FCC PART 15C
ISED RSS-247
TEST REPORT
No.I21Z70185-EMC10

for

Samsung Electronics Co., Ltd.

Notebook PC

XE310XDA

with

FCC ID: ZCAXE310XDA

ISED Number: 25314-XE310XDA

Hardware Version: REV1.0

Software Version: Chrome

Issued Date: 2021-06-21

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

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
I21Z70185-EMC10	Rev.0	1st edition	2021-06-21

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

Location 1:CTTL(Huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China100191

Location 2:CTTL(BDA)

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

1.3. Testing Environment

Normal Temperature: 15-35℃

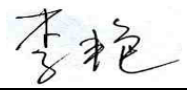
Relative Humidity: 20-75%

1.4. Project date

Testing Start Date: 2021-05-06

Testing End Date: 2021-06-18

1.5. Signature

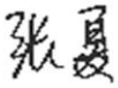


Li Yan

(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
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Fax:	/

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
Contact:	Sunghoon Cho
Email:	ggobi.cho@samsung.com
Telephone:	+82-10-2722-4159
Fax:	/

3. PRODUCT INFORMATION

3.1. About EUT

Description	Notebook PC
Model name	XE310XDA
FCC ID	ZCAXE310XDA
ISED Number	25314-XE310XDA

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	2170185UT31a	REV1.0	Chrome
EUT2	2170185UT11a	REV1.0	Chrome

*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	Travel Adapter	/	/
AE3	battery	/	Inbuilt

AE1

Model	EP-TA845
Manufacturer	DONGYANG E&P Inc
Length of cable	/

AE2

Model	EP-TA845
Manufacturer	SOLUM CO.,LTD
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)	AWAN	/	EUT2
	Auxiliary antenna (Chain B)			
Antenna	Main antenna (Chain A)	SPEED	/	EUT1
	Auxiliary antenna (Chain B)			

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

Samples undergoing test were selected by the Client.

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.	2019
ANSI C63.10	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices	2013
ISED RSS - Gen	Spectrum Management and Telecommunications - Radio Standards Specification General Requirements for Compliance of Radio Apparatus	Issue5 2019
ISED RSS-247	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices	Issue 2 2017
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	Sub-clause of ISED	Verdict
Radiated Spurious Emission	15.247, 15.205, 15.209	RSS-247 5.5 RSS-Gen 8.9	**P**
AC Power line Conducted Emission	15.107, 15.207	RSS-Gen 8.8	**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	26℃
Voltage	V nom	4.0V
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	2021-09-04
2	BiLog Antenna	VULB9163	9163-482	Schwarzbeck	1 year	2021-11-04
3	Dual-Ridge Waveguide Horn Antenna	3117	00139065	ETS-Lindgren	1 year	2021-10-11
4	Dual-Ridge Waveguide Horn Antenna	3116	2663	ETS-Lindgren	1 year	2021-08-05
5	Vector Signal Analyzer	FSV40	101047	R&S	1 year	2022-05-17
6	Loop Antenna	HFH2-Z2	829324/007	R&S	1 year	2021-12-10
7	Test Receiver	ESU26	100235	R&S	1 year	2022-02-23

AC Powerline Conducted Emission

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	LISN	ENV216	101459	R&S	1 year	2022-03-16
2	Test Receiver	ESCI	100766	R&S	1 year	2022-03-09

7. Measurement Uncertainty

Radiated Spurious Emission

(k=2)

Frequency Range	Uncertainty(dB)
9kHz-30MHz	/
30MHz ≤ f ≤ 1GHz	5.40
1GHz ≤ f ≤18GHz	4.32
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

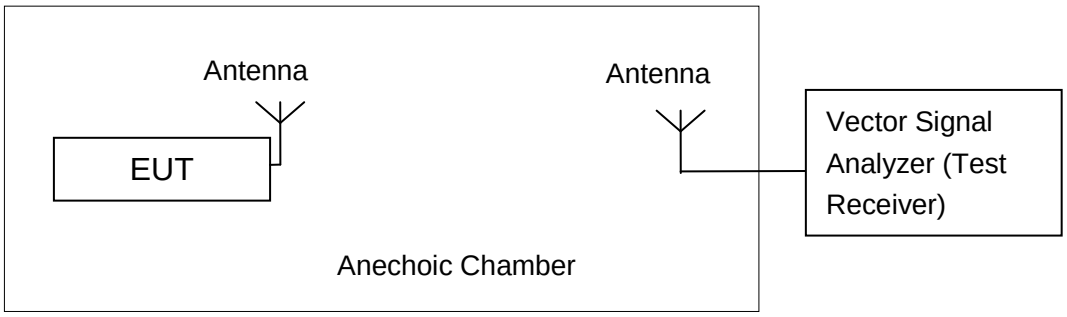
C.1. Radiated Spurious Emission

Specification Reference

FCC 47 CFR Part 15.247, 15.205, 15.209 & RSS-247 5.5, RSS-GEN, 8.9

Method of Measurement

Testing was performed in according with ANSI C63.10-2013 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 & RSS-247 section 5.5	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 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.

For EUT2 with AWAN 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

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)
2360.498	60.30	2.85	31.97	25.48	74.00	13.70	V
2386.916	59.91	2.86	32.00	25.05	74.00	14.09	H
4823.500	48.37	-33.24	34.13	47.48	74.00	25.63	V
7236.000	41.72	-30.88	35.80	36.80	74.00	32.28	H
9648.000	42.74	-30.46	36.71	36.49	74.00	31.26	V
12060.000	44.03	-28.70	38.74	33.99	74.00	29.97	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)
2365.200	43.89	2.85	31.98	9.07	74.00	30.11	H
2501.200	45.63	2.94	32.10	10.58	74.00	28.37	H
4873.500	46.73	-33.30	34.15	45.88	74.00	27.27	V
7311.000	41.45	-30.82	35.83	36.44	74.00	32.55	V
9748.000	41.86	-30.33	36.85	35.34	74.00	32.14	H
12185.000	44.75	-28.11	38.81	34.04	74.00	29.25	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)
2483.835	60.52	2.93	32.09	25.50	74.00	13.48	H
2484.395	60.93	2.93	32.09	25.91	74.00	13.07	V
4924.000	44.99	-33.53	34.17	44.35	74.00	29.01	H
7386.000	41.15	-31.45	35.86	36.74	74.00	32.85	V
9848.000	42.55	-30.18	36.99	35.74	74.00	31.45	H
12310.000	44.68	-27.75	38.89	33.55	74.00	29.32	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)
2373.532	60.08	2.85	31.98	25.25	74.00	13.92	H
2385.138	60.21	2.86	31.99	25.35	74.00	13.79	V
4824.000	39.78	-33.24	34.13	38.89	74.00	34.22	V
7236.000	41.56	-30.88	35.80	36.65	74.00	32.44	V
9648.000	41.84	-30.46	36.71	35.59	74.00	32.16	V
12060.000	44.60	-28.70	38.74	34.57	74.00	29.40	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)
2353.400	44.16	2.84	31.96	9.36	74.00	29.84	H
2518.000	44.41	2.96	32.14	9.32	74.00	29.59	H
4881.000	44.14	-33.32	34.15	43.30	74.00	29.86	V
7311.000	41.53	-30.82	35.83	36.52	74.00	32.47	H
9748.000	42.69	-30.33	36.85	36.17	74.00	31.31	H
12185.000	45.31	-28.11	38.81	34.60	74.00	28.69	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)
2486.520	60.58	2.93	32.09	25.55	74.00	13.42	V
2497.770	60.29	2.94	32.10	25.25	74.00	13.71	V
4924.000	39.07	-33.53	34.17	38.43	74.00	34.93	V
7386.000	40.70	-31.45	35.86	36.30	74.00	33.30	V
9848.000	41.81	-30.18	36.99	35.00	74.00	32.19	H
12310.000	44.70	-27.75	38.89	33.56	74.00	29.30	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)
2333.436	60.18	2.83	31.95	25.41	74.00	13.82	H
2375.828	60.33	2.86	31.99	25.49	74.00	13.67	H
4824.000	40.41	-33.24	34.13	39.52	74.00	33.59	H
7236.000	41.80	-30.88	35.80	36.89	74.00	32.20	V
9648.000	42.52	-30.46	36.71	36.27	74.00	31.48	V
12060.000	44.78	-28.70	38.74	34.74	74.00	29.22	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)
2361.000	44.09	2.85	31.97	9.27	74.00	29.91	V
2505.400	44.12	2.95	32.11	9.06	74.00	29.88	V
4873.000	44.59	-33.30	34.15	43.74	74.00	29.41	H
7311.000	42.37	-30.82	35.83	37.36	74.00	31.63	V
9748.000	42.77	-30.33	36.85	36.25	74.00	31.23	V
12185.000	45.13	-28.11	38.81	34.42	74.00	28.87	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)
2493.150	60.23	2.94	32.09	25.19	74.00	13.77	V
2494.365	60.15	2.94	32.09	25.11	74.00	13.85	H
4924.000	39.74	-33.53	34.17	39.10	74.00	34.26	H
7386.000	42.43	-31.45	35.86	38.03	74.00	31.57	V
9848.000	42.20	-30.18	36.99	35.38	74.00	31.80	V
12310.000	44.86	-27.75	38.89	33.73	74.00	29.14	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)
2386.230	61.17	2.86	32.00	25.55	74.00	12.83	H
2389.646	60.86	2.87	32.00	25.25	74.00	13.14	V
4844.000	38.32	-33.23	34.14	38.43	74.00	35.68	H
7266.000	41.59	-30.60	35.81	36.30	74.00	32.41	H
9688.000	42.42	-30.37	36.77	35.00	74.00	31.58	V
12110.000	45.59	-28.47	38.77	33.56	74.00	28.41	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	43.88	2.85	31.98	25.41	74.00	30.12	H
2522.600	44.77	2.96	32.14	25.49	74.00	29.23	H
4874.000	38.95	-33.30	34.15	39.52	74.00	35.05	H
7311.000	41.06	-30.82	35.83	36.89	74.00	32.94	V
9748.000	42.05	-30.33	36.85	36.27	74.00	31.95	V
12185.000	45.33	-28.11	38.81	34.74	74.00	28.67	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)
2487.390	62.78	2.93	32.09	9.27	74.00	11.22	H
2489.840	62.76	2.94	32.09	9.06	74.00	11.24	H
4904.000	39.98	-33.42	34.16	43.74	74.00	34.02	H
7356.000	42.70	-31.17	35.84	37.36	74.00	31.30	V
9808.000	41.72	-30.32	36.94	36.25	74.00	32.28	V
12260.000	44.52	-27.88	38.86	34.42	74.00	29.48	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)
2341.668	60.19	2.8	32.0	25.40	74.0	13.8	H
2378.348	60.50	2.9	32.0	25.65	74.0	13.5	V
4824.000	40.83	-33.2	34.1	39.93	74.0	33.2	H
7236.000	41.54	-30.9	35.8	36.62	74.0	32.5	H
9648.000	43.05	-30.5	36.7	36.80	74.0	31.0	V
12060.000	45.04	-28.7	38.7	35.00	74.0	29.0	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)
2370.000	43.93	2.9	32.0	9.10	74.0	30.1	V
2517.800	45.32	3.0	32.1	10.23	74.0	28.7	H
4874.000	44.52	-33.3	34.2	43.67	74.0	29.5	H
7311.000	41.72	-30.8	35.8	36.71	74.0	32.3	H
9748.000	43.24	-30.3	36.9	36.72	74.0	30.8	H
12185.000	45.54	-28.1	38.8	34.83	74.0	28.5	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)
2488.295	60.17	2.9	32.1	25.14	74.0	13.8	H
2492.745	60.28	2.9	32.1	25.25	74.0	13.7	V
4924.000	39.73	-33.5	34.2	39.09	74.0	34.3	V
7386.000	42.00	-31.5	35.9	37.60	74.0	32.0	H
9848.000	43.23	-30.2	37.0	36.42	74.0	30.8	V
12310.000	46.12	-27.8	38.9	34.98	74.0	27.9	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)
2386.230	61.17	2.9	32.0	25.55	74.0	12.8	H
2389.646	60.86	2.9	32.0	25.25	74.0	13.1	V
4844.000	38.32	-33.2	34.1	38.43	74.0	35.7	H
7266.000	41.59	-30.6	35.8	36.30	74.0	32.4	H
9688.000	42.42	-30.4	36.8	35.00	74.0	31.6	V
12110.000	45.59	-28.5	38.8	33.56	74.0	28.4	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	43.88	2.8	32.0	25.41	74.0	30.1	H
2522.600	44.77	3.0	32.1	25.49	74.0	29.2	H
4874.000	38.95	-33.3	34.2	39.52	74.0	35.1	H
7311.000	41.06	-30.8	35.8	36.89	74.0	32.9	V
9748.000	42.05	-30.3	36.9	36.27	74.0	32.0	V
12185.000	45.33	-28.1	38.8	34.74	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)
2487.390	62.78	2.9	32.1	9.27	74.0	11.2	H
2489.840	62.76	2.9	32.1	9.06	74.0	11.2	H
4904.000	39.98	-33.4	34.2	43.74	74.0	34.0	H
7356.000	42.70	-31.2	35.8	37.36	74.0	31.3	V
9808.000	41.72	-30.3	36.9	36.25	74.0	32.3	V
12260.000	44.52	-27.9	38.9	34.42	74.0	29.5	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)
2388.240	46.59	2.86	32.00	11.73	54.00	7.41	V
2389.560	46.61	2.87	32.00	11.75	54.00	7.39	V
4824.000	45.49	-33.24	34.13	44.59	54.00	8.51	H
7236.000	30.56	-30.88	35.80	25.65	54.00	23.44	V
9648.000	31.00	-30.46	36.71	24.75	54.00	23.00	H
12060.000	33.50	-28.70	38.74	23.47	54.00	20.50	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)
2422.140	46.78	2.89	32.03	11.87	54.00	7.22	V
2451.600	46.75	2.91	32.06	11.78	54.00	7.25	V
4874.000	42.81	-33.30	34.15	41.96	54.00	11.19	H
7311.000	30.35	-30.82	35.83	25.34	54.00	23.65	V
9748.000	31.11	-30.33	36.85	24.59	54.00	22.89	H
12185.000	33.81	-28.11	38.81	23.10	54.00	20.19	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)
2483.500	46.73	2.93	32.09	11.71	54.00	7.27	V
2484.060	46.69	2.93	32.09	11.67	54.00	7.31	V
4924.000	40.12	-33.53	34.17	39.47	54.00	13.88	H
7386.000	29.72	-31.45	35.86	25.32	54.00	24.28	V
9848.000	31.06	-30.18	36.99	24.25	54.00	22.94	H
12310.000	33.62	-27.75	38.89	22.48	54.00	20.38	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)
2387.220	46.67	2.86	32.00	11.81	54.00	7.33	V
2389.320	46.71	2.87	32.00	11.84	54.00	7.29	V
4824.000	29.21	-33.24	34.13	28.32	54.00	24.79	H
7236.000	30.60	-30.88	35.80	25.68	54.00	23.40	V
9648.000	31.15	-30.46	36.71	24.90	54.00	22.85	V
12060.000	33.49	-28.70	38.74	23.46	54.00	20.51	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)
2416.380	46.80	2.88	32.02	11.89	54.00	7.20	V
2457.720	46.82	2.91	32.06	11.85	54.00	7.18	V
4873.000	32.10	-33.30	34.15	31.25	54.00	21.90	V
7311.000	30.37	-30.82	35.83	25.36	54.00	23.63	H
9748.000	31.26	-30.33	36.85	24.74	54.00	22.74	V
12185.000	33.85	-28.11	38.81	23.14	54.00	20.15	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)
2483.500	46.74	2.93	32.09	11.72	54.00	7.26	V
2484.840	46.70	2.93	32.09	11.68	54.00	7.30	V
4924.000	28.62	-33.53	34.17	27.98	54.00	25.38	V
7386.000	29.82	-31.45	35.86	25.42	54.00	24.18	H
9848.000	31.15	-30.18	36.99	24.34	54.00	22.85	H
12310.000	33.67	-27.75	38.89	22.54	54.00	20.33	H

