TESTING
NVLAP LAB CODE 600118-0

FCC PART 15
TEST REPORT
No. I22Z70451-EMC11

for

Samsung Electronics Co., Ltd.

Notebook PC

Model Name: NP750XFG, NP754XFG, NP750XFT, NP754XFT

With

FCC ID: ZCANP750XFG

Hardware Version: REV1.0

Software Version: Windows 11

Issued Date: 2022-12-08

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

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

Tel:+86(0)10-62304633-2512, Fax:+86(0)10-62304633-2504

Email: cttl_terminals@caict.ac.cn, website: www.caict.ac.cn

REPORT HISTORY

Report Number	Revision	Description	Issue Date
I22Z70451-EMC11	Rev.0	1st edition	2022-12-08

CONTENTS

1. TEST LATORATORY

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. TestingEnvironment

Normal Temperature: 15-35℃

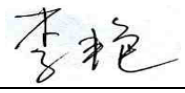
Relative Humidity: 20-75%

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
Email:	j1.chun@samsung.com
Telephone:	+1-201-937-4203
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	NP750XFG, NP754XFG, NP750XFT, NP754XFT
FCC ID	ZCANP750XFG

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 used during the test

EUT ID*	IMEI	HW Version	SW Version
EUT1	2270451UT22a	REV1.0	Windows 11
EUT2	2270451UT14a	REV1.0	Windows 11

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

3.3. Internal Identification of AE used during the test

AE ID*	Description	SN	Remarks
AE1	Travel Adapter	/	SOLUM CO.,LTD.
AE2	Travel Adapter	/	DONGYANG E&P Inc
AE3	Data Cable	/	/
AE4	battery	/	Inbuilt

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

3.4. General Description

Te Equipment Under Test (EUT) was a Notebook Computer 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 802.11a mode the EUT can transmit at both CHAIN A and CHAIN B RF outputs individually, but not simultaneously.

For 802.11n20 & 802.11ac20 &802.11ax20 (20 MHz channel bandwidth), 802.11n40 & 802.11ac40 &802.11ax40 (40MHz channel bandwidth) and 802.11ac80 & 802.11ax80 (80MHz 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 and E: 15.205 Restricted bands of operation; 15.209 Radiated emission limits, general requirements; 15.407 General technical requirements	2020
ANSI C63.10	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2020
UNII: KDB 789033 D02	General U-NII Test Procedures New Rules v02r01	2017-12

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 Part15	Verdict
Radiated Spurious Emission	15.407, 15.205, 15.209	**P**
AC Power line Conducted Emission	15.407, 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 EQUIPMENTS 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

(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: 310dB, 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

A ccording to FCC 47 CFR § 15.203, §15.407:

“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, §15.407.

ANNEX C: Detailed Test Results

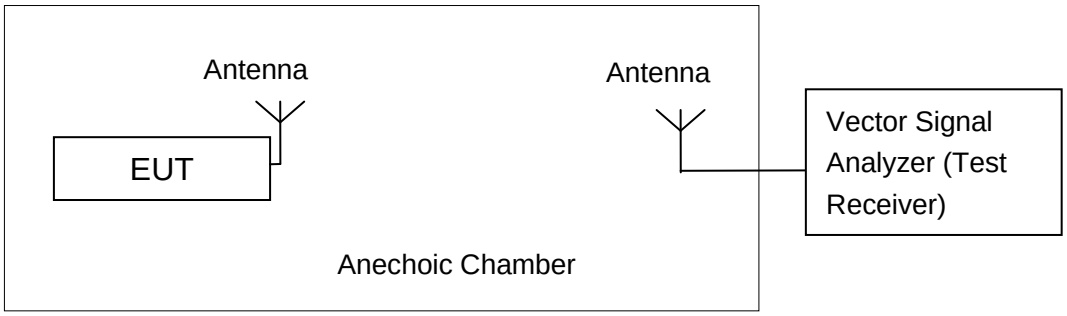
C.1. Radiated Spurious Emission

Specification Reference

FCC 47 CFR Part 15, Clause 15.407 (b) , Clause 15.205, Clause 15.209

Method of Measurement

Testing was performed in according with ANSI C63.10-2013 and KDB 789033.
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 (dBm/MHz)	
FCC 47 CFR Part 15.407	at the band edge	27
	at 5 MHz above or below the band edge	15.6
	at 25 MHz above or below the band edge	10
	at 75 MHz or more above or below the band edge	-27
	Note：Increasing linearly from point to point.	

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
26500-40000	1MHz/3MHz

Sample Calculation

1. Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:
E=EIRP- 20log (*D)* +104.77
Where:
E is the field strength in dBμV/m
D is the measurement distance in meters
EIRP is the equivalent isotropically radiated power in dbm

2. 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.

Average Results：

802.11a

Channel 149

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)
5450.150	39.55	-25.38	34.38	30.55	54.00	14.45	V
5457.100	39.68	-25.34	34.38	30.64	54.00	14.32	V
11490.550	32.88	-32.54	38.20	27.23	54.00	21.12	V
17770.550	36.70	-26.49	41.55	21.64	54.00	17.30	V
17873.750	36.79	-26.29	41.52	21.55	54.00	17.21	H
17904.950	36.88	-26.22	41.52	21.57	54.00	17.12	H

Channel 157

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)
5451.850	39.50	-25.37	34.38	30.49	54.00	14.50	V
5457.600	39.59	-25.34	34.38	30.55	54.00	14.41	V
11570.550	33.22	-32.29	38.27	27.24	54.00	20.78	H
17769.750	36.66	-26.49	41.55	21.61	54.00	17.34	H
17875.350	36.75	-26.29	41.52	21.51	54.00	17.25	H
17972.950	36.98	-26.06	41.51	21.54	54.00	17.02	V

Channel 165

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)
5453.400	39.70	-25.36	34.38	30.68	54.00	14.30	V
5456.500	39.59	-25.35	34.38	30.55	54.00	14.41	V
11650.550	33.41	-32.10	38.35	27.16	54.00	20.59	V
17770.550	36.62	-26.49	41.55	21.57	54.00	17.38	H
17882.550	36.76	-26.27	41.52	21.51	54.00	17.24	H
17974.550	36.92	-26.06	41.51	21.48	54.00	17.08	V

802.11n-HT20

Channel 149

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)
5451.100	39.51	-25.38	34.38	30.50	54.00	14.49	V
5457.350	39.63	-25.34	34.38	30.59	54.00	14.37	V
11490.550	32.80	-32.54	38.20	27.14	54.00	21.20	H
17768.150	36.80	-26.49	41.55	21.75	54.00	17.20	H
17876.950	36.80	-26.28	41.52	21.56	54.00	17.20	H
17976.150	36.96	-26.05	41.50	21.51	54.00	17.04	V

Channel 157

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)
5450.500	39.52	-25.38	34.38	30.52	54.00	14.48	V
5456.900	39.54	-25.35	34.38	30.51	54.00	14.46	V
11570.550	33.11	-32.29	38.27	27.13	54.00	20.89	H
17769.750	36.78	-26.49	41.55	21.73	54.00	17.22	V
17875.350	36.82	-26.29	41.52	21.59	54.00	17.18	V
17971.350	36.84	-26.06	41.51	21.40	54.00	17.16	V

Channel 165

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)
5454.150	39.59	-25.36	34.38	30.57	54.00	14.41	V
5456.400	39.61	-25.35	34.38	30.58	54.00	14.39	V
11650.550	33.44	-32.10	38.35	27.20	54.00	20.56	V
17874.550	36.70	-26.29	41.52	21.46	54.00	17.30	H
17699.350	36.57	-26.58	41.56	21.60	54.00	17.43	V
17970.550	36.96	-26.07	41.51	21.52	54.00	17.04	V

802.11n-HT40

Channel 151

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)
5453.300	39.66	-25.37	34.38	30.64	54.00	14.34	V
5455.250	39.61	-25.35	34.38	30.58	54.00	14.39	V
11490.550	32.89	-32.54	38.20	27.24	54.00	21.11	V
15942.550	36.72	-27.73	40.63	23.81	54.00	17.28	H
17788.950	36.82	-26.47	41.54	21.74	54.00	17.18	H
17877.750	37.13	-26.28	41.52	21.88	54.00	16.87	V

Channel 159

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)
5451.100	39.64	-25.38	34.38	30.63	54.00	14.36	V
5457.550	39.58	-25.34	34.38	30.53	54.00	14.42	V
11570.550	33.30	-32.29	38.27	27.32	54.00	20.70	H
15946.950	36.66	-27.71	40.64	23.73	54.00	17.34	V
17792.950	36.77	-26.46	41.54	21.69	54.00	17.23	V
17880.950	37.17	-26.27	41.52	21.92	54.00	16.83	V

802.11ac-HT20

Channel 149

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)
5447.900	39.48	-25.40	34.38	30.50	54.00	14.52	V
5452.100	39.61	-25.37	34.38	30.60	54.00	14.39	V
11490.550	32.90	-32.54	38.20	27.25	54.00	21.10	H
17739.350	36.46	-26.53	41.55	21.44	54.00	17.54	H
17868.150	36.80	-26.30	41.53	21.58	54.00	17.20	H
17966.550	36.96	-26.08	41.51	21.53	54.00	17.04	V

Channel 157

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)
5452.200	39.52	-25.37	34.38	30.51	54.00	14.48	V
5457.550	39.55	-25.34	34.38	30.50	54.00	14.45	V
11570.550	33.22	-32.29	38.27	27.24	54.00	20.78	H
15825.750	36.17	-28.24	40.49	23.92	54.00	17.83	H
17792.950	36.78	-26.46	41.54	21.70	54.00	17.22	V
17970.550	37.03	-26.07	41.51	21.59	54.00	16.97	V

Channel 165

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)
5453.300	39.65	-25.37	34.38	30.63	54.00	14.35	V
5457.300	39.63	-25.34	34.38	30.59	54.00	14.37	V
11650.550	33.47	-32.10	38.35	27.22	54.00	20.53	V
15945.750	36.63	-27.71	40.64	23.70	54.00	17.37	H
17784.150	36.85	-26.47	41.54	21.78	54.00	17.15	V
17866.550	37.17	-26.31	41.53	21.95	54.00	16.83	V

802.11ac-HT40

Channel 151

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)
5449.550	39.54	-25.39	34.38	30.54	54.00	14.46	V
5455.650	39.69	-25.35	34.38	30.66	54.00	14.31	V
11650.550	33.48	-32.10	38.35	27.23	54.00	20.52	V
15945.750	36.61	-27.71	40.64	23.68	54.00	17.39	H
17780.950	36.80	-26.48	41.54	21.73	54.00	17.20	H
17876.950	37.23	-26.28	41.52	21.99	54.00	16.77	V

Channel 159

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)
5443.400	39.55	-25.43	34.38	30.60	54.00	14.45	V
5453.600	39.69	-25.36	34.38	30.67	54.00	14.31	V
11510.550	32.91	-32.50	38.21	27.20	54.00	21.09	V
15955.350	36.61	-27.67	40.65	23.63	54.00	17.39	V
17790.550	36.80	-26.47	41.54	21.72	54.00	17.20	V
17868.950	37.14	-26.30	41.53	21.91	54.00	16.86	H

802.11ac-HT80

Channel 155

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)
5451.650	39.65	-25.37	34.56	30.46	54.00	14.35	V
5456.800	39.69	-25.35	34.57	30.47	54.00	14.31	V
11550.600	34.74	-32.36	38.54	28.56	54.00	19.26	H
17375.300	36.56	-26.82	41.32	22.06	54.00	17.44	H
18009.950	36.62	0.00	0.00	36.62	54.00	17.38	H
17475.050	37.09	-26.75	41.22	22.61	54.00	16.91	V

Channel 149

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)
5451.650	39.7	-25.4	34.4	30.71	54.0	14.3	V
5456.500	39.7	-25.3	34.4	30.63	54.0	14.3	V
11590.550	33.1	-32.2	38.3	27.05	54.0	20.9	H
16026.550	36.7	-27.9	40.7	23.78	54.0	17.3	V
17788.950	36.8	-26.5	41.5	21.70	54.0	17.2	H
17870.550	37.2	-26.3	41.5	21.99	54.0	16.8	H

Channel 157

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)
5449.000	39.5	-25.4	34.4	30.51	54.0	14.5	V
5456.600	39.6	-25.3	34.4	30.54	54.0	14.4	V
11510.550	32.9	-32.5	38.2	27.18	54.0	21.1	V
16028.150	36.7	-27.9	40.7	23.82	54.0	17.3	H
17784.150	36.9	-26.5	41.5	21.78	54.0	17.1	V
17872.150	37.2	-26.3	41.5	21.92	54.0	16.8	H

Channel 165

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)
5452.350	39.6	-25.4	34.4	30.59	54.0	14.4	V
5455.750	39.5	-25.4	34.4	30.50	54.0	14.5	V
11590.550	33.0	-32.2	38.3	26.96	54.0	21.0	V
16028.150	36.7	-27.9	40.7	23.81	54.0	17.3	H
17783.350	36.9	-26.5	41.5	21.79	54.0	17.1	V
17876.150	37.2	-26.3	41.5	21.95	54.0	16.8	V

802.11ax-HT40

Channel 151

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)
5446.950	39.5	-25.4	34.4	30.57	54.0	14.5	V
5453.450	39.8	-25.4	34.4	30.74	54.0	14.2	V
11510.150	44.5	-32.5	38.2	38.82	54.0	9.5	V
17265.350	49.6	-26.9	41.9	34.59	54.0	4.4	V
17820.050	50.5	-26.4	41.5	35.35	54.0	3.5	H
17683.950	50.4	-26.6	41.6	35.39	54.0	3.7	H

Channel 159

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)
5451.450	39.6	-25.4	34.4	30.60	54.0	14.4	V
5455.100	39.7	-25.4	34.4	30.63	54.0	14.3	V
11589.900	44.3	-32.2	38.3	38.29	54.0	9.7	V
17385.250	46.7	-26.8	41.7	31.77	54.0	7.3	H
17575.600	51.2	-26.7	41.6	36.27	54.0	2.8	V
17702.100	50.3	-26.6	41.6	35.30	54.0	3.7	H

802.11ax-HT80

Ch155

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)
5451.600	39.7	-25.4	34.6	30.48	54.0	14.3	V
5455.750	39.7	-25.4	34.6	30.49	54.0	14.3	V
11550.600	34.6	-32.4	38.5	28.39	54.0	19.4	H
17775.250	36.4	-26.5	41.3	21.66	54.0	17.6	H
17982.850	36.5	-26.0	41.3	21.24	54.0	17.5	H
17484.950	36.9	-26.7	41.2	22.45	54.0	17.1	H

Peak Results：

802.11a

Channel 149

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)
5650.431	54.80	-24.77	34.68	44.89	68.52	13.72	H
5652.432	54.55	-24.77	34.68	44.63	70.00	15.45	H
11490.450	43.70	-32.54	38.20	38.05	74.00	30.30	V
16673.650	50.98	-27.49	41.75	36.73	68.30	17.32	V
16905.900	50.90	-27.18	42.07	36.01	68.30	17.40	H
17250.200	49.94	-26.90	41.90	34.95	68.30	18.36	V

Channel 157

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)
5739.200	54.56	-24.79	34.84	44.51	68.30	13.74	V
5831.800	53.38	-24.98	35.01	43.36	68.30	14.92	V
11570.200	45.41	-32.30	38.27	39.43	74.00	28.59	H
16873.300	50.78	-27.22	42.02	35.97	68.30	17.52	H
17153.950	50.46	-26.94	42.01	35.38	68.30	17.84	V
17370.100	49.20	-26.82	41.75	34.27	68.30	19.10	H

Channel 165

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)
5922.180	54.65	-25.21	35.16	44.70	70.29	15.64	H
5924.130	54.59	-25.21	35.17	44.63	68.84	14.26	H
11779.750	46.66	-31.98	38.48	40.16	74.00	27.34	V
16648.900	50.25	-27.53	41.71	36.08	68.30	18.05	H
16944.950	50.31	-27.13	42.12	35.32	68.30	17.99	V
17490.000	50.08	-26.74	41.61	35.20	68.30	18.22	H

802.11n-HT20

Channel 149

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)
5651.086	54.28	-24.77	34.68	44.37	69.00	14.73	V
5652.470	54.88	-24.77	34.68	44.97	70.03	15.15	H
11490.450	44.64	-32.54	38.20	38.99	74.00	29.36	H
16735.800	51.03	-27.39	41.83	36.59	68.30	17.27	V
17100.050	51.05	-26.97	42.08	35.93	68.30	17.25	H
17250.200	50.06	-26.90	41.90	35.06	68.30	18.24	H

Channel 157

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)
5722.000	54.87	-24.80	34.81	44.85	68.30	13.43	V
5817.400	54.67	-24.90	34.98	44.59	68.30	13.63	H
11570.200	44.17	-32.30	38.27	38.19	74.00	29.83	V
16567.450	49.94	-27.60	41.60	35.94	68.30	18.36	V
16918.000	50.80	-27.16	42.09	35.88	68.30	17.50	H
17370.100	49.42	-26.82	41.75	34.49	68.30	18.88	H

