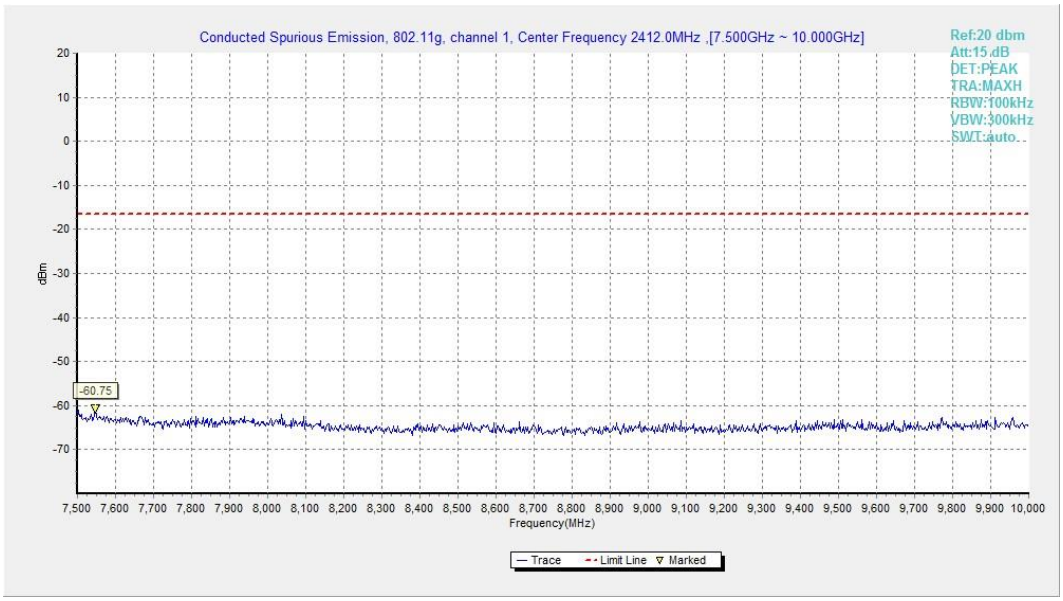


Fig.A.6.1.29 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 7.5 GHz-10 GHz)

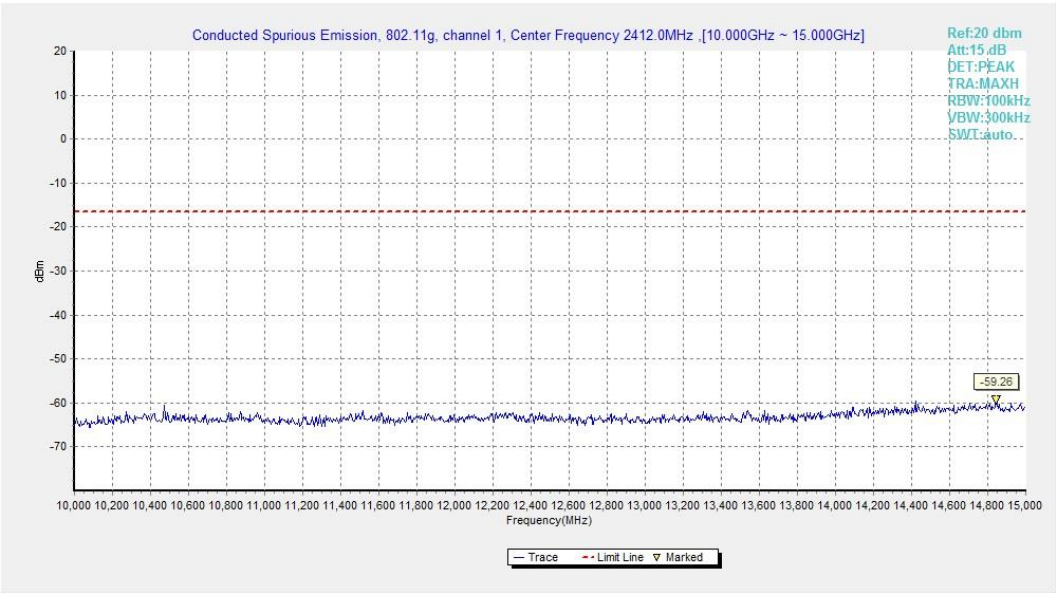


Fig.A.6.1.30 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 10 GHz-15 GHz)

©Copyright. All rights reserved by CTTL.

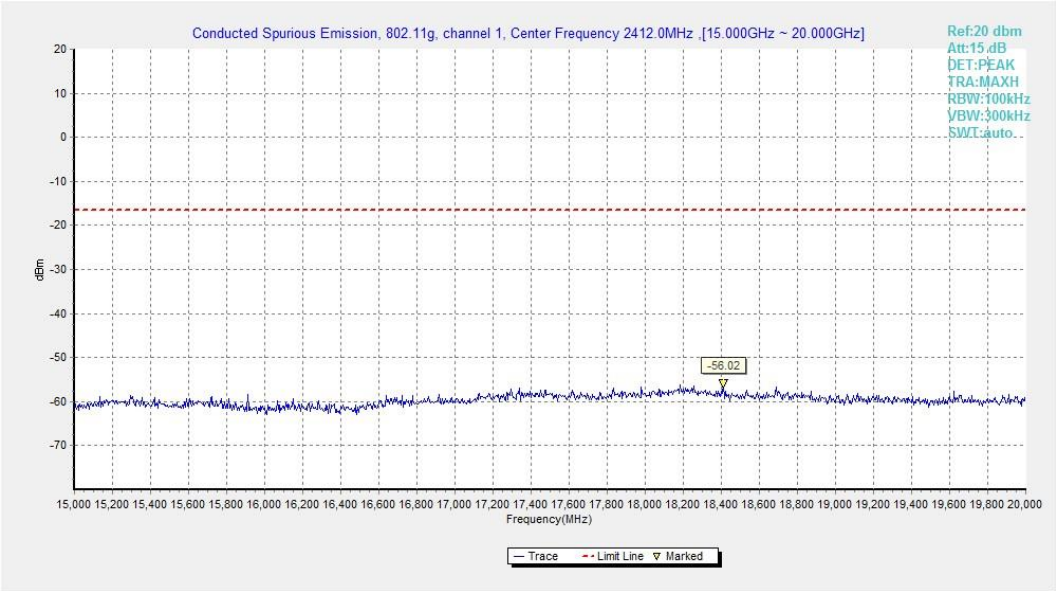


Fig.A.6.1.31 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 15 GHz-20 GHz)

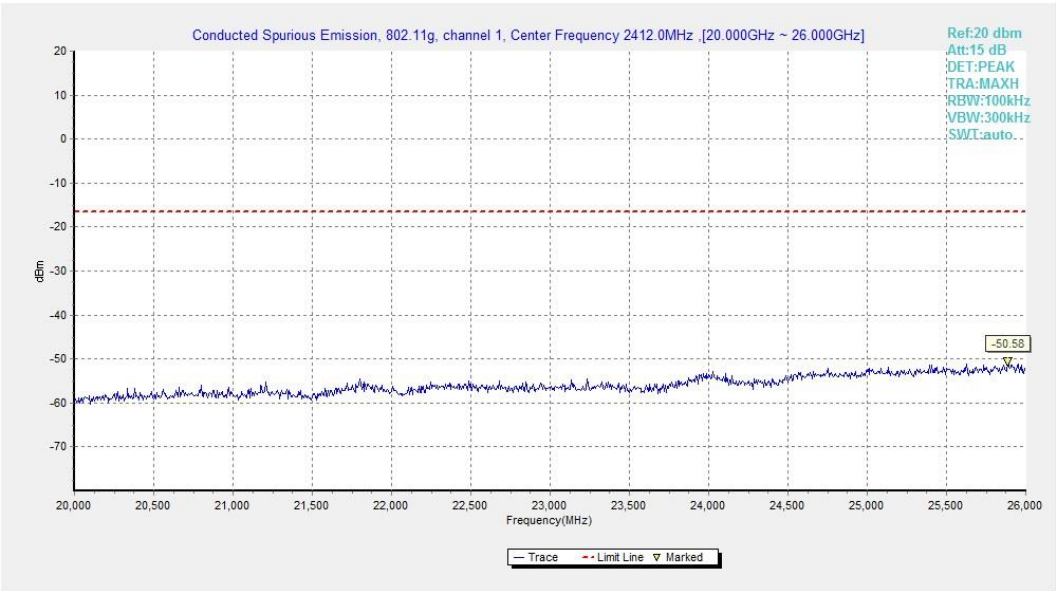


Fig.A.6.1.32 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 20 GHz-26 GHz)

©Copyright. All rights reserved by CTTL.

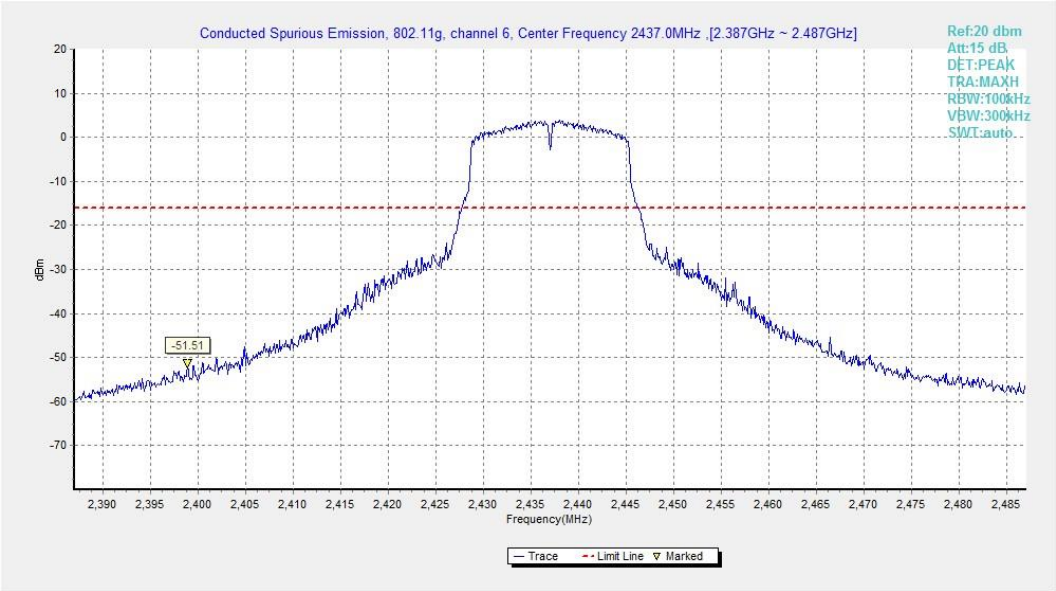


Fig.A.6.1.33 Transmitter Spurious Emission - Conducted (802.11g, Ch6, Center Frequency)

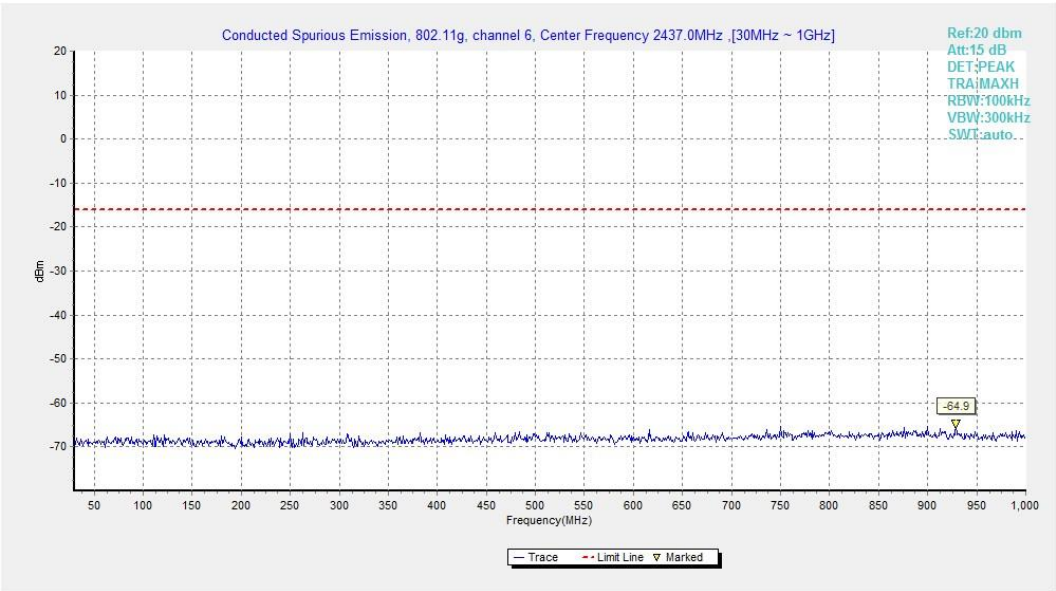


Fig.A.6.1.34 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 30 MHz-1 GHz)

©Copyright. All rights reserved by CTTL.

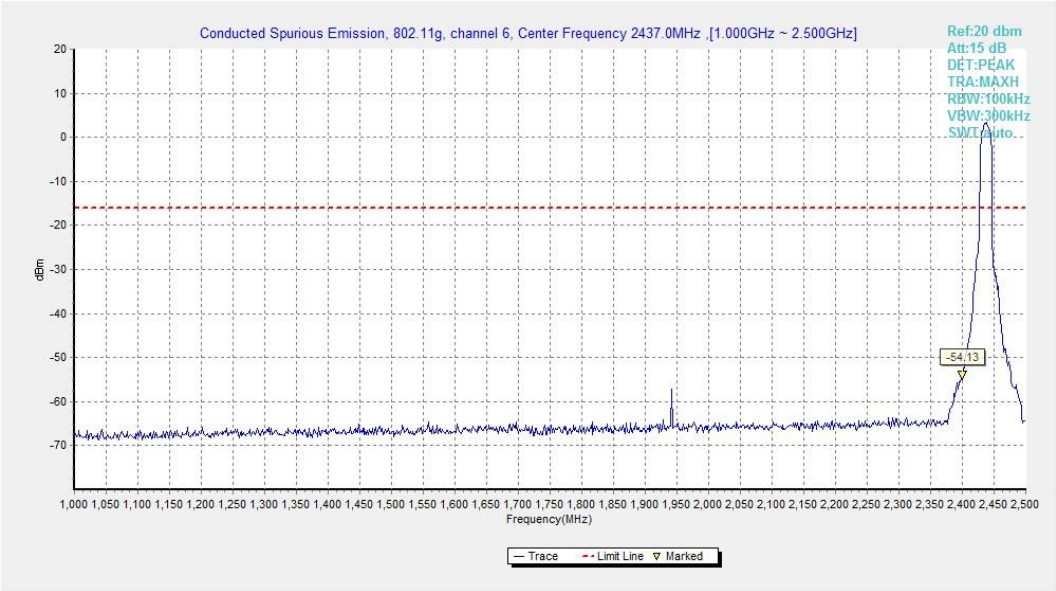


Fig.A.6.1.35 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 1 GHz-2.5 GHz)

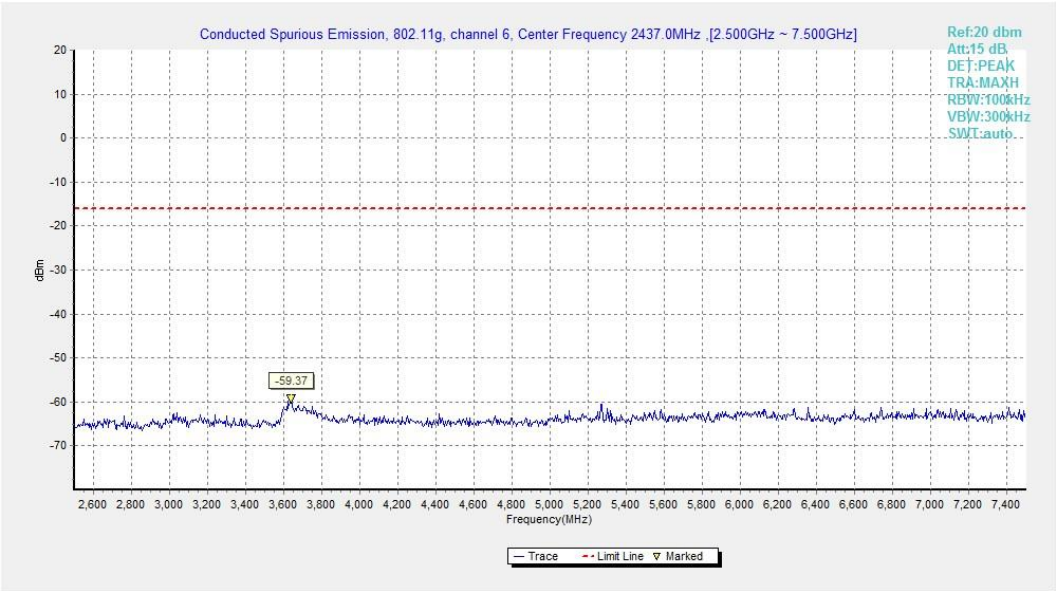


Fig.A.6.1.36 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 2.5 GHz-7.5 GHz)

©Copyright. All rights reserved by CTTL.

