

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

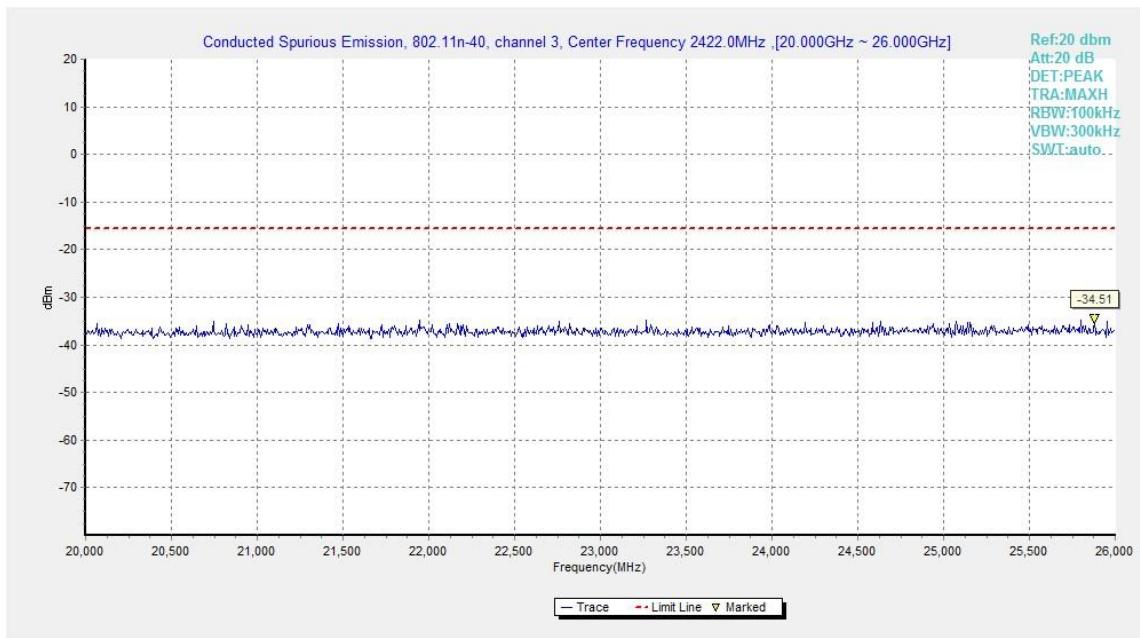


Fig.A.6.1.80 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 20 GHz-26 GHz)

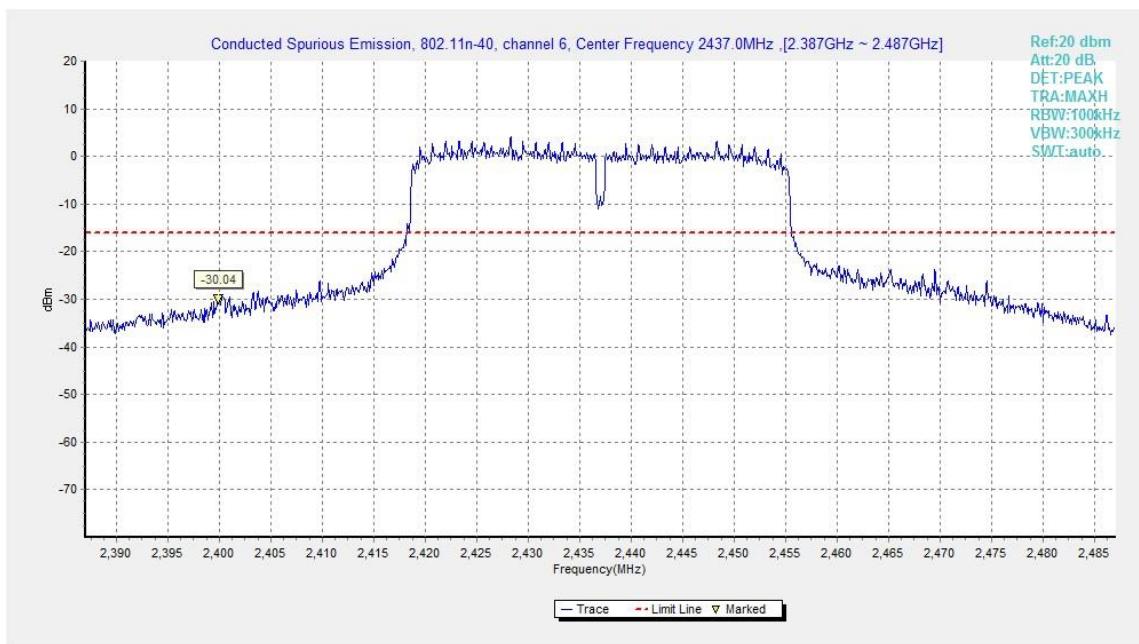


Fig.A.6.1.81 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, Center Frequency)

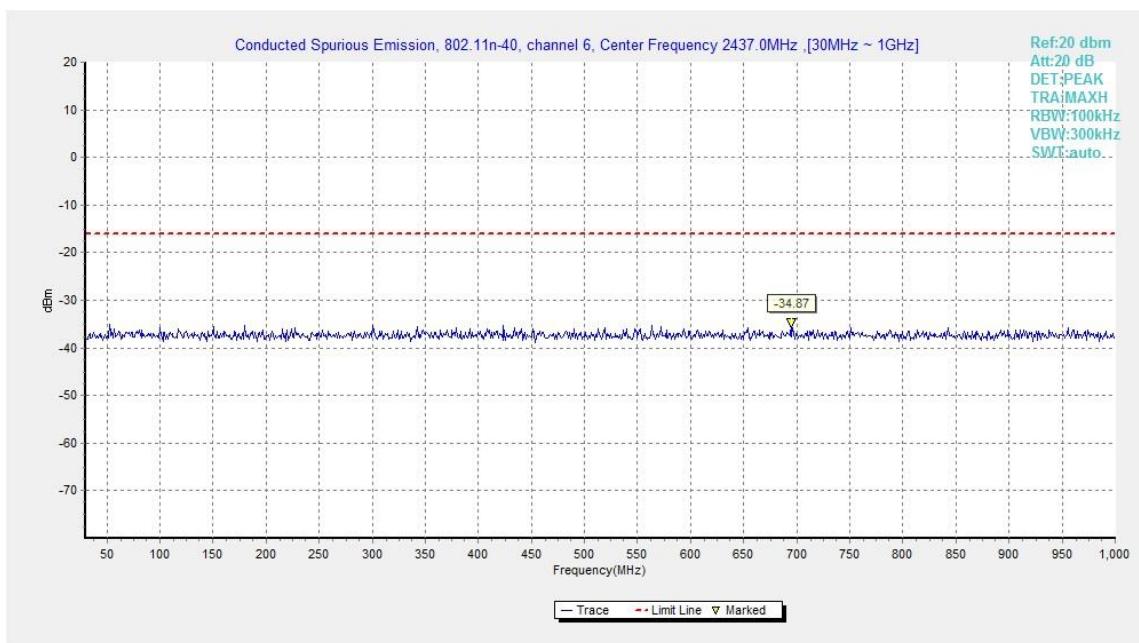


Fig.A.6.1.82 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 30 MHz-1 GHz)

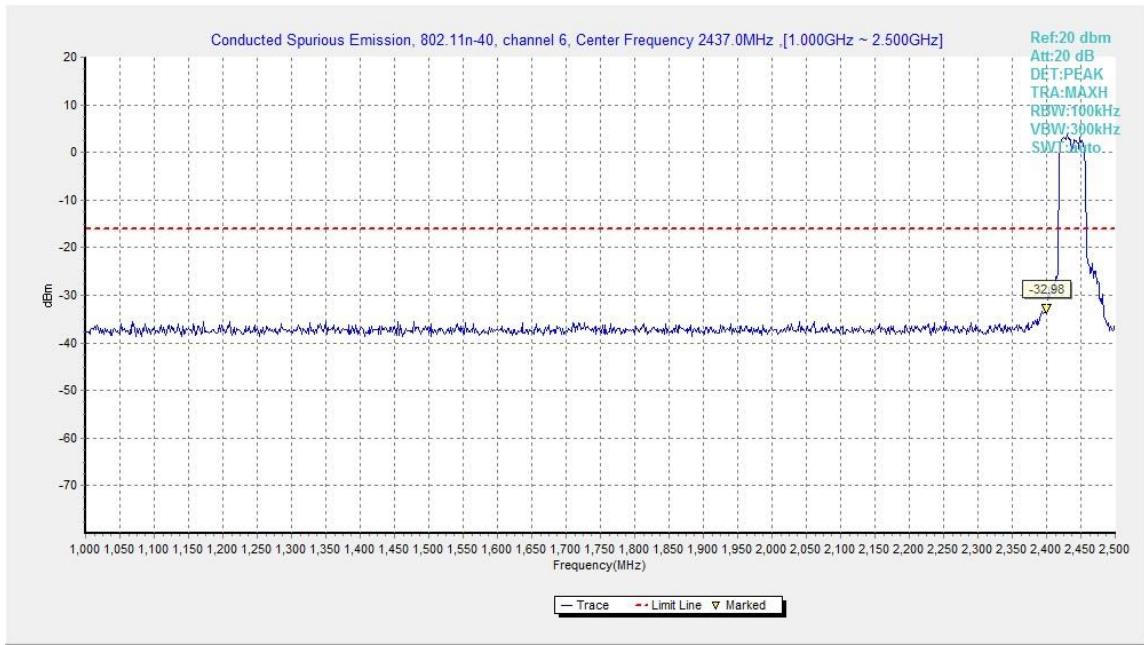


Fig.A.6.1.83 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 1 GHz-2.5 GHz)

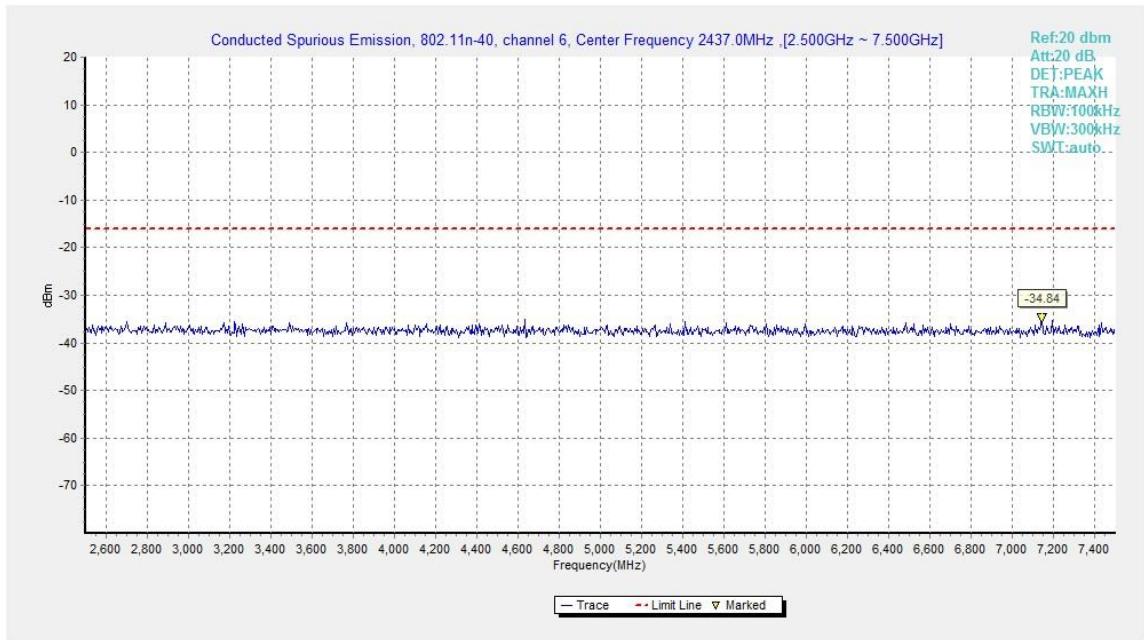


Fig.A.6.1.84 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 2.5 GHz-7.5 GHz)

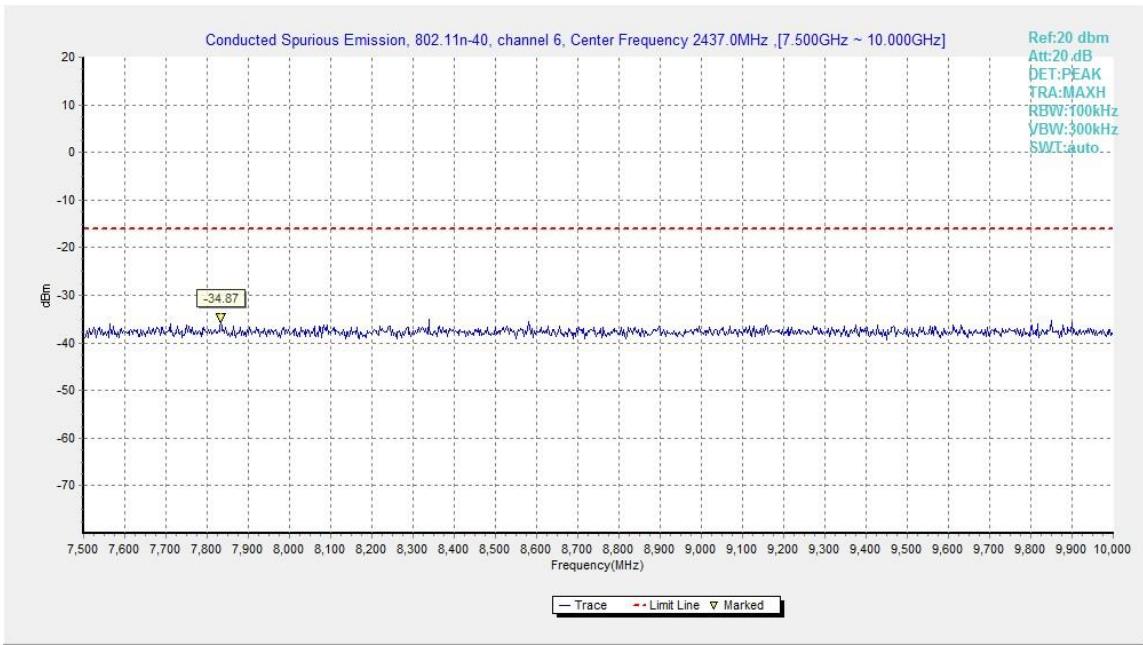


Fig.A.6.1.85 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 7.5 GHz-10 GHz)

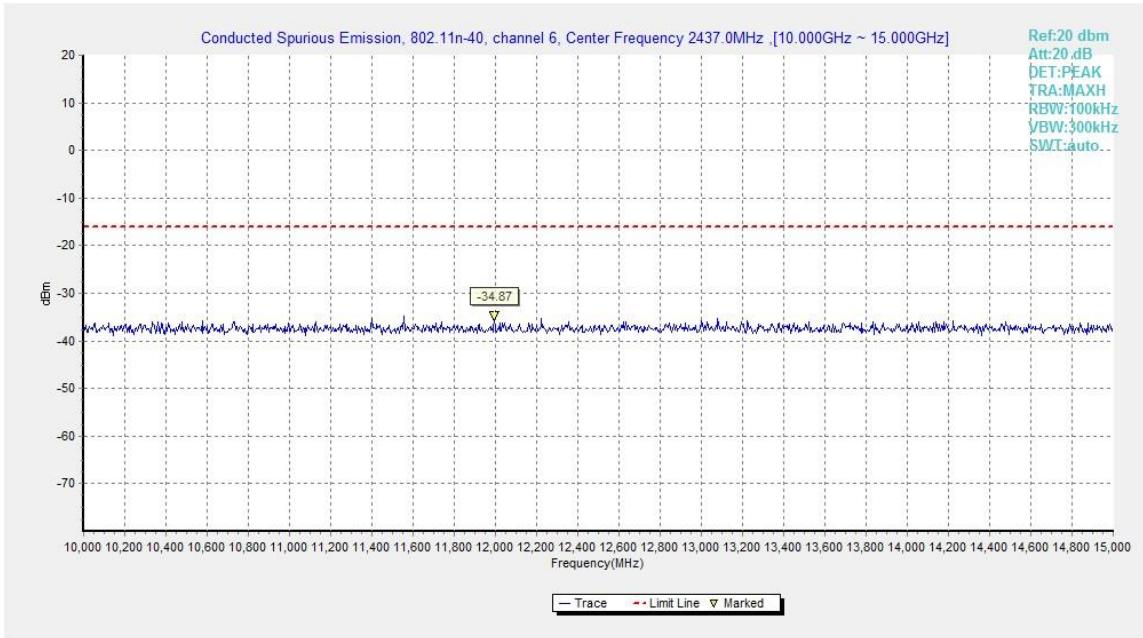


Fig.A.6.1.86 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 10 GHz-15 GHz)

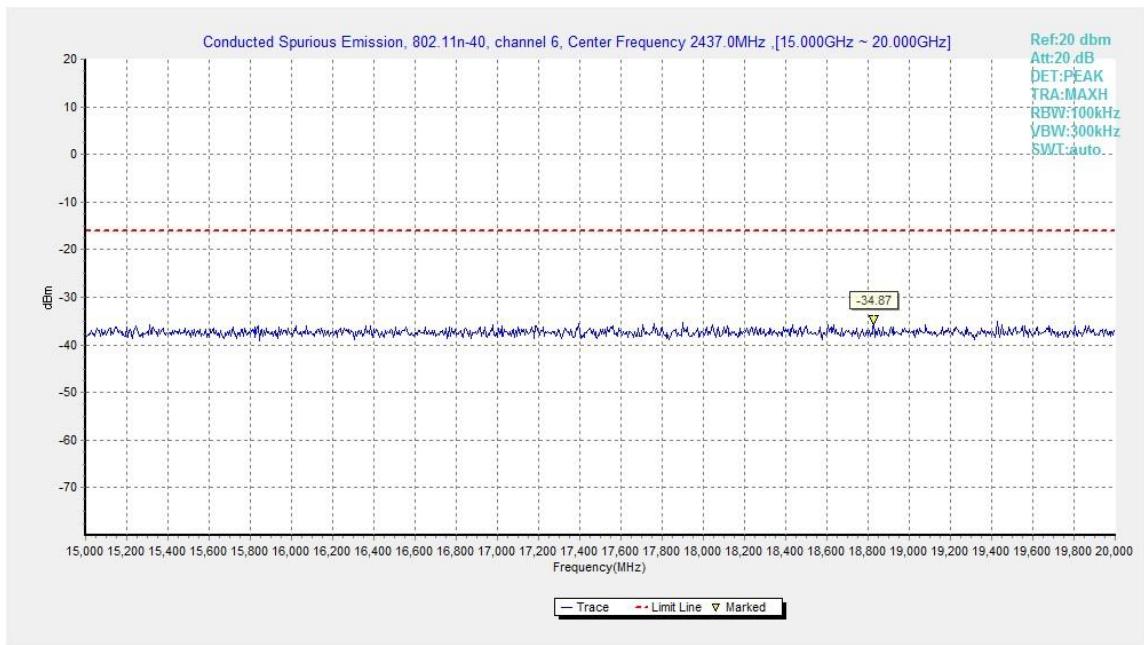


Fig.A.6.1.87 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 15 GHz-20 GHz)

