FCC PART 15C
TEST REPORT
No.I21Z60861-IOT06

for

TCL Communication Ltd.

Tablet PC

9198S

With

FCC ID: 2ACCJB155

Hardware Version: 03

Software Version: 2C61

Issued Date: 2021-07-19

Note:

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I21Z60861-IOT06	Rev.0	1st edition	2021-07-19
I21Z60861-IOT06	Rev.1	1.Change Page.5.Testing Location 1. 2.Remove KDB 558074 D01 at Page.9 .Add KDB-662911 D01 at Page.9 . 3.Add calibration information of VSA,at Page.11 . 4.Add Pic. (ANT9 11g 6Mbps CH157) power of max power.at Page.14.	2021-09-10
I21Z60861-IOT06	Rev.2	1. Renew the value of MIMO Power and MIMO PSD,about add the Directional gain. (P.17-20)	2021-09-16

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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

Location 1: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. TestingEnvironment

Normal Temperature: 15-35℃

Relative Humidity: 20-75%

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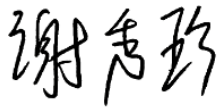
1.4. Project date

Testing Start Date: 2021-05-17

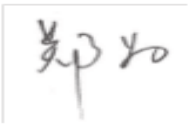
Testing End Date: 2021-07-16

1.5. Signature



Xie Xiuzhen

(Prepared this test report)



Zheng Wei

(Reviewed this test report)

Hu Xiaoyu

(Approved this test report)

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2. CLIENT INFORMATION

2.1. Applicant Information

Company Name:	TCL Communication Ltd.
Address:	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
City:	Hong Kong
Postal Code:	/
Country:	China
Telephone:	0086-755-36611722
Fax:	0086-755-36612000-81722

2.2. Manufacturer Information

Company Name:	TCL Communication Ltd
Address:	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
City:	Hong Kong
Postal Code:	/
Country:	China
Telephone:	0086-755-36611722
Fax:	0086-755-36612000-81722

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

3.1. About EUT

Description	Tablet PC
Model name	9198S
FCC ID	2ACCJB155
WLAN Frequency Band	ISM Band: 5725MHz~5850MHz
Type of modulation	OFDM
Voltage	3.8V

3.2. Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version
EUT1	358861400001957	03	2C61
EUT2	358861400001775	03	2C61

*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	Type	SN
AE1	Charger	/	/
AE2	Cable	/	/

AE1

Model	QC13US
Manufacturer	BYD
Length of cable	/

AE2

Type	/
Manufacturer	/
Length of cable	0.8 meter

*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 Tablet PC 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.

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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	2018
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
KDB-662911 D01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band (e.g. MIMO Smart Antenna etc)	2013

5. LABORATORY ENVIRONMENT

Conducted RF performance testing is performed in shielding room.

EMC performance testing is performed in Semi-anechoic chamber.

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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/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	3.8V
Humidity	44%

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7. TEST EQUIPMENTS UTILIZED

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
0	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	1 year	2021-05-23
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	1 year	2022-05-24
2	LISN	ENV216	101200	R&S	1 year	2021-10-15
3	Test Receiver	ESCI3	100344	R&S	1 year	2022-02-23
4	Shielding Room	S81	/	ETS-Lindgren	/	/

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESU26	100235	Rohde & Schwarz	1 year	2022-02-23
2	BiLog Antenna	VULB9163	9163-483	Schwarzbeck	1 year	2021-08-27
3	Antenna	3115	6914	ETS-Lindgren	1 year	2022-02-03
4	LISN	ESH3-E5	825562/028	Rohde & Schwarz	1 year	2021-10-15
5	Test Receiver	ESCI	100344	Rohde & Schwarz	1 year	2022-02-23

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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)
30MHz ≤ f ≤ 2GHz	1.22
2GHz ≤ f ≤3.6GHz	1.22
3.6GHz ≤ f ≤8GHz	1.22
8GHz ≤ f ≤12.75GHz	1.51
12.75GHz ≤ f ≤26GHz	1.51
26GHz ≤ f ≤40GHz	1.59

Radiated (k=2)

Frequency Range	Uncertainty(dB)
9kHz-30MHz	/
30MHz ≤ f ≤ 1GHz	5.16
1GHz ≤ f ≤18GHz	5.44
18GHz ≤ f ≤40GHz	5.28

8.6. AC Power-line Conducted Emission

Measurement Uncertainty : 3.08dB,k=2

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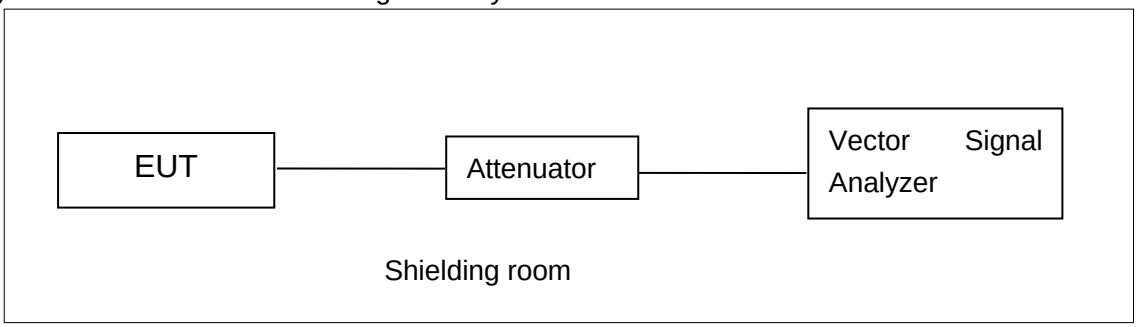
ANNEX A: MEASUREMENT RESULTS

A.1. Measurement Method

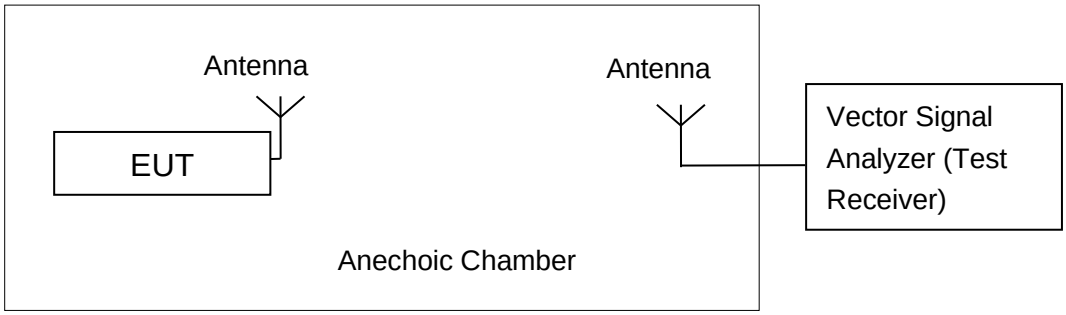
A.1.1. Conducted Measurements

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.

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A.2. Maximum Peak Output Power

Measurement Limit and Method:

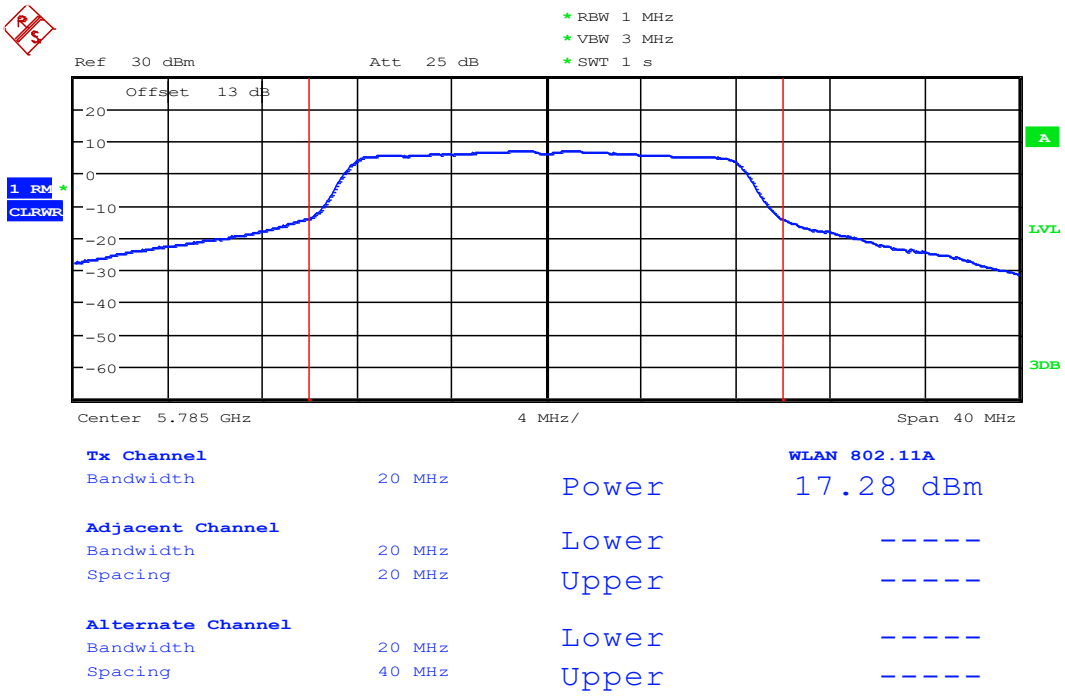
Standard	Limit (dBm)
FCC CRF Part 15.407(a)	< 30

A.2.1 Antenna Gain

Antenna gain is 0.73dBi(ANT9) 0.37(ANT10) and the value is supplied by the applicant or manufacturer.

