

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

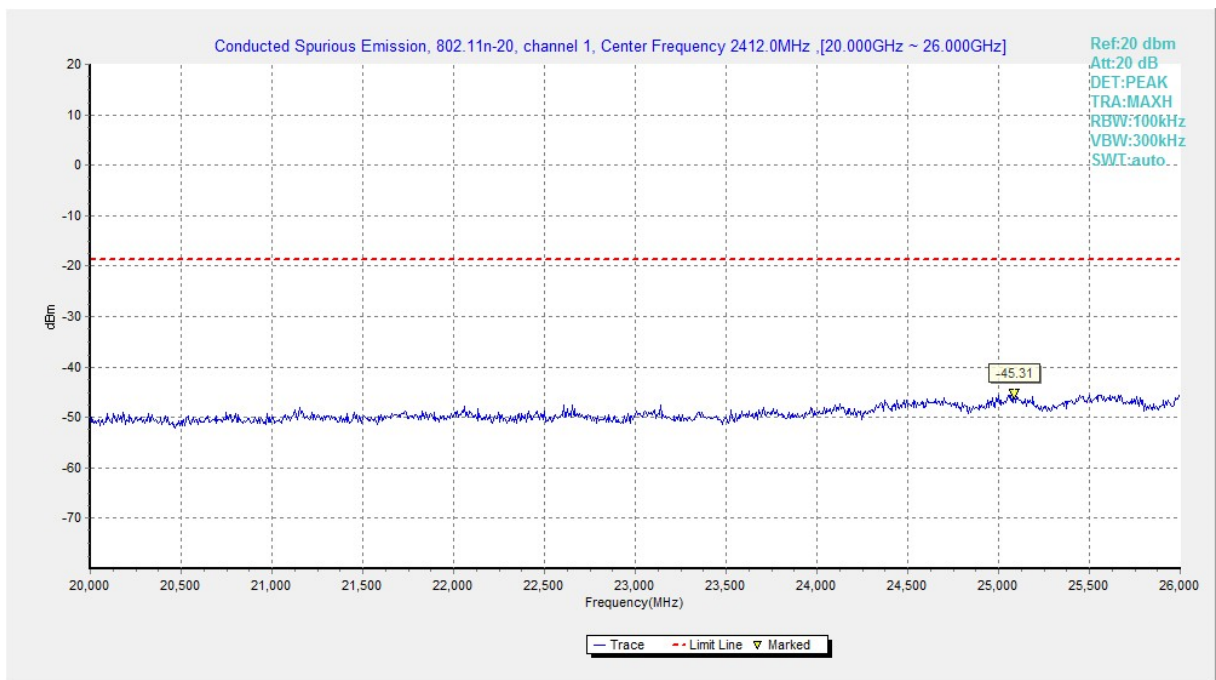


Fig.A.6.1.56 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 20 GHz-26 GHz)

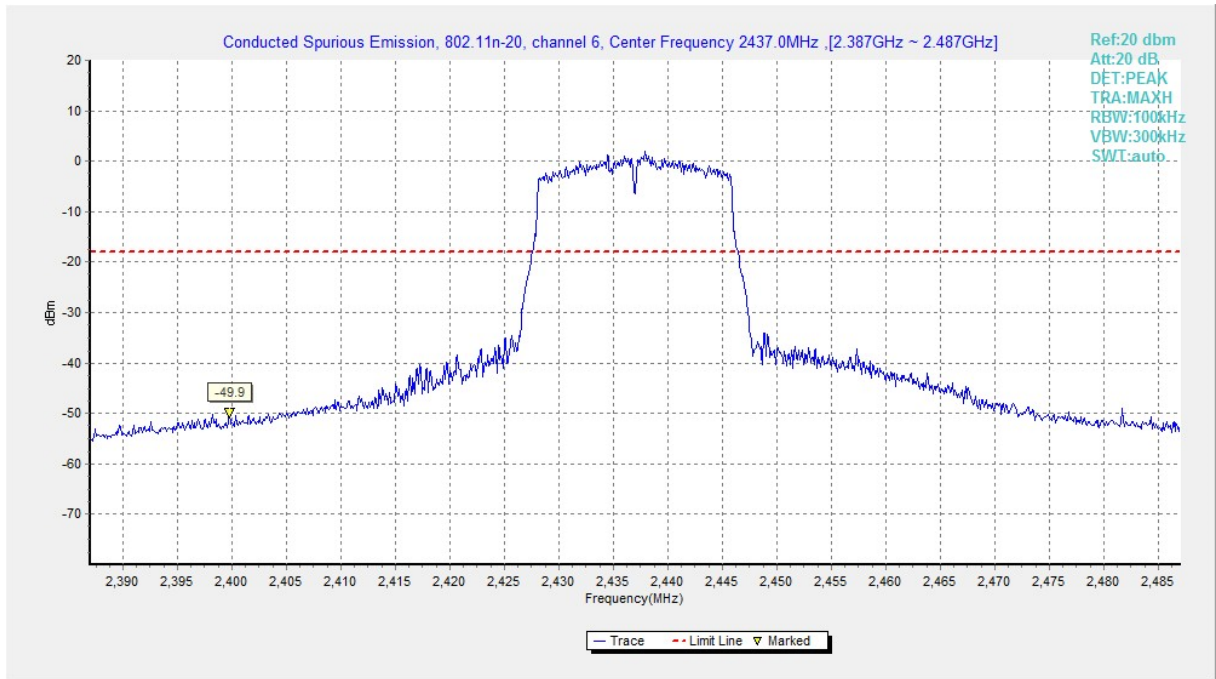


Fig.A.6.1.57 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, Center Frequency)