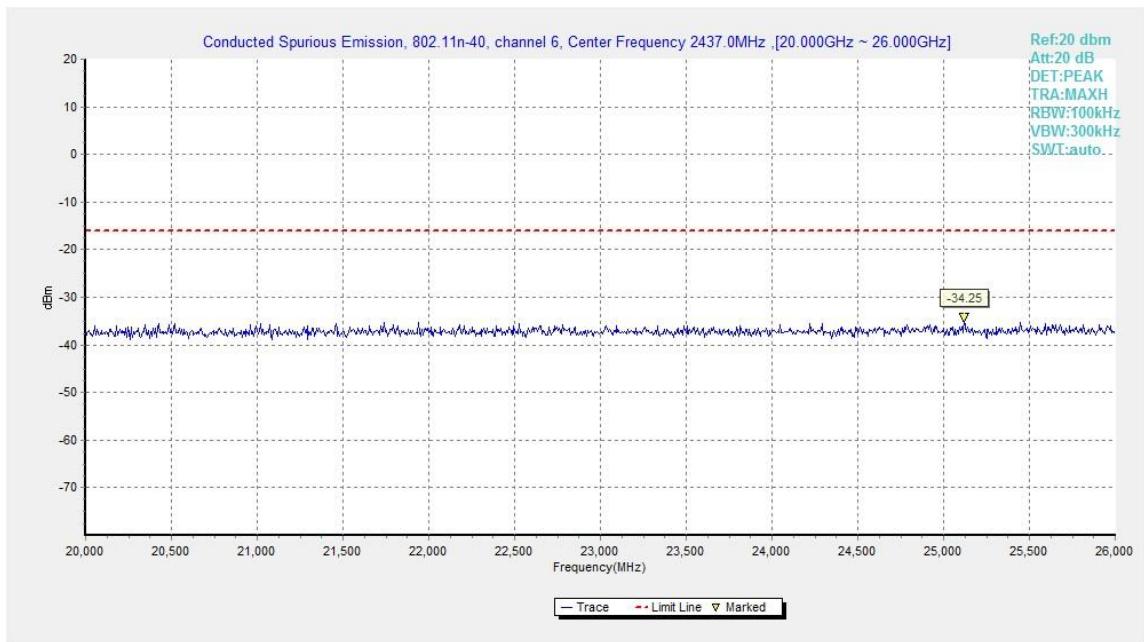


Fig.A.6.1.88 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 20 GHz-26 GHz)

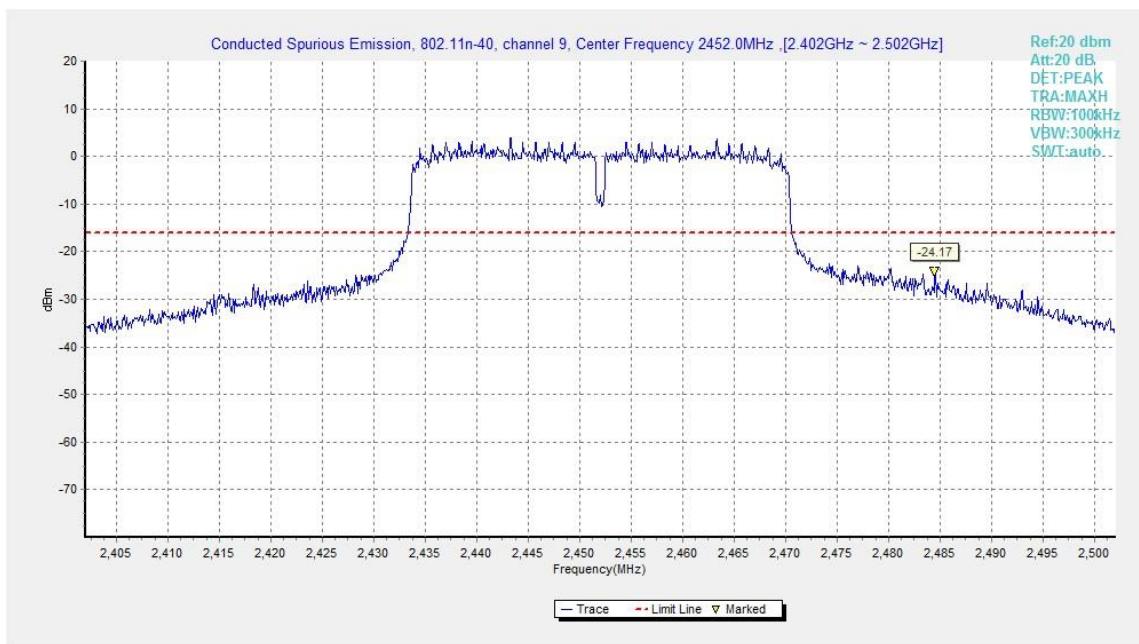


Fig.A.6.1.89 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, Center Frequency)

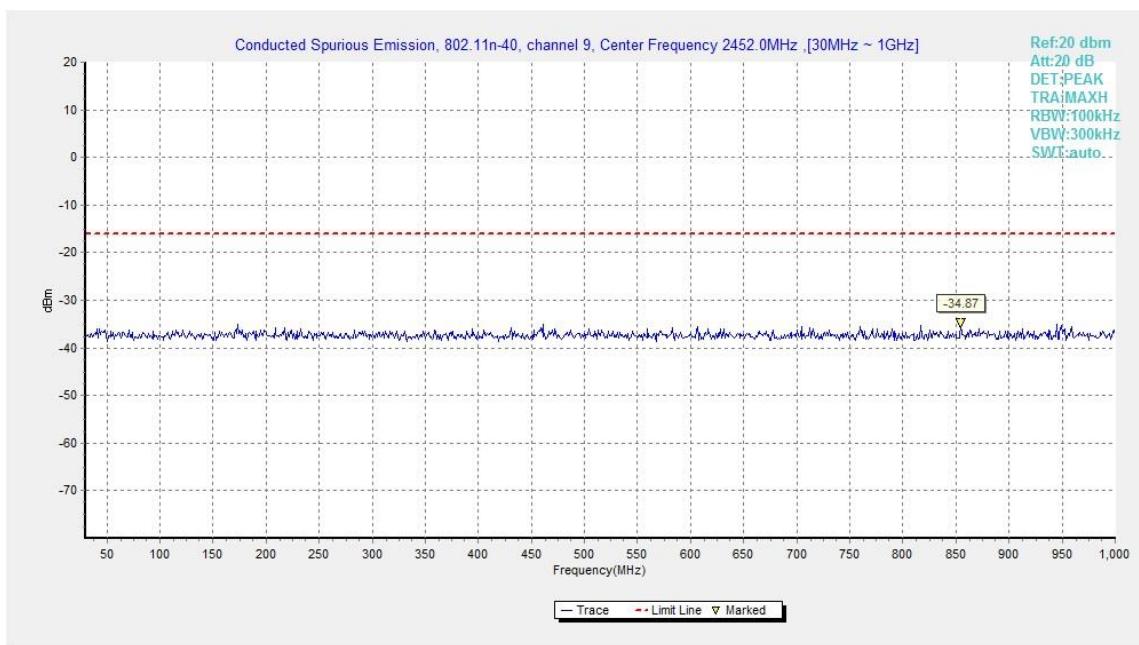


Fig.A.6.1.90 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 30 MHz-1 GHz)

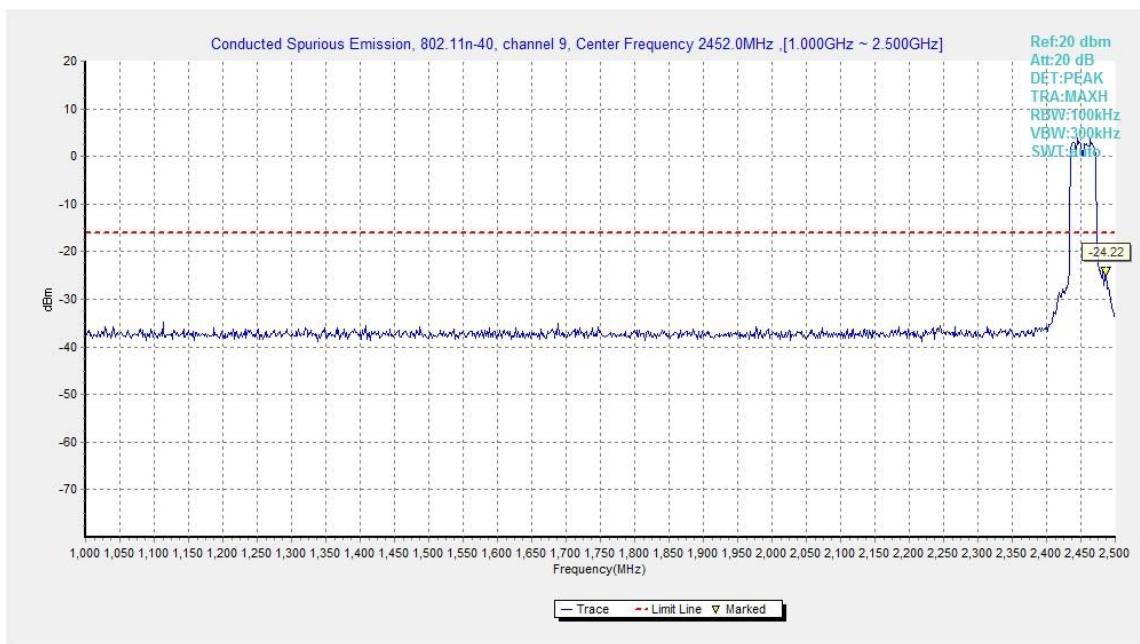


Fig.A.6.1.91 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 1 GHz-2.5 GHz)

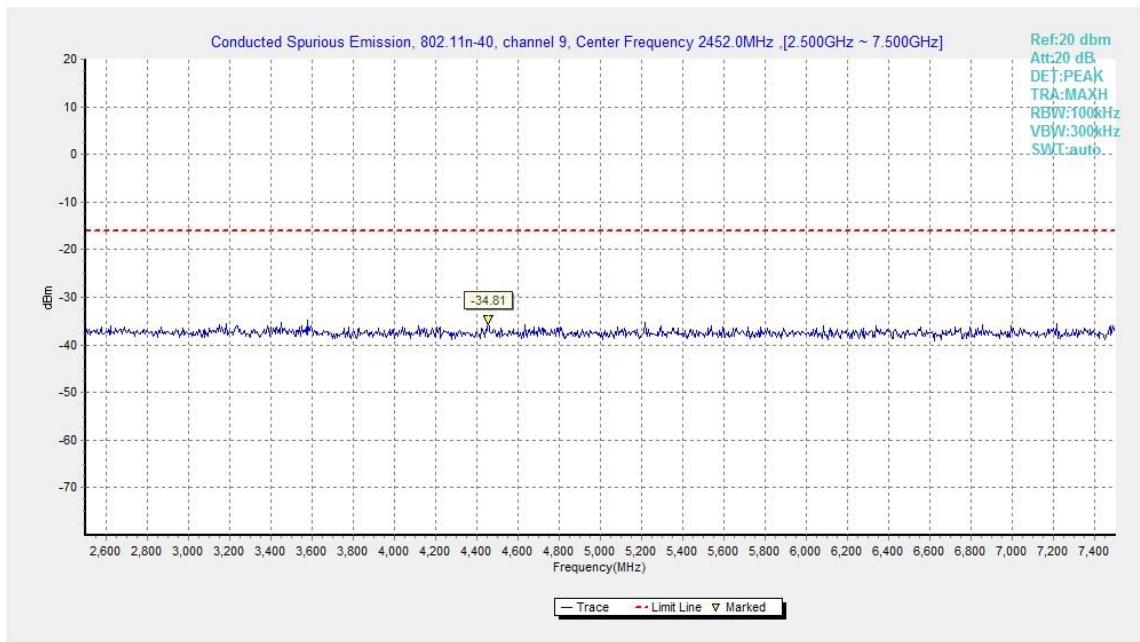


Fig.A.6.1.92 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 2.5 GHz-7.5 GHz)

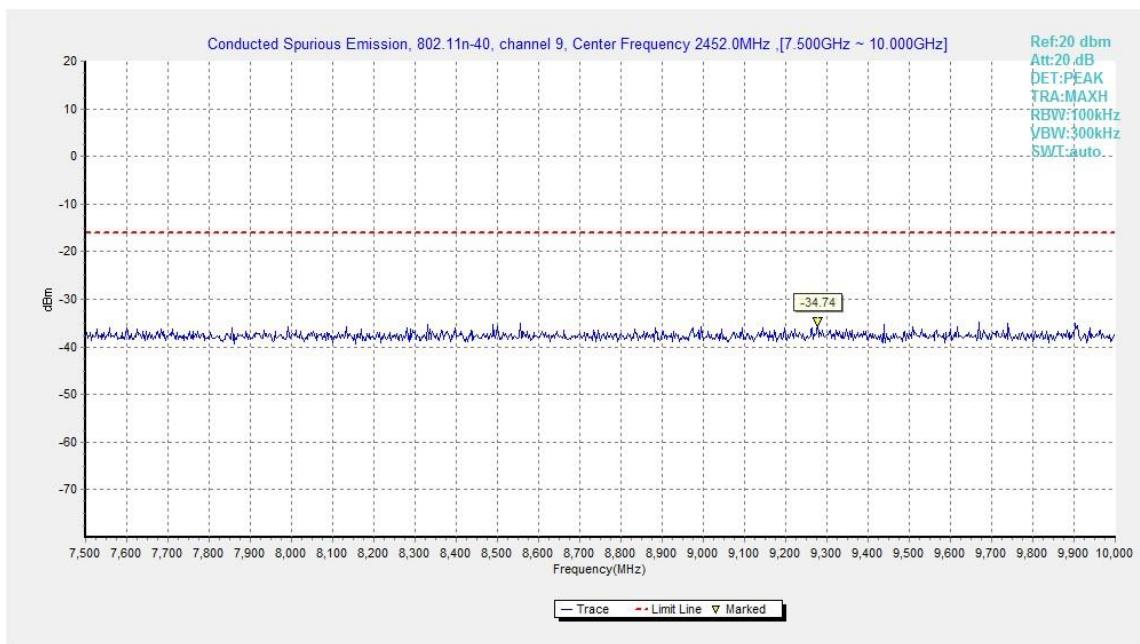


Fig.A.6.1.93 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 7.5 GHz-10 GHz)

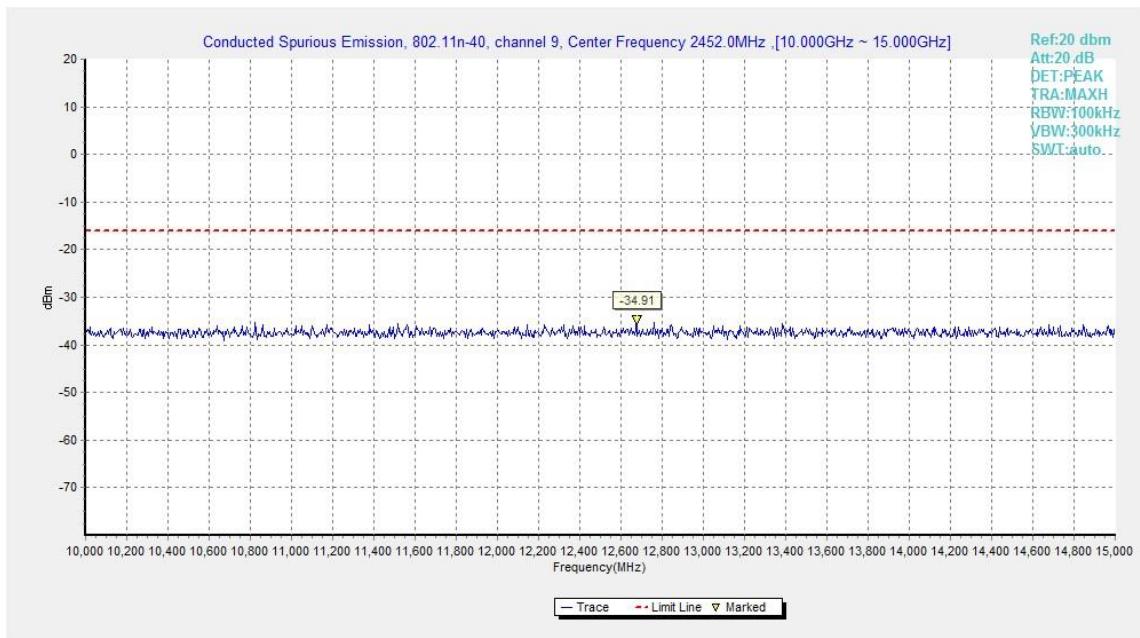


Fig.A.6.1.94 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 10 GHz-15 GHz)

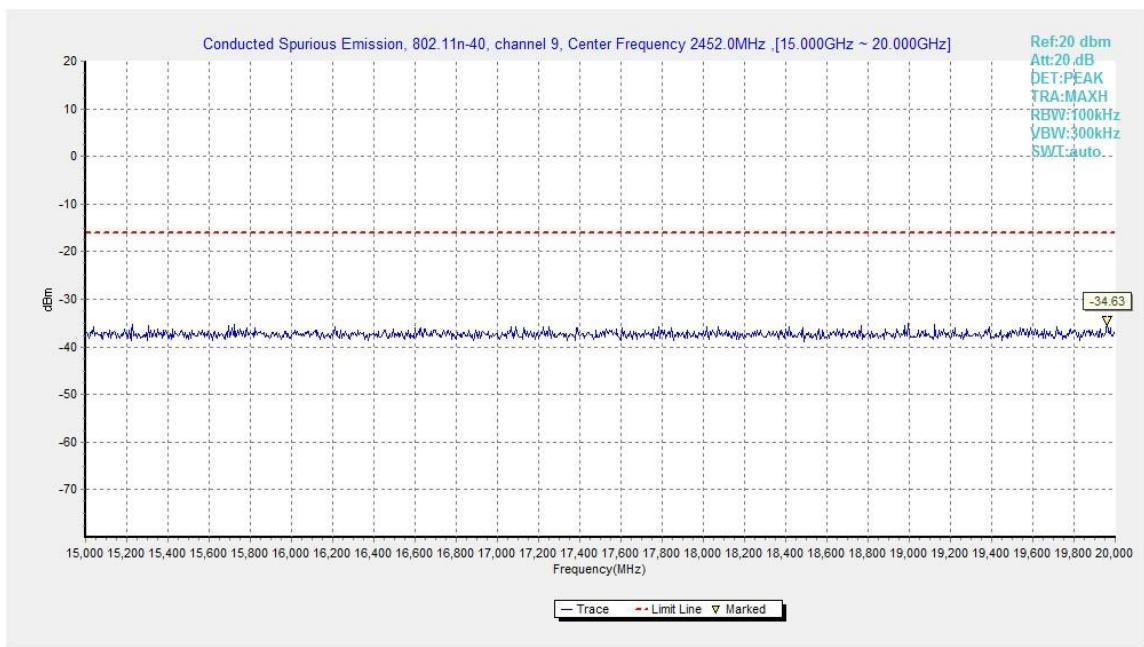


Fig.A.6.1.95 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 15 GHz-20 GHz)

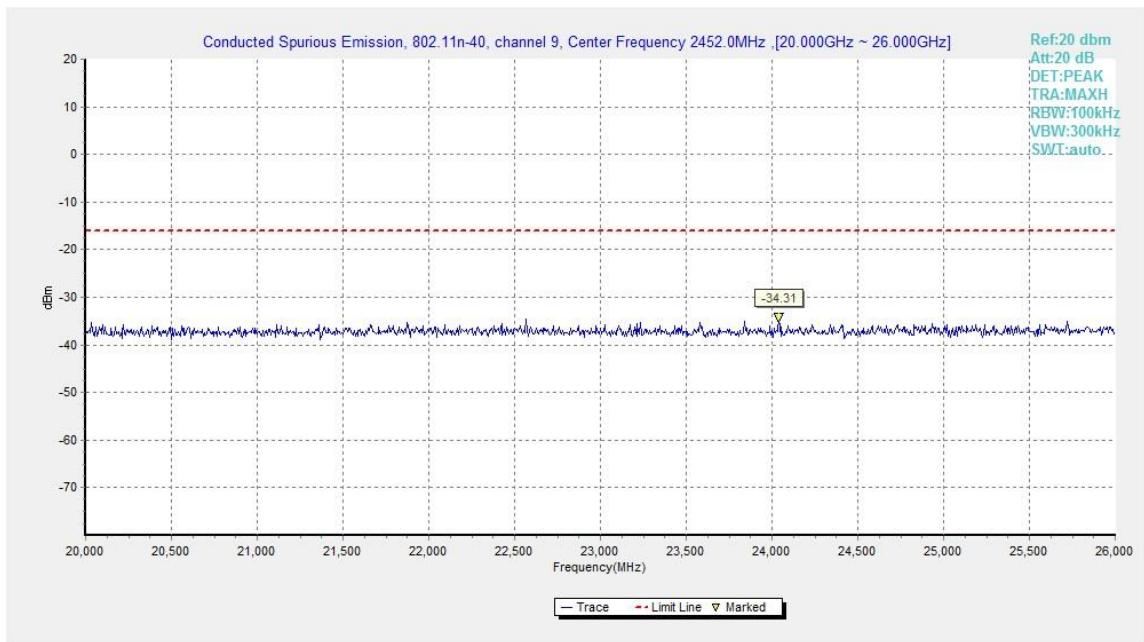


Fig.A.6.1.96 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 20 GHz-26 GHz)