A.2.2. Maximum Average Output Power-Conducted

Measurement Results:



Date: 10.SEP.2021 04:12:50

PIC.ANT9 11g 6Mbps CH157 Power

ANT9

802.11a mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)

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802.11a	6	15.93	17.17	16.64

The data rate 6Mbps is selected as worse 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	14.53	14.95	15.50

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

802.11ac-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ac(20MHz)	MCS0	14.49	14.97	15.52

The data rate MCS0 is selected as worse 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	14.43	14.78

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

802.11ac-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11ac(40MHz)	MCS0	14.45	14.79

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

802.11ac-HT80 mode

Mode	Data Rate (Index)	Test Result (dBm)
		5775MHz (Ch155)
802.11ac(80MHz)	MCS0	14.47

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

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this condition.

802.11a mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11a	6	16.29	16.75	16.13

The data rate 6Mbps is selected as worse 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	15.20	15.30	15.00

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

802.11ac-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ac(20MHz)	MCS0	15.17	15.31	15.03

The data rate MCS0 is selected as worse 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	15.01	14.94

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

802.11ac-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11ac(40MHz)	MCS0	15.03	14.94

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

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802.11ac-HT80 mode

Mode	Data Rate (Index)	Test Result (dBm)
		5775MHz (Ch155)
802.11ac(80MHz)	MCS0	14.83

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

MIMO&CDD

The Test Result =the equipments read value+DG

- $$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$$

where

Each antenna is driven by no more than one spatial stream;
N_{SS} = the number of independent spatial streams of data;
N_{ANT} = the total number of antennas
$g_{j,k} = 10^{G_k/20}$ if the kth antenna is being fed by spatial stream j, or zero if it is not;
G_k is the gain in dBi of the kth antenna.

The antenna gain is provided by the manufacturer。

ANT9 Frequency Gain(dBi)

5.1~5.5G 0.23

5.5~5.7G 0.23

5.7~5.8G 0.73

ANT10

5.1~5.5G 0.37

5.5~5.8G 0.25

Directional Gain 5.1-5.3G 3.31

5.5~5.7G 3.25

5.7~5.8G 3.50

802.11a mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11a	6	20.48	21.65	22.3

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

802.11n-HT20 mode

Mode	Data Rate	Test Result (dBm)

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	(Index)	5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11n(20MHz)	MCS0	20.96	21.09	21.22

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

802.11ac-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ac(20MHz)	MCS0	21.02	21.09	21.24

The data rate MCS0 is selected as worse 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	20.69	20.8

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

802.11ac-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11ac(40MHz)	MCS0	20.72	20.85

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

802.11ac-HT80 mode

Mode	Data Rate (Index)	Test Result (dBm)
		5775MHz (Ch155)
802.11ac(80MHz)	MCS0	20.63

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

Conclusion: PASS

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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:

The measurements were performed separately in Chain 1, Chain 2, and MIMO (Chain 1+2), and only the worst cases are shown in this report.

ANT10

Mode	Channel	Power Spectral Density (dBm/500kHz)	Conclusion
802.11a	149	3.08	P
	157	2.81	P
	165	2.41	P
802.11ac HT20	149	1.80	P
	157	1.74	P
	165	1.49	P
802.11ac HT40	151	-1.53	P
	159	-1.71	P
802.11ac HT80	155	-4.73	P

MIMO&CDD

Mode	Channel	Power Spectral Density (dBm/500kHz) ANT9	Power Spectral Density (dBm/500kHz) ANT10	Power Spectral Density (dBm/500kHz) ANT9+ANT10+DG	Conclusion
802.11a	149	2.15	2.50	8.84	P
	157	2.50	2.40	8.96	P
	165	3.01	1.83	8.97	P
802.11ac HT20	149	0.69	1.48	7.61	P
	157	1.18	1.22	7.71	P
	165	1.65	0.78	7.75	P
802.11ac HT40	151	-2.51	-2.16	4.18	P
	159	-2.18	-2.40	4.22	P
802.11ac	155	-5.25	-5.33	1.22	P

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HT80					

The Power Spectral Density =Total value of (ANT9+ANT10) +DG

- $$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$$

where

Each antenna is driven by no more than one spatial stream;
N_{SS} = the number of independent spatial streams of data;
N_{ANT} = the total number of antennas
$g_{j,k} = 10^{G_k/20}$ if the kth antenna is being fed by spatial stream j, or zero if it is not;
G_k is the gain in dBi of the kth antenna.

The antenna gain is provided by the manufacturer。

ANT9 Frequency Gain(dBi)

5.1~5.5G 0.23

5.5~5.7G 0.23

5.7~5.8G 0.73

ANT10

5.1~5.5G 0.37

5.5~5.8G 0.25

Directional Gain 5.1-5.3G 3.31

5.5~5.7G 3.25

5.7~5.8G 3.50

Conclusion: PASS

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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 (KHz)		conclusion
802.11a	149	Fig.1	15.15	P
	157	Fig.2	15.10	P
	165	Fig.3	15.75	P
802.11ac HT20	149	Fig.4	15.10	P
	157	Fig.5	15.70	P
	165	Fig.6	16.50	P
802.11ac HT40	151	Fig.7	36.00	P
	159	Fig.8	36.24	P
802.11ac HT80	155	Fig.9	72.48	P

Conclusion: PASS

Test graphs as below:

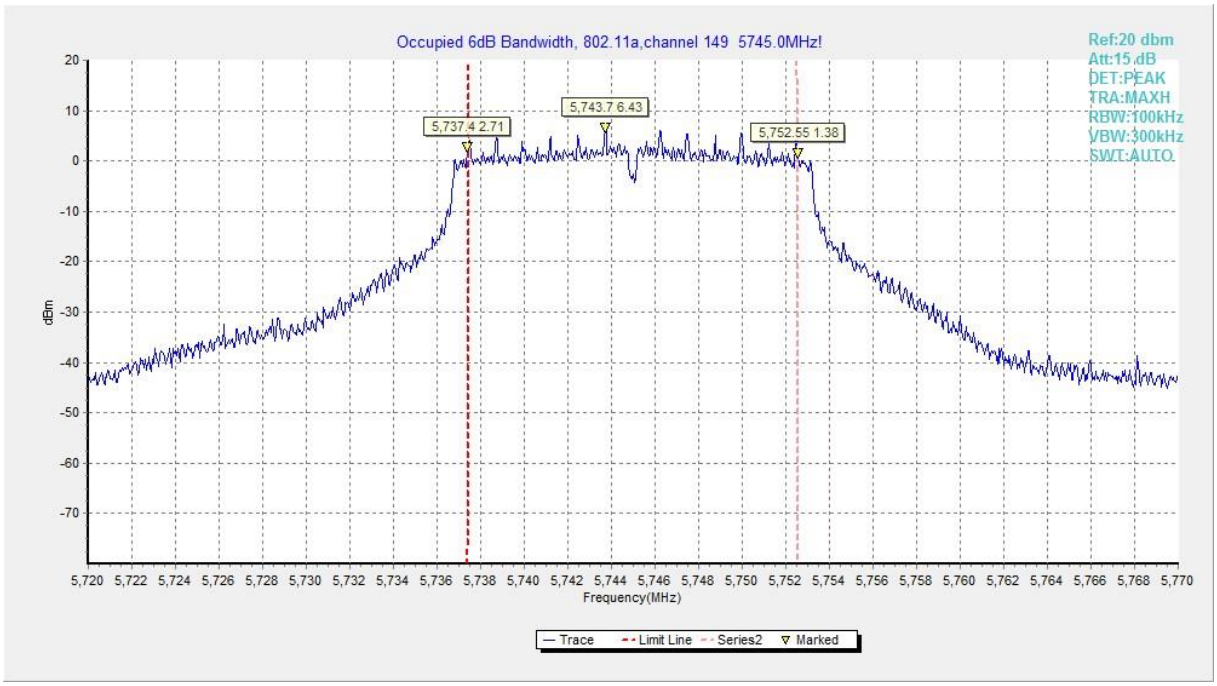

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Fig. 1 Occupied 6dB Bandwidth (802.11a, Ch 149)

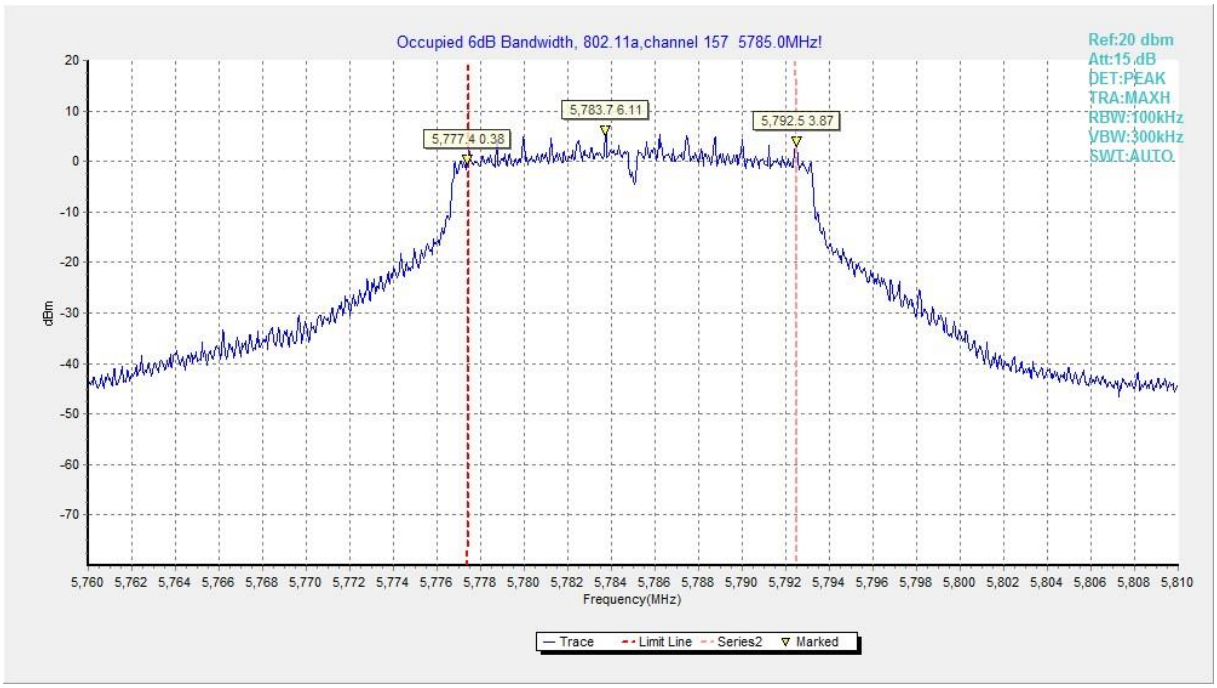

Fig. 2 Occupied 6dB Bandwidth (802.11a, Ch 157)

