

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

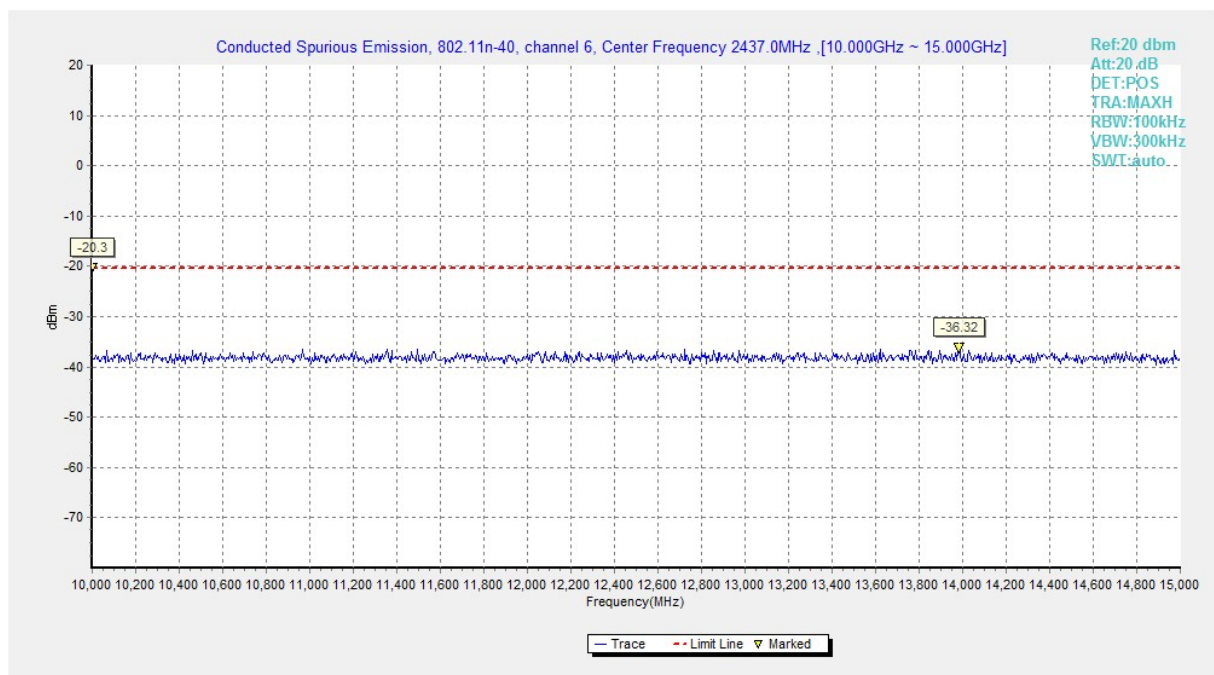


Fig.A.6.1.86 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 10 GHz-15 GHz)

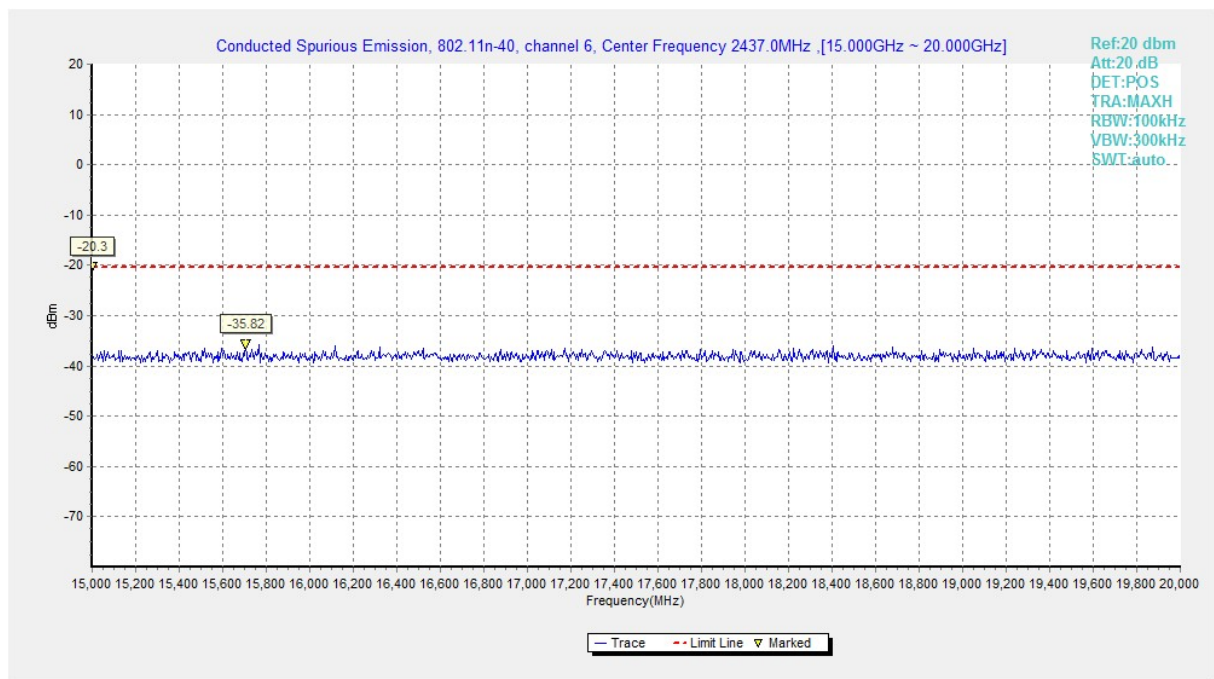


Fig.A.6.1.87 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 15 GHz-20 GHz)

