



FCC PART 15C TEST REPORT No.I22Z61813-IOT05

for

Honor Device Co., Ltd.

Smart Phone

RMO-NX3

With

FCC ID: 2AYGCRMO-NX3

Hardware Version: HN2RMOM

Software Version: 6.1.0.21(C900E21R1P1)

Issued Date: 2022-11-04

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: ctl_terminals@caict.ac.cn, website: www.caict.ac.cn



No.I22Z61813-IOT05

REPORT HISTORY

Report Number	Revision	Description	Issue Date
I22Z61813-IOT05	Rev.0	1st edition	2022-11-04



CONTENTS

CONTENTS	3
1. TEST LATORATORY.....	5
1.1. INTRODUCTION & ACCREDITATION	5
1.2. TESTING LOCATION	5
1.3. TESTING ENVIRONMENT	5
1.4. PROJECT DATE	5
1.5. SIGNATURE	5
2. CLIENT INFORMATION.....	6
2.1. APPLICANT INFORMATION	6
2.2. MANUFACTURER INFORMATION	6
3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT(AE)	7
3.1. ABOUT EUT	7
3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST	7
3.3. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST	7
3.4. GENERAL DESCRIPTION.....	8
4. REFERENCE DOCUMENTS	9
4.1. DOCUMENTS SUPPLIED BY APPLICANT	9
4.2. REFERENCE DOCUMENTS FOR TESTING.....	9
5. LABORATORY ENVIRONMENT.....	9
6. SUMMARY OF TEST RESULTS	10
6.1. SUMMARY OF TEST RESULTS	10
6.2. STATEMENTS.....	10
6.3. TEST CONDITIONS	10
7. TEST EQUIPMENTS UTILIZED	11
8. MEASUREMENT UNCERTAINTY	12
8.1. TRANSMITTER OUTPUT POWER	12
8.2. PEAK POWER SPECTRAL DENSITY	12
8.3. OCCUPIED 6DB BANDWIDTH.....	12
8.4. BAND EDGES COMPLIANCE	12
8.5. SPURIOUS EMISSIONS	12
8.6. AC POWER-LINE CONDUCTED EMISSION	12
ANNEX A: MEASUREMENT RESULTS.....	13
A.1. MEASUREMENT METHOD	13
A.2. MAXIMUM PEAK OUTPUT POWER	14
A.2.1 ANTENNA GAIN	14
A.2.2. MAXIMUM AVERAGE OUTPUT POWER-CONDUCTED	14



No.I22Z61813-IOT05

A.3. PEAK POWER SPECTRAL DENSITY	16
A.4. OCCUPIED 6DB BANDWIDTH	17
A.5. TRANSMITTER SPURIOUS EMISSION	22
A.5.1 TRANSMITTER SPURIOUS EMISSION - RADIATED	22
A.6. BAND EDGES COMPLIANCE	35
A6.1 BAND EDGES - RADIATED	35
A.7. AC POWERLINE CONDUCTED EMISSION	42
A.8. FREQUENCY STABILITY	51
ANNEX B: EUT PARAMETERS.....	51
ANNEX C: ACCREDITATION CERTIFICATE	52



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

Conducted testing Location: CTTL(huayuan North Road)

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

Radiated testing Location: CTTL(huayuan North Road)

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

1.3. Testing Environment

Normal Temperature: 15-35°C

Relative Humidity: 20-75%

1.4. Project date

Testing Start Date: 2022-10-09

Testing End Date: 2022-11-04

1.5. Signature

Xie Xiuzhen

(Prepared this test report)

Zheng Wei

(Reviewed this test report)

Pang Shuai

(Approved this test report)



2. CLIENT INFORMATION

2.1. Applicant Information

Company Name: Honor Device Co., Ltd.
Address: Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China
City: Shenzhen
Country: China
Telephone: /
Fax: /

2.2. Manufacturer Information

Company Name: Honor Device Co., Ltd.
Address: Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China
City: Shenzhen
Country: China
Telephone: /
Fax: /

3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY

EQUIPMENT(AE)

3.1. About EUT

Description	Smart Phone
Model name	RMO-NX3
FCC ID	2AYGCRMO-NX3
WLAN Frequency Band	ISM Band: 5725MHz~5850MHz
Type of modulation	OFDM
Voltage	3.87V
antenna gain	0dBi

3.2. Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version
UT07a	869123060002698/ 869123060006962	HN2RMOM	6.1.0.21(C900E21R1P1)
UT35a	869123060003308	HN2RMOM	6.1.0.21(C900E21R1P1)
UT22a	869123060004322/ 869123060008596	HN2RMOM	6.1.0.21(C900E21R1P1)
UT25a	869123060003670/ 869123060007945	HN2RMOM	6.1.0.21(C900E21R1P1)
UT26a	869123060004835/ 869123060009107	HN2RMOM	6.1.0.21(C900E21R1P1)

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

UT07a/35a is used for Conduction test, UT22a/25a/26a are used for Radiation test.

3.3. Internal Identification of AE used during the test

AE ID*	Name	Model	Manufacturer
AE1-1	Adapter	HW-100400E01	Honor Device Co., Ltd.
AE1-2	Adapter	HW-100400B01	Honor Device Co., Ltd.
AE1-3	Adapter	HW-100400U01	Honor Device Co., Ltd.
AE2-1	USB Cable	WA0052	Broad
AE2-2	USB Cable	CUDU01B-HC385-EH	FOXCONN
AE2-3	USB Cable	L99UC144-CS-H	LUXSHARE
AE2-4	USB Cable	AU2-CRO009HF	Freeport
AE2-5	USB Cable	2120-00062-0	MING JI
AE2-6	USB Cable	2120-00060-0	MING JI
AE2-7	USB Cable	L99UC139-CS-H	LUXSHARE
AE3-1	Headset	1293-3283-3.5mm-339	Quancheng
AE3-2	Headset	EPAB542-2WH05-DH	FOXCONN
AE3-3	Headset	MEND1532B528C00	Lianchuang



AE4-1	Battery	HB506492EFW	Honor Device Co., Ltd. (Sunwoda)
AE4-2	Battery	HB506492EFW	Honor Device Co., Ltd. (Desay)
AE4-3	Battery	HB506492EFW	Honor Device Co., Ltd. (CosMX)
AE5-1	Type-C to 3.5mm	USB042020090AW7	LC
AE5-2	Type-C to 3.5mm	6001-7001-TC-348	QC

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

3.4. General Description

Equipment Under Test (EUT) is a model of Smart Phone with integrated antenna. It consists of normal options: Battery and Charger.

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

Samples undergoing test were selected by the Client.

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.

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	2021
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	2013
UNII: KDB 789033 D02	General U-NII Test Procedures New Rules v02r01	2017-12

5. LABORATORY ENVIRONMENT

Conducted RF performance testing is performed in shielding room.

EMC performance testing is performed in Semi-anechoic chamber.

6. SUMMARY OF TEST RESULTS

6.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15C	Sub-clause of IC	Verdict
Maximum Peak Output Power	15.407 (a)	/	P
Peak Power Spectral Density	15.407 (a)	/	P
Occupied 6dB Bandwidth	15.407 (e)	/	P
Band Edges Compliance - Conducted& Radiated	15.407 (b)	/	P
Transmitter Spurious Emission - Conducted	15.407	/	P
Transmitter Spurious Emission - Radiated	15.407, 15.205, 15.209	/	P
AC Powerline Conducted Emission	15.107, 15.207	/	P

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

Terms used in Verdict column

P	Pass, The EUT complies with the essential requirements in the standard.
NM	Not measured, The test was not measured by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

6.2. Statements

CTTL has evaluated the test cases requested by the client/matrix manufacturer as listed in section 6.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.1.

This report only deals with the WLAN function among the features described in section 3.

6.3. Test Conditions

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

Temperature	26°C
Voltage	3.87V
Humidity	44%

7. TEST EQUIPMENTS UTILIZED

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	1 year	2023-05-15
2	Test Receiver	ESCI	100344	Rohde & Schwarz	1 year	2023-03-21
3	LISN	ENV216	101200	Rohde & Schwarz	1 year	2023-06-29
4	Shielding Room	S81	/	ETS-Lindgren	/	/

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESW44	103015	Rohde & Schwarz	1 year	2023-01-23
2	BiLog Antenna	VULB9163	01223	Schwarzbeck	1 year	2023-07-25
3	Dual-Ridge Waveguide Horn Antenna	3116	2661	ETS-Lindgren	1 year	2023-02-08
4	EMI Antenna	3115	00167250	ETS-Lindgren	1 year	2023-06-20
5	Antenna	HFH2-Z2	829324/007	Rohde & Schwarz	1 year	2022-12-22

8. Measurement Uncertainty

8.1. Transmitter Output Power

Measurement Uncertainty: 0.387dB,k=1.96

8.2. Peak Power Spectral Density

Measurement Uncertainty: 0.705dB,k=1.96

8.3. Occupied 6dB Bandwidth

Measurement Uncertainty: 60.80Hz,k=1.96

8.4. Band Edges Compliance

Measurement Uncertainty : 0.62dB,k=1.96

8.5. Spurious Emissions

Conducted (k=1.96)

Frequency Range	Uncertainty(dB)
$30\text{MHz} \leq f \leq 2\text{GHz}$	1.22
$2\text{GHz} \leq f \leq 3.6\text{GHz}$	1.22
$3.6\text{GHz} \leq f \leq 8\text{GHz}$	1.22
$8\text{GHz} \leq f \leq 12.75\text{GHz}$	1.51
$12.75\text{GHz} \leq f \leq 26\text{GHz}$	1.51
$26\text{GHz} \leq f \leq 40\text{GHz}$	1.59

Radiated (k=2)

Frequency Range	Uncertainty(dB)
9kHz-30MHz	4.92
$30\text{MHz} \leq f \leq 1\text{GHz}$	5.18
$1\text{GHz} \leq f \leq 18\text{GHz}$	5.54
$18\text{GHz} \leq f \leq 40\text{GHz}$	5.26

8.6. AC Power-line Conducted Emission

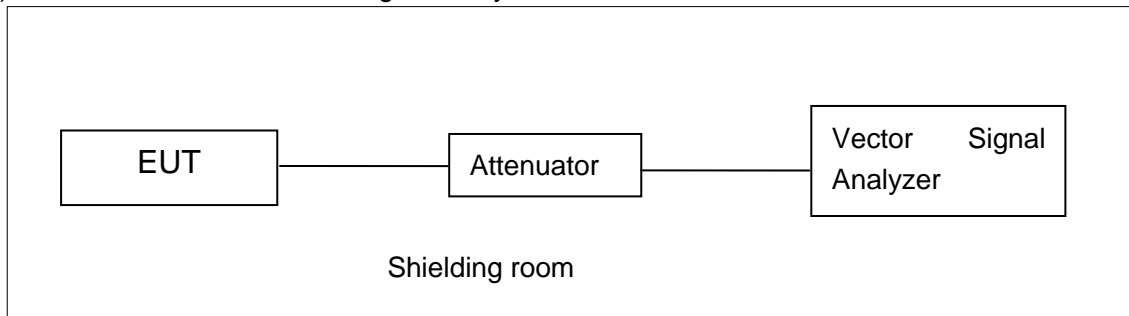
Measurement Uncertainty : 3.08dB,k=2

ANNEX A: MEASUREMENT RESULTS

A.1. Measurement Method

A.1.1. Conducted Measurements

- 1). Connect the EUT to the test system correctly.
- 2). Set the EUT to the required work mode.
- 3). Set the EUT to the required channel.
- 4). Set the spectrum analyzer to start measurement.
- 5). Record the values. Vector Signal Analyzer

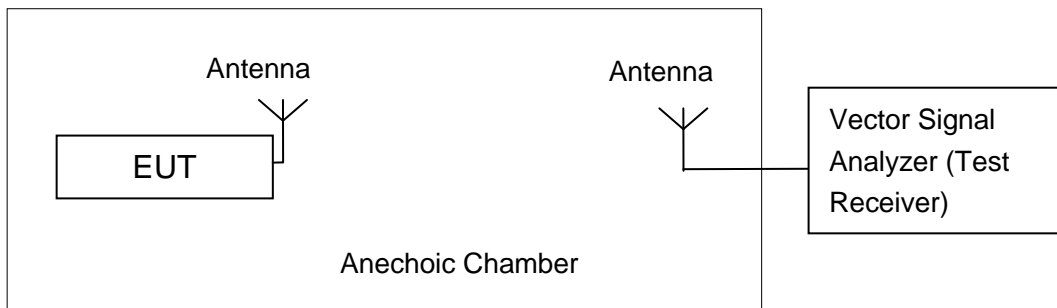


A.1.2. Radiated Emission Measurements

In the case of radiated emission, the used settings are as follows,

Sweep frequency from 30 MHz to 1GHz, RBW = 100 kHz, VBW = 300 kHz;

Sweep frequency from 1 GHz to 26GHz, RBW = 1MHz, VBW = 10Hz;



The measurement is made according to ANSI C63.10.

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.

A.2. Maximum Peak Output Power

Measurement Limit and Method:

Standard	Limit (dBm)
FCC CRF Part 15.407(a)	< 30

A.2.1 Antenna Gain

Antenna gain is 0dBi and the value is supplied by the applicant or manufacturer.

A.2.2. Maximum Average Output Power-Conducted

Measurement Results:

802.11a mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11a	6	14.62	13.59	14.21

The data rate 6Mbps is selected as worst condition, and the following cases are performed with this condition.

