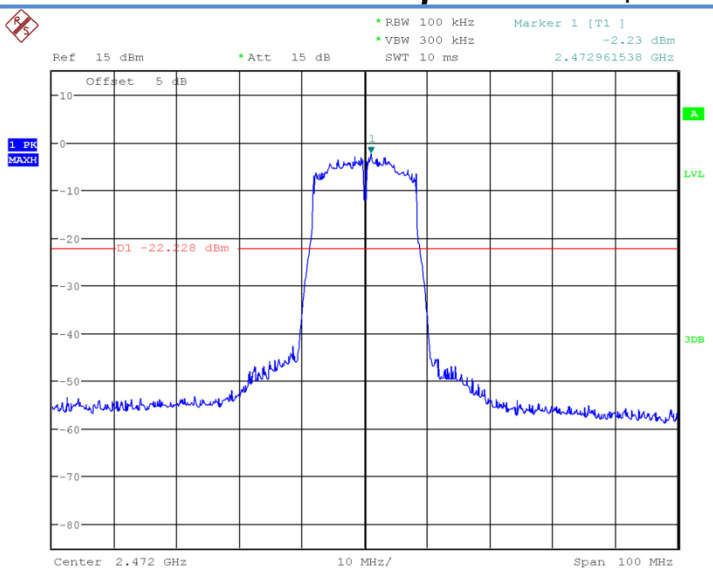


Fig.75 Conducted Spurious Emission (802.11g, Ch13)

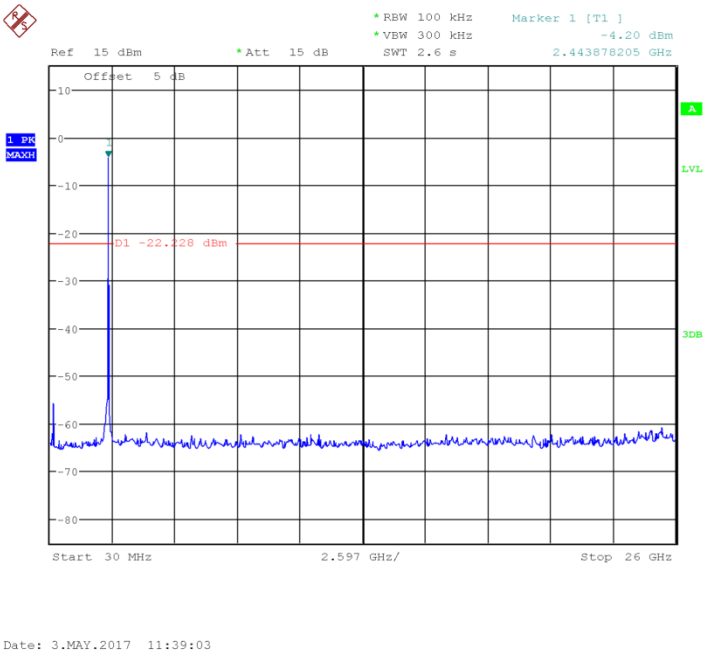


Fig.76 Conducted Spurious Emission (802.11g, Ch13, 30MHz~26GHz)

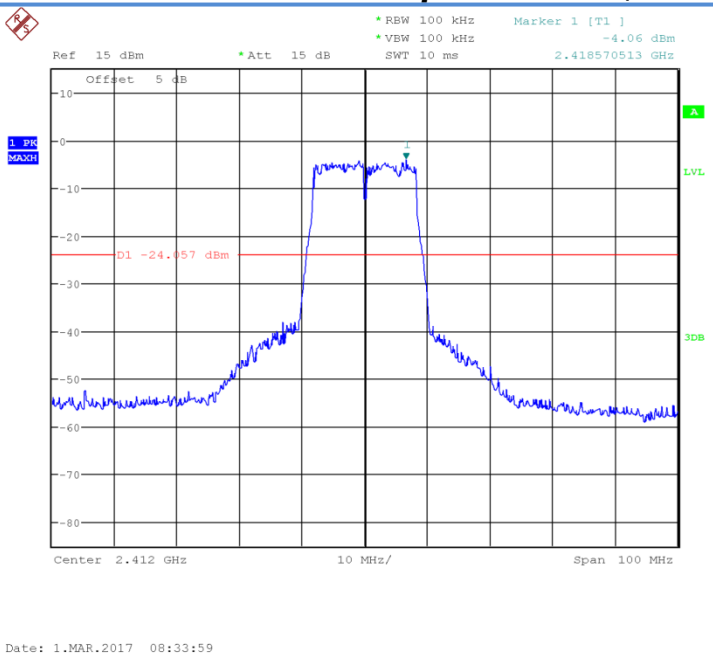


Fig.77 Conducted Spurious Emission (802.11n-20MHz, Ch1)

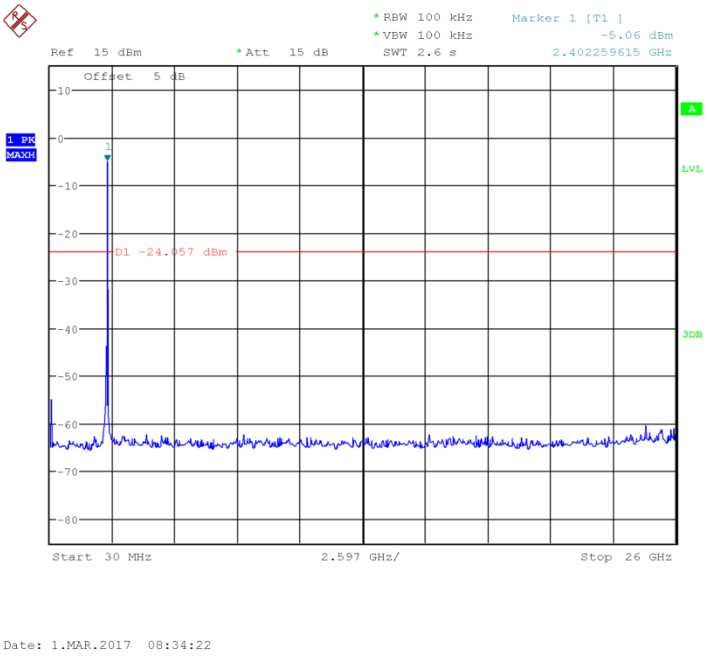


Fig.78 Conducted Spurious Emission (802.11n-20MHz, Ch1, 30MHz~26GHz)

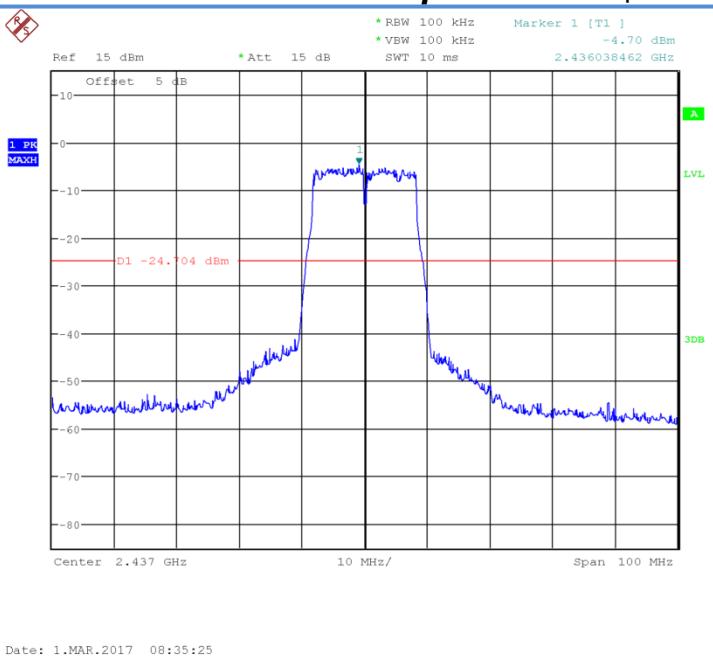


Fig.79 Conducted Spurious Emission (802.11n-20MHz, Ch6)

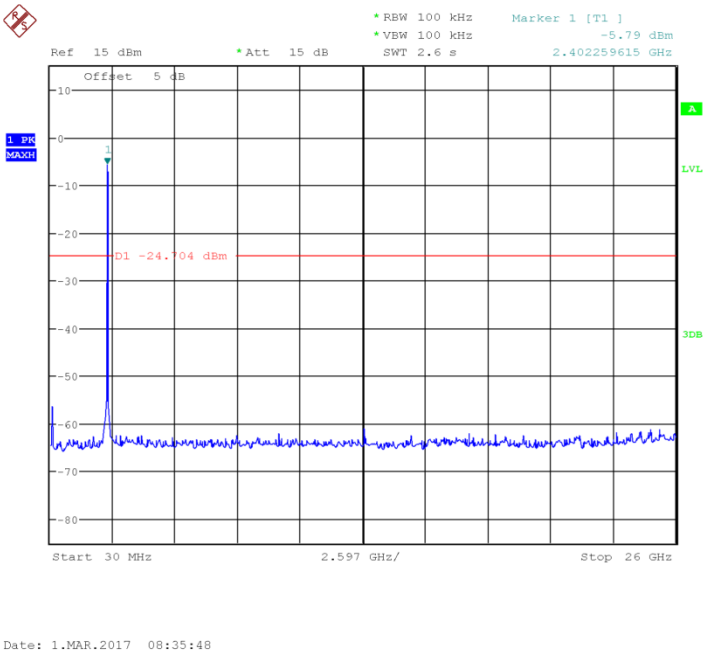


Fig.80 Conducted Spurious Emission (802.11n-20MHz, Ch6, 30MHz~26GHz)

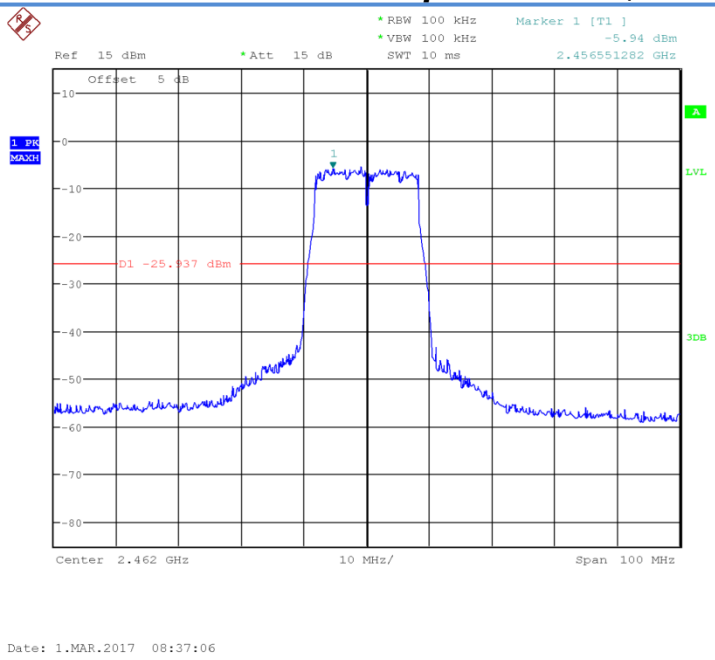


Fig.81 Conducted Spurious Emission (802.11n-20MHz, Ch11)

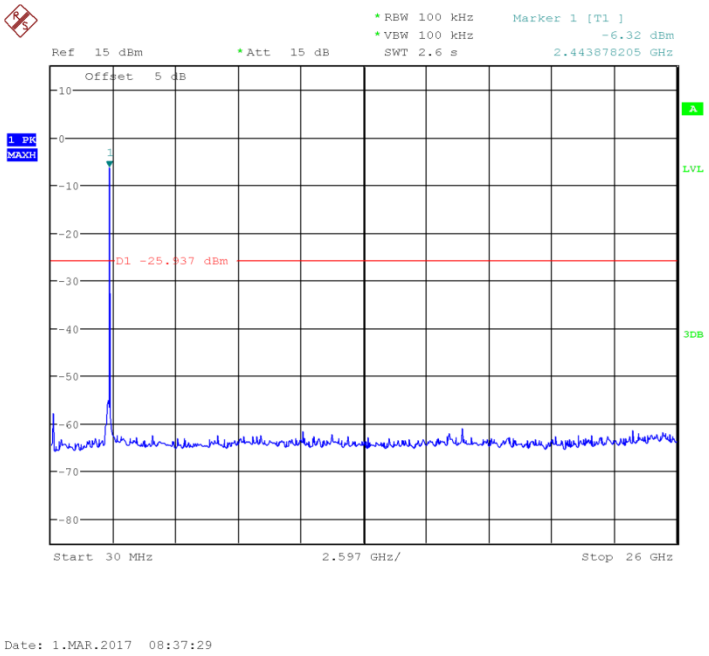


Fig.82 Conducted Spurious Emission (802.11n-20MHz, Ch11, 30MHz~26GHz)

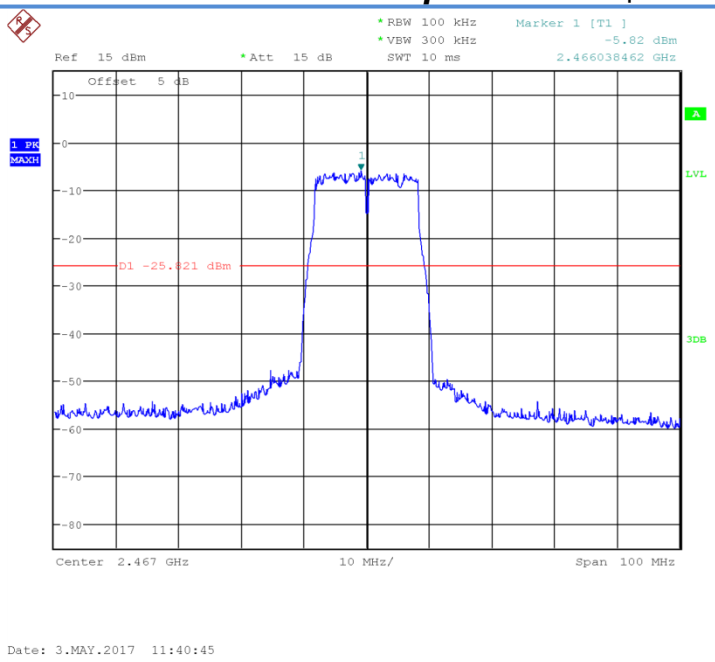


Fig.83 Conducted Spurious Emission (802.11n-20MHz, Ch12)

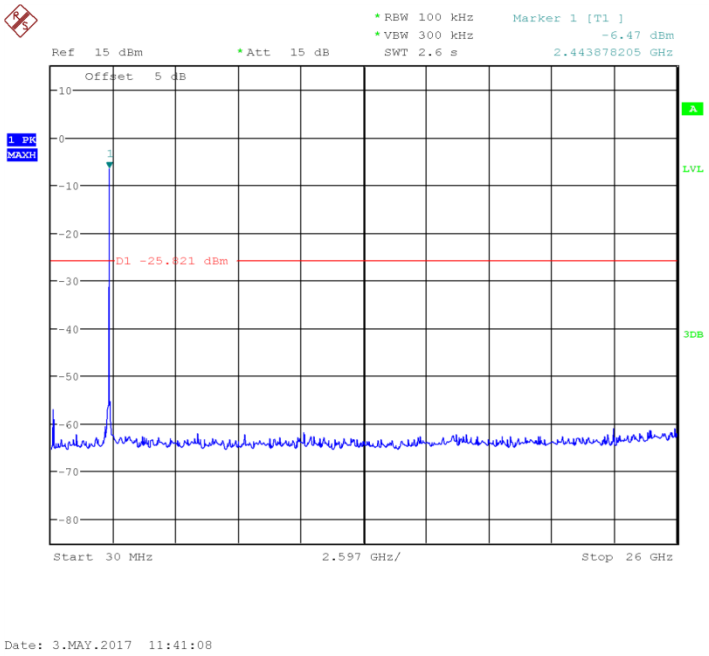


Fig.84 Conducted Spurious Emission (802.11n-20MHz, Ch12, 30MHz~26GHz)

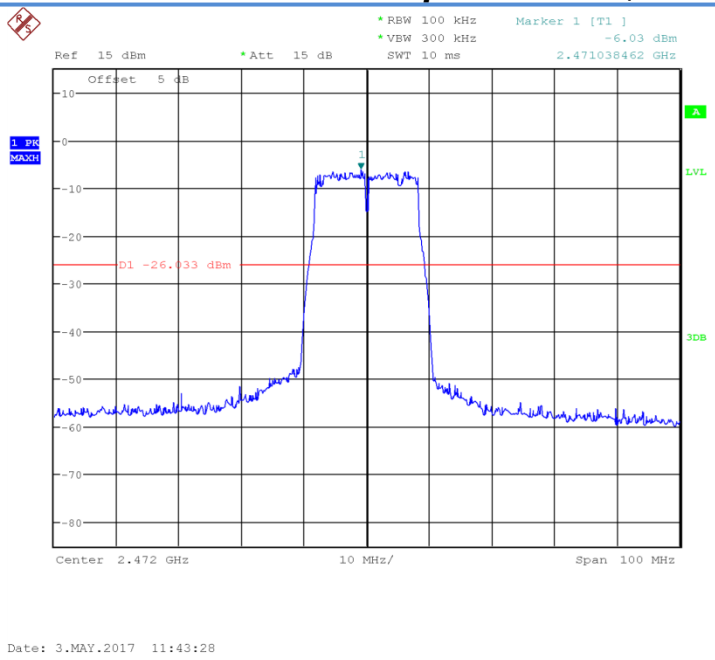


Fig.85 Conducted Spurious Emission (802.11n-20MHz, Ch13)

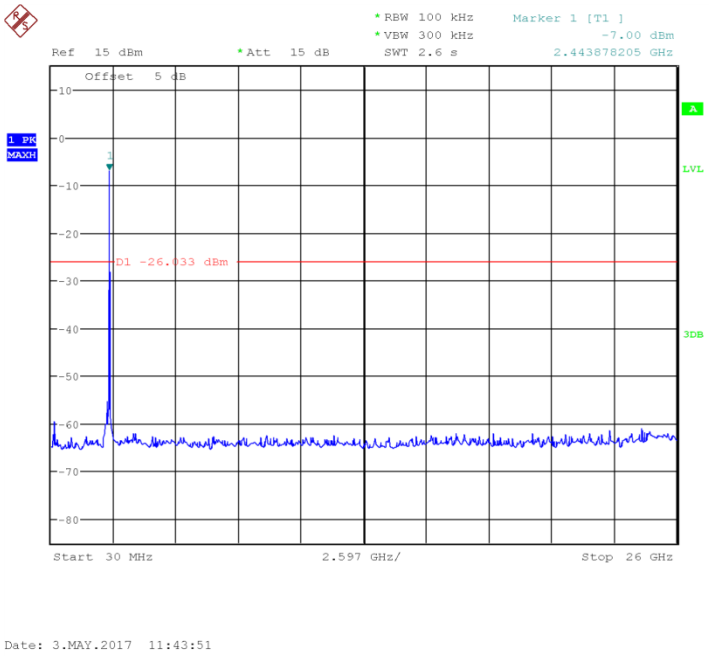


Fig.86 Conducted Spurious Emission (802.11n-20MHz, Ch13, 30MHz~26GHz)

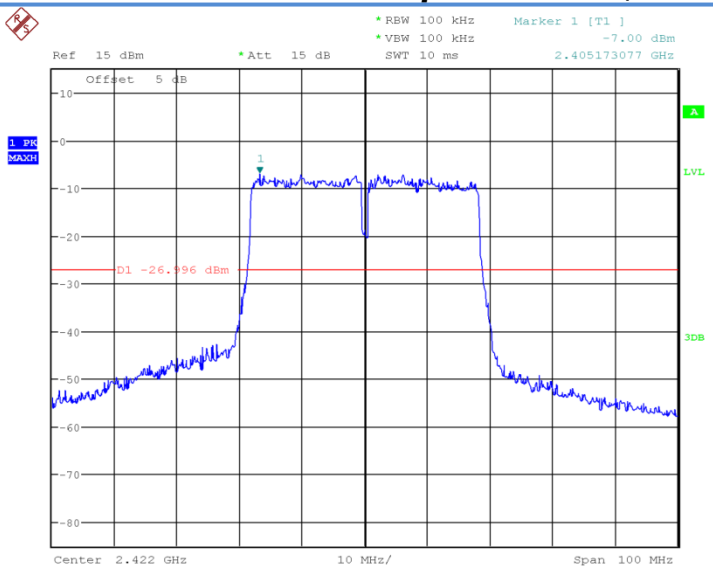


Fig.87 Conducted Spurious Emission (802.11n-40MHz, Ch3)

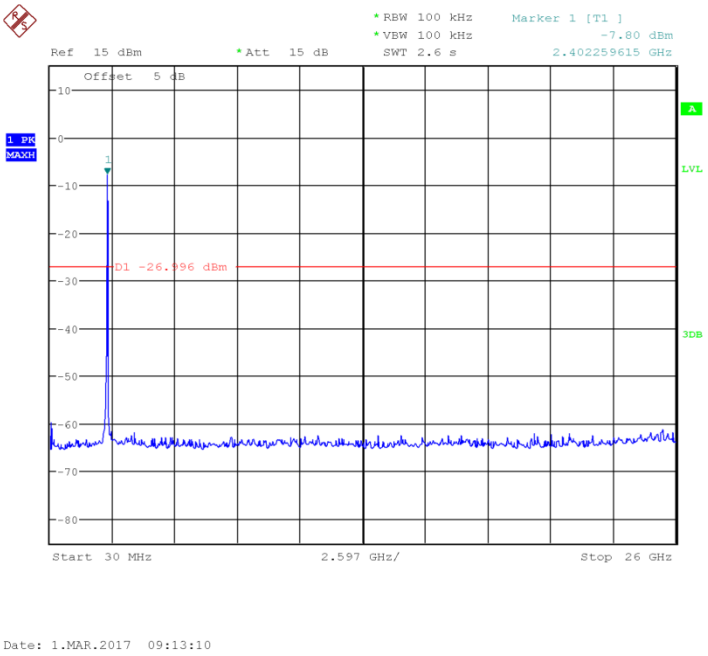


Fig.88 Conducted Spurious Emission (802.11n-40MHz, Ch3, 30MHz~26GHz)