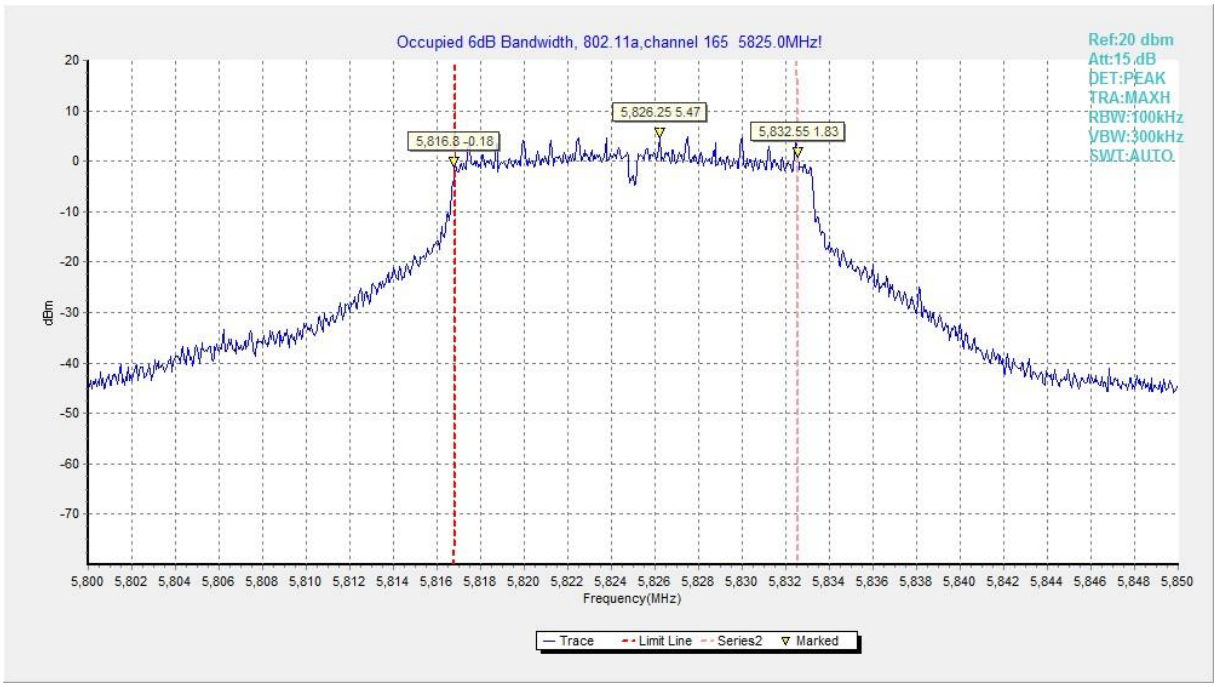

Fig. 3 Occupied 6dB Bandwidth (802.11a, Ch 165)

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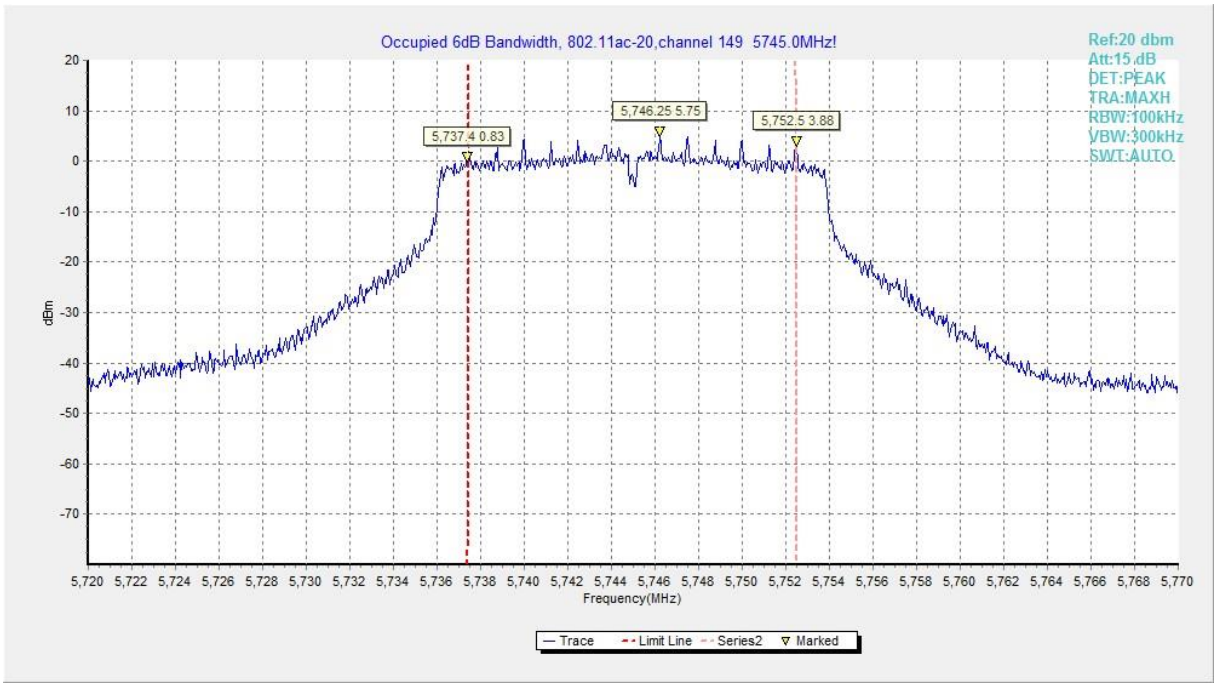

Fig. 4 Occupied 6dB Bandwidth (802.11ac-HT20, Ch 149)

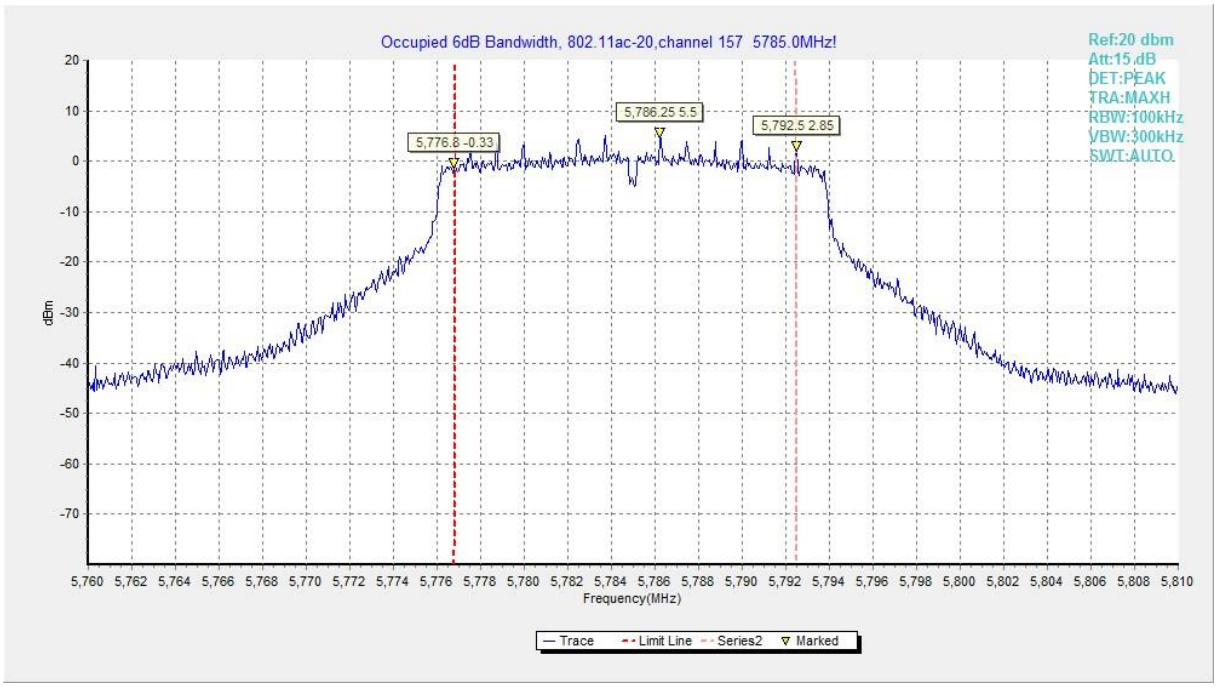

Fig. 5 Occupied 6dB Bandwidth (802.11ac-HT20, Ch 157)

