FCC PART 15C
TEST REPORT
No.I22Z70452-EMC09

for

Samsung Electronics Co., Ltd.

Notebook PC

Model Name: NP750XFH, NP754XFH, NP750XFS, NP754XFS

With

FCC ID: ZCANP750XFH

Hardware Version: REV1.0

Software Version: Windows 11

Issued Date: 2022-12-07

Note:

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The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S.Government.

Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I22Z70452-EMC09	Rev.0	1st edition	2022-12-07

CONTENTS

1. Test Laboratory

1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2017 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0, and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (ISED#: 24849). The detail accreditation scope can be found on NVLAP website.

1.2. Testing Location

Location1: CTTL(BDA)

Address: No. 18A, Kangding Street, Beijing Economic-Technology Development Area, Beijing, 100176, P.R. China

Location2: CTTL (Huayuan North Road)

Address: No. 52 Huayuan North Road, Haidian District, Beijing 100191, P.R. China

1.3. Testing Environment

Normal Temperature: 15-35℃

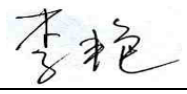
Relative Humidity: 20-75%

1.4. Project date

Testing Start Date: 2022-11-01

Testing End Date: 2022-12-07

1.5. Signature

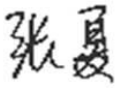


Li Yan

(Prepared this test report)

Zhang Ying

(Reviewed this test report)



Zhang Xia

Deputy Director of the laboratory

(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name:	Samsung Electronics Co., Ltd.
Address:	19 Chapin Rd.,Building D Pine Brook, NJ 07058
Contact:	Jenni Chun
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2.2. Manufacturer Information

Company Name:	Samsung Electronics Co., Ltd.
Address:	Samsung R5, Maetan dong 129, Samsung ro Youngtong gu, Suwon city 443 742, Korea
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Telephone:	+82-10-2722-4159
Fax:	/

3. PRODUCT INFORMATION

3.1. About EUT

Description	Notebook PC
Model name	NP750XFH, NP754XFH, NP750XFS, NP754XFS
FCC ID	ZCANP750XFH

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of T CTTL-Telecommunication Technology Labs, CAICT

3.2. Internal Identification of EUT

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	2270452UT23a	REV1.0	Windows 11
EUT2	2270452UT13a	REV1.0	Windows 11

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE

AE ID*	Description	SN	Remarks
AE1	Travel Adapter	/	/
AE2	Data Cable	/	/
AE3	battery	/	Inbuilt

AE1

Model	EP-TA865
Manufacturer	DONGYANG E&P Inc
Length of cable	/

AE2

Model	/
Manufacturer	/
Length of cable	/

AE3

Model	/
Manufacturer	/

*AE ID: is used to identify the test sample in the lab internally.

3.4. General Description

The Equipment Under Test (EUT) was a Notebook PC with Bluetooth, Bluetooth Low Energy and 802.11 a/b/g/n/ac/ax capabilities in the 2.4 GHz and 5 GHz bands.

Antenna information

Item	Spec.	Vendor	Vendor P/N	Sample under test
Antenna	Main antenna (Chain A)	INNOWAVE	/	EUT1
	Auxiliary antenna (Chain B)			
Antenna	Main antenna (Chain A)	SPEED	/	EUT2
	Auxiliary antenna (Chain B)			

Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the Client.

The differences in the model names are only for different marketing purposes.

For more EUT information please refers to the manufacturer's specifications or user's manual.

3.5. Test Configuration

For 802.11b/g modes the EUT can transmit at both CHAIN A and CHAIN B RF outputs individually, but not simultaneously.

For 802.11n20 & 802.11ax20 (20 MHz channel bandwidth), 802.11n40 & 802.11ax40 (40MHz channel bandwidth) modes the EUT can transmit at both CHAIN A and CHAIN B RF outputs individually, and also simultaneously(MIMO).

The software DRTU provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

3.6. Interpretation of the Test Environment

For the test methods, the test environment uncertainty figures correspond to an expansion factor k=2.

Measurement Uncertainty

Parameter	Uncertainty
temperature	0.48°C
humidity	2 %
DC voltages	0.003V

4. Reference Documents

4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part15	FCC CFR 47, Part 15, Subpart C: 15.205 Restricted bands of operation; 15.209 Radiated emission limits, general requirements; 15.247 Operation within the bands 902-928MHz, 2400-2483.5 MHz, and 5725-5850 MHz.	2020
ANSI C63.10	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices	2020
KDB 558074 D01	Federal Communications Commission Office of Engineering and Technology Laboratory Division GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES	2019

Note: The test methods have no deviation with standards.

5. SUMMARY OF TEST RESULTS

5.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15C	Verdict
Radiated Spurious Emission	15.247, 15.205, 15.209	**P**
AC Power line Conducted Emission	15.107, 15.207	**P**

Please refer to **ANNEX C** for detail.

Terms used in Verdict column

P	Pass, The EUT complies with the essential requirements in the standard.
NP	Not Perform, The test was not performed by CTTL
BR	Re-use test data from basic model report.
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

5.2. Statements

The test cases as listed in section 5.1 of this report for the EUT specified in section 3 was performed by CTTL and according to the standards or reference documents listed in section 4.2 The EUT met all requirements of the standards or reference documents, and only the WLAN function was tested in this report.

5.3. Test Conditions

T nom	Normal Temperature
T min	Low Temperature
T max	High Temperature
V nom	Normal Voltage

For this report, if the test cases listed above are tested under normal temperature and normal voltage, and also under norm humidity, the specific condition is shown as follows:

Temperature	T nom	15-35℃
Voltage	V nom	15.4V
Humidity	H nom	20-75%

6. Test Facilities Utilized

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESU26	100376	R&S	1 year	2023-09-22
2	Test Receiver	ESW44	103015	R&S	1 year	2023-02-23
3	Test Receiver	ESU26	100235	R&S	1 year	2023-03-08
4	Loop Antenna	HFH2-Z2	829324/007	R&S	1 year	2022-12-22
5	EMI Antenna	VULB9163	01223	Schwarzbeck	1 year	2023-07-25
6	EMI Antenna	3117	00119024	ETS-Lindgren	1 year	2023-06-07
7	EMI Antenna	3115	00167252	ETS-Lindgren	1 year	2022-12-26
8	EMI Antenna	LB-180400 -25-C-KF	J211060826	A-INFO	1 year	2023-02-27

AC Power Line Conducted Emission

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	LISN	ENV216	101459	R&S	1 year	2023-03-26
2	Test Receiver	ESCI	100766	R&S	1 year	2023-03-02

Test Software

Test Item	Test Software and Version	Software Vendor
Radiated Continuous Emission	EMC32 V8.53.0	R&S
	EMC32 V10.60.20	R&S
Conducted Emission	EMC32 V8.53.0	R&S

7. Measurement Uncertainty

Radiated Spurious Emission

Measurement Uncertainty: (k=2)

Frequency Range	Uncertainty(dB)
9kHz-30MHz	4.92
30MHz ≤ f ≤ 1GHz	5.15
1GHz ≤ f ≤18GHz	5.54
18GHz ≤ f ≤40GHz	5.26

AC Power-line Conducted Emission

Measurement Uncertainty: 3.10dB, k=2

ANNEX A: EUT parameters

Disclaimer: The antenna gain and setting power provided by the client may affect the validity of the measurement results in this report, and the client shall bear the impact and consequences arising therefrom.

ANNEX B: Antenna Requirements

According to FCC 47 CFR § 15.203:
“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”
(1) The antennas of the EUT are permanently attached.
(2) The EUT complies with the requirement of §15.203

ANNEX C: Detailed Test Results

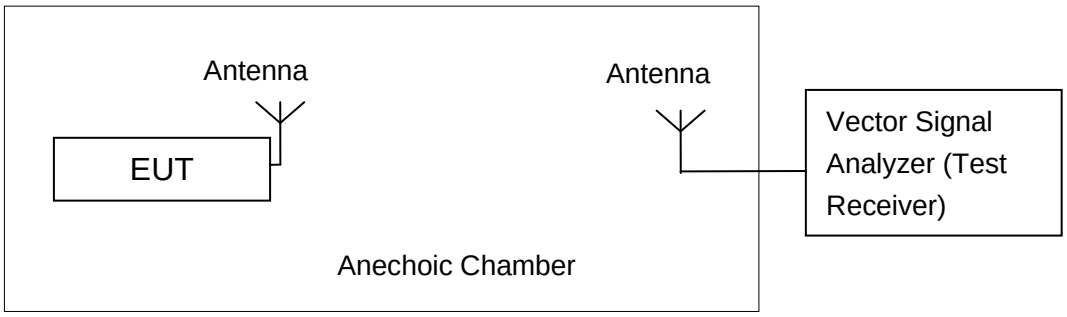
C.1. Radiated Spurious Emission

Specification Reference

FCC 47 CFR Part 15.247, 15.205, 15.209

Method of Measurement

Testing was performed in according with ANSI C63.10-2020 and KDB 558074.
The radiated emission test is performed in semi-anechoic chamber. The distance from the EUT to the reference point of measurement antenna is 3m. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept. During the test, the turntable is rotated 360° and the measurement antenna is moved from 1m to 4m to get the maximization result.



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 (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

Frequency of emission (MHz)	Field strength(dBμV/m)	Measurement distance(m)
30-88	40.0	3
88-216	43.5	3
216-960	46.0	3
Above 960	54.0	3

Test settings

Frequency of emission (MHz)	RBW/VBW
30-1000	100kHz/300kHz
1000-4000	1MHz/3MHz
4000-18000	1MHz/3MHz
18000-26500	1MHz/3MHz

Sample Calculation

The measurement results are obtained as described below:
Result=P_{Mea}+$A_{Rpl=}$ P_{Mea}+Cable Loss+Antenna Factor
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.

Test Notes

1. The EUT is operating at its maximum duty cycle and its maximum power control level.
2. Investigation has been done on all channel, modes and modulations/data rates. Only the radiated emissions of the configurations that produced the worst case emissions are reported in this section.
3.
For EUT1 with INNOWAVE antenna the measurements were performed separately in Chain A, Chain B, and MIMO (Chain A+B), and only the worst cases are shown in this report.
For EUT2 with SPEED antenna the measurements were performed separately in Chain A,Chain B, and MIMO (Chain A+B), and only the worst cases are shown in this report.

C.1.1 Radiated Spurious Emission- above 1GHz

INNOWAVE

The measurements were performed separately in Chain A, Chain B, and MIMO (Chain A+B), and only the worst cases are shown in this section.

Peak results

802.11b

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2386.398	62.83	4.61	31.71	26.51	74.00	11.17	V
2387.266	62.07	4.61	31.72	25.73	74.00	11.93	H
4824.000	43.87	-35.93	33.80	46.00	74.00	30.13	H
7236.000	41.94	-34.54	35.54	40.93	74.00	32.06	V
9648.000	44.24	-33.48	36.80	40.92	74.00	29.76	V
12060.000	45.88	-31.76	38.86	38.78	74.00	28.12	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2366.600	45.85	-34.44	31.43	48.86	74.00	28.15	H
2506.600	46.25	-34.23	32.20	48.28	74.00	27.75	H
4874.000	44.06	-35.79	33.80	46.05	74.00	29.94	V
7311.000	42.88	-34.28	35.58	41.57	74.00	31.12	V
9748.000	44.66	-33.54	37.00	41.19	74.00	29.34	H
12185.000	45.62	-31.61	38.81	38.42	74.00	28.38	H

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2484.414	62.13	4.65	32.14	25.34	74.00	11.87	V
2484.650	61.49	4.65	32.14	24.71	74.00	12.51	H
4924.000	46.98	-35.70	33.85	48.83	74.00	27.02	V
7386.000	43.63	-34.09	35.50	42.22	74.00	30.37	H
9848.000	44.56	-33.44	37.10	40.90	74.00	29.44	H
12310.000	46.38	-31.47	38.81	39.04	74.00	27.62	V

802.11g

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2388.190	62.45	4.61	31.74	26.10	74.00	11.55	H
2389.520	62.80	4.61	31.75	26.43	74.00	11.20	H
4824.000	40.94	-35.93	33.80	43.07	74.00	33.06	V
7236.000	41.26	-34.54	35.54	40.26	74.00	32.74	H
9648.000	45.25	-33.48	36.80	41.94	74.00	28.75	H
12060.000	45.86	-31.76	38.86	38.75	74.00	28.14	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2363.400	45.92	-34.44	31.39	48.97	74.00	28.08	V
2526.400	46.73	-34.23	32.20	48.76	74.00	27.27	V
4874.000	40.87	-35.79	33.80	42.86	74.00	33.13	V
7311.000	42.56	-34.28	35.58	41.26	74.00	31.44	H
9748.000	42.53	-33.54	37.00	39.07	74.00	31.47	V
12185.000	45.12	-31.61	38.81	37.91	74.00	28.88	H

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.985	66.35	4.65	32.14	29.56	74.00	7.65	V
2484.845	66.63	4.65	32.14	29.84	74.00	7.37	V
4924.000	41.37	-35.70	33.85	43.22	74.00	32.63	H
7386.000	41.70	-34.09	35.50	40.29	74.00	32.30	V
9848.000	42.97	-33.44	37.10	39.31	74.00	31.03	V
12310.000	44.00	-31.47	38.81	36.66	74.00	30.00	V

802.11n-HT20

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2388.638	65.58	4.61	31.74	29.22	74.00	8.42	V
2389.506	65.45	4.61	31.75	29.08	74.00	8.55	H
4824.000	39.26	-35.93	33.80	41.39	74.00	34.74	V
7236.000	42.47	-34.54	35.54	41.46	74.00	31.53	V
9648.000	45.06	-33.48	36.80	41.75	74.00	28.94	H
12060.000	46.51	-31.76	38.86	39.41	74.00	27.49	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2367.800	45.73	-34.44	31.45	48.72	74.00	28.27	H
2504.600	45.75	-34.23	32.20	47.78	74.00	28.25	V
4874.000	40.25	-35.79	33.80	42.24	74.00	33.75	V
7311.000	41.44	-34.28	35.58	40.14	74.00	32.56	H
9748.000	42.92	-33.54	37.00	39.45	74.00	31.08	V
12185.000	44.70	-31.61	38.81	37.49	74.00	29.30	V

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.645	65.27	4.65	32.14	28.48	74.00	8.73	V
2484.485	64.51	4.65	32.14	27.72	74.00	9.49	V
4924.000	40.35	-35.70	33.85	42.21	74.00	33.65	V
7386.000	41.34	-34.09	35.50	39.94	74.00	32.66	V
9848.000	44.55	-33.44	37.10	40.89	74.00	29.45	V
12310.000	45.07	-31.47	38.81	37.73	74.00	28.93	V

802.11n-HT40

Ch3

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2383.766	64.71	4.60	31.67	28.44	74.00	9.29	V
2389.548	64.54	4.61	31.75	28.17	74.00	9.46	V
4844.000	40.79	-35.85	33.80	42.84	74.00	33.21	V
7266.000	43.41	-34.49	35.60	42.31	74.00	30.59	H
9688.000	45.27	-33.47	36.95	41.78	74.00	28.73	V
12110.000	46.28	-31.73	38.89	39.13	74.00	27.72	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2365.850	45.83	-36.86	31.42	51.26	74.00	28.17	V
2514.650	45.82	-36.79	32.20	50.41	74.00	28.18	V
4873.500	41.71	-35.79	33.80	43.70	74.00	32.29	V
7311.000	43.05	-34.28	35.58	41.75	74.00	30.95	V
9747.000	43.81	-33.53	37.00	40.35	74.00	30.19	H
12185.000	45.61	-31.61	38.81	38.41	74.00	28.39	H

Ch9

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.810	64.09	4.65	32.14	27.30	74.00	9.91	V
2484.795	63.89	4.65	32.14	27.10	74.00	10.11	V
4844.000	41.77	-35.85	33.80	43.82	74.00	32.23	V
7266.000	43.10	-34.49	35.60	41.99	74.00	30.90	H
9688.000	44.17	-33.47	36.95	40.69	74.00	29.83	H
12110.000	46.14	-31.73	38.89	38.98	74.00	27.86	V

802.11ax-HT20

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2386.888	65.94	4.6	31.7	29.62	74.00	8.1	V
2387.462	63.21	4.6	31.7	26.87	74.00	10.8	H
4824.000	40.02	-35.9	33.8	42.15	74.00	34.0	H
7236.000	41.16	-34.5	35.5	40.16	74.00	32.8	V
9648.000	43.08	-33.5	36.8	39.77	74.00	30.9	H
12060.000	45.74	-31.8	38.9	38.63	74.00	28.3	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2364.400	46.13	4.6	31.4	10.16	74.00	27.9	H
2519.400	47.13	4.7	32.2	10.21	74.00	26.9	H
4874.000	40.24	-35.8	33.8	42.23	74.00	33.8	V
7311.000	41.22	-34.3	35.6	39.92	74.00	32.8	H
9748.000	43.22	-33.5	37.0	39.75	74.00	30.8	V
12185.000	45.23	-31.6	38.8	38.02	74.00	28.8	V

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.870	64.49	4.7	32.1	27.69	74.00	9.5	H
2485.135	62.28	4.6	32.1	25.49	74.00	11.7	V
4924.000	40.86	-35.7	33.8	42.71	74.00	33.1	V
7386.000	41.48	-34.1	35.5	40.07	74.00	32.5	H
9848.000	44.96	-33.4	37.1	41.31	74.00	29.0	V
12310.000	45.01	-31.5	38.8	37.67	74.00	29.0	H

802.11ax-HT40

Ch3

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2386.804	64.99	4.6	31.7	28.66	74.00	9.0	H
2389.674	64.83	4.6	31.8	28.46	74.00	9.2	H
4844.000	40.30	-35.8	33.8	42.35	74.00	33.7	H
7266.000	41.19	-34.5	35.6	40.09	74.00	32.8	V
9688.000	43.32	-33.5	37.0	39.84	74.00	30.7	V
12110.000	46.50	-31.7	38.9	39.35	74.00	27.5	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2360.750	45.79	-37.0	31.4	51.41	74.00	28.2	V
2511.350	45.89	-36.7	32.2	50.42	74.00	28.1	H
4874.000	40.14	-35.8	33.8	42.13	74.00	33.9	V
7311.000	42.63	-34.3	35.6	41.33	74.00	31.4	V
9748.000	43.17	-33.5	37.0	39.70	74.00	30.8	H
12185.000	45.08	-31.6	38.8	37.88	74.00	28.9	H

Ch9

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.955	66.40	4.7	32.1	29.60	74.00	7.6	V
2484.495	62.50	4.6	32.1	25.71	74.00	11.5	H
4904.000	41.73	-35.7	33.8	43.66	74.00	32.3	H
7356.000	42.75	-34.1	35.5	41.34	74.00	31.3	H
9808.000	44.50	-33.6	37.1	41.02	74.00	29.5	V
12260.000	46.56	-31.5	38.8	39.28	74.00	27.4	V

Average results

802.11b

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2388.120	48.12	4.61	31.74	11.77	54.00	5.88	V
2388.840	48.14	4.61	31.75	11.78	54.00	5.86	V
4824.100	32.15	-35.93	33.80	34.28	54.00	21.85	V
7388.200	30.95	-34.09	35.50	29.54	54.00	23.05	H
9648.215	34.06	-33.48	36.80	30.75	54.00	19.94	V
12060.100	34.27	-31.76	38.86	27.17	54.00	19.73	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2386.050	48.13	4.60	31.71	11.82	54.00	5.87	V
2486.580	48.48	4.64	32.15	11.69	54.00	5.52	V
4873.900	30.57	-35.79	33.80	32.56	54.00	23.43	H
7311.100	30.74	-34.28	35.58	29.44	54.00	23.26	V
9748.000	31.85	-33.54	37.00	28.38	54.00	22.15	H
12184.900	33.80	-31.61	38.82	26.59	54.00	20.20	H

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2491.050	48.64	4.63	32.16	11.84	54.00	5.36	V
2493.870	48.52	4.63	32.18	11.72	54.00	5.48	V
4924.000	37.91	-35.70	33.85	39.76	54.00	16.09	H
7386.100	30.89	-34.09	35.50	29.48	54.00	23.11	V
9847.900	32.19	-33.44	37.10	28.53	54.00	21.81	H
12310.000	33.76	-31.47	38.81	26.42	54.00	20.24	H