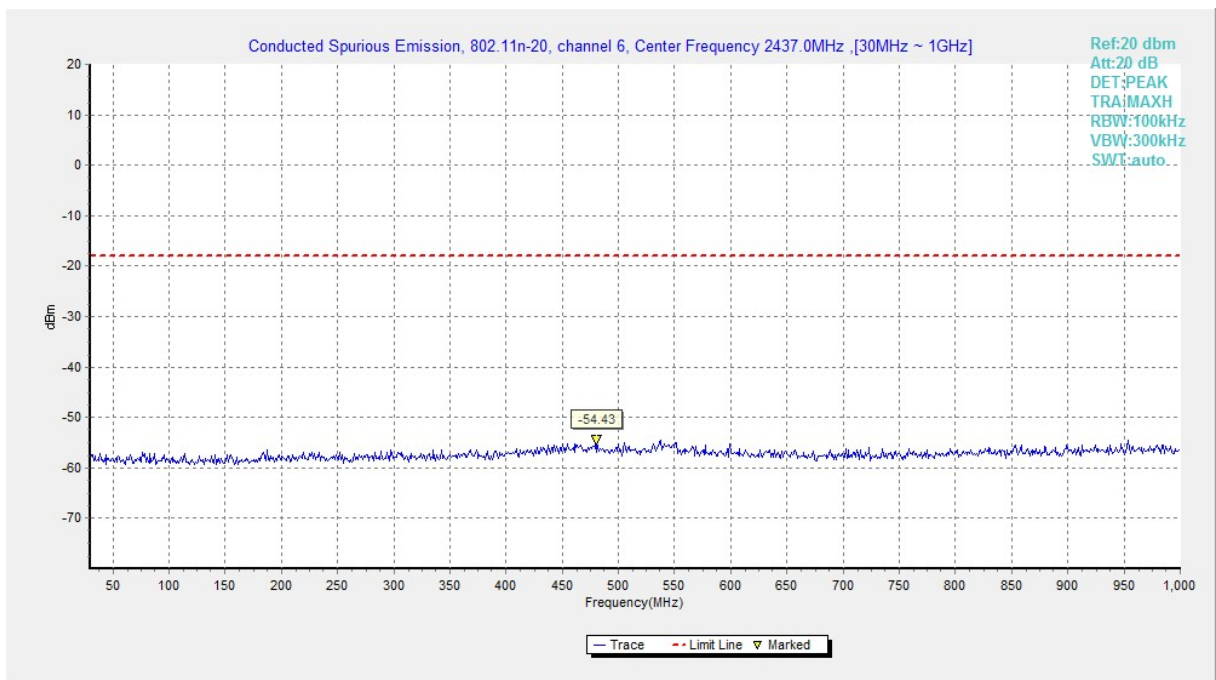


Fig.A.6.1.58 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 30 MHz-1 GHz)

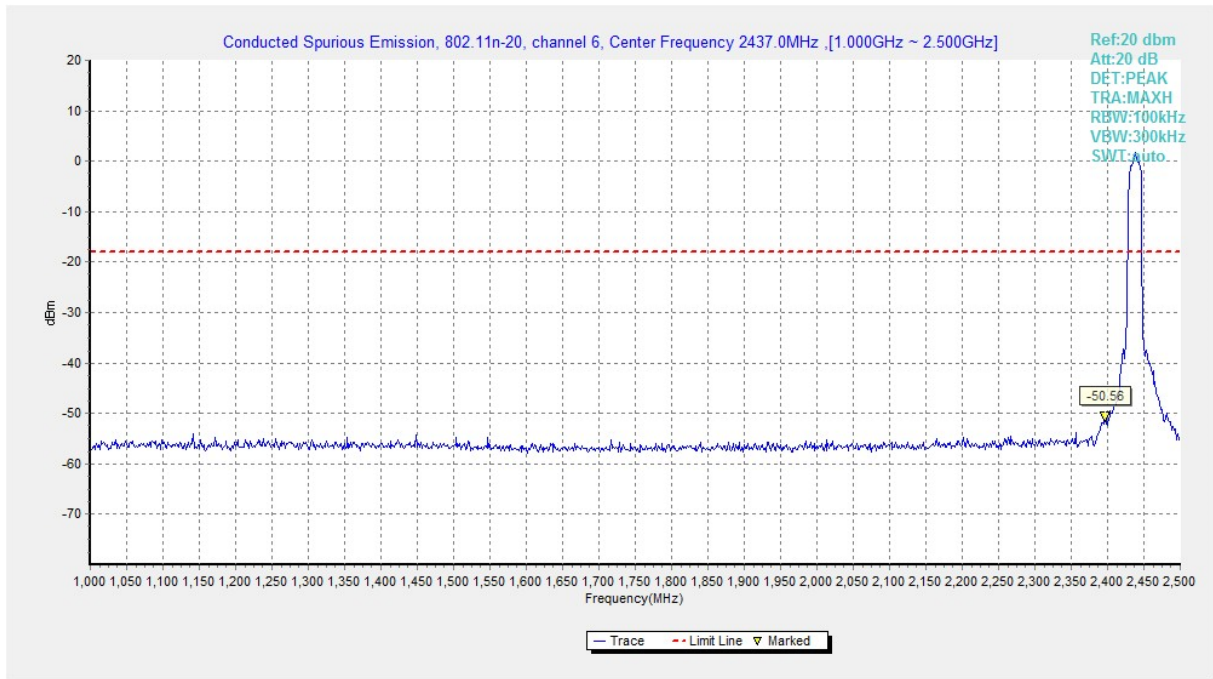


Fig.A.6.1.59 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 1 GHz-2.5 GHz)

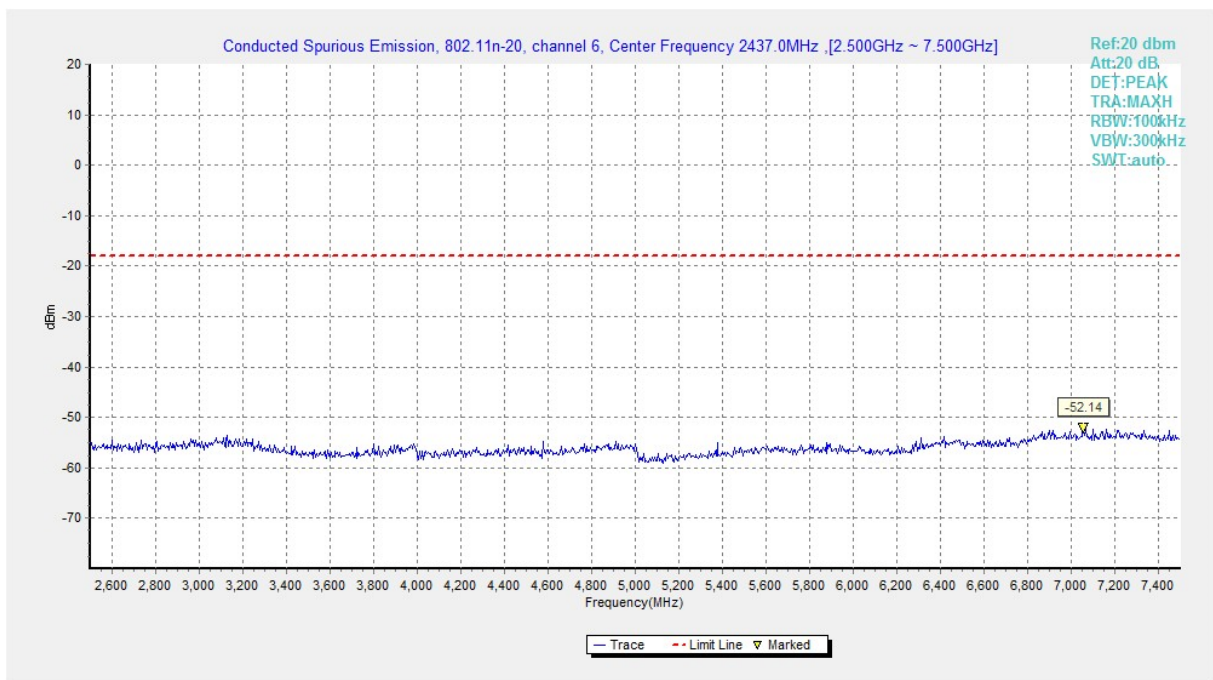


Fig.A.6.1.60 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 2.5 GHz-7.5 GHz)