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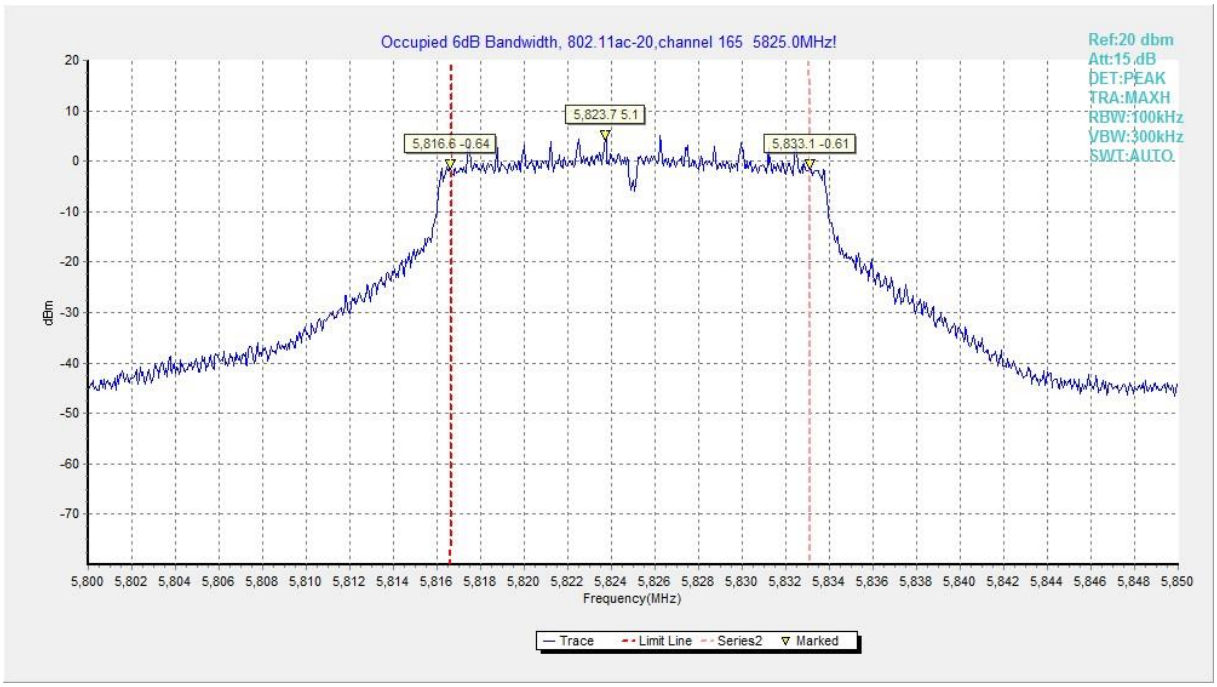

Fig. 6 Occupied 6dB Bandwidth (802.11ac-HT20, Ch 165)

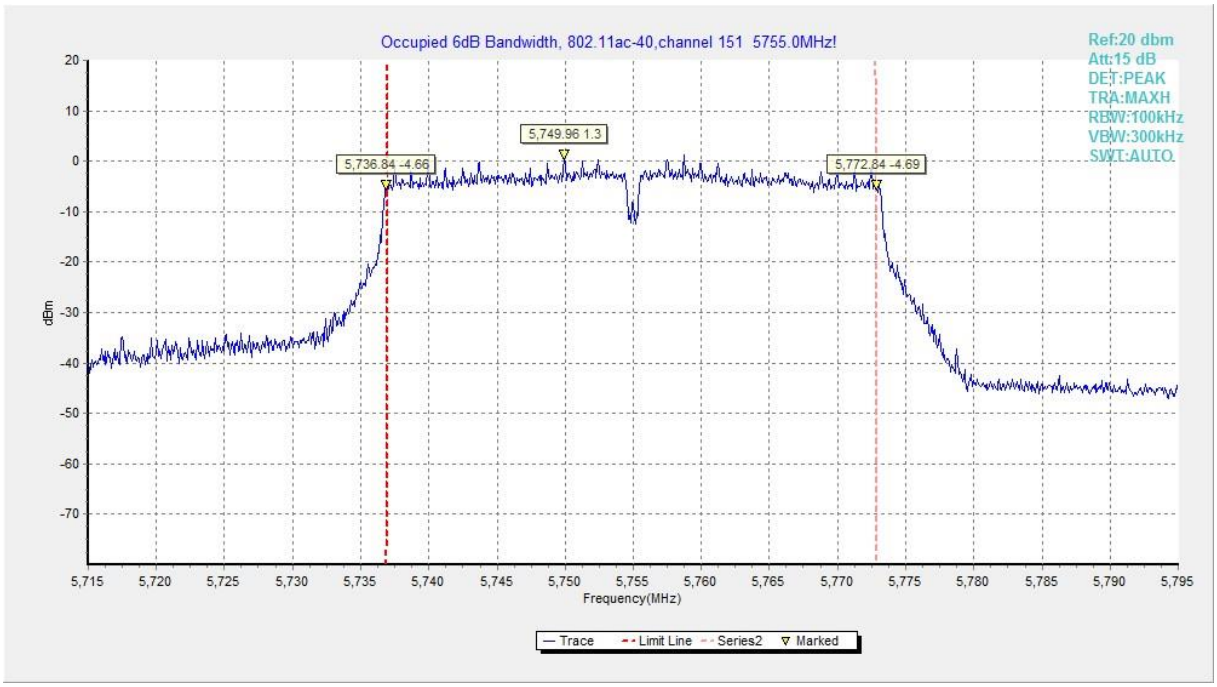

Fig. 7 Occupied 6dB Bandwidth (802.11ac-HT40, Ch 151)

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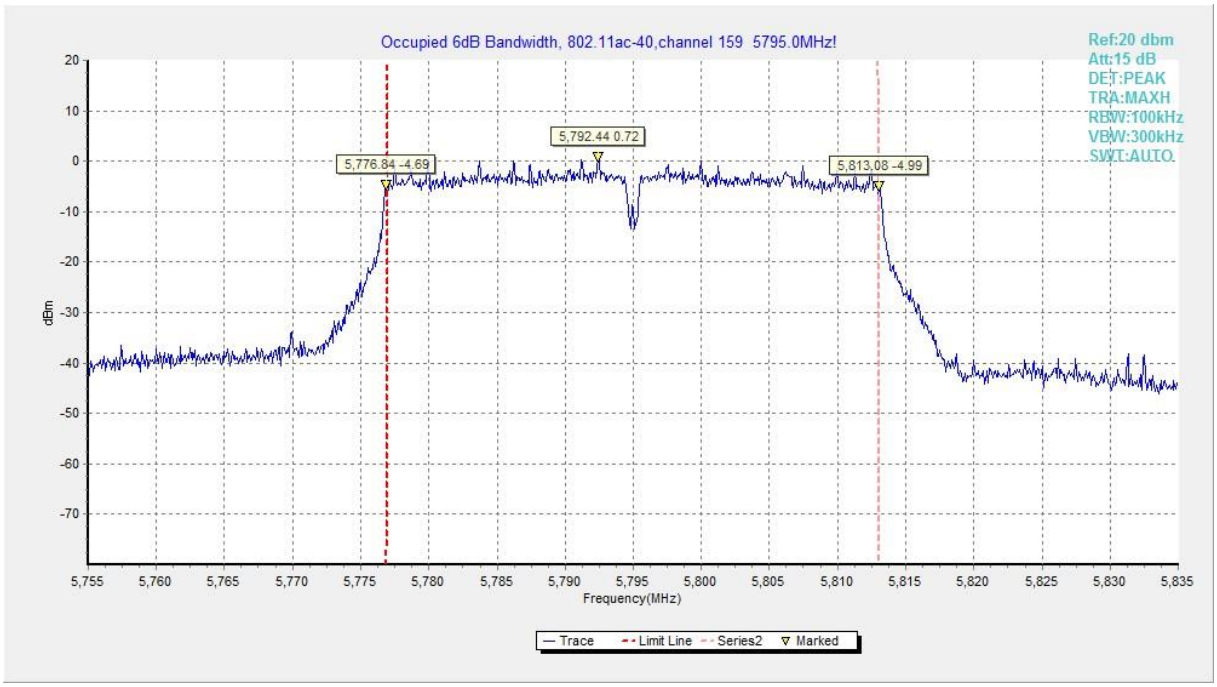

Fig. 8 Occupied 6dB Bandwidth (802.11ac-HT40, Ch 159)

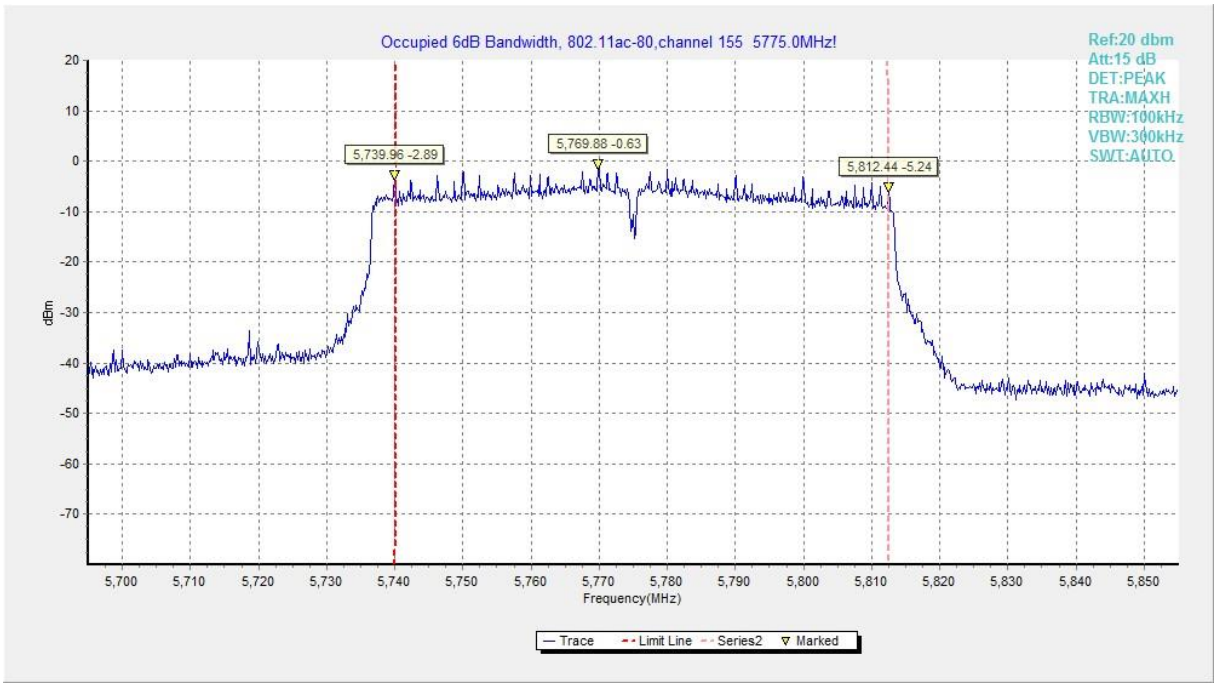

Fig. 9 Occupied 6dB Bandwidth (802.11ac-HT80, Ch 155)

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A.5. Transmitter Spurious Emission

A.5.1 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:

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. The measurements were performed separately in Chain 1, Chain 2, and MIMO (Chain 1+2), and only the worst cases are shown in this report.

