

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

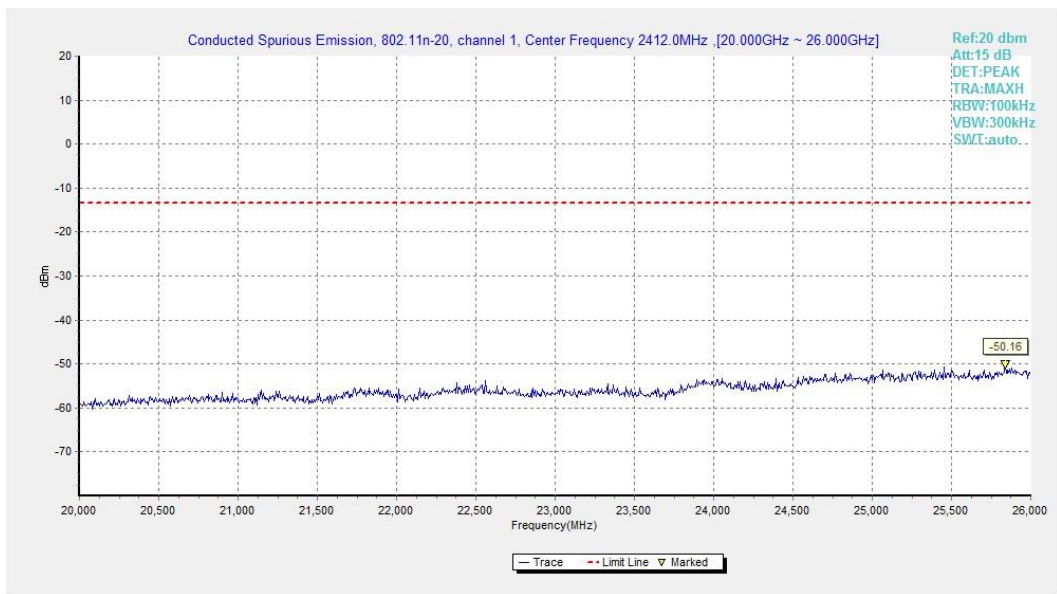


Fig.A.6.1.56 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 20 GHz-26 GHz)

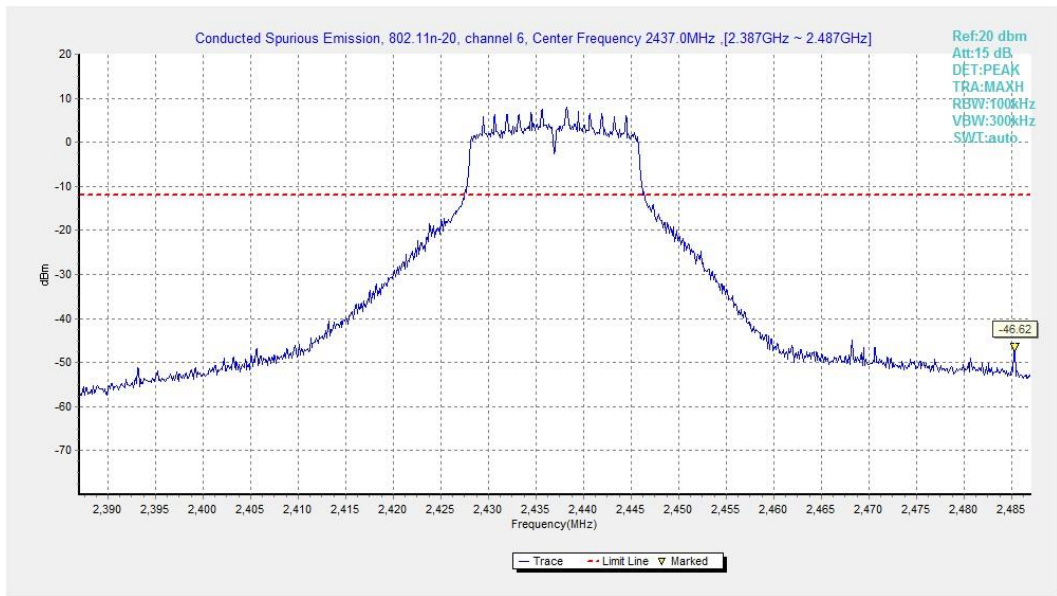


Fig.A.6.1.57 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, Center Frequency)

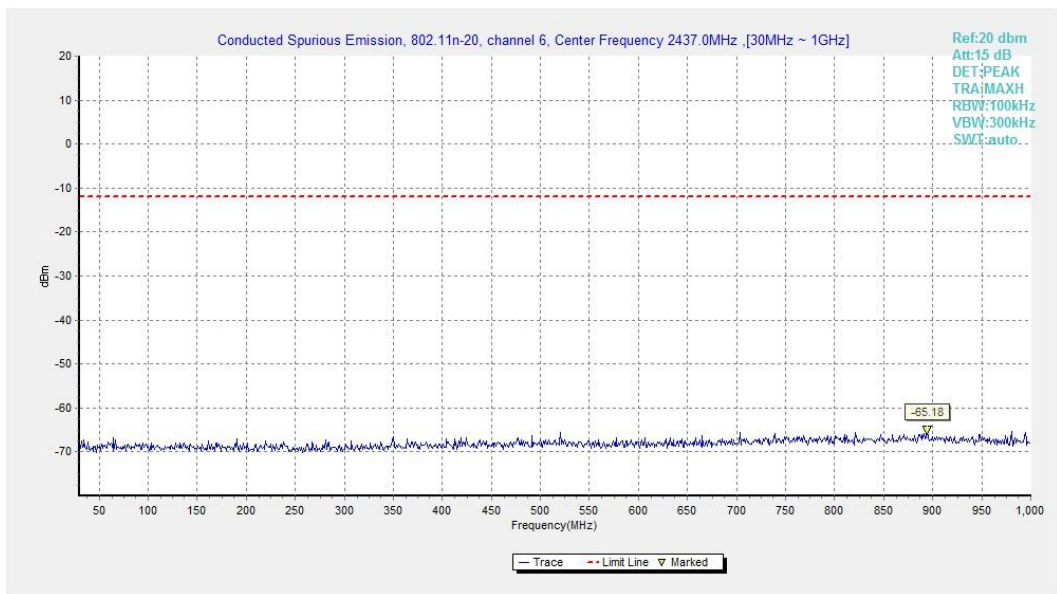


Fig.A.6.1.58 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 30 MHz-1 GHz)

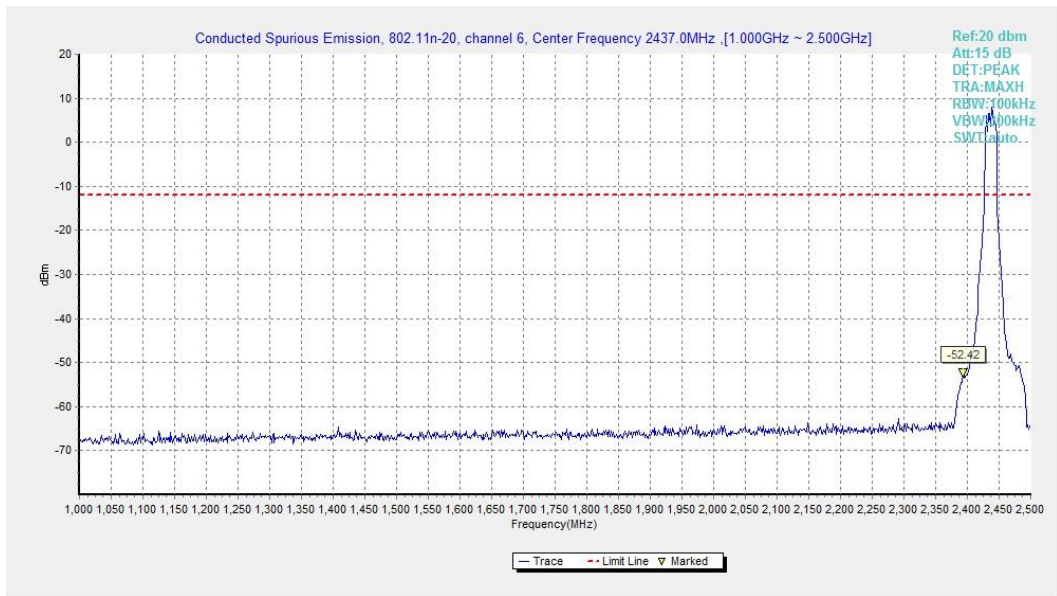


Fig.A.6.1.59 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 1 GHz-2.5 GHz)

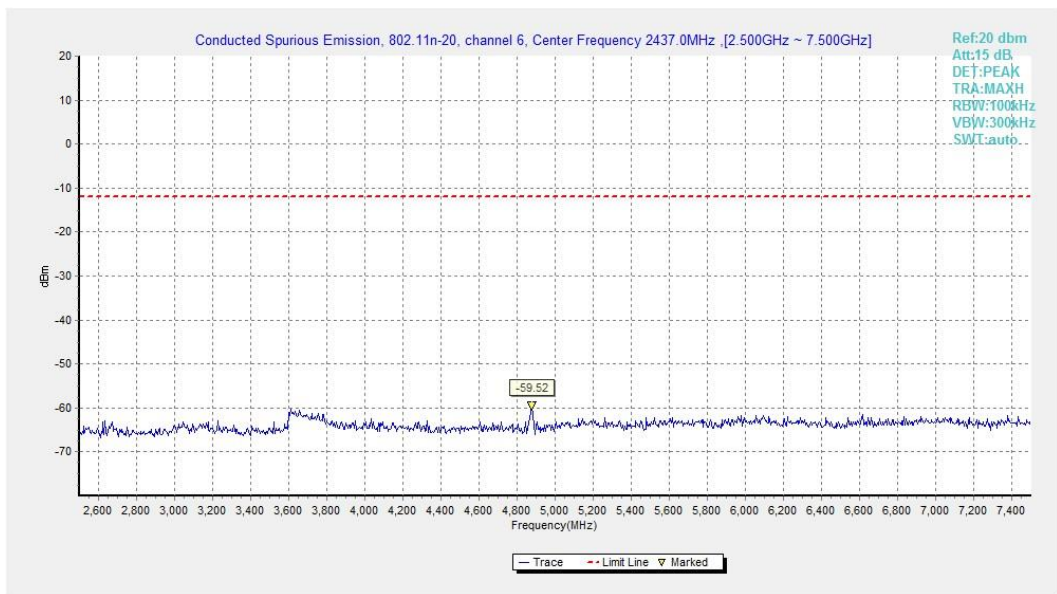


Fig.A.6.1.60 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 2.5 GHz-7.5 GHz)

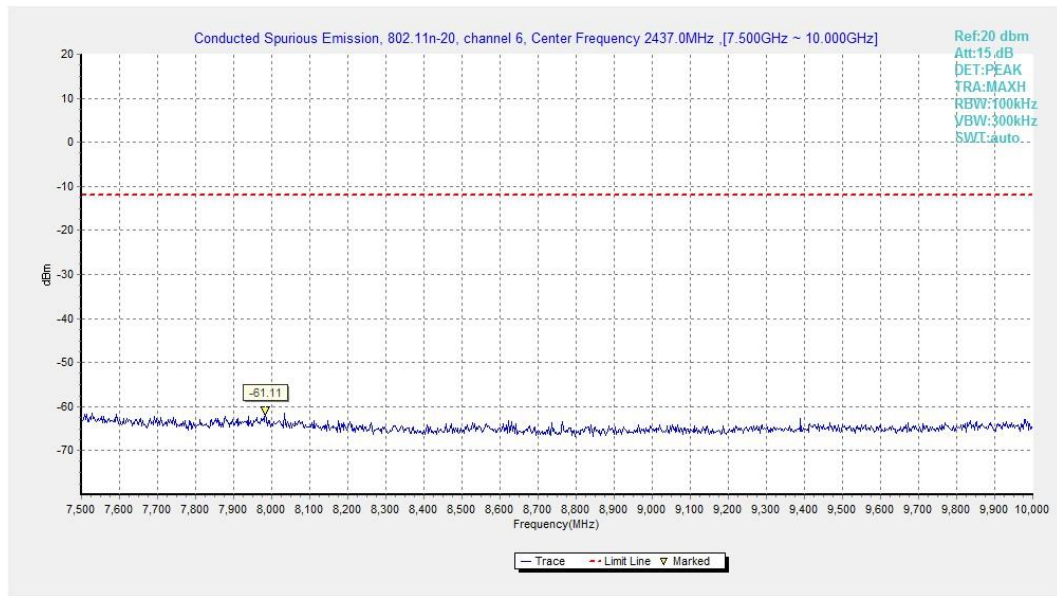


Fig.A.6.1.61 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 7.5 GHz-10 GHz)

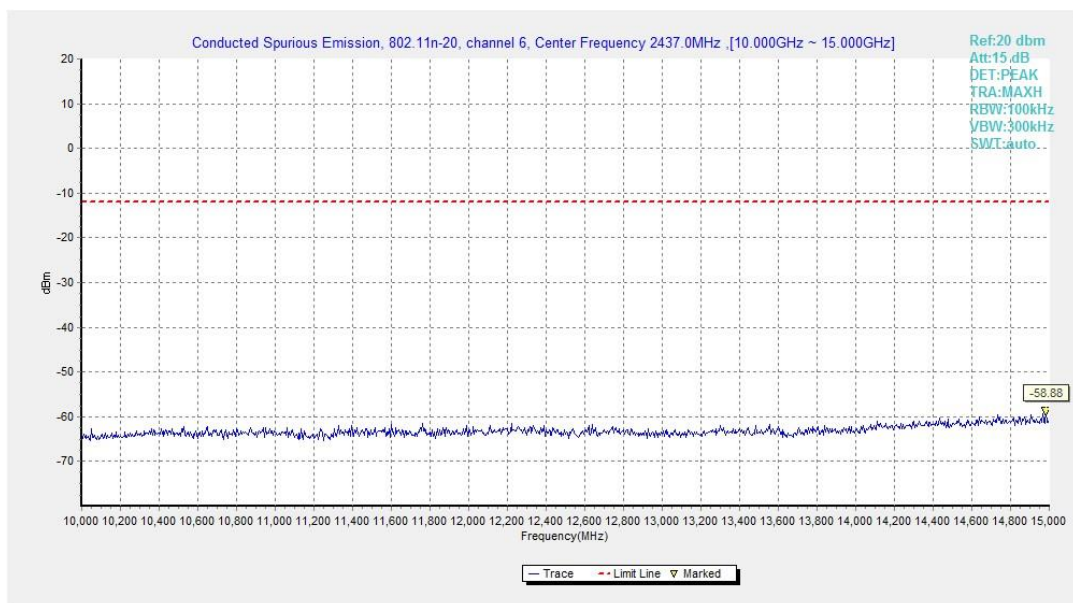


Fig.A.6.1.62 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 10 GHz-15 GHz)