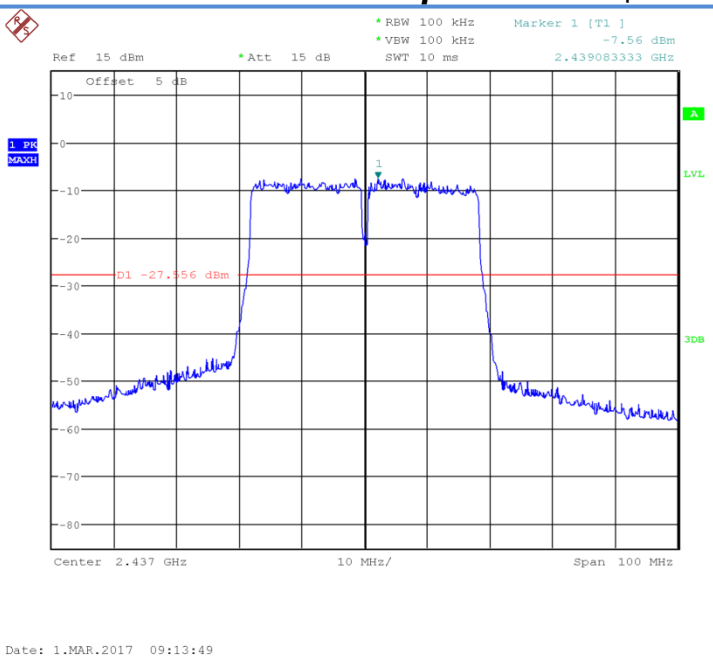


Fig.89 Conducted Spurious Emission (802.11n-40MHz, Ch6)

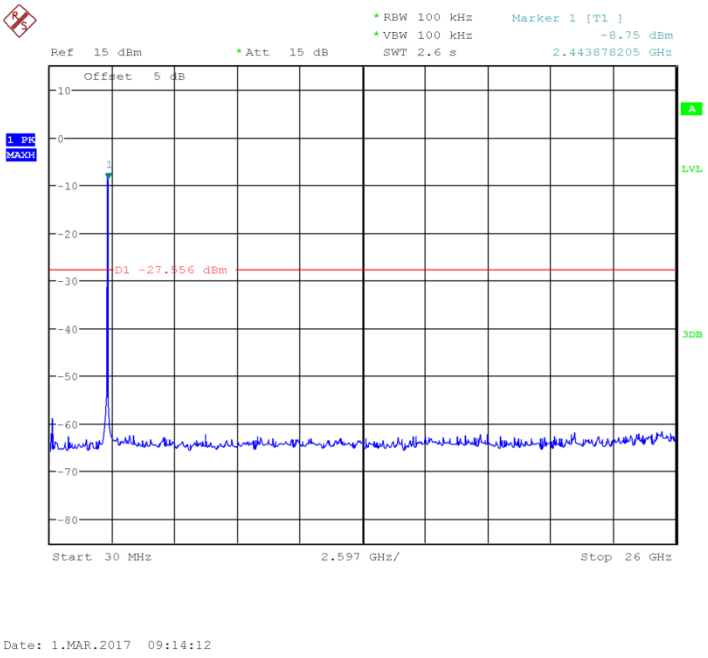


Fig.90 Conducted Spurious Emission (802.11n-40MHz, Ch6, 30MHz~26GHz)

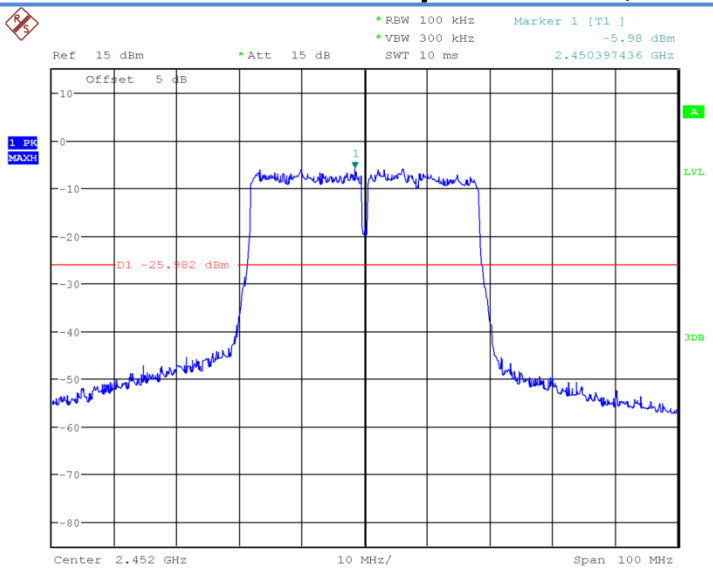


Fig.91 Conducted Spurious Emission (802.11n-40MHz, Ch9)

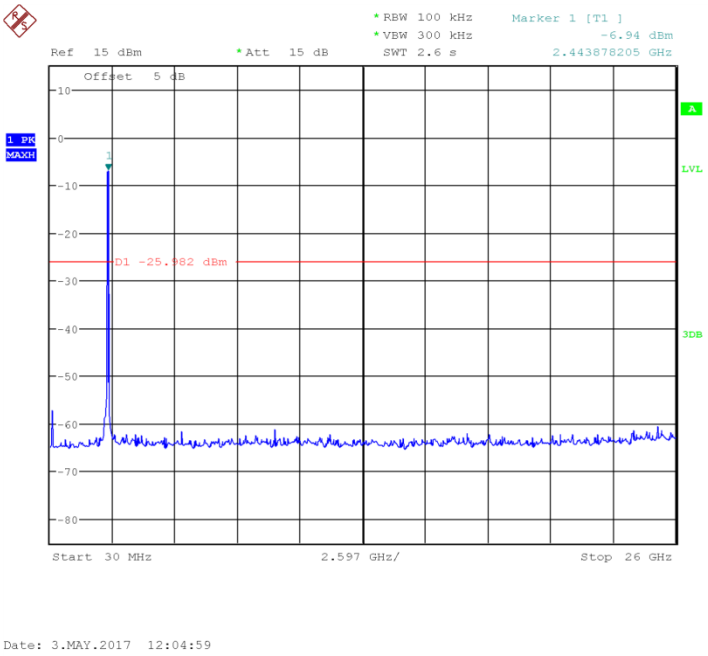


Fig.92 Conducted Spurious Emission (802.11n-40MHz, Ch9, 30MHz~26GHz)

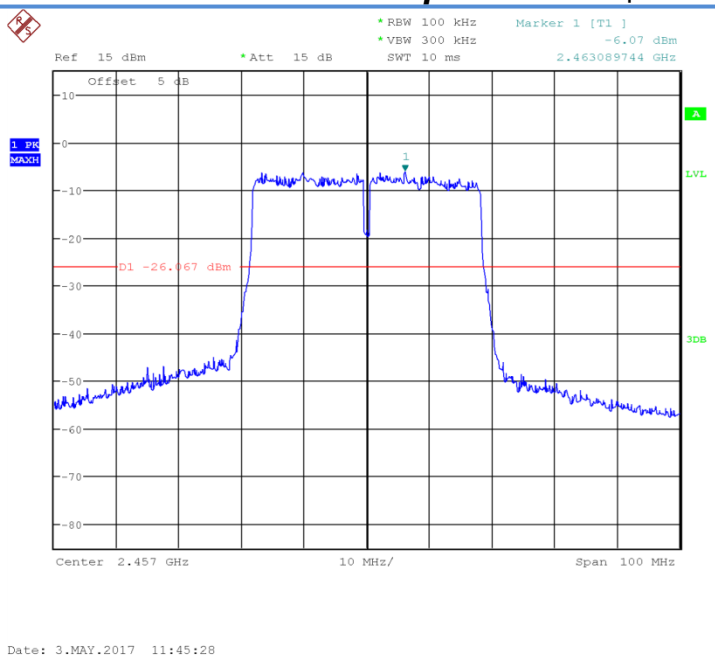


Fig.93 Conducted Spurious Emission (802.11n-40MHz, Ch10)

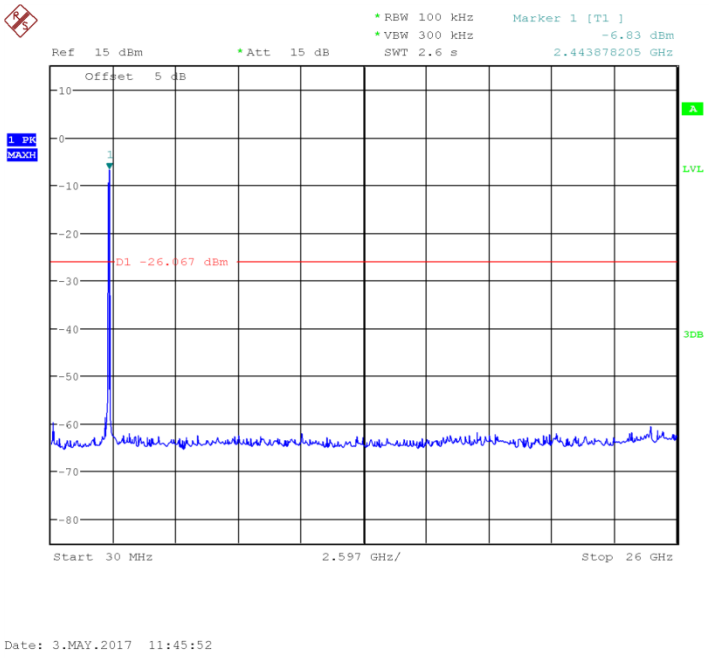


Fig.94 Conducted Spurious Emission (802.11n-40MHz, Ch10, 30MHz~26GHz)

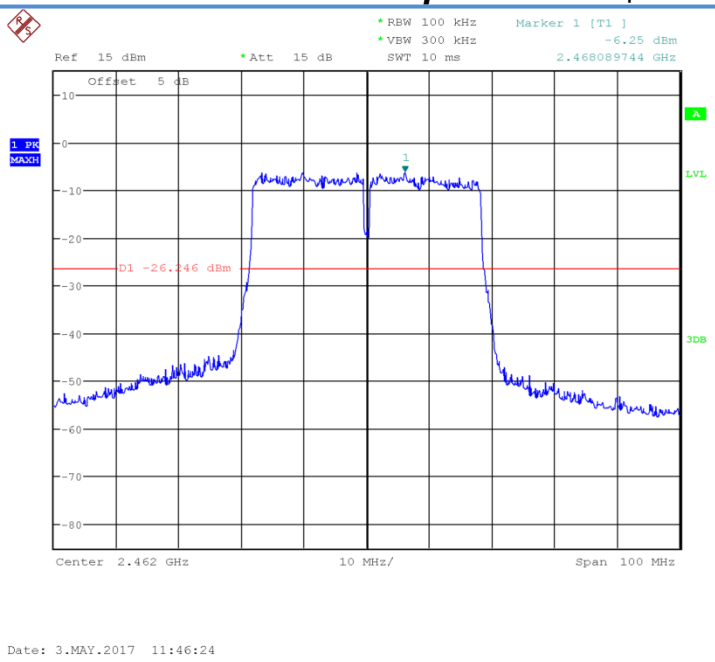


Fig.95 Conducted Spurious Emission (802.11n-40MHz, Ch11)

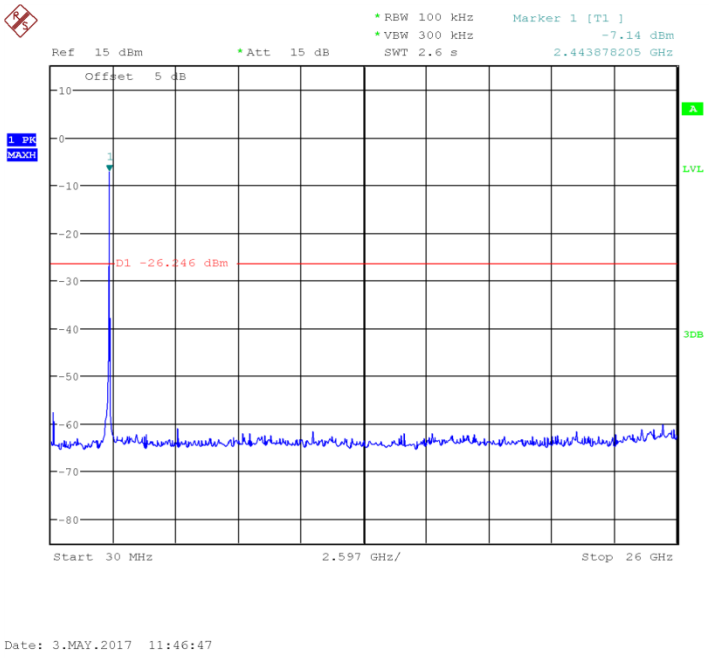


Fig.96 Conducted Spurious Emission (802.11n-40MHz, Ch11, 30MHz~26GHz)

6.6. Transmitter Spurious Emission-Radiated

6.6.1 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 25.205(a),

must also comply with the radiated emission limits specified in 15.209(a)(see 15.205(c)). The measurement is according to ANSI C63.10 clause 11.11 and 11.12.

6.6.2 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

6.6.3 Test procedures

Portable, small, lightweight, or modular devices that may be handheld, worn on the body, or placed on a table during operation shall be positioned on a nonconducting platform, the top of which is 80 cm above the reference ground plane. The preferred area occupied by the EUT arrangement is 1 m by 1.5 m, but it may be larger or smaller to accommodate various sized EUTs. For testing purposes, ceiling- and wall-mounted devices also shall be positioned on a tabletop (see also ANSI C63.4-2013 section 6.3.4 and 6.3.5). In making any tests involving handheld, body-worn, or ceiling-mounted equipment, it is essential to recognize that the measured levels may be dependent on the orientation (attitude) of the three orthogonal axes of the EUT. Thus, exploratory tests as specified in 8.3.1 shall be carried out for various axes orientations to determine the attitude having maximum or near-maximum emission level.

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During testing, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emission from the EUT. This maximization process was repeated with the EUT positioned in each of its three rthogonal orientations.

Frequency of emission (MHz)	RBW/VBW	Sweep Times (s)
30~1000	100KHz/300KHz	5
1000~4000	1MHz/1MHz	15
4000~18000	1MHz/1MHz	40
18000~26500	1MHz/1MHz	20

802.11b/g mode

Mode	Channel	Frequency Range	Test Results	Conclusion

802.11b	Power	2.38GHz~2.45GHz	Fig 97.	P
	Power	2.45GHz~2.5GHz	Fig 98.	P
	1	30MHz~1GHz	Fig 99.	P
		1GHz~3GHz	Fig 100.	P
		3GHz~18GHz	Fig 101.	P
802.11g	Power	2.38GHz~2.45GHz	Fig 102.	P
	Power	2.45GHz~2.5GHz	Fig 103.	P
	1	30MHz~1GHz	Fig 104.	P
		1GHz~3GHz	Fig 105.	P
		3GHz~18GHz	Fig 106.	P

802.11n mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(20MHz)	Power	2.38GHz~2.45GHz	Fig 107.	P
	Power	2.45GHz~2.5GHz	Fig 108.	P
	1	30MHz~1GHz	Fig 109.	P
		1GHz~3GHz	Fig 110.	P
		3GHz~18GHz	Fig 111.	P
802.11n(40MHz)	Power	2.38GHz~2.45GHz	Fig 112.	P
	Power	2.45GHz~2.5GHz	Fig 113.	P
	3	30MHz~1GHz	Fig 114.	P
		1GHz~3GHz	Fig 115.	P
		3GHz~18GHz	Fig 116.	P

802.11b mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	Power	2.38GHz~2.45GHz	Fig 117.	P
	Power	2.45GHz~2.5GHz	Fig 118.	P
	12	30MHz~1GHz	Fig 119.	P
		1GHz~3GHz	Fig 120.	P
		3GHz~18GHz	Fig 121.	P
802.11b	Power	2.38GHz~2.45GHz	Fig 122.	P
	Power	2.45GHz~2.5GHz	Fig 123.	P
	13	30MHz~1GHz	Fig 124.	P
		1GHz~3GHz	Fig 125.	P
		3GHz~18GHz	Fig 126.	P

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	Power	2.38GHz~2.45GHz	Fig 127.	P
	Power	2.45GHz~2.5GHz	Fig 128.	P
	12	30MHz~1GHz	Fig 129.	P
		1GHz~3GHz	Fig 130.	P
		3GHz~18GHz	Fig 131.	P
802.11g	Power	2.38GHz~2.45GHz	Fig 132.	P
	Power	2.45GHz~2.5GHz	Fig 133.	P
	13	30MHz~1GHz	Fig 134.	P
		1GHz~3GHz	Fig 135.	P
		3GHz~18GHz	Fig 136.	P

802.11n mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(20MHz)	Power	2.38GHz~2.45GHz	Fig 137.	P
	Power	2.45GHz~2.5GHz	Fig 138.	P
	12	30MHz~1GHz	Fig 139.	P
		1GHz~3GHz	Fig 140.	P
		3GHz~18GHz	Fig 141.	P
802.11n(20MHz)	Power	2.38GHz~2.45GHz	Fig 142.	P
	Power	2.45GHz~2.5GHz	Fig 143.	P
	13	30MHz~1GHz	Fig 144.	P
		1GHz~3GHz	Fig 145.	P
		3GHz~18GHz	Fig 146.	P

802.11n mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(40MHz)	Power	2.38GHz~2.45GHz	Fig 147.	P
	Power	2.45GHz~2.5GHz	Fig 148.	P
	10	30MHz~1GHz	Fig 149.	P
		1GHz~3GHz	Fig 150.	P
		3GHz~18GHz	Fig 151.	P
802.11n(40MHz)	Power	2.38GHz~2.45GHz	Fig 152.	P
	Power	2.45GHz~2.5GHz	Fig 153.	P
	11	30MHz~1GHz	Fig 154.	P
		1GHz~3GHz	Fig 155.	P
		3GHz~18GHz	Fig 156.	P

Conclusion: PASS

Note:

A ”reference path loss” is established and A_{Rpi} 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:

ARpi = Cable loss + Antenna Gain-Preamplifier gain

Result = P_{Mea} + Cable loss + Antenna Gain-Preamplifier gain = P_{Mea} + ARpi .

802.11b mode

Ch1 30MHz~1GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
34.439084	7.88	-26.8	34.68	V
35.6447	8.1	-26.7	34.8	V
45.423532	7.75	-25.8	33.55	H
106.807132	6.43	-24.6	31.03	H
307.832048	16.08	-20.6	36.68	H

Ch1 1GHz~3GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2260.48	49.06	5.4	43.66	H
2608.916154	51.93	8.8	43.13	V
2690.100961	52.29	9.4	42.89	H
2761.782692	52.86	9.5	43.36	H
2841.668846	54.11	10.7	43.41	H
2922.213846	53.81	10.7	43.11	H

Ch1 1GHz~3GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2260.48	36.66	5.4	31.26	H
2608.916154	39.74	8.8	30.94	V
2690.100961	40.49	9.4	31.09	H
2761.782692	40.45	9.5	30.95	H
2841.668846	41.28	10.7	30.58	H
2922.213846	41.49	10.7	30.79	H

Ch1 3GHz~18GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
3618.365867	53.22	-2	55.22	V
5465.5322	43.96	1.4	42.56	V
7970.215133	46.13	6.7	39.43	V
14338.27067	54.8	20.3	34.5	H
16168.69207	58.88	25.4	33.48	V
17581.22273	63.27	29.5	33.77	H

Ch1 1GHz~3GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
3618.365867	47.04	-2	49.04	V
5465.5322	31.41	1.4	30.01	V
7970.215133	34.34	6.7	27.64	V
14338.27067	42.09	20.3	21.79	H
16168.69207	46.9	25.4	21.5	V
17581.22273	50.18	29.5	20.68	H

802.11g

Ch1 30MHz~1GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
34.641056	17.91	-26.7	44.61	V
35.621784	10.45	-26.4	36.85	V
36.888816	16.22	-25.6	41.82	V
48.665604	10.01	-23.3	33.31	V
819.660232	18.44	-10.6	29.04	H
914.98344	20	-9	29	V

Ch1 1GHz~3GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity

2599.376346	52.33	8.7	43.63	H
2682.076538	52.28	9.4	42.88	V
2727.207885	52.34	9.4	42.94	V
2848.222884	53.24	10.7	42.54	H
2895.696154	52.93	10.7	42.23	H
2978.806731	53.42	10.9	42.52	H

Ch1 3GHz~18GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
14311.87507	54.13	20.6	33.53	V
15014.06873	56.8	21.5	35.3	H
16033.40007	59.55	25.1	34.45	H
16483.34667	59.25	26.7	32.55	V
16791.71613	59.74	27.2	32.54	V
17554.15	61.87	29.4	32.47	V

Ch1 3GHz~18GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
14311.87507	42.66	20.6	22.06	V
15014.06873	43.61	21.5	22.11	H
16033.40007	47.17	25.1	22.07	H
16483.34667	47.01	26.7	20.31	V
16791.71613	47.6	27.2	20.4	V
17554.15	49.92	29.4	20.52	V

802.11n-20MHz

Ch1 30MHz~1GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
34.724748	7.47	-26.8	34.27	V
49.349624	7.35	-25.8	33.15	V

105.466796	5.47	-24.7	30.17	V
313.98734	17.1	-20.3	37.4	H
438.704856	20.59	-16.8	37.39	H
902.817324	20.82	-8.1	28.92	H

Ch1 1GHz~3GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2615.901731	52.31	8.9	43.41	H
2689.066538	52.15	9.4	42.75	V
2769.507308	52.04	9.5	42.54	V
2818.027307	53.86	10.2	43.66	V
2944.507884	54.05	10.7	43.35	H
2987.819615	54.66	11.2	43.46	H

Ch1 1GHz~3GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2615.901731	39.68	8.9	30.78	H
2689.066538	40.37	9.4	30.97	V
2769.507308	40.23	9.5	30.73	V
2818.027307	41.18	10.2	30.98	V
2944.507884	41.56	10.7	30.86	H
2987.819615	42.17	11.2	30.97	H

Ch1 3GHz~18GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
15356.71207	55.4	22.6	32.8	H
15787.18853	57.32	24.6	32.72	V
16182.9116	59.33	25.5	33.83	V
16819.69587	60.01	27.3	32.71	H

