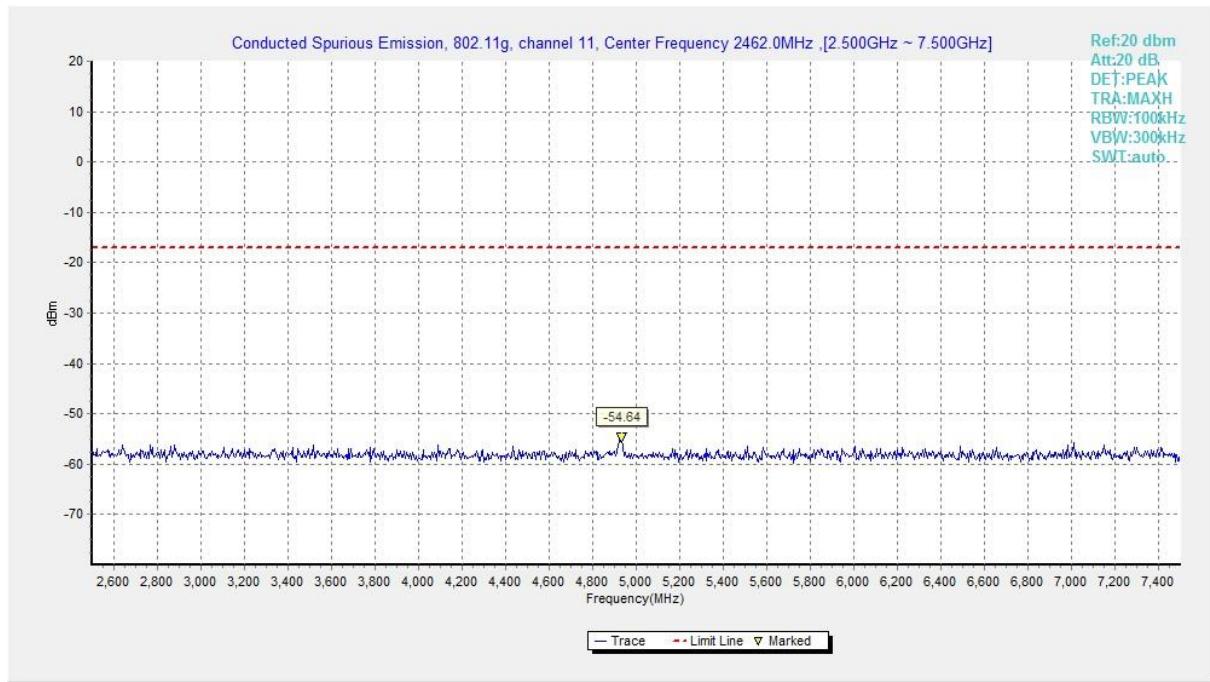


Fig.A.6.1.44 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 2.5 GHz-7.5 GHz)

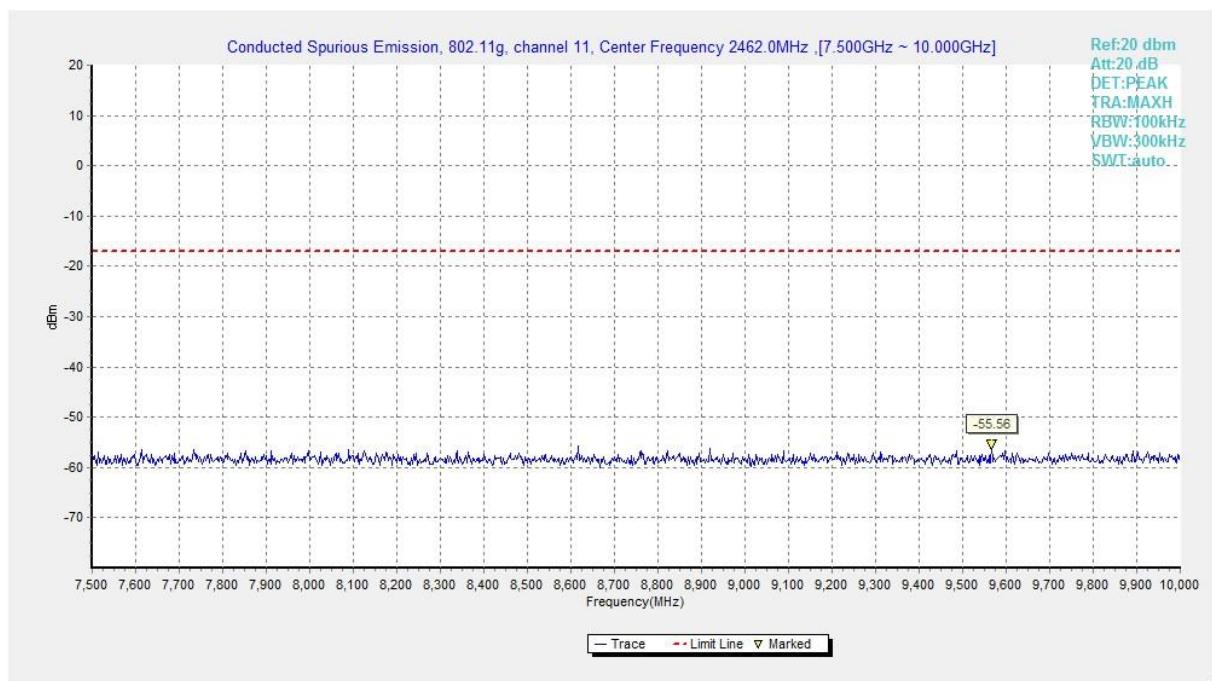


Fig.A.6.1.45 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 7.5 GHz-10 GHz)

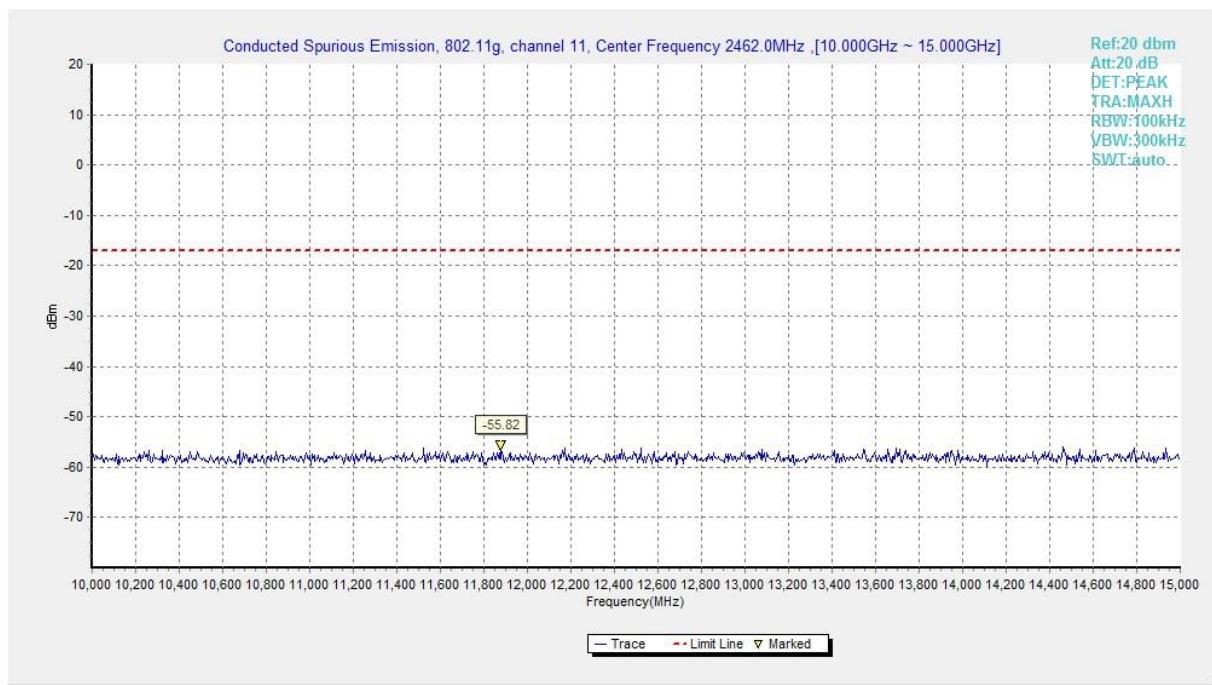


Fig.A.6.1.46 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 10 GHz-15 GHz)

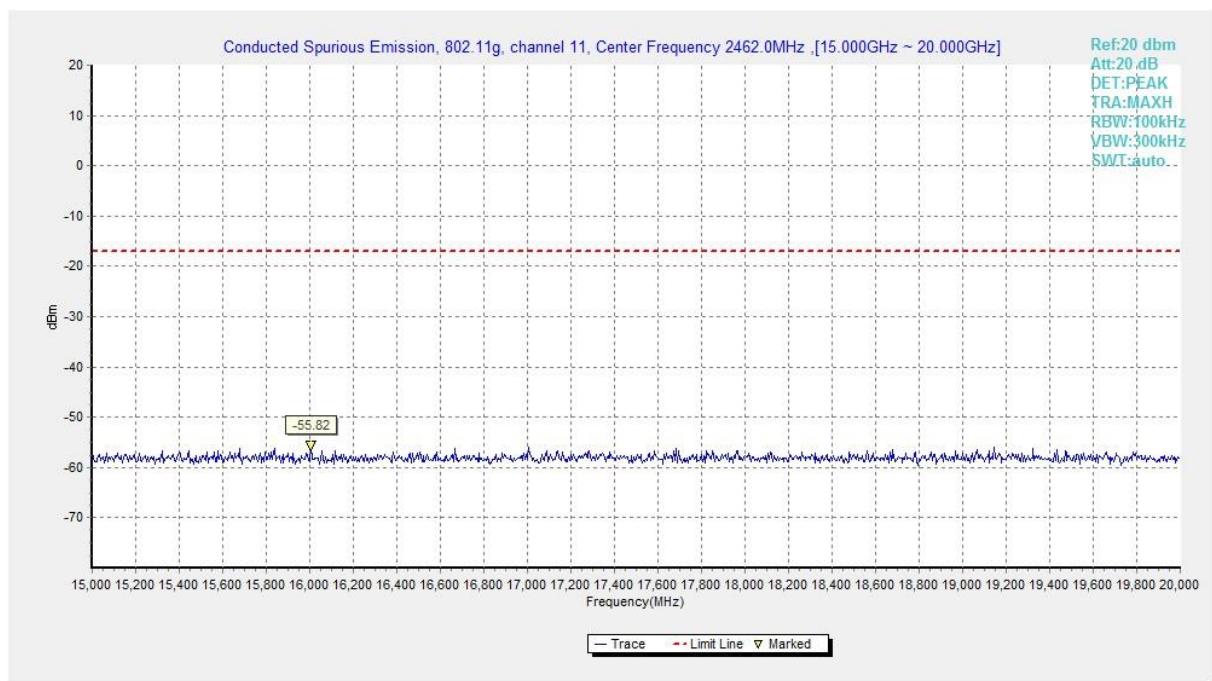


Fig.A.6.1.47 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 15 GHz-20 GHz)