802.11n-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11n (20MHz)	MCS0	14.44	13.44	14.05

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

802.11ac-VHT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ac (20MHz)	MCS0	14.47	13.47	14.02

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

802.11n-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11n (40MHz)	MCS0	14.82	14.03

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

802.11ac-VHT40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11ac (40MHz)	MCS0	14.84	13.99

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

802.11ac-VHT80 mode

Mode	Data Rate (Index)	Test Result (dBm)
		5775MHz (Ch155)
802.11ac (80MHz)	MCS0	14.25

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

Duty Cycle

Mode	802.11a	802.11n20	802.11n40	802.11ac20	802.11ac40	802.11ac80
Duty Cycle	98%	98%	98%	98%	98%	98%

Conclusion: PASS

A.3. Peak Power Spectral Density

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407(a)	< 30 dBm/500 kHz

The measurement is made according to ANSI C63.10 and KDB789033 D02

Measurement Uncertainty:

Measurement Uncertainty	0.75dB
-------------------------	--------

Measurement Results:

Mode	Channel	Power Spectral Density (dBm/500kHz)	Conclusion
802.11a	149	1.64	P
	157	1.16	P
	165	0.87	P
802.11ac VHT20	149	1.30	P
	157	0.77	P
	165	0.48	P
802.11ac VHT40	151	-1.47	P
	159	-1.98	P
802.11ac VHT80	155	-5.15	P

Conclusion: PASS

A.4. Occupied 6dB Bandwidth

Measurement Limit:

Standard	Limit (kHz)
FCC 47 CFR Part 15.407 (e)	≥ 500

The measurement is made according to KDB789033 D02 .

Measurement Uncertainty:

Measurement Uncertainty	60.80Hz
-------------------------	---------

Measurement Result:

Mode	Channel	Occupied 6dB Bandwidth (MHz)		conclusion
802.11a	149	Fig.1	16.30	P
	157	Fig.2	16.30	P
	165	Fig.3	15.95	P
802.11ac VHT20	149	Fig.4	15.25	P
	157	Fig.5	17.55	P
	165	Fig.6	16.95	P
802.11ac VHT40	151	Fig.7	36.32	P
	159	Fig.8	36.32	P
802.11ac VHT80	155	Fig.9	71.36	P

Conclusion: PASS

Test graphs as below:

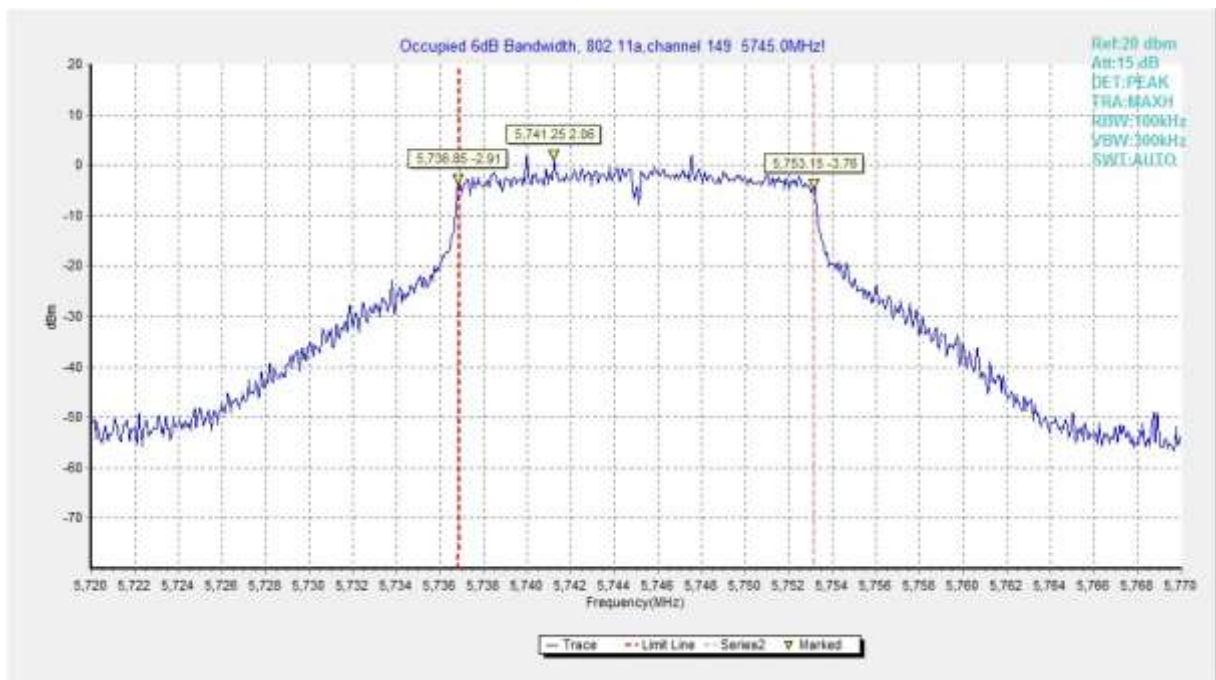


Fig. 1 Occupied 6dB Bandwidth (802.11a, Ch 149)



Fig. 2 Occupied 6dB Bandwidth (802.11a, Ch 157)

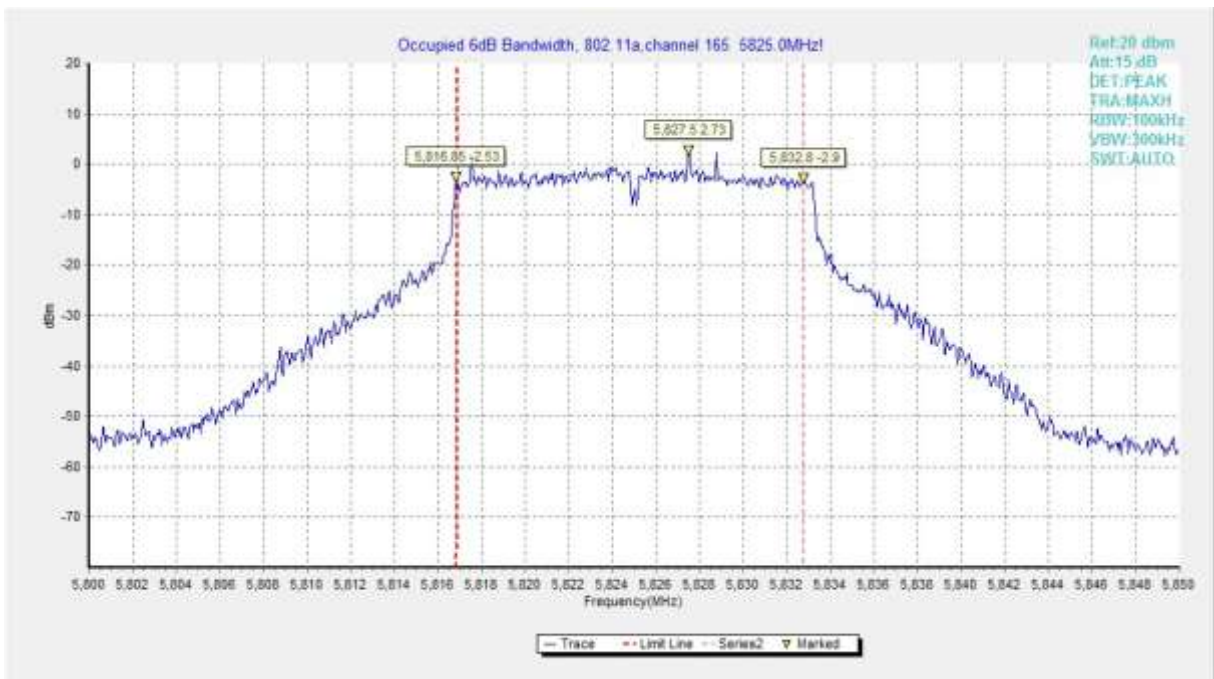


Fig. 3 Occupied 6dB Bandwidth (802.11a, Ch 165)

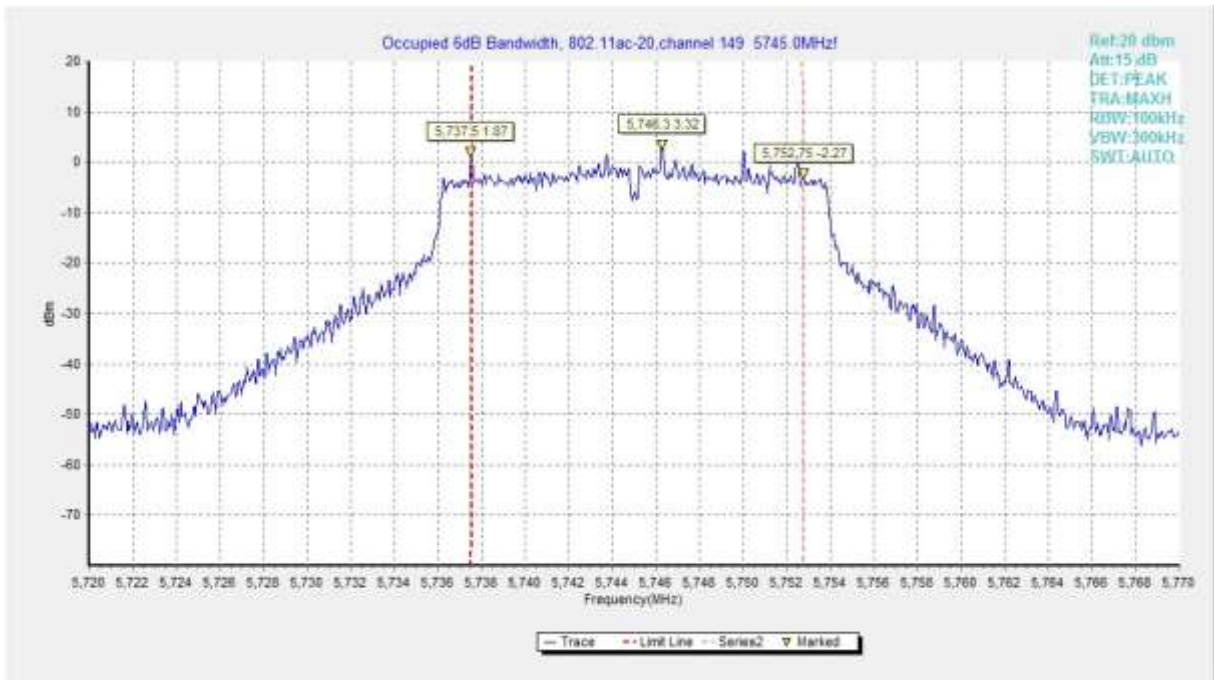


Fig. 4 Occupied 6dB Bandwidth (802.11ac-VHT20, Ch 149)

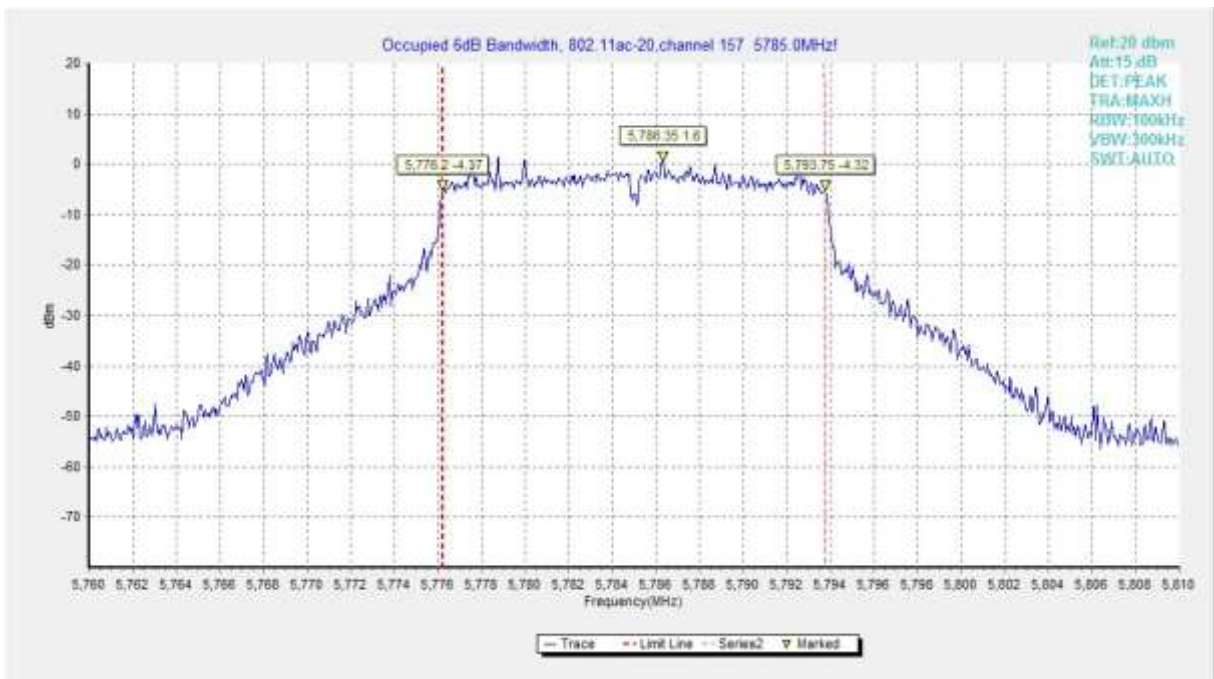


Fig. 5 Occupied 6dB Bandwidth (802.11ac-VHT20, Ch 157)

