

Fig.85 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 7.5 GHz-10 GHz)

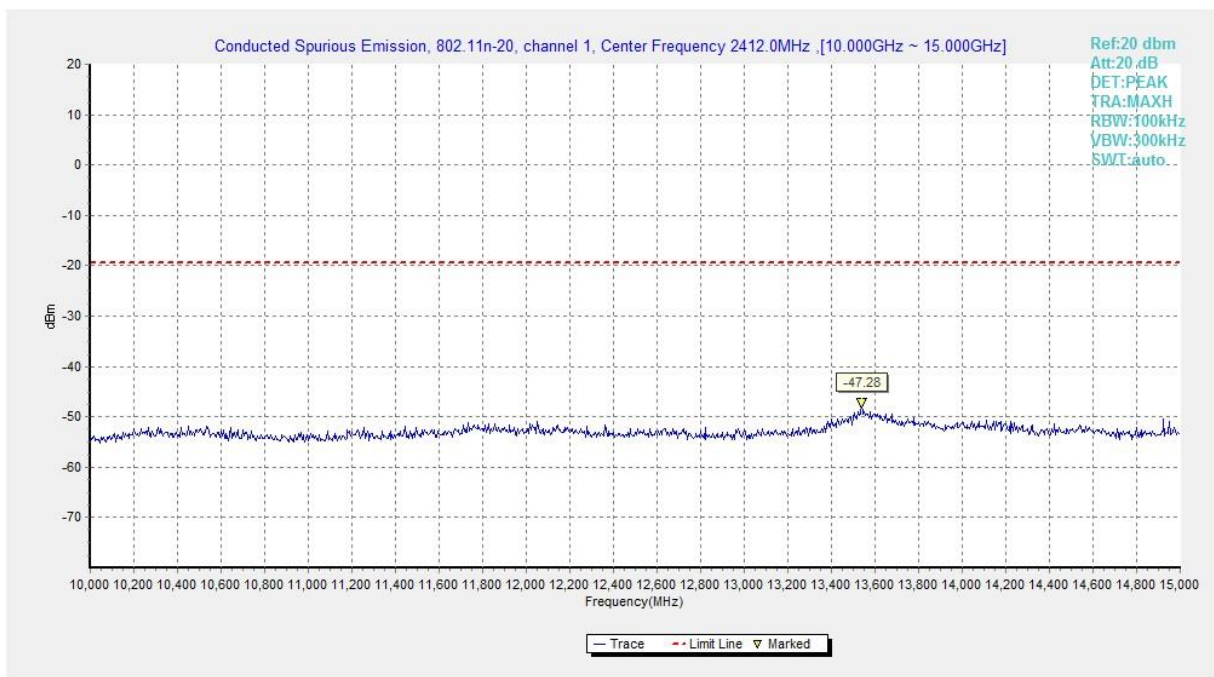


Fig.86 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 10 GHz-15 GHz)

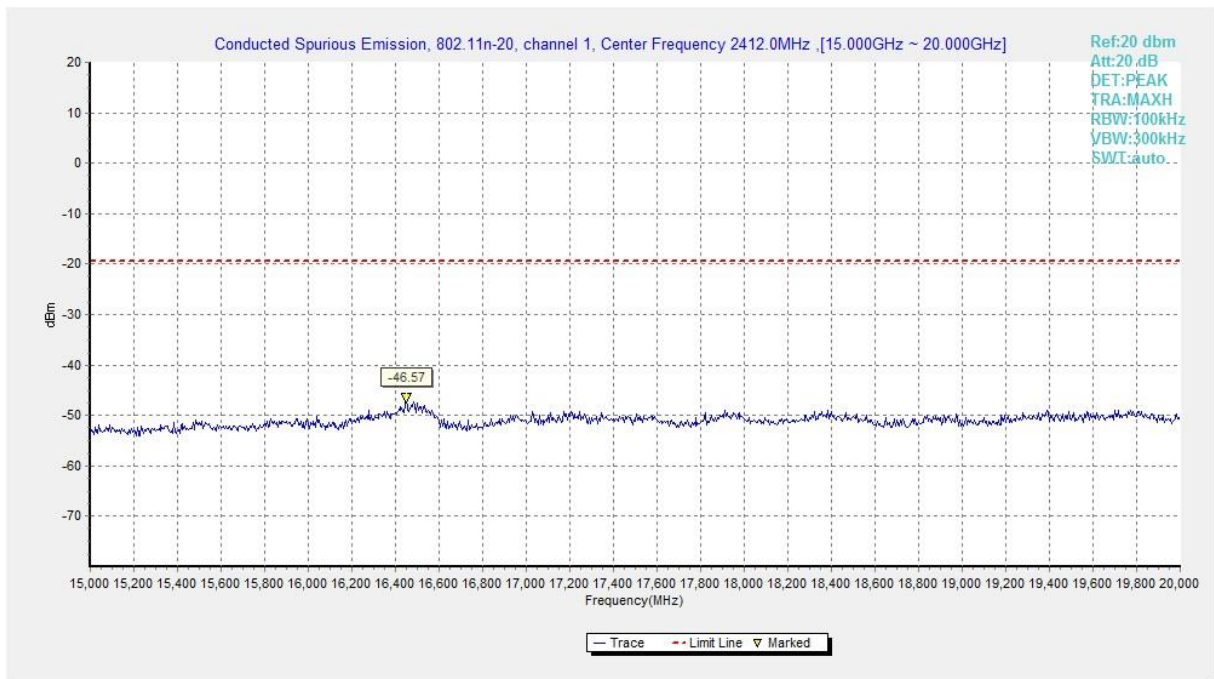


Fig.87 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 15 GHz-20 GHz)

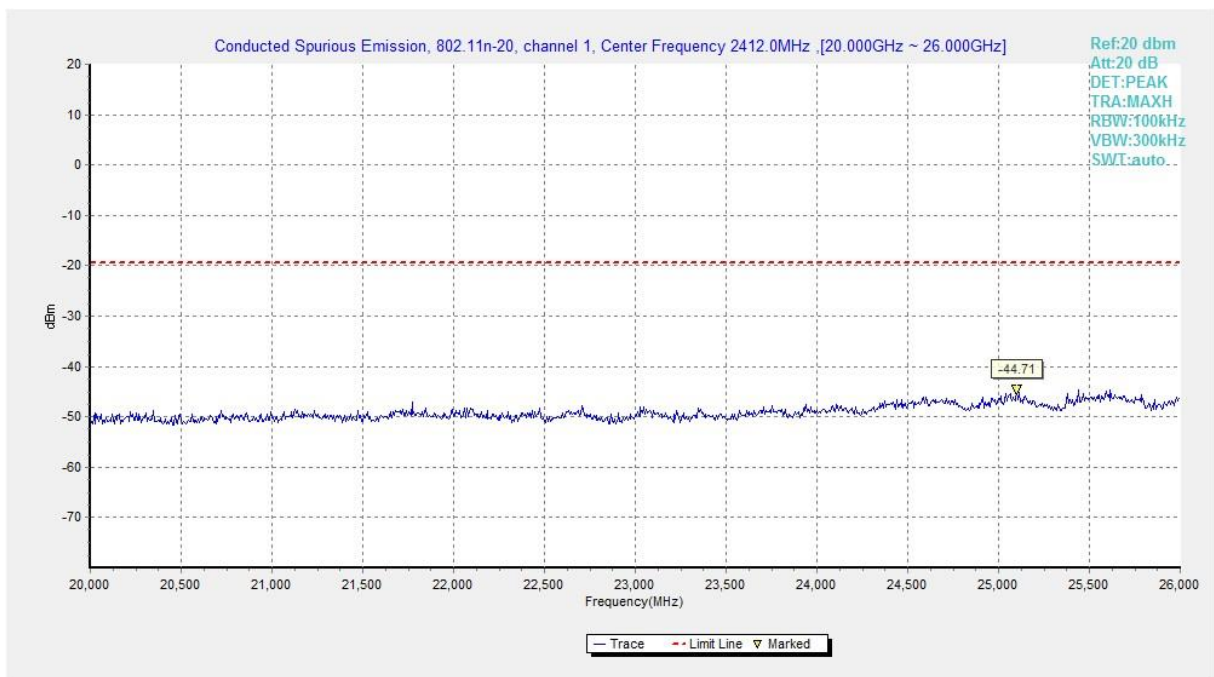


Fig.88 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch1, 20 GHz-26 GHz)

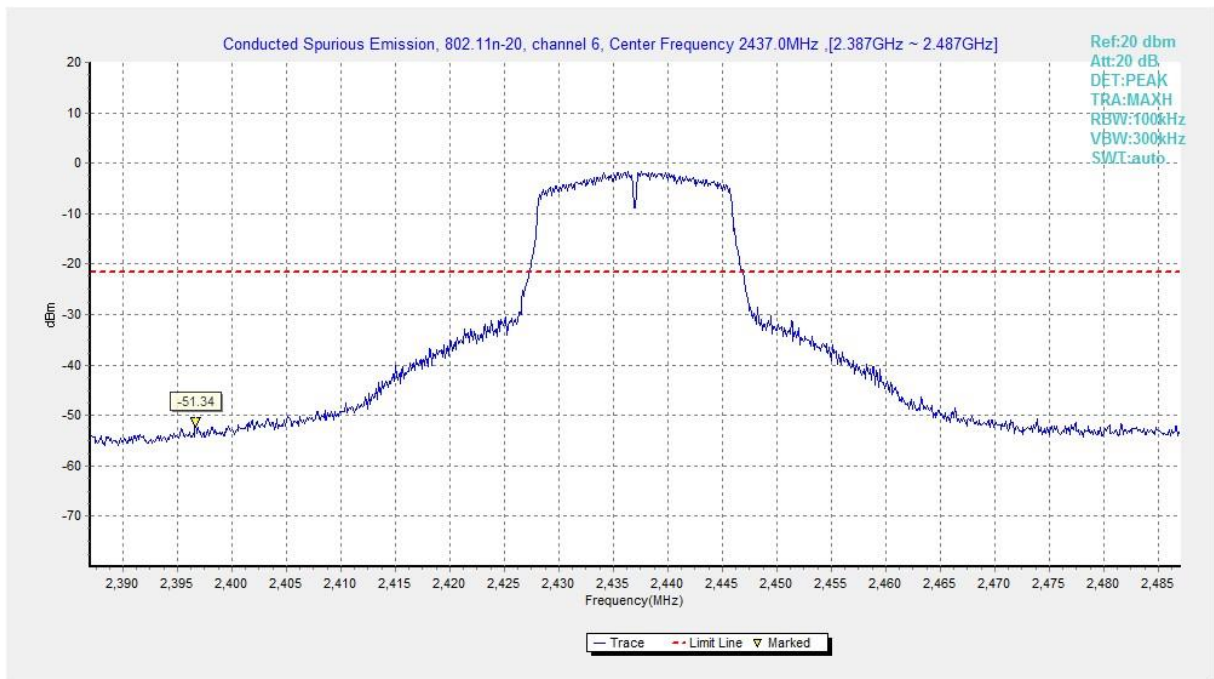


Fig.89 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, Center Frequency)

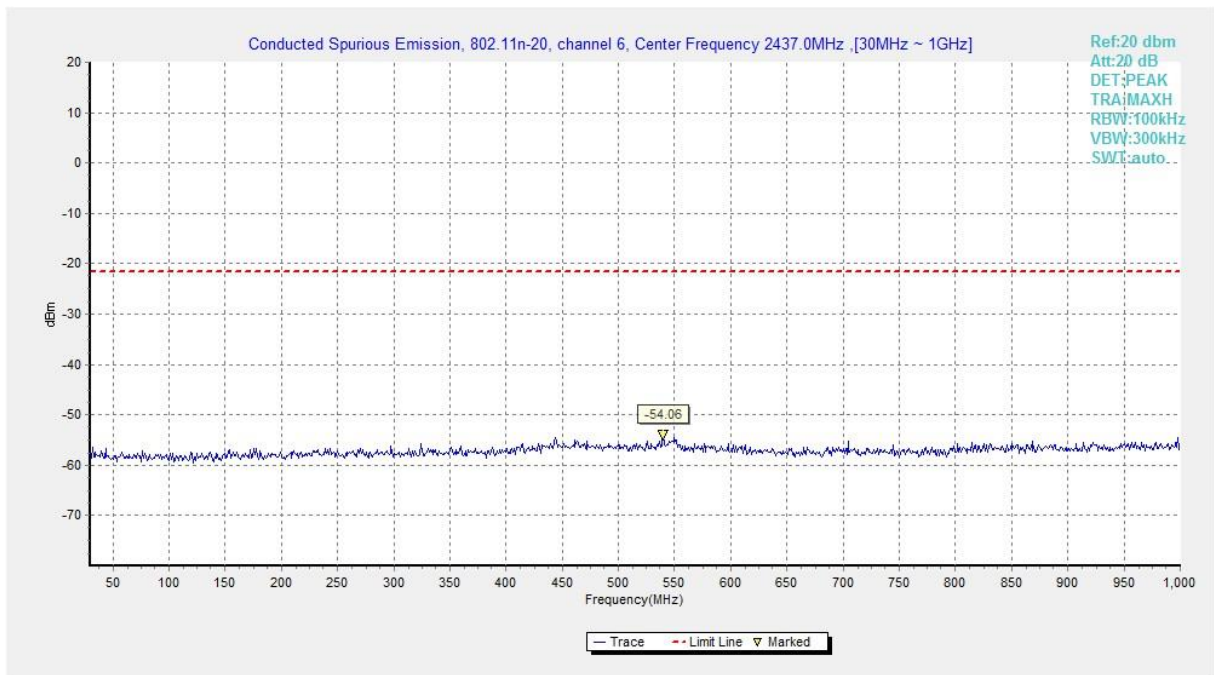


Fig.90 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 30 MHz-1 GHz)

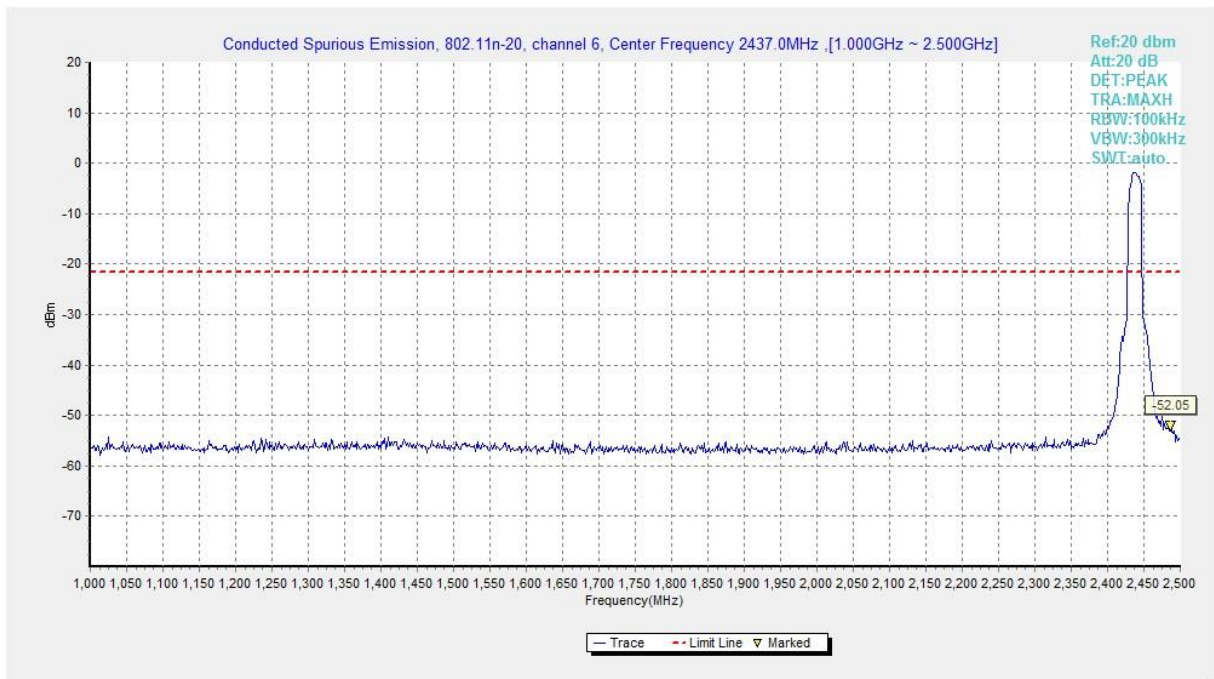


Fig.91 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 1 GHz-2.5 GHz)