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

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		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

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	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.

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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)
17995.600	45.77	-25.50	46.66	24.61	54.00	8.23	H
17994.000	45.56	-25.50	46.66	24.40	54.00	8.44	H
14497.600	39.03	-28.59	42.46	25.16	54.00	14.97	H
14497.000	38.98	-28.59	42.46	25.11	54.00	15.02	V
11496.200	34.72	-32.26	38.84	28.15	54.00	19.28	V
11492.400	34.68	-32.26	38.84	28.11	54.00	19.32	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)
17995.000	45.91	-25.50	46.66	24.75	54.00	8.09	H
17983.500	45.62	-25.50	46.66	24.46	54.00	8.38	V
14497.600	38.87	-28.59	42.46	25.00	54.00	15.13	V
14499.200	38.71	-28.59	42.46	24.84	54.00	15.29	V
11571.600	35.91	-32.31	38.91	29.32	54.00	18.09	V
11572.100	35.88	-32.31	38.91	29.29	54.00	18.12	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)
17995.600	45.60	-25.50	46.66	24.44	54.00	8.40	V
17994.500	45.59	-25.50	46.66	24.43	54.00	8.41	V
14497.600	38.68	-28.59	42.46	24.81	54.00	15.32	H
14490.500	38.49	-28.59	42.46	24.62	54.00	15.51	V
11651.900	37.15	-32.31	38.91	30.56	54.00	16.85	V

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11651.400	36.85	-32.31	38.91	30.26	54.00	17.15	V

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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)
17997.800	45.65	-25.50	46.66	24.49	54.00	8.35	V
17981.300	45.57	-25.50	46.66	24.41	54.00	8.43	H
14495.400	38.60	-28.59	42.46	24.73	54.00	15.40	V
14497.000	38.59	-28.59	42.46	24.72	54.00	15.41	V
11496.800	34.30	-32.26	38.84	27.73	54.00	19.70	V
11486.900	34.27	-32.26	38.84	27.70	54.00	19.73	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)
17991.200	45.77	-25.50	46.66	24.61	54.00	8.23	V
17997.800	45.60	-25.50	46.66	24.44	54.00	8.40	V
14499.800	38.77	-28.59	42.46	24.90	54.00	15.23	H
14483.300	38.66	-28.59	42.46	24.79	54.00	15.34	V
11575.500	34.44	-32.31	38.91	27.85	54.00	19.56	V
11565.000	34.30	-32.31	38.91	27.71	54.00	19.70	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)
17991.800	45.62	-25.50	46.66	24.46	54.00	8.38	V
17986.200	45.59	-25.50	46.66	24.43	54.00	8.41	V
14490.500	38.67	-28.59	42.46	24.80	54.00	15.33	V
14494.900	38.63	-28.59	42.46	24.76	54.00	15.37	V
11645.900	35.28	-32.31	38.91	28.69	54.00	18.72	H
11652.500	35.23	-32.31	38.91	28.64	54.00	18.77	V

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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)
17995.000	45.90	-25.50	46.66	24.74	54.00	8.10	V
17995.600	45.81	-25.50	46.66	24.65	54.00	8.19	H
14486.600	39.13	-28.59	42.46	25.26	54.00	14.87	H
14497.600	39.08	-28.59	42.46	25.21	54.00	14.92	V
11816.900	34.39	-31.85	39.05	27.19	54.00	19.61	H
11846.600	34.38	-31.85	39.05	27.18	54.00	19.62	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)
17996.700	45.98	-25.50	46.66	24.82	54.00	8.02	H
17994.000	45.90	-25.50	46.66	24.74	54.00	8.10	H
14499.800	39.09	-28.59	42.46	25.22	54.00	14.91	V
14495.400	39.01	-28.59	42.46	25.14	54.00	14.99	V
11589.800	35.87	-32.31	38.91	29.28	54.00	18.13	V
11593.600	35.54	-32.31	38.91	28.95	54.00	18.46	V

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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)
17987.900	45.85	-25.50	46.66	24.69	54.00	8.15	H
17973.600	45.68	-25.50	46.66	24.52	54.00	8.32	V
14489.900	38.80	-28.59	42.46	24.93	54.00	15.20	H
14478.900	38.78	-28.59	42.46	24.91	54.00	15.22	H
11493.500	35.27	-32.26	38.84	28.70	54.00	18.73	V
11492.400	35.23	-32.26	38.84	28.66	54.00	18.77	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)
17985.200	45.64	-25.50	46.66	24.48	54.00	8.36	V
17996.200	45.57	-25.50	46.66	24.41	54.00	8.43	H
14486.600	38.93	-28.59	42.46	25.06	54.00	15.07	V
14477.200	38.70	-28.59	42.46	24.83	54.00	15.30	V
11567.800	35.27	-32.31	38.91	28.68	54.00	18.73	H
11568.300	34.86	-32.31	38.91	28.27	54.00	19.14	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)
17995.600	46.04	-25.50	46.66	24.88	54.00	7.96	H
17986.800	45.75	-25.50	46.66	24.59	54.00	8.25	V
14497.000	38.73	-28.59	42.46	24.86	54.00	15.27	V
14499.800	38.66	-28.59	42.46	24.79	54.00	15.34	V
11645.900	35.46	-32.31	38.91	28.87	54.00	18.54	H
11655.200	35.46	-32.31	38.91	28.87	54.00	18.54	V

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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)
17997.200	45.86	-25.50	46.66	24.70	54.00	8.14	H
17998.900	45.68	-25.50	46.66	24.52	54.00	8.32	V
14488.200	39.01	-28.59	42.46	25.14	54.00	14.99	V
14499.800	38.96	-28.59	42.46	25.09	54.00	15.04	H
11517.100	34.92	-32.26	38.84	28.35	54.00	19.08	V
11521.000	34.87	-32.26	38.84	28.30	54.00	19.13	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)
17993.400	46.12	-25.50	46.66	24.96	54.00	7.88	V
17994.000	45.84	-25.50	46.66	24.68	54.00	8.16	H
14478.900	38.98	-28.59	42.46	25.11	54.00	15.02	H
14499.200	38.92	-28.59	42.46	25.05	54.00	15.08	H
11589.800	35.80	-32.31	38.91	29.21	54.00	18.20	V
11590.300	35.45	-32.31	38.91	28.86	54.00	18.55	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)
17995.600	45.96	-25.50	46.66	24.80	54.00	8.04	V
17998.900	45.90	-25.50	46.66	24.74	54.00	8.10	V
14497.000	39.13	-28.59	42.46	25.26	54.00	14.87	V
14494.300	38.92	-28.59	42.46	25.05	54.00	15.08	V
11550.100	34.68	-32.26	38.84	28.11	54.00	19.32	V
11851.500	34.57	-31.85	39.05	27.37	54.00	19.43	V

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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)
17987.300	56.93	-25.50	46.66	35.77	74.00	17.07	H
17988.500	56.91	-25.50	46.66	35.75	74.00	17.09	H
14345.800	51.11	-28.42	42.34	37.19	68.30	17.19	H
14618.000	50.86	-27.29	41.90	36.25	68.30	17.44	V
11832.900	45.97	-31.85	39.05	38.77	74.00	28.03	H
11501.800	45.87	-32.26	38.84	39.30	74.00	28.13	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)
17968.700	57.02	-25.50	46.66	35.86	74.00	16.98	V
17986.800	56.89	-25.50	46.66	35.73	74.00	17.11	V
14528.400	50.87	-28.59	42.46	37.00	68.30	17.43	V
14520.100	50.49	-28.59	42.46	36.62	68.30	17.81	H
11570.500	46.80	-32.31	38.91	40.21	74.00	27.20	V
11572.100	46.42	-32.31	38.91	39.83	74.00	27.58	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)
17992.800	56.54	-25.50	46.66	35.38	74.00	17.46	H
17983.000	56.45	-25.50	46.66	35.29	74.00	17.55	H
14488.800	51.16	-28.59	42.46	37.29	74.00	22.84	V
14516.300	50.75	-28.59	42.46	36.88	68.30	17.55	V
11651.900	47.43	-32.31	38.91	40.84	74.00	26.57	V
11653.000	47.08	-32.31	38.91	40.49	74.00	26.92	H

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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)
17991.800	58.22	-25.50	46.66	37.06	74.00	15.78	V
17902.100	56.50	-25.50	46.66	35.34	74.00	17.50	H
14434.400	51.28	-28.59	42.46	37.41	68.30	17.02	H
14307.300	50.60	-28.42	42.34	36.68	68.30	17.70	V
11832.300	45.66	-31.85	39.05	38.46	74.00	28.34	H
11489.600	45.65	-32.26	38.84	39.08	74.00	28.35	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)
17996.200	57.11	-25.50	46.66	35.95	74.00	16.89	V
17977.500	56.77	-25.50	46.66	35.61	74.00	17.23	V
14380.500	50.91	-28.42	42.34	36.99	68.30	17.39	H
14432.700	50.90	-28.59	42.46	37.03	68.30	17.40	V
11948.400	46.14	-31.48	39.09	38.53	74.00	27.86	H
11379.600	45.66	-32.42	38.79	39.29	74.00	28.34	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)
17975.800	57.30	-25.50	46.66	36.14	74.00	16.70	H
17970.800	56.65	-25.50	46.66	35.49	74.00	17.35	H
14721.500	51.20	-28.32	41.35	38.18	68.30	17.10	V
14471.200	50.64	-28.59	42.46	36.77	74.00	23.36	H
11816.900	46.49	-31.85	39.05	39.29	74.00	27.51	H
11648.000	45.90	-32.31	38.91	39.31	74.00	28.10	H