802.11g

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2388.660	48.25	4.61	31.74	11.89	54.00	5.75	V
2389.590	48.35	4.61	31.76	11.98	54.00	5.65	V
4824.100	28.57	-35.93	33.80	30.70	54.00	25.43	V
7236.100	30.17	-34.54	35.54	29.16	54.00	23.83	V
9648.100	32.02	-33.48	36.80	28.70	54.00	21.98	H
12060.100	34.13	-31.76	38.86	27.03	54.00	19.87	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2386.980	48.08	4.61	31.72	11.75	54.00	5.92	V
2487.510	48.50	4.64	32.15	11.70	54.00	5.50	V
4873.900	28.96	-35.79	33.80	30.95	54.00	25.04	H
7311.100	30.77	-34.28	35.58	29.47	54.00	23.23	V
9748.000	31.74	-33.54	37.00	28.28	54.00	22.26	H
12184.900	33.83	-31.61	38.82	26.62	54.00	20.17	V

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2484.420	50.32	4.65	32.14	13.53	54.00	3.68	V
2485.440	49.47	4.65	32.14	12.68	54.00	4.53	V
4924.000	28.85	-35.70	33.85	30.70	54.00	25.15	H
7386.100	30.99	-34.09	35.50	29.58	54.00	23.01	V
9847.900	32.06	-33.44	37.10	28.40	54.00	21.94	H
12310.000	33.68	-31.47	38.81	26.34	54.00	20.32	V

802.11n-HT20

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2388.540	48.41	4.61	31.74	12.05	54.00	5.59	V
2389.470	48.55	4.61	31.75	12.18	54.00	5.45	V
4824.100	28.74	-35.93	33.80	30.87	54.00	25.26	H
7236.100	30.14	-34.54	35.54	29.13	54.00	23.86	H
9648.100	31.99	-33.48	36.80	28.68	54.00	22.01	V
12060.100	34.05	-31.76	38.86	26.95	54.00	19.95	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2386.740	48.13	4.61	31.72	11.81	54.00	5.87	V
2488.470	48.52	4.64	32.15	11.72	54.00	5.48	V
4873.900	28.93	-35.79	33.80	30.92	54.00	25.07	V
7311.100	30.67	-34.28	35.58	29.37	54.00	23.33	V
9748.000	31.78	-33.54	37.00	28.32	54.00	22.22	H
12184.900	33.72	-31.61	38.82	26.52	54.00	20.28	V

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2486.190	49.45	4.65	32.15	12.66	54.00	4.55	V
2487.300	49.12	4.64	32.15	12.33	54.00	4.88	V
4924.000	28.91	-35.70	33.85	30.76	54.00	25.09	H
7386.100	30.93	-34.09	35.50	29.52	54.00	23.07	H
9847.900	32.17	-33.44	37.10	28.52	54.00	21.83	H
12310.000	33.61	-31.47	38.81	26.27	54.00	20.39	H

802.11n-HT40

Ch3

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2388.570	49.67	4.60	31.70	13.31	54.00	4.30	V
2389.410	49.72	4.60	31.80	13.35	54.00	4.30	V
4843.900	29.12	-35.85	33.80	31.17	54.00	24.88	H
7266.100	30.52	-34.49	35.60	29.41	54.00	23.48	V
9688.000	31.99	-33.47	36.95	28.50	54.00	22.01	V
12109.900	33.74	-31.73	38.89	26.59	54.00	20.26	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2386.590	48.38	4.61	31.71	12.06	54.00	5.62	V
2484.750	48.67	4.65	32.14	11.88	54.00	5.33	V
4873.900	29.18	-35.79	33.80	31.17	54.00	24.82	H
7311.100	30.64	-34.28	35.58	29.34	54.00	23.36	H
9748.000	31.71	-33.54	37.00	28.25	54.00	22.29	V
12184.900	33.72	-31.61	38.82	26.52	54.00	20.28	V

Ch9

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2484.540	49.53	4.65	32.14	12.74	54.00	4.47	V
2485.650	49.37	4.65	32.14	12.58	54.00	4.63	V
4903.900	29.10	-35.73	33.81	31.03	54.00	24.90	H
7356.100	30.99	-34.09	35.50	29.58	54.00	23.01	H
9808.000	31.82	-33.61	37.10	28.33	54.00	22.18	H
12259.900	33.72	-31.52	38.80	26.45	54.00	20.28	H

802.11ax-HT20

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2388.840	49.47	4.6	31.7	13.11	54.0	4.5	V
2389.350	49.57	4.6	31.8	13.20	54.0	4.4	V
4824.100	28.79	-35.9	33.8	30.92	54.0	25.2	H
7236.100	30.22	-34.5	35.5	29.21	54.0	23.8	H
9648.100	32.00	-33.5	36.8	28.69	54.0	22.0	H
12060.100	34.07	-31.8	38.9	26.97	54.0	19.9	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2387.220	48.14	4.6	31.7	11.81	54.0	5.9	V
2486.700	48.49	4.6	32.1	11.70	54.0	5.5	V
4873.900	28.93	-35.8	33.8	30.92	54.0	25.1	H
7311.100	30.66	-34.3	35.6	29.36	54.0	23.3	V
9748.000	31.78	-33.5	37.0	28.32	54.0	22.2	V
12184.900	33.75	-31.6	38.8	26.55	54.0	20.2	H

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2484.060	49.74	4.7	32.1	12.95	54.0	4.3	H
2485.320	49.30	4.6	32.1	12.51	54.0	4.7	H
4874.000	28.98	-25.8	33.8	20.97	54.0	25.0	V
7311.150	30.74	-34.3	35.6	29.44	54.0	23.3	V
9748.250	31.88	-33.5	37.0	28.42	54.0	22.1	H
12184.750	33.95	-31.6	38.8	26.75	54.0	20.0	V

802.11ax-HT40

Ch3

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2388.720	50.35	4.6	31.7	14.00	54.0	3.6	H
2389.800	50.55	4.6	31.8	14.17	54.0	3.5	V
4843.900	28.71	-35.8	33.8	30.76	54.0	25.3	V
7266.100	30.50	-34.5	35.6	29.39	54.0	23.5	V
9688.000	31.96	-33.5	37.0	28.48	54.0	22.0	H
12109.900	33.86	-31.7	38.9	26.71	54.0	20.1	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2388.480	48.96	4.6	31.7	12.61	54.0	5.0	V
2486.130	48.87	4.6	32.1	12.07	54.0	5.1	V
4873.900	28.67	-35.8	33.8	30.66	54.0	25.3	V
7311.100	30.60	-34.3	35.6	29.30	54.0	23.4	V
9748.000	31.77	-33.5	37.0	28.31	54.0	22.2	H
1218.490	33.58	3.3	29.5	0.76	54.0	20.4	H

Ch9

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.770	50.85	4.6	32.1	14.15	54.0	3.2	V
2487.270	49.23	4.6	32.1	12.44	54.0	4.8	V
4903.900	28.96	-35.7	33.8	30.89	54.0	25.0	V
7356.100	31.01	-34.1	35.5	29.60	54.0	23.0	V
9808.000	31.73	-33.6	37.1	28.25	54.0	22.3	V
12259.900	33.73	-31.5	38.8	26.45	54.0	20.3	H

Note: the spurious emission above 18G is noise only.

Conclusion: Pass

SPEED

The measurements were performed separately in Chain A, Chain B, and MIMO (Chain A+B), and only the worst cases are shown in this section.

Peak results

802.11b

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2387.322	61.95	4.61	31.72	25.61	74.00	12.05	V
2389.296	61.48	4.61	31.75	25.12	74.00	12.52	V
4823.500	48.19	-35.93	33.80	50.32	74.00	25.81	V
7236.000	41.94	-34.54	35.54	40.93	74.00	32.06	V
9648.000	43.84	-33.48	36.80	40.53	74.00	30.16	H
12060.000	46.51	-31.76	38.86	39.41	74.00	27.49	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2367.600	46.08	-36.82	31.45	51.45	74.00	27.92	V
2502.800	45.96	-36.56	32.20	50.32	74.00	28.04	H
4874.000	47.62	-35.79	33.80	49.60	74.00	26.38	H
7311.000	42.27	-34.28	35.58	40.97	74.00	31.73	V
9748.000	43.57	-33.54	37.00	40.11	74.00	30.43	H
12185.000	45.00	-31.61	38.81	37.80	74.00	29.00	H

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.535	61.52	4.65	32.13	24.73	74.00	12.48	V
2484.025	62.04	4.65	32.14	25.25	74.00	11.96	H
4923.500	45.82	-35.70	33.85	47.68	74.00	28.18	V
7386.000	41.42	-34.09	35.50	40.01	74.00	32.58	V
9848.000	42.74	-33.44	37.10	39.08	74.00	31.26	H
12310.000	44.96	-31.47	38.81	37.62	74.00	29.04	H

802.11g

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.352	61.51	4.61	31.75	25.15	74.00	12.49	V
2389.702	61.65	4.61	31.76	25.28	74.00	12.35	V
4824.500	47.06	-35.93	33.80	49.19	74.00	26.94	V
7236.000	42.47	-34.54	35.54	41.46	74.00	31.53	V
9648.000	44.42	-33.48	36.80	41.10	74.00	29.58	V
12060.000	45.77	-31.76	38.86	38.66	74.00	28.23	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2375.000	44.76	-36.66	31.55	49.87	74.00	29.24	H
2499.000	45.20	-36.48	32.20	49.49	74.00	28.80	V
4868.000	44.01	-35.80	33.80	46.01	74.00	29.99	H
7311.000	42.91	-34.28	35.58	41.61	74.00	31.09	V
9748.000	44.68	-33.54	37.00	41.22	74.00	29.32	H
12185.000	45.54	-31.61	38.81	38.34	74.00	28.46	H

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.525	64.15	4.65	32.13	27.36	74.00	9.85	H
2483.760	63.76	4.65	32.14	26.97	74.00	10.24	H
4917.500	43.62	-35.71	33.84	45.50	74.00	30.38	V
7386.000	41.64	-34.09	35.50	40.23	74.00	32.36	H
9848.000	42.61	-33.44	37.10	38.95	74.00	31.39	H
12310.000	44.77	-31.47	38.81	37.43	74.00	29.23	V

802.11n-HT20

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.338	61.73	4.61	31.75	25.37	74.00	12.27	V
2389.884	61.59	4.62	31.76	25.22	74.00	12.41	H
4824.000	45.71	-35.93	33.80	47.84	74.00	28.29	H
7236.000	41.03	-34.54	35.54	40.02	74.00	32.97	H
9648.000	43.83	-33.48	36.80	40.52	74.00	30.17	V
12060.000	45.51	-31.76	38.86	38.41	74.00	28.49	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2373.200	44.66	-36.70	31.53	49.83	74.00	29.34	V
2515.200	46.64	-36.80	32.20	51.24	74.00	27.36	V
4881.500	42.27	-35.77	33.80	44.24	74.00	31.73	V
7311.000	41.44	-34.28	35.58	40.13	74.00	32.56	V
9748.000	42.41	-33.54	37.00	38.95	74.00	31.59	V
12185.000	45.36	-31.61	38.81	38.16	74.00	28.64	H

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.620	65.22	4.65	32.13	28.43	74.00	8.78	H
2483.725	65.95	4.65	32.14	29.17	74.00	8.05	H
4924.000	42.91	-35.70	33.85	44.76	74.00	31.09	V
7386.000	40.91	-34.09	35.50	39.50	74.00	33.09	V
9848.000	42.83	-33.44	37.10	39.17	74.00	31.17	V
12310.000	44.48	-31.47	38.81	37.14	74.00	29.52	H

802.11n-HT40

Ch3

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2388.512	64.87	4.61	31.74	28.52	74.00	9.13	H
2389.254	64.65	4.61	31.75	28.29	74.00	9.35	H
4829.000	43.02	-35.90	33.80	45.12	74.00	30.98	V
7266.000	42.98	-34.49	35.60	41.87	74.00	31.02	V
9688.000	43.34	-33.47	36.95	39.85	74.00	30.66	V
12110.000	45.74	-31.73	38.89	38.59	74.00	28.26	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2374.400	47.17	-36.67	31.54	52.30	74.00	26.83	H
2505.400	46.39	-36.61	32.20	50.80	74.00	27.61	V
4861.000	42.72	-35.81	33.80	44.73	74.00	31.28	V
7311.000	40.96	-34.28	35.58	39.66	74.00	33.04	H
9748.000	43.36	-33.54	37.00	39.90	74.00	30.64	V
12185.000	44.99	-31.61	38.81	37.78	74.00	29.01	V

Ch9

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2484.310	64.39	4.65	32.14	27.60	74.00	9.61	V
2486.040	63.62	4.65	32.14	26.83	74.00	10.38	H
4904.000	42.04	-35.73	33.81	43.97	74.00	31.96	H
7356.000	41.08	-34.09	35.50	39.67	74.00	32.92	V
9808.000	42.23	-33.61	37.10	38.74	74.00	31.77	V
12260.000	45.79	-31.52	38.80	38.52	74.00	28.21	V

802.11ax-HT20

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2387.154	63.47	4.6	31.7	27.14	74.0	10.5	V
2388.890	63.39	4.6	31.7	27.03	74.0	10.6	H
4824.000	44.41	-35.9	33.8	46.54	74.0	29.6	V
7236.000	41.14	-34.5	35.5	40.13	74.0	32.9	H
9648.000	42.28	-33.5	36.8	38.97	74.0	31.7	V
12060.000	45.55	-31.8	38.9	38.44	74.0	28.5	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2372.400	45.44	-36.7	31.5	50.64	74.0	28.6	V
2511.400	46.35	-36.7	32.2	50.87	74.0	27.7	H
4871.500	42.64	-35.8	33.8	44.63	74.0	31.4	H
7311.000	40.53	-34.3	35.6	39.23	74.0	33.5	H
9748.000	41.78	-33.5	37.0	38.32	74.0	32.2	V
12185.000	44.94	-31.6	38.8	37.74	74.0	29.1	V

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.555	63.08	4.7	32.1	26.29	74.0	10.9	V
2483.790	63.82	4.7	32.1	27.03	74.0	10.2	H
4921.500	43.20	-35.7	33.8	45.06	74.0	30.8	V
7386.000	40.68	-34.1	35.5	39.28	74.0	33.3	V
9848.000	42.91	-33.4	37.1	39.25	74.0	31.1	H
12310.000	44.78	-31.5	38.8	37.44	74.0	29.2	V

802.11ax-HT40

Ch3

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.170	63.47	4.6	31.7	27.11	74.0	10.5	V
2389.926	64.26	4.6	31.8	27.89	74.0	9.7	H
4827.500	44.00	-35.9	33.8	46.11	74.0	30.0	V
7266.000	42.53	-34.5	35.6	41.42	74.0	31.5	H
9688.000	42.88	-33.5	37.0	39.40	74.0	31.1	H
12110.000	44.19	-31.7	38.9	37.03	74.0	29.8	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2375.800	48.20	-36.6	31.6	53.27	74.0	25.8	V
2498.600	46.64	-36.5	32.2	50.92	74.0	27.4	H
4864.000	43.57	-35.8	33.8	45.58	74.0	30.4	H
7311.000	42.08	-34.3	35.6	40.77	74.0	31.9	V
9748.000	41.63	-33.5	37.0	38.17	74.0	32.4	V
12185.000	45.28	-31.6	38.8	38.07	74.0	28.7	H

Ch9

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.830	65.20	4.7	32.1	28.41	74.0	8.8	V
2487.170	64.24	4.6	32.1	27.45	74.0	9.8	H
4899.000	42.36	-35.7	33.8	44.30	74.0	31.6	H
7356.000	41.16	-34.1	35.5	39.75	74.0	32.8	V
9808.000	43.43	-33.6	37.1	39.94	74.0	30.6	H
1260.000	45.11	3.4	29.8	11.95	74.0	28.9	H

Average results

802.11b

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2388.750	48.25	4.61	31.74	11.90	54.00	5.75	V
2389.680	48.23	4.61	31.76	11.85	54.00	5.77	V
4824.100	44.77	-35.93	33.80	46.90	54.00	9.23	H
7236.100	29.84	-34.54	35.54	28.83	54.00	24.16	V
9648.100	32.06	-33.48	36.80	28.75	54.00	21.94	V
12060.100	34.22	-31.76	38.86	27.12	54.00	19.78	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2421.720	49.31	4.65	31.94	12.72	54.00	4.69	V
2452.680	49.36	4.67	32.01	12.68	54.00	4.64	V
4873.900	42.34	-35.79	33.80	44.33	54.00	11.66	H
7311.100	30.41	-34.28	35.58	29.11	54.00	23.59	V
9748.000	31.61	-33.54	37.00	28.15	54.00	22.39	H
12184.900	33.79	-31.61	38.82	26.59	54.00	20.21	H

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.760	48.59	4.65	32.14	11.80	54.00	5.41	V
2484.330	48.55	4.65	32.14	11.76	54.00	5.45	V
4923.700	40.86	-35.70	33.85	42.71	54.00	13.14	V
7386.100	30.70	-34.09	35.50	29.29	54.00	23.30	V
9847.900	31.86	-33.44	37.10	28.20	54.00	22.14	H
12310.000	33.66	-31.47	38.81	26.32	54.00	20.34	V

802.11g

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.590	48.50	4.61	31.76	12.13	54.00	5.50	V
2389.830	48.52	4.62	31.76	12.15	54.00	5.48	V
4825.300	34.51	-35.92	33.80	36.63	54.00	19.49	H
7236.100	29.37	-34.54	35.54	28.37	54.00	24.63	V
9648.100	31.92	-33.48	36.80	28.60	54.00	22.08	V
12060.100	34.02	-31.76	38.86	26.91	54.00	19.98	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2417.040	49.35	4.65	31.93	12.77	54.00	4.65	V
2458.350	49.37	4.67	32.03	12.66	54.00	4.63	V
4876.300	31.44	-35.78	33.80	33.43	54.00	22.56	V
7311.000	30.30	-34.28	35.58	29.00	54.00	23.70	H
9748.000	31.53	-33.54	37.00	28.07	54.00	22.47	V
12184.900	33.65	-31.61	38.82	26.44	54.00	20.35	V

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.550	49.38	4.65	32.13	12.59	54.00	4.62	V
2483.700	49.28	4.65	32.14	12.49	54.00	4.72	V
4924.900	31.31	-35.70	33.85	33.16	54.00	22.69	H
7386.100	30.70	-34.09	35.50	29.29	54.00	23.30	V
9847.900	31.80	-33.44	37.10	28.15	54.00	22.20	H
12310.000	33.62	-31.47	38.81	26.28	54.00	20.38	V

802.11n-HT20

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.470	48.74	4.61	31.75	12.37	54.00	5.26	V
2389.830	48.88	4.62	31.76	12.51	54.00	5.12	V
4824.100	32.47	-35.93	33.80	34.60	54.00	21.53	H
7236.100	29.82	-34.54	35.54	28.81	54.00	24.18	V
9648.100	31.89	-33.48	36.80	28.58	54.00	22.11	V
12060.100	34.03	-31.76	38.86	26.92	54.00	19.97	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2417.490	49.69	4.65	31.94	13.11	54.00	4.31	V
2458.200	49.85	4.67	32.03	13.14	54.00	4.15	V
4873.600	30.61	-35.79	33.80	32.60	54.00	23.39	H
7311.000	30.33	-34.28	35.58	29.03	54.00	23.67	V
9748.000	31.60	-33.54	37.00	28.14	54.00	22.40	H
12184.900	33.67	-31.61	38.82	26.47	54.00	20.33	V

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.520	49.88	4.65	32.13	13.09	54.00	4.12	V
2483.670	49.86	4.65	32.14	13.07	54.00	4.14	V
4924.900	30.62	-35.70	33.85	32.47	54.00	23.38	V
7386.100	30.97	-34.09	35.50	29.56	54.00	23.03	V
9847.900	31.93	-33.44	37.10	28.28	54.00	22.07	H
12310.000	33.73	-31.47	38.81	26.39	54.00	20.27	V

