FCC PART 15C
TEST REPORT
No.I22Z60417-IOT04

for

Wingtech Group (Hong Kong) Limited

5G Mobile Phone

TMAF025G

With

FCC ID: 2APXW-TMAF025G

Hardware Version: V2.0

Software Version: TMAF025G_0.01.01

Issued Date: 2022-05-14

Note:

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Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

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

Tel:+86(0)10-62304633-2512, Fax:+86(0)10-62304633-2504

Email: cttl_terminals@caict.ac.cn, website: www.caict.ac.cn

REPORT HISTORY

Report Number	Revision	Description	Issue Date
I22Z60417-IOT04	Rev.0	1st edition	2022-05-14

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

1.3. Testing Environment

Normal Temperature: 15-35℃

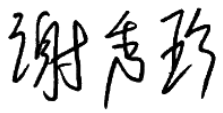
Relative Humidity: 20-75%

1.4. Project date

Testing Start Date: 2022-03-10

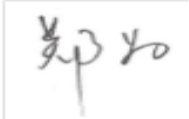
Testing End Date: 2022-05-14

1.5. Signature



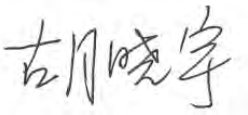
Xie Xiuzhen

(Prepared this test report)



Zheng Wei

(Reviewed this test report)



Hu Xiaoyu

(Approved this test report)

2. CLIENT INFORMATION

2.1 Applicant Information

Company Name:	Wingtech Group (Hong Kong) Limited
Address:	Flat/RM 1802 18/F, Podium Plaza, 5 Hanoi Road, Tsim Sha Tsui, KL, HK
City:	HK
Postal Code:	/
Country:	China
Telephone:	+86-21-53529900
Fax:	/

2.2 Manufacturer Information

Company Name:	Wingtech Group (Hong Kong) Limited
Address:	Flat/RM 1802 18/F, Podium Plaza, 5 Hanoi Road, Tsim Sha Tsui, KL, HK
City:	HK
Postal Code:	/
Country:	China
Telephone:	+86-21-53529900
Fax:	/

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

3.1. About EUT

Description	5G Mobile Phone
Model name	TMAF025G
FCC ID	2APXW-TMAF025G
WLAN Frequency Band	ISM Bands: -5150MHz~5250MHz -5250MHz~5350MHz -5470MHz~5725MHz
Type of modulation	OFDM
Antenna	Integral Antenna
Voltage	3.85V

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
UT92a	861690060017957	V2.0	TMAF025G_0.01.01
UT07a	861690060005747	V2.0	TMAF025G_0.01.01

*EUT ID: is used to identify the test sample in the lab internally.
UT07a is used for conduction test, UT92a is used for radiation test.

3.3. Internal Identification of AE used during the test

AE ID*	Description	SN
AE1	Battery	/
AE2	Charger	/
AE3	USB Cable	/

AE1

Model	RE001
Manufacturer	SUNWODA ELECTRONIC CO ., LTD
Capacity	4500mAh
Nominal Voltage	

AE2

Model	BLJ-QC06HU
Manufacturer	Zhongshan Baolijin Electronic Co., Ltd
Length of cable	/

AE3

Model	USB AM TO TYPE-C2.0
Manufacturer	SUNTOPS ELECTRONICS CO.,LTD

Length of cable /

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

3.4. General Description

The Equipment under Test (EUT) is a model of 5G Mobile 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.

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**
Frequency Stability	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	3.85V
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	2022-05-24
2	Test Receiver	ESCI 7	100344	R&S	1 year	2023-03-21
3	LISN	ENV216	101200	R&S	1 year	2022-05-30
4	Shielding Room	S81	/	ETS-Lindgren	/	/

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESW44	103023	R&S	1 year	2022-10-28
2	EMI Antenna	VULB 9163	302	SCHWARZBECK	1 year	2022-12-28
3	EMI Antenna	3115	00167250	ETS-Lindgren	1 year	2022-07-01

※The Test Receiver with series number of 100344 is within the calibration period when used.

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	5.40
1GHz ≤ f ≤18GHz	4.32
18GHz ≤ f ≤40GHz	5.26

8.6. AC Power-line Conducted Emission

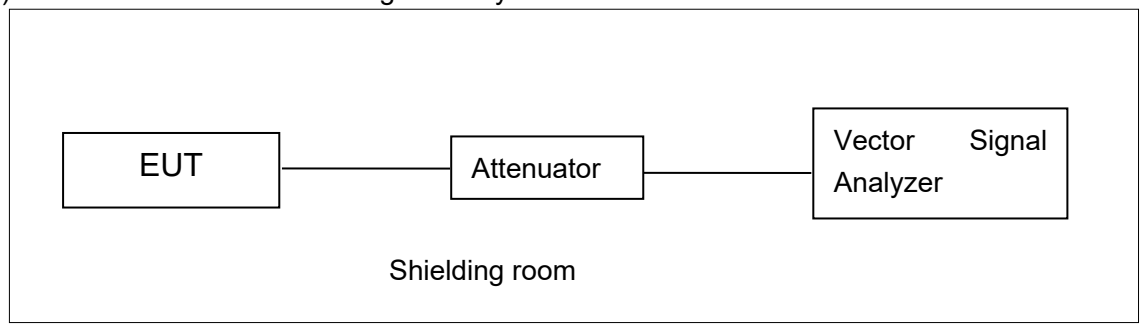
Measurement Uncertainty : 3.08,k=2

ANNEX A: MEASUREMENT RESULTS

A.1. Measurement Method

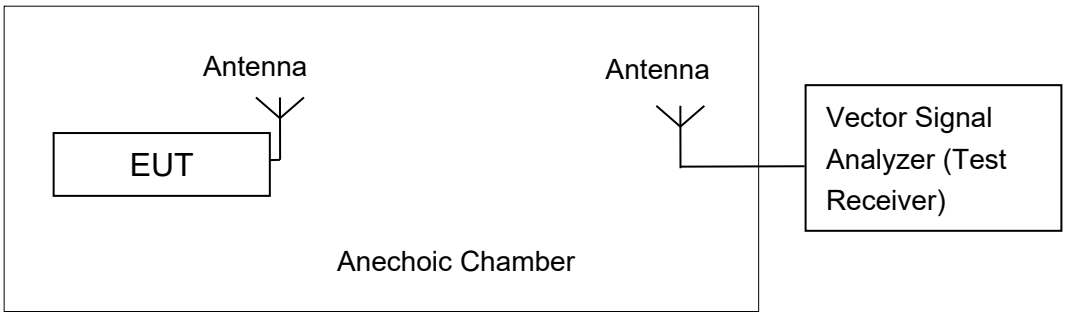
A.1.1. Conducted Measurements

1). Connect the EUT to the test system correctly.
2). Set the EUT to the required work mode.
3). Set the EUT to the required channel.
4). Set the spectrum analyzer to start measurement.
5). Record the values. Vector Signal Analyzer



A.1.2. Radiated Emission Measurements

In the case of radiated emission, the used settings are as follows,
Sweep frequency from 30 MHz to 1GHz, RBW = 100 kHz, VBW = 300 kHz;
Sweep frequency from 1 GHz to 26GHz, RBW = 1MHz, VBW = 10Hz;



The measurement is made according to 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.

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

Note：

For straddle channel 20MHz Bandwidth 5720MHz, Conducted Output Power Limit:

802.11a=11+10*log(B)=24.86, B=38.65/2+5=24.325MHz,

802.11n-HT20=11+10*log(B)=24.57, B=35.55/2+5=22.775MHz,

802.11ac-VHT20=11+10*log(B)=23.82, B=28.30/2+5=19.15MHz,

For straddle channel 40/80MHz Bandwidth, conducted output power limit=24 dBm

802.11n-HT40: B=45.92/2+15=37.96MHz,

802.11ac-VHT40: B=44.96/2+15=37.48MHz,

802.11ac-VHT80: B=86.40/2+15=78.20MHz

Measurement Results:

802.11a mode

Mode	Frequency	Test Result (dBm)							
		Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
802.11a	5180MHz	18.24	/	/	/	/	/	/	/
	5200MHz	18.76	/	/	/	/	/	/	/
	5240MHz	18.52	/	/	/	/	/	/	/
	5260MHz	18.88	/	/	/	/	/	/	/
	5280MHz	18.39	/	/	/	/	/	/	/
	5320MHz	18.07	/	/	/	/	/	/	/
	5500MHz	18.11	/	/	/	/	/	/	/
	5580MHz	19.49	/	/	/	/	/	/	/
	5700MHz	19.85	/	/	/	/	/	/	/
	5720MHz	19.96	/	/	/	/	/	/	/

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

802.11n-HT20 mode

Mode	Frequency	Test Result (dBm)							
		Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11n (HT20)	5180MHz	19.05	/	/	/	/	/	/	/
	5200MHz	19.09	/	/	/	/	/	/	/
	5240MHz	19.11	/	/	/	/	/	/	/
	5260MHz	19.53	/	/	/	/	/	/	/
	5280MHz	19.83	/	/	/	/	/	/	/
	5320MHz	19.47	/	/	/	/	/	/	/
	5500MHz	18.07	/	/	/	/	/	/	/
	5580MHz	19.26	/	/	/	/	/	/	/
	5700MHz	16.28	/	/	/	/	/	/	/
	5720MHz	19.42	/	/	/	/	/	/	/

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

802.11ac-HT20 mode

Mode	Frequency	Test Result (dBm)								
		Data Rate								
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
802.11ac (HT20)	5180MHz	17.81	/	/	/	/	/	/	/	/
	5200MHz	17.85	/	/	/	/	/	/	/	/
	5240MHz	17.83	/	/	/	/	/	/	/	/
	5260MHz	18.27	/	/	/	/	/	/	/	/
	5280MHz	18.38	/	/	/	/	/	/	/	/
	5320MHz	18.13	/	/	/	/	/	/	/	/
	5500MHz	17.83	/	/	/	/	/	/	/	/
	5580MHz	17.81	/	/	/	/	/	/	/	/
	5700MHz	17.80	/	/	/	/	/	/	/	/
	5720MHz	18.18	/	/	/	/	/	/	/	/

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

802.11n-HT40 mode

Mode	Frequency	Test Result (dBm)							
		Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11n (HT40)	5190MHz	15.33	/	/	/	/	/	/	/
	5230MHz	18.07	/	/	/	/	/	/	/

	5270MHz	18.63	/	/	/	/	/	/	/
	5310MHz	18.69	/	/	/	/	/	/	/
	5510MHz	15.87	/	/	/	/	/	/	/
	5550MHz	18.23	/	/	/	/	/	/	/
	5670MHz	17.76	/	/	/	/	/	/	/
	5710MHz	18.70	/	/	/	/	/	/	/

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

802.11ac-HT40 mode

Mode	Frequency	Test Result (dBm)									
		Data Rate									
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
802.11ac (HT40)	5190MHz	16.02	/	/	/	/	/	/	/	/	/
	5230MHz	16.76	/	/	/	/	/	/	/	/	/
	5270MHz	17.43	/	/	/	/	/	/	/	/	/
	5310MHz	17.36	/	/	/	/	/	/	/	/	/
	5510MHz	17.16	/	/	/	/	/	/	/	/	/
	5550MHz	17.18	/	/	/	/	/	/	/	/	/
	5670MHz	16.89	/	/	/	/	/	/	/	/	/
	5710MHz	16.90	/	/	/	/	/	/	/	/	/

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

802.11ac-HT80 mode

Mode	Frequency	Test Result (dBm)									
		Data Rate									
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
802.11ac (HT80)	5210MHz	14.16	/	/	/	/	/	/	/	/	/
	5290MHz	15.35	/	/	/	/	/	/	/	/	/
	5530MHz	14.81	/	/	/	/	/	/	/	/	/
	5610MHz	16.33	/	/	/	/	/	/	/	/	/
	5690MHz	16.52	/	/	/	/	/	/	/	/	/

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 100%.

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	8.27	P
	5200 MHz	8.36	P
	5240 MHz	8.47	P
	5260 MHz	9.10	P
	5280 MHz	9.19	P
	5320 MHz	8.98	P
	5500 MHz	8.77	P
	5580 MHz	8.81	P
	5700 MHz	8.90	P
	5720 MHz	9.00	P
802.11n HT20	5180 MHz	8.12	P
	5200 MHz	8.24	P
	5240 MHz	8.28	P
	5260 MHz	8.93	P
	5280 MHz	9.13	P
	5320 MHz	9.05	P
	5500 MHz	8.63	P
	5580 MHz	8.72	P
	5700 MHz	8.69	P
	5720 MHz	8.76	P
802.11n HT40	5190 MHz	4.52	P
	5230 MHz	4.49	P
	5270 MHz	5.25	P
	5310 MHz	4.94	P
	5510 MHz	4.38	P
	5550 MHz	4.28	P
	5670 MHz	4.29	P
	5710 MHz	4.88	P
802.11ac	5210MHz	-0.28	P

HT80	5290MHz	0.34	P
	5530MHz	-0.37	P
	5610MHz	-0.51	P
	5690MHz	-0.21	P

Conclusion: PASS

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	22.15	P
	5200 MHz	Fig.2	23.40	P
	5240 MHz	Fig.3	21.35	P
	5260 MHz	Fig.4	26.60	P
	5280 MHz	Fig.5	26.00	P
	5320 MHz	Fig.6	25.60	P
	5500 MHz	Fig.7	28.30	P
	5580 MHz	Fig.8	37.50	P
	5700 MHz	Fig.9	37.70	P
	5720 MHz	Fig.10	38.05	P
802.11n HT20	5180 MHz	Fig.11	24.05	P
	5200 MHz	Fig.12	23.20	P
	5240 MHz	Fig.13	22.55	P
	5260 MHz	Fig.14	27.50	P
	5280 MHz	Fig.15	26.60	P
	5320 MHz	Fig.16	30.40	P
	5500 MHz	Fig.17	30.60	P
	5580 MHz	Fig.18	35.30	P
	5700 MHz	Fig.19	32.60	P
	5720 MHz	Fig.20	35.55	P
802.11n HT40	5190 MHz	Fig.21	41.04	P
	5230 MHz	Fig.22	40.96	P

	5270 MHz	Fig.23	41.04	P
	5310 MHz	Fig.24	40.88	P
	5510 MHz	Fig.25	44.00	P
	5550 MHz	Fig.26	45.36	P
	5670 MHz	Fig.27	49.68	P
	5710 MHz	Fig.28	45.92	P
802.11ac HT80	5210MHz	Fig.29	81.44	P
	5290MHz	Fig.30	80.96	P
	5530MHz	Fig.31	82.08	P
	5610MHz	Fig.32	86.88	P
	5690MHz	Fig.33	86.40	P

Conclusion: PASS

Test graphs as below:

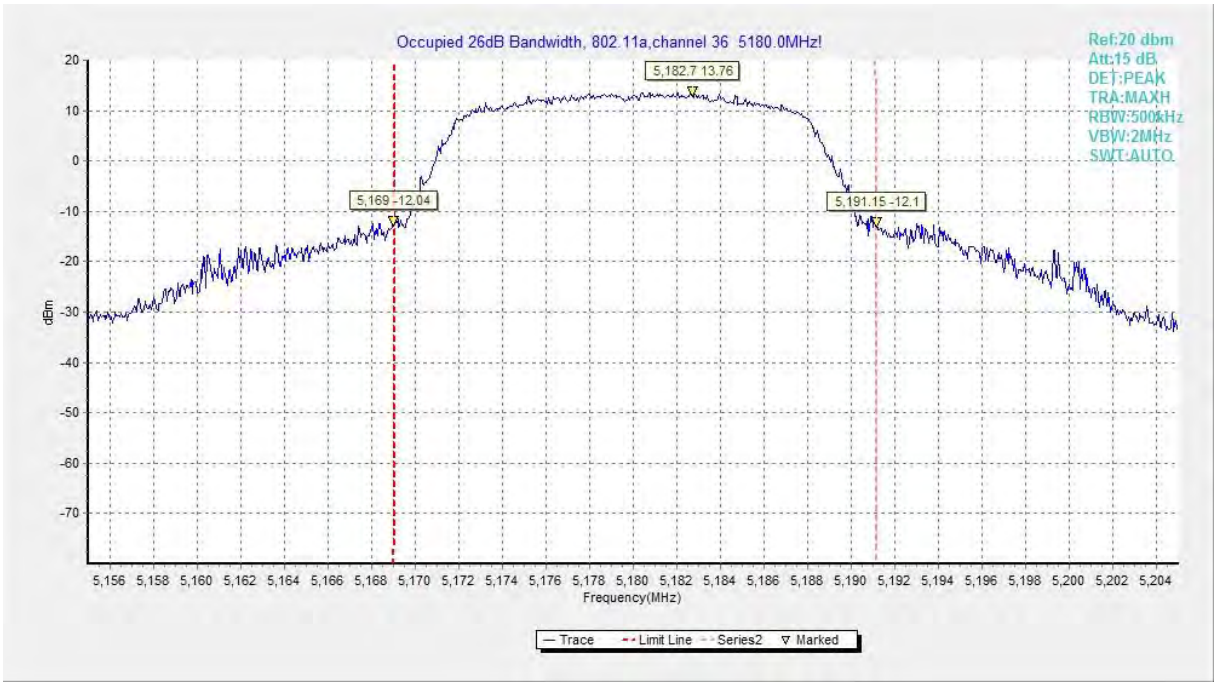


Fig.1 Occupied 26dB Bandwidth (802.11a, 5180MHz)

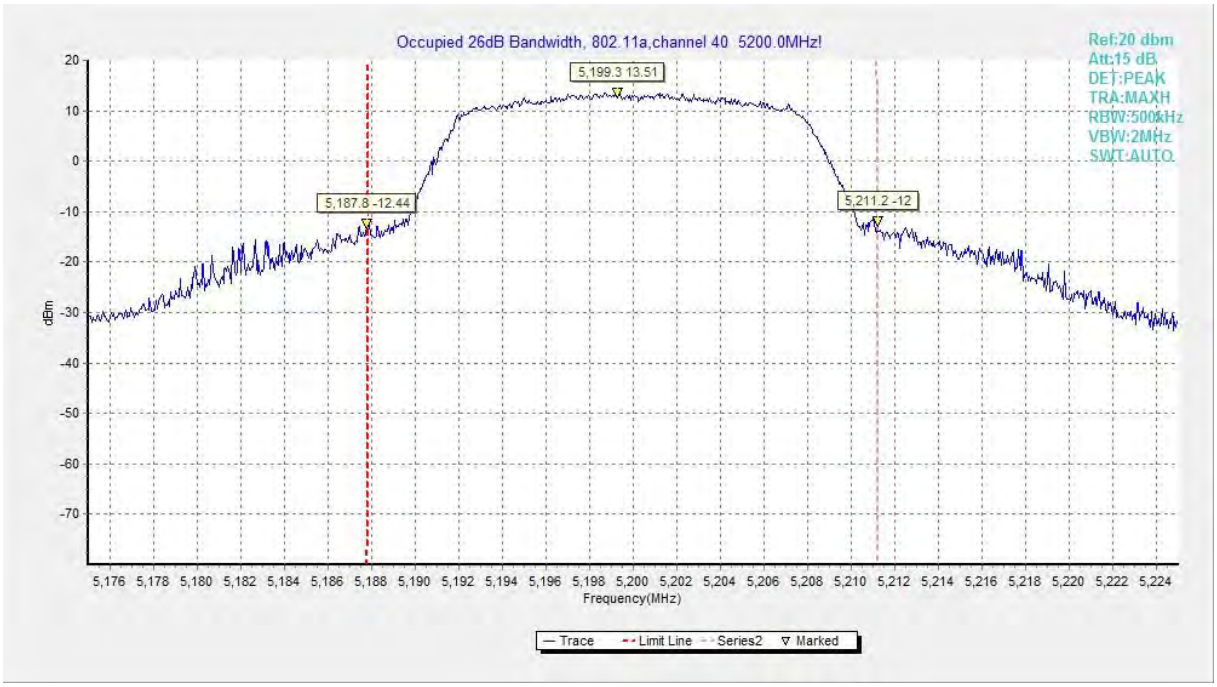


Fig.2 Occupied 26dB Bandwidth (802.11a, 5200MHz)

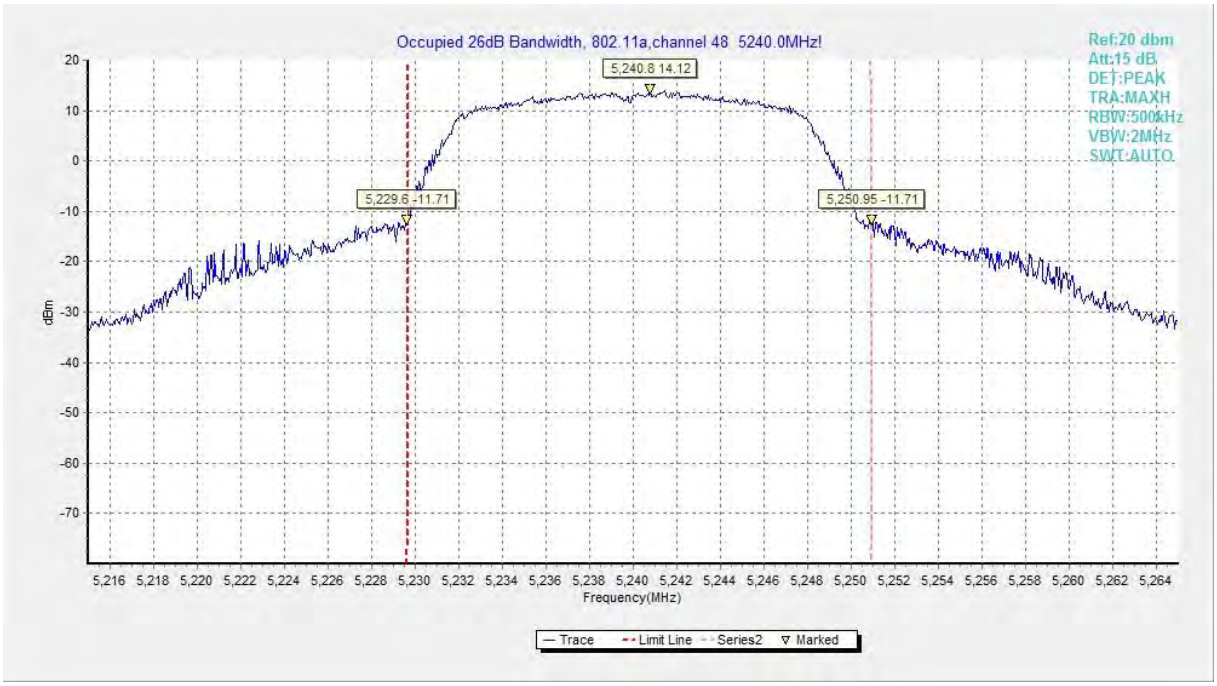


Fig.3 Occupied 26dB Bandwidth (802.11a, 5240MHz)

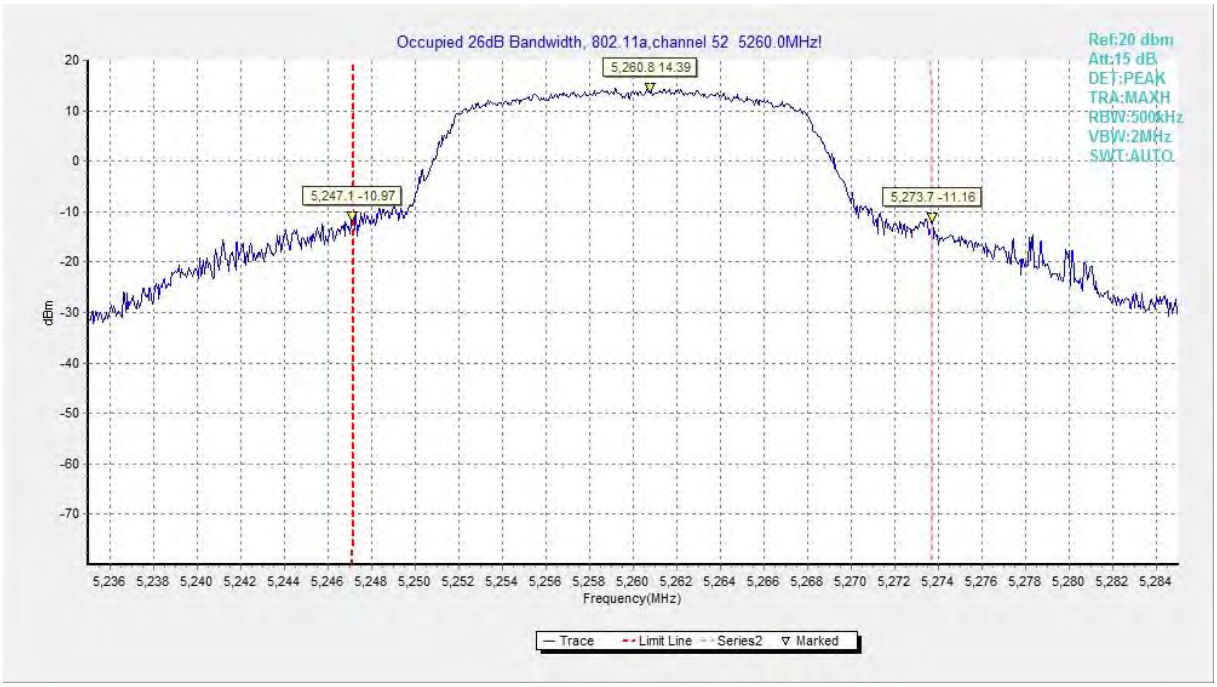


Fig.4 Occupied 26dB Bandwidth (802.11a, 5260MHz)

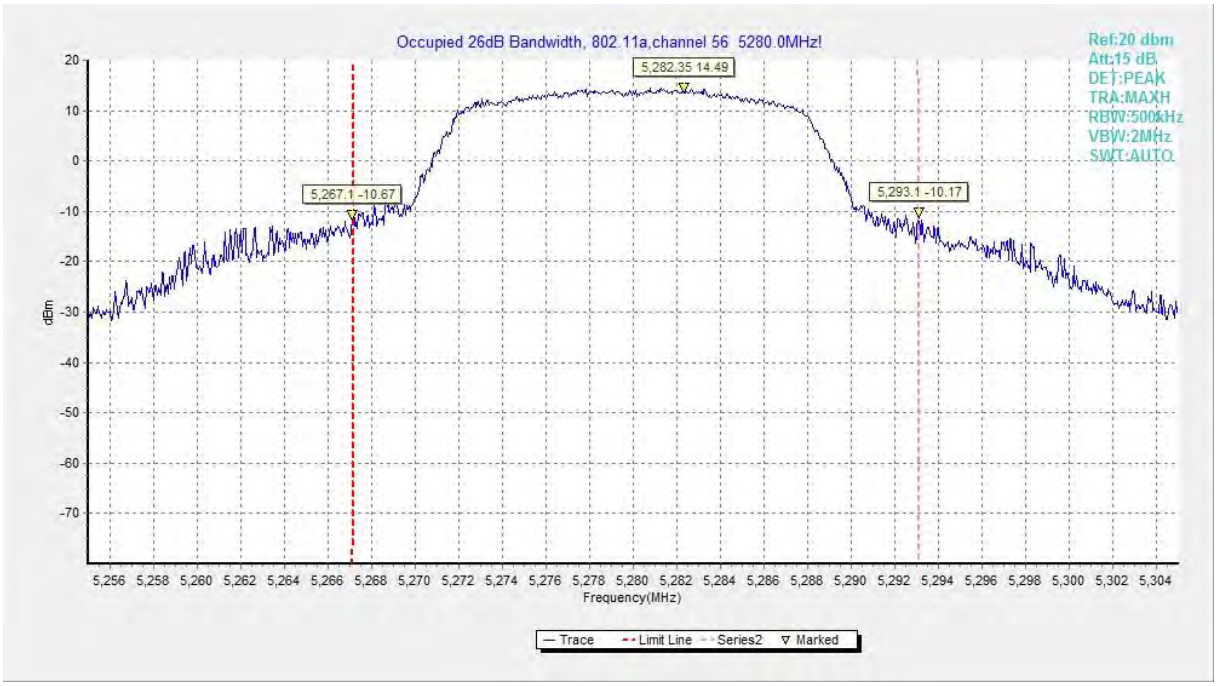


Fig.5 Occupied 26dB Bandwidth (802.11a, 5280MHz)

