TESTING
NVLAP LAB CODE 600118-0

FCC PART 15C
TEST REPORT
No.I23Z70153-IOT05

for

Samsung Electronics Co., Ltd.

Multi-band GSM/WCDMA/LTE Phone with Bluetooth, WLAN

SM-A055F/DS,SM-A055F

With

FCC ID: ZCASMA055F

Hardware Version: REV1.0

Software Version: A055F.001

Issued Date: 2023-08-18

Note:

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Test Laboratory:

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I23Z70153-IOT05	Rev.0	1st edition	2023-08-10
I23Z70153-IOT05	Rev.1	Spot check the Maximum Peak Output Power and add a statement.	2023-08-18

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

Conducted testing Location: CTTL(huayuan North Road)

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

Radiated testing Location:

CTTL (BDA)

Address: No. 18A, Kangding Street, Beijing Economic-Technology Development Area, Beijing, 100176, P.R. China

CTTL(huayuan North Road)

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

1.3. TestingEnvironment

Normal Temperature: 15-35°C

Relative Humidity: 20-75%

1.4. Project date

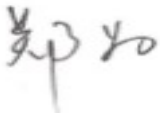
Testing Start Date: 2023-06-14

Testing End Date: 2023-07-25

1.5. Signature

Yao Xingyu

(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:	Samsung Electronics Co., Ltd.
Address:	19 Chapin Rd.,Building D Pine Brook, NJ 07058
City:	New Jersey
Postal Code:	/
Country:	United States
Telephone:	+1-201-937-4203
Fax:	/

2.2. Manufacturer Information

Company Name:	Samsung Electronics Co., Ltd.
Address:	Samsung R5, Maetan dong 129, Samsung ro Youngtong gu, Suwon city 443 742, Korea
City:	Suwon
Postal Code:	/
Country:	Korea
Telephone:	+82-10-2722-4159
Fax:	/

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

3.1. About EUT

Description	Multi-band GSM/WCDMA/LTE Phone with Bluetooth, WLAN
Model name	SM-A055F/DS,SM-A055F
FCC ID	ZCASMA055F
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
UT10a(SM-A055M/DS,SM-A055M)	/	REV1.0	A055F.001
UT12a(SM-A055M/DS,SM-A055M)	/	REV1.0	A055F.001

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

UT10a is used for Conduction test, UT12a is used for Radiation test.

3.3. Internal Identification of AE used during the test

AE ID*	Name	Model	Manufacturer
AE1	Battery	WT-S-N28	SCUD (FUJIAN) Electronics Co., Ltd.
AE2	Adapter	EP-TA800	DONGGUAN SOLUM ELECTRONICS CO.,LTD.
AE3-1	Date Cable1 C-C	EP-DN980BWE	GUANGXI BROAD TELECOMMUNICATION CO.,LTD
AE3-2	Date Cable2 C-C	EP-DN980BWE	R.e.tech Electronics (Huizhou) Co., Ltd.
AE3-3	Date Cable3 C-C	EP-DN980BWE	Cresyn Electronics(Dongguan) Co., Ltd.

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

*AE2 is not the AE for EUT, provided by the client for relevant tests

3.4. General Description

Equipment Under Test (EUT) is a model of Multi-band GSM/WCDMA/LTE Phone with Bluetooth, WLAN with integrated antenna. It consists of normal options: Battery and Charger.

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

Samples undergoing test were selected by the Client.

4. REFERENCE DOCUMENTS

4.1. Documents supplied by applicant

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

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

FCC Part15	FCC CFR 47, Part 15, Subpart C and E: 15.205 Restricted bands of operation; 15.209 Radiated emission limits, general requirements; 15.407 General technical requirements	2021
ANSI C63.10	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2013
UNII: KDB 789033 D02	General U-NII Test Procedures New Rules v02r01	2017-12

5. LABORATORY ENVIRONMENT

Conducted RF performance testing is performed in shielding room.

EMC performance testing is performed in Semi-anechoic chamber.

6. SUMMARY OF TEST RESULTS

6.1. Summary of Test Results

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

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
BR	Re-use test data from basic model report.
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

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.

The device what use a permanently attached antenna were considered sufficient to comply with the provisions of 15.203.

The Equipment Under Test (EUT) model SM-A055F/DS,SM-A055F (FCC ID: ZCASMA055F) is a variant product of SM-A055M/DS,SM-A055M(FCC ID: ZCASMA055M), according to the declaration of changes provided by the applicant and FCC KDB publication 178919 D01, except maximum peak output power, other results are derived from test report No.I23Z70127-IOT05.

For detail differences between two models please refer the Declaration of Changes document.

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	2024-07-04
2	LISN	ENV216	101200	Rohde & Schwarz	1 year	2024-07-04
3	Test Receiver	ESCI	100344	Rohde & Schwarz	1 year	2024-02-21
4	Shielding Room	S81	/	ETS-Lindgren	/	/

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESU26	100376	R&S	1 year	2023-09-22
2	Test Receiver	ESW44	103015	R&S	1 year	2024-01-14
3	Test Receiver	ESW44	103144	R&S	1 year	2023-10-25
4	Loop Antenna	HFH2-Z2	829324/007	R&S	1 year	2023-12-22
5	EMI Antenna	VULB9163	01177	Schwarzbeck	1 year	2023-08-03
6	EMI Antenna	3117	00139065	ETS-Lindgren	1 year	2023-10-05
7	EMI Antenna	LB-180400-25-C-KF	2110084000006	A-INFO	1 year	2024-03-02

AC Power Line Conducted Emission

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	LISN	ENV216	101459	R&S	1 year	2024-02-29
2	Test Receiver	ESCI	100766	R&S	1 year	2024-03-30

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	4.92
30MHz ≤ f ≤ 1GHz	5.73
1GHz ≤ f ≤18GHz	5.62
18GHz ≤ f ≤40GHz	3.52

8.6. AC Power-line Conducted Emission

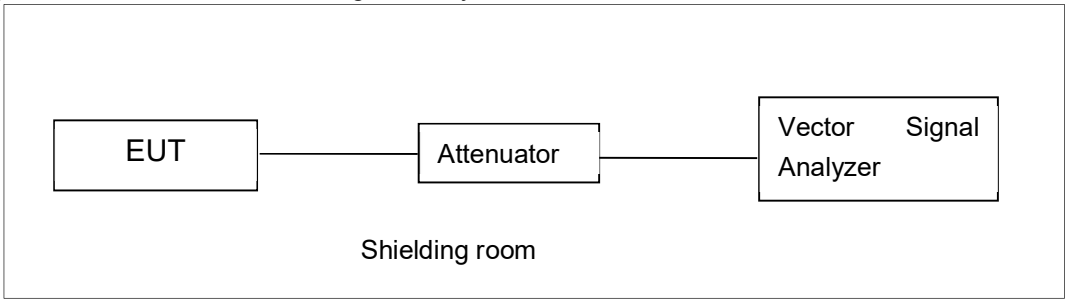
Measurement Uncertainty : 3.10dB, k=2

ANNEX A: MEASUREMENT RESULTS

A.1. Measurement Method

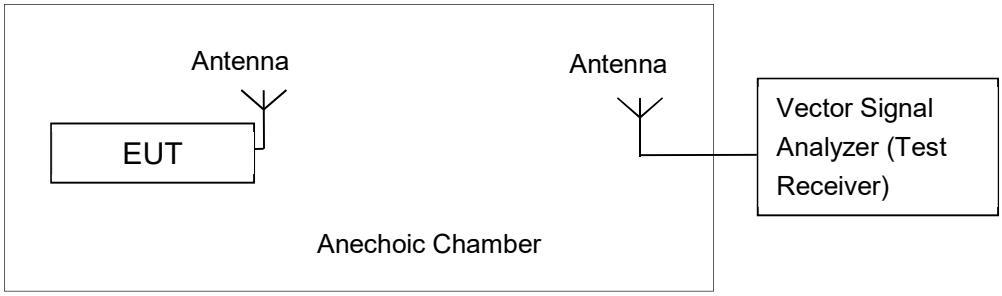
A.1.1. Conducted Measurements

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 = 3MHz;



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 -2.77dBi 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	17.06	17.00	16.66
	9	17.02	/	/
	12	16.89	/	/
	18	16.36	/	/
	24	15.92	/	/
	36	15.54	/	/
	48	14.98	/	/
	54	14.39	/	/

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	16.45	16.49	16.53
	MCS1	16.42	/	/
	MCS2	16.08	/	/
	MCS3	15.97	/	/
	MCS4	15.57	/	/
	MCS5	15.55	/	/
	MCS6	14.86	/	/
	MCS7	14.47	/	/

The data rate MSC0 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	16.54	16.46	16.15
	MCS1	16.21	/	/
	MCS2	15.43	/	/
	MCS3	14.93	/	/
	MCS4	14.42	/	/
	MCS5	14.01	/	/
	MCS6	13.23	/	/
	MCS7	12.74	/	/
	MCS8	12.21	/	/

The data rate MSC0 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	15.26	15.09
	MCS1	15.02	/
	MCS2	14.67	/
	MCS3	14.68	/
	MCS4	14.09	/
	MCS5	14.18	/
	MCS6	13.71	/
	MCS7	13.03	/

The data rate MSC0 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	16.27	16.13
	MCS1	15.72	/
	MCS2	15.27	/
	MCS3	14.77	/
	MCS4	14.05	/
	MCS5	13.66	/
	MCS6	13.09	/
	MCS7	12.61	/

	MCS8	12.21	/
	MCS9	11.03	/

The data rate MSC0 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	16.06
	MCS1	15.88
	MCS2	15.42
	MCS3	14.65
	MCS4	14.31
	MCS5	13.50
	MCS6	13.27
	MCS7	12.09
	MCS8	11.02
	MCS9	10.09

The data rate MSC0 is selected as worst condition, and the following cases are performed with this condition.