17358.93327	60.16	28.4	31.76	H
17644.7252	61.69	29.1	32.59	V

Ch1 3GHz~18GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
15356.71207	43.81	22.6	21.21	H
15787.18853	45.52	24.6	20.92	V
16182.9116	46.68	25.5	21.18	V
16819.69587	47.68	27.3	20.38	H
17358.93327	48.55	28.4	20.15	H
17644.7252	49.28	29.1	20.18	V

802.11n-40MHz

Ch3 30MHz~1GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
34.7303	14.64	-26.7	41.34	V
36.894116	14.9	-25.6	40.5	V
86.389712	4.42	-26.4	30.82	V
799.0632	17.8	-11	28.8	H
870.67072	19.11	-9.7	28.81	V
932.623384	20.34	-8.6	28.94	H

Ch3 1GHz~3GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2654.079615	51.88	9.4	42.48	V
2694.478077	52.68	9.5	43.18	H
2850.199424	53.86	10.8	43.06	V
2886.815961	53.29	10.7	42.59	H
2936.505	52.85	10.5	42.35	V
2990.359808	53.56	11.1	42.46	V

Ch3 3GHz~18GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
14299.11713	54.79	20.8	33.99	V
15337.93293	55.53	22.3	33.23	H
16039.19947	59.06	25.1	33.96	V
16500.67087	59.59	26.9	32.69	V
17048.3574	60.83	27.1	33.73	V
17552.2114	61.86	29.4	32.46	H

Ch3 3GHz~18GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
14299.11713	42.85	20.8	22.05	V
15337.93293	43.64	22.3	21.34	H
16039.19947	47.15	25.1	22.05	V
16500.67087	47.29	26.9	20.39	V
17048.3574	47.82	27.1	20.72	V
17552.2114	49.97	29.4	20.57	H

802.11b

Ch12 30MHz~1GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
34.3888	8.73	-26.7	35.43	V
35.685728	7.28	-26.3	33.58	V
43.592108	8.13	-23.5	31.63	V
48.44258	9.63	-23.3	32.93	H
65.613152	6.2	-26.1	32.3	V
306.879324	18.85	-20.8	39.65	H

Ch12 1GHz~3GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity

2719.867307	52.25	9.4	42.85	V
2828.11077	53.5	10.3	43.2	V
2861.929423	52.99	10.7	42.29	V
2900.097115	52.92	10.6	42.32	V
2926.556539	53.69	10.6	43.09	V
2984.365769	54.39	11	43.39	H

Ch12 1GHz~3GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2719.867307	40.02	9.4	30.62	V
2828.11077	41.09	10.3	30.79	V
2861.929423	41.03	10.7	30.33	V
2900.097115	41.34	10.6	30.74	V
2926.556539	41.03	10.6	30.43	V
2984.365769	41.71	11	30.71	H

Ch12 3GHz~18GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
3698.8896	55.48	-1.8	57.28	V
14934.11773	55.8	22	33.8	H
15420.79913	55.91	23.2	32.71	V
16005.1074	59.09	25.3	33.79	V
16820.49527	59.88	27.3	32.58	H
17568.2282	62.13	29.4	32.73	H

Ch12 3GHz~18GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
3698.8896	51.33	-1.8	53.13	V
14934.11773	43.65	22	21.65	H
15420.79913	44.27	23.2	21.07	V

16005.1074	47.29	25.3	21.99	V
16820.49527	47.63	27.3	20.33	H
17568.2282	49.62	29.4	20.22	H

802.11b

Ch13 30MHz~1GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
34.464932	8.09	-26.7	34.79	V
41.313952	10.65	-23.6	34.25	H
44.607028	10.16	-23.5	33.66	V
49.10706	9.72	-23.3	33.02	V
326.652712	19.24	-20.1	39.34	H
733.2751	16.84	-12.2	29.04	V

Ch13 1GHz~3GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2602.066347	52.06	8.8	43.26	H
2693.931346	52.84	9.5	43.34	H
2756.274615	52.42	9.4	43.02	H
2852.577692	52.93	10.8	42.13	H
2894.156154	53.76	10.7	43.06	V
2951.929231	53.02	10.5	42.52	V

Ch13 3GHz~18GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
3706.484333	53.5	-1.8	55.3	V
4944.0048	48.99	1	47.99	H
7415.1096	54.82	5.9	48.92	V
12740.7958	52.78	16.6	36.18	V

14872.68507	56.14	21.6	34.54	H
16484.3034	58.58	26.7	31.88	H

Ch13 3GHz~18GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
3706.484333	48.86	-1.8	50.66	V
4944.0048	44.08	1	43.08	H
7415.1096	49.95	5.9	44.05	V
12740.7958	40.39	16.6	23.79	V
14872.68507	43.8	21.6	22.2	H
16484.3034	46.63	26.7	19.93	H

802.11g

Ch12 30MHz~1GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
34.262896	7.36	-26.6	33.96	V
53.515208	8.9	-23.7	32.6	V
62.919496	5.26	-25.3	30.56	V
439.025228	19.95	-17.1	37.05	H
563.725052	18.61	-14.5	33.11	H
809.49916	18.19	-10.7	28.89	V

Ch12 1GHz~3GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2603.300769	52.75	8.8	43.95	V
2704.055769	52.21	9.5	42.71	V
2745.5525	52.32	9.4	42.92	V
2826.355962	53.71	10.3	43.41	H
2909.634615	53.89	10.6	43.29	V
2983.834231	53.64	11	42.64	H

Ch12 3GHz~18GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
3700.329067	47.76	-1.8	49.56	H
14901.6218	56.78	22.2	34.58	H
15858.3762	58.19	24.7	33.49	V
16177.3422	59.32	25.5	33.82	H
17151.39513	60.43	26.9	33.53	V
17547.2516	61.68	29.3	32.38	V

Ch12 3GHz~18GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
3700.329067	38.13	-1.8	39.93	H
14901.6218	43.94	22.2	21.74	H
15858.3762	46.11	24.7	21.41	V
16177.3422	46.56	25.5	21.06	H
17151.39513	47.66	26.9	20.76	V
17547.2516	49.36	29.3	20.06	V

802.11g

Ch13 30MHz~1GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
31.191864	5.83	-26	31.83	V
44.148928	9.7	-23.5	33.2	V
50.441504	7.45	-23.3	30.75	V
86.487844	4.25	-26.4	30.65	H
420.437388	18.1	-17.5	35.6	H
909.596136	19.67	-9.1	28.77	V

Ch13 1GHz~3GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity

2608.490192	52.05	8.8	43.25	H
2689.486346	52.31	9.4	42.91	V
2793.401154	52.76	9.7	43.06	H
2866.584615	53.07	10.7	42.37	V
2922.121923	53.63	10.6	43.03	V
2964.389039	53.86	10.7	43.16	H

Ch13 3GHz~18GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
3707.228	53.66	-1.8	55.46	V
4944.011733	49.74	1	48.74	H
7414.935933	52.05	5.9	46.15	H
10943.4346	50.23	13.7	36.53	H
14040.129	53.95	18.6	35.35	H
17621.4346	62.15	29.3	32.85	H

Ch13 3GHz~18GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
3707.228	49.34	-1.8	51.14	V
4944.011733	44.46	1	43.46	H
7414.935933	45.84	5.9	39.94	H
10943.4346	37.82	13.7	24.12	H
14040.129	41.02	18.6	22.42	H
17621.4346	49.64	29.3	20.34	H

802.11n-20Mhz

Ch12 30MHz~1GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
34.751896	7.79	-26.7	34.49	V
47.479768	7.39	-23.4	30.79	V

59.9806	6.82	-24.3	31.12	H
100.341904	5.63	-23.7	29.33	H
851.19586	18.73	-10.2	28.93	V
981.115276	20.58	-8.4	28.98	H

Ch12 1GHz~3GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2630.591538	52.3	9.1	43.2	V
2698.03	53.07	9.5	43.57	H
2844.426539	53.56	10.7	42.86	V
2878.945	53.51	10.7	42.81	V
2968.295577	53.08	10.8	42.28	H
2992.749807	54.08	11.1	42.98	H

Ch12 1GHz~3GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2630.591538	40.18	9.1	31.08	V
2698.03	40.33	9.5	30.83	H
2844.426539	41.16	10.7	30.46	V
2878.945	41.29	10.7	30.59	V
2968.295577	40.97	10.8	30.17	H
2992.749807	41.64	11.1	30.54	H

Ch12 3GHz~18GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
15019.90133	55.24	21.5	33.74	V
15475.03533	56.68	23.3	33.38	H
16151.45593	58.32	25.2	33.12	V
16900.92273	59.28	27.1	32.18	V

17570.24733	62.57	29.4	33.17	V
17877.21593	60.84	29.4	31.44	H

Ch12 3GHz~18GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
15019.90133	42.96	21.5	21.46	V
15475.03533	44.33	23.3	21.03	H
16151.45593	46.43	25.2	21.23	V
16900.92273	46.92	27.1	19.82	V
17570.24733	49.2	29.4	19.8	V
17877.21593	48.86	29.4	19.46	H

802.11n-20Mhz

Ch13 30MHz~1GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
34.860832	7.76	-26.8	34.56	V
60.135076	7.12	-24.4	31.52	V
90.757544	5.45	-25.2	30.65	H
138.515744	1.69	-27.8	29.49	V
769.628284	17.32	-11.6	28.92	H
883.4465	19.34	-9.4	28.74	V

Ch13 1GHz~3GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2735.231731	52.41	9.4	43.01	V
2842.9025	52.85	10.6	42.25	H
2866.090192	53.5	10.7	42.8	H
2898.447885	53.58	10.7	42.88	H
2958.87577	53.88	10.6	43.28	H
2994.7925	53.46	11.1	42.36	V

Ch13 3GHz~18GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
15420.6276	56.49	23.2	33.29	V
15990.5668	59.31	25.3	34.01	H
16229.97613	58.73	25.5	33.23	V
16503.12713	58.85	26.9	31.95	V
17155.6928	60.7	26.9	33.8	H
17540.0308	61.55	29.3	32.25	H

Ch13 3GHz~18GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
15420.6276	43.82	23.2	20.62	V
15990.5668	47.21	25.3	21.91	H
16229.97613	46.76	25.5	21.26	V
16503.12713	46.46	26.9	19.56	V
17155.6928	47.33	26.9	20.43	H
17540.0308	49.47	29.3	20.17	H

802.11n-40Mhz

Ch10 30MHz~1GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
34.884456	22.43	-26.8	49.23	V
36.978164	8.18	-25.5	33.68	V
38.501308	10.19	-24.6	34.79	V
39.976052	25.86	-23.7	49.56	V
51.131976	22.5	-23.4	45.9	V
159.300324	24.01	-27.2	51.21	H

Ch10 1GHz~3GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity

2718.241731	52.68	9.4	43.28	H
2784.385385	52.3	9.6	42.7	H
2854.456154	53.22	10.8	42.42	H
2894.648077	53.78	10.7	43.08	V
2949.546731	53.03	10.5	42.53	V
2996.647115	54.8	11.1	43.7	H

Ch10 1GHz~3GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2718.241731	40.06	9.4	30.66	H
2784.385385	40.41	9.6	30.81	H
2854.456154	41.18	10.8	30.38	H
2894.648077	41.33	10.7	30.63	V
2949.546731	41.39	10.5	30.89	V
2996.647115	41.5	11.1	30.4	H

Ch10 3GHz~18GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
15049.76093	55.33	21.4	33.93	V
15459.82013	55.63	23.3	32.33	H
15996.8748	58.89	25.3	33.59	V
16492.24133	58.82	26.8	32.02	H
17064.67293	58.68	27.1	31.58	H
17590.9144	61.81	29.5	32.31	H

Ch10 3GHz~18GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
15049.76093	42.93	21.4	21.53	V
15459.82013	43.58	23.3	20.28	H
15996.8748	46.99	25.3	21.69	V

16492.24133	47.08	26.8	20.28	H
17064.67293	47.2	27.1	20.1	H
17590.9144	48.91	29.5	19.41	H

802.11n-40Mhz

Ch11 30MHz~1GHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
33.715628	9.75	-26.5	36.25	V
34.695056	10.5	-26.7	37.2	V
38.57102	14.84	-24.5	39.34	V
51.664484	11.64	-23.5	35.14	V
67.885708	13.67	-26.8	40.47	V
131.409564	14.7	-27.9	42.6	H

Ch11 1GHz~3GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2669.322692	52.69	9.4	43.29	H
2750.621731	52.89	9.4	43.49	H
2853.18673	53.2	10.8	42.4	H
2887.779615	54.07	10.7	43.37	V
2949.8825	53.39	10.5	42.89	V
2992.377115	53.43	11.1	42.33	H

Ch11 1GHz~3GHz(Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2669.322692	40.59	9.4	31.19	H
2750.621731	40.27	9.4	30.87	H
2853.18673	41.23	10.8	30.43	H
2887.779615	41.42	10.7	30.72	V

2949.8825	41.41	10.5	30.91	V
2992.377115	41.68	11.1	30.58	H

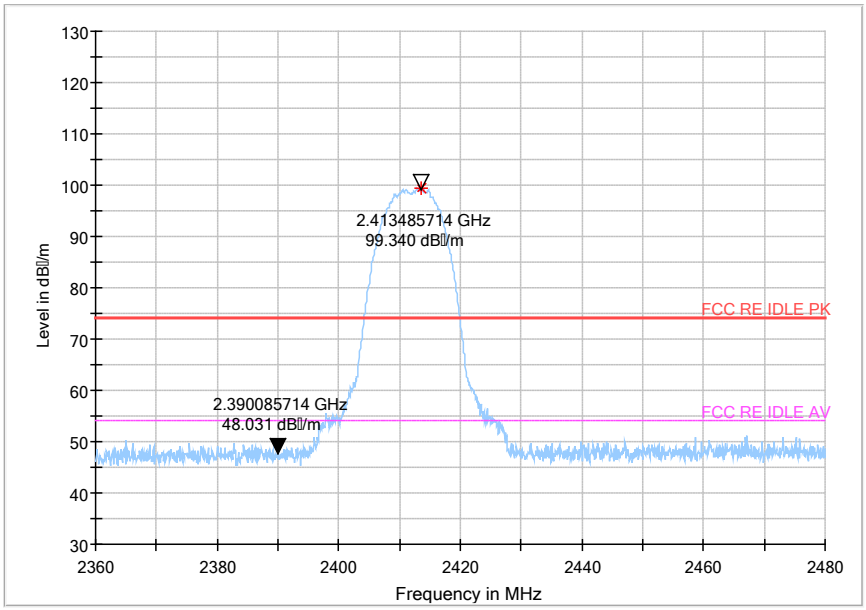
Ch11 3GHz~18GHz(Peak)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
14882.63687	55.72	21.9	33.82	V
15432.78347	56.1	23.3	32.8	V
15729.05107	58.21	24.1	34.11	H
16154.918	58.36	25.3	33.06	V
16815.868	58.98	27.3	31.68	V
17512.09107	62.01	29.2	32.81	H

Ch11 3GHz~18GHz(Average)

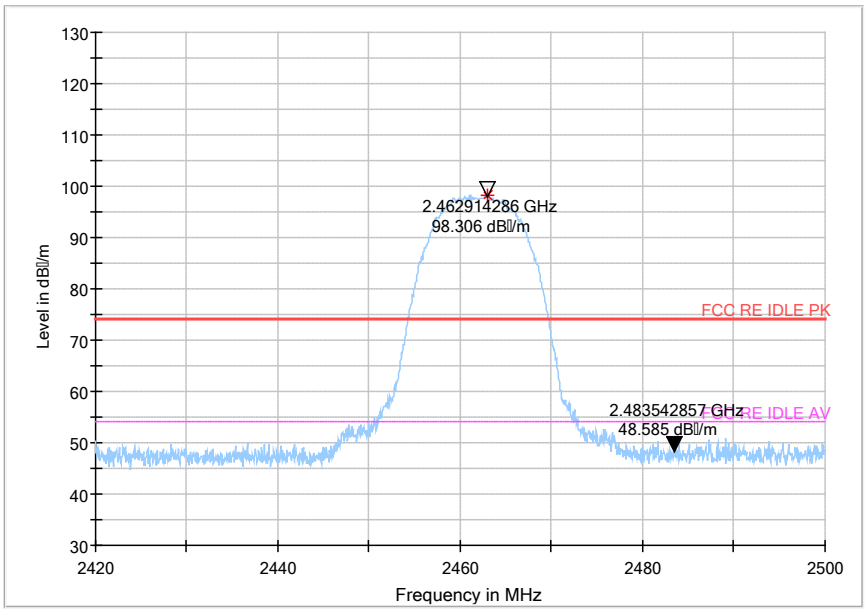
Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
14882.63687	43.63	21.9	21.73	V
15432.78347	44.06	23.3	20.76	V
15729.05107	46.03	24.1	21.93	H
16154.918	46.24	25.3	20.94	V
16815.868	47.27	27.3	19.97	V
17512.09107	49.04	29.2	19.84	H

Test graphs as below:



Peak detector

Fig.97 Radiated emission (Power): 802.11b, low channel



Peak detector

Fig.98 Radiated emission (Power): 802.11b, high channel

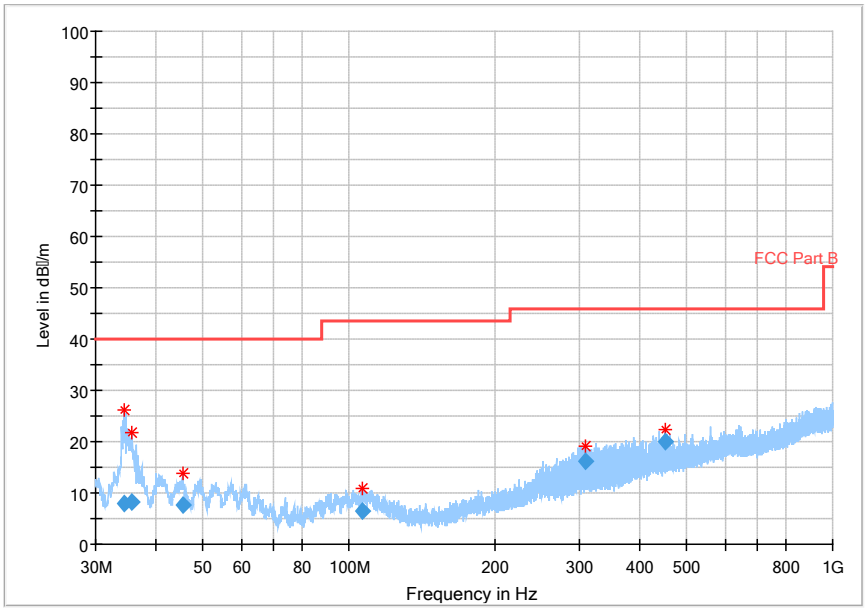


Fig.99 Radiated Spurious Emission (802.11b,Ch1,30MHz~1GHz)

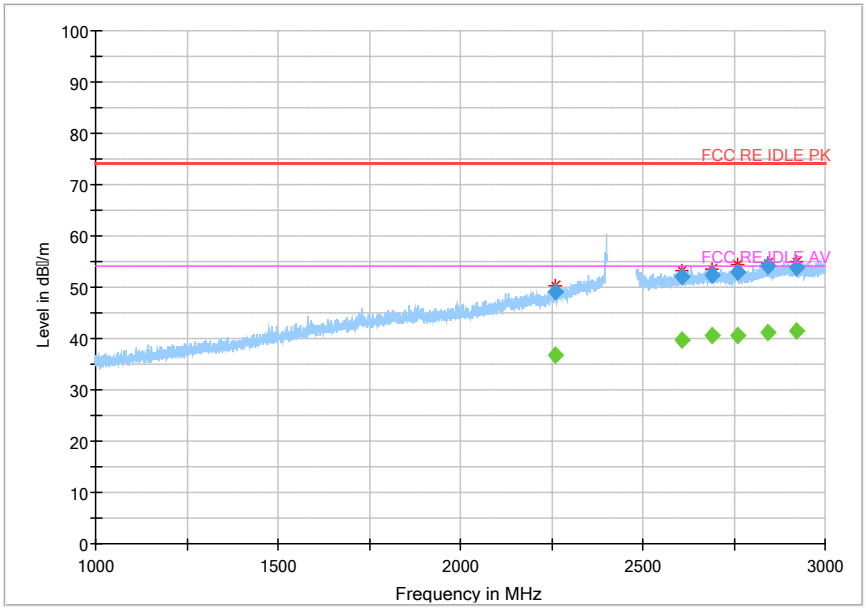


Fig.100 Radiated Spurious Emission (802.11b,Ch1,1GHz~3GHz)