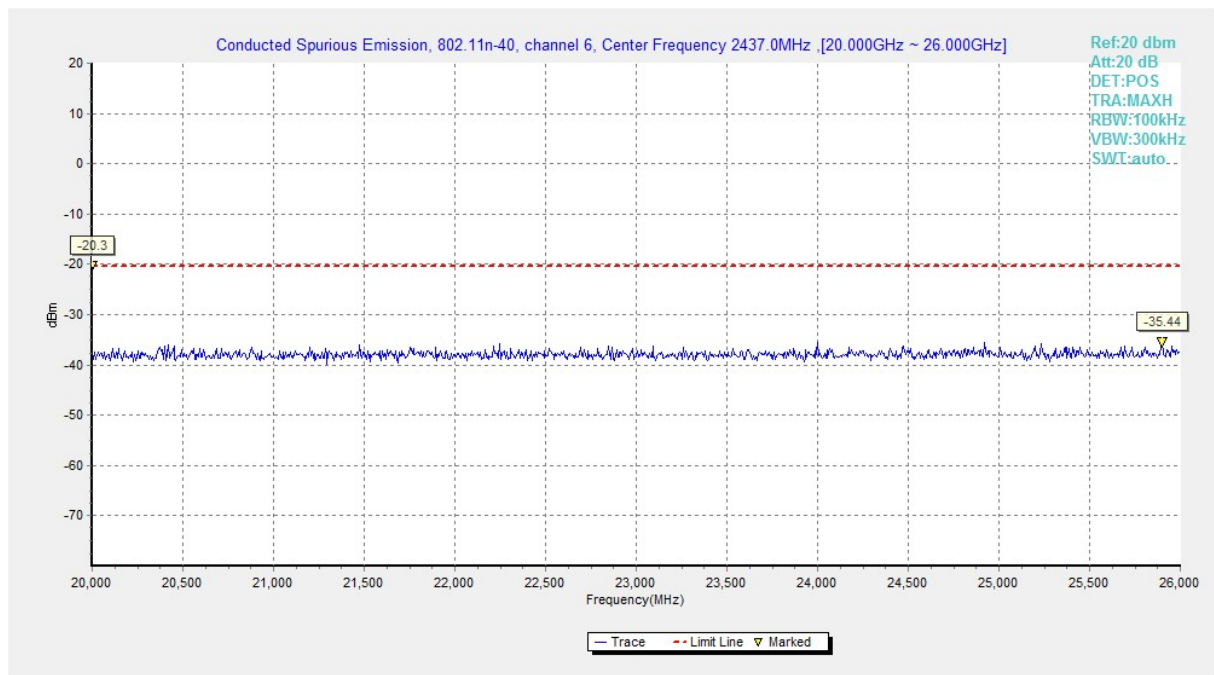


Fig.A.6.1.88 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 20 GHz-26 GHz)

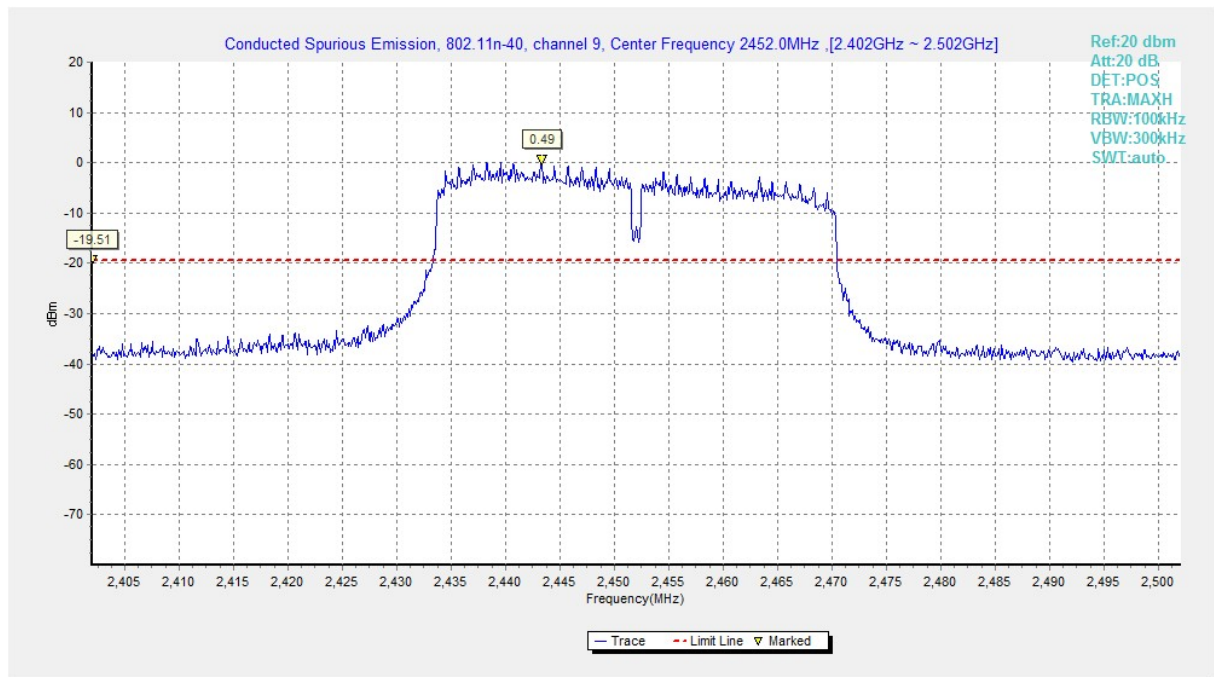


Fig.A.6.1.89 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, Center Frequency)

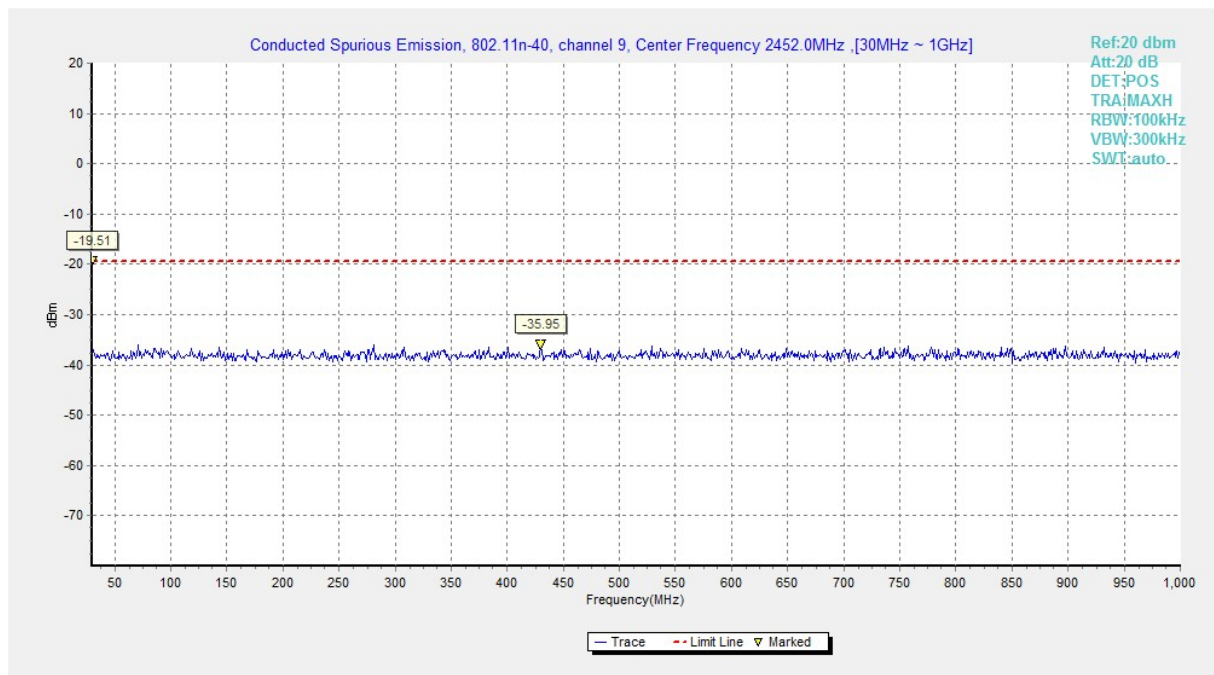


Fig.A.6.1.90 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 30 MHz-1 GHz)