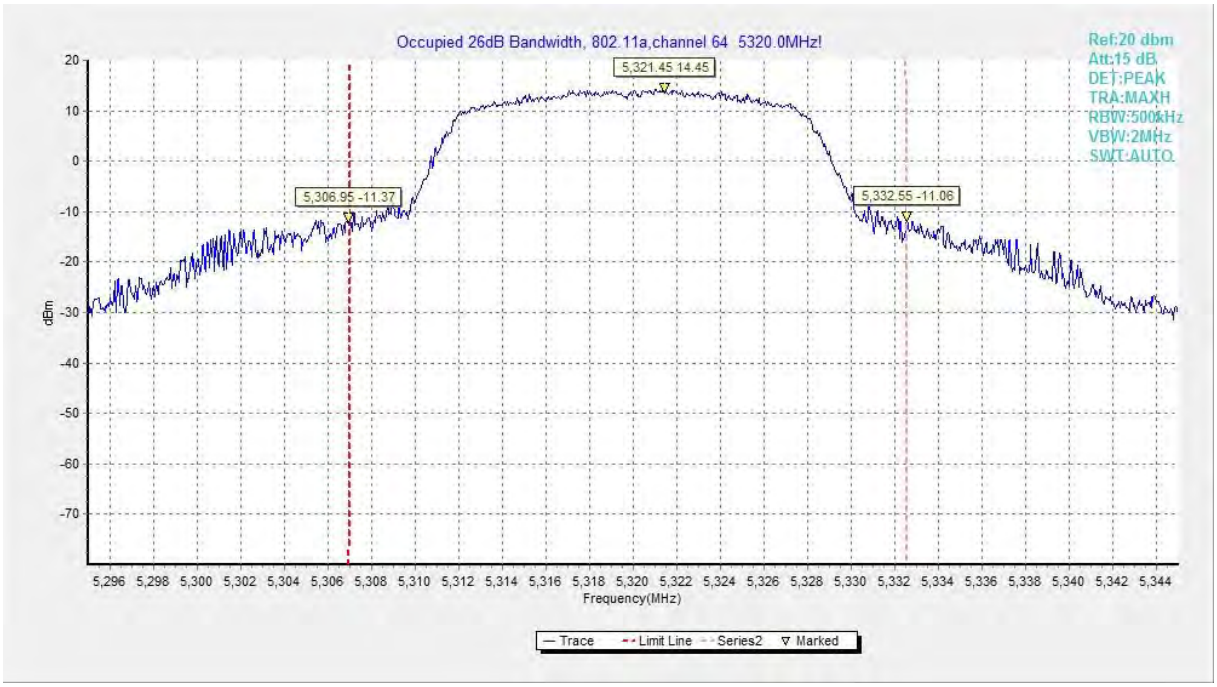


Fig.6 Occupied 26dB Bandwidth (802.11a, 5320MHz)

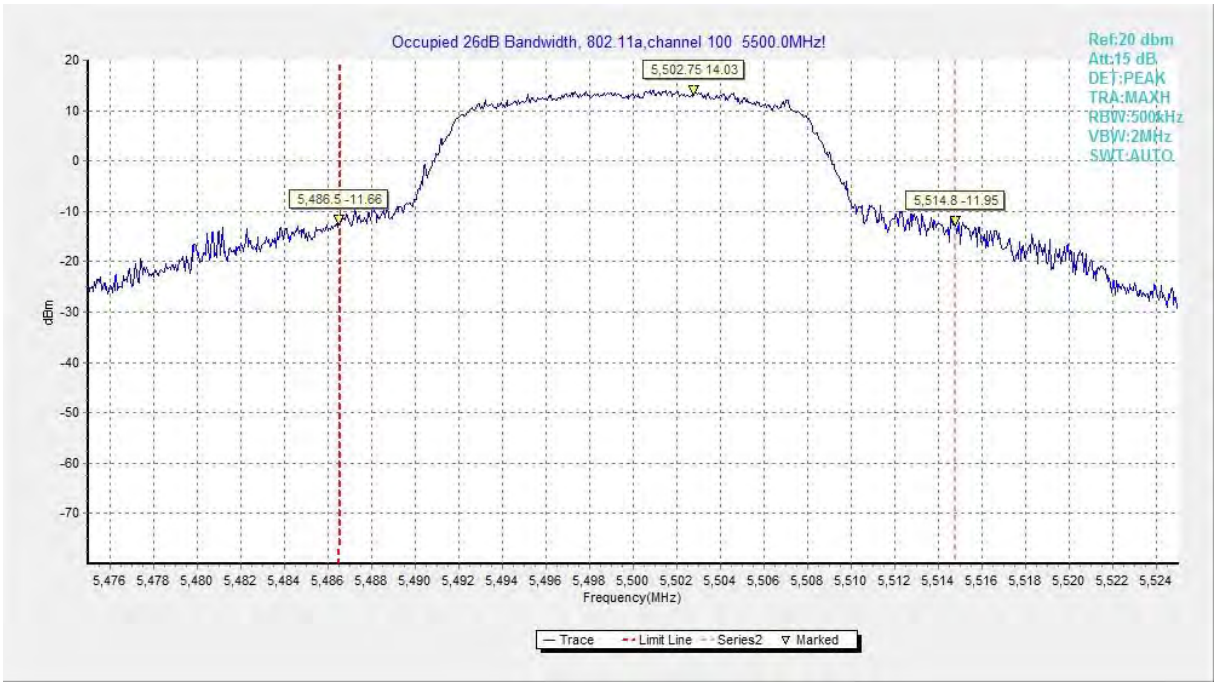


Fig.7 Occupied 26dB Bandwidth (802.11a, 5500MHz)

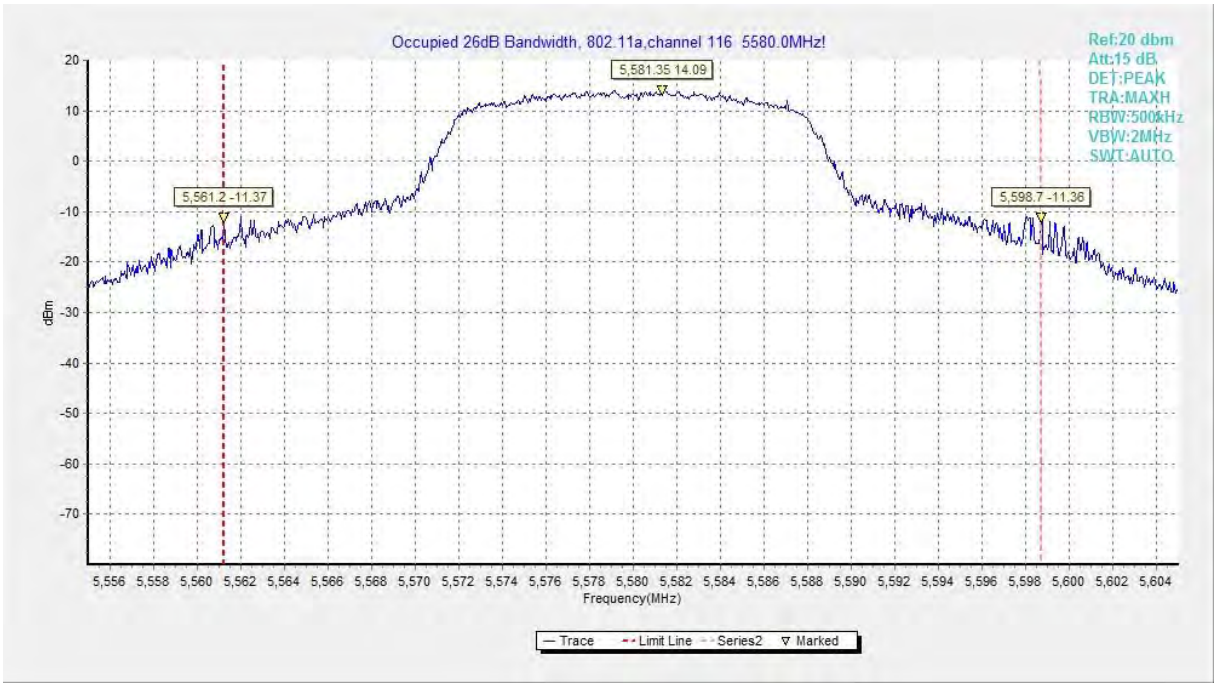


Fig.8 Occupied 26dB Bandwidth (802.11a, 5580MHz)

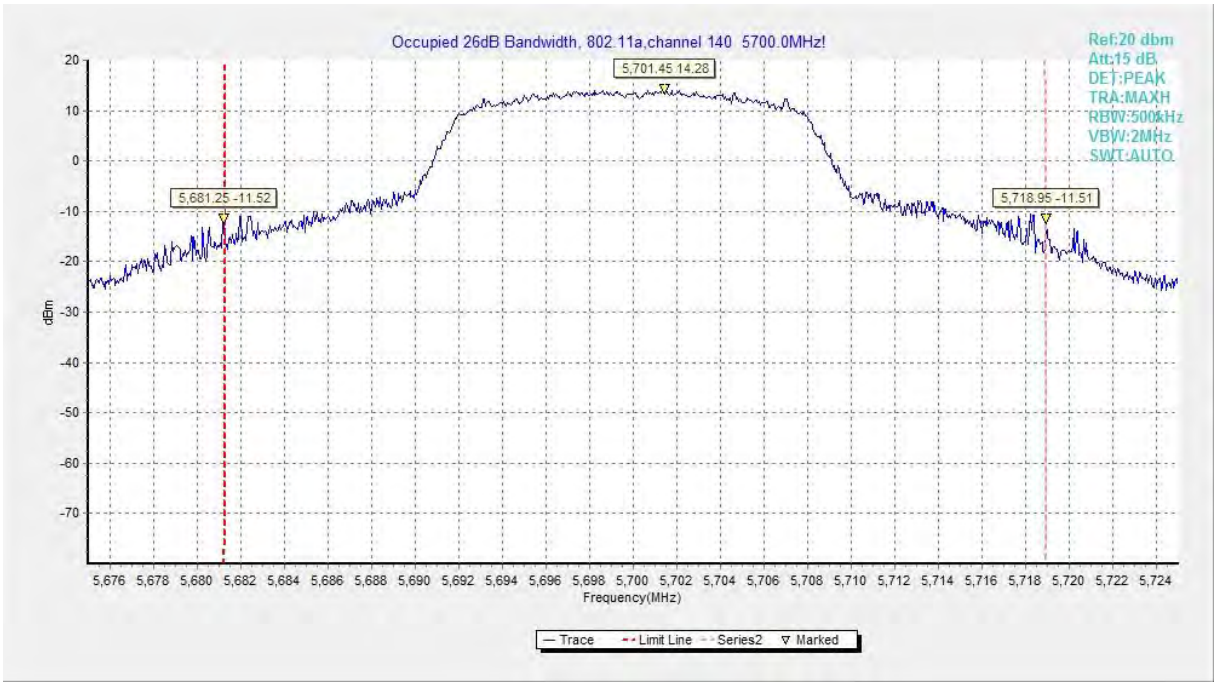


Fig.9 Occupied 26dB Bandwidth (802.11a, 5700MHz)

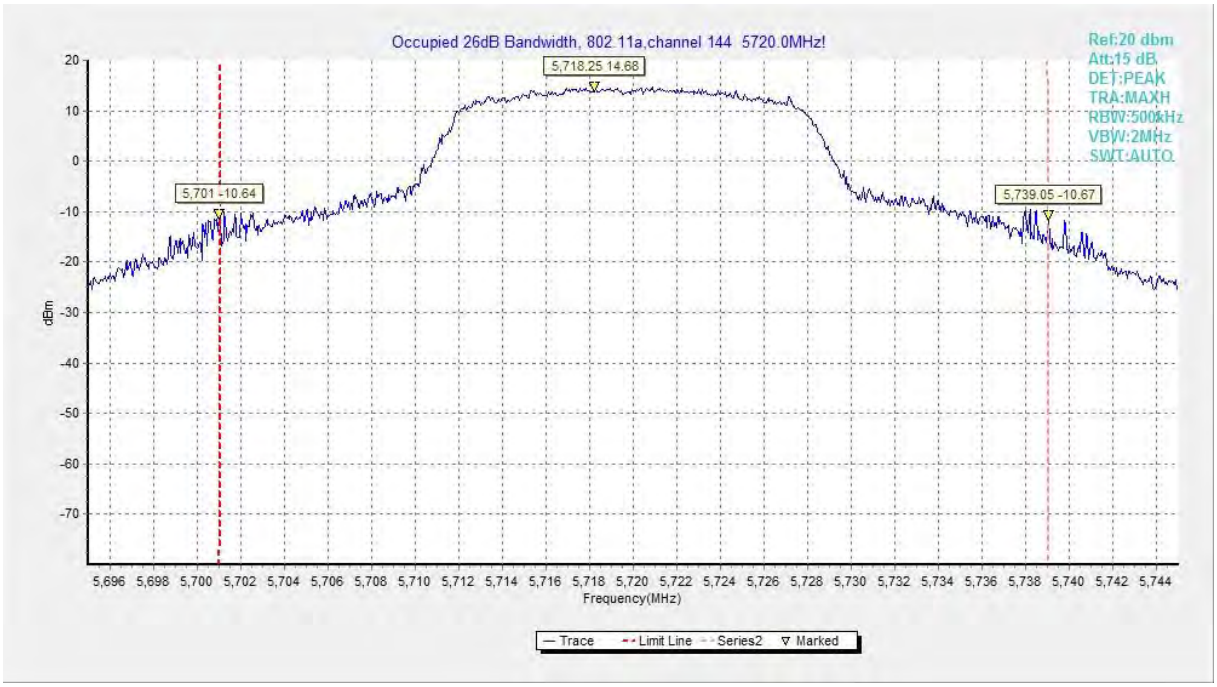


Fig.10 Occupied 26dB Bandwidth (802.11a, 5720MHz)

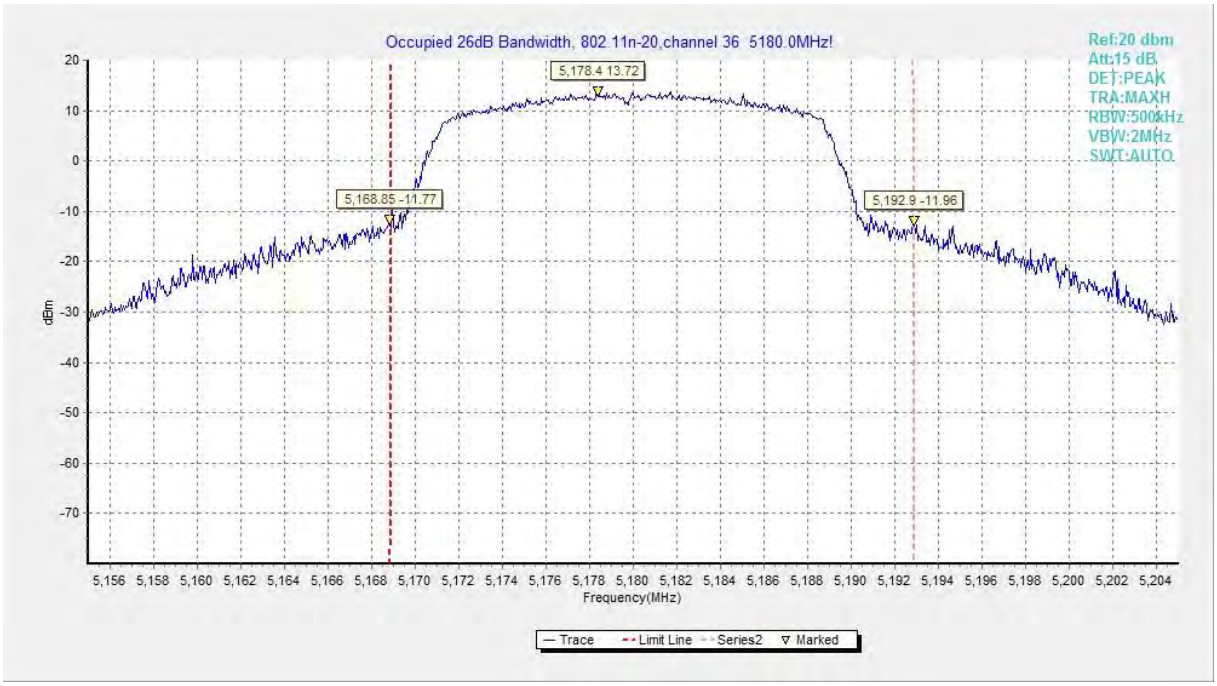


Fig.11 Occupied 26dB Bandwidth (802.11n-HT20, 5180MHz)

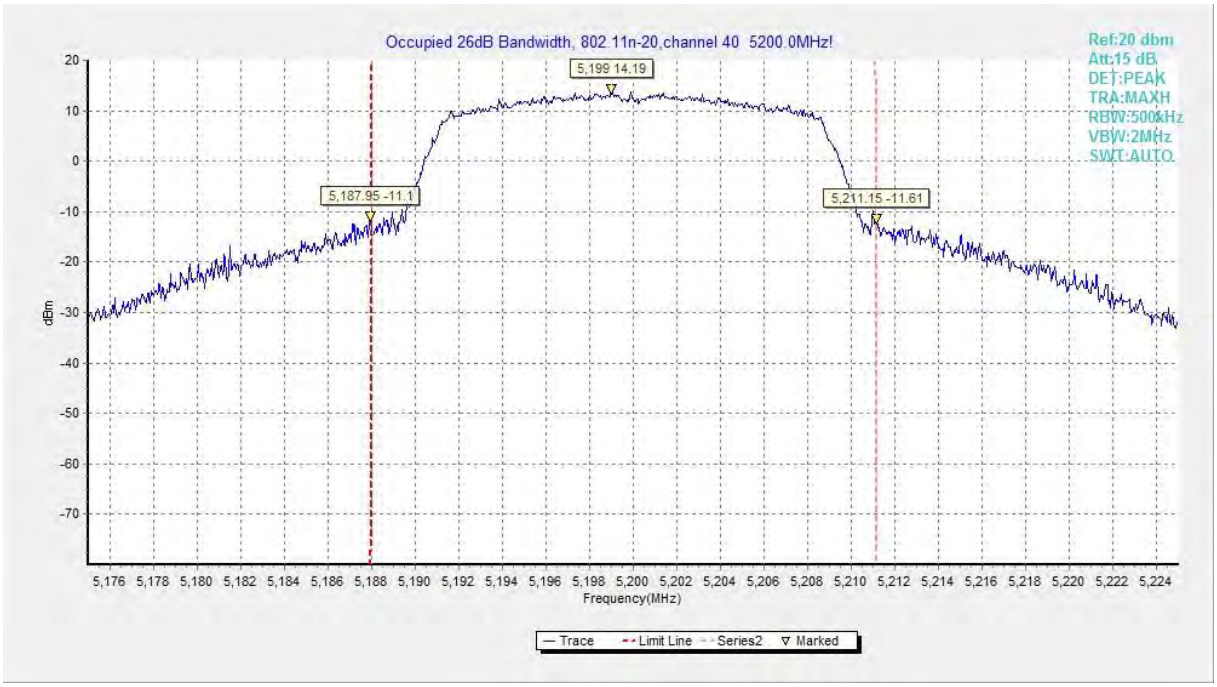


Fig.12 Occupied 26dB Bandwidth (802.11n-HT20, 5200MHz)

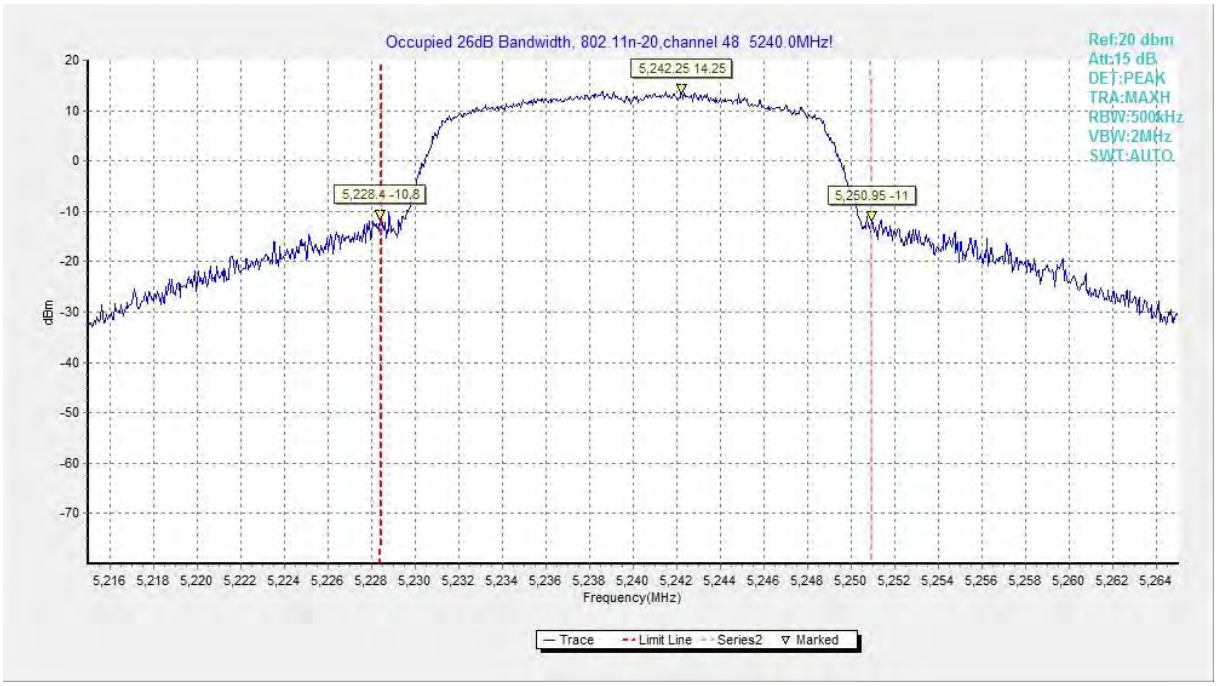


Fig.13 Occupied 26dB Bandwidth (802.11n-HT20, 5240MHz)

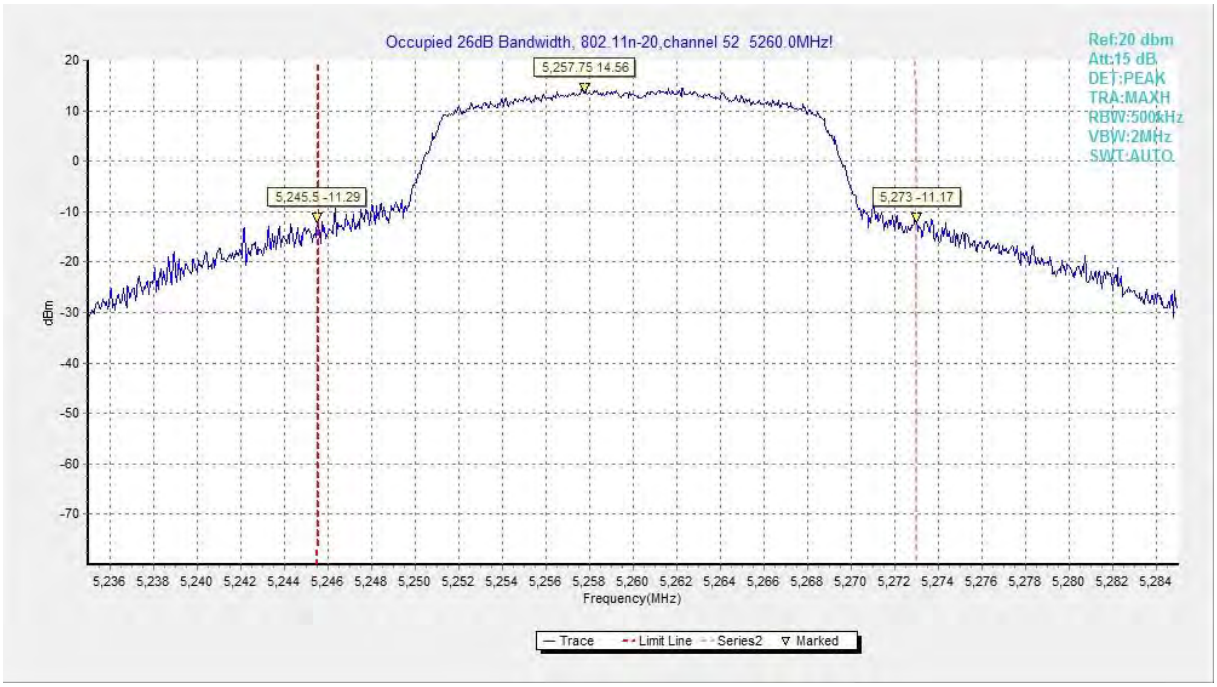


Fig.14 Occupied 26dB Bandwidth (802.11n-HT20, 5260MHz)