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(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:
802.11b mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	Power	2.38GHz ~2.45GHz	Fig.A.6.2.1	P
	1	1 GHz ~ 3 GHz	Fig.A.6.2.2	P
		3 GHz ~ 18 GHz	Fig.A.6.2.3	P
	6	9 kHz ~30 MHz	Fig.A.6.2.4	P
		30 MHz ~1 GHz	Fig.A.6.2.5	P
		1 GHz ~ 3 GHz	Fig.A.6.2.6	P
		3 GHz ~ 18 GHz	Fig.A.6.2.7	P
		18 GHz~ 26.5 GHz	Fig.A.6.2.8	P
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.9	P
	11	1 GHz ~ 3 GHz	Fig.A.6.2.10	P
		3 GHz ~ 18 GHz	Fig.A.6.2.11	P

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	Power	2.38GHz ~2.43GHz	Fig.A.6.2.12	P
	1	1 GHz ~ 3 GHz	Fig.A.6.2.13	P
		3 GHz ~ 18 GHz	Fig.A.6.2.14	P
	6	30 MHz ~1 GHz	Fig.A.6.2.15	P
		1 GHz ~ 3 GHz	Fig.A.6.2.16	P
		3 GHz ~ 18 GHz	Fig.A.6.2.17	P
		18 GHz~ 26.5 GHz	Fig.A.6.2.18	P
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.19	P
	11	1 GHz ~ 3 GHz	Fig.A.6.2.20	P
		3 GHz ~ 18 GHz	Fig.A.6.2.21	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	Power	2.38GHz ~2.45GHz	Fig.A.6.2.22	P
	1	1 GHz ~ 3 GHz	Fig.A.6.2.23	P
		3 GHz ~ 18 GHz	Fig.A.6.2.24	P
	6	30 MHz ~1 GHz	Fig.A.6.2.25	P
		1 GHz ~ 3 GHz	Fig.A.6.2.26	P
		3 GHz ~ 18 GHz	Fig.A.6.2.27	P
		18 GHz~ 26.5 GHz	Fig.A.6.2.28	P
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.29	P
	11	1 GHz ~ 3 GHz	Fig.A.6.2.30	P
		3 GHz ~ 18 GHz	Fig.A.6.2.31	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	3	Power	2.38GHz ~2.45GHz	P
		1 GHz ~ 3 GHz	Fig.A.6.2.33	P
		3 GHz ~ 18 GHz	Fig.A.6.2.34	P
	6	30 MHz ~1 GHz	Fig.A.6.2.35	P
		1 GHz ~ 3 GHz	Fig.A.6.2.36	P
		3 GHz ~ 18 GHz	Fig.A.6.2.37	P
		18 GHz~ 26.5 GHz	Fig.A.6.2.38	P
	9	Power	2.45GHz ~2.5GHz	P
		1 GHz ~ 3 GHz	Fig.A.6.2.40	P
		3 GHz ~ 18 GHz	Fig.A.6.2.41	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:

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

Average Result:
802.11b
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)
2385.400	46.90	2.9	32.0	12.02	54.0	7.1	H
2381.200	46.79	2.9	32.0	11.88	54.0	7.2	H
4824.000	37.16	-17.3	34.5	19.98	54.0	16.8	H
7236.000	38.11	-17.6	36.1	19.58	54.0	15.9	H
9648.000	39.26	-17.4	37.0	19.63	54.0	14.7	H
12060.000	41.46	-17.2	39.3	19.40	54.0	12.5	H

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)
2379.000	46.81	2.9	32.1	11.88	54.0	7.2	H
2552.250	48.48	3.0	33.1	12.41	54.0	5.5	H
4873.500	36.17	-18.3	34.5	19.98	54.0	17.8	H
7311.000	36.83	-18.6	36.1	19.37	54.0	17.2	H
9748.500	39.42	-17.3	37.2	19.55	54.0	14.6	H
12184.500	40.64	-17.7	39.2	19.10	54.0	13.4	H

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)
2486.900	47.83	2.9	32.7	12.23	54.0	6.2	H
2485.100	47.84	2.9	32.7	12.19	54.0	6.2	H
4924.500	35.65	-19.0	34.5	20.10	54.0	18.4	H
7386.000	38.53	-17.3	36.0	19.74	54.0	15.5	H
9847.500	38.66	-18.1	37.3	19.46	54.0	15.3	H
12130.000	40.21	-17.4	39.2	18.36	54.0	13.8	H

802.11g

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)
2375.800	46.80	2.9	32.1	13.19	54.0	7.2	H
2559.700	48.58	3.0	33.1	13.50	54.0	5.4	H
4824.000	37.25	-17.3	34.5	20.07	54.0	16.8	H
7236.000	38.24	-17.6	36.1	19.71	54.0	15.8	H
9648.000	39.30	-17.4	37.0	19.67	54.0	14.7	H
12060.000	41.55	-17.2	39.3	19.48	54.0	12.5	H

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)
2385.600	47.05	2.9	32.0	12.17	54.0	7.0	H
2632.740	49.56	3.0	33.4	13.11	54.0	4.4	H
4874.000	36.24	-18.3	34.5	20.06	54.0	17.8	H
7311.000	36.86	-18.6	36.1	19.39	54.0	17.1	H
9748.000	39.55	-17.3	37.2	19.66	54.0	14.5	H
12185.000	40.75	-17.7	39.2	19.21	54.0	13.3	H

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)
2484.800	49.92	2.9	32.7	14.26	54.0	4.1	H
2484.100	50.09	2.9	32.7	14.42	54.0	3.9	H
4924.000	35.73	-19.0	34.5	20.18	54.0	18.3	H
7386.400	38.60	-17.2	36.0	19.81	54.0	15.4	H
9848.000	38.72	-18.1	37.3	19.51	54.0	15.3	H
12310.400	40.31	-17.9	39.2	19.00	54.0	13.7	H

802.11n-HT20

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)
2387.300	47.34	2.9	32.0	12.48	54.0	6.7	H
2387.700	47.45	2.9	32.0	12.58	54.0	6.6	H
4824.000	37.36	-17.3	34.5	20.18	54.0	16.6	H
7236.000	38.30	-17.6	36.1	19.78	54.0	15.7	H
9648.000	39.40	-17.4	37.0	19.77	54.0	14.6	H
12060.000	41.60	-17.2	39.3	19.54	54.0	12.4	H

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)
2378.400	46.82	2.9	32.1	11.89	54.0	7.2	H
2569.700	48.59	3.0	33.0	12.58	54.0	5.4	H
4874.200	36.30	-18.3	34.5	20.13	54.0	17.7	H
7311.500	36.94	-18.6	36.1	19.47	54.0	17.1	H
9748.500	39.62	-17.3	37.2	19.75	54.0	14.4	H
12185.000	40.85	-17.7	39.2	19.31	54.0	13.2	H

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)
2484.700	48.62	2.9	32.7	12.95	54.0	5.4	H
2484.200	48.87	2.9	32.7	13.20	54.0	5.1	H
4924.000	36.12	-19.0	34.5	20.57	54.0	17.9	H
7386.000	38.59	-17.3	36.0	19.81	54.0	15.4	H
9848.000	39.39	-18.1	37.3	20.18	54.0	14.6	H
12310.000	40.19	-17.9	39.2	18.88	54.0	13.8	H

802.11n-HT40

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)
2383.900	47.98	2.9	32.0	13.09	54.0	6.0	H
2384.600	48.27	2.9	32.0	13.39	54.0	5.7	H
4844.000	37.04	-17.5	34.5	20.08	54.0	17.0	H
7266.500	37.03	-18.8	36.1	19.71	54.0	17.0	H
9688.000	40.67	-16.5	37.1	20.08	54.0	13.3	H
12110.500	41.21	-17.3	39.3	19.26	54.0	12.8	H

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)
2376.800	46.83	2.9	32.1	11.89	54.0	7.2	H
2649.300	49.32	3.0	33.7	12.59	54.0	4.7	H
4874.000	36.17	-18.3	34.5	19.99	54.0	17.8	H
7311.500	36.83	-18.6	36.1	19.36	54.0	17.2	H
9748.000	39.42	-17.3	37.2	19.53	54.0	14.6	H
12185.500	40.64	-17.7	39.2	19.10	54.0	13.4	H

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)
2485.900	47.94	2.9	32.7	12.31	54.0	6.1	H
2483.700	48.14	2.9	32.8	12.45	54.0	5.9	H
4904.000	35.69	-18.8	34.5	19.97	54.0	18.3	H
7356.000	37.76	-18.0	36.1	19.68	54.0	16.2	H
9808.400	38.99	-18.8	37.3	20.52	54.0	15.0	H
12260.500	40.33	-17.8	39.2	18.96	54.0	13.7	H

Peak Result:
802.11b

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)
2387.379	59.4	2.9	32.0	24.54	74.0	14.6	H
2385.500	60.0	2.9	32.0	25.12	74.0	14.0	V
17931.750	59.9	-13.6	40.9	32.62	74.0	14.1	H
17496.750	59.6	-14.5	41.2	32.94	74.0	14.4	H
17620.500	59.3	-13.1	41.1	31.37	74.0	14.7	V
17790.000	59.3	-13.4	41.0	31.76	74.0	14.7	V

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)
2361.600	49.8	-27.5	31.9	45.47	74.0	24.2	V
2662.000	52.4	-26.7	33.6	45.60	74.0	21.6	H
17886.000	59.8	-13.5	40.9	32.49	74.0	14.2	V
17634.750	59.6	-13.0	41.1	31.49	74.0	14.4	H
17293.500	59.2	-14.0	41.2	32.02	74.0	14.8	H
17787.750	59.2	-13.4	41.0	31.62	74.0	14.8	V

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)
2484.400	60.9	2.9	32.7	25.28	74.0	13.1	H
2489.800	61.4	2.9	32.6	25.85	74.0	12.6	H
17270.250	60.5	-14.0	41.2	33.37	74.0	13.5	V
17759.250	60.3	-13.3	41.0	32.68	74.0	13.7	H
17385.750	59.8	-14.5	41.2	33.12	74.0	14.2	H
17756.250	59.6	-13.3	41.0	31.89	74.0	14.4	V

802.11g

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)
2389.492	68.5	2.9	32.0	33.69	74.0	5.5	H
2389.940	68.4	2.9	32.0	33.53	74.0	5.6	H
17302.500	59.7	-14.0	41.2	32.56	74.0	14.3	V
17759.250	59.6	-13.3	41.0	31.94	74.0	14.4	V
17604.750	59.4	-13.3	41.1	31.61	74.0	14.6	V
17242.500	59.4	-14.2	41.2	32.38	74.0	14.6	H

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)
2295.800	48.5	-27.9	31.0	45.42	74.0	25.5	V
2634.400	52.6	-26.8	33.5	45.91	74.0	21.4	H
17437.500	60.1	-14.8	41.2	33.69	74.0	13.9	V
17991.750	59.8	-13.6	40.8	32.55	74.0	14.2	V
17660.250	59.7	-13.1	41.1	31.74	74.0	14.3	V
17646.000	59.7	-13.0	41.1	31.63	74.0	14.3	H

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)
2483.710	67.9	2.9	32.8	32.20	74.0	6.1	V
2484.290	66.9	2.9	32.7	31.18	74.0	7.1	V
17598.000	60.0	-13.4	41.1	32.24	74.0	14.0	H
17927.250	59.4	-13.6	40.9	32.08	74.0	14.6	V
17971.500	59.3	-13.6	40.8	32.14	74.0	14.7	V
17505.750	59.3	-14.4	41.2	32.49	74.0	14.7	H

802.11n-HT20

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)
2389.160	63.7	2.9	32.0	28.89	74.0	10.3	H
2389.730	64.4	2.9	32.0	29.53	74.0	9.6	V
17730.750	60.3	-13.3	41.0	32.50	74.0	13.7	H
17280.750	60.1	-14.0	41.2	32.81	74.0	13.9	H
17580.000	59.9	-13.6	41.1	32.33	74.0	14.1	V
17328.000	59.7	-14.2	41.2	32.69	74.0	14.3	V

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)
2345.200	49.0	-27.7	31.6	45.08	74.0	25.0	V
2928.600	53.9	-25.4	33.9	45.28	74.0	20.1	H
17790.000	59.8	-13.4	41.0	32.23	74.0	14.2	H
17569.500	59.6	-13.7	41.1	32.11	74.0	14.4	V
17783.250	59.3	-13.4	41.0	31.72	74.0	14.7	H
17658.000	59.2	-13.1	41.1	31.17	74.0	14.8	V

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)
2484.100	63.8	2.9	32.7	28.17	74.0	10.2	V
2484.400	64.1	2.9	32.7	28.44	74.0	9.9	V
17730.750	60.3	-13.3	41.0	32.50	74.0	13.7	H
17280.750	60.1	-14.0	41.2	32.81	74.0	13.9	V
17580.000	59.9	-13.6	41.1	32.33	74.0	14.1	V
17328.000	59.7	-14.2	41.2	32.69	74.0	14.3	H

802.11n-HT40

Ch3

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2386.496	65.0	2.9	32.0	30.10	74.0	9.0	H
2386.706	64.3	2.9	32.0	29.43	74.0	9.7	V
17780.250	60.1	-13.4	41.0	32.49	74.0	13.9	V
17353.500	59.8	-14.3	41.2	32.88	74.0	14.2	H
17279.250	59.7	-14.0	41.2	32.43	74.0	14.3	V
17657.250	59.6	-13.1	41.1	31.63	74.0	14.4	H

Ch6

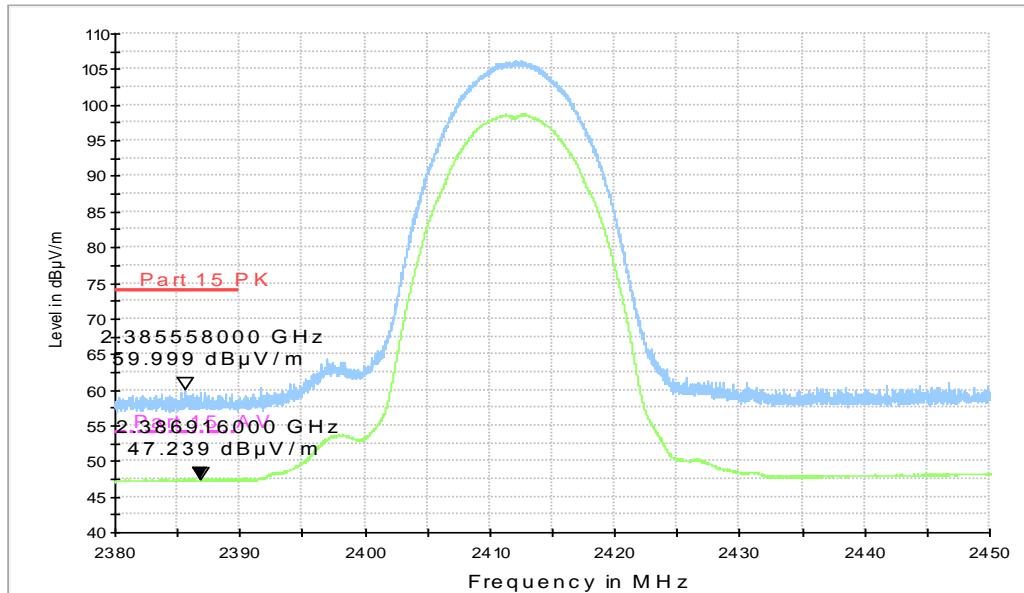
Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
2320.400	48.8	-27.8	31.2	45.37	74.0	25.2	H
2917.600	53.6	-25.4	34.0	44.97	74.0	20.4	V
17656.500	59.6	-13.1	41.1	31.61	74.0	14.4	H
17612.250	59.5	-13.2	41.1	31.58	74.0	14.5	H
17676.000	59.4	-13.1	41.1	31.41	74.0	14.6	V
17616.000	59.3	-13.2	41.1	31.43	74.0	14.7	H

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)
2484.820	63.2	2.9	32.7	27.55	74.0	10.8	H
2484.130	63.3	2.9	32.7	27.58	74.0	10.7	H
17589.000	59.4	-13.5	41.1	31.71	74.0	14.6	H
17635.500	59.3	-13.0	41.1	31.25	74.0	14.7	H
17691.000	59.3	-13.2	41.0	31.44	74.0	14.7	H
17247.000	59.3	-14.2	41.2	32.26	74.0	14.7	V

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 – 2.45GHz

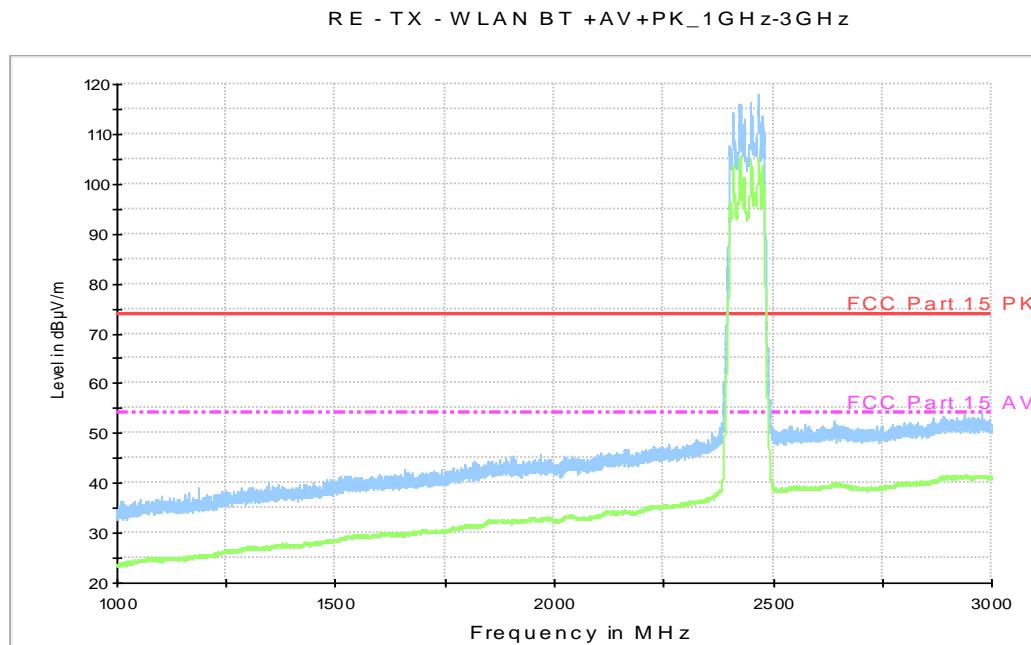


Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (802.11b, Ch1, 1 GHz-3 GHz)

