FCC PART 15
TEST REPORT
No. I22Z62328-EMC06

for

Honor Device Co., Ltd.

Smart Phone

Model Name: RBN-NX1

FCC ID: 2AYGCRBN-NX1

with

Hardware Version: HN2VNEM

Software Version: 6.1.0.9(C900E9R1P1)

Issued Date: 2023-01-12

Note:

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

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

Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I22Z62328-EMC06	Rev.0	1st edition	2023-01-12

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

Radiated testing Location: CTTL(huayuan North Road)

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

1.3. TestingEnvironment

Normal Temperature: 15-35℃

Extreme Temperature: -10/+55℃

Relative Humidity: 20-75%

1.4. Project data

Testing Start Date: 2023-01-07

Testing End Date: 2023-01-12

1.5. Signature

张颖

Zhang Ying

(Prepared this test report)

安辉

An Hui

(Reviewed this test report)

Shi Suolan

(Approved this test report)

2. CLIENT INFORMATION

2.1. Applicant Information

Company Name:	Honor Device Co., Ltd.
Address /Post:	Suite 3401,Unit A,Building 6,Shum Yip Sky Park,No.8089,Hongli West Road,Xiangmihu Street,Futian District,Shenzhen,Guangdong 518040,People's Republic of China
Contact:	/
Email:	/
Telephone:	/

2.2. Manufacturer Information

Company Name:	Honor Device Co., Ltd.
Address /Post:	Suite 3401,Unit A,Building 6,Shum Yip Sky Park,No.8089,Hongli West Road,Xiangmihu Street,Futian District,Shenzhen,Guangdong 518040,People's Republic of China
Contact:	/
Email:	/
Telephone:	/

3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT(AE)

3.1. About EUT

Description	Smart Phone
Model name	RBN-NX1
FCC ID	2AYGCRBN-NX1

Note: Photographs of EUT are shown in ANNEX C of this test report. Components list, please refer to documents of the manufacturer; it is also included in the original test record of Telecommunication Metrology Center of MIIT of People's Republic of China.

3.2. Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version
UT08a	868648060015002/868648060049043	HN2VNEM	6.1.0.9(C900E9R1P1)
UT05a	868648060011795/868648060045835	HN2VNEM	6.1.0.9(C900E9R1P1)
UT07a	868648060010565/868648060044606	HN2VNEM	6.1.0.9(C900E9R1P1)
UT06a	868648060014021/868648060048060	HN2VNEM	6.1.0.9(C900E9R1P1)

*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*	Name	Model	Manufacturer
AE1-1	Adapter	HN-100225U00	Salcomp
AE1-2	Adapter	HN-100225E00	Salcomp
AE1-3	Adapter	HW-100225U00	Huntkey
AE1-4	Adapter	HW-100225E00	Huntkey
AE1-5	Adapter	HW-100225B00	Huntkey
AE2-1	USB Cable	CUDU01B-HC451-EH	Fuding Precision Components (Shenzhen) Co., Ltd.
AE2-2	USB Cable	AU2-CRO013 HF	Freeport Ji an Electronics Co.,Ltd.
AE2-3	USB Cable	L125UC007-CS-H	Luxshare Precision Industry Co.,Ltd.
AE2-4	USB Cable	2120-00001-0	Guangdong Mingji Hi-Tech Electronics Co.,Ltd.
AE2-5	USB Cable	RY0002	Guangxi Broad Telecommunication Co.,Ltd.
AE3-1	Headset	1293-3283-3.5mm-339	BOLUO COUNTY QUANCHENG ELECTRONIC CO.,LTD.
AE3-2	Headset	EPAB542-2WH05-DH	FOXCONN INTERCONNECT TECHNOLOGY LIMITED
AE3-3	Headset	MEND1532B528A11	Jiangxi Lianchuang Hongsheng Electronic Co., LTD.
AE4-1	Battery	HB496590EFW	SCUD
AE4-2	Battery	HB496590EFW-F	SCUD

AE4-3	Battery	HB496590EFW	NVT
AE4-4	Battery	HB496590EFW-F	NVT

*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 has MP3, MP4,Camera, USB memory, Bluetooth 5.1, Wi-Fi (802.11b/g/n/ac) , GNSS functions.

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

Samples undergoing test were selected by the client.

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

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	2016
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

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
Band Edges Compliance	15.407 (b)	/	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/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℃
Voltage	3.85V
Humidity	44%

7. TEST EQUIPMENTS UTILIZED

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	LISN	ENV216	101200	Rohde & Schwarz	1 year	2023-06-29
2	Test Receiver	ESCI 7	100344	Rohde & Schwarz	1 year	2023-02-21

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Loop Antenna	HFH2-Z2	829324/007	R&S	2 years	2023-12-22
2	EMI Antenna	3115	00167250	ETS-Lindgren	1 year	2023-06-20
3	EMI Antenna	VULB9163	01223	Schwarzbeck	1 year	2023-07-25
4	Test Receiver	ESW44	103015	Rohde & Schwarz	1 year	2023-01-23
5	EMI Antenna	3115	00167250	ETS-Lindgren	1 year	2023-06-20

8. Measurement Uncertainty

8.1. Spurious Emissions

Radiated (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

8.2. AC Power-line Conducted Emission

Measurement Uncertainty: 3.08dB, k=2

ANNEX A: MEASUREMENT RESULTS

A.1. Measurement Method

A.1.1. 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;

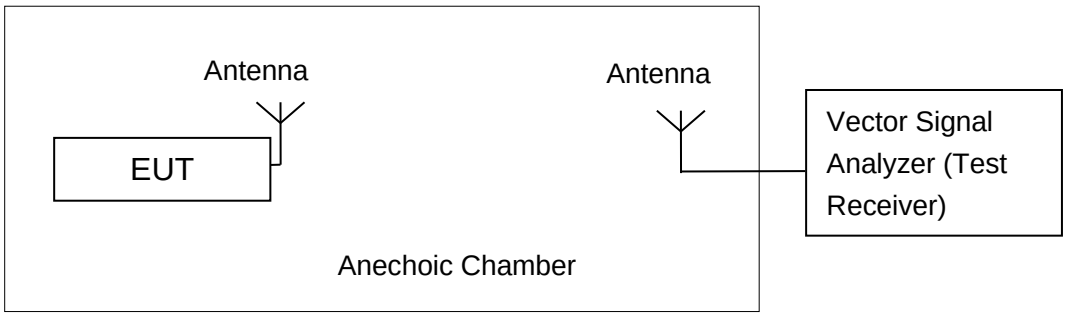

Fig.A.1.1.1: Test Setup Diagram for Radiated Measurements

A.2. Band Edges Compliance

A.2.1 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.	

