FCC PART 15
TEST REPORT
No.I21Z62312-IOT05

for

OnePlus Technology (Shenzhen) Co., Ltd.

Smart Phone

GN2200

With

FCC ID: 2ABZ2-AA455

Hardware Version: 11

Software Version: GN2200_11_A.02

Issued Date: 2022-01-29

Note:

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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.

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I21Z62312-IOT05	Rev.0	1st edition	2022-01-12
I21Z62312-IOT05	Rev.1	Update the reference documents and summary of test results.	2022-01-29

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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 ANCILLARYEQUIPMENT(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
3.5. INTERPRETATION OF THE TEST ENVIRONMENT 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 CHANNEL 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 OUTPUT POWER 13

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A.3. PEAK POWER SPECTRAL DENSITY (CONDUCTED) 15
A.4. OCCUPIED 26DB BANDWIDTH(CONDUCTED) 16
A.5. BAND EDGES COMPLIANCE 32
A5.1 BAND EDGES - RADIATED 32
A.6. TRANSMITTER SPURIOUS EMISSION 42
A.7. AC POWERLINE CONDUCTED EMISSION (150KHZ- 30MHZ) 79
A.8. 99% OCCUPIED BANDWIDTH 82
A.9. POWER CONTROL 87

ANNEX B: EUT PARAMETERS 87

ANNEX C: ACCREDITATION CERTIFICATE 88

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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

Testing Location: CTTL(Huayuan North Road)

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

1.3. Testing Environment

Normal Temperature: 15-35℃

Relative Humidity: 20-75%

1.4. Project date

Testing Start Date: 2021-11-26

Testing End Date: 2022-01-12

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:	OnePlus Technology (Shenzhen) Co., Ltd.
Address:	18C02, 18C03, 18C04 and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen
City:	Shenzhen
Postal Code:	/
Country:	China
Telephone:	86 755 61898696-7023
Fax:	/

2.2 Manufacturer Information

Company Name:	OnePlus Technology (Shenzhen) Co., Ltd.
Address:	"18C02, 18C03, 18C04 and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen"
City:	Shenzhen
Postal Code:	/
Country:	China
Telephone:	86 755 61898696-7023
Fax:	/

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

3.1. About EUT

Description	Smart Phone
Model name	GN2200
FCC ID	2ABZ2-AA455
WLAN Frequency Band	ISM Bands: -5150MHz~5250MHz -5250MHz~5350MHz -5470MHz~5725MHz
Type of modulation	OFDM
Antenna	Integral Antenna
Voltage	3.87V

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	866966050025092	11	GN2200_11_A.02
EUT2	866966050029490	11	GN2200_11_A.02

*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	Charger1	H121415BA1500104	CH001
AE2	Charger2	J21401GA1000034	CH012
AE3	Charger3	C621404AA1000041	CH020

AE1

Model	VCB3HDUH
Manufacturer	SHENZHEN HUNTKEY ELECTRIC CO LTD
Length of cable	1 meter

AE2

Model	VCB3HDUH
Manufacturer	HUIZHOU GOLDEN LAKE INDUSTRIAL CO., LTD
Length of cable	1 meter

AE3

Model	VCB3HDUH
Manufacturer	Dongguan YOHOO Electronic Technology Co., LTD.
Length of cable	1 meter

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

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3.4. General Description

The Equipment under Test (EUT) is a model of Smart Phone with integrated antenna and inbuilt battery.
It has Bluetooth (EDR)function.
It consists of normal options: travel charger, USB cable.
Manual and specifications of the EUT were provided to fulfil the test.
Samples undergoing test were selected by the client.

3.5. Interpretation of the Test Environment

For the test methods, the test environment uncertainty figures correspond to an expansion factor k=2.
Measurement Uncertainty

Parameter	Uncertainty
temperature	0.48°C
humidity	2 %
DC voltages	0.003V

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	Title 47 of the Code of Federal Regulations; Chapter I Part 15 - Radio frequency devices	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

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 Part15E	Sub-clause of IC	Verdict
Maximum Output Power	15.407	/	**P**
Peak Power Spectral Density	15.407	/	**P**
Occupied 26dB Bandwidth	15.403	/	**P**
Band edge compliance (Radiated)	15.209	/	**P**
Transmitter spurious emissions (Radiated)	15.407	/	**P**
AC Powerline Conducted Emission (150kHz- 30MHz)	15.407	/	**P**
99% Occupied bandwidth	/	/	**P**
Transmit Power Control	15.407	/	**NA**

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	3.87V
Humidity	44%

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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	2022-05-24
2	LISN	ENV216	101200	R&S	1 year	2022-05-30
3	Test Receiver	ESCI	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	FSW67	103290	R&S	1 year	2022-01-20
2	BiLog Antenna	VULB9163	9163-1223	Schwarzbeck	1 year	2022-03-22
3	EMI Antenna	3115	0016725	ETS-Lindgren	1 year	2022-07-01

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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 Channel 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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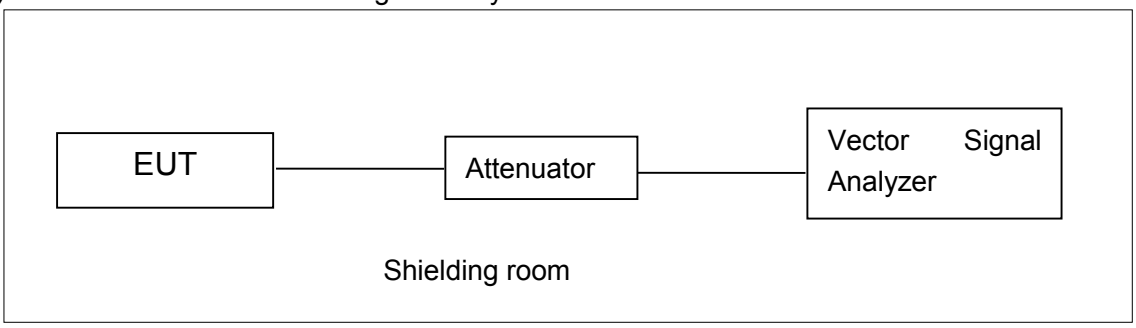
ANNEX A: MEASUREMENT RESULTS

A.1. Measurement Method

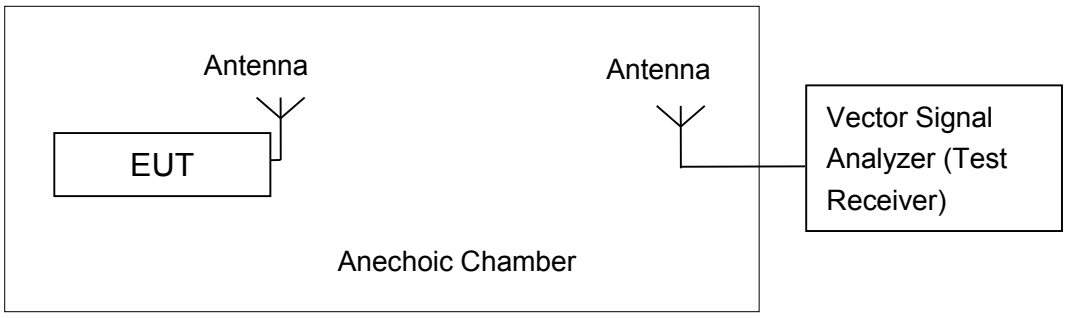
A.1.1. Conducted Measurements

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 KDB 789033
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 output Power

Measurement Limit and Method:

Standard	Frequency (MHz)	Limit (dBm)
FCC CRF Part 15.407(a)	5150MHz~5250MHz	24dBm
	5250MHz~5350MHz	24dBm or 11+10logB
	5470MHz~5725MHz	24dBm or 11+10logB

Limit use the less value, and B is the 26dB bandwidth.
The measurementmethod SA-2 is made according to KDB 789033

Measurement Results:

802.11a mode

Mode	Data Rate	Test Result (dBm)								
		Frequency (MHz)								
		5180	5200	5240	5260	5280	5320	5500	5580	5700
802.11a	6Mbps	20.49	20.47	20.35	20.04	19.87	20.01	18.06	19.48	13.65

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)								
		Frequency (MHz)								
		5180	5200	5240	5260	5280	5320	5500	5580	5700
802.11n-HT20	MCS0	20.28	20.27	20.01	19.94	19.67	19.95	18.01	19.50	13.91

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	Test Result (dBm)								
		Frequency (MHz)								
		5180	5200	5240	5260	5280	5320	5500	5580	5700
802.11ac-HT20	MCS0	20.37	20.30	20.02	19.95	19.70	19.96	17.95	19.50	13.89

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	Test Result (dBm)						
		Frequency (MHz)						
		5190	5230	5270	5310	5510	5550	5670
802.11n(HT40)	MCS0	14.51	19.54	19.45	14.14	14.26	19.47	18.36

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

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802.11ac-HT40 mode

Mode	Data Rate	Test Result (dBm)						
		Frequency (MHz)						
		5190	5230	5270	5310	5510	5550	5670
802.11ac(HT40)	MCS0	16.53	20.17	19.95	15.30	14.27	19.50	18.42

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

802.11ac-HT80 mode

Mode	Rate	Test Result (dBm)			
		Frequency (MHz)			
		5210	5290	5530	5610
802.11ac(HT80)	MCS0	14.39	15.00	13.46	18.74

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

The duty cycle of all mode are meet the 98% requirement.

Conclusion: Pass

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A.3. Peak Power Spectral Density (conducted)

Measurement Limit:

Standard	Frequency (MHz)	Limit (dBm/MHz)
FCC CRF Part 15.407(a)	5150MHz~5250MHz	11
	5250MHz~5350MHz	11
	5470MHz~5725MHz	11

The output power measurement method Section F is made according to KDB 789033

Measurement Results:

Mode	Frequency	Power Spectral Density (dBm/MHz)	Conclusion
802.11a	5180 MHz	9.59	P
	5200 MHz	9.39	P
	5240 MHz	9.09	P
	5260 MHz	9.02	P
	5280 MHz	8.65	P
	5320 MHz	8.92	P
	5500 MHz	7.41	P
	5580 MHz	8.81	P
	5700 MHz	4.16	P
802.11ac HT20	5180 MHz	9.11	P
	5200 MHz	8.87	P
	5240 MHz	8.60	P
	5260 MHz	8.50	P
	5280 MHz	8.19	P
	5320 MHz	8.44	P
	5500 MHz	6.94	P
	5580 MHz	8.29	P
	5700 MHz	3.63	P
802.11ac HT40	5190 MHz	3.12	P
	5230 MHz	5.66	P
	5270 MHz	5.49	P
	5310 MHz	2.48	P
	5510 MHz	0.50	P
	5550 MHz	5.53	P
	5670 MHz	4.85	P
802.11ac HT80	5210MHz	-2.04	P
	5290MHz	-0.92	P
	5530MHz	-3.77	P
	5610MHz	1.92	P

Conclusion: PASS

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A.4. Occupied 26dB Bandwidth(conducted)

Measurement Limit:

Standard	Limit (kHz)
FCC 47 CFR Part 15.403 (i)	/

The measurement is made according to KDB 789033

Measurement Uncertainty:

Measurement Uncertainty	60.80Hz

Measurement Result:

Mode	Frequency	Occupied 26dB Bandwidth (MHz)		conclusion
802.11a	5180 MHz	Fig.1	23.10	P
	5200 MHz	Fig.2	23.15	P
	5240 MHz	Fig.3	23.10	P
	5260 MHz	Fig.4	23.25	P
	5280 MHz	Fig.5	23.45	P
	5320 MHz	Fig.6	23.30	P
	5500 MHz	Fig.7	23.30	P
	5580 MHz	Fig.8	23.45	P
	5700 MHz	Fig.9	23.40	P
802.11ac HT20	5180 MHz	Fig.10	24.10	P
	5200 MHz	Fig.11	24.10	P
	5240 MHz	Fig.12	24.20	P
	5260 MHz	Fig.13	23.80	P
	5280 MHz	Fig.14	24.15	P
	5320 MHz	Fig.15	23.90	P
	5500 MHz	Fig.16	23.95	P
	5580 MHz	Fig.17	24.35	P
	5700 MHz	Fig.18	23.90	P
802.11ac HT40	5190 MHz	Fig.19	42.16	P
	5230 MHz	Fig.20	41.68	P
	5270 MHz	Fig.21	41.04	P
	5310 MHz	Fig.22	41.84	P
	5510 MHz	Fig.23	41.36	P
	5550 MHz	Fig.24	41.20	P
	5670 MHz	Fig.25	41.44	P
802.11ac HT80	5210MHz	Fig.26	84.32	P
	5290MHz	Fig.27	84.48	P
	5530MHz	Fig.28	84.16	P
	5610MHz	Fig.29	99.52	P

Conclusion: PASS

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Test graphs as below:

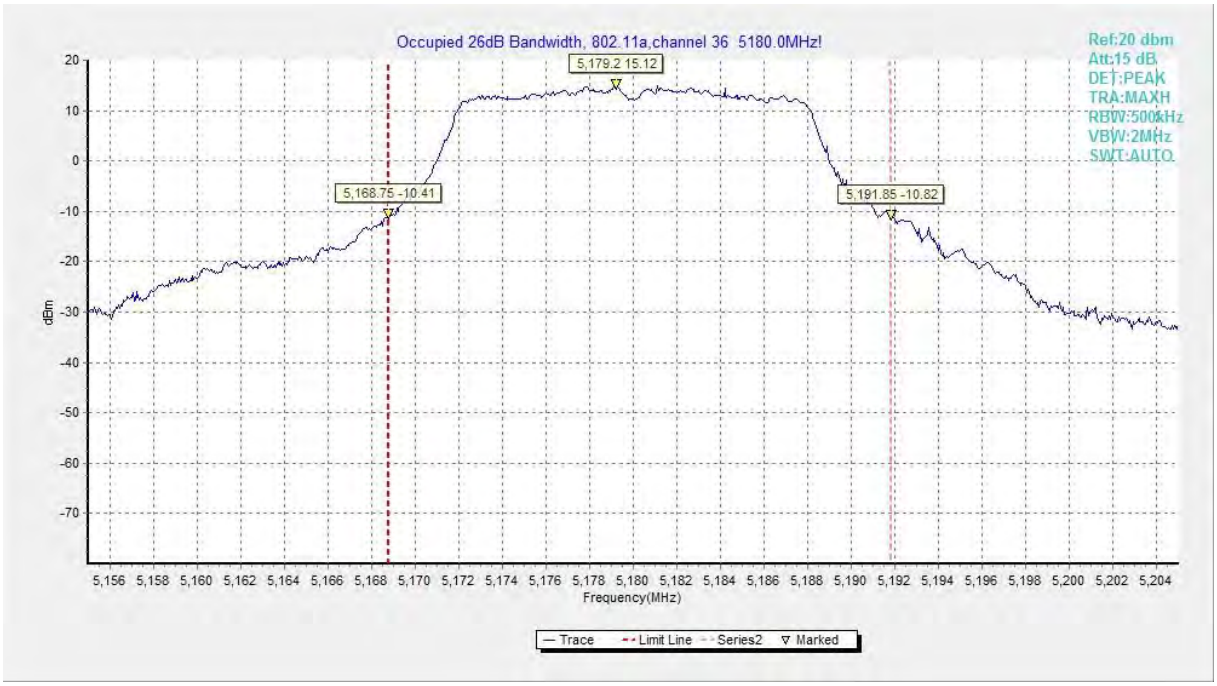

Fig.1 Occupied 26dB Bandwidth (802.11a, 5180MHz)

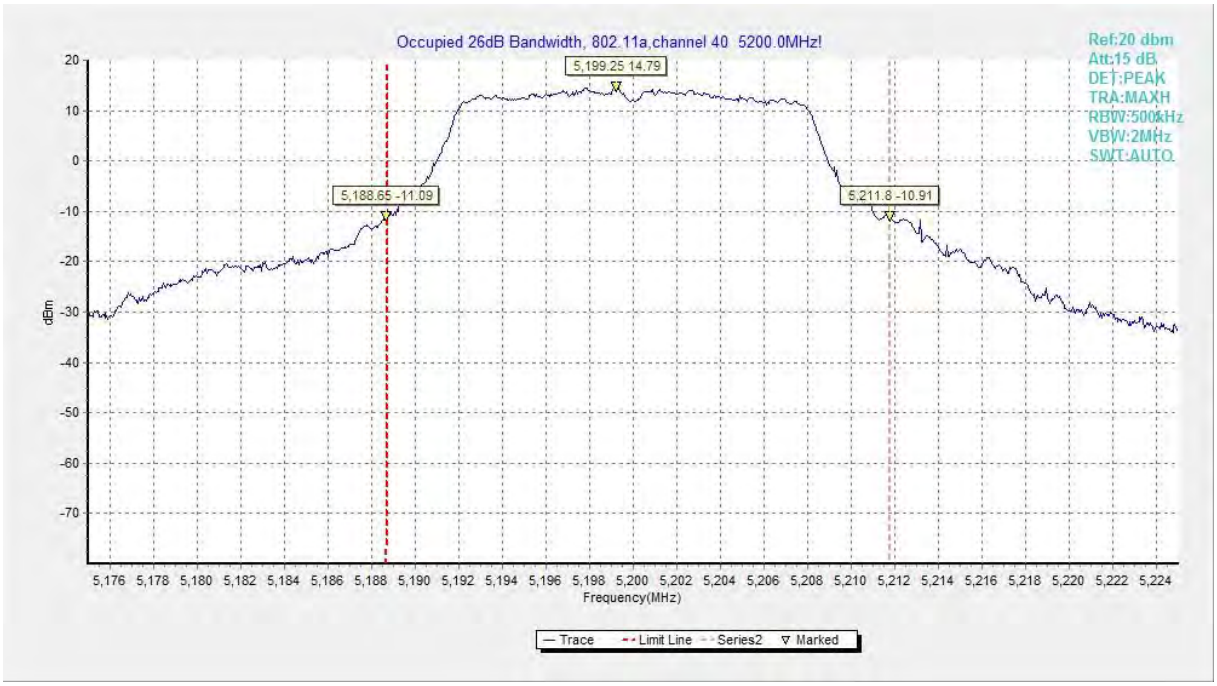

Fig.2 Occupied 26dB Bandwidth (802.11a, 5200MHz)

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Fig.3 Occupied 26dB Bandwidth (802.11a, 5240MHz)

Fig.4 Occupied 26dB Bandwidth (802.11a, 5260MHz)

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Fig.5 Occupied 26dB Bandwidth (802.11a, 5280MHz)

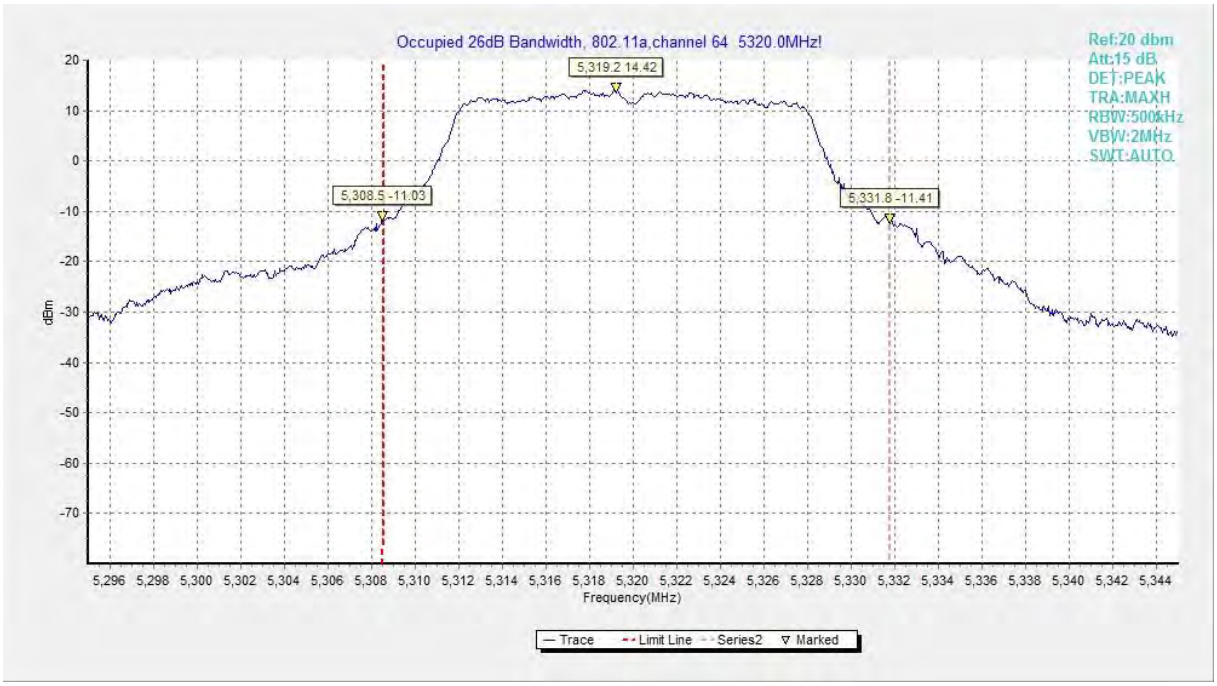

Fig.6 Occupied 26dB Bandwidth (802.11a, 5320MHz)

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Fig.7 Occupied 26dB Bandwidth (802.11a, 5500MHz)

Fig.8 Occupied 26dB Bandwidth (802.11a, 5580MHz)

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Fig.9 Occupied 26dB Bandwidth (802.11a, 5700MHz)