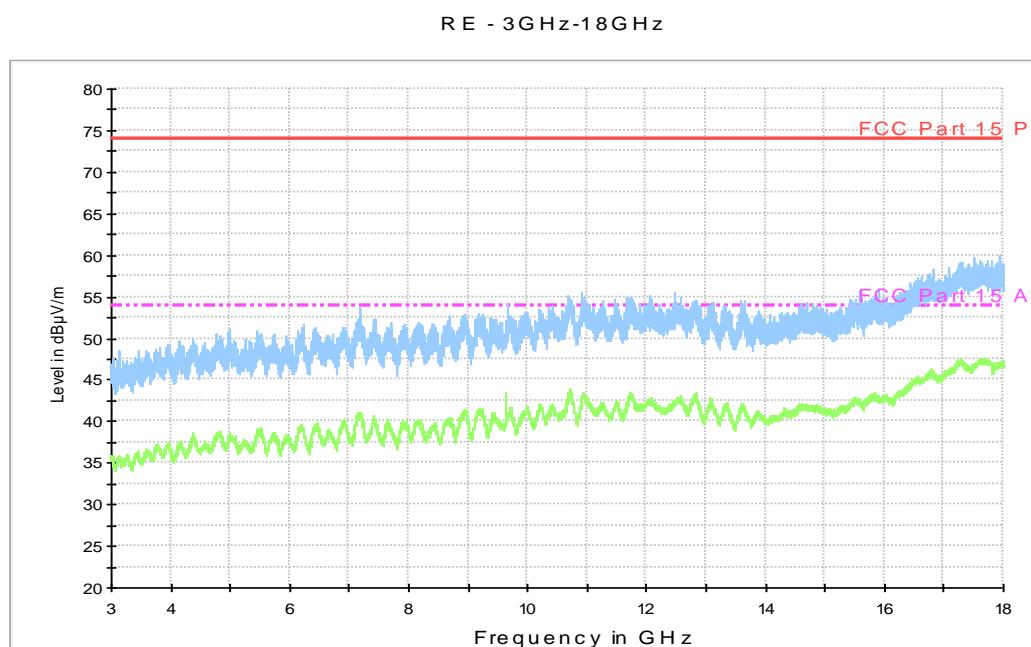


Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (802.11b, Ch1, 3 GHz-18 GHz)

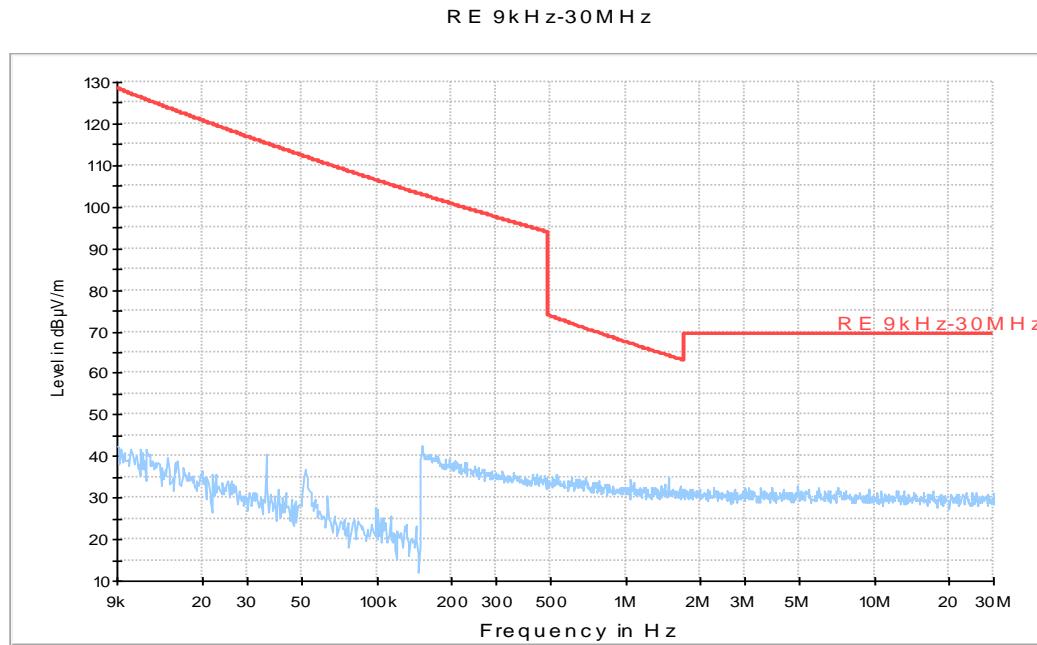


Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (802.11b, Ch6, 9kHz-30 MHz)

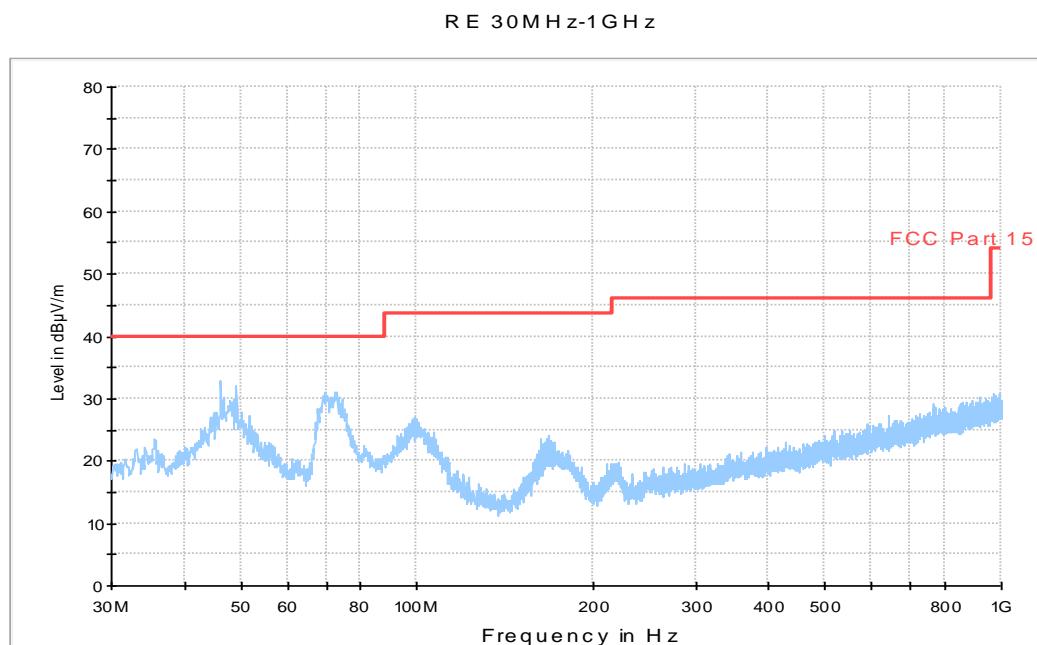


Fig.A.6.2.5 Transmitter Spurious Emission - Radiated (802.11b, Ch6, 30 MHz-1 GHz)

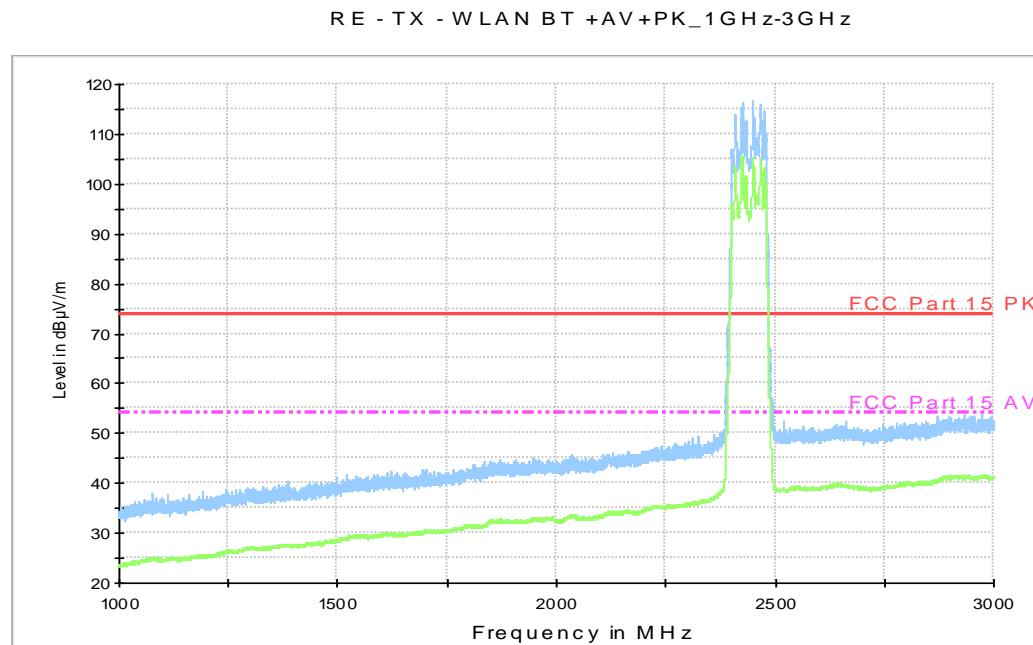


Fig.A.6.2.6 Transmitter Spurious Emission - Radiated (802.11b, Ch6, 1 GHz-3 GHz)

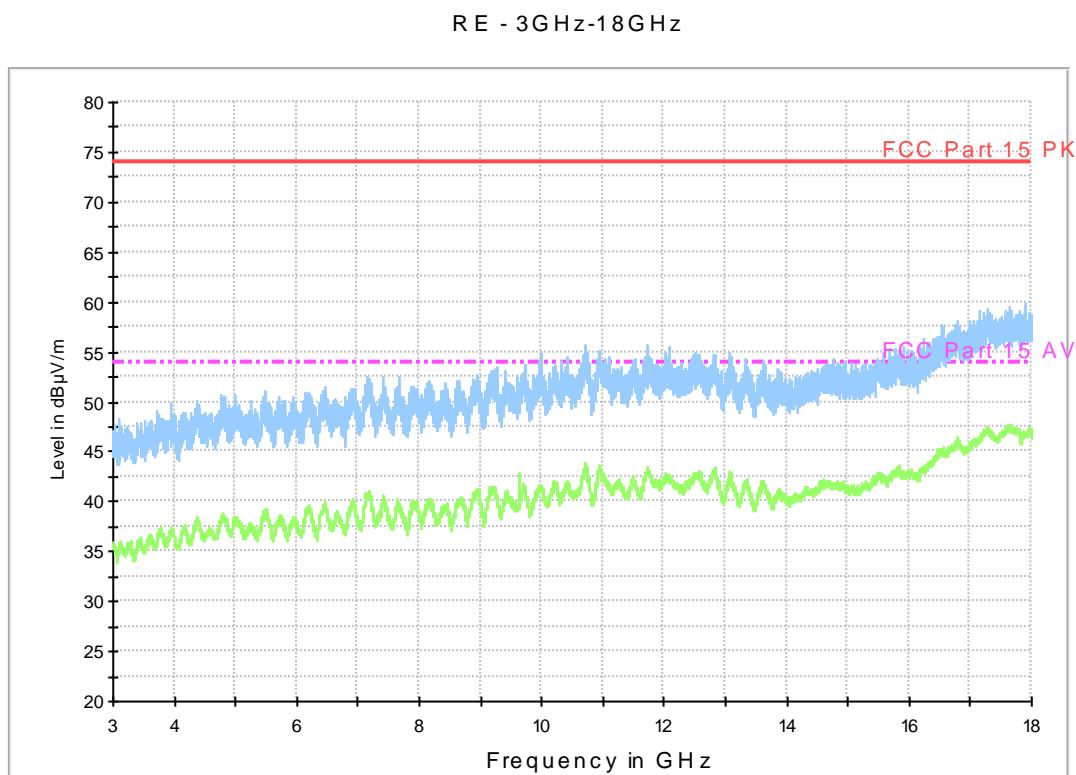


Fig.A.6.2.7 Transmitter Spurious Emission - Radiated (802.11b, Ch6, 3 GHz-18 GHz)

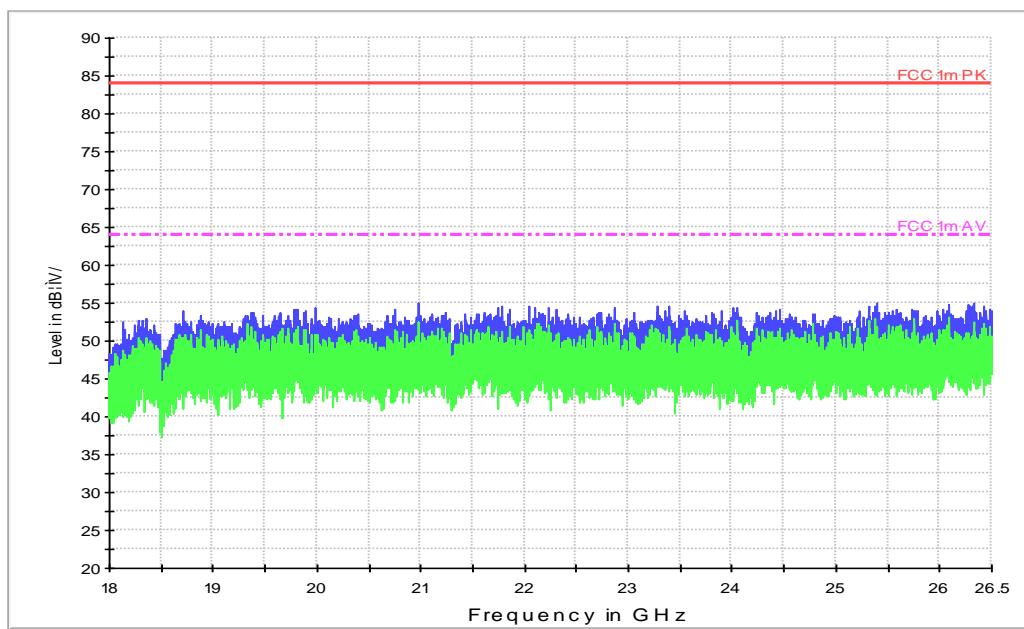


Fig.A.6.2.8 Transmitter Spurious Emission - Radiated (802.11b, Ch6, 18GHz – 26.5GHz)

R E - Power-2.45GHz-2.5GHz

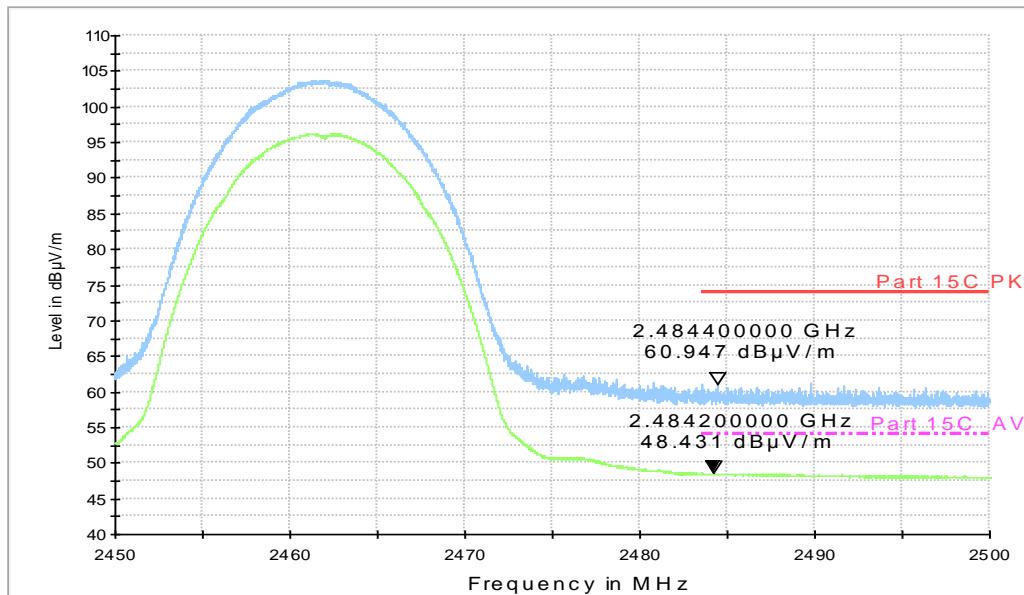


Fig.A.6.2.9 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45GHz - 2.50GHz

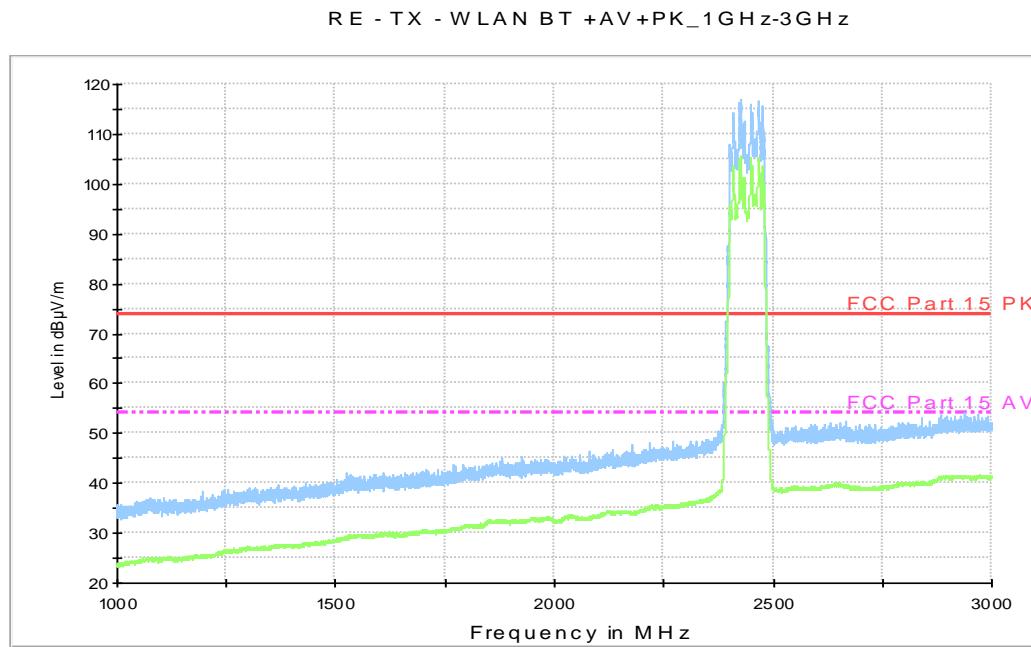


Fig.A.6.2.10 Transmitter Spurious Emission - Radiated (802.11b, Ch11, 1 GHz-3 GHz)

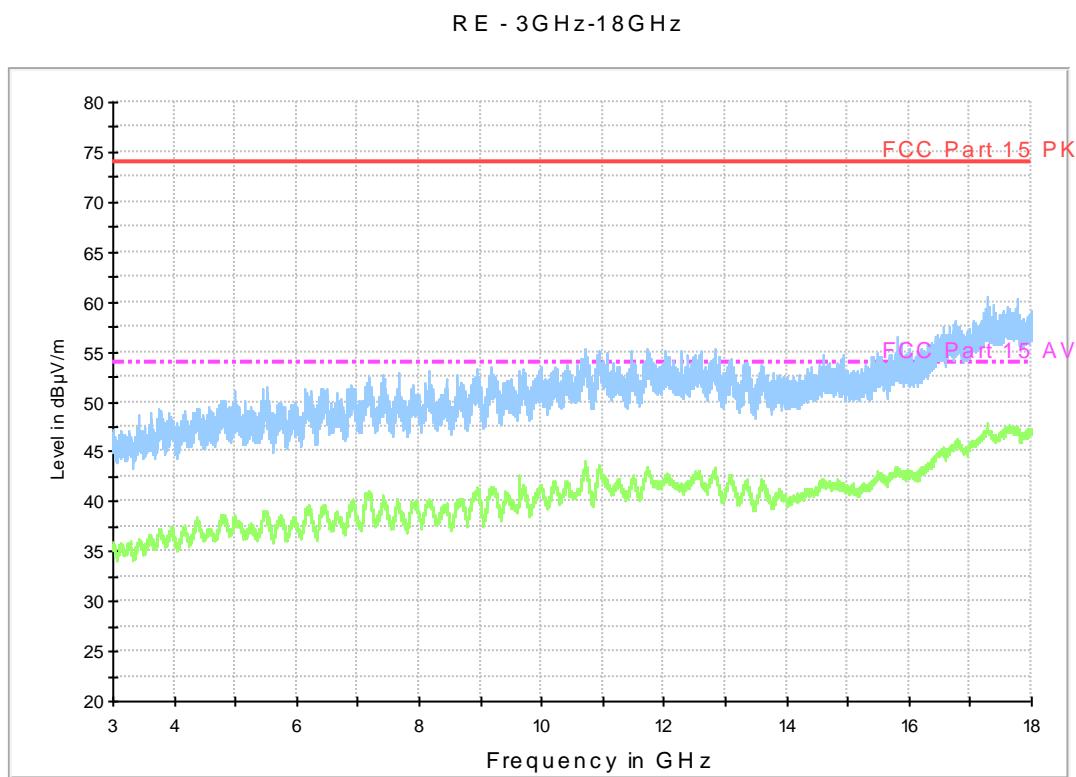


Fig.A.6.2.11 Transmitter Spurious Emission - Radiated (802.11b, Ch11, 3 GHz-18 GHz)