The duty cycle of all mode are 100%.

The spot check result of average output power are 16.66dBm (802.11a 6Mbps ch165 prototype result: 17.15dBm)

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	3.59	P
	157	3.75	P
	165	3.21	P
802.11ac HT20	149	2.58	P
	157	2.10	P
	165	2.45	P
802.11ac HT40	151	-0.40	P
	159	-0.45	P
802.11ac HT80	155	-3.98	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	16.35	P
	157	Fig.2	16.35	P
	165	Fig.3	16.35	P
802.11ac HT20	149	Fig.4	17.60	P
	157	Fig.5	17.60	P
	165	Fig.6	17.55	P
802.11ac HT40	151	Fig.7	36.00	P
	159	Fig.8	36.32	P
802.11ac HT80	155	Fig.9	76.32	P

Conclusion: PASS

Test graphs as below:

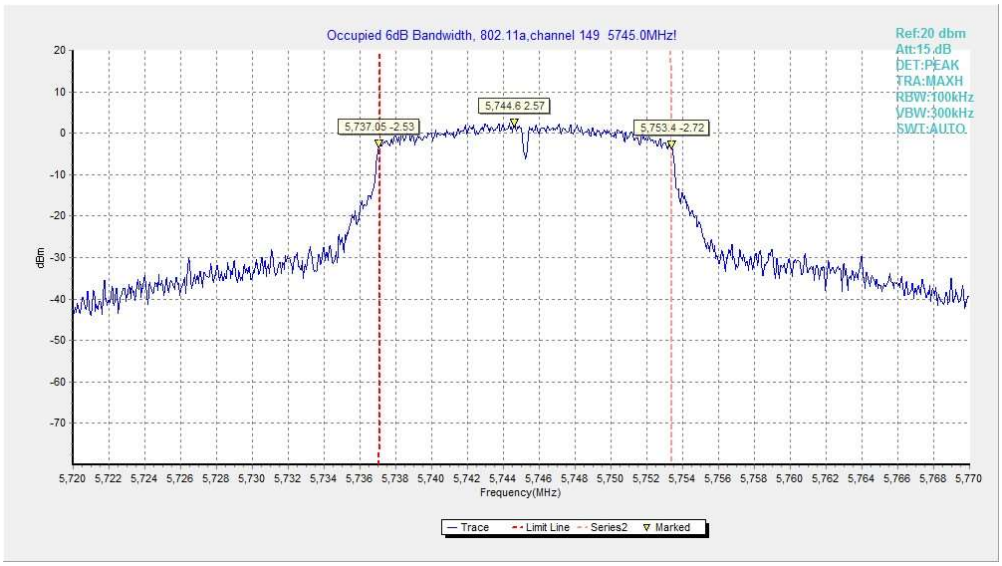


Fig. 1 Occupied 6dB Bandwidth (802.11a, Ch 149)

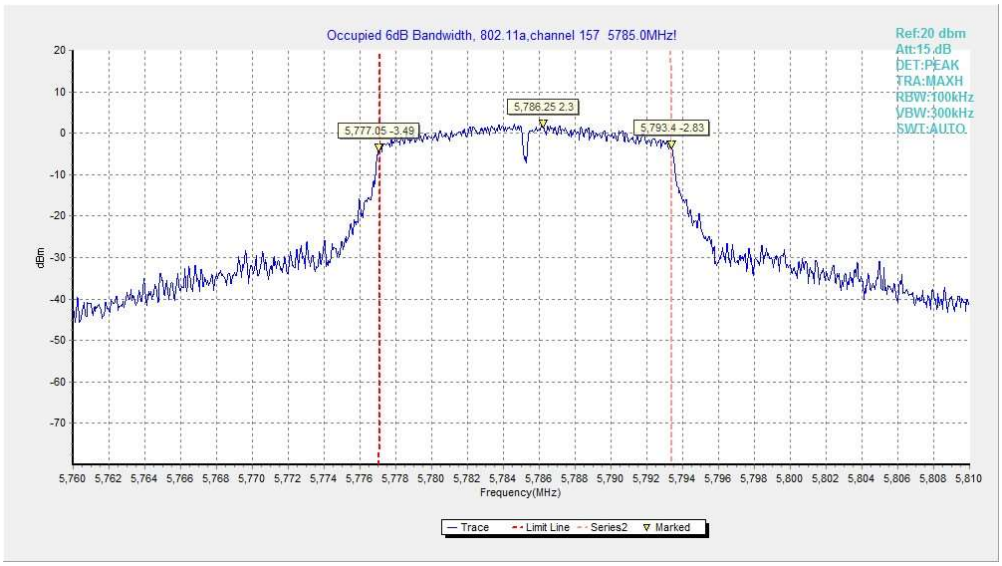


Fig. 2 Occupied 6dB Bandwidth (802.11a, Ch 157)

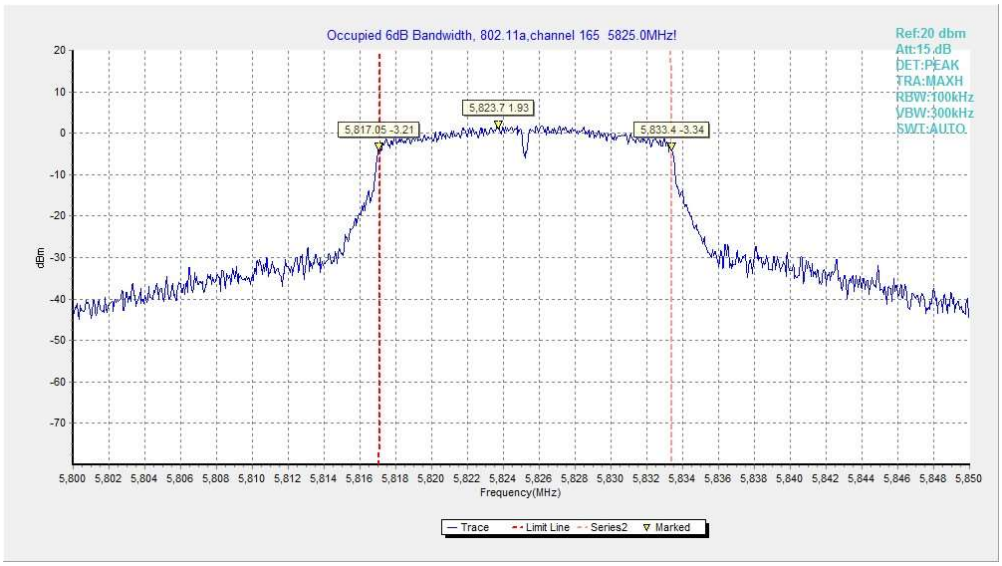


Fig. 3 Occupied 6dB Bandwidth (802.11a, Ch 165)

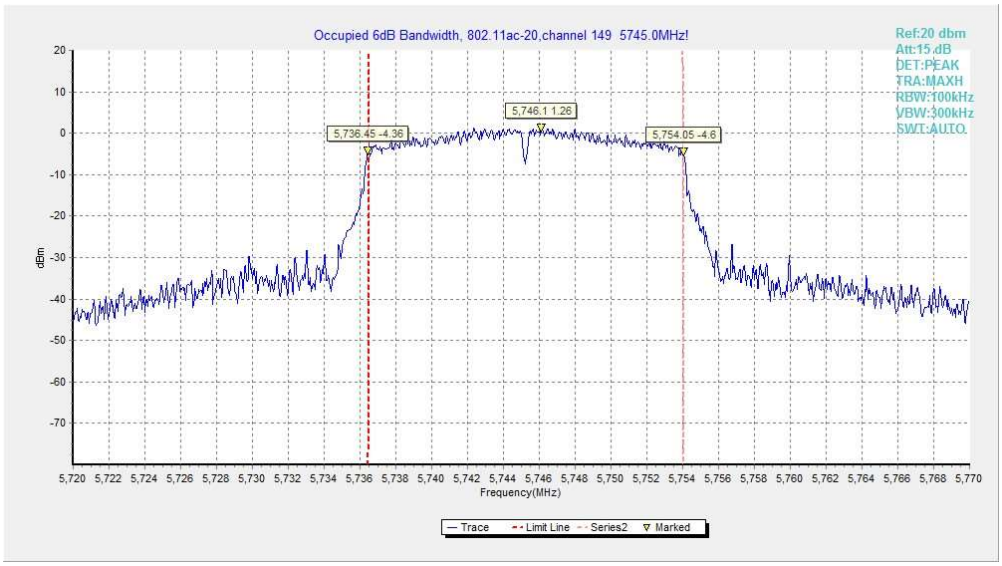


Fig. 4 Occupied 6dB Bandwidth (802.11ac-HT20, Ch 149)