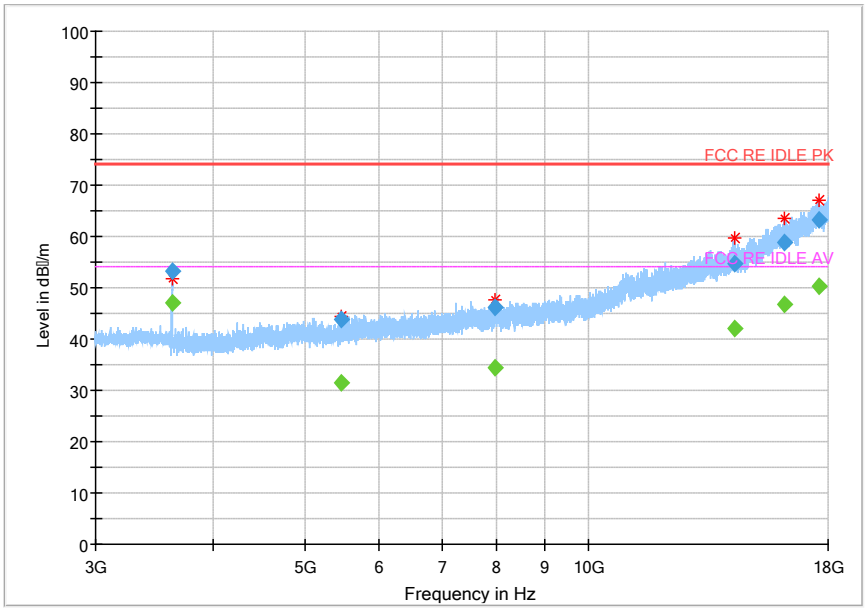
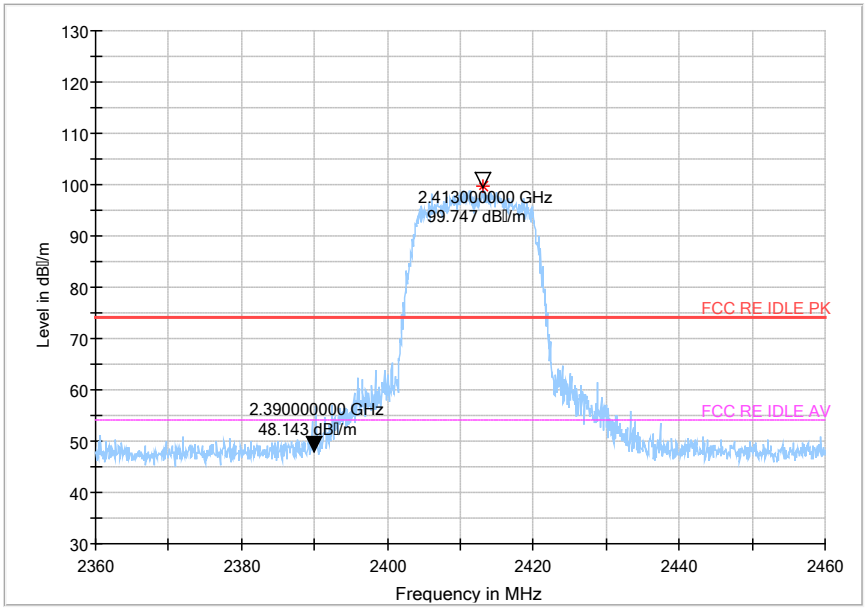
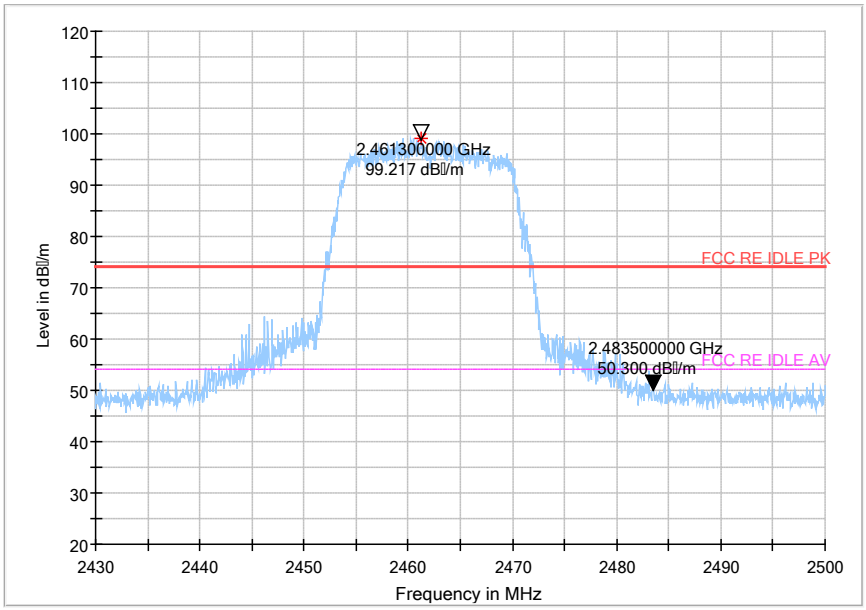


Fig.101 Radiated Spurious Emission (802.11b,Ch1,3GHz~18GHz)



Peak detector

Fig.102 Radiated emission (Power): 802.11g, low channel



Peak detector

Fig.103 Radiated emission (Power): 802.11g, high channel

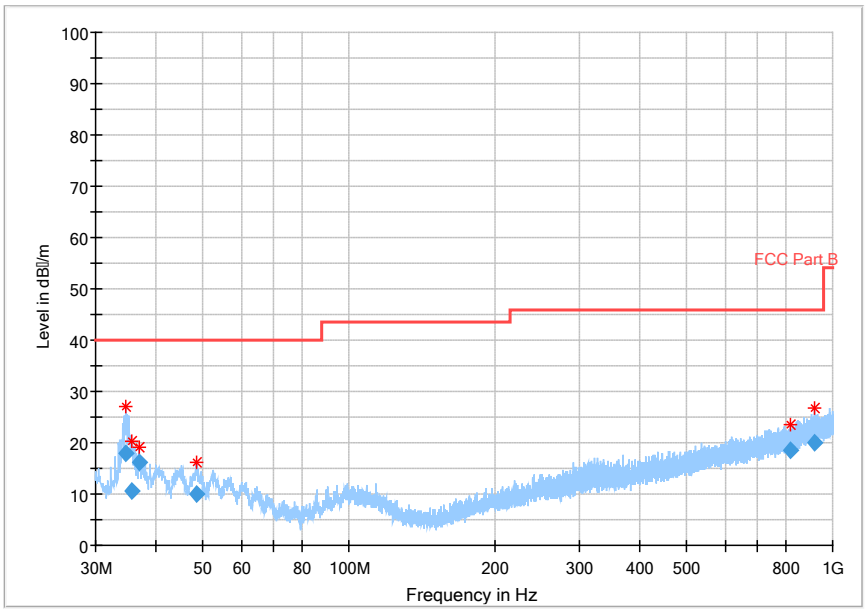


Fig.104 Radiated Spurious Emission (802.11g,Ch1,30MHz~1GHz)

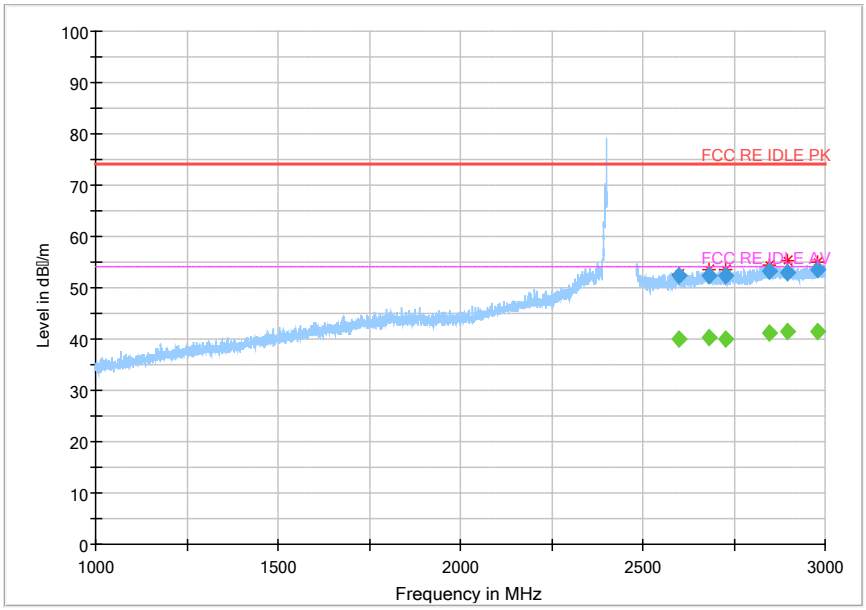


Fig.105 Radiated Spurious Emission (802.11g,Ch1,1GHz~3GHz)

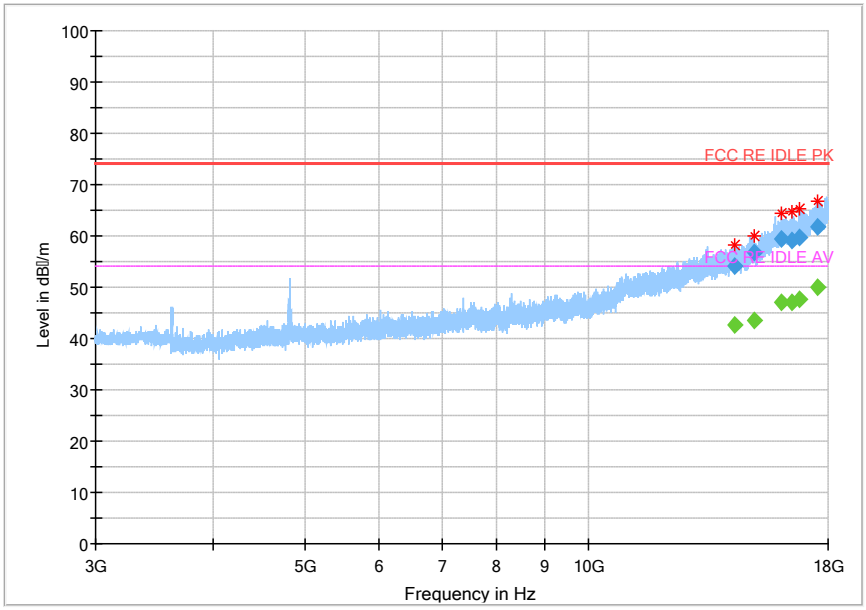
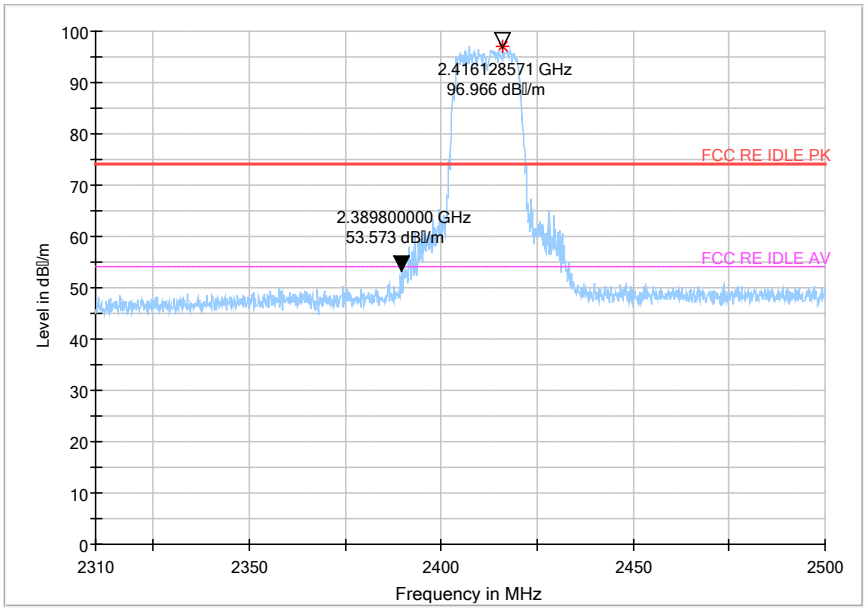
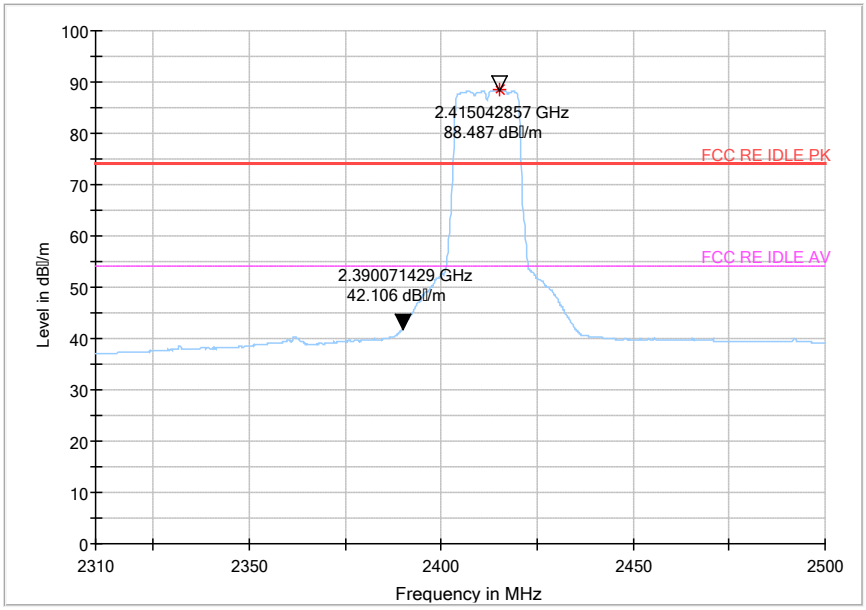


Fig.106 Radiated Spurious Emission (802.11g,Ch1,3GHz~18GHz)

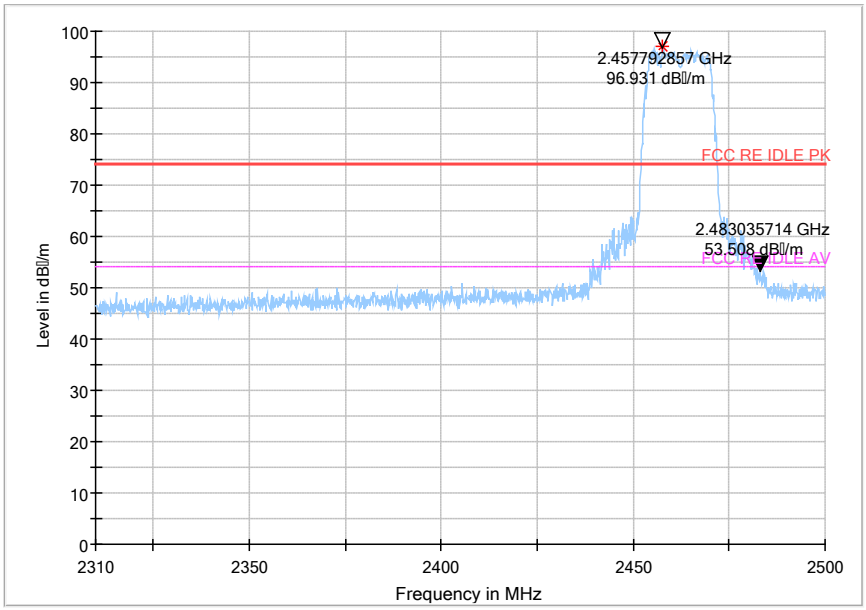


Peak detector

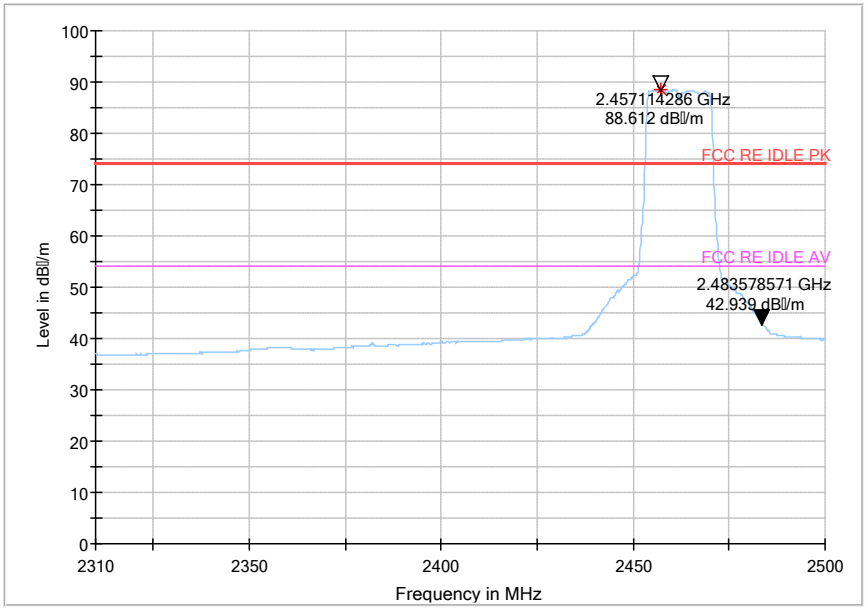


AV detector

Fig.107 Radiated emission (Power): 802.11n, low channel



Peak detector



AV detector

Fig.108 Radiated emission (Power): 802.11n, high channel

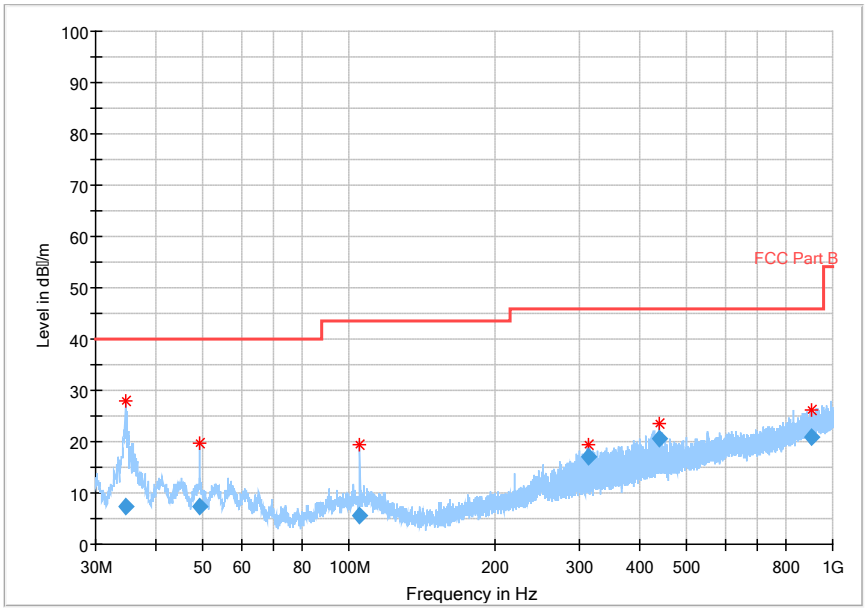


Fig.109 Radiated Spurious Emission (802.11 n-20MHz,Ch1,30MHz~1GHz)

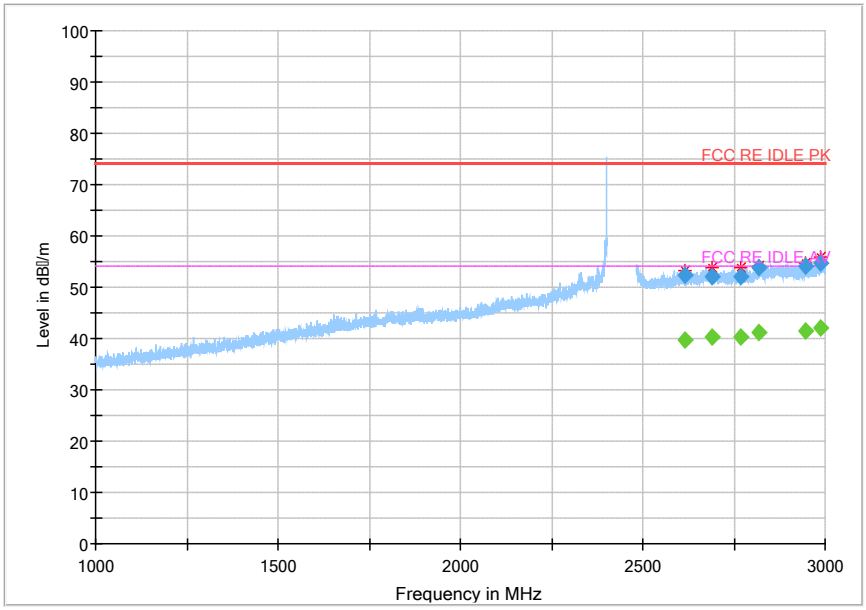


Fig.110 Radiated Spurious Emission (802.11 n-20MHz,Ch1,1GHz~3GHz)

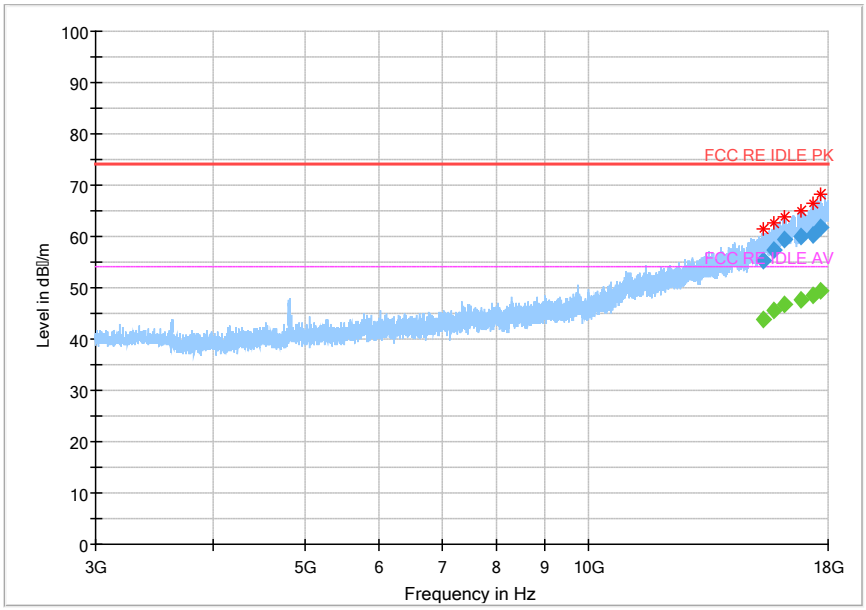
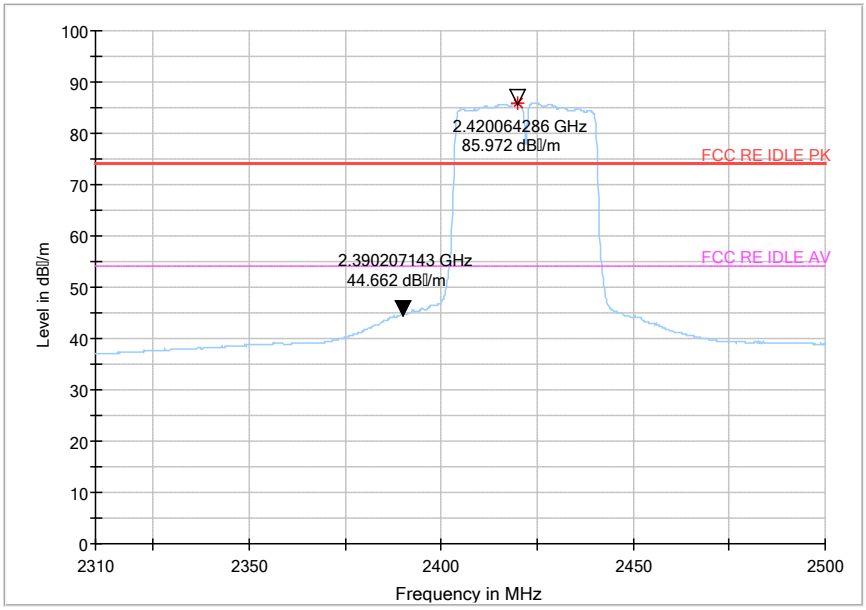
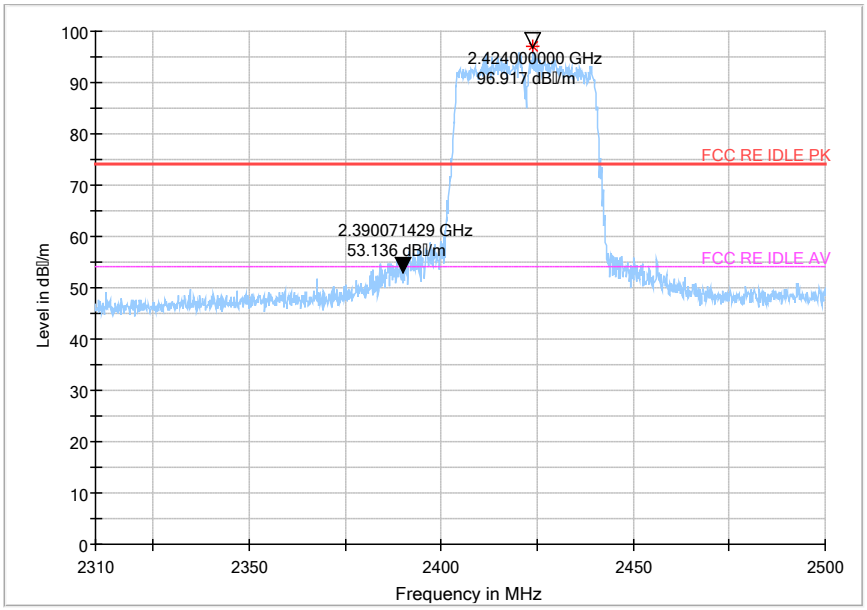