802.11n-HT40

Ch3

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.350	49.81	4.61	31.75	13.45	54.00	4.19	V
2389.860	49.85	4.62	31.76	13.48	54.00	4.15	V
4843.600	30.71	-35.85	33.80	32.76	54.00	23.29	V
7266.100	30.37	-34.49	35.60	29.26	54.00	23.63	H
9688.000	31.93	-33.47	36.95	28.45	54.00	22.07	H
12109.900	33.79	-31.73	38.89	26.64	54.00	20.21	H

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2401.830	49.62	4.64	31.90	13.07	54.00	4.38	V
2468.970	49.98	4.68	32.08	13.22	54.00	4.02	V
4873.900	29.93	-35.79	33.80	31.92	54.00	24.07	V
7386.100	30.64	-34.09	35.50	29.23	54.00	23.36	V
9847.900	31.95	-33.44	37.10	28.29	54.00	22.05	V
12310.000	33.73	-31.47	38.81	26.40	54.00	20.27	V

Ch9

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.760	49.85	4.65	32.14	13.06	54.00	4.15	V
2484.240	49.85	4.65	32.14	13.07	54.00	4.15	V
4904.200	29.99	-35.73	33.81	31.91	54.00	24.01	V
7356.100	30.56	-34.09	35.50	29.15	54.00	23.44	V
9808.000	31.71	-33.61	37.10	28.22	54.00	22.29	V
12259.900	33.62	-31.52	38.80	26.34	54.00	20.38	H

802.11ax-HT20

Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.620	48.92	4.6	31.8	12.55	54.00	5.1	V
2389.890	48.95	4.6	31.8	12.57	54.00	5.1	V
4824.100	32.32	-35.9	33.8	34.45	54.00	21.7	H
7236.100	29.77	-34.5	35.5	28.76	54.00	24.2	H
9648.100	31.83	-33.5	36.8	28.52	54.00	22.2	H
12060.100	34.04	-31.8	38.9	26.94	54.00	20.0	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2416.800	49.42	4.6	31.9	12.85	54.00	4.6	V
2458.290	49.81	4.7	32.0	13.10	54.00	4.2	V
4873.300	30.36	-35.8	33.8	32.35	54.00	23.6	H
7311.100	30.38	-34.3	35.6	29.07	54.00	23.6	V
9748.000	31.59	-33.5	37.0	28.12	54.00	22.4	H
12184.000	33.65	-31.6	38.8	26.45	54.00	20.3	V

Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.550	49.66	4.7	32.1	12.87	54.00	4.3	V
2483.850	49.50	4.7	32.1	12.71	54.00	4.5	V
4924.000	30.26	-35.7	33.8	32.11	54.00	23.7	V
7386.100	30.66	-34.1	35.5	29.25	54.00	23.3	H
9847.900	31.80	-33.4	37.1	28.15	54.00	22.2	H
12310.000	33.75	-31.5	38.8	26.41	54.00	20.3	V

802.11ax-HT40

Ch3

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.770	49.92	4.6	31.8	13.55	54.00	4.1	V
2389.980	49.96	4.6	31.8	13.59	54.00	4.0	V
4834.300	30.62	-35.9	33.8	32.69	54.00	23.4	V
7266.100	30.16	-34.5	35.6	29.05	54.00	23.8	V
9688.000	31.89	-33.5	37.0	28.40	54.00	22.1	H
12109.900	33.78	-31.7	38.9	26.62	54.00	20.2	V

Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2402.310	49.38	4.6	31.9	12.83	54.00	4.6	V
2468.550	49.67	4.7	32.1	12.92	54.00	4.3	V
4863.700	29.76	-35.8	33.8	31.77	54.00	24.2	H
7311.100	30.42	-34.3	35.6	29.12	54.00	23.6	V
9748.000	31.64	-33.5	37.0	28.17	54.00	22.4	V
12184.900	33.59	-31.6	38.8	26.38	54.00	20.4	H

Ch9

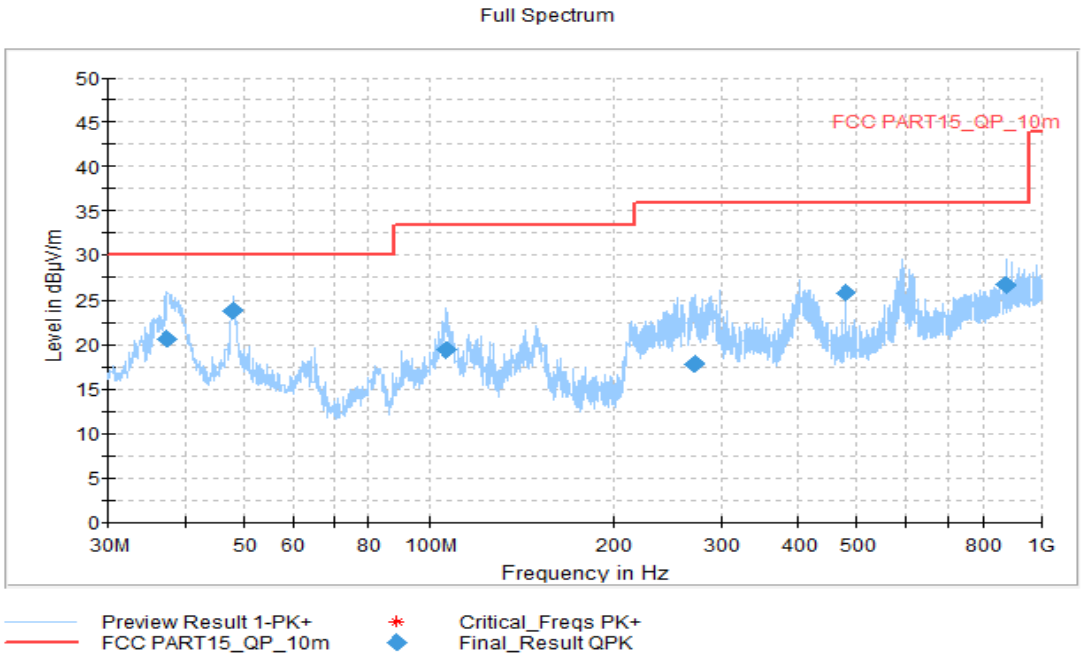
Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.550	50.94	4.7	32.1	14.15	54.00	3.1	V
2483.970	49.88	4.7	32.1	13.10	54.00	4.1	V
4903.900	29.85	-35.7	33.8	31.78	54.00	24.1	H
7356.100	30.61	-34.1	35.5	29.20	54.00	23.4	V
9808.000	31.63	-33.6	37.1	28.15	54.00	22.4	V
12259.900	33.71	-31.5	38.8	26.43	54.00	20.3	V

Note: the spurious emission above 18G is noise only and did not show on the report.

Conclusion: Pass

C.1.2 Radiated Spurious Emission- Below 1GHz

WOSRT CASE BELOW 1GHz



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)
37.46900	20.37	30.00	9.63	120.000	215.0	V	0.0
47.94500	23.77	30.00	6.23	120.000	313.0	H	26.0
106.4360	19.33	33.52	14.19	120.000	225.0	V	118.0
271.0450	17.82	36.02	18.20	120.000	125.0	V	196.0
479.9830	25.50	36.02	10.52	120.000	187.0	H	262.0
873.9970	26.70	36.02	9.32	120.000	125.0	H	146.0

Note: 10 meters' limit is got by converting from 3 meters test distance.

Limit (10m) = limit (3m) + 20(log (3/10))

BELOW 30MHz

No emissions were found within 20dB of the limit below 30MHz.

C.1.3 Band Edges Compliance– Radiated

INNOWAVE

802.11b mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	Power(ch1)	2.31GHz ~2.43GHz	Fig.C.1.3.1	**P**
	Power(ch11)	2.45GHz ~2.5GHz	Fig.C.1.3.2	**P**

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	Power(ch1)	2.31GHz ~2.43GHz	Fig.C.1.3.3	**P**
	Power(ch2)	2.31GHz ~2.43GHz	Fig.C.1.3.4	**P**
	Power(ch10)	2.45GHz ~2.5GHz	Fig.C.1.3.5	**P**
	Power(ch11)	2.45GHz ~2.5GHz	Fig.C.1.3.6	**P**

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT20)	Power(ch1)	2.31GHz ~2.43GHz	Fig.C.1.3.7	**P**
	Power(ch2)	2.31GHz ~2.43GHz	Fig.C.1.3.8	**P**
	Power(ch10)	2.45GHz ~2.5GHz	Fig.C.1.3.9	**P**
	Power(ch11)	2.45GHz ~2.5GHz	Fig.C.1.3.10	**P**

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT40)	Power(ch3)	2.31GHz ~2.43GHz	Fig.C.1.3.11	**P**
	Power(ch4)	2.31GHz ~2.43GHz	Fig.C.1.3.12	**P**
	Power(ch5)	2.31GHz ~2.43GHz	Fig.C.1.3.13	**P**
	Power(ch8)	2.45GHz ~2.5GHz	Fig.C.1.3.14	**P**
	Power(ch9)	2.45GHz ~2.5GHz	Fig.C.1.3.15	**P**

802.11ax-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT20)	Power(ch1)	2.31GHz ~2.43GHz	Fig.C.1.3.16	**P**
	Power(ch2)	2.31GHz ~2.43GHz	Fig.C.1.3.17	
	Power(ch10)	2.45GHz ~2.5GHz	Fig.C.1.3.18	
	Power(ch11)	2.45GHz ~2.5GHz	Fig.C.1.3.19	**P**

802.11ax-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ax(HT40)	Power(ch3)	2.31GHz ~2.43GHz	Fig.C.1.3.20	**P**
	Power(ch4)	2.31GHz ~2.43GHz	Fig.C.1.3.21	**P**
	Power(ch8)	2.45GHz ~2.5GHz	Fig.C.1.3.22	**P**
	Power(ch9)	2.45GHz ~2.5GHz	Fig.C.1.3.23	**P**

The measurements were performed separately in Chain A, Chain B, and MIMO (Chain A+B), and only the worst cases are shown in this section.

Conclusion: PASS

SPEED

802.11b mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	Power(ch1)	2.31GHz ~2.43GHz	Fig.C.1.3.24	**P**
	Power(ch11)	2.45GHz ~2.5GHz	Fig.C.1.3.25	**P**

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	Power(ch1)	2.31GHz ~2.43GHz	Fig.C.1.3.26	**P**
	Power(ch2)	2.31GHz ~2.43GHz	Fig.C.1.3.27	**P**
	Power(ch10)	2.45GHz ~2.5GHz	Fig.C.1.3.28	**P**
	Power(ch11)	2.45GHz ~2.5GHz	Fig.C.1.3.29	**P**

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT20)	Power(ch1)	2.31GHz ~2.43GHz	Fig.C.1.3.30	**P**
	Power(ch2)	2.31GHz ~2.43GHz	Fig.C.1.3.31	**P**
	Power(ch10)	2.45GHz ~2.5GHz	Fig.C.1.3.32	**P**
	Power(ch11)	2.45GHz ~2.5GHz	Fig.C.1.3.33	**P**

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT40)	Power(ch3)	2.31GHz ~2.43GHz	Fig.C.1.3.34	**P**
	Power(ch4)	2.31GHz ~2.43GHz	Fig.C.1.3.35	**P**
	Power(ch8)	2.45GHz ~2.5GHz	Fig.C.1.3.36	**P**
	Power(ch9)	2.45GHz ~2.5GHz	Fig.C.1.3.37	**P**

802.11ax-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT20)	Power(ch1)	2.31GHz ~2.43GHz	Fig.C.1.3.38	**P**
	Power(ch2)	2.31GHz ~2.43GHz	Fig.C.1.3.39	
	Power(ch10)	2.45GHz ~2.5GHz	Fig.C.1.3.40	
	Power(ch11)	2.45GHz ~2.5GHz	Fig.C.1.3.41	**P**

802.11ax-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ax(HT40)	Power(ch3)	2.31GHz ~2.43GHz	Fig.C.1.3.42	**P**
	Power(ch4)	2.31GHz ~2.43GHz	Fig.C.1.3.43	**P**
	Power(ch8)	2.45GHz ~2.5GHz	Fig.C.1.3.44	**P**
	Power(ch9)	2.45GHz ~2.5GHz	Fig.C.1.3.45	**P**

The measurements were performed separately in Chain A, Chain B, and MIMO (Chain A+B), and only the worst cases are shown in this section.

Conclusion: PASS

Test graphs as below:

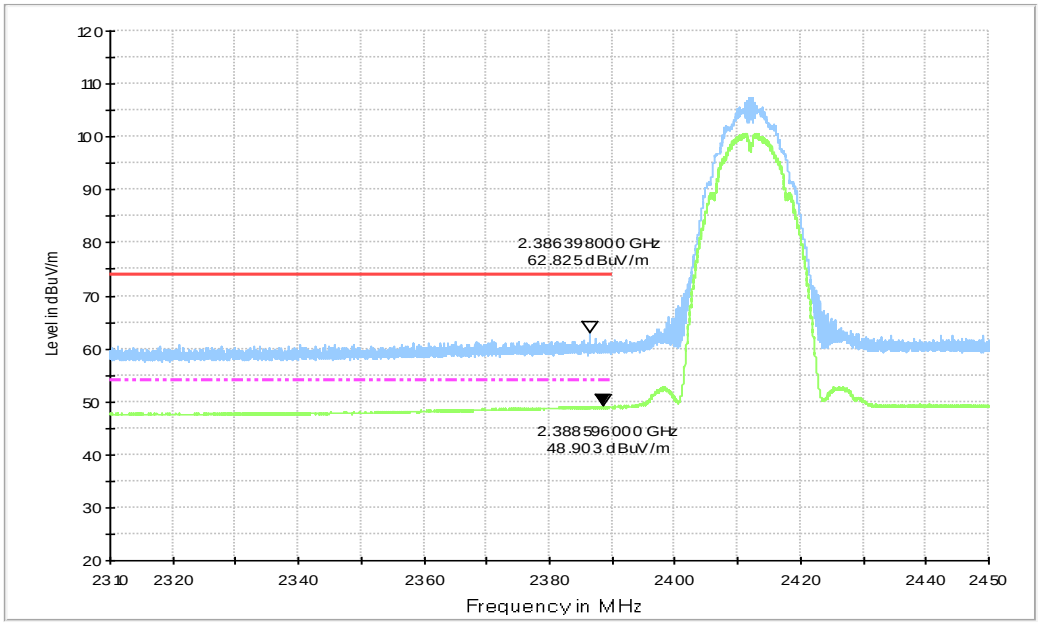


Fig.C.1.3.1 **Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.45GHz**

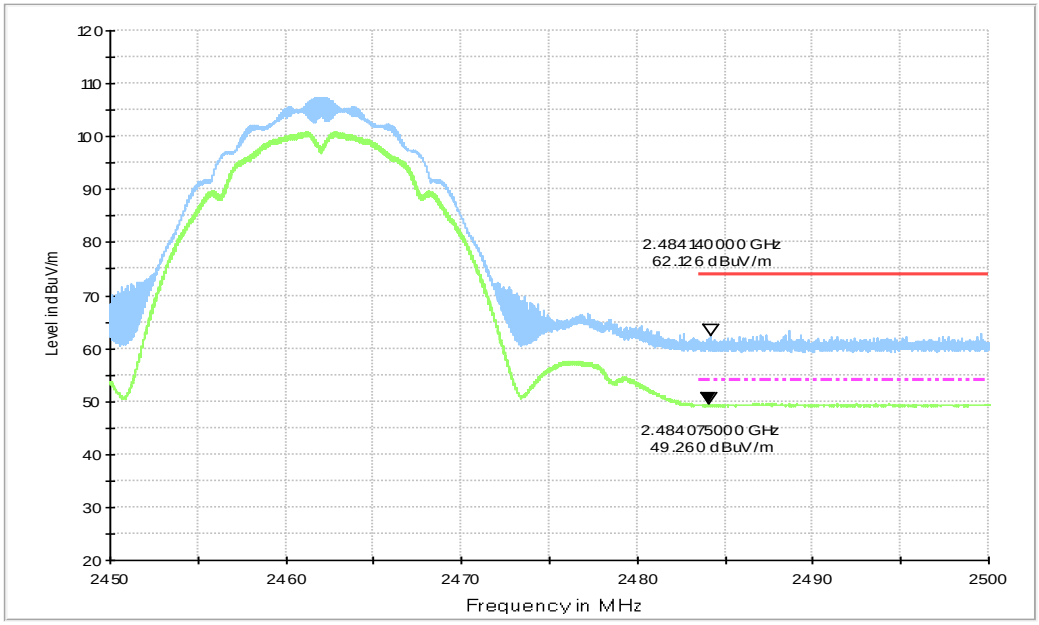


Fig.C.1.3.2 **Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz**

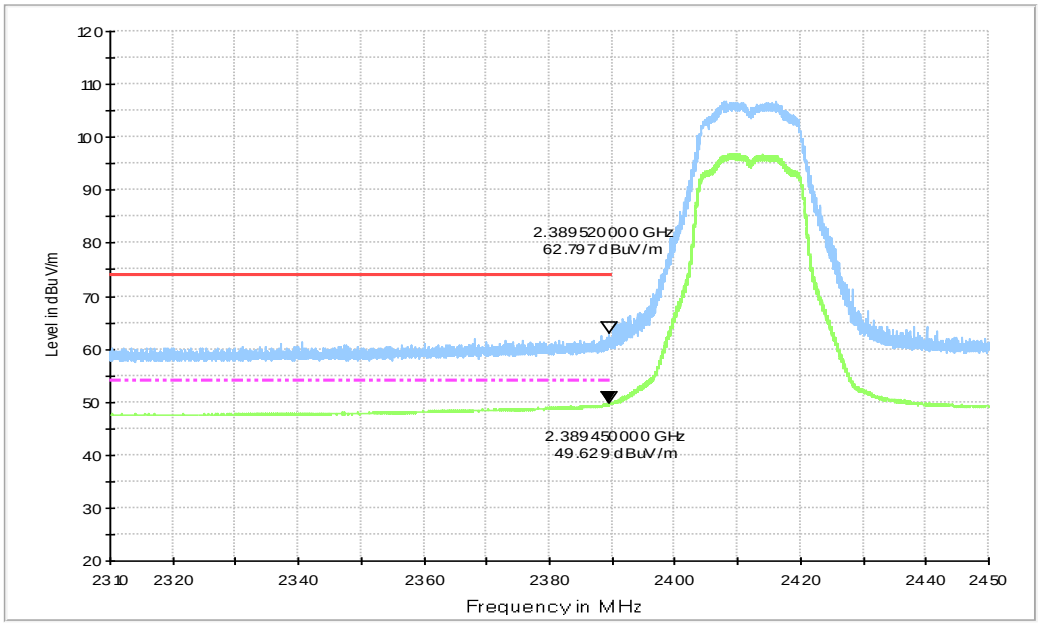


Fig.C.1.3.3 **Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.45GHz**

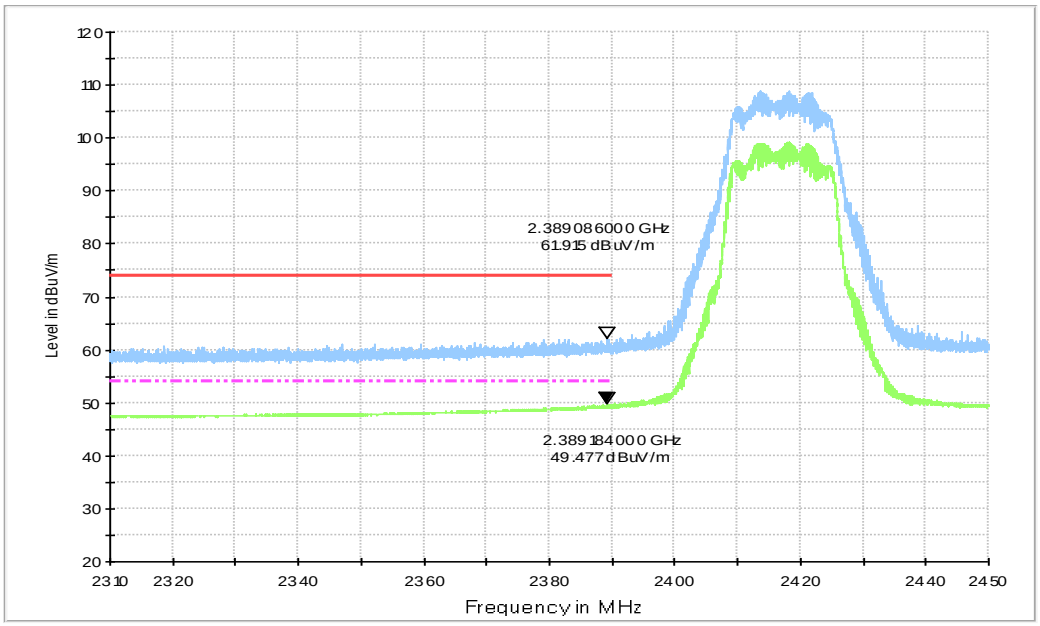


Fig.C.1.3.4 **Transmitter Spurious Emission - Radiated (Power): 802.11g, ch2, 2.31 GHz - 2.45GHz**