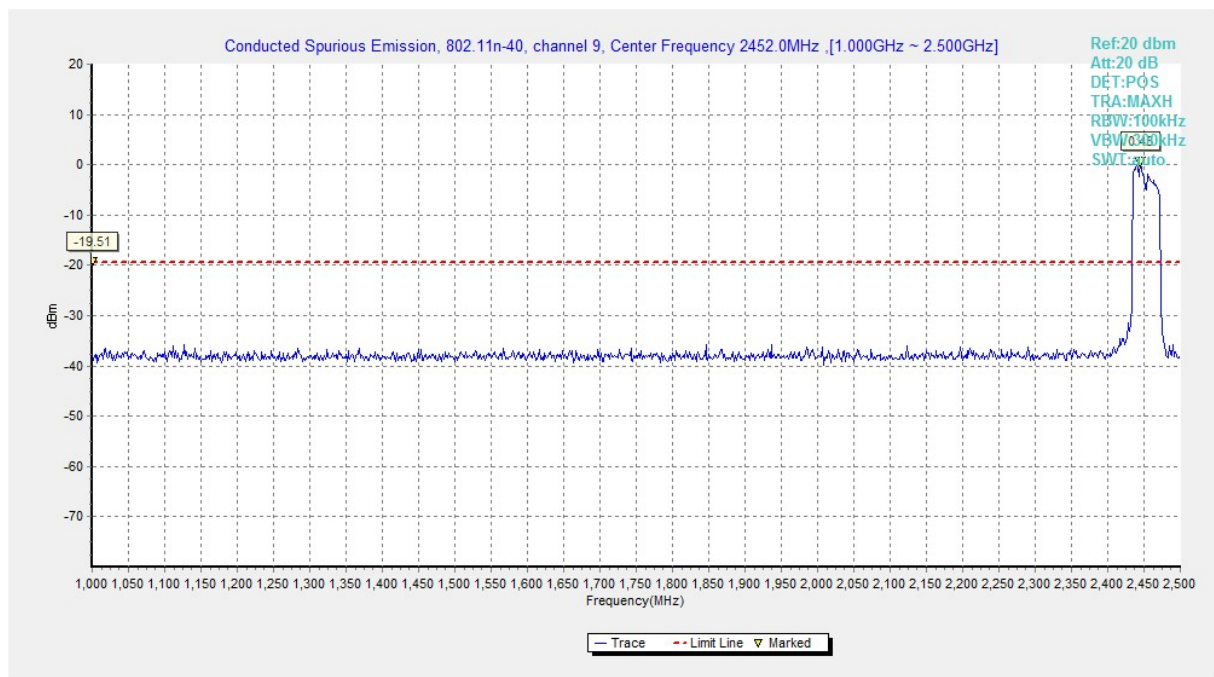


Fig.A.6.1.91 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 1 GHz-2.5 GHz)

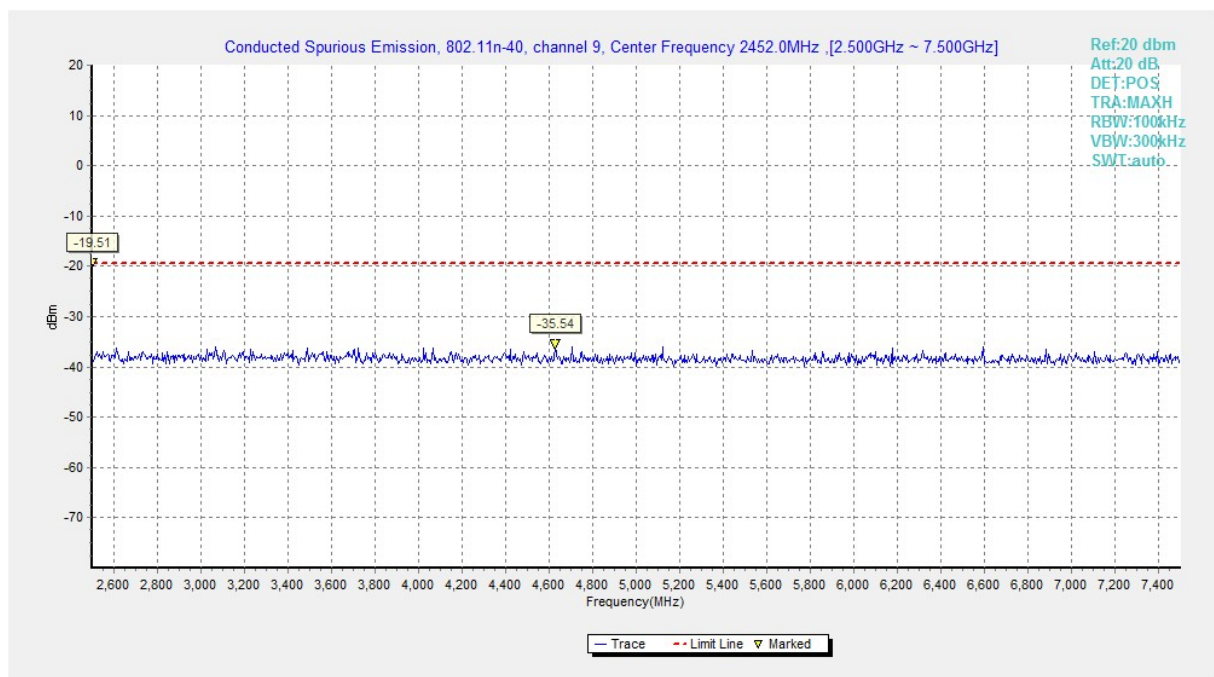


Fig.A.6.1.92 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 2.5 GHz-7.5 GHz)

