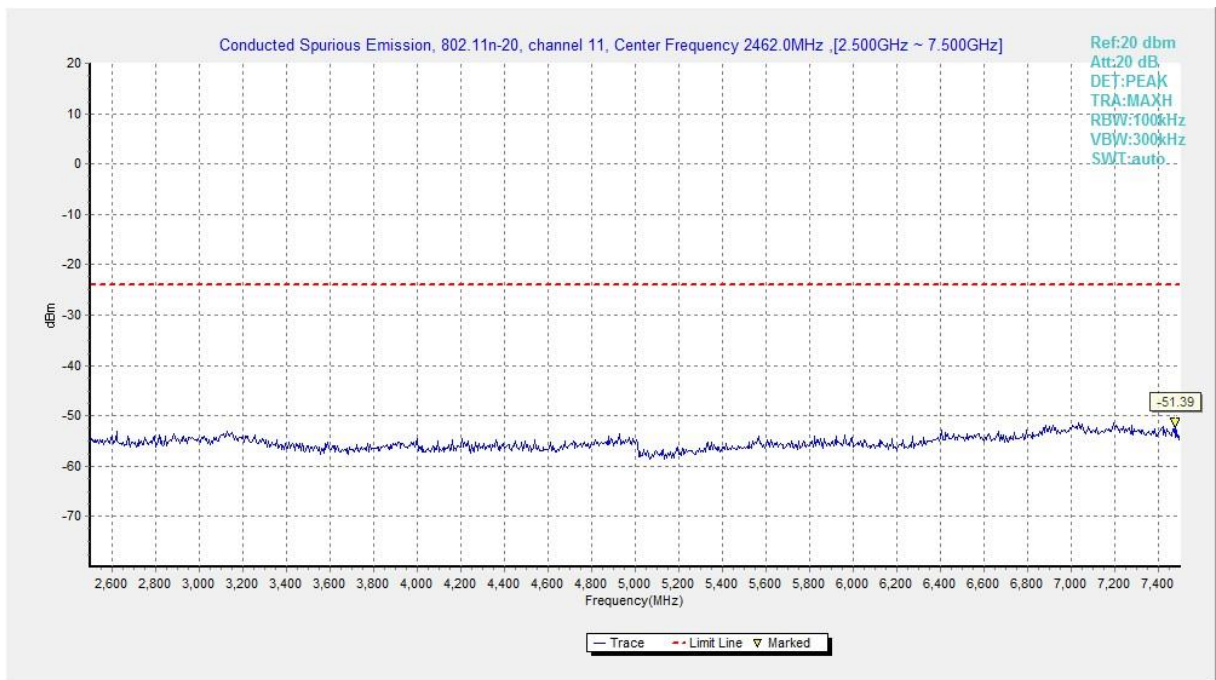
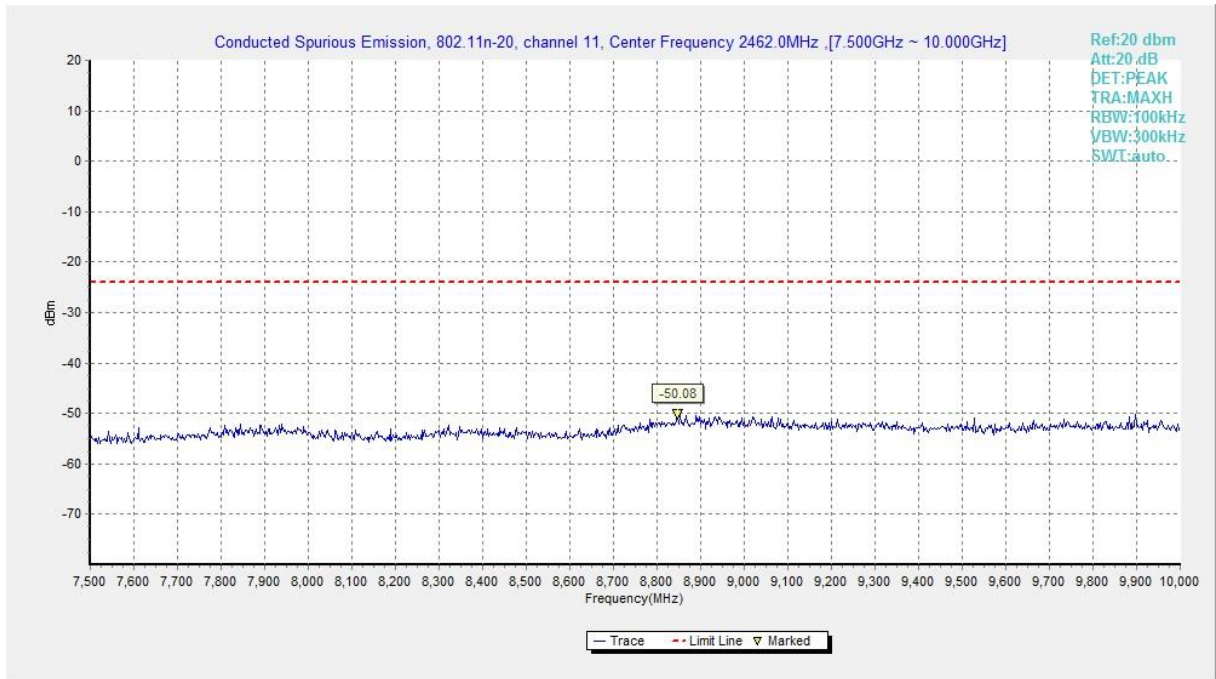


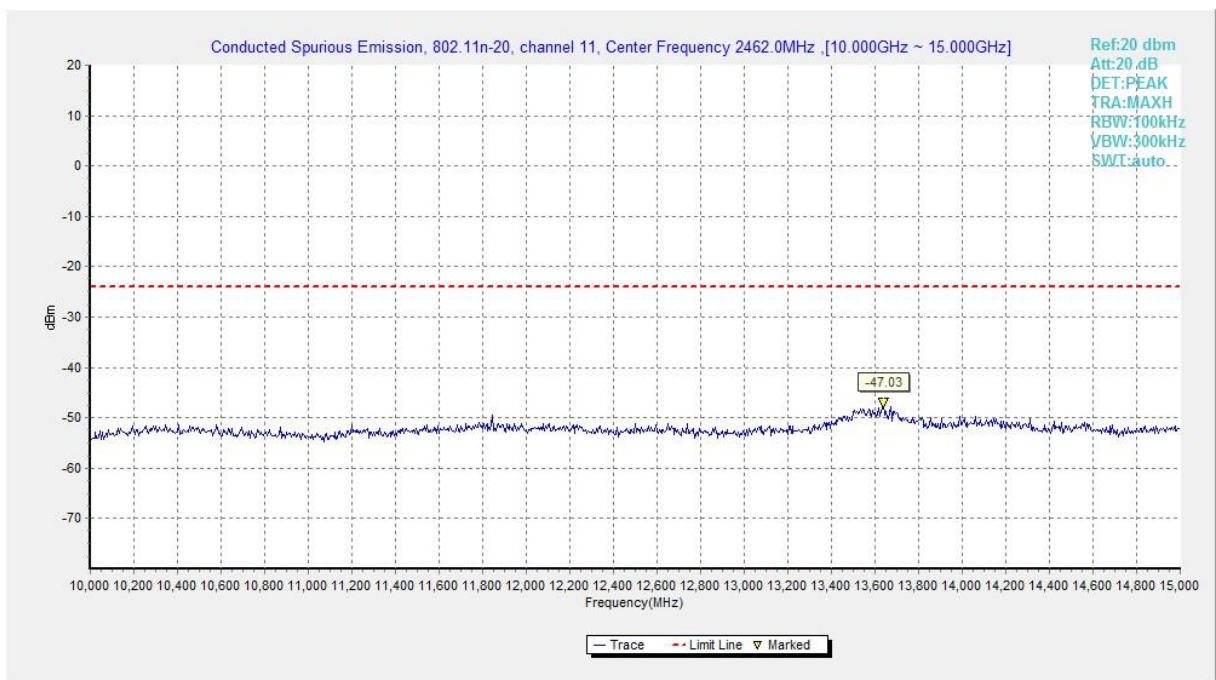
**Fig.A.6.1.67 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 1 GHz-2.5 GHz)**



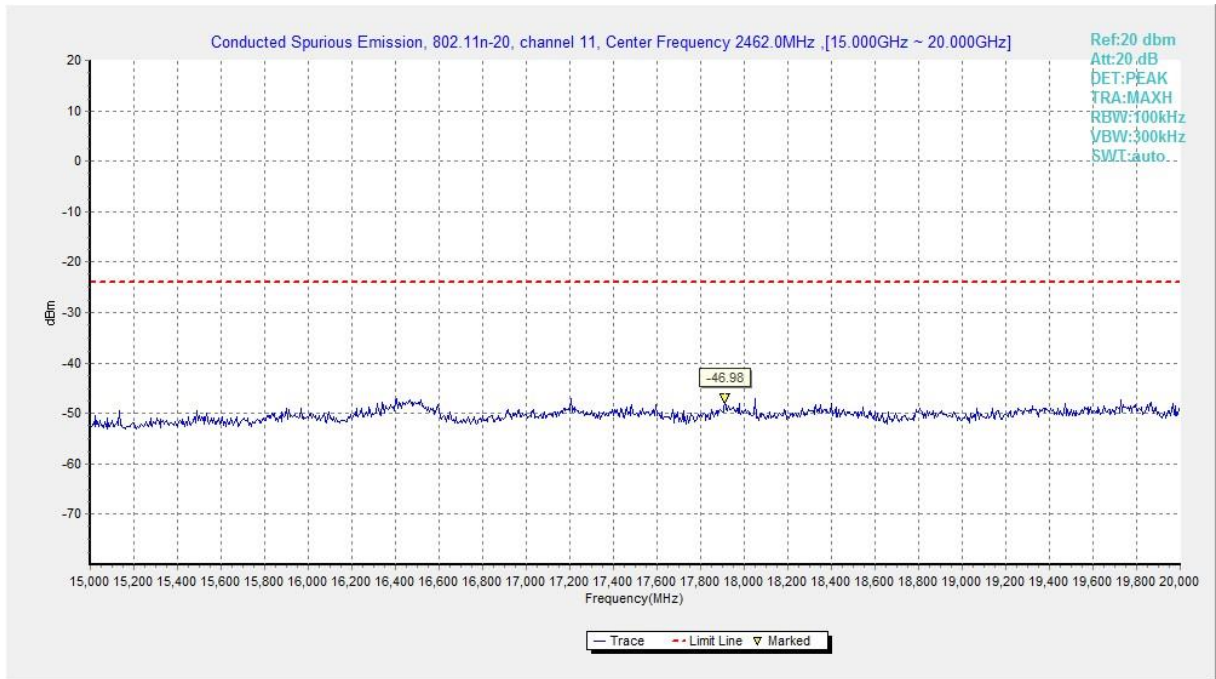
**Fig.A.6.1.68 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 2.5 GHz-7.5 GHz)**



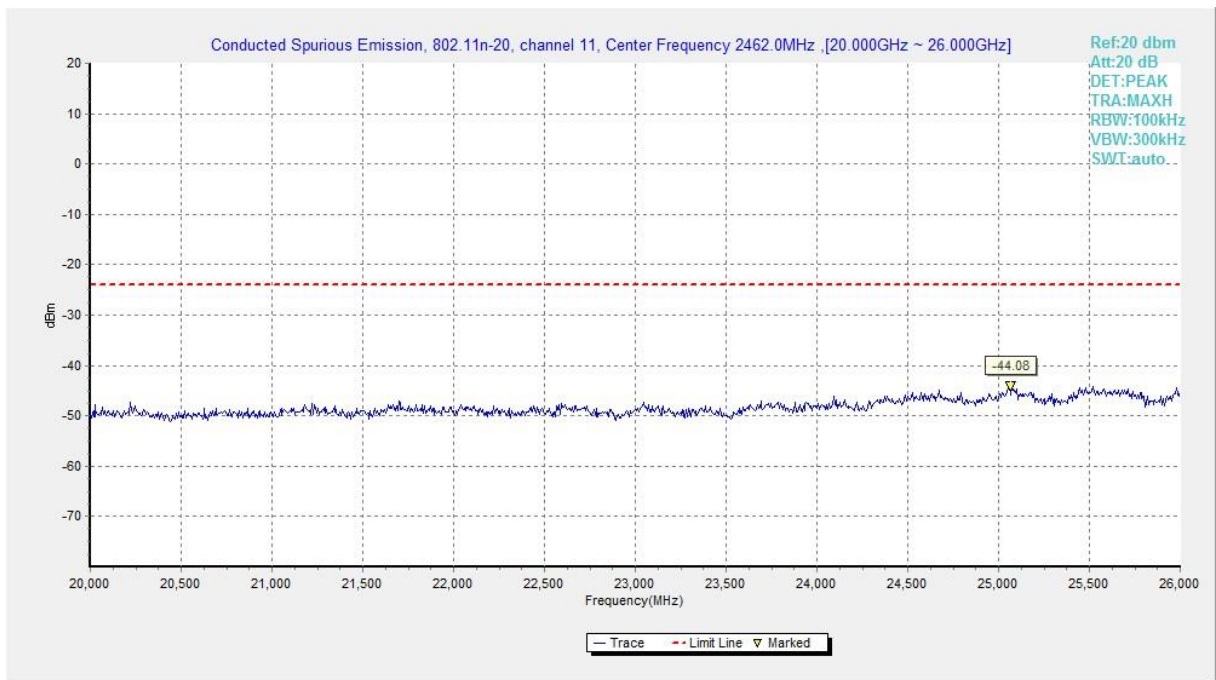
**Fig.A.6.1.69 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 7.5 GHz-10 GHz)**



