



FCC PART 15C TEST REPORT No.I22Z62189-IOT05

for

HMD Global Oy

Smart Phone

N156DL

With

FCC ID: 2AJOTTA-1560

Hardware Version: V1.0

Software Version: 02US_0_043

Issued Date: 2023-01-17

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.I22Z62189-IOT05

REPORT HISTORY

Report Number	Revision	Description	Issue Date
I22Z62189-IOT05	Rev.0	1st edition	2023-01-17

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	8
4.1. DOCUMENTS SUPPLIED BY APPLICANT	8
4.2. REFERENCE DOCUMENTS FOR TESTING	8
5. LABORATORY ENVIRONMENT	8
6. SUMMARY OF TEST RESULTS	9
6.1. SUMMARY OF TEST RESULTS	9
6.2. STATEMENTS	9
6.3. TEST CONDITIONS	9
7. TEST EQUIPMENTS UTILIZED	10
8. MEASUREMENT UNCERTAINTY	11
8.1. TRANSMITTER OUTPUT POWER	11
8.2. PEAK POWER SPECTRAL DENSITY	11
8.3. OCCUPIED 6DB BANDWIDTH	11
8.4. BAND EDGES COMPLIANCE	11
8.5. SPURIOUS EMISSIONS	11
8.6. AC POWER-LINE CONDUCTED EMISSION	11
ANNEX A: MEASUREMENT RESULTS	12
A.1. MEASUREMENT METHOD	12
A.2. MAXIMUM PEAK OUTPUT POWER	13
A.2.1 ANTENNA GAIN	13

A.2.2. MAXIMUM AVERAGE OUTPUT POWER-CONDUCTED	13
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
FIG. 10 BAND EDGES (802.11A CH149,5745MHZ).....	36
FIG. 11 BAND EDGES (802.11A CH165, 5825MHZ).....	36
FIG. 12 BAND EDGES (802.11N-HT20 CH149, 5745MHZ).....	36
FIG. 13 BAND EDGES (802.11N-HT20 CH165, 5825MHZ).....	37
FIG. 14 BAND EDGES (802.11N-HT40 CH151, 5755MHZ).....	37
FIG. 15 BAND EDGES (802.11N-HT40 CH159, 5795MHZ).....	37
FIG. 16 BAND EDGES (802.11AC-HT20 CH149, 5745MHZ).....	38
FIG. 17 BAND EDGES (802.11AC-HT20 CH165, 5825MHZ).....	38
FIG. 18 BAND EDGES (802.11AC-HT40 CH151, 5755MHZ).....	38
FIG. 19 BAND EDGES (802.11AC-HT40 CH159, 5795MHZ).....	39
FIG. 20 BAND EDGES (802.11AC-HT80 CH155, 5775MHZ).....	39
FIG. 21 BAND EDGES (802.11AC-HT80, 5775MHZ).....	39
A.7. AC POWERLINE CONDUCTED EMISSION	40
FIG. 22 AC POWER LINE CONDUCTED EMISSION-802.11A	41
FIG. 23 AC POWER LINE CONDUCTED EMISSION-IDLE.....	42
ANNEX B: EUT PARAMETERS.....	43
ANNEX C: ACCREDITATION CERTIFICATE	43

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,
100191, P. R. China

1.3. Testing Environment

Normal Temperature: 15-35°C

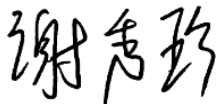
Relative Humidity: 20-75%

1.4. Project date

Testing Start Date: 2022-11-21

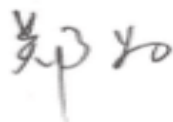
Testing End Date: 2023-01-17

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: HMD Global Oy
Address: Bertel Jungin aukio 9, 02600 Espoo, Finland
City: Espoo
Contact: Reza Serafat
Country: Finland
Email: reza.serafat@hmdglobal.com
Telephone: +491735287964
Fax: /

2.2. Manufacturer Information

Company Name: HMD Global Oy
Address: Bertel Jungin aukio 9, 02600 Espoo, Finland
City: Espoo
Contact: Reza Serafat
Country: Finland
Email: reza.serafat@hmdglobal.com
Telephone: +491735287964
Fax: /

3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY

EQUIPMENT(AE)

3.1. About EUT

Description	Smart Phone
Model name	N156DL
FCC ID	2AJOTTA-1560
WLAN Frequency Band	ISM Band: 5725MHz~5850MHz
Type of modulation	OFDM
Voltage	3.85V

3.2. Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version
UT22a	350817210014810	V1.0	02US_0_043
UT42a	350817210018134	V1.0	02US_0_043

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

UT22a is used for Conduction test, UT42a is used for Radiation test.

3.3. Internal Identification of AE used during the test

AE ID*	Description	Type	SN
AE1	Battery	/	/
AE2	Battery	/	/
AE3	USB Cable	/	/
AE4	Charger1	/	/

AE1

Model	TN-BP3000N1
Manufacturer	Guangdong Fenghua new energy co.,ltd.
Capacity	typ 3050mAh
Nominal Voltage	3.85V

AE2

Model	TN-BP3000N1
Manufacturer	Dongguan Ganfeng Electronics Co., Ltd
Capacity	typ 3050mAh
Nominal Voltage	3.85V

AE3

Model	TN-TC2A1MFB
Manufacturer	SAIBAO(JIANGXI) INDUSTRIAL CO.,LTD
Length of cable	/

AE4

Model	AD-005U
Manufacturer	Shenzhen Baijunda Electronic Co., Ltd

Length of cable /

*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	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 558074 D01	Federal Communications Commission Office of Engineering and Technology Laboratory Division GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES	2019

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	3.85V
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	LISN	ENV216	101200	Rohde & Schwarz	1 year	2023-06-29
3	Test Receiver	ESCI	100344	Rohde & Schwarz	1 year	2023-03-21
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	R&S	1 year	2023-01-23
2	EMI Antenna	VULB 9163	01223	SCHWARZBECK	1 year	2023-07-25
3	EMI Antenna	3115	00167250	ETS-Lindgren	1 year	2023-06-20

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	/
$30\text{MHz} \leq f \leq 1\text{GHz}$	5.15
$1\text{GHz} \leq f \leq 18\text{GHz}$	5.54
$18\text{GHz} \leq f \leq 40\text{GHz}$	5.26

8.6. AC Power-line Conducted Emission

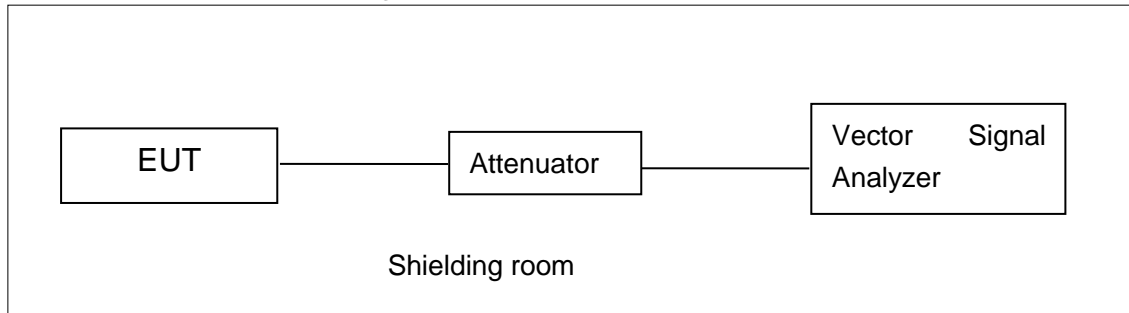
Measurement Uncertainty: 3.08dB, k=2

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

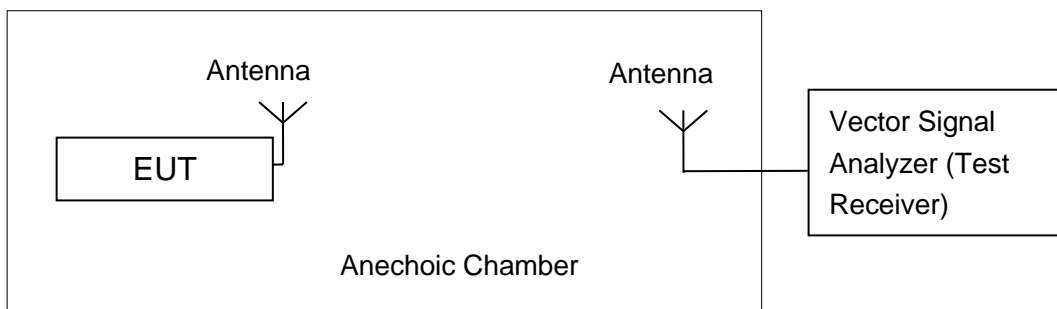


A.1.2. Radiated Emission Measurements

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 1.9dBi 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	18.68	18.81	18.72
	9	/	/	/
	12	/	/	/
	18	/	/	/
	24	/	/	/
	36	/	/	/
	48	/	/	/
	54	/	/	/

