

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

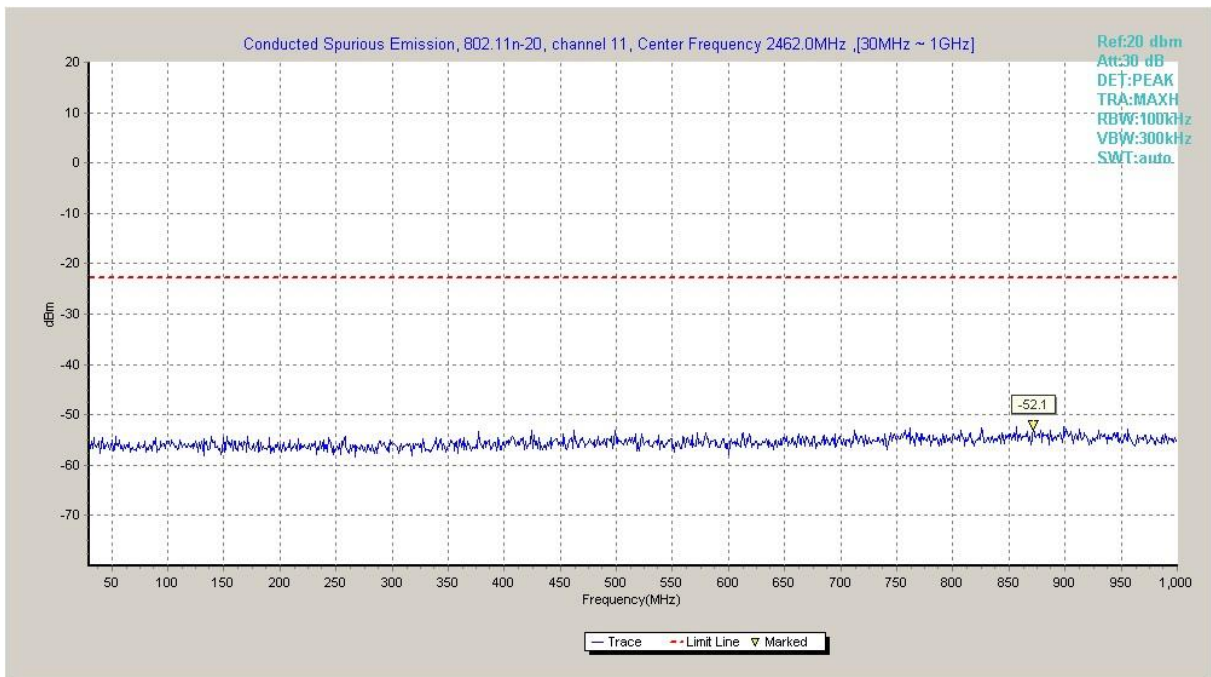


Fig.A.6.1.66 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 30 MHz-1 GHz)

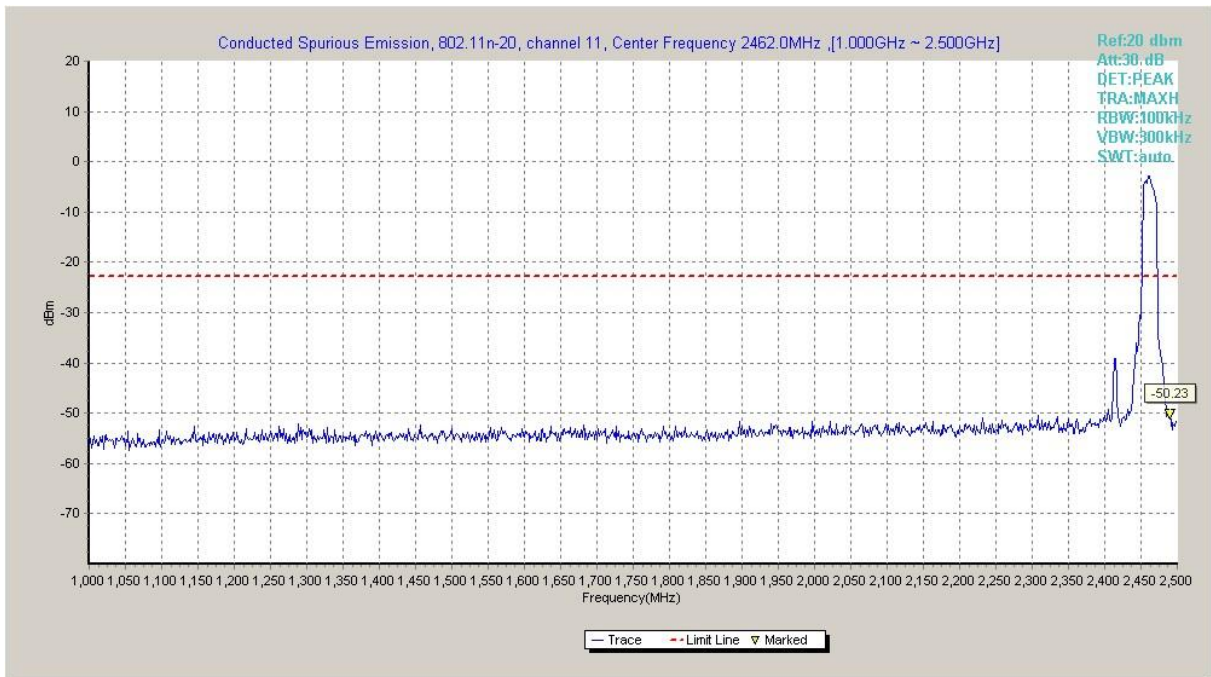


Fig.A.6.1.67 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 1 GHz-2.5 GHz)

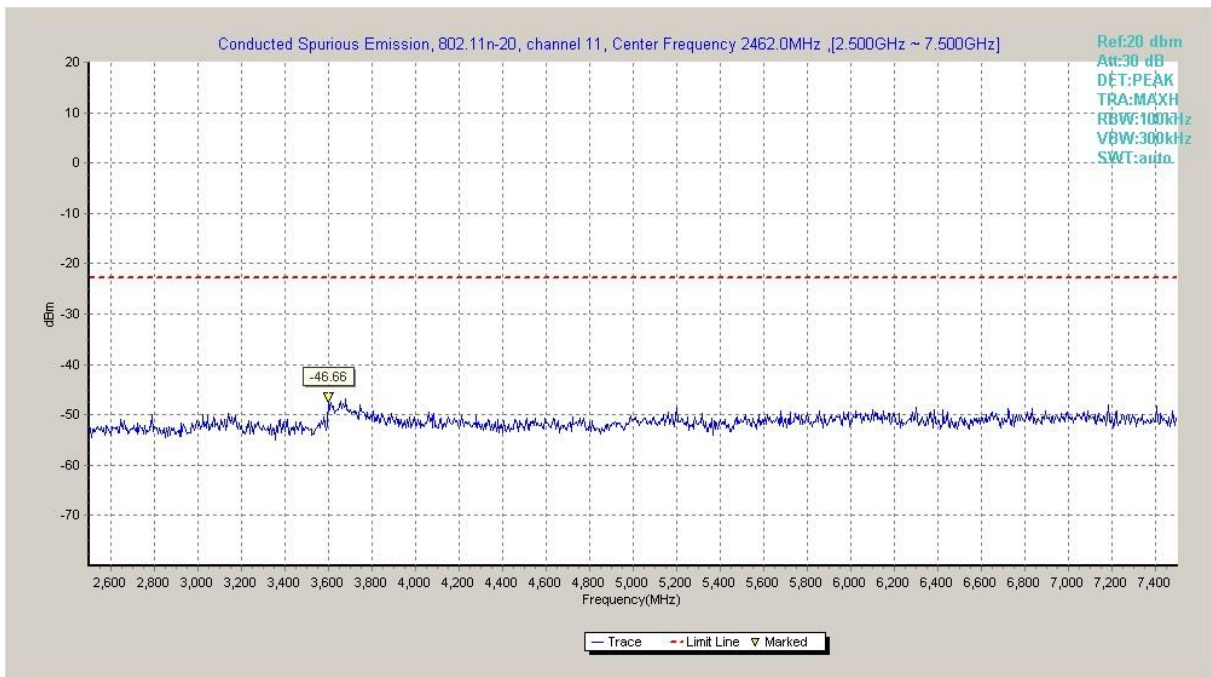


Fig.A.6.1.68 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 2.5 GHz-7.5 GHz)

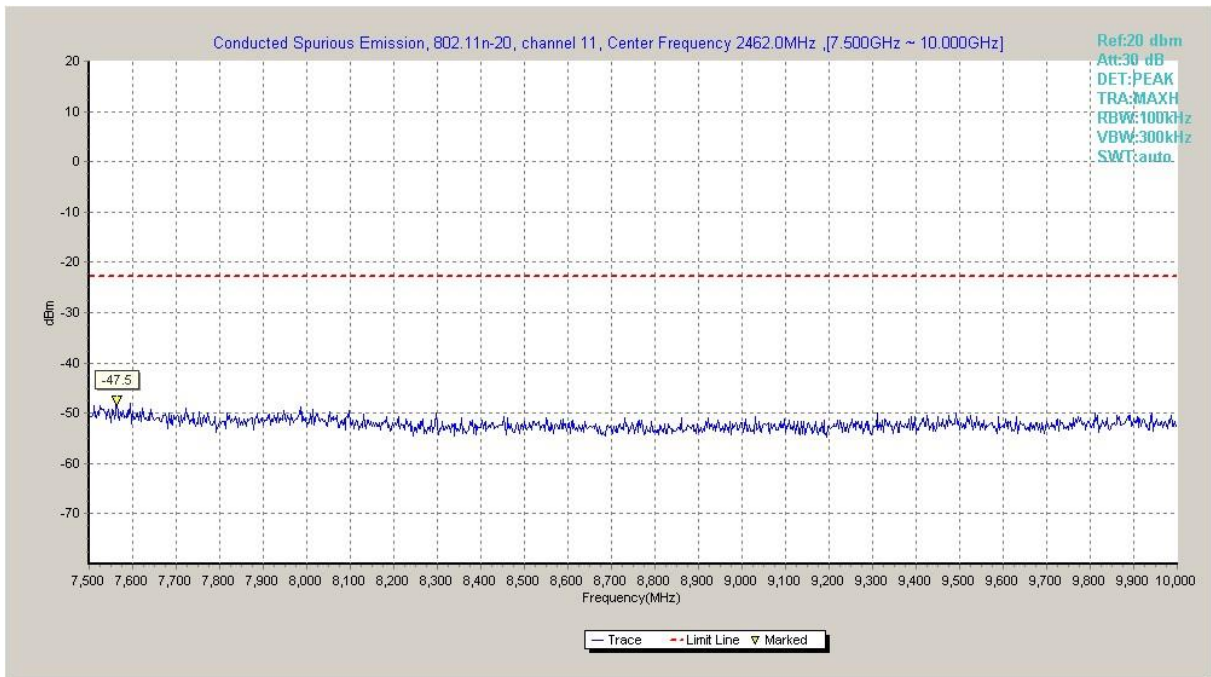


Fig.A.6.1.69 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 7.5 GHz-10 GHz)

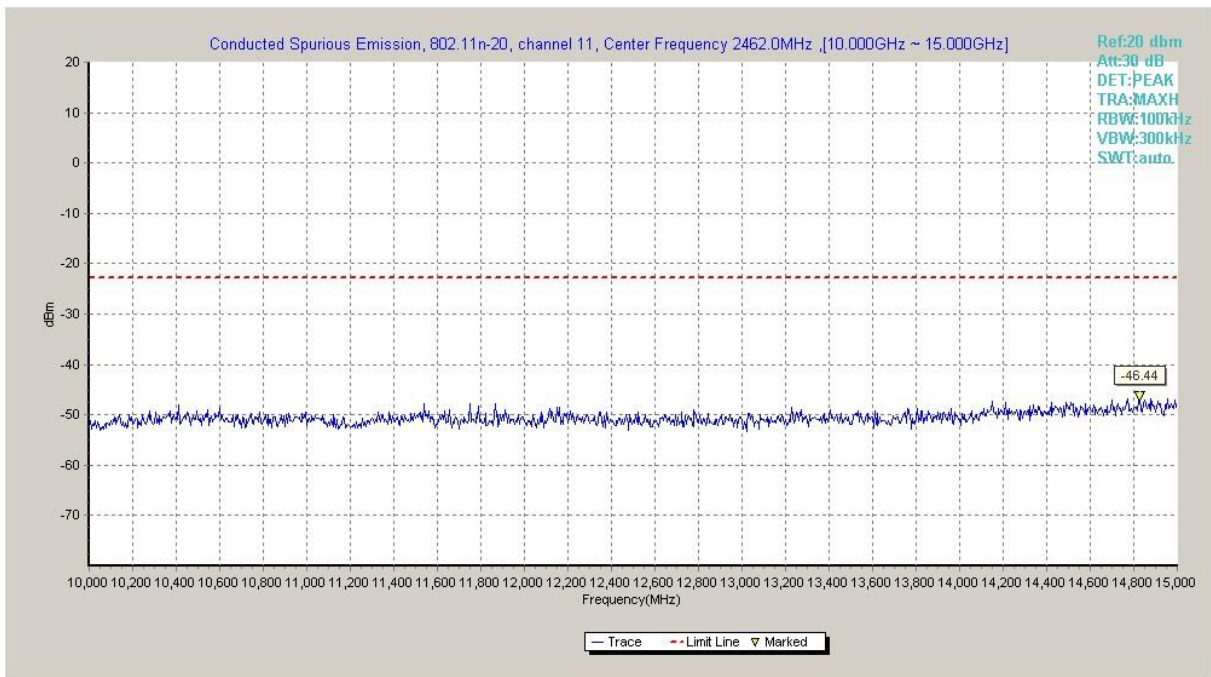


Fig.A.6.1.70 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 10 GHz-15 GHz)

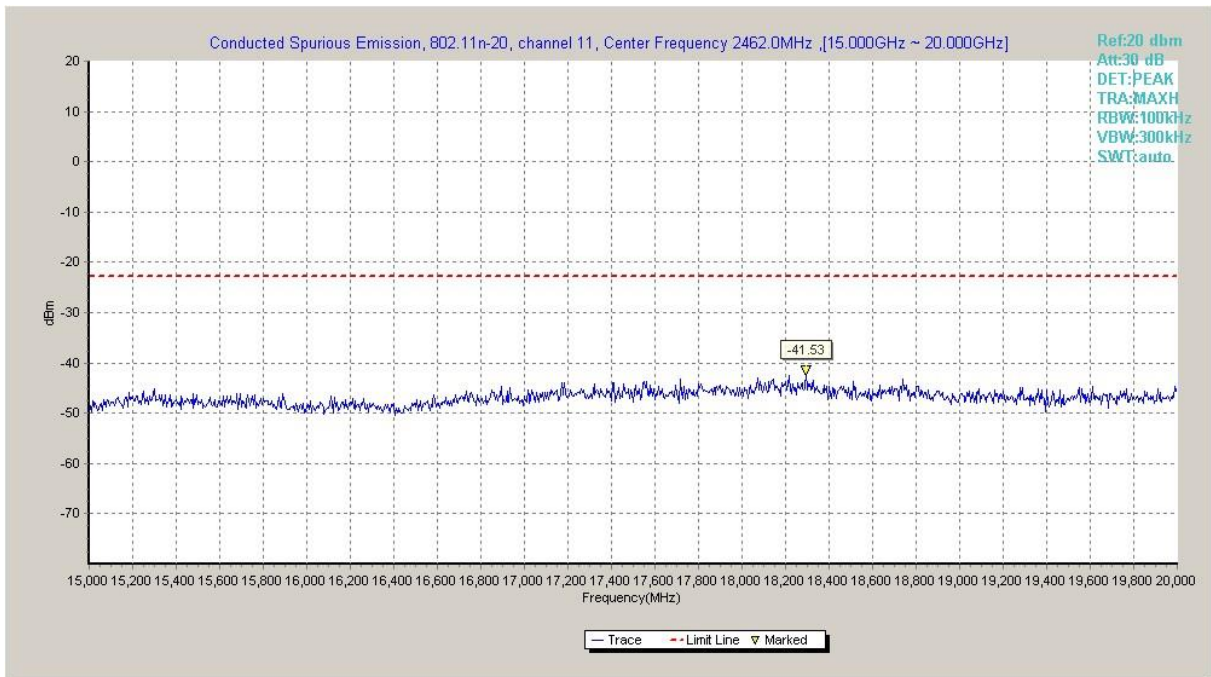


Fig.A.6.1.71 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 15 GHz-20 GHz)

