FCC PART 15
TEST REPORT
No.I22Z60785-IOT22

for

Wingtech Group (Hong Kong) Limited

5G Mobile Phone

CELERO5G

With

FCC ID: 2APXW-CELERO5G

Hardware Version: V2.0

Software Version: Celero5G_0.01.01

Issued Date: 2022-07-20

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S.Government.

Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I22Z60785-IOT22	Rev.0	1st edition	2022-07-06
I22Z60785-IOT22	Rev.1	Add duty cycle plot.	2022-07-20

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℃

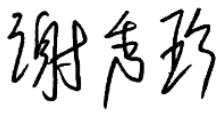
Relative Humidity: 20-75%

1.4. Project date

Testing Start Date: 2022-04-22

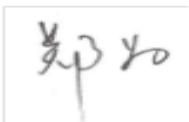
Testing End Date: 2022-07-06

1.5. Signature



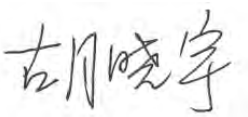
Xie Xiuzhen

(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:	HongKong
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:	HongKong
Postal Code:	/
Country:	China
Telephone:	/
Fax:	/

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

3.1. About EUT

Description	5G Mobile Phone
Model name	CELERO5G
FCC ID	2APXW-CELERO5G
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
UT87a	863401060009228	V2.0	Celero5G_0.01.01
UT39a	863401060002736	V2.0	Celero5G_0.01.01
UT40a	863401060002769	V2.0	Celero5G_0.01.01

*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	Battery	/	/
AE2	Charger	/	/
AE3	USB Cable	/	/

AE1

Model	RE001
Manufacturer	SUNWODA ELECTRONIC CO ., LTD
Capacitance	4500mAh
Nominal voltage	3.85V

AE2

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

AE3

Model	USB AM TO TYPE-C2.0
Manufacturer	ShenZhen BRL Technology 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. nterpretation 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	2023-05-15
2	Test Receiver	ESCI	100344	R&S	1 year	2023-02-21
3	LISN	ENV216	101200	R&S	1 year	2023-05-30
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	2022-06-28
2	EMI Antenna	VULB 9163	302	SCHWARZBECK	1 year	2022-12-28
3	EMI Antenna	3115	00167250	ETS-Lindgren	1 year	2022-07-01
4	EMI Antenna	3116	2663	ETS-Lindgren	1 year	2022-08-11

Note:

The test dates were before the calibration due dates of equipment used (the Test Receiver which series number is 103023).

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	4.92
30MHz ≤ f ≤ 1GHz	5.15
1GHz ≤ f ≤18GHz	5.54
18GHz ≤ f ≤40GHz	5.26

8.6 AC Power-line Conducted Emission

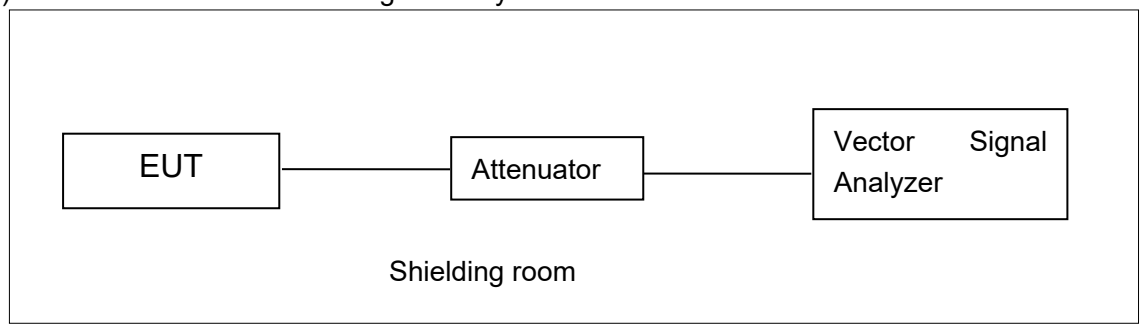
Measurement Uncertainty : 3.08,k=2

ANNEX A: MEASUREMENT RESULTS

A.1. Measurement Method

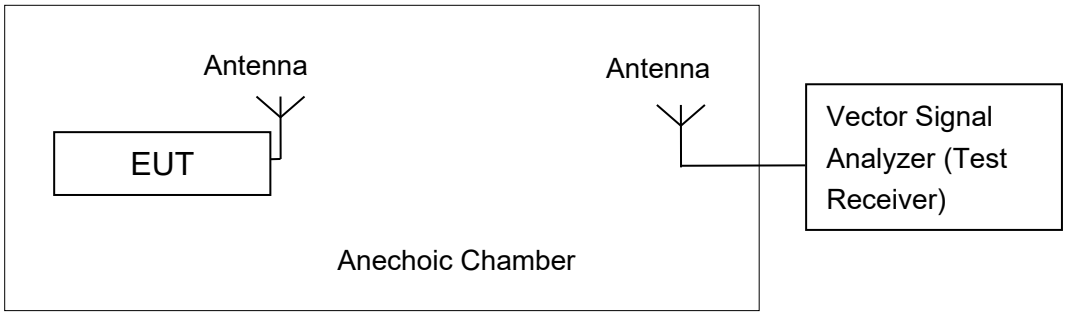
A.1.1. Conducted Measurements

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 = 3MHz;



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)=23.22, B=23.35/2+5=16.675MHz,
802.11n-HT20=11+10*log(B)=22.88, B=20.85/2+5=15.425MHz,
802.11ac-VHT20=11+10*log(B)=22.87, B=20.35/2+5=15.375MHz,

For straddle channel 40/80MHz Bandwidth, conducted output power limit=24 dBm
802.11n-HT40: B=40.56/2+15=35.28MHz,
802.11ac-VHT40: B=40.08/2+15=35.04MHz,
802.11ac-VHT80: B=80.48/2+35=75.24MHz

Measurement Results:

802.11a mode

Mode	Frequency	Test Result (dBm)							
		Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
802.11a	5180MHz	19.28	/	/	/	/	/	/	/
	5200MHz	19.36	/	/	/	/	/	/	/
	5240MHz	19.14	/	/	/	/	/	/	/
	5260MHz	18.72	/	/	/	/	/	/	/
	5280MHz	18.78	/	/	/	/	/	/	/
	5320MHz	18.84	/	/	/	/	/	/	/
	5500MHz	18.78	/	/	/	/	/	/	/
	5580MHz	18.36	/	/	/	/	/	/	/
	5700MHz	18.20	/	/	/	/	/	/	/
	5720MHz	18.88	/	/	/	/	/	/	/

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	18.70	/	/	/	/	/	/	/
	5200MHz	18.75	/	/	/	/	/	/	/
	5240MHz	18.86	/	/	/	/	/	/	/
	5260MHz	18.39	/	/	/	/	/	/	/
	5280MHz	18.31	/	/	/	/	/	/	/
	5320MHz	18.11	/	/	/	/	/	/	/
	5500MHz	18.34	/	/	/	/	/	/	/
	5580MHz	18.16	/	/	/	/	/	/	/
	5700MHz	18.17	/	/	/	/	/	/	/
	5720MHz	18.60	/	/	/	/	/	/	/

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	17.46	/	/	/	/	/	/	/	/
	5200MHz	17.65	/	/	/	/	/	/	/	/
	5240MHz	17.58	/	/	/	/	/	/	/	/
	5260MHz	17.37	/	/	/	/	/	/	/	/
	5280MHz	17.38	/	/	/	/	/	/	/	/
	5320MHz	17.16	/	/	/	/	/	/	/	/
	5500MHz	17.41	/	/	/	/	/	/	/	/
	5580MHz	17.18	/	/	/	/	/	/	/	/
	5700MHz	17.49	/	/	/	/	/	/	/	/
	5720MHz	17.29	/	/	/	/	/	/	/	/

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	14.91	/	/	/	/	/	/	/
	5230MHz	17.99	/	/	/	/	/	/	/
	5270MHz	17.63	/	/	/	/	/	/	/
	5310MHz	17.52	/	/	/	/	/	/	/

	5510MHz	17.18	/	/	/	/	/	/	/
	5550MHz	17.56	/	/	/	/	/	/	/
	5670MHz	17.96	/	/	/	/	/	/	/
	5710MHz	17.63	/	/	/	/	/	/	/

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	15.09	/	/	/	/	/	/	/	/	/
	5230MHz	16.80	/	/	/	/	/	/	/	/	/
	5270MHz	16.42	/	/	/	/	/	/	/	/	/
	5310MHz	16.22	/	/	/	/	/	/	/	/	/
	5510MHz	16.36	/	/	/	/	/	/	/	/	/
	5550MHz	16.55	/	/	/	/	/	/	/	/	/
	5670MHz	16.70	/	/	/	/	/	/	/	/	/
	5710MHz	16.42	/	/	/	/	/	/	/	/	/

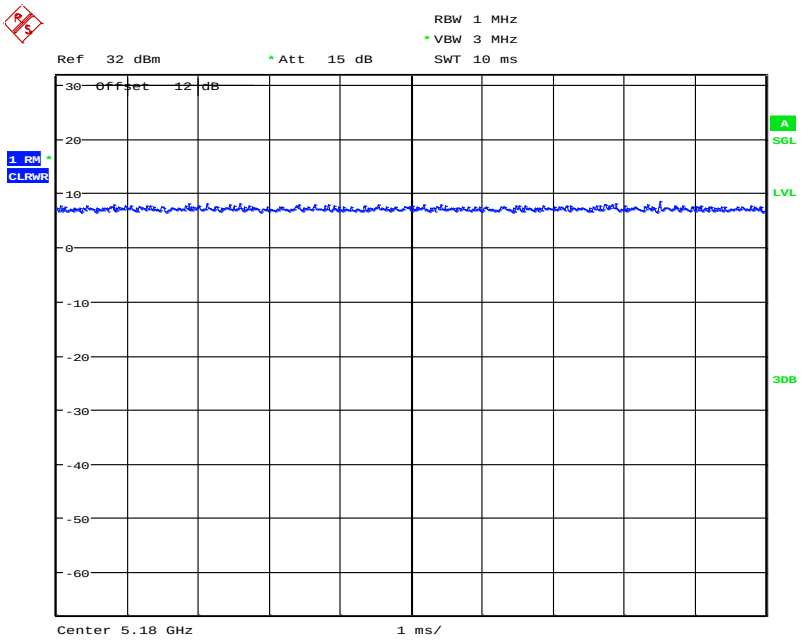
The data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.

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	12.83	/	/	/	/	/	/	/	/	/
	5290MHz	16.27	/	/	/	/	/	/	/	/	/
	5530MHz	16.20	/	/	/	/	/	/	/	/	/
	5610MHz	16.02	/	/	/	/	/	/	/	/	/
	5690MHz	16.05	/	/	/	/	/	/	/	/	/

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%, for example:



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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	7.90	P
	5200 MHz	8.01	P
	5240 MHz	8.10	P
	5260 MHz	7.63	P
	5280 MHz	7.68	P
	5320 MHz	7.35	P
	5500 MHz	7.76	P
	5580 MHz	7.30	P
	5700 MHz	7.66	P
	5720 MHz	7.70	P
802.11n	5180 MHz	7.75	P

HT20	5200 MHz	7.76	P
	5240 MHz	7.74	P
	5260 MHz	7.29	P
	5280 MHz	7.43	P
	5320 MHz	7.01	P
	5500 MHz	7.30	P
	5580 MHz	6.86	P
	5700 MHz	7.42	P
	5720 MHz	7.39	P
802.11n HT40	5190 MHz	1.78	P
	5230 MHz	4.16	P
	5270 MHz	3.52	P
	5310 MHz	3.55	P
	5510 MHz	4.18	P
	5550 MHz	3.70	P
	5670 MHz	4.08	P
	5710 MHz	3.78	P
802.11ac HT80	5210MHz	-3.45	P
	5290MHz	-0.84	P
	5530MHz	-1.07	P
	5610MHz	-1.35	P
	5690MHz	-0.83	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	20.10	P
	5200 MHz	Fig.2	20.20	P
	5240 MHz	Fig.3	20.45	P
	5260 MHz	Fig.4	21.55	P
	5280 MHz	Fig.5	20.25	P

	5320 MHz	Fig.6	20.35	P
	5500 MHz	Fig.7	21.20	P
	5580 MHz	Fig.8	21.75	P
	5700 MHz	Fig.9	23.50	P
	5720 MHz	Fig.10	23.35	P
802.11n HT20	5180 MHz	Fig.11	20.85	P
	5200 MHz	Fig.12	20.54	P
	5240 MHz	Fig.13	20.55	P
	5260 MHz	Fig.14	20.55	P
	5280 MHz	Fig.15	23.00	P
	5320 MHz	Fig.16	20.80	P
	5500 MHz	Fig.17	20.60	P
	5580 MHz	Fig.18	20.50	P
	5700 MHz	Fig.19	23.50	P
	5720 MHz	Fig.20	20.85	P
802.11n HT40	5190 MHz	Fig.21	40.24	P
	5230 MHz	Fig.22	40.72	P
	5270 MHz	Fig.23	40.16	P
	5310 MHz	Fig.24	40.16	P
	5510 MHz	Fig.25	40.00	P
	5550 MHz	Fig.26	40.64	P
	5670 MHz	Fig.27	40.56	P
	5710 MHz	Fig.28	40.56	P
802.11ac HT80	5210MHz	Fig.29	80.48	P
	5290MHz	Fig.30	80.80	P
	5530MHz	Fig.31	80.32	P
	5610MHz	Fig.32	80.16	P
	5690MHz	Fig.33	80.48	P

Conclusion: PASS

Test graphs as below:

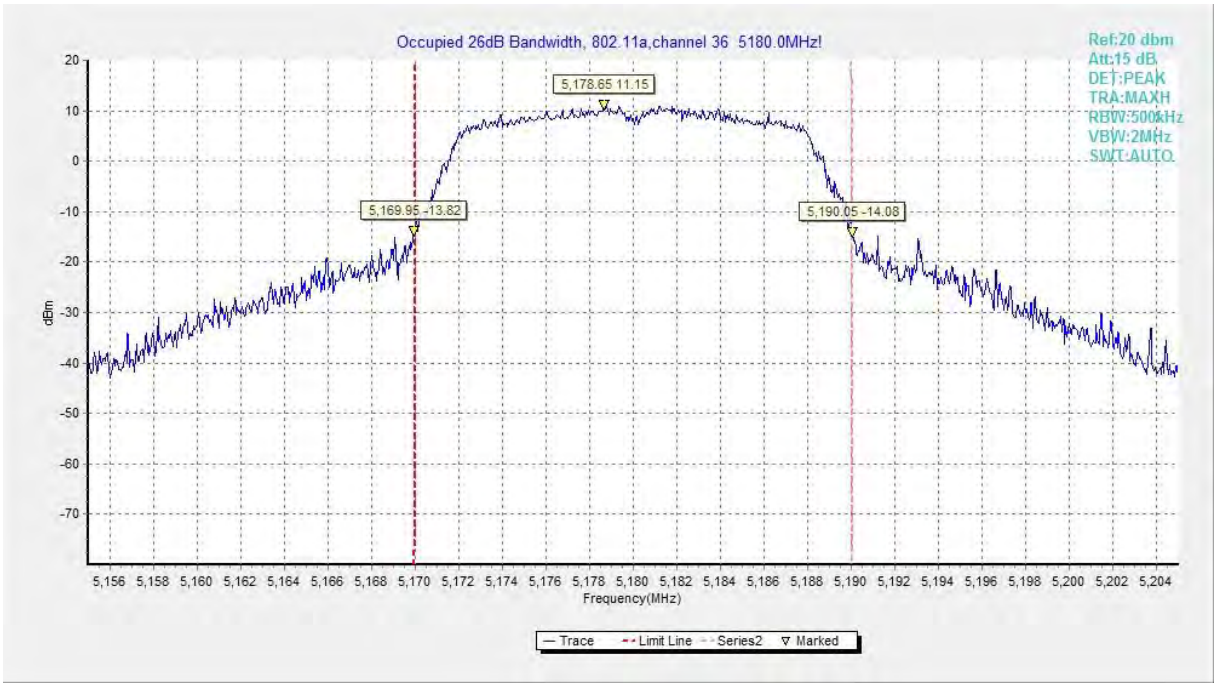

Fig.1 Occupied 26dB Bandwidth (802.11a, 5180MHz)

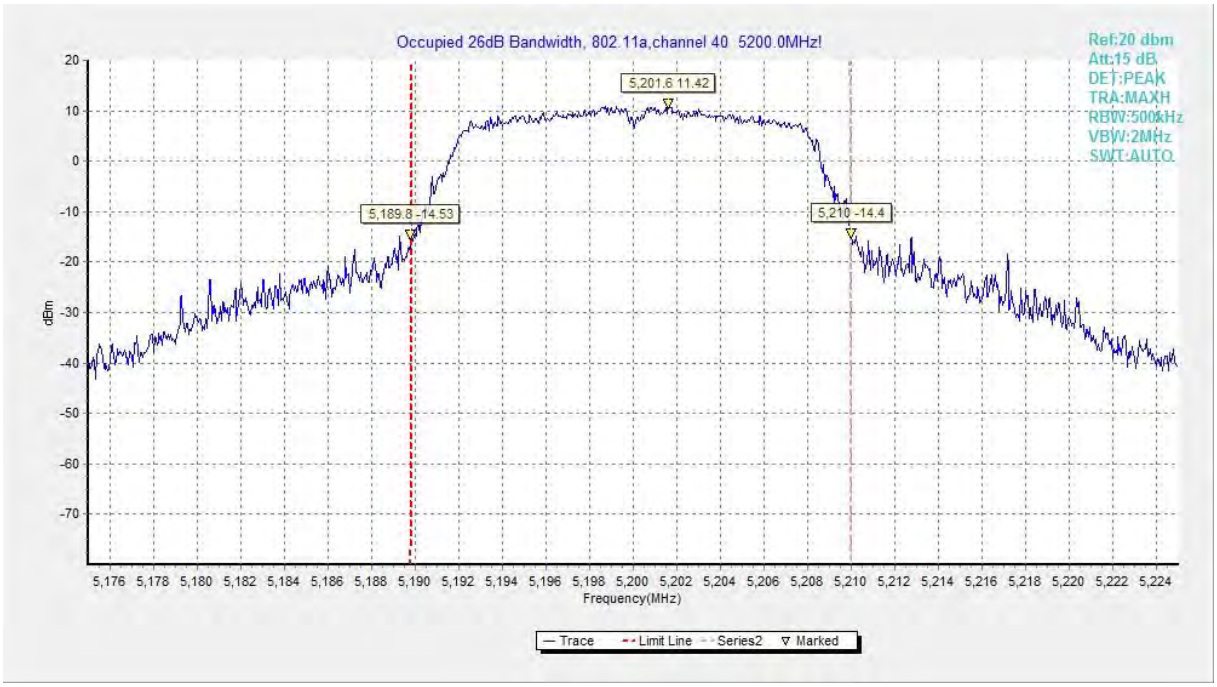

Fig.2 Occupied 26dB Bandwidth (802.11a, 5200MHz)

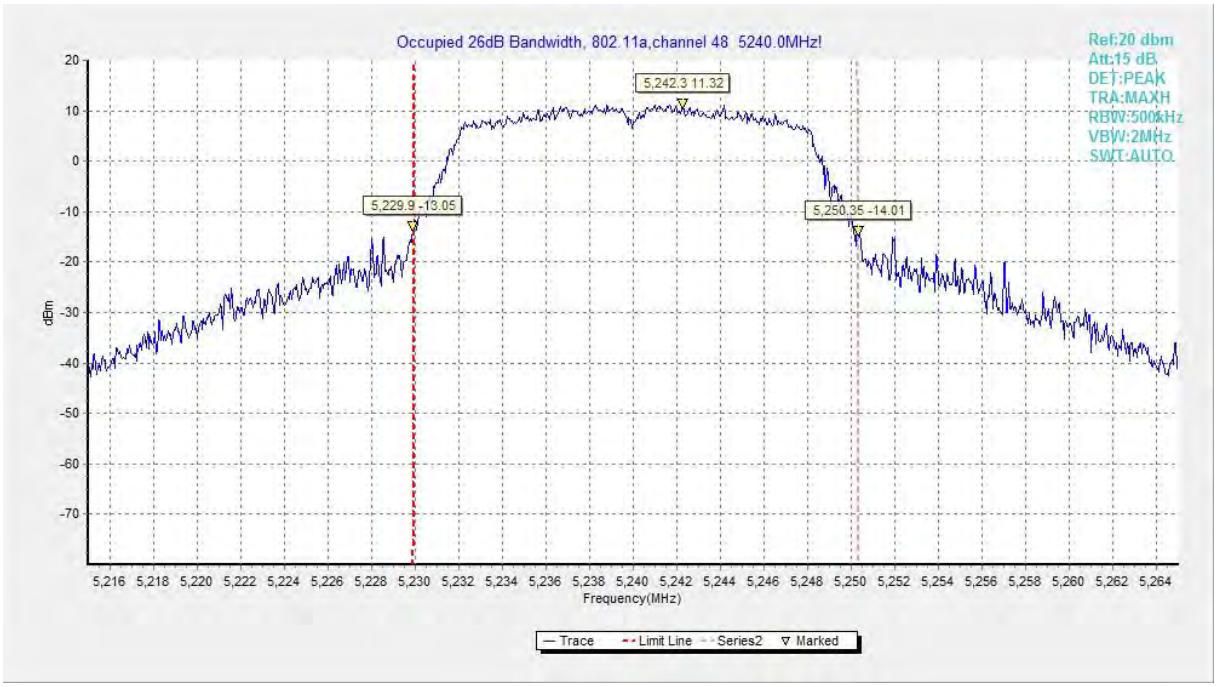

Fig.3 Occupied 26dB Bandwidth (802.11a, 5240MHz)

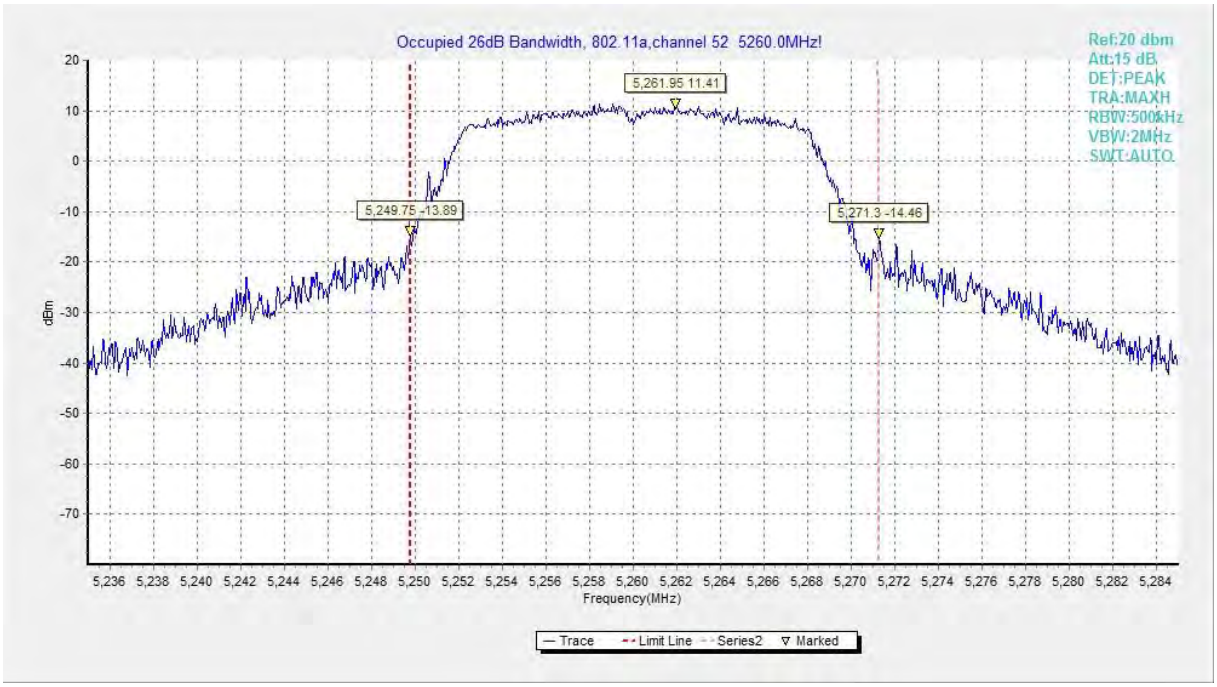

Fig.4 Occupied 26dB Bandwidth (802.11a, 5260MHz)

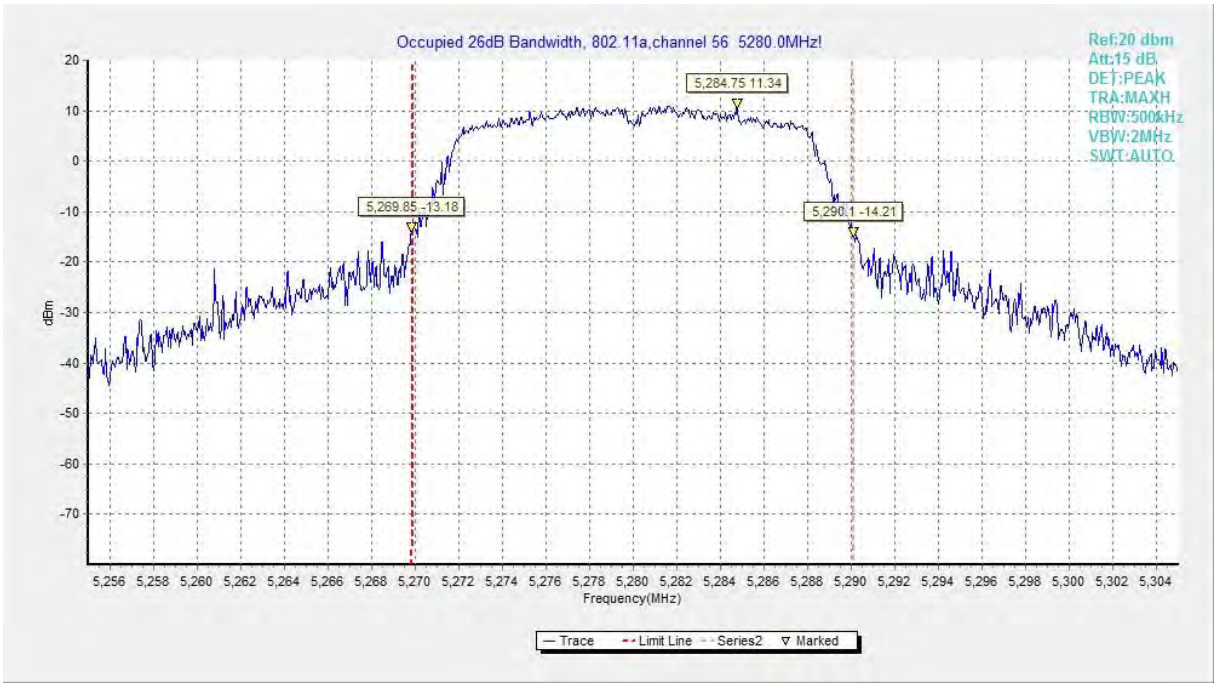

Fig.5 Occupied 26dB Bandwidth (802.11a, 5280MHz)

