

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

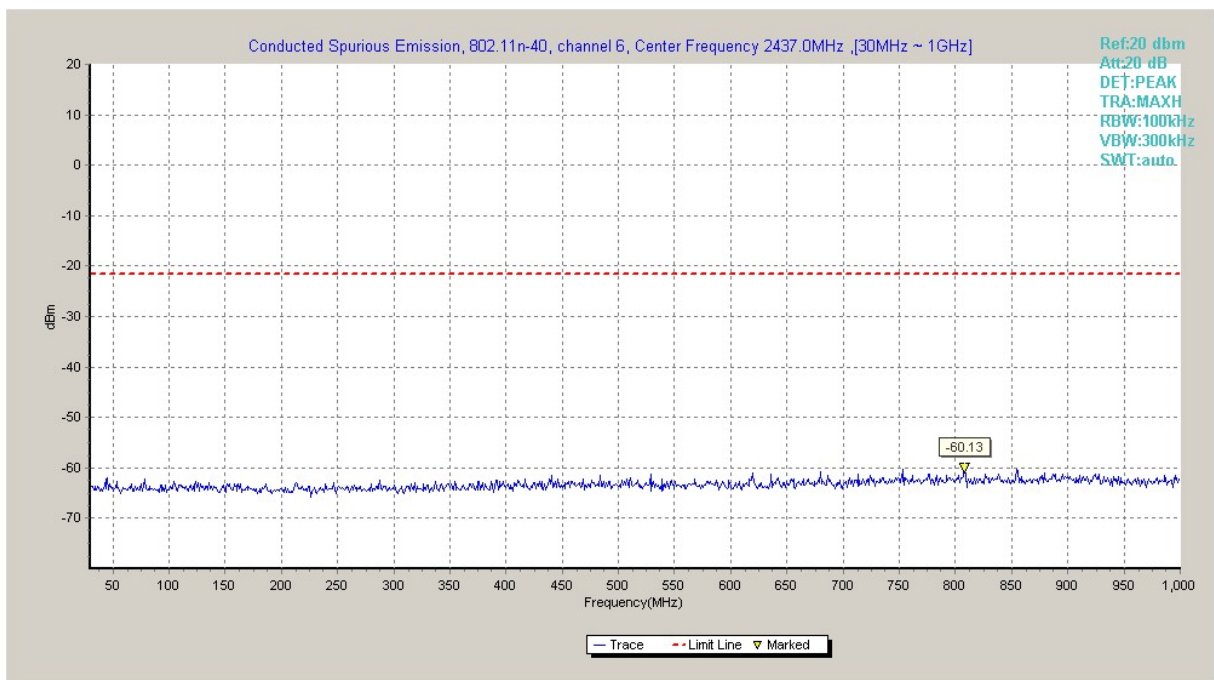


Fig.A.6.1.82 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 30 MHz-1 GHz)

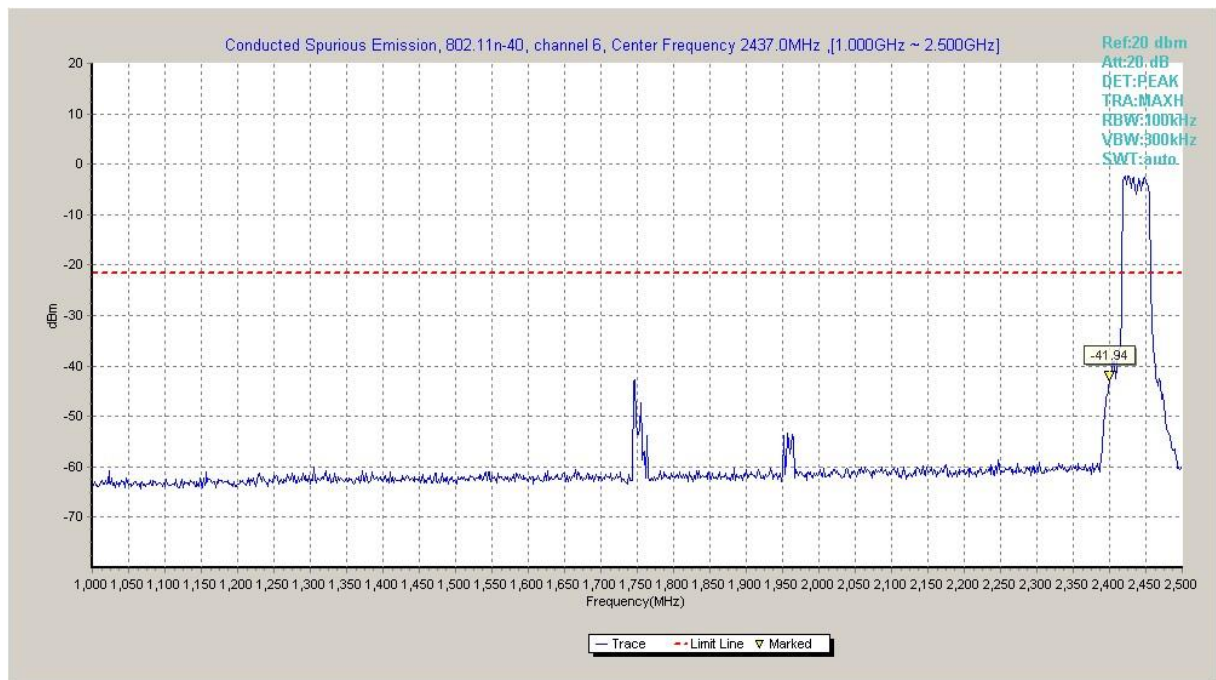


Fig.A.6.1.83 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 1 GHz-2.5 GHz)

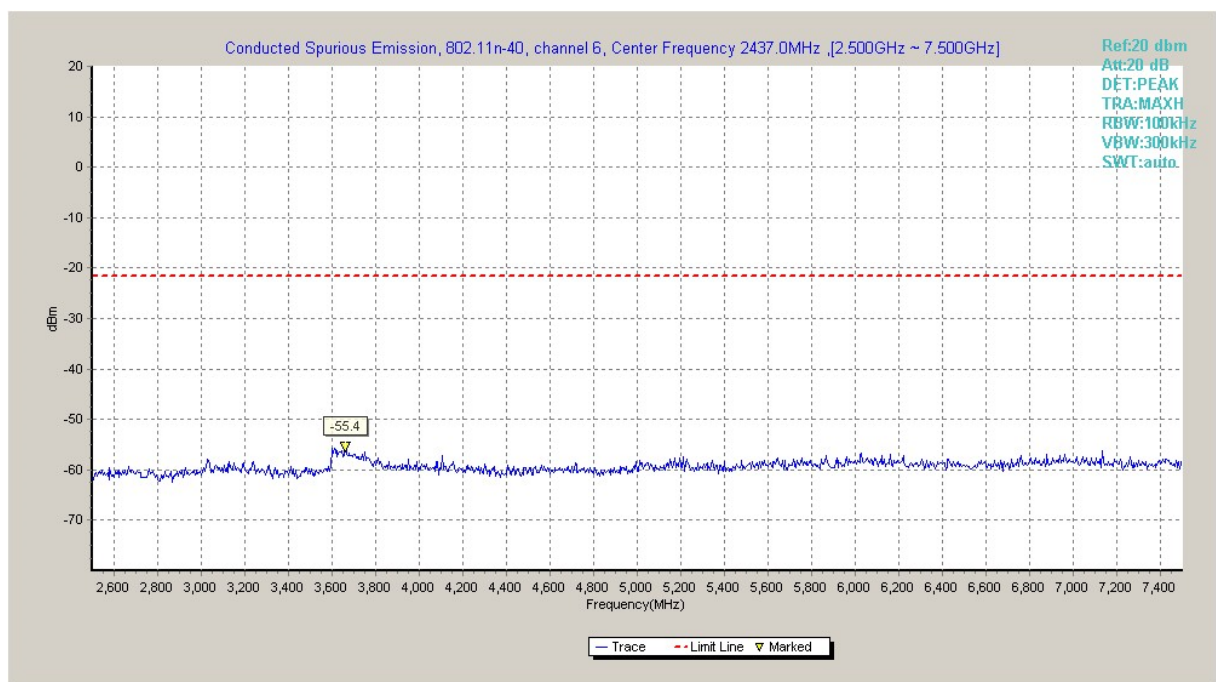


Fig.A.6.1.84 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 2.5 GHz-7.5 GHz)

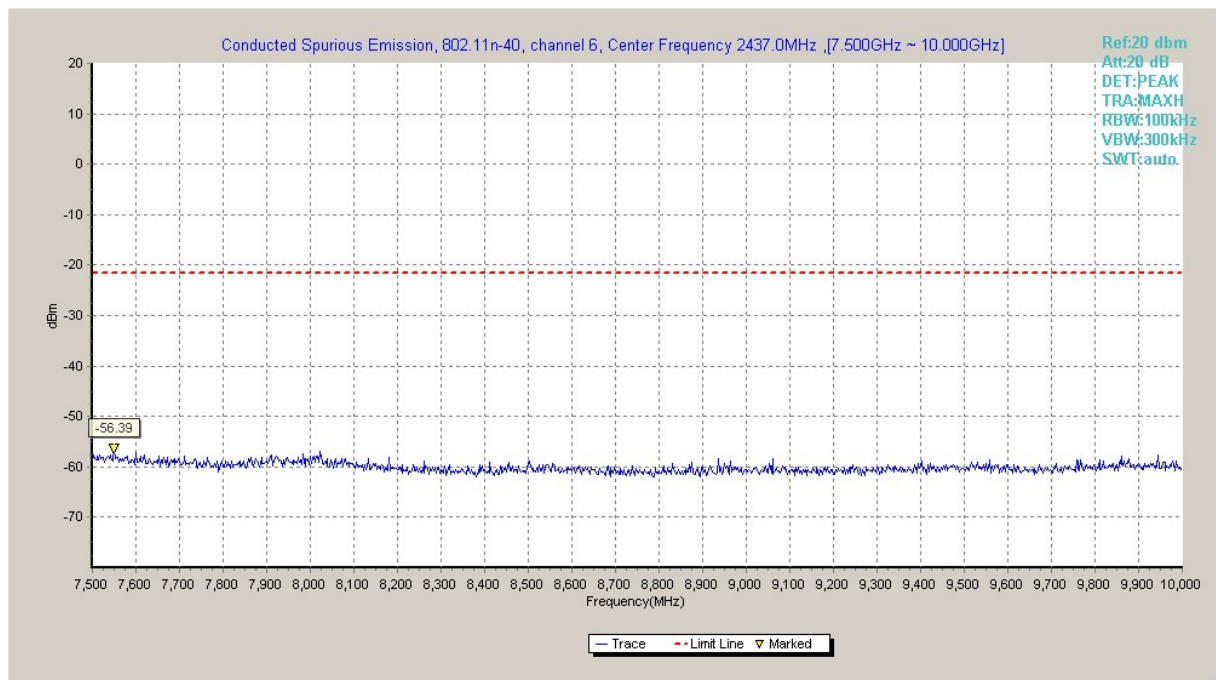


Fig.A.6.1.85 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 7.5 GHz-10 GHz)