Worst case:

EUT set-up No.	Combination of EUT and AE
Set.1-1	UT08a + AE1-1 + AE2-1

Measurement Result:

Mode	Channel	Test Results	Conclusion
802.11a	5745 MHz	Fig.1	P
	5825 MHz	Fig.2	P
802.11n HT20	5745 MHz	Fig.3	P
	5825 MHz	Fig.4	P
802.11n HT40	5755 MHz	Fig.5	P
	5795 MHz	Fig.6	P
802.11ac HT20	5745 MHz	Fig.7	P
	5825 MHz	Fig.8	P
802.11ac HT40	5755 MHz	Fig.9	P
	5795 MHz	Fig.10	P
802.11ac HT80	5775 MHz	Fig.11 Fig.12	P

Conclusion: PASS

Test graphs as below:

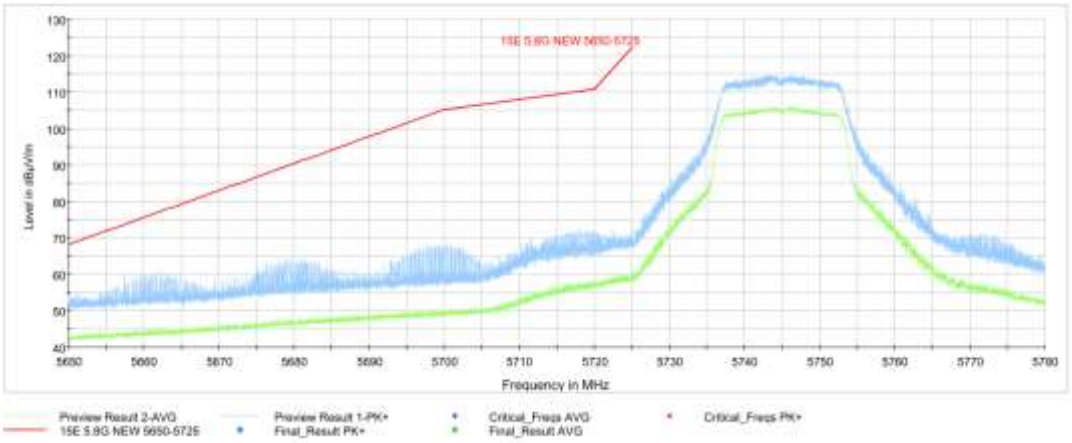

Fig. 1 Band Edges (802.11a Ch149,5745MHz)

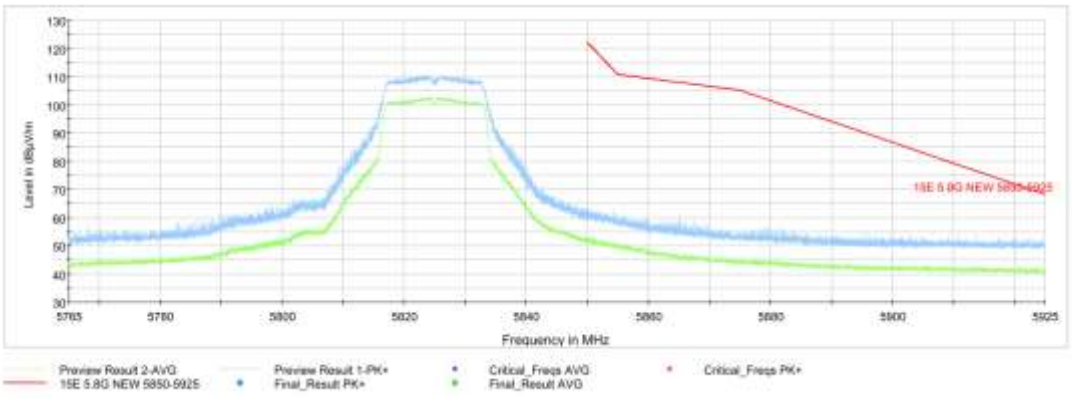

Fig. 2 Band Edges (802.11a Ch165, 5825MHz)

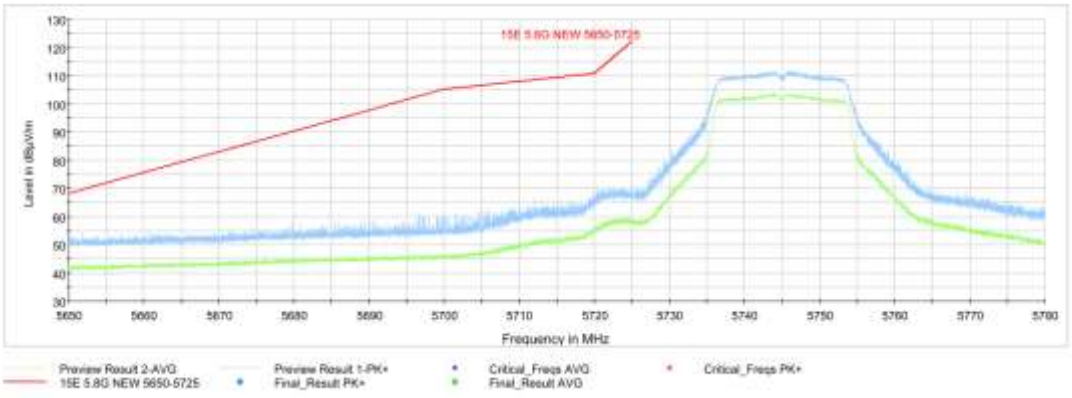

Fig. 3 Band Edges (802.11n-HT20 Ch149, 5745MHz)

