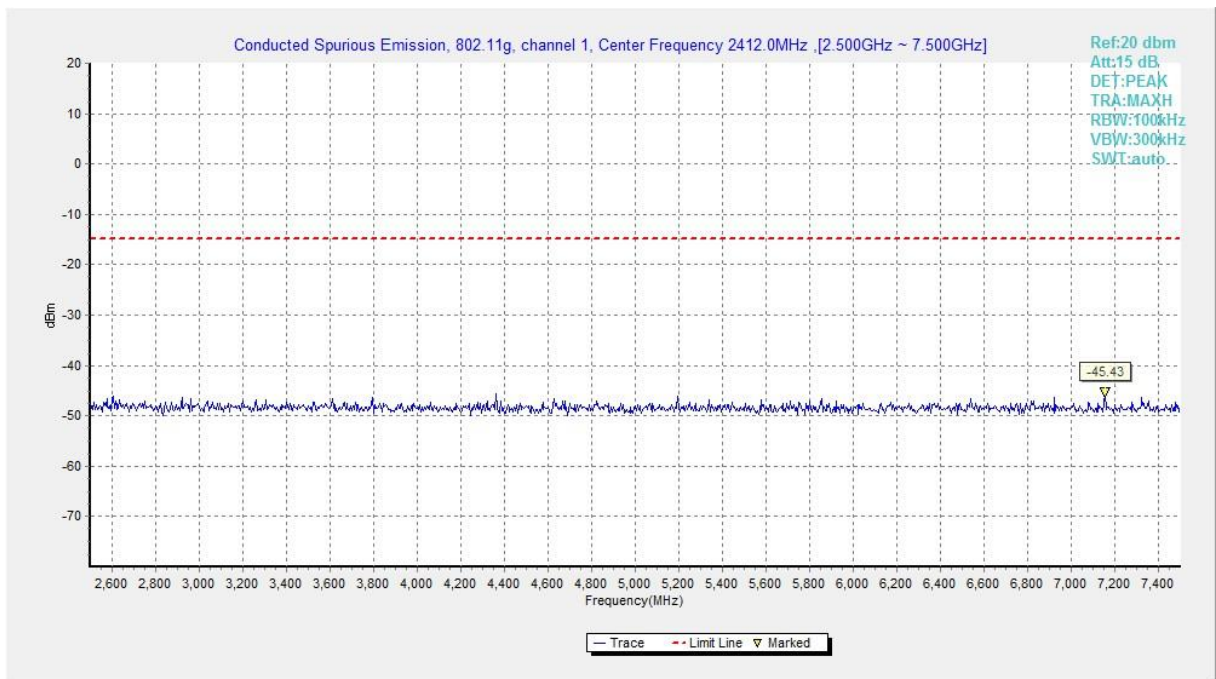
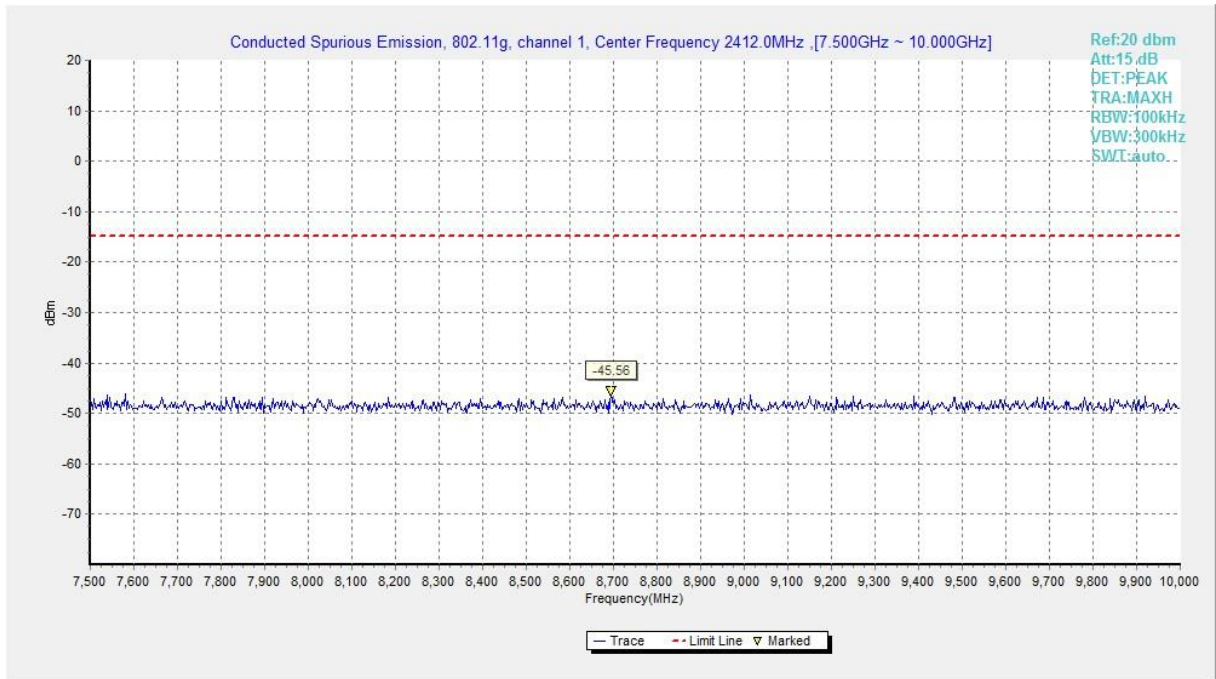


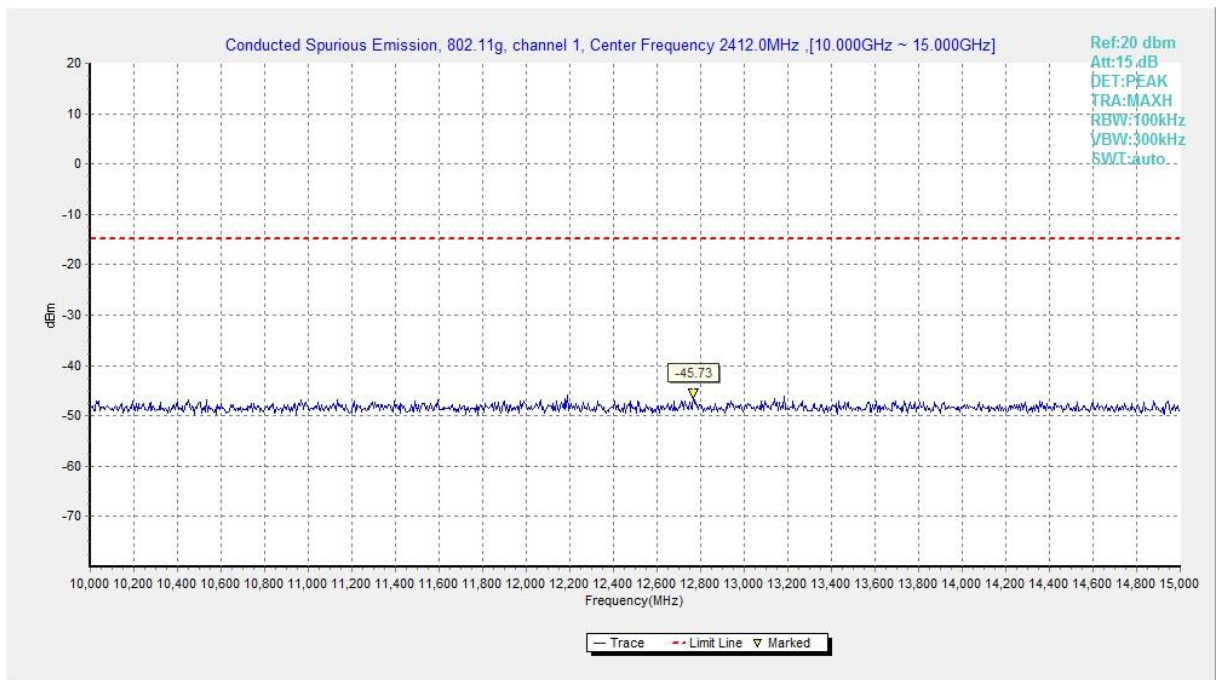
**Fig.A.6.1.27 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 1 GHz-2.5 GHz)**



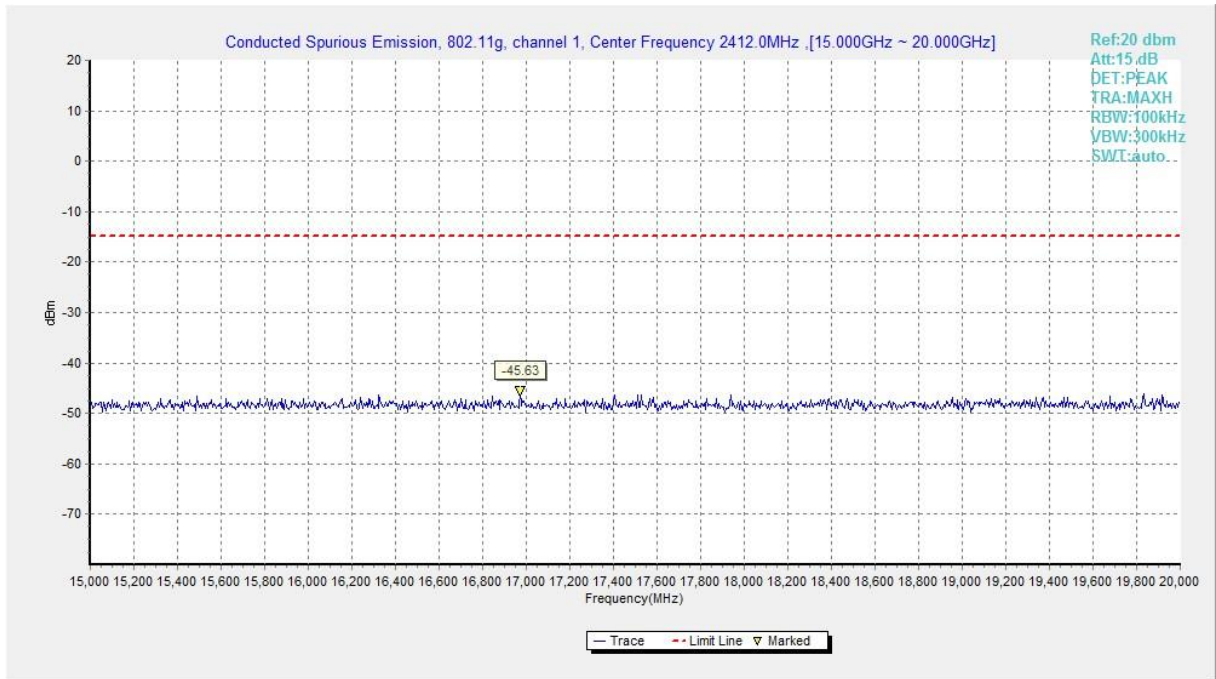
**Fig.A.6.1.28 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 2.5 GHz-7.5 GHz)**



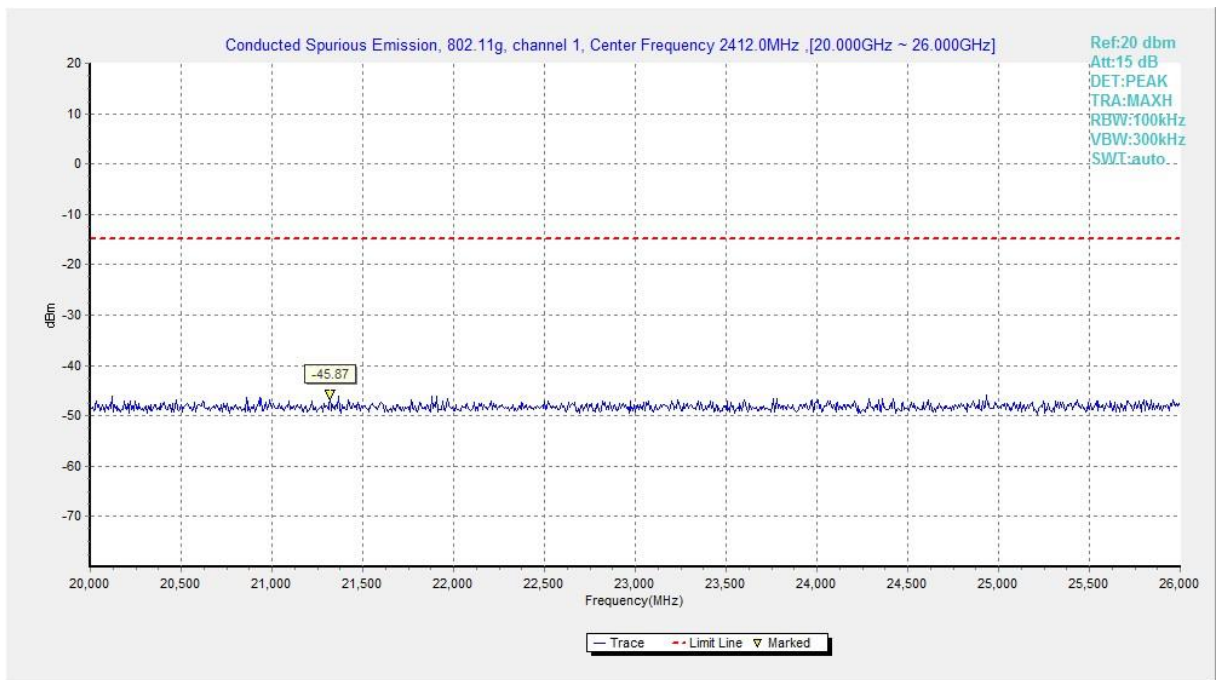
**Fig.A.6.1.29 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 7.5 GHz-10 GHz)**



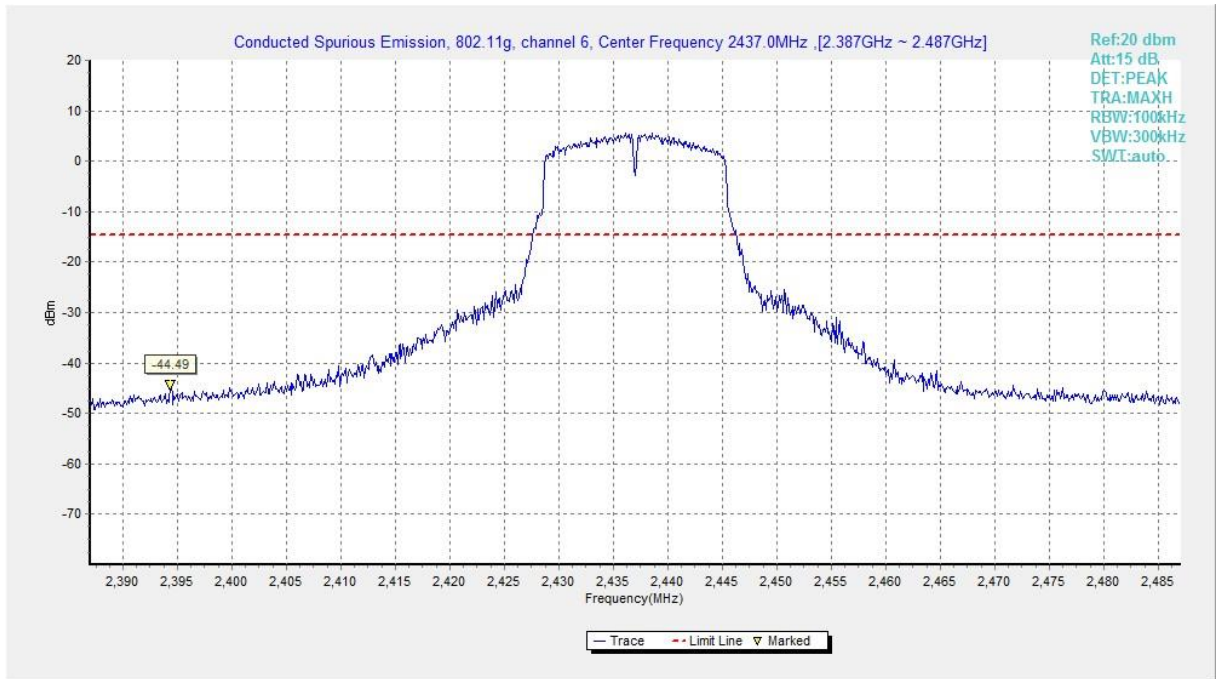
**Fig.A.6.1.30 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 10 GHz-15 GHz)**



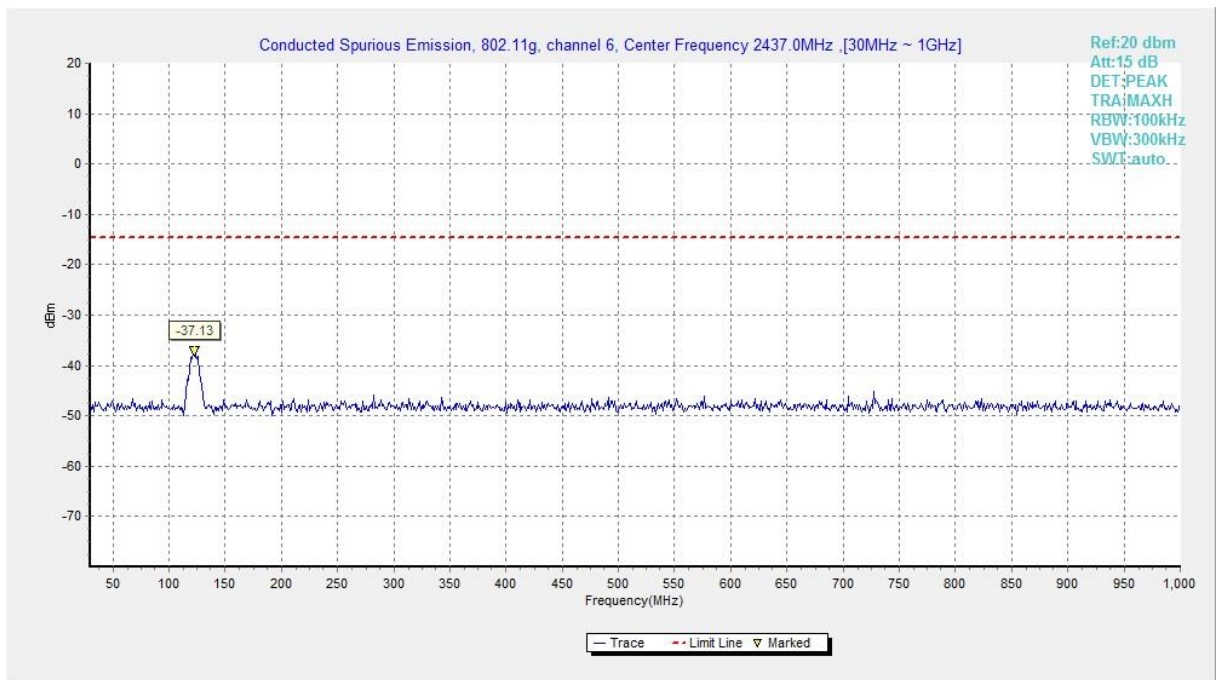
**Fig.A.6.1.31 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 15 GHz-20 GHz)**