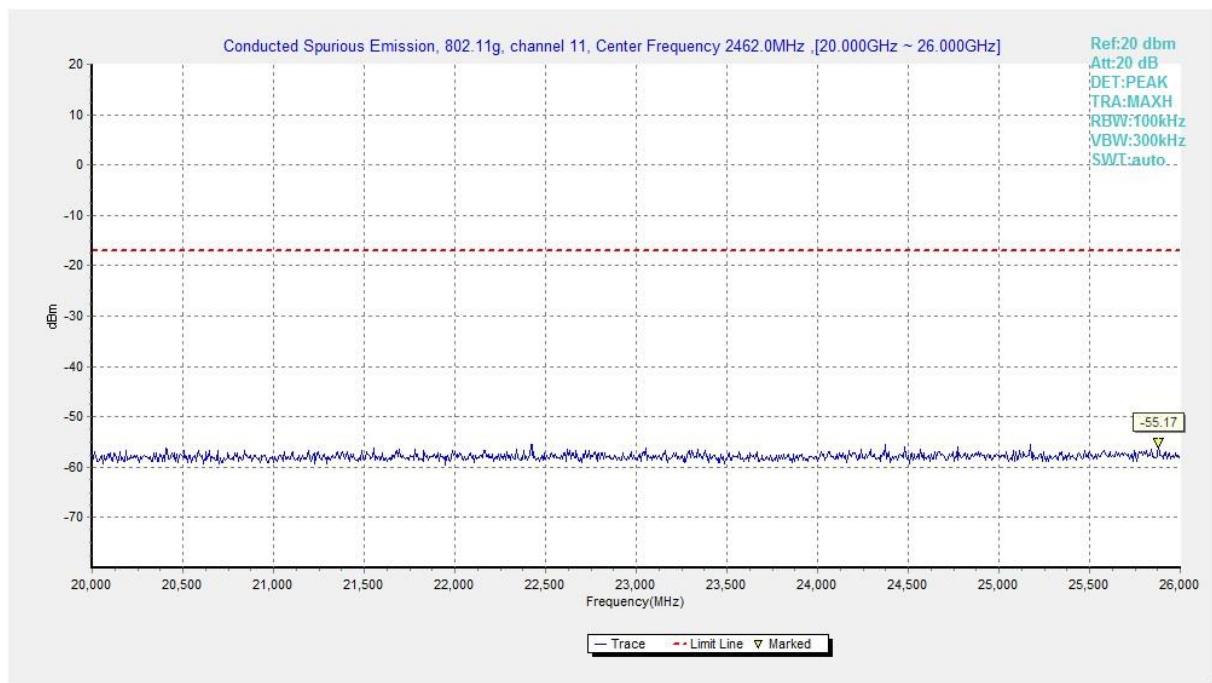


Fig.A.6.1.48 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 20 GHz-26 GHz)

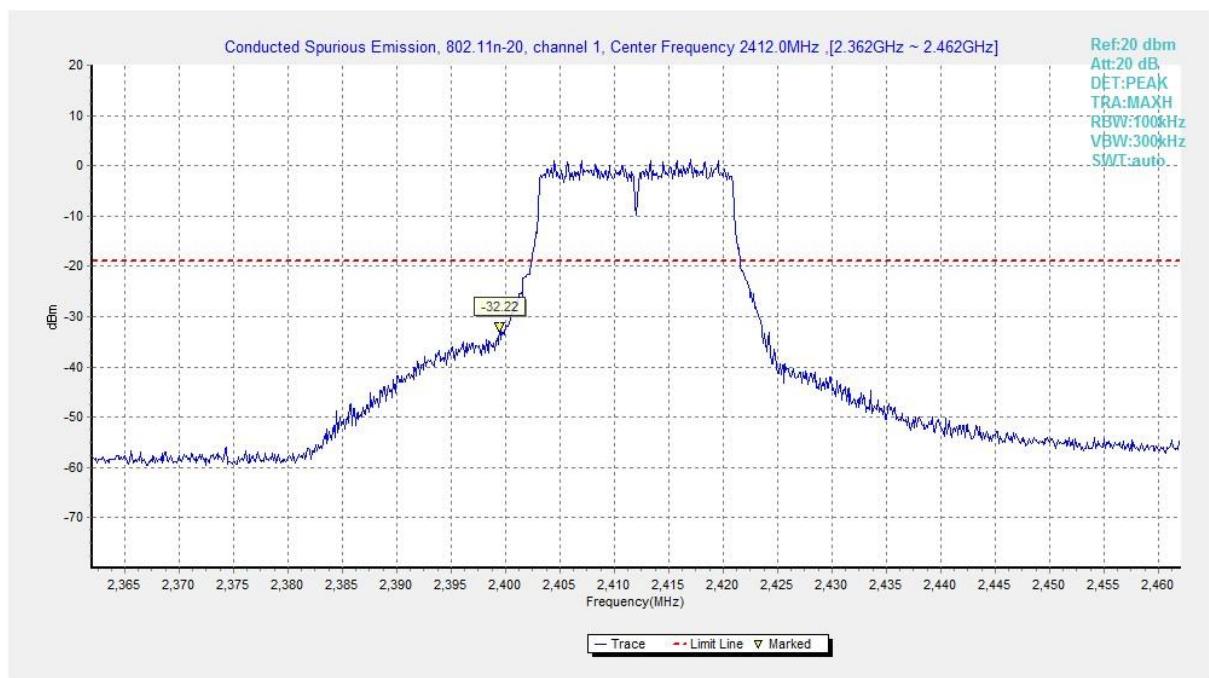


Fig.A.6.1.49 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, Center Frequency)

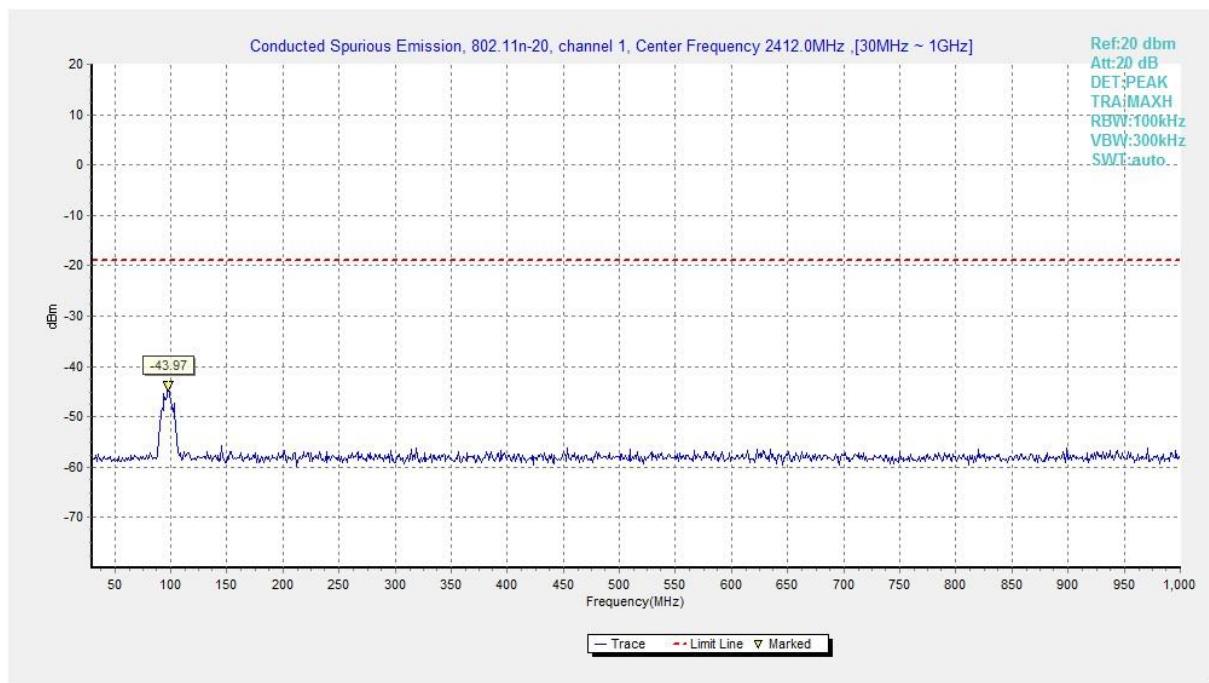


Fig.A.6.1.50 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 30 MHz-1 GHz)