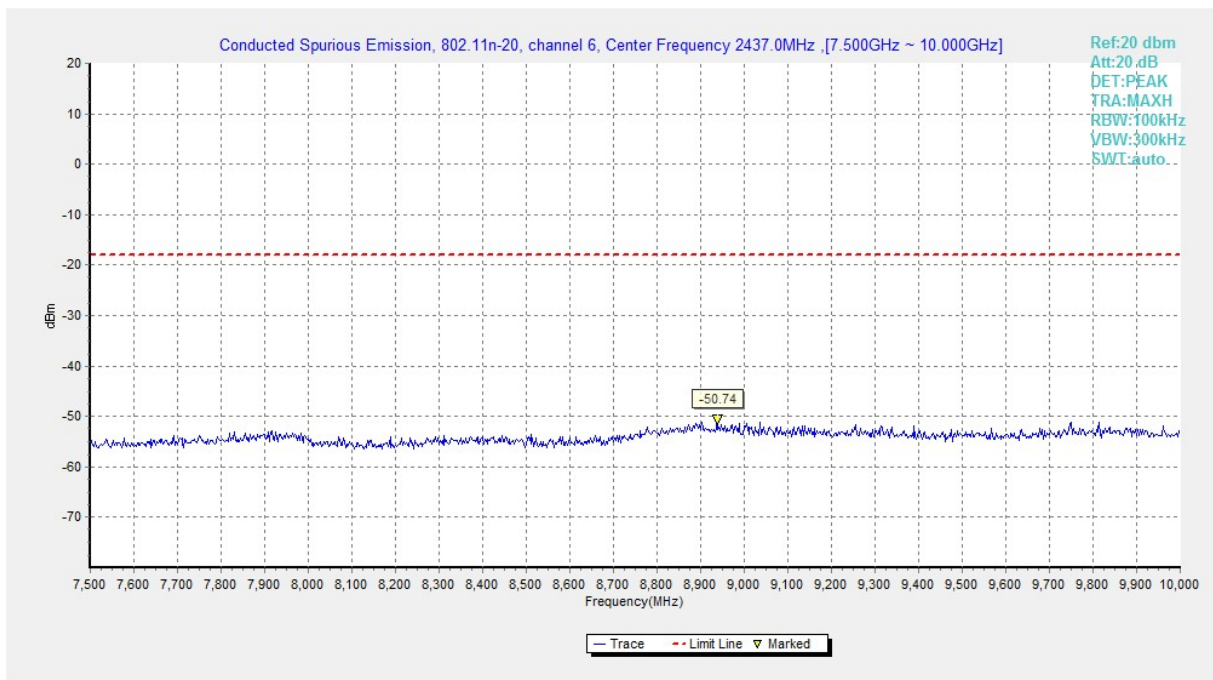


Fig.A.6.1.61 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 7.5 GHz-10 GHz)

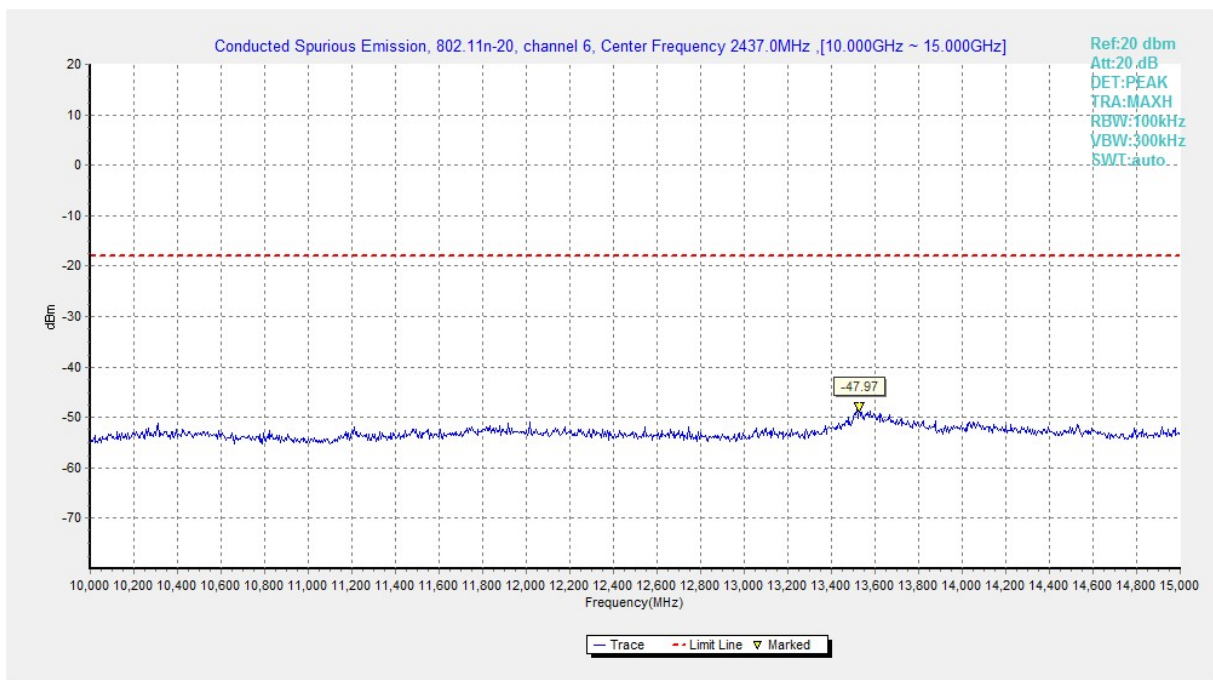


Fig.A.6.1.62 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 10 GHz-15 GHz)