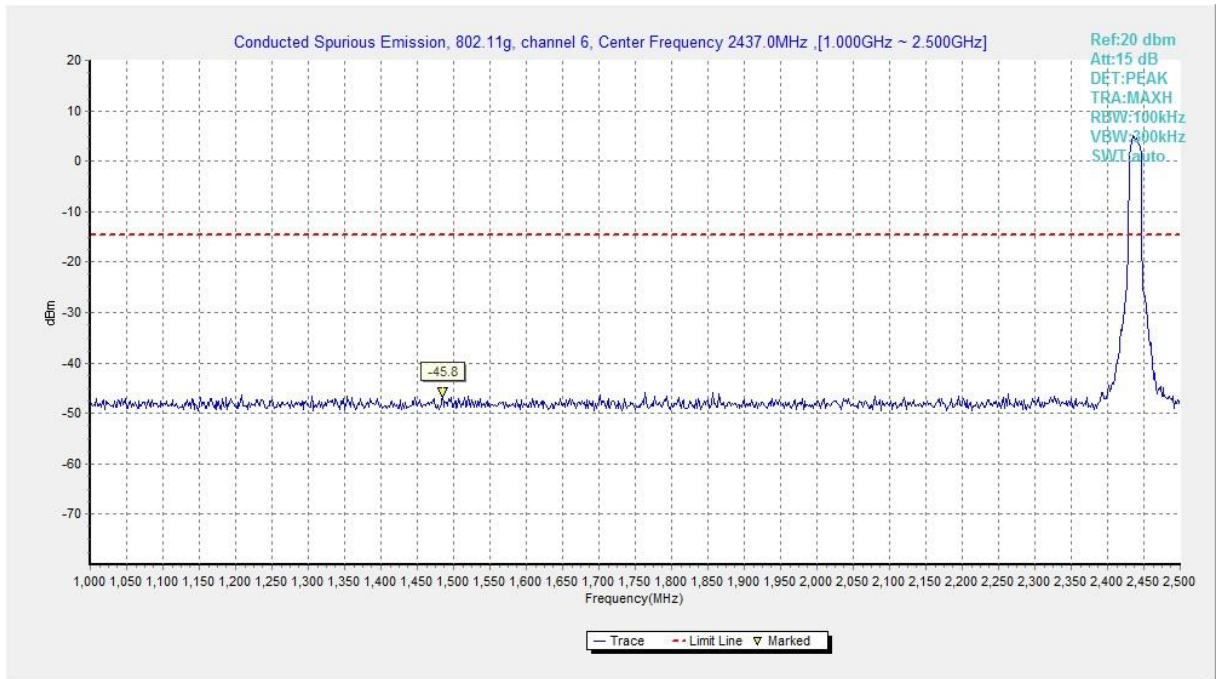
**Fig.A.6.1.32 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 20 GHz-26 GHz)**



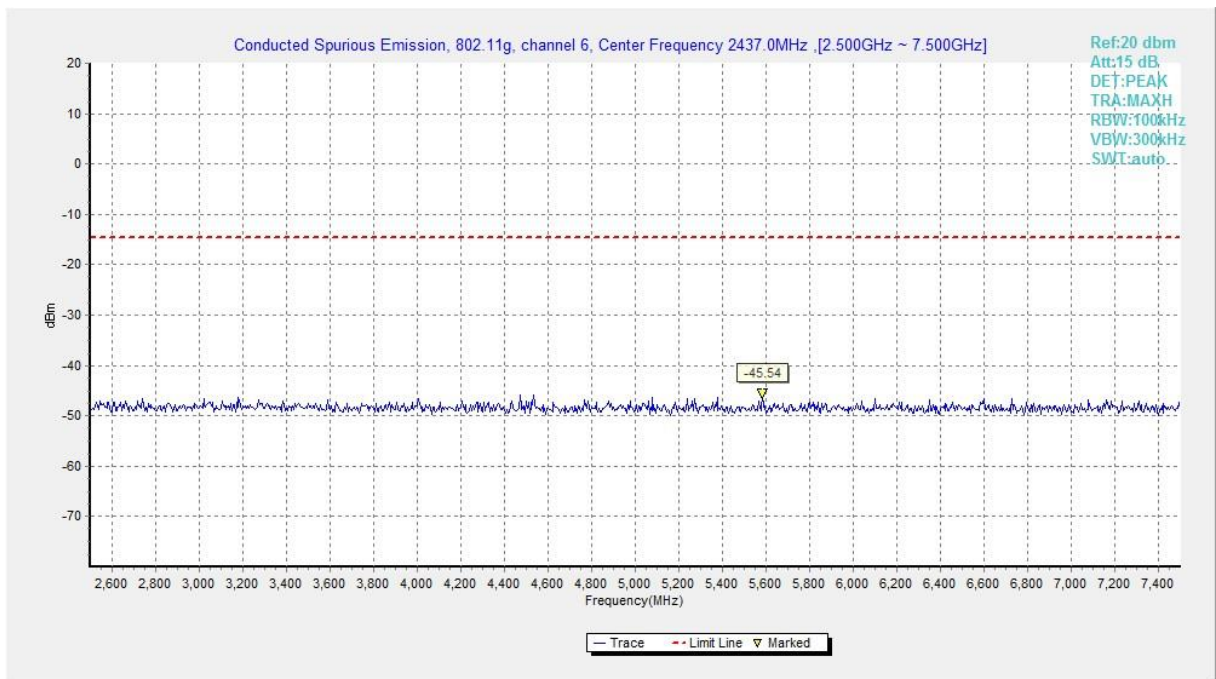
**Fig.A.6.1.33 Transmitter Spurious Emission - Conducted (802.11g, Ch6, Center Frequency)**



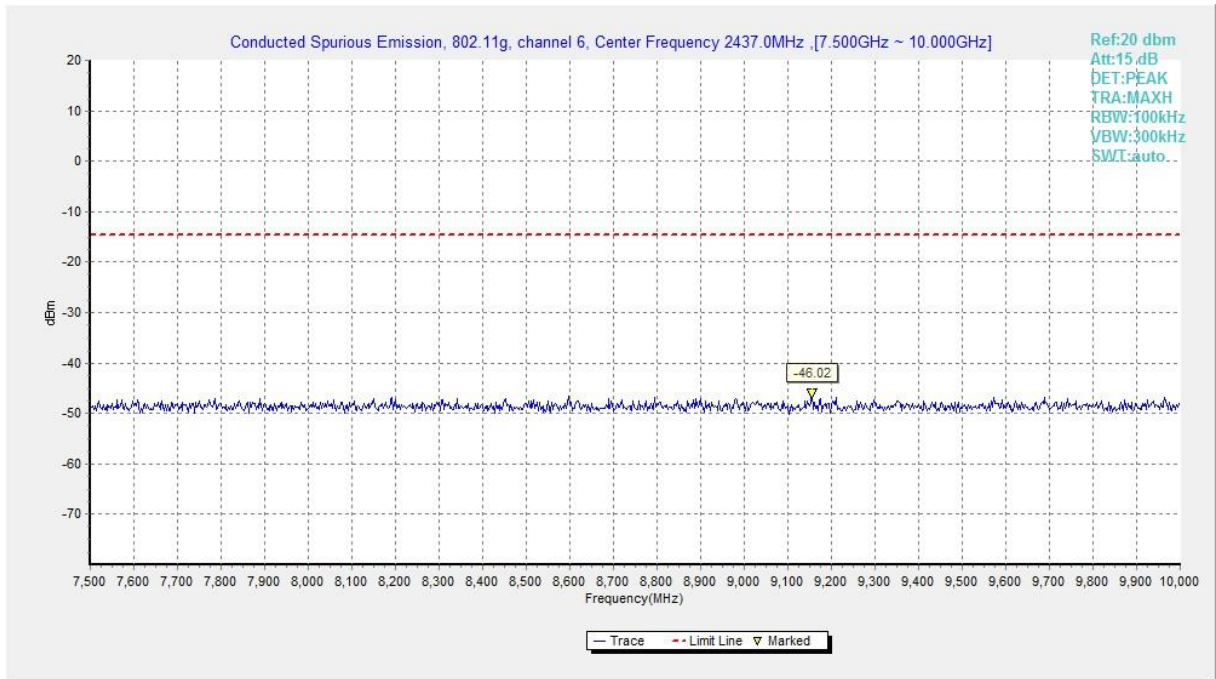
**Fig.A.6.1.34 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 30 MHz-1 GHz)**



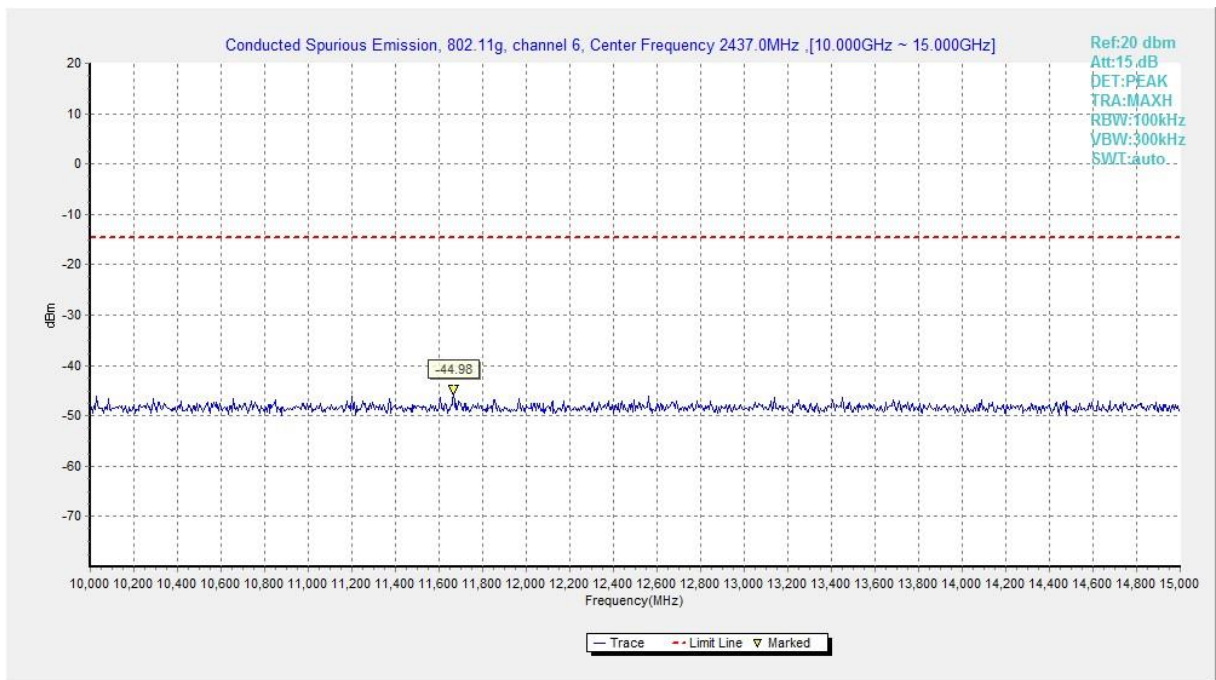
**Fig.A.6.1.35 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 1 GHz-2.5 GHz)**



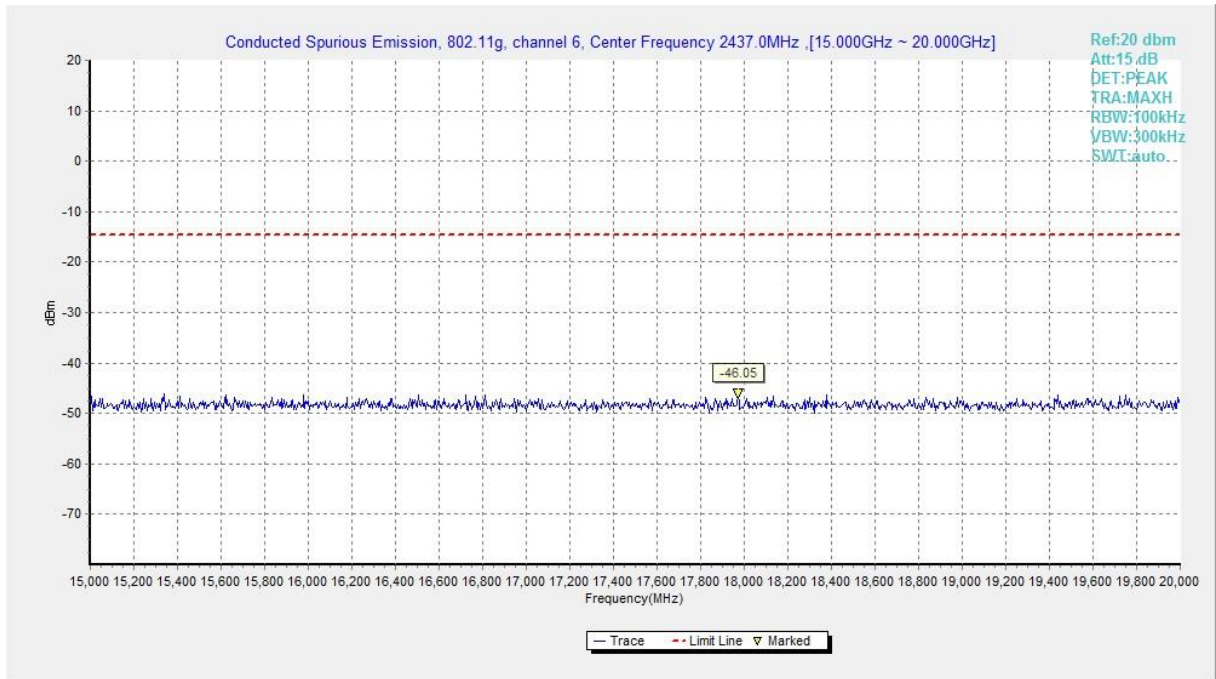
**Fig.A.6.1.36 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 2.5 GHz-7.5 GHz)**



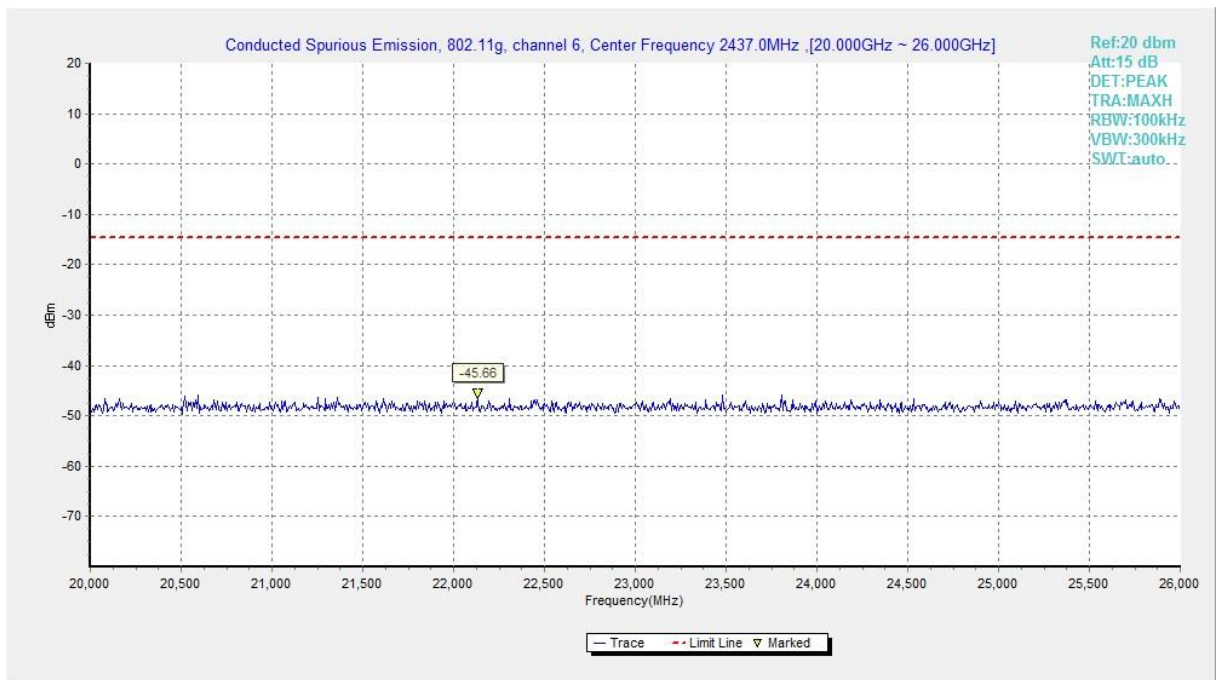
**Fig.A.6.1.37 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 7.5 GHz-10 GHz)**



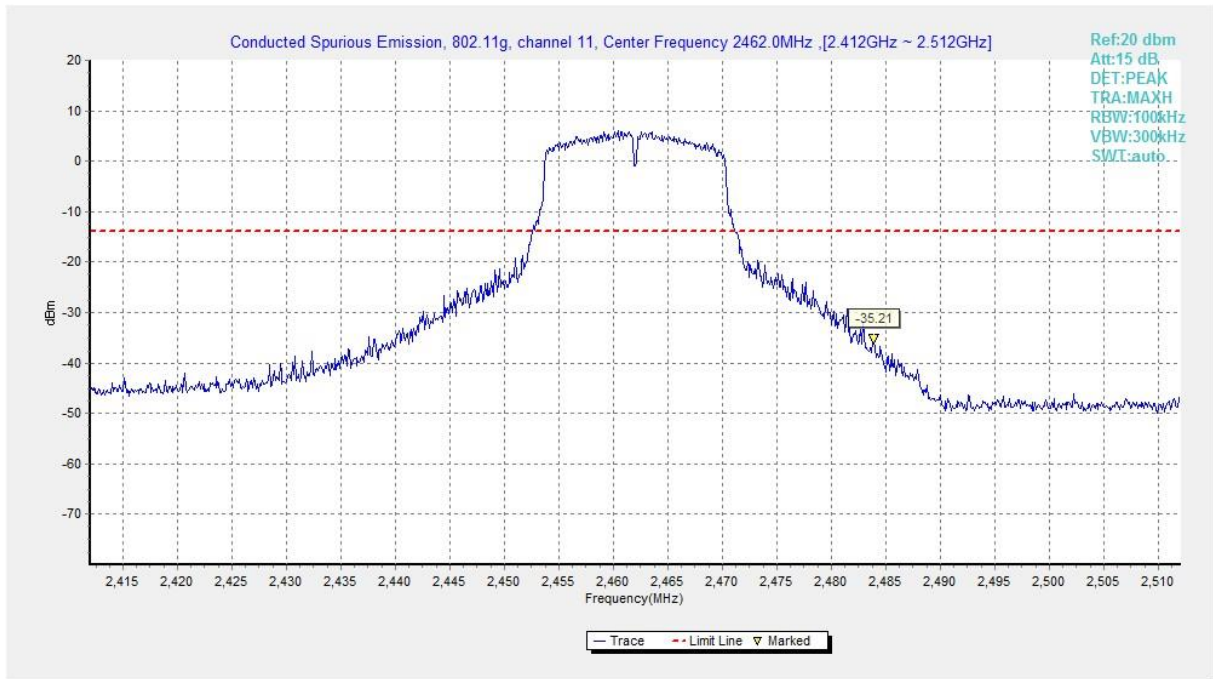
**Fig.A.6.1.38 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 10 GHz-15 GHz)**