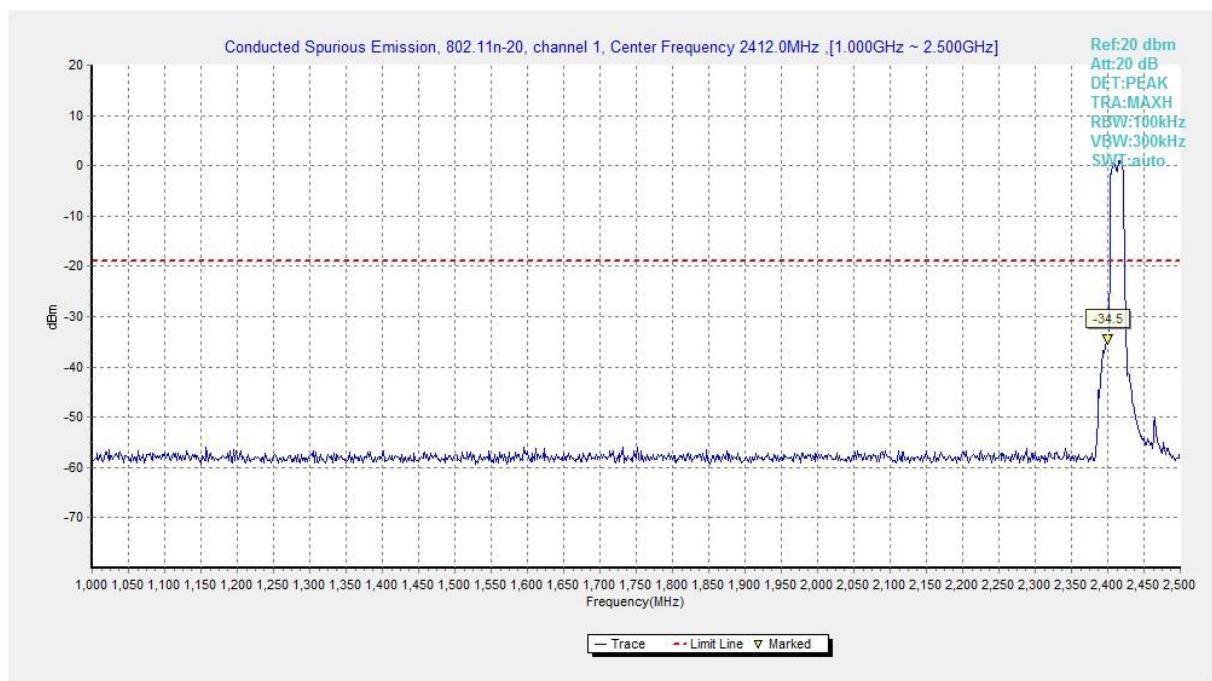


Fig.A.6.1.51 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 1 GHz-2.5 GHz)

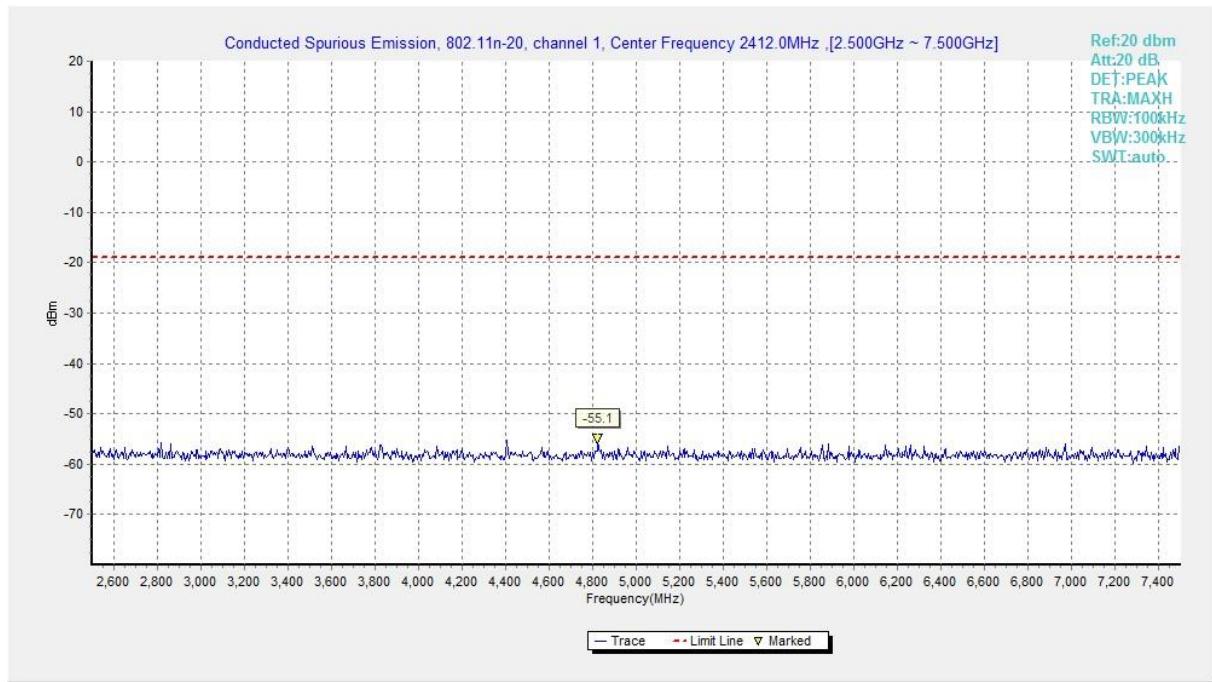


Fig.A.6.1.52 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 2.5 GHz-7.5 GHz)

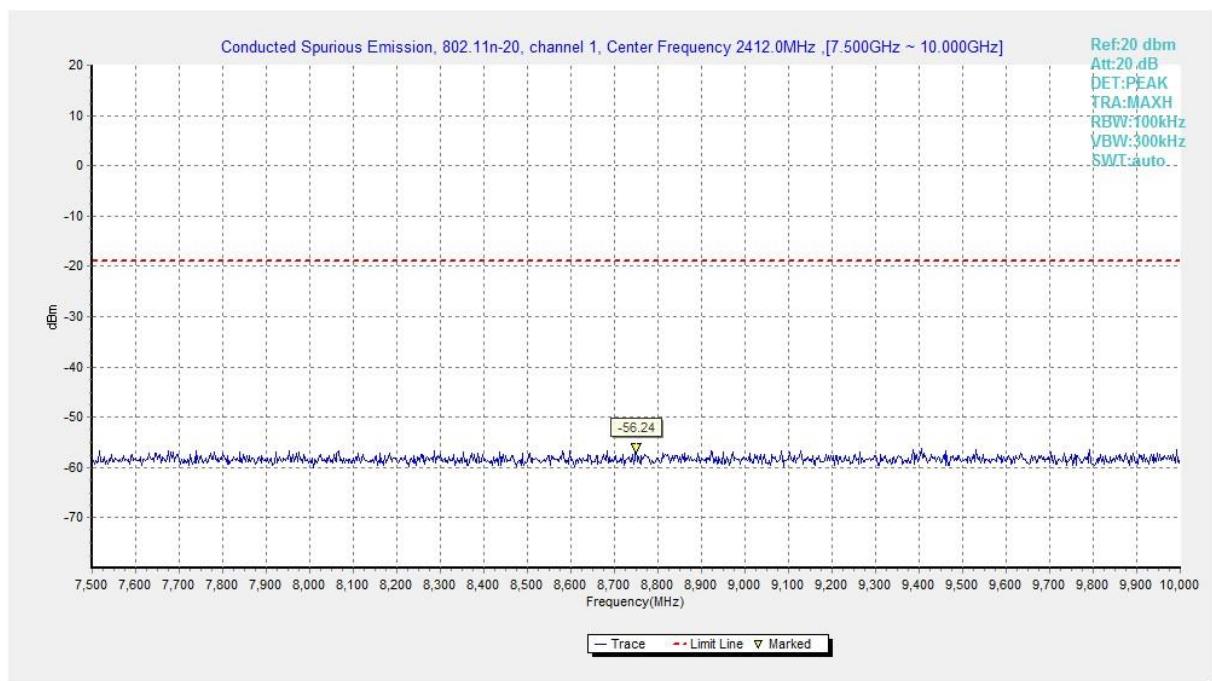


Fig.A.6.1.53 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 7.5 GHz-10 GHz)

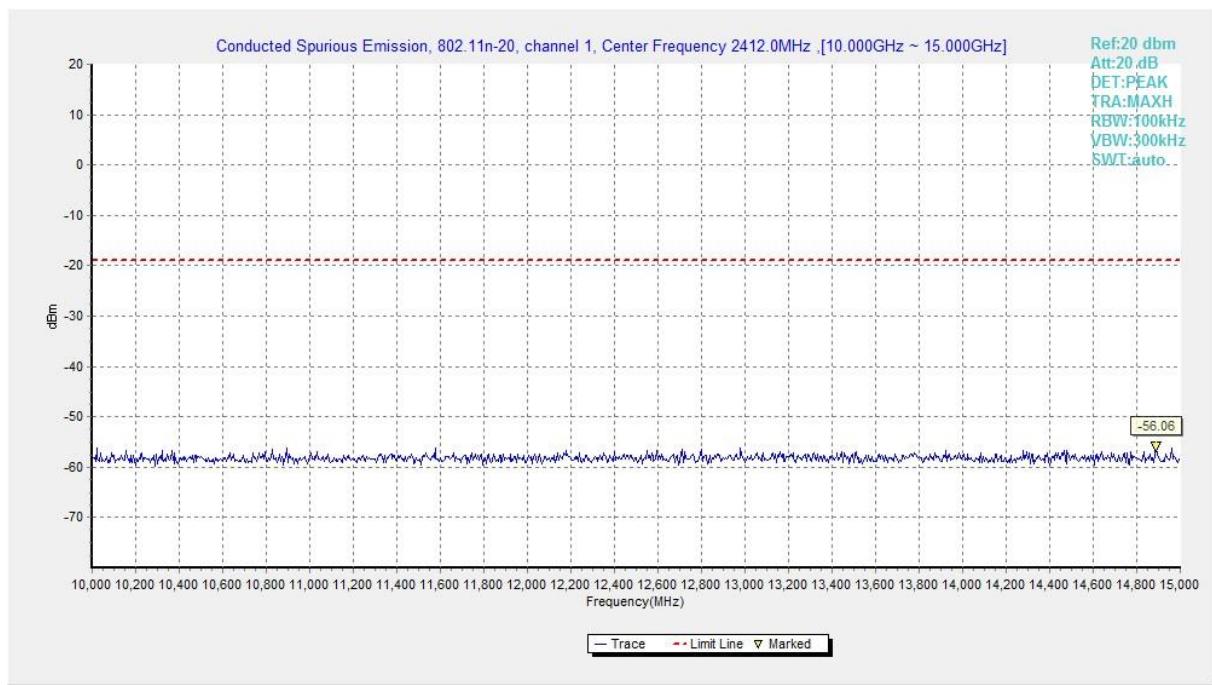


Fig.A.6.1.54 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 10 GHz-15 GHz)