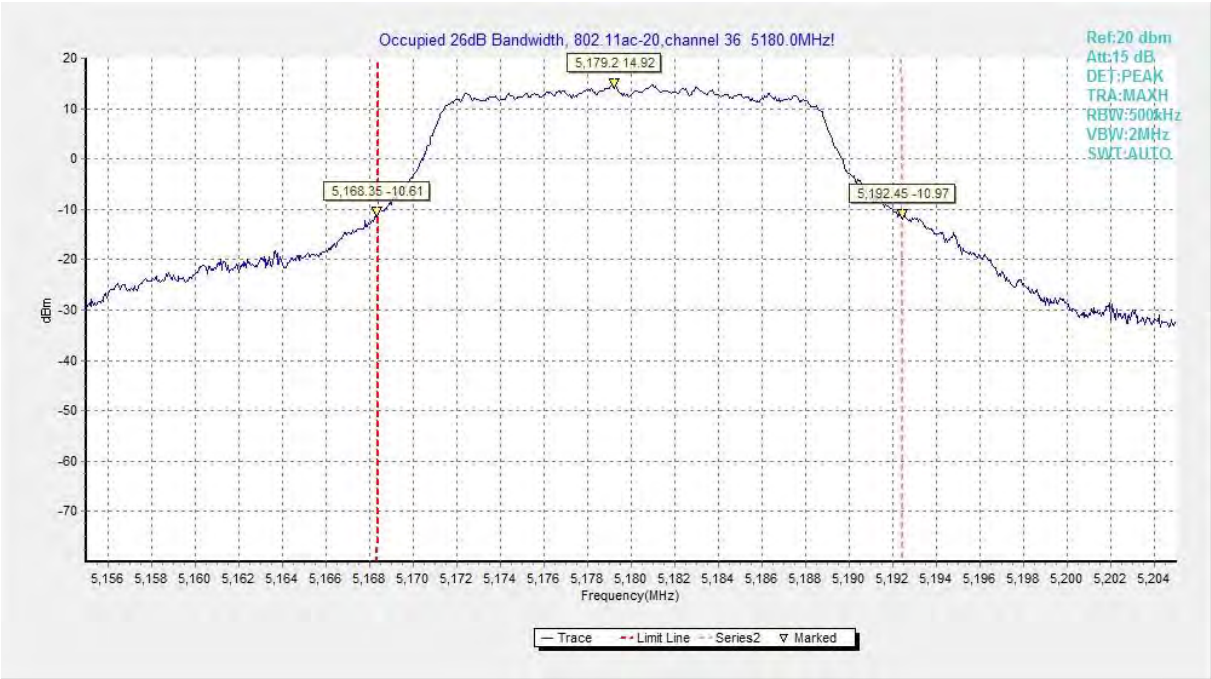

Fig.10 Occupied 26dB Bandwidth (802.11ac-HT20, 5180MHz)

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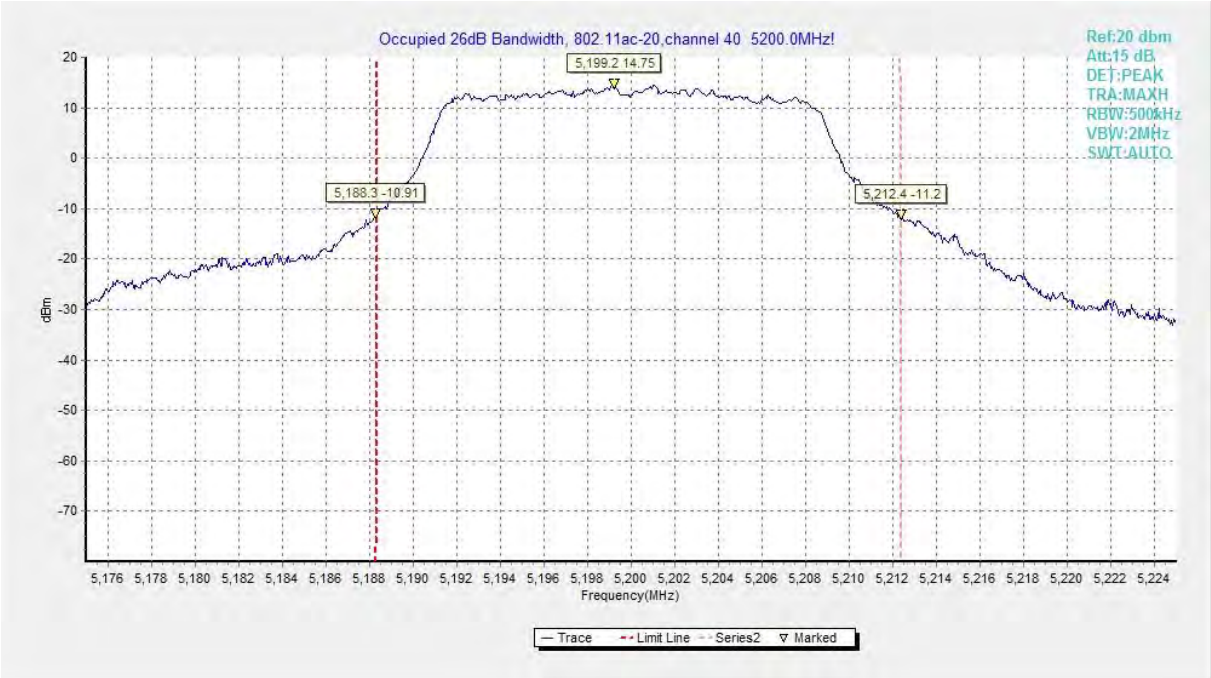

Fig.11 Occupied 26dB Bandwidth (802.11ac-HT20, 5200MHz)

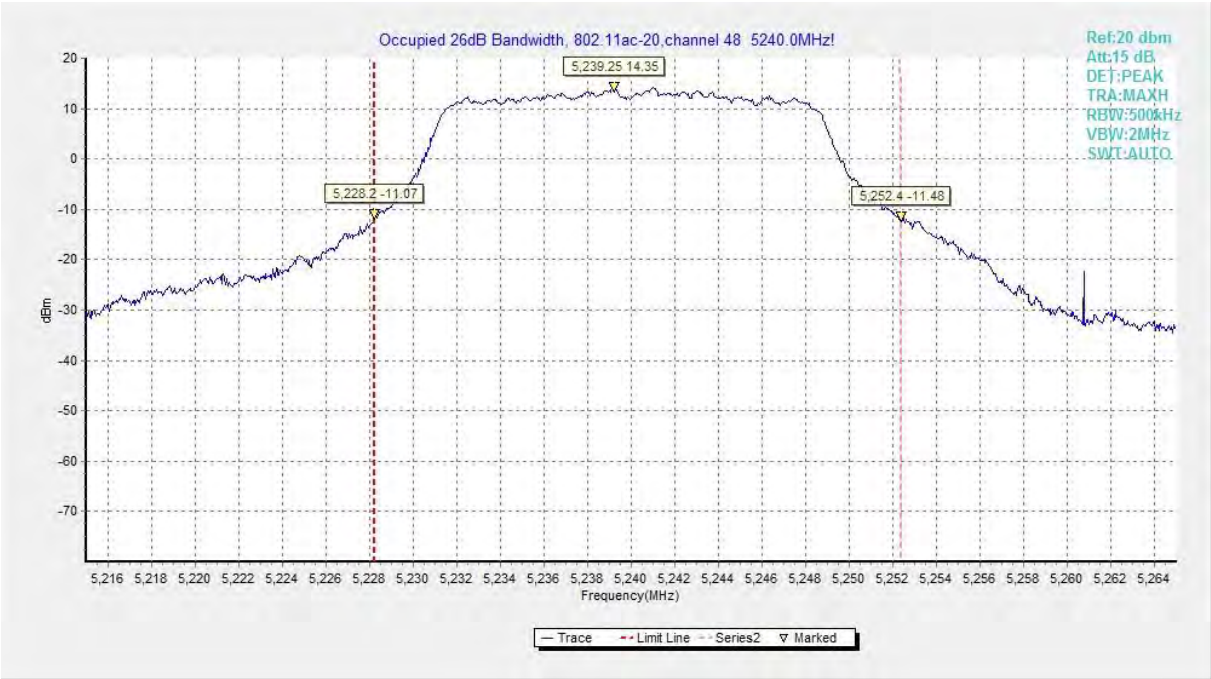

Fig.12 Occupied 26dB Bandwidth (802.11ac-HT20, 5240MHz)

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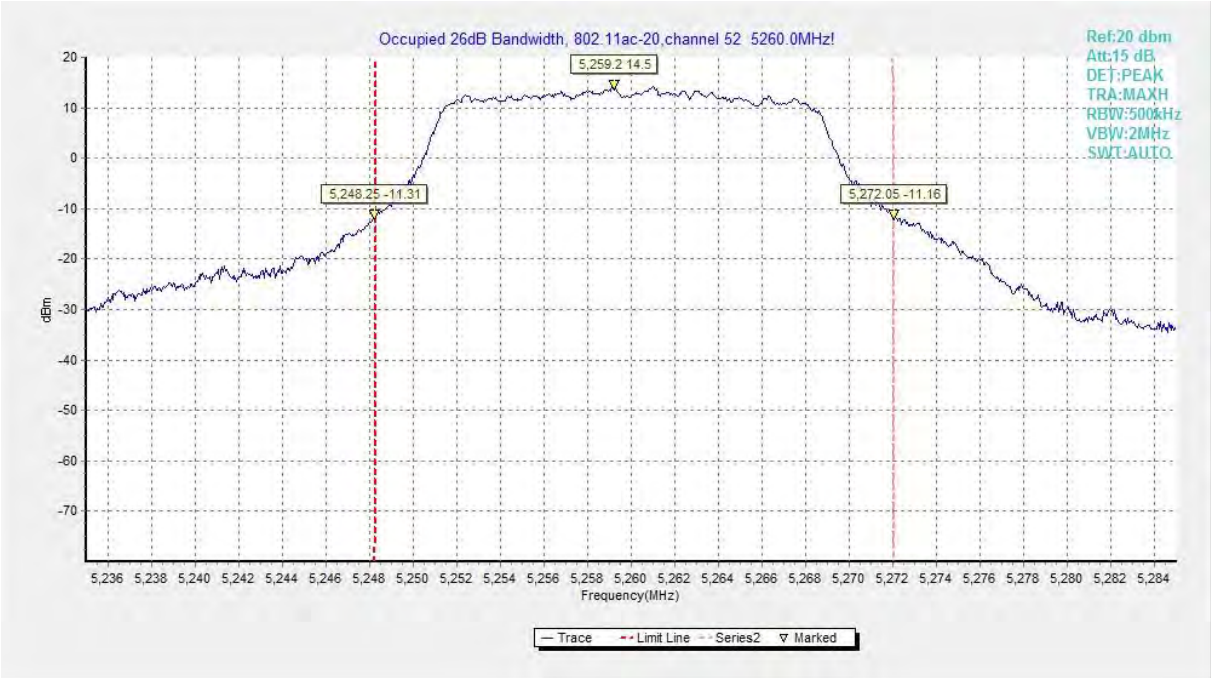

Fig.13 Occupied 26dB Bandwidth (802.11ac-HT20, 5260MHz)

Fig.14 Occupied 26dB Bandwidth (802.11ac-HT20, 5280MHz)

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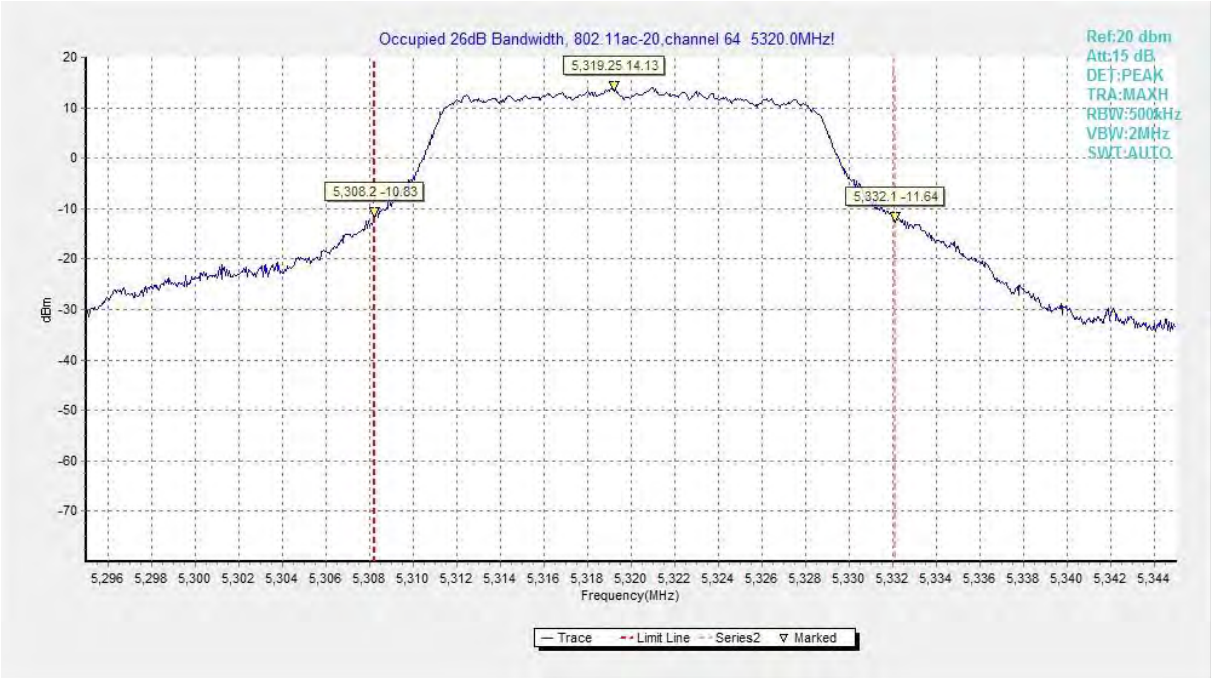

Fig.15 Occupied 26dB Bandwidth (802.11ac-HT20, 5320MHz)

Fig.16 Occupied 26dB Bandwidth (802. 11ac-HT20, 5500MHz)

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Fig.17 Occupied 26dB Bandwidth (802. 11ac-HT20, 5580MHz)

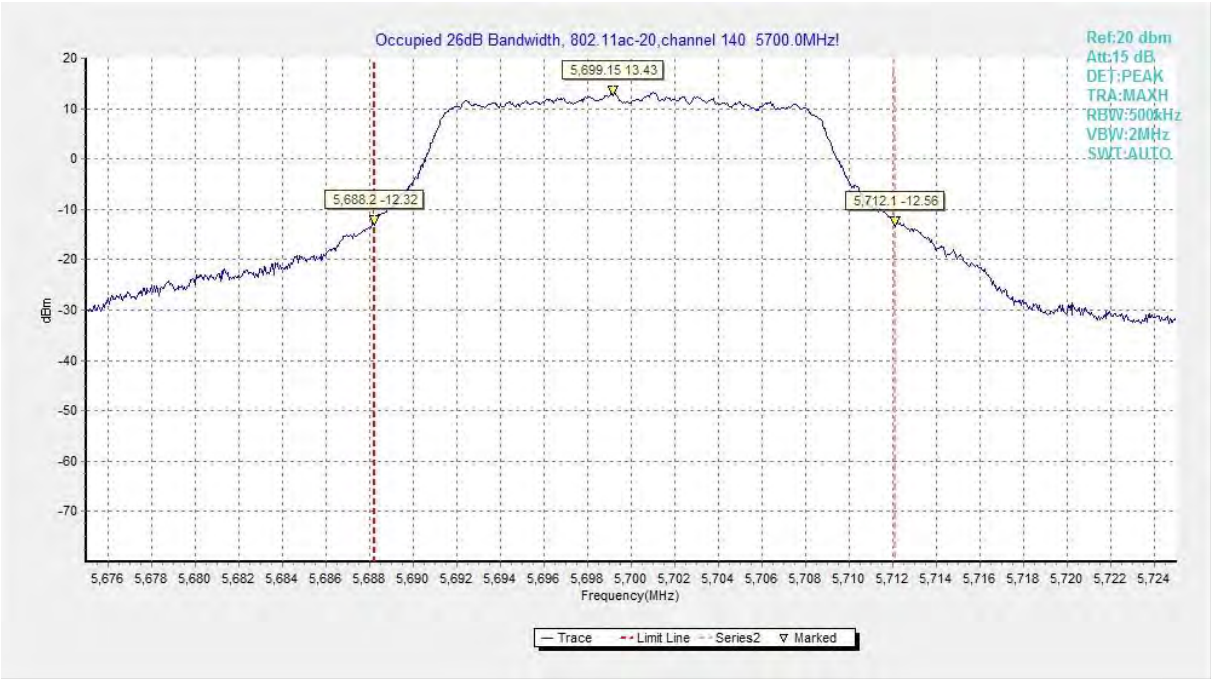

Fig.18 Occupied 26dB Bandwidth (802. 11ac-HT20, 5700MHz)

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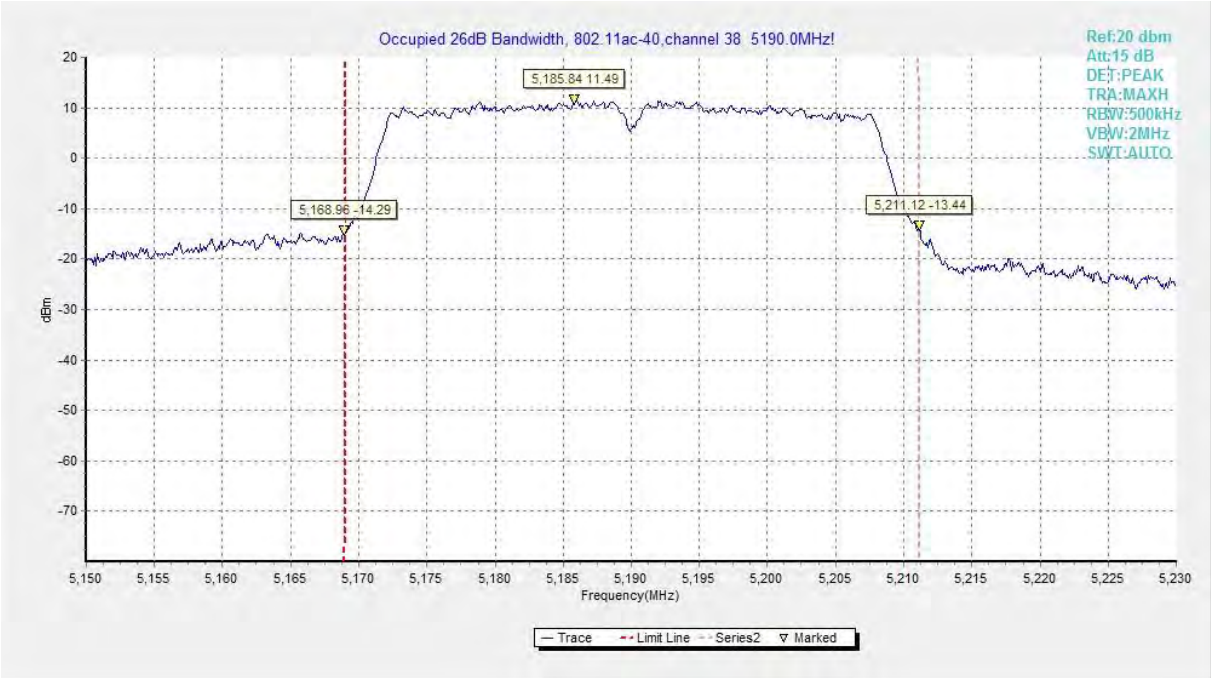

Fig.19 Occupied 26dB Bandwidth (802.11ac-HT40, 5190MHz)

Fig.20 Occupied 26dB Bandwidth (802.11ac-HT40, 5230MHz)

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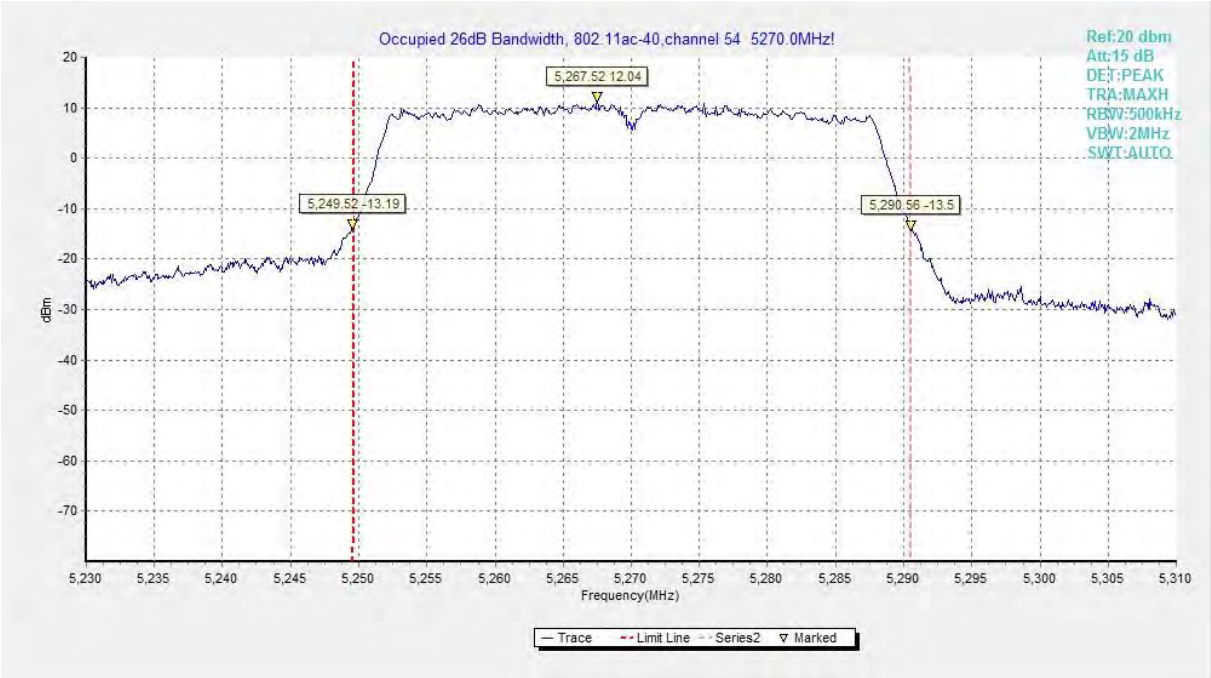