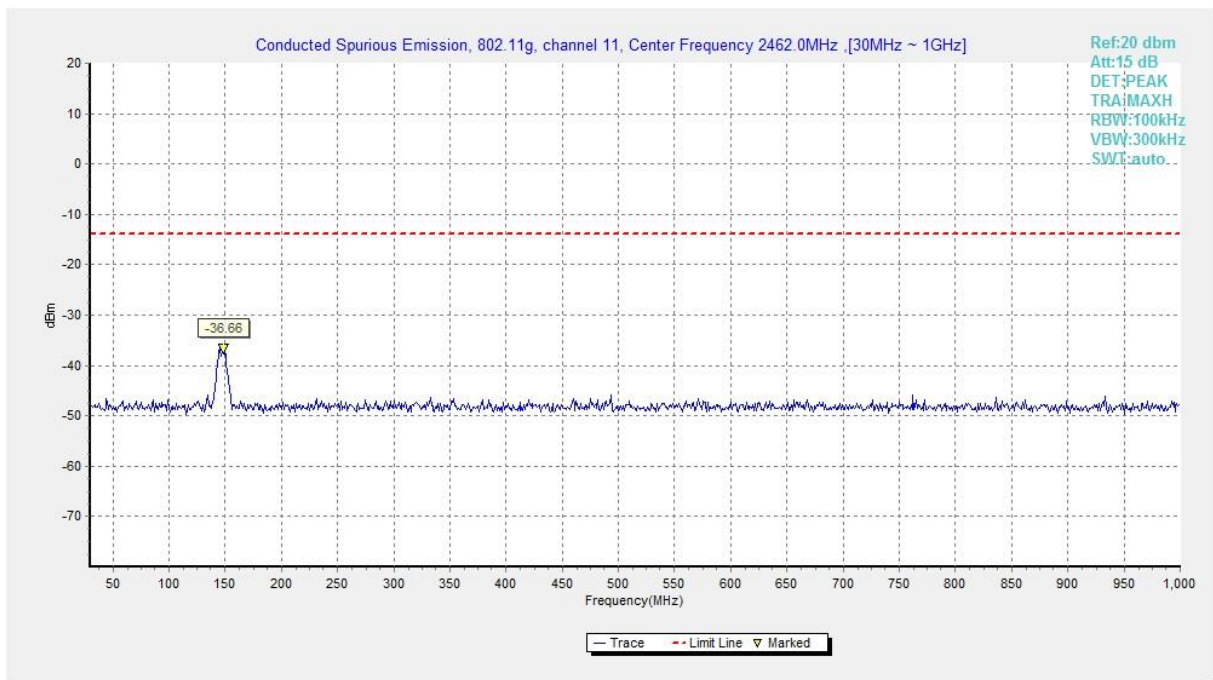
**Fig.A.6.1.39 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 15 GHz-20 GHz)**



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

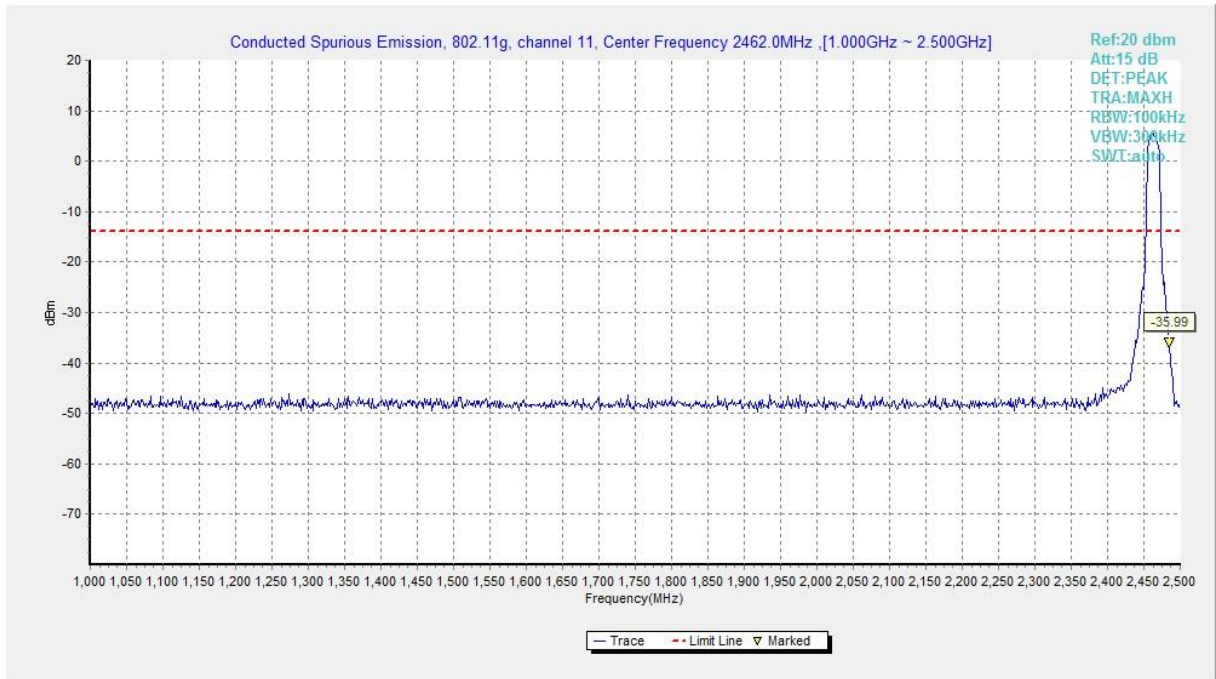


**Fig.A.6.1.41 Transmitter Spurious Emission - Conducted (802.11g, Ch11, Center Frequency)**

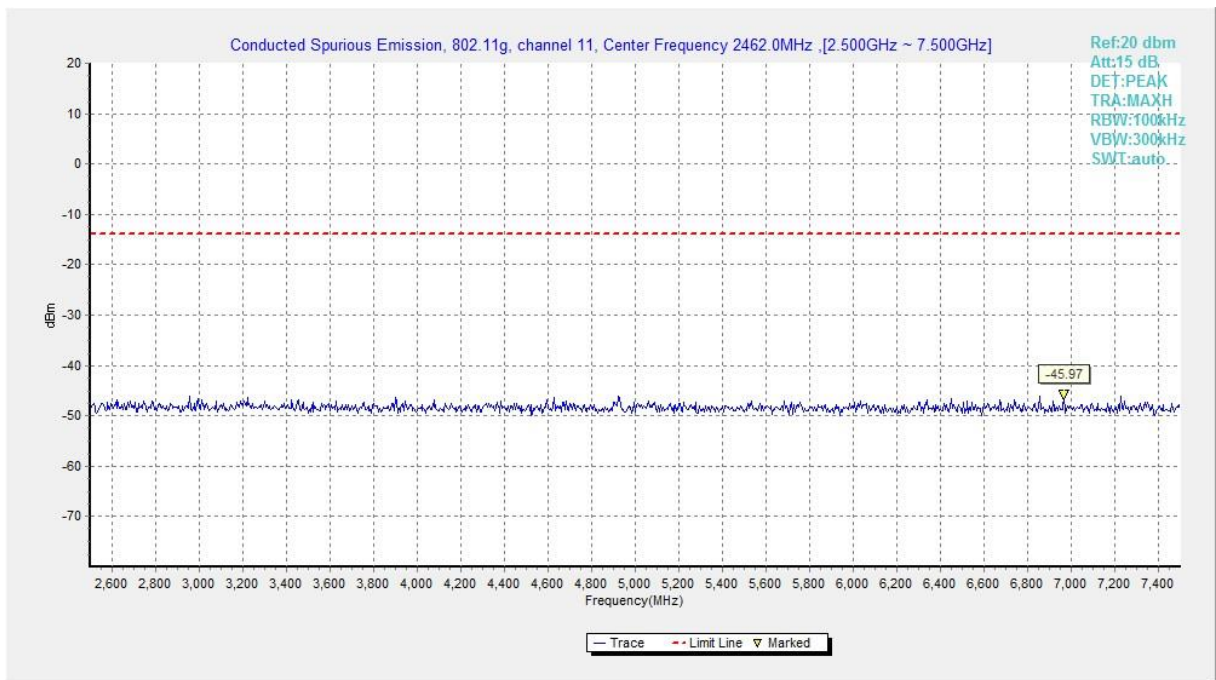


**Fig.A.6.1.42 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 30 MHz-1 GHz)**

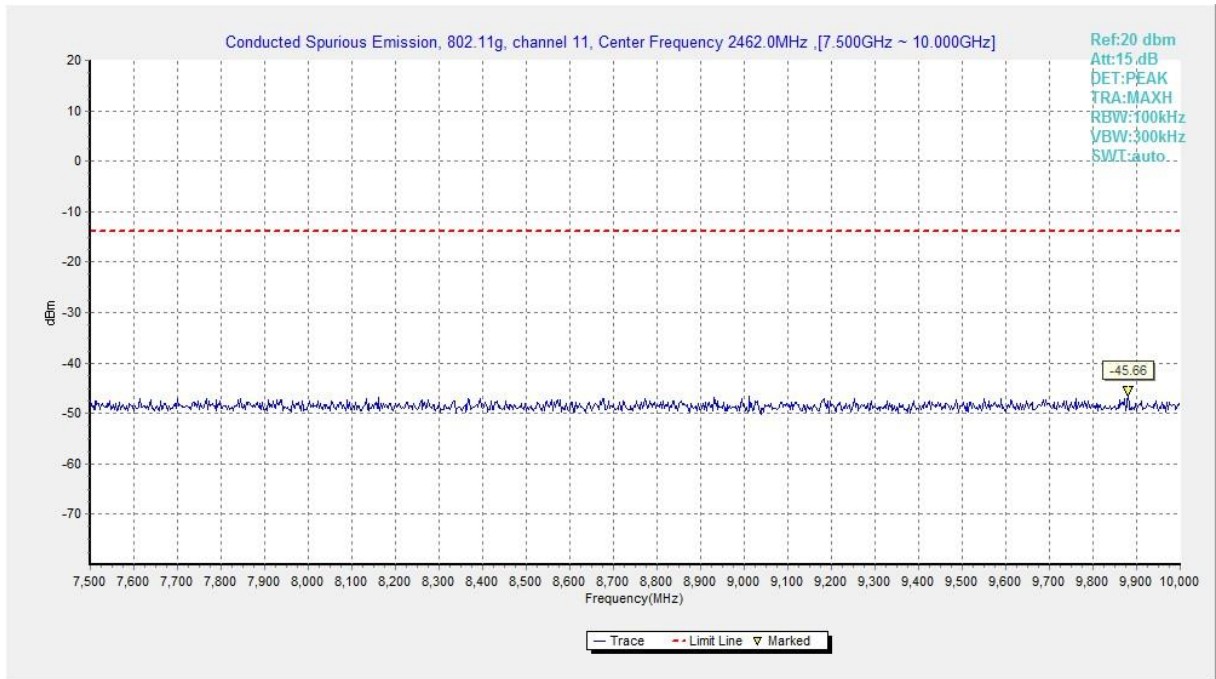




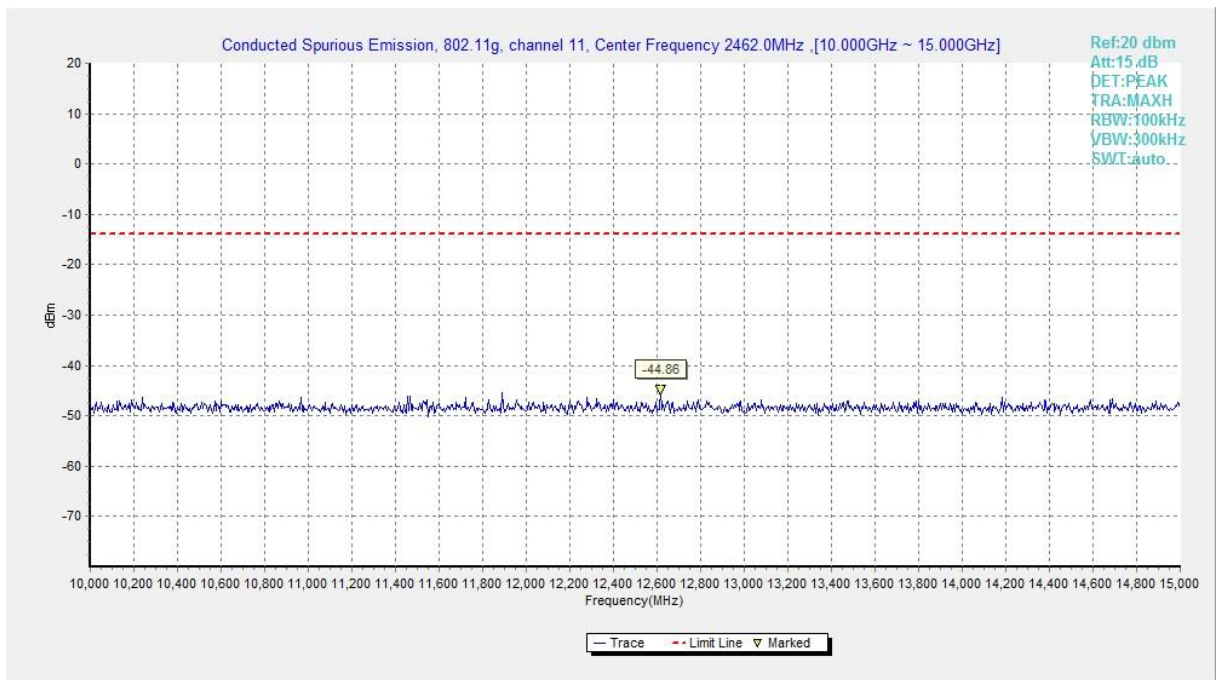
**Fig.A.6.1.43 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 1 GHz-2.5 GHz)**



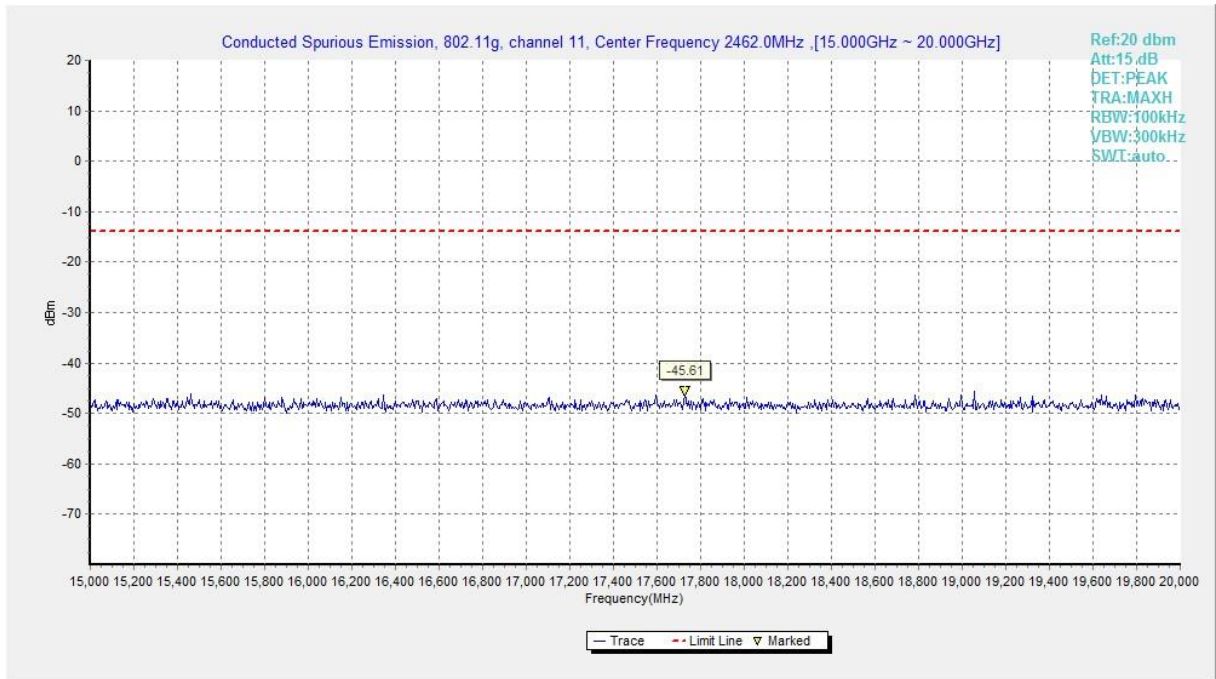
**Fig.A.6.1.44 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 2.5 GHz-7.5 GHz)**



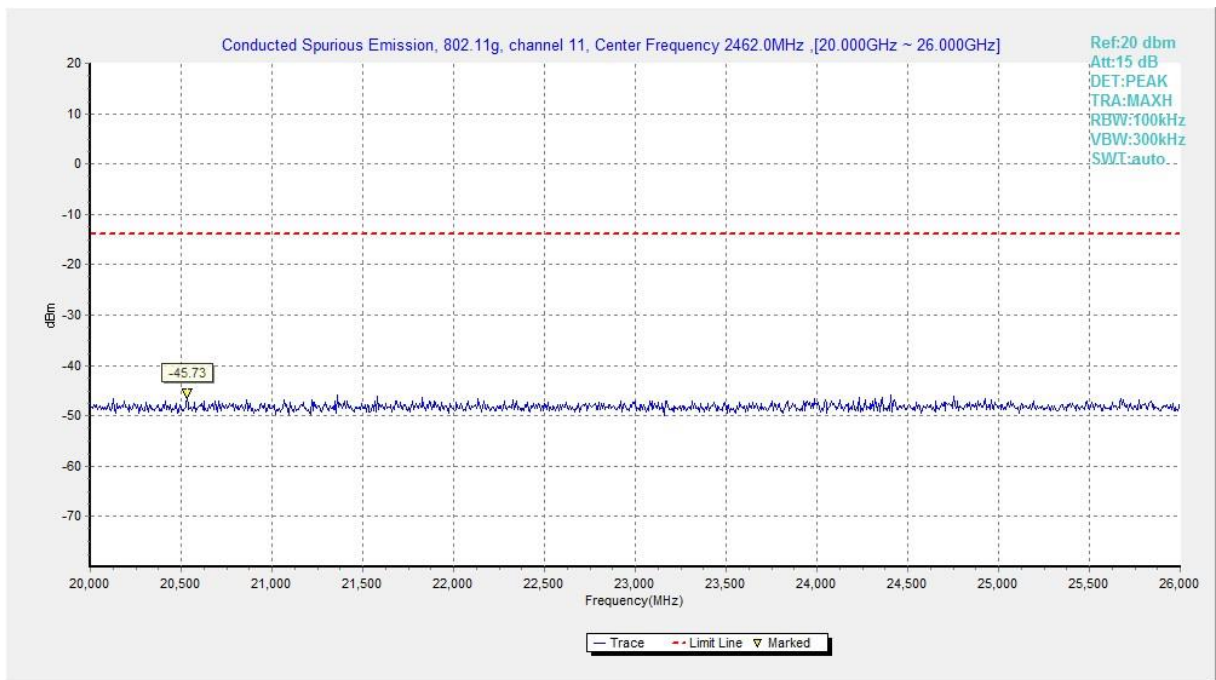
**Fig.A.6.1.45 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 7.5 GHz-10 GHz)**