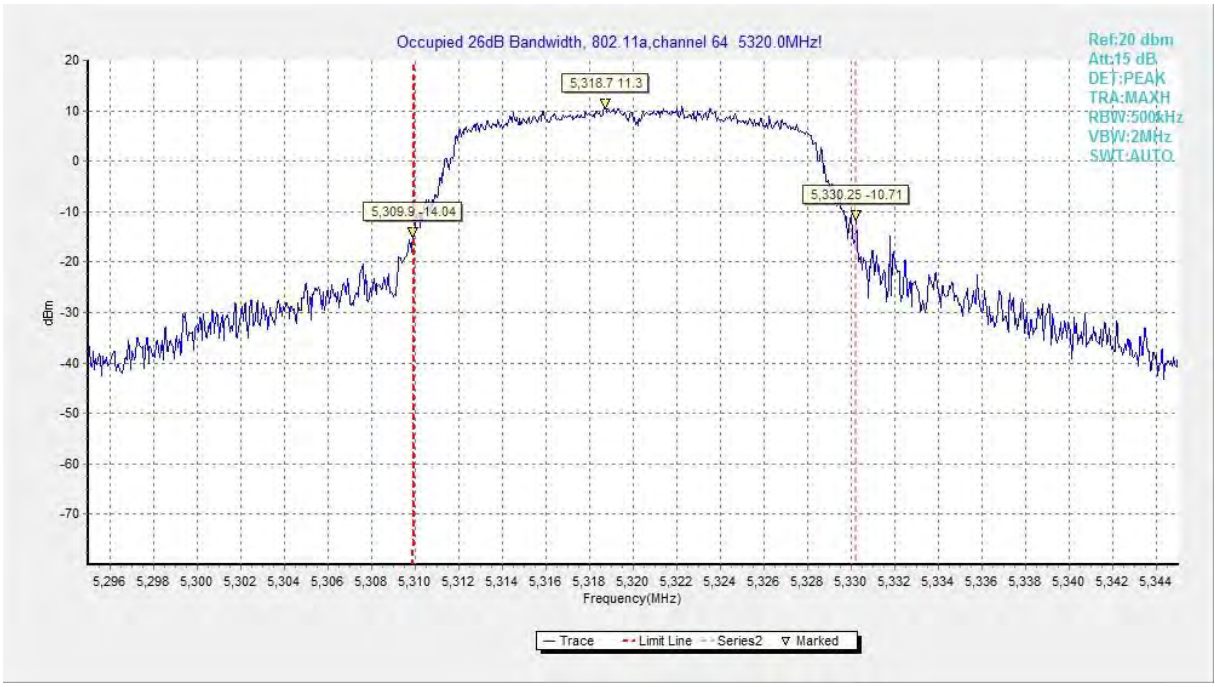

Fig.6 Occupied 26dB Bandwidth (802.11a, 5320MHz)

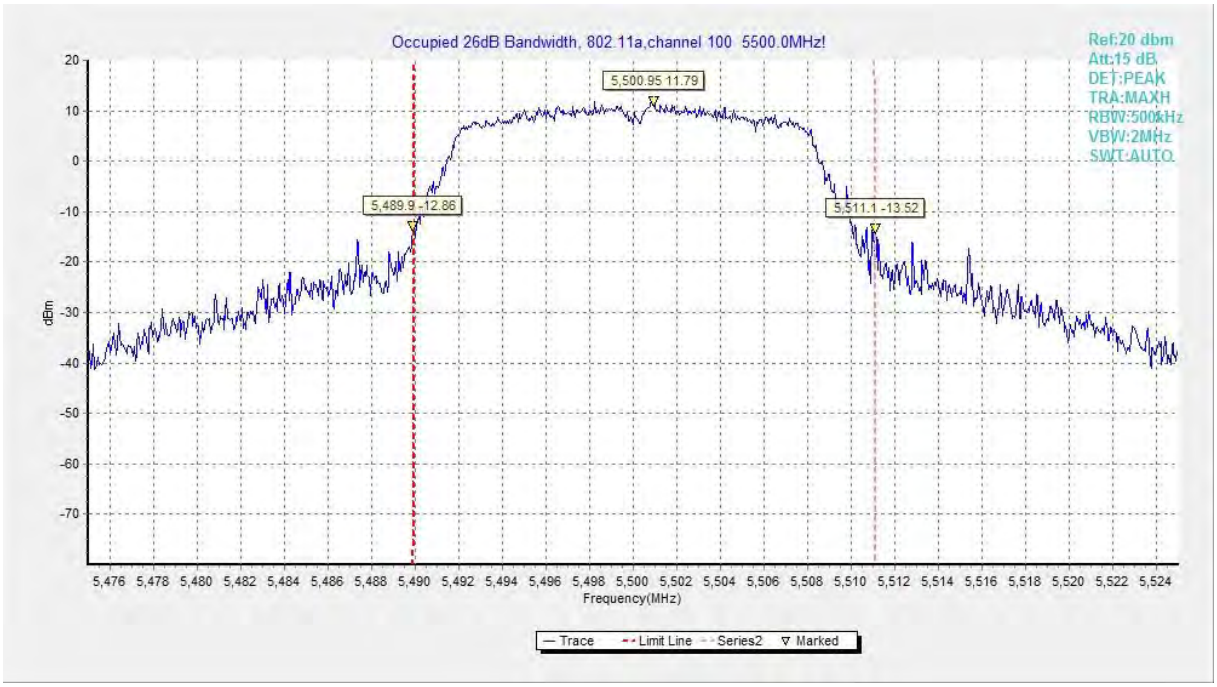

Fig.7 Occupied 26dB Bandwidth (802.11a, 5500MHz)

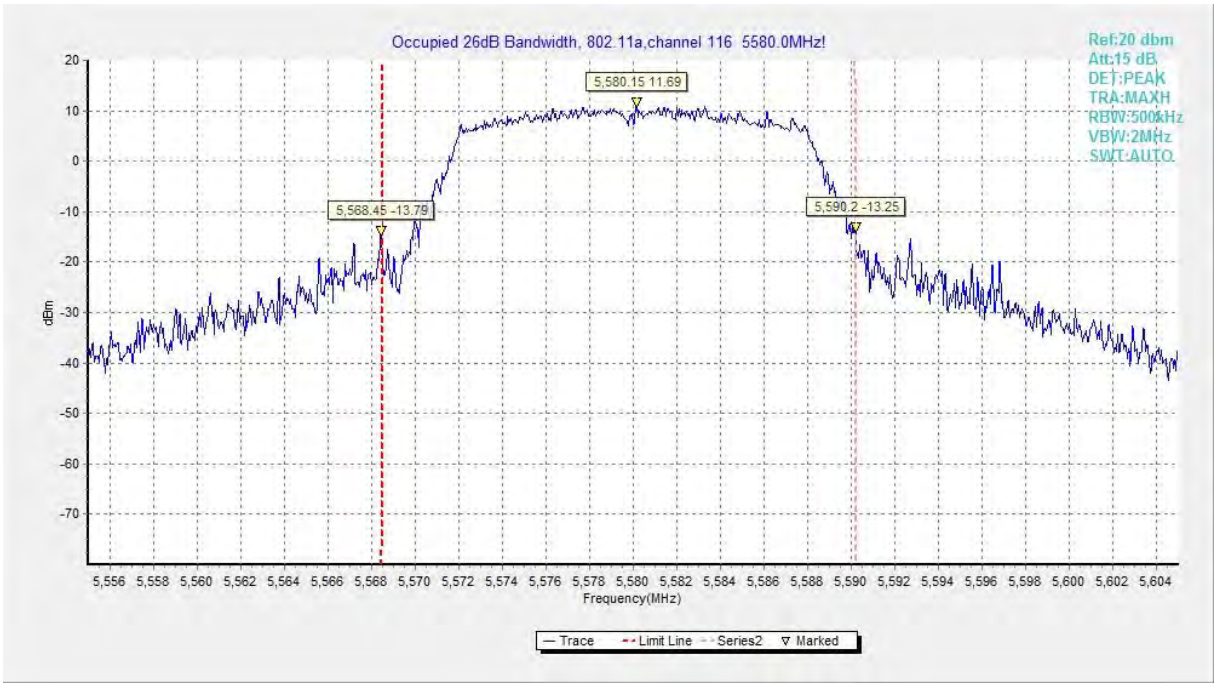

Fig.8 Occupied 26dB Bandwidth (802.11a, 5580MHz)

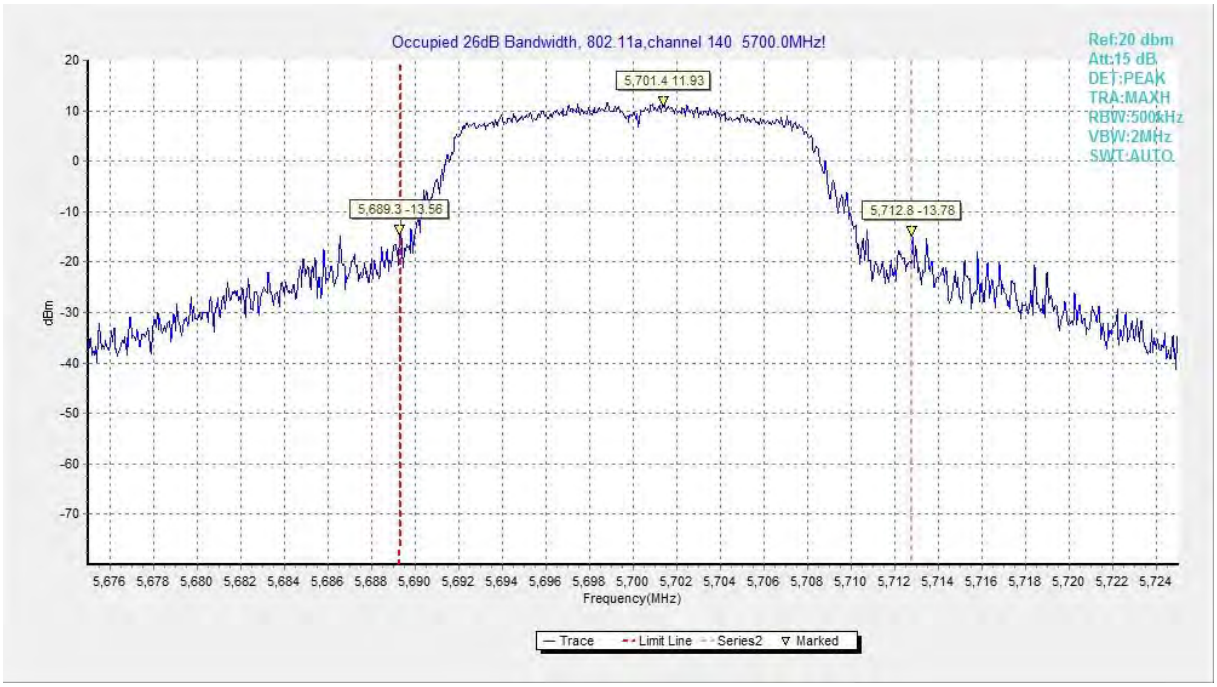

Fig.9 Occupied 26dB Bandwidth (802.11a, 5700MHz)

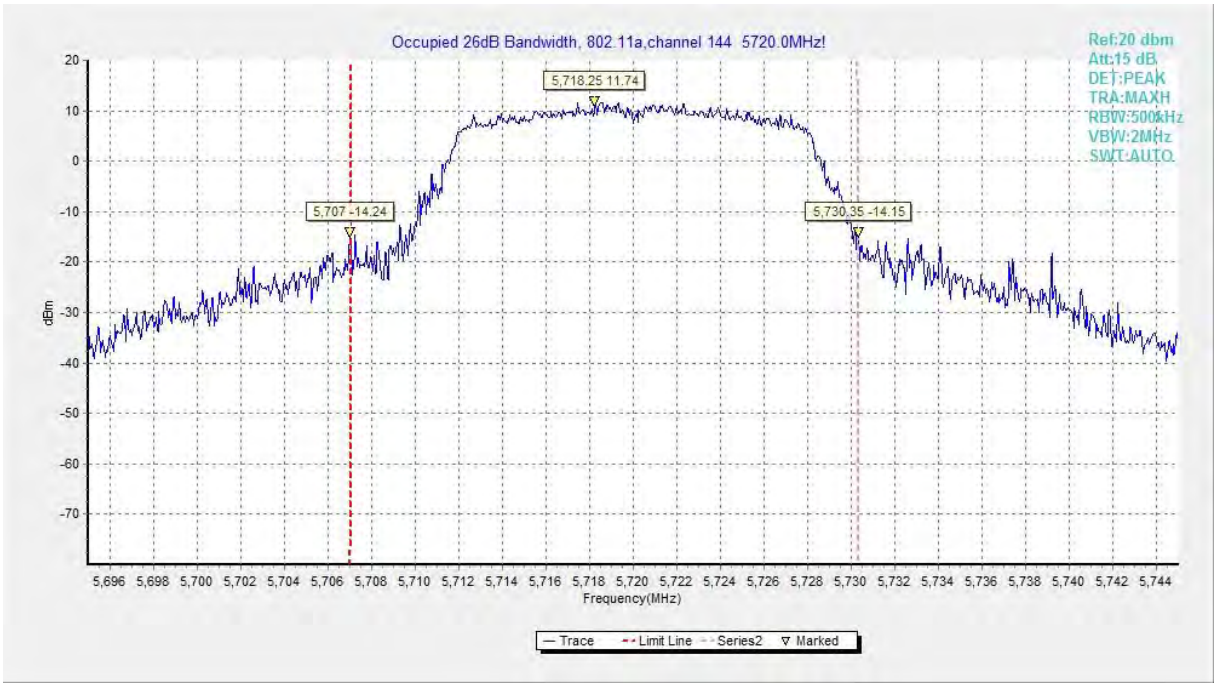

Fig.10 Occupied 26dB Bandwidth (802.11a, 5720MHz)

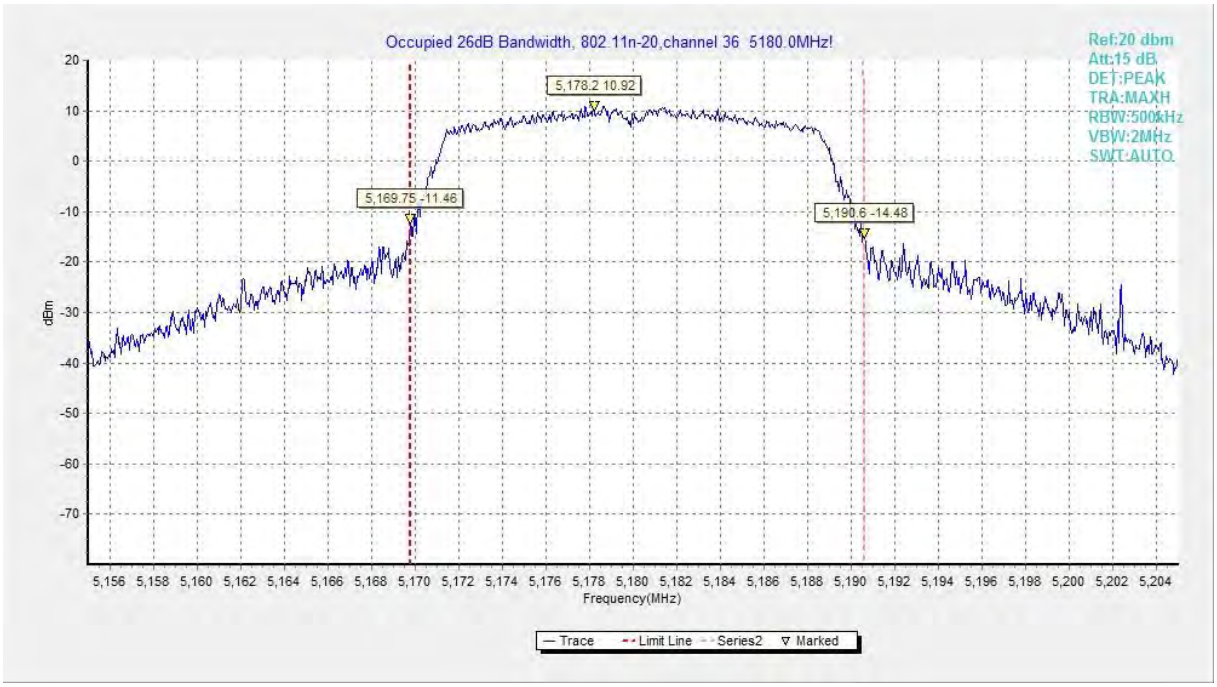

Fig.11 Occupied 26dB Bandwidth (802.11n-HT20, 5180MHz)

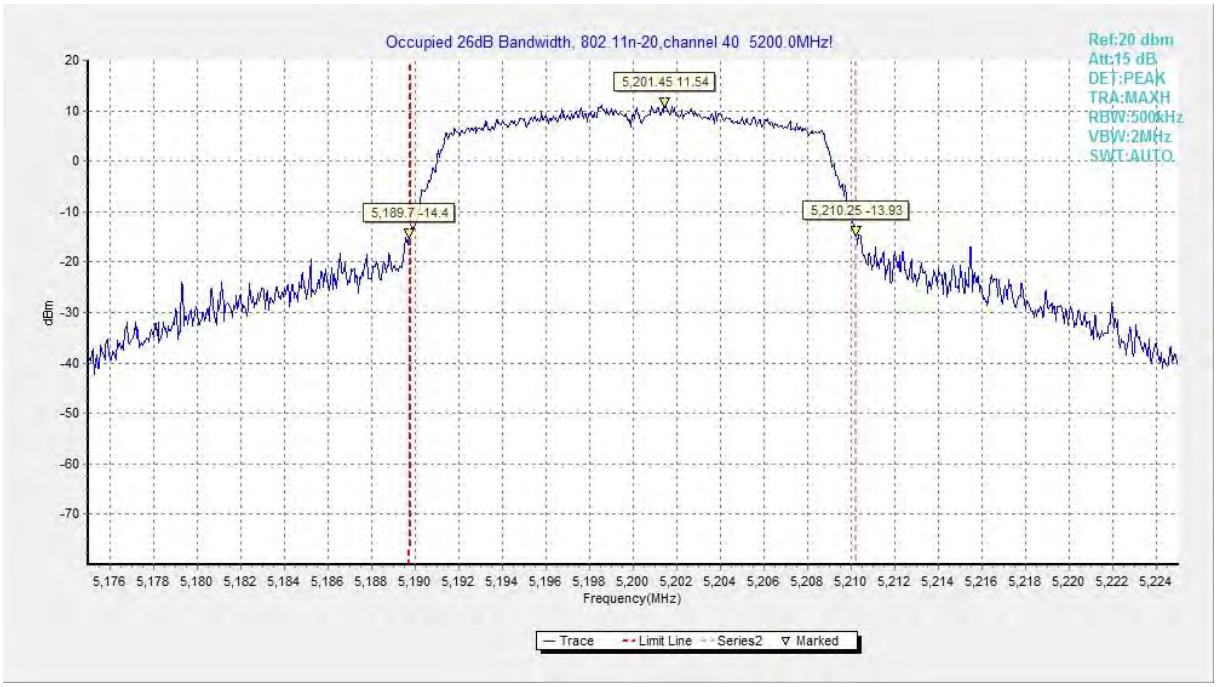

Fig.12 Occupied 26dB Bandwidth (802.11n-HT20, 5200MHz)

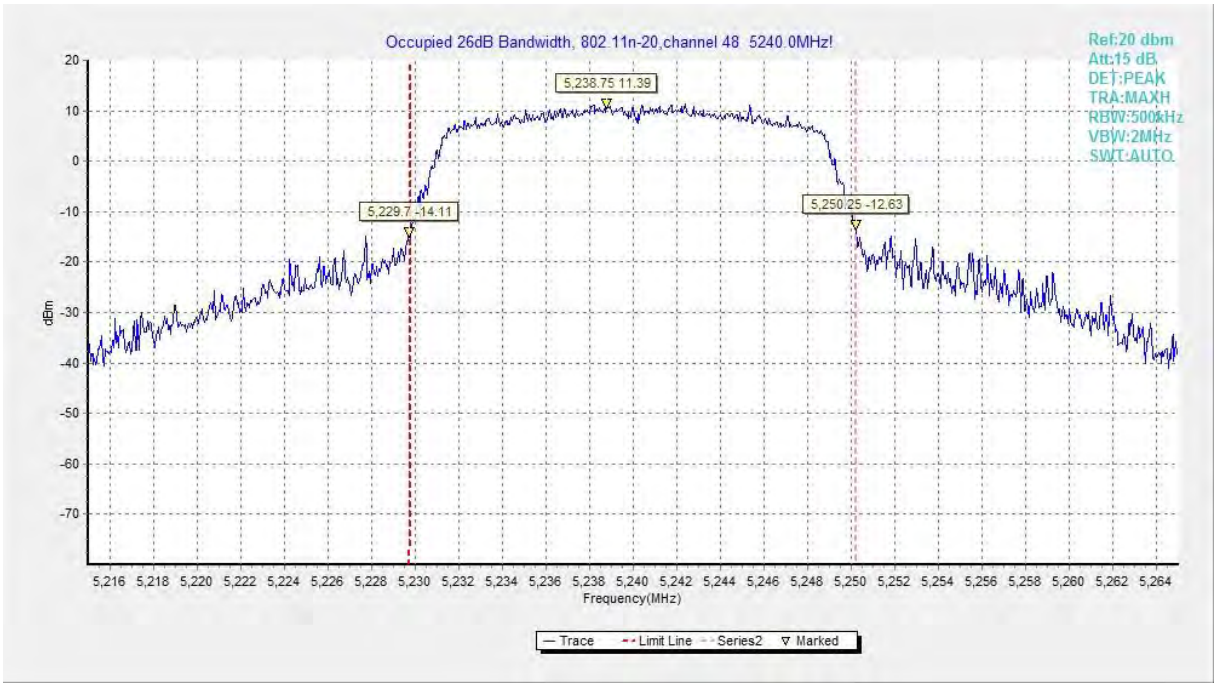

Fig.13 Occupied 26dB Bandwidth (802.11n-HT20, 5240MHz)

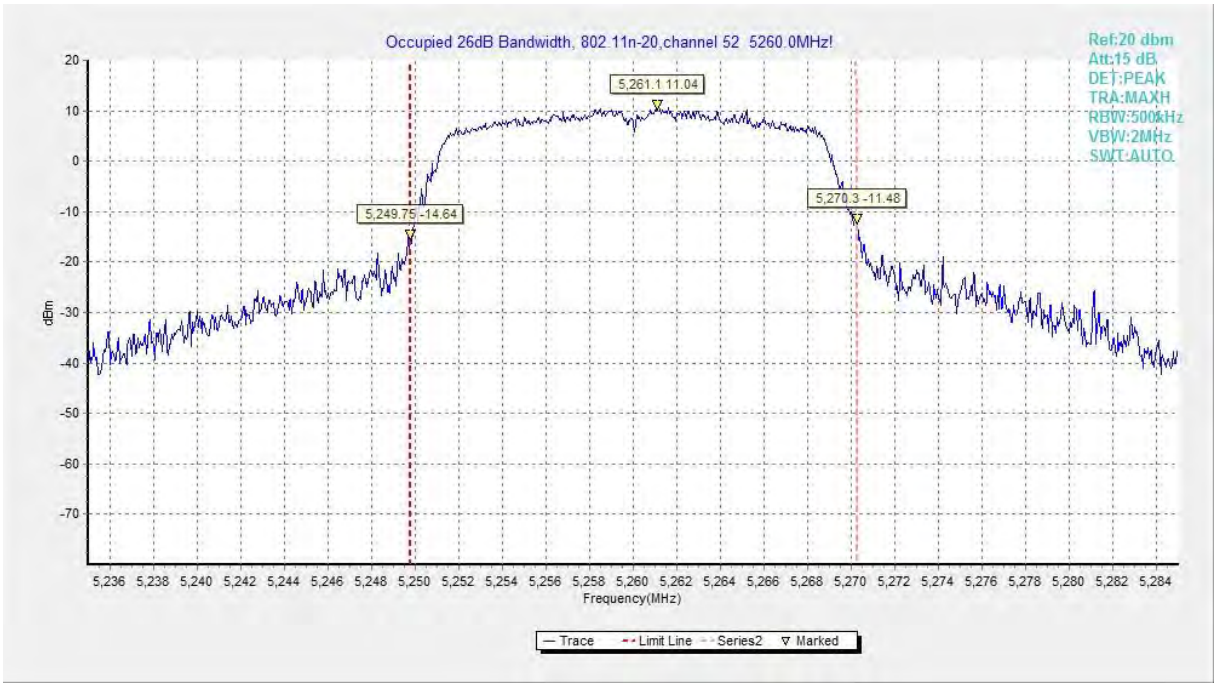

Fig.14 Occupied 26dB Bandwidth (802.11n-HT20, 5260MHz)