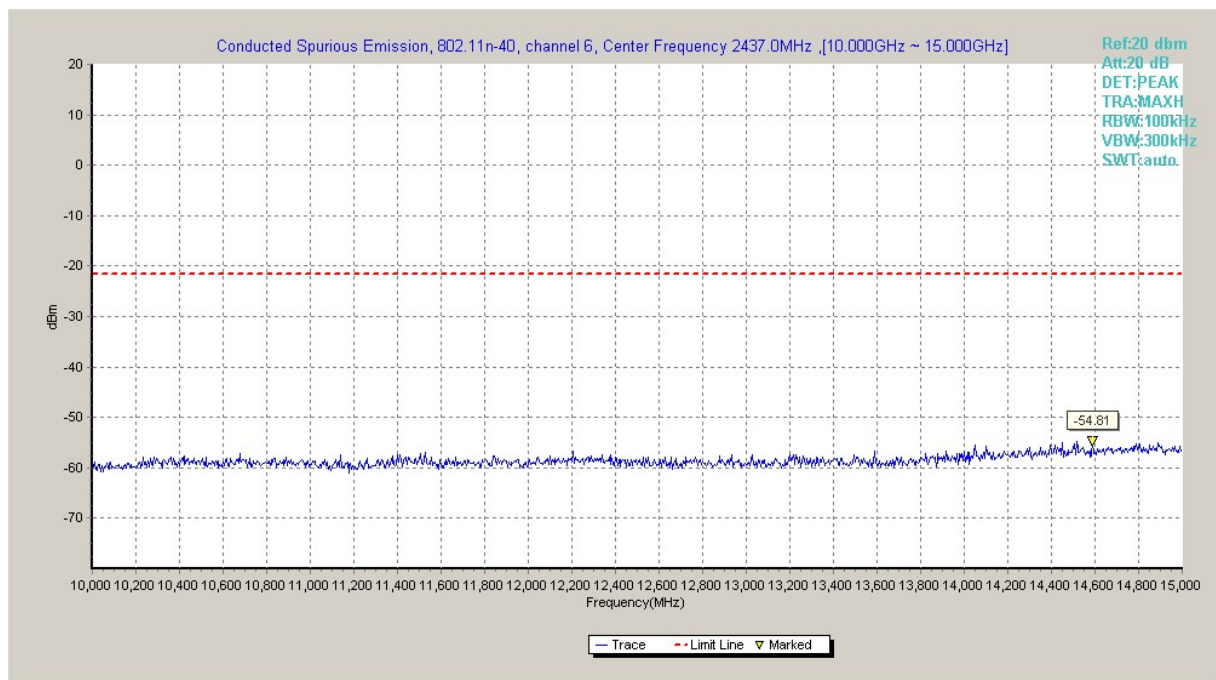


Fig.A.6.1.86 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 10 GHz-15 GHz)

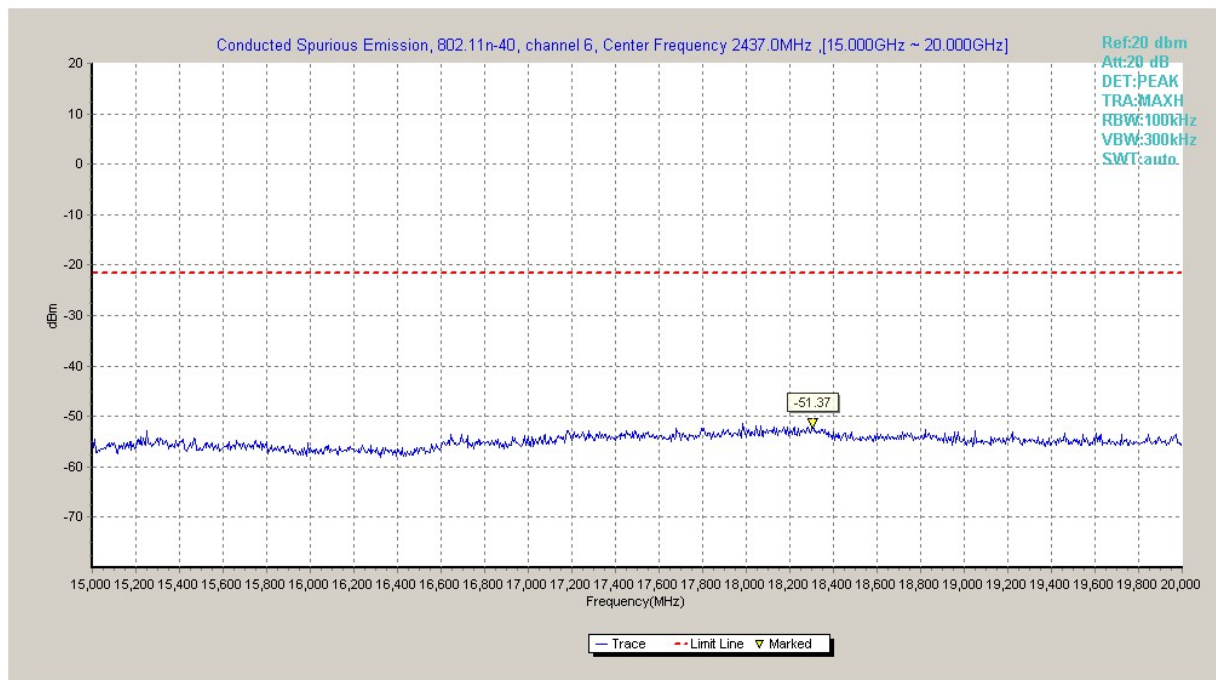


Fig.A.6.1.87 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 15 GHz-20 GHz)

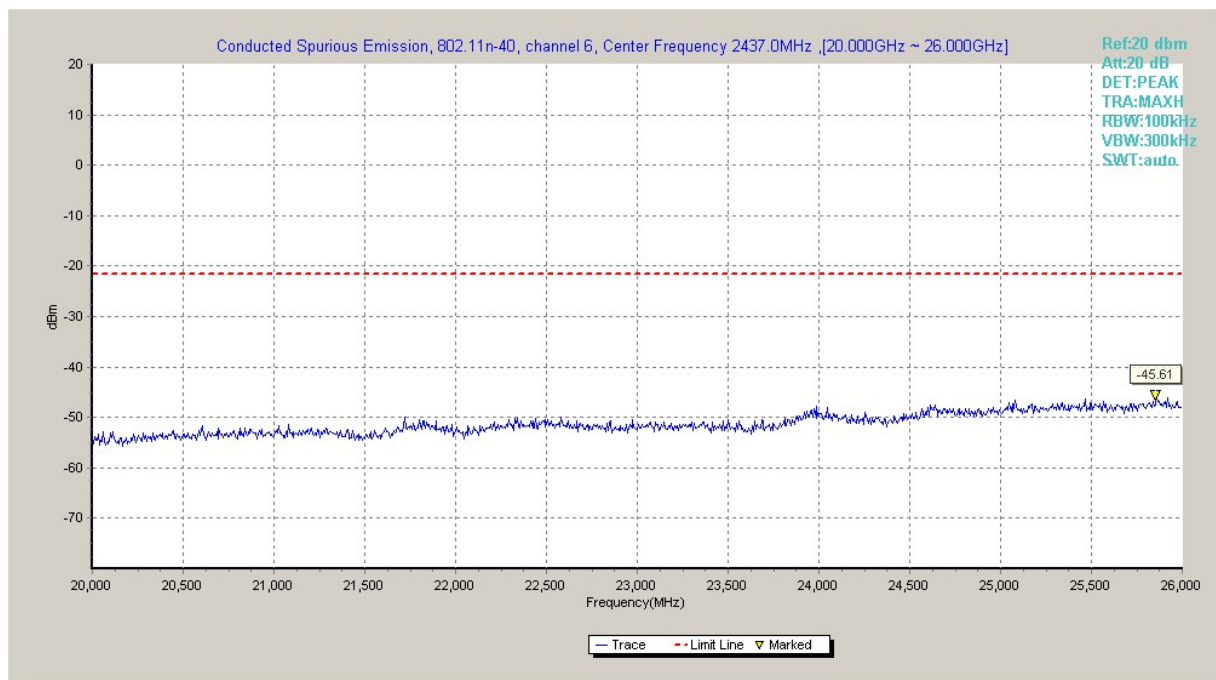


Fig.A.6.1.88 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 20 GHz-26 GHz)