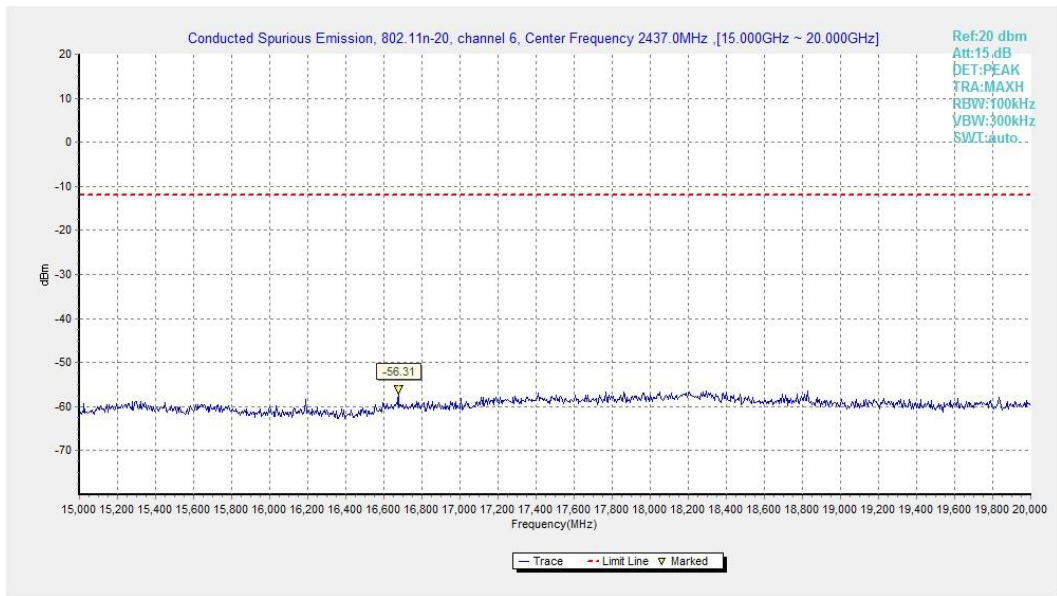


Fig.A.6.1.63 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 15 GHz-20 GHz)

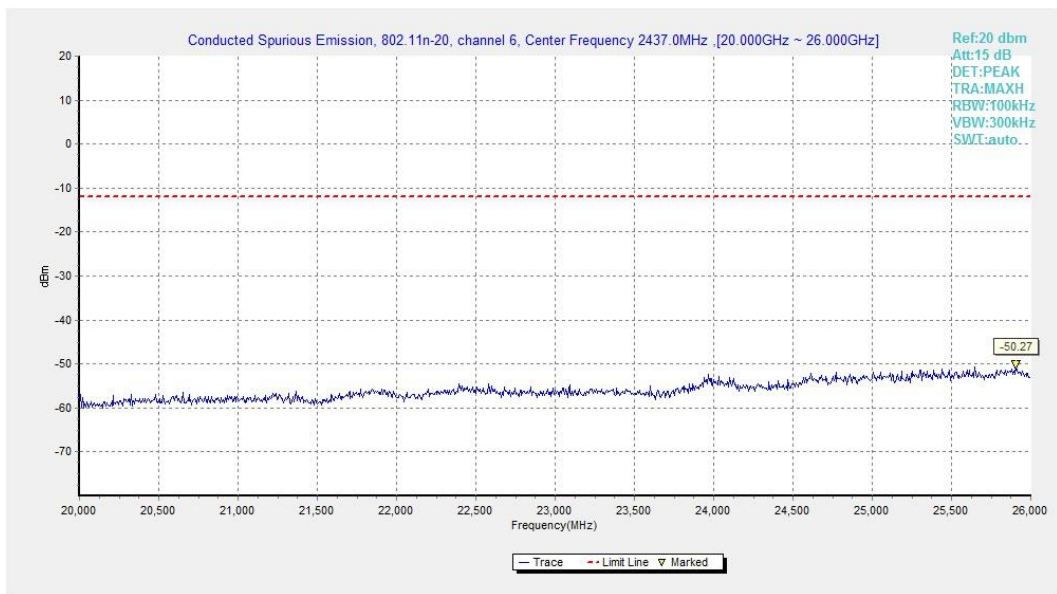


Fig.A.6.1.64 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 20 GHz-26 GHz)

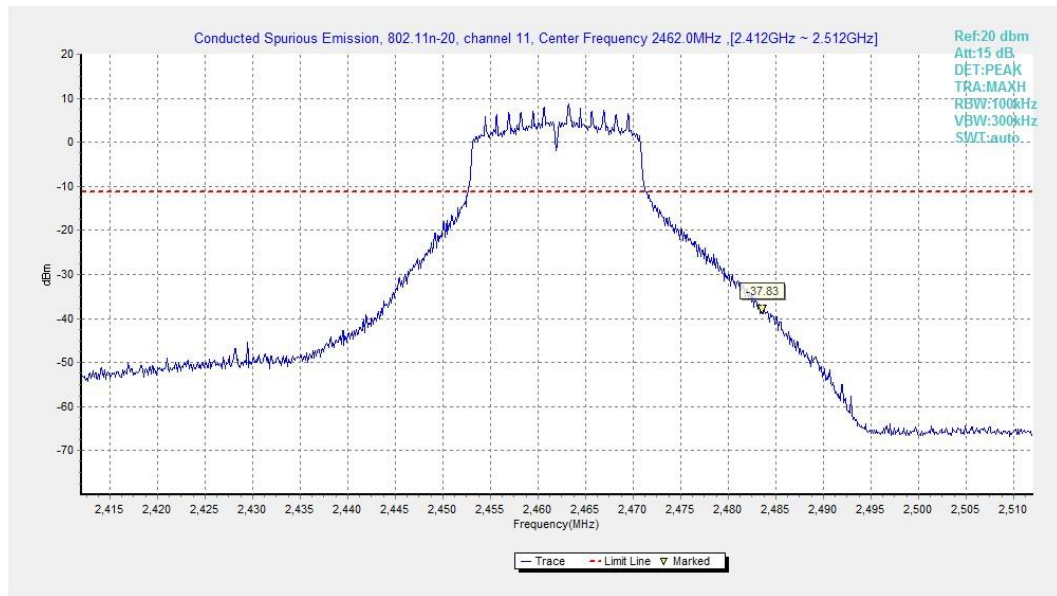


Fig.A.6.1.65 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, Center Frequency)

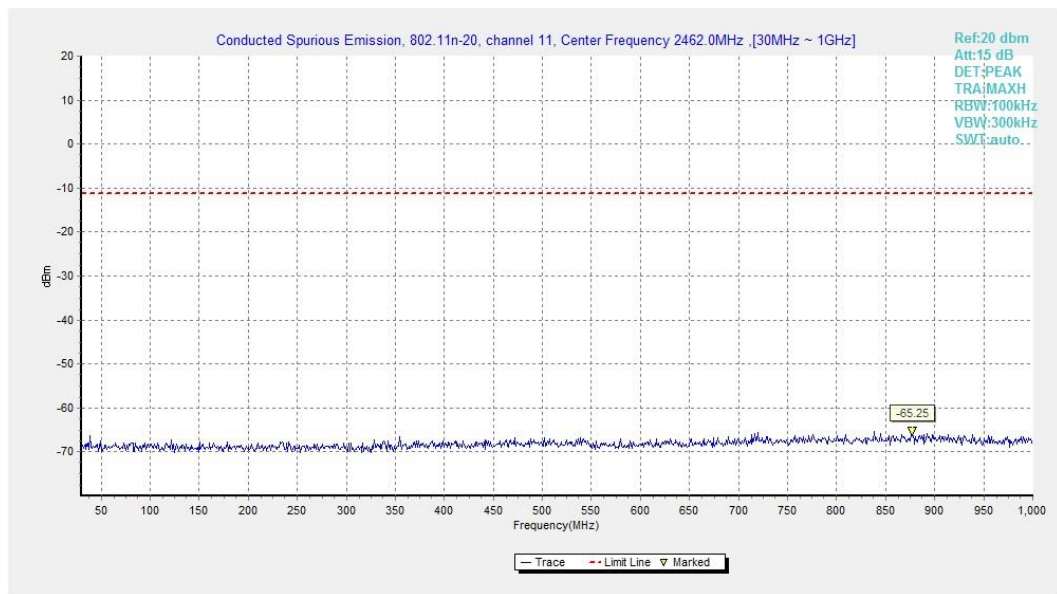


Fig.A.6.1.66 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 30 MHz-1 GHz)

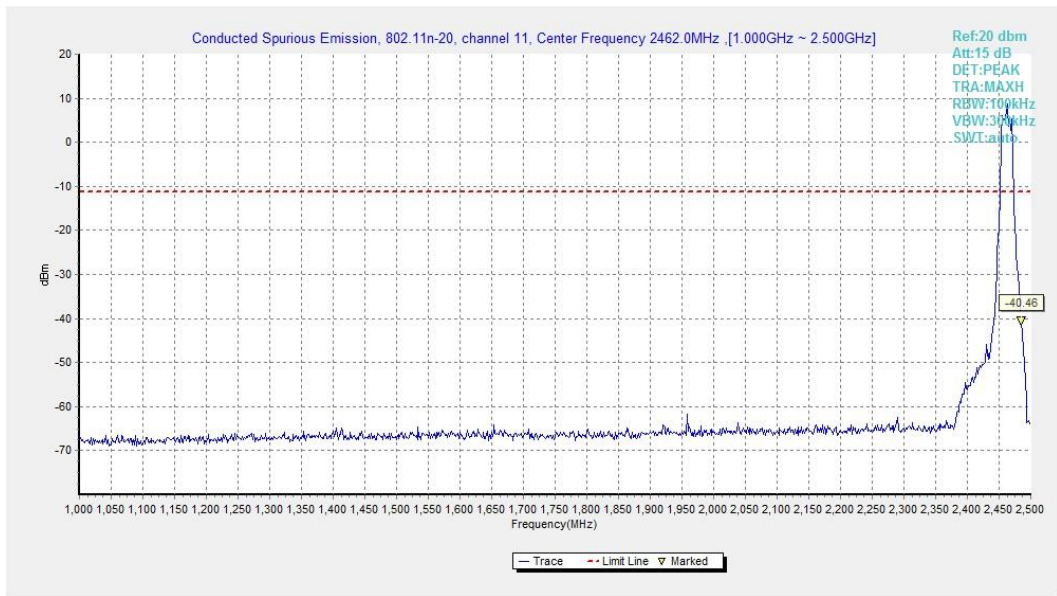


Fig.A.6.1.67 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 1 GHz-2.5 GHz)

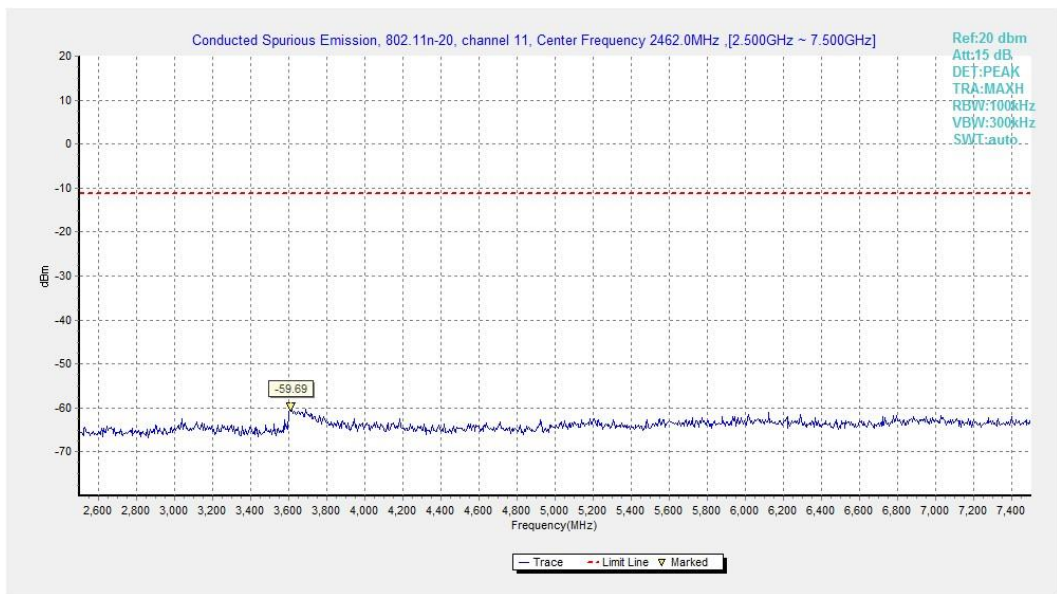


Fig.A.6.1.68 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 2.5 GHz-7.5 GHz)

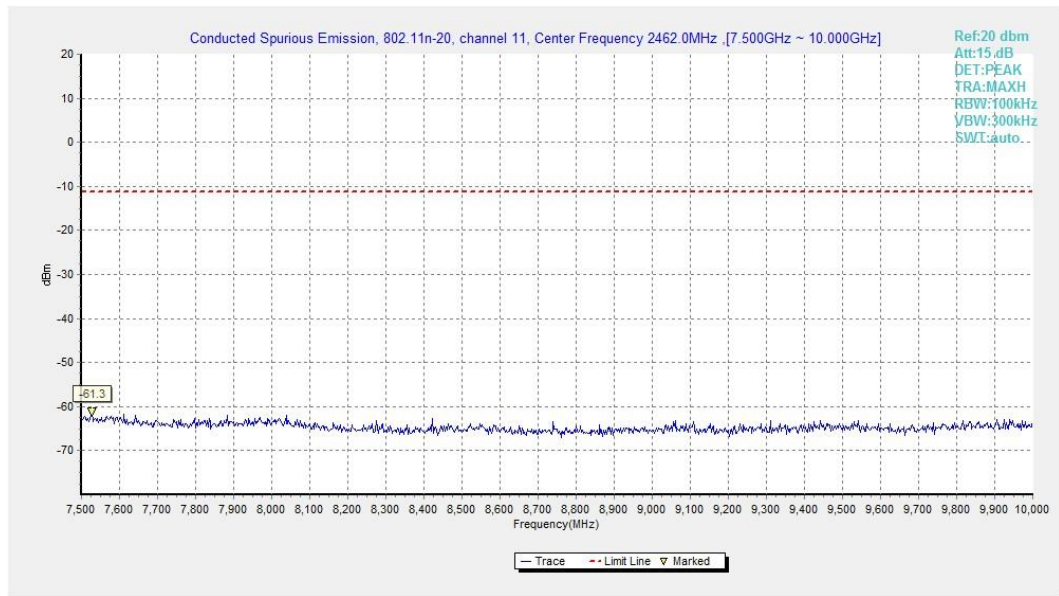


Fig.A.6.1.69 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 7.5 GHz-10 GHz)