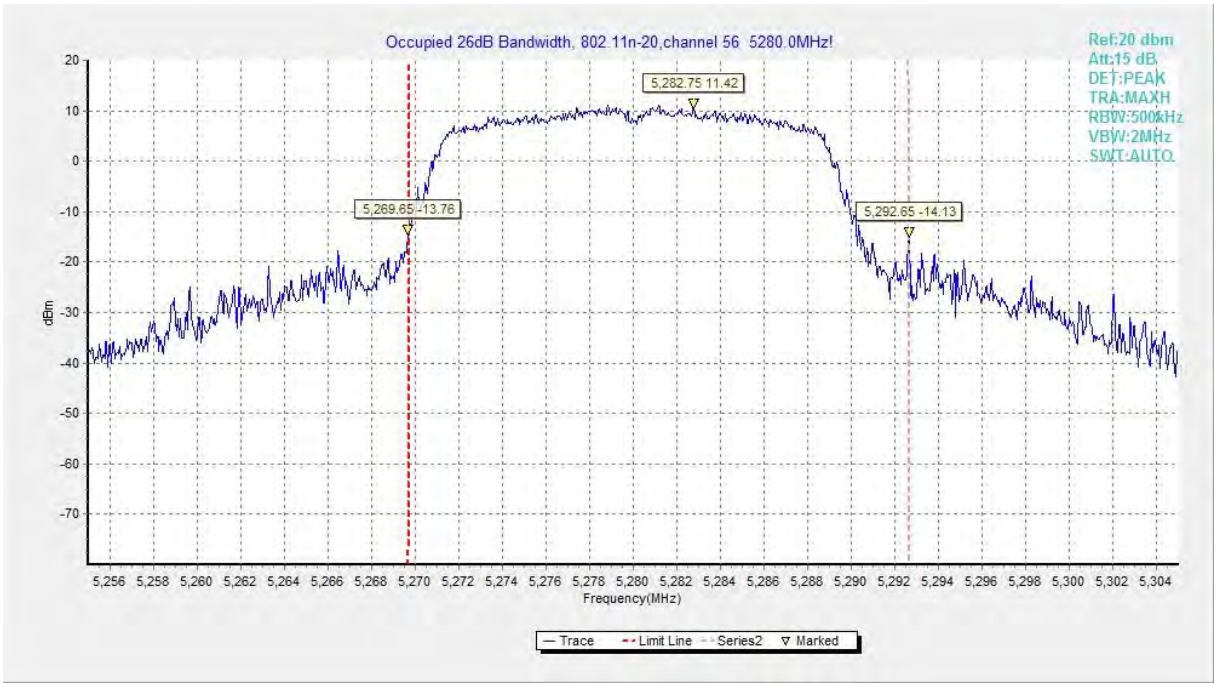

Fig.15 Occupied 26dB Bandwidth (802.11n-HT20, 5280MHz)

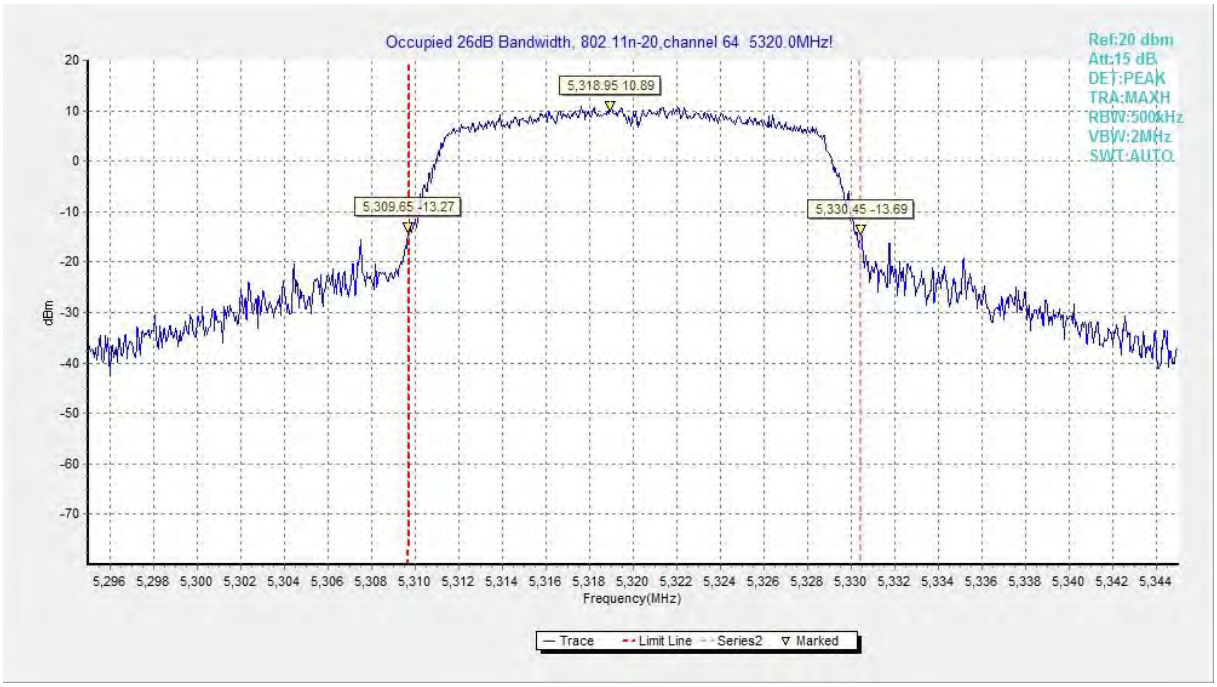

Fig.16 Occupied 26dB Bandwidth (802.11n-HT20, 5320MHz)

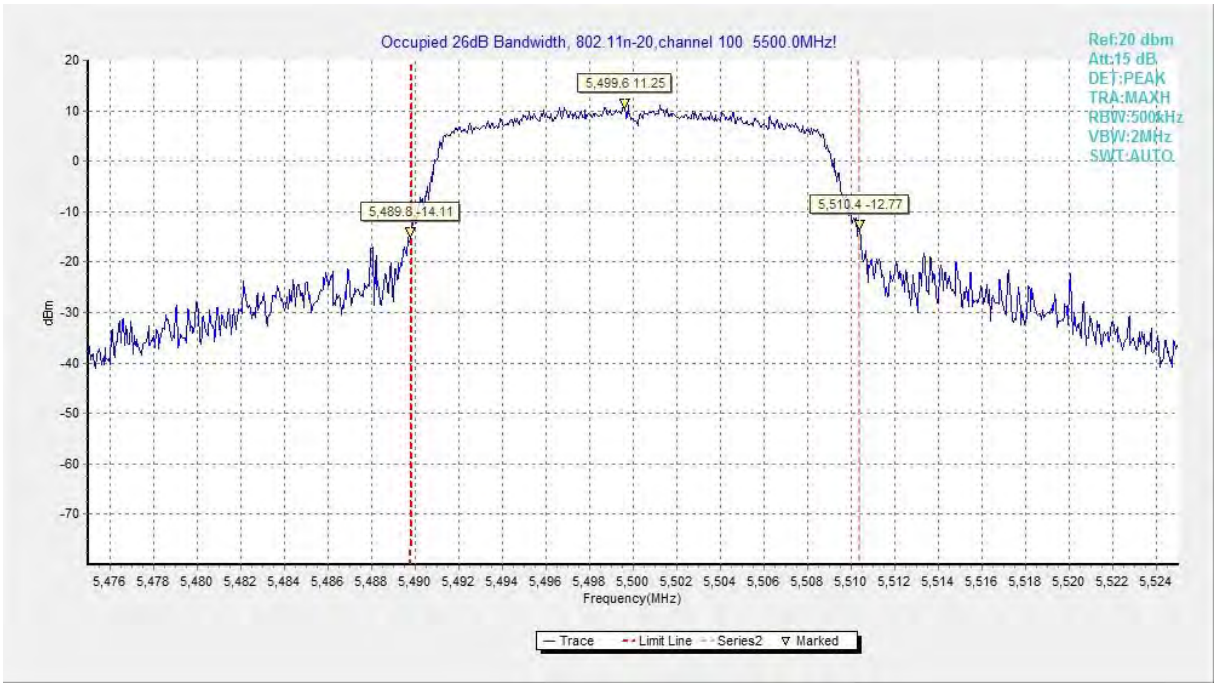

Fig.17 Occupied 26dB Bandwidth (802. 11n-HT20, 5500MHz)

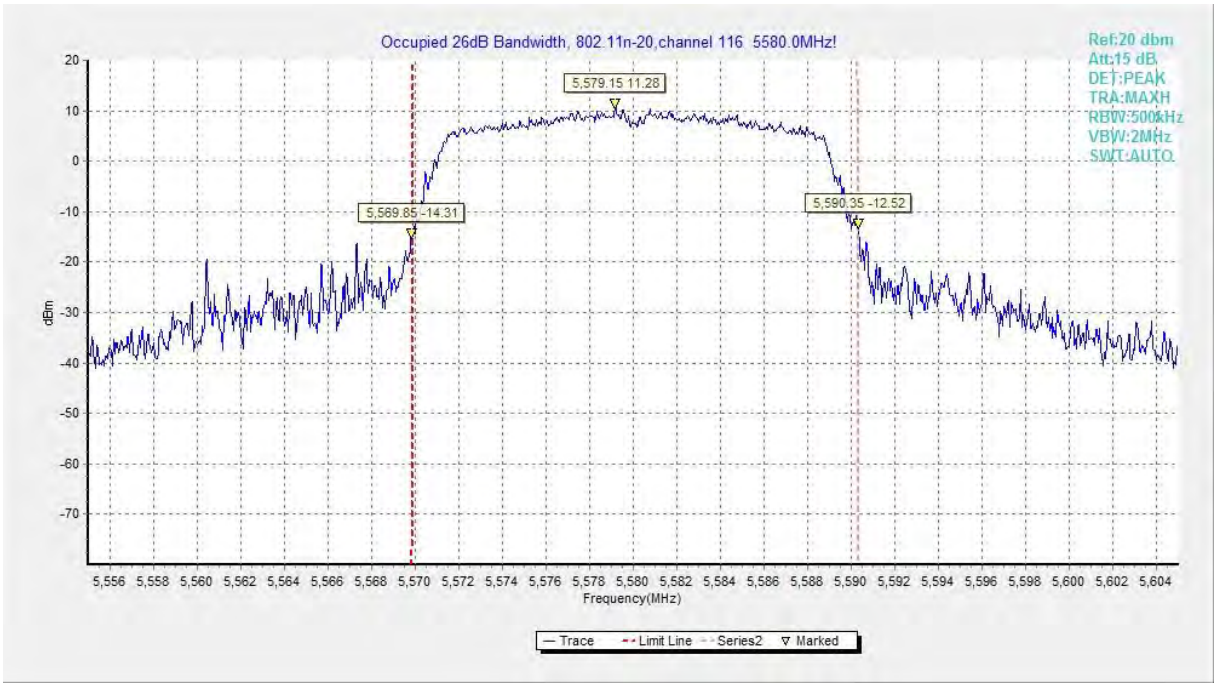

Fig.18 Occupied 26dB Bandwidth (802. 11n-HT20, 5580MHz)

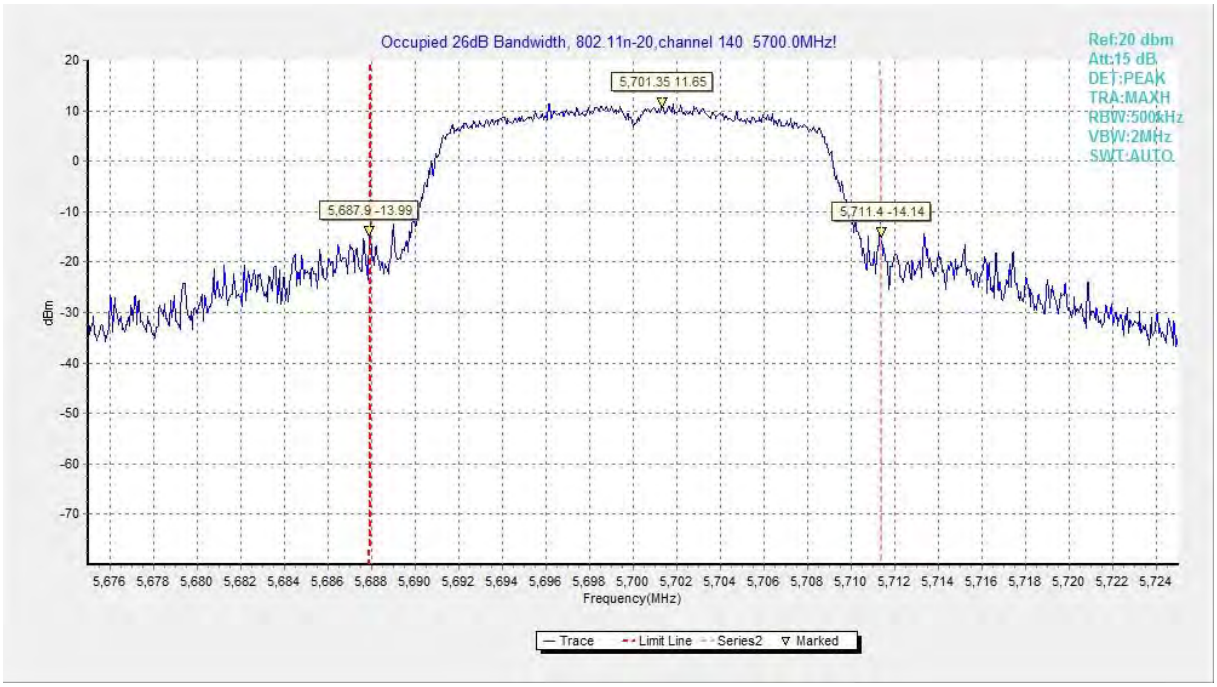

Fig.19 Occupied 26dB Bandwidth (802. 11n-HT20, 5700MHz)

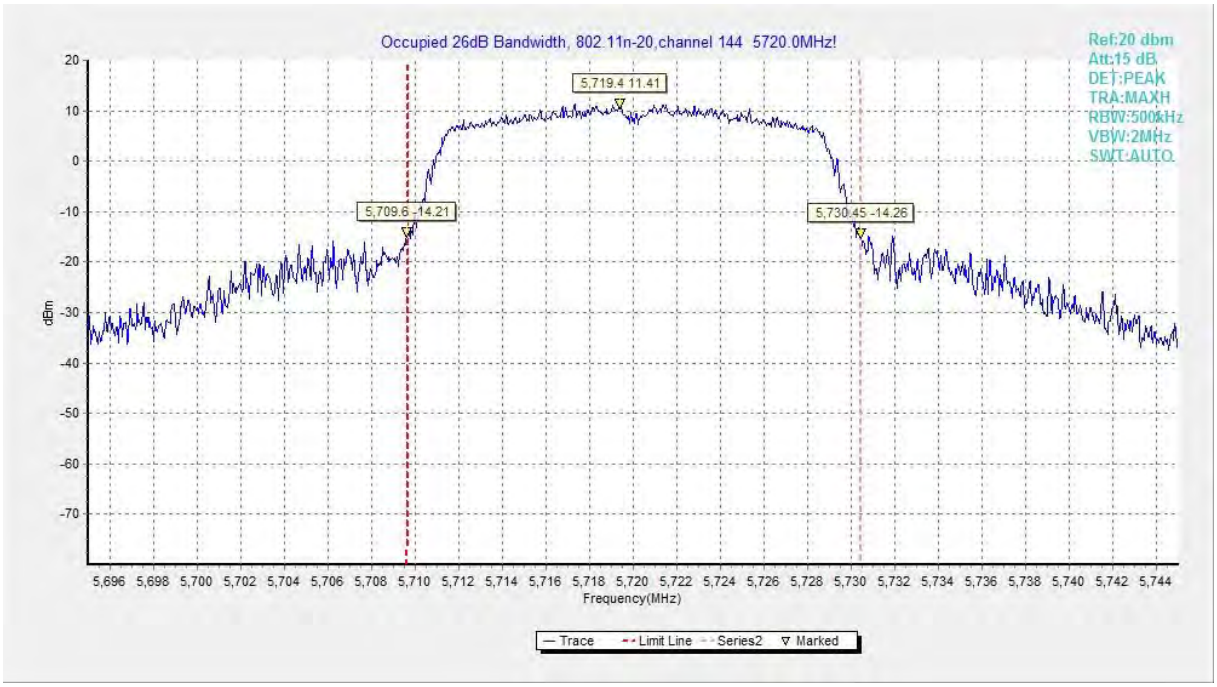

Fig.20 Occupied 26dB Bandwidth (802. 11n-HT20, 5720MHz)

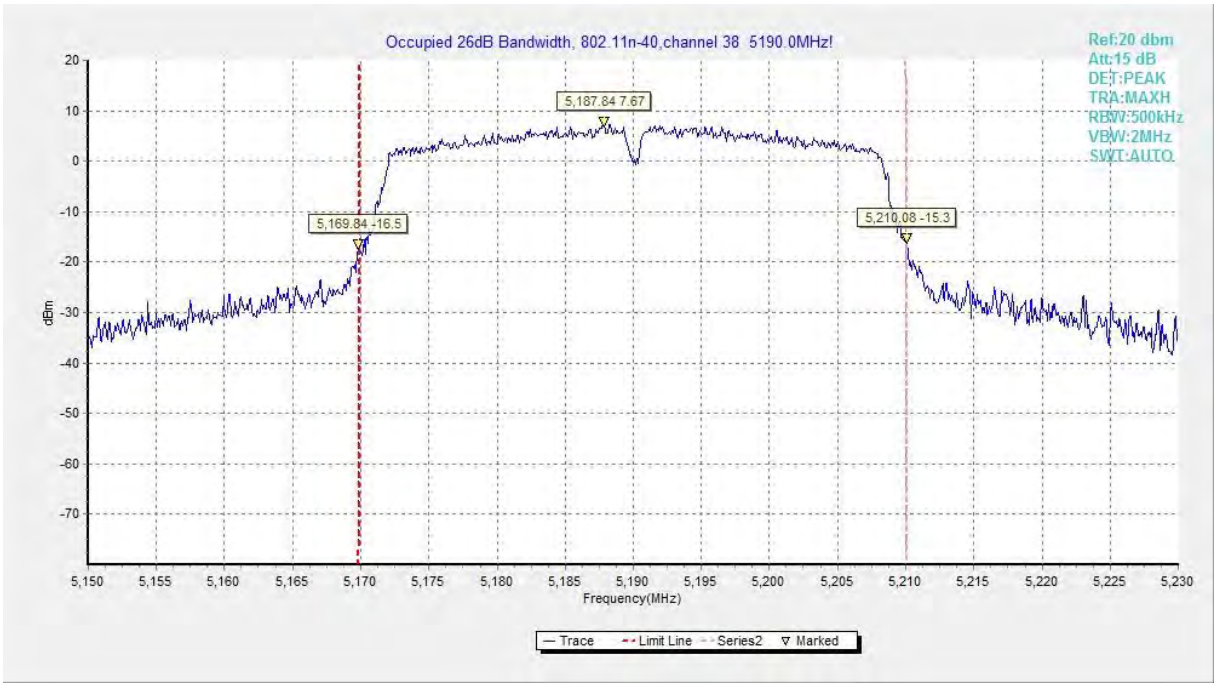

Fig.21 Occupied 26dB Bandwidth (802.11n-HT40, 5190MHz)

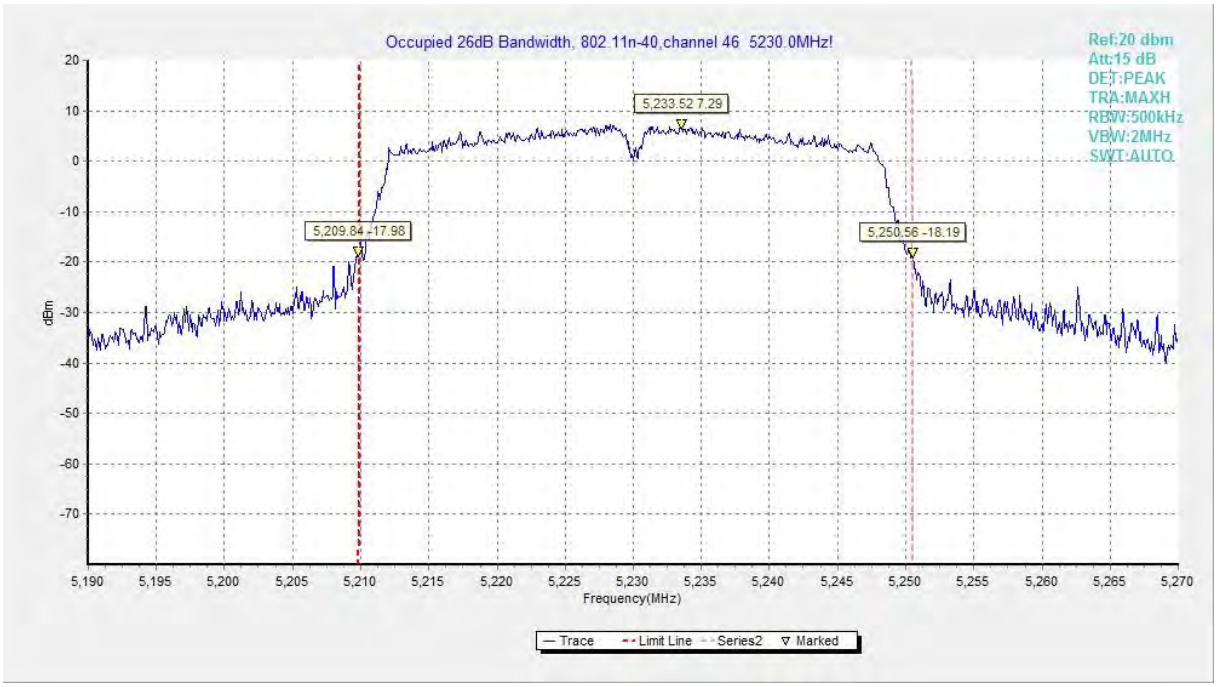

Fig.22 Occupied 26dB Bandwidth (802.11n-HT40, 5230MHz)

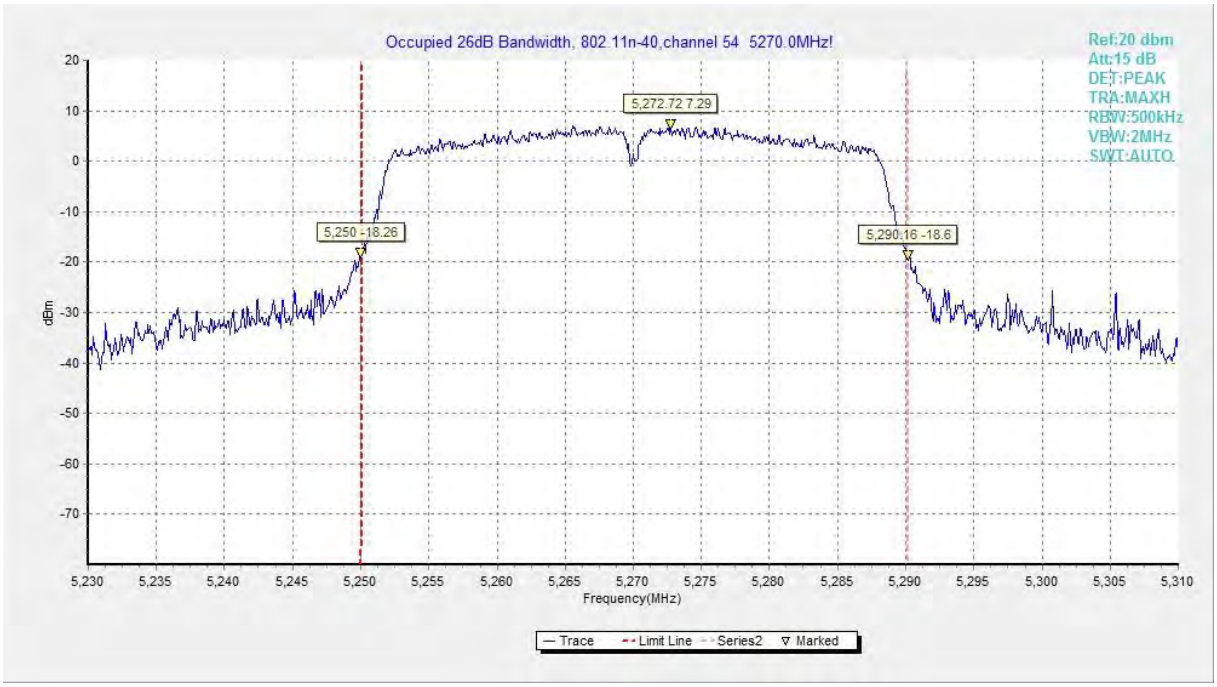

Fig.23 Occupied 26dB Bandwidth (802.11n-HT40, 5270MHz)

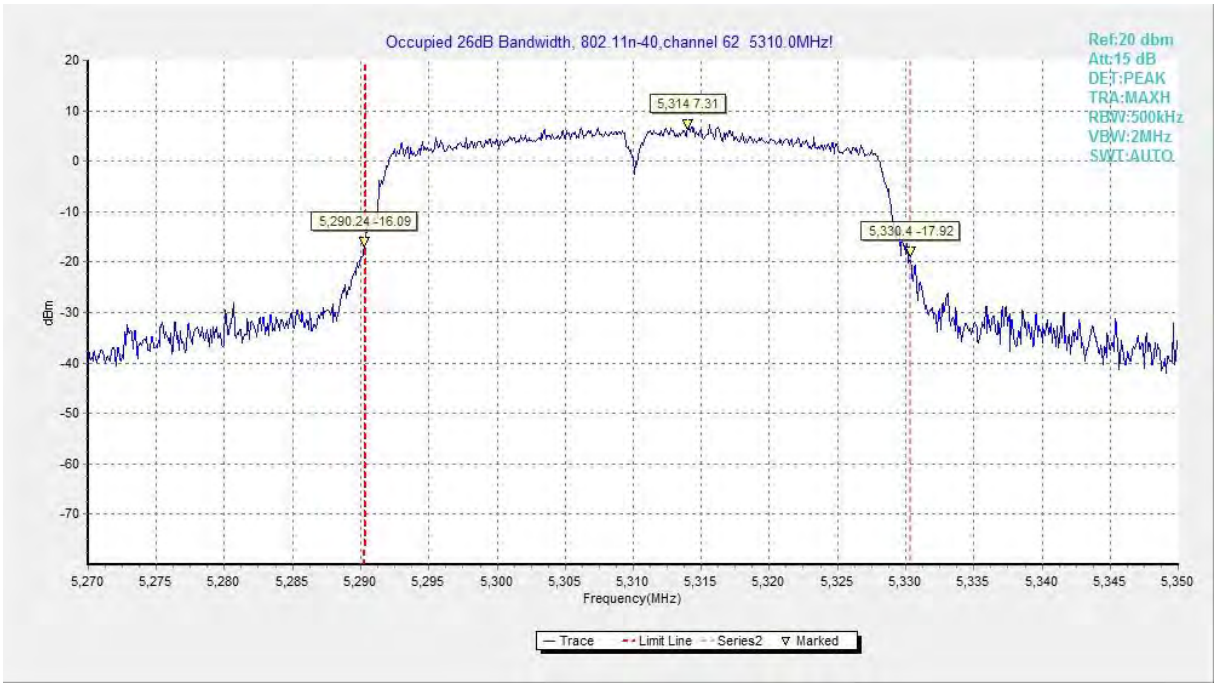

Fig.24 Occupied 26dB Bandwidth (802.11n-HT40, 5310MHz)