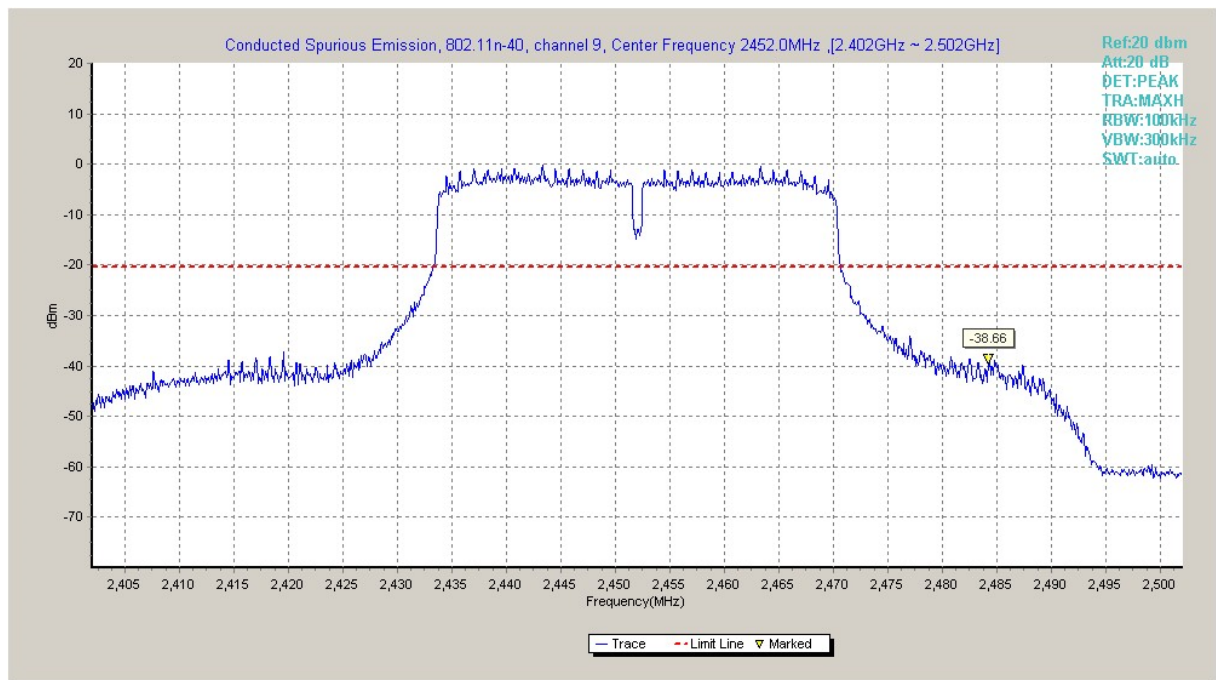


Fig.A.6.1.89 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, Center Frequency)

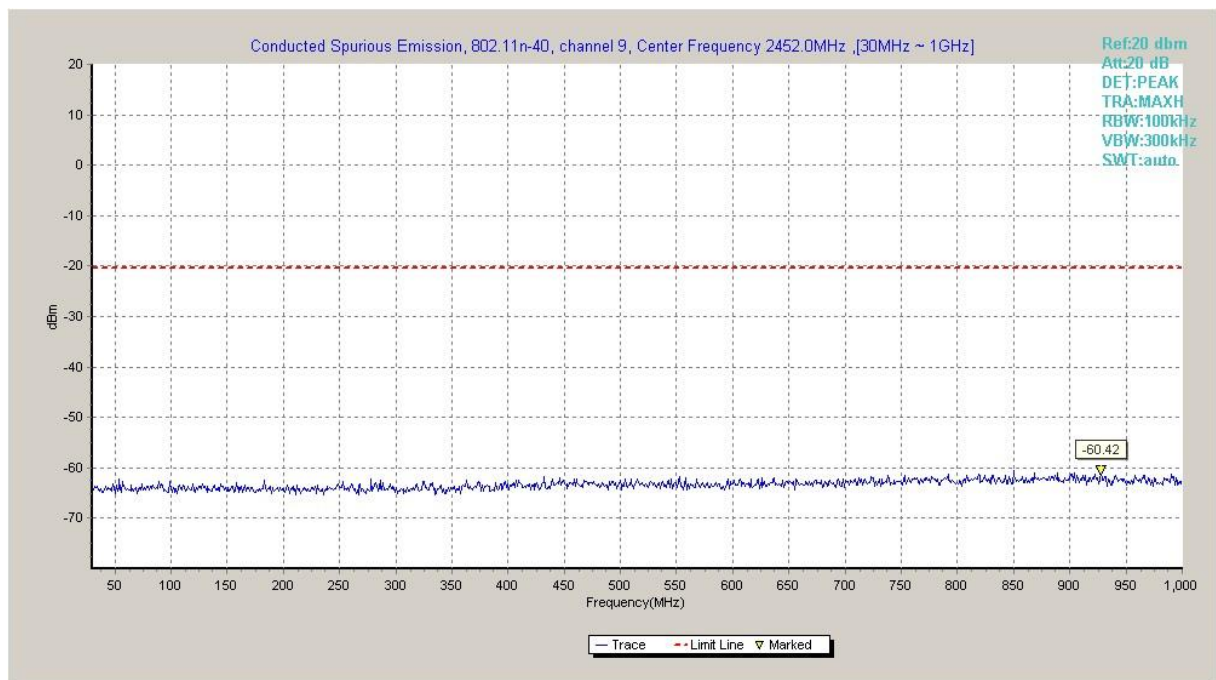


Fig.A.6.1.90 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 30 MHz-1 GHz)

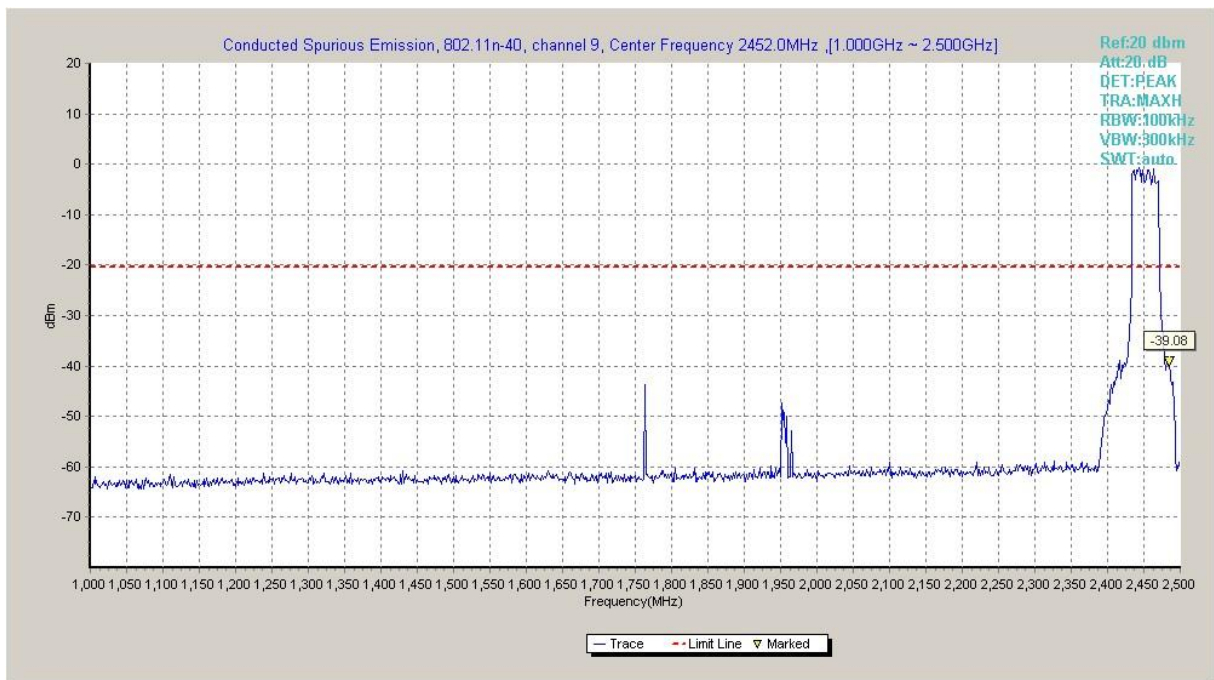


Fig.A.6.1.91 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 1 GHz-2.5 GHz)

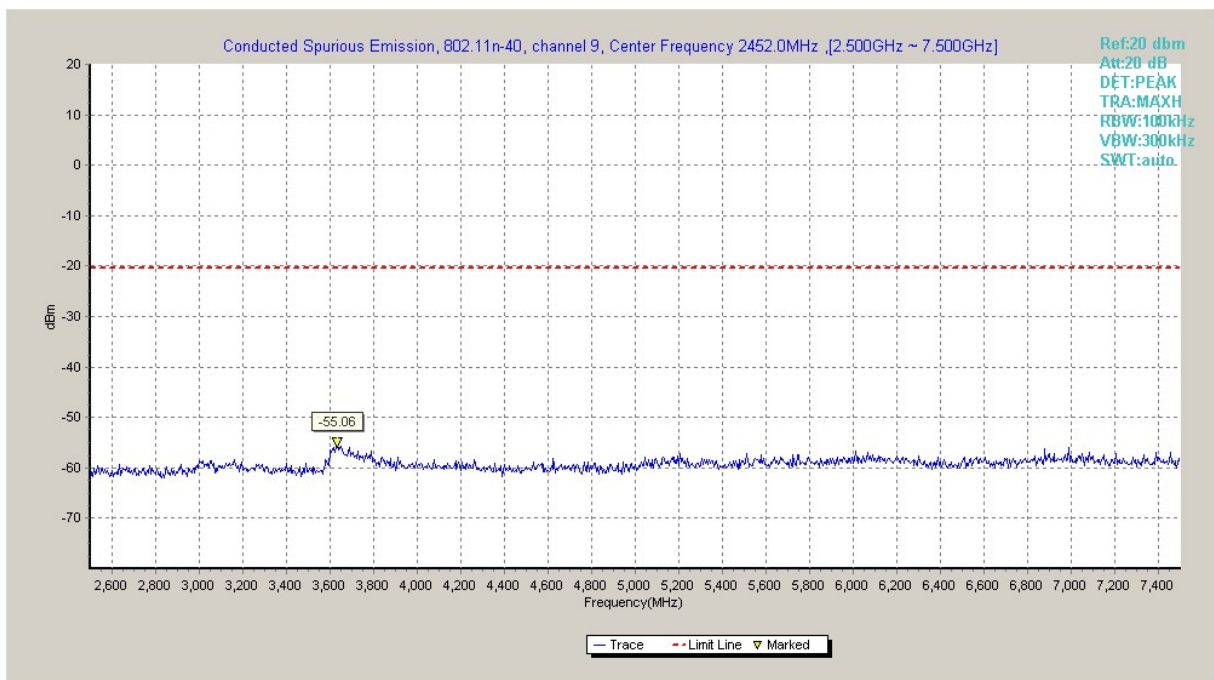


Fig.A.6.1.92 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 2.5 GHz-7.5 GHz)