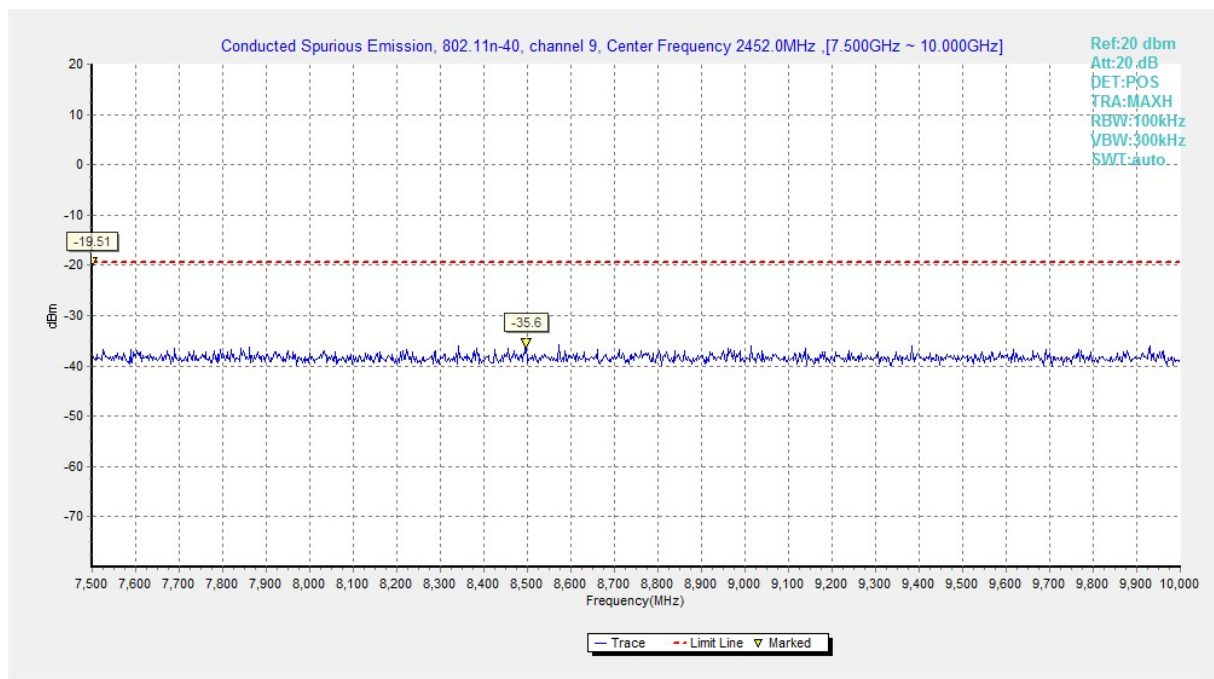


Fig.A.6.1.93 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 7.5 GHz-10 GHz)

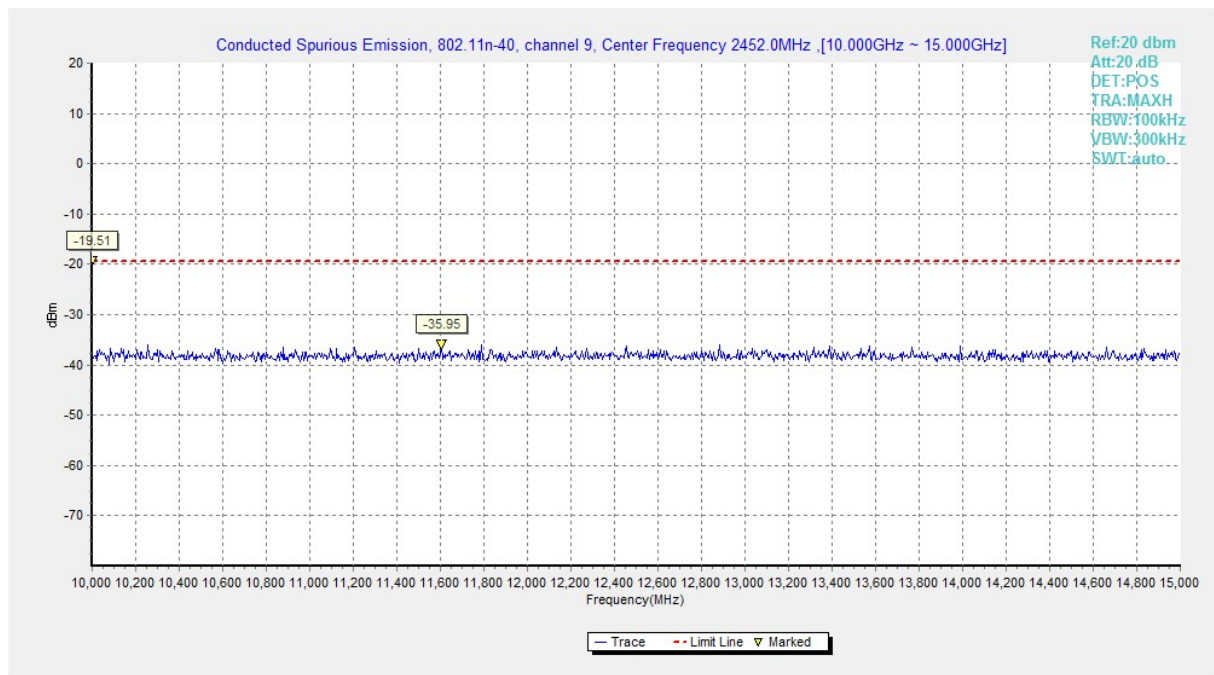


Fig.A.6.1.94 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 10 GHz-15 GHz)

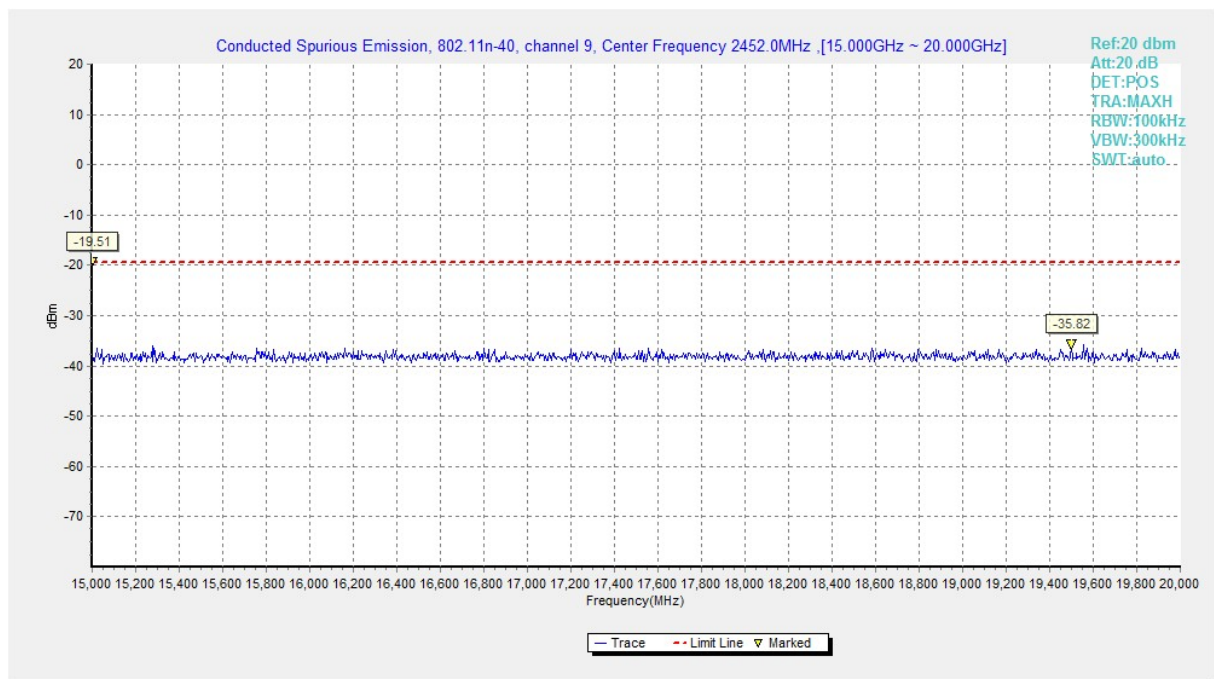


Fig.A.6.1.95 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 15 GHz-20 GHz)