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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)
17998.900	57.34	-25.50	46.66	36.18	74.00	16.66	V
17993.400	57.07	-25.50	46.66	35.91	74.00	16.93	V
14999.800	50.98	-27.85	40.21	38.62	68.30	17.32	V
14696.100	50.68	-28.32	41.35	37.66	68.30	17.62	V
11498.500	45.93	-32.26	38.84	39.36	74.00	28.07	V
11886.800	45.88	-31.85	39.05	38.68	74.00	28.12	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)
17941.700	56.72	-25.50	46.66	35.56	74.00	17.28	H
17971.400	56.49	-25.50	46.66	35.33	74.00	17.51	V
14379.900	50.80	-28.42	42.34	36.88	68.30	17.50	H
14420.600	50.72	-28.59	42.46	36.85	68.30	17.58	H
11817.500	46.66	-31.85	39.05	39.46	74.00	27.34	H
11593.600	46.16	-32.31	38.91	39.57	74.00	27.84	V

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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)
17973.600	57.13	-25.50	46.66	35.97	74.00	16.87	V
17990.700	57.05	-25.50	46.66	35.89	74.00	16.95	V
14456.400	51.20	-28.59	42.46	37.33	68.30	17.10	V
14521.200	50.59	-28.59	42.46	36.72	68.30	17.71	V
11513.900	45.97	-32.26	38.84	39.40	74.00	28.03	H
11490.800	45.83	-32.26	38.84	39.26	74.00	28.17	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)
17958.200	56.39	-25.50	46.66	35.23	74.00	17.61	H
17971.400	56.29	-25.50	46.66	35.13	74.00	17.71	V
15002.500	50.74	-27.85	40.21	38.38	68.30	17.56	H
14185.200	50.35	-28.99	42.00	37.33	68.30	17.95	V
11834.000	46.86	-31.85	39.05	39.66	74.00	27.14	V
11929.600	46.35	-31.48	39.09	38.74	74.00	27.65	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)
17940.000	56.98	-25.50	46.66	35.82	74.00	17.02	V
17991.800	56.92	-25.50	46.66	35.76	74.00	17.08	H
14563.600	51.28	-27.29	41.90	36.67	68.30	17.02	V
14331.000	51.15	-28.42	42.34	37.23	68.30	17.15	V
11649.700	46.09	-32.31	38.91	39.50	74.00	27.91	V
11655.800	45.69	-32.31	38.91	39.10	74.00	28.31	V

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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)
17981.300	57.09	-25.50	46.66	35.93	74.00	16.91	V
17993.400	56.99	-25.50	46.66	35.83	74.00	17.01	H
14372.800	51.33	-28.42	42.34	37.41	68.30	16.97	H
14695.600	50.92	-28.32	41.35	37.90	68.30	17.38	H
11983.000	45.75	-31.48	39.09	38.14	74.00	28.25	V
11996.200	45.59	-31.48	39.09	37.98	74.00	28.41	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)
17987.300	57.20	-25.50	46.66	36.04	74.00	16.80	H
17992.800	57.19	-25.50	46.66	36.03	74.00	16.81	V
14400.200	51.74	-28.59	42.46	37.87	68.30	16.56	H
14391.500	51.41	-28.42	42.34	37.49	68.30	16.89	H
11049.100	46.62	-32.49	38.72	40.38	74.00	27.38	V
11838.900	46.48	-31.85	39.05	39.28	74.00	27.52	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)
17889.500	56.83	-25.50	46.66	35.67	74.00	17.17	V
17989.500	56.82	-25.50	46.66	35.66	74.00	17.18	H
14332.000	51.59	-28.42	42.34	37.67	68.30	16.71	H
16895.600	51.33	-26.32	42.36	35.28	68.30	16.97	V
10959.500	46.76	-32.82	38.70	40.88	74.00	27.24	V
11990.700	45.84	-31.48	39.09	38.23	74.00	28.16	H

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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.	

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
	5825 MHz	Fig.13	P
802.11n HT40	5755 MHz	Fig.14	P
	5795 MHz	Fig.15	P
802.11ac HT20	5745 MHz	Fig.16	P
	5825 MHz	Fig.17	P
802.11ac HT40	5755 MHz	Fig.18	P
	5795 MHz	Fig.19	P
802.11ac HT80	5775 MHz	Fig.20 Fig.21	P

Conclusion: PASS

Test graphs as below:

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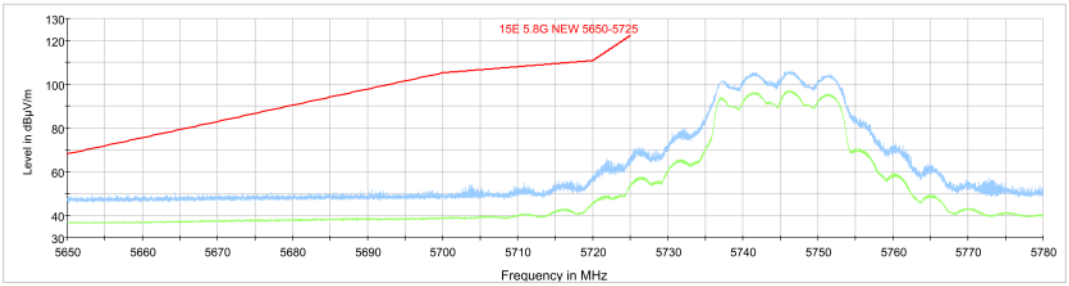

Fig. 10 Band Edges (802.11a Ch149,5745MHz)

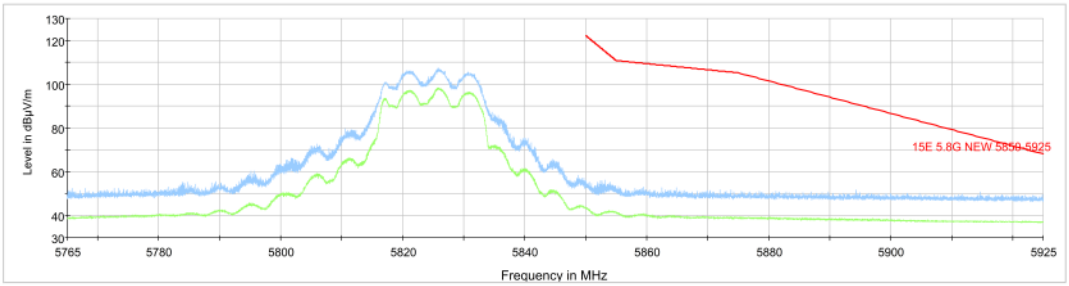

Fig. 11 Band Edges (802.11a Ch165, 5825MHz)

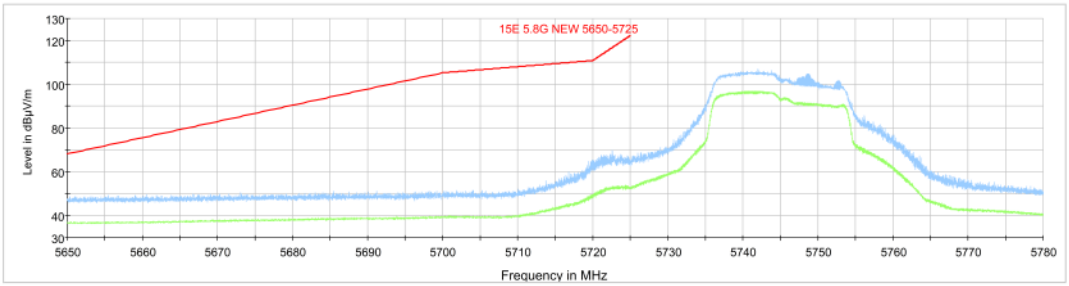

Fig. 12 Band Edges (802.11n-HT20 Ch149, 5745MHz)

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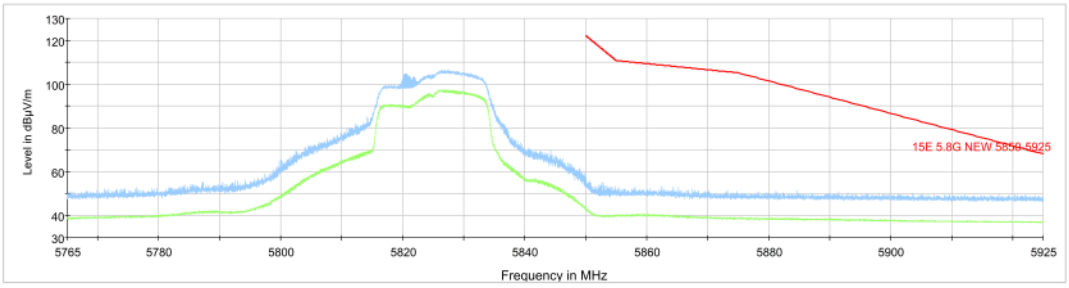

Fig. 13 Band Edges (802.11n-HT20 Ch165, 5825MHz)

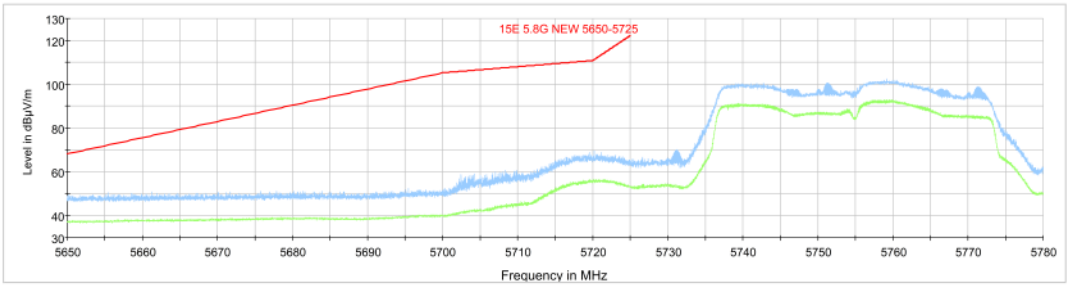

Fig. 14 Band Edges (802.11n-HT40 Ch151, 5755MHz)