Fig.111 Radiated Spurious Emission (802.11 n-20MHz,Ch1,3GHz~18GHz)

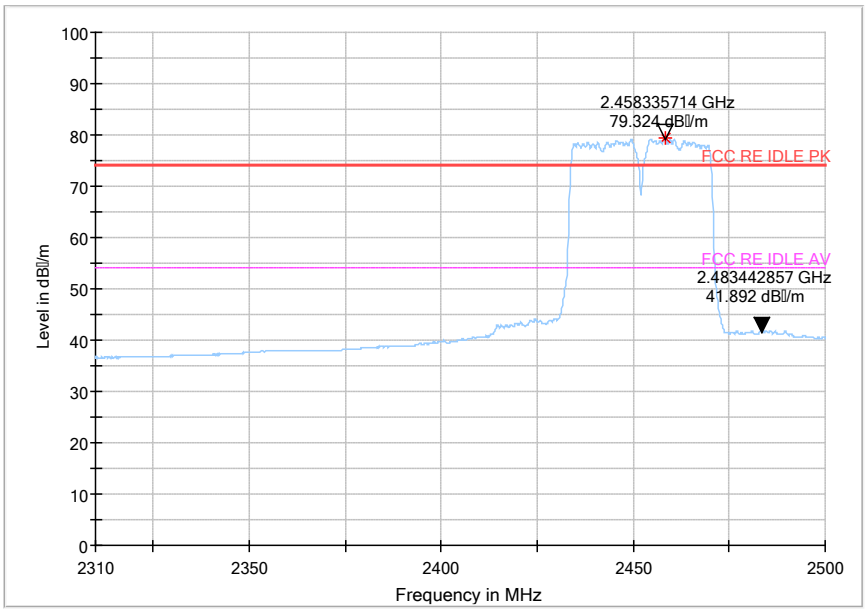


Average detector

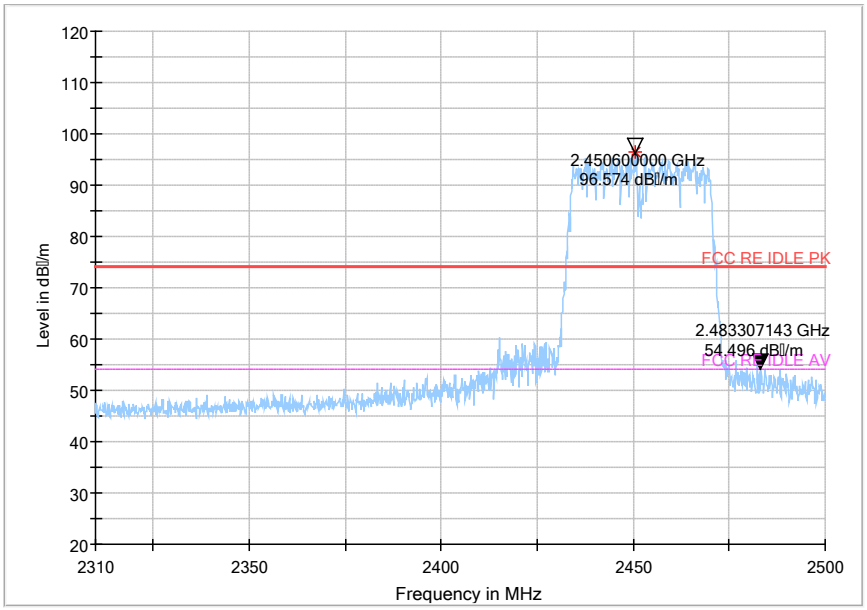


Peak detector

Fig.112 Radiated emission (Power): 802.11n（40M）, low channel



Average detector



Peak detector

Fig.113 Radiated emission (Power): 802.11n（40M）, high channel

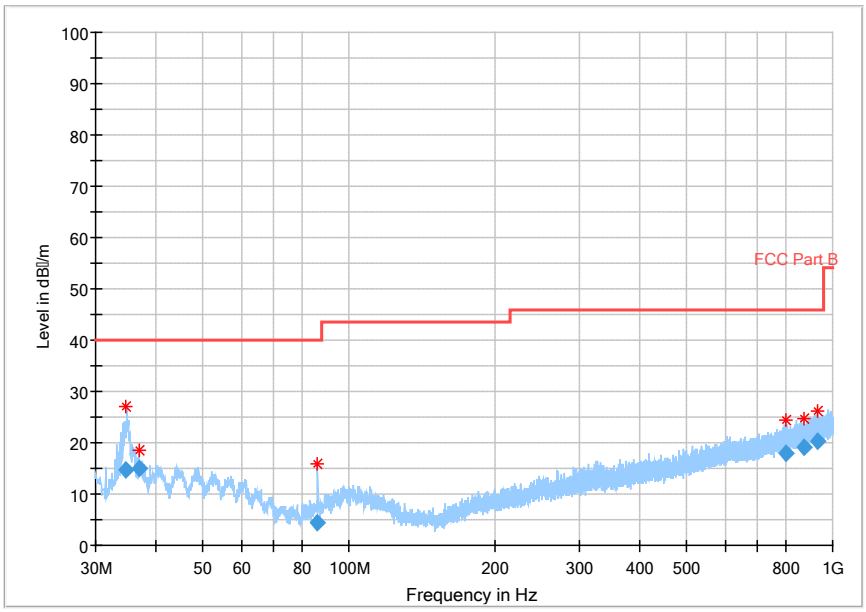


Fig.114 Radiated Spurious Emission (802.11 n-40MHz,Ch3,30MHz~1GHz)

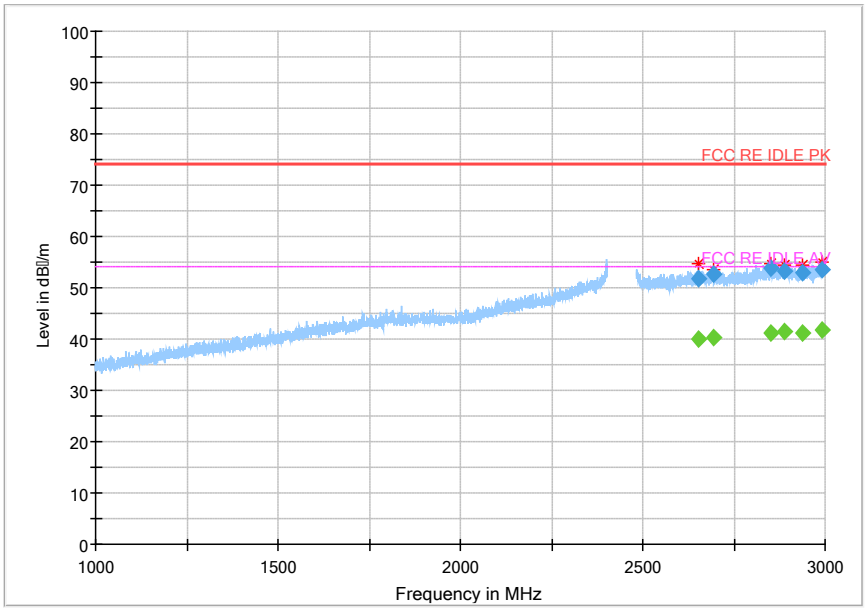


Fig.115 Radiated Spurious Emission (802.11 n-40MHz,Ch3,1GHz~3GHz)

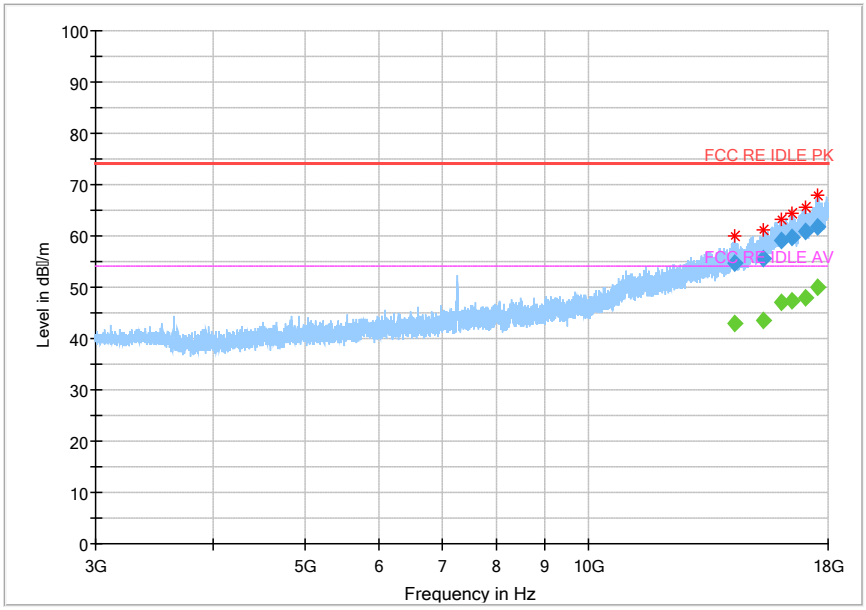
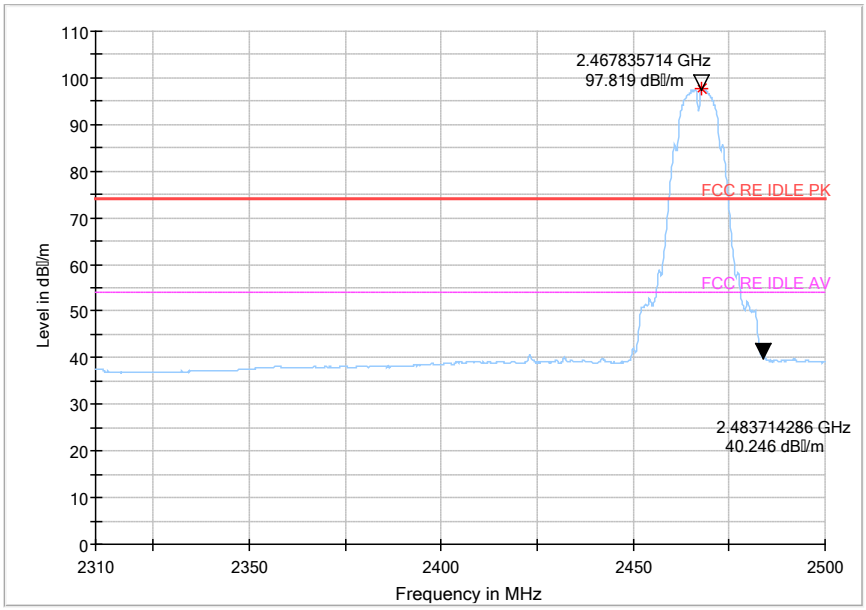
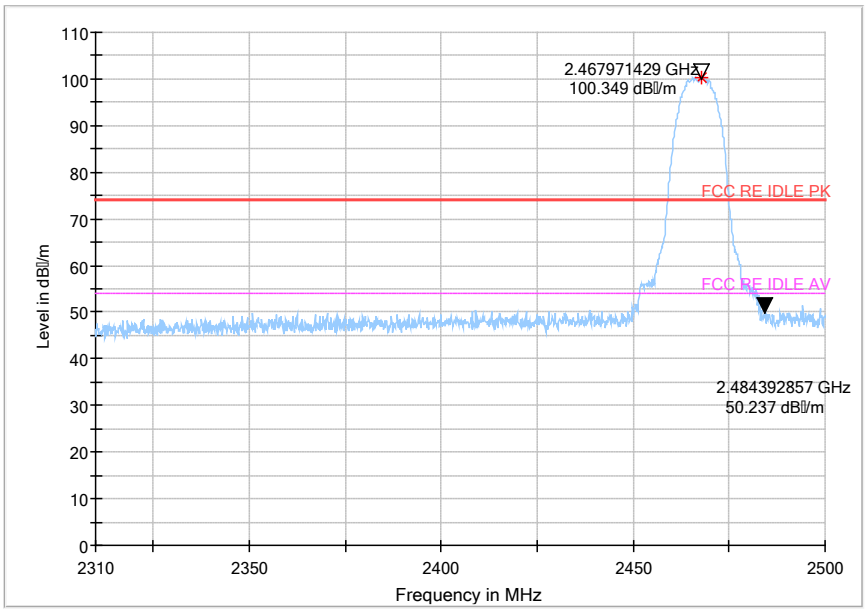


Fig.116 Radiated Spurious Emission (802.11 n-40MHz,Ch3,3GHz~18GHz)



Average detector

Fig.117 Radiated emission (Power): 802.11b,Ch12



Peak detector

Fig.118 Radiated emission (Power): 802.11b,Ch12

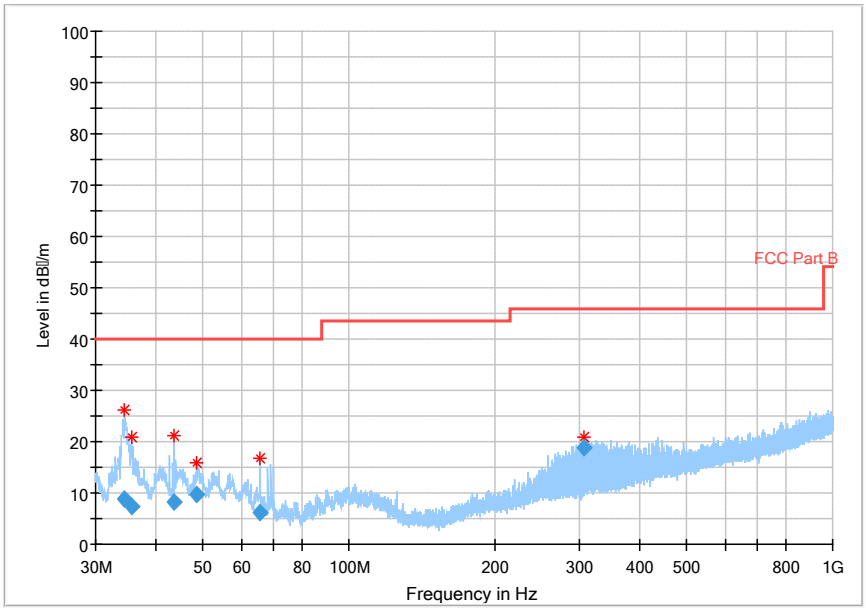


Fig.119 Radiated Spurious Emission (802.11b,Ch12,30MHz~1GHz)

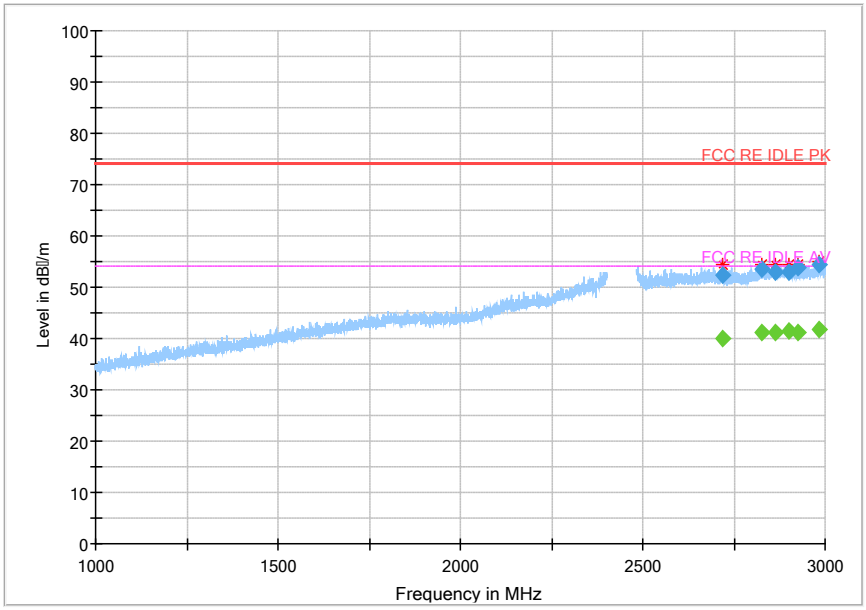


Fig.120 Radiated Spurious Emission (802.11b,Ch12,1GHz~3GHz)

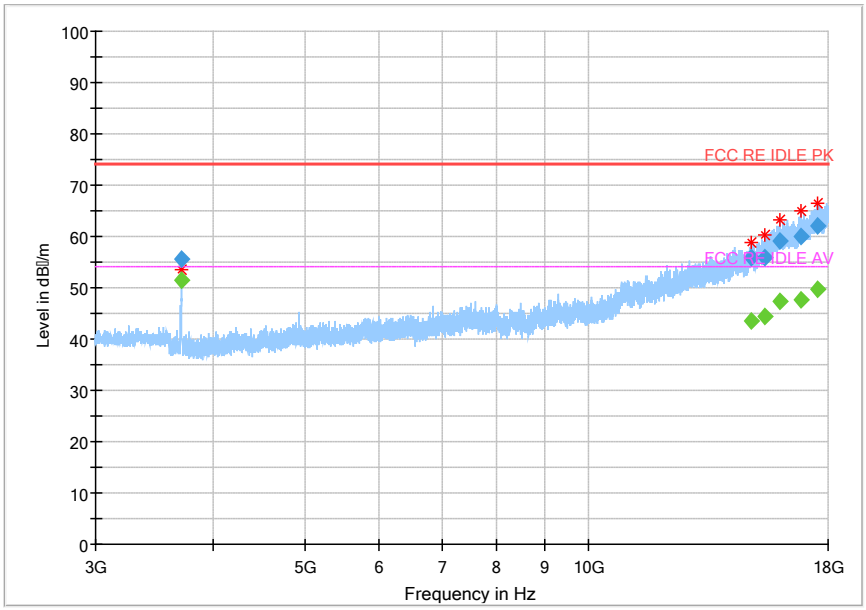
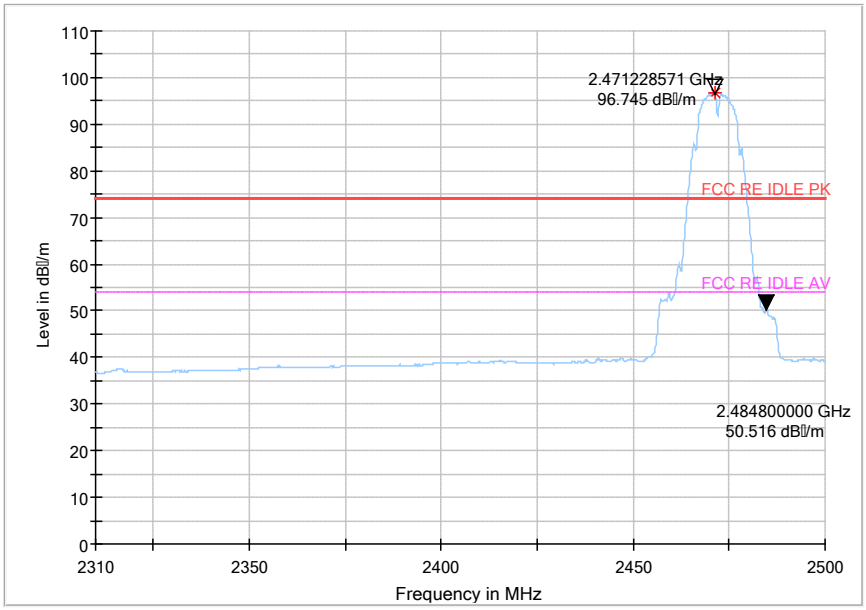
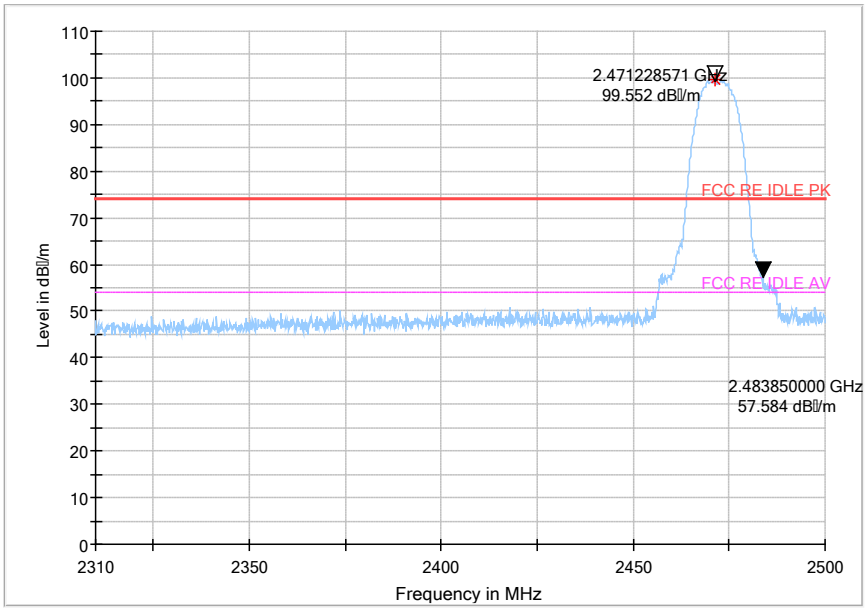