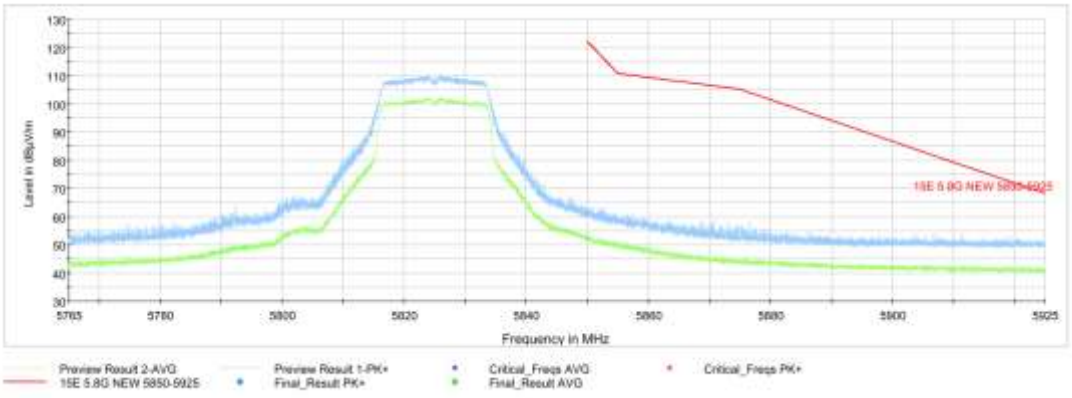

Fig. 4 Band Edges (802.11n-HT20 Ch165, 5825MHz)

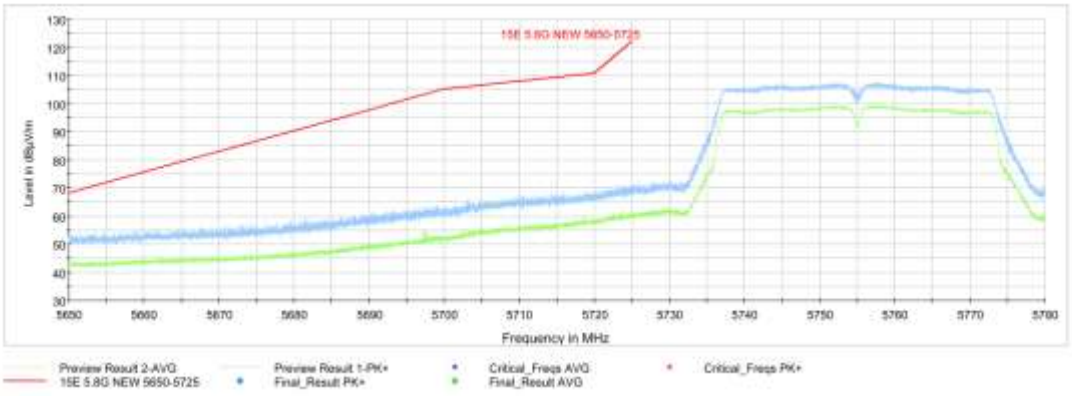

Fig. 5 Band Edges (802.11n-HT40 Ch151, 5755MHz)

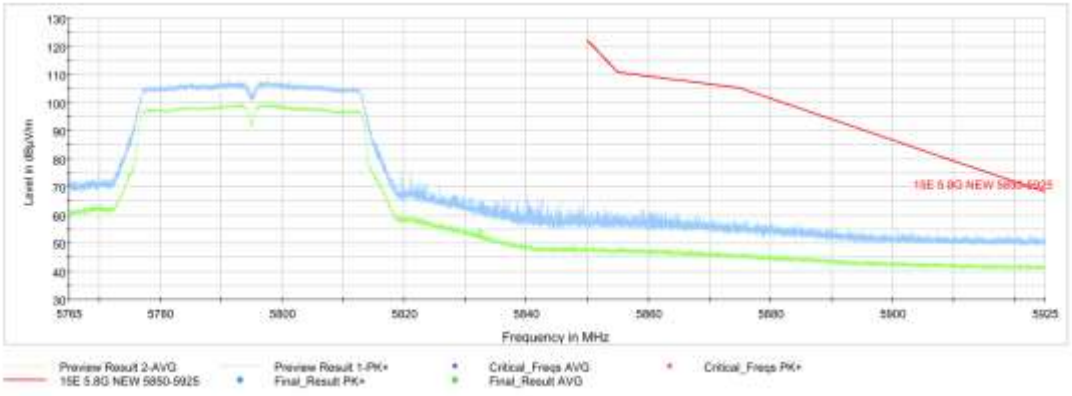

Fig. 6 Band Edges (802.11n-HT40 Ch159, 5795MHz)

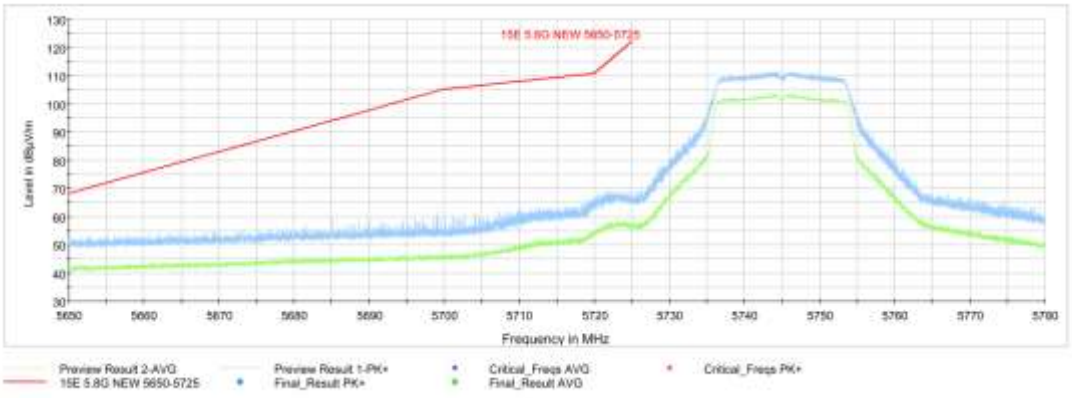

Fig. 7 Band Edges (802.11ac-HT20 Ch149, 5745MHz)