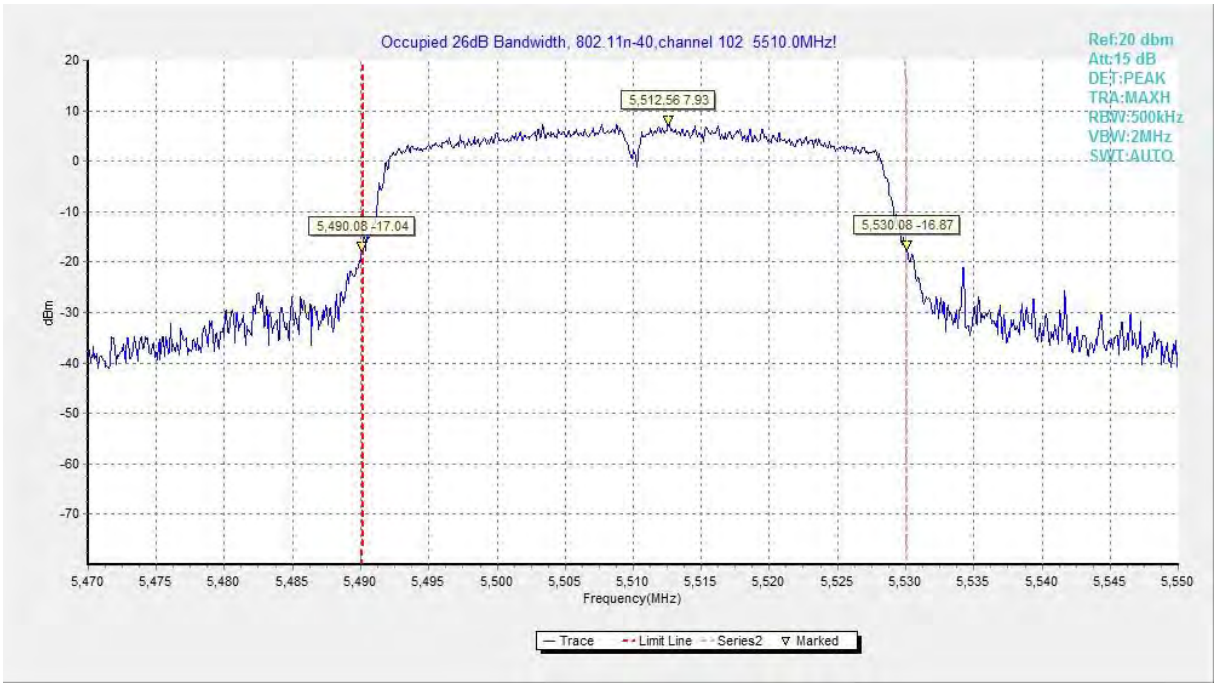

Fig.25 Occupied 26dB Bandwidth (802. 11n-HT40, 5510MHz)

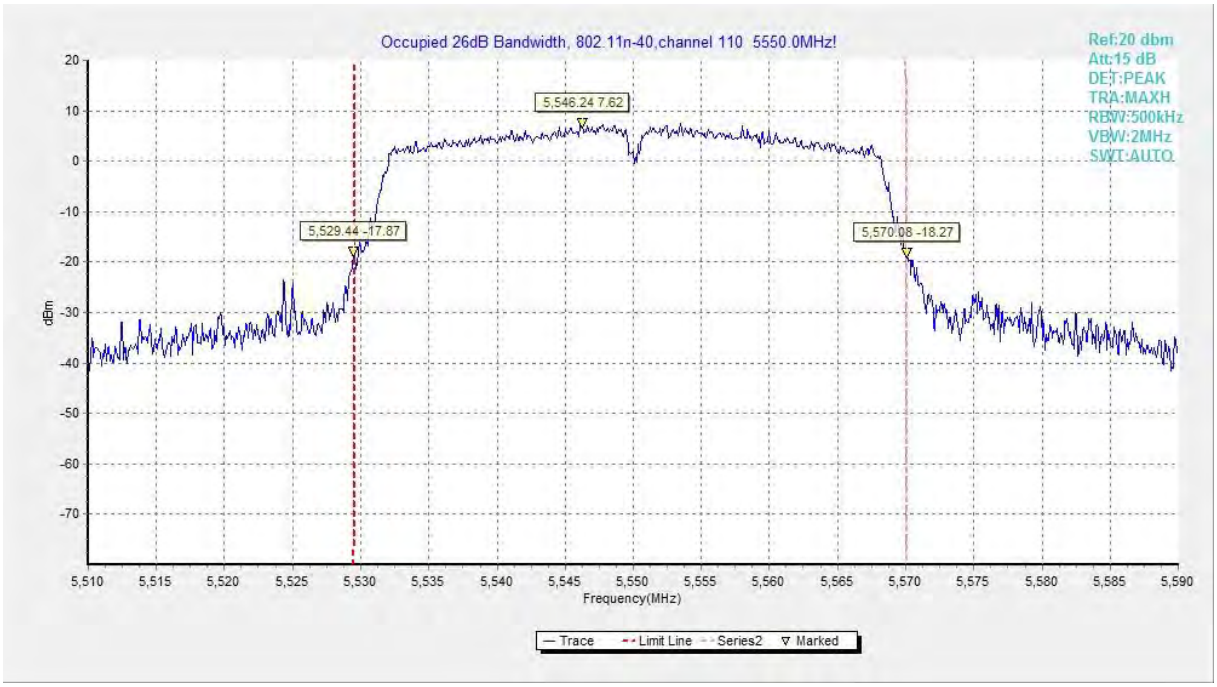

Fig.26 Occupied 26dB Bandwidth (802. 11n-HT40, 5550MHz)

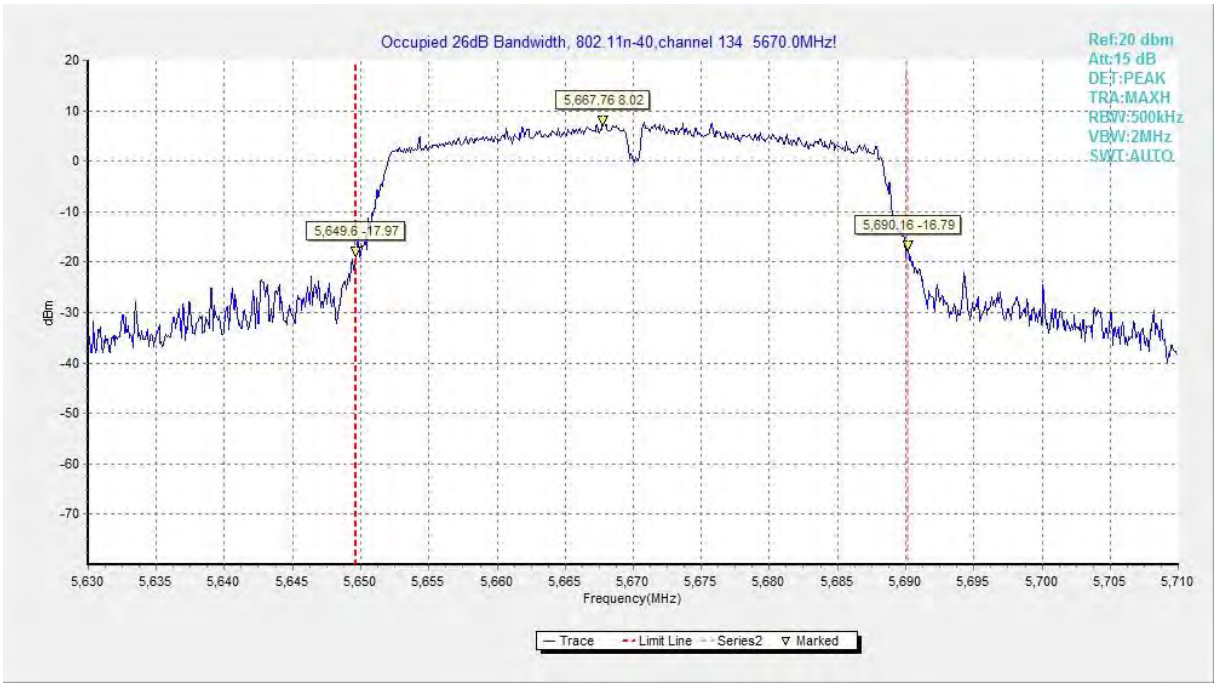

Fig.27 Occupied 26dB Bandwidth (802. 11n-HT40, 5670MHz)

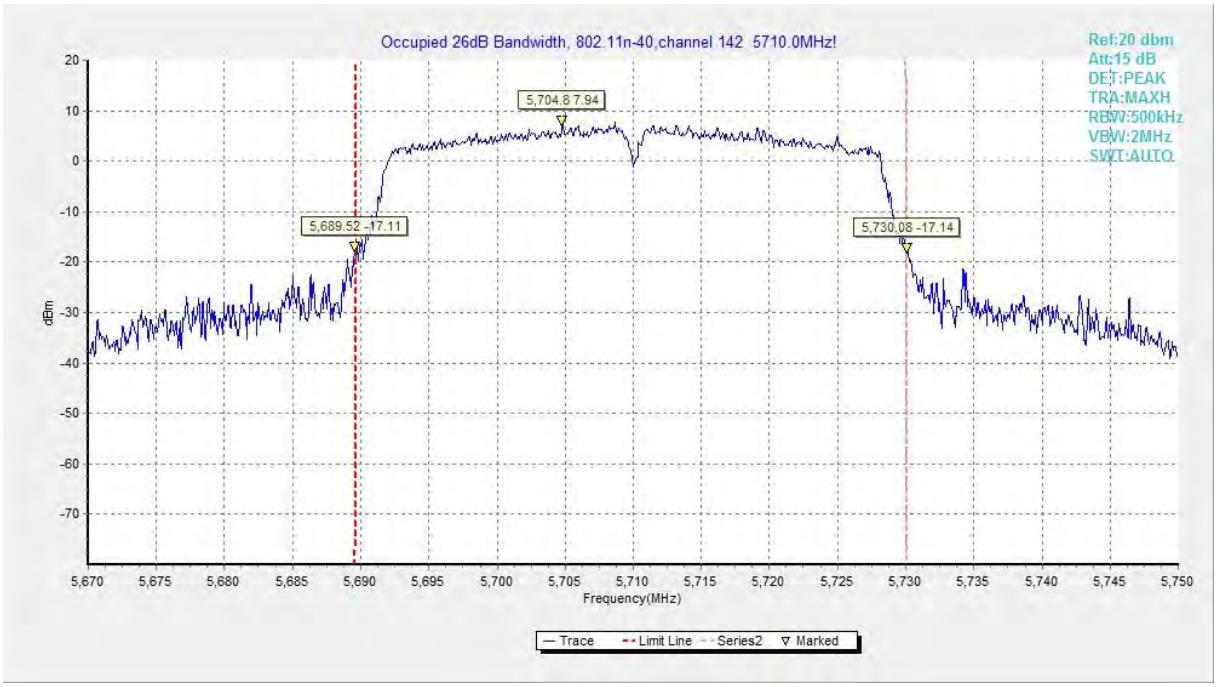

Fig.28 Occupied 26dB Bandwidth (802. 11n-HT40, 5710MHz)

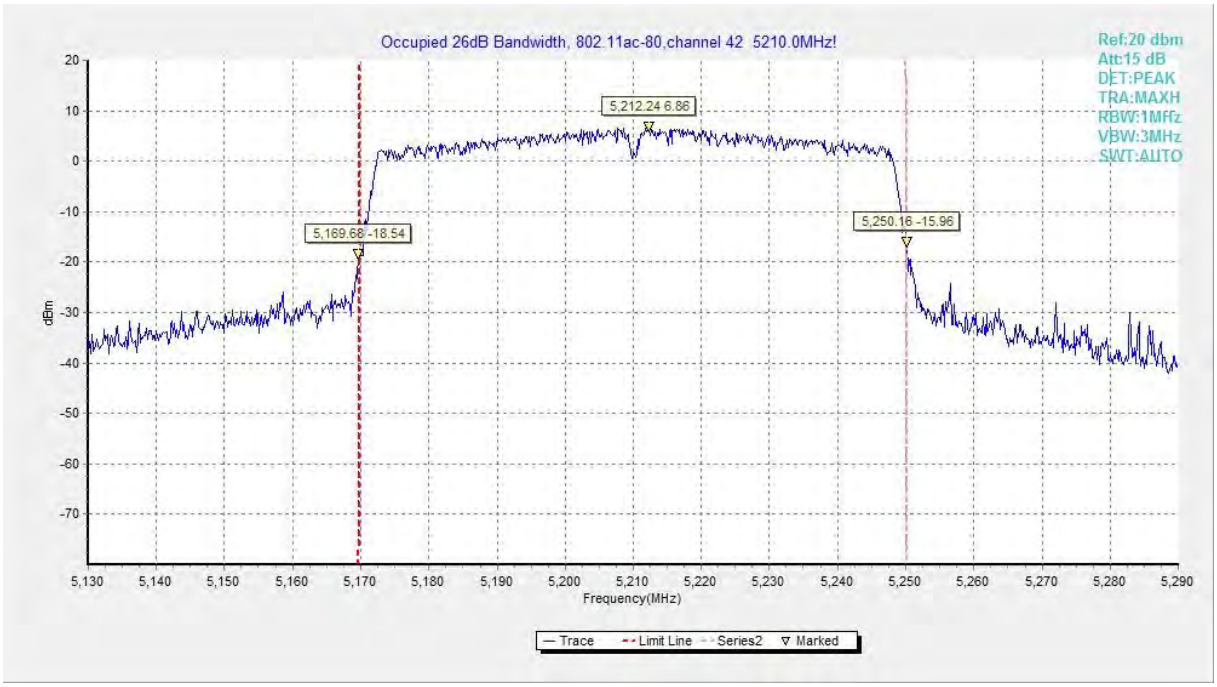

Fig.29 Occupied 26dB Bandwidth (802. 11ac-HT80, 5210MHz)

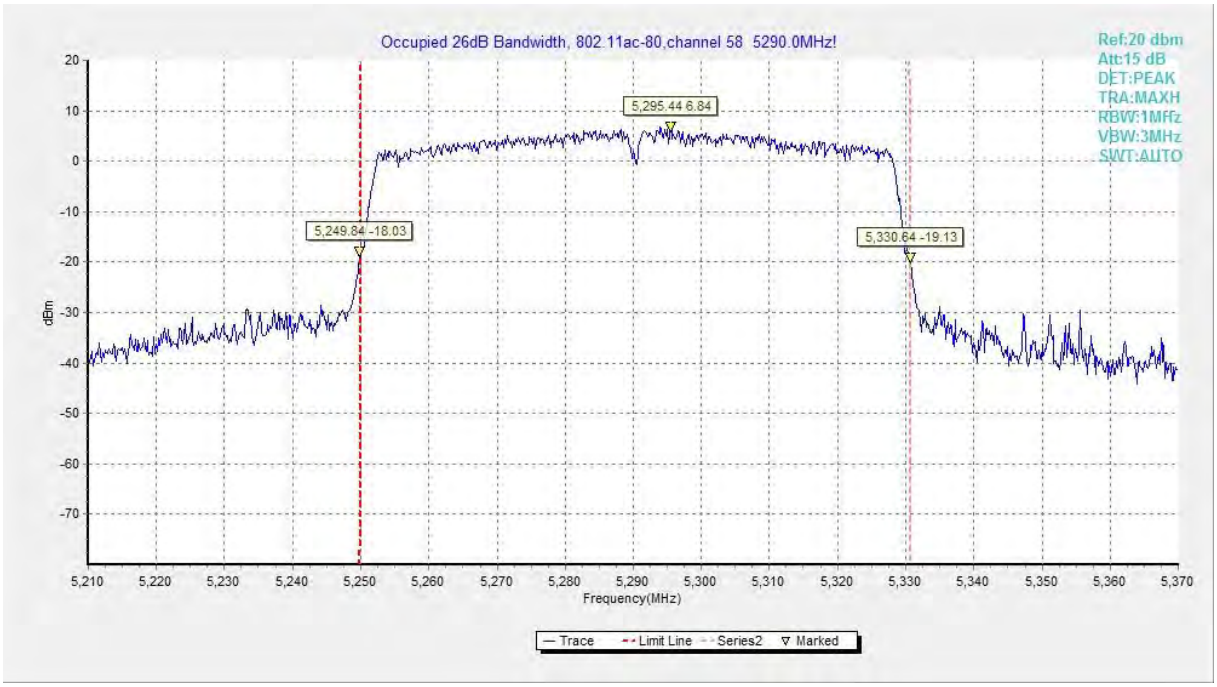

Fig.30 Occupied 26dB Bandwidth (802. 11ac-HT80, 5290MHz)

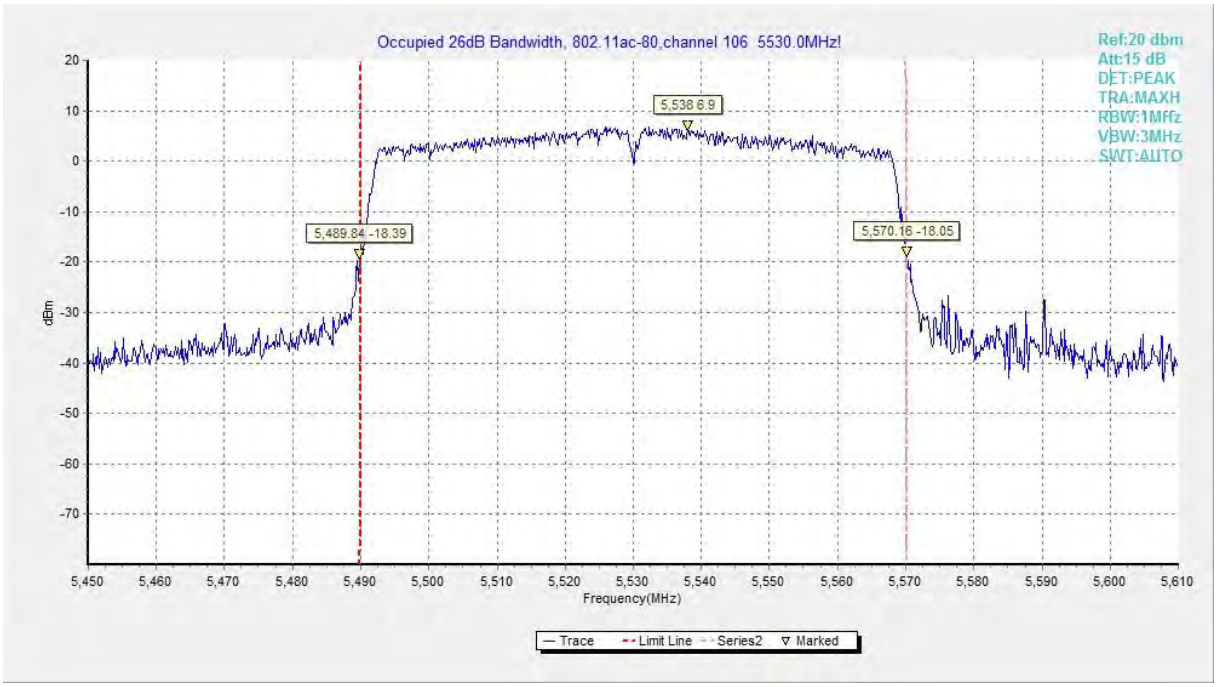

Fig.31 Occupied 26dB Bandwidth (802. 11ac-HT80, 5530MHz)

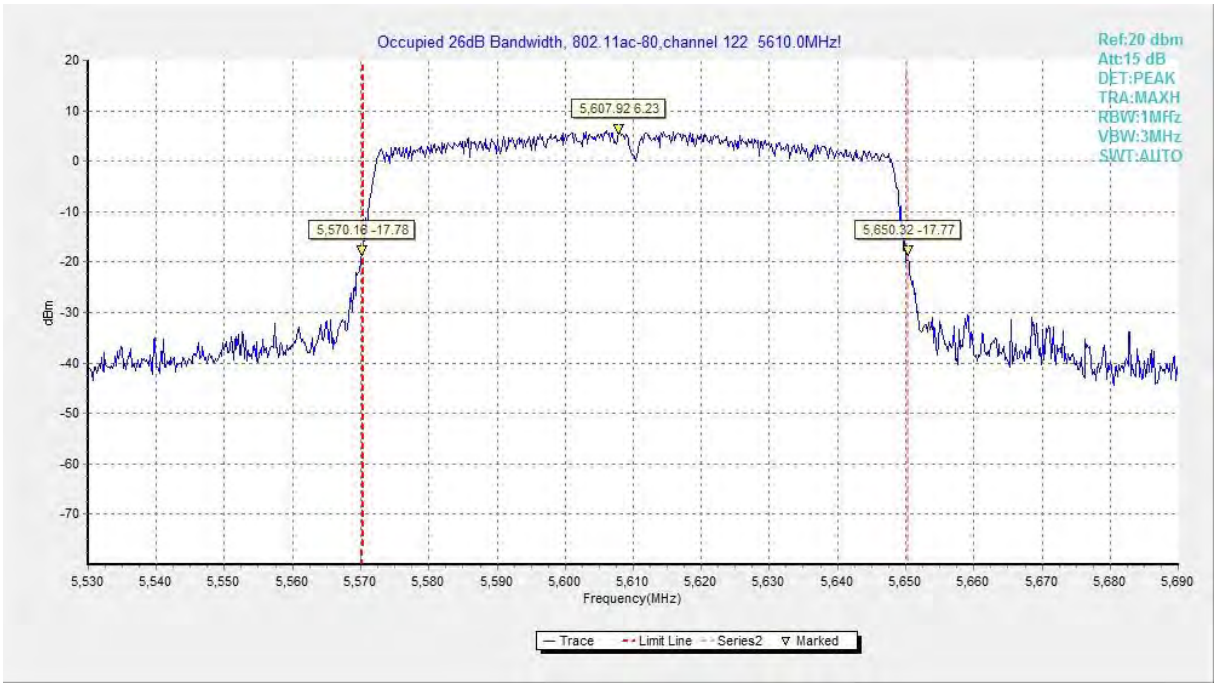

Fig.32 Occupied 26dB Bandwidth (802. 11ac-HT80, 5610MHz)

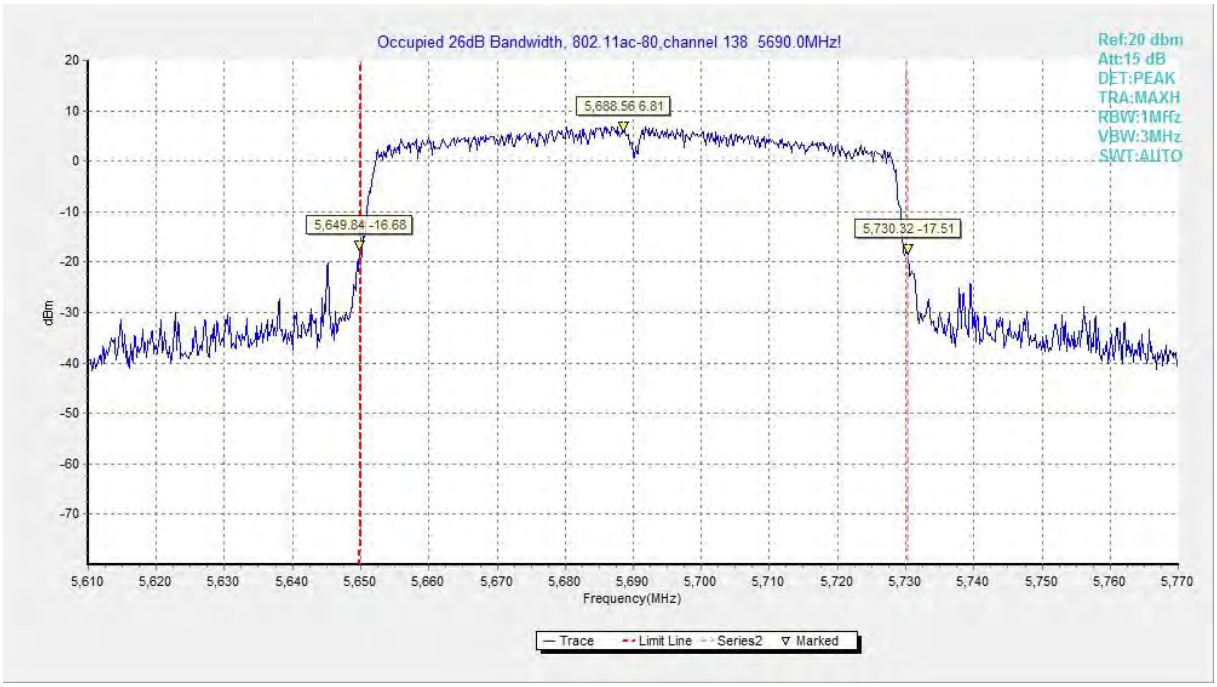

Fig.33 Occupied 26dB Bandwidth (802. 11ac-HT80, 5690MHz)

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
802.11ac HT20	5180 MHz	Fig.42	P
	5320 MHz	Fig.43	P
	5500 MHz	Fig.44	P
	5700 MHz	Fig.45	P
802.11n HT40	5190 MHz	Fig.46	P
	5310 MHz	Fig.47	P
	5510 MHz	Fig.48	P
	5670 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:

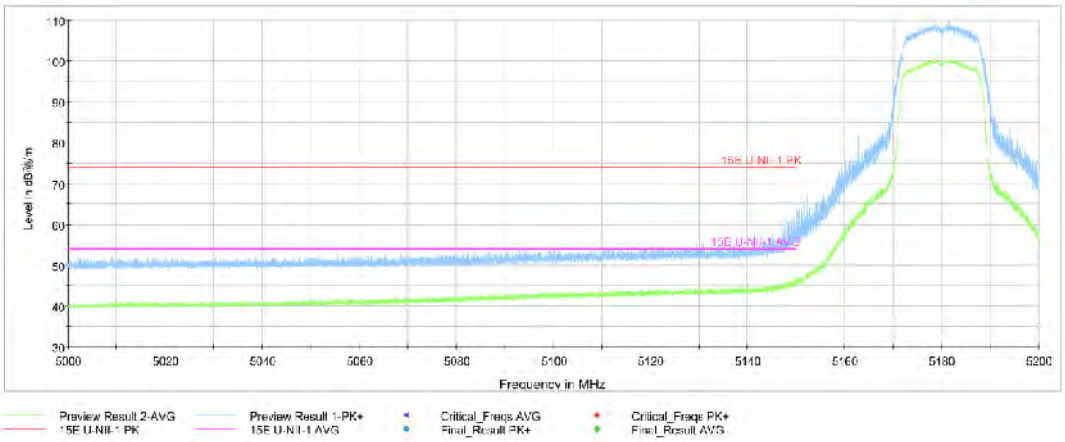

Fig.34 Band Edges (802.11a Ch36, 5180MHz)

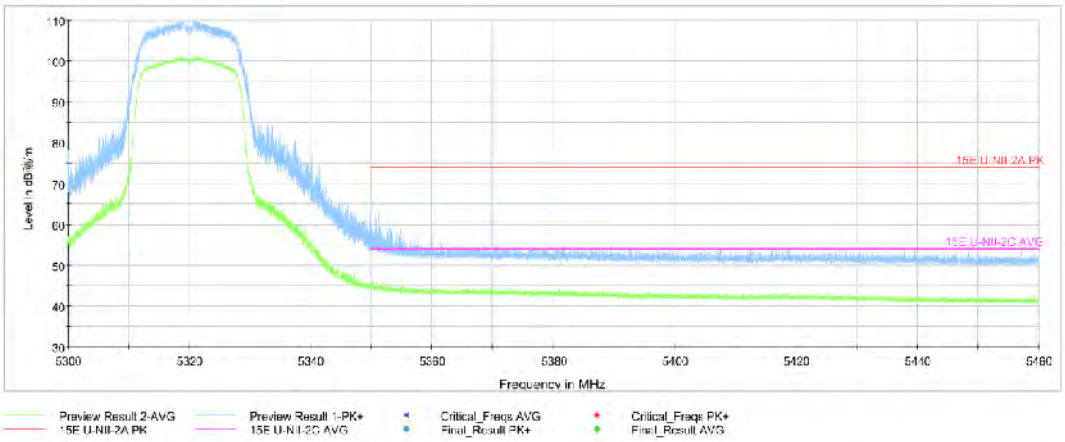

Fig.35 Band Edges (802.11a Ch64, 5320MHz)

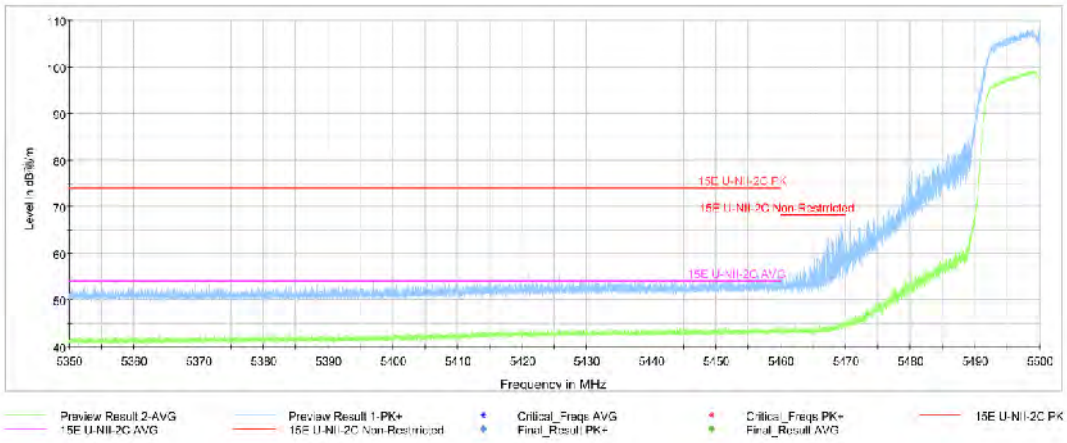

Fig.36 Band Edges (802.11a Ch100, 5500MHz)

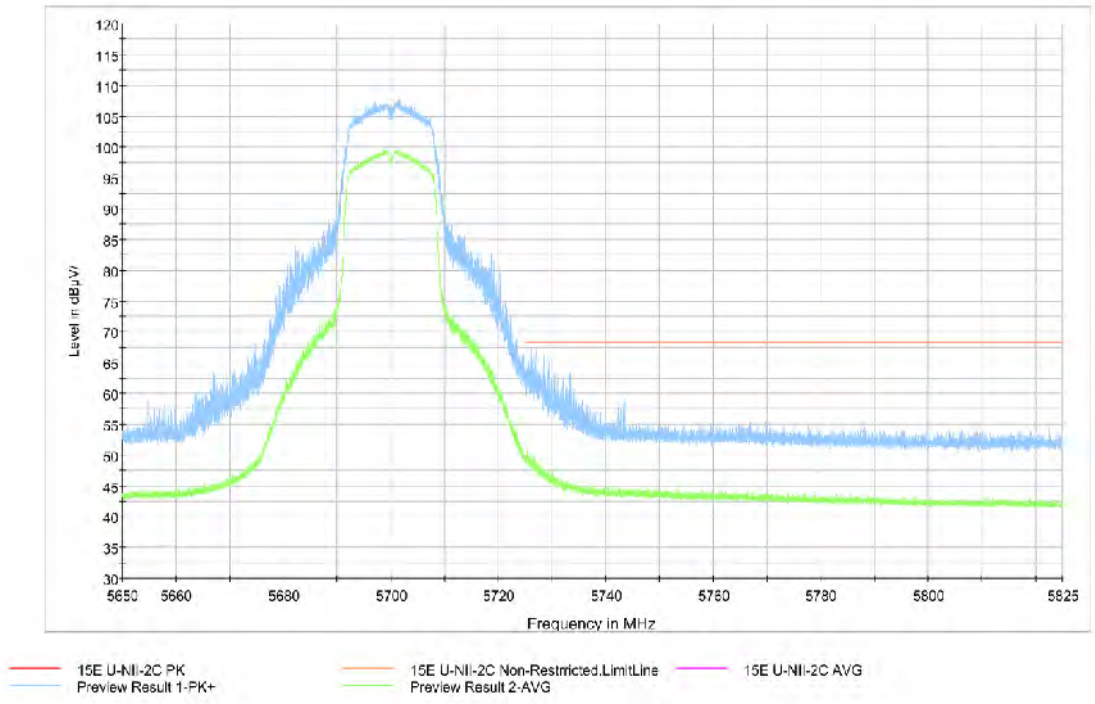

Fig.37 Band Edges (802.11a Ch140, 5700MHz)

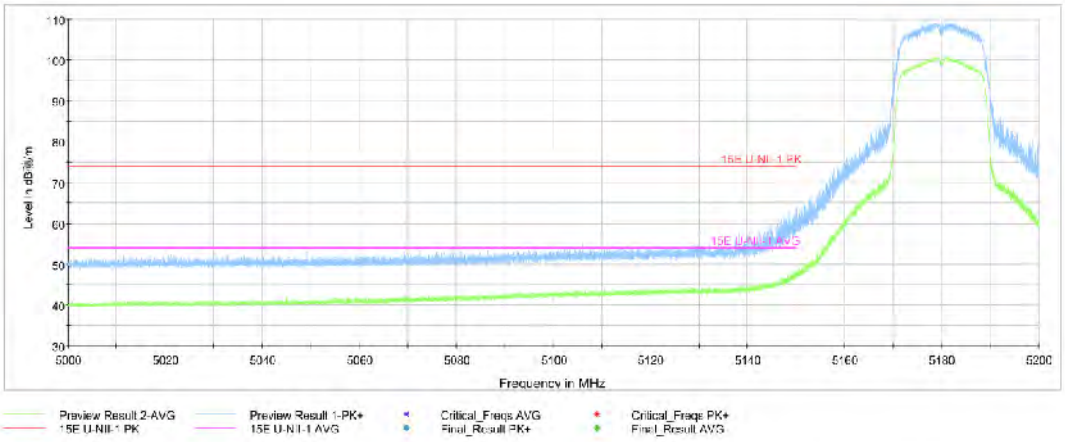

Fig.38 Band Edges (802.11n-HT20 Ch36, 5180MHz)

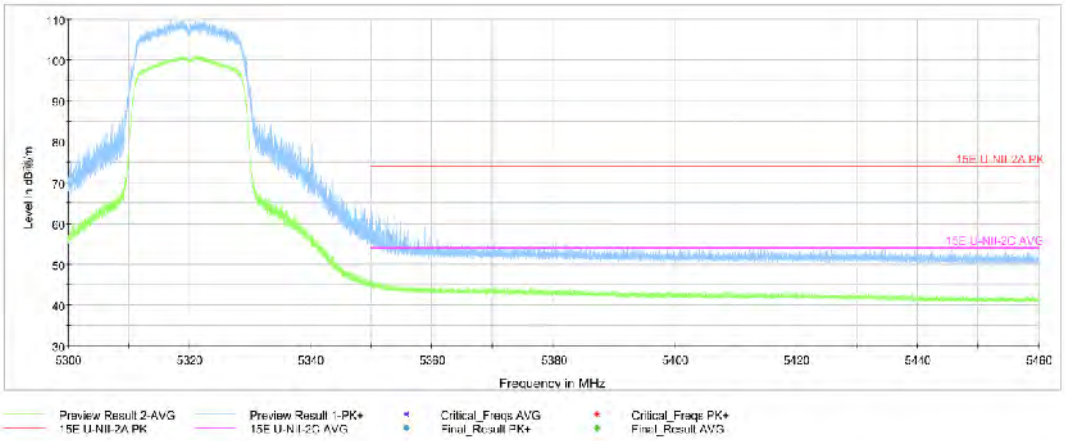

Fig.39 Band Edges (802.11n-HT20 Ch64, 5320MHz)

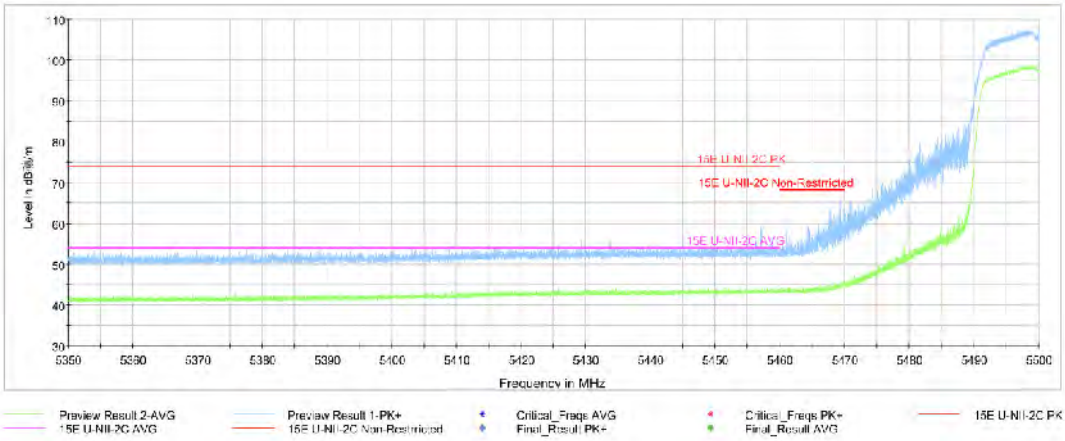

Fig.40 Band Edges (802.11n-HT20 Ch100, 5500MHz)

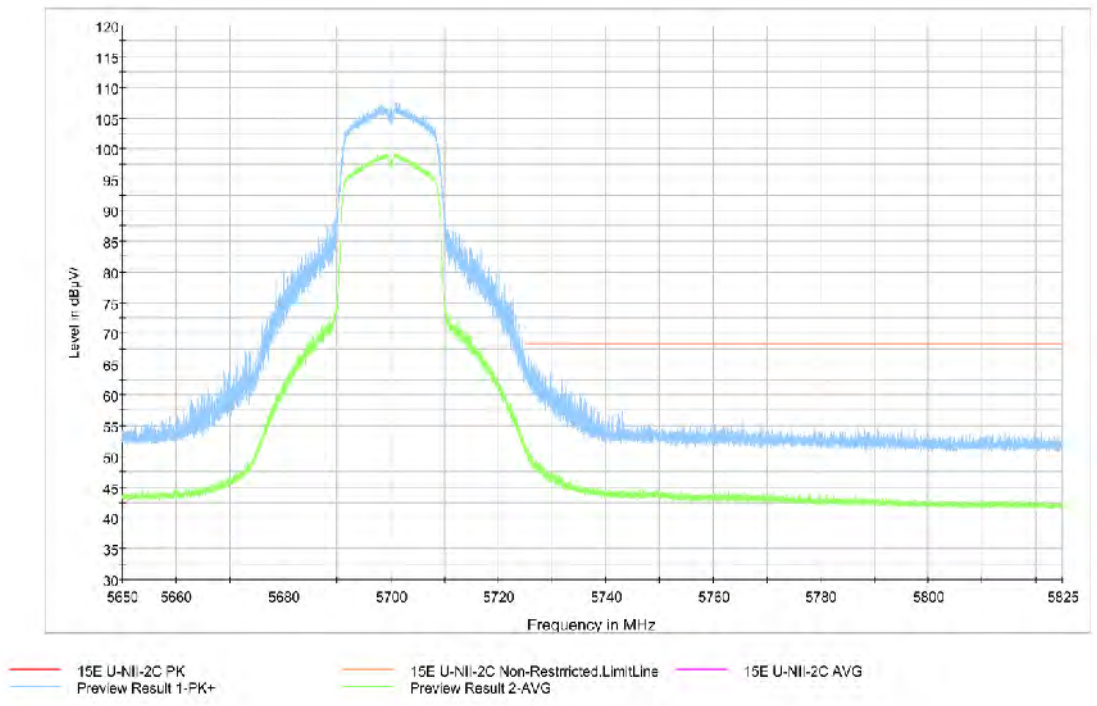

Fig.41 Band Edges (802.11n-HT20 Ch140, 5700MHz)

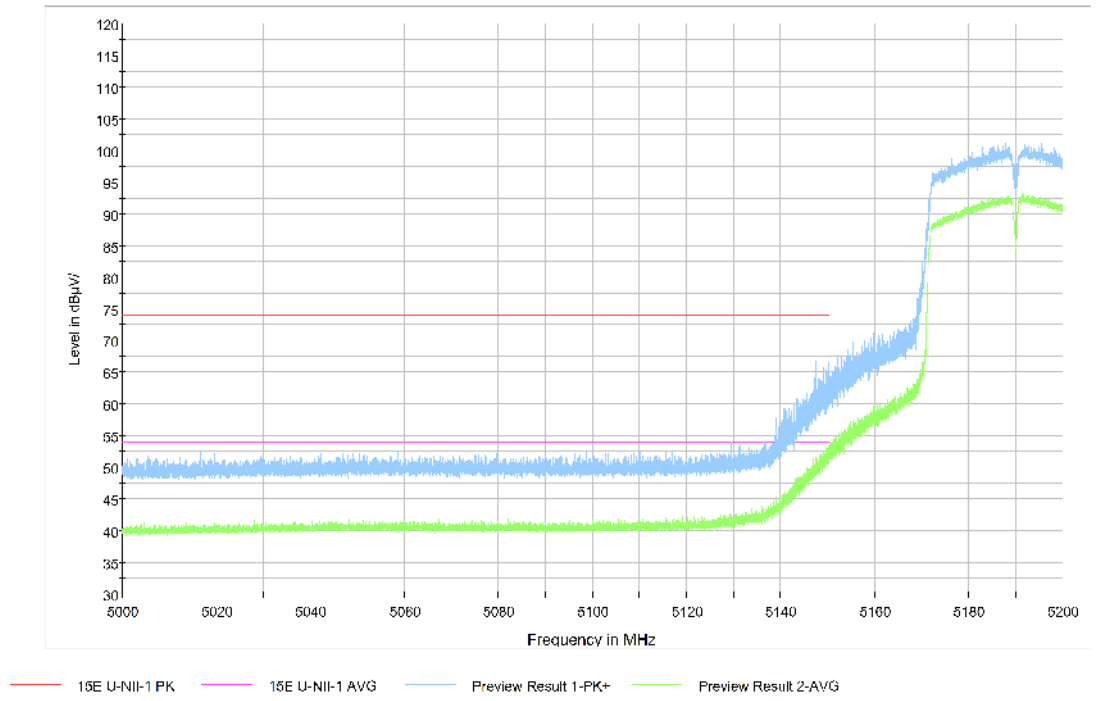

Fig.42 Band Edges (802.11n-HT40 Ch38, 5190MHz)

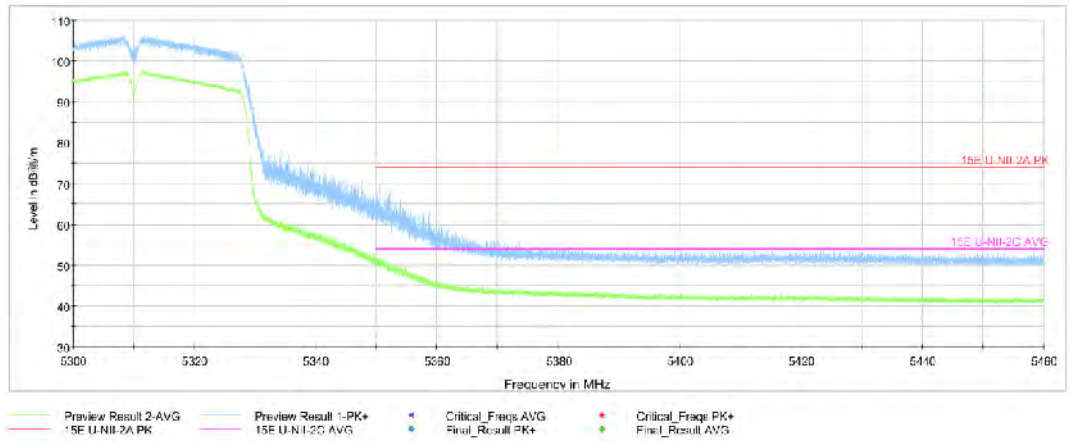

Fig.43 Band Edges (802.11n-HT40 Ch62, 5310MHz)

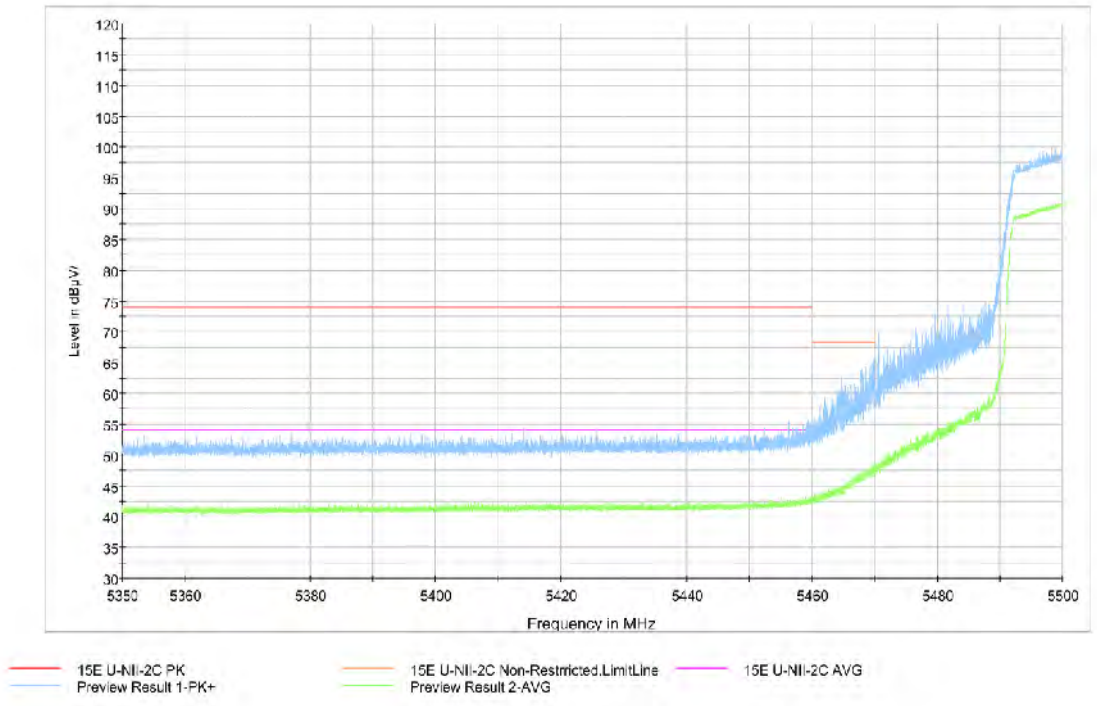

Fig.44 Band Edges (802.11n-HT40 Ch102, 5510MHz)

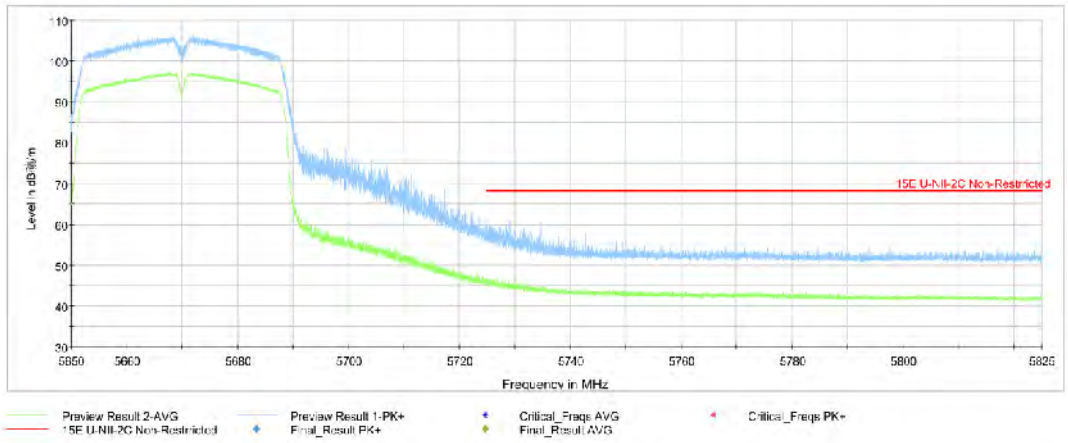

Fig.45 Band Edges (802.11n-HT40 Ch134, 5670MHz)

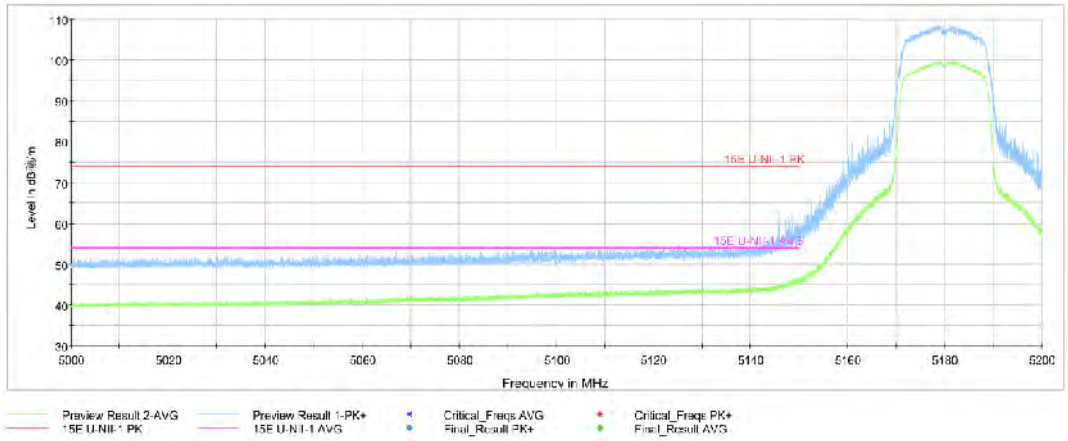

Fig.46 Band Edges (802.11ac-HT20 Ch36, 5180MHz)

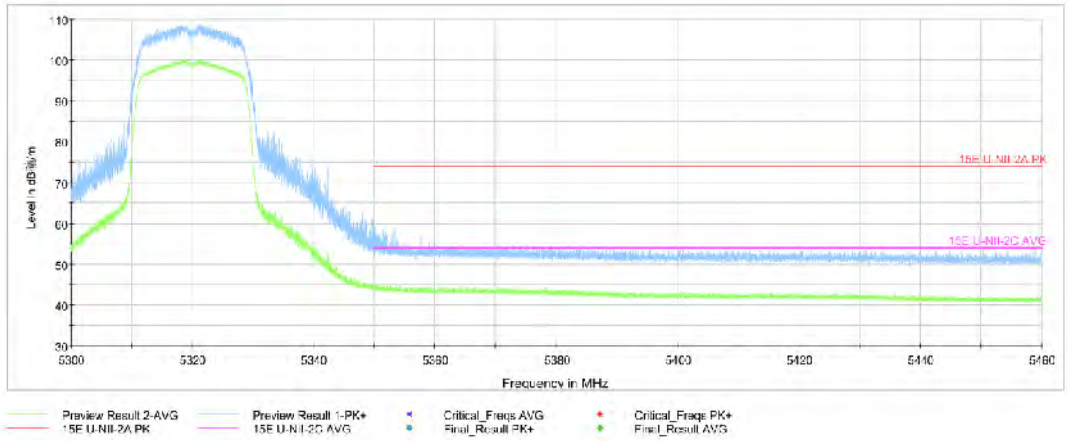

Fig.47 Band Edges (802.11ac-HT20 Ch64, 5320MHz)