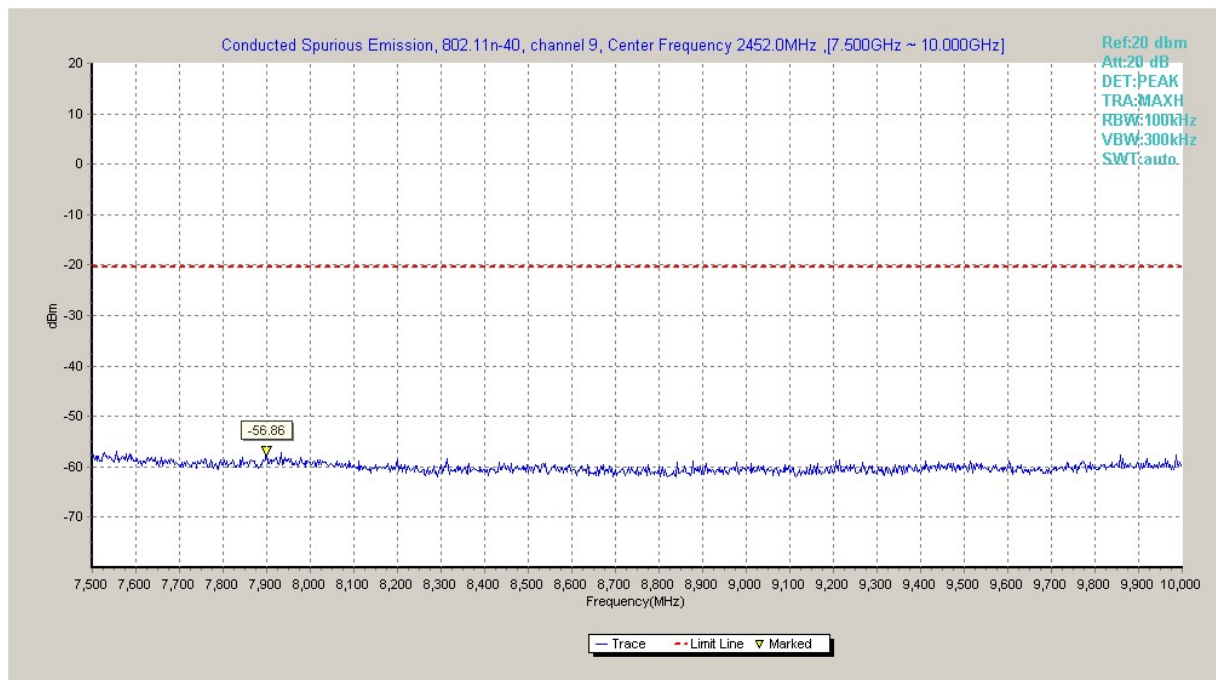


Fig.A.6.1.93 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 7.5 GHz-10 GHz)

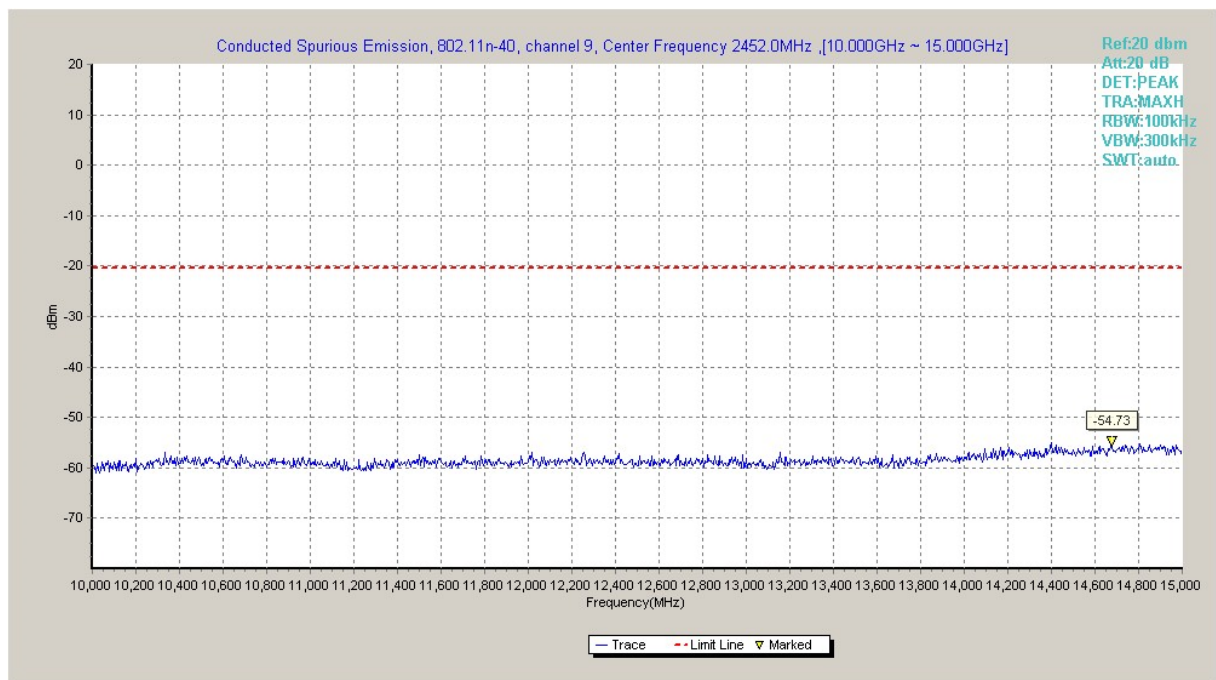


Fig.A.6.1.94 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 10 GHz-15 GHz)

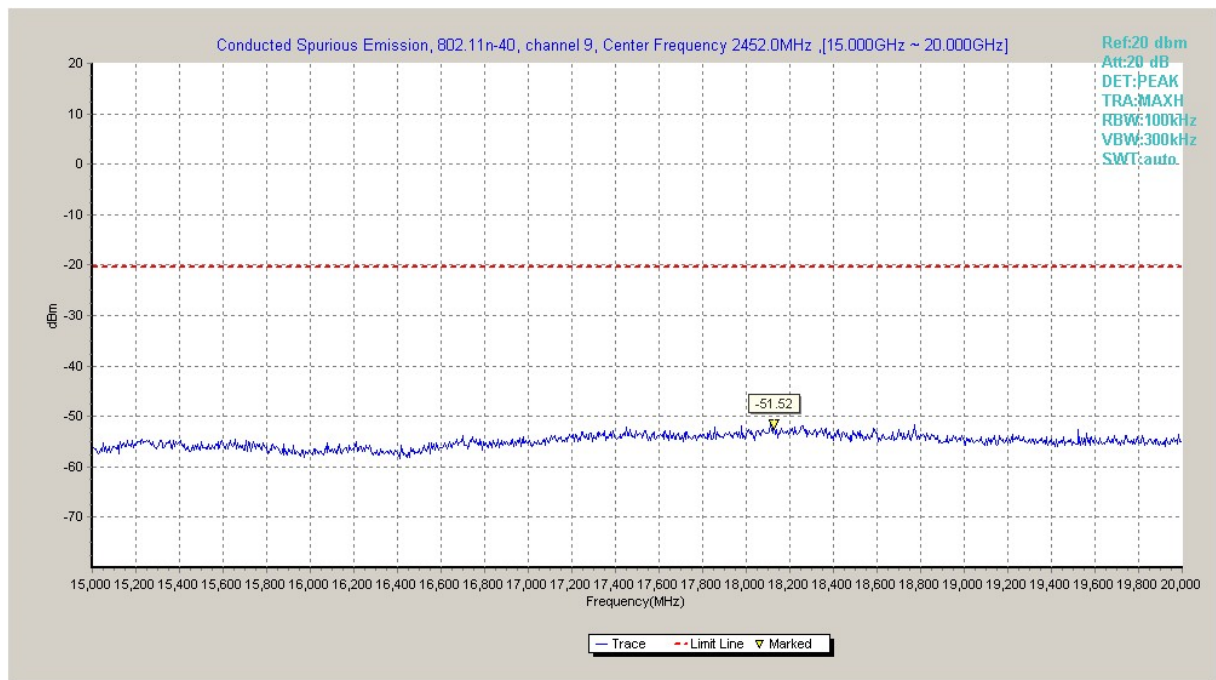


Fig.A.6.1.95 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 15 GHz-20 GHz)