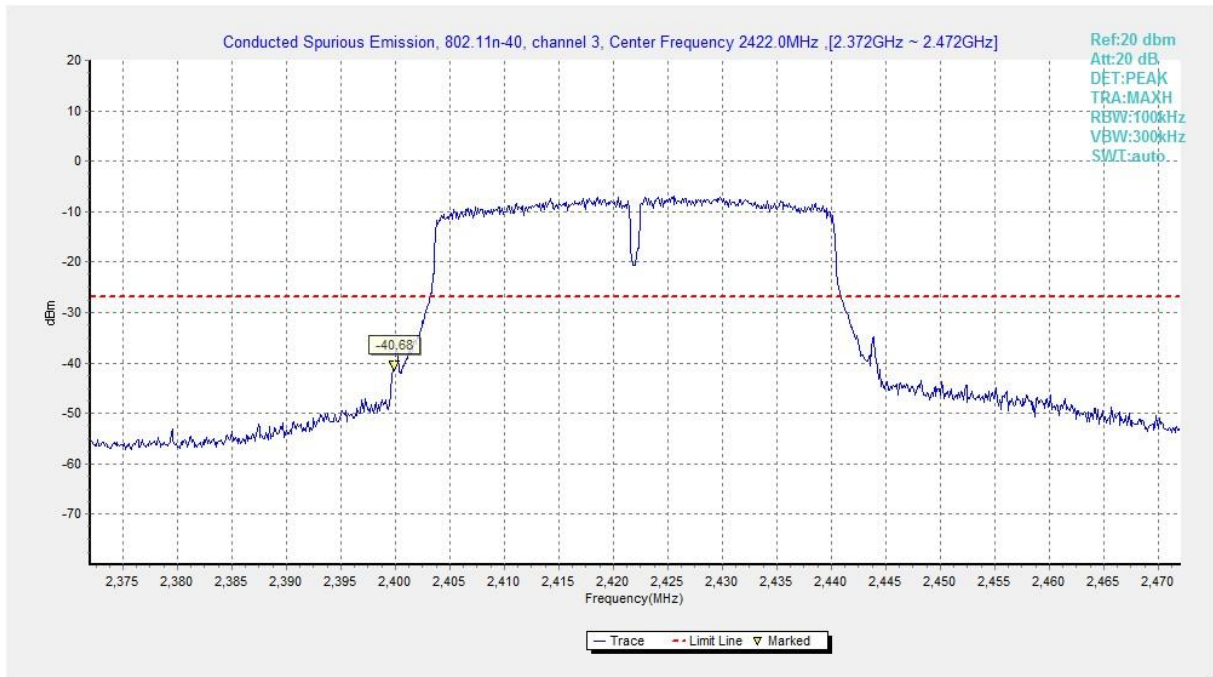
**Fig.A.6.1.70 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 10 GHz-15 GHz)**



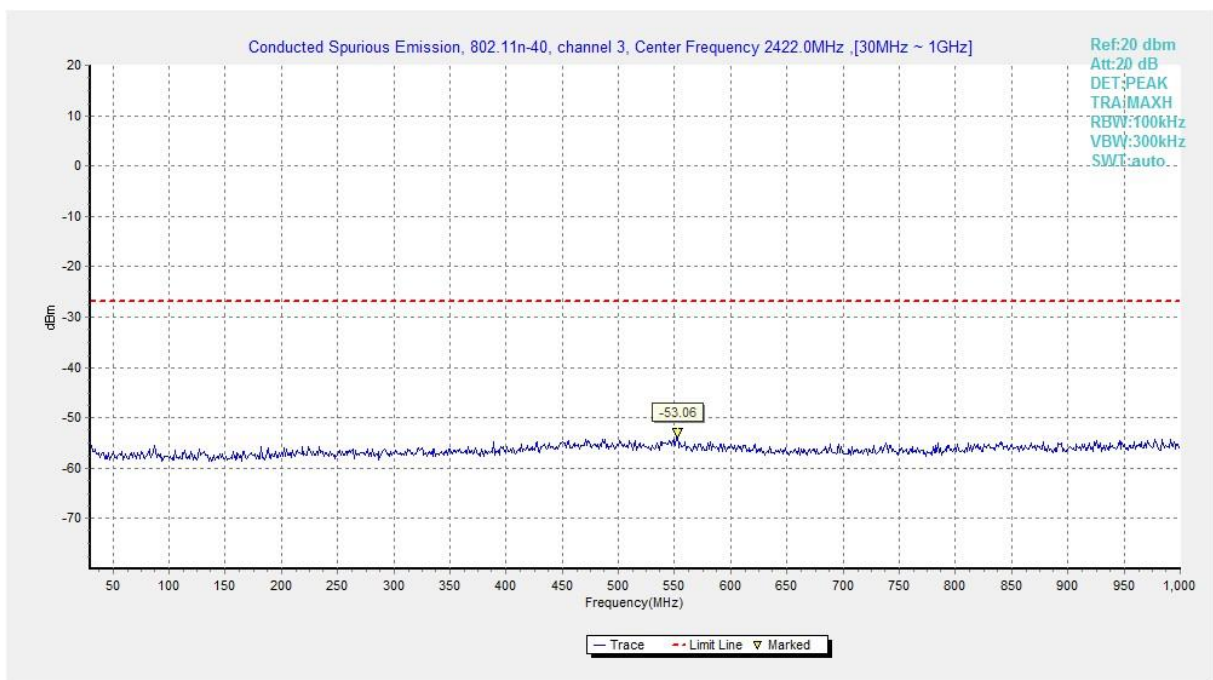
**Fig.A.6.1.71 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 15 GHz-20 GHz)**



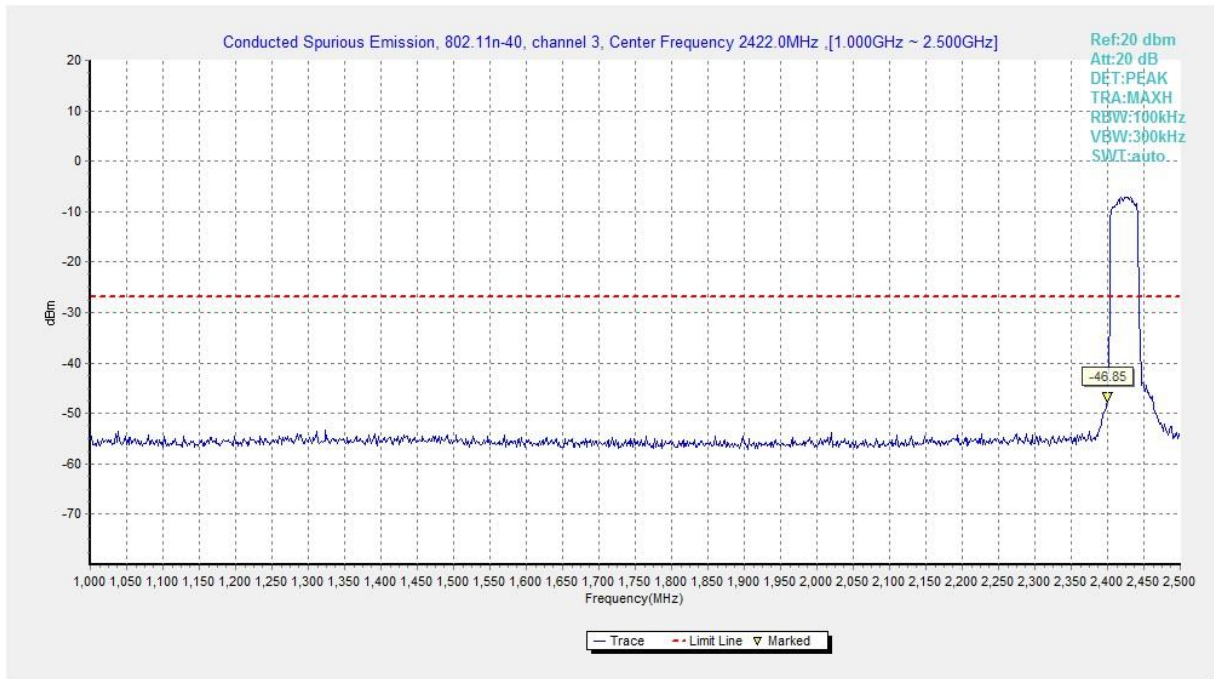
**Fig.A.6.1.72 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 20 GHz-26 GHz)**



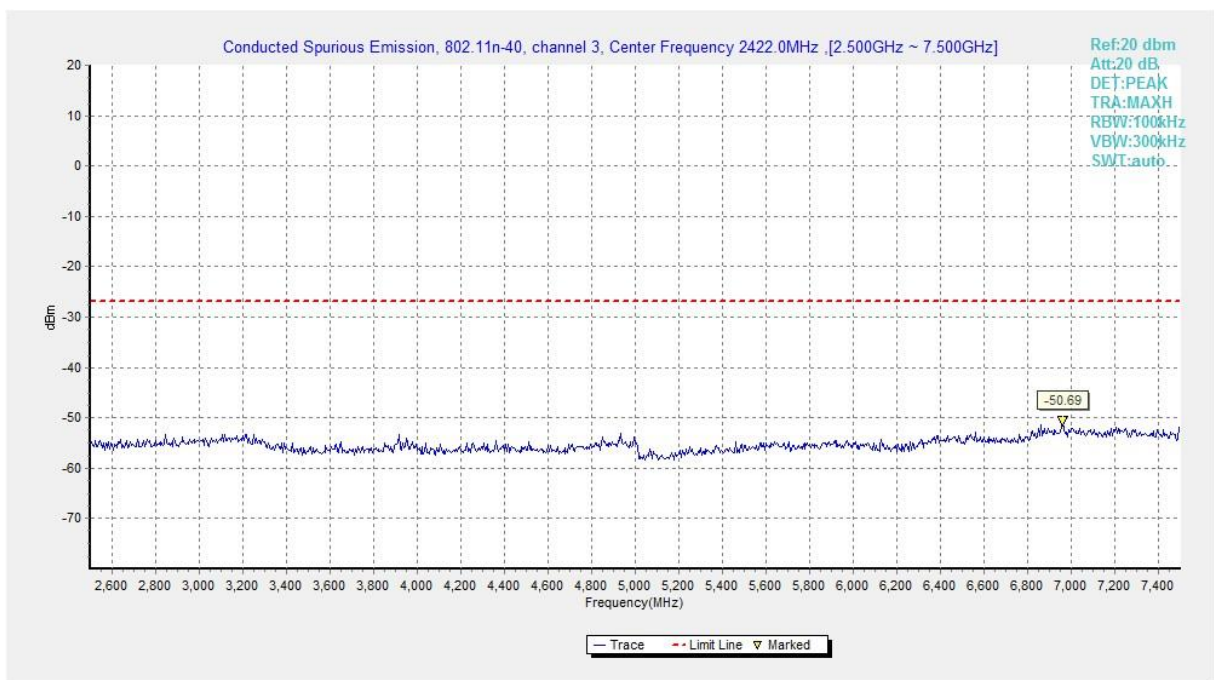
**Fig.A.6.1.73 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, Center Frequency)**



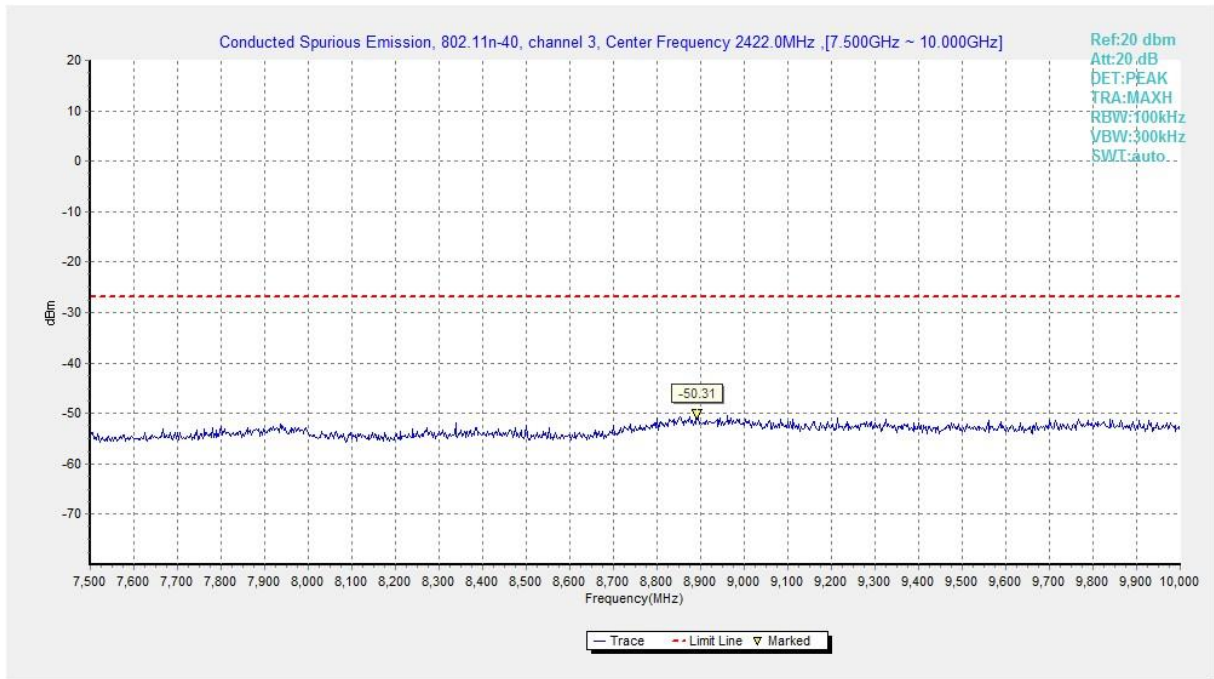
**Fig.A.6.1.74 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 30 MHz-1 GHz)**



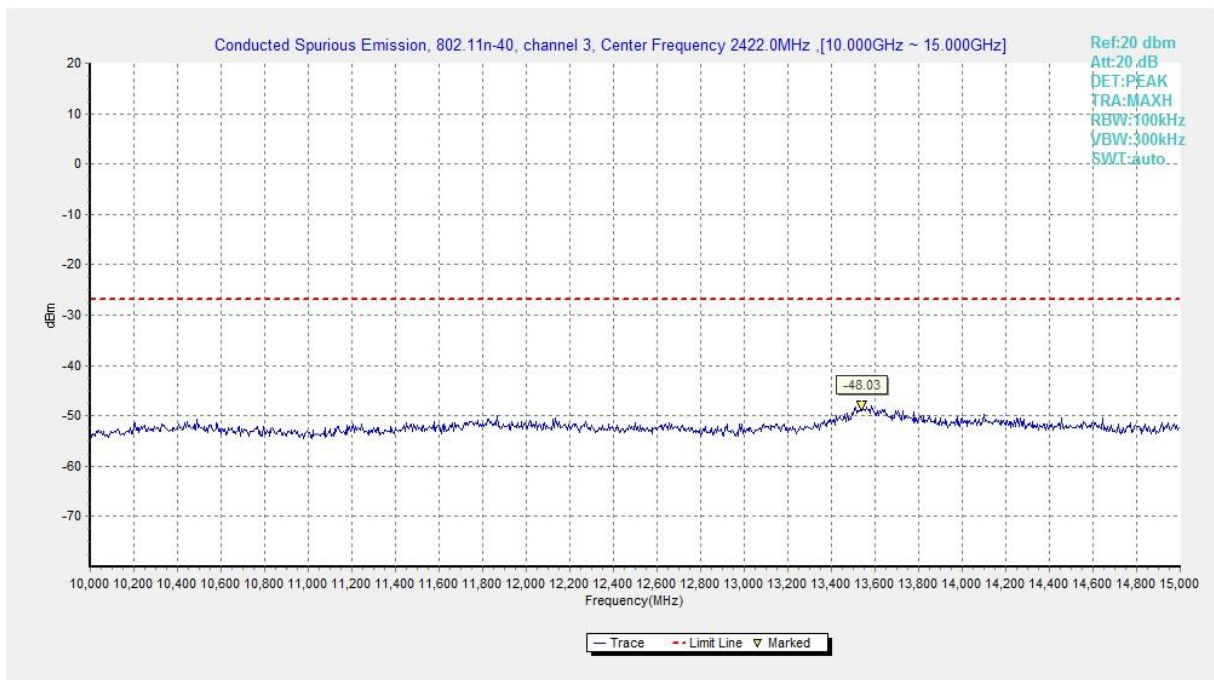
**Fig.A.6.1.75 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 1 GHz-2.5 GHz)**