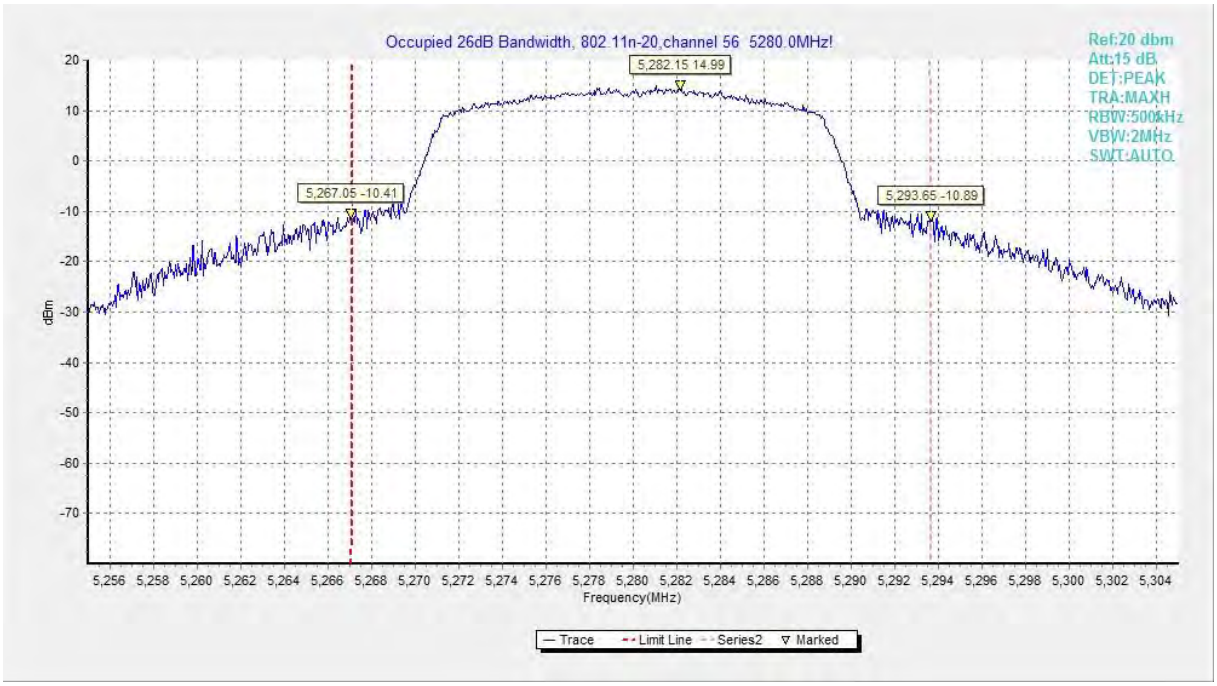


Fig.15 Occupied 26dB Bandwidth (802.11n-HT20, 5280MHz)

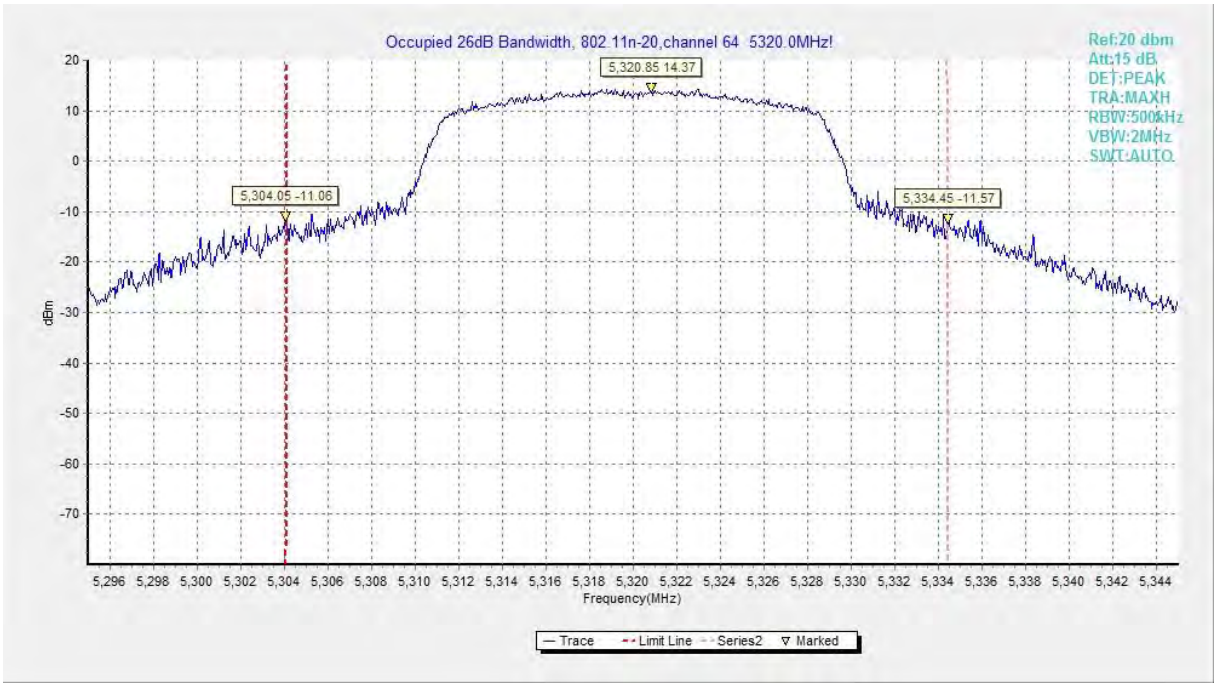


Fig.16 Occupied 26dB Bandwidth (802.11n-HT20, 5320MHz)

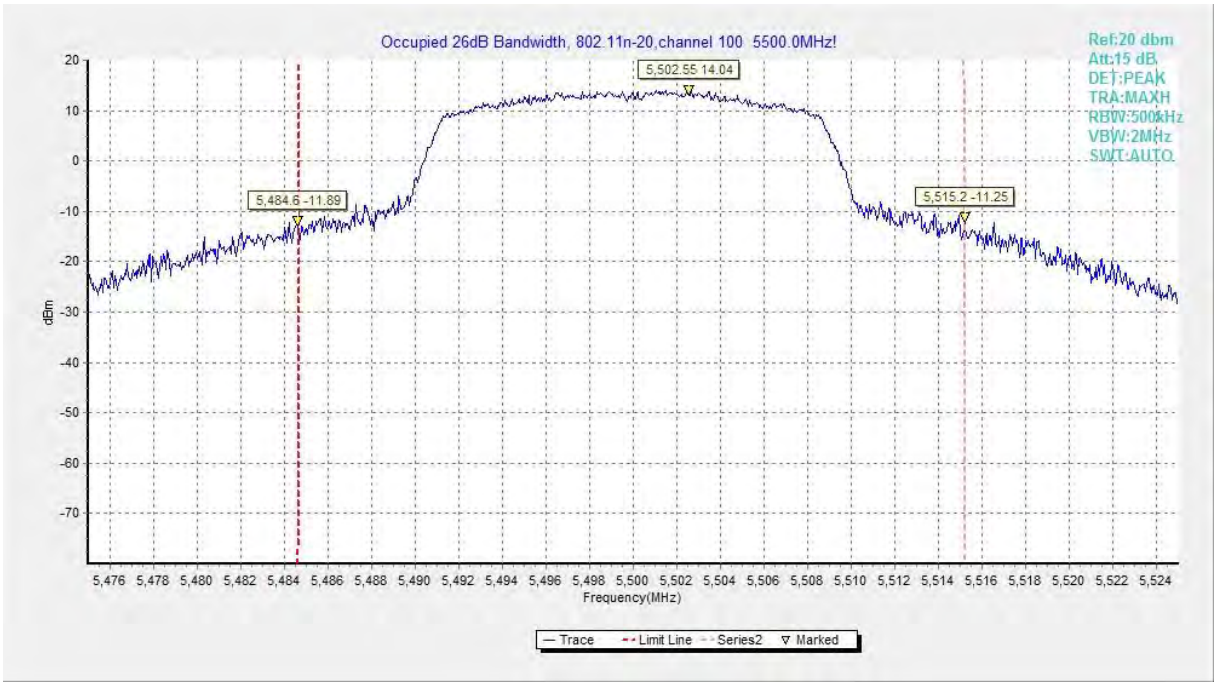


Fig.17 Occupied 26dB Bandwidth (802. 11n-HT20, 5500MHz)

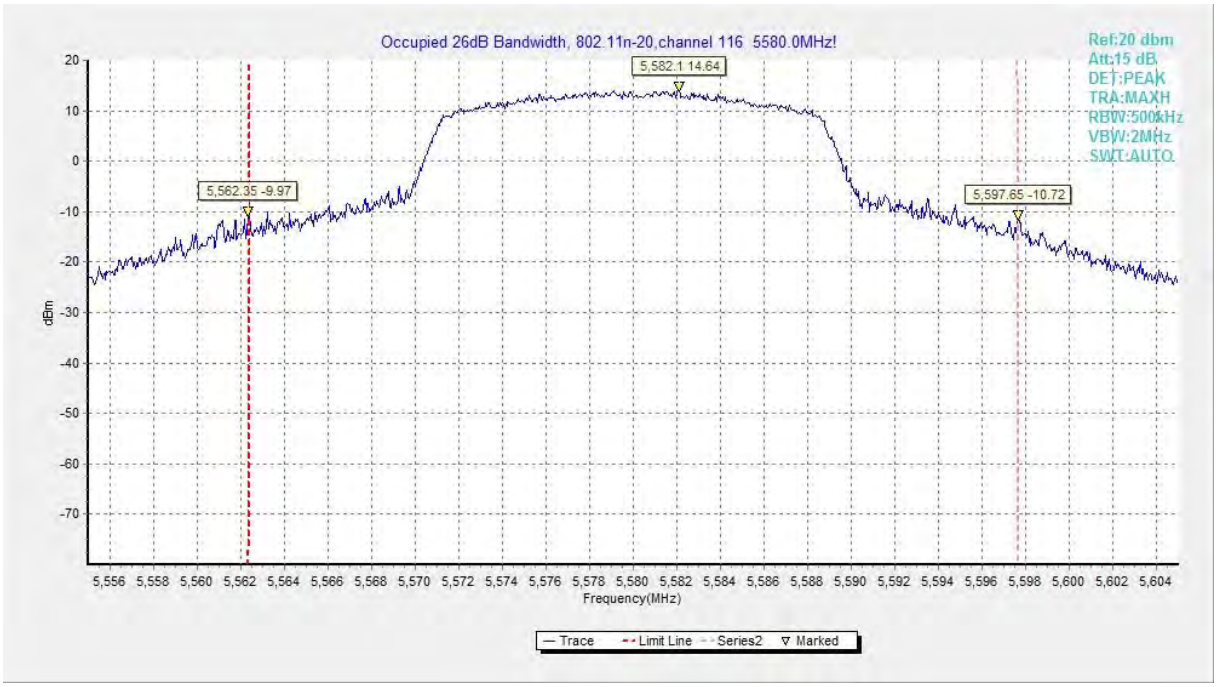


Fig.18 Occupied 26dB Bandwidth (802. 11n-HT20, 5580MHz)

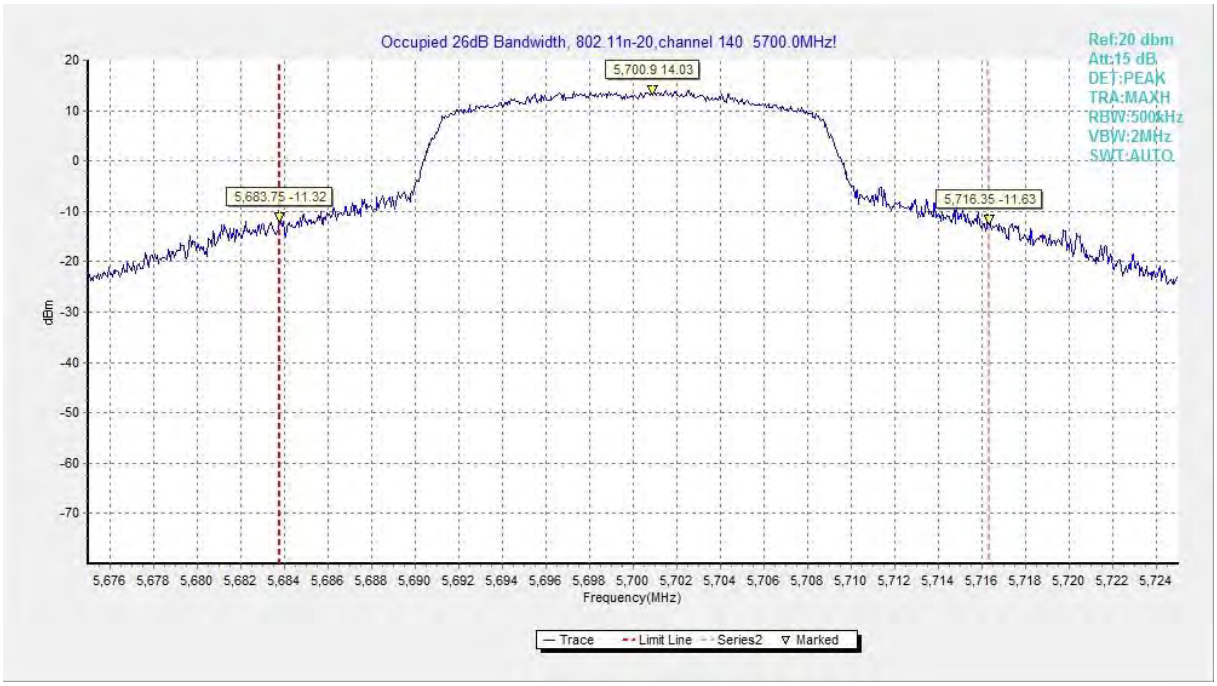


Fig.19 Occupied 26dB Bandwidth (802. 11n-HT20, 5700MHz)

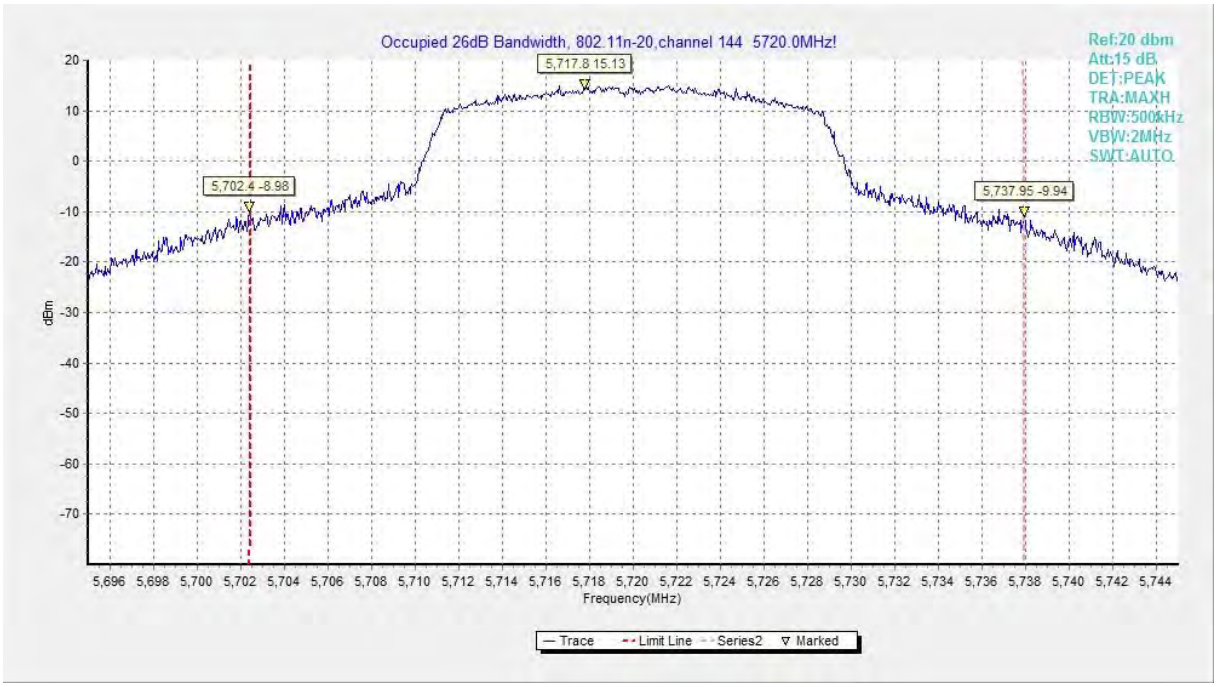


Fig.20 Occupied 26dB Bandwidth (802. 11n-HT20, 5720MHz)

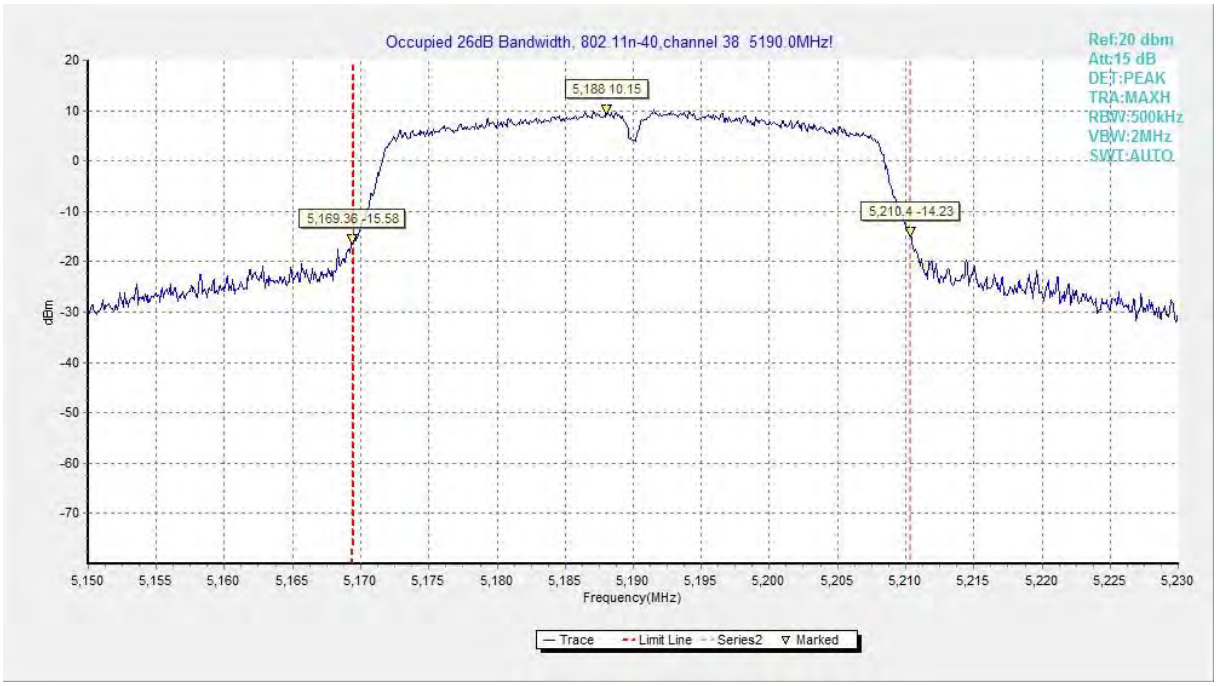


Fig.21 Occupied 26dB Bandwidth (802.11n-HT40, 5190MHz)

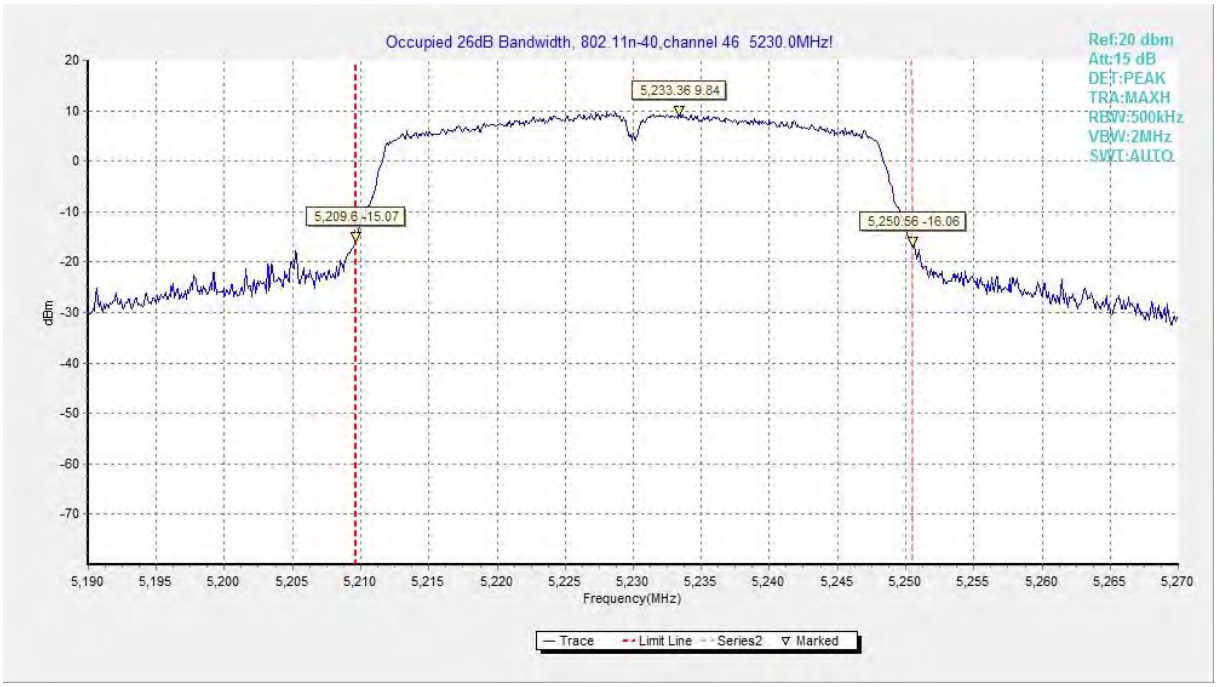


Fig.22 Occupied 26dB Bandwidth (802.11n-HT40, 5230MHz)

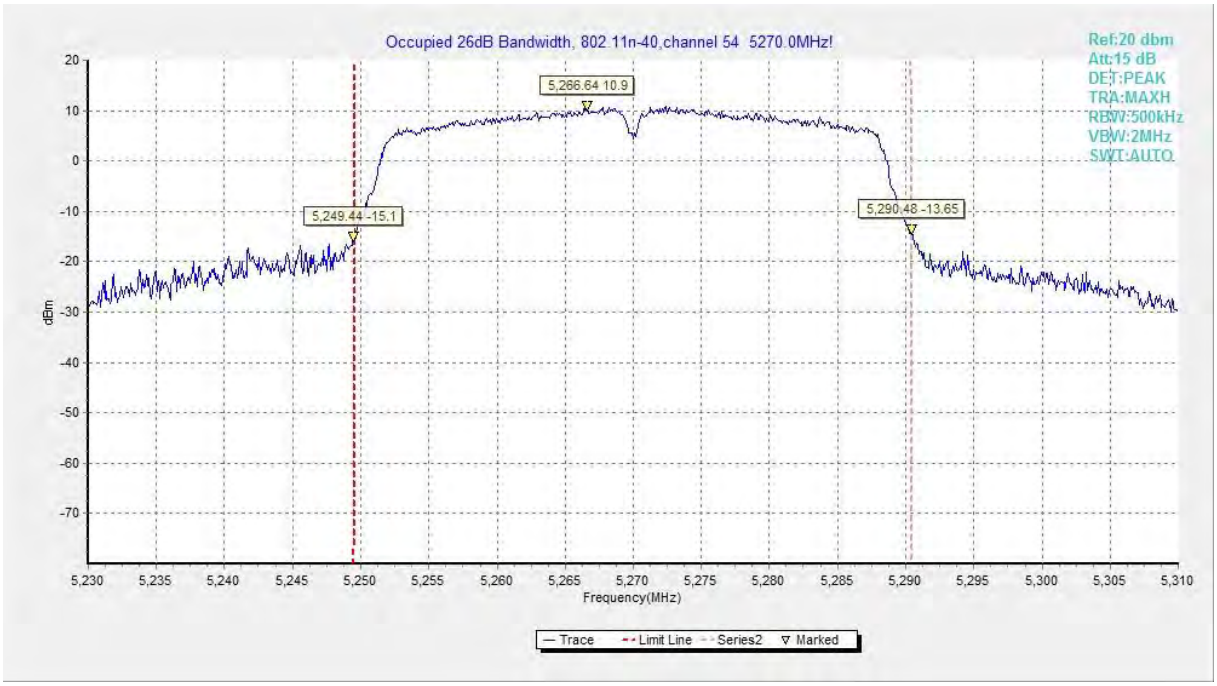


Fig.23 Occupied 26dB Bandwidth (802.11n-HT40, 5270MHz)

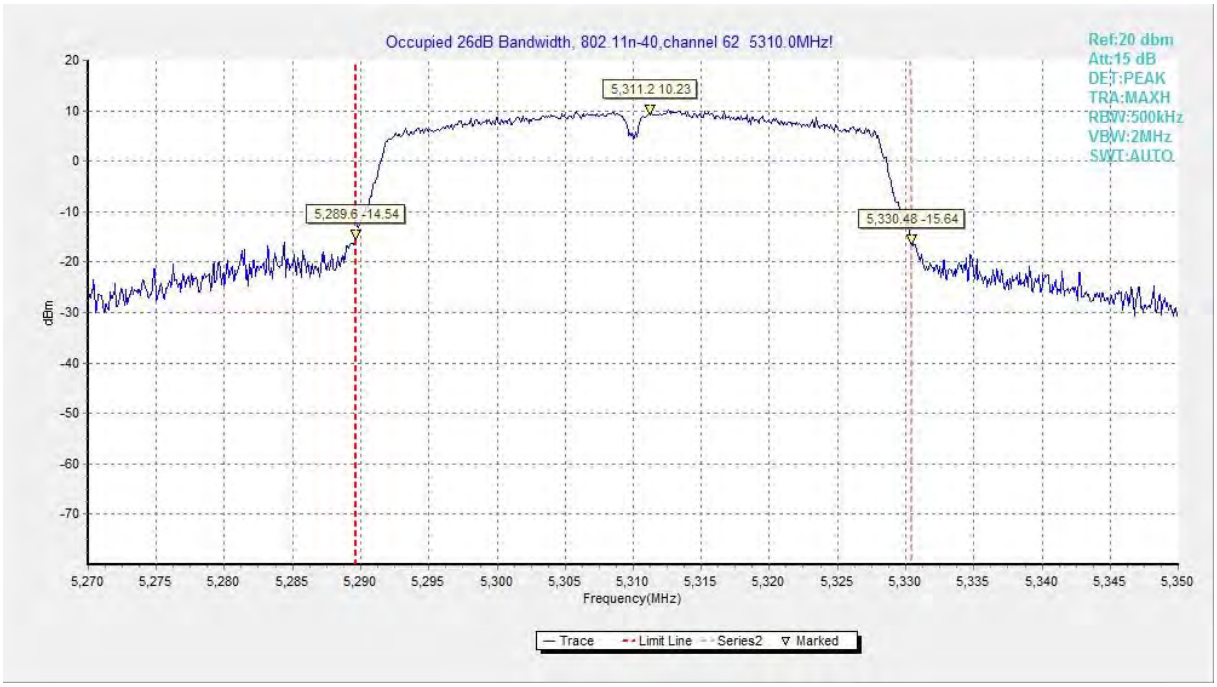


Fig.24 Occupied 26dB Bandwidth (802.11n-HT40, 5310MHz)