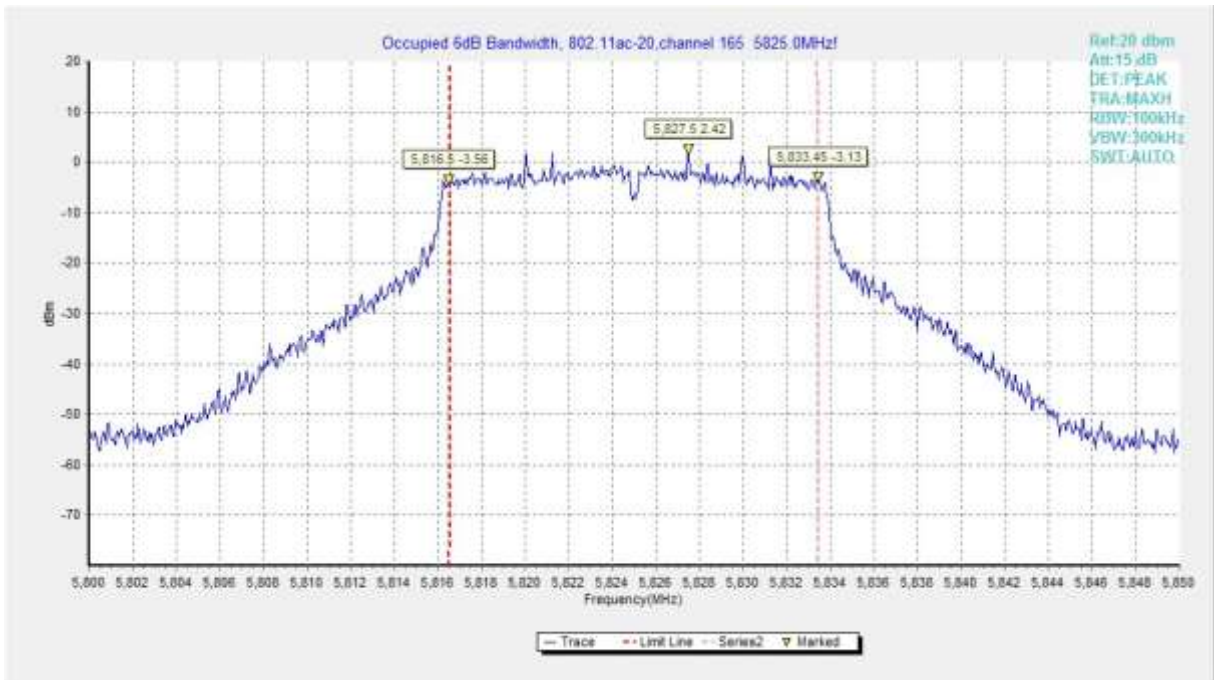


Fig. 6 Occupied 6dB Bandwidth (802.11ac-VHT20, Ch 165)

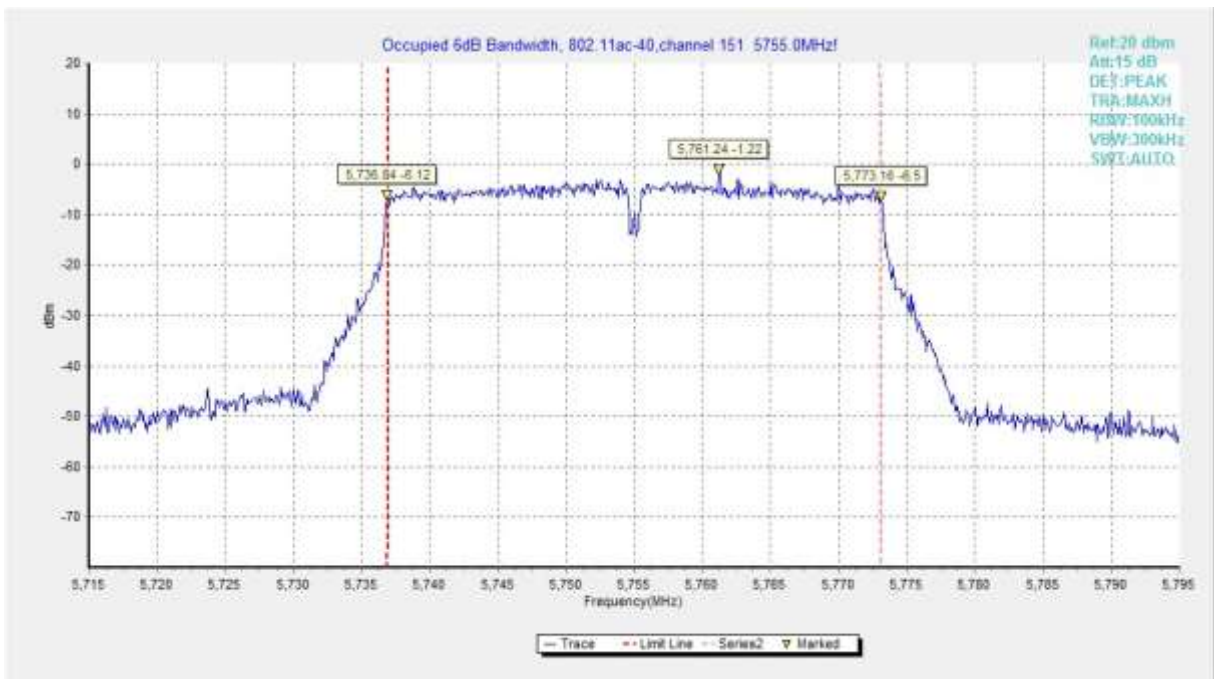


Fig. 7 Occupied 6Db Bandwidth (802.11ac-VHT40, Ch 151)

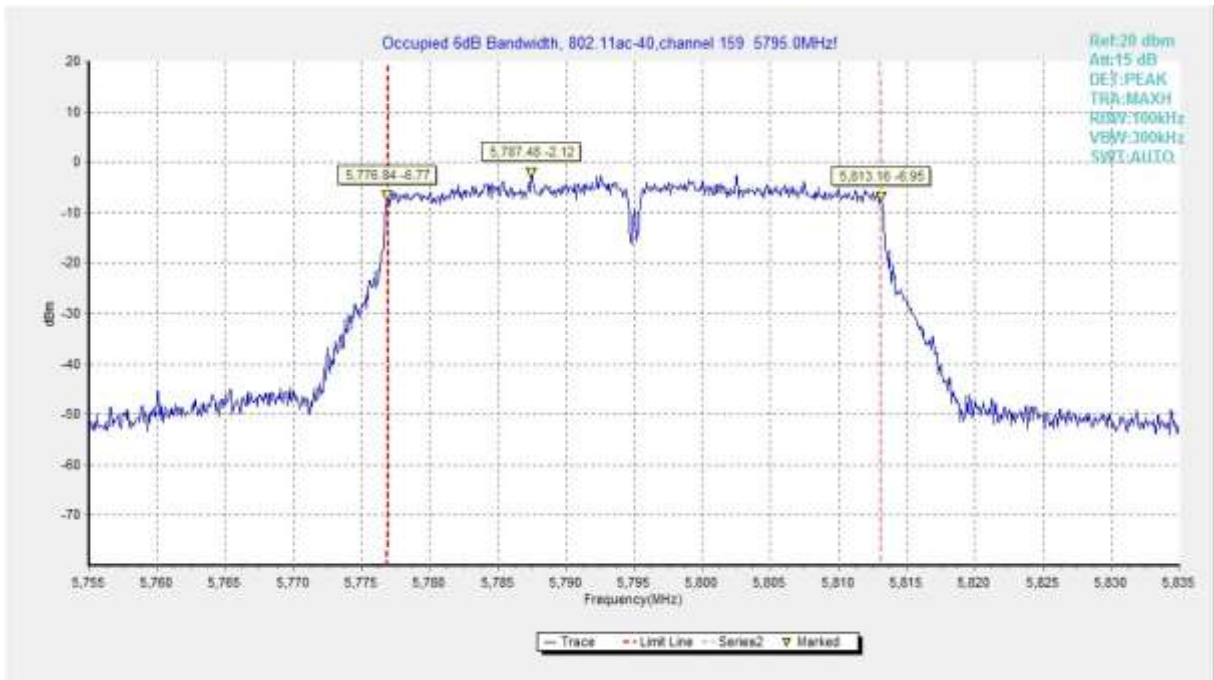


Fig. 8 Occupied 6dB Bandwidth (802.11ac-VHT40, Ch 159)

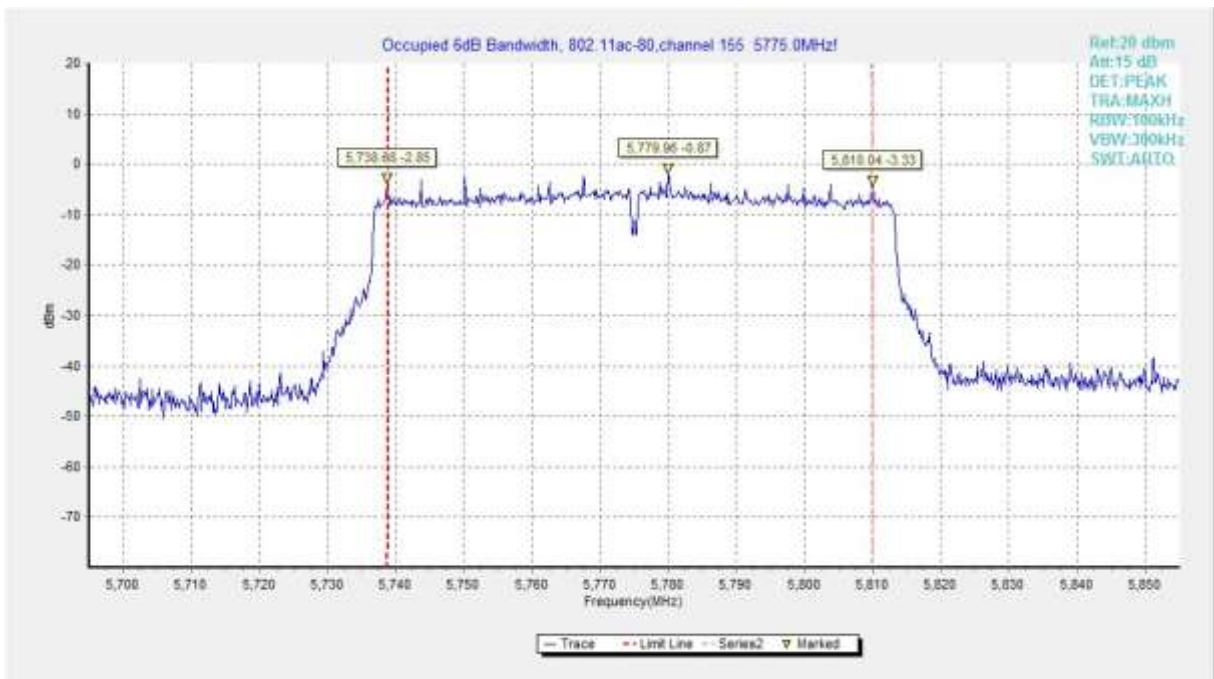


Fig. 9 Occupied 6dB Bandwidth (802.11ac-VHT80, Ch 155)

A.5. Transmitter Spurious Emission

Measurement Limit:

Standard	Frequency (MHz)	Limit (dBm/MHz)
FCC 47 CFR Part 15.407	5725MHz~5850MHz	< -27

The measurement is made according to ANSI C63.10 .

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)).

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

Measurement Uncertainty:

Frequency Range	Uncertainty(dB)
30MHz ≤ f ≤ 2GHz	0.63
2GHz ≤ f ≤ 3.6GHz	0.82
3.6GHz ≤ f ≤ 8GHz	1.55
8GHz ≤ f ≤ 20GHz	1.86
20GHz ≤ f ≤ 22GHz	1.90
22GHz ≤ f ≤ 26GHz	2.20

A.5.1 Transmitter Spurious Emission - Radiated

Measurement Limit:

Standard	Frequency (MHz)	Limit (dBm/MHz)
FCC 47 CFR Part 15.407	5725MHz~5850MHz	< -27

The measurement is made according to ANSI C63.10 .

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Limit in restricted band:

Frequency of emission (MHz)	Field strength (uV/m)	Field strength (dBμV/m)	Measurement distance(m)
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

Measurement Results:

Note:

A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss", and

including the gain of receive antenna, the gain of the preamplifier, the cable loss.

P_{Mea} is the field strength recorded from the instrument.