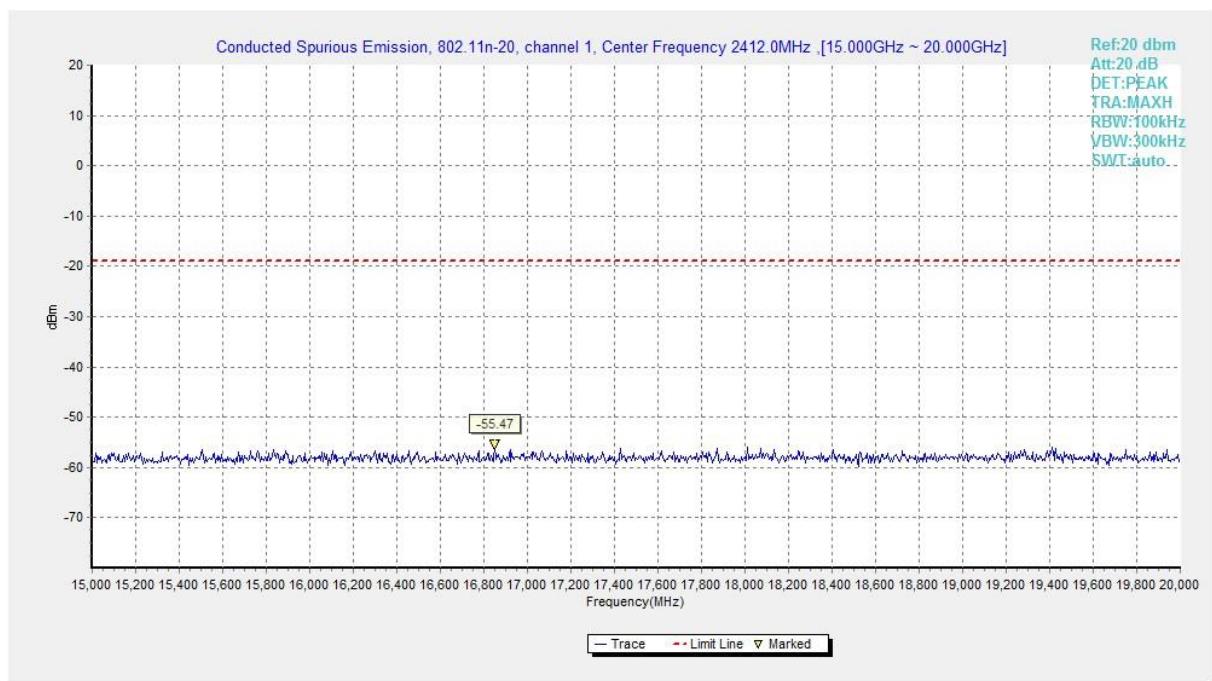


Fig.A.6.1.55 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 15 GHz-20 GHz)

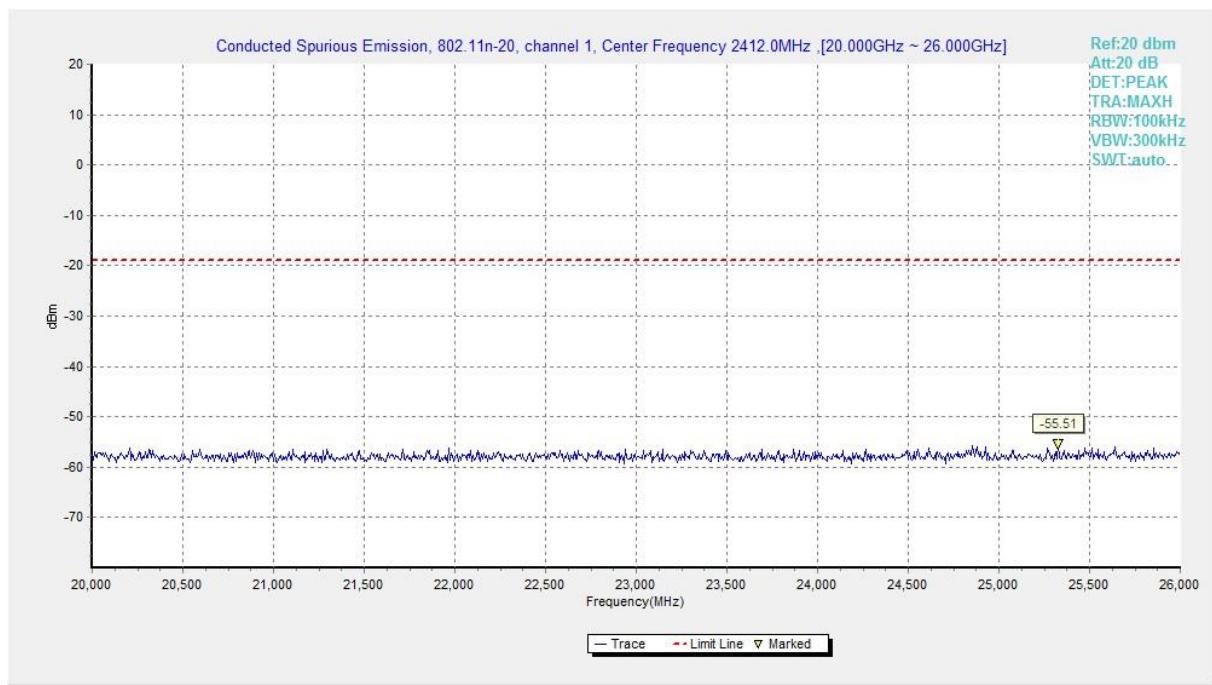


Fig.A.6.1.56 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 20 GHz-26 GHz)

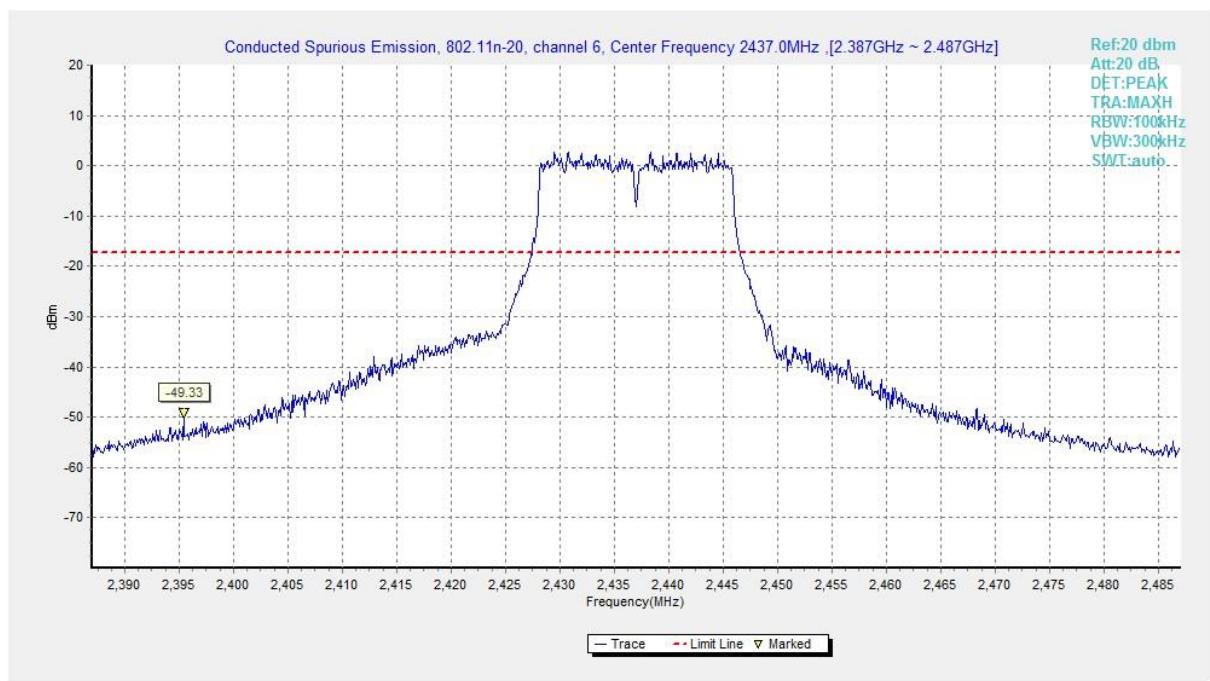


Fig.A.6.1.57 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, Center Frequency)

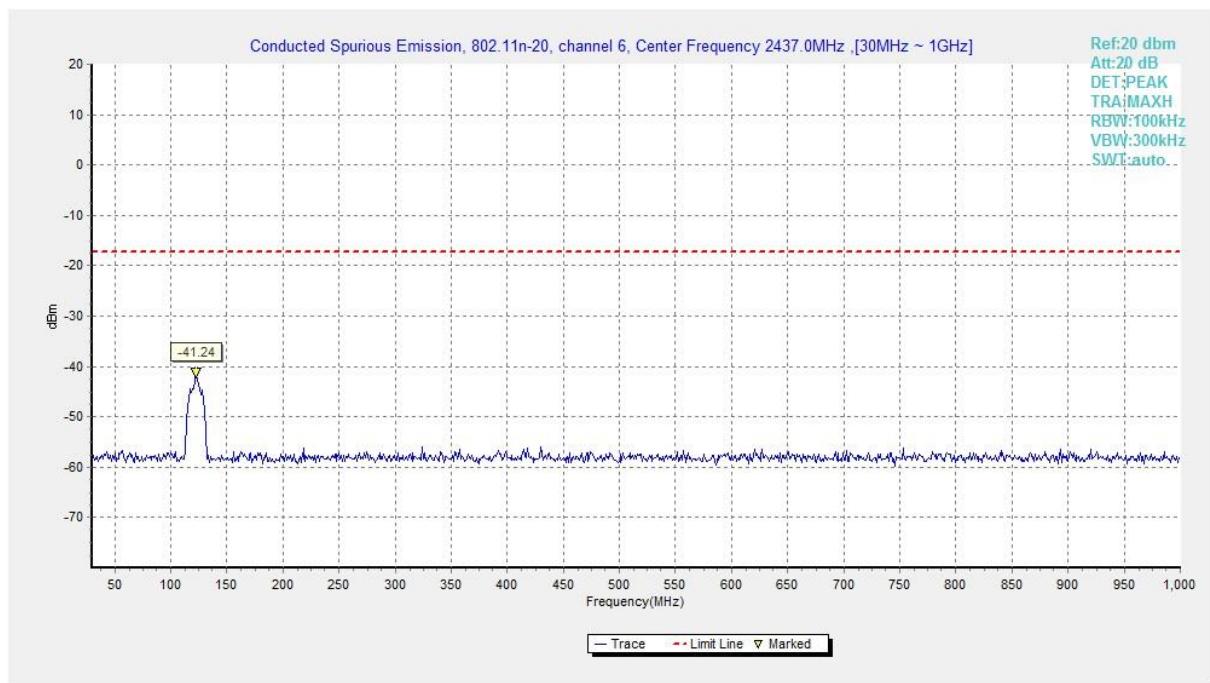


Fig.A.6.1.58 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 30 MHz-1 GHz)