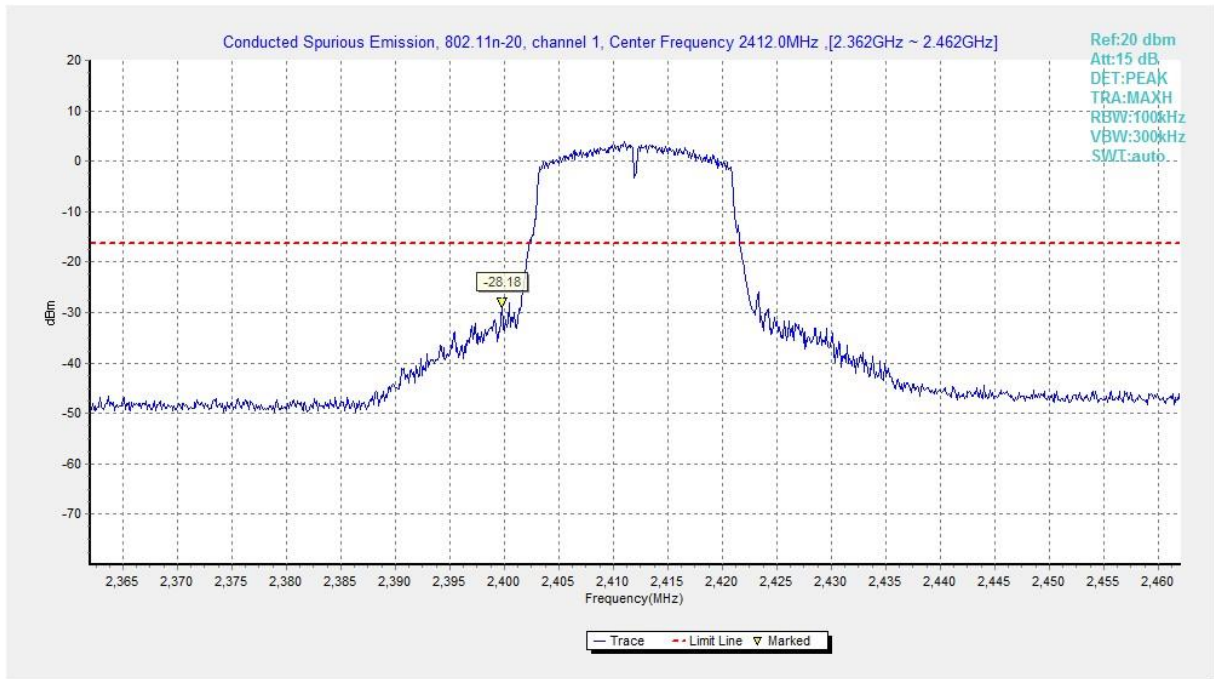
**Fig.A.6.1.46 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 10 GHz-15 GHz)**



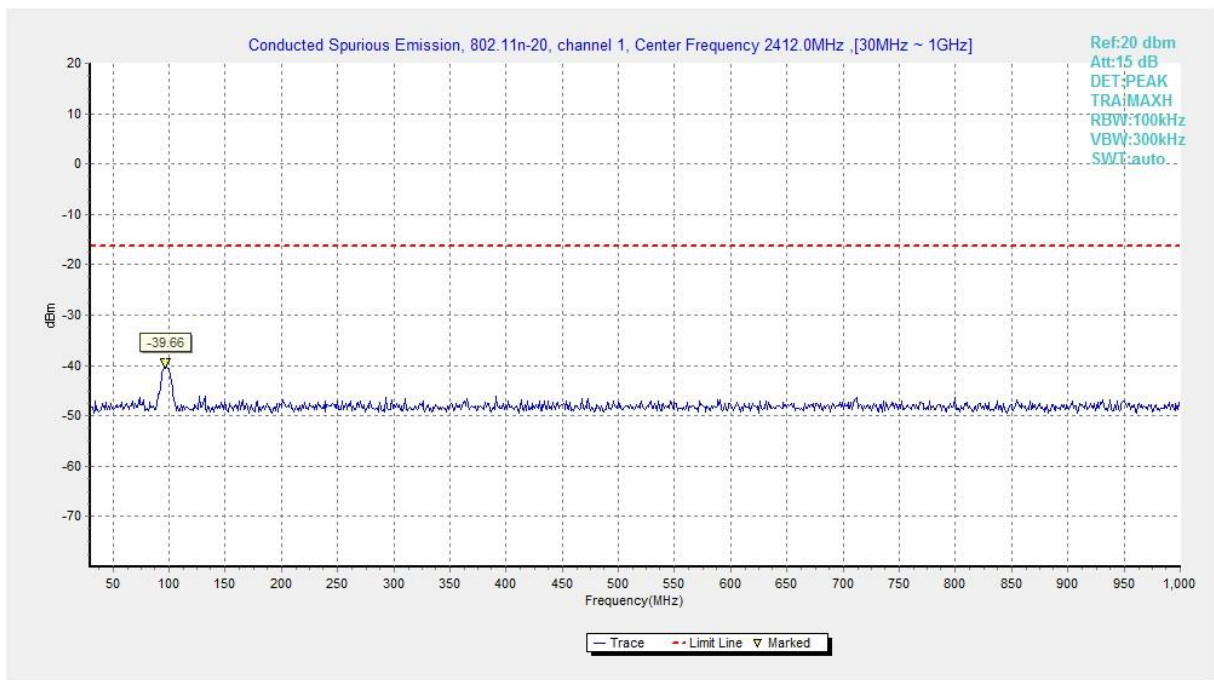
**Fig.A.6.1.47 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 15 GHz-20 GHz)**



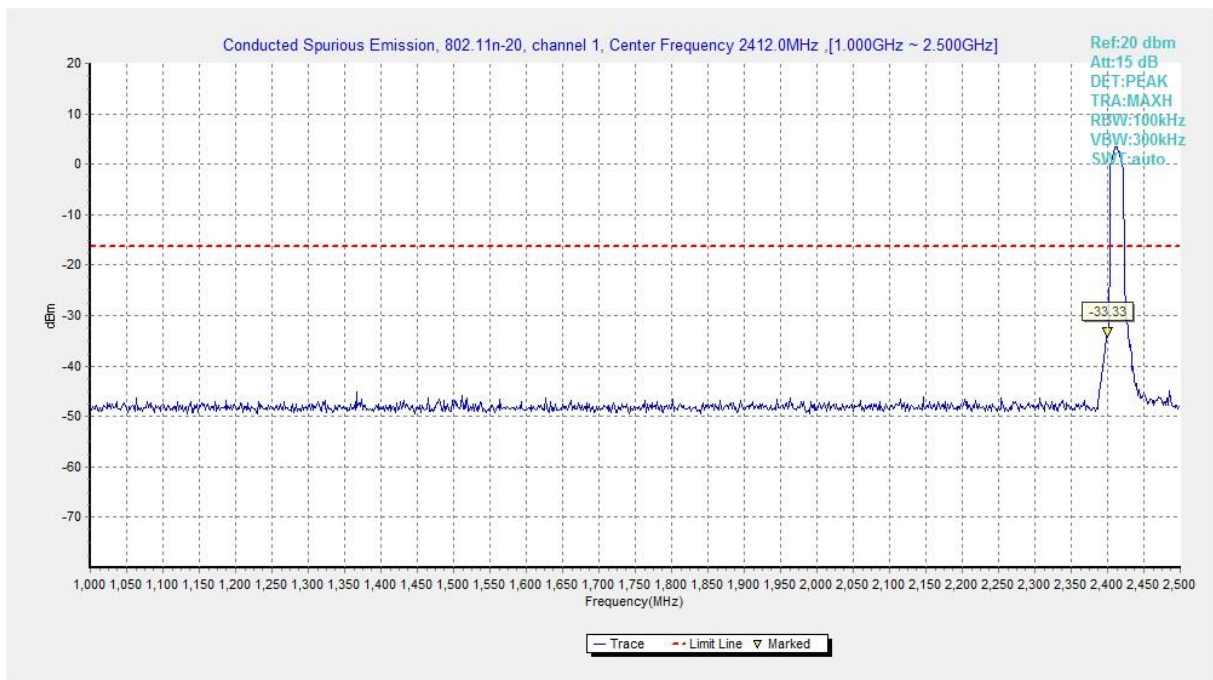
**Fig.A.6.1.48 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 20 GHz-26 GHz)**



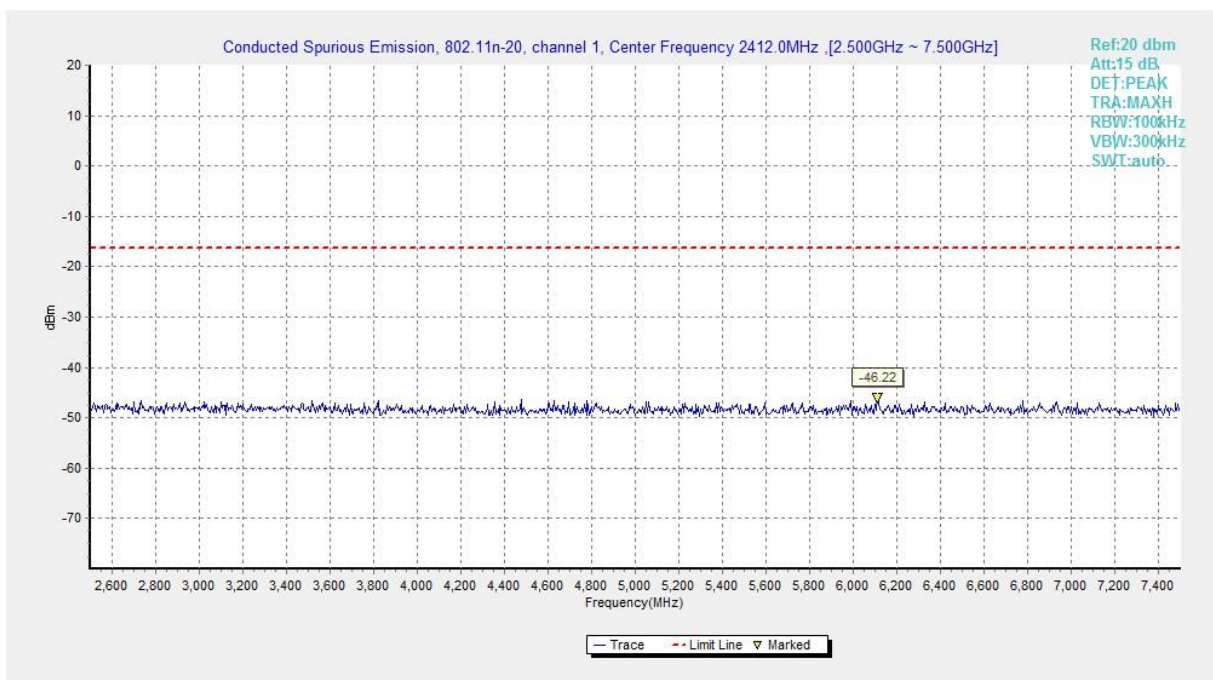
**Fig.A.6.1.49 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, Center Frequency)**



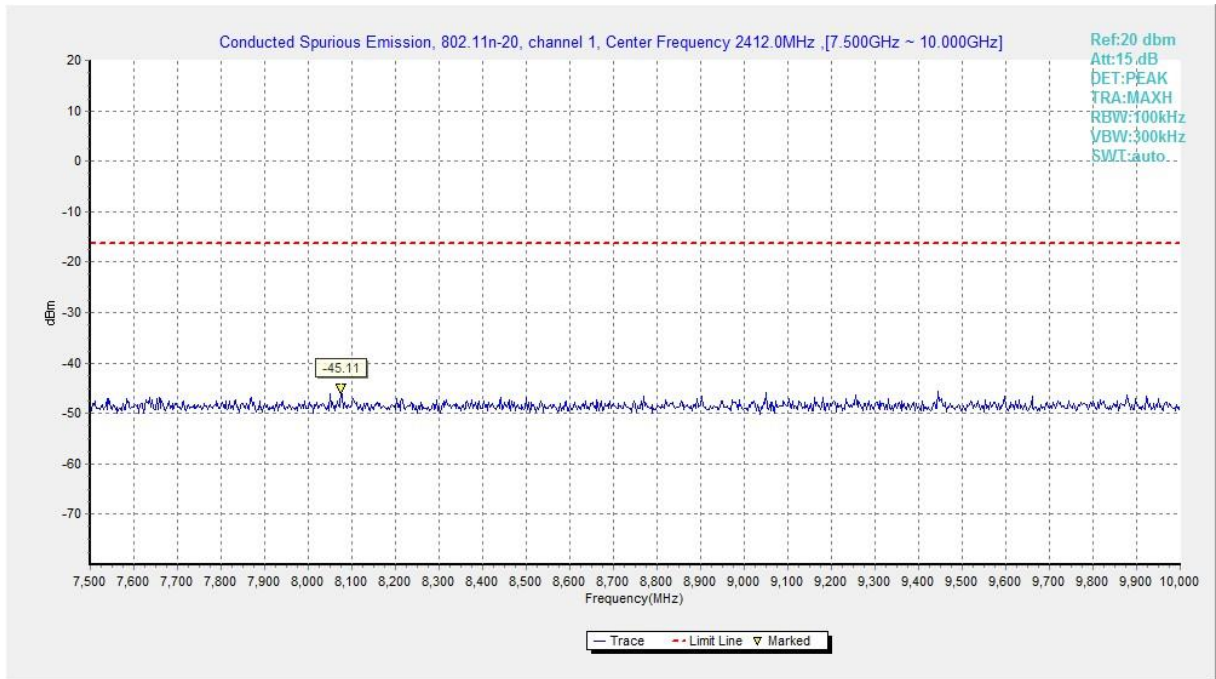
**Fig.A.6.1.50 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 30 MHz-1 GHz)**



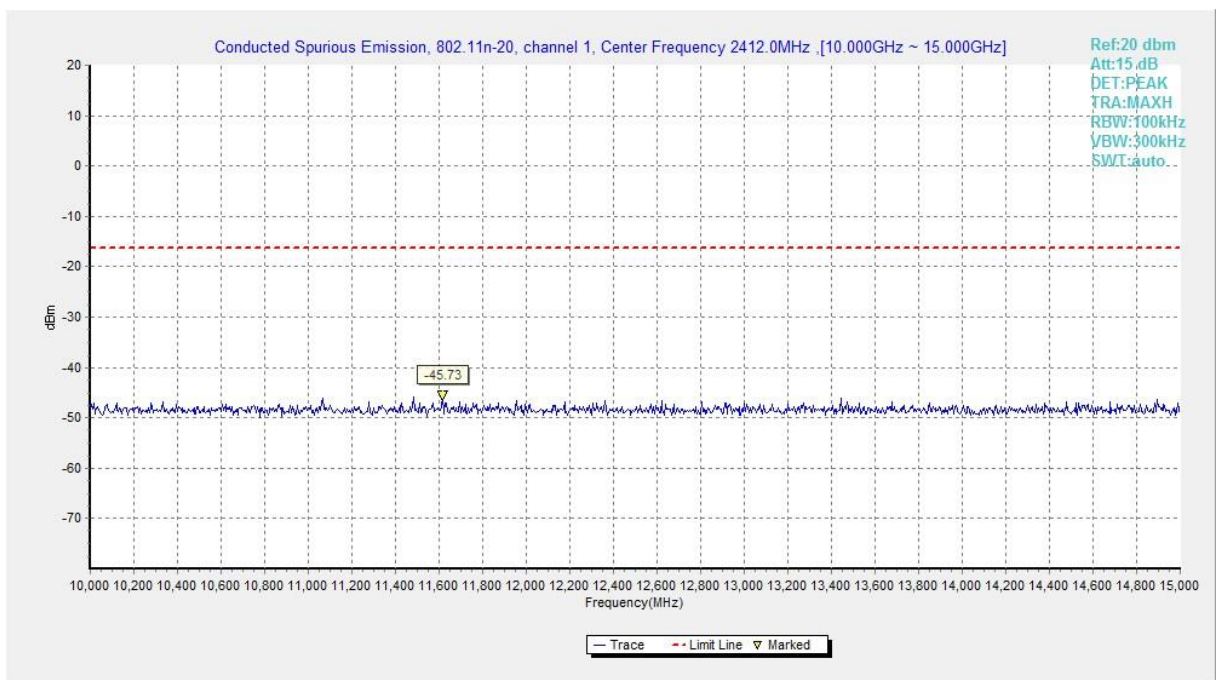
**Fig.A.6.1.51 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 1 GHz-2.5 GHz)**



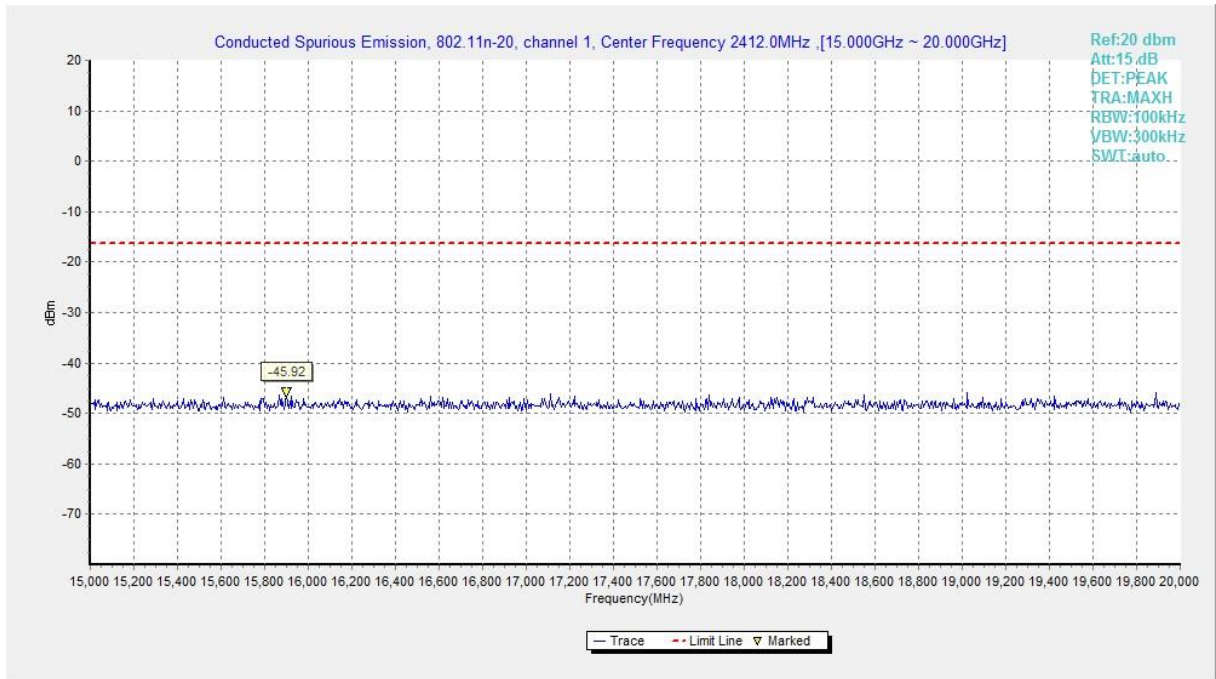
**Fig.A.6.1.52 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 2.5 GHz-7.5 GHz)**