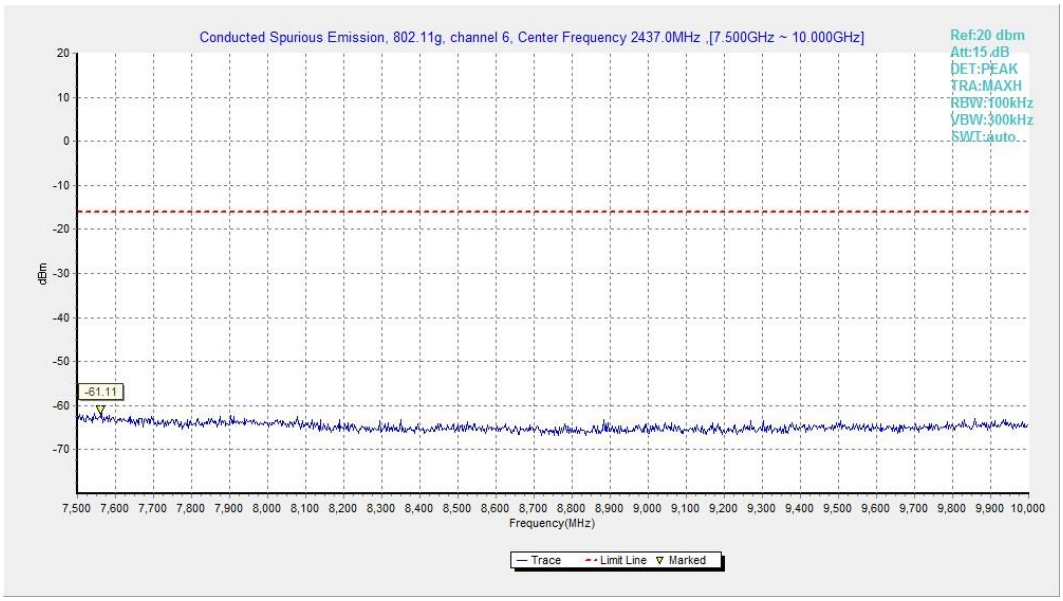


Fig.A.6.1.37 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 7.5 GHz-10 GHz)

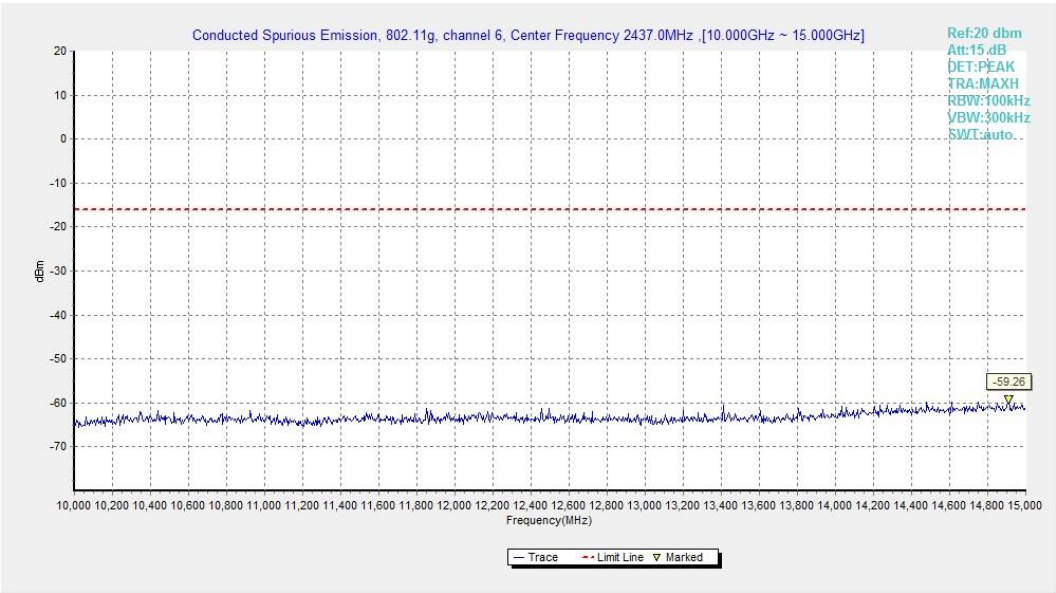


Fig.A.6.1.38 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 10 GHz-15 GHz)

©Copyright. All rights reserved by CTTL.

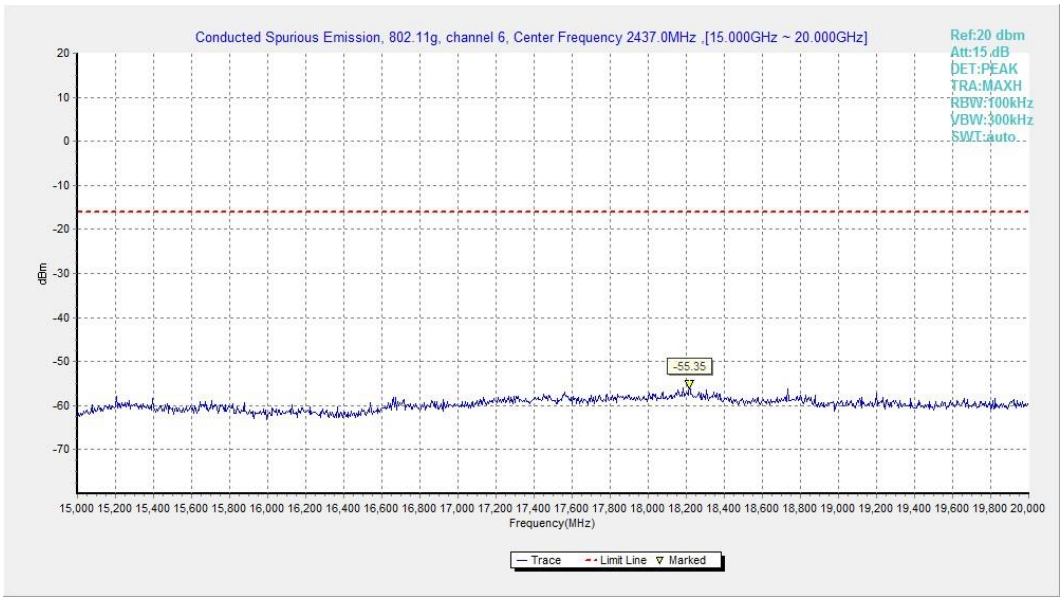


Fig.A.6.1.39 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 15 GHz-20 GHz)

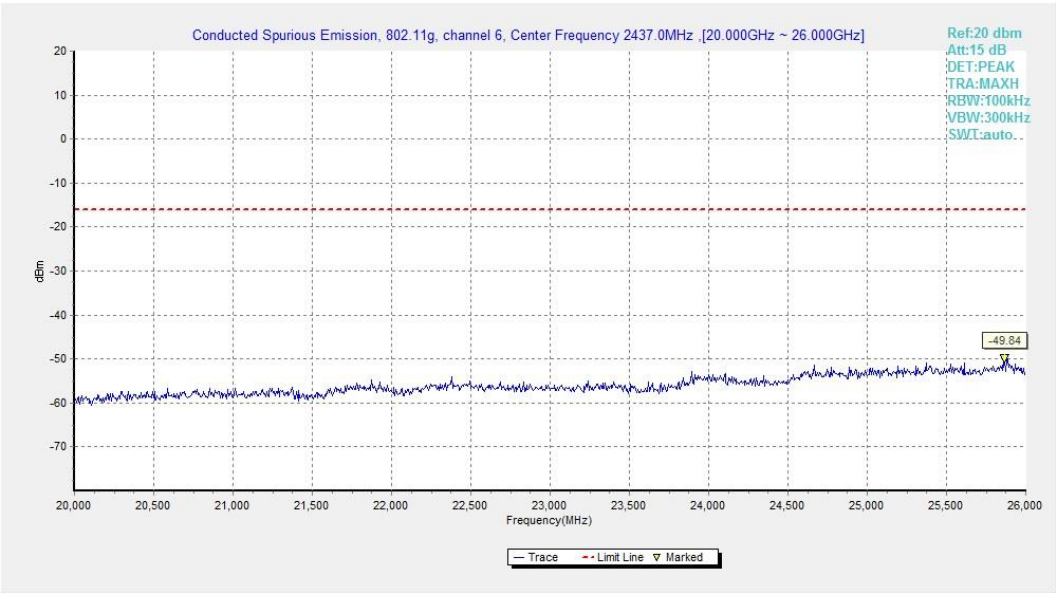


Fig.A.6.1.40 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 20 GHz-26 GHz)

©Copyright. All rights reserved by CTTL.

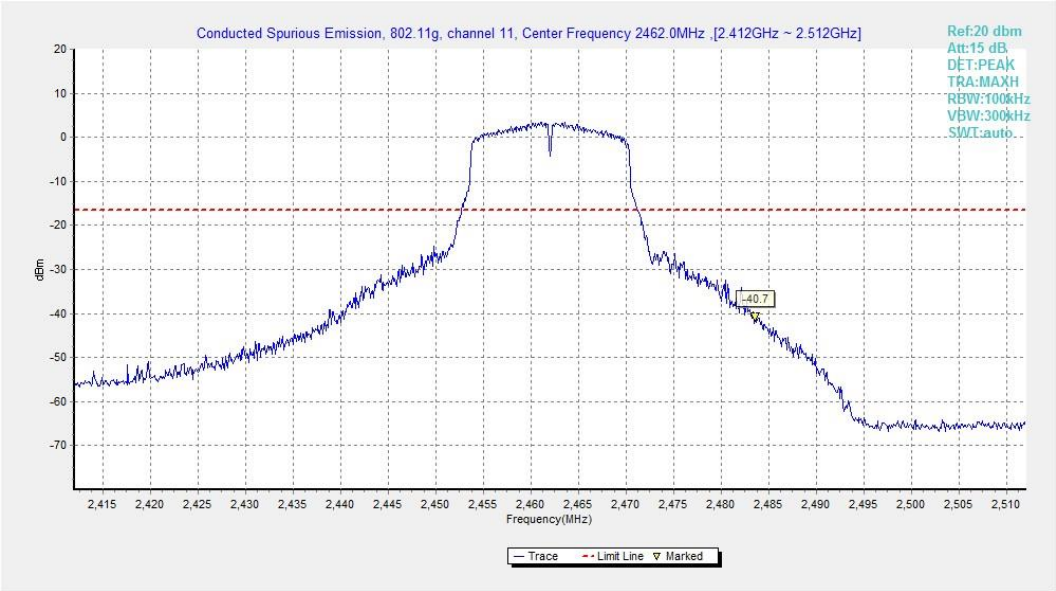


Fig.A.6.1.41 Transmitter Spurious Emission - Conducted (802.11g, Ch11, Center Frequency)

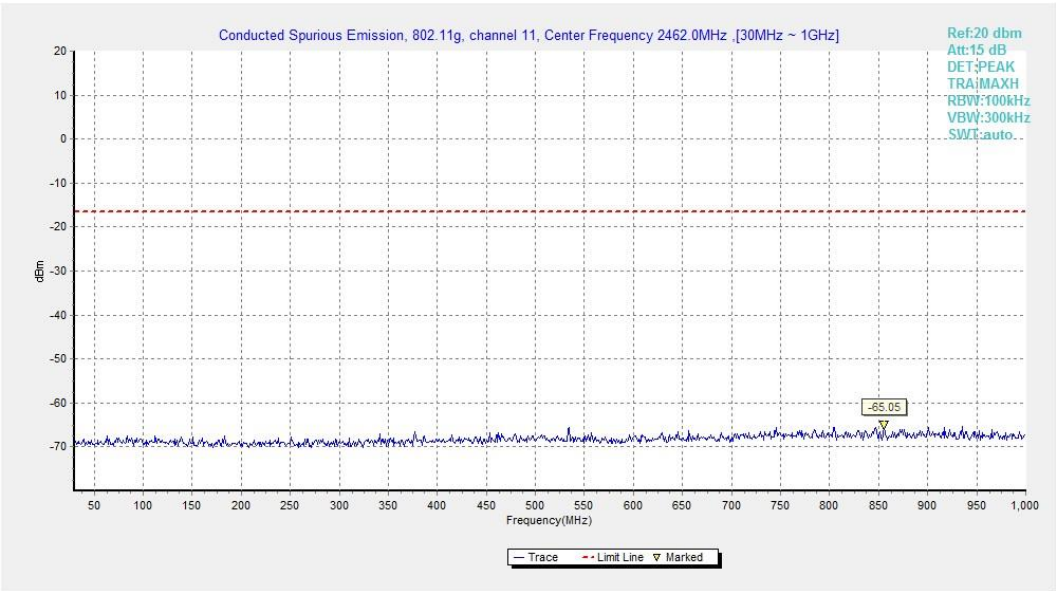


Fig.A.6.1.42 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 30 MHz-1 GHz)

©Copyright. All rights reserved by CTTL.