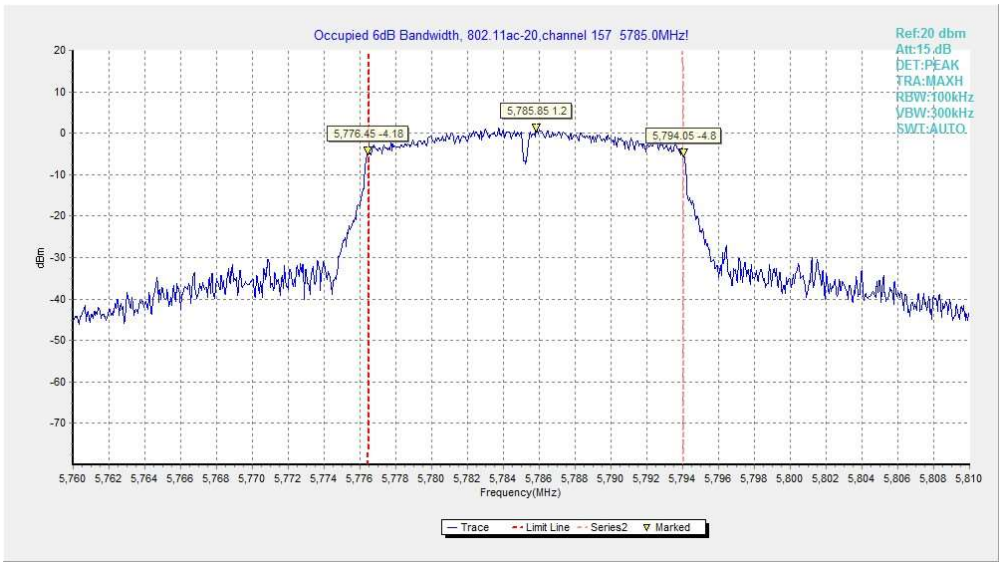


Fig. 5 Occupied 6dB Bandwidth (802.11ac-HT20, Ch 157)

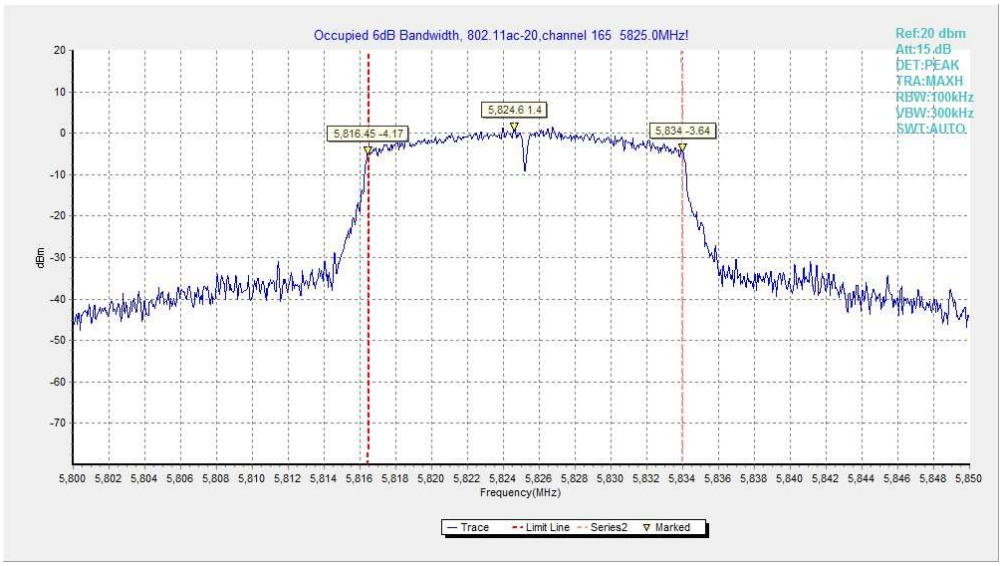


Fig. 6 Occupied 6dB Bandwidth (802.11ac-HT20, Ch 165)

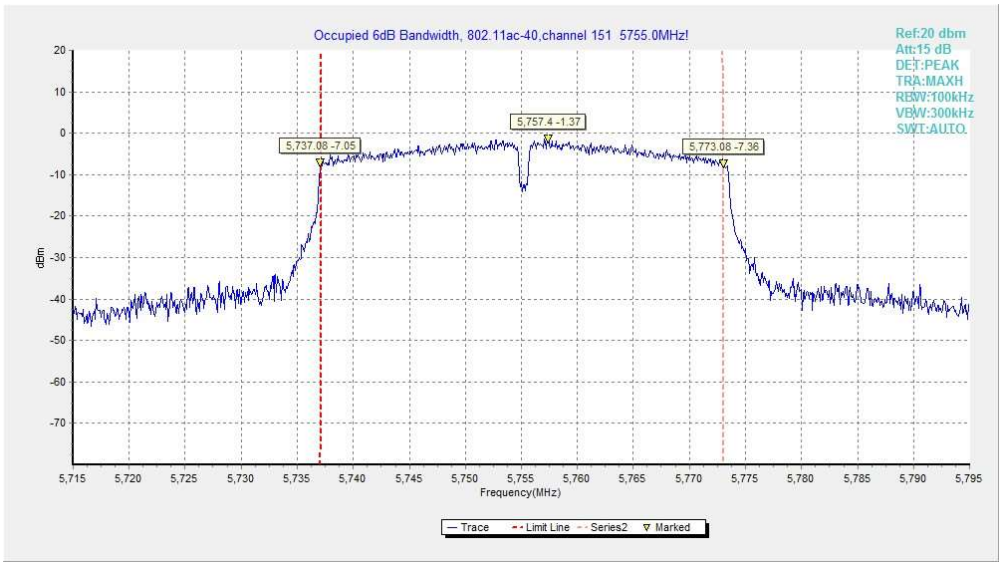


Fig. 7 Occupied 6dB Bandwidth (802.11ac-HT40, Ch 151)

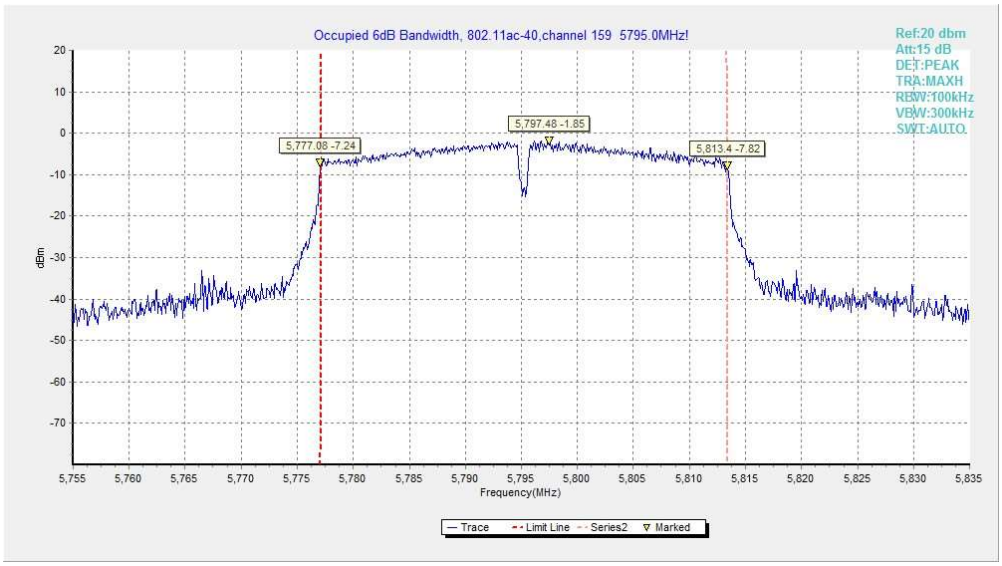


Fig. 8 Occupied 6dB Bandwidth (802.11ac-HT40, Ch 159)

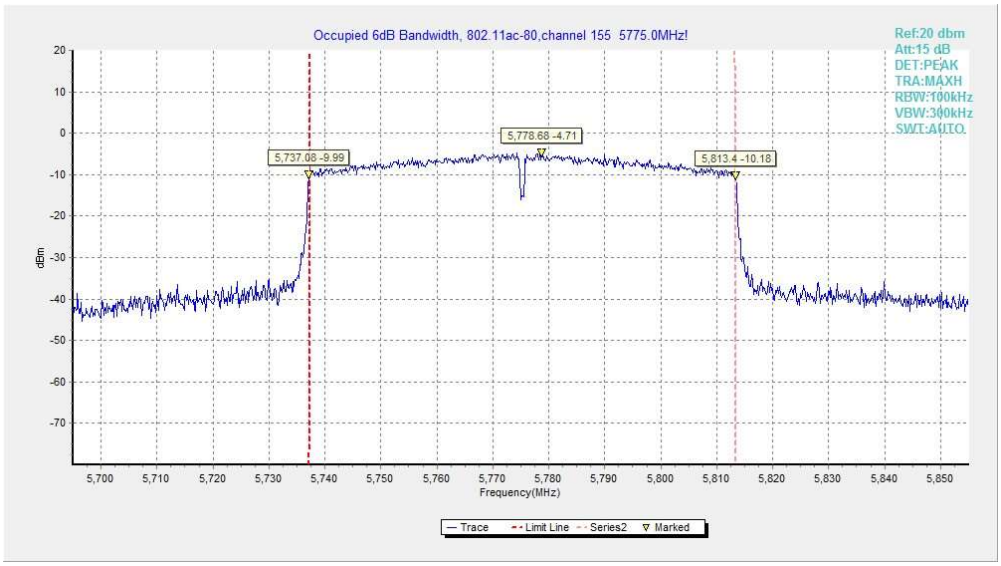


Fig. 9 Occupied 6dB Bandwidth (802.11ac-HT80, Ch 155)

A.5. Transmitter Spurious Emission

Measurement Limit:

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

The measurement is made according to ANSI C63.10 .

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

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

Measurement Uncertainty:

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

A.5.1 Transmitter Spurious Emission – Radiated

Measurement Limit:

Standard	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 ANSI C63.10 and KDB 789033.