Fig.121 Radiated Spurious Emission (802.11b,Ch12,3GHz~18GHz)



Average detector

Fig.122 Radiated emission (Power): 802.11b,Ch13



Peak detector

Fig.123 Radiated emission (Power): 802.11b,Ch13

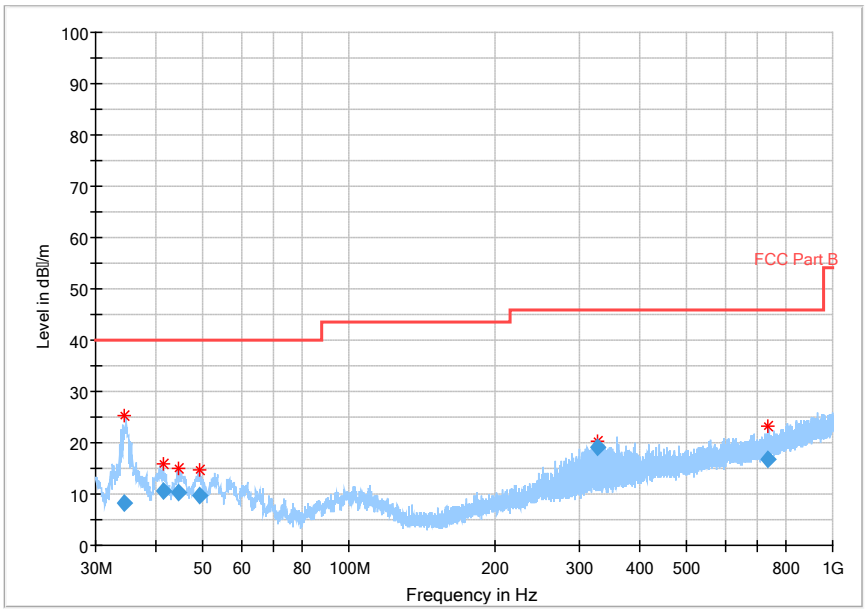


Fig.124 Radiated Spurious Emission (802.11b,Ch13,30MHz~1GHz)

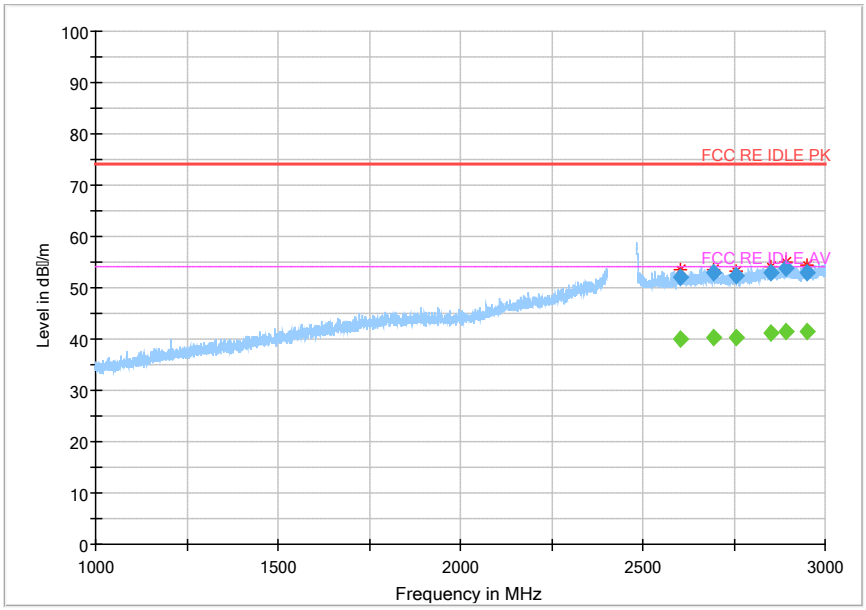


Fig.125 Radiated Spurious Emission (802.11b,Ch13,1GHz~3GHz)

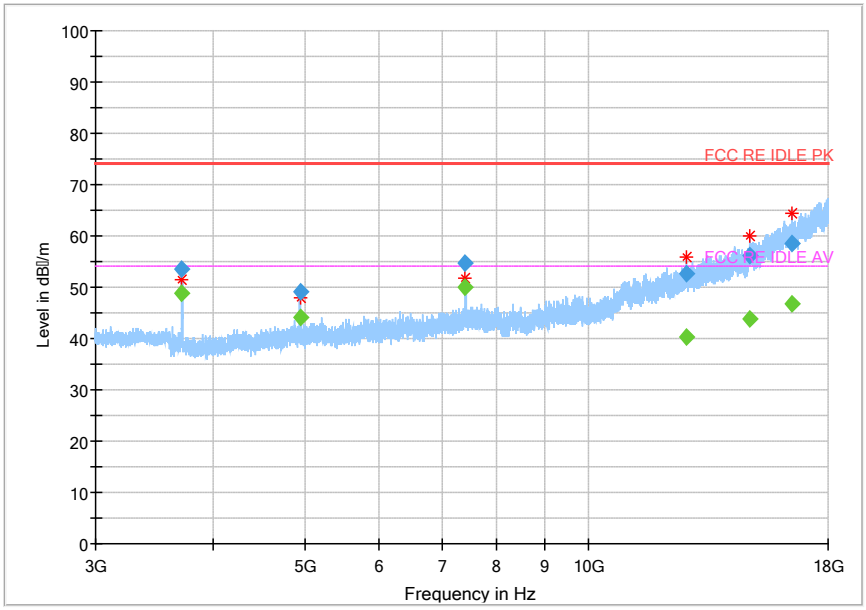
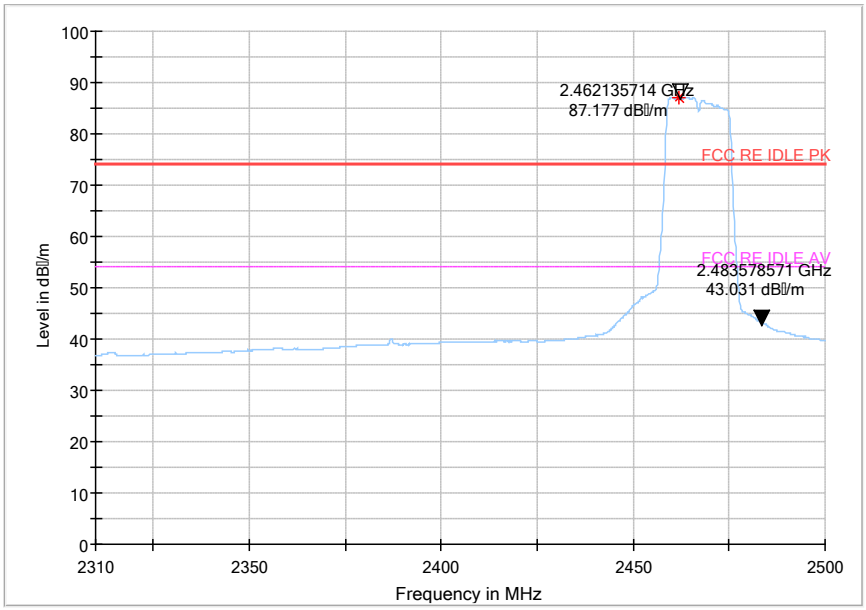
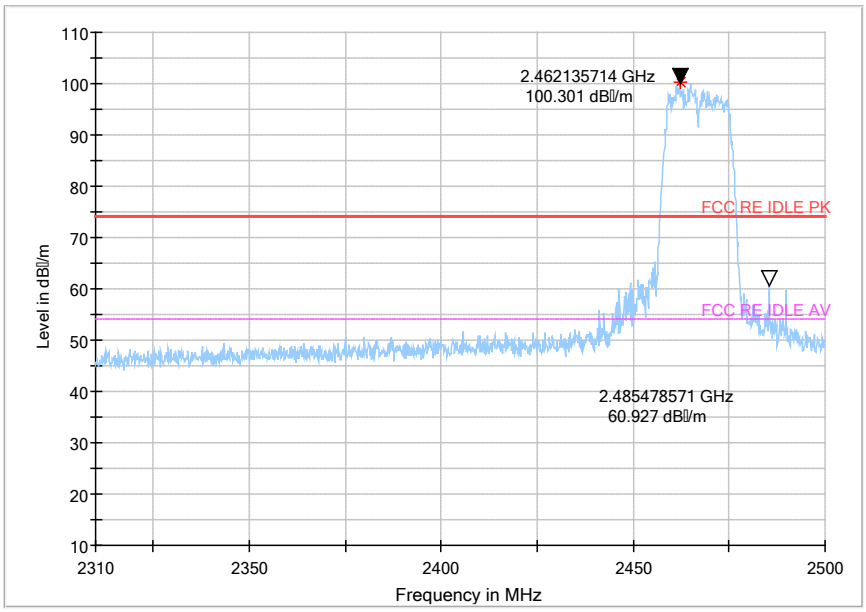


Fig.126 Radiated Spurious Emission (802.11b,Ch13,3GHz~18GHz)



Average detector

Fig.127 Radiated emission (Power): 802.11g,Ch12



Peak detector

Fig.128 Radiated emission (Power): 802.11g,Ch12

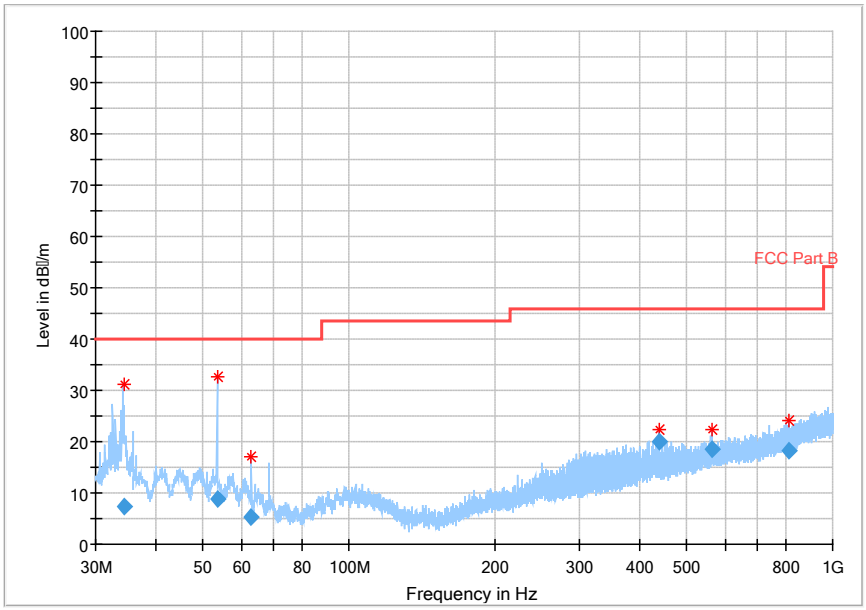


Fig.129 Radiated Spurious Emission (802.11g,Ch12,30MHz~1GHz)

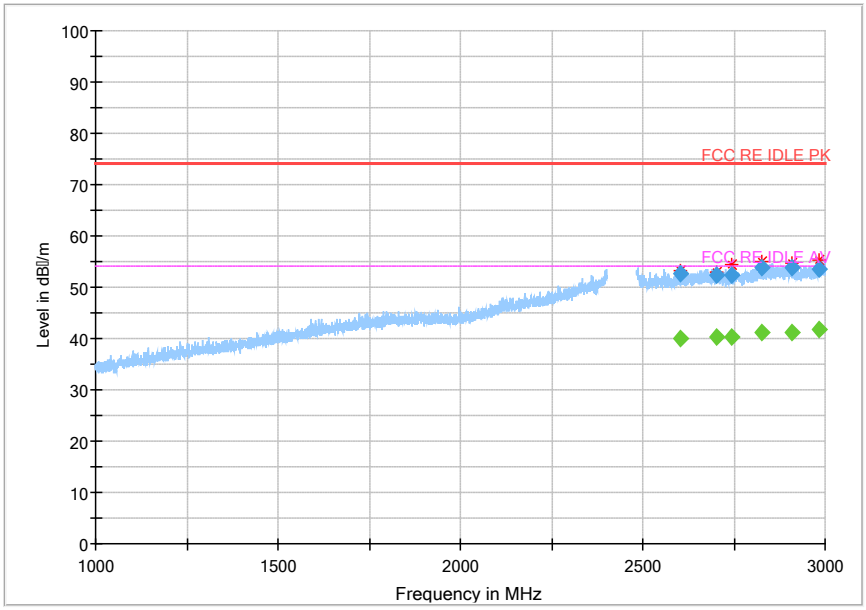


Fig.130 Radiated Spurious Emission (802.11g,Ch12,1GHz~3GHz)

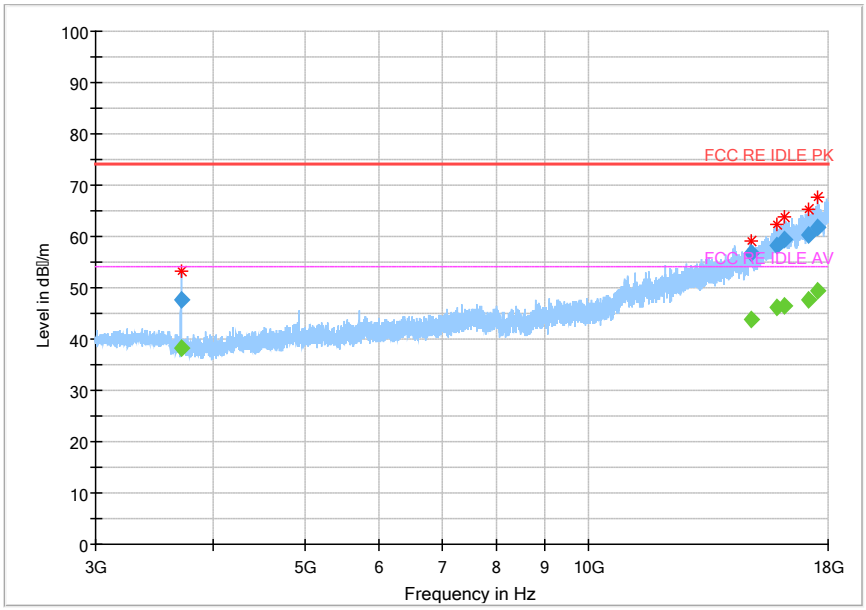
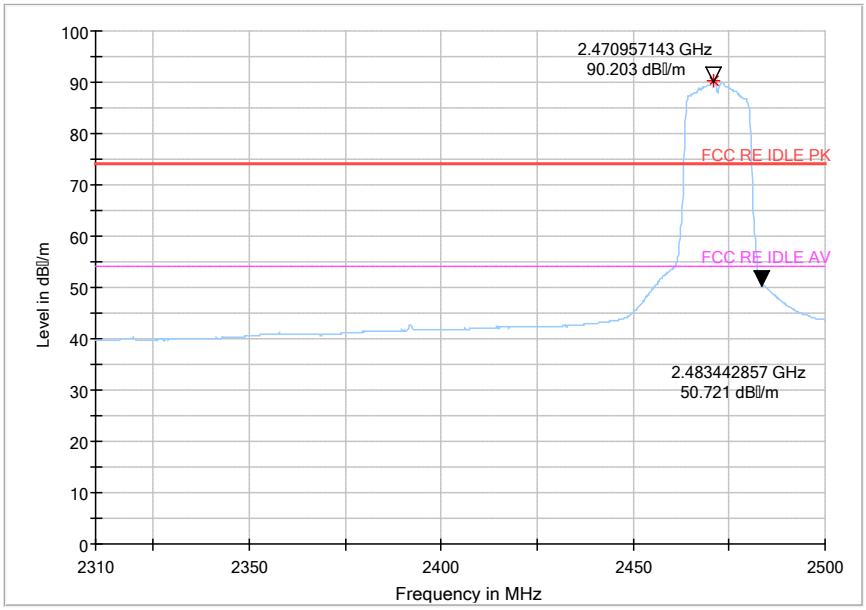
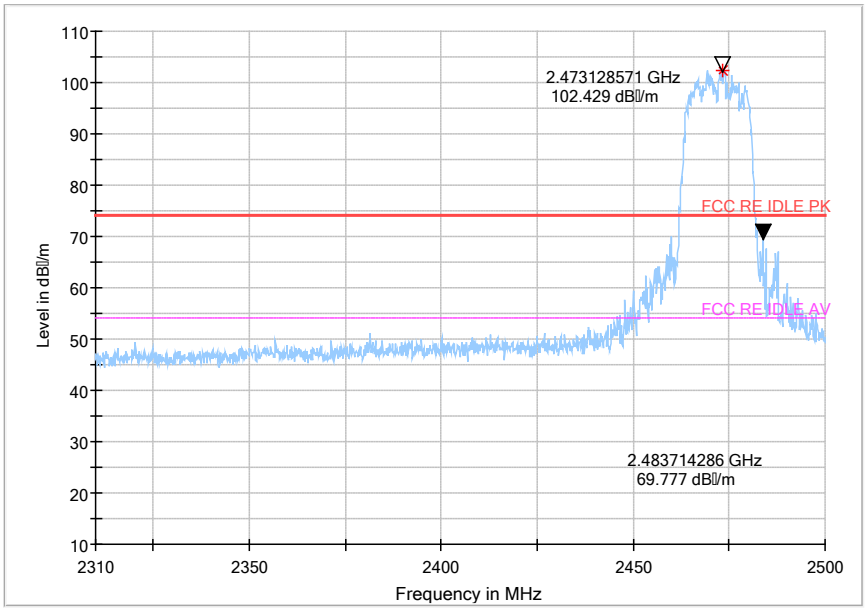


Fig.131 Radiated Spurious Emission (802.11g,Ch12,3GHz~18GHz)



Average detector

Fig.132 Radiated emission (Power): 802.11g,Ch13



Peak detector

Fig.133 Radiated emission (Power): 802.11g,Ch13

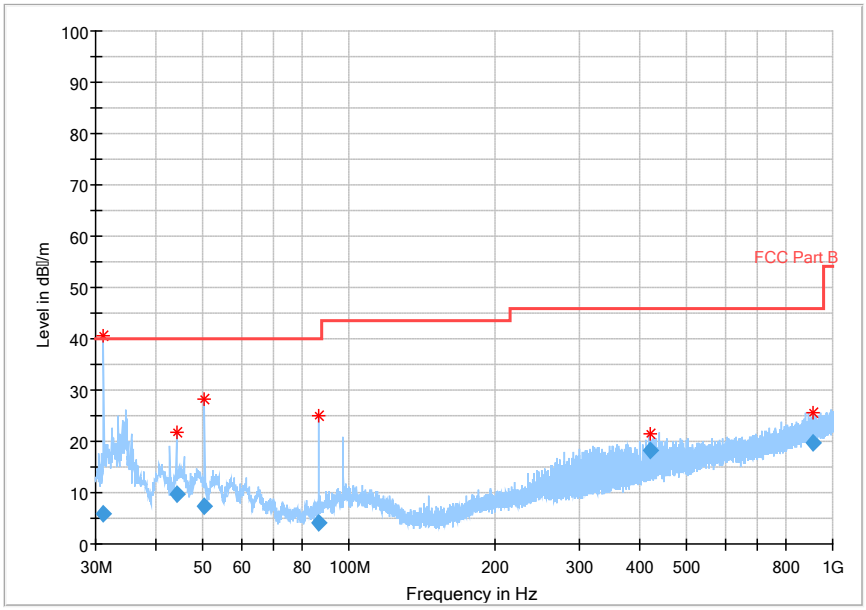


Fig.134 Radiated Spurious Emission (802.11g,Ch13,30MHz~1GHz)

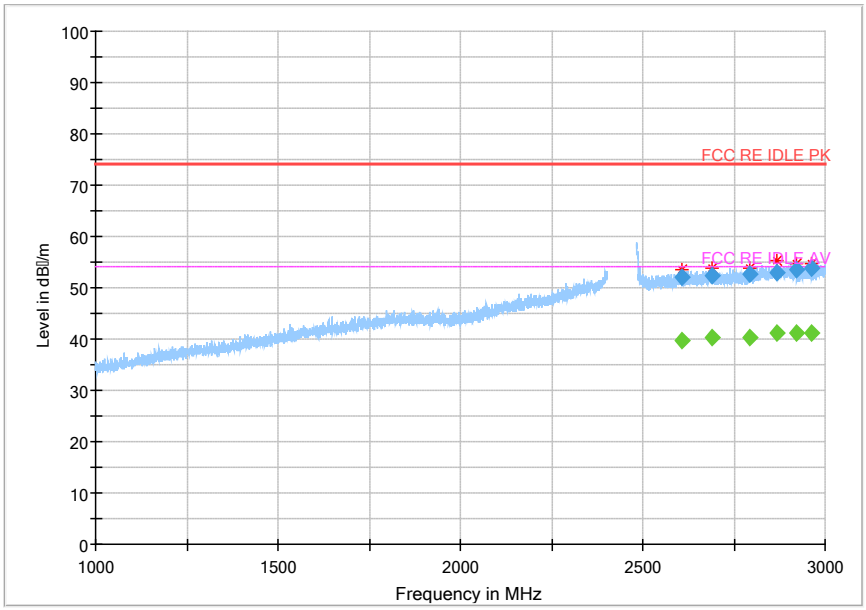


Fig.135 Radiated Spurious Emission (802.11g,Ch13,1GHz~3GHz)