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)
2388.480	46.60	2.86	32.00	11.74	54.00	7.40	V
2389.980	46.66	2.87	32.00	11.80	54.00	7.34	V
4824.000	29.26	-33.24	34.13	28.37	54.00	24.74	V
7236.000	30.63	-30.88	35.80	25.72	54.00	23.37	H
9648.000	31.16	-30.46	36.71	24.91	54.00	22.84	H
12060.000	33.54	-28.70	38.74	23.51	54.00	20.46	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)
2419.500	46.75	2.89	32.03	11.84	54.00	7.25	V
2452.800	47.18	2.91	32.06	12.21	54.00	6.82	V
4873.000	32.22	-33.30	34.15	31.37	54.00	21.78	H
7311.000	30.48	-30.82	35.83	25.48	54.00	23.52	H
9748.000	31.19	-30.33	36.85	24.67	54.00	22.81	H
12185.000	33.94	-28.11	38.81	23.23	54.00	20.06	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)
2483.520	46.68	2.93	32.09	11.67	54.00	7.32	V
2484.300	46.73	2.93	32.09	11.71	54.00	7.27	V
4924.000	28.65	-33.53	34.17	28.01	54.00	25.35	H
7386.000	29.92	-31.45	35.86	25.52	54.00	24.08	H
9848.000	31.27	-30.18	36.99	24.46	54.00	22.73	H
12310.000	33.76	-27.75	38.89	22.62	54.00	20.24	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)
2388.600	46.78	2.86	32.00	11.92	54.00	7.22	V
2388.900	46.75	2.87	32.00	11.89	54.00	7.25	V
4844.000	28.00	-33.23	34.14	27.09	54.00	26.00	V
7266.000	30.83	-30.60	35.81	25.62	54.00	23.17	H
9688.000	31.06	-30.37	36.77	24.66	54.00	22.94	H
12110.000	33.65	-28.47	38.77	23.35	54.00	20.35	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)
2408.220	47.01	2.88	32.02	12.12	54.00	6.99	V
2465.160	47.02	2.92	32.07	12.03	54.00	6.98	V
4874.000	28.91	-33.30	34.15	28.06	54.00	25.09	H
7311.000	30.61	-30.82	35.83	25.60	54.00	23.39	H
9748.000	31.29	-30.33	36.85	24.77	54.00	22.71	H
12185.000	33.89	-28.11	38.81	23.18	54.00	20.11	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)
2483.520	48.60	2.93	32.09	13.59	54.00	5.40	V
2483.580	48.57	2.93	32.09	13.55	54.00	5.43	V
4904.000	28.46	-33.42	34.16	27.72	54.00	25.54	V
7356.000	30.44	-31.17	35.84	25.77	54.00	23.56	V
9808.000	30.89	-30.32	36.94	24.28	54.00	23.11	V
12260.000	33.48	-27.88	38.86	22.51	54.00	20.52	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)
2389.080	46.62	2.9	32.0	11.76	54.0	7.4	V
2389.860	46.64	2.9	32.0	11.78	54.0	7.4	V
4824.000	29.20	-33.2	34.1	28.30	54.0	24.8	H
7236.000	30.64	-30.9	35.8	25.72	54.0	23.4	V
9648.000	31.06	-30.5	36.7	24.81	54.0	22.9	V
12060.000	33.63	-28.7	38.7	23.59	54.0	20.4	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)
2410.920	46.75	2.9	32.0	11.85	54.0	7.3	V
2461.500	46.73	2.9	32.1	11.75	54.0	7.3	V
4873.000	31.60	-33.3	34.2	30.75	54.0	22.4	V
7311.000	30.44	-30.8	35.8	25.43	54.0	23.6	V
9748.000	31.27	-30.3	36.9	24.75	54.0	22.7	H
12185.000	33.97	-28.1	38.8	23.26	54.0	20.0	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)
2483.520	46.71	2.9	32.1	11.69	54.0	7.3	V
2484.900	46.68	2.9	32.1	11.66	54.0	7.3	V
4924.000	28.54	-33.5	34.2	27.90	54.0	25.5	V
7386.000	29.81	-31.5	35.9	25.41	54.0	24.2	H
9848.000	31.20	-30.2	37.0	24.39	54.0	22.8	H
12310.000	33.59	-27.8	38.9	22.46	54.0	20.4	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)
2483.520	48.60	2.9	32.1	13.59	54.0	5.4	V
2483.580	48.57	2.9	32.1	13.55	54.0	5.4	V
4904.000	28.46	-33.4	34.2	27.72	54.0	25.5	V
7356.000	30.44	-31.2	35.8	25.77	54.0	23.6	V
9808.000	30.89	-30.3	36.9	24.28	54.0	23.1	V
12260.000	33.49	-27.9	38.9	22.51	54.0	20.5	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)
2389.680	46.88	2.9	32.0	12.01	54.0	7.1	V
2389.980	46.91	2.9	32.0	12.04	54.0	7.1	V
4844.000	28.08	-33.2	34.1	27.18	54.0	25.9	V
7266.000	30.89	-30.6	35.8	25.68	54.0	23.1	V
9688.000	31.06	-30.4	36.8	24.66	54.0	22.9	V
12110.000	33.71	-28.5	38.8	23.41	54.0	20.3	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)
2408.220	47.23	2.9	32.0	12.33	54.0	6.8	V
2464.980	47.15	2.9	32.1	12.16	54.0	6.9	V
4874.000	28.86	-33.3	34.2	28.01	54.0	25.1	V
7311.000	30.53	-30.8	35.8	25.52	54.0	23.5	H
9748.000	31.31	-30.3	36.9	24.79	54.0	22.7	H
12185.000	34.00	-28.1	38.8	23.29	54.0	20.0	H