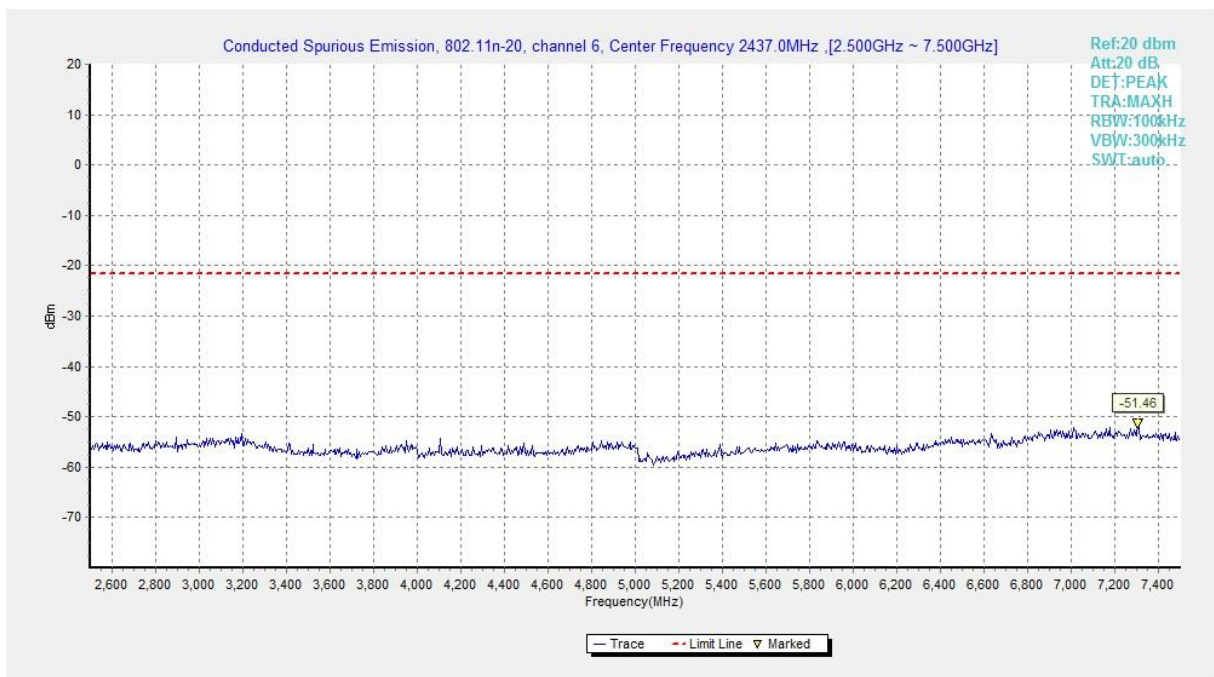


Fig.92 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 2.5 GHz-7.5 GHz)

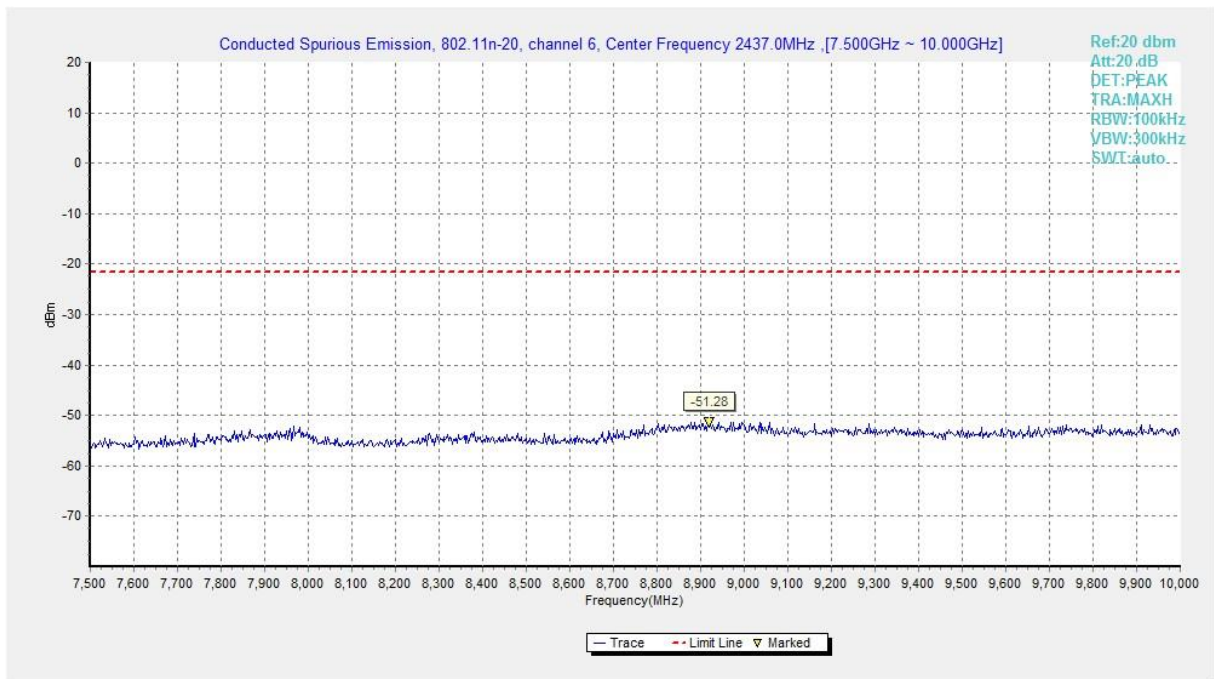


Fig.93 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 7.5 GHz-10 GHz)

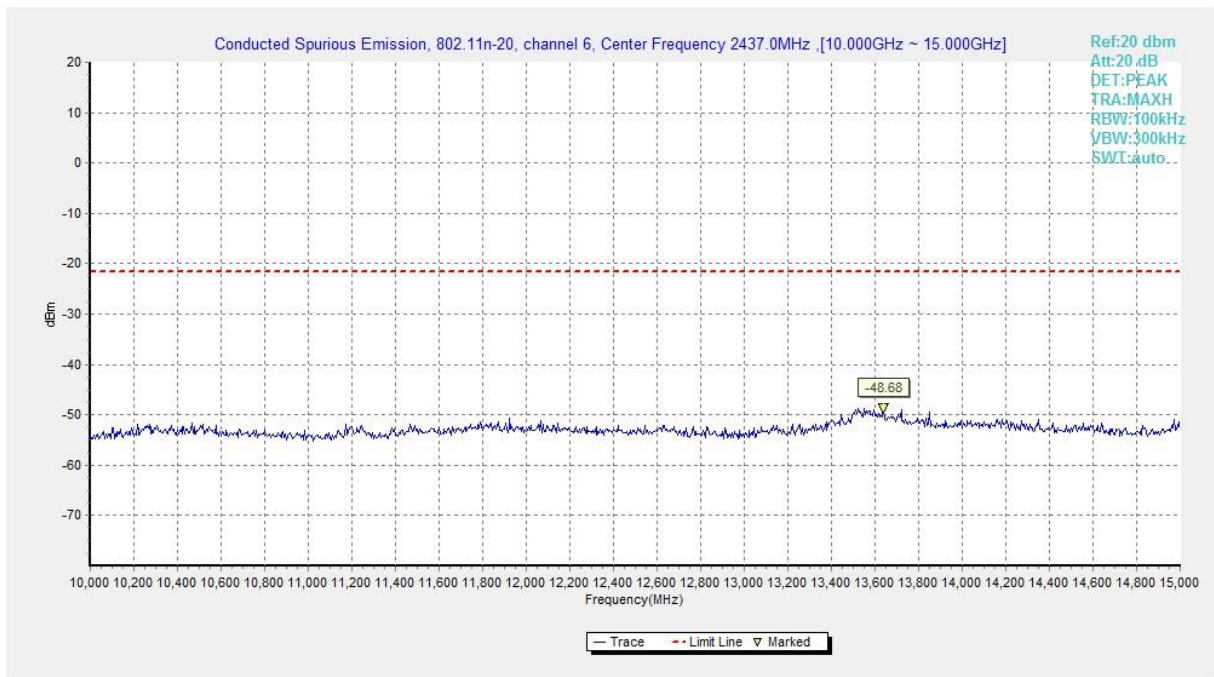


Fig.94 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 10 GHz-15 GHz)

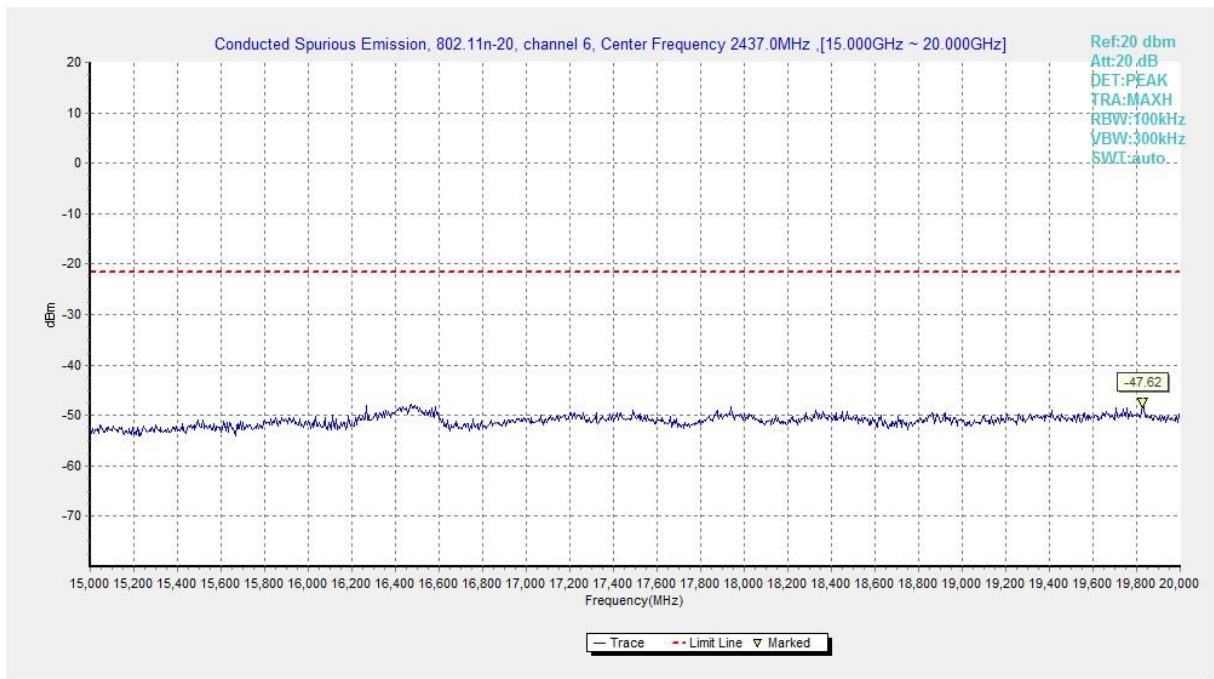


Fig.95 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 15 GHz-20 GHz)

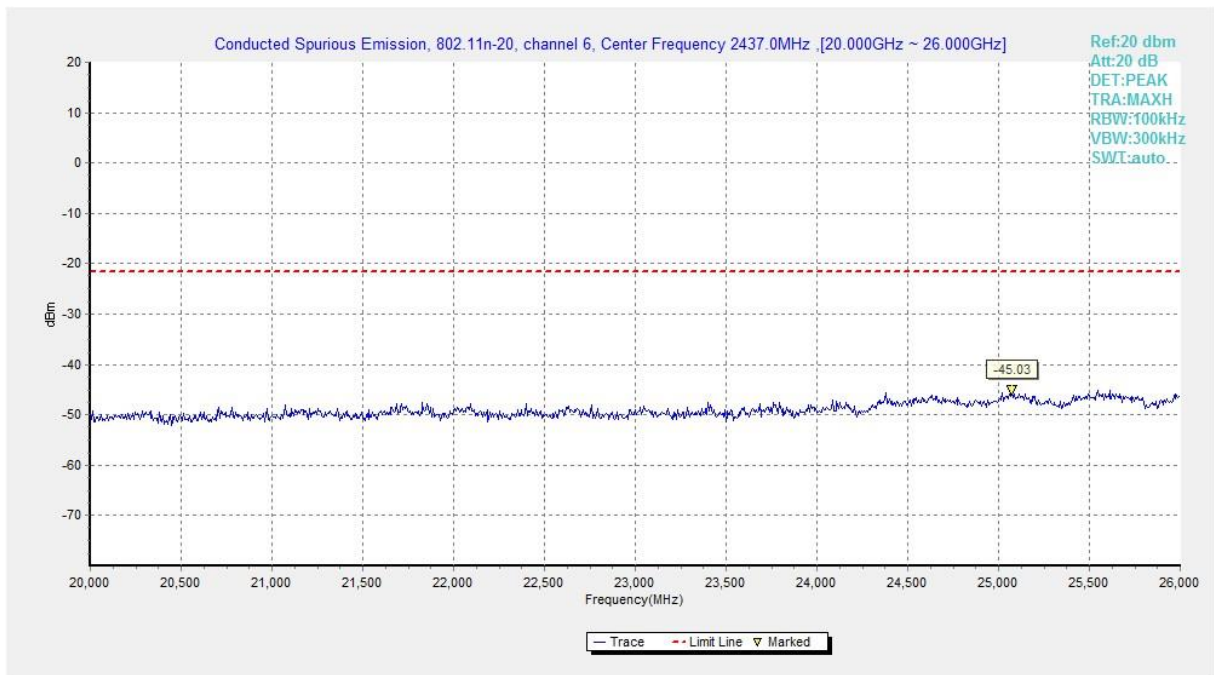


Fig.96 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch6, 20 GHz-26 GHz)