Fig.21 Occupied 26dB Bandwidth (802.11ac-HT40, 5270MHz)

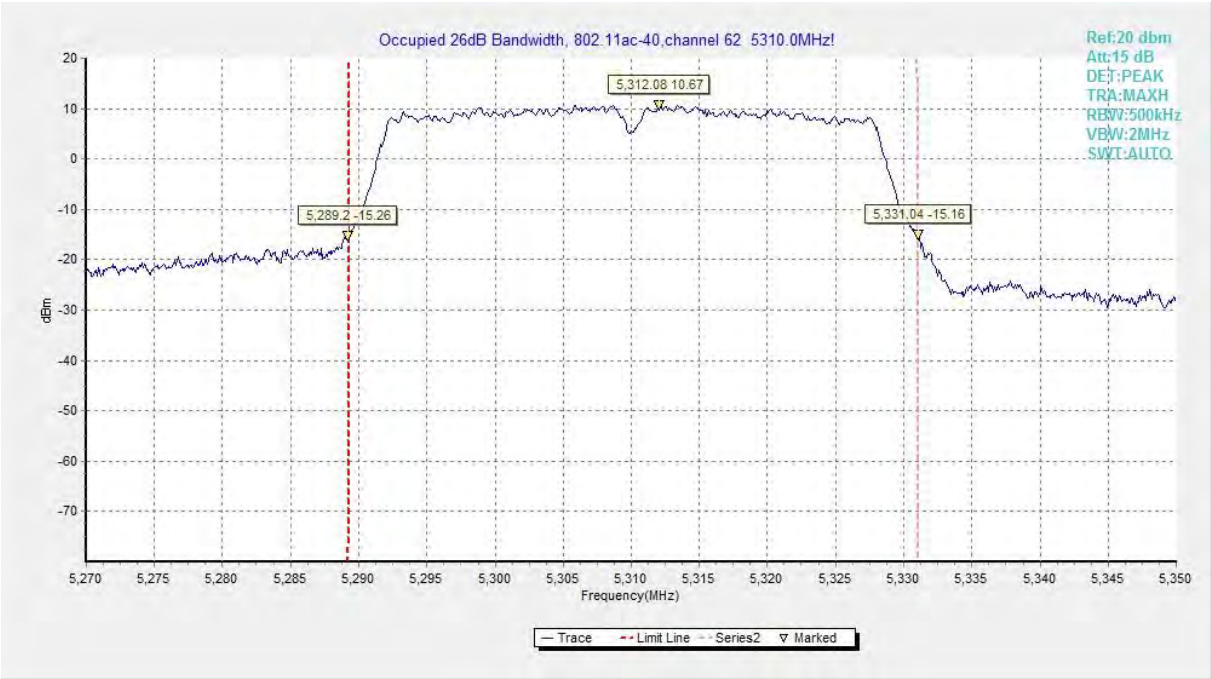

Fig.22 Occupied 26dB Bandwidth (802.11ac-HT40, 5310MHz)

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Fig.23 Occupied 26dB Bandwidth (802. 11ac-HT40, 5510MHz)

Fig.24 Occupied 26dB Bandwidth (802. 11ac-HT40, 5550MHz)

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Fig.25 Occupied 26dB Bandwidth (802. 11ac-HT40, 5670MHz)

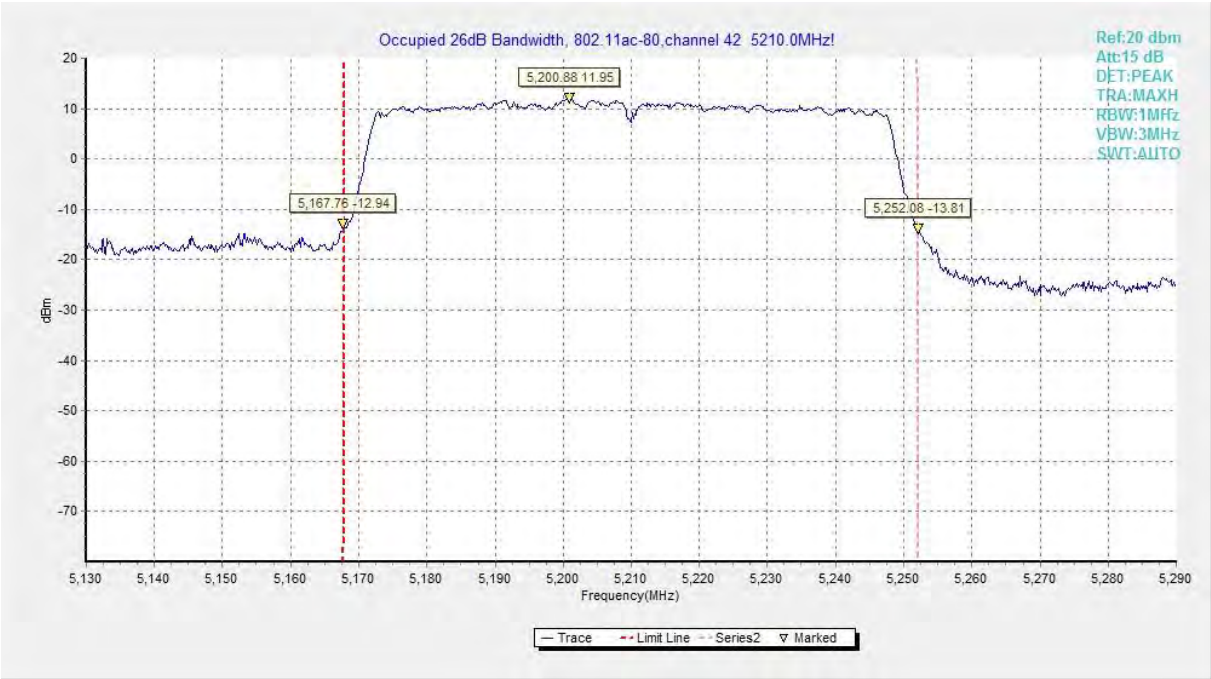

Fig.26 Occupied 26dB Bandwidth (802. 11ac-HT80, 5210MHz)

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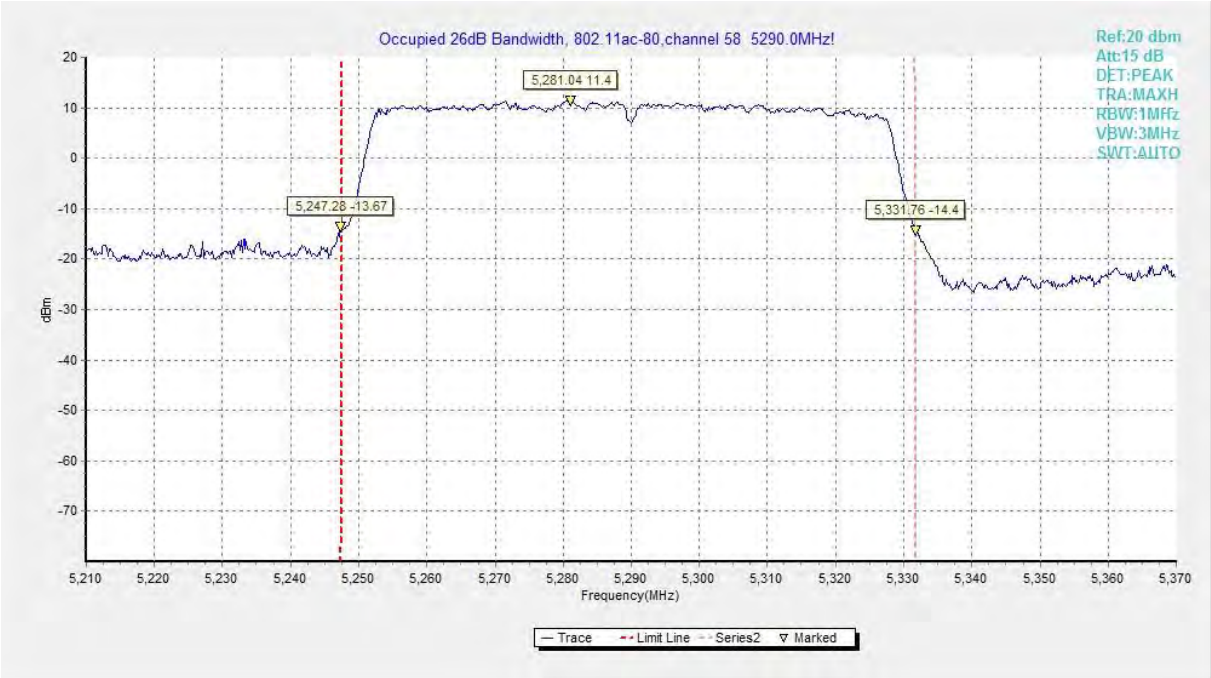

Fig.27 Occupied 26dB Bandwidth (802. 11ac-HT80, 5290MHz)

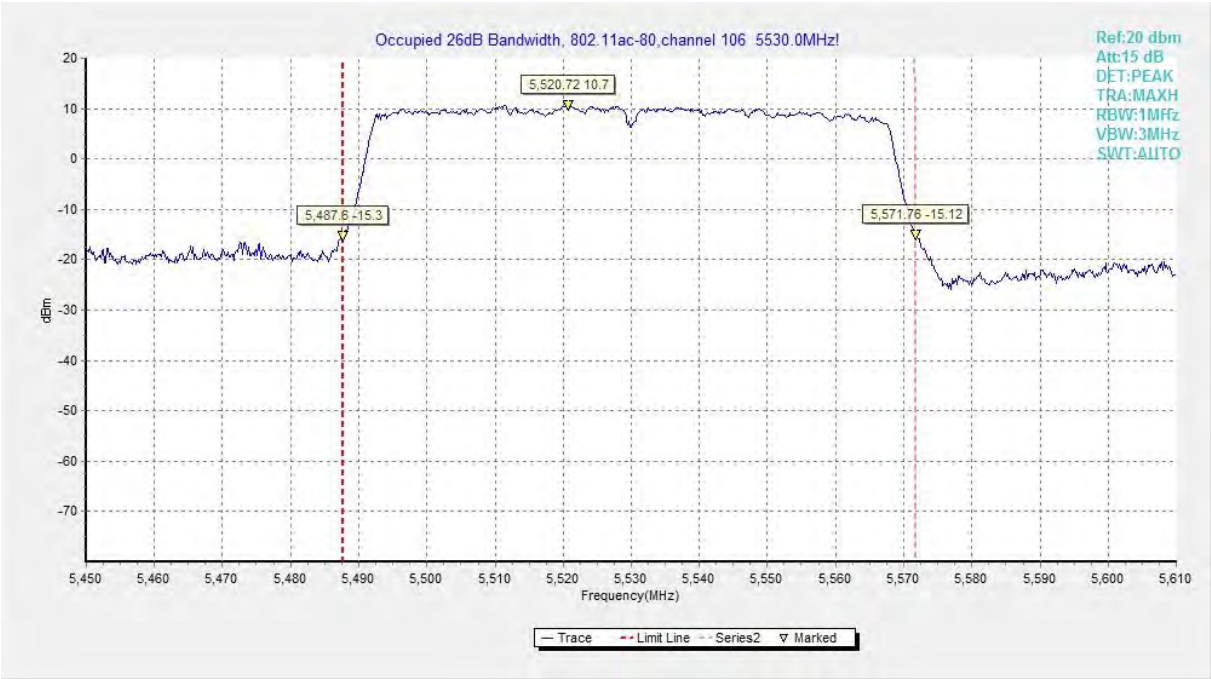

Fig.28 Occupied 26dB Bandwidth (802. 11ac-HT80, 5530MHz)

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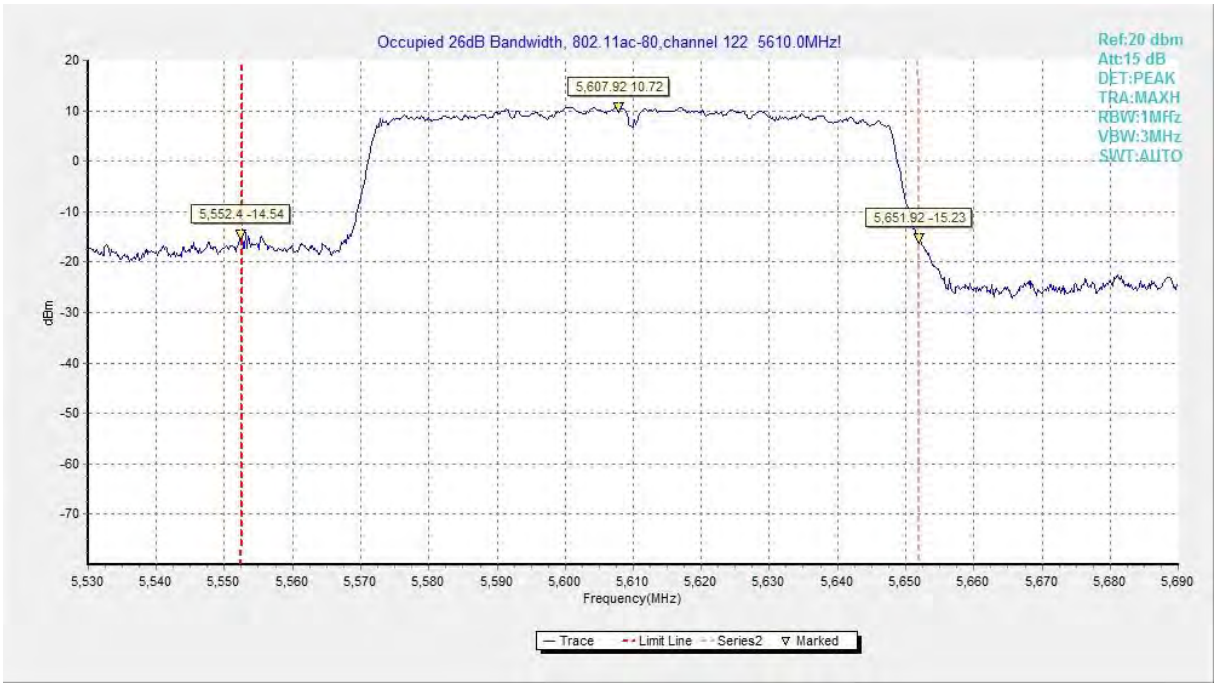

Fig.29 Occupied 26dB Bandwidth (802. 11ac-HT80, 5610MHz)

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A.5. Band Edges Compliance

A5.1 Band Edges - Radiated

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407	-27 dBm/MHz

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

Limit in restricted band:

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(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

The measurement is made according to ANSI C63.10-2013 and KDB 789033

Measurement Result:

Mode	Channel	Test Results	Conclusion
802.11a	5180 MHz	Fig.30	P
	5320 MHz	Fig.31	P
	5500 MHz	Fig.32	P
	5700 MHz	Fig.33	P
802.11n HT20	5180 MHz	Fig.34	P
	5320 MHz	Fig.35	P
	5500 MHz	Fig.36	P
	5700 MHz	Fig.37	P
802.11ac HT20	5180 MHz	Fig.38	P
	5320 MHz	Fig.39	P
	5500 MHz	Fig.40	P
	5700 MHz	Fig.41	P
802.11n HT40	5190 MHz	Fig.42	P
	5310 MHz	Fig.43	P
	5510 MHz	Fig.44	P
	5670 MHz	Fig.45	P
802.11ac HT40	5190 MHz	Fig.46	P
	5310 MHz	Fig.47	P
	5510 MHz	Fig.48	P
	5670 MHz	Fig.49	P
802.11ac HT80	5210MHz	Fig.50	P
	5290MHz	Fig.51	P
	5530MHz	Fig.52	P
	5610MHz	Fig.53	P

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Conclusion: PASS

Test graphs as below:

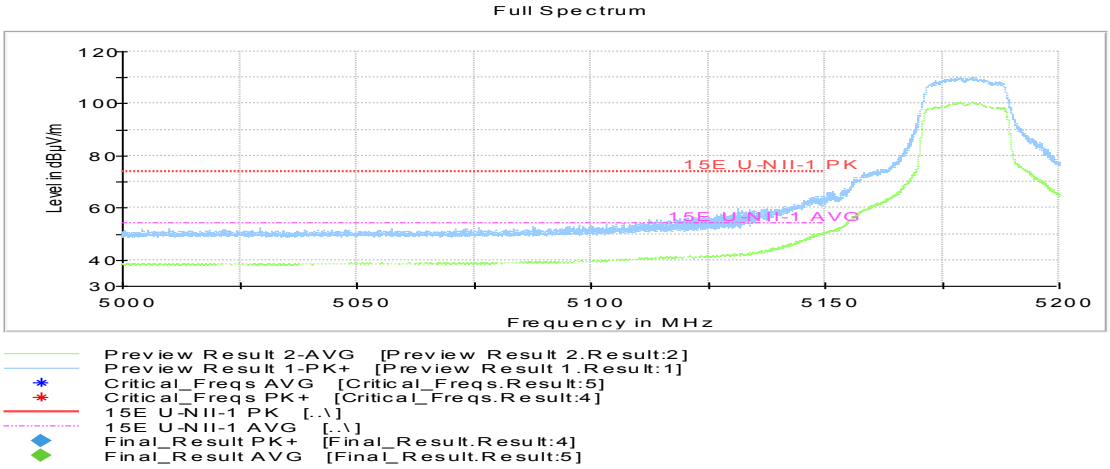

Fig.30 Band Edges (802.11a Ch36, 5180MHz)

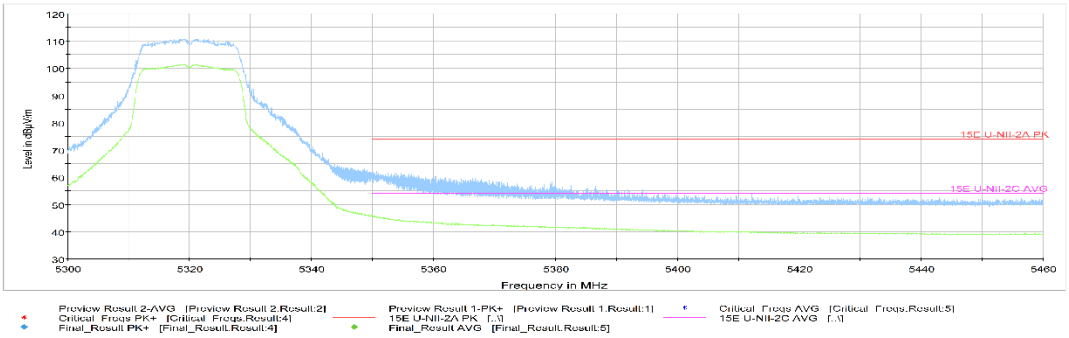

Fig.31 Band Edges (802.11a Ch64, 5320MHz)

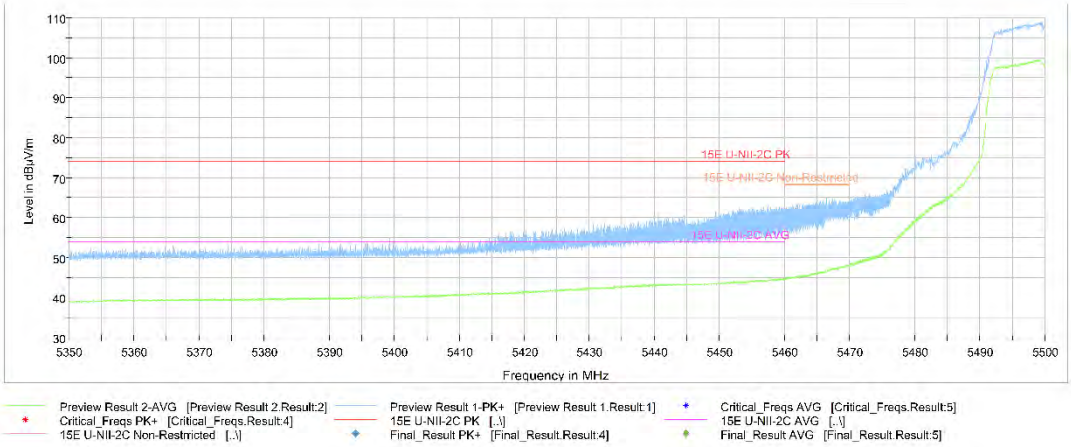

Fig.32 Band Edges (802.11a Ch100, 5500MHz)