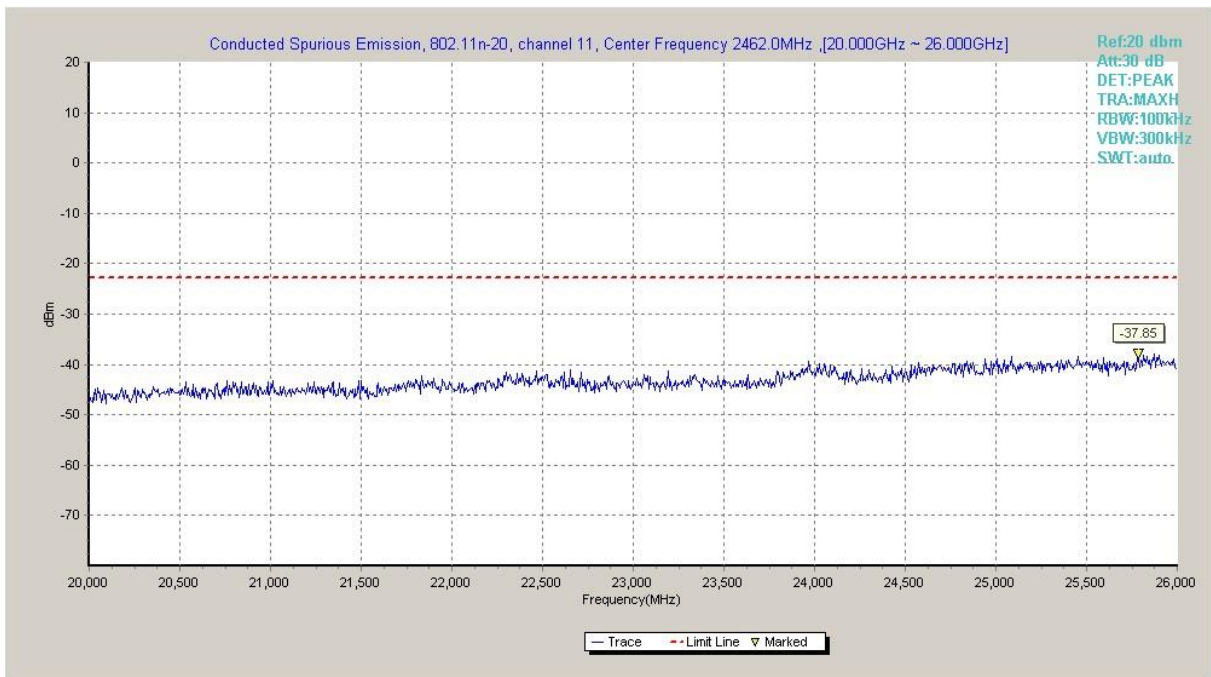


Fig.A.6.1.72 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 20 GHz-26 GHz)

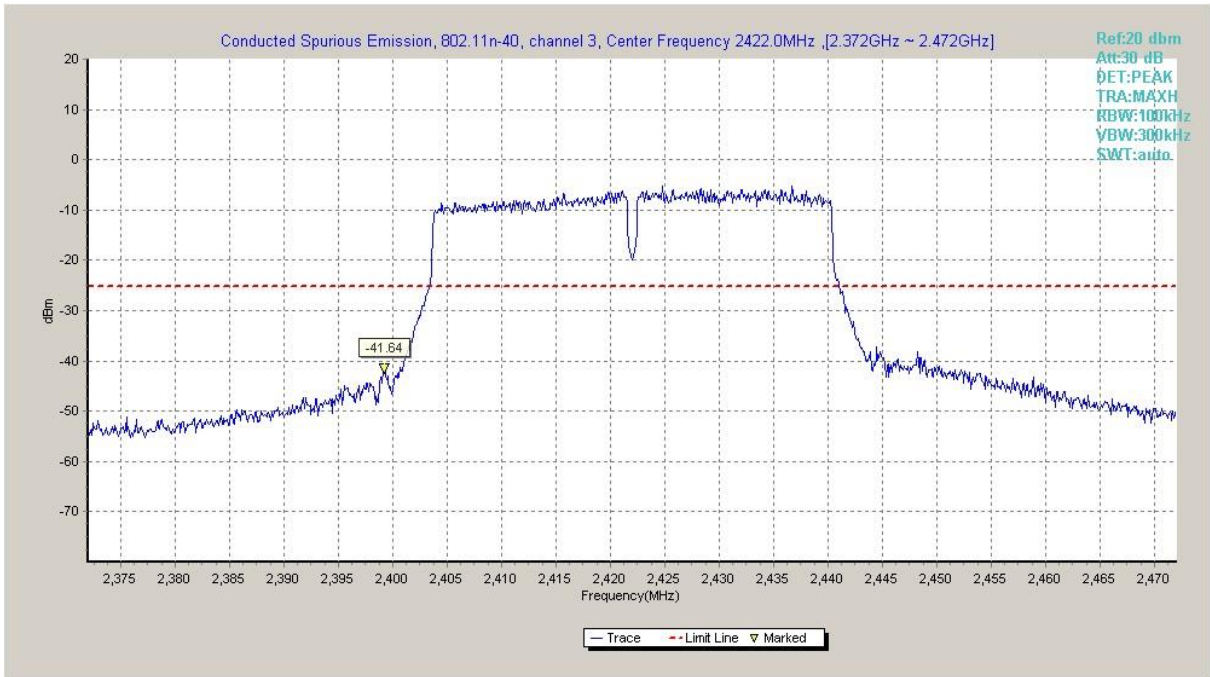


Fig.A.6.1.73 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, Center Frequency)

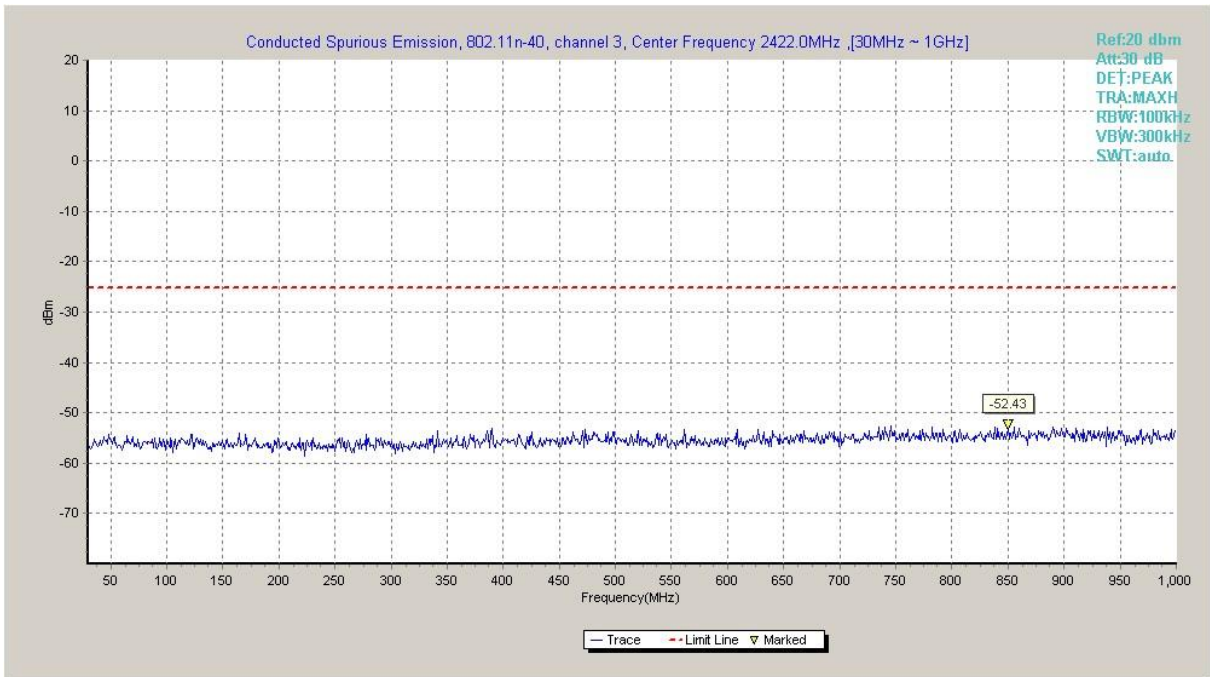


Fig.A.6.1.74 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 30 MHz-1 GHz)

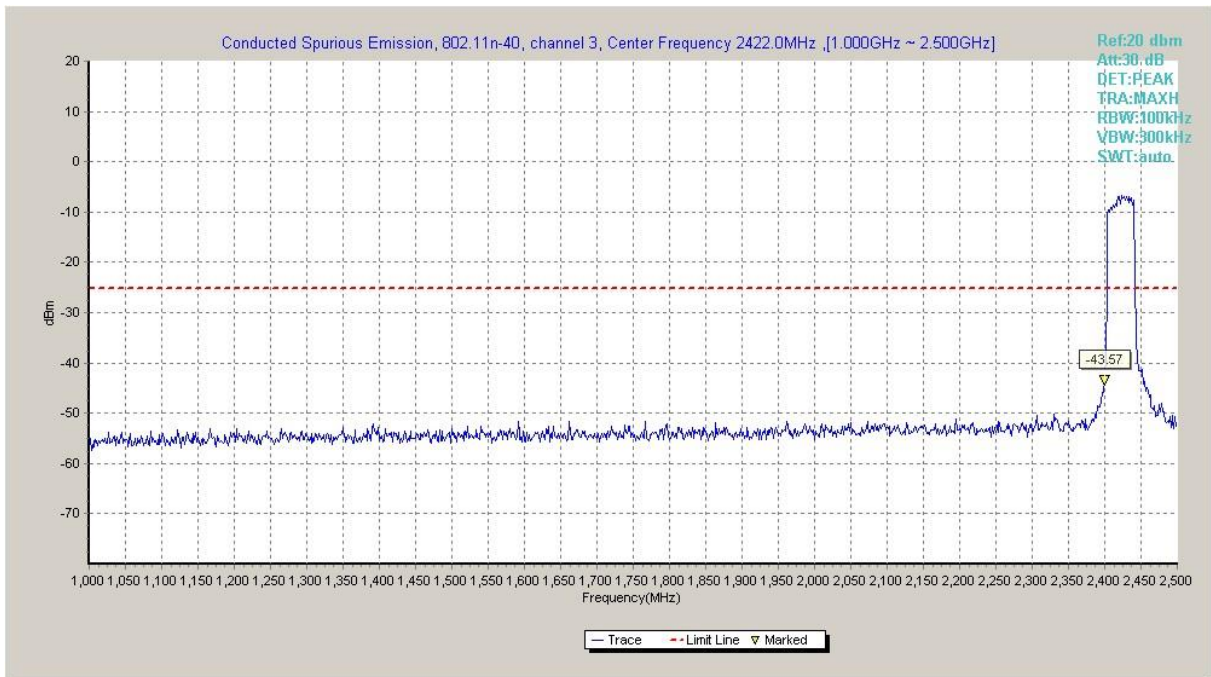


Fig.A.6.1.75 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 1 GHz-2.5 GHz)

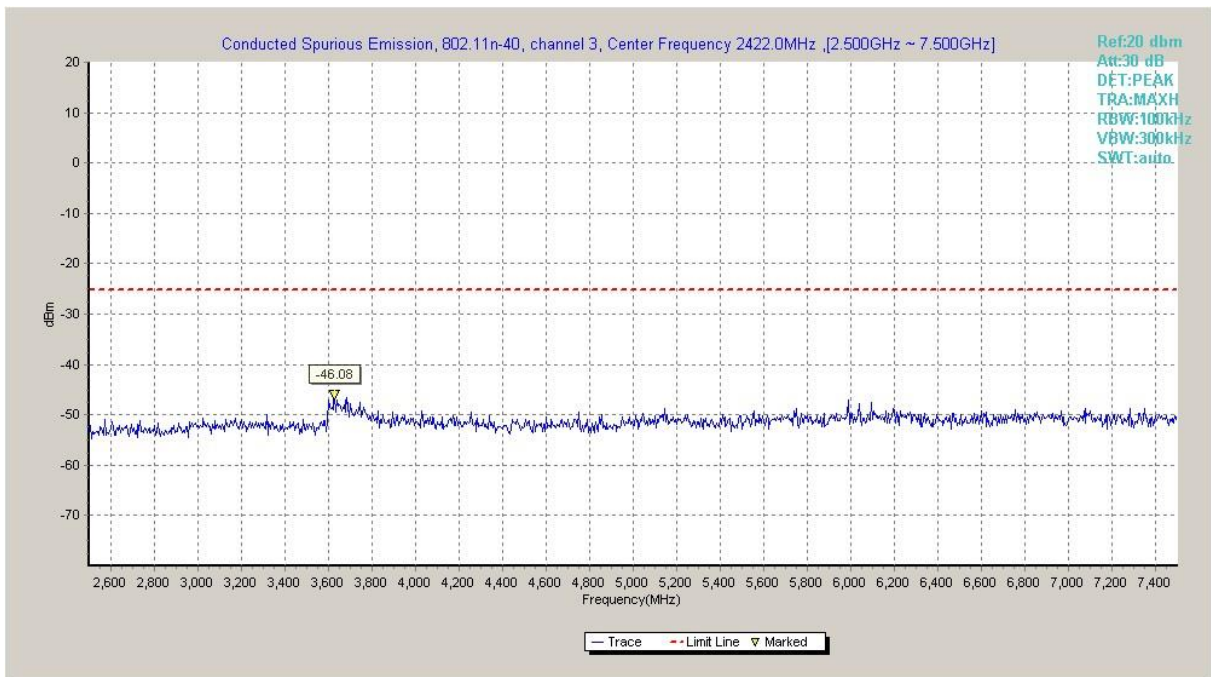


Fig.A.6.1.76 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 2.5 GHz-7.5 GHz)