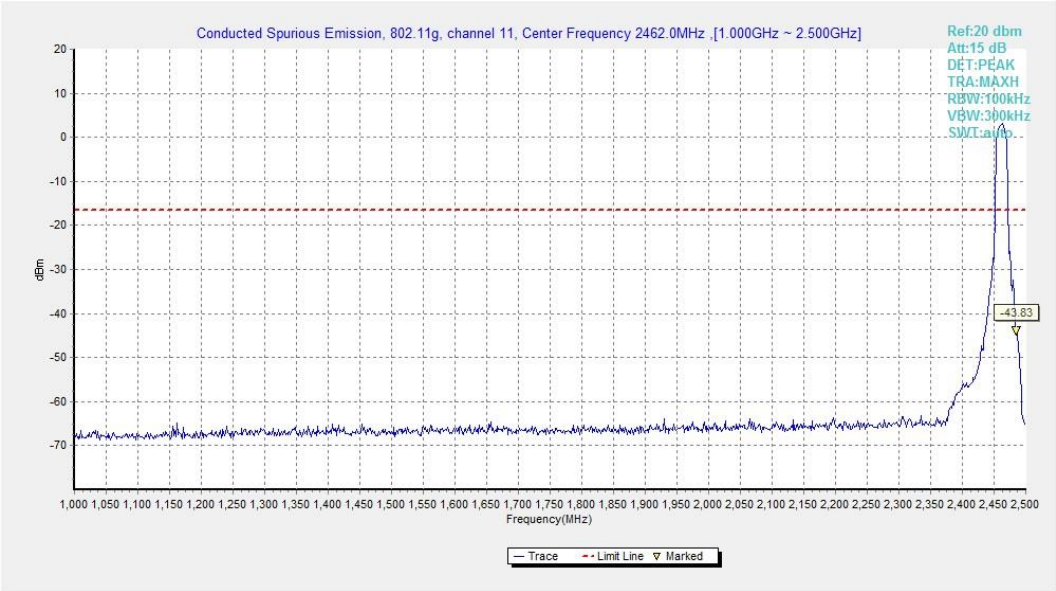


Fig.A.6.1.43 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 1 GHz-2.5 GHz)

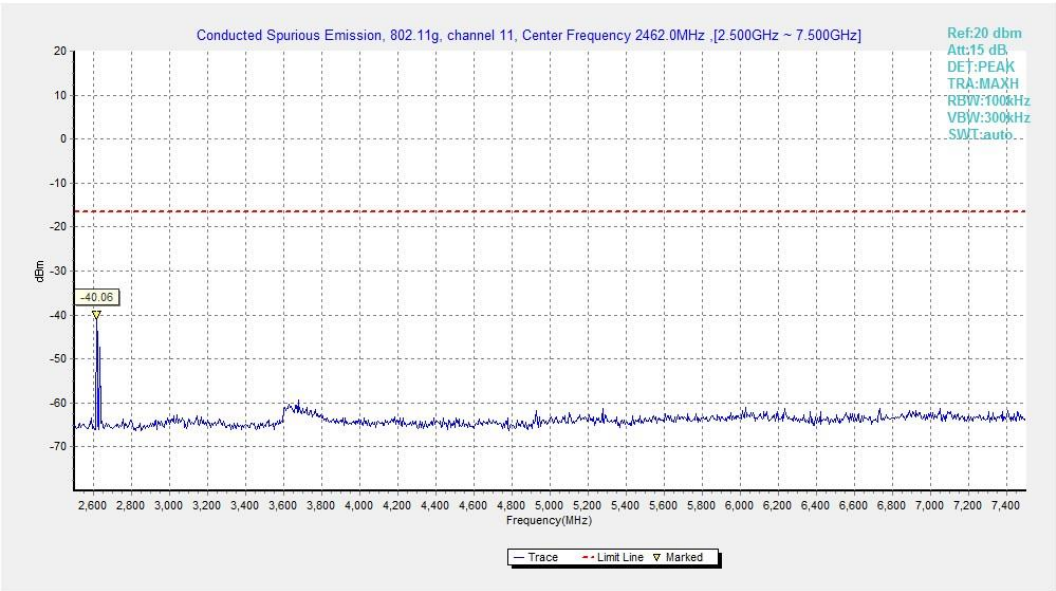


Fig.A.6.1.44 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 2.5 GHz-7.5 GHz)

©Copyright. All rights reserved by CTTL.

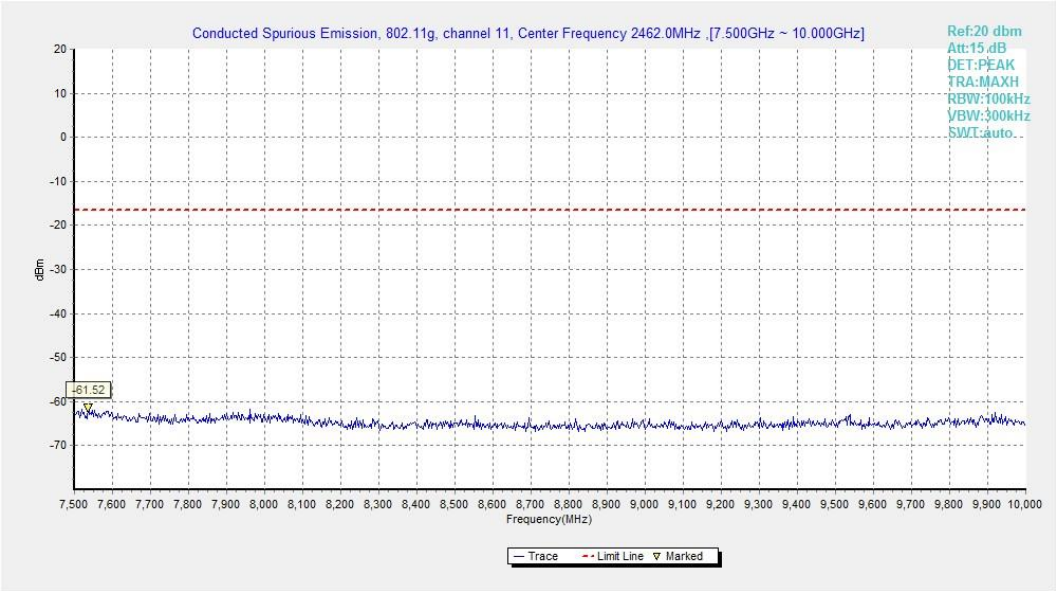


Fig.A.6.1.45 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 7.5 GHz-10 GHz)

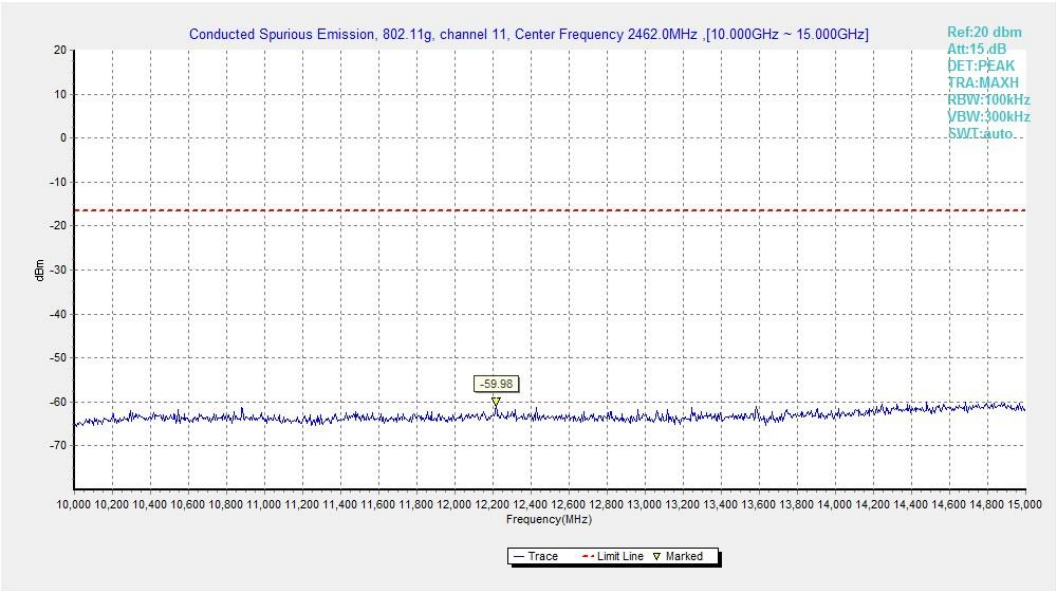


Fig.A.6.1.46 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 10 GHz-15 GHz)

©Copyright. All rights reserved by CTTL.

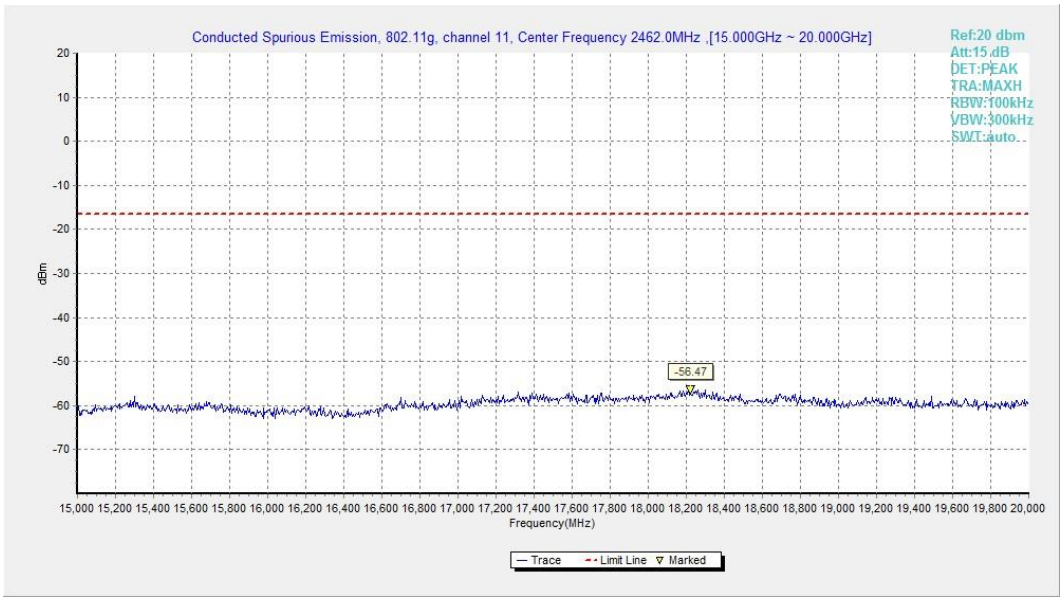


Fig.A.6.1.47 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 15 GHz-20 GHz)

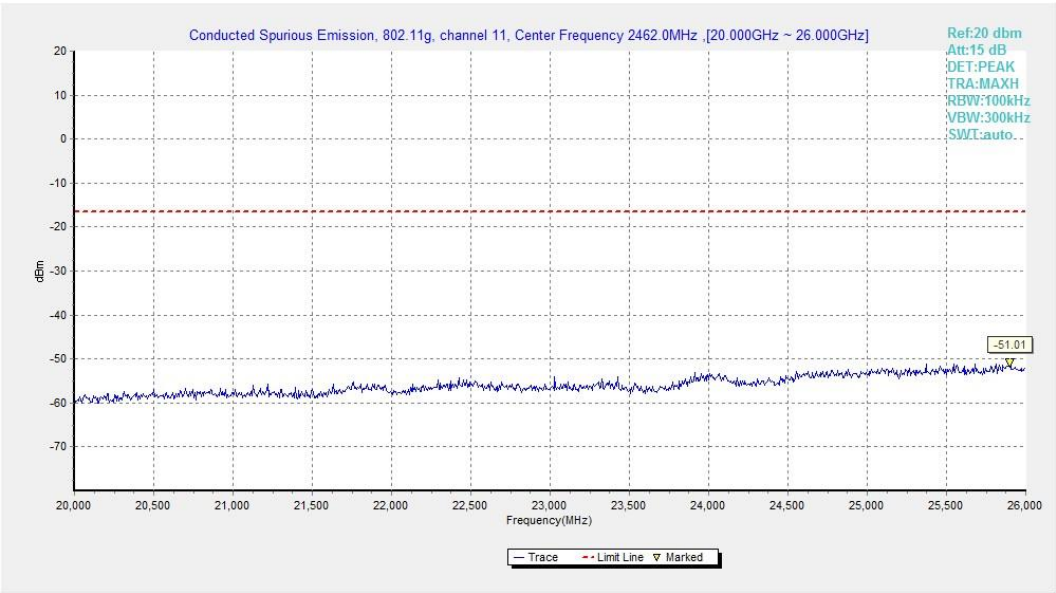


Fig.A.6.1.48 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 20 GHz-26 GHz)

©Copyright. All rights reserved by CTTL.

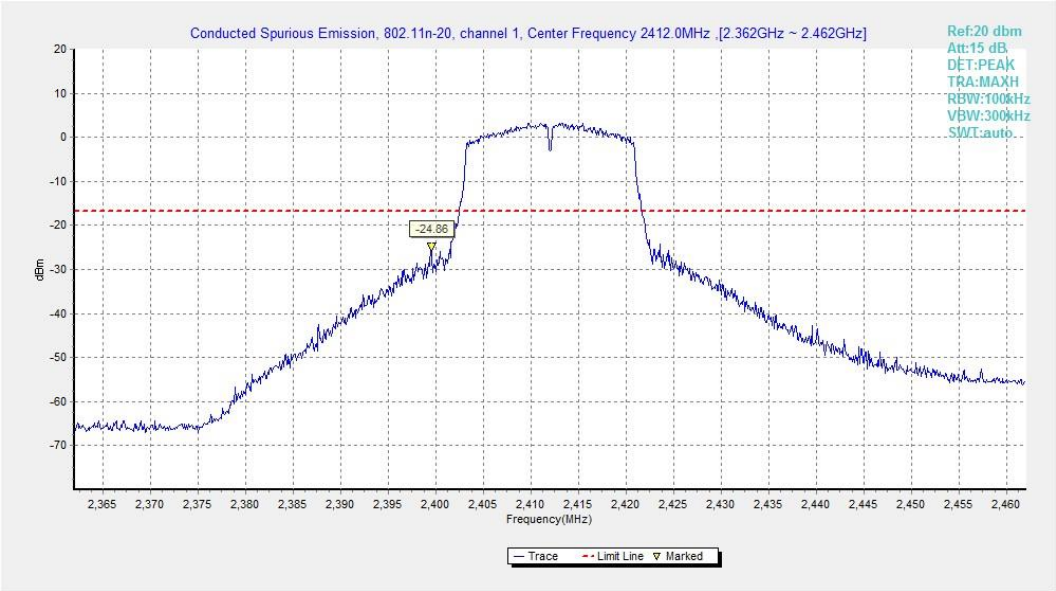


Fig.A.6.1.49 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, Center Frequency)

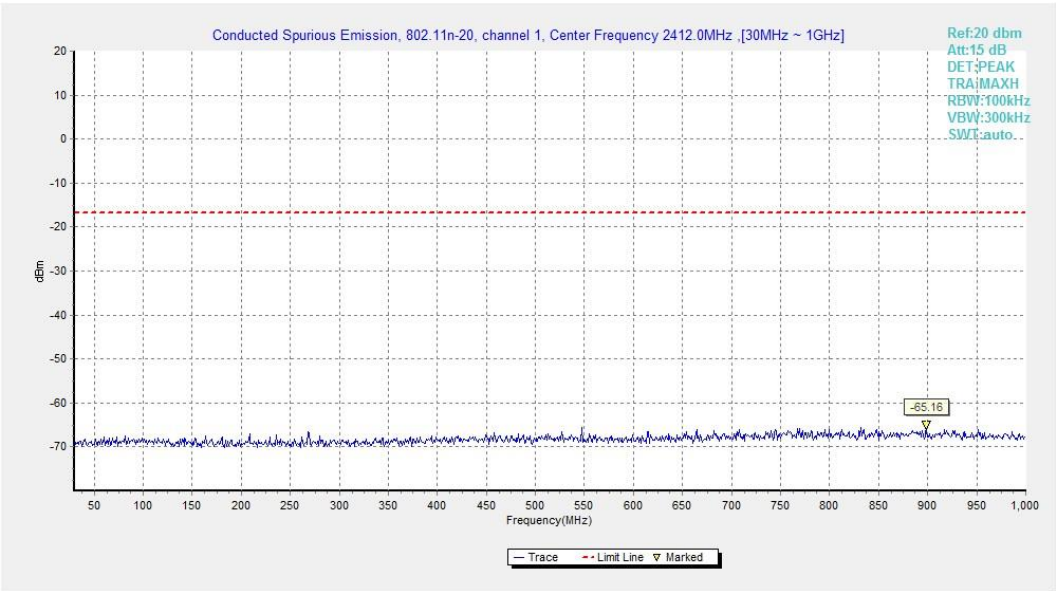


Fig.A.6.1.50 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 30 MHz-1 GHz)

©Copyright. All rights reserved by CTTL.