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	18.55	18.72	18.79
	MCS1	/	/	/
	MCS2	/	/	/
	MCS3	/	/	/
	MCS4	/	/	/
	MCS5	/	/	/
	MCS6	/	/	/
	MCS7	/	/	/

The data rate MCS0 is selected as worst 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	18.51	18.85	18.82
	MCS1	/	/	/
	MCS2	/	/	/
	MCS3	/	/	/
	MCS4	/	/	/
	MCS5	/	/	/
	MCS6	/	/	/
	MCS7	/	/	/
	MCS8	/	/	/

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	18.79	18.82
	MCS1	/	/
	MCS2	/	/
	MCS3	/	/
	MCS4	/	/
	MCS5	/	/
	MCS6	/	/
	MCS7	/	/

The data rate MCS0 is selected as worst 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	18.59	18.87
	MCS1	/	/
	MCS2	/	/
	MCS3	/	/
	MCS4	/	/
	MCS5	/	/
	MCS6	/	/
	MCS7	/	/

	MCS8	/	/
	MCS9	/	/

The data rate MCS0 is selected as worst 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	15.97
	MCS1	/
	MCS2	/
	MCS3	/
	MCS4	/
	MCS5	/
	MCS6	/
	MCS7	/
	MCS8	/
	MCS9	/

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

The duty cycle of all mode are 100%

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	5.54	P
	157	5.49	P
	165	5.64	P
802.11ac HT20	149	5.09	P
	157	5.31	P
	165	5.40	P
802.11ac HT40	151	2.21	P
	159	2.48	P
802.11ac HT80	155	-2.84	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	16.30	P
802.11ac HT20	149	Fig.4	17.55	P
	157	Fig.5	17.60	P
	165	Fig.6	17.55	P
802.11ac HT40	151	Fig.7	36.32	P
	159	Fig.8	36.32	P
802.11ac HT80	155	Fig.9	76.16	P

Conclusion: PASS

Test graphs as below:

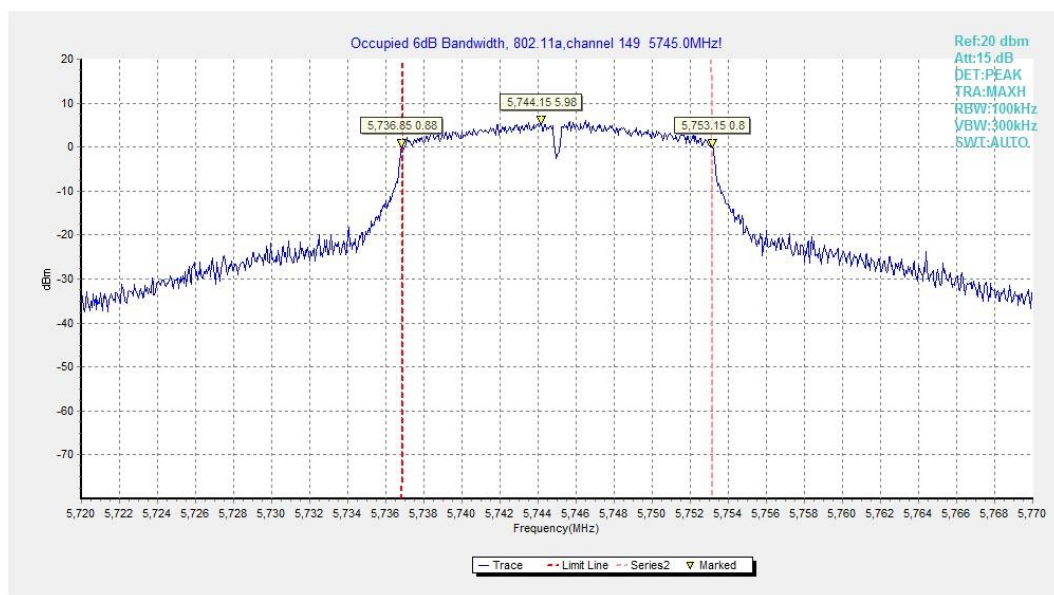


Fig. 1 Occupied 6dB Bandwidth (802.11a, Ch 149)

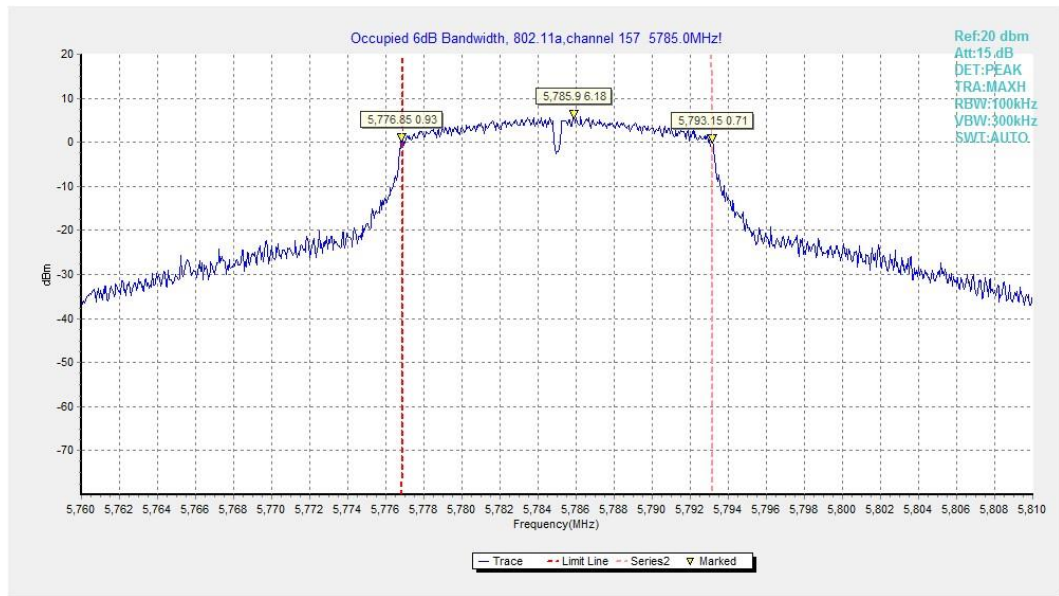


Fig. 2 Occupied 6dB Bandwidth (802.11a, Ch 157)

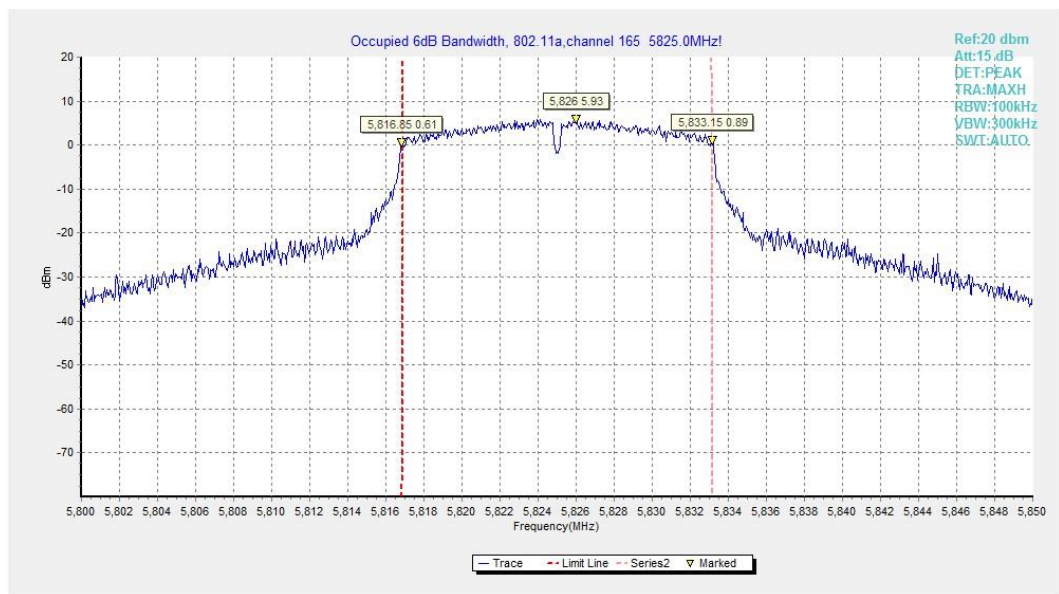


Fig. 3 Occupied 6dB Bandwidth (802.11a, Ch 165)