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

Limit in restricted band:

Frequency (MHz)	Field strength(μV/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

Frequency of emission (MHz)	Field strength (uV/m)	Field strength (dBuV/m)	Measurement distance (m)
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Set up:

Tabletop devices shall be placed on a nonconducting platform with nominal top surface dimensions 1 m by 1.5 m. For emissions testing at or below 1 GHz, the table height shall be 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m

The EUT and transmitting antenna shall be centered on the turntable.

Test Procedure

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. 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. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The receiver references:

Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	100kHz/300kHz	5
1000-7000	1MHz/3MHz	15
7000-18000	1MHz/3MHz	40
18000-26500	1MHz/3MHz	20

Sample Calculations

1. Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

E=EIRP- 20log (*D*) +104.77

Where:

E is the field strength in dBμV/m

D is the measurement distance in meters

EIRP is the equivalent isotropically radiated power in dbm

2. The measurement results are obtained as described below:

Result=P_{Mea}+$A_{Rpl=}$ P_{Mea}+Cable Loss+Antenna Factor

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

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

Note:

The range of evaluated frequency is from 9 kHz to 40GHz. Measurement value showed here only up to 6 maximum emissions noted.

Measurement Results:

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)
5377.200	43.60	-23.27	34.50	32.37	54.00	10.40	V
5408.600	43.63	-23.07	34.48	32.22	54.00	10.37	V
11490.000	32.97	-30.98	38.19	25.76	54.00	21.03	V
15933.000	38.54	-25.42	40.73	23.22	54.00	15.46	V
17968.000	39.52	-24.63	41.20	22.95	54.00	14.48	H
17995.500	39.59	-24.70	41.20	23.08	54.00	14.41	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)
5394.200	43.74	-23.06	34.50	32.30	54.00	10.26	V
5418.200	43.62	-23.09	34.46	32.24	54.00	10.38	V
11570.000	33.91	-30.33	38.41	25.83	54.00	20.09	V
15923.500	38.45	-25.43	40.72	23.15	54.00	15.55	V
17953.000	39.11	-24.67	41.20	22.58	54.00	14.89	V
17987.000	39.72	-24.58	41.20	23.10	54.00	14.28	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)
5376.200	43.59	-23.28	34.50	32.37	54.00	10.41	V
5394.000	43.72	-23.07	34.50	32.29	54.00	10.28	V
11650.000	34.32	-29.87	38.60	25.59	54.00	19.68	V
15926.000	38.55	-25.43	40.73	23.25	54.00	15.45	V
17966.500	39.43	-24.63	41.20	22.87	54.00	14.57	V
17995.000	39.65	-24.69	41.20	23.14	54.00	14.35	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)
5371.400	43.60	-23.34	34.50	32.44	54.00	10.40	V
5390.400	43.62	-23.11	34.50	32.23	54.00	10.38	V
11490.000	32.99	-30.98	38.19	25.77	54.00	21.01	H
15933.000	38.57	-25.42	40.73	23.26	54.00	15.43	H
17954.000	39.12	-24.67	41.20	22.59	54.00	14.88	H
17989.500	39.68	-24.61	41.20	23.09	54.00	14.32	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)
5373.400	43.53	-23.32	34.50	32.35	54.00	10.47	V
5391.600	43.67	-23.09	34.50	32.27	54.00	10.33	V
11570.000	33.97	-30.33	38.41	25.89	54.00	20.03	V
15909.000	38.44	-25.45	40.71	23.18	54.00	15.56	V
17954.000	39.10	-24.67	41.20	22.57	54.00	14.90	V
17992.000	39.70	-24.65	41.20	23.15	54.00	14.30	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)
5393.600	43.66	-23.07	34.50	32.23	54.00	10.34	V
5407.000	43.62	-23.06	34.49	32.20	54.00	10.38	V
11650.000	34.23	-29.87	38.60	25.49	54.00	19.77	V
15949.500	38.37	-25.40	40.75	23.02	54.00	15.63	H
17963.500	39.38	-24.64	41.20	22.82	54.00	14.62	H
17988.000	39.68	-24.59	41.20	23.07	54.00	14.32	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)
5372.800	43.63	-23.32	34.50	32.45	54.00	10.37	V
5400.000	43.73	-23.05	34.50	32.28	54.00	10.27	V
11510.000	33.33	-30.85	38.23	25.95	54.00	20.67	H
15926.500	38.59	-25.43	40.73	23.29	54.00	15.41	H
17954.500	39.12	-24.67	41.20	22.58	54.00	14.88	V
17989.500	39.77	-24.61	41.20	23.18	54.00	14.23	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)
5376.800	43.62	-23.27	34.50	32.39	54.00	10.38	V
5395.600	43.67	-23.05	34.50	32.22	54.00	10.33	V
11590.000	34.15	-30.16	38.47	25.83	54.00	19.85	H
15904.500	38.49	-25.45	40.70	23.24	54.00	15.51	H
17968.500	39.51	-24.63	41.20	22.93	54.00	14.49	H
17992.200	39.68	-24.65	41.20	23.13	54.00	14.32	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)
5382.000	43.54	-23.21	34.50	32.25	54.00	10.46	V
5396.400	43.71	-23.04	34.50	32.25	54.00	10.29	V
11490.000	33.03	-30.98	38.19	25.82	54.00	20.97	V
15917.000	38.59	-25.44	40.72	23.31	54.00	15.41	H
17947.000	38.94	-24.69	41.20	22.42	54.00	15.06	H
17992.500	39.73	-24.65	41.20	23.18	54.00	14.27	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)
5373.000	43.58	-23.32	34.50	32.40	54.00	10.42	V
5399.600	43.70	-23.05	34.50	32.25	54.00	10.30	V
11570.000	34.00	-30.33	38.41	25.92	54.00	20.00	H
15907.000	38.56	-25.45	40.71	23.31	54.00	15.44	V
17960.500	39.25	-24.65	41.20	22.70	54.00	14.75	H
17994.500	39.74	-24.68	41.20	23.22	54.00	14.26	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)
5391.200	43.71	-23.10	34.50	32.31	54.00	10.29	V
5401.000	43.70	-23.05	34.50	32.25	54.00	10.30	V
11650.000	34.48	-29.87	38.60	25.75	54.00	19.52	V
15919.000	38.59	-25.43	40.72	23.31	54.00	15.41	V
17953.500	38.95	-24.67	41.20	22.42	54.00	15.05	H
17990.000	39.87	-24.62	41.20	23.29	54.00	14.13	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)
5373.000	43.64	-23.32	34.50	32.46	54.00	10.36	V
5395.800	43.72	-23.04	34.50	32.26	54.00	10.28	V
11510.000	33.27	-30.85	38.23	25.89	54.00	20.73	H
15916.500	38.60	-25.44	40.72	23.33	54.00	15.40	V
17959.500	39.25	-24.65	41.20	22.70	54.00	14.75	V
17987.000	39.67	-24.58	41.20	23.05	54.00	14.33	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)
5374.200	43.60	-23.31	34.50	32.41	54.00	10.40	V
5396.000	43.73	-23.04	34.50	32.27	54.00	10.27	V
11590.000	34.13	-30.16	38.47	25.82	54.00	19.87	V
15923.500	38.58	-25.43	40.72	23.28	54.00	15.42	V
17961.500	39.35	-24.65	41.20	22.79	54.00	14.65	H
17992.500	39.72	-24.65	41.20	23.17	54.00	14.28	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)
5393.000	43.70	-23.08	34.50	32.28	54.00	10.30	V
5399.200	43.71	-23.05	34.50	32.26	54.00	10.29	V
11550.000	33.62	-30.50	38.35	25.77	54.00	20.38	V
15905.000	38.47	-25.45	40.71	23.22	54.00	15.53	H
17968.500	39.43	-24.63	41.20	22.86	54.00	14.57	V
17987.500	39.73	-24.58	41.20	23.11	54.00	14.27	V

Peak Results：

802.11a

Channel 149

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5650.568	57.09	-22.87	34.70	45.26	68.62	11.53	H
5650.898	56.78	-22.87	34.70	44.95	68.86	12.08	V
11490.000	44.58	-30.98	38.19	37.37	74.00	29.42	V
17235.000	51.54	-24.76	41.26	35.04	68.30	16.76	H
17417.500	52.95	-24.87	41.20	36.62	68.30	15.35	H
17590.500	52.34	-25.06	41.20	36.19	68.30	15.96	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)
5740.600	59.44	-22.80	34.88	47.36	68.30	8.86	H
5834.400	58.58	-23.08	35.10	46.56	68.30	9.72	V
11570.000	45.44	-30.33	38.41	37.35	74.00	28.56	H
17355.000	51.54	-24.77	41.20	35.11	68.30	16.76	H
17527.500	52.93	-25.00	41.20	36.73	68.30	15.37	V
17692.500	51.47	-25.08	41.29	35.26	68.30	16.83	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)
5923.915	57.13	-23.24	35.25	45.11	69.00	11.88	H
5924.583	57.64	-23.23	35.25	45.62	68.51	10.87	H
11650.000	45.55	-29.87	38.60	36.81	74.00	28.45	V
17475.000	51.56	-24.96	41.20	35.32	68.30	16.74	V
17527.500	53.49	-25.00	41.20	37.29	68.30	14.81	V
17687.000	51.73	-25.08	41.29	35.52	68.30	16.57	H