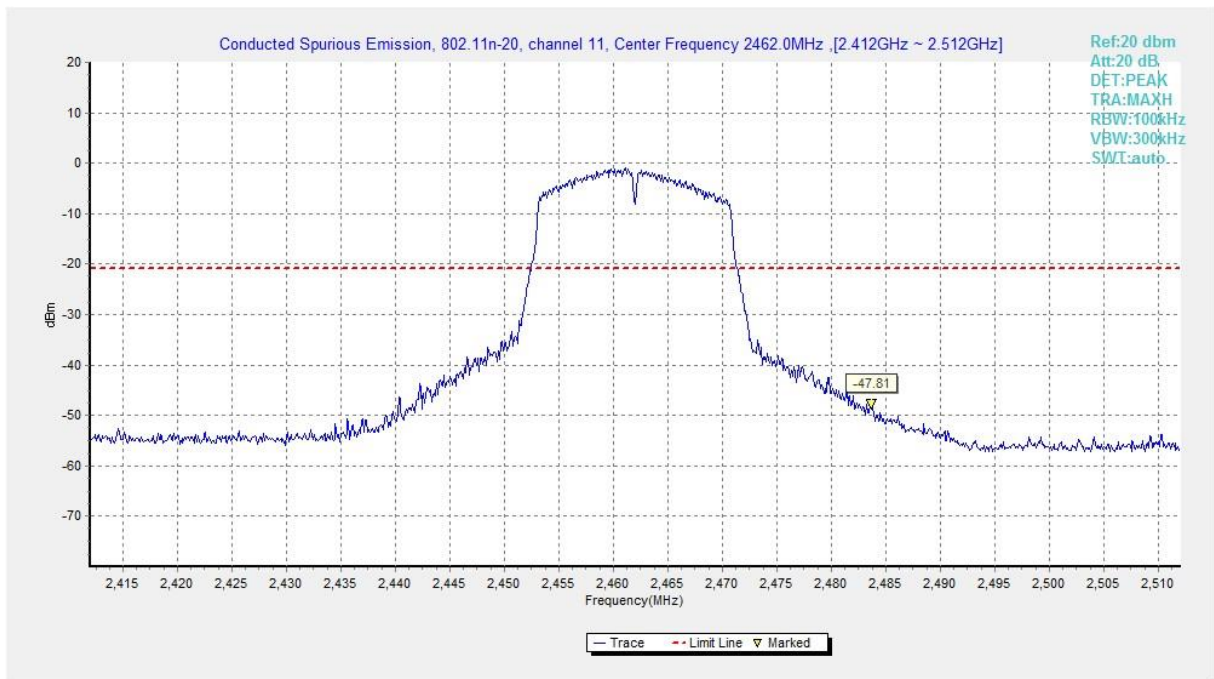


Fig.97 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, Center Frequency)

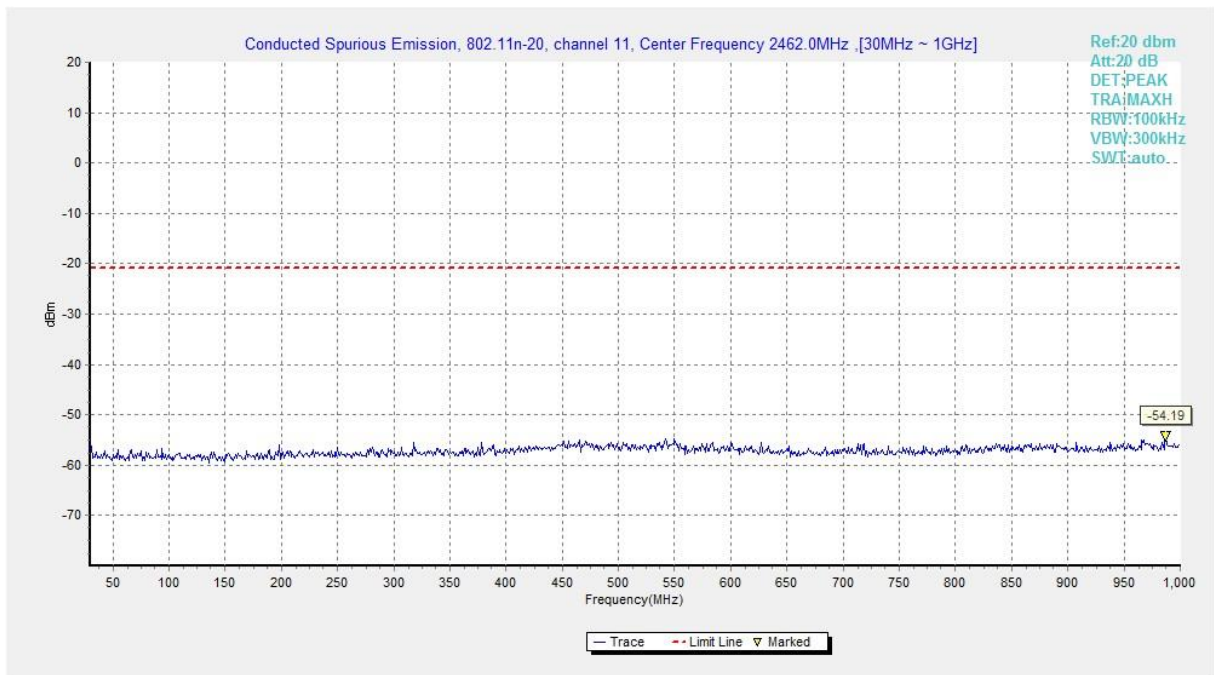


Fig.98 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 30 MHz-1 GHz)

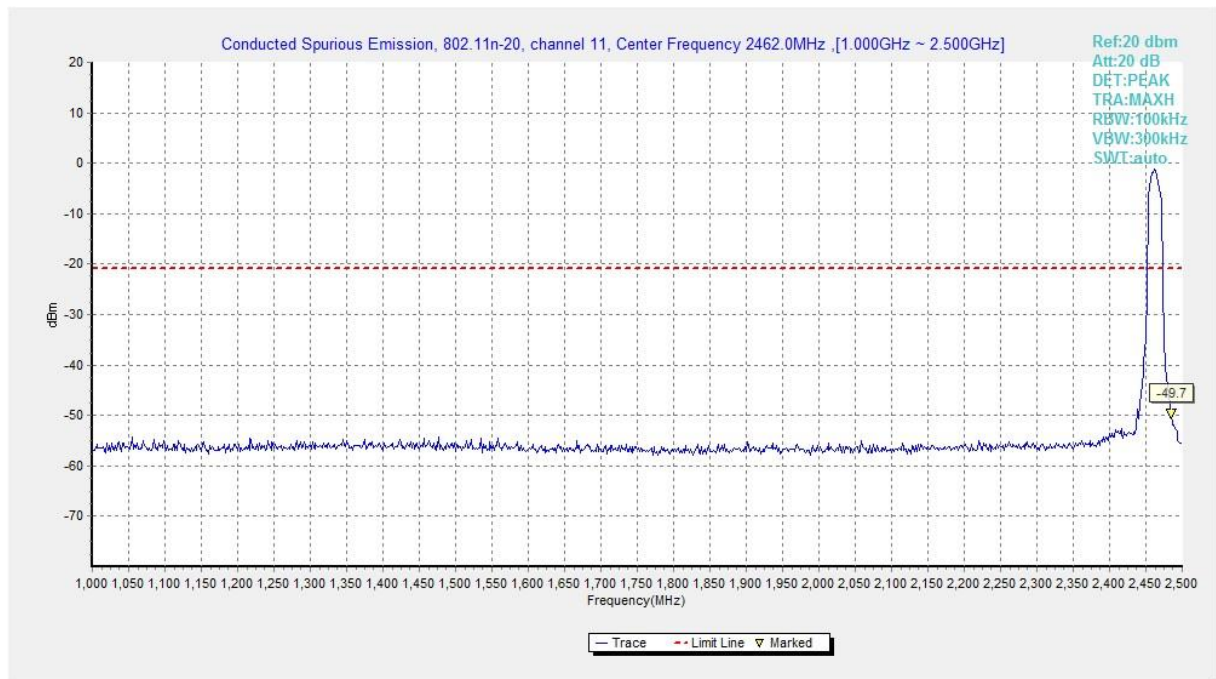


Fig.99 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 1 GHz-2.5 GHz)

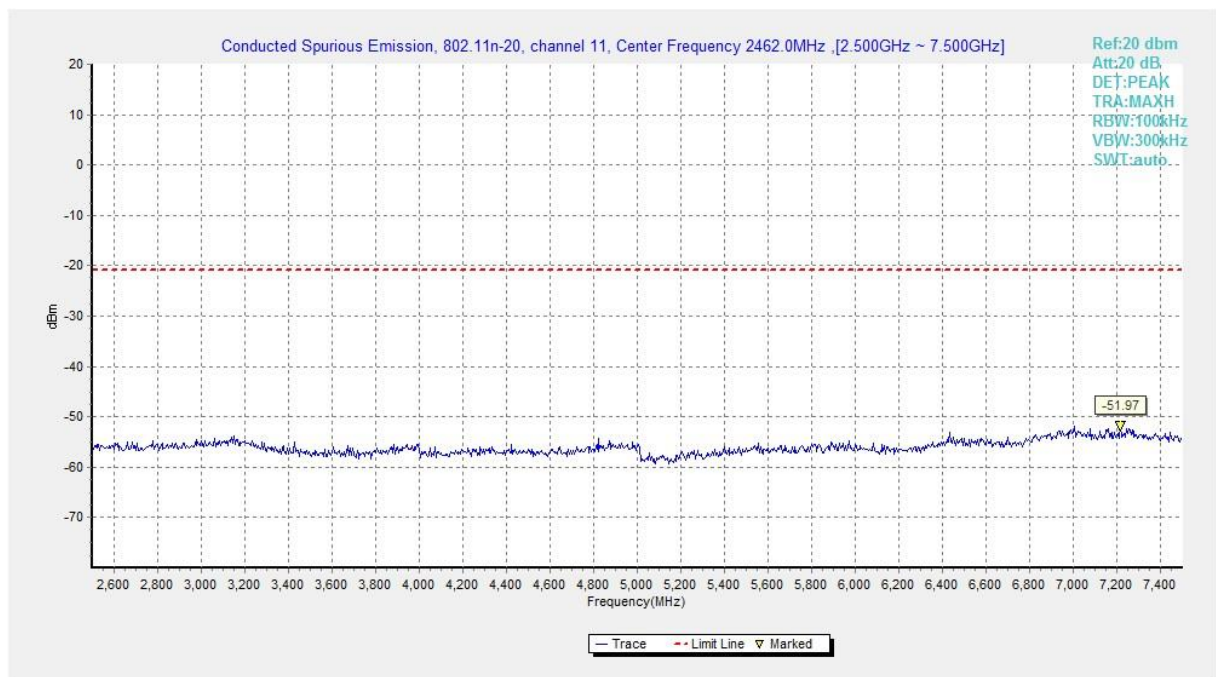


Fig.100 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 2.5 GHz-7.5 GHz)

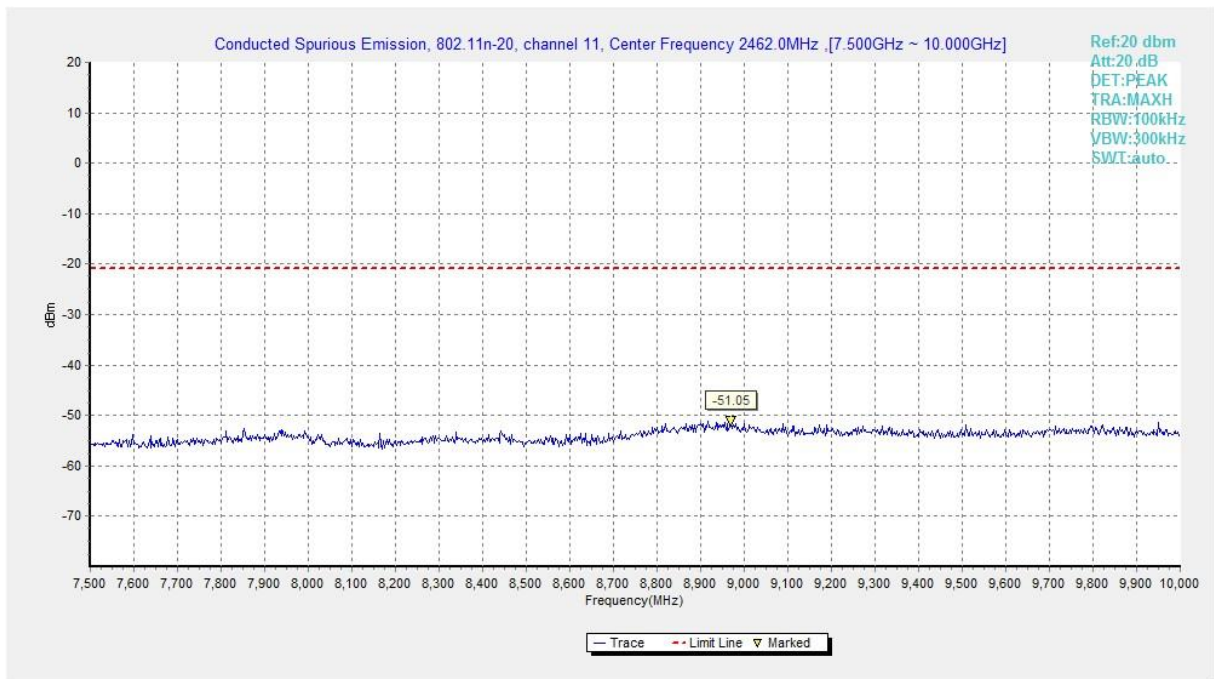


Fig.101 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 7.5 GHz-10 GHz)

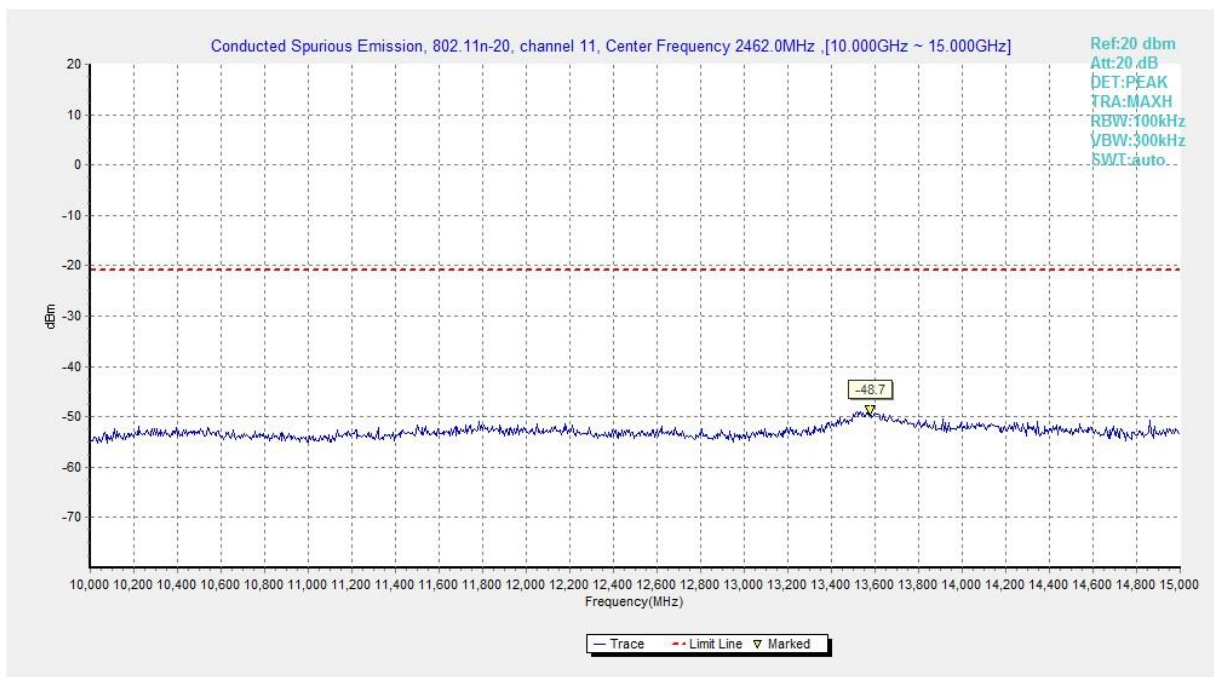


Fig.102 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 10 GHz-15 GHz)