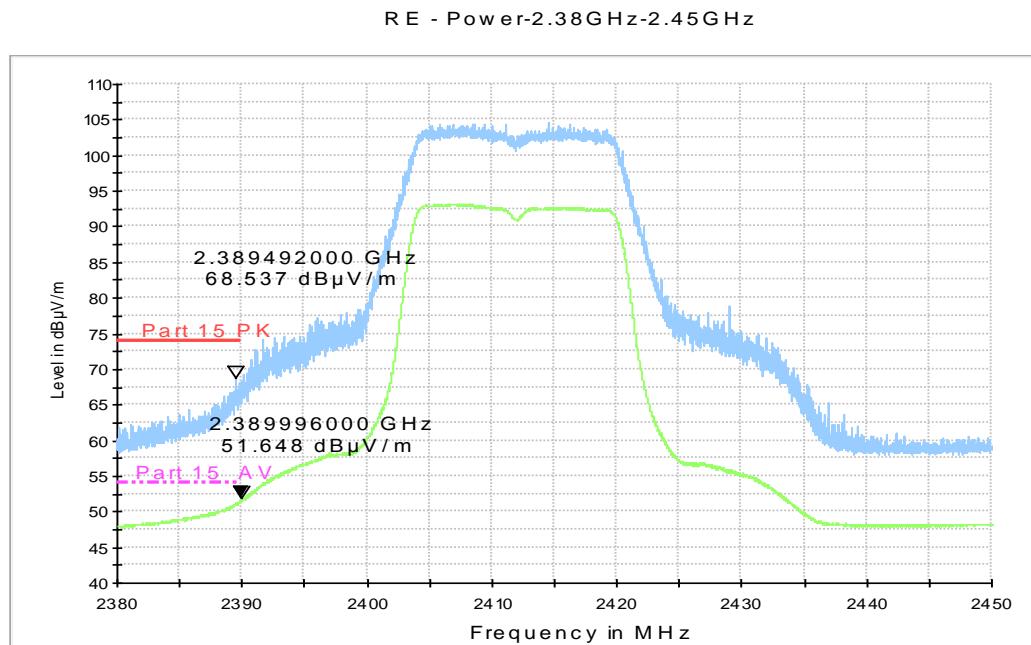


Fig.A.6.2.12 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.38 GHz - 2.45GHz

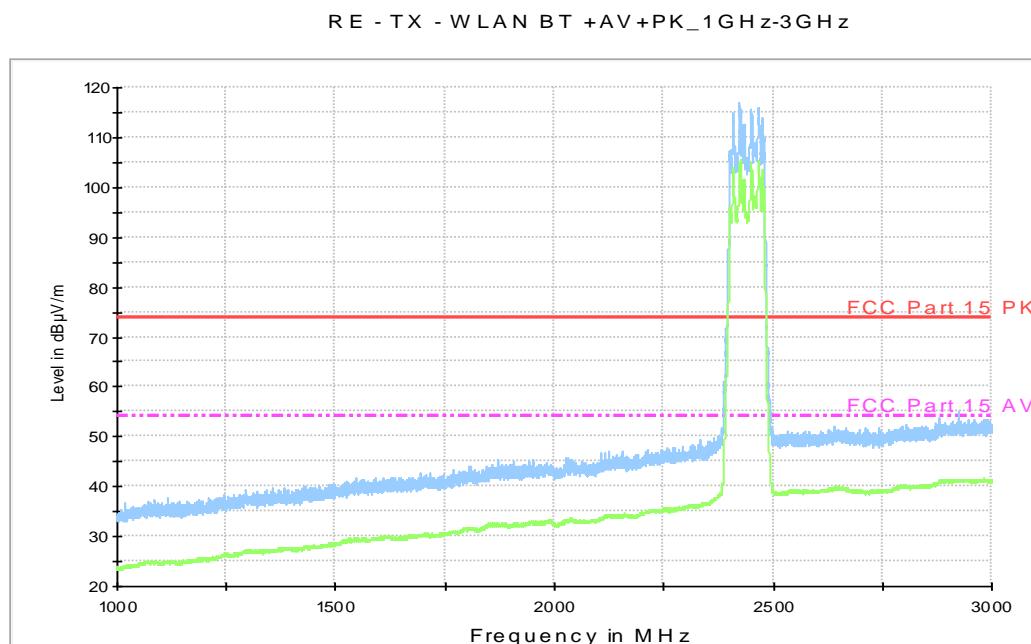


Fig.A.6.2.13 Transmitter Spurious Emission - Radiated (802.11g, Ch1, 1 GHz-3 GHz)

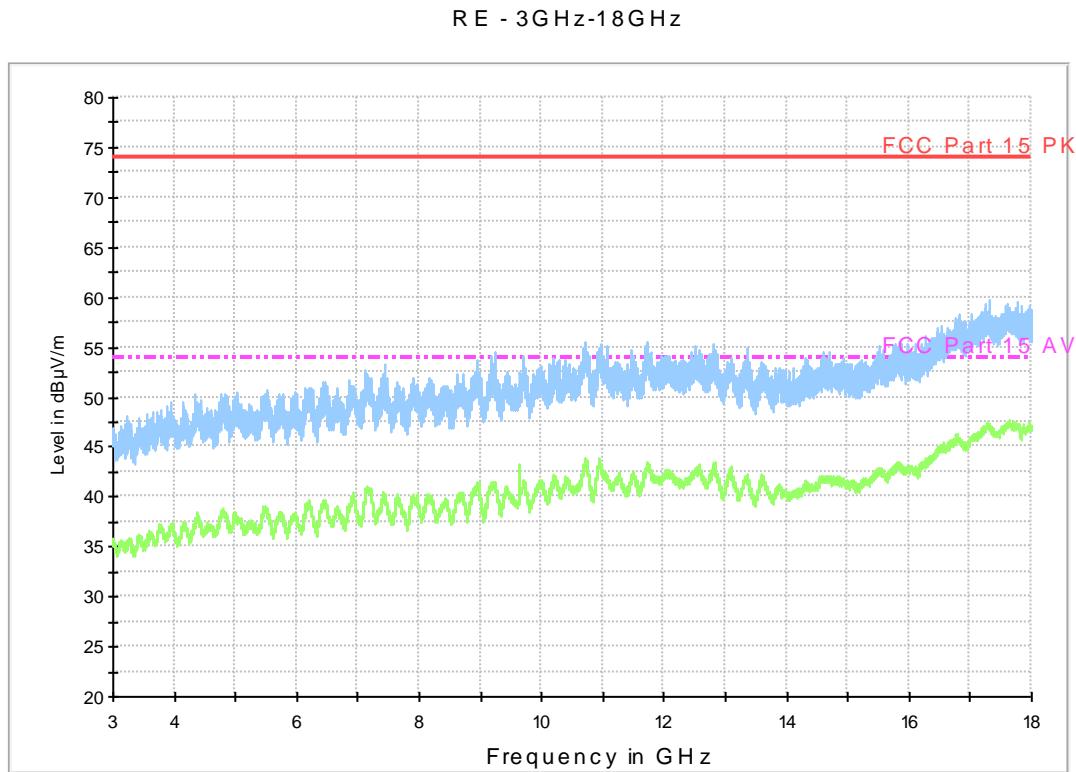


Fig.A.6.2.14 Transmitter Spurious Emission - Radiated (802.11g, Ch1, 3 GHz-18 GHz)

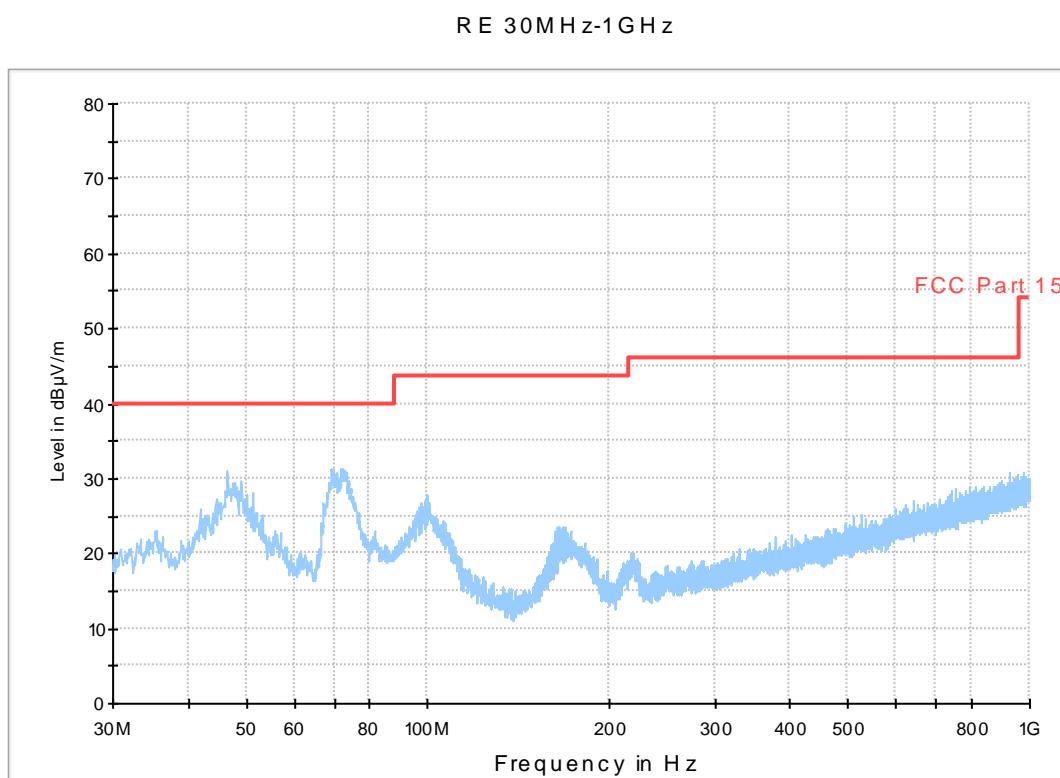


Fig.A.6.2.15 Transmitter Spurious Emission - Radiated (802.11g, Ch6, 30 MHz-1 GHz)

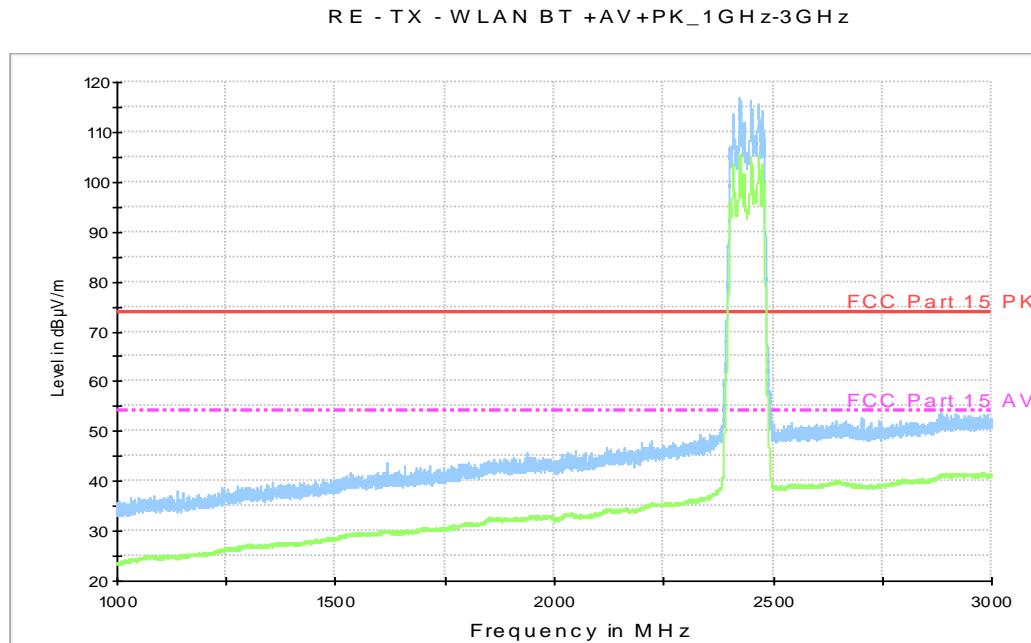


Fig.A.6.2.16 Transmitter Spurious Emission - Radiated (802.11g, Ch6, 1 GHz-3 GHz)

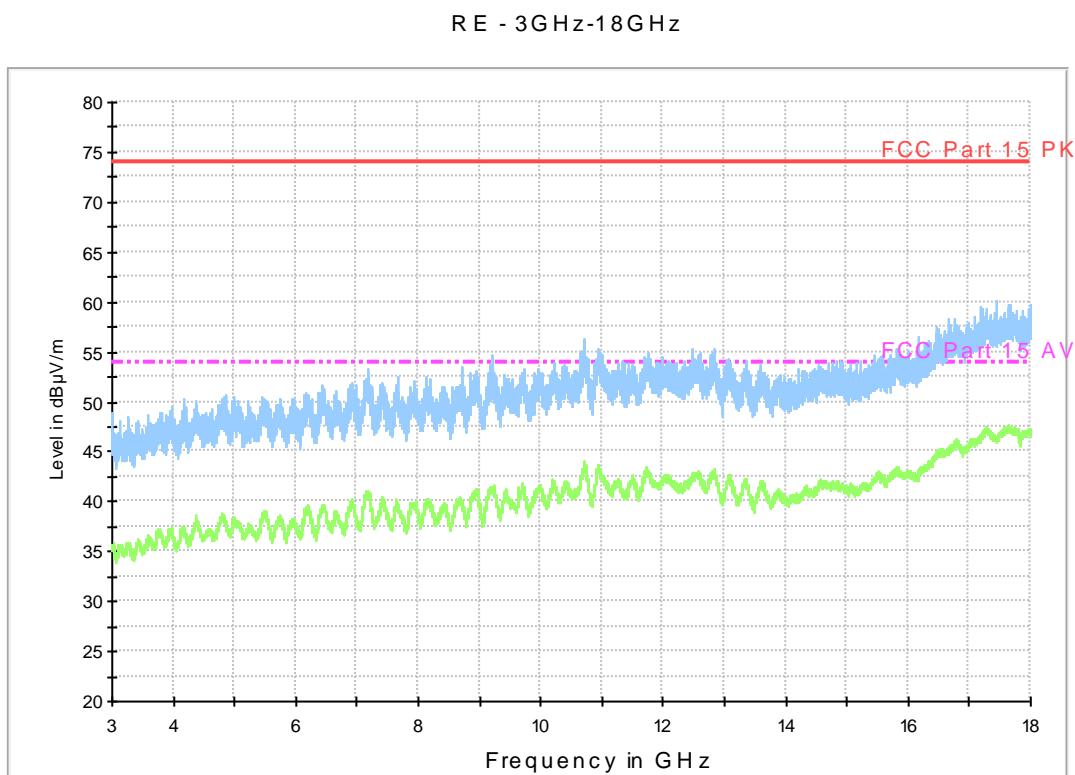


Fig.A.6.2.17 Transmitter Spurious Emission - Radiated (802.11g, Ch6, 3 GHz-18 GHz)

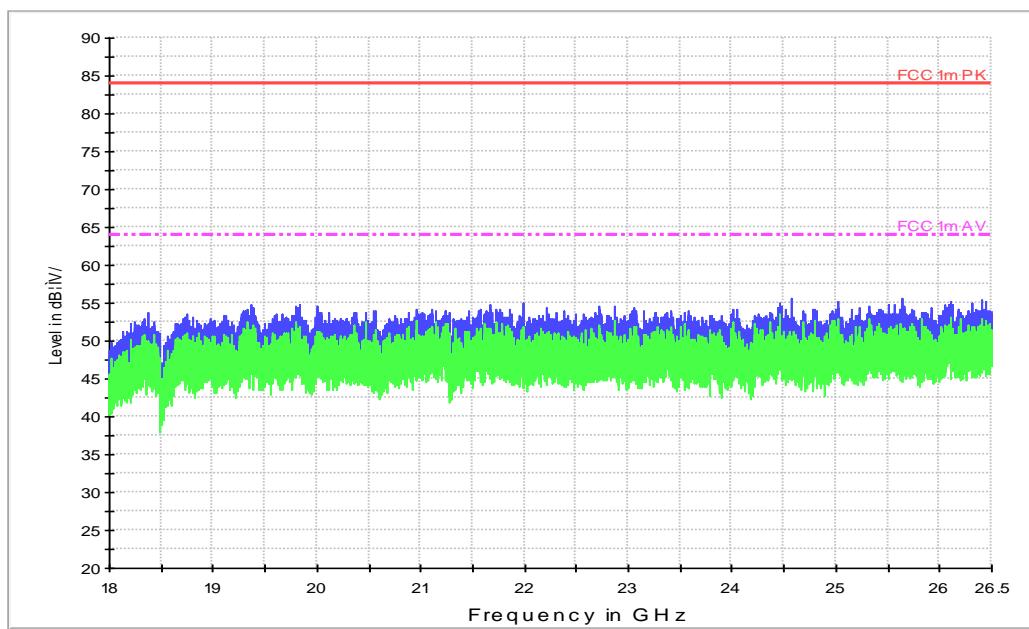


Fig.A.6.2.18 Transmitter Spurious Emission - Radiated (802.11g, Ch6, 18GHz – 26.5GHz)

R E - Power-2.45GHz-2.5GHz

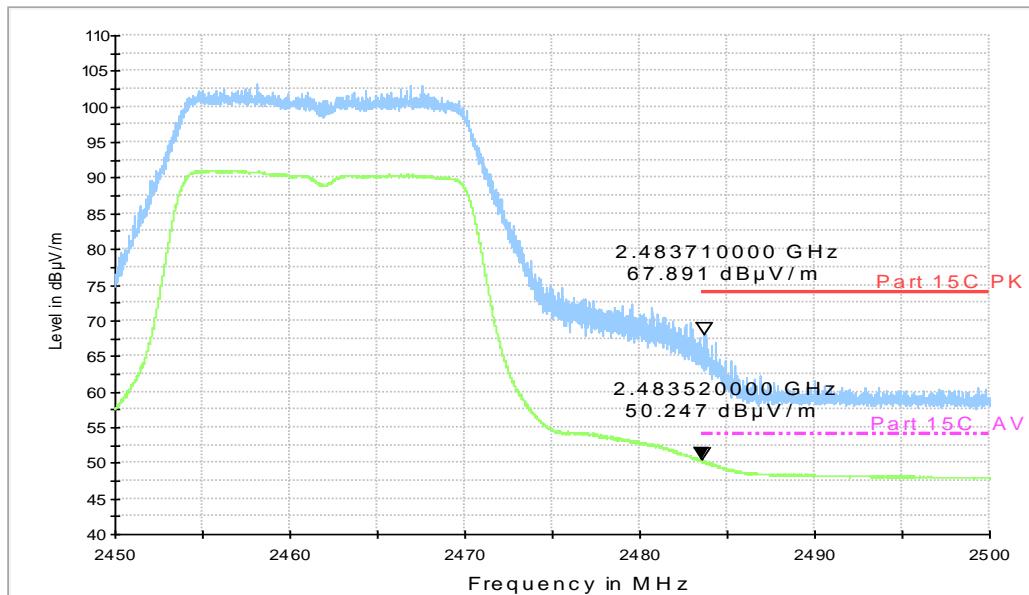


Fig.A.6.2.19 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45GHz - 2.50GHz