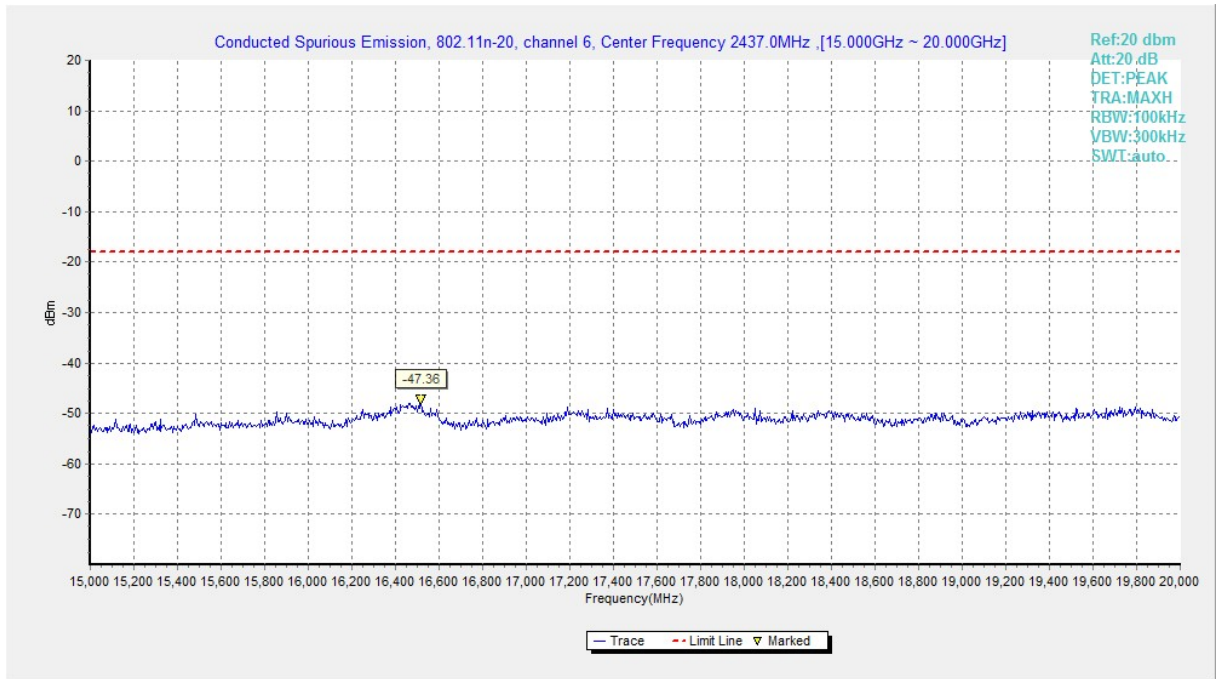


Fig.A.6.1.63 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 15 GHz-20 GHz)

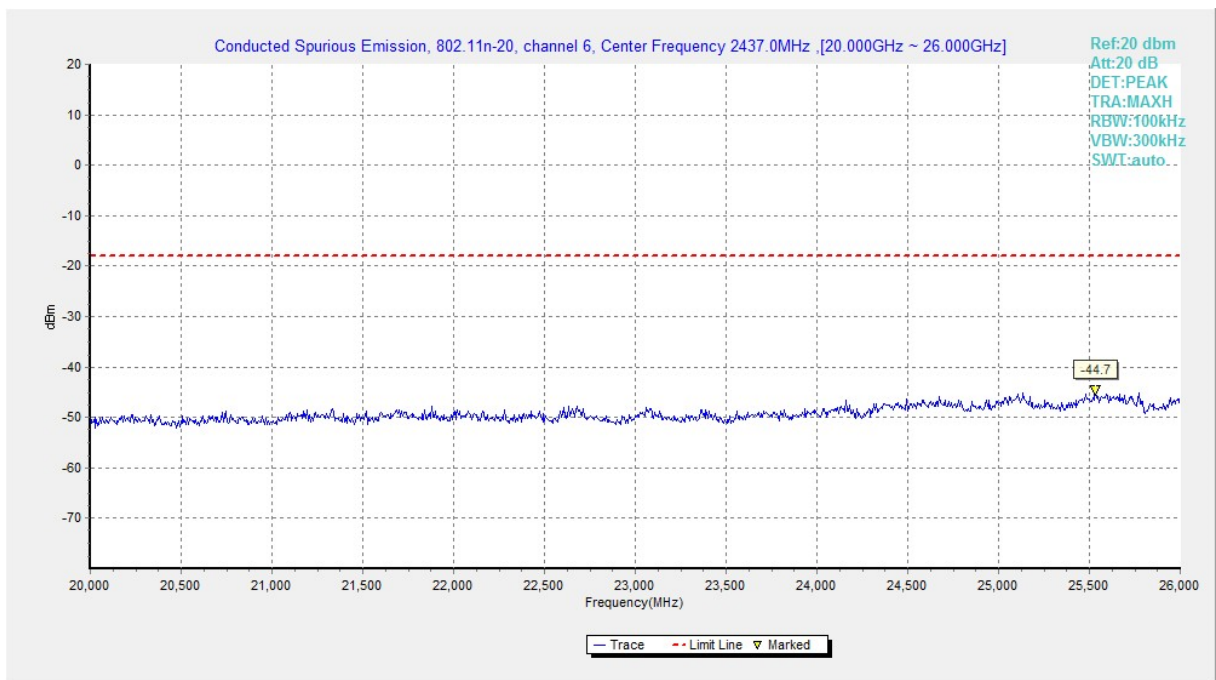


Fig.A.6.1.64 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 20 GHz-26 GHz)

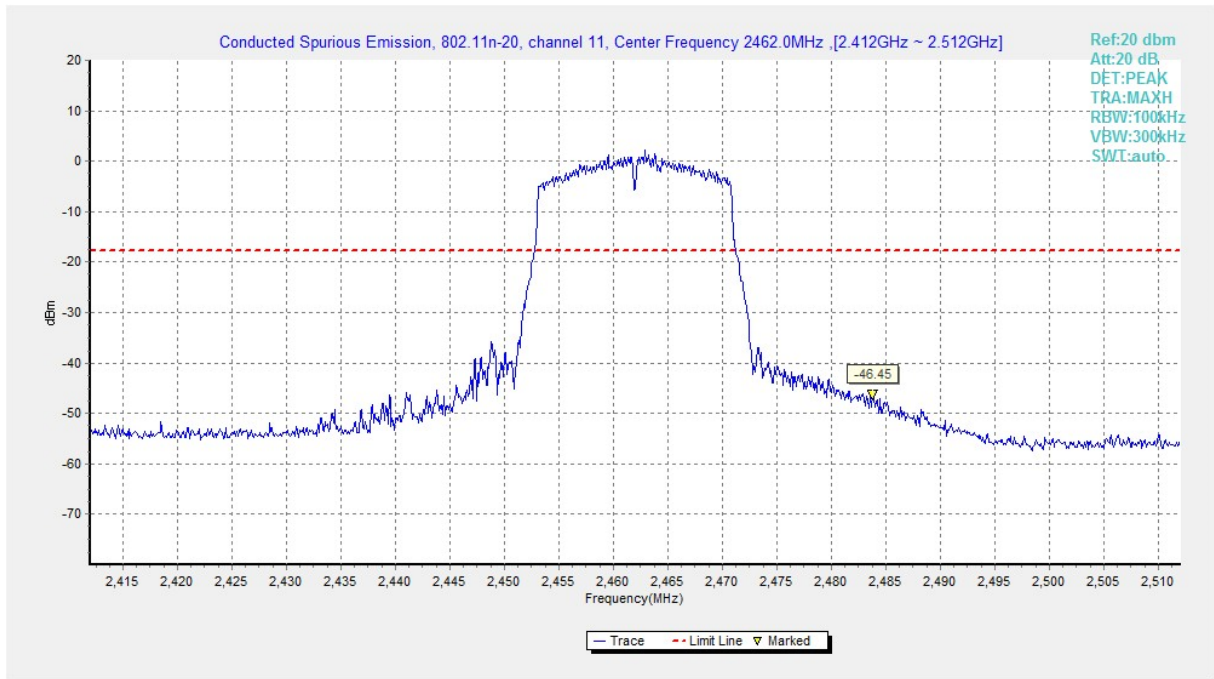


Fig.A.6.1.65 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, Center Frequency)