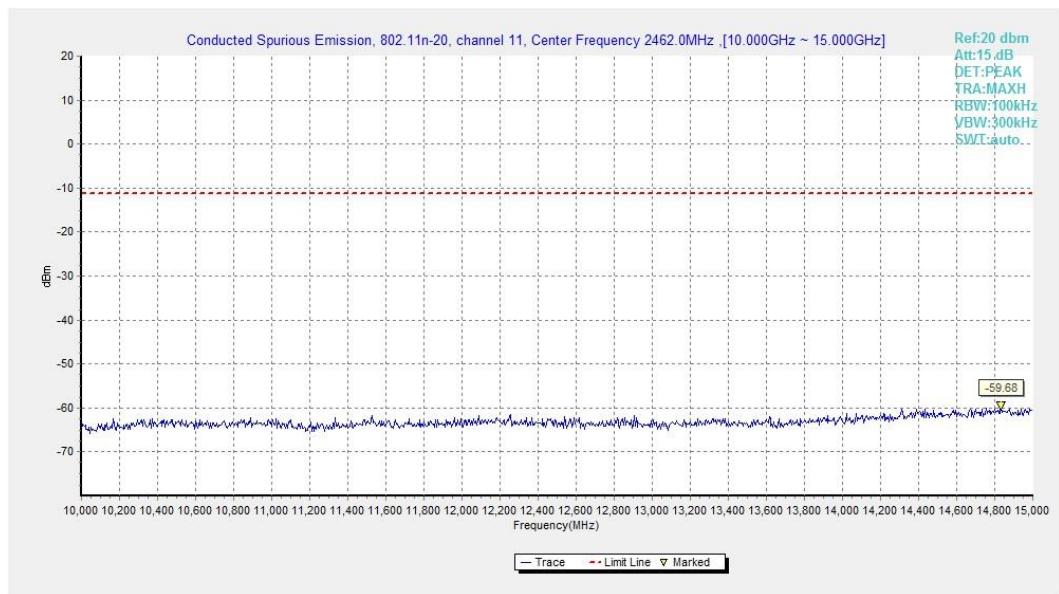


Fig.A.6.1.70 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 10 GHz-15 GHz)

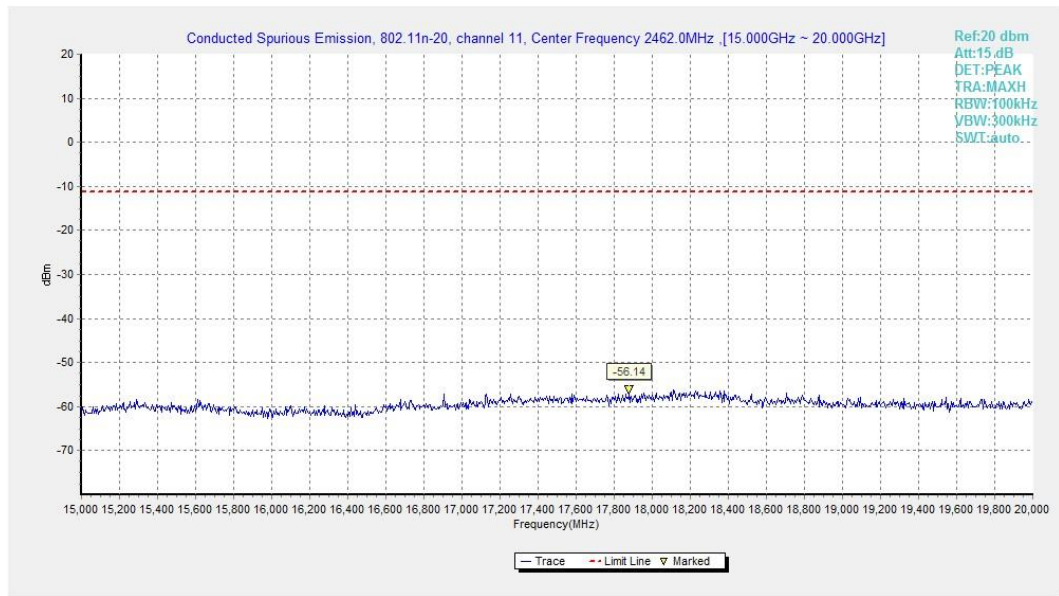


Fig.A.6.1.71 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 15 GHz-20 GHz)

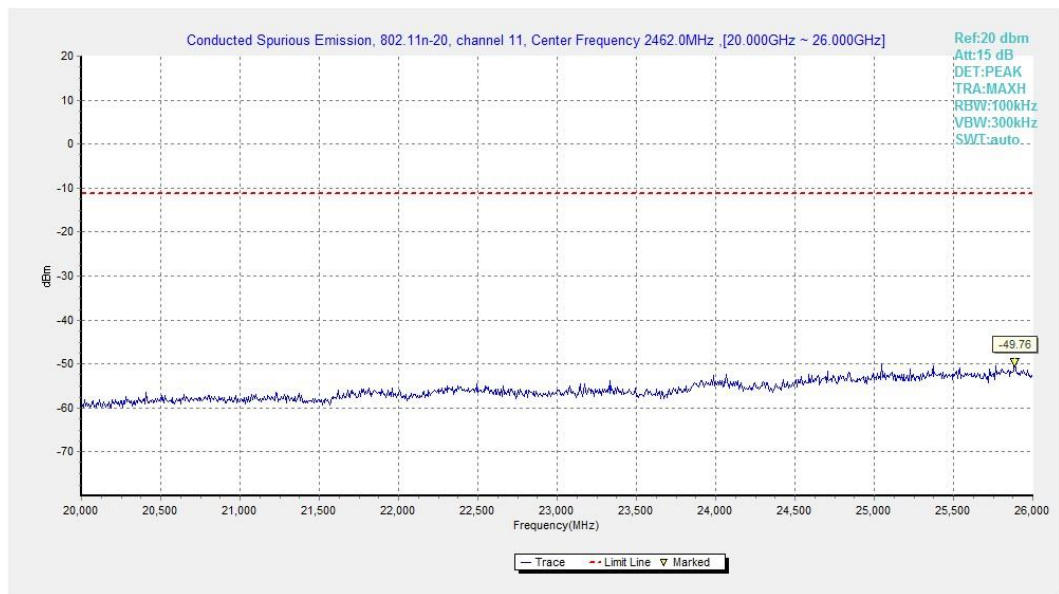


Fig.A.6.1.72 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 20 GHz-26 GHz)

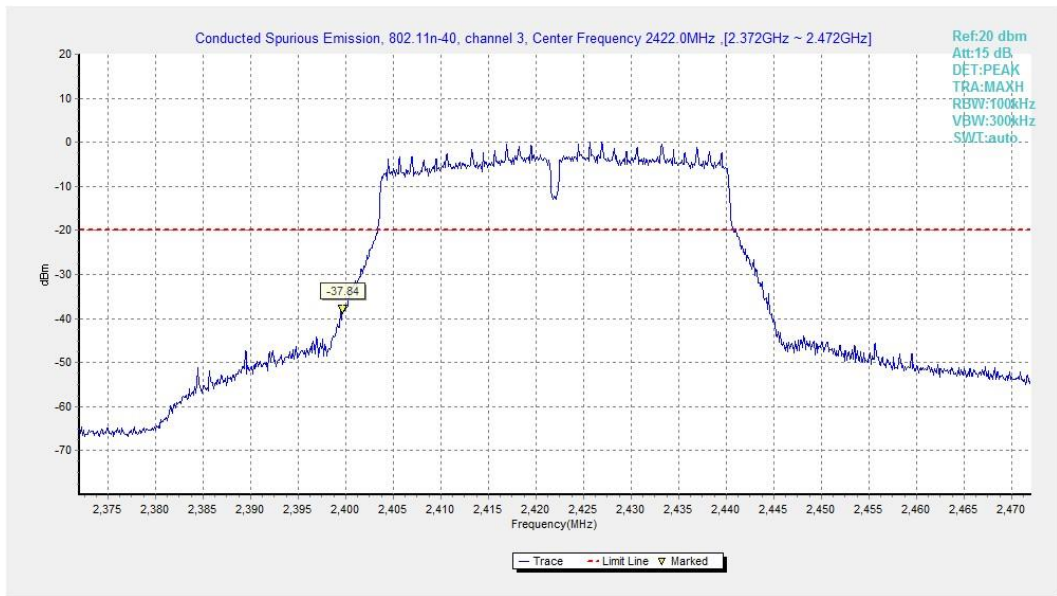


Fig.A.6.1.73 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, Center Frequency)

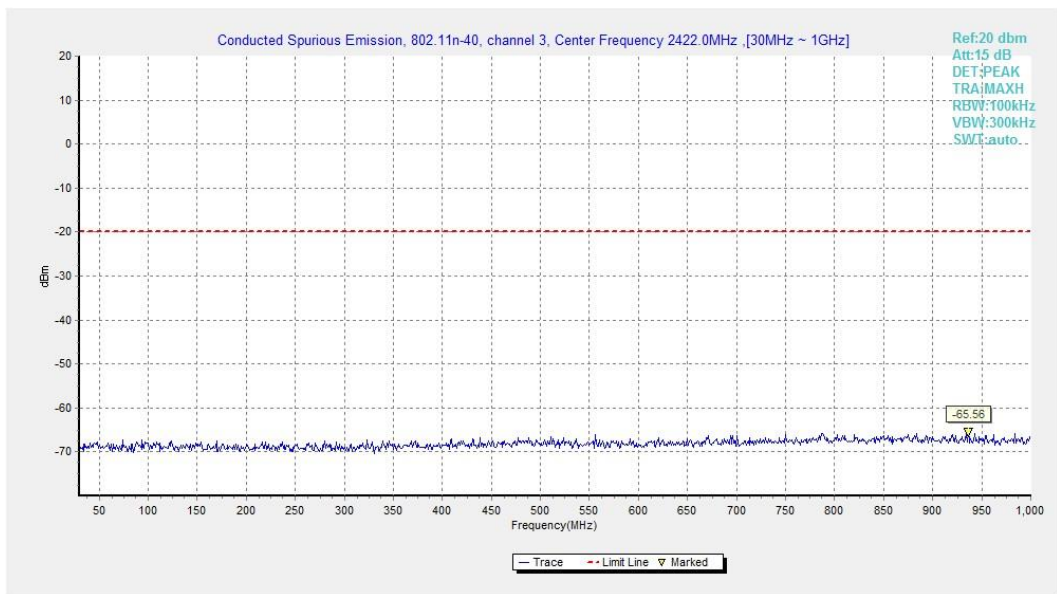


Fig.A.6.1.74 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 30 MHz-1 GHz)

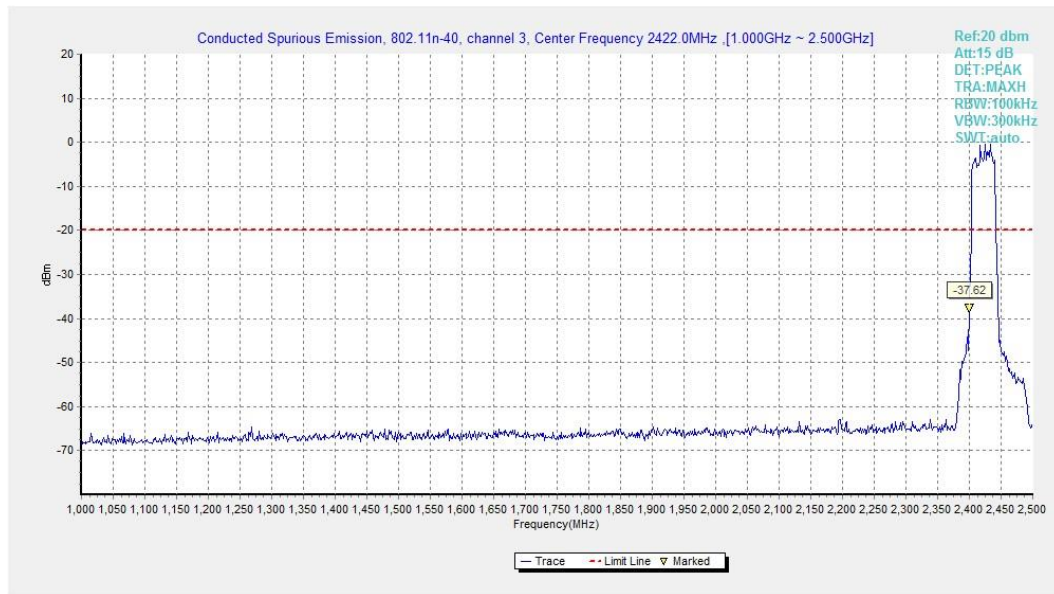


Fig.A.6.1.75 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 1 GHz-2.5 GHz)

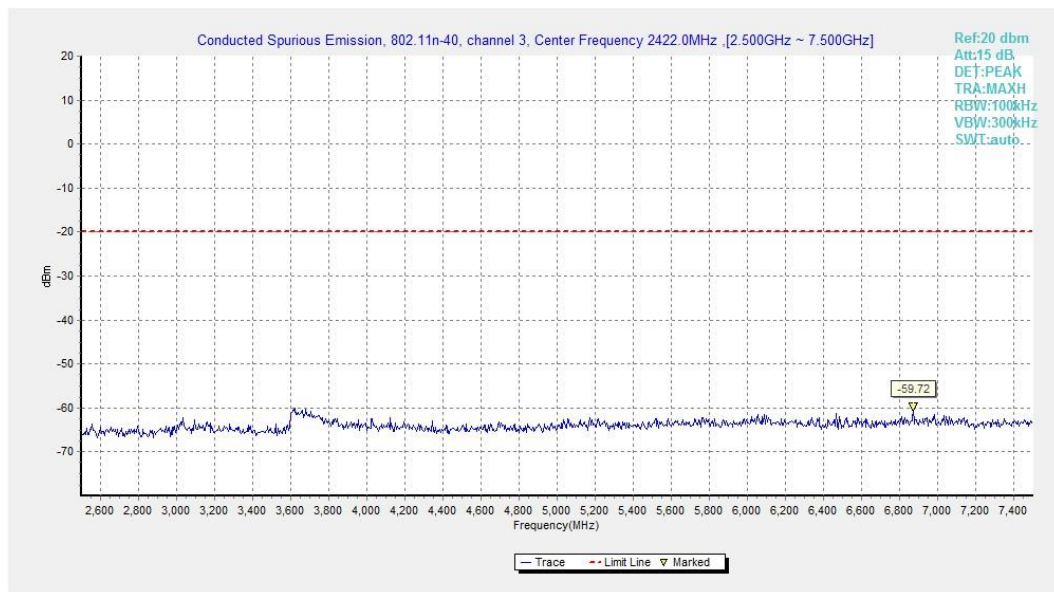


Fig.A.6.1.76 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 2.5 GHz-7.5 GHz)