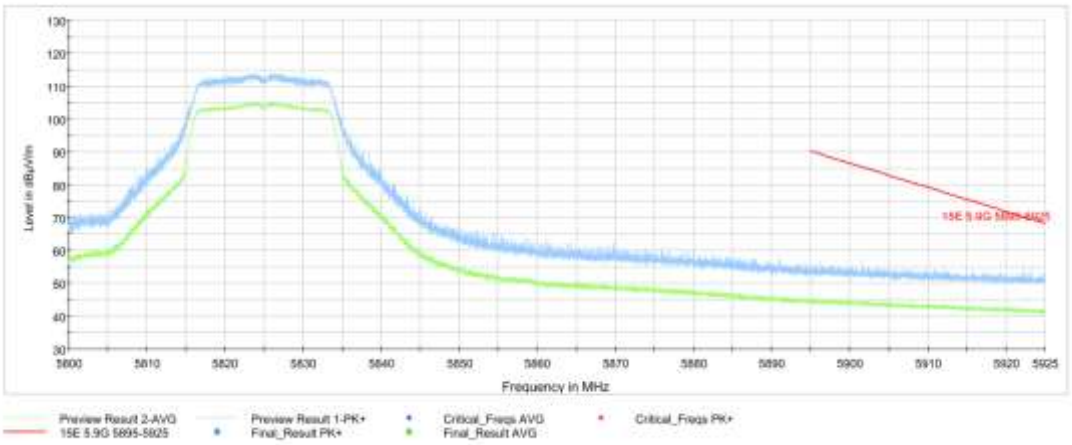

Fig. 8 Band Edges (802.11ac-HT20 Ch165, 5825MHz)

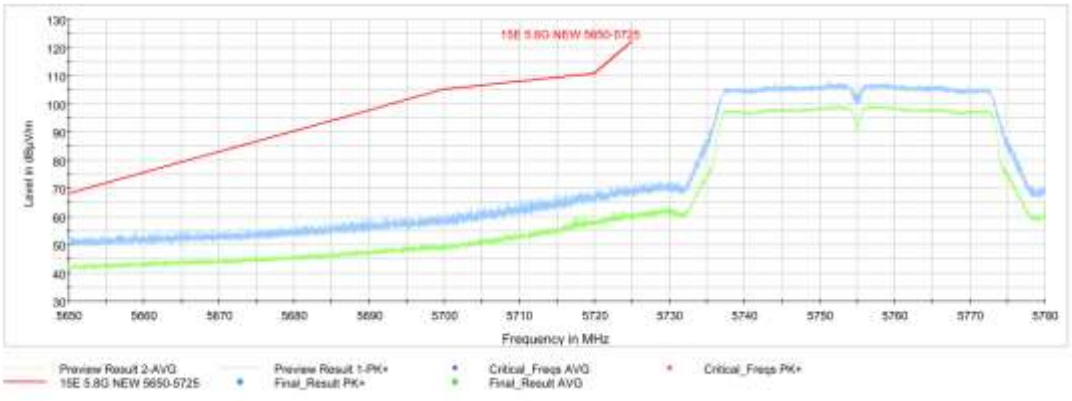

Fig. 9 Band Edges (802.11ac-HT40 Ch151, 5755MHz)

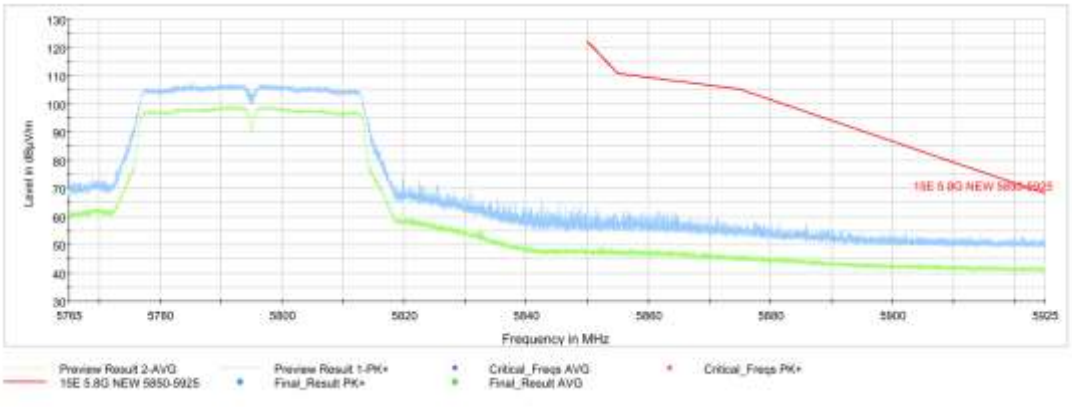

Fig. 10 Band Edges (802.11ac-HT40 Ch159, 5795MHz)