Conclusion: PASS

EUT ID: UT22a + AE2-1 + AE1-3

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)
17957.100	40.28	-25.50	46.66	19.12	54.00	13.72	V
17910.350	40.16	-25.50	46.66	19.00	54.00	13.84	V
14482.200	37.92	-28.59	42.46	24.05	54.00	16.08	H
14490.450	37.52	-28.59	42.46	23.65	54.00	16.48	H
11869.150	36.57	-31.85	39.05	29.37	54.00	17.43	V
11794.900	36.54	-31.99	38.98	29.55	54.00	17.46	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)
17936.200	40.33	-25.50	46.66	19.17	54.00	13.67	V
17920.800	40.21	-25.50	46.66	19.05	54.00	13.79	V
14478.350	37.54	-28.59	42.46	23.67	54.00	16.46	V
14475.600	37.34	-28.59	42.46	23.47	54.00	16.66	V
11805.350	36.47	-31.85	39.05	29.27	54.00	17.53	V
11868.600	36.38	-31.85	39.05	29.18	54.00	17.62	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)
17954.350	40.10	-25.50	46.66	18.94	54.00	13.90	V
17962.050	40.10	-25.50	46.66	18.94	54.00	13.90	V
14486.050	37.59	-28.59	42.46	23.72	54.00	16.41	H
14498.150	37.37	-28.59	42.46	23.50	54.00	16.63	V
11787.750	36.45	-31.99	38.98	29.46	54.00	17.55	H
11864.750	36.30	-31.85	39.05	29.10	54.00	17.70	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)
17910.900	40.34	-25.50	46.66	19.18	54.00	13.66	H
17930.700	40.27	-25.50	46.66	19.11	54.00	13.73	V
14495.950	37.75	-28.59	42.46	23.88	54.00	16.25	V
14495.400	37.43	-28.59	42.46	23.56	54.00	16.57	H
11866.400	36.45	-31.85	39.05	29.25	54.00	17.55	V
11879.600	36.42	-31.85	39.05	29.22	54.00	17.58	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)
17946.650	40.49	-25.50	46.66	19.33	54.00	13.51	V
17910.900	40.42	-25.50	46.66	19.26	54.00	13.58	H
15980.950	37.21	-27.35	38.54	26.02	54.00	16.79	V
14477.250	37.17	-28.59	42.46	23.30	54.00	16.83	H
11841.650	36.31	-31.85	39.05	29.11	54.00	17.69	V
11883.450	36.17	-31.85	39.05	28.97	54.00	17.83	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)
17986.800	40.59	-25.50	46.66	19.43	54.00	13.41	V
17922.450	40.57	-25.50	46.66	19.41	54.00	13.43	H
15963.350	37.61	-27.35	38.54	26.42	54.00	16.39	H
16062.900	37.60	-26.77	38.93	25.44	54.00	16.40	V
10875.300	36.28	-32.33	38.59	30.02	54.00	17.72	V
11852.650	36.14	-31.85	39.05	28.94	54.00	17.86	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)
17913.100	40.44	-25.50	46.66	19.28	54.00	13.56	H
17927.400	40.31	-25.50	46.66	19.15	54.00	13.69	V
14486.050	37.54	-28.59	42.46	23.67	54.00	16.46	V
14472.300	37.50	-28.59	42.46	23.63	54.00	16.50	V
11775.650	36.52	-31.99	38.98	29.53	54.00	17.48	H
11792.150	36.47	-31.99	38.98	29.48	54.00	17.53	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)
17959.300	40.25	-25.50	46.66	19.09	54.00	13.75	H
17971.400	40.20	-25.50	46.66	19.04	54.00	13.80	V
13293.650	37.64	-29.49	39.71	27.42	54.00	16.36	H
14496.500	37.63	-28.59	42.46	23.76	54.00	16.37	V
11784.450	36.62	-31.99	38.98	29.63	54.00	17.38	V
11390.650	36.38	-32.42	38.79	30.01	54.00	17.62	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)
17926.850	40.36	-25.50	46.66	19.20	54.00	13.64	H
17965.900	40.02	-25.50	46.66	18.86	54.00	13.98	V
14489.350	37.64	-28.59	42.46	23.77	54.00	16.36	H
14489.900	37.46	-28.59	42.46	23.59	54.00	16.54	H
11789.400	36.48	-31.99	38.98	29.49	54.00	17.52	V
11793.250	36.42	-31.99	38.98	29.43	54.00	17.58	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)
17934.000	40.66	-25.50	46.66	19.50	54.00	13.34	V
17924.100	40.44	-25.50	46.66	19.28	54.00	13.56	H
14494.300	37.27	-28.59	42.46	23.40	54.00	16.73	H
13309.600	37.25	-29.49	39.71	27.03	54.00	16.75	V
11785.550	36.16	-31.99	38.98	29.17	54.00	17.84	V
11789.950	36.00	-31.99	38.98	29.01	54.00	18.00	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)
17971.400	41.07	-25.50	46.66	19.91	54.00	12.93	V
17924.100	40.71	-25.50	46.66	19.55	54.00	13.29	H
16084.350	37.69	-26.77	38.93	25.53	54.00	16.31	V
14494.850	37.57	-28.59	42.46	23.70	54.00	16.43	H
11874.100	36.01	-31.85	39.05	28.81	54.00	17.99	H
11809.200	35.98	-31.85	39.05	28.78	54.00	18.02	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)
17924.100	40.29	-25.50	46.66	19.13	54.00	13.71	V
17979.650	40.26	-25.50	46.66	19.10	54.00	13.74	V
14494.300	37.40	-28.59	42.46	23.53	54.00	16.60	V
13335.450	37.35	-29.49	39.71	27.13	54.00	16.65	V
11364.800	36.36	-32.42	38.79	29.99	54.00	17.64	H
11847.700	36.34	-31.85	39.05	29.14	54.00	17.66	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)
17985.700	40.76	-25.50	46.66	19.60	54.00	13.24	V
17951.600	40.55	-25.50	46.66	19.39	54.00	13.45	H
14499.250	37.38	-28.59	42.46	23.51	54.00	16.62	V
14480.550	37.31	-28.59	42.46	23.44	54.00	16.69	V
11865.300	36.47	-31.85	39.05	29.27	54.00	17.53	H
11791.050	36.29	-31.99	38.98	29.30	54.00	17.71	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)
17904.850	40.28	-25.50	46.66	19.12	54.00	13.72	V
17995.600	40.24	-25.50	46.66	19.08	54.00	13.76	H
14494.850	37.50	-28.59	42.46	23.63	54.00	16.50	V
14486.050	37.46	-28.59	42.46	23.59	54.00	16.54	H
11783.900	36.44	-31.99	38.98	29.45	54.00	17.56	H
11890.600	36.44	-31.85	39.05	29.24	54.00	17.56	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)
17362.000	51.40	-25.95	44.35	32.99	68.20	16.80	H
17453.300	51.25	-26.85	45.25	32.85	68.20	16.95	H
16846.100	50.99	-26.62	41.49	36.12	68.20	17.21	H
16832.900	50.65	-26.62	41.49	35.78	68.20	17.55	V
11797.100	47.53	-31.85	39.05	40.33	74.00	26.47	V
10842.850	47.51	-32.33	38.59	41.25	74.00	26.49	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)
17355.400	51.32	-25.95	44.35	32.91	68.20	16.88	H
17960.950	51.16	-25.50	46.66	30.00	74.00	22.84	V
16887.900	50.23	-26.32	42.36	34.18	68.20	17.97	V
16850.500	50.06	-26.62	41.49	35.19	68.20	18.14	H
11733.850	47.25	-31.99	38.98	40.26	74.00	26.75	H
11810.300	47.23	-31.85	39.05	40.03	74.00	26.77	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)
17549.550	51.76	-26.85	45.25	33.36	68.20	16.44	V
17965.900	51.51	-25.50	46.66	30.35	74.00	22.49	H
16875.250	50.64	-26.62	41.49	35.77	68.20	17.56	H
16870.850	50.40	-26.62	41.49	35.53	68.20	17.80	V
11784.450	47.58	-31.99	38.98	40.59	74.00	26.42	H
11390.650	47.03	-32.42	38.79	40.66	74.00	26.97	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)
17570.450	51.11	-25.74	45.95	30.90	68.20	17.09	H
17914.750	50.98	-25.50	46.66	29.82	74.00	23.02	H
16934.650	50.69	-26.32	42.36	34.64	68.20	17.51	V
16952.800	50.49	-26.32	42.36	34.44	68.20	17.71	V
11414.850	47.54	-32.42	38.79	41.17	74.00	26.46	H
8692.350	47.03	-34.42	38.00	43.44	68.20	21.17	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)
16856.000	51.15	-26.62	41.49	36.28	68.20	17.05	H
17948.850	51.02	-25.50	46.66	29.86	74.00	22.98	V
17947.200	50.98	-25.50	46.66	29.82	74.00	23.02	H
16872.500	50.47	-26.62	41.49	35.60	68.20	17.73	V
8606.000	46.61	-34.38	37.93	43.06	68.20	21.59	V
11113.450	46.59	-32.60	38.75	40.45	74.00	27.41	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)
17892.200	51.47	-25.50	46.66	30.31	74.00	22.53	V
17549.000	51.18	-26.85	45.25	32.78	68.20	17.02	V
16849.950	50.53	-26.62	41.49	35.66	68.20	17.67	V
16862.050	50.42	-26.62	41.49	35.55	68.20	17.78	H
11389.550	46.78	-32.42	38.79	40.41	74.00	27.22	H
11793.800	46.77	-31.99	38.98	39.78	74.00	27.23	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)
17337.800	51.38	-25.95	44.35	32.97	68.20	16.82	V
17452.750	51.21	-26.85	45.25	32.81	68.20	16.99	V
16888.450	51.11	-26.32	42.36	35.06	68.20	17.09	V
13694.600	50.52	-29.10	40.86	38.75	68.20	17.68	V
11251.500	47.01	-32.36	38.77	40.61	74.00	26.99	H
10461.700	46.81	-33.22	38.19	41.84	68.20	21.39	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)
17231.100	51.51	-25.95	44.35	33.10	68.20	16.69	V
17446.700	51.11	-26.85	45.25	32.71	68.20	17.09	V
16455.600	50.35	-26.96	39.82	37.49	68.20	17.85	H
16924.750	50.20	-26.32	42.36	34.15	68.20	18.00	H
11787.200	47.87	-31.99	38.98	40.88	74.00	26.13	H
11238.850	47.04	-32.36	38.77	40.64	74.00	26.96	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)
17817.950	50.86	-25.50	46.66	29.70	74.00	23.14	H
17588.600	50.70	-25.74	45.95	30.49	68.20	17.50	H
16835.100	50.36	-26.62	41.49	35.49	68.20	17.84	H
16714.650	50.30	-26.62	41.49	35.43	68.20	17.90	H
11719.550	47.48	-31.99	38.98	40.49	74.00	26.52	V
11708.000	47.15	-31.99	38.98	40.16	74.00	26.85	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)
17964.800	51.51	-25.50	46.66	30.35	74.00	22.49	H
17560.000	51.25	-26.85	45.25	32.85	68.20	16.95	V
16556.250	50.37	-26.87	40.65	36.59	68.20	17.83	V
16887.350	50.27	-26.32	42.36	34.22	68.20	17.93	V
11771.800	47.34	-31.99	38.98	40.35	74.00	26.66	V
11318.050	47.16	-32.36	38.77	40.76	74.00	26.84	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)
17967.000	51.50	-25.50	46.66	30.34	74.00	22.50	H
17255.850	51.31	-25.95	44.35	32.90	68.20	16.89	V
16753.700	51.02	-26.62	41.49	36.15	68.20	17.18	V
16788.900	50.65	-26.62	41.49	35.78	68.20	17.55	V
11880.150	46.84	-31.85	39.05	39.64	74.00	27.16	H
11803.150	46.74	-31.85	39.05	39.54	74.00	27.26	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)
17440.100	51.38	-26.85	45.25	32.98	68.20	16.82	V
17366.400	51.31	-25.95	44.35	32.90	68.20	16.89	H
16840.600	51.13	-26.62	41.49	36.26	68.20	17.07	V
16974.800	50.72	-26.32	42.36	34.67	68.20	17.48	H
11290.000	47.04	-32.36	38.77	40.64	74.00	26.96	H
11888.950	47.04	-31.85	39.05	39.84	74.00	26.96	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)
17608.950	51.12	-25.74	45.95	30.91	68.20	17.08	V
17925.750	50.98	-25.50	46.66	29.82	74.00	23.02	V
16838.400	50.31	-26.62	41.49	35.44	68.20	17.89	V
16994.050	49.94	-26.32	42.36	33.89	68.20	18.26	H
11878.500	47.18	-31.85	39.05	39.98	74.00	26.82	H
11804.800	47.14	-31.85	39.05	39.94	74.00	26.86	V

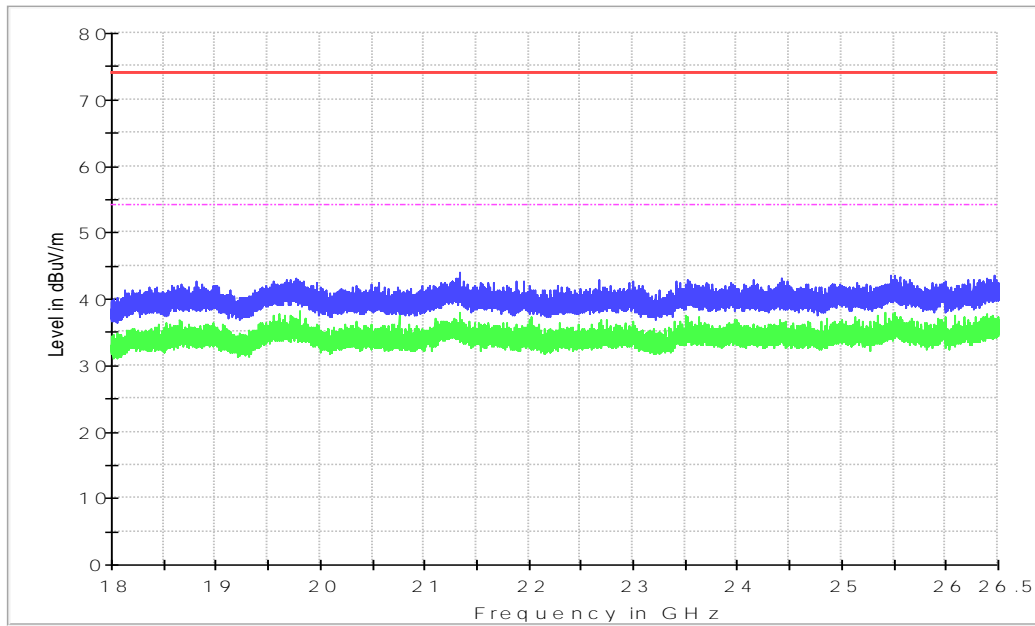
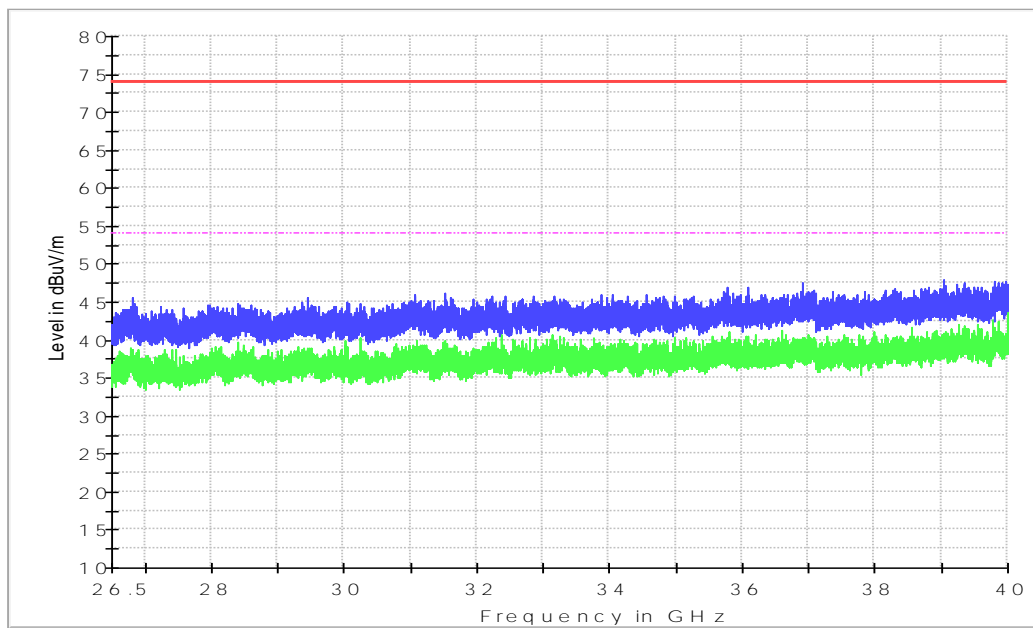
802.11ac-HT80