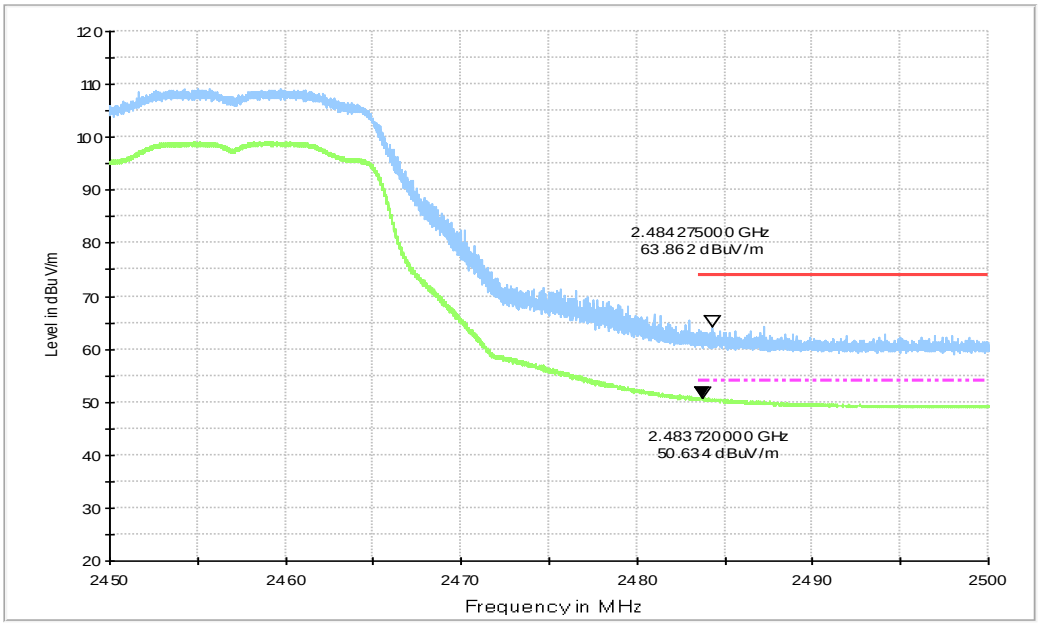


Fig.C.1.3.5 **Transmitter Spurious Emission - Radiated (Power): 802.11g, ch10, 2.45 GHz - 2.50GHz**

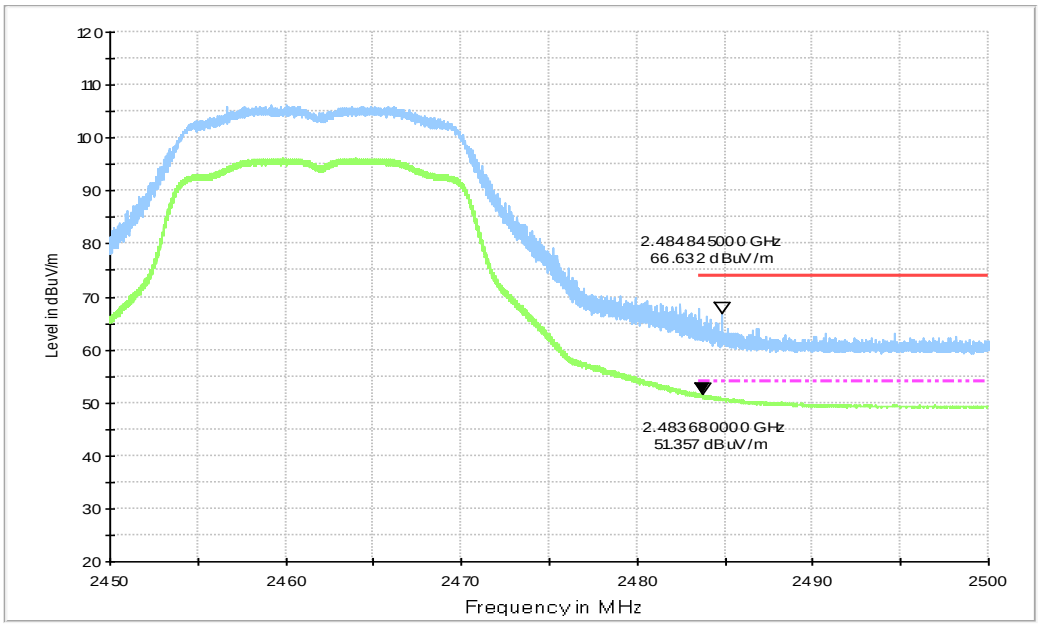


Fig.C.1.3.6 **Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz**

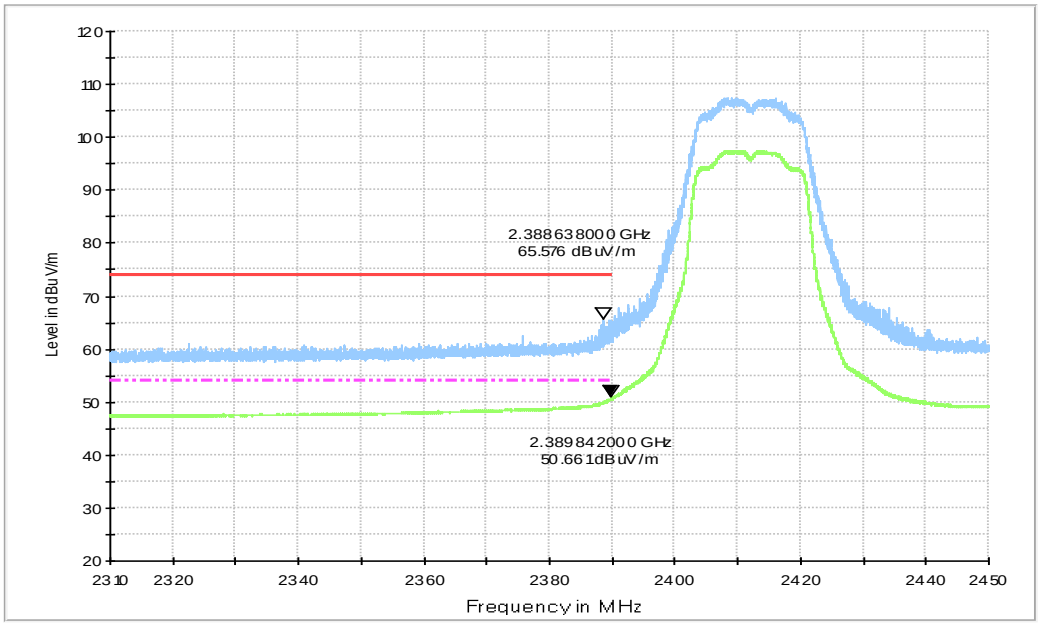


Fig.C.1.3.7 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31 GHz - 2.45GHz**

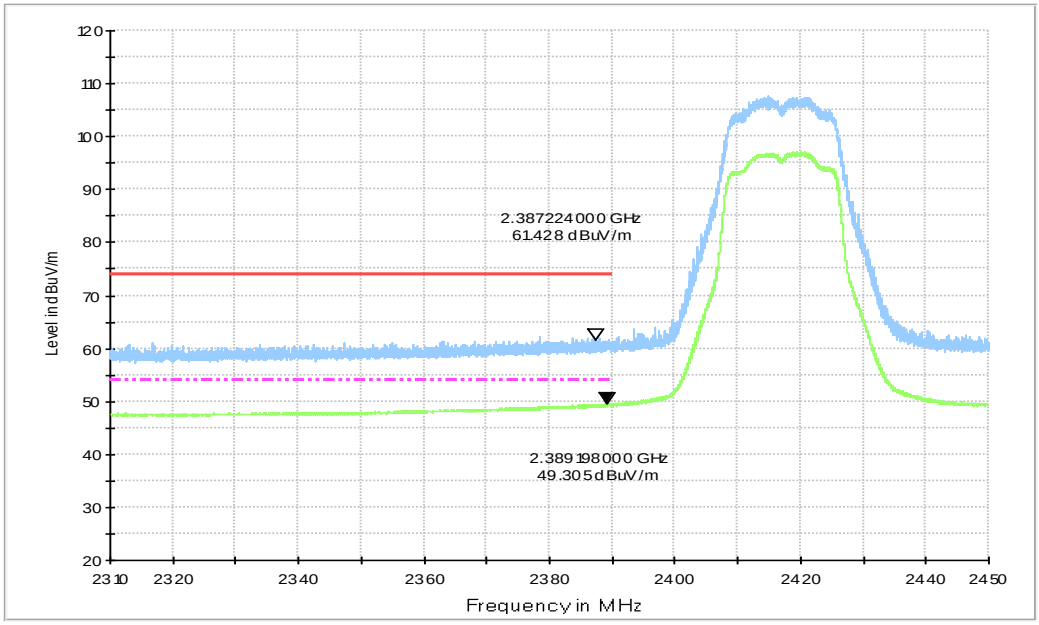


Fig.C.1.3.8 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch2, 2.31 GHz - 2.45GHz**

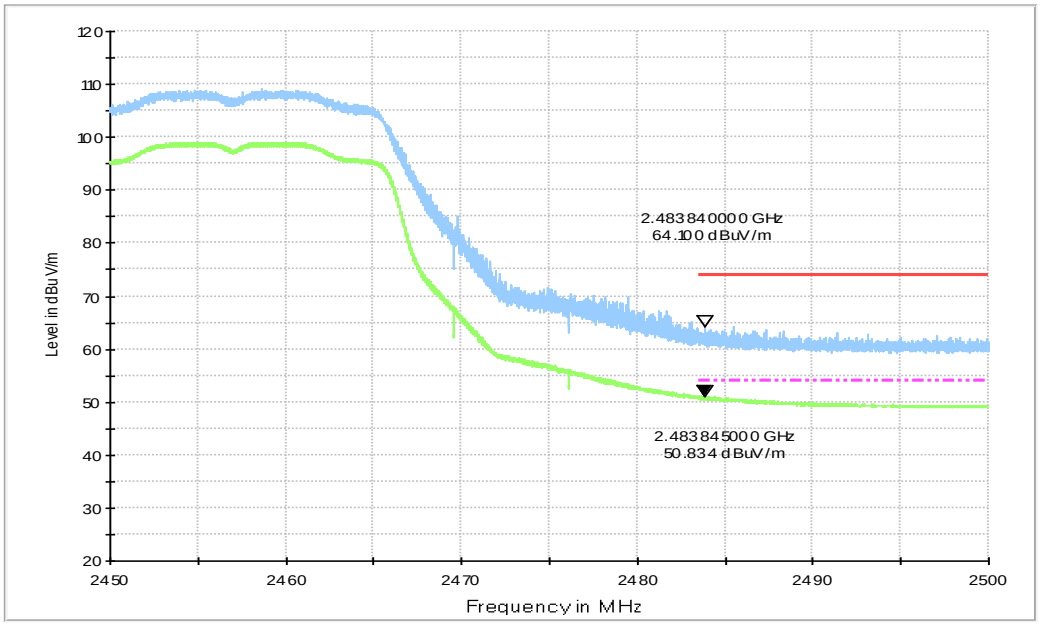


Fig.C.1.3.9 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch10, 2.45 GHz - 2.50GHz**

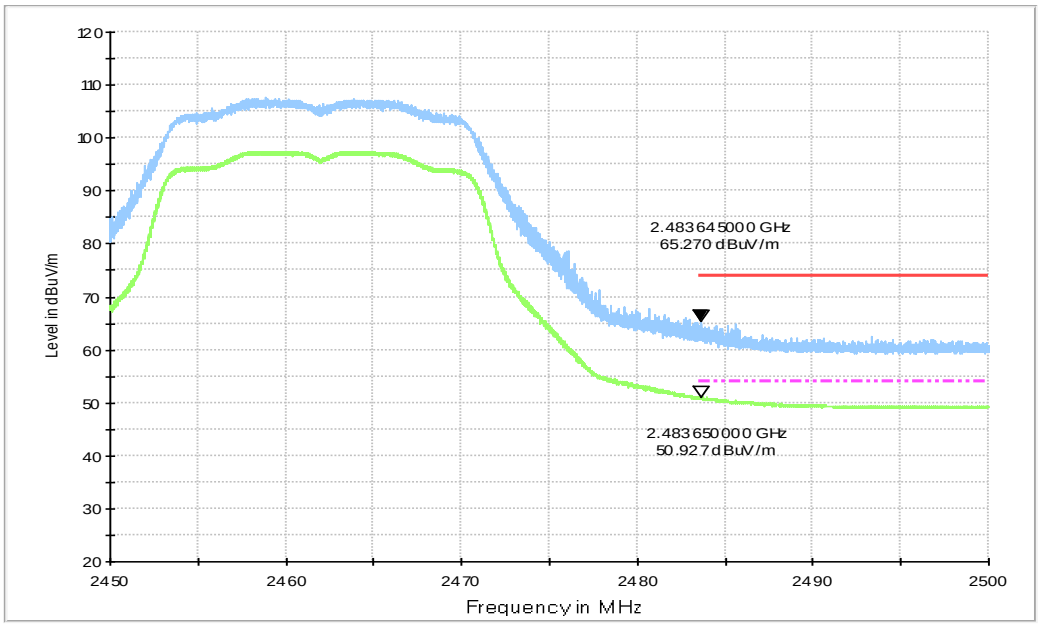


Fig.C.1.3.10 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz**

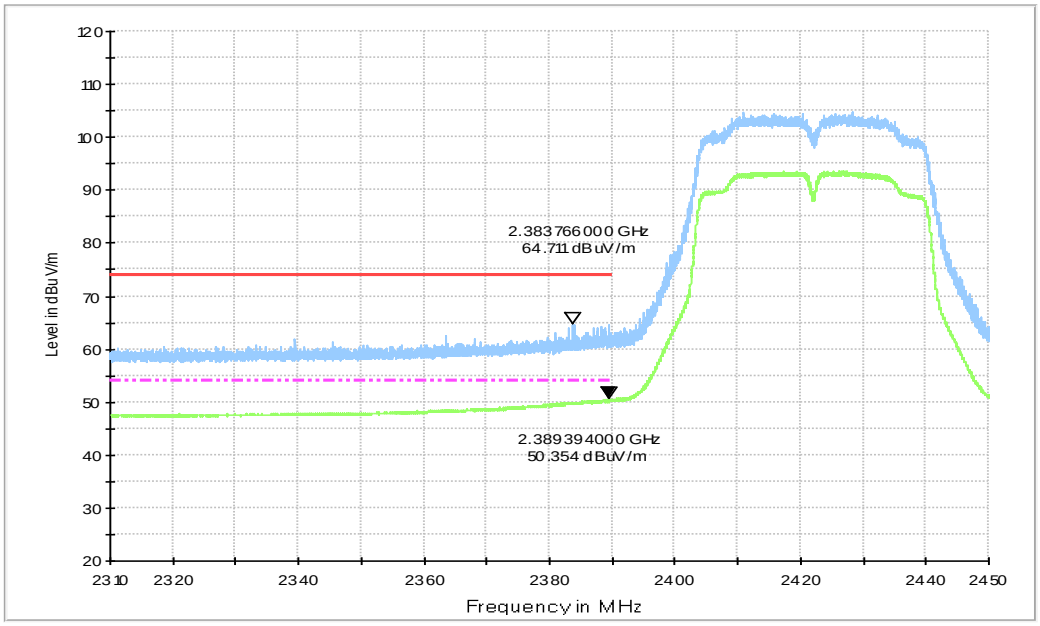


Fig.C.1.3.11 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31 GHz - 2.45GHz**

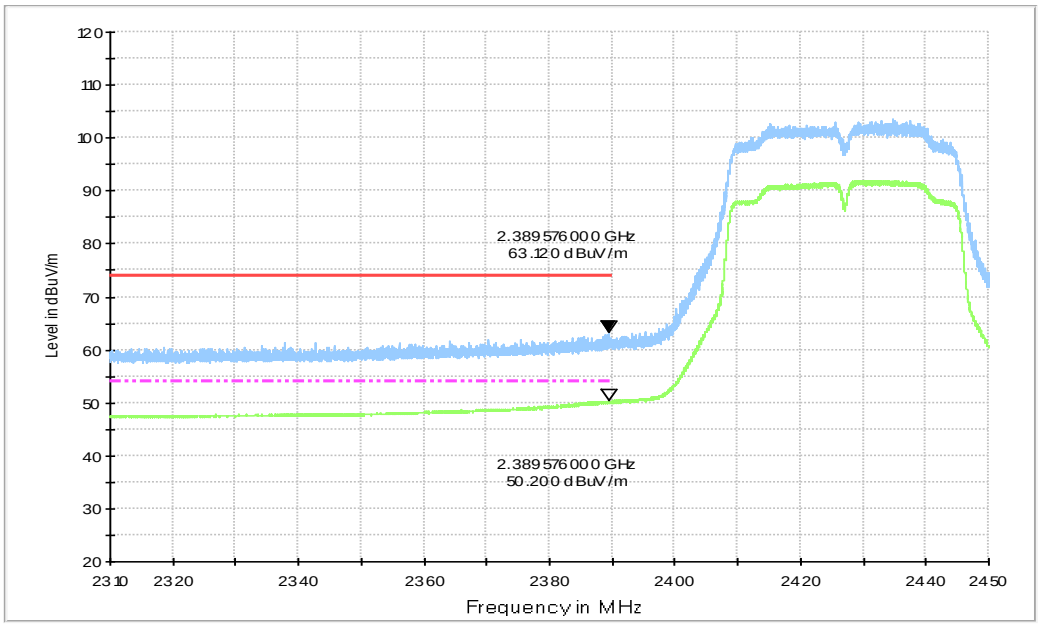


Fig.C.1.3.12 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch4, 2.31 GHz - 2.45GHz**

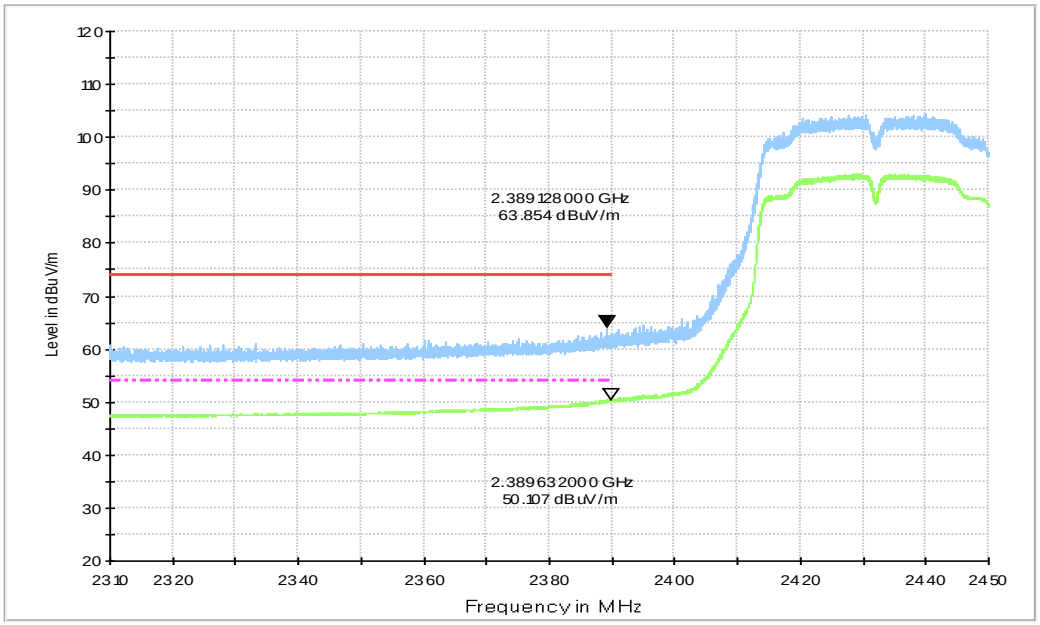


Fig.C.1.3.13 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch5, 2.31 GHz - 2.45GHz**