Channel 165

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)
5922.760	55.05	-25.21	35.17	45.09	69.86	14.81	H
5924.490	54.42	-25.21	35.17	44.46	68.58	14.16	V
11650.500	45.11	-32.10	38.35	38.87	74.00	28.89	H
17152.150	50.02	-26.94	42.02	34.95	68.30	18.27	V
17489.750	49.42	-26.74	41.61	34.55	68.30	18.88	H
17708.900	50.26	-26.57	41.56	35.28	68.30	18.04	H

802.11n-HT40

Channel 151

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)
5651.006	54.55	-24.77	34.68	44.65	68.94	14.39	V
5651.934	54.58	-24.77	34.68	44.67	69.63	15.05	H
11490.450	44.66	-32.54	38.20	39.01	74.00	29.34	V
17235.200	48.60	-26.91	41.92	33.60	68.30	19.70	H
17464.700	50.38	-26.75	41.64	35.49	68.30	17.92	V
17555.450	50.86	-26.71	41.59	35.98	68.30	17.44	V

Channel 159

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)
5921.538	55.29	-25.21	35.16	45.34	70.76	15.47	H
5924.409	54.91	-25.21	35.17	44.96	68.64	13.72	H
11570.200	44.44	-32.30	38.27	38.47	74.00	29.56	V
17355.100	48.56	-26.84	41.77	33.62	68.30	19.74	V
17564.250	50.67	-26.70	41.59	35.79	68.30	17.63	V
17613.750	50.69	-26.68	41.58	35.79	68.30	17.61	H

802.11ac-HT20

Channel 149

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)
5650.520	54.91	-24.77	34.68	45.00	68.58	13.68	V
5653.421	54.30	-24.77	34.68	44.38	70.73	16.43	H
11490.450	44.25	-32.54	38.20	38.59	74.00	29.75	H
17235.200	48.03	-26.91	41.92	33.03	68.30	20.27	V
17481.750	50.56	-26.74	41.62	35.69	68.30	17.73	V
17567.000	50.53	-26.70	41.59	35.64	68.30	17.77	V

Channel 157

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)
5712.000	54.57	-24.78	34.79	44.56	68.30	13.73	V
5827.600	63.76	-24.96	35.00	53.71	68.30	4.54	V
11570.200	43.98	-32.30	38.27	38.01	74.00	30.02	H
17355.100	47.44	-26.84	41.77	32.50	68.30	20.86	H
17572.500	50.76	-26.70	41.59	35.87	68.30	17.54	H
17757.300	49.97	-26.51	41.55	34.93	68.30	18.33	H

Channel 165

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)
5922.412	54.66	-25.21	35.17	44.71	70.12	15.46	H
5923.630	54.31	-25.21	35.17	44.35	69.21	14.90	V
11650.500	46.05	-32.10	38.35	39.80	74.00	27.95	H
17475.000	47.34	-26.75	41.63	32.46	68.30	20.96	V
17584.050	49.51	-26.69	41.58	34.62	68.30	18.79	H
17658.550	49.85	-26.64	41.57	34.92	68.30	18.45	H

802.11ac-HT40

Channel 151

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)
5651.052	54.81	-24.77	34.68	44.90	68.98	14.17	V
5652.139	54.41	-24.77	34.68	44.50	69.78	15.37	V
11650.500	44.56	-32.10	38.35	38.31	74.00	29.44	V
17475.000	47.51	-26.75	41.63	32.63	68.30	20.79	V
17630.250	49.95	-26.67	41.57	35.05	68.30	18.35	V
17630.250	49.95	-26.67	41.57	35.05	68.30	18.34	H

Channel 159

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)
5922.240	55.18	-25.21	35.17	45.22	70.24	15.06	H
5924.172	55.22	-25.21	35.17	45.26	68.81	13.60	H
11510.250	43.77	-32.50	38.21	38.05	74.00	30.23	H
17265.450	47.57	-26.90	41.88	32.59	68.30	20.73	V
17535.650	50.58	-26.72	41.59	35.71	68.30	17.72	H
17609.350	50.81	-26.68	41.58	35.91	68.30	17.49	H

802.11ac-HT80

Channel 155

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)
5652.254	54.84	-24.77	34.79	44.82	68.30	13.46	H
5655.606	55.48	-24.76	34.79	45.45	68.30	12.82	H
11550.500	44.24	-32.36	38.54	38.06	68.30	24.06	V
17325.450	50.77	-26.86	41.37	36.25	68.30	17.53	H
5922.297	55.42	-25.21	35.11	45.52	68.30	12.88	H
5924.833	55.90	-25.21	35.11	46.00	68.30	12.40	H

802.11ax-HT20

Channel 149

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)
5651.230	55.8	-24.8	34.7	45.87	69.1	13.3	V
5652.806	54.4	-24.8	34.7	44.47	70.3	15.9	H
11590.000	43.7	-32.2	38.3	37.62	74.0	30.3	V
17385.350	47.0	-26.8	41.7	32.09	68.3	21.3	V
17539.500	50.0	-26.7	41.6	35.13	68.3	18.3	H
17699.550	50.6	-26.6	41.6	35.67	68.3	17.7	H

Channel 157

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)
5725.800	55.8	-24.8	34.8	45.76	68.3	12.5	V
5862.600	54.1	-25.1	35.1	44.19	68.3	14.2	V
11510.250	43.5	-32.5	38.2	37.74	74.0	30.5	V
17265.450	47.9	-26.9	41.9	32.97	68.3	20.4	V
17499.850	50.4	-26.7	41.6	35.57	68.3	17.9	H
17556.000	50.6	-26.7	41.6	35.76	68.3	17.7	H

Channel 165

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)
5922.640	53.8	-25.2	35.2	43.80	69.9	16.2	V
5924.712	54.5	-25.2	35.2	44.55	68.4	13.9	H
11590.000	45.9	-32.2	38.3	39.85	74.0	28.1	H
17385.350	46.5	-26.8	41.7	31.55	68.3	21.8	V
17485.050	50.4	-26.7	41.6	35.53	68.3	17.9	H
17678.650	50.2	-26.6	41.6	35.29	68.3	18.1	V

802.11ax-HT40

Channel 151

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)
5652.633	55.3	-24.8	34.7	45.34	70.1	14.9	V
5653.730	54.6	-24.8	34.7	44.66	71.0	16.4	H
11510.250	44.5	-32.5	38.2	38.82	74.0	29.5	H
17265.450	49.6	-26.9	41.9	34.59	68.3	18.7	V
17819.150	50.5	-26.4	41.5	35.36	68.3	17.8	H
17683.050	50.3	-26.6	41.6	35.39	68.3	18.0	V

Channel 159

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)
5924.172	55.2	-25.2	35.2	45.26	68.8	13.6	H
5923.016	54.8	-25.2	35.2	44.80	69.7	14.9	H
11590.000	44.3	-32.2	38.3	38.29	74.0	29.7	V
17385.350	46.7	-26.8	41.7	31.78	68.3	21.6	H
17574.700	51.2	-26.7	41.6	36.28	68.3	17.1	H
17701.200	50.3	-26.6	41.6	35.30	68.3	18.0	V

802.11ax-HT80

Ch155

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)
5652.900	54.8	-24.8	34.8	44.74	68.3	13.5	V
5653.550	54.8	-24.8	34.8	44.82	68.3	13.5	H
11550.400	44.2	-32.4	38.5	38.06	68.3	24.1	V
17325.985	50.7	-26.9	41.4	36.23	68.3	17.6	H
5921.610	55.6	-25.2	35.1	45.75	68.3	12.7	V
5924.560	55.3	-25.2	35.1	45.35	68.3	13.0	H

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

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.

Average Results：

802.11a

Channel 149

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)
5459.050	40.46	-22.69	34.38	28.77	54.00	13.54	V
5459.650	40.44	-22.69	34.38	28.75	54.00	13.56	V
11490.400	33.02	-29.15	38.20	23.97	54.00	20.98	H
17770.400	36.83	-22.34	41.55	17.63	54.00	17.17	V
17857.600	36.92	-22.53	41.53	17.92	54.00	17.08	V
17888.800	36.74	-22.60	41.52	17.81	54.00	17.26	V

Channel 157

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)
5459.300	39.75	-22.69	34.38	28.06	54.00	14.25	V
5459.700	39.73	-22.69	34.38	28.04	54.00	14.27	V
11570.400	33.36	-29.25	38.27	24.33	54.00	20.64	V
17769.600	36.80	-22.34	41.55	17.59	54.00	17.20	V
17859.200	36.88	-22.53	41.53	17.89	54.00	17.12	H
17956.800	36.85	-22.73	41.51	18.07	54.00	17.15	V

Channel 165

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)
5455.900	39.77	-22.70	34.38	28.08	54.00	14.23	V
5458.400	39.68	-22.69	34.38	27.99	54.00	14.32	V
11650.400	33.55	-29.41	38.35	24.60	54.00	20.45	V
17770.400	36.76	-22.34	41.55	17.55	54.00	17.24	V
17866.400	36.90	-22.55	41.53	17.92	54.00	17.10	V
17958.400	36.79	-22.74	41.51	18.02	54.00	17.21	H

802.11n-HT20

Channel 149

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)
5458.850	39.94	-22.69	34.38	28.25	54.00	14.06	V
5459.350	39.86	-22.69	34.38	28.17	54.00	14.14	V
11490.400	32.93	-29.15	38.20	23.89	54.00	21.07	V
17768.000	36.93	-22.34	41.55	17.72	54.00	17.07	H
17860.800	36.93	-22.54	41.53	17.94	54.00	17.07	H
17960.000	36.83	-22.74	41.51	18.06	54.00	17.17	V

Channel 157

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)
5459.650	39.76	-22.69	34.38	28.07	54.00	14.24	V
5459.900	39.87	-22.69	34.38	28.18	54.00	14.13	V
11570.400	33.24	-29.25	38.27	24.22	54.00	20.75	H
17769.600	36.92	-22.34	41.55	17.71	54.00	17.08	H
17859.200	36.96	-22.53	41.53	17.96	54.00	17.04	V
17955.200	36.70	-22.73	41.51	17.92	54.00	17.30	H

Channel 165

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)
5458.550	39.78	-22.69	34.38	28.09	54.00	14.22	V
5459.600	39.80	-22.69	34.38	28.11	54.00	14.20	V
11650.400	33.58	-29.41	38.35	24.64	54.00	20.42	H
17874.400	36.83	-22.57	41.52	17.87	54.00	17.17	V
17683.200	36.71	-22.14	41.56	17.29	54.00	17.29	H
17954.400	36.83	-22.73	41.51	18.05	54.00	17.17	H

802.11n-HT40

Channel 151

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)
5454.050	39.84	-22.70	34.38	28.16	54.00	14.16	V
5458.850	39.85	-22.69	34.38	28.16	54.00	14.15	V
11510.400	33.05	-29.15	38.21	23.98	54.00	20.95	H
15955.200	36.74	-23.83	40.65	19.92	54.00	17.26	H
17774.400	36.94	-22.35	41.54	17.74	54.00	17.06	V
17852.800	37.00	-22.52	41.53	17.99	54.00	17.00	H

Channel 159

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)
5452.850	39.79	-22.70	34.38	28.11	54.00	14.21	V
5458.200	39.80	-22.69	34.38	28.12	54.00	14.20	V
11590.400	33.25	-29.28	38.29	24.24	54.00	20.75	V
16026.400	36.80	-23.62	40.74	19.68	54.00	17.20	V
17772.800	36.91	-22.35	41.55	17.71	54.00	17.09	H
17854.400	37.08	-22.52	41.53	18.08	54.00	16.92	V

802.11ac-HT20

Channel 149

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)
5459.800	39.81	-22.69	34.38	28.12	54.00	14.19	V
5459.900	39.85	-22.69	34.38	28.15	54.00	14.15	V
11490.400	33.04	-29.15	38.20	23.99	54.00	20.96	V
17739.200	36.59	-22.27	41.55	17.31	54.00	17.41	H
17852.000	36.94	-22.52	41.53	17.93	54.00	17.06	V
17950.400	36.83	-22.72	41.51	18.04	54.00	17.17	H

Channel 157

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)
5459.650	39.76	-22.69	34.38	28.07	54.00	14.24	V
5459.800	39.72	-22.69	34.38	28.03	54.00	14.28	V
11570.400	33.35	-29.25	38.27	24.33	54.00	20.65	H
15825.600	36.31	-24.09	40.49	19.91	54.00	17.69	V
17776.800	36.91	-22.36	41.54	17.72	54.00	17.09	V
17954.400	36.89	-22.73	41.51	18.11	54.00	17.11	V

Channel 165

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)
5459.450	39.89	-22.69	34.38	28.20	54.00	14.11	V
5459.500	39.89	-22.69	34.38	28.20	54.00	14.11	V
11650.400	33.60	-29.41	38.35	24.66	54.00	20.40	V
15945.600	36.76	-23.85	40.64	19.97	54.00	17.24	V
17768.000	36.98	-22.34	41.55	17.77	54.00	17.02	H
17850.400	37.03	-22.52	41.53	18.02	54.00	16.97	H

802.11ac-HT40

Channel 151

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)
5451.400	39.89	-22.70	34.38	28.21	54.00	14.11	V
5457.150	39.84	-22.70	34.38	28.16	54.00	14.15	V
11510.400	33.03	-29.15	38.21	23.97	54.00	20.97	H
16028.000	36.84	-23.62	40.75	19.71	54.00	17.16	V
17768.000	36.99	-22.34	41.55	17.78	54.00	17.01	V
17856.000	37.02	-22.53	41.53	18.02	54.00	16.98	H

Channel 159

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)
5455.600	39.70	-22.70	34.38	28.02	54.00	14.29	V
5457.600	39.81	-22.70	34.38	28.12	54.00	14.19	V
11590.400	33.16	-29.28	38.29	24.15	54.00	20.84	V
16028.000	36.83	-23.62	40.75	19.70	54.00	17.17	V
17767.200	36.99	-22.33	41.55	17.78	54.00	17.01	V
17860.000	37.06	-22.54	41.53	18.07	54.00	16.94	V

802.11ac-HT80

Channel 155

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)
5136.000	43.37	-23.31	34.31	32.36	54.00	10.63	V
5147.200	44.17	-23.28	34.32	33.13	54.00	9.83	V
11550.350	34.56	-29.21	38.54	25.23	54.00	19.44	V
17375.150	36.71	-22.98	41.32	18.37	54.00	17.29	V
5447.950	39.72	-22.69	34.56	27.84	54.00	14.28	V
5452.450	39.85	-22.70	34.56	27.99	54.00	14.15	V

802.11ax-HT20

Channel 149

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)
5449.950	39.5	-22.7	34.4	27.81	54.0	14.5	V
5457.400	39.6	-22.7	34.4	27.90	54.0	14.4	V
11490.400	33.0	-29.1	38.2	23.98	54.0	21.0	H
15942.400	36.9	-23.9	40.6	20.07	54.0	17.2	V
17772.800	37.0	-22.3	41.5	17.76	54.0	17.0	V
17861.600	37.0	-22.5	41.5	18.00	54.0	17.0	H

Channel 157

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)
5456.400	39.8	-22.7	34.4	28.12	54.0	14.2	V
5458.900	39.8	-22.7	34.4	28.14	54.0	14.2	V
11570.400	33.4	-29.2	38.3	24.41	54.0	20.6	V
15946.800	36.8	-23.8	40.6	20.00	54.0	17.2	V
17776.800	36.9	-22.4	41.5	17.72	54.0	17.1	V
17864.800	37.0	-22.5	41.5	18.06	54.0	17.0	V

Channel 165

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)
5454.850	39.8	-22.7	34.4	28.08	54.0	14.2	V
5458.000	39.9	-22.7	34.4	28.21	54.0	14.1	V
11650.400	33.6	-29.4	38.4	24.67	54.0	20.4	H
15945.600	36.7	-23.8	40.6	19.95	54.0	17.3	V
17764.800	36.9	-22.3	41.5	17.72	54.0	17.1	H
17860.800	37.1	-22.5	41.5	18.11	54.0	16.9	H

802.11ax-HT40

Channel 151

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)
5650.115	54.1	-22.8	34.7	42.21	68.3	14.2	H
5650.280	54.5	-22.8	34.7	42.63	71.6	17.2	H
11510.000	44.7	-29.1	38.2	35.60	74.0	29.3	H
17265.200	49.7	-22.8	41.9	30.63	68.3	18.6	H
17803.900	50.6	-22.4	41.5	31.49	68.3	17.7	V
17667.800	50.2	-22.1	41.6	30.75	68.3	18.1	V

Channel 159

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)
5924.988	53.8	-22.2	35.2	40.85	68.2	14.4	H
5924.833	53.9	-22.2	35.2	40.93	68.3	14.4	H
11589.750	44.5	-29.3	38.3	35.47	74.0	29.5	H
17385.100	46.8	-23.0	41.7	28.10	68.3	21.5	V
17559.450	51.3	-22.5	41.6	32.22	68.3	17.0	H
17685.950	50.1	-22.1	41.6	30.73	68.3	18.2	V

802.11ax-HT80

Ch155

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)
5413.000	39.6	-22.4	34.5	27.47	54.0	14.4	V
5454.400	39.7	-22.7	34.6	27.80	54.0	14.3	V
11550.350	34.4	-29.2	38.5	25.06	54.0	19.6	H
17775.100	36.6	-22.4	41.3	17.68	54.0	17.4	V
17958.350	36.6	-22.7	41.3	18.09	54.0	17.4	V
17460.450	36.8	-23.2	41.2	18.71	54.0	17.2	H