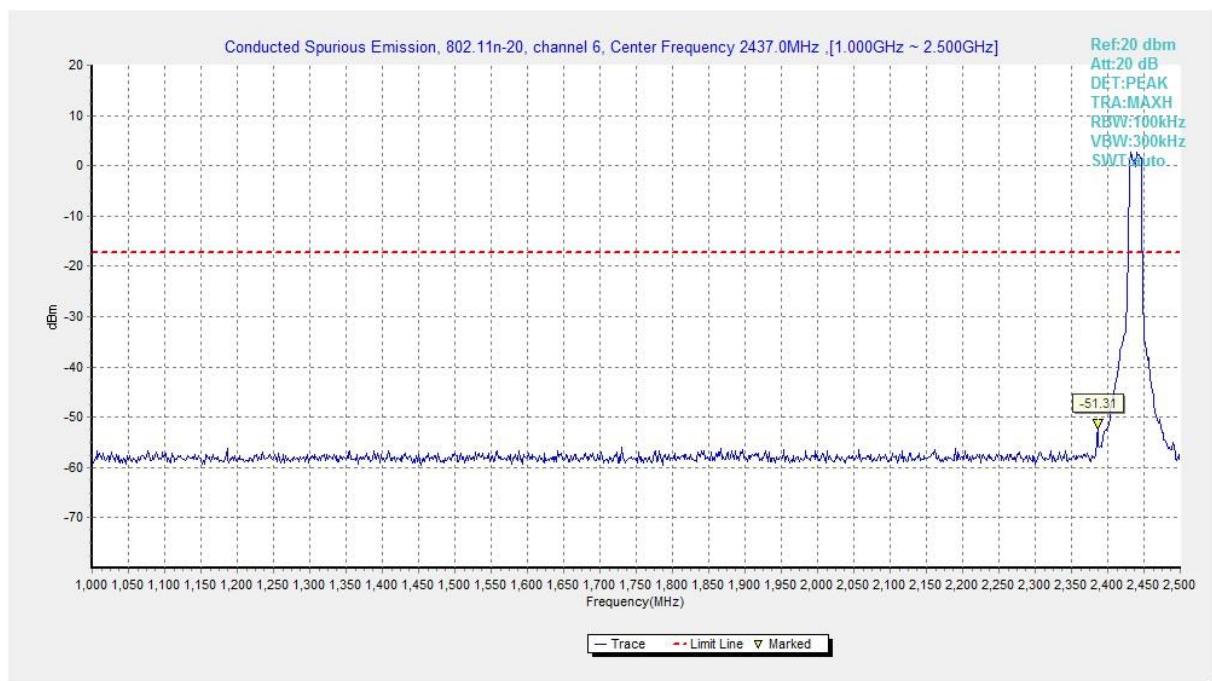


Fig.A.6.1.59 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 1 GHz-2.5 GHz)

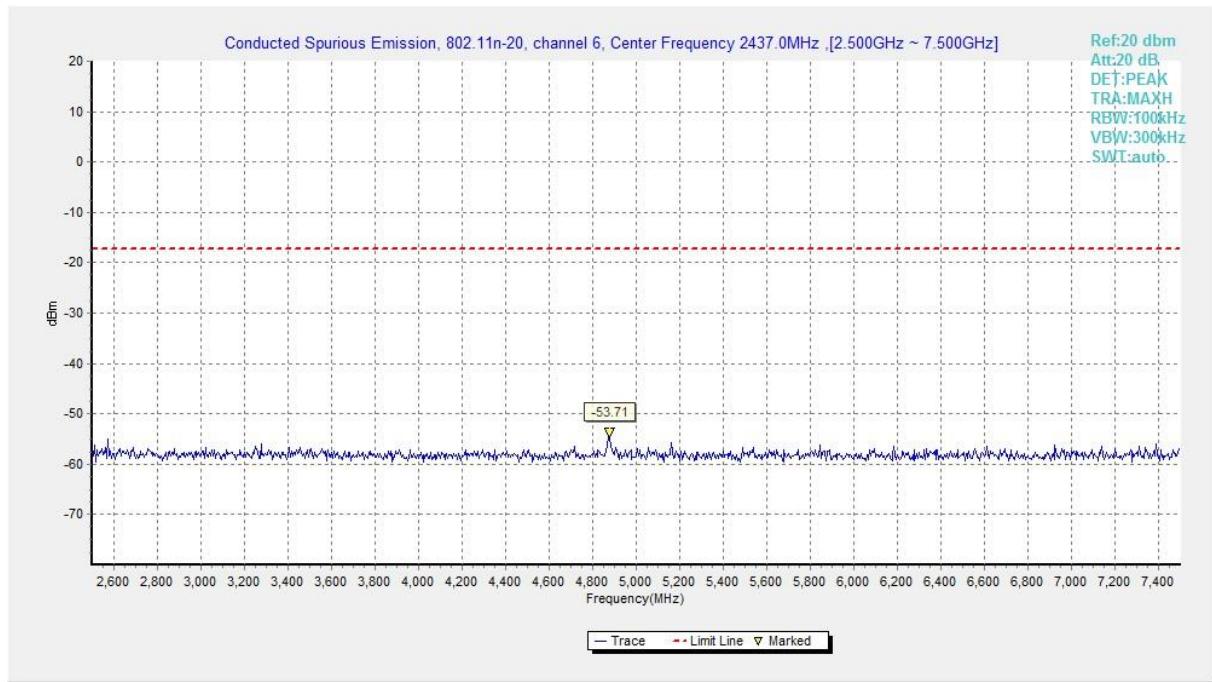


Fig.A.6.1.60 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 2.5 GHz-7.5 GHz)

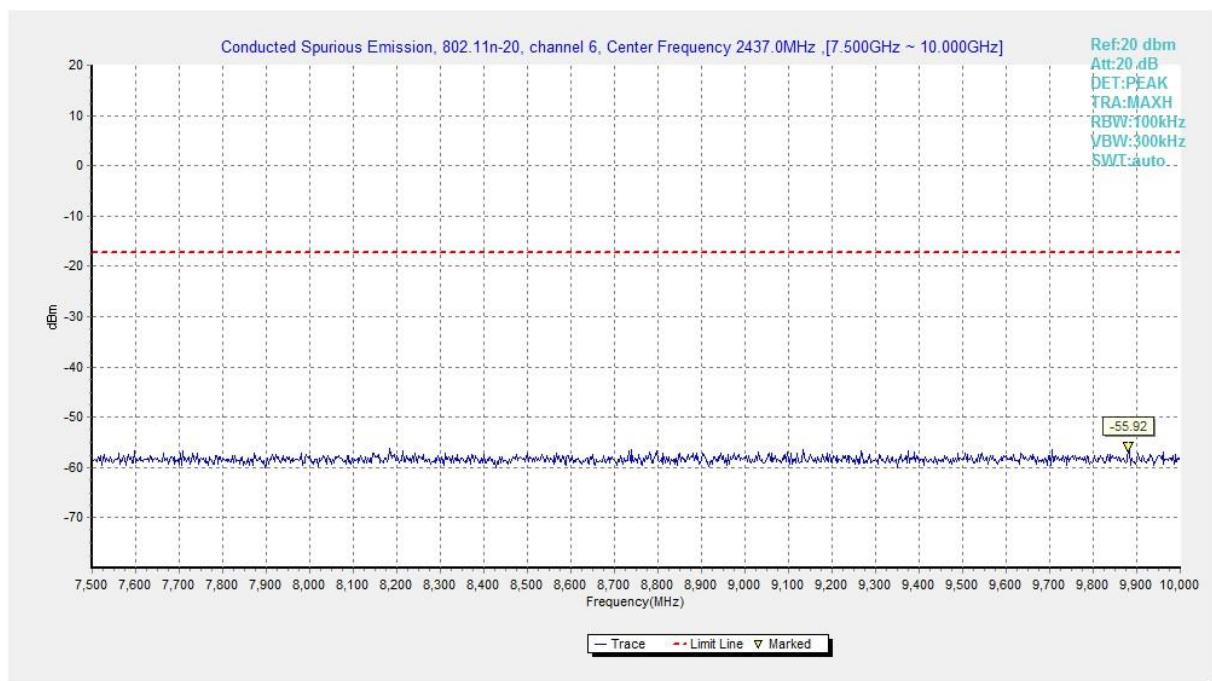


Fig.A.6.1.61 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 7.5 GHz-10 GHz)