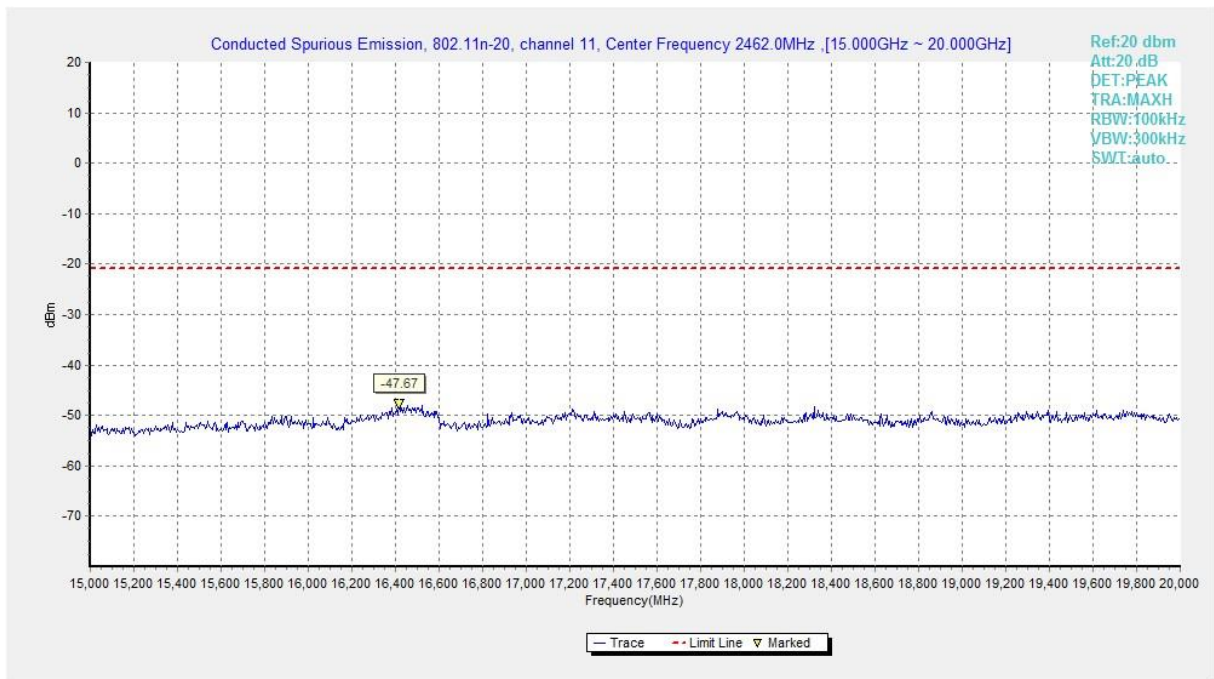


Fig.103 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 15 GHz-20 GHz)

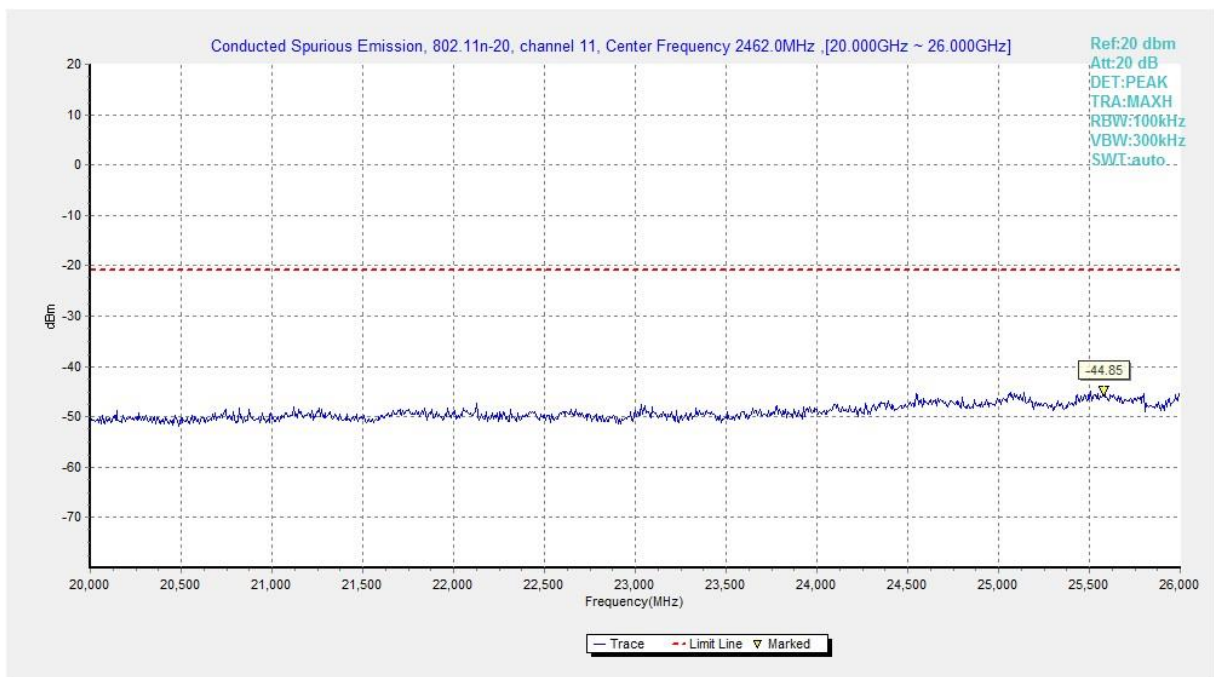


Fig.104 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 20 GHz-26 GHz)

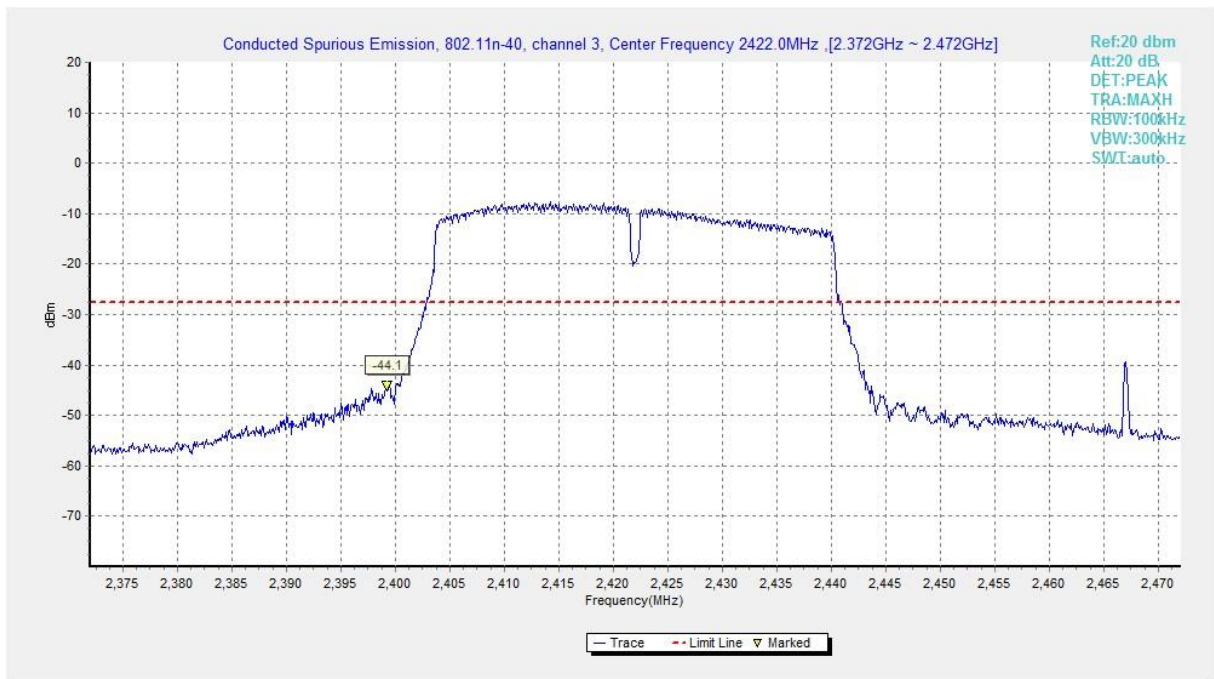


Fig.105 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, Center Frequency)

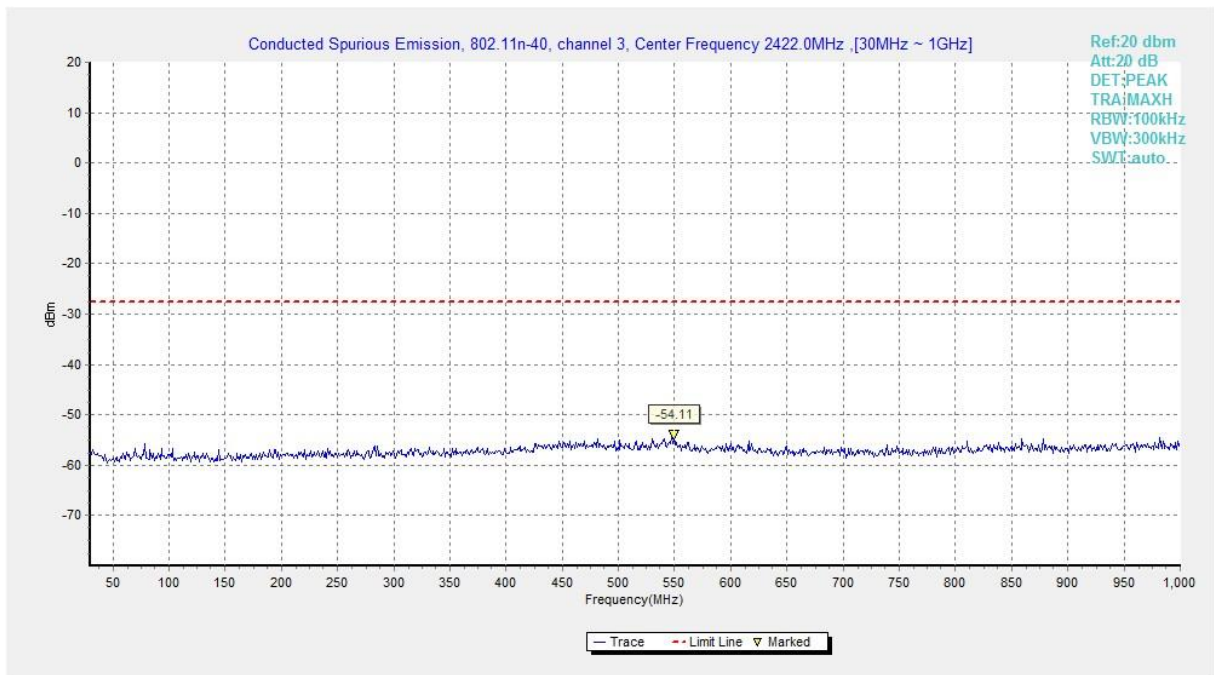


Fig.106 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 30 MHz-1 GHz)

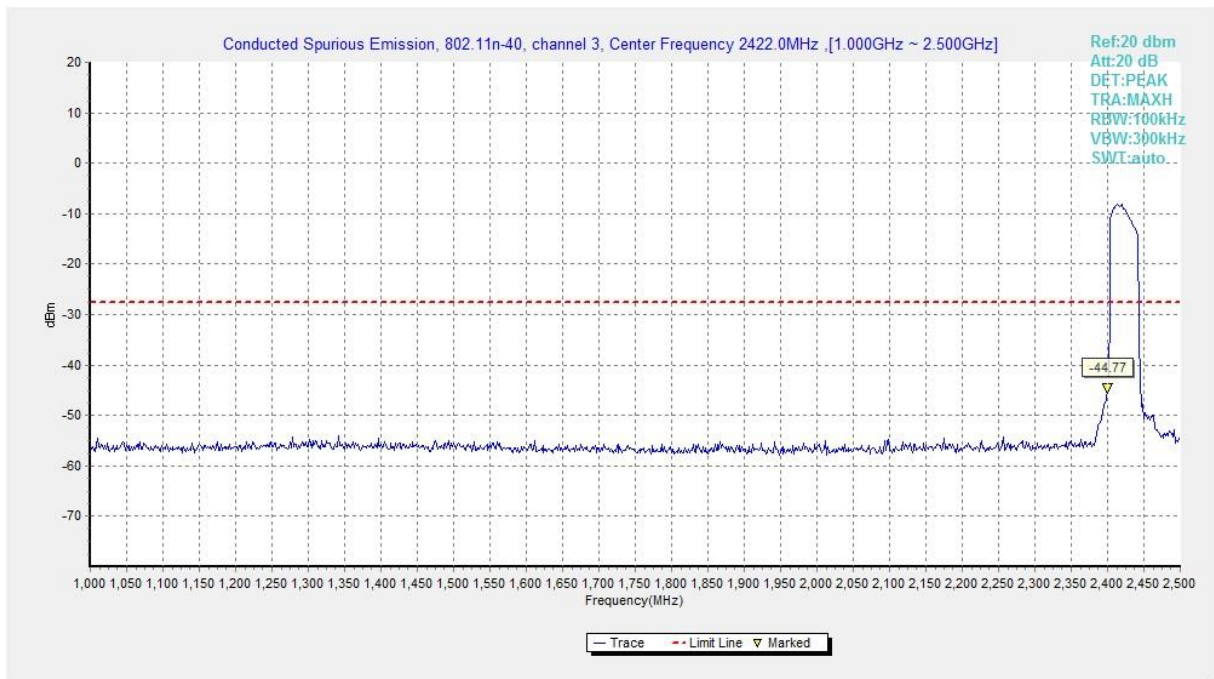


Fig.107 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 1 GHz-2.5 GHz)