Peak Results：

802.11a

Channel 149

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)
5650.069	53.59	-32.84	34.68	51.75	68.25	14.66	H
5650.098	53.88	-32.84	34.68	52.04	68.27	14.39	H
11490.200	43.84	-29.15	38.20	34.79	74.00	30.16	H
16673.400	51.11	-23.21	41.75	32.58	68.30	17.19	V
16890.650	51.04	-23.01	42.05	31.99	68.30	17.26	V
17234.950	48.81	-22.85	41.92	29.74	68.30	19.49	H

Channel 157

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)
5747.600	53.49	-32.95	34.86	51.58	68.30	14.81	V
5826.200	53.34	-32.57	35.00	50.91	68.30	14.96	V
11569.950	45.54	-29.24	38.27	36.52	74.00	28.46	H
16873.050	50.92	-23.00	42.02	31.90	68.30	17.38	H
17138.700	50.59	-23.00	42.03	31.56	68.30	17.71	H
17354.850	49.07	-22.93	41.77	30.23	68.30	19.23	H

Channel 165

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)
5924.764	54.26	-32.21	35.17	51.30	68.37	14.11	V
5924.856	54.46	-32.21	35.17	51.50	68.31	13.85	H
11779.500	46.79	-29.41	38.48	37.72	74.00	27.21	H
16648.650	50.39	-23.26	41.71	31.94	68.30	17.91	H
16929.700	50.44	-23.01	42.10	31.35	68.30	17.86	V
17474.750	48.94	-23.07	41.63	30.38	68.30	19.36	H

802.11n-HT20

Channel 149

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)
5650.086	54.08	-32.84	34.68	52.24	68.30	14.22	V
5650.305	54.73	-32.84	34.68	52.89	68.30	13.57	H
11490.200	44.78	-29.15	38.20	35.73	74.00	29.22	V
16735.550	51.16	-23.08	41.83	32.41	68.30	17.14	H
17084.800	51.18	-23.04	42.10	32.12	68.30	17.12	V
17234.950	48.92	-22.85	41.92	29.86	68.30	19.38	V

Channel 157

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)
5749.600	54.96	-32.94	34.86	53.05	68.30	13.34	H
5826.600	54.71	-32.57	35.00	52.28	68.30	13.59	V
11569.950	44.30	-29.24	38.27	35.28	74.00	29.70	V
16567.200	50.07	-23.27	41.60	31.75	68.30	18.23	H
16902.750	50.93	-23.01	42.07	31.87	68.30	17.37	H
17354.850	47.29	-22.93	41.77	28.45	68.30	21.01	H

Channel 165

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)
5924.805	54.38	-32.21	35.17	51.42	68.30	13.92	H
5924.822	53.80	-32.21	35.17	50.84	68.30	14.51	H
11650.250	45.25	-29.41	38.35	36.30	68.30	23.05	V
17151.900	50.16	-22.98	42.02	31.12	68.30	18.14	H
17474.500	47.56	-23.07	41.63	29.00	68.30	20.74	V
17693.650	50.13	-22.16	41.56	30.73	68.30	18.17	H

802.11n-HT40

Channel 151

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)
5650.603	55.90	-32.84	34.68	54.06	68.65	12.74	V
5651.334	55.02	-32.84	34.68	53.18	69.19	14.16	V
11510.000	43.90	-29.14	38.21	34.83	74.00	30.10	V
17265.200	47.70	-22.80	41.88	28.62	68.30	20.60	V
17520.400	50.72	-22.77	41.60	31.89	68.30	17.58	H
17594.100	50.67	-22.28	41.58	31.37	68.30	17.63	H

Channel 159

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)
5923.413	54.80	-32.22	35.17	51.86	69.37	14.57	H
5924.454	54.25	-32.21	35.17	51.30	68.60	14.35	V
11589.750	43.82	-29.28	38.29	34.80	74.00	30.18	V
17385.100	47.15	-23.01	41.74	28.42	68.30	21.15	V
17524.250	50.15	-22.74	41.60	31.29	68.30	18.16	V
17684.300	50.51	-22.14	41.56	31.09	68.30	17.79	H

802.11ac-HT20

Channel 149

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)
5650.086	54.27	-32.84	34.68	52.43	68.30	14.03	H
5650.253	54.78	-32.84	34.68	52.94	68.30	13.52	H
11490.200	44.38	-29.15	38.20	35.34	68.30	23.92	H
17234.950	48.17	-22.85	41.92	29.10	68.30	20.13	V
17466.500	50.70	-23.12	41.64	32.18	68.30	17.60	H
17551.750	50.39	-22.56	41.59	31.36	68.30	17.91	V

Channel 157

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)
5750.200	54.29	-32.94	34.86	52.37	68.30	14.01	V
5827.600	53.40	-32.56	35.00	50.96	68.30	14.90	V
11569.950	44.12	-29.24	38.27	35.09	68.30	24.18	H
17354.850	47.57	-22.93	41.77	28.73	68.30	20.73	H
17557.250	50.89	-22.52	41.59	31.83	68.30	17.41	V
17742.050	49.84	-22.28	41.55	30.56	68.30	18.46	H

Channel 165

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)
5924.741	54.26	-32.21	35.17	51.30	68.30	14.04	V
5924.845	53.89	-32.21	35.17	50.93	68.30	14.41	V
11650.250	46.18	-29.41	38.35	37.24	74.00	27.82	V
17474.750	47.48	-23.07	41.63	28.92	68.30	20.82	H
17568.800	49.64	-22.45	41.59	30.50	68.30	18.66	V
17643.300	49.72	-22.05	41.57	30.20	68.30	18.58	V

802.11ac-HT40

Channel 151

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)
5652.018	54.76	-32.84	34.68	52.92	69.69	14.93	V
5652.886	54.53	-32.84	34.68	52.69	70.34	15.80	V
11510.000	43.59	-29.14	38.21	34.52	74.00	30.41	V
17265.200	48.08	-22.80	41.88	29.00	68.30	20.22	H
17484.600	50.57	-23.00	41.62	31.95	68.30	17.73	V
17540.750	50.51	-22.63	41.59	31.55	68.30	17.79	V

Channel 159

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)
5922.827	54.34	-32.22	35.17	51.39	69.81	15.47	H
5924.028	54.72	-32.22	35.17	51.76	68.92	14.20	H
11589.750	46.05	-29.28	38.29	37.03	74.00	27.95	V
17385.100	46.61	-23.01	41.74	27.88	68.30	21.69	V
17469.800	50.54	-23.10	41.64	32.01	68.30	17.76	H
17663.400	50.11	-22.09	41.57	30.63	68.30	18.19	V

802.11ac-HT80

Channel 155

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)
5674.138	60.62	-22.84	34.81	48.65	68.30	7.68	H
5674.464	59.96	-22.84	34.82	47.99	68.30	8.34	H
11550.350	44.38	-29.21	38.54	35.05	68.30	23.92	H
17325.150	50.91	-22.86	41.37	32.40	68.30	17.39	V
5921.458	55.03	-22.23	35.11	42.16	68.30	13.27	H
5922.769	54.68	-22.22	35.11	41.79	68.30	13.62	V

802.11ax-HT20

Channel 149

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)
5650.782	55.5	-32.8	34.7	53.69	68.7	13.2	H
5652.277	54.8	-32.8	34.7	53.00	69.9	15.0	H
11490.200	44.8	-29.1	38.2	35.75	74.0	29.2	V
17234.950	48.7	-22.8	41.9	29.67	68.3	19.6	H
17449.450	50.5	-23.2	41.7	32.01	68.3	17.8	H
17540.200	50.7	-22.6	41.6	31.77	68.3	17.6	H

Channel 157

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)
5749.200	54.4	-32.9	34.9	52.45	68.3	13.9	V
5820.200	54.8	-32.6	35.0	52.44	68.3	13.5	V
11569.950	44.6	-29.2	38.3	35.55	74.0	29.4	H
17354.850	48.7	-22.9	41.8	29.85	68.3	19.6	H
17549.000	50.8	-22.6	41.6	31.79	68.3	17.5	H
17598.500	50.6	-22.2	41.6	31.22	68.3	17.7	H

Channel 165

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)
5923.212	54.2	-32.2	35.2	51.23	69.5	15.3	H
5924.425	53.9	-32.2	35.2	50.92	68.6	14.8	H
11650.250	44.7	-29.4	38.4	35.75	74.0	29.3	H
17474.750	47.6	-23.1	41.6	29.08	68.3	20.7	V
17615.000	50.1	-22.1	41.6	30.65	68.3	18.2	H
17615.000	49.8	-22.1	41.6	30.39	68.3	18.5	H

802.11ax-HT40

Channel 151

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)
5653.850	55.4	-32.8	34.7	53.55	71.0	15.6	H
5654.640	55.7	-32.8	34.7	53.82	71.6	16.0	H
11510.000	44.7	-29.1	38.2	35.60	74.0	29.3	H
17265.200	49.7	-22.8	41.9	30.63	68.3	18.6	H
17803.900	50.6	-22.4	41.5	31.49	68.3	17.7	V
17667.800	50.2	-22.1	41.6	30.75	68.3	18.1	V

Channel 159

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)
5917.266	54.9	-32.3	35.2	52.03	73.9	19.0	H
5917.996	54.3	-32.3	35.2	51.39	73.4	19.1	H
11589.750	44.5	-29.3	38.3	35.47	74.0	29.5	H
17385.100	46.8	-23.0	41.7	28.10	68.3	21.5	V
17559.450	51.3	-22.5	41.6	32.22	68.3	17.0	H
17685.950	50.1	-22.1	41.6	30.73	68.3	18.2	V

802.11ax-HT80

Ch155

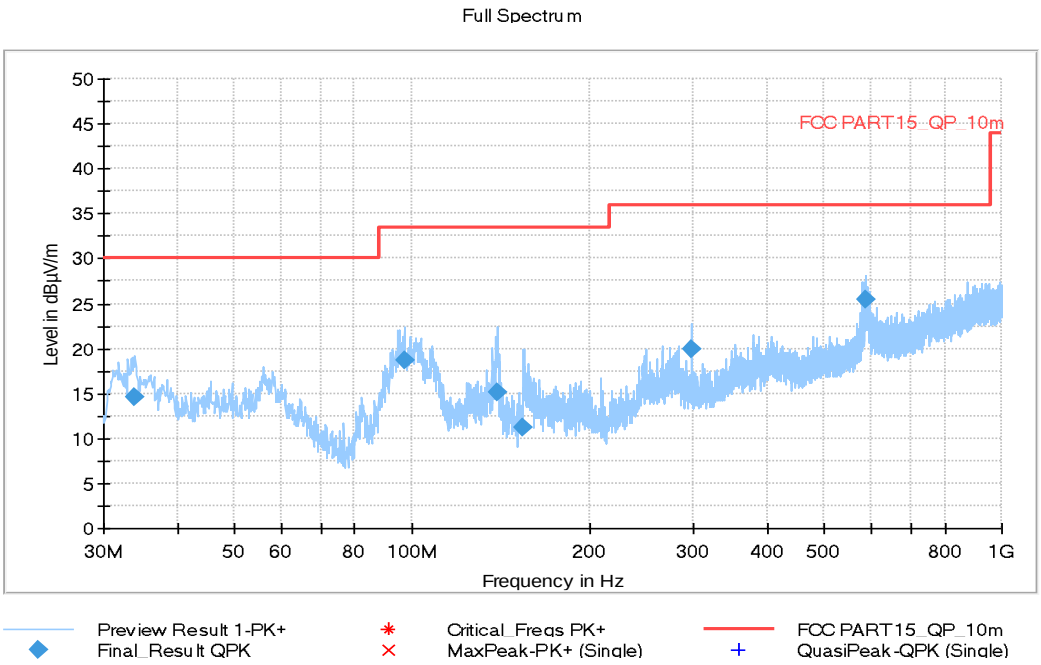
Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5659.380	55.6	-22.8	34.8	43.62	68.3	12.7	V
5664.438	57.9	-22.8	34.8	45.88	68.3	10.5	H
11550.250	44.4	-29.2	38.5	35.05	68.3	23.9	H
17325.685	50.9	-22.9	41.4	32.38	68.3	17.4	H
5919.480	54.6	-22.2	35.1	41.69	68.3	13.7	H
5921.110	54.5	-22.2	35.1	41.65	68.3	13.8	H

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)
33.88000	14.60	30.00	15.40	120.000	283.0	V	-30.0
96.93000	18.75	33.52	14.77	120.000	100.0	V	315.0
139.2220	15.12	33.52	18.40	120.000	114.0	V	45.0
154.6450	11.25	33.52	22.27	120.000	287.0	H	180.0
296.9440	19.91	36.02	16.11	120.000	108.0	V	-18.0
587.2650	25.51	36.02	10.51	120.000	223.0	V	-31.0

Note: 10 meters' limit is got by converting from 3 meters test distance.
Limit (10m) = limit (3m) + 20(log (3/10))

BELOW 30MHz

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

C.1.3 Band Edges Compliance– Radiated

Measurement Result:

INNOWAVE:

Mode	Channel	Test Results	Conclusion
802.11a	5745 MHz(CH149)	Fig.1	P
	5825 MHz(CH165)	Fig.2	P
802.11n HT20	5745 MHz(CH149)	Fig.3	P
	5825 MHz(CH165)	Fig.4	P
802.11n HT40	5755 MHz(CH151)	Fig.5	P
	5795 MHz(CH159)	Fig.6	P
802.11ac HT20	5745 MHz(CH149)	Fig.7	P
	5825 MHz(CH165)	Fig.8	P
802.11ac HT40	5755 MHz(CH151)	Fig.9	P
	5795 MHz(CH159)	Fig.10	P
802.11ac HT80	5775 MHz(CH155)	Fig.11 Fig.12	P
802.11ax HT20	5745 MHz(CH149)	Fig.13	P
	5825 MHz(CH165)	Fig.14	P
802.11ax HT40	5755 MHz(CH151)	Fig.15	P
	5795 MHz(CH159)	Fig.16	P
802.11ax HT80	5775 MHz(CH155)	Fig.17 Fig.18	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::

Mode	Channel	Test Results	Conclusion
802.11a	5745 MHz(CH149)	Fig.19	P
	5825 MHz(CH165)	Fig.20	P
802.11n HT20	5745 MHz(CH149)	Fig.21	P
	5825 MHz(CH165)	Fig.22	P
802.11n HT40	5755 MHz(CH151)	Fig.23	P
	5795 MHz(CH159)	Fig.24	P
802.11ac HT20	5745 MHz(CH149)	Fig.25	P
	5825 MHz(CH165)	Fig.26	P
802.11ac HT40	5755 MHz(CH151)	Fig.27	P
	5795 MHz(CH159)	Fig.28	P
802.11ac HT80	5775 MHz(CH155)	Fig.29 Fig.30	P
802.11ax HT20	5745 MHz(CH149)	Fig.31	P
	5825 MHz(CH165)	Fig.32	P
802.11ax HT40	5755 MHz(CH151)	Fig.33	P
	5795 MHz(CH159)	Fig.34	P
802.11ax HT80	5775 MHz(CH155)	Fig.35 Fig.36	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:

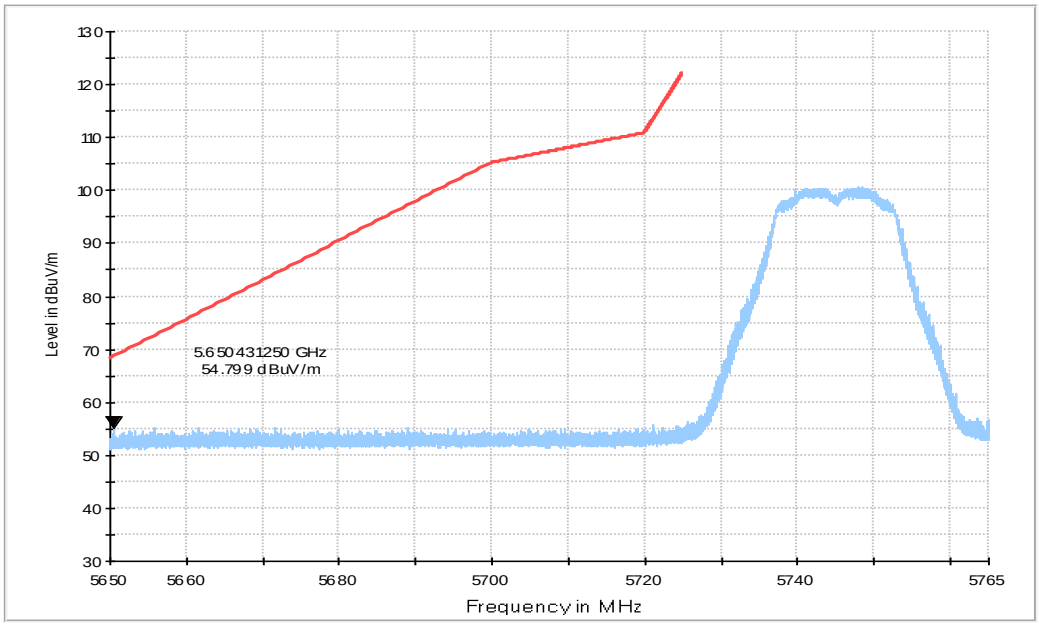


Fig. 1 Band Edges (802.11a,CH149, 5745MHz)