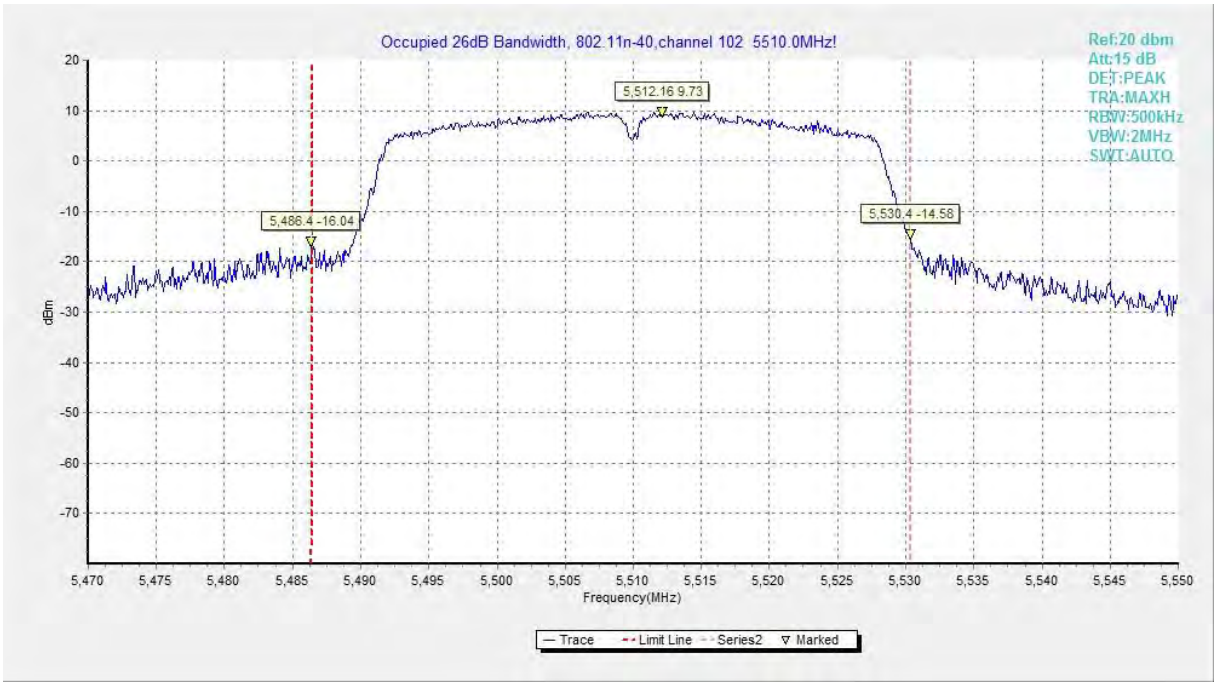


Fig.25 Occupied 26dB Bandwidth (802. 11n-HT40, 5510MHz)

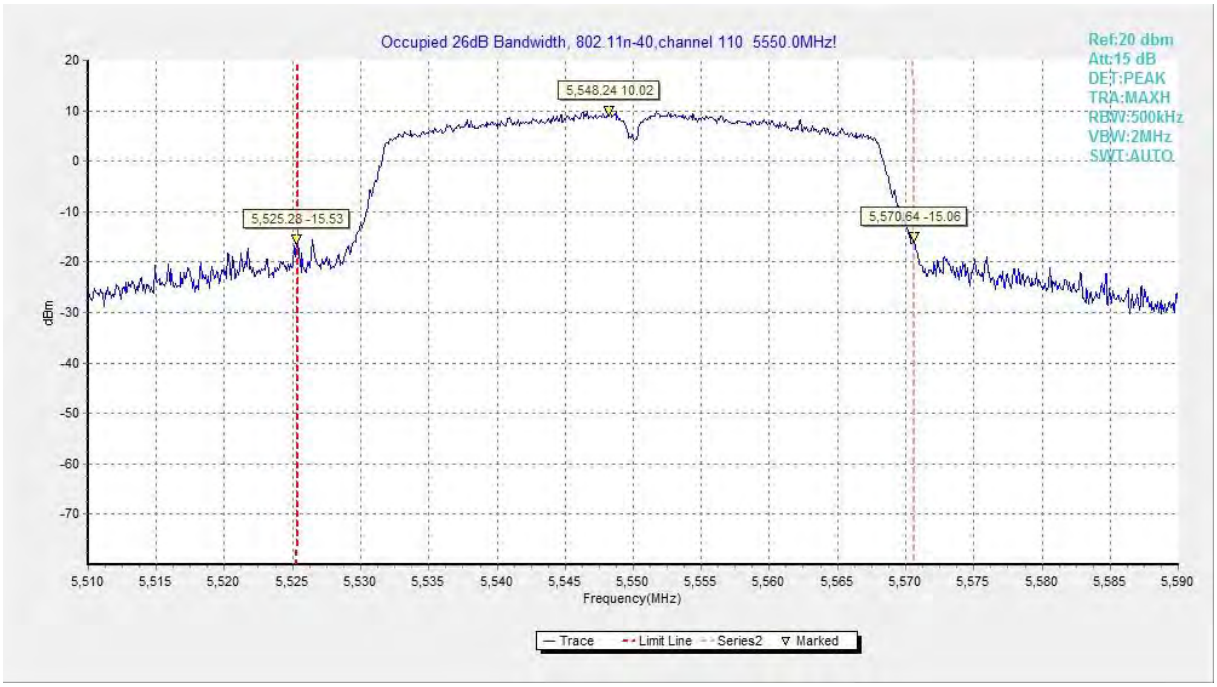


Fig.26 Occupied 26dB Bandwidth (802. 11n-HT40, 5590MHz)

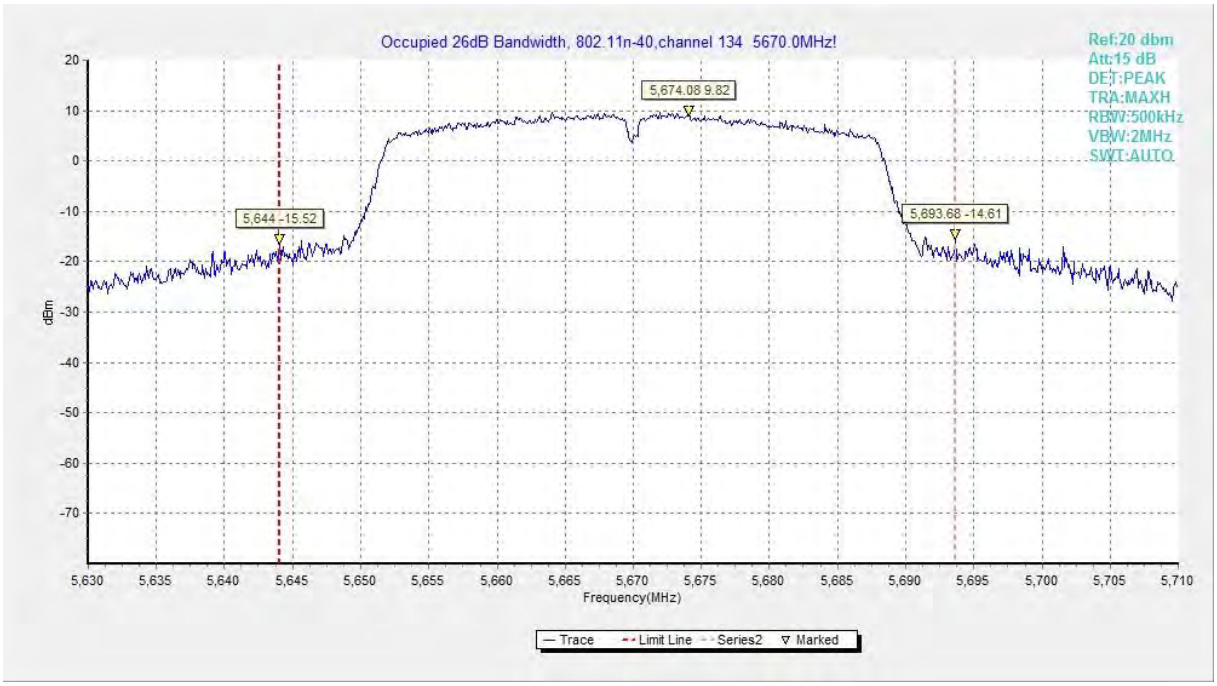


Fig.27 Occupied 26dB Bandwidth (802. 11n-HT40, 5670MHz)

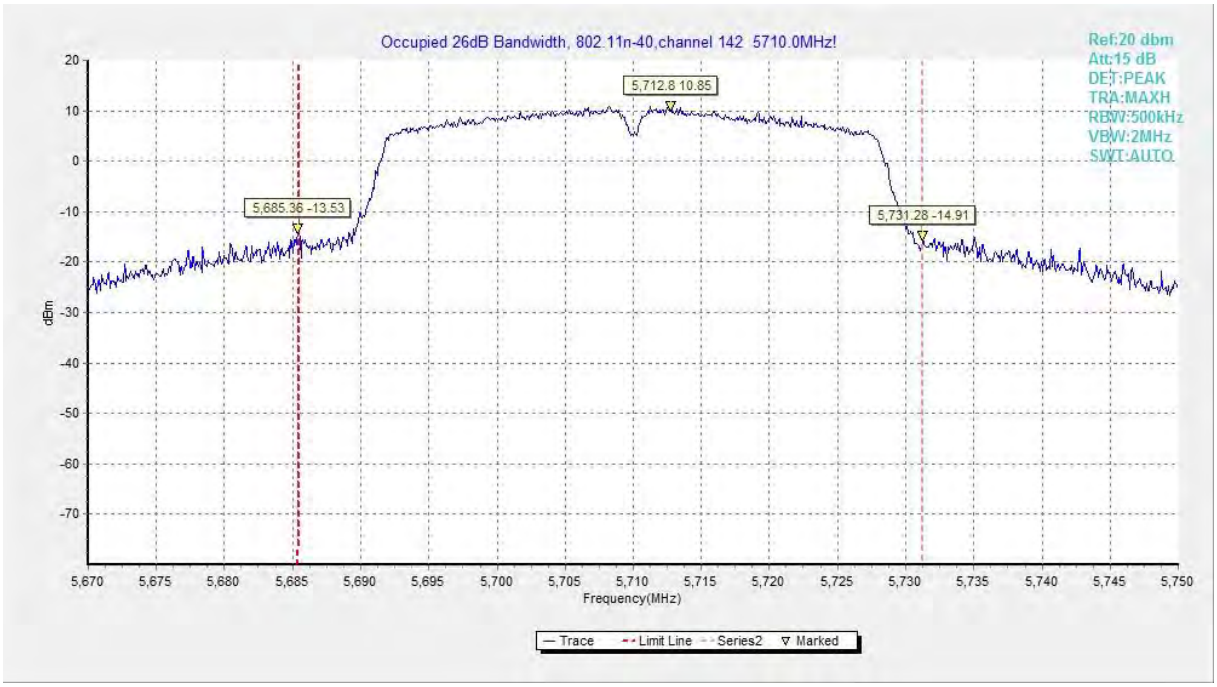


Fig.28 Occupied 26dB Bandwidth (802.11n-HT40, 5710MHz)

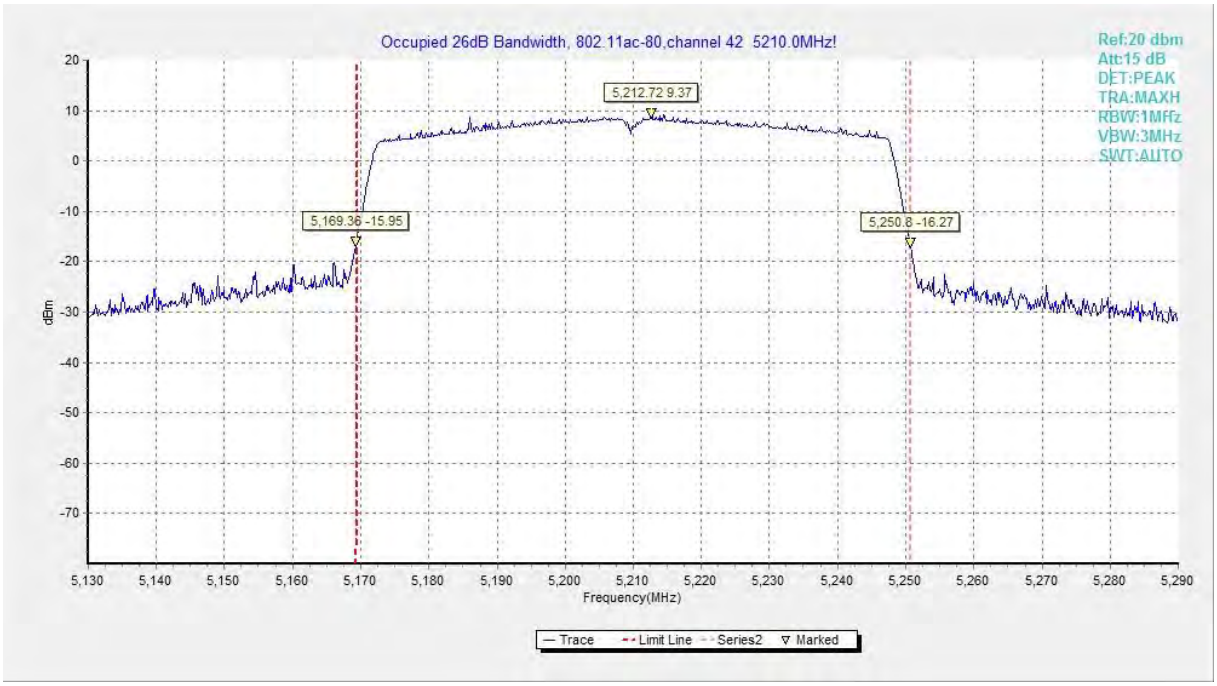


Fig.29 Occupied 26dB Bandwidth (802. 11ac-HT80, 5210MHz)

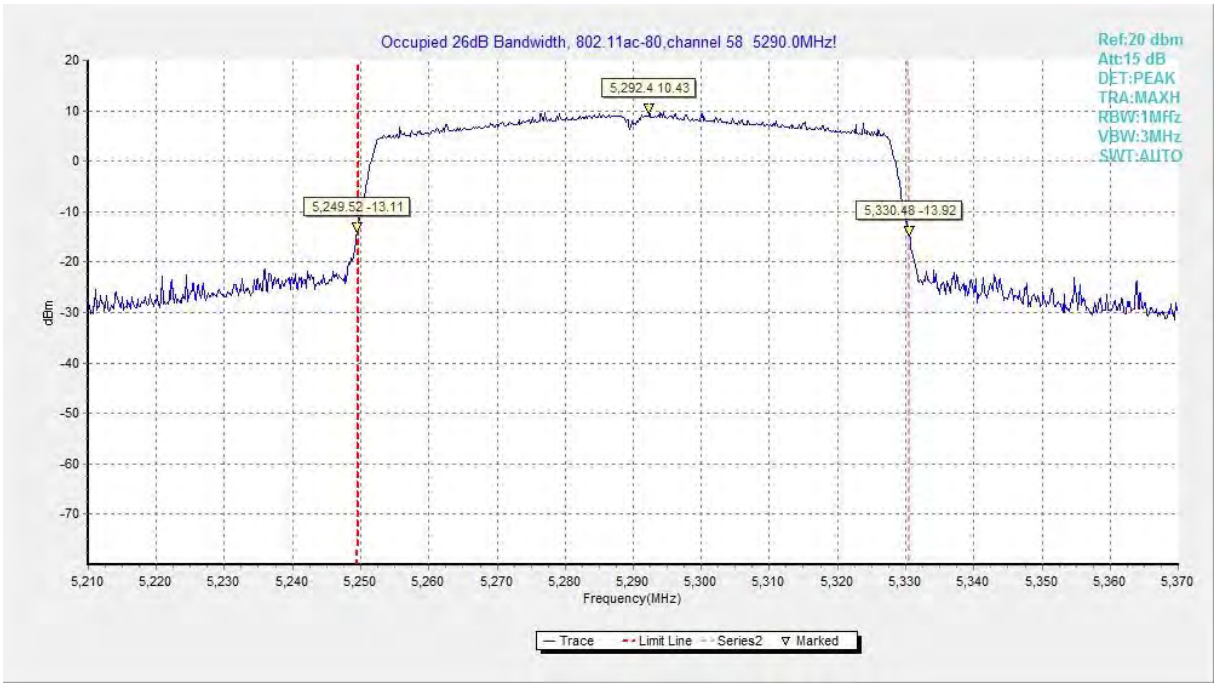


Fig.30 Occupied 26dB Bandwidth (802. 11ac-HT80, 5290MHz)

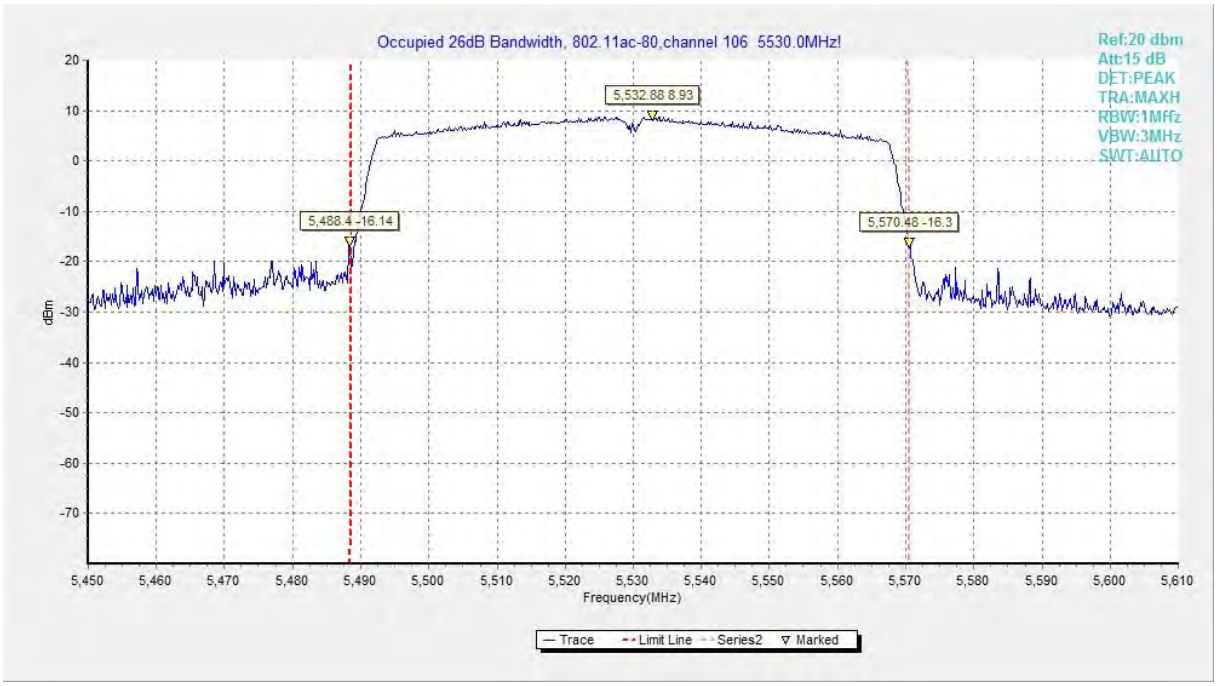


Fig.31 Occupied 26dB Bandwidth (802. 11ac-HT80, 5530MHz)

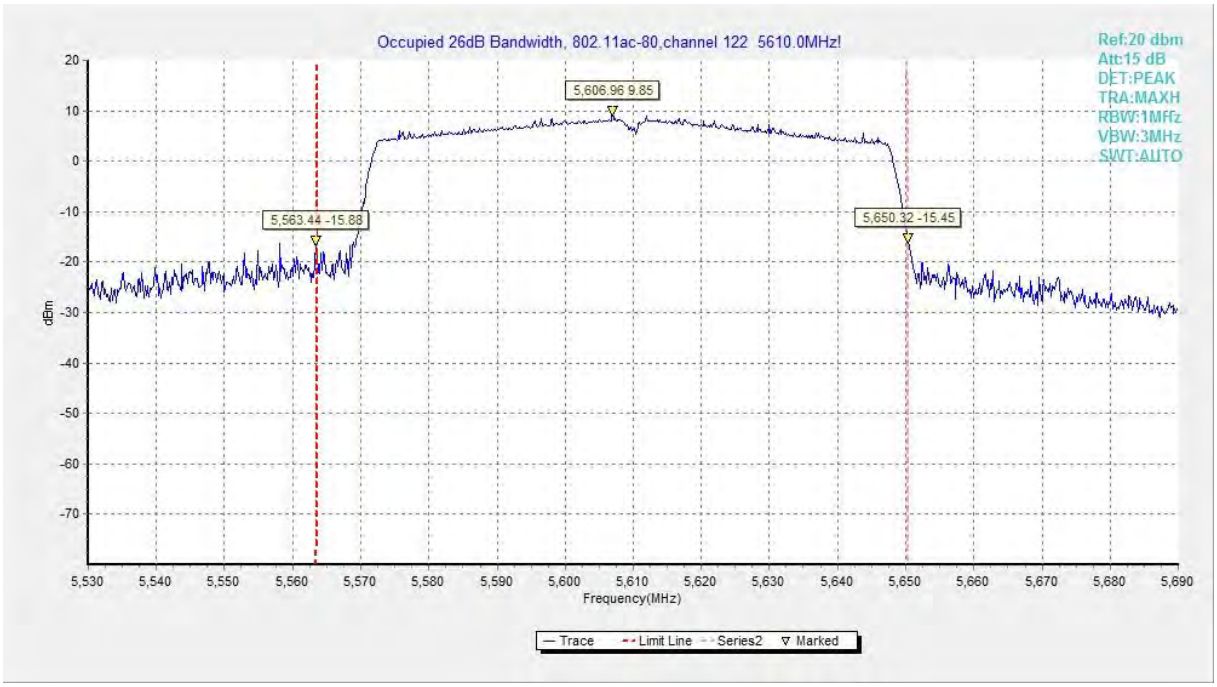


Fig.32 Occupied 26dB Bandwidth (802. 11ac-HT80, 5610MHz)

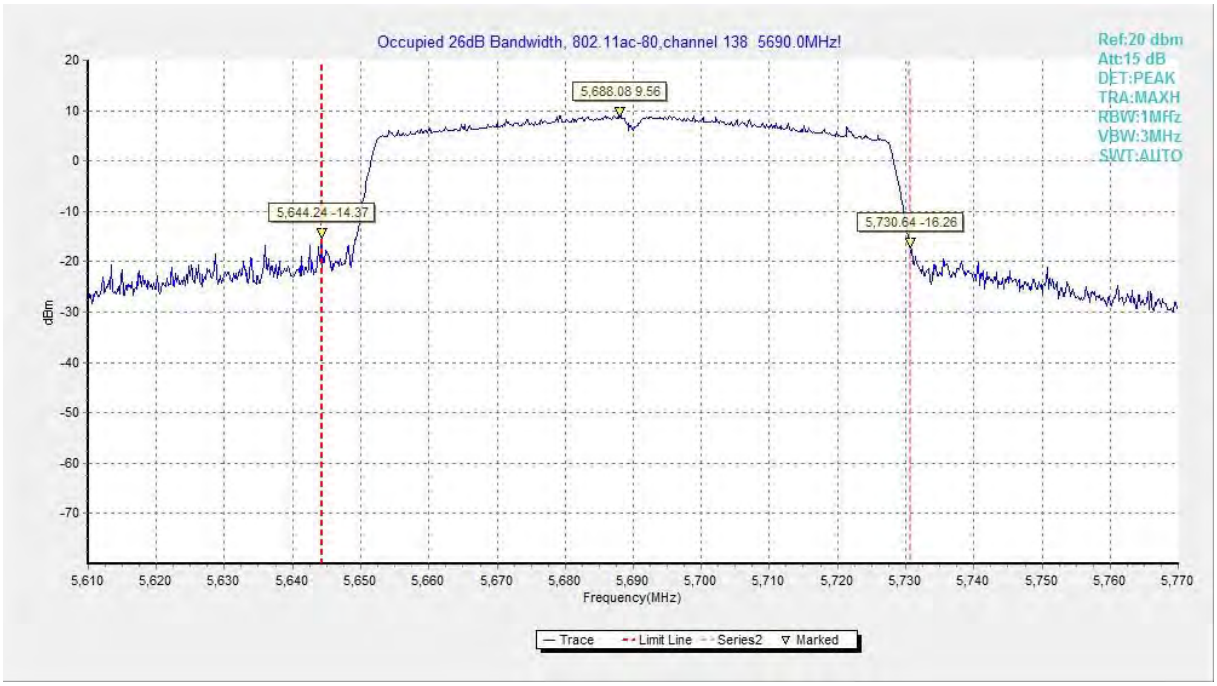


Fig.33 Occupied 26dB Bandwidth (802. 11ac-HT80, 5690MHz)

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.34	P
	5320 MHz	Fig.35	P
	5500 MHz	Fig.36	P
	5700 MHz	Fig.37	P
802.11n 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 HT20	5180 MHz	Fig.46	P
	5320 MHz	Fig.47	P
	5500 MHz	Fig.48	P
	5700 MHz	Fig.49	P
802.11ac HT40	5190 MHz	Fig.50	P
	5310 MHz	Fig.51	P
	5510 MHz	Fig.52	P
	5670 MHz	Fig.53	P
802.11ac HT80	5210MHz	Fig.54	P
	5290MHz	Fig.55	P
	5530MHz	Fig.56	P

	5610MHz	Fig.57	P

Conclusion: PASS

Test graphs as below:

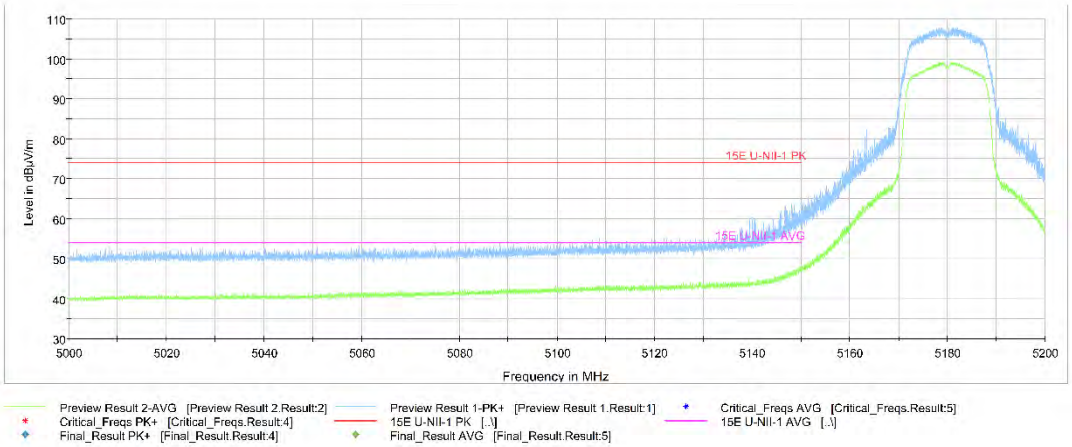


Fig.34 Band Edges (802.11a Ch36, 5180MHz)

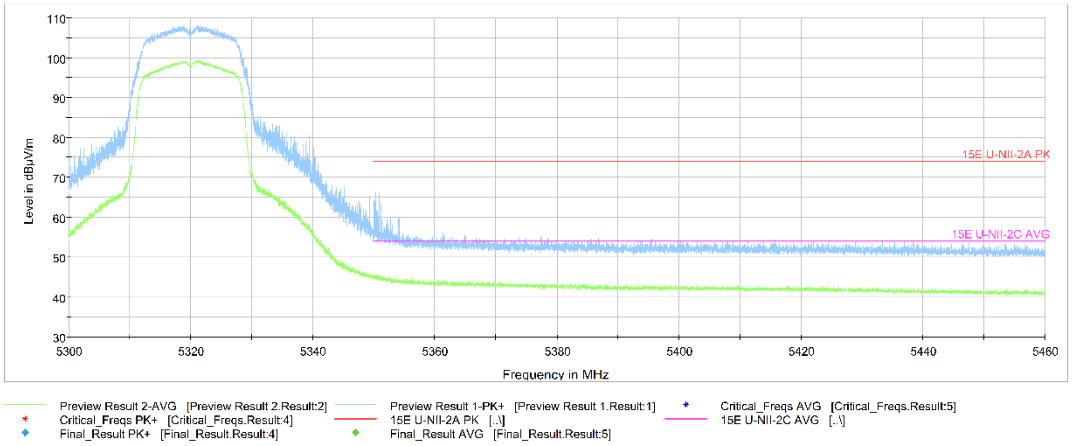


Fig.35 Band Edges (802.11a Ch64, 5320MHz)