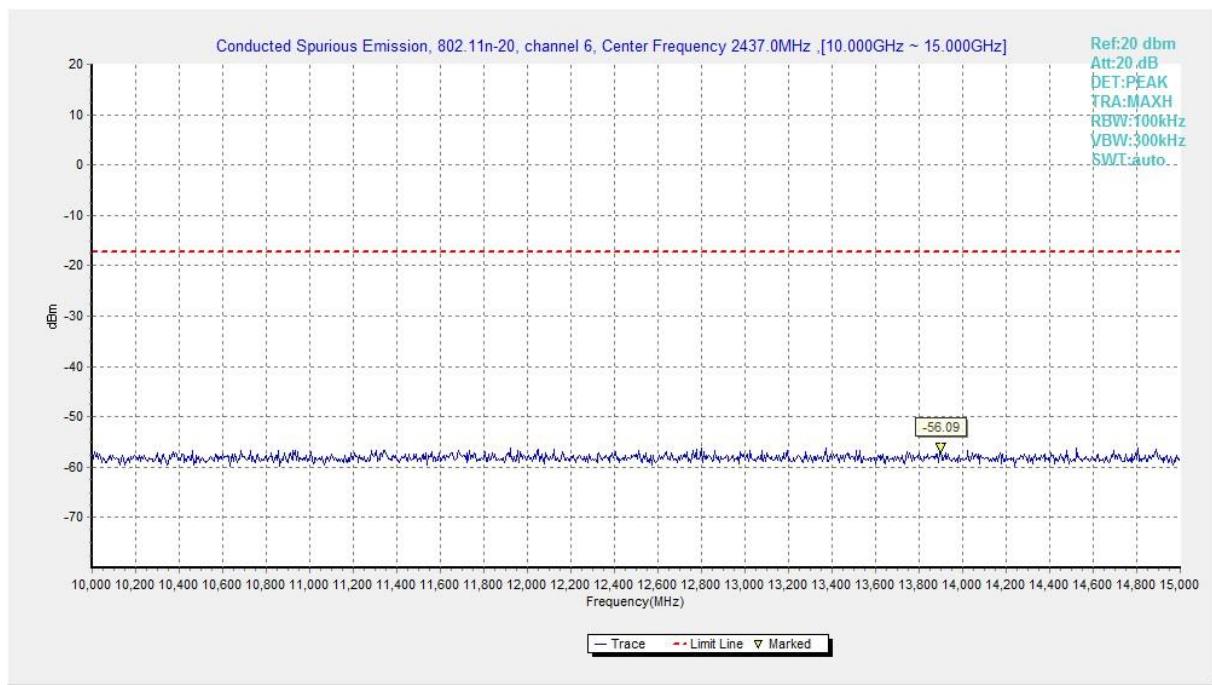


Fig.A.6.1.62 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 10 GHz-15 GHz)

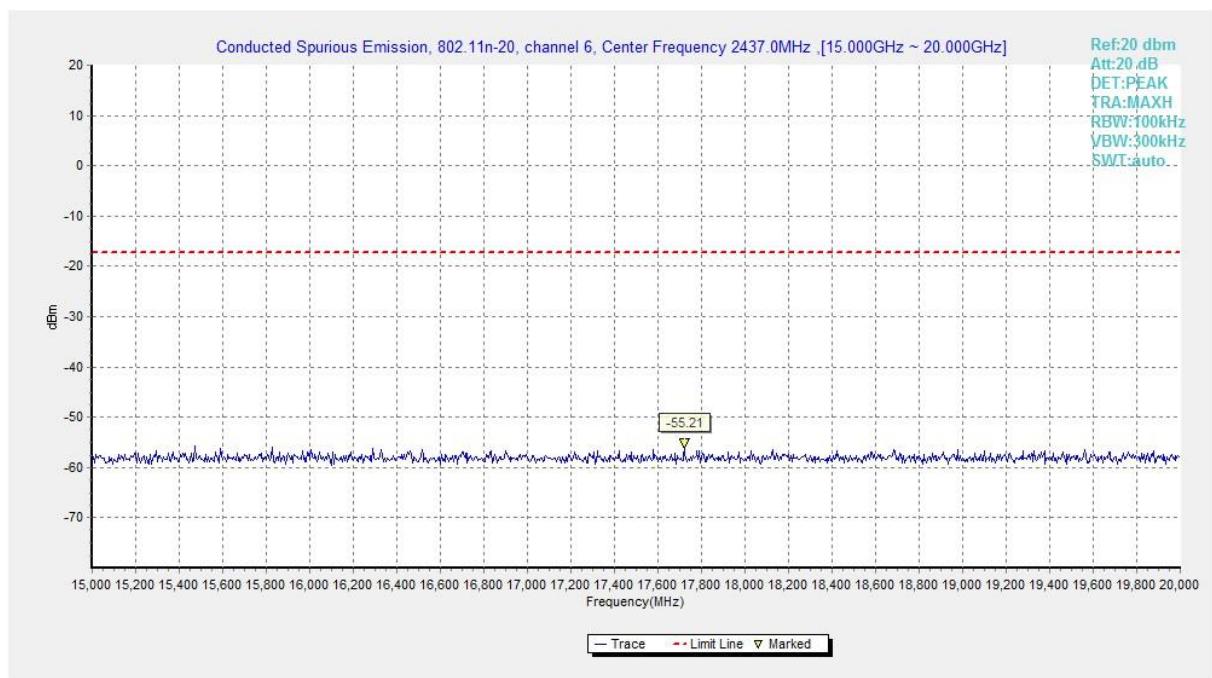


Fig.A.6.1.63 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 15 GHz-20 GHz)

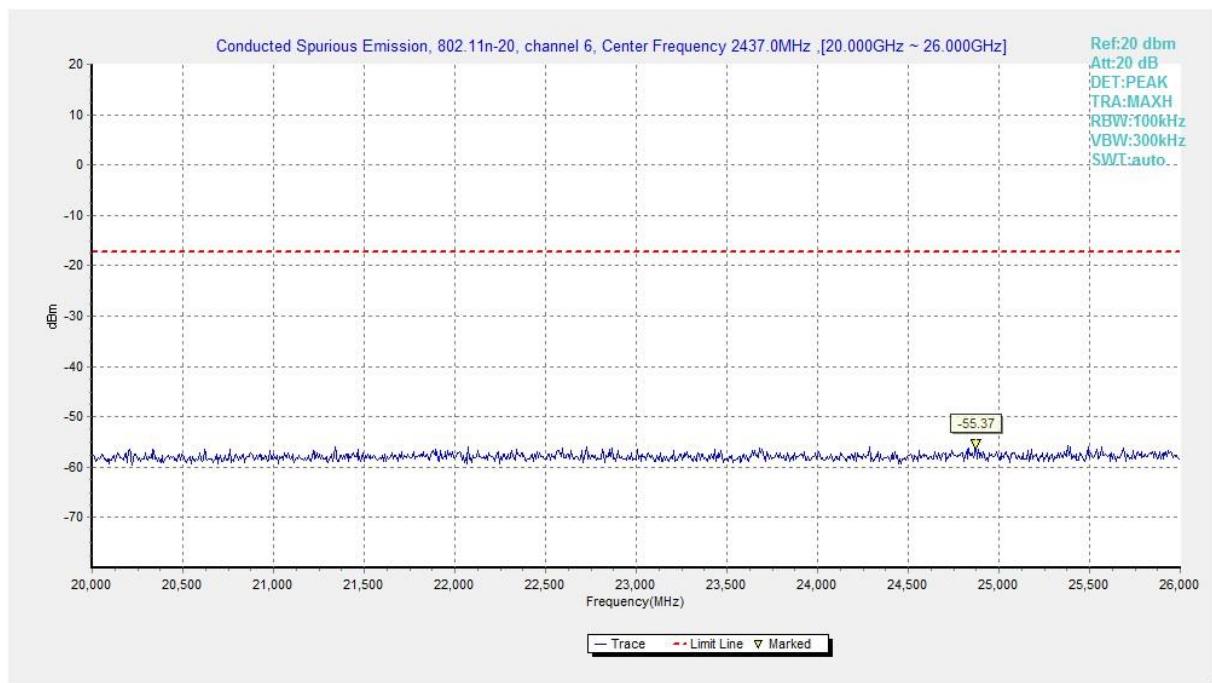


Fig.A.6.1.64 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 20 GHz-26 GHz)

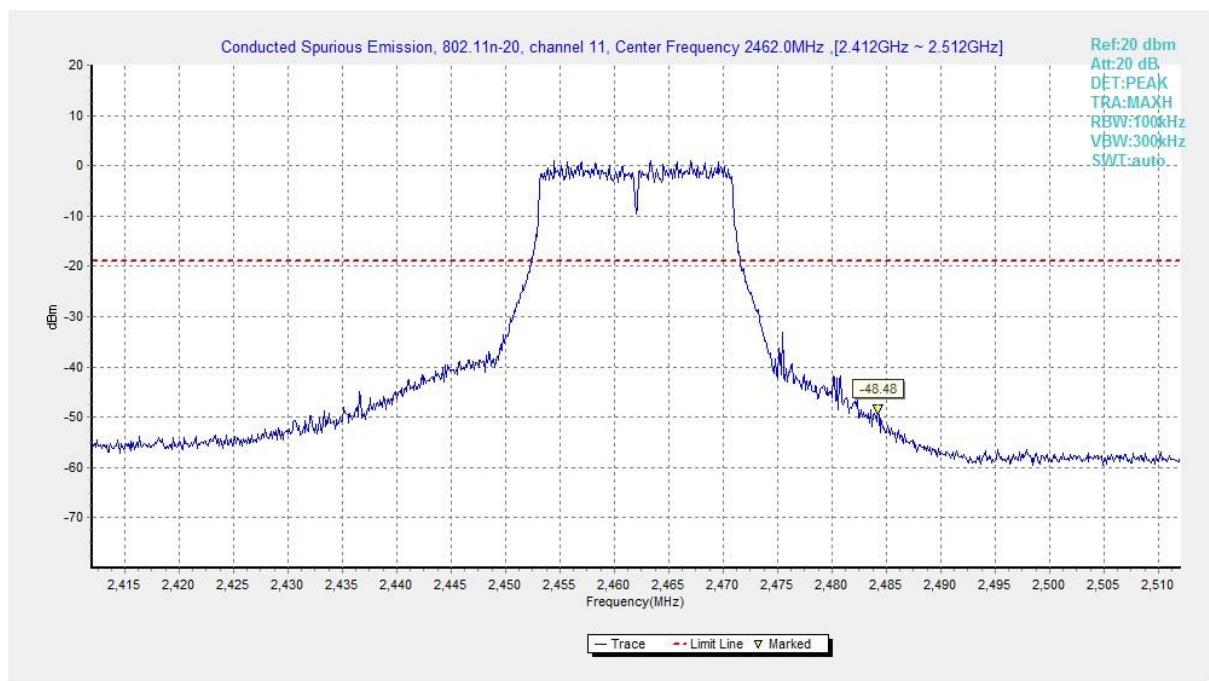


Fig.A.6.1.65 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, Center Frequency)