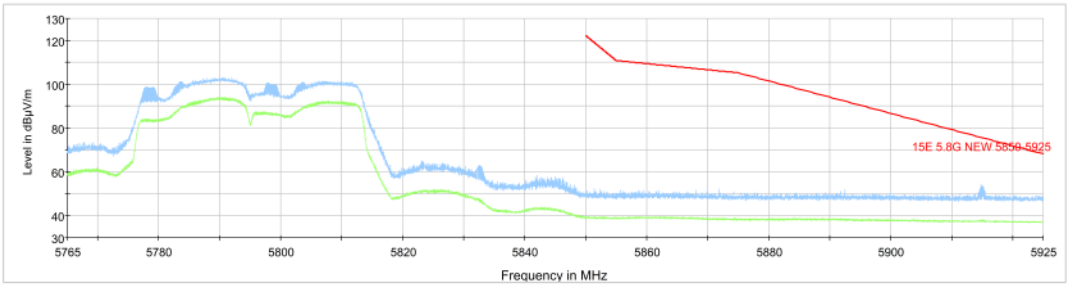

Fig. 15 Band Edges (802.11n-HT40 Ch159, 5795MHz)

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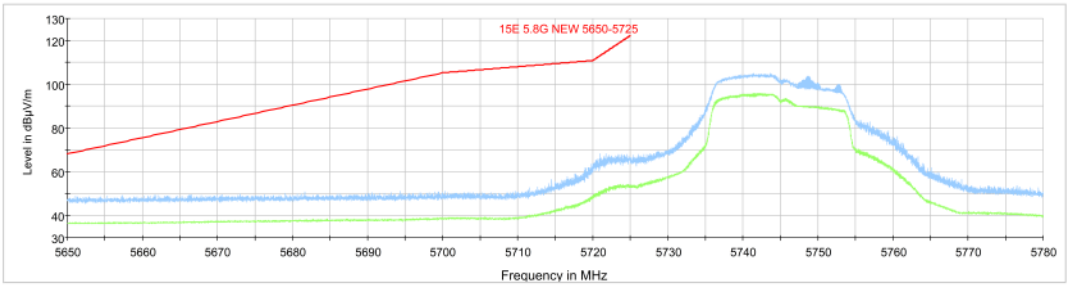

Fig. 16 Band Edges (802.11ac-HT20 Ch149, 5745MHz)

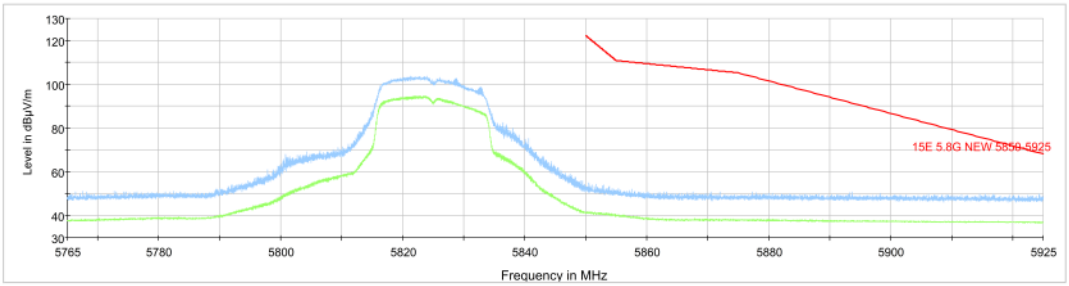

Fig. 17 Band Edges (802.11ac-HT20 Ch165, 5825MHz)

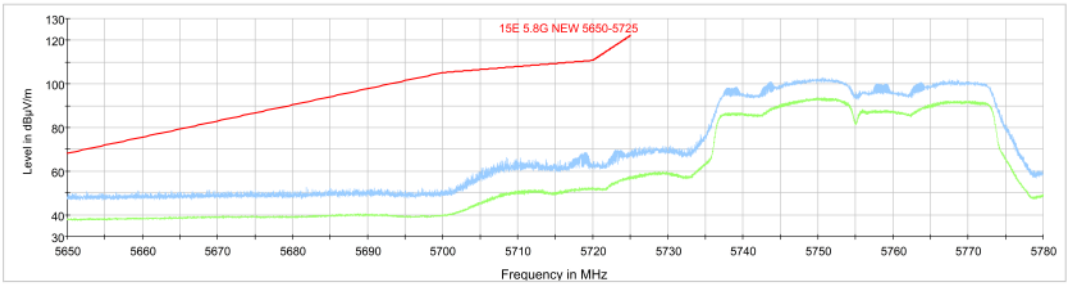

Fig. 18 Band Edges (802.11ac-HT40 Ch151, 5755MHz)

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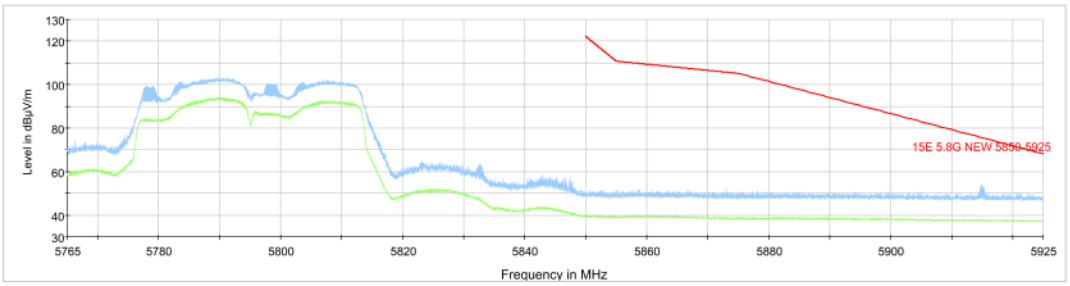

Fig. 19 Band Edges (802.11ac-HT40 Ch159, 5795MHz)

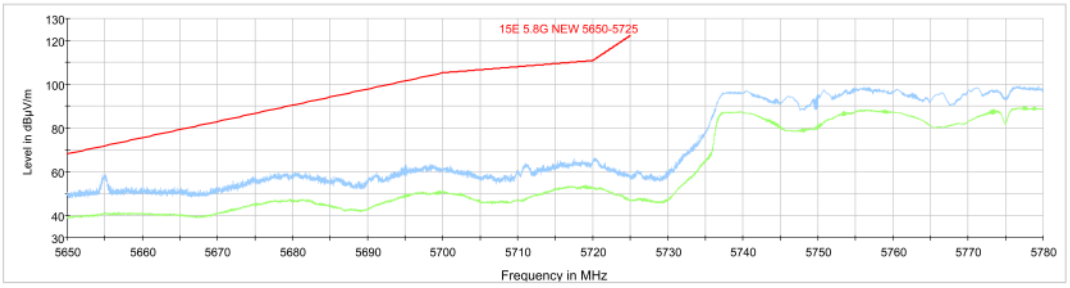

Fig. 20 Band Edges (802.11ac-HT80 Ch155, 5775MHz)

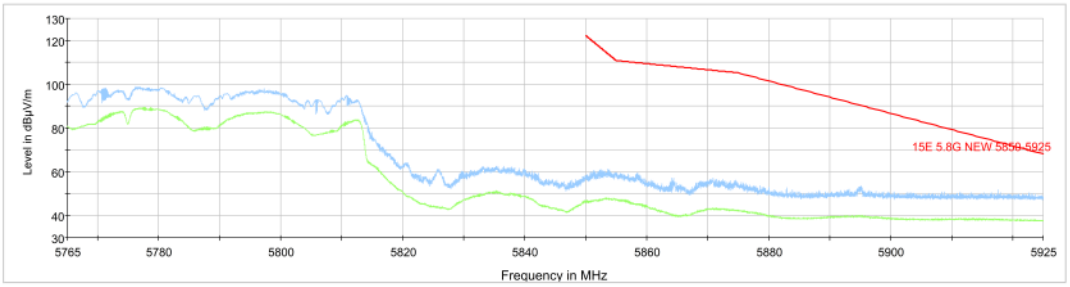

Fig. 21 Band Edges (802.11ac-HT80 Ch155, 5775MHz)

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A.7. AC Powerline Conducted Emission

Test Condition:

Voltage（V）	Frequency（Hz）
120	60

Measurement uncertainty:

Expanded measurement uncertainty for this test item is U =3.08dB, k=2.

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.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 (dBμV)	Result (dBμV)		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 .