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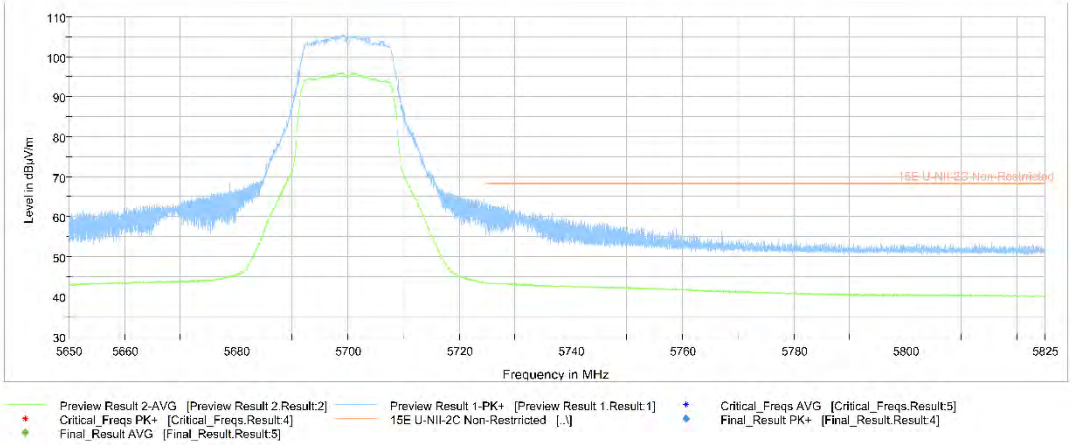

Fig.33 Band Edges (802.11a Ch140, 5700MHz)

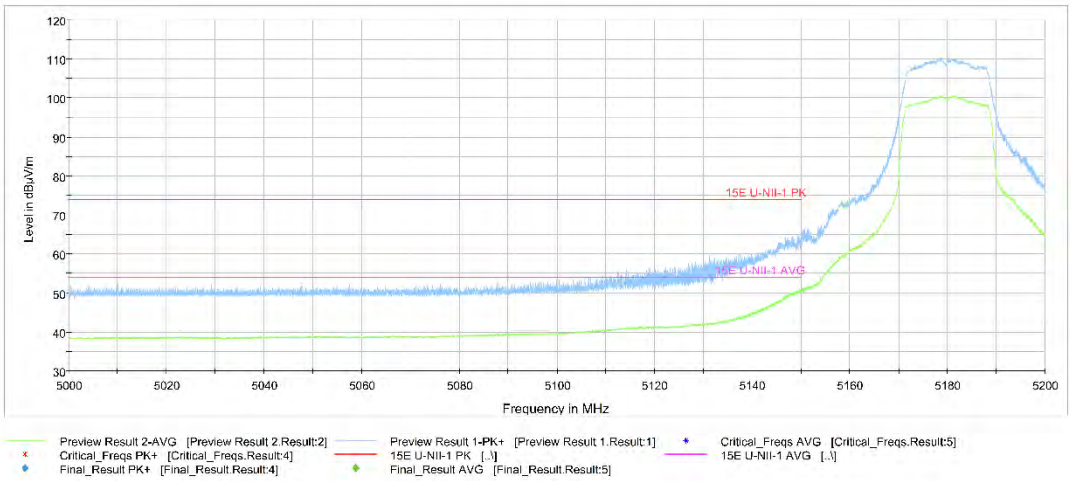

Fig.34 Band Edges (802.11n-HT20 Ch36, 5180MHz)

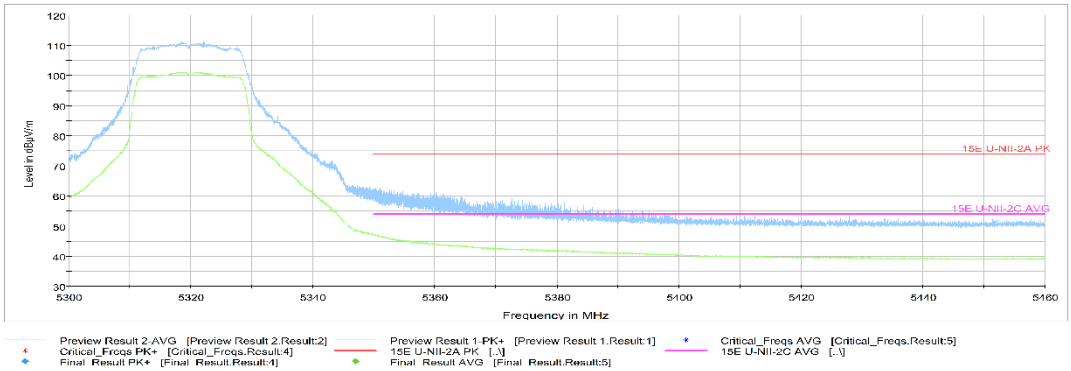

Fig.35 Band Edges (802.11n-HT20 Ch64, 5320MHz)

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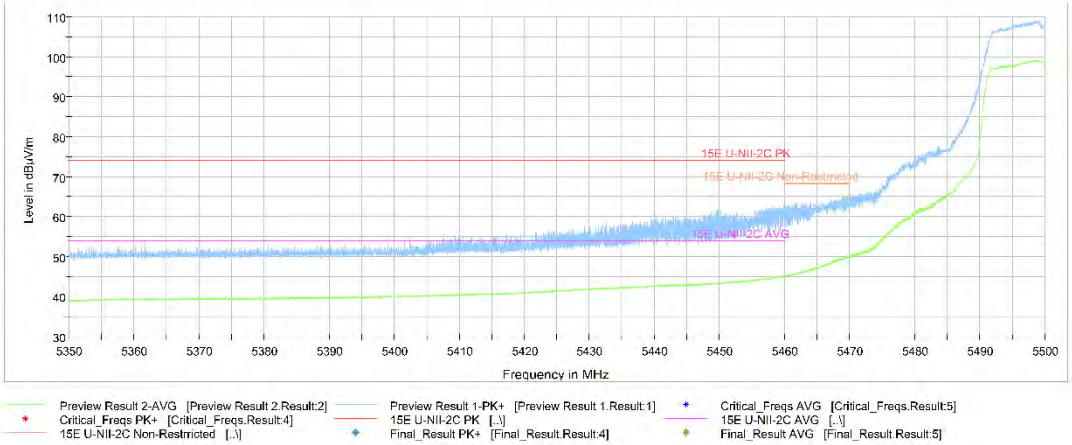

Fig.36 Band Edges (802.11n-HT20 Ch100, 5500MHz)

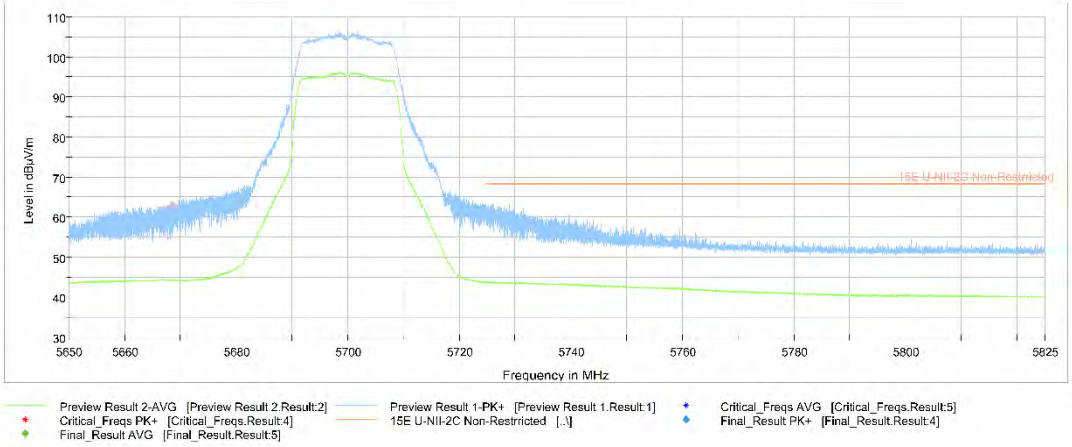

Fig.37 Band Edges (802.11n-HT20 Ch140, 5700MHz)

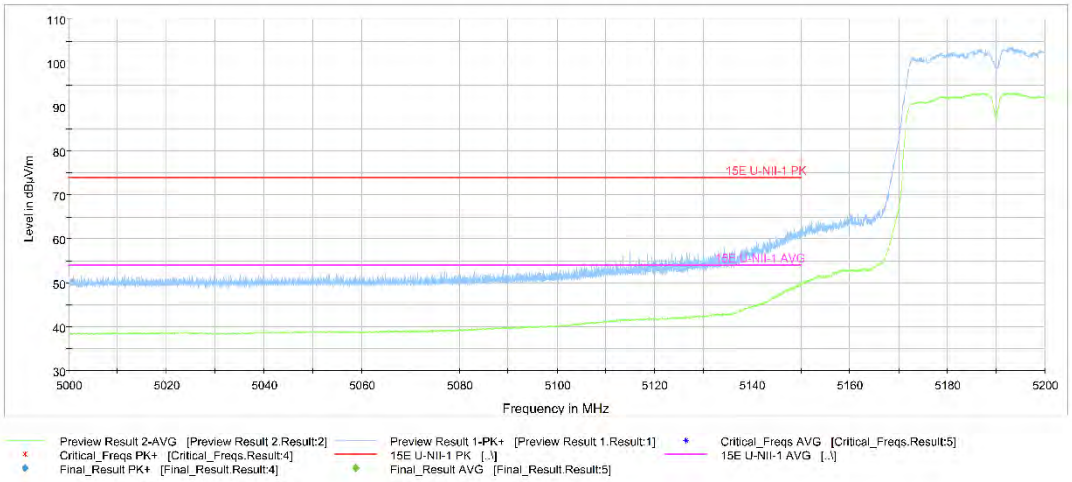

Fig.38 Band Edges (802.11n-HT40 Ch38, 5190MHz)

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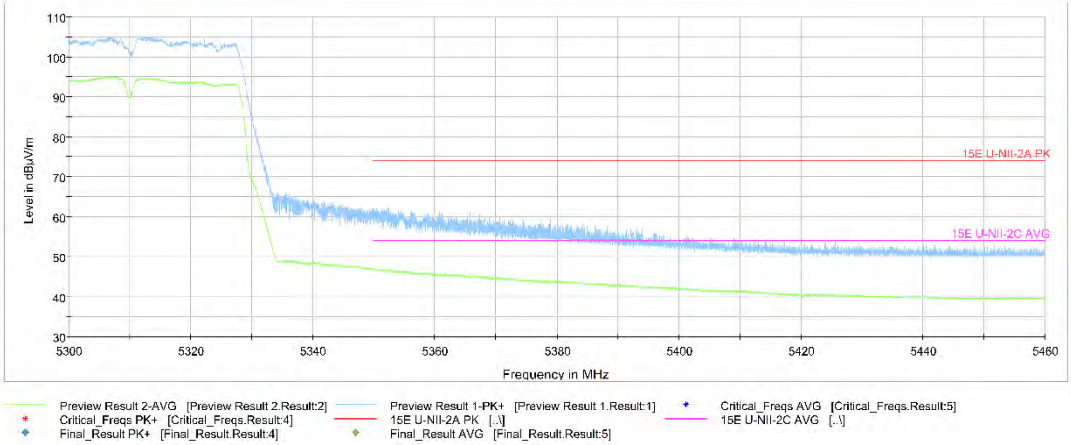

Fig.39 Band Edges (802.11n-HT40 Ch62, 5310MHz)

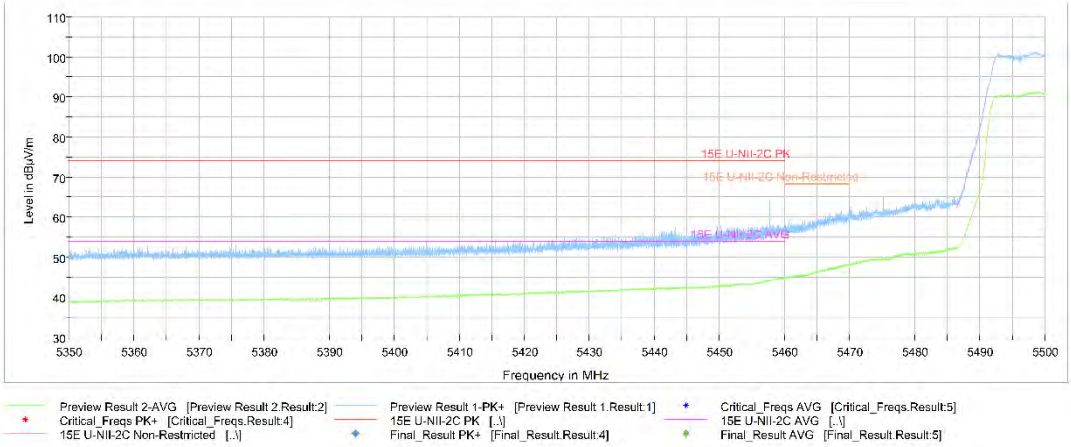

Fig.40 Band Edges (802.11n-HT40 Ch102, 5510MHz)

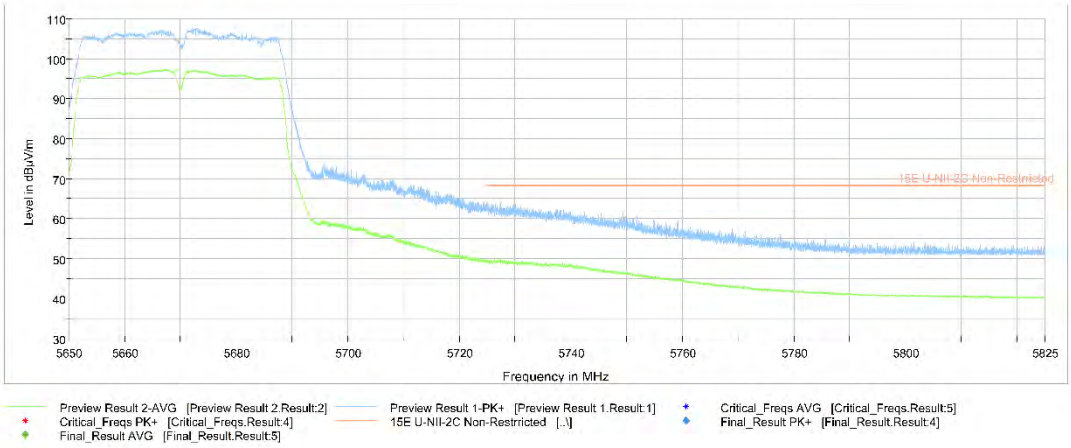

Fig.41 Band Edges (802.11n-HT40 Ch134, 5670MHz)

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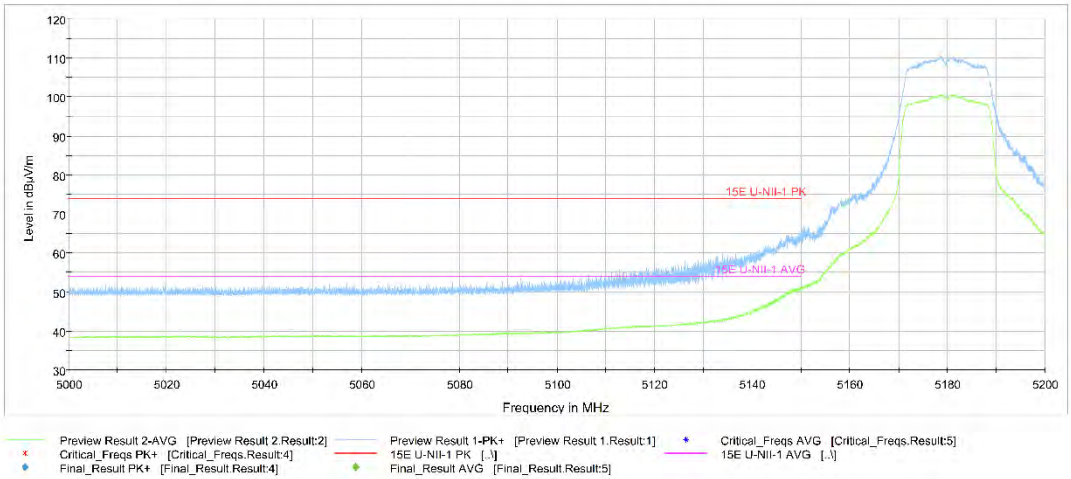

Fig.42 Band Edges (802.11ac-HT20 Ch36, 5180MHz)

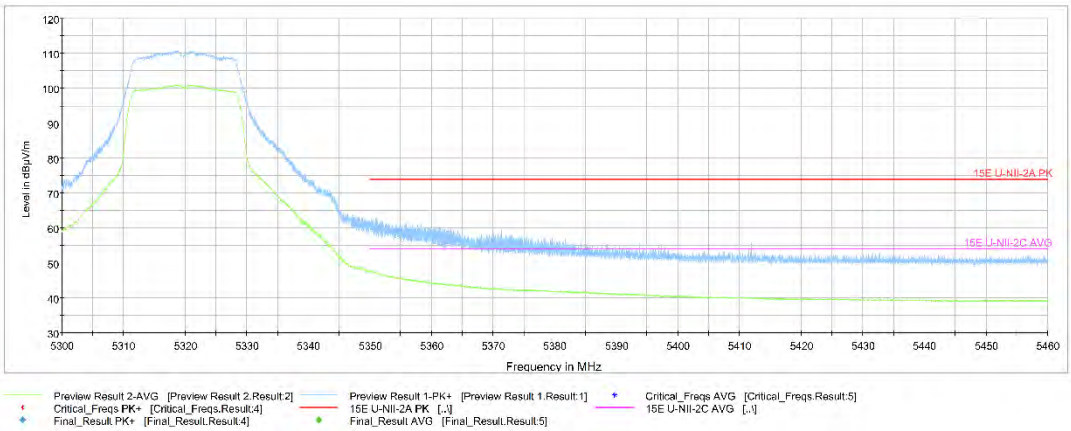

Fig.43 Band Edges (802.11ac-HT20 Ch64, 5320MHz)

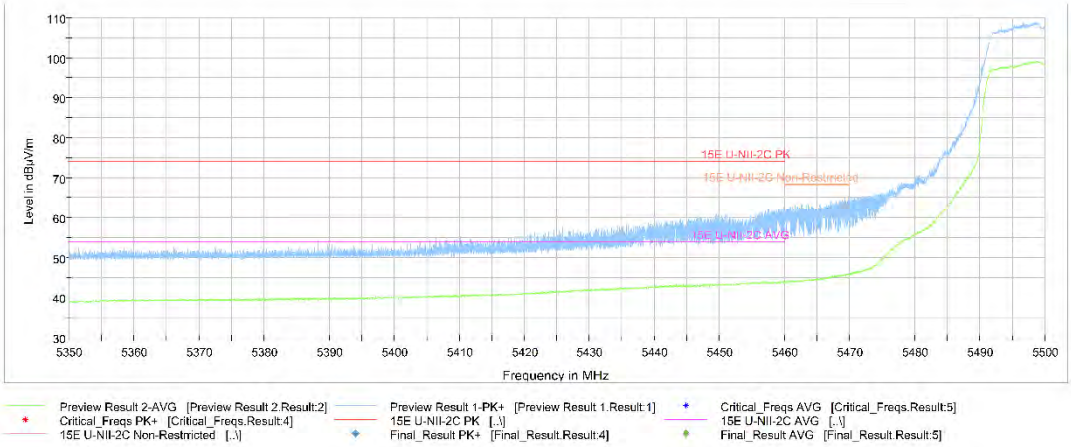

Fig.44 Band Edges (802.11ac-HT20 Ch100, 5500MHz)

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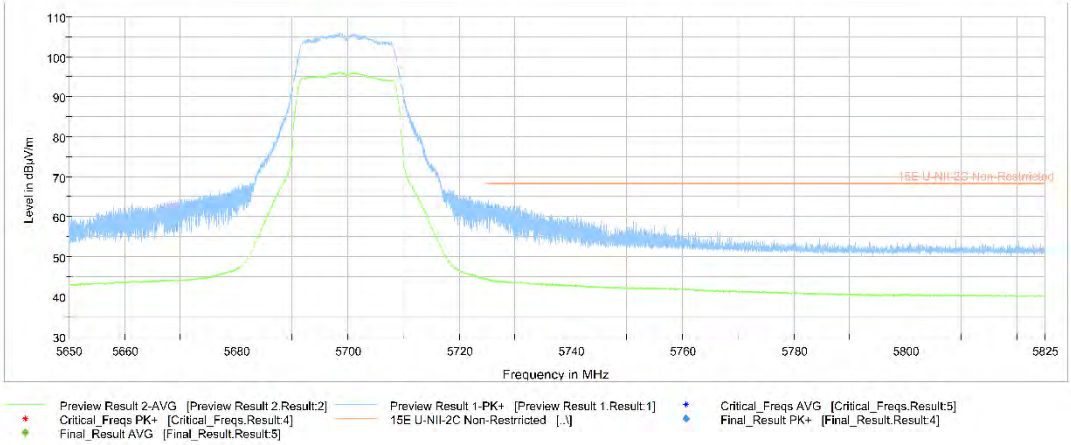

Fig.45 Band Edges (802.11ac-HT20 Ch140, 5700MHz)