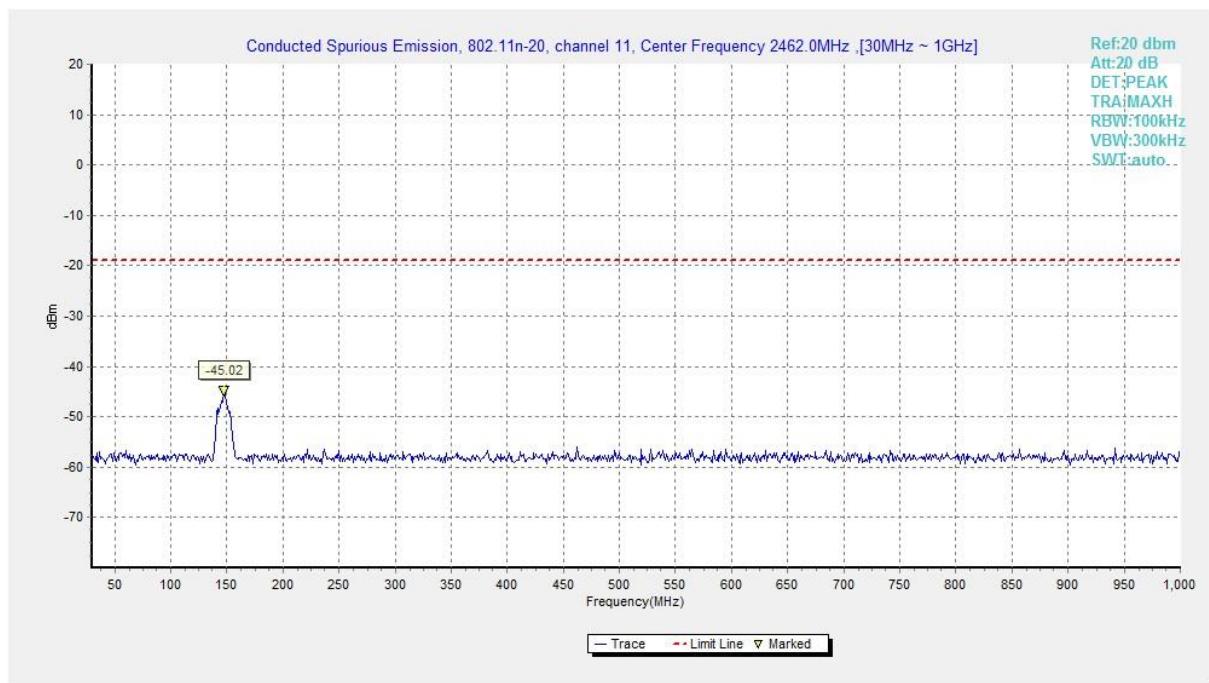


Fig.A.6.1.66 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 30 MHz-1 GHz)

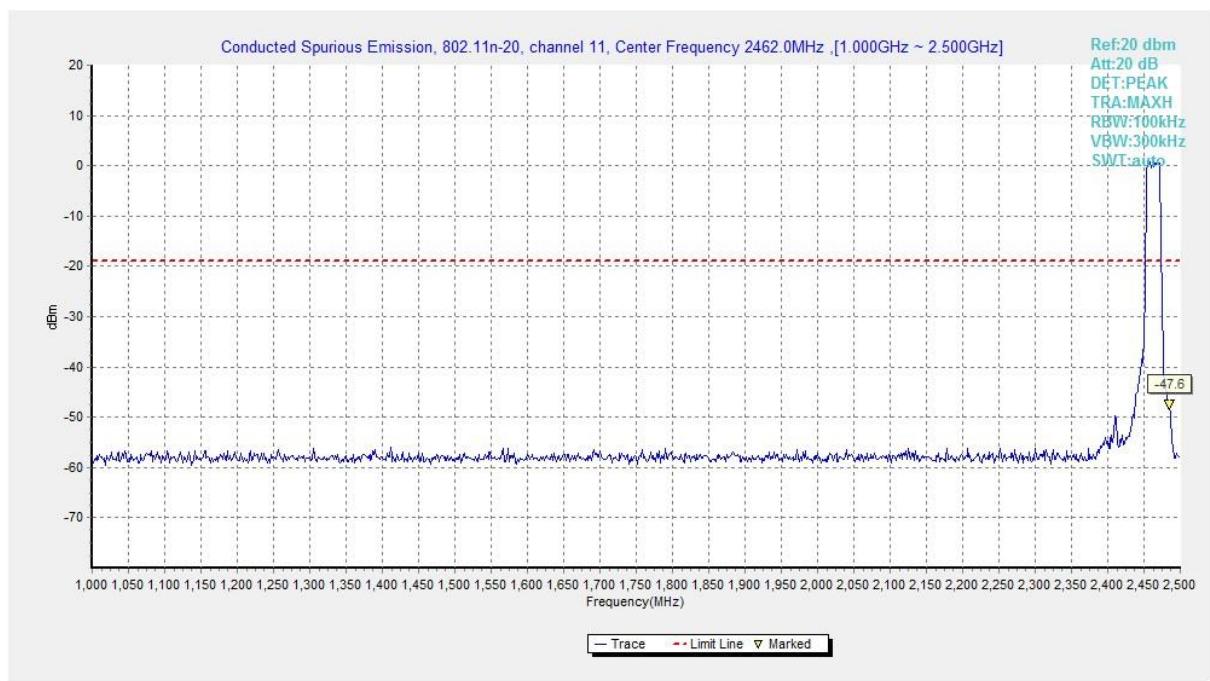


Fig.A.6.1.67 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 1 GHz-2.5 GHz)

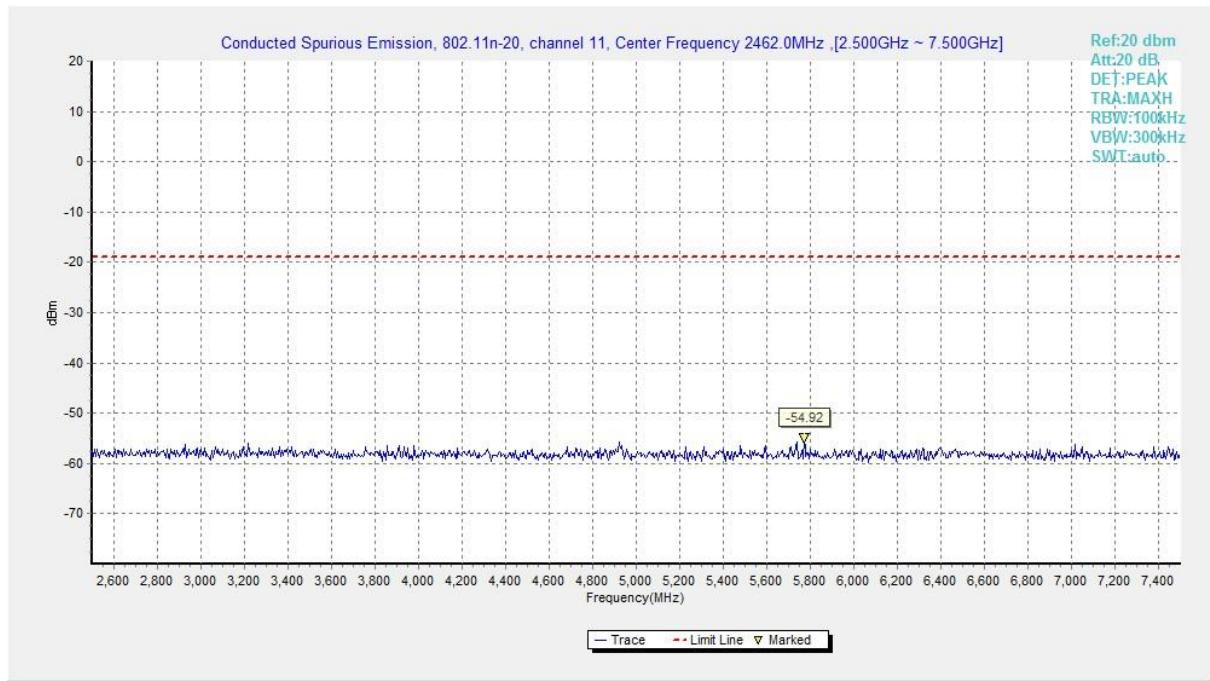


Fig.A.6.1.68 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 2.5 GHz-7.5 GHz)