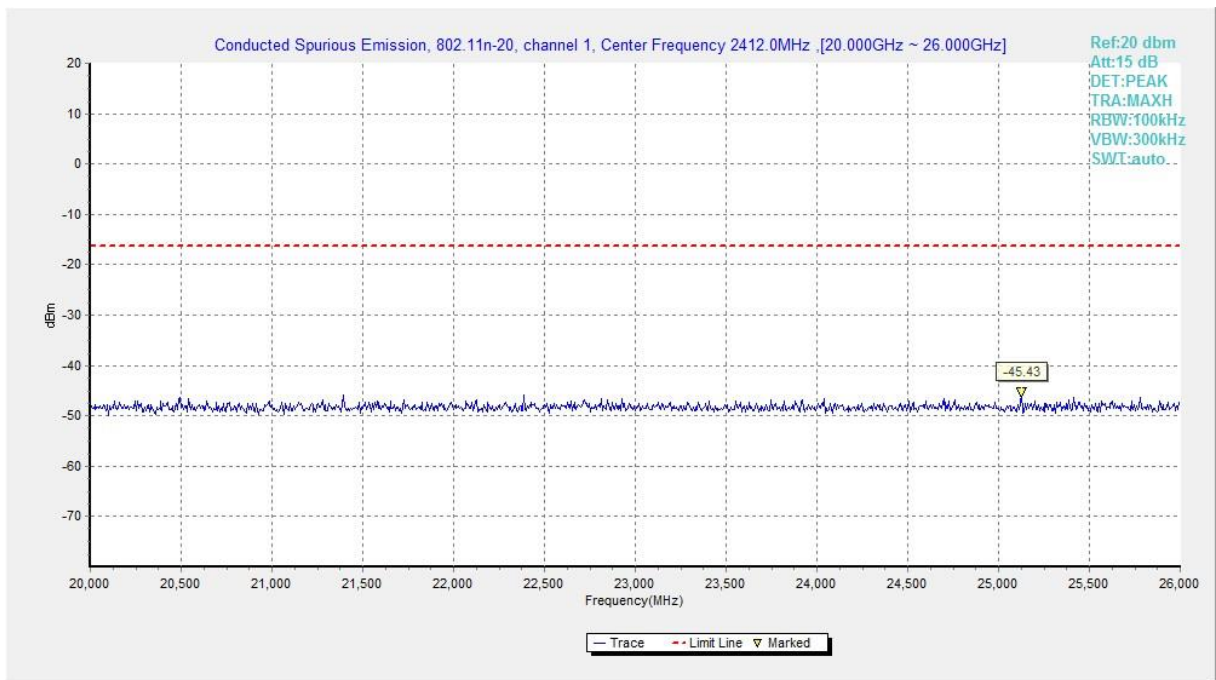
**Fig.A.6.1.53 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 7.5 GHz-10 GHz)**



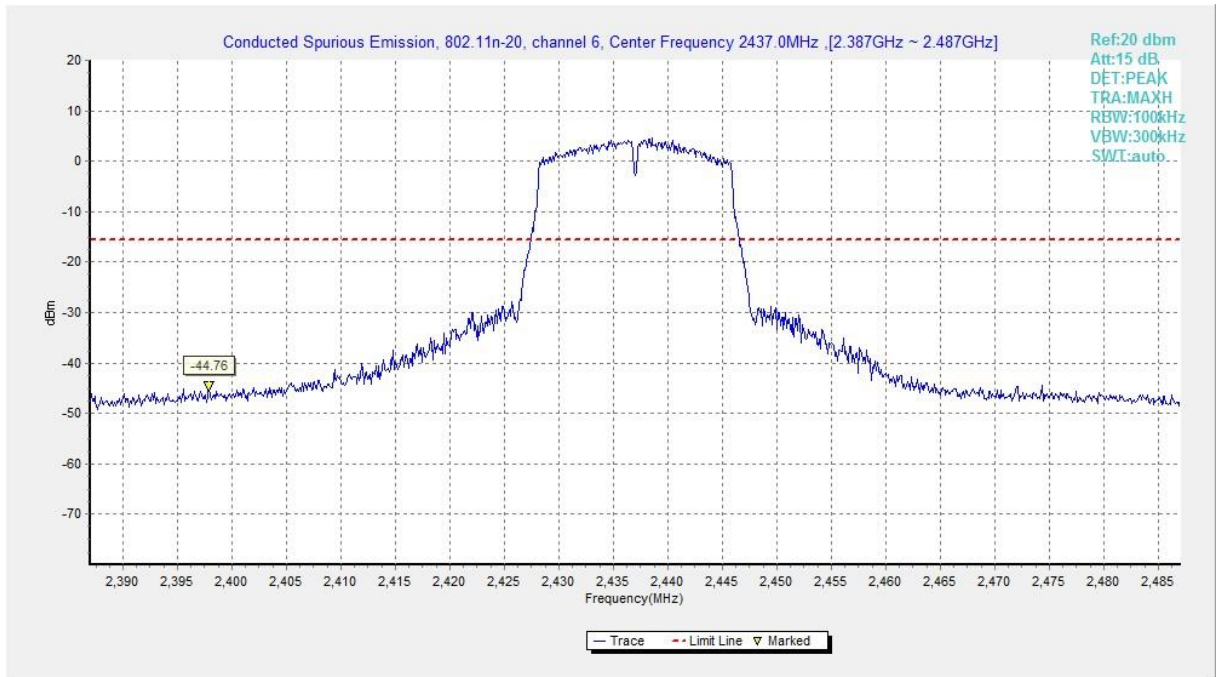
**Fig.A.6.1.54 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 10 GHz-15 GHz)**



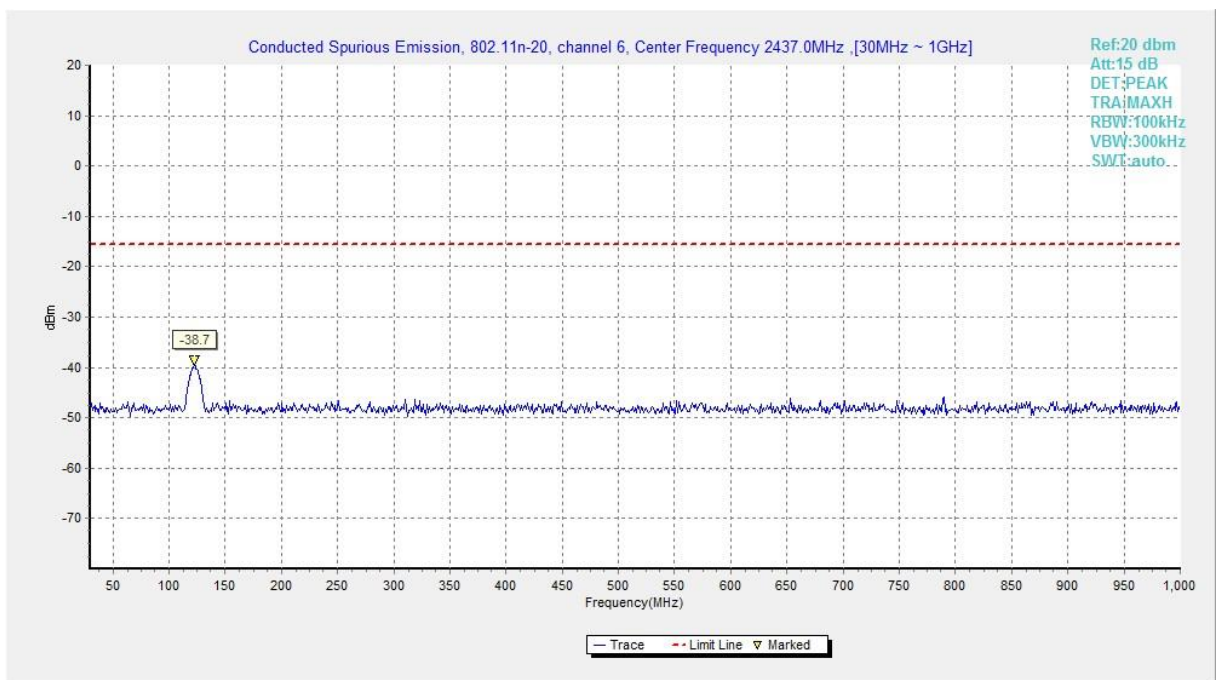
**Fig.A.6.1.55 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 15 GHz-20 GHz)**



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

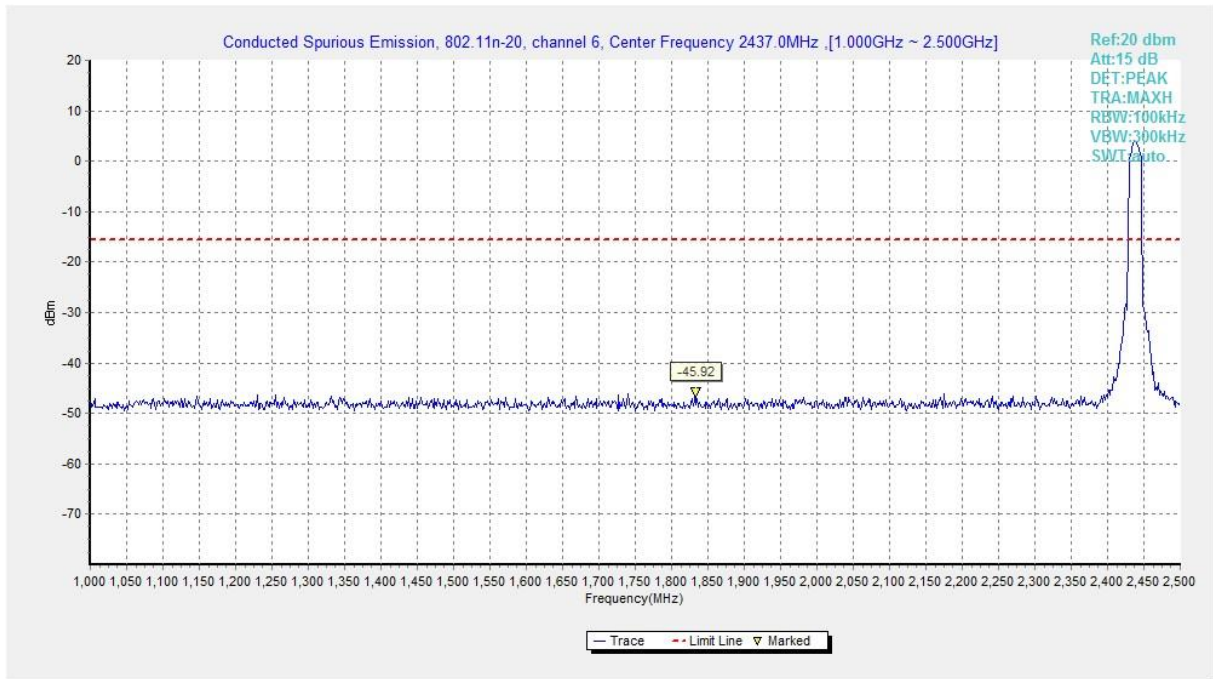


**Fig.A.6.1.57 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, Center Frequency)**

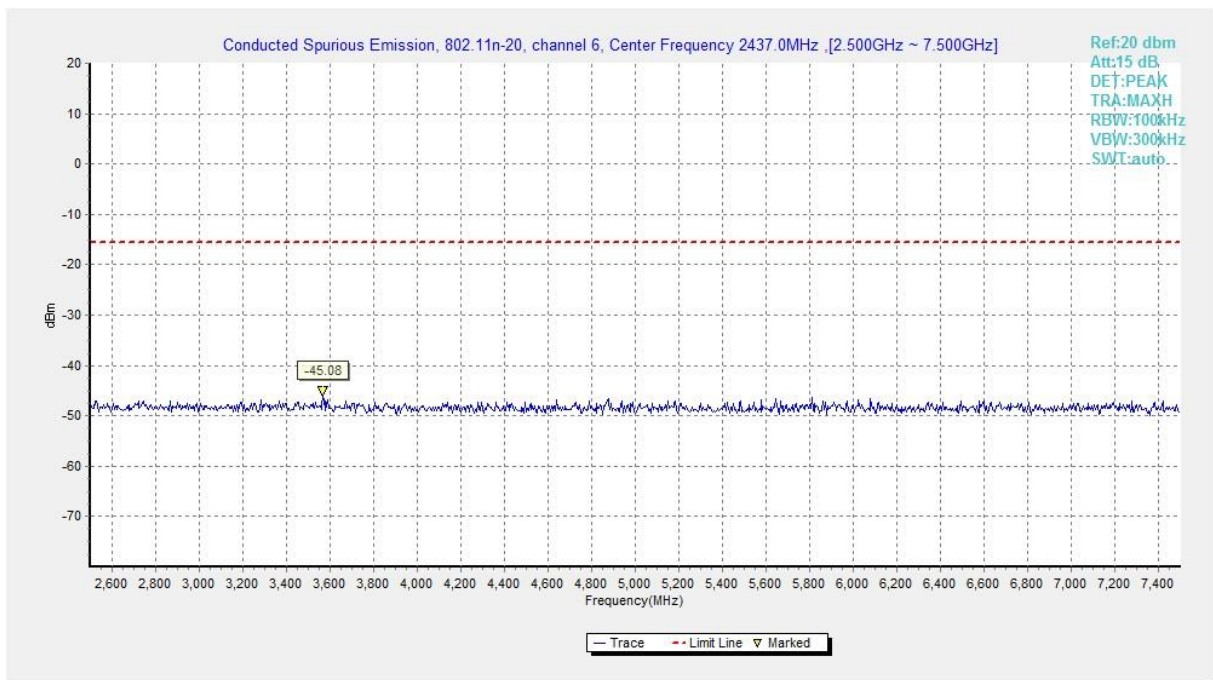


**Fig.A.6.1.58 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 30 MHz-1 GHz)**

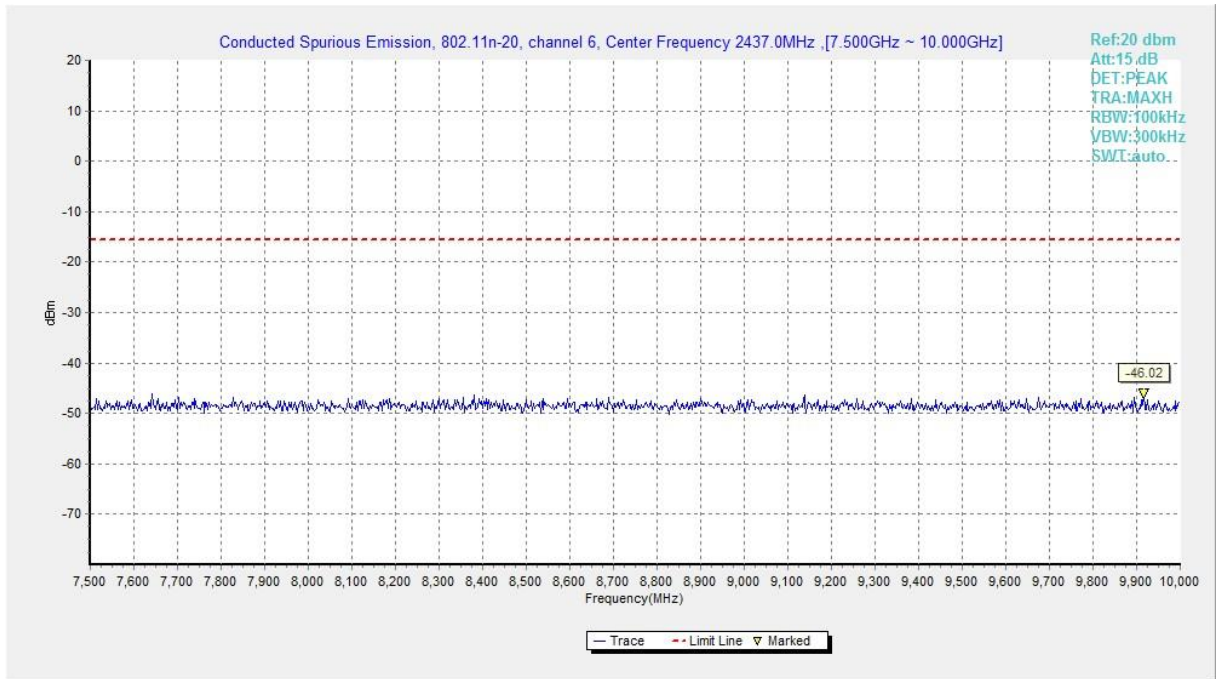




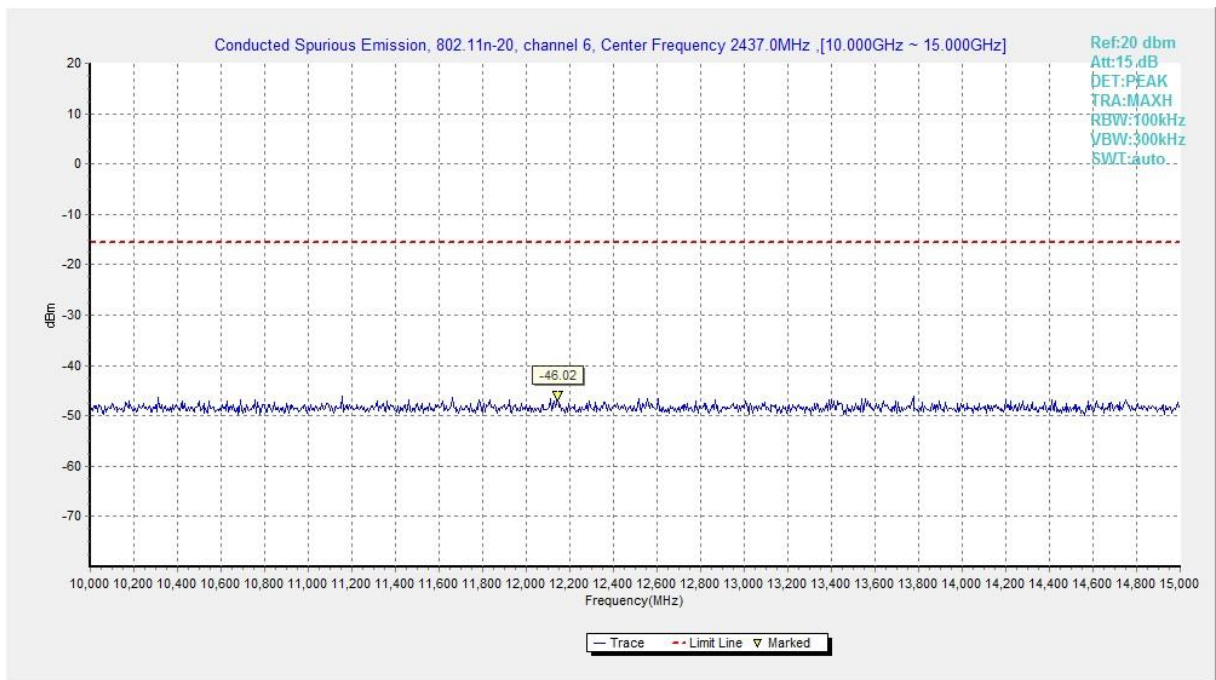
**Fig.A.6.1.59 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 1 GHz-2.5 GHz)**