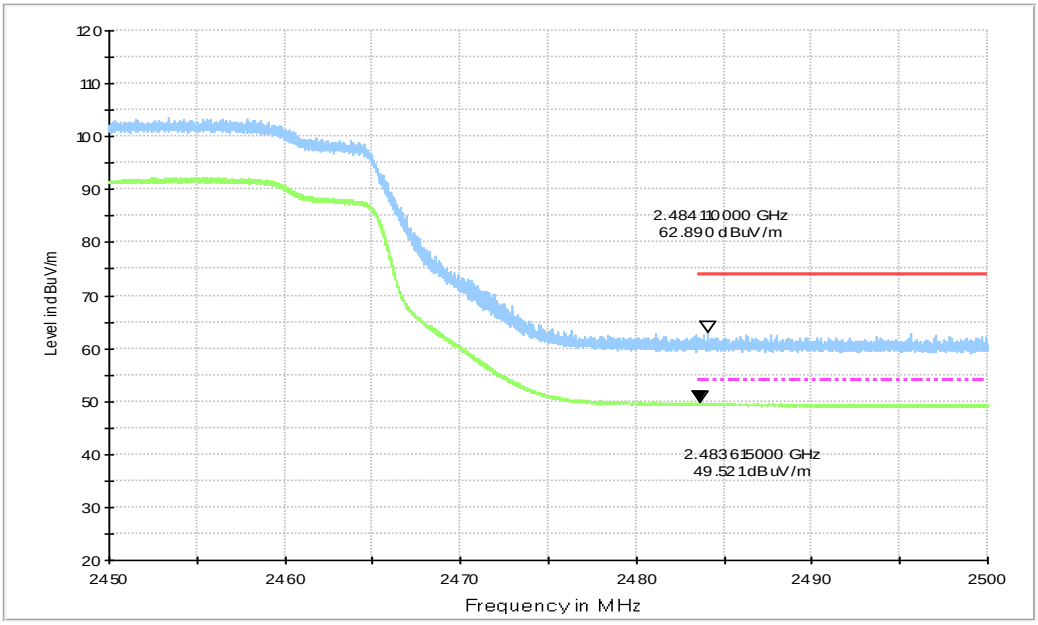


Fig.C.1.3.14 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch8, 2.45 GHz - 2.50GHz**

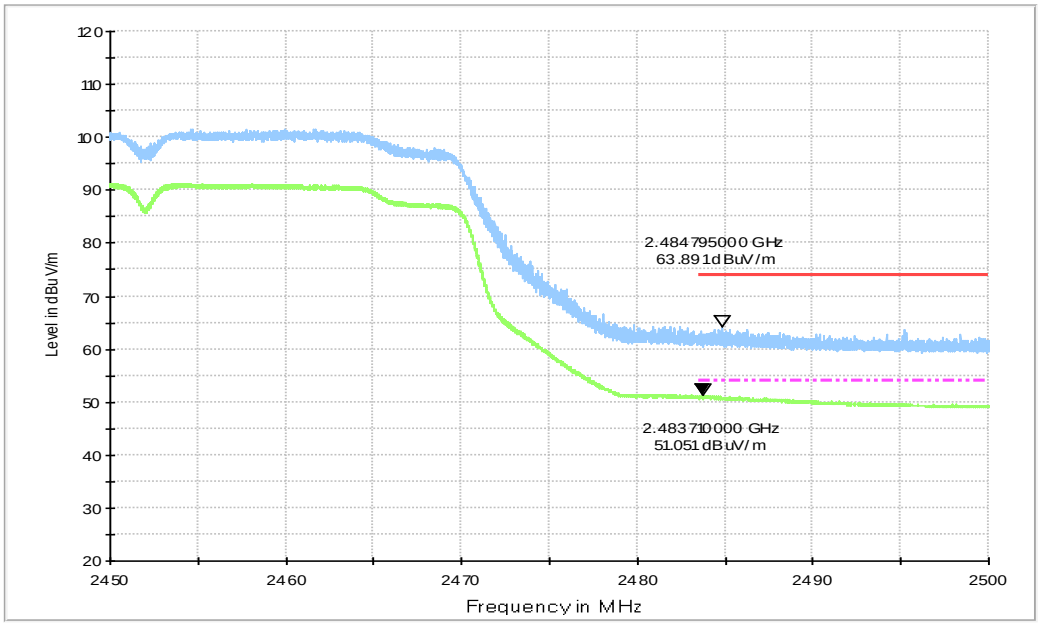


Fig.C.1.3.15 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz**

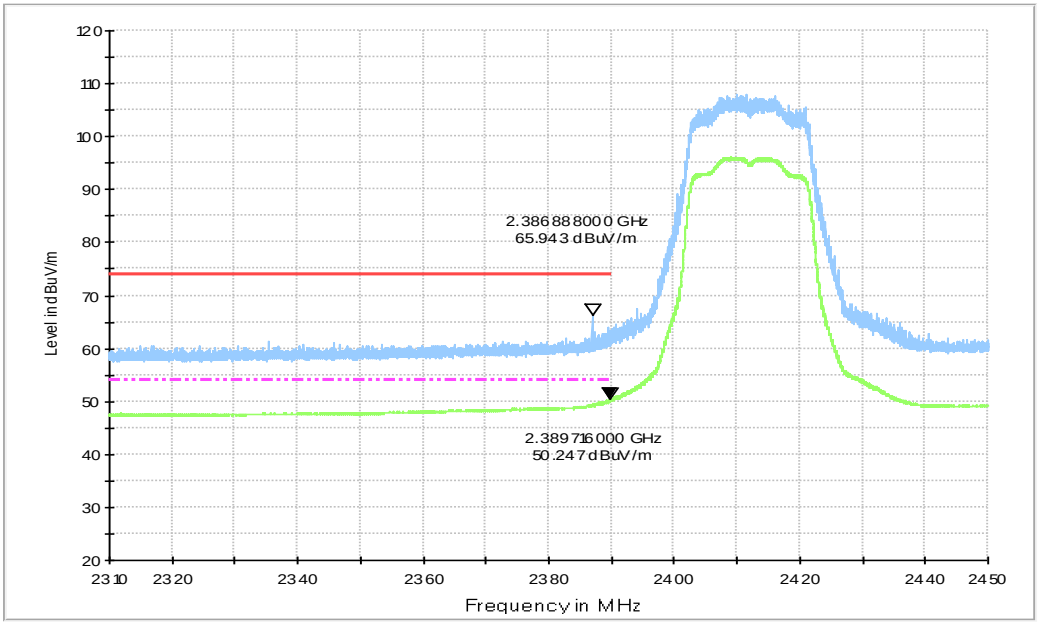


Fig.C.1.3.16 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, ch1, 2.31GHz - 2.45GHz**

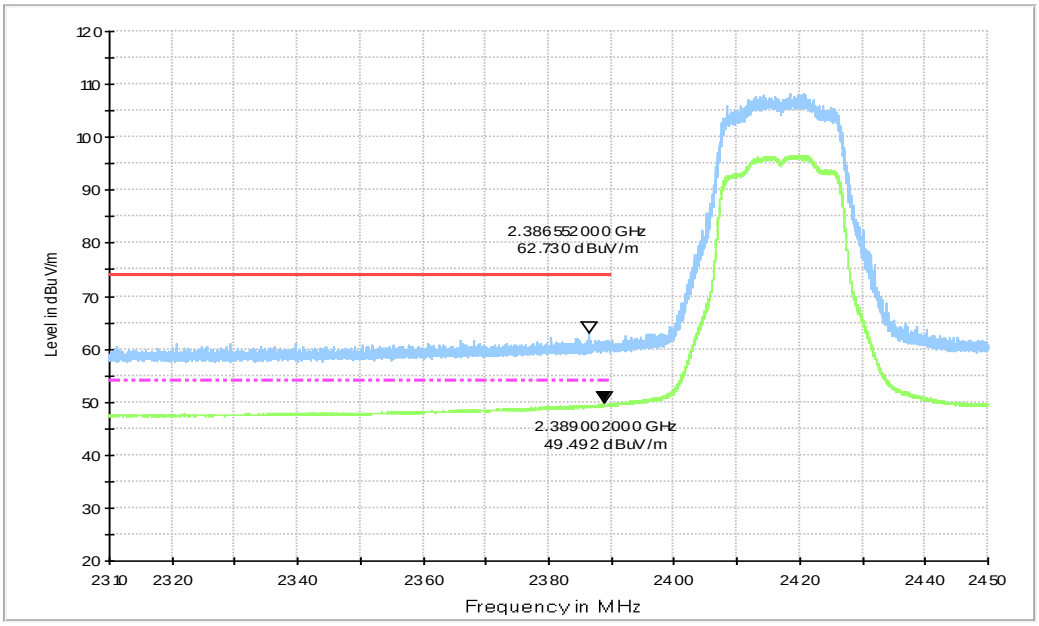


Fig.C.1.3.17 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, ch2, 2.31GHz - 2.45GHz**

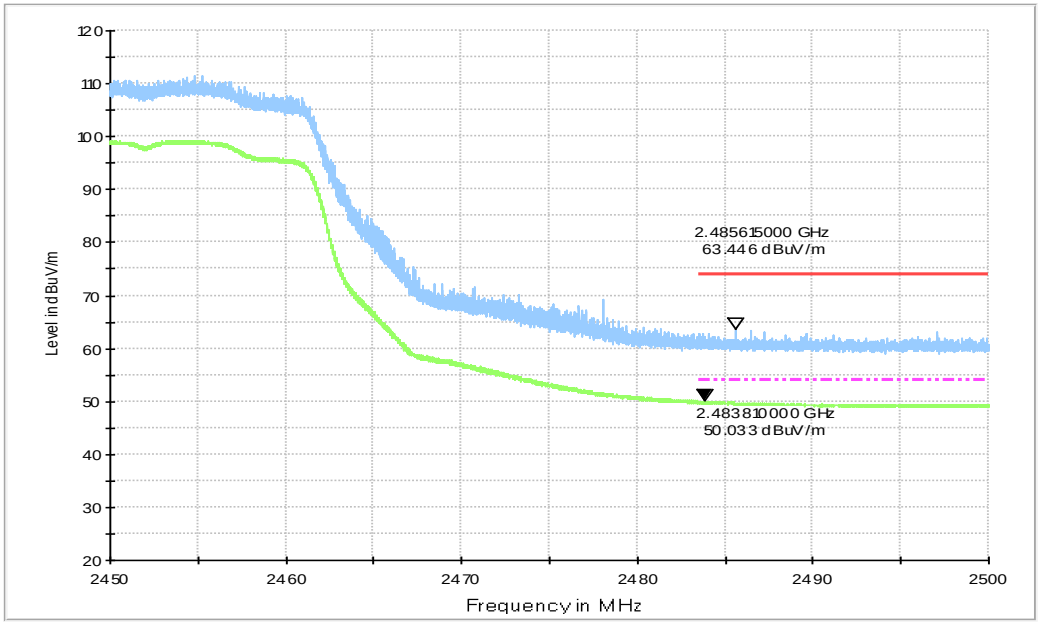


Fig.C.1.3.18 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, ch10, 2.45 GHz - 2.50GHz**

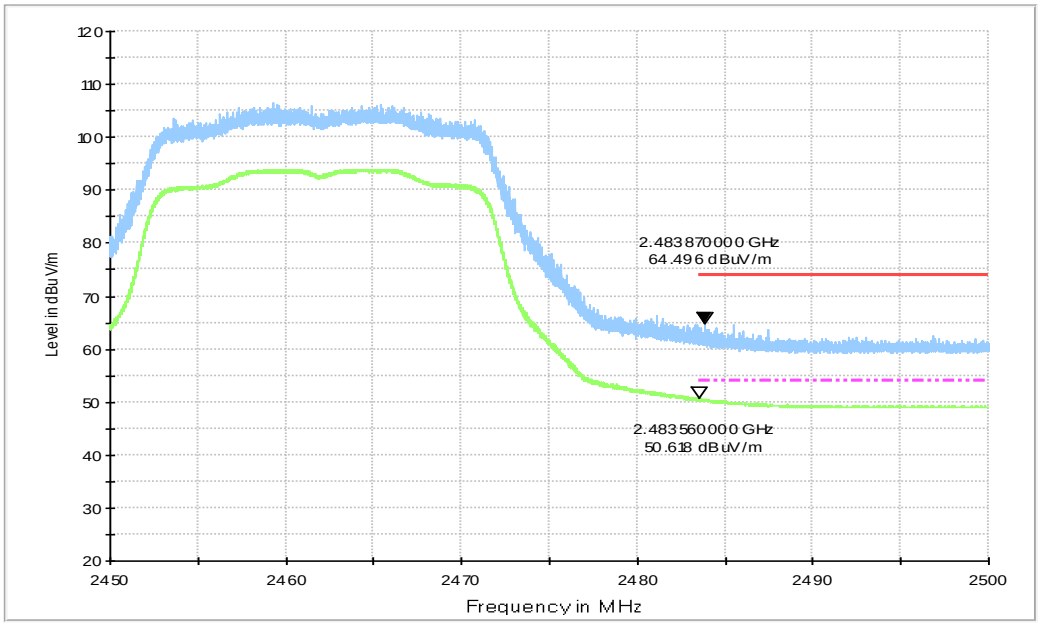


Fig.C.1.3.19 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, ch11, 2.45 GHz - 2.50GHz**

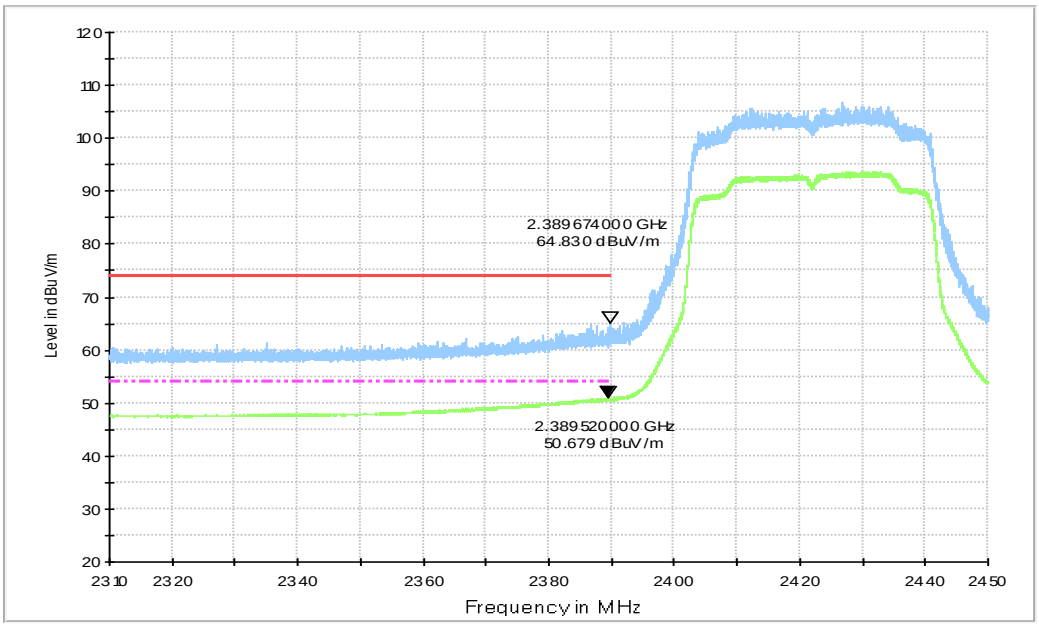


Fig.C.1.3.20 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, ch3, 2.31GHz - 2.45GHz**

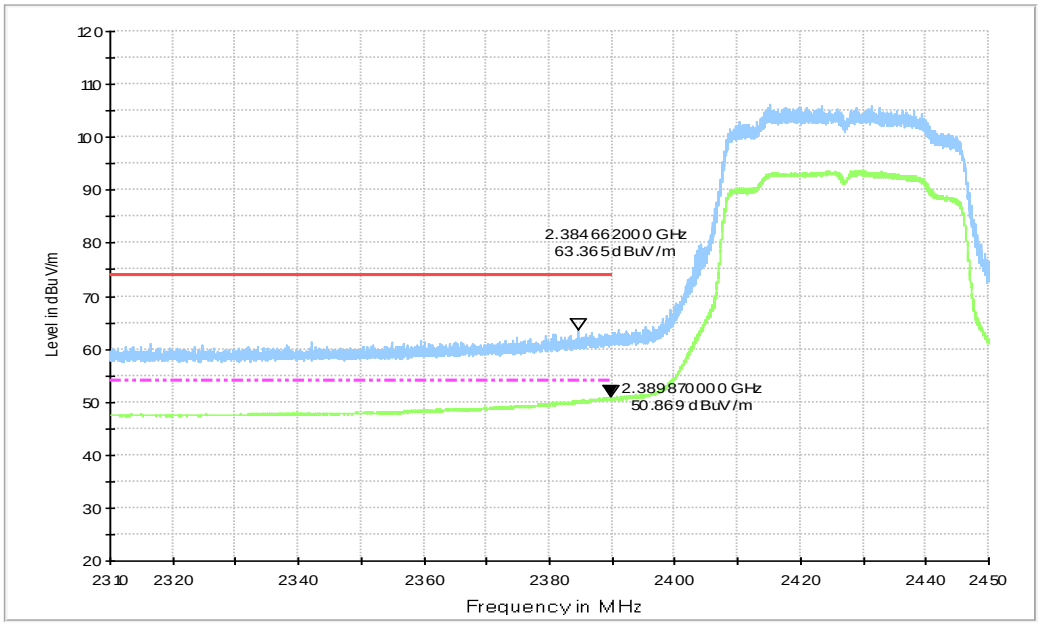


Fig.C.1.3.21 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, ch4, 2.45 GHz - 2.50GHz**

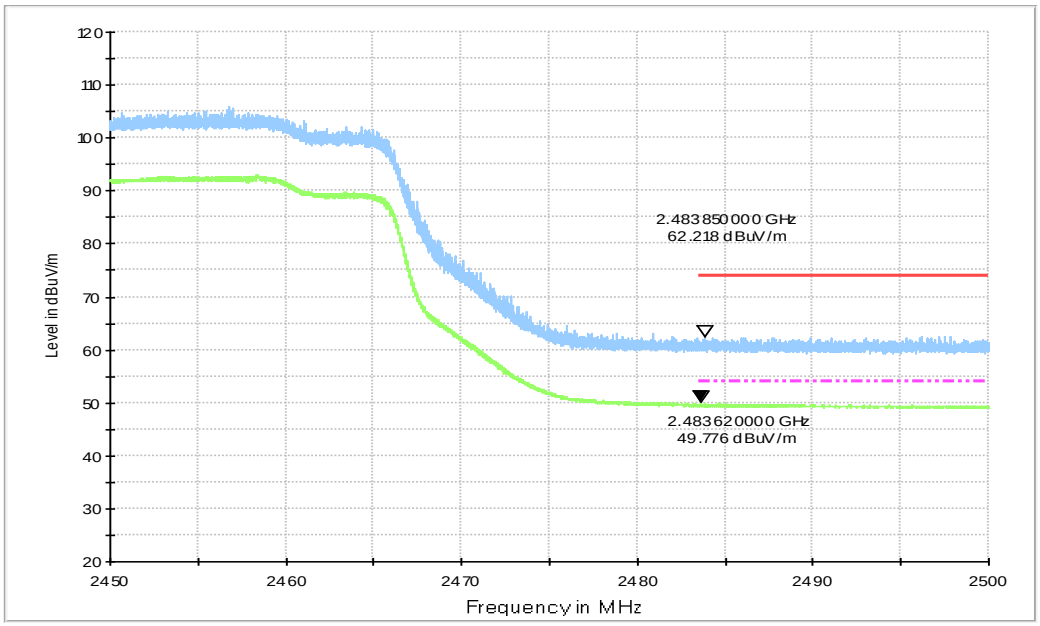


Fig.C.1.3.22 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, ch8, 2.45 GHz - 2.50GHz**