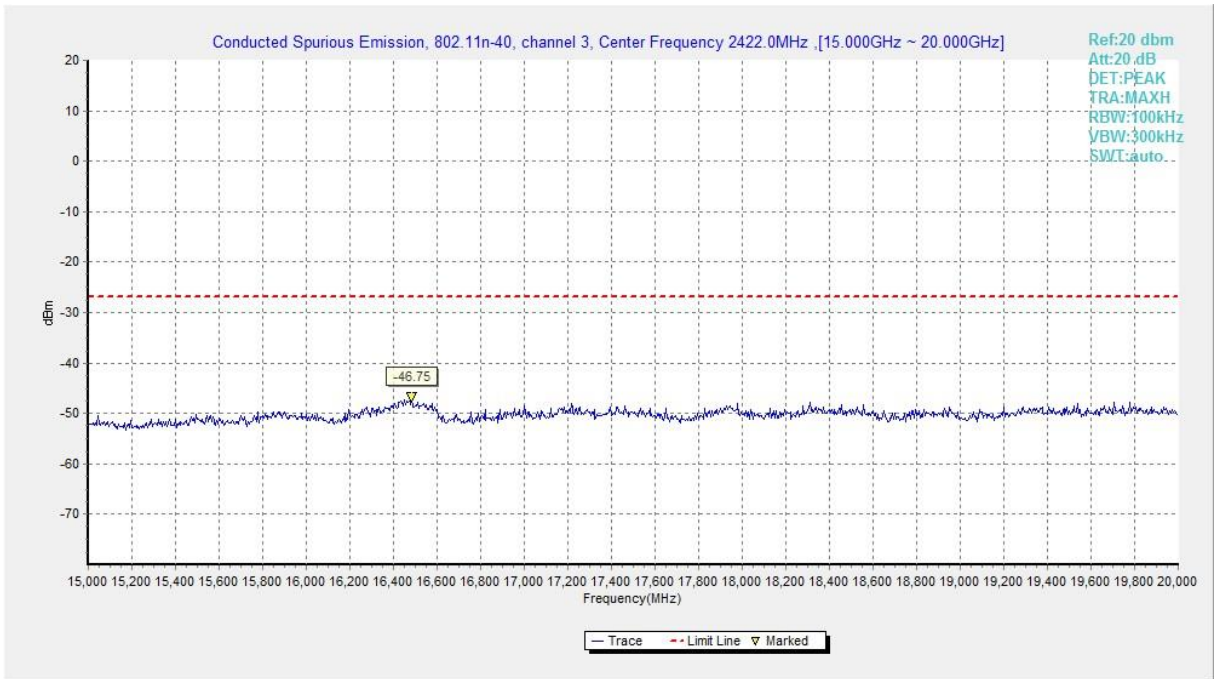
**Fig.A.6.1.76 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 2.5 GHz-7.5 GHz)**



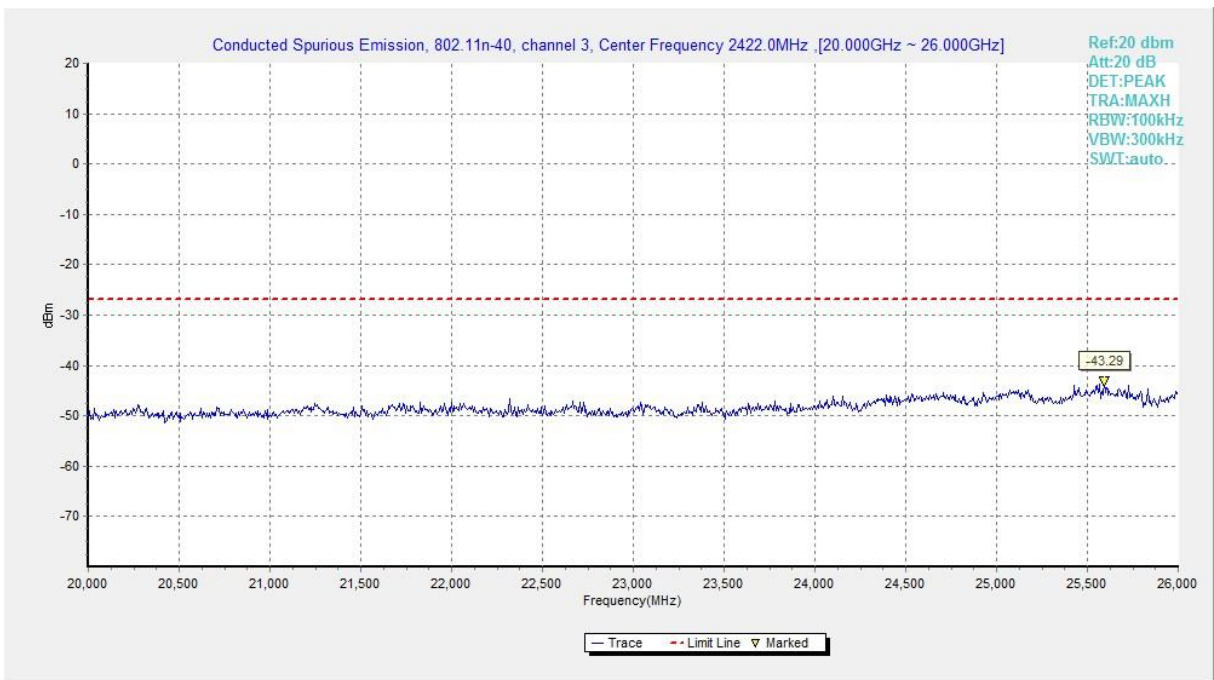
**Fig.A.6.1.77 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 7.5 GHz-10 GHz)**



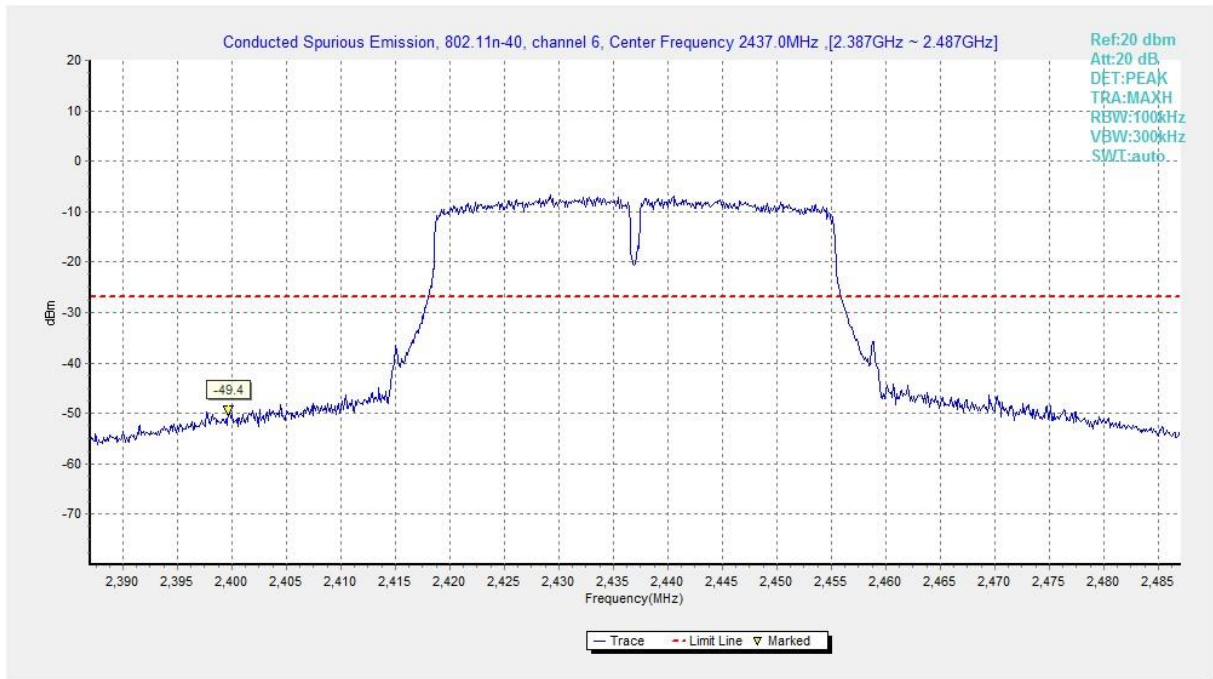
**Fig.A.6.1.78 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 10 GHz-15 GHz)**



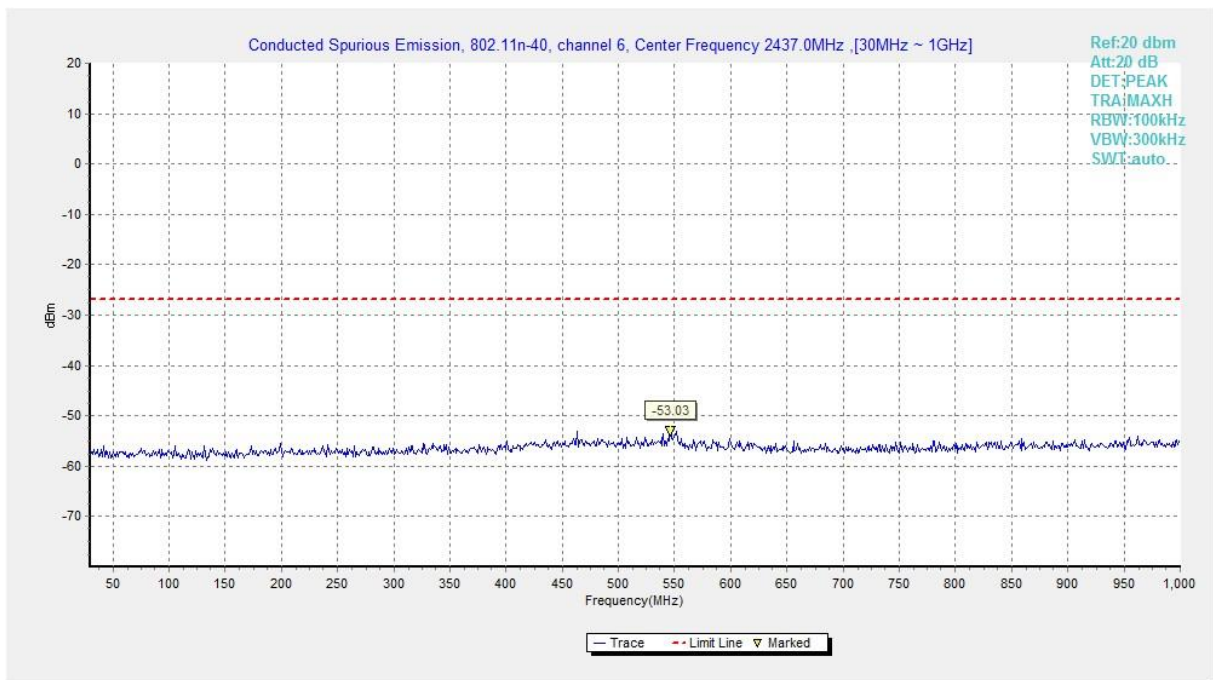
**Fig.A.6.1.79 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 15 GHz-20 GHz)**