802.11n-HT20

Channel 149

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5651.035	57.53	-22.87	34.70	45.70	68.97	11.43	H
5651.459	57.24	-22.87	34.70	45.41	69.28	12.03	V
11490.000	44.90	-30.98	38.19	37.69	74.00	29.10	H
17235.000	50.60	-24.76	41.26	34.10	68.30	17.70	H
17457.000	51.85	-24.94	41.20	35.59	68.30	16.45	H
17694.000	52.12	-25.08	41.29	35.90	68.30	16.18	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)
5742.400	58.59	-22.81	34.88	46.51	68.30	9.71	H
5830.400	58.05	-23.08	35.10	46.03	68.30	10.25	V
11570.000	45.44	-30.33	38.41	37.35	74.00	28.56	V
17355.000	49.84	-24.77	41.20	33.41	68.30	18.46	H
17512.000	51.95	-24.99	41.20	35.74	68.30	16.35	H
17633.000	51.97	-25.09	41.23	35.83	68.30	16.33	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)
5923.685	57.48	-23.24	35.25	45.46	69.17	11.70	H
5923.900	57.62	-23.24	35.25	45.61	69.01	11.39	V
11650.000	45.51	-29.87	38.60	36.77	74.00	28.49	V
17475.000	49.61	-24.96	41.20	33.37	68.30	18.69	H
17568.000	51.38	-25.04	41.20	35.21	68.30	16.92	V
17665.500	52.18	-25.08	41.27	36.00	68.30	16.12	H

802.11n-HT40

Channel 151

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5650.252	57.65	-22.87	34.70	45.82	68.39	10.74	V
5650.985	57.06	-22.87	34.70	45.22	68.93	11.87	H
11510.000	45.68	-30.85	38.23	38.30	74.00	28.32	V
17265.000	50.95	-24.70	41.23	34.41	68.30	17.35	V
17400.000	51.82	-24.84	41.20	35.47	68.30	16.48	V
17633.500	52.79	-25.09	41.23	36.65	68.30	15.51	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)
5923.735	57.70	-23.24	35.25	45.69	69.14	11.44	H
5924.245	57.70	-23.24	35.25	45.69	68.76	11.06	V
11590.000	45.70	-30.16	38.47	37.39	74.00	28.30	V
17385.000	50.59	-24.82	41.20	34.21	68.30	17.71	V
17480.000	51.94	-24.96	41.20	35.70	68.30	16.36	V
17610.500	52.19	-25.07	41.21	36.06	68.30	16.11	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)
5650.474	57.97	-22.87	34.70	46.14	68.55	10.59	H
5651.035	57.73	-22.87	34.70	45.89	68.97	11.24	H
11490.000	43.83	-30.98	38.19	36.62	74.00	30.17	V
17325.000	49.77	-24.72	41.20	33.29	68.30	18.53	H
17413.500	52.37	-24.87	41.20	36.04	68.30	15.93	V
17674.500	51.88	-25.08	41.27	35.68	68.30	16.42	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)
5743.800	58.42	-22.81	34.89	46.34	68.30	9.88	H
5824.800	60.06	-23.07	35.10	48.04	68.30	8.24	H
11570.000	45.82	-30.33	38.41	37.74	74.00	28.18	V
17355.000	50.57	-24.77	41.20	34.14	68.30	17.73	H
17515.500	52.47	-24.99	41.20	36.26	68.30	15.83	V
17699.000	51.71	-25.08	41.30	35.48	68.30	16.59	H

Channel 165

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5923.275	57.35	-23.24	35.25	45.33	69.48	12.13	V
5924.748	57.61	-23.23	35.25	45.60	68.39	10.77	H
11650.000	44.99	-29.87	38.60	36.26	74.00	29.01	H
17475.000	49.97	-24.96	41.20	33.73	68.30	18.33	H
17615.000	51.91	-25.08	41.22	35.77	68.30	16.39	H
17691.000	51.65	-25.08	41.29	35.44	68.30	16.65	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)
5651.200	57.90	-22.87	34.70	46.06	69.09	11.19	H
5652.257	57.39	-22.86	34.70	45.55	69.87	12.48	H
11510.000	44.74	-30.85	38.23	37.37	74.00	29.26	H
17265.000	50.16	-24.70	41.23	33.62	68.30	18.14	H
17392.000	52.18	-24.83	41.20	35.81	68.30	16.12	V
17570.000	52.86	-25.04	41.20	36.70	68.30	15.44	H

Channel 159

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5923.757	57.66	-23.24	35.25	45.65	69.12	11.46	V
5924.245	57.99	-23.24	35.25	45.97	68.76	10.77	H
11590.000	45.93	-30.16	38.47	37.61	74.00	28.07	H
17385.000	52.56	-24.82	41.20	36.18	68.30	15.74	V
17472.500	52.02	-24.95	41.20	35.77	68.30	16.28	V
17576.000	52.07	-25.04	41.20	35.91	68.30	16.23	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)
5650.431	57.87	-22.87	34.70	46.04	68.52	10.65	V
5924.332	58.98	-23.24	35.25	46.96	68.69	9.72	H
11550.000	46.20	-30.50	38.35	38.36	74.00	27.80	H
17325.000	50.90	-24.72	41.20	34.42	68.30	17.40	V
17526.000	52.27	-25.00	41.20	36.07	68.30	16.03	V
17623.500	52.44	-25.08	41.22	36.30	68.30	15.86	H

Conclusion: PASS

Note:

1. The spurious emission above 18G is noise only.
2. All emissions below 30MHz are more than 20 dB below the limit

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.	

Set up:

Tabletop devices shall be placed on a nonconducting platform with nominal top surface dimensions 1 m by 1.5 m and the table height shall be 1.5 m.
The EUT and transmitting antenna shall be centered on the turntable.

Test Procedure

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. 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. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The receiver references:

Sweep frequency from 30 MHz to 1GHz, RBW = 100 kHz, VBW = 300 kHz;
Sweep frequency from 1 GHz to 26GHz, RBW = 1MHz, VBW = 3MHz

Sample Calculations

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

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:

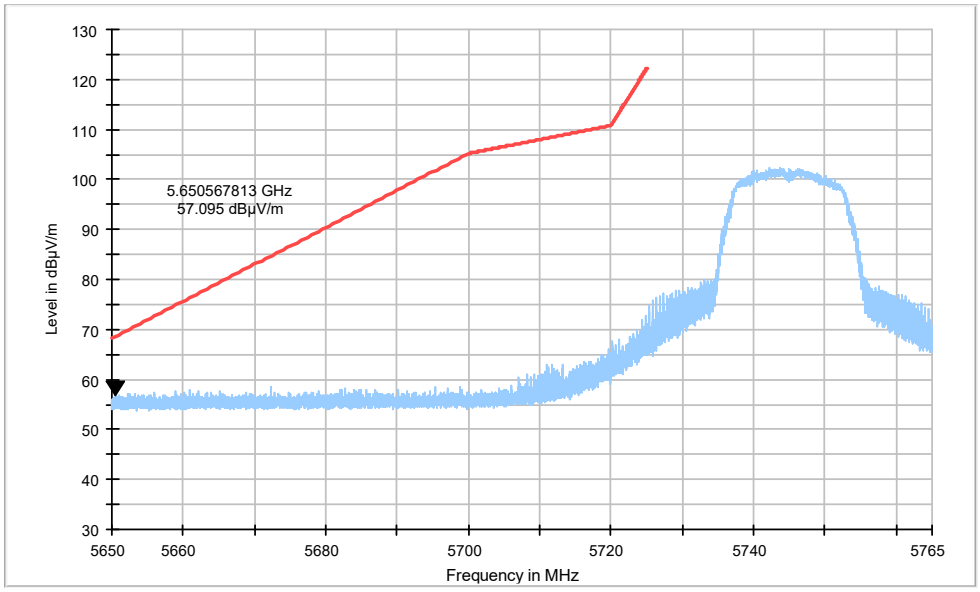


Fig. 10 Band Edges (802.11a Ch149,5745MHz)

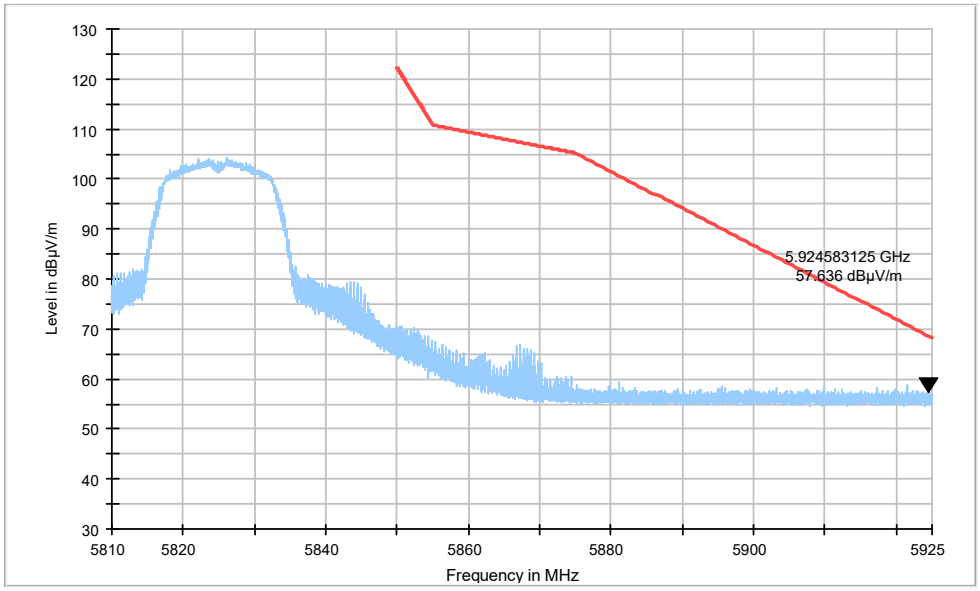


Fig. 11 Band Edges (802.11a Ch165, 5825MHz)