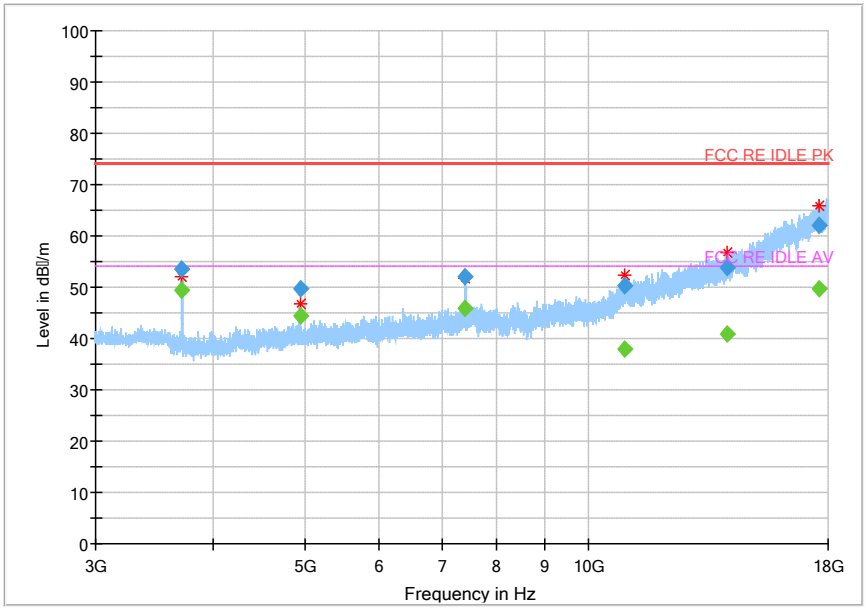
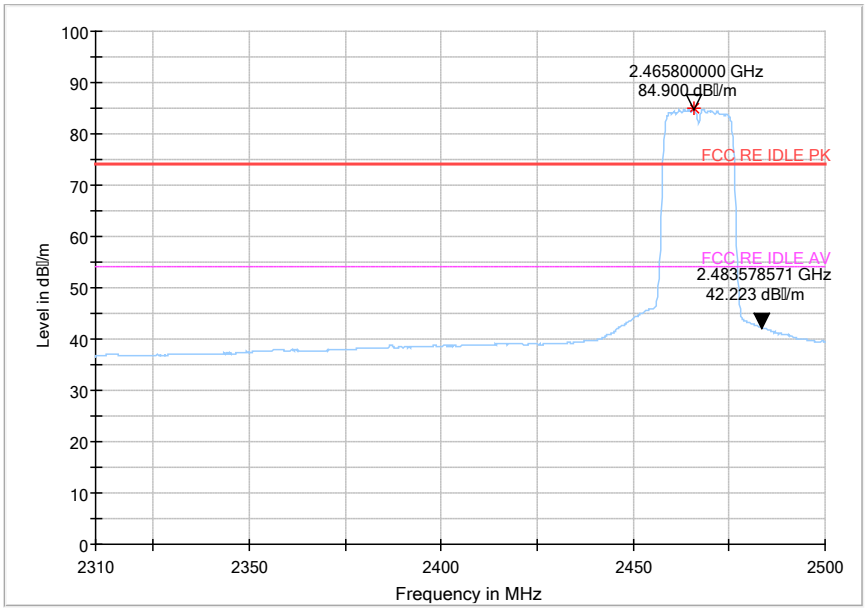
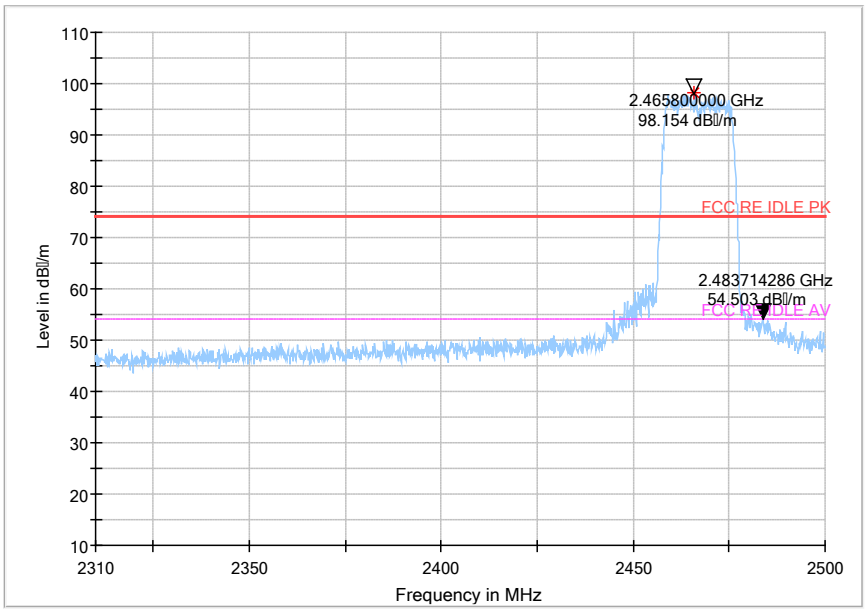


Fig.136 Radiated Spurious Emission (802.11g,Ch13,3GHz~18GHz)



Average detector

Fig.137 Radiated emission (Power): 802.11 n-20Mhz,Ch12



Peak detector

Fig.138 Radiated emission (Power): 802.11 n-20Mhz,Ch12

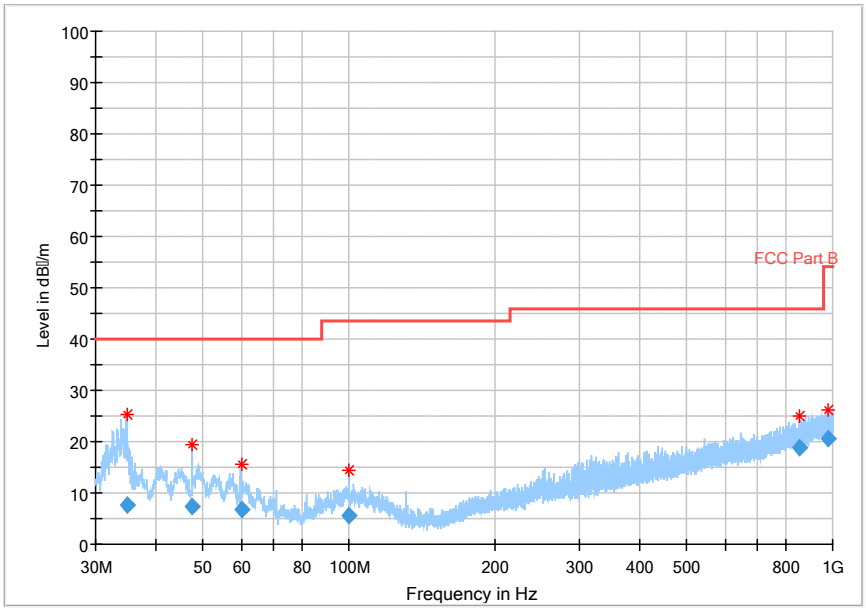


Fig.139 Radiated Spurious Emission (802.11 n-20Mhz,Ch12,30MHz~1GHz)

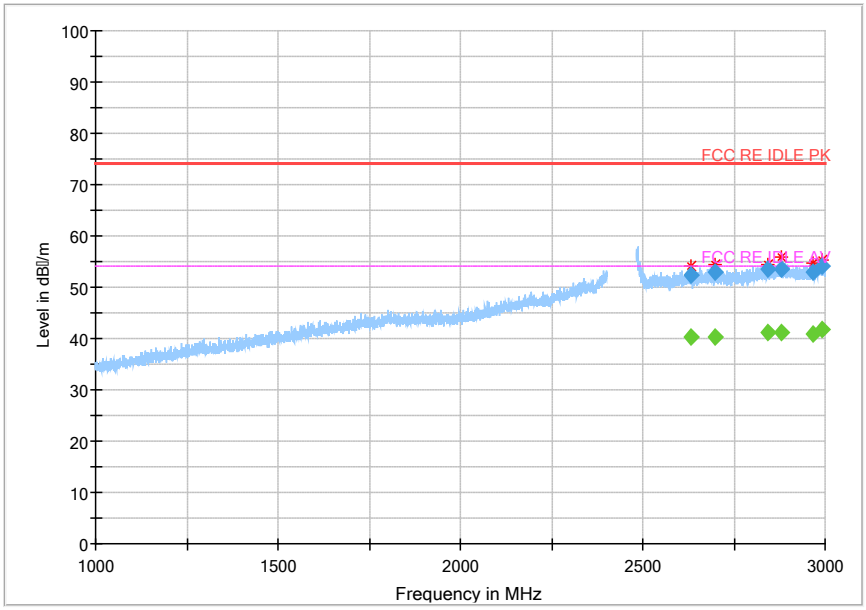


Fig.140 Radiated Spurious Emission (802.11 n-20Mhz,Ch12,1GHz~3GHz)

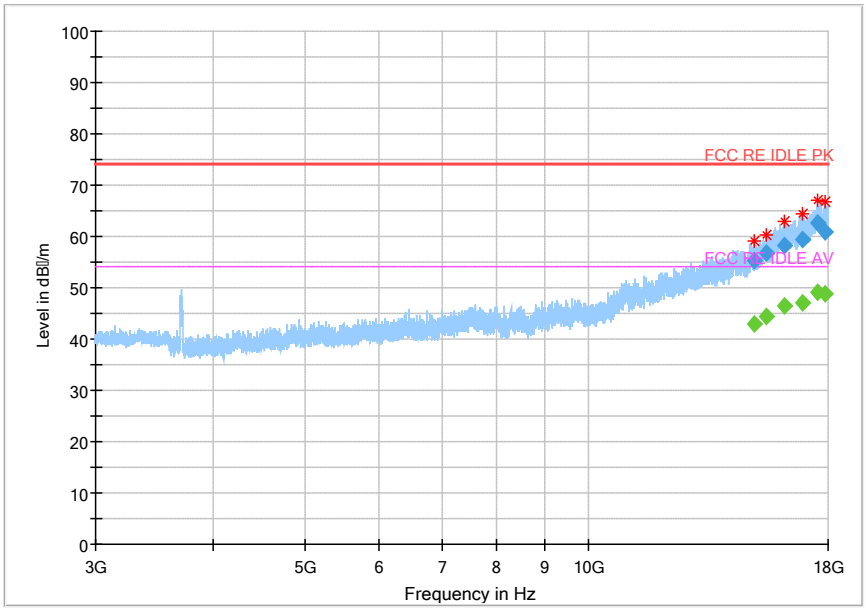
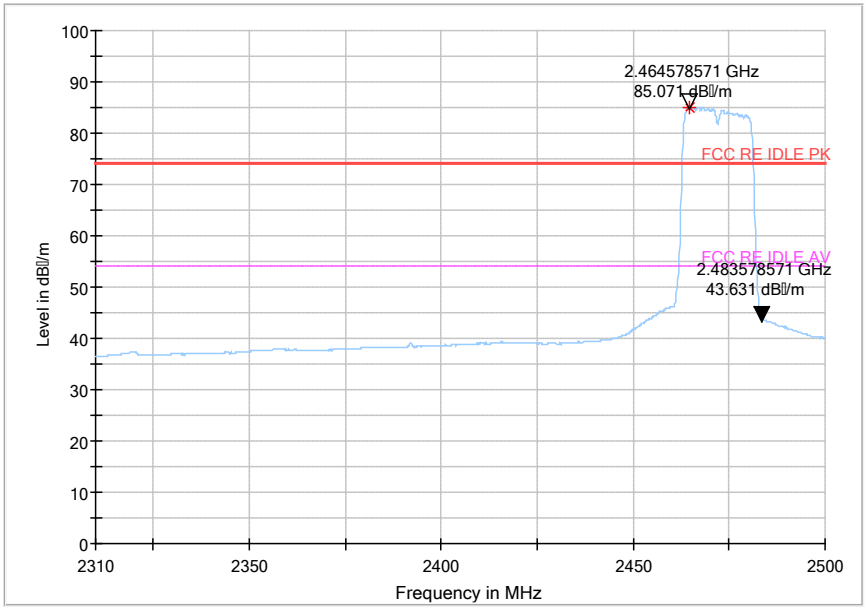
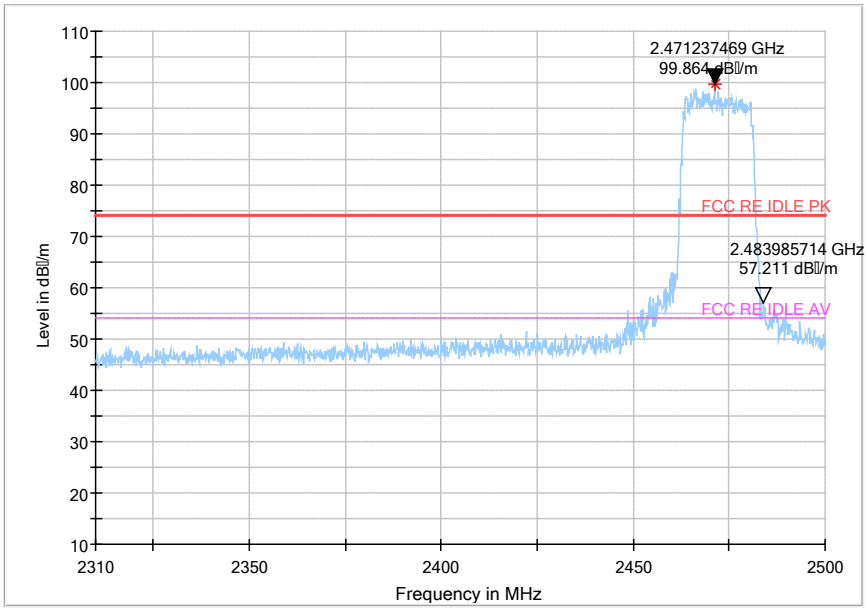


Fig.141 Radiated Spurious Emission (802.11 n-20Mhz,Ch12,3GHz~18GHz)



Average detector

Fig.142 Radiated emission (Power): 802.11 n-20Mhz,Ch13



Peak detector

Fig.143 Radiated emission (Power): 802.11 n-20Mhz,Ch13

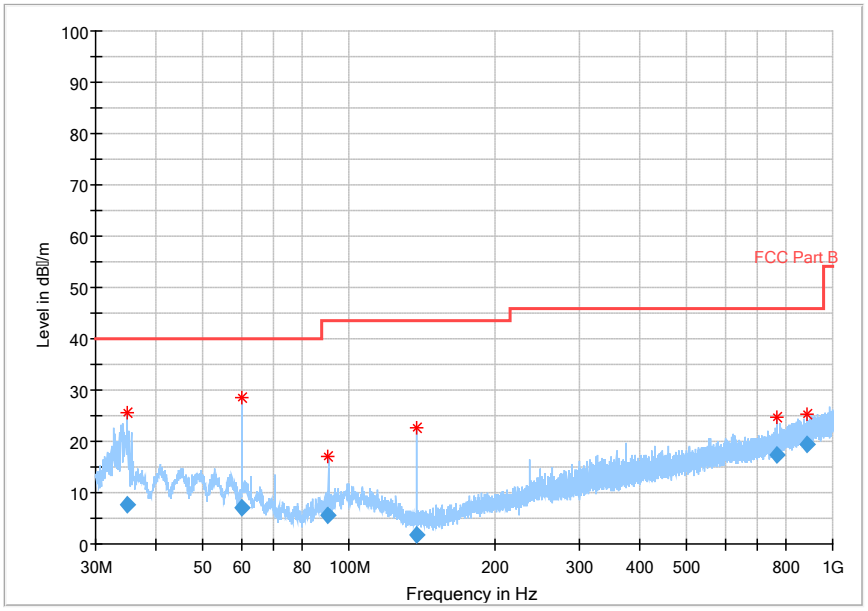


Fig.144 Radiated Spurious Emission (802.11 n-20Mhz,Ch13,30MHz~1GHz)

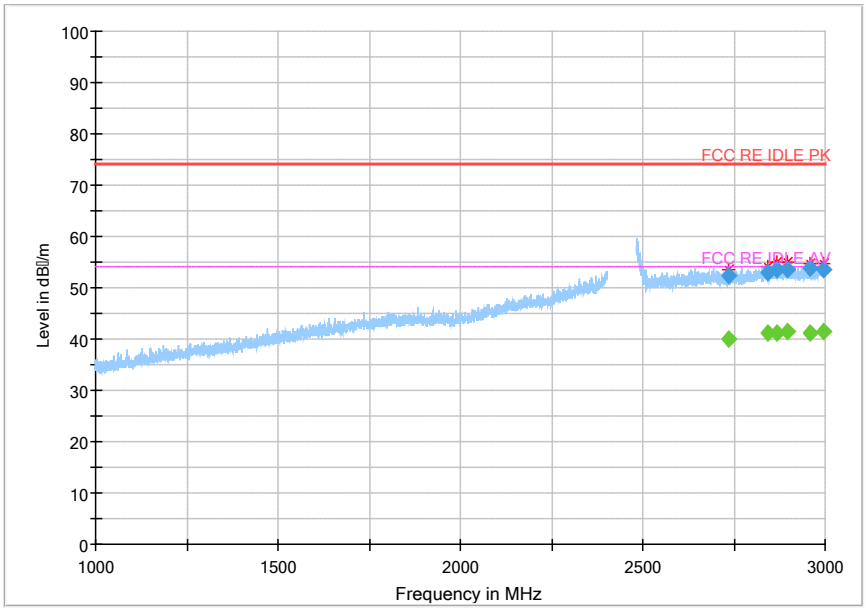


Fig.145 Radiated Spurious Emission (802.11 n-20Mhz,Ch13,1GHz~3GHz)

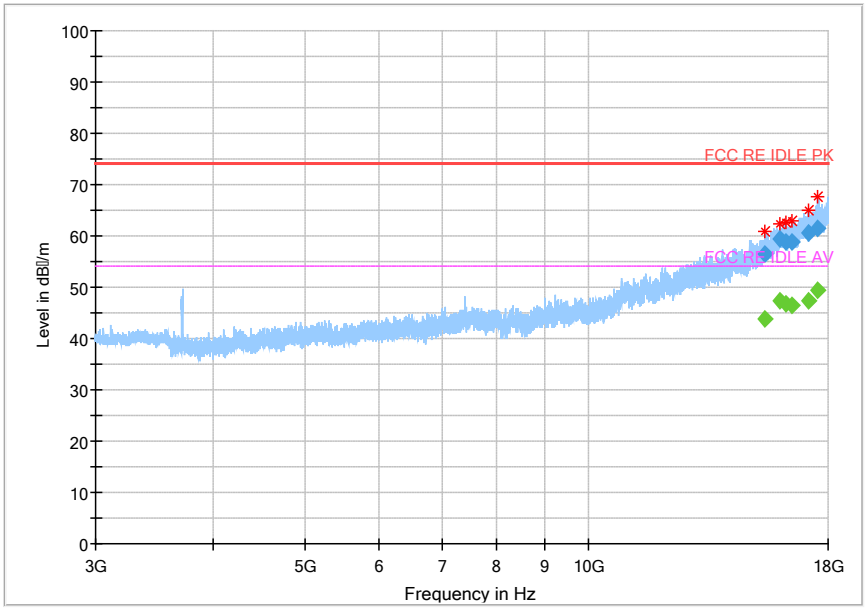
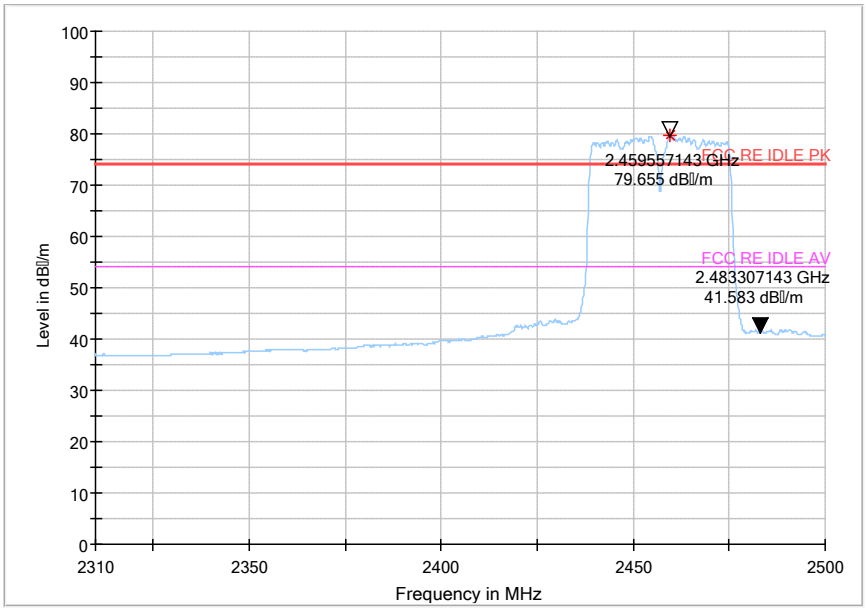
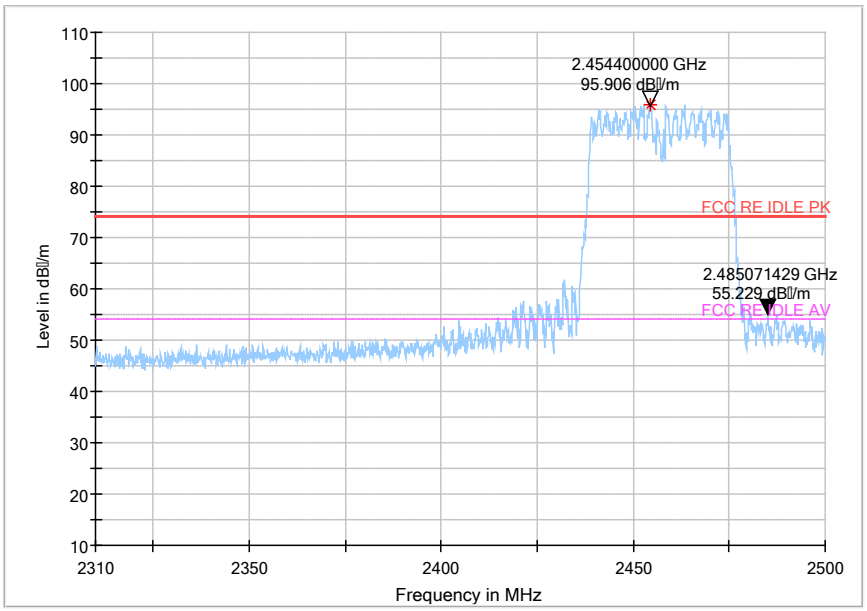