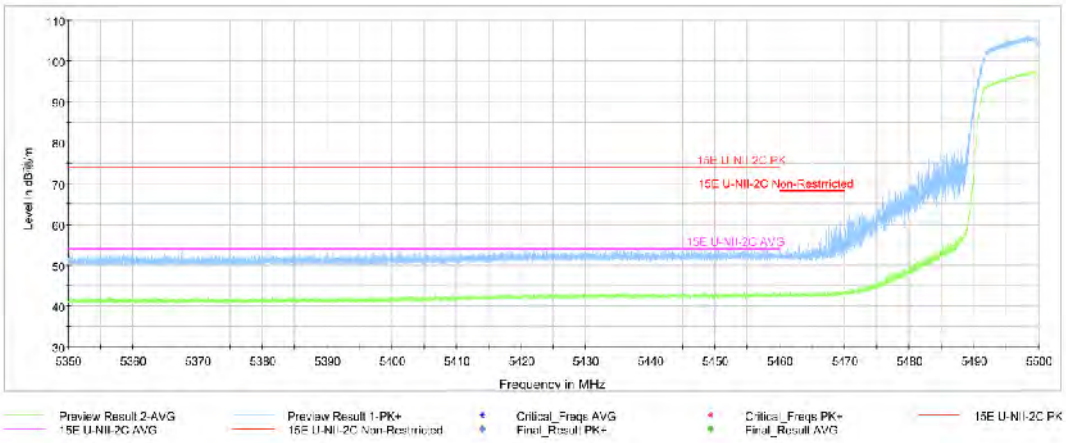

Fig.48 Band Edges (802.11ac-HT20 Ch100, 5500MHz)

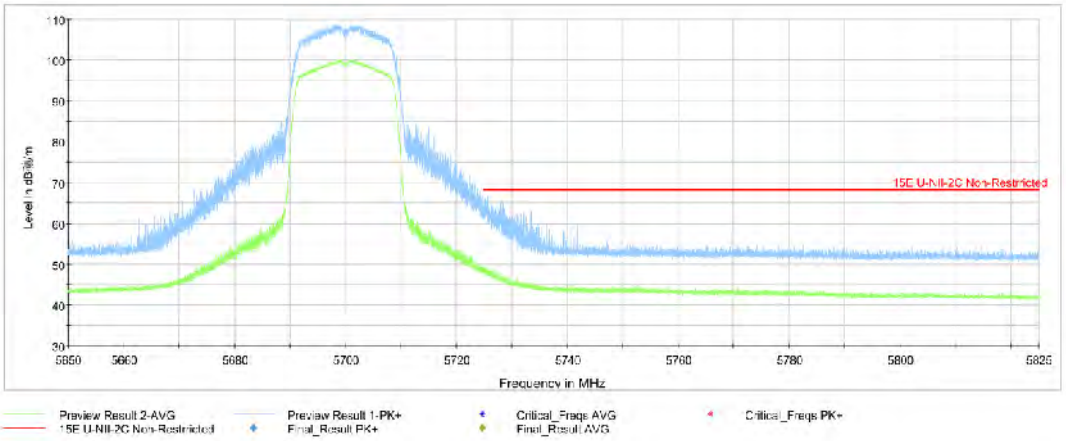

Fig.49 Band Edges (802.11ac-HT20 Ch140, 5700MHz)

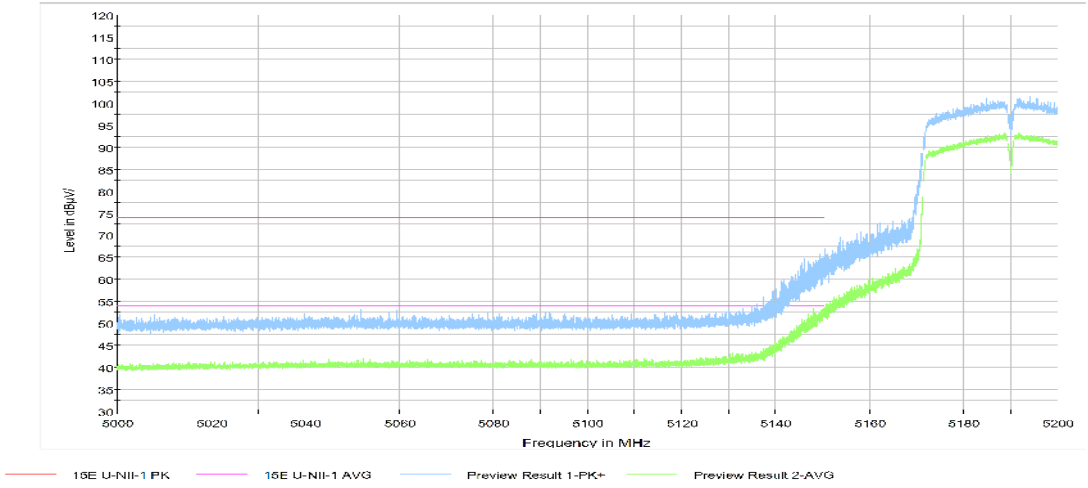

Fig.50 Band Edges (802.11ac-HT40 Ch38, 5190MHz)

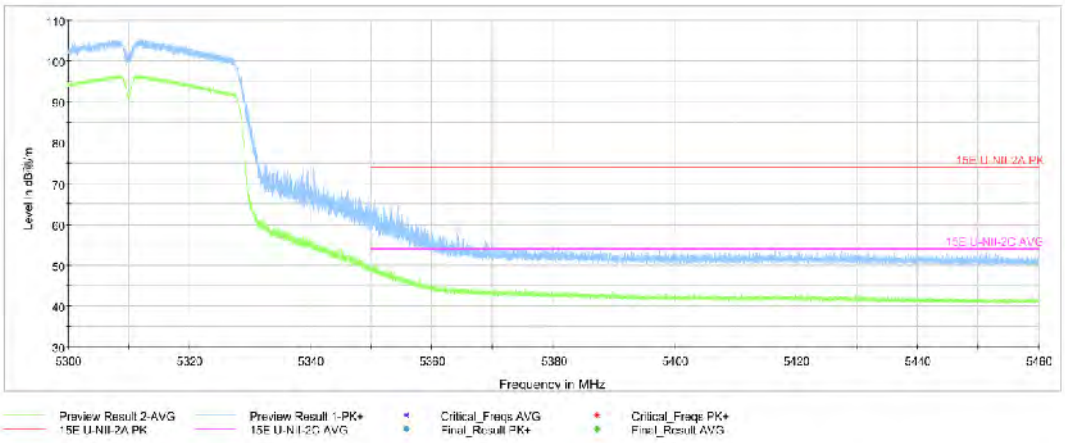

Fig.51 Band Edges (802.11ac-HT40 Ch62, 5310MHz)

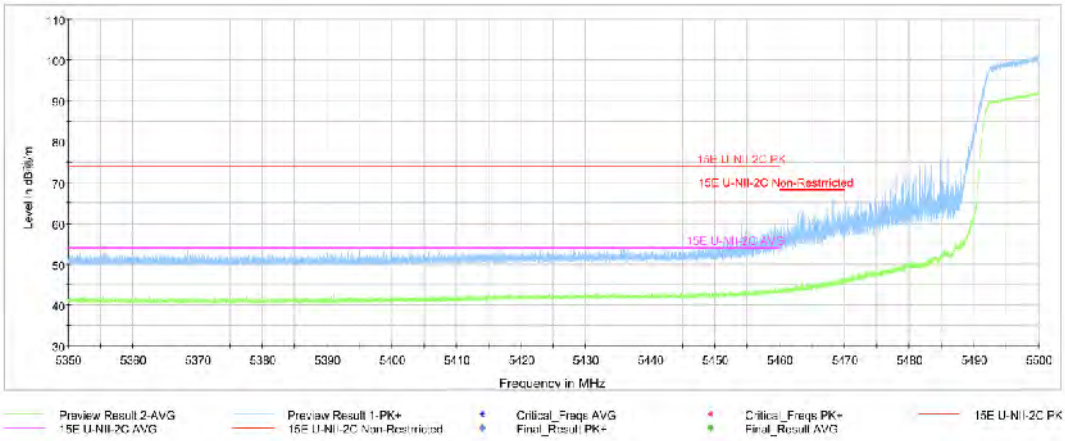

Fig.52 Band Edges (802.11ac-HT40 Ch102, 5510MHz)

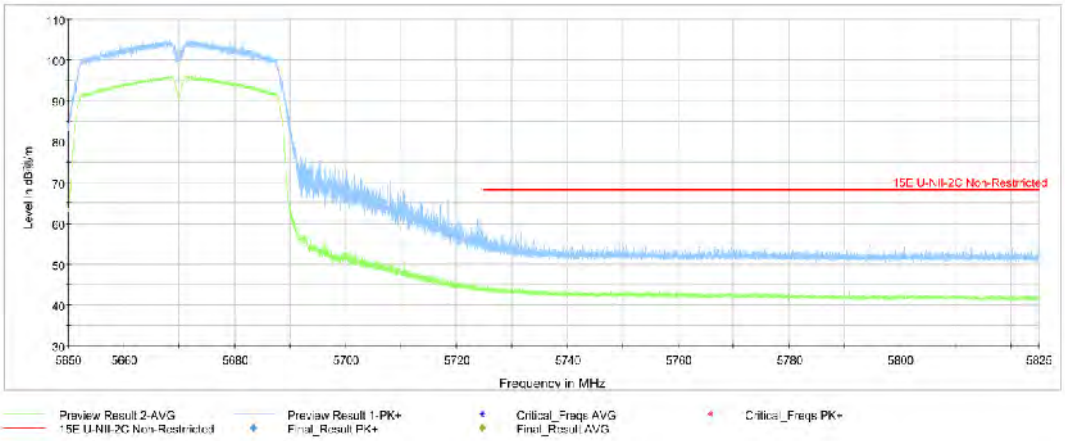

Fig.53 Band Edges (802.11ac-HT40 Ch134, 5670MHz)

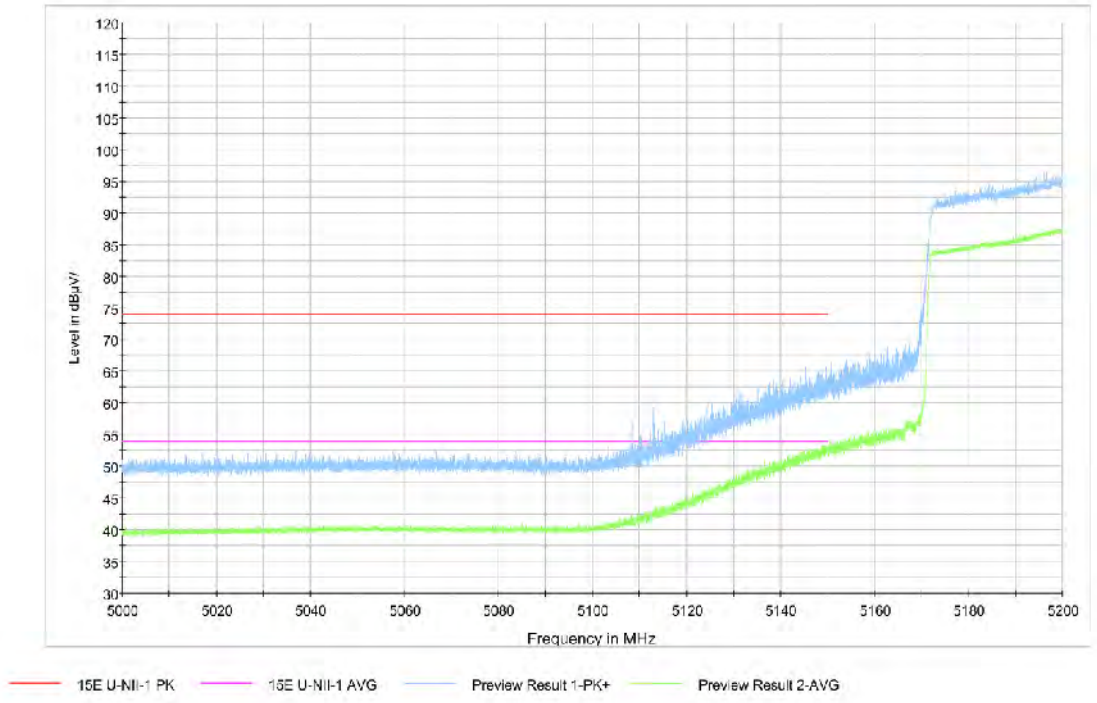

Fig.54 Band Edges (802.11ac-HT80 Ch42 , 5210MHz)

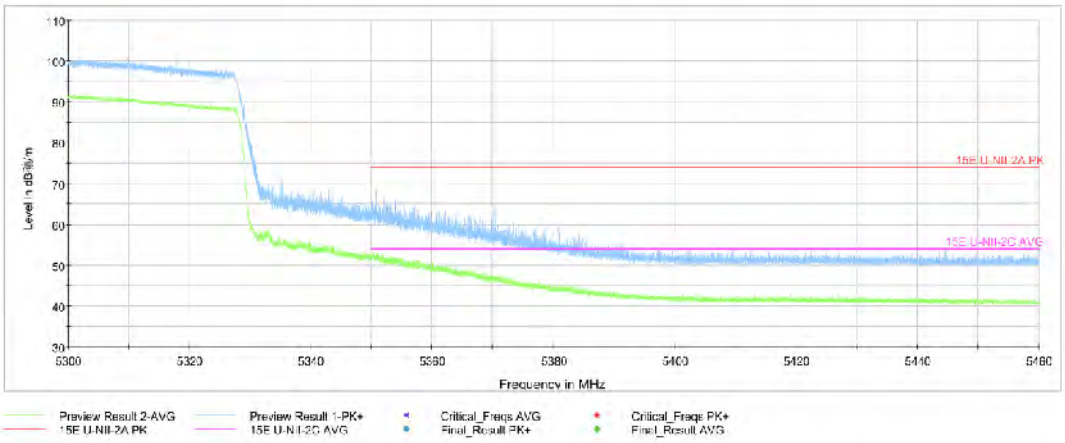

Fig.55 Band Edges (802.11ac-HT80 Ch58, 5290MHz)

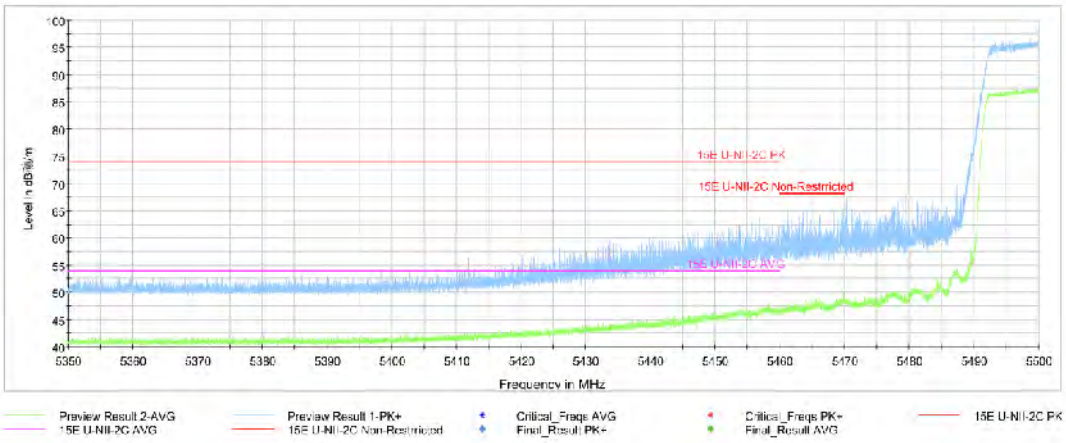

Fig.56 Band Edges (802.11ac-HT80 Ch106, 5530MHz)

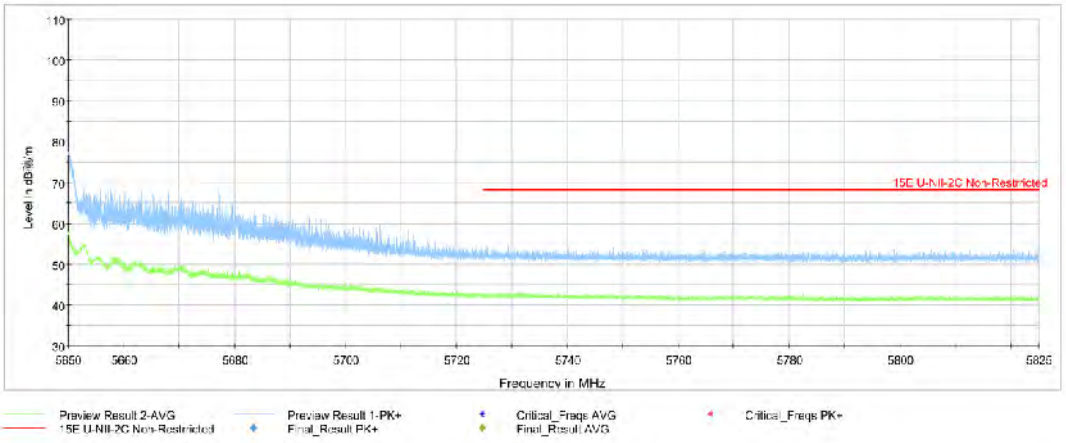

Fig.57 Band Edges (802.11ac-HT80 Ch122, 5610MHz)

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
	116(5580MHz)	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
	116(5580MHz)	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
	116(5580MHz)	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)
17962.050	42.11	-25.50	46.66	20.95	54.00	11.89	V
17918.600	41.86	-25.50	46.66	20.70	54.00	12.14	H
12563.800	38.81	-31.05	38.99	30.87	54.00	15.19	H
12553.350	38.13	-31.05	38.99	30.19	54.00	15.87	H
5149.120	46.31	-27.61	33.67	40.25	54.00	7.69	V
5149.800	46.29	-27.61	33.67	40.23	54.00	7.71	V

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)
17973.050	41.89	-25.50	46.66	20.73	54.00	12.11	H
17929.050	41.88	-25.50	46.66	20.72	54.00	12.12	V
12533.000	38.12	-31.05	38.99	30.18	54.00	15.88	H
12495.050	38.07	-31.22	38.91	30.38	54.00	15.93	V
11979.700	36.26	-31.48	39.09	28.65	54.00	17.74	V
11991.250	36.17	-31.48	39.09	28.56	54.00	17.83	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)
17960.950	42.03	-25.50	46.66	20.87	54.00	11.97	V
17958.750	41.98	-25.50	46.66	20.82	54.00	12.02	V
12299.800	38.25	-31.10	38.94	30.41	54.00	15.75	V
12572.600	38.18	-31.05	38.99	30.24	54.00	15.82	H
11970.900	36.17	-31.48	39.09	28.56	54.00	17.83	H
11757.500	36.16	-31.99	38.98	29.17	54.00	17.84	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)
17857.550	42.81	-25.50	46.66	21.65	54.00	11.19	H
17957.100	42.81	-25.50	46.66	21.65	54.00	11.19	H
12506.050	39.18	-31.22	38.91	31.49	54.00	14.82	H
12520.900	38.95	-31.05	38.99	31.01	54.00	15.05	H
8415.700	37.84	-34.35	37.79	34.40	54.00	16.16	H
11970.350	37.15	-31.48	39.09	29.54	54.00	16.85	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)
17934.550	43.11	-25.50	46.66	21.95	54.00	10.89	V
17909.250	43.06	-25.50	46.66	21.90	54.00	10.94	V
12515.950	39.58	-31.22	38.91	31.89	54.00	14.42	H
12548.950	38.85	-31.05	38.99	30.91	54.00	15.15	V
11969.800	37.49	-31.48	39.09	29.88	54.00	16.51	H
11983.000	37.34	-31.48	39.09	29.73	54.00	16.66	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)
17894.400	43.33	-25.50	46.66	22.17	54.00	10.67	H
17976.900	43.02	-25.50	46.66	21.86	54.00	10.98	V
12344.350	38.75	-31.10	38.94	30.91	54.00	15.25	H
12265.700	38.73	-31.43	38.99	31.17	54.00	15.27	H
5351.872	46.22	-27.43	34.01	39.64	54.00	7.78	V
5350.464	45.87	-27.43	34.01	39.29	54.00	8.13	V

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)
17966.450	42.81	-25.50	46.66	21.65	54.00	11.19	V
17932.900	42.75	-25.50	46.66	21.59	54.00	11.25	H
14499.800	39.30	-28.59	42.46	25.43	54.00	14.70	V
12556.100	39.10	-31.05	38.99	31.16	54.00	14.90	H
5459.665	44.44	-27.18	34.17	37.45	54.00	9.56	V
5445.430	44.26	-27.18	34.17	37.27	54.00	9.74	V

Channel 116

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17848.750	43.11	-25.50	46.66	21.95	54.00	10.89	V
17957.650	43.02	-25.50	46.66	21.86	54.00	10.98	V
12514.850	39.28	-31.22	38.91	31.59	54.00	14.72	H
12354.800	39.08	-31.10	38.94	31.24	54.00	14.92	V
11833.400	37.25	-31.85	39.05	30.05	54.00	16.75	V
11770.150	37.24	-31.99	38.98	30.25	54.00	16.76	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)
17909.250	43.22	-25.50	46.66	22.06	54.00	10.78	V
17951.600	42.90	-25.50	46.66	21.74	54.00	11.10	H
14492.100	39.42	-28.59	42.46	25.55	54.00	14.58	V
12520.350	38.92	-31.22	38.91	31.23	54.00	15.08	V
11968.700	37.48	-31.48	39.09	29.87	54.00	16.52	V
11851.000	37.10	-31.85	39.05	29.90	54.00	16.90	V

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)
17936.750	42.27	-25.50	46.66	21.11	54.00	11.73	H
17968.100	42.13	-25.50	46.66	20.97	54.00	11.87	V
12539.600	38.35	-31.05	38.99	30.41	54.00	15.65	H
12566.000	38.14	-31.05	38.99	30.20	54.00	15.86	H
5149.600	48.10	-27.61	33.67	42.04	54.00	5.90	V
5149.340	47.75	-27.61	33.67	41.69	54.00	6.25	V

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)
17978.000	41.96	-25.50	46.66	20.80	54.00	12.04	H
17910.900	41.92	-25.50	46.66	20.76	54.00	12.08	H
12541.800	37.88	-31.05	38.99	29.94	54.00	16.12	V
12497.800	37.85	-31.22	38.91	30.16	54.00	16.15	H
11997.850	36.31	-31.48	39.09	28.70	54.00	17.69	V
11880.150	36.16	-31.85	39.05	28.96	54.00	17.84	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)
17952.700	42.18	-25.50	46.66	21.02	54.00	11.82	H
17942.250	42.17	-25.50	46.66	21.01	54.00	11.83	V
12563.800	38.28	-31.05	38.99	30.34	54.00	15.72	H
12288.800	38.10	-31.10	38.94	30.26	54.00	15.90	H
11974.750	36.50	-31.48	39.09	28.89	54.00	17.50	H
11941.750	36.08	-31.48	39.09	28.47	54.00	17.92	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)
17931.250	42.80	-25.50	46.66	21.64	54.00	11.20	H
17941.700	42.74	-25.50	46.66	21.58	54.00	11.26	V
12566.000	38.92	-31.05	38.99	30.98	54.00	15.08	H
12556.100	38.80	-31.05	38.99	30.86	54.00	15.20	H
8415.700	37.68	-34.35	37.79	34.24	54.00	16.32	V
11731.100	37.25	-31.99	38.98	30.26	54.00	16.75	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)
17930.150	43.16	-25.50	46.66	22.00	54.00	10.84	H
17967.550	43.00	-25.50	46.66	21.84	54.00	11.00	H
12537.400	38.86	-31.05	38.99	30.92	54.00	15.14	V
12352.050	38.85	-31.10	38.94	31.01	54.00	15.15	V
11948.900	37.31	-31.48	39.09	29.70	54.00	16.69	V
11968.700	37.28	-31.48	39.09	29.67	54.00	16.72	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)
17835.550	42.66	-25.50	46.66	21.50	54.00	11.34	H
17890.550	42.64	-25.50	46.66	21.48	54.00	11.36	V
12319.050	39.27	-31.10	38.94	31.43	54.00	14.73	V
12520.350	39.05	-31.22	38.91	31.36	54.00	14.95	H
5350.112	45.89	-27.43	34.01	39.31	54.00	8.11	V
5350.288	45.75	-27.43	34.01	39.17	54.00	8.25	V

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)
17937.300	42.93	-25.50	46.66	21.77	54.00	11.07	H
17878.450	42.79	-25.50	46.66	21.63	54.00	11.21	H
12536.300	39.30	-31.05	38.99	31.36	54.00	14.70	H
12559.950	39.13	-31.05	38.99	31.19	54.00	14.87	V
5448.970	44.30	-27.18	34.17	37.31	54.00	9.70	V
5458.075	44.24	-27.18	34.17	37.25	54.00	9.76	V

Channel 116

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17934.550	43.45	-25.50	46.66	22.29	54.00	10.55	V
17954.900	43.17	-25.50	46.66	22.01	54.00	10.83	V
12491.200	39.02	-31.22	38.91	31.33	54.00	14.98	V
12338.850	38.85	-31.10	38.94	31.01	54.00	15.15	H
11986.300	37.35	-31.48	39.09	29.74	54.00	16.65	V
11981.350	37.33	-31.48	39.09	29.72	54.00	16.67	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)
17843.800	43.02	-25.50	46.66	21.86	54.00	10.98	H
17964.800	42.68	-25.50	46.66	21.52	54.00	11.32	V
12562.700	39.03	-31.05	38.99	31.09	54.00	14.97	V
12492.300	38.97	-31.22	38.91	31.28	54.00	15.03	V
11994.550	37.14	-31.48	39.09	29.53	54.00	16.86	V
11973.100	37.10	-31.48	39.09	29.49	54.00	16.90	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)
17927.400	43.03	-25.50	46.66	21.87	54.00	10.97	H
17960.950	42.92	-25.50	46.66	21.76	54.00	11.08	H
8304.050	42.31	-34.97	37.56	39.71	54.00	11.69	V
8303.500	41.05	-34.97	37.56	38.45	54.00	12.95	V
5149.580	53.51	-27.61	33.67	47.45	54.00	0.49	V
5149.700	53.23	-27.61	33.67	47.17	54.00	0.77	V