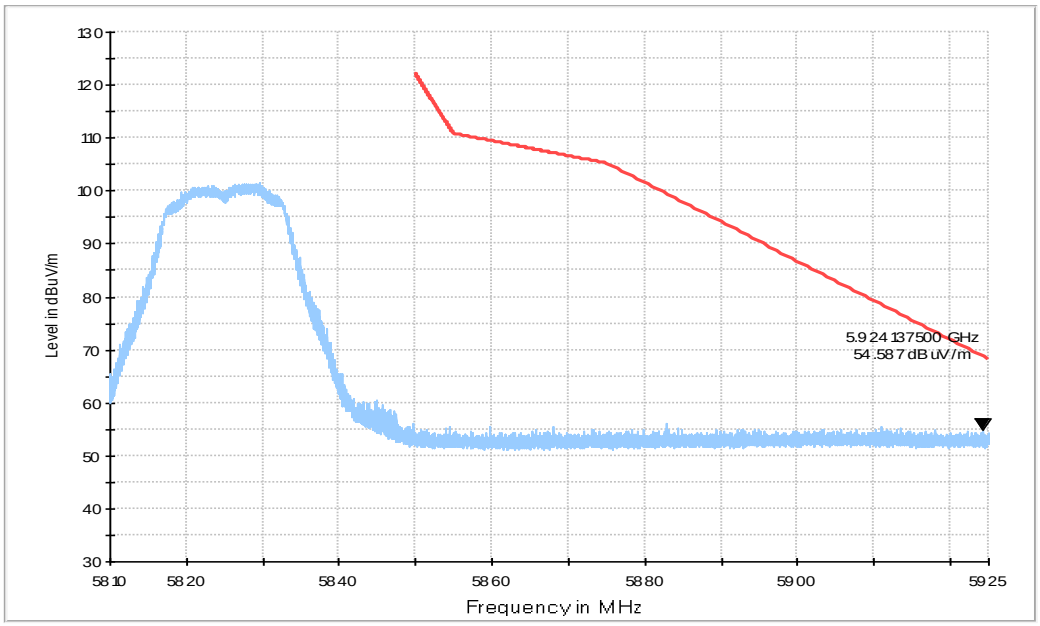


Fig. 2 Band Edges (802.11a, CH165, 5825MHz)

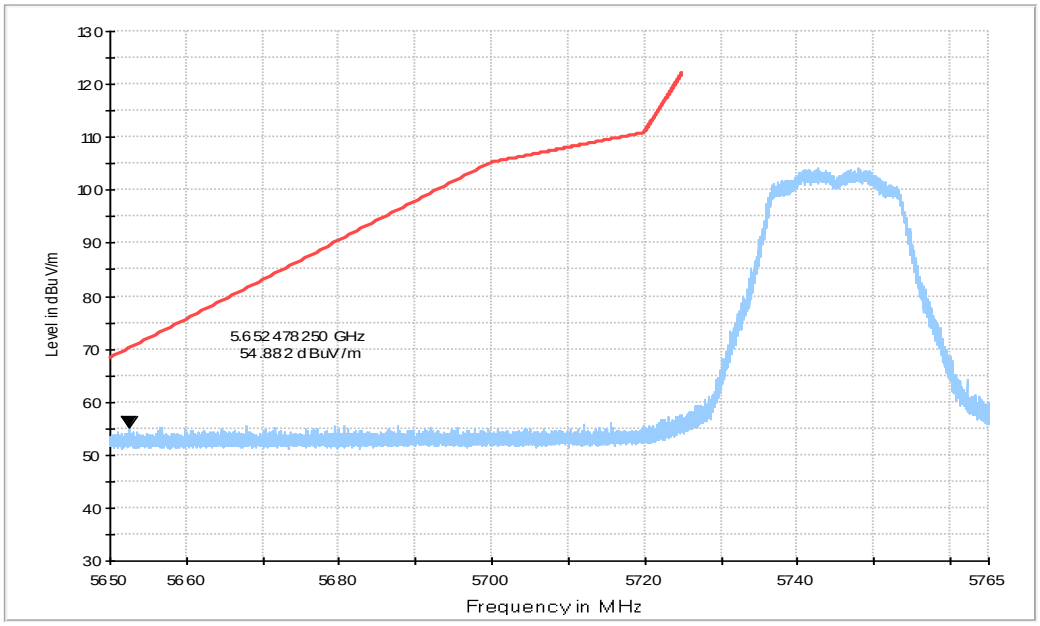


Fig. 3 Band Edges (802.11n-HT20, CH149, 5745MHz)

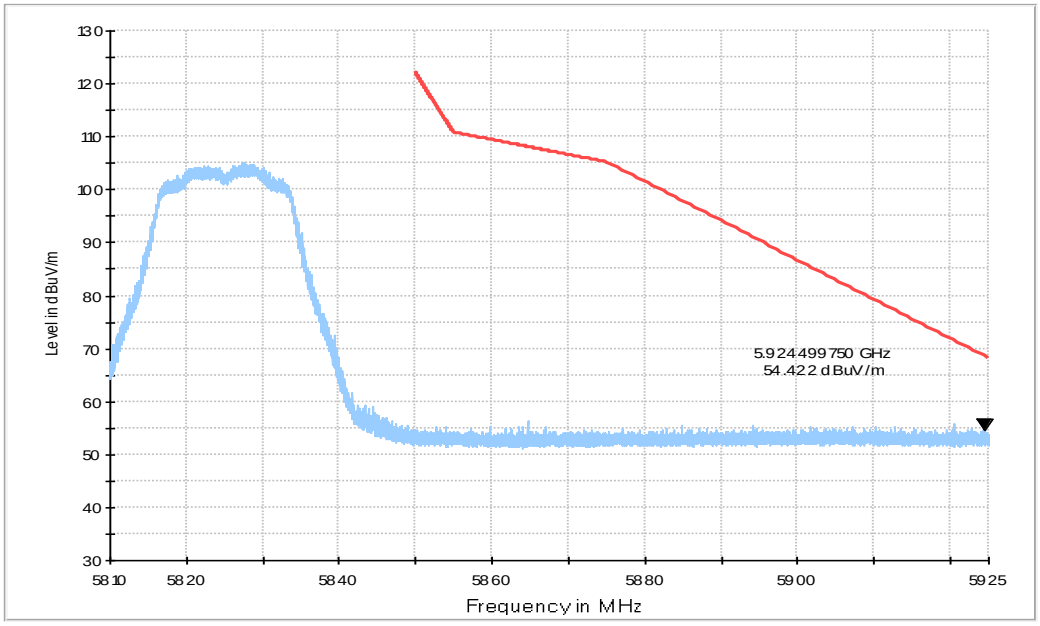


Fig. 4 Band Edges (802.11n-HT20, CH165, 5825MHz)

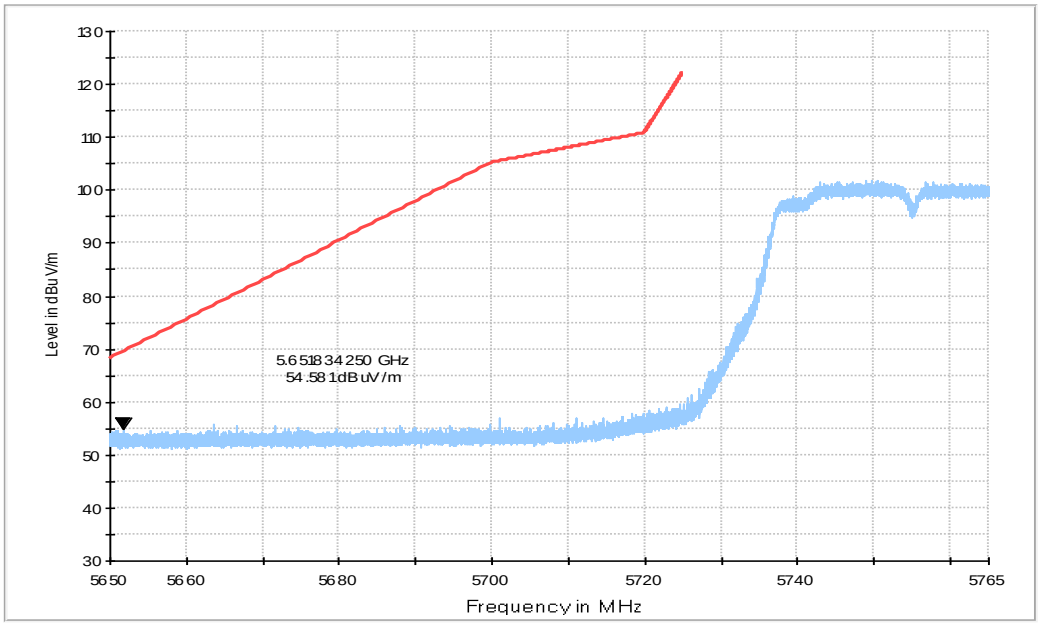


Fig. 5 Band Edges (802.11n-HT40, CH151, 5755MHz)

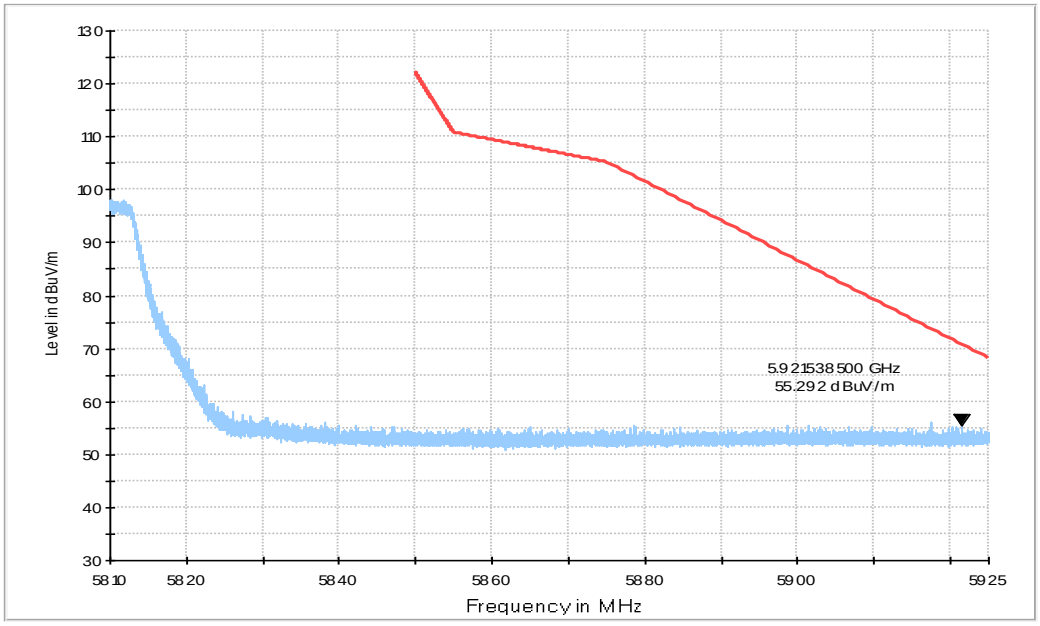


Fig. 6 Band Edges (802.11n-HT40, CH159, 5795MHz)

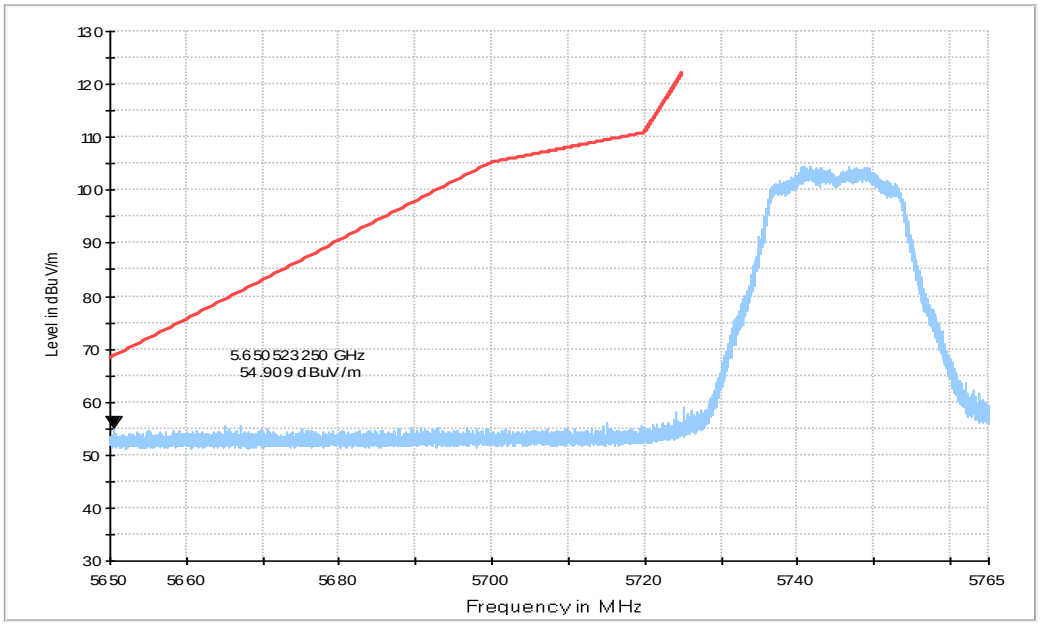


Fig. 7 Band Edges (802.11ac-HT20, CH149, 5745MHz)

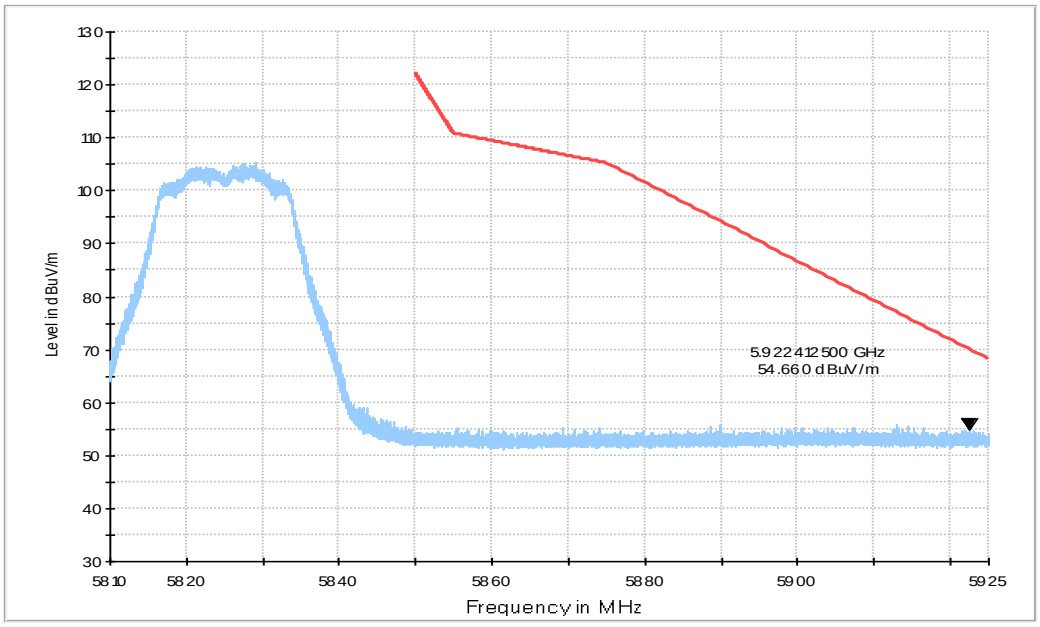


Fig. 8 Band Edges (802.11ac-HT20, CH165, 5825MHz)

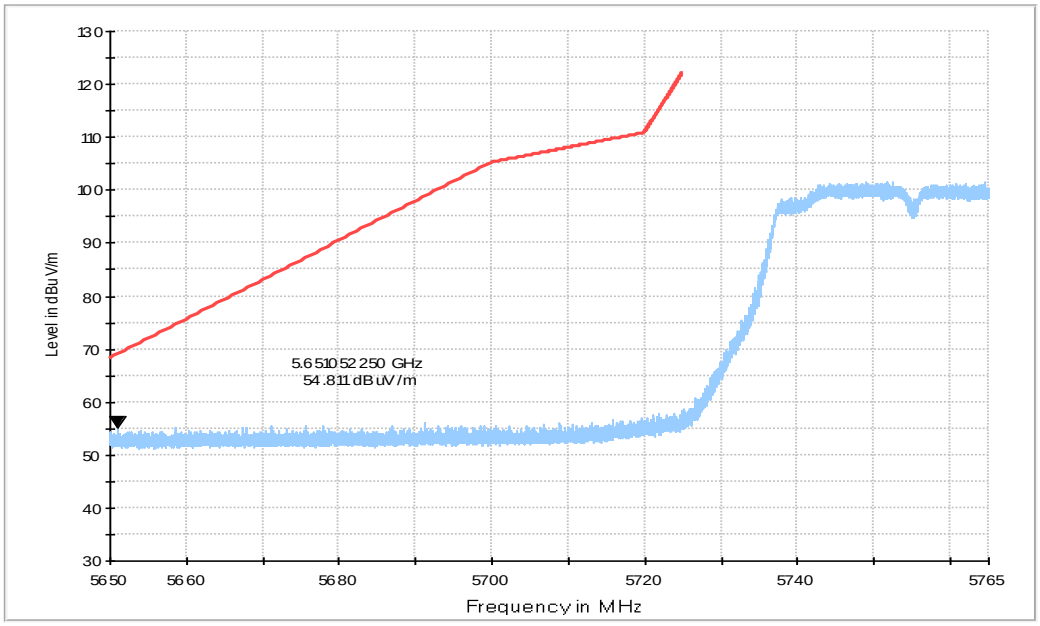


Fig. 9 Band Edges (802.11ac-HT40,CH151, 5755MHz)