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

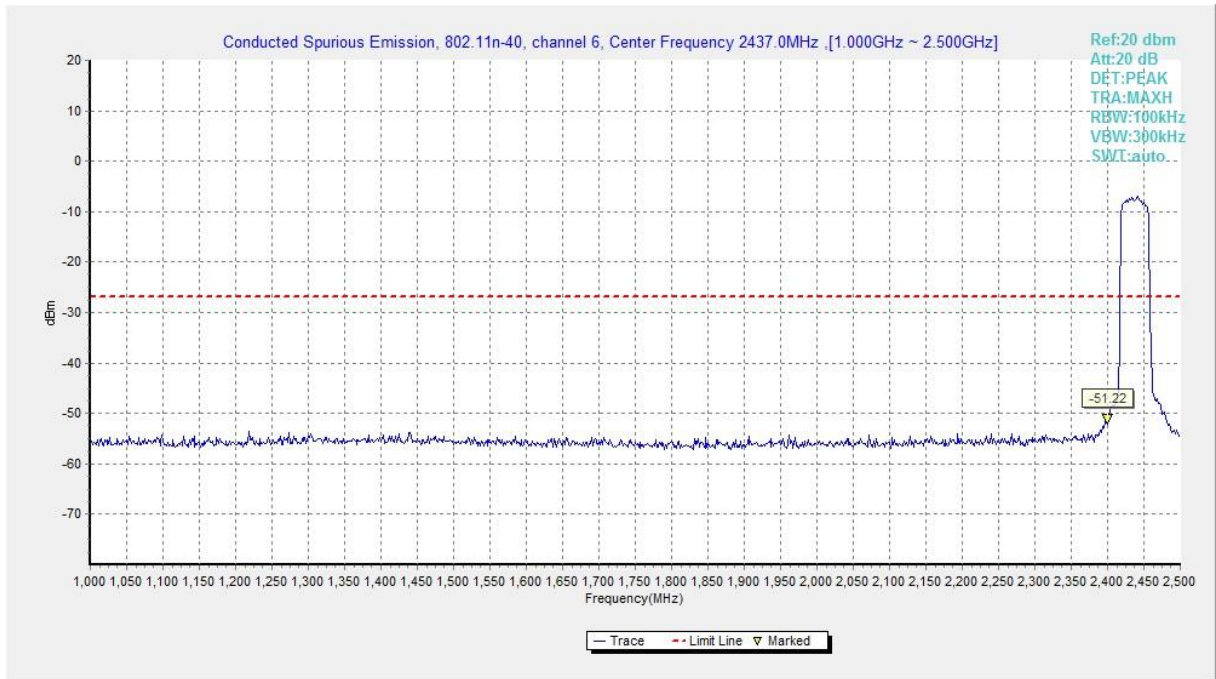


**Fig.A.6.1.81 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, Center Frequency)**

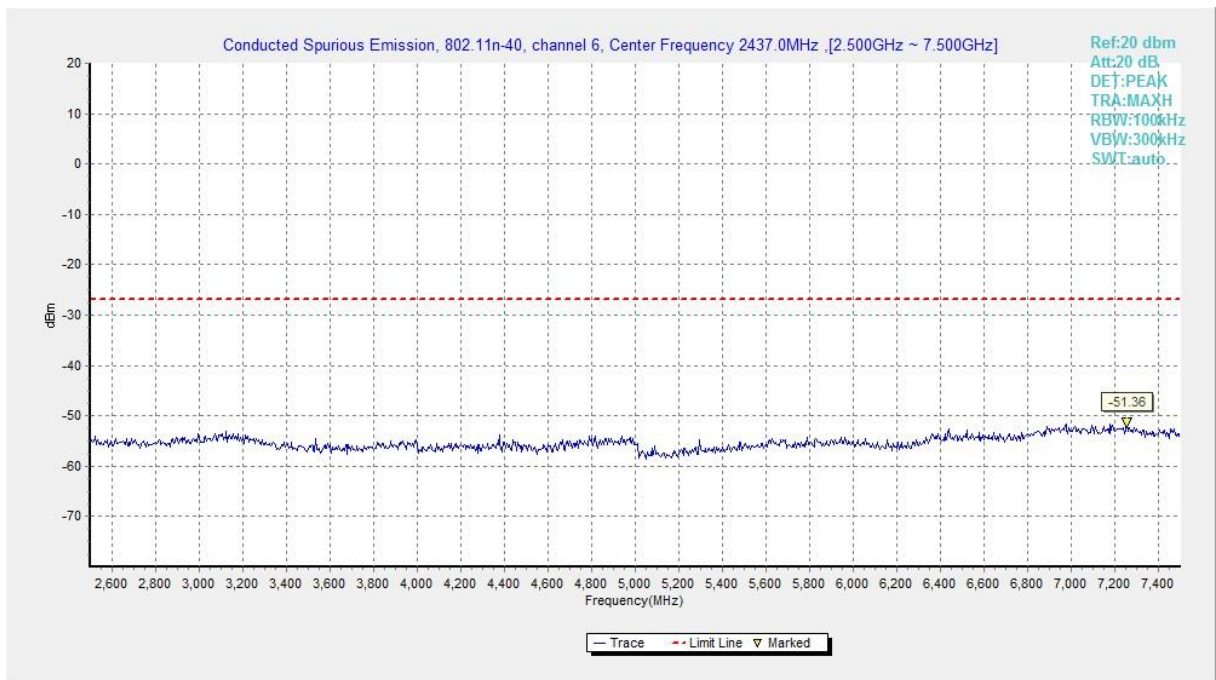


**Fig.A.6.1.82 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 30 MHz-1 GHz)**

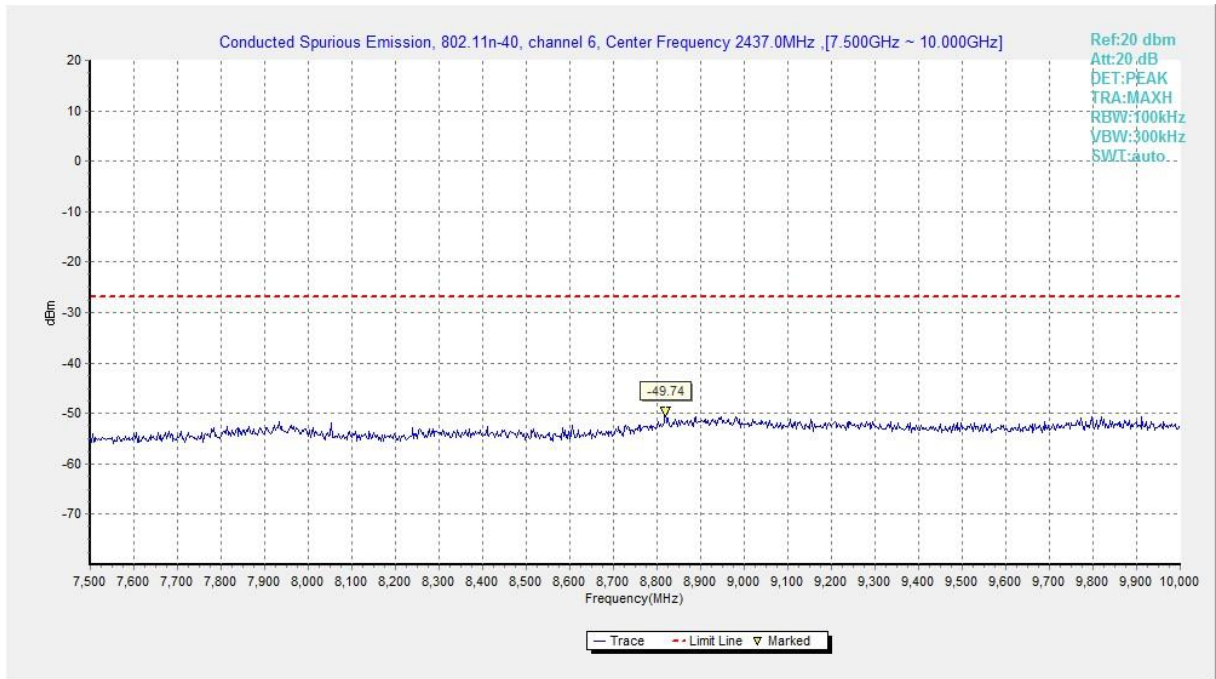




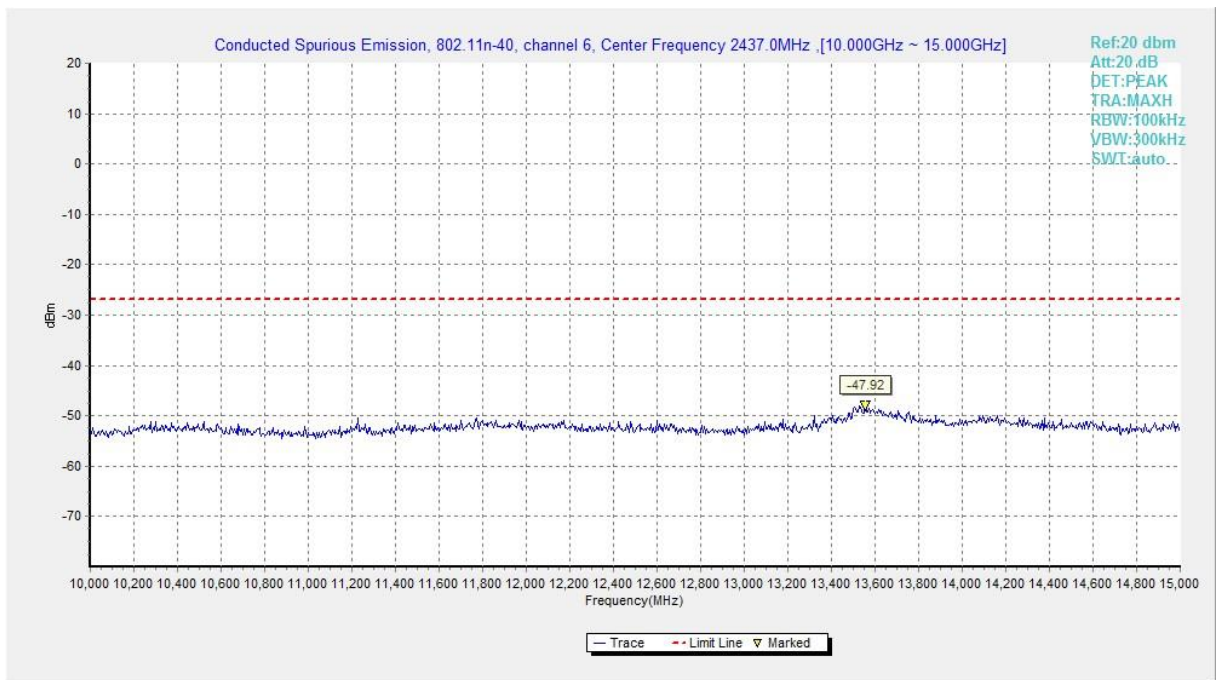
**Fig.A.6.1.83 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 1 GHz-2.5 GHz)**



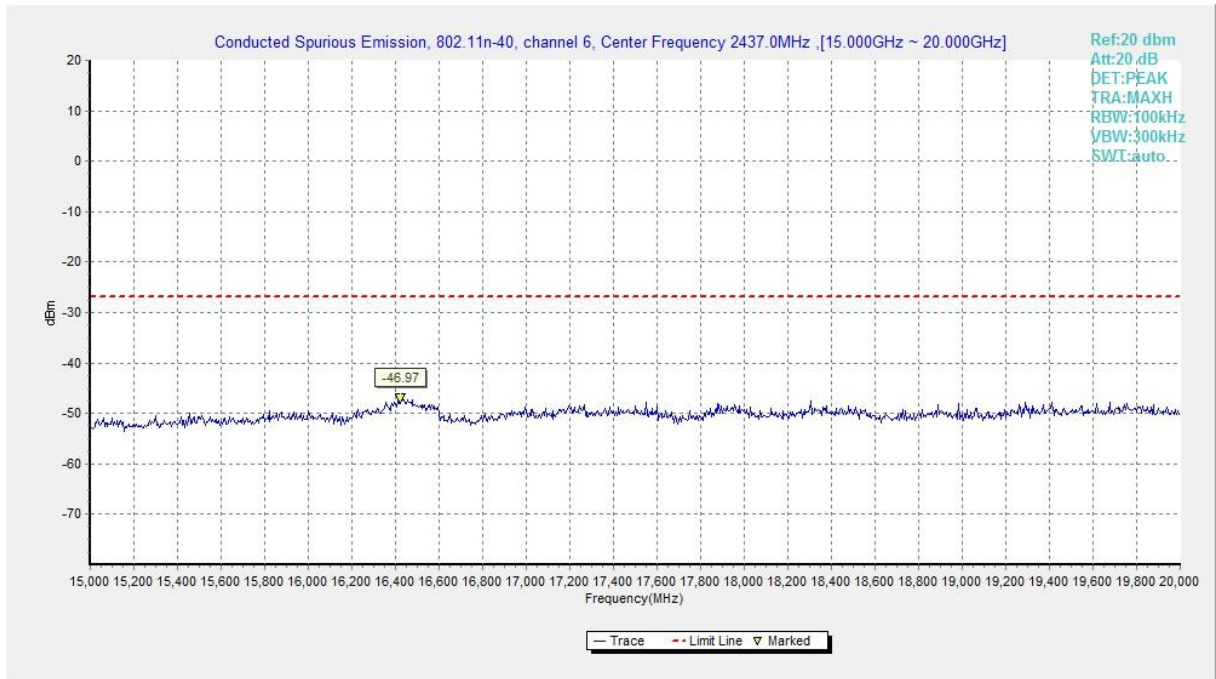
**Fig.A.6.1.84 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 2.5 GHz-7.5 GHz)**



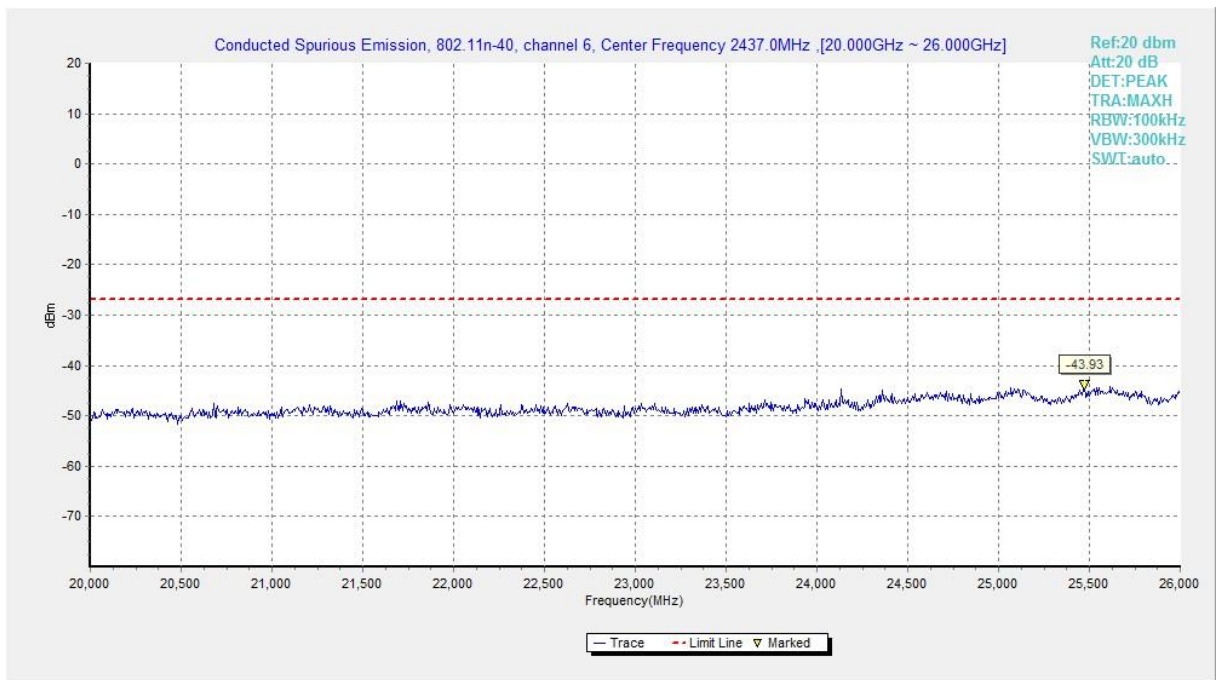
**Fig.A.6.1.85 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 7.5 GHz-10 GHz)**



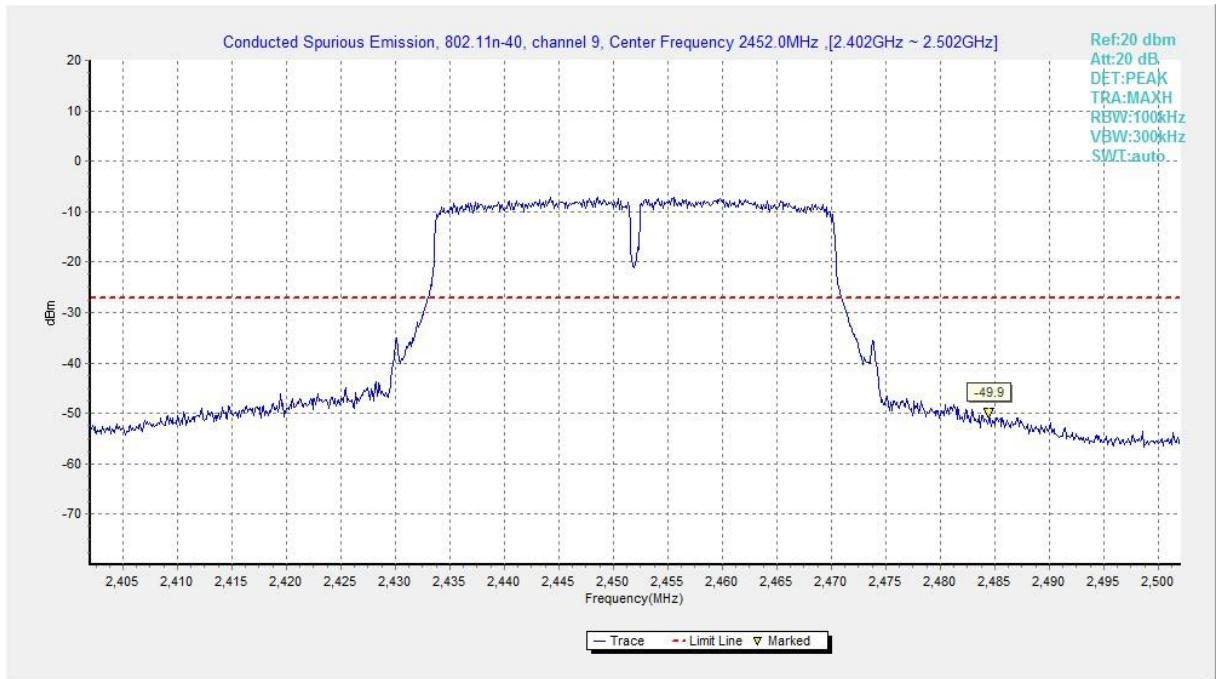
**Fig.A.6.1.86 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 10 GHz-15 GHz)**