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

Conclusion: Pass

AWAN

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)
2386.160	60.40	2.86	32.00	25.54	74.00	13.60	H
2388.890	60.47	2.87	32.00	25.60	74.00	13.53	V
4824.000	44.49	-33.24	34.13	43.60	74.00	29.51	V
7236.000	42.40	-30.88	35.80	37.48	74.00	31.60	V
9648.000	44.01	-30.46	36.71	37.76	74.00	29.99	H
12060.000	33.52	-28.70	38.74	23.49	74.00	40.48	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)
2337.200	43.14	-35.28	31.95	46.47	74.00	30.86	H
2515.600	43.84	-34.31	32.13	46.02	74.00	30.16	V
4874.000	45.80	-33.30	34.15	44.95	74.00	28.20	V
7311.000	40.72	-30.82	35.83	35.71	74.00	33.28	V
9748.000	42.60	-30.33	36.85	36.08	74.00	31.40	V
12185.000	46.57	-28.11	38.81	35.86	74.00	27.43	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)
2490.400	61.04	2.94	32.09	26.01	74.00	12.96	H
2499.605	60.91	2.94	32.10	25.87	74.00	13.09	H
4924.000	45.17	-33.53	34.17	44.52	74.00	28.83	V
7386.000	41.98	-31.45	35.86	37.58	74.00	32.02	V
9848.000	42.65	-30.18	36.99	35.84	74.00	31.35	H
12310.000	45.71	-27.75	38.89	34.58	74.00	28.29	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)
2315.614	58.90	2.81	31.93	24.16	74.00	15.10	V
2372.972	60.09	2.85	31.98	25.25	74.00	13.91	V
4824.000	42.94	-33.24	34.13	42.04	74.00	31.06	H
7236.000	41.85	-30.88	35.80	36.93	74.00	32.15	V
9648.000	42.32	-30.46	36.71	36.07	74.00	31.68	H
12060.000	45.32	-28.70	38.74	35.28	74.00	28.68	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)
2362.200	43.81	-34.79	31.97	46.63	74.00	30.19	V
2523.350	44.63	-34.39	32.15	46.87	74.00	29.37	V
4874.000	44.45	-33.30	34.15	43.60	74.00	29.55	V
7311.000	42.86	-30.82	35.83	37.85	74.00	31.14	V
9748.000	44.14	-30.33	36.85	37.62	74.00	29.86	V
12185.000	45.18	-28.11	38.81	34.47	74.00	28.82	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)
2486.350	60.58	2.93	32.09	25.56	74.00	13.42	V
2499.825	60.23	2.94	32.10	25.19	74.00	13.77	H
4924.000	42.92	-33.53	34.17	42.27	74.00	31.08	V
7386.000	42.11	-31.45	35.86	37.71	74.00	31.89	H
9848.000	42.90	-30.18	36.99	36.08	74.00	31.10	H
12310.000	45.17	-27.75	38.89	34.03	74.00	28.83	H

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)
2370.466	60.74	2.85	31.98	25.91	74.00	13.26	H
2386.216	60.46	2.86	32.00	25.60	74.00	13.54	V
4824.000	42.77	-33.24	34.13	41.88	74.00	31.23	V
7236.000	42.15	-30.88	35.80	37.24	74.00	31.85	H
9648.000	43.17	-30.46	36.71	36.92	74.00	30.83	V
12060.000	44.46	-28.70	38.74	34.43	74.00	29.54	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)
2357.600	44.03	-34.97	31.97	47.04	74.00	29.97	H
2528.800	43.83	-34.46	32.16	46.13	74.00	30.17	H
4874.000	42.25	-33.30	34.15	41.40	74.00	31.75	H
7311.000	42.31	-30.82	35.83	37.30	74.00	31.69	V
9748.000	44.04	-30.33	36.85	37.52	74.00	29.96	H
12185.000	45.11	-28.11	38.81	34.40	74.00	28.89	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)
2486.650	60.80	2.93	32.09	25.78	74.00	13.20	V
2488.945	61.14	2.94	32.09	26.11	74.00	12.86	H
4924.000	41.77	-33.53	34.17	41.13	74.00	32.23	H
7386.000	41.77	-31.45	35.86	37.37	74.00	32.23	H
9848.000	42.95	-30.18	36.99	36.14	74.00	31.05	H
12310.000	45.78	-27.75	38.89	34.64	74.00	28.22	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)
2387.294	65.04	2.86	32.00	30.18	74.00	8.96	V
2389.282	66.21	2.87	32.00	31.35	74.00	7.79	V
4844.000	42.08	-33.23	34.14	41.17	74.00	31.92	V
7266.000	43.14	-30.60	35.81	37.93	74.00	30.86	V
9688.000	42.89	-30.37	36.77	36.49	74.00	31.11	H
12110.000	45.53	-28.47	38.77	35.23	74.00	28.47	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)
2255.400	44.14	-35.70	31.87	47.97	74.00	29.86	V
2569.800	45.37	-34.51	32.24	47.64	74.00	28.63	H
4874.000	40.88	-33.30	34.15	40.03	74.00	33.12	V
7311.000	43.12	-30.82	35.83	38.11	74.00	30.88	H
9748.000	42.69	-30.33	36.85	36.17	74.00	31.31	H
12185.000	45.55	-28.11	38.81	34.84	74.00	28.45	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)
2484.135	65.66	2.93	32.09	30.64	74.00	8.34	V
2484.745	65.50	2.93	32.09	30.48	74.00	8.50	H
4904.000	40.54	-33.42	34.16	39.80	74.00	33.46	V
7356.000	42.10	-31.17	35.84	37.43	74.00	31.90	V
9808.000	43.23	-30.32	36.94	36.62	74.00	30.77	H
12260.000	45.75	-27.88	38.86	34.77	74.00	28.25	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)
2352.840	60.31	2.8	32.0	25.51	74.0	13.7	H
2384.732	60.35	2.9	32.0	25.49	74.0	13.7	H
4824.000	42.97	-33.2	34.1	42.07	74.0	31.0	V
7236.000	42.41	-30.9	35.8	37.50	74.0	31.6	V
9648.000	43.37	-30.5	36.7	37.12	74.0	30.6	V
12060.000	45.84	-28.7	38.7	35.80	74.0	28.2	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)
2312.800	44.37	-35.4	31.9	47.88	74.0	29.6	V
2518.650	44.87	-34.3	32.1	47.08	74.0	29.1	H
4874.000	42.44	-33.3	34.2	41.59	74.0	31.6	V
7311.000	42.09	-30.8	35.8	37.08	74.0	31.9	V
9748.000	43.81	-30.3	36.9	37.29	74.0	30.2	V
12185.000	45.81	-28.1	38.8	35.10	74.0	28.2	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)
2495.945	60.39	2.9	32.1	25.35	74.0	13.6	H
2498.390	60.40	2.9	32.1	25.36	74.0	13.6	H
4924.000	42.27	-33.5	34.2	41.63	74.0	31.7	V
7386.000	42.24	-31.5	35.9	37.84	74.0	31.8	H
9848.000	43.23	-30.2	37.0	36.41	74.0	30.8	H
12310.000	45.44	-27.8	38.9	34.30	74.0	28.6	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)
2382.254	60.73	2.9	32.0	25.88	74.0	13.3	V
2388.288	60.42	2.9	32.0	25.56	74.0	13.6	H
4844.000	41.20	-33.2	34.1	40.29	74.0	32.8	V
7266.000	40.60	-30.6	35.8	35.39	74.0	33.4	H
9688.000	43.52	-30.4	36.8	37.12	74.0	30.5	V
12110.000	45.63	-28.5	38.8	35.33	74.0	28.4	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)
2326.800	43.85	-35.4	31.9	47.27	74.0	30.1	V
2504.680	44.26	-34.2	32.1	46.35	74.0	29.7	H
4874.000	41.33	-33.3	34.2	40.48	74.0	32.7	V
7311.000	41.60	-30.8	35.8	36.59	74.0	32.4	V
9748.000	43.73	-30.3	36.9	37.21	74.0	30.3	H
12185.000	46.14	-28.1	38.8	35.43	74.0	27.9	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)
2483.655	65.24	2.9	32.1	30.22	74.0	8.8	H
2484.675	65.47	2.9	32.1	30.45	74.0	8.5	V
4904.000	40.34	-33.4	34.2	39.61	74.0	33.7	H
7356.000	41.74	-31.2	35.8	37.07	74.0	32.3	V
9808.000	43.07	-30.3	36.9	36.45	74.0	30.9	H
12260.000	45.49	-27.9	38.9	34.51	74.0	28.5	V

Average

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)
2389.920	46.71	2.87	32.00	11.85	54.00	7.29	V
2389.980	46.70	2.87	32.00	11.84	54.00	7.30	V
4824.000	39.77	-33.24	34.13	38.88	54.00	14.23	H
7236.000	29.78	-30.88	35.80	24.86	54.00	24.22	H
9648.000	29.92	-30.46	36.71	23.66	54.00	24.08	V
12060.000	32.53	-28.70	38.74	22.49	54.00	21.47	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)
2425.560	46.80	2.89	32.03	11.87	54.00	7.20	V
2449.980	46.92	2.91	32.05	11.96	54.00	7.08	V
4874.000	41.36	-33.30	34.15	40.51	54.00	12.64	H
7311.000	29.72	-30.82	35.83	24.71	54.00	24.28	V
9748.000	30.08	-30.33	36.85	23.56	54.00	23.92	H
12185.000	32.82	-28.11	38.81	22.11	54.00	21.18	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)
2483.520	46.74	2.93	32.09	11.72	54.00	7.26	V
2483.580	46.72	2.93	32.09	11.70	54.00	7.28	V
4924.000	40.42	-33.53	34.17	39.78	54.00	13.58	H
7386.000	29.88	-31.45	35.86	25.48	54.00	24.12	V
9848.000	30.12	-30.18	36.99	23.31	54.00	23.88	V
12310.000	32.80	-27.75	38.89	21.67	54.00	21.20	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)
2389.920	46.67	2.87	32.00	11.80	54.00	7.33	V
2389.980	46.66	2.87	32.00	11.80	54.00	7.34	V
4824.000	31.57	-33.24	34.13	30.68	54.00	22.43	V
7236.000	29.83	-30.88	35.80	24.91	54.00	24.17	H
9648.000	30.28	-30.46	36.71	24.03	54.00	23.72	V
12060.000	32.75	-28.70	38.74	22.72	54.00	21.25	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)
2420.460	47.16	2.89	32.03	12.25	54.00	6.84	V
2454.180	47.10	2.91	32.06	12.13	54.00	6.90	V
4874.000	32.08	-33.30	34.15	31.23	54.00	21.92	V
7311.000	29.77	-30.82	35.83	24.77	54.00	24.23	H
9748.000	30.34	-30.33	36.85	23.82	54.00	23.66	V
12185.000	33.17	-28.11	38.81	22.46	54.00	20.83	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	46.77	2.93	32.09	11.76	54.00	7.23	V
2483.580	46.78	2.93	32.09	11.77	54.00	7.22	V
4924.000	31.13	-33.53	34.17	30.49	54.00	22.87	V
7386.000	29.27	-31.45	35.86	24.87	54.00	24.73	H
9848.000	30.29	-30.18	36.99	23.48	54.00	23.71	H
12310.000	32.97	-27.75	38.89	21.84	54.00	21.03	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)
2389.080	46.65	2.87	32.00	11.78	54.00	7.35	V
2390.000	46.71	2.87	32.00	11.85	54.00	7.29	V
4824.000	30.64	-33.24	34.13	29.75	54.00	23.36	V
7236.000	29.93	-30.88	35.80	25.01	54.00	24.07	H
9648.000	30.29	-30.46	36.71	24.03	54.00	23.71	H
12060.000	32.84	-28.70	38.74	22.81	54.00	21.16	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)
2419.680	46.99	2.89	32.03	12.07	54.00	7.01	V
2453.220	47.10	2.91	32.06	12.13	54.00	6.90	V
4874.000	32.81	-33.30	34.15	31.96	54.00	21.19	V
7311.000	29.74	-30.82	35.83	24.73	54.00	24.26	H
9748.000	30.38	-30.33	36.85	23.86	54.00	23.62	H
12185.000	33.23	-28.11	38.81	22.53	54.00	20.77	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)
2483.500	46.79	2.93	32.09	11.77	54.00	7.21	V
2484.780	46.72	2.93	32.09	11.70	54.00	7.28	V
4924.000	31.03	-33.53	34.17	30.39	54.00	22.97	H
7386.000	30.53	-31.45	35.86	26.13	54.00	23.47	V
9848.000	30.84	-30.18	36.99	24.03	54.00	23.16	V
12310.000	33.41	-27.75	38.89	22.28	54.00	20.59	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)
2489.920	49.64	2.94	32.09	14.61	54.00	4.36	V
2489.980	49.67	2.94	32.09	14.65	54.00	4.33	V
4844.000	29.86	-33.23	34.14	28.95	54.00	24.14	V
7266.000	30.53	-30.60	35.81	25.32	54.00	23.47	V
9688.000	30.36	-30.37	36.77	23.96	54.00	23.64	V
12110.000	33.42	-28.47	38.77	23.12	54.00	20.58	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)
2408.340	48.26	2.88	32.02	13.36	54.00	5.74	V
2466.360	48.31	2.92	32.07	13.32	54.00	5.69	V
4874.000	30.26	-33.30	34.15	29.41	54.00	23.74	V
7311.000	30.10	-30.82	35.83	25.09	54.00	23.90	V
9748.000	30.91	-30.33	36.85	24.40	54.00	23.09	V
12185.000	33.63	-28.11	38.81	22.92	54.00	20.37	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)
2483.520	49.72	2.93	32.09	14.70	54.00	4.28	V
2483.580	49.72	2.93	32.09	14.71	54.00	4.28	V
4904.000	30.13	-33.42	34.16	29.40	54.00	23.87	H
7356.000	30.26	-31.17	35.84	25.59	54.00	23.74	H
9808.000	30.58	-30.32	36.94	23.96	54.00	23.42	V
12260.000	33.22	-27.88	38.86	22.24	54.00	20.78	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)
2389.920	46.73	2.9	32.0	11.87	54.0	7.3	V
2389.980	46.72	2.9	32.0	11.86	54.0	7.3	V
4824.000	30.99	-33.2	34.1	30.10	54.0	23.0	H
7236.000	30.23	-30.9	35.8	25.31	54.0	23.8	H
9648.000	30.70	-30.5	36.7	24.45	54.0	23.3	V
12060.000	33.24	-28.7	38.7	23.20	54.0	20.8	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)
2420.400	47.12	2.9	32.0	12.21	54.0	6.9	V
2453.700	47.03	2.9	32.1	12.06	54.0	7.0	V
4874.000	31.40	-33.3	34.2	30.54	54.0	22.6	H
7311.000	30.31	-30.8	35.8	25.30	54.0	23.7	H
9748.000	30.81	-30.3	36.9	24.29	54.0	23.2	V
12185.000	33.56	-28.1	38.8	22.85	54.0	20.4	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)
2483.520	46.81	2.9	32.1	11.79	54.0	7.2	V
2483.580	46.80	2.9	32.1	11.78	54.0	7.2	V
4924.000	31.21	-33.5	34.2	30.57	54.0	22.8	H
7386.000	30.62	-31.5	35.9	26.22	54.0	23.4	H
9848.000	30.92	-30.2	37.0	24.11	54.0	23.1	H
12310.000	33.42	-27.8	38.9	22.29	54.0	20.6	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)
2389.860	47.15	2.9	32.0	12.28	54.0	6.9	V
2389.920	47.13	2.9	32.0	12.26	54.0	6.9	V
4844.000	30.03	-33.2	34.1	29.12	54.0	24.0	V
7266.000	30.62	-30.6	35.8	25.41	54.0	23.4	V
9688.000	30.75	-30.4	36.8	24.35	54.0	23.2	V
12110.000	33.44	-28.5	38.8	23.14	54.0	20.6	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)
2406.120	47.47	2.9	32.0	12.57	54.0	6.5	V
2467.740	47.62	2.9	32.1	12.63	54.0	6.4	V
4874.000	30.16	-33.3	34.2	29.31	54.0	23.8	V
7311.000	30.33	-30.8	35.8	25.32	54.0	23.7	V
9748.000	31.02	-30.3	36.9	24.50	54.0	23.0	V
12185.000	33.69	-28.1	38.8	22.98	54.0	20.3	H