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)
17534.150	51.10	-26.85	45.25	32.70	68.20	17.10	V
17611.700	50.96	-25.74	45.95	30.75	68.20	17.24	V
16886.250	50.45	-26.32	42.36	34.40	68.20	17.75	V
16847.750	50.37	-26.62	41.49	35.50	68.20	17.83	V
11382.950	47.04	-32.42	38.79	40.67	74.00	26.96	H
11242.700	46.70	-32.36	38.77	40.30	74.00	27.30	H

Sample calculation: 17534.150MHz

$$\text{Peak ERP(dBm)} = P_{\text{Mea}}(32.70\text{dBuV/m}) + \text{Cable Loss}(-26.85) + \text{Antenna Factor}(45.25) = 51.10 \text{ dBuV/m}$$

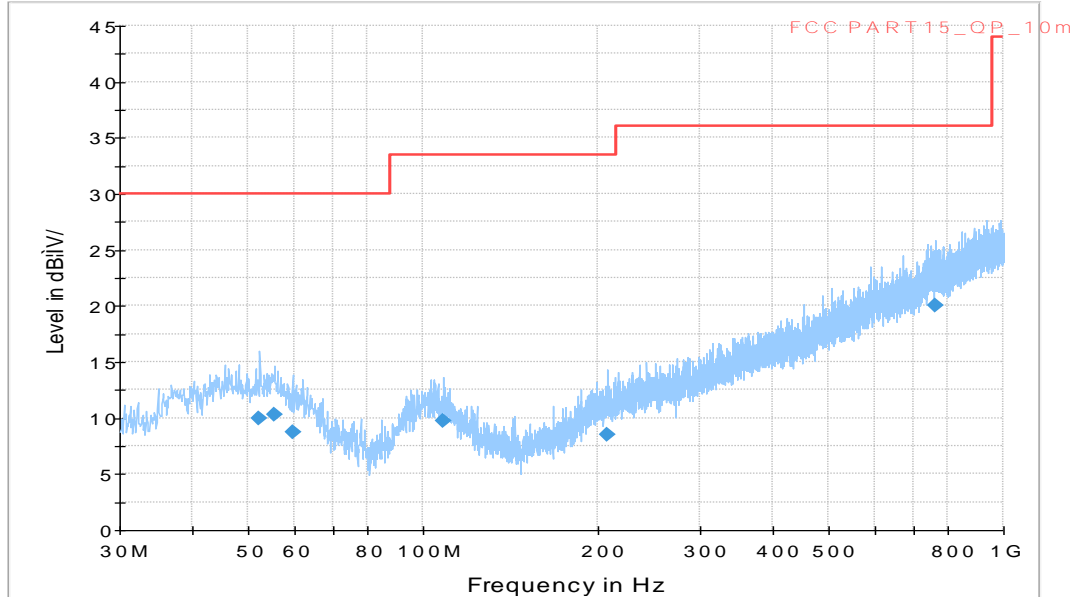
WOSRT CASE 18GHz-26.5 GHz**WOSRT CASE 26.5GHz-40GHz**

Note: the spurious emission above 18G is noise only

WOSRT CASE BELOW 1GHz

- FCC Part 15C 30-1G Limit
- Peak Preview Result
- ◆ Final Result QPK

RE FCC_30MHz-1GHz_10m_Direct_testing_FP5b



Frequency (MHz)	QuasiPeak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBuV/m)
52.213000	9.9	125.0	H	93.0	-11.2	20.1	30.0
55.414000	10.3	175.0	V	45.0	-11.3	19.7	30.0
59.585000	8.7	275.0	H	-10.0	-11.9	21.3	30.0
108.279000	9.7	100.0	V	225.0	-12.6	23.8	33.5
207.995000	8.5	175.0	H	225.0	-11.5	25.0	33.5
764.678000	20.0	225.0	V	135.0	1.9	16.0	36.0

BELOW 30MHz

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

A.6. Band Edges Compliance

A6.1 Band Edges - Radiated

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.	

The measurement is made according to KDB 789033 D02

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)).

EUT ID: UT22a + AE2-1 + AE1-3

Measurement Result:

Mode	Channel	Test Results	Conclusion
802.11a	5745 MHz	Fig.10	P
	5825 MHz	Fig.11	P
802.11n HT20	5745 MHz	Fig.12	P
802.11ac HT20	5745 MHz	Fig.13	P
	5825 MHz	Fig.14	P
	5825 MHz	Fig.15	P
802.11n HT40	5755 MHz	Fig.16	P
	5795 MHz	Fig.17	P
802.11ac HT40	5755 MHz	Fig.18	P
	5795 MHz	Fig.19	P
802.11ac HT80	5775 MHz	Fig.20	P
	5775 MHz	Fig.21	P

Conclusion: PASS

Test graphs as below:

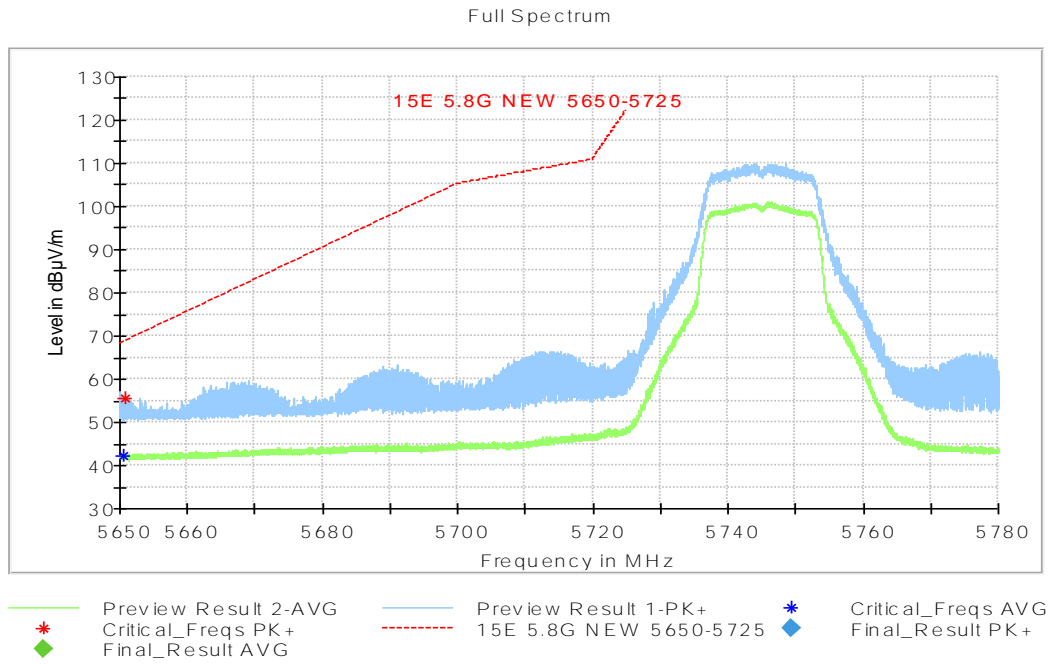


Fig. 10 Band Edges (802.11a, 5745MHz)

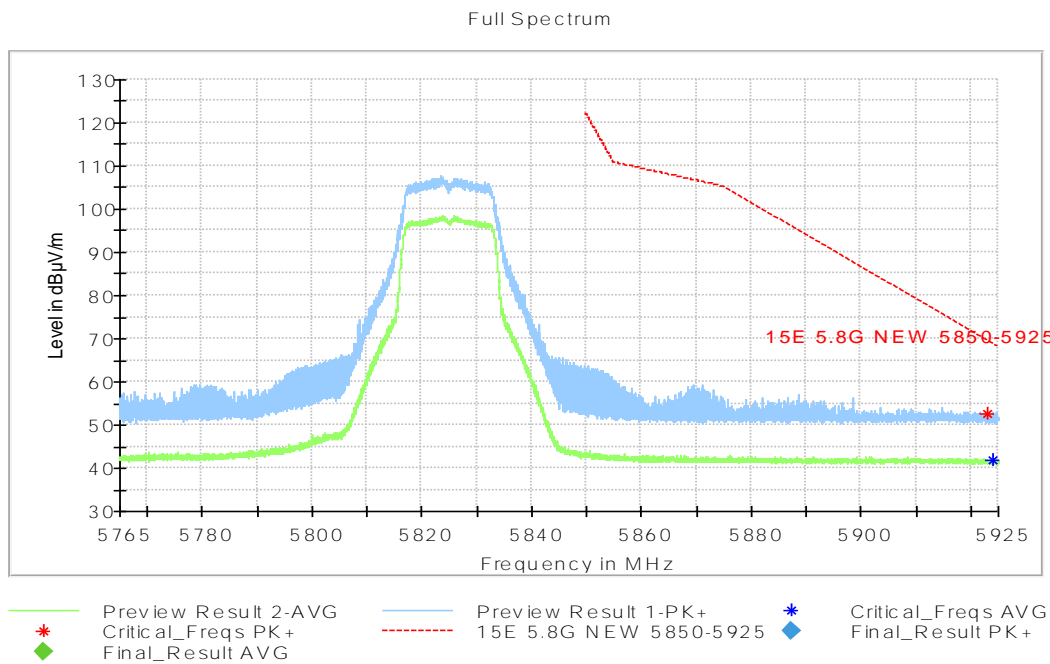


Fig. 11 Band Edges (802.11a, 5825MHz)

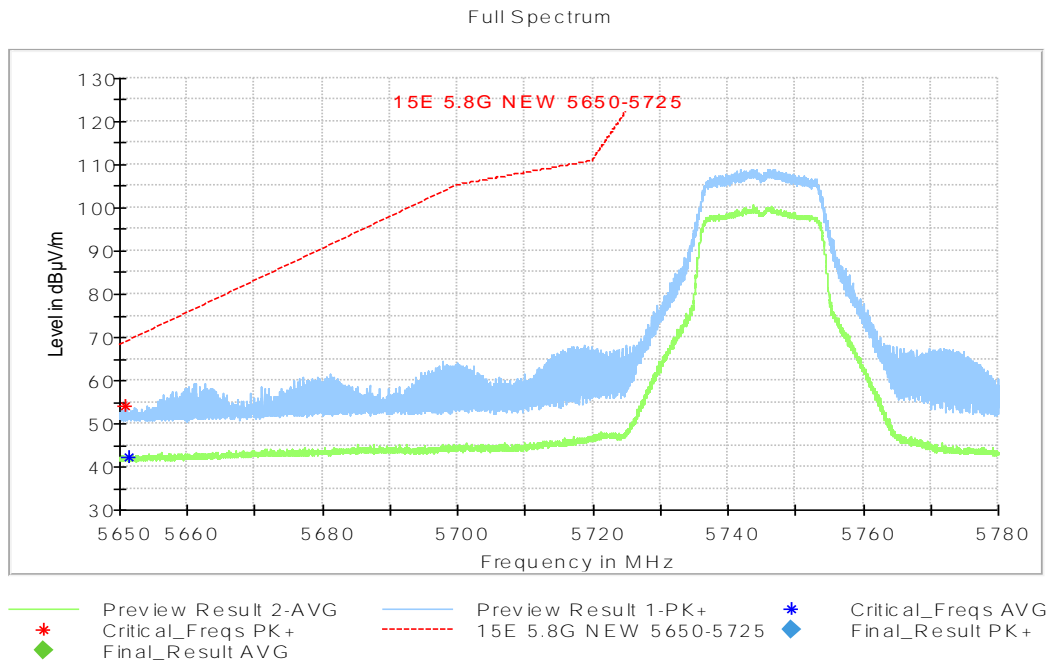


Fig. 12 Band Edges (802.11n-HT20, 5745MHz)

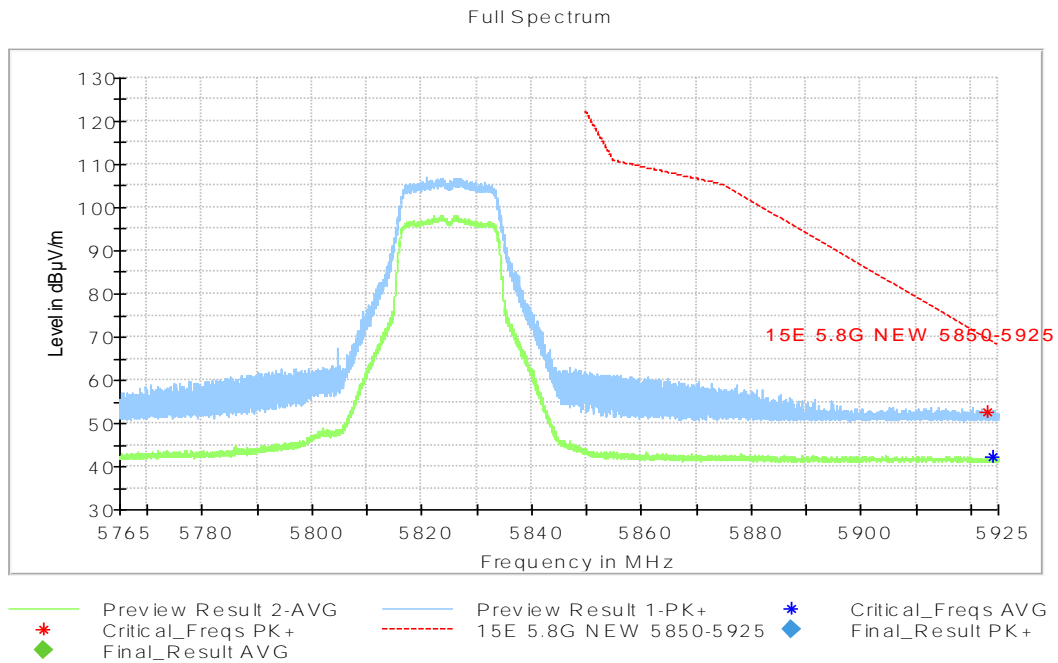


Fig. 13 Band Edges (802.11n-HT20, 5825MHz)