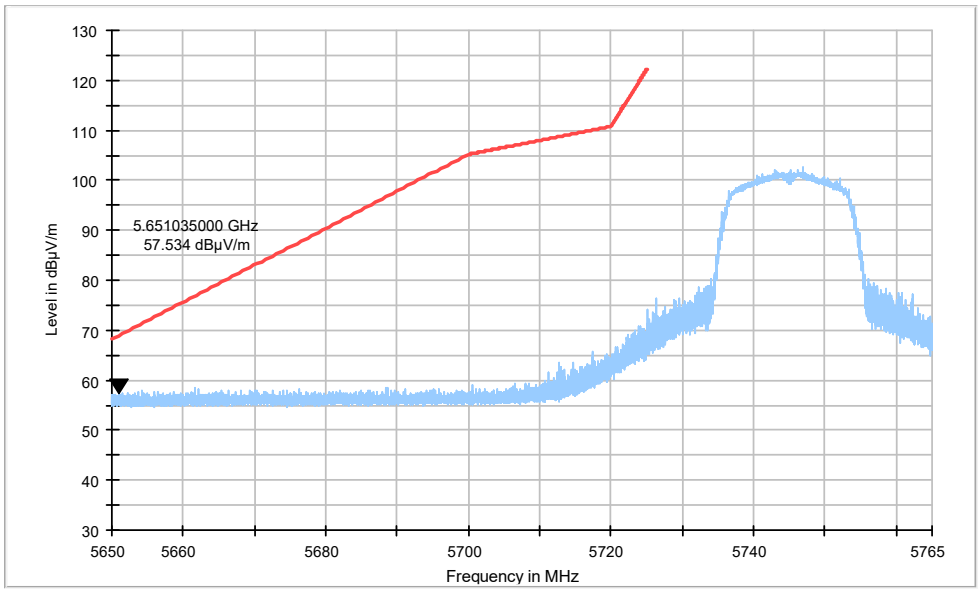


Fig. 12 Band Edges (802.11n-HT20 Ch149, 5745MHz)

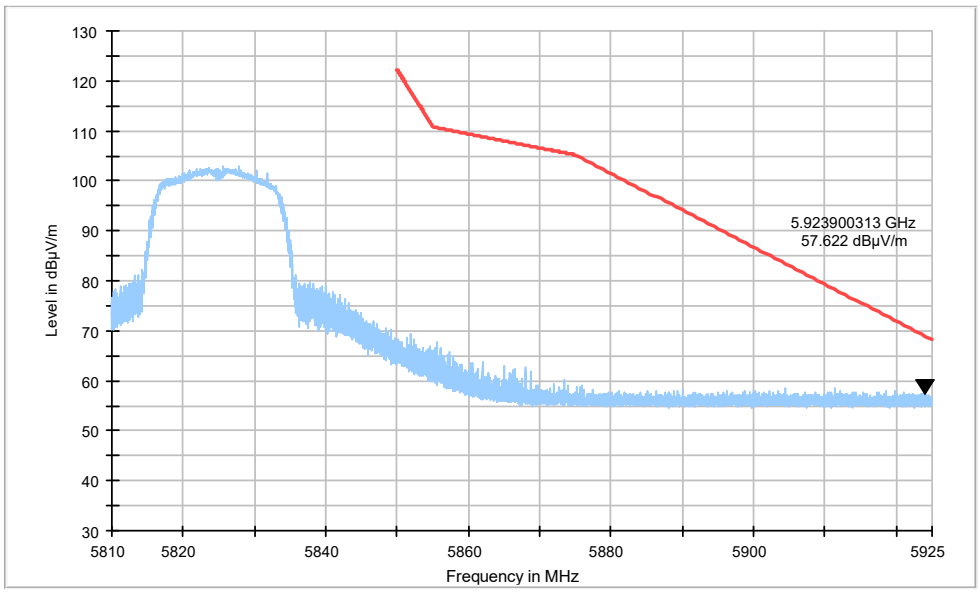


Fig. 13 Band Edges (802.11n-HT20 Ch165, 5825MHz)

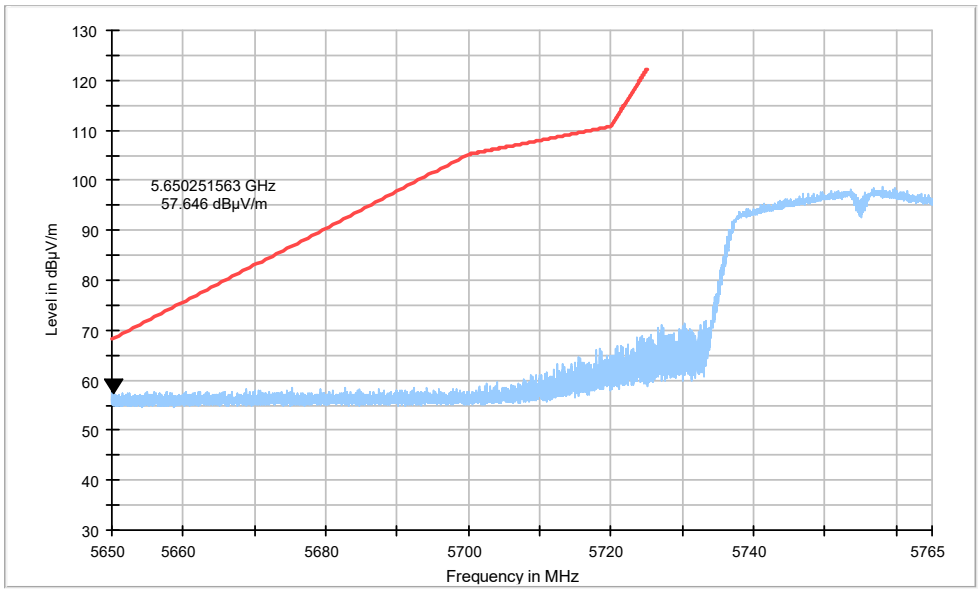


Fig. 14 Band Edges (802.11n-HT40 Ch151, 5755MHz)

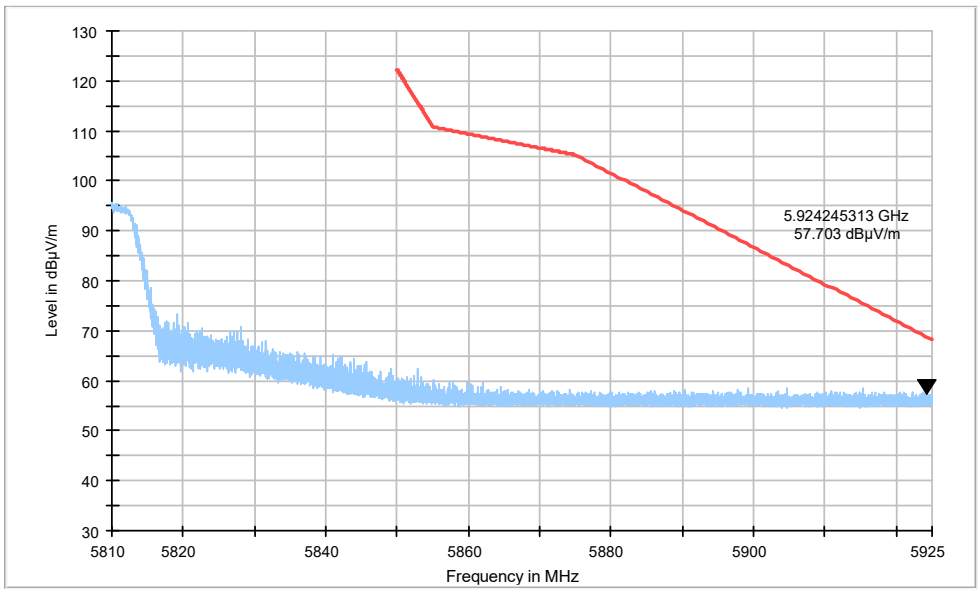


Fig. 15 Band Edges (802.11n-HT40 Ch159, 5795MHz)

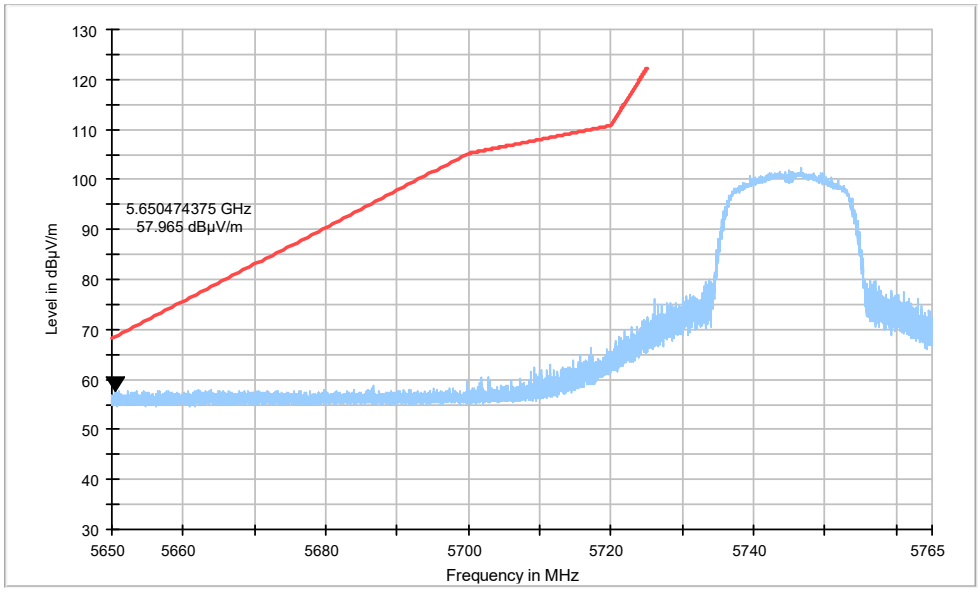


Fig. 16 Band Edges (802.11ac-HT20 Ch149, 5745MHz)