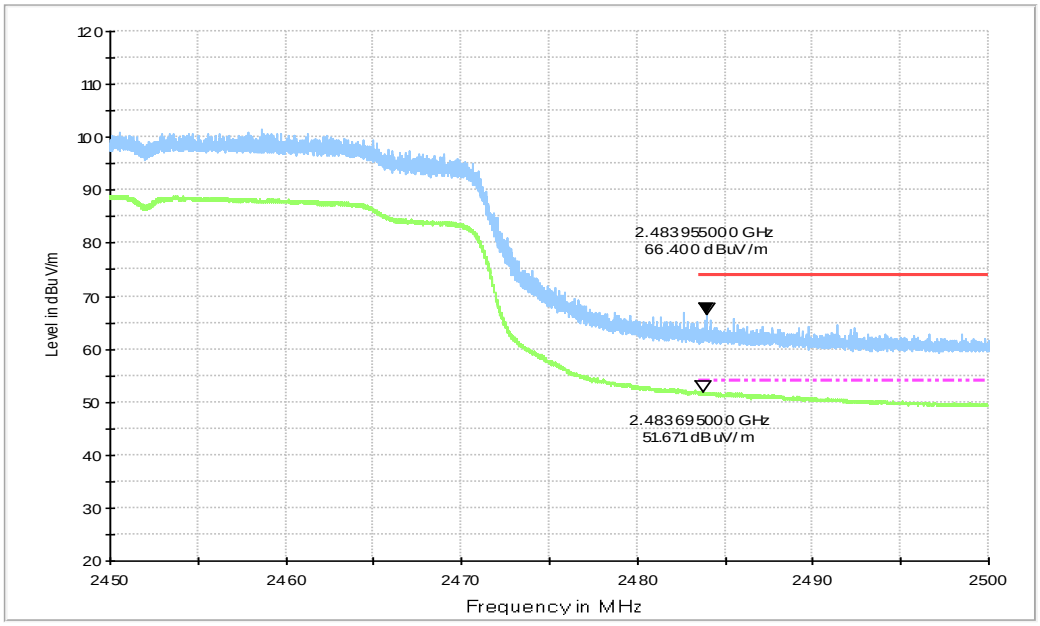


Fig.C.1.3.23 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, ch9, 2.45 GHz - 2.50GHz**

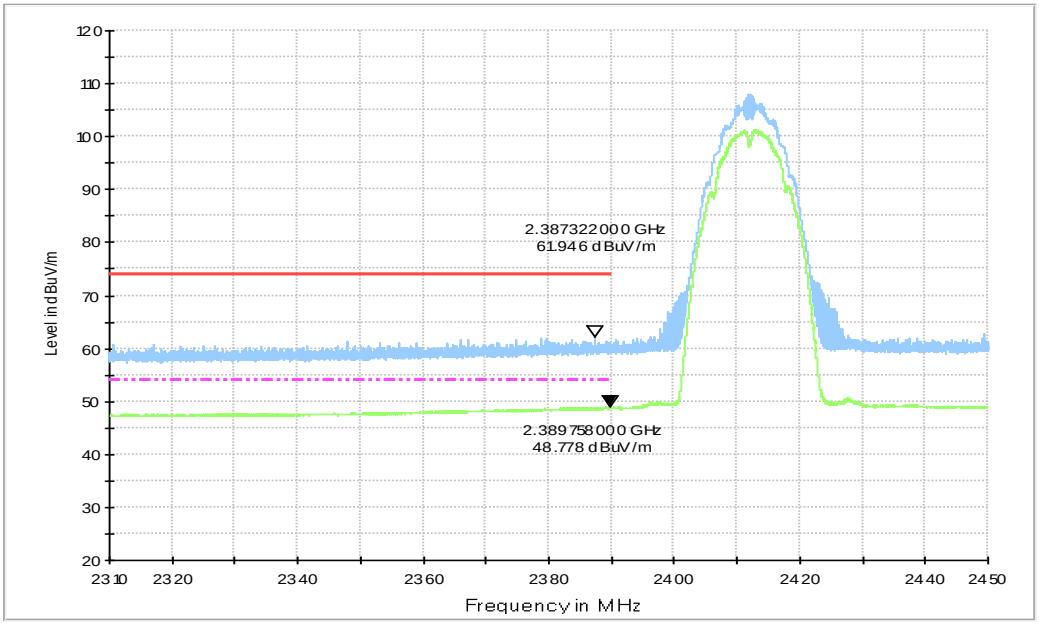


Fig.C.1.3.24 **Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.45GHz**

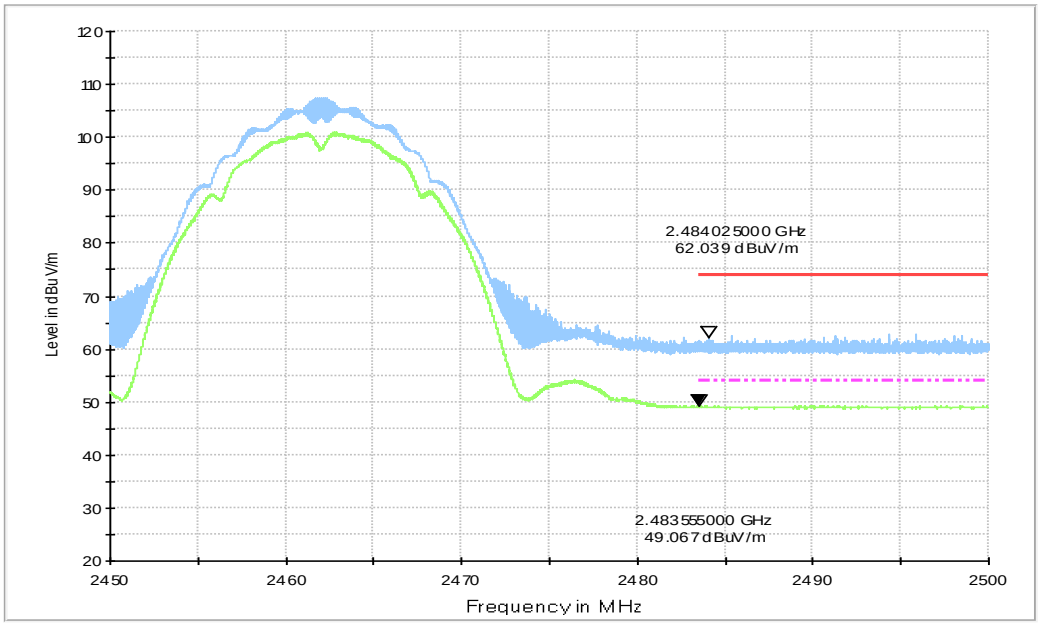


Fig.C.1.3.25 **Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz**

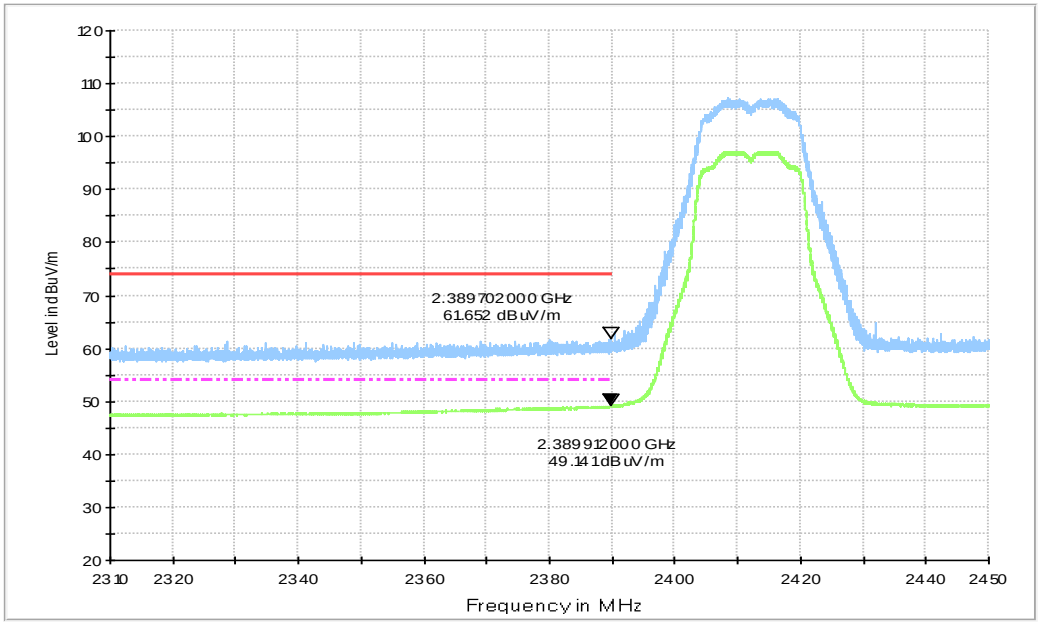


Fig.C.1.3.26 **Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.45GHz**

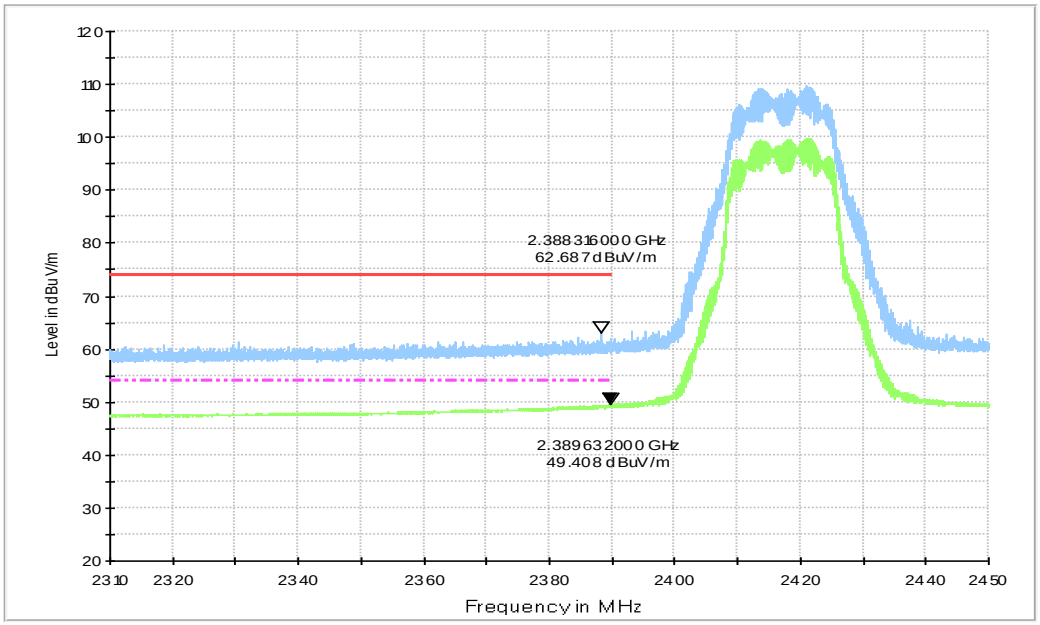


Fig.C.1.3.27 **Transmitter Spurious Emission - Radiated (Power): 802.11g, ch2, 2.31 GHz - 2.45GHz**

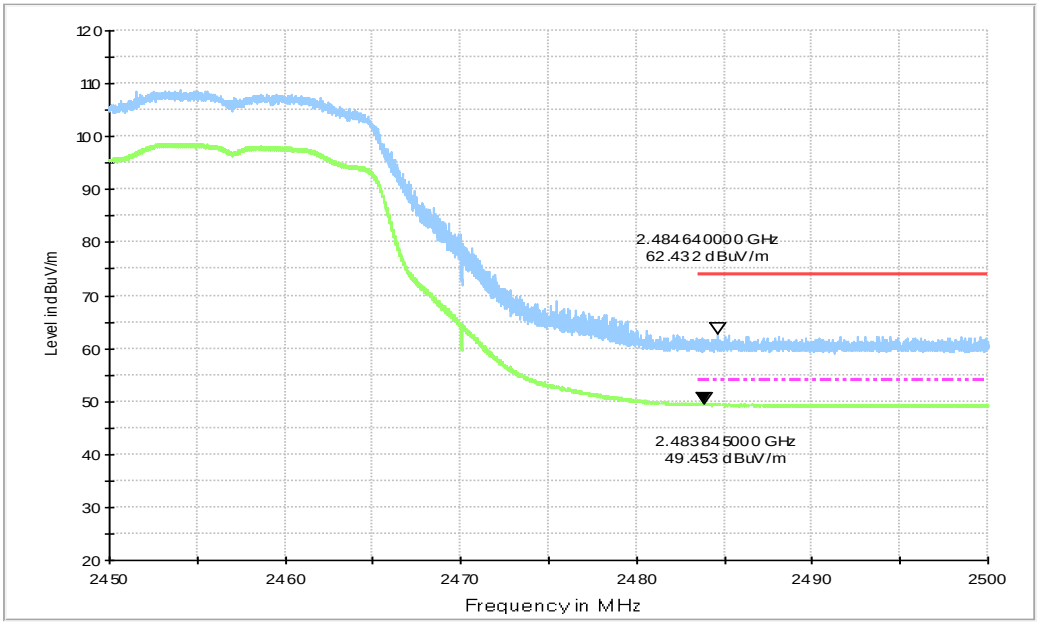


Fig.C.1.3.28 **Transmitter Spurious Emission - Radiated (Power): 802.11g, ch10, 2.45 GHz - 2.50GHz**

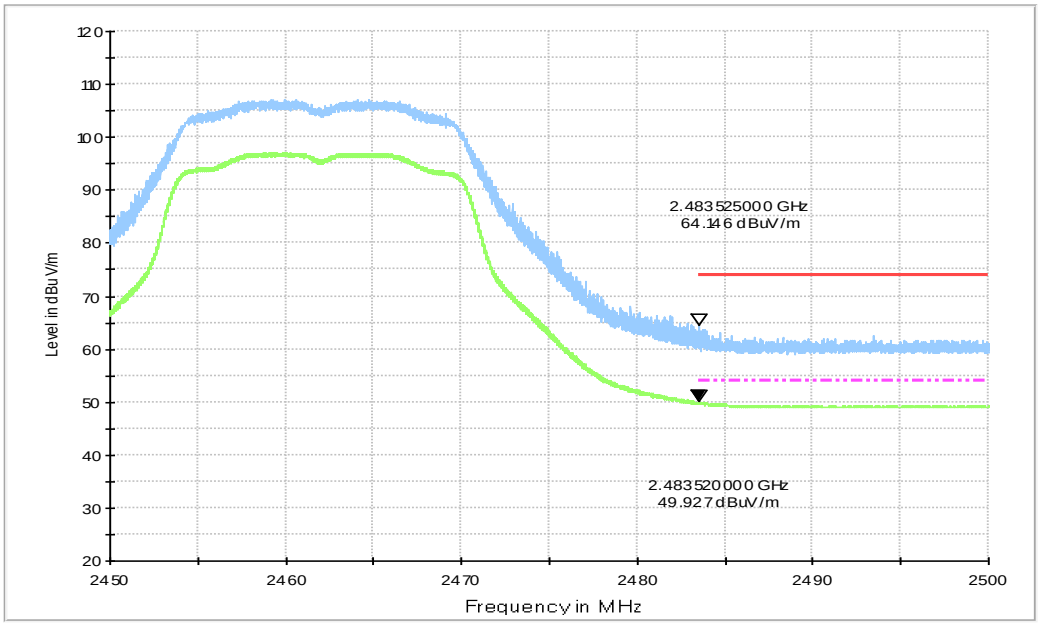


Fig.C.1.3.29 **Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz**

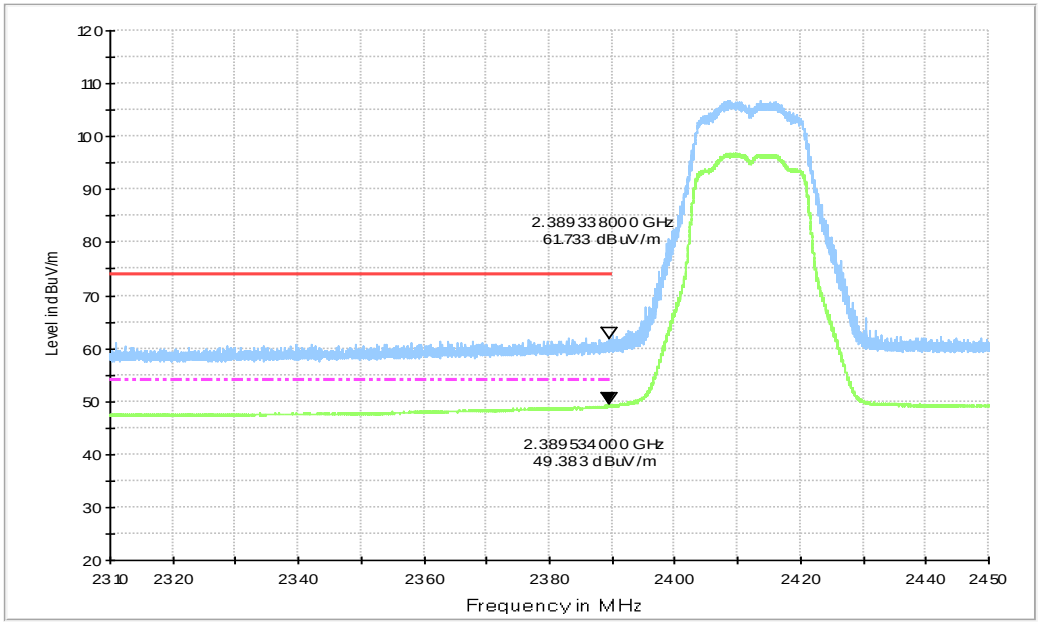


Fig.C.1.3.30 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31 GHz - 2.45GHz**

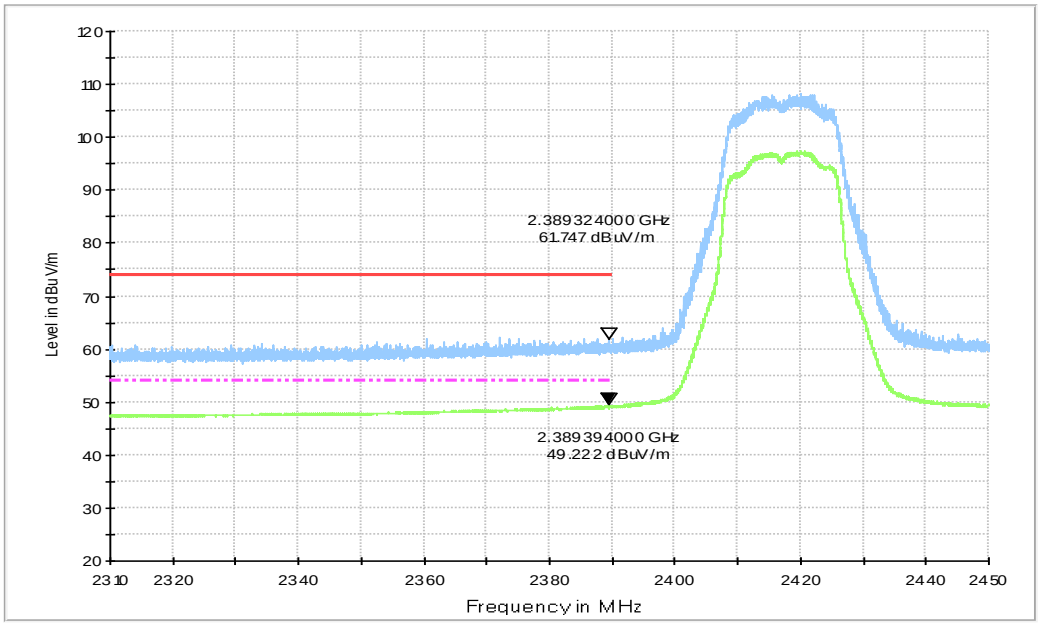


Fig.C.1.3.31 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch2, 2.31 GHz - 2.45GHz**