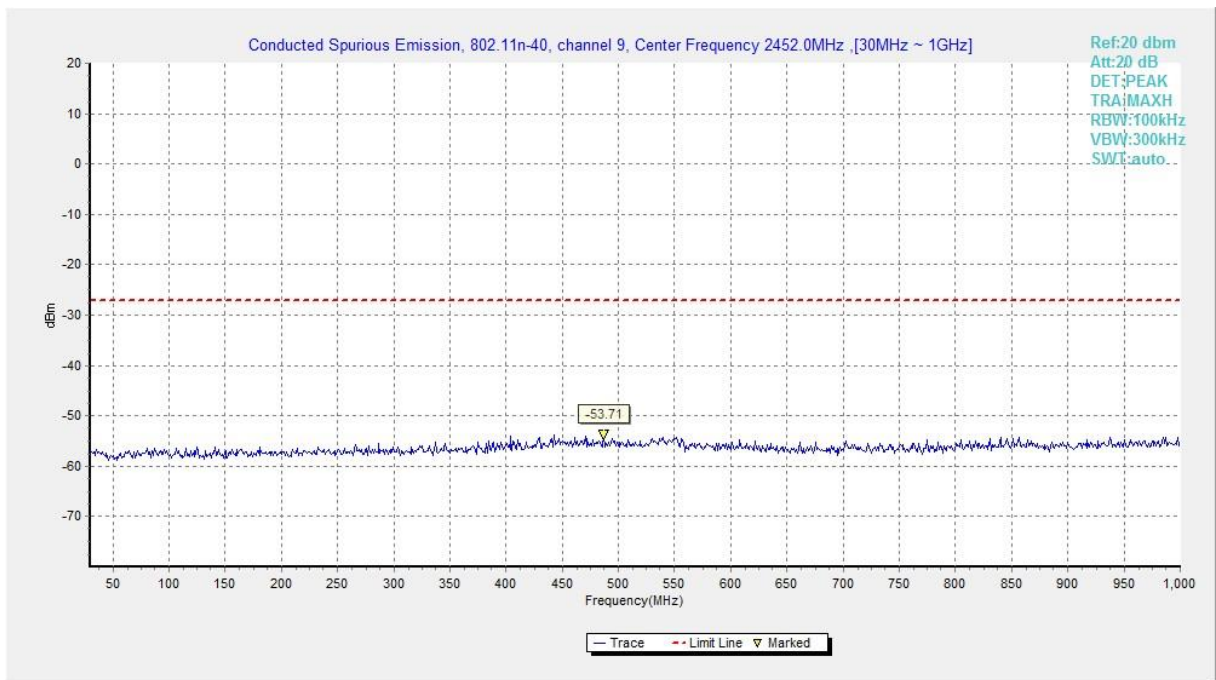
**Fig.A.6.1.87 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 15 GHz-20 GHz)**



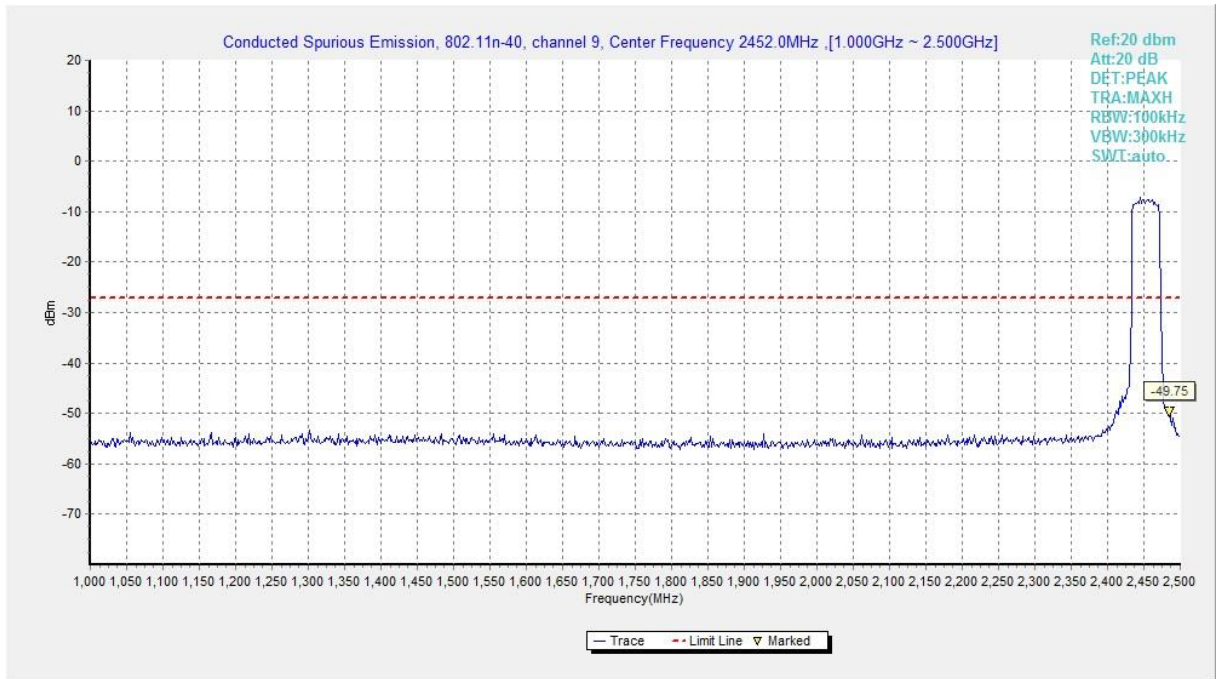
**Fig.A.6.1.88 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 20 GHz-26 GHz)**



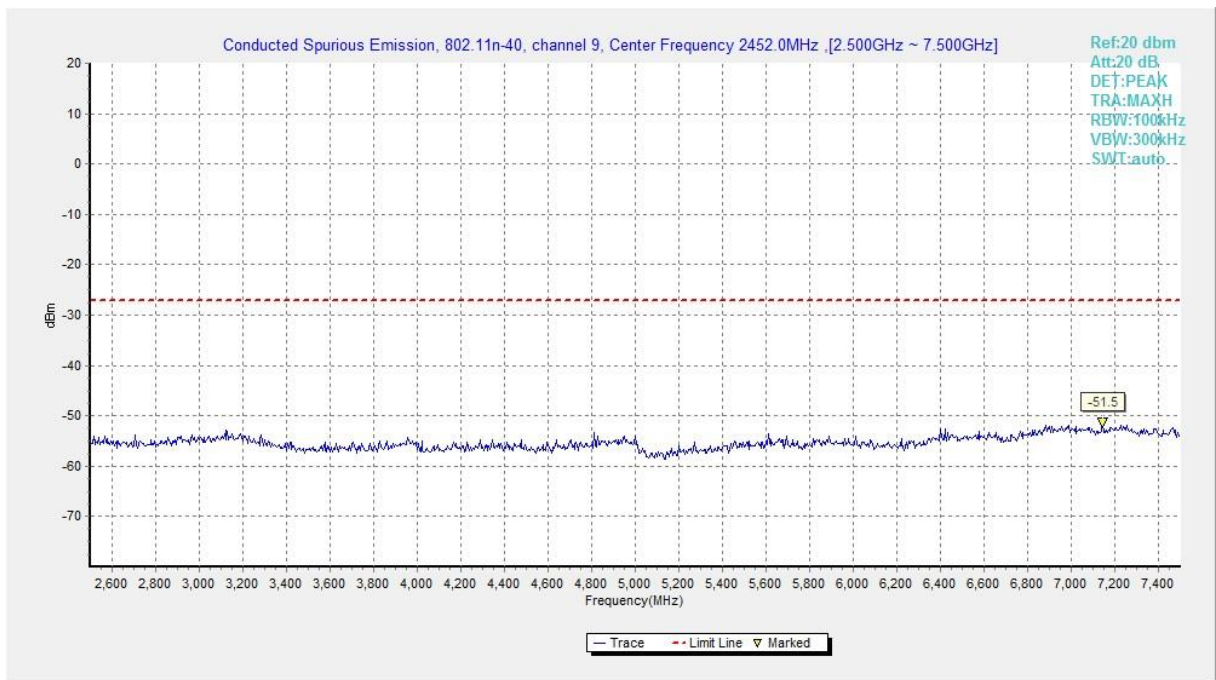
**Fig.A.6.1.89 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, Center Frequency)**



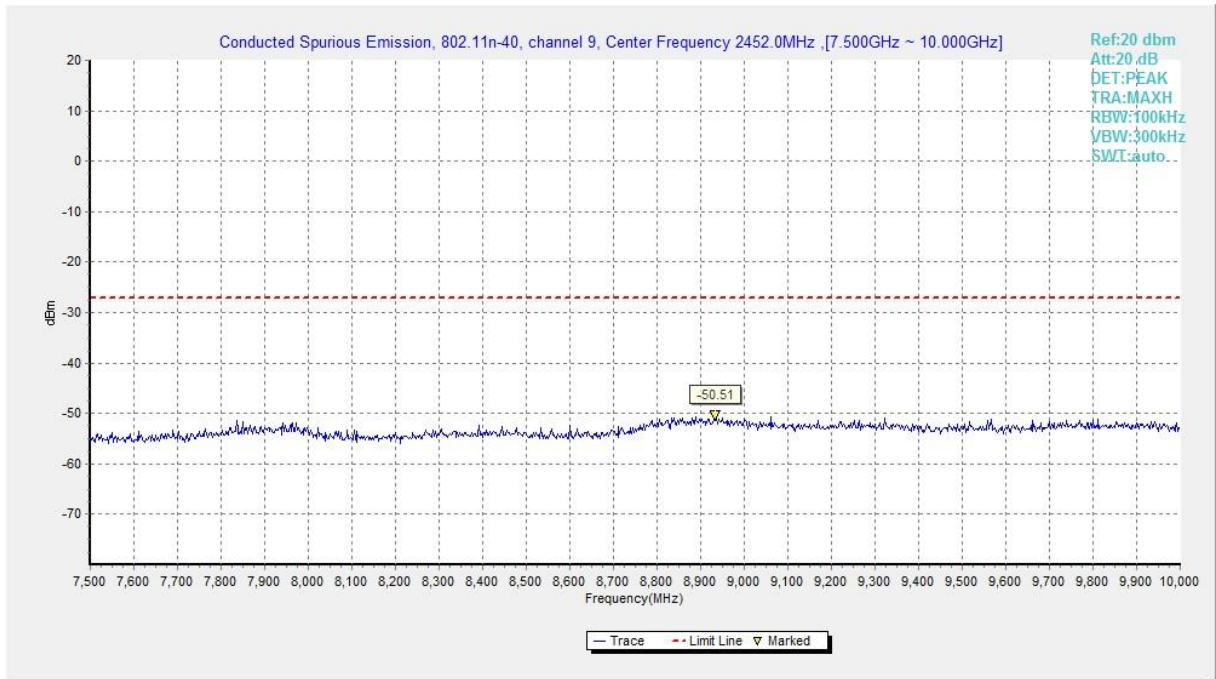
**Fig.A.6.1.90 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 30 MHz-1 GHz)**



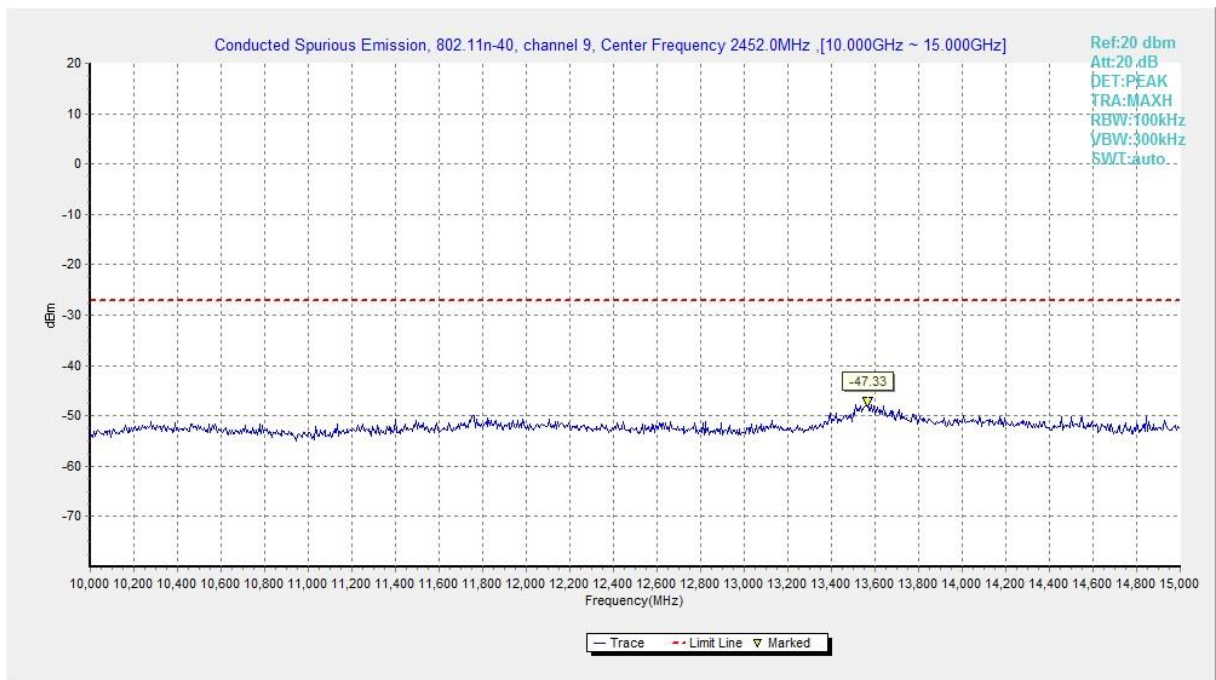
**Fig.A.6.1.91 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 1 GHz-2.5 GHz)**