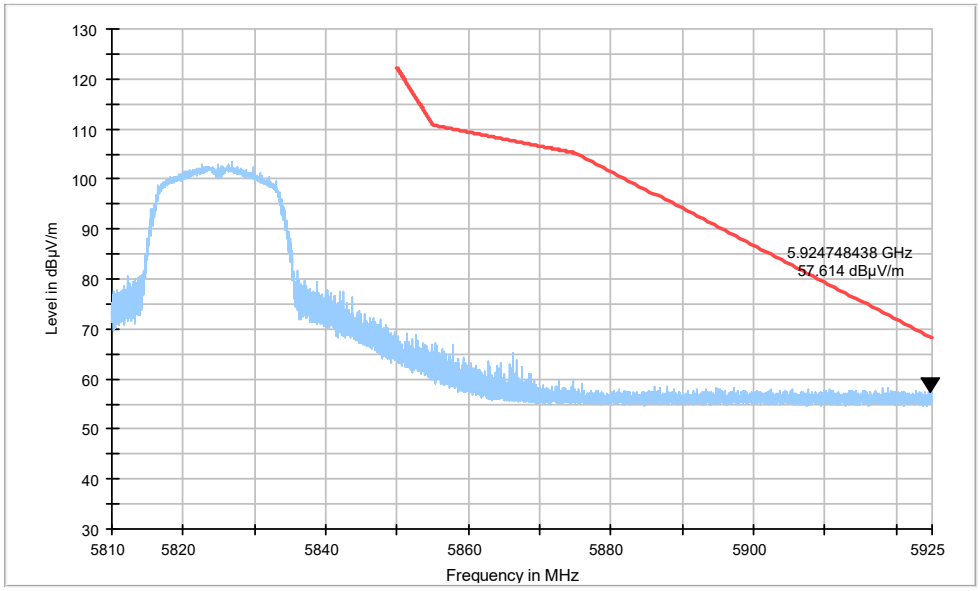


Fig. 17 Band Edges (802.11ac-HT20 Ch165, 5825MHz)

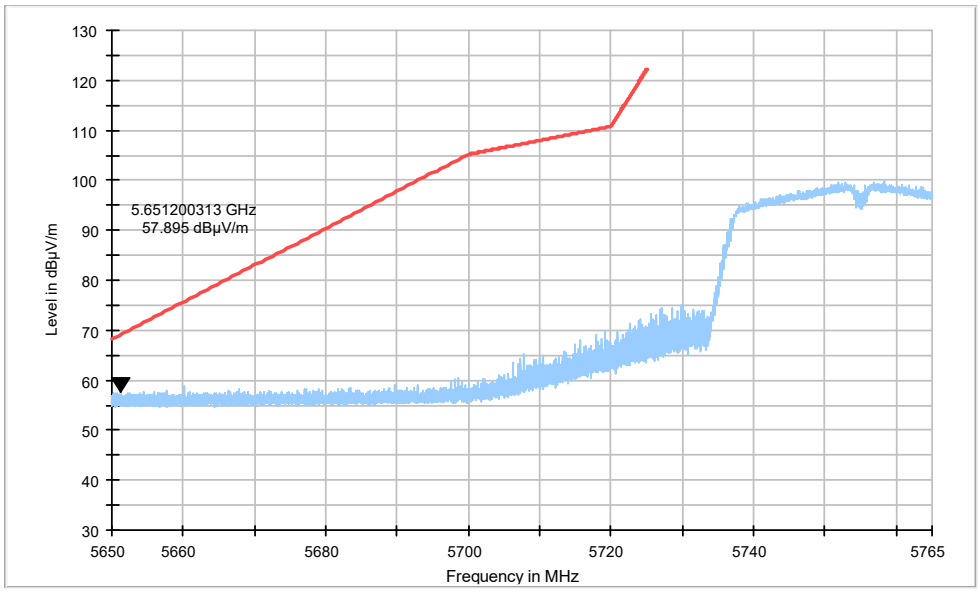


Fig. 18 Band Edges (802.11ac-HT40 Ch151, 5755MHz)

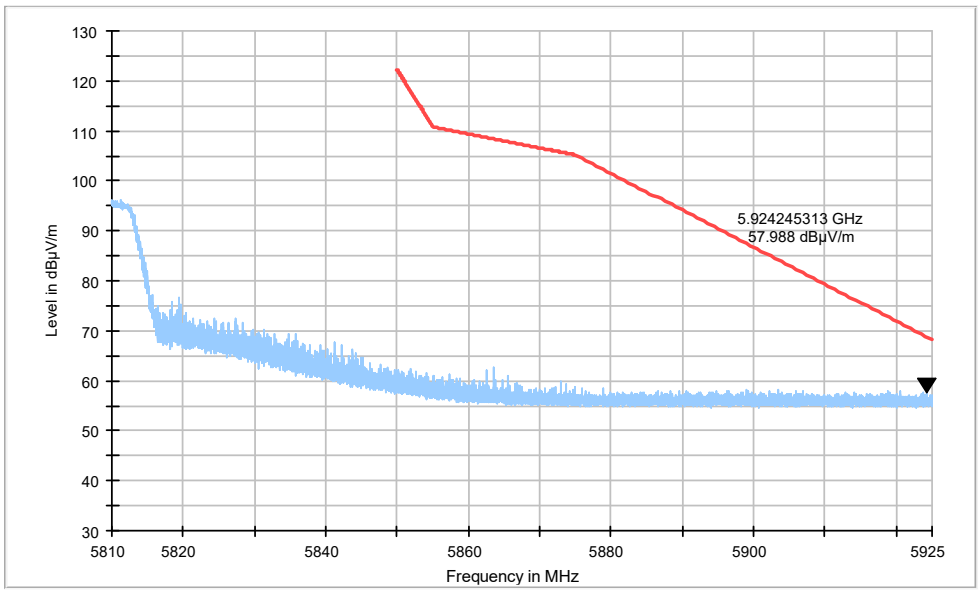


Fig. 19 Band Edges (802.11ac-HT40 Ch159, 5795MHz)

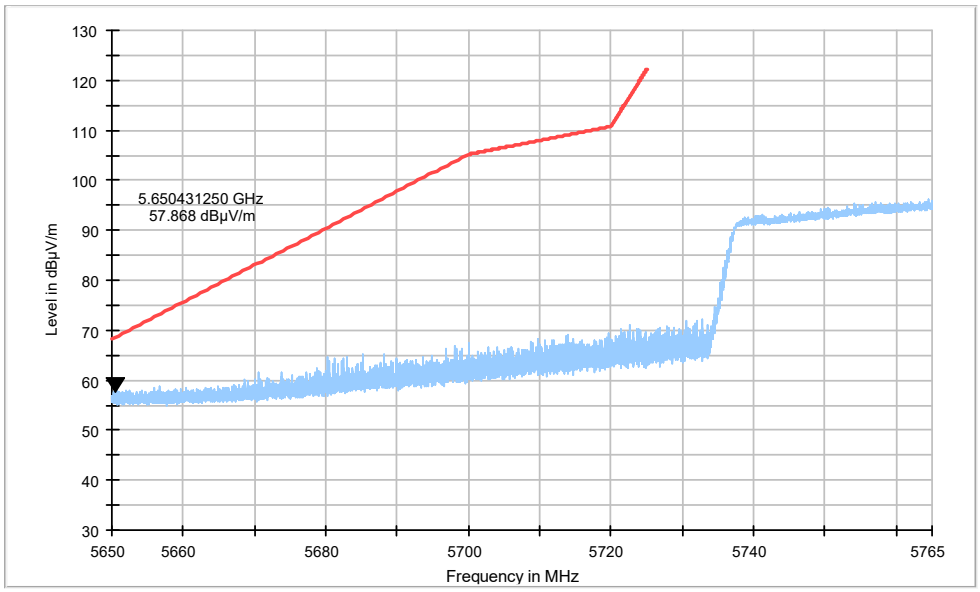


Fig. 20 Band Edges (802.11ac-HT80 Ch155, 5775MHz)

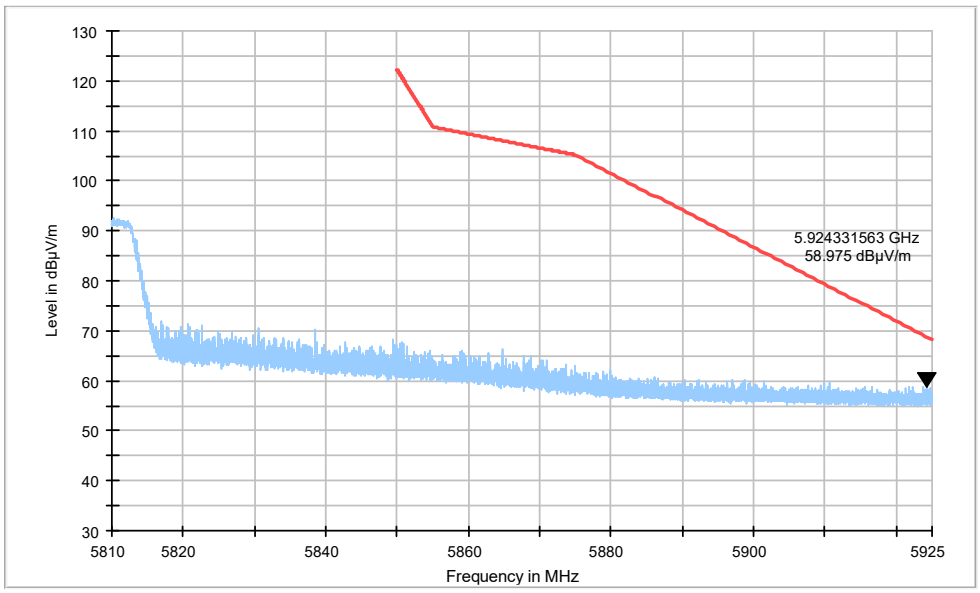


Fig. 21 Band Edges (802.11ac-HT80 Ch155, 5775MHz)

A.7. AC Powerline Conducted Emission

Summary

All AC line conducted spurious emissions are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for conducted spurious emissions. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section

Method of Measurement:

See Clause 6.2 of ANSI C63.10 specifically.