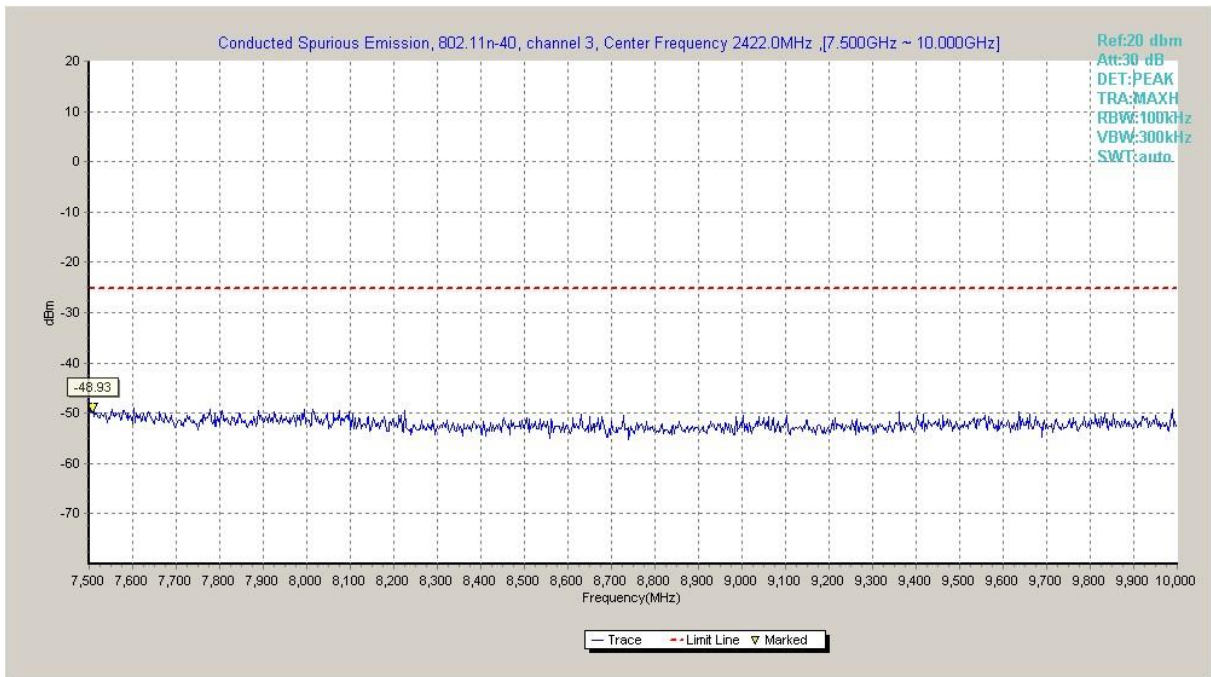


Fig.A.6.1.77 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 7.5 GHz-10 GHz)

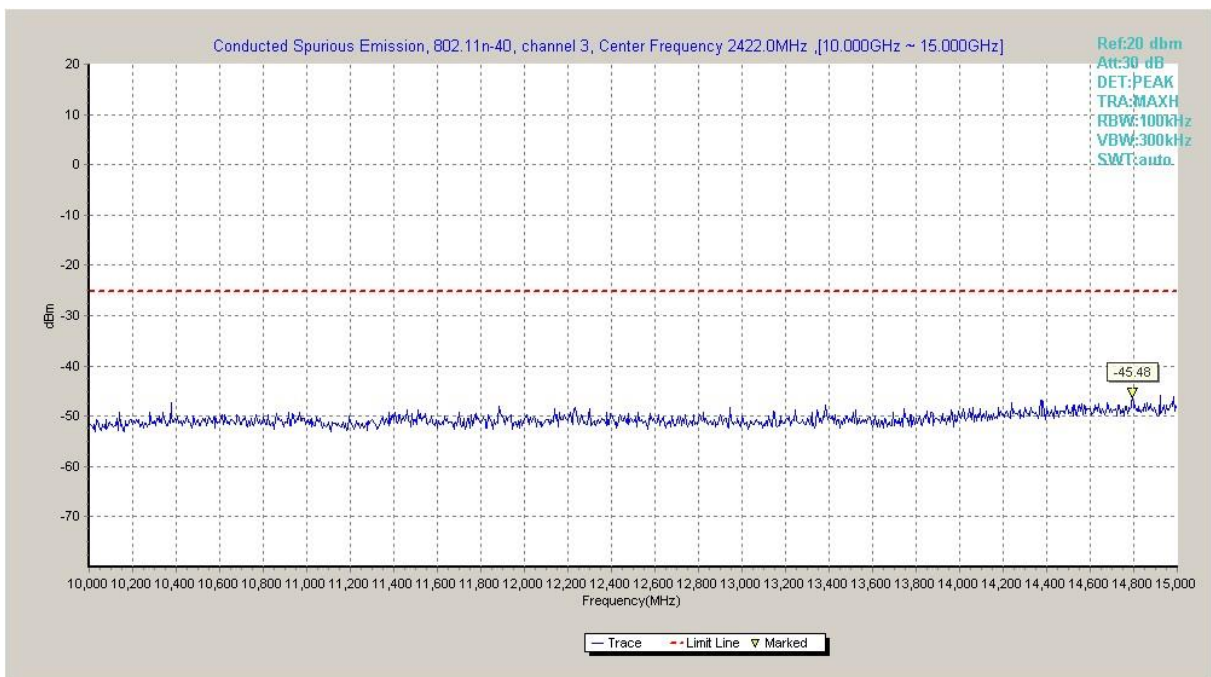


Fig.A.6.1.78 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 10 GHz-15 GHz)

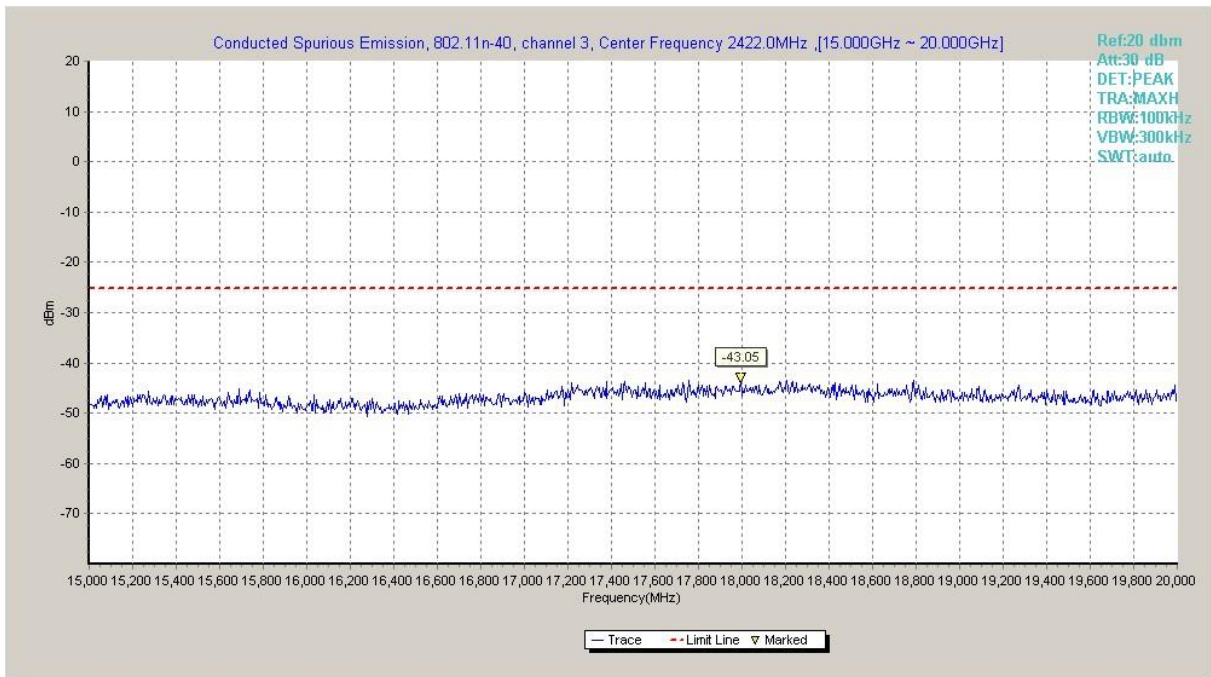


Fig.A.6.1.79 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 15 GHz-20 GHz)

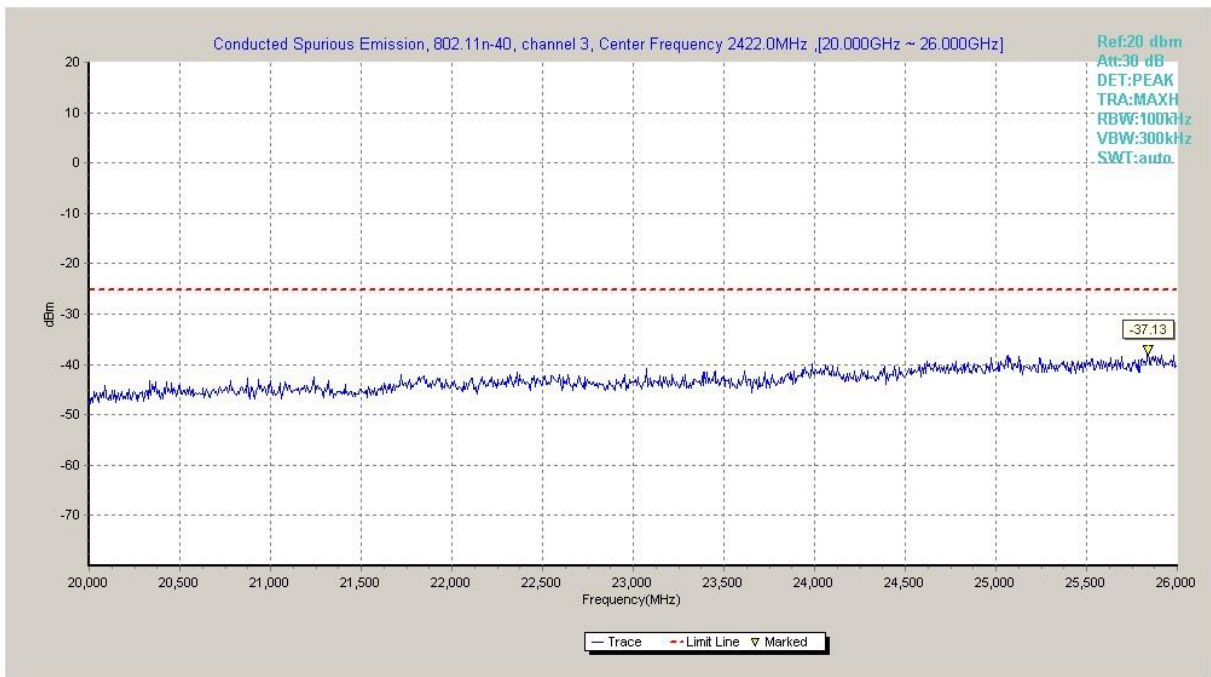


Fig.A.6.1.80 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 20 GHz-26 GHz)

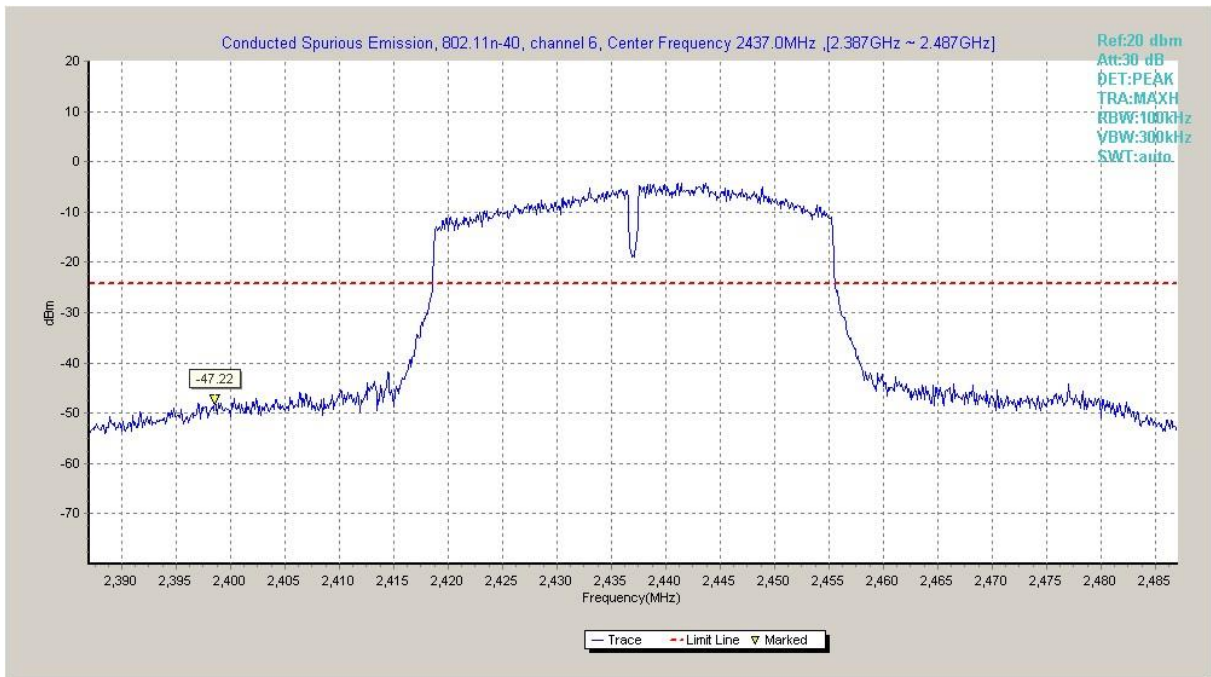


Fig.A.6.1.81 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, Center Frequency)

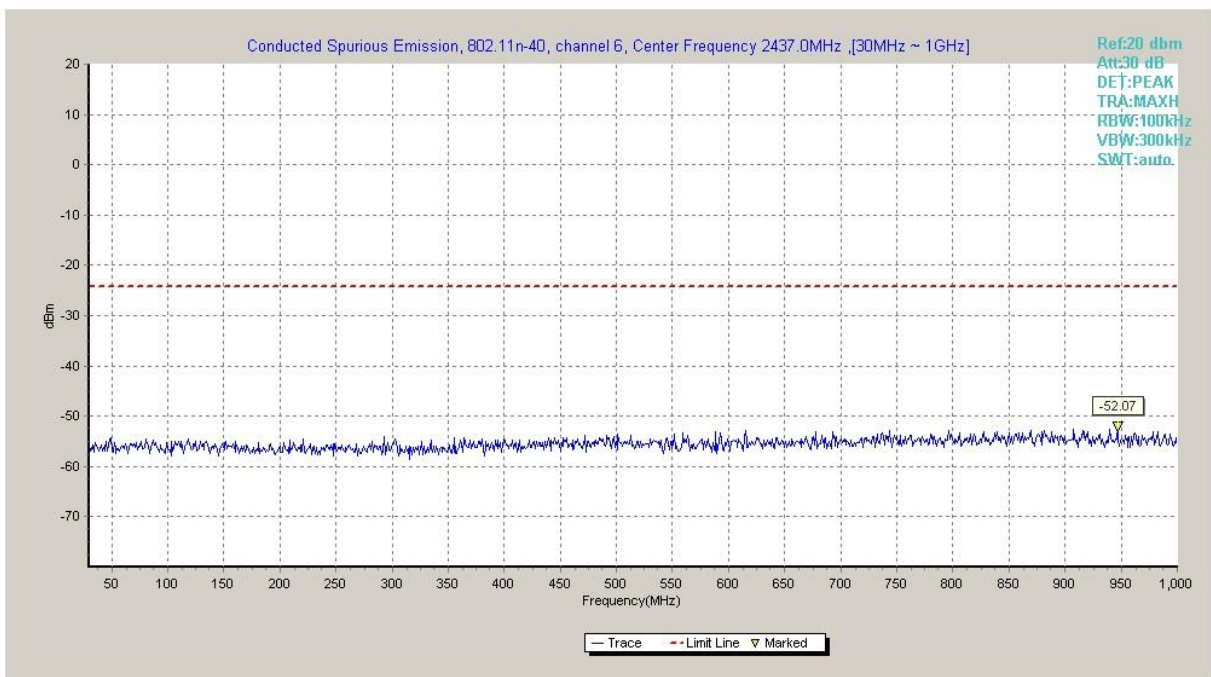


Fig.A.6.1.82 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 30 MHz-1 GHz)