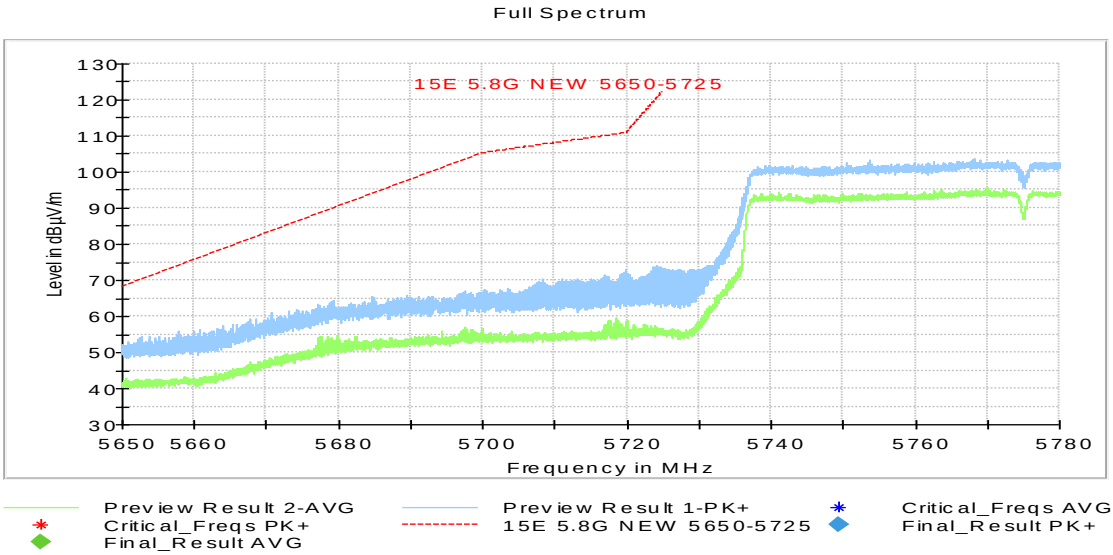

Fig. 11 Band Edges (802.11ac-HT80 Ch155, 5775MHz)

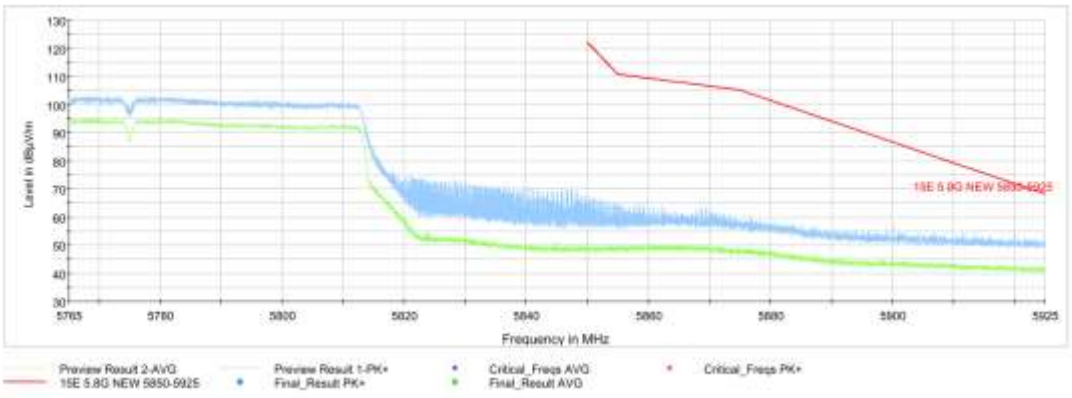

Fig. 12 Band Edges (802.11ac-HT80, 5775MHz)

A.3. Transmitter Spurious Emission

A.3.1 Transmitter Spurious Emission – 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

Measurement Results:

Worst case:

EUT set-up No.	Combination of EUT and AE
Set.1-1	UT08a + AE1-1 + AE2-1

802.11a mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11a	149	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	157	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P
	165	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	149	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	157	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P

	165	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	151	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P
	159	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

802.11ac-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ac (HT20)	149	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	157	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P
	165	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

802.11ac-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ac (HT40)	151	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P
	159	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

802.11ac-HT80 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ac (HT80)	155	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P

Conclusion: PASS

Note:

A "reference path loss" is established and the A_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