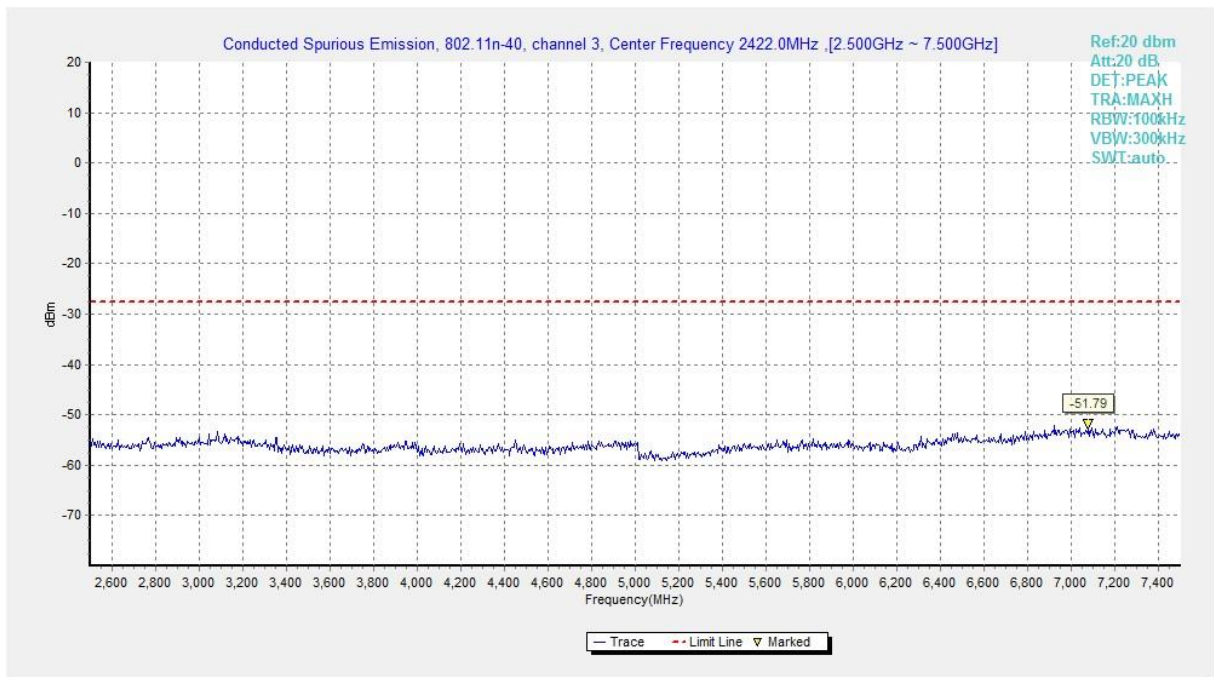


Fig.108 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 2.5 GHz-7.5 GHz)

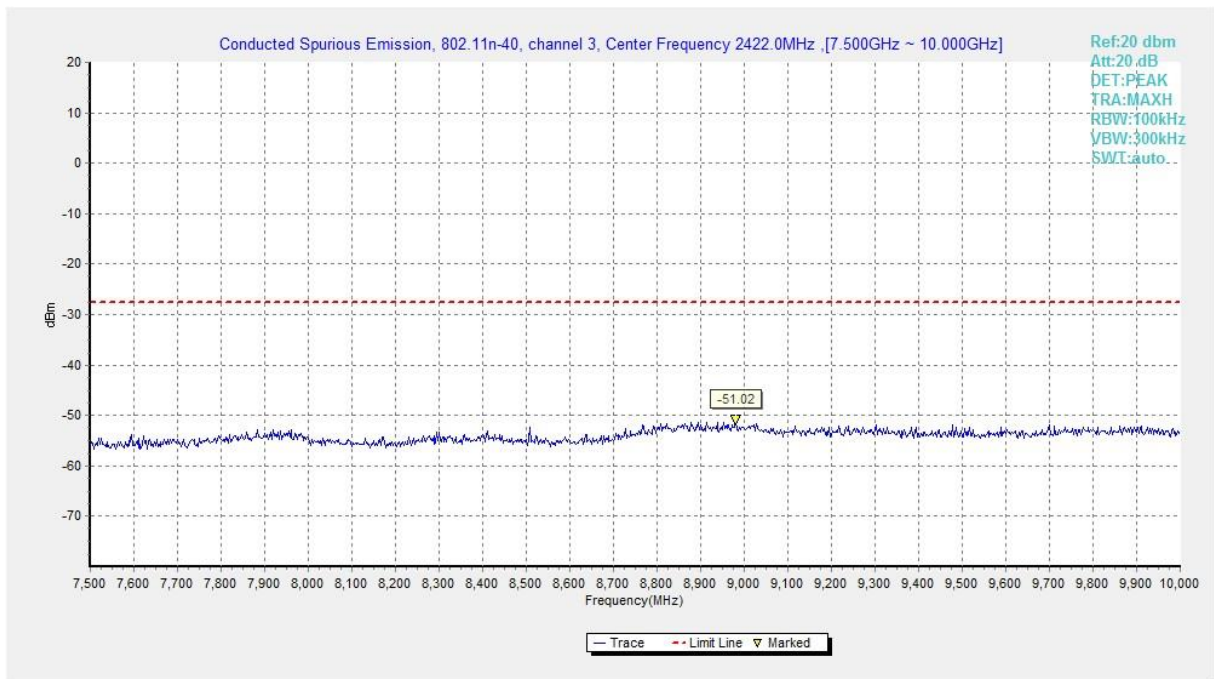


Fig.109 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 7.5 GHz-10 GHz)

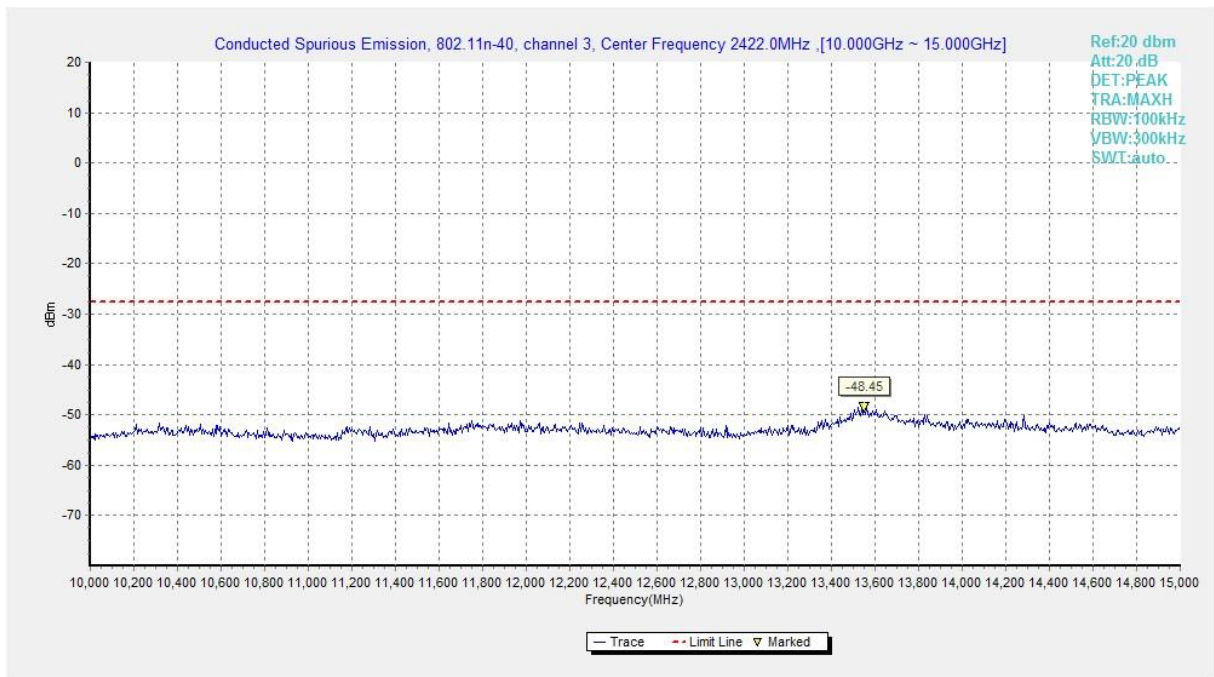


Fig.110 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 10 GHz-15 GHz)

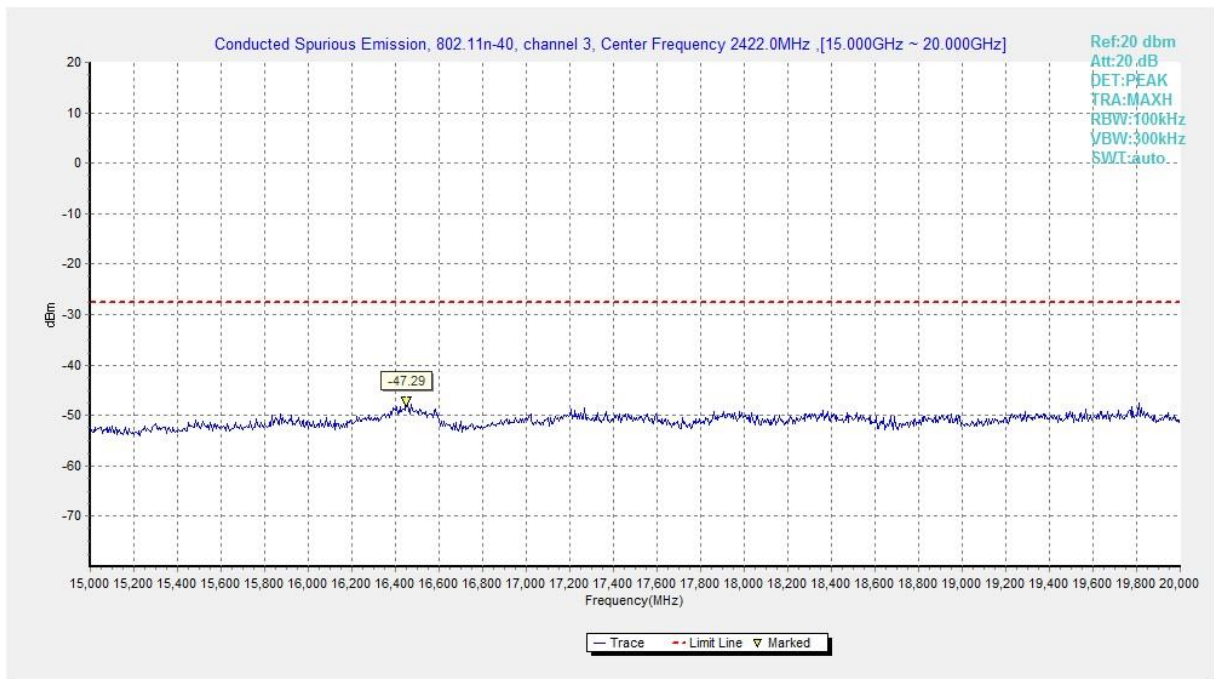


Fig.111 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 15 GHz-20 GHz)

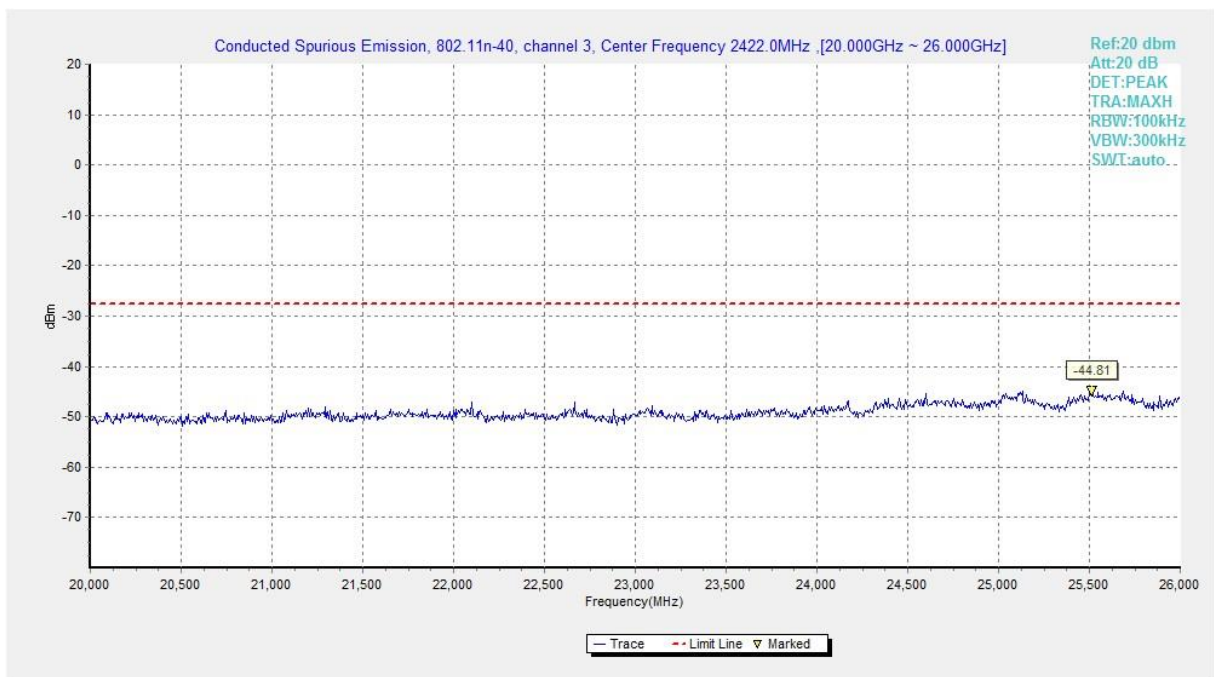


Fig.112 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 20 GHz-26 GHz)

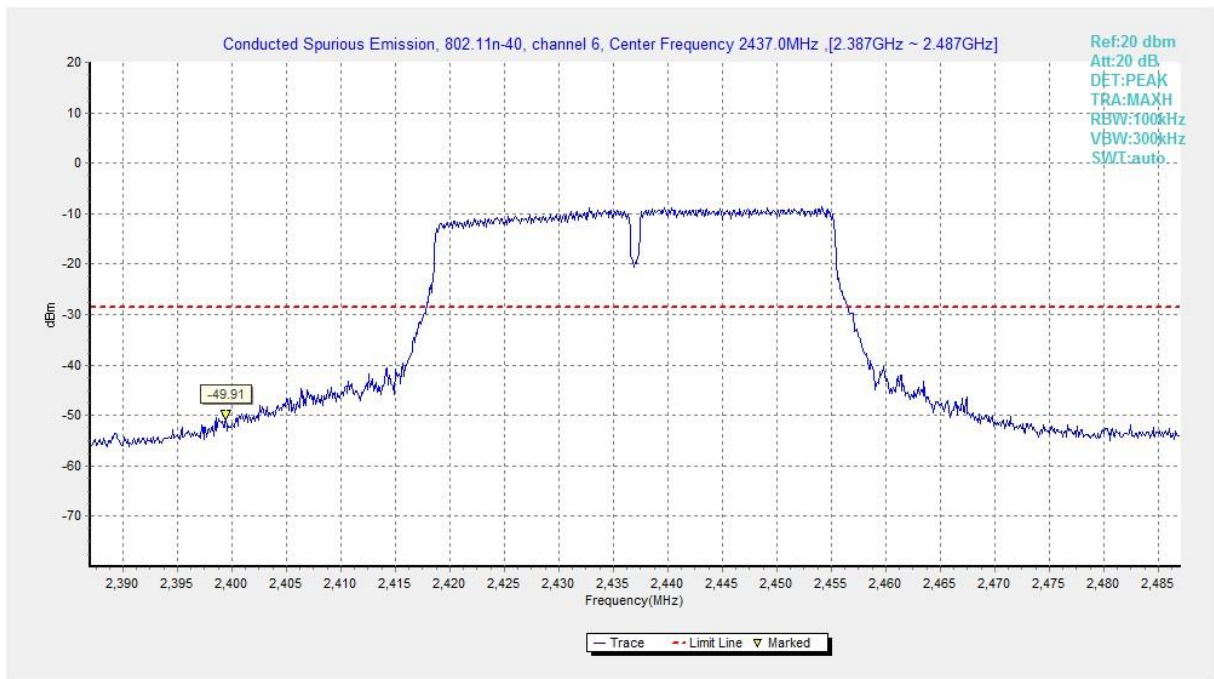


Fig.113 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, Center Frequency)