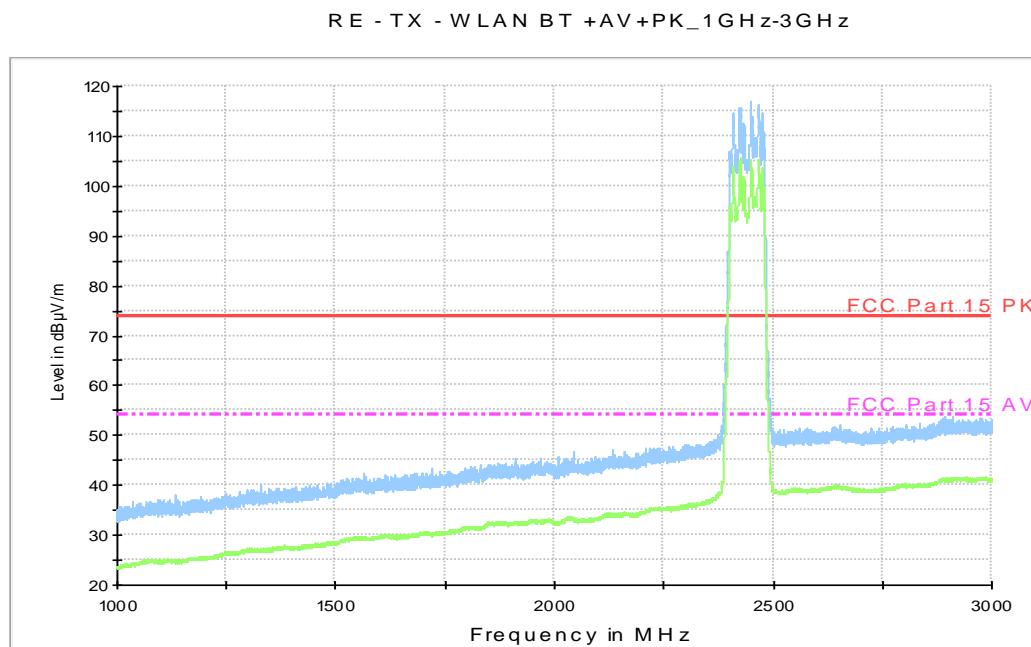


Fig.A.6.2.20 Transmitter Spurious Emission - Radiated (802.11g, Ch11, 1 GHz-3 GHz)

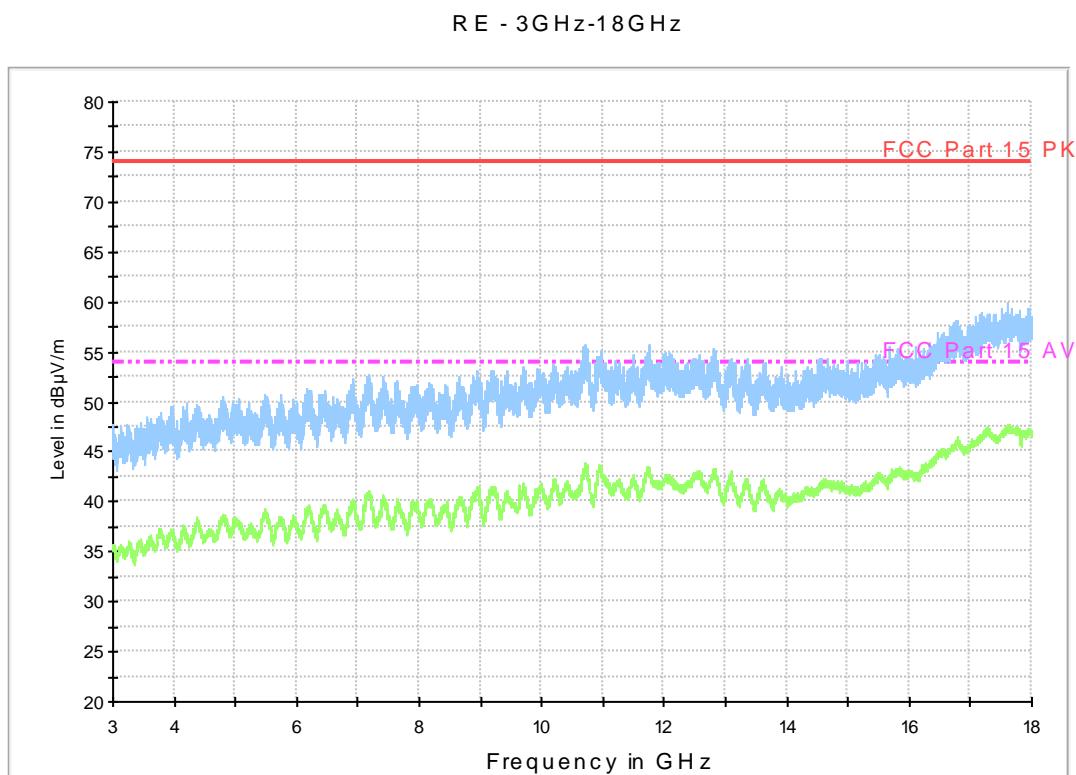


Fig.A.6.2.21 Transmitter Spurious Emission - Radiated (802.11g, Ch11, 3 GHz-18 GHz)

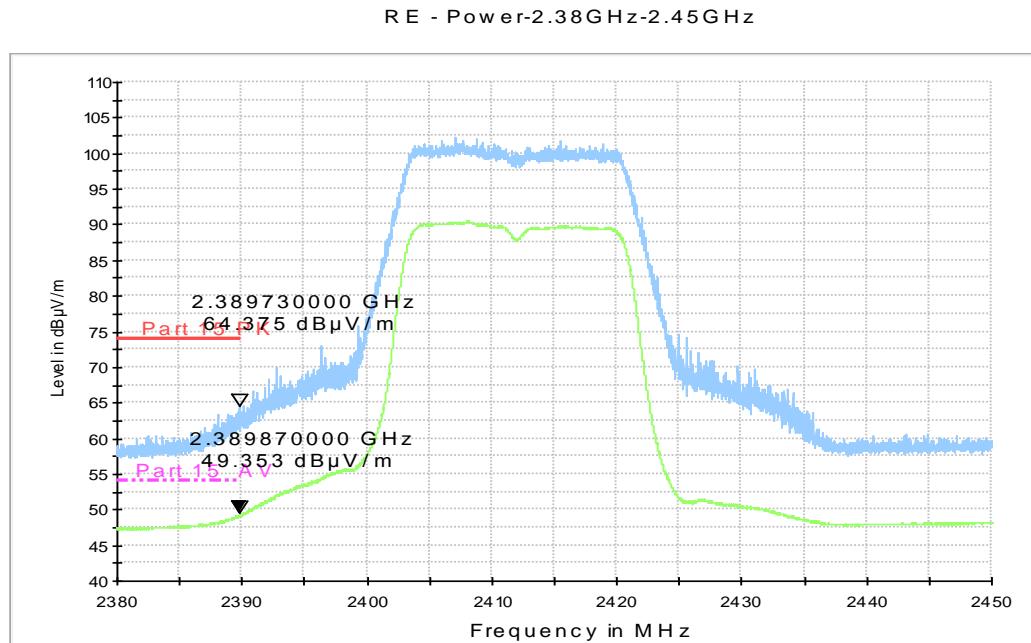


Fig.A.6.2.22 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.38 GHz - 2.45GHz

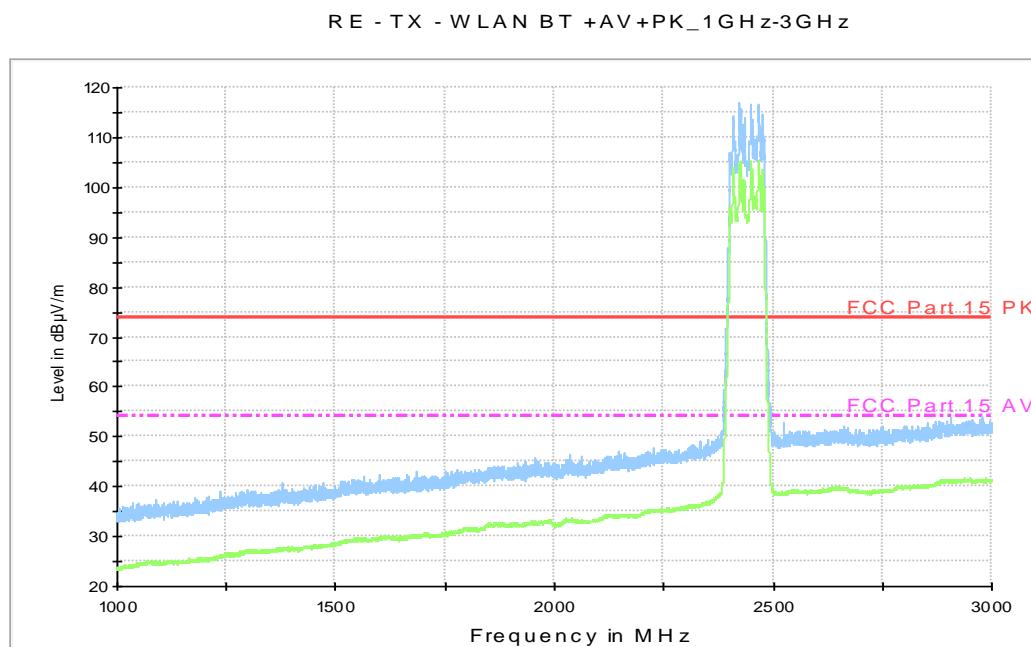


Fig.A.6.2.23 Transmitter Spurious Emission - Radiated (802.11n-HT20, Ch1, 1 GHz-3 GHz)

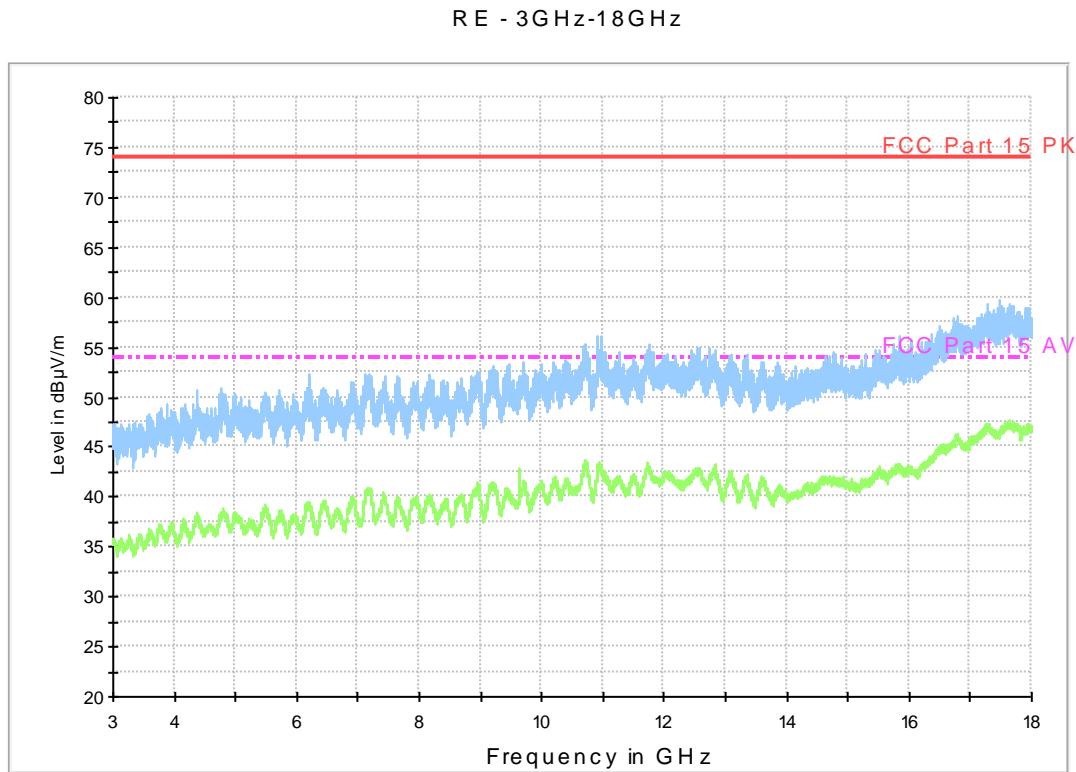


Fig.A.6.2.24 Transmitter Spurious Emission - Radiated (802.11n-HT20, Ch1, 3 GHz-18 GHz)

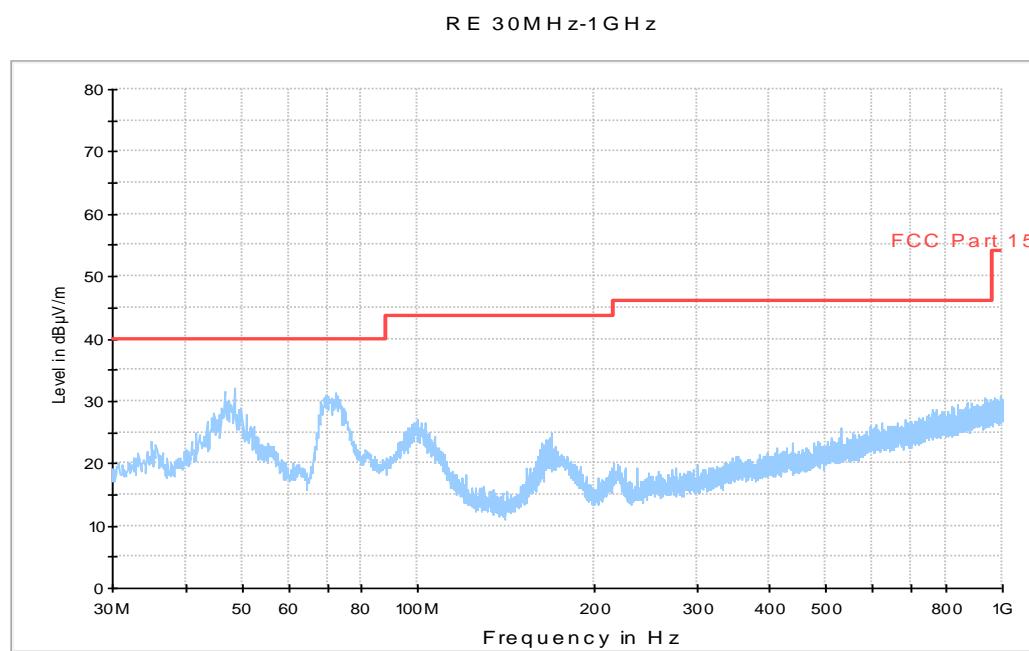


Fig.A.6.2.25 Transmitter Spurious Emission - Radiated (802.11n-HT20, Ch6, 30 MHz-1 GHz)

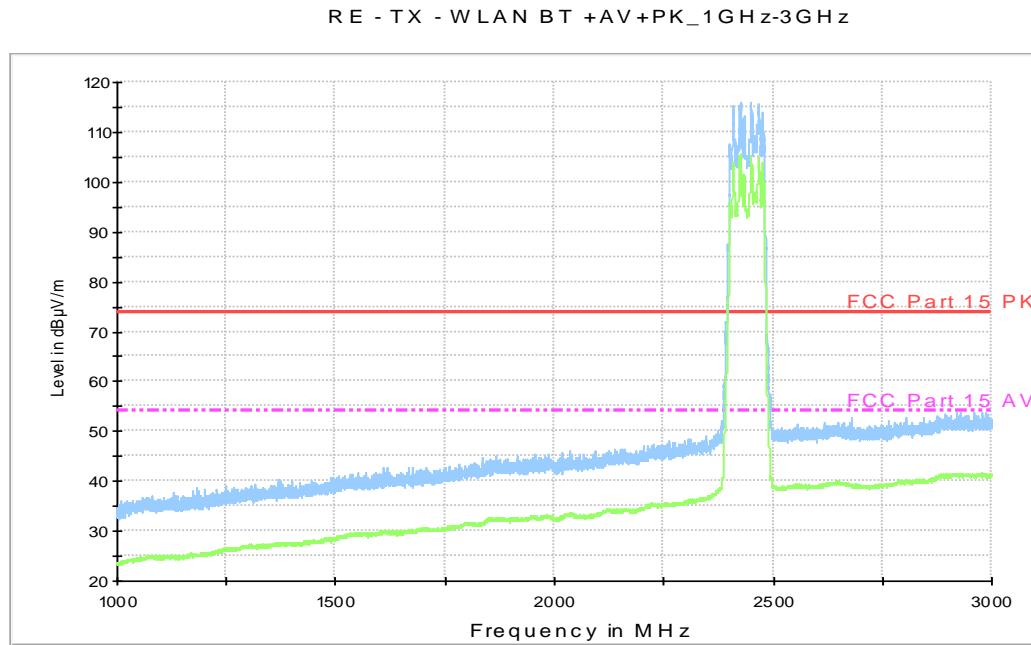


Fig.A.6.2.26 Transmitter Spurious Emission - Radiated (802.11n-HT20, Ch6, 1 GHz-3 GHz)

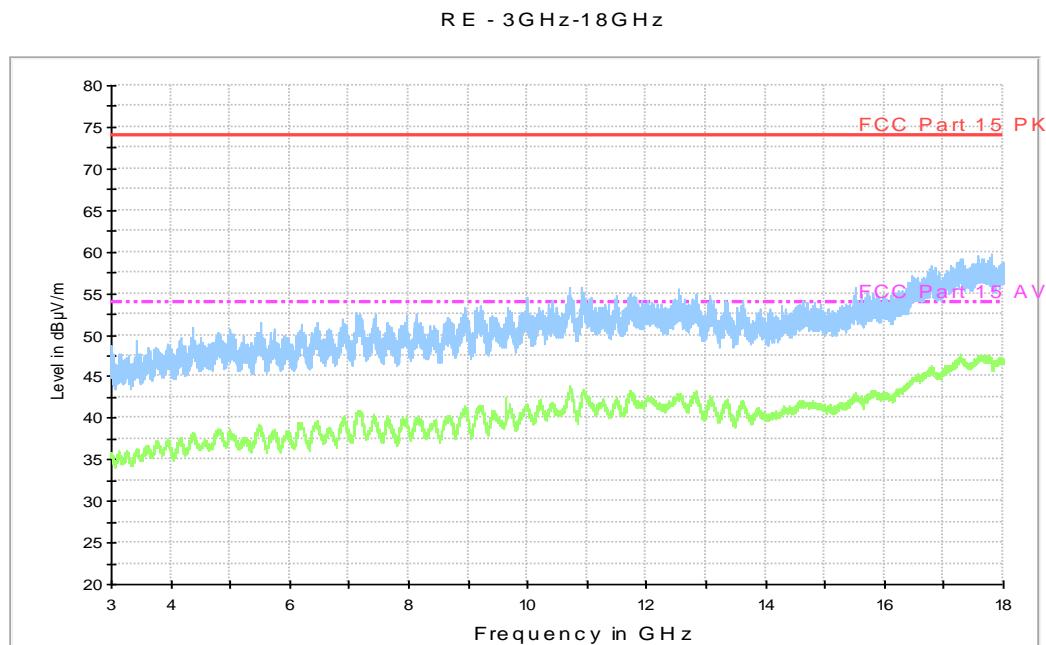


Fig.A.6.2.27 Transmitter Spurious Emission - Radiated (802.11n-HT20, Ch6, 3 GHz-18 GHz)