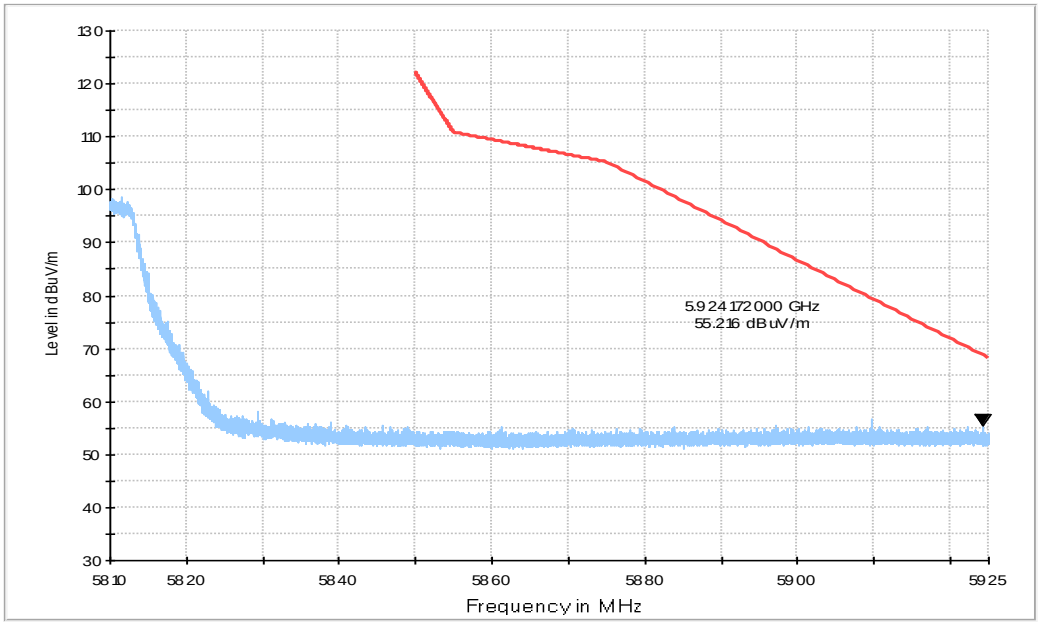


Fig. 10 Band Edges (802.11ac-HT40,CH159, 5795MHz)

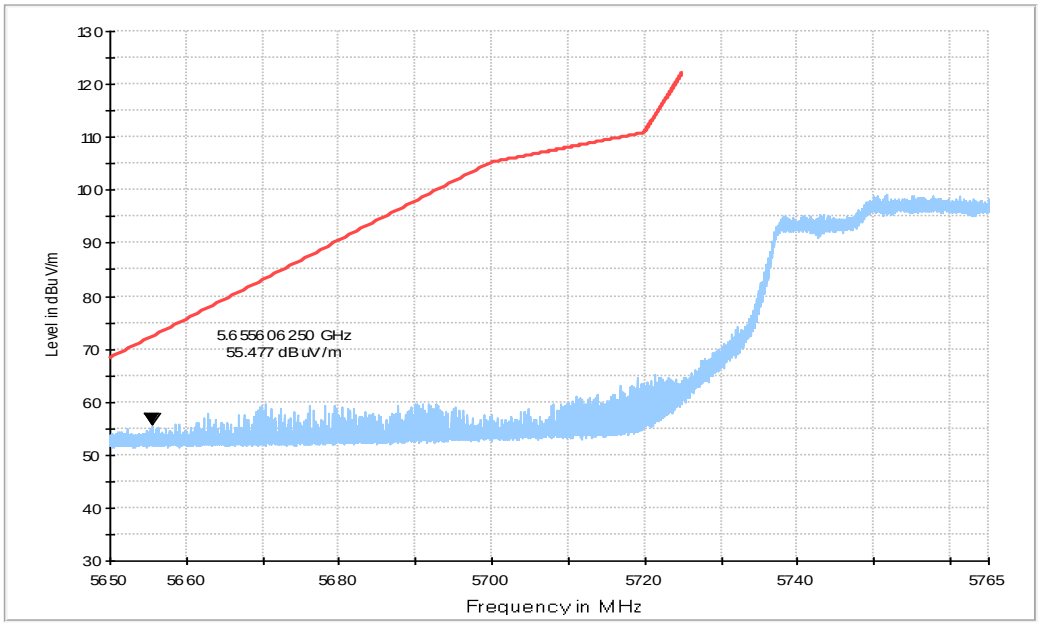


Fig. 11 Band Edges (802.11ac-HT80, CH155, 5775MHz)

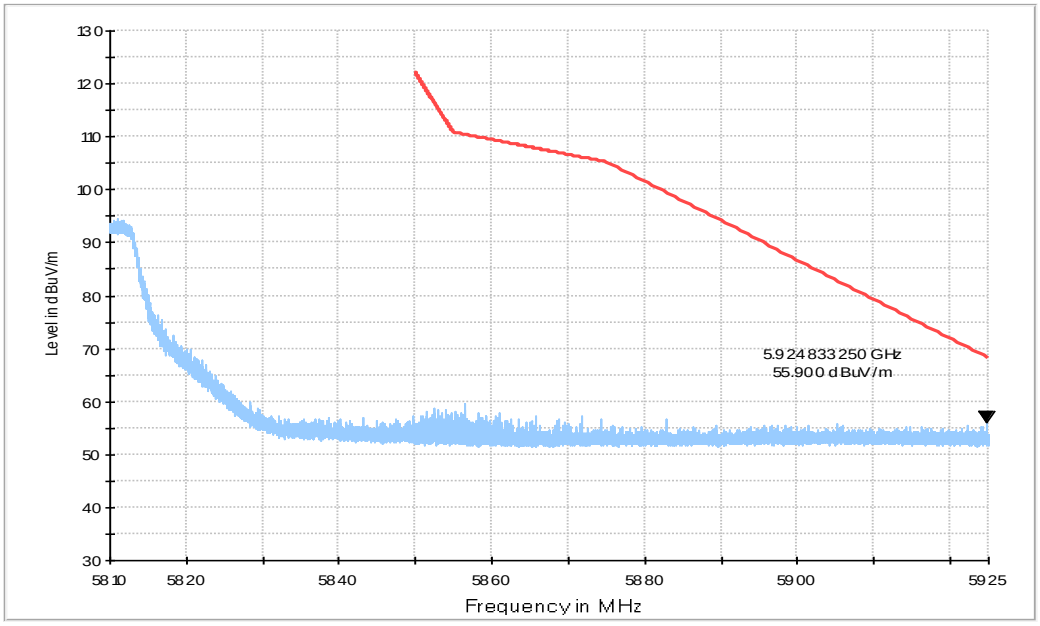


Fig. 12 Band Edges (802.11ac-HT80, CH155, 5775MHz)

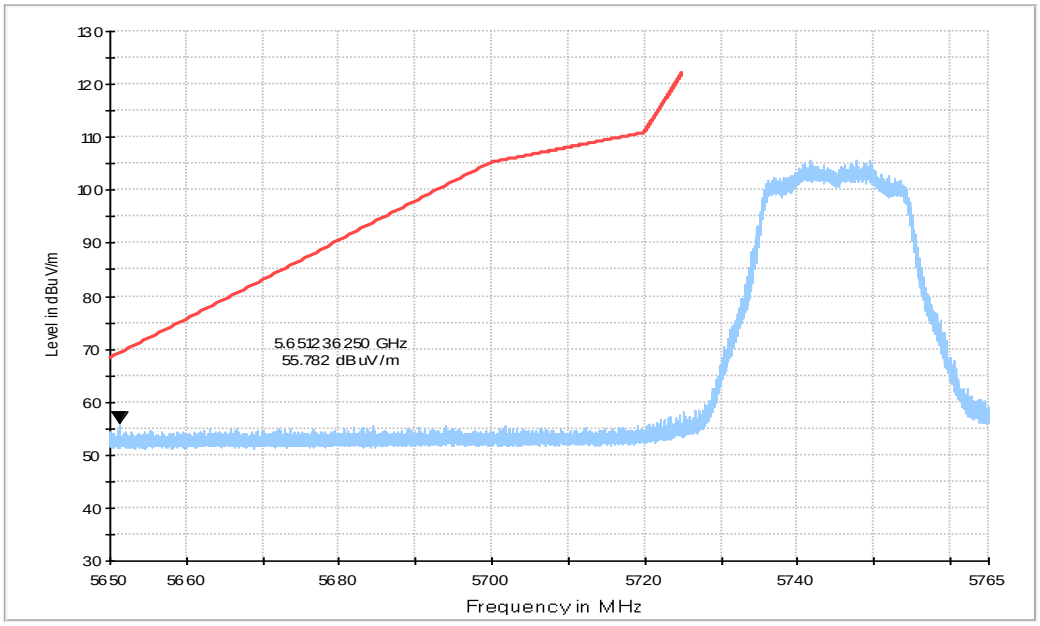


Fig. 13 Band Edges (802.11ax-HT20, CH149, 5745MHz)

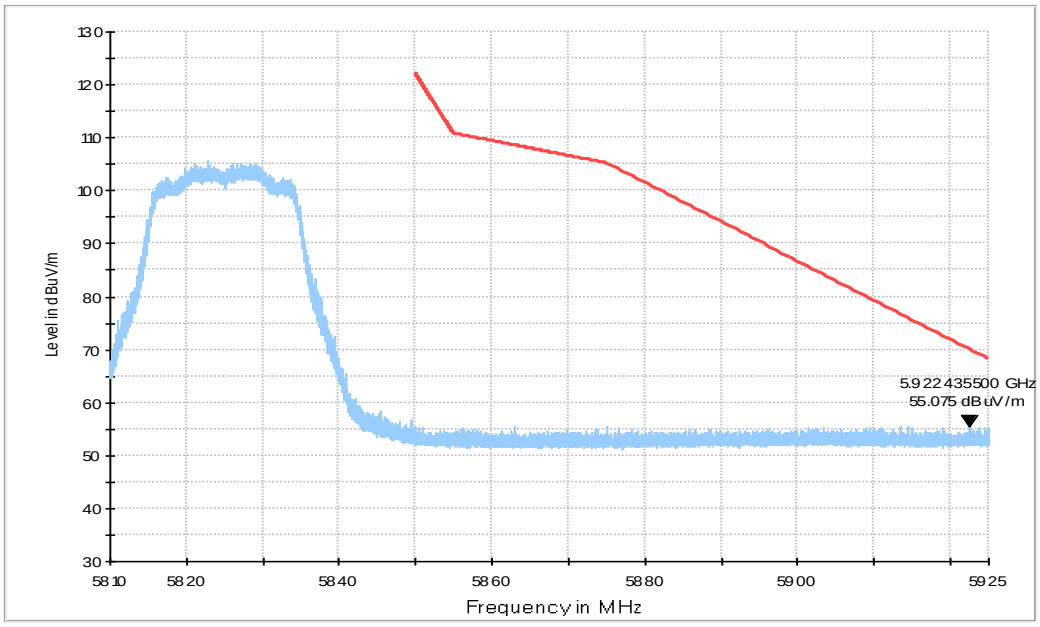


Fig. 14 Band Edges (802.11ax-HT20, CH165, 5825MHz)

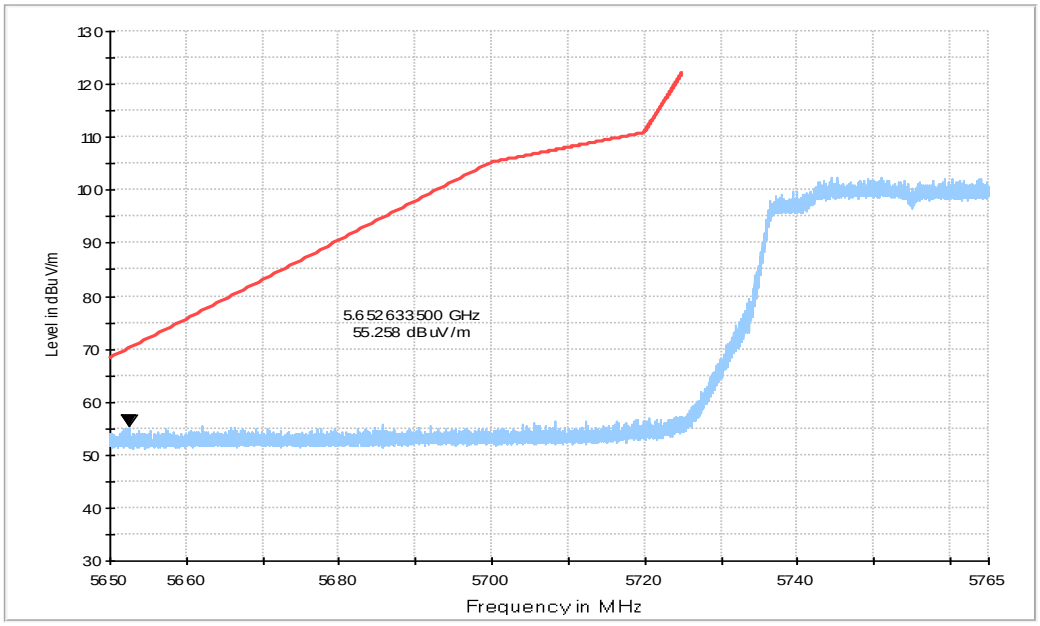


Fig. 15 Band Edges (802.11ax-HT40,CH151, 5755MHz)

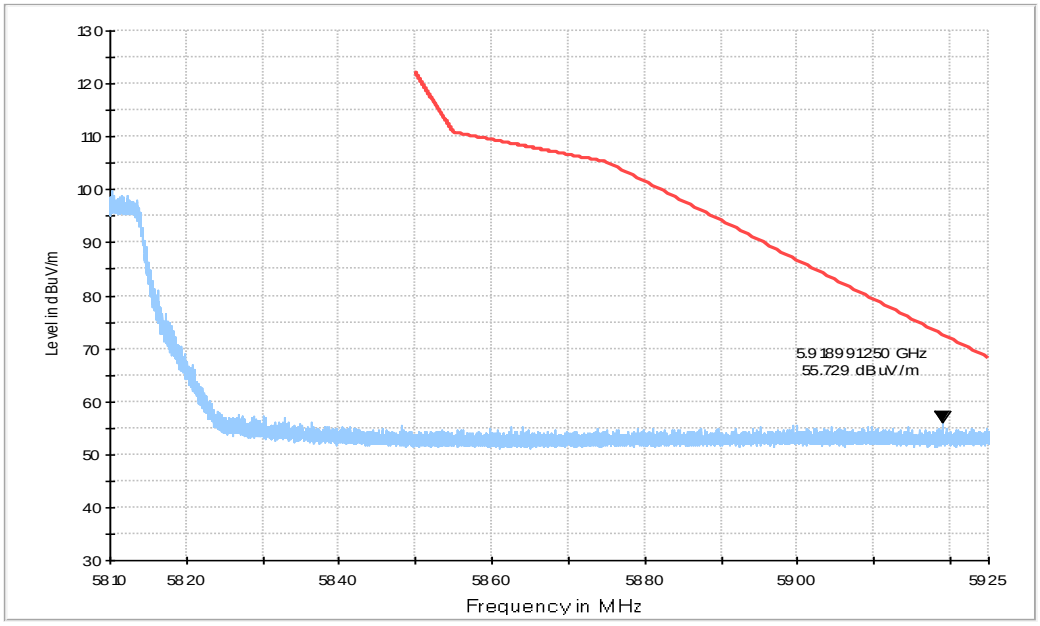


Fig. 16 Band Edges (802.11ax-HT40,CH159, 5795MHz)

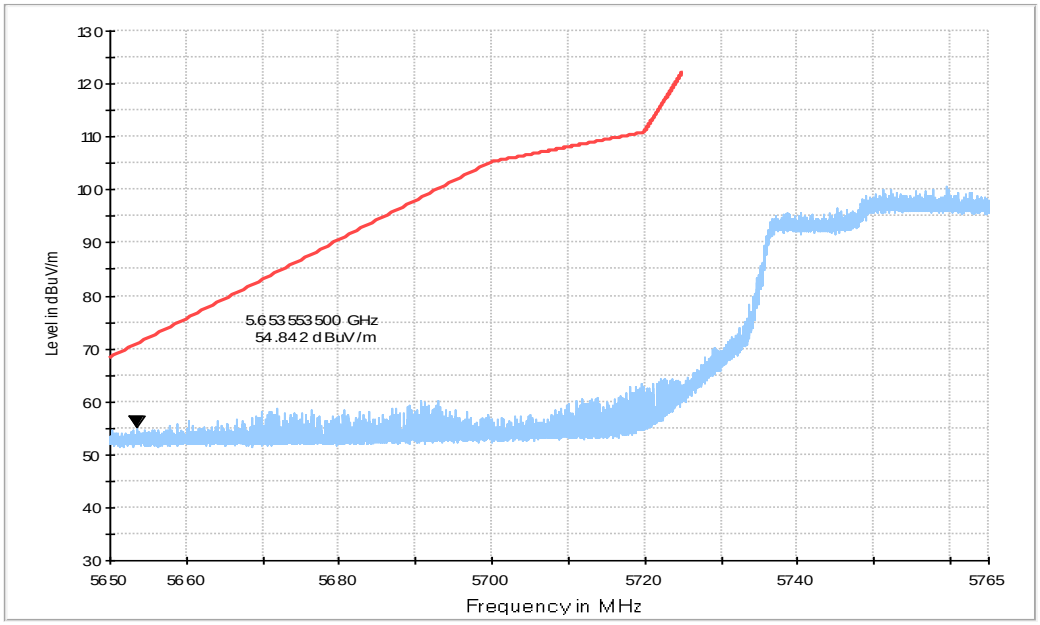


Fig. 17 Band Edges (802.11ax-HT80, CH155, 5775MHz)