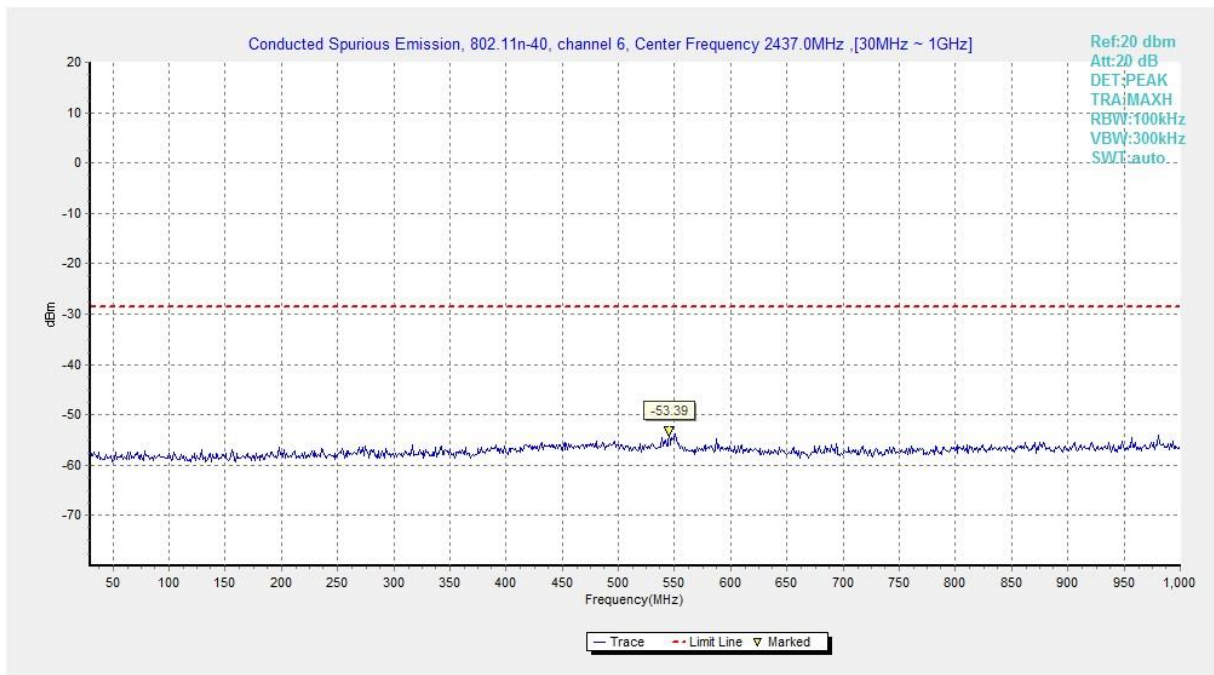


Fig.114 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 30 MHz-1 GHz)

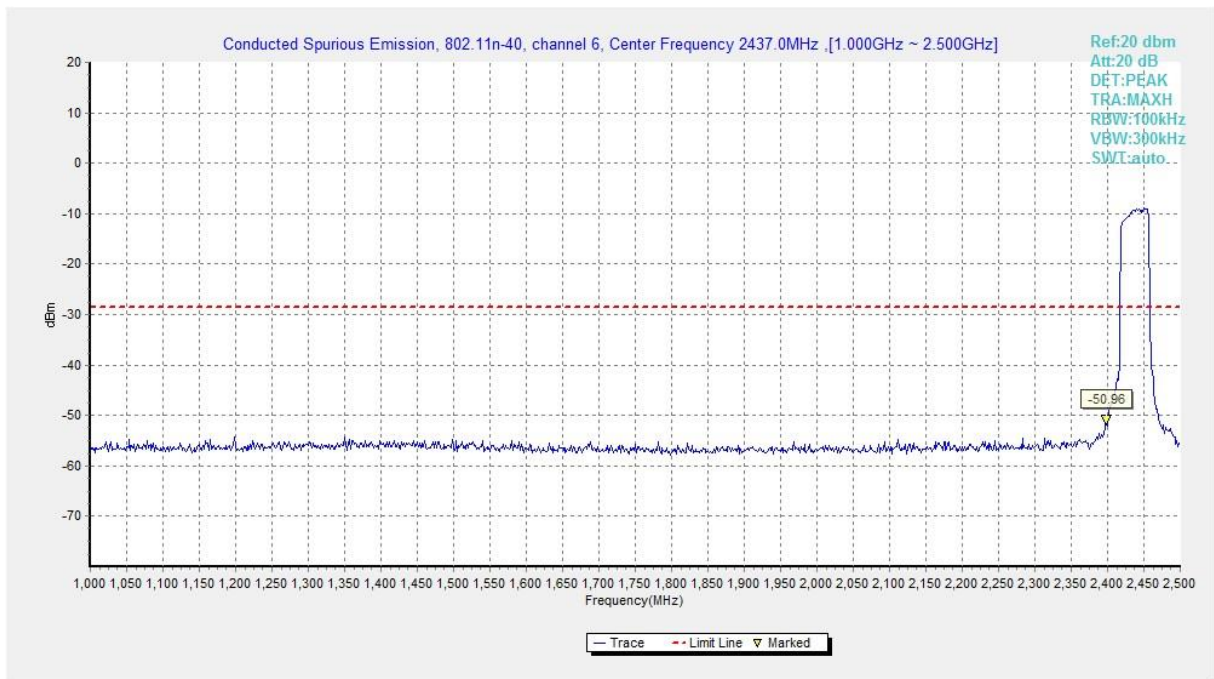


Fig.115 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 1 GHz-2.5 GHz)

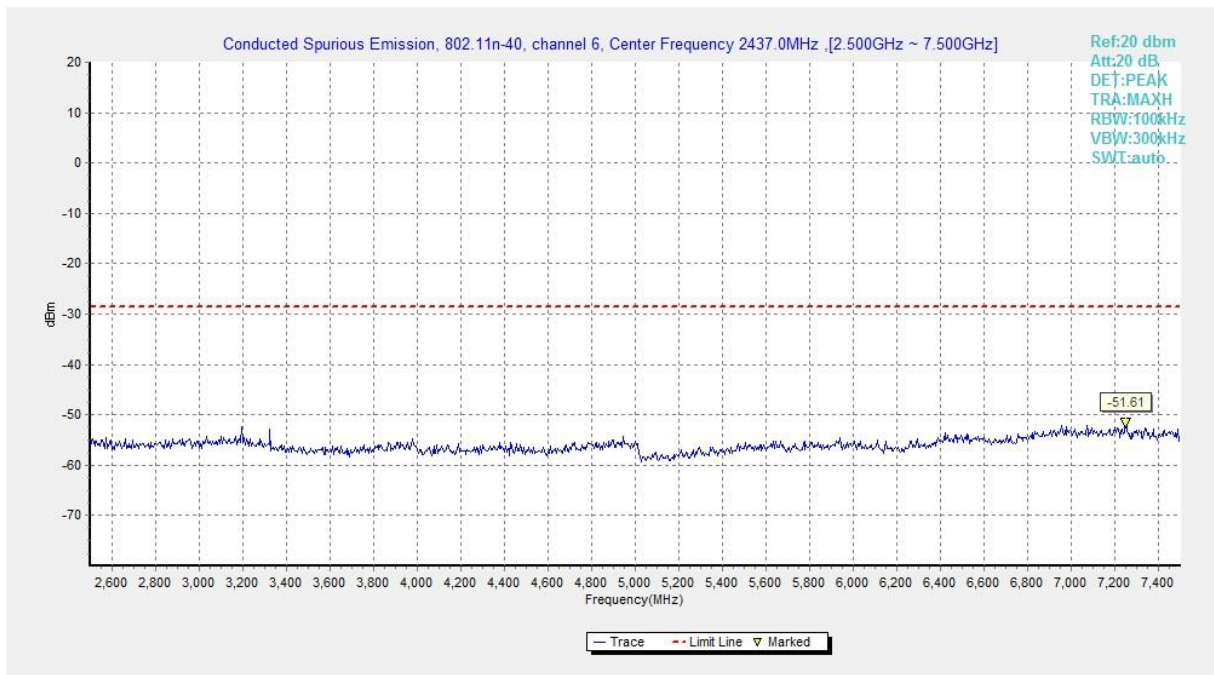


Fig.116 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 2.5 GHz-7.5 GHz)

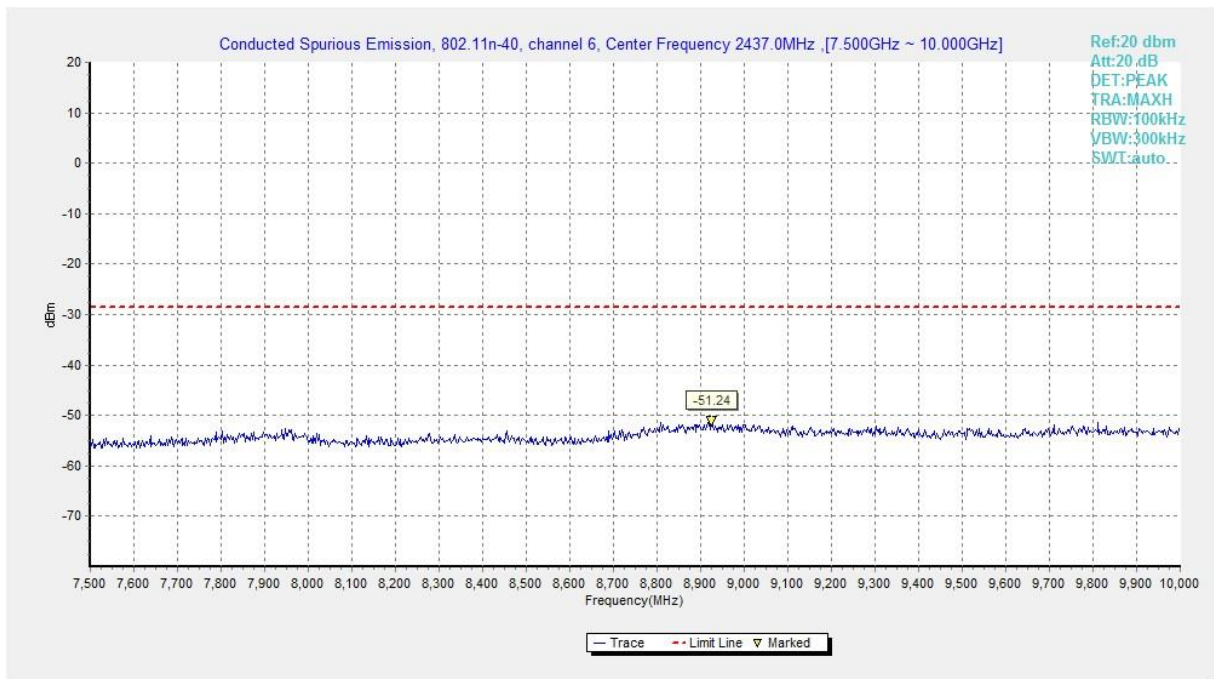


Fig.117 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 7.5 GHz-10 GHz)

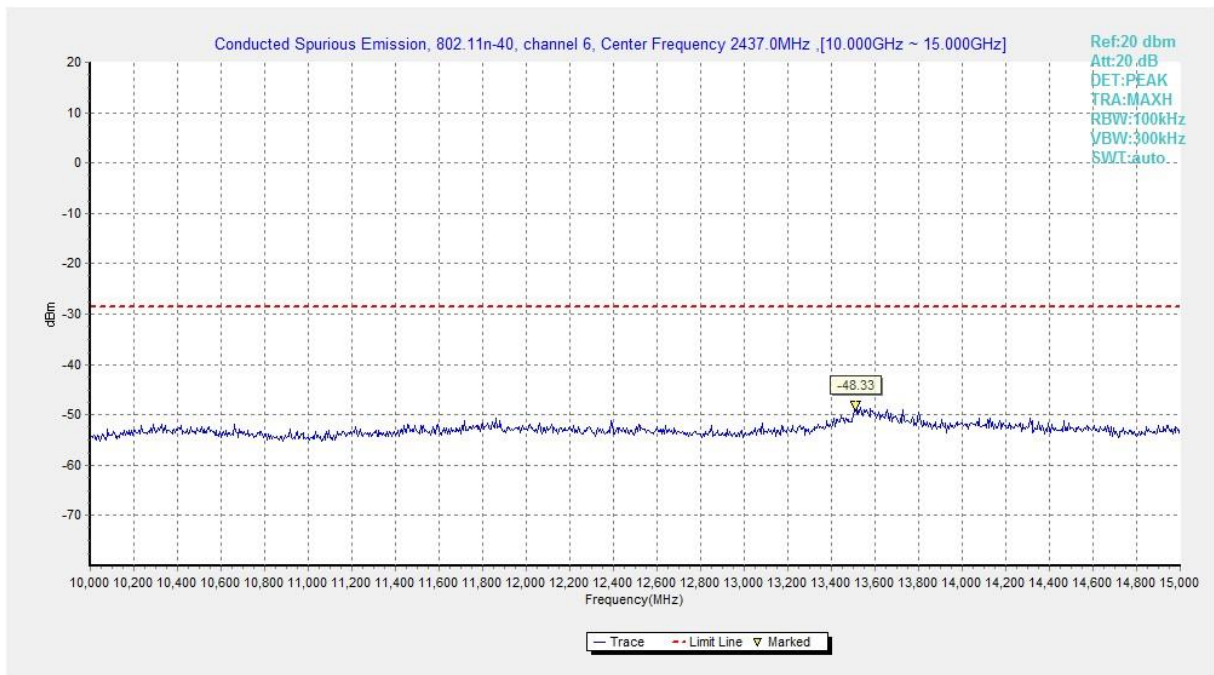


Fig.118 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 10 GHz-15 GHz)

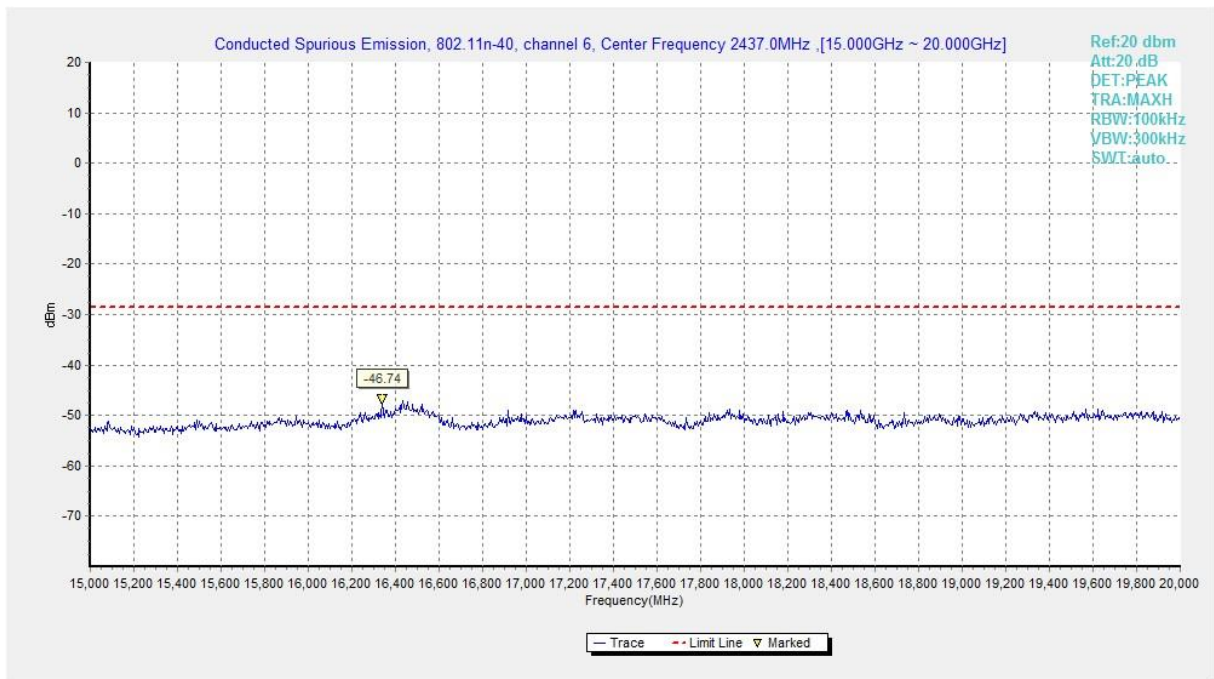


Fig.119 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 15 GHz-20 GHz)