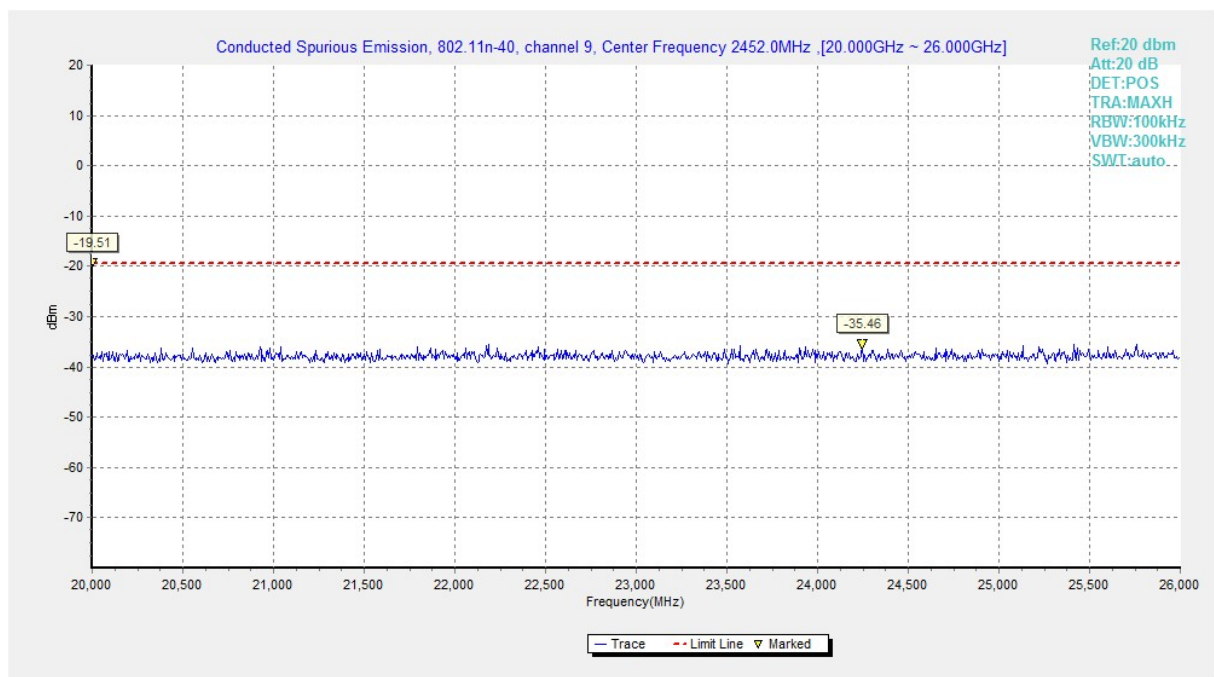


Fig.A.6.1.96 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 20 GHz-26 GHz)

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

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

Test Condition

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

Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	100KHz/300KHz	5
1000-4000	1MHz/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.A.6.2.1	P
	1	1 GHz ~ 3 GHz	Fig.A.6.2.2	P
		3 GHz ~ 18 GHz	Fig.A.6.2.3	P
	6	9 kHz ~30 MHz	Fig.A.6.2.4	P
		30 MHz ~1 GHz	Fig.A.6.2.5	P
		1 GHz ~ 3 GHz	Fig.A.6.2.6	P
		3 GHz ~ 18 GHz	Fig.A.6.2.7	P
		18 GHz~ 26.5 GHz	Fig.A.6.2.8	P
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.9	P
	11	1 GHz ~ 3 GHz	Fig.A.6.2.10	P
		3 GHz ~ 18 GHz	Fig.A.6.2.11	P

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	Power	2.38GHz ~2.43GHz	Fig.A.6.2.12	P
	1	1 GHz ~ 3 GHz	Fig.A.6.2.13	P
		3 GHz ~ 18 GHz	Fig.A.6.2.14	P
	6	30 MHz ~1 GHz	Fig.A.6.2.15	P
		1 GHz ~ 3 GHz	Fig.A.6.2.16	P
		3 GHz ~ 18 GHz	Fig.A.6.2.17	P
		18 GHz~ 26.5 GHz	Fig.A.6.2.18	P
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.19	P
	11	1 GHz ~ 3 GHz	Fig.A.6.2.20	P
		3 GHz ~ 18 GHz	Fig.A.6.2.21	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	Power	2.38GHz ~2.45GHz	Fig.A.6.2.22	P
	1	1 GHz ~ 3 GHz	Fig.A.6.2.23	P
		3 GHz ~ 18 GHz	Fig.A.6.2.24	P
	6	30 MHz ~1 GHz	Fig.A.6.2.25	P
		1 GHz ~ 3 GHz	Fig.A.6.2.26	P
		3 GHz ~ 18 GHz	Fig.A.6.2.27	P
		18 GHz~ 26.5 GHz	Fig.A.6.2.28	P
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.29	P
	11	1 GHz ~ 3 GHz	Fig.A.6.2.30	P
		3 GHz ~ 18 GHz	Fig.A.6.2.31	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	Power	2.38GHz ~2.45GHz	Fig.A.6.2.32	P
	3	1 GHz ~ 3 GHz	Fig.A.6.2.33	P
		3 GHz ~ 18 GHz	Fig.A.6.2.34	P
	6	30 MHz ~1 GHz	Fig.A.6.2.35	P
		1 GHz ~ 3 GHz	Fig.A.6.2.36	P
		3 GHz ~ 18 GHz	Fig.A.6.2.37	P
		18 GHz~ 26.5 GHz	Fig.A.6.2.38	P
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.39	P
	9	1 GHz ~ 3 GHz	Fig.A.6.2.40	P
		3 GHz ~ 18 GHz	Fig.A.6.2.41	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:

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

802.11b

Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
2389.968	47.8	-26.9	32.4	42.308	HORIZONTAL
17625.750	46.4	-14.9	41.2	20.118	HORIZONTAL
17700.750	46.3	-13.0	41.2	18.105	HORIZONTAL
17712.000	46.3	-13.0	41.2	18.105	HORIZONTAL
17634.750	46.3	-13.0	41.2	18.105	VERTICAL
17694.750	46.2	-13.0	41.2	18.005	VERTICAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17636.250	46.3	-13.0	41.2	18.105	VERTICAL
17628.000	46.3	-14.9	41.2	20.018	HORIZONTAL
17685.000	46.3	-13.0	41.2	18.105	HORIZONTAL
17660.250	46.3	-13.0	41.2	18.105	HORIZONTAL
17682.750	46.3	-13.0	41.2	18.105	VERTICAL
17630.250	46.3	-14.9	41.2	20.018	HORIZONTAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2483.680	47.7	-27.4	32.4	42.672	VERTICAL
17684.250	46.4	-13.0	41.2	18.205	HORIZONTAL
17700.000	46.3	-13.0	41.2	18.105	HORIZONTAL
17728.500	46.3	-13.0	41.2	18.105	VERTICAL
17632.500	46.2	-14.9	41.2	19.918	HORIZONTAL
17724.750	46.2	-13.0	41.2	18.005	VERTICAL