Ch9

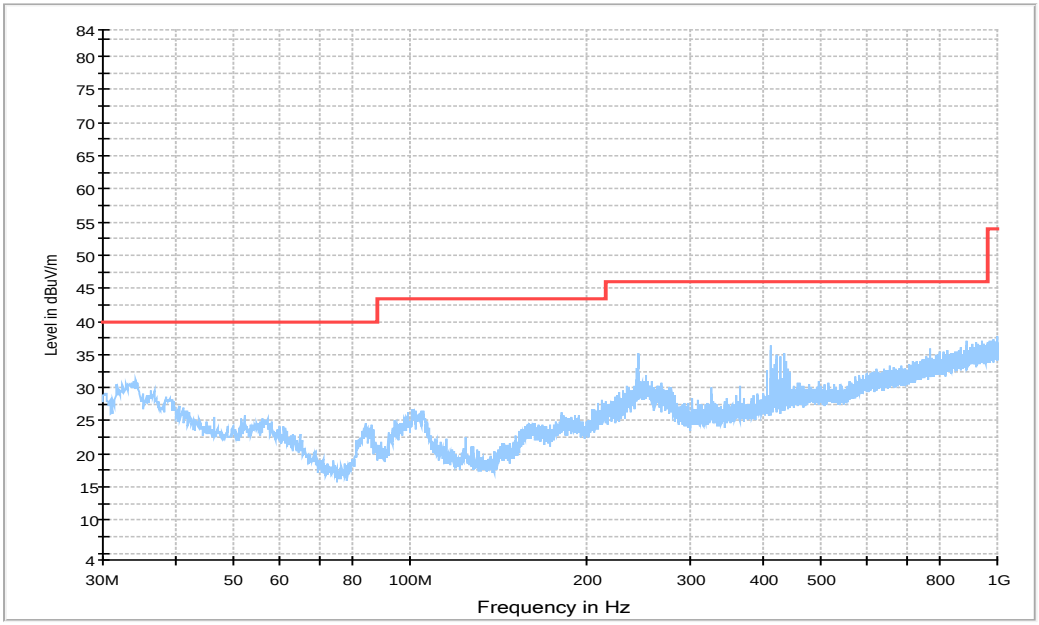
Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.520	49.44	2.9	32.1	14.43	54.0	4.6	V
2483.580	49.43	2.9	32.1	14.41	54.0	4.6	V
4904.000	30.22	-33.4	34.2	29.49	54.0	23.8	V
7356.000	30.13	-31.2	35.8	25.46	54.0	23.9	H
9808.000	30.71	-30.3	36.9	24.10	54.0	23.3	H
12260.000	33.34	-27.9	38.9	22.36	54.0	20.7	H

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

Conclusion: Pass

C.1.2 Radiated Spurious Emission- Below 1GHz

WOSRT CASE BELOW 1GHz



BELOW 30MHz

There are no emissions found below 30MHz with in 20dB of the limit.

C.1.3 Band Edges Compliance– Radiated

SPEED

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(ch11)	2.45GHz ~2.5GHz	Fig.C.1.3.4	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT20)	Power(ch1)	2.31GHz ~2.43GHz	Fig.C.1.3.5	P
	Power(ch11)	2.45GHz ~2.5GHz	Fig.C.1.3.6	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT40)	Power(ch3)	2.31GHz ~2.43GHz	Fig.C.1.3.7	P
	Power(ch9)	2.45GHz ~2.5GHz	Fig.C.1.3.8	P

802.11ax-HT20 mode

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

802.11ax-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(ch9)	2.45GHz ~2.5GHz	Fig.C.1.3.12	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

AWAN

802.11b mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	Power(ch1)	2.31GHz ~2.43GHz	Fig.C.1.3.13	**P**
	Power(ch11)	2.45GHz ~2.5GHz	Fig.C.1.3.14	**P**

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	Power(ch1)	2.31GHz ~2.43GHz	Fig.C.1.3.15	**P**
	Power(ch11)	2.45GHz ~2.5GHz	Fig.C.1.3.16	**P**

802.11n-HT20 mode

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

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT40)	Power(ch3)	2.31GHz ~2.43GHz	Fig.C.1.3.19	**P**
	Power(ch9)	2.45GHz ~2.5GHz	Fig.C.1.3.20	**P**

802.11ax-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT20)	Power(ch1)	2.31GHz ~2.43GHz	Fig.C.1.3.21	**P**
	Power(ch11)	2.45GHz ~2.5GHz	Fig.C.1.3.22	**P**

802.11ax-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT40)	Power(ch3)	2.31GHz ~2.43GHz	Fig.C.1.3.23	**P**
	Power(ch9)	2.45GHz ~2.5GHz	Fig.C.1.3.24	**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:

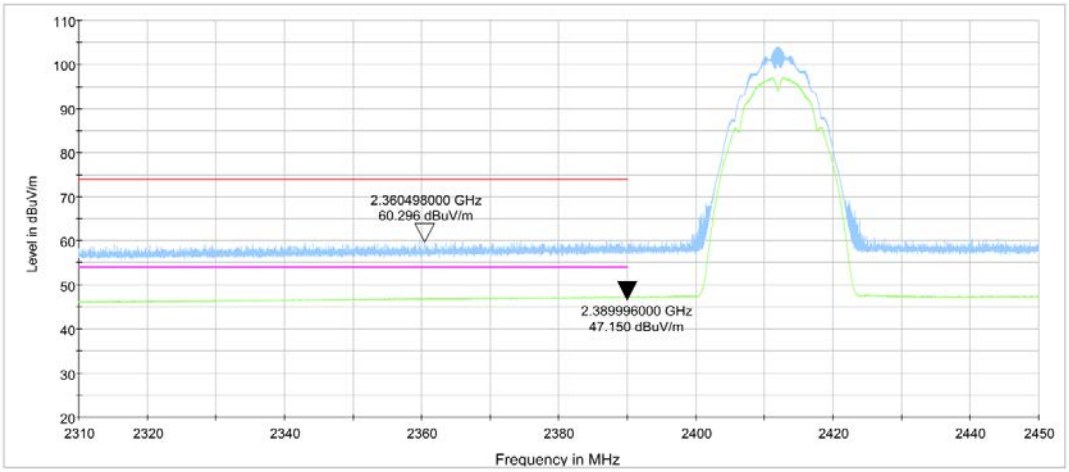


Fig.C.1.3.1 **Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.45GHz**

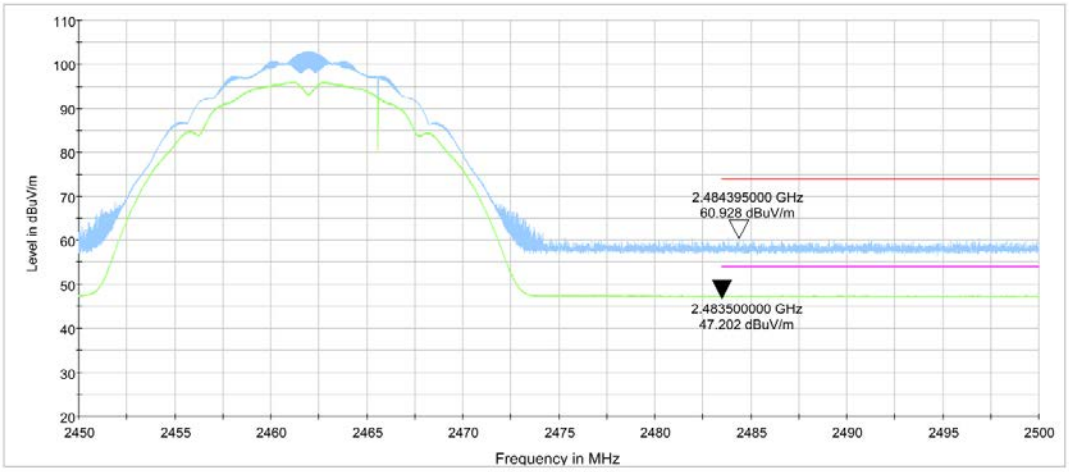


Fig.C.1.3.2 **Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz**

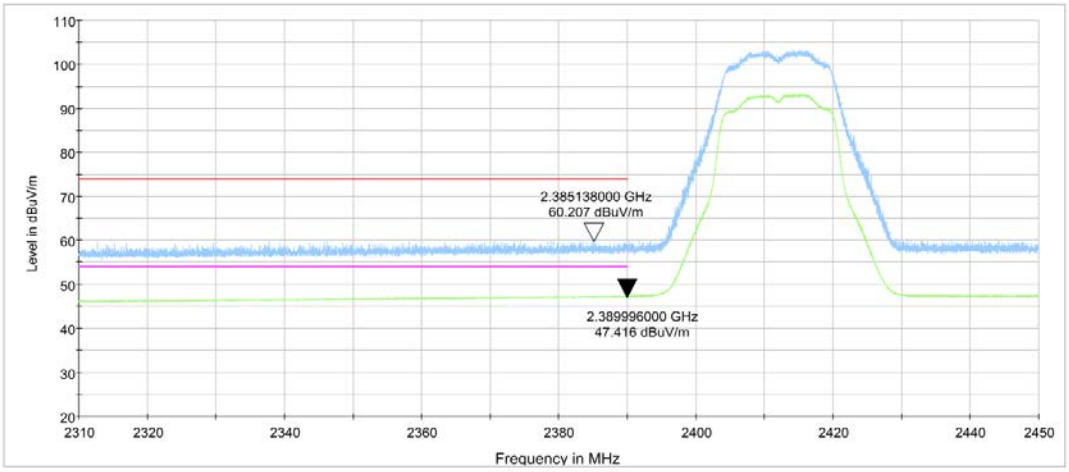


Fig.C.1.3.3 **Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.45GHz**

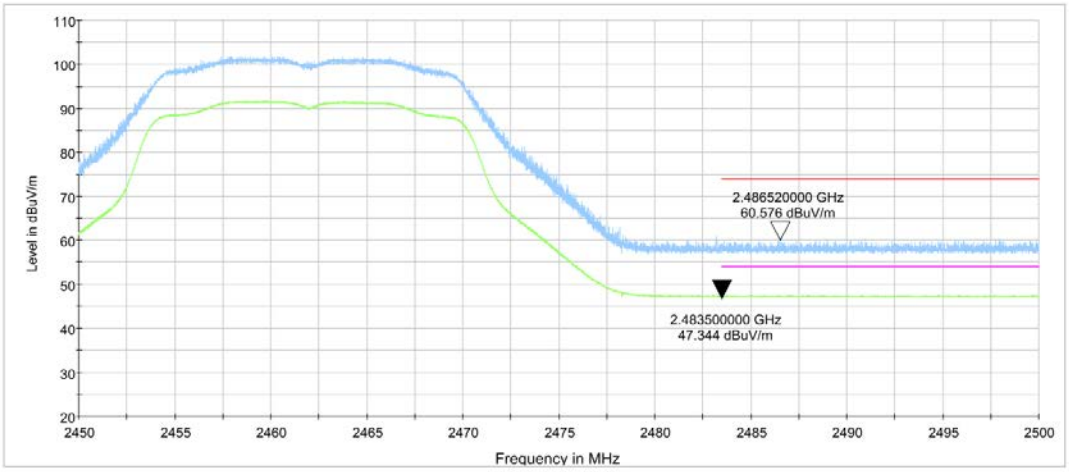


Fig.C.1.3.4 **Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz**

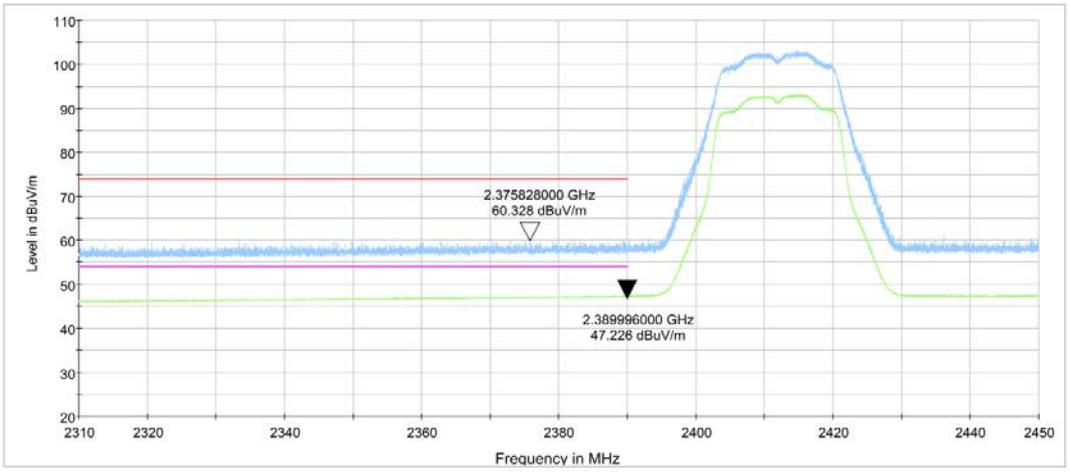


Fig.C.1.3.5 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31 GHz - 2.45GHz**

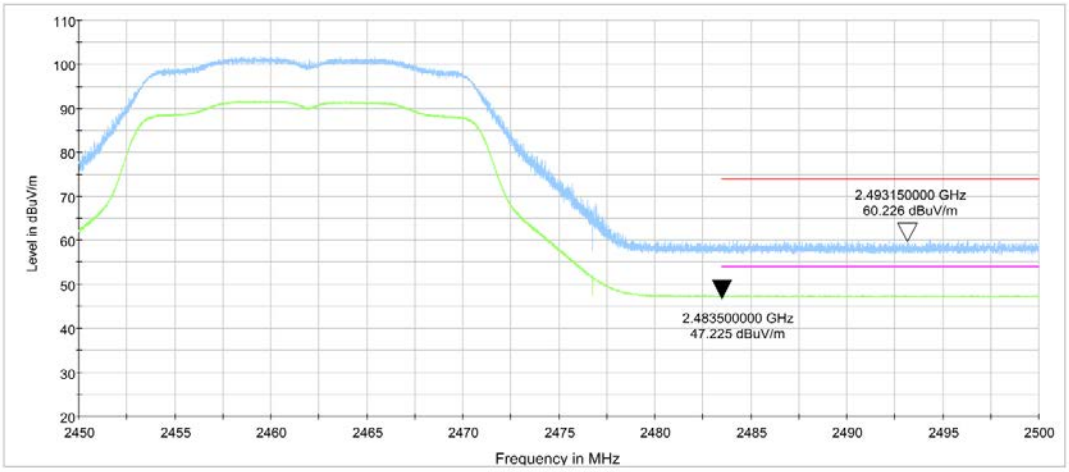


Fig.C.1.3.6 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz**

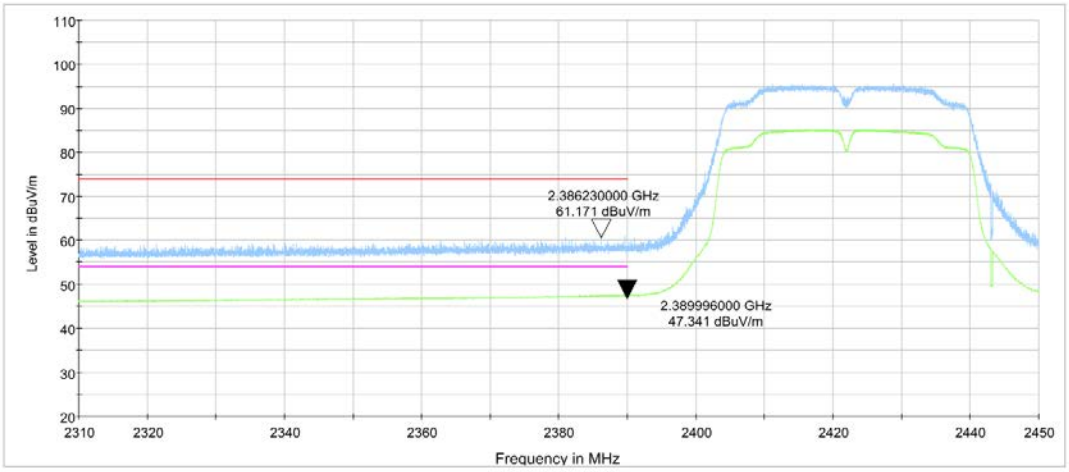


Fig.C.1.3.7 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31 GHz - 2.45GHz**

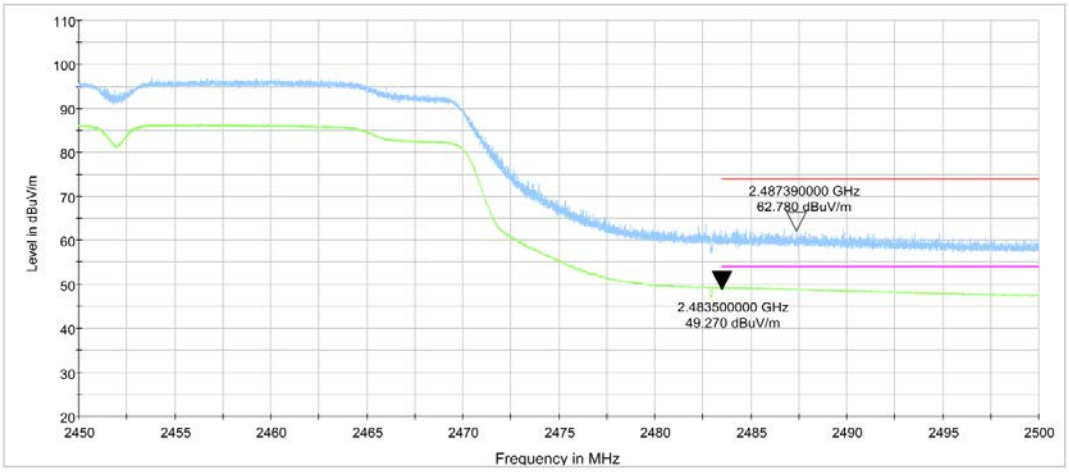


Fig.C.1.3.8 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz**

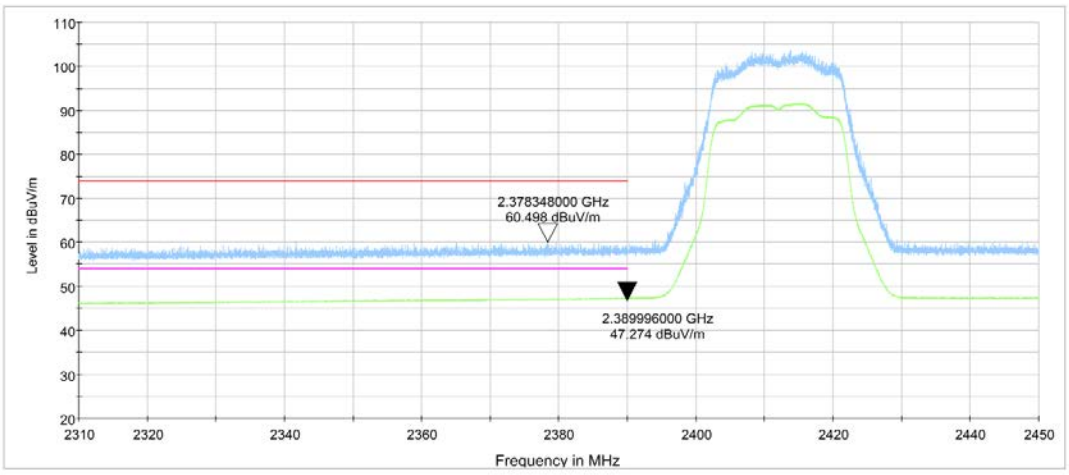


Fig.C.1.3.9 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, ch1, 2.31GHz - 2.45GHz**