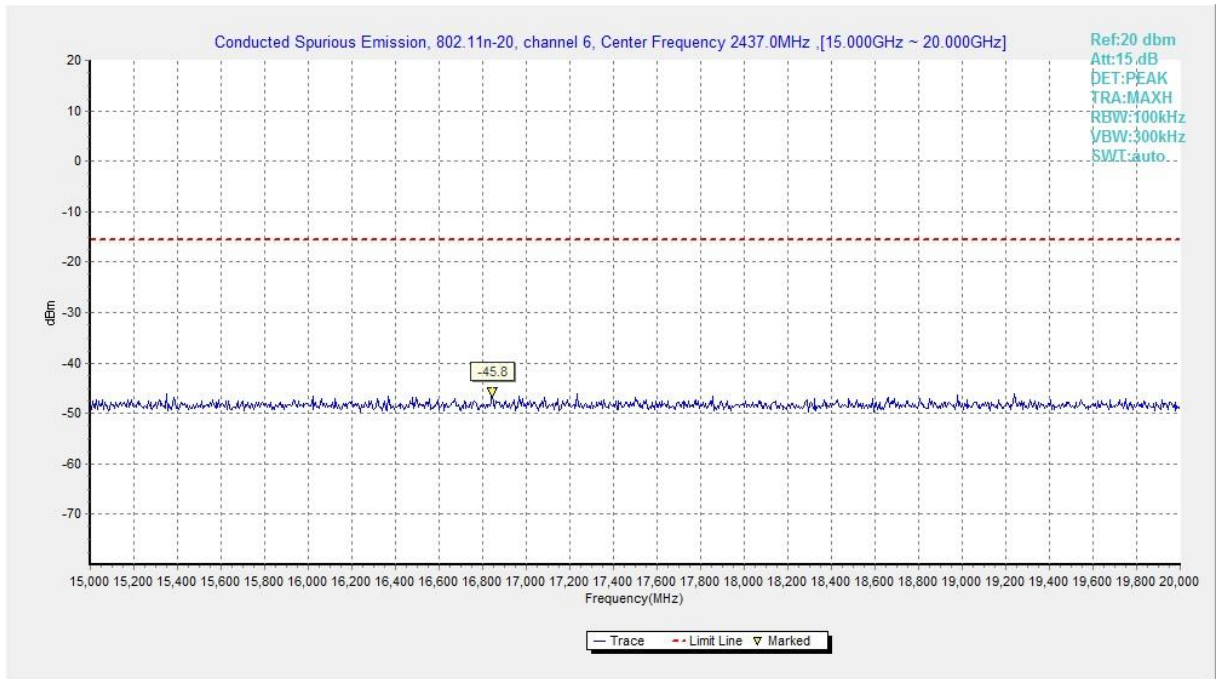
**Fig.A.6.1.60 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 2.5 GHz-7.5 GHz)**



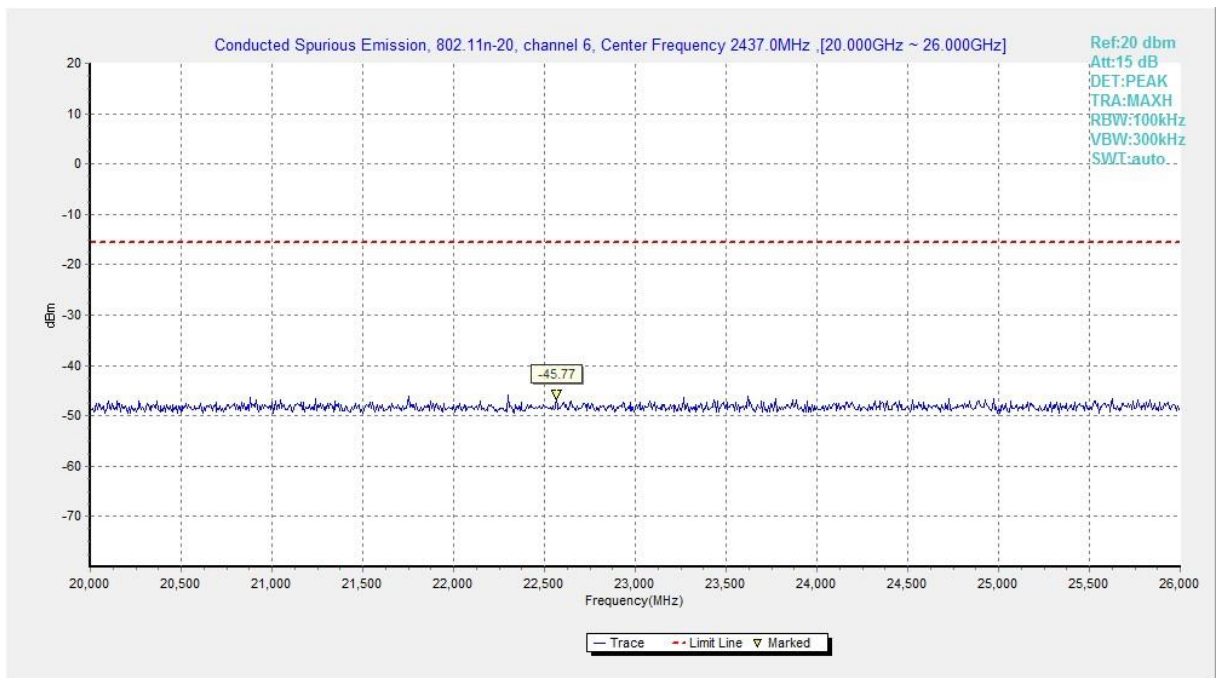
**Fig.A.6.1.61 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 7.5 GHz-10 GHz)**



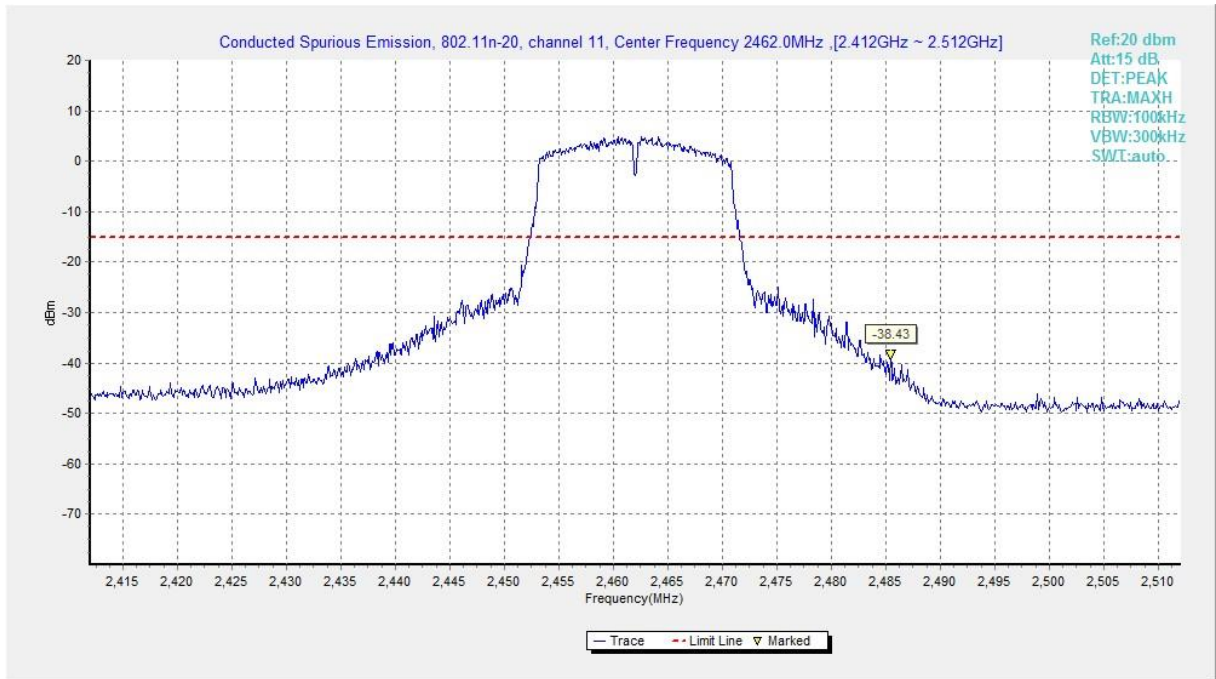
**Fig.A.6.1.62 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 10 GHz-15 GHz)**



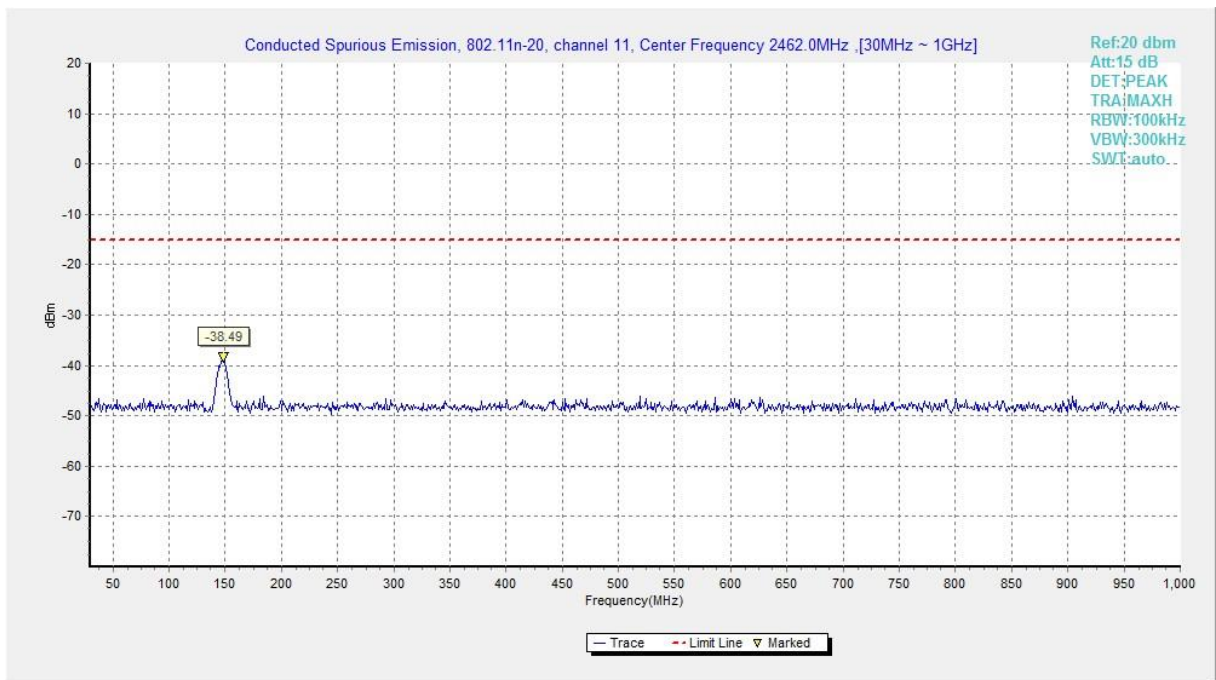
**Fig.A.6.1.63 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 15 GHz-20 GHz)**



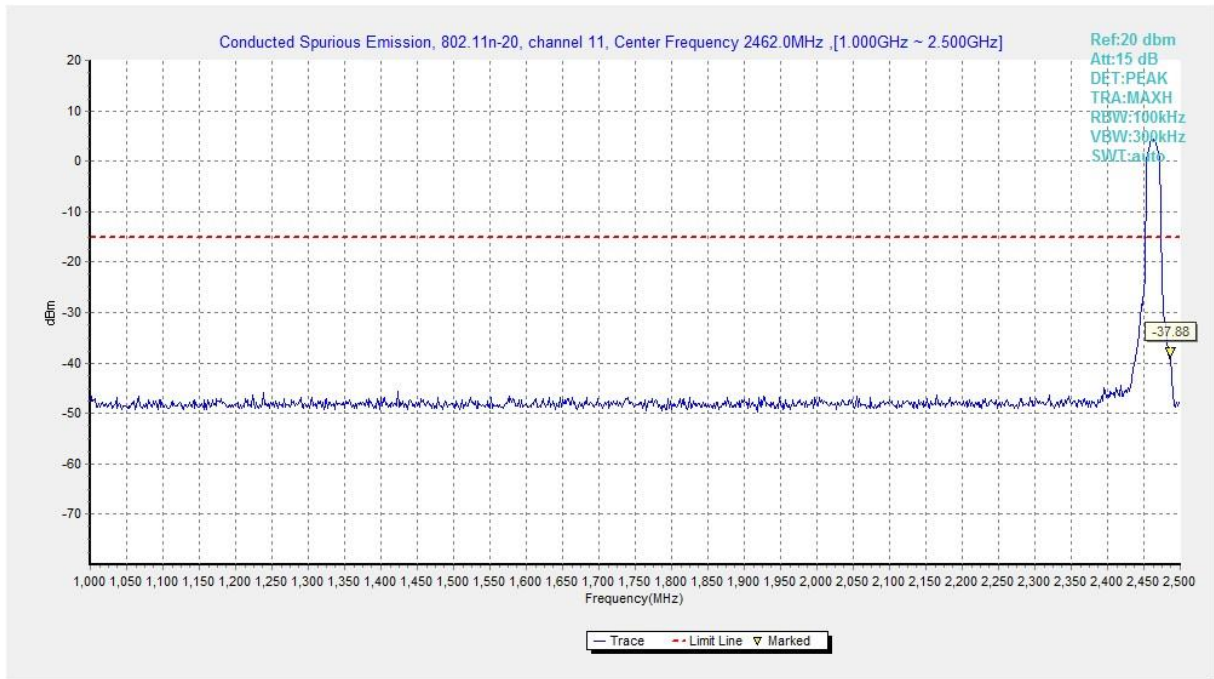
**Fig.A.6.1.64 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 20 GHz-26 GHz)**



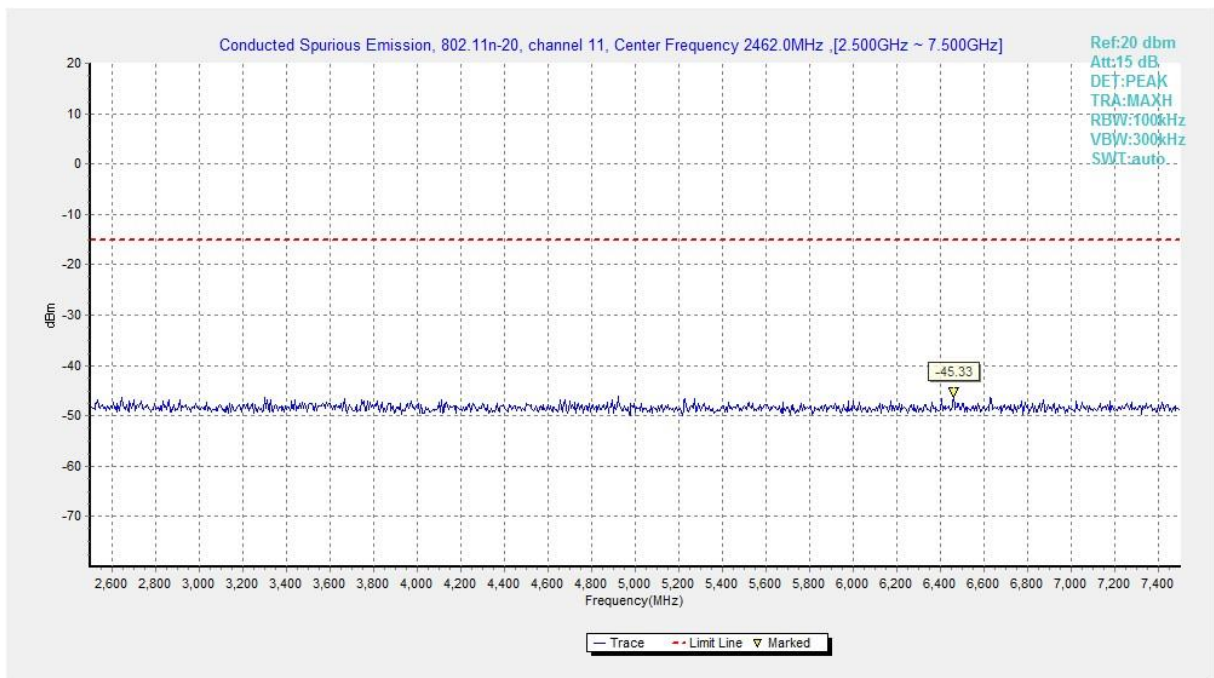
**Fig.A.6.1.65 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, Center Frequency)**



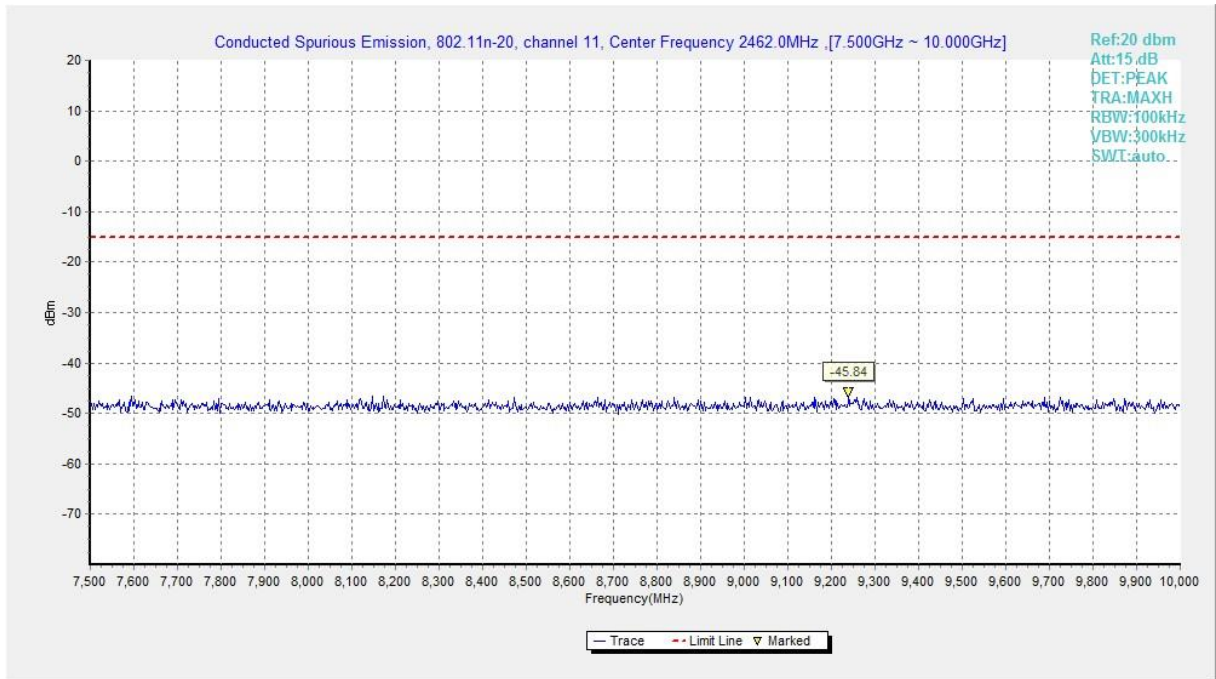
**Fig.A.6.1.66 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 30 MHz-1 GHz)**