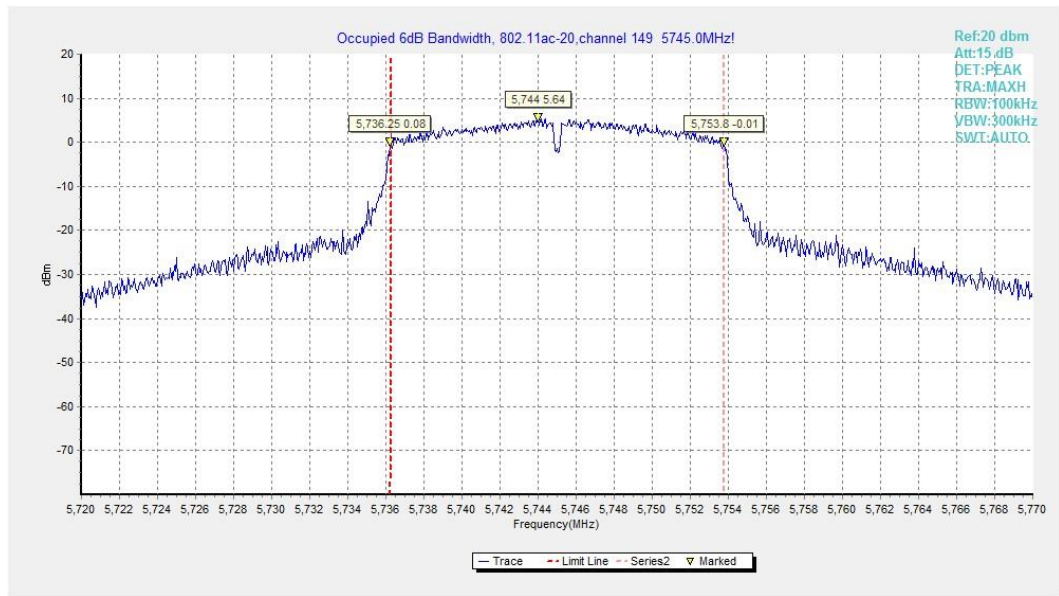


Fig. 4 Occupied 6dB Bandwidth (802.11ac-HT20, Ch 149)

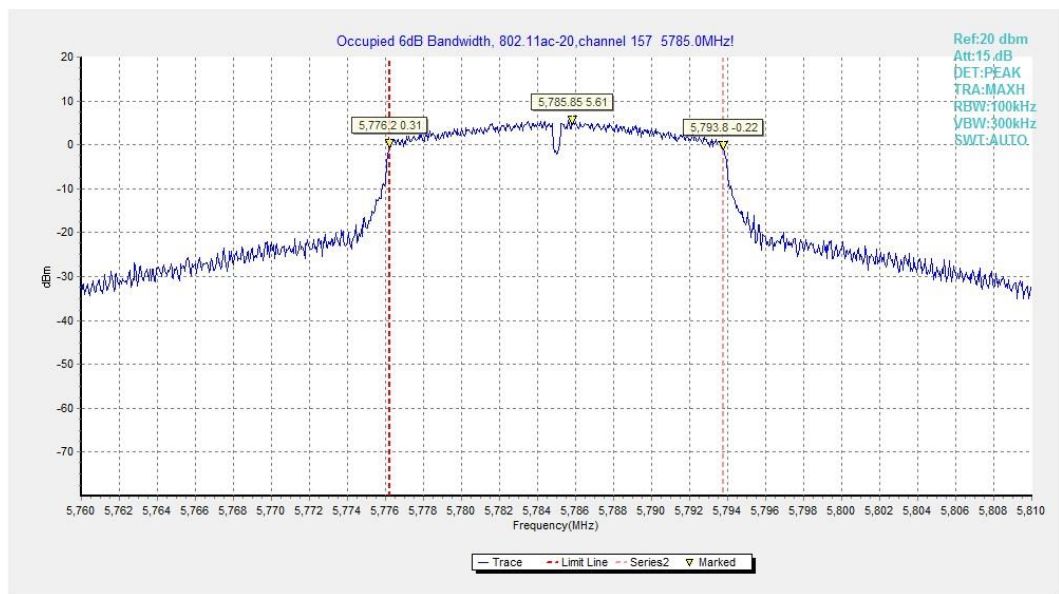


Fig. 5 Occupied 6dB Bandwidth (802.11ac-HT20, Ch 157)

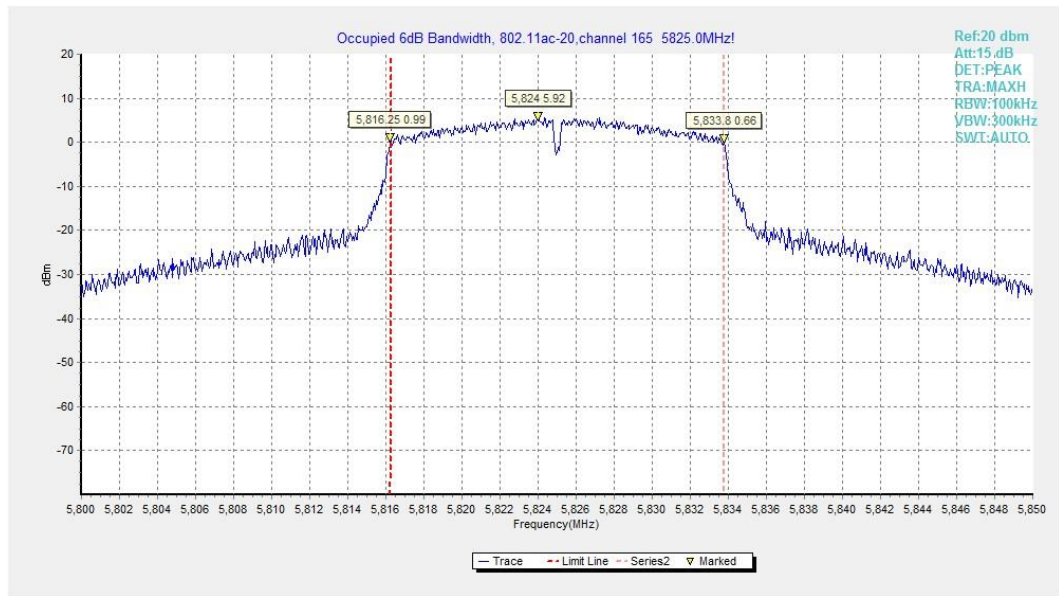


Fig. 6 Occupied 6dB Bandwidth (802.11ac-HT20, Ch 165)

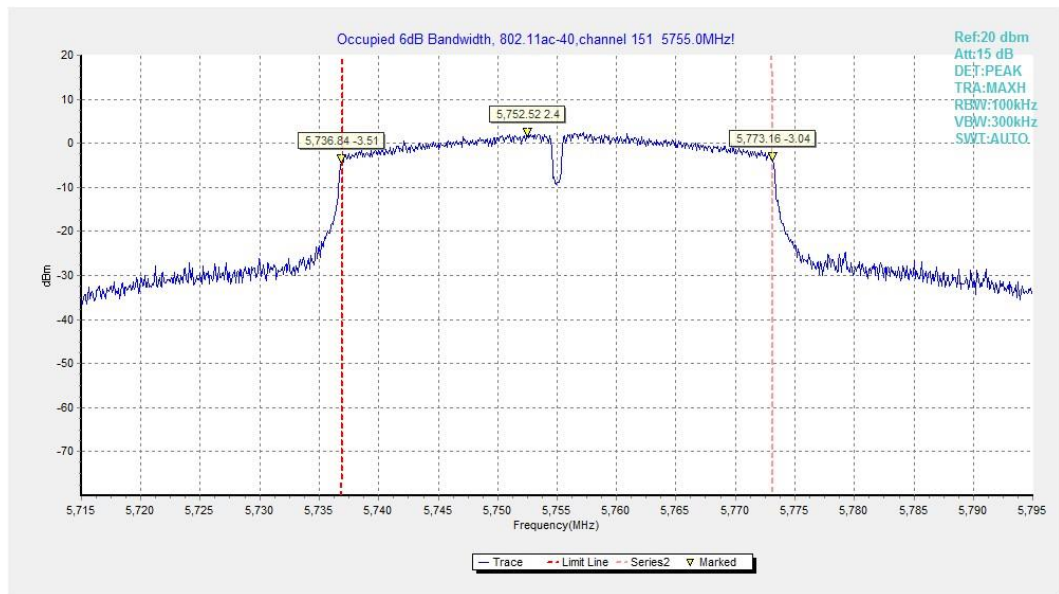


Fig. 7 Occupied 6dB Bandwidth (802.11ac-HT40, Ch 151)