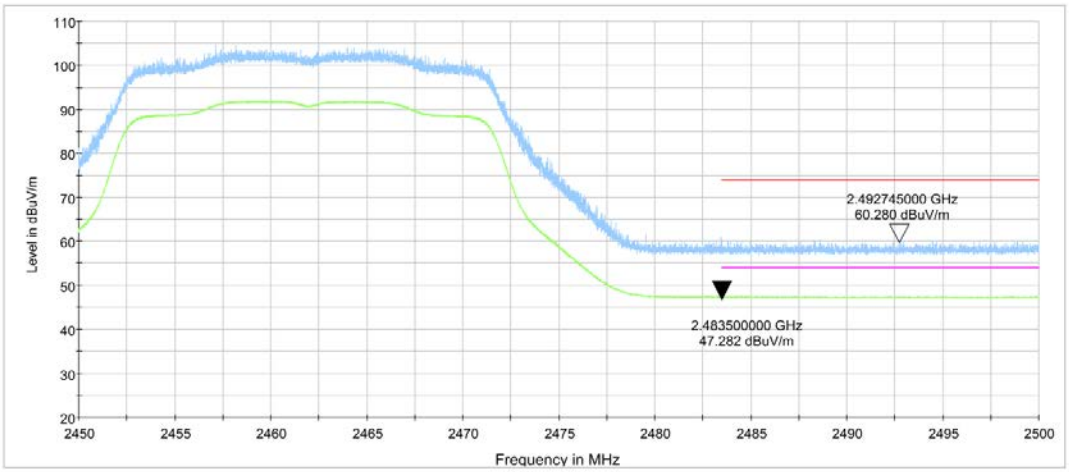


Fig.C.1.3.10 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, ch11, 2.45 GHz - 2.50GHz**

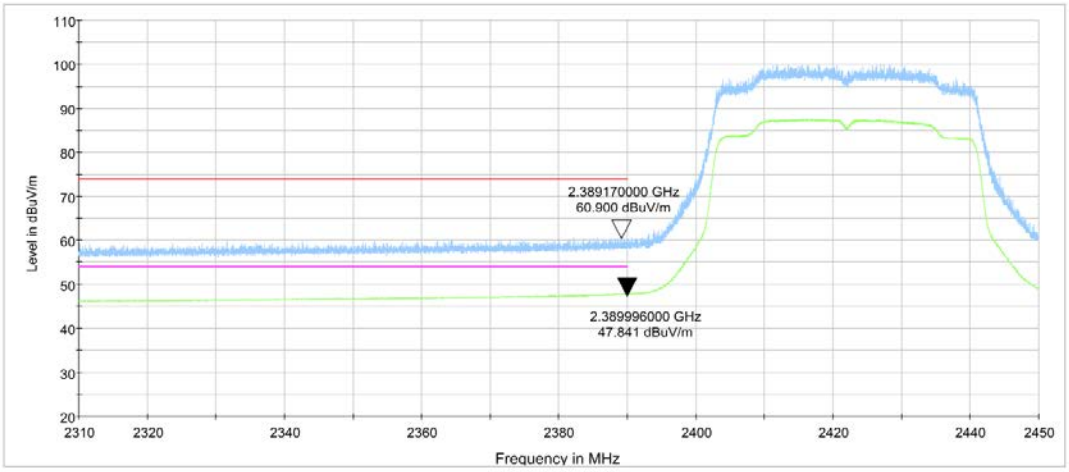


Fig.C.1.3.11 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, ch3, 2.31GHz - 2.45GHz**

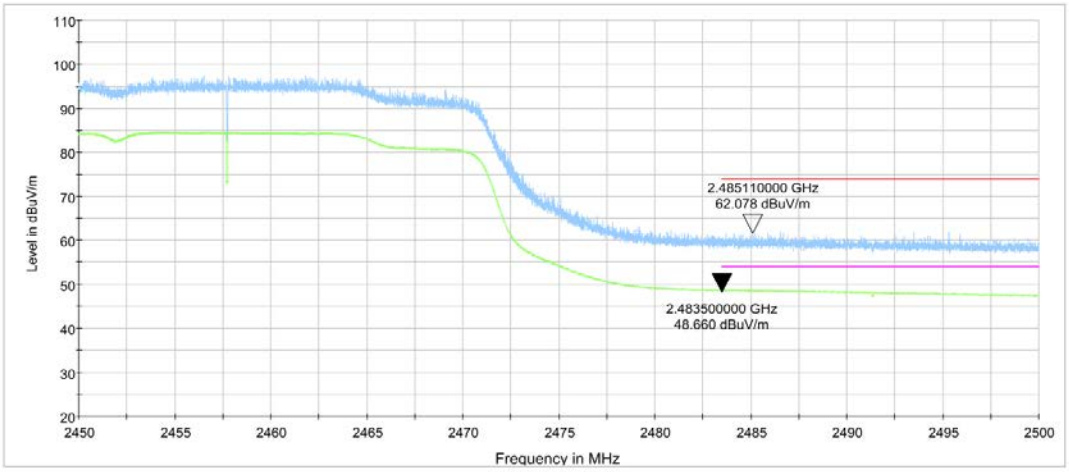


Fig.C.1.3.12 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, ch9, 2.45 GHz - 2.50GHz**