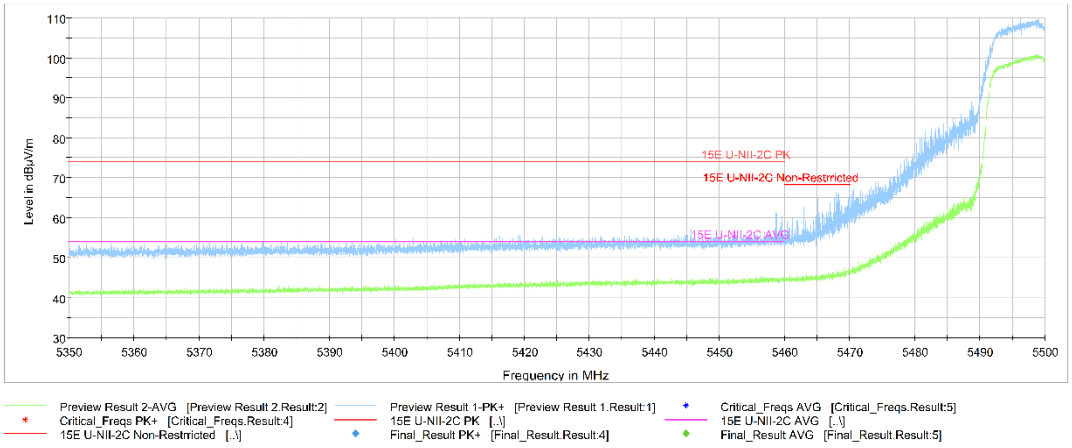


Fig.36 Band Edges (802.11a Ch100, 5500MHz)

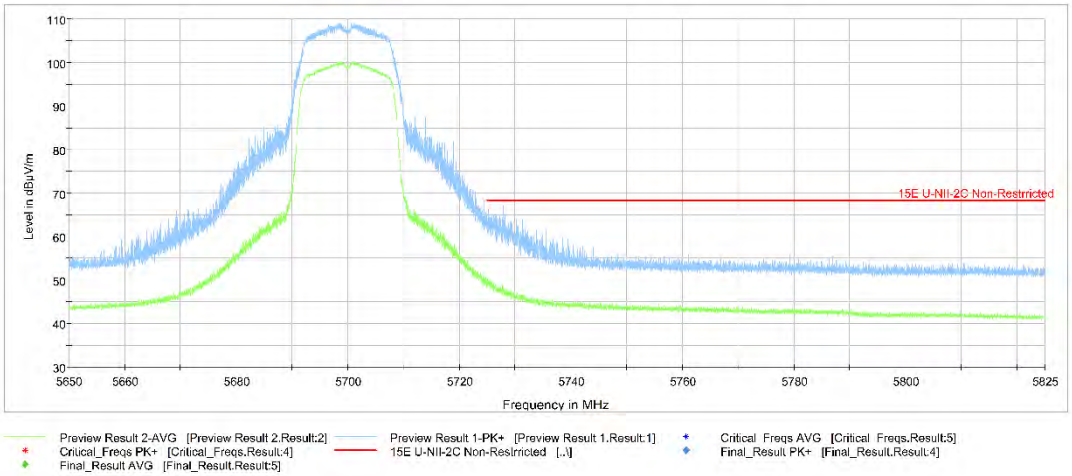


Fig.37 Band Edges (802.11a Ch140, 5700MHz)

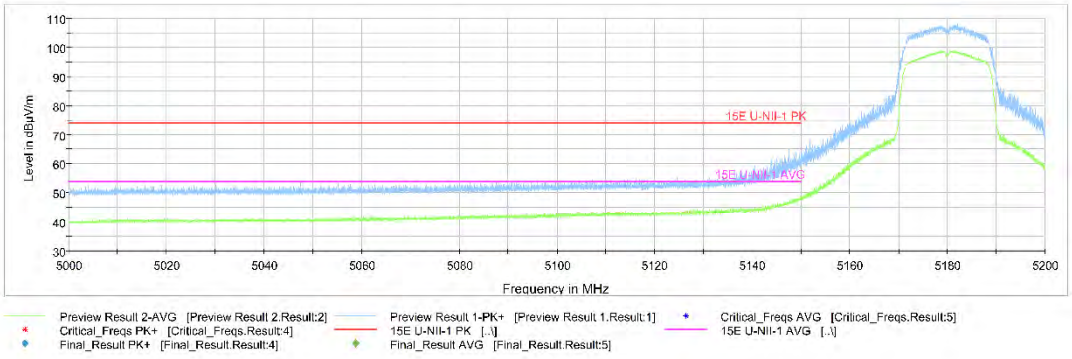


Fig.38 Band Edges (802.11n-HT20 Ch36, 5180MHz)

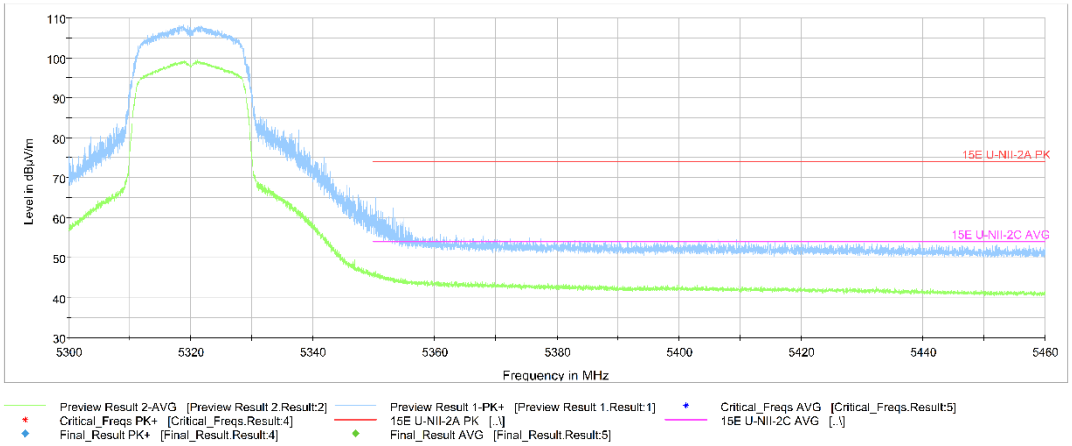


Fig.39 Band Edges (802.11n-HT20 Ch64, 5320MHz)

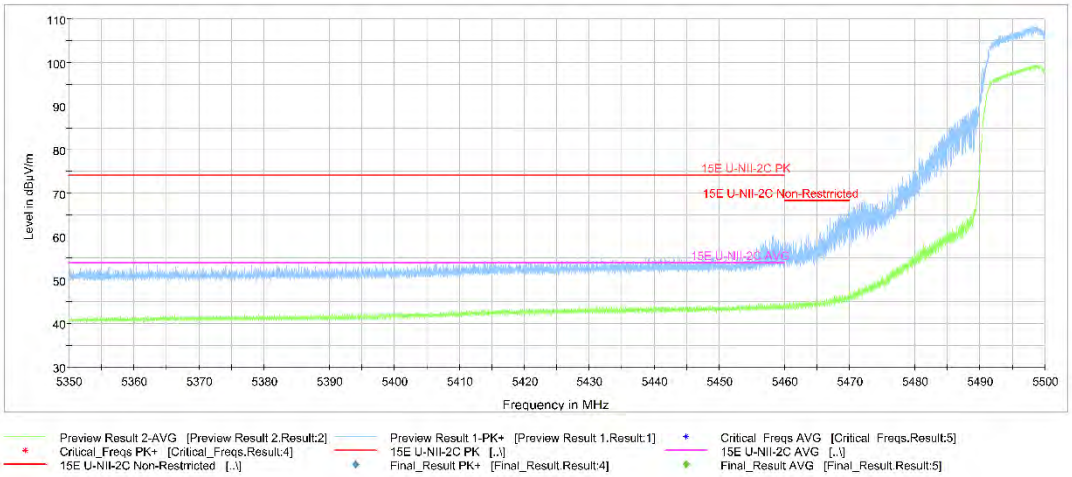


Fig.40 Band Edges (802.11n-HT20 Ch100, 5500MHz)

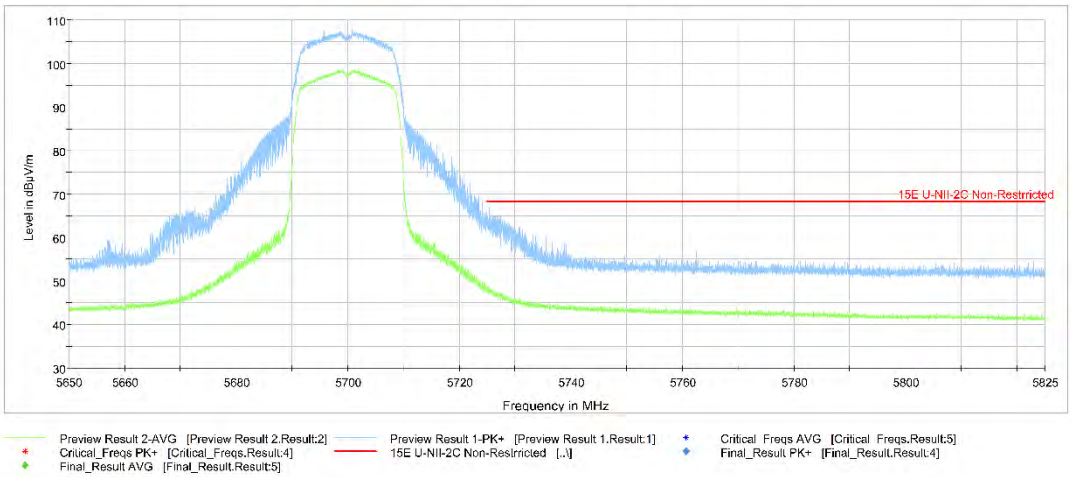


Fig.41 Band Edges (802.11n-HT20 Ch140, 5700MHz)

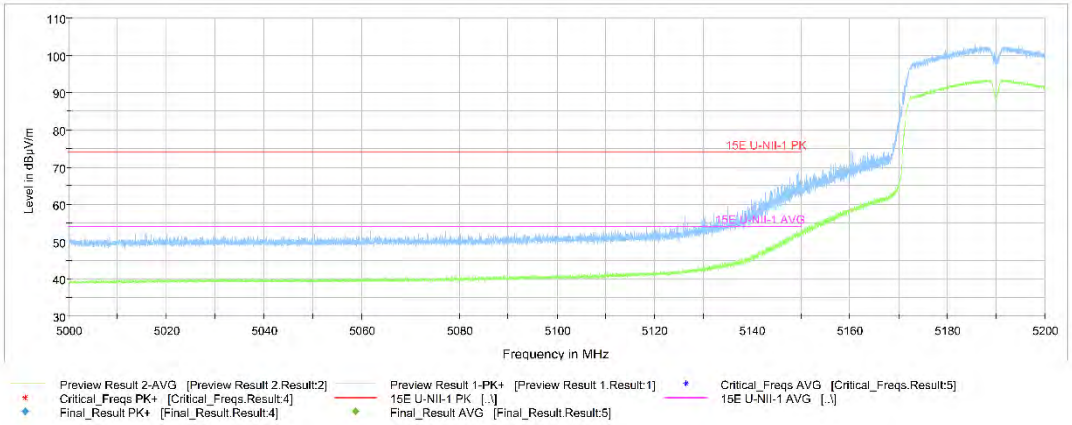


Fig.42 Band Edges (802.11n-HT40 Ch38, 5190MHz)

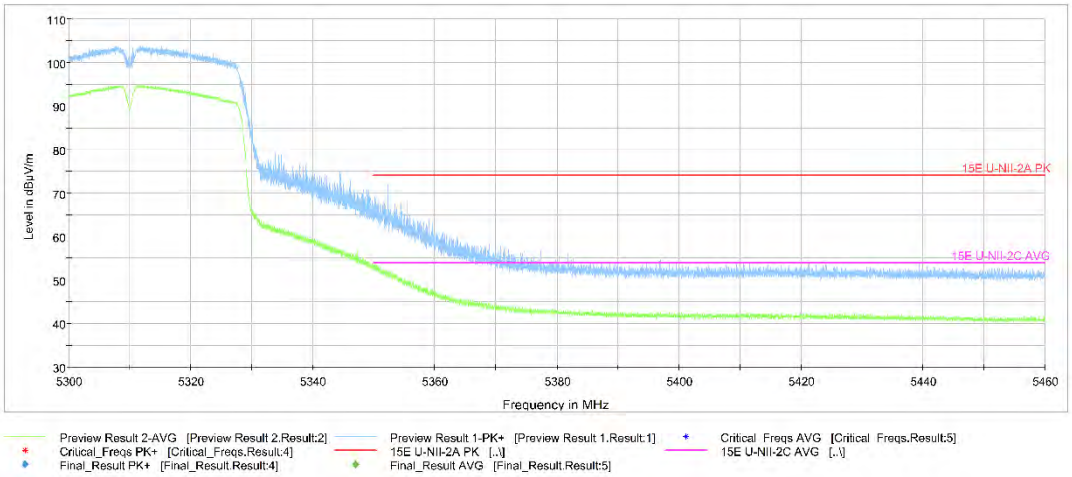


Fig.43 Band Edges (802.11n-HT40 Ch62, 5310MHz)

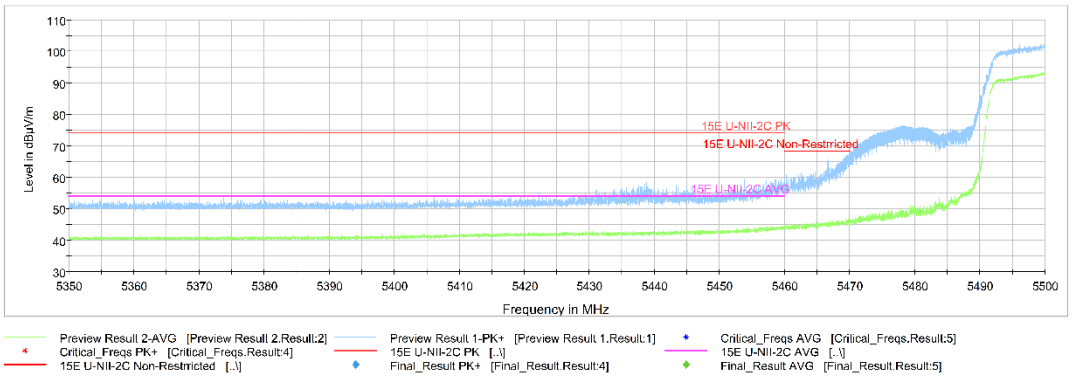


Fig.44 Band Edges (802.11n-HT40 Ch102, 5510MHz)

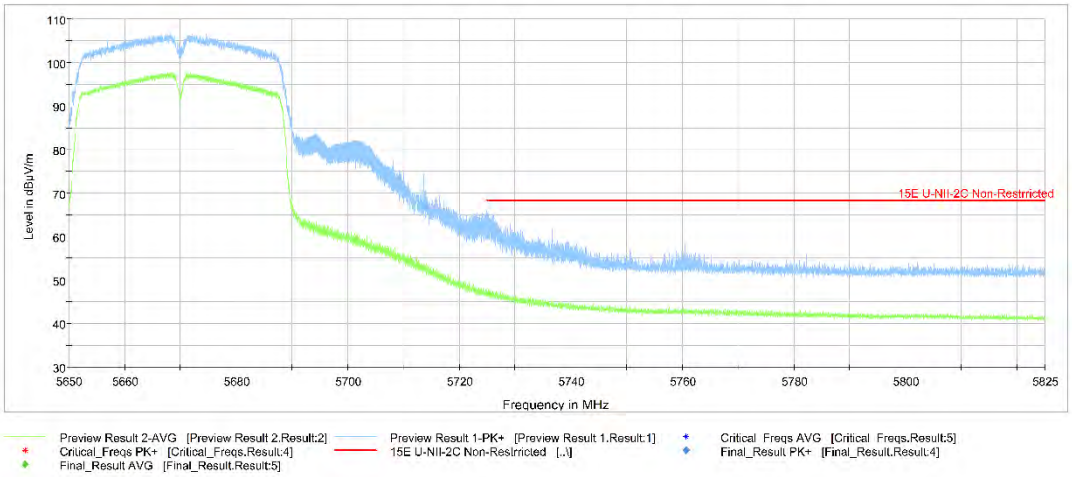


Fig.45 Band Edges (802.11n-HT40 Ch134, 5670MHz)

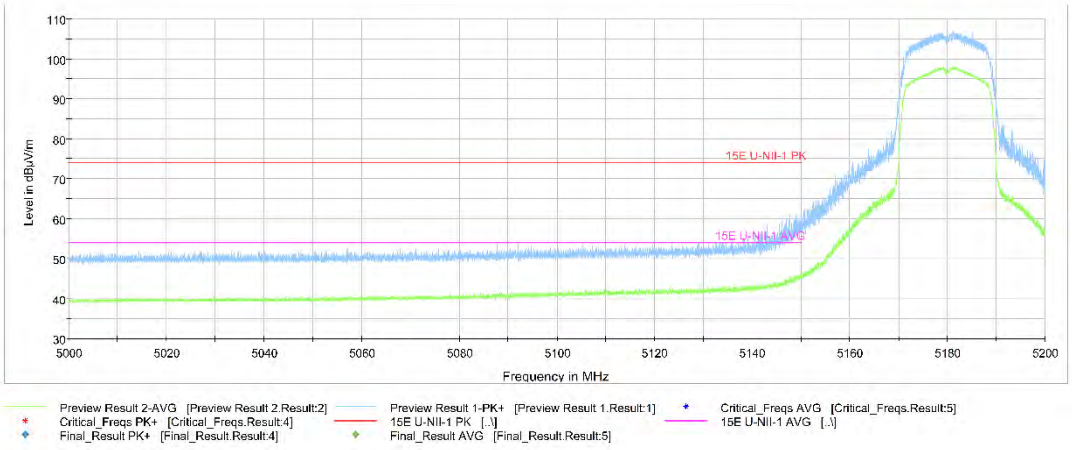


Fig.46 Band Edges (802.11ac-HT20 Ch36, 5180MHz)

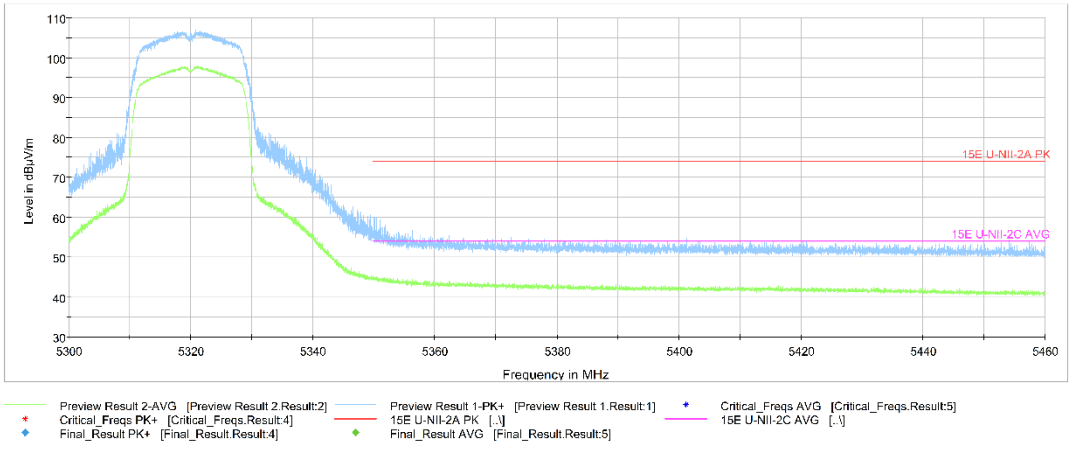


Fig.47 Band Edges (802.11ac-HT20 Ch64, 5320MHz)

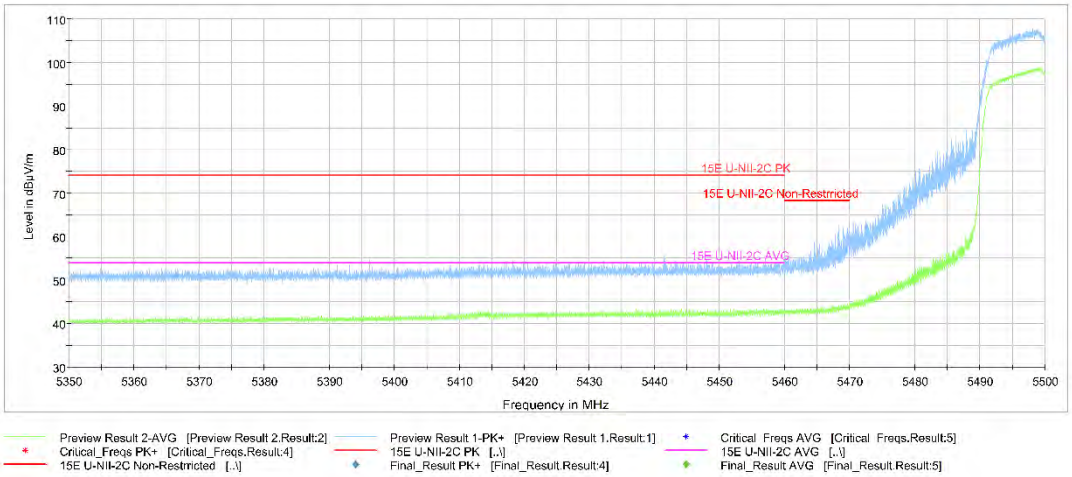


Fig.48 Band Edges (802.11ac-HT20 Ch100, 5500MHz)

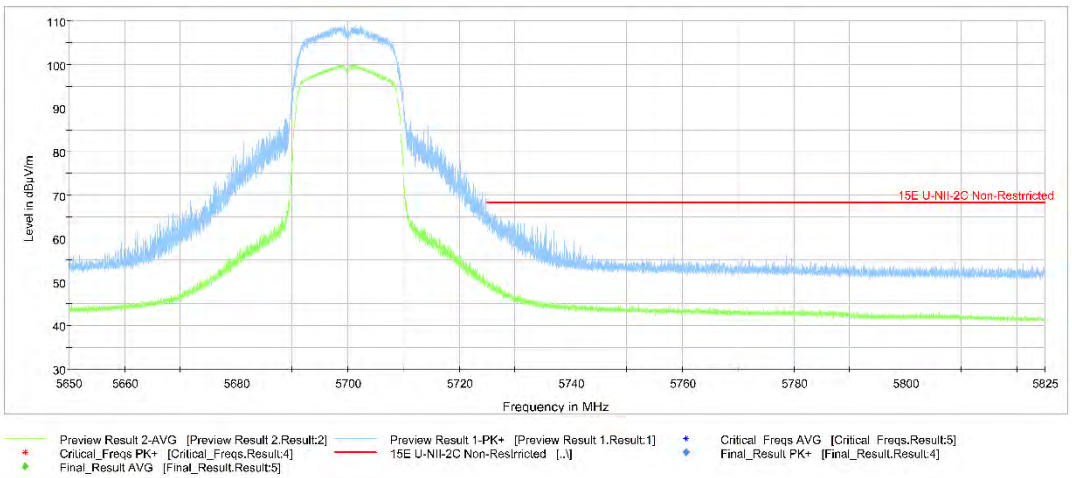


Fig.49 Band Edges (802.11ac-HT20 Ch140, 5700MHz)

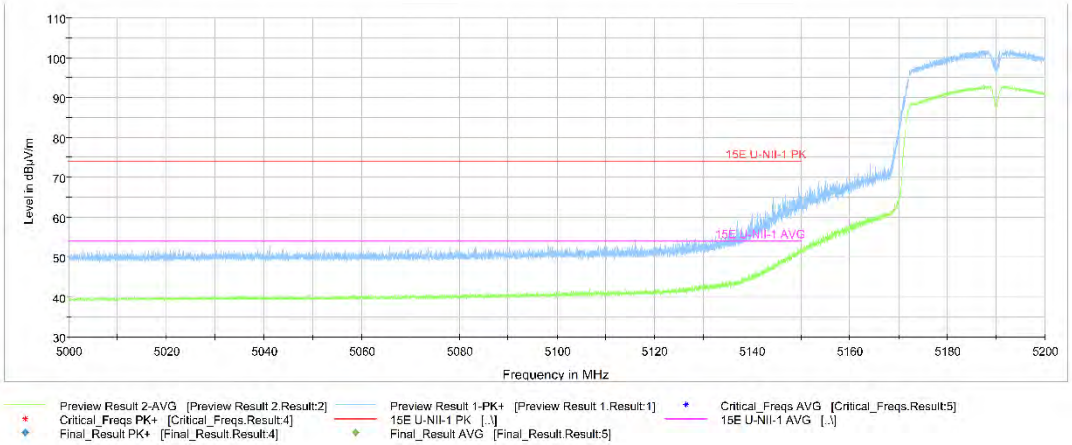


Fig.50 Band Edges (802.11ac-HT40 Ch38, 5190MHz)

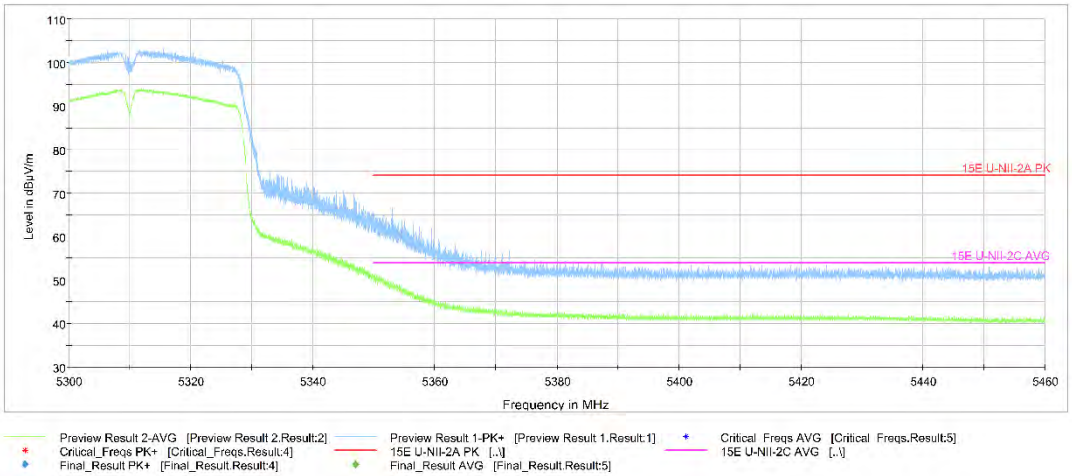


Fig.51 Band Edges (802.11ac-HT40 Ch62, 5310MHz)