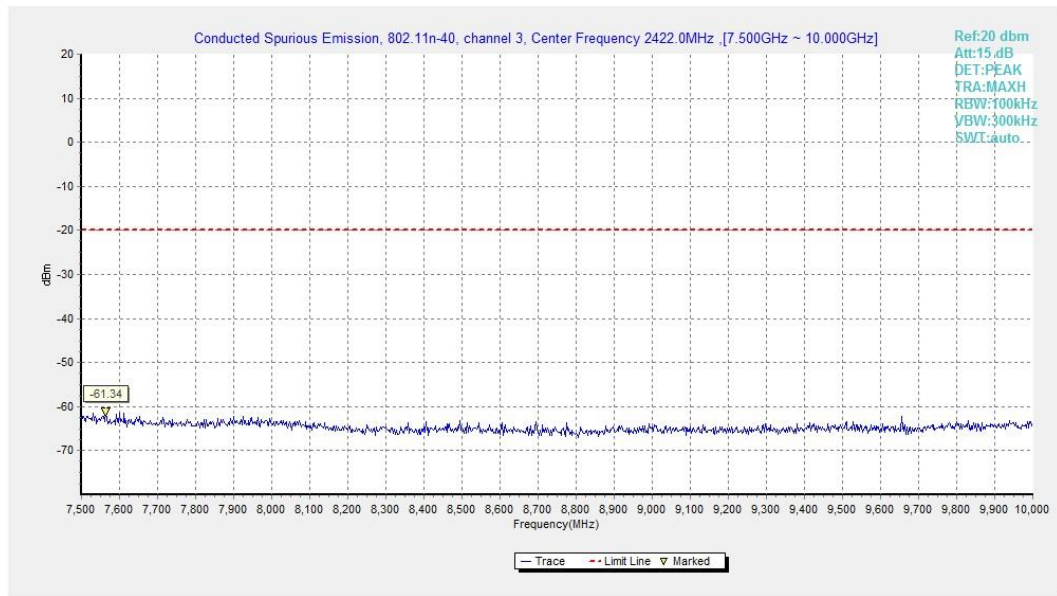


Fig.A.6.1.77 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 7.5 GHz-10 GHz)

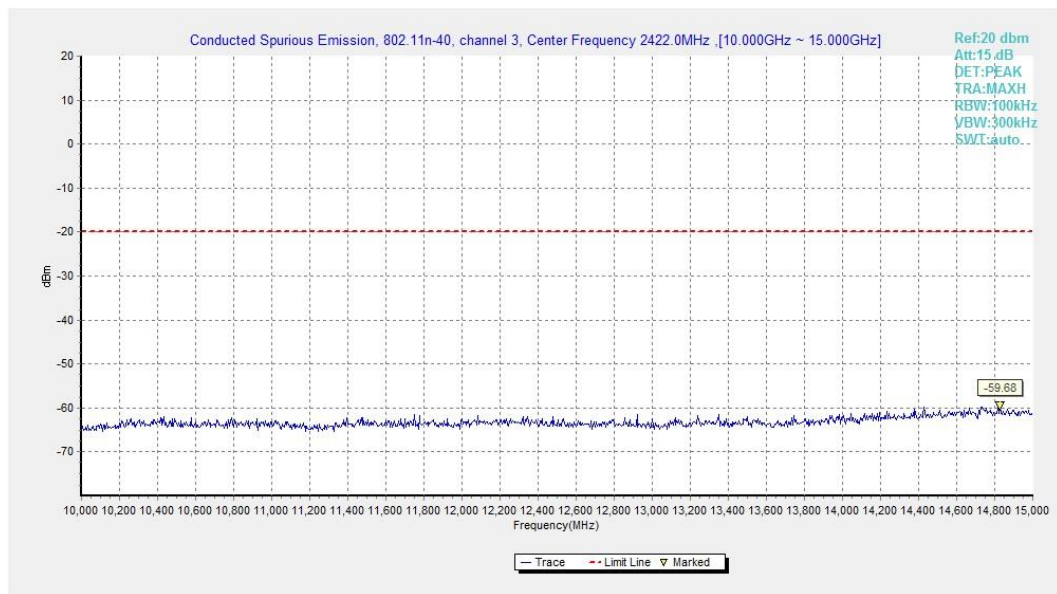


Fig.A.6.1.78 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 10 GHz-15 GHz)

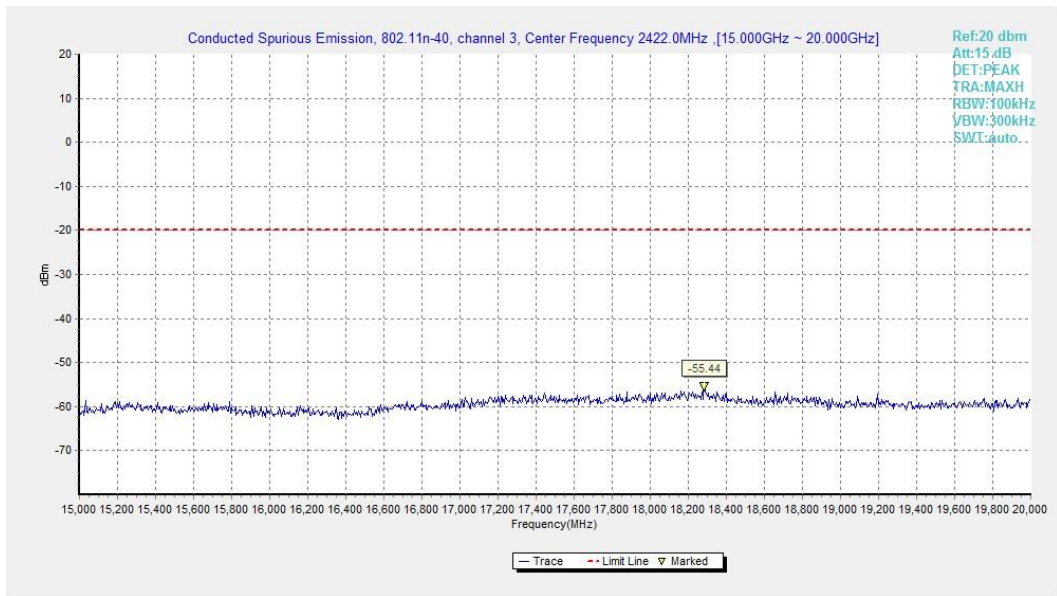


Fig.A.6.1.79 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 15 GHz-20 GHz)

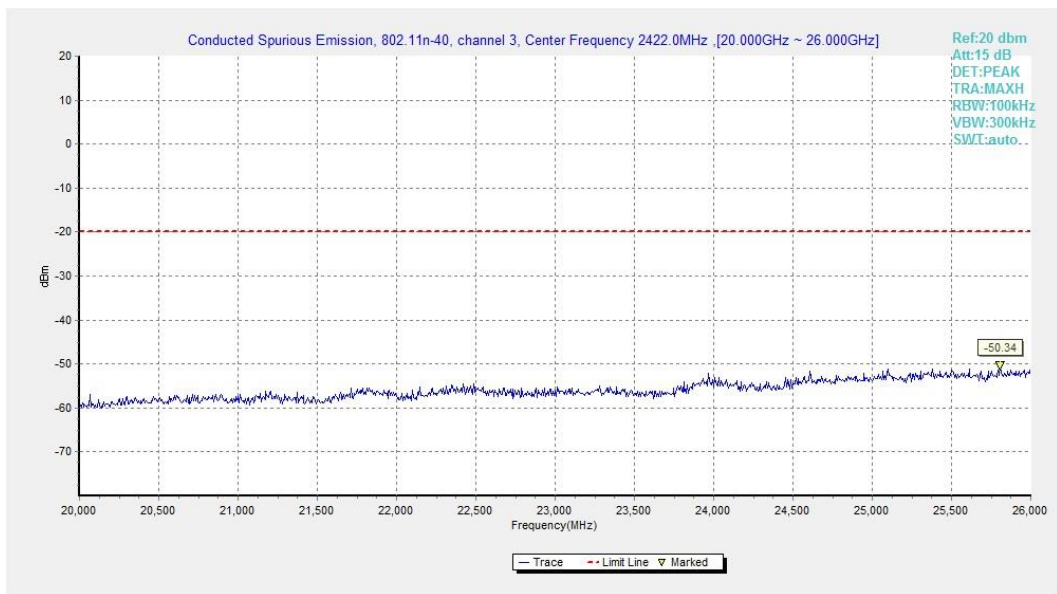


Fig.A.6.1.80 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 20 GHz-26 GHz)

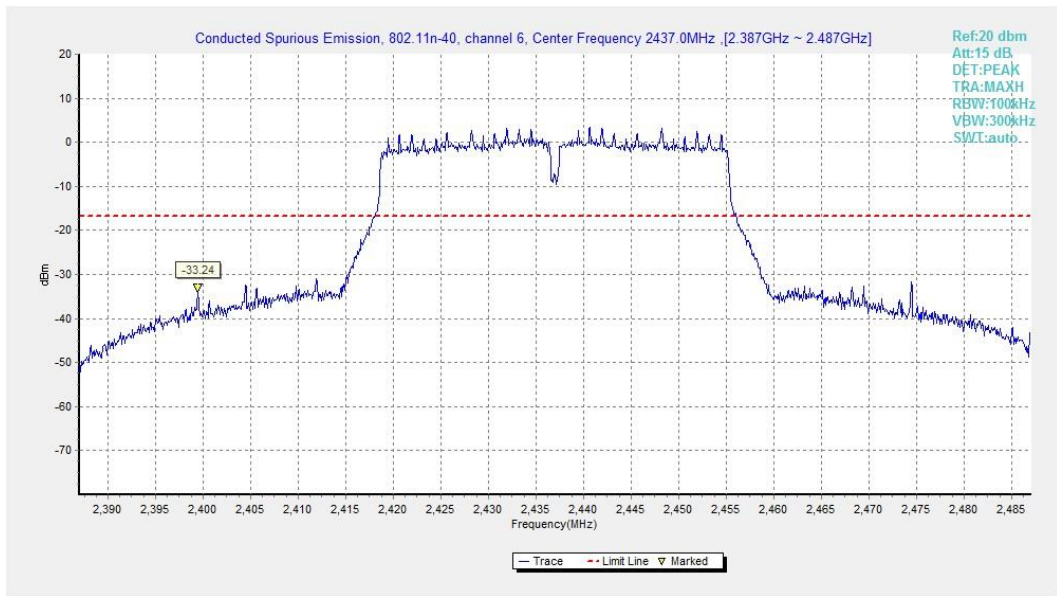


Fig.A.6.1.81 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, Center Frequency)

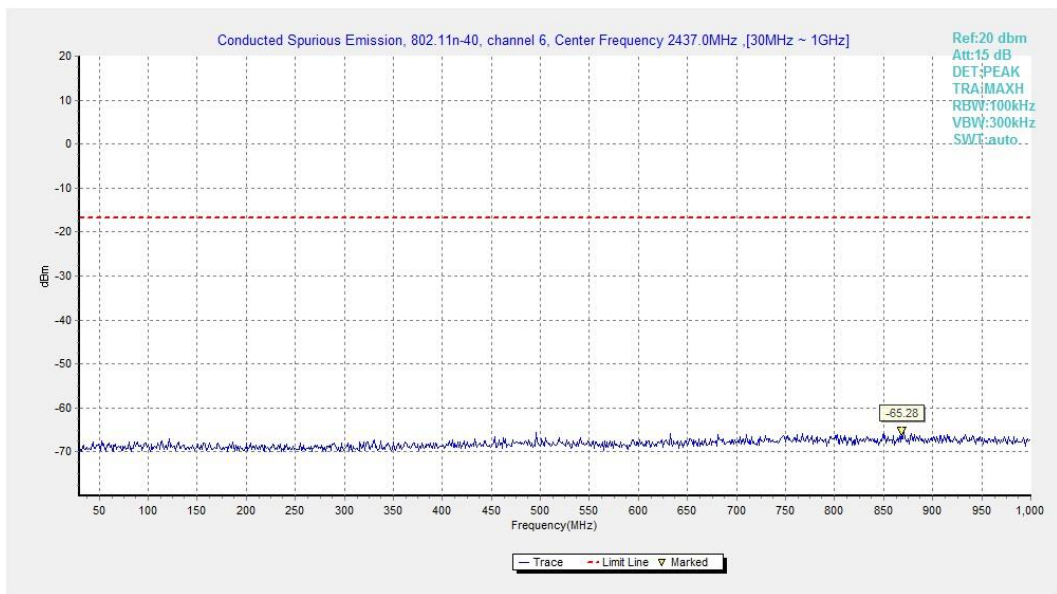


Fig.A.6.1.82 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 30 MHz-1 GHz)

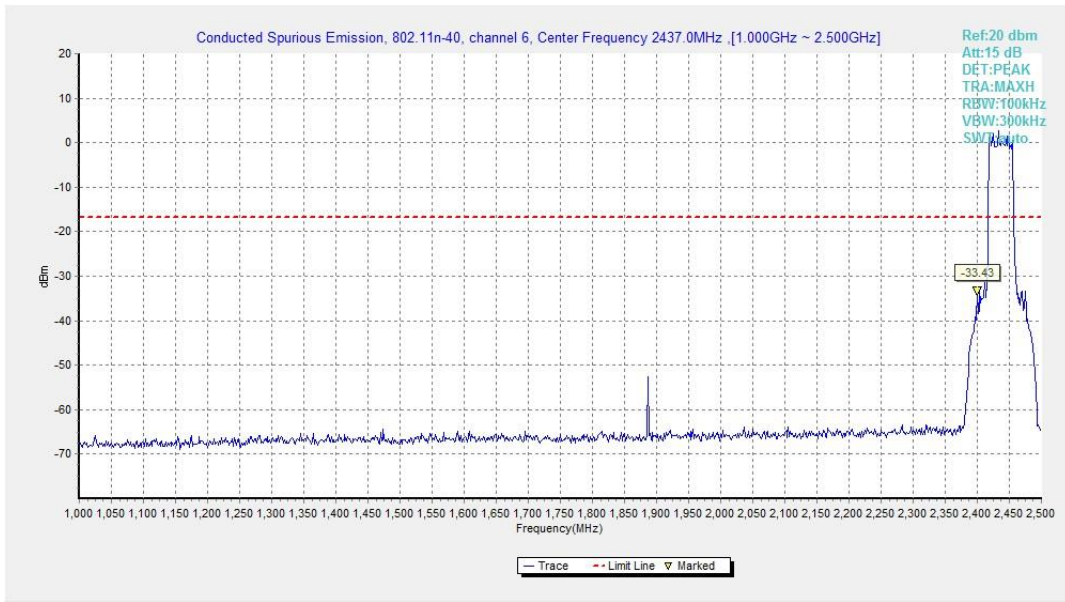


Fig.A.6.1.83 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 1 GHz-2.5 GHz)