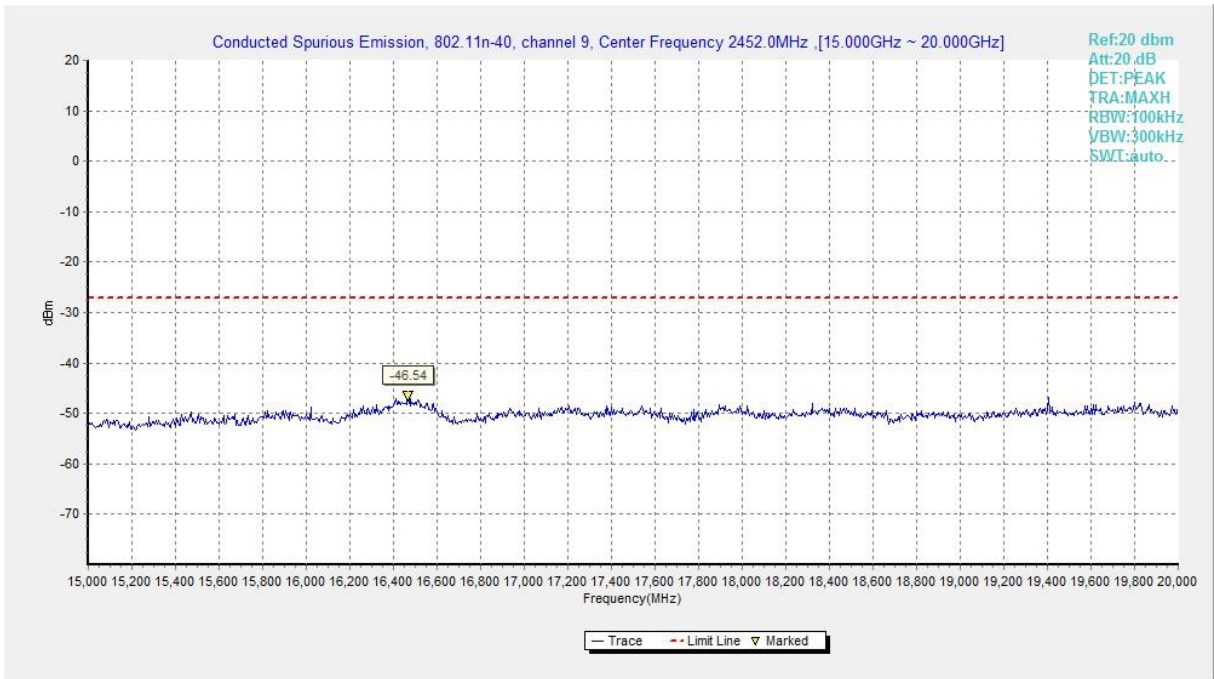
**Fig.A.6.1.92 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 2.5 GHz-7.5 GHz)**



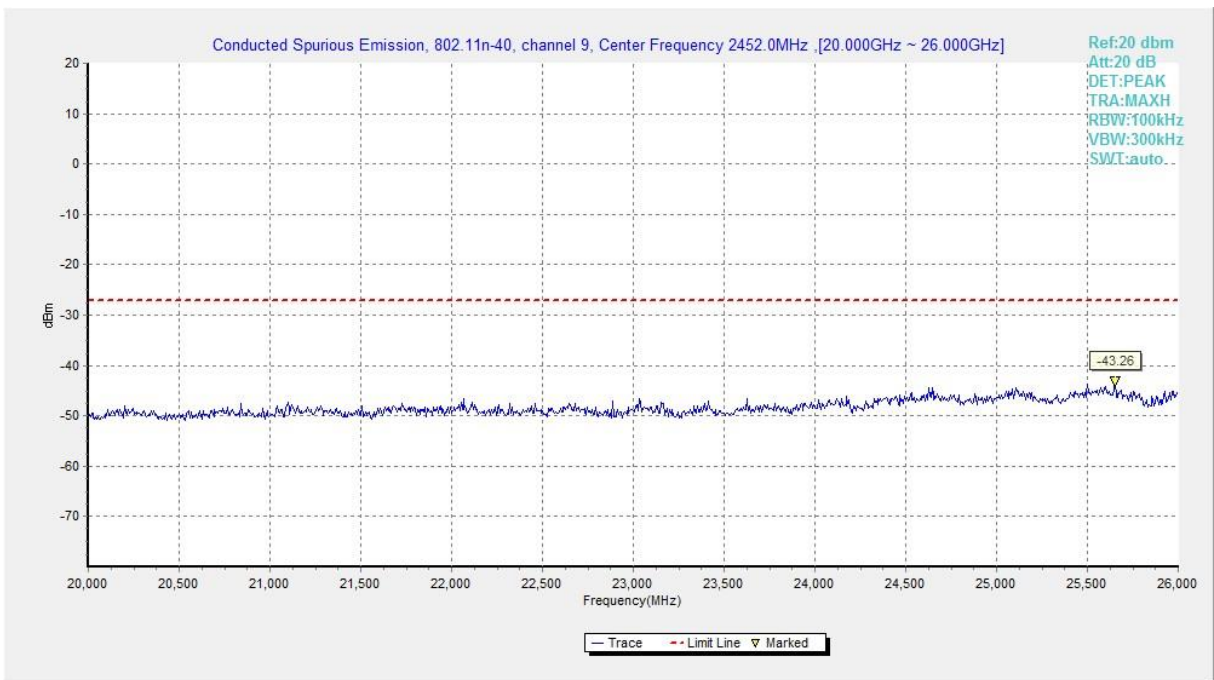
**Fig.A.6.1.93 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 7.5 GHz-10 GHz)**



**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( $\mu\text{V}/\text{m}$ )	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( $\mu\text{V}/\text{m}$ )	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/1MHz	15
4000-18000	1MHz/1MHz	40
18000-26500	1MHz/1MHz	20

**EUT ID:** EUT1



**Measurement Results:**
**802.11b mode(SISO-ANT0)**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	Power	2.31GHz ~2.43GHz	Fig.A.6.2.1	<b>P</b>
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.2	<b>P</b>

**802.11g mode(SISO-ANT0)**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	Power	2.31GHz ~2.43GHz	Fig.A.6.2.3	<b>P</b>
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.4	<b>P</b>

**802.11n-HT20 mode(MIMO)**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	Power	2.31GHz ~2.43GHz	Fig.A.6.2.5	<b>P</b>
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.6	<b>P</b>

**802.11n-HT40 mode(MIMO)**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	Power	2.31GHz ~2.43GHz	Fig.A.6.2.7	<b>P</b>
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.8	<b>P</b>

**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:

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

**Average Measurement results**
**802.11b**

## Ch1

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17957	47.1	-25.5	46.7	25.9	V	54	6.9
17994.5	47	-25.5	46.7	25.8	V	54	7
17940	46.9	-25.5	46.7	25.7	V	54	7.1
17964	46.9	-25.5	46.7	25.7	V	54	7.1
17972.5	46.9	-25.5	46.7	25.7	H	54	7.1
2382.7	42.7	-14.2	28.1	28.8	V	54	11.3

## Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17971.5	46.9	-25.5	46.7	25.7	H	54	7.1
17992.5	46.9	-25.5	46.7	25.7	H	54	7.1
17968	46.8	-25.5	46.7	25.6	H	54	7.2
17982.5	46.8	-25.5	46.7	25.6	H	54	7.2
17934	46.7	-25.5	46.7	25.5	V	54	7.3
17949	46.7	-25.5	46.7	25.5	V	54	7.3

## Ch11

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17954.5	47.1	-25.5	46.7	25.9	H	54	6.9
17959.5	46.9	-25.5	46.7	25.7	H	54	7.1
17986	46.9	-25.5	46.7	25.7	H	54	7.1
17999	46.9	-25.5	46.7	25.7	V	54	7.1
17944	46.8	-25.5	46.7	25.6	H	54	7.2
2485	44.9	-14.2	28.3	30.8	V	54	9.1

**802.11g**

## Ch1

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17952.5	46.9	-25.5	46.7	25.7	H	54	7.1
17950	46.8	-25.5	46.7	25.6	H	54	7.2
17951.5	46.8	-25.5	46.7	25.6	V	54	7.2
17960.5	46.8	-25.5	46.7	25.6	H	54	7.2
17965	46.8	-25.5	46.7	25.6	V	54	7.2
2390	48.1	-14.2	28.1	34.2	V	54	5.9

## Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17986	47.1	-25.5	46.7	25.9	H	54	6.9
17948.5	46.9	-25.5	46.7	25.7	H	54	7.1
17987	46.9	-25.5	46.7	25.7	V	54	7.1
17960.5	46.8	-25.5	46.7	25.6	V	54	7.2
17962	46.8	-25.5	46.7	25.6	V	54	7.2
17972.5	46.8	-25.5	46.7	25.6	V	54	7.2

## Ch11

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17979.5	47.2	-25.5	46.7	26	H	54	6.8
17959.5	46.9	-25.5	46.7	25.7	V	54	7.1
17969	46.9	-25.5	46.7	25.7	V	54	7.1
17966	46.8	-25.5	46.7	25.6	H	54	7.2
17977.5	46.7	-25.5	46.7	25.5	H	54	7.3
2485	48.9	-14.2	28.3	34.8	V	54	5.1

**802.11n-HT20**

## Ch1

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17962.5	46.9	-25.5	46.7	25.7	V	54	7.1
17987	46.9	-25.5	46.7	25.7	V	54	7.1
17966	46.8	-25.5	46.7	25.6	V	54	7.2
17976	46.8	-25.5	46.7	25.6	V	54	7.2
17987.5	46.8	-25.5	46.7	25.6	H	54	7.2
2390	51	-14.2	28.1	37.1	V	54	3

## Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17986	46.9	-25.5	46.7	25.7	V	54	7.1
17966.5	46.7	-25.5	46.7	25.5	V	54	7.3
17957.5	46.6	-25.5	46.7	25.4	V	54	7.4
17985	46.6	-25.5	46.7	25.4	V	54	7.4
17990.5	46.6	-25.5	46.7	25.4	V	54	7.4
17992.5	46.6	-25.5	46.7	25.4	V	54	7.4

## Ch11

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17966	46.9	-25.5	46.7	25.7	V	54	7.1
17976.5	46.8	-25.5	46.7	25.6	V	54	7.2
17988	46.8	-25.5	46.7	25.6	V	54	7.2
17988.5	46.7	-25.5	46.7	25.5	V	54	7.3
17989.5	46.7	-25.5	46.7	25.5	V	54	7.3
2485.1	51	-14.2	28.3	36.9	H	54	3

**802.11n-HT40**

## Ch3

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17989.5	46.9	-25.5	46.7	25.7	V	54	7.1
17993.5	46.9	-25.5	46.7	25.7	H	54	7.1
17958.5	46.8	-25.5	46.7	25.6	V	54	7.2
17971.5	46.8	-25.5	46.7	25.6	H	54	7.2
17989	46.8	-25.5	46.7	25.6	V	54	7.2
2389.9	48.1	-14.2	28.1	34.2	H	54	5.9

## Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17976.5	46.9	-25.5	46.7	25.7	H	54	7.1
17998	46.9	-25.5	46.7	25.7	H	54	7.1
17953.5	46.8	-25.5	46.7	25.6	H	54	7.2
17980.5	46.8	-25.5	46.7	25.6	V	54	7.2
17947.5	46.7	-25.5	46.7	25.5	V	54	7.3
17951	46.7	-25.5	46.7	25.5	V	54	7.3

## Ch9

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17947.5	47.2	-25.5	46.7	26	V	54	6.8
17969	47.2	-25.5	46.7	26	V	54	6.8
17955	47.1	-25.5	46.7	25.9	H	54	6.9
17978.5	47	-25.5	46.7	25.8	H	54	7
17949	46.9	-25.5	46.7	25.7	H	54	7.1
2485.2	47.3	-14.2	28.3	33.2	H	54	6.7

**Peak Measurement results**
**802.11b**

## Ch1

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17949	59.2	-25.5	46.7	38	H	74	14.8
17866	58.4	-25.5	46.7	37.2	H	74	15.6
17984	58.1	-25.5	46.7	36.9	V	74	15.9
17864	57.8	-25.5	46.7	36.6	H	74	16.2
17937	57.8	-25.5	46.7	36.6	H	74	16.2
2327.2	55.9	-14.5	27.9	42.5	H	74	18.1

## Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17994.5	58.2	-25.5	46.7	37	H	74	15.8
17925	57.8	-25.5	46.7	36.6	H	74	16.2
17952	57.8	-25.5	46.7	36.6	H	74	16.2
17965.5	57.8	-25.5	46.7	36.6	H	74	16.2
17987	57.7	-25.5	46.7	36.5	H	74	16.3
17851.5	57.6	-25.5	46.7	36.4	H	74	16.4

## Ch11

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17900.5	58.4	-25.5	46.7	37.2	H	74	15.6
17987	58.3	-25.5	46.7	37.1	V	74	15.7
17986	58	-25.5	46.7	36.8	H	74	16
17758.5	57.9	-25.5	46.7	36.7	V	74	16.1
17957	57.9	-25.5	46.7	36.7	V	74	16.1
2488.7	56.1	-14.2	28.3	42	V	74	17.9

**802.11g**

## Ch1

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17960	58.8	-25.5	46.7	37.6	H	74	15.2
17978	57.9	-25.5	46.7	36.7	H	74	16.1
17972.5	57.7	-25.5	46.7	36.5	V	74	16.3
17987	57.7	-25.5	46.7	36.5	V	74	16.3
17930.5	57.6	-25.5	46.7	36.4	H	74	16.4
2389.5	63.8	-14.2	28.1	49.9	V	74	10.2

## Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17975	58	-25.5	46.7	36.8	H	74	16
17907	57.8	-25.5	46.7	36.6	V	74	16.2
17935	57.7	-25.5	46.7	36.5	H	74	16.3
17985.5	57.7	-25.5	46.7	36.5	V	74	16.3
17997	57.7	-25.5	46.7	36.5	V	74	16.3
17530	57.6	-26.9	45.2	39.2	H	74	16.4

## Ch11

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17982	58.6	-25.5	46.7	37.4	V	74	15.4
17980.5	57.9	-25.5	46.7	36.7	V	74	16.1
17683	57.6	-25.7	46	37.4	V	74	16.4
17897.5	57.5	-25.5	46.7	36.3	V	74	16.5
17960	57.4	-25.5	46.7	36.2	V	74	16.6
2485	63.7	-14.2	28.3	49.6	V	74	10.3

**802.11n-HT20**

## Ch1

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17860.5	58.4	-25.5	46.7	37.2	H	74	15.6
17821	58.3	-25.5	46.7	37.1	H	74	15.7
17962.5	58.1	-25.5	46.7	36.9	V	74	15.9
17956.5	57.6	-25.5	46.7	36.4	H	74	16.4
17933.5	57.4	-25.5	46.7	36.2	V	74	16.6
2389.9	69.5	-14.2	28.1	55.6	V	74	4.5

## Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17985	57.9	-25.5	46.7	36.7	V	74	16.1
17985.5	57.7	-25.5	46.7	36.5	V	74	16.3
17977	57.4	-25.5	46.7	36.2	V	74	16.6
17890	57.3	-25.5	46.7	36.1	V	74	16.7
17983	57.2	-25.5	46.7	36	V	74	16.8
17932.5	57.1	-25.5	46.7	35.9	V	74	16.9

## Ch11

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17981	57.9	-25.5	46.7	36.7	V	74	16.1
17978	57.4	-25.5	46.7	36.2	V	74	16.6
17947	57.3	-25.5	46.7	36.1	V	74	16.7
17959	57.1	-25.5	46.7	35.9	V	74	16.9
17835.5	56.9	-25.5	46.7	35.7	V	74	17.1
2485.1	65.4	-14.2	28.3	51.3	H	74	8.6



**802.11n-HT40**
**Ch3**

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17981	58.3	-25.5	46.7	37.1	H	74	15.7
17963	58.2	-25.5	46.7	37	H	74	15.8
17867.5	58.1	-25.5	46.7	36.9	V	74	15.9
17971.5	58.1	-25.5	46.7	36.9	H	74	15.9
17893.5	58	-25.5	46.7	36.8	V	74	16
2388.8	62.5	-14.2	28.1	48.6	H	74	11.5

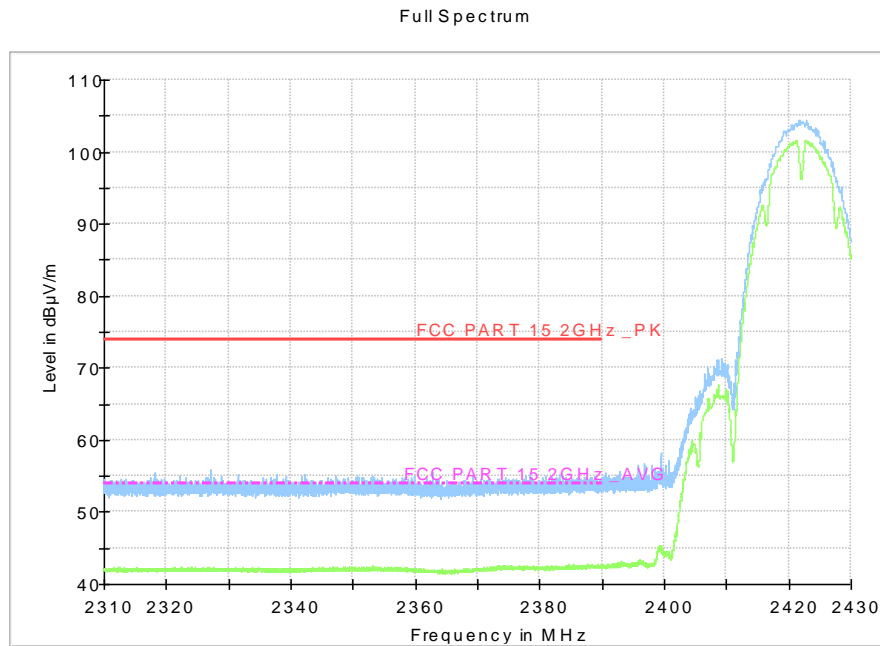
**Ch6**

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17973	58.7	-25.5	46.7	37.5	V	74	15.3
17957	58.6	-25.5	46.7	37.4	V	74	15.4
17978	58.5	-25.5	46.7	37.3	V	74	15.5
17977	58	-25.5	46.7	36.8	H	74	16
17934.5	57.9	-25.5	46.7	36.7	V	74	16.1
17931	57.8	-25.5	46.7	36.6	H	74	16.2

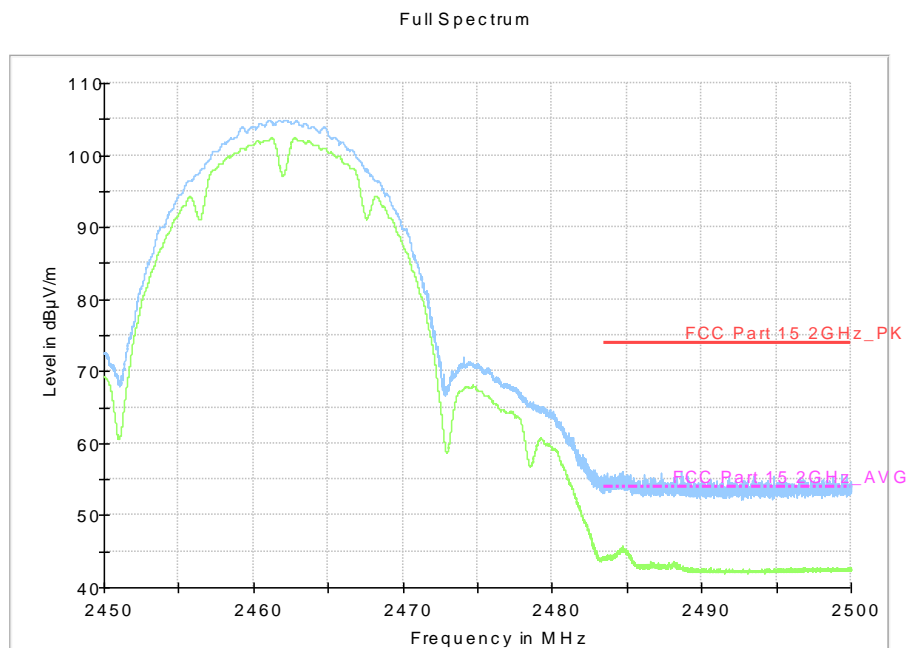
**Ch9**

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	P <sub>Mea</sub> (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
17951	58.5	-25.5	46.7	37.3	H	74	15.5
17945	58.2	-25.5	46.7	37	H	74	15.8
17775	57.9	-25.5	46.7	36.7	H	74	16.1
17998.5	57.9	-25.5	46.7	36.7	H	74	16.1
17892.5	57.8	-25.5	46.7	36.6	V	74	16.2
2487.3	61	-14.2	28.3	46.9	H	74	13

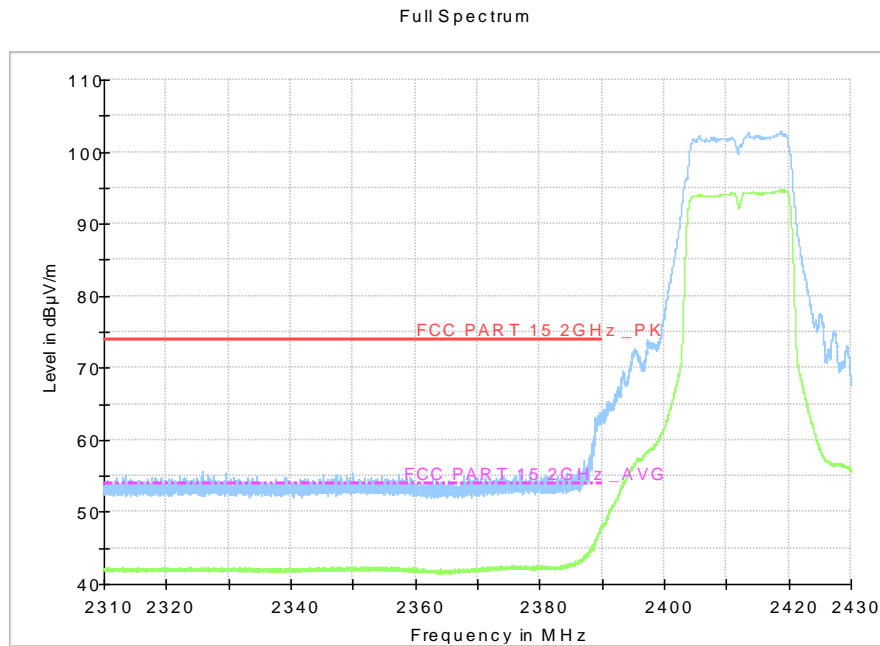
**Test graphs as below:**



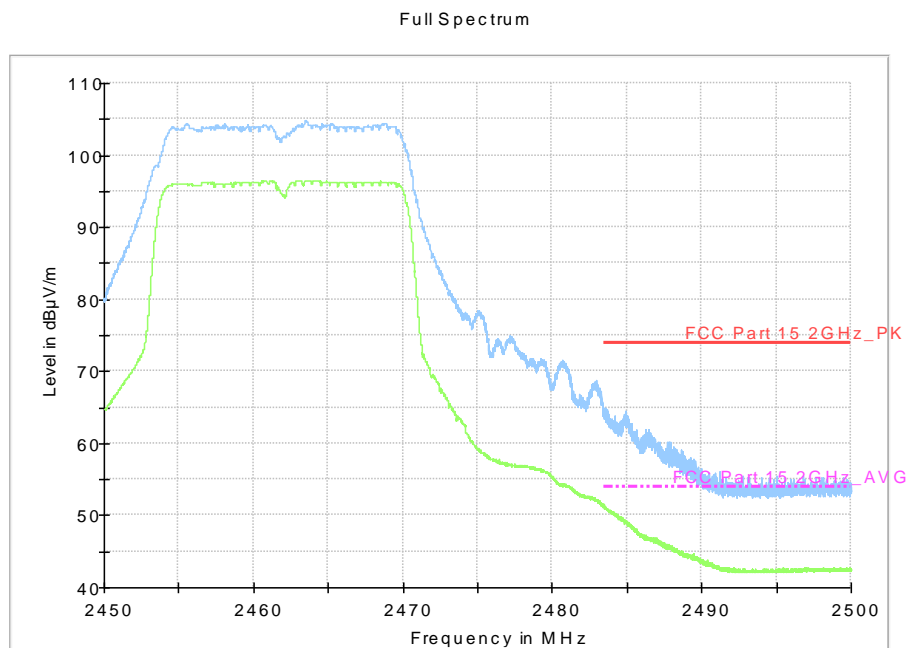
**Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.43GHz**



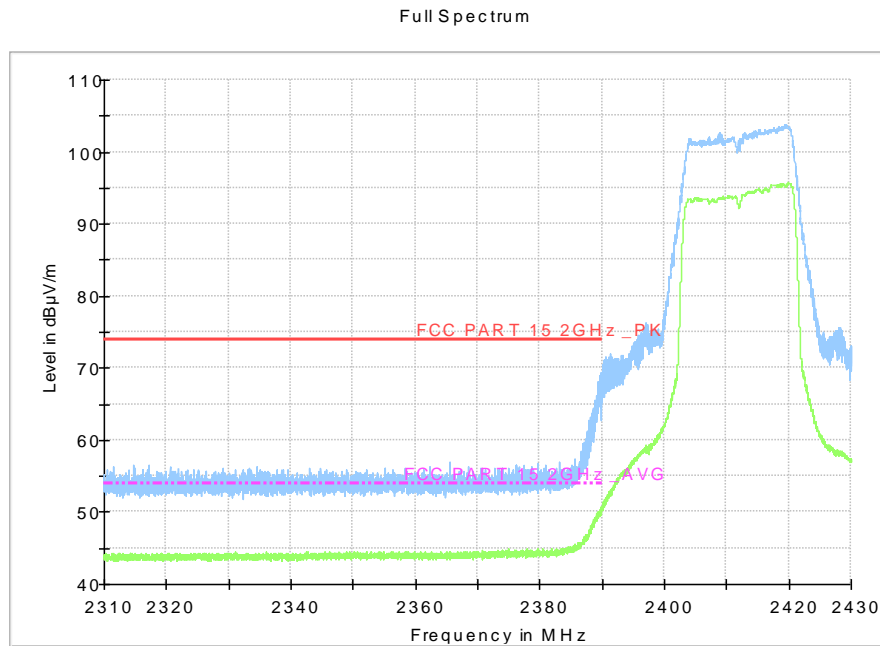
**Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz**



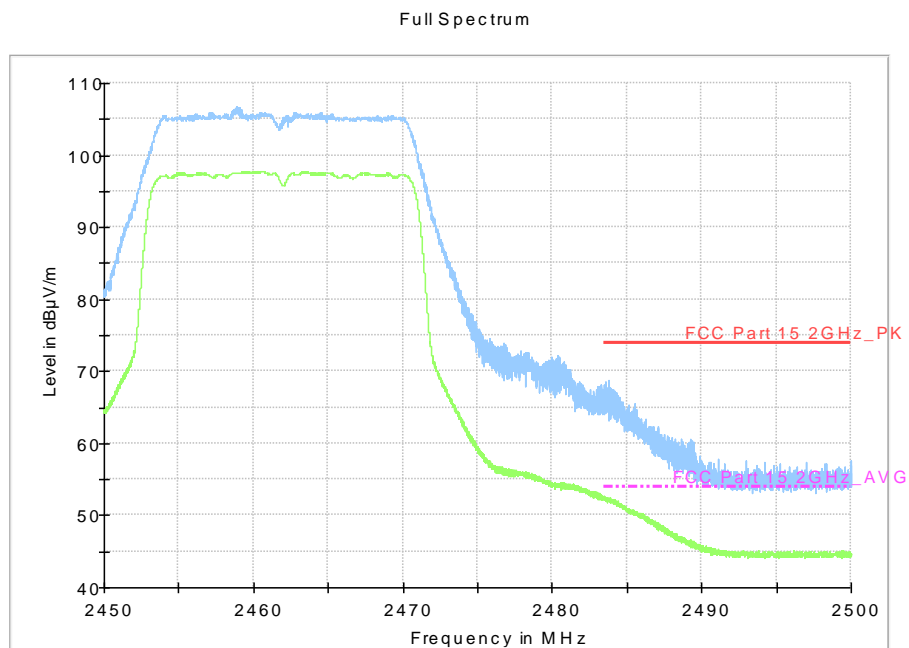
**Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.43GHz**