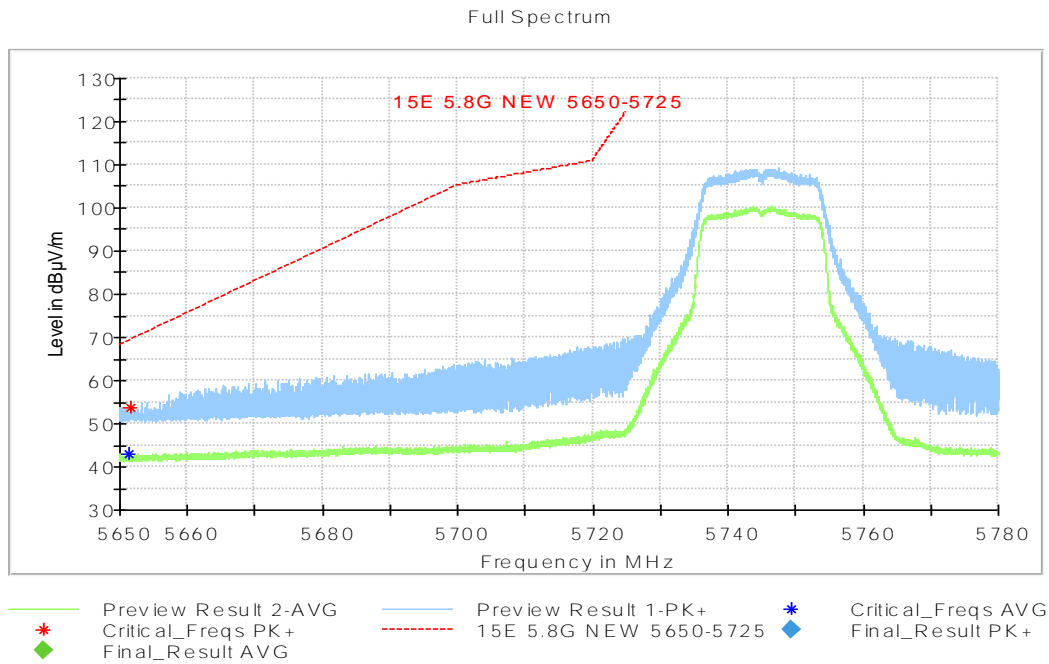


Fig. 14 Band Edges (802.11ac-HT20, 5745MHz)

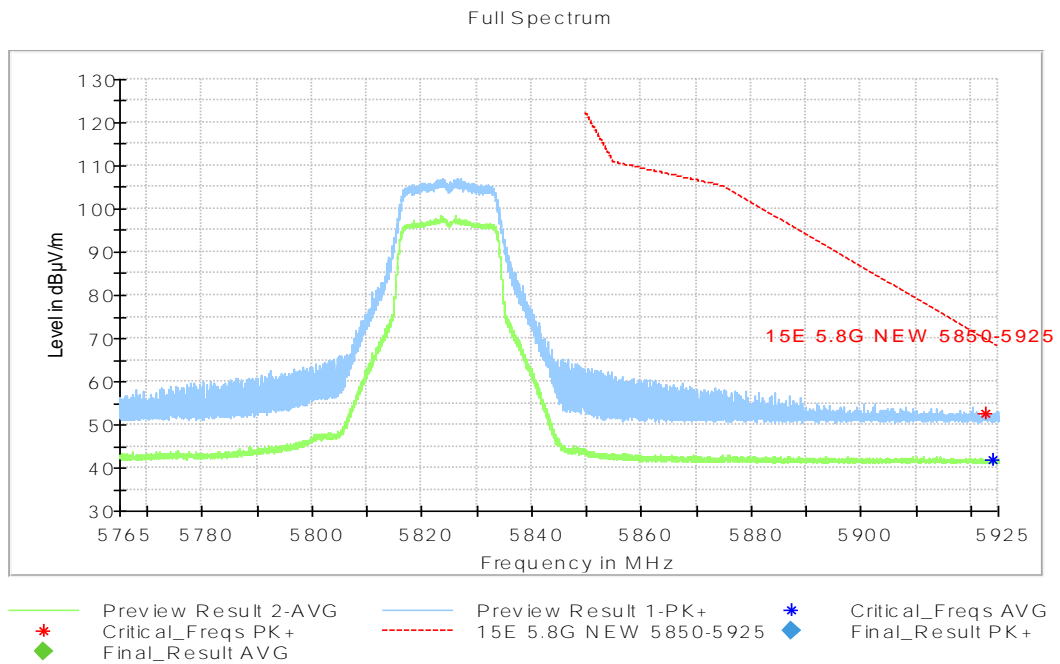


Fig. 15 Band Edges (802.11ac-HT20, 5825MHz)

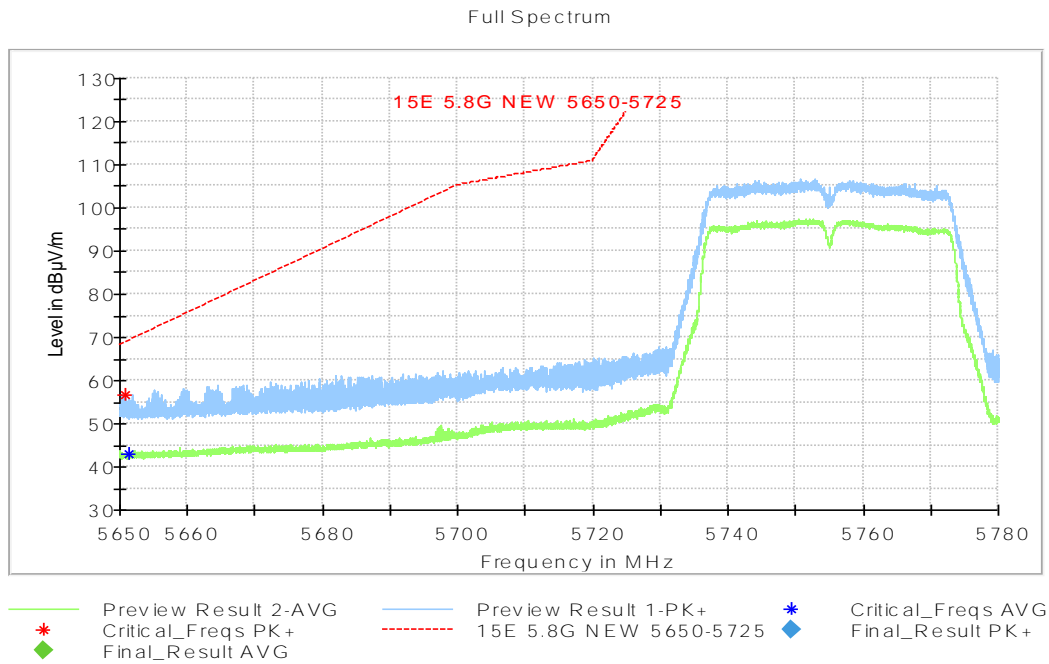


Fig. 16 Band Edges (802.11n-HT40, 5755MHz)

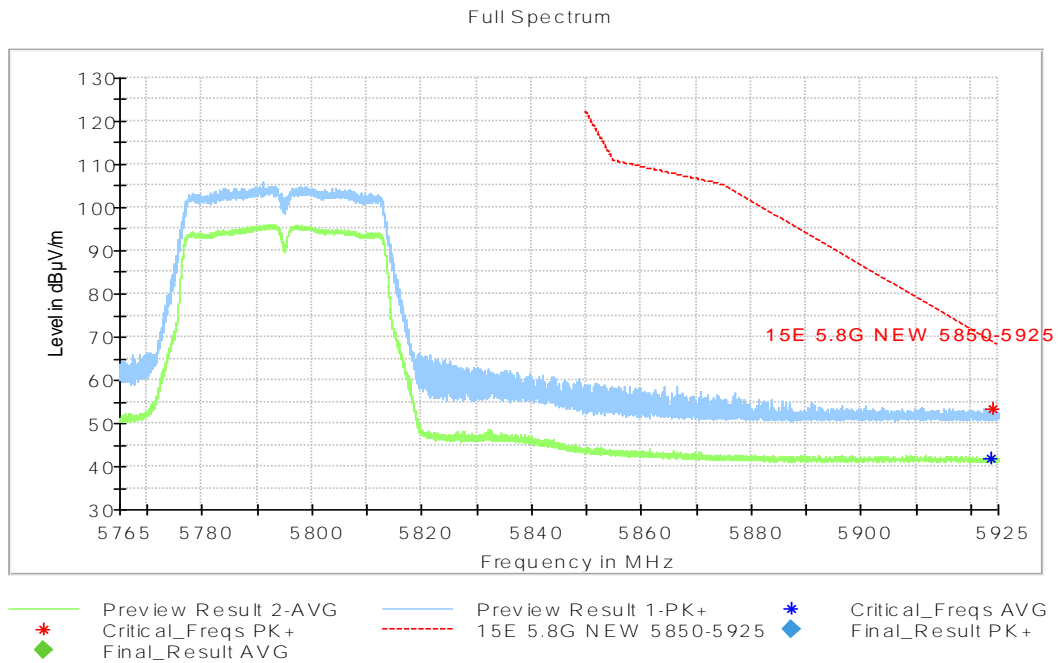


Fig. 17 Band Edges (802.11n-HT40, 5795MHz)

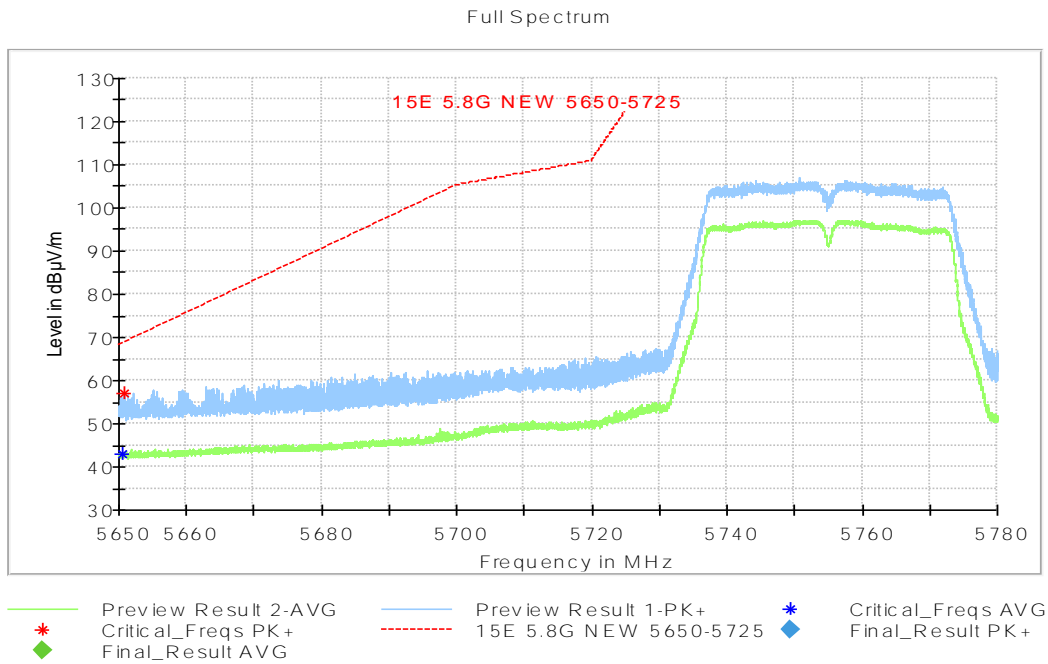


Fig. 18 Band Edges (802.11ac-HT40, 5755MHz)

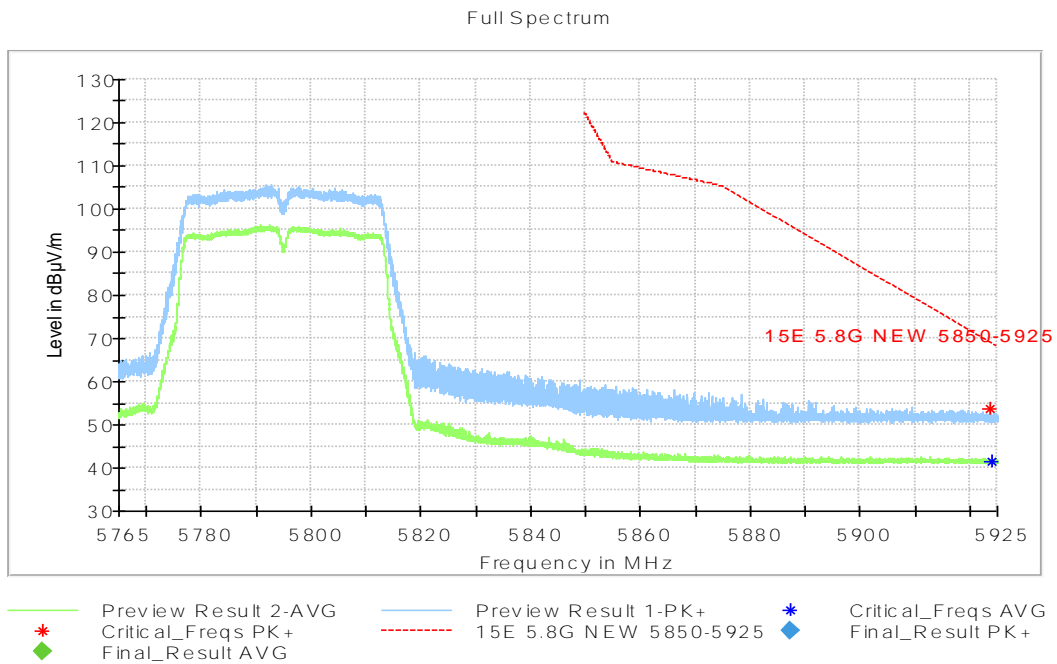


Fig. 19 Band Edges (802.11ac-HT40, 5795MHz)