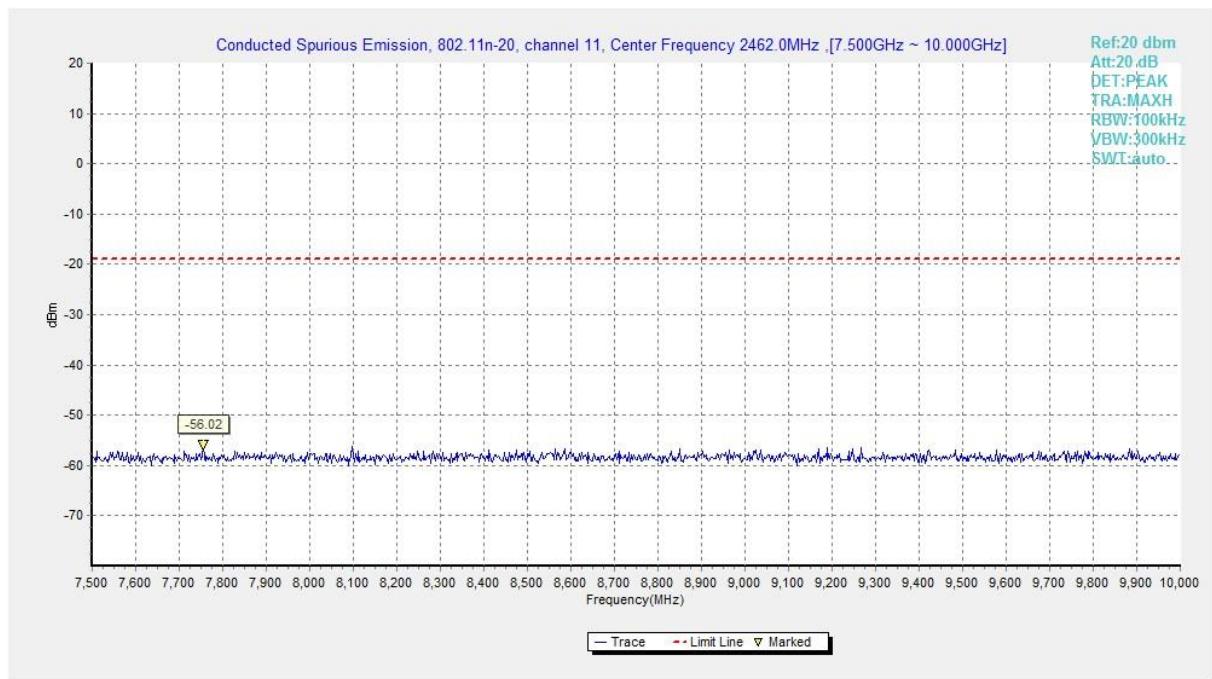


Fig.A.6.1.69 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 7.5 GHz-10 GHz)

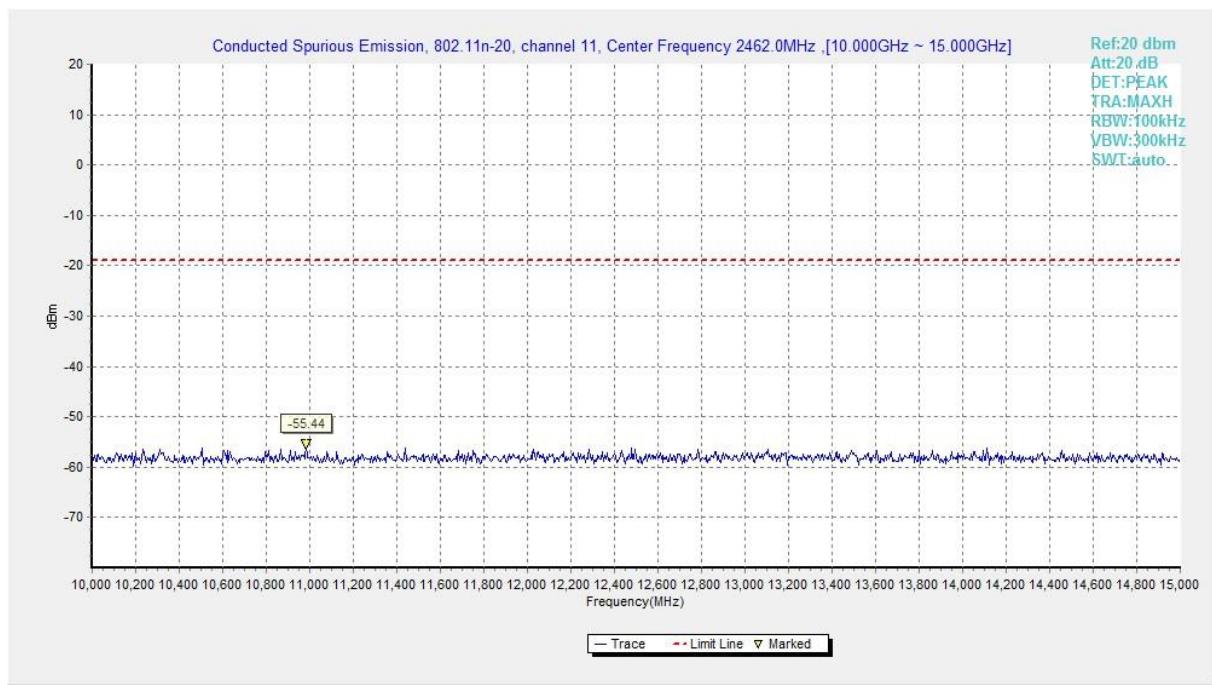


Fig.A.6.1.70 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 10 GHz-15 GHz)

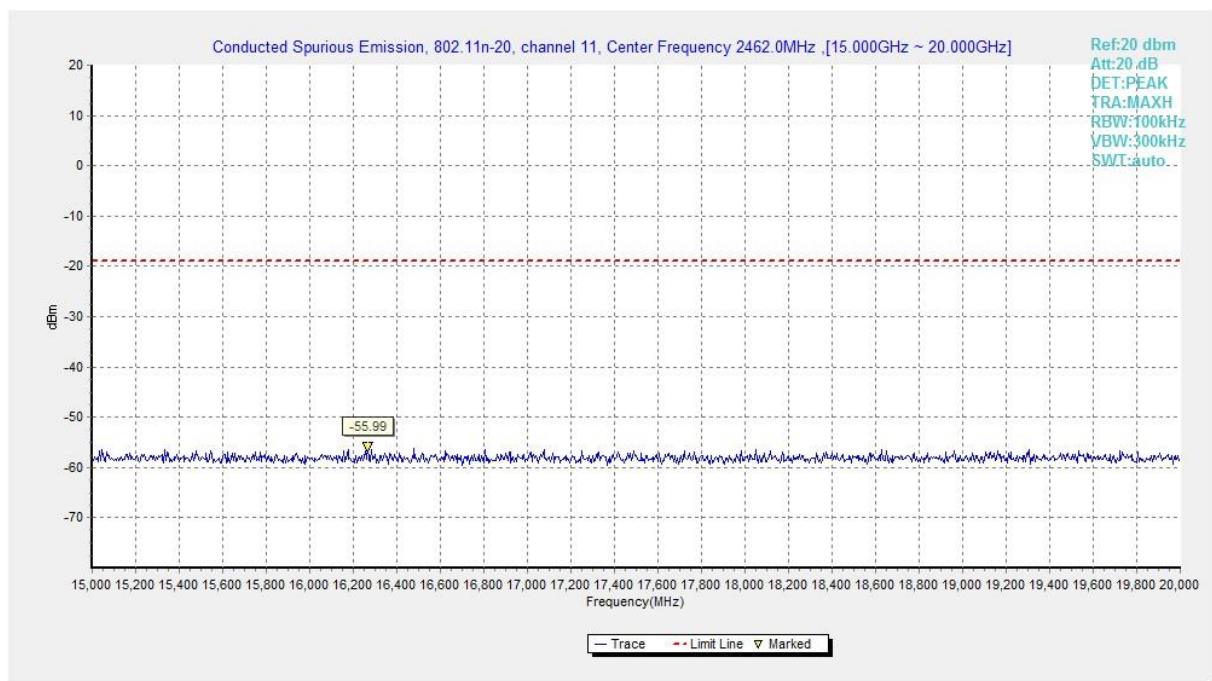


Fig.A.6.1.71 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 15 GHz-20 GHz)

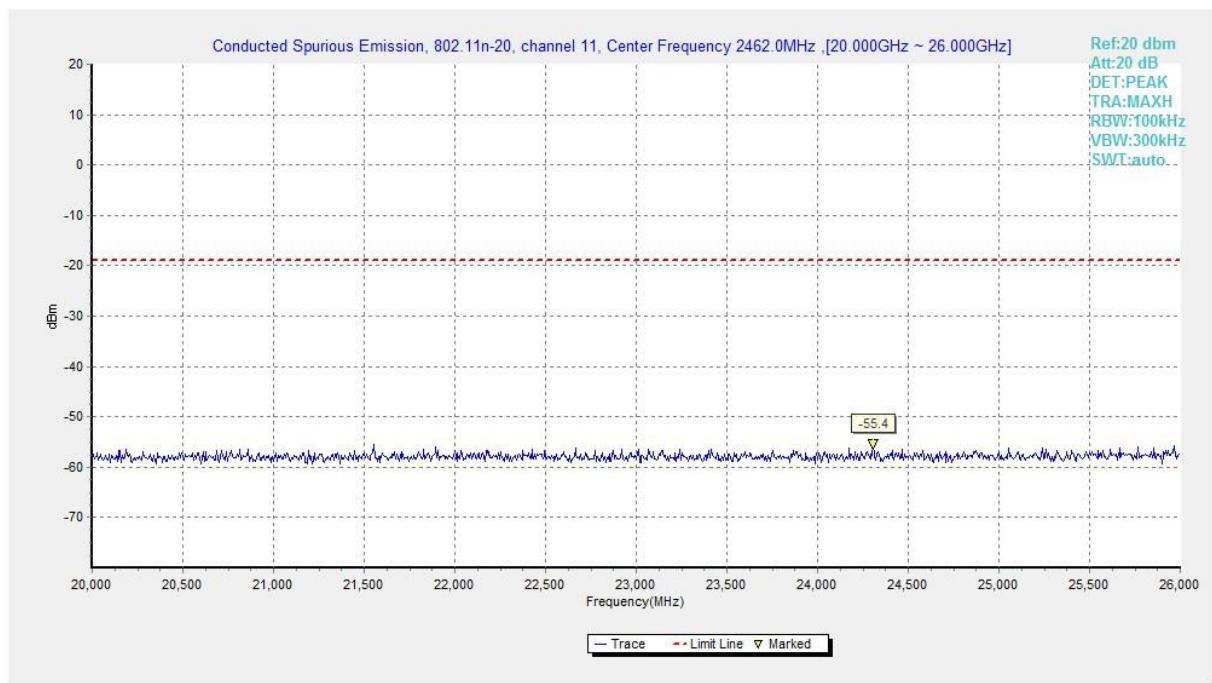


Fig.A.6.1.72 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 20 GHz-26 GHz)

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