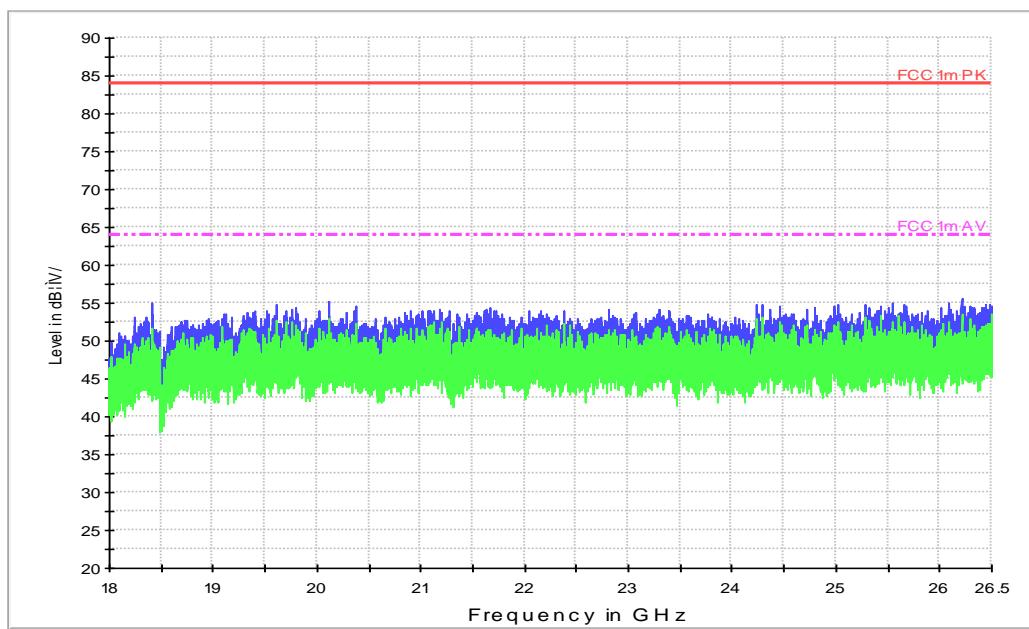


Fig.A.6.2.28 Transmitter Spurious Emission - Radiated (802.11n-HT20, Ch6, 18GHz – 26.5GHz)

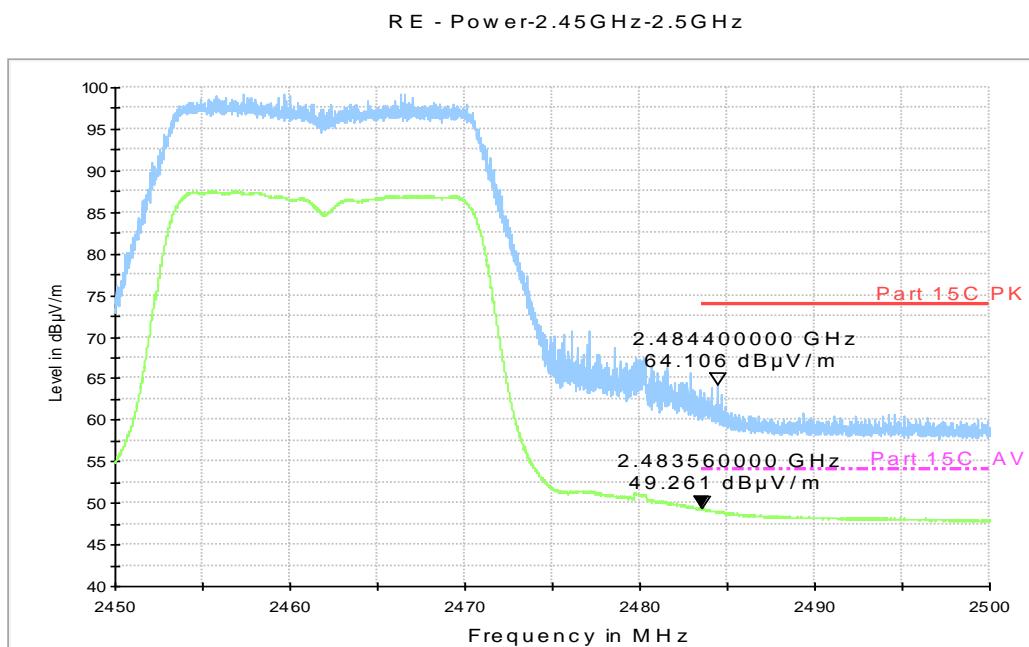


Fig.A.6.2.29 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

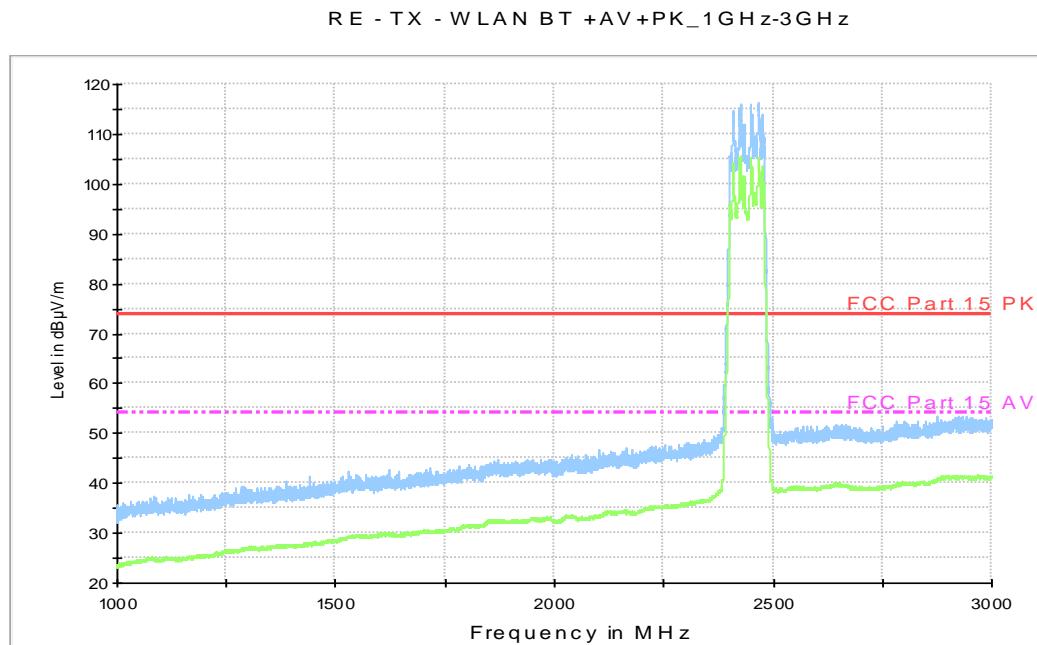


Fig.A.6.2.30 Transmitter Spurious Emission - Radiated (802.11n-HT20, Ch11, 1 GHz-3 GHz)

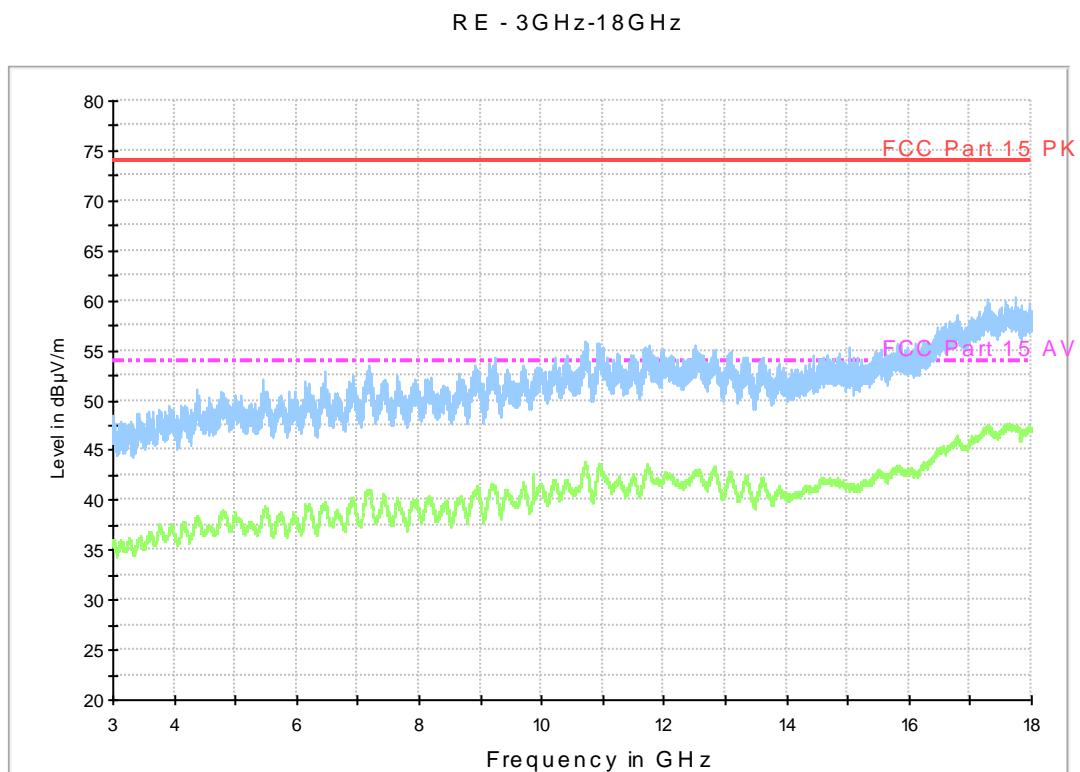


Fig.A.6.2.31 Transmitter Spurious Emission - Radiated (802.11n-HT20, Ch11, 3 GHz-18 GHz)

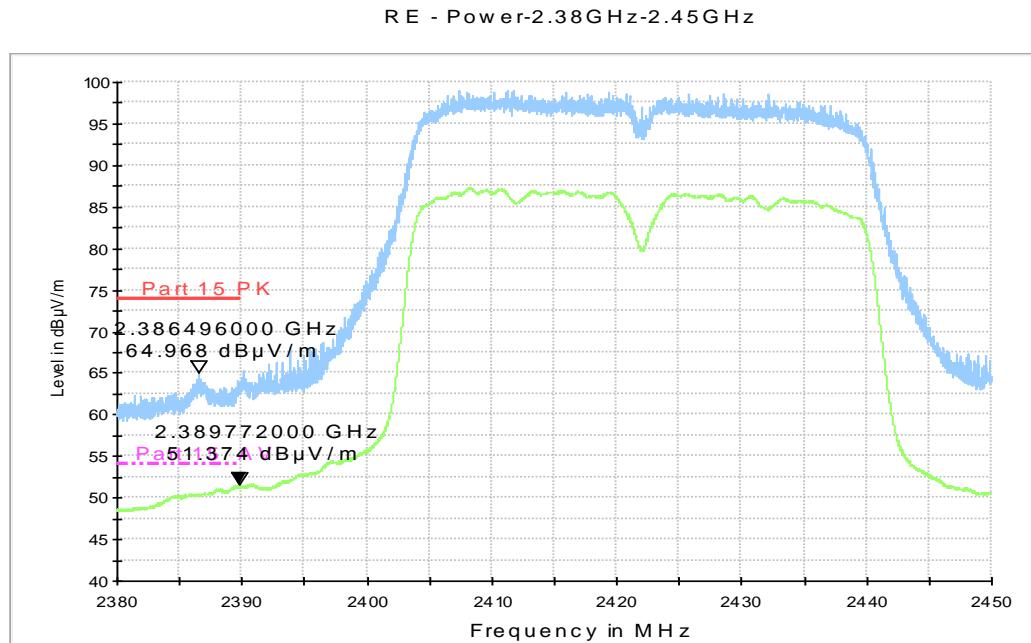


Fig.A.6.2.32 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.38 GHz - 2.45GHz

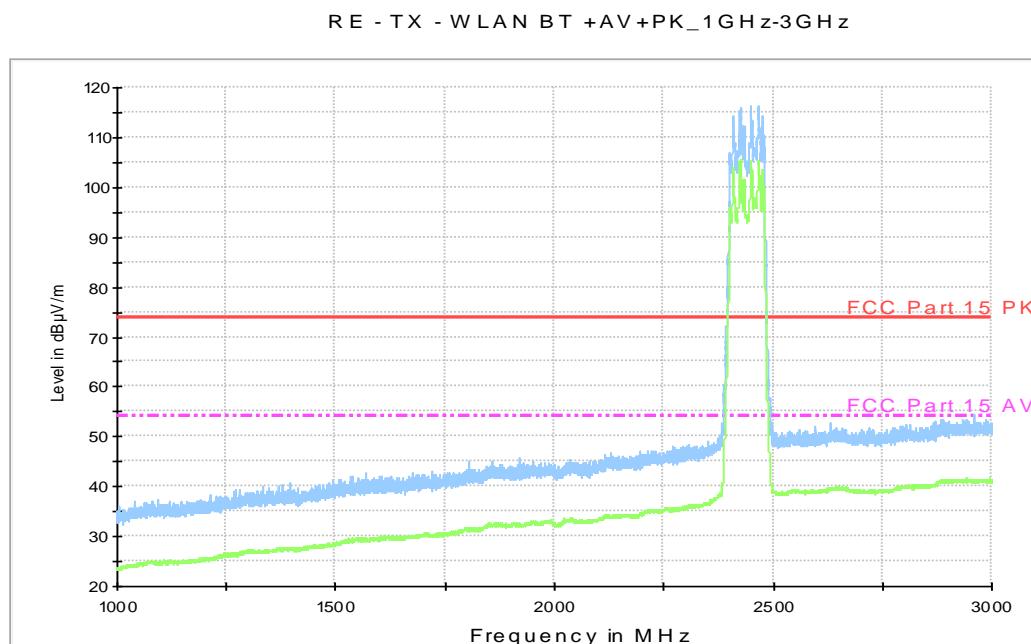


Fig.A.6.2.33 Transmitter Spurious Emission - Radiated (802.11n-HT40, ch3, 1 GHz-3 GHz)

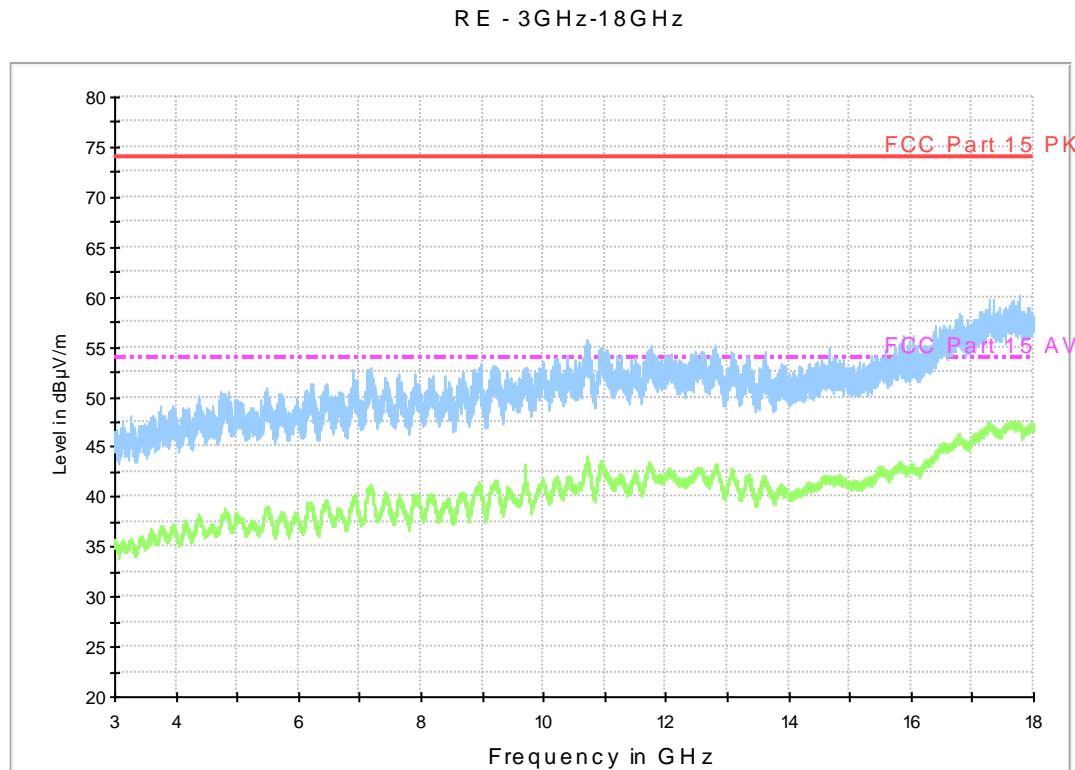


Fig.A.6.2.34 Transmitter Spurious Emission - Radiated (802.11n-HT40, ch3, 3 GHz-18 GHz)

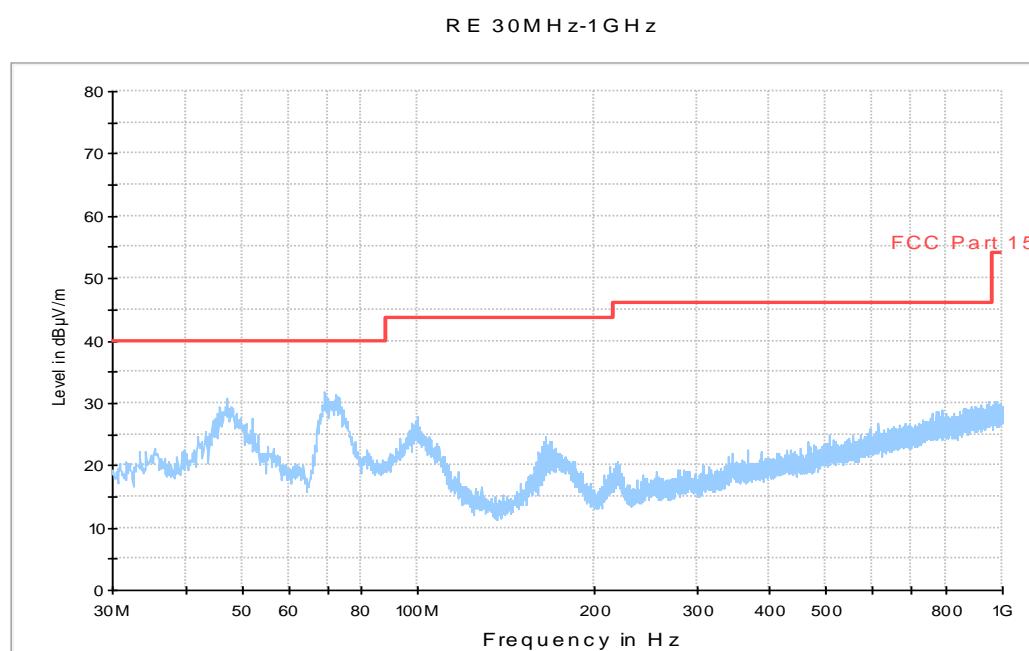


Fig.A.6.2.35 Transmitter Spurious Emission - Radiated (802.11n-HT40, Ch6, 30 MHz-1 GHz)