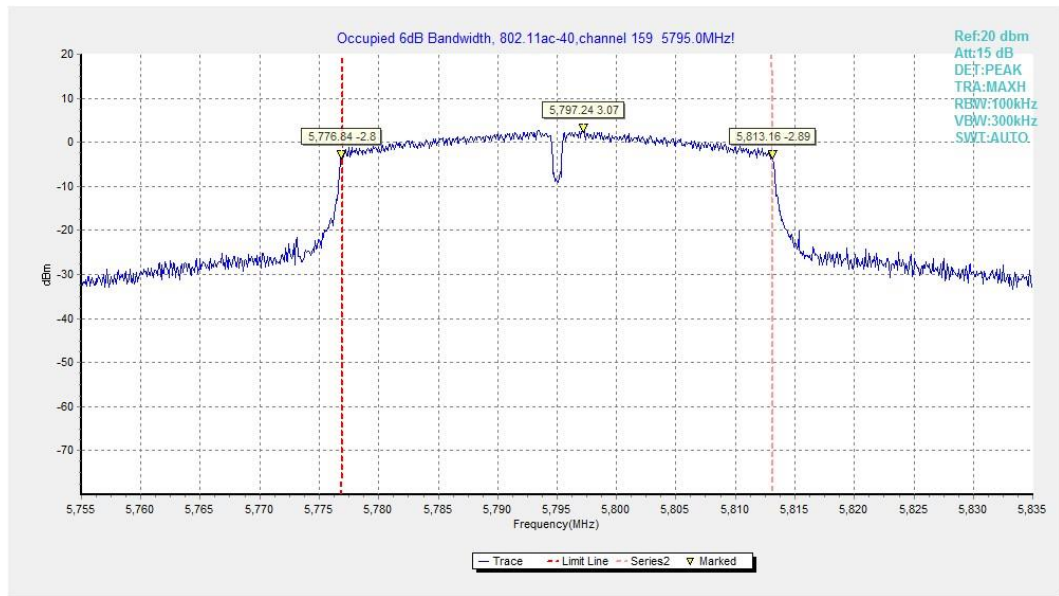


Fig. 8 Occupied 6dB Bandwidth (802.11ac-HT40, Ch 159)

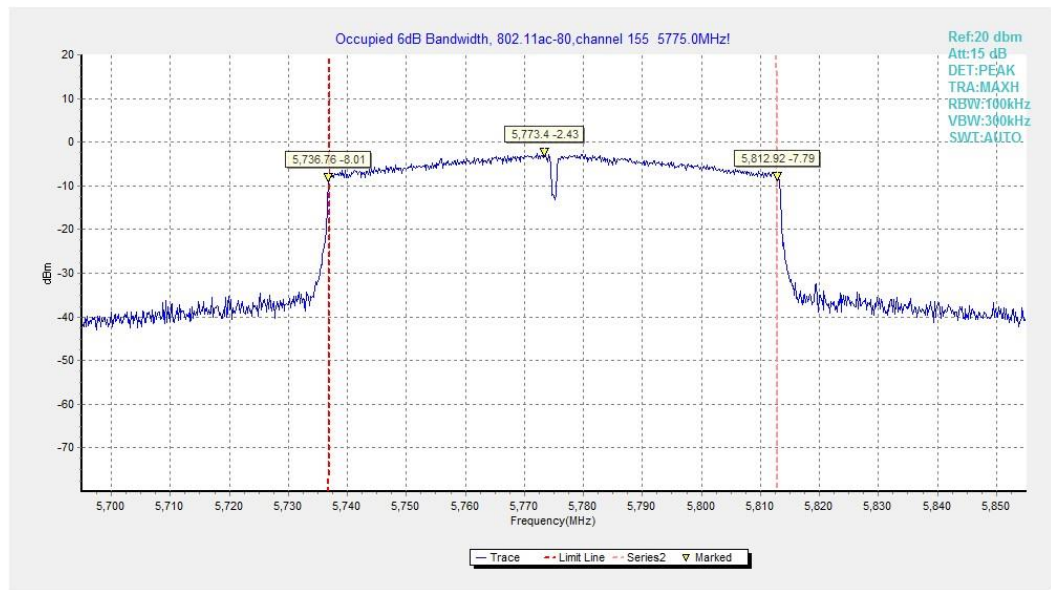


Fig. 9 Occupied 6dB Bandwidth (802.11ac-HT80, Ch 155)

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:

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
	165	26.5 GHz~ 40 GHz	---	P
		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
	165	26.5 GHz~ 40 GHz	---	P
		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	---
	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)
11489.650	52.91	-32.26	38.84	46.34	54.00	1.09	H
11490.200	52.41	-32.26	38.84	45.84	54.00	1.59	H
17955.450	39.31	-25.50	46.66	18.15	54.00	14.69	V
17941.150	39.29	-25.50	46.66	18.13	54.00	14.71	H
14498.150	36.23	-28.59	42.46	22.36	54.00	17.77	V
13310.700	36.08	-29.49	39.71	25.86	54.00	17.92	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)
11571.600	51.75	-32.31	38.91	45.16	54.00	2.25	H
11574.900	50.71	-32.31	38.91	44.12	54.00	3.29	H
17970.850	39.46	-25.50	46.66	18.30	54.00	14.54	V
17952.700	39.43	-25.50	46.66	18.27	54.00	14.57	H
14493.200	36.03	-28.59	42.46	22.16	54.00	17.97	V
13297.500	35.97	-29.49	39.71	25.75	54.00	18.03	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)
11650.800	48.83	-32.31	38.91	42.24	54.00	5.17	H
11648.600	48.45	-32.31	38.91	41.86	54.00	5.55	H
17952.700	39.21	-25.50	46.66	18.05	54.00	14.79	V
17996.700	39.19	-25.50	46.66	18.03	54.00	14.81	H
13311.800	36.23	-29.49	39.71	26.01	54.00	17.77	V
13303.000	36.12	-29.49	39.71	25.90	54.00	17.88	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)
11491.300	52.62	-32.26	38.84	46.05	54.00	1.38	H
11485.250	52.32	-32.26	38.84	45.75	54.00	1.68	H
17998.350	39.76	-25.50	46.66	18.60	54.00	14.24	V
17930.150	39.33	-25.50	46.66	18.17	54.00	14.67	H
14491.550	36.06	-28.59	42.46	22.19	54.00	17.94	V
12680.950	36.04	-30.47	39.06	27.45	54.00	17.96	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)
11572.150	51.57	-32.31	38.91	44.98	54.00	2.43	H
11565.550	51.24	-32.31	38.91	44.65	54.00	2.76	H
17948.850	39.48	-25.50	46.66	18.32	54.00	14.52	V
17936.200	39.21	-25.50	46.66	18.05	54.00	14.79	H
14498.700	36.27	-28.59	42.46	22.40	54.00	17.73	V
14498.150	35.88	-28.59	42.46	22.01	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)
11649.150	48.90	-32.31	38.91	42.31	54.00	5.10	H
11653.550	48.87	-32.31	38.91	42.28	54.00	5.13	H
17936.750	39.21	-25.50	46.66	18.05	54.00	14.79	H
17941.150	39.17	-25.50	46.66	18.01	54.00	14.83	H
14495.950	35.98	-28.59	42.46	22.11	54.00	18.02	V
14495.400	35.95	-28.59	42.46	22.08	54.00	18.05	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)
11503.950	49.61	-32.26	38.84	43.04	54.00	4.39	H
11511.650	48.81	-32.26	38.84	42.24	54.00	5.19	H
17988.450	39.26	-25.50	46.66	18.10	54.00	14.74	V
17997.250	39.26	-25.50	46.66	18.10	54.00	14.74	H
12681.500	35.84	-30.47	39.06	27.25	54.00	18.16	V
14477.250	35.76	-28.59	42.46	21.89	54.00	18.24	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)
11583.700	48.17	-32.31	38.91	41.58	54.00	5.83	H
11593.050	48.02	-32.31	38.91	41.43	54.00	5.98	H
17969.200	39.32	-25.50	46.66	18.16	54.00	14.68	H
17959.850	39.31	-25.50	46.66	18.15	54.00	14.69	H
13337.100	36.08	-29.49	39.71	25.86	54.00	17.92	V
14488.250	35.96	-28.59	42.46	22.09	54.00	18.04	V