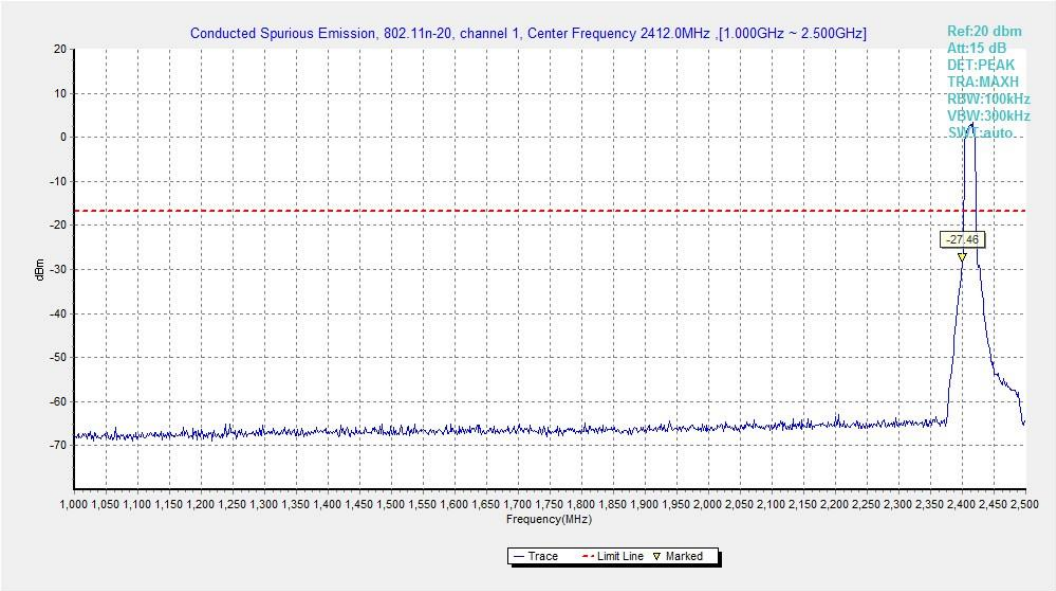


Fig.A.6.1.51 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 1 GHz-2.5 GHz)

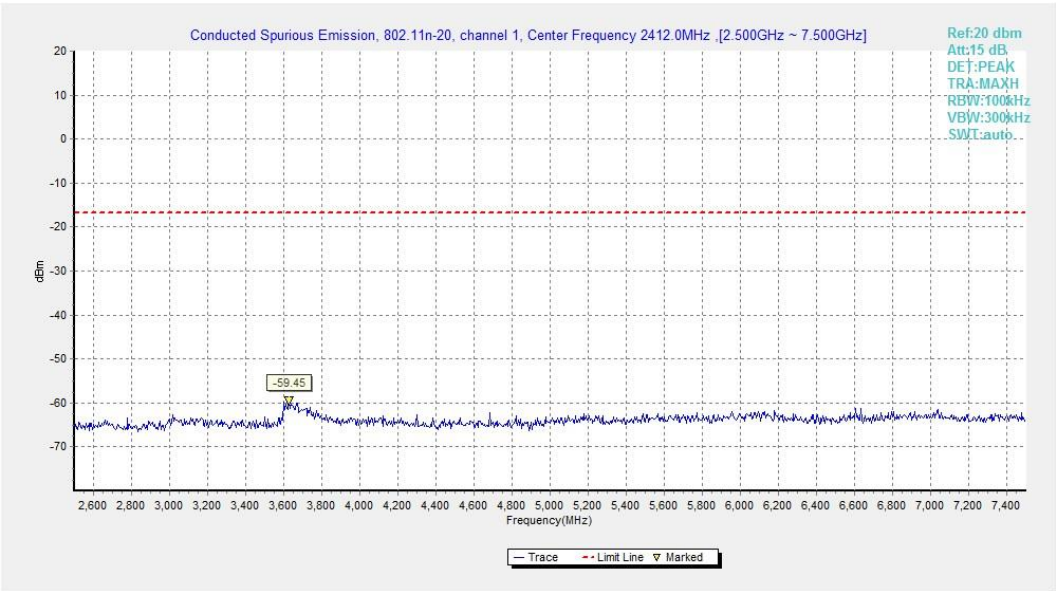


Fig.A.6.1.52 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 2.5 GHz-7.5 GHz)

©Copyright. All rights reserved by CTTL.

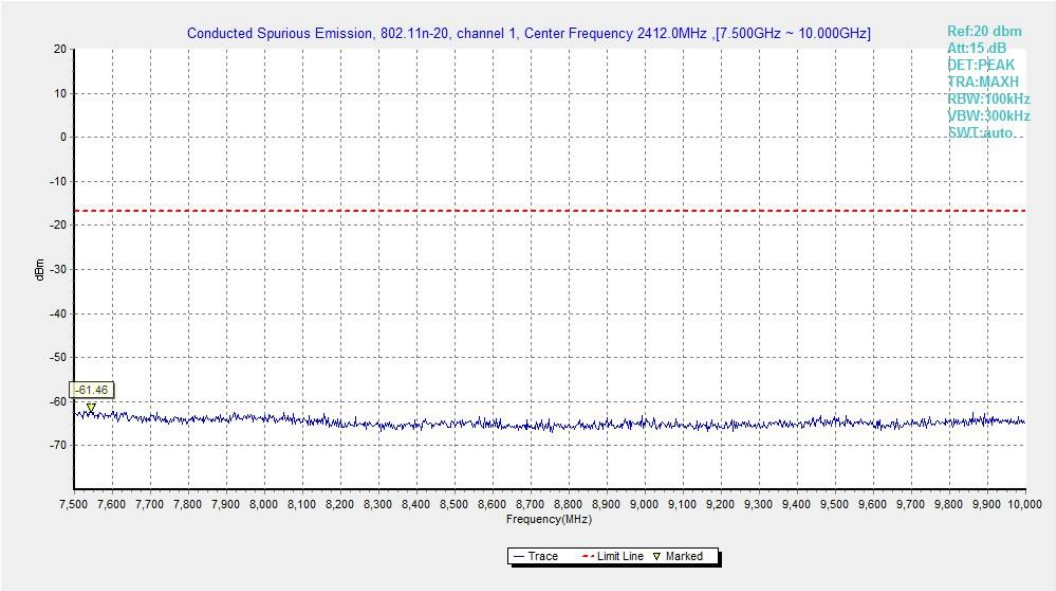


Fig.A.6.1.53 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 7.5 GHz-10 GHz)

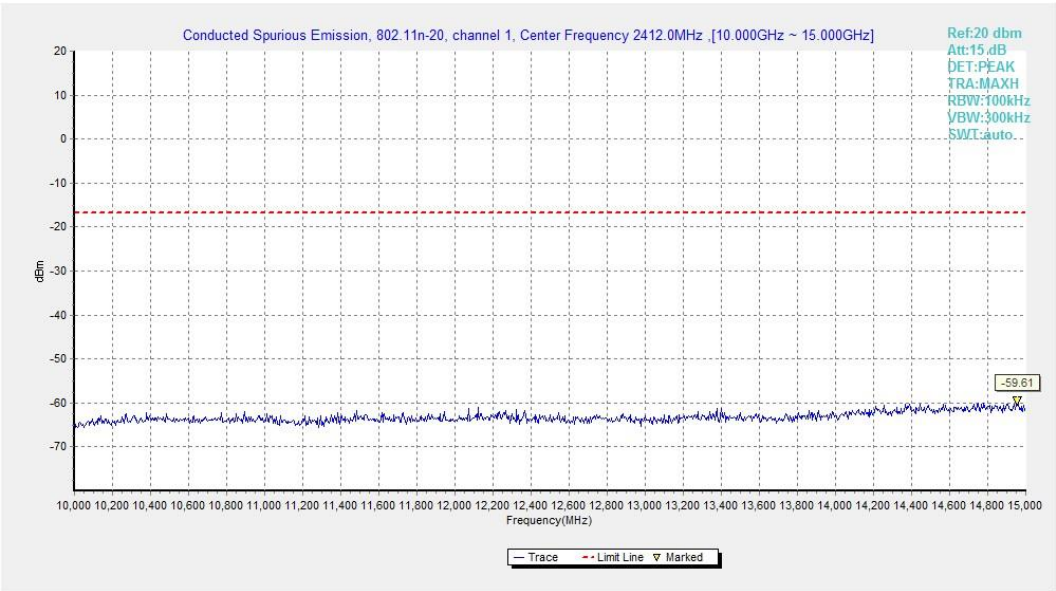


Fig.A.6.1.54 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 10 GHz-15 GHz)

©Copyright. All rights reserved by CTTL.

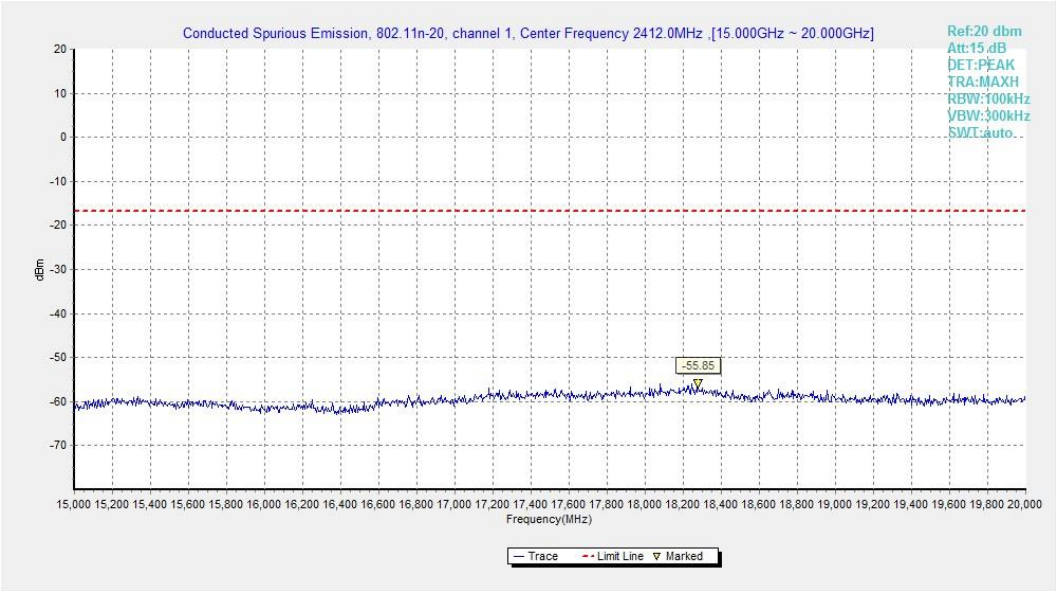


Fig.A.6.1.55 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 15 GHz-20 GHz)

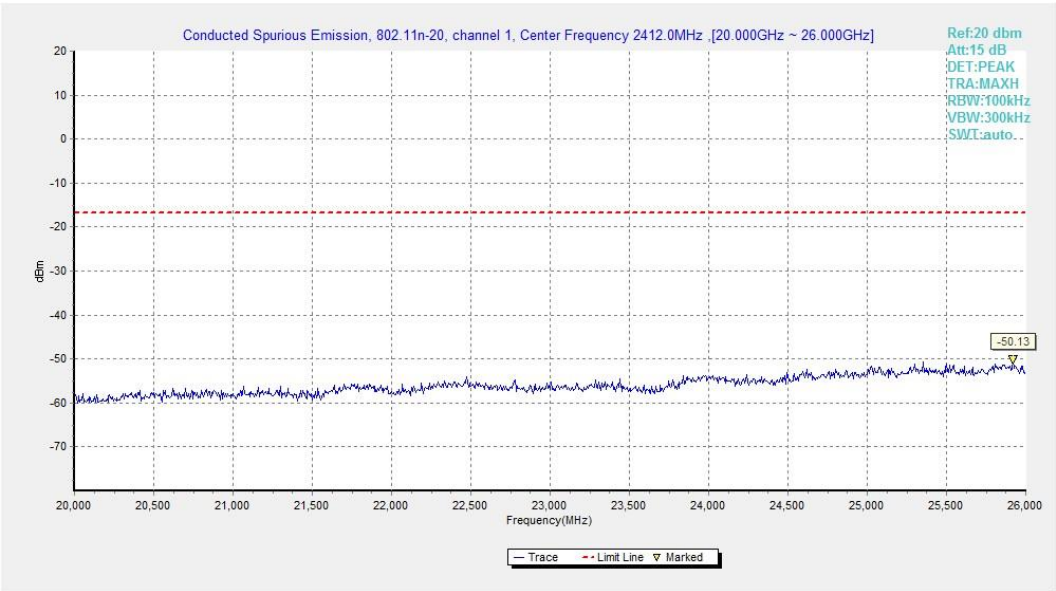


Fig.A.6.1.56 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 20 GHz-26 GHz)

©Copyright. All rights reserved by CTTL.

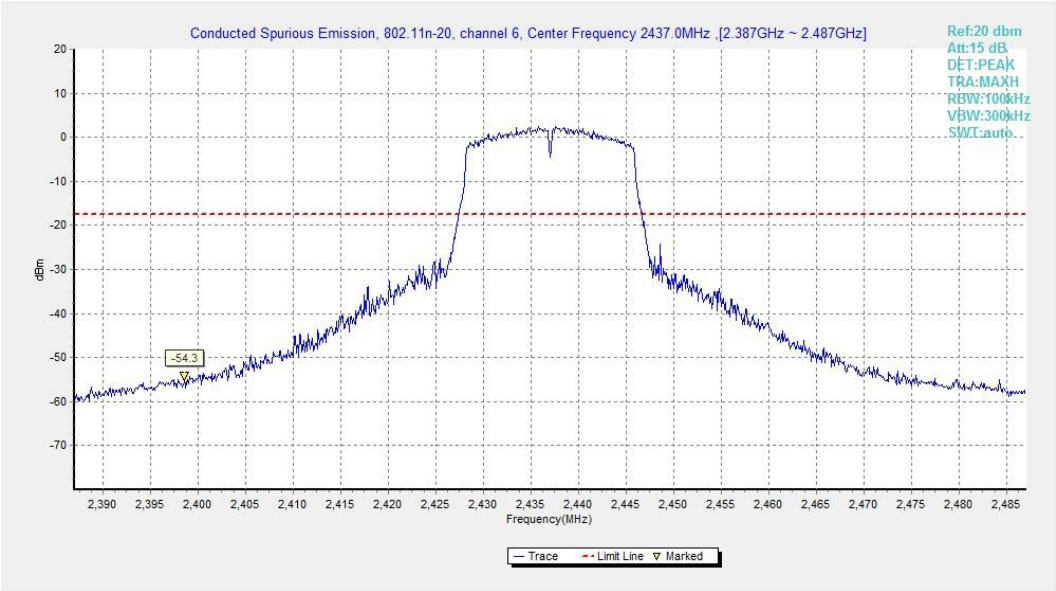


Fig.A.6.1.57 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, Center Frequency)

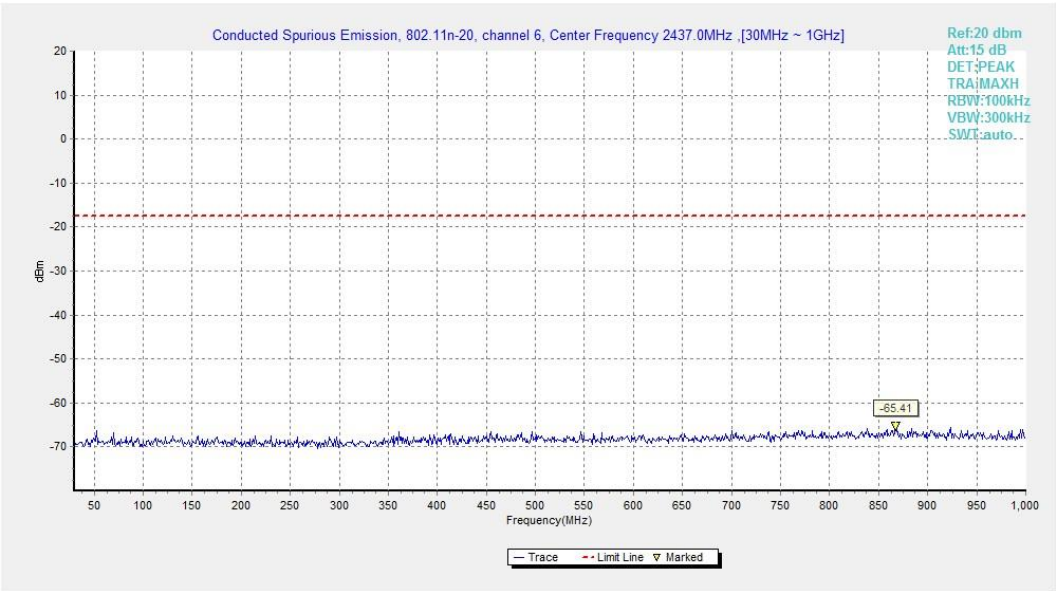


Fig.A.6.1.58 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 30 MHz-1 GHz)

©Copyright. All rights reserved by CTTL.