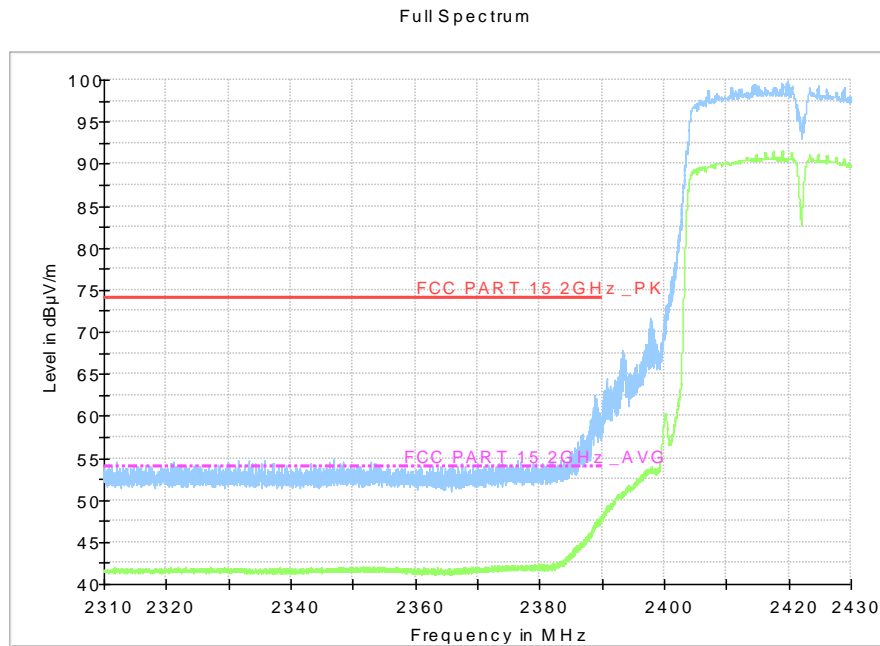
**Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz**



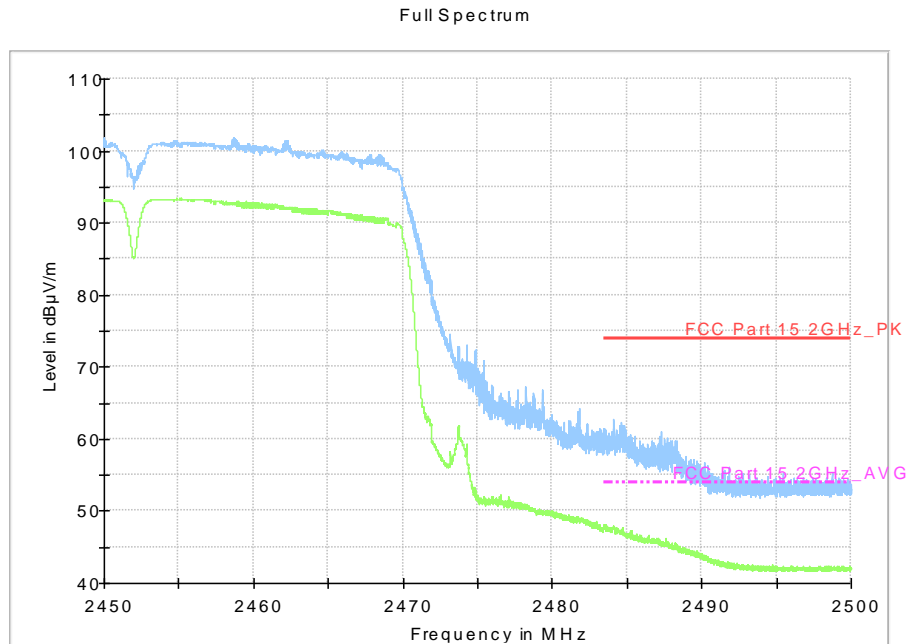
**Fig.A.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31 GHz - 2.43GHz**



**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.<sup>36</sup> 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:**

<b>Voltage (V)</b>	<b>Frequency (Hz)</b>
120	60

**Measurement Result and limit:**

EUT1 with AE1

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.

EUT1 with AE2

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	67 to 56	Fig.A.7.3	Fig.A.7.4	<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.

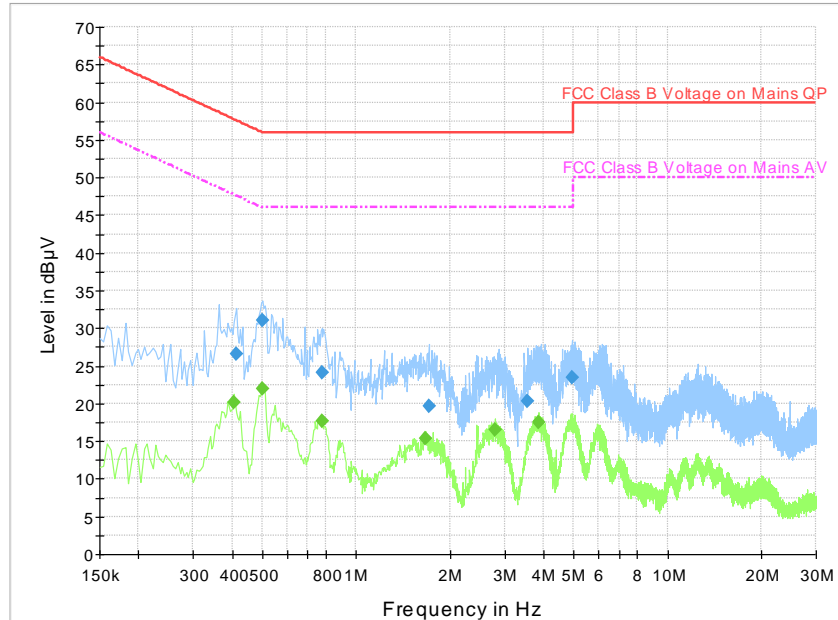
WLAN (Average Limit)

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.7.3	Fig.A.7.4	<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:**



**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.

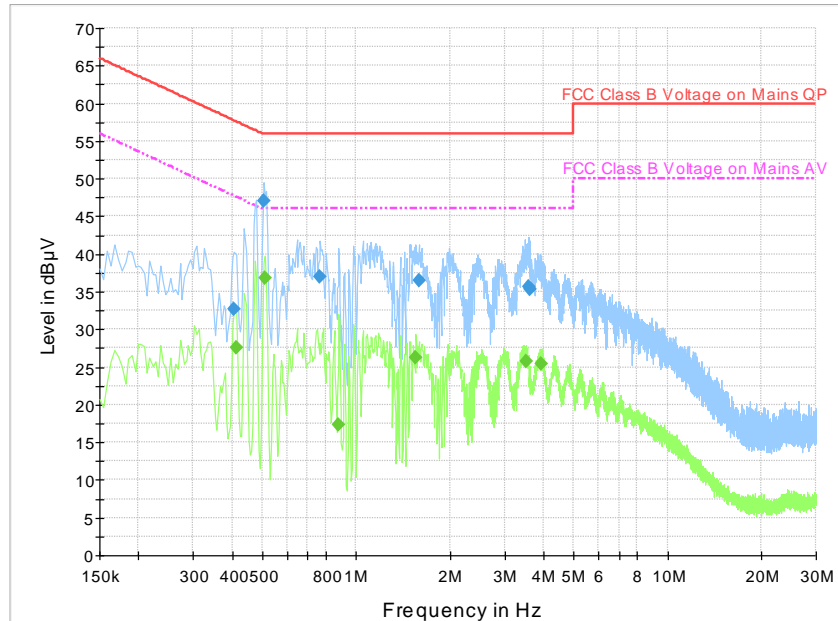
**Final Result 1**

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.411000	26.6	1000.0	9.000	On	L1	19.6	31.1	57.6
0.501000	31.0	1000.0	9.000	On	L1	19.6	25.0	56.0
0.775500	24.2	1000.0	9.000	On	N	19.5	31.8	56.0
1.711500	19.6	1000.0	9.000	On	N	19.6	36.4	56.0
3.565500	20.3	1000.0	9.000	On	L1	19.7	35.7	56.0
4.924500	23.5	1000.0	9.000	On	L1	19.8	32.5	56.0

**Final Result 2**

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.406500	20.2	1000.0	9.000	On	L1	19.6	27.5	47.7
0.501000	22.0	1000.0	9.000	On	N	19.6	24.0	46.0
0.775500	17.6	1000.0	9.000	On	N	19.5	28.4	46.0
1.671000	15.3	1000.0	9.000	On	L1	19.6	30.7	46.0
2.791500	16.5	1000.0	9.000	On	L1	19.6	29.5	46.0
3.849000	17.4	1000.0	9.000	On	L1	19.7	28.6	46.0





**Fig.A.7.2 AC Powerline Conducted Emission-Iidle**

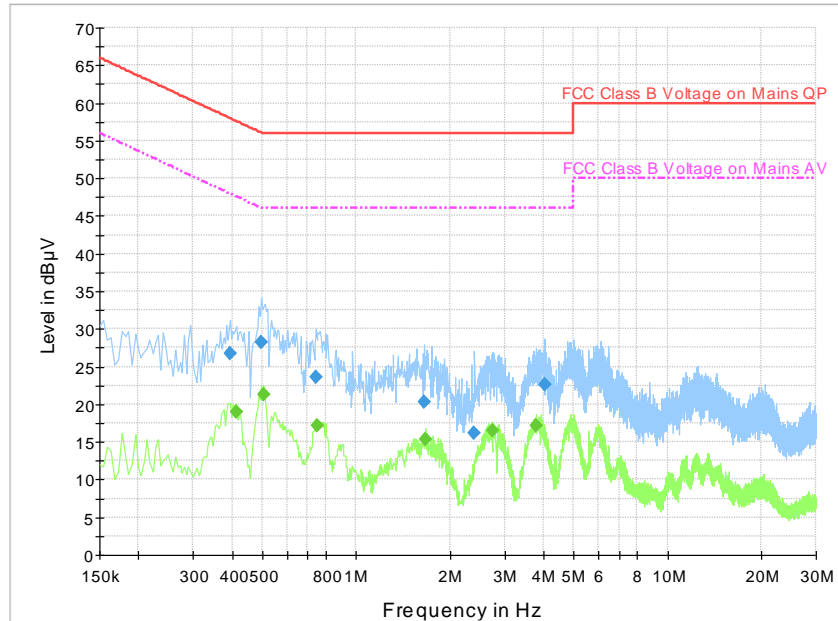
Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.406500	32.6	1000.0	9.000	On	L1	19.6	25.1	57.7
0.505500	47.0	1000.0	9.000	On	L1	19.6	9.0	56.0
0.766500	37.0	1000.0	9.000	On	L1	19.6	19.0	56.0
1.590000	36.6	1000.0	9.000	On	L1	19.6	19.4	56.0
3.579000	35.6	1000.0	9.000	On	N	19.6	20.4	56.0
3.610500	35.4	1000.0	9.000	On	N	19.6	20.6	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.411000	27.6	1000.0	9.000	On	N	19.6	20.0	47.6
0.510000	36.8	1000.0	9.000	On	L1	19.6	9.2	46.0
0.879000	17.3	1000.0	9.000	On	L1	19.6	28.7	46.0
1.558500	26.2	1000.0	9.000	On	L1	19.6	19.8	46.0
3.507000	25.7	1000.0	9.000	On	N	19.6	20.3	46.0
3.921000	25.4	1000.0	9.000	On	L1	19.7	20.6	46.0



**Fig.A.7.3 AC Powerline Conducted Emission-802.11b**

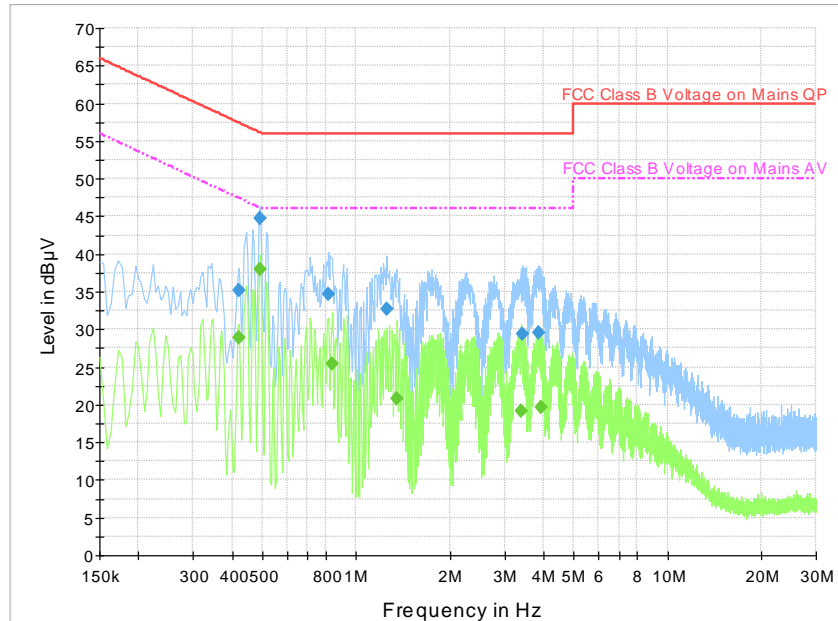
Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.393000	26.8	1000.0	9.000	On	L1	19.6	31.2	58.0
0.496500	28.2	1000.0	9.000	On	N	19.6	27.9	56.1
0.744000	23.6	1000.0	9.000	On	N	19.5	32.4	56.0
1.657500	20.3	1000.0	9.000	On	N	19.6	35.7	56.0
2.400000	16.1	1000.0	9.000	On	N	19.6	39.9	56.0
4.024500	22.6	1000.0	9.000	On	L1	19.7	33.4	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.411000	19.0	1000.0	9.000	On	L1	19.6	28.6	47.6
0.505500	21.3	1000.0	9.000	On	N	19.6	24.8	46.0
0.753000	17.2	1000.0	9.000	On	N	19.5	28.8	46.0
1.666500	15.4	1000.0	9.000	On	L1	19.6	30.6	46.0
2.751000	16.5	1000.0	9.000	On	L1	19.6	29.5	46.0
3.777000	17.1	1000.0	9.000	On	L1	19.7	28.9	46.0



**Fig.A.7.4 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 (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.420000	35.1	1000.0	9.000	On	L1	19.6	22.3	57.4
0.492000	44.8	1000.0	9.000	On	L1	19.6	11.3	56.1
0.811500	34.6	1000.0	9.000	On	L1	19.6	21.4	56.0
1.252500	32.6	1000.0	9.000	On	L1	19.6	23.4	56.0
3.426000	29.4	1000.0	9.000	On	N	19.6	26.6	56.0
3.867000	29.5	1000.0	9.000	On	N	19.7	26.5	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.420000	28.8	1000.0	9.000	On	N	19.6	18.6	47.4
0.492000	37.9	1000.0	9.000	On	N	19.6	8.2	46.1
0.838500	25.5	1000.0	9.000	On	N	19.5	20.5	46.0
1.356000	20.7	1000.0	9.000	On	N	19.6	25.3	46.0
3.376500	19.2	1000.0	9.000	On	N	19.6	26.8	46.0
3.943500	19.7	1000.0	9.000	On	N	19.7	26.3	46.0

**ANNEX B: Accreditation Certificate**

United States Department of Commerce  
National Institute of Standards and Technology

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**Certificate of Accreditation to ISO/IEC 17025:2017**

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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:*

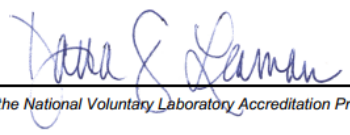
**Electromagnetic Compatibility & Telecommunications**

*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).*

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2020-09-29 through 2021-09-30  
*Effective Dates*



  
*For the National Voluntary Laboratory Accreditation Program*

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