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

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)
11485.800	39.13	-32.26	38.84	32.56	54.00	14.87	V
11488.000	38.10	-32.26	38.84	31.53	54.00	15.90	V
17881.200	38.07	-25.50	46.66	16.91	54.00	15.93	V
17861.950	38.02	-25.50	46.66	16.86	54.00	15.98	H
13295.850	35.30	-29.49	39.71	25.08	54.00	18.70	H
13295.300	35.13	-29.49	39.71	24.91	54.00	18.87	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)
17910.350	38.63	-25.50	46.66	17.47	54.00	15.37	V
11573.250	38.55	-32.31	38.91	31.96	54.00	15.45	V
17852.050	38.14	-25.50	46.66	16.98	54.00	15.86	H
11572.150	37.38	-32.31	38.91	30.79	54.00	16.62	V
13358.550	35.12	-29.49	39.71	24.90	54.00	18.88	V
13307.950	35.05	-29.49	39.71	24.83	54.00	18.95	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)
17901.550	38.30	-25.50	46.66	17.14	54.00	15.70	V
17925.750	38.15	-25.50	46.66	16.99	54.00	15.85	H
11646.950	36.54	-32.31	38.91	29.95	54.00	17.46	V
11643.650	36.10	-32.31	38.91	29.51	54.00	17.90	V
13331.600	35.86	-29.49	39.71	25.64	54.00	18.14	V
13269.450	35.36	-29.67	39.55	25.48	54.00	18.64	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)
11486.350	38.14	-32.26	38.84	31.57	54.00	15.86	V
11488.000	38.12	-32.26	38.84	31.55	54.00	15.88	V
17851.500	38.02	-25.50	46.66	16.86	54.00	15.98	V
17896.600	37.93	-25.50	46.66	16.77	54.00	16.07	H
13268.350	35.27	-29.67	39.55	25.39	54.00	18.73	V
13323.350	34.95	-29.49	39.71	24.73	54.00	19.05	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)
17911.450	38.44	-25.50	46.66	17.28	54.00	15.56	V
17904.300	38.15	-25.50	46.66	16.99	54.00	15.85	V
11575.450	37.67	-32.31	38.91	31.08	54.00	16.33	V
11570.500	37.42	-32.31	38.91	30.83	54.00	16.58	V
13299.700	35.39	-29.49	39.71	25.17	54.00	18.61	H
13300.800	35.38	-29.49	39.71	25.16	54.00	18.62	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)
17889.450	38.35	-25.50	46.66	17.19	54.00	15.65	V
17899.900	38.31	-25.50	46.66	17.15	54.00	15.69	V
11646.950	36.37	-32.31	38.91	29.78	54.00	17.63	V
11653.550	36.27	-32.31	38.91	29.68	54.00	17.73	V
13322.800	35.14	-29.49	39.71	24.92	54.00	18.86	H
13279.350	35.12	-29.67	39.55	25.24	54.00	18.88	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)
17904.300	39.06	-25.50	46.66	17.90	54.00	14.94	V
17899.900	38.27	-25.50	46.66	17.11	54.00	15.73	H
11505.050	35.68	-32.26	38.84	29.11	54.00	18.32	V
13332.700	35.43	-29.49	39.71	25.21	54.00	18.57	H
13346.450	35.41	-29.49	39.71	25.19	54.00	18.59	V
11523.750	35.24	-32.26	38.84	28.67	54.00	18.76	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)
17915.850	38.49	-25.50	46.66	17.33	54.00	15.51	H
17900.450	38.47	-25.50	46.66	17.31	54.00	15.53	H
7726.550	36.84	-34.82	36.96	34.70	54.00	17.16	H
13322.250	35.53	-29.49	39.71	25.31	54.00	18.47	H
13300.800	35.38	-29.49	39.71	25.16	54.00	18.62	V
7726.000	34.86	-34.82	36.96	32.72	54.00	19.14	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)
17892.200	38.73	-25.50	46.66	17.57	54.00	15.27	V
17905.950	38.58	-25.50	46.66	17.42	54.00	15.42	V
11486.900	38.53	-32.26	38.84	31.96	54.00	15.47	V
11491.850	38.23	-32.26	38.84	31.66	54.00	15.77	V
13316.750	35.46	-29.49	39.71	25.24	54.00	18.54	V
13306.850	35.14	-29.49	39.71	24.92	54.00	18.86	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)
17891.100	38.02	-25.50	46.66	16.86	54.00	15.98	V
17897.700	37.99	-25.50	46.66	16.83	54.00	16.01	H
11576.000	37.45	-32.31	38.91	30.86	54.00	16.55	V
11568.850	37.43	-32.31	38.91	30.84	54.00	16.57	V
7712.800	35.41	-34.82	36.96	33.27	54.00	18.59	H
13331.600	35.15	-29.49	39.71	24.93	54.00	18.85	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)
17909.800	38.30	-25.50	46.66	17.14	54.00	15.70	H
17940.600	38.25	-25.50	46.66	17.09	54.00	15.75	V
11649.700	36.68	-32.31	38.91	30.09	54.00	17.32	V
11642.550	36.18	-32.31	38.91	29.59	54.00	17.82	V
13324.450	35.36	-29.49	39.71	25.14	54.00	18.64	H
13301.350	35.13	-29.49	39.71	24.91	54.00	18.87	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)
17869.650	38.05	-25.50	46.66	16.89	54.00	15.95	V
17905.950	37.97	-25.50	46.66	16.81	54.00	16.03	V
13277.150	35.27	-29.67	39.55	25.39	54.00	18.73	V
13278.250	35.19	-29.67	39.55	25.31	54.00	18.81	V
11505.050	35.07	-32.26	38.84	28.50	54.00	18.93	V
11511.100	34.90	-32.26	38.84	28.33	54.00	19.10	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)
17902.100	38.58	-25.50	46.66	17.42	54.00	15.42	H
17902.650	38.41	-25.50	46.66	17.25	54.00	15.59	H
7726.550	36.71	-34.82	36.96	34.57	54.00	17.29	H
13298.050	35.53	-29.49	39.71	25.31	54.00	18.47	V
13298.600	35.43	-29.49	39.71	25.21	54.00	18.57	H
11578.750	35.15	-32.31	38.91	28.56	54.00	18.85	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)
17886.700	38.49	-25.50	46.66	17.33	54.00	15.51	H
17864.700	38.19	-25.50	46.66	17.03	54.00	15.81	H
13265.600	36.37	-29.67	39.55	26.49	54.00	17.63	H
13324.450	36.34	-29.49	39.71	26.12	54.00	17.66	H
7699.600	34.76	-34.82	36.96	32.62	54.00	19.24	H