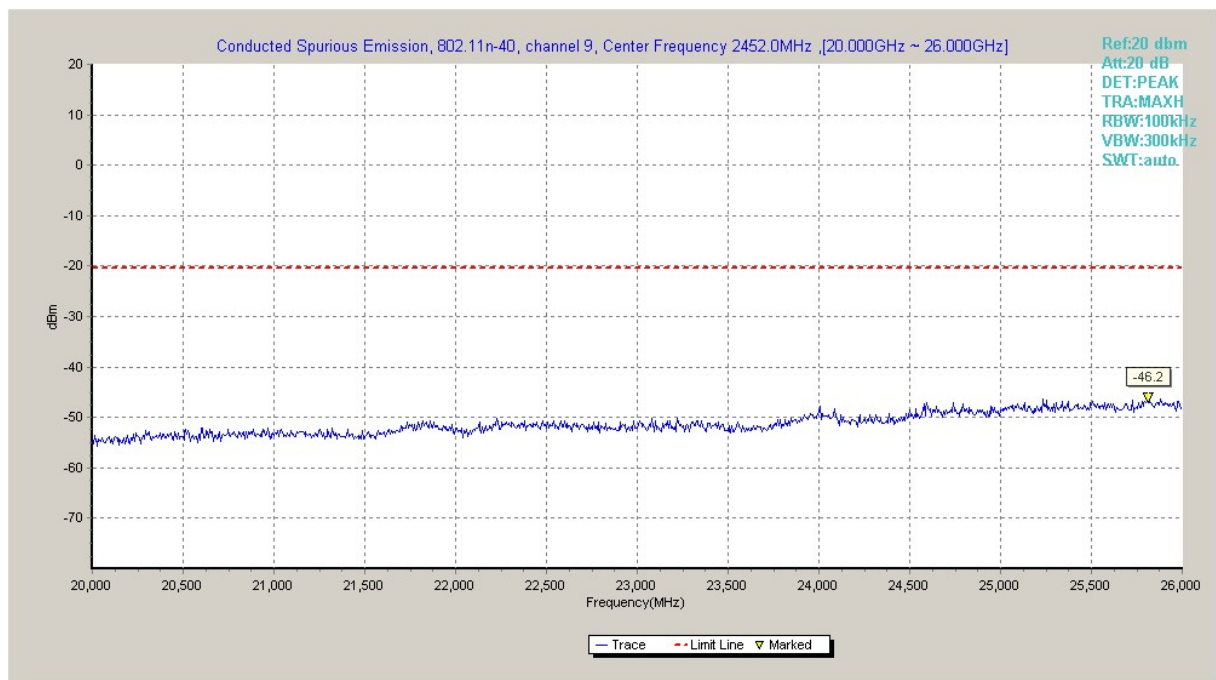


Fig.A.6.1.96 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 20 GHz-26 GHz)

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(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/3MHz	15
4000-18000	1MHz/3MHz	40
18000-26500	1MHz/3MHz	20

EUT ID: EUT1

Measurement Results for EUT1:

802.11b mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	Power(ch1)	2.38GHz ~2.43GHz	Fig.A.6.2.1	P
	Power(ch11)	2.45GHz ~2.5GHz	Fig.A.6.2.2	P

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	Power(ch1)	2.38GHz ~2.43GHz	Fig.A.6.2.3	P
	Power(ch11)	2.45GHz ~2.5GHz	Fig.A.6.2.4	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT20)	Power(ch1)	2.38GHz ~2.43GHz	Fig.A.6.2.5	P
	Power(ch11)	2.45GHz ~2.5GHz	Fig.A.6.2.6	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT20)	Power(ch3)	2.38GHz ~2.43GHz	Fig.A.6.2.7	P
	Power(ch9)	2.45GHz ~2.5GHz	Fig.A.6.2.8	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:

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

802.11b-Average

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2384.900	46.46	2.9	32.0	11.59	54.0	7.5	H	155	8
2389.050	46.47	2.9	32.0	11.58	54.0	7.5	H	155	28
4823.800	34.11	-35.2	34.1	35.19	54.0	19.9	H	155	119
7236.100	37.53	-32.4	35.7	34.22	54.0	16.5	H	155	146
9648.400	41.93	-30.1	36.8	35.29	54.0	12.1	H	155	76
12059.600	49.11	-31.0	38.9	41.23	54.0	4.9	H	155	94

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2415.200	46.91	2.9	32.1	11.96	54.0	7.1	H	155	28
2460.380	47.19	2.9	32.1	12.14	54.0	6.8	H	155	49
4874.400	34.19	-35.5	34.2	35.53	54.0	19.8	H	155	226
7310.900	39.96	-31.6	35.8	35.80	54.0	14.0	H	155	248
9748.500	42.51	-31.3	36.9	36.90	54.0	11.5	H	155	268
12185.000	47.79	-29.1	38.9	37.97	54.0	6.2	H	155	298

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2483.500	46.67	2.9	32.2	11.57	54.0	7.3	H	155	48
2485.180	46.56	2.9	32.2	11.46	54.0	7.4	H	155	6
4923.900	35.03	-35.2	34.2	36.02	54.0	19.0	H	155	312
7385.700	40.22	-31.2	35.8	35.66	54.0	13.8	H	155	48
9847.500	45.83	-30.6	37.0	39.37	54.0	8.2	H	155	68
12310.400	44.58	-31.6	39.0	37.23	54.0	9.4	H	155	80

802.11b-Peak
Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2377.284	60.26	2.9	32.0	25.40	74.0	13.7	H	155	0
2381.988	59.88	2.9	32.0	25.01	74.0	14.1	H	155	22
4824.000	41.51	-35.2	34.1	42.59	74.0	32.5	H	155	110
7236.000	42.95	-32.4	35.7	39.65	74.0	31.0	V	155	132
9648.000	46.86	-30.1	36.8	40.22	74.0	27.1	V	155	66
12060.000	52.01	-31.0	38.9	44.13	74.0	22.0	V	155	88

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2050.460	47.14	-28.8	31.4	44.58	74.0	26.9	H	155	22
2701.280	49.42	-26.7	32.4	43.79	74.0	24.6	H	155	44
4874.000	41.25	-35.5	34.2	42.59	74.0	32.7	V	155	220
7311.000	44.40	-31.6	35.8	40.24	74.0	29.6	V	155	242
9748.000	47.55	-31.3	36.9	41.93	74.0	26.5	H	155	264
12185.000	50.22	-29.1	38.9	40.41	74.0	23.8	H	155	286

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2485.280	60.35	2.9	32.2	25.24	74.0	13.7	H	155	44
2496.710	60.92	2.9	32.2	25.78	74.0	13.1	H	155	0
4924.000	41.45	-35.2	34.2	42.44	74.0	32.6	V	155	308
7386.000	45.28	-31.2	35.8	40.73	74.0	28.7	H	155	44
9848.000	48.93	-30.5	37.0	42.46	74.0	25.1	V	155	66
12310.000	48.40	-31.6	39.0	41.04	74.0	25.6	H	155	88

802.11g - Average

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2387.760	46.65	2.9	32.0	11.77	54.0	7.4	H	155	4
2385.650	46.91	2.9	32.0	12.03	54.0	7.1	H	155	26
4823.800	34.28	-35.2	34.1	35.36	54.0	19.7	H	155	356
7236.100	37.69	-32.4	35.7	34.39	54.0	16.3	H	155	348
9648.400	42.05	-30.1	36.8	35.41	54.0	12.0	H	155	174
12059.600	49.08	-31.0	38.9	41.20	54.0	4.9	H	155	112

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2146.200	46.86	2.7	31.6	12.58	54.0	7.1	H	155	28
2461.500	46.98	2.9	32.1	11.93	54.0	7.0	H	155	48
4874.000	34.29	-35.5	34.2	35.63	54.0	19.7	H	155	8
7310.900	40.03	-31.6	35.8	35.87	54.0	14.0	H	155	16
9748.500	42.57	-31.3	36.9	36.95	54.0	11.4	H	155	228
12185.000	47.82	-29.1	38.9	38.00	54.0	6.2	H	155	92

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2483.500	46.84	2.9	32.2	11.73	54.0	7.2	H	155	98
2484.650	46.79	2.9	32.2	11.69	54.0	7.2	H	155	135
4923.900	35.35	-35.2	34.2	36.34	54.0	18.7	H	155	4
7385.700	40.33	-31.2	35.8	35.78	54.0	13.7	H	155	74
9847.500	45.85	-30.6	37.0	39.39	54.0	8.2	H	155	48
12310.400	44.58	-31.6	39.0	37.22	54.0	9.4	H	155	246

802.11g - Peak

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2389.968	62.49	2.9	32.0	27.61	74.0	11.5	H	155	0
2389.520	62.20	2.9	32.0	27.31	74.0	11.8	V	155	22
4824.000	39.99	-35.2	34.1	41.07	74.0	34.0	V	155	352
7610.500	46.35	-31.1	35.8	41.59	74.0	27.6	V	155	352
9648.000	45.80	-30.1	36.8	39.16	74.0	28.2	V	155	176
12060.000	52.92	-31.0	38.9	45.04	74.0	21.1	V	155	110

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2071.200	47.56	-29.0	31.4	45.11	74.0	26.4	H	155	22
2693.250	50.22	-26.7	32.4	44.60	74.0	23.8	H	155	44
4874.000	39.23	-35.5	34.2	40.58	74.0	34.8	V	155	0
7311.000	44.27	-31.6	35.8	40.11	74.0	29.7	H	155	22
9748.000	47.27	-31.3	36.9	41.65	74.0	26.7	H	155	242
12185.000	50.52	-29.1	38.9	40.71	74.0	23.5	H	155	88

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2484.075	61.64	2.9	32.2	26.53	74.0	12.4	H	155	88
2485.145	60.98	2.9	32.2	25.87	74.0	13.0	H	155	132
4924.000	42.00	-35.2	34.2	42.99	74.0	32.0	H	155	0
7386.000	44.92	-31.2	35.8	40.37	74.0	29.1	V	155	66
9848.000	51.17	-30.5	37.0	44.70	74.0	22.8	V	155	44
12310.000	47.32	-31.6	39.0	39.96	74.0	26.7	H	155	242

802.11n-HT20-Average
Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2389.340	47.00	2.9	32.0	12.11	54.0	7.0	H	155	8
2389.850	47.21	2.9	32.0	12.33	54.0	6.8	H	155	52
4823.800	34.25	-35.2	34.1	35.33	54.0	19.7	H	155	18
7236.100	37.64	-32.4	35.7	34.33	54.0	16.4	H	155	6
9648.400	42.08	-30.1	36.8	35.44	54.0	11.9	H	155	48
12059.600	49.18	-31.0	38.9	41.30	54.0	4.8	H	155	128

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2413.300	48.61	2.9	32.1	13.67	54.0	5.4	H	155	28
2456.400	48.51	2.9	32.1	13.47	54.0	5.5	H	155	49
4874.400	34.33	-35.5	34.2	35.67	54.0	19.7	H	155	246
7310.900	39.99	-31.6	35.8	35.83	54.0	14.0	H	155	182
9748.500	42.59	-31.3	36.9	36.98	54.0	11.4	H	155	94
12185.000	47.79	-29.1	38.9	37.98	54.0	6.2	H	155	42