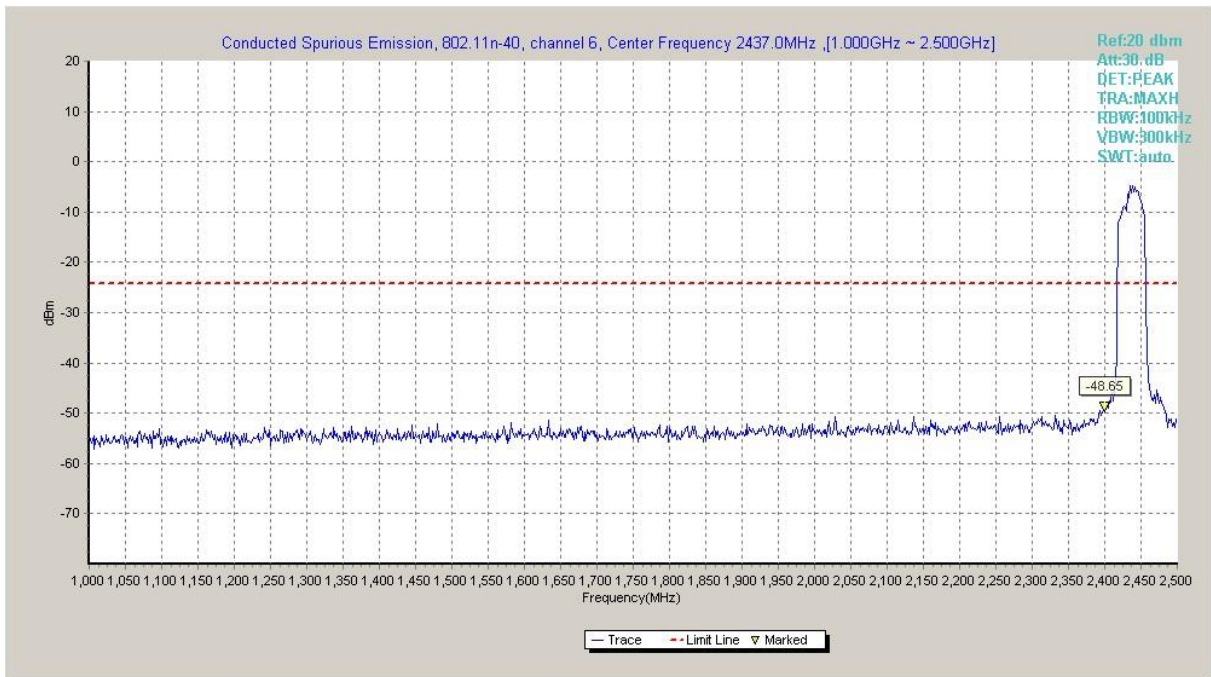


Fig.A.6.1.83 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 1 GHz-2.5 GHz)

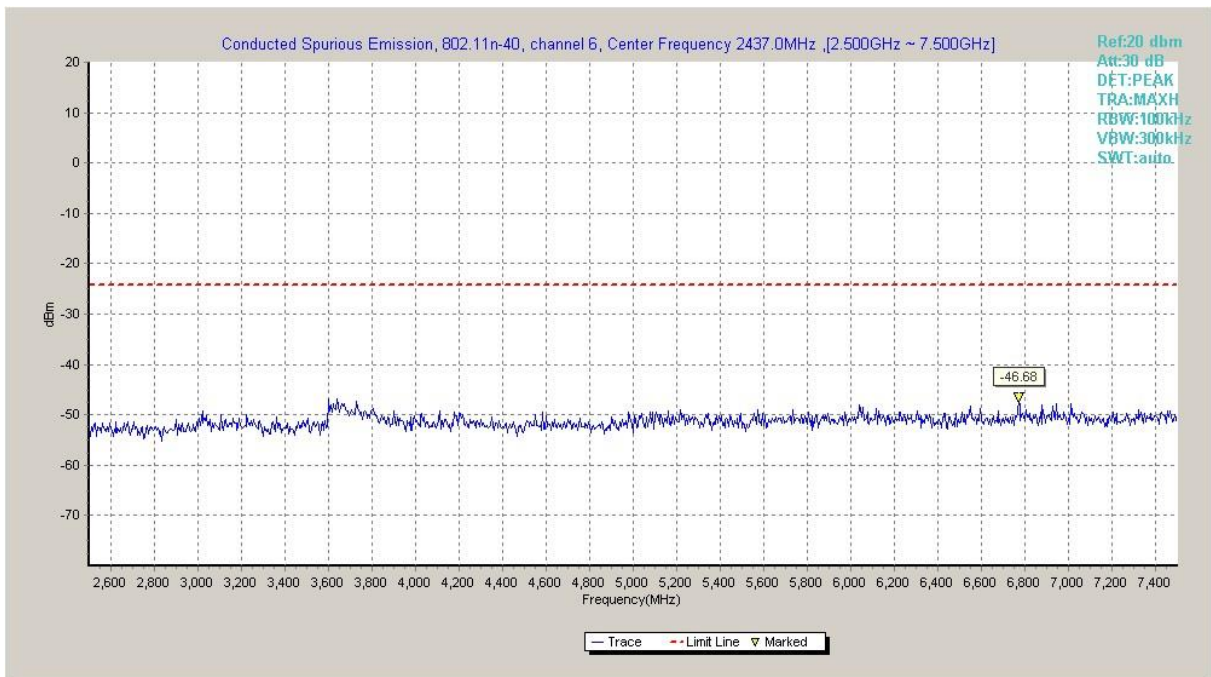


Fig.A.6.1.84 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 2.5 GHz-7.5 GHz)

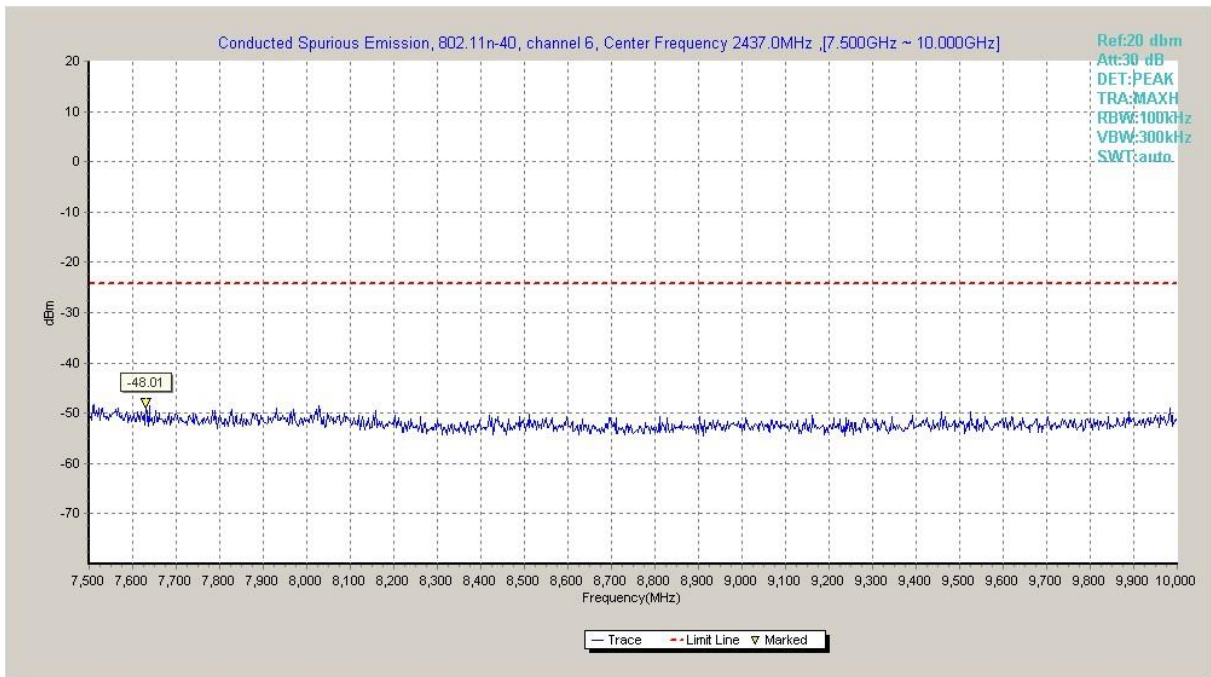


Fig.A.6.1.85 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 7.5 GHz-10 GHz)

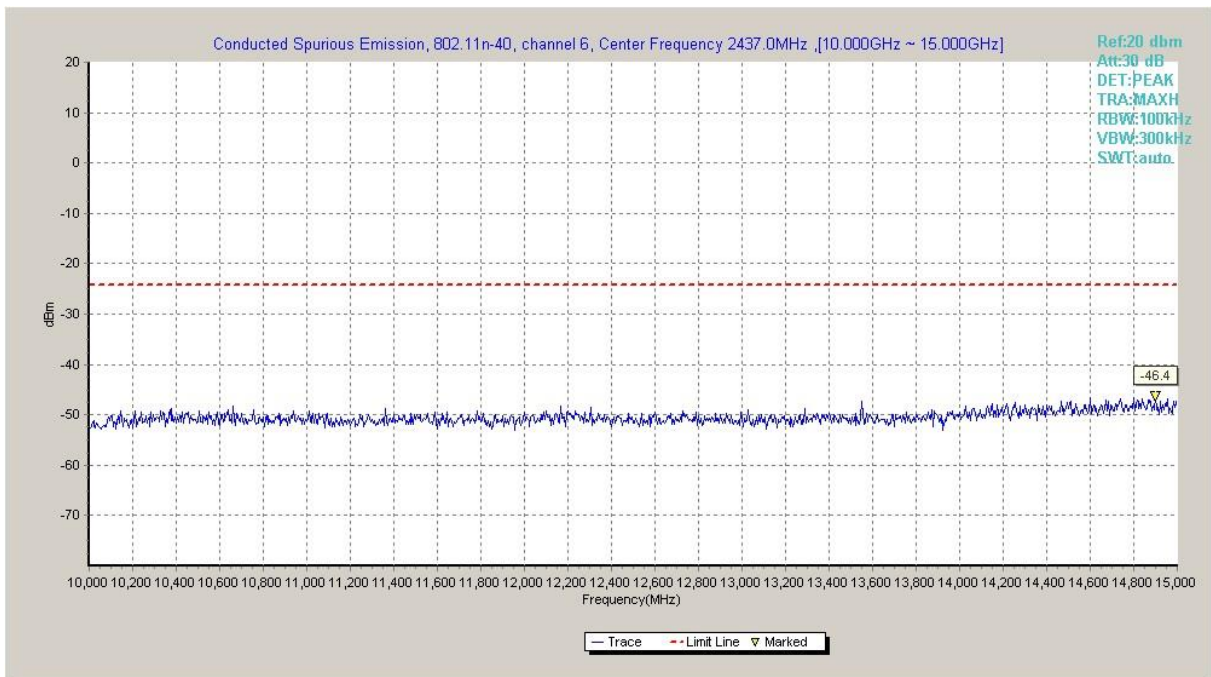


Fig.A.6.1.86 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 10 GHz-15 GHz)

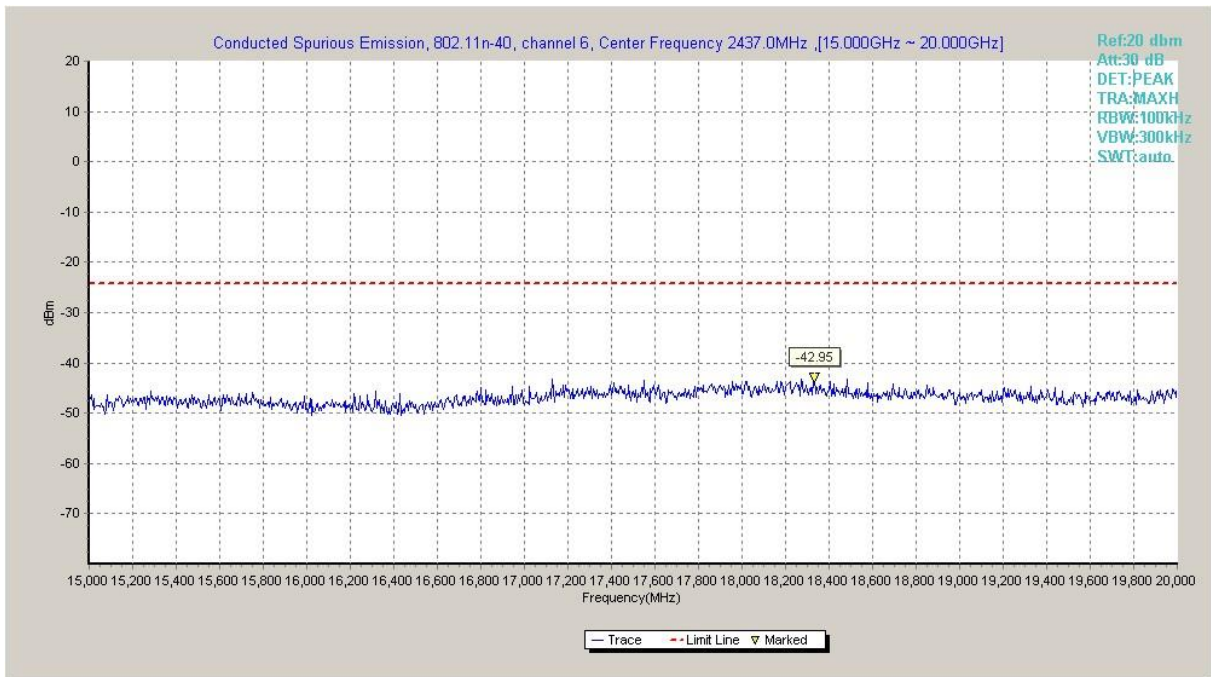


Fig.A.6.1.87 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 15 GHz-20 GHz)

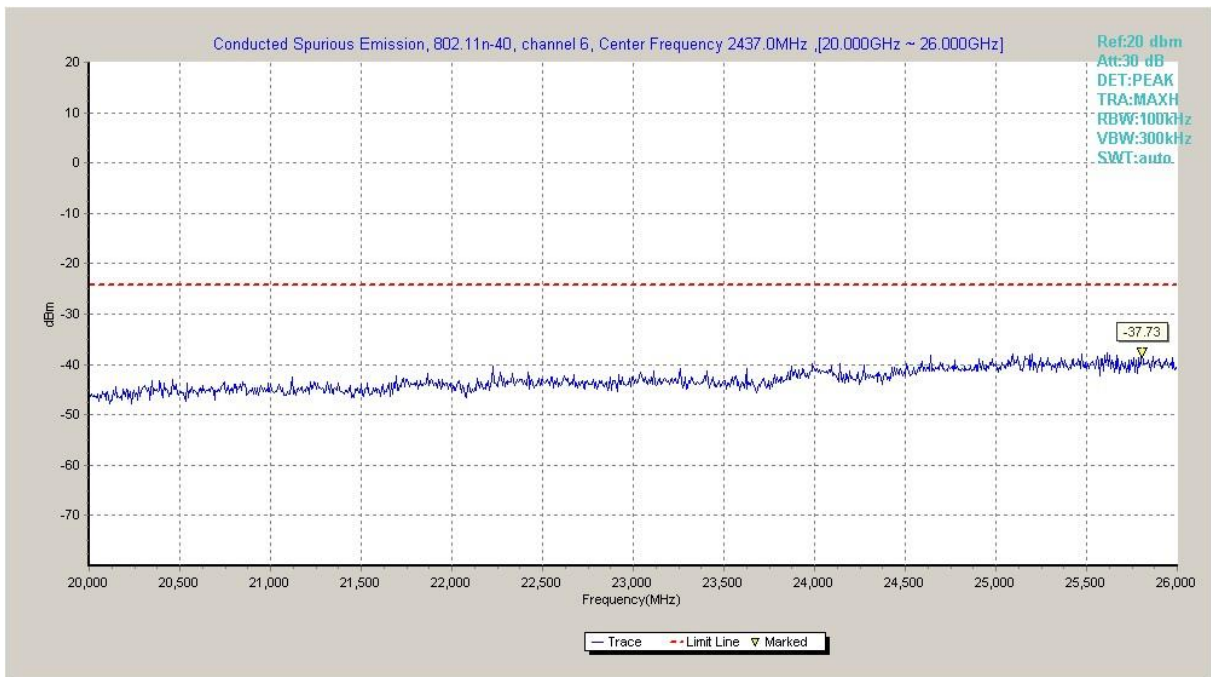


Fig.A.6.1.88 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 20 GHz-26 GHz)