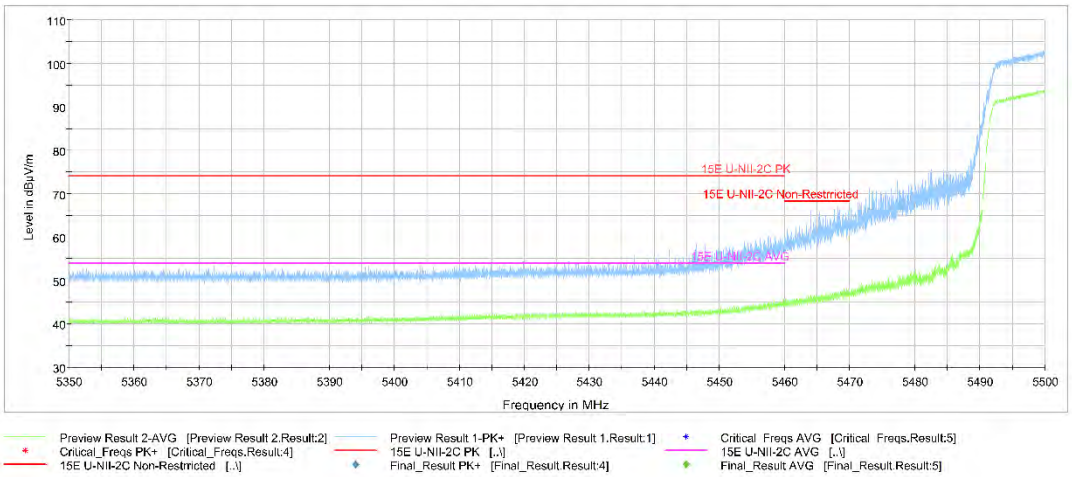


Fig.52 Band Edges (802.11ac-HT40 Ch102, 5510MHz)

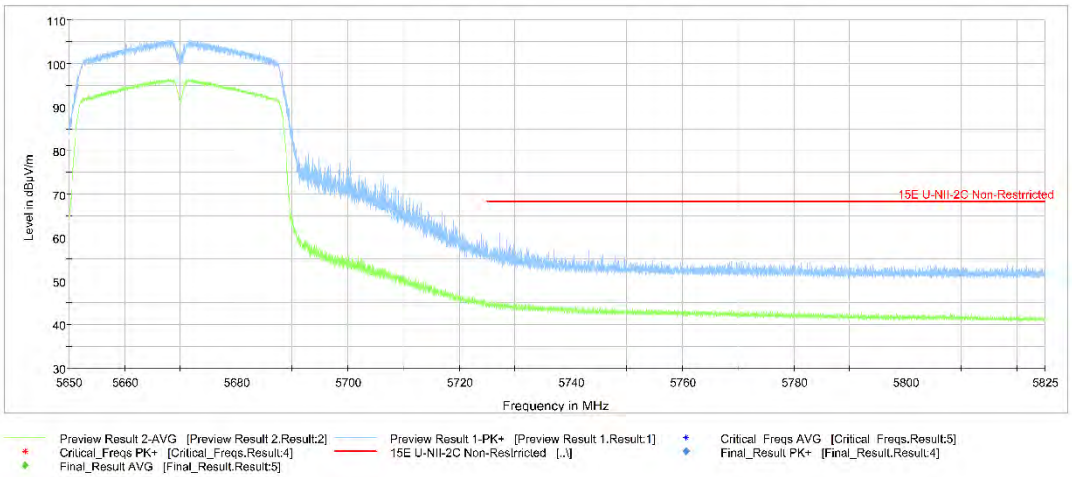


Fig.53 Band Edges (802.11ac-HT40 Ch134, 5670MHz)

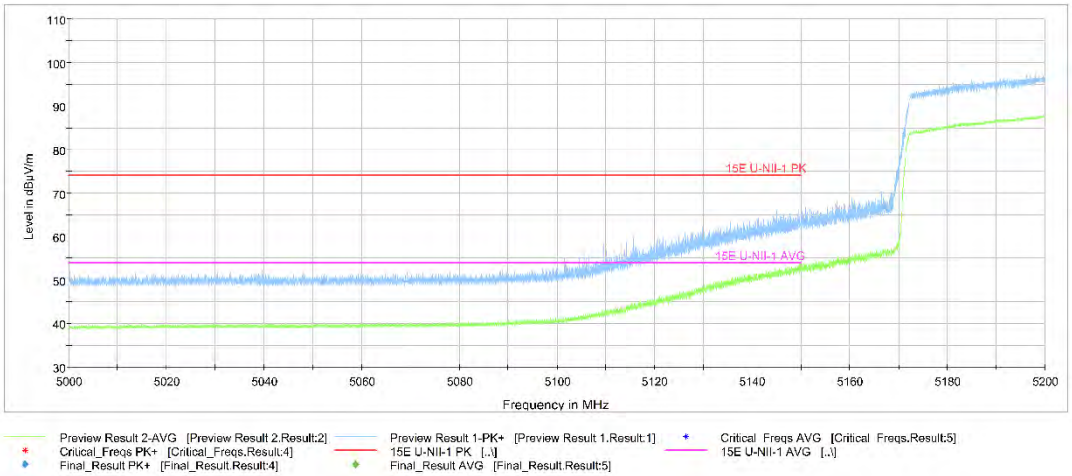


Fig.54 Band Edges (802.11ac-HT80 Ch42 , 5210MHz)

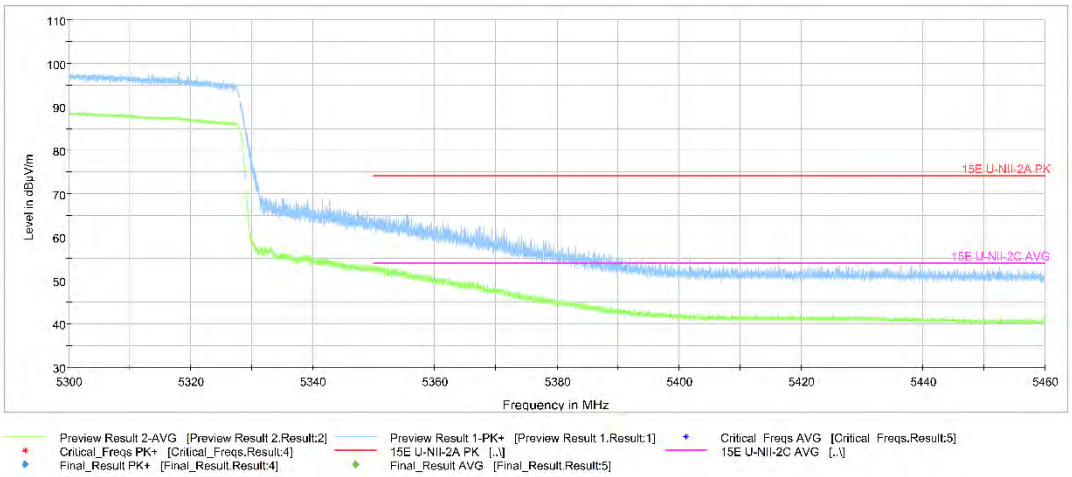


Fig.55 Band Edges (802.11ac-HT80 Ch58, 5290MHz)

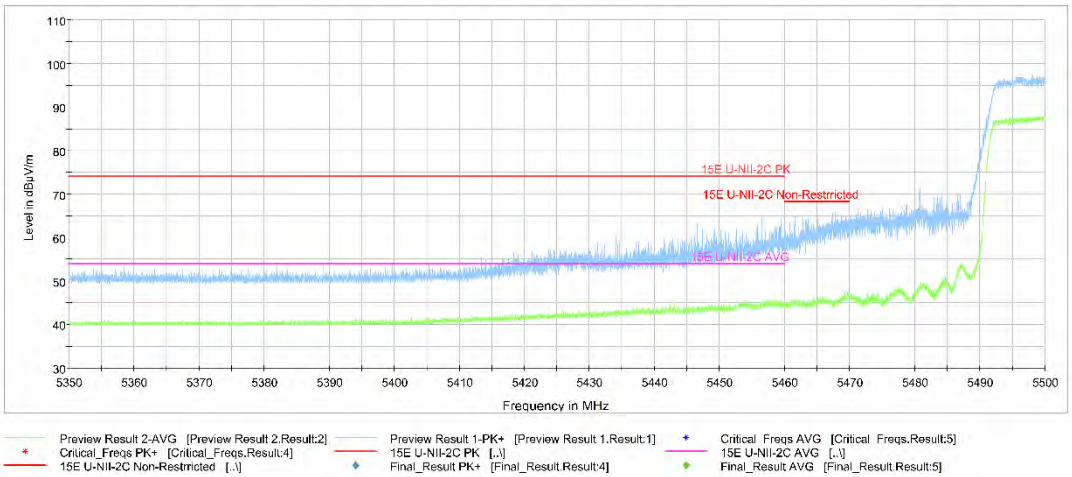


Fig.56 Band Edges (802.11ac-HT80 Ch106, 5530MHz)

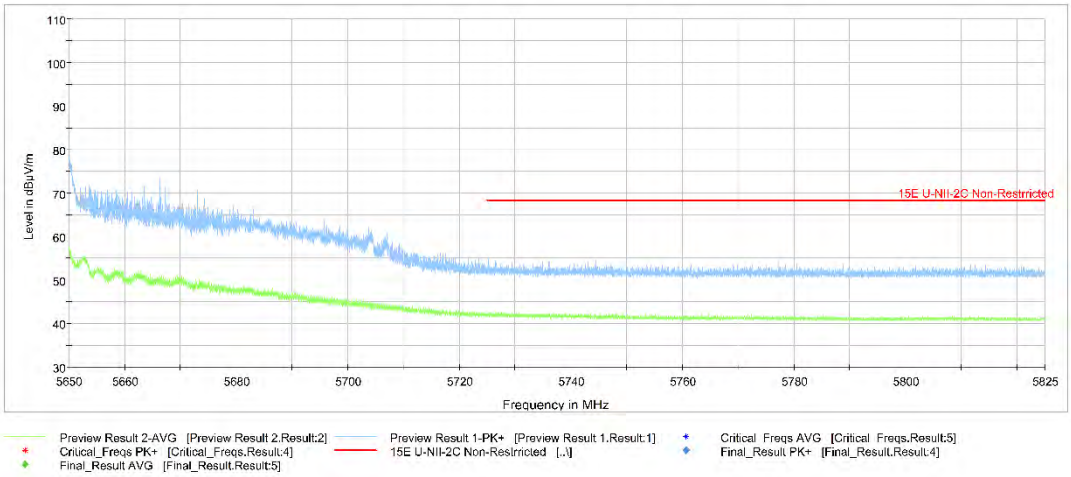


Fig.57 Band Edges (802.11ac-HT80 Ch122, 5610MHz)

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:

802.11a mode

Mode	Channel	Frequency Range	Test Results	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

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	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

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	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

802.11ac-HT20 mode

Mode	Channel	Frequency Range	Test Results	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

802.11ac-HT40 mode

Mode	Channel	Frequency Range	Test Results	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

802.11ac-HT80 mode

Mode	Channel	Frequency Range	Test Results	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

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)
17983.000	42.33	-25.50	46.66	21.17	54.00	11.67	V
17995.600	42.33	-25.50	46.66	21.17	54.00	11.67	H
8287.500	40.83	-34.97	37.56	38.23	54.00	13.17	V
8288.100	39.74	-34.97	37.56	37.14	54.00	14.26	V
5149.500	47.94	-27.61	33.67	41.88	54.00	6.06	H
5149.900	47.87	-27.61	33.67	41.81	54.00	6.13	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)
17998.300	42.91	-25.50	46.66	21.75	54.00	11.09	V
17994.500	42.60	-25.50	46.66	21.44	54.00	11.40	H
8320.000	41.57	-34.97	37.56	38.97	54.00	12.43	V
8319.500	40.60	-34.97	37.56	38.00	54.00	13.40	V
14499.200	38.78	-28.59	42.46	24.91	54.00	15.22	H
13321.700	38.66	-29.49	39.71	28.44	54.00	15.34	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)
17953.200	42.15	-25.50	46.66	20.99	54.00	11.85	V
17996.200	42.07	-25.50	46.66	20.91	54.00	11.93	H
8383.800	39.73	-34.50	37.68	36.55	54.00	14.27	V
13327.200	38.19	-29.49	39.71	27.97	54.00	15.81	V
13340.400	38.06	-29.49	39.71	27.84	54.00	15.94	V
11044.100	36.65	-32.49	38.72	30.41	54.00	17.35	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	42.26	-25.50	46.66	21.10	54.00	11.74	H
17994.000	42.15	-25.50	46.66	20.99	54.00	11.85	V
13350.900	38.47	-29.49	39.71	28.25	54.00	15.53	V
8415.700	38.45	-34.35	37.79	35.01	54.00	15.55	V
13321.700	38.37	-29.49	39.71	28.15	54.00	15.63	V
8416.200	36.43	-34.35	37.79	32.99	54.00	17.57	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)
17997.200	42.41	-25.50	46.66	21.25	54.00	11.59	V
17972.000	42.11	-25.50	46.66	20.95	54.00	11.89	H
13334.900	38.29	-29.49	39.71	28.07	54.00	15.71	V
13345.400	38.23	-29.49	39.71	28.01	54.00	15.77	H
11924.700	36.49	-31.48	39.09	28.88	54.00	17.51	V
11923.000	36.33	-31.48	39.09	28.72	54.00	17.67	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	42.25	-25.50	46.66	21.09	54.00	11.75	H
17996.200	42.10	-25.50	46.66	20.94	54.00	11.90	H
13323.400	38.14	-29.49	39.71	27.92	54.00	15.86	V
14494.900	38.03	-28.59	42.46	24.16	54.00	15.97	V
5350.500	45.65	-27.43	34.01	39.07	54.00	8.35	H
5350.800	45.61	-27.43	34.01	39.03	54.00	8.39	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)
17765.200	42.07	-25.50	46.66	20.91	54.00	11.93	H
17950.000	41.72	-25.50	46.66	20.56	54.00	12.28	H
14499.200	37.97	-28.59	42.46	24.10	54.00	16.03	H
14488.200	37.84	-28.59	42.46	23.97	54.00	16.16	V
5456.600	45.32	-27.18	34.17	38.33	54.00	8.68	H
5459.500	45.26	-27.18	34.17	38.27	54.00	8.74	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)
17990.100	42.03	-25.50	46.66	20.87	54.00	11.97	V
17991.200	41.71	-25.50	46.66	20.55	54.00	12.29	V
13353.600	37.88	-29.49	39.71	27.66	54.00	16.12	H
13359.100	37.71	-29.49	39.71	27.49	54.00	16.29	V
11938.500	36.34	-31.48	39.09	28.73	54.00	17.66	H
11046.900	36.21	-32.49	38.72	29.97	54.00	17.79	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)
17956.000	41.78	-25.50	46.66	20.62	54.00	12.22	H
17931.200	41.70	-25.50	46.66	20.54	54.00	12.30	H
13344.800	38.11	-29.49	39.71	27.89	54.00	15.89	V
14491.000	38.01	-28.59	42.46	24.14	54.00	15.99	V
11929.100	36.38	-31.48	39.09	28.77	54.00	17.62	V
11922.000	36.30	-31.48	39.09	28.69	54.00	17.70	H

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)
17996.700	42.22	-25.50	46.66	21.06	54.00	11.78	V
17983.000	42.05	-25.50	46.66	20.89	54.00	11.95	V
8287.500	39.28	-34.97	37.56	36.68	54.00	14.72	V
8288.100	38.30	-34.97	37.56	35.70	54.00	15.70	V
5150.000	48.65	-27.61	33.67	42.59	54.00	5.35	H
5149.900	48.59	-27.61	33.67	42.53	54.00	5.41	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)
17986.800	42.07	-25.50	46.66	20.91	54.00	11.93	H
17975.800	42.06	-25.50	46.66	20.90	54.00	11.94	H
8320.000	39.81	-34.97	37.56	37.21	54.00	14.19	V
8319.500	38.81	-34.97	37.56	36.21	54.00	15.19	V
13333.800	37.87	-29.49	39.71	27.65	54.00	16.13	V
14494.900	37.82	-28.59	42.46	23.95	54.00	16.18	V

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)
17792.100	41.91	-25.50	46.66	20.75	54.00	12.09	H
17958.800	41.86	-25.50	46.66	20.70	54.00	12.14	V
8383.800	39.63	-34.50	37.68	36.45	54.00	14.37	V
14480.000	37.94	-28.59	42.46	24.07	54.00	16.06	V
13380.000	37.93	-29.49	39.71	27.71	54.00	16.07	V
8383.200	36.41	-34.50	37.68	33.23	54.00	17.59	V

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)
17778.300	42.24	-25.50	46.66	21.08	54.00	11.76	V
17966.500	41.92	-25.50	46.66	20.76	54.00	12.08	H
8415.700	38.66	-34.35	37.79	35.22	54.00	15.34	V
13341.500	38.51	-29.49	39.71	28.29	54.00	15.49	V
14487.700	38.32	-28.59	42.46	24.45	54.00	15.68	V
11948.900	36.45	-31.48	39.09	28.84	54.00	17.55	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)
17997.800	42.05	-25.50	46.66	20.89	54.00	11.95	H
17992.300	41.98	-25.50	46.66	20.82	54.00	12.02	V
13347.000	38.41	-29.49	39.71	28.19	54.00	15.59	V
13350.900	38.22	-29.49	39.71	28.00	54.00	15.78	H
8447.600	37.29	-34.35	37.79	33.85	54.00	16.71	V
11857.600	36.44	-31.85	39.05	29.24	54.00	17.56	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)
17981.800	42.16	-25.50	46.66	21.00	54.00	11.84	V
17996.200	42.13	-25.50	46.66	20.97	54.00	11.87	H
14494.300	38.16	-28.59	42.46	24.29	54.00	15.84	V
13339.300	38.11	-29.49	39.71	27.89	54.00	15.89	V
5350.300	46.53	-27.43	34.01	39.95	54.00	7.47	H
5350.100	46.31	-27.43	34.01	39.73	54.00	7.69	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)
17953.800	41.79	-25.50	46.66	20.63	54.00	12.21	H
17717.800	41.69	-25.74	45.95	21.48	54.00	12.31	H
14495.400	37.85	-28.59	42.46	23.98	54.00	16.15	V
14498.700	37.73	-28.59	42.46	23.86	54.00	16.27	H
5456.000	44.68	-27.18	34.17	37.69	54.00	9.32	H
5457.300	44.58	-27.18	34.17	37.59	54.00	9.42	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)
17793.200	42.06	-25.50	46.66	20.90	54.00	11.94	V
17998.300	41.83	-25.50	46.66	20.67	54.00	12.17	V
14479.500	37.92	-28.59	42.46	24.05	54.00	16.08	H
13344.200	37.91	-29.49	39.71	27.69	54.00	16.09	V
11050.800	36.26	-32.49	38.72	30.02	54.00	17.74	H
11926.900	36.25	-31.48	39.09	28.64	54.00	17.75	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)
17920.800	41.81	-25.50	46.66	20.65	54.00	12.19	H
17744.800	41.78	-25.50	46.66	20.62	54.00	12.22	V
14488.200	37.88	-28.59	42.46	24.01	54.00	16.12	H
13352.500	37.80	-29.49	39.71	27.58	54.00	16.20	H
11053.500	36.38	-32.49	38.72	30.14	54.00	17.62	V
11043.600	36.32	-32.49	38.72	30.08	54.00	17.68	V

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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)
17782.200	41.98	-25.50	46.66	20.82	54.00	12.02	H
17997.200	41.86	-25.50	46.66	20.70	54.00	12.14	V
8303.500	39.46	-34.97	37.56	36.86	54.00	14.54	V
8304.000	38.89	-34.97	37.56	36.29	54.00	15.11	V
5149.100	52.74	-27.61	33.67	46.68	54.00	1.26	H
5149.800	52.65	-27.61	33.67	46.59	54.00	1.35	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)
17995.600	41.89	-25.50	46.66	20.73	54.00	12.11	V
17970.800	41.76	-25.50	46.66	20.60	54.00	12.24	H
8367.900	39.86	-34.50	37.68	36.68	54.00	14.14	V
14486.000	37.87	-28.59	42.46	24.00	54.00	16.13	H
14499.200	37.83	-28.59	42.46	23.96	54.00	16.17	H
8367.300	36.86	-34.50	37.68	33.68	54.00	17.14	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)
17979.700	42.11	-25.50	46.66	20.95	54.00	11.89	H
17995.000	42.11	-25.50	46.66	20.95	54.00	11.89	H
14487.100	38.39	-28.59	42.46	24.52	54.00	15.61	H
13347.500	38.22	-29.49	39.71	28.00	54.00	15.78	V
8431.600	36.85	-34.35	37.79	33.41	54.00	17.15	V
11934.000	36.38	-31.48	39.09	28.77	54.00	17.62	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)
17997.800	42.21	-25.50	46.66	21.05	54.00	11.79	H
17993.400	42.16	-25.50	46.66	21.00	54.00	11.84	V
13339.900	38.60	-29.49	39.71	28.38	54.00	15.40	V
14491.000	38.27	-28.59	42.46	24.40	54.00	15.73	H
5350.600	53.45	-27.43	34.01	46.87	54.00	0.55	H
5350.200	53.44	-27.43	34.01	46.86	54.00	0.56	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)
17962.000	41.95	-25.50	46.66	20.79	54.00	12.05	V
17943.900	41.89	-25.50	46.66	20.73	54.00	12.11	H
13335.500	37.75	-29.49	39.71	27.53	54.00	16.25	H
13358.000	37.74	-29.49	39.71	27.52	54.00	16.26	H
5459.800	44.55	-27.18	34.17	37.56	54.00	9.45	H
5459.900	44.54	-27.18	34.17	37.55	54.00	9.46	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)
17966.500	41.96	-25.50	46.66	20.80	54.00	12.04	V
17925.200	41.95	-25.50	46.66	20.79	54.00	12.05	V
13342.000	38.08	-29.49	39.71	27.86	54.00	15.92	H
14496.500	38.02	-28.59	42.46	24.15	54.00	15.98	V
11944.500	36.33	-31.48	39.09	28.72	54.00	17.67	H
11521.500	36.18	-32.26	38.84	29.61	54.00	17.82	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)
17974.700	41.87	-25.50	46.66	20.71	54.00	12.13	V
17934.500	41.86	-25.50	46.66	20.70	54.00	12.14	V
14489.900	38.04	-28.59	42.46	24.17	54.00	15.96	V
14492.600	37.99	-28.59	42.46	24.12	54.00	16.01	H
11958.800	36.21	-31.48	39.09	28.60	54.00	17.79	H
11963.200	36.13	-31.48	39.09	28.52	54.00	17.87	V

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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)
17919.700	41.91	-25.50	46.66	20.75	54.00	12.09	V
17782.800	41.89	-25.50	46.66	20.73	54.00	12.11	V
8287.500	39.94	-34.97	37.56	37.34	54.00	14.06	V
8288.100	39.00	-34.97	37.56	36.40	54.00	15.00	V
5149.900	46.10	-27.61	33.67	40.04	54.00	7.90	H
5149.900	45.98	-27.61	33.67	39.92	54.00	8.02	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)
17721.700	42.02	-25.74	45.95	21.81	54.00	11.98	H
17945.000	41.72	-25.50	46.66	20.56	54.00	12.28	H
8320.000	39.94	-34.97	37.56	37.34	54.00	14.06	V
8319.500	39.52	-34.97	37.56	36.92	54.00	14.48	V
14499.200	37.81	-28.59	42.46	23.94	54.00	16.19	V
14488.800	37.75	-28.59	42.46	23.88	54.00	16.25	V

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)
17709.600	42.01	-25.74	45.95	21.80	54.00	11.99	V
17997.800	41.91	-25.50	46.66	20.75	54.00	12.09	V
8383.800	39.21	-34.50	37.68	36.03	54.00	14.79	V
13332.100	38.10	-29.49	39.71	27.88	54.00	15.90	H
14499.200	37.91	-28.59	42.46	24.04	54.00	16.09	V
11534.200	36.38	-32.26	38.84	29.81	54.00	17.62	V

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)
17996.700	42.62	-25.50	46.66	21.46	54.00	11.38	V
17763.000	42.58	-25.50	46.66	21.42	54.00	11.42	V
8415.700	39.66	-34.35	37.79	36.22	54.00	14.34	V
13344.200	38.59	-29.49	39.71	28.37	54.00	15.41	V
13333.200	38.58	-29.49	39.71	28.36	54.00	15.42	H
11044.100	36.74	-32.49	38.72	30.50	54.00	17.26	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)
17988.500	42.28	-25.50	46.66	21.12	54.00	11.72	H
17951.000	42.24	-25.50	46.66	21.08	54.00	11.76	V
13334.900	38.27	-29.49	39.71	28.05	54.00	15.73	V
13342.600	38.19	-29.49	39.71	27.97	54.00	15.81	H
8447.600	37.88	-34.35	37.79	34.44	54.00	16.12	V
11043.000	36.38	-32.49	38.72	30.14	54.00	17.62	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)
17993.400	42.33	-25.50	46.66	21.17	54.00	11.67	V
17946.100	42.02	-25.50	46.66	20.86	54.00	11.98	H
13369.000	38.19	-29.49	39.71	27.97	54.00	15.81	V
13348.100	38.15	-29.49	39.71	27.93	54.00	15.85	H
5350.500	45.09	-27.43	34.01	38.51	54.00	8.91	H
5350.600	45.03	-27.43	34.01	38.45	54.00	8.97	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)
17981.300	41.77	-25.50	46.66	20.61	54.00	12.23	V
17767.300	41.75	-25.50	46.66	20.59	54.00	12.25	H
14494.300	37.89	-28.59	42.46	24.02	54.00	16.11	V
14498.100	37.78	-28.59	42.46	23.91	54.00	16.22	V
5444.200	43.44	-27.18	34.17	36.45	54.00	10.56	H
5457.200	43.39	-27.18	34.17	36.40	54.00	10.61	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)
17758.500	41.85	-25.50	46.66	20.69	54.00	12.15	V
17937.800	41.76	-25.50	46.66	20.60	54.00	12.24	H
14489.900	37.93	-28.59	42.46	24.06	54.00	16.07	H
13339.900	37.79	-29.49	39.71	27.57	54.00	16.21	V
11467.100	36.24	-32.26	38.84	29.67	54.00	17.76	H
11923.600	36.24	-31.48	39.09	28.63	54.00	17.76	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)
17774.000	41.95	-25.50	46.66	20.79	54.00	12.05	H
17751.400	41.90	-25.50	46.66	20.74	54.00	12.10	V
13346.500	38.07	-29.49	39.71	27.85	54.00	15.93	V
14478.900	37.95	-28.59	42.46	24.08	54.00	16.05	V
11956.000	36.45	-31.48	39.09	28.84	54.00	17.55	H
11532.500	36.18	-32.26	38.84	29.61	54.00	17.82	V