802.11ac-HT20

Channel 149

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
11487.450	52.21	-32.26	38.84	45.64	54.00	1.79	H
11489.650	52.20	-32.26	38.84	45.63	54.00	1.80	H
17967.550	39.27	-25.50	46.66	18.11	54.00	14.73	V
17943.900	39.16	-25.50	46.66	18.00	54.00	14.84	V
14494.850	36.55	-28.59	42.46	22.68	54.00	17.45	V
14495.950	36.20	-28.59	42.46	22.33	54.00	17.80	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)
11569.400	51.36	-32.31	38.91	44.77	54.00	2.64	H
11566.650	50.60	-32.31	38.91	44.01	54.00	3.40	H
17919.700	39.29	-25.50	46.66	18.13	54.00	14.71	V
17957.650	39.24	-25.50	46.66	18.08	54.00	14.76	H
13304.650	36.30	-29.49	39.71	26.08	54.00	17.70	V
14471.750	36.21	-28.59	42.46	22.34	54.00	17.79	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)
11650.250	49.50	-32.31	38.91	42.91	54.00	4.50	H
11648.600	48.72	-32.31	38.91	42.13	54.00	5.28	H
17927.950	39.16	-25.50	46.66	18.00	54.00	14.84	H
17947.750	39.11	-25.50	46.66	17.95	54.00	14.89	V
14488.250	36.02	-28.59	42.46	22.15	54.00	17.98	H
14495.950	35.94	-28.59	42.46	22.07	54.00	18.06	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)
11513.300	49.54	-32.26	38.84	42.97	54.00	4.46	H
11510.550	49.23	-32.26	38.84	42.66	54.00	4.77	H
17976.900	39.77	-25.50	46.66	18.61	54.00	14.23	V
17957.650	39.66	-25.50	46.66	18.50	54.00	14.34	H
13310.700	36.61	-29.49	39.71	26.39	54.00	17.39	V
13317.300	36.19	-29.49	39.71	25.97	54.00	17.81	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)
11590.300	48.28	-32.31	38.91	41.69	54.00	5.72	H
11595.250	47.69	-32.31	38.91	41.10	54.00	6.31	H
17918.050	39.37	-25.50	46.66	18.21	54.00	14.63	V
17962.600	39.28	-25.50	46.66	18.12	54.00	14.72	H
14491.550	36.08	-28.59	42.46	22.21	54.00	17.92	V
14493.750	36.01	-28.59	42.46	22.14	54.00	17.99	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)
11554.550	47.80	-32.26	38.84	41.23	54.00	6.20	H
11546.300	46.99	-32.26	38.84	40.42	54.00	7.01	H
17940.600	39.74	-25.50	46.66	18.58	54.00	14.26	H
17946.100	39.72	-25.50	46.66	18.56	54.00	14.28	H
13331.050	36.73	-29.49	39.71	26.51	54.00	17.27	V
13325.000	36.55	-29.49	39.71	26.33	54.00	17.45	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)
11489.650	63.76	-32.26	38.84	57.19	74.00	10.24	H
11490.200	63.00	-32.26	38.84	56.43	74.00	11.00	H
17368.600	50.21	-25.95	44.35	31.80	68.20	17.99	V
17968.100	50.15	-25.50	46.66	28.99	74.00	23.85	H
13647.850	48.17	-29.50	40.43	37.24	68.20	20.03	V
13676.450	48.03	-29.50	40.43	37.10	68.20	20.17	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)
11570.500	60.13	-32.31	38.91	53.54	74.00	13.87	H
11571.600	59.75	-32.31	38.91	53.16	74.00	14.25	H
17377.400	50.43	-25.95	44.35	32.02	68.20	17.77	V
17854.250	50.01	-25.50	46.66	28.85	74.00	23.99	H
14177.500	48.15	-28.99	42.00	35.13	68.20	20.05	H
14618.050	47.82	-27.29	41.90	33.21	68.20	20.38	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)
11644.200	57.88	-32.31	38.91	51.29	74.00	16.12	H
11654.650	57.78	-32.31	38.91	51.19	74.00	16.22	H
17352.100	50.29	-25.95	44.35	31.88	68.20	17.91	H
17442.300	49.99	-26.85	45.25	31.59	68.20	18.21	V
13763.350	48.29	-29.10	40.86	36.52	68.20	19.91	H
13679.200	48.15	-29.50	40.43	37.22	68.20	20.05	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)
11483.050	61.99	-32.26	38.84	55.42	74.00	12.01	H
11497.350	61.76	-32.26	38.84	55.19	74.00	12.24	H
17344.400	51.09	-25.95	44.35	32.68	68.20	17.11	V
17234.400	50.31	-25.95	44.35	31.90	68.20	17.89	V
13694.050	48.73	-29.10	40.86	36.96	68.20	19.47	H
14092.250	48.58	-29.44	41.66	36.36	68.20	19.62	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)
11572.700	60.79	-32.31	38.91	54.20	74.00	13.21	H
11569.950	60.74	-32.31	38.91	54.15	74.00	13.26	H
17424.150	50.68	-26.85	45.25	32.28	68.20	17.52	H
17386.200	50.39	-25.95	44.35	31.98	68.20	17.81	V
13741.900	49.06	-29.10	40.86	37.29	68.20	19.14	H
13725.400	48.18	-29.10	40.86	36.41	68.20	20.02	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)
11645.300	58.81	-32.31	38.91	52.22	74.00	15.19	H
11650.250	58.57	-32.31	38.91	51.98	74.00	15.43	H
17473.100	51.48	-26.85	45.25	33.08	68.20	16.72	V
17389.500	50.63	-26.85	45.25	32.23	68.20	17.57	H
13779.300	48.49	-29.10	40.86	36.72	68.20	19.71	V
14583.400	48.27	-27.29	41.90	33.66	68.20	19.93	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)
11510.000	58.63	-32.26	38.84	52.06	74.00	15.37	H
11494.600	58.30	-32.26	38.84	51.73	74.00	15.70	H
17995.600	50.49	-25.50	46.66	29.33	74.00	23.51	V
17357.600	50.00	-25.95	44.35	31.59	68.20	18.20	V
13801.300	48.33	-29.10	40.86	36.56	68.20	19.87	H
13640.700	48.09	-29.50	40.43	37.16	68.20	20.11	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)
11578.200	57.18	-32.31	38.91	50.59	74.00	16.82	H
11597.450	57.11	-32.31	38.91	50.52	74.00	16.89	H
17386.200	50.31	-25.95	44.35	31.90	68.20	17.89	V
17900.450	50.25	-25.50	46.66	29.09	74.00	23.75	H
14073.000	48.53	-29.44	41.66	36.31	68.20	19.67	V
14093.900	48.29	-29.44	41.66	36.07	68.20	19.91	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)
11499.000	60.24	-32.26	38.84	53.67	74.00	13.76	H
11490.750	60.23	-32.26	38.84	53.66	74.00	13.77	H
17436.800	50.23	-26.85	45.25	31.83	68.20	17.97	H
17327.350	50.17	-25.95	44.35	31.76	68.20	18.03	V
14561.950	48.04	-27.29	41.90	33.43	68.20	20.16	V
13750.700	47.88	-29.10	40.86	36.11	68.20	20.32	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)
11570.500	61.11	-32.31	38.91	54.52	74.00	12.89	H
11566.100	59.99	-32.31	38.91	53.40	74.00	14.01	H
17353.200	50.80	-25.95	44.35	32.39	68.20	17.40	H
17461.550	50.25	-26.85	45.25	31.85	68.20	17.95	V
13738.050	48.07	-29.10	40.86	36.30	68.20	20.13	V
13656.650	48.02	-29.50	40.43	37.09	68.20	20.18	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)
11649.700	58.43	-32.31	38.91	51.84	74.00	15.57	H
11648.050	58.30	-32.31	38.91	51.71	74.00	15.70	H
17362.550	50.39	-25.95	44.35	31.98	68.20	17.81	V
17461.000	50.08	-26.85	45.25	31.68	68.20	18.12	H
14101.600	48.67	-29.44	41.66	36.45	68.20	19.53	V
13713.300	48.06	-29.10	40.86	36.29	68.20	20.14	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)
11528.150	59.30	-32.26	38.84	52.73	74.00	14.70	H
11523.200	58.22	-32.26	38.84	51.65	74.00	15.78	H
17379.600	50.73	-25.95	44.35	32.32	68.20	17.47	V
17979.100	50.73	-25.50	46.66	29.57	74.00	23.27	V
14073.550	48.69	-29.44	41.66	36.47	68.20	19.51	H
13626.400	48.30	-29.50	40.43	37.37	68.20	19.90	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)
11595.250	58.14	-32.31	38.91	51.55	74.00	15.86	H
11597.450	57.36	-32.31	38.91	50.77	74.00	16.64	H
17943.350	50.78	-25.50	46.66	29.62	74.00	23.22	H
17943.900	50.54	-25.50	46.66	29.38	74.00	23.46	H
14077.950	47.91	-29.44	41.66	35.69	68.20	20.29	V
13674.800	47.87	-29.50	40.43	36.94	68.20	20.33	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)
11532.000	58.07	-32.26	38.84	51.50	74.00	15.93	H
11539.700	57.76	-32.26	38.84	51.19	74.00	16.24	H
17145.850	51.11	-26.60	43.36	34.35	68.20	17.09	V
17239.350	50.52	-25.95	44.35	32.11	68.20	17.68	H
14202.800	48.44	-28.99	42.00	35.42	68.20	19.76	H
13628.600	48.41	-29.50	40.43	37.48	68.20	19.79	V

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:

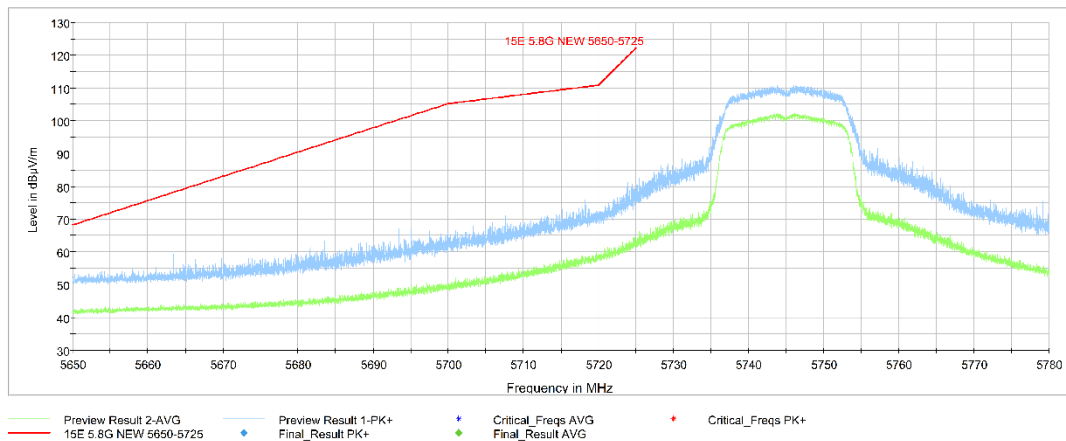


Fig. 10 Band Edges (802.11a Ch149,5745MHz)

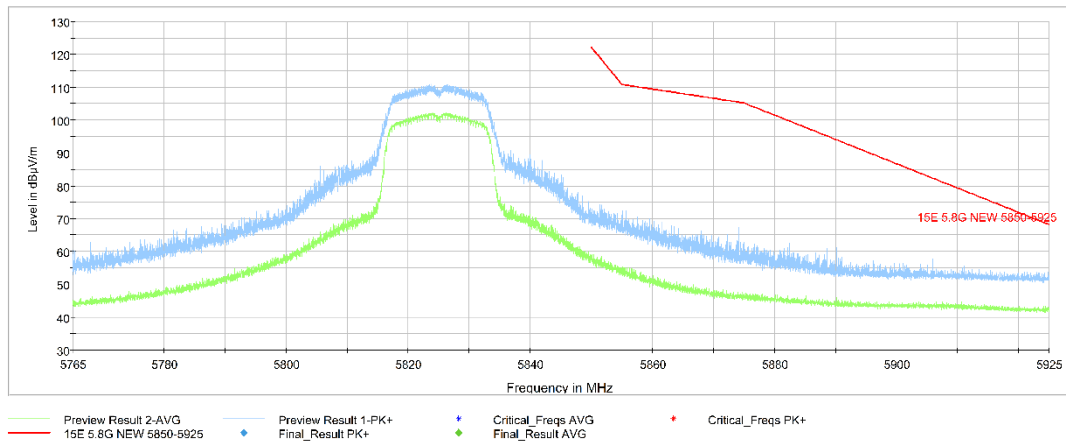


Fig. 11 Band Edges (802.11a Ch165, 5825MHz)

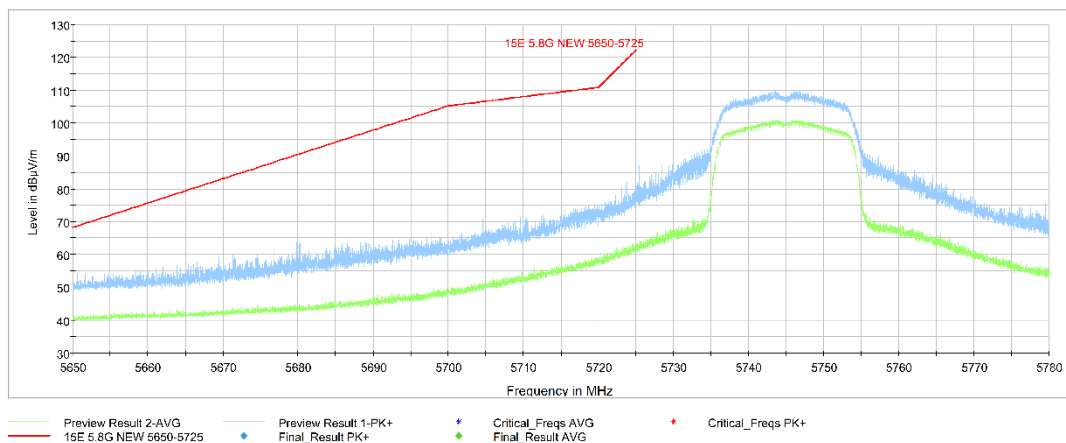


Fig. 12 Band Edges (802.11n-HT20 Ch149, 5745MHz)

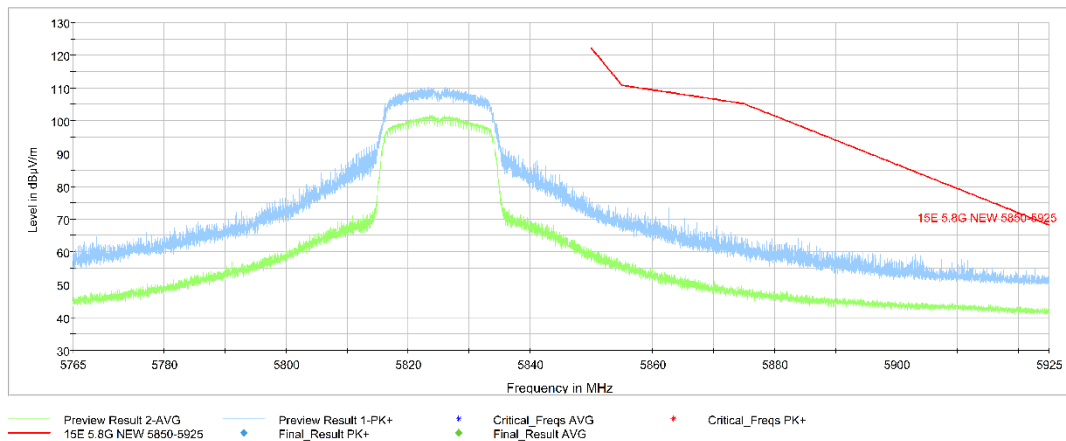


Fig. 13 Band Edges (802.11n-HT20 Ch165, 5825MHz)

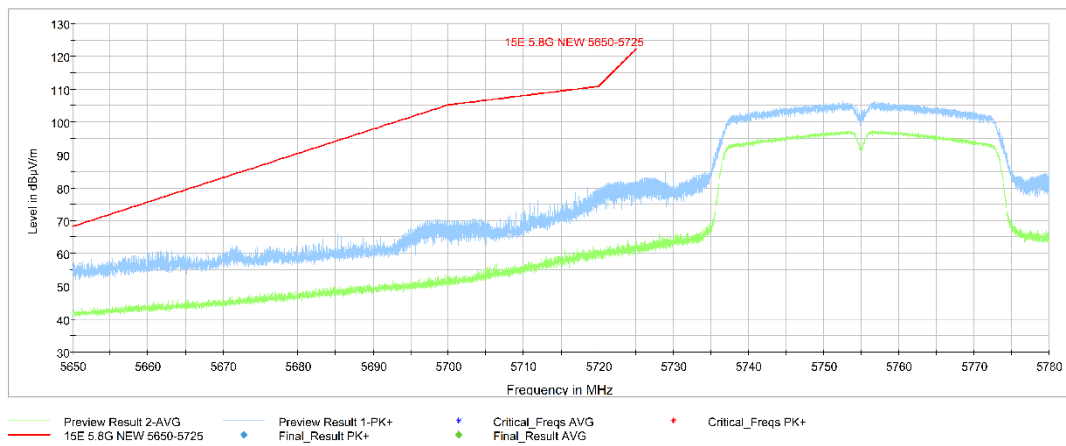


Fig. 14 Band Edges (802.11n-HT40 Ch151, 5755MHz)

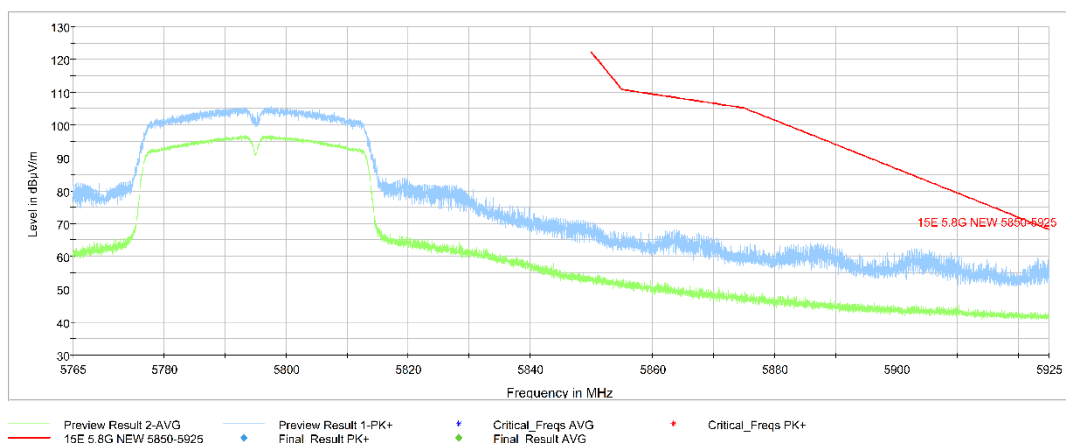


Fig. 15 Band Edges (802.11n-HT40 Ch159, 5795MHz)