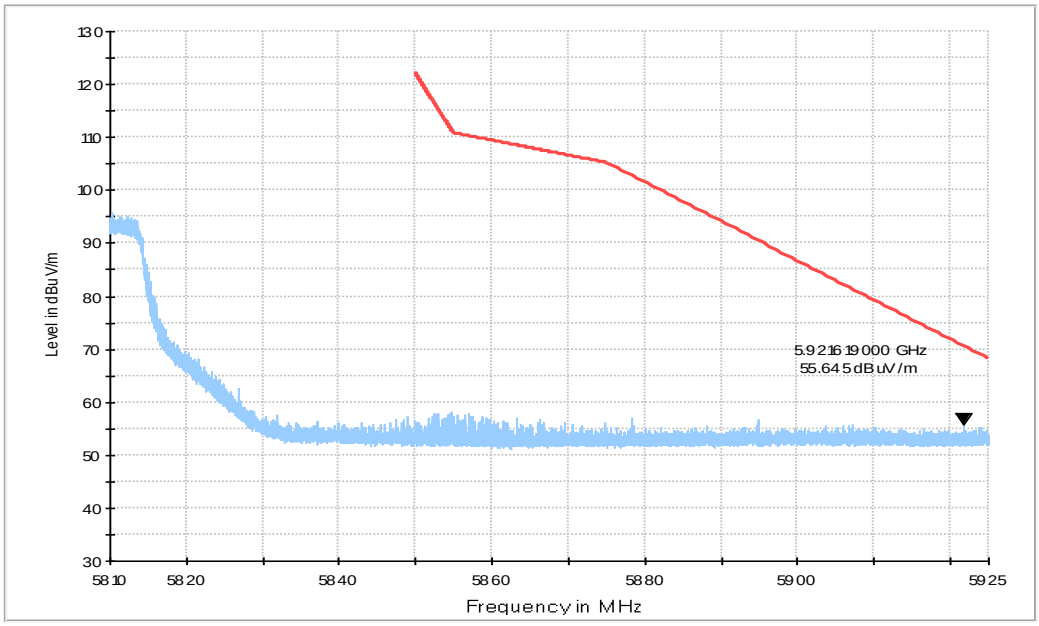


Fig. 18 Band Edges (802.11ax-HT80, CH155, 5775MHz)

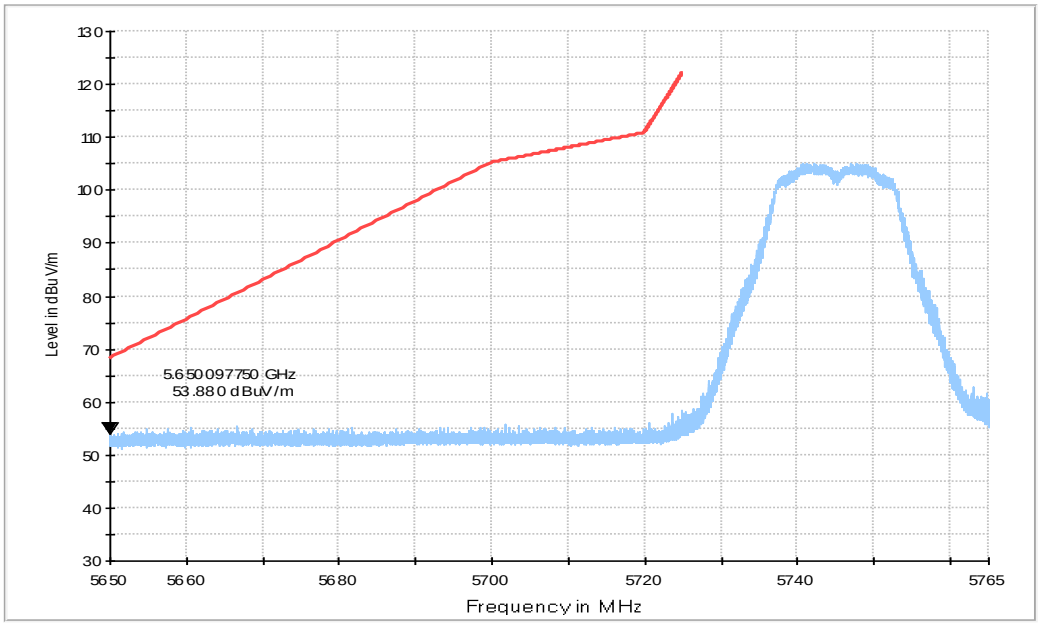


Fig. 19 Band Edges (802.11a,CH149, 5745MHz)

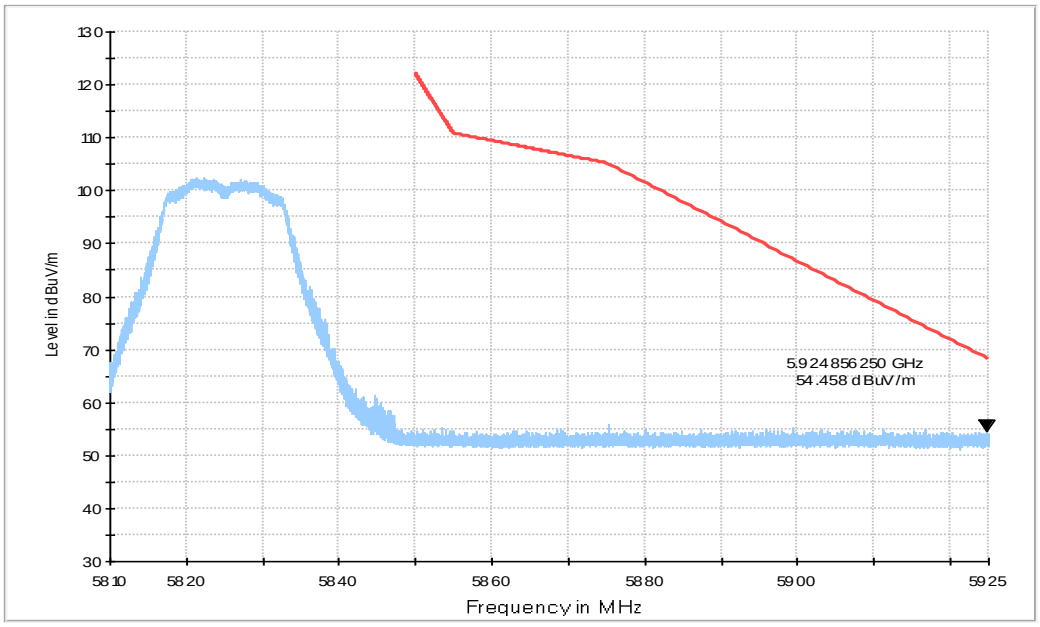


Fig. 20 Band Edges (802.11a, CH165, 5825MHz)

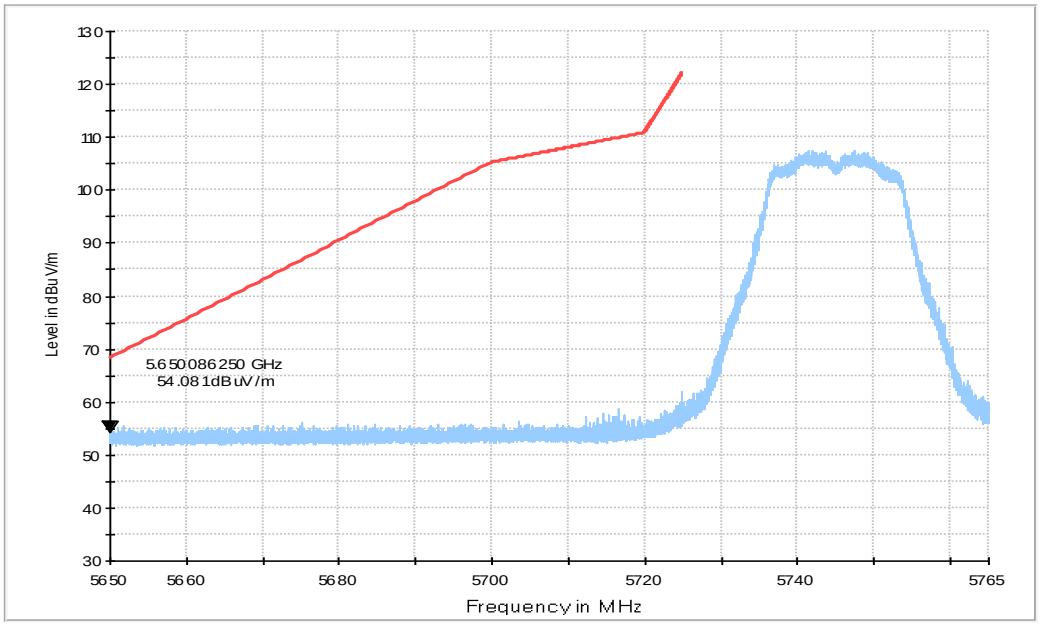


Fig. 21 Band Edges (802.11n-HT20, CH149, 5745MHz)

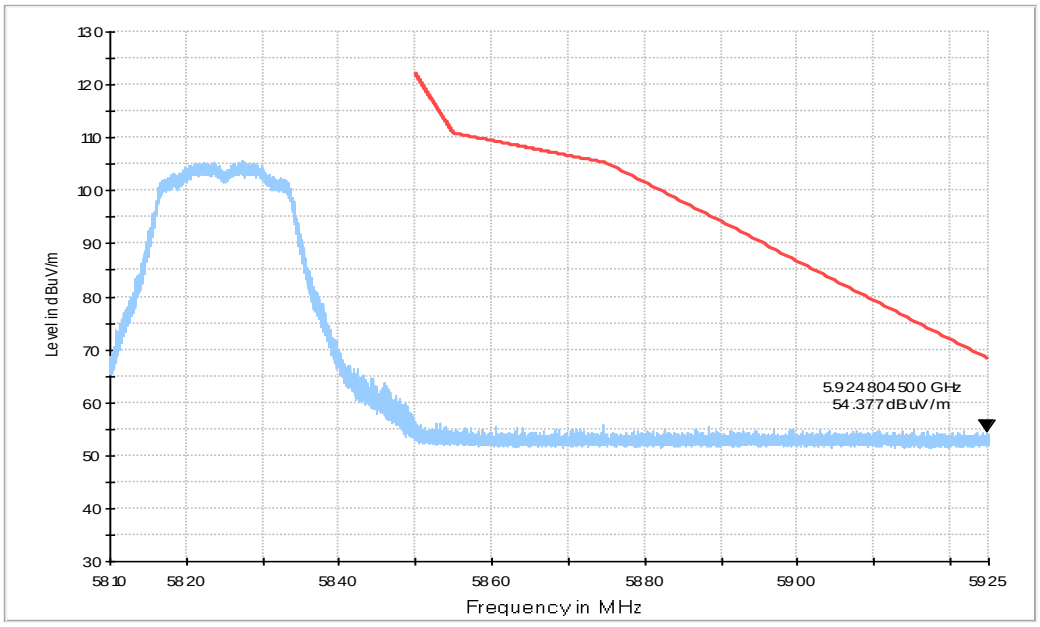


Fig. 22 Band Edges (802.11n-HT20, CH165, 5825MHz)

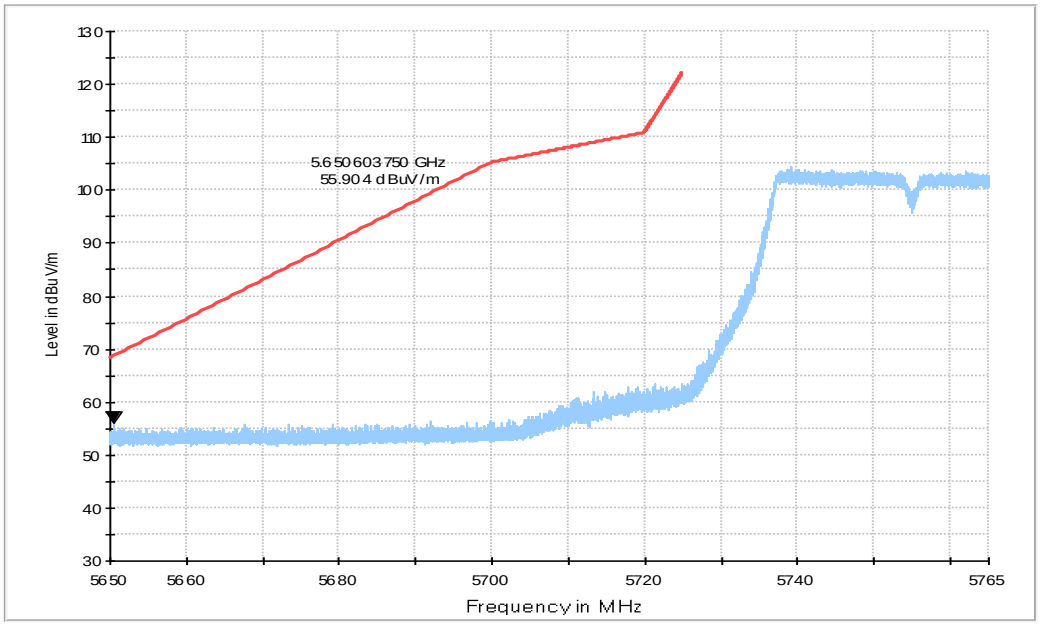


Fig. 23 Band Edges (802.11n-HT40, CH151, 5755MHz)

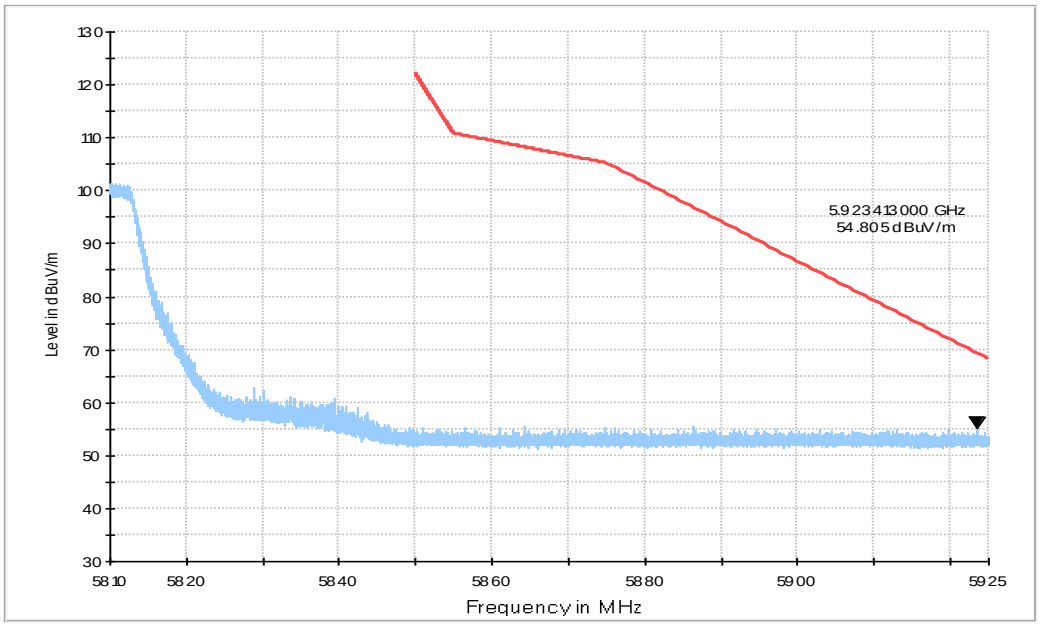


Fig. 24 Band Edges (802.11n-HT40, CH159, 5795MHz)