802.11g

Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2389.968	50.0	-26.9	32.4	44.508	VERTICAL
17711.250	46.3	-13.0	41.2	18.105	HORIZONTAL
17626.500	46.3	-14.9	41.2	20.018	VERTICAL
17633.250	46.3	-13.0	41.2	18.105	HORIZONTAL
17673.000	46.3	-13.0	41.2	18.105	VERTICAL
17647.500	46.3	-13.0	41.2	18.105	HORIZONTAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17701.500	46.4	-13.0	41.2	18.205	VERTICAL
17679.750	46.3	-13.0	41.2	18.105	HORIZONTAL
17661.750	46.3	-13.0	41.2	18.105	HORIZONTAL
17614.500	46.3	-14.9	41.2	20.018	HORIZONTAL
17658.750	46.3	-13.0	41.2	18.105	HORIZONTAL
17619.750	46.3	-14.9	41.2	20.018	VERTICAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2483.560	47.9	-27.4	32.4	42.872	VERTICAL
17655.000	46.4	-13.0	41.2	18.205	VERTICAL
17642.250	46.3	-13.0	41.2	18.105	VERTICAL
17653.500	46.2	-13.0	41.2	18.005	VERTICAL
17616.750	46.2	-14.9	41.2	19.918	VERTICAL
17706.000	46.2	-13.0	41.2	18.005	HORIZONTAL

802.11n-HT20
Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2389.940	49.2	-26.9	32.4	43.708	VERTICAL
17637.750	46.4	-13.0	41.2	18.205	VERTICAL
17745.750	46.3	-13.0	41.2	18.105	VERTICAL
17628.000	46.3	-14.9	41.2	20.018	VERTICAL
17676.000	46.3	-13.0	41.2	18.105	HORIZONTAL
17694.000	46.3	-13.0	41.2	18.105	VERTICAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17627.250	46.6	-14.9	41.2	20.318	HORIZONTAL
17623.500	46.4	-14.9	41.2	20.118	VERTICAL
17672.250	46.4	-13.0	41.2	18.205	VERTICAL
17634.750	46.3	-13.0	41.2	18.105	HORIZONTAL
17654.250	46.3	-13.0	41.2	18.105	VERTICAL
17621.250	46.3	-14.9	41.2	20.018	VERTICAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2483.920	47.9	-27.4	32.4	42.872	VERTICAL
17627.250	46.5	-14.9	41.2	20.218	HORIZONTAL
17632.500	46.4	-14.9	41.2	20.118	VERTICAL
17622.000	46.3	-14.9	41.2	20.018	VERTICAL
17635.500	46.3	-13.0	41.2	18.105	HORIZONTAL
17637.750	46.3	-13.0	41.2	18.105	VERTICAL

802.11n-HT40
Ch3

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2389.632	52.0	-26.9	32.4	46.508	HORIZONTAL
17773.500	46.3	-13.0	41.0	18.305	HORIZONTAL
17635.500	46.3	-13.0	41.2	18.105	HORIZONTAL
17715.750	46.3	-13.0	41.2	18.105	VERTICAL
17679.000	46.2	-13.0	41.2	18.005	VERTICAL
17631.000	46.2	-14.9	41.2	19.918	VERTICAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17681.250	46.5	-13.0	41.2	18.305	VERTICAL
17625.000	46.4	-14.9	41.2	20.118	VERTICAL
17694.750	46.3	-13.0	41.2	18.105	VERTICAL
17637.000	46.3	-13.0	41.2	18.105	VERTICAL
17632.500	46.3	-14.9	41.2	20.018	HORIZONTAL
17699.250	46.3	-13.0	41.2	18.105	VERTICAL

Ch9

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
2483.700	47.8	-27.4	32.4	42.772	HORIZONTAL
17661.000	46.3	-13.0	41.2	18.105	VERTICAL
17628.750	46.3	-14.9	41.2	20.018	VERTICAL
17638.500	46.2	-13.0	41.2	18.005	HORIZONTAL
17632.500	46.2	-14.9	41.2	19.918	VERTICAL
17658.000	46.2	-13.0	41.2	18.005	HORIZONTAL

Test graphs as below:

RE - Power-2.38GHz-2.45GHz

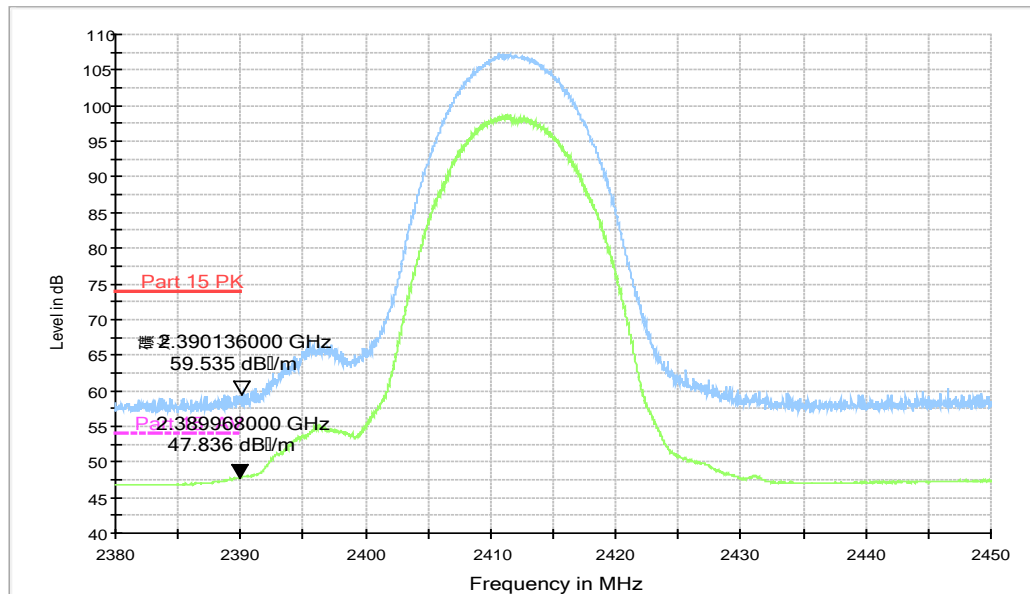


Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.38 GHz – 2.45GHz

RE - 1GHz-3GHz

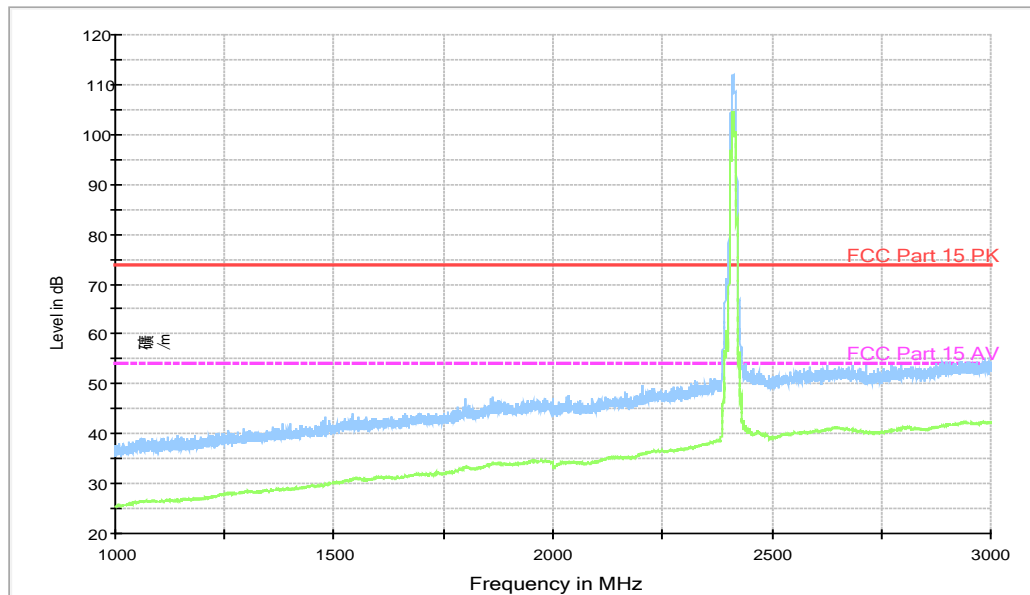


Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (802.11b, Ch1, 1 GHz-3 GHz)