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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)
17951.600	42.12	-25.50	46.66	20.96	54.00	11.88	H
17994.000	42.12	-25.50	46.66	20.96	54.00	11.88	H
8303.500	39.81	-34.97	37.56	37.21	54.00	14.19	V
8304.000	39.35	-34.97	37.56	36.75	54.00	14.65	V
5149.600	52.11	-27.61	33.67	46.05	54.00	1.89	H
5149.400	52.01	-27.61	33.67	45.95	54.00	1.99	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)
17964.800	41.93	-25.50	46.66	20.77	54.00	12.07	V
17990.100	41.93	-25.50	46.66	20.77	54.00	12.07	V
13356.400	38.33	-29.49	39.71	28.11	54.00	15.67	H
13345.900	38.27	-29.49	39.71	28.05	54.00	15.73	H
8367.900	37.16	-34.50	37.68	33.98	54.00	16.84	H
8367.300	36.99	-34.50	37.68	33.81	54.00	17.01	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)
17993.400	42.04	-25.50	46.66	20.88	54.00	11.96	H
17994.500	41.94	-25.50	46.66	20.78	54.00	12.06	H
13331.000	38.16	-29.49	39.71	27.94	54.00	15.84	H
13339.300	38.12	-29.49	39.71	27.90	54.00	15.88	V
8431.600	37.44	-34.35	37.79	34.00	54.00	16.56	V
11940.600	36.70	-31.48	39.09	29.09	54.00	17.30	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)
17994.500	42.11	-25.50	46.66	20.95	54.00	11.89	V
17987.300	42.09	-25.50	46.66	20.93	54.00	11.91	V
13349.200	38.09	-29.49	39.71	27.87	54.00	15.91	H
13350.300	38.05	-29.49	39.71	27.83	54.00	15.95	V
5350.100	51.29	-27.43	34.01	44.71	54.00	2.71	H
5350.400	51.15	-27.43	34.01	44.57	54.00	2.85	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)
17989.000	41.99	-25.50	46.66	20.83	54.00	12.01	V
17990.700	41.89	-25.50	46.66	20.73	54.00	12.11	H
14493.800	38.01	-28.59	42.46	24.14	54.00	15.99	H
14483.900	37.98	-28.59	42.46	24.11	54.00	16.02	H
5459.900	45.60	-27.18	34.17	38.61	54.00	8.40	H
5458.400	45.44	-27.18	34.17	38.45	54.00	8.56	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)
17990.100	41.98	-25.50	46.66	20.82	54.00	12.02	H
17981.300	41.93	-25.50	46.66	20.77	54.00	12.07	V
13347.000	38.03	-29.49	39.71	27.81	54.00	15.97	H
14483.300	37.95	-28.59	42.46	24.08	54.00	16.05	V
11941.800	36.23	-31.48	39.09	28.62	54.00	17.77	V
10958.900	36.19	-32.82	38.70	30.31	54.00	17.81	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)
17968.700	42.10	-25.50	46.66	20.94	54.00	11.90	V
17936.800	41.88	-25.50	46.66	20.72	54.00	12.12	V
14492.600	37.84	-28.59	42.46	23.97	54.00	16.16	H
13320.600	37.72	-29.49	39.71	27.50	54.00	16.28	V
11042.500	36.18	-32.49	38.72	29.94	54.00	17.82	H
11908.200	36.17	-31.85	39.05	28.97	54.00	17.83	H

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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)
17988.500	42.22	-25.50	46.66	21.06	54.00	11.78	H
17996.700	41.95	-25.50	46.66	20.79	54.00	12.05	V
8336.000	39.98	-34.50	37.68	36.80	54.00	14.02	V
8335.400	38.39	-34.50	37.68	35.21	54.00	15.61	V
5149.900	53.68	-27.61	33.67	47.62	54.00	0.32	H
5149.700	53.63	-27.61	33.67	47.57	54.00	0.37	H

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)
17995.000	42.75	-25.50	46.66	21.59	54.00	11.25	H
17995.600	42.10	-25.50	46.66	20.94	54.00	11.90	V
13340.400	38.12	-29.49	39.71	27.90	54.00	15.88	V
13342.600	38.08	-29.49	39.71	27.86	54.00	15.92	V
5352.400	53.43	-27.43	34.01	46.85	54.00	0.57	H
5350.800	53.29	-27.43	34.01	46.71	54.00	0.71	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)
17998.900	42.00	-25.50	46.66	20.84	54.00	12.00	V
17978.500	41.98	-25.50	46.66	20.82	54.00	12.02	V
13336.500	38.09	-29.49	39.71	27.87	54.00	15.91	V
14486.600	38.06	-28.59	42.46	24.19	54.00	15.94	V
5457.000	46.00	-27.18	34.17	39.01	54.00	8.00	H
5458.800	45.97	-27.18	34.17	38.98	54.00	8.03	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)
17710.200	41.96	-25.74	45.95	21.75	54.00	12.04	H
17919.700	41.86	-25.50	46.66	20.70	54.00	12.14	V
13344.800	38.31	-29.49	39.71	28.09	54.00	15.69	H
13325.500	37.81	-29.49	39.71	27.59	54.00	16.19	V
11448.400	36.22	-32.26	38.84	29.65	54.00	17.78	V
11917.500	36.18	-31.48	39.09	28.57	54.00	17.82	H

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)
17625.500	53.25	-25.74	45.95	33.04	68.30	15.05	V
17324.000	52.93	-25.95	44.35	34.52	68.30	15.37	V
13721.500	50.19	-29.10	40.86	38.42	68.30	18.11	V
13682.000	50.17	-29.50	40.43	39.24	68.30	18.13	H
5147.500	63.93	-27.61	33.67	57.87	74.00	10.07	H
5148.100	63.69	-27.61	33.67	57.63	74.00	10.31	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)
17392.800	53.31	-26.85	45.25	34.91	68.30	14.99	V
17611.200	53.12	-25.74	45.95	32.91	68.30	15.18	H
13682.500	51.29	-29.50	40.43	40.36	68.30	17.01	V
13764.500	50.61	-29.10	40.86	38.84	68.30	17.69	V
11532.000	47.89	-32.26	38.84	41.32	74.00	26.11	H
10891.200	47.37	-32.33	38.59	41.11	74.00	26.63	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)
17437.300	52.98	-26.85	45.25	34.58	68.30	15.32	V
17925.200	52.74	-25.50	46.66	31.58	74.00	21.26	H
13639.600	50.62	-29.50	40.43	39.69	68.30	17.68	V
13552.700	50.50	-29.56	39.99	40.07	68.30	17.80	V
11625.000	47.89	-32.31	38.91	41.30	74.00	26.11	H
10473.800	47.31	-32.99	38.27	42.02	68.30	20.99	V

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	52.79	-25.50	46.66	31.63	74.00	21.21	V
17935.100	52.70	-25.50	46.66	31.54	74.00	21.30	H
13643.500	51.50	-29.50	40.43	40.57	68.30	16.80	V
13774.400	50.29	-29.10	40.86	38.52	68.30	18.01	V
11149.800	48.07	-32.60	38.75	41.93	74.00	25.93	H
10581.600	47.50	-32.76	38.38	41.88	68.30	20.80	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)
17539.700	53.20	-26.85	45.25	34.80	68.30	15.10	V
17987.300	52.97	-25.50	46.66	31.81	74.00	21.03	V
13684.700	50.78	-29.50	40.43	39.85	68.30	17.52	H
13608.800	50.67	-29.50	40.43	39.74	68.30	17.63	H
10560.700	46.99	-32.99	38.27	41.70	68.30	21.31	V
11999.500	46.99	-31.48	39.09	39.38	74.00	27.01	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)
17920.200	52.68	-25.50	46.66	31.52	74.00	21.32	V
17995.600	52.67	-25.50	46.66	31.51	74.00	21.33	H
13746.300	50.25	-29.10	40.86	38.48	68.30	18.05	V
13638.000	50.06	-29.50	40.43	39.13	68.30	18.24	H
5350.300	66.40	-27.43	34.01	59.82	74.00	7.60	H
5350.800	65.83	-27.43	34.01	59.25	74.00	8.17	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)
17409.800	52.60	-26.85	45.25	34.20	68.30	15.70	H
17723.300	52.32	-25.74	45.95	32.11	74.00	21.68	V
13752.900	50.41	-29.10	40.86	38.64	68.30	17.89	H
13538.400	50.39	-29.56	39.99	39.96	68.30	17.91	V
5458.700	61.07	-27.18	34.17	54.08	74.00	12.93	H
5467.900	66.28	-27.18	34.17	59.29	68.30	2.02	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)
17808.600	53.04	-25.50	46.66	31.88	74.00	20.96	V
17513.800	52.09	-26.85	45.25	33.69	68.30	16.21	V
13754.000	51.04	-29.10	40.86	39.27	68.30	17.26	V
13590.100	50.50	-29.50	40.43	39.57	68.30	17.80	H
11946.100	47.28	-31.48	39.09	39.67	74.00	26.72	V
10953.400	46.74	-32.82	38.70	40.86	74.00	27.26	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)
17783.800	52.55	-25.50	46.66	31.39	74.00	21.45	V
17293.200	52.32	-25.95	44.35	33.91	68.30	15.98	H
13645.600	50.23	-29.50	40.43	39.30	68.30	18.07	H
13525.200	49.90	-29.56	39.99	39.47	68.30	18.40	H
5727.800	67.15	-27.07	34.31	59.91	68.30	1.15	H
5725.300	66.51	-27.07	34.31	59.27	68.30	1.79	H

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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)
17943.900	52.97	-25.50	46.66	31.81	74.00	21.03	H
17467.000	52.53	-26.85	45.25	34.13	68.30	15.77	H
13534.500	50.07	-29.56	39.99	39.64	68.30	18.23	V
13716.600	50.06	-29.10	40.86	38.29	68.30	18.24	V
5147.600	64.92	-27.61	33.67	58.86	74.00	9.08	H
5149.000	64.18	-27.61	33.67	58.12	74.00	9.82	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)
17898.800	52.16	-25.50	46.66	31.00	74.00	21.84	V
17886.700	52.07	-25.50	46.66	30.91	74.00	21.93	V
13589.000	50.08	-29.50	40.43	39.15	68.30	18.22	V
13743.000	50.07	-29.10	40.86	38.30	68.30	18.23	H
10400.100	47.18	-33.22	38.19	42.21	68.30	21.12	V
11869.700	46.85	-31.85	39.05	39.65	74.00	27.15	V

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)
17521.000	52.13	-26.85	45.25	33.73	68.30	16.17	H
17981.800	52.10	-25.50	46.66	30.94	74.00	21.90	V
13627.000	49.96	-29.50	40.43	39.03	68.30	18.34	H
13635.800	49.96	-29.50	40.43	39.03	68.30	18.34	V
10898.400	47.01	-32.82	38.70	41.13	74.00	26.99	H
11924.100	46.67	-31.48	39.09	39.06	74.00	27.33	V

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)
17964.200	53.06	-25.50	46.66	31.90	74.00	20.94	H
17622.200	52.89	-25.74	45.95	32.68	68.30	15.41	V
13744.100	50.51	-29.10	40.86	38.74	68.30	17.79	H
13547.800	50.44	-29.56	39.99	40.01	68.30	17.86	H
10879.700	47.71	-32.33	38.59	41.45	74.00	26.29	H
11865.300	47.48	-31.85	39.05	40.28	74.00	26.52	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)
17998.300	53.45	-25.50	46.66	32.29	74.00	20.55	V
17745.300	52.31	-25.50	46.66	31.15	74.00	21.69	V
13738.000	50.92	-29.10	40.86	39.15	68.30	17.38	H
13656.100	50.63	-29.50	40.43	39.70	68.30	17.67	H
11949.500	47.40	-31.48	39.09	39.79	74.00	26.60	H
11916.500	47.27	-31.48	39.09	39.66	74.00	26.73	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)
17678.800	52.81	-25.74	45.95	32.60	68.30	15.49	H
17983.500	52.43	-25.50	46.66	31.27	74.00	21.57	H
13747.400	50.64	-29.10	40.86	38.87	68.30	17.66	H
13834.300	50.28	-29.51	41.30	38.49	68.30	18.02	H
5350.300	64.96	-27.43	34.01	58.38	74.00	9.04	H
5353.100	62.58	-27.43	34.01	56.00	74.00	11.42	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)
17773.400	52.70	-25.50	46.66	31.54	74.00	21.30	V
17719.000	52.59	-25.74	45.95	32.38	74.00	21.41	V
13524.600	50.61	-29.56	39.99	40.18	68.30	17.69	H
13601.100	50.03	-29.50	40.43	39.10	68.30	18.27	V
5458.300	60.16	-27.18	34.17	53.17	74.00	13.84	H
5469.800	65.89	-27.18	34.17	58.90	68.30	2.41	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)
17975.200	52.70	-25.50	46.66	31.54	74.00	21.30	V
17892.200	52.32	-25.50	46.66	31.16	74.00	21.68	V
13651.100	50.13	-29.50	40.43	39.20	68.30	18.17	V
14093.400	50.10	-29.44	41.66	37.88	68.30	18.20	V
11954.400	47.02	-31.48	39.09	39.41	74.00	26.98	V
11049.600	46.92	-32.49	38.72	40.68	74.00	27.08	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)
17953.800	52.38	-25.50	46.66	31.22	74.00	21.62	V
17832.200	52.14	-25.50	46.66	30.98	74.00	21.86	H
13565.900	50.04	-29.50	40.43	39.11	68.30	18.26	H
13737.000	49.92	-29.10	40.86	38.15	68.30	18.38	H
5725.300	67.00	-27.07	34.31	59.76	68.30	1.30	H
5726.300	65.03	-27.07	34.31	57.79	68.30	3.27	H

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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)
17401.000	52.72	-26.85	45.25	34.32	68.30	15.58	H
17577.600	52.28	-25.74	45.95	32.07	68.30	16.02	H
13633.500	50.71	-29.50	40.43	39.78	68.30	17.59	V
13560.400	50.31	-29.50	40.43	39.38	68.30	17.99	V
5149.600	69.05	-27.61	33.67	62.99	74.00	4.95	H
5149.400	68.23	-27.61	33.67	62.17	74.00	5.77	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)
17859.200	52.62	-25.50	46.66	31.46	74.00	21.38	V
17296.000	52.38	-25.95	44.35	33.97	68.30	15.92	V
13761.700	50.93	-29.10	40.86	39.16	68.30	17.37	H
13552.100	50.00	-29.56	39.99	39.57	68.30	18.30	H
11535.300	47.02	-32.26	38.84	40.45	74.00	26.98	H
11522.100	47.00	-32.26	38.84	40.43	74.00	27.00	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)
17945.000	52.79	-25.50	46.66	31.63	74.00	21.21	V
17380.200	52.60	-25.95	44.35	34.19	68.30	15.70	H
13614.900	51.55	-29.50	40.43	40.62	68.30	16.75	H
13771.000	50.62	-29.10	40.86	38.85	68.30	17.68	H
10534.900	47.35	-32.99	38.27	42.06	68.30	20.95	V
11042.500	47.16	-32.49	38.72	40.92	74.00	26.84	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)
17968.700	53.75	-25.50	46.66	32.59	74.00	20.25	V
17589.200	52.83	-25.74	45.95	32.62	68.30	15.47	H
13668.200	50.67	-29.50	40.43	39.74	68.30	17.63	H
13717.700	50.31	-29.10	40.86	38.54	68.30	17.99	H
5352.300	71.92	-27.43	34.01	65.34	74.00	2.08	H
5350.200	69.34	-27.43	34.01	62.76	74.00	4.66	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)
17964.200	53.29	-25.50	46.66	32.13	74.00	20.71	V
17688.700	52.80	-25.74	45.95	32.59	68.30	15.50	H
13637.400	50.02	-29.50	40.43	39.09	68.30	18.28	H
13536.800	49.82	-29.56	39.99	39.39	68.30	18.48	H
5459.500	60.01	-27.18	34.17	53.02	74.00	13.99	H
5470.000	67.65	-27.18	34.17	60.66	68.30	0.65	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)
17395.000	52.44	-26.85	45.25	34.04	68.30	15.86	H
17934.500	52.41	-25.50	46.66	31.25	74.00	21.59	H
13776.500	50.37	-29.10	40.86	38.60	68.30	17.93	H
13644.000	50.19	-29.50	40.43	39.26	68.30	18.11	H
11950.000	47.48	-31.48	39.09	39.87	74.00	26.52	V
11521.500	46.59	-32.26	38.84	40.02	74.00	27.41	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)
17698.000	52.66	-25.74	45.95	32.45	68.30	15.64	V
17925.200	52.56	-25.50	46.66	31.40	74.00	21.44	H
13570.900	50.81	-29.50	40.43	39.88	68.30	17.49	V
13737.500	50.26	-29.10	40.86	38.49	68.30	18.04	V
5725.200	65.50	-27.07	34.31	58.26	68.30	2.80	H
5725.300	65.29	-27.07	34.31	58.05	68.30	3.01	H

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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)
17946.100	52.22	-25.50	46.66	31.06	74.00	21.78	H
17299.300	52.11	-25.95	44.35	33.70	68.30	16.19	V
13586.800	50.56	-29.50	40.43	39.63	68.30	17.74	H
13561.000	50.05	-29.50	40.43	39.12	68.30	18.25	V
5147.700	61.06	-27.61	33.67	55.00	74.00	12.94	H
5149.100	60.89	-27.61	33.67	54.83	74.00	13.11	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)
17598.000	52.53	-25.74	45.95	32.32	68.30	15.77	H
17236.000	52.38	-25.95	44.35	33.97	68.30	15.92	V
13647.300	49.96	-29.50	40.43	39.03	68.30	18.34	V
13628.600	49.94	-29.50	40.43	39.01	68.30	18.36	V
11549.600	47.08	-32.26	38.84	40.51	74.00	26.92	V
11125.500	46.97	-32.60	38.75	40.83	74.00	27.03	V

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)
17323.000	53.70	-25.95	44.35	35.29	68.30	14.60	V
17814.700	52.19	-25.50	46.66	31.03	74.00	21.81	V
13595.600	50.36	-29.50	40.43	39.43	68.30	17.94	H
13561.500	50.27	-29.50	40.43	39.34	68.30	18.03	H
11830.100	47.10	-31.85	39.05	39.90	74.00	26.90	V
9100.500	46.66	-33.76	38.13	42.29	74.00	27.34	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)
17989.500	53.30	-25.50	46.66	32.14	74.00	20.70	V
17925.200	53.04	-25.50	46.66	31.88	74.00	20.96	V
14203.900	50.96	-28.99	42.00	37.94	68.30	17.34	V
13668.200	50.53	-29.50	40.43	39.60	68.30	17.77	V
10685.000	47.09	-32.77	38.49	41.37	74.00	26.91	V
11616.100	47.06	-32.31	38.91	40.47	74.00	26.94	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)
17838.300	53.30	-25.50	46.66	32.14	74.00	20.70	V
17786.000	52.80	-25.50	46.66	31.64	74.00	21.20	V
13688.500	50.72	-29.50	40.43	39.79	68.30	17.58	H
13667.100	50.60	-29.50	40.43	39.67	68.30	17.70	V
11788.300	47.40	-31.99	38.98	40.41	74.00	26.60	V
11902.700	47.24	-31.85	39.05	40.04	74.00	26.76	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)
17315.200	52.71	-25.95	44.35	34.30	68.30	15.59	V
17818.500	52.64	-25.50	46.66	31.48	74.00	21.36	V
13625.300	50.71	-29.50	40.43	39.78	68.30	17.59	V
13585.100	50.54	-29.50	40.43	39.61	68.30	17.76	H
5350.500	60.08	-27.43	34.01	53.50	74.00	13.92	H
5350.200	59.87	-27.43	34.01	53.29	74.00	14.13	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)
17930.700	52.35	-25.50	46.66	31.19	74.00	21.65	V
17672.800	52.20	-25.74	45.95	31.99	68.30	16.10	V
13565.400	49.86	-29.50	40.43	38.93	68.30	18.44	H
13680.300	49.82	-29.50	40.43	38.89	68.30	18.48	H
5441.400	55.50	-27.18	34.17	48.51	74.00	18.50	H
5468.300	62.50	-27.18	34.17	55.51	68.30	5.80	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)
17994.500	52.73	-25.50	46.66	31.57	74.00	21.27	H
17627.700	52.25	-25.74	45.95	32.04	68.30	16.05	V
13639.600	50.59	-29.50	40.43	39.66	68.30	17.71	V
13676.500	50.48	-29.50	40.43	39.55	68.30	17.82	V
11932.400	47.19	-31.48	39.09	39.58	74.00	26.81	V
11890.000	46.72	-31.85	39.05	39.52	74.00	27.28	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)
17768.500	52.48	-25.50	46.66	31.32	74.00	21.52	V
17953.800	52.41	-25.50	46.66	31.25	74.00	21.59	V
13651.100	49.90	-29.50	40.43	38.97	68.30	18.40	H
13546.100	49.74	-29.56	39.99	39.31	68.30	18.56	V
5725.600	67.39	-27.07	34.31	60.15	68.30	0.91	H
5725.000	66.58	-27.07	34.31	59.34	68.30	1.72	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)
17860.300	53.09	-25.50	46.66	31.93	74.00	20.91	V
17992.800	52.72	-25.50	46.66	31.56	74.00	21.28	V
13659.400	50.40	-29.50	40.43	39.47	68.30	17.90	V
13746.900	50.03	-29.10	40.86	38.26	68.30	18.27	H
5149.500	67.75	-27.61	33.67	61.69	74.00	6.25	H
5149.800	65.94	-27.61	33.67	59.88	74.00	8.06	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)
17996.700	52.84	-25.50	46.66	31.68	74.00	21.16	H
17392.800	52.35	-26.85	45.25	33.95	68.30	15.95	H
13719.400	50.34	-29.10	40.86	38.57	68.30	17.96	H
13557.600	50.13	-29.56	39.99	39.70	68.30	18.17	V
11530.400	47.28	-32.26	38.84	40.71	74.00	26.72	V
8792.500	47.10	-33.90	38.07	42.93	68.30	21.20	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)
17795.400	52.26	-25.50	46.66	31.10	74.00	21.74	H
17876.800	52.18	-25.50	46.66	31.02	74.00	21.82	H
13624.800	50.31	-29.50	40.43	39.38	68.30	17.99	H
13712.200	50.31	-29.10	40.86	38.54	68.30	17.99	V
11961.500	47.19	-31.48	39.09	39.58	74.00	26.81	V
11435.800	47.01	-32.42	38.79	40.64	74.00	26.99	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)
17952.200	52.37	-25.50	46.66	31.21	74.00	21.63	H
17997.800	52.00	-25.50	46.66	30.84	74.00	22.00	V
13606.600	50.96	-29.50	40.43	40.03	68.30	17.34	V
13754.500	50.28	-29.10	40.86	38.51	68.30	18.02	H
5353.000	66.81	-27.43	34.01	60.23	74.00	7.19	H
5350.000	65.19	-27.43	34.01	58.61	74.00	8.81	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)
17236.000	53.20	-25.95	44.35	34.79	68.30	15.10	V
17997.200	52.53	-25.50	46.66	31.37	74.00	21.47	H
13651.100	50.51	-29.50	40.43	39.58	68.30	17.79	V
13558.200	50.31	-29.50	40.43	39.38	68.30	17.99	H
5458.600	60.37	-27.18	34.17	53.38	74.00	13.63	H
5468.200	67.09	-27.18	34.17	60.10	68.30	1.21	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)
17990.700	53.44	-25.50	46.66	32.28	74.00	20.56	H
17774.000	52.80	-25.50	46.66	31.64	74.00	21.20	H
13592.900	50.02	-29.50	40.43	39.09	68.30	18.28	V
13561.000	49.95	-29.50	40.43	39.02	68.30	18.35	V
11048.500	47.42	-32.49	38.72	41.18	74.00	26.58	H
11996.200	47.32	-31.48	39.09	39.71	74.00	26.68	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)
17697.500	52.79	-25.74	45.95	32.58	68.30	15.51	V
17400.500	52.35	-26.85	45.25	33.95	68.30	15.95	H
13543.400	50.68	-29.56	39.99	40.25	68.30	17.62	H
13745.200	50.12	-29.10	40.86	38.35	68.30	18.18	V
5727.200	61.18	-27.07	34.31	53.94	68.30	7.12	H
5725.600	59.59	-27.07	34.31	52.35	68.30	8.71	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)
17696.400	52.93	-25.74	45.95	32.72	68.30	15.37	H
17437.300	52.38	-26.85	45.25	33.98	68.30	15.92	V
13716.000	49.88	-29.10	40.86	38.11	68.30	18.42	H
13746.300	49.86	-29.10	40.86	38.09	68.30	18.44	V
5149.600	66.31	-27.61	33.67	60.25	74.00	7.69	H
5145.000	66.02	-27.61	33.67	59.96	74.00	7.98	H

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)
17736.000	52.37	-25.74	45.95	32.16	74.00	21.63	H
17961.000	52.18	-25.50	46.66	31.02	74.00	21.82	V
13653.400	50.35	-29.50	40.43	39.42	68.30	17.95	V
13668.800	50.00	-29.50	40.43	39.07	68.30	18.30	V
5355.500	65.33	-27.43	34.01	58.75	74.00	8.67	H
5355.700	65.31	-27.43	34.01	58.73	74.00	8.69	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)
17404.900	52.55	-26.85	45.25	34.15	68.30	15.75	V
17928.500	52.40	-25.50	46.66	31.24	74.00	21.60	H
13655.000	50.94	-29.50	40.43	40.01	68.30	17.36	H
13737.500	50.17	-29.10	40.86	38.40	68.30	18.13	V
5459.500	65.81	-27.18	34.17	58.82	74.00	8.19	H
5467.800	66.01	-27.18	34.17	59.02	68.30	2.29	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)
17930.700	52.58	-25.50	46.66	31.42	74.00	21.42	H
17924.700	52.45	-25.50	46.66	31.29	74.00	21.55	V
13647.900	50.66	-29.50	40.43	39.73	68.30	17.64	H
13525.200	50.18	-29.56	39.99	39.75	68.30	18.12	H
5725.200	55.00	-27.07	34.31	47.76	68.30	13.30	H
5744.500	54.43	-27.07	34.31	47.19	68.30	13.87	H

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 AE5		
		802.11a	Idle	
0.15 to 0.5	66 to 56	Fig.58	Fig.59	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 AE5		
		802.11a	Idle	
0.15 to 0.5	67 56 to 46	Fig.58	Fig.59	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:

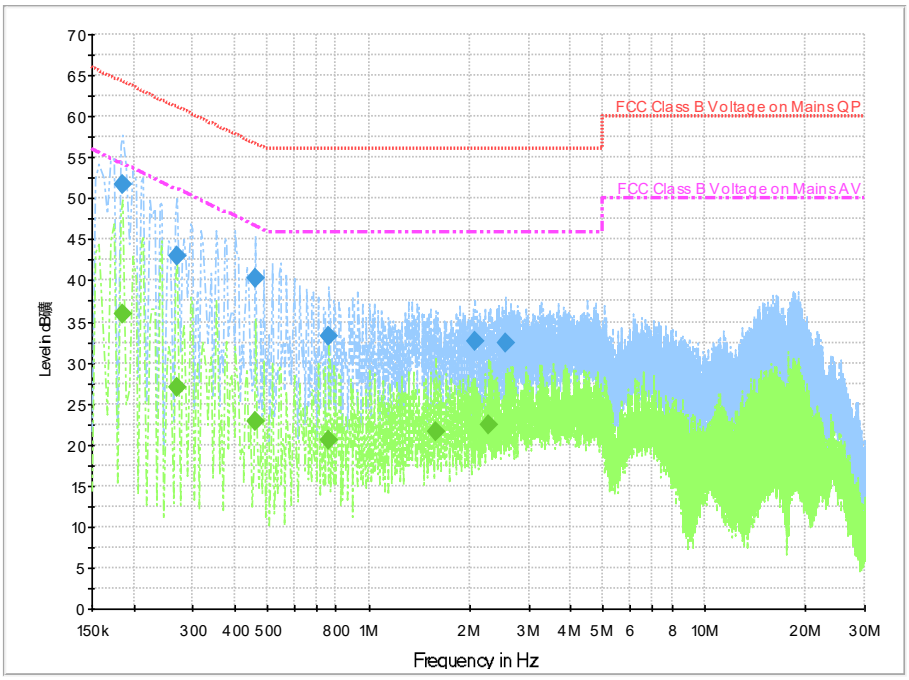

Fig.58 Conducted Emission (802.11a, Ch36, TX)