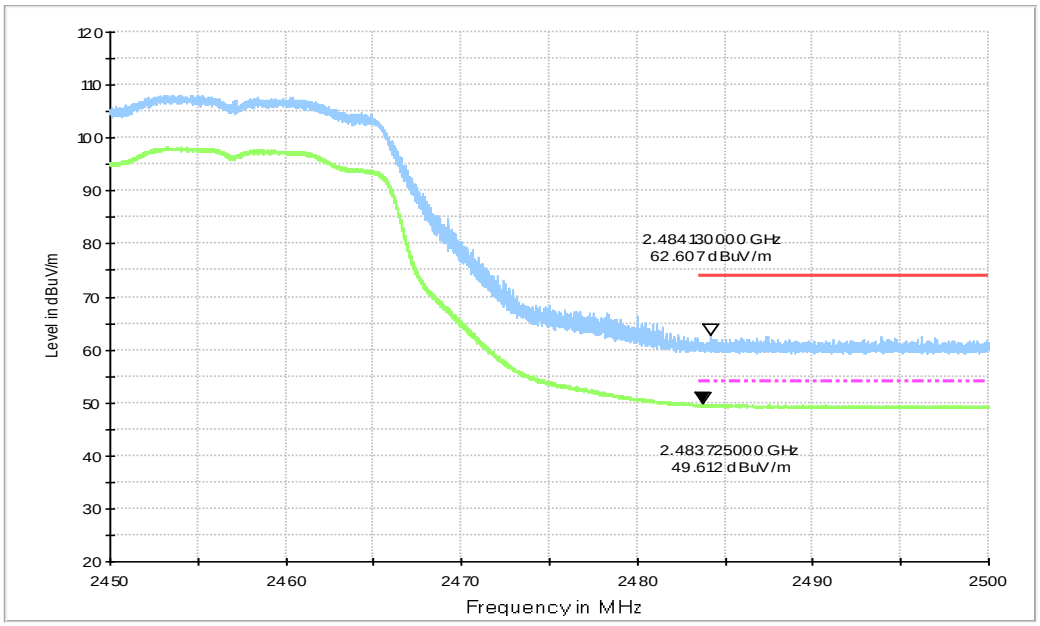


Fig.C.1.3.32 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch10, 2.45 GHz - 2.50GHz**

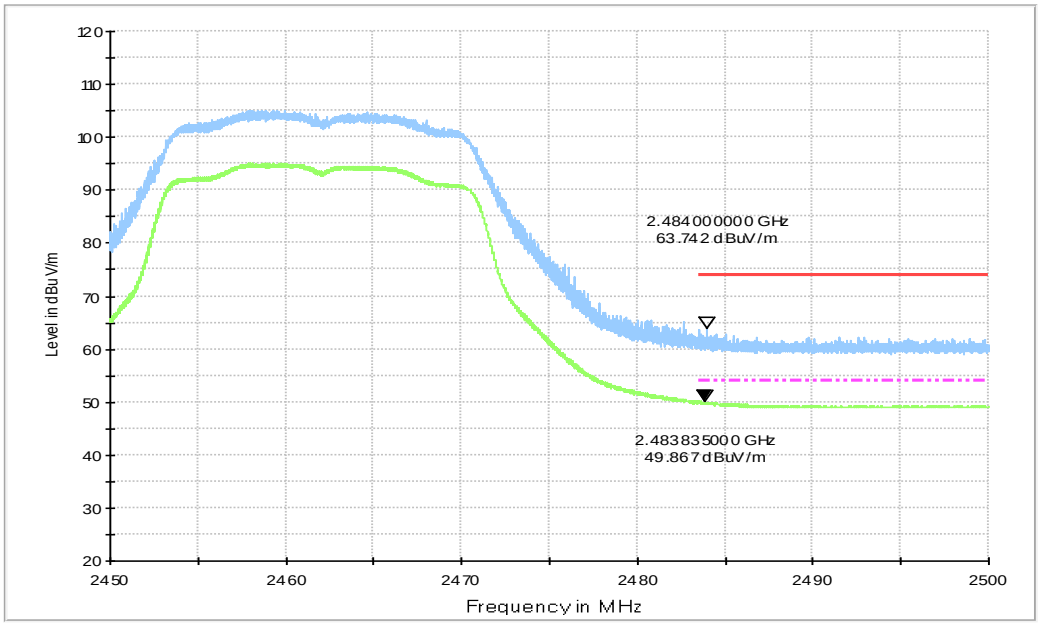


Fig.C.1.3.33 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz**

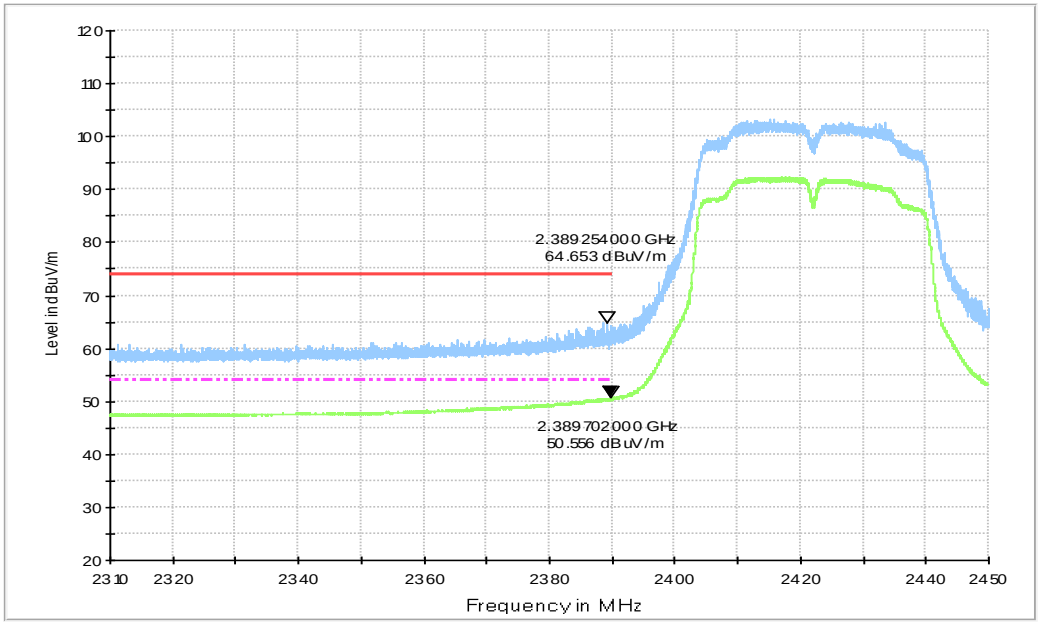


Fig.C.1.3.34 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31 GHz - 2.45GHz**

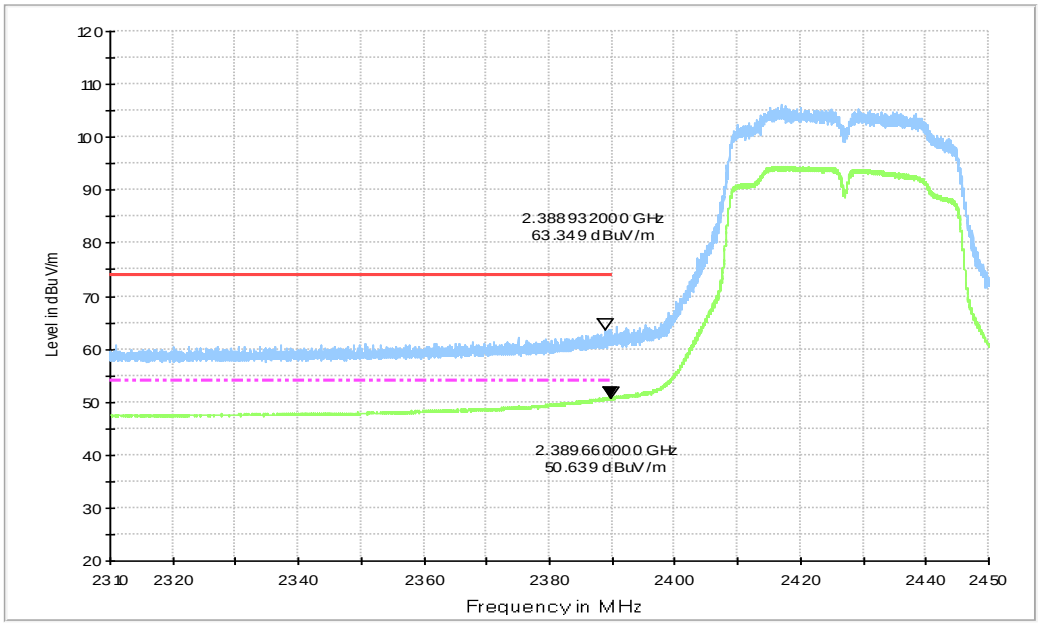


Fig.C.1.3.35 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch2, 2.31 GHz - 2.45GHz**

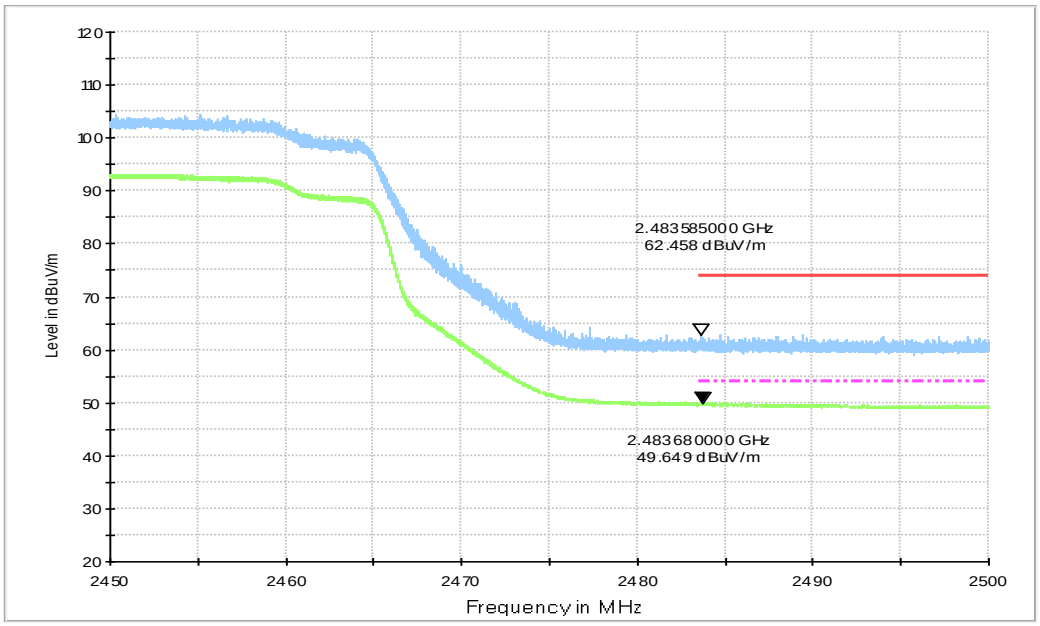


Fig.C.1.3.36 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch8, 2.45 GHz - 2.50GHz**

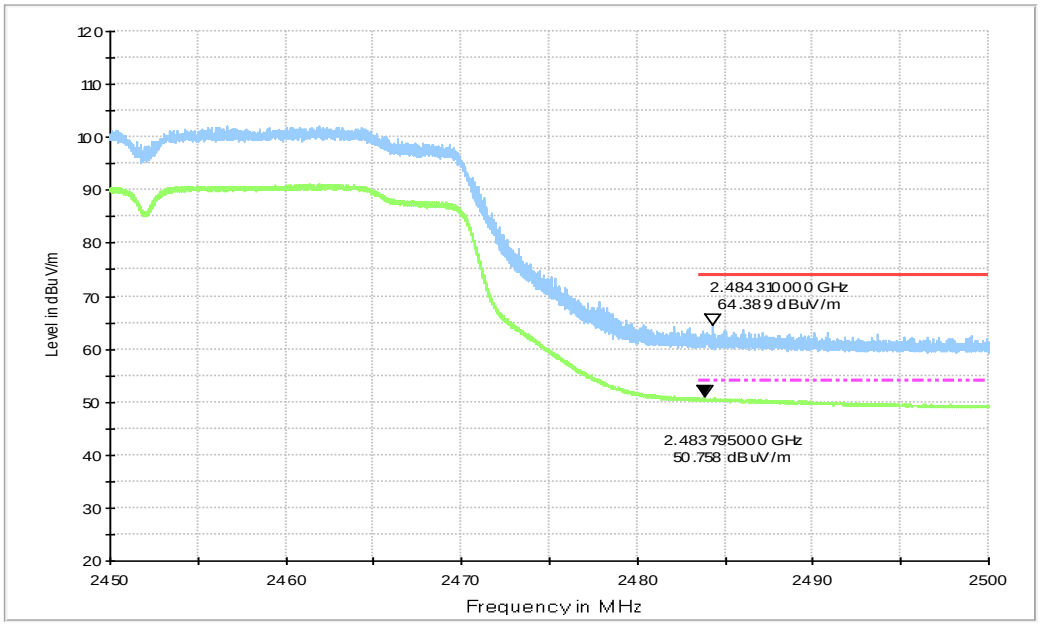


Fig.C.1.3.37 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz**

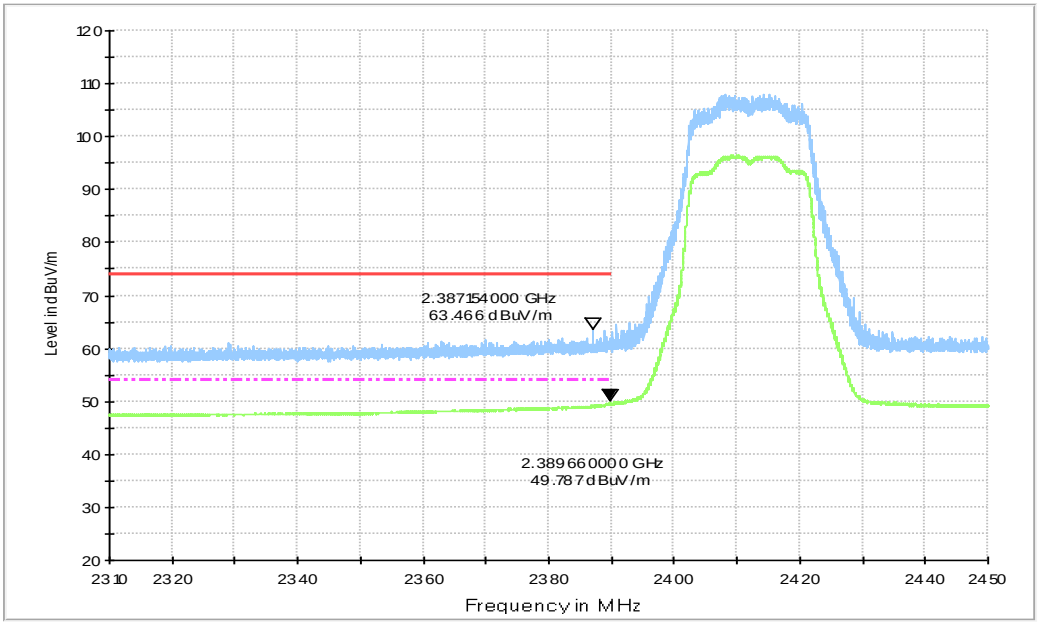


Fig.C.1.3.38 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, ch1, 2.31GHz - 2.45GHz**

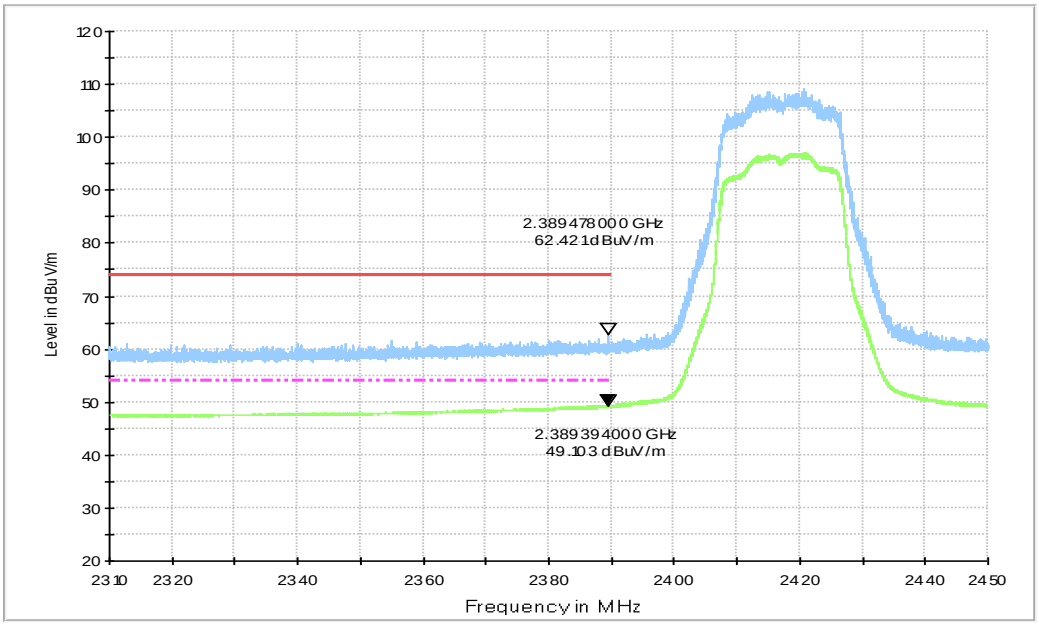


Fig.C.1.3.39 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, ch2, 2.31GHz - 2.45GHz**

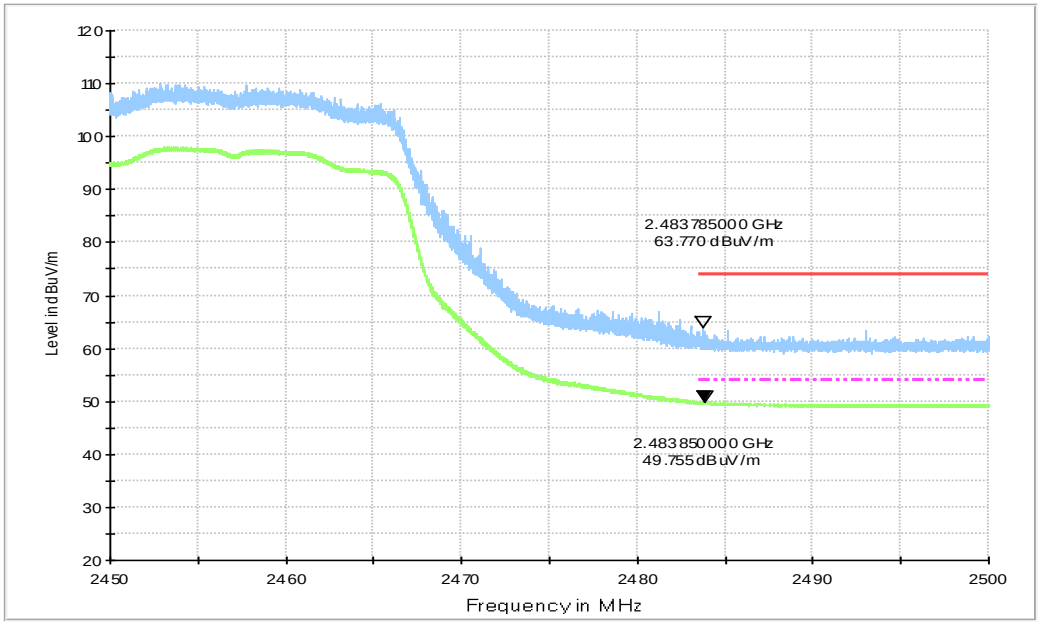


Fig.C.1.3.40 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, ch10, 2.45 GHz - 2.50GHz**