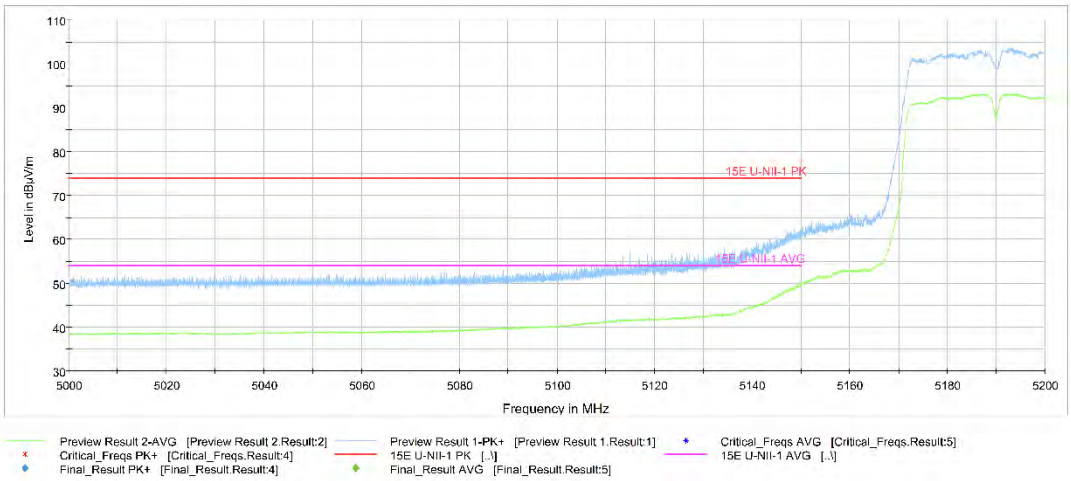

Fig.46 Band Edges (802.11ac-HT40 Ch38, 5190MHz)

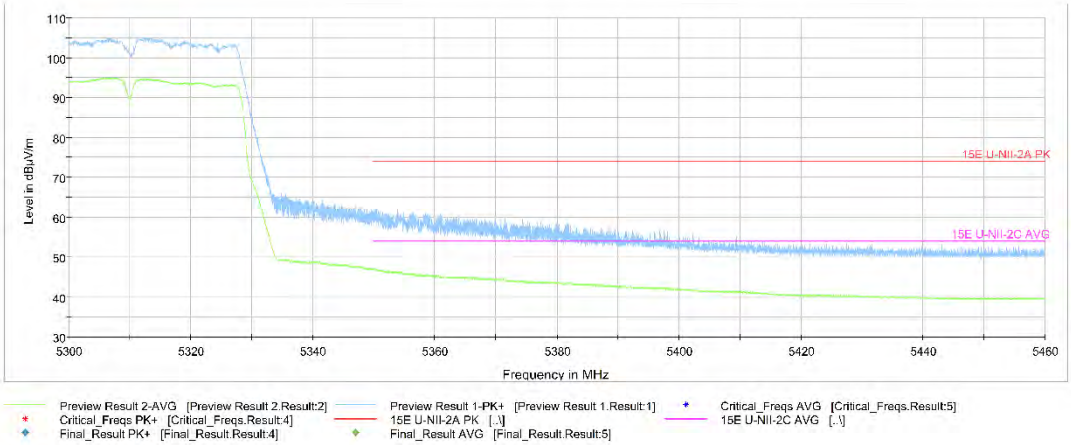

Fig.47 Band Edges (802.11ac-HT40 Ch62, 5310MHz)

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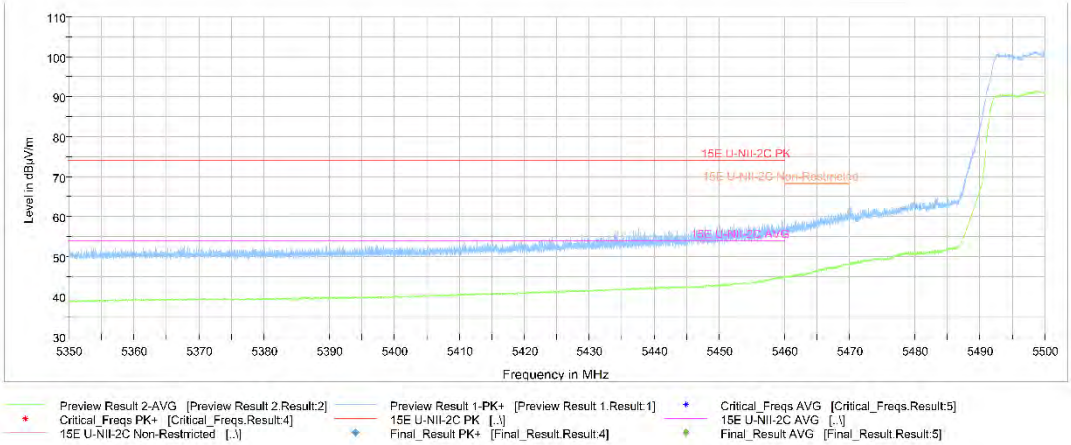

Fig.48 Band Edges (802.11ac-HT40 Ch102, 5510MHz)

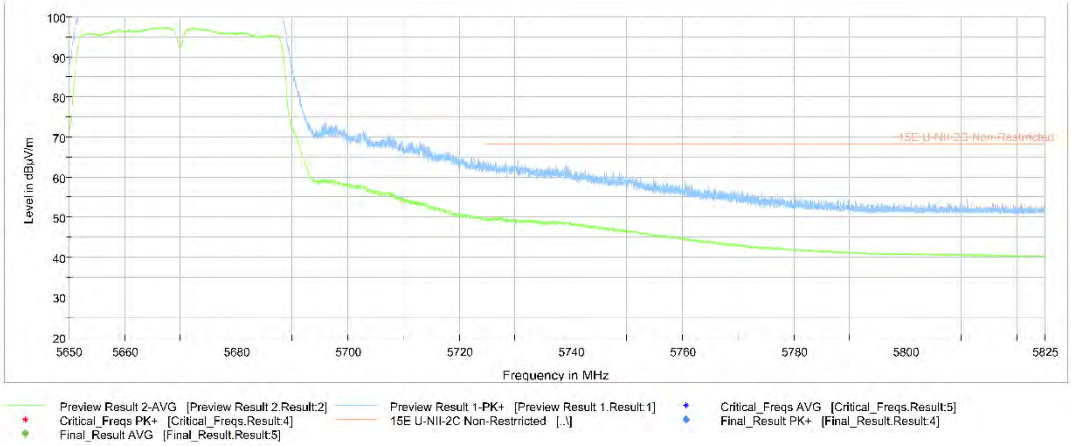

Fig.49 Band Edges (802.11ac-HT40 Ch134, 5670MHz)

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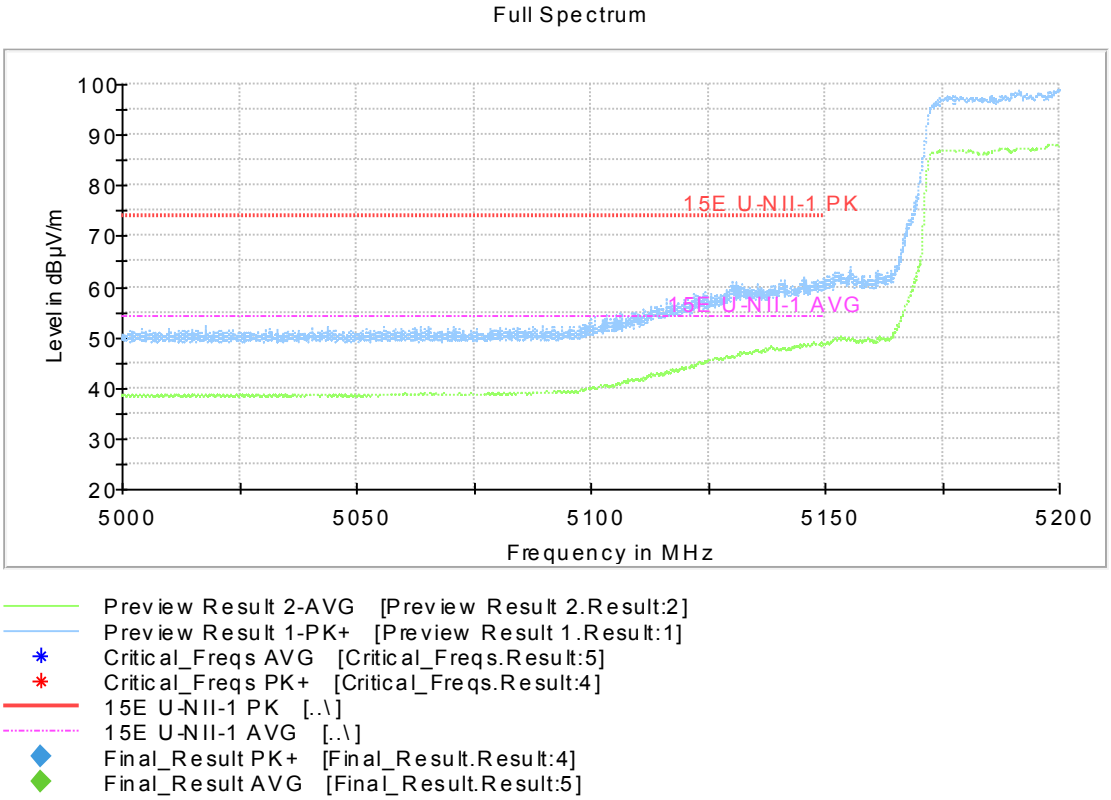

Fig.50 Band Edges (802.11ac-HT80 Ch42 , 5210MHz)

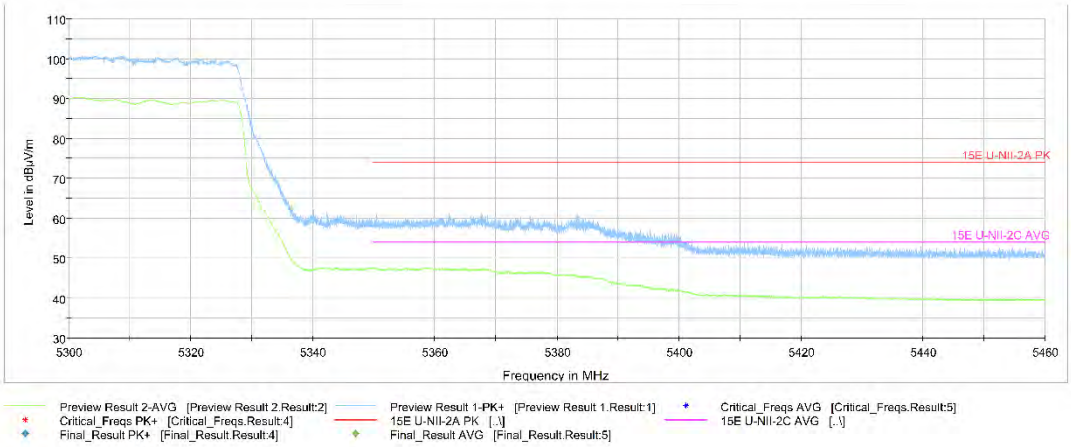

Fig.51 Band Edges (802.11ac-HT80 Ch58, 5290MHz)

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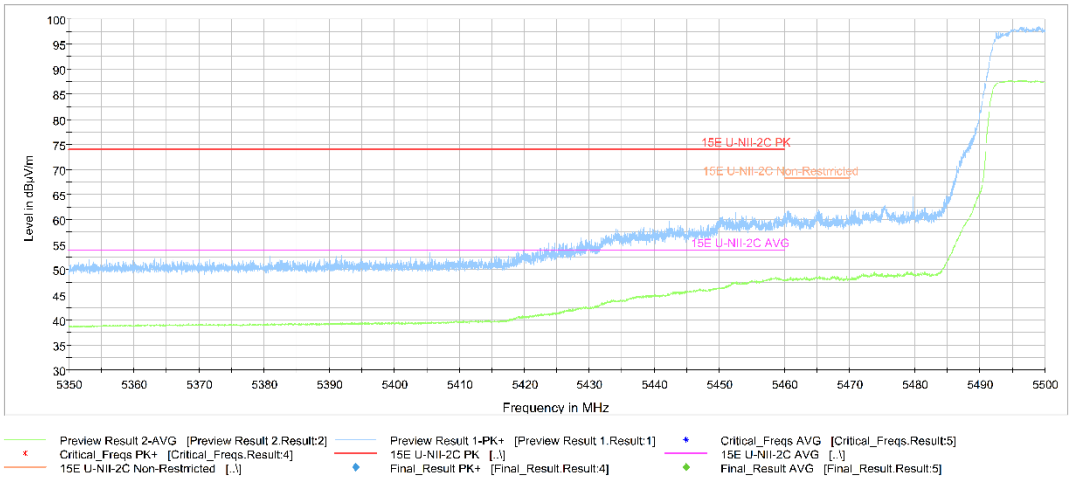

Fig.52 Band Edges (802.11ac-HT80 Ch106, 5530MHz)

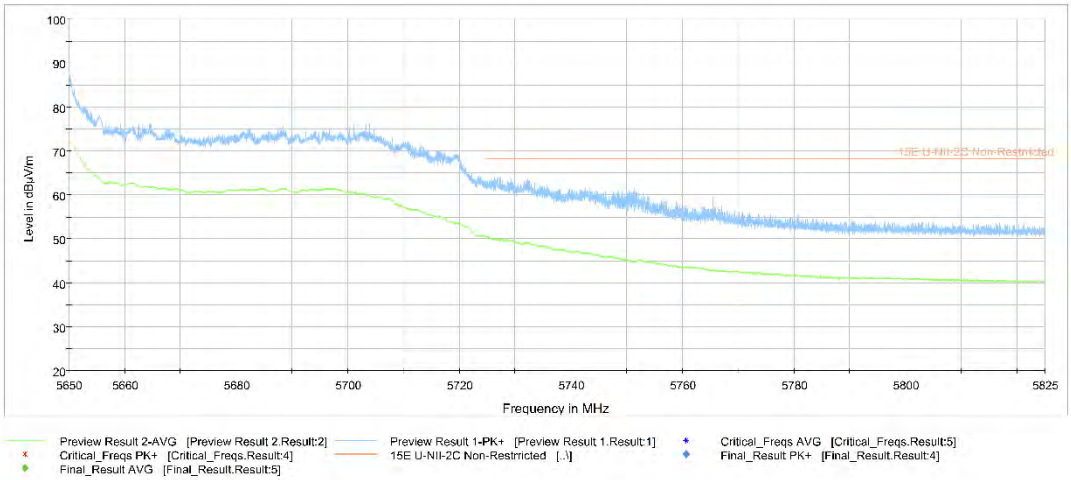

Fig.53 Band Edges (802.11ac-HT80 Ch122, 5610MHz)

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A.6. Transmitter Spurious Emission

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407	-27 dBm/MHz

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

Limit in restricted band:

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(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

The measurement is made according to ANSI C63.10-2013 and KDB 789033

Measurement Results:

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802.11a mode

Mode	Channel	Frequency Range	Conclusion
802.11a	36(5180MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	40(5200MHz)	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
	48(5240MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	52(5260MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	56(5280MHz)	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
	64(5320MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	100(5500MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	120(5600MHz)	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
	140(5700MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P

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802.11n-HT20 mode

Mode	Channel	Frequency Range	Conclusion
802.11n - HT20	36(5180MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	40(5200MHz)	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
	48(5240MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	52(5260MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	56(5280MHz)	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
	64(5320MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	100(5500MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	120(5600MHz)	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
	140(5700MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P

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802.11n-HT40 mode

Mode	Channel	Frequency Range	Conclusion
802.11n HT40	38(5190MHz)	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
	46(5230MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	54(5270MHz)	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
	62(5310MHz)	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
	102(5510MHz)	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
	118(5590MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	134(5670MHz)	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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802.11ac-HT20 mode

Mode	Channel	Frequency Range	Conclusion
802.11ac - HT20	36(5180MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	40(5200MHz)	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
	48(5240MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	52(5260MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	56(5280MHz)	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
	64(5320MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	100(5500MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	120(5600MHz)	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
	140(5700MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P

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802.11ac-HT40 mode

Mode	Channel	Frequency Range	Conclusion
802.11ac HT40	38(5190MHz)	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
	46(5230MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	54(5270MHz)	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
	62(5310MHz)	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
	102(5510MHz)	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
	118(5590MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	134(5670MHz)	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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802.11ac-HT80 mode

Mode	Channel	Frequency Range	Conclusion
802.11ac – HT80	42(5210MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	58(5290MHz)	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
	106(5530MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 GHz	P
	122(5610MHz)	1 GHz ~ 3 GHz	P
		3 GHz ~ 7 GHz	P
		7 GHz ~ 18 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.

The measurement results are obtained as described below:

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

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AVERAGE Results:

802.11a

Channel 36

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)
17978.500	42.14	-25.50	46.66	20.98	54.00	11.86	V
17990.700	42.09	-25.50	46.66	20.93	54.00	11.91	H
13250.200	37.49	-29.67	39.55	27.61	54.00	16.51	V
13253.500	37.42	-29.67	39.55	27.54	54.00	16.58	H
5149.600	50.63	-27.61	33.67	44.57	54.00	3.37	H
5149.000	50.51	-27.61	33.67	44.45	54.00	3.49	H

Channel 40

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	42.24	-25.50	46.66	21.08	54.00	11.76	V
17984.000	42.14	-25.50	46.66	20.98	54.00	11.86	H
13261.800	37.52	-29.67	39.55	27.64	54.00	16.48	H
13251.900	37.45	-29.67	39.55	27.57	54.00	16.55	H
11808.700	36.11	-31.85	39.05	28.91	54.00	17.89	V
11823.000	36.06	-31.85	39.05	28.86	54.00	17.94	H

Channel 48

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)
17989.000	42.18	-25.50	46.66	21.02	54.00	11.82	H
17978.000	42.15	-25.50	46.66	20.99	54.00	11.85	V
13254.600	37.64	-29.67	39.55	27.76	54.00	16.36	H
13252.400	37.54	-29.67	39.55	27.66	54.00	16.46	V
11805.400	36.10	-31.85	39.05	28.90	54.00	17.90	H
11828.500	36.05	-31.85	39.05	28.85	54.00	17.95	H

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Channel 52

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	42.12	-25.50	46.66	20.96	54.00	11.88	V
17974.700	42.08	-25.50	46.66	20.92	54.00	11.92	H
13353.000	37.56	-29.49	39.71	27.34	54.00	16.44	H
13320.600	37.53	-29.49	39.71	27.31	54.00	16.47	V
11800.400	36.18	-31.85	39.05	28.98	54.00	17.82	H
11806.500	36.13	-31.85	39.05	28.93	54.00	17.87	V

Channel 56

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	42.04	-25.50	46.66	20.88	54.00	11.96	H
17983.500	42.03	-25.50	46.66	20.87	54.00	11.97	H
13342.600	37.53	-29.49	39.71	27.31	54.00	16.47	H
13259.000	37.40	-29.67	39.55	27.52	54.00	16.60	H
11803.200	36.12	-31.85	39.05	28.92	54.00	17.88	V
11907.100	36.01	-31.85	39.05	28.81	54.00	17.99	H

Channel 64

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	42.07	-25.50	46.66	20.91	54.00	11.93	V
17993.400	42.05	-25.50	46.66	20.89	54.00	11.95	V
10638.300	38.84	-32.76	38.38	33.22	54.00	15.16	V
10641.600	38.84	-32.76	38.38	33.22	54.00	15.16	V
5350.100	45.70	-27.43	34.01	39.12	54.00	8.30	H
5350.200	45.68	-27.43	34.01	39.10	54.00	8.32	H

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Channel 100

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)
17990.700	42.25	-25.50	46.66	21.09	54.00	11.75	H
17965.300	42.15	-25.50	46.66	20.99	54.00	11.85	H
13261.200	37.76	-29.67	39.55	27.88	54.00	16.24	V
13363.000	37.66	-29.49	39.71	27.44	54.00	16.34	V
5459.900	44.77	-27.18	34.17	37.78	54.00	9.23	H
5459.900	44.76	-27.18	34.17	37.77	54.00	9.24	H

Channel 120

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)
17961.000	42.30	-25.50	46.66	21.14	54.00	11.70	V
17996.700	42.18	-25.50	46.66	21.02	54.00	11.82	V
13320.600	37.71	-29.49	39.71	27.49	54.00	16.29	H
13313.500	37.69	-29.49	39.71	27.47	54.00	16.31	V
11842.800	36.32	-31.85	39.05	29.12	54.00	17.68	H
11799.300	36.27	-31.85	39.05	29.07	54.00	17.73	H

Channel 140

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)
17963.200	42.27	-25.50	46.66	21.11	54.00	11.73	H
17994.500	42.27	-25.50	46.66	21.11	54.00	11.73	V
13324.500	37.67	-29.49	39.71	27.45	54.00	16.33	H
13256.200	37.64	-29.67	39.55	27.76	54.00	16.36	V
11801.500	36.53	-31.85	39.05	29.33	54.00	17.47	H
11799.900	36.37	-31.85	39.05	29.17	54.00	17.63	H

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802.11n-HT20

Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17985.700	42.13	-25.50	46.66	20.97	54.00	11.87	V
17987.300	42.11	-25.50	46.66	20.95	54.00	11.89	V
13323.400	37.58	-29.49	39.71	27.36	54.00	16.42	V
13257.400	37.46	-29.67	39.55	27.58	54.00	16.54	V
5150.000	50.80	-27.61	33.67	44.74	54.00	3.20	H
5149.900	50.72	-27.61	33.67	44.66	54.00	3.28	H

Channel 40

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)
17990.100	42.12	-25.50	46.66	20.96	54.00	11.88	H
17991.800	42.06	-25.50	46.66	20.90	54.00	11.94	V
13254.000	37.50	-29.67	39.55	27.62	54.00	16.50	H
13341.500	37.48	-29.49	39.71	27.26	54.00	16.52	V
11802.600	36.14	-31.85	39.05	28.94	54.00	17.86	V
11874.700	36.08	-31.85	39.05	28.88	54.00	17.92	H