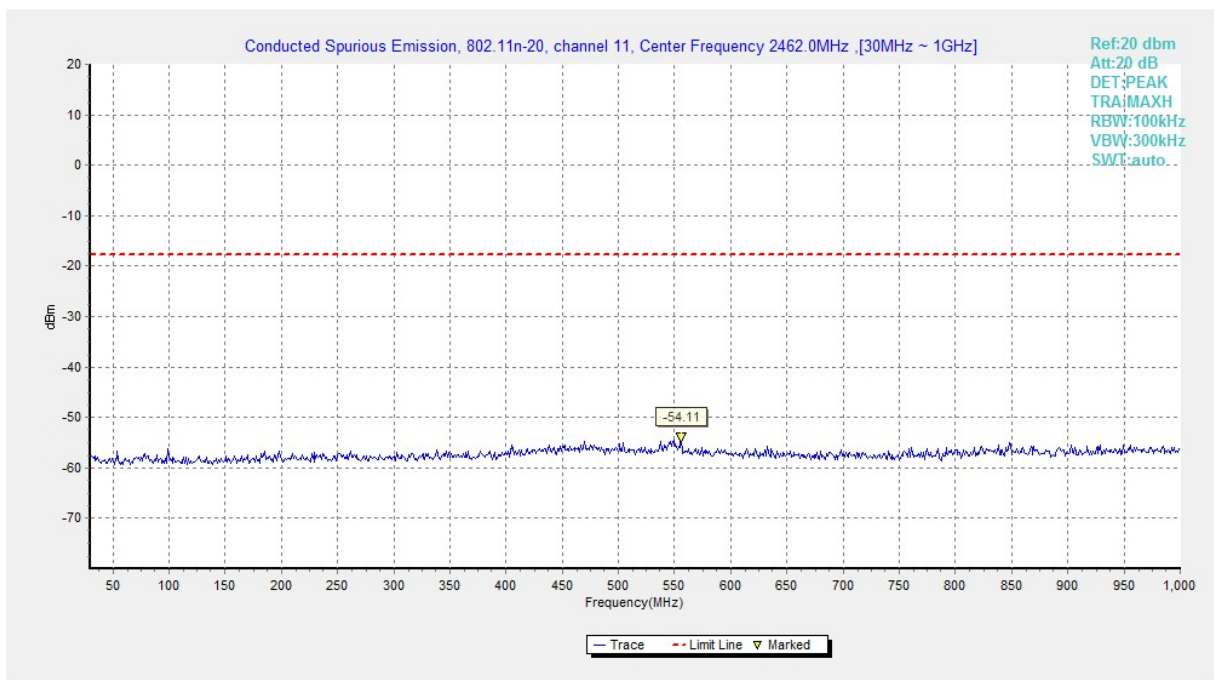


Fig.A.6.1.66 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 30 MHz-1 GHz)

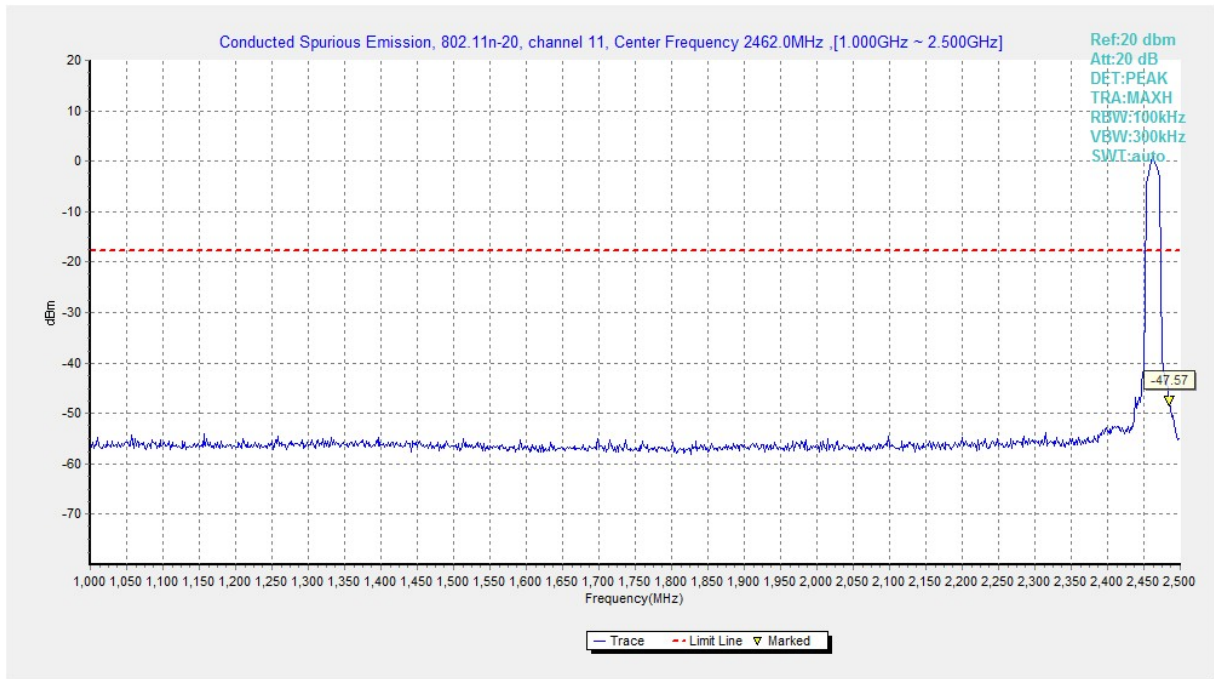


Fig.A.6.1.67 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 1 GHz-2.5 GHz)