Fig.146 Radiated Spurious Emission (802.11 n-20Mhz,Ch13,3GHz~18GHz)



Average detector

Fig.147 Radiated emission (Power): 802.11 n-40Mhz,Ch10



Peak detector

Fig.148 Radiated emission (Power): 802.11 n-40Mhz,Ch10

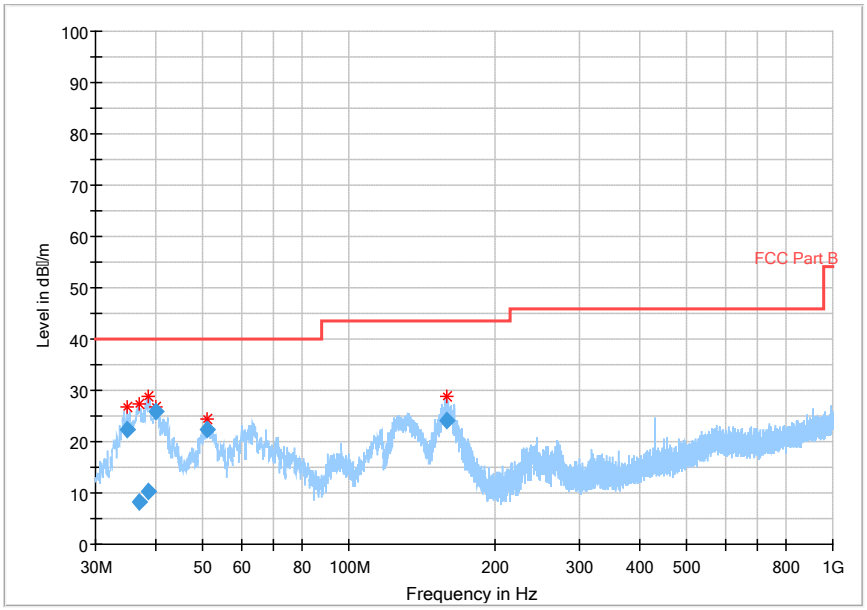


Fig.149 Radiated Spurious Emission (802.11 n-40Mhz,Ch10,30MHz~1GHz)

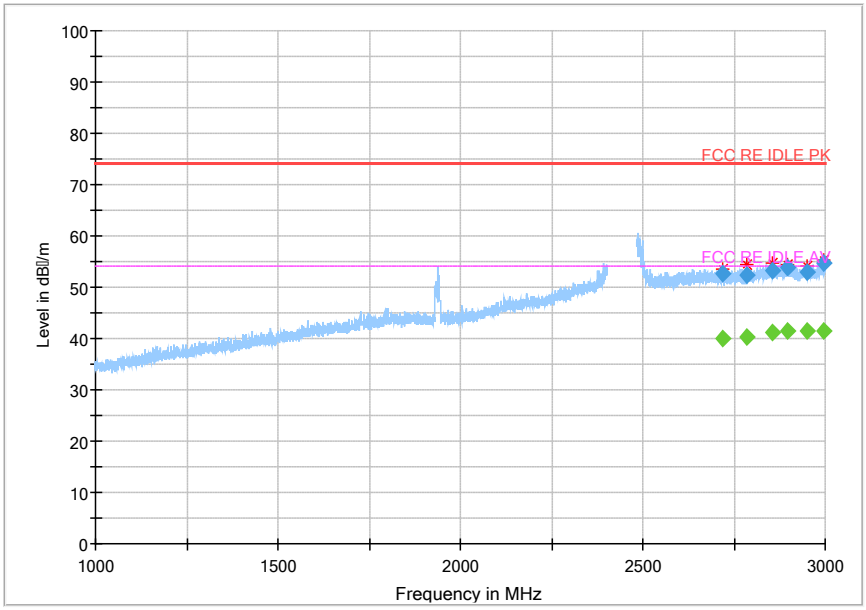


Fig.150 Radiated Spurious Emission (802.11 n-40Mhz,Ch10,1GHz~3GHz)

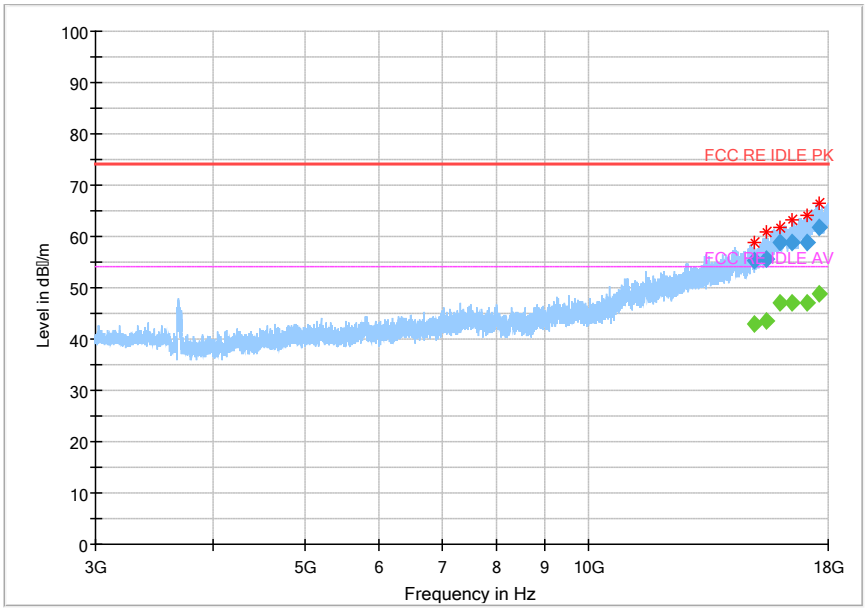
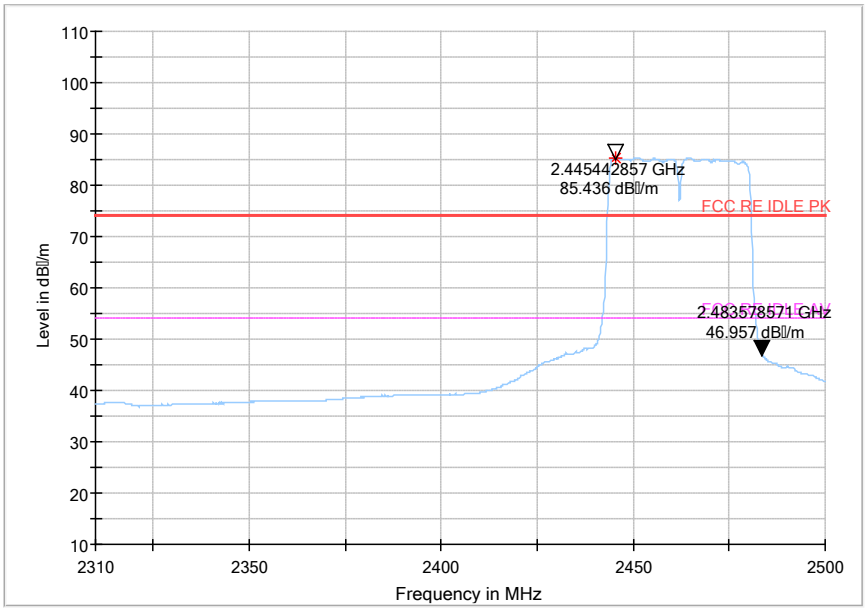
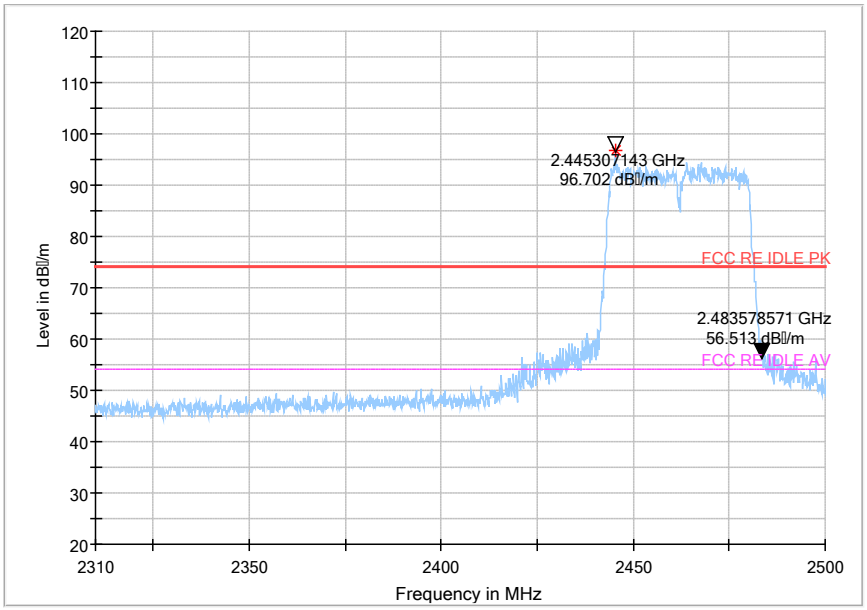


Fig.151 Radiated Spurious Emission (802.11 n-40Mhz,Ch10,3GHz~18GHz)



Average detector



Peak detector

Fig.152 Radiated emission (Power): 802.11 n-40Mhz,Ch11

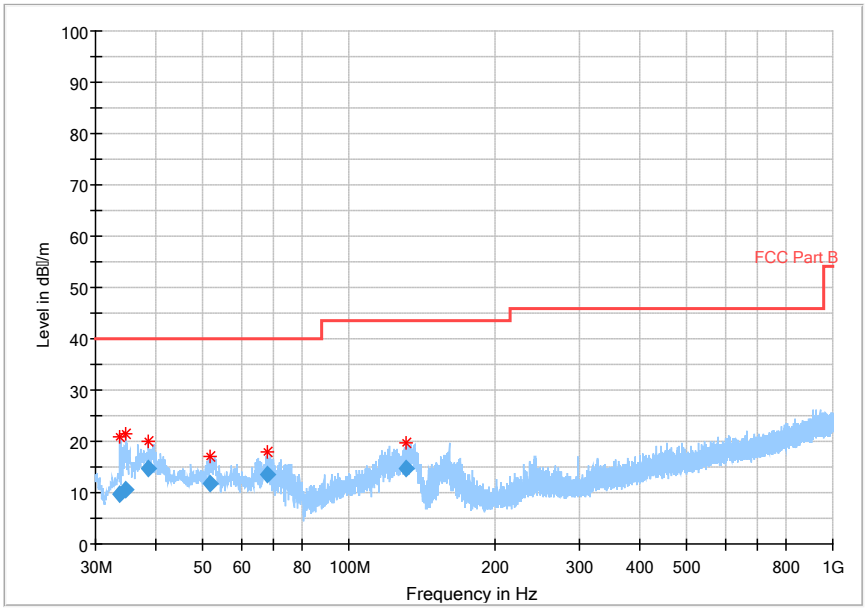


Fig.153 Radiated Spurious Emission (802.11 n-40Mhz,Ch11,30MHz~1GHz)

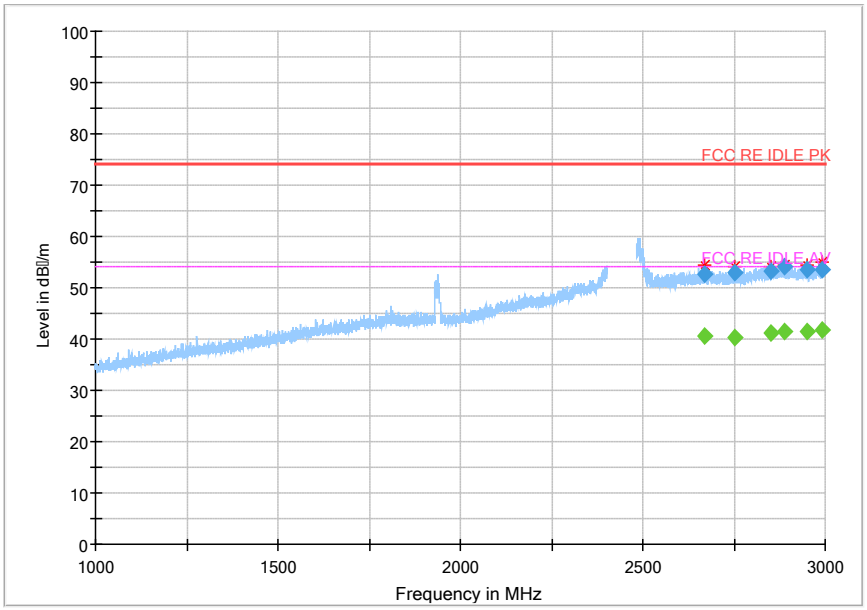


Fig.154 Radiated Spurious Emission (802.11 n-40Mhz,Ch11,1GHz~3GHz)

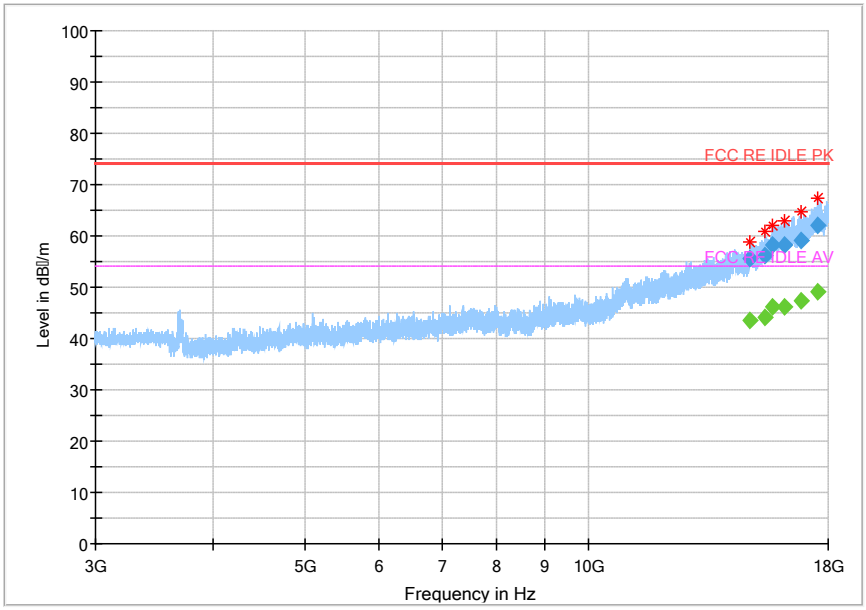


Fig.155 Radiated Spurious Emission (802.11 n-40Mhz,Ch11,3GHz~18GHz)

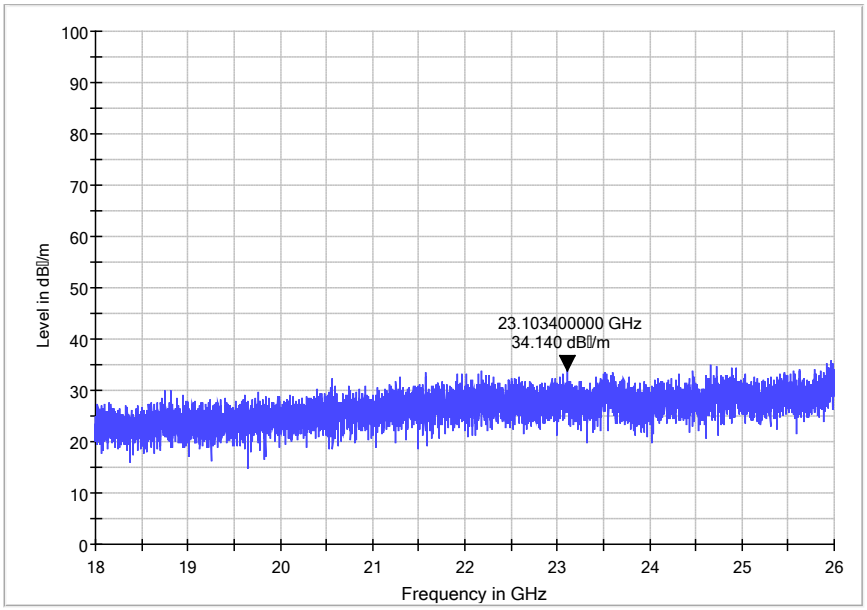


Fig.156 Radiated Spurious Emission (802.11b,ch1,18GHz~26GHz)

6.7. AC Powerline 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.

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:

(Quasi-peak-average Limit)

First Supply

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) With charger 802.11b	Conclusion
0.15 to 0.5	66 to 56	56 to 46	Fig 157.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Conclusion: Pass

First Supply

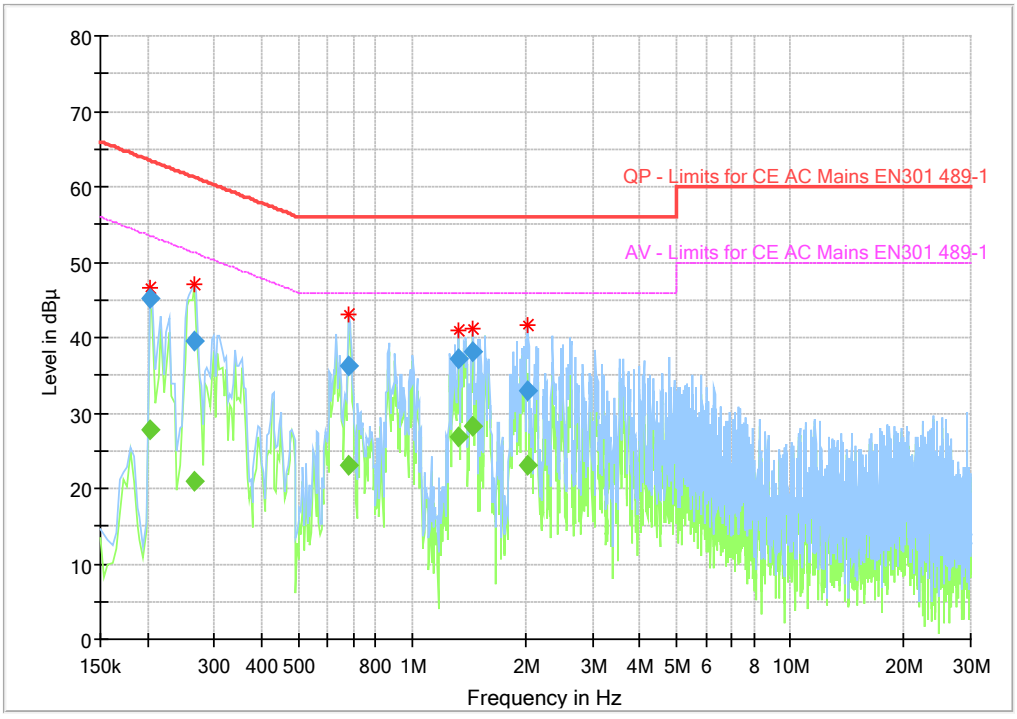


Fig.157 AC Powerline Conducted Emission

Frequency (MHz)	QuasiPeak (dB μ V)	Average (dB μ V)	Limit (dB μ	Margin (dB)	Meas. Time	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.202238	45.18	---	63.52	18.34	1000.0	9.000	N	ON	9.6
0.202238	---	27.75	53.52	25.77	1000.0	9.000	N	ON	9.6
0.265669	39.63	---	61.25	21.62	1000.0	9.000	L1	ON	9.6
0.265669	---	20.85	51.25	30.40	1000.0	9.000	L1	ON	9.6
0.679838	36.20	---	56.00	19.80	1000.0	9.000	L1	ON	9.7
0.679838	---	23.05	46.00	22.95	1000.0	9.000	L1	ON	9.7
1.329075	---	26.85	46.00	19.15	1000.0	9.000	L1	ON	9.7
1.329075	37.24	---	56.00	18.76	1000.0	9.000	L1	ON	9.7
1.452206	38.05	---	56.00	17.95	1000.0	9.000	L1	ON	9.7
1.452206	---	28.24	46.00	17.76	1000.0	9.000	L1	ON	9.7
2.019356	---	23.15	46.00	22.85	1000.0	9.000	N	ON	9.7
2.019356	33.00	---	56.00	23.00	1000.0	9.000	N	ON	9.7

7. Test Equipment and Ancillaries Used For Tests

The test equipment and ancillaries used are as follows.

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration date	Cal.interval
1	Vector Signal	FSQ26	101096	R&S	2016-05-12	1 Year
2	DC Power Supply	ZUP60-14	LOC-220Z006	TDL-Lambda	2016-05-12	1 Year

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date	Cal.interval
1	Universal Radio Communication Tester	CMU200	123101	R&S	2016-05-12	1 Year
3	Test Receiver	ESU40	100307	R&S	2016-05-12	1 Year
4	Trilog Antenna	VULB9163	VULB9163-515	Schwarzbeck	2014-11-05	3 Year
5	Double Ridged Guide Antenna	ETS-3117	135885	ETS	2014-05-06	3 Year
8	2-Line V-Network	ENV216	101380	R&S	2016-05-12	1 Year

Anechoic chamber

Fully anechoic chamber by Frankonia German.

8. Test Environment

Shielding Room1 (6.0 meters×3.0 meters×2.7 meters) did not exceed following limits along the conducted RF performance testing:

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. = 25 %, Max. = 75 %
Shielding effectiveness	> 110 dB
Ground system resistance	< 0.5 Ω

Control room did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. =25 %, Max. = 75 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

Fully-anechoic chamber1 (6.9 meters×10.9 meters×5.4 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. = 25 %, Max. = 75 %
Shielding effectiveness	> 100 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
VSWR	Between 0 and 6 dB, from 1GHz to 18GHz
Site Attenuation Deviation	Between -4 and 4 dB,30MHz to 1GHz
Uniformity of field strength	Between 0 and 6 dB, from 80MHz to 3000 MHz

ANNEX A. Deviations from Prescribed Test Methods

No deviation from Prescribed Test Methods.

************End The Report************