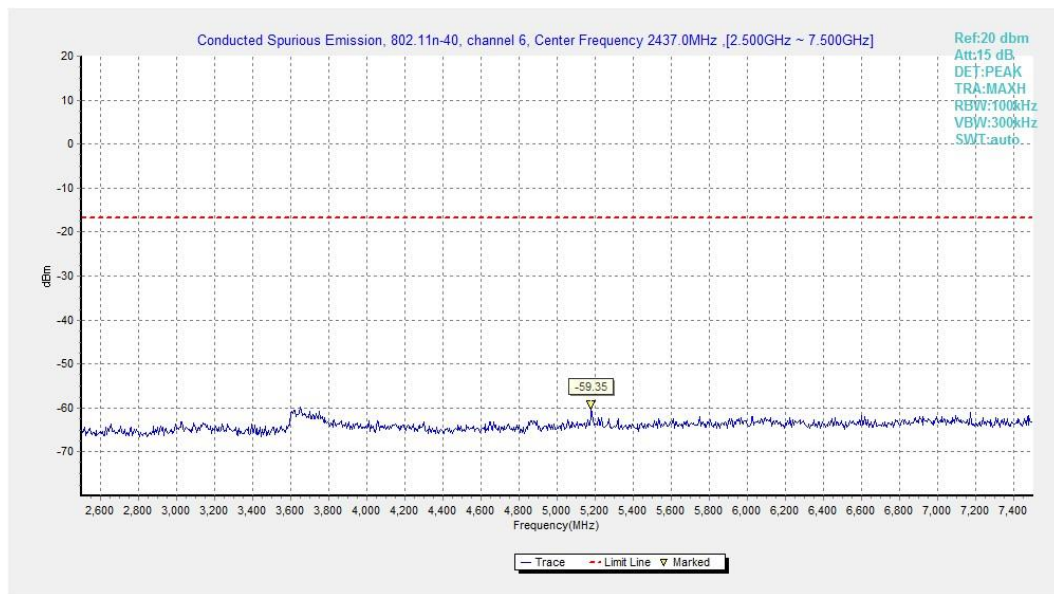


Fig.A.6.1.84 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 2.5 GHz-7.5 GHz)

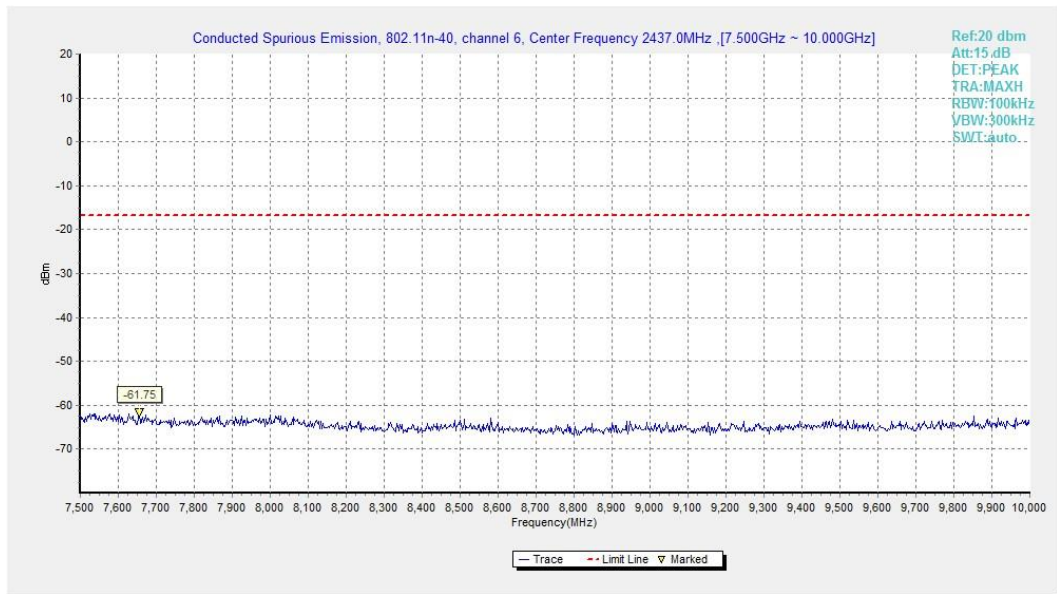


Fig.A.6.1.85 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 7.5 GHz-10 GHz)

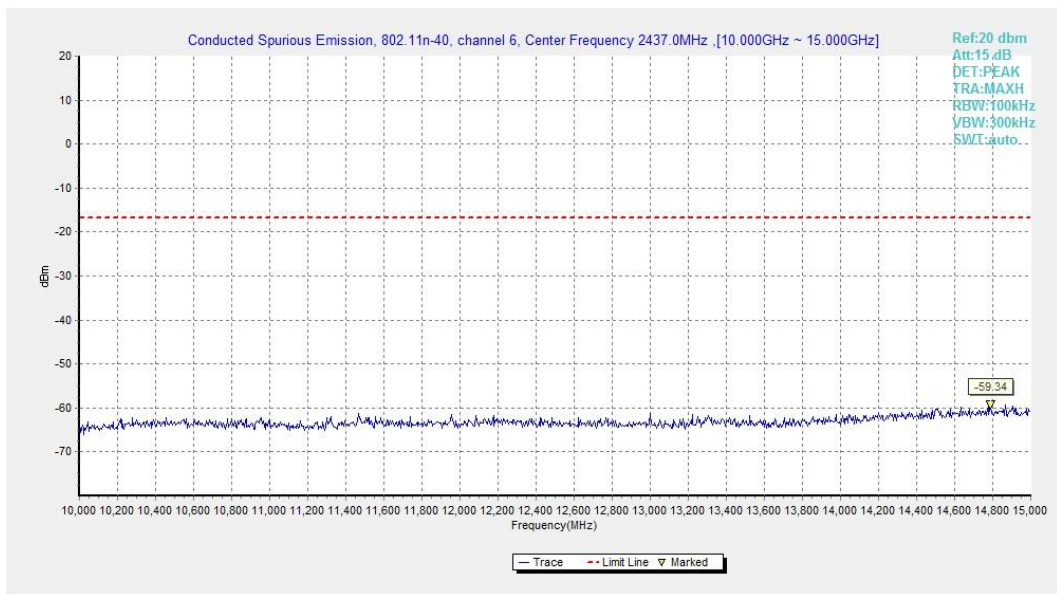


Fig.A.6.1.86 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 10 GHz-15 GHz)

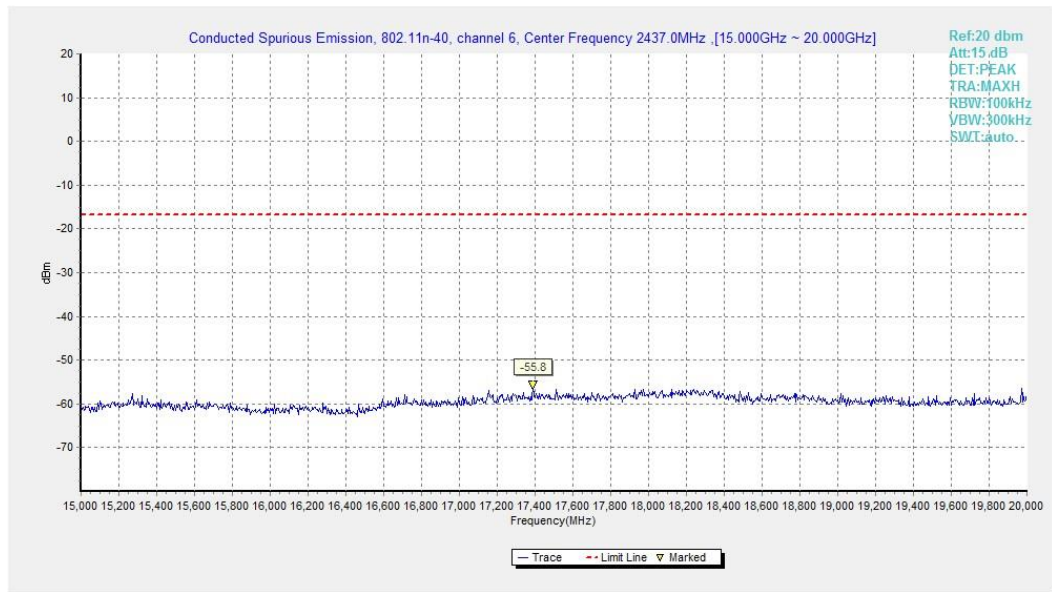


Fig.A.6.1.87 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 15 GHz-20 GHz)

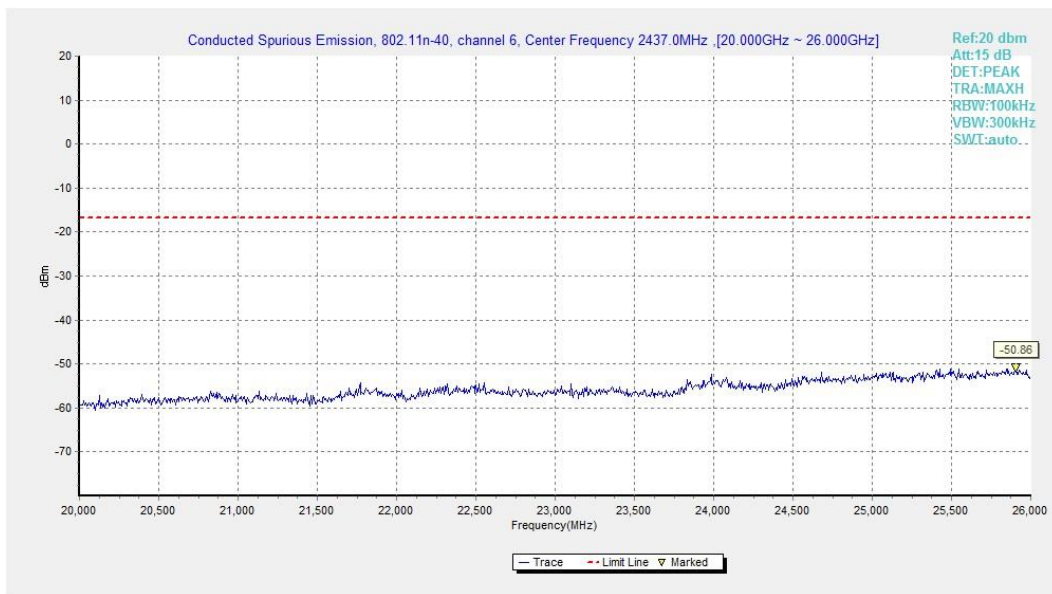


Fig.A.6.1.88 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 20 GHz-26 GHz)

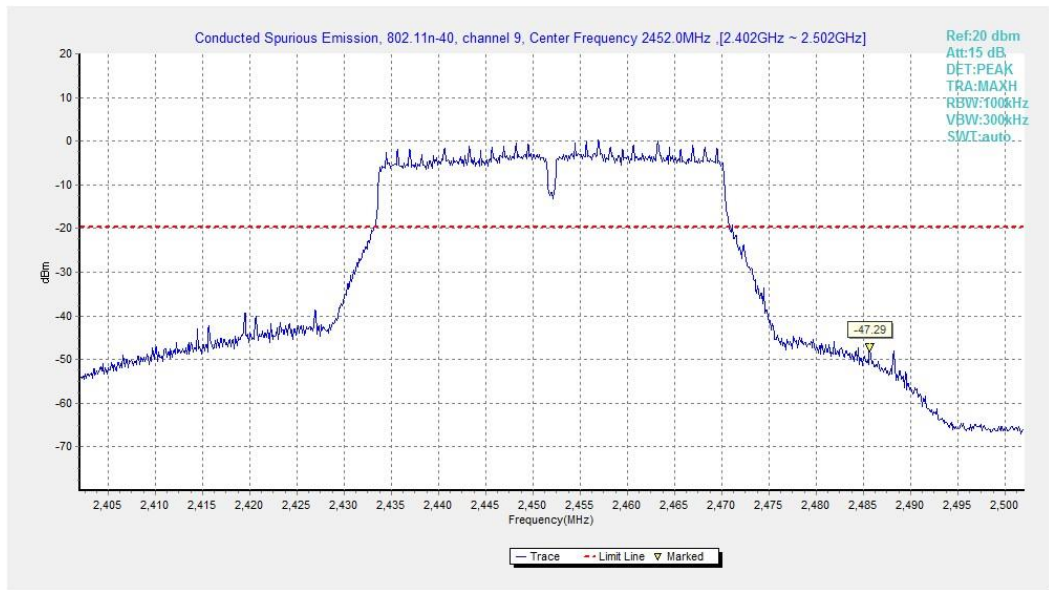


Fig.A.6.1.89 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, Center Frequency)

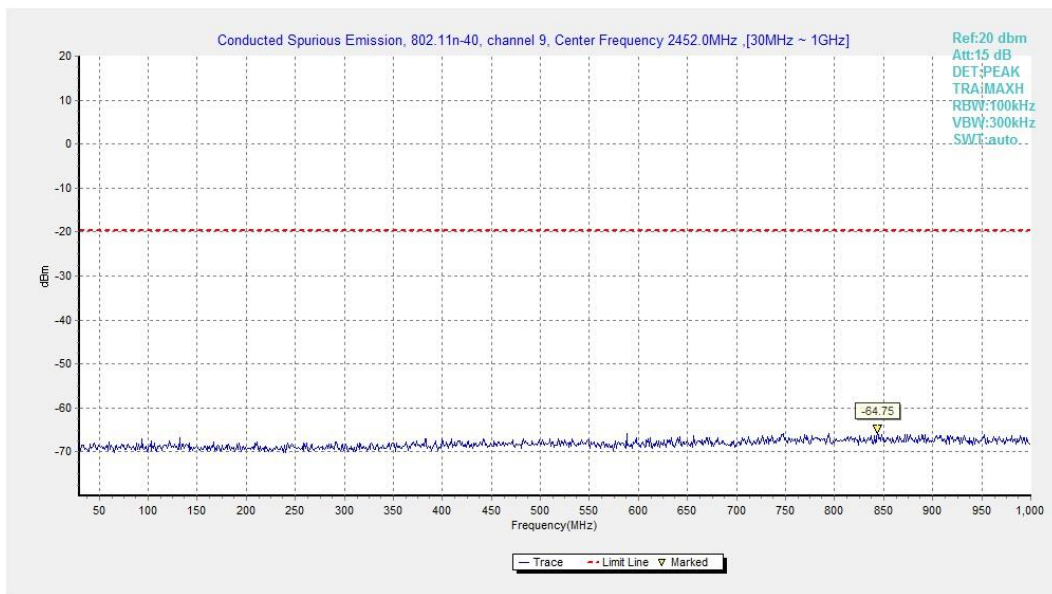


Fig.A.6.1.90 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 30 MHz-1 GHz)