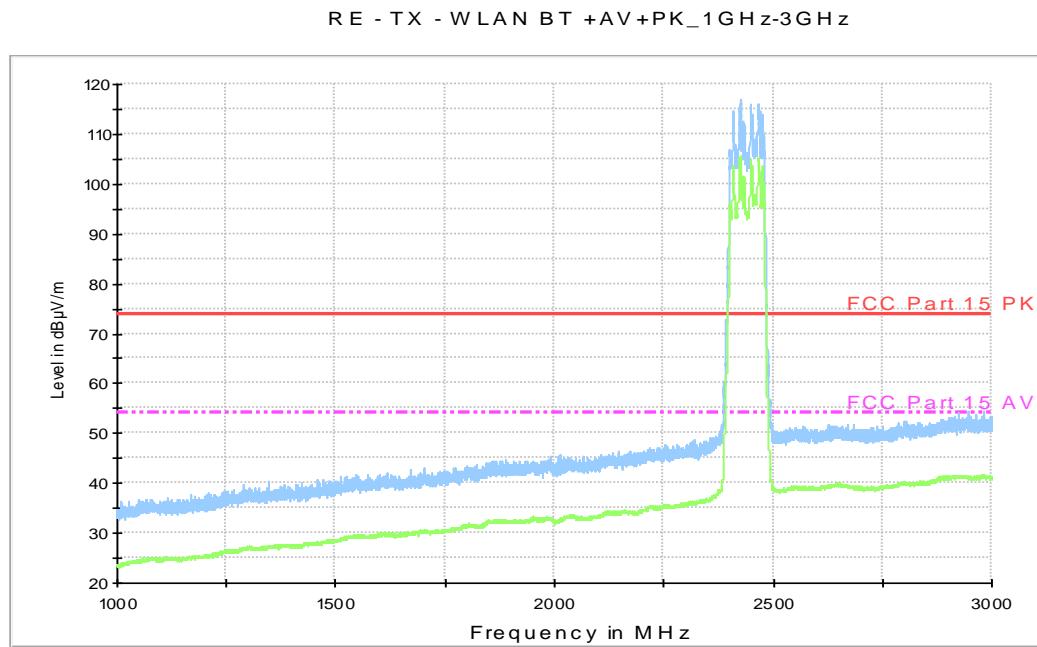


Fig.A.6.2.36 Transmitter Spurious Emission - Radiated (802.11n-HT40, Ch6, 1 GHz-3 GHz)

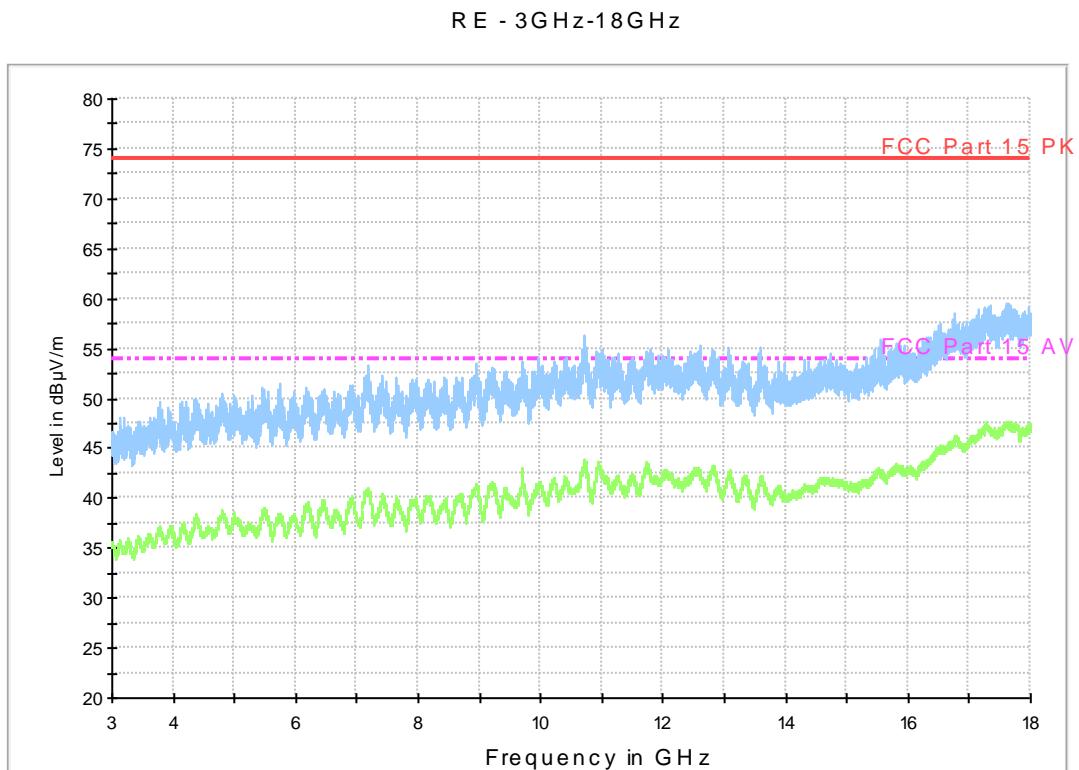


Fig.A.6.2.37 Transmitter Spurious Emission - Radiated (802.11n-HT40, Ch6, 3 GHz-18 GHz)

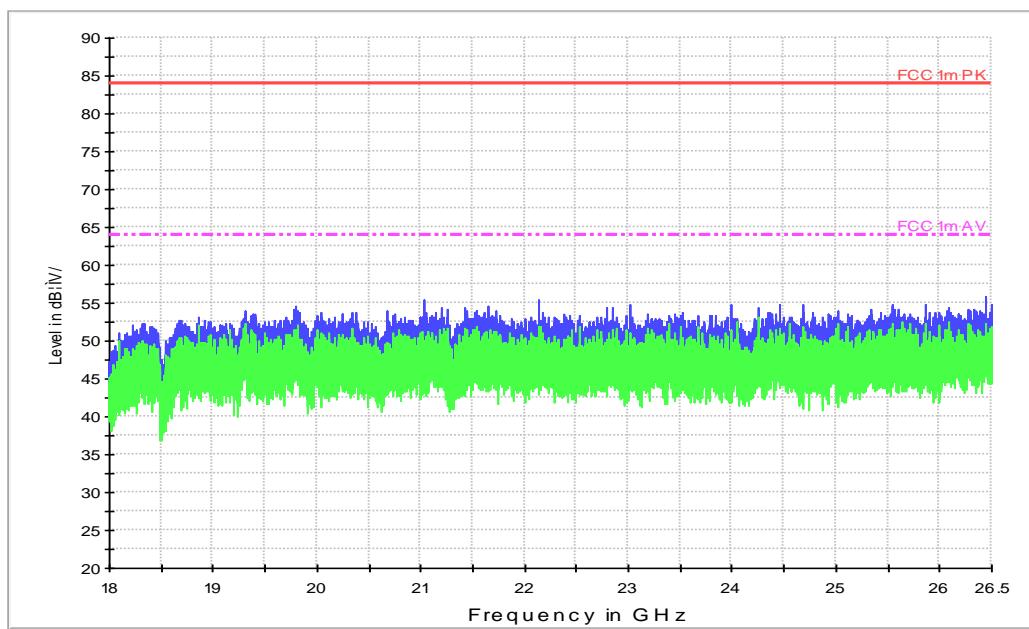


Fig.A.6.2.38 Transmitter Spurious Emission - Radiated (802.11n-HT40, Ch6, 18GHz – 26.5GHz)

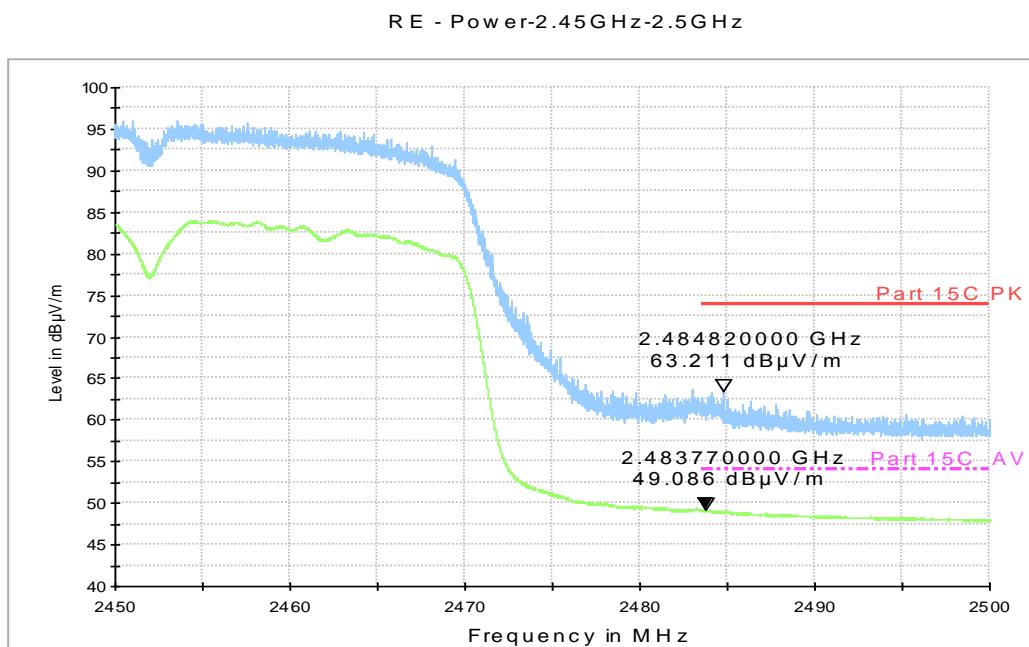


Fig.A.6.2.39 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz

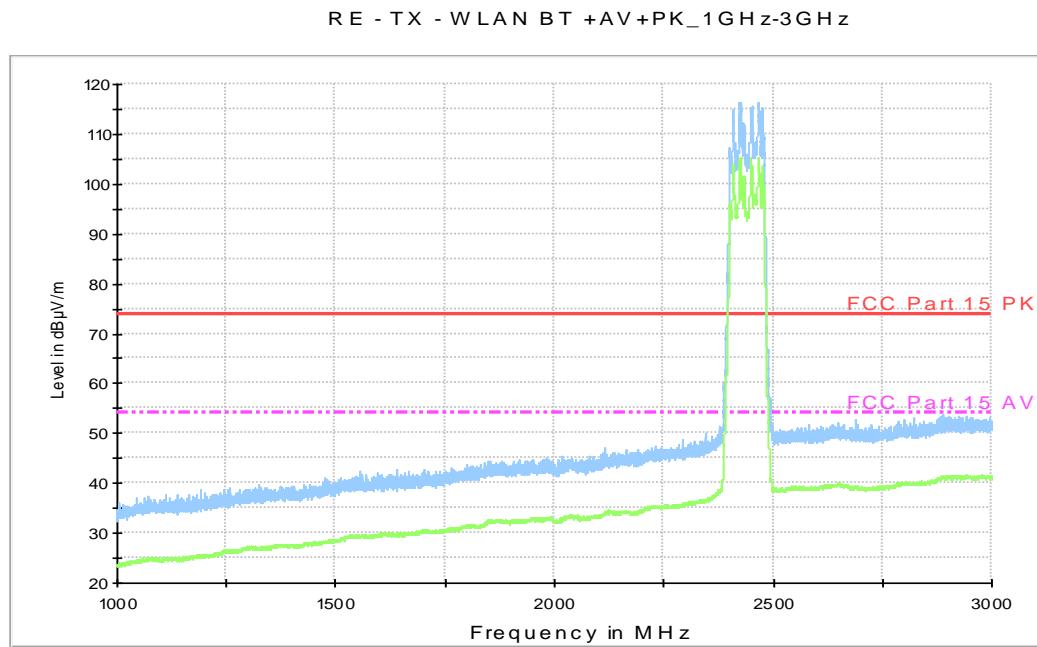


Fig.A.6.2.40 Transmitter Spurious Emission - Radiated (802.11n-HT40, ch9, 1 GHz-3 GHz)

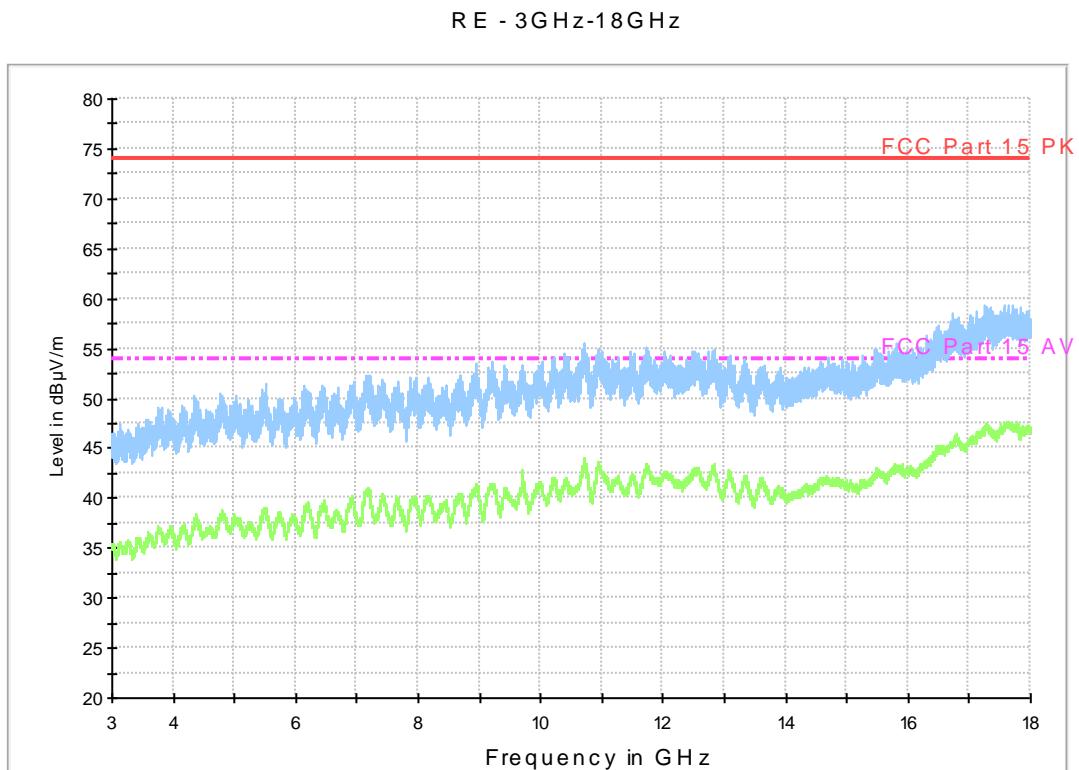


Fig.A.6.2.41 Transmitter Spurious Emission - Radiated (802.11n-HT40, ch9, 3 GHz-18 GHz)

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.7.2	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.

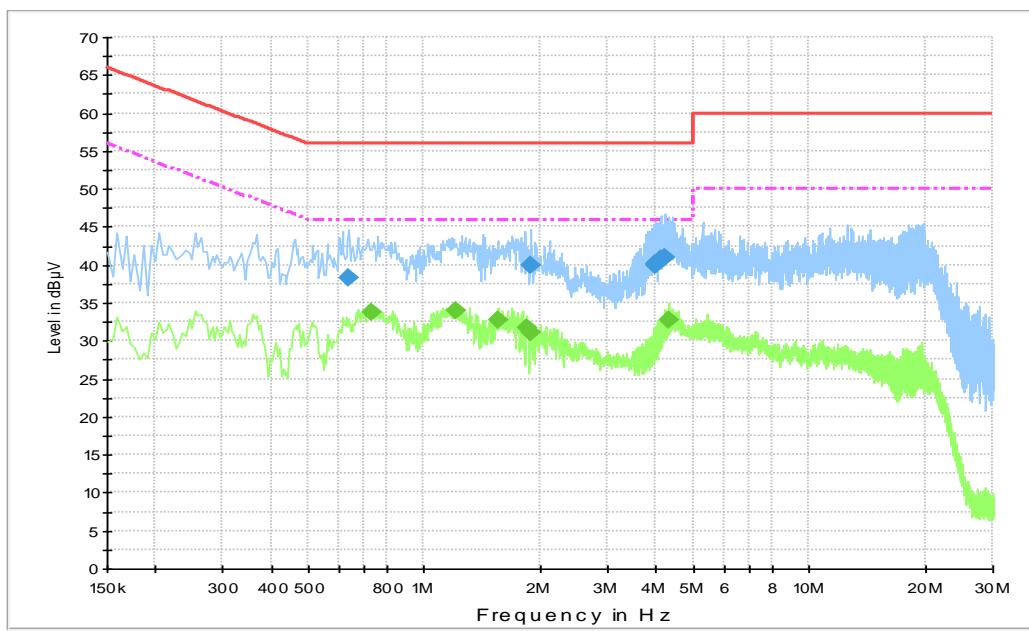
WLAN (Average Limit)

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.7.2	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:


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

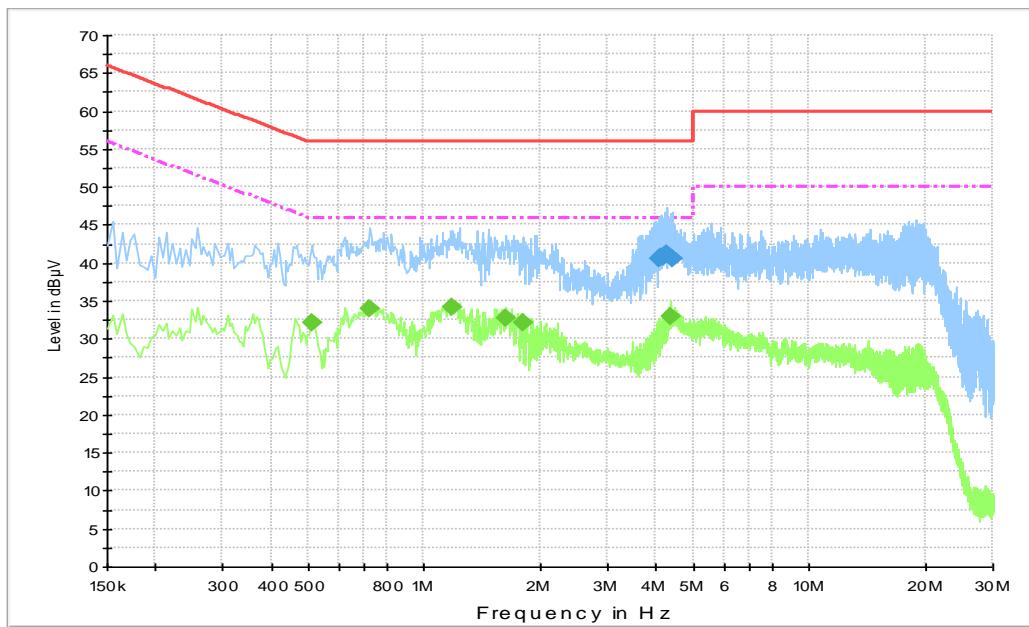
Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.636000	38.2	GND	L1	10.3	17.8	56.0
1.891500	39.8	GND	L1	10.4	16.2	56.0
3.966000	40.0	GND	L1	10.4	16.0	56.0
3.997500	40.2	GND	L1	10.4	15.8	56.0
4.105500	40.7	GND	L1	10.5	15.3	56.0
4.204500	41.0	GND	L1	10.5	15.0	56.0

Final Result 2

Frequency (MHz)	Average (dB μ V)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.726000	33.8	GND	L1	10.3	12.2	46.0
1.207500	33.9	GND	L1	10.3	12.1	46.0
1.549500	32.7	GND	L1	10.3	13.3	46.0
1.842000	31.6	GND	L1	10.4	14.4	46.0
1.891500	31.0	GND	L1	10.4	15.0	46.0
4.299000	32.6	GND	L1	10.5	13.4	46.0


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)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
4.056000	40.5	GND	L1	10.5	15.5	56.0
4.119000	40.8	GND	L1	10.5	15.2	56.0
4.155000	40.7	GND	L1	10.5	15.3	56.0
4.204500	41.0	GND	L1	10.5	15.0	56.0
4.272000	41.2	GND	L1	10.5	14.8	56.0
4.398000	40.6	GND	L1	10.5	15.4	56.0

Final Result 2

Frequency (MHz)	Average (dB μ V)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.510000	32.2	GND	L1	10.3	13.8	46.0
0.721500	34.0	GND	L1	10.3	12.0	46.0
1.185000	34.1	GND	L1	10.3	11.9	46.0
1.630500	32.8	GND	L1	10.3	13.2	46.0
1.801500	32.1	GND	L1	10.4	13.9	46.0
4.389000	33.0	GND	L1	10.5	13.0	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).*

2016-09-29 through 2017-09-30

Effective Dates



For the National Voluntary Laboratory Accreditation Program

END OF REPORT