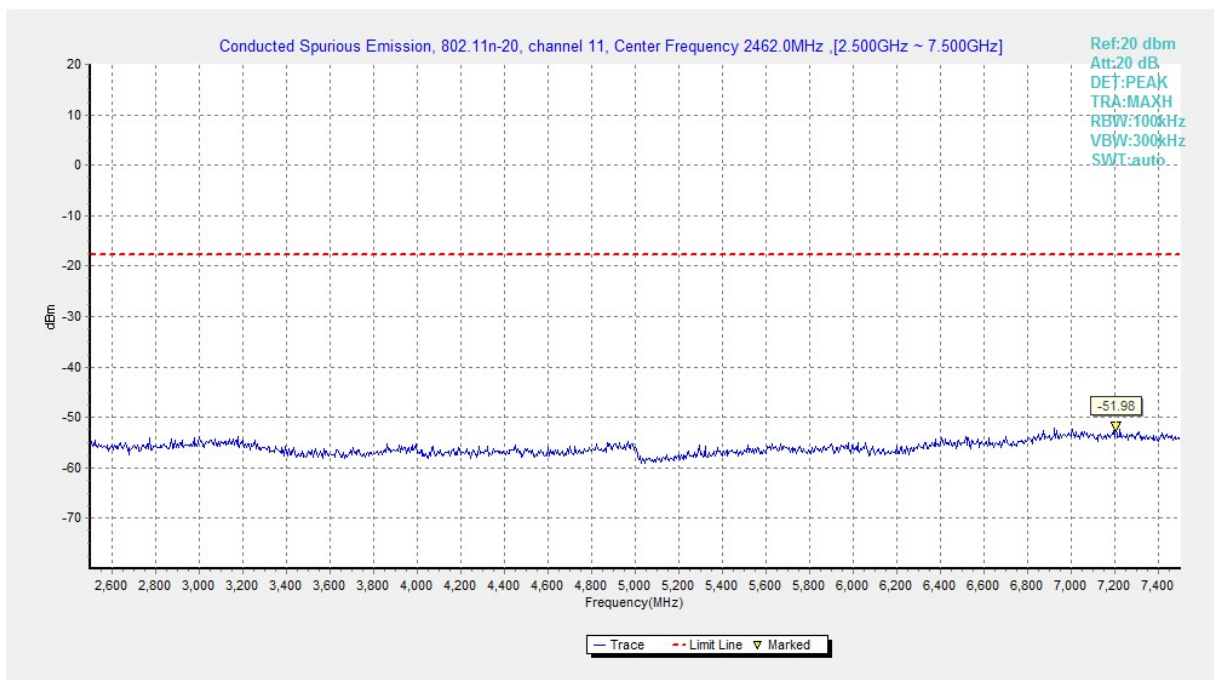


Fig.A.6.1.68 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 2.5 GHz-7.5 GHz)

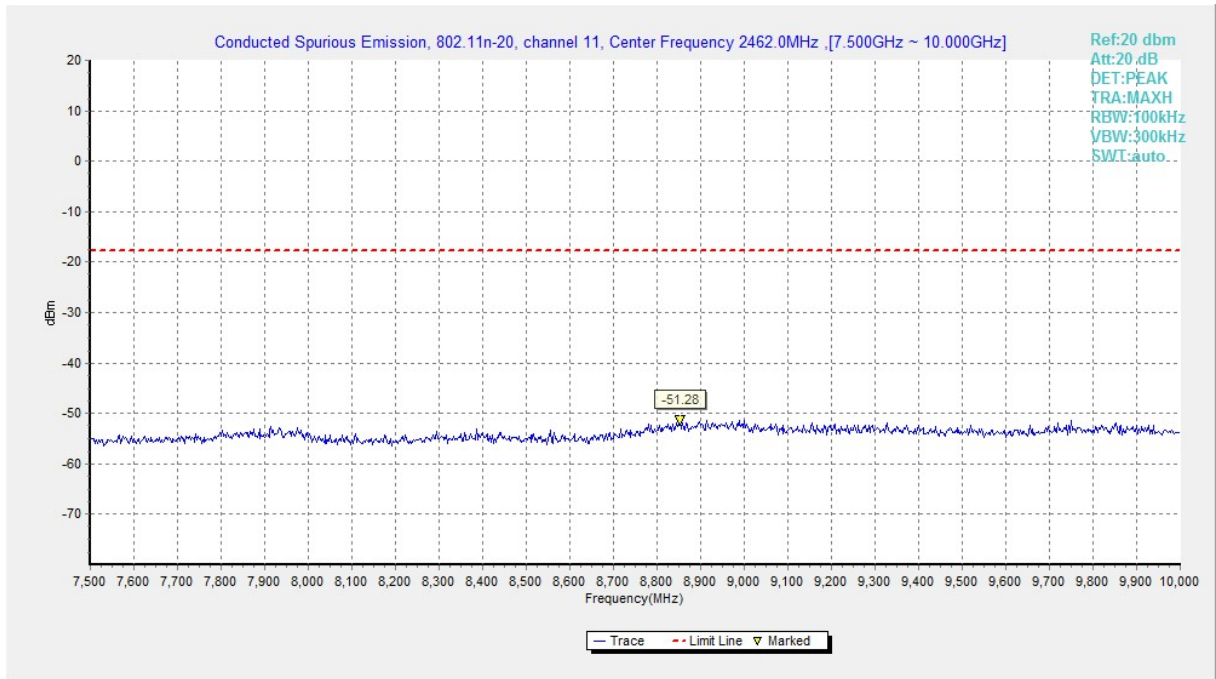


Fig.A.6.1.69 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 7.5 GHz-10 GHz)

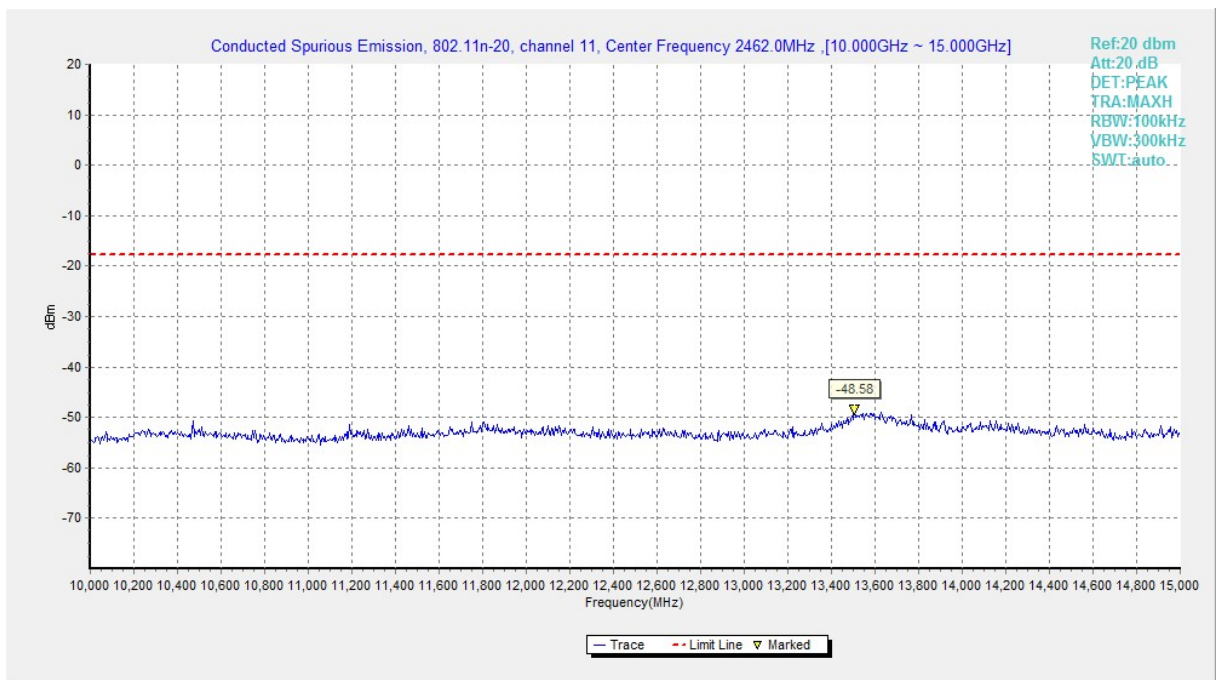


Fig.A.6.1.70 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 10 GHz-15 GHz)