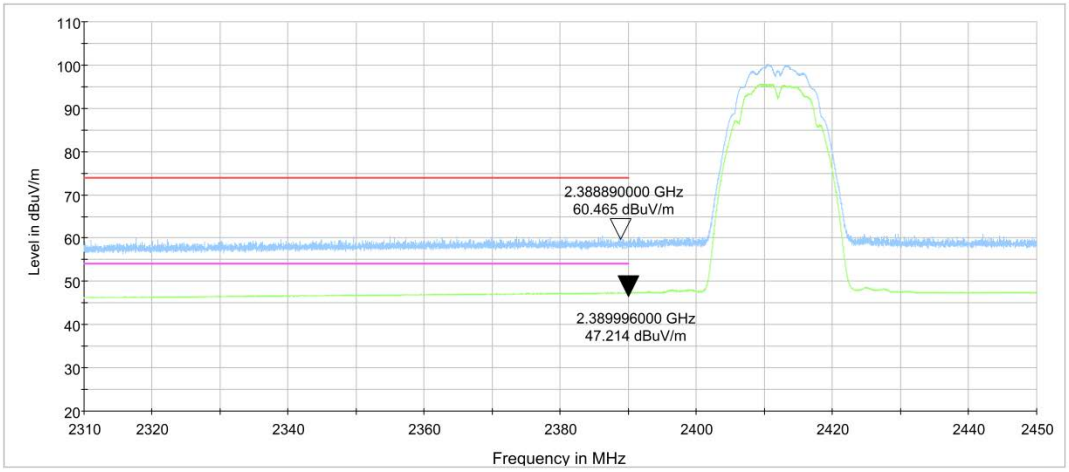


Fig.C.1.3.13 **Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.45GHz**

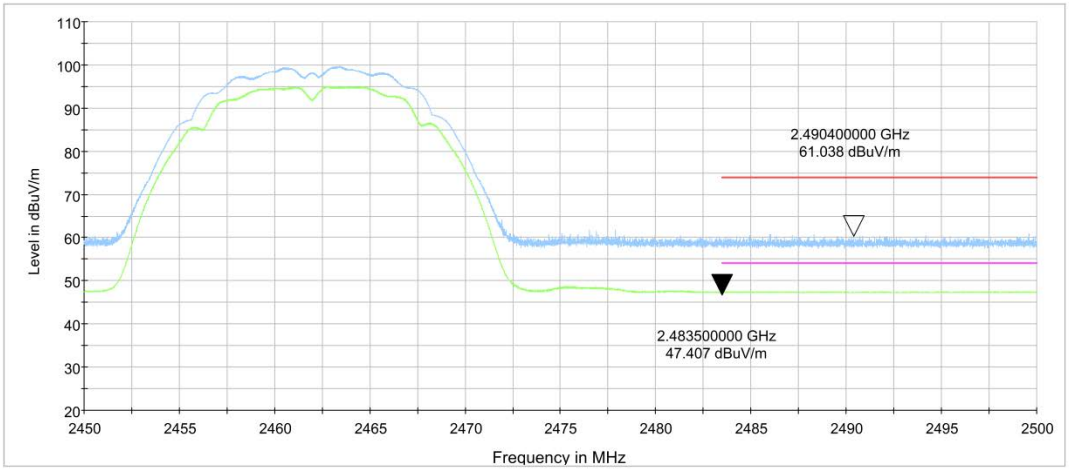


Fig.C.1.3.14 **Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz**

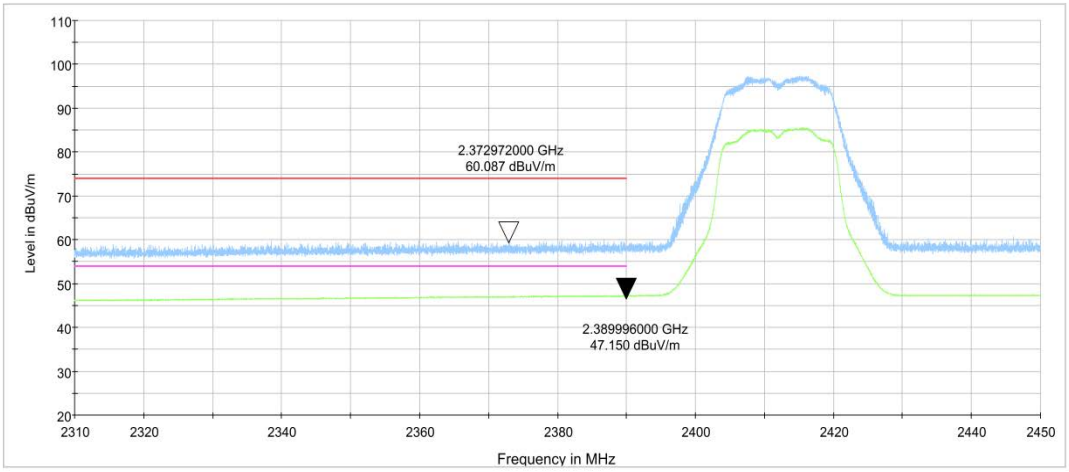


Fig.C.1.3.15 **Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.45GHz**

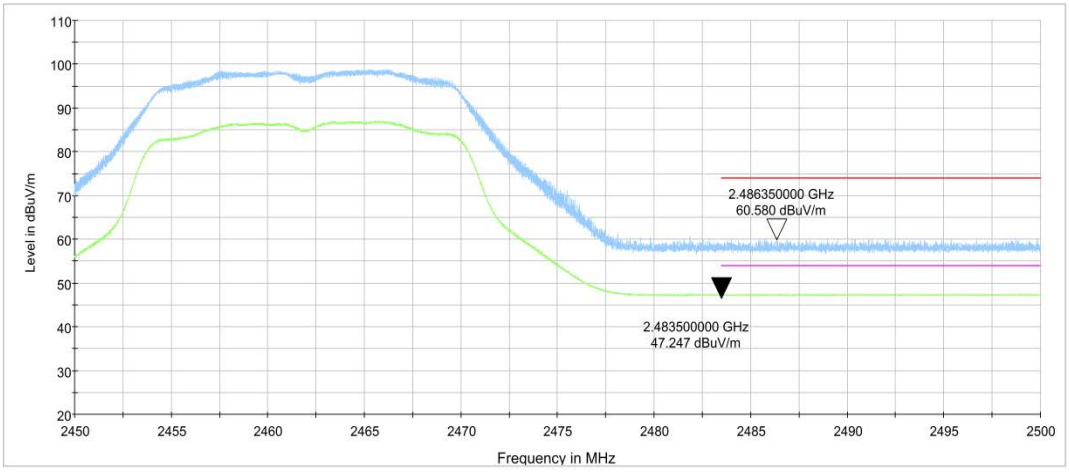


Fig.C.1.3.16 **Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz**

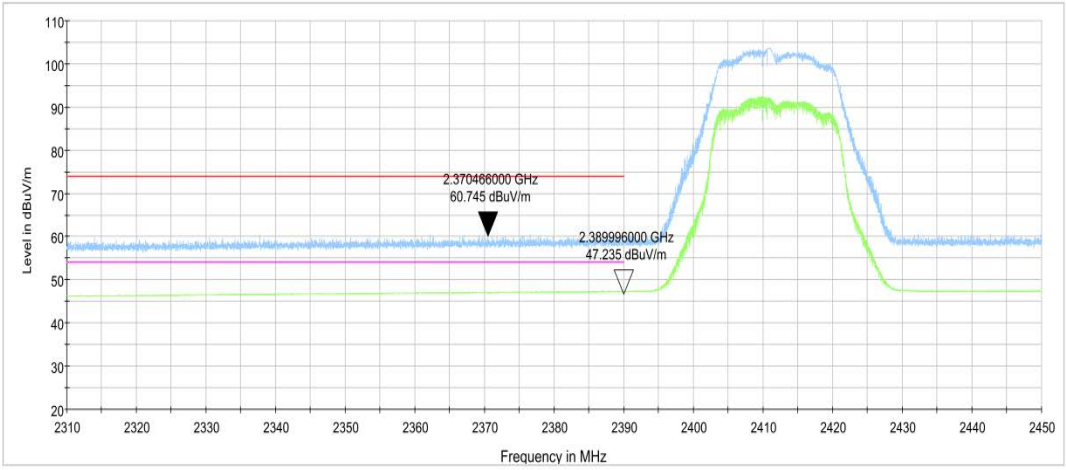


Fig.C.1.3.17 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31 GHz - 2.45GHz**

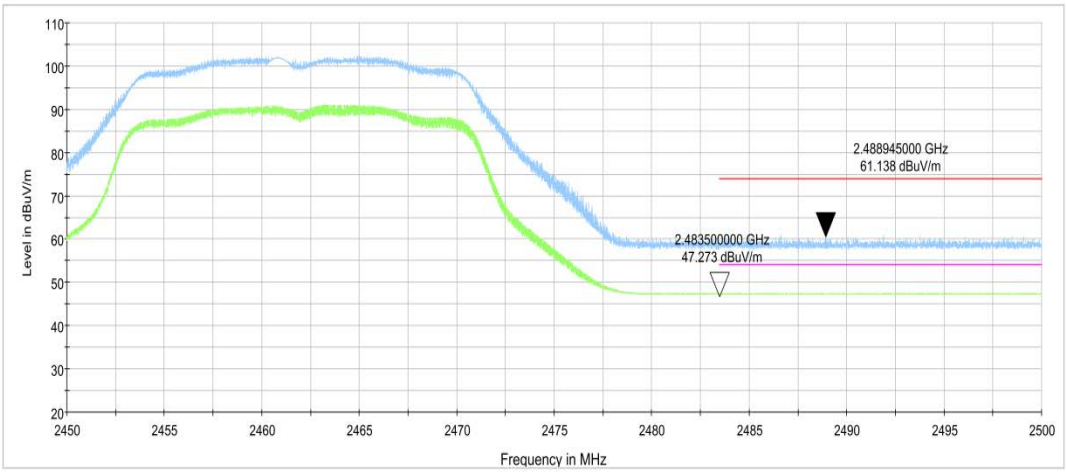


Fig.C.1.3.18 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz**

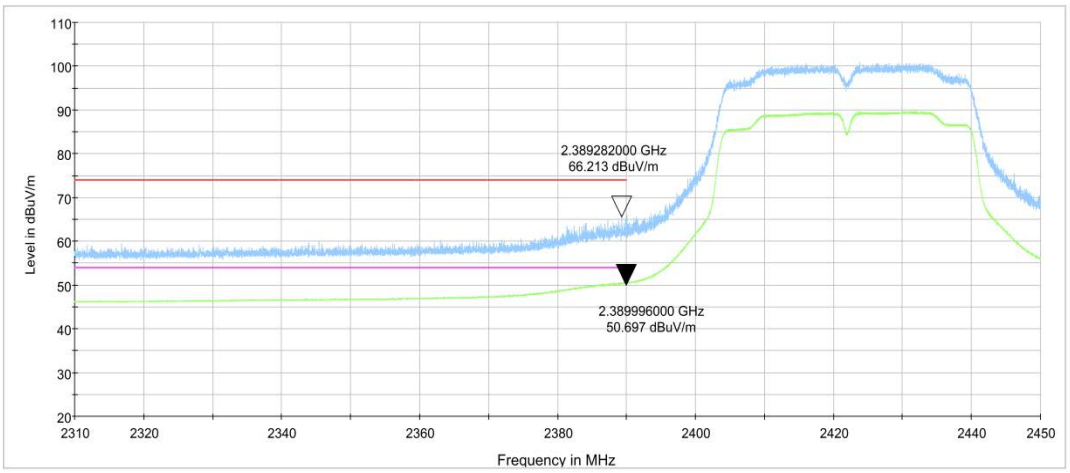


Fig.C.1.3.19 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31 GHz - 2.45GHz**

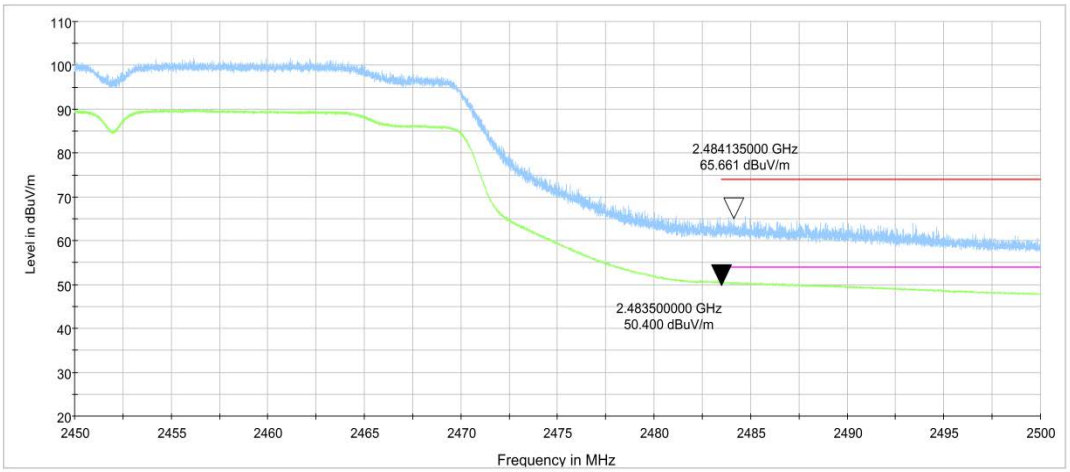


Fig.C.1.3.20 **Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz**

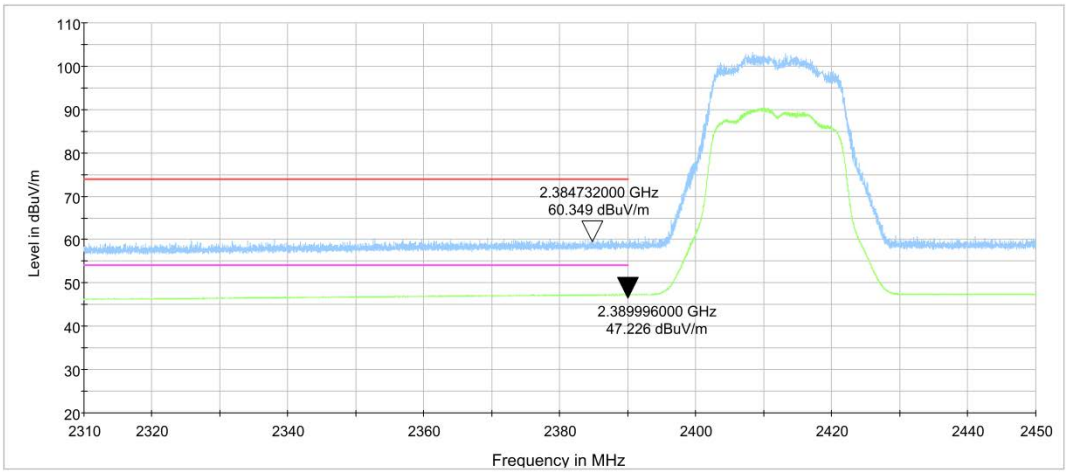


Fig.C.1.3.21 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, ch1, 2.31GHz - 2.45GHz**

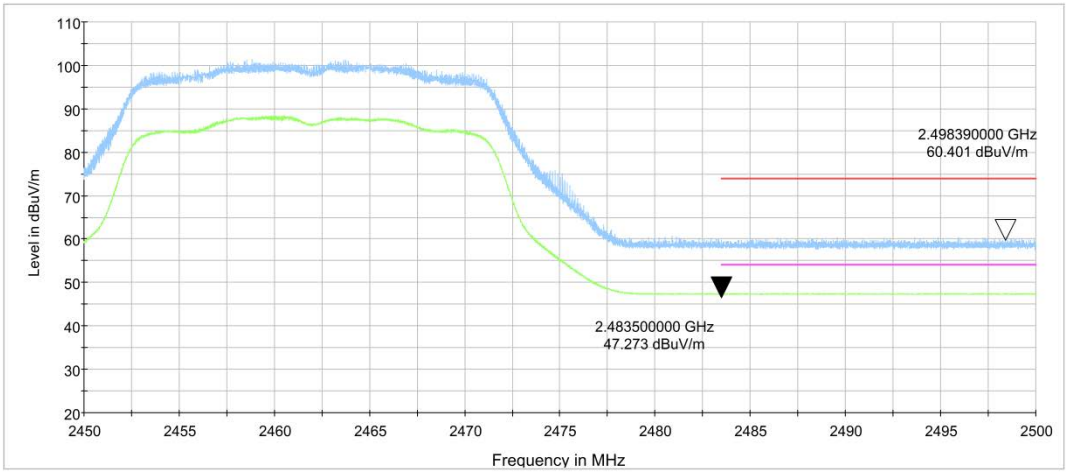


Fig.C.1.3.22 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT20, ch11, 2.45 GHz - 2.50GHz**