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)
17941.150	43.07	-25.50	46.66	21.91	54.00	10.93	V
17923.000	43.03	-25.50	46.66	21.87	54.00	10.97	H
8367.850	41.80	-34.50	37.68	38.62	54.00	12.20	V
12333.350	39.04	-31.10	38.94	31.20	54.00	14.96	H
12537.400	39.03	-31.05	38.99	31.09	54.00	14.97	V
11989.050	37.73	-31.48	39.09	30.12	54.00	16.27	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)
17981.300	42.86	-25.50	46.66	21.70	54.00	11.14	H
17830.050	42.68	-25.50	46.66	21.52	54.00	11.32	V
12290.450	38.93	-31.10	38.94	31.09	54.00	15.07	V
14495.400	38.93	-28.59	42.46	25.06	54.00	15.07	V
11748.150	37.53	-31.99	38.98	30.54	54.00	16.47	H
11943.950	37.19	-31.48	39.09	29.58	54.00	16.81	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)
17938.400	42.95	-25.50	46.66	21.79	54.00	11.05	H
17956.550	42.91	-25.50	46.66	21.75	54.00	11.09	V
12457.100	39.39	-31.22	38.91	31.70	54.00	14.61	V
12450.500	39.00	-31.22	38.91	31.31	54.00	15.00	H
5350.592	51.89	-27.43	34.01	45.31	54.00	2.11	V
5350.432	51.78	-27.43	34.01	45.20	54.00	2.22	V

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)
17937.850	42.64	-25.50	46.66	21.48	54.00	11.36	H
17934.000	42.55	-25.50	46.66	21.39	54.00	11.45	H
12348.200	39.14	-31.10	38.94	31.30	54.00	14.86	V
12332.250	39.05	-31.10	38.94	31.21	54.00	14.95	H
5459.755	43.29	-27.18	34.17	36.30	54.00	10.71	V
5458.960	43.24	-27.18	34.17	36.25	54.00	10.76	V

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)
17951.600	43.12	-25.50	46.66	21.96	54.00	10.88	H
17927.400	42.78	-25.50	46.66	21.62	54.00	11.22	H
12539.600	39.14	-31.05	38.99	31.20	54.00	14.86	V
12562.150	39.10	-31.05	38.99	31.16	54.00	14.90	H
11978.600	37.48	-31.48	39.09	29.87	54.00	16.52	V
11997.850	37.11	-31.48	39.09	29.50	54.00	16.89	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)
17944.450	43.09	-25.50	46.66	21.93	54.00	10.91	V
17948.300	42.98	-25.50	46.66	21.82	54.00	11.02	V
12352.050	39.16	-31.10	38.94	31.32	54.00	14.84	V
12327.850	39.09	-31.10	38.94	31.25	54.00	14.91	H
11985.200	37.34	-31.48	39.09	29.73	54.00	16.66	V
11982.450	37.32	-31.48	39.09	29.71	54.00	16.68	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)
17948.300	42.08	-25.50	46.66	20.92	54.00	11.92	H
17959.300	41.97	-25.50	46.66	20.81	54.00	12.03	V
12542.350	38.28	-31.05	38.99	30.34	54.00	15.72	V
12561.600	38.04	-31.05	38.99	30.10	54.00	15.96	V
5149.880	46.70	-27.61	33.67	40.64	54.00	7.30	V
5149.840	46.35	-27.61	33.67	40.29	54.00	7.65	V

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)
17871.300	42.23	-25.50	46.66	21.07	54.00	11.77	H
17835.550	42.01	-25.50	46.66	20.85	54.00	11.99	H
12568.200	38.28	-31.05	38.99	30.34	54.00	15.72	V
12513.200	37.95	-31.22	38.91	30.26	54.00	16.05	H
11987.400	36.51	-31.48	39.09	28.90	54.00	17.49	V
11995.650	36.21	-31.48	39.09	28.60	54.00	17.79	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)
17947.750	42.00	-25.50	46.66	20.84	54.00	12.00	H
17945.550	41.98	-25.50	46.66	20.82	54.00	12.02	V
12336.100	38.27	-31.10	38.94	30.43	54.00	15.73	V
12339.950	38.27	-31.10	38.94	30.43	54.00	15.73	V
11992.900	36.24	-31.48	39.09	28.63	54.00	17.76	H
11730.000	36.19	-31.99	38.98	29.20	54.00	17.81	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)
17956.000	43.26	-25.50	46.66	22.10	54.00	10.74	H
17954.900	43.13	-25.50	46.66	21.97	54.00	10.87	V
12355.350	39.17	-31.10	38.94	31.33	54.00	14.83	V
12334.450	38.94	-31.10	38.94	31.10	54.00	15.06	H
8415.700	38.72	-34.35	37.79	35.28	54.00	15.28	H
11988.500	37.21	-31.48	39.09	29.60	54.00	16.79	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)
17974.150	43.35	-25.50	46.66	22.19	54.00	10.65	V
17947.750	43.24	-25.50	46.66	22.08	54.00	10.76	V
12514.850	39.09	-31.22	38.91	31.40	54.00	14.91	H
12541.800	38.86	-31.05	38.99	30.92	54.00	15.14	V
11988.500	37.05	-31.48	39.09	29.44	54.00	16.95	H
11966.500	36.95	-31.48	39.09	29.34	54.00	17.05	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)
17945.000	42.99	-25.50	46.66	21.83	54.00	11.01	H
17980.200	42.91	-25.50	46.66	21.75	54.00	11.09	H
12338.850	39.11	-31.10	38.94	31.27	54.00	14.89	H
12515.950	39.04	-31.22	38.91	31.35	54.00	14.96	H
5351.072	45.13	-27.43	34.01	38.55	54.00	8.87	V
5350.048	45.10	-27.43	34.01	38.52	54.00	8.90	V

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)
17947.750	43.08	-25.50	46.66	21.92	54.00	10.92	V
17935.100	43.05	-25.50	46.66	21.89	54.00	10.95	V
12534.100	39.14	-31.05	38.99	31.20	54.00	14.86	H
12337.750	39.02	-31.10	38.94	31.18	54.00	14.98	V
5458.210	43.77	-27.18	34.17	36.78	54.00	10.23	V
5459.140	43.38	-27.18	34.17	36.39	54.00	10.62	V

Channel 116

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17954.900	42.83	-25.50	46.66	21.67	54.00	11.17	H
17949.400	42.80	-25.50	46.66	21.64	54.00	11.20	V
12543.450	39.80	-31.05	38.99	31.86	54.00	14.20	V
12559.400	39.43	-31.05	38.99	31.49	54.00	14.57	V
11975.300	37.52	-31.48	39.09	29.91	54.00	16.48	V
11968.150	37.20	-31.48	39.09	29.59	54.00	16.80	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)
17939.500	42.83	-25.50	46.66	21.67	54.00	11.17	H
17947.750	42.68	-25.50	46.66	21.52	54.00	11.32	V
12542.900	38.99	-31.05	38.99	31.05	54.00	15.01	H
12333.350	38.76	-31.10	38.94	30.92	54.00	15.24	H
11975.850	37.36	-31.48	39.09	29.75	54.00	16.64	V
11983.000	37.16	-31.48	39.09	29.55	54.00	16.84	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)
17952.700	42.92	-25.50	46.66	21.76	54.00	11.08	H
17943.900	42.69	-25.50	46.66	21.53	54.00	11.31	V
8304.050	42.09	-34.97	37.56	39.49	54.00	11.91	V
8303.500	41.60	-34.97	37.56	39.00	54.00	12.40	H
5148.220	53.45	-27.61	33.67	47.39	54.00	0.55	V
5149.950	53.15	-27.61	33.67	47.09	54.00	0.85	V

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)
17944.450	42.92	-25.50	46.66	21.76	54.00	11.08	H
17970.850	42.64	-25.50	46.66	21.48	54.00	11.36	V
8367.850	40.94	-34.50	37.68	37.76	54.00	13.06	V
12559.400	39.34	-31.05	38.99	31.40	54.00	14.66	H
12495.600	39.15	-31.22	38.91	31.46	54.00	14.85	V
11942.300	37.48	-31.48	39.09	29.87	54.00	16.52	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)
17909.250	43.34	-25.50	46.66	22.18	54.00	10.66	H
17954.900	43.07	-25.50	46.66	21.91	54.00	10.93	V
12355.350	39.24	-31.10	38.94	31.40	54.00	14.76	H
12537.950	39.06	-31.05	38.99	31.12	54.00	14.94	V
8431.650	37.52	-34.35	37.79	34.08	54.00	16.48	H
11988.500	37.30	-31.48	39.09	29.69	54.00	16.70	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)
17898.250	42.82	-25.50	46.66	21.66	54.00	11.18	V
17973.600	42.68	-25.50	46.66	21.52	54.00	11.32	H
12350.400	39.29	-31.10	38.94	31.45	54.00	14.71	H
12289.350	39.02	-31.10	38.94	31.18	54.00	14.98	V
5350.592	50.46	-27.43	34.01	43.88	54.00	3.54	V
5350.880	50.45	-27.43	34.01	43.87	54.00	3.55	V

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)
17874.050	43.60	-25.50	46.66	22.44	54.00	10.40	V
17974.150	43.53	-25.50	46.66	22.37	54.00	10.47	V
12355.350	38.94	-31.10	38.94	31.10	54.00	15.06	V
12364.700	38.88	-31.10	38.94	31.04	54.00	15.12	H
5458.945	44.32	-27.18	34.17	37.33	54.00	9.68	V
5459.275	44.09	-27.18	34.17	37.10	54.00	9.91	V

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)
17944.450	43.12	-25.50	46.66	21.96	54.00	10.88	V
17943.350	43.03	-25.50	46.66	21.87	54.00	10.97	V
12539.050	39.09	-31.05	38.99	31.15	54.00	14.91	V
14497.600	38.93	-28.59	42.46	25.06	54.00	15.07	H
11996.200	37.48	-31.48	39.09	29.87	54.00	16.52	H
11995.100	37.39	-31.48	39.09	29.78	54.00	16.61	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)
17941.700	42.82	-25.50	46.66	21.66	54.00	11.18	V
17916.950	42.76	-25.50	46.66	21.60	54.00	11.24	V
12541.800	39.20	-31.05	38.99	31.26	54.00	14.80	H
12545.650	38.95	-31.05	38.99	31.01	54.00	15.05	V
11967.600	37.86	-31.48	39.09	30.25	54.00	16.14	V
11836.150	37.08	-31.85	39.05	29.88	54.00	16.92	V

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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)
17930.700	43.27	-25.50	46.66	22.11	54.00	10.73	V
17936.750	43.24	-25.50	46.66	22.08	54.00	10.76	H
8335.950	42.53	-34.50	37.68	39.35	54.00	11.47	H
8335.400	39.49	-34.50	37.68	36.31	54.00	14.51	V
5149.200	53.38	-27.61	33.67	47.32	54.00	0.62	V
5149.360	53.34	-27.61	33.67	47.28	54.00	0.66	V

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)
17954.900	43.15	-25.50	46.66	21.99	54.00	10.85	H

17960.950	43.06	-25.50	46.66	21.90	54.00	10.94	H
12561.050	39.26	-31.05	38.99	31.32	54.00	14.74	V
14497.050	39.25	-28.59	42.46	25.38	54.00	14.75	H
5350.944	52.94	-27.43	34.01	46.36	54.00	1.06	V
5350.144	52.93	-27.43	34.01	46.35	54.00	1.07	V

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)
17967.550	42.78	-25.50	46.66	21.62	54.00	11.22	H
17925.750	42.67	-25.50	46.66	21.51	54.00	11.33	H
12551.150	39.13	-31.05	38.99	31.19	54.00	14.87	H
14494.300	38.94	-28.59	42.46	25.07	54.00	15.06	H
5458.375	47.96	-27.18	34.17	40.97	54.00	6.04	V
5458.300	47.49	-27.18	34.17	40.50	54.00	6.51	V

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)
17943.350	42.69	-25.50	46.66	21.53	54.00	11.31	V
17924.100	42.66	-25.50	46.66	21.50	54.00	11.34	V
12495.600	38.88	-31.22	38.91	31.19	54.00	15.12	V
12498.350	38.84	-31.22	38.91	31.15	54.00	15.16	V
11976.400	36.98	-31.48	39.09	29.37	54.00	17.02	V
11987.950	36.98	-31.48	39.09	29.37	54.00	17.02	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)
17095.800	52.87	-26.60	43.36	36.11	68.20	15.33	H
17932.900	52.58	-25.50	46.66	31.42	74.00	21.42	V
14839.150	48.85	-28.59	40.79	36.65	68.20	19.35	H
12566.000	48.72	-31.05	38.99	40.78	74.00	25.28	V
5147.880	62.03	-27.61	33.67	55.97	74.00	11.97	V
5149.540	61.76	-27.61	33.67	55.70	74.00	12.24	V

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)
17971.950	52.96	-25.50	46.66	31.80	74.00	21.04	V
17975.250	52.48	-25.50	46.66	31.32	74.00	21.52	H
14875.450	49.40	-28.59	40.79	37.20	68.20	18.80	H
14790.200	49.31	-28.32	41.35	36.29	68.20	18.89	V
11996.200	47.54	-31.48	39.09	39.93	74.00	26.46	V
11990.700	47.23	-31.48	39.09	39.62	74.00	26.77	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)
17942.800	52.70	-25.50	46.66	31.54	74.00	21.30	H
17997.800	52.23	-25.50	46.66	31.07	74.00	21.77	H
14752.250	49.23	-28.32	41.35	36.21	68.20	18.97	H
14679.100	48.71	-27.29	41.90	34.10	68.20	19.49	V
11809.200	47.73	-31.85	39.05	40.53	74.00	26.27	H
11974.200	46.84	-31.48	39.09	39.23	74.00	27.16	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)
15962.250	52.51	-27.35	38.54	41.32	74.00	21.49	H
17899.350	51.90	-25.50	46.66	30.74	74.00	22.10	H
14996.450	48.87	-27.85	40.21	36.51	68.20	19.33	V
12359.750	48.41	-31.10	38.94	40.57	74.00	25.59	H
11985.750	47.09	-31.48	39.09	39.48	74.00	26.91	V
11951.100	47.07	-31.48	39.09	39.46	74.00	26.93	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)
15953.450	52.32	-27.35	38.54	41.13	74.00	21.68	H
17880.650	51.80	-25.50	46.66	30.64	74.00	22.20	H
14465.700	49.58	-28.59	42.46	35.71	68.20	18.62	H
14835.300	49.14	-28.59	40.79	36.94	68.20	19.06	V
11968.700	46.76	-31.48	39.09	39.15	74.00	27.24	H
11756.950	46.68	-31.99	38.98	39.69	74.00	27.32	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)
17892.750	52.21	-25.50	46.66	31.05	74.00	21.79	V
17941.150	52.13	-25.50	46.66	30.97	74.00	21.87	V
12372.950	48.78	-31.10	38.94	40.94	74.00	25.22	H
14756.650	48.70	-28.32	41.35	35.68	68.20	19.50	V
5350.000	64.33	-27.43	34.01	57.75	74.00	9.67	V
5351.296	63.06	-27.43	34.01	56.48	74.00	10.94	V

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)
17947.750	52.44	-25.50	46.66	31.28	74.00	21.56	H
17954.350	52.07	-25.50	46.66	30.91	74.00	21.93	H
14995.900	49.22	-27.85	40.21	36.86	68.20	18.98	H
12865.200	49.03	-30.69	39.14	40.58	68.20	19.17	H
5457.775	56.39	-27.18	34.17	49.40	74.00	17.61	V
5469.340	66.42	-27.18	34.17	59.43	68.20	1.78	V

Channel 116

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17947.750	52.44	-25.50	46.66	31.28	74.00	21.56	H
17954.350	52.07	-25.50	46.66	30.91	74.00	21.93	H
14995.900	49.22	-27.85	40.21	36.86	68.20	18.98	H
12865.200	49.03	-30.69	39.14	40.58	68.20	19.17	H
5457.775	56.39	-27.18	34.17	49.40	74.00	17.61	V
5469.340	66.42	-27.18	34.17	59.43	68.20	1.78	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)
17969.750	53.31	-25.50	46.66	32.15	74.00	20.69	H
17836.650	52.04	-25.50	46.66	30.88	74.00	21.96	H
14821.000	48.82	-28.32	41.35	35.80	68.20	19.38	V
12557.200	48.76	-31.05	38.99	40.82	74.00	25.24	V
5727.035	67.47	-27.07	34.31	60.23	68.20	0.73	V
5726.177	67.15	-27.07	34.31	59.91	68.20	1.05	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)
17886.700	52.34	-25.50	46.66	31.18	74.00	21.66	V
17825.100	52.12	-25.50	46.66	30.96	74.00	21.88	H
14999.200	49.93	-27.85	40.21	37.57	68.20	18.27	V
14877.650	49.05	-28.59	40.79	36.85	68.20	19.15	V
5149.940	63.40	-27.61	33.67	57.34	74.00	10.60	V
5149.340	63.10	-27.61	33.67	57.04	74.00	10.90	V

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)
17867.450	52.32	-25.50	46.66	31.16	74.00	21.68	V
17906.500	52.22	-25.50	46.66	31.06	74.00	21.78	H
14871.050	48.87	-28.59	40.79	36.67	68.20	19.33	V
14838.600	48.82	-28.59	40.79	36.62	68.20	19.38	H
11972.000	46.91	-31.48	39.09	39.30	74.00	27.09	V
11968.700	46.81	-31.48	39.09	39.20	74.00	27.19	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)
17852.050	52.56	-25.50	46.66	31.40	74.00	21.44	H
16857.650	52.42	-26.62	41.49	37.55	68.20	15.78	V
14985.450	48.62	-27.85	40.21	36.26	68.20	19.58	V
14825.400	48.58	-28.32	41.35	35.56	68.20	19.62	H
11887.850	47.16	-31.85	39.05	39.96	74.00	26.84	H
11948.350	46.86	-31.48	39.09	39.25	74.00	27.14	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)
17958.200	53.01	-25.50	46.66	31.85	74.00	20.99	H
17858.650	52.01	-25.50	46.66	30.85	74.00	21.99	V
12517.600	49.07	-31.22	38.91	41.38	74.00	24.93	H
12360.300	48.44	-31.10	38.94	40.60	74.00	25.56	H
11945.050	47.05	-31.48	39.09	39.44	74.00	26.95	H
11732.200	46.64	-31.99	38.98	39.65	74.00	27.36	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)
17933.450	52.51	-25.50	46.66	31.35	74.00	21.49	V
17914.200	52.19	-25.50	46.66	31.03	74.00	21.81	V
12555.000	49.20	-31.05	38.99	41.26	74.00	24.80	V
12553.350	48.94	-31.05	38.99	41.00	74.00	25.06	V
11992.900	46.95	-31.48	39.09	39.34	74.00	27.05	V
11741.550	46.55	-31.99	38.98	39.56	74.00	27.45	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)
17111.750	52.10	-26.60	43.36	35.34	68.20	16.10	V
17941.150	52.08	-25.50	46.66	30.92	74.00	21.92	V
14494.850	48.55	-28.59	42.46	34.68	74.00	25.45	H
12797.000	48.48	-30.69	39.14	40.03	68.20	19.72	H
5350.768	64.82	-27.43	34.01	58.24	74.00	9.18	V
5350.000	63.44	-27.43	34.01	56.86	74.00	10.56	V

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)
17947.200	52.27	-25.50	46.66	31.11	74.00	21.73	V
17828.950	52.08	-25.50	46.66	30.92	74.00	21.92	H
14855.100	48.90	-28.59	40.79	36.70	68.20	19.30	V
14836.950	48.80	-28.59	40.79	36.60	68.20	19.40	V
5457.145	59.15	-27.18	34.17	52.16	74.00	14.85	V
5469.385	66.48	-27.18	34.17	59.49	68.20	1.72	V

Channel 116

Frequency (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	52.35	-25.50	46.66	31.19	74.00	21.65	V
17833.900	51.81	-25.50	46.66	30.65	74.00	22.19	V
14823.200	49.18	-28.32	41.35	36.16	68.20	19.02	V
14789.650	48.75	-28.32	41.35	35.73	68.20	19.45	H
11981.350	46.88	-31.48	39.09	39.27	74.00	27.12	H
11798.200	46.84	-31.85	39.05	39.64	74.00	27.16	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)
17959.850	53.11	-25.50	46.66	31.95	74.00	20.89	H
17870.750	52.83	-25.50	46.66	31.67	74.00	21.17	H
14876.000	48.45	-28.59	40.79	36.25	68.20	19.75	H
14867.200	48.44	-28.59	40.79	36.24	68.20	19.76	V
5725.565	67.05	-27.07	34.31	59.81	68.20	1.15	V
5725.722	66.20	-27.07	34.31	58.96	68.20	2.00	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)
17901.550	52.17	-25.50	46.66	31.01	74.00	21.83	H
17990.650	52.10	-25.50	46.66	30.94	74.00	21.90	H
12507.150	49.20	-31.22	38.91	41.51	74.00	24.80	H
12563.250	48.86	-31.05	38.99	40.92	74.00	25.14	H
5147.540	66.73	-27.61	33.67	60.67	74.00	7.27	V
5149.180	65.66	-27.61	33.67	59.60	74.00	8.34	V

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)
17975.800	52.04	-25.50	46.66	30.88	74.00	21.96	V
17747.550	51.83	-25.50	46.66	30.67	74.00	22.17	H
12542.900	48.91	-31.05	38.99	40.97	74.00	25.09	V
14832.550	48.76	-28.59	40.79	36.56	68.20	19.44	H
11985.750	47.11	-31.48	39.09	39.50	74.00	26.89	V
12000.050	46.61	-31.48	39.09	39.00	74.00	27.39	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)
16827.400	52.09	-26.62	41.49	37.22	68.20	16.11	H
17843.250	52.05	-25.50	46.66	30.89	74.00	21.95	V
14855.650	49.15	-28.59	40.79	36.95	68.20	19.05	H
14998.650	49.12	-27.85	40.21	36.76	68.20	19.08	H
11757.500	46.42	-31.99	38.98	39.43	74.00	27.58	H
11985.750	46.36	-31.48	39.09	38.75	74.00	27.64	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)
17932.350	52.79	-25.50	46.66	31.63	74.00	21.21	V
17813.000	52.30	-25.50	46.66	31.14	74.00	21.70	H
14475.600	48.83	-28.59	42.46	34.96	74.00	25.17	V
14999.750	48.66	-27.85	40.21	36.30	68.20	19.54	H
5350.640	69.89	-27.43	34.01	63.31	74.00	4.11	V
5352.080	69.30	-27.43	34.01	62.72	74.00	4.70	V

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)
17935.100	53.25	-25.50	46.66	32.09	74.00	20.75	H
17841.600	53.05	-25.50	46.66	31.89	74.00	20.95	V
14843.550	48.98	-28.59	40.79	36.78	68.20	19.22	V
14767.100	48.85	-28.32	41.35	35.83	68.20	19.35	H
5459.980	55.90	-27.18	34.17	48.91	74.00	18.10	V
5469.940	65.90	-27.18	34.17	58.91	68.20	2.30	V

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)
17955.450	52.33	-25.50	46.66	31.17	74.00	21.67	H
17948.850	52.16	-25.50	46.66	31.00	74.00	21.84	H
14838.600	48.89	-28.59	40.79	36.69	68.20	19.31	V
14992.050	48.81	-27.85	40.21	36.45	68.20	19.39	H
11965.400	47.07	-31.48	39.09	39.46	74.00	26.93	V
11993.450	46.53	-31.48	39.09	38.92	74.00	27.47	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)
17960.400	53.18	-25.50	46.66	32.02	74.00	20.82	H
17955.450	52.61	-25.50	46.66	31.45	74.00	21.39	V
12980.150	49.21	-30.49	39.24	40.46	68.20	18.99	H
12540.700	48.62	-31.05	38.99	40.68	74.00	25.38	V
5728.820	60.94	-27.07	34.31	53.70	68.20	7.26	V
5729.118	60.94	-27.07	34.31	53.70	68.20	7.26	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)
17847.650	52.51	-25.50	46.66	31.35	74.00	21.49	H
17901.550	52.31	-25.50	46.66	31.15	74.00	21.69	V
14988.200	49.18	-27.85	40.21	36.82	68.20	19.02	V
14892.500	48.86	-28.59	40.79	36.66	68.20	19.34	V
5145.920	62.98	-27.61	33.67	56.92	74.00	11.02	V
5148.660	62.23	-27.61	33.67	56.17	74.00	11.77	V

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)
17784.400	52.33	-25.50	46.66	31.17	74.00	21.67	V
16963.800	52.01	-26.32	42.36	35.96	68.20	16.19	H
14844.100	49.06	-28.59	40.79	36.86	68.20	19.14	V
14879.300	48.71	-28.59	40.79	36.51	68.20	19.49	H
11924.150	46.45	-31.48	39.09	38.84	74.00	27.55	H
11999.500	46.43	-31.48	39.09	38.82	74.00	27.57	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)
17864.700	53.19	-25.50	46.66	32.03	74.00	20.81	V
17886.700	52.34	-25.50	46.66	31.18	74.00	21.66	H
12562.150	49.01	-31.05	38.99	41.07	74.00	24.99	V
14907.350	48.81	-28.59	40.79	36.61	68.20	19.39	V
11736.050	47.32	-31.99	38.98	40.33	74.00	26.68	H
11968.700	46.90	-31.48	39.09	39.29	74.00	27.10	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)
17880.100	52.22	-25.50	46.66	31.06	74.00	21.78	H
17931.250	51.89	-25.50	46.66	30.73	74.00	22.11	H
14866.650	49.27	-28.59	40.79	37.07	68.20	18.93	V
14555.350	49.25	-27.29	41.90	34.64	68.20	18.95	V
11851.550	47.00	-31.85	39.05	39.80	74.00	27.00	V
11972.000	46.99	-31.48	39.09	39.38	74.00	27.01	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)
17970.850	52.77	-25.50	46.66	31.61	74.00	21.23	V
17952.150	52.24	-25.50	46.66	31.08	74.00	21.76	H
14784.150	48.39	-28.32	41.35	35.37	68.20	19.81	V
14844.100	48.28	-28.59	40.79	36.08	68.20	19.92	H
11840.000	46.51	-31.85	39.05	39.31	74.00	27.49	H
11832.300	46.41	-31.85	39.05	39.21	74.00	27.59	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)
17980.200	52.49	-25.50	46.66	31.33	74.00	21.51	H
17945.000	52.34	-25.50	46.66	31.18	74.00	21.66	H
14741.800	49.50	-28.32	41.35	36.48	68.20	18.70	V
12854.200	48.87	-30.69	39.14	40.42	68.20	19.33	V
5351.776	59.78	-27.43	34.01	53.20	74.00	14.22	V
5350.048	59.05	-27.43	34.01	52.47	74.00	14.95	V