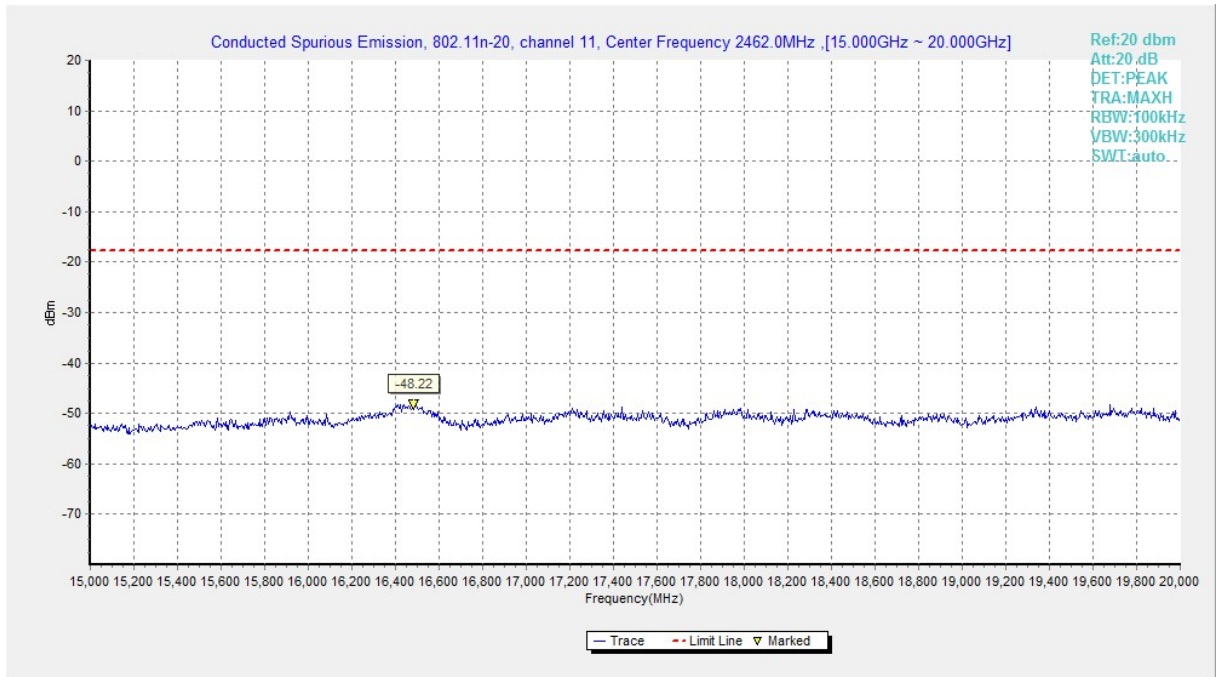


Fig.A.6.1.71 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 15 GHz-20 GHz)

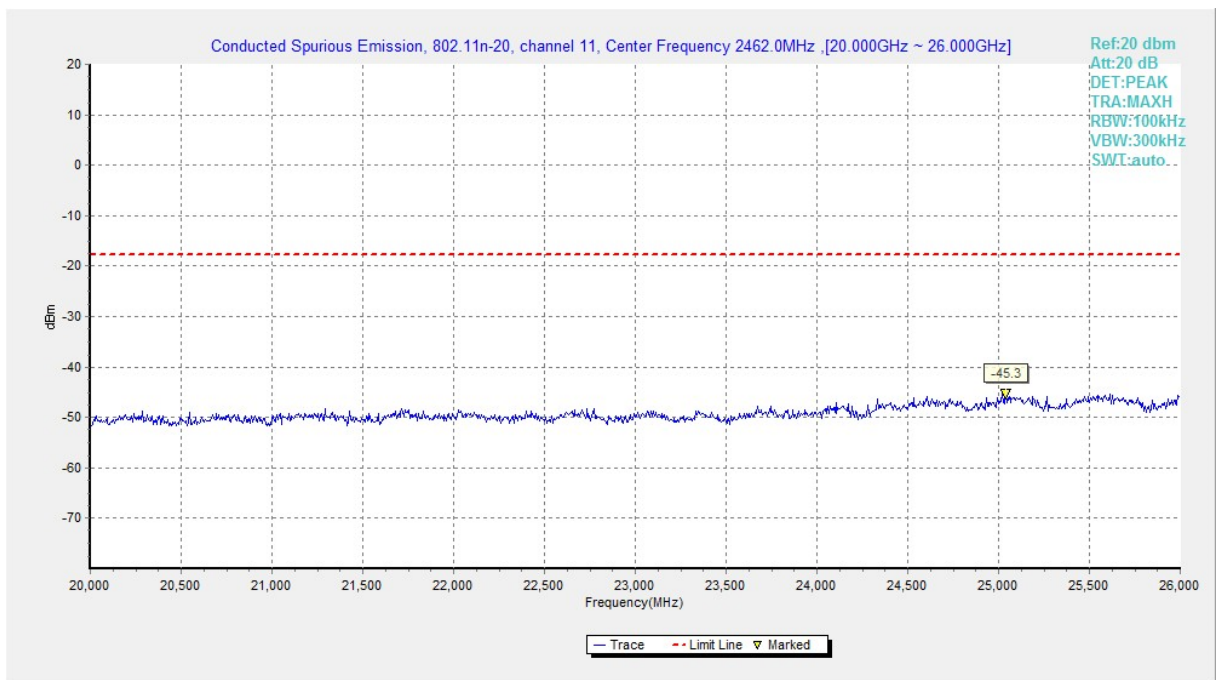


Fig.A.6.1.72 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 20 GHz-26 GHz)

A.6.2 Transmitter Spurious Emission - Radiated

Method of Measurement: See ANSI C63.10-2013-clause 6.4 & 6.5 & 6.6

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247, 15.205, 15.209	20dB below peak output power

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Limit in restricted band:

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Frequency (MHz)	Field strength(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: EUT1