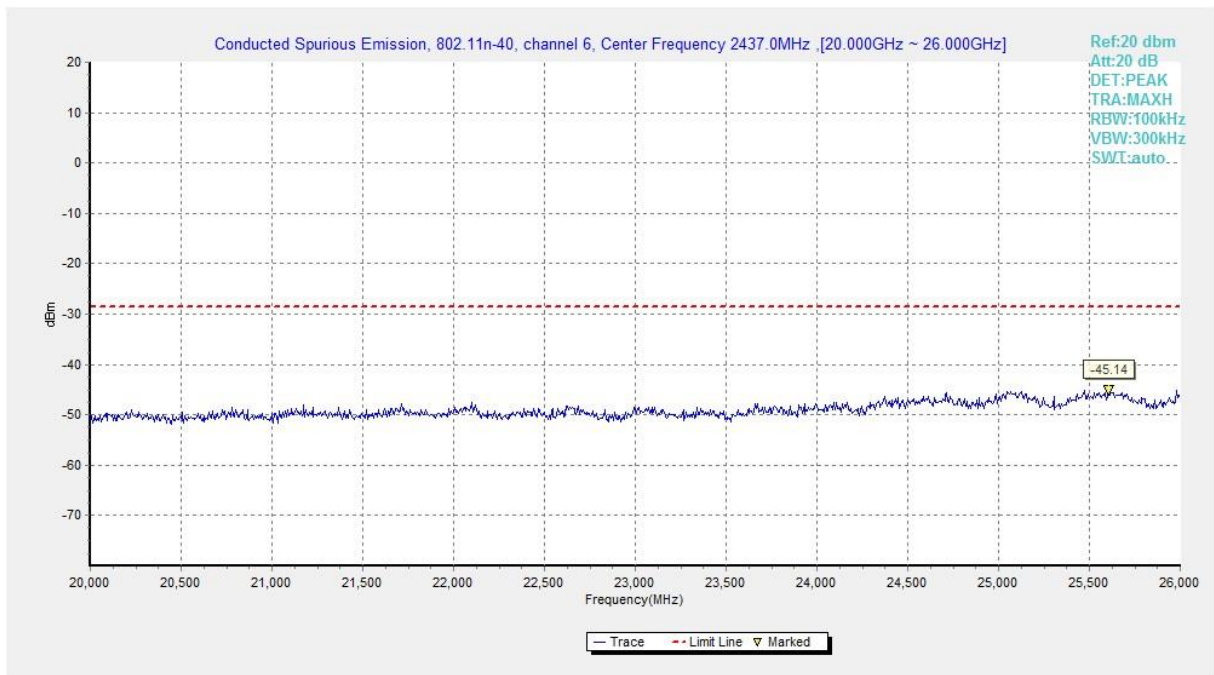


Fig.120 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 20 GHz-26 GHz)

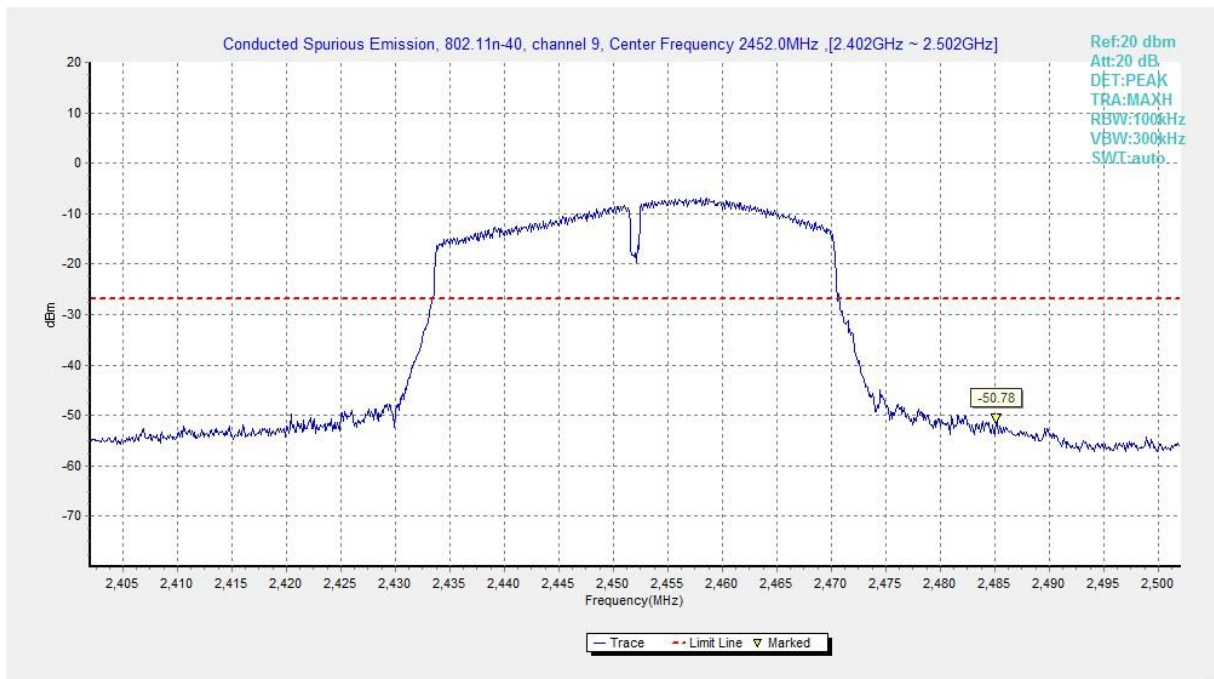


Fig.121 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, Center Frequency)

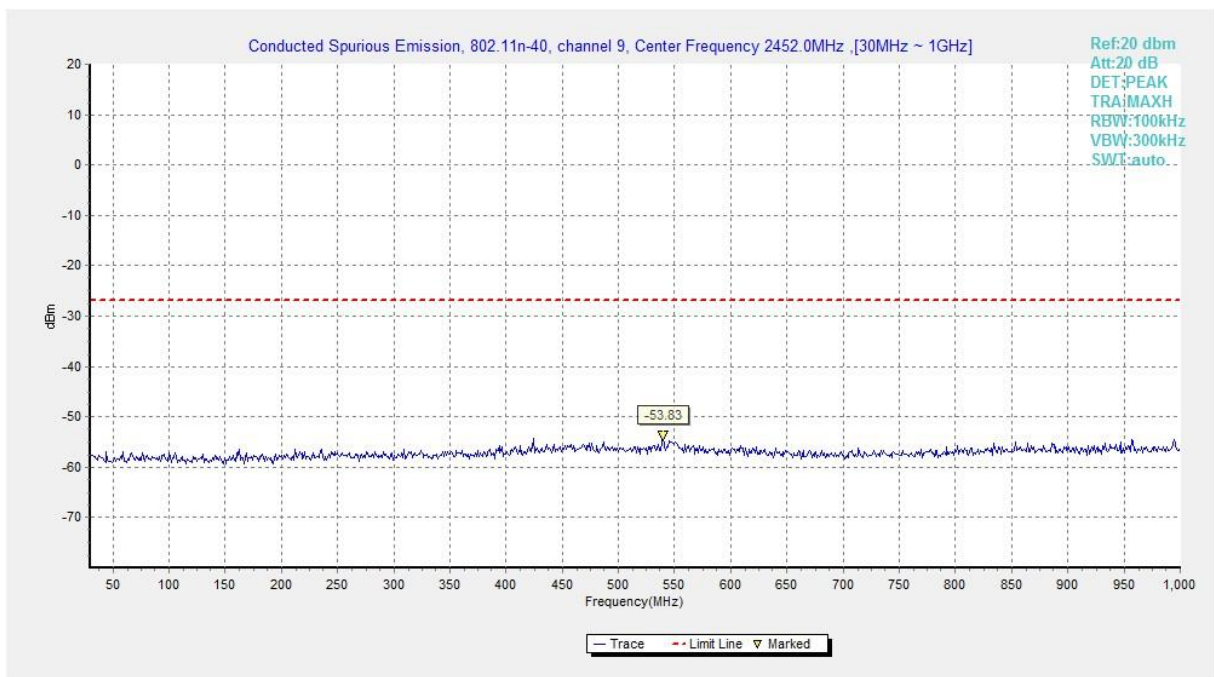


Fig.122 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 30 MHz-1 GHz)

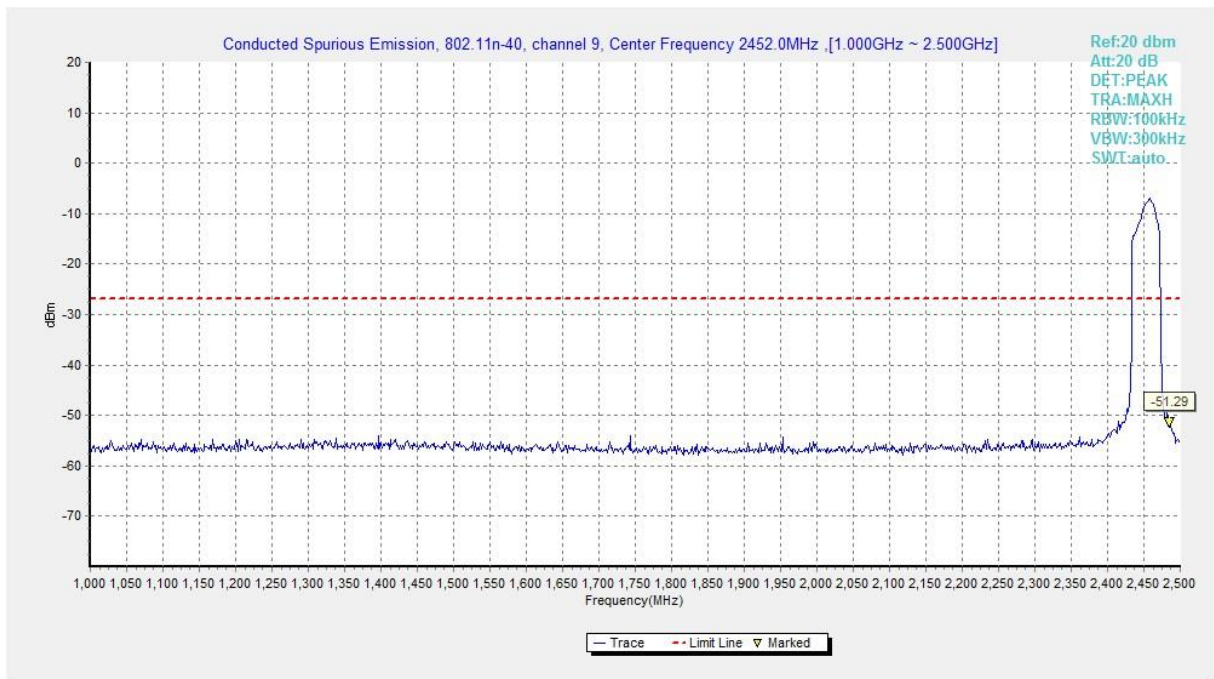


Fig.123 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 1 GHz-2.5 GHz)

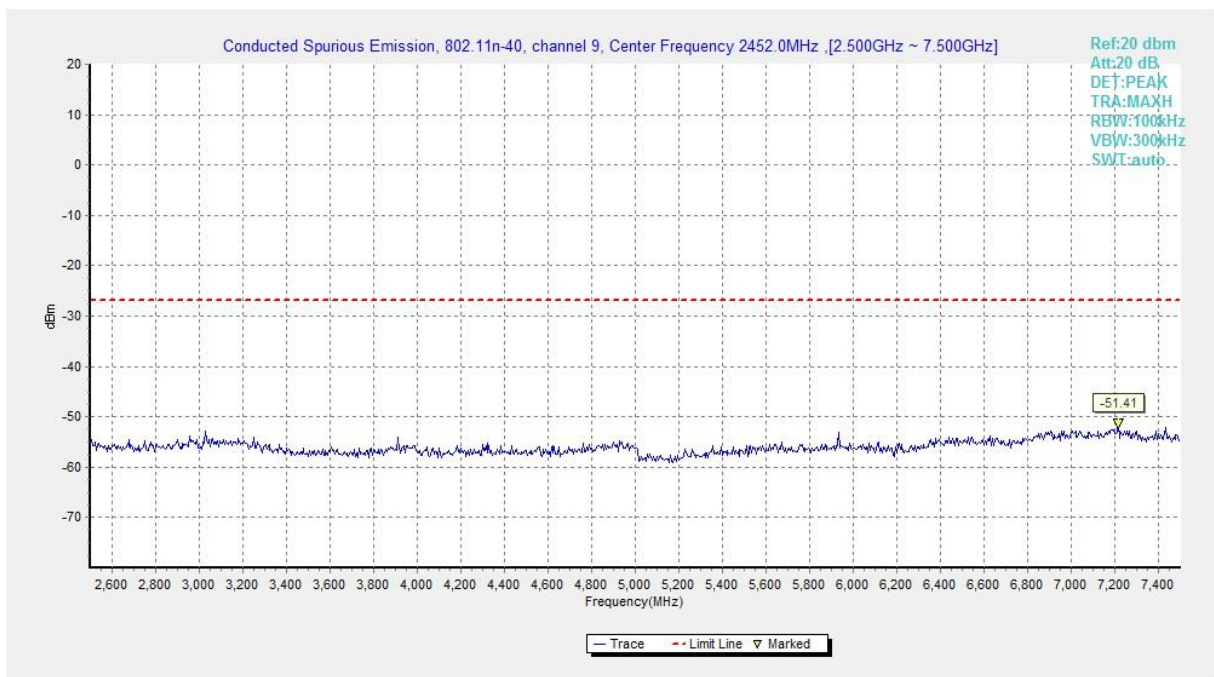


Fig.124 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 2.5 GHz-7.5 GHz)