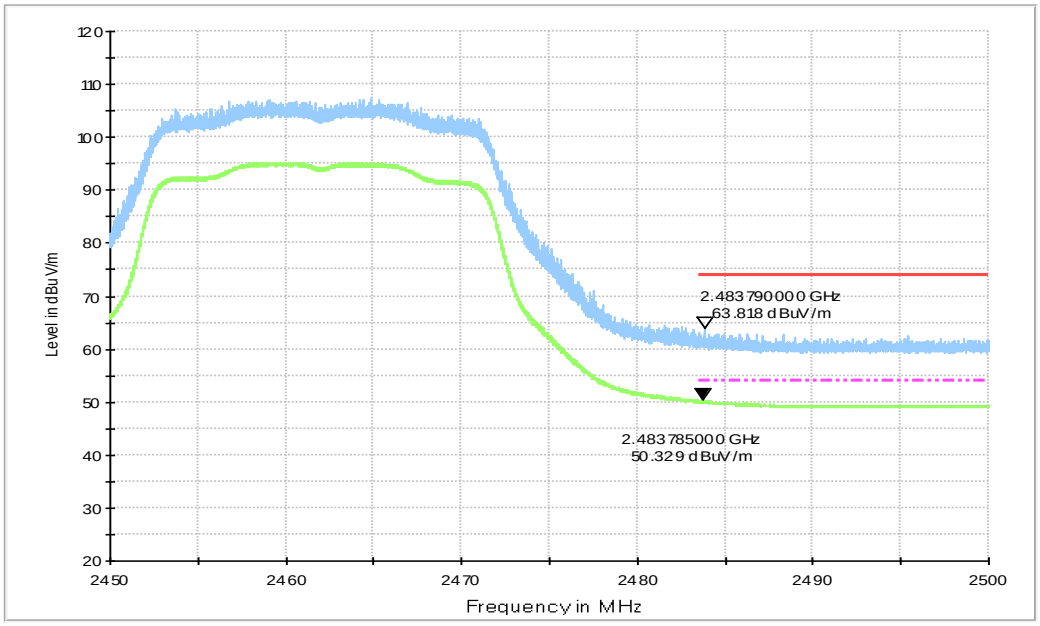


Fig.C.1.3.41 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, ch11, 2.45 GHz - 2.50GHz**

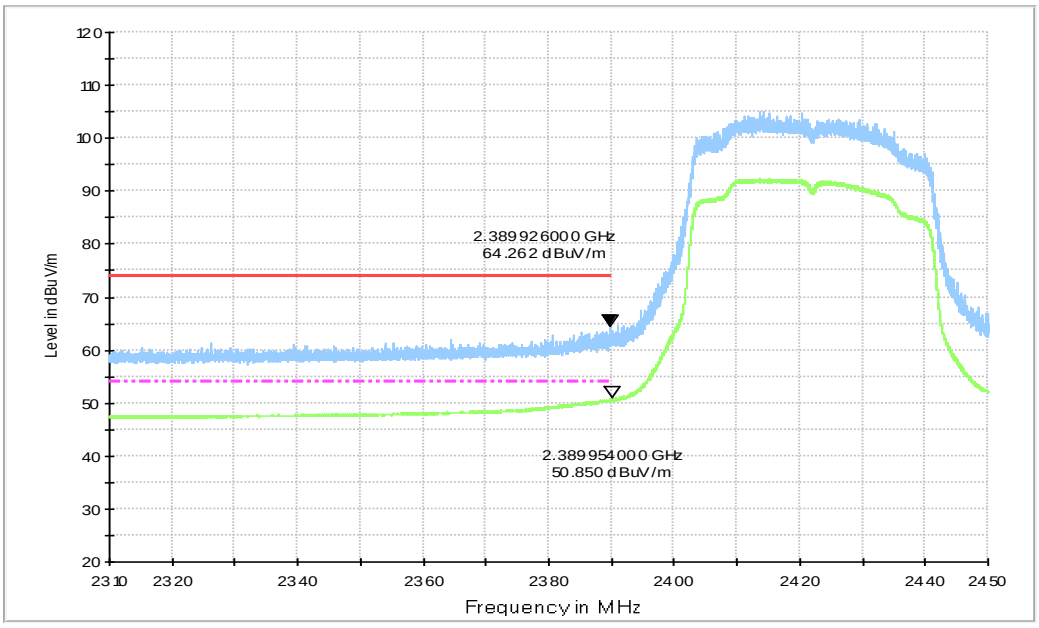


Fig.C.1.3.42 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, ch3, 2.31GHz - 2.45GHz**

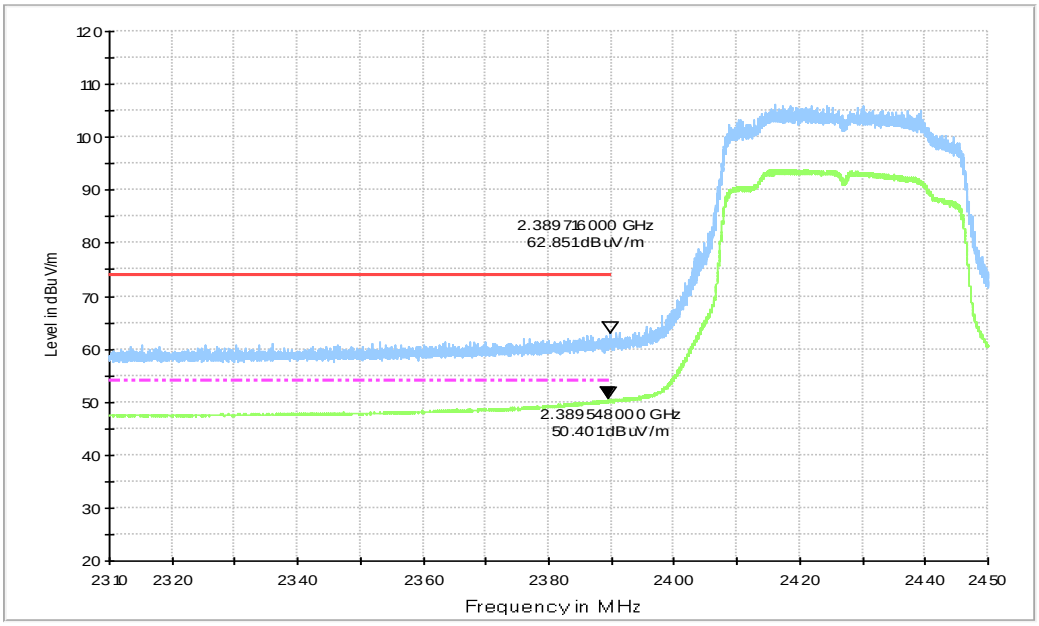


Fig.C.1.3.43 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, ch4, 2.31GHz - 2.45GHz**

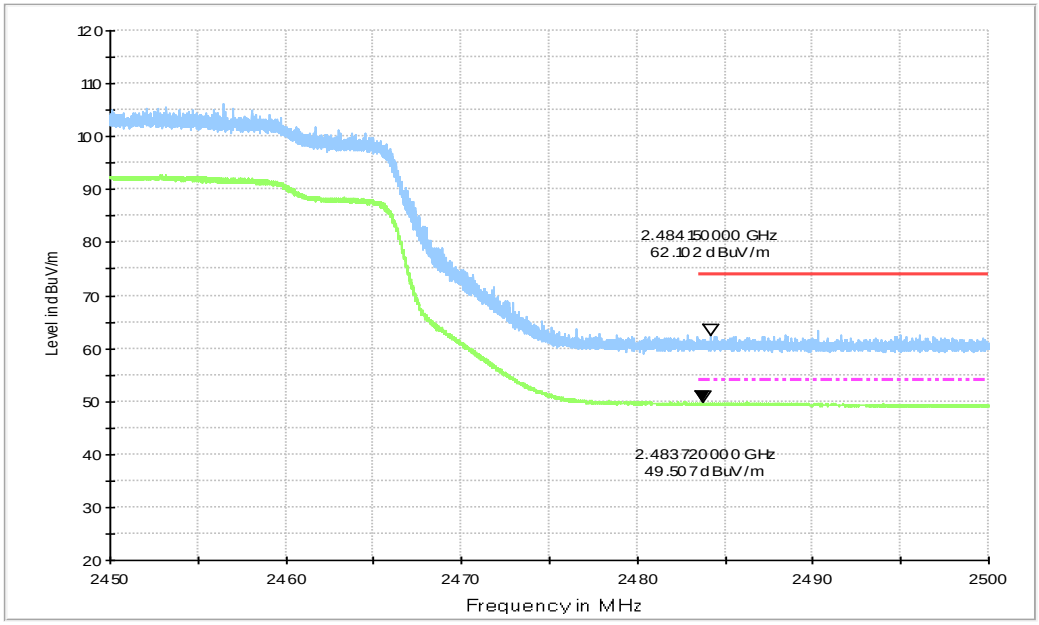


Fig.C.1.3.44 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, ch8, 2.45 GHz - 2.50GHz**

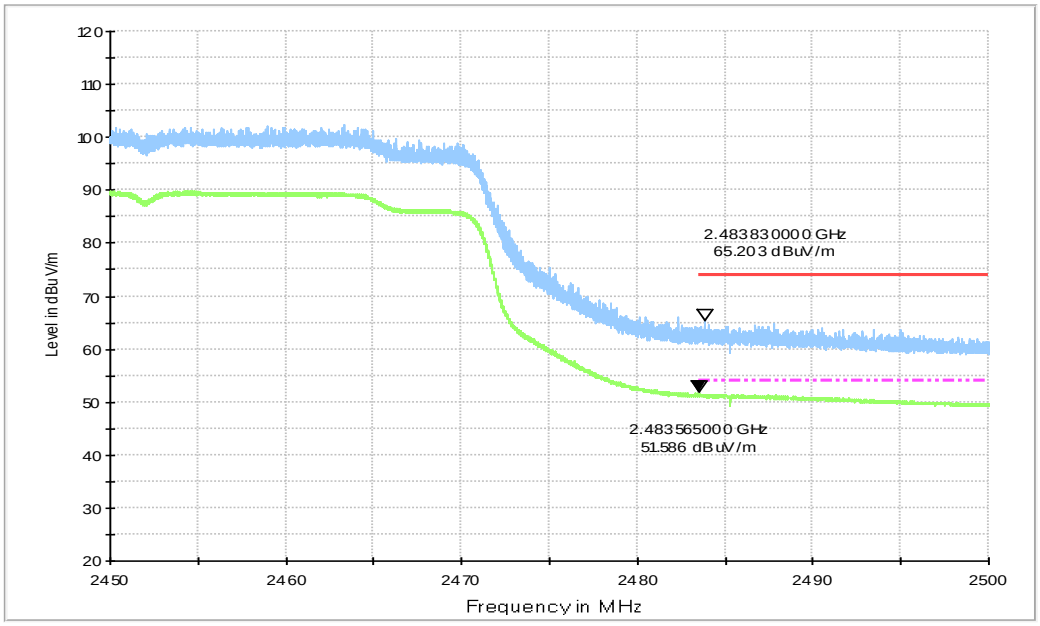


Fig.C.1.3.45 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, ch9, 2.45 GHz - 2.50GHz**

C.2. AC Power-line Conducted Emission

Specification Reference

FCC 47 CFR Part 15.207, Part 115.107

Method of Measurement

See Clause 6.2 of ANSI C63.10-2013 specifically.

See Clause 4 and Clause 5 of ANSI C63.10-2013 generally.

The conducted emissions from the AC port of the EUT are measured in a shielding room. The EUT is connected to a Line Impedance Stabilization Network (LISN). An overview sweep with peak detection was performed. The measurements were performed with a quasi-peak detector and if required, an average detector.

The conducted emission measurements were made with the following detector of the test receiver: Quasi-Peak / Average Detector.

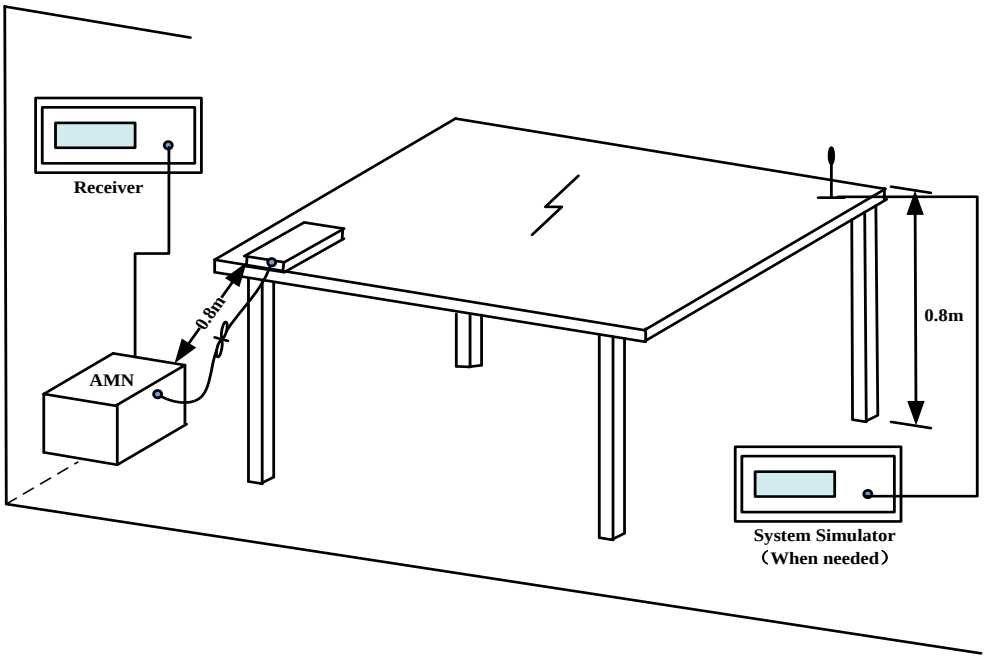
The measurement bandwidth is:

Frequency of Emission (MHz)	RBW/IF bandwidth	Sweep Time(s)
0.15-30	9kHz	1

Test Condition:

Voltage（V）	Frequency（Hz）
120	60

Measurement Setup



EUT Operating Mode and Test Conditions

The measurement of EUT is carried out under the transmitting state.

The EUT is powered by an AC/DC travel adapter.

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.C.2.1	Fig.C.2.2	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.C.2.1	Fig.C.2.2	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.				

Note: all modes have been tested and the worst results shown here.

Conclusion: Pass

Test graphs as below:

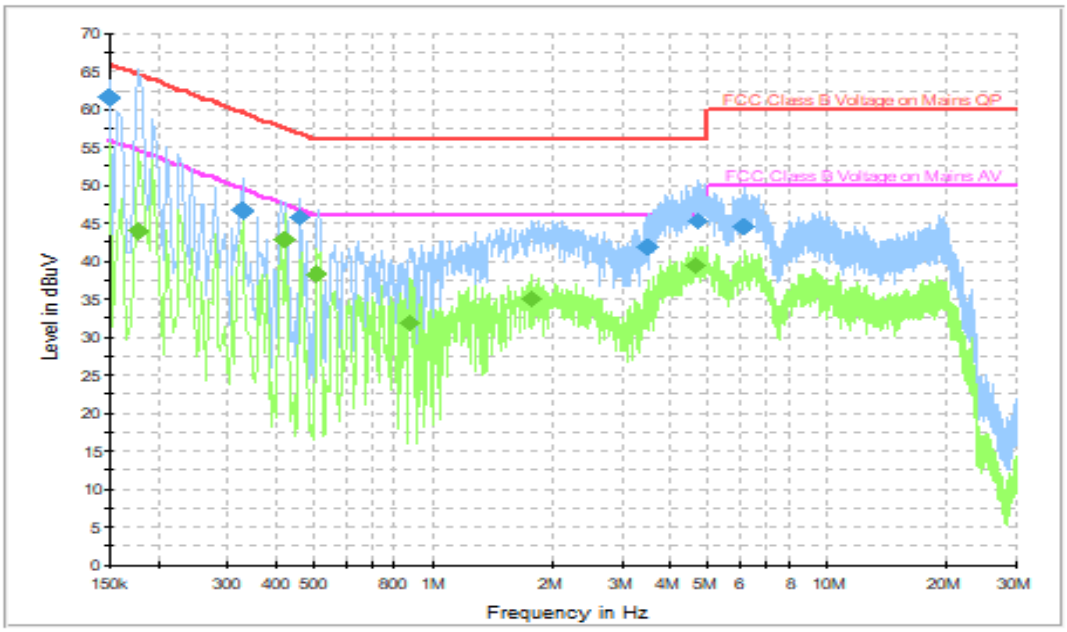


Fig.C.2.1 AC Powerline Conducted Emission-802.11b

Note1: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	62.3	5000.	9.000	L1	20.0	3.7	66.0
0.326000	46.7	5000.	9.000	N	19.6	12.8	59.6
0.458000	45.9	5000.	9.000	N	19.7	10.8	56.7
3.522000	41.8	5000.	9.000	N	19.6	14.2	56.0
4.698000	45.2	5000.	9.000	N	19.6	10.8	56.0
6.158000	44.5	5000.	9.000	N	19.6	15.5	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.178000	43.9	5000.0	9.000	L1	19.7	10.7	54.6
0.418000	42.8	5000.0	9.000	L1	19.7	4.7	47.5
0.506000	38.3	5000.0	9.000	L1	19.7	7.7	46.0
0.870000	31.8	5000.0	9.000	L1	19.6	14.2	46.0
1.774000	35.1	5000.0	9.000	L1	19.6	10.9	46.0
4.638000	39.5	5000.0	9.000	N	19.6	6.5	46.0

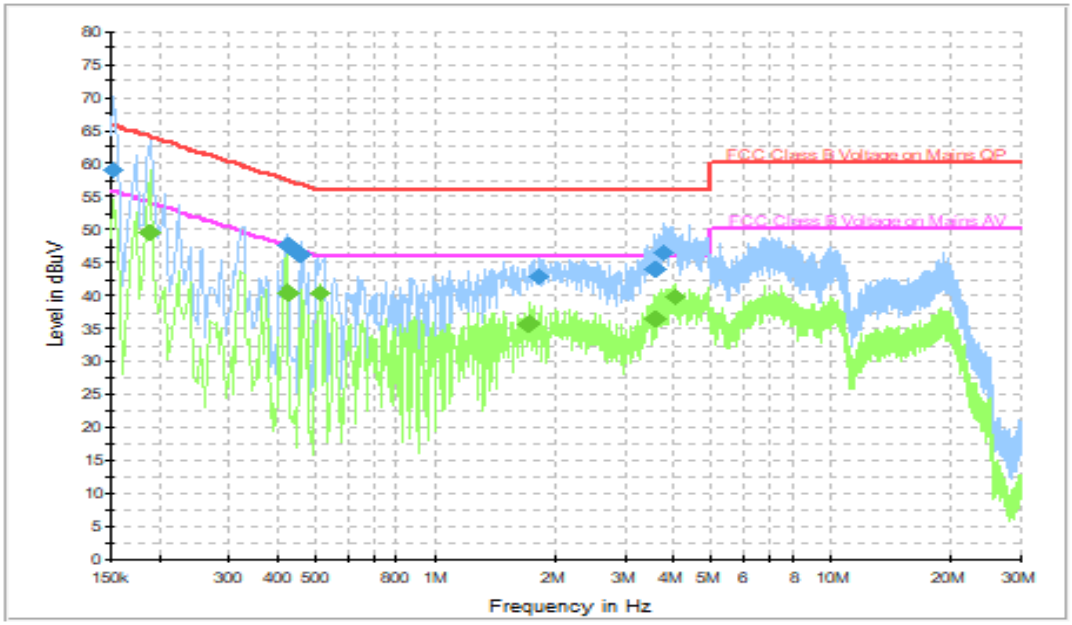


Fig.C.2.2 AC Powerline Conducted Emission-Idle

Note1: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.154000	59.1	5000.	9.000	L1	19.9	6.7	65.8
0.422000	47.6	5000.	9.000	L1	19.7	9.8	57.4
0.454000	46.3	5000.	9.000	N	19.7	10.5	56.8
1.822000	42.8	5000.	9.000	L1	19.6	13.2	56.0
3.602000	44.0	5000.	9.000	N	19.6	12.0	56.0
3.778000	46.3	5000.	9.000	N	19.6	9.7	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	49.4	5000.0	9.000	L1	19.7	4.6	54.0
0.422000	40.4	5000.0	9.000	L1	19.7	7.0	47.4
0.510000	40.3	5000.0	9.000	L1	19.7	5.7	46.0
1.726000	35.7	5000.0	9.000	L1	19.6	10.3	46.0
3.586000	36.4	5000.0	9.000	N	19.6	9.6	46.0
4.014000	39.8	5000.0	9.000	N	19.6	6.2	46.0

***** END OF REPORT BODY *****