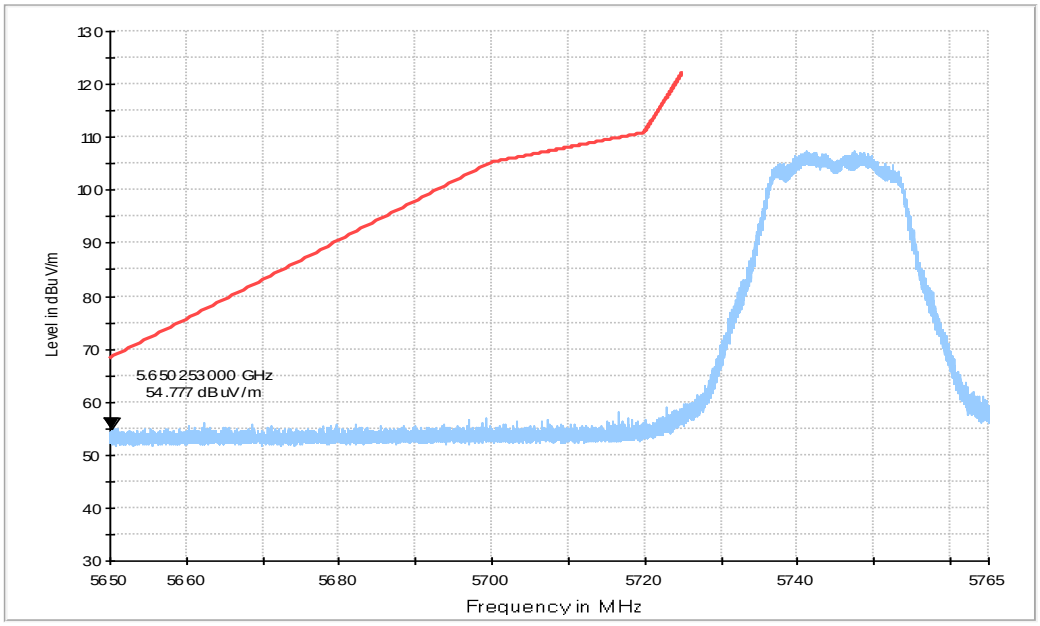


Fig. 25 Band Edges (802.11ac-HT20, CH149, 5745MHz)

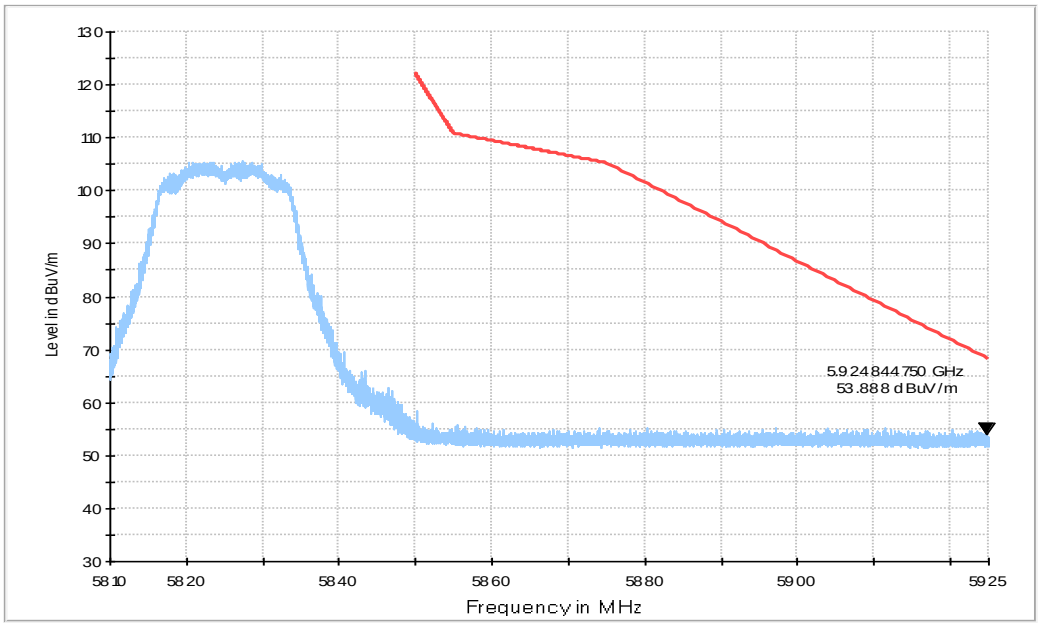


Fig. 26 Band Edges (802.11ac-HT20, CH165, 5825MHz)

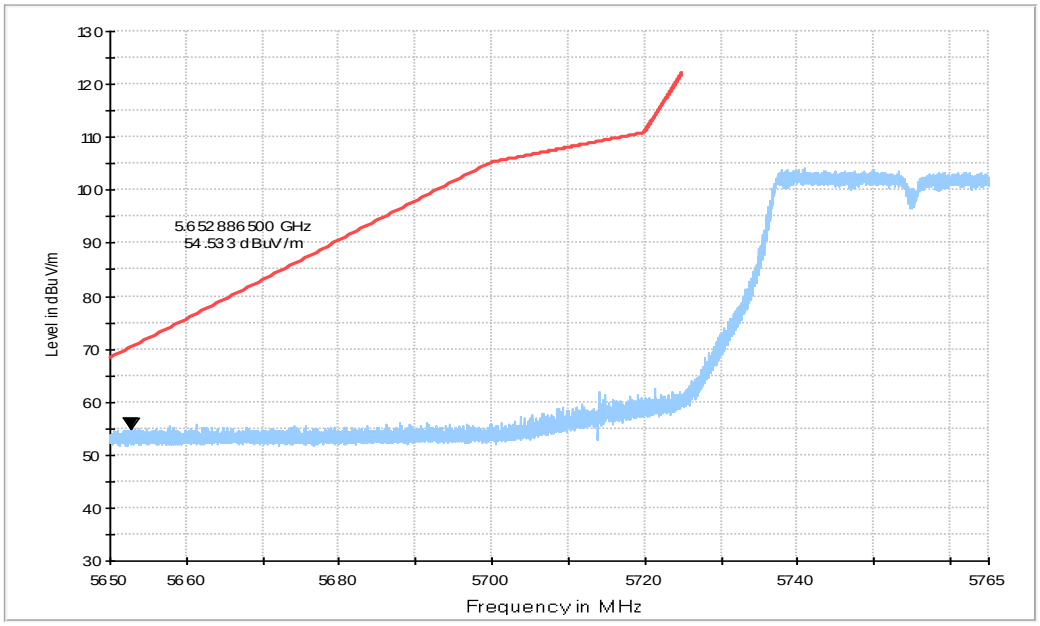


Fig. 27 Band Edges (802.11ac-HT40,CH151, 5755MHz)

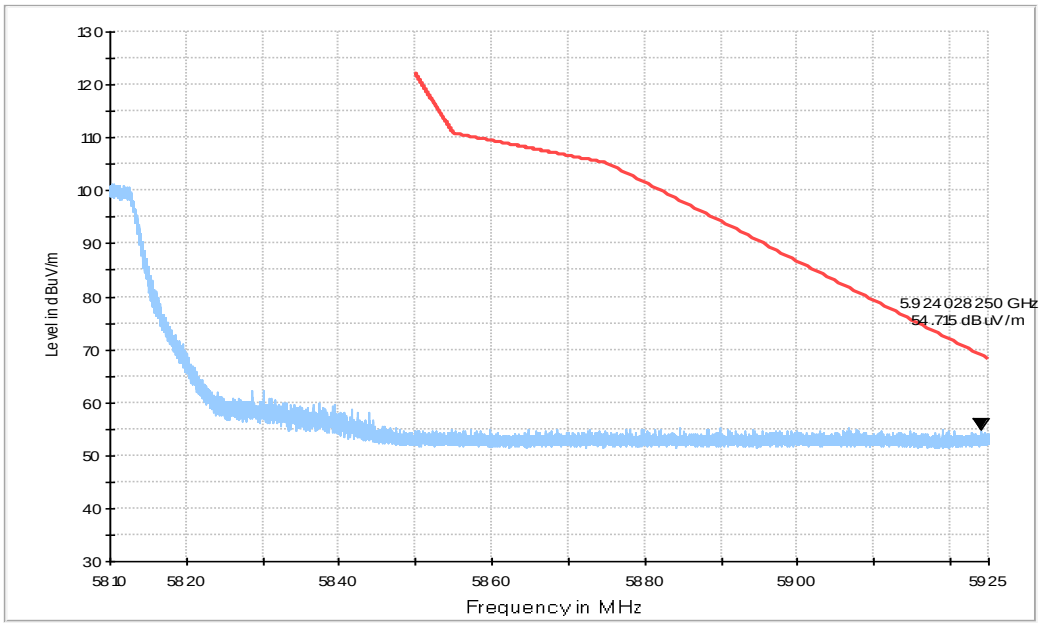


Fig. 28 Band Edges (802.11ac-HT40,CH159, 5795MHz)

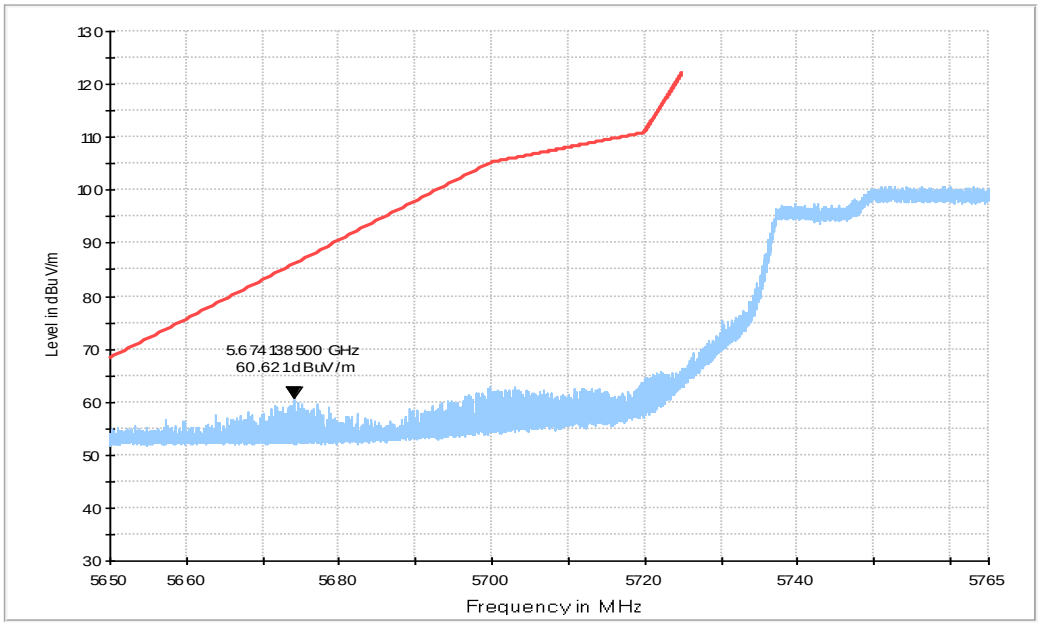


Fig. 29 Band Edges (802.11ac-HT80, CH155, 5775MHz)

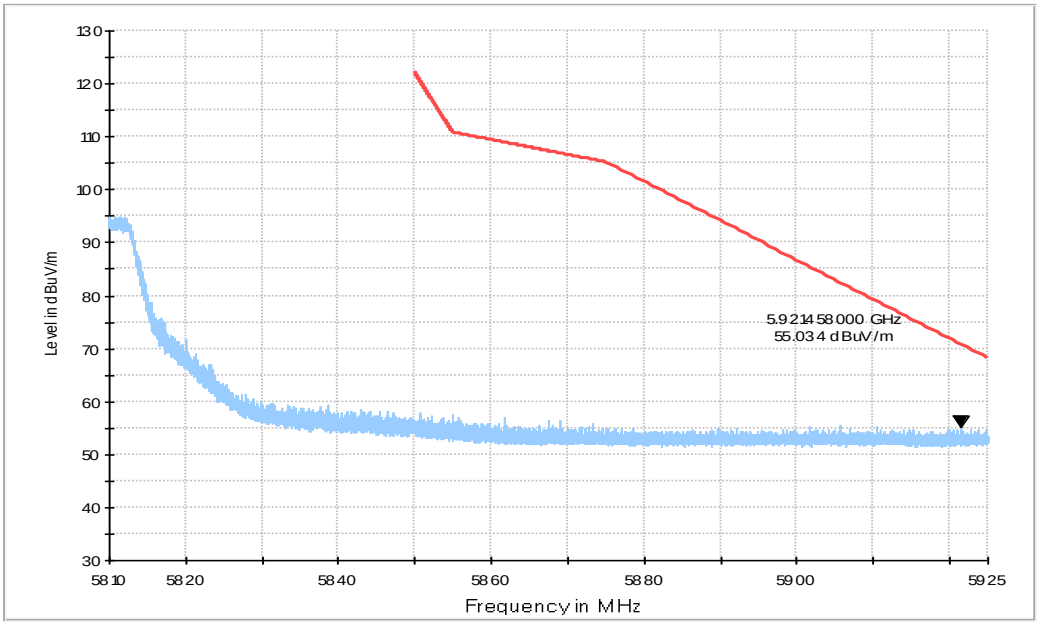


Fig. 30 Band Edges (802.11ac-HT80, CH155, 5775MHz)

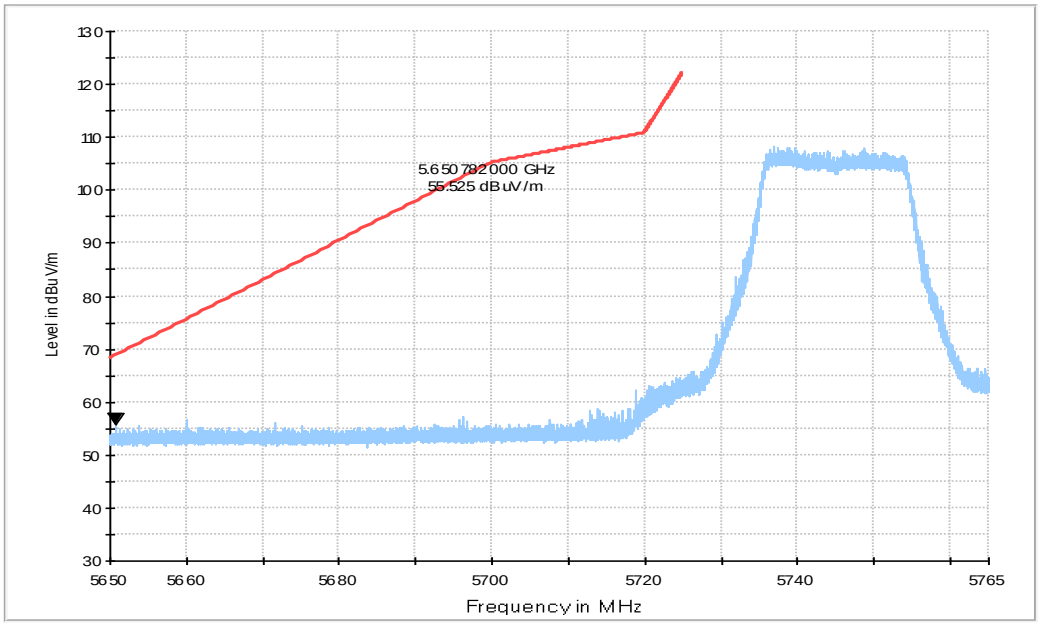


Fig. 31 Band Edges (802.11ax-HT20, CH149, 5745MHz)

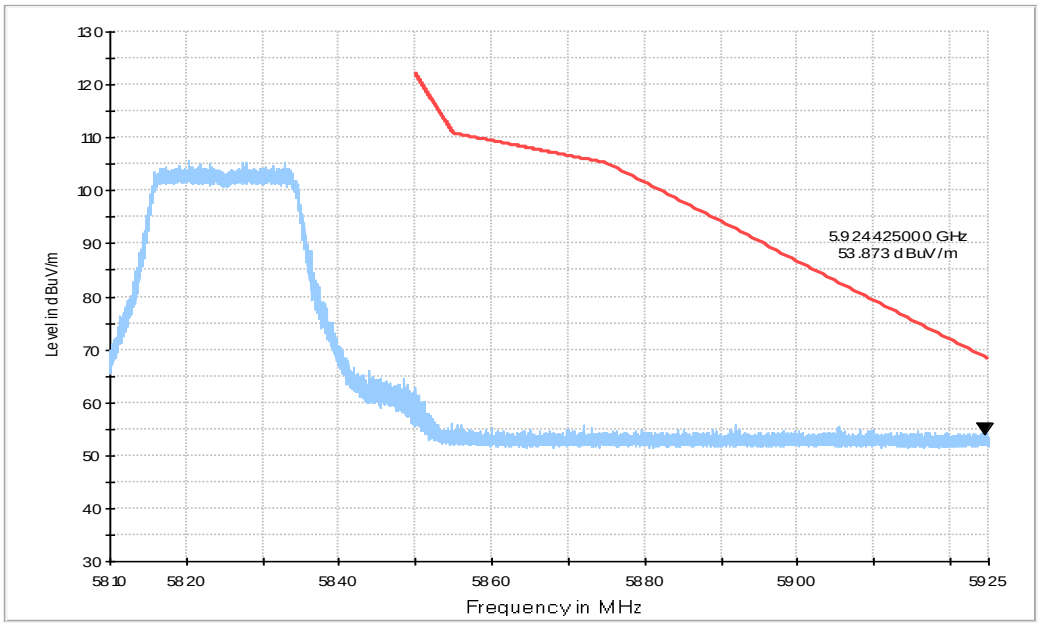


Fig. 32 Band Edges (802.11ax-HT20, CH165, 5825MHz)