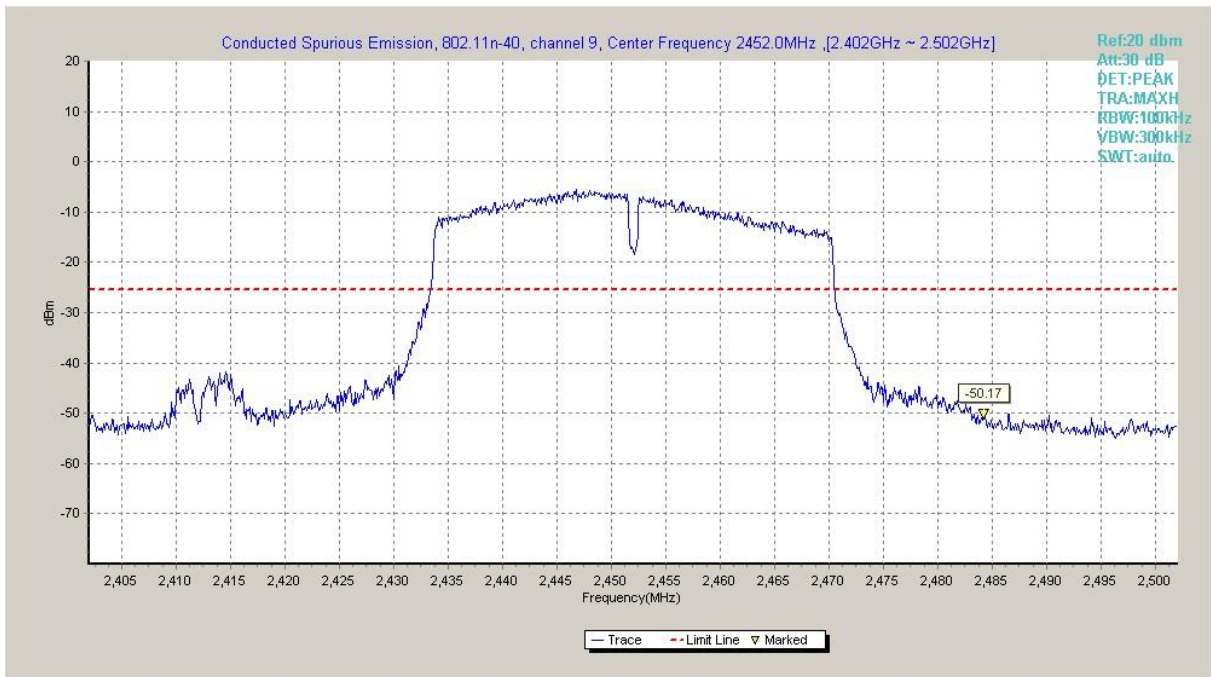


Fig.A.6.1.89 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, Center Frequency)

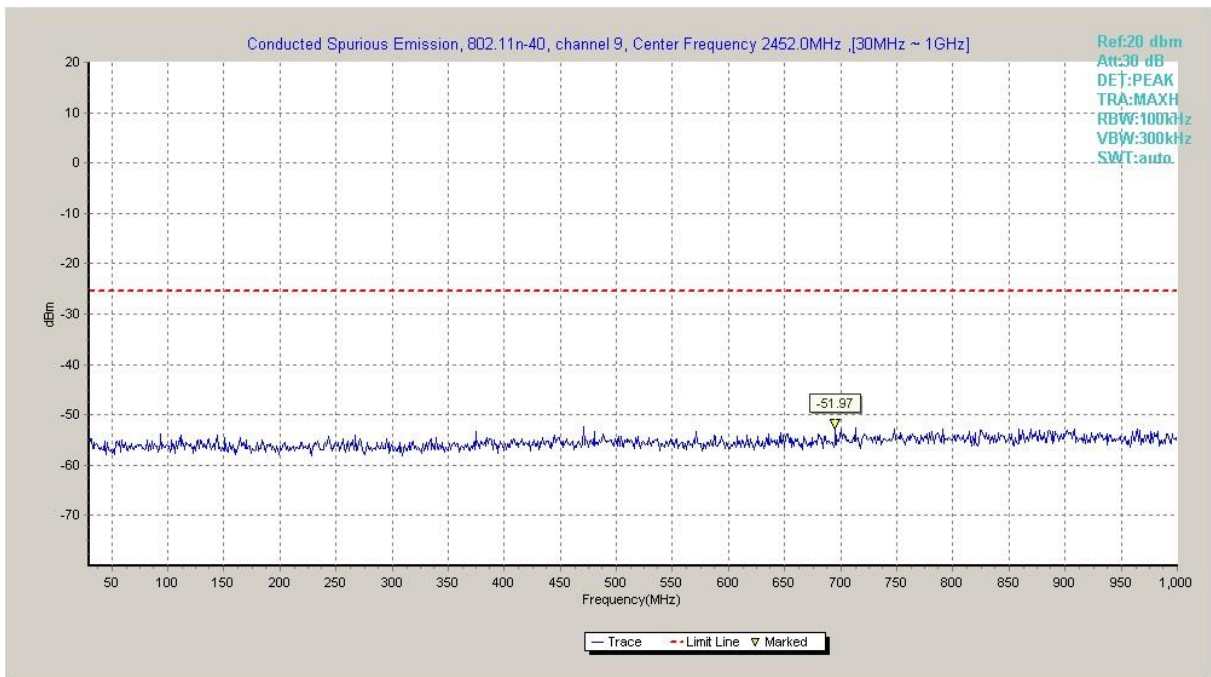


Fig.A.6.1.90 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 30 MHz-1 GHz)

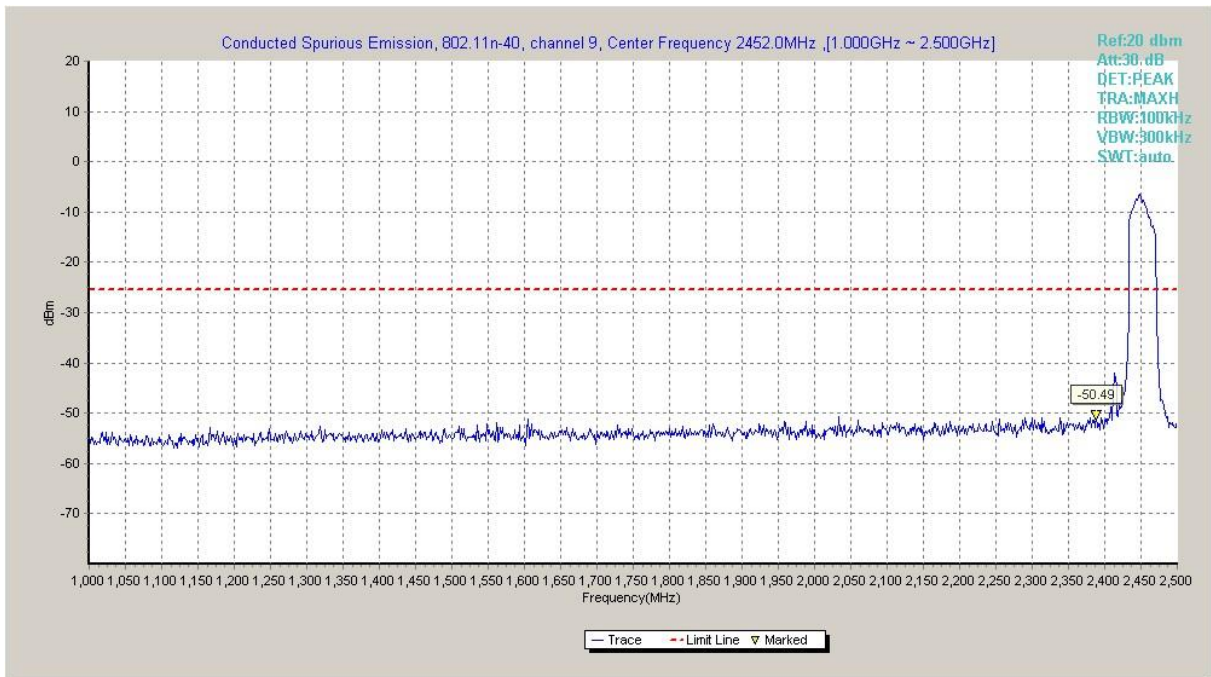


Fig.A.6.1.91 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 1 GHz-2.5 GHz)

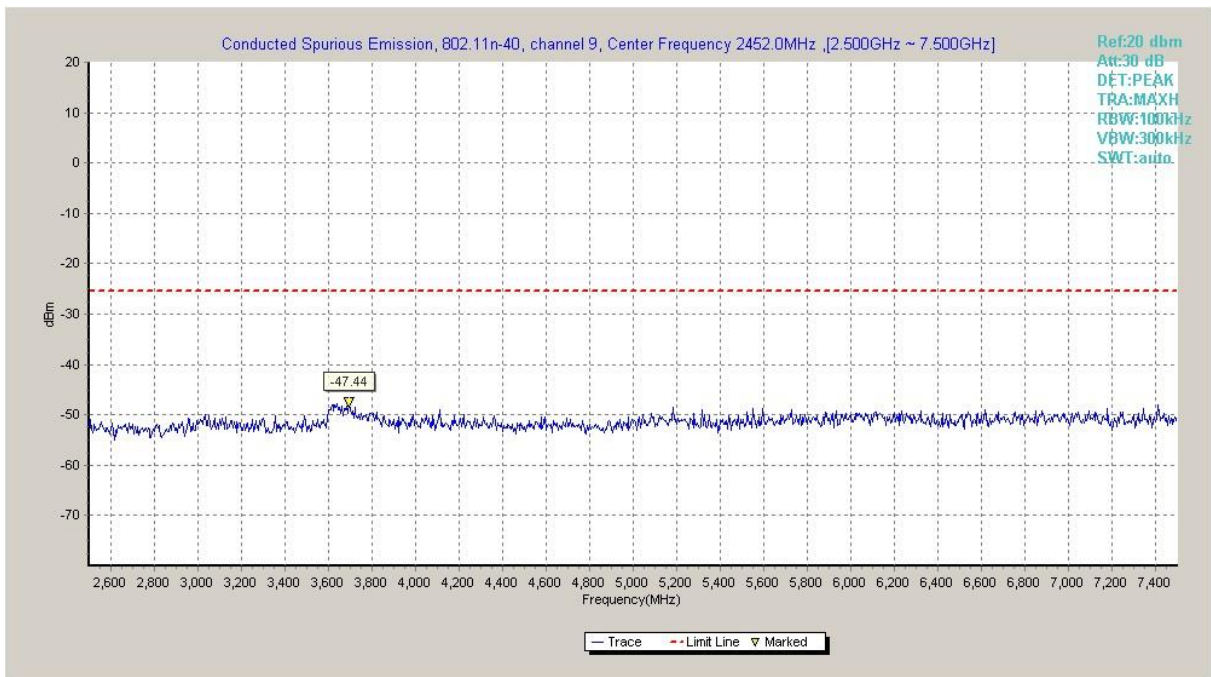


Fig.A.6.1.92 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 2.5 GHz-7.5 GHz)

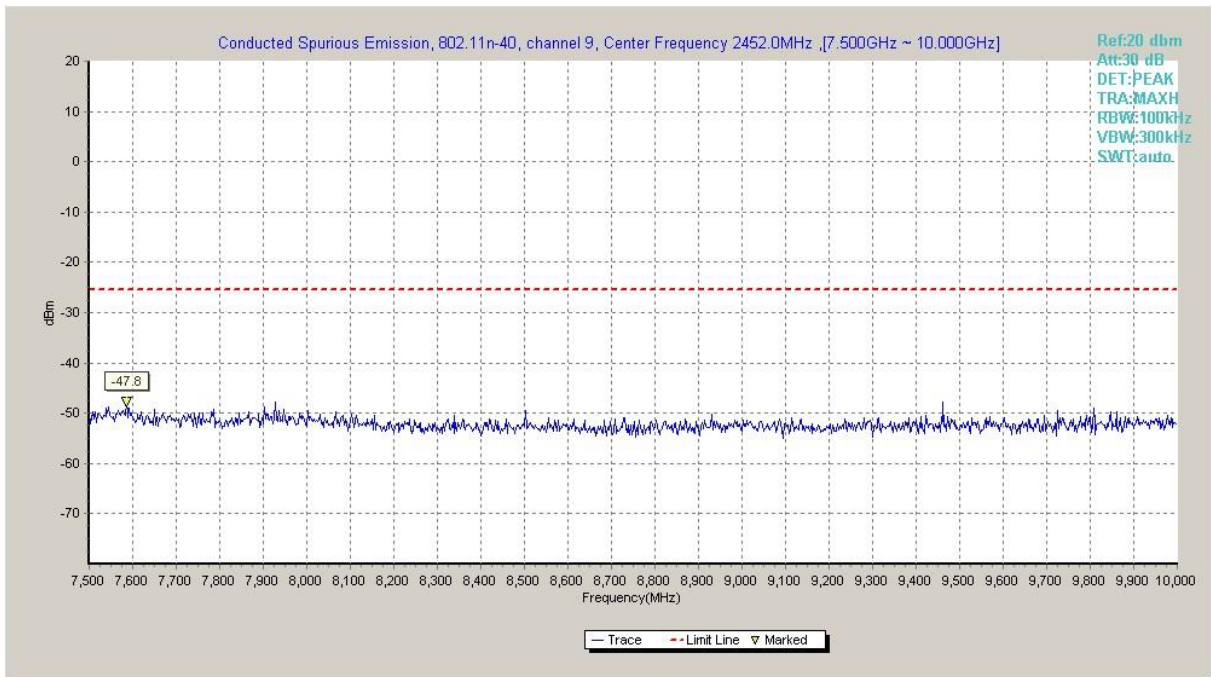


Fig.A.6.1.93 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 7.5 GHz-10 GHz)