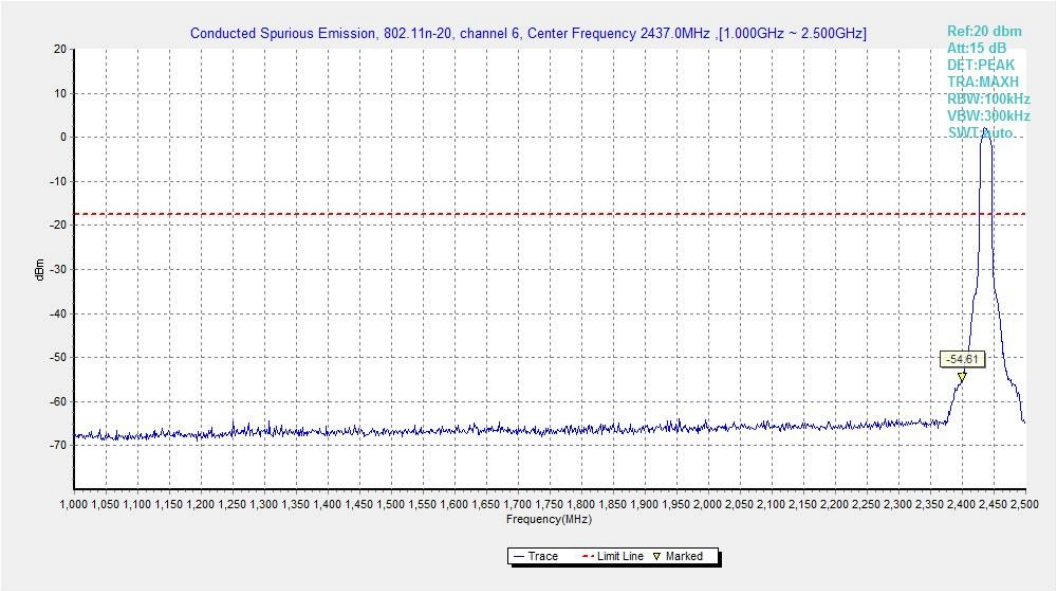


Fig.A.6.1.59 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 1 GHz-2.5 GHz)

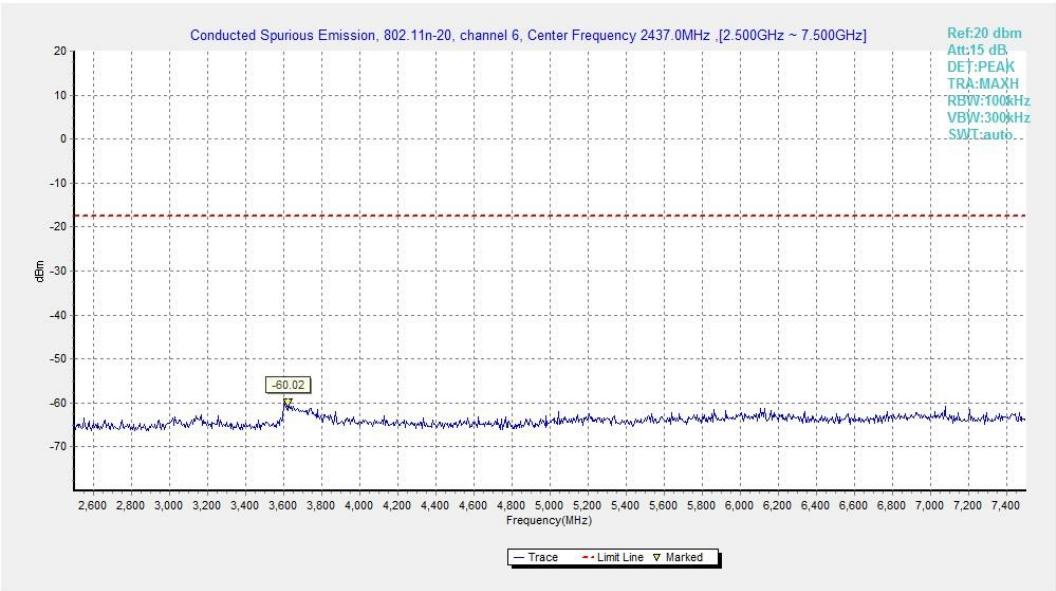


Fig.A.6.1.60 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 2.5 GHz-7.5 GHz)

©Copyright. All rights reserved by CTTL.

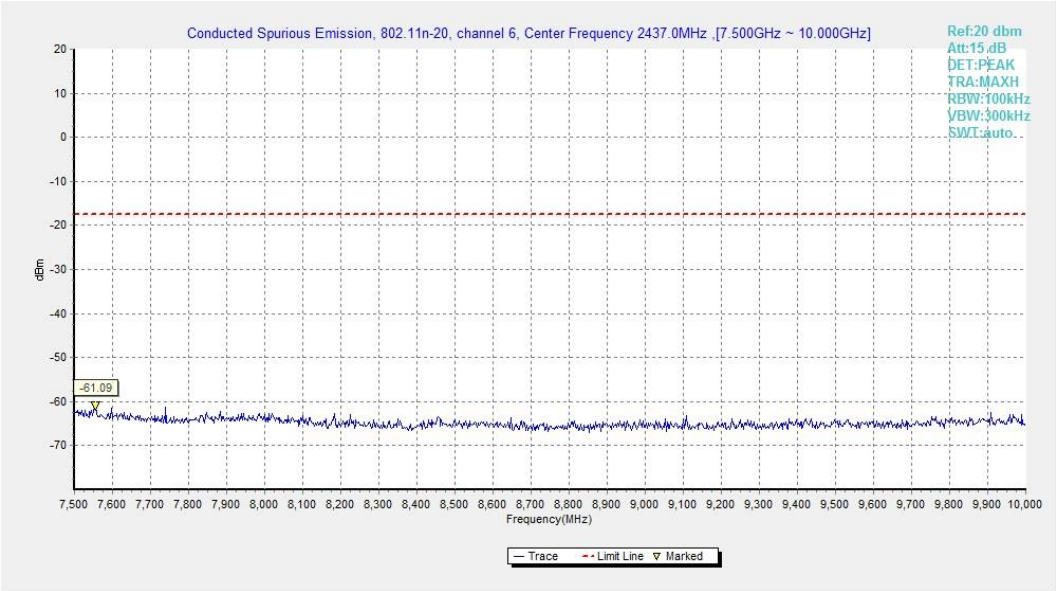


Fig.A.6.1.61 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 7.5 GHz-10 GHz)

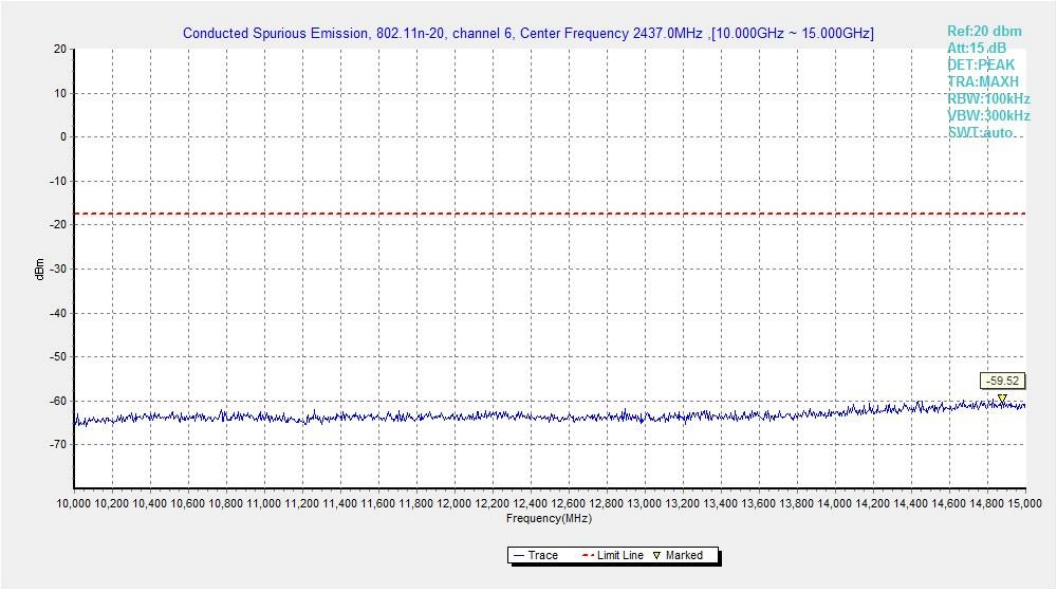


Fig.A.6.1.62 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 10 GHz-15 GHz)

©Copyright. All rights reserved by CTTL.

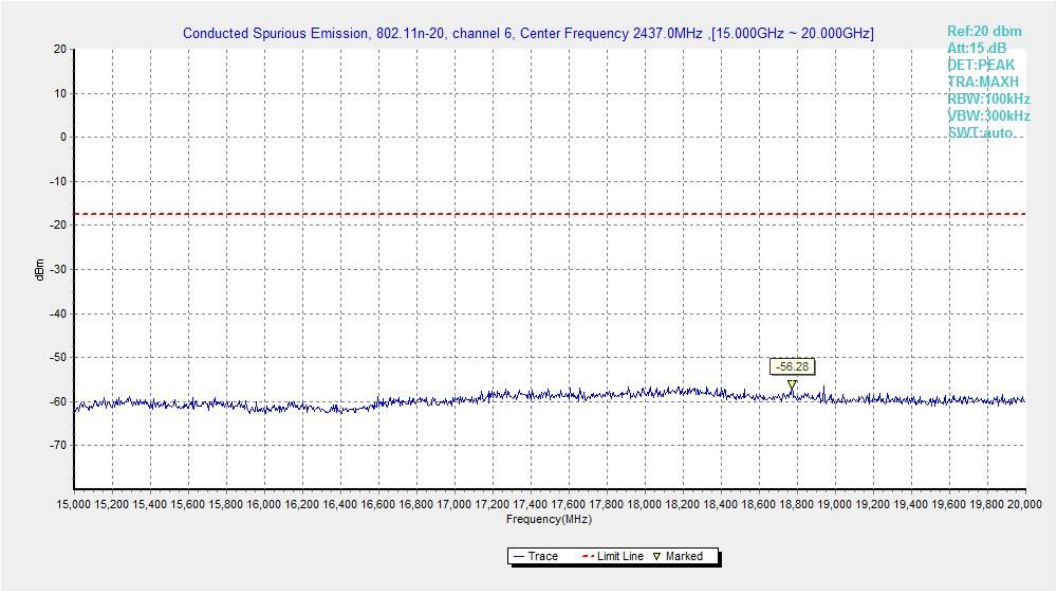


Fig.A.6.1.63 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 15 GHz-20 GHz)

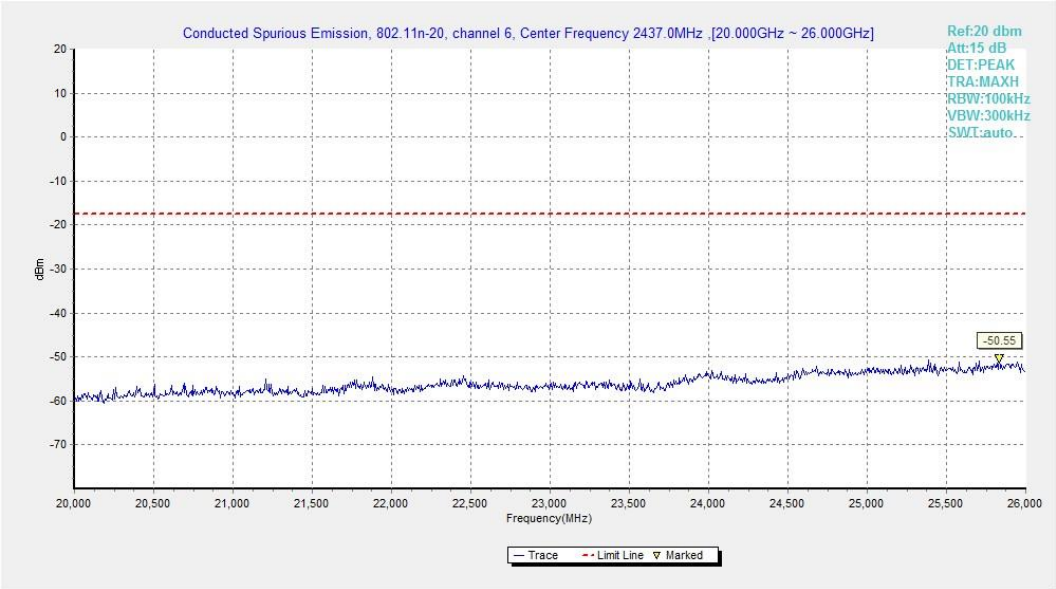


Fig.A.6.1.64 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 20 GHz-26 GHz)

©Copyright. All rights reserved by CTTL.