See Clause 4 and Clause 5 of ANSI C63.10 generally.

The conducted emissions from the AC port of the EUT are measured in a shielding room. The EUT is connected to a Line Impedance Stabilization Network (LISN). An overview sweep with peak detection was performed. The measurements were performed with a quasi-peak detector and if required, an average detector.

The conducted emission measurements were made with the following detector of the test receiver: Quasi-Peak / Average Detector.

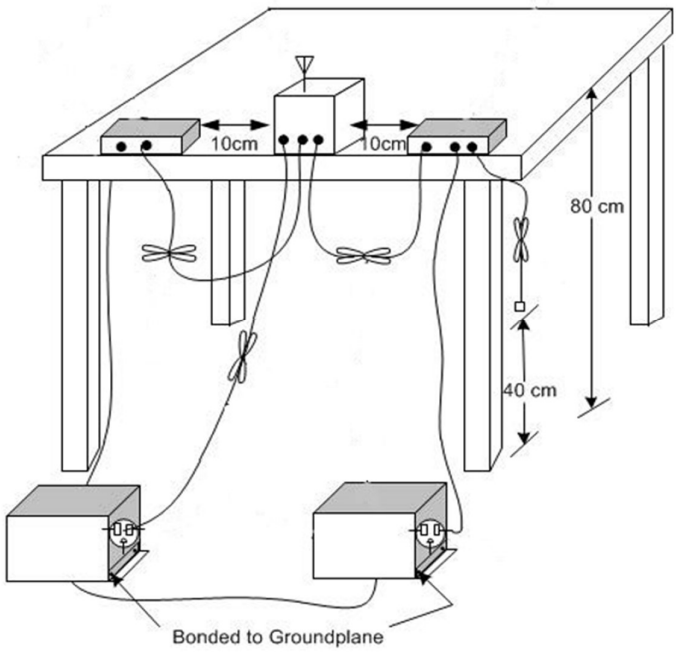
The measurement bandwidth is:

Frequency of Emission (MHz)	RBW/IF bandwidth
0.15-30	9kHz

Test Condition:

Voltage（V）	Frequency（Hz）
120	60

Measurement Setup



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.				

Conclusion: PASS

Test graphs as below:

Traffic:

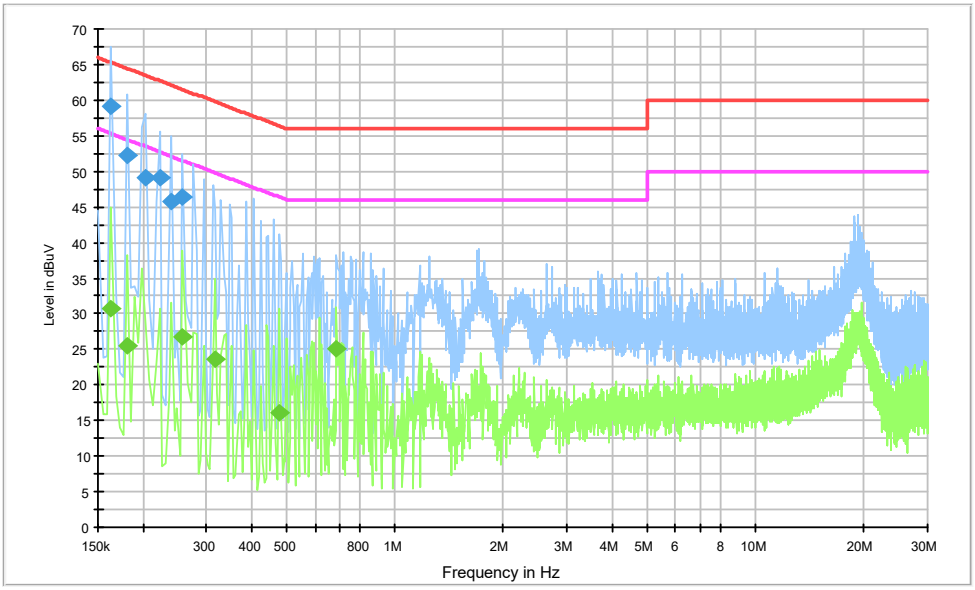


Fig. 22 AC Power line Conducted Emission-802.11a

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 (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.163500	59.2	2000.0	9.000	On	L1	26.0	6.1	65.3
0.181500	52.2	2000.0	9.000	On	N	22.7	12.2	64.4
0.204000	49.0	2000.0	9.000	On	N	19.7	14.4	63.4
0.222000	49.1	2000.0	9.000	On	L1	19.7	13.7	62.7
0.240000	45.7	2000.0	9.000	On	N	19.7	16.4	62.1
0.258000	46.3	2000.0	9.000	On	L1	19.7	15.2	61.5

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.163500	30.6	2000.0	9.000	On	L1	26.0	24.7	55.3
0.181500	25.4	2000.0	9.000	On	N	22.7	29.0	54.4
0.258000	26.8	2000.0	9.000	On	L1	19.7	24.7	51.5
0.316500	23.7	2000.0	9.000	On	L1	19.7	26.1	49.8
0.478500	16.1	2000.0	9.000	On	L1	19.8	30.3	46.4
0.690000	25.0	2000.0	9.000	On	N	19.7	21.0	46.0

Idle:

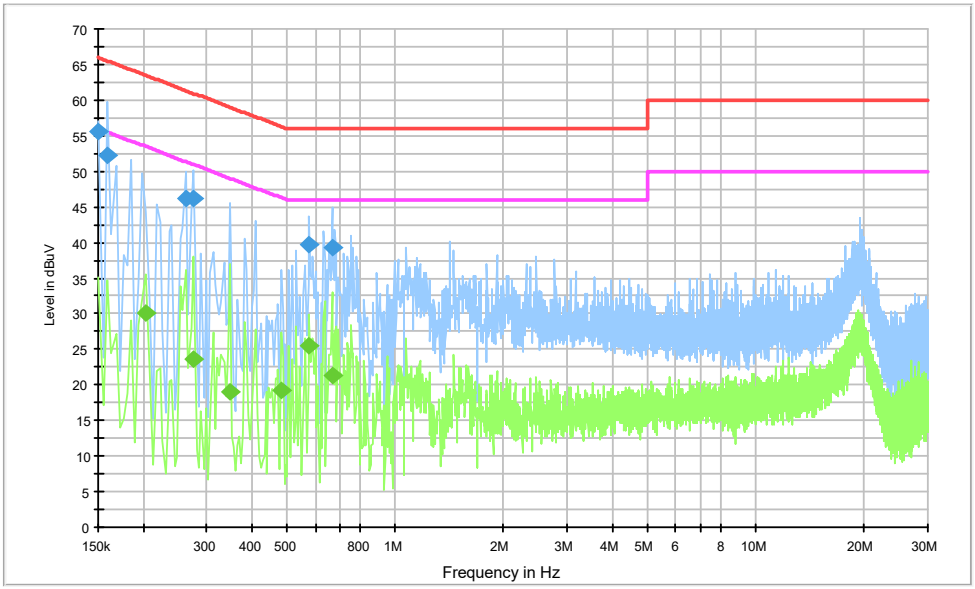


Fig. 23 AC Power line Conducted Emission-Idle

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 (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	55.7	2000.0	9.000	On	L1	28.6	10.3	66.0
0.159000	52.3	2000.0	9.000	On	L1	26.8	13.2	65.5
0.262500	46.1	2000.0	9.000	On	L1	19.7	15.3	61.4
0.276000	46.1	2000.0	9.000	On	L1	19.7	14.8	60.9
0.577500	39.7	2000.0	9.000	On	N	19.7	16.3	56.0
0.667500	39.3	2000.0	9.000	On	N	19.7	16.7	56.0

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.204000	30.0	2000.0	9.000	On	N	19.7	23.4	53.4
0.276000	23.6	2000.0	9.000	On	N	19.7	27.3	50.9
0.348000	19.0	2000.0	9.000	On	L1	19.7	30.0	49.0
0.483000	19.2	2000.0	9.000	On	N	19.8	27.1	46.3
0.577500	25.4	2000.0	9.000	On	N	19.7	20.6	46.0
0.667500	21.3	2000.0	9.000	On	L1	19.7	24.7	46.0

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

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ilac-MRA

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 600118-0

Telecommunication Technology Labs, CAICT
Beijing
China

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

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).

2022-10-01 through 2023-09-30
Effective Dates

DEPARTMENT OF COMMERCE · UNITED STATES OF AMERICA

For the National Voluntary Laboratory Accreditation Program

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