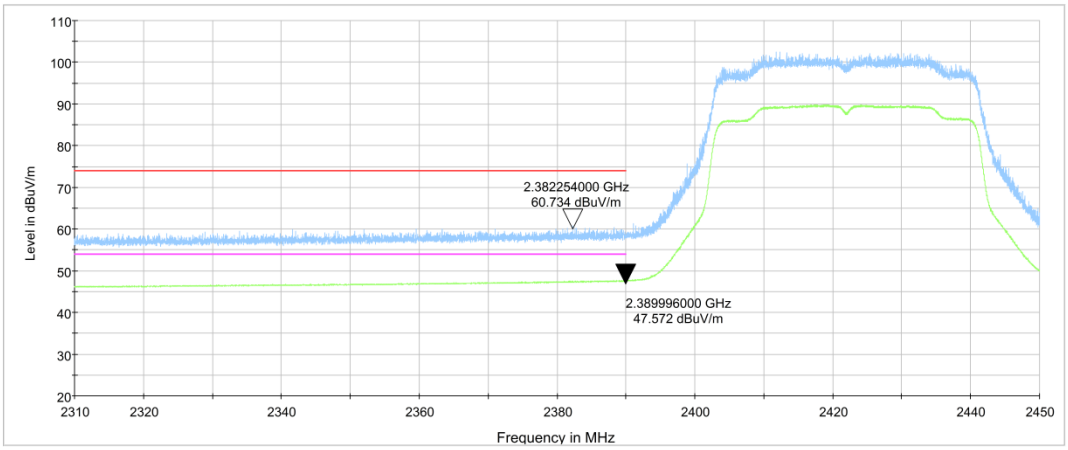


Fig.C.1.3.23 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, ch3, 2.31GHz - 2.45GHz**

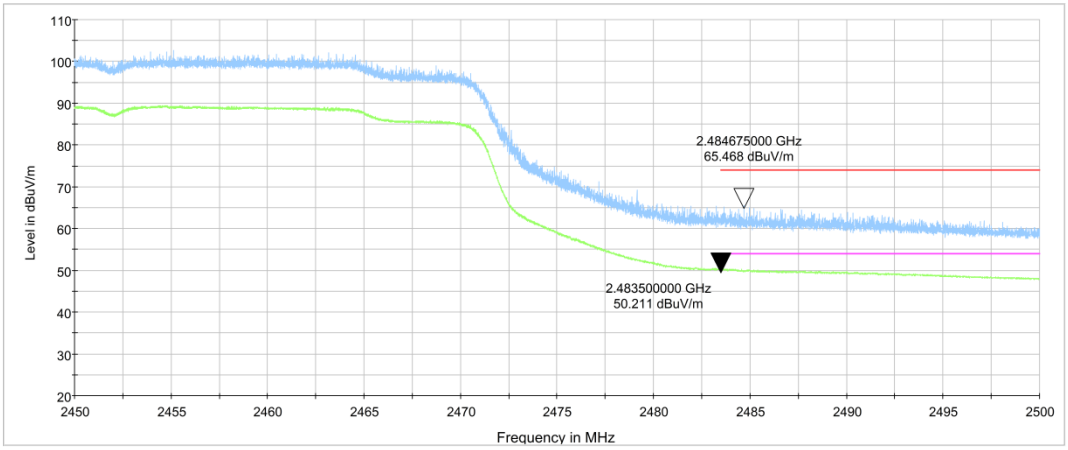


Fig.C.1.3.24 **Transmitter Spurious Emission - Radiated (Power): 802.11ax-HT40, ch9, 2.45 GHz - 2.50GHz**

C.2. AC Power-line Conducted Emission

Specification Reference

FCC 47 CFR Part 15.207, 15.107& RSS-GEN, 8.8

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:

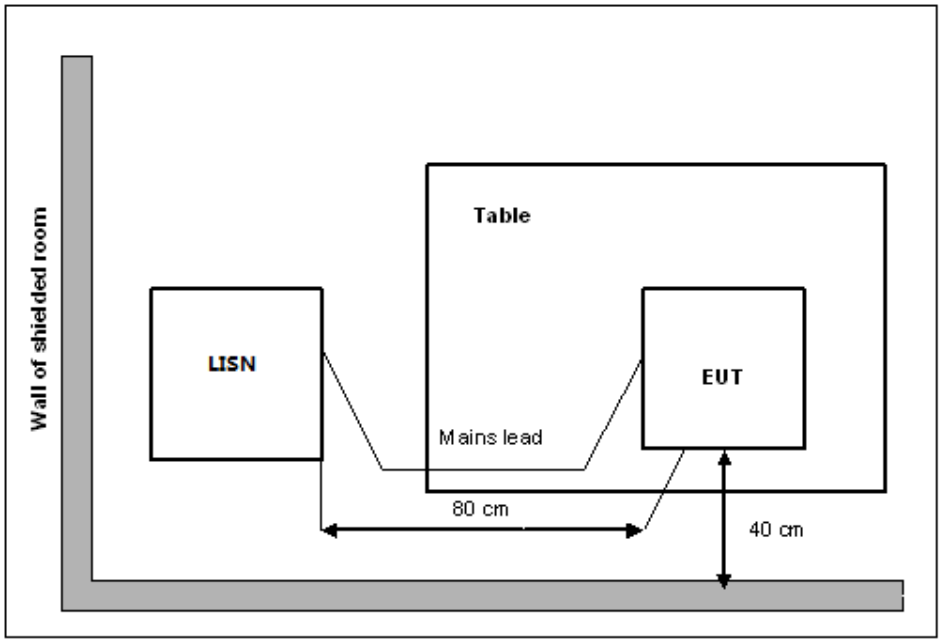
Measurement Bandwidth

Frequency of Emission (MHz)	RBW/VBW
0.15-30	9kHz

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 transmit state.

The EUT is powered by an AC/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:

Traffic:

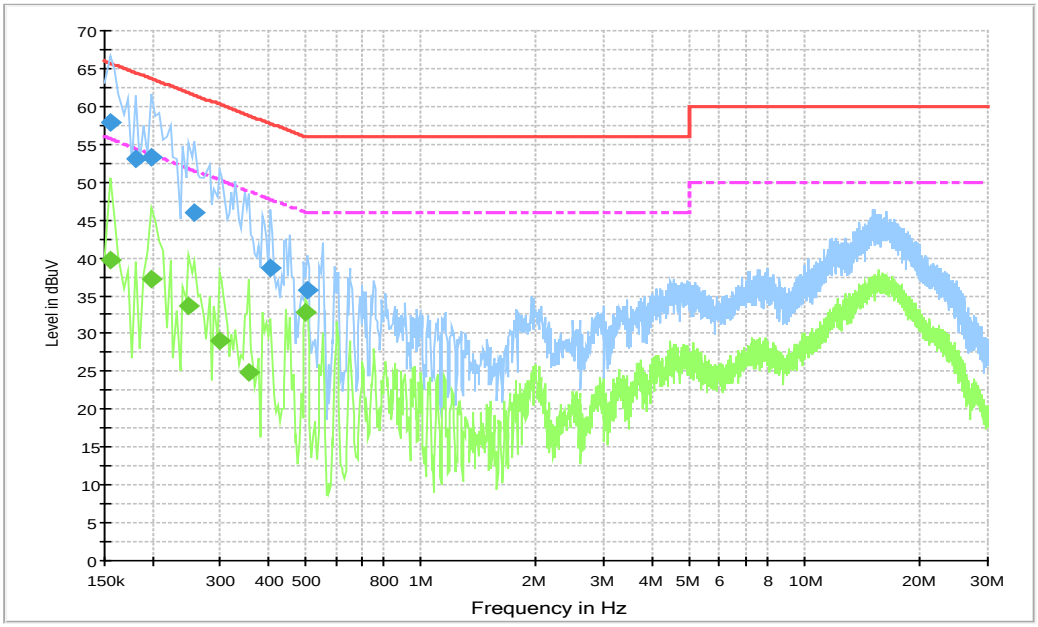


Fig.C.2.1 AC Powerline Conducted Emission-802.11b

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)
0.154500	57.9	1000.	9.000	L1	19.6	7.9	65.8
0.181500	53.0	1000.	9.000	N	19.7	11.4	64.4
0.199500	53.2	1000.	9.000	L1	19.6	10.4	63.6
0.258000	45.9	1000.	9.000	L1	19.7	15.6	61.5
0.406500	38.7	1000.	9.000	L1	19.8	19.0	57.7
0.505500	35.6	1000.	9.000	N	19.8	20.4	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.154500	39.7	1000.0	9.000	L1	19.6	16.1	55.8
0.199500	37.3	1000.0	9.000	L1	19.6	16.4	53.6
0.249000	33.6	1000.0	9.000	L1	19.7	18.2	51.8
0.298500	29.1	1000.0	9.000	L1	19.7	21.2	50.3
0.357000	24.9	1000.0	9.000	L1	19.7	23.9	48.8
0.501000	32.9	1000.0	9.000	L1	19.8	13.1	46.0

Idle:

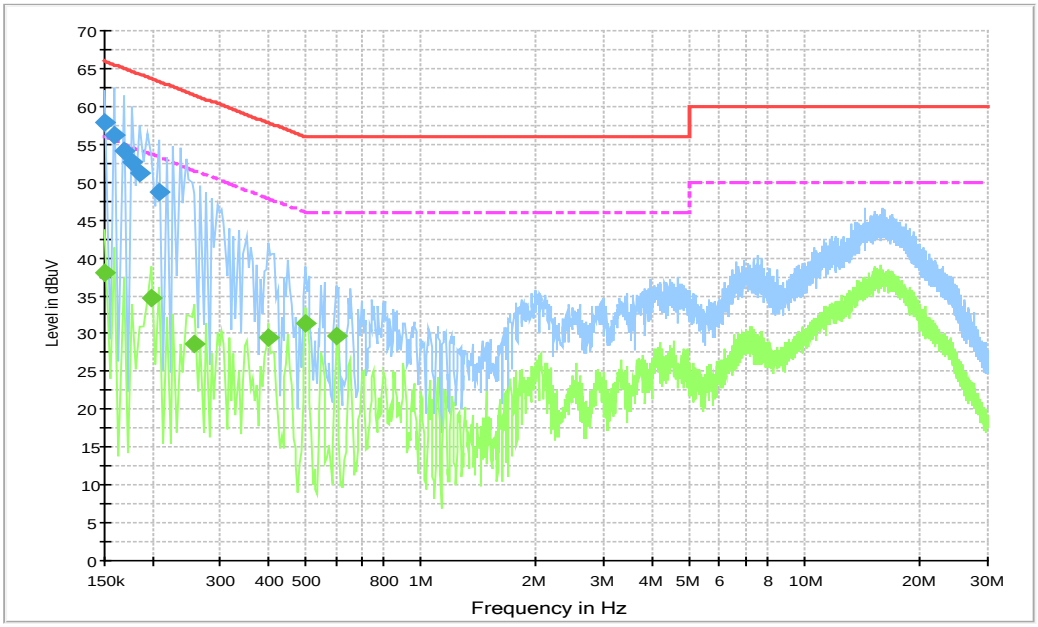


Fig.C.2.2 AC Powerline Conducted Emission-Idle

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)
0.150000	57.9	1000.	9.000	L1	19.6	8.1	66.0
0.159000	56.2	1000.	9.000	L1	19.7	9.3	65.5
0.168000	54.2	1000.	9.000	L1	19.7	10.9	65.1
0.177000	52.6	1000.	9.000	L1	19.6	12.0	64.6
0.186000	51.3	1000.	9.000	L1	19.7	12.9	64.2
0.208500	48.7	1000.	9.000	L1	19.6	14.6	63.3

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	38.0	1000.0	9.000	L1	19.6	18.0	56.0
0.199500	34.6	1000.0	9.000	N	19.6	19.0	53.6
0.258000	28.5	1000.0	9.000	L1	19.7	23.0	51.5
0.402000	29.4	1000.0	9.000	L1	19.8	18.4	47.8
0.501000	31.3	1000.0	9.000	L1	19.8	14.7	46.0
0.604500	29.7	1000.0	9.000	L1	19.7	16.3	46.0

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