Channel 48

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)
17990.100	42.23	-25.50	46.66	21.07	54.00	11.77	V
17995.600	42.10	-25.50	46.66	20.94	54.00	11.90	V
13320.000	37.51	-29.49	39.71	27.29	54.00	16.49	H
13250.200	37.44	-29.67	39.55	27.56	54.00	16.56	H
11813.100	36.14	-31.85	39.05	28.94	54.00	17.86	H
11830.100	36.09	-31.85	39.05	28.89	54.00	17.91	H

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Channel 52

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	42.12	-25.50	46.66	20.96	54.00	11.88	V
17991.200	42.05	-25.50	46.66	20.89	54.00	11.95	V
13261.200	37.46	-29.67	39.55	27.58	54.00	16.54	V
13251.300	37.44	-29.67	39.55	27.56	54.00	16.56	V
11802.600	36.12	-31.85	39.05	28.92	54.00	17.88	H
11804.800	36.10	-31.85	39.05	28.90	54.00	17.90	V

Channel 56

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)
17992.300	42.03	-25.50	46.66	20.87	54.00	11.97	V
17997.800	42.02	-25.50	46.66	20.86	54.00	11.98	H
13316.200	37.45	-29.49	39.71	27.23	54.00	16.55	H
13323.400	37.43	-29.49	39.71	27.21	54.00	16.57	V
11802.600	36.15	-31.85	39.05	28.95	54.00	17.85	V
11818.000	36.12	-31.85	39.05	28.92	54.00	17.88	H

Channel 64

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)
17988.500	42.02	-25.50	46.66	20.86	54.00	11.98	H
17989.500	42.01	-25.50	46.66	20.85	54.00	11.99	V
10639.400	38.66	-32.76	38.38	33.04	54.00	15.34	V
10640.500	38.53	-32.76	38.38	32.91	54.00	15.47	V
5350.300	47.25	-27.43	34.01	40.67	54.00	6.75	H
5350.100	47.19	-27.43	34.01	40.61	54.00	6.81	H

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Channel 100

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	42.40	-25.50	46.66	21.24	54.00	11.60	H
17995.000	42.27	-25.50	46.66	21.11	54.00	11.73	V
13351.400	37.74	-29.49	39.71	27.52	54.00	16.26	H
13332.100	37.67	-29.49	39.71	27.45	54.00	16.33	V
5460.000	45.44	-27.18	34.17	38.45	54.00	8.56	H
5460.000	45.18	-27.18	34.17	38.19	54.00	8.82	H

Channel 120

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)
17951.600	42.28	-25.50	46.66	21.12	54.00	11.72	H
17998.900	42.24	-25.50	46.66	21.08	54.00	11.76	H
13343.700	37.65	-29.49	39.71	27.43	54.00	16.35	V
13324.500	37.59	-29.49	39.71	27.37	54.00	16.41	V
11821.300	36.35	-31.85	39.05	29.15	54.00	17.65	V
11819.700	36.33	-31.85	39.05	29.13	54.00	17.67	V

Channel 140

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	42.27	-25.50	46.66	21.11	54.00	11.73	V
17997.800	42.25	-25.50	46.66	21.09	54.00	11.75	H
13250.200	37.76	-29.67	39.55	27.88	54.00	16.24	H
13311.200	37.57	-29.49	39.71	27.35	54.00	16.43	V
11801.000	36.52	-31.85	39.05	29.32	54.00	17.48	H
11884.000	36.44	-31.85	39.05	29.24	54.00	17.56	V

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802.11n-HT40

Channel 38

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	42.03	-25.50	46.66	20.87	54.00	11.97	V
17995.000	42.01	-25.50	46.66	20.85	54.00	11.99	H
13264.000	37.57	-29.67	39.55	27.69	54.00	16.43	H
13250.200	37.46	-29.67	39.55	27.58	54.00	16.54	H
5150.000	49.88	-27.61	33.67	43.82	54.00	4.12	H
5149.900	49.86	-27.61	33.67	43.80	54.00	4.14	H

Channel 46

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	42.26	-25.50	46.66	21.10	54.00	11.74	H
17981.300	42.04	-25.50	46.66	20.88	54.00	11.96	H
13322.800	37.60	-29.49	39.71	27.38	54.00	16.40	H
13332.700	37.41	-29.49	39.71	27.19	54.00	16.59	V
11803.200	36.12	-31.85	39.05	28.92	54.00	17.88	H
11854.300	36.10	-31.85	39.05	28.90	54.00	17.90	H

Channel 54

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17986.800	42.10	-25.50	46.66	20.94	54.00	11.90	H
17998.900	42.08	-25.50	46.66	20.92	54.00	11.92	V
13251.900	37.65	-29.67	39.55	27.77	54.00	16.35	H
13256.800	37.48	-29.67	39.55	27.60	54.00	16.52	V
11793.300	36.10	-31.99	38.98	29.11	54.00	17.90	V
11804.300	36.07	-31.85	39.05	28.87	54.00	17.93	V

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Channel 62

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)
17988.500	42.10	-25.50	46.66	20.94	54.00	11.90	H
17982.400	42.04	-25.50	46.66	20.88	54.00	11.96	V
13259.500	37.58	-29.67	39.55	27.70	54.00	16.42	H
13255.700	37.49	-29.67	39.55	27.61	54.00	16.51	V
5350.100	46.90	-27.43	34.01	40.32	54.00	7.10	H
5350.300	46.89	-27.43	34.01	40.31	54.00	7.11	H

Channel 102

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)
17994.000	42.48	-25.50	46.66	21.32	54.00	11.52	H
17989.000	42.38	-25.50	46.66	21.22	54.00	11.62	H
13252.400	37.67	-29.67	39.55	27.79	54.00	16.33	V
13311.200	37.67	-29.49	39.71	27.45	54.00	16.33	H
5459.600	44.90	-27.18	34.17	37.91	54.00	9.10	H
5459.600	44.83	-27.18	34.17	37.84	54.00	9.17	H

Channel 118

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)
17942.200	42.26	-25.50	46.66	21.10	54.00	11.74	V
17982.400	42.18	-25.50	46.66	21.02	54.00	11.82	V
13316.800	37.80	-29.49	39.71	27.58	54.00	16.20	V
13345.900	37.67	-29.49	39.71	27.45	54.00	16.33	H
11789.400	36.38	-31.99	38.98	29.39	54.00	17.62	V
11843.300	36.28	-31.85	39.05	29.08	54.00	17.72	H

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Channel 134

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)
17961.500	42.35	-25.50	46.66	21.19	54.00	11.65	H
17967.000	42.29	-25.50	46.66	21.13	54.00	11.71	V
13317.900	37.65	-29.49	39.71	27.43	54.00	16.35	V
13308.500	37.64	-29.49	39.71	27.42	54.00	16.36	H
11797.700	36.42	-31.85	39.05	29.22	54.00	17.58	V
11884.000	36.38	-31.85	39.05	29.18	54.00	17.62	H

802.11ac-HT20

Channel 36

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	42.05	-25.50	46.66	20.89	54.00	11.95	V
17987.900	42.01	-25.50	46.66	20.85	54.00	11.99	H
13282.100	37.58	-29.67	39.55	27.70	54.00	16.42	H
13256.800	37.56	-29.67	39.55	27.68	54.00	16.44	H
5149.800	51.25	-27.61	33.67	45.19	54.00	2.75	H
5149.900	51.20	-27.61	33.67	45.14	54.00	2.80	H

Channel 40

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	42.11	-25.50	46.66	20.95	54.00	11.89	V
17984.600	42.10	-25.50	46.66	20.94	54.00	11.90	H
13259.500	37.52	-29.67	39.55	27.64	54.00	16.48	H
13250.200	37.43	-29.67	39.55	27.55	54.00	16.57	V
11815.800	36.21	-31.85	39.05	29.01	54.00	17.79	H
11827.900	36.05	-31.85	39.05	28.85	54.00	17.95	H

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Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17986.800	42.14	-25.50	46.66	20.98	54.00	11.86	H
17974.700	42.12	-25.50	46.66	20.96	54.00	11.88	V
13258.500	37.59	-29.67	39.55	27.71	54.00	16.41	V
13259.500	37.48	-29.67	39.55	27.60	54.00	16.52	H
11812.500	36.15	-31.85	39.05	28.95	54.00	17.85	V
11799.300	36.12	-31.85	39.05	28.92	54.00	17.88	H

Channel 52

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	42.22	-25.50	46.66	21.06	54.00	11.78	H
17983.500	42.12	-25.50	46.66	20.96	54.00	11.88	V
13250.200	37.59	-29.67	39.55	27.71	54.00	16.41	H
13260.100	37.50	-29.67	39.55	27.62	54.00	16.50	H
11807.000	36.18	-31.85	39.05	28.98	54.00	17.82	H
11837.800	36.16	-31.85	39.05	28.96	54.00	17.84	H

Channel 56

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)
17989.500	42.14	-25.50	46.66	20.98	54.00	11.86	H
17996.200	42.09	-25.50	46.66	20.93	54.00	11.91	H
13352.000	37.62	-29.49	39.71	27.40	54.00	16.38	V
13255.700	37.57	-29.67	39.55	27.69	54.00	16.43	H
11801.000	36.20	-31.85	39.05	29.00	54.00	17.80	H
11806.500	36.15	-31.85	39.05	28.95	54.00	17.85	H

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Channel 64

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)
17978.000	42.15	-25.50	46.66	20.99	54.00	11.85	V
17984.600	42.09	-25.50	46.66	20.93	54.00	11.91	V
10639.400	38.55	-32.76	38.38	32.93	54.00	15.45	V
10642.100	38.34	-32.76	38.38	32.72	54.00	15.66	V
5350.100	47.68	-27.43	34.01	41.10	54.00	6.32	H
5350.400	47.68	-27.43	34.01	41.10	54.00	6.32	H

Channel 100

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)
17989.500	42.54	-25.50	46.66	21.38	54.00	11.46	H
17994.000	42.44	-25.50	46.66	21.28	54.00	11.56	H
13293.600	37.81	-29.49	39.71	27.59	54.00	16.19	V
13333.200	37.80	-29.49	39.71	27.58	54.00	16.20	H
5459.600	44.01	-27.18	34.17	37.02	54.00	9.99	H
5459.500	43.92	-27.18	34.17	36.93	54.00	10.08	H

Channel 120

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)
17992.300	42.58	-25.50	46.66	21.42	54.00	11.42	V
17997.800	42.48	-25.50	46.66	21.32	54.00	11.52	V
13319.000	37.92	-29.49	39.71	27.70	54.00	16.08	V
13297.500	37.73	-29.49	39.71	27.51	54.00	16.27	H
11822.400	36.28	-31.85	39.05	29.08	54.00	17.72	H
11814.200	36.21	-31.85	39.05	29.01	54.00	17.79	H

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Channel 140

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	42.30	-25.50	46.66	21.14	54.00	11.70	H
17989.000	42.22	-25.50	46.66	21.06	54.00	11.78	H
13317.900	37.81	-29.49	39.71	27.59	54.00	16.19	V
13257.400	37.76	-29.67	39.55	27.88	54.00	16.24	V
11819.100	36.30	-31.85	39.05	29.10	54.00	17.70	V
11911.000	36.27	-31.85	39.05	29.07	54.00	17.73	H

802.11ac-HT40

Channel 38

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)
17975.200	42.24	-25.50	46.66	21.08	54.00	11.76	V
17989.000	42.08	-25.50	46.66	20.92	54.00	11.92	V
13328.300	37.47	-29.49	39.71	27.25	54.00	16.53	V
13268.900	37.44	-29.67	39.55	27.56	54.00	16.56	H
5149.700	49.82	-27.61	33.67	43.76	54.00	4.18	H
5149.800	49.81	-27.61	33.67	43.75	54.00	4.19	H

Channel 46

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)
17994.500	42.14	-25.50	46.66	20.98	54.00	11.86	V
17987.900	42.09	-25.50	46.66	20.93	54.00	11.91	V
13323.400	37.50	-29.49	39.71	27.28	54.00	16.50	H
13252.400	37.45	-29.67	39.55	27.57	54.00	16.55	V
11824.100	36.15	-31.85	39.05	28.95	54.00	17.85	V
11821.300	36.04	-31.85	39.05	28.84	54.00	17.96	V

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Channel 54

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	42.11	-25.50	46.66	20.95	54.00	11.89	H
17996.200	42.07	-25.50	46.66	20.91	54.00	11.93	V
13259.000	37.53	-29.67	39.55	27.65	54.00	16.47	H
13254.600	37.50	-29.67	39.55	27.62	54.00	16.50	V
11803.200	36.14	-31.85	39.05	28.94	54.00	17.86	V
11819.100	36.11	-31.85	39.05	28.91	54.00	17.89	V

Channel 62

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)
17982.400	42.10	-25.50	46.66	20.94	54.00	11.90	V
17992.300	42.05	-25.50	46.66	20.89	54.00	11.95	H
13256.200	37.56	-29.67	39.55	27.68	54.00	16.44	H
13258.500	37.54	-29.67	39.55	27.66	54.00	16.46	V
5350.000	47.10	-27.43	34.01	40.52	54.00	6.90	H
5350.200	46.96	-27.43	34.01	40.38	54.00	7.04	H

Channel 102

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	42.40	-25.50	46.66	21.24	54.00	11.60	V
17983.000	42.27	-25.50	46.66	21.11	54.00	11.73	H
13313.500	37.77	-29.49	39.71	27.55	54.00	16.23	H
13267.200	37.66	-29.67	39.55	27.78	54.00	16.34	H
5459.900	45.11	-27.18	34.17	38.12	54.00	8.89	H
5459.900	45.01	-27.18	34.17	38.02	54.00	8.99	H

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Channel 118

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)
17980.200	42.28	-25.50	46.66	21.12	54.00	11.72	V
17992.800	42.20	-25.50	46.66	21.04	54.00	11.80	H
13334.400	37.71	-29.49	39.71	27.49	54.00	16.29	H
13309.000	37.68	-29.49	39.71	27.46	54.00	16.32	H
11886.200	36.39	-31.85	39.05	29.19	54.00	17.61	H
11891.700	36.35	-31.85	39.05	29.15	54.00	17.65	H

Channel 134

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	42.36	-25.50	46.66	21.20	54.00	11.64	V
17985.200	42.26	-25.50	46.66	21.10	54.00	11.74	V
13343.100	37.71	-29.49	39.71	27.49	54.00	16.29	V
13277.100	37.68	-29.67	39.55	27.80	54.00	16.32	H
11859.800	36.30	-31.85	39.05	29.10	54.00	17.70	V
11874.700	36.29	-31.85	39.05	29.09	54.00	17.71	H

802.11ac-HT80

Channel 42

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)
17974.700	42.14	-25.50	46.66	20.98	54.00	11.86	H
17994.000	42.12	-25.50	46.66	20.96	54.00	11.88	V
13253.000	37.63	-29.67	39.55	27.75	54.00	16.37	H
13251.300	37.47	-29.67	39.55	27.59	54.00	16.53	H
5149.600	49.13	-27.61	33.67	43.07	54.00	4.87	H
5149.900	49.09	-27.61	33.67	43.03	54.00	4.91	H

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Channel 58

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17985.700	42.17	-25.50	46.66	21.01	54.00	11.83	H
17973.600	42.12	-25.50	46.66	20.96	54.00	11.88	H
13260.100	37.45	-29.67	39.55	27.57	54.00	16.55	H
13261.200	37.45	-29.67	39.55	27.57	54.00	16.55	H
5350.100	47.68	-27.43	34.01	41.10	54.00	6.32	H
5358.700	47.62	-27.43	34.01	41.04	54.00	6.38	H

Channel 106

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)
17984.000	42.47	-25.50	46.66	21.31	54.00	11.53	H
17995.600	42.46	-25.50	46.66	21.30	54.00	11.54	H
13318.400	37.80	-29.49	39.71	27.58	54.00	16.20	V
13292.000	37.71	-29.49	39.71	27.49	54.00	16.29	H
5458.700	48.50	-27.18	34.17	41.51	54.00	5.50	H
5458.700	48.49	-27.18	34.17	41.50	54.00	5.51	H

Channel 122

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)
17979.700	42.40	-25.50	46.66	21.24	54.00	11.60	H
17995.600	42.36	-25.50	46.66	21.20	54.00	11.64	H
13303.500	37.77	-29.49	39.71	27.55	54.00	16.23	V
13351.400	37.70	-29.49	39.71	27.48	54.00	16.30	V
11860.400	36.39	-31.85	39.05	29.19	54.00	17.61	H
11796.600	36.36	-31.85	39.05	29.16	54.00	17.64	H

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PEAK Results:

802.11a

Channel 36

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)
17930.200	54.43	-25.50	46.66	33.27	74.00	19.57	H
17943.900	54.31	-25.50	46.66	33.15	74.00	19.69	V
13621.500	51.98	-29.50	40.43	41.05	68.30	16.32	V
14208.300	51.28	-28.99	42.00	38.26	68.30	17.02	V
5147.800	63.96	-27.61	33.67	57.90	74.00	10.04	H
5149.600	63.19	-27.61	33.67	57.13	74.00	10.81	H

Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17936.800	54.88	-25.50	46.66	33.72	74.00	19.12	V
17961.500	54.88	-25.50	46.66	33.72	74.00	19.12	V
14201.100	51.48	-28.99	42.00	38.46	68.30	16.82	H
13581.900	50.99	-29.50	40.43	40.06	68.30	17.31	H
11803.200	49.44	-31.85	39.05	42.24	74.00	24.56	H
11270.800	48.77	-32.36	38.77	42.37	74.00	25.23	H

Channel 48

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)
17983.500	55.82	-25.50	46.66	34.66	74.00	18.18	V
17953.800	54.95	-25.50	46.66	33.79	74.00	19.05	H
13724.300	50.92	-29.10	40.86	39.15	68.30	17.38	V
13658.900	50.83	-29.50	40.43	39.90	68.30	17.47	V
11950.000	49.64	-31.48	39.09	42.03	74.00	24.36	H
11791.100	49.35	-31.99	38.98	42.36	74.00	24.65	H

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Channel 52

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	54.76	-25.50	46.66	33.60	74.00	19.24	V
17927.400	54.26	-25.50	46.66	33.10	74.00	19.74	H
14191.200	51.24	-28.99	42.00	38.22	68.30	17.06	H
13672.000	50.97	-29.50	40.43	40.04	68.30	17.33	V
10938.600	49.08	-32.82	38.70	43.20	74.00	24.92	H
11859.800	48.63	-31.85	39.05	41.43	74.00	25.37	H

Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17926.800	54.58	-25.50	46.66	33.42	74.00	19.42	V
17981.800	54.39	-25.50	46.66	33.23	74.00	19.61	H
13641.800	51.14	-29.50	40.43	40.21	68.30	17.16	V
13719.900	50.99	-29.10	40.86	39.22	68.30	17.31	H
11957.200	49.12	-31.48	39.09	41.51	74.00	24.88	H
11868.100	48.80	-31.85	39.05	41.60	74.00	25.20	H

Channel 64

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)
17989.500	54.65	-25.50	46.66	33.49	74.00	19.35	V
17925.800	54.58	-25.50	46.66	33.42	74.00	19.42	V
14042.800	51.63	-29.44	41.66	39.41	68.30	16.67	V
10642.700	51.20	-32.76	38.38	45.58	74.00	22.80	V
5350.600	62.12	-27.43	34.01	55.54	74.00	11.88	H
5350.000	62.07	-27.43	34.01	55.49	74.00	11.93	H

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Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17901.000	54.68	-25.50	46.66	33.52	74.00	19.32	H
17996.200	54.25	-25.50	46.66	33.09	74.00	19.75	V
13711.100	51.25	-29.10	40.86	39.48	68.30	17.05	H
13747.400	51.21	-29.10	40.86	39.44	68.30	17.09	V
5457.400	62.93	-27.18	34.17	55.94	74.00	11.07	H
5466.500	64.85	-27.18	34.17	57.86	68.30	3.45	H

Channel 120

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)
17976.900	55.61	-25.50	46.66	34.45	74.00	18.39	V
17948.300	54.05	-25.50	46.66	32.89	74.00	19.95	H
14183.500	51.19	-28.99	42.00	38.17	68.30	17.11	H
13724.900	51.02	-29.10	40.86	39.25	68.30	17.28	H
10744.400	48.59	-32.77	38.49	42.87	74.00	25.41	H
11796.000	48.45	-31.85	39.05	41.25	74.00	25.55	V

Channel 140

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	54.53	-25.50	46.66	33.37	74.00	19.47	V
17617.800	54.42	-25.74	45.95	34.21	68.30	13.88	V
13735.300	51.09	-29.10	40.86	39.32	68.30	17.21	V
13645.100	50.72	-29.50	40.43	39.79	68.30	17.58	V
5725.100	63.17	-27.07	34.31	55.93	68.30	5.13	H
5725.000	63.05	-27.07	34.31	55.81	68.30	5.25	H

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802.11n-HT20

Channel 36

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)
17981.800	55.11	-25.50	46.66	33.95	74.00	18.89	V
17963.700	54.78	-25.50	46.66	33.62	74.00	19.22	V
13614.300	51.40	-29.50	40.43	40.47	68.30	16.90	H
13350.300	51.30	-29.49	39.71	41.08	74.00	22.70	V
5149.400	64.98	-27.61	33.67	58.92	74.00	9.02	H
5149.400	64.68	-27.61	33.67	58.62	74.00	9.32	H