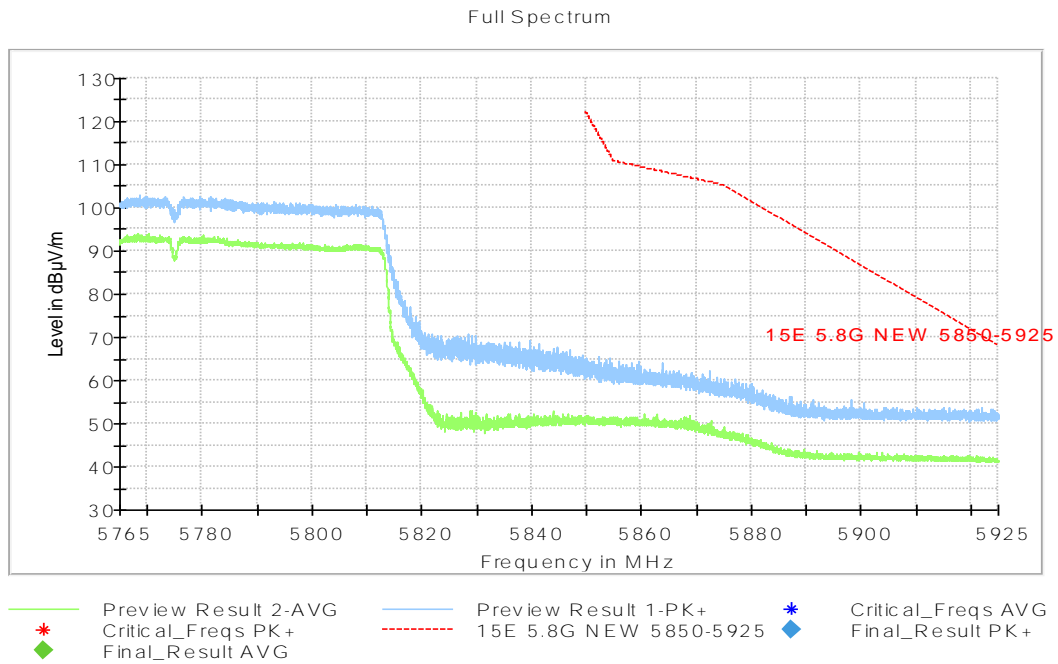


Fig. 20 Band Edges (802.11ac-HT80, 5775MHz)

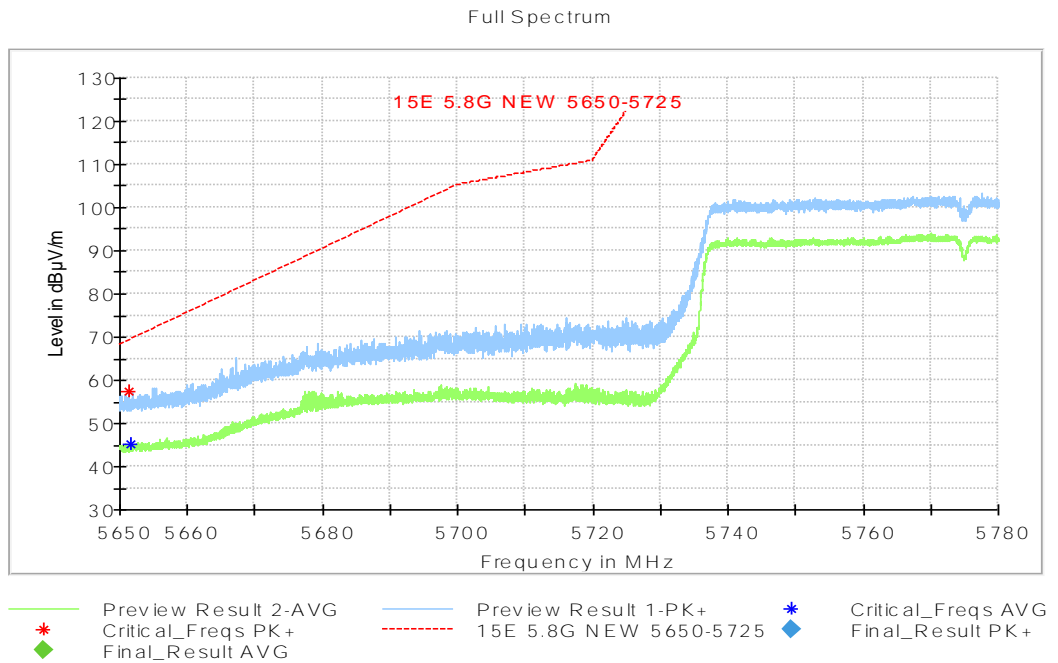


Fig. 21 Band Edges (802.11ac-HT80, 5775MHz)

A.7. AC Powerline Conducted Emission

Test Condition:

Voltage (V)	Frequency (Hz)
110	60

Measurement Result and limit:

Set.4: UT22a + AE2-1 + AE1-3

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	66 to 56	Fig. 22	Fig. 23	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 (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	56 to 46	Fig.22	Fig.23	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.

The measurement is made according to ANSI C63.10 .

Set.5: UT25a + AE2-2 + AE1-3

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	67 to 56	Fig. 24	/	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 (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	56 to 46	Fig.24	/	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.

The measurement is made according to ANSI C63.10 .

Set.6: UT26a + AE2-3 + AE1-3

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	68 to 56	Fig. 25	/	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 (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	56 to 46	Fig.25	/	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.

The measurement is made according to ANSI C63.10 .

Set.7: UT22a + AE2-4 + AE1-3

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	69 to 56	Fig. 26	/	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 (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	56 to 46	Fig.26	/	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.

The measurement is made according to ANSI C63.10 .

Set.8: UT25a + AE2-5 + AE1-3

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	70 to 56	Fig. 27	/	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 (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	56 to 46	Fig.27	/	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.

The measurement is made according to ANSI C63.10 .

Conclusion: PASS
Test graphs as below:

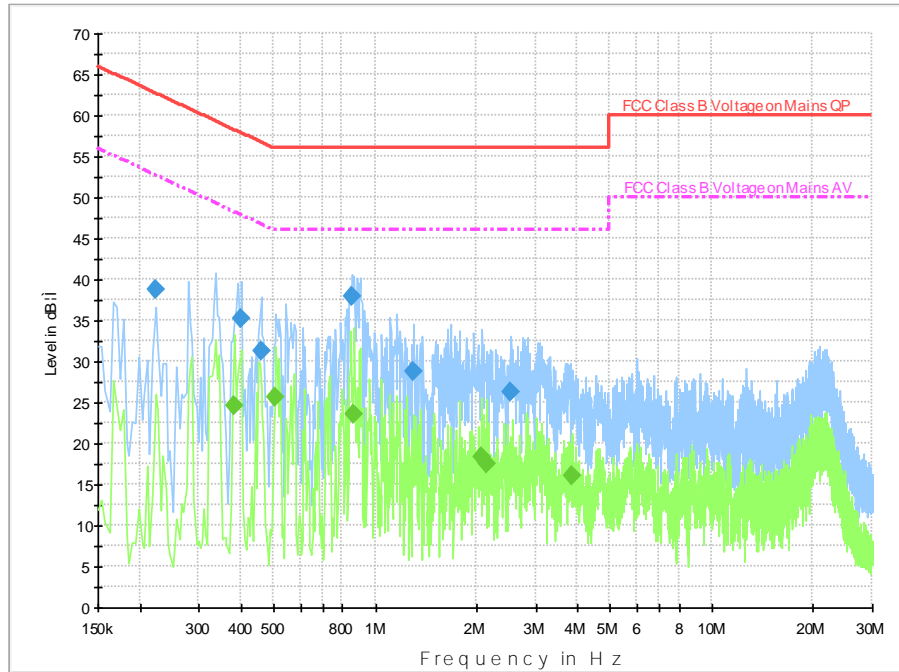


Fig. 22 AC Powerline Conducted Emission-802.11a (Set.4: UT22a + AE2-1 + AE1-3)

Final Result 1

Frequency (MHz)	QuasiPeak (dB µ V)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB µ)
0.222000	38.8	1000.0	9.000	On	N	19.7	24.0	62.7
0.402000	35.2	1000.0	9.000	On	L1	19.7	22.6	57.8
0.458000	31.2	1000.0	9.000	On	L1	19.7	25.5	56.7
0.854000	37.9	1000.0	9.000	On	N	19.6	18.1	56.0
1.298000	28.8	1000.0	9.000	On	L1	19.7	27.2	56.0
2.538000	26.3	1000.0	9.000	On	N	19.6	29.7	56.0

Final Result 2

Frequency (MHz)	CAverage (dB µ V)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB µ)
0.382000	24.5	1000.0	9.000	On	N	19.7	23.7	48.2
0.506000	25.6	1000.0	9.000	On	N	19.7	20.4	46.0
0.866000	23.6	1000.0	9.000	On	N	19.6	22.4	46.0
2.062000	18.3	1000.0	9.000	On	N	19.6	27.7	46.0
2.150000	17.5	1000.0	9.000	On	N	19.6	28.5	46.0
3.854000	16.0	1000.0	9.000	On	N	19.6	30.0	46.0

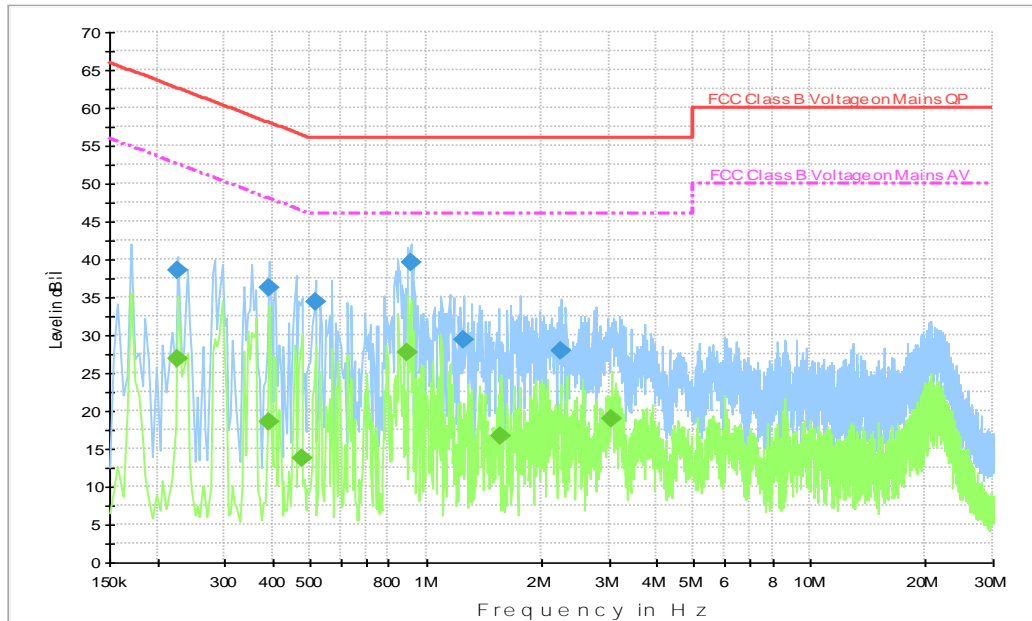


Fig. 23 AC Powerline Conducted Emission-Idle (Set.4: UT22a + AE2-1 + AE1-3)

Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB μ)
0.226000	38.6	1000.0	9.000	On	N	19.7	24.0	62.6
0.390000	36.3	1000.0	9.000	On	L1	19.7	21.7	58.1
0.514000	34.3	1000.0	9.000	On	L1	19.7	21.7	56.0
0.914000	39.5	1000.0	9.000	On	N	19.6	16.5	56.0
1.258000	29.4	1000.0	9.000	On	L1	19.6	26.6	56.0
2.242000	28.0	1000.0	9.000	On	L1	19.6	28.0	56.0

Final Result 2

Frequency (MHz)	CAverage (dB μ V)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB μ)
0.226000	26.9	1000.0	9.000	On	N	19.7	25.7	52.6
0.390000	18.5	1000.0	9.000	On	L1	19.7	29.5	48.1
0.474000	13.7	1000.0	9.000	On	N	19.7	32.8	46.4
0.898000	27.8	1000.0	9.000	On	N	19.6	18.2	46.0
1.574000	16.8	1000.0	9.000	On	N	19.6	29.2	46.0
3.054000	19.0	1000.0	9.000	On	N	19.6	27.0	46.0

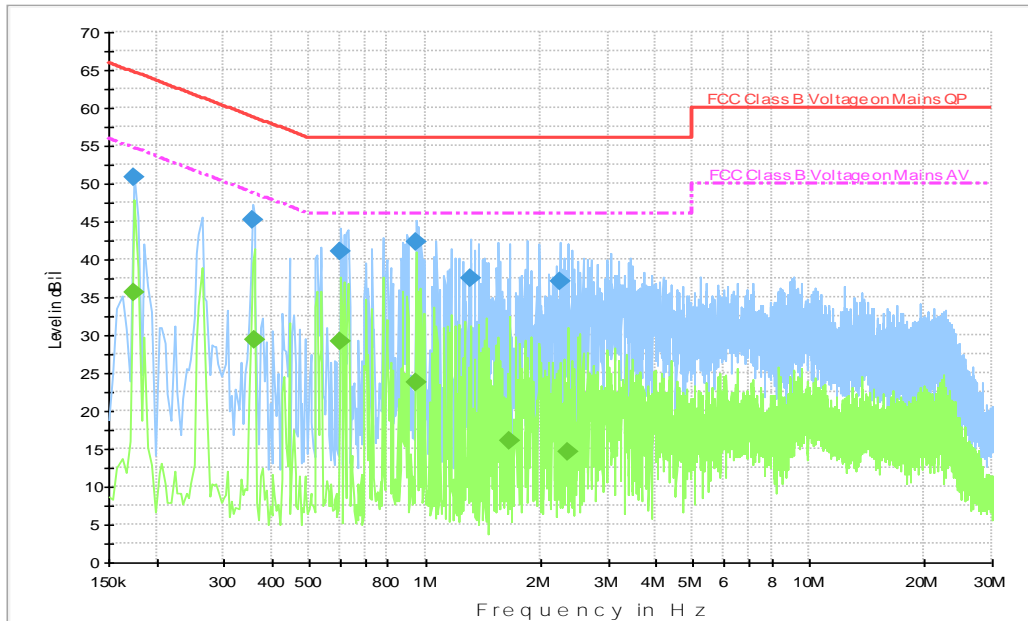


Fig. 24 AC Powerline Conducted Emission-802.11a (Set.5: UT25a + AE2-2 + AE1-3)

Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB μ)
0.174000	50.8	1000.0	9.000	On	L1	19.7	14.0	64.8
0.354000	45.3	1000.0	9.000	On	L1	19.7	13.6	58.9
0.602000	41.1	1000.0	9.000	On	L1	19.7	14.9	56.0
0.950000	42.3	1000.0	9.000	On	N	19.6	13.7	56.0
1.318000	37.6	1000.0	9.000	On	L1	19.6	18.4	56.0
2.238000	37.1	1000.0	9.000	On	L1	19.6	18.9	56.0

Final Result 2

Frequency (MHz)	CAverage (dB μ V)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB μ)
0.174000	35.7	1000.0	9.000	On	L1	19.7	19.1	54.8
0.358000	29.4	1000.0	9.000	On	N	19.7	19.4	48.8
0.602000	29.2	1000.0	9.000	On	N	19.6	16.8	46.0
0.946000	23.8	1000.0	9.000	On	L1	19.7	22.2	46.0
1.662000	16.0	1000.0	9.000	On	L1	19.6	30.0	46.0
2.362000	14.7	1000.0	9.000	On	L1	19.6	31.3	46.0

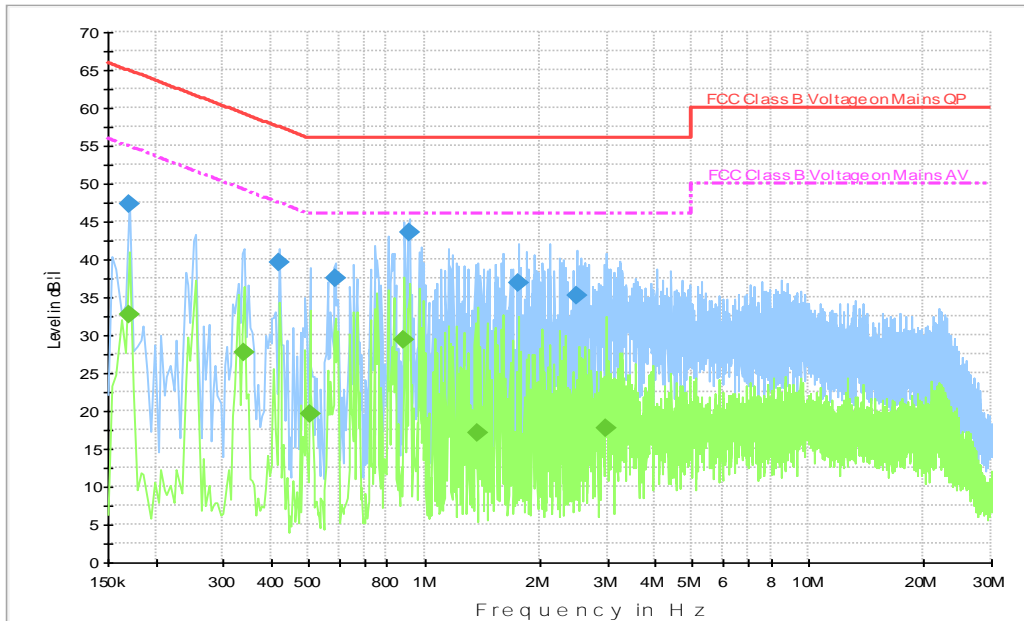


Fig. 25 AC Powerline Conducted Emission-802.11a (Set.6: UT26a + AE2-3 + AE1-3)

Final Result 1

Frequency (MHz)	QuasiPeak (dB µ V)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB µ)
0.170000	47.3	1000.0	9.000	On	N	19.7	17.6	65.0
0.418000	39.5	1000.0	9.000	On	N	19.7	18.0	57.5
0.586000	37.5	1000.0	9.000	On	N	19.6	18.5	56.0
0.914000	43.5	1000.0	9.000	On	N	19.6	12.5	56.0
1.766000	36.9	1000.0	9.000	On	L1	19.6	19.1	56.0
2.486000	35.3	1000.0	9.000	On	L1	19.6	20.7	56.0

Final Result 2

Frequency (MHz)	CAverage (dB µ V)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB µ)
0.170000	32.7	1000.0	9.000	On	N	19.7	22.3	55.0
0.338000	27.6	1000.0	9.000	On	N	19.7	21.6	49.3
0.502000	19.7	1000.0	9.000	On	N	19.7	26.3	46.0
0.886000	29.3	1000.0	9.000	On	N	19.6	16.7	46.0
1.382000	17.1	1000.0	9.000	On	L1	19.6	28.9	46.0
2.970000	17.7	1000.0	9.000	On	L1	19.6	28.3	46.0

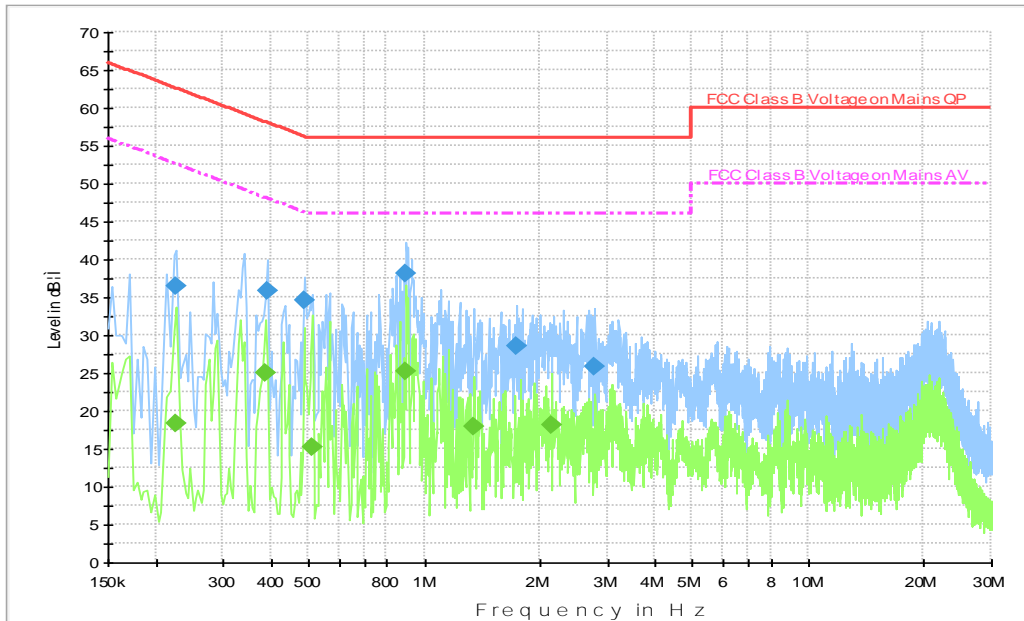


Fig. 26 AC Powerline Conducted Emission-802.11a (Set.7: UT22a + AE2-4 + AE1-3)

Final Result 1

Frequency (MHz)	QuasiPeak (dB µ V)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB µ)
0.226000	36.5	1000.0	9.000	On	L1	19.7	26.1	62.6
0.390000	35.9	1000.0	9.000	On	L1	19.7	22.2	58.1
0.486000	34.5	1000.0	9.000	On	L1	19.7	21.7	56.2
0.898000	38.2	1000.0	9.000	On	N	19.6	17.8	56.0
1.742000	28.5	1000.0	9.000	On	L1	19.6	27.5	56.0
2.778000	25.8	1000.0	9.000	On	L1	19.6	30.2	56.0

Final Result 2

Frequency (MHz)	CAverage (dB µ V)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB µ)
0.226000	18.3	1000.0	9.000	On	L1	19.7	34.3	52.6
0.386000	25.0	1000.0	9.000	On	N	19.7	23.1	48.1
0.510000	15.2	1000.0	9.000	On	N	19.7	30.8	46.0
0.898000	25.3	1000.0	9.000	On	N	19.6	20.7	46.0
1.350000	18.0	1000.0	9.000	On	N	19.6	28.0	46.0
2.154000	18.2	1000.0	9.000	On	N	19.6	27.8	46.0

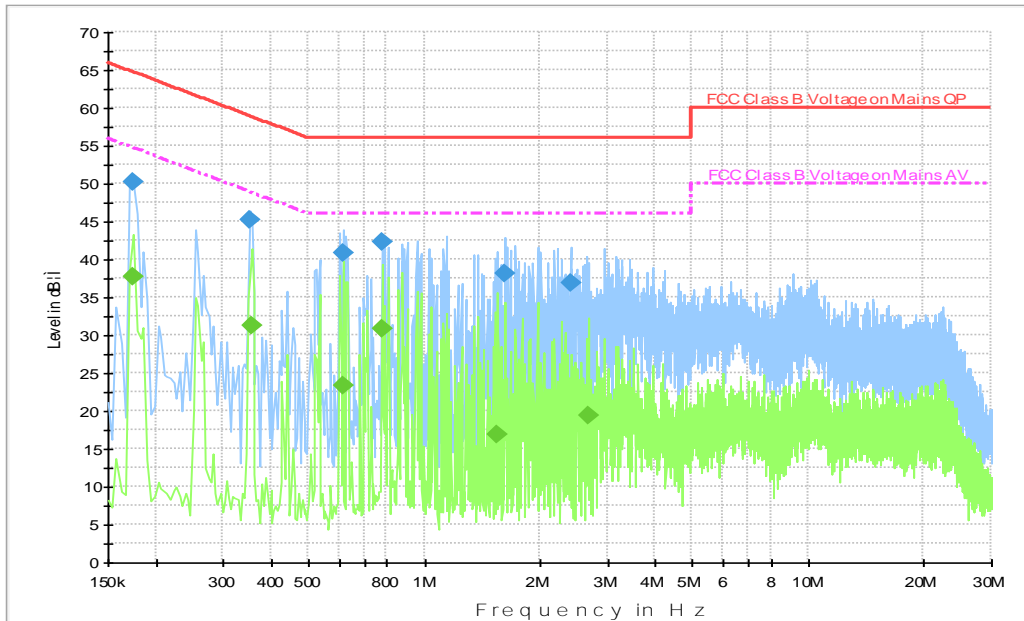


Fig. 27 AC Powerline Conducted Emission-802.11a (Set.8: UT25a + AE2-5 + AE1-3)

Final Result 1

Frequency (MHz)	QuasiPeak (dB µ V)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB µ)
0.174000	50.3	1000.0	9.000	On	L1	19.7	14.5	64.8
0.350000	45.2	1000.0	9.000	On	L1	19.7	13.8	59.0
0.614000	40.8	1000.0	9.000	On	L1	19.7	15.2	56.0
0.774000	42.2	1000.0	9.000	On	N	19.7	13.8	56.0
1.618000	38.0	1000.0	9.000	On	L1	19.6	18.0	56.0
2.398000	36.8	1000.0	9.000	On	L1	19.6	19.2	56.0

Final Result 2

Frequency (MHz)	CAverage (dB µ V)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB µ)
0.174000	37.8	1000.0	9.000	On	N	19.7	17.0	54.8
0.354000	31.3	1000.0	9.000	On	N	19.7	17.6	48.9
0.614000	23.4	1000.0	9.000	On	L1	19.7	22.6	46.0
0.778000	30.8	1000.0	9.000	On	N	19.7	15.2	46.0
1.550000	16.9	1000.0	9.000	On	L1	19.6	29.1	46.0
2.682000	19.5	1000.0	9.000	On	N	19.6	26.5	46.0

A.8. Frequency Stability

Manufacturers ensured the EUT meet the requirement of frequency stability, such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

Test Condition:

T min = 0 °C T nom = 26 °C T max = 35 °C
 V nom = 3.6 V V nom = 3.87 V V nom = 4.45 V

Measurement Limit:

Standard	Limit (ppm)
FCC 47 CFR Part 15.407 (g)	20

The measurement is made according to KDB789033 D02 .

Measurement Result:

Mode	Frequency	Test Condition		Result
		Tnom	Vnom	
802.11ac-VHT40	5755	Tnom	Vnom	6.95
		Tmax	Vnom	6.96
		Tmin	Vnom	9.00
		Vmax	Tnom	6.95
		Vmin	Tnom	6.95
	5795	Tnom	Vnom	6.90
		Tmax	Vnom	5.14
		Tmin	Vnom	3.45
		Vmax	Tnom	6.90
		Vmin	Tnom	6.90

ANNEX B: EUT parameters

Disclaimer: The antenna gain and worse case 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 C: Accreditation Certificate

United States Department of Commerce National Institute of Standards and Technology	
<hr/> Certificate of Accreditation to ISO/IEC 17025:2017 <hr/>	
NVLAP LAB CODE: 600118-0	
Telecommunication Technology Labs, CAICT Beijing China	
<i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i>	
Electromagnetic Compatibility & Telecommunications	
<i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).</i>	
<hr/> 2022-10-01 through 2023-09-30 <i>Effective Dates</i>	 <hr/> <i>John S. Laman</i> <i>For the National Voluntary Laboratory Accreditation Program</i>

*** END OF REPORT BODY ***