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)
0.186000	51.7	5000.0	9.000	On	L1	20.0	12.5	64.2
0.270000	43.1	5000.0	9.000	On	L1	20.0	18.0	61.1
0.458000	40.3	5000.0	9.000	On	N	20.0	16.4	56.7
0.762000	33.1	5000.0	9.000	On	N	19.8	22.9	56.0
2.070000	32.5	5000.0	9.000	On	N	19.7	23.5	56.0
2.570000	32.4	5000.0	9.000	On	N	19.7	23.6	56.0

Final Result 2

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.186000	36.0	5000.0	9.000	On	L1	20.0	18.2	54.2
0.270000	27.0	5000.0	9.000	On	L1	20.0	24.1	51.1
0.462000	22.8	5000.0	9.000	On	L1	19.9	23.9	46.7
0.762000	20.5	5000.0	9.000	On	N	19.8	25.5	46.0
1.590000	21.5	5000.0	9.000	On	N	19.8	24.5	46.0
2.278000	22.5	5000.0	9.000	On	N	19.7	23.5	46.0

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

Idle:

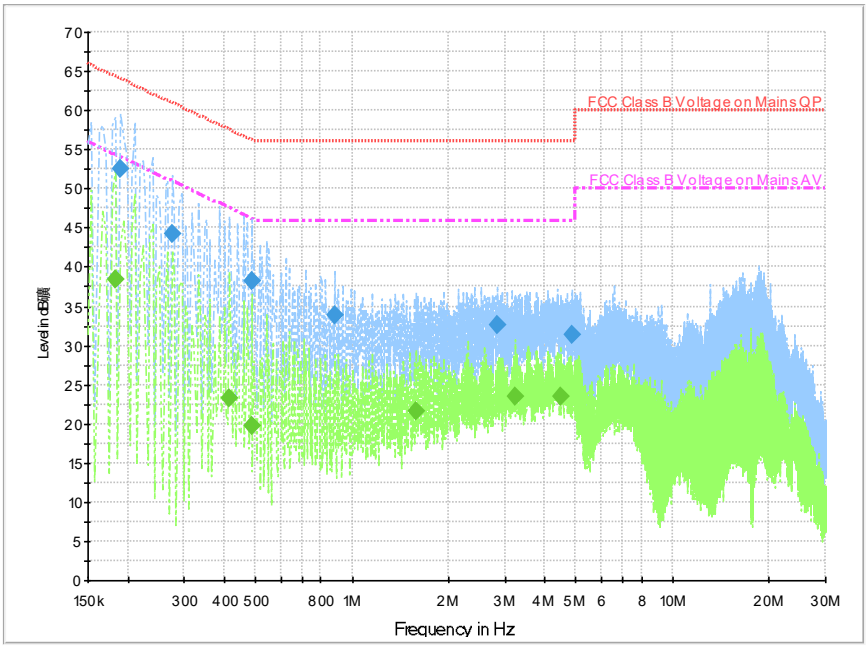

Fig.59 Conducted Emission(802.11a, IDLE)

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)
0.190000	52.5	5000.0	9.000	On	N	19.8	11.6	64.0
0.274000	44.2	5000.0	9.000	On	N	19.8	16.8	61.0
0.486000	38.2	5000.0	9.000	On	L1	19.9	18.0	56.2
0.882000	33.9	5000.0	9.000	On	N	19.8	22.1	56.0
2.846000	32.6	5000.0	9.000	On	N	19.7	23.4	56.0
4.846000	31.3	5000.0	9.000	On	L1	19.6	24.7	56.0

Final Result 2

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	52.5	5000.0	9.000	On	N	19.8	11.6	64.0
0.274000	44.2	5000.0	9.000	On	N	19.8	16.8	61.0
0.486000	38.2	5000.0	9.000	On	L1	19.9	18.0	56.2
0.882000	33.9	5000.0	9.000	On	N	19.8	22.1	56.0
2.846000	32.6	5000.0	9.000	On	N	19.7	23.4	56.0
4.846000	31.3	5000.0	9.000	On	L1	19.6	24.7	56.0

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

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.60	17.35	P
	5200 MHz	Fig.61	17.34	P
	5240 MHz	Fig.62	17.32	P
802.11n HT20	5180 MHz	Fig.63	18.29	P
	5200 MHz	Fig.64	18.15	P
	5240 MHz	Fig.65	18.19	P
802.11n HT40	5190 MHz	Fig.66	36.15	P
	5230 MHz	Fig.67	36.23	P
802.11ac HT80	5210 MHz	Fig.68	75.22	P

Conclusion: PASS

Test graphs as below:

Fig.60 99% Occupied bandwidth (802.11a, 5180MHz)

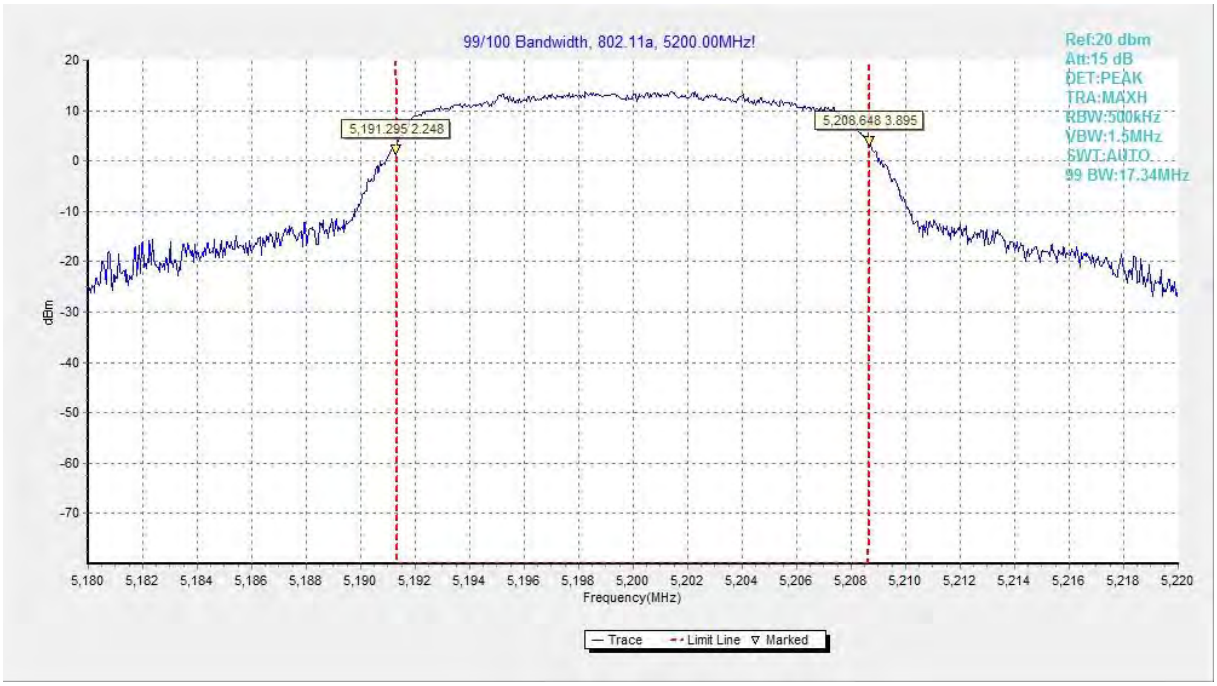

Fig.61 99% Occupied bandwidth (802.11a, 5200MHz)

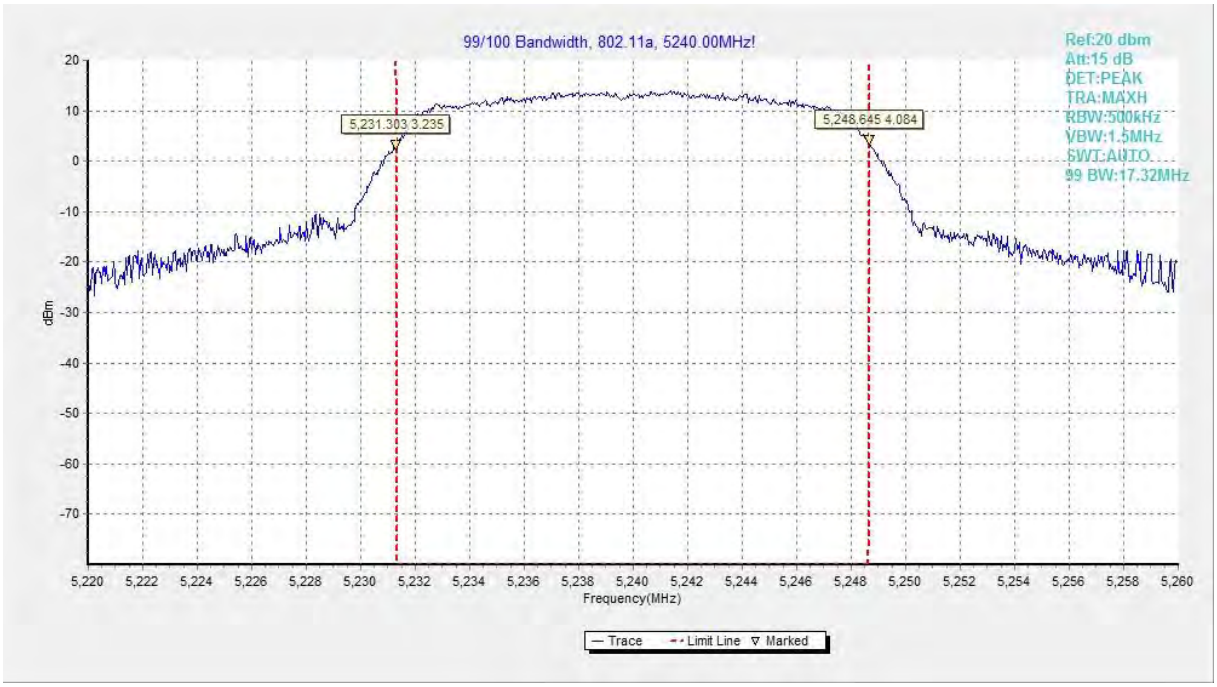

Fig.62 99% Occupied bandwidth (802.11a, 5240MHz)

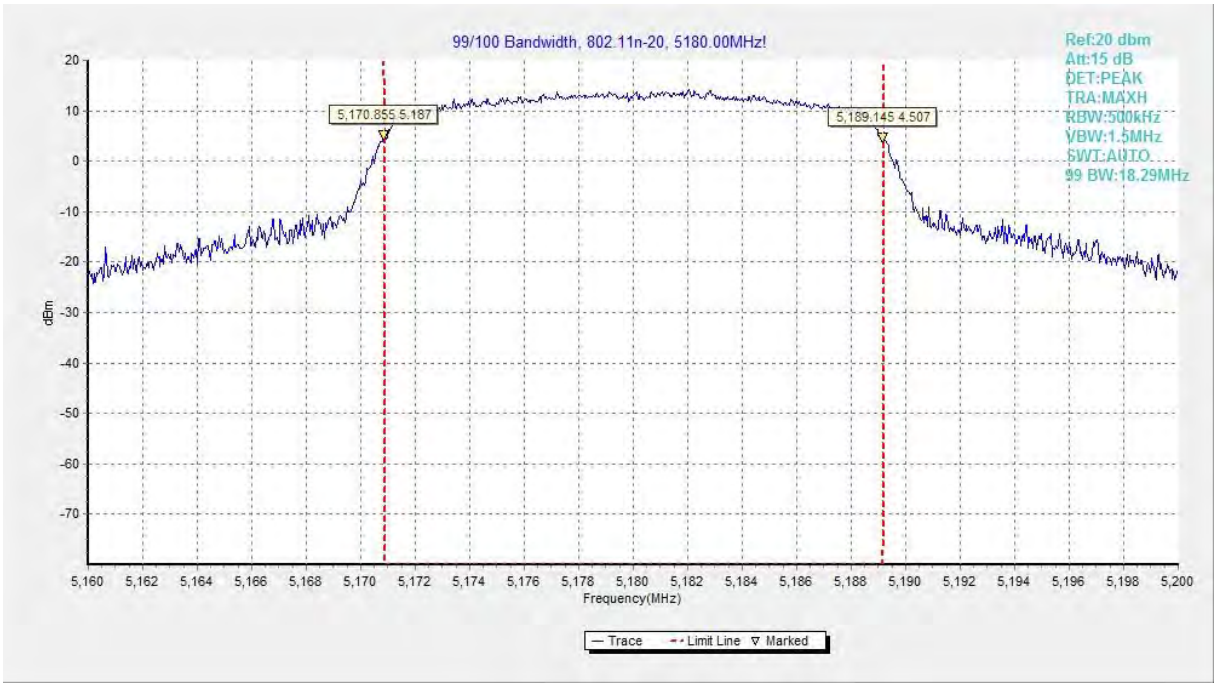

Fig.63 99% Occupied bandwidth (802.11n-HT20, 5180MHz)

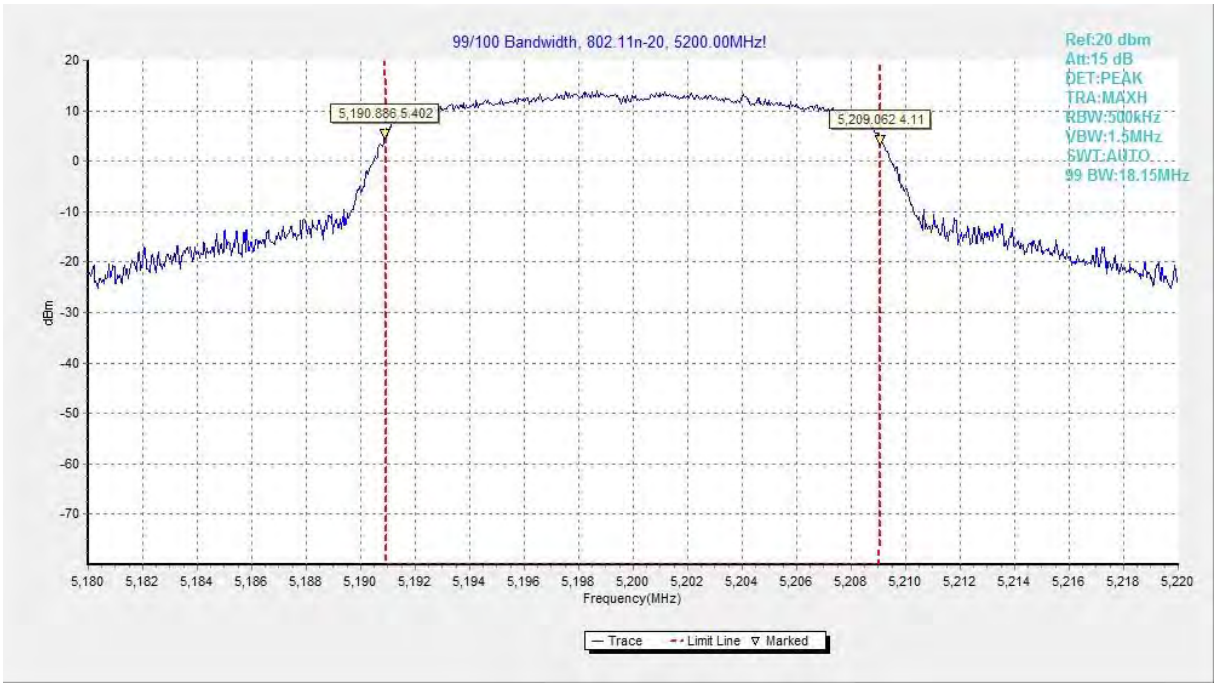

Fig.64 99% Occupied bandwidth (802.11n-HT20, 5200MHz)

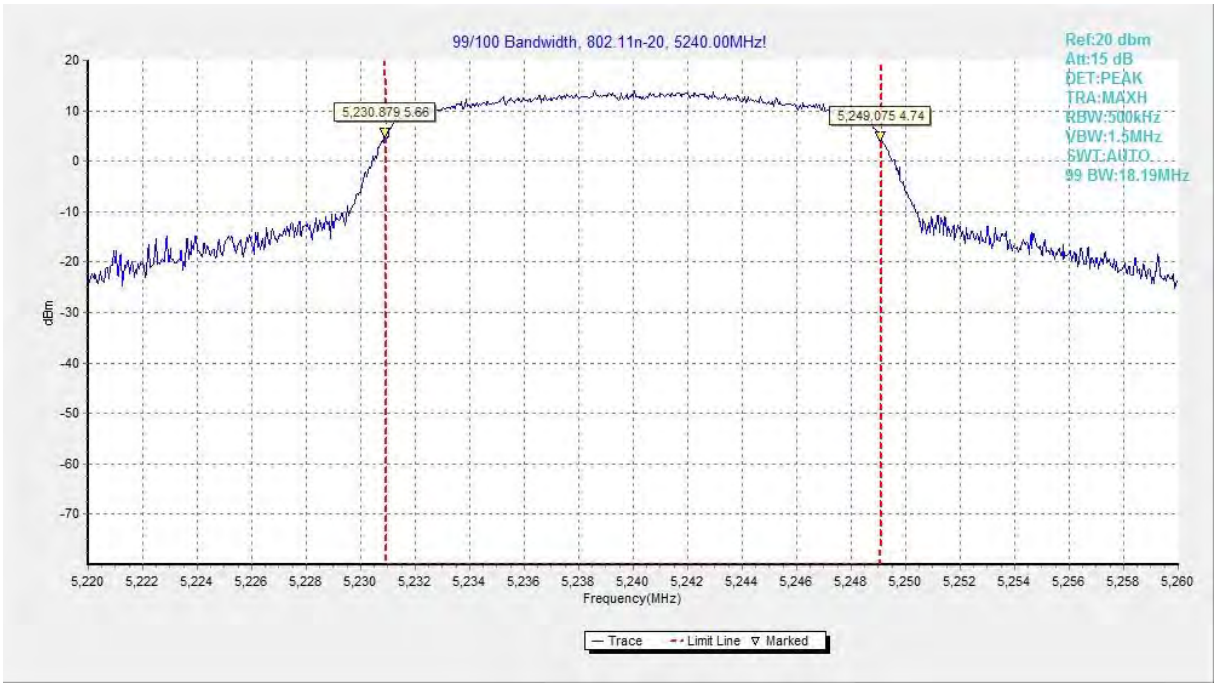

Fig.65 99% Occupied bandwidth (802.11n-HT20, 5240MHz)

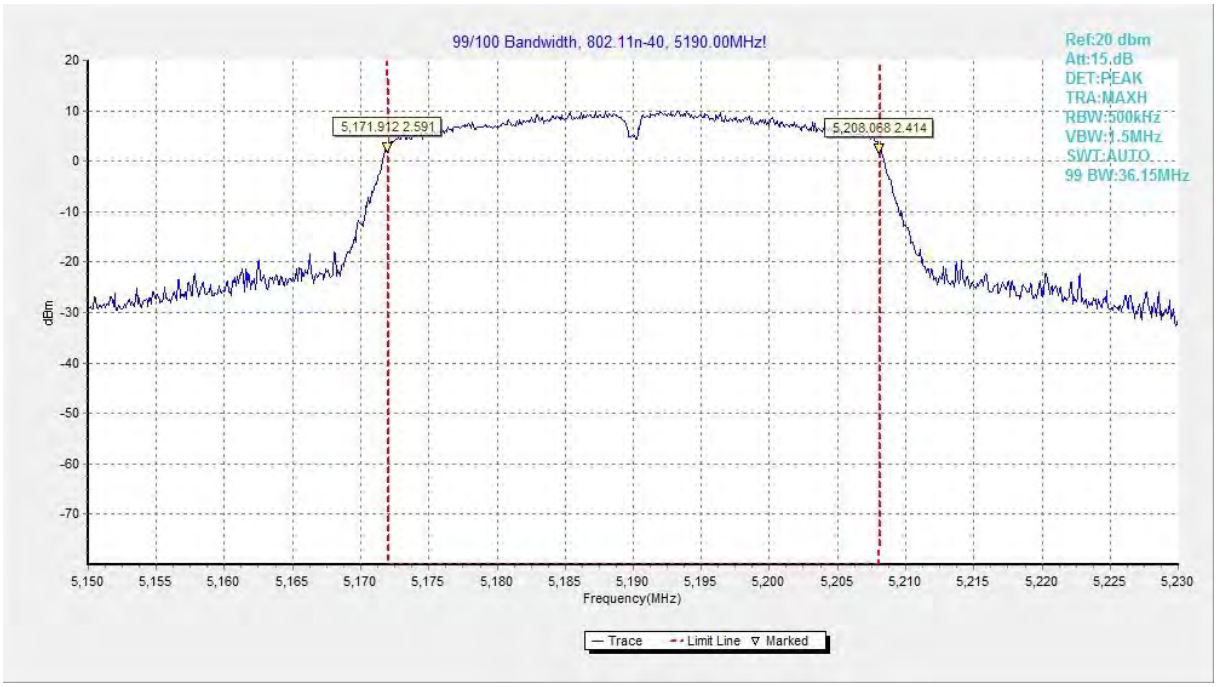

Fig.66 99% Occupied bandwidth (802.11n-HT40, 5190MHz)

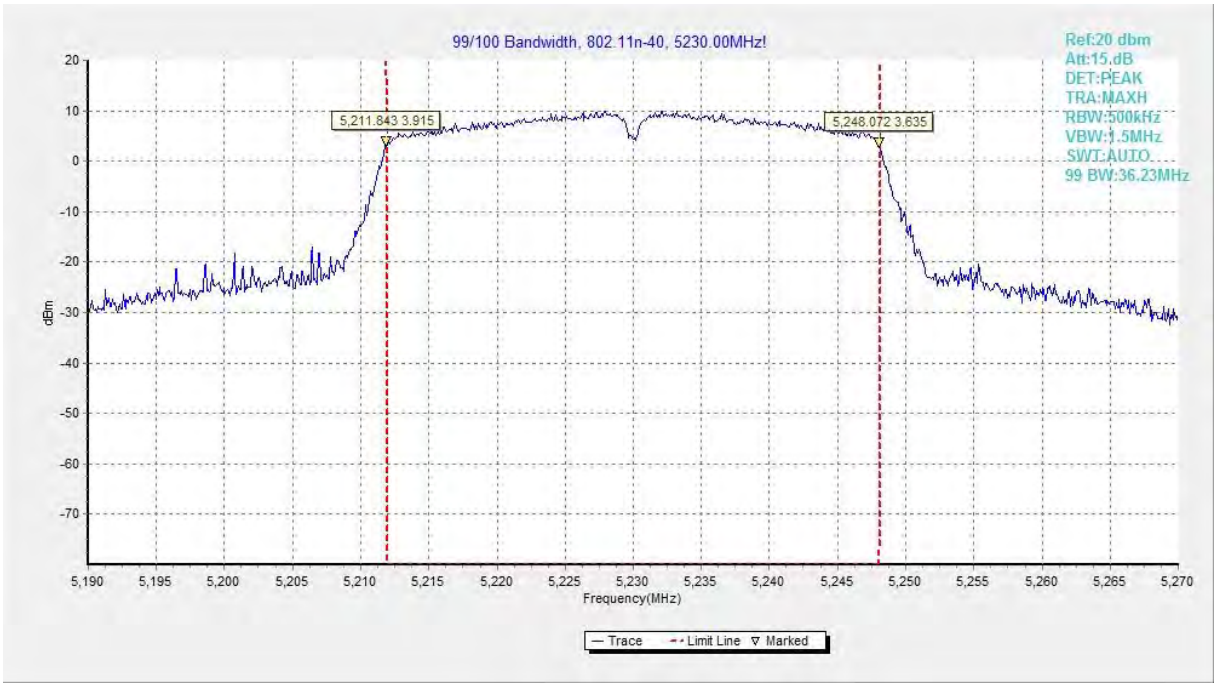

Fig.67 99% Occupied bandwidth (802.11n-HT40, 5230MHz)

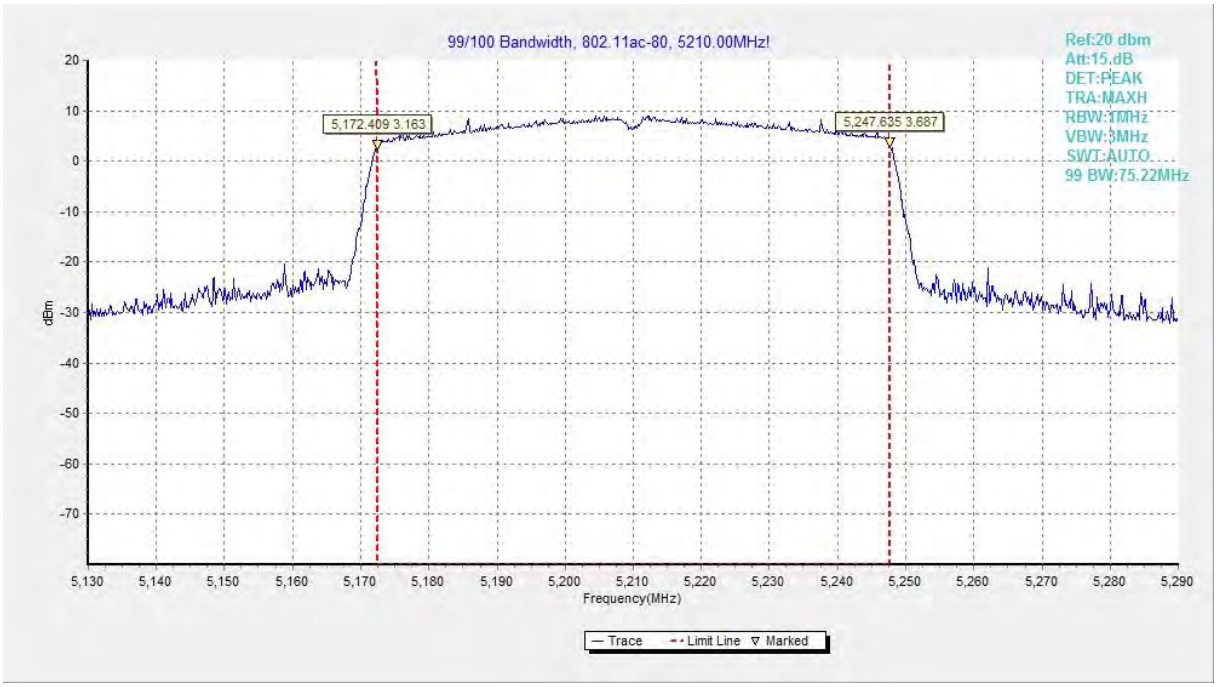

Fig.68 99% Occupied bandwidth (802.11ac-HT80, 5210MHz)

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.

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 *****