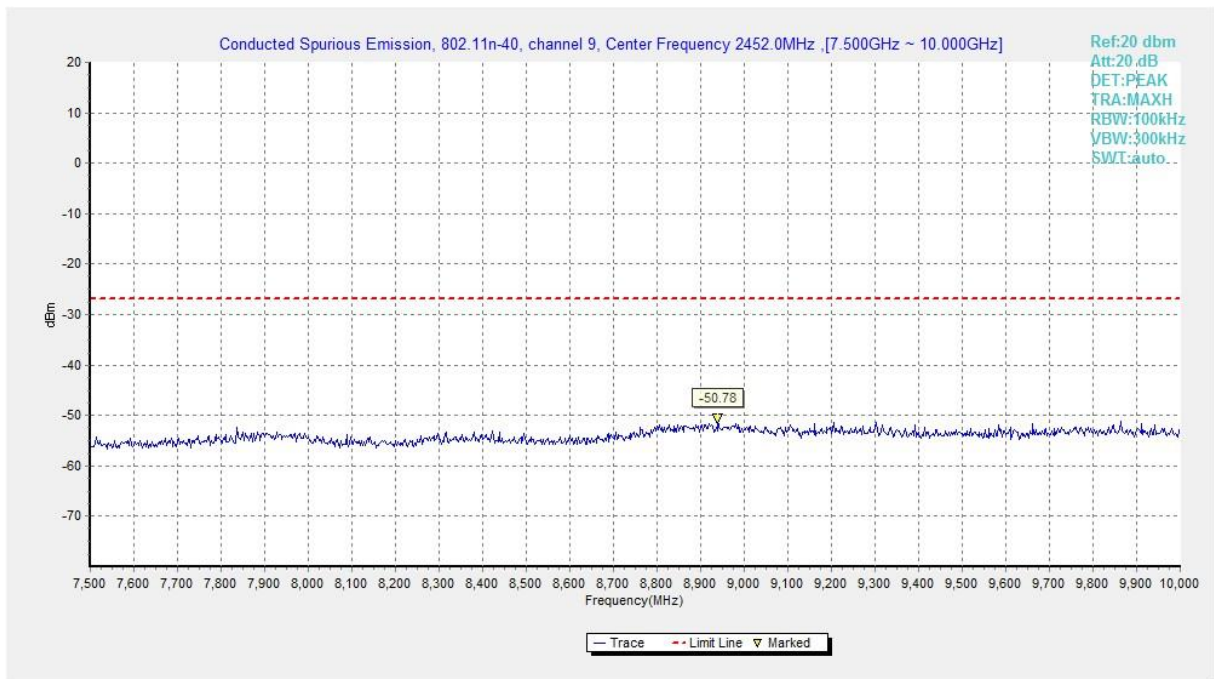


Fig.125 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 7.5 GHz-10 GHz)

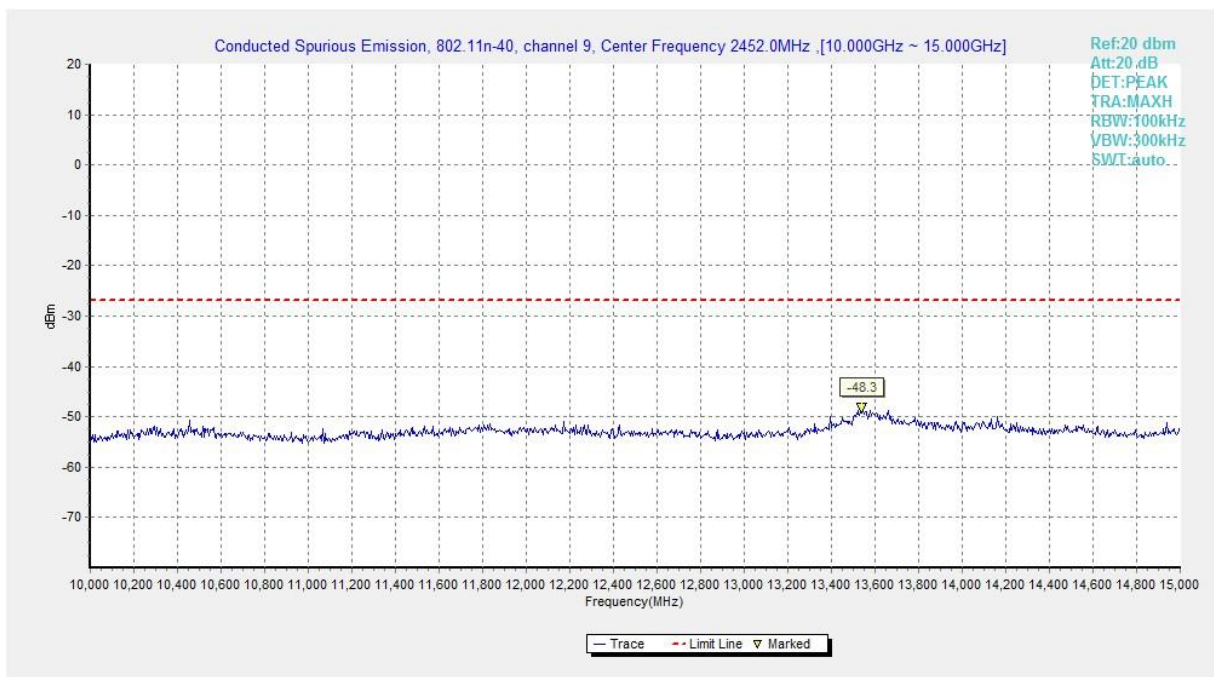


Fig.126 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 10 GHz-15 GHz)

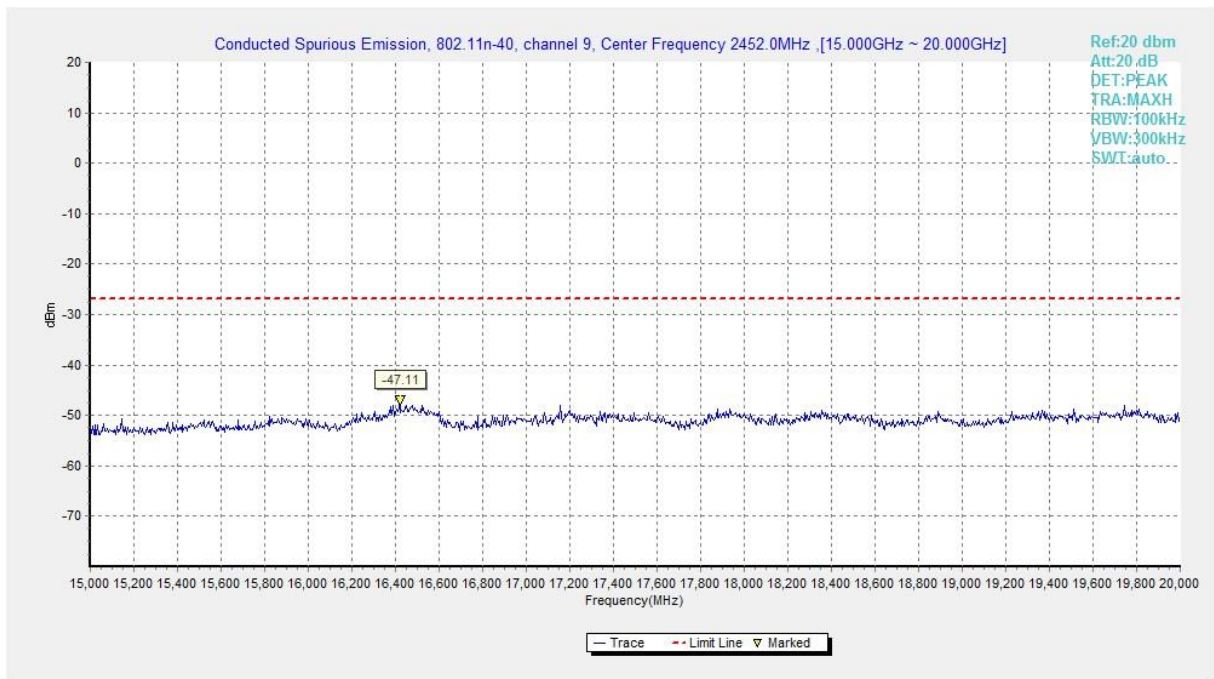


Fig.127 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 15 GHz-20 GHz)

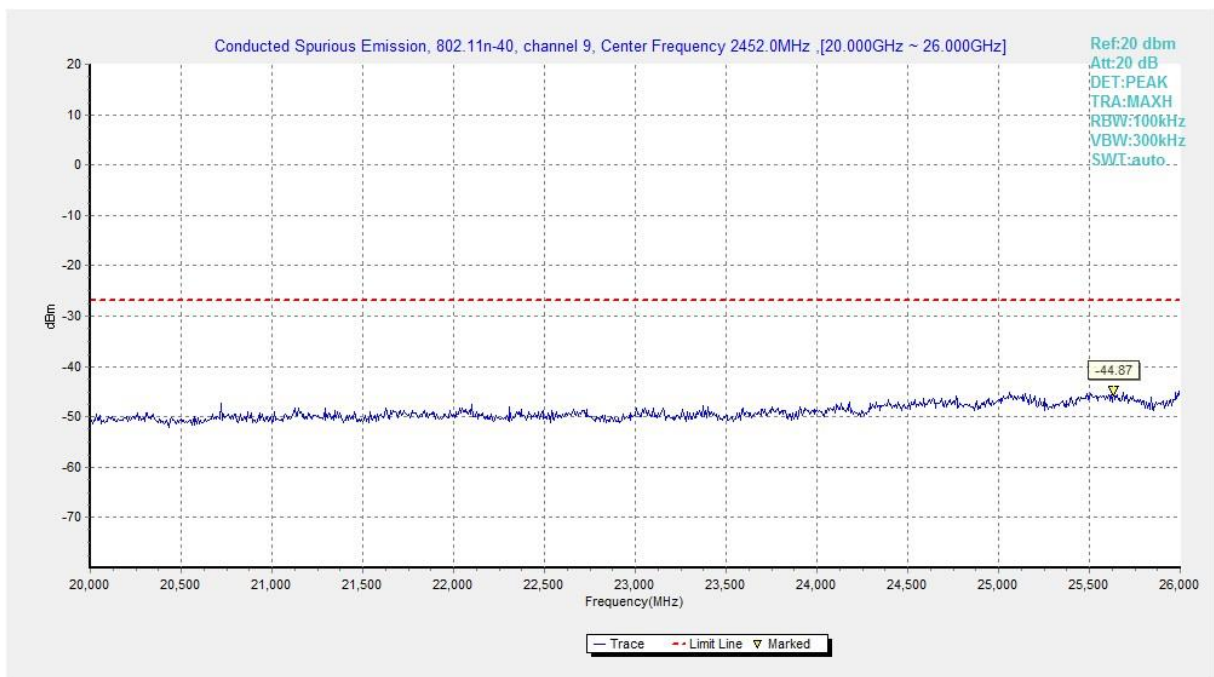


Fig.128 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 20 GHz-26 GHz)

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(μV/m)	Field strength(dBuV/m)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Frequency (MHz)	Field strength(μV/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

Test Condition

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	100KHz/300KHz	5
1000-4000	1MHz/1MHz	15
4000-18000	1MHz/1MHz	40
18000-26500	1MHz/1MHz	20

EUT ID: EUT1

Measurement Results:

802.11b mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	Power	2.38GHz ~2.45GHz	Fig.129.	P
	Power	2.45GHz ~2.5GHz	Fig.130.	P

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	Power	2.38GHz ~2.43GHz	Fig.131.	P
	Power	2.45GHz ~2.5GHz	Fig.132.	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	Power	2.38GHz ~2.45GHz	Fig.133.	P
	Power	2.45GHz ~2.5GHz	Fig.134.	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	Power	2.38GHz ~2.45GHz	Fig.135.	P
	Power	2.45GHz ~2.5GHz	Fig.136.	P

Conclusion: Pass

Note:

A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

P_{Mea} is the field strength recorded from the instrument.

The measurement results are obtained as described below:

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

Average Measurement results

802.11b

Ch1

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
17962	47.2	-25.5	46.7	26	V	54	6.8
17997.5	46.9	-25.5	46.7	25.7	V	54	7.1
17986	46.8	-25.5	46.7	25.6	V	54	7.2
17954.5	46.7	-25.5	46.7	25.5	V	54	7.3
17996	46.7	-25.5	46.7	25.5	V	54	7.3
2387	42.6	-14.2	28.1	28.7	V	54	11.4

Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
17992.5	46.8	-25.5	46.7	25.6	V	54	7.2
17995.5	46.8	-25.5	46.7	25.6	V	54	7.2
17962	46.7	-25.5	46.7	25.5	V	54	7.3
17967.5	46.7	-25.5	46.7	25.5	V	54	7.3
17976	46.7	-25.5	46.7	25.5	V	54	7.3
17985	46.7	-25.5	46.7	25.5	V	54	7.3

Ch11

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
17982.5	47.1	-25.5	46.7	25.9	V	54	6.9
17959	46.9	-25.5	46.7	25.7	V	54	7.1
17979	46.9	-25.5	46.7	25.7	V	54	7.1
17957.5	46.8	-25.5	46.7	25.6	V	54	7.2
17973	46.8	-25.5	46.7	25.6	V	54	7.2
2485.4	42.3	-14.2	28.3	28.2	V	54	11.7

802.11g
Ch1

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
17991	46.9	-25.5	46.7	25.7	V	54	7.1
17955	46.8	-25.5	46.7	25.6	V	54	7.2
17984	46.8	-25.5	46.7	25.6	V	54	7.2
17999	46.8	-25.5	46.7	25.6	V	54	7.2
17936	46.7	-25.5	46.7	25.5	V	54	7.3
2390	44.3	-14.2	28.1	30.4	V	54	9.7

Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
17973	46.9	-25.5	46.7	25.7	V	54	7.1
17967.5	46.8	-25.5	46.7	25.6	V	54	7.2
17965	46.6	-25.5	46.7	25.4	V	54	7.4
17975	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
17992	46.6	-25.5	46.7	25.4	V	54	7.4

Ch11

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
17973	46.8	-25.5	46.7	25.6	V	54	7.2
17973.5	46.8	-25.5	46.7	25.6	V	54	7.2
17950	46.7	-25.5	46.7	25.5	V	54	7.3
17957.5	46.7	-25.5	46.7	25.5	V	54	7.3
17985.5	46.7	-25.5	46.7	25.5	V	54	7.3
2485.1	44.2	-14.2	28.3	30.1	V	54	9.8

802.11n-HT20
Ch1

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
17977.5	47.1	-25.5	46.7	25.9	V	54	6.9
17945.5	47	-25.5	46.7	25.8	V	54	7
17957	46.9	-25.5	46.7	25.7	V	54	7.1
17968.5	46.8	-25.5	46.7	25.6	V	54	7.2
17995.5	46.8	-25.5	46.7	25.6	V	54	7.2
2389.8	42.3	-14.2	28.1	28.4	V	54	11.7

Ch6

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
17969.5	47.1	-25.5	46.7	25.9	V	54	6.9
17970	46.9	-25.5	46.7	25.7	V	54	7.1
17942	46.8	-25.5	46.7	25.6	V	54	7.2
17990.5	46.8	-25.5	46.7	25.6	V	54	7.2
17994.5	46.8	-25.5	46.7	25.6	V	54	7.2
17951.5	46.7	-25.5	46.7	25.5	V	54	7.3

Ch11

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
17953	46.9	-25.5	46.7	25.7	V	54	7.1
17983	46.9	-25.5	46.7	25.7	V	54	7.1
17963	46.8	-25.5	46.7	25.6	V	54	7.2
17962	46.7	-25.5	46.7	25.5	V	54	7.3
17971.5	46.7	-25.5	46.7	25.5	V	54	7.3
2485	42.7	-14.2	28.3	28.6	V	54	11.3