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)
17866.900	52.13	-25.50	46.66	30.97	74.00	21.87	V
17944.450	52.08	-25.50	46.66	30.92	74.00	21.92	H
12338.300	48.72	-31.10	38.94	40.88	74.00	25.28	H
14526.750	48.38	-28.59	42.46	34.51	68.20	19.82	H
5457.970	54.76	-27.18	34.17	47.77	74.00	19.24	V
5469.385	60.66	-27.18	34.17	53.67	68.20	7.54	V

Channel 116

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17821.800	52.43	-25.50	46.66	31.27	74.00	21.57	V
15960.050	52.06	-27.35	38.54	40.87	74.00	21.94	H
12536.850	49.30	-31.05	38.99	41.36	74.00	24.70	H
14849.600	48.84	-28.59	40.79	36.64	68.20	19.36	V
11866.400	46.62	-31.85	39.05	39.42	74.00	27.38	H
11872.450	46.46	-31.85	39.05	39.26	74.00	27.54	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)
17929.600	53.21	-25.50	46.66	32.05	74.00	20.79	V
17959.300	51.80	-25.50	46.66	30.64	74.00	22.20	H
12814.600	49.20	-30.69	39.14	40.75	68.20	19.00	H
14809.450	48.97	-28.32	41.35	35.95	68.20	19.23	H
5725.583	66.63	-27.07	34.31	59.39	68.20	1.57	V
5725.285	66.26	-27.07	34.31	59.02	68.20	1.94	V

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)
17981.300	52.38	-25.50	46.66	31.22	74.00	21.62	V
17870.750	52.01	-25.50	46.66	30.85	74.00	21.99	H
12467.550	48.76	-31.22	38.91	41.07	74.00	25.24	V
14558.100	48.70	-27.29	41.90	34.09	68.20	19.50	V
5149.440	65.83	-27.61	33.67	59.77	74.00	8.17	V
5146.180	64.81	-27.61	33.67	58.75	74.00	9.19	V

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)
17876.800	51.99	-25.50	46.66	30.83	74.00	22.01	V
15963.900	51.96	-27.35	38.54	40.77	74.00	22.04	V
12536.850	49.02	-31.05	38.99	41.08	74.00	24.98	H
14855.100	48.81	-28.59	40.79	36.61	68.20	19.39	H
11970.350	46.71	-31.48	39.09	39.10	74.00	27.29	H
11841.100	46.67	-31.85	39.05	39.47	74.00	27.33	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)
16502.900	52.23	-26.96	39.82	39.37	68.20	15.97	H
17973.600	52.22	-25.50	46.66	31.06	74.00	21.78	H
14994.800	49.27	-27.85	40.21	36.91	68.20	18.93	H
13032.950	48.91	-30.13	39.39	39.64	68.20	19.29	V
11997.850	46.55	-31.48	39.09	38.94	74.00	27.45	H
11756.400	46.54	-31.99	38.98	39.55	74.00	27.46	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)
17956.000	52.74	-25.50	46.66	31.58	74.00	21.26	V
17934.000	52.01	-25.50	46.66	30.85	74.00	21.99	V
12333.900	48.88	-31.10	38.94	41.04	74.00	25.12	H
14866.100	48.40	-28.59	40.79	36.20	68.20	19.80	V
5350.592	66.14	-27.43	34.01	59.56	74.00	7.86	V
5350.448	64.98	-27.43	34.01	58.40	74.00	9.02	V

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)
17962.050	52.12	-25.50	46.66	30.96	74.00	21.88	H
17876.800	52.10	-25.50	46.66	30.94	74.00	21.90	V
12545.650	48.64	-31.05	38.99	40.70	74.00	25.36	H
14992.600	48.49	-27.85	40.21	36.13	68.20	19.71	V
5459.275	59.89	-27.18	34.17	52.90	74.00	14.11	V
5467.075	66.09	-27.18	34.17	59.10	68.20	2.11	V

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)
17910.350	52.28	-25.50	46.66	31.12	74.00	21.72	H
17948.850	52.20	-25.50	46.66	31.04	74.00	21.80	H
14826.500	49.54	-28.32	41.35	36.52	68.20	18.66	H
14790.200	48.91	-28.32	41.35	35.89	68.20	19.29	H
11846.050	46.62	-31.85	39.05	39.42	74.00	27.38	V
11756.950	46.11	-31.99	38.98	39.12	74.00	27.89	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)
17984.050	53.18	-25.50	46.66	32.02	74.00	20.82	V
17976.900	51.76	-25.50	46.66	30.60	74.00	22.24	H
12563.800	49.62	-31.05	38.99	41.68	74.00	24.38	H
12522.550	48.61	-31.05	38.99	40.67	74.00	25.39	H
5731.672	58.62	-27.07	34.31	51.38	68.20	9.58	V
5725.722	58.25	-27.07	34.31	51.01	68.20	9.95	V

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)
17955.450	52.87	-25.50	46.66	31.71	74.00	21.13	V
17852.050	52.61	-25.50	46.66	31.45	74.00	21.39	H
14857.850	48.75	-28.59	40.79	36.55	68.20	19.45	V
14995.900	48.64	-27.85	40.21	36.28	68.20	19.56	H
5149.800	65.84	-27.61	33.67	59.78	74.00	8.16	V
5145.240	65.81	-27.61	33.67	59.75	74.00	8.19	V

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)
17754.700	52.38	-25.50	46.66	31.22	74.00	21.62	V
17877.350	52.31	-25.50	46.66	31.15	74.00	21.69	V
14741.800	49.69	-28.32	41.35	36.67	68.20	18.51	V
12292.100	48.66	-31.10	38.94	40.82	74.00	25.34	V
5350.912	68.20	-27.43	34.01	61.62	74.00	5.80	V
5352.000	66.18	-27.43	34.01	59.60	74.00	7.82	V

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)
17887.800	53.14	-25.50	46.66	31.98	74.00	20.86	H
17950.500	52.90	-25.50	46.66	31.74	74.00	21.10	H
14861.150	48.89	-28.59	40.79	36.69	68.20	19.31	V
14815.500	48.87	-28.32	41.35	35.85	68.20	19.33	H
5456.890	63.98	-27.18	34.17	56.99	74.00	10.02	V
5469.775	65.25	-27.18	34.17	58.26	68.20	2.95	V

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)
17888.900	52.48	-25.50	46.66	31.32	74.00	21.52	H
17088.650	51.92	-26.60	43.36	35.16	68.20	16.28	H
14817.700	49.29	-28.32	41.35	36.27	68.20	18.91	V
14599.900	49.14	-27.29	41.90	34.53	68.20	19.06	H
5729.415	54.75	-27.07	34.31	47.51	68.20	13.45	V
5725.688	54.52	-27.07	34.31	47.28	68.20	13.68	V

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

Test Condition:

Voltage（V）	Frequency（Hz）
110	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		
		11a mode	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		
		11a mode	Idle	
0.15 to 0.5	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:

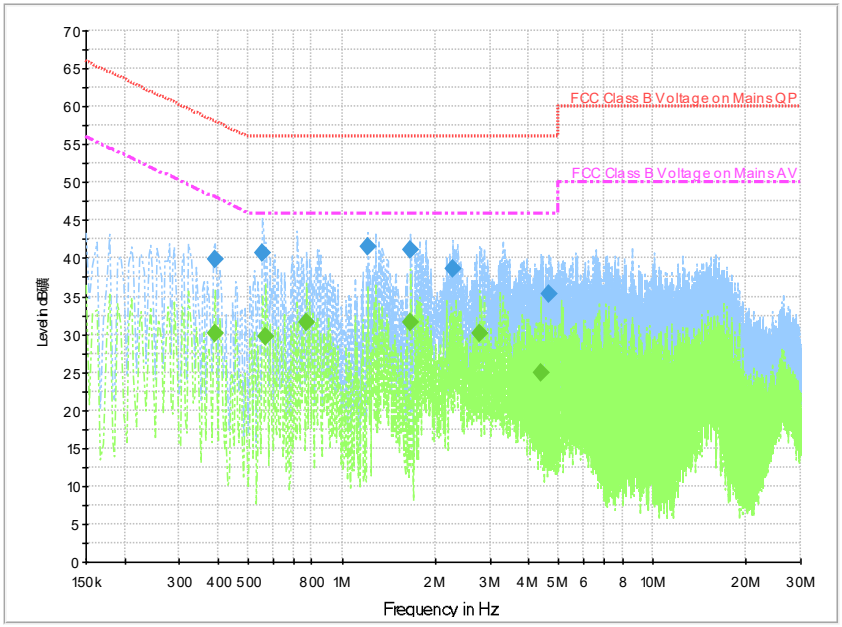

Fig.58 Conducted Emission (802.11a, Ch36, TX)

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	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.390000	39.8	5000.	9.000	On	L1	19.8	18.3	58.1
0.554000	40.7	5000.	9.000	On	L1	19.7	15.3	56.0
1.214000	41.4	5000.	9.000	On	L1	19.7	14.6	56.0
1.666000	41.1	5000.	9.000	On	L1	19.7	14.9	56.0
2.270000	38.7	5000.	9.000	On	L1	19.6	17.3	56.0
4.638000	35.4	5000.	9.000	On	L1	19.5	20.6	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.390000	30.1	5000.	9.000	On	L1	19.8	17.9	48.1
0.570000	29.6	5000.	9.000	On	L1	19.7	16.4	46.0
0.770000	31.6	5000.	9.000	On	L1	19.7	14.4	46.0
1.666000	31.5	5000.	9.000	On	L1	19.7	14.5	46.0
2.778000	30.2	5000.	9.000	On	L1	19.5	15.8	46.0
4.390000	24.9	5000.	9.000	On	L1	19.6	21.1	46.0

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

Idle:

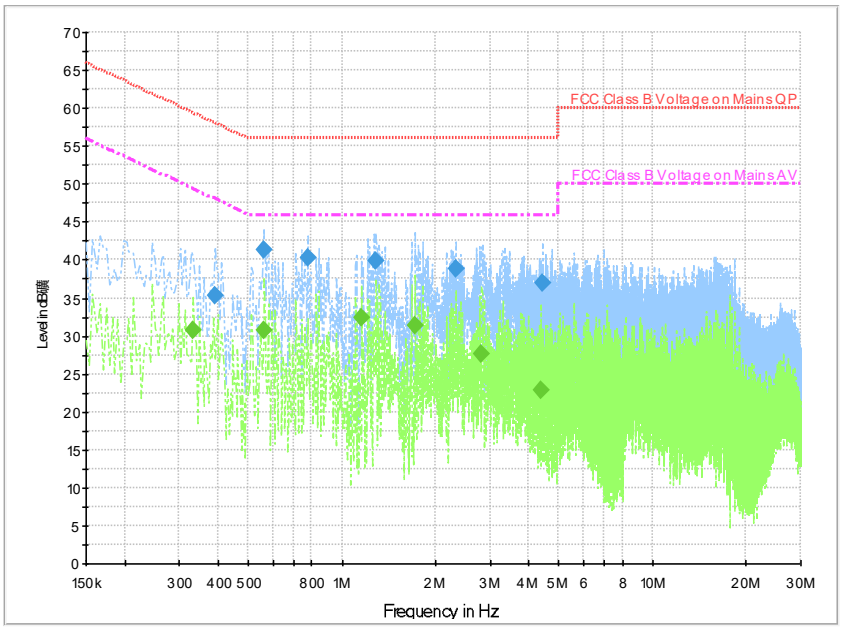

Fig.59 Conducted Emission(802.11a, IDLE)

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	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.390000	35.4	5000.	9.000	On	N	19.8	22.7	58.1
0.558000	41.3	5000.	9.000	On	L1	19.7	14.7	56.0
0.774000	40.2	5000.	9.000	On	L1	19.7	15.8	56.0
1.286000	40.0	5000.	9.000	On	L1	19.7	16.0	56.0
2.326000	38.8	5000.	9.000	On	L1	19.6	17.2	56.0
4.450000	37.1	5000.	9.000	On	L1	19.6	18.9	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.330000	30.7	5000.	9.000	On	L1	19.8	18.7	49.5
0.562000	30.8	5000.	9.000	On	L1	19.7	15.2	46.0
1.158000	32.4	5000.	9.000	On	L1	19.8	13.6	46.0
1.722000	31.3	5000.	9.000	On	L1	19.6	14.7	46.0
2.822000	27.5	5000.	9.000	On	L1	19.5	18.5	46.0
4.390000	22.8	5000.	9.000	On	L1	19.6	23.2	46.0

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	17.41	P
	5200 MHz	Fig.61	17.33	P
	5240 MHz	Fig.62	17.34	P
802.11n HT20	5180 MHz	Fig.63	18.21	P
	5200 MHz	Fig.64	18.15	P
	5240 MHz	Fig.65	18.18	P
802.11n HT40	5190 MHz	Fig.66	36.22	P
	5230 MHz	Fig.67	36.18	P
802.11ac HT80	5210 MHz	Fig.68	75.20	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)

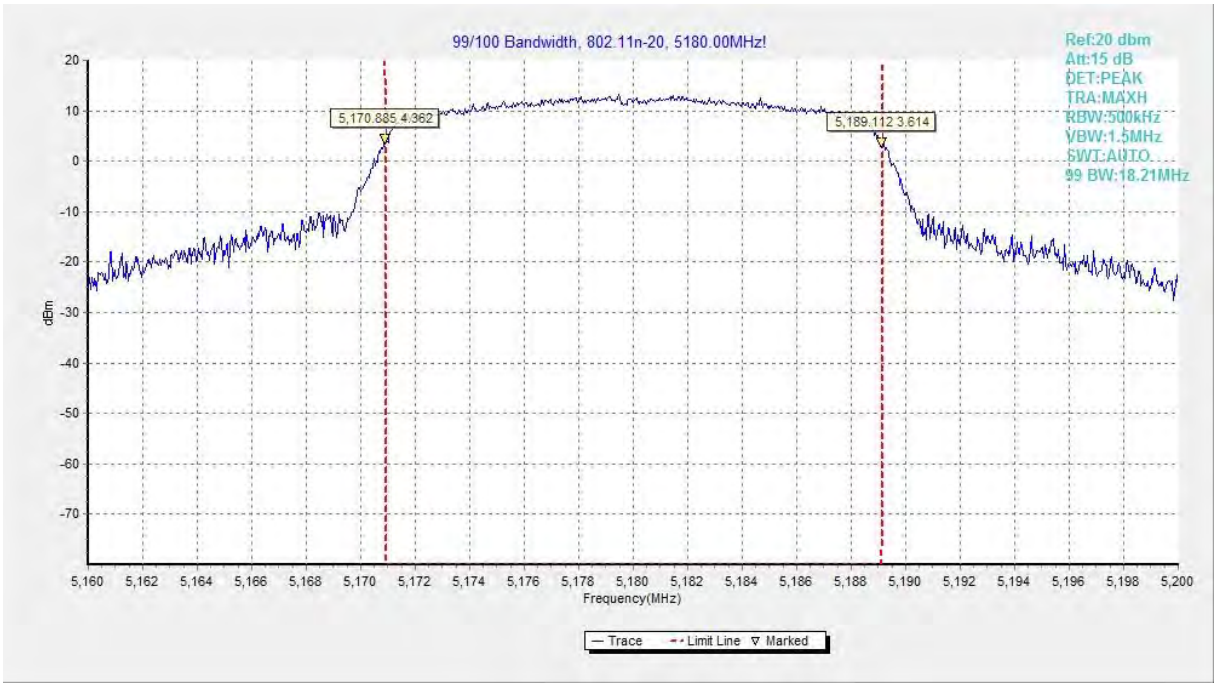

Fig.63 99% Occupied bandwidth (802.11n-HT20, 5180MHz)

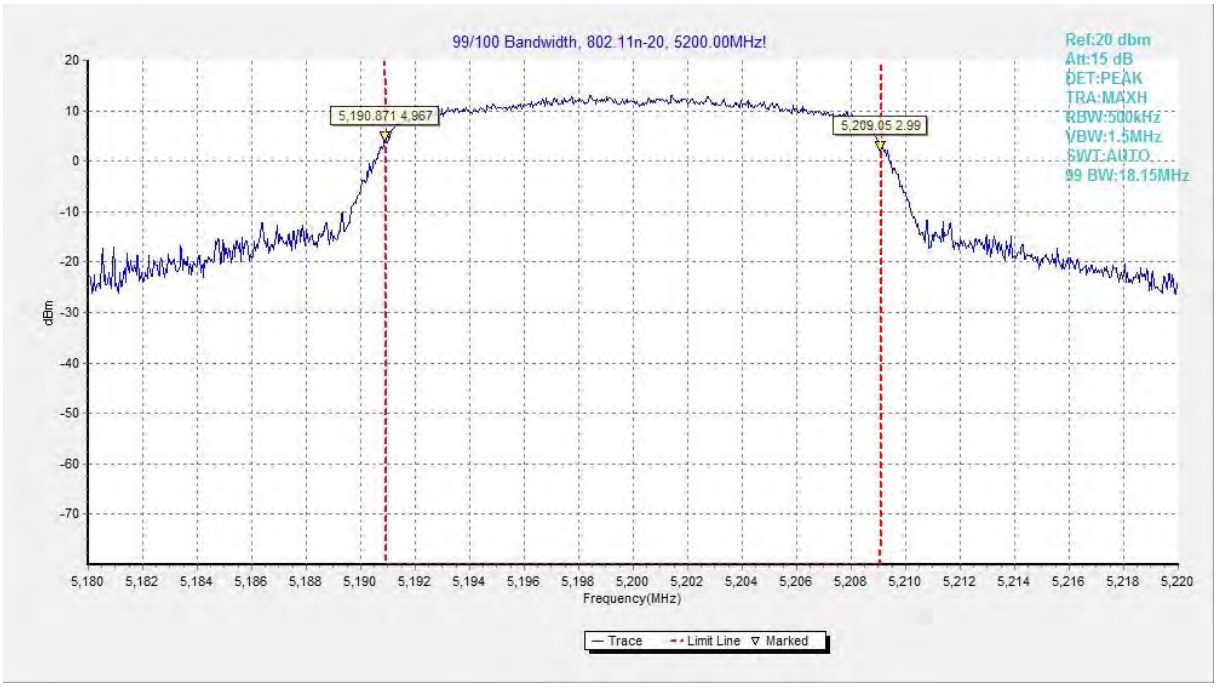

Fig.64 99% Occupied bandwidth (802.11n-HT20, 5200MHz)

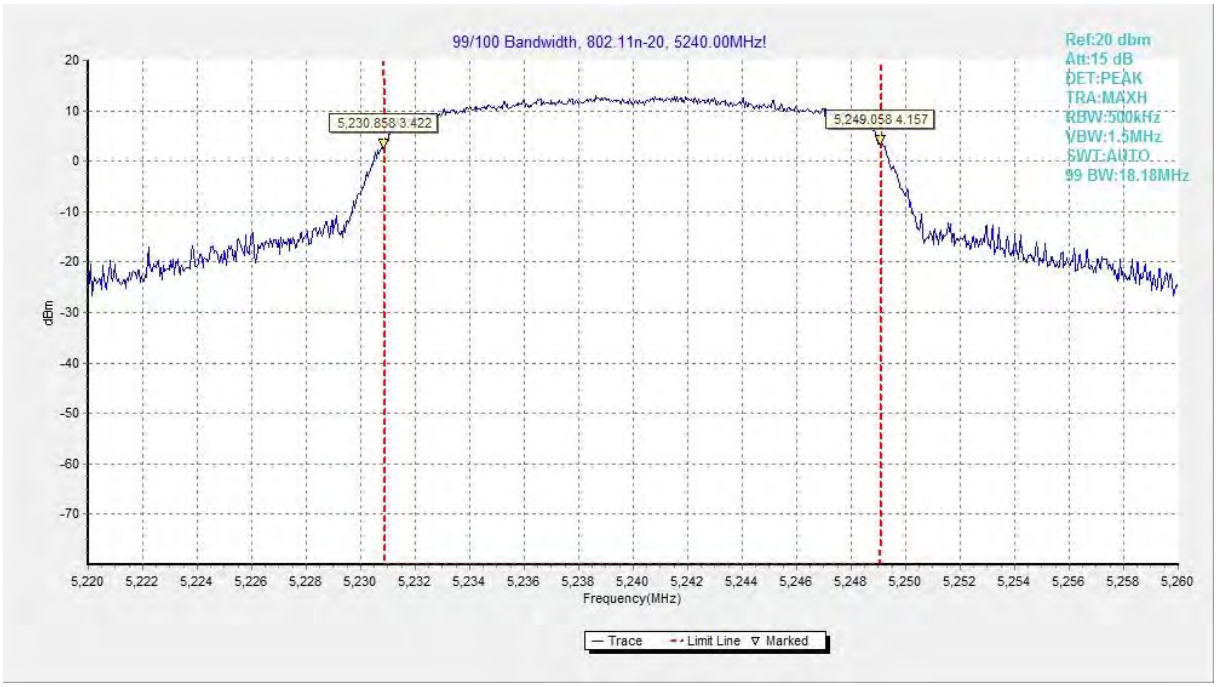

Fig.65 99% Occupied bandwidth (802.11n-HT20, 5240MHz)

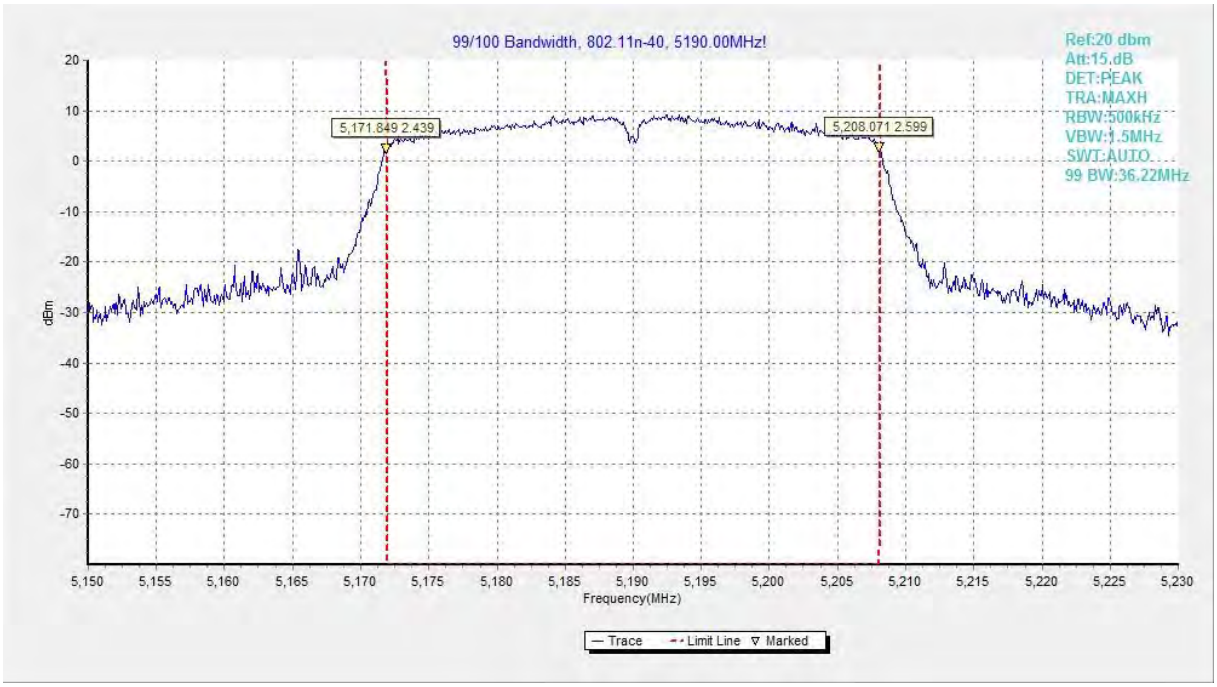

Fig.66 99% Occupied bandwidth (802.11n-HT40, 5190MHz)

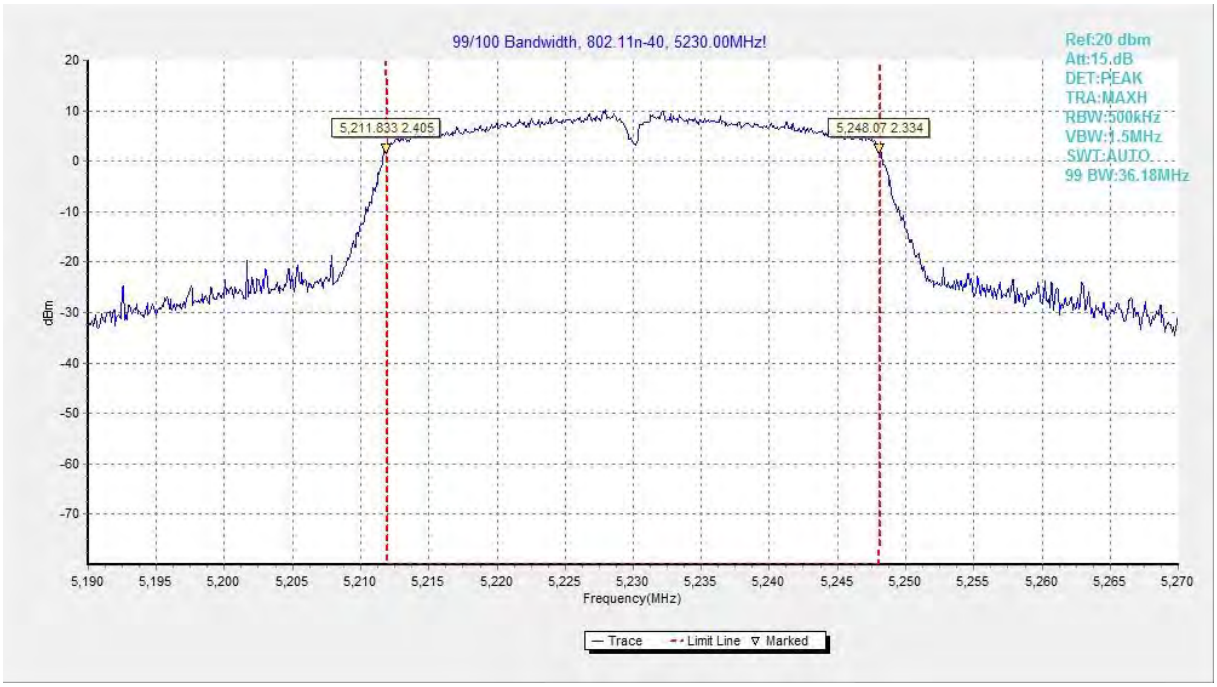

Fig.67 99% Occupied bandwidth (802.11n-HT40, 5230MHz)

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 *****