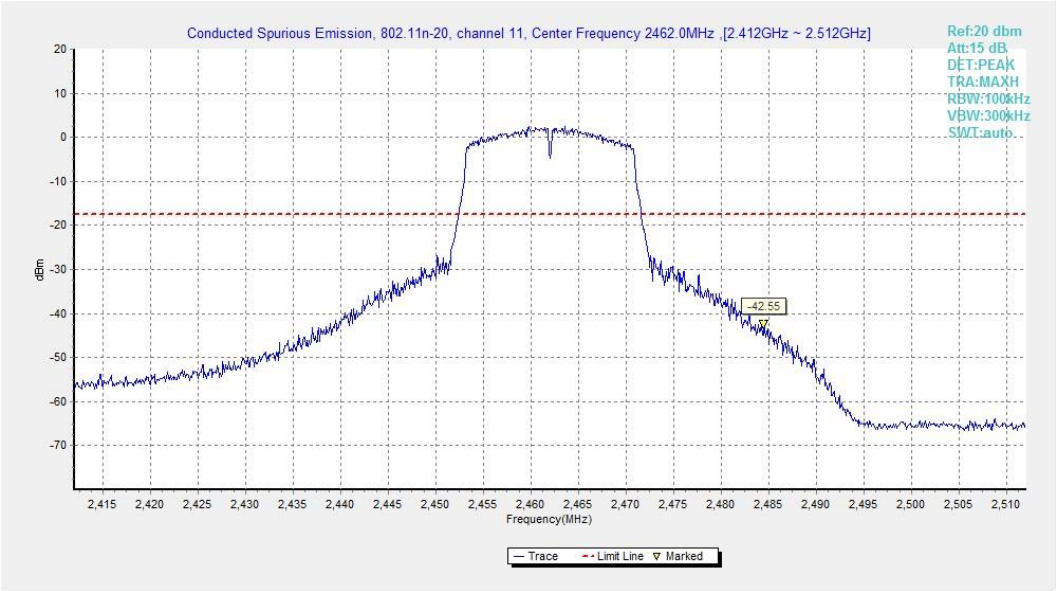


Fig.A.6.1.65 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, Center Frequency)

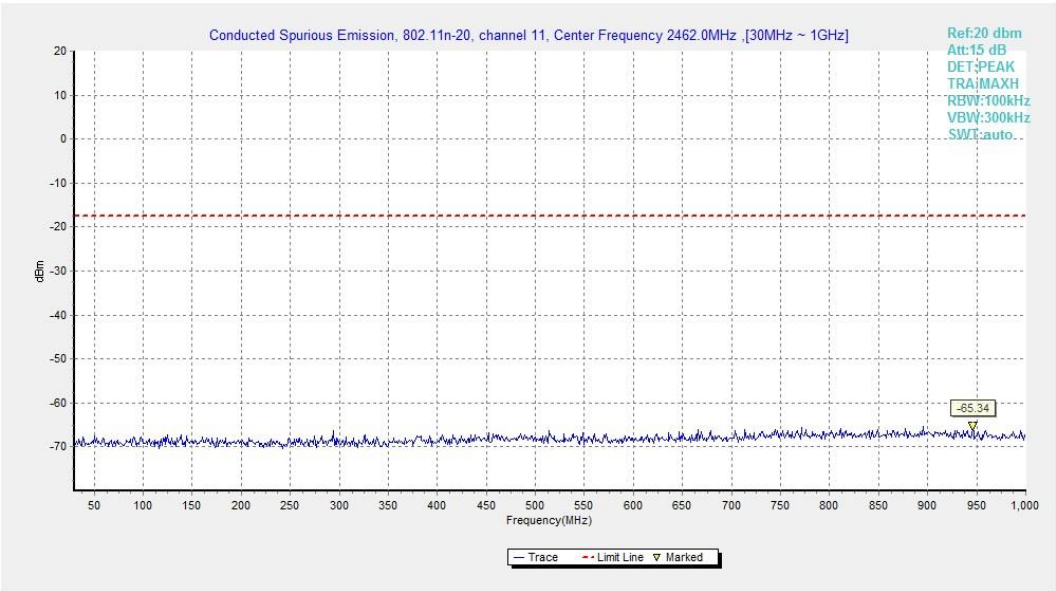


Fig.A.6.1.66 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 30 MHz-1 GHz)

©Copyright. All rights reserved by CTTL.

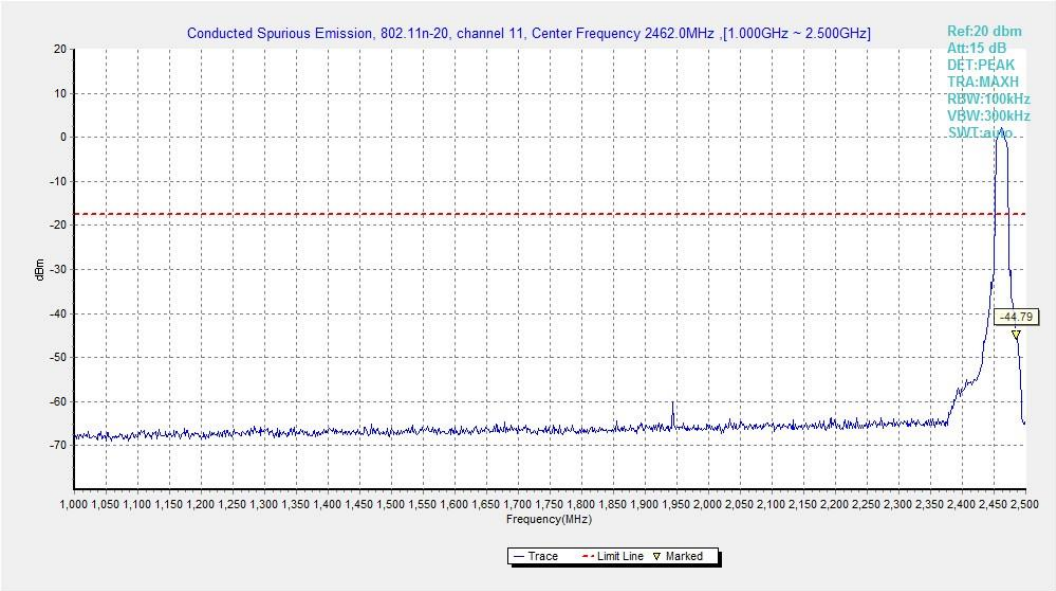


Fig.A.6.1.67 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 1 GHz-2.5 GHz)

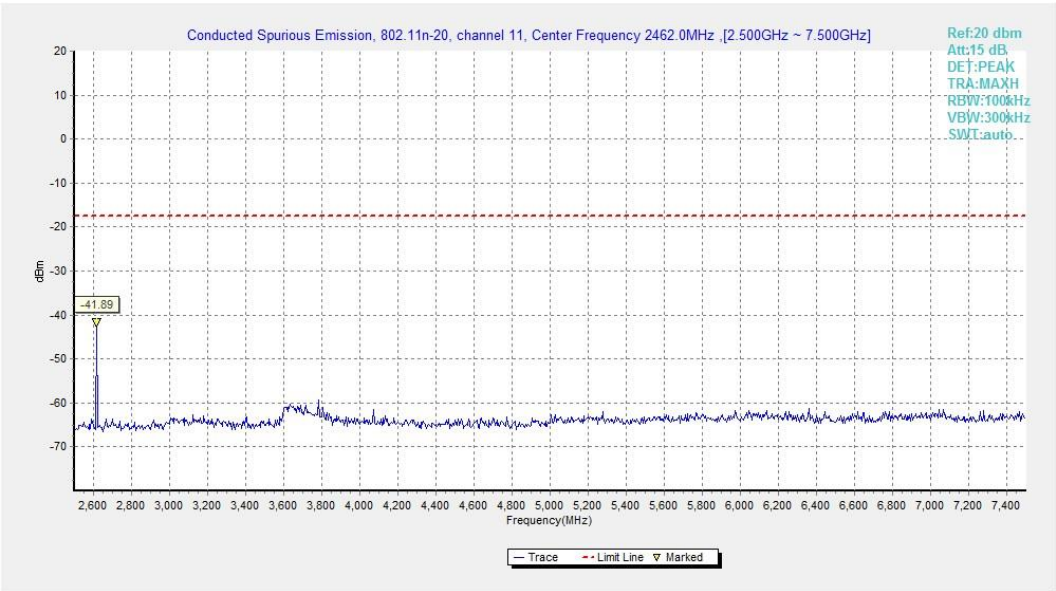


Fig.A.6.1.68 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 2.5 GHz-7.5 GHz)

©Copyright. All rights reserved by CTTL.

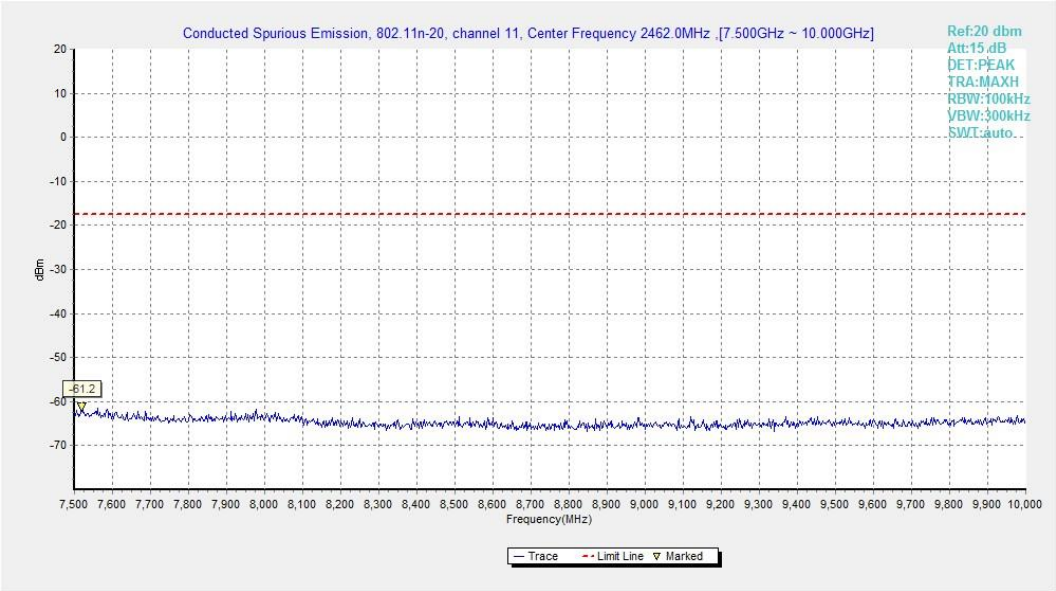


Fig.A.6.1.69 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 7.5 GHz-10 GHz)

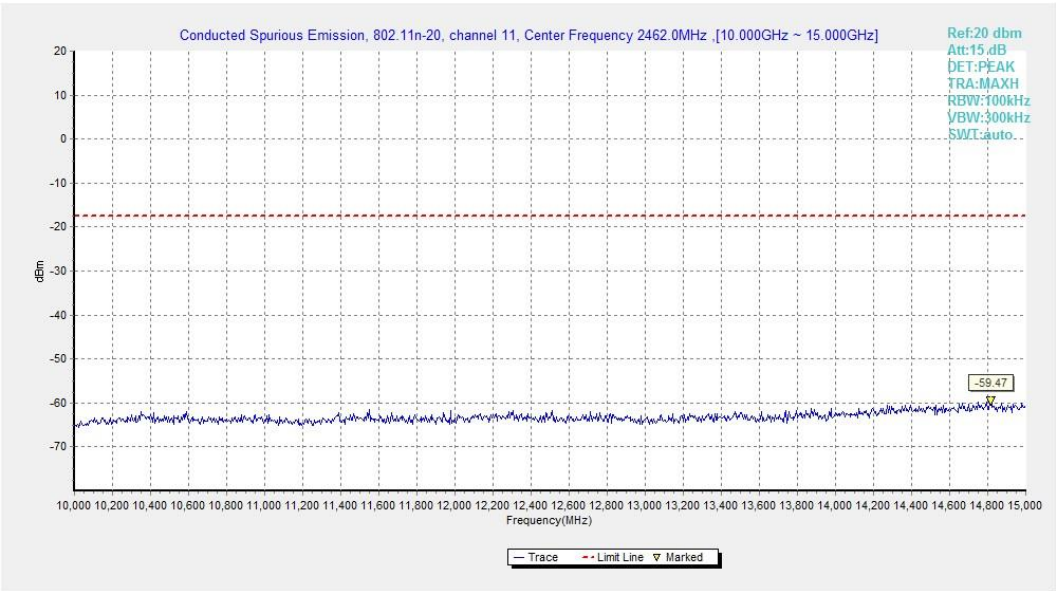


Fig.A.6.1.70 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 10 GHz-15 GHz)

©Copyright. All rights reserved by CTTL.

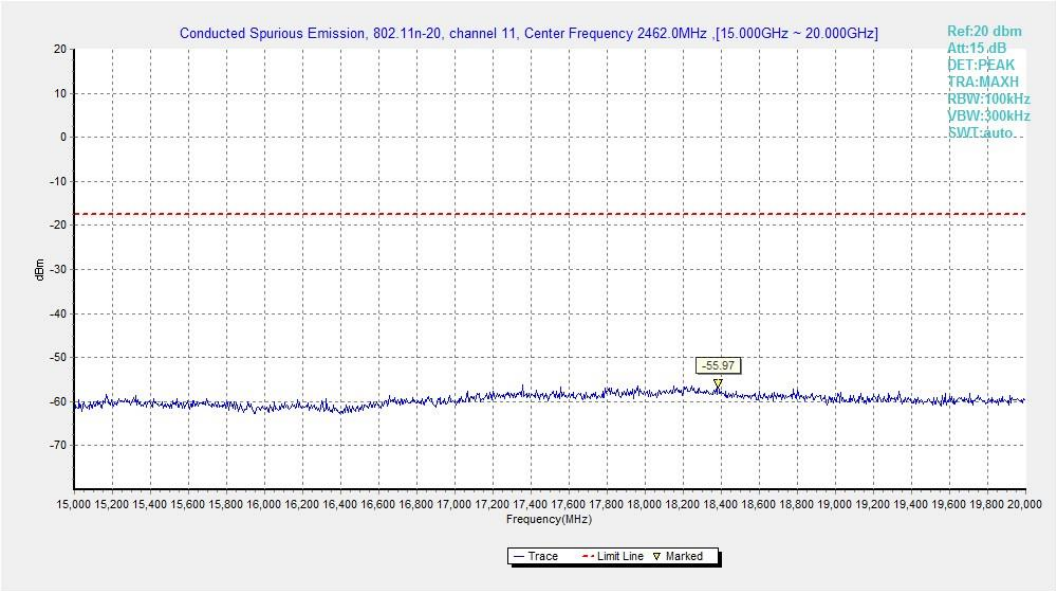


Fig.A.6.1.71 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 15 GHz-20 GHz)

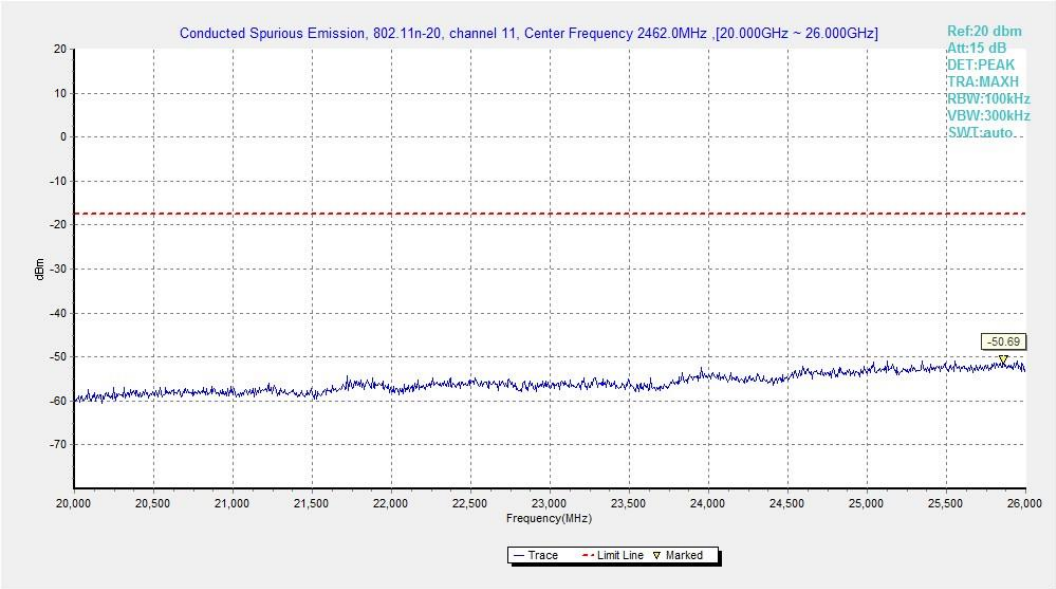


Fig.A.6.1.72 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 20 GHz-26 GHz)

©Copyright. All rights reserved by CTTL.