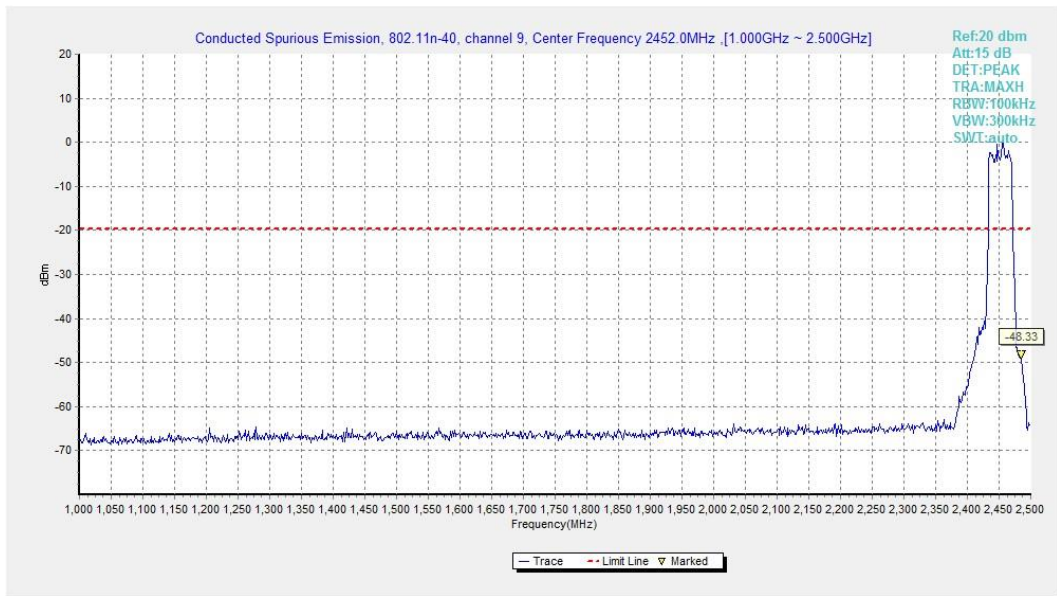


Fig.A.6.1.91 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 1 GHz-2.5 GHz)

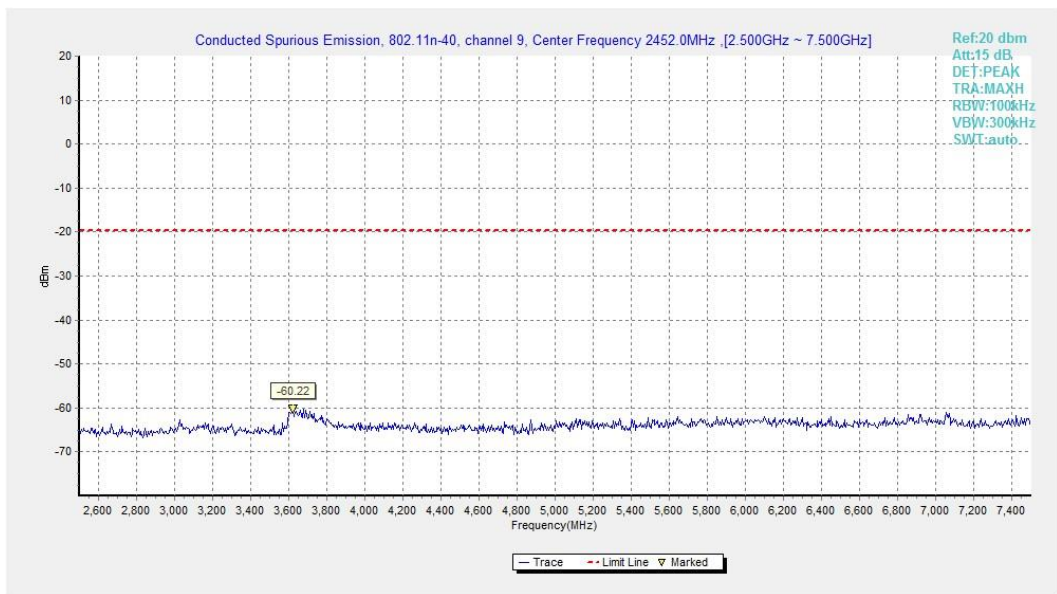


Fig.A.6.1.92 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 2.5 GHz-7.5 GHz)

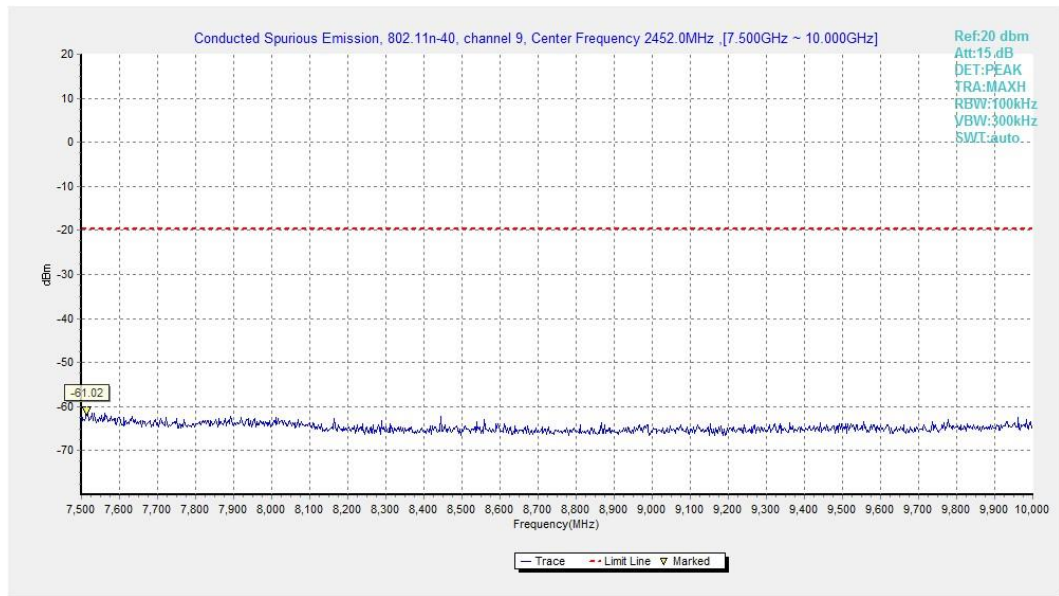


Fig.A.6.1.93 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 7.5 GHz-10 GHz)

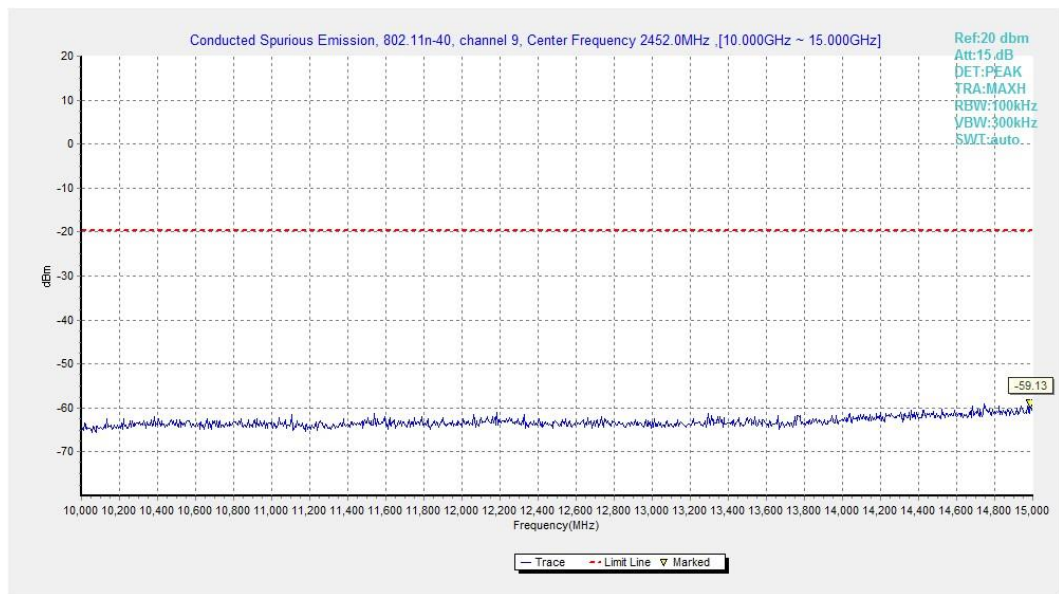


Fig.A.6.1.94 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 10 GHz-15 GHz)

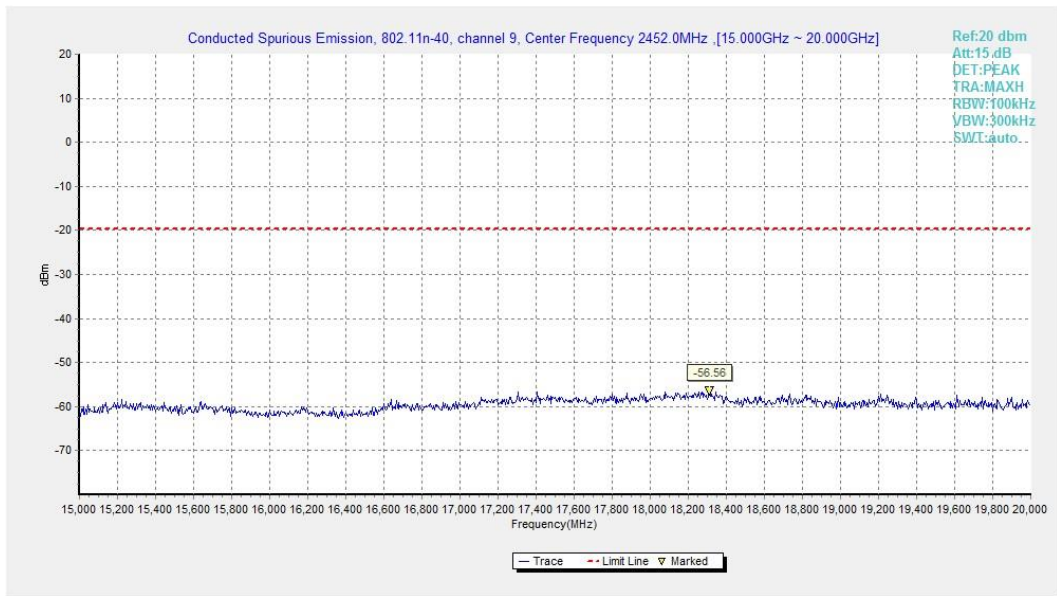


Fig.A.6.1.95 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 15 GHz-20 GHz)

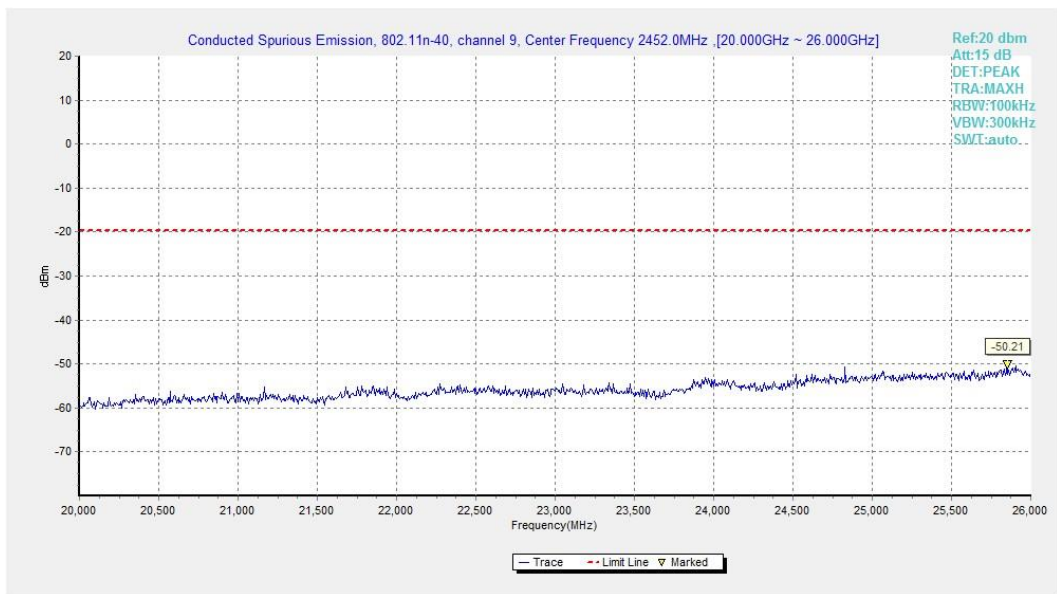


Fig.A.6.1.96 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 20 GHz-26 GHz)

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(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(μV/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/3MHz	15
4000-18000	1MHz/3MHz	40
18000-26500	1MHz/3MHz	20

EUT ID: UT82a

Measurement results for Set.1:
802.11b mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	1	2.31GHz~2.43GHz---L	Fig.A.6.2.1	P
	11	2.45GHz~2.50GHz---H	Fig.A.6.2.2	P

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	1	2.31GHz~2.43GHz---L	Fig.A.6.2.3	P
	11	2.45GHz~2.50GHz---H	Fig.A.6.2.4	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	1	2.31GHz~2.43GHz---L	Fig.A.6.2.5	P
	11	2.45GHz~2.50GHz---H	Fig.A.6.2.6	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	3	2.31GHz~2.43GHz---L	Fig.A.6.2.7	P
	9	2.45GHz~2.50GHz---H	Fig.A.6.2.8	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:

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

Peak
802.11b

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.436	60.42	5.35	32.25	22.82	74.00	13.58	V
2389.968	60.64	5.35	32.26	23.03	74.00	13.36	H
4824.000	48.89	-35.00	34.10	49.79	74.00	25.11	H
7236.500	48.13	-32.58	35.87	44.85	74.00	25.87	H
9648.500	45.79	-32.03	36.90	40.93	74.00	28.21	H
12060.000	44.44	-31.70	38.82	37.32	74.00	29.56	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2313.800	40.26	-29.96	31.56	38.66	74.00	33.74	V
2624.600	40.57	-29.26	32.65	37.18	74.00	33.43	H
4874.000	48.47	-34.27	34.15	48.59	74.00	25.53	V
7309.000	53.55	-32.61	35.96	50.19	74.00	20.46	V
9747.000	45.75	-32.21	36.89	41.06	74.00	28.26	H
12185.000	45.80	-31.20	39.07	37.93	74.00	28.20	V

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.575	61.72	5.46	32.60	23.66	74.00	12.28	V
2484.190	62.54	5.46	32.60	24.48	74.00	11.46	H
4923.500	47.76	-34.61	34.25	48.12	74.00	26.24	H
7385.500	51.01	-32.60	35.80	47.80	74.00	22.99	V
9848.500	46.22	-32.53	37.00	41.75	74.00	27.78	H
12310.000	45.52	-31.03	38.91	37.64	74.00	28.48	H