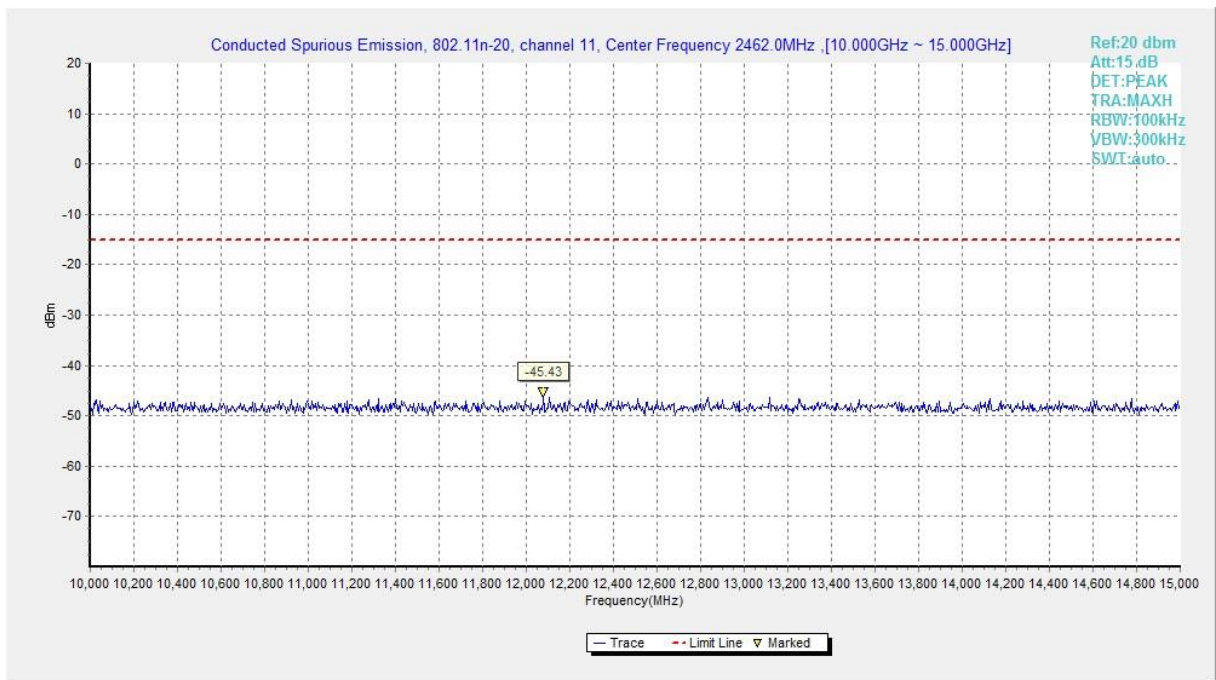
**Fig.A.6.1.67 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 1 GHz-2.5 GHz)**



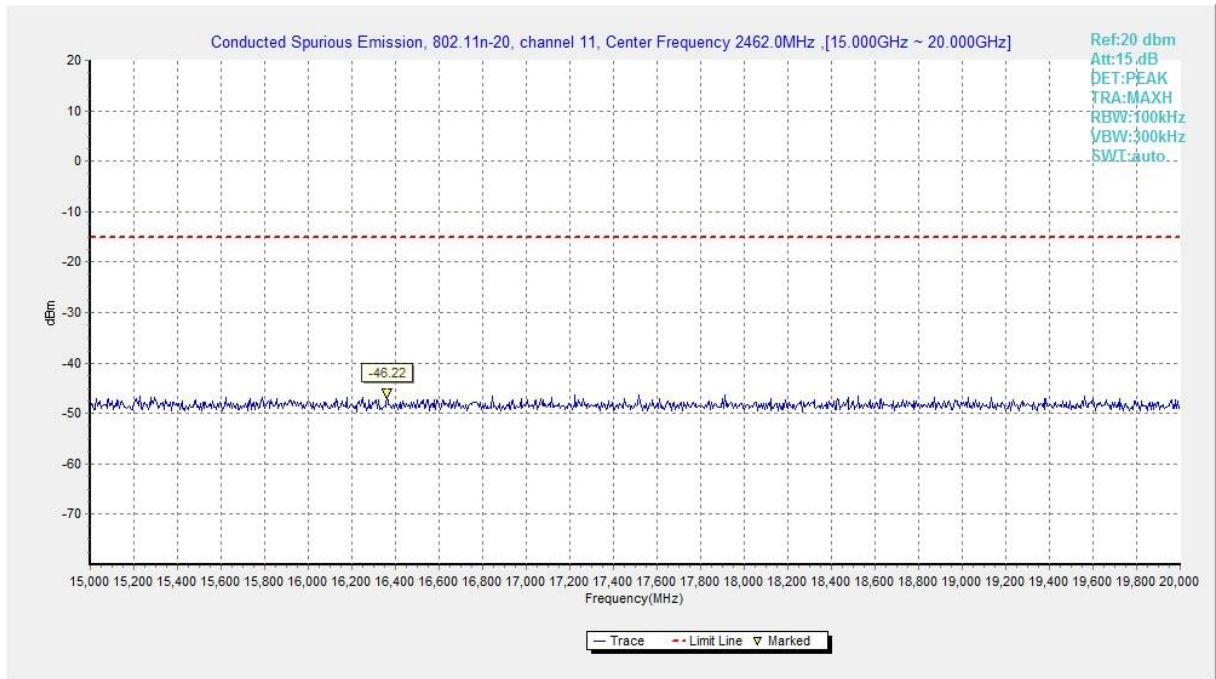
**Fig.A.6.1.68 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 2.5 GHz-7.5 GHz)**



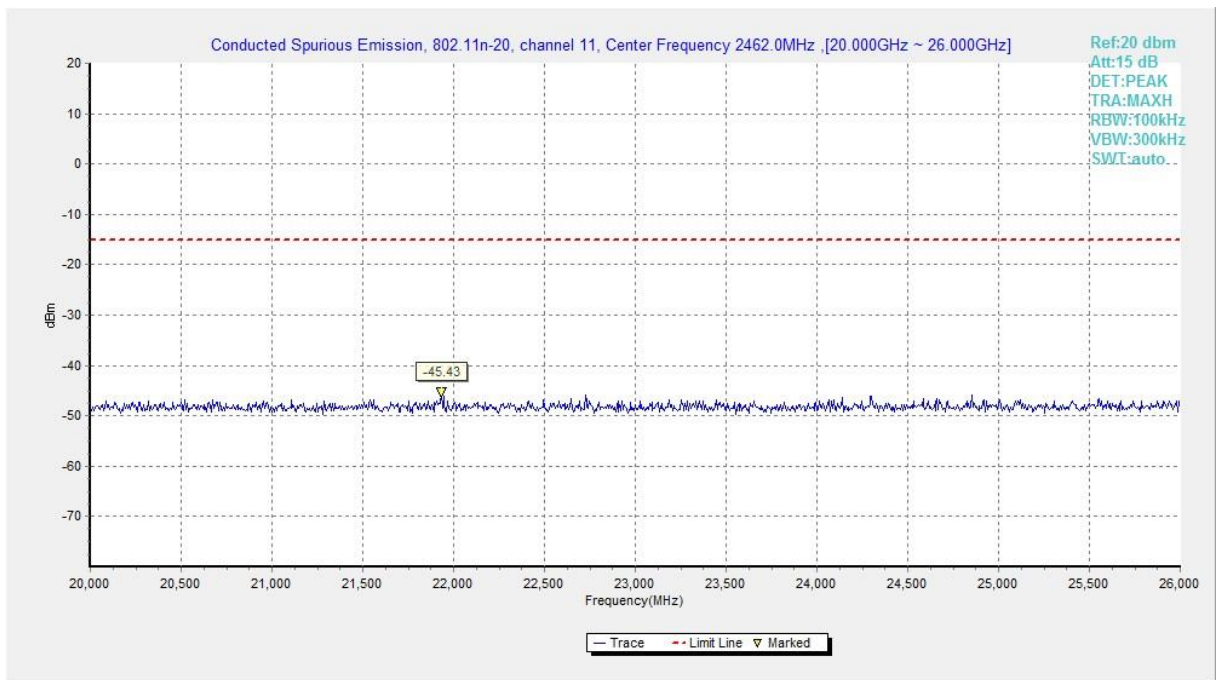
**Fig.A.6.1.69 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 7.5 GHz-10 GHz)**



**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)	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.



**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

**EUT ID: EUT1**
**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	<b>P</b>
	11	2.45GHz~2.50GHz---H	Fig.A.6.2.2	<b>P</b>

**802.11g mode**

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

**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	<b>P</b>
	11	2.45GHz~2.50GHz---H	Fig.A.6.2.6	<b>P</b>

**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:

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

2. The range of evaluated frequency is from 9 kHz to 26GHz. Measurement value show only up to 6 maximum emissions noted.

**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)
17968.5	56.99	-25.5	46.7	35.79	74	17.01	V
14318	52.42	-28.4	42.3	38.52	74	21.58	H
7235.5	49.69	-35.5	36.4	48.79	74	24.31	H
12931.5	47.83	-30.5	39.2	39.13	74	26.17	V
9002.5	46.86	-33.3	38.2	41.96	74	27.14	H
2385.1	57.16	-20	28.1	49.16	74	16.84	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)
17937	57.85	-25.5	46.7	36.65	74	16.15	V
14421.5	51.83	-28.6	42.5	37.93	74	22.17	H
7309.5	48.44	-35	36.5	46.84	74	25.56	V
12932	47.93	-30.5	39.2	39.23	74	26.07	V
9937	45.5	-33.5	38.1	40.9	74	28.5	H
4874	44.23	-37.2	33.2	48.23	74	29.77	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)
17993.5	58.17	-25.5	46.7	36.97	74	15.83	H
14402.5	52.29	-28.6	42.5	38.39	74	21.71	H
12760.5	48.37	-30.5	39.1	39.77	74	25.63	H
7386.5	47.38	-35.1	36.6	45.88	74	26.62	V
8974	45.9	-33.3	38.2	41	74	28.1	V
2486.2	57.83	-20	28.3	49.53	74	16.17	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)
17989	58.27	-25.5	46.7	37.07	74	15.73	V
14366.5	52.22	-28.4	42.3	38.32	74	21.78	H
12917.5	48.27	-30.5	39.2	39.57	74	25.73	H
8995	45.94	-33.3	38.2	41.04	74	28.06	V
7240	45.57	-35.5	36.4	44.67	74	28.43	H
2389.8	70.38	-20	28.1	62.38	74	3.62	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)
17863.5	57.44	-25.5	46.7	36.24	74	16.56	V
14208.5	52.11	-29	42	39.11	74	21.89	V
12478.5	47.92	-31.2	38.9	40.22	74	26.08	H
7308.5	46.09	-35	36.5	44.49	74	27.91	V
8982.5	45.81	-33.3	38.2	40.91	74	28.19	V
4868.5	40.26	-37.2	33.2	44.26	74	33.74	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)
17900.5	57.18	-25.5	46.7	35.98	74	16.82	V
14147	52.74	-29	42	39.74	74	21.26	V
12641.5	48.27	-31	39	40.37	74	25.73	V
8980	46.08	-33.3	38.2	41.18	74	27.92	V
2483.6	71.93	-20	28.2	63.73	74	2.07	V
2485.9	68.16	-20	28.3	59.86	74	5.84	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)
17941	57.76	-25.5	46.7	36.56	74	16.24	H
14493	52.13	-28.6	42.5	38.23	74	21.87	H
12704	47.9	-30.5	39.1	39.3	74	26.1	V
9504.5	45.79	-33.2	37.9	41.09	74	28.21	V
7243	45.21	-35.5	36.4	44.31	74	28.79	H
2389.9	68.13	-20	28.1	60.13	74	5.87	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)
17998.5	57.38	-25.5	46.7	36.18	74	16.62	H
14461	52.14	-28.6	42.5	38.24	74	21.86	H
12961	47.94	-30.5	39.2	39.24	74	26.06	H
7299	46.61	-35	36.5	45.01	74	27.39	V
9200	45.35	-33.7	38	41.05	74	28.65	H
4479.5	40.26	-37.7	32.4	45.56	74	33.74	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)
17938	56.75	-25.5	46.7	35.55	74	17.25	V
14399.5	52.58	-28.6	42.5	38.68	74	21.42	V
12242	49.08	-31.4	39	41.48	74	24.92	H
8903.5	46.51	-33.5	38.1	41.91	74	27.49	V
2483.8	71.78	-20	28.2	63.58	74	2.22	H
2485.3	67.19	-20	28.3	58.89	74	6.81	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)
17998.5	46.09	-25.5	46.7	24.89	54	7.91	H
7237	44.59	-35.5	36.4	43.69	54	9.41	H
14369.5	40.59	-28.4	42.3	26.69	54	13.41	H
4824	38.93	-37.5	33.1	43.23	54	15.07	H
12641.5	36.36	-31	39	28.46	54	17.64	V
2389.9	45.44	-20	28.1	37.44	54	8.56	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)
17994.5	46.46	-25.5	46.7	25.26	54	7.54	H
7310	42.78	-35	36.5	41.18	54	11.22	V
4874	40.48	-37.2	33.2	44.48	54	13.52	H
14488	40.38	-28.6	42.5	26.48	54	13.62	H
12662.5	36.45	-30.5	39.1	27.85	54	17.55	V
9197	33.97	-33.8	38.1	29.77	54	20.03	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)
17997.5	46.09	-25.5	46.7	24.89	54	7.91	V
14384.5	40.62	-28.4	42.3	26.72	54	13.38	H
7385	40.19	-35.1	36.6	38.69	54	13.81	V
4924	37.29	-37.1	33.3	41.09	54	16.71	H
12639	36.34	-31	39	28.44	54	17.66	H
2485.1	45.81	-20	28.3	37.51	54	8.19	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)
17996	46.27	-25.5	46.7	25.07	54	7.73	V
14379	40.44	-28.4	42.3	26.54	54	13.56	V
12964.5	36.59	-30.5	39.2	27.89	54	17.41	H
7237.5	34.33	-35.5	36.4	33.43	54	19.67	H
8979.5	34.04	-33.3	38.2	29.14	54	19.96	V
2389.7	51.39	-20	28.1	43.39	54	2.61	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)
17985	46.05	-25.5	46.7	24.85	54	7.95	V
14402	40.33	-28.6	42.5	26.43	54	13.67	H
12967	36.6	-30.5	39.2	27.9	54	17.4	H
7308	35.36	-35	36.5	33.76	54	18.64	V
9182.5	33.83	-33.8	38.1	29.63	54	20.17	H
4873	30.49	-37.2	33.2	34.49	54	23.51	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)
17999	45.79	-25.5	46.7	24.59	54	8.21	V
14389.5	40.54	-28.4	42.3	26.64	54	13.46	V
12652.5	36.54	-30.5	39.1	27.94	54	17.46	H
9082.5	33.93	-33.8	38.1	29.53	54	20.07	H
7384.5	32.78	-35.1	36.6	31.28	54	21.22	H
2485	51.2	-20	28.3	42.9	54	2.8	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)
17994	45.98	-25.5	46.7	24.78	54	8.02	V
14385	40.65	-28.4	42.3	26.75	54	13.35	H
12647.5	36.64	-30.5	39.1	28.04	54	17.36	H
8976	34.59	-33.3	38.2	29.69	54	19.41	V
7234.5	34.3	-35.5	36.4	33.4	54	19.7	H
2390	50.14	-20	28.1	42.14	54	3.86	H

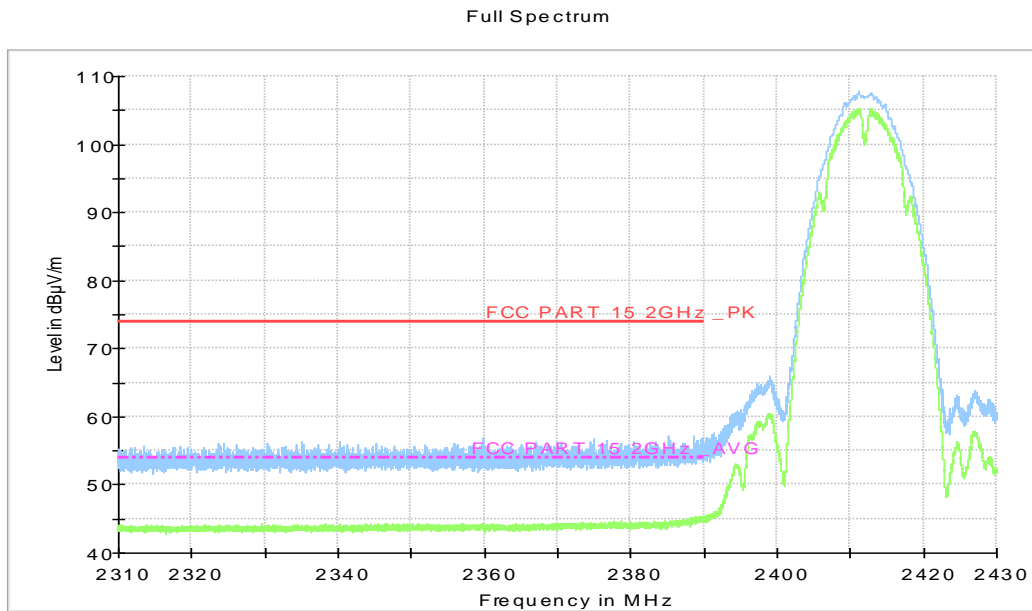
## Ch6

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)
17987	46.29	-25.5	46.7	25.09	54	7.71	H
14391.5	40.57	-28.4	42.3	26.67	54	13.43	V
12668	36.65	-30.5	39.1	28.05	54	17.35	H
7307.5	35.13	-35	36.5	33.53	54	18.87	V
9503.5	34.31	-33.2	37.9	29.61	54	19.69	V
4873	30.15	-37.2	33.2	34.15	54	23.85	H

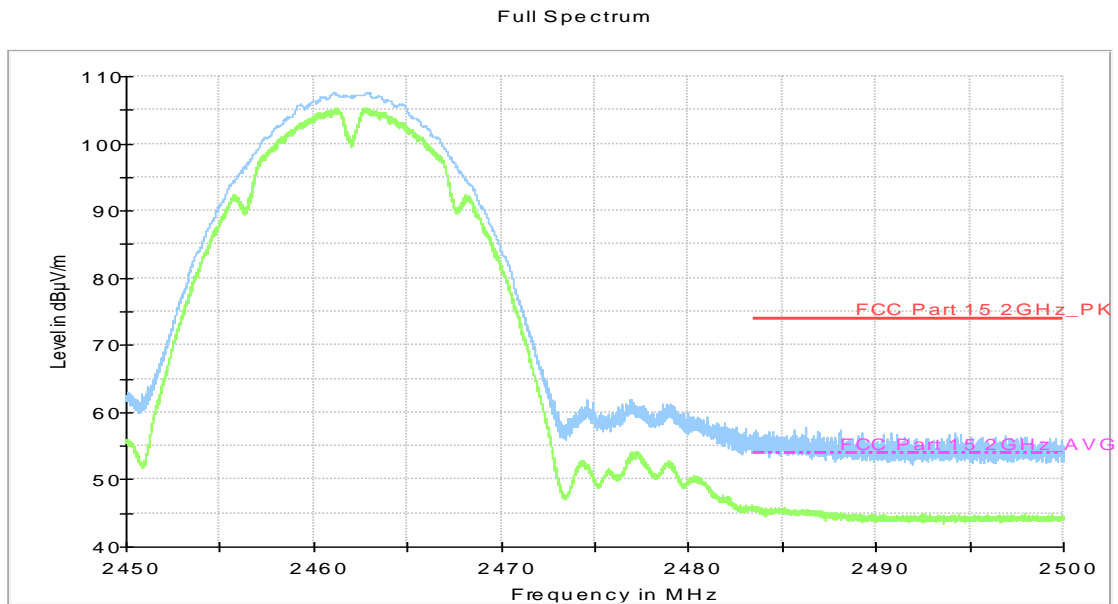
## Ch11

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)
17995.5	46.17	-25.5	46.7	24.97	54	7.83	V
14502	40.62	-28.6	42.5	26.72	54	13.38	V
12946	36.76	-30.5	39.2	28.06	54	17.24	H
9093.5	33.97	-33.8	38.1	29.57	54	20.03	H
7383	33.05	-35.1	36.6	31.55	54	20.95	H
2485	49.95	-20	28.3	41.65	54	4.05	H