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)	Measurement distance (m)
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

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

Set up:

Tabletop devices shall be placed on a nonconducting platform with nominal top surface dimensions 1 m by 1.5 m. For emissions testing at or below 1 GHz, the table height shall be 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m

The EUT and transmitting antenna shall be centered on the turntable.

Test Procedure

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept. During the test, the turntable is rotated 360° and the measurement antenna is moved from 1m to 4m to get the maximization result. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

©Copyright. All rights reserved by CTTL.

The receiver references:

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

Measurement results:

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:

1. 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:
Result=P_{Mea}+$A_{Rpl=}$ P_{Mea}+Cable Loss+Antenna Factor
2. The range of evaluated frequency is from 9 kHz to 26GHz. Measurement value show only up to 6 maximum emissions noted.

©Copyright. All rights reserved by CTTL.

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)
2388.974	59.48	4.61	31.75	23.12	74.00	14.52	H
2389.506	59.20	4.61	31.75	22.84	74.00	14.80	V
4824.000	43.03	-35.93	33.80	45.16	74.00	30.97	V
7236.000	43.69	-34.54	35.54	42.68	74.00	30.31	V
9648.000	44.73	-33.48	36.80	41.42	74.00	29.27	H
12060.000	46.50	-31.76	38.86	39.39	74.00	27.50	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)
2362.200	44.57	-36.94	31.37	50.14	74.00	29.43	H
2513.400	44.74	-36.76	32.20	49.30	74.00	29.26	V
4874.000	41.82	-35.79	33.80	43.80	74.00	32.18	H
7311.000	44.74	-34.28	35.58	43.44	74.00	29.26	H
9748.000	43.35	-33.54	37.00	39.89	74.00	30.65	V
12185.000	45.61	-31.61	38.81	38.41	74.00	28.39	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)
2485.665	61.43	4.65	32.14	24.64	74.00	12.57	H
2487.830	60.73	4.64	32.15	23.93	74.00	13.27	V
4924.000	44.70	-35.70	33.85	46.56	74.00	29.30	V
7386.000	46.98	-34.09	35.50	45.57	74.00	27.02	V
9848.000	42.60	-33.44	37.10	38.94	74.00	31.40	H
12310.000	43.94	-31.47	38.81	36.60	74.00	30.06	V

©Copyright. All rights reserved by CTTL.

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)
2389.744	69.45	4.61	31.76	33.08	74.00	4.55	H
2389.912	68.57	4.62	31.76	32.20	74.00	5.43	V
4824.000	39.74	-35.93	33.80	41.87	74.00	34.26	H
7236.000	42.23	-34.54	35.54	41.23	74.00	31.77	H
9648.000	43.73	-33.48	36.80	40.41	74.00	30.28	H
12060.000	44.50	-31.76	38.86	37.40	74.00	29.50	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)
2370.800	44.47	-36.75	31.49	49.73	74.00	29.53	H
2499.600	44.30	-36.49	32.20	48.59	74.00	29.70	H
4874.000	39.79	-35.79	33.80	41.78	74.00	34.21	H
7311.000	42.14	-34.28	35.58	40.84	74.00	31.86	H
9748.000	41.88	-33.54	37.00	38.42	74.00	32.12	H
12185.000	44.72	-31.61	38.81	37.51	74.00	29.28	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)
2483.525	70.52	4.65	32.13	33.74	74.00	3.48	V
2483.565	70.19	4.65	32.13	33.41	74.00	3.81	V
4924.000	40.93	-35.70	33.85	42.79	74.00	33.07	V
7385.000	46.69	-34.09	35.50	45.28	74.00	27.31	V
9848.000	41.72	-33.44	37.10	38.06	74.00	32.28	H
12310.000	44.10	-31.47	38.81	36.76	74.00	29.90	H

©Copyright. All rights reserved by CTTL.

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)
2389.044	65.77	4.61	31.75	29.41	74.00	8.23	V
2389.562	65.36	4.61	31.76	28.99	74.00	8.64	V
4824.000	40.40	-35.93	33.80	42.53	74.00	33.60	V
7236.000	43.37	-34.54	35.54	42.36	74.00	30.64	V
9648.000	44.24	-33.48	36.80	40.93	74.00	29.76	H
12060.000	44.76	-31.76	38.86	37.65	74.00	29.24	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)
2367.200	44.59	-36.83	31.44	49.97	74.00	29.42	V
2507.400	45.30	-36.65	32.20	49.74	74.00	28.70	V
4874.000	39.39	-35.79	33.80	41.38	74.00	34.61	V
7311.000	43.03	-34.28	35.58	41.73	74.00	30.97	V
9748.000	42.24	-33.54	37.00	38.78	74.00	31.76	H
12185.000	44.19	-31.61	38.81	36.99	74.00	29.81	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)
2483.565	69.96	4.65	32.13	33.17	74.00	4.04	V
2483.750	68.56	4.65	32.14	31.77	74.00	5.44	V
4924.000	41.52	-35.70	33.85	43.38	74.00	32.48	H
7380.500	44.84	-34.09	35.50	43.43	74.00	29.16	V
9847.500	42.65	-33.44	37.10	38.99	74.00	31.35	V
12310.000	45.20	-31.47	38.81	37.86	74.00	28.80	V

©Copyright. All rights reserved by CTTL.

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)
2385.413	47.56	4.60	31.70	11.26	54.00	6.44	V
2387.063	47.54	4.61	31.72	11.21	54.00	6.46	V
4824.100	39.30	-35.93	33.80	41.43	54.00	14.70	0.00
7236.700	40.20	-34.54	35.55	39.19	54.00	13.80	0.00
9648.100	37.54	-33.48	36.80	34.22	54.00	16.46	0.00
12060.100	38.38	-31.76	38.86	31.27	54.00	15.62	0.00

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)
2399.250	48.60	4.64	31.89	12.07	54.00	5.40	V
2466.788	48.15	4.68	32.07	11.40	54.00	5.86	V
4873.900	37.85	-35.79	33.80	39.84	54.00	16.15	0.00
73105.000	41.40	0.00	0.00	41.40	54.00	12.60	0.00
9748.000	37.95	-33.54	37.00	34.48	54.00	16.05	0.00
12184.900	39.93	-31.61	38.82	32.72	54.00	14.08	0.00

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)
2485.838	47.34	4.65	32.14	10.55	54.00	6.66	V
2487.113	47.38	4.64	32.15	10.59	54.00	6.62	V
4923.700	42.56	-35.70	33.85	44.42	54.00	11.44	0.00
7384.300	45.81	-34.09	35.50	44.40	54.00	8.19	0.00
9847.900	36.92	-33.44	37.10	33.26	54.00	17.08	0.00
12310.000	40.30	-31.47	38.81	32.96	54.00	13.70	0.00

©Copyright. All rights reserved by CTTL.

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)
2389.913	49.81	4.62	31.76	13.43	54.00	4.19	V
2389.988	49.88	4.62	31.76	13.50	54.00	4.12	V
4824.100	35.22	-35.93	33.80	37.34	54.00	18.79	0.00
7236.100	36.50	-34.54	35.54	35.50	54.00	17.50	0.00
9648.100	38.50	-33.48	36.80	35.18	54.00	15.50	0.00
12060.100	39.30	-31.76	38.86	32.20	54.00	14.70	0.00

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)
2403.863	48.76	4.64	31.91	12.21	54.00	5.24	V
2467.838	48.87	4.68	32.07	12.12	54.00	5.14	V
4873.900	34.44	-35.79	33.80	36.43	54.00	19.56	0.00
7311.100	37.17	-34.28	35.58	35.87	54.00	16.83	0.00
9748.000	36.72	-33.54	37.00	33.25	54.00	17.28	0.00
12184.900	38.86	-31.61	38.82	31.66	54.00	15.14	0.00

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)
2483.550	49.46	4.65	32.13	12.67	54.00	4.54	H
2483.963	49.27	4.65	32.14	12.49	54.00	4.73	V
4924.000	34.71	-35.70	33.85	36.57	54.00	19.29	V
7387.000	39.71	-34.09	35.50	38.30	54.00	14.29	V
9847.900	36.81	-33.44	37.10	33.16	54.00	17.19	V
12310.000	39.01	-31.47	38.81	31.67	54.00	14.99	H

©Copyright. All rights reserved by CTTL.

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)
2389.838	47.75	4.62	31.76	11.37	54.00	6.25	V
2389.950	47.77	4.62	31.76	11.39	54.00	6.23	V
4824.100	35.08	-35.93	33.80	37.21	54.00	18.92	H
7698.100	38.17	-34.02	35.70	36.50	54.00	15.83	H
9648.100	37.48	-33.48	36.80	34.16	54.00	16.53	H
12060.100	37.96	-31.76	38.86	30.85	54.00	16.04	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)
2400.675	48.72	4.64	31.90	12.18	54.00	5.28	V
2470.013	48.78	4.68	32.08	12.03	54.00	5.22	H
4873.900	34.20	-35.79	33.80	36.19	54.00	19.80	V
7311.100	36.36	-34.28	35.58	35.06	54.00	17.64	V
9748.000	37.79	-33.54	37.00	34.33	54.00	16.21	H
12184.900	38.71	-31.61	38.82	31.51	54.00	15.29	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)
2483.550	48.21	4.65	32.13	11.43	54.00	5.79	H
2484.038	48.06	4.65	32.14	11.27	54.00	5.95	V
4927.300	36.65	-35.70	33.85	38.49	54.00	17.35	V
7388.800	39.49	-34.09	35.50	38.08	54.00	14.51	H
9848.500	37.27	-33.44	37.10	33.61	54.00	16.73	V
12310.000	37.29	-31.47	38.81	29.95	54.00	16.72	H

©Copyright. All rights reserved by CTTL.

Test graphs as below:

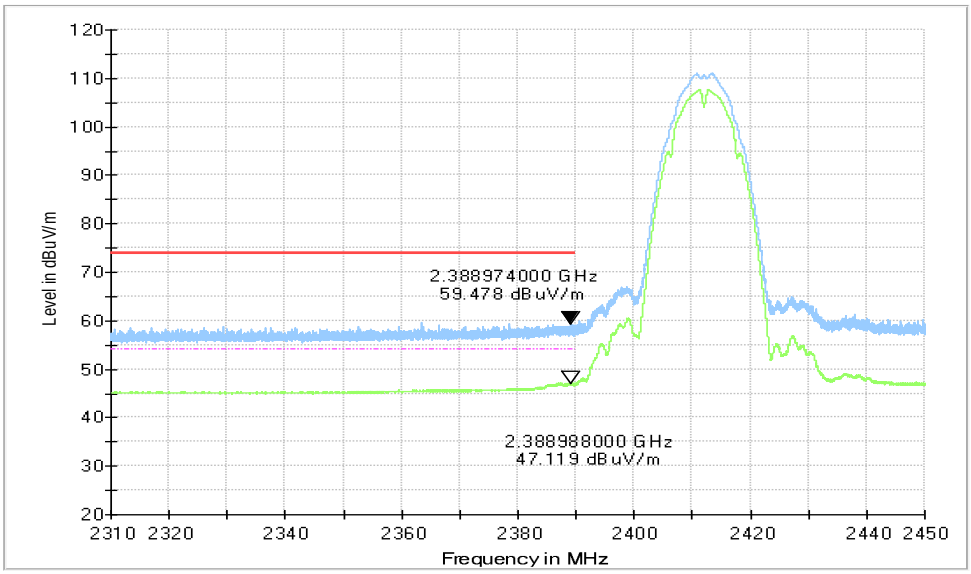


Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.45GHz

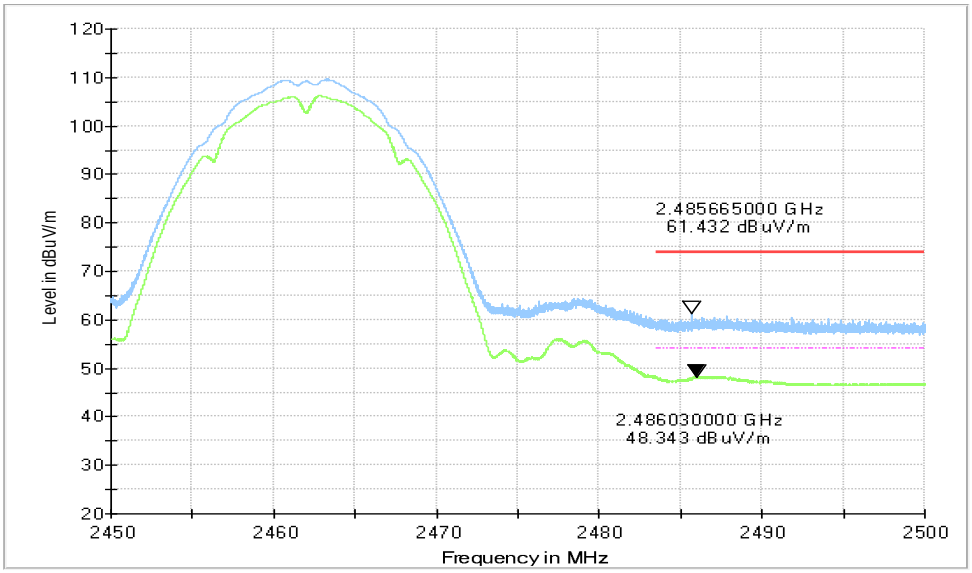


Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

©Copyright. All rights reserved by CTTL.