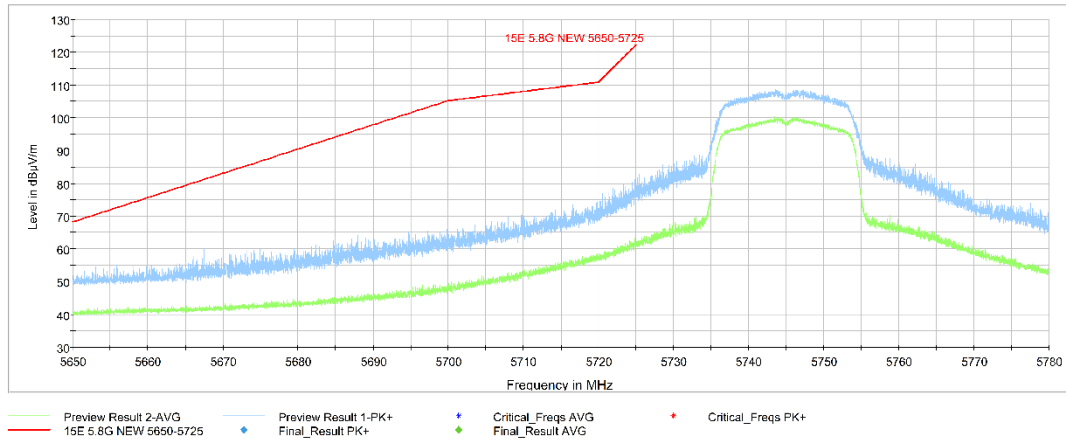


Fig. 16 Band Edges (802.11ac-HT20 Ch149, 5745MHz)

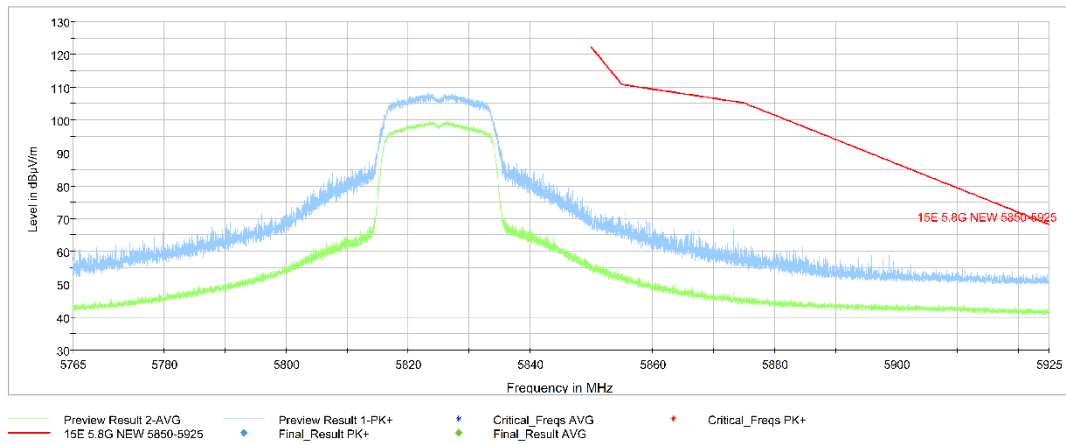


Fig. 17 Band Edges (802.11ac-HT20 Ch165, 5825MHz)

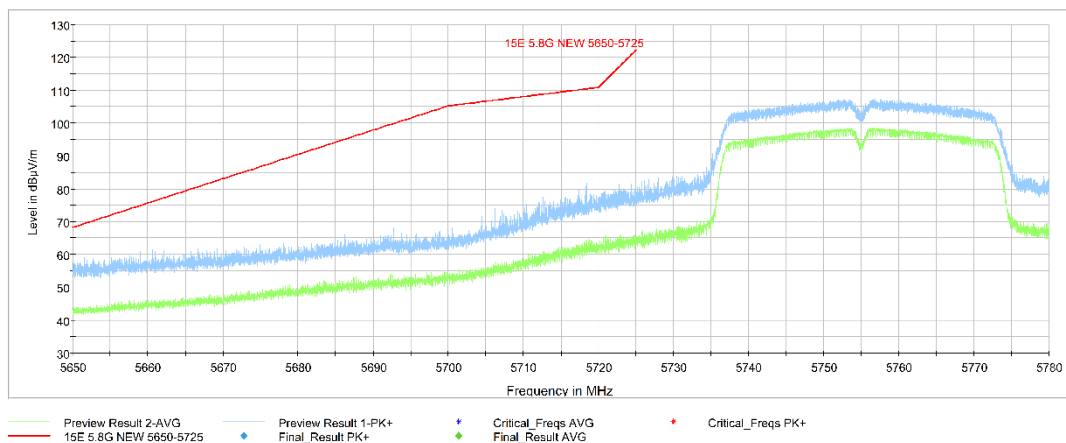


Fig. 18 Band Edges (802.11ac-HT40 Ch151, 5755MHz)

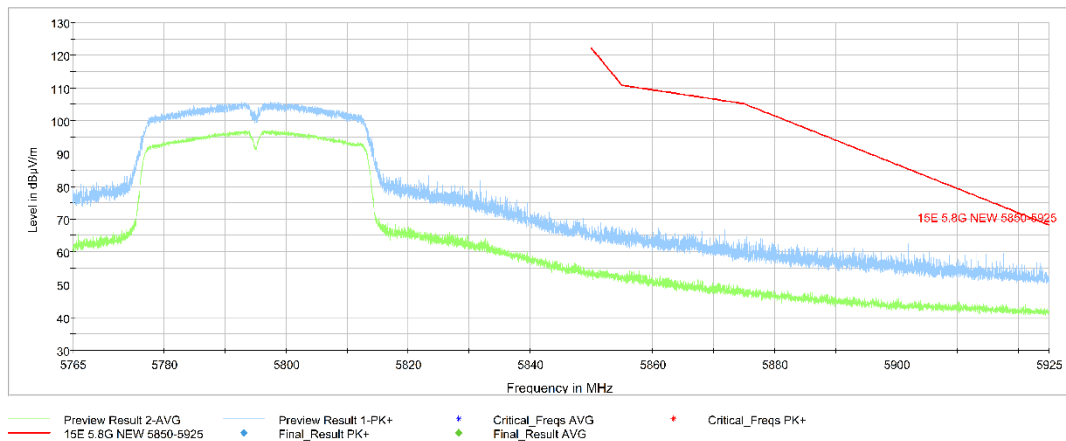


Fig. 19 Band Edges (802.11ac-HT40 Ch159, 5795MHz)

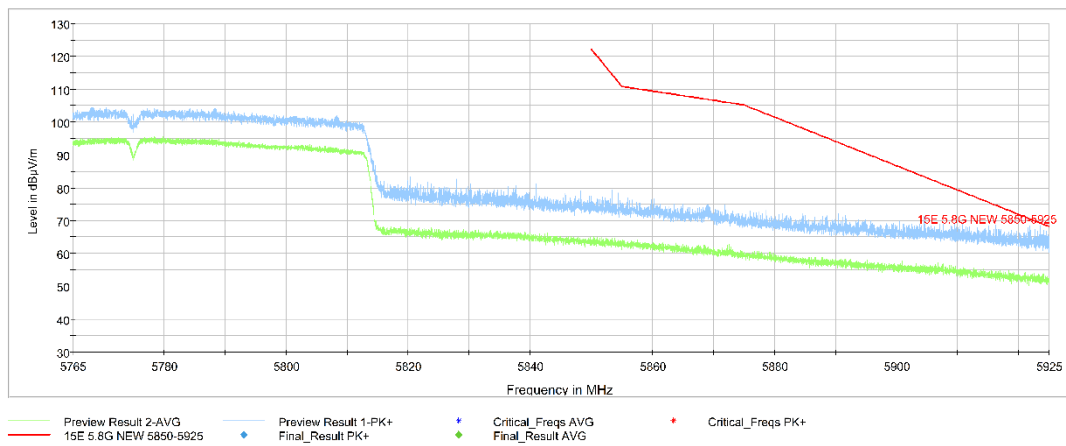


Fig. 20 Band Edges (802.11ac-HT80 Ch155, 5775MHz)