Test graphs as below:



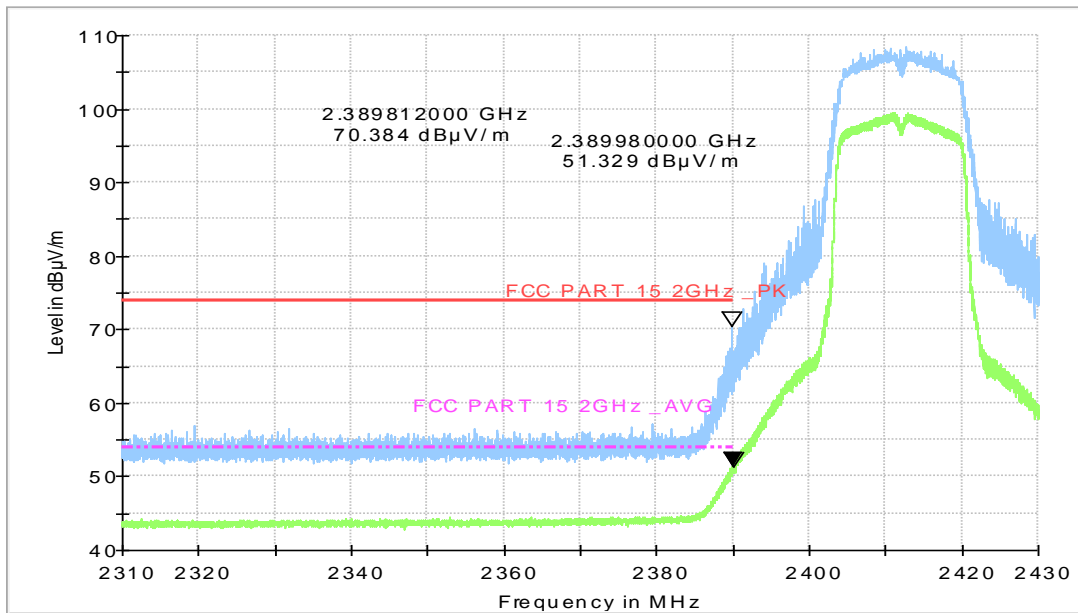
**Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.45GHz**



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

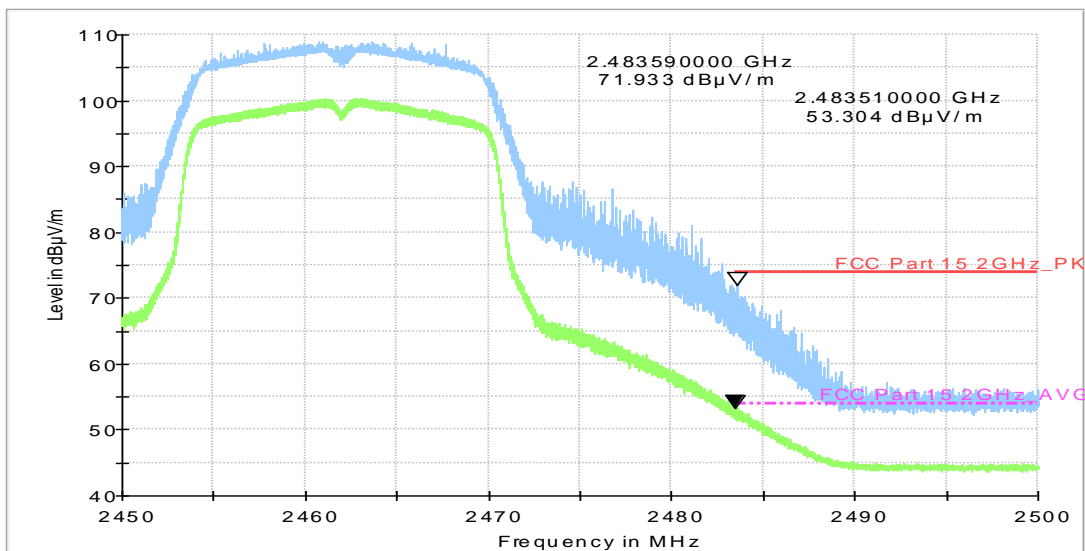


Full Spectrum



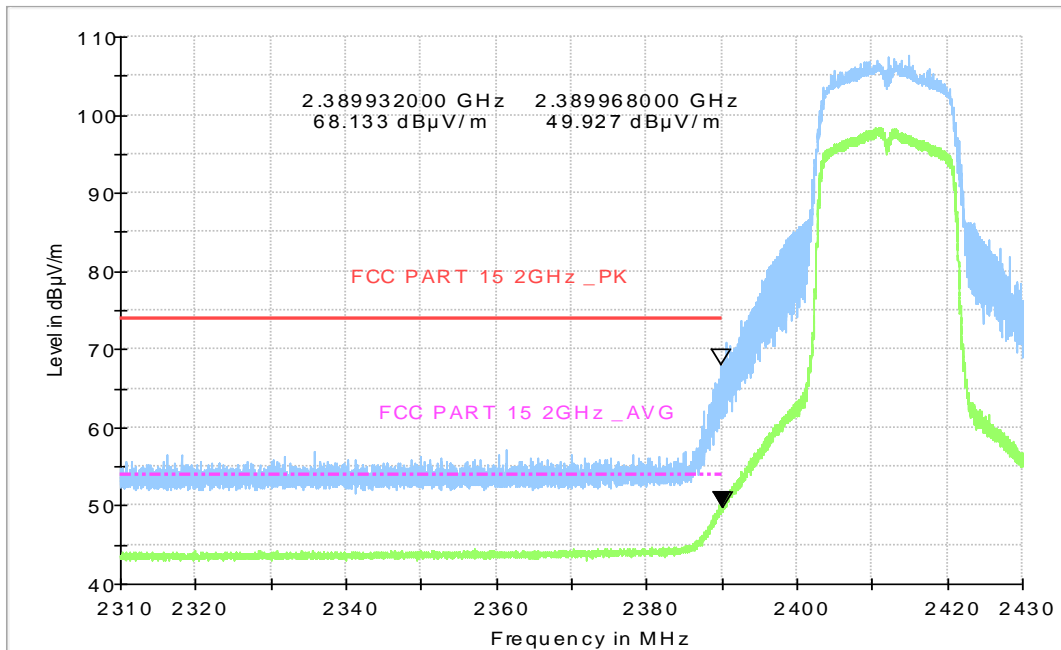
**Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.45GHz**

Full Spectrum



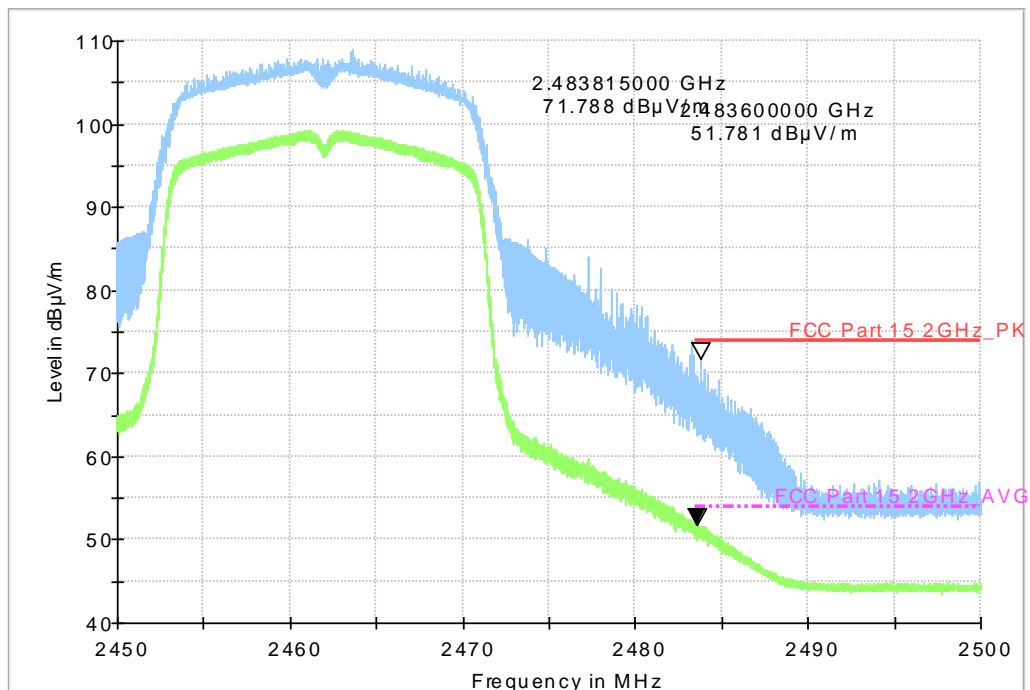
**Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz**

Full Spectrum



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

Full Spectrum



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

## **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.

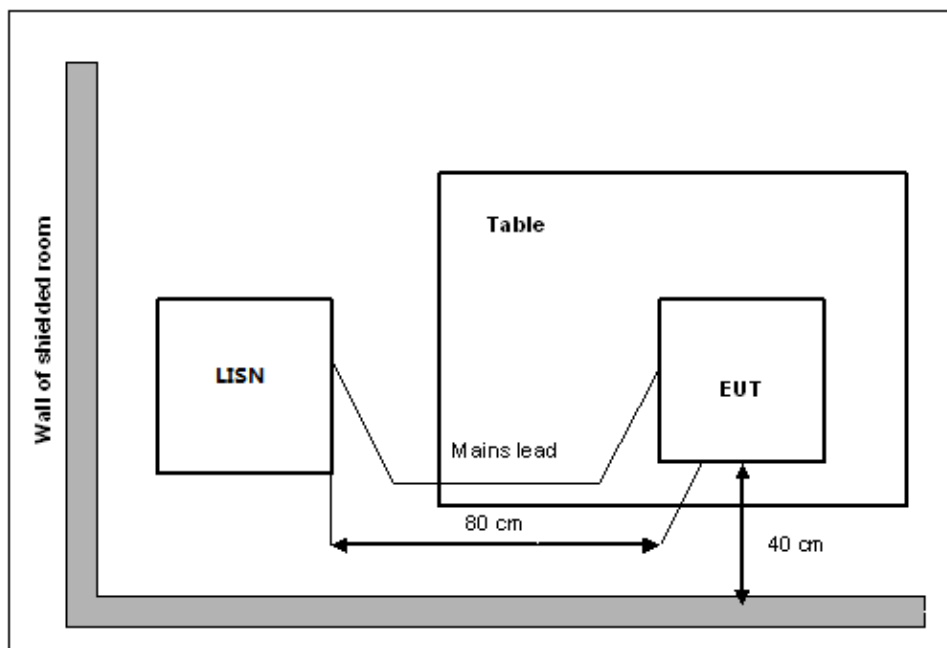
The measurement bandwidth is:

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

### **Test Condition:**

Voltage (V)	Frequency (Hz)
120	60

### **Measurement Setup**



**Measurement Result and limit:**

## WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger		
		802.11b	Idle	
0.15 to 0.5	66 to 56	Fig.A.7.1	Fig.A.7.2	<b>P</b>
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)

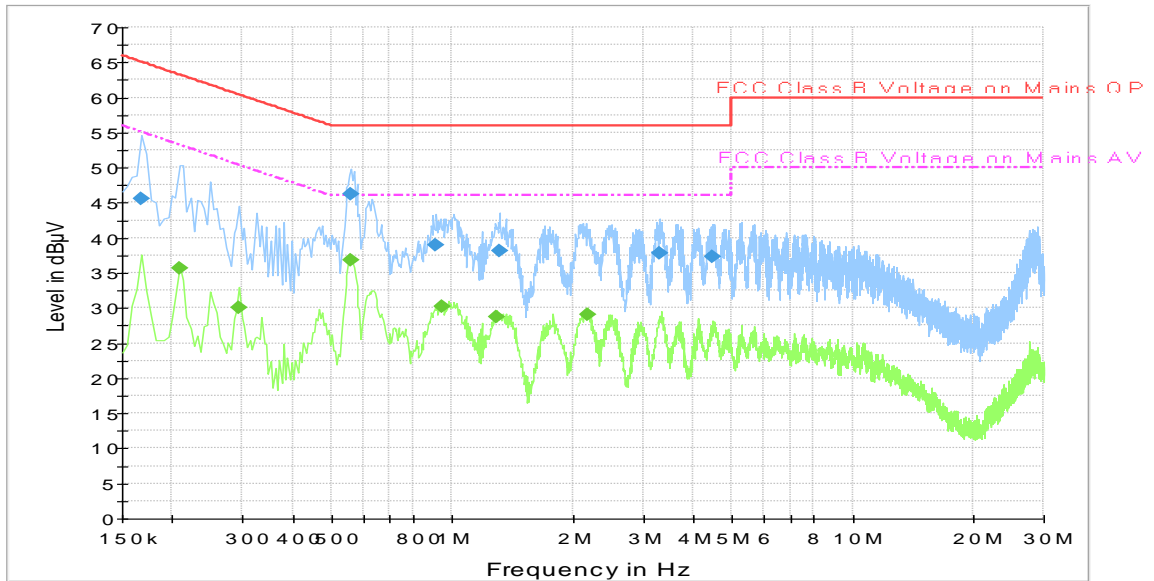
Frequency range (MHz)	Average Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger		
		802.11b	Idle	
0.15 to 0.5	56 to 46	Fig.A.7.1	Fig.A.7.2	<b>P</b>
0.5 to 5	46			
5 to 30	50			

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:**

**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.

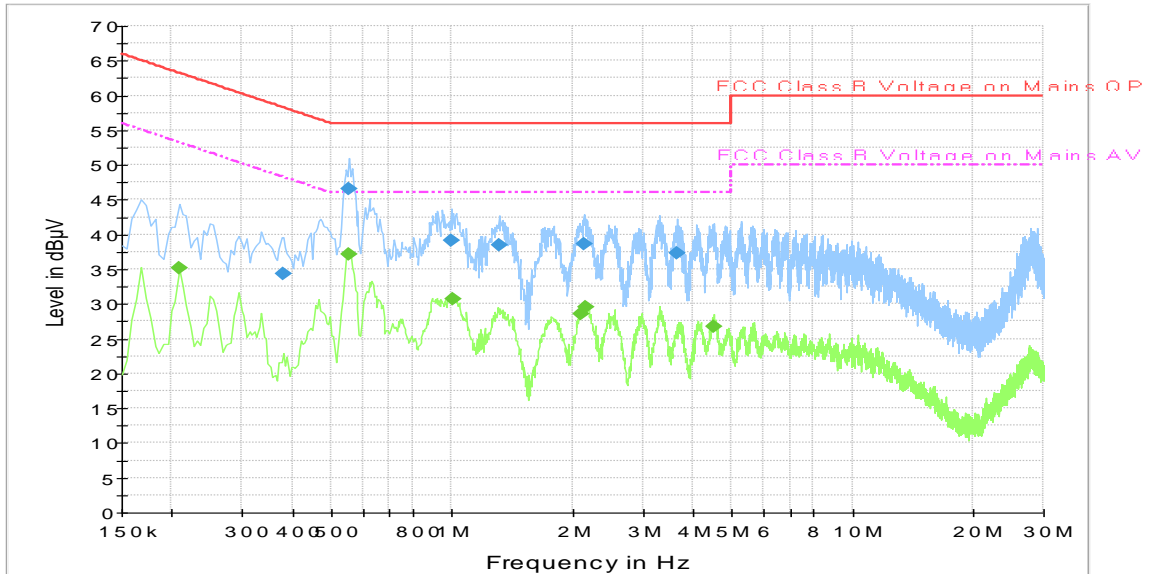
**Final Result 1**

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.168000	45.6	1000.	9.000	L1	20.0	19.5	65.1
0.559500	46.3	1000.	9.000	L1	19.9	9.7	56.0
0.910500	38.9	1000.	9.000	L1	19.6	17.1	56.0
1.315500	38.2	1000.	9.000	L1	19.5	17.8	56.0
3.286500	37.8	1000.	9.000	L1	19.5	18.2	56.0
4.461000	37.3	1000.	9.000	L1	19.6	18.7	56.0

**Final Result 2**

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.208500	35.6	1000.0	9.000	N	19.8	17.7	53.3
0.294000	30.0	1000.0	9.000	L1	20.0	20.4	50.4
0.559500	36.8	1000.0	9.000	N	19.9	9.2	46.0
0.942000	30.3	1000.0	9.000	N	19.8	15.7	46.0
1.293000	28.8	1000.0	9.000	L1	19.5	17.2	46.0
2.179500	29.1	1000.0	9.000	L1	19.5	16.9	46.0

**Result for Idle:**



**Fig.A.7.1 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)
0.379500	34.4	1000.	9.000	N	19.9	23.9	58.3
0.555000	46.6	1000.	9.000	L1	19.9	9.4	56.0
0.996000	39.2	1000.	9.000	L1	19.6	16.8	56.0
1.311000	38.4	1000.	9.000	L1	19.5	17.6	56.0
2.134500	38.7	1000.	9.000	L1	19.5	17.3	56.0
3.651000	37.3	1000.	9.000	L1	19.5	18.7	56.0

**Final Result 2**

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.208500	35.2	1000.0	9.000	N	19.8	18.0	53.3
0.555000	37.2	1000.0	9.000	N	19.9	8.8	46.0
1.009500	30.7	1000.0	9.000	N	19.8	15.3	46.0
2.107500	28.5	1000.0	9.000	N	19.8	17.5	46.0
2.166000	29.5	1000.0	9.000	L1	19.5	16.5	46.0
4.501500	26.8	1000.0	9.000	L1	19.6	19.2	46.0

## ANNEX B EUT parameters

Disclaimer: The worse case 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

<b>United States Department of Commerce National Institute of Standards and Technology</b>	
	
<hr/> <b>Certificate of Accreditation to ISO/IEC 17025:2017</b> <hr/>	
NVLAP LAB CODE: 600118-0	
<b>Telecommunication Technology Labs, CAICT</b> Beijing China	
<i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i>	
<b>Electromagnetic Compatibility &amp; Telecommunications</b>	
<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>	
2021-09-29 through 2022-09-30 <i>Effective Dates</i>	 For the National Voluntary Laboratory Accreditation Program

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