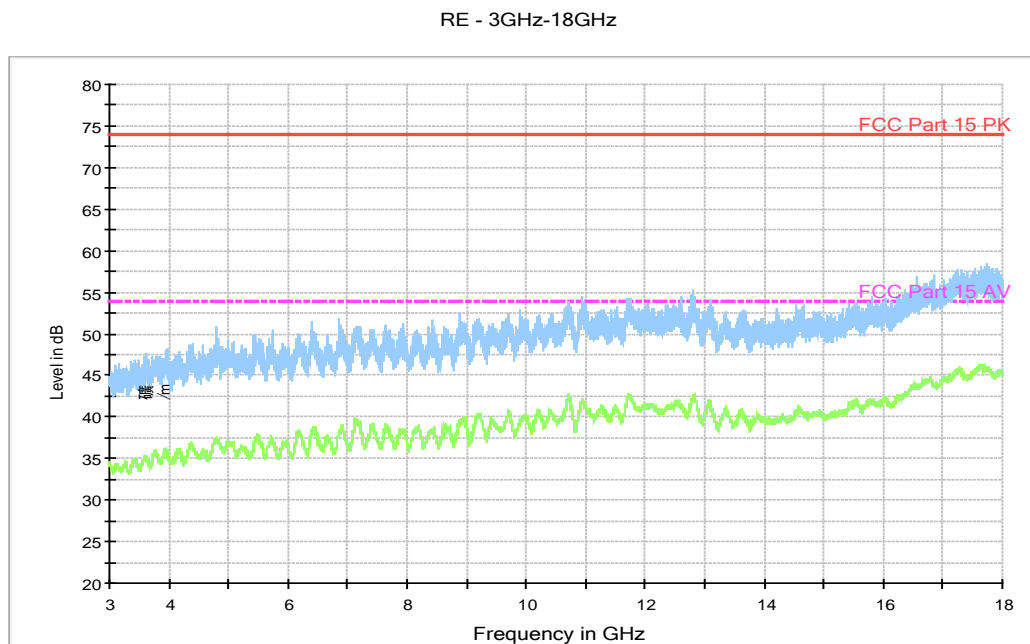


Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (802.11b, Ch1, 3 GHz-18 GHz)

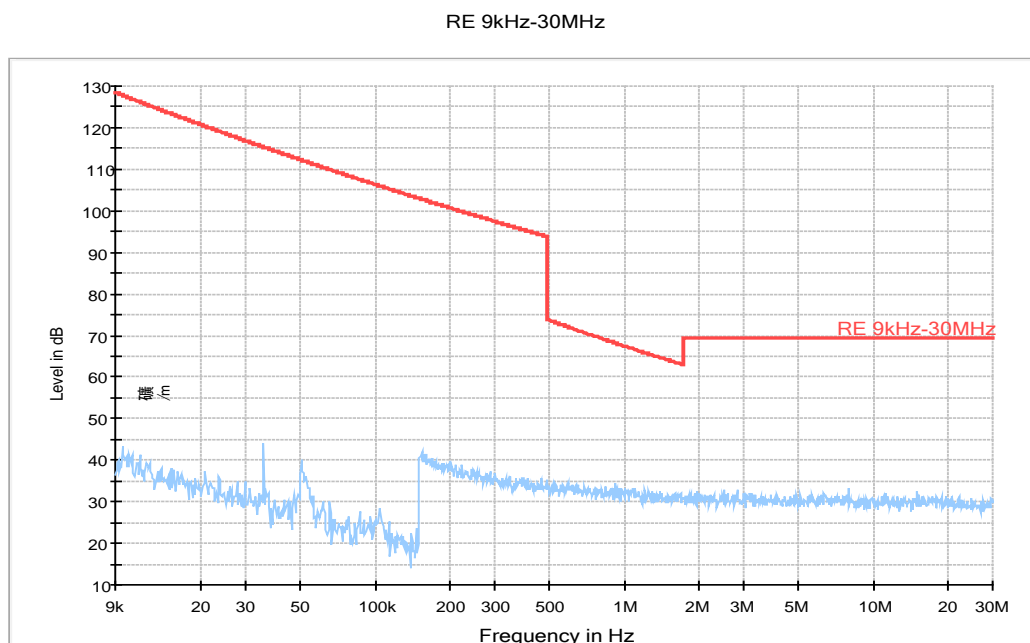


Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (802.11b, Ch6, 9kHz-30 MHz)

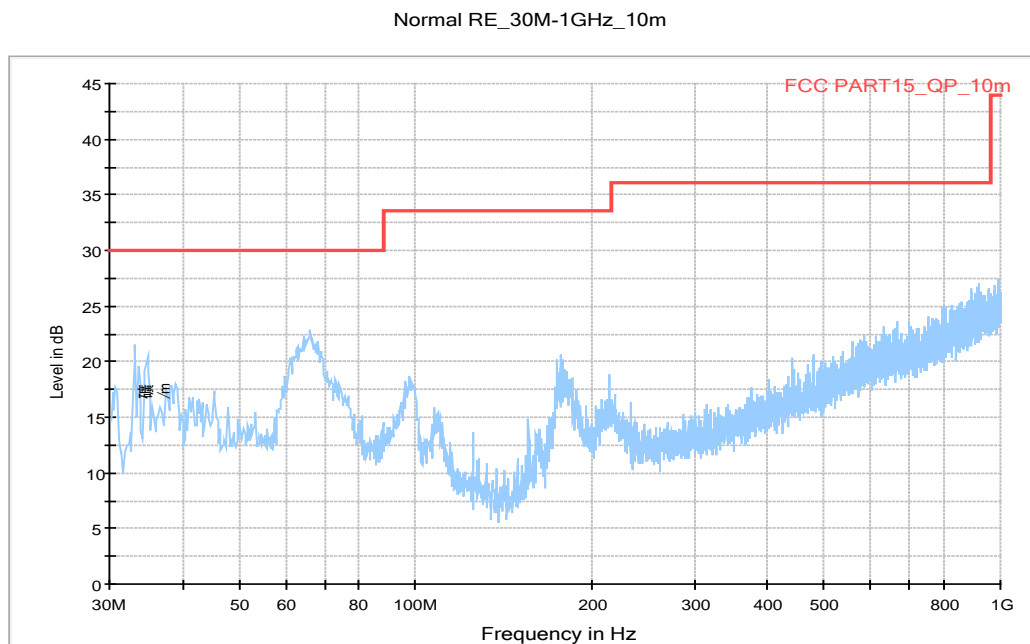


Fig.A.6.2.5 Transmitter Spurious Emission - Radiated (802.11b, Ch6, 30 MHz-1 GHz)