802.11g

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.506	62.00	5.35	32.25	24.40	74.00	12.00	V
2389.926	62.63	5.35	32.26	25.02	74.00	11.37	V
4816.500	45.29	-35.13	34.10	46.32	74.00	28.71	H
7236.000	44.51	-32.59	35.87	41.22	74.00	29.50	H
9648.000	46.15	-32.04	36.90	41.29	74.00	27.85	H
12060.000	44.08	-31.70	38.82	36.96	74.00	29.92	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2314.000	40.64	-29.95	31.56	39.03	74.00	33.36	V
2557.400	41.28	-29.31	32.70	37.89	74.00	32.72	V
4877.000	44.88	-34.29	34.15	45.02	74.00	29.12	H
7307.500	50.73	-32.61	35.97	47.37	74.00	23.27	V
9748.000	47.11	-32.22	36.90	42.43	74.00	26.90	V
12185.000	48.22	-31.20	39.07	40.35	74.00	25.78	H

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.815	64.91	5.46	32.60	26.85	74.00	9.09	V
2484.025	65.30	5.46	32.60	27.23	74.00	8.70	V
4920.000	45.37	-34.59	34.24	45.72	74.00	28.63	V
7375.000	45.44	-32.60	35.80	42.24	74.00	28.56	V
9848.000	47.70	-32.52	37.00	43.22	74.00	26.30	H
12310.000	46.01	-31.03	38.91	38.12	74.00	27.99	V

802.11n-HT20

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.142	64.74	5.35	32.25	27.14	74.00	9.26	H
2389.982	64.18	5.35	32.26	26.57	74.00	9.82	V
4829.000	44.61	-34.90	34.10	45.41	74.00	29.39	H
7241.500	49.08	-32.57	35.88	45.77	74.00	24.92	V
9648.000	47.73	-32.04	36.90	42.86	74.00	26.27	H
12137.500	47.39	-31.37	38.98	39.79	74.00	26.61	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2318.200	41.10	-29.88	31.57	39.41	74.00	32.90	H
2550.200	42.07	-29.22	32.70	38.58	74.00	31.93	H
4873.000	44.03	-34.26	34.15	44.14	74.00	29.97	V
7307.500	46.34	-32.61	35.97	42.98	74.00	27.66	V
9748.000	46.00	-32.22	36.90	41.32	74.00	28.00	V
12185.000	45.95	-31.20	39.07	38.08	74.00	28.05	H

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.720	64.85	5.46	32.60	26.79	74.00	9.15	H
2484.450	63.56	5.46	32.60	25.49	74.00	10.45	H
4924.000	43.20	-34.61	34.25	43.56	74.00	30.80	V
7386.000	46.18	-32.60	35.80	42.97	74.00	27.83	V
9848.000	47.68	-32.52	37.00	43.20	74.00	26.33	V
12310.000	45.68	-31.03	38.91	37.79	74.00	28.32	V

802.11n-HT40

Ch3

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.464	61.46	5.35	32.25	23.85	74.00	12.54	H
2389.996	61.38	5.35	32.26	23.77	74.00	12.62	V
4850.000	43.97	-34.50	34.10	44.37	74.00	30.03	V
7266.000	43.49	-32.58	35.93	40.14	74.00	30.51	V
9688.000	45.52	-32.04	36.82	40.74	74.00	28.48	V
12110.000	45.00	-31.49	38.92	37.57	74.00	29.00	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2316.000	40.65	-29.92	31.56	39.00	74.00	33.35	V
2547.200	42.31	-29.20	32.69	38.81	74.00	31.69	H
4874.000	41.19	-34.27	34.15	41.31	74.00	32.81	H
7311.000	42.07	-32.61	35.96	38.72	74.00	31.93	H
9748.000	44.53	-32.22	36.90	39.85	74.00	29.47	H
12185.000	45.49	-31.20	39.07	37.62	74.00	28.51	H

Ch9

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.910	63.22	5.46	32.60	25.16	74.00	10.78	V
2484.310	63.31	5.46	32.60	25.24	74.00	10.70	V
4904.000	42.36	-34.48	34.21	42.64	74.00	31.64	H
7356.000	44.48	-32.60	35.80	41.28	74.00	29.52	V
9808.000	43.68	-32.40	37.00	39.08	74.00	30.32	H
12260.000	44.10	-30.95	38.98	36.07	74.00	29.90	V

Average
802.11b

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.763	46.15	5.35	32.26	8.54	54.00	7.85	V
2389.988	46.21	5.35	32.26	8.60	54.00	7.79	V
4823.800	45.85	-35.00	34.10	46.76	54.00	8.15	H
7235.200	45.47	-32.59	35.87	42.19	54.00	8.53	V
9647.800	34.47	-32.04	36.90	29.60	54.00	19.54	H
12060.100	32.95	-31.70	38.82	25.82	54.00	21.06	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2412.150	49.59	5.39	32.45	11.76	54.00	4.41	V
2465.888	49.77	5.44	32.60	11.73	54.00	4.23	V
4873.600	40.74	-34.26	34.15	40.85	54.00	13.26	V
7310.200	48.21	-32.61	35.96	44.85	54.00	5.80	V
9748.000	35.97	-32.22	36.90	31.29	54.00	18.03	V
12184.900	33.93	-31.20	39.07	26.07	54.00	20.07	H

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.625	48.11	5.46	32.60	10.04	54.00	5.90	V
2483.813	48.14	5.46	32.60	10.08	54.00	5.86	V
4923.700	44.15	-34.61	34.25	44.51	54.00	9.85	V
7384.900	39.53	-32.60	35.80	36.32	54.00	14.47	H
9847.900	32.13	-32.52	37.00	27.65	54.00	21.87	H
12310.000	33.80	-31.03	38.91	25.91	54.00	20.20	H

802.11g

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.875	47.62	5.35	32.26	10.01	54.00	6.38	V
2389.950	47.64	5.35	32.26	10.03	54.00	6.36	V
4823.500	34.57	-35.01	34.10	35.48	54.00	19.43	H
7234.900	40.17	-32.59	35.87	36.89	54.00	13.83	V
9647.800	39.22	-32.04	36.90	34.36	54.00	14.78	V
12060.100	33.07	-31.70	38.82	25.95	54.00	20.93	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2399.137	48.07	5.37	32.39	10.31	54.00	5.93	V
2484.938	48.71	5.46	32.60	10.65	54.00	5.29	V
4868.200	31.54	-34.22	34.14	31.63	54.00	22.46	V
7311.400	36.70	-32.61	35.95	33.35	54.00	17.30	H
9748.000	35.96	-32.22	36.90	31.28	54.00	18.05	V
12184.900	33.91	-31.20	39.07	26.04	54.00	20.10	H

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.513	49.62	5.46	32.60	11.56	54.00	4.38	V
2483.550	49.60	5.46	32.60	11.54	54.00	4.40	V
4924.300	33.30	-34.61	34.25	33.67	54.00	20.70	V
7386.100	31.73	-32.60	35.80	28.53	54.00	22.27	V
9847.900	37.75	-32.52	37.00	33.28	54.00	16.25	V
12310.000	33.63	-31.03	38.91	25.74	54.00	20.37	H

802.11n-HT20

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.913	50.11	5.35	32.26	12.50	54.00	3.89	V
2389.988	50.19	5.35	32.26	12.57	54.00	3.81	V
4822.900	32.52	-35.02	34.10	33.44	54.00	21.48	V
7236.100	32.16	-32.59	35.87	28.88	54.00	21.84	H
9647.500	33.79	-32.04	36.90	28.93	54.00	20.21	V
12060.000	32.95	-31.70	38.82	25.83	54.00	21.05	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2414.288	48.31	5.39	32.46	10.46	54.00	5.69	V
2462.513	48.71	5.43	32.60	10.68	54.00	5.29	V
4873.900	31.95	-34.26	34.15	32.07	54.00	22.05	H
7309.000	35.57	-32.61	35.96	32.21	54.00	18.43	H
9747.700	35.58	-32.22	36.90	30.90	54.00	18.42	H
12184.900	34.09	-31.20	39.07	26.22	54.00	19.92	H

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.513	49.70	5.46	32.60	11.64	54.00	4.30	V
2483.550	49.63	5.46	32.60	11.57	54.00	4.37	V
4924.000	29.71	-34.61	34.25	30.07	54.00	24.30	V
7386.100	31.63	-32.60	35.80	28.42	54.00	22.37	V
9847.900	40.85	-32.52	37.00	36.37	54.00	13.15	H
12310.000	33.65	-31.03	38.91	25.76	54.00	20.35	V

802.11n-HT40
Ch3

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.875	48.01	5.35	32.26	10.39	54.00	5.99	V
2389.988	48.04	5.35	32.26	10.42	54.00	5.96	V
4844.000	30.87	-34.61	34.10	31.38	54.00	23.13	H
7273.067	32.72	-32.59	35.95	29.36	54.00	21.28	H
9688.000	37.51	-32.04	36.82	32.73	54.00	16.49	V
12110.133	33.25	-31.49	38.92	25.81	54.00	20.75	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2392.125	48.50	5.36	32.29	10.85	54.00	5.50	V
2485.675	48.95	5.46	32.60	10.88	54.00	5.05	V
4874.133	30.81	-34.27	34.15	30.93	54.00	23.19	V
7310.933	32.23	-32.61	35.96	28.88	54.00	21.77	H
9748.000	35.01	-32.22	36.90	30.33	54.00	18.99	V
12185.067	34.06	-31.20	39.07	26.19	54.00	19.94	V

Ch9

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.513	49.49	5.46	32.60	11.43	54.00	4.51	V
2483.738	49.55	5.46	32.60	11.49	54.00	4.45	V
4904.000	29.48	-34.48	34.21	29.75	54.00	24.52	H
7356.000	32.09	-32.60	35.80	28.89	54.00	21.91	V
9808.000	34.33	-32.40	37.00	29.73	54.00	19.67	H
12260.000	33.64	-30.95	38.98	25.61	54.00	20.36	V

Test graphs as below:

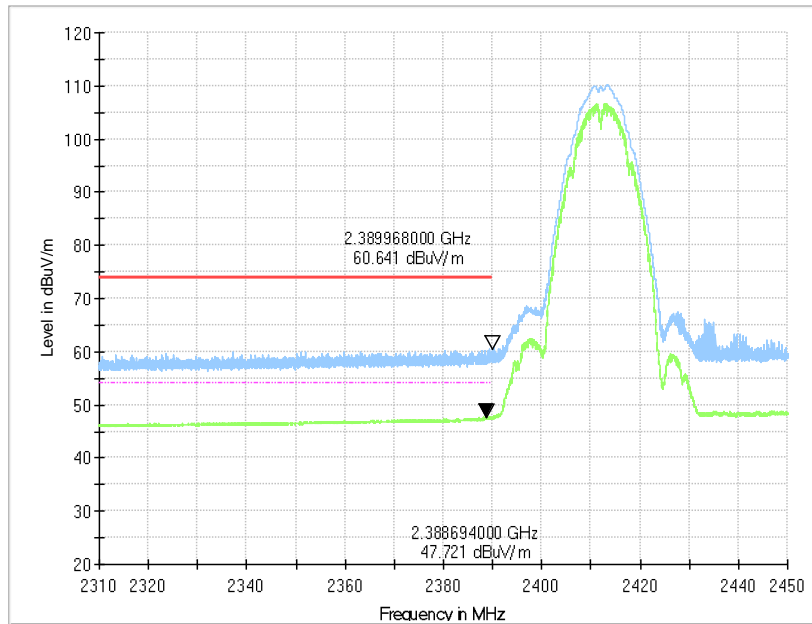


Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.43GHz

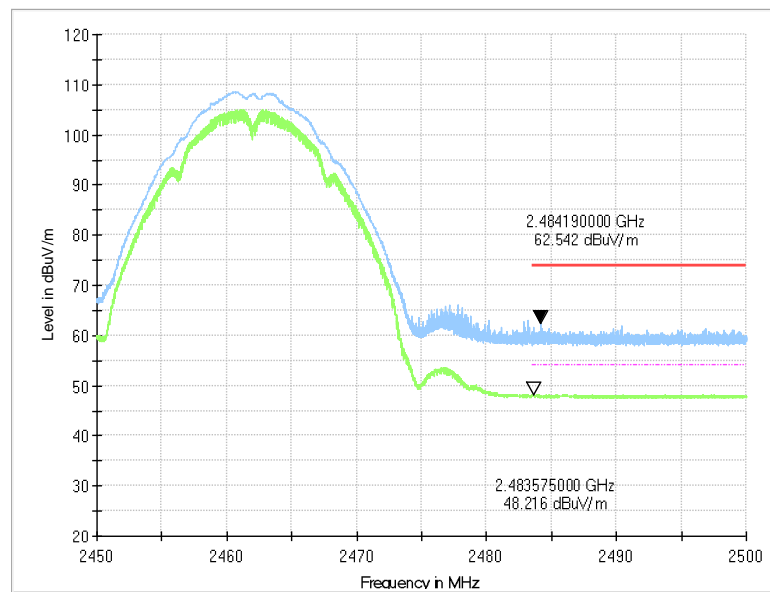


Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

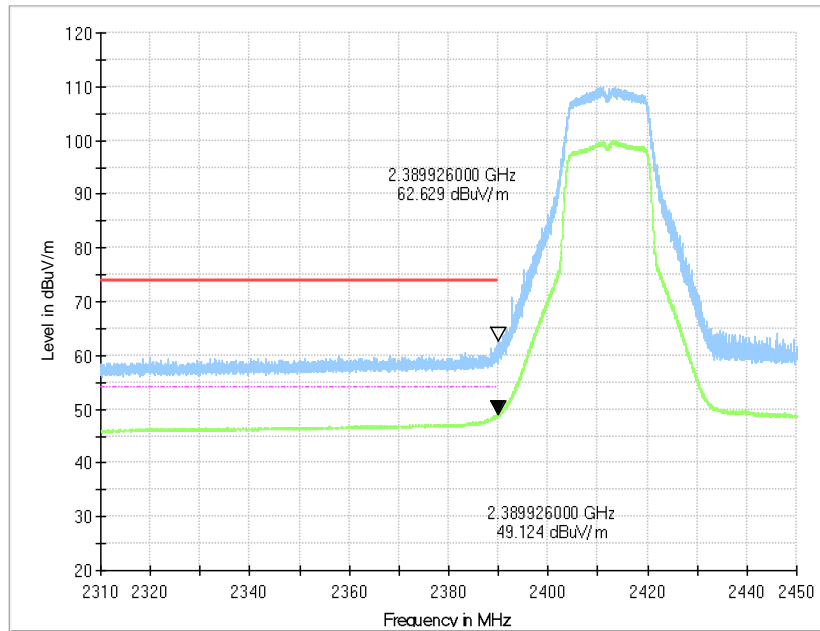


Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.43GHz

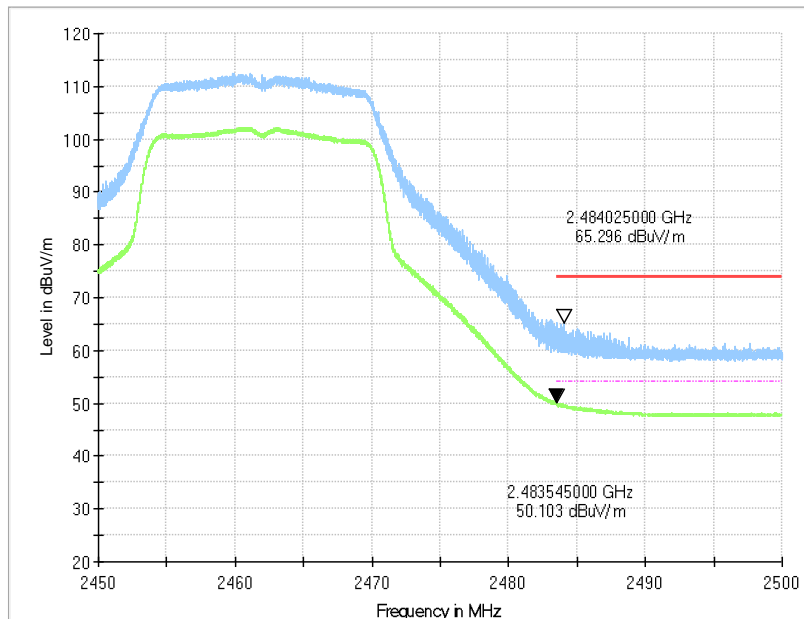


Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

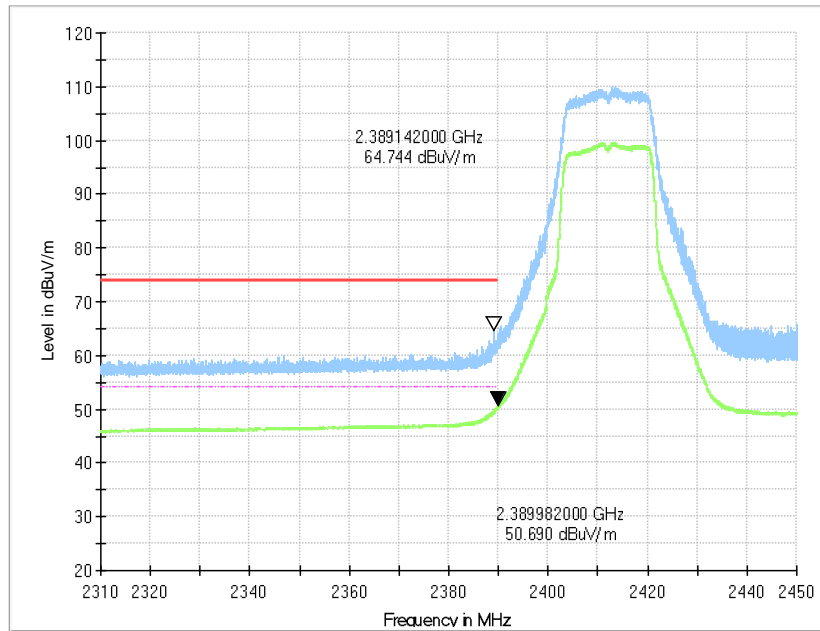


Fig.A.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31 GHz - 2.43GHz

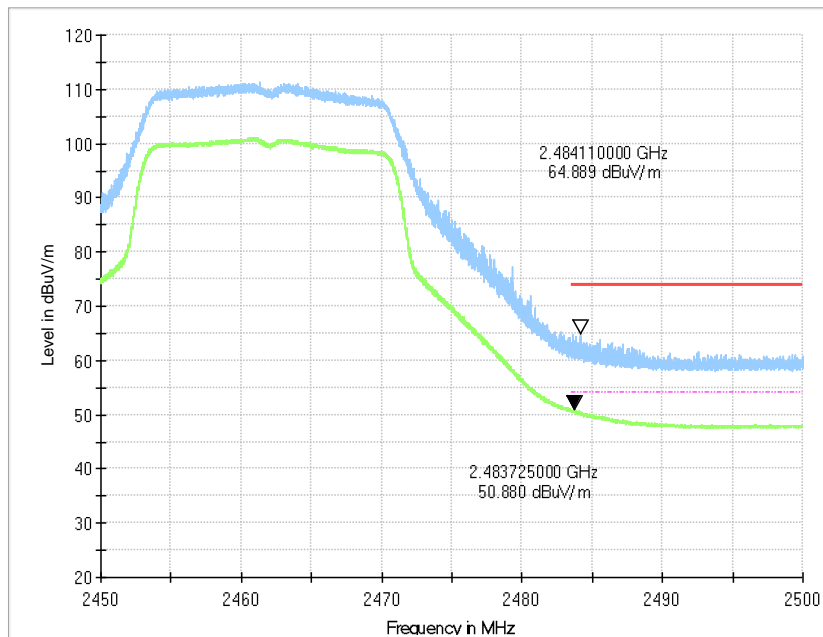


Fig.A.6.2.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

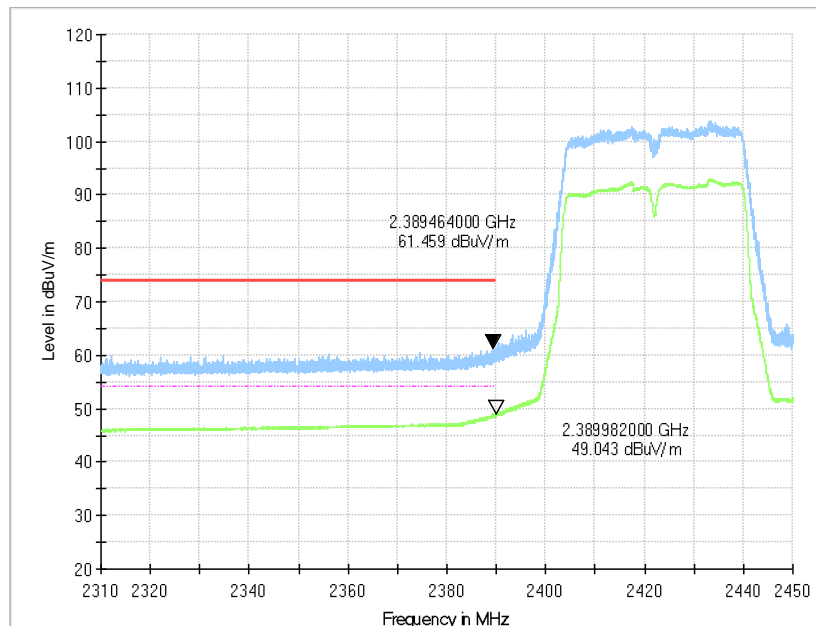


Fig.A.6.2.7 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31 GHz - 2.43GHz

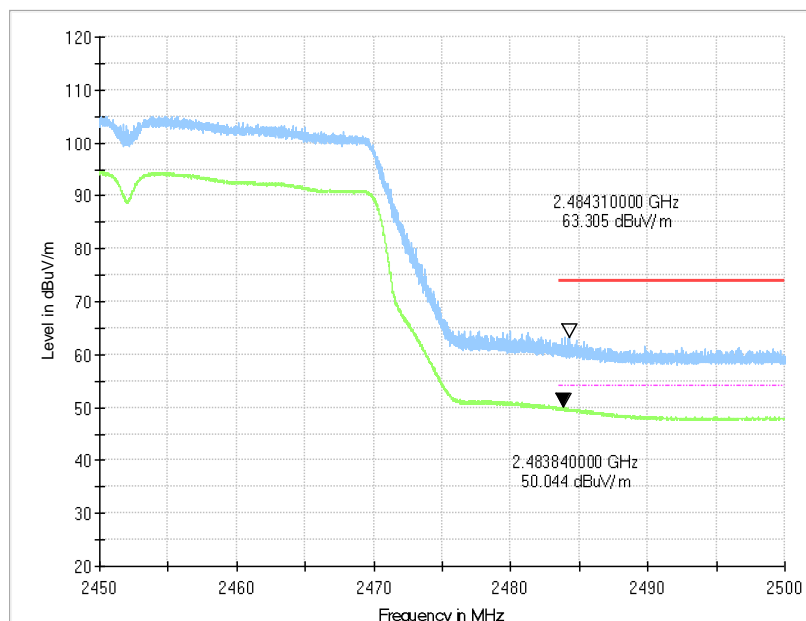


Fig.A.6.2.8 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz

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	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:

Measurement results for Set.1:

Result for Traffic:

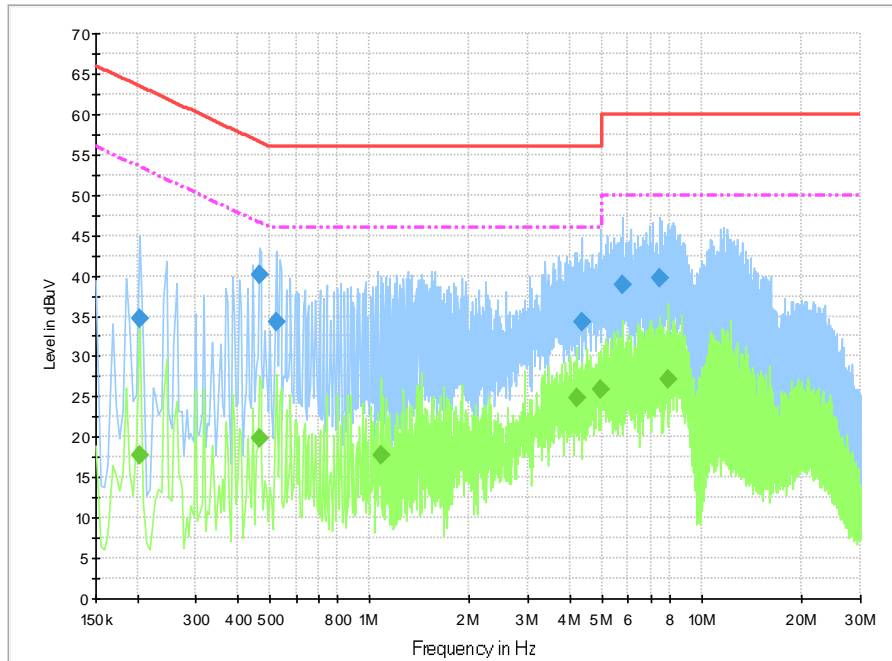


Fig.A.7.1 AC Powerline Conducted Emission-802.11b

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

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.204000	34.7	2000.0	9.000	On	N	19.7	28.8	63.4	
0.465000	40.2	2000.0	9.000	On	L1	19.8	16.4	56.6	
0.523500	34.2	2000.0	9.000	On	N	19.8	21.8	56.0	
4.366500	34.4	2000.0	9.000	On	N	19.6	21.6	56.0	
5.743500	39.0	2000.0	9.000	On	N	19.7	21.0	60.0	
7.485000	39.7	2000.0	9.000	On	N	19.7	20.3	60.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.204000	17.8	2000.0	9.000	On	N	19.7	35.6	53.4	
0.465000	19.8	2000.0	9.000	On	L1	19.8	26.8	46.6	
1.081500	17.7	2000.0	9.000	On	N	19.7	28.3	46.0	
4.204500	24.9	2000.0	9.000	On	N	19.6	21.1	46.0	
4.965000	25.9	2000.0	9.000	On	L1	19.7	20.1	46.0	
7.935000	27.1	2000.0	9.000	On	L1	19.7	22.9	50.0	

Measurement results for Set.1:

Result for Idle:

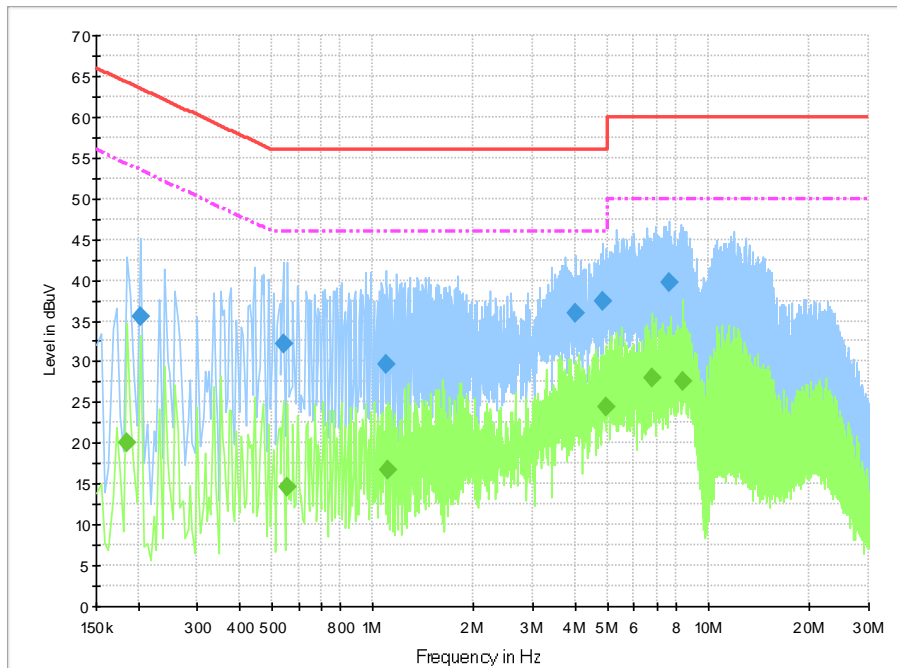


Fig.A.7.2 AC Powerline Conducted Emission-Idle

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

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.204000	35.6	2000.0	9.000	On	N	19.7	27.9	63.4	
0.541500	32.3	2000.0	9.000	On	N	19.8	23.7	56.0	
1.095000	29.8	2000.0	9.000	On	L1	19.7	26.2	56.0	
4.002000	35.9	2000.0	9.000	On	L1	19.6	20.1	56.0	
4.839000	37.4	2000.0	9.000	On	N	19.7	18.6	56.0	
7.629000	39.7	2000.0	9.000	On	N	19.7	20.3	60.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.186000	20.0	2000.0	9.000	On	N	19.8	34.2	54.2	
0.555000	14.5	2000.0	9.000	On	L1	19.8	31.5	46.0	
1.104000	16.7	2000.0	9.000	On	N	19.7	29.3	46.0	
4.938000	24.4	2000.0	9.000	On	L1	19.7	21.6	46.0	
6.814500	27.9	2000.0	9.000	On	L1	19.7	22.1	50.0	
8.421000	27.6	2000.0	9.000	On	L1	19.7	22.4	50.0	

ANNEX B: EUT parameters

Disclaimer: The antenna gain and worse case provided by the client may affect the validity of the measurement results in this report, and the client shall bear the impact and consequences arising therefrom.

ANNEX C: Accreditation Certificate

<p>United States Department of Commerce National Institute of Standards and Technology</p>  	
<hr/> <h3>Certificate of Accreditation to ISO/IEC 17025:2017</h3> <hr/>	
<p>NVLAP LAB CODE: 600118-0</p>	
<p>Telecommunication Technology Labs, CAICT Beijing China</p>	
<p><i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i></p>	
<p>Electromagnetic Compatibility & Telecommunications</p>	
<p><i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).</i></p>	
<hr/> <p>2022-10-01 through 2023-09-30 <i>Effective Dates</i></p>	  <i>For the National Voluntary Laboratory Accreditation Program</i>

END OF REPORT