Full Spectrum

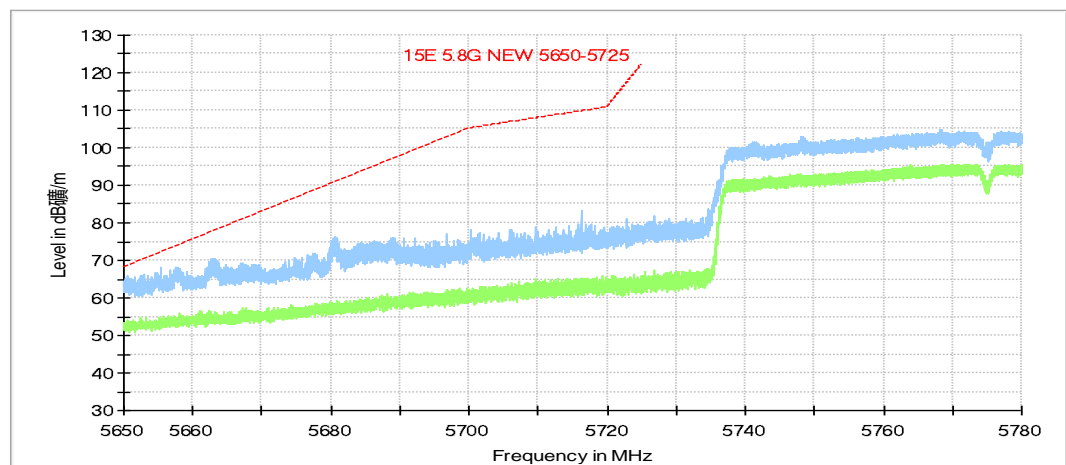


Fig. 21 Band Edges (802.11ac-HT80, 5775MHz)

A.7. AC Powerline Conducted Emission

Test Condition:

Voltage (V)	Frequency (Hz)
120	60

Measurement uncertainty:

Expanded measurement uncertainty for this test item is $U = 3.08\text{dB}$, $k=2$.

Measurement Result and limit:

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 .

Conclusion: PASS

Test graphs as below:

Traffic:

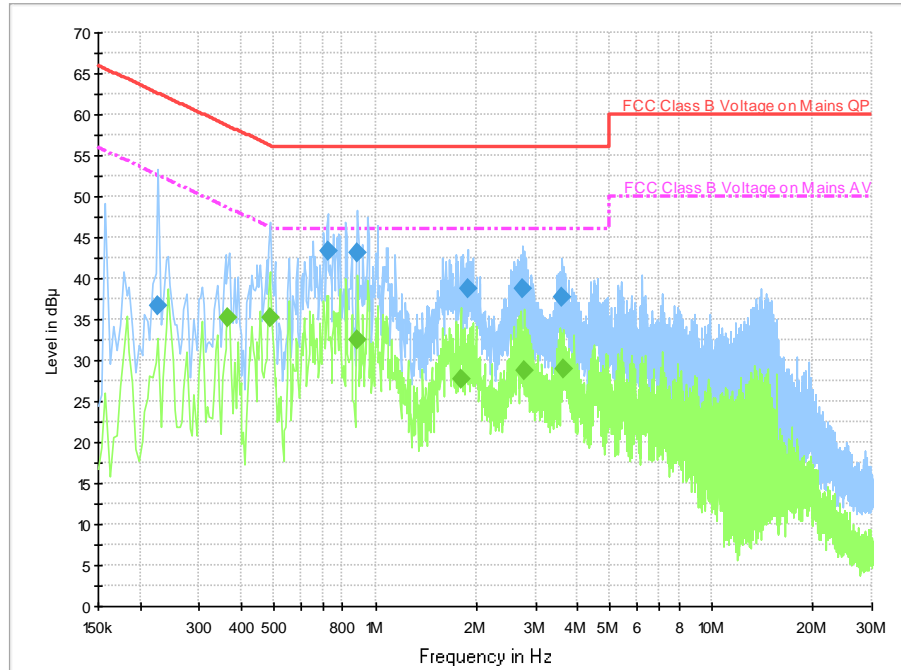


Fig. 22 AC Power line Conducted Emission-802.11a

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)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.226000	36.6	2000.	9.000	On	L1	19.7	25.9	62.6	
0.722000	43.3	2000.	9.000	On	L1	19.7	12.7	56.0	
0.882000	43.2	2000.	9.000	On	L1	19.7	12.8	56.0	
1.890000	38.8	2000.	9.000	On	L1	19.6	17.2	56.0	
2.738000	38.7	2000.	9.000	On	L1	19.6	17.3	56.0	
3.606000	37.7	2000.	9.000	On	L1	19.6	18.3	56.0	

Final Result 2

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.366000	35.2	2000.	9.000	On	N	19.7	13.4	48.6	
0.486000	35.2	2000.	9.000	On	L1	19.7	11.0	46.2	
0.886000	32.4	2000.	9.000	On	L1	19.7	13.6	46.0	
1.794000	27.7	2000.	9.000	On	L1	19.6	18.3	46.0	
2.770000	28.8	2000.	9.000	On	L1	19.6	17.2	46.0	
3.622000	29.0	2000.	9.000	On	L1	19.6	17.0	46.0	

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

Idle:

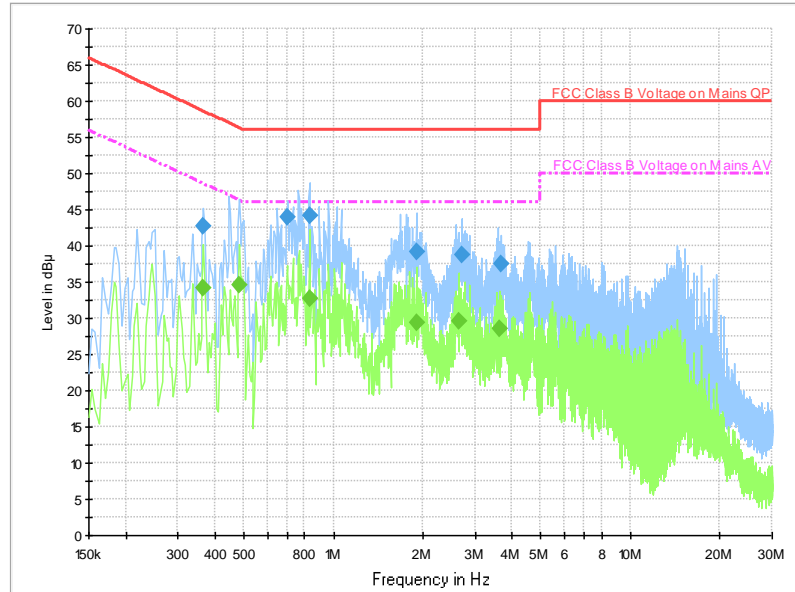


Fig. 23 AC Power line Conducted Emission-Idle

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)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.366000	42.6	2000.	9.000	On	L1	19.7	16.0	58.6	
0.702000	43.9	2000.	9.000	On	L1	19.7	12.1	56.0	
0.830000	44.1	2000.	9.000	On	L1	19.7	11.9	56.0	
1.902000	39.2	2000.	9.000	On	L1	19.6	16.8	56.0	
2.718000	38.8	2000.	9.000	On	L1	19.6	17.2	56.0	
3.670000	37.5	2000.	9.000	On	L1	19.6	18.5	56.0	

Final Result 2



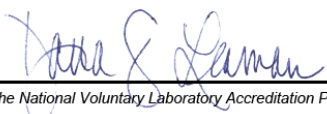
Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.366000	34.2	2000.0	9.000	On	L1	19.7	14.3	48.6	
0.482000	34.5	2000.0	9.000	On	L1	19.7	11.8	46.3	
0.830000	32.8	2000.0	9.000	On	L1	19.7	13.2	46.0	
1.902000	29.3	2000.0	9.000	On	L1	19.6	16.7	46.0	
2.658000	29.6	2000.0	9.000	On	L1	19.6	16.4	46.0	
3.642000	28.4	2000.0	9.000	On	L1	19.6	17.6	46.0	

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 C: Accreditation Certificate

<p>United States Department of Commerce National Institute of Standards and Technology</p> <div style="display: flex; justify-content: space-around; align-items: center;"><div style="font-size: 2em; font-weight: bold; letter-spacing: 0.5em;">NVLAP[®]</div><div style="text-align: center;"></div></div> <hr/> <p style="font-size: 1.2em; font-weight: bold; text-align: center;">Certificate of Accreditation to ISO/IEC 17025:2017</p> <hr/> <p style="text-align: center;">NVLAP LAB CODE: 600118-0</p> <p style="text-align: center; font-weight: bold;">Telecommunication Technology Labs, CAICT</p> <p style="text-align: center;">Beijing China</p> <p style="text-align: center; font-size: 0.8em;"><i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i></p> <p style="text-align: center; font-weight: bold; font-size: 1.1em;">Electromagnetic Compatibility & Telecommunications</p> <p style="text-align: center; font-size: 0.8em;"><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></p> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 20px;"><div style="text-align: center;"><hr/><p style="font-size: 0.8em;">2022-10-01 through 2023-09-30 <i>Effective Dates</i></p></div><div style="text-align: center;"></div><div style="text-align: center;"><hr/><p style="font-size: 0.8em;"><i>For the National Voluntary Laboratory Accreditation Program</i></p></div></div>	
--	--

*** END OF REPORT BODY ***