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2483.600	46.99	2.9	32.2	11.89	54.0	7.0	H	155	20
2484.260	46.87	2.9	32.2	11.77	54.0	7.1	H	155	248
4823.900	35.28	-35.2	34.1	36.36	54.0	18.7	H	155	49
7385.700	40.29	-31.2	35.8	35.73	54.0	13.7	H	155	82
9847.500	45.92	-30.6	37.0	39.46	54.0	8.1	H	155	168
12310.400	44.55	-31.6	39.0	37.20	54.0	9.5	H	155	8

802.11n-HT20-Peak
Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2385.240	60.58	2.9	32.0	25.71	74.0	13.4	V	155	0
2389.590	61.04	2.9	32.0	26.15	74.0	13.0	H	155	44
4824.000	41.36	-35.2	34.1	42.45	74.0	32.6	V	155	22
7236.000	42.51	-32.4	35.7	39.21	74.0	31.5	H	155	0
9648.000	46.62	-30.1	36.8	39.98	74.0	27.4	H	155	44
12060.000	53.33	-31.0	38.9	45.46	74.0	20.7	V	155	132

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2278.860	47.55	-28.1	31.8	43.78	74.0	26.5	H	155	22
2686.600	49.64	-26.7	32.4	44.02	74.0	24.4	H	155	44
4874.000	40.41	-35.5	34.2	41.75	74.0	33.6	V	155	242
7311.000	46.31	-31.6	35.8	42.14	74.0	27.7	H	155	176
9748.000	47.63	-31.3	36.9	42.01	74.0	26.4	V	155	88
12185.000	50.58	-29.1	38.9	40.77	74.0	23.4	V	155	22

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2483.540	61.77	2.9	32.2	26.67	74.0	12.2	H	155	22
2486.390	61.16	2.9	32.2	26.05	74.0	12.8	V	155	242
4924.000	42.00	-35.2	34.2	43.00	74.0	32.0	H	155	44
7386.000	44.23	-31.2	35.8	39.68	74.0	29.8	V	155	88
9848.000	50.46	-30.5	37.0	43.98	74.0	23.5	V	155	176
12310.000	47.33	-31.6	39.0	39.97	74.0	26.7	V	155	0

802.11n-HT40-Average
Ch3

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2389.600	47.57	2.9	32.0	12.69	54.0	6.4	H	155	92
2390.000	47.85	2.9	32.0	12.96	54.0	6.2	H	155	115
4843.600	34.32	-35.4	34.1	35.56	54.0	19.7	H	155	135
7265.800	38.37	-32.5	35.8	35.11	54.0	15.6	H	155	168
9688.000	41.38	-30.7	36.8	35.25	54.0	12.6	H	155	184
12110.200	47.97	-30.7	38.9	39.72	54.0	6.0	H	155	202

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2408.500	46.92	2.9	32.0	11.99	54.0	7.1	H	155	92
2467.500	46.56	2.9	32.1	11.49	54.0	7.4	H	155	68
4874.400	34.34	-35.5	34.2	35.68	54.0	19.7	H	155	118
7310.900	40.01	-31.6	35.8	35.85	54.0	14.0	H	155	354
9748.500	42.59	-31.3	36.9	36.97	54.0	11.4	H	155	18
12185.000	47.73	-29.1	38.9	37.92	54.0	6.3	H	155	38

Ch9

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2483.500	47.92	2.9	32.2	12.81	54.0	6.1	H	155	180
2484.100	47.92	2.9	32.2	12.81	54.0	6.1	H	155	202
4904.100	34.97	-35.4	34.2	36.16	54.0	19.0	H	155	222
7356.000	40.75	-30.9	35.8	35.86	54.0	13.2	H	155	190
9807.900	44.90	-31.6	37.0	39.52	54.0	9.1	H	155	240
12259.800	45.32	-30.3	39.0	36.66	54.0	8.7	H	155	270

802.11n-HT40-Peak
Ch3

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2389.296	60.88	2.9	32.0	26.00	74.0	13.1	H	155	88
2389.912	60.94	2.9	32.0	26.06	74.0	13.1	H	155	110
4844.000	39.59	-35.4	34.1	40.82	74.0	34.4	V	155	132
7266.000	42.48	-32.5	35.8	39.22	74.0	31.5	V	155	154
9688.000	46.18	-30.7	36.8	40.05	74.0	27.8	H	155	176
12110.000	50.89	-30.7	38.9	42.64	74.0	23.1	V	155	198

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2334.650	49.10	-27.7	31.9	44.87	74.0	24.9	H	155	88
2671.450	48.82	-26.7	32.3	43.20	74.0	25.2	H	155	66
4874.000	42.32	-35.5	34.2	43.66	74.0	31.7	H	155	110
7311.000	44.44	-31.6	35.8	40.27	74.0	29.6	V	155	0
9748.000	46.44	-31.3	36.9	40.82	74.0	27.6	H	155	22
12185.000	49.80	-29.1	38.9	39.99	74.0	24.2	H	155	44

Ch9

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2484.015	66.55	2.9	32.2	31.44	74.0	7.5	H	155	176
2484.475	66.22	2.9	32.2	31.12	74.0	7.8	H	155	198
4904.000	41.31	-35.4	34.2	42.50	74.0	32.7	V	155	220
7356.000	46.60	-30.9	35.8	41.71	74.0	27.4	V	155	198
9808.000	48.17	-31.6	37.0	42.79	74.0	25.8	H	155	242
12260.000	47.32	-30.3	39.0	38.66	74.0	26.7	V	155	264

Test graphs as below:

RE - Power-2.31GHz-2.45GHz

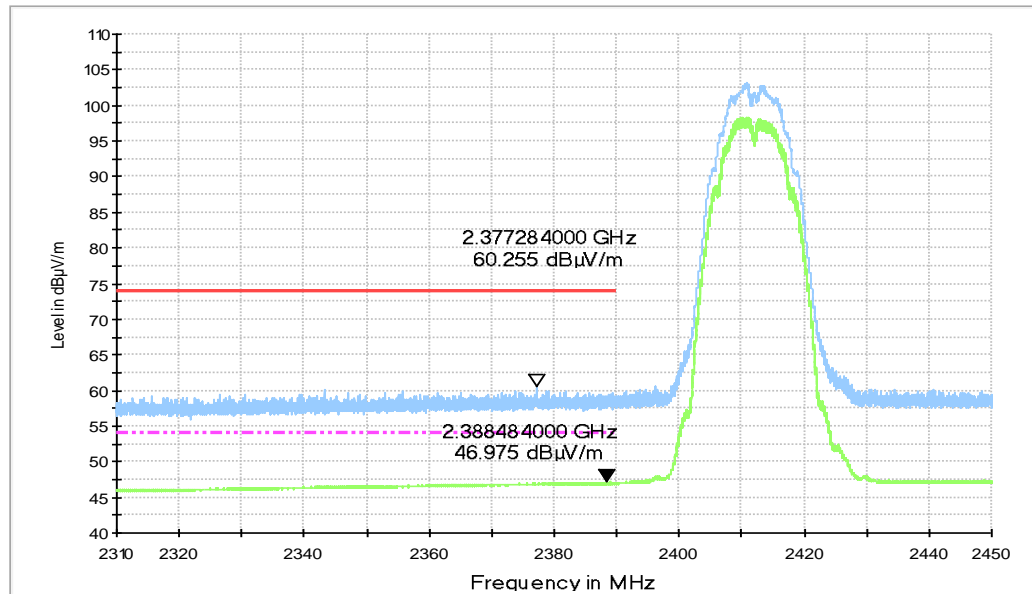


Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.43GHz

RE - Power-2.45GHz-2.5GHz

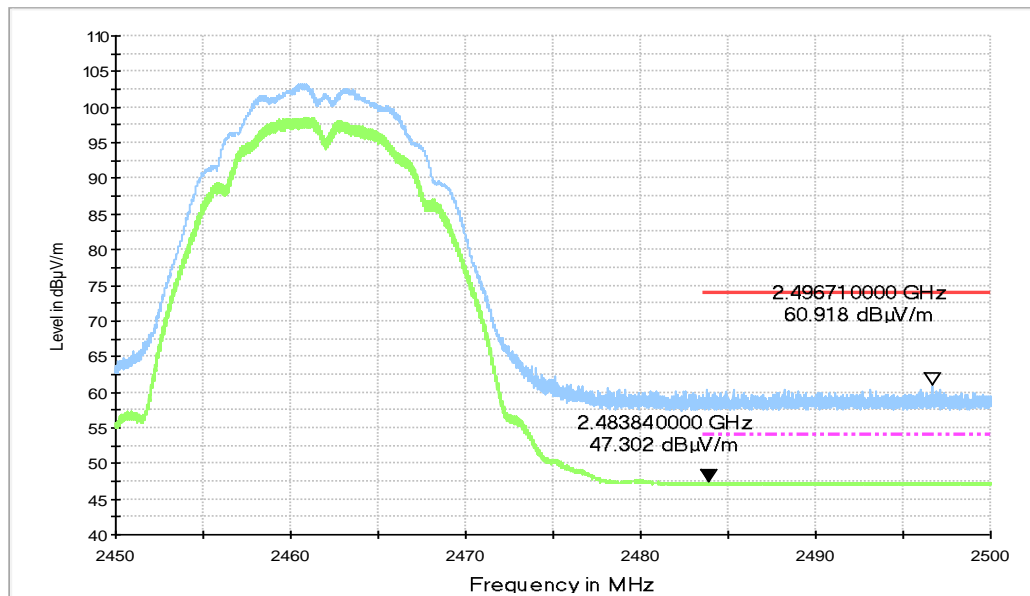


Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

RE - Power-2.31GHz-2.45GHz

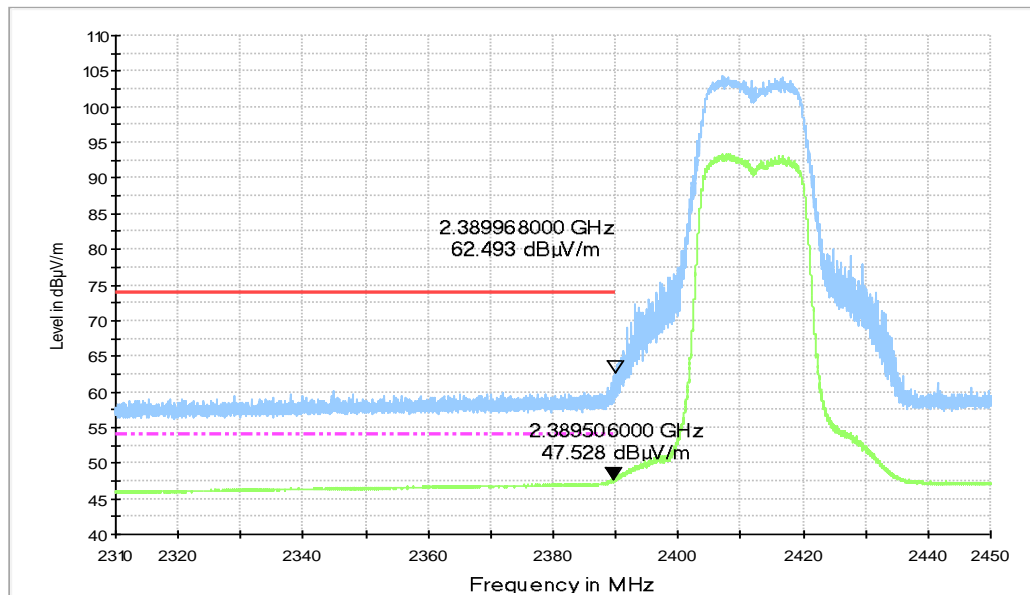


Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.43GHz

RE - Power-2.45GHz-2.5GHz

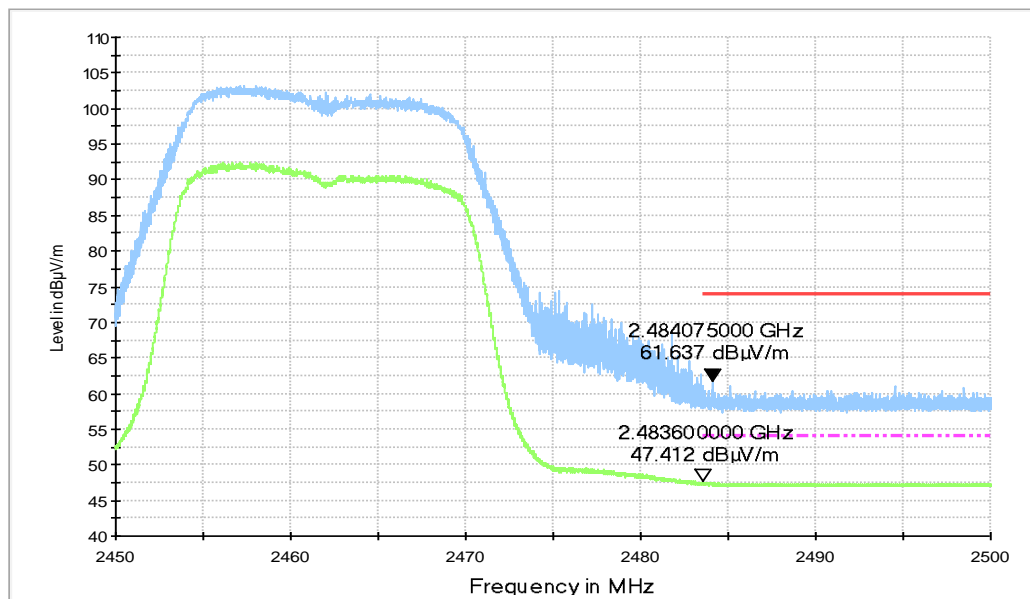


Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

RE - Power-2.31GHz-2.45GHz

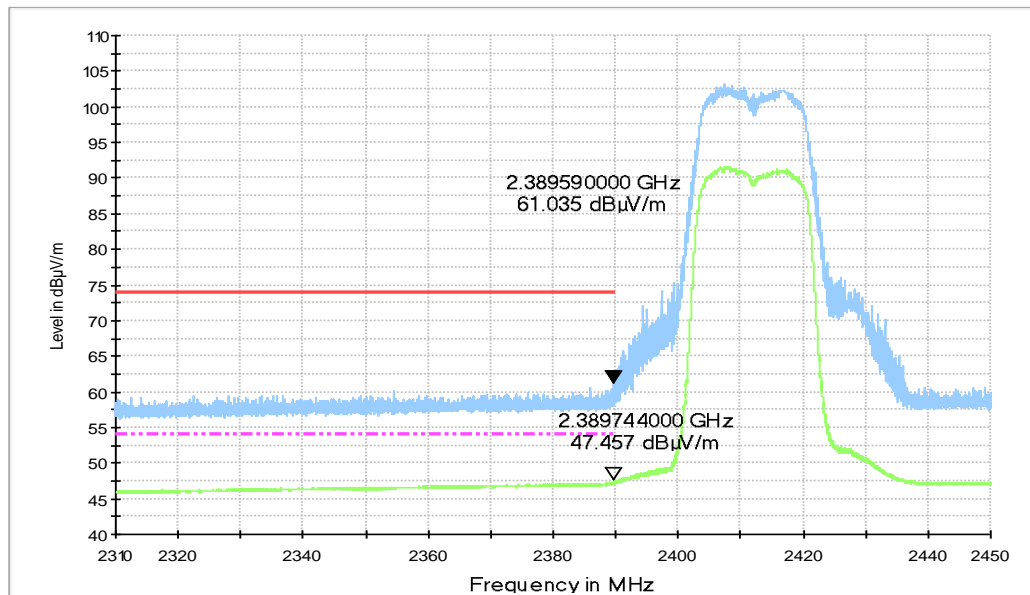


Fig.A.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31GHz - 2.45GHz

RE - Power-2.45GHz-2.5GHz

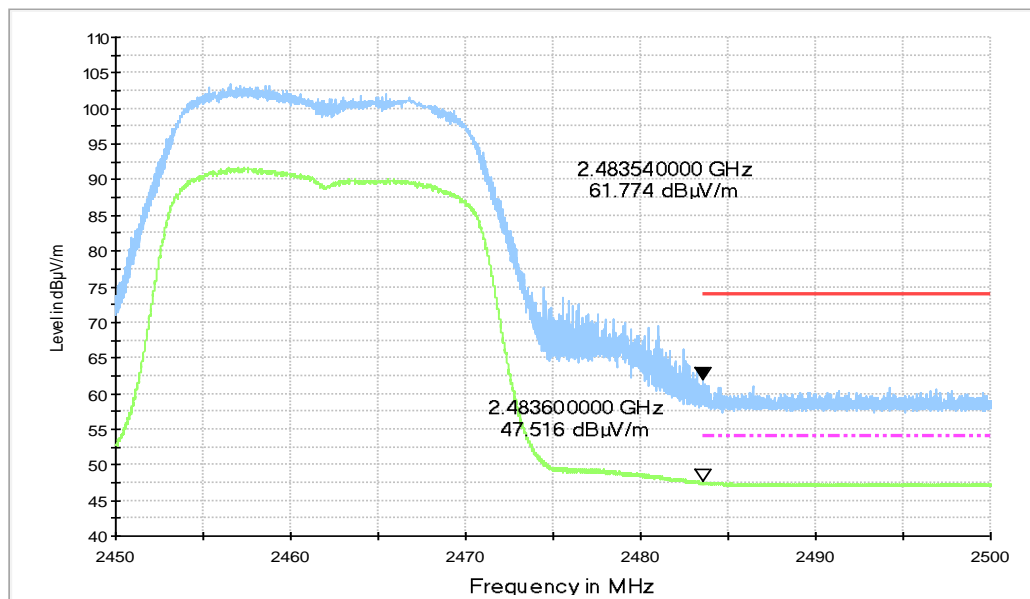


Fig.A.6.2.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

RE - Power-2.31GHz-2.45GHz

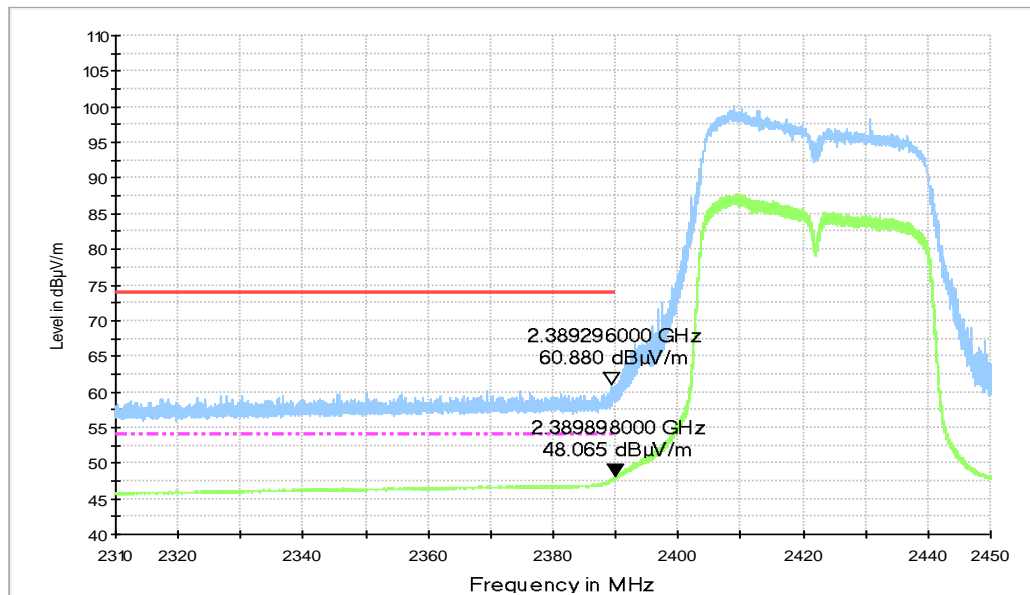


Fig.A.6.2.7 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31GHz - 2.45GHz

RE - Power-2.45GHz-2.5GHz

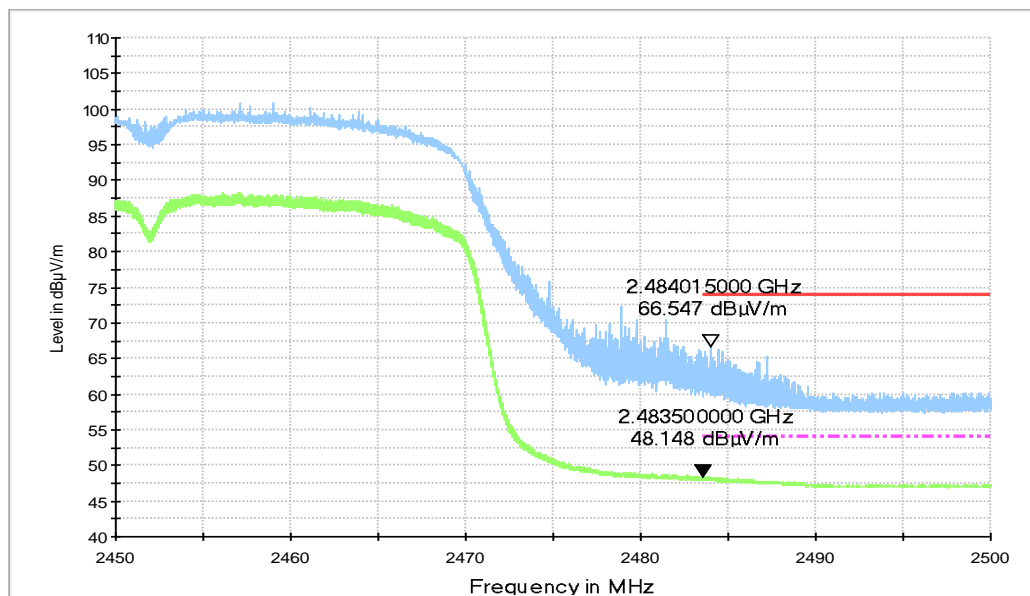


Fig.A.6.2.8 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz

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.³⁶ 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:

Voltage (V)	Frequency (Hz)
120	60

Measurement Result and limit:
WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		802.11b	Idle	
0.15 to 0.5	66 to 56	Fig.A.7.1	Fig.A.7.2	P
0.5 to 5	56			
5 to 30	60			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		802.11b	Idle	
0.15 to 0.5	56 to 46	Fig.A.7.1	Fig.A.7.2	P
0.5 to 5	46			
5 to 30	50			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Conclusion: Pass
Test graphs as below:

Traffic with AE3:

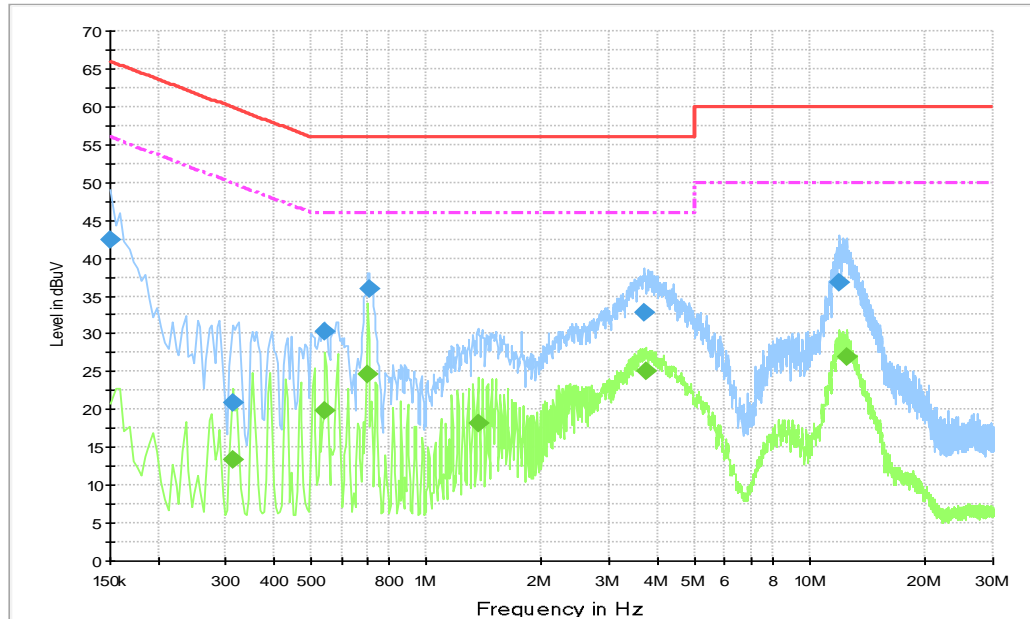


Fig.A.7.1 AC Powerline Conducted Emission-802.11b

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

Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.150000	42.4	10000	9.000	On	L1	28.9	23.6	66.0
0.312000	20.9	10000	9.000	On	N	20.0	39.1	59.9
0.546000	30.2	10000	9.000	On	L1	20.0	25.8	56.0
0.708000	36.0	10000	9.000	On	L1	20.0	20.0	56.0
3.700500	32.8	10000	9.000	On	L1	19.8	23.2	56.0
11.976000	36.7	10000	9.000	On	L1	19.9	23.3	60.0

Final Result 2