Channel 40

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)
17843.800	55.20	-25.50	46.66	34.04	74.00	18.80	V
17962.600	54.92	-25.50	46.66	33.76	74.00	19.08	H
14216.000	51.85	-28.99	42.00	38.83	68.30	16.45	H
13641.800	51.66	-29.50	40.43	40.73	68.30	16.64	V
11432.500	48.94	-32.42	38.79	42.57	74.00	25.06	H
11825.700	48.94	-31.85	39.05	41.74	74.00	25.06	H

Channel 48

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)
17969.800	54.73	-25.50	46.66	33.57	74.00	19.27	V
17709.000	54.70	-25.74	45.95	34.49	74.00	19.30	H
13638.000	51.77	-29.50	40.43	40.84	68.30	16.53	H
14214.400	51.31	-28.99	42.00	38.29	68.30	16.99	V
11865.900	49.46	-31.85	39.05	42.26	74.00	24.54	H
11820.800	48.98	-31.85	39.05	41.78	74.00	25.02	H

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Channel 52

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	54.90	-25.50	46.66	33.74	74.00	19.10	H
17966.500	54.80	-25.50	46.66	33.64	74.00	19.20	H
13740.800	51.08	-29.10	40.86	39.31	68.30	17.22	H
14203.400	51.07	-28.99	42.00	38.05	68.30	17.23	H
10937.500	48.87	-32.82	38.70	42.99	74.00	25.13	V
11717.900	48.64	-31.99	38.98	41.65	74.00	25.36	V

Channel 56

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)
17962.000	55.12	-25.50	46.66	33.96	74.00	18.88	H
17955.500	54.51	-25.50	46.66	33.35	74.00	19.49	V
13790.300	51.43	-29.10	40.86	39.66	68.30	16.87	V
13675.900	51.33	-29.50	40.43	40.40	68.30	16.97	V
11832.900	48.82	-31.85	39.05	41.62	74.00	25.18	H
11883.500	48.67	-31.85	39.05	41.47	74.00	25.33	V

Channel 64

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)
17984.000	55.85	-25.50	46.66	34.69	74.00	18.15	H
17989.500	54.80	-25.50	46.66	33.64	74.00	19.20	V
10636.100	51.92	-32.76	38.38	46.30	74.00	22.08	V
13655.500	51.89	-29.50	40.43	40.96	68.30	16.41	H
5353.300	67.91	-27.43	34.01	61.33	74.00	6.09	H
5350.400	62.68	-27.43	34.01	56.10	74.00	11.32	H

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Channel 100

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	54.44	-25.50	46.66	33.28	74.00	19.56	H
17984.600	54.42	-25.50	46.66	33.26	74.00	19.58	H
14137.400	51.46	-28.99	42.00	38.44	68.30	16.84	V
13715.000	51.18	-29.10	40.86	39.41	68.30	17.12	H
5459.900	62.90	-27.18	34.17	55.91	74.00	11.10	H
5469.100	65.35	-27.18	34.17	58.36	68.30	2.95	H

Channel 120

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)
17935.700	55.79	-25.50	46.66	34.63	74.00	18.21	H
17986.800	54.04	-25.50	46.66	32.88	74.00	19.96	V
14192.900	51.32	-28.99	42.00	38.30	68.30	16.98	H
14214.400	50.96	-28.99	42.00	37.94	68.30	17.34	V
11992.900	49.16	-31.48	39.09	41.55	74.00	24.84	V
11865.300	48.91	-31.85	39.05	41.71	74.00	25.09	V

Channel 140

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)
17994.500	54.89	-25.50	46.66	33.73	74.00	19.11	V
17818.000	54.30	-25.50	46.66	33.14	74.00	19.70	V
13615.400	51.17	-29.50	40.43	40.24	68.30	17.13	H
13636.900	51.10	-29.50	40.43	40.17	68.30	17.20	V
5725.800	63.37	-27.07	34.31	56.13	68.30	4.93	H
5726.100	63.29	-27.07	34.31	56.05	68.30	5.01	H

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802.11n-HT40

Channel 38

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	54.93	-25.50	46.66	33.77	74.00	19.07	V
17993.400	54.90	-25.50	46.66	33.74	74.00	19.10	V
14183.500	51.08	-28.99	42.00	38.06	68.30	17.22	V
13558.800	51.01	-29.50	40.43	40.08	68.30	17.29	H
5149.800	63.17	-27.61	33.67	57.11	74.00	10.83	H
5149.800	62.45	-27.61	33.67	56.39	74.00	11.55	H

Channel 46

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)
17604.500	54.81	-25.74	45.95	34.60	68.30	13.49	H
17977.500	54.63	-25.50	46.66	33.47	74.00	19.37	V
14193.500	51.52	-28.99	42.00	38.50	68.30	16.78	H
13587.400	51.50	-29.50	40.43	40.57	68.30	16.80	H
11752.000	48.90	-31.99	38.98	41.91	74.00	25.10	V
11028.800	48.89	-32.49	38.72	42.65	74.00	25.11	V

Channel 54

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	54.46	-25.50	46.66	33.30	74.00	19.54	H
17826.200	54.39	-25.50	46.66	33.23	74.00	19.61	H
13617.600	51.61	-29.50	40.43	40.68	68.30	16.69	H
13683.000	51.37	-29.50	40.43	40.44	68.30	16.93	H
11862.000	49.83	-31.85	39.05	42.63	74.00	24.17	H
11892.800	49.13	-31.85	39.05	41.93	74.00	24.87	H

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Channel 62

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)
17979.700	54.44	-25.50	46.66	33.28	74.00	19.56	H
17964.800	54.41	-25.50	46.66	33.25	74.00	19.59	H
13609.900	51.72	-29.50	40.43	40.79	68.30	16.58	V
13669.300	51.37	-29.50	40.43	40.44	68.30	16.93	H
5362.600	64.79	-27.43	34.01	58.21	74.00	9.21	H
5352.400	62.87	-27.43	34.01	56.29	74.00	11.13	H

Channel 102

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)
17864.200	54.27	-25.50	46.66	33.11	74.00	19.73	H
17335.000	53.93	-25.95	44.35	35.52	68.30	14.37	H
13789.200	51.03	-29.10	40.86	39.26	68.30	17.27	V
14191.800	51.00	-28.99	42.00	37.98	68.30	17.30	H
5457.800	64.16	-27.18	34.17	57.17	74.00	9.84	H
5469.900	61.57	-27.18	34.17	54.58	68.30	6.73	H

Channel 118

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17986.200	54.82	-25.50	46.66	33.66	74.00	19.18	V
17949.400	54.69	-25.50	46.66	33.53	74.00	19.31	V
13649.000	51.69	-29.50	40.43	40.76	68.30	16.61	V
14189.000	51.34	-28.99	42.00	38.32	68.30	16.96	H
11905.500	49.04	-31.85	39.05	41.84	74.00	24.96	H
10848.400	48.43	-32.33	38.59	42.17	74.00	25.57	V

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Channel 134

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17924.700	54.62	-25.50	46.66	33.46	74.00	19.38	H
17980.800	54.37	-25.50	46.66	33.21	74.00	19.63	V
13766.600	51.70	-29.10	40.86	39.93	68.30	16.60	H
13756.800	51.15	-29.10	40.86	39.38	68.30	17.15	V
5727.500	64.36	-27.07	34.31	57.12	68.30	3.94	H
5727.300	63.71	-27.07	34.31	56.47	68.30	4.59	H

802.11ac-HT20

Channel 36

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)
17874.600	54.99	-25.50	46.66	33.83	74.00	19.01	H
17934.500	54.56	-25.50	46.66	33.40	74.00	19.44	V
13725.400	51.11	-29.10	40.86	39.34	68.30	17.19	H
13628.000	51.08	-29.50	40.43	40.15	68.30	17.22	V
5149.900	64.98	-27.61	33.67	58.92	74.00	9.02	H
5149.600	64.91	-27.61	33.67	58.85	74.00	9.09	H

Channel 40

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)
17984.600	54.41	-25.50	46.66	33.25	74.00	19.59	H
17964.800	54.38	-25.50	46.66	33.22	74.00	19.62	V
13650.000	51.41	-29.50	40.43	40.48	68.30	16.89	V
13751.200	51.14	-29.10	40.86	39.37	68.30	17.16	V
11909.900	48.79	-31.85	39.05	41.59	74.00	25.21	V
11875.200	48.65	-31.85	39.05	41.45	74.00	25.35	H

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Channel 48

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)
17937.800	54.48	-25.50	46.66	33.32	74.00	19.52	V
17963.200	54.44	-25.50	46.66	33.28	74.00	19.56	V
13625.300	51.42	-29.50	40.43	40.49	68.30	16.88	H
14156.000	51.32	-28.99	42.00	38.30	68.30	16.98	H
11904.400	49.68	-31.85	39.05	42.48	74.00	24.32	H
11823.000	48.68	-31.85	39.05	41.48	74.00	25.32	H

Channel 52

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)
17970.300	55.28	-25.50	46.66	34.12	74.00	18.72	H
17990.100	54.44	-25.50	46.66	33.28	74.00	19.56	H
13700.100	51.83	-29.10	40.86	40.06	68.30	16.47	V
13630.800	51.30	-29.50	40.43	40.37	68.30	17.00	H
11908.800	49.16	-31.85	39.05	41.96	74.00	24.84	H
11969.300	48.78	-31.48	39.09	41.17	74.00	25.22	V

Channel 56

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)
17963.200	55.04	-25.50	46.66	33.88	74.00	18.96	V
17986.800	54.44	-25.50	46.66	33.28	74.00	19.56	H
13659.400	51.29	-29.50	40.43	40.36	68.30	17.01	H
13721.500	51.13	-29.10	40.86	39.36	68.30	17.17	V
11842.200	49.09	-31.85	39.05	41.89	74.00	24.91	H
11905.500	48.58	-31.85	39.05	41.38	74.00	25.42	V

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Channel 64

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)
17884.000	54.99	-25.50	46.66	33.83	74.00	19.01	H
17321.300	54.95	-25.95	44.35	36.54	68.30	13.35	V
14192.900	51.60	-28.99	42.00	38.58	68.30	16.70	V
13629.100	51.25	-29.50	40.43	40.32	68.30	17.05	V
5351.000	62.91	-27.43	34.01	56.33	74.00	11.09	H
5350.200	62.63	-27.43	34.01	56.05	74.00	11.37	H

Channel 100

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)
17984.000	55.24	-25.50	46.66	34.08	74.00	18.76	H
17998.300	54.94	-25.50	46.66	33.78	74.00	19.06	V
13631.900	51.04	-29.50	40.43	40.11	68.30	17.26	V
13601.600	50.97	-29.50	40.43	40.04	68.30	17.33	H
5459.900	62.38	-27.18	34.17	55.39	74.00	11.62	H
5469.200	65.26	-27.18	34.17	58.27	68.30	3.04	H

Channel 120

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	54.59	-25.50	46.66	33.43	74.00	19.41	V
17990.700	54.29	-25.50	46.66	33.13	74.00	19.71	H
13651.100	51.90	-29.50	40.43	40.97	68.30	16.40	H
14186.900	51.46	-28.99	42.00	38.44	68.30	16.84	V
11799.300	48.46	-31.85	39.05	41.26	74.00	25.54	V
11810.900	48.43	-31.85	39.05	41.23	74.00	25.57	V

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Channel 140

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	54.24	-25.50	46.66	33.08	74.00	19.76	V
17987.900	53.99	-25.50	46.66	32.83	74.00	20.01	V
13727.000	51.31	-29.10	40.86	39.54	68.30	16.99	V
13627.000	50.68	-29.50	40.43	39.75	68.30	17.62	V
5725.200	63.98	-27.07	34.31	56.74	68.30	4.32	H
5725.100	63.35	-27.07	34.31	56.11	68.30	4.95	H

802.11ac-HT40

Channel 38

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)
17419.800	54.77	-26.85	45.25	36.37	68.30	13.53	V
17954.300	54.52	-25.50	46.66	33.36	74.00	19.48	V
14115.900	51.17	-28.99	42.00	38.15	68.30	17.13	H
13724.300	51.06	-29.10	40.86	39.29	68.30	17.24	V
5148.600	62.07	-27.61	33.67	56.01	74.00	11.93	H
5149.900	62.05	-27.61	33.67	55.99	74.00	11.95	H

Channel 46

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17915.800	54.74	-25.50	46.66	33.58	74.00	19.26	V
17984.000	54.74	-25.50	46.66	33.58	74.00	19.26	H
13612.600	51.08	-29.50	40.43	40.15	68.30	17.22	V
13710.000	50.99	-29.10	40.86	39.22	68.30	17.31	H
11803.700	48.99	-31.85	39.05	41.79	74.00	25.01	H
11755.900	48.73	-31.99	38.98	41.74	74.00	25.27	H

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Channel 54

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)
17381.800	54.37	-25.95	44.35	35.96	68.30	13.93	H
17936.800	54.19	-25.50	46.66	33.03	74.00	19.81	V
14202.800	51.57	-28.99	42.00	38.55	68.30	16.73	H
13586.800	51.28	-29.50	40.43	40.35	68.30	17.02	V
11839.500	48.75	-31.85	39.05	41.55	74.00	25.25	H
11813.600	48.67	-31.85	39.05	41.47	74.00	25.33	H

Channel 62

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)
17951.000	55.24	-25.50	46.66	34.08	74.00	18.76	V
17979.700	54.53	-25.50	46.66	33.37	74.00	19.47	V
13630.200	51.06	-29.50	40.43	40.13	68.30	17.24	H
13584.600	50.84	-29.50	40.43	39.91	68.30	17.46	V
5350.400	62.43	-27.43	34.01	55.85	74.00	11.57	H
5354.000	62.02	-27.43	34.01	55.44	74.00	11.98	H

Channel 102

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)
17929.000	54.11	-25.50	46.66	32.95	74.00	19.89	V
17418.100	53.88	-26.85	45.25	35.48	68.30	14.42	V
13750.100	51.00	-29.10	40.86	39.23	68.30	17.30	V
13662.700	50.83	-29.50	40.43	39.90	68.30	17.47	H
5459.700	59.19	-27.18	34.17	52.20	74.00	14.81	H
5470.000	62.05	-27.18	34.17	55.06	68.30	6.25	H

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Channel 118

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17909.800	54.57	-25.50	46.66	33.41	74.00	19.43	H
17946.700	54.46	-25.50	46.66	33.30	74.00	19.54	H
13773.200	51.11	-29.10	40.86	39.34	68.30	17.19	V
14190.700	51.02	-28.99	42.00	38.00	68.30	17.28	V
11798.200	48.45	-31.85	39.05	41.25	74.00	25.55	V
11818.000	48.30	-31.85	39.05	41.10	74.00	25.70	V

Channel 134

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)
17403.800	54.94	-26.85	45.25	36.54	68.30	13.36	V
17596.300	54.66	-25.74	45.95	34.45	68.30	13.64	V
13662.700	51.53	-29.50	40.43	40.60	68.30	16.77	V
13582.400	50.87	-29.50	40.43	39.94	68.30	17.43	V
5730.500	64.63	-27.07	34.31	57.39	68.30	3.67	H
5725.700	64.21	-27.07	34.31	56.97	68.30	4.09	H

802.11ac-HT80

Channel 42

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)
17931.800	54.79	-25.50	46.66	33.63	74.00	19.21	V
17419.800	54.52	-26.85	45.25	36.12	68.30	13.78	V
14201.100	51.52	-28.99	42.00	38.50	68.30	16.78	H
13664.400	51.08	-29.50	40.43	40.15	68.30	17.22	V
5145.400	61.96	-27.61	33.67	55.90	74.00	12.04	H
5149.600	61.71	-27.61	33.67	55.65	74.00	12.29	H

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Channel 58

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)
17882.800	55.02	-25.50	46.66	33.86	74.00	18.98	H
17973.600	54.79	-25.50	46.66	33.63	74.00	19.21	H
13620.900	51.31	-29.50	40.43	40.38	68.30	16.99	H
14207.200	50.99	-28.99	42.00	37.97	68.30	17.31	V
5362.400	61.34	-27.43	34.01	54.76	74.00	12.66	H
5383.300	61.06	-27.36	34.09	54.34	74.00	12.94	H

Channel 106

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17967.000	54.43	-25.50	46.66	33.27	74.00	19.57	V
17997.800	54.37	-25.50	46.66	33.21	74.00	19.63	V
13672.000	50.91	-29.50	40.43	39.98	68.30	17.39	H
14301.800	50.87	-28.42	42.34	36.95	68.30	17.43	H
5450.300	61.56	-27.18	34.17	54.57	74.00	12.44	H
5465.200	61.98	-27.18	34.17	54.99	68.30	6.32	H

Channel 122

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)
17988.500	54.89	-25.50	46.66	33.73	74.00	19.11	H
17972.500	54.44	-25.50	46.66	33.28	74.00	19.56	H
13729.800	51.08	-29.10	40.86	39.31	68.30	17.22	H
13738.600	50.91	-29.10	40.86	39.14	68.30	17.39	H
5726.400	64.17	-27.07	34.31	56.93	68.30	4.13	H
5727.400	64.00	-27.07	34.31	56.76	68.30	4.30	H

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A.7. AC Powerline Conducted Emission (150kHz- 30MHz)

Test Condition:

Voltage（V）	Frequency（Hz）
120	60

Measurement uncertainty:
Expanded measurement uncertainty for this test item is U =3.10dB, k=2.

Measurement Result and limit:
WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger AE1		
		802.11a	Idle	
0.15 to 0.5	66 to 56	Fig.54	Fig.55	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 AE1		
		802.11a	Idle	
0.15 to 0.5	67 56 to 46	Fig.54	Fig.55	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:

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Traffic:

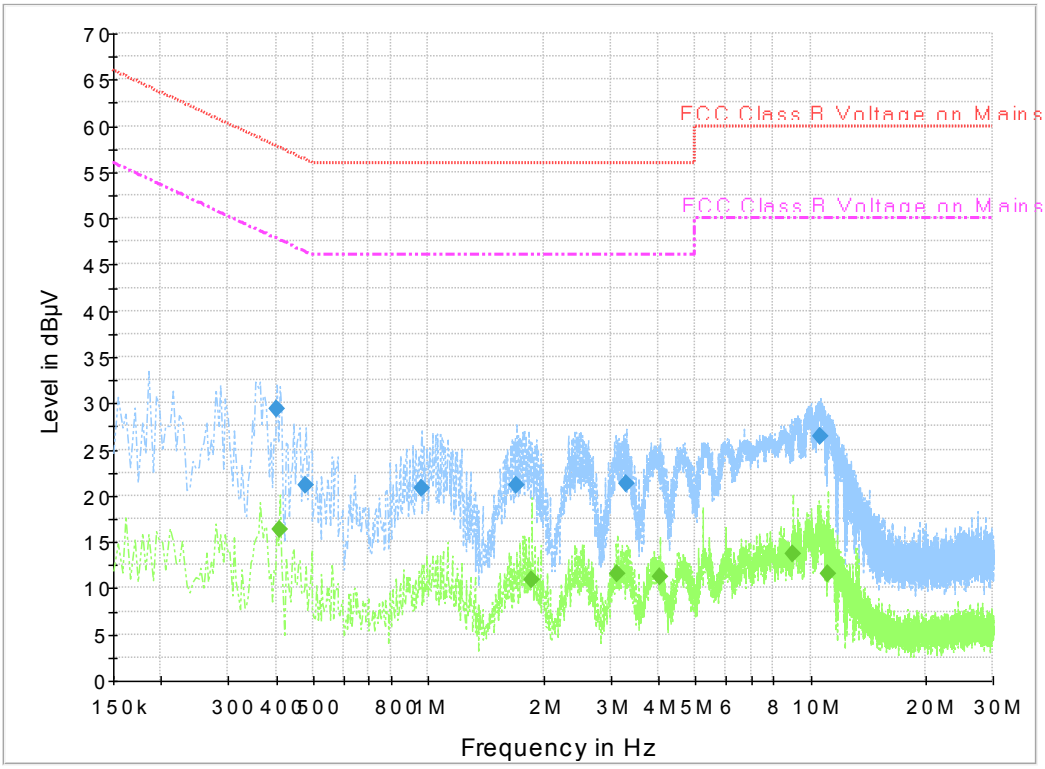

Fig.54 Conducted Emission (802.11a, Ch36, TX)

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)
0.402000	29.4	2000.0	9.000	On	L1	19.9	28.4	57.8
0.478000	21.1	2000.0	9.000	On	N	20.0	35.2	56.4
0.958000	20.7	2000.0	9.000	On	N	19.8	35.3	56.0
1.706000	21.1	2000.0	9.000	On	N	19.7	34.9	56.0
3.294000	21.3	2000.0	9.000	On	N	19.7	34.7	56.0
10.642000	26.4	2000.0	9.000	On	L1	19.7	33.6	60.0

Final Result 2

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.410000	16.3	2000.0	9.000	On	N	19.9	31.3	47.6
1.866000	10.9	2000.0	9.000	On	N	19.7	35.1	46.0
3.134000	11.5	2000.0	9.000	On	N	19.7	34.5	46.0
4.030000	11.2	2000.0	9.000	On	N	19.7	34.8	46.0
9.014000	13.7	2000.0	9.000	On	L1	19.6	36.3	50.0
11.098000	11.6	2000.0	9.000	On	L1	19.6	38.4	50.0

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

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Idle:

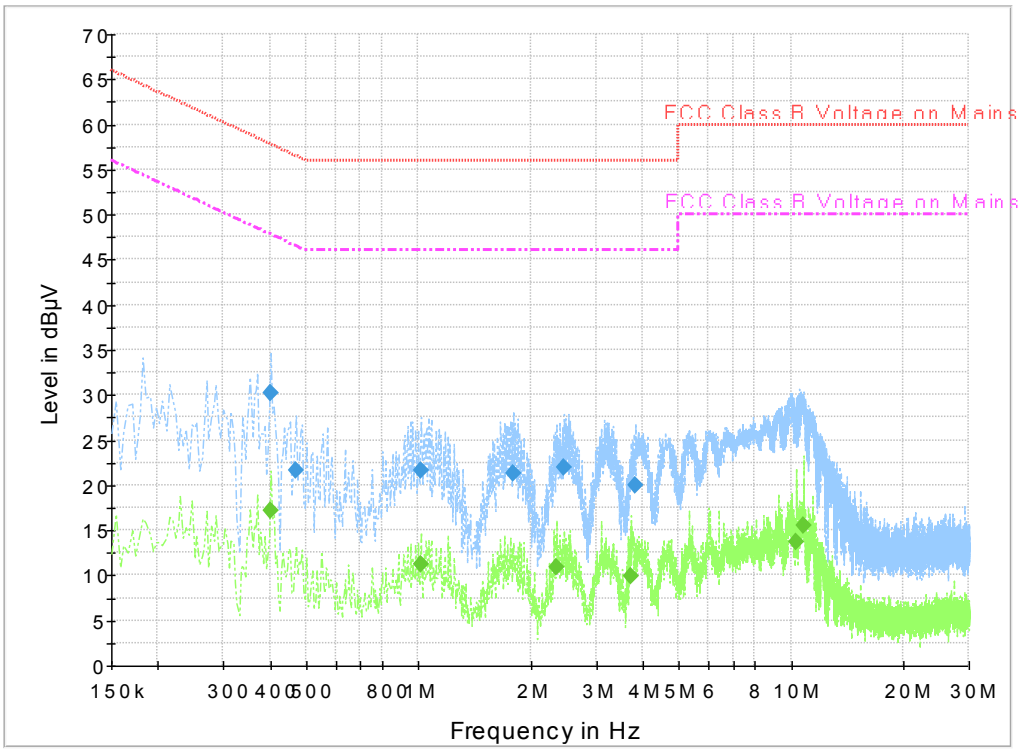

Fig.55 Conducted Emission(802.11a, IDLE)

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)
0.402000	30.3	2000.0	9.000	On	N	19.9	27.5	57.8
0.470000	21.7	2000.0	9.000	On	N	20.0	34.8	56.5
1.014000	21.6	2000.0	9.000	On	N	19.8	34.4	56.0
1.794000	21.3	2000.0	9.000	On	N	19.8	34.7	56.0
2.458000	22.0	2000.0	9.000	On	N	19.7	34.0	56.0
3.822000	19.9	2000.0	9.000	On	N	19.7	36.1	56.0

Final Result 2

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.402000	17.2	2000.0	9.000	On	N	19.9	30.6	47.8
1.014000	11.2	2000.0	9.000	On	N	19.8	34.8	46.0
2.354000	10.9	2000.0	9.000	On	N	19.8	35.1	46.0
3.726000	10.0	2000.0	9.000	On	L1	19.5	36.0	46.0
10.346000	13.7	2000.0	9.000	On	L1	19.7	36.3	50.0
10.786000	15.4	2000.0	9.000	On	N	19.8	34.6	50.0

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

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A.8. 99% Occupied bandwidth

Method of Measurement: See ANSI C63.10-2013-clause 12.4.2.

a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.

b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.

c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.

d) Step a) through step c) might require iteration to adjust within the specified range.

e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.

g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% ofthe total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.

h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Measurement Uncertainty:

Measurement Uncertainty	60.80Hz

Measurement Result:

Mode	Frequency	99% Occupied bandwidth (MHz)		conclusion
802.11a	5180 MHz	Fig.56	17.08	P
	5200 MHz	Fig.57	17.08	P
	5240 MHz	Fig.58	17.08	P
802.11ac HT20	5180 MHz	Fig.59	18.32	P
	5200 MHz	Fig.60	18.28	P
	5240 MHz	Fig.61	18.24	P
802.11ac HT40	5190 MHz	Fig.62	36.40	P
	5230 MHz	Fig.63	36.40	P
802.11ac HT80	5210 MHz	Fig.64	76.00	P

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Conclusion: PASS

Test graphs as below:

Fig.56 99% Occupied bandwidth (802.11a, 5180MHz)

Fig.57 99% Occupied bandwidth (802.11a, 5200MHz)

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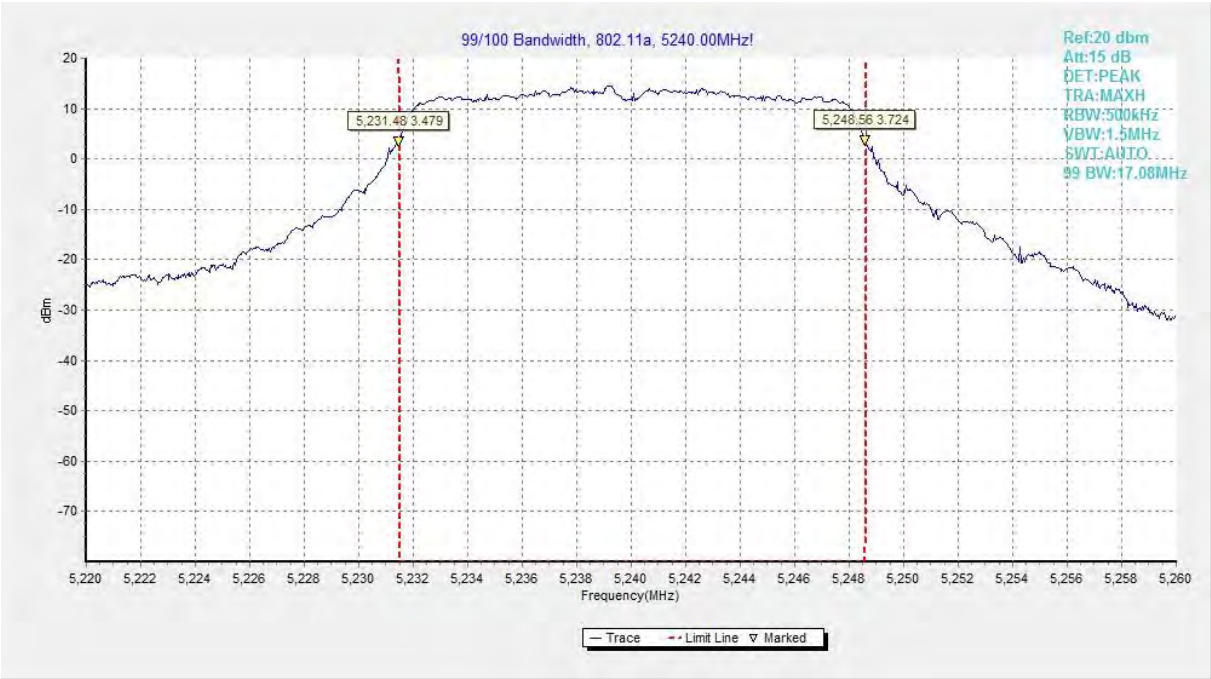

Fig.58 99% Occupied bandwidth (802.11a, 5240MHz)

Fig.59 99% Occupied bandwidth (802.11n-HT20, 5180MHz)

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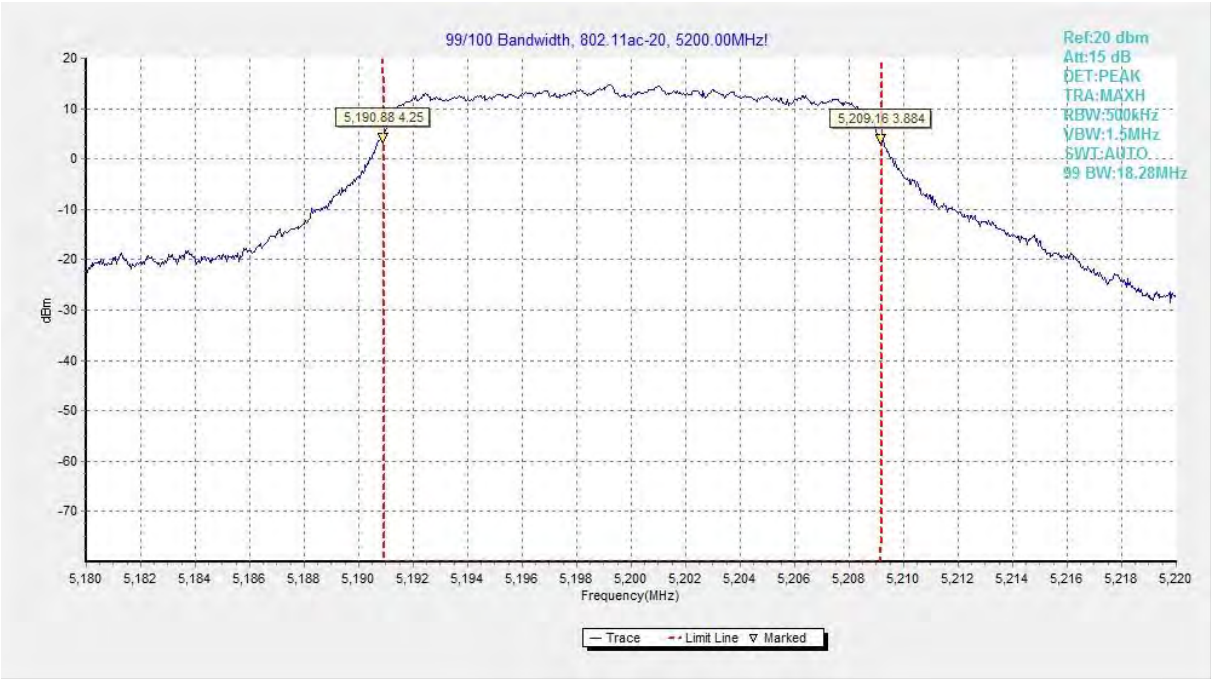

Fig.60 99% Occupied bandwidth (802.11n-HT20, 5200MHz)

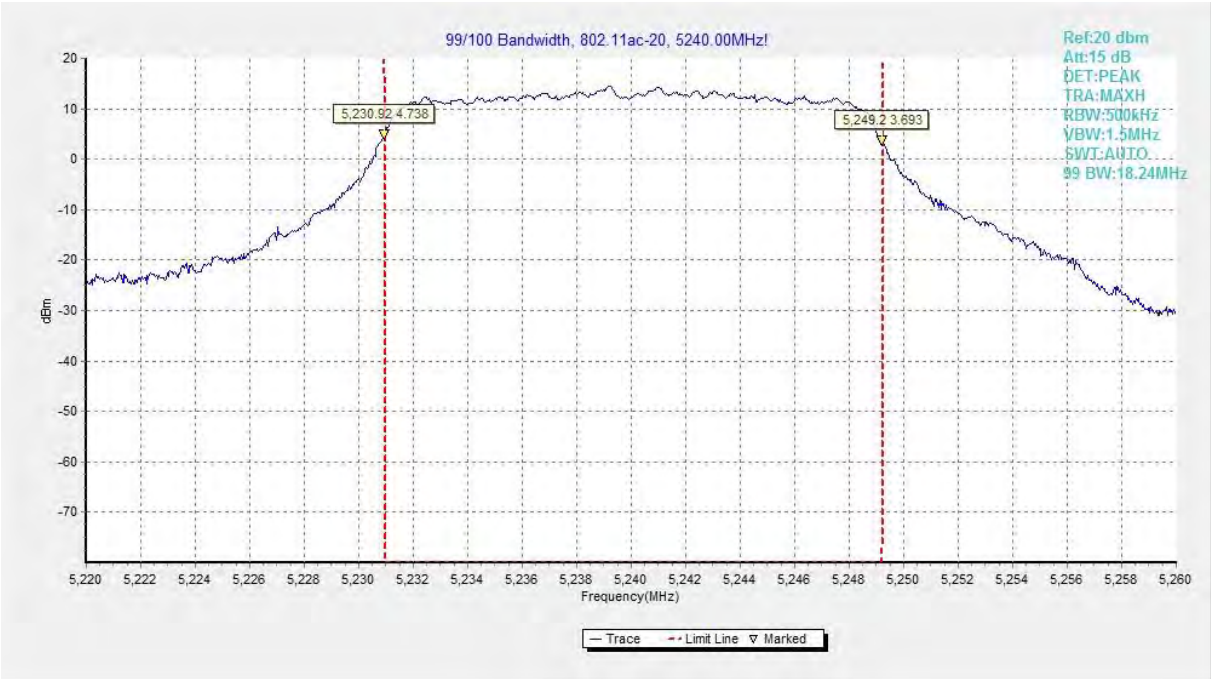

Fig.61 99% Occupied bandwidth (802.11n-HT20, 5240MHz)

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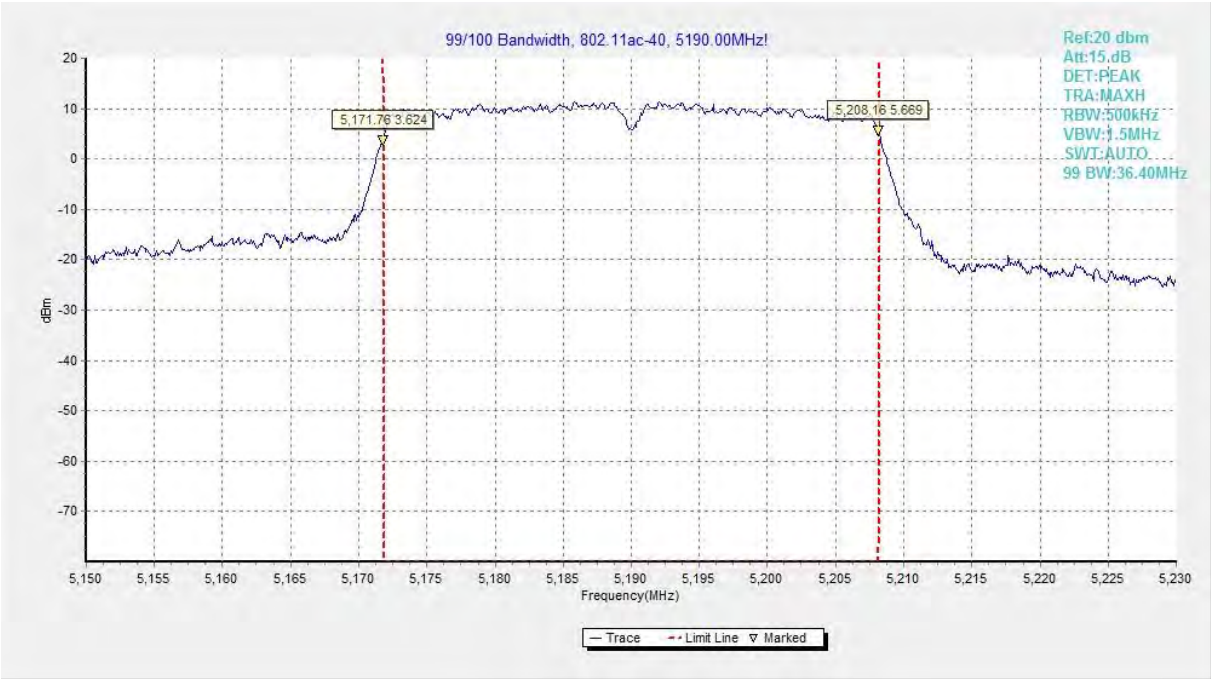

Fig.62 99% Occupied bandwidth (802.11ac-HT40, 5190MHz)

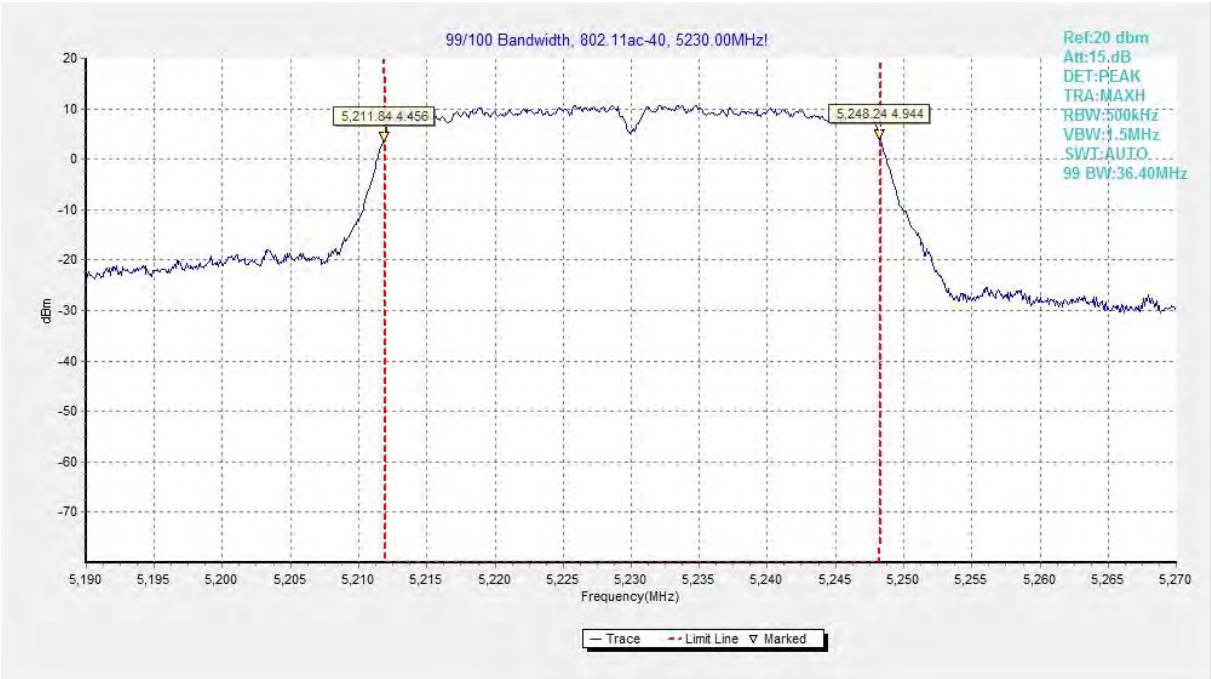

Fig.63 99% Occupied bandwidth (802.11ac-HT40, 5230MHz)

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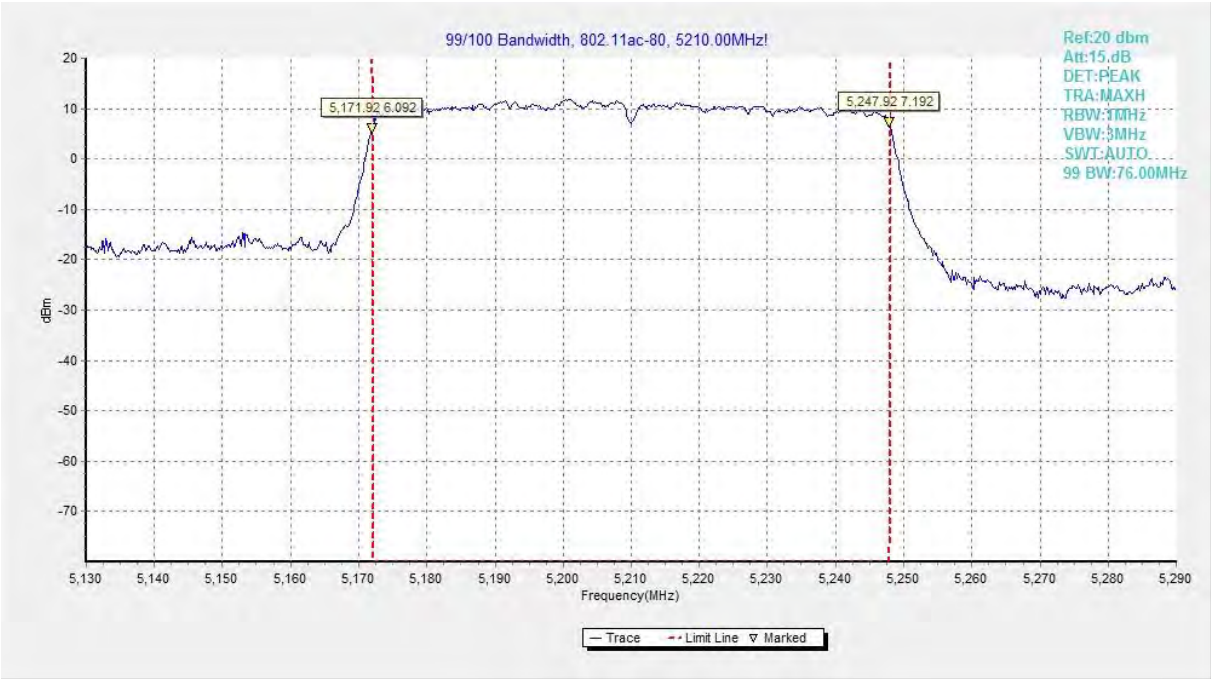

Fig.64 99% Occupied bandwidth (802.11ac-HT80, 5210MHz)

A.9. Power control

A Transmission Power Control mechanism is not required for systems with an e.i.r.p. of less than 27dBm (500 mW).

ANNEX B: EUT parameters

Disclaimer: The 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.

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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).

2021-09-29 through 2022-09-30
Effective Dates

For the National Voluntary Laboratory Accreditation Program

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

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