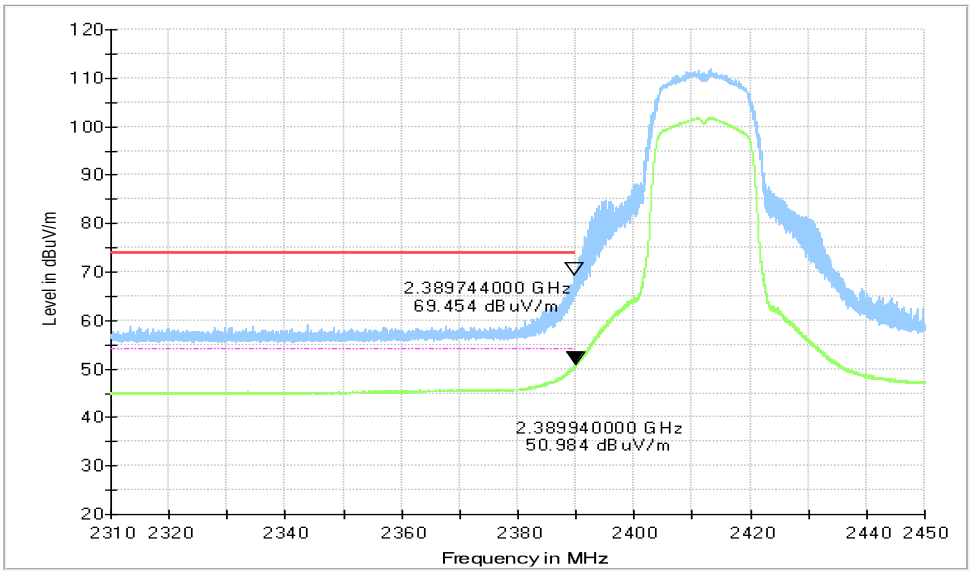


Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.45GHz

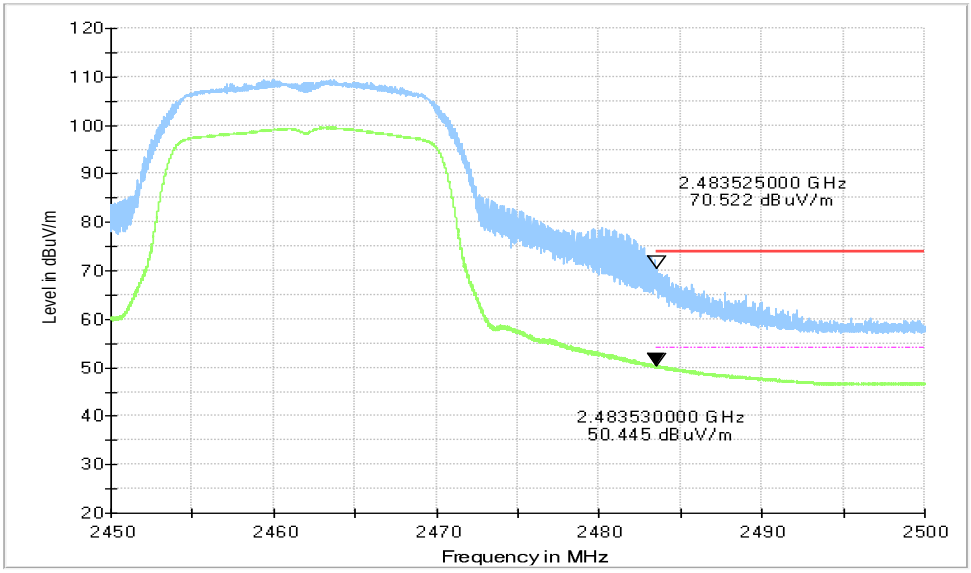


Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

©Copyright. All rights reserved by CTTL.

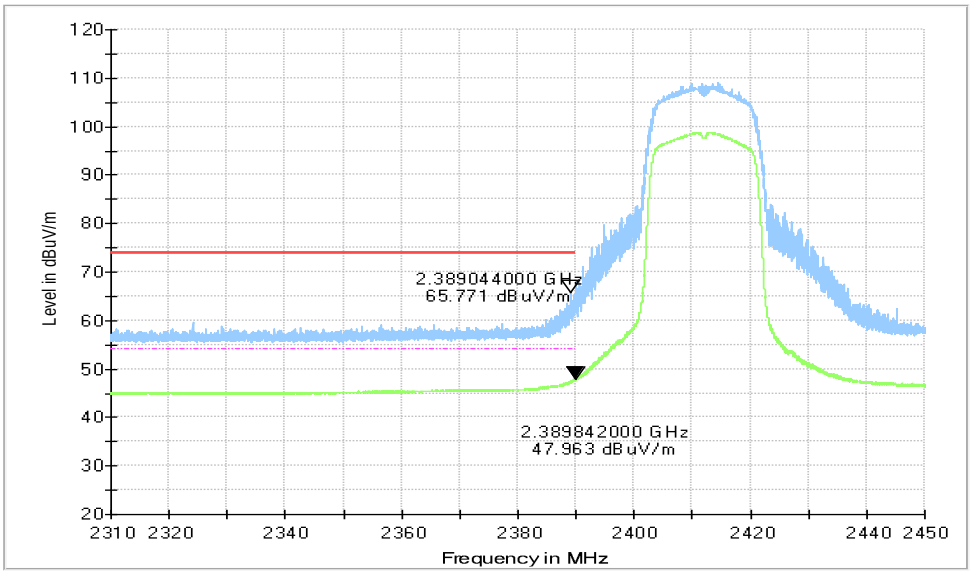


Fig.A.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31 GHz - 2.45GHz

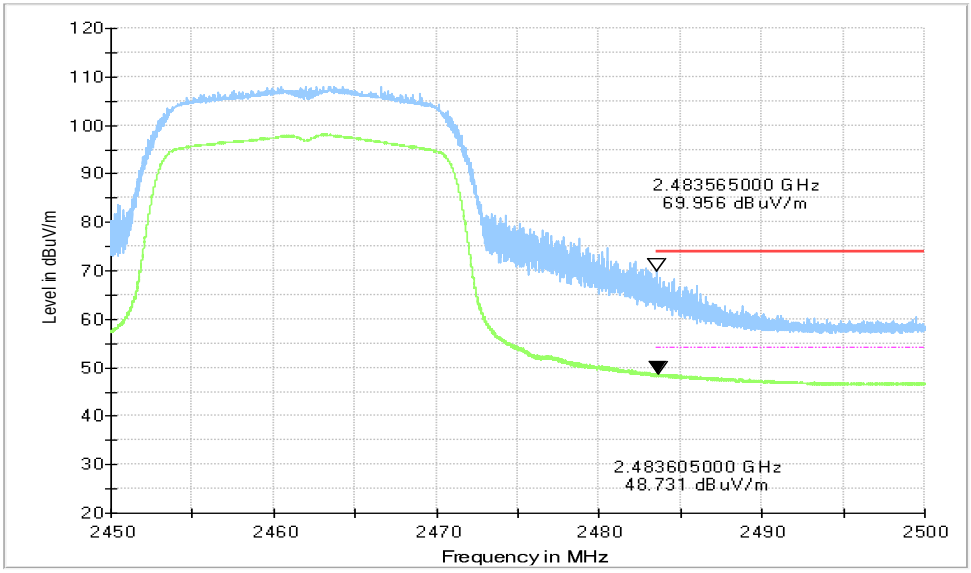


Fig.A.6.2.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

©Copyright. All rights reserved by CTTL.

A.7. AC Power-line Conducted Emission

Method of Measurement:

See Clause 6.2 of ANSI C63.10-2013 specifically.

See Clause 4 and Clause 5 of ANSI C63.10-2013 generally.

The conducted emissions from the AC port of the EUT are measured in a shielding room. The EUT is connected to a Line Impedance Stabilization Network (LISN). An overview sweep with peak detection was performed. The measurements were performed with a quasi-peak detector and if required, an average detector.

The conducted emission measurements were made with the following detector of the test receiver: Quasi-Peak / Average Detector.

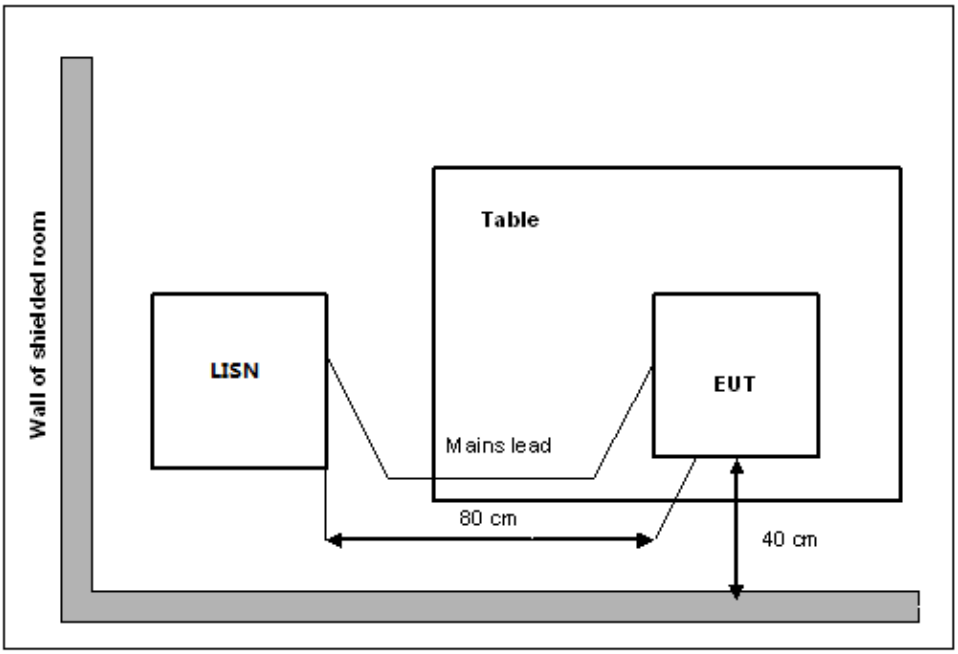
The measurement bandwidth is:

Frequency of Emission (MHz)	RBW/IF bandwidth
0.15-30	9kHz

Test Condition:

Voltage（V）	Frequency（Hz）
120	60

Measurement Setup



©Copyright. All rights reserved by CTTL.

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		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 (dBμV)	Result (dBμV)		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:

©Copyright. All rights reserved by CTTL.

Result for Traffic:

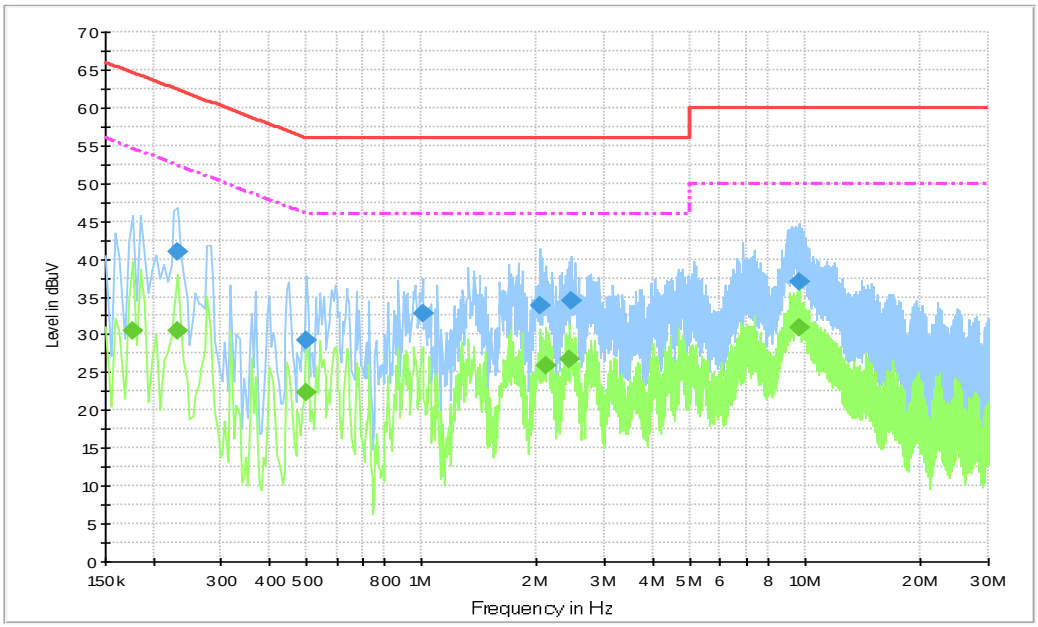


Fig.A.7.1 AC Powerline Conducted Emission-802.11b

Note1: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.231000	40.9	3000.	9.000	N	19.8	21.5	62.4
0.501000	29.3	3000.	9.000	N	19.8	26.7	56.0
1.005000	32.9	3000.	9.000	N	19.7	23.1	56.0
2.035500	33.8	3000.	9.000	N	19.6	22.2	56.0
2.463000	34.5	3000.	9.000	N	19.6	21.5	56.0
9.618000	36.9	3000.	9.000	L1	19.8	23.1	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.177000	30.5	3000.0	9.000	N	19.8	24.1	54.6
0.231000	30.5	3000.0	9.000	N	19.8	22.0	52.4
0.501000	22.4	3000.0	9.000	N	19.8	23.6	46.0
2.107500	26.0	3000.0	9.000	L1	19.6	20.0	46.0
2.440500	26.8	3000.0	9.000	N	19.6	19.2	46.0
9.604500	31.0	3000.0	9.000	L1	19.8	19.0	50.0

©Copyright. All rights reserved by CTTL.

Result for Idle:

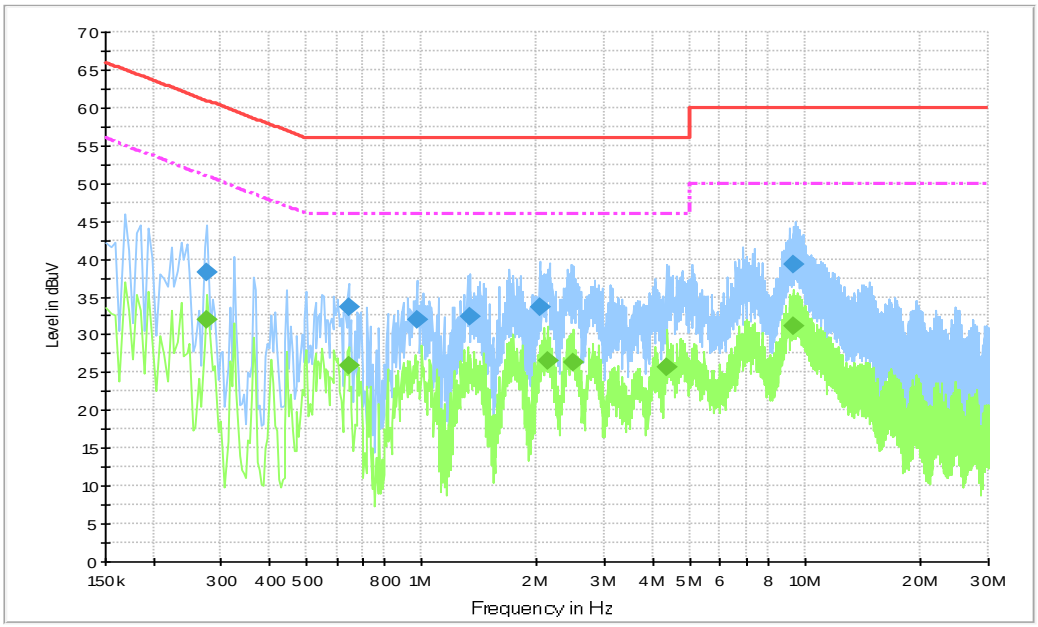


Fig.A.7.2 AC Powerline Conducted Emission-Idle

Note1: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.276000	38.3	3000.	9.000	L1	19.8	22.6	60.9
0.645000	33.7	3000.	9.000	N	19.8	22.3	56.0
0.969000	31.9	3000.	9.000	N	19.7	24.1	56.0
1.338000	32.4	3000.	9.000	N	19.6	23.6	56.0
2.026500	33.7	3000.	9.000	N	19.6	22.3	56.0
9.298500	39.2	3000.	9.000	N	19.8	20.8	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.276000	31.9	3000.0	9.000	N	19.8	19.0	50.9
0.645000	25.9	3000.0	9.000	L1	19.8	20.1	46.0
2.125500	26.6	3000.0	9.000	N	19.6	19.4	46.0
2.481000	26.3	3000.0	9.000	N	19.6	19.7	46.0
4.380000	25.7	3000.0	9.000	N	19.6	20.3	46.0
9.298500	31.1	3000.0	9.000	L1	19.8	18.9	50.0

Note: The measurement results showed here are worst cases.

©Copyright. All rights reserved by CTTL.

ANNEX B: EUT parameters

Disclaimer: The antenna gain 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

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ilac-MRA

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 600118-0

Telecommunication Technology Labs, CAICT
Beijing
China

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Electromagnetic Compatibility & Telecommunications

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. 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).

2022-10-01 through 2023-09-30
Effective Dates

DEPARTMENT OF COMMERCE · UNITED STATES OF AMERICA

For the National Voluntary Laboratory Accreditation Program

*****END OF REPORT*****

©Copyright. All rights reserved by CTTL.