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

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)
2385.166	60.22	2.86	31.99	25.36	74.00	13.78	H
2387.280	60.66	2.86	32.00	25.80	74.00	13.34	H
4824.000	43.79	-33.24	34.13	42.89	74.00	30.21	V
7236.000	44.57	-30.88	35.80	39.66	74.00	29.43	V
9648.000	45.36	-30.46	36.71	39.11	74.00	28.64	V
12060.000	46.25	-28.70	38.74	36.21	74.00	27.75	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)
2369.600	46.41	-34.50	31.98	48.93	74.00	27.59	H
2508.400	46.30	-34.24	32.12	48.42	74.00	27.70	V
4874.000	42.51	-33.30	34.15	41.66	74.00	31.49	V
7311.000	41.85	-30.82	35.83	36.84	74.00	32.15	H
9748.000	42.72	-30.33	36.85	36.20	74.00	31.28	V
12185.000	46.00	-28.11	38.81	35.29	74.00	28.00	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)
2484.260	60.26	2.93	32.09	25.24	74.00	13.74	V
2484.490	60.49	2.93	32.09	25.47	74.00	13.51	V
4924.000	42.46	-33.53	34.17	41.82	74.00	31.54	V
7386.000	41.88	-31.45	35.86	37.48	74.00	32.12	V
9848.000	42.59	-30.18	36.99	35.78	74.00	31.41	H
12310.000	45.16	-27.75	38.89	34.03	74.00	28.84	V

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)
2387.952	65.96	2.86	32.00	31.10	74.00	8.04	V
2388.918	67.89	2.87	32.00	33.03	74.00	6.11	V
4824.000	40.08	-33.24	34.13	39.19	74.00	33.92	H
7236.000	42.25	-30.88	35.80	37.33	74.00	31.75	V
9648.000	42.92	-30.46	36.71	36.67	74.00	31.08	H
12060.000	44.82	-28.70	38.74	34.79	74.00	29.18	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)
2368.000	45.12	-34.57	31.98	47.70	74.00	28.88	V
2509.000	45.80	-34.25	32.12	47.93	74.00	28.20	V
4874.000	39.82	-33.30	34.15	38.97	74.00	34.18	H
7311.000	41.70	-30.82	35.83	36.69	74.00	32.30	H
9748.000	44.81	-30.33	36.85	38.29	74.00	29.19	H
12185.000	45.39	-28.11	38.81	34.69	74.00	28.61	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)
2483.605	70.67	2.93	32.09	35.65	74.00	3.33	V
2484.315	69.45	2.93	32.09	34.43	74.00	4.55	V
4924.000	40.09	-33.53	34.17	39.45	74.00	33.91	V
7386.000	41.98	-31.45	35.86	37.58	74.00	32.02	H
9848.000	42.52	-30.18	36.99	35.71	74.00	31.48	H
12310.000	45.64	-27.75	38.89	34.51	74.00	28.36	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)
2364.012	61.47	2.85	31.97	26.65	74.00	12.53	V
2388.246	62.20	2.86	32.00	27.34	74.00	11.80	V
4824.000	40.09	-33.24	34.13	39.20	74.00	33.91	V
7236.000	42.95	-30.88	35.80	38.03	74.00	31.05	H
9648.000	42.83	-30.46	36.71	36.58	74.00	31.17	V
12060.000	44.79	-28.70	38.74	34.76	74.00	29.21	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)
2363.000	45.71	-34.76	31.97	48.50	74.00	28.29	H
2505.000	45.62	-34.21	32.11	47.71	74.00	28.38	H
4874.000	39.49	-33.30	34.15	38.64	74.00	34.51	H
7311.000	41.17	-30.82	35.83	36.16	74.00	32.83	V
9748.000	42.86	-30.33	36.85	36.35	74.00	31.14	V
12185.000	44.97	-28.11	38.81	34.27	74.00	29.03	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	62.40	2.93	32.09	27.38	74.00	11.60	V
2486.380	61.17	2.93	32.09	26.15	74.00	12.83	V
4924.000	40.98	-33.53	34.17	40.34	74.00	33.02	V
7386.000	43.71	-31.45	35.86	39.31	74.00	30.29	V
9848.000	42.09	-30.18	36.99	35.28	74.00	31.91	V
12310.000	45.14	-27.75	38.89	34.00	74.00	28.86	H

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)
2388.780	47.03	2.86	32.00	12.16	54.00	6.97	V
2389.740	47.10	2.87	32.00	12.23	54.00	6.90	V
4824.000	28.99	-33.24	34.13	28.10	54.00	25.01	H
7236.000	31.68	-30.88	35.80	26.77	54.00	22.32	V
9648.000	32.64	-30.46	36.71	26.39	54.00	21.36	H
12060.000	33.79	-28.70	38.74	23.76	54.00	20.21	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)
2422.320	49.78	2.89	32.03	14.87	54.00	4.22	V
2452.140	51.79	2.91	32.06	16.82	54.00	2.21	V
4874.000	28.94	-33.30	34.15	28.09	54.00	25.06	H
7311.000	32.42	-30.82	35.83	27.41	54.00	21.58	V
9748.000	32.88	-30.33	36.85	26.36	54.00	21.12	V
12185.000	33.38	-28.11	38.81	22.67	54.00	20.62	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)
2483.520	47.20	2.93	32.09	12.18	54.00	6.80	V
2484.060	47.20	2.93	32.09	12.18	54.00	6.80	V
4924.000	31.71	-33.53	34.17	31.07	54.00	22.29	H
7386.000	35.05	-31.45	35.86	30.65	54.00	18.95	H
9848.000	32.36	-30.18	36.99	25.55	54.00	21.64	V
12310.000	33.49	-27.75	38.89	22.36	54.00	20.51	V

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)
2389.380	47.07	2.87	32.00	12.21	54.00	6.93	V
2389.860	47.10	2.87	32.00	12.23	54.00	6.90	V
4824.000	28.91	-33.24	34.13	28.01	54.00	25.09	H
7236.000	31.18	-30.88	35.80	26.26	54.00	22.82	H
9648.000	32.02	-30.46	36.71	25.77	54.00	21.98	H
12060.000	33.22	-28.70	38.74	23.19	54.00	20.78	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)
2413.800	48.31	2.88	32.02	13.41	54.00	5.69	V
2459.400	48.48	2.91	32.06	13.50	54.00	5.52	V
4874.000	28.45	-33.30	34.15	27.60	54.00	25.55	H
7311.000	30.97	-30.82	35.83	25.96	54.00	23.03	H
9748.000	31.78	-30.33	36.85	25.26	54.00	22.22	H
12185.000	34.73	-28.11	38.81	24.02	54.00	19.27	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)
2483.520	49.50	2.93	32.09	14.48	54.00	4.50	V
2483.580	49.34	2.93	32.09	14.32	54.00	4.66	V
4924.000	29.14	-33.53	34.17	28.50	54.00	24.86	H
7386.000	30.85	-31.45	35.86	26.45	54.00	23.15	V
9848.000	31.68	-30.18	36.99	24.87	54.00	22.32	V
12310.000	33.95	-27.75	38.89	22.81	54.00	20.05	V