Frequency (MHz)	Average (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.312000	13.4	10000.	9.000	On	L1	20.0	36.5	49.9
0.546000	19.9	10000.	9.000	On	L1	20.0	26.1	46.0
0.703500	24.7	10000.	9.000	On	L1	20.0	21.3	46.0
1.365000	18.1	10000.	9.000	On	L1	19.8	27.9	46.0
3.723000	25.1	10000.	9.000	On	L1	19.8	20.9	46.0
12.480000	26.9	10000.	9.000	On	L1	20.0	23.1	50.0

Idle with AE3:

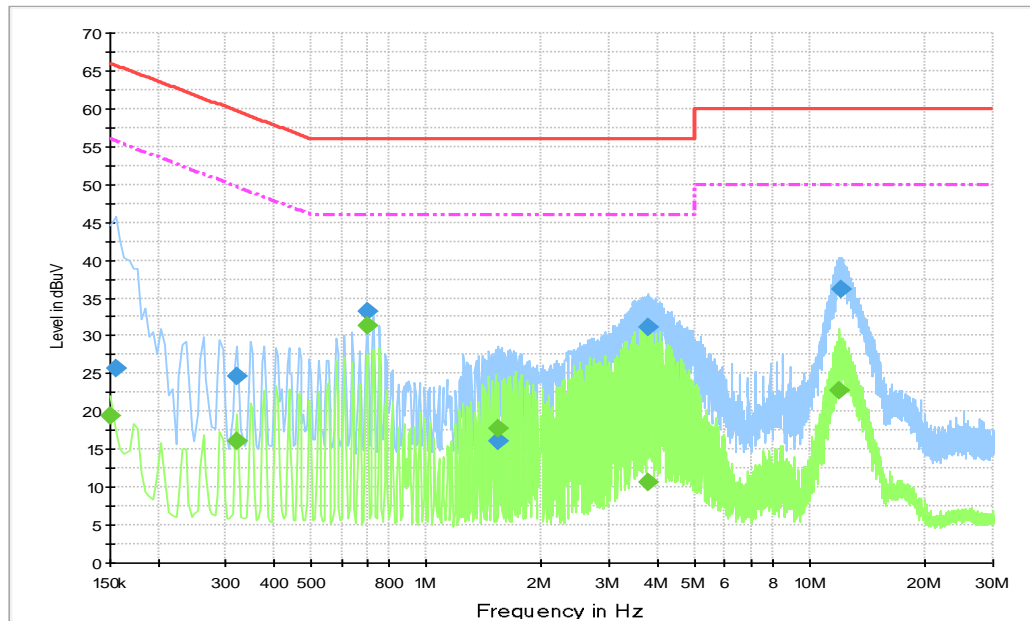


Fig.A.7.2 AC Powerline Conducted Emission-Idle

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)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.154500	25.7	10000	9.000	On	N	28.0	40.1	65.8
0.321000	24.6	10000	9.000	On	N	20.0	35.1	59.7
0.699000	33.2	10000	9.000	On	L1	20.0	22.8	56.0
1.545000	16.0	10000	9.000	On	L1	19.8	40.0	56.0
3.799500	31.2	10000	9.000	On	L1	19.8	24.8	56.0
11.998500	36.1	10000	9.000	On	L1	19.9	23.9	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	19.4	10000.	9.000	On	L1	28.9	36.6	56.0
0.321000	16.1	10000.	9.000	On	L1	20.0	33.6	49.7
0.699000	31.4	10000.	9.000	On	L1	20.0	14.6	46.0
1.540500	17.8	10000.	9.000	On	L1	19.8	28.2	46.0
3.781500	10.6	10000.	9.000	On	L1	19.8	35.4	46.0
11.953500	22.7	10000.	9.000	On	L1	19.9	27.3	50.0

ANNEX B: Accreditation Certificate

<p>United States Department of Commerce National Institute of Standards and Technology</p> <p>NVLAP[®]</p> <hr/> <p>Certificate of Accreditation to ISO/IEC 17025:2005</p> <hr/> <p>NVLAP LAB CODE: 600118-0</p> <p>Telecommunication Technology Labs, CAICT Beijing China</p> <p><i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i></p> <p>Electromagnetic Compatibility & Telecommunications</p> <p><i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. 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></p> <table><tr><td><hr/><p>2019-09-26 through 2020-09-30 Effective Dates</p></td><td></td><td> <hr/><p>For the National Voluntary Laboratory Accreditation Program</p></td></tr></table>		<hr/> <p>2019-09-26 through 2020-09-30 Effective Dates</p>		 <hr/> <p>For the National Voluntary Laboratory Accreditation Program</p>
<hr/> <p>2019-09-26 through 2020-09-30 Effective Dates</p>		 <hr/> <p>For the National Voluntary Laboratory Accreditation Program</p>		

END OF REPORT