Conclusion: PASS

Test graphs as below:

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Traffic:

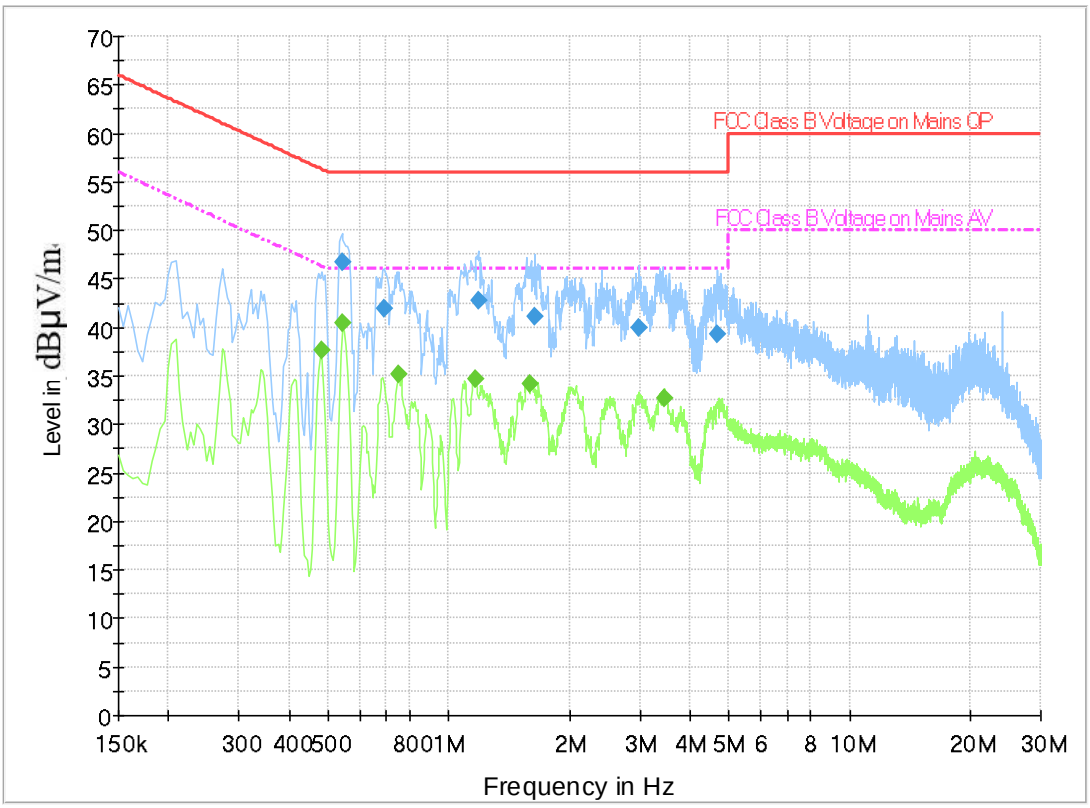

Fig. 22 AC Power line Conducted Emission-802.11a

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)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.541500	46.6	GND	L1	10.0	9.4	56.0
0.690000	42.0	GND	N	10.0	14.0	56.0
1.185000	42.8	GND	L1	10.0	13.2	56.0
1.644000	41.2	GND	N	10.0	14.8	56.0
2.976000	40.0	GND	L1	10.0	16.0	56.0
4.686000	39.2	GND	L1	10.2	16.8	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.483000	37.6	GND	N	10.0	8.7	46.3
0.546000	40.4	GND	L1	10.0	5.6	46.0
0.753000	35.1	GND	L1	10.0	10.9	46.0
1.162500	34.6	GND	N	10.0	11.4	46.0
1.599000	34.2	GND	L1	10.0	11.8	46.0
3.457500	32.6	GND	L1	10.1	13.4	46.0

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

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Idle:

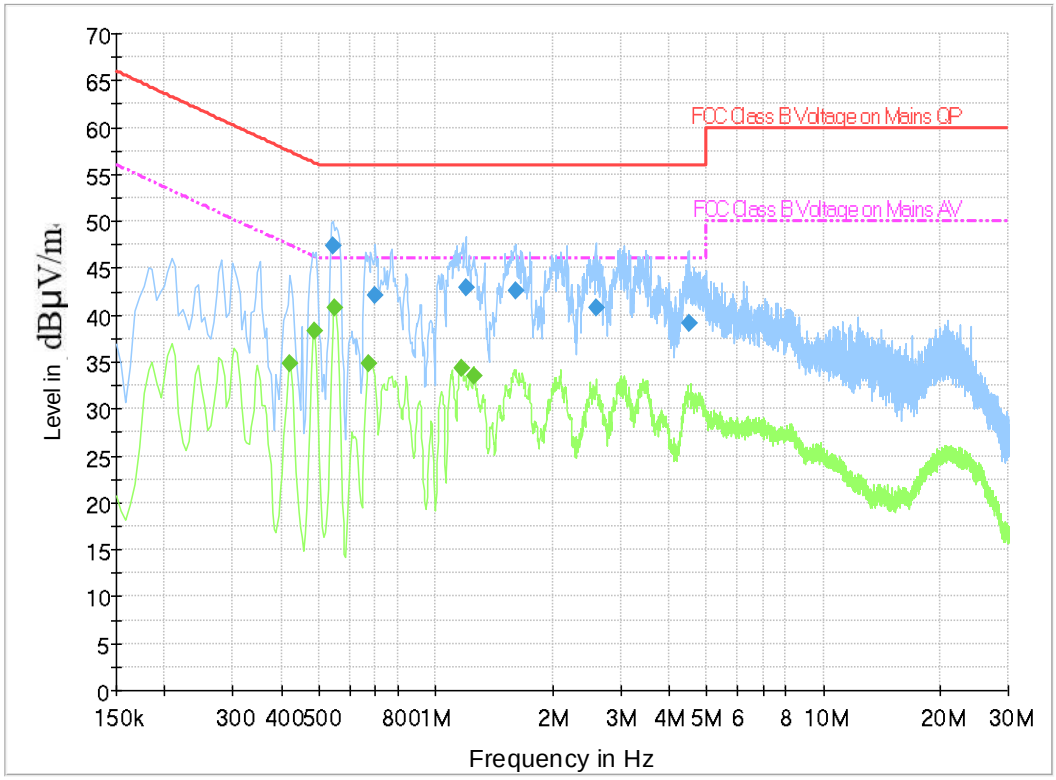

Fig. 23 AC Power line Conducted Emission-Idle

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)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.546000	47.4	GND	N	10.0	8.6	56.0
0.699000	42.1	GND	L1	10.0	13.9	56.0
1.194000	43.0	GND	N	10.0	13.0	56.0
1.608000	42.5	GND	L1	10.0	13.5	56.0
2.589000	40.8	GND	L1	10.1	15.2	56.0
4.492500	39.2	GND	L1	10.1	16.8	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.420000	34.8	GND	L1	9.9	12.6	47.4
0.487500	38.3	GND	N	10.0	7.9	46.2
0.550500	40.9	GND	L1	10.0	5.1	46.0
0.672000	34.9	GND	N	9.9	11.1	46.0
1.162500	34.4	GND	L1	10.0	11.6	46.0
1.257000	33.5	GND	N	10.0	12.5	46.0

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

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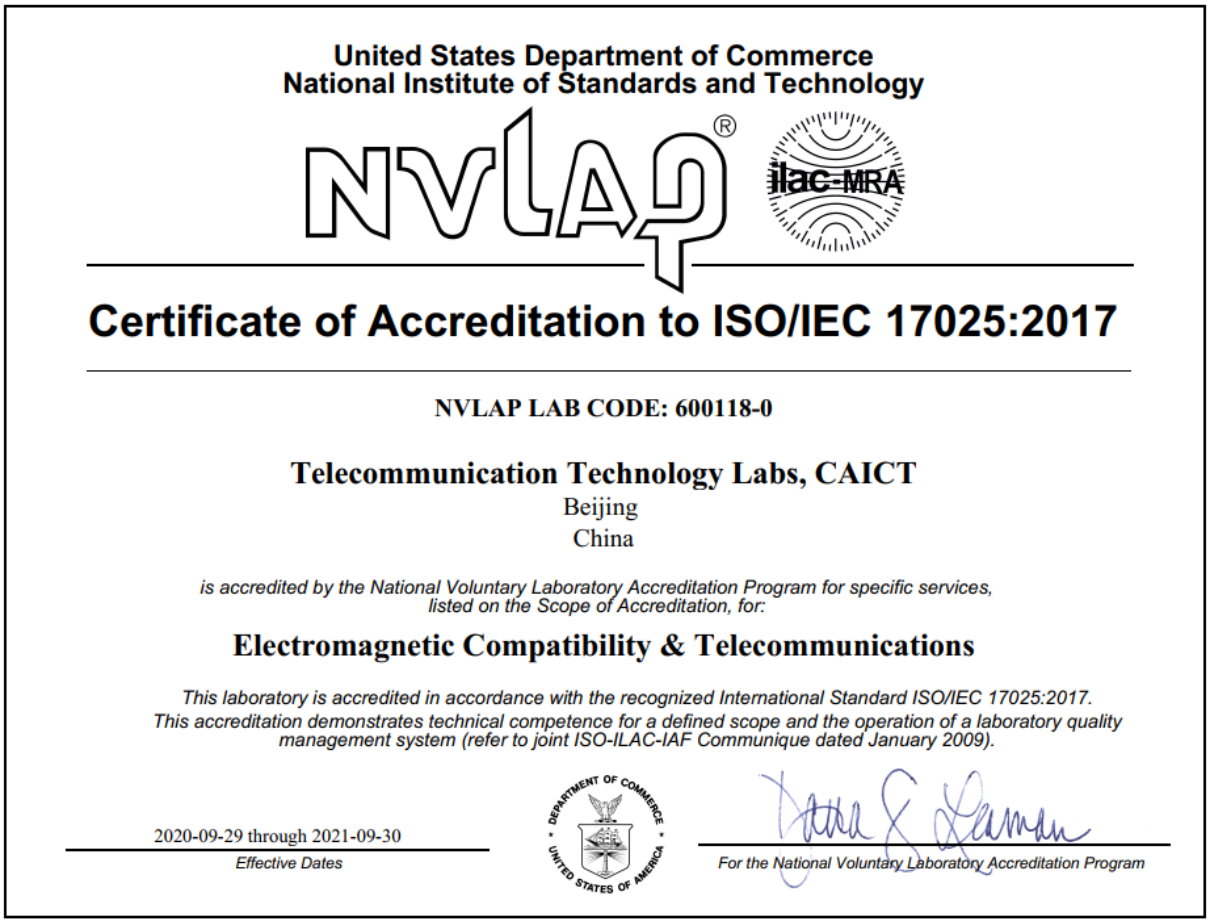
ANNEX B: EUT parameters

Disclaimer: The antenna gain 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



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NVLAP LAB CODE: 600118-0

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Beijing
China

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Electromagnetic Compatibility & Telecommunications

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).

2020-09-29 through 2021-09-30
Effective Dates

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

For the National Voluntary Laboratory Accreditation Program

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