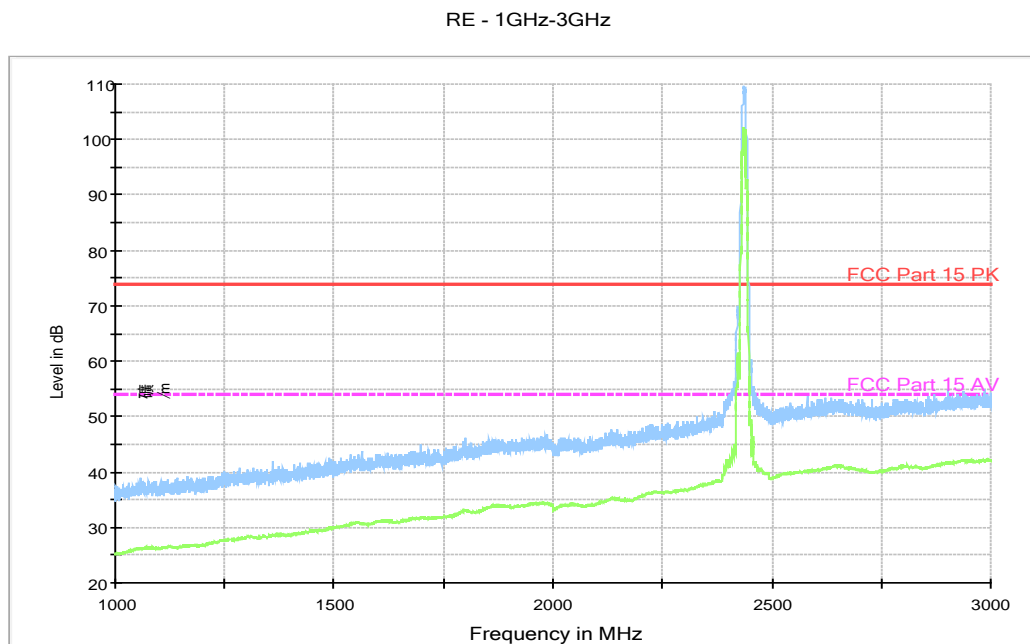


Fig.A.6.2.6 Transmitter Spurious Emission - Radiated (802.11b, Ch6, 1 GHz-3 GHz)

RE - 3GHz-18GHz

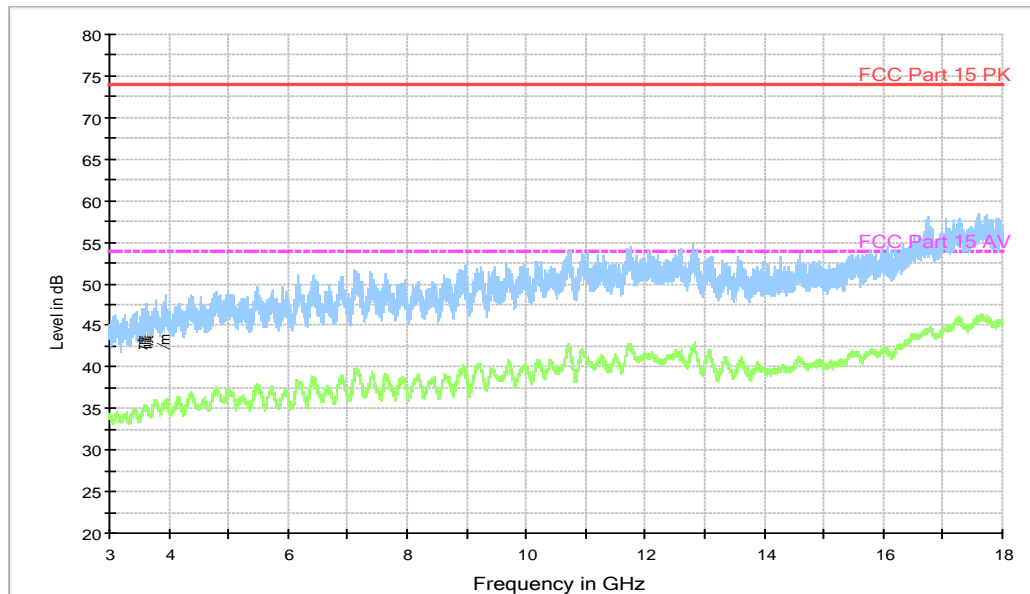


Fig.A.6.2.7 Transmitter Spurious Emission - Radiated (802.11b, Ch6, 3 GHz-18 GHz)

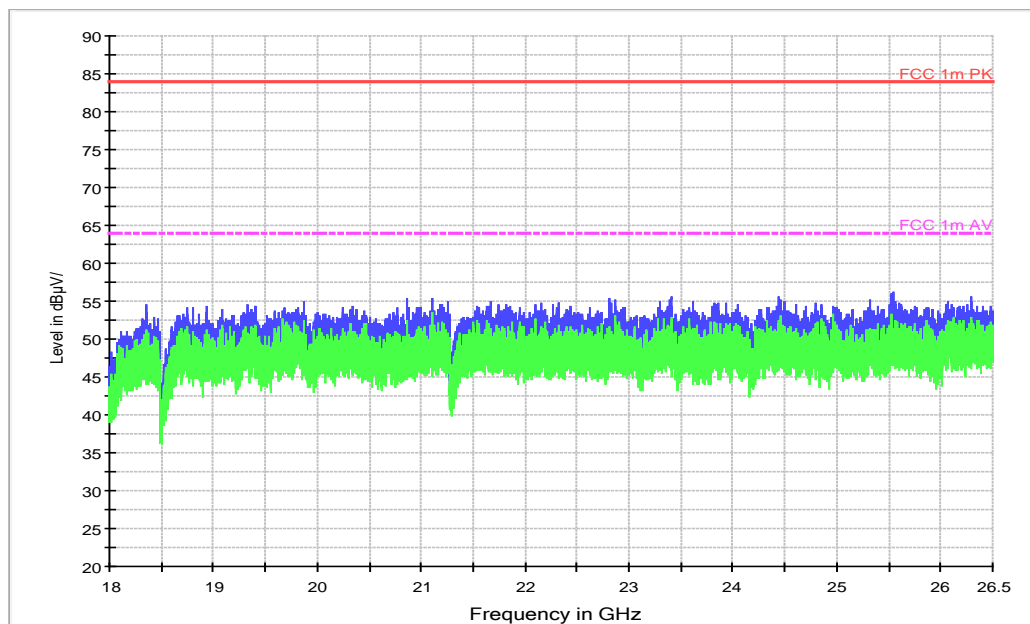


Fig.A.6.2.8 Transmitter Spurious Emission - Radiated (802.11b, Ch6, 18GHz – 26.5GHz)