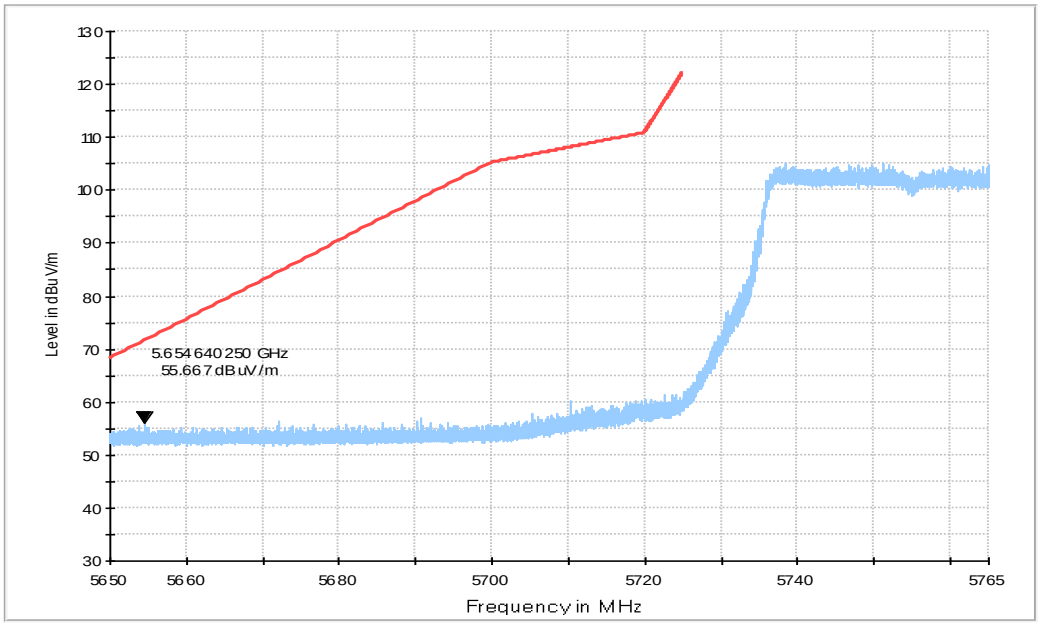


Fig. 33 Band Edges (802.11ax-HT40,CH151, 5755MHz)

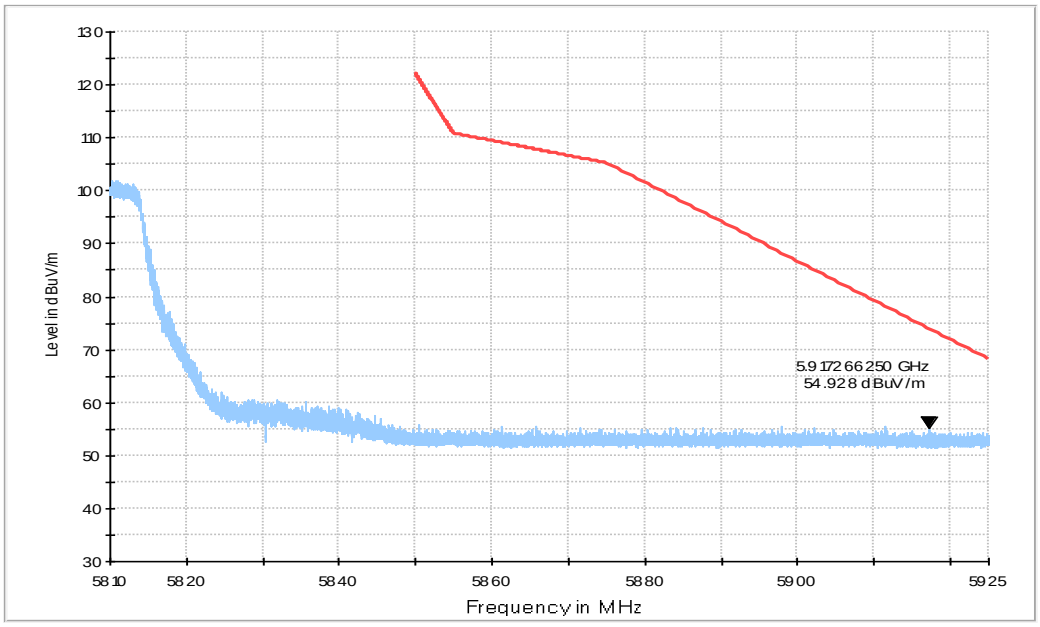


Fig. 34 Band Edges (802.11ax-HT40,CH159, 5795MHz)

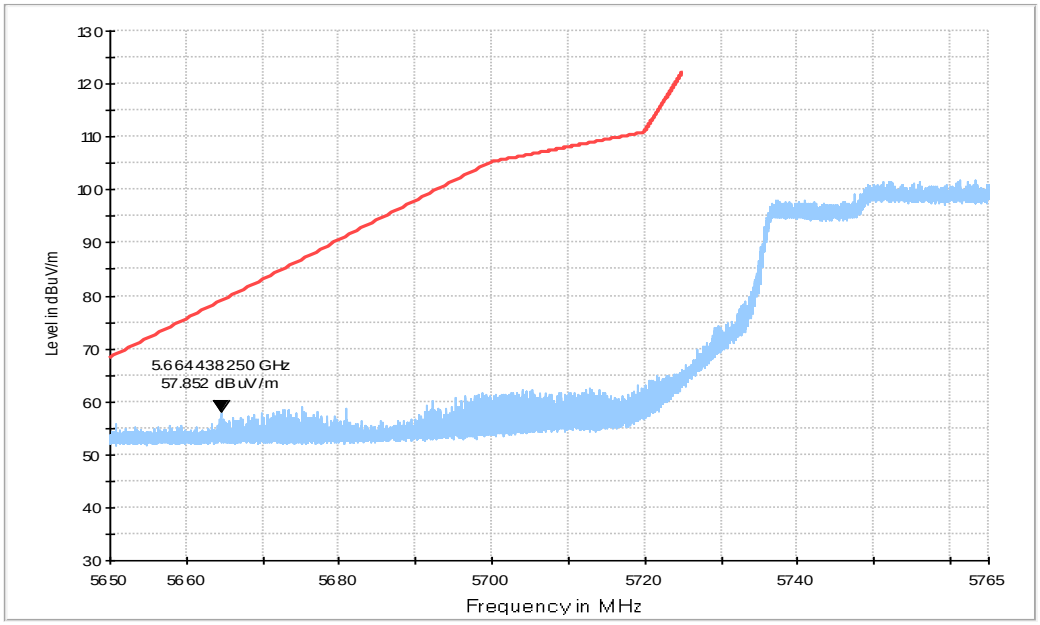


Fig. 35 Band Edges (802.11ax-HT80, CH155, 5775MHz)

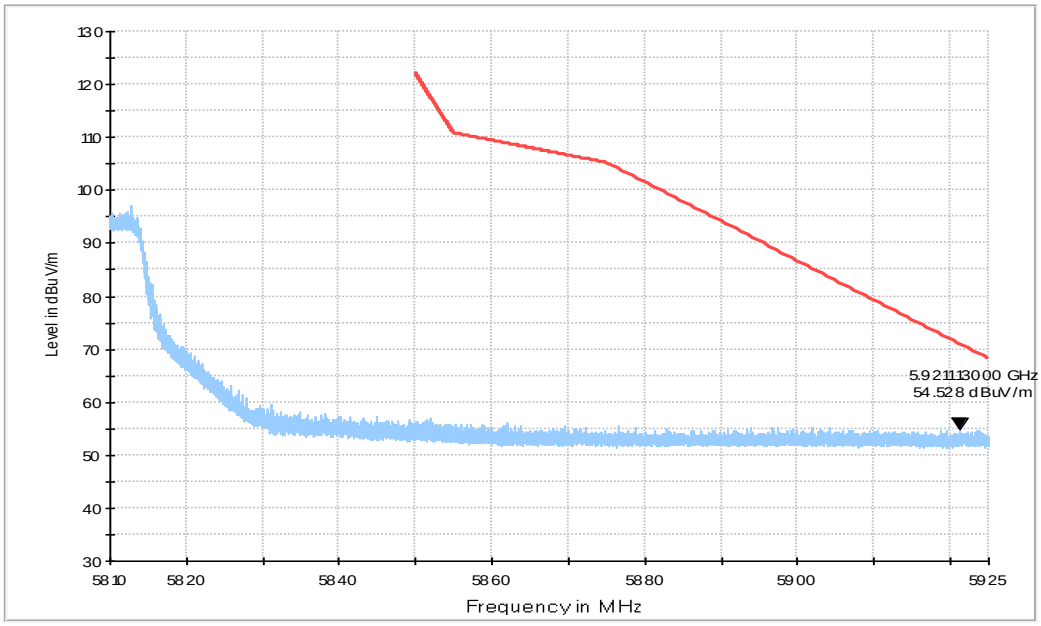


Fig. 36 Band Edges (802.11ax-HT80, CH155, 5775MHz)

C.2. AC Power-line Conducted Emission

Reference

FCC 47 CFR Part 15, Clause 15.407, Clause 15.207

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.

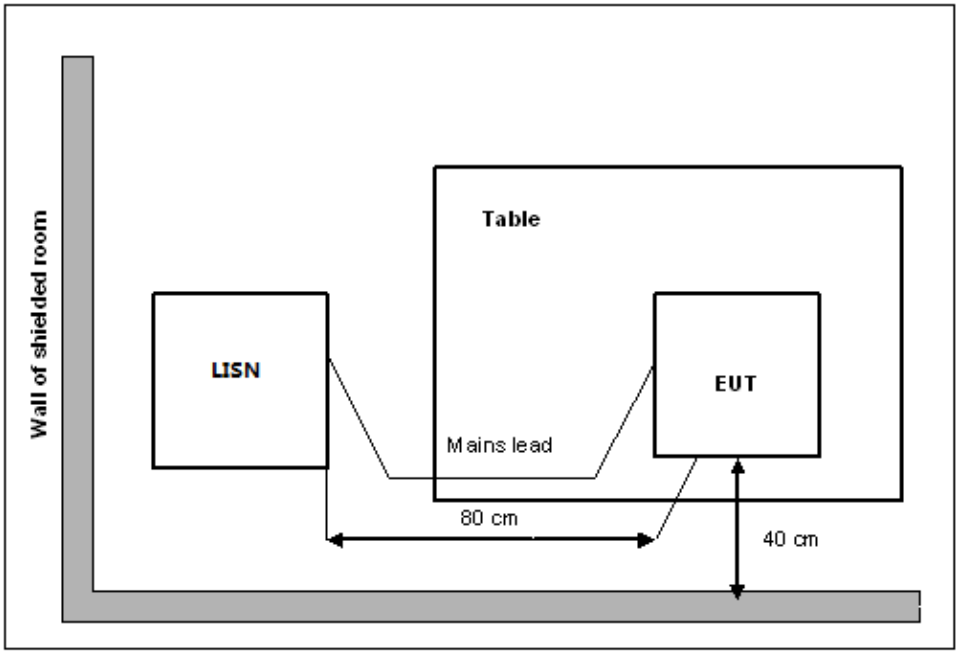
The measurement bandwidth is:

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 transmit 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		
		802.11a	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		
		802.11a	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:

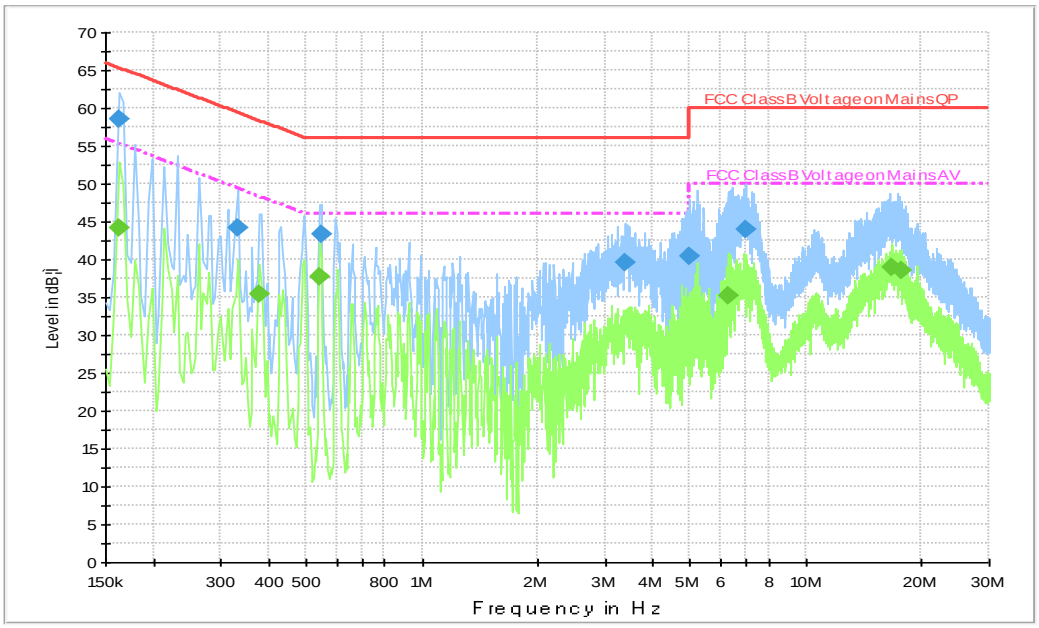


Fig.C.2.1 AC Power line Conducted Emission-802.11a

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)
0.162000	58.6	5000.0	9.000	L1	19.8	6.8	65.4
0.330000	44.2	5000.0	9.000	L1	19.7	15.3	59.5
0.546000	43.3	5000.0	9.000	N	19.7	12.7	56.0
3.390000	39.6	5000.0	9.000	N	19.6	16.4	56.0
4.974000	40.4	5000.0	9.000	N	19.6	15.6	56.0
6.970000	44.0	5000.0	9.000	N	19.6	16.0	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.162000	44.2	5000.0	9.000	L1	19.8	11.2	55.4
0.378000	35.5	5000.0	9.000	N	19.7	12.8	48.3
0.542000	37.8	5000.0	9.000	L1	19.7	8.2	46.0
6.302000	35.2	5000.0	9.000	N	19.6	14.8	50.0
16.806000	39.0	5000.0	9.000	N	19.7	11.0	50.0
17.698000	38.6	5000.0	9.000	N	19.7	11.4	50.0

Idle:

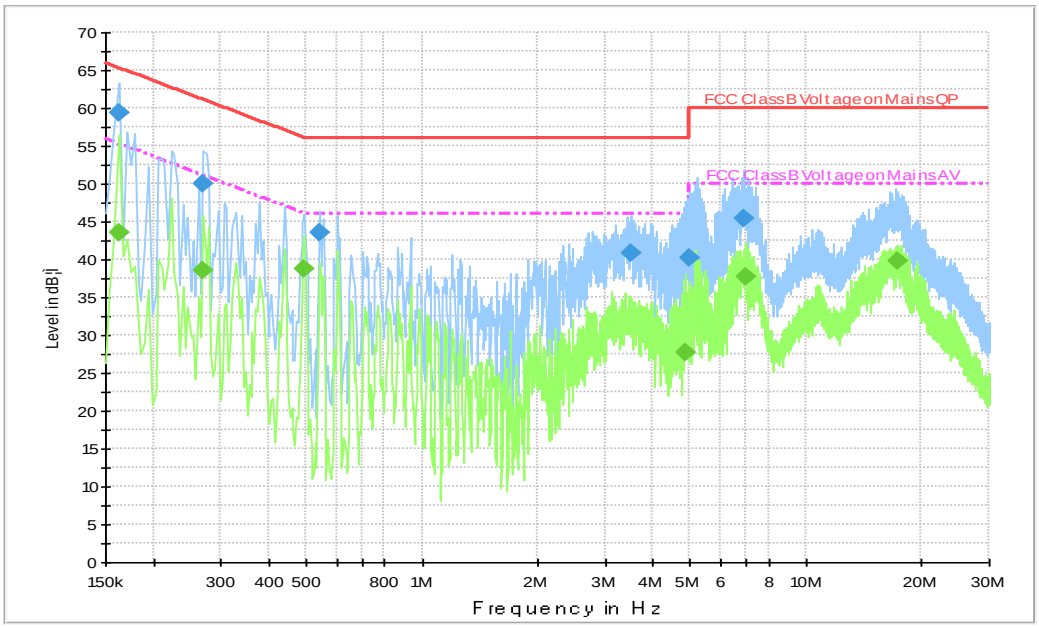


Fig.C.2.2 AC Power line Conducted Emission-Idle

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)
0.162000	59.3	5000.0	9.000	L1	19.8	6.1	65.4
0.270000	50.0	5000.0	9.000	N	19.7	11.1	61.1
0.542000	43.6	5000.0	9.000	L1	19.7	12.4	56.0
3.518000	40.8	5000.0	9.000	L1	19.6	15.2	56.0
4.998000	40.1	5000.0	9.000	L1	19.6	15.9	56.0
6.902000	45.3	5000.0	9.000	L1	19.6	14.7	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.162000	43.6	5000.0	9.000	L1	19.8	11.8	55.4
0.270000	38.5	5000.0	9.000	N	19.7	12.7	51.1
0.494000	38.8	5000.0	9.000	L1	19.7	7.3	46.1
4.838000	27.8	5000.0	9.000	L1	19.6	18.2	46.0
6.994000	37.7	5000.0	9.000	L1	19.6	12.3	50.0
17.386000	39.7	5000.0	9.000	L1	19.7	10.3	50.0

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