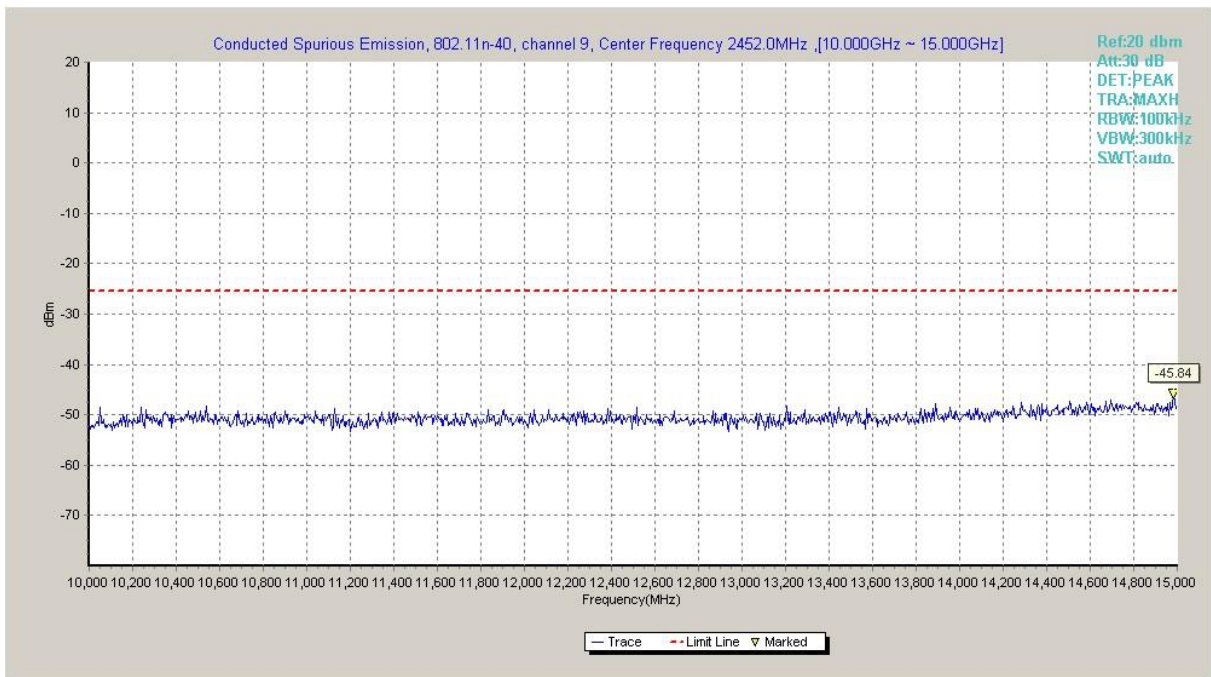


Fig.A.6.1.94 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 10 GHz-15 GHz)

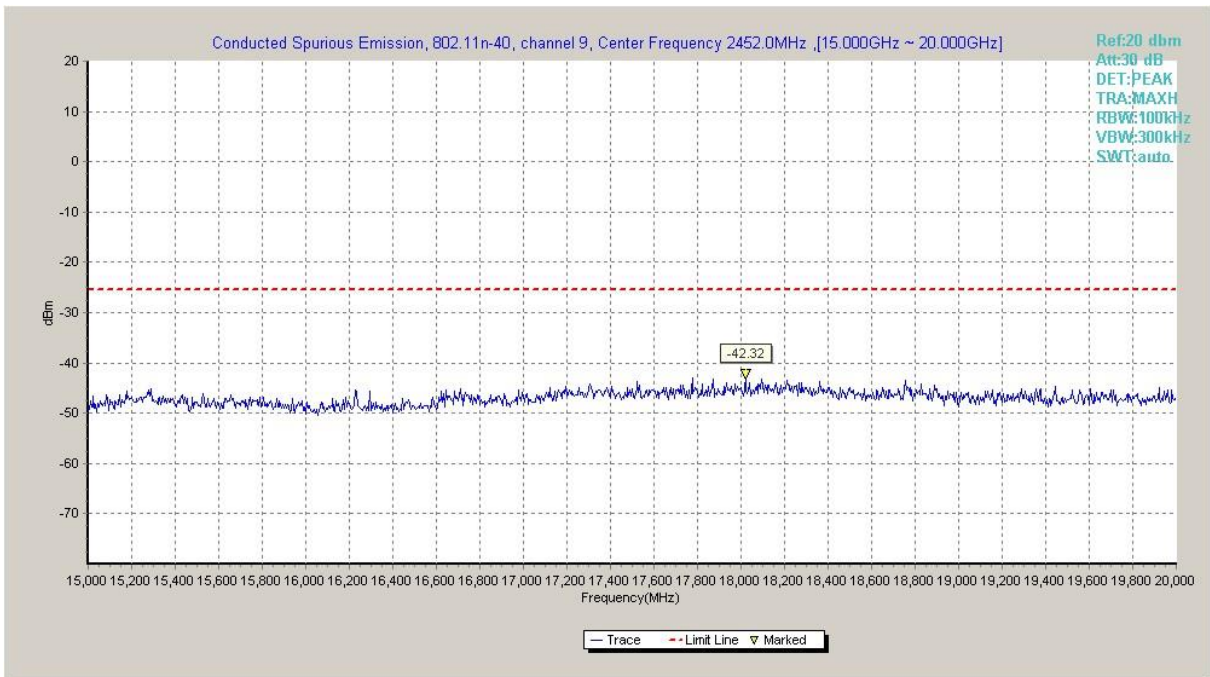


Fig.A.6.1.95 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 15 GHz-20 GHz)

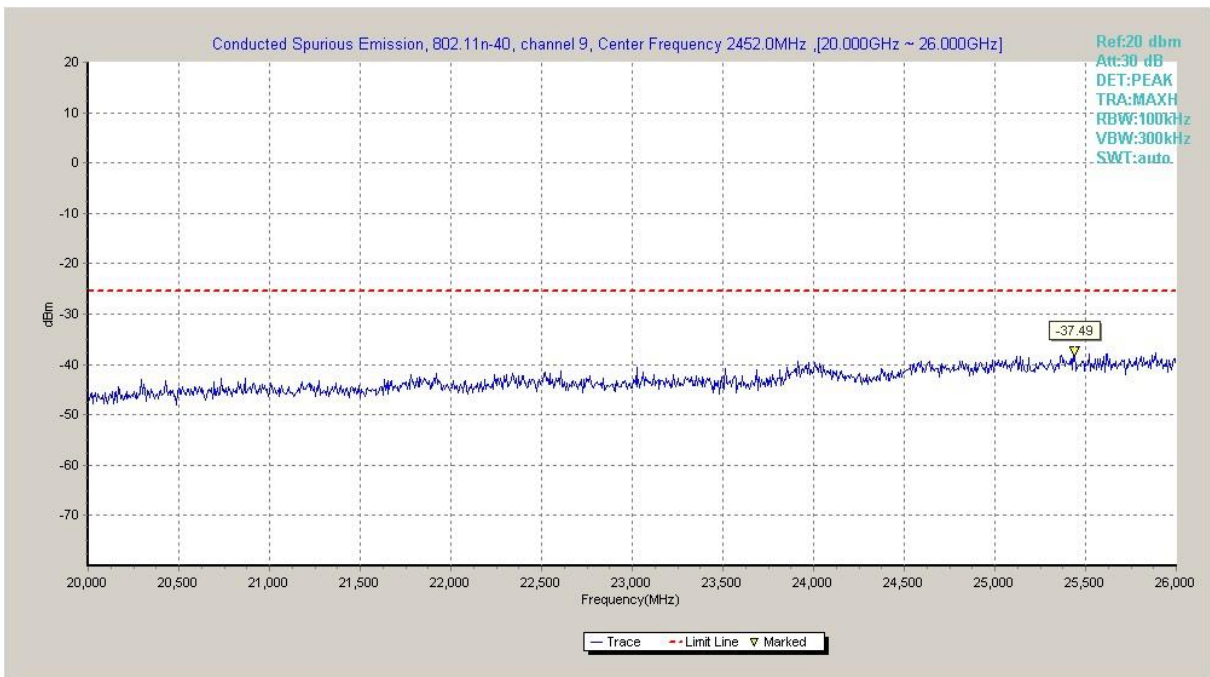


Fig.A.6.1.96 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 20 GHz-26 GHz)

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(μ V/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:

802.11b mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	Power	2.38GHz ~2.43GHz	Fig.A.6.2.1	P
	1	1 GHz ~ 3 GHz	--	P
		3 GHz ~ 18 GHz	--	P
	6	9 kHz ~30 MHz	--	P
		30 MHz ~1 GHz	--	P
		1 GHz ~ 3 GHz	--	P
		3 GHz ~ 18 GHz	--	P
	Power	18 GHz~ 26.5 GHz	--	P
		2.45GHz ~2.5GHz	Fig.A.6.2.2	P
		11	1 GHz ~ 3 GHz	--
3 GHz ~ 18 GHz	--		P	

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	Power	2.38GHz ~2.43GHz	Fig.A.6.2.3	P
	1	1 GHz ~ 3 GHz	--	P
		3 GHz ~ 18 GHz	--	P
	6	30 MHz ~1 GHz	--	P
		1 GHz ~ 3 GHz	--	P
		3 GHz ~ 18 GHz	--	P
		18 GHz~ 26.5 GHz	--	P
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.4	P
	11	1 GHz ~ 3 GHz	--	P
		3 GHz ~ 18 GHz	--	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	Power	2.38GHz ~2.43GHz	Fig.A.6.2.5	P
	1	1 GHz ~ 3 GHz	--	P
		3 GHz ~ 18 GHz	--	P
	6	30 MHz ~1 GHz	--	P
		1 GHz ~ 3 GHz	--	P
		3 GHz ~ 18 GHz	--	P
		18 GHz~ 26.5 GHz	--	P
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.6	P
	11	1 GHz ~ 3 GHz	--	P
		3 GHz ~ 18 GHz	--	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	Power	2.38GHz ~2.43GHz	Fig.A.6.2.7	P
	3	1 GHz ~ 3 GHz	--	P
		3 GHz ~ 18 GHz	--	P
	6	30 MHz ~1 GHz	--	P
		1 GHz ~ 3 GHz	--	P
		3 GHz ~ 18 GHz	--	P
		18 GHz~ 26.5 GHz	--	P
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.8	P
	9	1 GHz ~ 3 GHz	--	P
		3 GHz ~ 18 GHz	--	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 (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)
2386.800	46.55	2.9	32.0	11.68	54.0	7.5	H	155	175
2389.400	46.53	2.9	32.0	11.68	54.0	7.5	H	155	194
4824.000	34.91	-32.8	34.5	33.17	54.0	19.1	H	155	215
7236.000	38.25	-31.7	36.1	33.88	54.0	15.8	H	155	196
9648.000	37.74	-30.4	37.0	31.06	54.0	16.3	H	155	241
12060.000	42.98	-29.6	39.3	33.30	54.0	11.0	H	155	259

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)
2402.700	46.71	2.9	31.9	11.96	54.0	7.3	H	155	40
2456.100	46.80	2.9	32.5	11.37	54.0	7.2	H	155	65
4873.500	35.01	-32.7	34.5	33.22	54.0	19.0	H	155	84
7311.000	38.02	-31.9	36.1	33.85	54.0	16.0	H	155	107
9748.500	38.15	-30.7	37.2	31.62	54.0	15.8	H	155	135
12184.500	43.59	-29.4	39.2	33.80	54.0	10.4	H	155	151

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)
2483.600	46.52	2.9	32.8	10.82	54.0	7.5	H	155	6
1488.700	46.64	2.2	26.5	17.98	54.0	7.4	H	155	48
4924.500	35.30	-33.1	34.5	33.89	54.0	18.7	H	155	92
7386.000	38.04	-31.8	36.0	33.83	54.0	16.0	H	155	48
9847.500	40.02	-30.1	37.3	32.77	54.0	14.0	H	155	68
12310.500	43.91	-29.7	39.2	34.43	54.0	10.1	H	155	92



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)
2386.118	59.88	2.9	32.0	25.00	74.0	14.1	V	155	176
2387.644	59.84	2.9	32.0	24.98	74.0	14.2	H	155	198
4824.000	38.15	-32.8	34.5	36.40	74.0	35.8	V	155	220
7236.000	40.66	-31.7	36.1	36.29	74.0	33.3	H	155	198
9648.000	39.87	-30.4	37.0	33.19	74.0	34.1	H	155	242
12060.000	45.77	-29.6	39.3	36.09	74.0	28.2	V	155	264

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)
2361.800	49.03	-27.5	31.9	44.64	74.0	25.0	V	155	44
2513.800	48.77	-26.6	32.5	42.83	74.0	25.2	H	155	66
4874.250	39.13	-32.7	34.5	37.34	74.0	34.9	H	155	88
7311.000	41.68	-31.9	36.1	37.51	74.0	32.3	V	155	110
9747.750	41.39	-30.7	37.2	34.86	74.0	32.6	V	155	132
12185.250	45.87	-29.4	39.2	36.08	74.0	28.1	H	155	154

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)
2484.050	59.49	2.9	32.7	23.82	74.0	14.5	H	155	0
2491.710	59.88	2.9	32.5	24.41	74.0	14.1	H	155	44
4923.750	38.63	-33.1	34.5	37.21	74.0	35.4	V	155	88
7386.000	41.45	-31.8	36.0	37.24	74.0	32.6	V	155	44
9848.250	42.68	-30.1	37.3	35.43	74.0	31.3	V	155	66
12309.750	44.63	-29.7	39.2	35.16	74.0	29.4	H	155	88



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)
2385.100	46.60	2.9	32.0	11.72	54.0	7.4	H	155	24
2389.600	46.65	2.9	32.0	11.80	54.0	7.3	H	155	336
4824.000	34.99	-32.8	34.5	33.24	54.0	19.0	H	155	248
7236.000	38.19	-31.7	36.1	33.83	54.0	15.8	H	155	268
9648.000	37.73	-30.4	37.0	31.04	54.0	16.3	H	155	290
12060.000	42.97	-29.6	39.3	33.30	54.0	11.0	H	155	300

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)
2409.600	46.75	2.9	31.8	12.05	54.0	7.2	H	155	135
2463.500	46.75	2.9	32.7	11.13	54.0	7.3	H	155	160
4873.500	35.13	-32.7	34.5	33.34	54.0	18.9	H	155	92
7311.000	38.01	-31.9	36.1	33.84	54.0	16.0	H	155	115
9748.500	38.15	-30.7	37.2	31.62	54.0	15.9	H	155	112
12184.500	43.56	-29.4	39.2	33.77	54.0	10.4	H	155	85

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	46.65	2.9	32.8	10.96	54.0	7.4	H	155	5
2496.400	46.69	2.9	32.4	11.34	54.0	7.3	H	155	25
4924.500	35.30	-33.1	34.5	33.89	54.0	18.7	H	155	356
7386.000	38.07	-31.8	36.0	33.86	54.0	15.9	H	155	350
9847.500	39.95	-30.1	37.3	32.70	54.0	14.1	H	155	185
12310.500	43.99	-29.7	39.2	34.52	54.0	10.0	H	155	187



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)
2388.246	59.51	2.9	32.0	24.65	74.0	14.5	H	155	22
2389.590	59.48	2.9	32.0	24.64	74.0	14.5	H	155	330
4824.000	38.69	-32.8	34.5	36.94	74.0	35.3	H	155	242
7236.000	43.86	-31.7	36.1	39.49	74.0	30.1	V	155	264
9648.000	40.89	-30.4	37.0	34.21	74.0	33.1	V	155	286
12060.000	45.72	-29.6	39.3	36.04	74.0	28.3	V	155	308