11871.350	34.34	-31.85	39.05	27.14	54.00	19.66	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)
17032.550	48.74	-26.32	42.36	32.69	68.20	19.46	H
17439.550	48.55	-26.85	45.25	30.15	68.20	19.65	V
11485.250	47.58	-32.26	38.84	41.01	74.00	26.42	V
11496.250	47.48	-32.26	38.84	40.91	74.00	26.52	V
14079.050	46.03	-29.44	41.66	33.81	68.20	22.17	H
13054.400	45.68	-30.13	39.39	36.41	68.20	22.52	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)
17411.500	49.14	-26.85	45.25	30.74	68.20	19.06	V
17346.050	48.31	-25.95	44.35	29.90	68.20	19.89	H
14700.550	46.84	-28.32	41.35	33.82	68.20	21.36	V
11572.700	46.40	-32.31	38.91	39.81	74.00	27.60	V
11579.300	46.16	-32.31	38.91	39.57	74.00	27.84	V
14708.800	46.00	-28.32	41.35	32.98	68.20	22.20	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)
16936.850	48.89	-26.32	42.36	32.84	68.20	19.31	V
17358.700	48.72	-25.95	44.35	30.31	68.20	19.48	V
13977.850	46.46	-29.44	41.66	34.24	68.20	21.74	H
14700.550	46.00	-28.32	41.35	32.98	68.20	22.20	V
11643.650	45.85	-32.31	38.91	39.26	74.00	28.15	V
11648.600	45.04	-32.31	38.91	38.45	74.00	28.96	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)
17923.000	49.76	-25.50	46.66	28.60	74.00	24.24	V
17903.750	48.70	-25.50	46.66	27.54	74.00	25.30	H
11484.700	46.97	-32.26	38.84	40.40	74.00	27.03	V
11489.650	46.85	-32.26	38.84	40.28	74.00	27.15	V
13853.000	45.86	-29.51	41.30	34.07	68.20	22.34	V
13179.800	45.57	-29.67	39.55	35.69	68.20	22.63	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)
17365.300	49.09	-25.95	44.35	30.68	68.20	19.11	H
17430.200	48.79	-26.85	45.25	30.39	68.20	19.41	H
13542.800	46.85	-29.56	39.99	36.42	68.20	21.35	V
11573.250	46.74	-32.31	38.91	40.15	74.00	27.26	V
11575.450	46.42	-32.31	38.91	39.83	74.00	27.58	V
13304.650	46.16	-29.49	39.71	35.94	74.00	27.84	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)
17444.500	48.94	-26.85	45.25	30.54	68.20	19.26	H
17035.300	48.93	-26.32	42.36	32.88	68.20	19.27	V
11656.850	46.95	-32.31	38.91	40.36	74.00	27.05	V
13301.900	45.93	-29.49	39.71	35.71	74.00	28.07	H
13295.850	45.77	-29.49	39.71	35.55	74.00	28.23	H
11659.600	45.44	-32.31	38.91	38.85	74.00	28.56	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)
17899.350	48.96	-25.50	46.66	27.80	74.00	25.04	V
17787.150	48.55	-25.50	46.66	27.39	74.00	25.45	H
13906.350	46.03	-29.51	41.30	34.24	68.20	22.17	V
13160.000	46.02	-29.67	39.55	36.14	68.20	22.18	H
11499.000	45.11	-32.26	38.84	38.54	74.00	28.89	V
11517.150	44.86	-32.26	38.84	38.29	74.00	29.14	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)
17885.600	49.05	-25.50	46.66	27.89	74.00	24.95	H
16986.900	48.78	-26.32	42.36	32.73	68.20	19.42	H
13949.800	46.03	-29.51	41.30	34.24	68.20	22.17	H
13280.450	45.97	-29.67	39.55	36.09	74.00	28.03	H
11366.450	44.60	-32.42	38.79	38.23	74.00	29.40	V
9456.300	44.54	-32.95	37.91	39.57	74.00	29.46	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)
17891.100	49.20	-25.50	46.66	28.04	74.00	24.80	H
17454.400	48.66	-26.85	45.25	30.26	68.20	19.54	H
11486.350	47.32	-32.26	38.84	40.75	74.00	26.68	V
11485.250	47.21	-32.26	38.84	40.64	74.00	26.79	V
13295.300	46.55	-29.49	39.71	36.33	74.00	27.45	H
14607.600	45.75	-27.29	41.90	31.14	68.20	22.45	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)
16924.750	49.86	-26.32	42.36	33.81	68.20	18.34	H
16967.650	48.73	-26.32	42.36	32.68	68.20	19.47	V
11568.850	46.58	-32.31	38.91	39.99	74.00	27.42	V
14143.950	46.51	-28.99	42.00	33.49	68.20	21.69	H
11571.600	45.95	-32.31	38.91	39.36	74.00	28.05	V
13890.950	45.53	-29.51	41.30	33.74	68.20	22.67	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)
17171.150	48.32	-26.60	43.36	31.56	68.20	19.88	V
17433.500	48.32	-26.85	45.25	29.92	68.20	19.88	V
11653.000	46.37	-32.31	38.91	39.78	74.00	27.63	V
13279.900	46.09	-29.67	39.55	36.21	74.00	27.91	H
13550.500	45.84	-29.56	39.99	35.41	68.20	22.36	V
11643.100	45.63	-32.31	38.91	39.04	74.00	28.37	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)
17387.850	49.29	-26.85	45.25	30.89	68.20	18.91	V
17355.950	48.87	-25.95	44.35	30.46	68.20	19.33	V
13935.500	46.58	-29.51	41.30	34.79	68.20	21.62	V
13923.950	46.56	-29.51	41.30	34.77	68.20	21.64	H
11505.600	44.89	-32.26	38.84	38.32	74.00	29.11	V
11334.550	44.29	-32.36	38.77	37.89	74.00	29.71	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)
16770.200	49.21	-26.62	41.49	34.34	68.20	18.99	V
16925.300	49.11	-26.32	42.36	33.06	68.20	19.09	H
14692.850	46.88	-28.32	41.35	33.86	68.20	21.32	H
13301.350	46.26	-29.49	39.71	36.04	74.00	27.74	V
11302.650	44.71	-32.36	38.77	38.31	74.00	29.29	V
10383.050	44.43	-33.22	38.19	39.46	68.20	23.77	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)
17132.650	49.56	-26.60	43.36	32.80	68.20	18.64	H
17146.950	49.50	-26.60	43.36	32.74	68.20	18.70	H
13336.550	47.86	-29.49	39.71	37.64	74.00	26.14	H
14699.450	46.79	-28.32	41.35	33.77	68.20	21.41	H
11335.100	44.89	-32.42	38.79	38.52	74.00	29.11	H
11405.500	44.76	-32.42	38.79	38.39	74.00	29.24	H

A.7. AC Powerline Conducted Emission

Test Condition:

Voltage（V）	Frequency（Hz）
120	60

Measurement Result and limit:

Worst case:

EUT set-up No.	Combination of EUT and AE
Set.1-1	UT08a + AE1-1 + AE2-1

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.13	Fig.14	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.13	Fig.14	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:

Traffic:

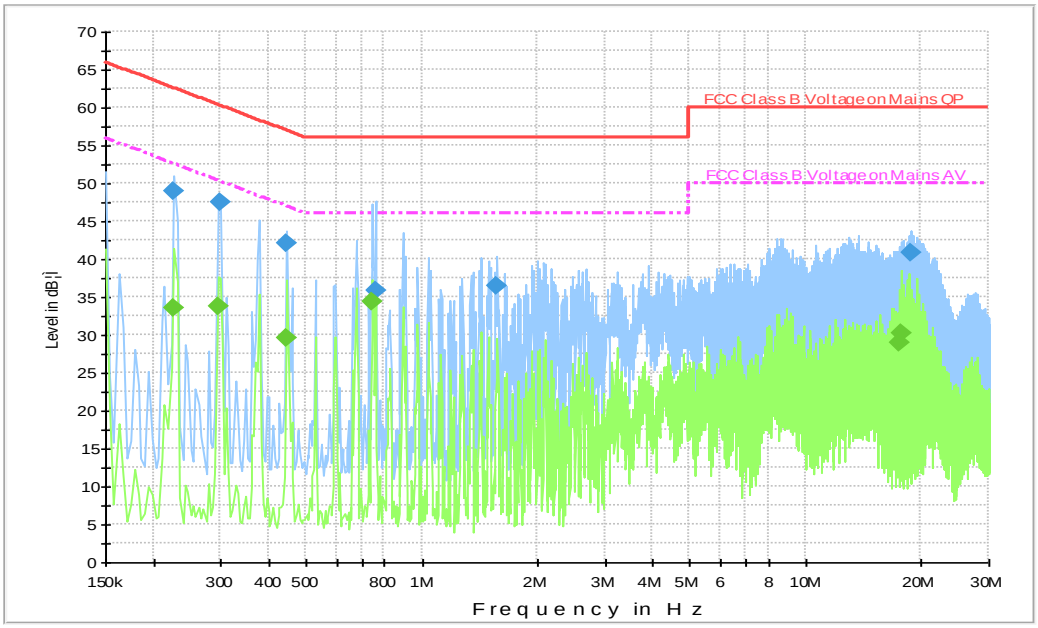

Fig. 13 AC Power line Conducted Emission-802.11a

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	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.226000	49.0	2000.	9.000	On	N	19.7	13.6	62.6
0.298000	47.5	2000.	9.000	On	L1	19.7	12.8	60.3
0.446000	42.0	2000.	9.000	On	L1	19.7	15.0	56.9
0.758000	35.9	2000.	9.000	On	N	19.7	20.1	56.0
1.574000	36.4	2000.	9.000	On	N	19.6	19.6	56.0
18.870000	40.8	2000.	9.000	On	L1	19.7	19.2	60.0

Final Result 2

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.226000	33.5	2000.	9.000	On	N	19.7	19.1	52.6
0.294000	33.7	2000.	9.000	On	N	19.7	16.7	50.4
0.446000	29.5	2000.	9.000	On	L1	19.7	17.5	46.9
0.742000	34.4	2000.	9.000	On	L1	19.7	11.6	46.0
17.614000	29.0	2000.	9.000	On	L1	19.7	21.0	50.0
17.762000	30.2	2000.	9.000	On	L1	19.7	19.8	50.0

Note2: The measurement results showed here are worst cases of the combinations of different cables and chargers

Idle:

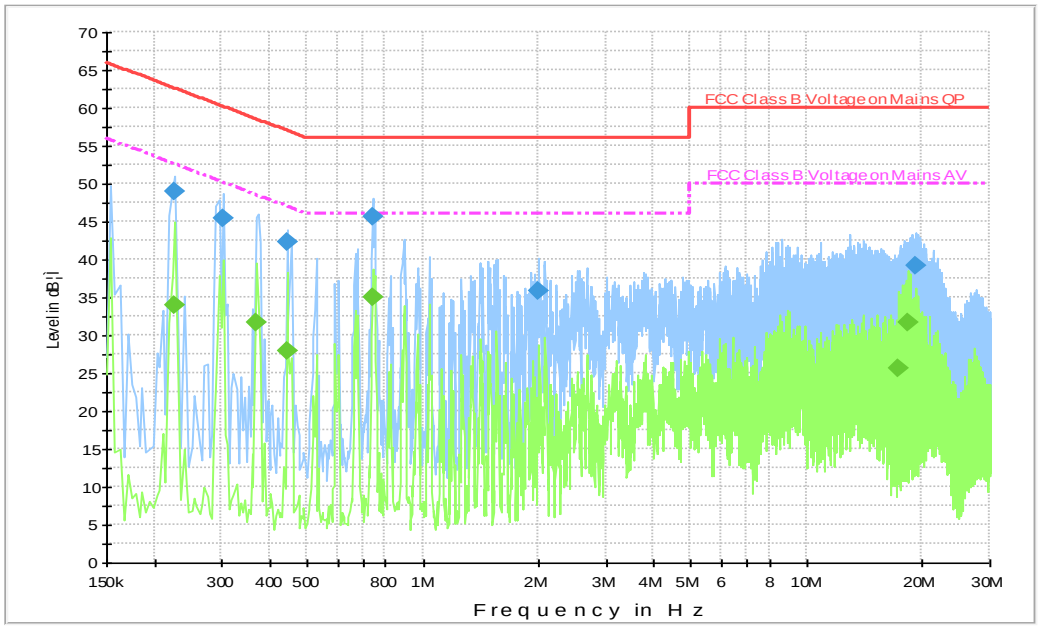

Fig. 14 AC Power line Conducted Emission-Idle

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	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.226000	49.0	2000.	9.000	On	N	19.7	13.6	62.6
0.302000	45.3	2000.	9.000	On	L1	19.7	14.9	60.2
0.442000	42.4	2000.	9.000	On	N	19.7	14.7	57.0
0.738000	45.6	2000.	9.000	On	N	19.7	10.4	56.0
1.994000	35.8	2000.	9.000	On	N	19.6	20.2	56.0
19.330000	39.1	2000.	9.000	On	L1	19.7	20.9	60.0

Final Result 2

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.226000	34.0	2000.0	9.000	On	N	19.7	18.6	52.6
0.370000	31.7	2000.0	9.000	On	L1	19.7	16.8	48.5
0.442000	27.8	2000.0	9.000	On	N	19.7	19.2	47.0
0.742000	34.9	2000.0	9.000	On	N	19.7	11.1	46.0
17.250000	25.5	2000.0	9.000	On	L1	19.7	24.5	50.0
18.286000	31.7	2000.0	9.000	On	L1	19.7	18.3	50.0

Note2: The measurement results showed here are worst cases of the combinations of different cables and chargers

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 B: PERSONS INVOLVED IN THIS TESTING

Test Item	Test operator
Conducted Emission	Zhang Tianli
Radiated Emission	Yan Hanchen & Ding Zai

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