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)
2374.800	48.09	-26.7	32.1	42.66	74.0	25.9	H	155	132
2511.400	48.70	-26.5	32.5	42.74	74.0	25.3	H	155	154
4874.250	39.07	-32.7	34.5	37.27	74.0	34.9	V	155	88
7311.000	41.31	-31.9	36.1	37.15	74.0	32.7	H	155	110
9747.750	40.36	-30.7	37.2	33.83	74.0	33.6	V	155	110
12185.250	45.84	-29.4	39.2	36.04	74.0	28.2	V	155	88

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)
2484.470	59.32	2.9	32.7	23.65	74.0	14.7	H	155	0
2491.910	60.01	2.9	32.5	24.55	74.0	14.0	H	155	22
4923.750	38.37	-33.1	34.5	36.95	74.0	35.6	H	155	352
7386.000	40.88	-31.8	36.0	36.68	74.0	33.1	V	155	352
9848.250	42.22	-30.1	37.3	34.96	74.0	31.8	V	155	176
12309.750	44.56	-29.7	39.2	35.09	74.0	29.4	V	155	176



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)
2384.500	46.57	2.9	32.0	11.69	54.0	7.4	H	155	86
2389.600	46.59	2.9	32.0	11.74	54.0	7.4	H	155	107
4824.000	35.04	-32.8	34.5	33.29	54.0	19.0	H	155	130
7236.000	38.27	-31.7	36.1	33.91	54.0	15.7	H	155	152
9648.000	37.80	-30.4	37.0	31.12	54.0	16.2	H	155	174
12060.000	43.07	-29.6	39.3	33.40	54.0	10.9	H	155	195

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)
2402.300	46.65	2.9	31.9	11.90	54.0	7.3	H	155	20
2475.600	46.65	2.9	33.0	10.74	54.0	7.4	H	155	45
4873.500	35.07	-32.7	34.5	33.28	54.0	18.9	H	155	240
7311.000	37.99	-31.9	36.1	33.82	54.0	16.0	H	155	180
9748.500	38.11	-30.7	37.2	31.58	54.0	15.9	H	155	85
12184.500	43.61	-29.4	39.2	33.82	54.0	10.4	H	155	25

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	46.62	2.9	32.8	10.93	54.0	7.4	H	155	175
2487.700	46.67	2.9	32.6	11.09	54.0	7.3	H	155	5
4924.500	35.37	-33.1	34.5	33.96	54.0	18.6	H	155	26
7386.000	38.10	-31.8	36.0	33.90	54.0	15.9	H	155	355
9847.500	40.03	-30.1	37.3	32.78	54.0	14.0	H	155	6
12310.500	43.95	-29.7	39.2	34.48	54.0	10.0	H	155	12



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)
2384.910	59.58	2.9	32.0	24.70	74.0	14.4	V	155	88
2387.980	59.45	2.9	32.0	24.59	74.0	14.6	H	155	110
4824.000	38.17	-32.8	34.5	36.42	74.0	35.8	V	155	132
7236.000	40.71	-31.7	36.1	36.35	74.0	33.3	H	155	154
9648.000	40.66	-30.4	37.0	33.98	74.0	33.3	V	155	176
12060.000	45.22	-29.6	39.3	35.54	74.0	28.8	V	155	198

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)
2361.800	48.18	-27.5	31.9	43.80	74.0	25.8	H	155	22
2502.800	48.46	-26.3	32.3	42.45	74.0	25.5	H	155	44
4874.250	37.96	-32.7	34.5	36.17	74.0	36.0	H	155	242
7311.000	39.94	-31.9	36.1	35.78	74.0	34.1	H	155	176
9747.750	41.63	-30.7	37.2	35.10	74.0	32.4	H	155	88
12185.250	45.12	-29.4	39.2	35.33	74.0	28.9	V	155	22

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)
2484.070	60.09	2.9	32.7	24.41	74.0	13.9	H	155	176
2491.450	60.18	2.9	32.5	24.70	74.0	13.8	H	155	0
4923.750	40.10	-33.1	34.5	38.68	74.0	33.9	V	155	22
7386.000	40.15	-31.8	36.0	35.94	74.0	33.9	V	155	352
9848.250	43.71	-30.1	37.3	36.46	74.0	30.3	V	155	0
12309.750	44.65	-29.7	39.2	35.18	74.0	29.3	V	155	0



802.11n-HT40-Average
Ch3

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)
2385.700	46.53	2.9	32.0	11.65	54.0	7.5	H	155	20
2389.900	46.61	2.9	32.0	11.76	54.0	7.4	H	155	248
4843.500	34.94	-32.7	34.5	33.13	54.0	19.1	H	155	49
7266.000	38.29	-31.9	36.1	34.05	54.0	15.7	H	155	335
9688.500	37.59	-30.7	37.1	31.21	54.0	16.4	H	155	180
12109.500	43.37	-29.5	39.3	33.60	54.0	10.6	H	155	8

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)
2386.500	46.52	2.9	32.0	11.65	54.0	7.5	H	155	170
2490.800	46.62	2.9	32.6	11.13	54.0	7.4	H	155	150
4873.500	35.11	-32.7	34.5	33.32	54.0	18.9	H	155	20
7311.000	38.03	-31.9	36.1	33.87	54.0	16.0	H	155	180
9748.500	38.19	-30.7	37.2	31.66	54.0	15.8	H	155	202
12184.500	43.58	-29.4	39.2	33.79	54.0	10.4	H	155	8

Ch9

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)
2485.900	46.68	2.9	32.7	11.06	54.0	7.3	H	155	25
2491.300	46.71	2.9	32.5	11.23	54.0	7.3	H	155	49
4903.500	35.43	-32.9	34.5	33.82	54.0	18.6	H	155	4
7356.000	38.03	-31.9	36.1	33.88	54.0	16.0	H	155	6
9808.500	39.13	-30.3	37.3	32.21	54.0	14.9	H	155	25
12259.500	43.88	-29.6	39.2	34.26	54.0	10.1	H	155	186



802.11n-HT40-Peak

Ch3

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)
2387.826	60.13	2.9	32.0	25.27	74.0	13.9	H	155	22
2389.674	60.08	2.9	32.0	25.23	74.0	13.9	H	155	242
4844.250	37.37	-32.7	34.5	35.56	74.0	36.6	V	155	44
7266.000	41.11	-31.9	36.1	36.88	74.0	32.9	H	155	330
9687.750	40.82	-30.7	37.1	34.44	74.0	33.2	H	155	176
12110.250	45.46	-29.5	39.3	35.69	74.0	28.5	H	155	0

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)
2347.000	47.77	-27.6	31.6	43.82	74.0	26.2	H	155	176
2514.200	48.02	-26.6	32.5	42.08	74.0	26.0	H	155	154
4874.250	38.35	-32.7	34.5	36.56	74.0	35.7	V	155	22
7311.000	41.12	-31.9	36.1	36.96	74.0	32.9	V	155	176
9747.750	41.41	-30.7	37.2	34.88	74.0	32.6	H	155	198
12185.250	45.47	-29.4	39.2	35.68	74.0	28.5	H	155	0

Ch9

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)
2483.570	64.63	2.9	32.8	28.94	74.0	9.4	H	155	22
2483.920	64.45	2.9	32.7	28.77	74.0	9.6	V	155	44
4904.250	39.04	-32.9	34.5	37.44	74.0	35.0	H	155	0
7356.000	41.41	-31.9	36.1	37.26	74.0	32.6	H	155	0
9807.750	41.67	-30.4	37.3	34.75	74.0	32.3	H	155	22
12260.250	45.11	-29.6	39.2	35.48	74.0	28.9	H	155	176

Test graphs as below:

RE - Power-2.38GHz-2.45GHz

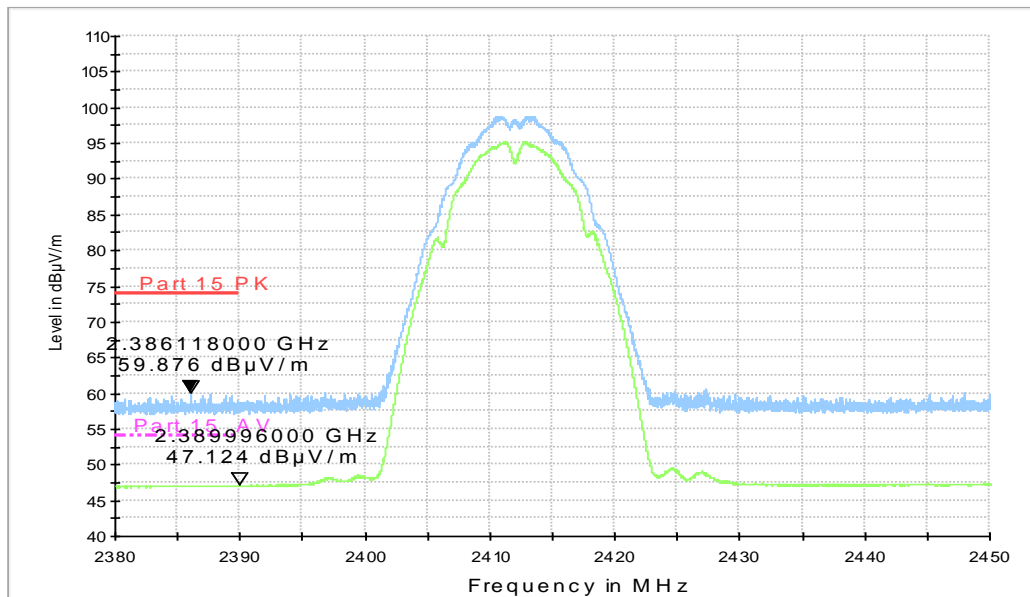


Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.38 GHz - 2.43GHz

RE - Power-2.45GHz-2.5GHz

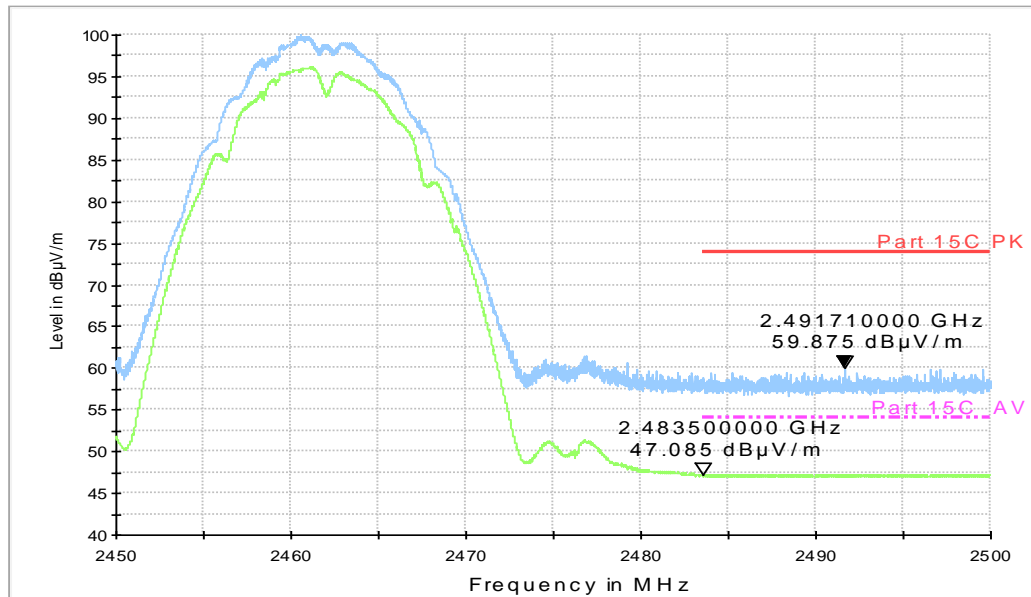


Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

RE - Power-2.38GHz-2.45GHz

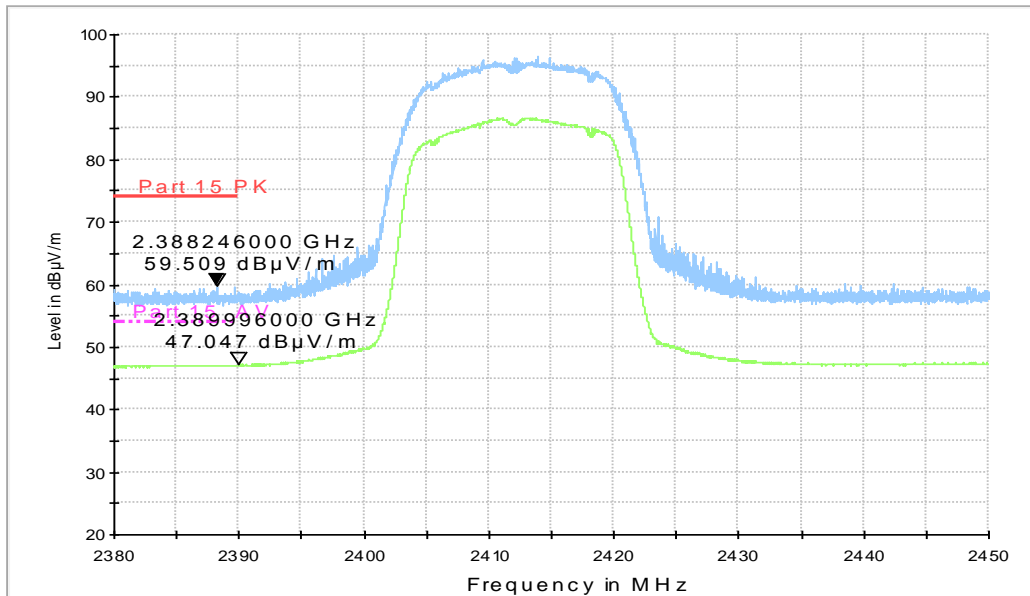


Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.38 GHz - 2.43GHz

RE - Power-2.45GHz-2.5GHz

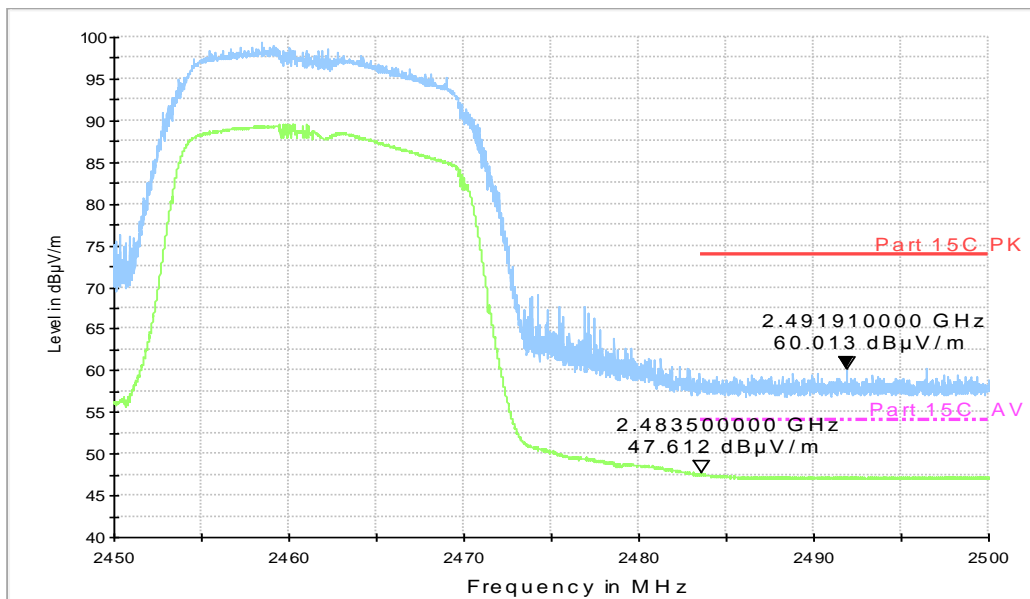


Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

RE - Power-2.38GHz-2.45GHz

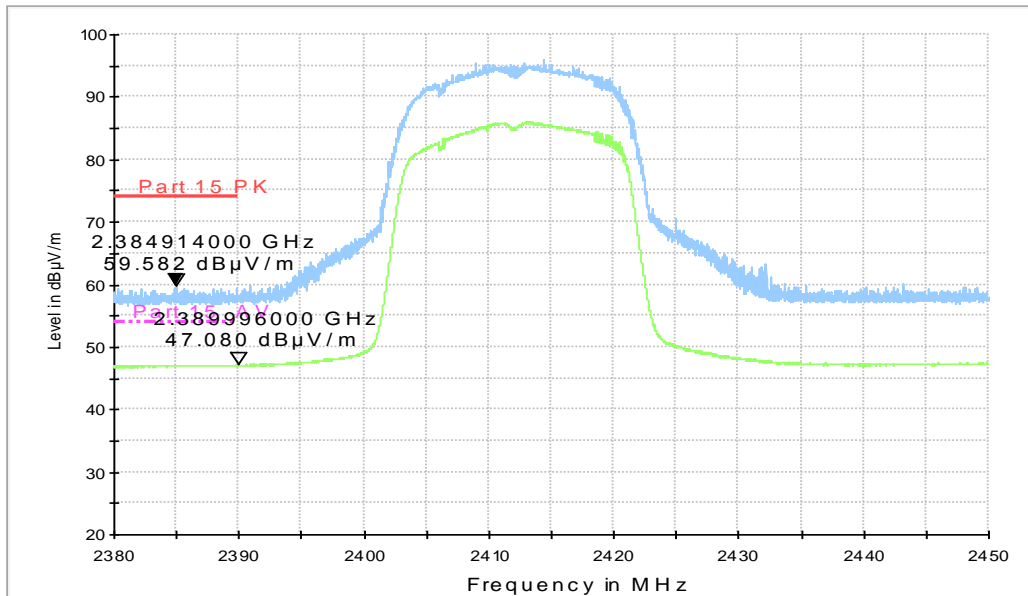


Fig.A.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.38 GHz - 2.45GHz

RE - Power-2.45GHz-2.5GHz

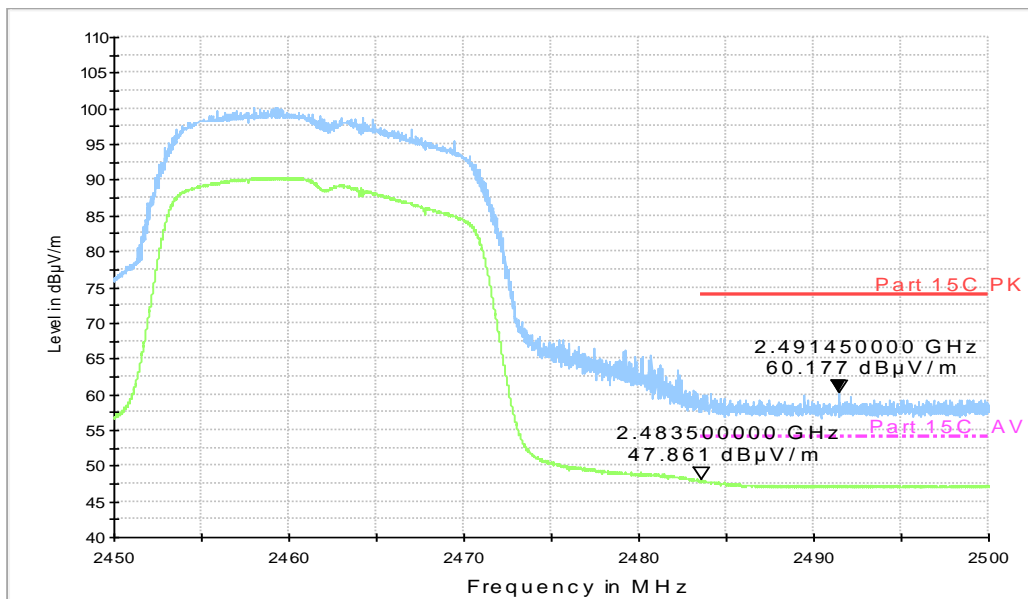


Fig.A.6.2.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

RE - Power-2.38GHz-2.45GHz

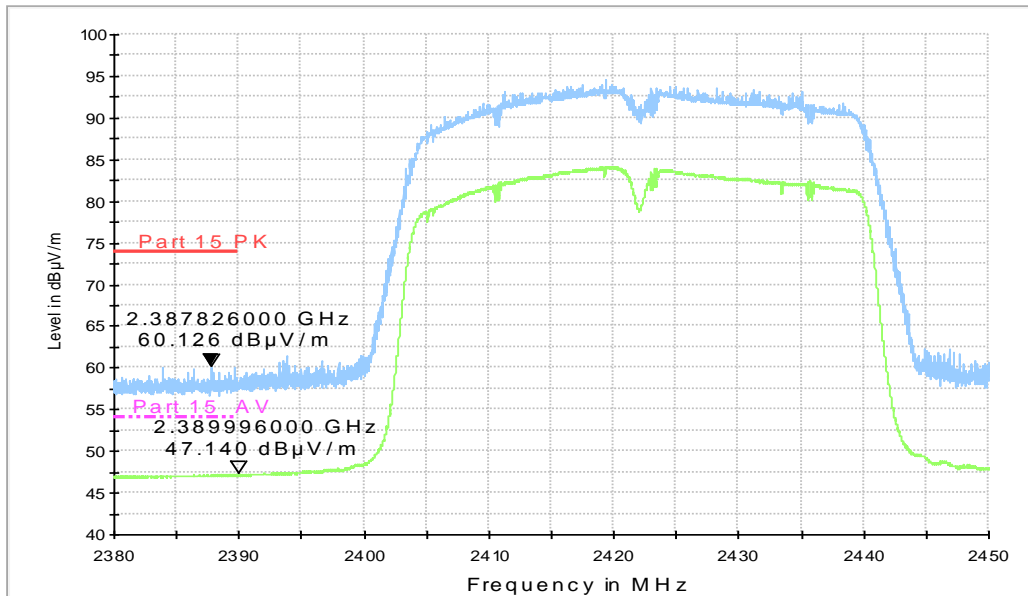


Fig.A.6.2.7 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.38 GHz - 2.43GHz

RE - Power-2.45GHz-2.5GHz

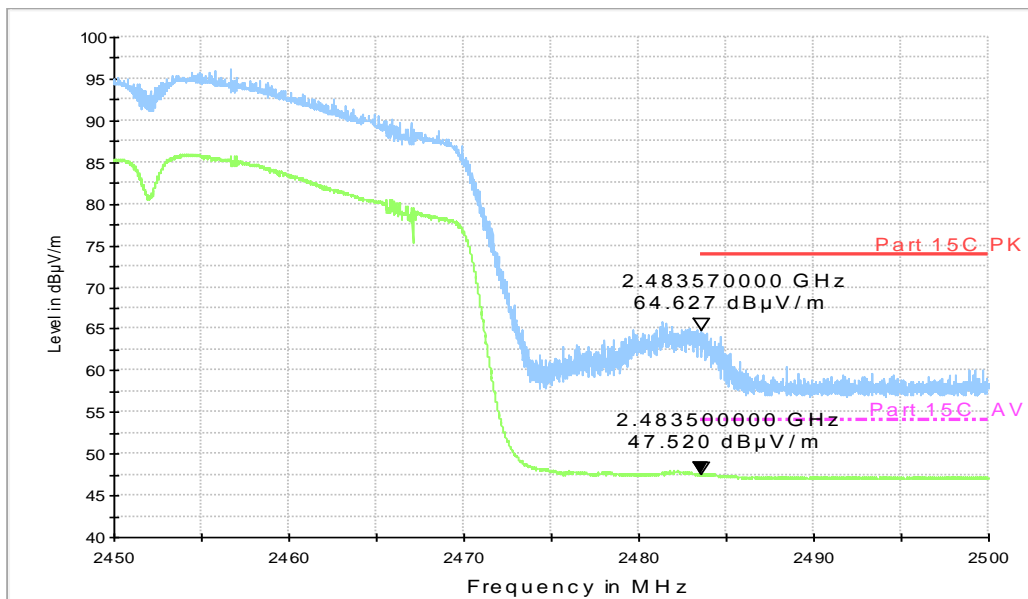


Fig.A.6.2.8 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz



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 within the fundamental emission band of the transmitter, but only for those measurements.³⁶ Record the six highest EUT emissions relative to the limit of each of the current-carrying conductors of the power cords of the equipment that comprises the EUT over the frequency range specified by the procuring or regulatory agency. Diagram or photograph the test setup that was used. See Clause 8 for full reporting requirements.

Test Condition:

Voltage (V)	Frequency (Hz)
120	60

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (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.7.2	Fig.A.7.3	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.7.2	Fig.A.7.3	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 Charger CBA0059AGAC7:

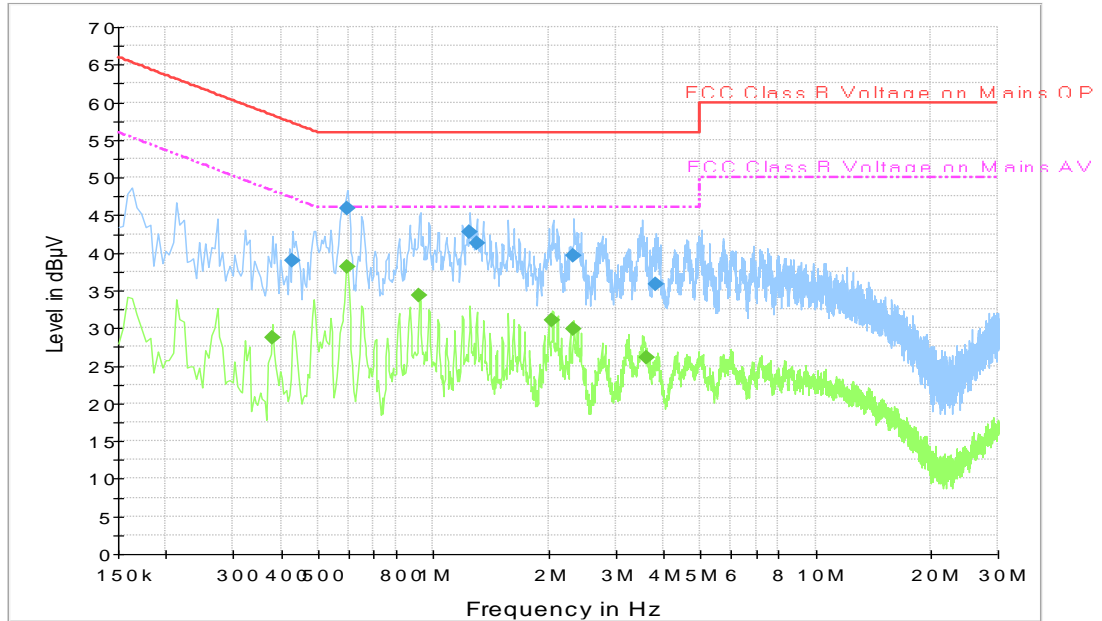


Fig.A.7.1 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.429000	38.9	2000.0	9.000	On	L1	19.9	18.4	57.3
0.595500	45.9	2000.0	9.000	On	L1	19.8	10.1	56.0
1.248000	42.8	2000.0	9.000	On	L1	19.6	13.2	56.0
1.297500	41.2	2000.0	9.000	On	L1	19.6	14.8	56.0
2.328000	39.6	2000.0	9.000	On	L1	19.7	16.4	56.0
3.813000	35.8	2000.0	9.000	On	L1	19.6	20.2	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.379500	28.8	2000.0	9.000	On	L1	19.8	19.5	48.3
0.595500	38.1	2000.0	9.000	On	L1	19.8	7.9	46.0
0.919500	34.4	2000.0	9.000	On	L1	19.7	11.6	46.0
2.053500	31.0	2000.0	9.000	On	L1	19.7	15.0	46.0
2.328000	29.9	2000.0	9.000	On	L1	19.7	16.1	46.0
3.606000	26.1	2000.0	9.000	On	L1	19.6	19.9	46.0

Traffic Charger CBA0059AGAC4:

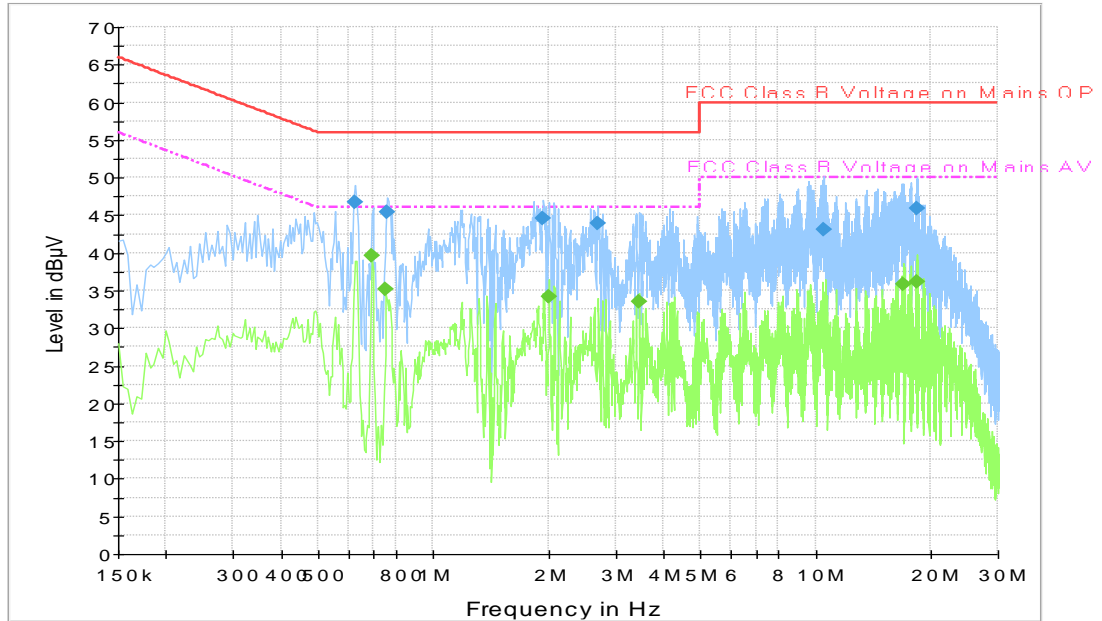


Fig.A.7.2 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.622500	46.7	2000.0	9.000	On	L1	19.8	9.3	56.0
0.757500	45.4	2000.0	9.000	On	L1	19.8	10.6	56.0
1.941000	44.5	2000.0	9.000	On	L1	19.7	11.5	56.0
2.697000	43.9	2000.0	9.000	On	L1	19.7	12.1	56.0
10.504500	43.0	2000.0	9.000	On	L1	19.8	17.0	60.0
18.388500	45.9	2000.0	9.000	On	N	19.9	14.1	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.690000	39.6	2000.0	9.000	On	N	19.9	6.4	46.0
0.753000	35.2	2000.0	9.000	On	N	19.8	10.8	46.0
2.008500	34.2	2000.0	9.000	On	L1	19.7	11.8	46.0
3.453000	33.5	2000.0	9.000	On	N	19.7	12.5	46.0
16.944000	35.8	2000.0	9.000	On	L1	20.0	14.2	50.0
18.393000	36.2	2000.0	9.000	On	L1	20.0	13.8	50.0